

# SAMPLE STORMWATER POLLUTION PREVENTION PLAN COMPLEX SITE

OWNER/DEVELOPER: HEAVEN SENT DEVELOPMENT, LLC  
1212 SOMEWHERE STREET  
ST LOUIS, MISSOURI 63XXX  
PHONE: 636-555-1212

ENGINEER: NINJA ENGINEERING  
1001 ELSEWHERE STREET  
ST LOUIS, MISSOURI 63XXX  
PHONE: 636-555-0101

### SWPPP CERTIFICATION

The Property Owner/Developer hereby certifies that he is familiar with the SWPPP and assumes full responsibility for the performance and maintenance of the SWPPP as stated on the approved plans. He will ensure that all contractors understand and are familiar with the SWPPP for the site and that each contractor agrees to implement and protect elements of the SWPPP as they relate to his work. The Property Owner/ Developer's onsite representative shall be responsible for the performance and maintenance of the SWPPP. In addition, the undersigned Owner/Developer assures that all City property or roads will be adequately protected.

*Gabriel Luther*

Date August 24, 2006

Gabriel Luther, President  
Heaven Sent Development, LLC  
636-555-1212

Emergency Contact: Joe Schlobotnik, Heaven Sent Development, 314-555-1111 (Cell)

### GENERAL SITE INFORMATION

PROPERTY ADDRESS: 2222 PUBLIC STREET  
CHESTERFIELD, MISSOURI 63017

SITE AREA: 8.07 ACRES

SITE BENCHMARK: OLD ROW MARKER FOR PUBLIC STREET  
AT STA 108+30.50 OFFSET 50 FEET TO  
THE EAST. ELEVATION 656.99

### LEGEND

☉	SANITARY INLET	C.O.	CLEAN OUT
⊕	STORM INLET	T.B.R.	TO BE REMOVED
⊕	TEST HOLE	T.B.R.&R.	TO BE REMOVED AND RELOCATED
⊕	POWER POLE	T.B.P.	TO BE PROTECTED
⊕	LIGHT STANDARD	T.B.A.	TO BE ABANDONED
C.I.	CURB INLET	B.C.	BASE OF CURB
D.C.I.	DOUBLE CURB INLET (EXISTING)	T.C.	TOP OF CURB
G.I.	GRATE INLET (EXISTING)	T.W.	TOP OF WALL
A.I.	AREA INLET (EXISTING)	TYP.	TYPICAL
D.A.I.	DOUBLE AREA INLET	U.N.O.	UNLESS NOTED OTHERWISE
F.E.	FLARED END SECTION	U.I.P.	USE IN PLACE
E.P.	END PIPE	—578—	EXISTING CONTOUR
E.D.	ENERGY DISSIPATOR	—578—	PROPOSED CONTOUR
M.H.	MANHOLE	—578—	TREE LINE
R.C.P.	REINFORCED CONCRETE PIPE	—8" PVC	SAN. SEWER (EXISTING)
C.M.P.	CORRUGATED METAL PIPE	—8" PVC	SAN. SEWER (PROPOSED)
C.I.P.	CAST IRON PIPE	—8" PVC	STORM DRAIN (EXISTING)
PVC	POLYVINYL CHLORIDE	—8" PVC	STORM DRAIN (PROPOSED)
VCP	VITRIFIED CLAY PIPE	☐	PHONE BOX
←	GUY WIRE	8"	IRON PIPE
○	SIGN	—6" W—	WATER LINE, SIZE
○	POST	☐	HYDRANT
⊕	WATER METER	☐	CHECK DAM
—	CLEARING LIMITS	☐	CONCRETE PAVEMENT
—	SILT FENCE	☐	PLACED RIP-RAP W/UNDERLAIN FABRIC
—	SITE BOUNDARY	☐	CURLEX SILT TRAP
☐	GRATED TROUGH	☐	TURF REINFORCEMENT MAT
☐	RETAINING WALL		

### GENERAL CONDITIONS OF THE STORMWATER POLLUTION PREVENTION PLAN

- I. Erosion and siltation controls shall be installed prior to any grading and be maintained throughout the project until adequate vegetative growth insures no further erosion of the soil and work is acceptable to the owner and/or controlling regulatory agency.  
  
See the BMP Implementation Schedules on Sheets 1, 2 and 3 for specific instructions on when specific BMP's are to be installed or removed.
- II. During maintenance of a silt control device, any soil material removed from the silt control device shall be spread out in thin lifts to dry. Only the rear-yard areas of the development may be used as drying areas. After the soil has dried it may be mixed with other fill material and used on-site. Any trash or refuse etc. removed from the device shall be disposed of in accordance with the NON-SEDIMENT POLLUTION CONTROL BMP on Sheet 4.
- III. Should a situation arise that is not specifically addressed by the Stormwater Pollution Prevention Plan, as outlined on the following sheets, the following general provisions shall be applied:
  1. When clearing and/or grading operations are completed or will be suspended for more than 5 days, all necessary precautions shall be taken to retain soil materials on site. Protective measures may include a combination or temporary seeding, periodic wetting, mulching, or other suitable means.
  2. If cut and fill operations occur during a season not favorable for immediate establishment of permanent ground cover, a fast germinating annual such as rye grasses or Sudan grasses shall be utilized to retard erosion, if adequate stormwater detention and erosion control devices have not been established.
  3. Temporary siltation control measures (structural) shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.
  4. Where natural vegetation is removed during grading, vegetation shall be reestablished as soon as possible in such a density as to prevent erosion.
  5. Storm water pipes, outlets and channels shall be protected by silt barriers and kept free of waste and silt at all times prior to final surface stabilization and/or paving.
- IV. At least once every week and after every rainfall event of 0.25 inches or more, erosion and siltation control devices shall be inspected for damage and amount of sedimentation accumulated and corrective actions shall be taken. Reports of these inspections and corrective actions shall be prepared on the forms provided by the City and submitted to the City of Chesterfield Department of Public Works within 5 days of the date of inspection.
- V. The following actions shall be taken should a sediment control device fail and sediment is lost off-site:
  1. The affected property owner shall be contacted immediately and informed of the issue. At this time the failed sediment control devices, on-site, shall be repaired or replaced in order to prevent a further loss of sediment off-site.
  2. The Emergency Contact and the Contractor shall meet with the affected property owner at the site to evaluate the damage and determine the course of the repair.
  3. Permission shall be obtained from the affected property owner for the clean up work to proceed.
  4. Sediment to be removed from the area with general grading equipment.
  5. Appropriate BMP's, as outlined in the SWPPP, shall be implemented to protect the affected off-site area until it is returned to its original condition.
  6. The steps taken to mitigate the incident shall be noted and included on the next weekly report to the City of Chesterfield Department of Public Works.

### DRAINAGE PLAN

General -  
The drainage channel that exits the site to the south is the single point of discharge for the undeveloped site and the proposed development. This greatly simplifies the drainage plan. Analysis of overflow paths at each silt control device is not required since any overflows will be directed to this single point of discharge.

Phase 1 -  
All runoff is directed to the drainage channel at the south end of the site. Velocities are kept low with check dams in the channel and silt fence on the exposed slopes.

Phase 2 -  
All runoff is directed to the detention basin that is under construction. The area south and east of the retaining wall forming the detention basin and the drainage area tributary to AI-4 must be finish graded and sodded prior to completion of the retaining wall. This will mitigate damage should AI-4 fail.

Phase 3 -  
All runoff is directed to the detention basin except for any possible overflows from AI-4. However, flows should be diverted away from the trench drains until the tributary areas to the trench drains have been stabilized.

### General Design Assumptions:

	Bare Soil	Temp. Seed	Undisturbed	Surrounding Developed Area
	PI Factor (cfs/ac)	PI Factor (cfs/ac)	PI Factor (cfs/ac)	PI Factor (cfs/ac)
15-Yr 20-min Storm	2.6	1.9	1.7	2.4
15-Yr 20-min Storm + 25%	3.25	2.38	2.13	3.0

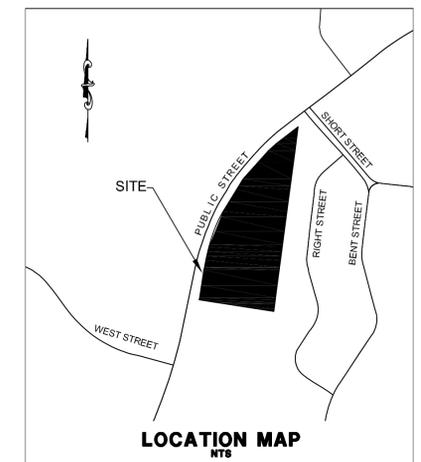
North Work Area ±3.47 Acres  
South Work Area ±4.60 Acres

In general the drainage plan should address where sediment laden runoff is directed. The flow path of the runoff, whether open channel or pipe, should have sufficient capacity for the design storm. The main goals are to identify potential problem areas and minimize the amount of sediment that leaves the site should one or more of the upstream BMP's fail, and to verify the capacity of the system.

Inlet capacities, the ponding around an inlet protected by a BMP and bypass of that inlet need to be accounted for in the design.

Velocities in open channels must be non-erosive during each phase of construction. As a rule of thumb:  
- If velocities are less than 2 ft/sec in an open channel then no stabilization is required during construction (bare soil condition).  
- If the velocity is between 2 ft/sec and 5 ft/sec during construction, the drainage way will need to be stabilized in some manner or devices installed to reduce the velocity of the runoff (sodding, installation of erosion control blankets, rip rap or other hard armor, check dams).  
- If the velocity is greater than 5 ft/sec the drainage way will need a permanent lining (turf reinforcement mat or hard armor).

