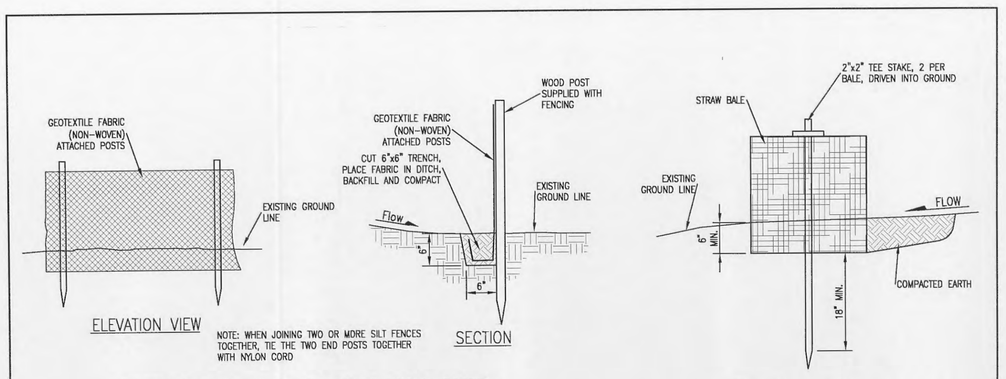
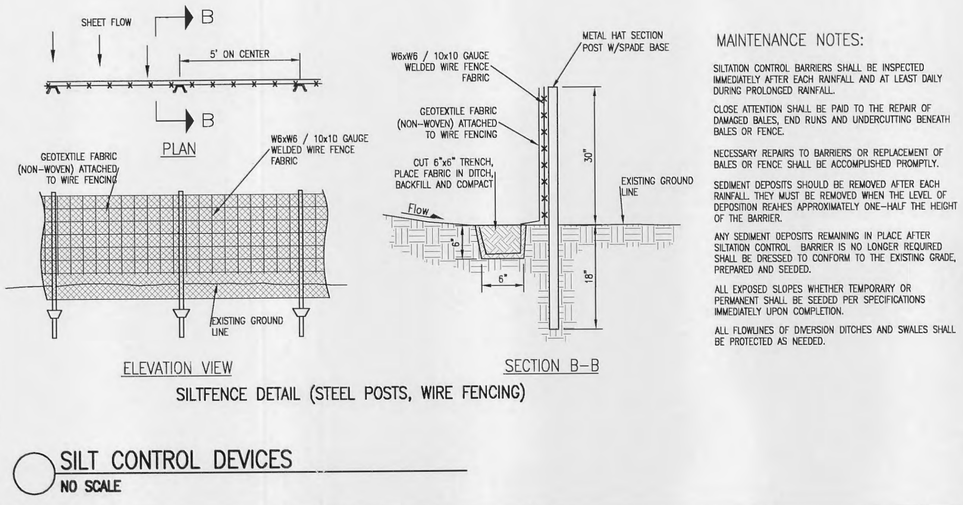


SILTFENCE DETAIL (PRE-ASSEMBLED, WOOD POSTS)

STRAW BALE DETAIL



SILTFENCE DETAIL (STEEL POSTS, WIRE FENCING)

MAINTENANCE NOTES:

SILTATION CONTROL BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES OR FENCE.

NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES OR FENCE SHALL BE ACCOMPLISHED PROMPTLY.

