

EROSION AND SEDIMENT CONTROL NOTES:

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL, LATEST REVISION.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY BOONE COUNTY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING PUBLIC & DEVELOPMENT STREETS WHEN DEBRIS HAS BEEN TRACKED AND/OR WASHED ON THEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO SWEEP THE STREETS IF DIRECTED TO DO SO BY BOONE COUNTY. THE CONTRACTOR IS ALSO RESPONSIBLE TO CONTROL DUST ON THE SITE IN ACCORDANCE WITH PRACTICES IN THE ILLINOIS URBAN MANUAL.

ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AND STABILIZED PRIOR TO SITE CLEARING AND GRADING. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE MAINTAINED THROUGH THE DURATION OF THE PROJECT. ALL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED WEEKLY AND AFTER EACH 1/2" RAINFALL EVENT AND 1" SNOWFALL EVENT AND AN INSPECTION RECORD SHALL BE MAINTAINED BY THE CONTRACTOR AT THE JOB SITE FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM THESE INSPECTIONS AND TO MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES IN SUCH A MANNER THAT THEY CONTINUE TO FUNCTION FOR THE DURATION OF THEIR INTENDED USE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TEMPORARY SEEDING.

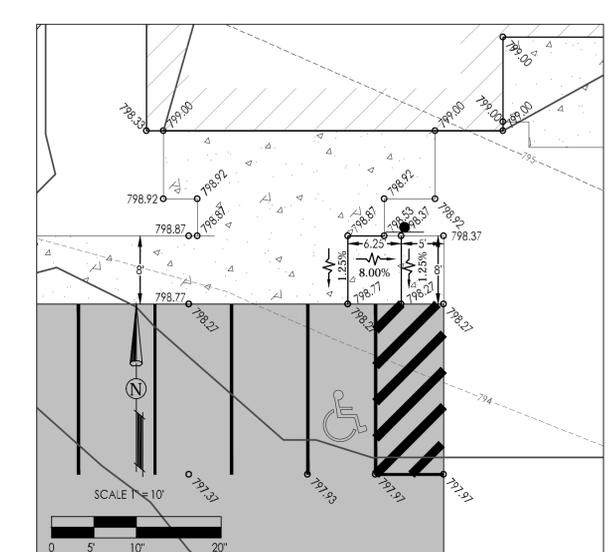
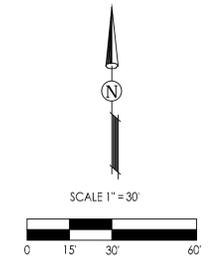
ALL DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY SEEDING WITHIN 21 DAYS FOLLOWING THE END OF ACTIVE DISTURBANCE.

EROSION BLANKETS ARE TO BE INSTALLED ON ALL SLOPES STEEPER THAN 10% IMMEDIATELY AFTER TOPSOILING, FERTILIZING, AND SEEDING ARE COMPLETE. EROSION BLANKETS WILL NOT BE REQUIRED IF SOD IS USED. INSTALLATION OF EROSION BLANKETS SHALL BE ACCORDING TO THE RECOMMENDATIONS OF THE MANUFACTURER. EROSION BLANKETS SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAINFALL FOR DAMAGE OR DISPLACEMENT. DAMAGED OR DISPLACED EROSION BLANKETS SHALL BE REPAIRED OR RE-STAPLED AS SOON AS POSSIBLE.

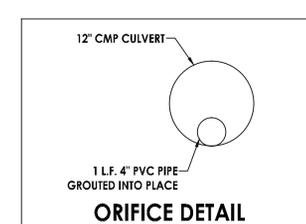
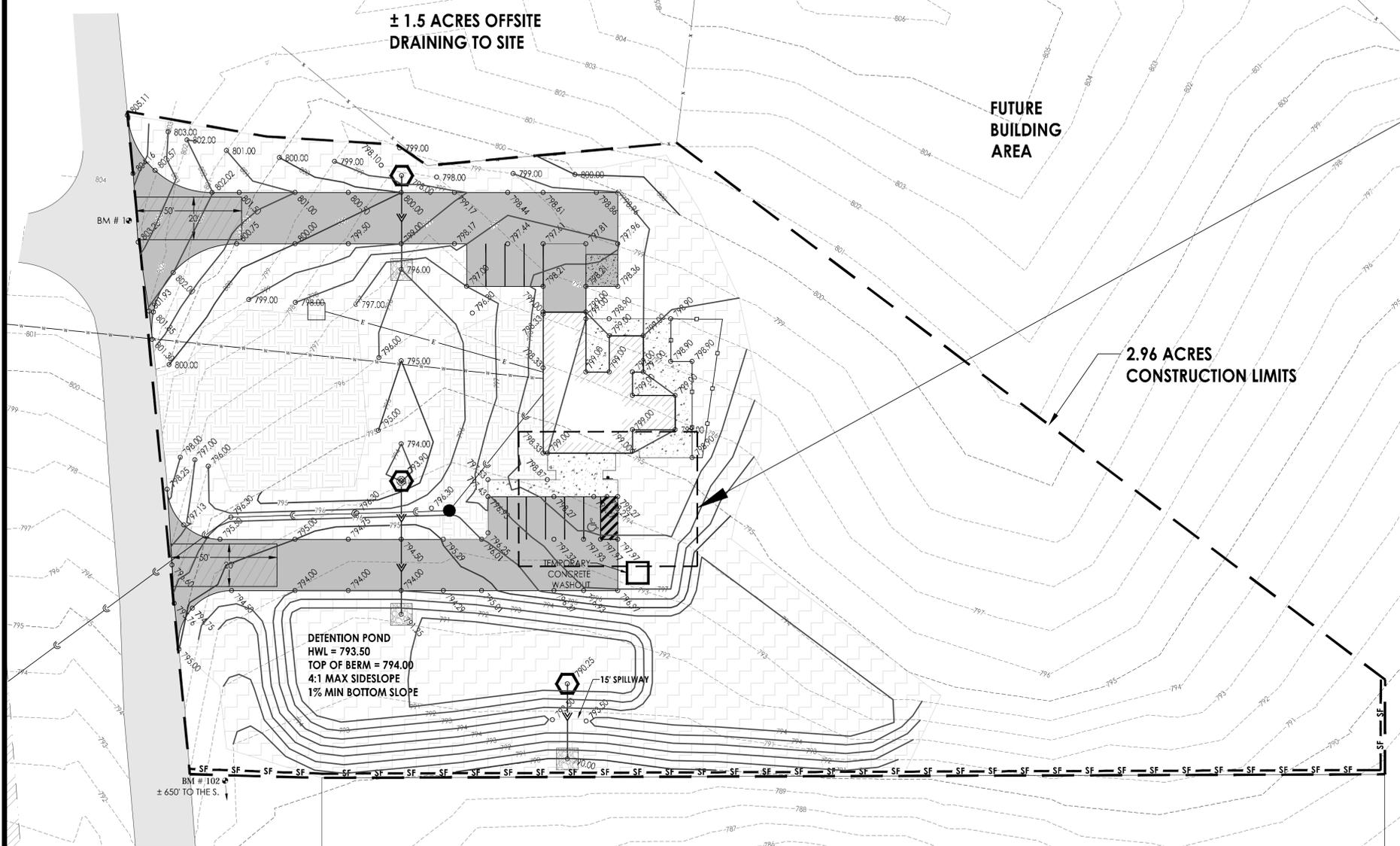
TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED VIA PERMANENT MEASURES. PERMANENT VEGETATION AND STRUCTURES SHALL BE INSTALLED AND FUNCTIONAL AS SOON AS PRACTICAL DURING DEVELOPMENT. PERMANENT SEEDING, SODDING, OR LANDSCAPING SHALL BE COMPLETED WITHIN 7 DAYS OF FINAL TOPSOIL RE-SPEAD.