When using Manning's equation to determine the velocity in a channel please use the appropriate roughness coefficient (n-value) for the design condition.



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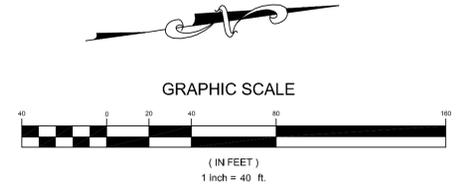
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		SCHEDULE OF MAJOR CONSTRUCTION ACTIVITIES																					
		SEE PLAN SHEETS 1, 2 & 3 FOR BMP IMPLEMENTATION SCHEDULE FOR EACH PHASE OF WORK																		Estimated Start Date - March, 200X			
		WEEK																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
PHASE 1	NORTH WORK AREA	Install Construction Entrance	XXXX																				
		Install Washdown Area	XXXX																				
		Install Construction Parking Area	XXXX																				
		Demolish Structures	X	XX																			
		Grade Haul Road and Pad for Stump Grinder			XXXXX																		
PHASE 1	SOUTH WORK AREA	Clear Trees	XX		XXXXX																		
		Temp. Seed and Mulch Disturbed Areas				XXX																	
		Demolish Structures		X	XXX																		
		Clear Trees				XXXXX																	
		Install Ditch Checks/Silt Fence				XX																	
PHASE 2	NORTH WORK AREA	Construct Sediment Trap								XXXXX													
		Grade Diversion Swale								XX													
		Install Storm Sewer									XXXXX												
		EP-1 to OS-2										XX	XXXX										
		OS-2 to AI-4												XX	XXX								
PHASE 2	SOUTH WORK AREA	OS-2 to MH-5																					
		MH-5 to MH-9																			XXXXX		
		Construct Retaining Wall at Detention Basin		X	XXXXX	XXXXX																	
		Grading for the Multi-tiered Wall		XXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX															
		Construct Multi-tiered Wall		XXXXXX	XXXXXX	XXXXXX	XXXXXX																
PHASE 3	COMBINED WORK AREAS	Haul In and Place Fill										XXXXX	XXXXXX	XXXXXX	XXXXXX								
		Install Storm Sewers																					
		Install Sanitary Sewers																					
		Install Watermain																					
		Install Remaining Utilities																					
Finish Grade, Rock and Pave Streets																							
Begin Home Construction																							



ISSUED	REVISIONS
1/18/2005	08/24/2006
<b>City of Chesterfield</b> Department of Public Works Chesterfield, Missouri	
SAMPLE SWPPP- COMPLEX SITE	

# PHASE 1



Typically the amount to be stockpiled for maintenance/emergency repairs should be equal to approximately 10% of the total BMP Quantities given above. However, good sense should be applied when determining the amounts to be stockpiled. For instance, silt fence usually comes in 100' lengths; if 5 inlets are to be protected with True Dam® then 1 or 2 True Dam® devices should be stockpiled; enough rock should be kept on hand to completely replace at least 1 rock check dam, etc. Seed and mulch are typically available on short notice and do not need to be stockpiled. Also, slopes will usually need to be repaired/regraded prior to reseeding and mulching which gives ample time to have the necessary materials delivered to the site.

BMP QUANTITIES			
PHASE 1			
SOUTH WORK AREA		NORTH WORK AREA	
SILT FENCE	XXX LN. FT.	SILT FENCE	XXX LN. FT.
SEED	XXX LBS	SEED	XXX LBS
MULCH	XXX LBS	MULCH	XXX LBS
DITCH CHECKS		CONSTRUCTION ENTRANCE	
ROCK	XX TONS	ROCK	XX TONS
		FABRIC	XXX YD <sup>2</sup>

MAINTAIN STOCKPILE OF EROSION/SEDIMENT CONTROL DEVICES, IN THE FOLLOWING QUANTITIES, SOUTH OF CONSTRUCTION ENTRANCE/PARKING AREA, TO BE USED FOR MAINTENANCE AND EMERGENCY REPAIRS. ANY MATERIALS USED SHOULD BE REPLACED WITHIN THE NEXT TWO (2) DAYS.

SILT FENCE	XXX LN. FT.
ROCK	
DITCH CHECKS	X TONS
CONSTRUCTION ENTRANCE	X TONS

WORK ITEMS AND BMP IMPLEMENTATION SCHEDULE	
PHASE 1	
SOUTH WORK AREA	NORTH WORK AREA
1. Obtain permits (separate permit process) to demolish existing structures to be removed. Implement non-sediment pollution controls.	1. Obtain permits (separate permit process) to demolish existing structures to be removed. Implement non-sediment pollution controls.
2. Demolish structures and remove all debris. Grade area to drain. Seed and mulch disturbed area.	2. Demolish structures and remove all debris. Grade area to drain. Seed and mulch disturbed areas.
3. Clear work area starting from the west and moving east until the drainage channel is reached, then clear from east to west. Install silt fence as the site is cleared. Install a row of silt fence for every 10' vertical change in grade.	3. Clear trees from construction parking area. Utilize existing driveway for construction access and parking. Install silt fence as site is cleared.
4. Install check dams.	4. Install construction entrance, washdown station and parking area.
	5. Grade haul road and pad for stump grinder. Minimize the disturbed area as much as possible.
	6. Clear trees from remainder of work area.
	7. Temporary seed and mulch disturbed areas.

ESTIMATED CLEARING  
NORTH WORK AREA ± X.X ACRES  
SOUTH WORK AREA ± X.X ACRES

BMP Referenced This Sheet:	BMP Description/Detail Found on:
Non-Sediment Pollution Controls	Sheet 4
Seed and Mulch	Sheet 5
Silt Fence	Sheet 5
Construction Entrance	Sheet 4
Washdown Station	Sheet 4
Parking Area	Sheet 4
Check Dams	Sheet 5



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Professional Engineer  
Dina Smart  
1/18/2005

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Department of Public Works  
Chesterfield, Missouri

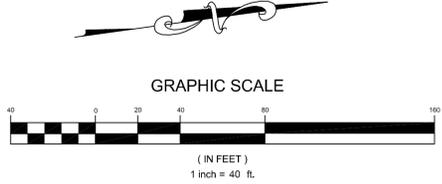
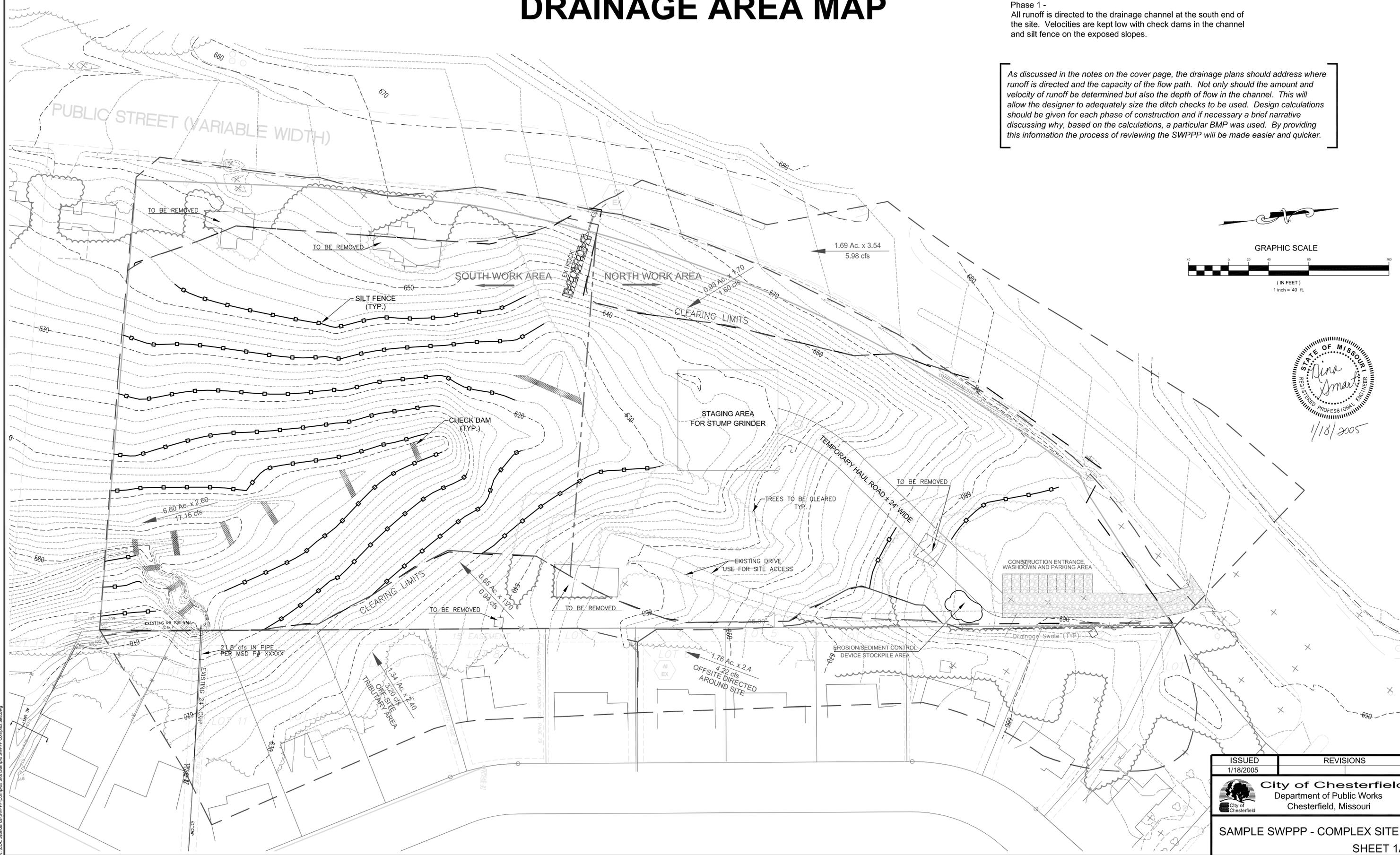
SAMPLE SWPPP - COMPLEX SITE  
SHEET 1

# PHASE 1 DRAINAGE AREA MAP

## DRAINAGE PLAN

Phase 1 -  
All runoff is directed to the drainage channel at the south end of the site. Velocities are kept low with check dams in the channel and silt fence on the exposed slopes.