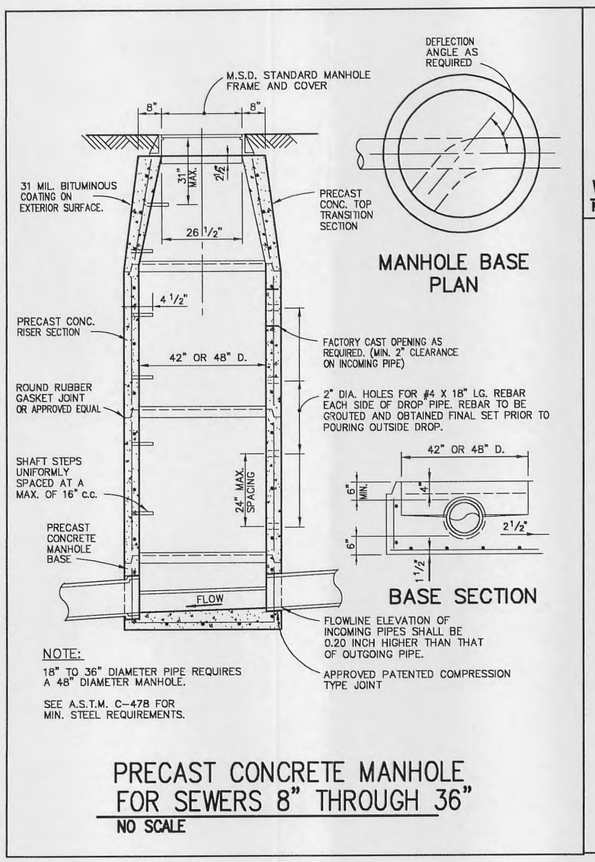
SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REAHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER SILTATION CONTROL BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

ALL EXPOSED SLOPES WHETHER TEMPORARY OR PERMANENT SHALL BE SEEDED PER SPECIFICATIONS IMMEDIATELY UPON COMPLETION.

ALL FLOWLINES OF DIVERSION DITCHES AND SWALES SHALL BE PROTECTED AS NEEDED.

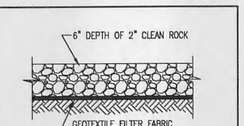
SILT CONTROL DEVICES
NO SCALE



MANHOLE BASE PLAN

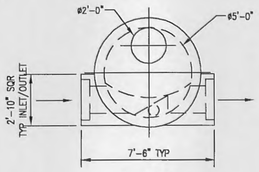
BASE SECTION

PRECAST CONCRETE MANHOLE FOR SEWERS 8" THROUGH 36"
NO SCALE

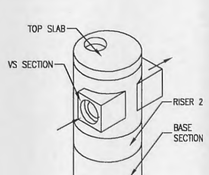


NOTE: IF WATER IS NOT AVAILABLE A WATER TRUCK WILL BE PROVIDED.

WASH DOWN AREA DETAIL
NO SCALE

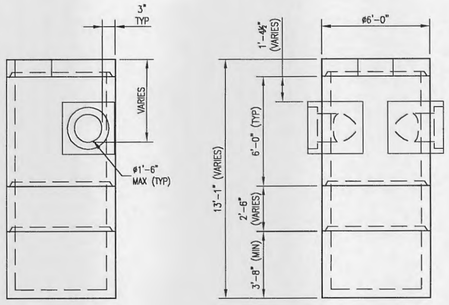


PLAN VIEW



ASSEMBLY VIEW

THE VORTSENTRY SECTION SHALL BE STENCILED WITH THE STORMWATER360 NAME AND LOGO. PIPE OPENINGS SHALL BE STENCILED "INLET" OR "OUTLET" AS APPROPRIATE.



LEFT SIDE VIEW

ELEVATION VIEW

NOTES:

1 STORMWATER TREATMENT SYSTEM (SWTS) SHALL BE DESIGNED TO MEET PERFORMANCE GOALS BASED ON FULL SCALE LABORATORY PERFORMANCE DATA

2 SWTS SHALL BE DESIGNED TO RETAIN FLOATABLES AND TRAPPED SEDIMENT AT FLOW RATES UP TO AND INCLUDING PEAK TREATMENT CAPACITY

3 SWTS INVERTS IN AND OUT SHALL BE AT THE SAME ELEVATION

4 SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER

5 SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS

6 PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION

7 PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF INTERNAL COMPONENTS

8 (2) MANHOLE FRAMES AND COVERS SUPPLIED WITH SYSTEM, NOT INSTALLED

9 PURCHASER TO PREPARE EXCAVATION AND PROVIDE LIFTING EQUIPMENT

10 CONTACT STORMWATER 360 AT (877) 907-8876 FOR SIZING AND ORDERING INFORMATION

STANDARD DETAIL
STORMWATER TREATMENT SYSTEM
VORTSENTRY MODEL VS50
AS MANUFACTURED BY
STORMWATER360

GENERAL NOTES:

1. Underground utilities have been plotted from available information and therefore their locations must be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to grading or construction of improvements.