ALL STOCKPILES ARE TO BE PLACED AT A LOCATION SPECIFIED BY THE ENGINEER. ALL STOCKPILES ARE TO BE PROTECTED BY SILT FENCE ALONG THE DOWN SLOPE SIDES OF THE STOCKPILE OR AROUND THE ENTIRE PERIMETER IF DIRECTED TO DO SO BY THE ENGINEER, BOONE COUNTY, OR THEIR REPRESENTATIVES. ANY STOCKPILES THAT WILL REMAIN UNDISTURBED FOR LONGER THAN THREE WEEKS SHALL BE PROTECTED BY TEMPORARY SEEDING. SOIL STORAGE PILES CONTAINING MORE THAN 10 CUBIC YARDS OF MATERIAL SHALL NOT BE LOCATED WITH A DOWN SLOPE DRAINAGE LENGTH OF LESS THAN 25 FEET TO A ROAD WAY OR DRAINAGE CHANNEL. COST OF TEMPORARY SEEDING SHALL BE INCLUDED PRICE BID PER EROSION CONTROL LUMP SUM.

EROSION FABRIC IS NECESSARY FOR SILT TRAPS INSTALLED AT ALL STORM STRUCTURES WITH OPEN LIDS. ALL STORMWATER INLETS SHALL BE PROTECTED BY SILT TRAPS, STRAW BALE DIKES, EXCELSION LOGS, EROSION FABRIC, OR OTHER METHODS APPROVED BY BOONE COUNTY. AFTER EACH RAINFALL, EACH INLET SHALL BE INSPECTED. ANY INLET PROTECTION THAT HAS FAILED OR IS DAMAGED SHALL BE REPAIRED AS SOON AS POSSIBLE. SEDIMENT SHALL BE REMOVED AS NECESSARY TO PROVIDE FOR THE CONTINUED EFFECTIVENESS OF THE INLET PROTECTION TECHNIQUE IN USE.



ENTRANCE GRADING DETAIL



ORIFICE DETAIL

DETENTION POND SPILLWAY CALCULATION

OFFSITE AREA TO SITE = 1.5 ACRES
 OFFSITE + SITE AREA = 6.371 ACRES
 C = 0.544
 I (DOWN) = 5.54 IN/HR
 Q(a) = CIA = 19.20 c.f.s.

BROAD CRESTED WEIR SIZING

$Q = C_s \cdot b \cdot H^{3/2}$
 $b = Q / [C_s \cdot H^{3/2}]$

Q(Allowable) = 19.20 c.f.s.
 $C_s = 3.33 R^{0.5} / \text{sec}$
 Headwater = (Berm Elevation) - (Spillway Elevation) = 794.0 - 793.5 = 0.5 ft.

Solving for b: b = 16.31 ft
 Design Width of Spillway = 17.00 feet

BOONE COUNTY ANIMAL

DETENTION POND CALCULATIONS FOR SITE

ITEM	TOTAL SF	"C"	C * A
TOTAL LOT AREA	128820		
BUILDING/PAVED AREA	20782	0.95	19743
GREEN AREA	108038	0.36	38904
NET C =	0.455		

Q ALLOWABLE CALCULATION

A = 2.957 Ac.
 C = 0.208
 Q(a) = CIA = 0.591 c.f.s.