As discussed in the notes on the cover page, the drainage plans should address where runoff is directed and the capacity of the flow path. Not only should the amount and velocity of runoff be determined but also the depth of flow in the channel. This will allow the designer to adequately size the ditch checks to be used. Design calculations should be given for each phase of construction and if necessary a brief narrative discussing why, based on the calculations, a particular BMP was used. By providing this information the process of reviewing the SWPPP will be made easier and quicker.



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SAMPLE SWPPP - COMPLEX SITE SHEET 1A	

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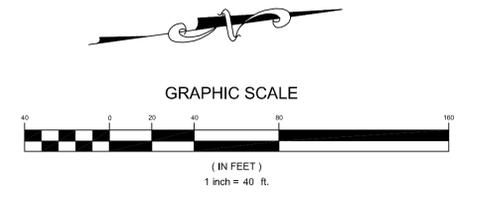
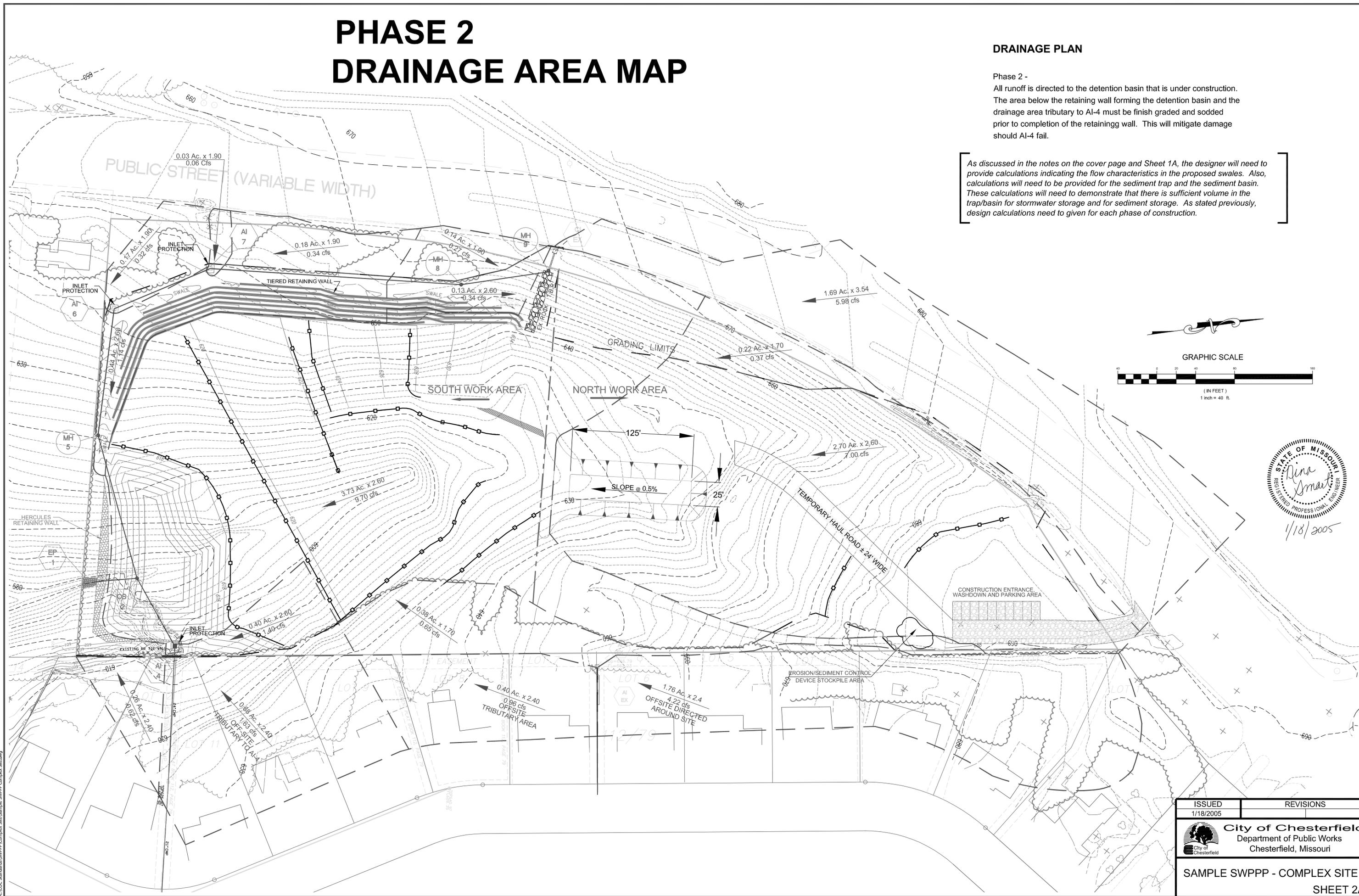


# PHASE 2 DRAINAGE AREA MAP

## DRAINAGE PLAN

Phase 2 -  
All runoff is directed to the detention basin that is under construction. The area below the retaining wall forming the detention basin and the drainage area tributary to AI-1 must be finish graded and sodded prior to completion of the retaining wall. This will mitigate damage should AI-4 fail.

As discussed in the notes on the cover page and Sheet 1A, the designer will need to provide calculations indicating the flow characteristics in the proposed swales. Also, calculations will need to be provided for the sediment trap and the sediment basin. These calculations will need to demonstrate that there is sufficient volume in the trap/basin for stormwater storage and for sediment storage. As stated previously, design calculations need to be given for each phase of construction.



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SAMPLE SWPPP - COMPLEX SITE SHEET 2A	

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# PHASE 3

Typically the amount to be stockpiled for maintenance/emergency repairs should be equal to approximately 10% of the total BMP Quantities given above. However, good sense should be applied when determining the amounts to be stockpiled. For instance, silt fence usually comes in 100' lengths; if 5 inlets are to be protected with True Dam® then 1 or 2 True Dam® devices should be stockpiled; enough rock should be kept on hand to completely replace at least 1 rock check dam, etc. Seed and mulch are typically available on short notice and do not need to be stockpiled. Also, slopes will usually need to be repaired/regraded prior to reseeded and mulching which gives ample time to have the necessary materials delivered to the site.

BMP QUANTITIES	
PHASE 3	
SILT FENCE	XXX LN. FT.
SEED	XXX LBS
MULCH	XXX LBS
TRM	XXX YD <sup>2</sup>
SOD	XXX YD <sup>2</sup>
TRUE DAM	2 @ XX LN. FT.
	1 @ X LN. FT.

MAINTAIN STOCKPILE OF EROSION/SEDIMENT CONTROL DEVICES, IN THE FOLLOWING QUANTITIES, SOUTH OF CONSTRUCTION ENTRANCE/PARKING AREA, TO BE USED FOR MAINTENANCE AND EMERGENCY REPAIRS. ANY MATERIALS USED SHOULD BE REPLACED WITHIN THE NEXT TWO (2) DAYS.

SILT FENCE	1 @ XX LN. FT.
TRUE DAM	1 @ X LN. FT.
ROCK	
CONSTRUCTION ENTRANCE	X TONS

## WORK ITEMS AND BMP IMPLEMENTATION SCHEDULE

### PHASE 3

1. Combine Work Areas and begin hauling fill into site. Remove Phase II silt controls in areas being filled.
2. Starting at the existing row of silt control at the top of the detention basin slope install a row of silt fence, Maximum 100' spacing for grade <10%, Maximum 50' spacing for grade ≥ 10%, as the fill progresses northward up the hill.
3. Install remainder of storm sewer system and sanitary sewers. Where sewer lines will cross silt fences, cut the fence at the centerline of the sewer trench and reinstall the fence parallel to the trench. The free ends of the fence shall be pointing uphill. Leave enough working room between the fence to accommodate machinery and materials storage. Should a sewer trench need to be left open for more than one day, spoil from the excavation shall be placed around the trench in a manner to divert runoff away from the trench.
4. Install inlet protection as storm sewer structures are completed. Grade swales tributary to the area inlets. Final seed swales and install turf reinforcement mats.
5. Install remaining utilities.
6. Remove silt control within the proposed street ROW. Final grade, rock and pave the street.
7. Begin home construction. Implement "Work Plan for Typical Lot" (See Details on Sheet 8). Remove silt fences from mass fill operation as needed.
8. When 50% of homes are completed finish grade and sod detention basin.
9. Any lots that are not under construction within 14 days of the completion of the paving operation shall be temporarily seeded and mulched.
10. When 70% of homes are completed the construction entrance/washdown/parking and BMP stockpile areas may be removed. The areas should be immediately finish graded and seeded or sodded.