2. Corrugated steel pipe (CMP) shall meet requirements of ASTM A929 for hot dipped galvanized pipe. Minimum thickness 12 gauge. Bedding for RCP sewer pipe shall consist of "clean" 1/2 inch to 1 inch granular stone uniformly graded. This bedding shall extend from 4 inches below pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above top of pipe.

3. All storm sewer pipe noted as RCP, regardless of size, shall be reinforced concrete pipe (A.S.T.M. C-76, Class III) unless noted otherwise on the plans.

4. All storm sewers shall meet all specifications and installation requirements of the City of O'Fallon.

5. Concrete pipe joints shall be MSD Type "A" approved compression type joints and shall conform to the requirements of the Specifications for joints for Circular Concrete Sewer and Culvert Pipe, using flexible, watertight, Rubber-type Gaskets ASTM C443. Band-type gaskets depending entirely on cement for adhesion and resistance to displacement during jointing shall not be used.

6. ****NOT USED****

7. Provide 0.20' drop through all inlets and manholes.

8. Compact rock backfill below highest pipe for drop structures. Brick shall not be used in the construction of storm or sanitary sewer structures. Manhole structures shall be precast concrete with cast iron covers, except for CMP manholes fabricated with CMP detention unit. Use MSD specifications and details.

9. Contractor shall maintain all siltation control measures and shall insure that all public roads are free from dust, mud and/or debris that may be produced as a direct result of construction operations on this project.

10. Any wells, springs and/or cisterns which may exist on this property should be located and sealed in conformance with applicable codes.

11. All trash and debris on-site, either existing or from construction, must be removed and properly disposed of off-site.

12. Temporary siltation control measures shall be maintained until vegetative cover is established at a sufficient density to provide erosion control on the site.

13. Upon completion of storm sewers, siltation control shall be provided around all open sewer inlets and shall remain until the disturbed drainage areas have been properly stabilized.

14. Where natural vegetation is removed during grading, vegetation shall be reestablished in such a density as to prevent erosion.

15. The Contractor shall assume complete responsibility for controlling all siltation and erosion of the project area. The Contractor shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or siltation fabric fences (possible methods of control are detailed in the plan). Control shall commence with grading and be maintained throughout the project until acceptance of the work by the Owner and/or the City of O'Fallon and/or MoDOT. The Contractor's responsibilities include all design and implementation as required to prevent erosion and the depositing of silt. The Owner and/or the City of O'Fallon and/or MoDOT may at their option direct the Contractor in his methods as deemed fit to protect property and improvements. Any depositing of silts or mud on new or existing pavement or in new or exiting storm sewers or swales shall be removed after each rain and affected areas cleaned to the satisfaction of the Owner and/or the City of O'Fallon and/or MoDOT.

16. The Developer must supply City construction inspectors with soil reports prior to or during site soil testing.

17. No slopes shall be steeper than 3 (horizontal) to 1 (vertical).

18. All filled places under storm sewers, proposed roads, and or paved area shall be compacted to 90% of maximum density as determined by the Modified AASHTO T-180 Compaction Test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99. All fill placed in proposed roads shall be compacted from the bottom of the fill, up. All tests shall be verified by a soils engineer concurrent with grading and backfilling operations. Ensure the moisture content of the soil in fill areas is to correspond to the compactive effort as defined by the Standard or Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill. Proof rolling may be required to verify soil stability at the discretion of the city of O'Fallon.

