

TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT

AND EROSION BEFORE BEGINNING THE PROJECT. 1

ENGINEER TO SUPERVISE POND CONSTRUCTION AND

PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT

WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30

ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL

DAYS OF COMPLETION, TALSO AUTHORIZE PERIODIC

SHALL ENGAGE A REGISTERED PROFESSIONAL

CONSERVATION DISTRICT.

ROVED: FOR STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, PUBLIC SEWAGE AND WATER

BUREAU OF ENGINEERING

0/21/99 REVISED ELEVATIONS

DIRECTOR

Drafting JJR

Design CGW

Check CEO

OWARD COUNTY DEPARTMENT OF PUBLIC

DATE

REVISIONS

DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT

HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL

ENGINEER TO SUPERVISE POND CONSTRUCTION AND

PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT

WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30

A-16.00

KCI Technologies, Inc.

14409 Greenview Drive, Suite 102

(301) 953-1821 (410) 792-8086

fax: (410) 792-7419

Laurel, Maryland 20708

DAYS OF COMPLETION.

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL

PREPARED FOR:

ACME PAPER AND SUPPLY CO.

8229 SANDY COURT

SAVAGE, MD 20763

EROSION AND SEDIMENT CONTROL MEET THE

ACME PAPER & SUPPLY COMPANY

A Resubdivision Of Parcels D-1 & E, BLOCK "C" Plat No. 6287 & 3591 ZONING: 'M-2'

3. DECANT THE WATER FROM THE UNIT TO THE SANITARY SEWER

APPROVAL FROM THE SEWER AUTHORITY/MUNICIPALITY)

6. DISPOSE OF SOLIDS AND LIQUIDS IN AN APPROVED MANNER.

THE VACUUM TRUCK ONCE THE DEPTH EXCEEDS 9".

DEWATER SOLIDS.

STORMWATER MANAGEMENT PROFILES

4. REMOVE THE SEDIMENT FROM THE BOTTOM OF THE UNIT USING

USING A PORTABLE PUMP (REQUIRES APPROVAL FROM THE SEWER

TAX MAP NO. 48 PARCEL D-2; PARCEL E-1, BLOCK "C"

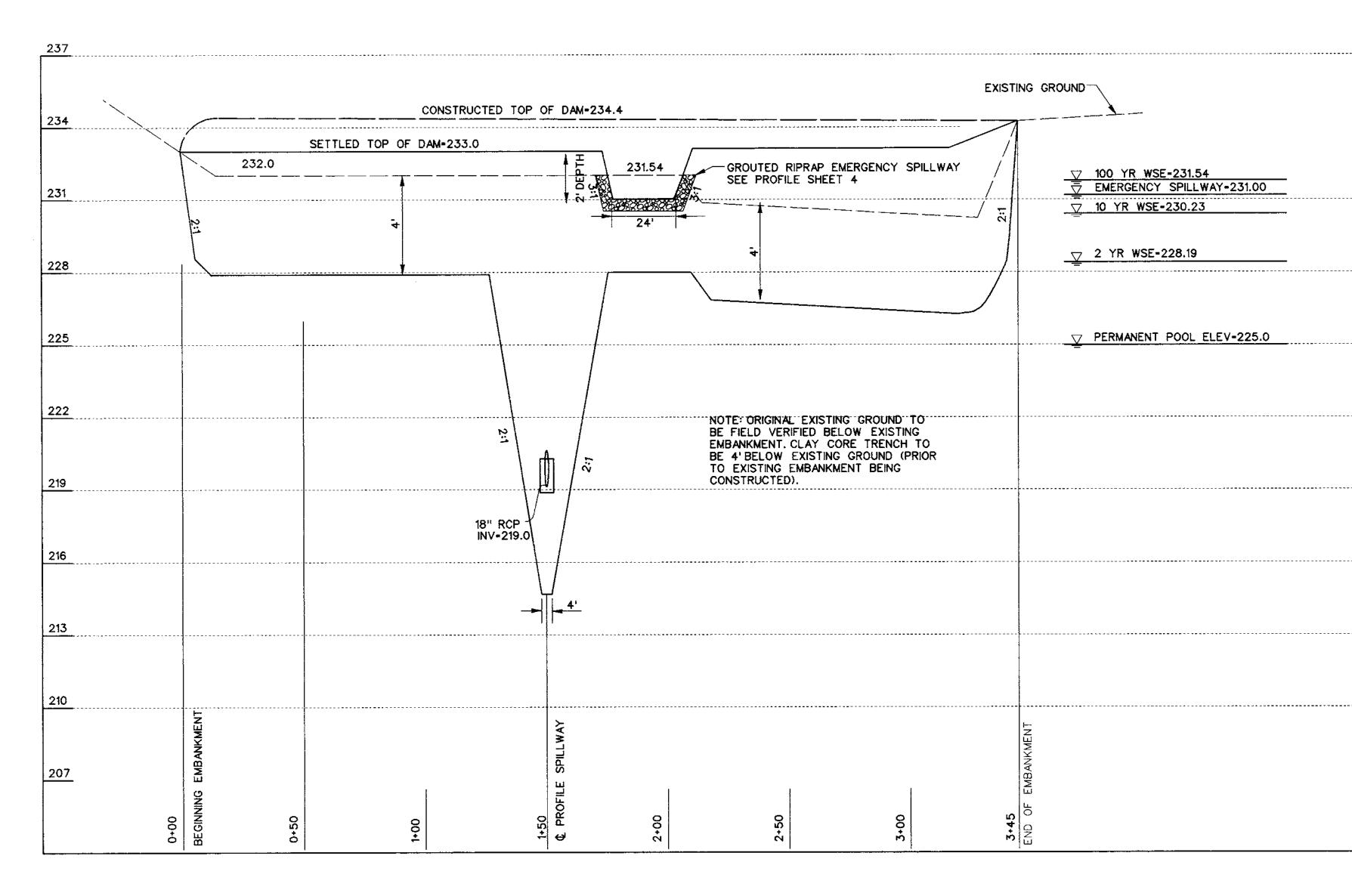
SIXTH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

WATER CODE: B02 SEWER CODE: 4201900

P\a+ 14112

SCALE: AS SHOWN DATE:SEPT. 29, 1999 SHEET 4 OF 18



PROFILE THROUGH & PRINCIPL SPILLWAY

SCALE: 1"-30" HORIZ.

SCALE: 1"=3" VERT.

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#### FOR PUBLIC WATER AND PUBLIC SEWERAGE TSTEMS IN CONFORMANCE WITH I MASTER PLAN OF WATER AND SEWERAGE HOWARD DOONTY HEALTH OFFICER HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. BY THE DEVELOPER: BY THE ENGINEER: \*THESE PLANS HAVE BEEN REVIEWED FOR THE I/WE CERTIFY THAT ALL DEVELOPMENT AND ICERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, HOWARD SOIL CONSERVATION DISTRICT AND MEET CONSTRUCTION WILL BE DONE ACCORDING TO THIS EROSION AND SEDIMENT CONTROL REPRESENTS A THE TECHNICAL REQUIREMENTS FOR SMALL POND PLAN, AND THAT ANY RESPONSIBLE PERSONNEL PRACTICAL AND WORKABLE PLAN BASED ON MY CONSTRUCTION, SOIL EROSION AND SEDIMENT INVOLVED IN THE CONSTRUCTION PROJECT WILL PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. HAVE A CERTIFICATE OF ATTENDANCE AT A THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE DEPARTMENT OF THE ENVIRONMENT APPROVED REQUIREMENTS OF THE HOWARD SOIL CONSERVATION TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT DISTRICT. IHAVE NOTIFIED THE DEVELOPER THAT AND EROSION BEFORE BEGINNING THE PROJECT. I HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND OVED: FOR STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, PUBLIC SEWAGE AND WATER, HOWARD COUNTY DEPARTMENT OF BUBLIC ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT EROSION AND SEDIMENT CONTROL MEET THE WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. S OF THE HOWARD SOME CONSERVATION DAYS OF COMPLETION, LALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL 4.26.00 CONSERVATION DISTRICT. DATE F; BUREAU OF ENGINEERING

REVISIONS

N/10/96 CHNC'D. SPILLWAY LOCATION IN ELEV.

Drafting JJR

Check ZH

Design CGW

Check CEO

#### SWM POND/SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds,

a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

#### Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification CH, or CL. GC and SC may be used provided 30% of the material passes the \*200 sieve. If the fill material for the core trench and the embankment is taken from an off-site borrow area, the fill material must be certified as meeting SCS, MD-378 Pond Specifications for fill material by a certified professional engineer prior to placement

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content with +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

#### Structure Back

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaced under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

#### Pipe Conduits

#### All pipes shall be circular in cross section.

Corrugated Metal Pipe - Altof the following criteria shall apply for corrugated metal pipe:

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The Ph of the surrounding soils shall be between 4 and 9.

- 2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 miles in thickness.
- 3. Connections All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with 0-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

- 4. Bedding The pipe shall be firmly and uniformly bedded throughout its entire length.

  Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- 5. Backfilling shall conform to "Structure Backfill".
- 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

- Materials Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
- Bedding All reinforced concrete pipe conduits shall be laid in a concrete bedding for
  their entire length. This bedding shall consist of high slump concrete placed under the
  pipe and up the sided of the pipe at least 10% of its outside diameter with a minimum
  thickness of 3 inches, or as shown on the drawings.
- 3. Laying pipe Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
- 4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

#### Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311 & 901.2.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the large rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09.

#### Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. the contractor shall also furnish install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purposes, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

#### Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berm shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

#### Erasion and Sediment Contro

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

## Filter Cloth

Filter cloth shall be Mirafi 1405, Dupont Typar \*3341 or approved equal.

## Pond Maintenance

- a. Removal of silt when accumulation exceeds six (6) inches in forebay.
- b. Removal of accumulated paper, trash and debris as necessary.
- c. Vegetation growing on the embankment top and faces of the foreboy forebay or basin is not allowed to exceed 18 inches in height at any time.
- d. Annual inspection and repair of the structure.



## ACME PAPER & SUPPLY COMPANY

A Resubdivision Of Parcels D-1 & E, BLOCK "C"
Plat No. 6287 & 3591
ZONING: 'M-2'

TAX MAP NO. 48 PARCEL D-2; PARCEL E-1, BLOCK "C"
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: 802 SEWER CODE: 4201900