## ESTIMATED GRADING QUANTITIES

XXX YD<sup>3</sup> FILL

BMP Referenced This Sheet:	BMP Description/Detail Found on:
Silt Fence	Sheet 5
Inlet Protection	Sheet 6
True Dam	Sheet 7
Typical Lot	Sheet 8
TRM	Sheet 7
Sod	Sheet 6
Seed and Mulch	Sheet 5



STATE OF MISSOURI  
 Registered Professional Engineer  
 Dina Smart  
 1/18/2005

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**City of Chesterfield**  
 Department of Public Works  
 Chesterfield, Missouri

**SAMPLE SWPPP - COMPLEX SITE**  
**SHEET 3**

# PHASE 3 DRAINAGE AREA MAP

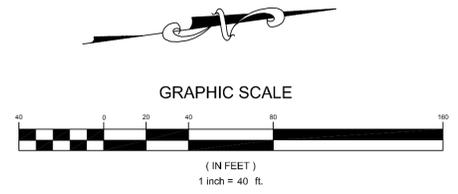
## DRAINAGE PLAN

Phase 3 -

All runoff is directed to the detention basin except for any possible overflows from AI-4. However, flows should be diverted away from the trench drains until the tributary areas to the trench drains have been stabilized.

NOTE: THE P.I. VALUES USED ON THIS PLAN ARE FOR THE POST DEVELOPED CONDITION (15 YR-20 MIN DESIGN STORM) STORM SEWER DESIGN. THE P.I. VALUES GIVEN ARE EQUAL TO OR GREATER THAN THE 2.6 VALUE ASSUMED FOR BARE SOIL.

As discussed in the notes on the cover page and Sheets 1A and 2A, the designer will need to provide calculations indicating the flow characteristics in the proposed swales. Also, calculations will need to be provided for the sediment basin. These calculations will need to demonstrate that there is sufficient volume in the basin for stormwater storage and for sediment storage. As stated previously, design calculations need to be given for each phase of construction.



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SAMPLE SWPPP - COMPLEX SITE SHEET 3A	

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**NON-SEDIMENT POLLUTION CONTROL**

PHYSICAL DESCRIPTION:

Control measures designed to prohibit chemicals, hazardous materials, solid waste and construction debris from polluting stormwater. Pollutants carried in solution or as surface films on runoff will be carried through most erosion control and sediment capture BMPs. Keeping substances like fuel, oil, asphalt, paint, solvents, fertilizer, soil additives, concrete wash water, solid waste and construction debris from polluting runoff can be accomplished to a large extent through good housekeeping on the site and following the manufacturer's recommendations for disposal.

WHERE BMP IS TO BE INSTALLED:

Collection, storage and fueling areas should be located onsite in an area that does not receive a substantial amount of runoff from upland areas and does not drain directly to lakes, creeks, streams, rivers, sewers, groundwater, wetlands, or road ditches.

WHEN BMP IS TO BE INSTALLED:

Immediately following installation of construction entrance and wash station

INSTALLATION/CONSTRUCTION PROCEDURES:

Place waste receptacles near area of work  
Construct protective berm or other devices around fueling and hazardous materials storage areas  
Install appropriate signage  
Post guidelines for proper handling, storage and disposal of materials, and emergency spill cleanup on site

O&M PROCEDURES:

Inspect activities on a weekly basis  
Inspect storage areas and control devices at least every two weeks and after every storm  
Make necessary corrections and repairs

SITE CONDITIONS FOR REMOVAL:

Maintain practices until all construction on the site has been completed

TYPICAL DETAILS:

General pollution prevention notes attached

**POLLUTION PREVENTION PROCEDURES**

1. HANDLING AND DISPOSAL OF HAZARDOUS MATERIALS

- DO:** Prevent spills  
Use products up  
Follow label directions for disposal  
Remove lids from empty bottles and cans when disposing in trash  
Recycle wastes whenever possible
- DON'T:** Don't pour waste into sewers or waterways on the ground  
Don't pour waste down the sink, floor drain or septic tanks  
Don't bury chemicals or containers, or dispose of them with construction debris  
Don't burn chemicals or containers  
Don't mix chemicals together
- Containers shall be provided for collection of all waste material including construction debris, trash, petroleum products and any hazardous materials to be used onsite. All waste material shall be disposed of at facilities approved for that material.
  - No waste materials shall be buried on-site.
  - Mixing, pumping, transferring or otherwise handling construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials shall be performed in an area away from any watercourse, ditch or storm drain.
  - Equipment fueling and maintenance, oil changing, etc., shall be performed only in an area designated for that purpose. The designated area is equipped for recycling oil and catching spills.
  - Concrete wash water shall not be allowed to flow directly to storm sewers, streams, ditches, lakes, etc without being treated. A sump or pit shall be constructed to contain concrete wash water.
  - If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto soil, the soil shall be dug up and disposed of at a licensed sanitary landfill (not a construction/demolition debris landfill). Spills on pavement shall be absorbed with sawdust, kitty litter or product designed for that purpose and disposed of at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oil-based paints, and cement curing compounds require special handling. These materials will be removed from the site and recycled or disposed of in accordance with MoDNR requirements.
  - State law requires the party responsible for a petroleum product spill in excess of 50 gallons to report the spill to MoDNR (537-634-2436) as soon as practical after discovery. Federal law requires the responsible party to report any release of oil if it reaches a sewer, lake, creek, stream, river, groundwater, wetland, or area, like a road ditch, that drains into one of the above

**CONSTRUCTION ENTRANCE**

WHERE BMP IS TO BE INSTALLED:

See Sheet 1 for location.

WHEN BMP IS TO BE INSTALLED:

First order of work, along with washdown area, prior to vehicles or equipment accessing unpaved areas.  
See BMP Implementation Schedule on Sheet 1 for specific installation time.

INSTALLATION/CONSTRUCTION PROCEDURES:

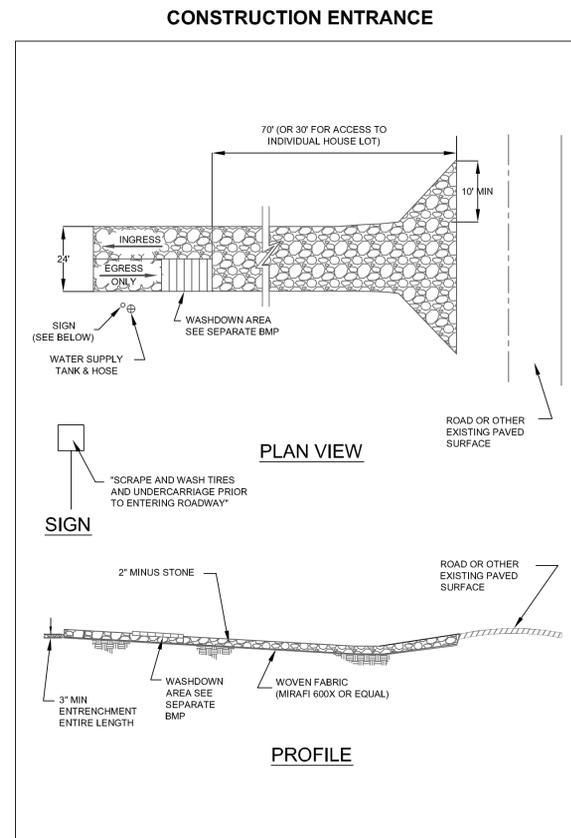
Grade and compact area of construction entrance  
Place fabric and cover with aggregate, forming diversion across entrance if needed to direct runoff away from roadway  
See Washdown Station BMP for additional steps

O&M PROCEDURES:

Immediately remove any mud or debris tracked onto paved surfaces  
Remove sediment and clods of dirt from construction entrance continuously  
Replace rock if necessary to maintain clean surface  
Repair settled areas

SITE CONDITIONS FOR REMOVAL:

Remove when vehicles and equipment will no longer access unpaved areas.  
See BMP Implementation Schedule on Sheet 3 for specific removal conditions.



**WASHDOWN STATION**

PHYSICAL DESCRIPTION:

An area located at construction entrances designed to wash sediment from the tires and undercarriage of exiting vehicles and prevent sediment from being tracked onto existing roadways.

WHERE BMP IS TO BE INSTALLED:

Across or immediately adjacent to exit paths from unpaved construction sites.

CONDITIONS FOR EFFECTIVE USE OF BMP:

Drainage: Downstream BMP sized to treat dirty runoff from washdown station

WHEN BMP IS TO BE INSTALLED:

First order of work, along with construction entrance, prior to vehicles or equipment accessing unpaved areas.  
See BMP Implementation Schedule on Sheet 1 for specific installation time.

INSTALLATION/CONSTRUCTION PROCEDURES:

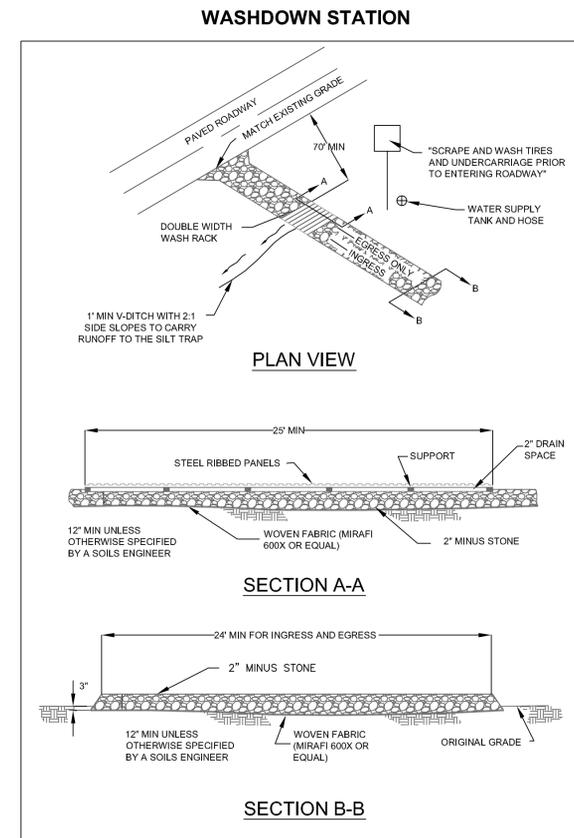
Grade and compact area for drainage under washdown pad  
Install steel-ribbed plate on frame or other support to allow a 2" drain space  
Grade and vegetate downstream BMP (v-ditch shown on detail)  
Install water supply and hose  
Post sign in advance of station indicating that all exiting vehicles and equipment must use station prior to exiting site

O&M PROCEDURES:

Remove sediment daily  
Repair settled areas  
Replace rock if necessary to maintain clean surface

SITE CONDITIONS FOR REMOVAL:

Remove when vehicles and equipment will no longer access unpaved areas.  
See BMP Implementation Schedule on Sheet 3 for specific removal conditions.



