

Sheet Index

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	GRADING AND SEDIMENT CONTROL PLAN
4	SEDIMENT CONTROL DETAILS
5	SEDIMENT CONTROL DETAILS
6	SEDIMENT CONTROL NOTES
7	STORM DRAIN DRAINAGE AREA MAP
8	STORM DRAIN PROFILES
9	STORM DRAIN PROFILES
10	SWM PLAN AND DETAILS
11	SWM FACILITY A PLAN AND SECTIONS
12	SWM FACILITY B PLAN
13	SWM NOTES AND DETAILS
14	TEN OAKS ROAD STRIPING PLAN
15	DETAIL SHEET
16	LANDSCAPE PLAN
17	WASTEWATER SYSTEM PLAN
18	WASTEWATER SYSTEM PLAN
19	WASTEWATER SYSTEM PLAN

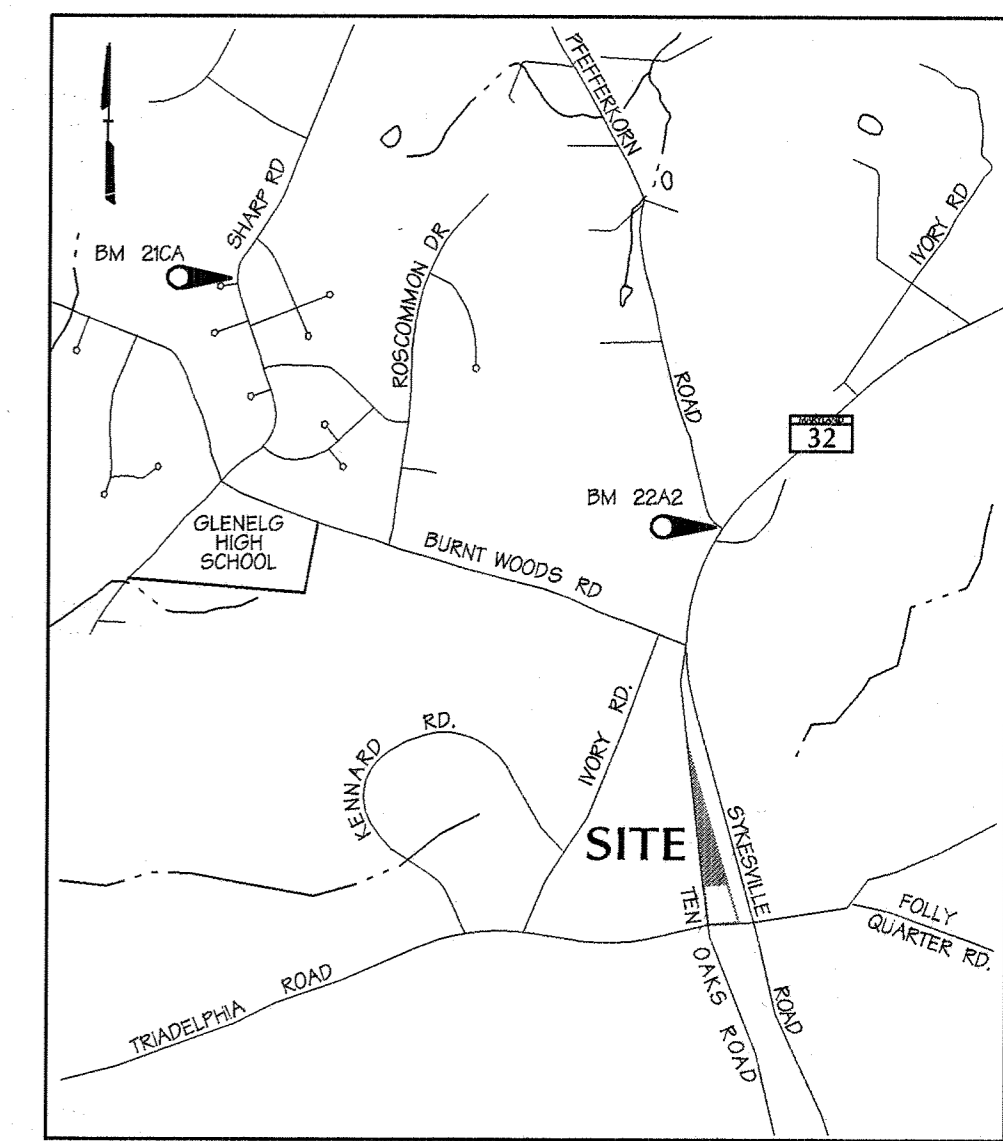
General Notes

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs be in place prior to the placement of any asphalt.
- All plan dimensions are to face of curb unless otherwise noted.
- The existing topography is taken from field run survey with two foot contour intervals prepared by Daft McCune Walker, dated September, 2003. Boundary information shown hereon is based upon a plat entitled "TRIANGLE HOWARD PARCELS A & B", prepared by Vogel & Associates Inc. and recorded among the Land Records of Howard County.
- The courses and coordinates shown hereon are based upon the Howard County Geospatial Control which is based upon the Maryland State Plane Coordinate System. Howard County monument nos. 21CA and 22A2 were used for this project.
- Water is private (well).
- Sewer is private (septic).
- Stormwater Management for this project will be private perimeter sand filters, gravel recharge trenches and a small extended detention facility. Each BMP will be owned and maintained by the owner, successor, or assignee.
- Any evidence of above ground utilities shown hereon is based solely on field location. No comparison to, or enhancement has been made from any utility drawings or plans. The location of any underground utility shown hereon is approximate and must be verified.
- There is no floodplain on this site.
- The wetlands delineation for this project was approved and appeared on plat 15543 and F-00-01.
- Traffic study for this project was prepared by The Traffic Group, dated 11/13/03.
- Project background information:  
 Subdivision Name: Triangle Howard Parcels A and B  
 Tax Map: 22  
 Lot/Parcel: Parcel B  
 Zoning: B-2  
 Election District: 3  
 Total Parcel Area: 2.4095 AC.  
 File Numbers: SDP-00-003, BA Case No. 98-14 E & VWP 97-53, F-06-83  
 Plat No. 15543, F-00-001, BA 98-14 E & V was for a previously proposed use (propane facility) and is no longer applicable to this site.
- All outdoor lighting shall comply with the requirements of Zoning Section 134.
- This project complies with the requirement of section 16,1200 of the Howard County Code for Forest Conservation. The forest conservation obligations for Parcel A and B, was met by the creation of a 0.24 Ac. retention Forest Conservation Easement on Parcel B and a fee-in-lieu payment of \$24,611.40 to the Howard County Forest Conservation Fund for 1.41 Ac. of reforestation per F-00-01, Plat No. 15543.
- The existing utilities were located from available records and field survey prepared by Daft McCune Walker, Inc. Contractor must test pit, by hand, at all utility crossings and connection points atleast 5 days prior to starting work to verify exact locations.
- Soils analysis report prepared by Hillis-Carnes dated February 5, 2004.
- Handicap parking details shall be in accordance with 'MD Building Code for the Handicapped' section 5.01-7.05.
- Any damage to county owned right-of-way shall be corrected at the contractor's expense.
- All sidewalks shall be cross sloped at 1/4" per foot.
- Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
- All inlets shall be constructed in accordance with Howard County standards or MSHA standards as specified on structure schedule.
- All materials and construction shall be in strict accordance with the Howard County Design Manual, Volume IV.
- Building setback restrictions from property lines and right-of-way lines of any public road shall be in accordance with Triangle Howard Plat 15543.
- All on site driveways and parking areas to be privately maintained.
- All curb radii are 5 foot unless otherwise labeled and all curbs are to be 6" in height.
- All equipment and tools to be placed so as not to interfere with vehicular or pedestrian movement unless specified.
- Contractor shall be responsible for any damage to existing property which may occur as a result of his negligence during the execution of work.
- All paving areas indicated are private.
- All proposed HC ramps shall be in accordance with current ADA standards.
- This property is located outside of the Metropolitan District.
- Electric, gas, cable and telephone lines designed by others.
- No clearing, grading or construction is permitted within the wetland limits, 25' wetland buffer or retention forest conservation easement.
- Landscaping shall be provided in accordance with the Landscape Plan on sheet 12 and financial surety in the amount of \$26,880.00 (\$17,400.00 for 50 shade trees, \$3450.00 for 23 evergreen trees and \$6030.00 for 201 shrubs) has been posted as part of the DPW developer's agreement.
- This property is located outside of the Metropolitan District.
- The Howard County Health Department has signed and approved the Perc Certification Plan, signed on 11-5-03.
- Groundwater Appropriation Permit Number HO22091.900.1 (02)
- Maximum Daily Flow = 2,068 GPD
- All approved shells must have a water meter installed on them. All future building permits will require at least 6 months of water data on all of the shells.
- All sidewalks at intersections to have handicap ramps.

# Site Improvements & Building Additions For Ten Oaks Commercial Center 'Triangle Howard, Parcel B'

Howard County

Maryland



VICINITY MAP

SCALE: 1"=2000'

Benchmark

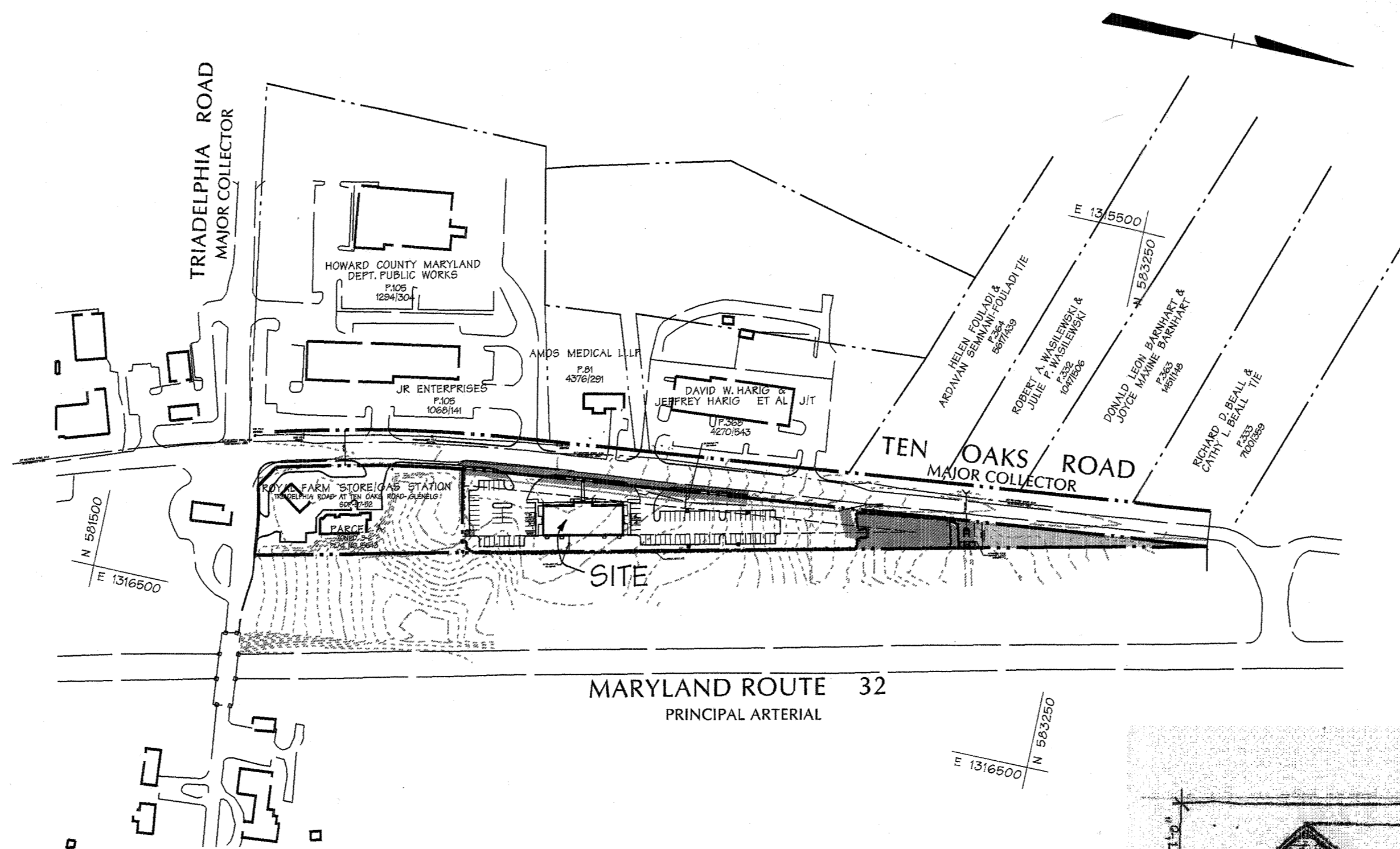
The courses and coordinates shown hereon are referred to the system of coordinates established in the Maryland Coordinate System - NAD 83 (1983) horizontal and NAVD 88 vertical and are based on the following Howard County Geospatial Control Stations provided by the Howard County Department of Public Works, Survey Division:

DESIGNATION	NORTH (FT)	EAST (FT)	ELEVATION (FT)
21CA	58897.368	131235.695	612.653
22A2	58998.551	1316283.882	620.176

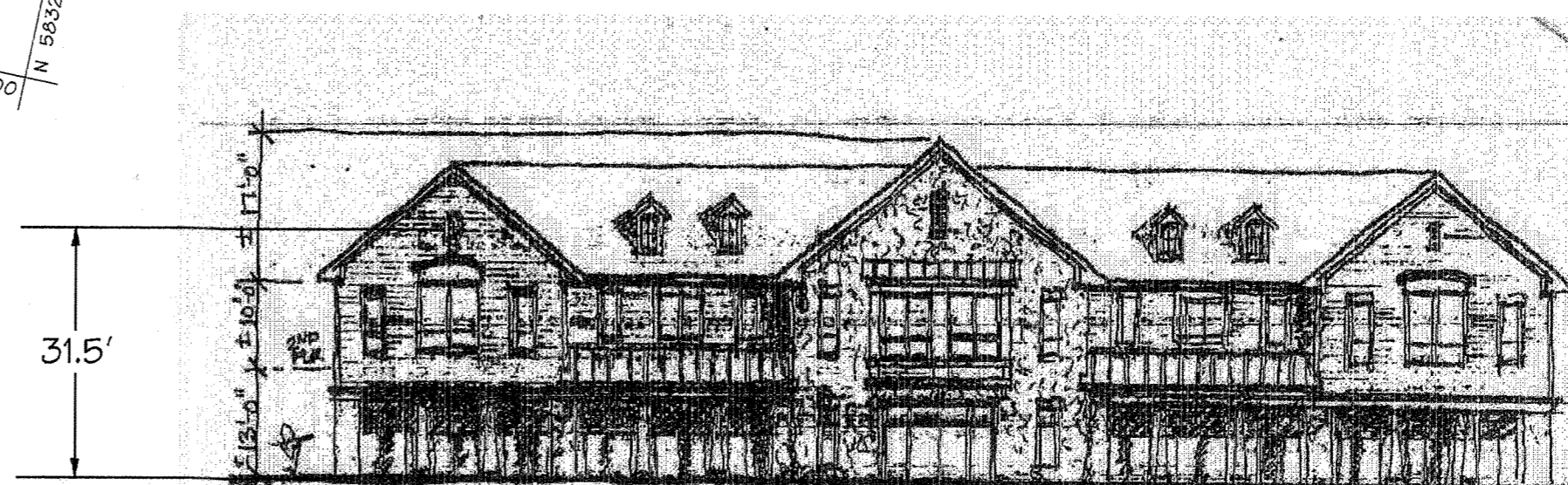
Bench Mark #21CA  
Standard Howard County stamped aluminum disc set on a concrete monument set outside the paving at the southwest corner of the intersection of Sharp Road and Our Mile Court at a distance of 2.5 feet from the face of curb.

Bench Mark #22A2  
Standard Howard County stamped aluminum disc set on a concrete monument set outside the paving at the southwest corner of the intersection of Route 32 and Pfefferkorn Road at a distance of 24.5 feet from the centerline of Pfefferkorn Road.

ADDRESS CHART	
PARCEL NUMBERS	STREET ADDRESS
PARCEL B PARCEL 95	3881 TEN OAKS ROAD



Overall Property Outline  
Scale: 1"=200'



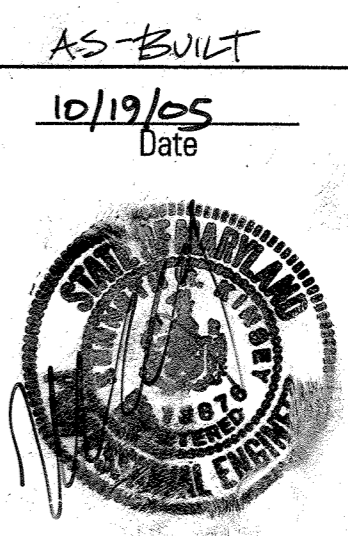
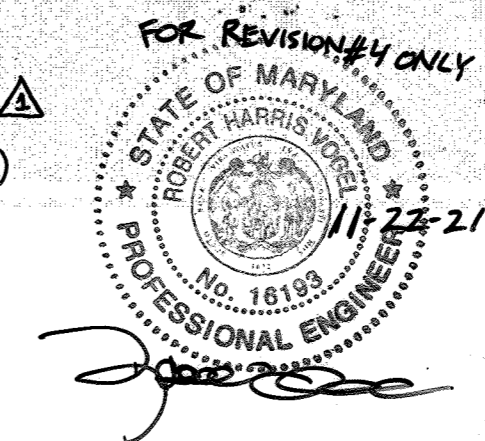
TEN OAKS ROAD (EAST) ELEVATION

SITE ANALYSIS DATA CHART

- General Site Data
  - Present Zoning: B-2 per the 02/02/04 Comprehensive Zoning Plan.
  - Applicable DPZ File References: SDP-00-003 BA case no. 98-14 E & V/Plat No. 15543, F-00-001 BA 98-14 E & V was for a previously proposed use (propane facility) and is no longer applicable to this site.
  - Proposed Use of Site or Structure(s): commercial office building, carry-out restaurant, retail and parking.
  - Proposed Water and Sewer Systems:  Public  Private (well and septic)
  - Any other relevant information: N/A
- Area Tabulation
  - Total Project Area: 2.4095 Acres (104,960 SF)
  - Area of This Plan Submission: 2.4095 Acres (104,960 SF)
  - Limit of Disturbed Area: 2.3 \_\_\_\_\_ Acres
  - Building Coverage of Site: 0.41 Acres and 16.9% of Gross Area (Proposed)
  - Area of floodplains: 0 Acres
  - Area of steep slopes: 0 Acres
  - Net area of site: 2.4095 Acres
- Parking Space Data
  - Floor space on each level per building per use:
 

FIRST FLOOR	8,430 SF (Carry-out restaurant / retail)
SECOND FLOOR	2,547 SF (Office)
TOTAL FLOOR AREA OF BUILDING	15,977 SF
  - Maximum number of employees, tenants on-site per use: N/A
  - Number of Parking Spaces Required by Zoning Regulations and Criteria:
 

3,190 SF CARRY-OUT RESTAURANT @ 5/1000=20 sp	(MAXIMUM SEATS TO BE PROVIDED =30) (14 INDOOR SEATS/16 OUTDOOR SEATS)
5000 SF RETAIL @ 5/1000	= 25 sp
7547 SF OFFICE @ 3.3/1000	= 23 sp
TOTAL REQUIRED	= 70 sp
  - Total Number of Parking Spaces Provided On-Site: 80 (10 sp. excess)
  - Number of Handicapped Parking Spaces Provided: 4 (HC included in total)
  - Proposed building is two stories.



AS-BUILT RED LINE PLANS PREPARED PER INFORMATION AS PROVIDED BY THE OWNER.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT	Robert W. Walker	12/28/05
COUNTY HEALTH OFFICER	MJD	DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	Shelton	12/28/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	MJD	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	Cindy Hammet	1/14/06
DIRECTOR	James D. Gault	1/14/06
11-22-21	REVISE THE PLAN TO ADD 130 SPT OF OUTDOOR COVERED PARKING	DATE
6-21-06	1 rev. bldg. sq. footage in Site Analysis	DATE
Date	No.	Revision Description

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

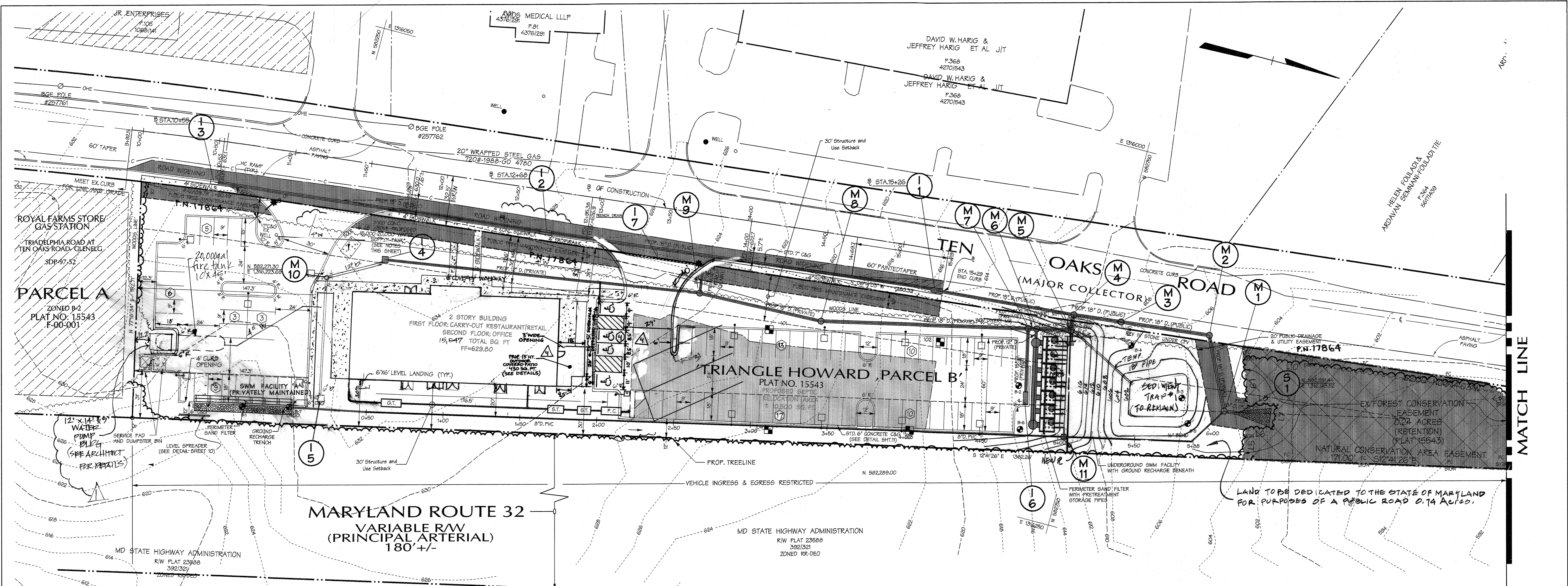
OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

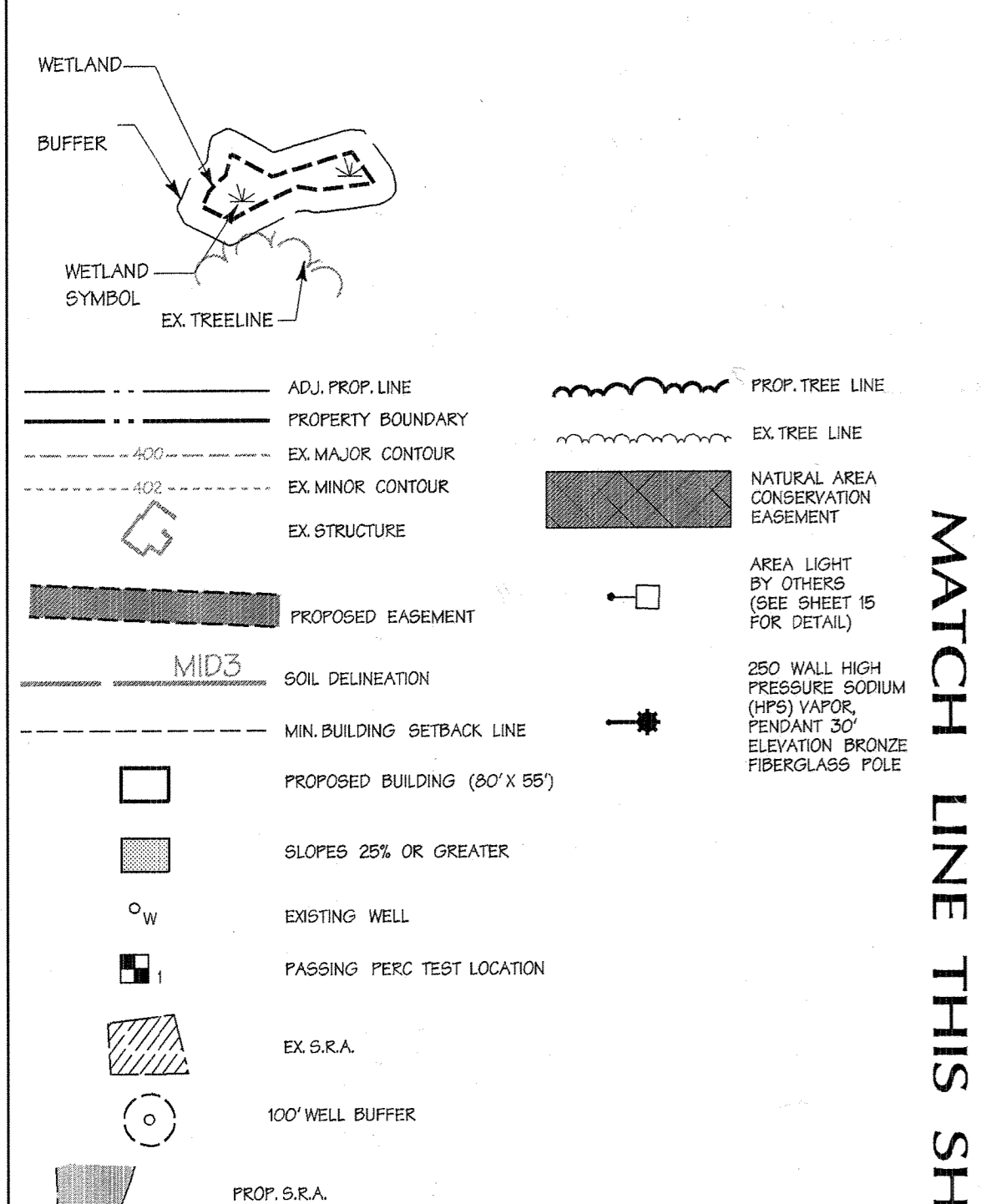
<b>DMW</b> Daft McCune Walker, Inc. 300 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3533 Fax: 296-4706		A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals	
SUBDIVISION NAME TRIANGLE HOWARD	SECTION/JARBA N/A	PARCEL # A	B
PLAT # 17864	BLK # 10	LOT # 22	DEVELOPER TRACT # 6030.00
WATER CODE N/A	SEWER CODE N/A	TITLE COVER SHEET	
Des. By RLH	Scale 1"=200'	Proj. No. 02136.00	1 of 19
Drn. By KDE	Date 10/28/05	Approved	
Chk. By KEL	Professional Engr. No. 13876		

SDP-04-130





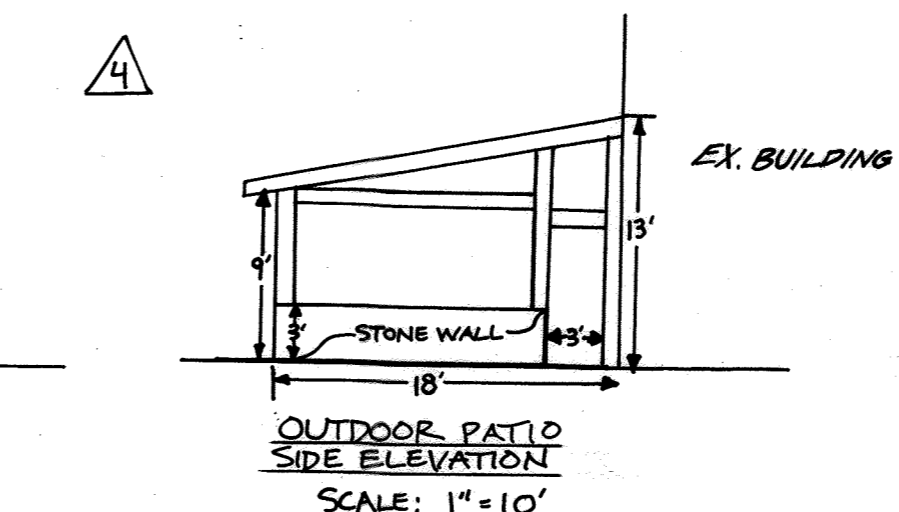
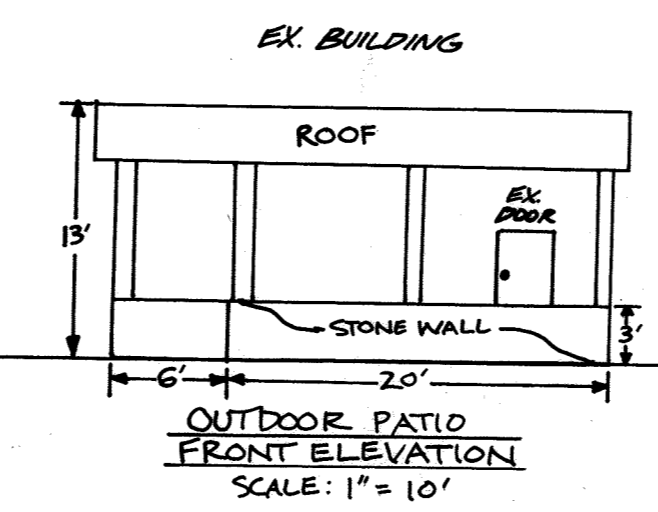
**Legend**



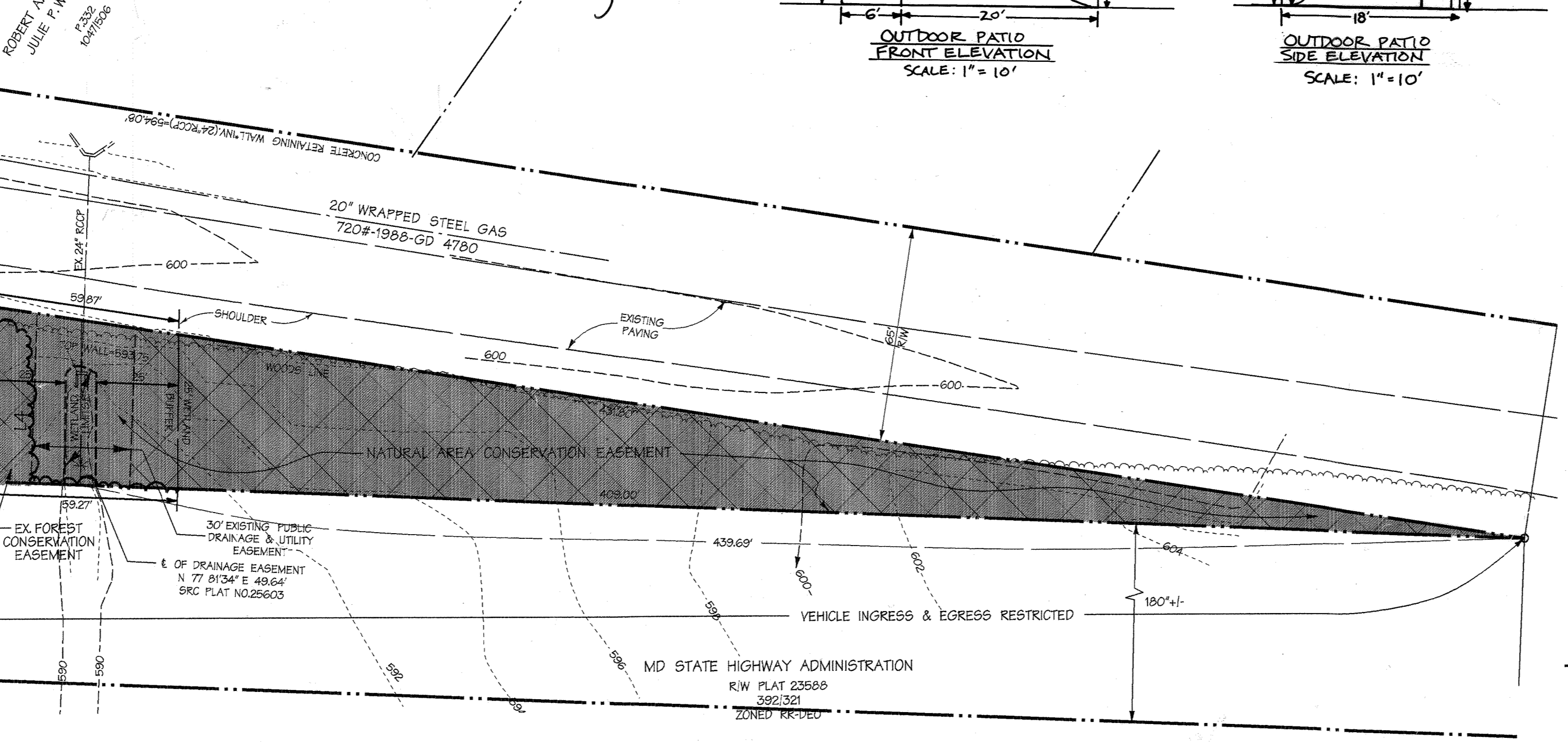
**PLAN VIEW**  
1"=30'

LINE	BEARING	LENGTH
L3	N21°15'16"E	35.38'
L4	N77°18'34"E	34.91'
L5	S81°16'56"W	21.01'
L6	N12°34'28"W	17.10'
L7	S83°45'57"W	15.00'
L8	S12°34'28"E	18.11'
L9	S69°12'46"W	31.13'
L10	N09°42'10"W	97.00'

**MARYLAND ROUTE 32**



MATCH LINE THIS SHEET



**PLAN VIEW**  
1"=30'

DATE	NO.	REVISION DESCRIPTION
1-29-08	2	ENT. RADIUS 40' W/ S RADIUS ISLAND
11-22-21	4	REVISE THE PLAN TO ADD 430 SET OF OUTDOOR COVERED PATIO FOR DINING AND TO REVISE THE HANDICAP PARKING

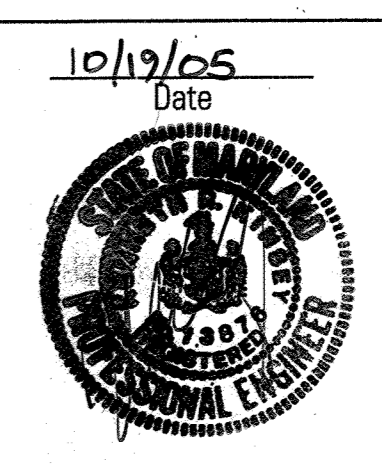
NOTE: 1. APPROXIMATE LOCATION FOR 15,000-20,000 GALLON FIBERGLASS WATER STORAGE TANK  
2. CONTRACTOR SHALL CONTACT THE HOWARD COUNTY DEPARTMENT OF FIRE AND RESCUE TO APPROVE TANK AND TANK LOCATION.

\* SEDIMENT TRAP TO REMAIN IN PLACE UNTIL FACILITY BUILT BY THE STATE IS COMPLETED.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 Robert A. Winkler, COUNTY HEALTH OFFICER, 12/21/05  
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief Development Engineering Division, 12/20/05  
 Chief, Division of Land Development, 1/14/06  
 Director, 1/21/06

**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'  
 OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD. COLUMBIA, MARYLAND 21044  
 410-730-5815

**DMW**  
 Duff, McCune-Walker, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3333  
 Fax 296-4705

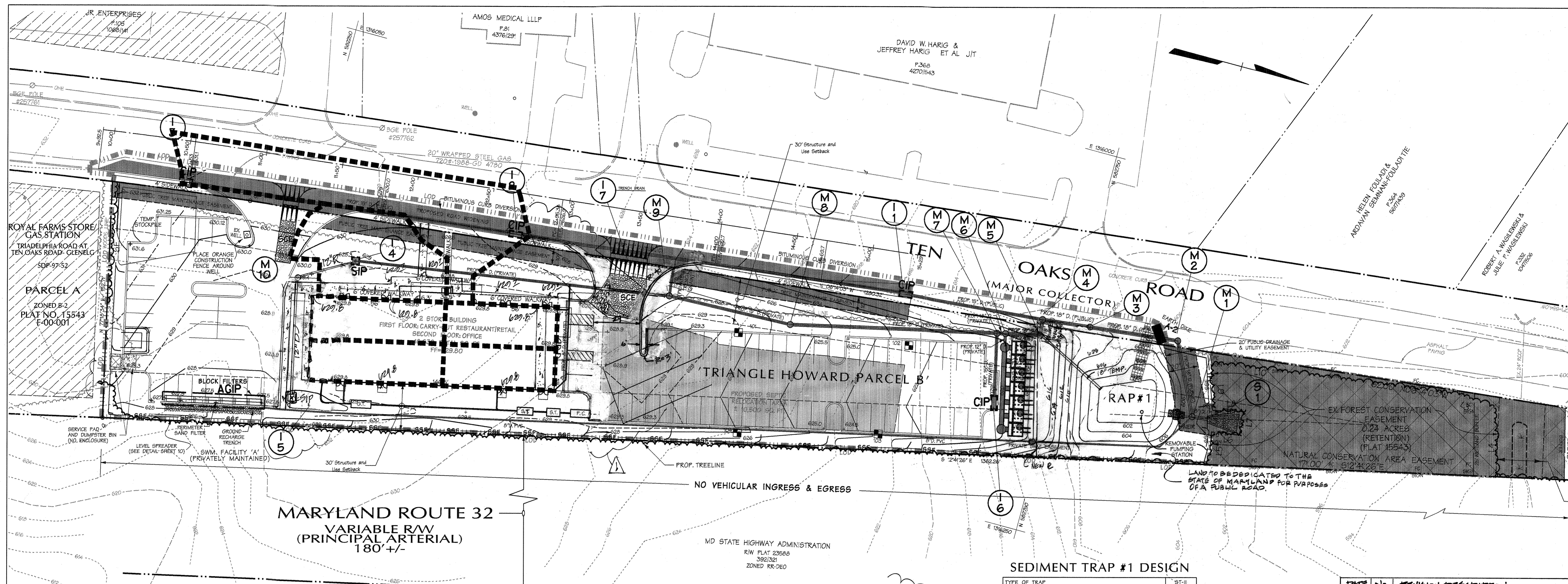


SECTION NAME	SECTION AREA	N/A	SECTION #
TRIANCLE HOWARD			
PLAT #	BLOCK #	ZONE	TRACT
17864	10	B-2	22
WATER CODE	SEWER CODE	N/A	GEN. TRACT
			6030.00

**SITE PLAN**  
 Des. By: RLH Scale: 1"=30' Proj. No.: 02136.00  
 Dm. By: KDE Date: 10/28/05  
 Chk. By: RLK Approved  
 2 of 19

SDP-04-130



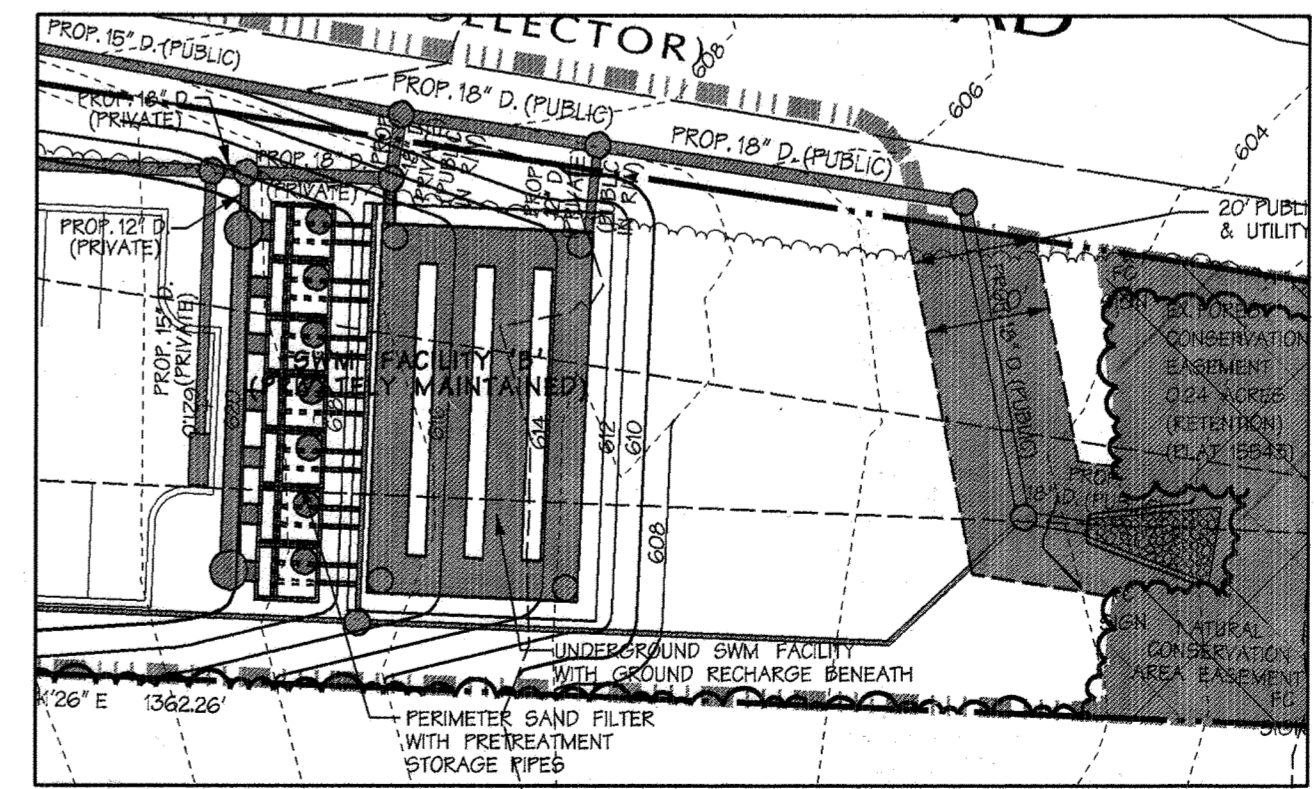
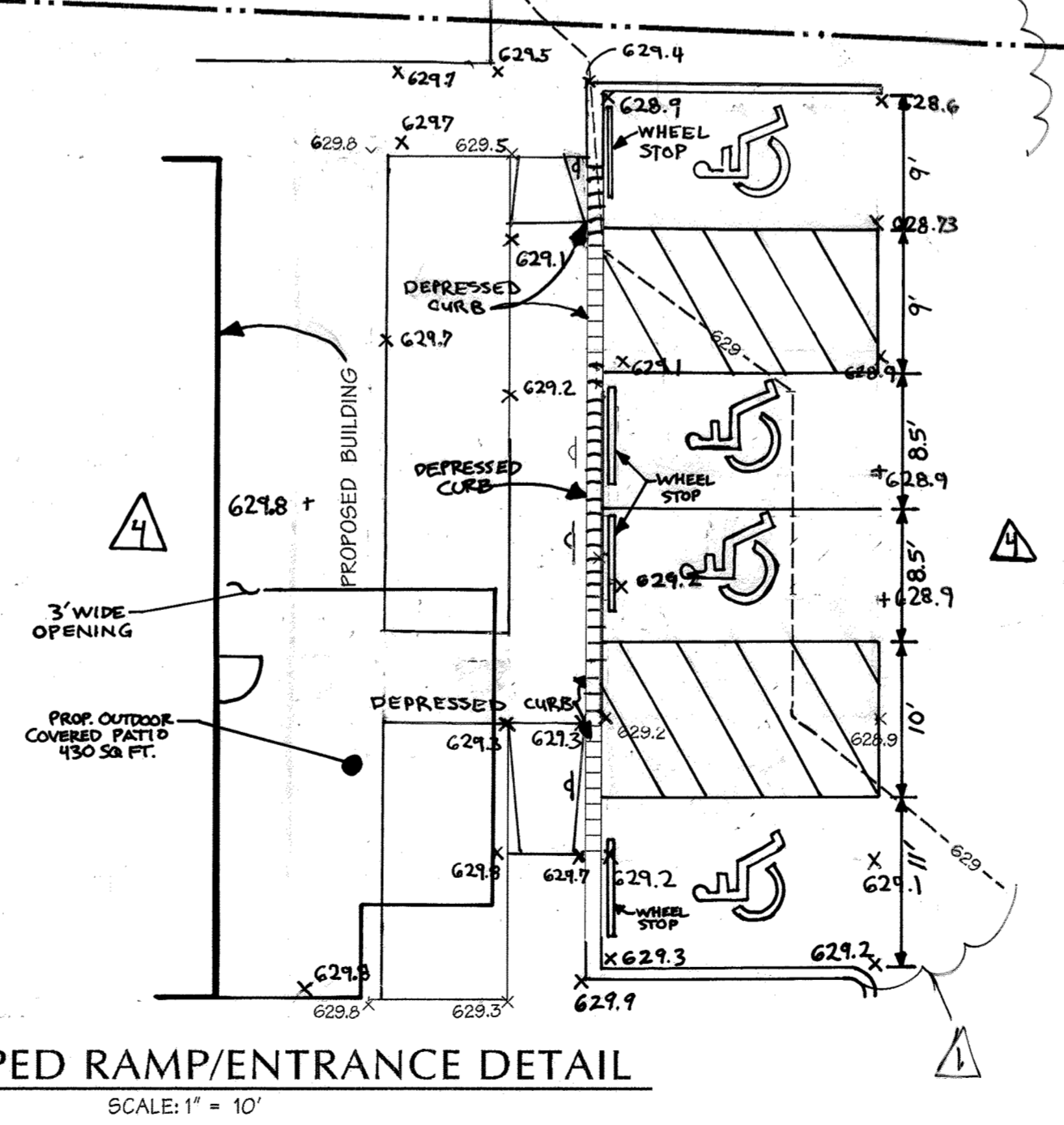


MARYLAND ROUTE 32  
VARIABLE RW  
(PRINCIPAL ARTERIAL)  
180' +/-

MD STATE HIGHWAY ADMINISTRATION  
R/W PLAT 23588  
392/321  
ZONED KR-DEO

**SEDIMENT TRAP #1 DESIGN**

TYPE OF TRAP	ST-11	
DRAINAGE AREA, ACRES	1.39	
CREST OF EMBANKMENT ELEVATION	606.7	
EMBANKMENT HEIGHT	4.0'	
STORAGE REQUIRED: CUBIC FEET	WET	2502
	DRY	2502
	TOTAL	5004
STORAGE PROVIDED: CUBIC FEET	WET	2613
	DRY	2763
	TOTAL	5376
TOP OF WET STORAGE	604.9	
TOP OF DRY STORAGE	605.7	
CLEANOUT ELEVATION @ 1/4 DEPTH OF WET STORAGE	603.46	
DEPTH BELOW CREST	2.25	
BOTTOM ELEVATION	602.0'	
WEIR LENGTH	6.0'	



**Legend**

- WETLAND
- WETLAND BUFFER
- WETLAND SYMBOL
- EX. TREELINE
- ADJ. PROP. LINE
- PROPERTY BOUNDARY
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- EX. DRAINAGE AND UTILITY EASEMENT
- MID3
- SOIL DELINEATION
- MIN. BUILDING SETBACK LINE
- PROPOSED BUILDING
- SLOPES 25% OR GREATER
- EXISTING WELL
- PASSING PERC TEST LOCATION
- EX. S.R.A.
- 100' WELL BUFFER
- PROP. S.R.A.

THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PUBLIC SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

- EARTH DIKE
- SILT FENCE
- SUPER SILT FENCE
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- STONE OUTLET STRUCTURE
- STABILIZED CONSTRUCTION ENTRANCE
- AT GRADE INLET PROTECTION
- STANDARD INLET PROTECTION
- CURB INLET PROTECTION
- BITUMINOUS CURB DIVERSION
- EROSION CONTROL MATTING
- NATURAL AREA CONSERVATION EASEMENT

**Legend**

- AGIP
- SIP
- CIP

**Legend**

- ADJ. PROP. LINE
- PROPERTY BOUNDARY
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- EX. DRAINAGE AND UTILITY EASEMENT
- MID3
- SOIL DELINEATION
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- SLOPES 25% OR GREATER
- EXISTING WELL
- PASSING PERC TEST LOCATION
- EX. S.R.A.
- 100' WELL BUFFER
- PROP. S.R.A.

PMT No.	REVISION DESCRIPTION	DATE
42708	ENT. RADIUS TO W/2 RADIUS ISLAND	11-22-04
11-22-04	REMOVE THE PLAN TO ADD 430 SFT OF OUTDOOR COVERED PATIO FOR DINING AND TO REUSE THE HANDICAP PARKING	
APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH OFFICER		
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING		
CHIEF, DIVISION OF LAND DEVELOPMENT		
DIRECTOR		

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Duff McCune-Walker, Inc.  
300 West Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

**Professional Engr. No. 13876**

**Professional Engr. No. 13876**

**Professional Engr. No. 13876**

**Professional Engr. No. 13876**

**DEVELOPERS CERTIFICATE:**  
I, the undersigned, certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a certificate of attendance at a department of 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. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Don Paul Pastore*  
SIGNATURE OF DEVELOPER  
DON PAUL PASTORE  
10-13-05  
DATE

**ENGINEERS CERTIFICATE:**  
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION 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 DAYS OF COMPLETION.