SCALE: AS SHOWN DATE: SEPT. 29,1999 SHEET 5 of 18

Plat 14112

STORMWATER MANAGEMENT PROFILES

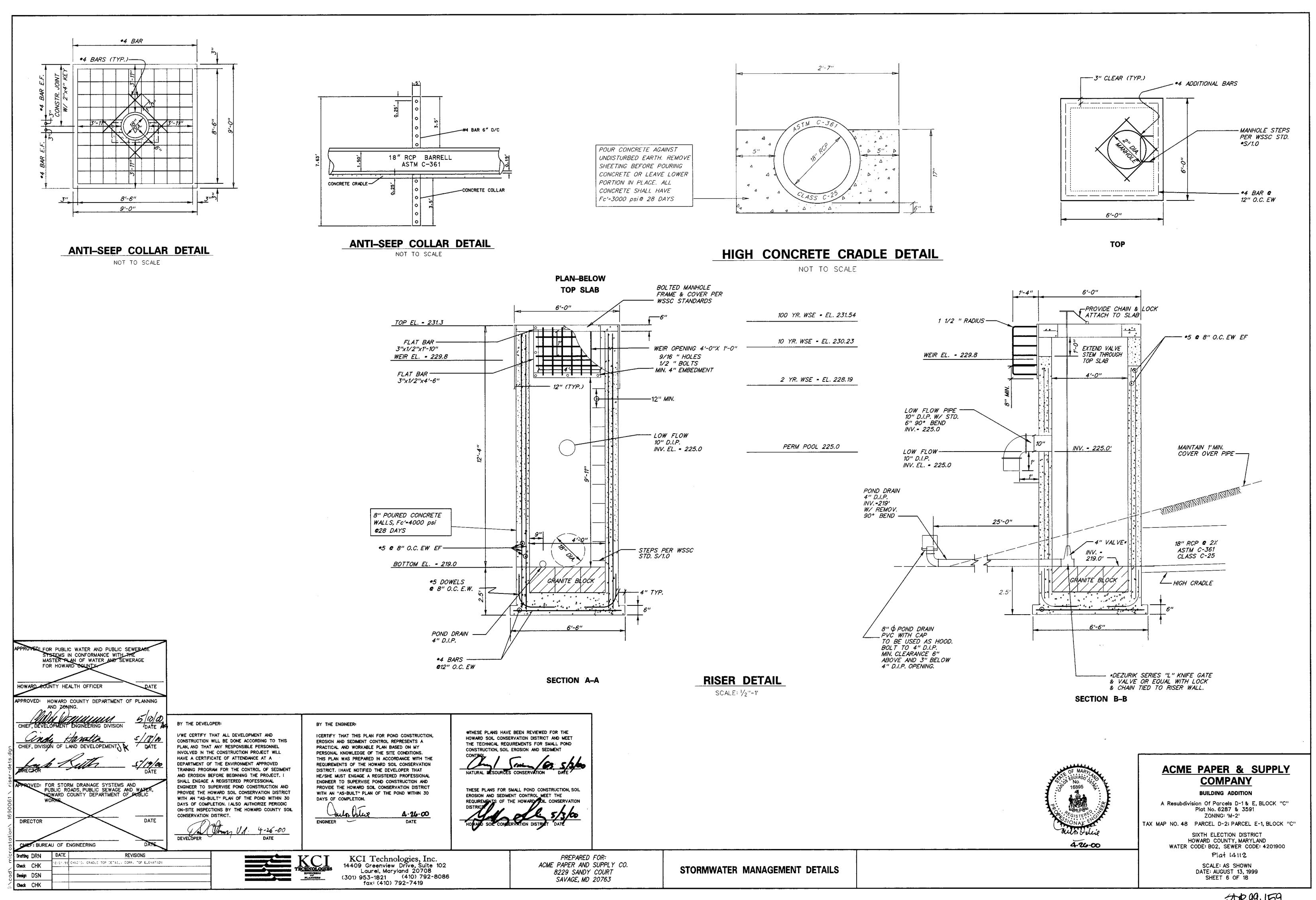
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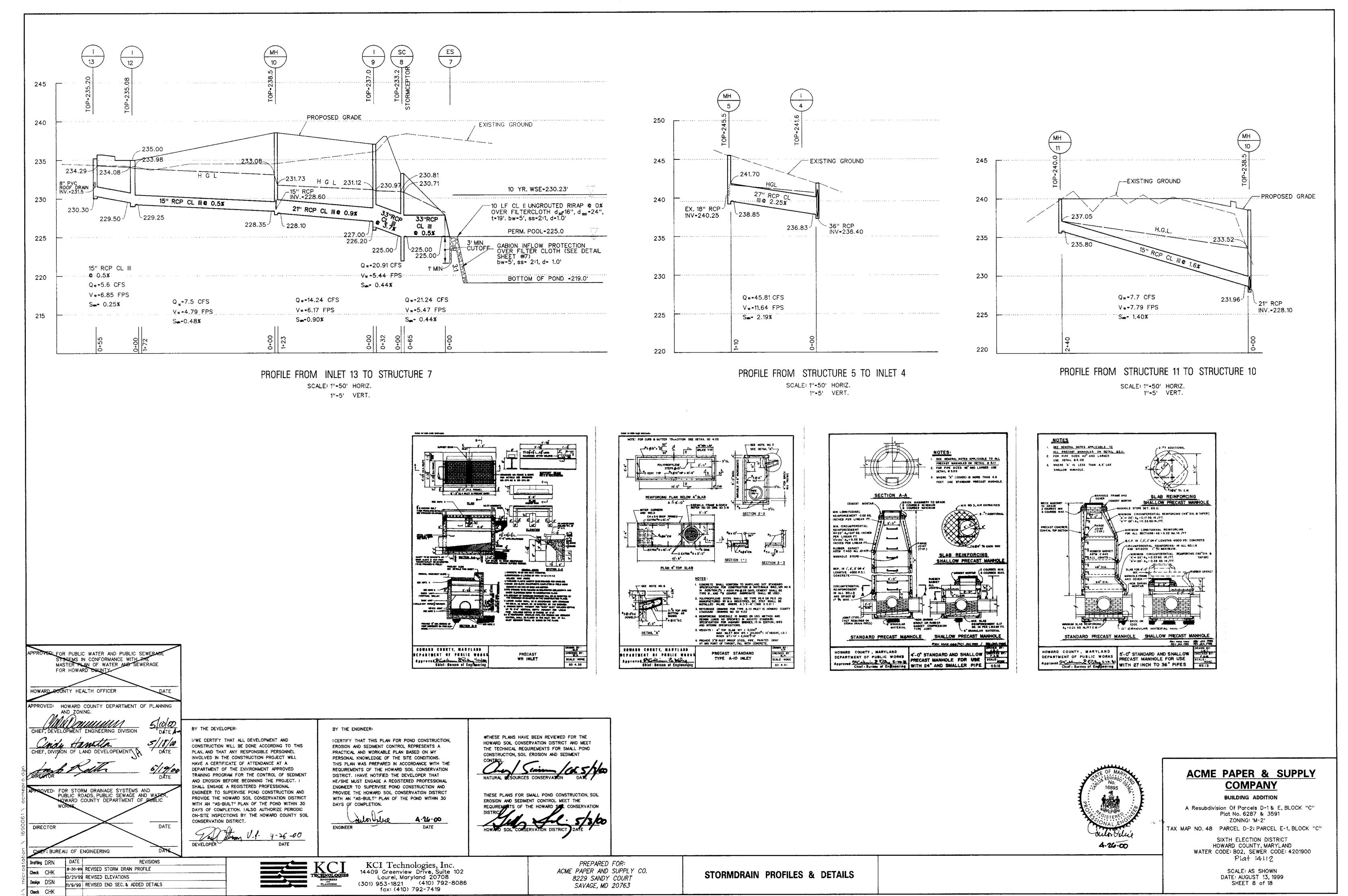
ACME PAPER AND SUPPLY CO.