**CONSTRUCTION PARKING**

PHYSICAL DESCRIPTION:

A stabilized pad designed to provide off street parking for construction related vehicles, eliminate parking on non-surfaced areas, and minimize the amount of sediment tracked from the site. Stabilization generally consists of aggregate over woven fabric. The stabilized pad also distributes the axle load of vehicles over a larger area; thereby mitigating the rutting impact vehicles normally have on unpaved areas.

CONDITIONS FOR EFFECTIVE USE OF BMP:

Aggregate size: 2- to 3-inch washed stone  
Pad design: Minimum of 12 inches thick and sized to handle anticipated number of employee and visitor vehicles. Plans shall provide provisions for relocation and resizing of parking area(s) as construction phasing requires. See table below for minimum requirements.

Construction Phase	Min. # of Parking Spaces
Rough Grading	3
Sewer/Street Construction	10
Residential Home Construction	10

\* Parking Space shall be a minimum of 19 feet long and 9 feet wide

Filter Fabric: Woven fabric - Mirafi 600X or equal

WHEN BMP IS TO BE INSTALLED:

Concurrently with installation of construction entrance and washdown station.  
See BMP Implementation Schedule on Sheet 1 for specific installation time.

INSTALLATION/CONSTRUCTION PROCEDURES:

Grade and compact area of pad and ditches, if needed  
Install culverts if needed to maintain positive drainage  
Pace fabric and aggregate, and compact  
Install signage indicating the designated parking area

O&M PROCEDURES:

Inform drivers of inappropriately parked vehicles that they need to be moved  
If necessary to ensure compliance on an ongoing basis, contact employers of violators  
Install No Parking signage in areas where vehicles are being parked inappropriately  
Remove sediment and clods of dirt continuously  
Repair settled areas  
Replace rock if necessary to maintain clean surface

SITE CONDITIONS FOR REMOVAL:

Remove/relocate when vehicles can legally park on paved areas without impeding non-construction related traffic.  
See BMP Implementation Schedule on Sheet 3 for specific removal conditions.



ISSUED	REVISIONS
1/18/2005	

City of Chesterfield  
Department of Public Works  
Chesterfield, Missouri

SAMPLE SWPPP - COMPLEX SITE  
SHEET 4

**SILT FENCE**

**PHYSICAL DESCRIPTION:**

A fence constructed of woven filter fabric and wire mesh stretched between posts and entrenched in the ground designed to pond stormwater runoff and cause sediment to settle out.

**WHERE BMP IS TO BE INSTALLED:**

See Sheets 1, 2 and 3 for silt fence locations.

**WHEN BMP IS TO BE INSTALLED:**

See BMP Implementation Schedules on Sheets 1, 2 and 3.

**INSTALLATION/CONSTRUCTION PROCEDURES:**

Install fence by slicing it into ground with Tommy™ silt fence installers.

**Reinstallation at Utility Crossings:**

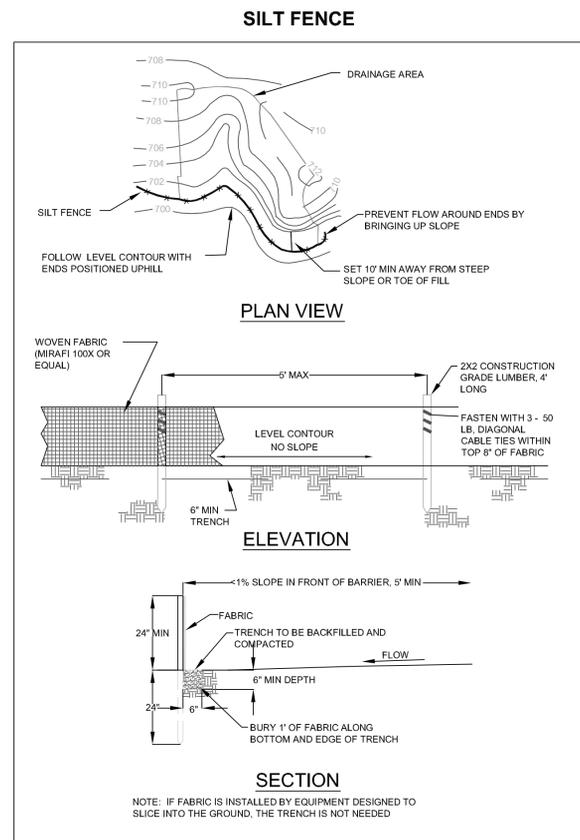
- Drive post for fence line
- Dig trench to required dimensions in front of posts for fabric burial
- Attach fabric to posts, allowing required length below ground level to run fabric along bottom of trench
- Backfill and compact soil in trench to protect and anchor fabric

**O&M PROCEDURES:**

- Inspect at least every two weeks and after every storm
- Remove sediment buildup deeper than 1/2 the fence height or 12", whichever is less
- Replace torn or clogged fabric; repair loose fabric
- Repair unstable or broken posts
- Stabilize any areas susceptible to undermining
- Extend fence or add additional row(s) of fence if necessary to provide adequate protection

**SITE CONDITIONS FOR REMOVAL:**

After permanent vegetation of slope is established. Remove fence, regrade trench area and vegetate.



**CHECK DAM**

**PHYSICAL DESCRIPTION:**

A small dam built within a drainage swale or temporary diversion channel designed to pond water and cause sediment to settle out. Dams can be constructed of rock, sand bags or gravel bags.

**WHERE BMP IS TO BE INSTALLED:**

At intervals along drainage swales or channels. The top of the downstream check dam should be level with the base of the upstream check dam. See Sheets 1 and 2 for specific locations.

**WHEN BMP IS TO BE INSTALLED:**

Prior to disturbance of natural vegetation in contributing drainage area; immediately after construction of drainageway. See the BMP Implementation Schedules on Sheets 1 and 2 of the SWPPP for more specific information.

**INSTALLATION/CONSTRUCTION PROCEDURES:**

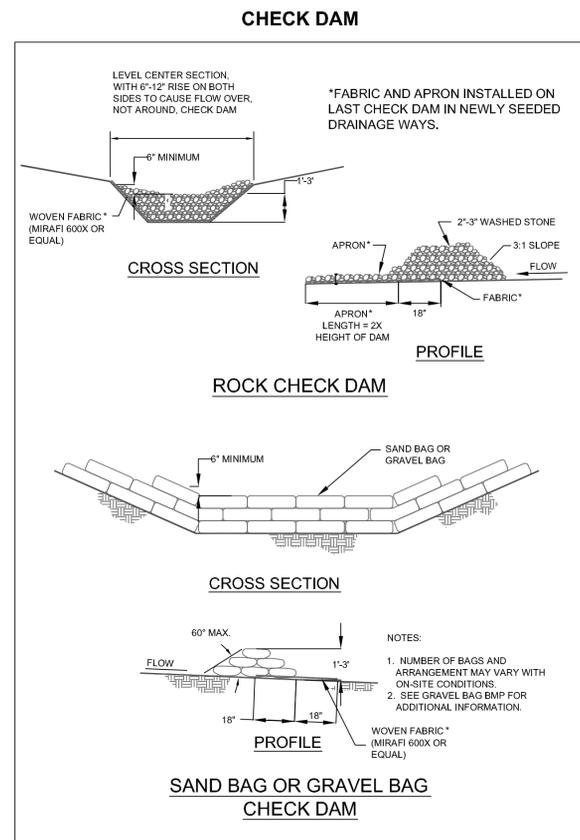
- Grade drainageway and compact area of check dam
- Place rock, sand bags or gravel bags to required configuration perpendicular to flow

**O&M PROCEDURES:**

- Inspect at least every two weeks and after every storm
- Remove trash and leaf accumulation
- Remove sediment buildup once it reaches 1/2 depth of check dam or 12" depth, whichever is less
- Restore dam structure to original configuration to protect banks
- Replace rock on upstream face of dam if ponding does not drain in reasonable timeframe

**SITE CONDITIONS FOR REMOVAL:**

Remove after contributing drainage areas have been adequately stabilized and vegetation is adequately established in drainageway. Regrade and vegetate area of check dam.



**SEEDING**

**PHYSICAL DESCRIPTION:**

Establishment of vegetation by spreading grass seed designed to protect exposed soil from erosion by eliminating direct impact of precipitation and slowing overland flow rates. Once established, the vegetative cover will also filter pollutants from the runoff.

**WHERE BMP IS TO BE INSTALLED:**

Exposed soil after a phase of rough or finish grading has been completed, or areas where no activity will occur for 14 days

**WHEN BMP IS TO BE INSTALLED:**

In general, immediately after rough or finished grading is completed. See the BMP Implementation Schedules on Sheets 1, 2, and 3 of the SWPPP for more specific information.