ORIFICE SIZING

$Q = C_d \cdot A \cdot \sqrt{2 \cdot g \cdot H^{0.5}}$
 $A = Q / [C_d \cdot \sqrt{2 \cdot g \cdot H^{0.5}}]$

Q(Allowable) = 0.591 c.f.s.
 $C_d = 0.6$
 Headwater = (Highwater Level) - (Centerline Elev of Outlet Pipe) = 793.5 - 790.45 = 3.05 ft.
 $g = 32.2 \text{ ft/sec}^2$

Solving for A: A = 0.07 sq. ft. = 3.14159 * r^2
 Solve for r: r = 0.15 ft. = 1.80 inches
 d = 2 * r = 3.59 inches

USE 4" ORIFICE
 Q * PIPE = 0.73 CFS

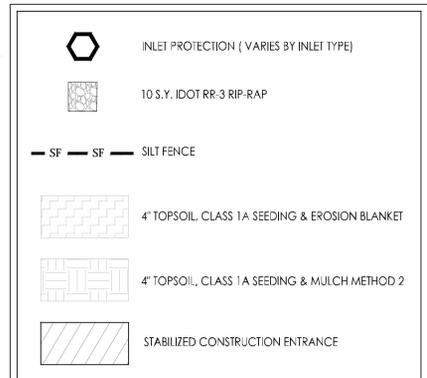
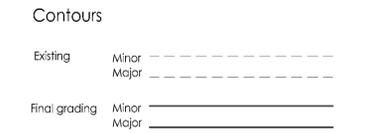
DETENTION POND VOLUME SIZING

DURATION (HOURS)	100-YEAR INTENSITY (IN/HR)	C X A	INFLOW (CFS)	RELEASE ALLOWABLE (CFS)	STORAGE RATE (CFS)	REQ'D STORAGE (AC.FT.)
0.000	0.00	1.346	0	0.734	-0.73	0
0.167	0.72	1.346	13.08	0.734	12.35	0.170
0.333	0.90	1.346	9.29	0.734	8.55	0.235
0.500	5.54	1.346	7.46	0.734	6.72	0.278
0.666	4.60	1.346	6.19	0.734	5.46	0.300
0.833	4.00	1.346	5.38	0.734	4.65	0.320
1.000	3.51	1.346	4.72	0.734	3.99	0.330
1.500	2.70	1.346	3.63	0.734	2.90	0.359
2.000	2.24	1.346	3.02	0.734	2.28	0.377
3.000	1.62	1.346	2.18	0.734	1.45	0.399
4.000	1.30	1.346	1.75	0.734	1.02	0.336
5.000	1.18	1.346	1.48	0.734	0.75	0.309
6.000	0.97	1.346	1.31	0.734	0.57	0.284
7.000	0.85	1.346	1.14	0.734	0.41	0.237
24.000	0.307	1.346	0.41	0.734	-0.32	-0.636
						MAX = 0.377 AC.FT. 14627 CU.FT.

DETENTION POND CAPACITY

USING FRUSTUM OF PYRAMID FORMULA

CONTOUR ELEV.	CONT. AREA SQ.FT.	ELEV. DIFF. FT.	INC. VOL. CU.FT.	CUM. VOL. CU.FT.
790.25	0	0	0	0
791.00	3308	0.75	860	860
792.00	7084	1.00	5078	5938
793.00	8729	1.00	7892	13830
793.50	9590	0.50	4578	18408
794.00	10476	0.50	6015	24423
			Max Volume = 0.403 AC.FT. 152% of Required Volume	



Date	Revision	By
8/4/15	REVISED PER CLIENT	JAB

Boone County Animal Services & Adoption Center
 Grading & Stormwater Pollution Prevention Plan