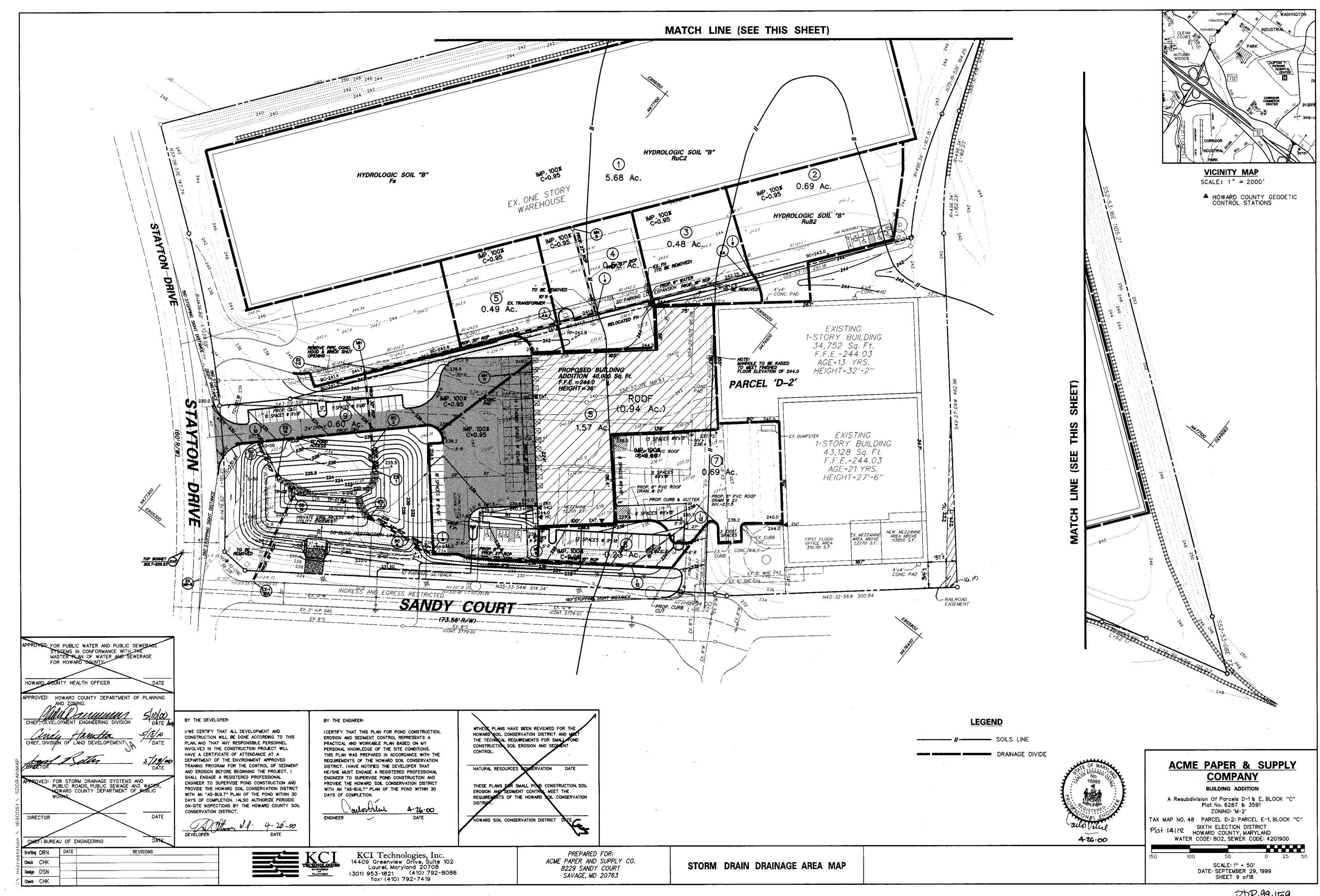
8229 SANDY COURT

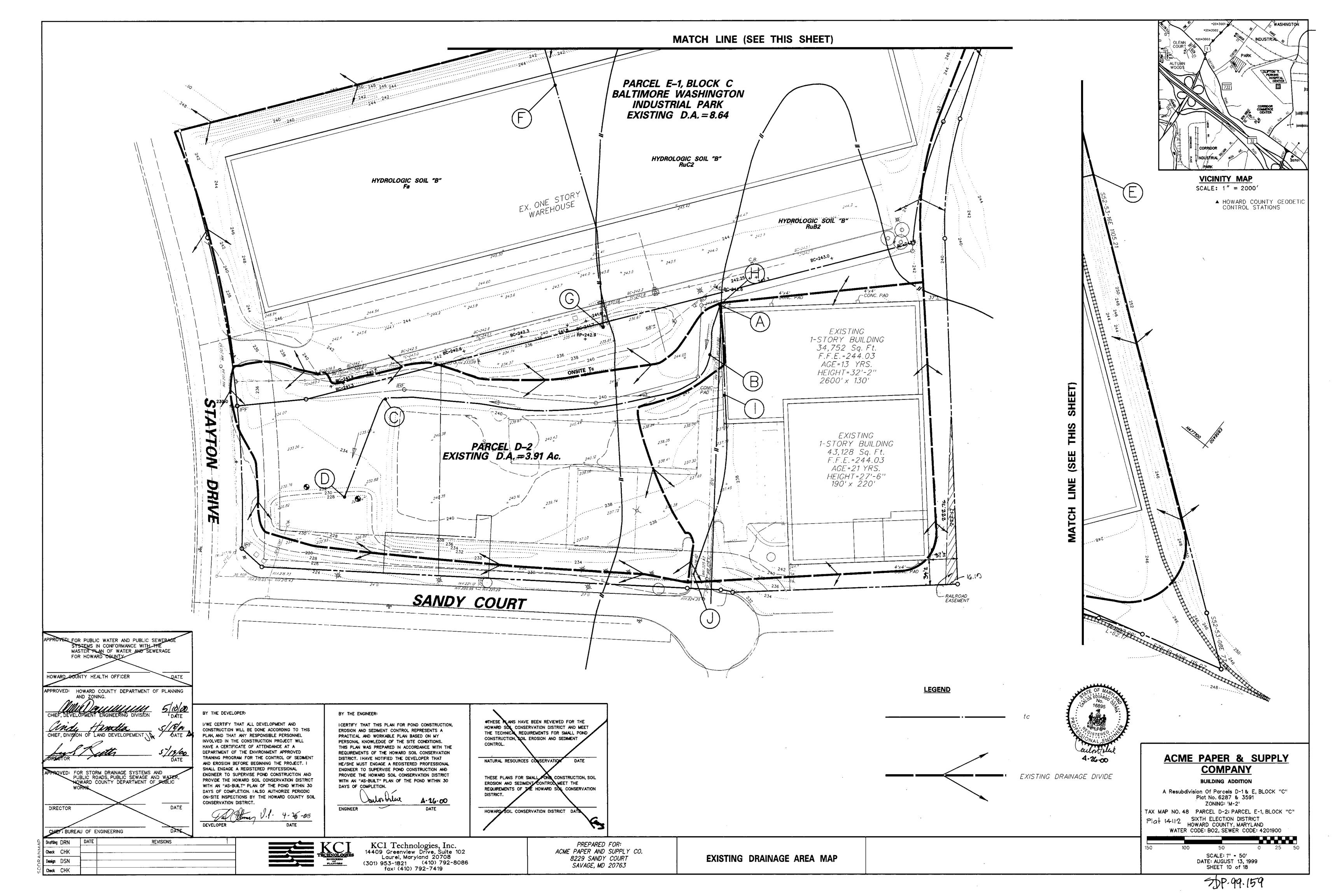
SAVAGE, MD 20763

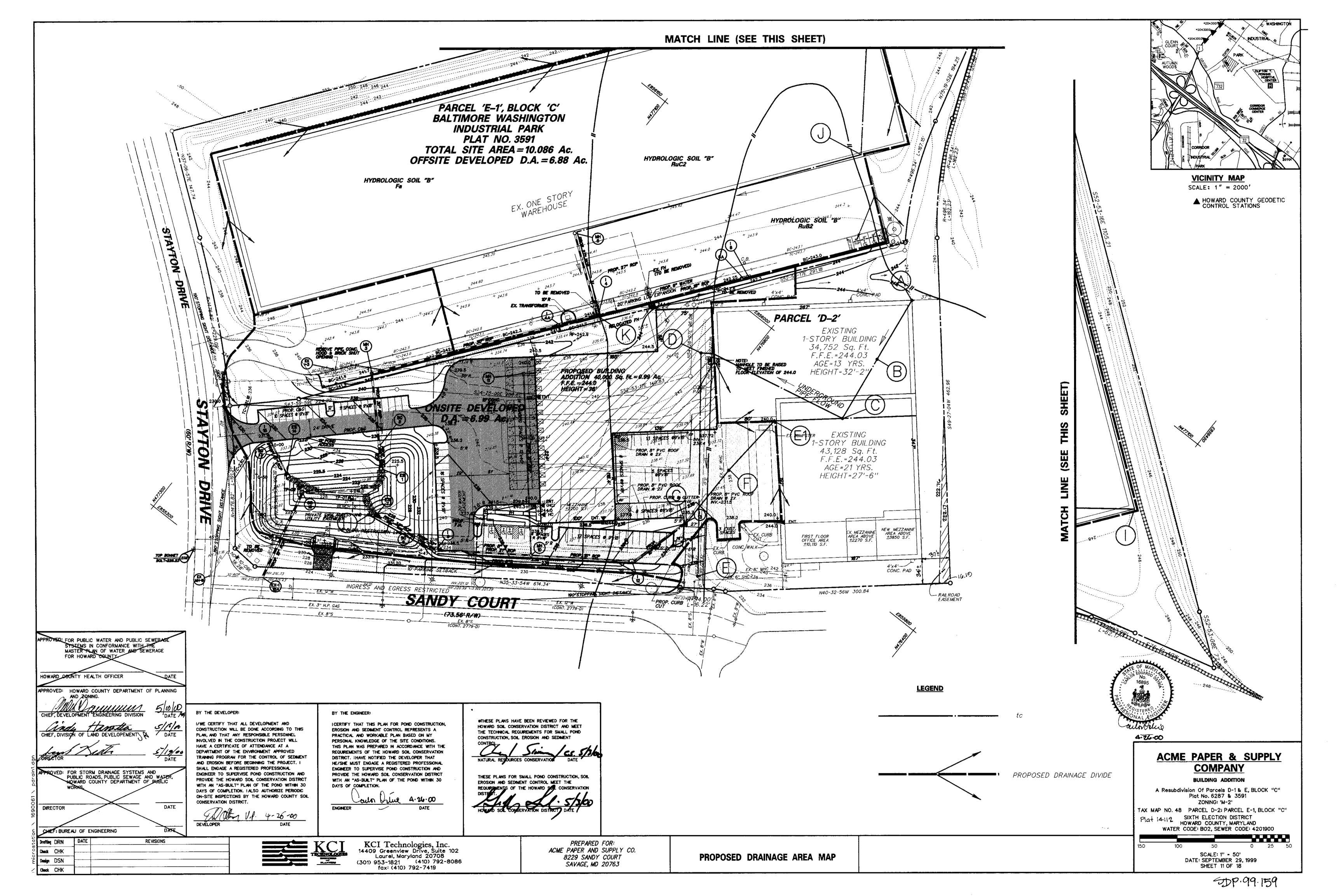
ORMWATER MANAGEMENT PROFILES

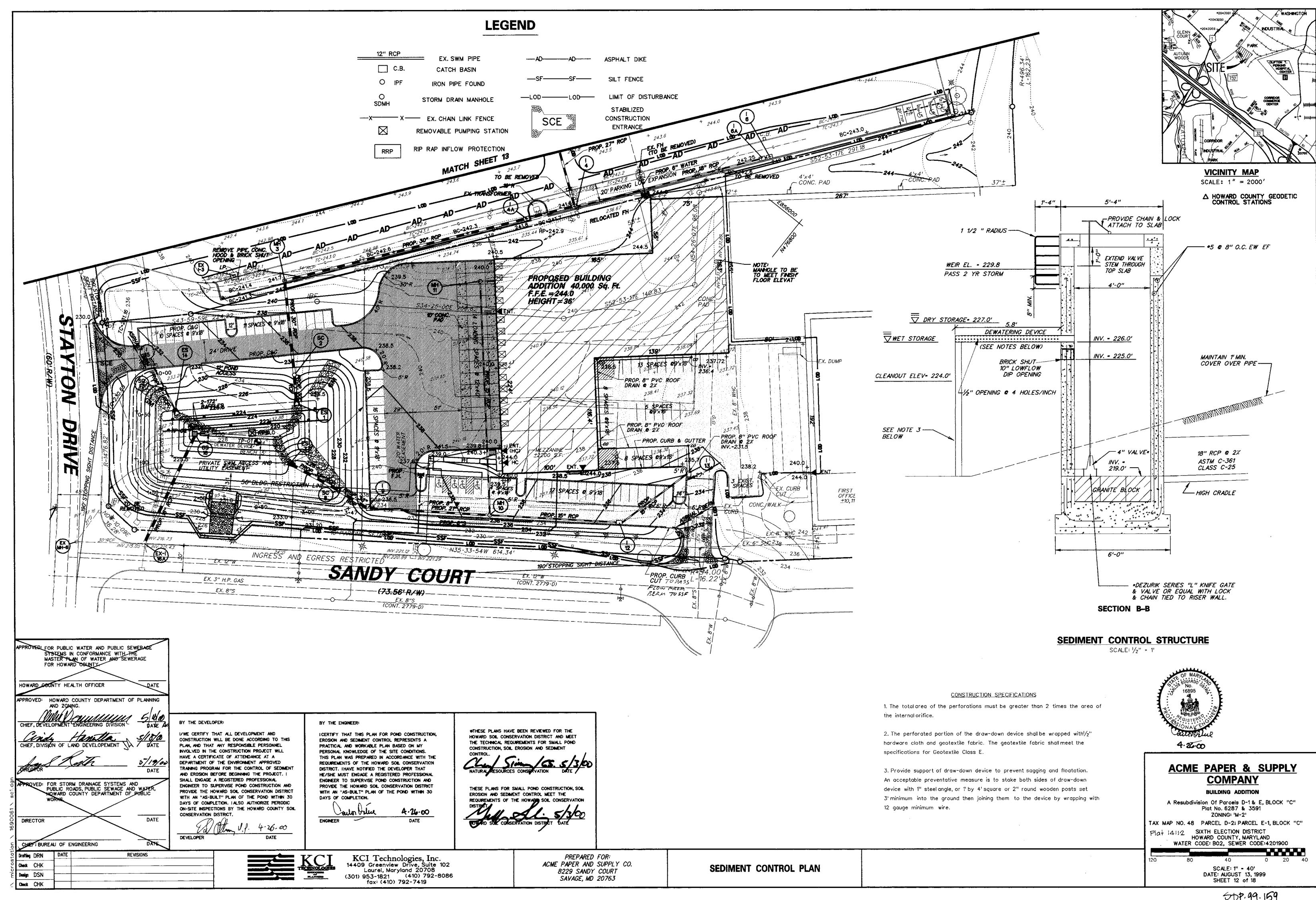


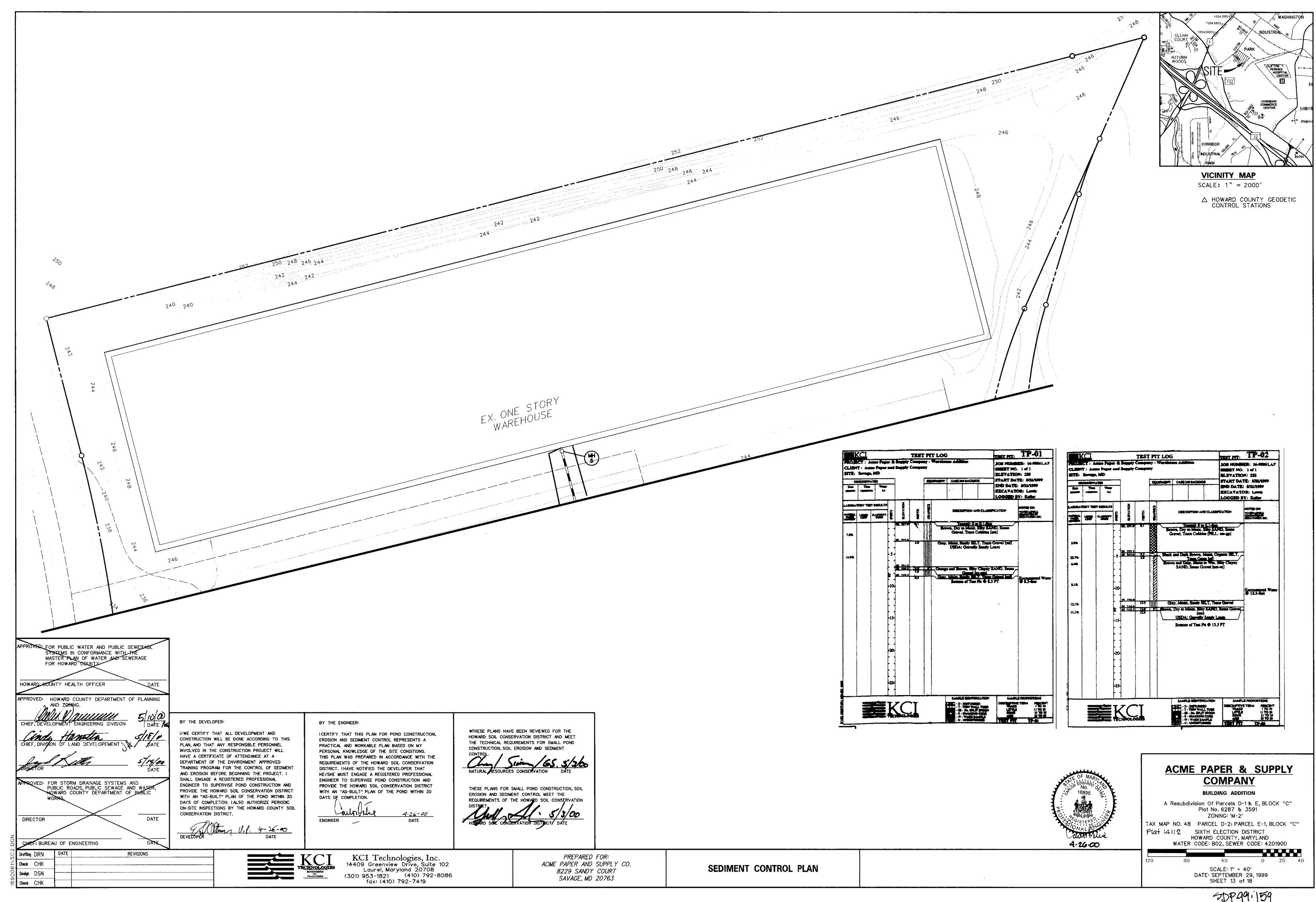


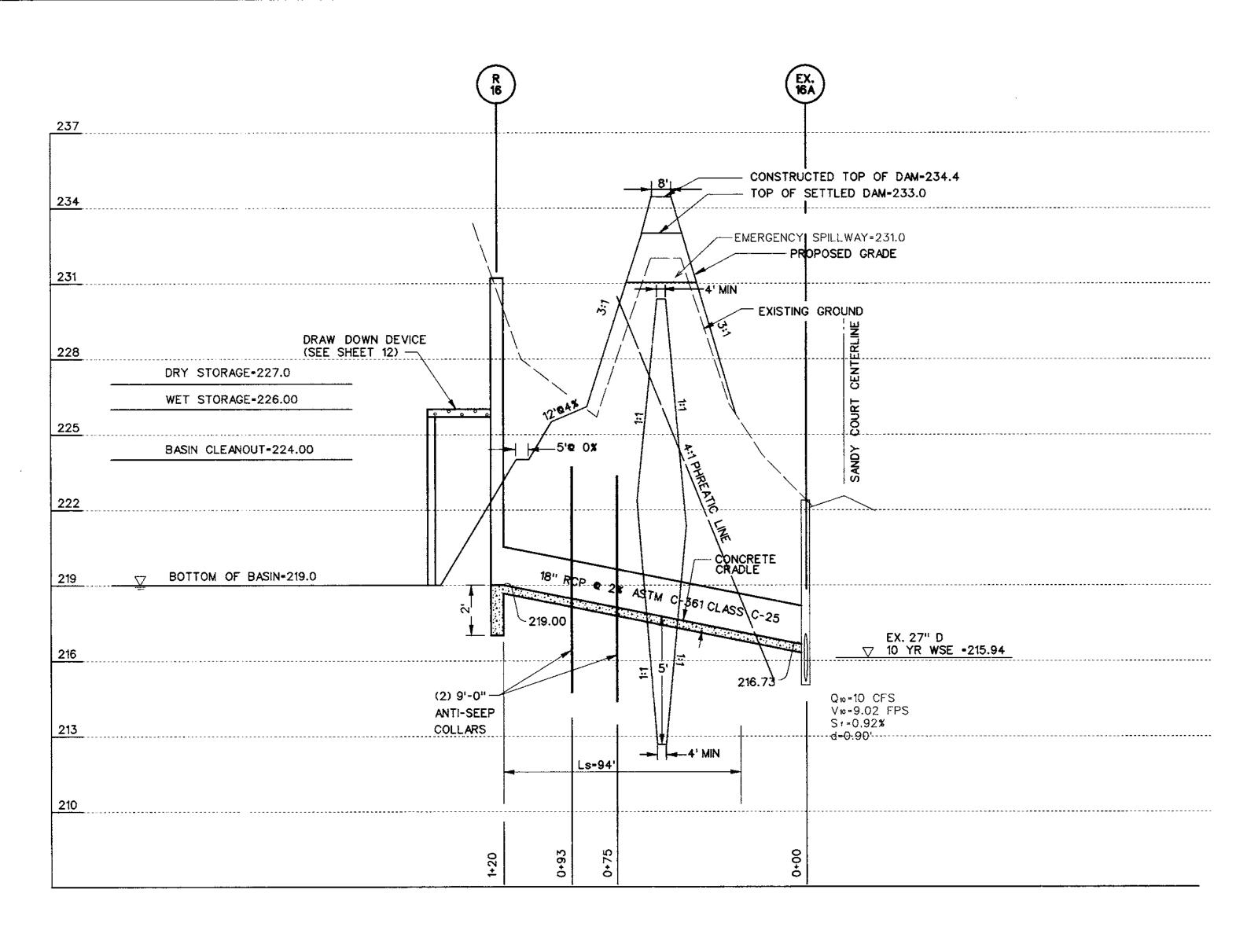






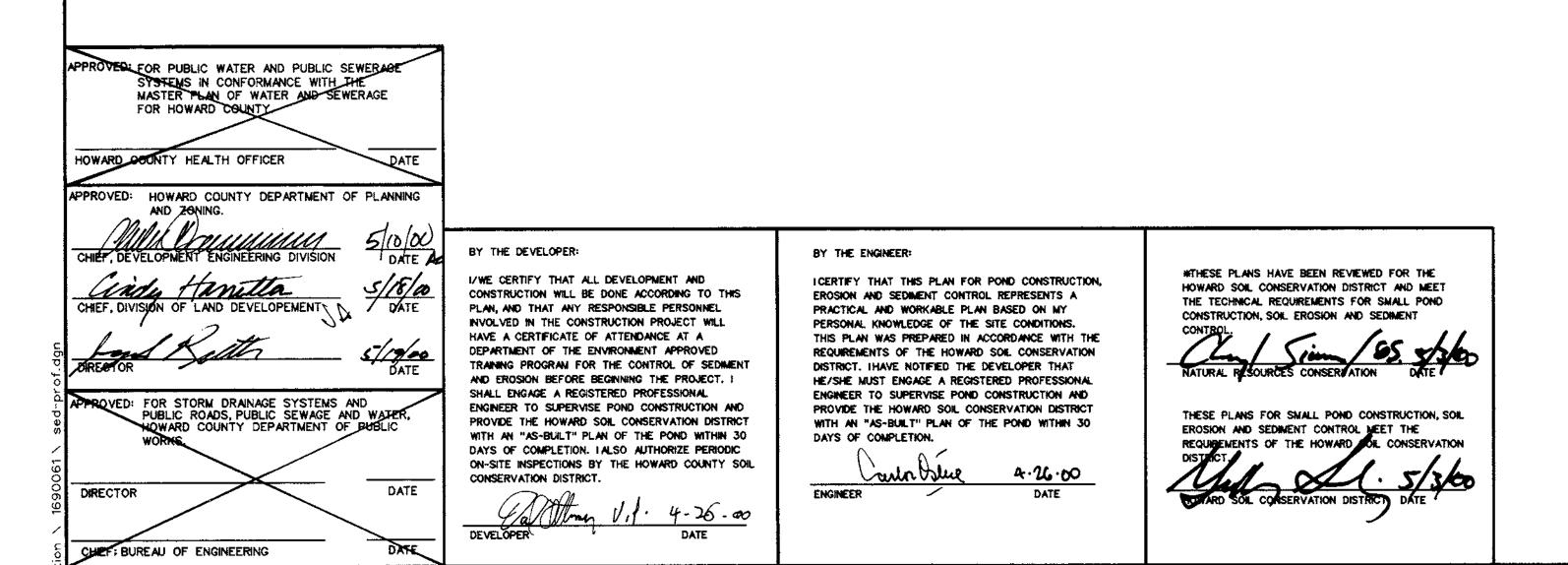






PROFILE THROUGH & PRINCIPLE SPILLWAY

SCALE: 1"=30' HORIZ. 1"+3' VERT.



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SEDIMENT CONTROL DETAILS

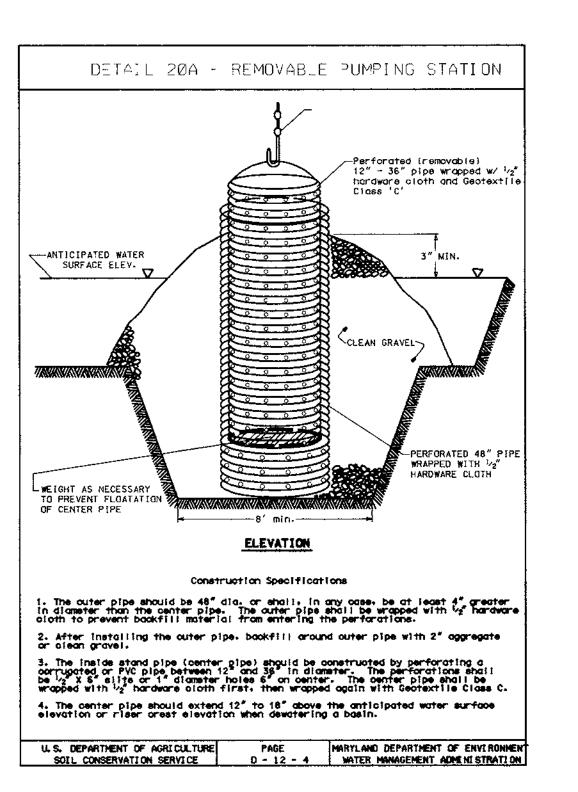
REVISIONS