*Kenneth R. Kinsey*  
SIGNATURE OF ENGINEER  
KENNETH R. KINSEY  
10/19/05  
DATE  
# 13876

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

*Jia Mays*  
SIGNATURE OF REVIEWER  
JIA MAYS  
10/19/05  
DATE

U.S. NATURAL RESOURCE CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

10/19/05  
Date

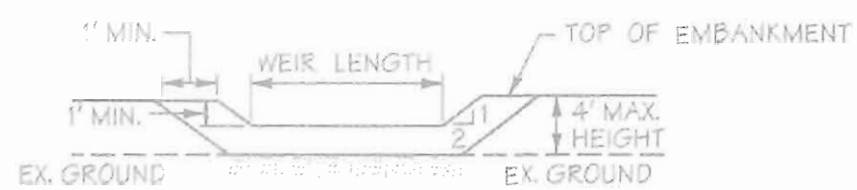
**STATE OF MARYLAND**  
PROFESSIONAL ENGINEER

Professional Engr. No. 13876

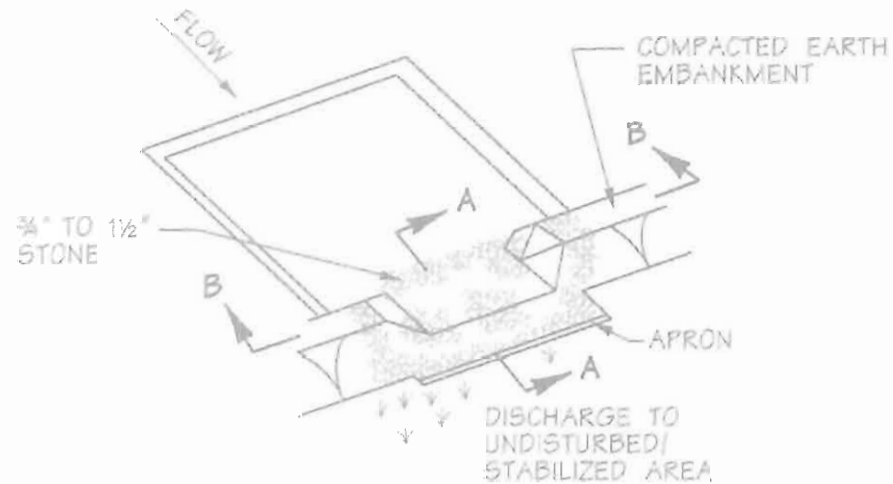
**Grading and Sediment & Erosion Control Plan**

Des. By	R.L.H.	Scale	1" = 30'	Proj. No.	02136.00
Dwn. By	K.D.E.	Date	10/28/05	3 of 19	
Chk. By	KEK	Approved			

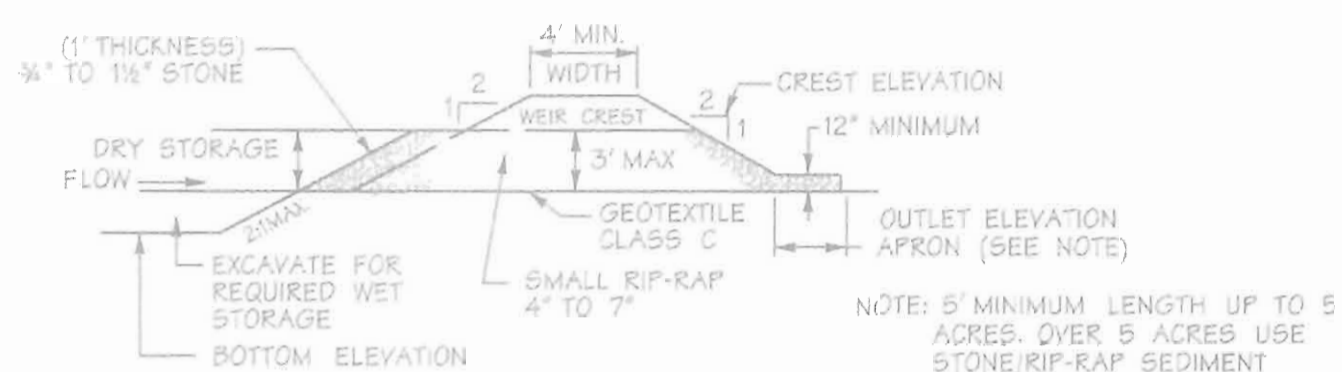




SECTION B-B



PERSPECTIVE VIEW



SECTION A-A

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-9-10 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

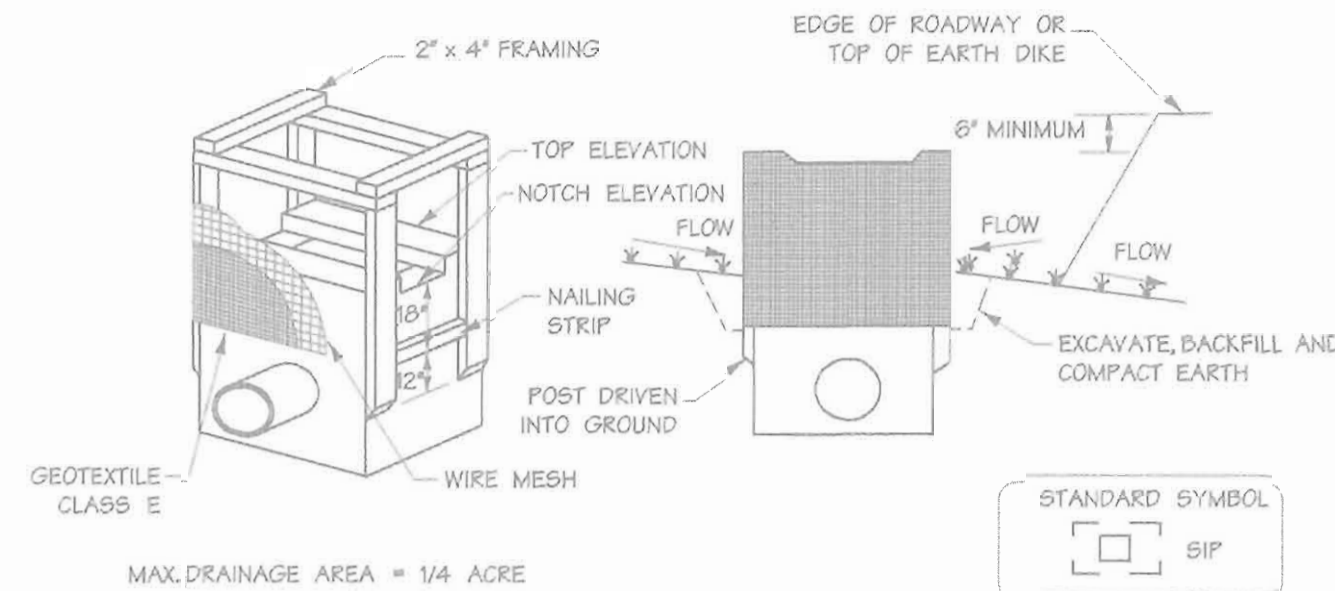
Stone Outlet Sediment Trap - ST II Not To Scale

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIP-RAP 4" TO 7" IN SIZE WITH A 1" THICK LAYER OF 3/4" TO 1 1/2" WASHED AGGREGATE PLACED ON THE UPSTREAM FACE OF THE OUTLET. STONE FACING SHALL BE WASHED AS NECESSARY TO PREVENT CLOGGING. GEOTEXTILE CLASS C MAY BE SUBSTITUTED FOR THE STONE FACING BY PLACING IT ON THE INSIDE FACE OF THE STONE OUTLET.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
6. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OF TRAPS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATION INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.
8. THE STRUCTURE SHALL BE DEWATERED BY APPROVED METHODS, REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
9. REFER TO SECTION D FOR SPECIFICATIONS CONCERNING TRAP DEWATERING.
10. MINIMUM TRAP DEPTH SHALL BE MEASURED FROM THE WEIR ELEVATION.
11. THE ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO THE TRAP MUST EQUAL OR EXCEED THE ELEVATION OF THE TRAP EMBANKMENT.
12. GEOTEXTILE CLASS C SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO THE PLACEMENT OF STONE. SECTIONS OF FILTER CLOTH MUST OVERLAP AT LEAST 1" WITH THE SECTION NEAREST THE ENTRANCE PLACED ON TOP. THE FILTER CLOTH SHALL BE EMBEDDED AT LEAST 6" INTO EXISTING GROUND AT THE ENTRANCE OF THE OUTLET CHANNEL.
13. OUTLET - AN OUTLET SHALL BE PROVIDED, INCLUDING A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE C-9-10A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Stone Outlet Sediment Trap - ST II Not To Scale

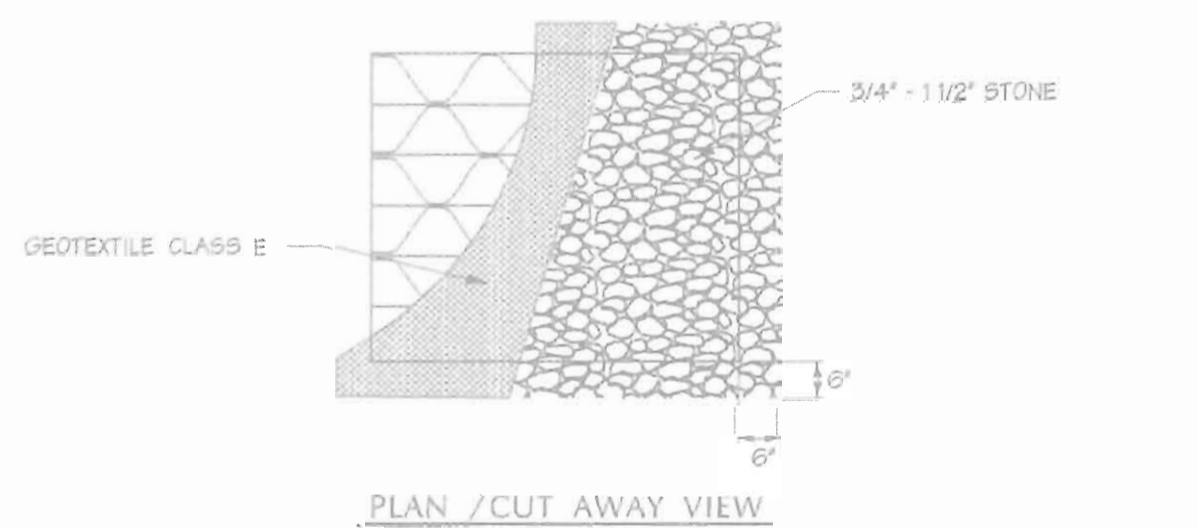


CONSTRUCTION SPECIFICATIONS

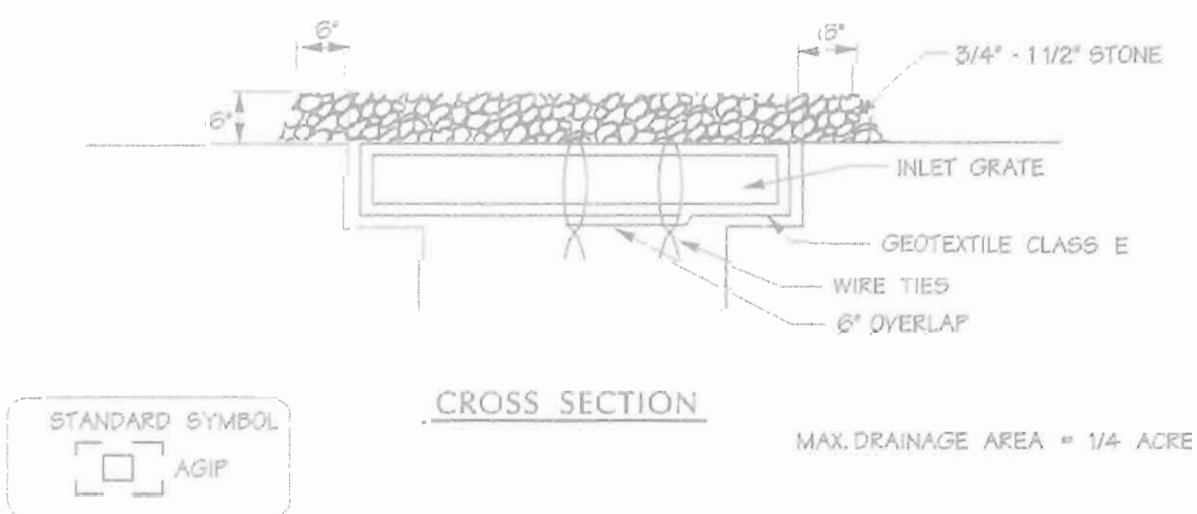
1. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION.
2. DRIVE THE 2" x 4" CONSTRUCTION GRADE LUMBER POSTS 1" INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2" x 4" FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.
3. STRETCH THE 1/2" x 1/2" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. THE ENDS MUST MEET AND OVERLAP AT A POST.
4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTEXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED DOWN.
5. BACKFILL AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
6. IF THE INLET IS NOT IN A BUMP, CONSTRUCT A COMPACTED EARTH DIKE ACROSS THE DITCH LINE DIRECTLY BELOW IT. THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.
7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E-16-5 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Standard Inlet Protection Not To Scale



PLAN / CUT AWAY VIEW

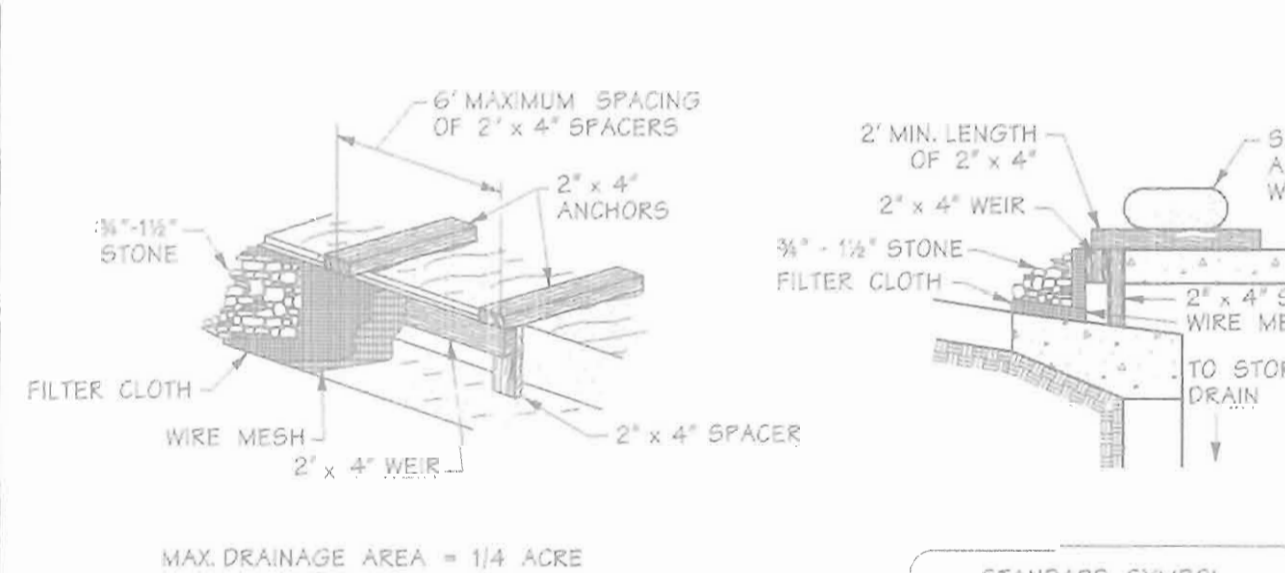


CROSS SECTION

- CONSTRUCTION SPECIFICATIONS
1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
  2. PLACE 3/4" TO 1 1/2" STONE, 4"-8" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E-16-5A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

At Grade Inlet Protection Not To Scale

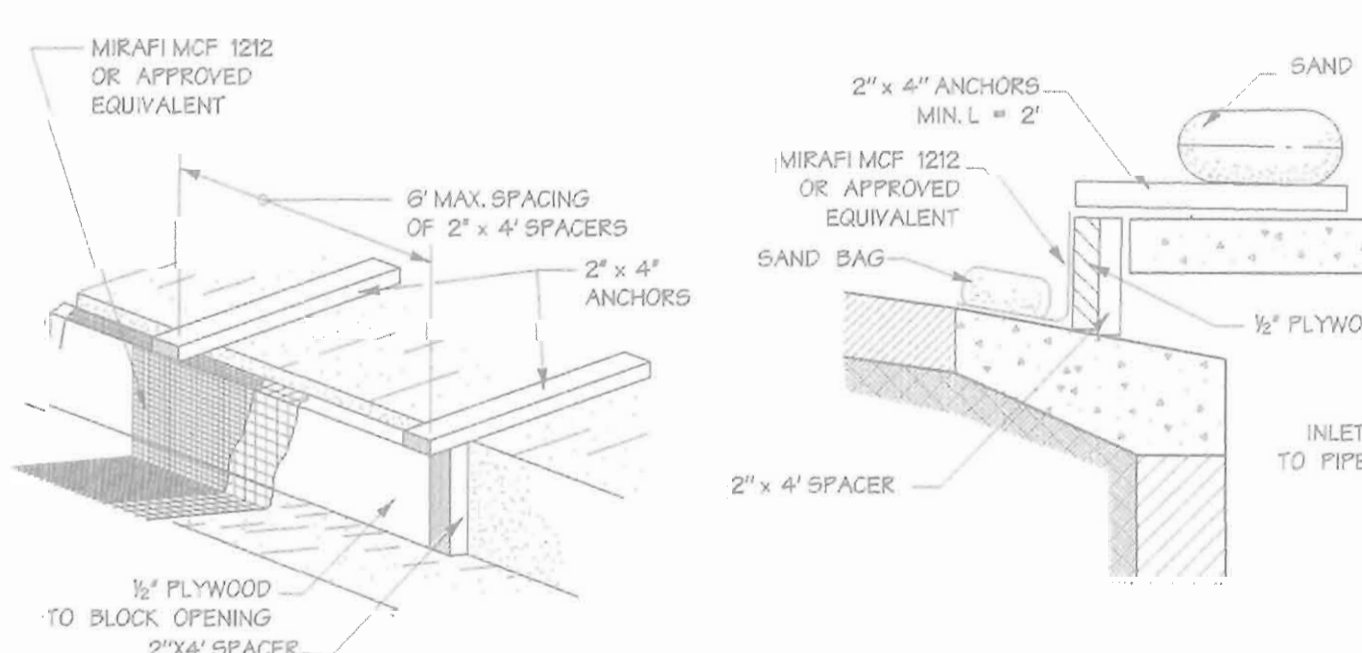
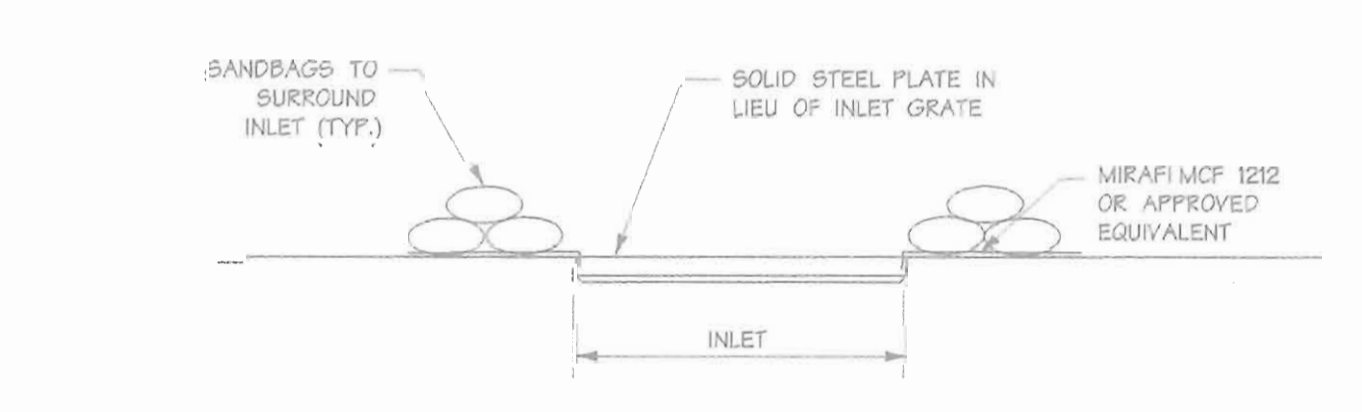


CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF 1/2" x 1/2" WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4") TO THE 2" x 4" WEIR (MEASURING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" x 4" WEIR.
3. SECURELY NAIL THE 2" x 4" WEIR TO A 3" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4" APART).
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2" LENGTHS OF 2" x 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" x 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1" BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE 1/2" x 1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4" x 1 1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW OF THE INLET.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E-16-5B MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Curb Inlet Protection (COG or COS Inlets) Not To Scale



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE E-16-5D MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Inlet Capping / Blocking Detail Not To Scale

DEVELOPERS CERTIFICATE:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION. I/WE SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION.

Signature: Don Paul Pastore  
Date: 10-13-05

ENGINEERS CERTIFICATE:  
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION.

Signature: Kevin R. Kiosey  
Date: 10/12/05

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Signature: Jim Lyngate  
Date: 10/21/05

Signature: [Signature]  
Date: 10/21/05

10/12/05 Date

Professional Engr. No. 13876

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT	Robert J. Walker HOWARD COUNTY HEALTH OFFICER	12/14/05 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	[Signature] CHIEF DEVELOPMENT ENGINEERING DIVISION	12/21/05 DATE
	[Signature] CHIEF, DIVISION OF LAND DEVELOPMENT	1/4/06 DATE
	[Signature] DIRECTOR	1/8/06 DATE

Date	No.	Revision Description

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3681 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3681 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Duff McCune-Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

SUBMISSION NAME	SECTION AREA	SHEET NO.	TOTAL SHEETS
TRAILHEAD HOWARD	N/A	22	60/60
DATE	SCALE	DATE	PROJECT NO.
1/8/06	AS SHOWN	10/28/05	02136.00

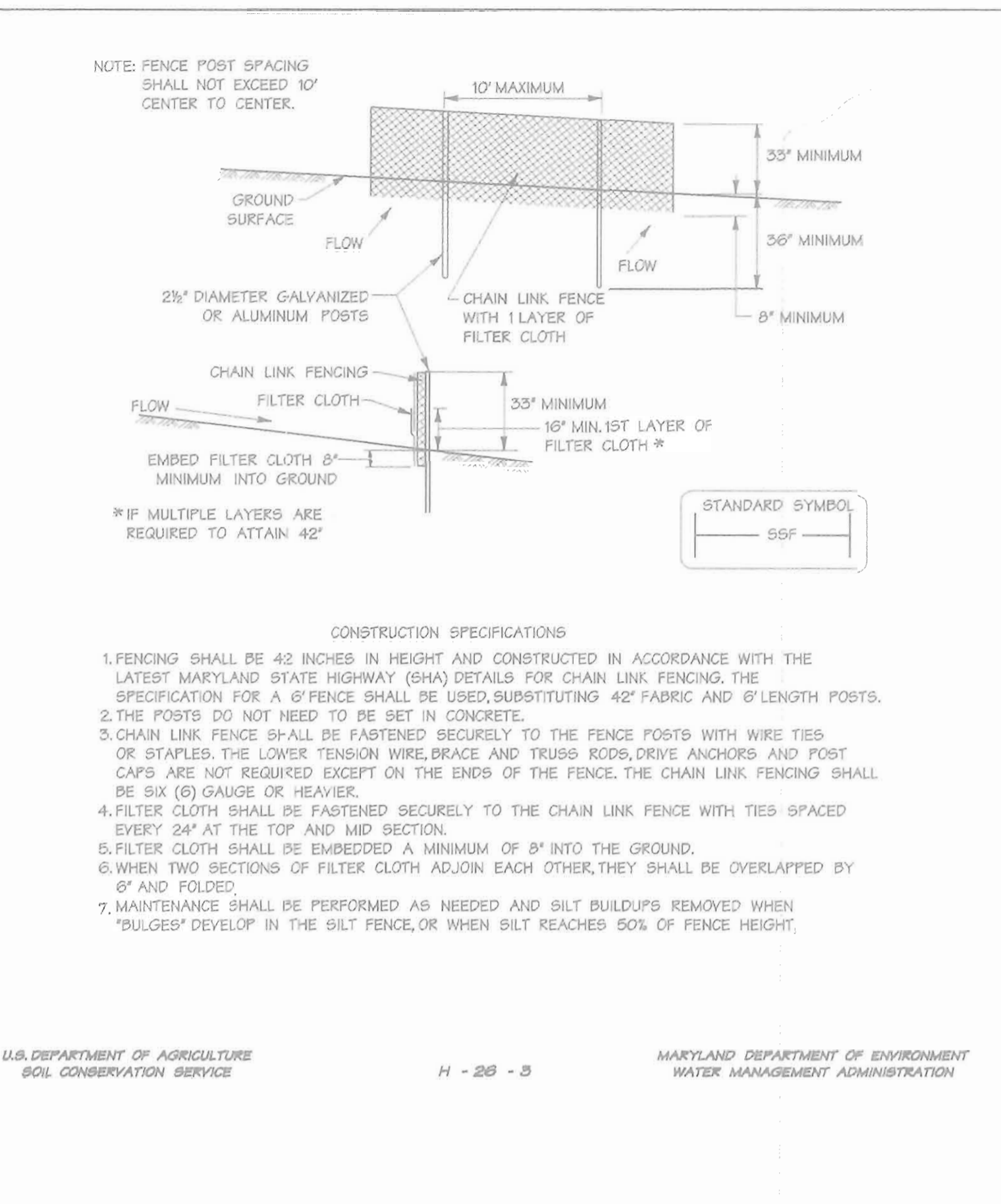
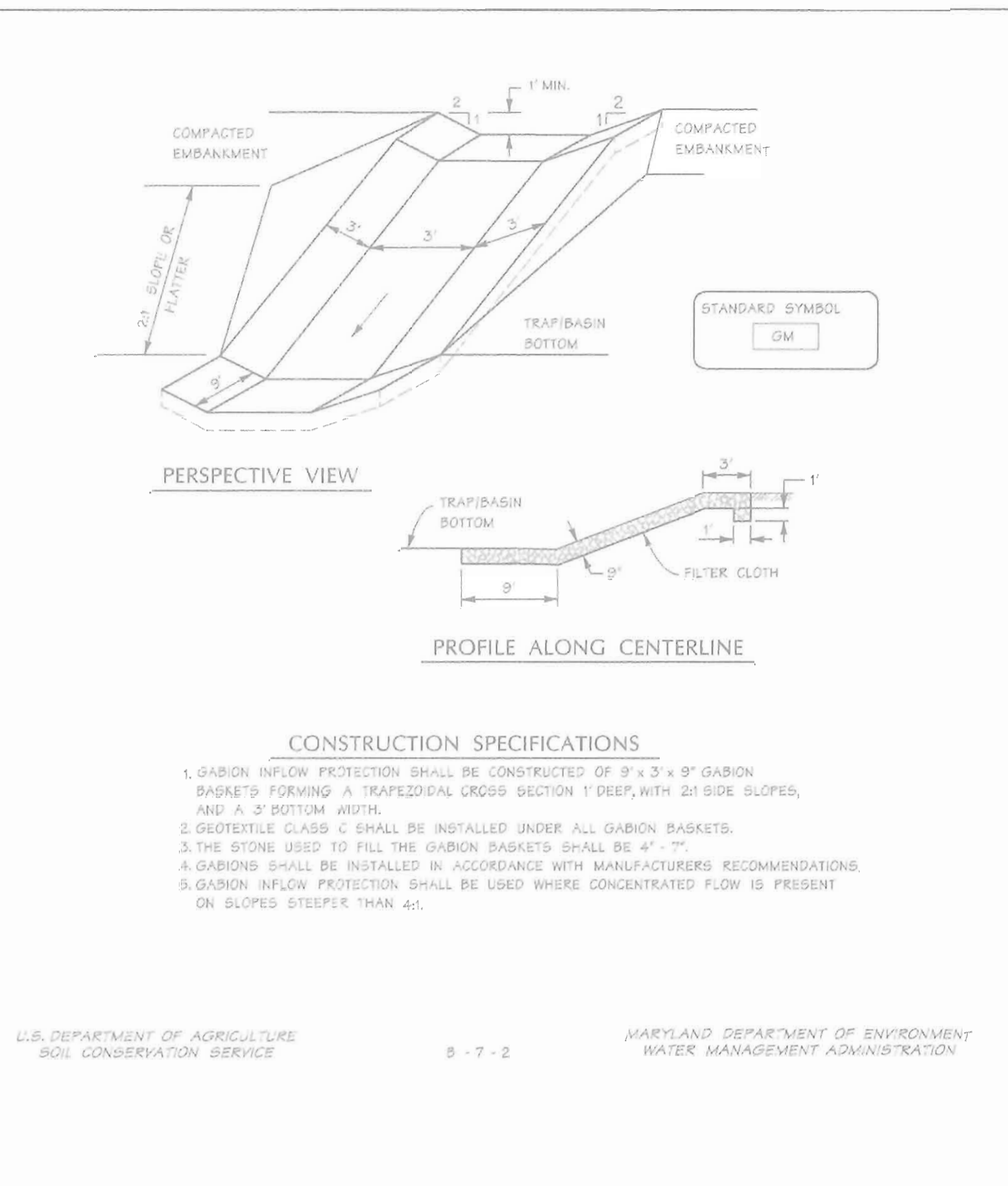
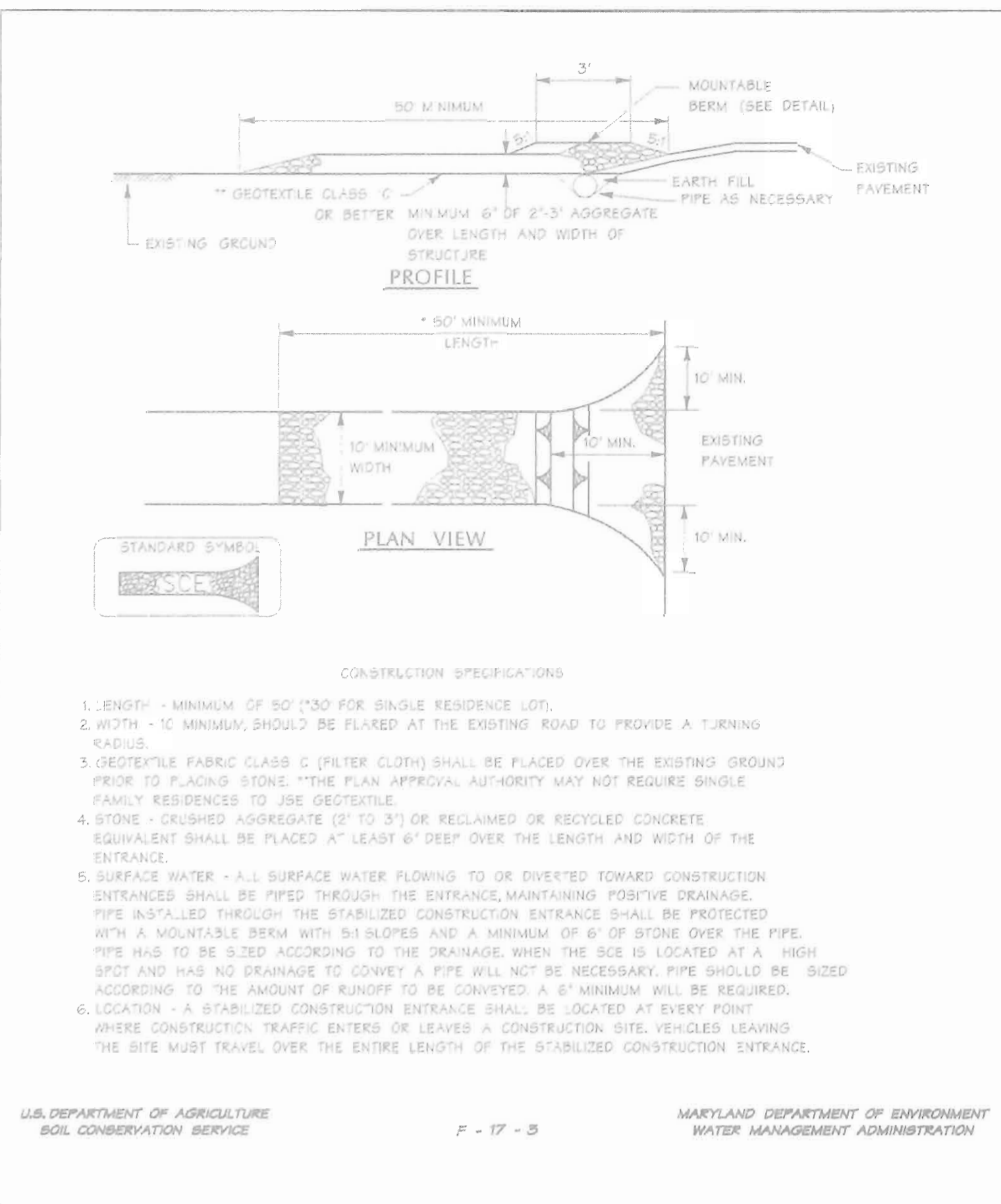
TITLE: **SEDIMENT & EROSION CONTROL DETAILS**

Des. By: C.R.W. Scale: Scale Proj. No. 02136.00  
 Dwn. By: W.D.E. Date: 10/28/05  
 Chk. By: [Signature] Approved: [Signature]

4 of 19

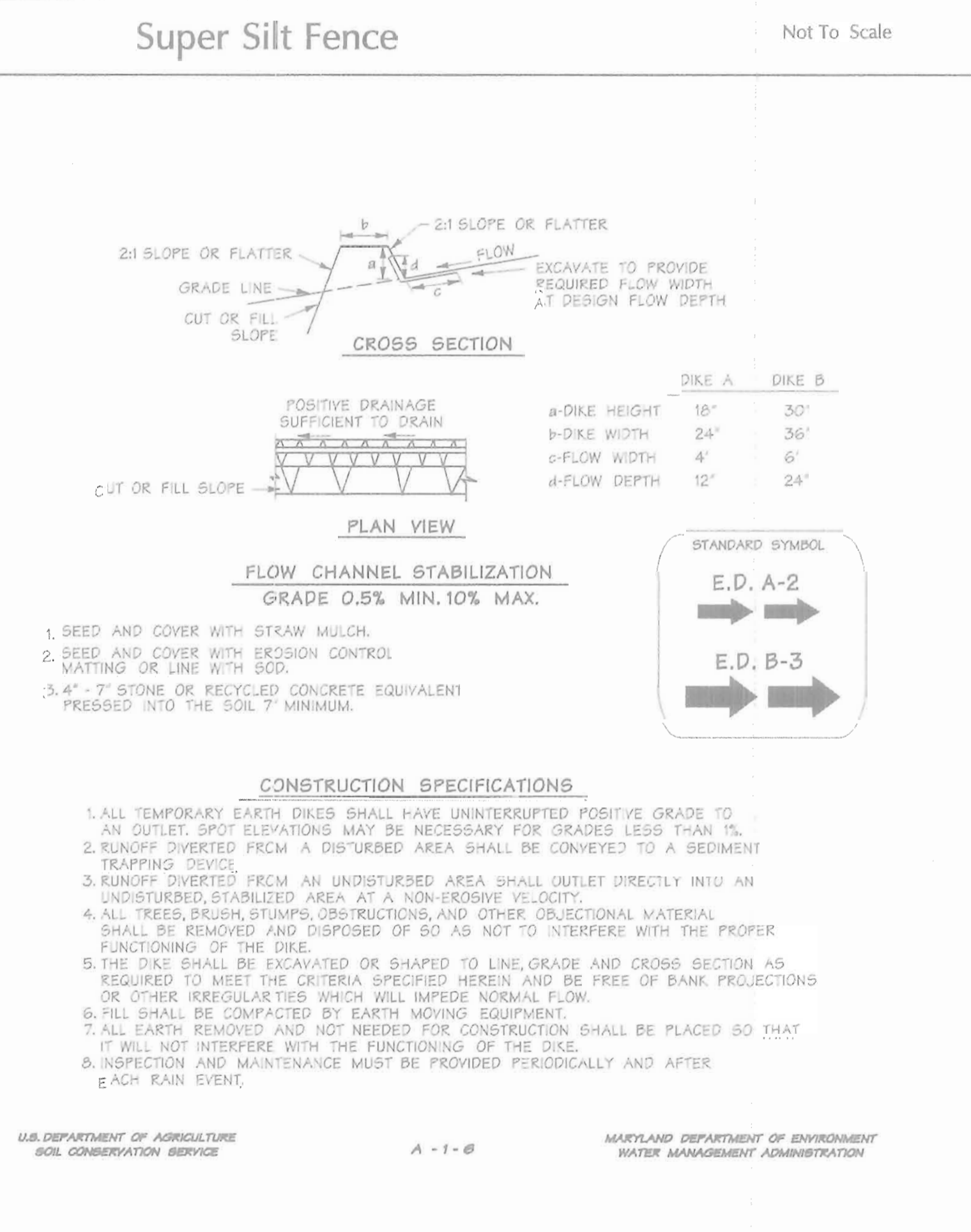
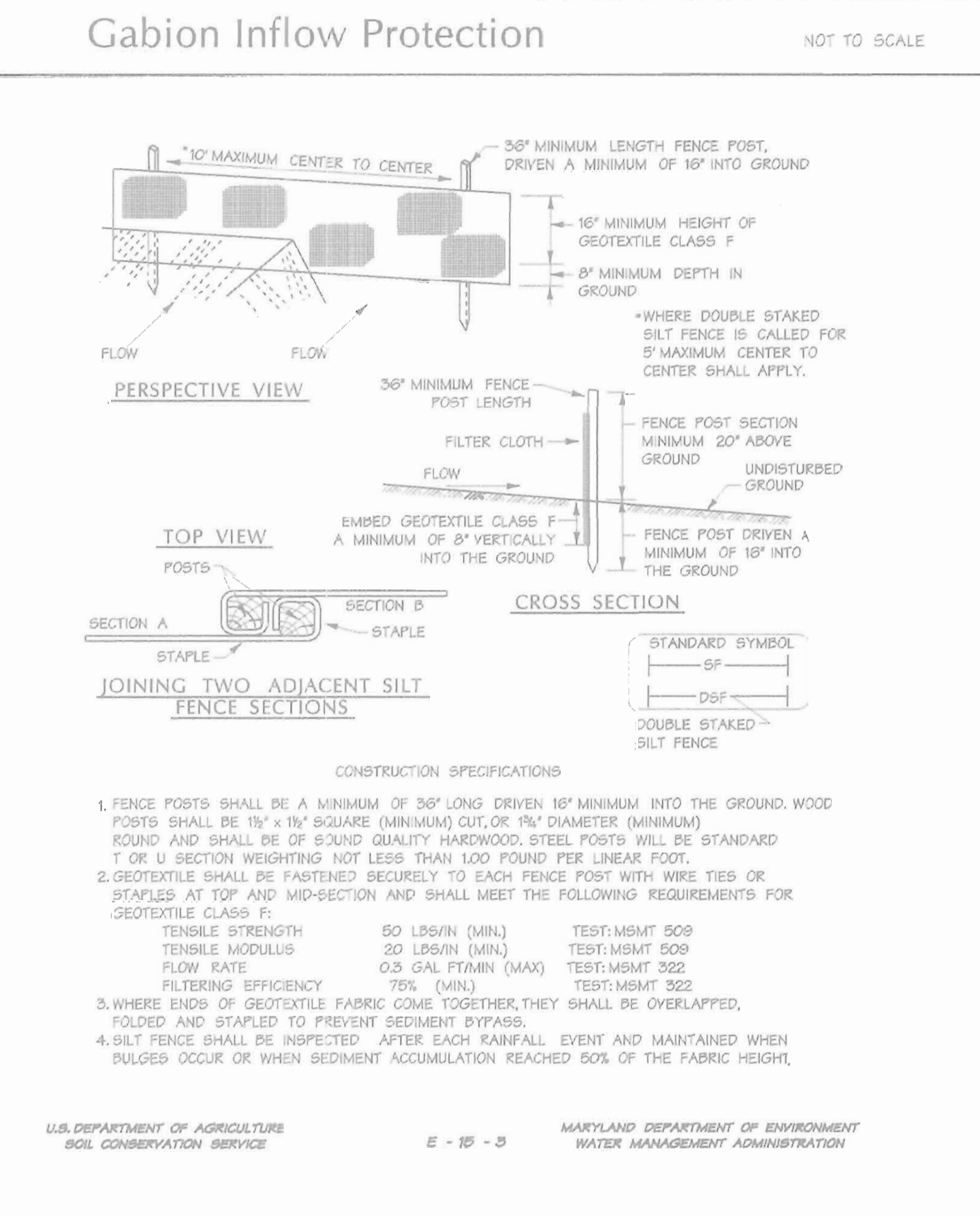
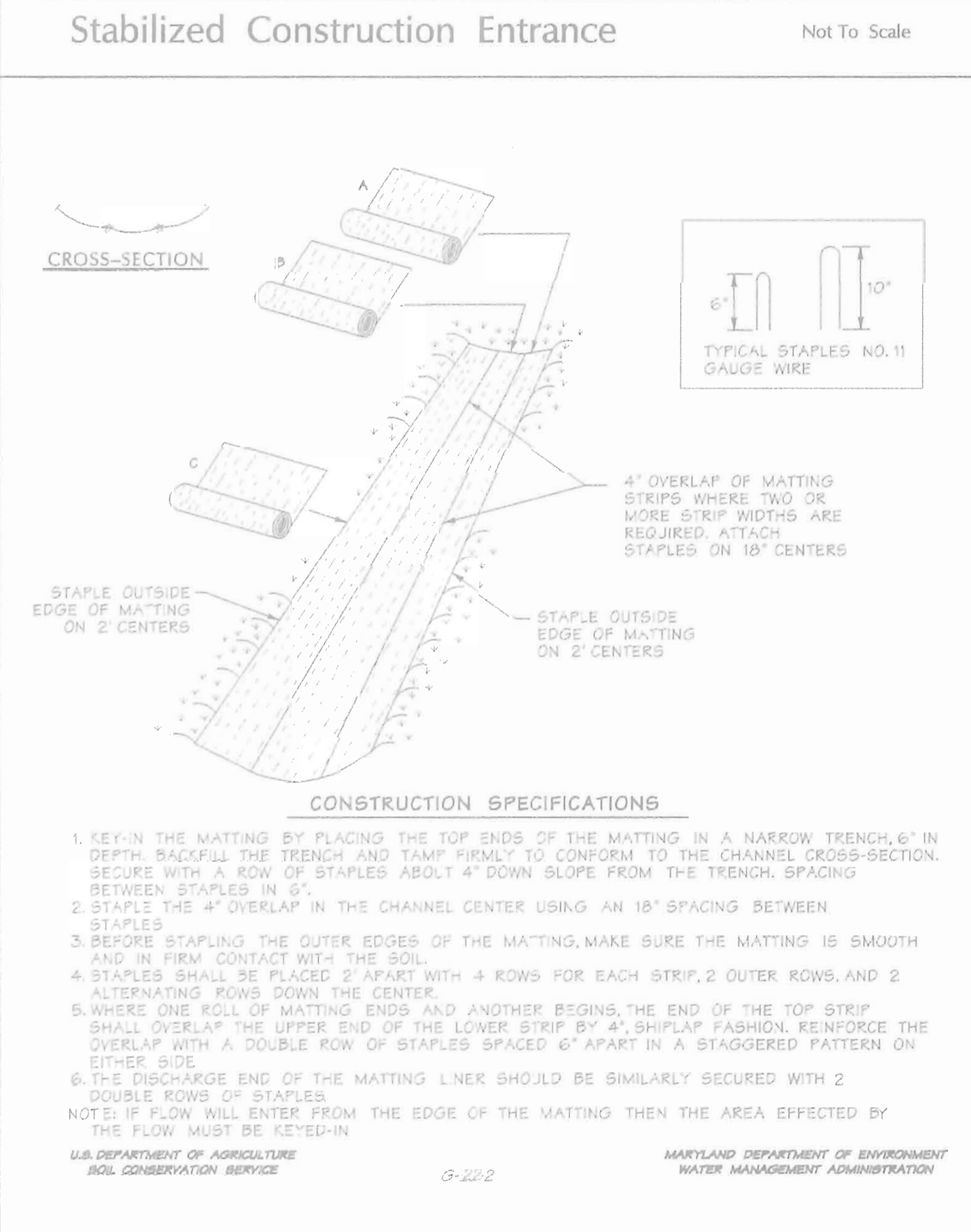
SDF-04-130





**Sediment Control General Notes**

1. DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN HEREON.  
 2. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (4) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.  
 3. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (3-13-1999).  
 4. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "MOST CURRENT" MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.  
 5. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:  
 A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1.  
 B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.  
 6. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.  
 7. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51), 6005 (SEC. 54), TEMPORARY SEEDING (SEC. 52), AND MULCHING (SEC. 53). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.  
 8. ALL SEDIMENT CONTROL STRUCTURES ARE 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 INSPECTOR.  
 9. SITE ANALYSIS:  
 TOTAL AREA OF SITE 2.40 ACRES  
 AREA TO BE ROOFED OR PAVED 2.10 ACRES  
 AREA TO BE VEGETATIVELY STABILIZED 1.00 ACRES  
 TOTAL CUT 4,875 CUBIC YARDS  
 TOTAL FILL 850 CUBIC YARDS  
 OFF-SITE WASTE/BORROW AREA LOCATION \*  
 \* TO BE COMPLETED WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.  
 10. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.  
 11. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.  
 12. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION 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.  
 13. 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.



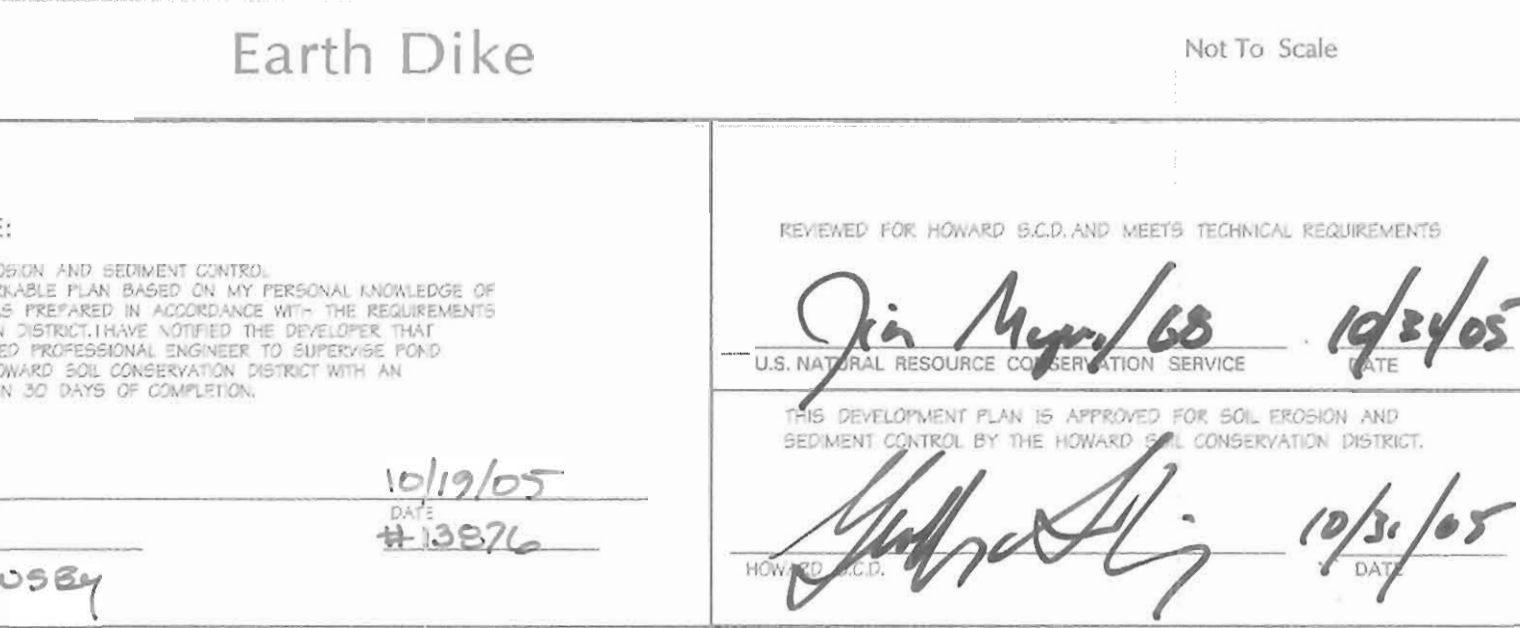
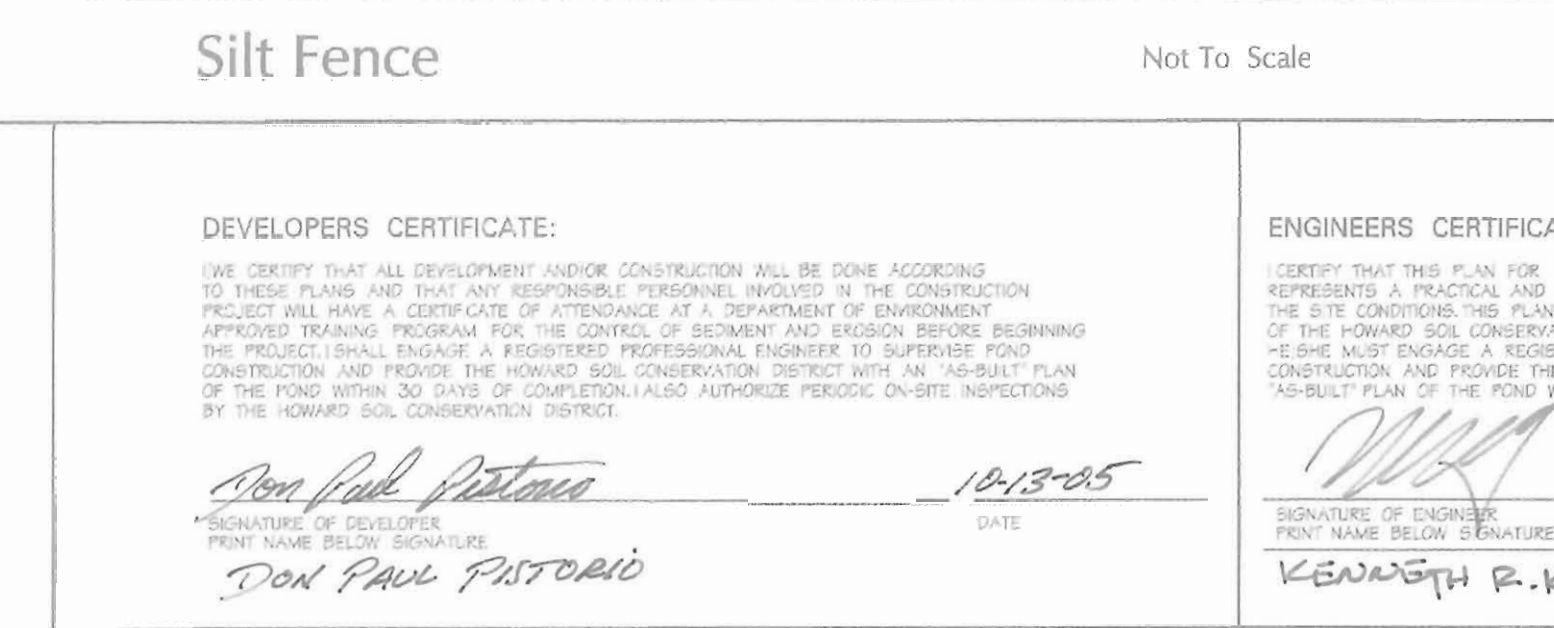
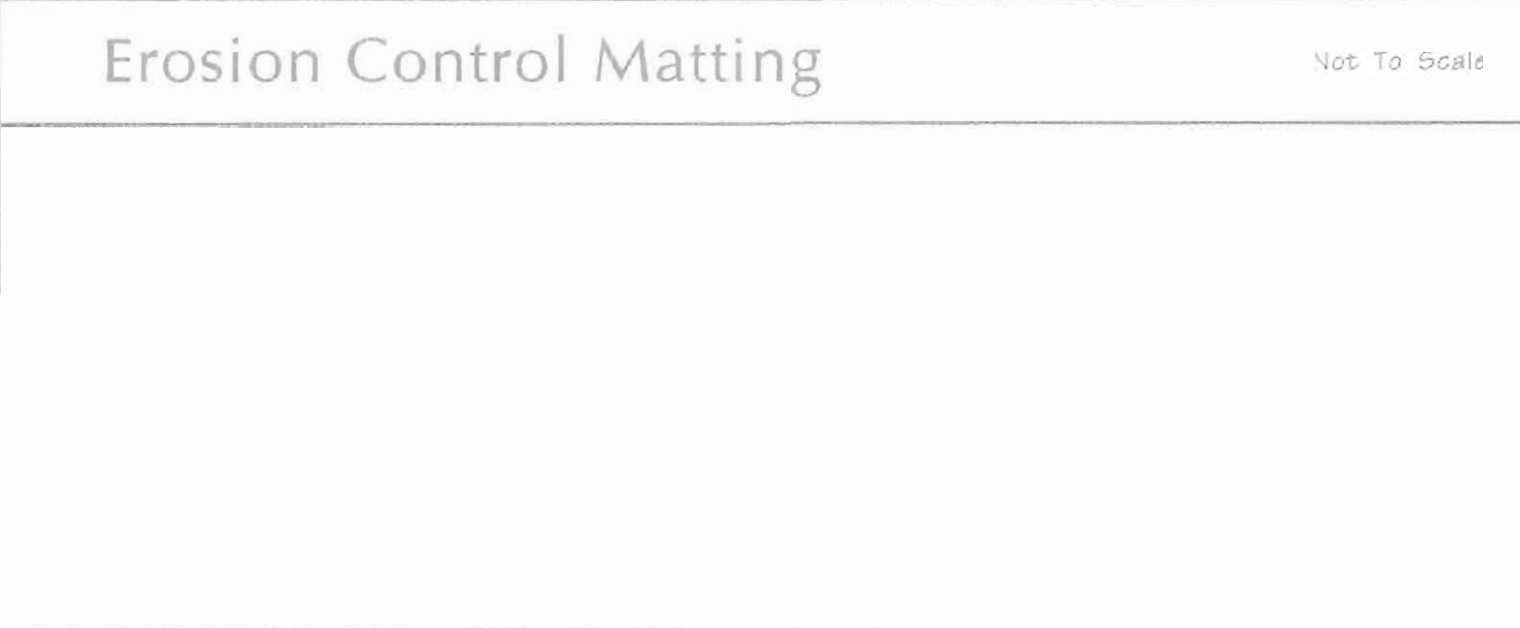
**TEMPORARY METHODS**  
 1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES. ONLY MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.  
 2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.  
 3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLUDS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE BULGING STRIPS BEGIN FLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.  
 4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE OVERWATERED TO THE POINT THE RUNOFF BEGINS TO FLOW.  
 5. BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.  
 6. CALCIUM CHLORIDE - APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

**PERMANENT METHODS**  
 1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH EXISTING TREES OR LARGE SHRUBS MAY PROVIDE VALUABLE PROTECTION IF LEFT IN PLACE.  
 2. TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.  
 3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

**Dust Control Specifications**

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 Robert J. Weber, COUNTY HEALTH OFFICER, 12/21/05  
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief Development Engineering Division, 12/23/05  
 Chief, Division of Land Development, 1/14/06  
 Director, 1/16/06

Date	No.	Revision Description



**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'

OWNER: 3681 TEN OAKS PROPERTIES, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

DEVELOPER: 3681 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

**DMW**  
 Dan McCune-Walker, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3339  
 Fax 296-4705

**Professional Engr. No. 13876**

10/19/05 Date

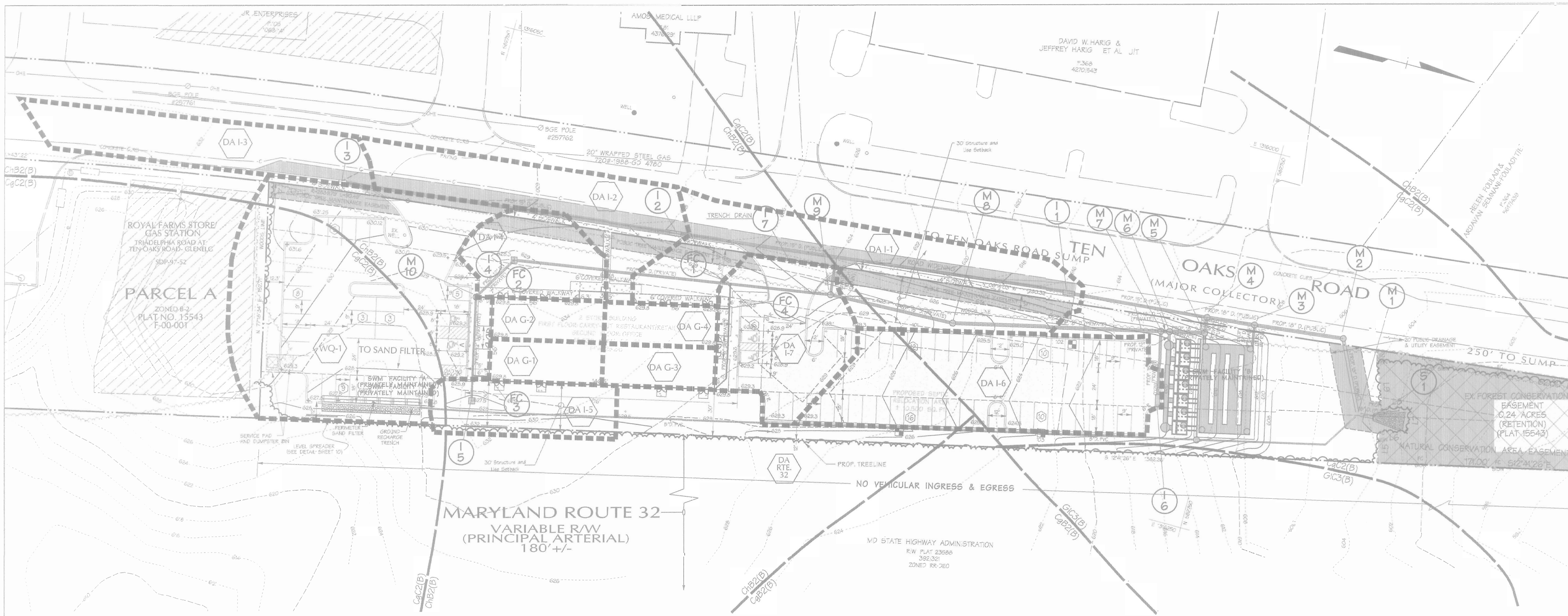
**Professional Engr. No. 13876**

**Professional Engr. No. 13876**



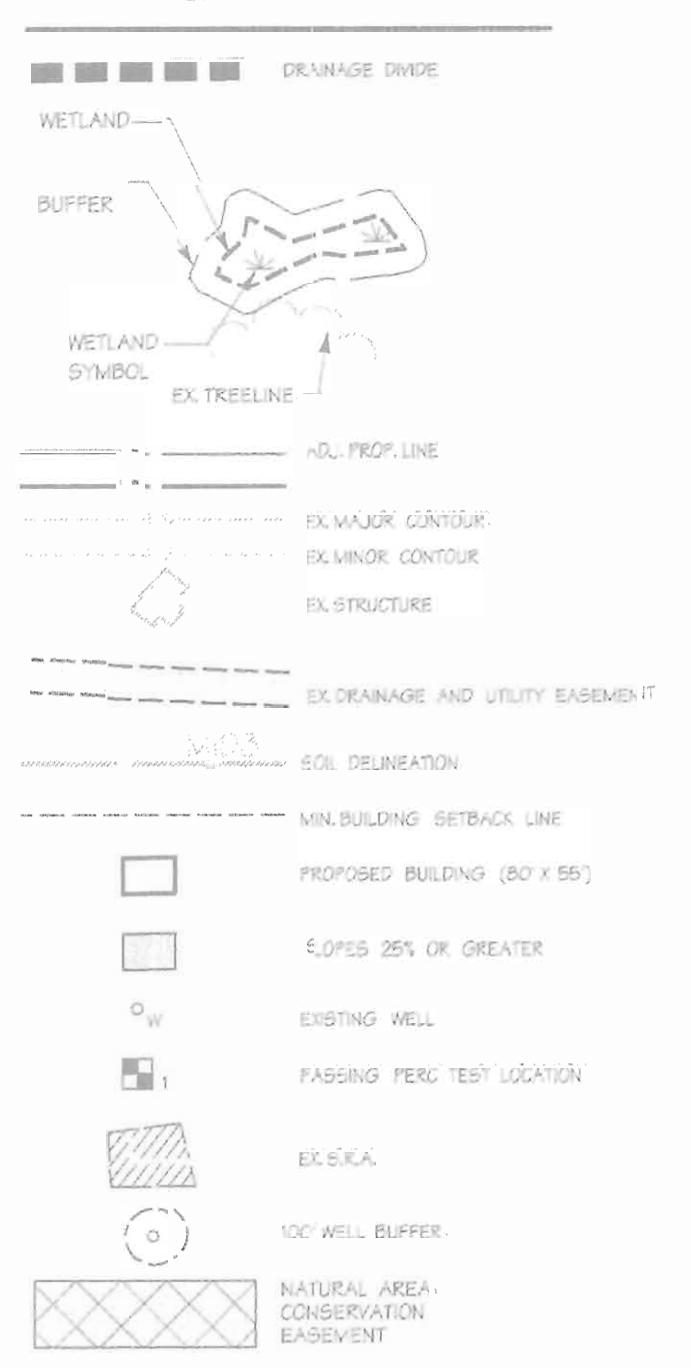






A= 0.16 AC C= 0.95	DA I-3	Z= B-2 IMP.= 100%	A= 0.04 AC C= 0.95	DA G-3	Z= B-2 IMP.= 100%
A= 0.18 AC C= 0.76	DA I-2	Z= B-2 IMP.= 77%	A= 0.04 AC C= 0.95	DA G-4	Z= B-2 IMP.= 100%
A= 0.31 AC C= 0.81	DA I-1	Z= B-2 IMP.= 80%	A= 0.28 AC C= 0.95	DA I-6	Z= B-2 IMP.= 100%
A= 0.08 AC C= 0.35	DA I-5	Z= B-2 IMP.= 13%	A= 0.4 AC C= 0.78	WQ 1	Z= B-2 IMP.= 80%
A= 0.19 AC C= 0.81	DA I-7	Z= B-2 IMP.= 80%	A= 0.04 AC C= 0.95	DA G-1	Z= B-2 IMP.= 100%
A= 0.10 AC C= 0.35	DA I-4	Z= B-2 IMP.= 10%	A= 0.04 AC C= 0.95	DA G-2	Z= B-2 IMP.= 100%

**Legend**



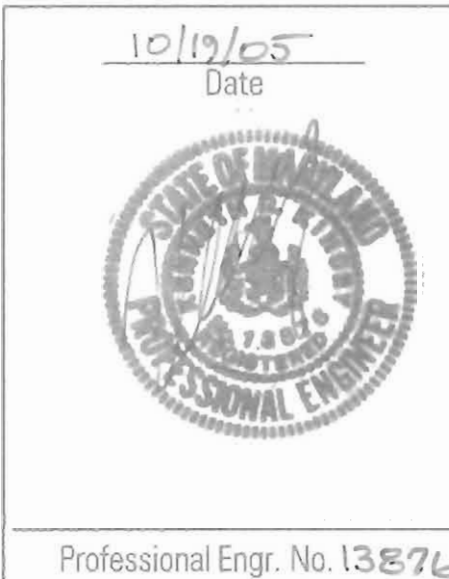
PROF. S.I.A.  
THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PUBLIC SEWERAGE EASEMENT RESTRICTIONS OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT  
*Robert W. Dale* 12/21/05  
COUNTY HEALTH OFFICER DATE  
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*John H. ...* 12/21/05  
CHIEF DEVELOPMENT ENGINEERING DIVISION MHD DATE  
*Andy ...* 1/14/06  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Mark ...* 1/5/06  
DIRECTOR DATE

Date	No.	Revision Description

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'  
OWNER: 3881 TEN OAKS PROPERTIES, LLC  
DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD. COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Dale McConne-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
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A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