CHECKED BY: KCB	DRAWN BY: JAB	Sheet
DATE: 05/12/15	DATE: 05/12/15	2 of 4

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CONTROL MEASURE GROUP	CONTROL MEASURE	URBAN MANUAL CODE	STANDARD DETAIL NUMBER ILLINOIS URBAN MANUAL	APPLIED	CONTROL MEASURE DESCRIPTION	PERM.	TEMP.	
SOIL STABILIZATION	CONSTRUCTION ROAD STABILIZATION	806	IL-506		THE STABILIZATION OF TEMPORARY CONSTRUCTION ACCESS ROADS: LUBBERSON ROAD, ON SITE WHICH TRAVEL THROUGH AREAS AND CONSTRUCTION PARKING AREAS WHICH WOULD OTHERWISE BE SUBJECT TO EROSION AND SOIL LOSS.			
	EROSION BLANKET	830	IL-530	X	A PERFORATED PROTECTIVE BLANKET OF STRAW OR OTHER PLANT RESIDUE, OR A SIMILAR FIBRIC FORMED INTO A MAT USUALLY WITH A PLASTIC MEMBRANE ON ONE OR BOTH SIDES.		X	
	LAND GRADING	865		X	SEPARATING THE GROUND SURFACE TO PLANNED GRADES AS DEFINED ON THE ENGINEERING PLANS.		X	
	MULCHING	875		X	THE APPLICATION OF PLANT RESIDUES AND OTHER SOLUBLE MATERIALS TO THE SOIL.		X	
	PERMANENT VEGETATION	880		X	ESTABLISHING PERMANENT VEGETATION COVER TO STABILIZE DISTURBED OR EXPOSED AREAS.		X	
	ROCK OUTLET PROTECTION	910	IL-611	X	A STRIP OF ROCK PROTECTION PLACED AT THE OUTLET END OF CURBS, CHANNELS, OR CHANNELS.		X	
	SODDING	925			STABILIZATION OF FINISHED OR EXISTING AREAS BY LAYING A CONTINUOUS COVER OF GRASS SEED.			
	SURFACE ROUGHENING	953			A SURFACE ON SURFACE WITH NECESSARY GROOVES RUNNING ACROSS THE SLOPE OR ON THE CONTOUR, LAUNDRING, OR FACED WITH CONSTRUCTION EQUIPMENT.			
	TEMPORARY SEEDING	965		X	PLANTING PAPER-GROWING ANNUALS, GRASSES OR SMALL GRAINS, TO PROVIDE TEMPORARY PROTECTION AGAINST EROSION ON EXPOSED AREAS.		X	
	TOPSODDING	981		X	METHODS OF SEEDING AND USING TOPSOIL TO ENHANCE FINAL SITE STABILIZATION WITH VEGETATION.		X	
RUNOFF CONTROL	DIVERSION	815			A CHANGE AND IMPROVING ROADS CONNECTED ACROSS THE SITE TO COLLECT AND DRAIN RUNOFF.			
	DIVERSION DIKE	820			A ONE OR TWO SIDED CHANNEL, CONSTRUCTED ALONG THE PERIMETER OF A DISTURBED CONSTRUCTION AREA.			
	RIGHT-OF-WAY DIVERSION	900			A BENCH OF ROAD AND CHANNEL, CONSTRUCTED SOMETIMES AT AN ANGLED SLOPING ROAD OR UTILITY RIGHT-OF-WAY THAT SUBJECTS TO FLOODING.			
	ROCK CHECK DAM - COARSE AGGREGATE	905	IL-605CA		A SMALL ROCK DAM CONSTRUCTED ACROSS A GRADED SHAPE OF ROADWAY.			
	ROCK CHECK DAM - RIPRAP	905	IL-605R		A SMALL ROCK DAM CONSTRUCTED ACROSS A GRADED SHAPE OF ROADWAY.			
	TEMPORARY DIVERSION	955	IL-655		A TEMPORARY ROOF OR DITCHED CHANNEL, CONSTRUCTION ROADS AND CHANNELS CONSTRUCTED ACROSS CONSTRUCTION AREAS.			
	TEMPORARY SLOPE DRAIN	970	IL-670		A TEMPORARY SLOPE DRAIN CONSTRUCTED ALONG TEMPORARY RUNOFF TO THE BOTTOM OF A CUT OR FILL SLOPE.			
	CULVERT INLET PROTECTION - SLIT FENCE	808	IL-508SF	X	A TEMPORARY SEDIMENT BARRIER LOCATED AT THE INLET TO STORM SEWER CULVERTS.		X	
	CULVERT INLET PROTECTION - STONE	808	IL-508ST		A TEMPORARY STONE BARRIER LOCATED AT THE INLET TO STORM SEWER CULVERTS.			
	INLET PROTECTION - BLOCK & GRAVEL	850	IL-550		A TEMPORARY SEDIMENT CONTROL BARRIER FORMED AROUND A STORM DRAIN INLET BY THE USE OF STANDARD CONCRETE BLOCKS AND GRAVEL.			
SEDIMENT CONTROL	INLET PROTECTION - EXCAVATED DRAIN	855	IL-555		AN EXCAVATED AREA IN THE APPROACH TO A STORM DRAIN DROP MAT OR CURB INLET.			
	INLET PROTECTION - FABRIC DROP	860	IL-560		A TEMPORARY FABRIC BARRIER FABRIC ACROSS A DROP INLET.			
	INLET PROTECTION - GRAVEL & WIRE MESH	861	IL-561		A TEMPORARY SEDIMENT CONTROL BARRIER FORMED AROUND A STORM DRAIN INLET BY THE USE OF GRAVEL AND WIRE MESH.			
	INLET PROTECTION - SOD FILTER	862	IL-562		A SEDIMENT FILTER FORMED AROUND A STORM DRAIN INLET BY THE USE OF SOD.			
	PORTABLE SEDIMENT TANK	895	IL-595		A CONTAINMENT CONTAINER THROUGH WHICH SEDIMENT CARRYING WATER IS PUMPED TO TRAP AND RETURN TO SOURCE.			
	SILT FENCE	930	IL-630	X	A TEMPORARY BARRIER OF ENTRENCHED GEOTEXTILE FABRIC, REEF FABRICS STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS USED TO RETARD OR TRAP SEDIMENT CARRYING RUNOFF FROM SMALL DRAINAGE AREAS OR DISTURBED AREAS.		X	