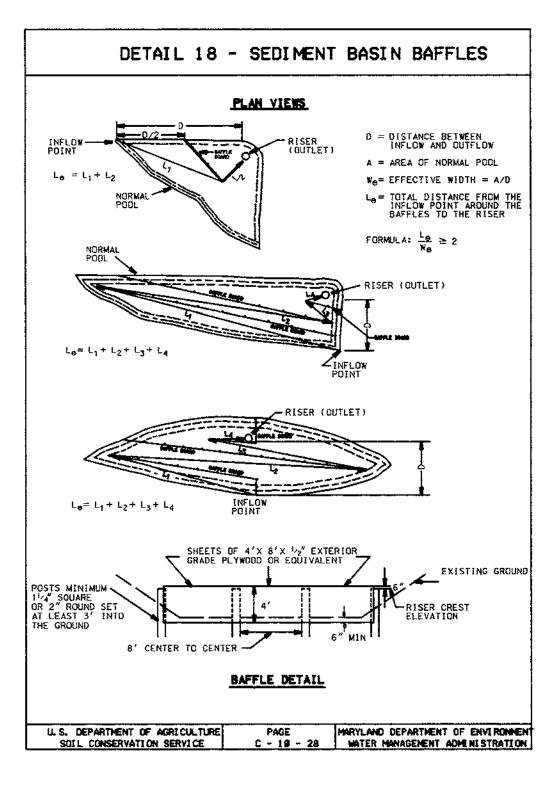
**Drofting JJR** 

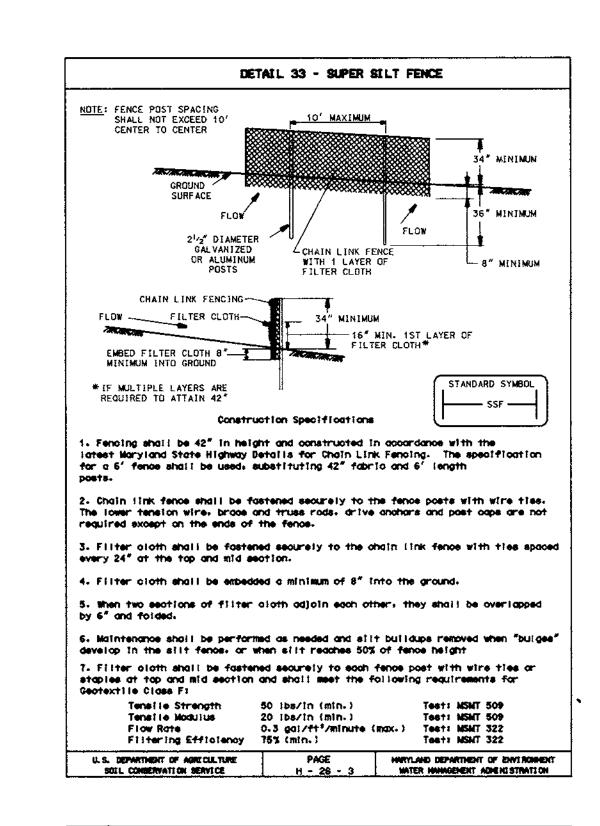
Check Z.H

Design CGW

Check CEO







SUPER SILT FENCE				
Design	<u>Criteria</u>			
		Silt Fence Length		
Steepness	(maximum)	(manchmum)		
0 - 10:1	Unitmited	unitmited		
10:1 - 5:1	200 feet	1+500 <del>feet</del>		
5:1 - 3:1	100 feet	1-000 feet		
3:1 - 2:1	100 <del>fee</del> t	500 feet		
2:1 +	50 feet	250 feet		
		NAYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMENDSTRATION		
	Design   Stope   Steepness     0 - 10:1     10:1 - 5:1     5:1 - 3:1     3:1 - 2:1	Slope   Slope Length (maximum)		