**INSTALLATION/CONSTRUCTION PROCEDURES:**

- Install upstream BMPs to protect area to be seeded
- Rough grade area and remove all debris larger than 1 inch in diameter and concentrated areas of smaller debris
- Install stabilization grids, if needed
- Mix soil amendments (lime, fertilizer, etc.) into top 3"-6" of soil as needed
- Plant seed 1/4 - 1/2 inch deep
- Roll lightly to firm surface
- Cover seeded area with mulch unless seeding completed during optimum spring and summer dates
- Install additional stabilization (netting, bonded fiber matrix, etc.) as required
- Water immediately - enough to soak 4 inches into soil without causing runoff

**O&M PROCEDURES:**

- Inspect at least every two weeks and after every storm
- Protect area from vehicular and foot traffic
- Reseed areas that have not sprouted within 21 days of planting.
- Repair damaged or eroded areas and reseed and stabilize as needed
- Do not mow until 4 inches of growth occurs
- During the first 4 months, mow no more than 1/3 the grass height
- Refertilize during 2nd growing season

**SITE CONDITIONS FOR REMOVAL:**

Does not require removal, but temporary seeding can be removed immediately prior to work returning to an area

**SEEDING REQUIREMENTS**

**Dates For Seeding**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Permanent Seeding</b>												
Tall Fescue			○	○	○			○	○			
Smooth Brome			○	○	○			○	○			
Fescue & Brome			○	○	○	○		○	○			
Fescue, Rye & Bluegrass	A	A	○	○	○	P	P	○	○	P	P	A
<b>Temporary Seeding</b>												
Rye or Sudan	A	A	○	○	○	○	○	○	○	○	A	A
Oats		A	○	○	○	○	○	○	○			

O - Optimum seeding dates      A - Acceptable seeding dates

P - Permitted seeding dates with reseeding 2 months later - Initially use 50% of seed and 75% of fertilizer. Reseed with additional 75% seed and remaining fertilizer.

**Minimum Fertilizer and Seeding Rates**

Permanent Seeding*	lb./acre	lb./1000 sq. ft.
Tall Fescue	300	7
Smooth Brome	200	4.6
Mixture #1	250	5.7
Mixture #2	210	4.8

Mixture #1 - Tall Fescue @150 lbs./ac. and Brome @ 100 lbs./ac.  
 Mixture #2 - Tall Fescue @ 100 lbs./ac., Perennial Rye Gras @ 100 lbs./ac. and Kentucky Bluegrass @ 10 lbs./ac.

\* Seeding rate for slopes in excess of 20% (5:1) shall be 10 lb./1000 sq. ft.

Temporary Seeding	lb./acre	lb./1000 sq. ft.
Rye or Sudan	150	3.5
Oats	120	2.8

Fertilizer	Permanent Seeding (lb./acre)	Temporary Seeding (lb./1000 sq. ft.)
Nitrogen	45	30
Phosphate	65	30
Potassium	65	30
Lime - ENM	600	600

ENM - effective neutralizing material per State evaluation of quarried rock

**MULCHING**

**PHYSICAL DESCRIPTION:**

A layer of organic material designed to protect exposed soil or freshly seeded areas from erosion by eliminating direct impact of precipitation and slowing overland flow rates. Mulch materials may include, but are not limited to, such things as grass, hay, straw, wood chips, wood fibers, and shredded bark.

**WHERE BMP IS TO BE INSTALLED:**

Typically installed on seeded areas for temporary use, and in landscaped areas for permanent use

**CONDITIONS FOR EFFECTIVE USE OF BMP:**

- Type of Flow: Sheet flow only
- Slopes: See attached chart for types of mulch acceptable as a function of slope length and steepness
- Mulching Rates: See attached table

**WHEN BMP IS TO BE INSTALLED:**

Immediately after grading landscaped areas or seeding other areas

**INSTALLATION/CONSTRUCTION PROCEDURES:**

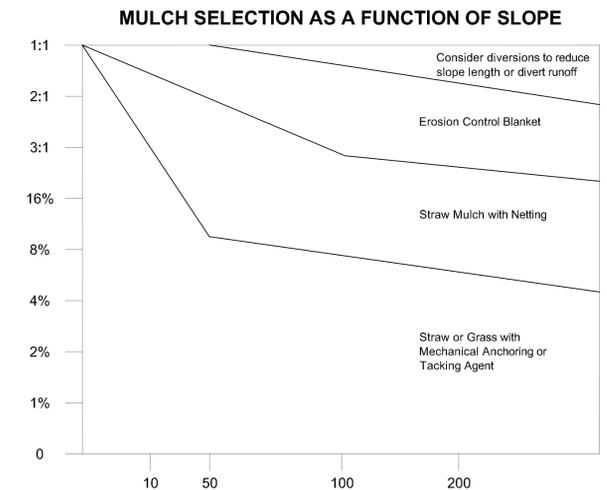
- Install upstream BMPs to protect area to be mulched
- Rough grade area and remove all debris larger than 1 inch if area is to be vegetated and mowed in the future, larger than 2 inches if area is to be permanently mulched
- If area is to be seeded, follow requirements of Seeding BMP
- Spread mulch and anchor by punching it into the ground, using netting, peg and twine, or tacking with liquid binder

**O&M PROCEDURES:**

- Inspect at least every two weeks and after every storm until adequate vegetation is established; annually for permanent mulch
- Protect from vehicular and foot traffic
- Repair damaged, degraded or eroded areas - reseed as needed and replace mulch

**SITE CONDITIONS FOR REMOVAL:**

Temporary mulch should be removed when adequate vegetation is established



**GENERAL MULCH RECOMMENDATIONS TO PROTECT FROM SPLASH AND SHEET FLOW**

Material	Rate Per Acre	Requirements	Notes
Straw	2 - 2 1/2 tons	Dry, chopped, unweathered; avoid weeds.	Spread by hand or machine; must be tacked or tied down.
Wood Fiber or Wood Cellulose	1/2 - 1 ton		Use with hydroseeder; may be used to tack straw. Do not use in hot, dry weather.
Wood Chips	5 - 6 tons	Air dry. Add Nitrogen fertilizer at 12 lb/ton.	Apply with blower, chip handler or by hand. Not for fine turf areas.
Bark	35 yd³	Air dry, shredded, or hammermilled; or chips.	Apply with mulch blower, chip handler or by hand. Do not use asphalt tack.



ISSUED 1/18/2005	REVISIONS
<p><b>City of Chesterfield</b> Department of Public Works Chesterfield, Missouri</p>	
<p><b>SAMPLE SWPPP - COMPLEX SITE</b></p>	
<p><b>SHEET 5</b></p>	



**TURF REINFORCEMENT MAT**

**PHYSICAL DESCRIPTION:**

North American Green P300 - See manufacturer's description below.

**WHERE BMP IS TO BE INSTALLED:**

See the BMP Implementation Schedule on Sheets 2 and 3.

**WHEN BMP IS TO BE INSTALLED:**

See the BMP Implementation Schedule on Sheets 2 and 3.

**INSTALLATION/CONSTRUCTION PROCEDURES:**

See manufacturer's guidelines given below.

**O&M PROCEDURES:**

- Inspect at least every two weeks and after every storm until adequate vegetation is established
- Repair erosion and/or undermining at top of slope
- Repair undermining beneath TRM - pull back the TRM(s), fix and compact eroded area, reseed and then staple TRM(s) to securely hold in place
- Reposition or replace TRM(s) that have moved along the channel and secure firmly
- Replace any damaged sections of the TRM(s)



**MATERIAL SPECIFICATION**

**P300**

The P300 permanent turf reinforcement mat shall be a machine-produced mat of 100% UV stable polypropylene fiber.

The matting shall be of consistent thickness with synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top with black heavyweight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh size. The bottom net shall also be UV stabilized polypropylene, with a 0.625 x 0.625 inch (1.57 x 1.57 cm) mesh size. The matting shall be sewn together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread.

The P300 shall meet requirements established by the Erosion Control Technology Council (ECT) Specification and the U.S. Department of Transportation, Federal Highway Administration's (FHWA) Standard Specifications For Construction of Roads and Bridges on Federal Highway Projects, FP-03 2003 Section 713.18 as a Type 5A or B Permanent Turf Reinforcement Mat.

The P300 is also available upon request with the DOT System™. The DOT System™ consists of installation staple patterns clearly marked on the erosion control blanket with environmentally safe paint. The blanket shall be manufactured with a colored line or thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) to ensure proper material overlapping.