	STABILIZED CONSTRUCTION ENTRANCE	930	IL-630	X	A STABILIZED ROAD OR ACCESSWAY WITH REEF FABRIC LOCATED AT AN OPEN POINT WHERE TRAFFIC WILL BE TRAFFIC OF A ROAD, A CONSTRUCTION SITE TO OR FROM A PUBLIC HIGHWAY OR WATERWAY, OR A ROAD, A CONSTRUCTION SITE TO OR FROM A PUBLIC HIGHWAY OR WATERWAY.		X	
	SUMP PIT PLAN	950	IL-650		A TEMPORARY PIT WHICH IS CONSTRUCTED TO TRAP AND RETURN WATER FOR REUSING INTO A REUSABLE STORAGE AREA.			
	TEMPORARY SEDIMENT TRAP	960	IL-660		A SMALL, BUT PERMANENTLY FORMING BASIN FORMED BY CONSTRUCTION OF AN EMBANKMENT OR EXCAVATED BASIN.			
	MISC.	DUST CONTROL	825		X	CONTROL OF DUST MOVING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.		X
TEMPORARY CONCRETE WASHOUT	954	IL-675		X	A DIRT FLOOR OF TEMPORARY STRUCTURE PROVIDED ACROSS A STREAM OR WATERCOURSE FOR WASHING OF CONSTRUCTION VEHICLES OF EXCESS DIRT.		X	
STORMWATER MANAGEMENT	TEMPORARY STREAM CROSSING (WETLAND CONSULTANT TO PROVIDE DETAILS)	975	IUM-654		A DEVICE USED TO MAINTAIN LOCAL FLOOD WATER FROM CONSTRUCTION CONSTRUCTION SITES AT PREVENT FLOOD DAMAGE AND ON-SITE POLLUTION.			
	RIPRAP STRIP - GRASSSED	835			A STRIP OF PRESERVED AREA OF VEGETATION DESIGNED TO RECEIVE SEDIMENT AND OTHER POLLUTANTS AND ENHANCE THE INFILTRATION OF SURFACE WATER RUNOFF.			
	GRASSSED-LINED CHANNEL	840			A CHANNEL OR CONSTRUCTED CHANNEL THAT IS SHAPED OR GRADED TO REQUIRE DIMENSIONS AND EROSION RESISTANCE PROVISION FOR STABLE CHANNELS OF RUNOFF.			
	INFILTRATION TRENCH	847	IL-547		AN EXCAVATED INLET WITH COARSE GRAVEL AND MATERIAL WHICH STORMWATER RUNOFF IS COLLECTED FOR TEMPORARY STORAGE AND INFILTRATION.			
	LEVEL SPREADER	870	IL-570		A DEVICE USED TO SPREAD CONCENTRATED RUNOFF UNIFORMLY OVER THE GROUND SURFACE AS SHEET FLOW.			
	PERMEABLE PAVEMENT	890			A PAVEMENT CONSISTS OF STRUCTURAL MATERIALS HAVING A REGULARLY INTERFERRED VOID AREAS. THE VOIDS ARE FILLED WITH FILTERING MATERIALS SUCH AS VEGETATED SOIL, GRAVEL OR SAND.			
	SUBSURFACE DRAIN	945			A CONCEPT THAT REMAINS IN THE GROUND SURFACE TO COLLECT AND CONVEY CONVEY DRAINAGE WATER.			
	URBAN STORMWATER WETLAND	800			A CONCEPT OF A SYSTEM OF SHALLOW POOLS THAT CAN BE CONSTRUCTED TO STORE, FILTER, AND IMPROVE WETLANDS THAT ARE SPECIFICALLY DESIGNED TO LESSEN THE IMPACTS OF URBAN STORMWATER RUNOFF.			
	IMPOUNDMENT STRUCTURE - FULL FLOW	841			A DAM OR EXCAVATION WHICH CREATES AN IMPOUNDMENT TO COLLECT AND STORE DRAINAGE OF WATER.			
	IMPOUNDMENT STRUCTURE - ROUTED	842			A DAM OR EXCAVATION WHICH CREATES AN IMPOUNDMENT TO COLLECT AND STORE DRAINAGE OF WATER.			
SPECIAL AREA PROTECTION	TURF REINFORCEMENT MAT	831	SEE DETAILS		THE STABILIZATION AND PROTECTION OF EXPOSURE SOLES WITH TURF REINFORCEMENT MAT AND VEGETATION.			
	VEGETATIVE STREAMBANK STABILIZATION	995	IL-695		THE STABILIZATION AND PROTECTION OF EXPOSURE STREAMBANKS WITH SELECTED VEGETATION.			
	WELL DECOMMISSIONING	996			THE SEALING AND PERMANENT CLOSURE OF A WATER WELL, BOREHOLE, OR MONITORING WELL.			
	TREE & FOREST ECOSYSTEM PRESERVATION	984	IL-685 IL-689		THE PRESERVATION OF CONIFEROUS STANDS OF TREES FROM DAMAGING DURING CONSTRUCTION.			
	TREE & SHRUB PLANTING	985	IL-685 IL-689		PLANTING OF SELECTED TREES AND SHRUBS.			
	TREE PROTECTION - FENCING	990	IL-690		THE PROTECTION OF INDIVIDUAL TREES FROM DAMAGE DURING CONSTRUCTION.			
	TREE PROTECTION - AUGURING	991			UNDERGROUND CONSTRUCTION SUCH AS CULVERT WORK, BY AUGURING THROUGH AN INDIVIDUAL TREE'S CRITICAL ROOT ZONE.			
	OTHER	TEMPORARY EROSION CONTROL SYSTEM		IDOT STANDARD 280001-07 PAGES 1-2	X	SILT FENCE INSTALLATION, DITCH CHECKS, RESTORATION, SEDIMENT BARS, AND TEMPORARY DITCHES FOR CDD HILL SECTION.		X
		DEWATERING	813			THE REMOVAL OF WATER FROM CONSTRUCTION SITES TO FACILITATE CONSTRUCTION IN AREAS WITH SURFACE WATER OR A HIGH WATER TABLE. WATER SHOULD BE STORED IN TANKS, PONDING AREAS, OR OTHER TYPES OF STORAGE OR SURFACE WATER AND RESERVE FOR CONSERVATION OF NATURAL RESOURCES AND PROPERTY.		