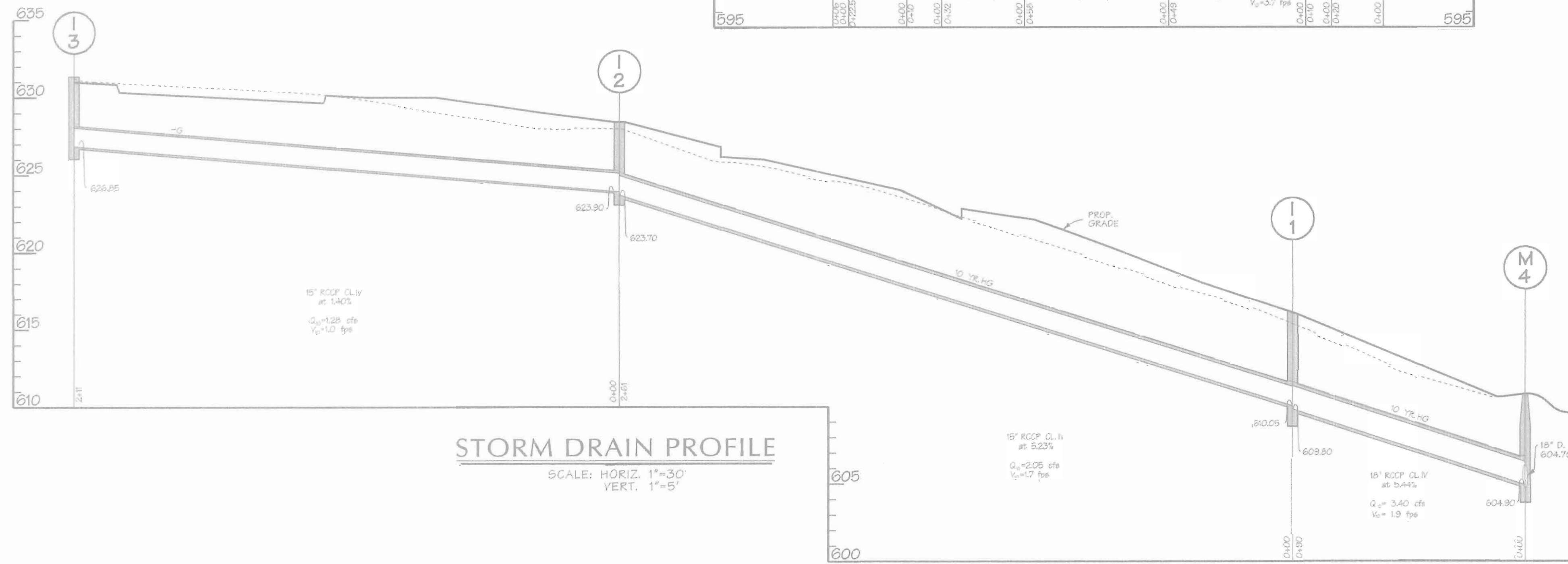
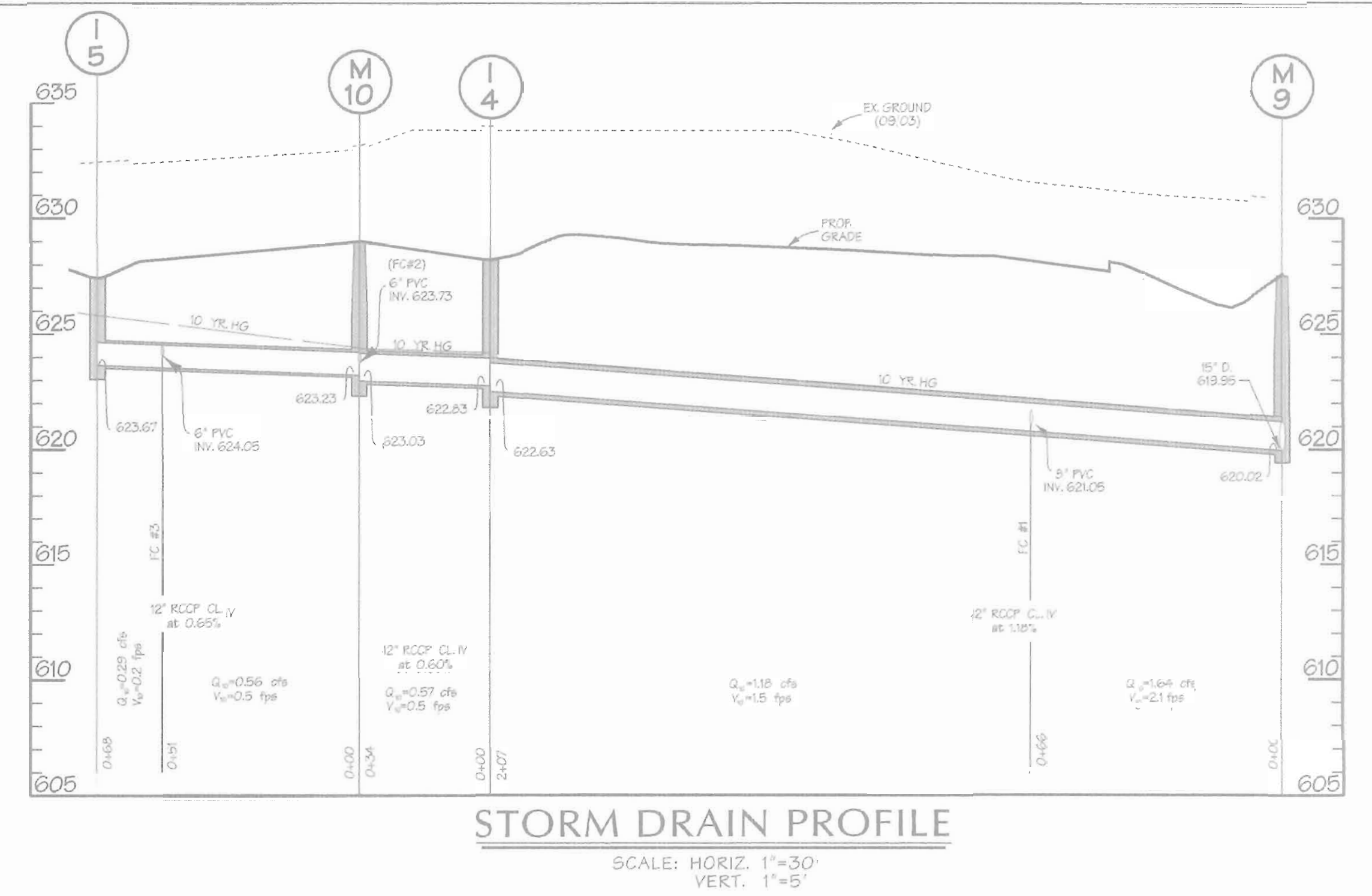
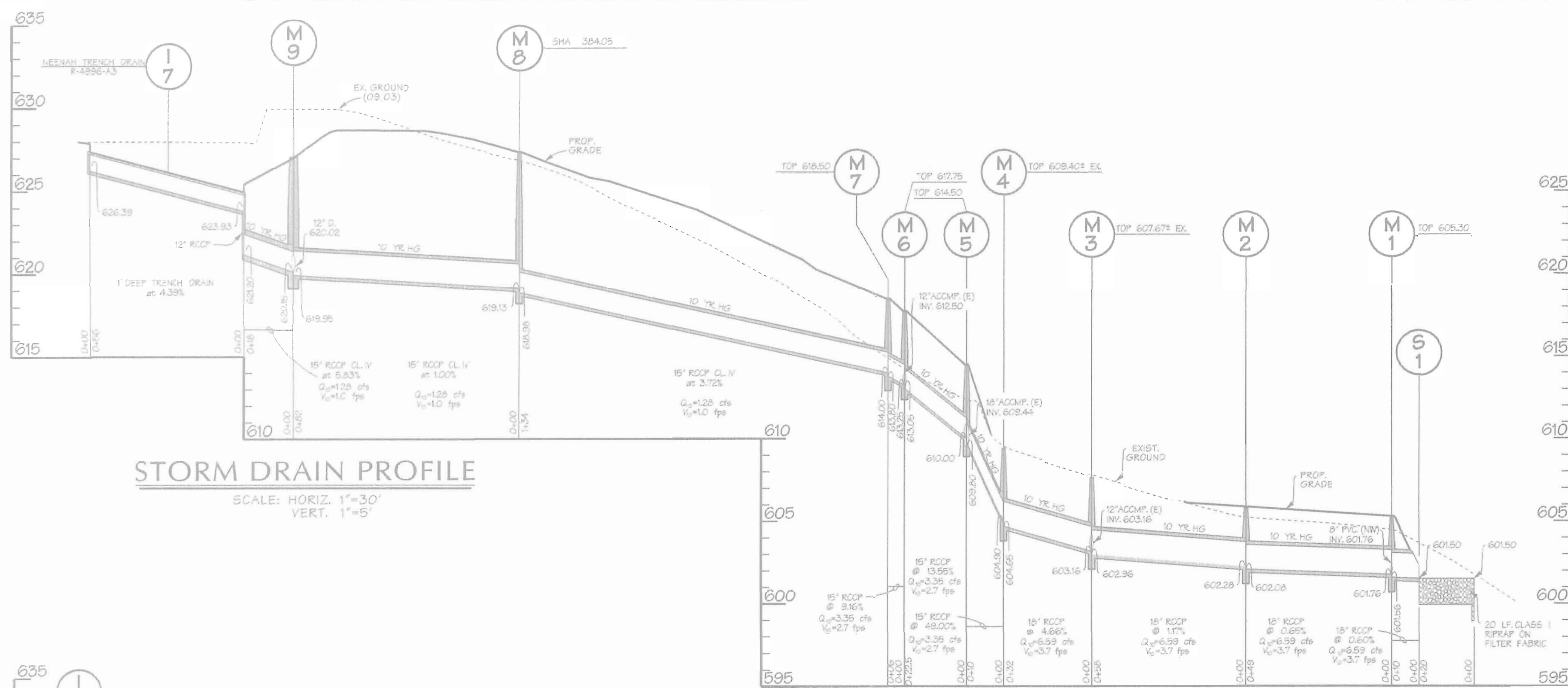


SECTION NAME	SECTION AREA	PERCENT
TRIANGLE HOWARD	178.64	100%

TITLE: **DRAINAGE AREA MAP**  
Scale: 1" = 30'  
Proj. No. 02136.00  
7 of 19  
SDP-04-130

FILED: 1/05/06 10:00 AM



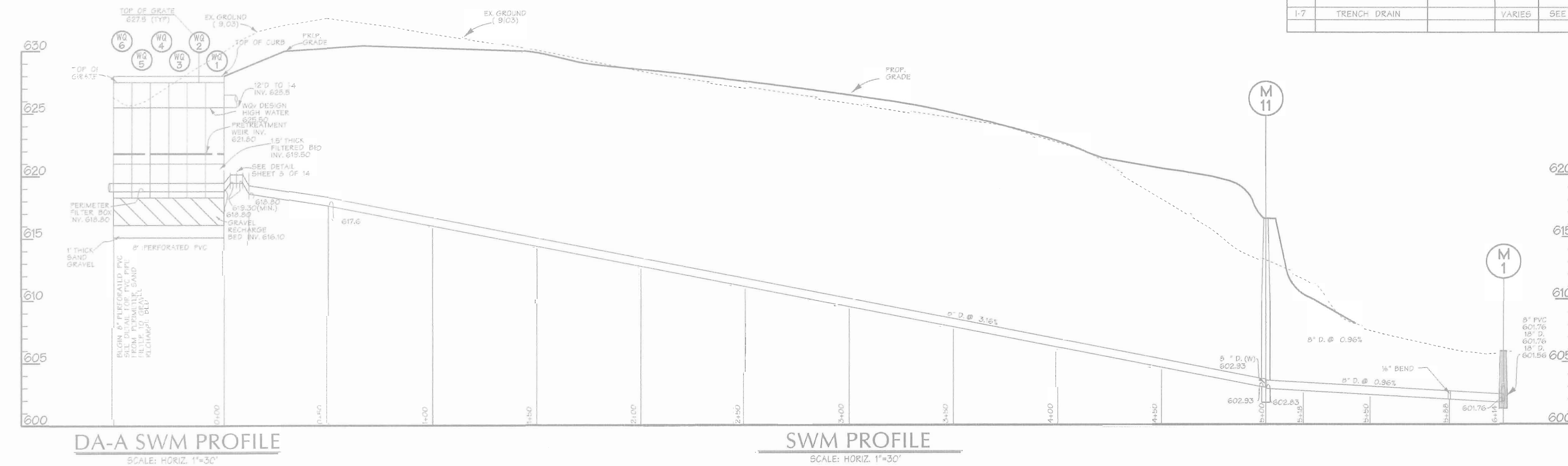


**STRUCTURE SCHEDULE**

NO.	DESCRIPTION	DETAIL NO.	TOP ELEV.	LOCATION	COMMENTS
S-1	FE5	SD-5.51	N/A	N. 582,851.44 E. 1,316,148.52	
M-1	Std Precast Manhole	G-5.11	605.5	N. 582,841.50 E. 1,316,149.57	
M-2	Std Precast Manhole	G-5.11	605.5	N. 582,819.63 E. 1,316,104.66	
M-3	Std Precast Manhole 5' DIA	G-5.11	607.5	N. 582,762.02 E. 1,316,110.96	USE CAST IRON GRATING COVER
M-4	Std Precast Manhole	G-5.11	609.0	N. 582,731.02 E. 1,316,114.34	DROP MANHOLE
M-5	Std Precast Manhole	G-5.11	629.5	N. 582,732.10 E. 1,316,124.39	* SEE DETAIL
M-6	Std Precast Manhole	G-5.11	618.0	N. 582,709.96 E. 1,316,129.38	* SEE DETAIL
M-7	Std Precast Manhole	G-5.11	618.0	N. 582,704.59 E. 1,316,130.59	
M-8	Std Precast Manhole	G-5.11	627.6	N. 582,573.26 E. 1,316,160.52	
M-9	Std Precast Manhole	G-5.11	627.8	N. 582,492.31 E. 1,316,163.09	
M-10	Std Precast Manhole	G-5.11	629.8	N. 582,271.30 E. 1,316,223.69	
M-11	Std Precast Manhole	G-5.11	616.5	N. 582,745.10 E. 1,316,192.35	
I-1	Type A-5 Inlet	SD-4.01 or SD-4.40	615.5	SEE SITE PLAN	TC @ CL INLET
I-2	Type A-5 Inlet	SD-4.01 or SD-4.40	628.0	SEE SITE PLAN	TC @ CL INLET
I-3	Type A-5 Inlet	SD-4.01 or SD-4.40	631.1	SEE SITE PLAN	TC @ CL INLET
I-4	YARD INLET	G-5.11	628.3	N. 582,288.56 E. 1,316,192.38	USE CAST IRON GRATING COVER
I-5	YARD INLET	SPECIAL	627.5	N. 582,286.09 E. 1,316,289.09	
I-6	S COMB.	SD-4.34	620.63	SEE SITE PLAN	
I-7	TRENCH DRAIN	VARIABLE	SEE SITE PLAN		

**PIPE SCHEDULE**

SIZE	TYPE	LENGTH
8"	PVC	614'
12"	RCCP-CL-IV	313'
15"	RCCP-CL-IV	789.5'
18"	RCCP-CL-IV	239'



10/17/05  
Date

Professional Engr. No. 13876

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert A. Walker*  
COUNTY HEALTH OFFICER  
DATE: 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Wendy Hammett*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 1/14/06

*David A. Wright*  
DIRECTOR  
DATE: 1/19/06

Date No. Revision Description

**Ten Oaks Commercial Center**  
"Triangle Howard, Parcel B"

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Duff McCune Walker, Inc.  
200 East Pennsylvania Avenue  
Thiessen, Maryland 21286  
(410) 296-5533  
Fax: 296-4705

A Team of Land Planners,  
Landscape Architects,  
Civil Course Architects,  
Engineers, Surveyors &  
Environmental Professionals

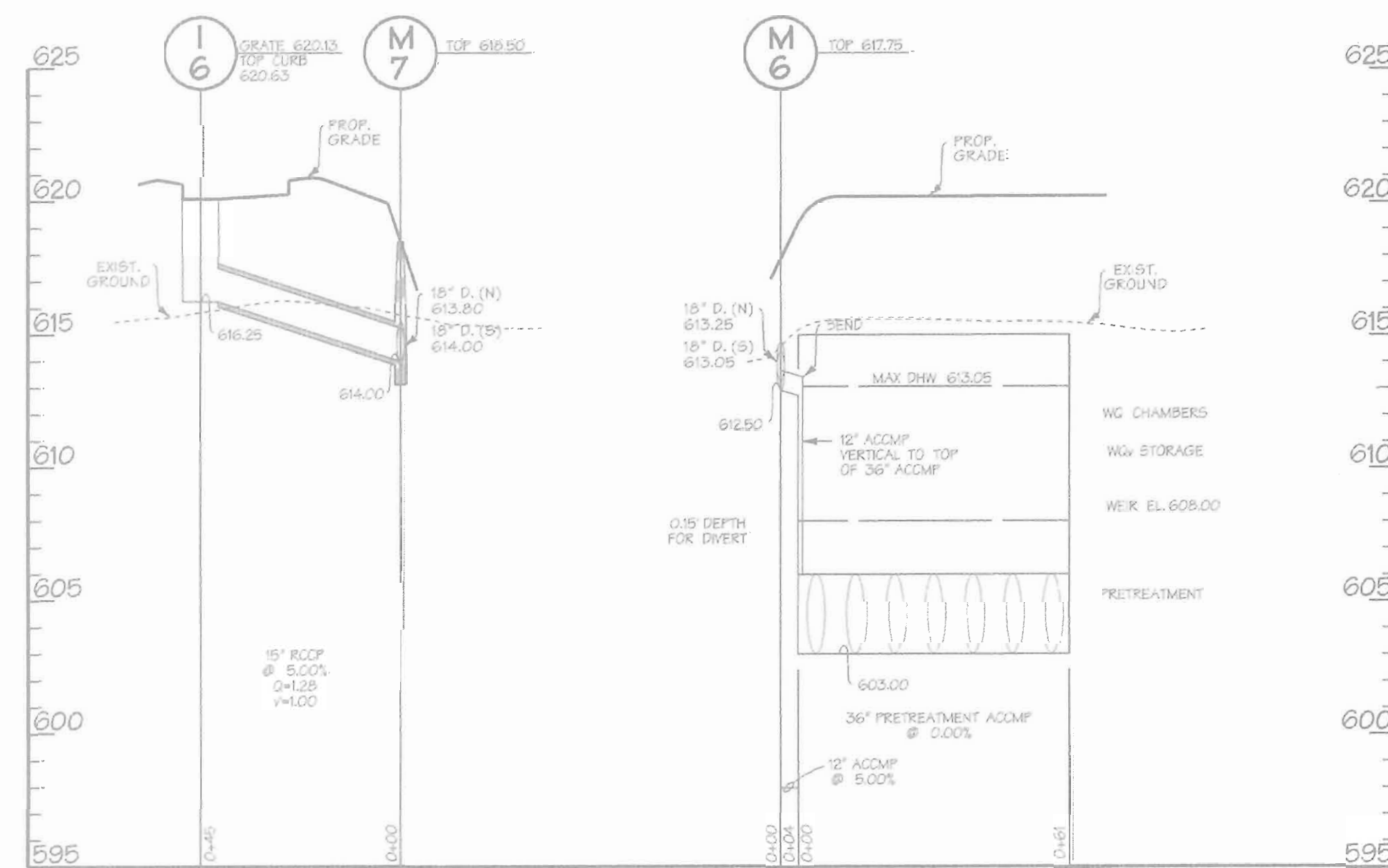
PROJECT: NAME: TRANSMISSION HOWARD SECTION: AREA: N/A PRICE: \$  
SHEET NO.: 17864 BLOCK # 22 INCLUSIVE MAP 22 EXC. SHEET 2500 DISTRICT: DISTRICT  
WATER CODE: N/A SEWER CODE: N/A

TITLE: **STORM DRAIN PROFILE**

Des. By: Scale: 1"=30' Proj. No. 02136.00  
Dwn. By: Date: 10/28/05  
Chk. By: PRK Approved: 8 of 19

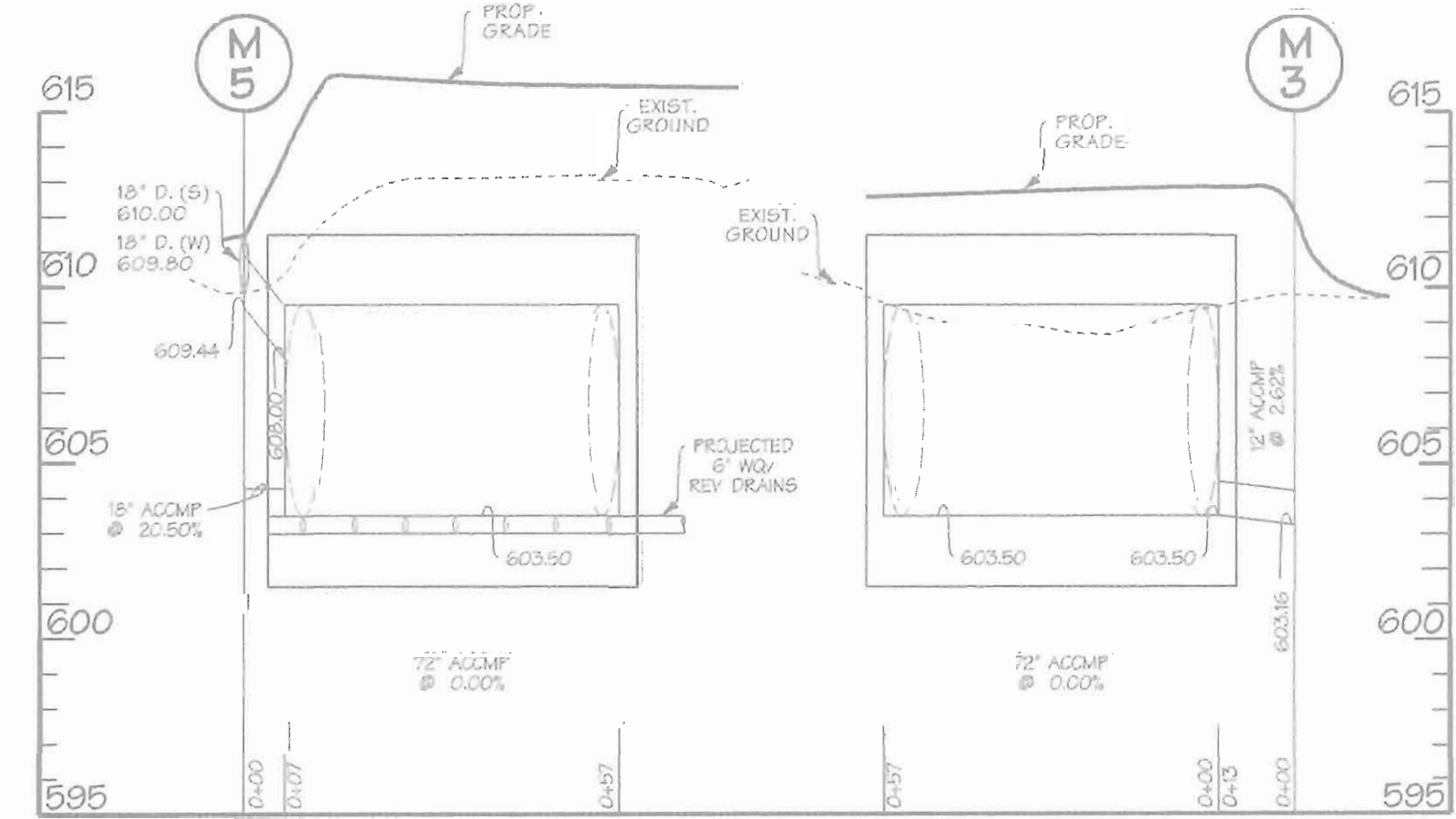
SDP-14-130





**STORM DRAIN PROFILE**

SCALE: HORIZ. 1"=30'  
VERT. 1"=5'



**STORM DRAIN PROFILE**

SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert D. Wiles* 12/14/05  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Shirley* 12/20/05  
CHIEF DEVELOPMENT/ENGINEERING DIVISION DATE

*Chinda Hamilton* 1/14/06  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Kenice L. Weyer* 1/17/06  
DIRECTOR DATE

Date	No.	Revision Description

**Ten Oaks Commercial Center**

"Triangle Howard, Parcel B"

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DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
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Environmental Professionals

10/19/05  
Date

Professional Engr. No. 13876

SECTION	NO.	DESCRIPTION	DATE
17864	15		

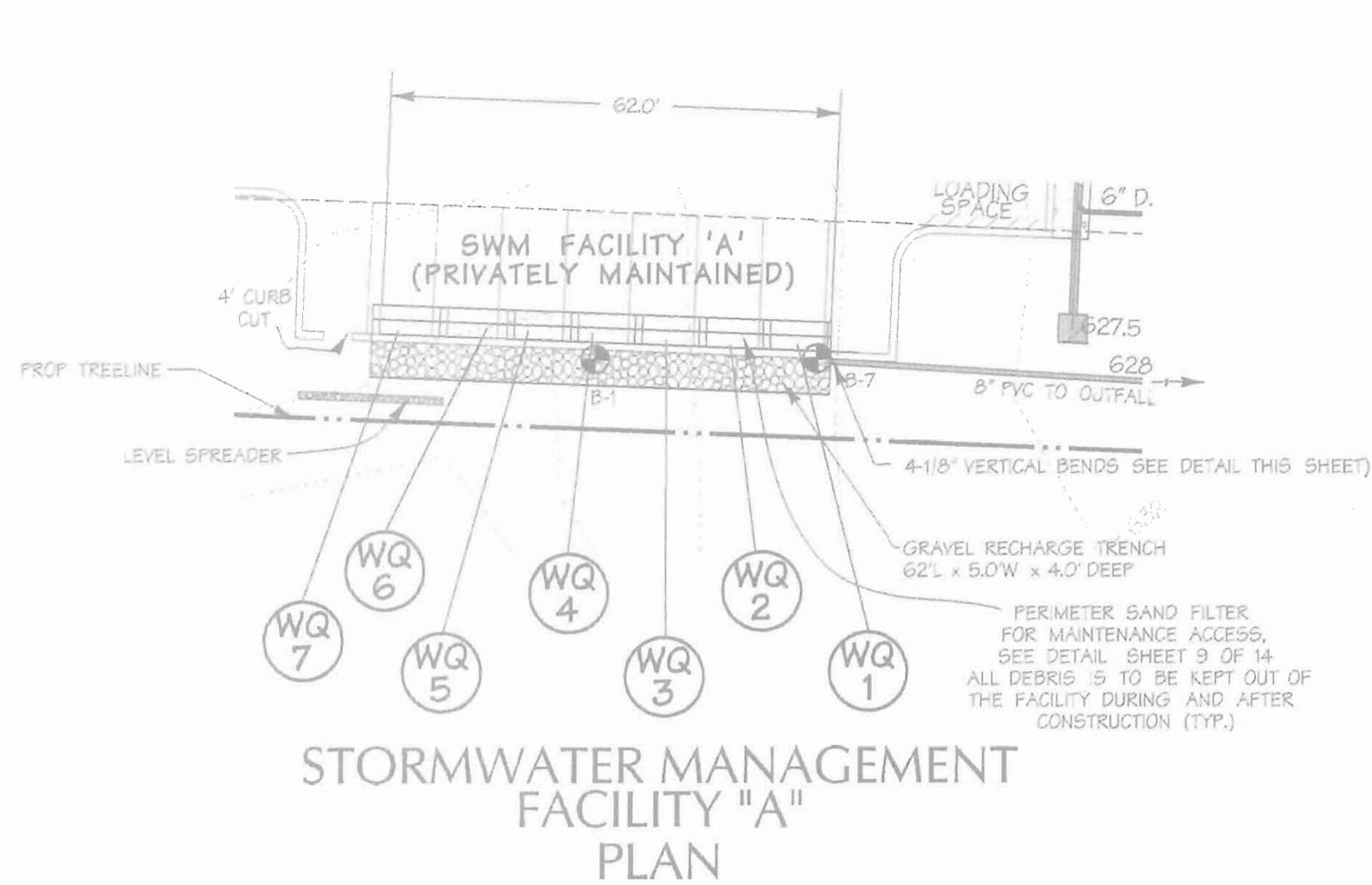
TITLE: **STORM DRAIN PROFILE**

Des. By	Scale 1"=30'	Proj. No. 02136.00
Drn. By	Date 10/28/05	9 of 19
Chk. By <i>KPK</i>	Approved	

SPP-04-130



NOTE: ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.



**STORMWATER MANAGEMENT FACILITY "A" PLAN**

SCALE: 1"=20'  
NOTE: MAINTENANCE BY OWNER (OR ASSIGNEE).

**SUMMARY TABLE**

DA	AREA ACRES	WQv (CF)		Rev (CF)		Cpv (CF)		1 YEAR PEAK DISCHARGE	
		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	EXISTING	PROVIDED
A	0.44	1307	1904	436	496	N/A	N/A	0.03	0.02
B	1.97	4356	4588	1742	1966	5228	6954	0.09	0.14

**UNDERGROUND STORAGE FACILITY**

HYDROLOGIC EVENT	WSEL
Cpv	606.77

BMP	HAZARD CLASSIFICATION
PERIMETER FILTER	N/A
INFILTRATION TRENCH	N/A
UNDERGROUND STORAGE	N/A

**RECHARGE TRENCH/AREA**

DEVICE NO.	LENGTH	WIDTH	DEPTH	TOP ELEV.	VOLUME	DISCHARGE CONTROL
A	62.0'	5.0'	4.0'	618.50	496cf	619.00
B	63.0'	39.0'	2.0'	602.83	1966cf	603.33

**PERIMETER SAND FILTER**

DEVICE NO.	PRECAST CHAMBERS	BOTTOM ELEV.	SAND FILTER ELEV.		TANK INTERCONNECT DIA.	OUTLET WEIR		TOP ELEV.
			BOTTOM	TOP		L	H	
A	7	618.50	619.00	620.50	622.00	1.5'	0.6'	622.00
B	7	603.00	603.50	605.00	608.00	1.5'	0.6'	608.00

**SAND FILTER SPECIFICATIONS**

The contractor shall furnish and install 13 Wet Chamber/Sand Filters in accordance with current EPA specifications and guidelines. The precast concrete tank shall be fabricated to reach a strength of 4500 PSI in 28 days. Walls and bottom shall be min. 6" thick. A min. reinforcing of two mats of 4" x 4" W4/W4 wire mesh shall be used. Each unit shall consist of two identical parallel chambers. The first chamber will serve as a solids settling "wet" chamber overflowing through the center partition wall into the filtration chamber. All pipe openings shall have cast in place (or equal) gaskets sized to accommodate 6" schedule 35 PVC pipe stubs. The two 6" dia. PVC drain collectors and support gravel shall be field installed as shown on the drawing. A geotextile woven drainage fabric membrane (Amoco 1198 or equal) shall be installed on the carefully leveled gravel bed and extended up the four sides of the wall to a height of 6" above the filter sand, thus precluding sand from escaping through openings developing along the wall. The 6" of support gravel shall be 3/4" washed (DE No. 57) or equivalent. The 12" of filter sand shall be concrete sand (AASHTO M6) or equivalent. Preinstalled angle frames shall support traffic bearing cast iron covers and grates throughout. A 6" gravel bed shall be placed on undisturbed or compacted soil as a means of establishing a permanent support and grade level for the tanks. The Wet Chamber/Sand Filters shall be of the "Standard Head" or "Hi-Head" (select one) type as manufactured by Gillespie & Son, Inc. (Chestertown, MD) or approved equal. The supplier of the filter system shall provide a minimum of two (2) days of field installation inspection in two trips by a factory trained Det. CDR. Following standard procedures the CDR will certify in writing that installation of the filter system has been completed in accordance with the manufacturer's recommendation.

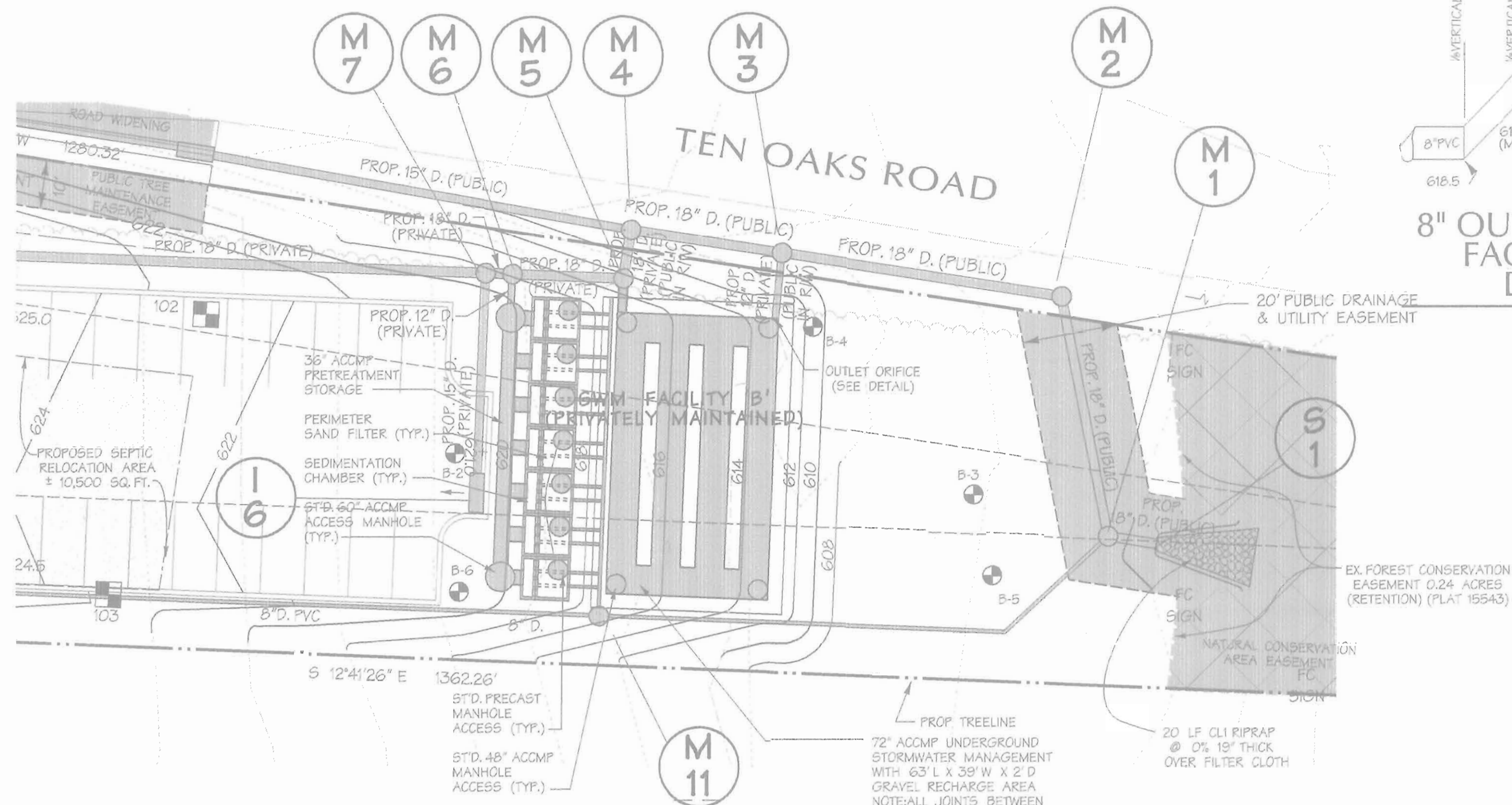
The corresponding surface area being 15.66 sq. ft. and the volume being as specified. Each filter tank will require 6 cu. ft. of 3/4" washed support stone and 16 sq. ft. of geotextile membrane. A 6" PVC pipe underdrain shall be installed in the sand chamber as shown. A 6" layer of stone and geotextile fabric shall be installed in support of a 12" layer of filter sand. (See Material List); Tank covers must meet HS-20 truck load bearing in traffic areas.

- Material List**
- Concrete mix must reach 4500 PSI at 28 days.
  - Reinforcing to be min. two mats of 4" x 4" W4/W4 wire mesh.
  - Support frames for grates and covers shall be rust proof painted steel angle cast in place.
  - Grates shall be 26" x 24" x 1 1/2" cast iron (East Jordan 695B type "M-2" or equal).
  - Solid covers shall be 26" x 24" x 1 1/2" cast iron (East Jordan 695B type "A" or equal).
  - Under drain piping and inter connecting piping between tanks shall be PVC class SDR 35 min.
  - Piping gaskets shall be compatible with PVC schedule 35 pipe (Star Seal or equal).
  - Filter bed support stone shall be 3/4" washed stone (DE No. 57 or equal) - 8 cu. ft. per filter.
  - Geotextile membrane shall be woven drainage fabric (Amoco 1198, Miraf-700XG or equal) 16 sq. ft. per filter.
  - Filter sand shall be Concrete sand (AASHTO M6, C-33 or equal).

Notes: Items 4 and 5 are pertaining to traffic bearing conditions. An underbedding of the tanks using 6" of #57 stone on undisturbed or compacted base is recommended.

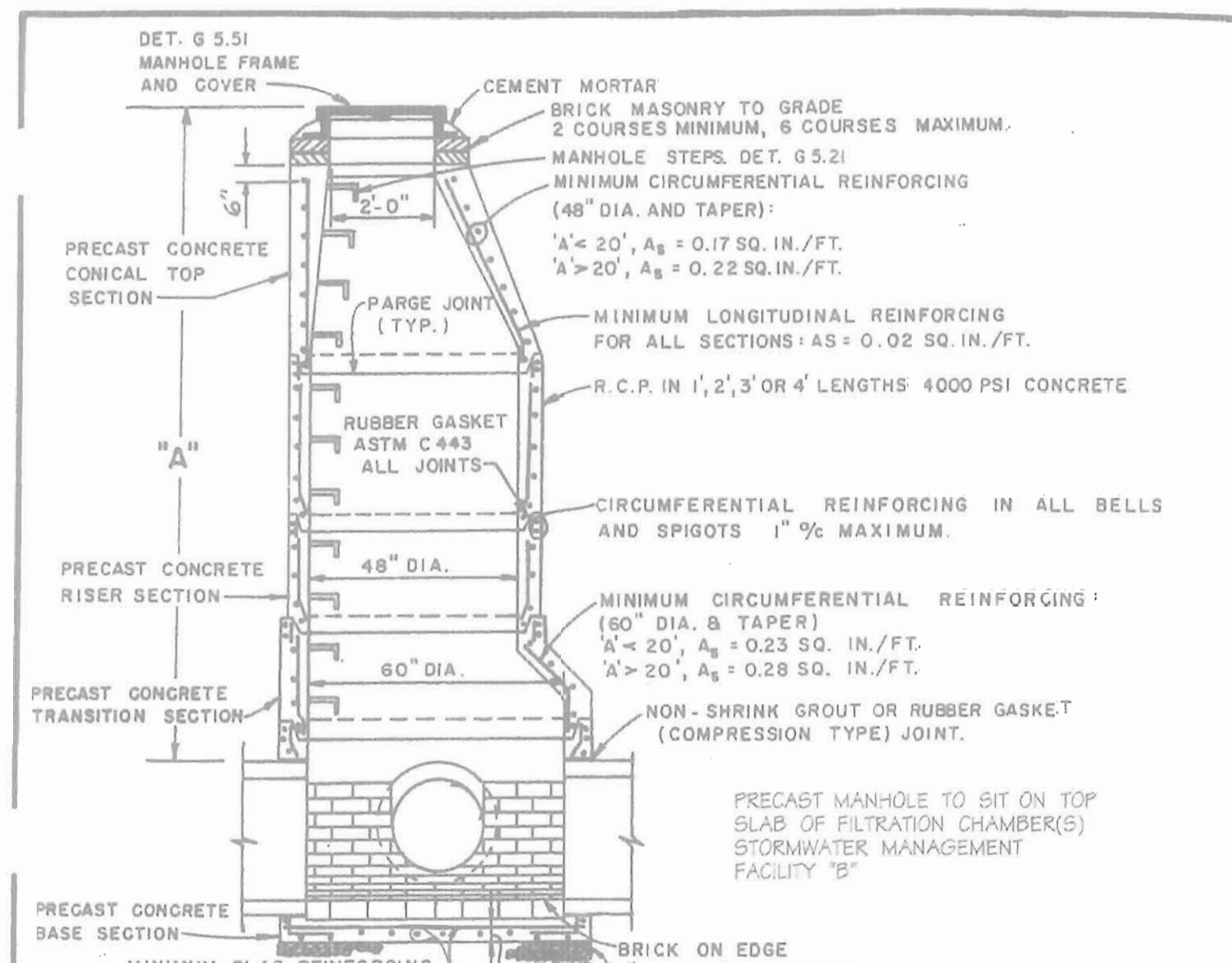
**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES**

- The stormwater facilities shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facilities are functioning properly.
- The top and side slopes of the embankment shall be moved a minimum of once per year, when vegetation reaches 18" in height or less.
- Debris and litter shall be removed from all perimeter sand filters and the EP facility during regular mowing operations as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches deep in the bottom of the facilities.
- A log book shall be maintained to determine the rate at which the facilities drain.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the filter systems have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



**STORMWATER MANAGEMENT FACILITY "B" PLAN**

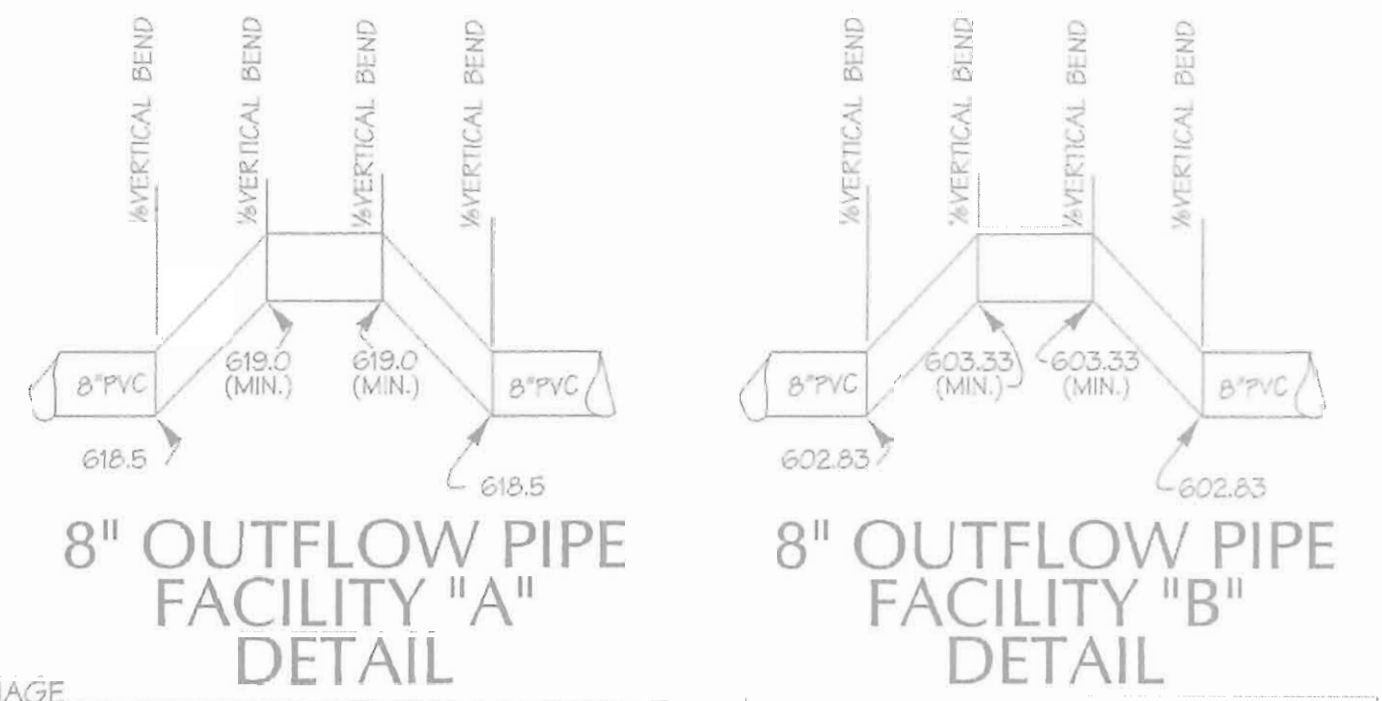
SCALE: 1"=20'  
NOTE: MAINTENANCE BY OWNER (OR ASSIGNEE).



**GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES**

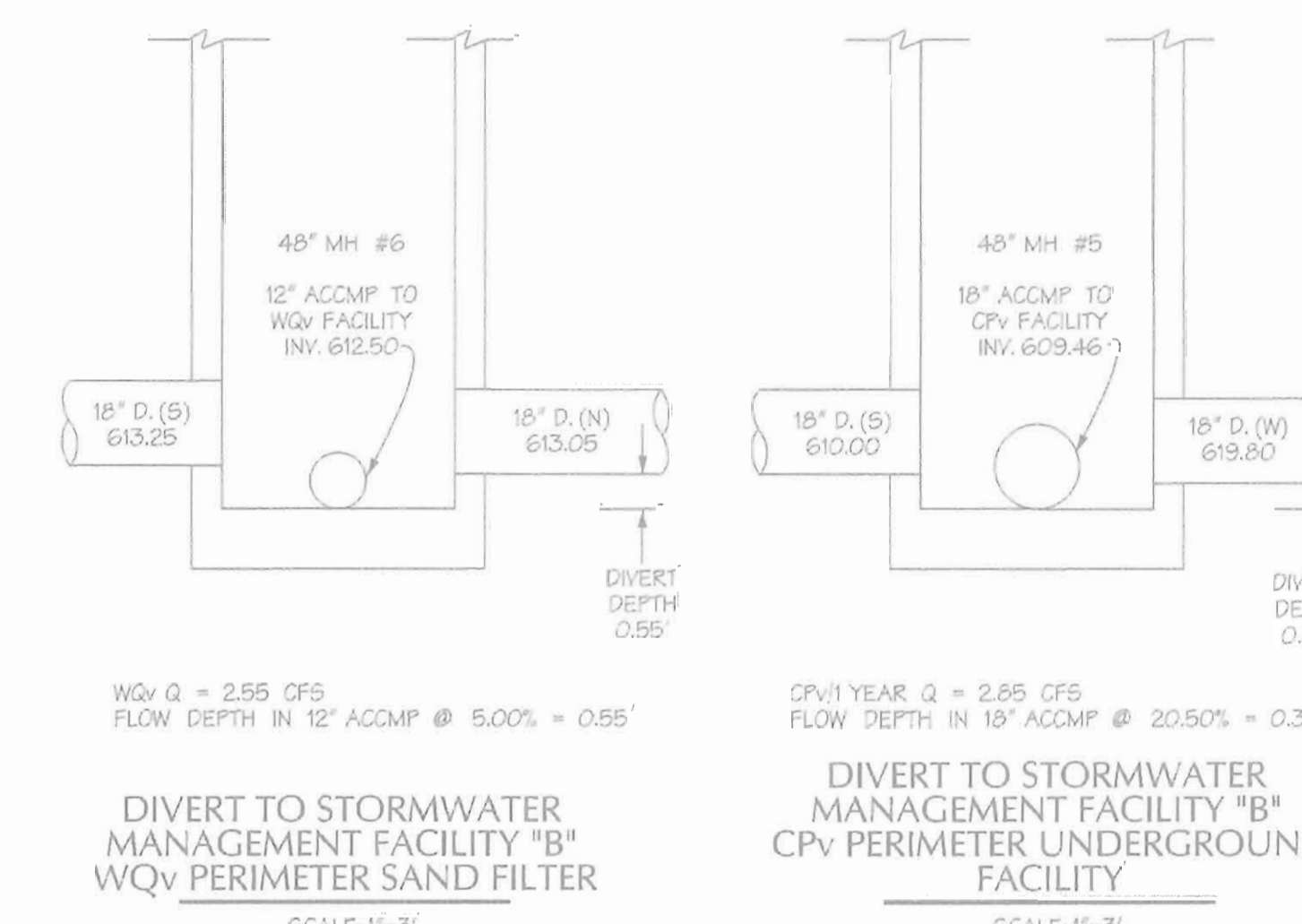
- MANHOLE BASE SHALL BE BEDDED ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
- EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/3 OF WAY TO TOP OF PIPE.
- CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
- MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G5.21. MANHOLE COVER SHALL BE AS SPECIFIED ON DETAIL G5.51.
- PROVIDE 2 COATS COAL TAR EPOXY COATING, 16 MIL. DRY, SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY).
- PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
- MANHOLE CHANNELS SHALL BE FORMED TO PROVIDE A SMOOTH HYDRAULIC TRANSITION BETWEEN PIPES. BENCHES SHALL BE TO TOP OF PIPE OR AS SHOWN ON PLANS. MANHOLE CHANNELS AND BENCHES SHALL BE FORMED FROM SEWER BRICK, GRADE SS, ASTM C-32.
- MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C 478 EXCEPT AS SHOWN.

HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
STANDARD PRECAST MANHOLES  
Approved: [Signature] Chief - Bureau of Engineering  
Checked by: J.M.C.  
Scale: NONE  
G5.11

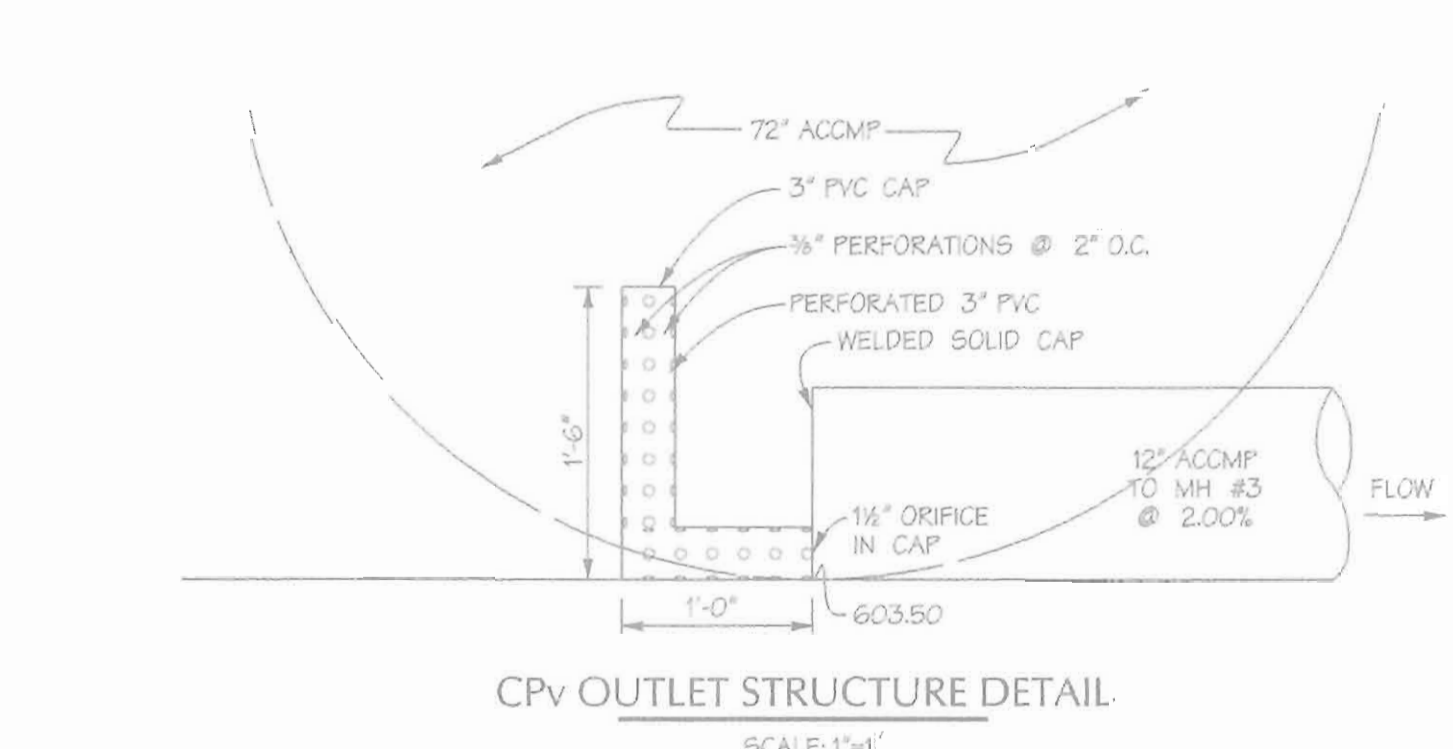


**LEVEL SPREADER DETAIL**

WHERE UTILITY CROSSINGS ARE ENCOUNTERED THE TRENCH DEPTH MAY BE REDUCED TO 1 FOOT.



**CPV OUTLET STRUCTURE DETAIL**



**DEVELOPERS CERTIFICATE:**  
I HAVE CERTIFIED THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE BY A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE AND CONTROL CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH ALL NECESSARY PLANS OF THE PROJECT WITHIN 30 DAYS OF COMPLETION. ALSO PROVIDE PERICAL IN-WRITE, RECOMMENDED BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 10/13/05  
[Signature] 10/13/05

**ENGINEERS CERTIFICATE:**  
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND REASONABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION 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 ALL NECESSARY PLANS OF THE PROJECT WITHIN 30 DAYS OF COMPLETION.