The P300 permanent erosion control/turf reinforcement mat shall have the following properties:

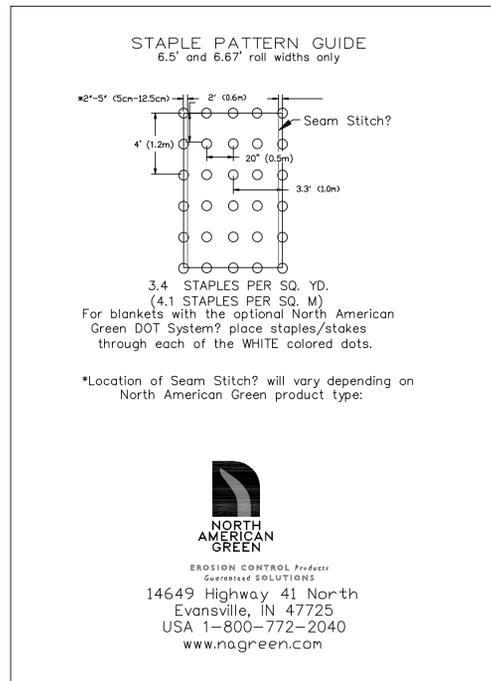
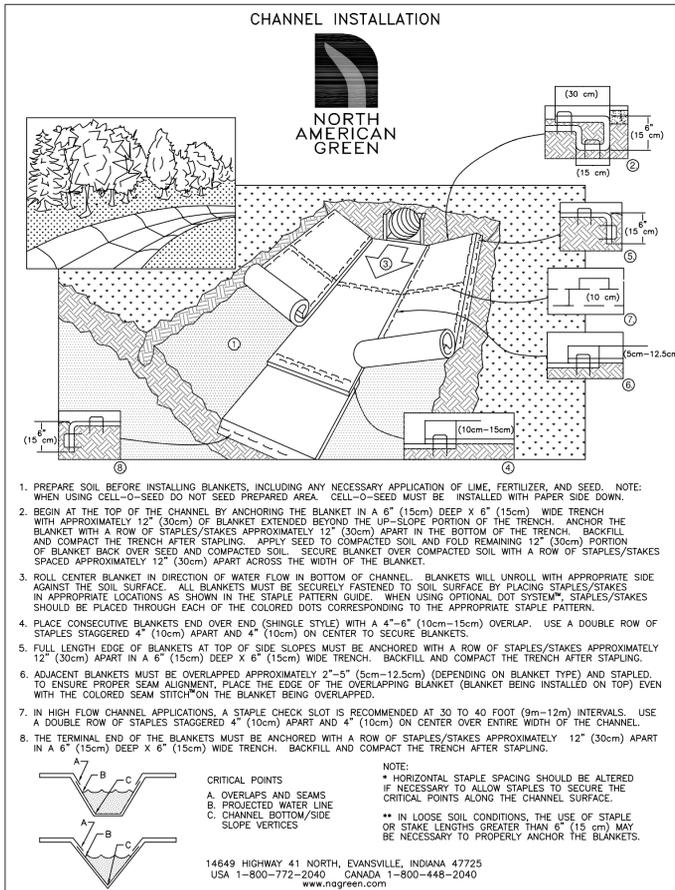
Material Content	
Matrix	100% UV Stable Polypropylene Fiber (0.70 lb/yd <sup>2</sup> ) (0.38 kg/m <sup>2</sup> )
Netting	Top side heavyweight UV stabilized (5.0 lbs/1,000 ft <sup>2</sup> [2.44 kg/100 m <sup>2</sup> ] approximate weight) Bottom side heavyweight UV stabilized (3.0 lbs/1,000 ft <sup>2</sup> [1.47 kg/100 m <sup>2</sup> ] approximate weight)
Thread	100% Black Polypropylene

**PS300 is Available with the Following Physical Specifications Per Roll [English Units (Metric Units)]**

<b>Width</b>	6.67 ft. (2.03 m)
<b>Length</b>	108.0 ft (32.92 m)
<b>Weight ± 10%</b>	61.0 lbs (27.66 kg)
<b>Area</b>	80.0 yd <sup>2</sup> (66.89 m <sup>2</sup> )

**Roll Widths Also Available Upon Special Request**

<b>Width</b>	8.0 ft. (2.43 m)	13.3 ft (4.05 m)
<b>Length</b>	108.0 ft (32.92 m)	108 ft (32.92 m)
<b>Weight ± 10%</b>	73.44 lbs (33.31 kg)	122.40 lbs (55.52 kg)
<b>Area</b>	96.0 yd <sup>2</sup> (80.26 m <sup>2</sup> )	160.0 yd <sup>2</sup> (133.78 m <sup>2</sup> )



**CURB INLET PROTECTION**

**PHYSICAL DESCRIPTION:**

True Dam® - See manufacturer's description below.

**WHERE BMP IS TO BE INSTALLED:**

At all curb inlets. See Sheet 3 for locations.

**WHEN BMP IS TO BE INSTALLED:**

Install True Dam® 1 to 2 days after pavement has been poured.

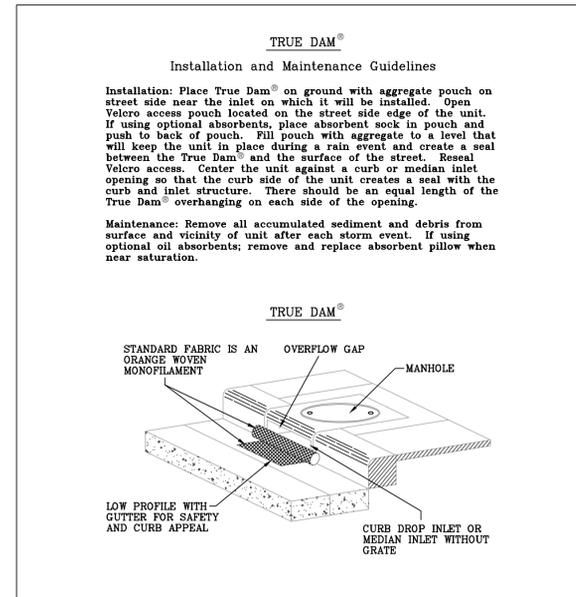
**INSTALLATION/CONSTRUCTION PROCEDURES:**

See manufacturer's guidelines given below.

**O&M PROCEDURES:**

See manufacturer's guidelines given below.

**CURB INLET PROTECTION**



**TRUE DAM® GRATELESS CURB INLET AND MEDIAN BARRIER INLET PROTECTION SYSTEM GUIDE SPECIFICATION**

**PRODUCT:**

TRUE DAM®

**MANUFACTURER:**

Dandy Products Inc.  
6200 Eiterman Rd.  
Dublin, Ohio 43016  
Phone: 1-800-591-2284  
Fax: 1-614-799-8727  
E mail dlo@dandyproducts.com  
Web www.dandyproducts.com

**1.0 Description:**

1.1 Work covered under this item consists of installing a True Dam® inlet protection system for inlets and median barrier inlets without grates. The purpose is to keep silt, sediment and construction debris out of the storm system.

**2.0 Material:**

- 2.1 The True Dam® inlet protection system shall be a sewn fabric unit enclosing a porous structure in the form of a cylindrical tube placed in front of and extending beyond the inlet opening on both sides.
- 2.2 The True Dam® inlet protection system shall have a pouch on the street side of the sewn unit for aggregate or other material to hold the unit in place.
- 2.3 The True Dam® unit shall utilize an orange monofilament fabric with the following characteristics:

PROPERTY	TEST METHOD	UNITS	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (3.65) x 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 x 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.44 (100)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (45)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
% Open Area	COE-22125-86	%	10
Apparent Opening Size	ASTM D 4751	mm (US Std Sieve)	0.425 (40)
Permittivity	ASTM D 4491	sec <sup>1</sup>	2.14
Permeability	ASTM 4491	cm/sec	0.142
Water Flow Rate	ASTM 4491	l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	5607 (145)
Ultraviolet Resistance	ASTM D 4355	%	70
Color			Orange <sup>1</sup>

<sup>1</sup>The color orange is a trademark of Dandy Products, Inc.

**3.0 Installation:**

- 3.1 Place True Dam® inlet protection unit on ground with aggregate pouch on street side near inlet it will be installed on.
- 3.2 For oil and sediment model, to install or replace absorbent, place absorbent sock in pouch.
- 3.3 Fill pouch with aggregate such as #5-7, 8's or similar to a level (at least 1/2 full) that will keep unit in place during a rain event and create a seal between the True Dam® and the surface of the street. Reseal Velcro access.
- 3.4 Center the unit against curb or median inlet opening so that the curb side of the unit creates a seal with the curb or median barrier and inlet structure. There will be approximately twelve (12) inches of the inlet protection unit overhanging on each side of the opening. If the unit is not installed in this manner, it will not function properly.

**4.0 Maintenance:**

- 4.1 The contractor shall remove all accumulated sediment and debris from surface and vicinity of unit after each rain event or as directed by engineer/inspector. Dispose of unit no longer in use at an appropriate recycling or solid waste facility.
- 4.2 For oil and sediment model; remove and replace absorbent when near saturation.

**5.0 Method of Measurement:**

5.1 The quantity to be paid is for the actual number of True Dam® inlet protection units installed.

**6.0 Basis of payment:**

- 6.1 The unit price shall include labor, equipment, and materials necessary to complete the work and maintain the True Dam® inlet protection units.
- 6.2 Payment for the completed work will be made at the contract prices for:

ITEM	UNIT	DESCRIPTION
True Dam®	EA	Inlet Protection Unit (# _____ Inlet)



1/18/2005

ISSUED	REVISIONS
1/18/2005	

**City of Chesterfield**  
Department of Public Works  
Chesterfield, Missouri

**SAMPLE SWPPP - COMPLEX SITE**

**SHEET 7**

**WORK PLAN FOR TYPICAL LOT DURING RESIDENTIAL CONSTRUCTION**

1. Install gravel access pad in area where driveway will be located. See the Construction Entrance BMP on Sheet 4 for methods and materials.
2. Install a Curlex SiltTRAP (8' wide) at the back of curb along the frontage of the lot. See the manufacturer's data sheet, this sheet, for a product description and installation details.
3. If the downstream lot has already been sodded a silt fence will need to be placed at the property line. See the Silt Fence BMP on this sheet for methods and materials.
4. Begin construction on the lot.
  - A. The Curlex SiltTRAP will be protected with sheets of plywood if they are to be crossed by construction equipment.
  - B. The street used for construction access to the Lot shall be kept free from mud and construction debris and shall be cleaned throughout the day.
  - C. Boards, tracks and other protection must be laid over sidewalks, curbs and gutters to avoid dirt and mud accumulating on or therein and to prevent damage to the existing improvements.
  - D. Any waste material (paper, refuse, lumber and other building waste) that is blown or scattered over the Lot as well as on any adjacent public or private property, shall be picked up daily and disposed of properly.
  - E. Washout from concrete trucks must be controlled in a manner so as not to adversely impact the Lot, adjacent public or private property or adjacent streams and storm sewer systems.
5. Once the foundation has been backfilled, the lot, excluding those areas needed for laydown and staging the remaining construction of the house, should be finish graded and sodded or seeded and mulched or otherwise stabilized. The stabilization of the lot should be completed no later than 14 days after the grading is done.
6. Erosion/siltation controls installed as a part of the overall site development, such as those at curb inlets and/or area inlets, must be maintained during construction on the lot. If the 'site' controls are damaged or disturbed during construction, immediately inform Joe Schlobotnik, 314-555-1111, to coordinate the repair or reestablishment of the 'site' controls.
7. All silt controls must be maintained throughout construction on the lot. See operation and maintenance procedures within the SWPPP for the BMPs used on the lot.
 