19. MSD refers to Metropolitan St. Louis Sewer District.

STORM SEWER INLETS SHALL BE MARKED. THE CITY WILL ALLOW THE FOLLOWING MARKER AND ADHESIVE PROCEDURED ONLY AS SHOWN IN THE TABLE BELOW OR AN APPROVED EQUAL BY ALMETEK INDUSTRIES. "PEEL AND STICK" ADHESIVE PADS WILL NOT BE ALLOWED.

Manufacturer	Size	Adhesive	Style	Message (Part#)	Website
ACP International	3 7/8"	Epoxy	Crystal Cap	No Dumping Drains To Waterway (SD-W-CC)	www.acpinternational.com
DAS Manufacturing, Inc.	4"	Epoxy	Standard Style	No Dumping Drains To Stream (#SDS)	www.dasmanufacturing.com

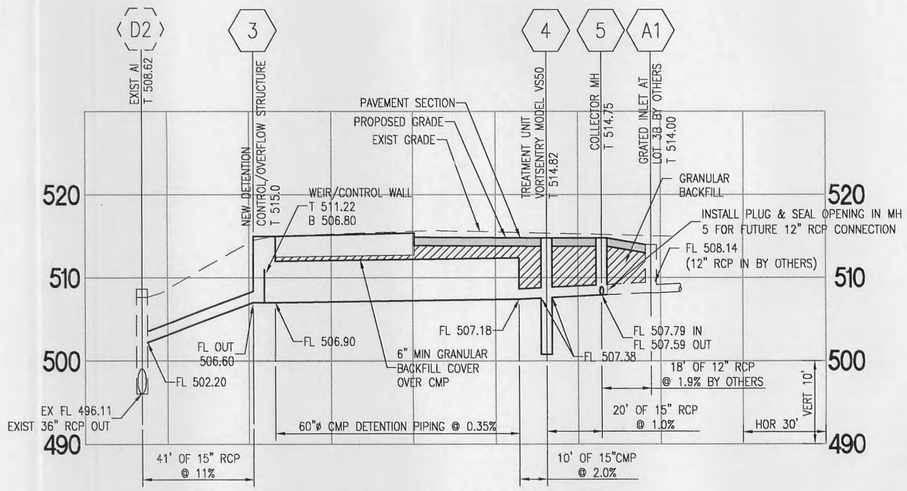
Pipe joints shall be gasketed O-ring type.

Graded areas to remain bare for over 2 weeks are seeded and mulched (DNR requirement)

Erosion control systems shall be inspected and necessary corrections make within 24 hours of any rainstorm resulting in one-half inch of rain or more.

Traffic control is to be per MoDOT or MUTCD whichever is most stringent.

Trees, organic debris, rubble, foundations and other deleterious material shall be removed from the site and disposed in compliance with all applicable laws and regulations. Landfill tickets for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented by the soils engineer.



STORM SEWER PROFILE
PRIVATE SEWER SYSTEM
SCALE: 1"=10' VERT 1"=30' HORIZ

PIDGEON PARK WEST PLAT 3

DEVELOPER:
PACE PROPERTIES, INC.
1401 S. BRENTWOOD BLVD. SUITE 900
ST. LOUIS, MISSOURI 63144
(314) 968-9898 PHONE
(314) 968-5050 FAX

Kuhlmann Design Group, Inc.
66 Progress Parkway
St. Louis, Missouri 63043-3706
Tel: (314) 434-8898
St. Louis, Missouri
Belleville, Illinois
St. Charles, Missouri

KdG

DISCLAIMER OF RESPONSIBILITY

I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI JAY M. LAPIN NUMBER E-6550 REGISTERED PROFESSIONAL ENGINEER

APRIL 26, 2007

EXPIRES DEC. 31, 2007

NO.	DATE	
1	3/19/07	CITY RESUBMITTAL
2	4/26/07	CITY RESUBMITTAL

PROJECT NO.	CONTRACT NO.
980324	0011
DRAWN: DGN	CHECKED: JML
DATE: 1/16/07	

SITE DETAILS
STORM PROFILES
NOTES

SHEET 4 OF 5

C3