[Signature] 10/19/05  
[Signature] 10/19/05

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
[Signature] 12/21/05  
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
[Signature] 12/23/05  
[Signature] 1/4/06  
[Signature] 1/19/06

**Ten Oaks Commercial Center**  
"Triangle Howard, Parcel B"

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
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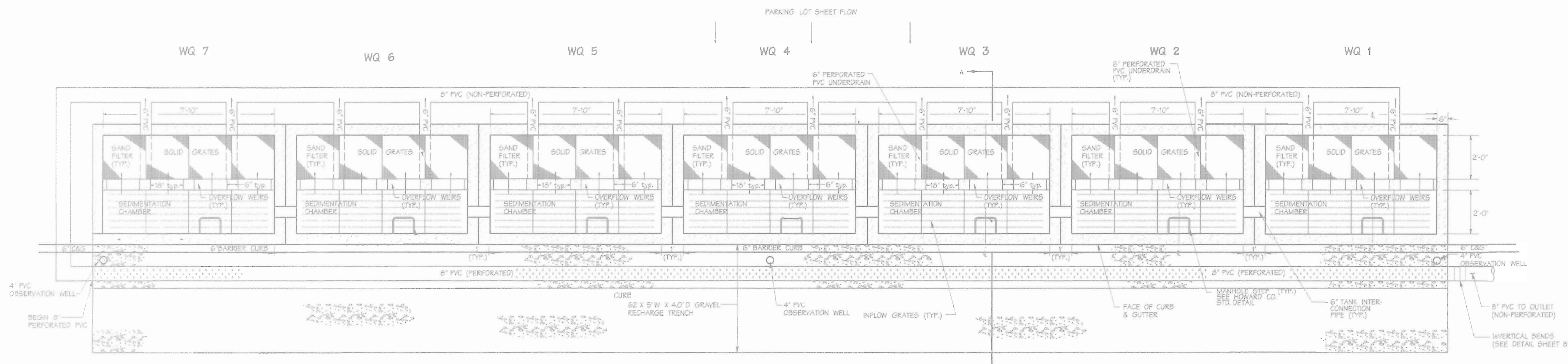
**DMW**  
Duck, McCune & Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 286-3232  
Fax 286-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

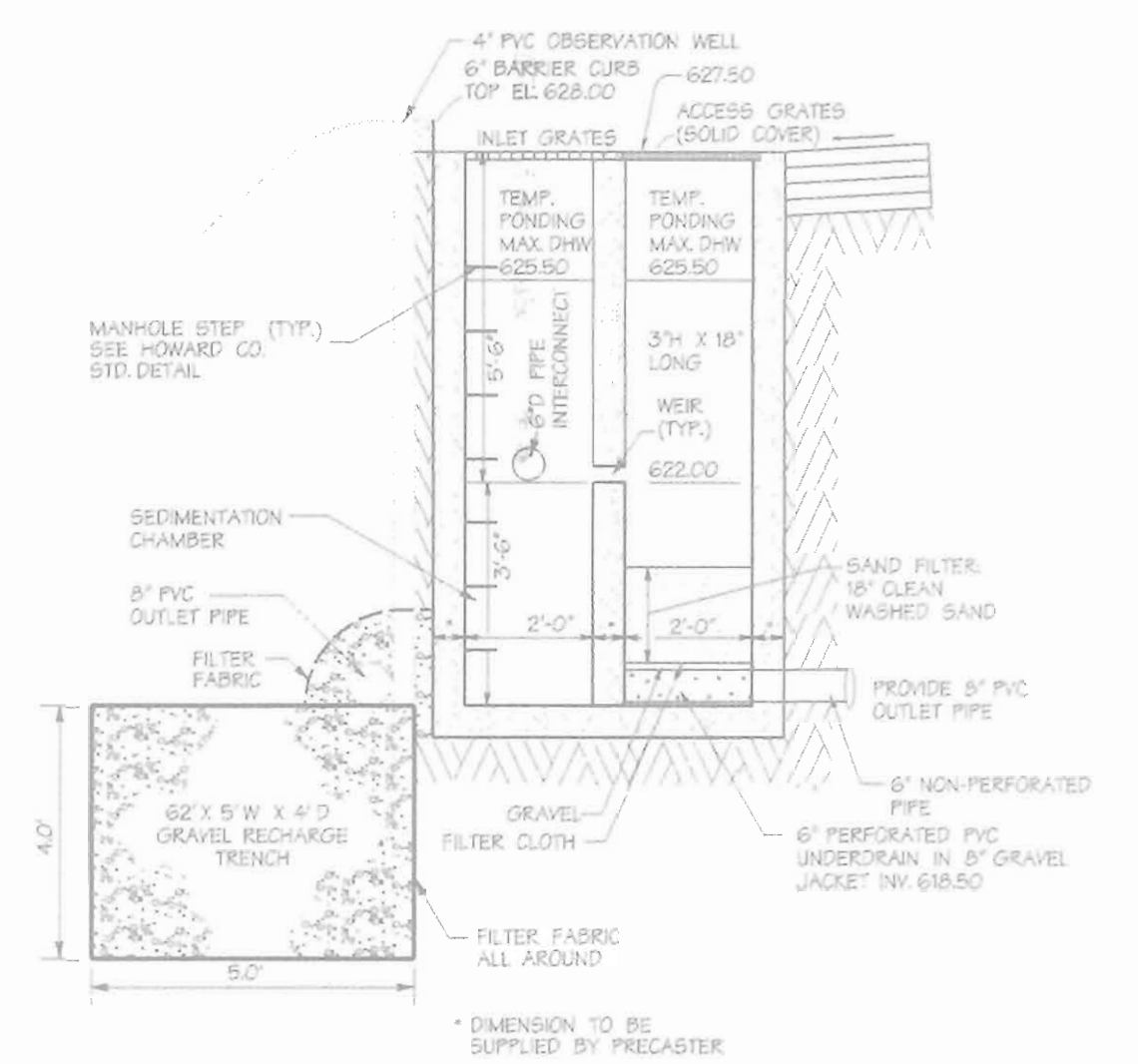
DATE: 10/19/05

PROFESSIONAL ENGR. NO. 13876

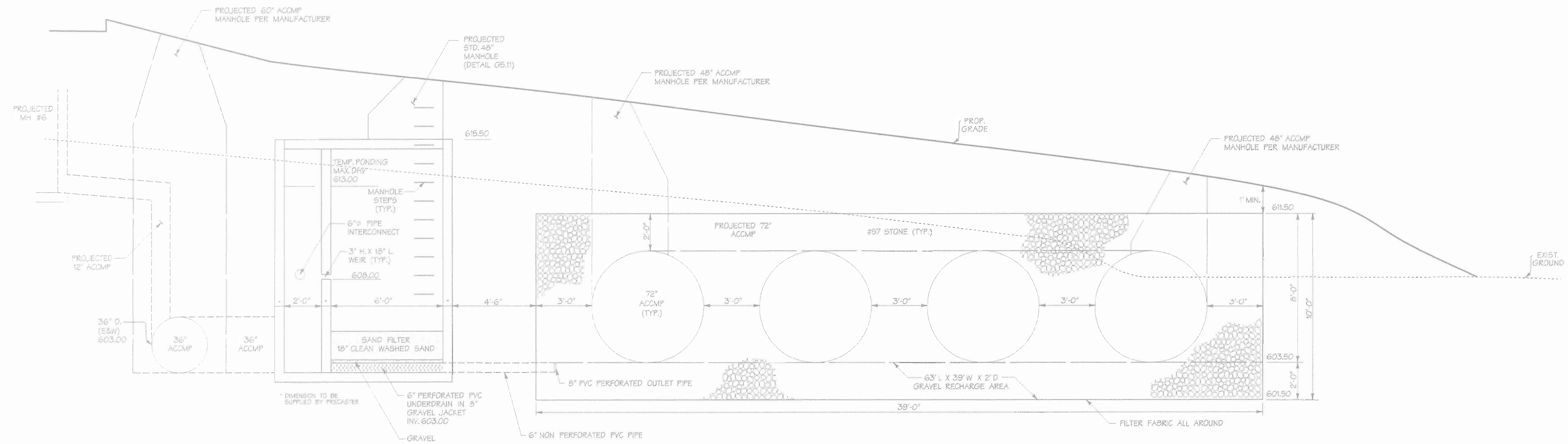




**SWM FACILITY 'A'**  
Scale: 1"=3'



**SWM FACILITY 'A'**  
**SECTION A-A**  
Scale: 1"=3'



**SWM FACILITY 'B'**  
**SECTION 'B - B'**  
Scale: 1"=3'

NOTE: ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT	
<i>Robert J. Wilson</i> COUNTY HEALTH OFFICER	12/21/05 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John H. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	12/20/05 DATE
<i>John H. ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT	1/4/06 DATE
<i>Robert K. ...</i> DIRECTOR	1/8/06 DATE

Date	No.	Revision Description

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10/19/05  
Date

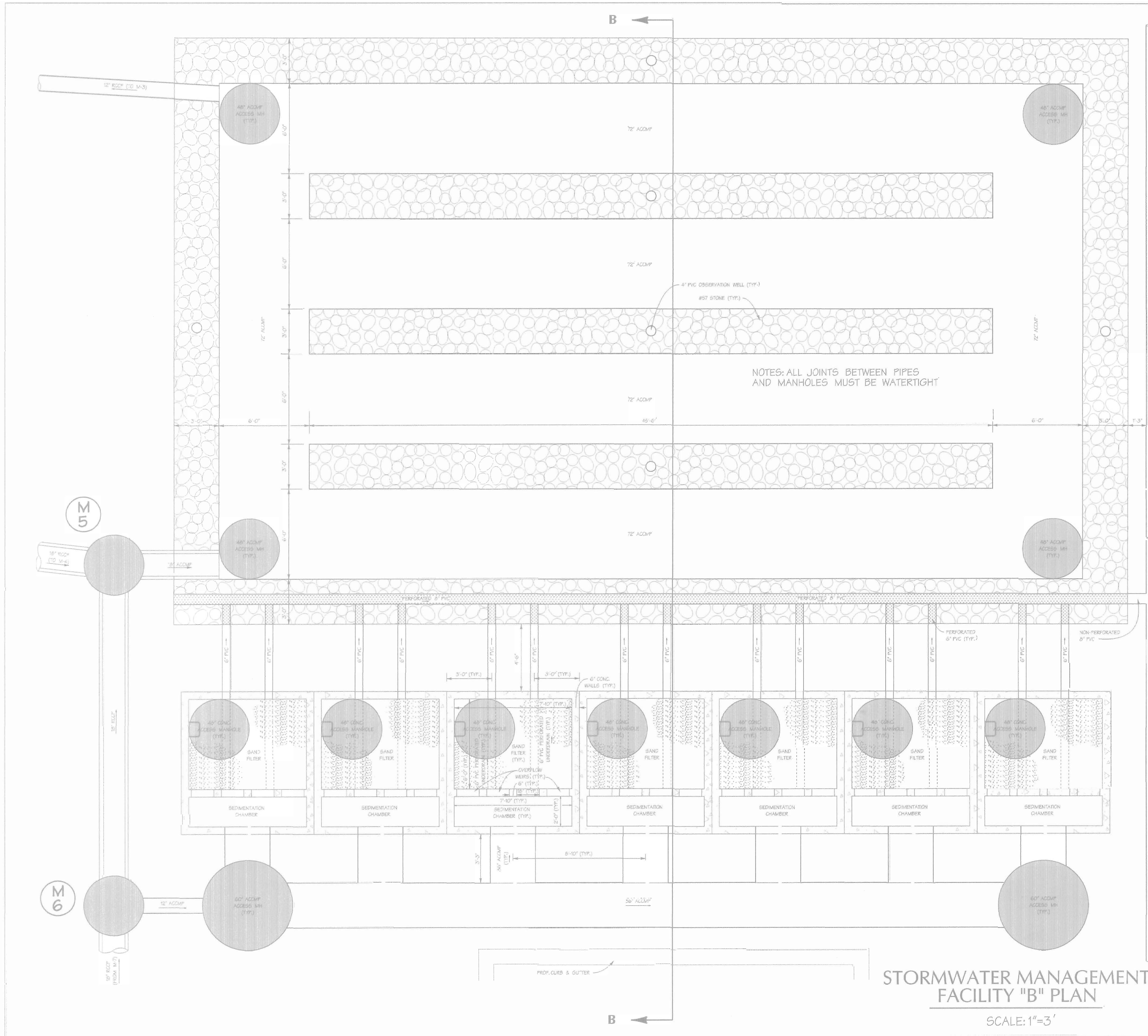
Professional Engr. No. 13876

<p>THESE PLANS HAVE BEEN PREPARED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL-SCALE CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.</p> <p>U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE: 10-13-05</p> <p>THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.</p> <p>APPROVED: HOWARD SOIL CONSERVATION DISTRICT</p>	<p><b>DEVELOPERS CERTIFICATE:</b></p> <p>I WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL EMPLOY 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. I ALSO AUTHORIZE PERSONS TO MAKE REVISIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>Don Paul Posten</i> SIGNATURE OF DEVELOPER 10-13-05 DATE</p> <p><i>Don Paul Posten</i> PRINT NAME BELOW SIGNATURE</p>	<p><b>ENGINEERS CERTIFICATE:</b></p> <p>I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRELIMINARY AND APPROXIMATE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER THAT HE/SHE MUST EMPLOY 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.</p> <p><i>Robert E. Knapp</i> SIGNATURE OF ENGINEER 13876 NO. REG. NO. 10/19/05 DATE</p>
--	---	---

SUBVISION NAME	SECTION AREA	DATE
17864	22	10/19/05
TITLE: <b>STORMWATER MANAGEMENT FACILITY 'A' PLAN AND SECTIONS</b>		
Des. By: CRW	Scale: AS SHOWN	Proj. No. 02136.00
Drn. By: WDE	Date: 10/28/05	
Chk. By: KRL	Approved	11 of 19

SDP-04+130





- NOTES:
1. 48" ACPMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
  2. 48" CONCRETE ACCESS MANHOLE SHALL BE PER HOWARD COUNTY DETAIL G-9-11.
  3. 60" ACPMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
  4. ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.

NOTES: ALL JOINTS BETWEEN PIPES AND MANHOLES MUST BE WATERTIGHT

**DEVELOPERS CERTIFICATE:**  
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY NECESSARY PERMITS INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGAINING THE PROJECT. I SHALL EMPLOY A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FLOOD CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FLOOD WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERKINS DWIGHT INSPECTORS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Don Paul Pistorio* 10-13-05  
 SIGNATURE OF DEVELOPER DATE  
 DON PAUL PISTORIO

**ENGINEERS CERTIFICATE:**  
 I HEREBY CERTIFY THAT THIS PLAN FOR FLOOD CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE CONDITIONS THAT WOULD BE NECESSARY TO ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FLOOD CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FLOOD WITHIN 30 DAYS OF COMPLETION.

*Kevin R. Kinsey* 13876 10/17/05  
 SIGNATURE OF ENGINEER REG. NO. DATE  
 KEVIN R. KINSEY

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

*Robert A. Wade* 12/2/05  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*John H. ...* 12/22/05  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Guido Hamst* 1/4/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*David ...* 1/8/06  
 DIRECTOR DATE

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 Towson, Maryland 21286  
 (410) 296-3333  
 Fax 296-4705

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

PROJECT NAME: HOWARD	SECTION: 10A	NO.:	TRACEL #:
PLAT #:	TAX LOT: 15	BLK: 22	BLK: 22
OWNER: 17864	OWNER: 17864	OWNER: 17864	OWNER: 17864
OWNER: 17864	OWNER: 17864	OWNER: 17864	OWNER: 17864

TITLE: **STORMWATER MANAGEMENT FACILITY "B" PLAN**

Des. By: KAD	Scale: 1"=3'	Proj. No.: 02136.00
Dim. By: -A-	Date: 10/28/05	
Chk. By: KDK	Approved:	12 of 19

10/19/05  
 Date

**STATE OF MARYLAND**  
 PROFESSIONAL ENGINEER

Professional Engr. No. 13876

**STORMWATER MANAGEMENT FACILITY "B" PLAN**  
 SCALE: 1"=3'



STORMWATER MANAGEMENT FACILITY  
GENERAL CONSTRUCTION SPECIFICATIONS

1. GENERAL  
All stormwater management facilities shall be constructed in accordance with Howard County's Standard Specifications and Details for Construction (2000).

2. SITE PROTECTION  
Underground facilities shall not be placed in service until all of the contributing drainage area has been stabilized, inspected and approved by the responsible representative of the developer's engineer.

Appropriate approved sediment control measures shall be strictly adhered to and maintained at all times to prevent sediment laden runoff from contaminating the facility.

3. EXCAVATION  
Except as noted below, the facility shall be excavated to the plan dimensions. Excavated materials shall be placed at least 10 feet from the facility in a manner which will prevent backfilling, cave-in, or sediment transport into the excavation. Large tree roots shall be trimmed flush with the trench walls. Any voids created during excavation shall be filled with natural soils at the most convenient time during construction. The slab walls of the trench shall be roughened where abrasion and sealed by excavation equipment.

4. SITE PREPARATION  
Areas designated for borrow areas, water quality, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other obstructions shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

All cleared and grubbed material shall be disposed of outside and below the limits of the facility as directed by the owner or his representative.

5. 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.

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.

COMPACTATION: The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be covered 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 so wet that water can be squeezed out.

All compaction is to be not less than 95 percent of the maximum dry density as determined by AASHTO Specification T-99 (Standard Proctor) with a moisture content within +/- 2 percent of 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 compaction.

6. STRUCTURAL BACKFILL AROUND PIPES  
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 4 inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than 4 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 inches or greater over the structure or pipe.

7. REMOVAL AND REPLACEMENT OF DEFECTIVE FILL  
Fill placed at densities lower than specified minimum density or at moisture contents outside the specified acceptable range of moisture content or otherwise not conforming to the requirements of the specifications shall be removed to meet the requirements or removed and replaced by acceptable fill. The bottoms of such excavations shall be finished flat or gently curving and at the sides of such excavations the adjacent sound fill shall be trimmed to a slope not steeper than 3 feet horizontal to 1 foot vertical extending from the bottom of the excavation to the fill surface.

8. PIPE CONDUITS  
All pipes shall be circular in cross section. Perforations are to be uniformly spaced around the full periphery of the pipe.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1795 or ASTM D-2241 Corrugated High Density Polyethylene (HDPE) Pipes, couplings and fittings shall conform to the following: 4", 10" inch pipe shall meet the requirements of AASHTO M252 Type B, and 12" through 48" shall meet the requirements of AASHTO M294 Type 5.

2. Install and backfill per manufacturer's recommendation.

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

9. CONCRETE  
a. Cast-in-place concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Sections 414 and 902.1x No. 3.

b. Supply mixture for approval prior to application. Contractor shall supply load and mix tickets for each truckload. No partial field mixes shall be allowed.

c. Concrete (pre-cast) - Per pre-cast manufacturer specification. Provide design drawings, scaled and approved by a professional structural engineer licensed in the State of Maryland.

10. REINFORCING STEEL  
Reinforcing steel shall conform to ASTM A-615, Grade 60, where not indicated, per lap splices shall be in accordance with AASHTO specifications. The minimum concrete cover shall be 2 inches unless otherwise noted.

a. Non-Rebar Steel shall conform to ASTM A-36. Structural Steel shall be hot-dipped galvanized ASTM-A-123.

11. CARE OF WATER DURING CONSTRUCTION  
All work on permanent structures shall be done free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the area 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 purpose, 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 structure 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.

12. STABILIZATION  
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the facility, spot and borrow areas, and areas shall be stabilized in a maximum loose lift thickness of 12 inches and compacted using plate compactors. The stone shall conform to AASHTO M-43, size No. 6, 1, or 3 according to plans or as directed by the owner.

13. EROSION AND SEDIMENT CONTROL  
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.

All disturbed areas shall be controlled by an Erosion and Sediment Control Plan which has been approved by the Howard County Soil Conservation District (H.C.S.C.D.).

14. SEEDING  
Seeding shall conform to the approved Erosion and Sediment Control Plan seeding specifications.

15. FILTER CLOTH  
0.075" thick equivalent opening size of #20 sieve. Must maintain 125 gpm per sq. ft. flow rate, ASTM-D-4833 (puncture strength - 125 lb.), ASTM-D-4632 (tensile strength - 300 lb.).

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-1, Job #: 04117A

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown moist medium stiff sandy silt	0.0							
9'-3"	ML	2.5							No groundwater encountered while drilling
8'-7"	Brown colored moist to wet medium stiff micaceous silt with trace of sand	2.5							
8'-7"	ML	2.5							
8'-8"		2.5							Caved in at 8.0' at Completion
8'-7"		2.5							
8'-7"		2.5							
7'-8-12"		15.0							
20.0	Bottom of Test Hole at 16.0'								

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D-DISINTEGRATED	AT COMPLETION	HSA-HOLLOW STEM AUGERS
PI-PRESSED SHIELD TUBE	U-UNDISTURBED	24 Hrs. Dry	DC-CONT. FLIGHT AUGERS
CA-CONTINUOUS FLIGHT AUGER	L-LOST	FT	DC-DRAWING CASING
HC-ROCK CORE		FT	MD-MUD DRILLING

STANDARD PENETRATION TEST-DRYING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-2, Job #: 04117B

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown, moist, loamy, sandy silt with mica and traces of clay	2.0							
10'	ML	2.0							No groundwater encountered while drilling
9'-3"	Brown, orange, moist, medium dense sandy silt with mica	2.0							
9'-3"	ML	2.0							(Installed 5.0' in-situ pipe)
8'-3"		2.0							
8'-3"		2.0							Caved in at 7.0' at Completion
8'-3-4.5"		2.0							
10.0	Bottom of Test Hole at 10.0'								

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D-DISINTEGRATED	AT COMPLETION	HSA-HOLLOW STEM AUGERS
PI-PRESSED SHIELD TUBE	U-UNDISTURBED	24 Hrs. Dry	DC-CONT. FLIGHT AUGERS
CA-CONTINUOUS FLIGHT AUGER	L-LOST	FT	DC-DRAWING CASING
HC-ROCK CORE		FT	MD-MUD DRILLING

STANDARD PENETRATION TEST-DRYING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

16. STONE AGGREGATE  
1. Stone Aggregate Placement and Compaction - The stone aggregate shall be placed in a maximum loose lift thickness of 12 inches and compacted using plate compactors. The stone shall conform to AASHTO M-43, size No. 6, 1, or 3 according to plans or as directed by the owner.
2. Overlapping and Covering - Following the stone aggregate placement, the filter fabric shall be folded over the stone aggregate to form a 6-inch minimum longitudinal lap. The desired fill soil or stone aggregate shall be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling. Alternative cover of stone is 6" or 8" gravel.
3. Contamination - Care shall be exercised to prevent natural or fill soils from intermingling with the stone aggregate. All contaminated stone aggregate shall be removed and replaced with uncontaminated stone aggregate.
17. SAND - Clean AASHTO - M-6 or ASTM C-33 Concrete sand (size 0.075" to 0.04")
18. UNDERDRAIN GRAVEL AASHTO - M-43 (0.375" to 0.75")
19. UNDERDRAIN PIPING  
4"-6" rigid schedule 40 PVC or SDR35, 3/8" perf. @ 6" on center, 4' holes per row minimum of 3" of gravel over pipe, not necessary under-rain pipe structure.  
F-750, type PS 28 or AASHTO-M-27B.
- Structure Type - Gravel Recharge Trench, perimeter sand filter, Infiltration Trench and pipe storage.  
Structure Classification - N/A  
Structure Location - Urban  
Total Site Area (Ac) - 2.41  
Water Shed - Patapsco River  
Water Shed Area to Facility (Ac) - 1.66  
Stream Classification - I  
Water Quality Storage Provided - perimeter sand filter

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-3, Job #: 04117A

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown multi-colored moist to wet soft to medium stiff micaceous silt with trace of sand	0.0							
6'-6-10"	ML	2.5							No groundwater encountered while drilling
5'-6-7"		2.5							
4'-5-3"		2.5							Caved in at 3.0' at Completion
5'-7-0"		2.5							
5'-7-0"		2.5							
22-23-23"		15.0							
20.0	Bottom of Test Hole at 15.0'								

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D-DISINTEGRATED	AT COMPLETION	HSA-HOLLOW STEM AUGERS
PI-PRESSED SHIELD TUBE	U-UNDISTURBED	24 Hrs. Dry	DC-CONT. FLIGHT AUGERS
CA-CONTINUOUS FLIGHT AUGER	L-LOST	FT	DC-DRAWING CASING
HC-ROCK CORE		FT	MD-MUD DRILLING

STANDARD PENETRATION TEST-DRYING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-4, Job #: 04117B

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown, orange, moist, loamy sandy silt with mica traces of clay	2.0							
10'	ML	2.0							No groundwater encountered while drilling
9'-3"	Brown, orange, moist, medium dense sandy silt with mica	2.0							
9'-3"	ML	2.0							
8'-3"		2.0							Caved in at 8.5' at Completion
8'-14-22-25"		19.0							
20.0	Bottom of Test Hole at 10.0'								

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D-DISINTEGRATED	AT COMPLETION	HSA-HOLLOW STEM AUGERS
PI-PRESSED SHIELD TUBE	U-UNDISTURBED	24 Hrs. Dry	DC-CONT. FLIGHT AUGERS
CA-CONTINUOUS FLIGHT AUGER	L-LOST	FT	DC-DRAWING CASING
HC-ROCK CORE		FT	MD-MUD DRILLING

STANDARD PENETRATION TEST-DRYING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

20. UNDERDRAIN PIPING  
4"-6" rigid schedule 40 PVC or SDR35, 3/8" perf. @ 6" on center, 4' holes per row minimum of 3" of gravel over pipe, not necessary under-rain pipe structure.  
F-750, type PS 28 or AASHTO-M-27B.
- Structure Type - Gravel Recharge Trench, perimeter sand filter, Infiltration Trench and pipe storage.  
Structure Classification - N/A  
Structure Location - Urban  
Total Site Area (Ac) - 2.41  
Water Shed - Patapsco River  
Water Shed Area to Facility (Ac) - 1.66  
Stream Classification - I  
Water Quality Storage Provided - perimeter sand filter

UNDERGROUND SWM FACILITY MAINTENANCE SCHEDULE  
The facility shall be inspected twice annually. The underground facility owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the facility and the continued operation, surveillance, inspection, and maintenance thereof. All appearances shall be kept free of trash.

Note: This underground stormwater management facility is a confined space and access to the facility will be controlled by OSHA requirements.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-5, Job #: 04117A

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown moist soft sand silt	0.0							
6'-6-13"	ML	2.5							No groundwater encountered while drilling
6'-6-10"		2.5							Caved in at 3.0' at Completion
6'-6-10"		2.5							
20.0	Bottom of Test Hole at 5.0'								

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D-DISINTEGRATED	AT COMPLETION	HSA-HOLLOW STEM AUGERS
PI-PRESSED SHIELD TUBE	U-UNDISTURBED	24 Hrs. Dry	DC-CONT. FLIGHT AUGERS
CA-CONTINUOUS FLIGHT AUGER	L-LOST	FT	DC-DRAWING CASING
HC-ROCK CORE		FT	MD-MUD DRILLING

STANDARD PENETRATION TEST-DRYING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-7, Job #: 04117A

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown, orange, moist, medium dense sandy silt with mica, traces of clay	1.5							
10'	ML	1.5							No groundwater encountered while drilling
9'-3"	Brown, orange, moist, medium dense sandy silt with mica	1.5							
9'-3"	ML	1.5							
8'-3"		1.5							Caved in at 4.8' at Completion
8'-3-11"		1.5							
8'-3-10"		1.5							
20.0	Bottom of Test Hole at 16.0'								

SAMPLER TYPE	SAMPLE CONDITIONS	GROUND WATER DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED	D-DISINTEGRATED	AT COMPLETION	HSA-HOLLOW STEM AUGERS
PI-PRESSED SHIELD TUBE	U-UNDISTURBED	24 Hrs. Dry	DC-CONT. FLIGHT AUGERS
CA-CONTINUOUS FLIGHT AUGER	L-LOST	FT	DC-DRAWING CASING
HC-ROCK CORE		FT	MD-MUD DRILLING

STANDARD PENETRATION TEST-DRYING 2" OD SAMPLER 1" WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

- GENERAL NOTES:  
1. Unless otherwise noted, all construction and workmanship shall be in accordance with:  
A. Howard County Department of Public Works Standard Specifications and Details for Construction  
B. Maryland Soil Conservation Service Standards and Specifications  
C. Maryland Department of Transportation State Highway Administration, January, 2001 Standard Specifications for Construction and Materials.  
2. This site lies within Patapsco River watershed.  
3. Stormwater management is approved under DRI No. 105-B-04.  
4. This facility is private and shall be maintained by the developer.  
5. All construction must be observed by the as-built engineer.  
6. A Maryland State Water Resource Permit is not required for this project.  
7. A Corps of Engineers Wetland Permit is not required for this project.

10/17/05  
Date

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 1

Project Name: Ten Oaks Commercial, Location: Howard County, Maryland, Boring Number: B-4, Job #: 04117B

ELEV.	SOIL DESCRIPTION	STRK DEPTH	SCALE	CON	SAMPLE BLOWS	NO	REC	BORING & SAMPLING	
								DEPTH	NOTES
12'	Topsoil	0.0							
10'	Brown, orange, moist, medium dense sandy silt with mica, traces of clay	1.5							
10'	ML	1.5							No groundwater encountered while drilling
9'-3"	Brown, orange, moist, medium dense sandy silt with mica	1.5							
9'-3"	ML	1.5							(Installed 5.0' in-situ pipe)
8'-3"		1.5							
8'-3"		1.5							Caved in at 7.0' at



TRIADELPHIA ROAD  
MAJOR COLLECTOR

JR ENTERPRISES  
P.105  
1068/141

HOWARD COUNTY TO BE RESPONSIBLE  
FOR RESTRIFFING FROM TRAFFIC CIRCLE TO  
& STA. 9+92+ CONTACT PARRIS ZIRKENBACH  
(410-313-5752) TO COORDINATE

AMOS MEDICAL LLP  
P.51  
4376/237

DAVID W. HARRIG &  
JEFFREY HARRIG ET AL J/T  
P.368  
4270/543

HELEN FOULADI &  
ARDAYAN SEMNANI-FOULADI  
P.364  
56/71439

ROYAL FARMS STORE/  
GAS STATION  
TRIADELPHIA ROAD AT  
TEN OAKS ROAD - GLENELG  
SDP-97-52

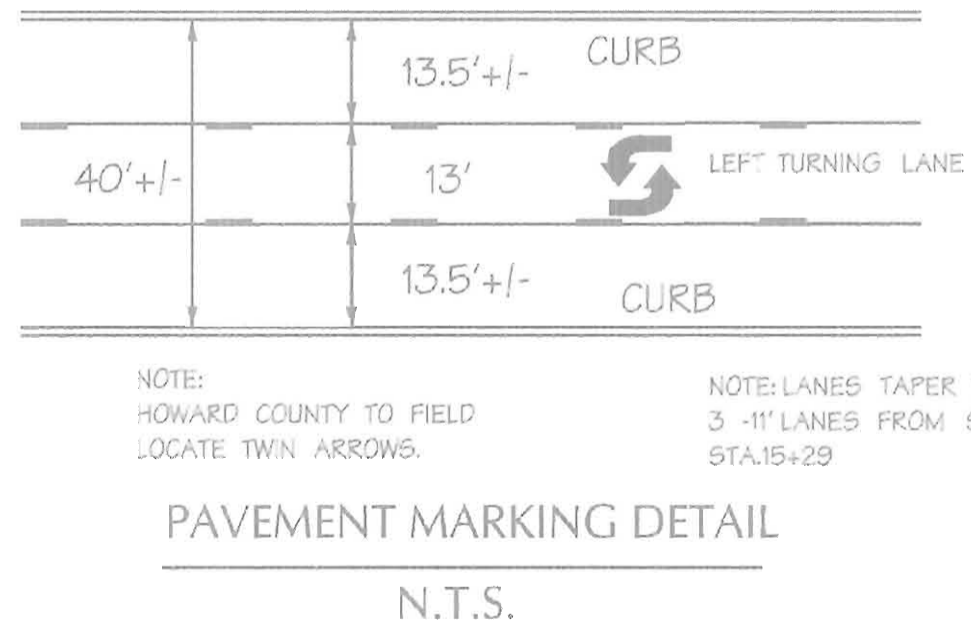
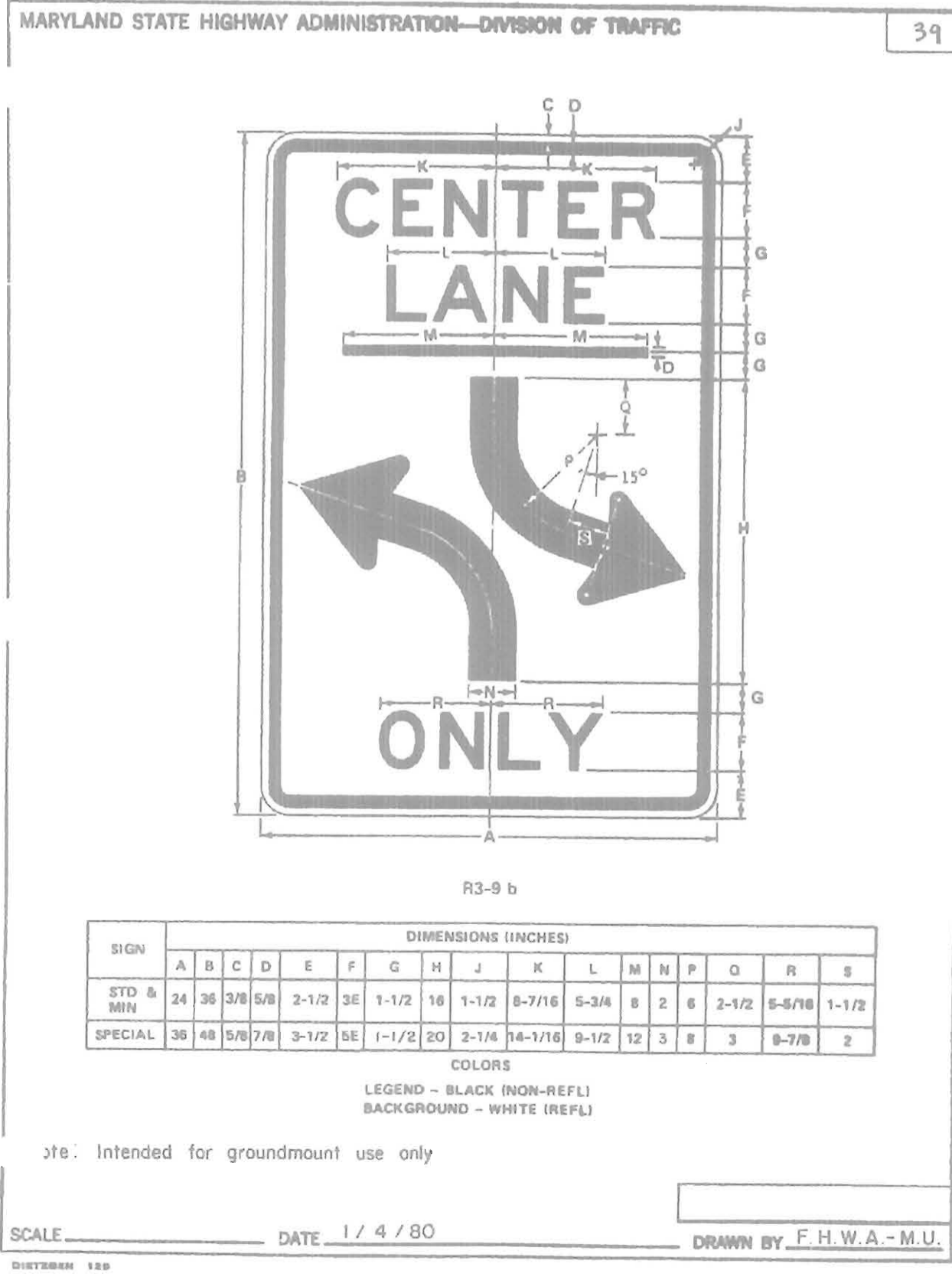
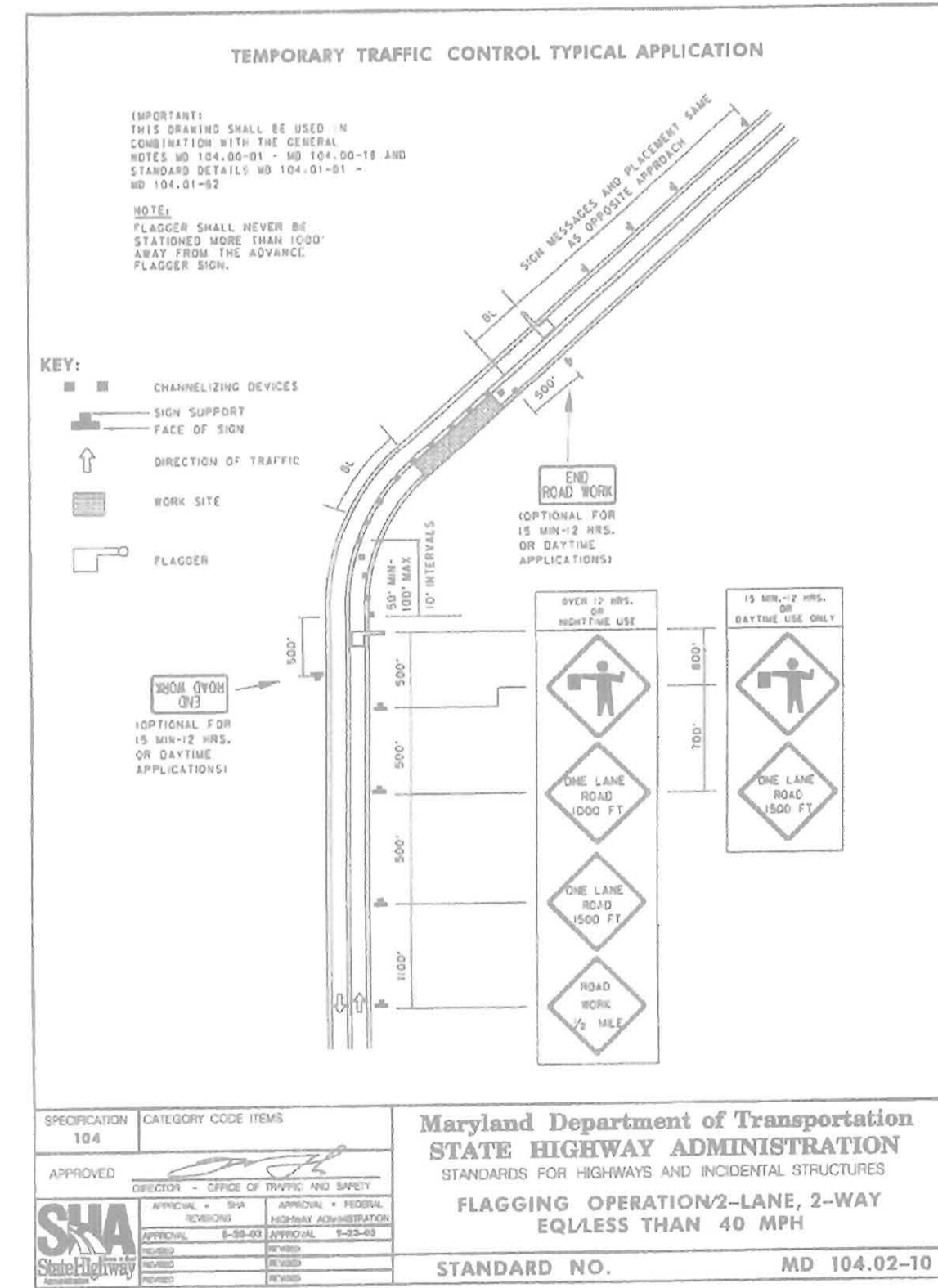
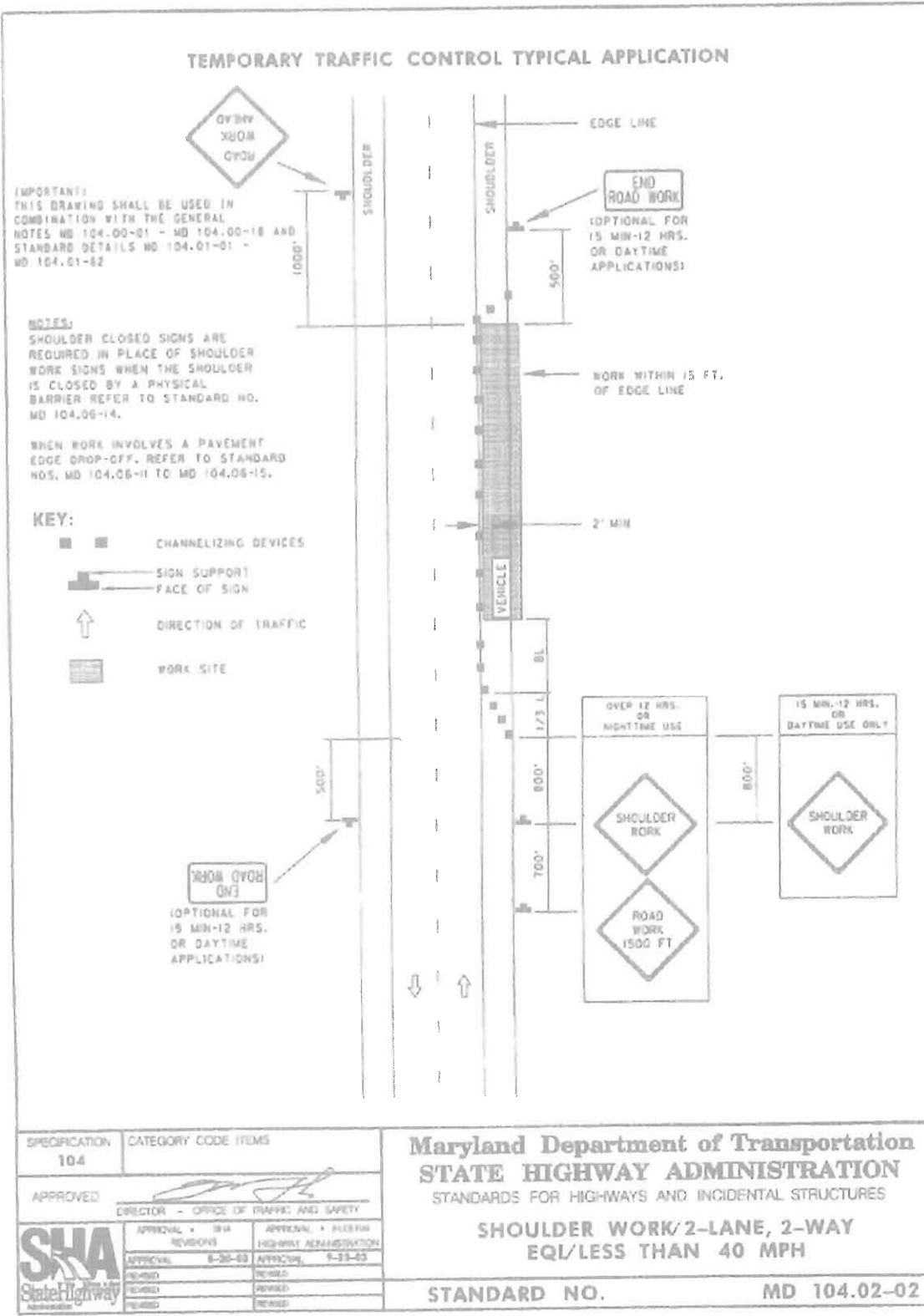
PARCEL A  
ZONED B-2  
PLAT NO. 15543  
F-00-001

PARCEL B  
PLAT NO. 15543

MARYLAND ROUTE 32  
VARIABLE R/W  
(PRINCIPAL ARTERIAL)  
180' +/-

MD STATE HIGHWAY ADMINISTRATION  
R/W PLAT 23688  
352/32  
ZONED RR-DE0

PAVEMENT MARKING LEGEND  
A - 5 IN. SOLID DOUBLE YELLOW PAVEMENT MARKING LINE



APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

Robert J. Wilton  
COUNTY HEALTH OFFICER  
DATE: 12/16/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature]  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 12/15/05

[Signature]  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 1/4/06

[Signature]  
DIRECTOR  
DATE: 1/3/06

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
DeR-McCune-Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3429  
Fax 296-4705

A Team of Land Planners,  
Landscape Architects,  
Civil Engineers,  
Engineers, Surveyors &  
Environmental Professionals

10/19/05  
Date

Professional Engr. No. 13876

17864

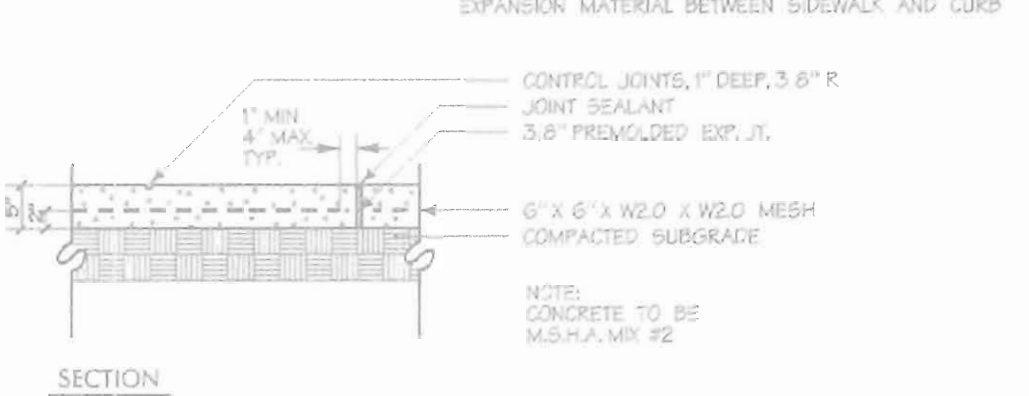
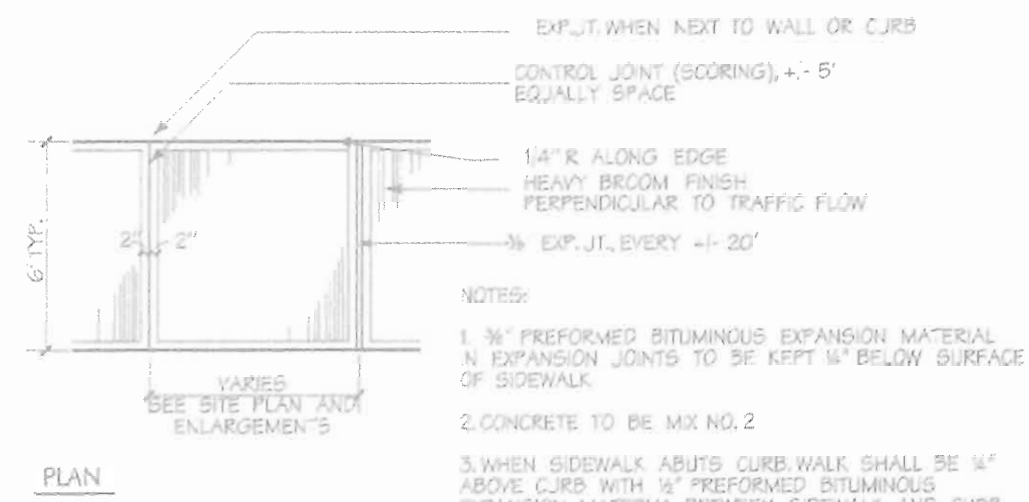
TITLE: TEN OAKS ROAD PAVEMENT MARKING AND MAINTENANCE OF TRAFFIC PLAN

Des. By: KAD Scale: 1" = 50' Proj. No. 02136.00  
Dwn. By: Date: 10/28/05  
Chk. By: [Signature] Approved: [Signature]

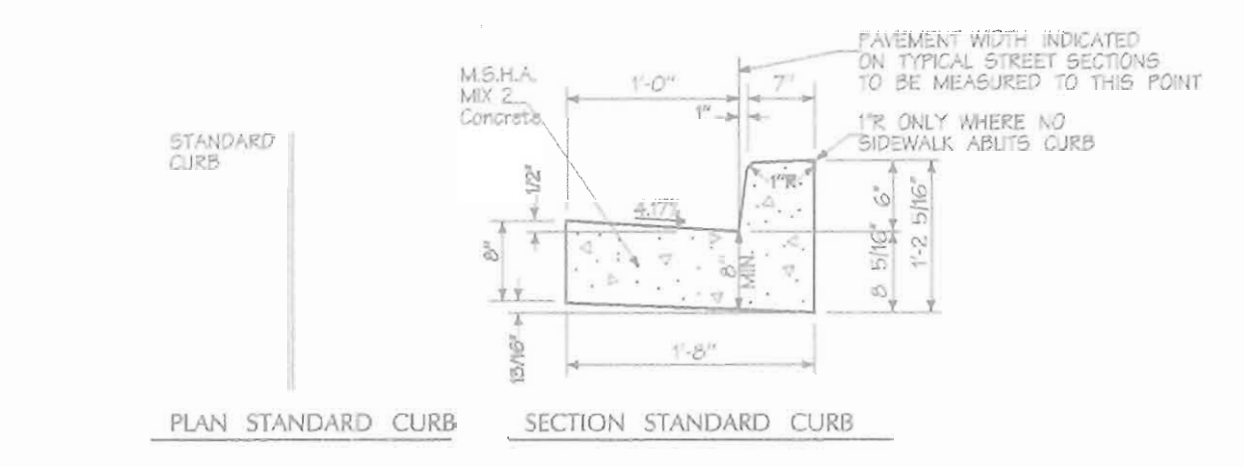
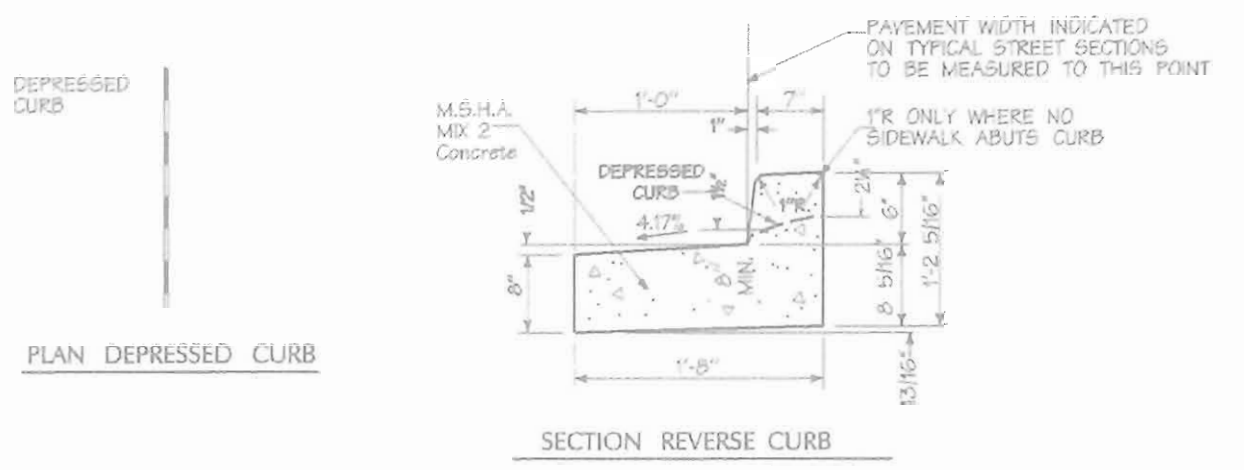
14 of 19

SDP-04-130





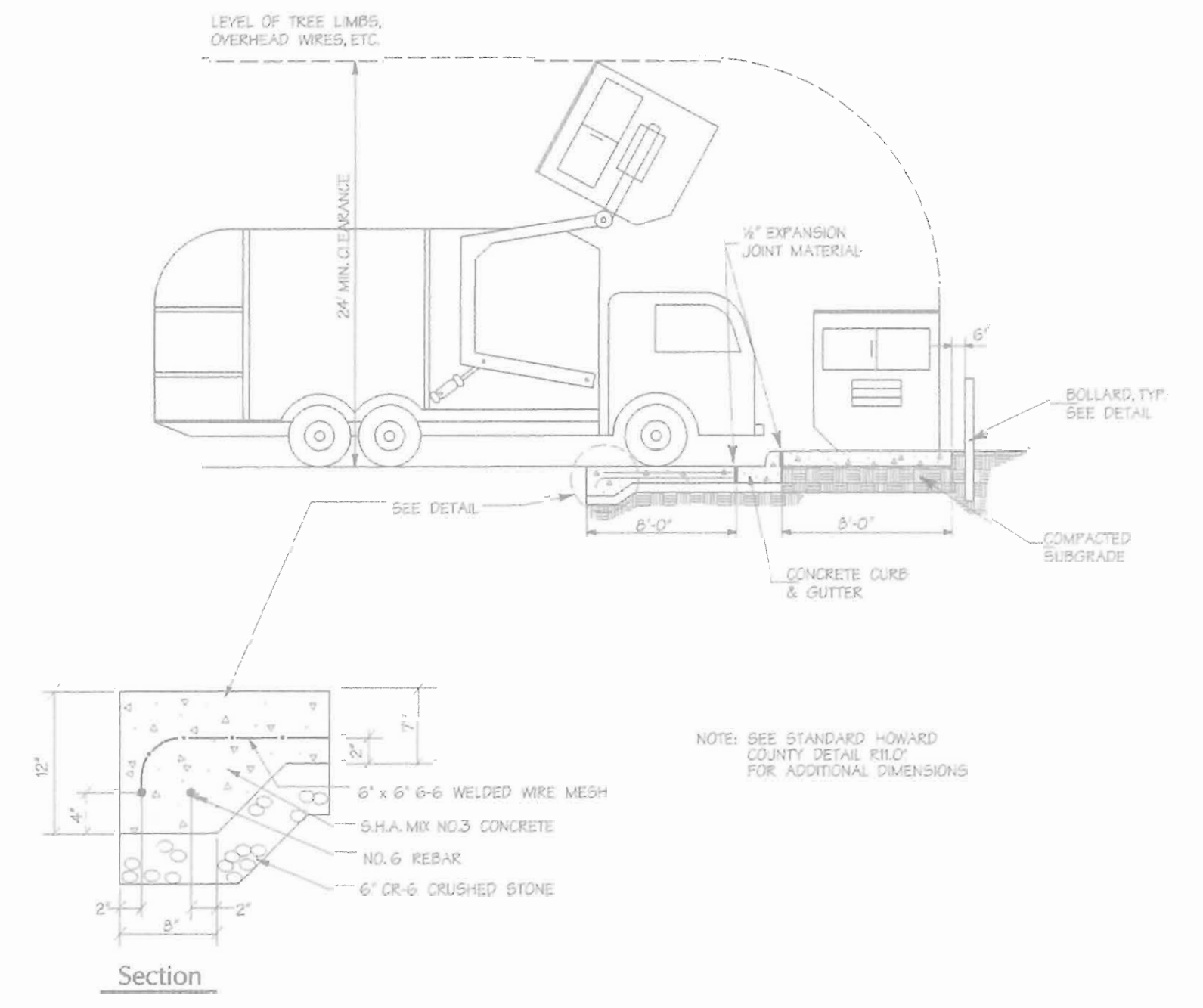
**Concrete Walk**  
Not To Scale



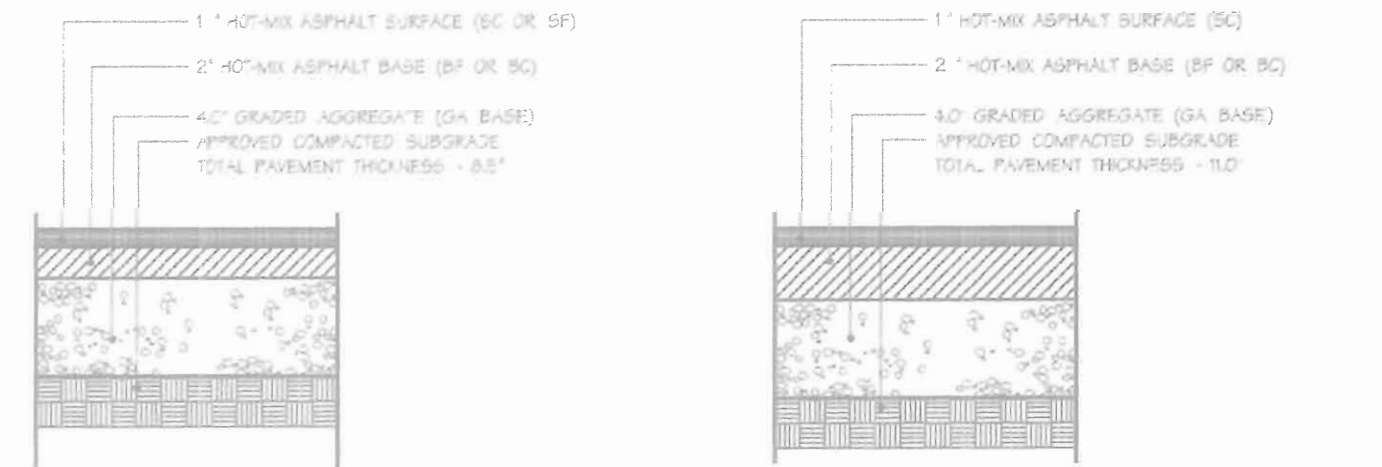
**6" Combination Curb & Gutter**  
Not To Scale

- GENERAL NOTES:**
- The Contractor shall be governed by the standards and requirements of the following publications:
    - Manual on Uniform Traffic Control Devices (MUTCD), 1988 Edition and subsequent revisions.
    - AASHTO - Specifications for the Design and Construction of Structural Supports for Highway Signs, April 1978 Edition.
    - AASHTO - Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, April 1985 Edition.
  - Standard sign panel layouts shall be based on the MUTCD.
  - Signs shall be located as shown on the plans. Any required changes in the location of signs necessary due to field conditions shall have the prior approval of the Engineer.
  - It shall be the responsibility of the Contractor to locate and protect all existing facilities that may be affected by this work.
  - All new signs shown on this plan shall have Non-Reflective (Black Copy) or High Intensity Reflective Sheeting (All Other Colors) background and copy. Reflective Sheeting shall be Type III-A Encapsulated Lens Reflective Element Material.
  - All new sheet aluminum signs shall have Non-Demountable Copy.
  - The following minimum thickness shall be used for the appropriate size of Sheet aluminum sign blanks:
 

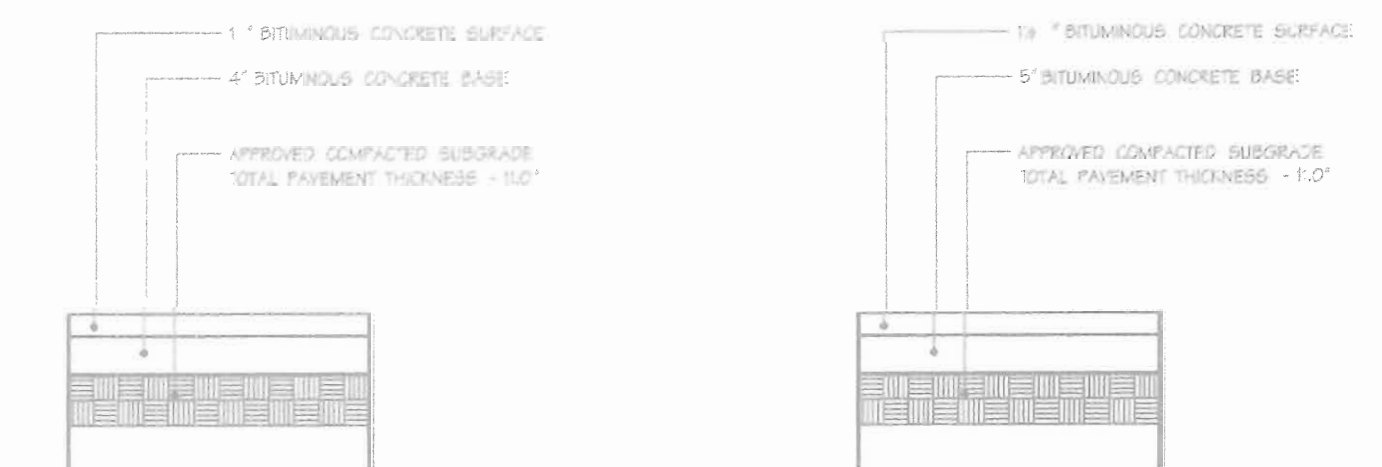
Longest Dimension (inches) - Minimum Thickness	
Up to 24"	0.040"
25 to 36"	0.050"
37 to 48"	0.060"
Over 48"	0.070"
  - All traffic control signs shall be mounted on Howard County standard posts. A single post shall be provided for signs with an area of 9.0 square feet or less. For signs with an area of greater than 9.0 square feet, 20 posts shall be provided. Sign posts shall be installed in the ground to a minimum depth of 3.0 feet and the sign posts shall extend to the top of the sign panel.
  - Signs shall be mounted such that the distance to the bottom edge of the sign panel is a minimum of six (6) feet above finished grade.