Any silt controls that fail should be immediately repaired or replaced and any damage to areas or structures downstream should be repaired.

Any silt removed from a device should be used to backfill eroded areas on the lot or removed from the lot and disposed of in accordance with the overall SWPPP.
8. Once exterior work is completed on the house, finish grade the remainder of the lot and repair any damage in previously stabilized areas. Sod or seed and mulch the remainder of the lot. The silt controls may be removed just prior to sodding the lot. If the lot is to be seeded, the controls must be maintained until the vegetation is sufficiently established to prevent erosion. Contact Joe Schlobotnik, 314-555-1111, to coordinate the removal of any 'site' erosion/siltation controls.



**CURLEX® SiltTRAP EXCELSIOR BUFFER STRIP INSTALLATION GUIDELINES**

Before installing Curlex SiltTRAP, the finished grade shall be inspected by the Owner's Representative to ensure it has been properly compacted and fine graded to remove any existing rills. It shall be free of obstructions, such as tree roots, projections such as stones, and other foreign objects. The contractor shall proceed when all satisfactory conditions are present. The roll's outside tape shall be removed. Next, locate the start of the roll, making sure the roll is facing toward the area to be covered, and then roll out the product. The product shall be rolled out flat, even, and smooth without stretching the material then anchored to the subgrade.

If Curlex SiltTrap is being used as a temporary buffer, seeding may not be necessary; however, due to its unique ability to expedite germination, it is recommended the area be final graded, seeded, fertilized, and compacted before SiltTRAP is installed. This will allow for early germination and possible elimination of future sod costs.

Curlex SiltTRAP shall be located at the perimeter of the site along undisturbed vegetation, paved surfaces, and/or the backside of curbs. Where large contributory areas or steep slopes are encountered, multiple strips may be required. SiltTRAP shall not be installed for sediment capture purposes where concentrated flow conditions (channelized flow) from above are anticipated.

Disclaimer: Curlex SiltTRAP is a system for erosion control and revegetation on perimeter areas of residential, commercial, and industrial construction sites. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in erosion control and revegetation applications. However, since physical conditions vary from job site to job site and even within a given job site, AEC makes no performance guarantees and assumes no obligation or liability for the reliability or accuracy of information contained herein, for the results, safety, or suitability of using Curlex SiltTRAP, or for damages occurring in connection with the installation of any erosion control product whether or not made by AEC or its affiliates, except as separately and specifically made in writing by AEC. These specifications are subject to change without notice.

850 Avenue H \* P.O. Box 5067 \* Arlington, Texas 7605-5067  
Phone 1-800-777-SOIL \* Fax 817-385-3585



**CURLEX SiltTRAP® MATERIAL SPECIFICATIONS**

**Materials:**

- Great Lakes Aspen Excelsior
- Polypropylene Netting
- Polypropylene Stitching Thread
- QuickGrass® (green excelsior - optional)

**Roll Sizes:**

- Width: 8.0 ft (2.4 m)
- Length: 90.0 ft (27.4 m)
- Area: 80.0 yd<sup>2</sup> (66.9 m<sup>2</sup>)
- Weight: 58.4 lb (26.5 kg)

**Description:**

Curlex SiltTRAP excelsior buffer strip is a natural, stitched excelsior product. Curlex SiltTRAP captures sediment produced by sheet flow before it overflows curbs and dumps on to streets. Typically, Curlex SiltTRAP is suitable for slopes up to 5:1 and should not be used in areas where concentrated flows are anticipated. Curlex SiltTRAP is furnished in rolls with polyethylene wrapping to protect against the elements prior to installation, and may be ordered in Master-Paks or nine rolls banded together to minimize material handling requirements.

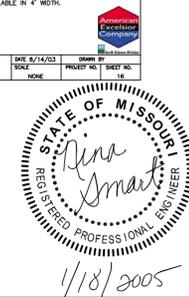
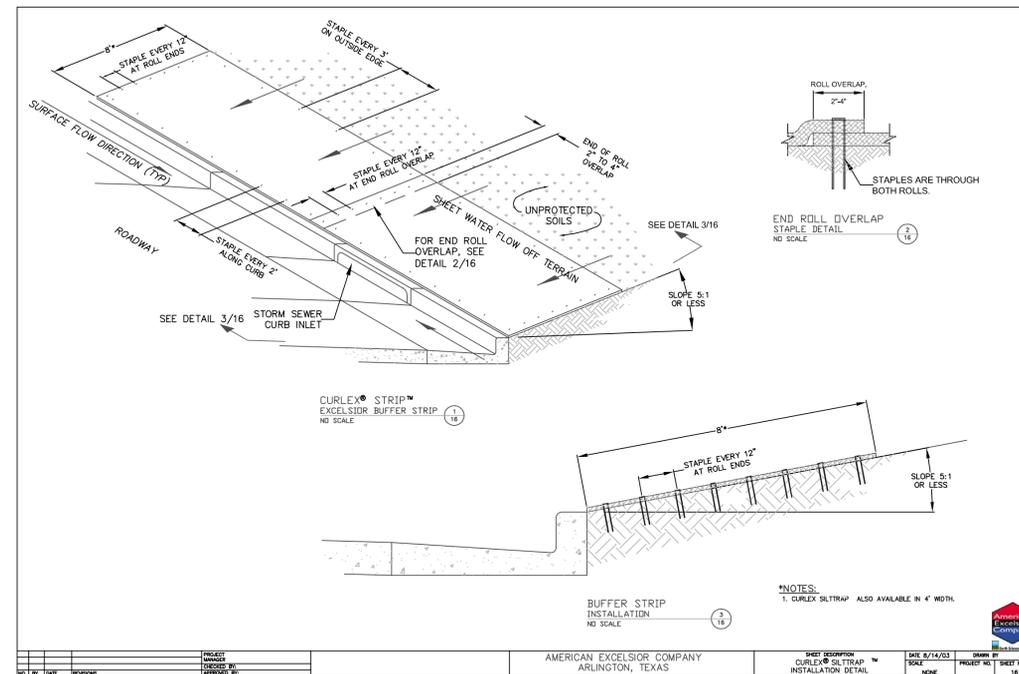
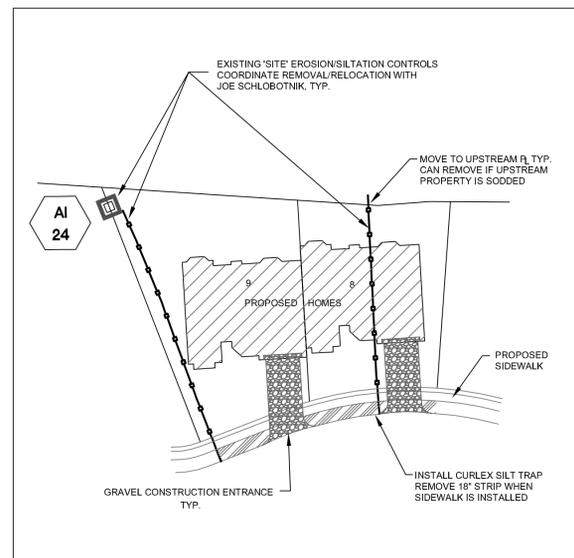
**Physical Properties:**

- Fiber: Great Lakes Aspen Excelsior with no weed seeds
- Fiber Size: Curled, interlocking fibers with barbed edges  
80% of fibers a minimum of 6" (15.2 cm) long  
0.038" ± 0.010" wide x 0.018" ± 0.003" thick  
(0.97 mm ± 0.25 mm wide x 0.45 mm ± 0.08 mm thick)
- Unit Weight: 0.73 lb/yd<sup>2</sup> (0.40 kg/m<sup>2</sup>) ± 10%
- Thread Material: HT Polypropylene with UV degrader additive
- Thread Pattern: 4"x4" wide x 1.625" long (19.1 mm wide x 41.3 mm long) green
- Net Material: Polypropylene (green or white with UV degrader additive)
- Net Openings: 0.75" wide x 1.625" long (19.1 mm wide x 41.3 mm long) green  
1.0" wide x 1.0" long (25.4 mm wide x 25.4 mm long) white
- Net Configuration: Top side only or both top and bottom

**All measurements are based on product at time of manufacture.**

850 Avenue H \* P.O. Box 5067 \* Arlington, Texas 7605-5067  
Phone 1-800-777-SOIL \* Fax 817-385-3585

**WORK PLAN DETAIL**



ISSUED	REVISIONS
1/18/2005	
 <b>City of Chesterfield</b> Department of Public Works Chesterfield, Missouri	
SAMPLE SWPPP - COMPLEX SITE SHEET 8	