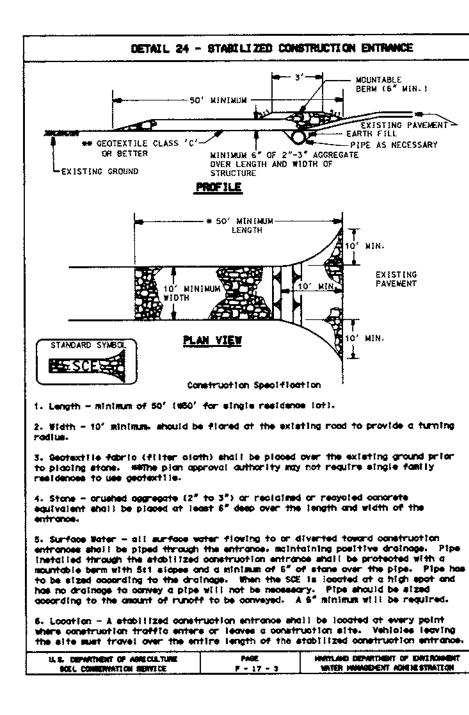


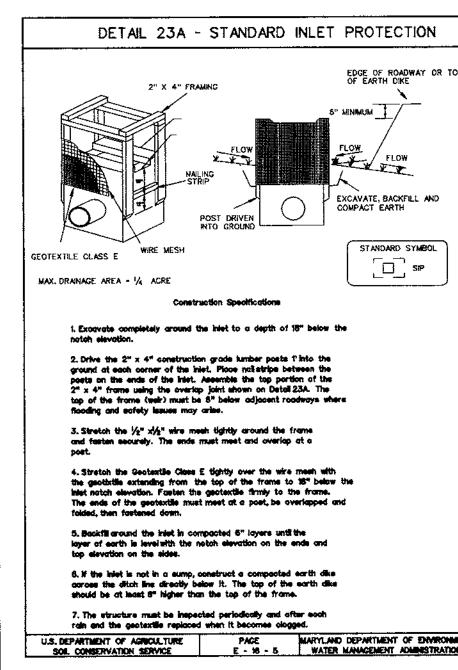
## ACME PAPER & SUPPLY COMPANY

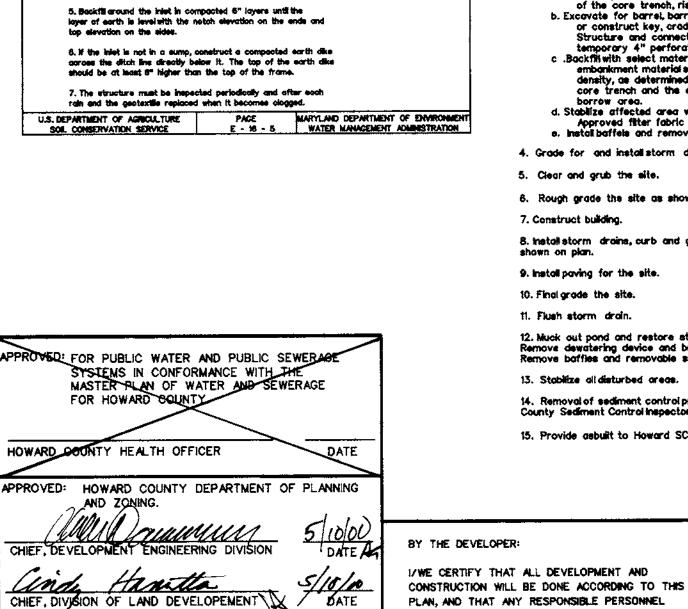
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TAX MAP NO. 48 PARCEL D-2: PARCEL E-1, BLOCK "C"
SIXTH ELECTION DISTRICT
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WATER CODE: B02 SEWER CODE: 4201900
Plat 14112

SCALE: AS SHOWN DATE: AUGUST13,1999 SHEET 14 OF 18







PROVED: FOR STORM DRAINAGE SYSTEMS AND

DIRECTOR

Drafting DRN

Check CHK

Design DSN

Check CHK

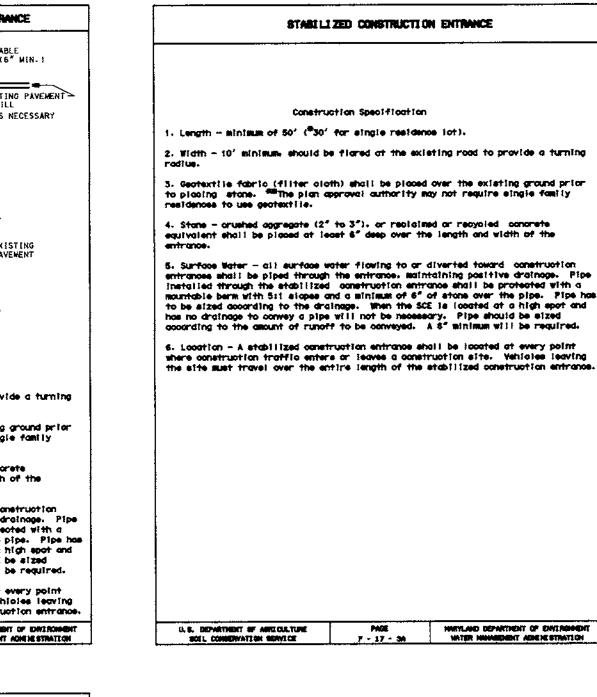
CHEF: BUREAU OF ENGINEERING

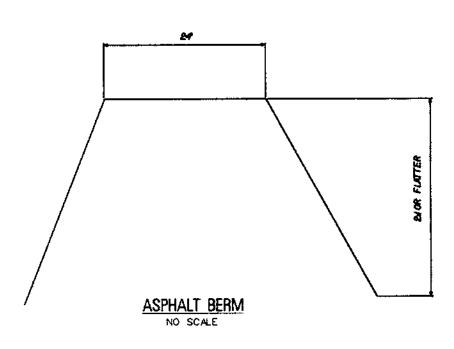
PUBLIC ROADS, PUBLIC SEWAGE AND WATER HOWARD COUNTY DEPARTMENT OF BUBLIC

5/19/00

DATE

REVISIONS





## SEQUENCE OF CONSTRUCTION

Obtain a grading permit and meet with Howard County inspector for preconstruction meeting as required by note number one (No.1) of the Standard Erosion and Sediment Control

2. install Sediment Control devices, Construct Stormwater Management Pond to be used as sediment control basin. Stabilized Construction Entrance, Sixt Fences, Riprap Inflow protection, asphalt dikes as shown on Sediment Control Plan. Install dewatering device.

3. Construct Stormwater Management Basin/Pond as shown on plan.
a. Qualified geotechnical engineer must observe the construction
of the core trench, riser, principal splittay and anti-seep collar.
b. Excavate for barrel, barrel cradie, anti-seep collar and key trench. Place

or construct key, cradie to barrel and anti-seep collar. Construct riser/control Structure and connect to barrel. Construct and black low flow orifice. Install temporary 4" perforated basin dewatering device. c. Backfill with select material after approval of geotechnical engineer. All earthen embankment material shall be compacted to a minimum of 95% of maximum density, as determined by the ASTM test method. The fill material for the

core trench and the embankment shall be obtained from approved off-site borrow area.
d. Stabilize affected area with seed and mulch, seed and curiex or riprap on Approved fitter fabric as indicated and specified.

b. install baffels and removable sump pit.

4. Grade for and install storm drain system 1-13 through ES-7 first.

5. Clear and grub the site. (1 week) (3 Weeks) 6. Rough grade the site as shown on plan. 7. Construct building. 8. installiatorm drains, curb and gutter and other permanent structures as

shown on plan. 9. Install paving for the site. 10. Final grade the site.

BY THE ENGINEER:

DAYS OF COMPLETION.

L'arlos Ortro

ENGINEER

ICERTIFY THAT THIS PLAN FOR POND CONSTRUCTION,

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE

REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL

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PRACTICAL AND WORKABLE PLAN BASED ON MY

PERSONAL KNOWLEDGE OF THE SITE CONDITIONS.

(3 Weeks)

(3 Daye)

(3 Days)

4.26.00

KCI Technologies, Inc.

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11. Flush storm drain. 12. Nuck out pand and restore storage to pand design volume. Remove dewatering device and brick shut 4" orifice. Open the low flow orifice. Remove baffles and removable sump pit.

14. Removal of sediment control practices only upon receiving permission from Howard County Sediment Control inspector. 15. Provide asbuilt to Howard SCD upon completion of project.

PLAN, AND THAT ANY RESPONSIBLE PERSONNEL

INVOLVED IN THE CONSTRUCTION PROJECT WILL

HAVE A CERTIFICATE OF ATTENDANCE AT A

DEPARTMENT OF THE ENVIRONMENT APPROVED

SHALL ENGAGE A REGISTERED PROFESSIONAL

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1.1. 4-26.00

TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT

#### APPENDIX C VEGETATIVE STABILIZATION

Permanent and Temporary Seeding. Sodding and Mulahing

Permanent or temporary vegetation shall be established within seven (7) days on the surface of all sediment control practices such as diversions, grade stabilization structures, berms, waterways, sediment control besine, and all slopes greated areas on the project site. Mulching 3:1) and within 14 days for all other disturbed or graded areas on the project site. Mulchin may only be used an disturbed areas as temporary cover where vegetation is not feasible a where seeding cannot be completed because of weather.

Located Proposition and Seeding Analogation
Located the top layer of the soli to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment such as also harrows, chiselplows or rippers mounted on construction equipment, incorporate the lime and fertilizer into the top 3 to 5 inches of the soli by disoing or by other suitable means. Rough areas should not be rolled or dragged amouth, but left in a roughened condition. Steep slopes greater than 3rl should be tracked by a dozer, leaving the soli in an irregular condition with ridges running parallel to the contour of the slope. The top 1 to 3 inches of solishould be loose and friable. Permanent cover may require an application of topsoli. If so, it must meet the requirements set forth in Section 21.0 Standards and Specifications for topsoli from the 1994 Standards and

Solitests shall be made on sites over five acres to determine the exact requirements for both lime and fertilizer. For sites under 5 acres, in lieu of a solitest, apply the following: Fertilizer Nitrogen P205 1.5 be/eq. ft. (65 be/cc) 3 be/eq. ft. (130 be/cc) 100 be/1000 eq. ft. (2 tone/cc)

For low maintenance areas apply 150 Se/ac ureaform fertilizer (38-0-0) at 3.5 Se/1000 sq. ft. in addition to the above fertilizer at the time of seeding.