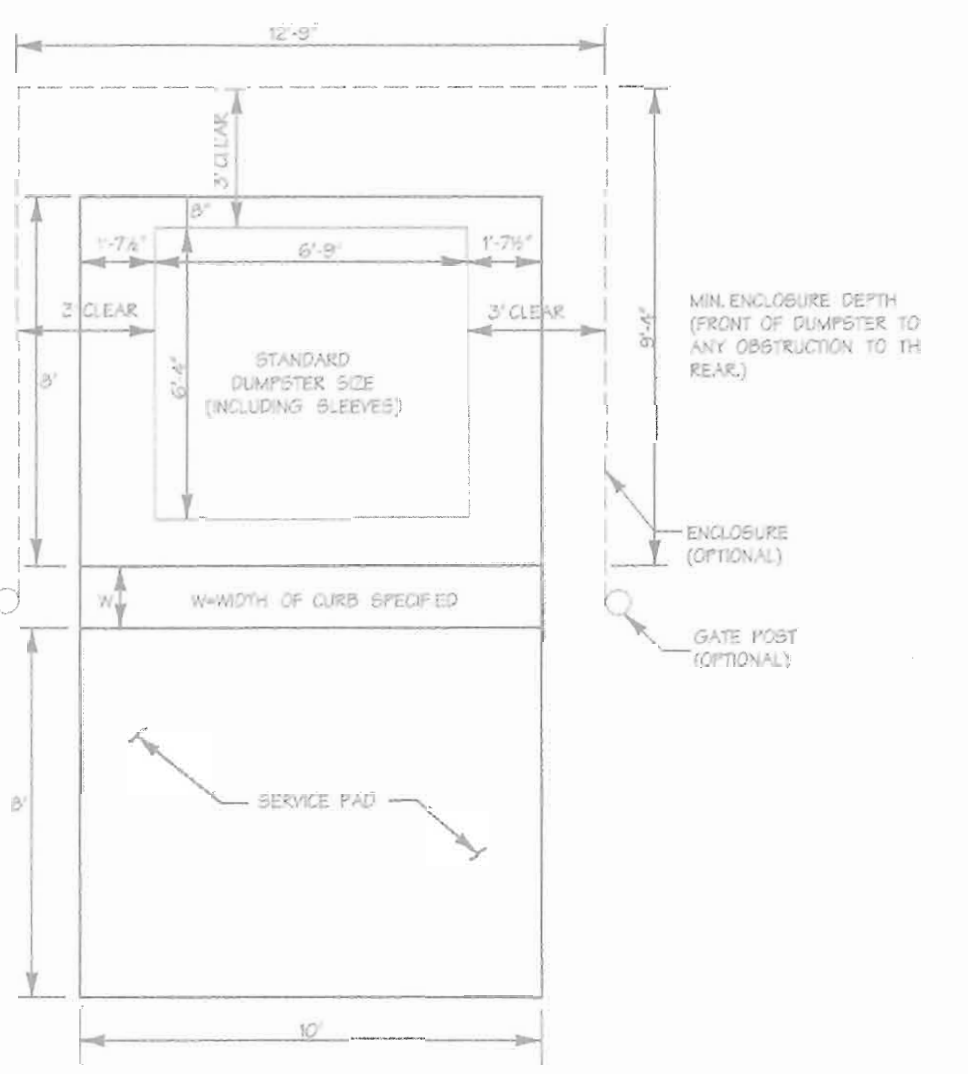
**Service Pad & Dumpster Bin**  
Not To Scale



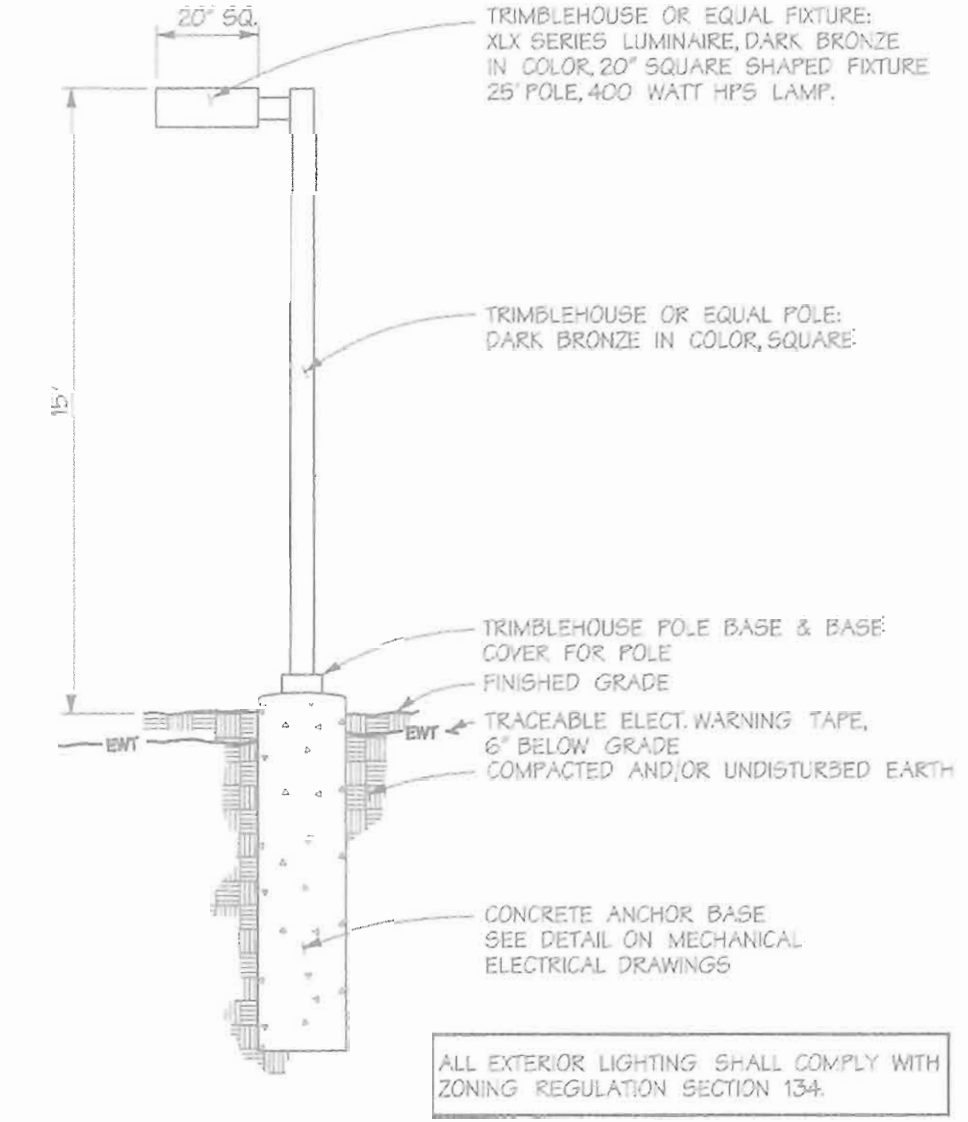
**ALTERNATE 1**  
P-1 LIGHT DUTY PAVING FOR PARKING BAYS



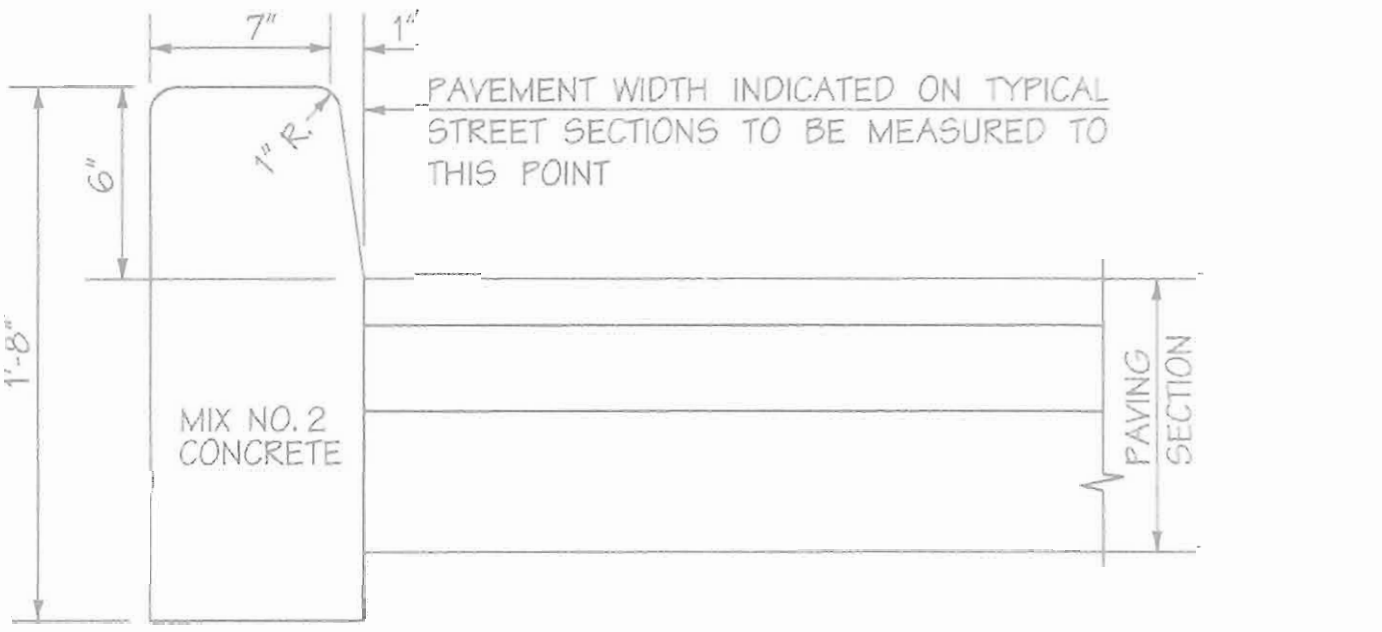
**ALTERNATE 2**  
P-2 BITUMINOUS FOR PARKING BAYS



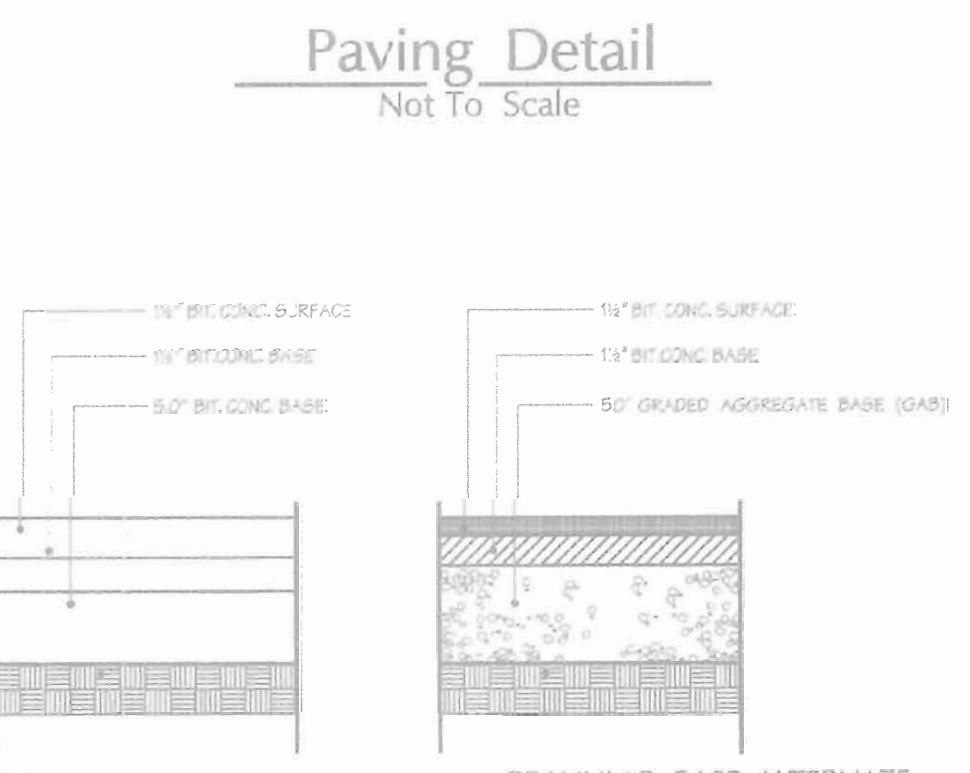
**Dumpster Enclosure**  
Not To Scale



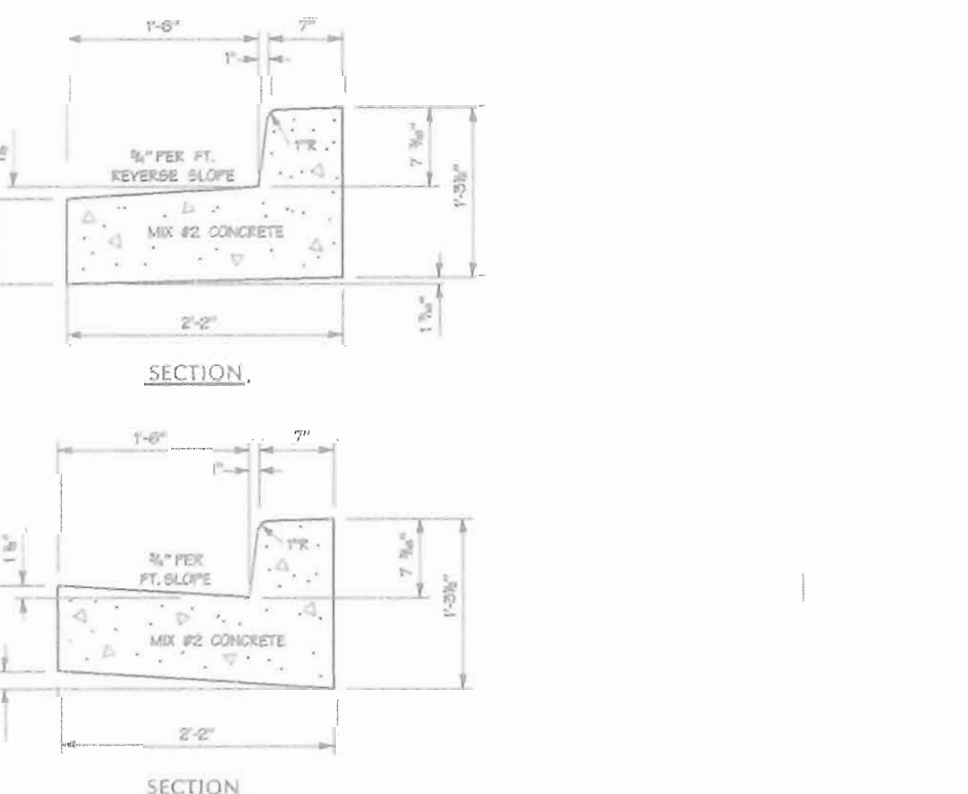
**Sharp Cut off Area Light**  
Not To Scale



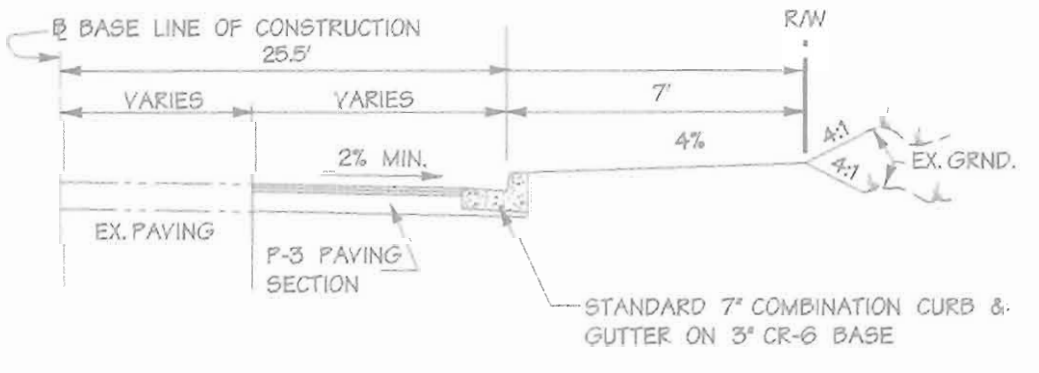
**Standard Barrier Curb**  
Not To Scale



**P-3 Paving Detail**  
Not To Scale



**7" Combination Curb and Gutter**  
Not To Scale



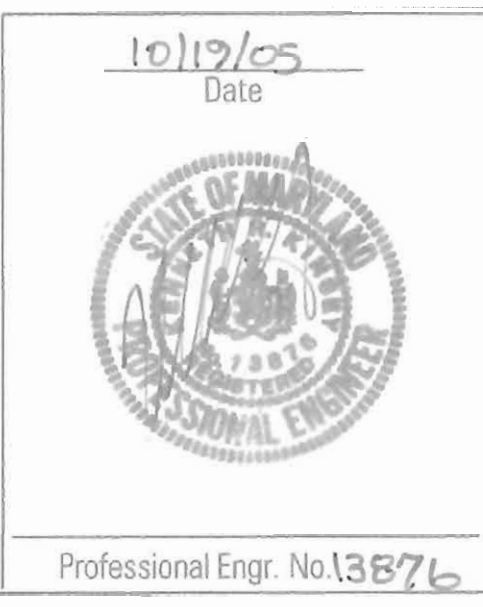
**TEN OAKS ROAD WIDENING DETAIL**  
Not To Scale

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 Robert J. Wilson, COUNTY HEALTH OFFICER, 12/21/05  
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief, Development Engineering Division, 12/20/05  
 Chief, Division of Land Development, 1/1/06  
 Director, 1/5/10

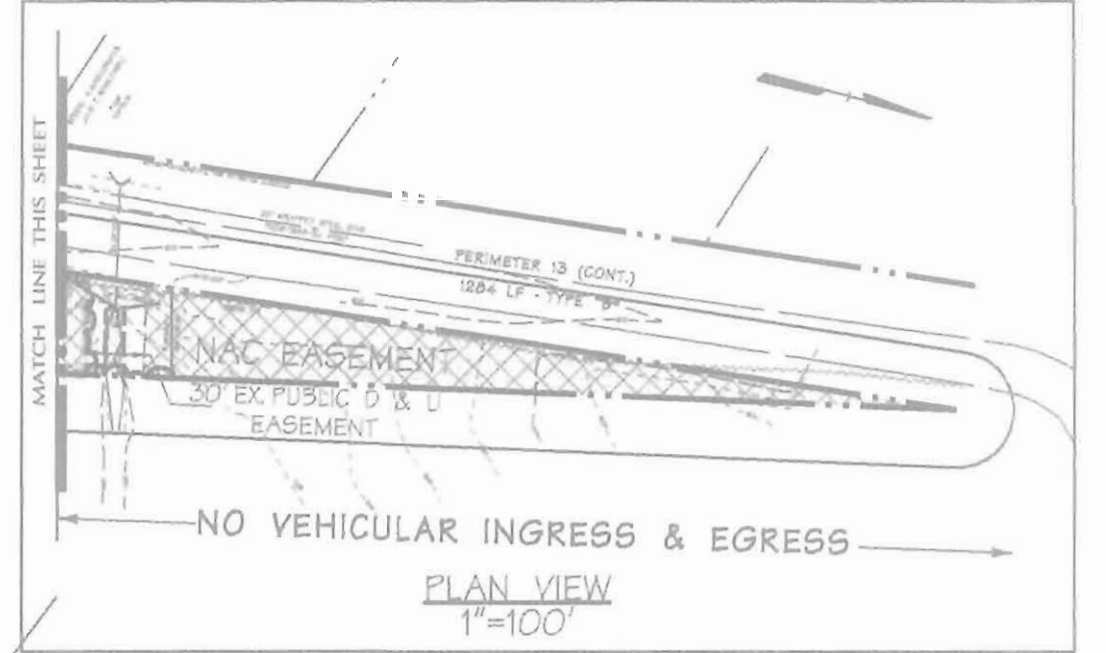
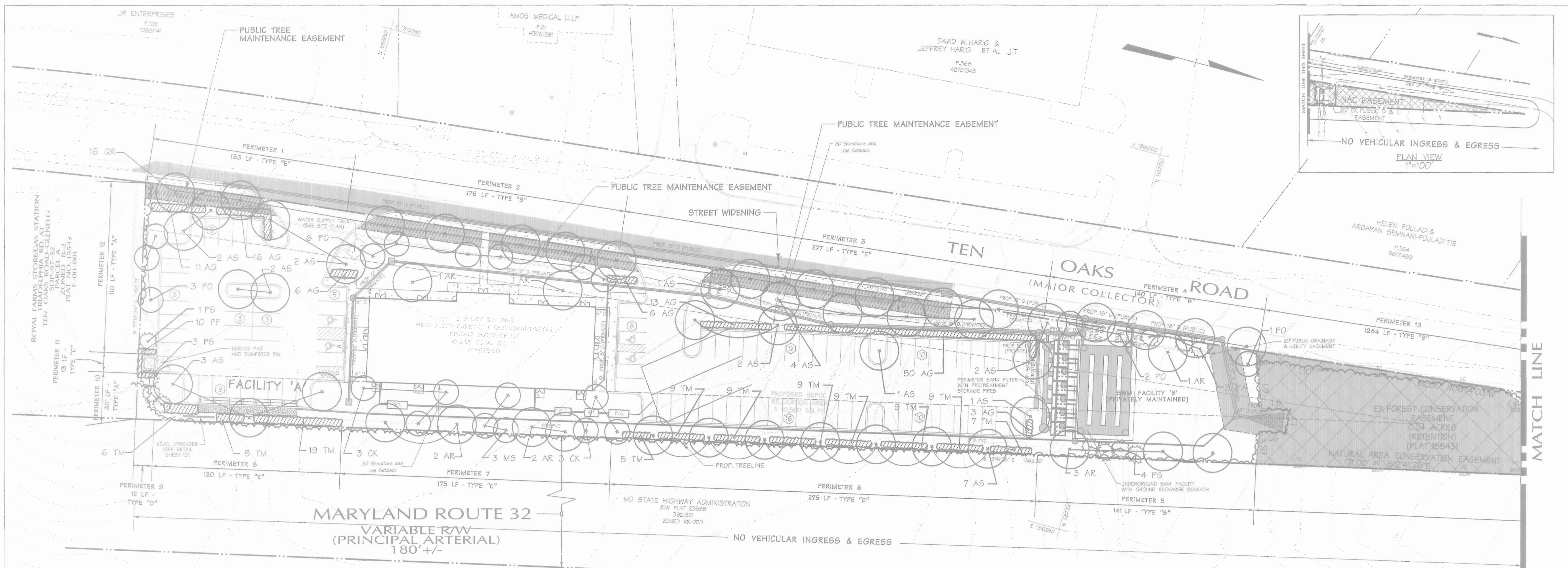
**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'  
 OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD. COLUMBIA, MARYLAND 21044  
 410-730-5815

SUBDIVISION: TRIANGLE HOWARD		SECTION AREA: N/A	PARCEL #:
BOOK #:	17864	15	15
DATE: 10/19/05	DATE: 10/28/05	DATE: 10/28/05	DATE: 10/28/05

<b>SITE DETAILS</b>			
Des. By: RLH	Scale: AS SHOWN	Proj. No.: 02136.00	
Dm. By: KDE	Date: 10/28/05		
Chk. By: RPK	Approved:		15 of 19







**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROAD								ADJACENT TO PERIMETER PROPERTIES		
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 10	P 11	P 12
LANDSCAPE TYPE "A"											
LINEAR FEET OF PERIMETER									30 LF		110 LF
LANDSCAPE TYPE "B"		P 2		P 4	P 5					P 10	
LINEAR FEET OF PERIMETER		176 LF		140 LF	141 LF					1284 LF	
LANDSCAPE TYPE "C"							P 7				P 11
LINEAR FEET OF PERIMETER							179 LF				15 LF
LANDSCAPE TYPE "D"								P 8			
LINEAR FEET OF PERIMETER								12 LF			
LANDSCAPE TYPE "E"	P 1		P 3			P 6		P 8			
LINEAR FEET OF PERIMETER	133 LF		277 LF			275 LF		120 LF			
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1284	N/A	N/A
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED											
SHADE TREES	3	4	7	3	3	7	4	3	--	1	0
EVERGREEN TREES	--	4	--	4	4	--	9	--	1	--	1
SHRUBS	35	--	69	--	--	69	--	30	--	--	--
NUMBER OF PLANTS PROVIDED*											
SHADE TREES	3	5	7	2	3	7	4	3	--	--	--
EVERGREEN TREES	--	6	--	3	4	--	9	--	1	--	1
OTHER TREES (2:1 SUBSTITUTION)	--	--	--	--	--	--	--	--	--	--	3
SHRUBS (10:1 SUBSTITUTION)	33	--	69	--	--	69	--	30	--	--	10
CREDITS BELOW IF NEEDED											

NOTE: STREET TREES WILL BE PROVIDED @ 140 LF, 16 STREET TREES SHOWN ON THIS SHEET.

NOTE: THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS.

NOTE: ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 3.5 SHADE TREES, 14 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 14 EVERGREENS, 3 EVERGREENS HAVE BEEN SUBSTITUTED FOR 15 SHADE TREES, 20 SHRUBS HAVE BEEN SUBSTITUTED FOR 2 EVERGREENS.

\* SHADE TREE VALUE FOR PERIMETER 9 IS 0.2, THEREFORE THE "NUMBER OF PLANTS REQUIRED" IS LISTED AS 0. SHADE TREE VALUE FOR PERIMETER 11 IS 0.5, THEREFORE THE "NUMBER OF PLANTS REQUIRED" IS LISTED AS 0.

**SCHEDULE B**

NUMBER OF PARKING SPACES.....	87
INTERNAL ISLANDS REQUIRED.....	5
INTERNAL ISLANDS PROVIDED.....	5
200 SQ.FT./ISLAND	
SHADE TREES REQUIRED.....	5
120 SPACES	
SHADE TREES PROVIDED.....	5

**PLANT LIST**

QTY	SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMARKS
<b>SHADE TREES</b>				
10	AR	AGER RUBRUM 'OCTOBER GLORY' October Glory Red Maple	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
27	AS	AGER SACCHARUM 'GREEN MOUNTAIN' Sugar Maple	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
16	QR	QUERCUS RUBRA Northern Red Oak	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
<b>EVERGREEN TREES</b>				
3	PA	PICEA ABIES Norway Spruce	6' - 8' HT.	B & B
8	PS	PINUS STROBUS Eastern White Pine	6' - 8' HT.	B & B
<b>ORNAMENTAL TREES</b>				
6	CK	CORNUS KOUSA Kousa Dogwood	6' - 10' HT.	B & B
3	MS	MAGNOLIA STELLATA Star Magnolia	6' - 10' HT.	B & B
12	PO	PRUNUS x INCAM 'OKAME' Okame Cherry	6' - 10' HT.	B & B
<b>SHRUBS</b>				
109	AG	ABELIA GRANDIFLORA Glossy Abelia	2-1/2' x 3' HT.	B & B OR CONTAINER
10	PF	PHOTINIA X FRASERI Red Tip Photinia	6' HT.	B & B OR CONTAINER
92	TM	TAXUS x MEDIA 'DENSIFORMIS' Yew	2-1/2' x 3' HT.	B & B OR CONTAINER

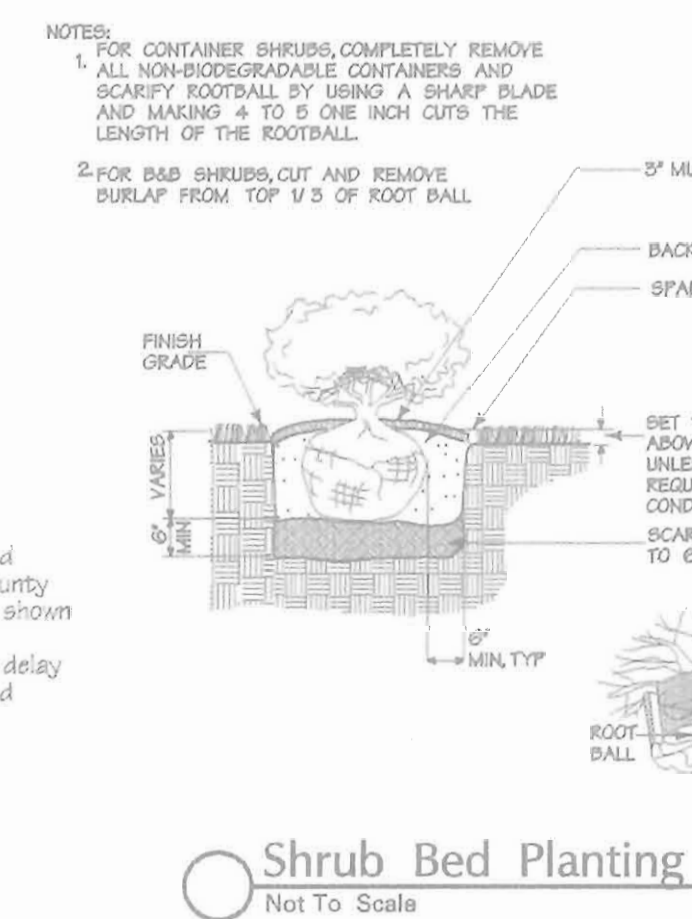
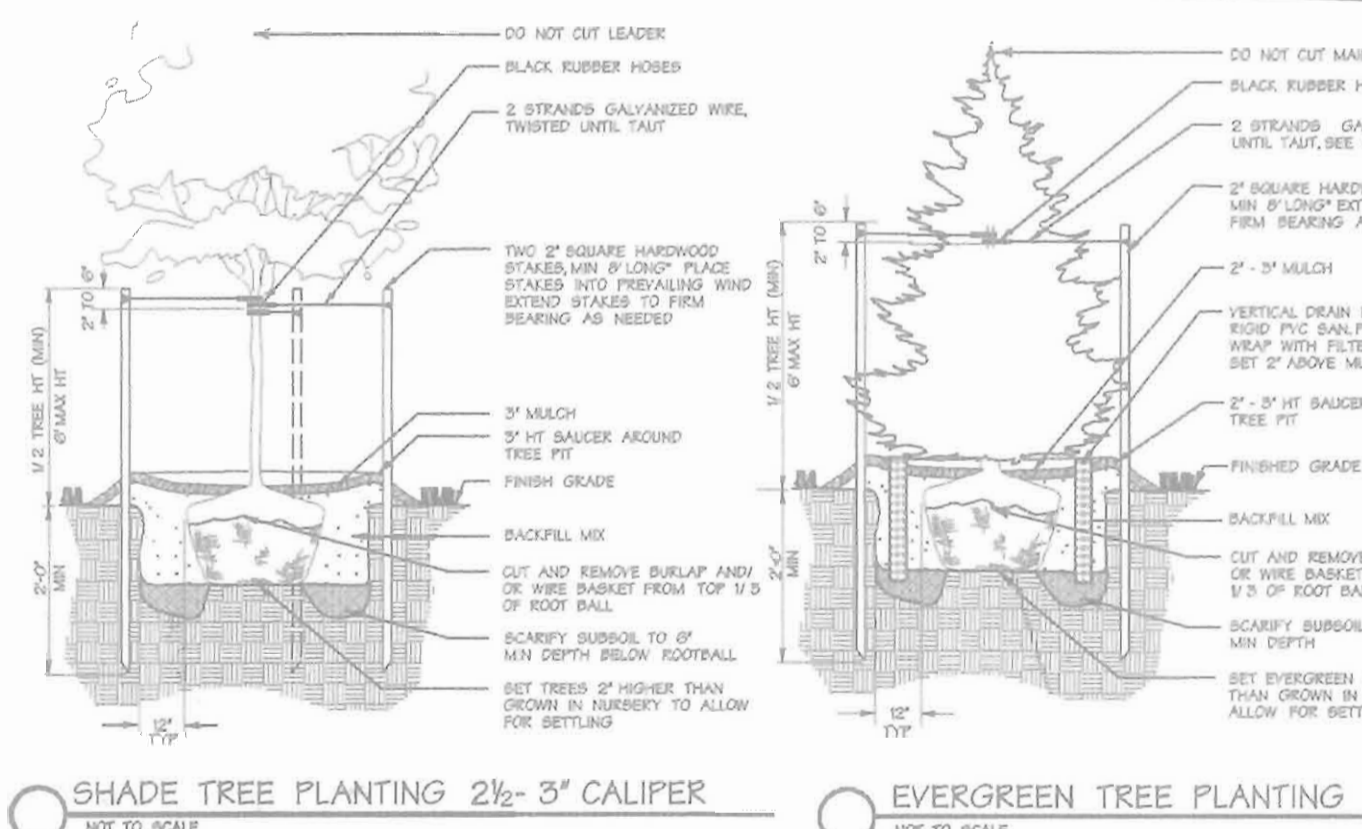
**General Planting Notes**

- All plants material to meet A.A.N. Standards.
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
- No substitutions to be made without consent of Landscape Architect or Owner.
- All trees to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting.
- Landscape Architect/Owner shall select, verify, and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
- Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection with acceptance, all electric, water, drainage, and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions Section

- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings as shown on this plan may be made without prior approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- Developer's/Builder's Certificate

I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County code and the Howard County Landscape Manual. I/we further certify that upon completion, a certification of landscape installation, accompanied by an executed one-year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

DATE: 10-13-05  
NAME: DON PAUL PISTOLIO



APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

DATE: 12/21/05

DATE: 12/21/05

DATE: 1/1/06

DATE: 1/1/06

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

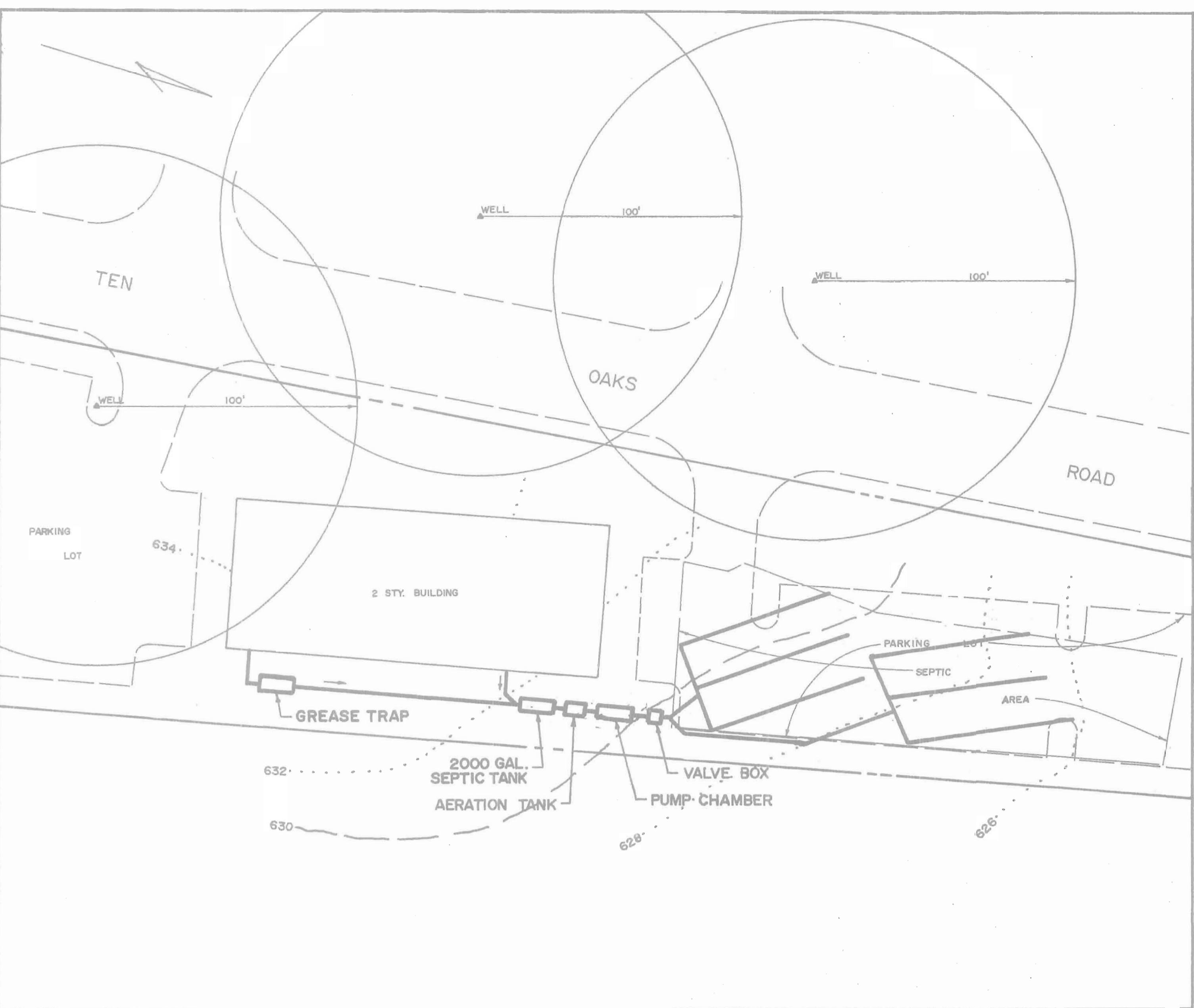
DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Dan McCune-Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

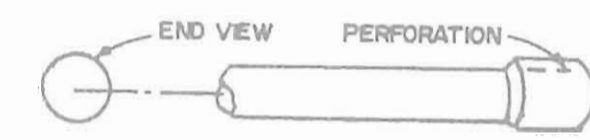
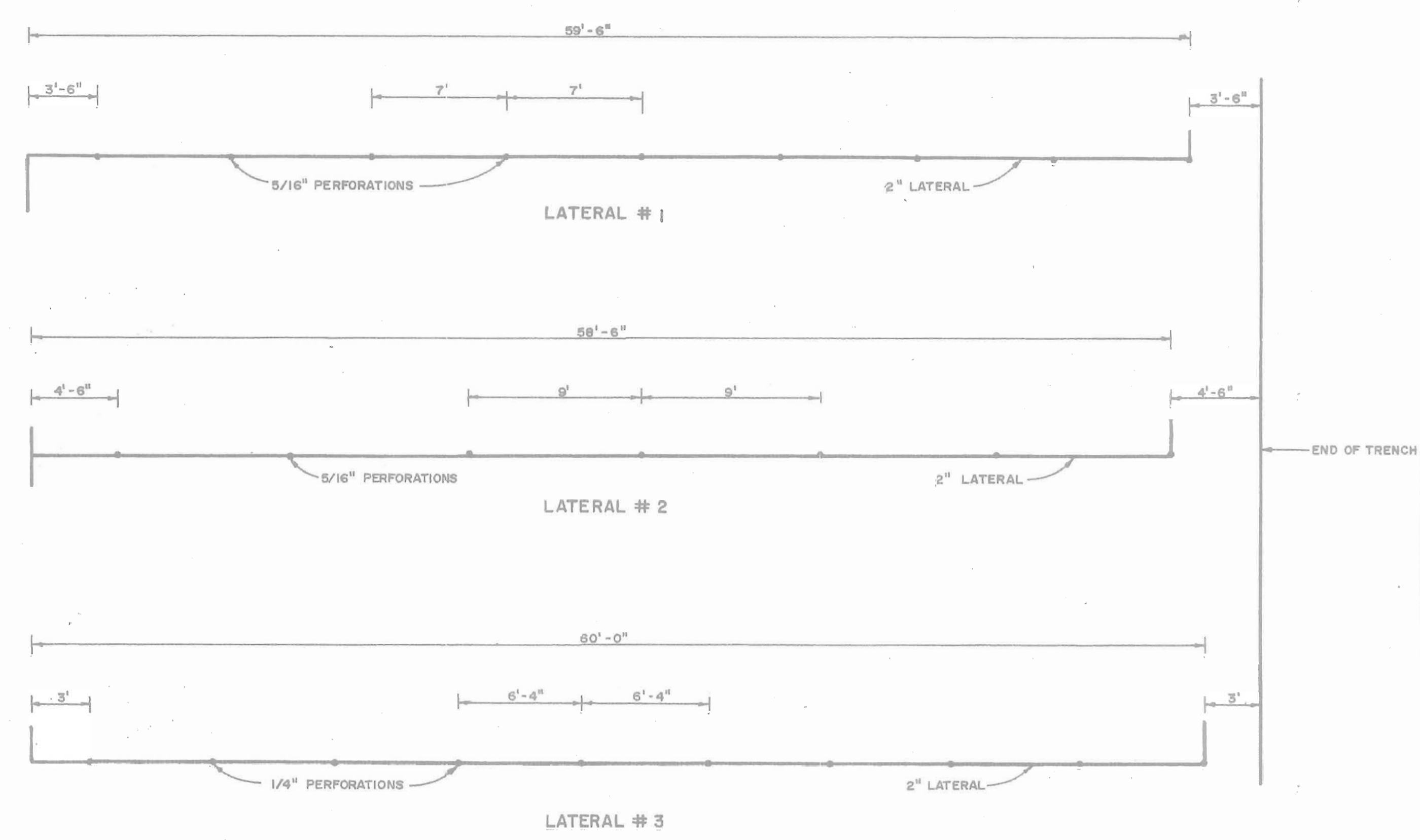
**LANDSCAPE PLAN**

Des By: CRH Scale: 1" = 30' Proj No.: 02136.00  
Dwn By: CRH Date: 10/28/05  
Chk By: [Signature] Approved: 16 of 19

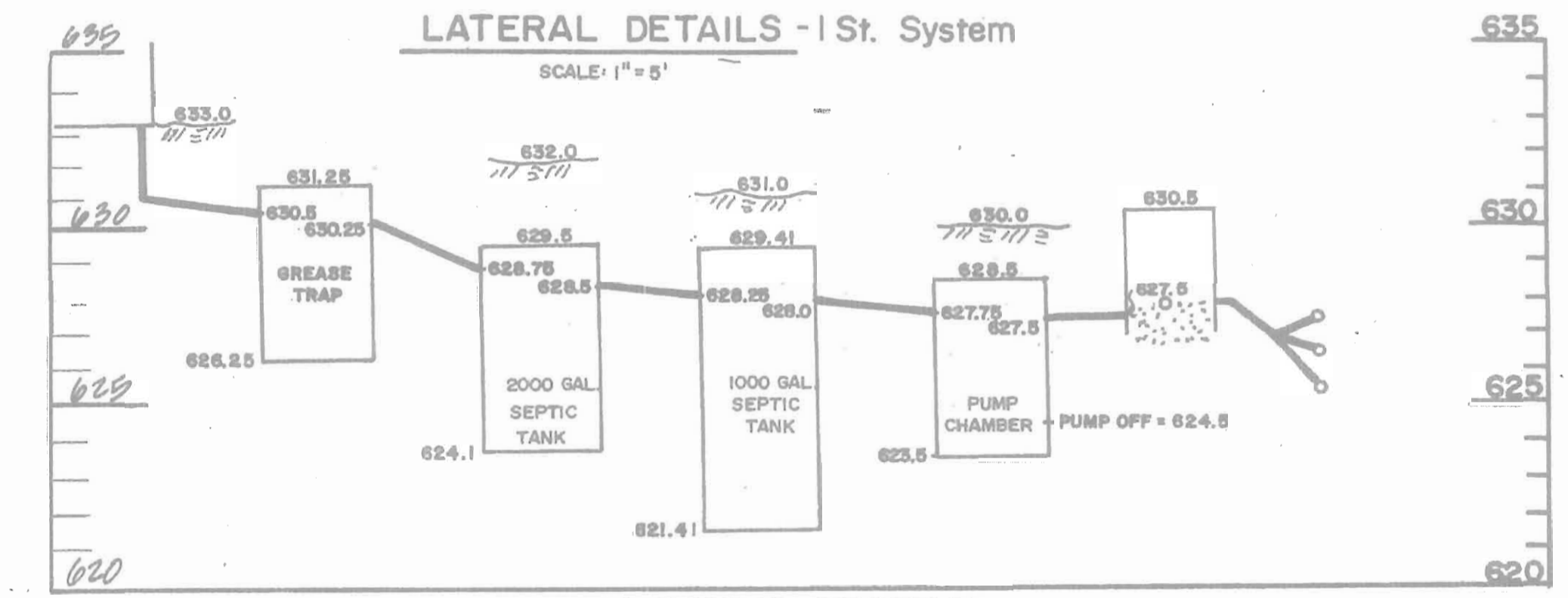




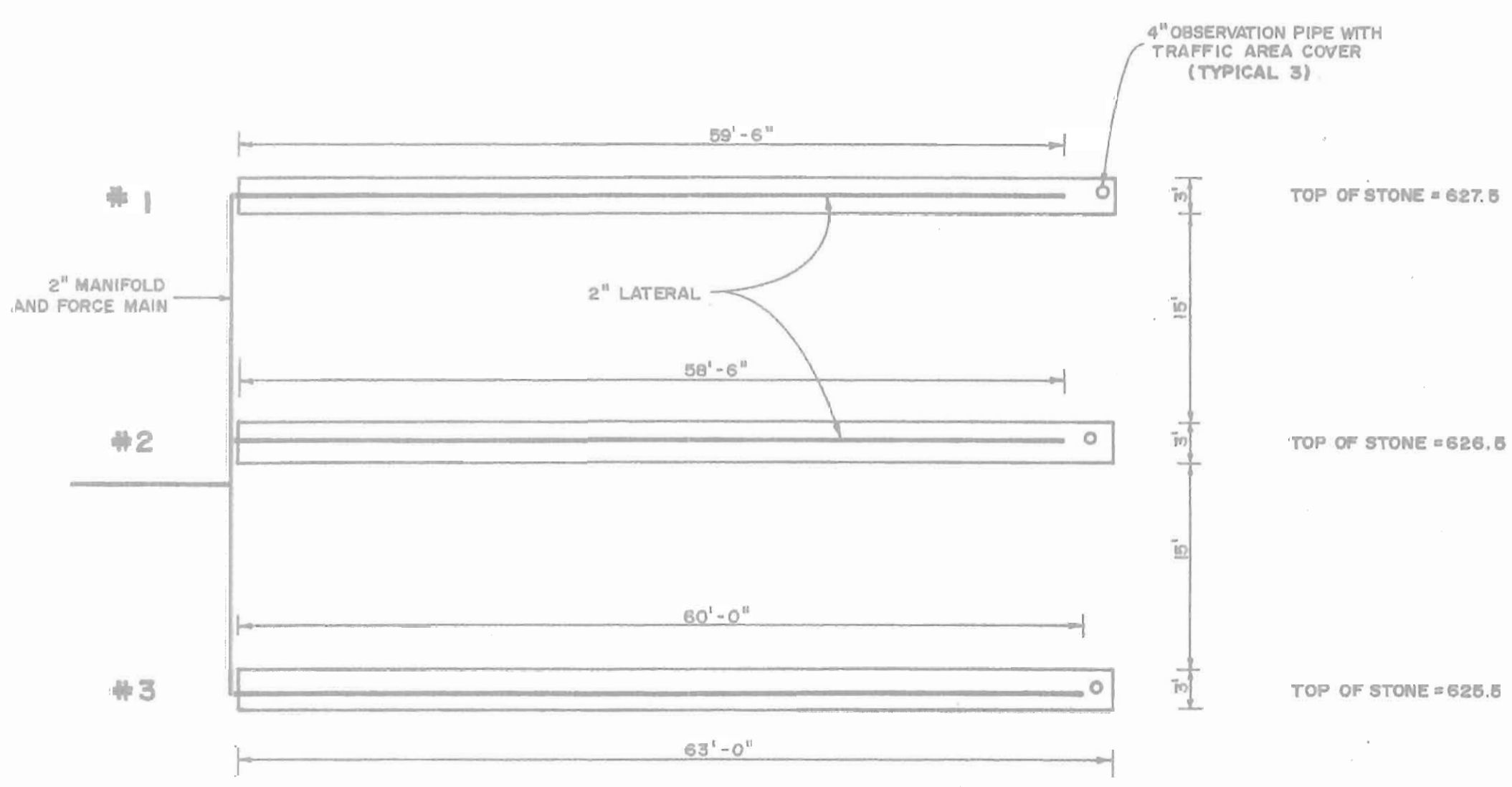
**SITE PLAN**  
SCALE: 1" = 30'



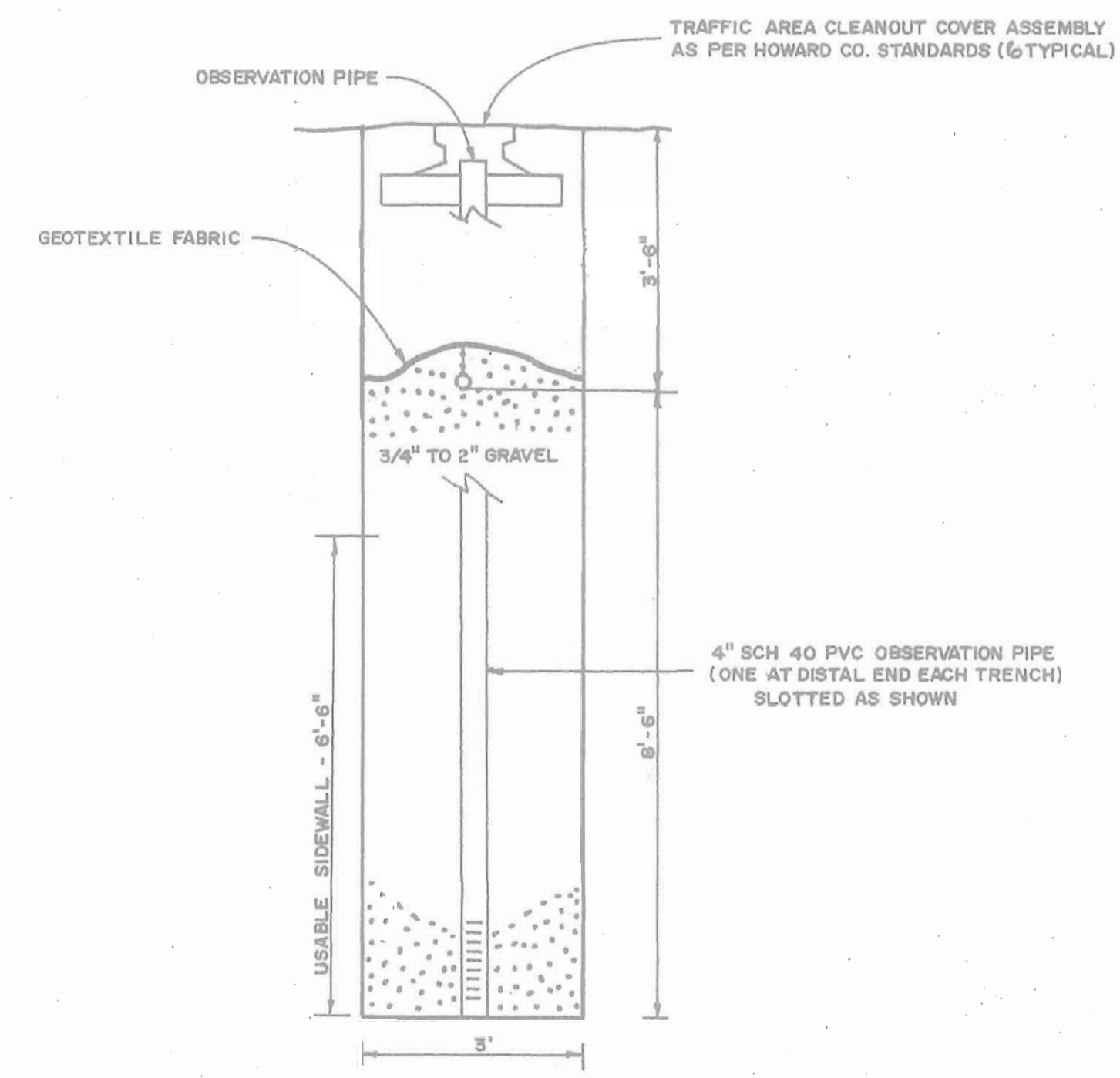
**LATERAL END CAP**  
USE ON ALL LATERALS  
N.T.S.



**HYDRAULIC PROFILE**  
SCALE: 1/4" = 1'  
H: N.T.S.



**TRENCH LAYOUT - 1st System**  
SCALE: 1" = 10'



**TRENCH DETAIL**  
6 TYPICAL  
SCALE: 1/2" = 1'

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT		DATE: 12/21/05	
Robert J. Walker COUNTY HEALTH OFFICER			
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING		DATE: 12/28/05	
Chief, Development Engineering Division (M)			
Judy Hammet CHIEF, DIVISION OF LAND DEVELOPMENT		DATE: 1/4/06	
Director		DATE: 1/9/06	
Date	No.	Revision Description	

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MD 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT LLC  
5221 LYNNGATE RD.  
COLUMBIA, MD 21044  
410-730-5815

**DMW**  
D&R-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 398-3333  
Fax 298-4708

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

SECTION NAME: TRIANGLE HOWARD  
BLOCK # 15  
PARCEL # 17864

SECTION AREA: N/A  
TAX MAP: 22  
SUBJECT: 3RD

DATE: N/A  
SEWER CODE: N/A

**SITE PLAN**



James J. Chase

**S/E ENGINEERING, INC.**  
WESTMINSTER, MARYLAND

SCALE: AS SHOWN APPROVED: JDC DRAWN BY: RSK  
DATE: DECEMBER, 2003 DESIGNED BY: JDC

TEN OAKS COMMERCIAL CENTER  
HOWARD COUNTY

LOW PRESSURE WASTEWATER SYSTEM DRAWING NO. 17 OF 19

SITE PLAN AMENDED 9/9/04

SDP 04-130



**SPECIFICATIONS**

Design Flow - 2,068 GPD

Loading Rate - 1.2 GPD/Sq. Ft.

1 - 1500 Gal. Grease Trap

1 - 2000 Gal. Septic Tank

1 - 2000 Gal. Aeration Tank

1 - Biomicrobic 3.0 Fast Unit - To be installed in accordance with Manufacturers Direction.

1 - 1500 Gal. Pump Chamber

1 - Valve Box

- Tank measurements and elevations are based on tanks as manufactured by Mayer Brothers, Elkridge, Md. (410) 796-1434. The 2000 Gal. Aeration Tank for the Fast Unit to be custom built - Mayer Brothers.

- Pump Rate - 44 GPM

- TDH - 11'

- Effluent Pumps to be Duplex, Gould's Model 3885-WE-03L, or equal. Pumps are to alternate. If selected pump fails to start, the other pump is to start. Any pump failure is to activate an alarm light on the control panel. Pump controls and alarm to be located in the building. The alarm is to be on a separate dedicated circuit.