OWNER'S POLLUTION PREVENTION PLAN CERTIFICATION
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:
Title / Position: _____
Date: _____

CONTRACTOR'S CERTIFICATION
I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signature
X _____
(Type Name & Title)
X _____
(Type Name & Title)

Temporary and Permanent
Stabilization

EXECUTIVE SUMMARY

The general contractor, and all subcontractors involved with a construction activity that disturbs site soil or who implement a pollutant control measure identified in the Storm Water Pollution Prevention Plan (SWPPP) must comply with the following requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit as well as any requirements of four governing agencies having jurisdiction concerning erosion and sedimentation control:

A. List the notification requirements of the permit. List names and addresses of the governing agencies requiring notification before earthwork can begin and what the minimum notification time is. (* Indicated any requirements for a pre-construction meeting.)

B. Complete copy of the SWPPP, including copies of all inspection reports, plan revisions, etc., must be retained at the project site all the times during working hours and kept in the permanent project records for at least three years following submission of the Notice of Termination (NOT).

C. The general contractor must provide names and address of all subcontractors working on this project who will be involved with the major construction activities that disturb site soil. This information must be kept with the SWPPP.

D. The general contractor and all subcontractors involved with the major construction activities that disturb site soils must sign a copy of the appropriate certification statement included in this document.

E. As described previously, regular inspections must be made to determine effectiveness of the SWPPP. The SWPPP must be modified as needed to prevent pollutants from discharging from the site. The inspector must be a person familiar with the site, the nature of the major construction activities, and qualified to evaluate both overall system performance and individual component performance. Additionally, the inspector must either be someone empowered to implement modifications to the SWPPP and the pollutant control devices, if needed, in order to increase effectiveness to an acceptable level, or someone with the authority to cause such things to happen.

F. This SWPPP must be updated each time there are significant modifications to the pollutant prevention system or a change of contractors working on the project who disturbs site soil. The general contractor must notify the governing review agency as soon as these modifications are implemented.

G. Discharge of oil or other hazardous substances into the storm water is subject to reporting and cleanup requirements. Refer to Part II, B of the NPDES General Permit for additional information. Copies of the NPDES General Permit and the Notice of Intent forms are available by calling 815-547-8435 or online at <http://www.epa.state.il.us/water/permits/storm-water/forms/notice-construction-permit.pdf>; and <http://www.epa.state.il.us/water/permits/storm-water/forms/notice-construction-permit.pdf>.

H. Once the site reaches final stabilization, the general contractor must complete and submit a Notice of Termination (NOT). A blank form can be found at <http://www.epa.state.il.us/water/permits/storm-water/forms/notice-construction-permit.pdf>.

I. This SWPPP intends to control water-borne and liquid pollutant discharges by some combination of interception, filtration, and containment. The general contractor and subcontractors implementing this SWPPP must remain alert to the need to periodically refine and update the SWPPP in order to accomplish the intended goals.

J. This SWPPP must be amended as necessary during the course of construction in order to keep it current with the pollutant control measures utilized at the site. Amending the SWPPP does not mean that it has to be reapproved. It is acceptable to add additional activities, new activities, or new equipment.

K. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated must be maintained until the NOT is filed. A log for keeping such records can be found online at http://www.epa.gov/epd/swppp_swppp_inspection_form.doc. A different form for the log may be substituted if it is found to be more useful.

A copy of the Notice of Intent (NOI) and a description of the project must be posted in a prominent place for public viewing at the construction site.

The general contractor must provide names and address of all subcontractors working on this project who will be involved with the major construction activities that disturb site soil. This information must be kept with the SWPPP.

The general contractor and all subcontractors involved with the major construction activities that disturb site soils must sign a copy of the appropriate certification statement included in this document.

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A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated must be maintained until the NOT is filed. A log for keeping such records can be found online at http://www.epa.gov/epd/swppp_swppp_inspection_form.doc. A different form for the log may be substituted if it is found to be more useful.

INTRODUCTION
This SWPPP has been prepared for major activities associated with the construction of buildings, parking, and sewers on a 2.96 acre site. This SWPPP includes the elements necessary to comply with the national baseline general permit for construction activities administered by the U.S. Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) program and all local governing agency requirements. This SWPPP must be updated and on-site before construction begins.

Construction phase pollutant sources anticipated at the site are disturbed bare soil, vehicle fumes and lubricants, chemicals associated with building construction, and building materials. Without adequate control there is the potential for each type of pollutant to be transported by storm water.

Project construction will consist of the construction of buildings, site grading, paving & seeding to facilitate a new building.

Purpose
A major goal of pollutant prevention efforts during project construction is to control soil and pollutants that originate on the site and prevent them from flowing to surface waters. The purpose of this SWPPP is to provide guidance for achieving that goal. A successful prevention program also relies upon careful inspection and adjustments during the construction process in order to enhance its effectiveness.

Scope
This SWPPP must be updated and on-site when construction begins. It primarily addresses the impact of storm rainfall and runoff areas of the ground surface disturbed during the construction process. In addition, there are recommendations to controlling other sources that may accompany the major construction activities. This SWPPP will terminate when disturbed areas are stabilized, construction activities covered herein have ceased, and a completed Notice of Termination (NOT) is filed to the governing agency requiring the NOT. Particular forms can be found at the following web addresses: <http://www.epa.state.il.us/water/permits/storm-water/forms/notice-construction-permit.pdf>; and <http://www.epa.state.il.us/water/permits/storm-water/forms/notice-construction-permit.pdf>.

The National Baseline General Permit for Storm Water Discharges From Construction Activities prohibits most non-storm water discharges during the construction phase. Allowable non-storm water discharges that could occur during construction on this project, which would therefore be covered by the General Permit, include:

- Discharges from the fire fighting activities.
- Fire hydrant flushing.
- Water from wash vehicles or control dust.
- Water flowing from portable sources and water line flushing.
- Irrigation drainage.
- External building wash down which does not use detergents.
- Rainfall from pavement wash down where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed and where detergents have not been used).
- Air conditioning condensate.
- Springs and uncontaminated groundwater.
- Foundation or footing drains where flows are not contaminated with process materials such as solvents.

The techniques described in this SWPPP focus on preventing control of pollutant discharges with practical approaches that utilize readily available expertise, materials, and equipment.

The owner referred to in this SWPPP is Boone County. The general contractor will construct the site development improvements while working under contract with the owner.