Ground Limestone 2 tons/ac W. Sediment Control Practice. Standing
Select a seeding mixture from tables 25 or 26 in Section G of the 1994 Standards and
Specifications. Document seeding on the erasion and sediment control plan using
appropriate chart below. Note if sediment control practices are in for longer than 12

onthe permanent seeding is required. Y. Tomperary/Permanent Seeding Michigan and Bales
Select a seeding mixture from appropriate table 25 or 26 in Section G of the 1994
Standards and Specifications. Document seeding on the erceion and sediment control plan

#### PERMITS STEERING STRANGEY

	Seed Minture (	For Hardiness (From Table )	Zone	. <u>.</u> .	1	Fertilizer Rai (10-20-20)		Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	Rate
7	TALL PERCOE AND WESTERS LONGISHISTON MERCON, LEMPTON TAKEN	<b>10</b>	3/1 TO 10/15	F-2*				
					90 lb/gc (2.0 lb/ 1000 sf)	175 B/cc (4 B/ 1000 sf)	175 lb/ac (4 lb/ 1000 sf)	2 tone/ac (100 lb/ 1000 sf)
• FO	R PERCO RETUEEN S	3/16 TO 8/16 USE	WEEPING LOVEOR	ASS & CONTA			· · · · · · · · · · · · · · · · · · ·	* <u></u> -2

#### TEMPORARY SEEDING SEMANRY

Seed Mixture (For Hardiness Zone				Fertilizer Rate	Lime	
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	(10-10-16)	Rate	
RYE	140	2/1 TO 4/30 OR 8/15 TO 11/15	f			
BARLEY OR RYE PLUS	150	5/170 8/14	Ŧ	600 lb/ac (15 lb/ 1000 sf)	2 tons/ac (100 lb/ 1000 sf)	
	Species  RYE  BARLEY OR	Species Application Rate (Ib/ac)  RYE 140  B/RLEY OR 450	Species   Application   Seeding   Dates	Species Application Rate (lb/ac) Seeding Depths  RYE 140 2/1 TO 4/30 08 8/15 TO 11/15	CFrom Table 28)   Fertilizer Rate (10-10-10)	

75. Turismone Enthalthement
This includes lawns, parks, playgrounds, and commercialistics which witreceivs a medium to high level of maintenance. Areas to receive used shall be tilled by discing or by other approved methods to a depth of 3 to 5 inches, leveled and raked to prepare a proper usedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting seedbed shallbe in such condition that future moving of grasses will pose no difficulty Use certified material and choose a turigrose mixture from page G-20 of the 1994 Standards and Specifications or select from the list in the most current University of Maryland publication, Agronomy Mimea \*77, "Turigrass Cultivar Recommendations for Maryland". See mimeo at end of this section.

VI. Missing
All seedings require mulching. Also mulch during non-seeding dates until seeding can be (3 Weeks)

> Match shall be unrotted, unchapped, email grain straw applied at a rate of 2 tons/acre or 90 bis/1000 eq. ft. (2 baiss). If a mulch anchoring tool is used, apply 2.5 tons/acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches. Mulch anchoring shall be accomplished immediately after mulch placement to minimize loss by wind or water. This may be done by mulch nettings, mulch anchoring tool, wood cellulose fiber or liquid mulch binders.

Apply wood cellulose fiber at a dry weight of 1,500 lbs/core. If mixed with water, use 50 lbs. of wood cellulose fiber per 100 gallons of water.

Liquid binder should be applied heavier at the edge, where wind catches mulch in valleys, and an arest of banks. The remainder of the area should appear uniform after binder application. Apply rates recommended by the manufacturer to anchor and mulch. Staple light weight, plastic netting over the mulch according to manufacturer's recommendations.

VII. Sadding

Close of turfgrass and shall be Maryland or Virginia State certified, or Naryland or Virginia State approved sod. Sod shall be harvested, delivered and installed within a period of 36 hours. Sod is to be isid with the long edges parallel to the contour using staggered joints with all ends tightly abutted and not over lapping. Sod shall be rolled and thoroughly watered after installation. Daily watering to maintain 4 inch depth of moleture for the first week is required in the absence of rainfall. Sod is not to be applied on frozen ground.

A irrigate - Apply minimum 1" of water every 3 to 4 days depending on soli texture, when soli moisture becomes deficient to prevent loss of stand of protective vegetation 8. Repairs - If stand provides between 40% and 94% ground coverage, overseed and fertilize using half of the rates originally applied. If stand provides less than 40% coverage, resetablish stand following original rates and procedures.

#THESE PLANS HAVE BEEN REVIEWED FOR THE

HOWARD SOIL CONSERVATION DISTRICT AND MEET

THE TECHNICAL REQUIREMENTS FOR SMALL POND

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL

REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

8229 SANDY COURT

SAVAGE, MD 20763

CONSTRUCTION, SOIL EROSION AND SEDIMENT

EROSION AND SEDIMENT CONTROL MEET THE

## 21.0 STANDARD AND SPECIFICATIONS TOPSOIL

Placement of topsallover a prepared subsall prior to establishment of permanent vegetation

To provide a suitable solimedium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation. Conditions Misers Provides Applies

1. This practice is limited to areas having 2:1 or flatter slopes where:

A. The texture of the exposed subsoli/parent materialis not adequate to produce

B. The soltmaterialis so shallow that the rooting zone is not deep enough to support plants or turnish continuing supplies of moisture and plant nutrients.

C. The original soil to be vegetated contains material toxic to plant growth. D. The soil is so acidic that treatment with limestone is not feasible

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 241 require special consideration and design for adequate stabilization. Areas having slopes steeper than 241 shall have the appropriate stabilization shown on the plans. Construction, and Micharlet Specifications

Topsoil satvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type ran be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following: A. Topeoli shall be a loam, sandy loam, clay loam, elit loam, sandy clay loam, loamy opeous status a loam, sandy loam, cay loam, set loam, sandy cay loam, loamy sand. Other soils may be used if recommended by an agronomist an soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.

B. Topeoli must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistie, or others as specified.

C. Where the subsoil is either highly acidic or composed of heavy clays, (ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoli. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage

W. For sites having disturbed areas under 5 acres place topsoli (if required) and apply soil amendments as specified in 20.0 Vegetative .Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

IV. For sites having disturbed areas over 5 acress

A On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

1. pH for topsolishalibe between 8.0 and 7.5. if the tested solidemonstrates a pit of less than 6.0, sufficient lime shall be prescribed to raise the pit to

2. Organic content of topsolishalibe not less than 1.5 percent by weight.

3. Topsolitaving soluble salt content greater than 500 parts per million shall

4. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has slapsed (14 days min.) to permit dissipation of phyto-toxic materials,

## Note: Topoolisubstitutes or amendments, as recommends by a qualified agronomist or soll scientist and approved by the appropriate approval-authority, may be used in lieu of noterel

II. Place topeoil (if required) and apply soli amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

A. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Sitt Fence and Sediment

Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

 Topsoll shall be uniformly distributed in a 4<sup>n</sup> - 8<sup>n</sup> layer and lightly compacted to a minimum thickness of 4<sup>n</sup>. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soli preparation and tiliage. Any irregularities in the surface resulting, from topeoling or other operations shall be corrected in order to prevent the formation of depressions or water packets.

3. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsollis excessively wet or in a condition th

may otherwise be detrimental to proper grading and seedbed preparation. VI. Atternative for Permanent Seeding - Instead of applying the full amounts of lime and A. Comparted Studge Material for use as a soil conditioner for sites having disturbed

areas over 5 scree shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following, requirements:

Composted skidge shallbe supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

 Composted studge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not most these requirements, the appropriate constituents must be added to meet the requirements prior to use. 3. Composted studge shallbe applied at a rate of iton/1,000 square feet.

B. Composted studge shall be amended with a potassium fertilizer applied at the rate of References: Guideline Specifications, Sall Preparation and Sodding MD-VA, Pub. \*1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

#### 19.0 STANDARDS AND SPECIFICATIONS LAND GRADING Contra Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal

Many counties have regulations and design procedures already established for land grading and out and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, fined attempt, reverse slope benches (include grade and cross section), grade stabilization structures, retaining wate, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be inconcepted into the state. practices. The following shall be incorporated into the plan

L. Provisions shall be made to safety conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded

II. Cut and fill alopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be moved the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to moving steep slopes.) Slopes exceeding 211 shall require special design and stabilization considerations that shall be adequately shown on the plane.

III. Reverse benches shallbe provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet for 31 slope it shall be increased to 30 feet and for 41 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

A. Benches shall be a minimum of eix-feet wide to provide for ease of maintenance.

B. Benches shall be designed with a reverse slope of 84 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate

C. The flow length within a bench shall not exceed 800 unless accompanied by appropriate design and computations. For flow channel stabilization see temporary

V. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dices, ditches and swales or conveyed downslope by the use of a designed structure, except

A. The face of the slope is or shall be stabilized and the face of alignated slopes shall be protected from surface runoff until they are stabilized.

B. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainageways, graded swales, downspouts, etc.

C. The face of the slope will be protected by special erasion control materials, to include, but not limited to approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.

V. Cut slopes occurring in ripable rock shallbe serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and withhave steps cut at nominal twofoot intervols with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 11. These steps will warder and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated out slopes and carries to a suitable outlet.

VI. Subsurface drainage shall be provided where necessary to intercept sespage that would otherwise advancely affect slope stability or create excessively wet site conditions.

VII. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erasion, slippage, settlement, subsidence or other related damages.

VIII. Fill material shall be free of brush, rubbish, rocks, loge, stumps, building debris, and other objectionable material. It should be free of stance over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

IX. Stockplies, borrow areas and spoilshall be shown on the plane and shall be subject to the

At disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

## HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections Licenses and permits, Sediment Control Division prior to the start of any construction (313-1855). 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

 Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, great on the project site.

Alisediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol1, Chapter 7 of the HOWARD COUNTY DESIGN MANUAL, Storm

5. All disturbed grees must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSIN AND SEDMENT CONTROL for permanent seeding, sod., temporary seeding, and mulching (Sec.G). Temporary stabilization with mulch glone shall only be done when recommended seeding dates do

8. At sediment control structure to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control 7. Site Analysis:

Total Area of Site = 7.67 Acres
Area Disturbed = 6.35 Acres
Area to be roofed or paved = 6.0 Acres
Area to be vegetatively stabilized = 0.35 Acres
Total Cut = 11.500 Cu. Yds.
Total File = 8,000 Cu. Yds.
Offsite weeks/horzone area location = 2.500 Cu. Offsite waste/borrow area location - 2,500 Cu. Yds.

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County

10. On all sites with disturbed area in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erasion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. 11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

#### HOWARD SOIL CONSERVATION DISTRICT RMANENT SEEDING NOTES

Apply to graded or cleaned areas not subject to immediate further disturbance where a permanent long-lived

eadbed Preparation: Loosen upper three inches of soll by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In Seu of soil test recommendations, use one of the following schedules:

1. Preferred 13/52 Apply 2 tons/core doiomitic limestons (92 lbs/1000 sq. ft.) and 600 lbs/core 10-10-10 fertilizer (14 lbs/1000 sq. ft) before seeding. Harrow or disk into upper three inches of soil. At this time of seeding, apply 400lbs/cores 30-0-0 ureaform fertilizing (9

2. Acceptable  $^{13}\!/_{22}$  Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (22 lbs/1000 sq. ft.) before seeding. Horrow or disk into

Seeding <sup>13</sup>/<sub>32</sub> For the periods March 1 <sup>13</sup>/<sub>32</sub> April 30, and August 1 <sup>13</sup>/<sub>32</sub> October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescus. For the period May 1 – July 31, seed with 60 lbs of Kentucky 31 Tall Fescus per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lavegrass. During the period of Dictober 16 <sup>13</sup>/<sub>32</sub> February 28,, protect site by:Option 1 <sup>13</sup>/<sub>32</sub> Two tone per acre of well anchored straw much and seed as soon as possible in the spring. Option 2 <sup>13</sup>/<sub>32</sub> Use sod. Option 3 <sup>13</sup>/<sub>32</sub> Seed with 80 lbs/acre

Mulching 13/32 Apply 1-1/2 to 2 tons per care (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance 13/52 inspect alisseding areas and make needed repairs, replacements and reseedings TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed. Seedbed preparation: - Loosen upper three inches of soil by raking, disking or other acceptable means

Soli Amendments: - Apply 800 lbs/core 10-10-10 fertilizes (14 lbs/1000 sq. ft.) Seeding: – For periods Narch 1  $^{13}/_{22}$  April 30 and from August 15  $^{15}/_{22}$  Dotober 15, seed with 2-1/2 bushelper acre of annualrys (3.2 lbs/1000 sq. ft.). For the period November 16  $^{15}/_{22}$  August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16  $^{15}/_{22}$  February 26, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal.