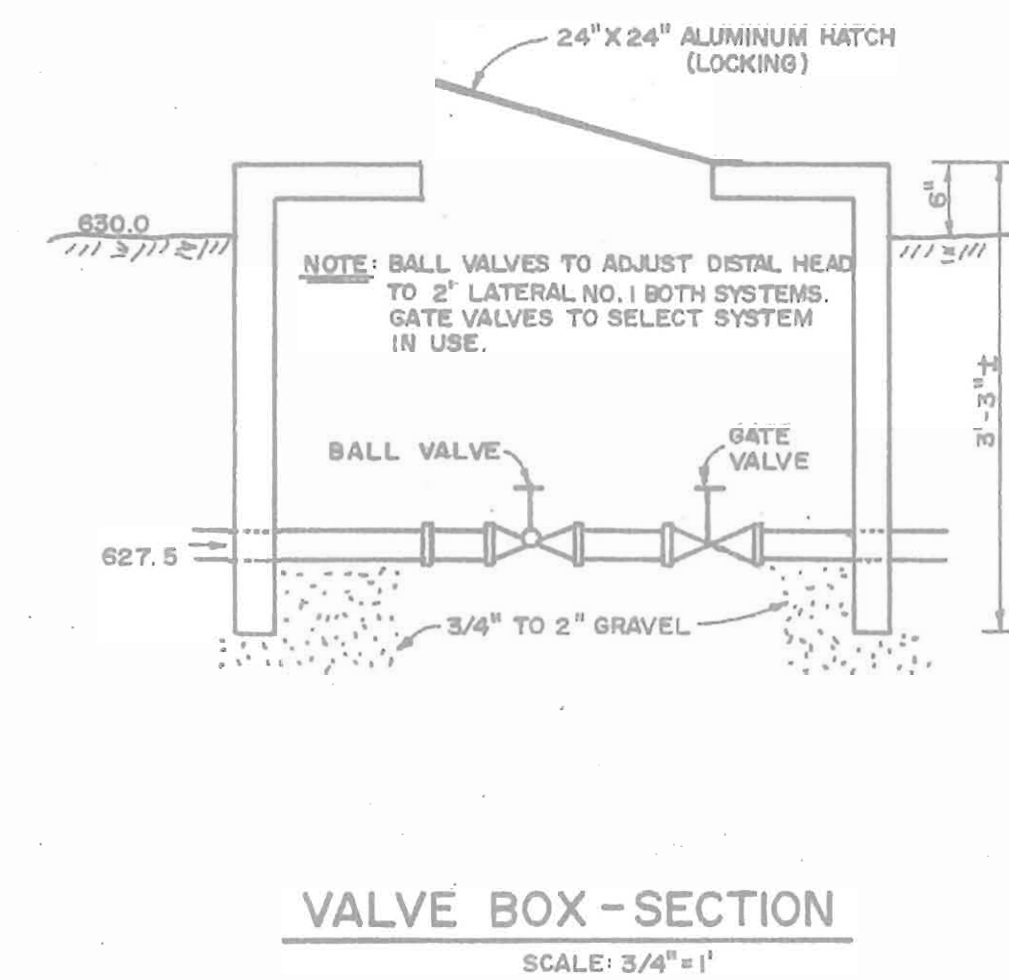
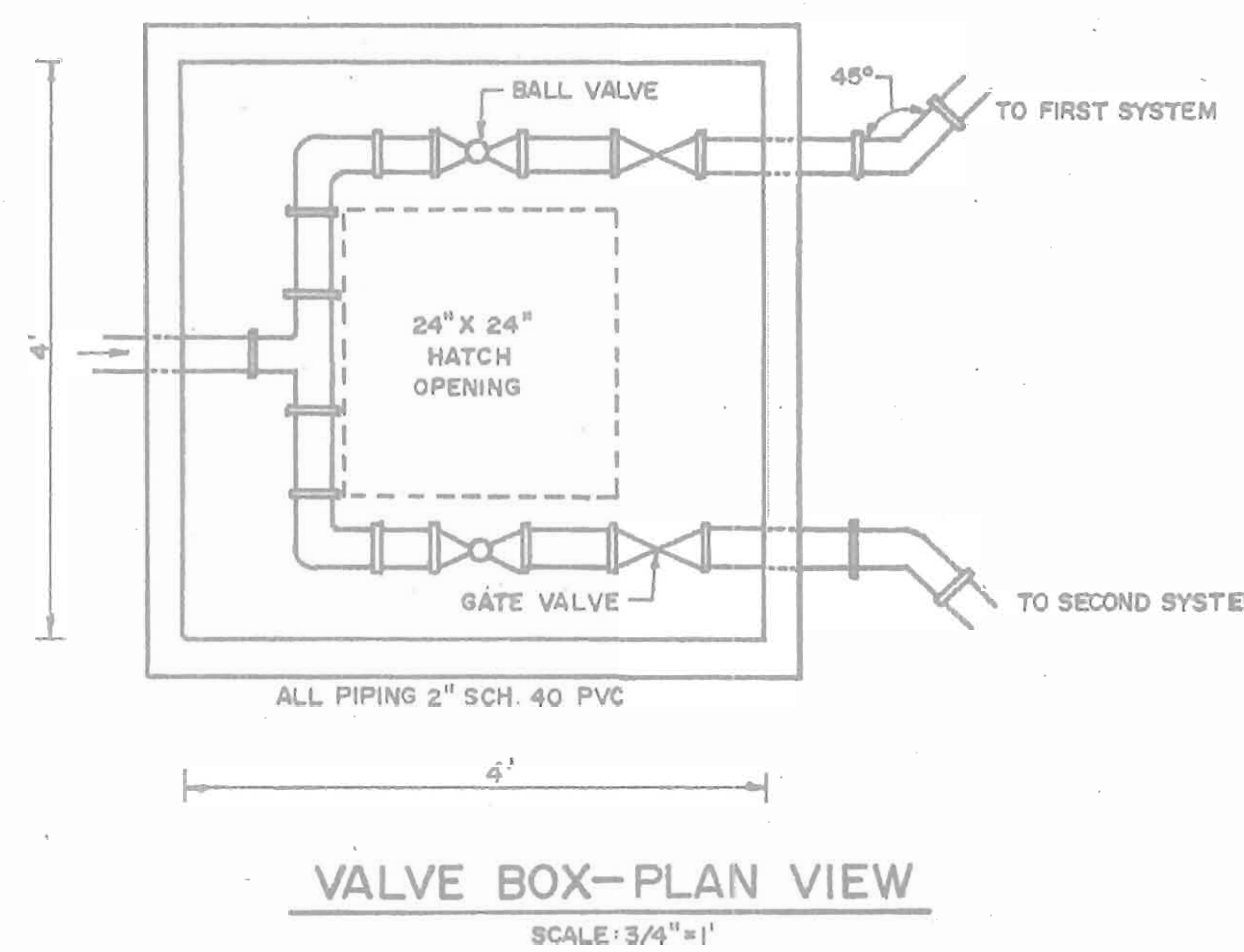
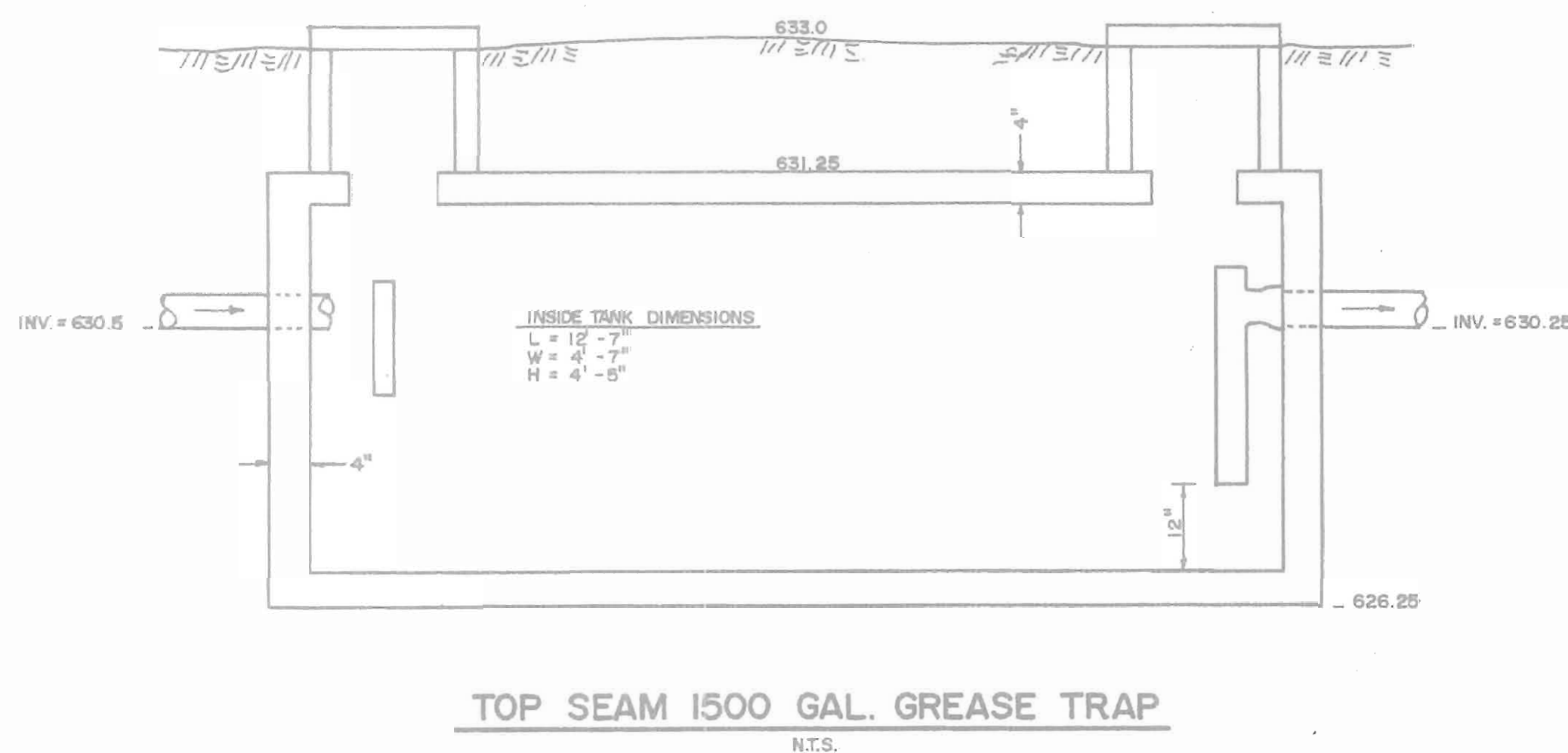
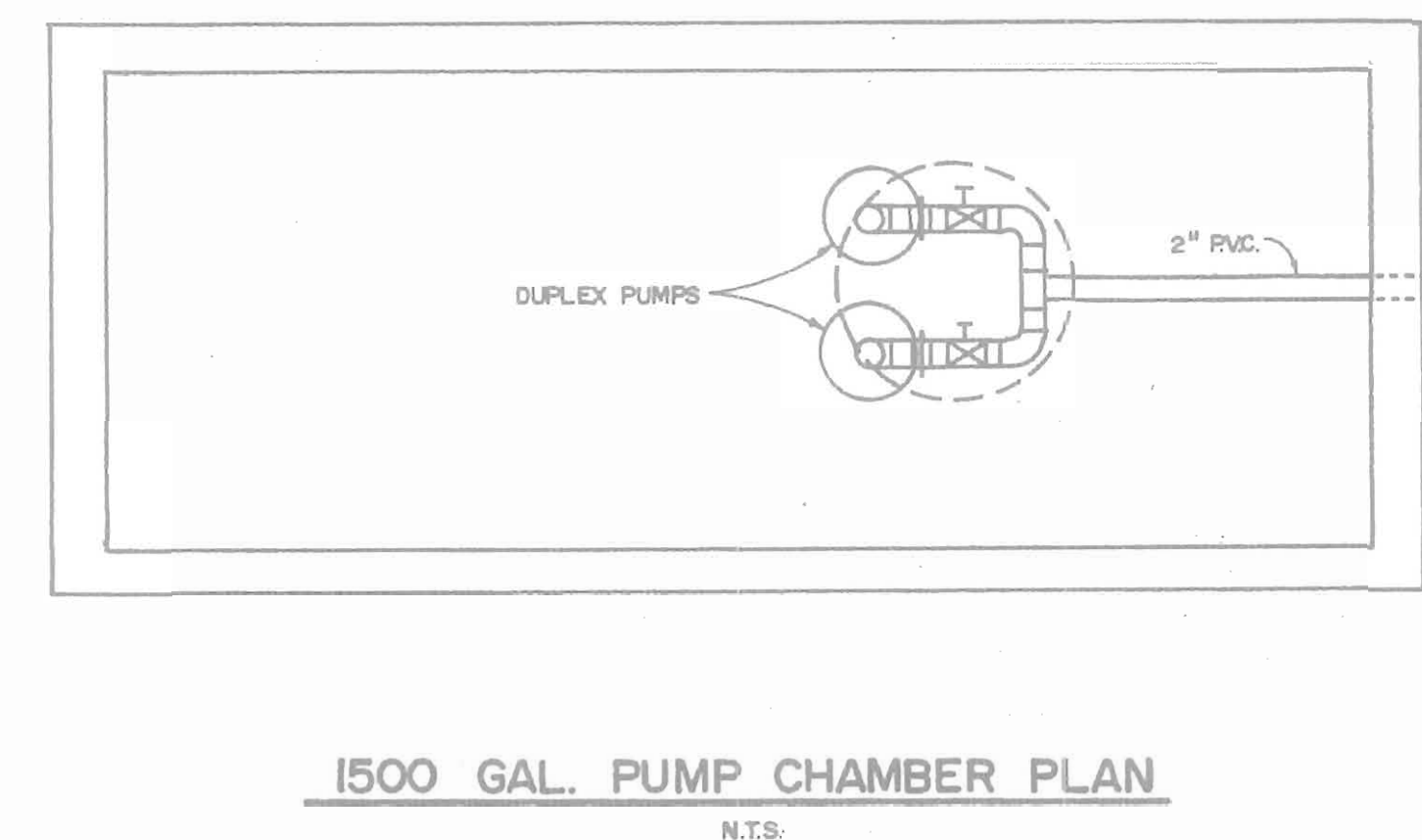
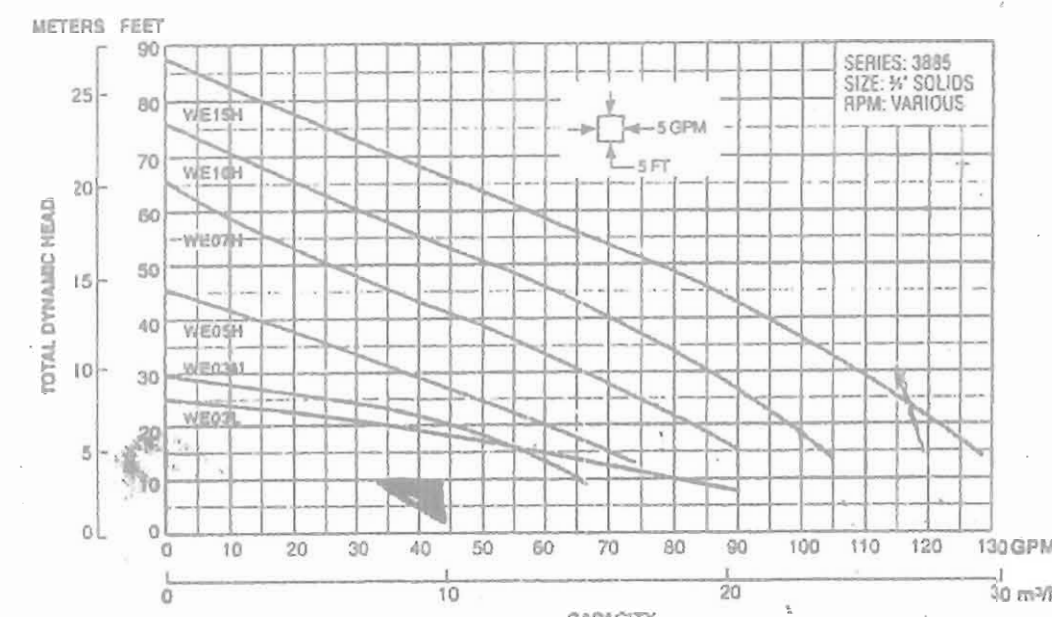
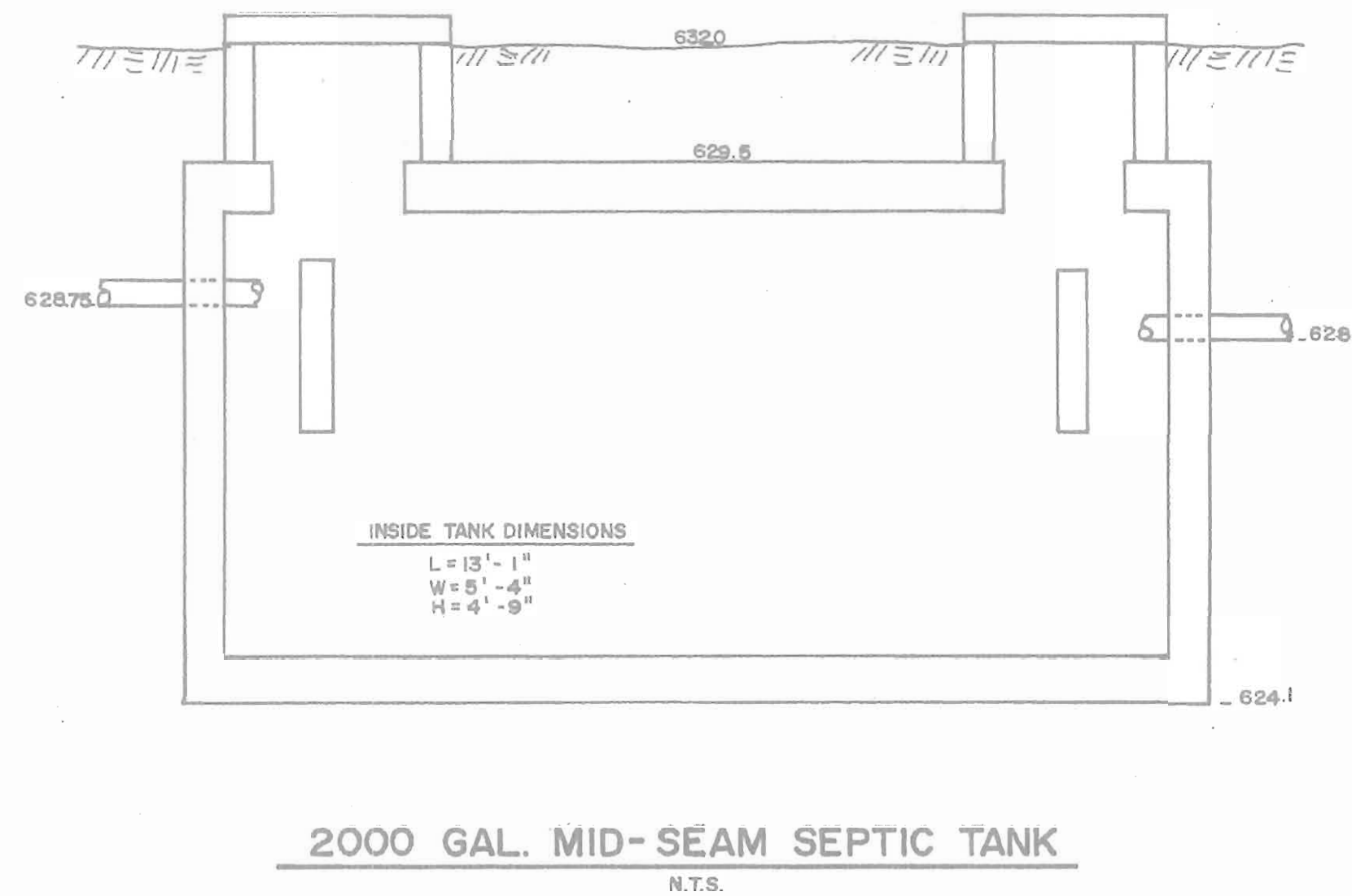
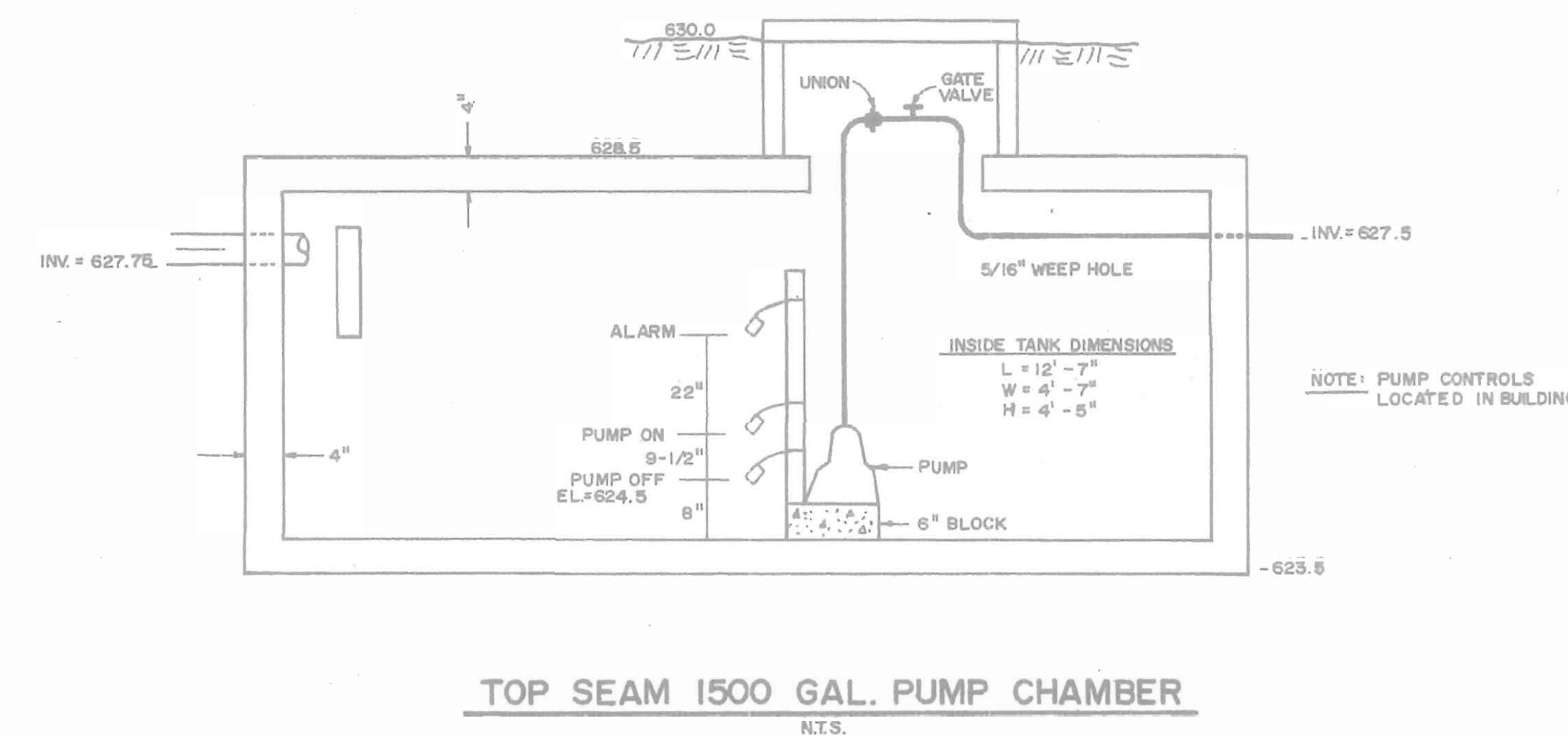
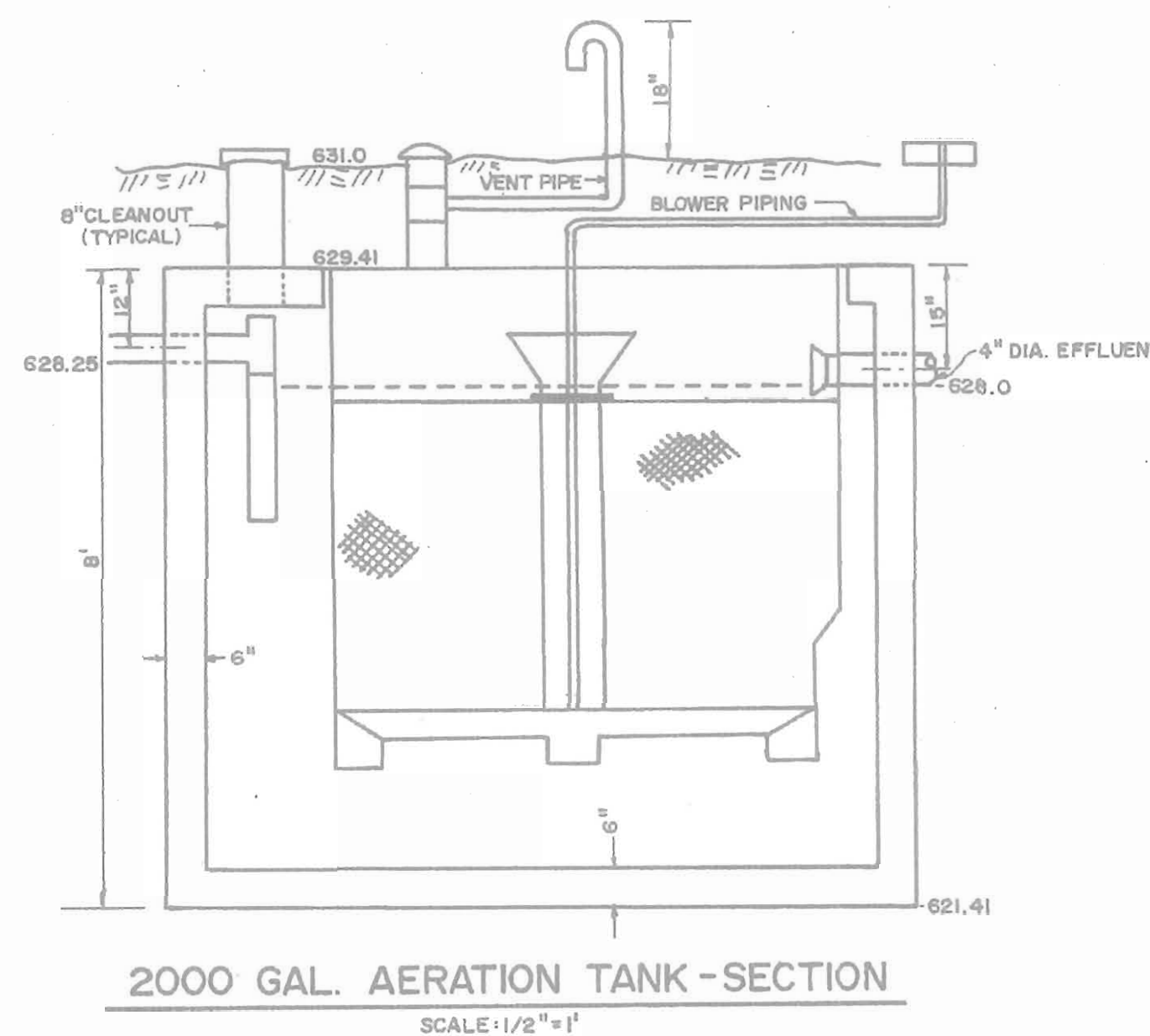
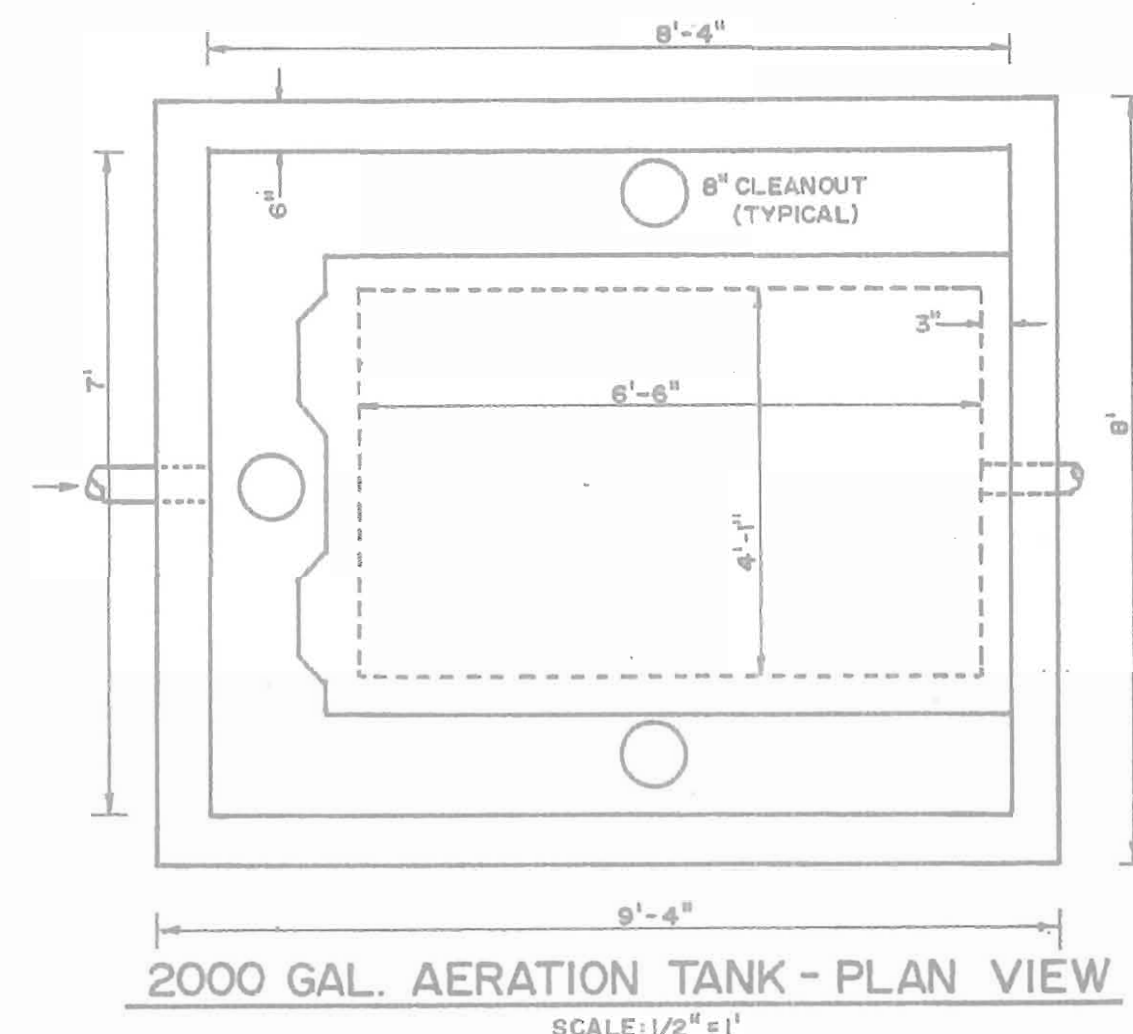
- All piping to be schedule 40 PVC of the size shown.

- Trenches to be 36" wide, 63" long, excavated to a depth of 12 feet. Stone depth to be 8' - 6".

- Ball valves in valve box to be adjusted to deliver 2' head on lateral #1 of both systems. Gate valves are for the manual selection of system to be in service.

- Trench stone to be clean bank gravel. Crushed limestone is not acceptable.

- The 2000 Gal. Aeration Tank drawing is to be reviewed by the Fast System Supplier (Freemire and Associates) prior to tank construction to assure that all details provided to S/E Engineering agrees with current available unit.



APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

DATE	NO.	REVISION DESCRIPTION

**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MD. 21044  
 410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MD. 21044  
 410-730-5815

**DMW**  
 Dan McConse-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3533  
 Fax 296-4705

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

SUBMISSION NAME: TRIANGLE HOWARD  
 BLOCK # 18  
 LOT # 2  
 SHEET NO. 17864

SECTION/AREA: N/A  
 DISTRICT: 3RD  
 SUBDIVISION: N/A

TITLE: **SITE PLAN**

**S/E ENGINEERING, INC.**  
 WESTMINSTER, MARYLAND

SCALE: AS SHOWN  
 DATE: DECEMBER, 2003

APPROVED: JDC  
 DESIGNED BY: JDC

TEN OAKS COMMERCIAL CENTER  
 HOWARD COUNTY

LOW PRESSURE WASTEWATER SYSTEM  
 DRAWING NO. 18 OF 19

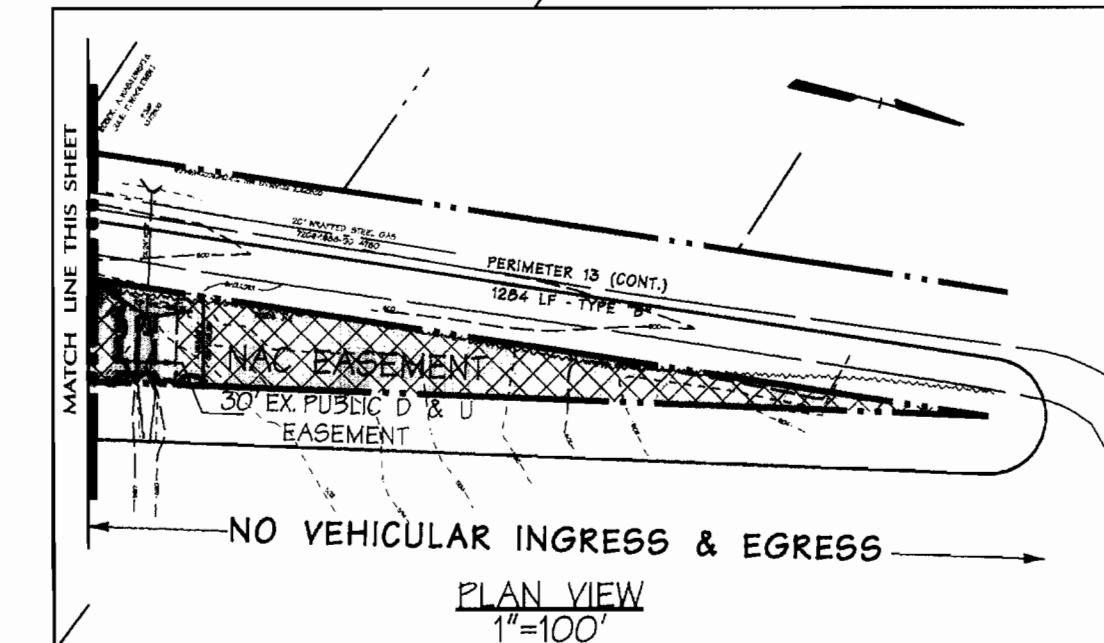
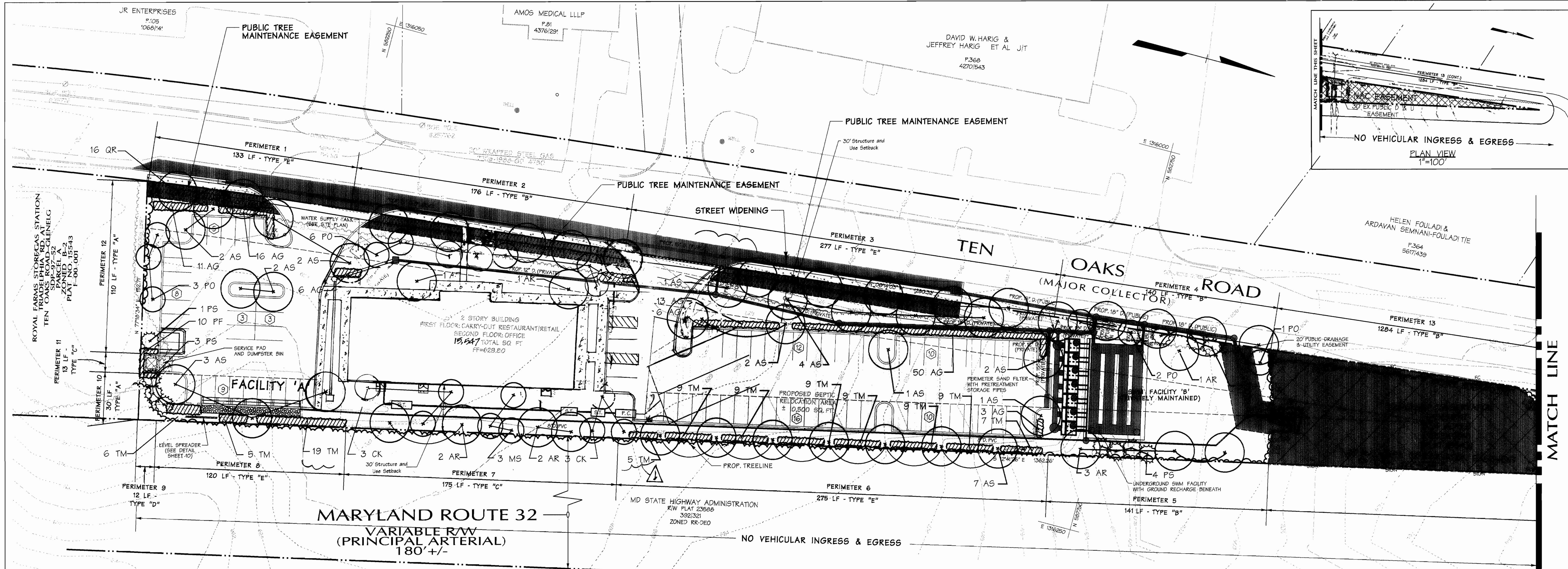


James H. Chai









**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROAD								ADJACENT TO PERIMETER PROPERTIES		
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 9	P 10	P 12
LANDSCAPE TYPE 'A'											
LINEAR FEET OF PERIMETER										30 LF	110 LF
LANDSCAPE TYPE 'B'		P 2		P 4	P 5						P 13
LINEAR FEET OF PERIMETER		176 LF		140 LF	141 LF						1284 LF
LANDSCAPE TYPE 'C'							P 7				P 11
LINEAR FEET OF PERIMETER							175 LF				13 LF
LANDSCAPE TYPE 'D'										P 9	
LINEAR FEET OF PERIMETER										12 LF	
LANDSCAPE TYPE 'E'	P 1			P 3		P 6		P 8			
LINEAR FEET OF PERIMETER	133 LF			277 LF		275 LF		120 LF			
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1284	N/A
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED											
SHADE TREES	3	4	7	3	4	7	4	3	--	1	0
EVERGREEN TREES	--	4	--	4	4	--	9	--	1	--	1
SHRUBS	33	--	69	--	--	69	--	30	--	--	--
NUMBER OF PLANTS PROVIDED*											
SHADE TREES	3	3	7	2	3	7	4	3	--	1	--
EVERGREEN TREES	--	--	--	2	4	--	--	--	1	--	2
OTHER TREES (2:1 SUBSTITUTION)	--	6	--	3	--	--	9	--	--	--	3
SHRUBS (10:1 SUBSTITUTION)	33	--	69	--	--	69	--	30	--	--	10

NOTE: STREET TREES WILL BE PROVIDED @ 1/40 LF. 16 STREET TREES SHOWN ON THIS SHEET.  
 NOTE: THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS.  
 NOTE: 7 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 3.5 SHADE TREES, 14 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 14 EVERGREENS, 3 EVERGREENS HAVE BEEN SUBSTITUTED FOR 1.5 SHADE TREES, 20 SHRUBS HAVE BEEN SUBSTITUTED FOR 2 EVERGREENS.  
 \* SHADE TREE VALUE FOR PERIMETER 9 IS 0.2, THEREFORE THE 'NUMBER OF PLANTS REQUIRED' IS LISTED AS 0. SHADE TREE VALUE FOR PERIMETER 11 IS 0.3, THEREFORE THE 'NUMBER OF PLANTS REQUIRED' IS LISTED AS 0.

**SCHEDULE B**

NUMBER OF PARKING SPACES.....	87
INTERNAL ISLANDS REQUIRED.....	5
INTERNAL ISLANDS PROVIDED.....	5
200 SQ. FT. ISLAND	
SHADE TREES REQUIRED.....	5
INTERNAL ISLANDS PROVIDED.....	5
SHADE TREES PROVIDED.....	5

**PLANT LIST**

QTY	SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMARKS
<b>SHADE TREES</b>				
10	AR	ACER RUBRUM 'OCTOBER GLORY' October Glory Red Maple	2 1/2' - 3' CAL. 12' - 14' HT.	B & B FULL HEAD
27	AS	ACER SACCHARUM 'GREEN MOUNTAIN' Sugar Maple	2 1/2' - 3' CAL. 12' - 14' HT.	B & B FULL HEAD
16	QR	QUERCUS RUBRA Northern Red Oak	2 1/2' - 3' CAL. 12' - 14' HT.	B & B FULL HEAD
<b>EVERGREEN TREES</b>				
3	PA	PICEA ABIES Norway Spruce	6' - 8' HT.	B & B
8	PS	PINUS STROBUS Eastern White Pine	6' - 8' HT.	B & B
<b>ORNAMENTAL TREES</b>				
6	CK	CORNUS KOUSA Kousa Dogwood	8' - 10' HT.	B & B
3	MS	MAGNOLIA STELLATA Star Magnolia	8' - 10' HT.	B & B
12	PO	PRUNUS x INCAM 'OKAME' Okame Cherry	8' - 10' HT.	B & B
<b>SHRUBS</b>				
109	AG	ABELIA GRANDIFLORA Glossy Abelia	2-1/2' x 3' HT.	B & B OR CONTAINER
10	PF	PHOTINIA X FRASERI Red Tip Photinia	6' HT.	B & B OR CONTAINER
92	TM	TAXUS x MEDIA 'DENSIFORMIS' Yew	2-1/2' x 3' HT.	B & B OR CONTAINER

**General Planting Notes**

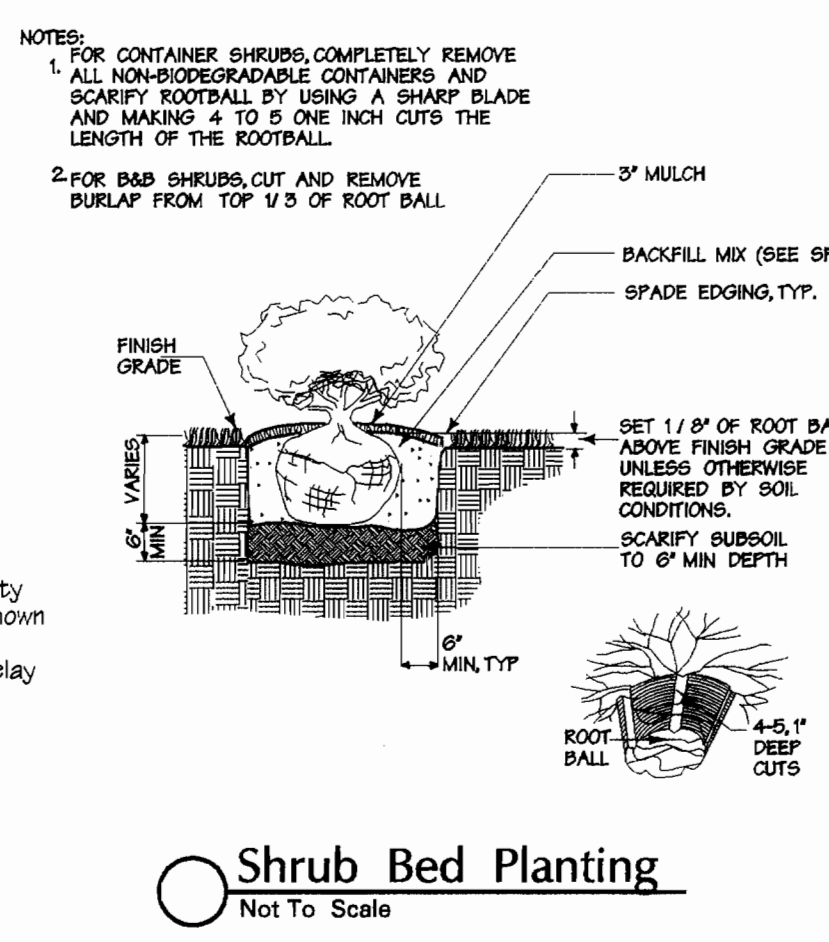
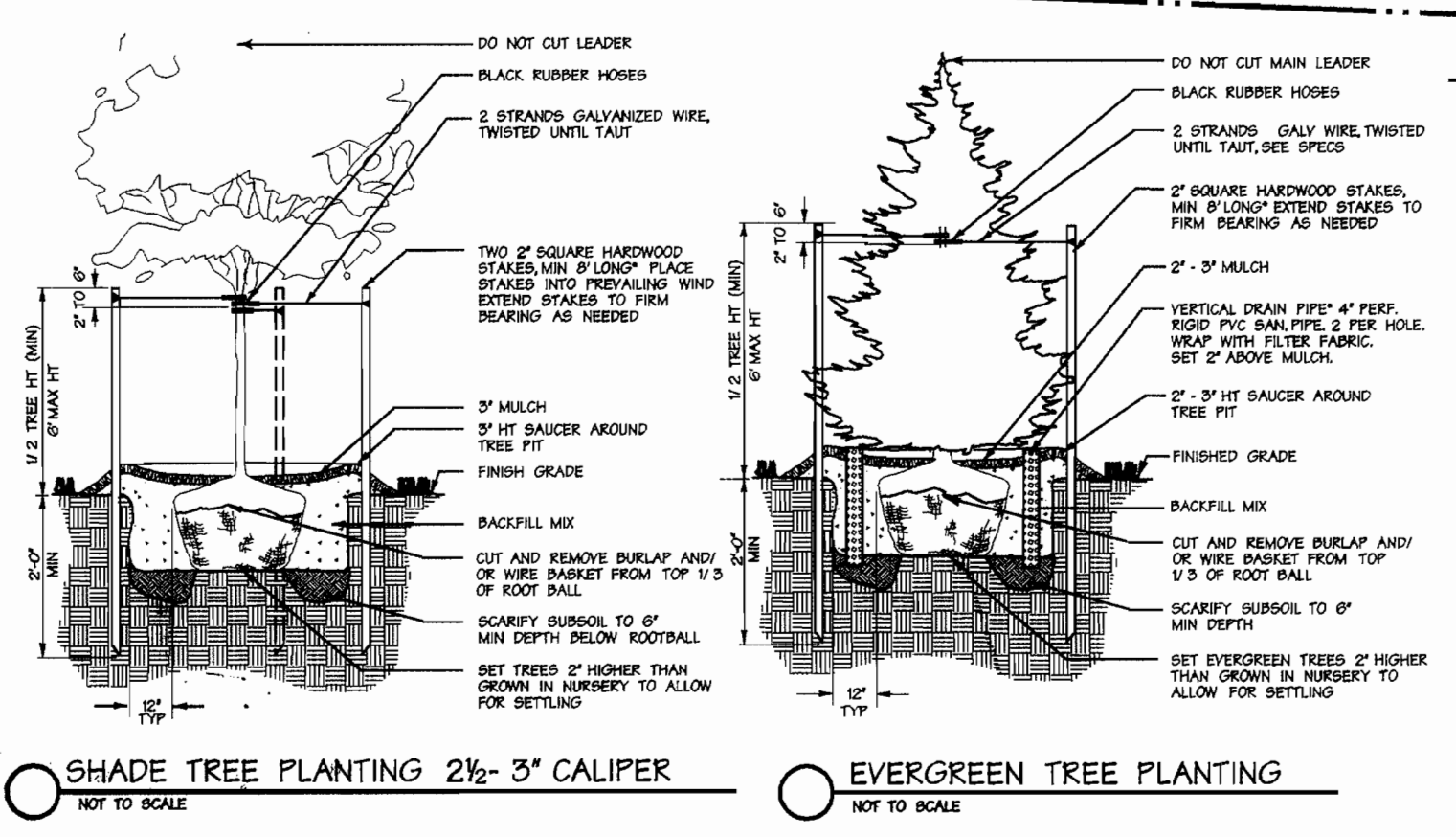
- All plant material to meet A.A.N. Standards.
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
- No substitutions to be made without consent of Landscape Architect or Owner.
- All beds to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting.
- Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
- Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection with acceptance, all electric, water, drainage, and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- Contractor shall notify Miss Utility 72 hours prior to construction.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions Section

16.124 of the Ho.Co. code and the Ho.Co. Landscape Manual. Financial surety for the required landscaping has been posted as a part of the Developers Agreement in the amount of \$26,800.00 (58 shade trees, 23 evergreen trees, and 201 shrubs).

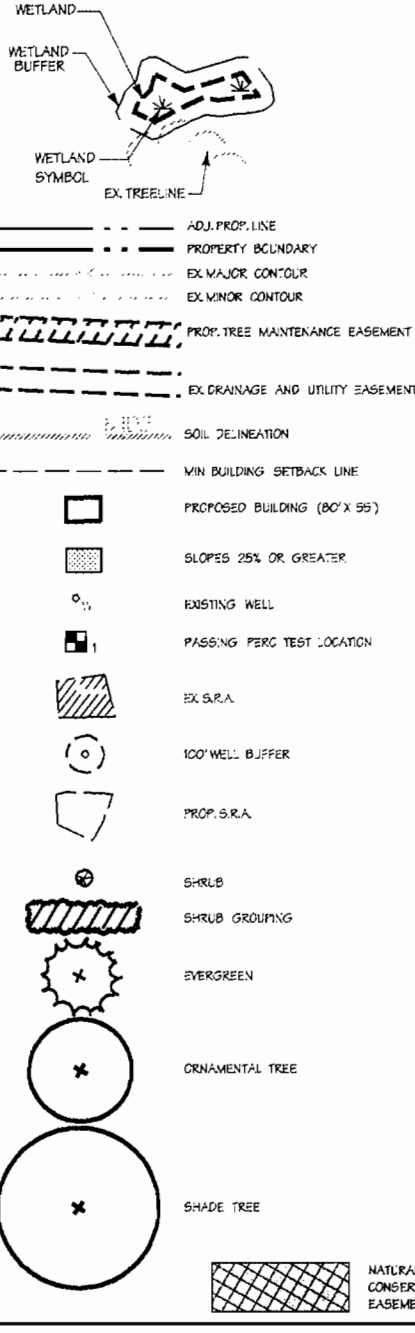
- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings as shown on this plan may be made without prior approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- Developer's/Builder's Certificate

I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County code and the Howard County Landscape Manual. I/we further certify that upon completion, a certification of landscape installation, accompanied by an executed one-year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Professional L.A. No. 405  
 NAME: DON PAUL PISTOCIO DATE: 10-13-05



**Legend**



APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 APPROVED: COUNTY HEALTH OFFICER  
 APPROVED: CHIEF DEVELOPMENT ENGINEERING DIVISION  
 APPROVED: CHIEF DIVISION OF LAND DEVELOPMENT  
 APPROVED: DIRECTOR

Date	No.	Revision Description
6/21/05	1	SHIFT BUILDING & ADJUST LANDSCAPE

**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'  
 OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD. COLUMBIA, MARYLAND 21044  
 410-730-5815

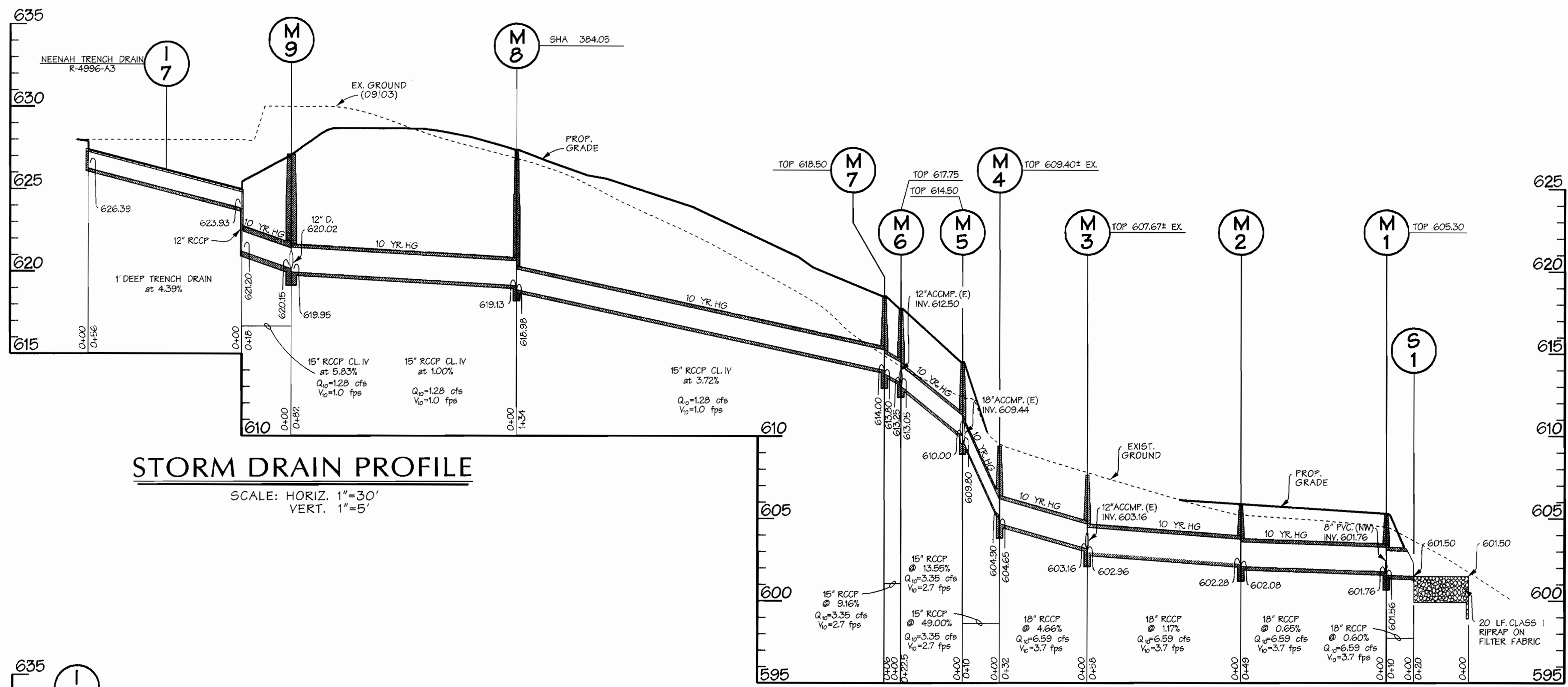
**DMW**  
 Dawn MacCallum Walker, Assoc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 286-3333  
 Fax 396-4705

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

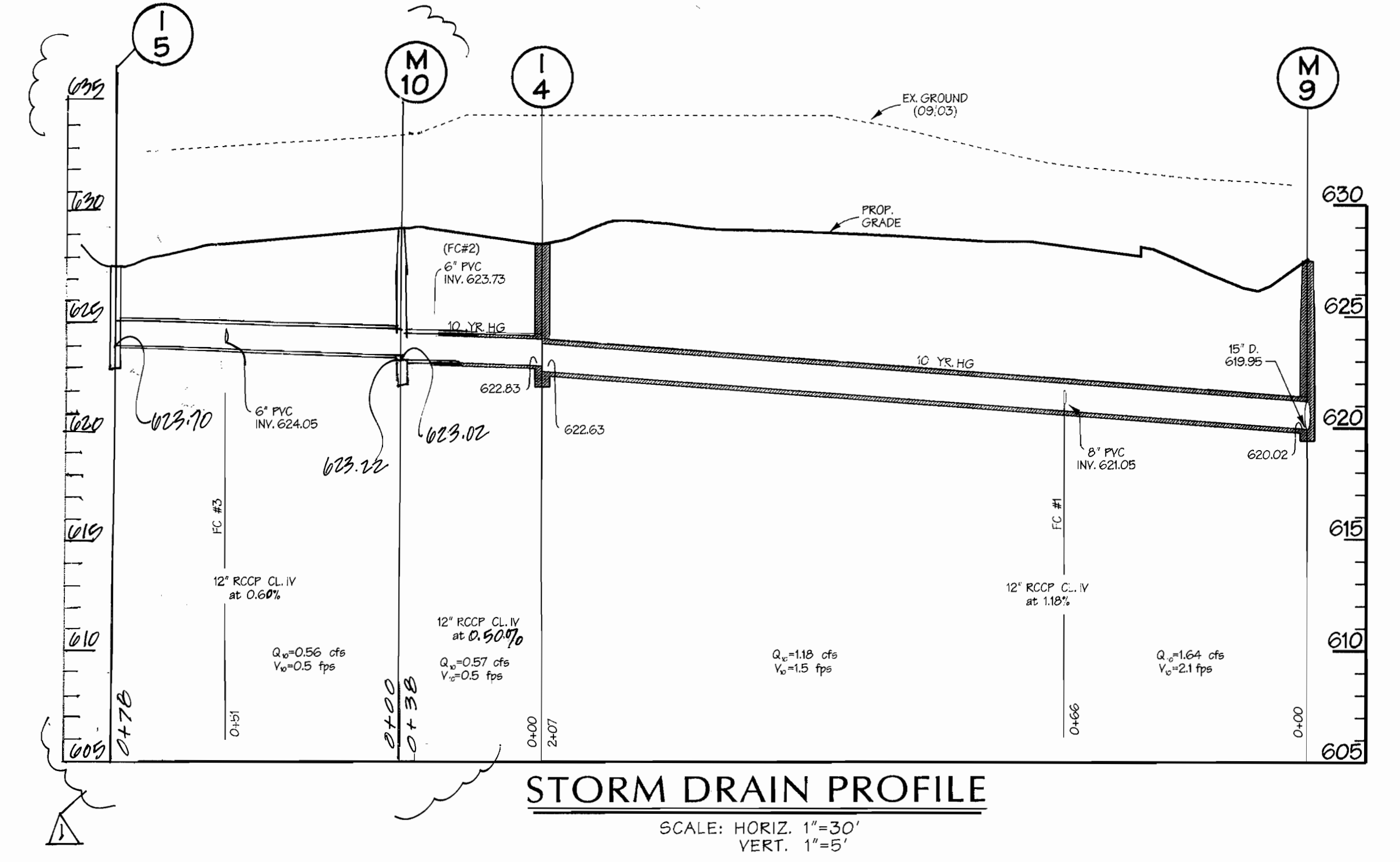
TITLE: <b>LANDSCAPE PLAN</b>			
Des. By	CRH	Scale	1" = 30'
Proj. No.	02136.00	Date	10/28/05
Chk. By	CRH	Approved	16 of 19

SDP-04-130

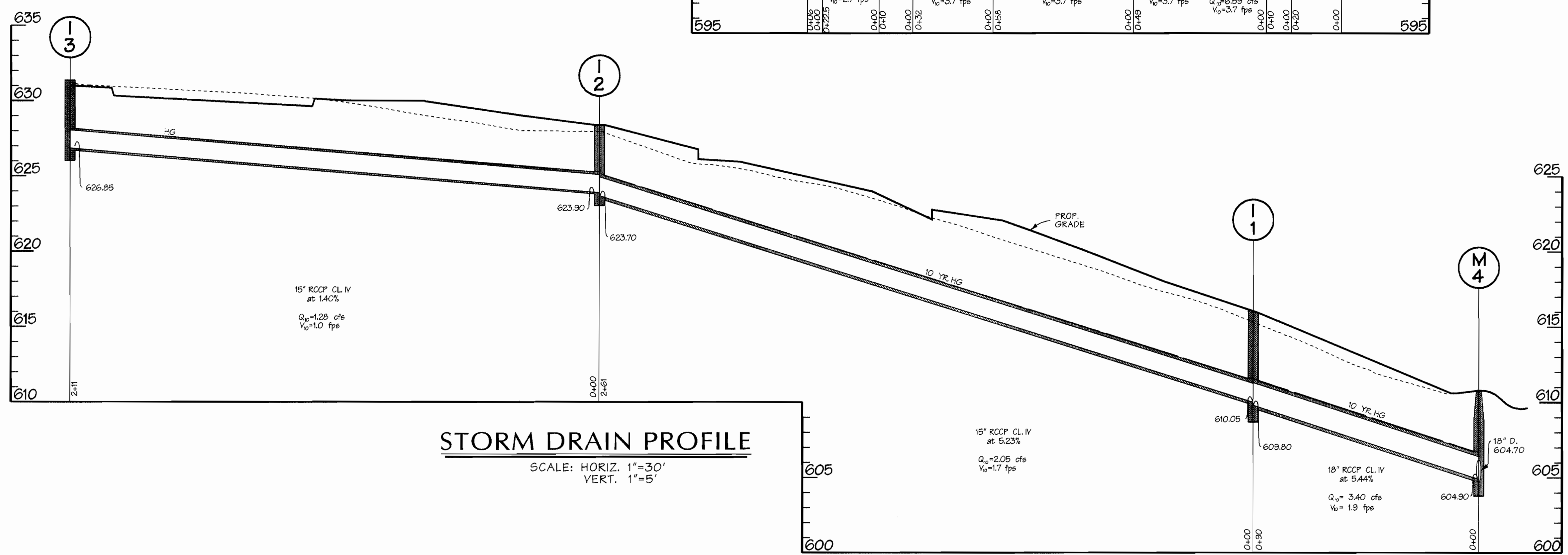




**STORM DRAIN PROFILE**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'



**STORM DRAIN PROFILE**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'



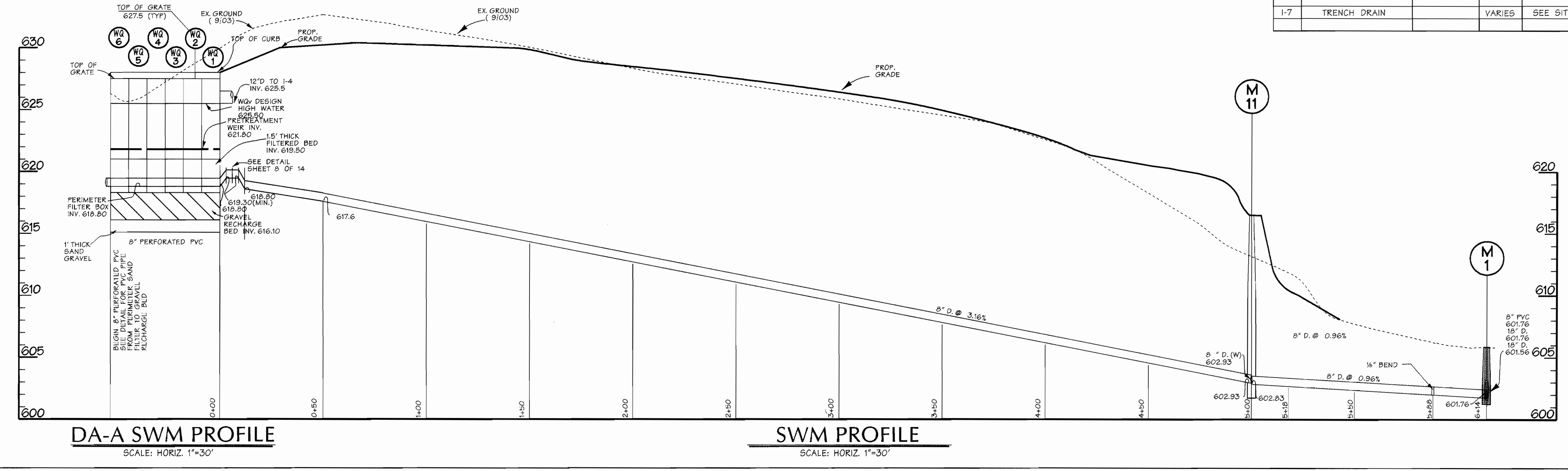
**STORM DRAIN PROFILE**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