Site Description:

- PROJECT NAME: BOONE COUNTY ANIMAL SERVICES
- LOCATION, COUNTY: BOONE
- LOCATION, CITY: BOONE COUNTY
- LOCATION, ADDRESS: NORTH OF SQUAW PRARIE RD BETWEEN MCKINLEY AVE & FAIRGROUNDS RD
- LOCATION, LAT/LONG: 42°17'37", 88°51'01"
- OWNER(S) NAME(S): BOONE COUNTY
- OWNER(S) ADDRESS: 401 WHITNEY BOULEVARD, BELVIDERE, IL 61008
- PROJECT DESCRIPTION: PROJECT CONSTRUCTION WILL CONSIST OF THE CONSTRUCTION OF BUILDINGS, SITE GRADING, PAVING & SEEDING TO FACILITATE A NEW BUILDING AND FUTURE BUILDINGS.
- RUNOFF COEFFICIENT: 0.25 (EXISTING CONDITIONS); 0.455 (FOR INTERIM DEVELOPMENT)
- PROMINENT SOIL TYPES: 1909 PLANO SILT LOAM; 3102C MCHERY SILT LOAM - EROSION POTENTIAL MODERATE
- SITE AREA: 2.96 ACRES
- NAME OF RECEIVING WATERS: UNNAMED TRIBUTARY TO THE KISHKAUKEE RIVER
- SURFACE WATER ON THE SITE: NONE
- CONSTRUCTION DRAINAGE: THE "ORDINARY STORM WATER POLLUTION PREVENTION PLAN" DRAWINGS CONTAIN THE NECESSARY INFORMATION TO SATISFY THE SWPPP LOCATIONS & CONTROLS DRAWING REQUIREMENTS.
- GRADING & STORM WATER POLLUTION PREVENTION PLAN SHEETS 2-4 - 5/8/15

AS PREPARED BY C.E.S. INC.

Governing Agencies:
Illinois Environmental Protection Agency (IEPA):
The US EPA governs the Clean Water Act and has granted the State of Illinois EPA control of administering a state-wide National Pollutant Discharge Elimination System (NPDES) Program for Construction & Industrial Activities. General NPDES Permit Number ILR10 for Construction Activities in Illinois was updated on 8/12/03 and expires on 7/31/2018. To be approved to use this permit, the owner must submit an EPA Notice of Intent (NOI) Form for Construction Activities, and wait 30-days from the date of the posting before disturbing the ground at the construction site, unless otherwise notified by the IEPA for additional permit requirements. In addition, some local governments have SWPPP requirements and may also require submission of the signed NOI Form. The NOI, the General Permit No. ILR10, the SWPPP, and any local required documents must be available at all job sites. Upon the completion of construction, a Notice of Termination (NOT) Form must also be filed with the same agencies.

Local Plans: In addition to this SWPPP, construction activities associated with the project must comply with any guidelines set forth by local regulatory agencies.

Local Municipality: Boone County

Storm Water Ordinance: For Boone County requirements.

SEQUENCE & TIMING OF MAJOR ACTIVITIES:
Described below are the major construction activities that are the subject of this SWPPP. The actual schedule for implementing pollutant control measures will be determined by project construction progress.

Sequence:	Activity Description	Completion Date (Initial Date)
1.	Install checkdams in adjacent ditches.	
2.	Install Construction Entrance.	
3.	Install Silt Fence per the SWPPP Drawing.	
4.	Construct rock surface for temporary parking.	
5.	Construct & grade improvement areas (Silt fence already in place).	
6.	Begin grading of surface.	
7.	Install intermediate Silt Fences, permanent geotextile slope stabilization fabric, and erosion control fabric mats on necessary.	
8.	Install underground utilities. Sediment basins will be utilized as required to bound the down slope side of utility construction and soil stabilizers.	
9.	Final Grading. Sediment basins will be maintained down slope from disturbed soil during this operation.	
10.	All Soil Disturbing Activities are Completed	
11.	Topsoil / Seeding Stabilized to 70% Density	
12.	Remove Erosion Control Devices	
13.	Submit Notice of Termination (NOT) Form	

Timing:
Areas where construction activities temporarily ceases for more than 14-days will be stabilized with a temporary seed and mulch within 7-days of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and mulch. After the entire site is stabilized, the accumulated sediment will be removed and temporary structural controls will be removed.

EROSION AND SEDIMENT CONTROLS
Stabilization Practices:

Temporary Stabilization: Top soil stock piles and disturbed portions of the site where construction activity temporarily ceases for at least 14-days will be stabilized with temporary seed and mulch no later than 7-days from the last construction activity on that area. The temporary seed shall be Ryegrass applied at the rate of 100 pounds per acre. Prior to seeding, 2,000 pounds of ground agricultural limestone and 1,000 pounds of 15-15-15 fertilizer shall be applied to each area to be stabilized. After seeding, each area shall be mulched with 4,000 pounds per acre of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight.

Permanent Stabilization: Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 7-days after the last construction activity. The permanent seed shall consist of 80 lbs/acre tall fescue, and 40 lbs/acre clover seed. Prior to seeding, 2,000 pounds of ground agricultural limestone and 2,000 pounds of 15-15-15 fertilizer shall be applied to each area to be stabilized. After seeding, each area shall be mulched with 4,000 pounds per acre of straw. The straw mulch is to be tacked into place by a disk with blades set nearly straight.

Structural Practices:
See table at the far left side of this page.

Storm Water Management:
Undeveloped Areas: The areas which are not permanently developed will be graded at less than 0.5:1 and have permanent seeding or plantings.

Permanently Developed Areas: Storm water drainage will be provided by swales and culverts to a proposed detention basin on site.

OTHER POLLUTANT CONTROLS
Dust Control:

Construction sites must enter and exit the site at the stabilized construction entrance. The purpose is to trap dust and mud that would otherwise be carried off by construction traffic.