Refer to the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

#### OPERATION, MAINTENANCE AND INSPECTION

inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards And Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pand and the continued operation, survellance, inspection, and maintenance thereof. The pand owner(s) shall promptly notify the Soli Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seeping, sliding

#### MAINTENANCE REQUIREMENTS

A. Removal of sit when accumulation exceeds six (6) inches in basins without forebays. in basins with forebays, removal of sit shall occur when the accumulation exceeds four (4) inches in the forebay.

B. Removal of accumulated paper, trash and debris as necessary. Vegetation growing on the embankment top and faces is not allowed to exceed 18 inches
in height at any time.

D. Annual inspection and repair of the structure.

E. Corrective maintenance is required any time an extended detention basin does not drain the equivalent of the Water Quality Volume within 60 hours (i.e., no standing water is

F. Corrective maintenance is required any time the forebay does not drain down completely within 60 hours (i.e., no standing water allowed).

## **ACME PAPER & SUPPLY** COMPANY

BUILDING ADDITION

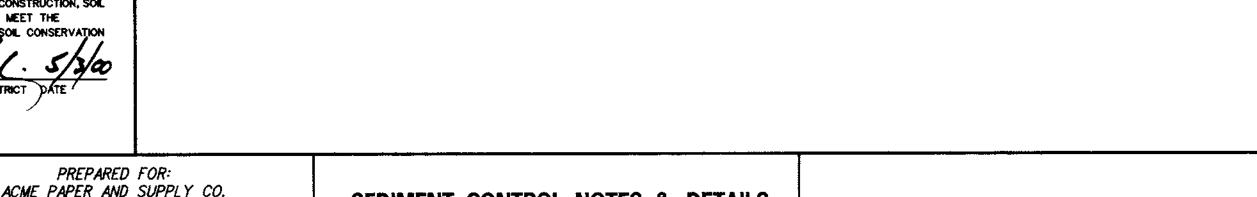
A Resubdivision Of Parcels D-1 & E, BLOCK "C" Plat No. 6287 & 3591 ZONING: 'M-2' TAX MAP NO. 48 PARCEL D-2; PARCEL E-1, BLOCK "C" SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

> Plat 14112 SCALE: N/A DATE: SEPTEMBER 29, 1999 SHEET 15 of 18

WATER CODE: BO2, SEWER CODE: 4201900

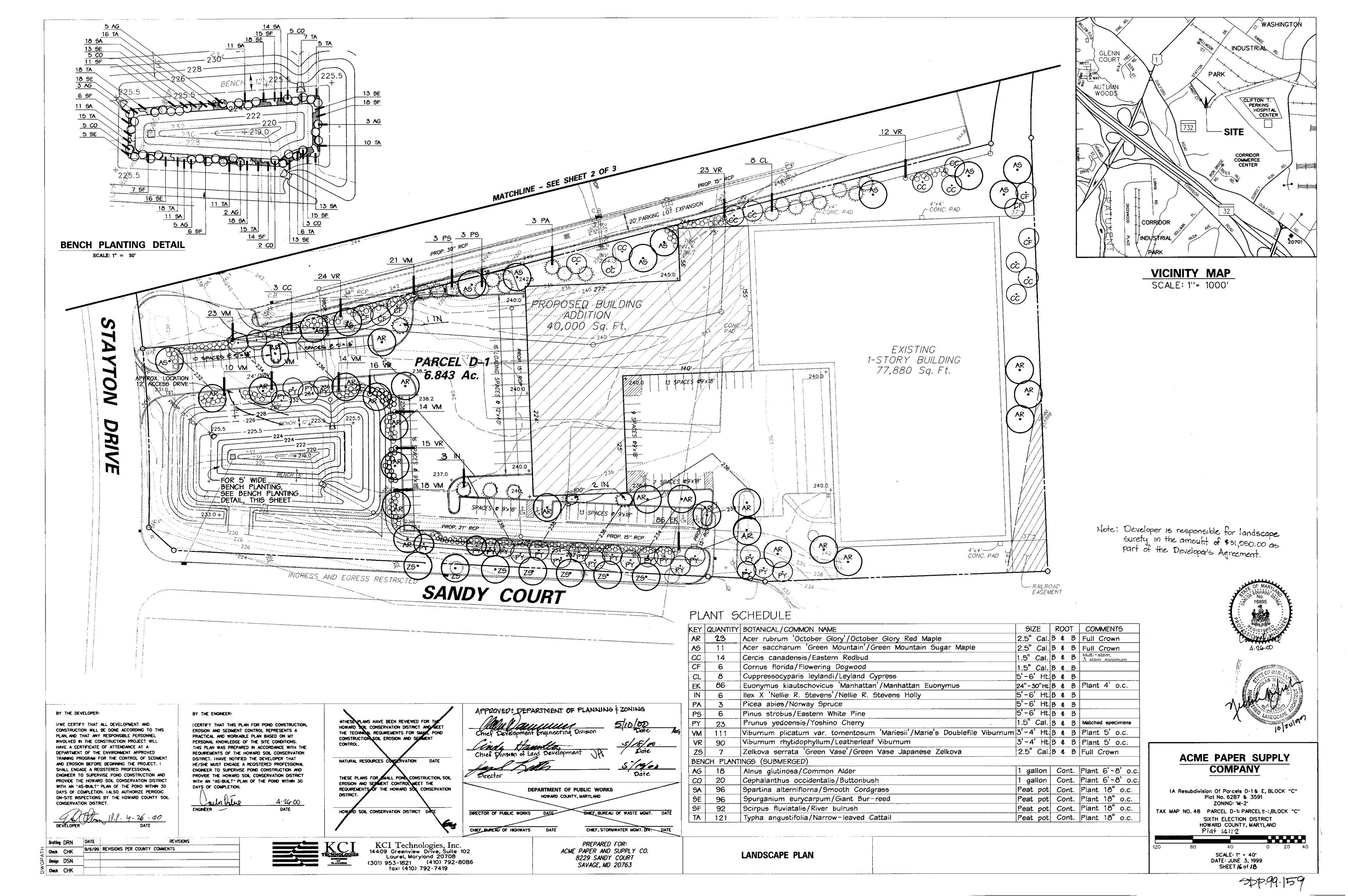


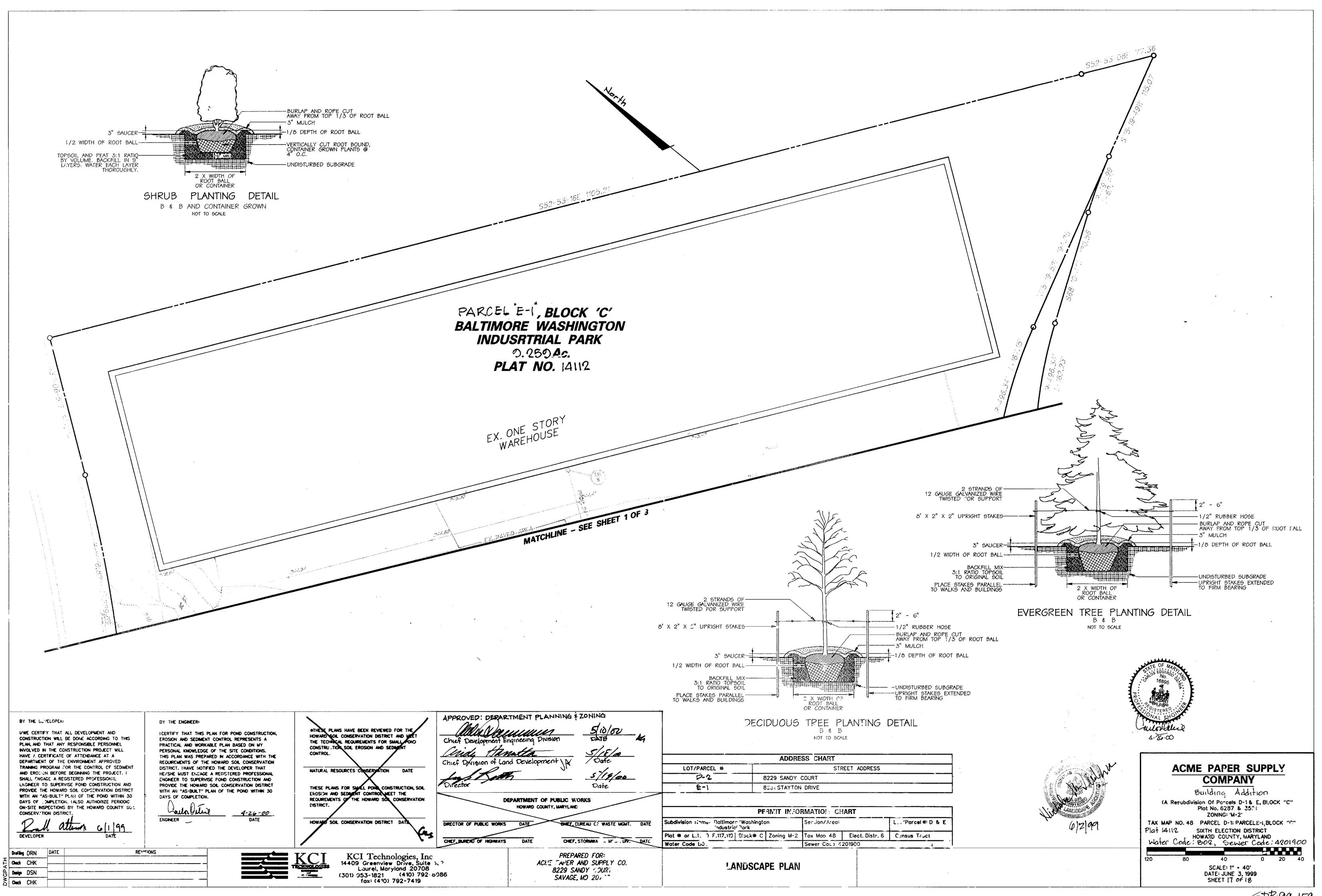




SEDIMENT CONTROL NOTES & DETAILS







#### Schedule A Perimeter Landscape Edge Parcel E

	A 41 b L.	A J
Category	Adjacent to Roadways	Adjacent to Perimeter Properties
	Noauways	Termieter Troperties
Landscape Type		Α
Linear Feet of Roadway		1 700
Frontage/Perimeter		1,722
Credit for Existing Vegetation		
(Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm		.,
(Yes, No, Linear Feet)		No
	İ	
Number of plants Required		^^
Shade Trees		29
Evergreen Trees	}	0
Shrubs	<u> </u> 	0
Number of plants Provided		·
Shade Trees	(	6
Evergreen Trees	1	14
Other Trees (2:1 substitution)		14
Shrubs (10:1 substitution)		103

#### Schedule A Perimeter Landscape Edge Parking to R/W (Stayton Drive)

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	E	
Linear Feet of Roadway Frontage/Perimeter	30	
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)	No	
Number of plants Required Shade Trees Evergreen Trees Shrubs	1 0 8	
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	1 0 0 8	

## Schedule B Parking Lot Internal Landscaping

Number of Parking Spaces	84
Number of Trees Required	4
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	5 0

BY THE ENGINEER:

DAYS OF COMPLETION.