**STRUCTURE SCHEDULE**

NO.	DESCRIPTION	DETAIL NO.	TOP ELEV.	LOCATION	COMMENTS
S-1	FES	SD-5.51	N/A	N. 582,851.44	
M-1	St'd Precast Manhole	G-5.11	605.5	N. 582,841.50	
M-2	St'd Precast Manhole	G-5.11	605.5	N. 582,819.63	
M-3	St'd Precast Manhole	G-5.11	607.5	N. 582,762.02	USE CAST IRON GRATING COVER
M-4	St'd Precast Manhole	G-5.11	609.0	N. 582,731.02	DROP MANHOLE
M-5	St'd Precast Manhole	G-5.11*	629.5	N. 582,732.10	* SEE DETAIL
M-6	St'd Precast Manhole	G-5.11*	618.0	N. 582,709.96	* SEE DETAIL
M-7	St'd Precast Manhole	G-5.11	618.0	N. 582,704.59	
M-8	St'd Precast Manhole	G-5.11	627.6	N. 582,673.26	
M-9	St'd Precast Manhole	G-5.11	627.8	N. 582,492.31	
M-10	St'd Precast Manhole	G-5.11	629.8	N. 582,269.90	
M-11	St'd Precast Manhole	G-5.11	616.5	N. 582,745.10	
I-1	Type A-5 Inlet	SD-4.01 or SD-4.40	615.5	SEE SITE PLAN	TC @ CL INLET
I-2	Type A-5 Inlet	SD-4.01 or SD-4.40	628.0	SEE SITE PLAN	TC @ CL INLET
I-3	Type A-5 Inlet	SD-4.01 or SD-4.40	631.1	SEE SITE PLAN	TC @ CL INLET
I-4	YARD INLET	G-5.11	628.3	N. 582,288.56	USE CAST IRON GRATING COVER
I-5	YARD INLET	SPECIAL	627.5	N. 582,273.32	
I-6	S COMB.	SD-4.34	620.63	SEE SITE PLAN	
I-7	TRENCH DRAIN		VARIABLE	SEE SITE PLAN	

**PIPE SCHEDULE**

SIZE	TYPE	LENGTH
8"	PVC	614'
12"	RCCP-CL-IV	313'
15"	RCCP-CL-IV	789.5'
18"	RCCP-CL-IV	239'



**DA-A SWM PROFILE**  
SCALE: HORIZ. 1"=30'

**SWM PROFILE**  
SCALE: HORIZ. 1"=30'

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT  
*Robert J. Weller* 12/21/05  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*John J. ...* 12/28/05  
CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

*...* 1/1/06  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*...* 1/1/06  
DIRECTOR DATE

617-06 **REVISION PROFILE I-5 to M-10**

Date	No.	Revision Description

**Ten Oaks Commercial Center**  
"Triangle Howard, Parcel B"

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Darr McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3383  
Fax 296-4706

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

10/19/05 Date

Professional Engr. No. 13876

DESIGNATION	TRAIL	SECTION / AREA	DATE
17864	B-2	22	10/28/05

**TITLE**  
STORM DRAIN PROFILE

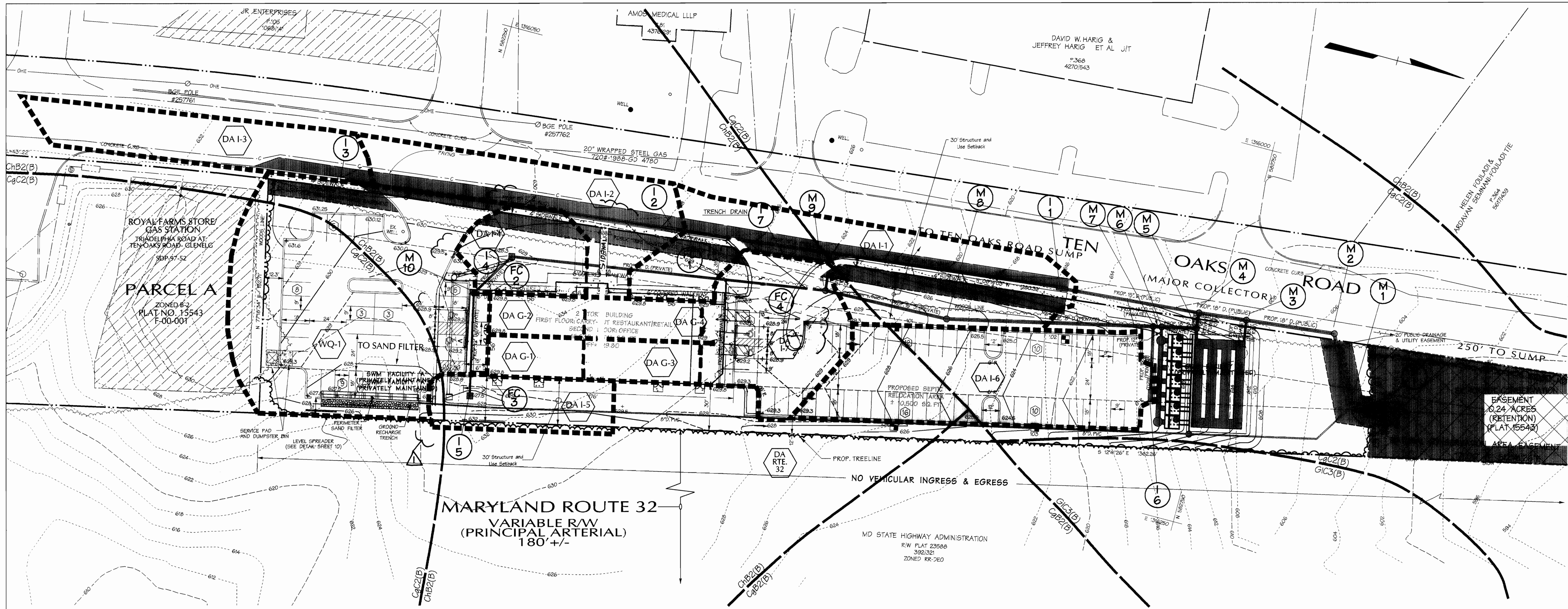
Des. By	Scale	Proj. No.
	1"=30'	02136.00

Drn. By	Date	Page
	10/28/05	8 of 19

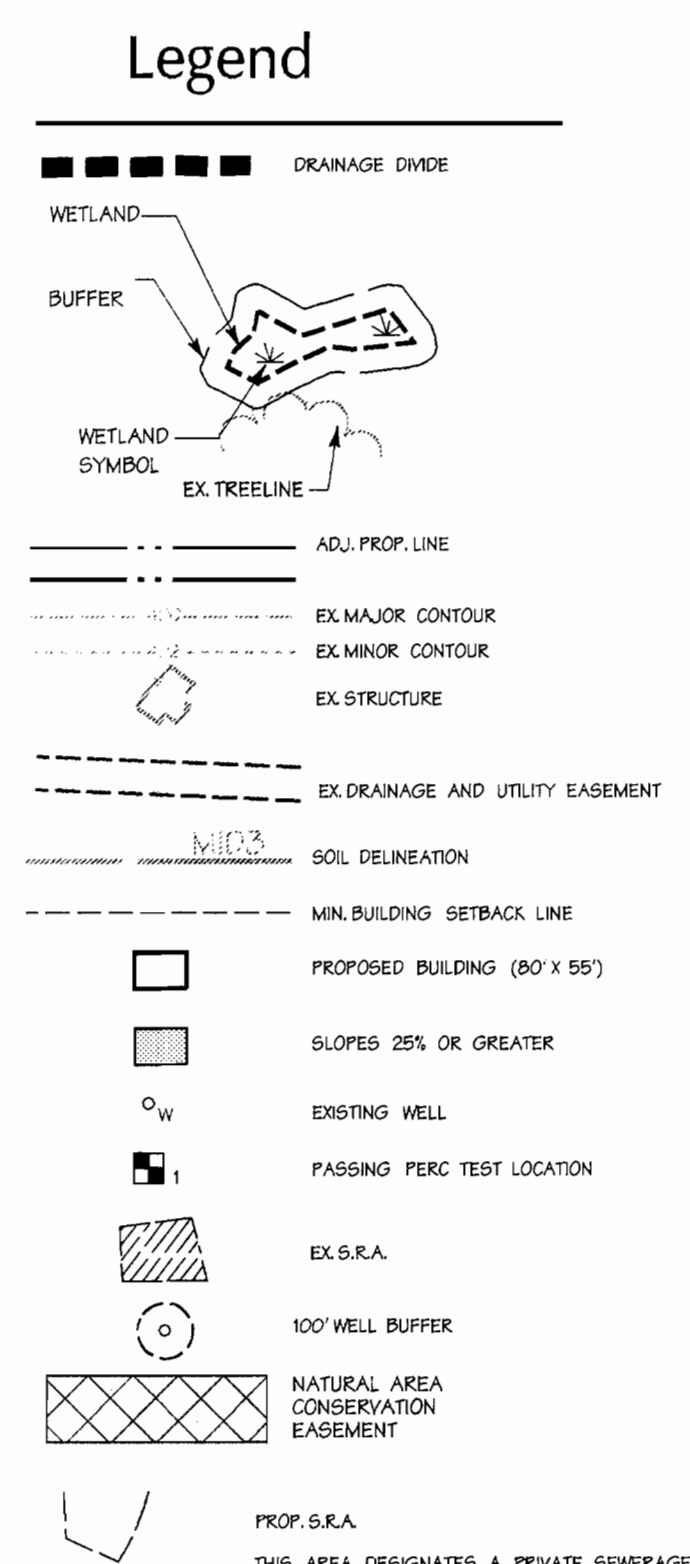
Professional Engr. No. 13876

SPR-04-130





A = 0.16 AC C = 0.95	DA I-3	Z = B-2 IMP. = 100%
A = 0.18 AC C = 0.76	DA I-2	Z = B-2 IMP. = 77%
A = 0.31 AC C = 0.81	DA I-1	Z = B-2 IMP. = 80%
A = 0.08 AC C = 0.35	DA I-5	Z = B-2 IMP. = 13%
A = 0.19 AC C = 0.81	DA I-7	Z = B-2 IMP. = 80%
A = 0.10 AC C = 0.35	DA I-4	Z = B-2 IMP. = 10%
A = 0.04 AC C = 0.95	DA G-3	Z = B-2 IMP. = 100%
A = 0.04 AC C = 0.95	DA G-4	Z = B-2 IMP. = 100%
A = 0.28 AC C = 0.95	DA I-6	Z = B-2 IMP. = 100%
A = 0.39± C = 0.78	WQ 1	Z = B-2 IMP. = 80%
A = 0.04 AC C = 0.95	DA G-1	Z = B-2 IMP. = 100%
A = 0.04 AC C = 0.95	DA G-2	Z = B-2 IMP. = 100%



THIS AREA DESIGNATED A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PUBLIC SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert A. Walker* 12/21/05  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Michael J. ...* 12/21/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*... ..* 1/4/06  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*... ..* 1/5/06  
DIRECTOR DATE

6/2/06 1 Rev. DA. per building shift  
Date No. Revision Description

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Duff McCune Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

A Team of Land Planners,  
Landscape Architects,  
Golf Course Architects,  
Engineers, Surveyors &  
Environmental Professionals

10/19/05  
Date

SECTION NAME: TRIANGLE HOWARD SECTION AREA: N/A SHEET NO.: 7  
PLAT NO.: 17864 BLOCK # 22 TAX MAP: 22-22-02 DISTRICT: 6630.00  
WATER CODE: N/A SEWER CODE: N/A

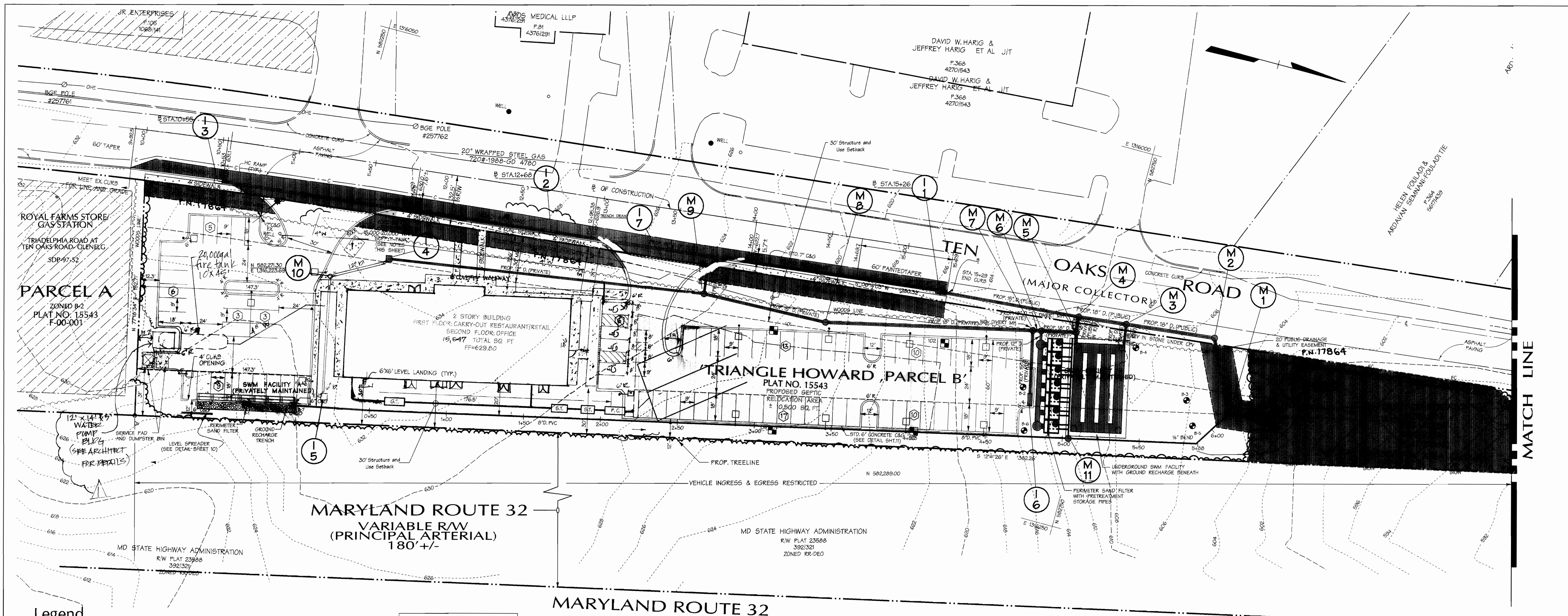
TITLE: DRAINAGE AREA MAP

Des. By: Scale: 1" = 30' Proj. No.: 02136.00  
Dm. By: KDE Date: 10/28/05 7 of 19  
Chk. By: YRK Approved

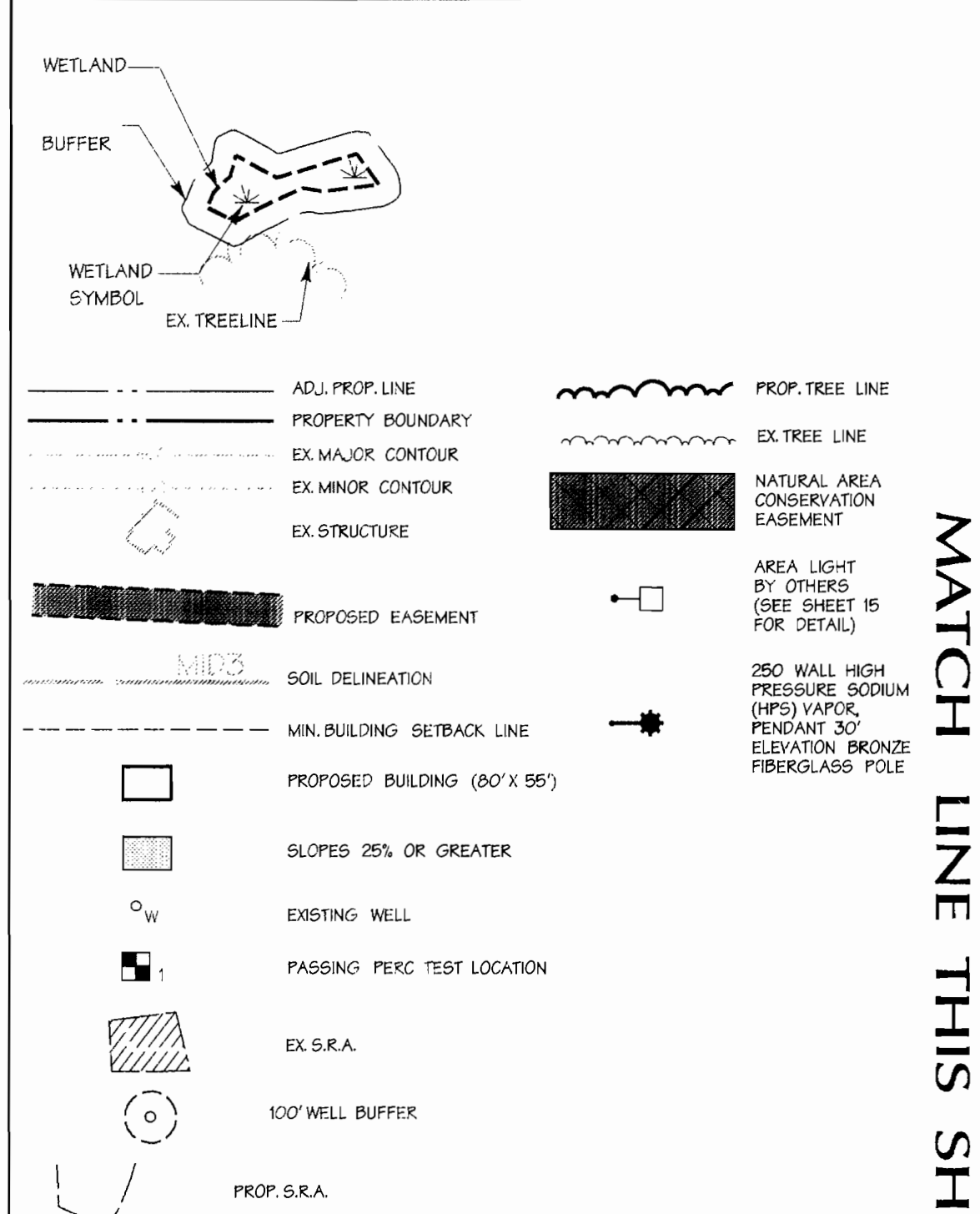
Professional Engr. No. 13876

SPR-04-130





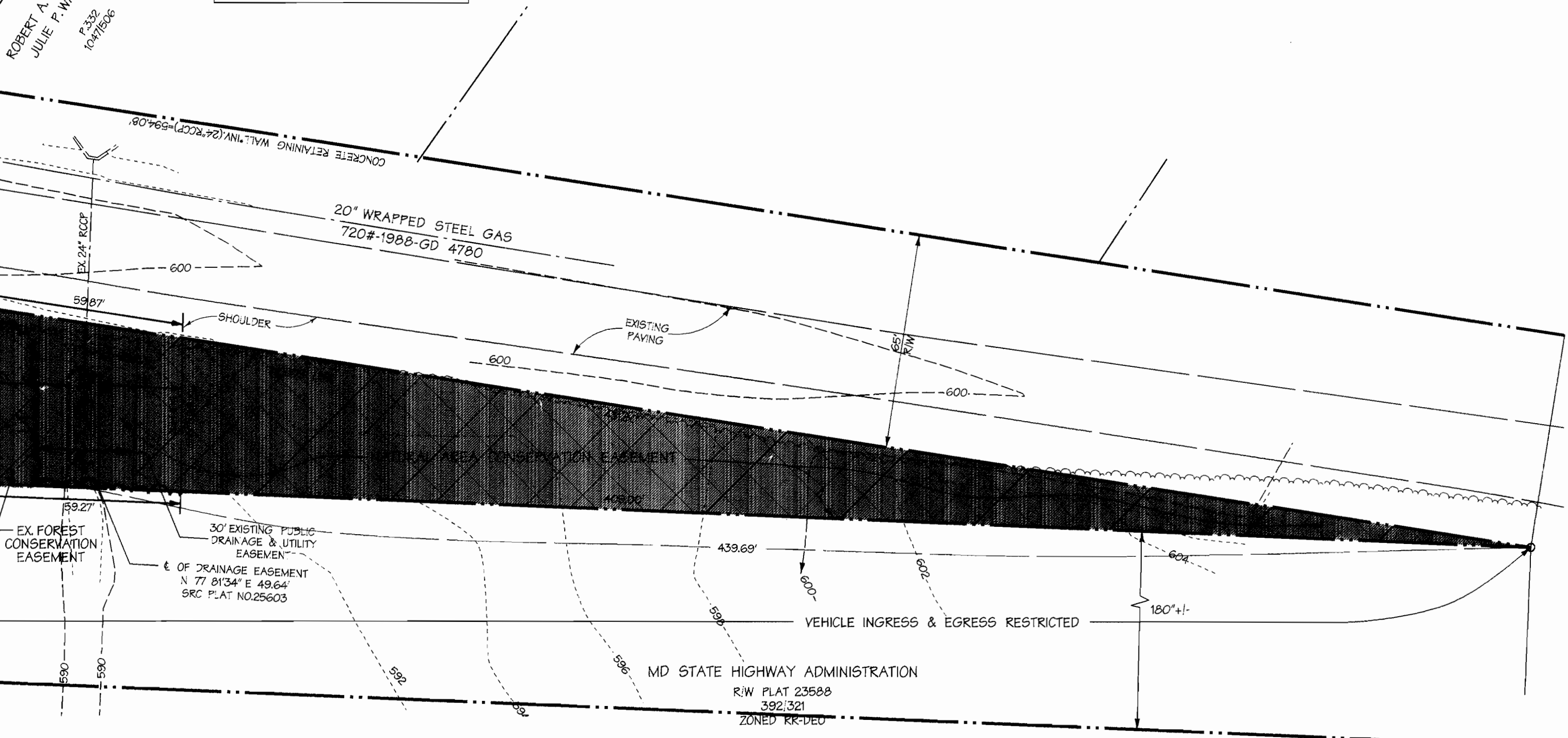
**Legend**



PLAN VIEW  
1"=30'

LINE TABLE		
L3	N21°15'16"E	35.38'
L4	N77°18'34"E	34.91'
L5	S81°16'56"W	21.01'
L6	N12°34'28"W	17.10'
L7	S83°45'57"W	15.00'
L8	S12°34'28"E	18.11'
L9	S69°12'46"W	31.13'
L10	N09°42'10"W	97.00'

MATCH LINE THIS SHEET



PLAN VIEW  
1"=30'

NOTE:  
1. APPROXIMATE LOCATION FOR 15,000-20,000 GALLON FIBERGLASS WATER STORAGE TANK  
2. CONTRACTOR SHALL CONTACT THE HOWARD COUNTY DEPARTMENT OF FIRE AND RESCUE TO APPROVE TANK AND TANK LOCATION.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Wain* 12/21/05  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Mark K...* 12/20/05  
CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

*...* 1/14/06  
CHIEF DIVISION OF LAND DEVELOPMENT DATE

*Mark S. ...* 1/9/06  
DIRECTOR DATE

4/21/06 1 Shift bldg. to the south adj. plan & s/w  
Date No. Revision Description

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Deft-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax: 296-4705

A Team of Land Planners,  
Landscape Architects,  
Civil Engineers,  
Engineers, Surveyors and  
Environmental Professionals

10/19/05  
Date

**PROFESSIONAL ENGINEER**

Professional Engr. No. 13876

Des. By	RLH	Scale	1" = 30'	Proj. No.	02136.00
Drn. By	KDE	Date	10/28/05		
Chk. By	REL	Approved		2 of 19	



Sheet Index

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	GRADING AND SEDIMENT CONTROL PLAN
4	SEDIMENT CONTROL DETAILS
5	SEDIMENT CONTROL DETAILS
6	SEDIMENT CONTROL NOTES
7	STORM DRAIN DRAINAGE AREA MAP
8	STORM DRAIN PROFILES
9	STORM DRAIN PROFILES
10	SWM PLAN AND DETAILS
11	SWM FACILITY A PLAN AND SECTIONS
12	SWM FACILITY B PLAN
13	SWM NOTES AND DETAILS
14	TEN OAKS ROAD STRIPING PLAN
15	DETAIL SHEET
16	LANDSCAPE PLAN
17	WASTEWATER SYSTEM PLAN
18	WASTEWATER SYSTEM PLAN
19	WASTEWATER SYSTEM PLAN

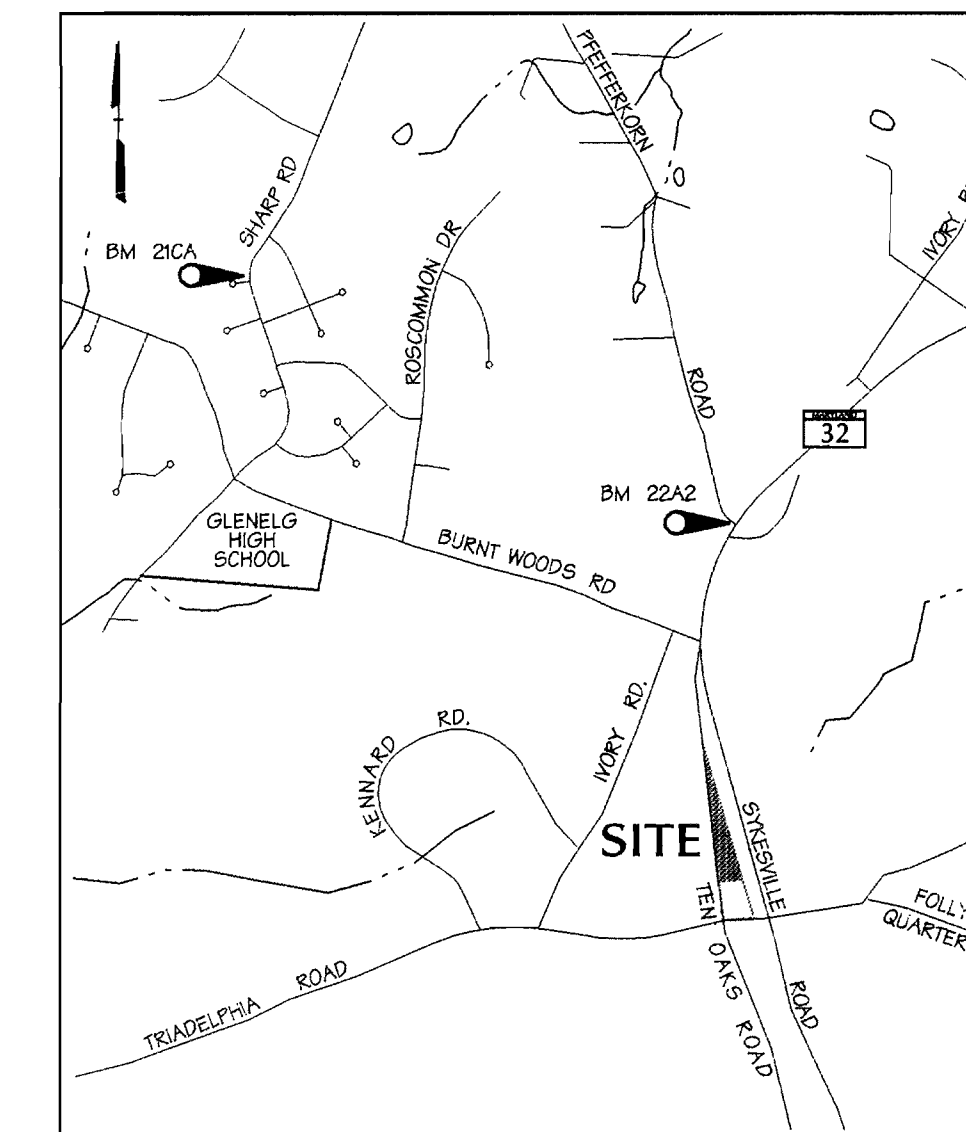
General Notes

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs be in place prior to the placement of any asphalt.
- All plan dimensions are to face of curb unless otherwise noted.
- The existing topography is taken from field run survey with two foot contour intervals prepared by Darr McCune Walker, dated September, 2003. Boundary information shown hereon is based upon a plat entitled "TRIANGLE HOWARD PARCELS A & B", prepared by Vogel & Associates Inc. and recorded among the Land Records of Howard County.
- The courses and coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County monument nos. 21CA and 22A2 were used for this project.
- Water is private (well).
- Sewer is private (septic).
- Stormwater Management for this project will be private perimeter sand filters, gravel recharge trenches and a small extended detention facility. Each BMP will be owned and maintained by the owner, successor, or assignee.
- Any evidence of above ground utilities shown hereon is based solely on field location. No comparison to, or enhancement has been made from any utility drawings or plans. The location of any underground utility shown hereon is approximate and must be verified.
- There is no floodplain on this site.
- The wetlands delineation for this project was approved and appeared on plat 15643 and F-00-01.
- Traffic study for this project was prepared by The Traffic Group, dated 11/13/03.
- Project background information:  
 Subdivision Name: Triangle Howard Parcels A and B\*  
 Tax Map: 22  
 Lot/Parcel: Parcel B  
 Zoning: B-2  
 Election District: 3  
 Total Parcel Area: 2.4095 AC.  
 File Numbers: SDP-00-003, BA Case No. 98-14 E & VWP 97-53, F-06-83  
 Plat No. 15643, F-00-001, BA 98-14 E & V was for a previously proposed use (propane facility) and is no longer applicable to this site.
- All outdoor lighting shall comply with the requirements of Zoning Section 134.
- This project complies with the requirement of section 16,1200 of the Howard County Code for Forest Conservation. The forest conservation obligations for Parcel A and B, was met by the creation of a 0.24 Ac. reforestation Forest Conservation Easement on Parcel B and a fee-in-lieu payment of \$24,611.40 to the Howard County Forest Conservation Fund for 1.41 Ac. of reforestation per F-00-01, Plat No. 15643.
- The existing utilities were located from available records and field survey prepared by Darr McCune Walker, Inc. Contractor must test pit, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact locations.
- Soils analysis report prepared by Hills-Carnes dated February 5, 2004.
- Handicap parking details shall be in accordance with 'MD Building Code for the Handicapped' section 5.01-7.05.
- Any damage to county owned right-of-way shall be corrected at the contractor's expense.
- All sidewalks shall be cross sloped at 1/4" per foot.
- Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
- All inlets shall be constructed in accordance with Howard County standards or MSHA standards as specified on structure schedule.
- All materials and construction shall be in strict accordance with the Howard County Design Manual, Volume IV.
- Building setback restrictions from property lines and right-of-way lines of any public road shall be in accordance with Triangle Howard Plat 15643.
- All on site driveways and parking areas to be privately maintained.
- All curb radii are 5 foot unless otherwise labeled and all curbs are to be 6" in height.
- All equipment and tools to be placed so as not to interfere with vehicular or pedestrian movement unless specified.
- Contractor shall be responsible for any damage to existing property which may occur as a result of his negligence during the execution of work.
- All paving areas indicated are private.
- All proposed HC ramps shall be in accordance with current ADA standards.
- This property is located outside of the Metropolitan District.
- Electric, gas, cable and telephone lines designed by others.
- No clearing, grading or construction is permitted within the wetland limits, 25' wetland buffer or retention forest conservation easement.
- Landscaping shall be provided in accordance with the Landscape Plan on sheet 12 and financial surety in the amount of \$26,880.00 (\$17,400.00 for 58 shade trees, \$3450.00 for 23 evergreen trees and \$6030.00 for 201 shrubs) has been posted as part of the DPW developer's agreement.
- This property is located outside of the Metropolitan District.
- The Howard County Health Department has signed and approved the Perc Certification Plan, signed on 11-5-03.
- Groundwater Appropriation Permit Number -- HD2,001,600 # (c.2).....
- Maximum Daily Flow = 2,065 GPD
- All approved shells must have a water meter installed on them. All future building permits will require at least 6 months of water data on all of the shells.
- All sidewalks at intersections to have handicap ramps.

# Site Improvements & Building Additions For Ten Oaks Commercial Center 'Triangle Howard, Parcel B'

Howard County

Maryland



VICINITY MAP

SCALE: 1"=2000'

Benchmark

The courses and coordinates shown hereon are referred to the system of coordinates established in the Maryland Coordinate System - NAD 83 (1983) horizontal and NAVD 83 vertical and are based on the following Howard County Geodetic Control Stations provided by the Howard County Departments of Public Works, Survey Division:

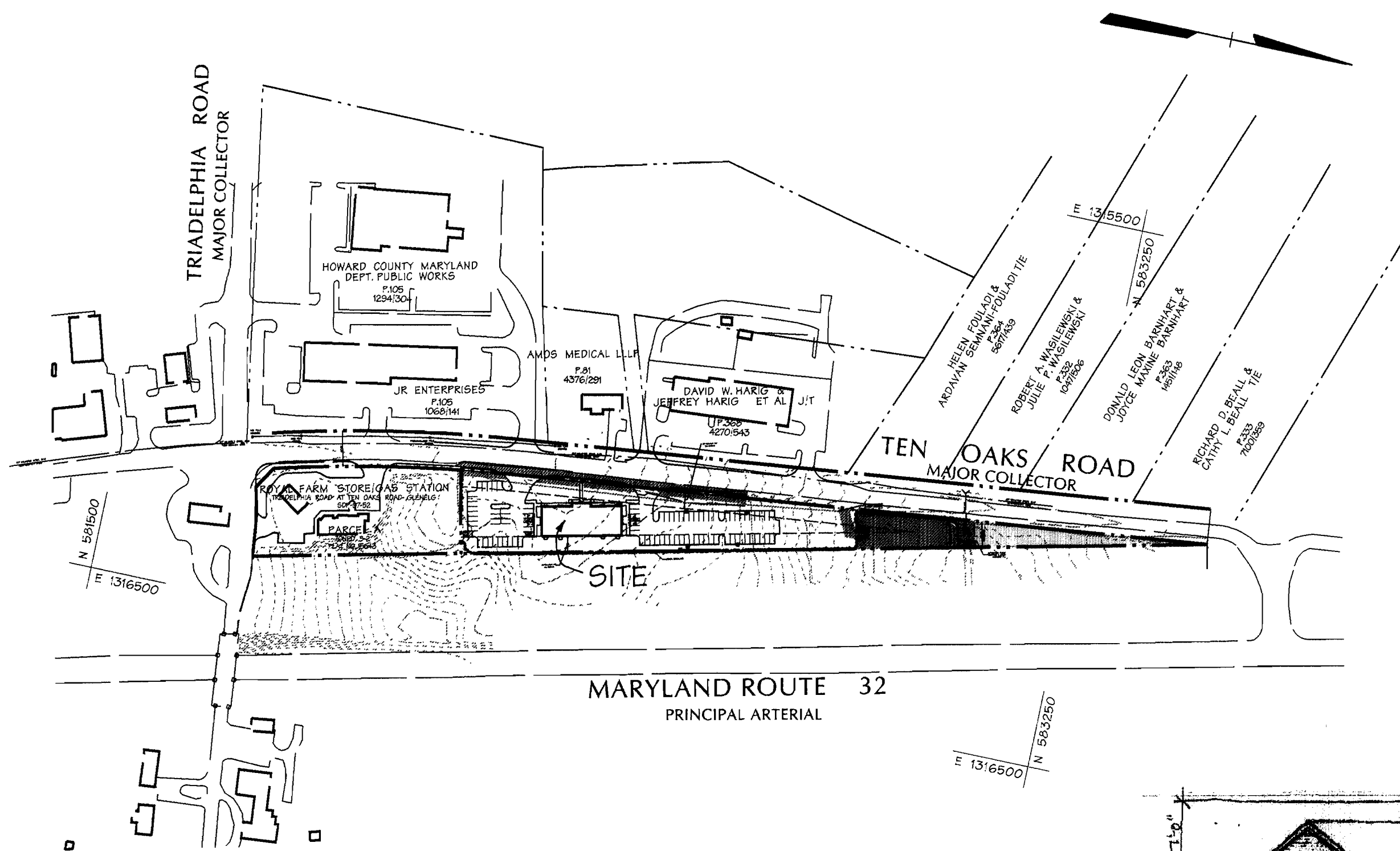
DESIGNATION	NORTH (FT)	EAST (FT)	ELEVATION (FT)
22CA	58889.368	131123.695	412.651
22A2	58598.551	1316283.882	620.176

Bench Mark #21CA  
Standard Howard County stamped aluminum disc set on a concrete monument set outside the paving at the southwest corner of the intersection of Shary Road and Our Mile Court at a distance of 215 feet from the face of curb.

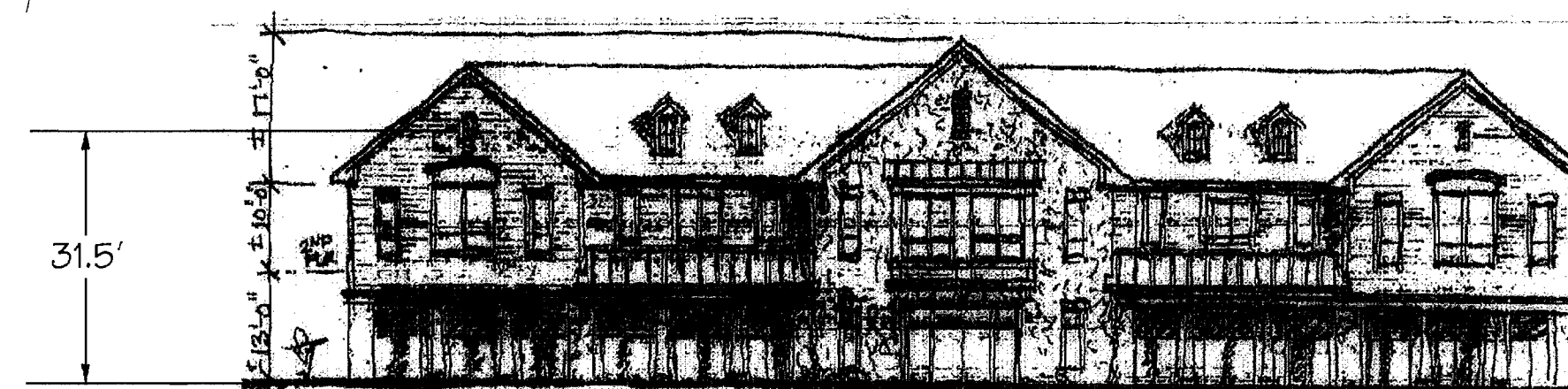
Bench Mark #22A2  
Standard Howard County stamped aluminum disc set on a concrete monument set outside the paving at the southwest corner of the intersection of Route 32 and Pfefferkorn Road at a distance of 24.5 feet from the centerline of Pfefferkorn Road.

ADDRESS CHART

PARCEL NUMBERS	STREET ADDRESS
PARCEL B PARCEL 55	3881 TEN OAKS ROAD



Overall Property Outline  
Scale: 1"=200'



TEN OAKS ROAD (EAST) ELEVATION

SITE ANALYSIS DATA CHART

1. General Site Data

- Present Zoning: B-2 per the 02/02/04 Comprehensive Zoning Plan.
  - Applicable DPZ File References: SDP-00-003 BA case no. 98-14 E & V, Plat No. 15643, F-00-001, BA 98-14 E & V was for a previously proposed use (propane facility) and is no longer applicable to this site.
  - Proposed Use of Site or Structure(s): commercial office building, carry-out restaurant, retail and parking.
  - Proposed Water and Sewer Systems:  Public  Private (well and septic)
  - Any other relevant information: N/A
2. Area Tabulation
- Total Project Area: 2.4095 Acres (104,960 SF)
  - Area of This Plan Submission: 2.4095 Acres (104,960 SF)
  - Limit of Disturbed Area: 2.2 \_\_\_\_\_ Acres
  - Building Coverage of Site: 0.41 Acres and 16.9% of Gross Area (Proposed)
  - Area of Floodplain: 0 Acres
  - Area of steep slopes: 0 Acres
  - Net area of site: 2.4095 Acres

3. Parking Space Data

- Floor space on each level per building per use:  
 FIRST FLOOR: 8000 SF (Carry-out restaurant / retail)  
 SECOND FLOOR: 2547 SF (Office)  
 TOTAL FLOOR AREA OF BUILDING: 10547 SF
- Maximum number of employees, tenants on-site per use: N/A
- Number of Parking Spaces Required by Zoning Regulations and Criteria:  
 3000 SF CARRY-OUT RESTAURANT @ 8/1000 = 18sp  
 (MAXIMUM SEATS TO BE PROVIDED = 30)  
 5000 SF RETAIL @ 5/1000 = 25sp  
 1250 SF OFFICE @ 3.3/1000 = 68sp  
 TOTAL REQUIRED = 111sp
- Total Number of Parking Spaces Provided On-Site: 81 (13 sp. excess)
- Number of Handicapped Parking Spaces Provided: 4 (HC included in total)
- Proposed building is two stories.

(9256 SF incl. porch & stairs)  
(8940 SF incl. porch & stairs)  
(18,196 SF incl. porch & stairs)

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

*Richard W. Wells*  
COUNTY HEALTH OFFICER 12/28/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Michael*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION 12/28/05 DATE

*Chris Hammet*  
CHIEF, DIVISION OF LAND DEVELOPMENT 1/10/06 DATE

*Mark A. Gagliardi*  
DIRECTOR 1/10/06 DATE

Date	No.	Revision Description
6-21-06	1	rev. bldg. sq. footage in Site Analysis

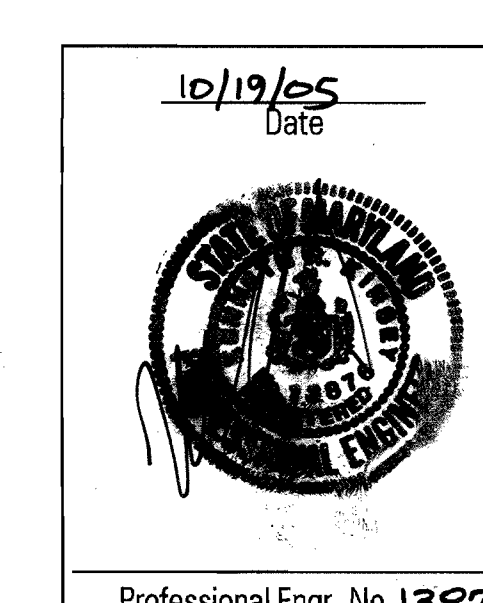
Ten Oaks Commercial Center  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Darr McCune Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705

A Team of Land Planners,  
Landscape Architects,  
Civil Engineers, Surveyors &  
Environmental Professionals



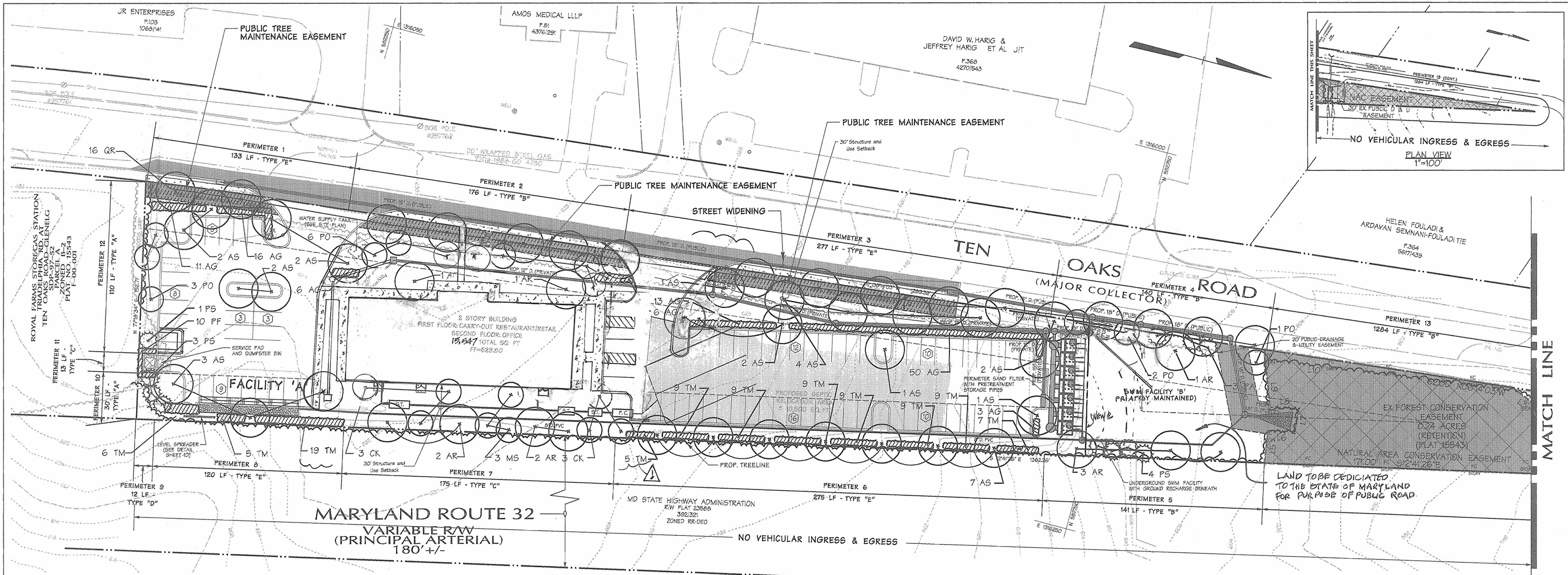
SECTION NAME	SECTION AREA	PARCEL #
TRIANGLE HOWARD	N/A	B
PLAT # 17864	10 B-2	6030.00
TAXING MAP # 22	360	
SEWER CODE	N/A	

TITLE: COVER SHEET

Des. By: RHL Scale: 1"=200' Proj. No.: 02136.00  
 Dwn. By: KDE Date: 10/28/05  
 Chk. By: KKL Approved: 1 of 19

SDP-04-130





**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROAD								ADJACENT TO PERIMETER PROPERTIES	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 10	P 12
LANDSCAPE TYPE 'A'									30 LF	110 LF
LANDSCAPE TYPE 'B'									1204 LF	
LANDSCAPE TYPE 'C'										13 LF
LANDSCAPE TYPE 'D'										12 LF
LANDSCAPE TYPE 'E'										
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1204	N/A
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED										
SHADE TREES	3	4	7	3	3	7	4	3	1	2
EVERGREEN TREES	4	4	4	4	4	9	1	1	1	1
SHRUBS	35	69	69	69	69	30	1	1	1	1
NUMBER OF PLANTS PROVIDED*										
SHADE TREES	3	3	7	2	3	7	4	3	1	1
EVERGREEN TREES	1	1	1	1	1	1	1	1	1	1
OTHER TREES (2:1 SUBSTITUTION)	35	69	69	69	69	30	1	1	1	1

NOTE: STREET TREES WILL BE PROVIDED @ 140 LF. 16 STREET TREES SHOWN ON THIS SHEET.  
 NOTE: THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS.  
 NOTE: 7 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 3.5 SHADE TREES, 14 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 14 EVERGREENS, 3 EVERGREENS HAVE BEEN SUBSTITUTED FOR 15 SHADE TREES, 20 SHRUBS HAVE BEEN SUBSTITUTED FOR 2 EVERGREENS.  
 \* SHADE TREE VALUE FOR PERIMETER 9 IS 0.2, THEREFORE THE NUMBER OF PLANTS REQUIRED IS LISTED AS 0. SHADE TREE VALUE FOR PERIMETER 11 IS 0.3 THEREFORE THE NUMBER OF PLANTS REQUIRED IS LISTED AS 0.

**SCHEDULE B**

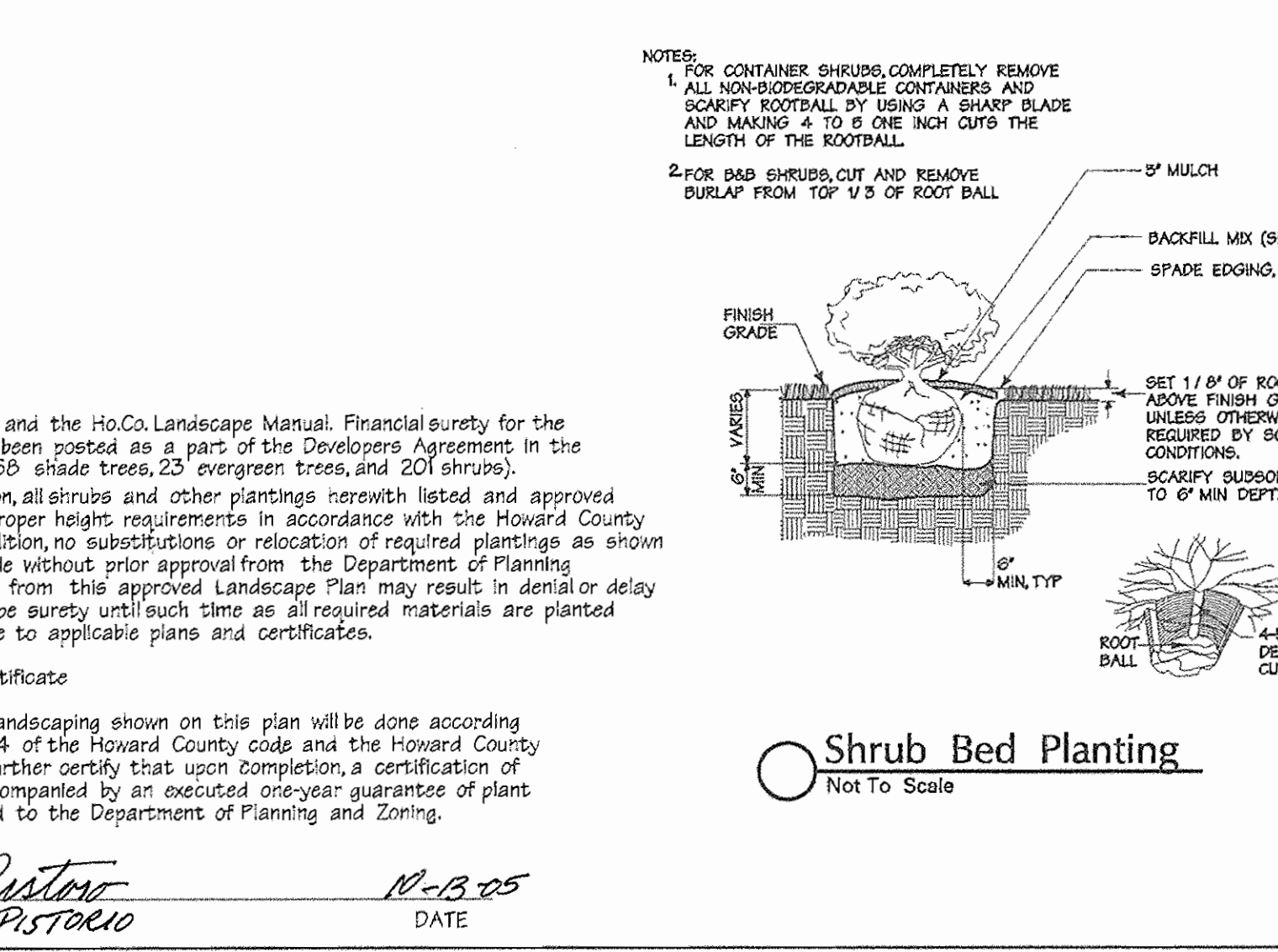
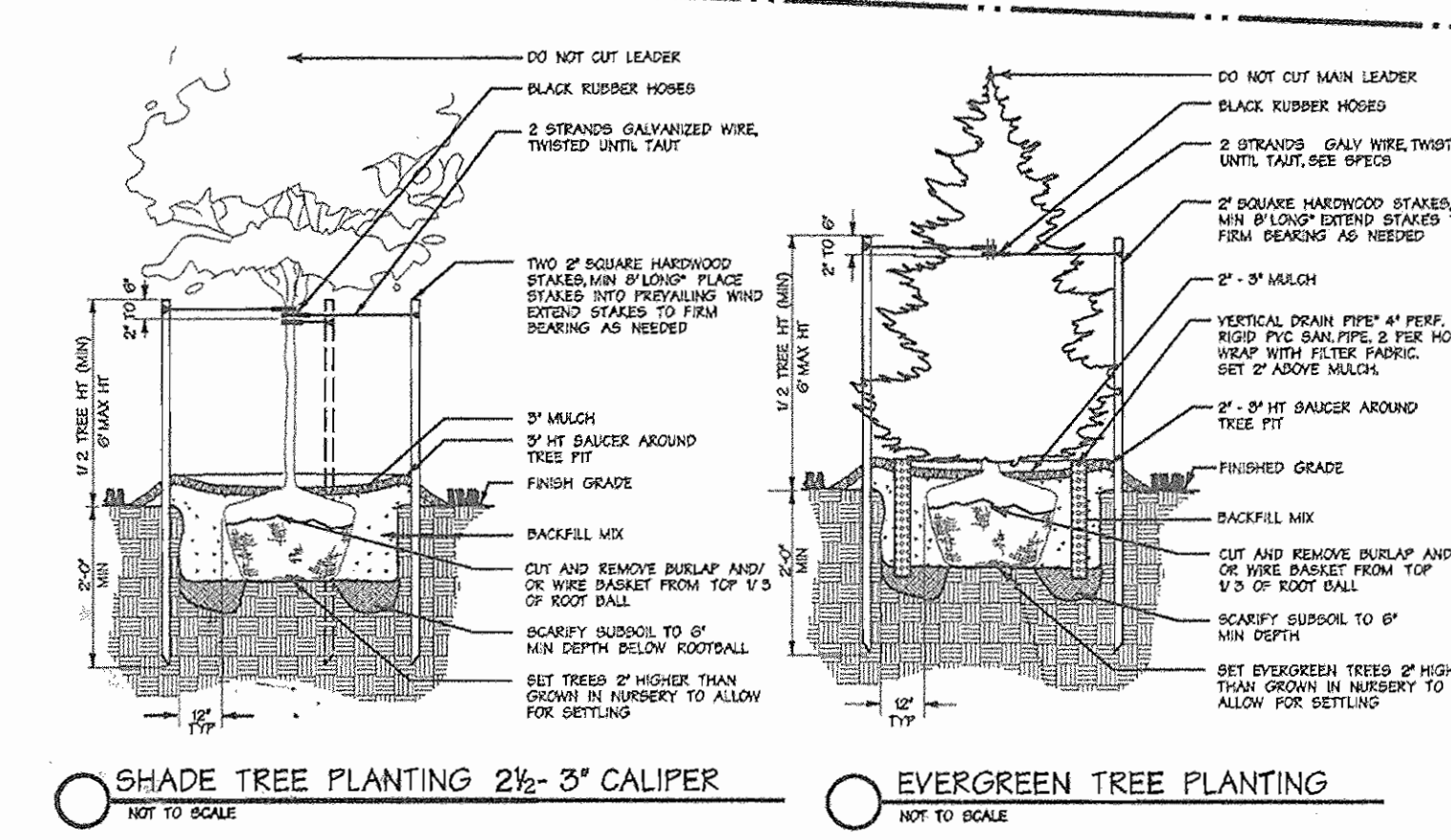
NUMBER OF PARKING SPACES.....	87
INTERNAL ISLANDS REQUIRED.....	5
INTERNAL ISLANDS PROVIDED.....	5
200 SQ. FT. ISLAND.....	5
SHADE TREES REQUIRED.....	5
120 SPACES.....	5
SHADE TREES PROVIDED.....	5

**PLANT LIST**

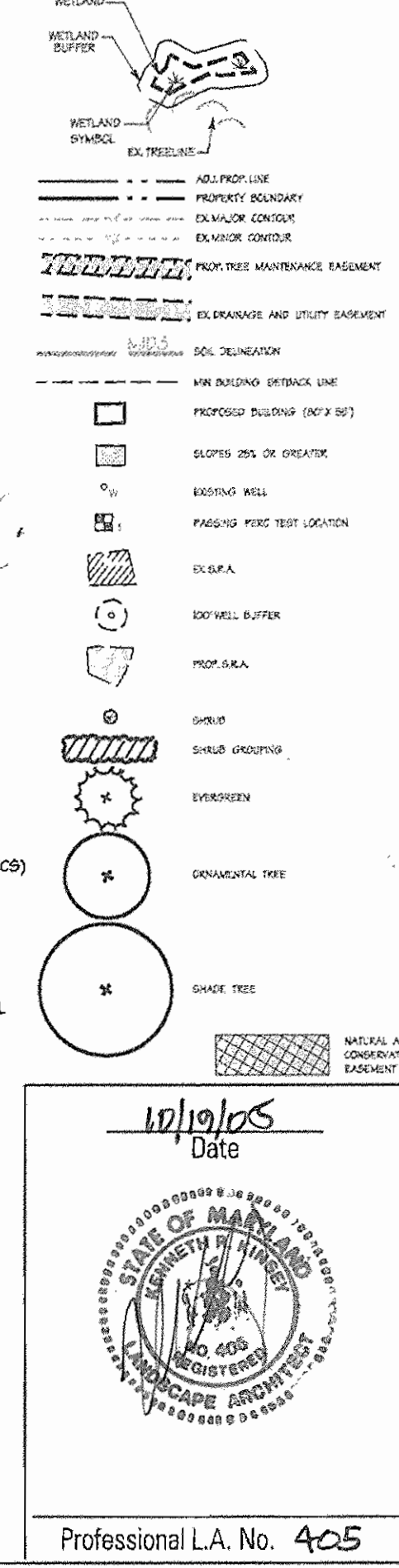
QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
<b>SHADE TREES</b>				
10	AR	ACER RUBRUM 'OCTOBER GLORY' October Glory Red Maple	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
27	AS	ACER SACCHARUM 'GREEN MOUNTAIN' Sugar Maple	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
16	QR	QUERCUS RUBRA Northern Red Oak	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
<b>EVERGREEN TREES</b>				
3	PA	PICEA ABIES Norway Spruce	6" - 8" HT.	B & B
8	PS	PINUS STROBUS Eastern White Pine	6" - 8" HT.	B & B
<b>ORNAMENTAL TREES</b>				
6	CK	CORNUS KOUSA Kousa Dogwood	8" - 10" HT.	B & B
3	MS	MAGNOLIA STELLATA Star Magnolia	8" - 10" HT.	B & B
12	PO	PRUNUS x INCAM 'OKAME' Okame Cherry	8" - 10" HT.	B & B
<b>SHRUBS</b>				
109	AG	ABELIA GRANDIFLORA Glossy Abelia	2-1/2' x 3' HT.	B & B OR CONTAINER
10	PF	PHOTINIA X FRASERI Red Tip Photinia	6' HT.	B & B OR CONTAINER
92	TM	TAXUS x MEDIA 'DENSIFORMIS' Yew	2-1/2' x 3' HT.	B & B OR CONTAINER

**General Planting Notes**

- All plant material to meet A.A.N. Standards.
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by ICANN.
- No substitutions to be made without consent of Landscape Architect or Owner. All beds to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
- Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection with acceptance all electric, water, drainage and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- Contractor shall notify Miss Utility 72 hours prior to construction.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions Section 16-124 of the Ho.Co. code and the Ho.Co. Landscape Manual. Financial surety for the required landscaping has been posted as a part of the Developer's Agreement in the amount of \$26,850.00 (50 shade trees, 23 evergreen trees, and 20 shrubs).
- At the time of installation, all shrubs and other plantings (as listed and approved for this site, shall be of proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings as shown on this plan may be made without prior approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such approved materials are planted and/or revisions are made to applicable plans and certificates.
- Developer's/Builder's Certificate
- I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16-124 of the Howard County code and the Howard County Landscape Manual. I/we further certify that upon completion, a certification of landscape installation, accompanied by an executed one-year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.