Water trucks will be used as needed during construction to reduce dust generated on the site. Dust control must be provided by the general contractor to a degree that is acceptable to Boone County and in compliance with applicable local and state dust control regulations. After construction, the site will be stabilized (as described elsewhere) which will reduce the potential for dust generation.

Waste Disposal:
Hazardous Waste: No solid materials, including building materials, are allowed to be discharged from the site with storm water. All solid waste, including disposable materials (except for the major construction activities), must be collected and stored in a securely locked container. The containers will be emptied periodically by a contract trash disposal service and hauled away from the site. Substances that have the potential for polluting surface water and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed so that it will not flow from the site or enter groundwater, even if the spill is removed, treated, and disposed of off-site. In this regard, petroleum spillage substances should be handled in a manner consistent with the impact they represent.

Hazardous Waste:
While no hazardous waste is expected on this project, any hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Site personnel will be notified in these practices, and the individual who manages the day-to-day site operations will be responsible for inspecting for such practices as follows:

Sanitary Waste:
All personnel involved with construction activities must comply with state and local sanitary or septic system regulations. Temporary sanitary facilities will be provided at the site throughout the construction phase. They must be utilized by all construction personnel and will be serviced by a commercial contractor.

Off-site Vehicle Tracking:
Construction Traffic: A temporary construction entrance and a stabilized construction entrance shall be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be swept daily to remove excess mud, dirt, or rock tracked from the site. Dump trucks hauling material through the site will be covered with a tarp.

CONSTRUCTION PHASE "BEST MANAGEMENT PRACTICES"

During the construction phase the general contractor will implement the following measures:

- Minimize grading during clearing, excavation, grading, etc. operations and the stockpiled up slope from adequate sedimentation controls.
- The general contractor will designate areas for equipment fueling, maintenance, and repair. The general contractor and subcontractors will utilize these areas. The areas will be protected by a temporary perimeter berm.
- Use of detergents for large scale washing is prohibited (i.e. vehicles, buildings, pavement surfaces, etc.).
- Chemicals, paints, solvents, herbicides, and other toxic materials must be stored in waterproof containers. Except during application, the contents must be kept in trucks or other storage facilities. Runoff containing such material must be collected, removed from the site, treated, and disposed at an approved solid waste or chemical disposal facility.

CERTIFICATION OF COMPLIANCE

This SWPPP reflects the requirements for storm water management and erosion and sediment control, as established in Boone County and EPA Requirements for General NPDES Permit No. ILR10. To ensure compliance, this plan was prepared in accordance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities, and any other applicable requirements for sediment and erosion site plans (or permits) or storm water management site plans (or permits).

MAINTENANCE / INSPECTION PROCEDURES

Between the time this SWPPP is enacted and final site stabilization is achieved, all disturbed areas and pollutant controls must be inspected at least once every seven calendar days and within 24 hours following a rainfall of 0.5 inches or greater. The purpose of the site inspections is to assess performance of pollutant controls. The inspections will be conducted by the general contractor's designated representative. Based on these inspections, the general contractor will decide whether it is necessary to modify this SWPPP, add or improve sediment barriers, or whatever else may be needed in order to prevent pollutants from leaving the site via storm water runoff. The general contractor has the duty to cause pollutant control measures to be repaired, modified, maintained, supplemented, etc. in order to achieve effective pollutant control.

Examples of particular items to evaluate during site inspections are listed below. This list is not intended to be all-inclusive. During each inspection the inspector must evaluate overall pollutant control system performance as well as particular details of individual system components. Additional factors should be considered as appropriate to the circumstances.

- Locations where vehicles enter and exit the site must be inspected for evidence of off site sediment tracking. A stabilized construction entrance will be constructed where vehicles enter and exit. This entrance will be maintained or supplemented as necessary to prevent sediment from leaving the site on vehicles.
- Sediment barriers must be inspected and, if necessary, they must be enlarged or cleaned or improved to provide additional capacity. All material excavated from behind sediment barriers will be stored on the job site. Additional sediment barriers must be constructed as needed.
- Inspectors will evaluate disturbed areas and areas used for storing materials that are exposed to rainfall or evidence of, or the potential for, pollutants entering the drainage system. If necessary, the materials must be covered or original covers must be repaired or supplemented. Also, protective berms must be constructed, if needed, in order to contain runoff from material storage areas.
- Grassed areas will be inspected to confirm that a healthy stand of grass is maintained. The site has achieved final stabilization once all bare soil areas are covered with existing foundation or pavement, or have a stand of grass with at least 70 percent density. The density of 70 percent or greater must be maintained to be considered stabilized. Areas must be watered, fertilized, and reseeded as needed to achieve the goal.
- All discharge points must be inspected to determine whether erosion control measures are effective in preventing significant impacts to receiving waters.

Based on inspection results, any modification necessary to increase effectiveness of this SWPPP to an acceptable level must be made within seven calendar days of the inspection. The inspection reports must be completed promptly and additional remarks should be included if needed to fully describe a situation. An input aspect of the inspection report is the description of additional measures that need to be taken to enhance plan effectiveness. The inspection report must identify whether the site was in compliance with the SWPPP at the time of inspection and specifically identify all incidents of non-compliance. The form for assessment of non-compliance can be found at the following web address: <http://www.epa.state.il.us/water/permits/storm-water/forms/notice-construction-permit.pdf>

Inspection reports must be kept on file with the general contractor as an integral part of this SWPPP for at least three years from the date of completion of the project.

Ultimately, it is the responsibility of the general contractor to assure the adequacy of site pollutant discharge controls. Actual physical site conditions or contractor practices could make it necessary to install