ENGINEER

#### Schedule A Perimeter Landscape Edge Parking to R/W (Sandy Court)

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	E	
Linear Feet of Roadway Frontage/Perimeter	325	
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)	No	
Number of plants Required Shade Trees Evergreen Trees Shrubs	8 0 81	
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	0 0 16 81	

## Schedule A Perimeter Landscape Edge

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		Α
Linear Feet of Roadway Frontage/Perimeter		463
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required - Shade Trees Evergreen Trees Shrubs		8 0 0
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)		5 0 6 0

## Schedule D Stormwater Management Area Landscaping

Linear Feet of Perimeter	400
Number of Trees Required Shade Trees Evergreen Trees	. 8 10
Credit for Existing Vegetation (No, Yes and %)	. No
Credit for Other Landscaping (No, Yes and %)	No
Number of Trees Provided Shade Trees Evergreen Trees Other trees (2:1 substitution) Shrubs (10:1 substitution)	7 0 4 98

### Schedule A Perimeter Landscape Edge Loading to Parcel E

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	,	С
Linear Feet of Roadway Frontage/Perimeter		60
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required Shade Trees Evergreen Trees Shrubs		2 3 0
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)		2 3 0 0

#### Schedule A Perimeter Landscape Edge South

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		Α
Linear Feet of Roadway Frontage/Perimeter		270
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required Shade Trees Evergreen Trees Shrubs		5 0 0
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)		3 O 3 5

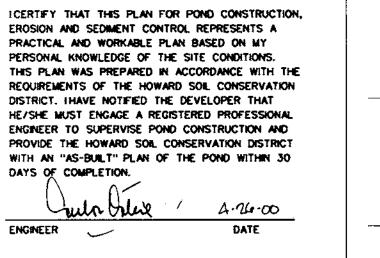
Street Trees Required: 1 Tree/40 I.f. Street R/W (23) Stayton Drive: 210 I.f./40 = 5.25 Trees Sandy Court: 700 I.f./40 = 17.5 Trees

Street Trees Proposed: 23 Stayton Drive: 3 Sandy Court: 13 Elsewhere on Site: 7

## BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION, FALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL

REVISIONS Orofling DRN DATE Check CHK Design DSN Check CHK



INTINESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MERIT THE TECHNICAL REQUIREMENTS FOR SMALL PUND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL. NATURAL RESOURCES CONSERVATION DATE THESE PLANS FOR SMALL MOND CONSTRUCTION, SOIL EROSION AND SEQUEENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION HOWARD SOIL CONSERVATION DISTRICT DATE

KCI Technologies, Inc.
14409 Greenview Drive, Suite 102
Laurel, Maryland 20708
(301) 953-1821 (410) 792-8086
fax: (410) 792-7419

Chief Development Engineering Division

Land Develor APPROVED: DEPARTMENT OF PLANNING & ZONING 5/10/00 Date Date 5/19/00 Date DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHEE, BUREAU OF WASTE MGMT. DATE CHEF BUREAU OF HIGHWAYS DATE CHEF, STORWATER MGMT. DIV. DATE PREPARED FOR:

ACME PAPER AND SUPPLY CO. 8229 SANDY COURT SAVAGE, MD 20763

LANDSCAPE REQUIREMENT SCHEDULES

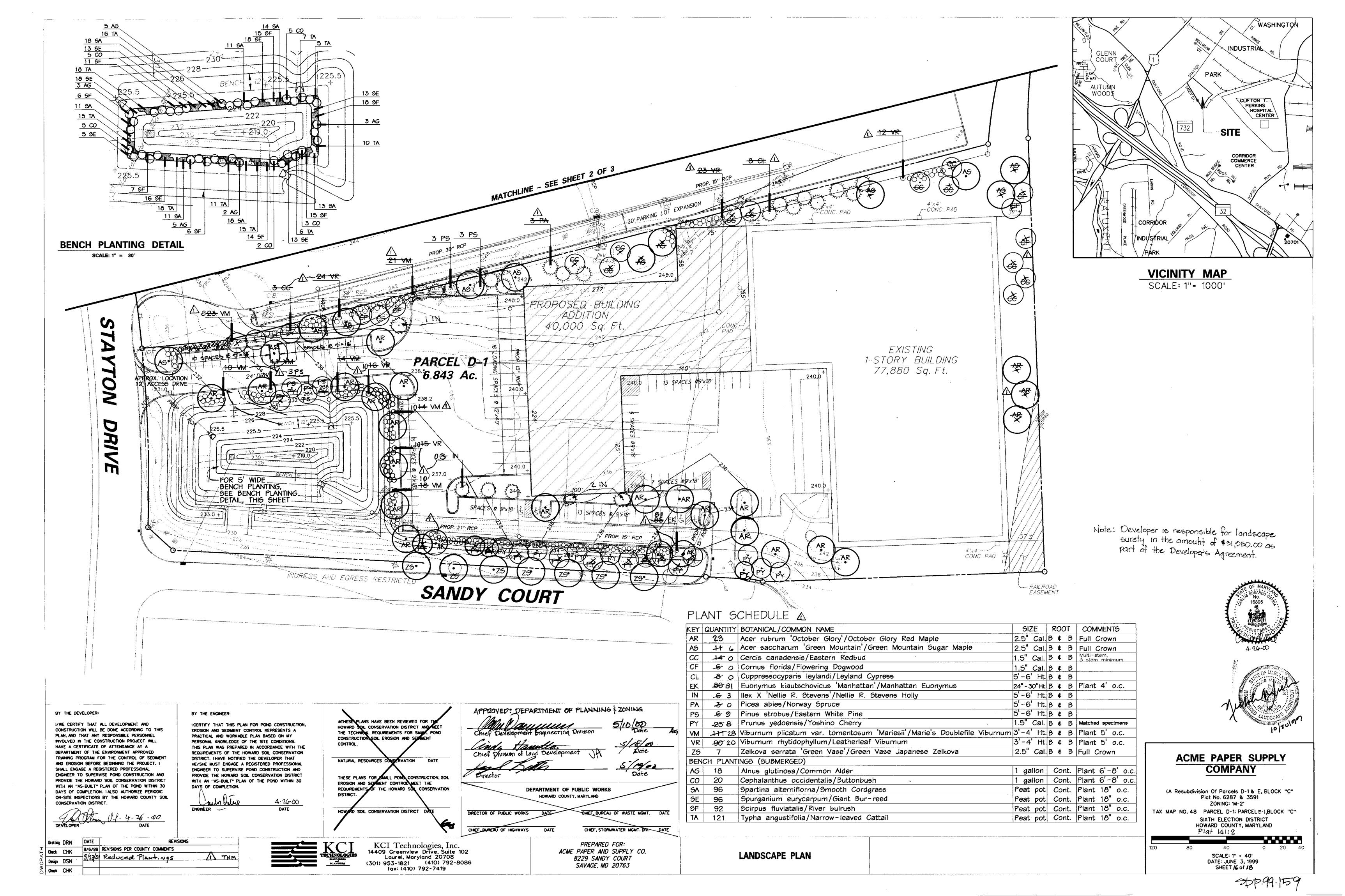


## **ACME PAPER SUPPLY** COMPANY

(A Resubdivision Of Parcels D-1 & E, BLOCK "C" Plat No. 6287 & 3591 ZONING: 'M-2' TAX MAP NO. 48 PARCEL D-1; PARCEL E-1, BLOCK "C" SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Plat 14112

SCALE: 1" - 40" DATE: JUNE 3, 1999 SHEET /8 of /8



Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		X
Linear Feet of Roadway Frontage/Perimeter		1,722
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required Shade Trees Evergreen Trees Shrubs		29 0 0
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)		6 14 103

#### Schedule A Perimeter Landscape Edge Parking to R/W (Stayton Drive)

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	E	
Linear Feet of Roadway Frontage/Perimeter	30	
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)	No	
Number of plants Required Shade Trees Evergreen Trees Shrubs	1 0 8	
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	1 0 0 8	

### Schedule B Parking Lot Internal Landscaping

Number of Parking Spaces	84
Number of Trees Required	4
Number of Trees Provided  Shade Trees  Other Trees (2:1 substitution)  Shaubs	÷ 8 ° ∕∆

BY THE ENGINEER:

DAYS OF COMPLETION.

ICERTIFY THAT THIS PLAN FOR POND CONSTRUCTION,

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE

REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL

ENGINEER TO SUPERVISE POND CONSTRUCTION AND

PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT

WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30

DISTRICT. THAVE NOTIFIED THE DEVELOPER THAT

EROSION AND SEDIMENT CONTROL REPRESENTS A

PRACTICAL AND WORKABLE PLAN BASED ON MY

PERSONAL KNOWLEDGE OF THE SITE CONDITIONS.

EVERGREENS

#### Schedule A Perimeter Landscape Edge Parking to R/W (Sandy Court)

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	E	
Linear Feet of Roadway Frontage/Perimeter	325	
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)	No	
Number of plants Required Shade Trees Evergreen Trees Shrubs	8 0 81	
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)	0 4 0 16 <b>8</b> 81	

# Perimeter Landscape Edge

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		X
Linear Feet of Roadway Frontage/Perimeter		463
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required Shade Trees Evergreen Trees Shrubs		800
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)		5060

<del>-Schedule D</del> <del>-Stormwater Management Area Landscaping</del> <u></u>		
Linear Feet of Perimeter	400	
Number of Trees Required Shade Trees Evergreen Trees	8 .	
Credit for Existing Vegetation (No, Yes and %)	No	
Credit for Other Landscaping (No, Yes and %)	No	
Number of Trees Provided Shade Trees Evergreen Trees Other trees (2:1 substitution) Shrubs (10:1 substitution)	0 4 98	

APPROVED: DEPARTMENT OF PLANNING & ZONING

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

Chief Development Engineering Division

Chief Division of Land Development

CHIEF BUREAU OF HIGHWAYS

### Schedule A Perimeter Landscape Edge Loading to Parcel E

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		С
Linear Feet of Roadway Frontage/Perimeter		60
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required Shade Trees Evergreen Trees Shrubs		2 3 0
Number of plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution)		2 3-6 0 0

## -Schedule A Perimeter Landscape Edge

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		A
Linear Feet of Roadway Frontage/Perimeter		270
Credit for Existing Vegetation (Yes, No, Linear Feet)		No
Credit for Wall, Fence, Berm (Yes, No, Linear Feet)		No
Number of plants Required Shade Trees Evergreen Trees Shrubs		500
Number of plants Provided  Shade Trees  Evergreen Trees  Other Trees (2:1 substitution)  Shrubs (10:1 substitution)		3 0 3 5

Street Trees Required: 1 Tree/40 l.f. Street R/W (23) Stayton Drive: 210 I.f./40 = 5.25 Trees Sandy Court: 700 l.f./40 = 17.5 Trees

Street Trees Proposed: 23 Stayton Drive: 3 0 Sandy Court: 13 (11 Shade & 4 other) Elsewhere on Site: 7 10

## BY THE DEVELOPER:

Design DSN

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. 1 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION, LALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL

CONSERVATION DISTRICT.

REVISIONS



1 A.24.00

DISTRICT.

KCI Technologies, Inc.
14409 Greenview Drive, Suite 102
Laurel, Maryland 20708
(301) 953-1821 (410) 792-8086
fax: (410) 792-7419

ATTHESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL PEND CONSTRUCTION, SOIL EROSION AND SEDIMENT

THESE PLANS FOR SMALL MOND CONSTRUCTION, SOIL EROSION AND SECUMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

HOWARD SOIL CONSERVATION DISTRICT DATE

NATURAL RESOURCES CONSERVATION

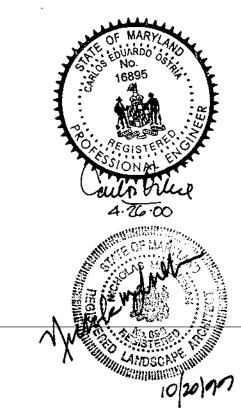
PREPARED FOR: ACME PAPER AND SUPPLY CO. 8229 SANDY COURT SAVAGE, MD 20763

CHEE, BUREAU OF WASTE MONT. DATE

CHEF, STORMWATER MGMT. DIV. DATE

5/10/00

LANDSCAPE REQUIREMENT SCHEDULES



## **ACME PAPER SUPPLY** COMPANY

(A Resubdivision Of Parcels D-1 & E, BLOCK "C" Plat No. 6287 & 3591 ZONING: 'M-2' TAX MAP NO. 48 PARCEL D-1; PARCEL E-1, BLOCK "C" SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND Plat 14112

> SCALE: 1" - 40" DATE: JUNE 3, 1999 SHEET 18 of 18