**Legend**



APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 Robert J. Walker  
 COUNTY HEALTH OFFICER 12/21/05  
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 12/21/05  
 CHIEF DEVELOPMENT ENGINEERING DIVISION  
 Chief, Division of Land Development  
 Director  
 12/21/05

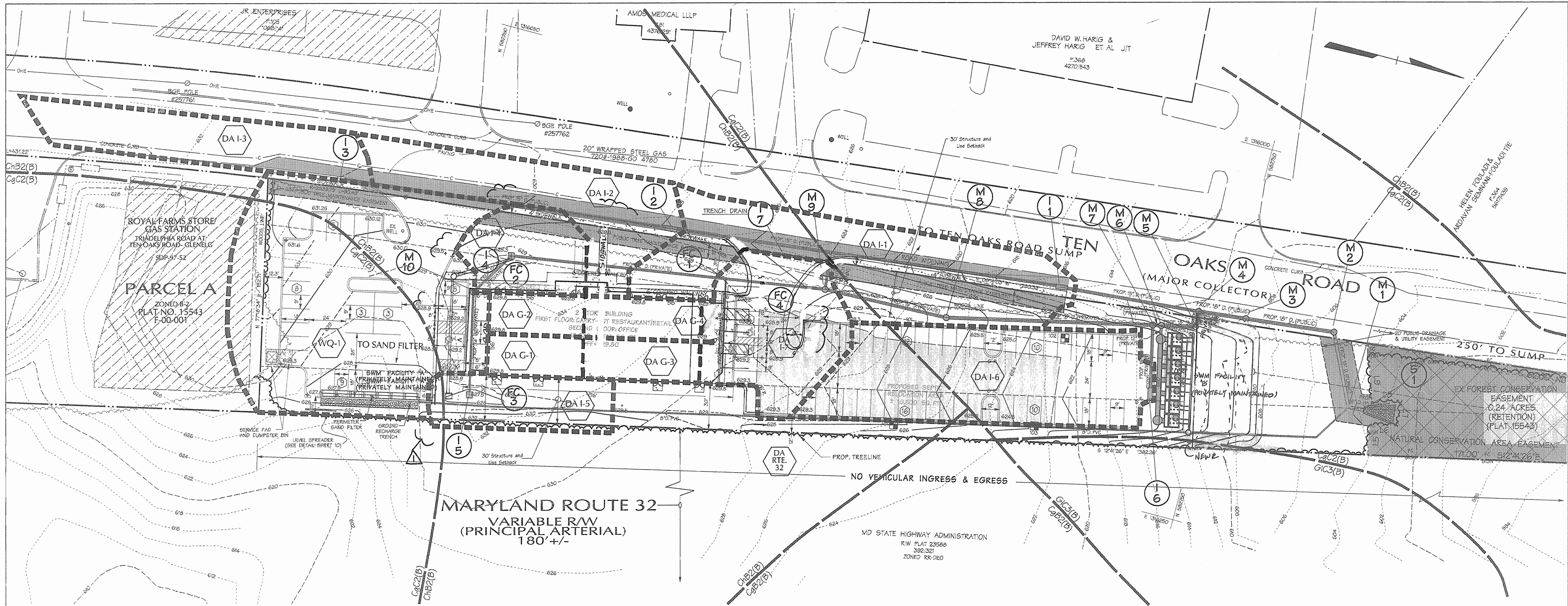
**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'  
 OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815  
 DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD.  
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 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3333  
 Fax 296-4705  
 A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

**LANDSCAPE PLAN**

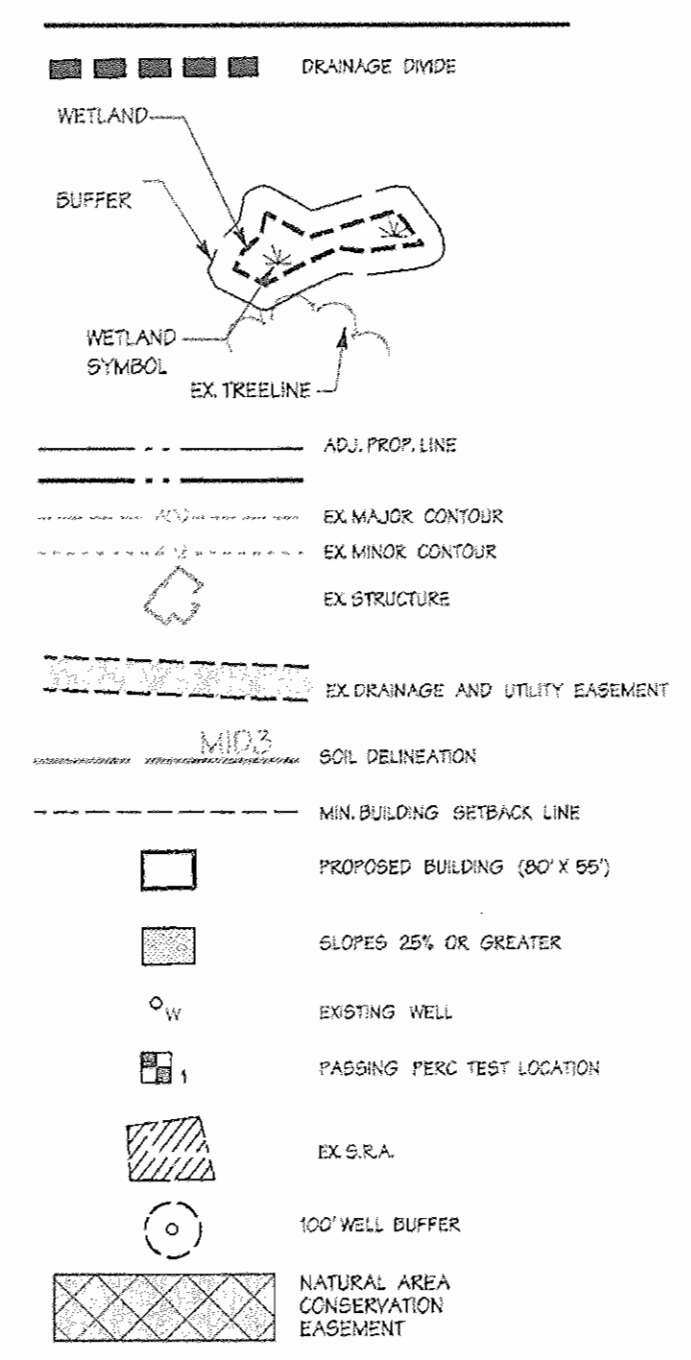
Des. By CRH Scale 1" = 30' Proj. No. 02136.00  
 Dwn. By CRH Date 10/28/05  
 Chk. By KRK Approved 16 of 19





A = 0.16 AC C = 0.95	DA I-3	Z = B-2 IMP. = 100%
A = 0.18 AC C = 0.76	DA I-2	Z = B-2 IMP. = 77%
A = 0.31 AC C = 0.81	DA I-1	Z = B-2 IMP. = 80%
A = 0.08 AC C = 0.35	DA I-5	Z = B-2 IMP. = 13%
A = 0.19 AC C = 0.81	DA I-7	Z = B-2 IMP. = 80%
A = 0.10 AC C = 0.35	DA I-4	Z = B-2 IMP. = 10%
A = 0.04 AC C = 0.95	DA G-3	Z = B-2 IMP. = 100%
A = 0.04 AC C = 0.95	DA G-4	Z = B-2 IMP. = 100%
A = 0.28 AC C = 0.95	DA I-6	Z = B-2 IMP. = 100%
A = 0.39± C = 0.78	WQ 1	Z = B-2 IMP. = 80%
A = 0.04 AC C = 0.95	DA G-1	Z = B-2 IMP. = 100%
A = 0.04 AC C = 0.95	DA G-2	Z = B-2 IMP. = 100%

**Legend**



PROP. S.R.A.  
THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 GPD AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PUBLIC SEWERAGE EASEMENT. RECONSTRUCTION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert Wade* 12/16/05  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Shelby L. ...* 12/21/05  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*David ...* 1/14/06  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Paul ...* 1/31/06  
DIRECTOR DATE

10/10/07	REMOVE 72" S.W.M. PIPES FROM DESIGN
6/1/06	REV. P.A. FOR BUILDING SHIFT

**Ten Oaks Commercial Center**  
'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Doherty-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-8333  
Fax 296-4705

A Team of Land Planners,  
Landscape Architects,  
Golf Course Architects,  
Engineers, Surveyors &  
Environmental Professionals

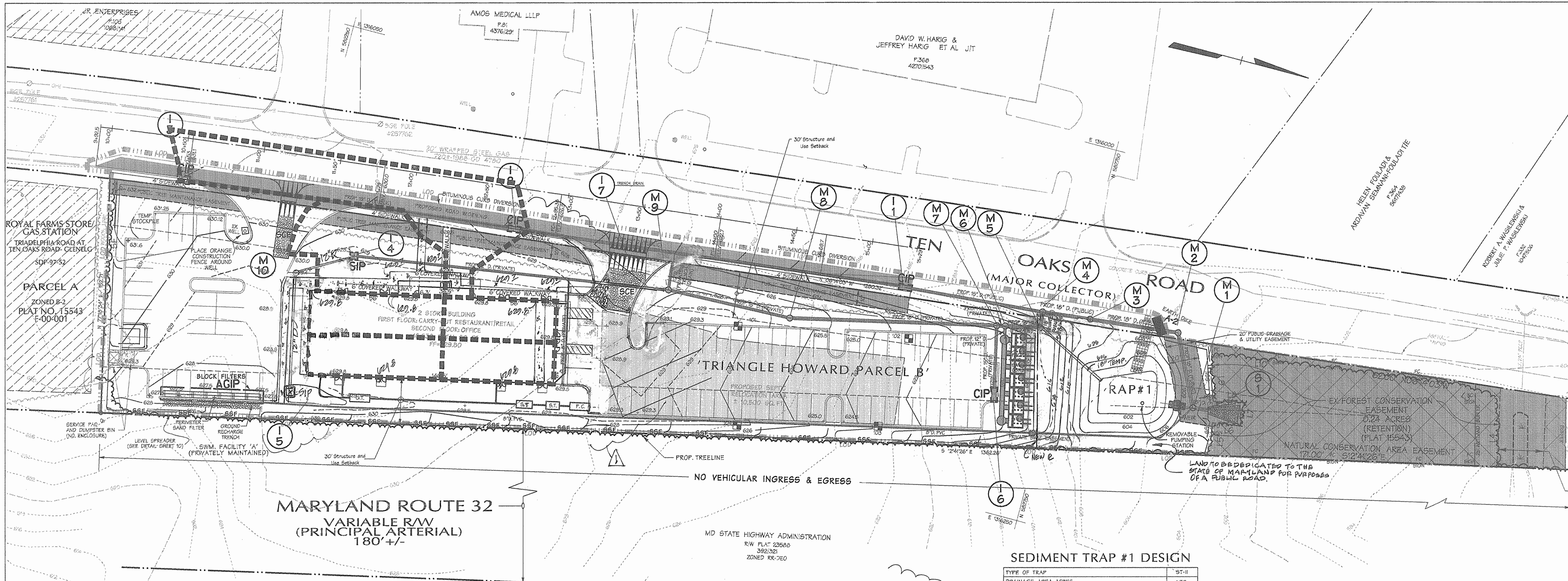
10/19/05  
Date

Professional Engr. No. 13876

SUBDIVISION NAME	SECTION AREA	N.A.	MAP/PARCEL #
TRIANGL	15	B-2	22
PLAT NO.	TAX MAP #	BLK. SYMB.	BLK. TRCF
17864	15	B-2	22
WATER CODE	N/A	SEWER CODE	N/A
TITLE			
DRAINAGE AREA MAP			
Des. By	Scale 1" = 30'	Proj. No.	02136.00
Dim. By	KDE	Date	10/28/05
Chk. By	KCK	Approved	7 of 19

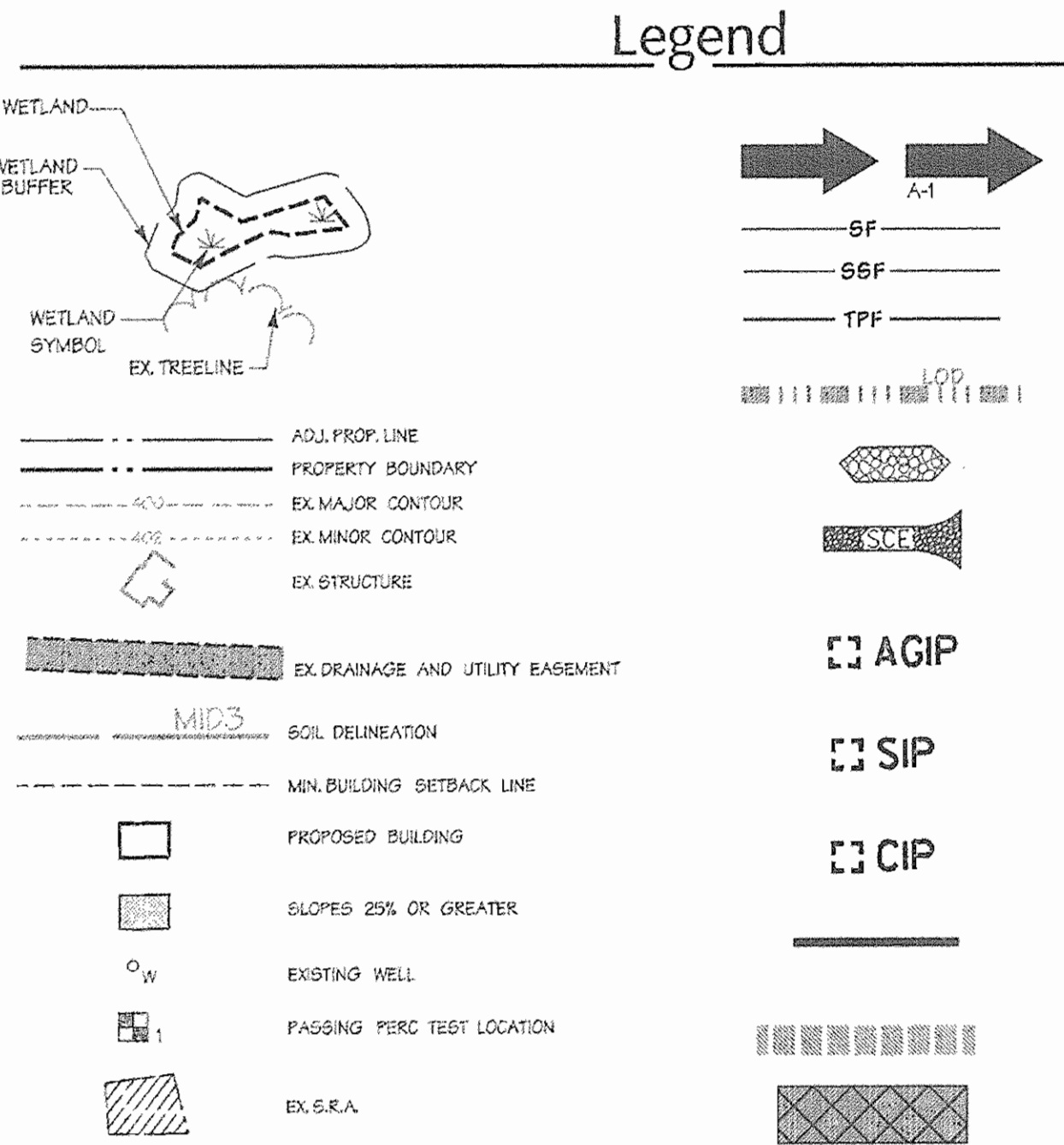
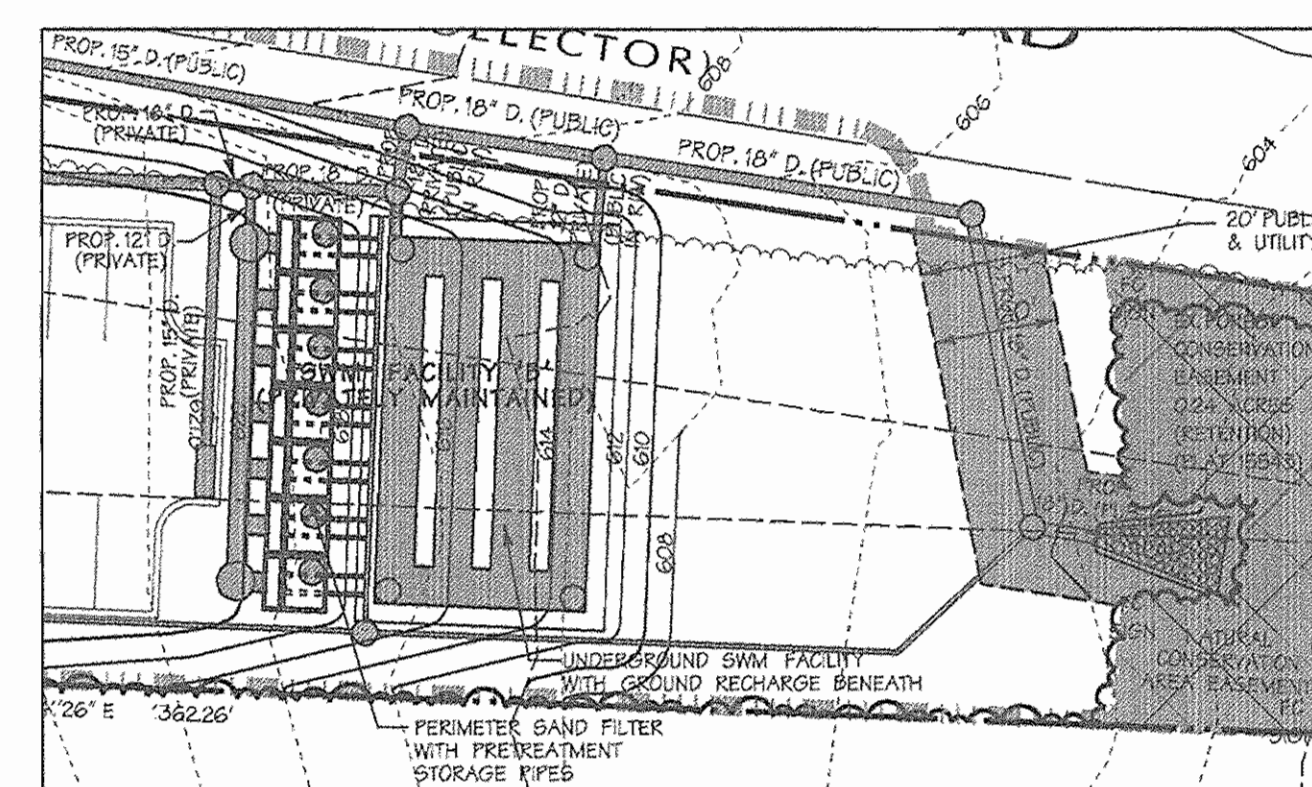
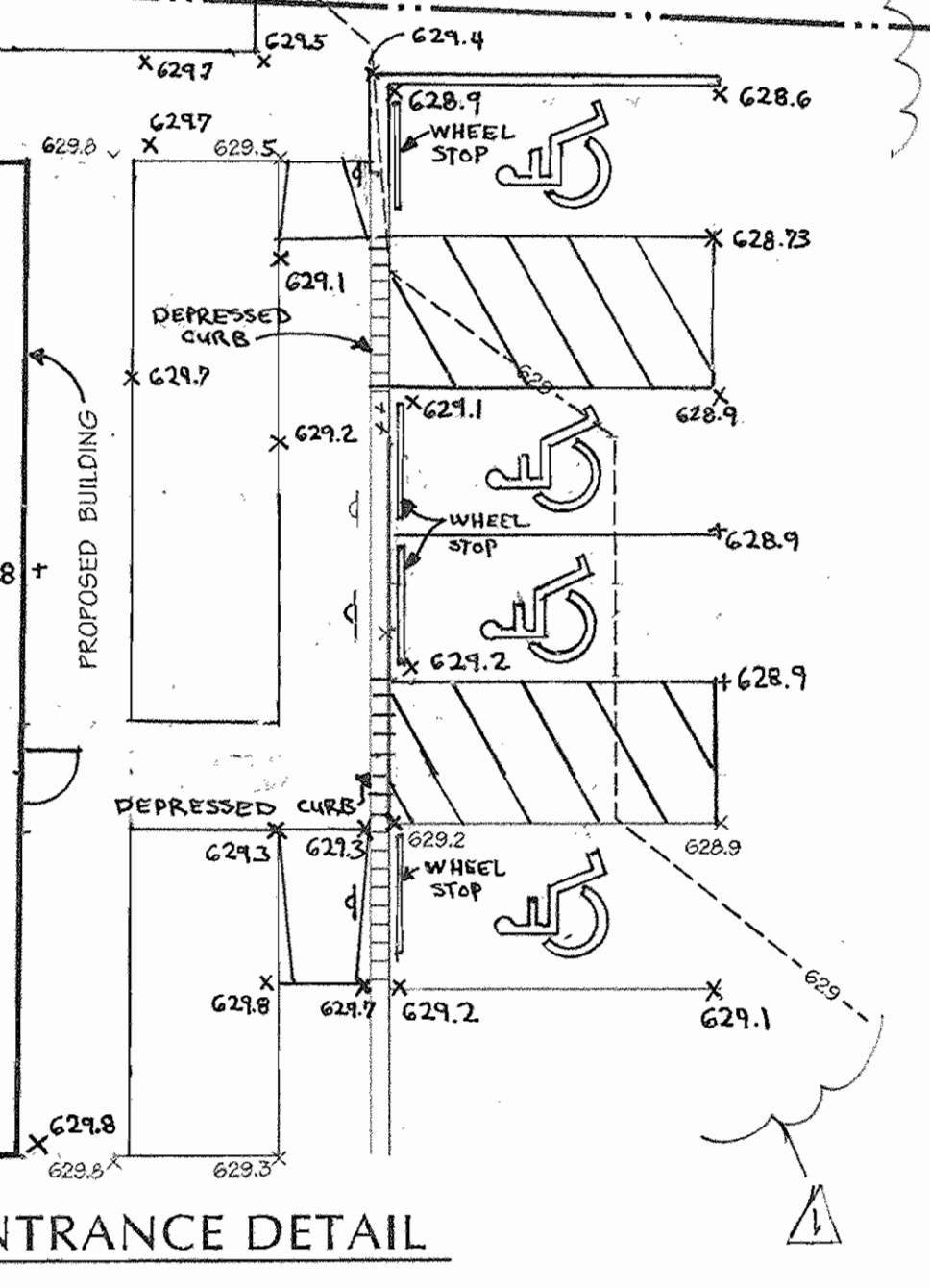
SPP-04-130





**SEDIMENT TRAP #1 DESIGN**

TYPE OF TRAP	ST-II	
DRAINAGE AREA: ACRES	1.39	
CREST OF EMBANKMENT ELEVATION	606.7	
EMBANKMENT HEIGHT	4.0'	
STORAGE REQUIRED: CUBIC FEET	WET	2502
	DRY	2502
	TOTAL	5004
STORAGE PROVIDED: CUBIC FEET	WET	2613
	DRY	2763
	TOTAL	5376
TOP OF WET STORAGE	604.9	
TOP OF DRY STORAGE	605.7	
CLEANOUT ELEVATION @ 1/4 DEPTH OF WET STORAGE	603.45	
DEPTH BELOW CREST	2.25	
BOTTOM ELEVATION	602.0'	
WEIR LENGTH	6.0'	



**DEVELOPERS CERTIFICATE:**  
 I, the undersigned, hereby certify that all development and/or construction will be done according to these plans and that any responsible personnel involved in the construction project will have a certificate of attendance at a department of 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Don Paul Pistorio* DATE: 10-13-05  
 PRINT NAME BELOW SIGNATURE: DON PAUL PISTORIO

**ENGINEERS CERTIFICATE:**  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/MHE 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 DAYS OF COMPLETION.

Signature: *Kenneth R. Kinsey* DATE: 10/19/05  
 PRINT NAME BELOW SIGNATURE: KENNETH R. KINSEY

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Signature: *J. M. Mays* DATE: 10/19/05  
 U.S. NATURAL RESOURCE CONSERVATION SERVICE

Signature: *Ken Kinsey* DATE: 10/19/05  
 HOWARD S.C.D.



APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

Signature: *Robert J. DeWitt* DATE: 12/1/05  
 COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Signature: *Shakti D.* DATE: 12/1/05  
 CHIEF DEVELOPMENT ENGINEERING DIVISION

Signature: *Janet Homuth* DATE: 11/1/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT

Signature: *Paul M. Angle* DATE: 1/31/06  
 DIRECTOR

6-6-07 REMOVE 18" SWM PIPES FROM DESIGN  
 6-14-06 EARTH BUILDING, PARKING, STORM DRAIN, RETAINMENT

**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

**DMW**  
 Dan-McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
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 Fax 296-4705

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

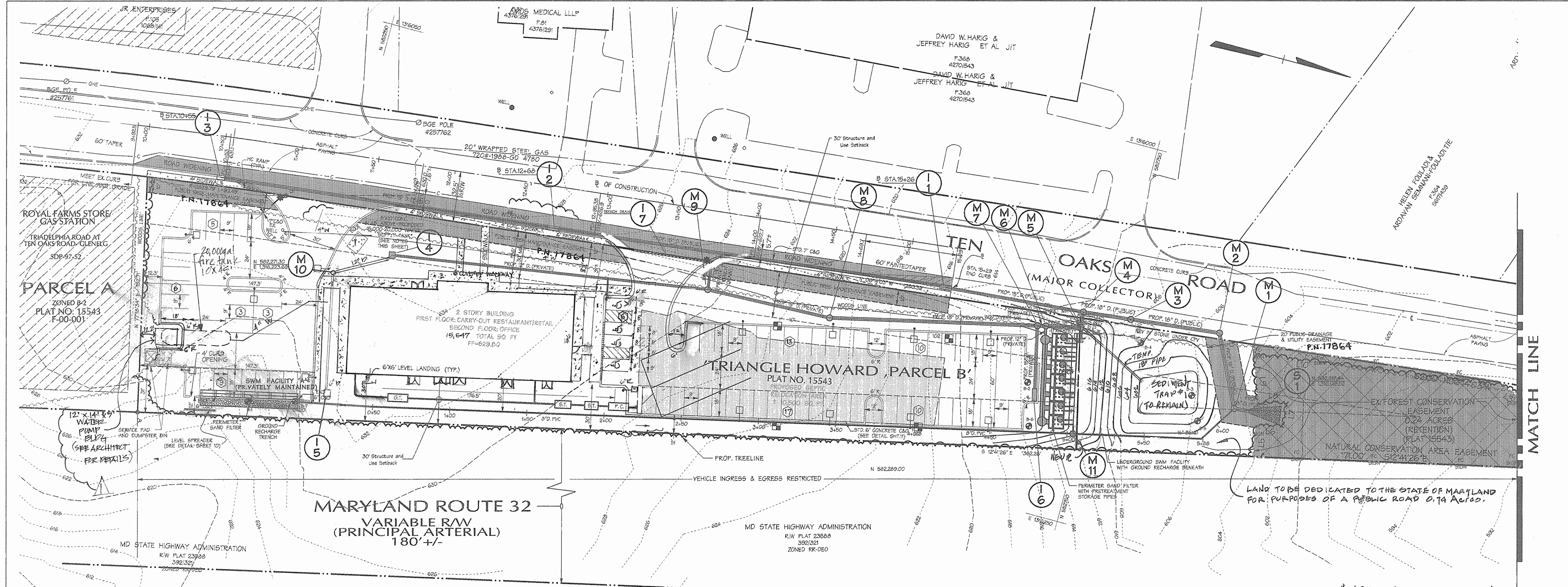
STATION NAME	TRANSVERSE	SECTION AREA	NO. OF STATIONS
17864	15	B-2	22
WATER CODE	N/A	SEWER CODE	N/A

TITLE: GRADING AND SEDIMENT & EROSION CONTROL PLAN

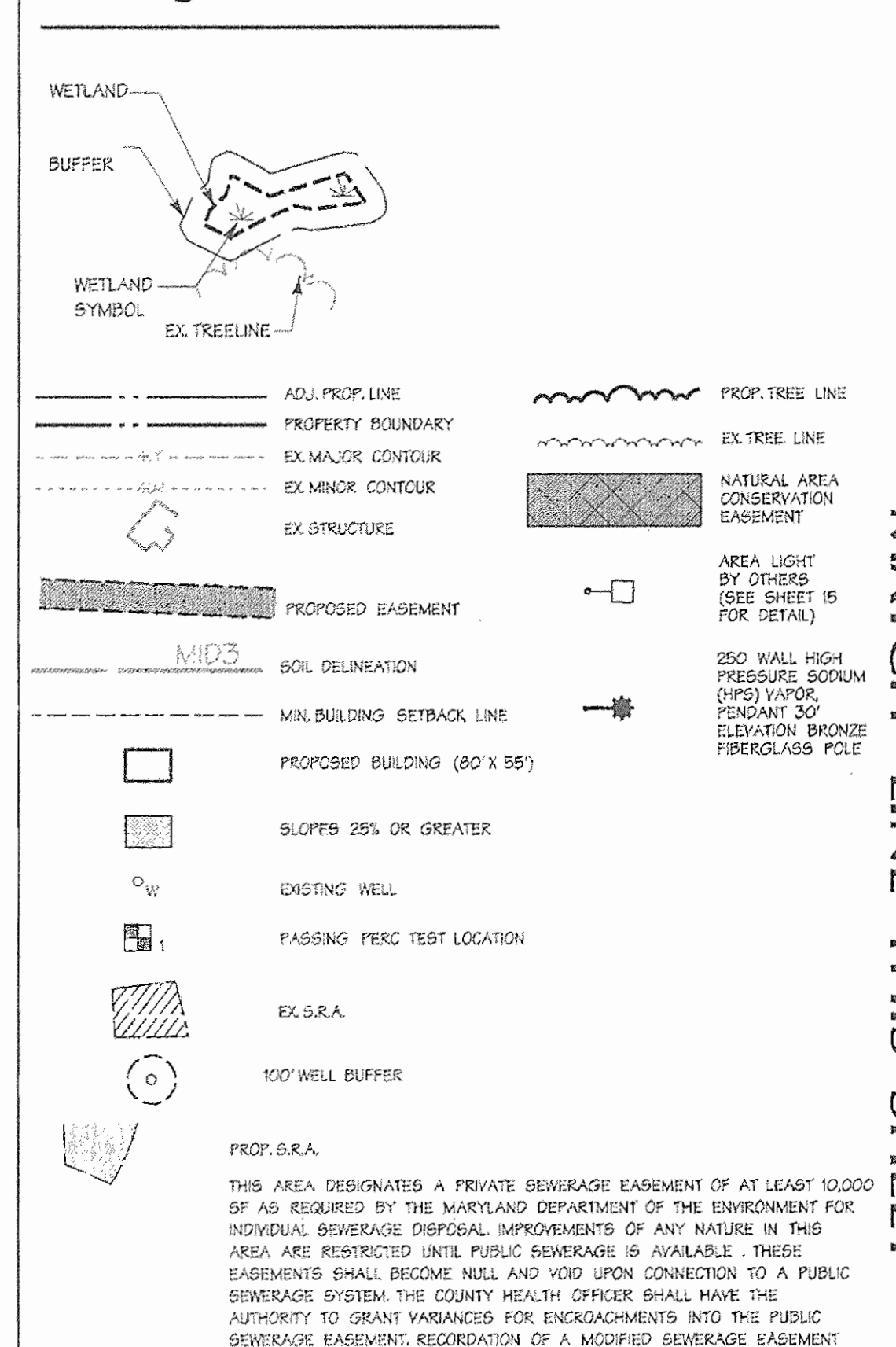
Des. By	R.L.H.	Scale	1" = 30'	Proj. No.	02136.00
Drn. By	K.D.E.	Date	10/28/05	3 of 19	
Chk. By	KEK	Approved			

Professional Engr. No. 13876



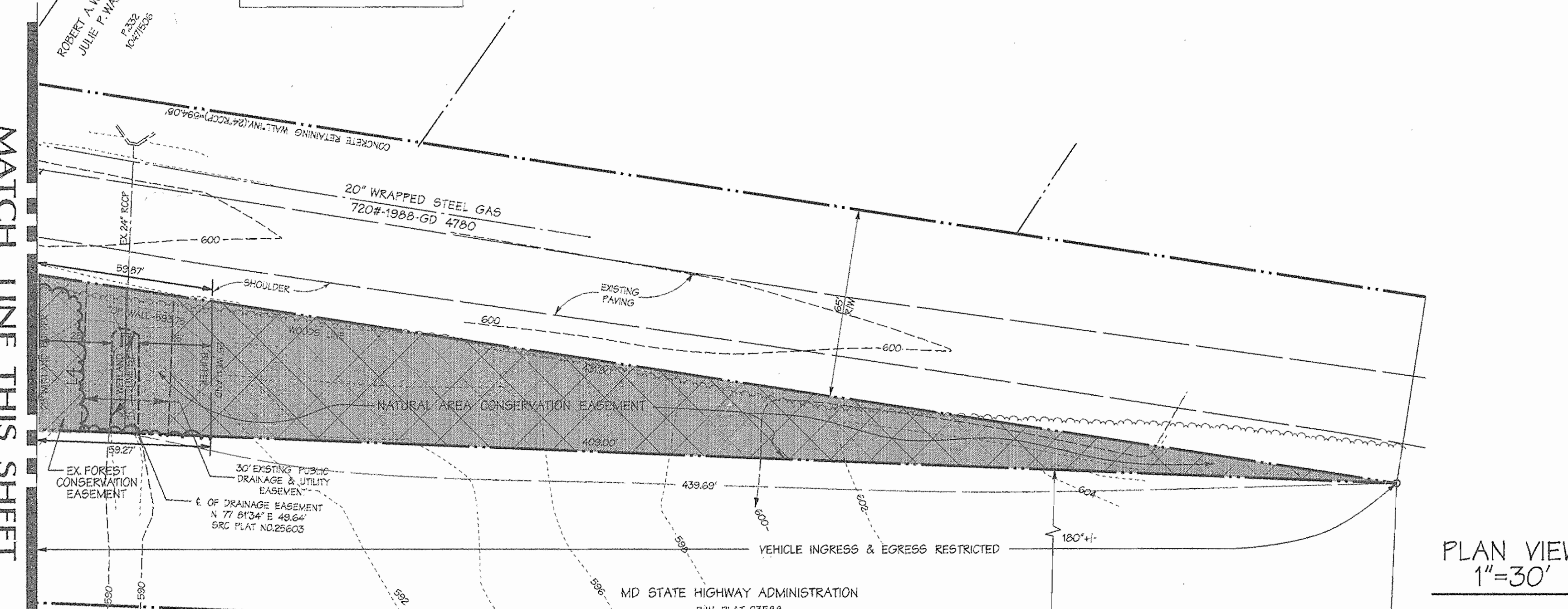


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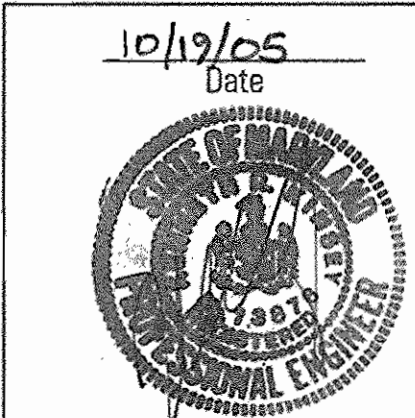


**PLAN VIEW**  
1"=30'

LINE TABLE		
L3	N2°15'16"E	35.38'
L4	N77°18'34"E	34.91'
L5	S81°16'56"W	21.01'
L6	N12°34'28"W	17.10'
L7	S83°45'57"W	15.00'
L8	S12°34'28"E	18.11'
L9	S69°12'46"W	31.13'
L10	N09°42'10"W	97.00'



NOTE: 1. APPROXIMATE LOCATION FOR 15,000-20,000 GALLON FIBERGLASS WATER STORAGE TANK  
2. CONTRACTOR SHALL CONTACT THE HOWARD COUNTY DEPARTMENT OF FIRE AND RESCUE TO APPROVE TANK AND TANK LOCATION.



\* SEDIMENT TRAP TO REMAIN IN PLACE UNTIL FACILITY OUT BY THE STATE IS COMPLETED.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*Robert L. Walker* 12/3/05 DATE  
COUNTY HEALTH OFFICER  
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*Shah K. D.* 12/3/05 DATE  
CHIEF DEVELOPMENT ENGINEERING DIVISION (MR-3)  
*Chris Hamaker* 1/14/06 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Mark K. ...* 4/8/06 DATE  
DIRECTOR

Date	No.	Revision Description
6/14/07	1	REMOVE 72" S.W.M. PIPES FROM DESIGN
1/21/06	1	Shift bldg. to the south adj. plan & s/w

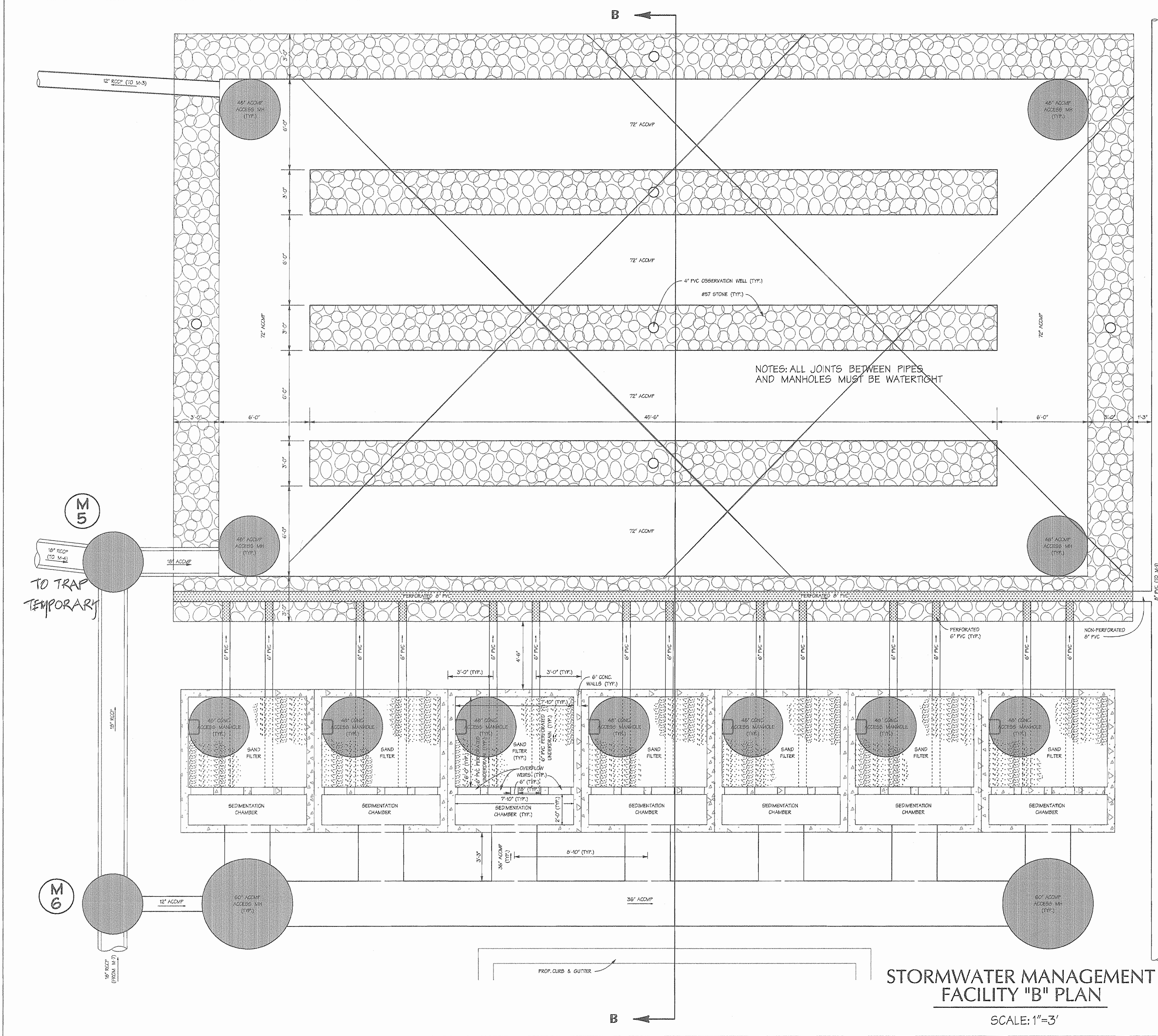
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Towson, Maryland 21286  
(410) 296-3333  
Fax 296-4705  
A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

DESIGN	SCALE	DATE	PROJECT NO.
Des. By RLH	Scale 1"= 30'	Date 10/28/05	Proj. No. 02136.00
Dwn. By KDE			
Chk. By RLK	Approved		2 of 19

Professional Engr. No. 13876  
SDP-04-130





- NOTES:
1. 48" ACCMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
  2. 48" CONCRETE ACCESS MANHOLE SHALL BE PER HOWARD COUNTY DETAIL G-511.
  3. 60" ACCMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
  4. ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.

NOTES: ALL JOINTS BETWEEN PIPES AND MANHOLES MUST BE WATERTIGHT

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

*Don Paul Pistoreio* 10-13-05  
 SIGNATURE OF DEVELOPER DATE  
 DON PAUL PISTOREIO

**ENGINEERS CERTIFICATE:**  
 I CERTIFY THAT THIS PLAN FOR FOND CONSTRUCTION, EROSION AND SEDIMENT CONTROL, REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE REVIEWED THE SUBMITTAL AND HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND AND I AM AUTHORIZED TO SIGN AND SEAL THIS PLAN. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION.

*KEVIN R. KINSEY* 13876 10/19/05  
 SIGNATURE OF ENGINEER REG. NO. DATE  
 KEVIN R. KINSEY

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Wade* 12/21/05  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Shelley* 12/22/05  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Carolee Hamon* 1/9/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Kevin Kinsey* 1/8/06  
 DIRECTOR DATE

6/7/07 REMOVE 72" SWM PIPES

**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

**DMW**  
 Daugherty-McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 286-3333  
 Fax 286-4705

A Team of Land Planners,  
 Landscape Architects,  
 Civil Engineers, Surveyors &  
 Environmental Professionals

10/19/05  
 Date

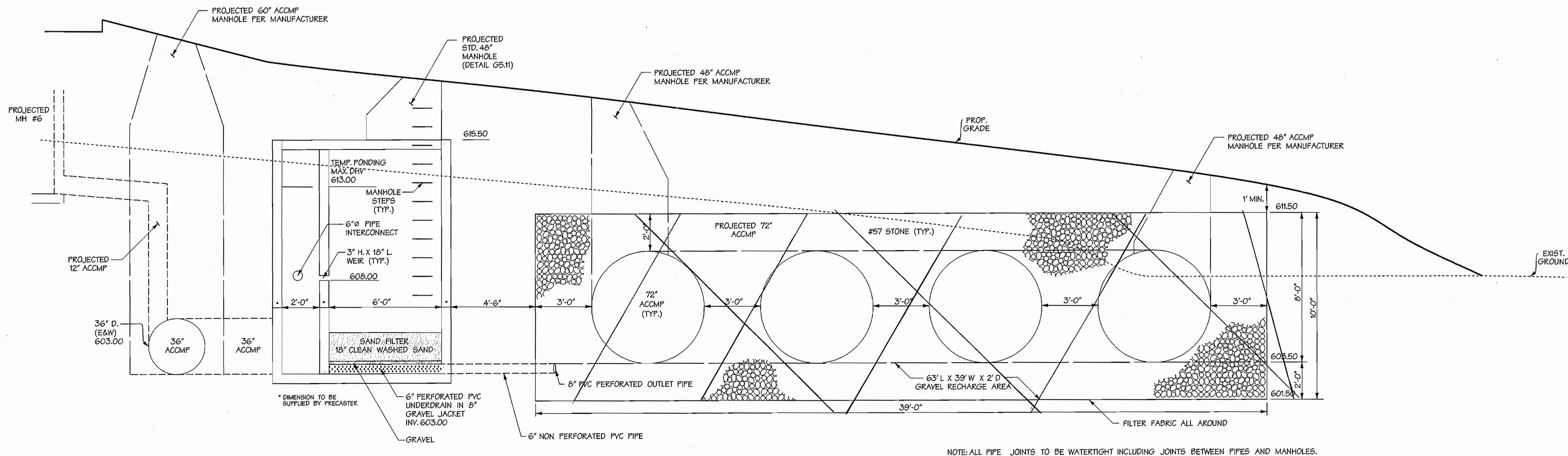
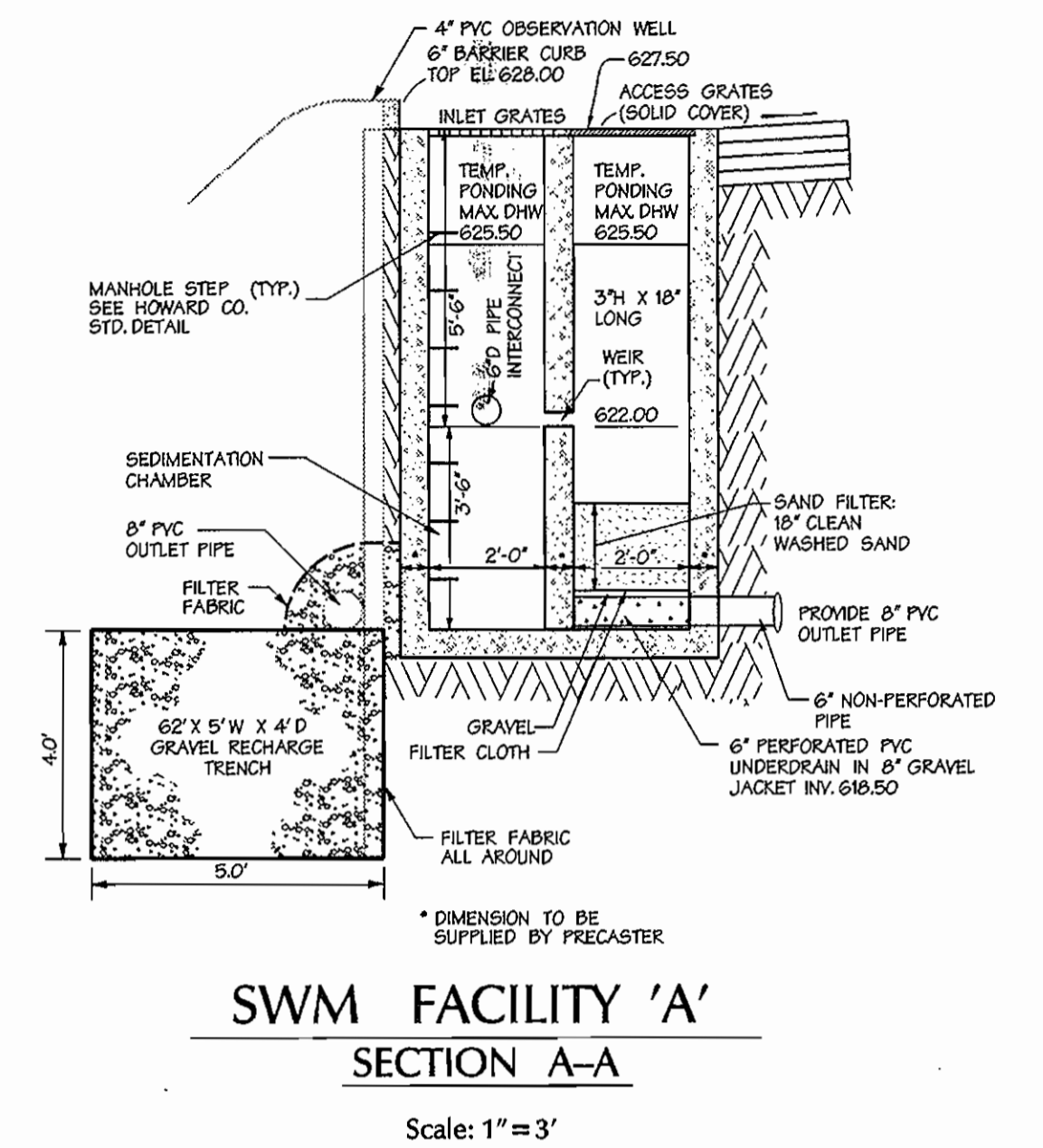
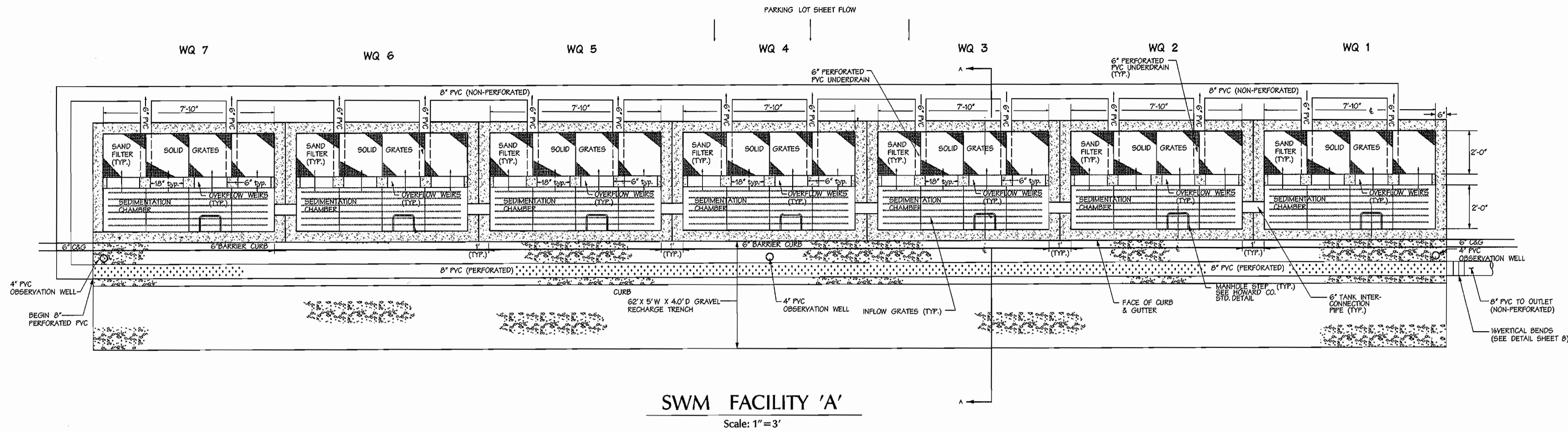
Professional Engr. No. 13876

**STORMWATER MANAGEMENT FACILITY "B" PLAN**

SCALE: 1"=3'

DES. BY	SCALE	PROJ. NO.
KAD	1"=3'	02136.00
DRN. BY	DATE	
-A-	10/28/05	
CHK. BY	APPROVED	
KDK		





APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. Walker* 12/2/05 DATE  
COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*John P. ...* 12/28/05 DATE  
CHIEF DEVELOPMENT ENGINEERING DIVISION

*...* 1/4/06 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT

*...* 1/1/06 DATE  
DIRECTOR

4/7/07 REMOVE 72" O.W.M. PIPES

Date	No.	Revision Description

**Ten Oaks Commercial Center**  
Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Darr McChesney-Walker, Inc.  
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 296-3333  
Fax: 296-4706

A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals

SECTION/AREA	SECTION/AREA	SECTION/AREA	SECTION/AREA
17864	15	B-2	22

TITLE: **STORMWATER MANAGEMENT FACILITY 'A' PLAN AND SECTIONS**

Des. By	CRW	Scale	AS SHOWN	Proj. No.	02136.00
Drn. By	WDE	Date	10/28/05		
Chk. By	KEL	Approved			11 of 19

Professional Engr. No. 13876

**SWM FACILITY 'B'**  
**SECTION 'B - B'**  
Scale: 1" = 3'

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE FEDERAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE: 10/13/05

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

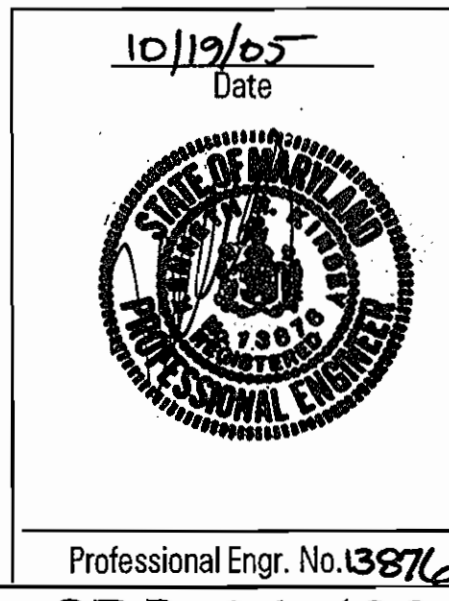
APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE: 10/13/05

DEVELOPERS CERTIFICATE:  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AS A REQUIREMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING CONSTRUCTION AND PROMISE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Don Paul ...* 10/13/05 DATE  
SIGNATURE OF DEVELOPER  
PRINT NAME BELOW SIGNATURE: DON PAUL ...

ENGINEERS CERTIFICATE:  
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE. I CONSIDER THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT THESE PLANS MUST UNDERGO A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROMISE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

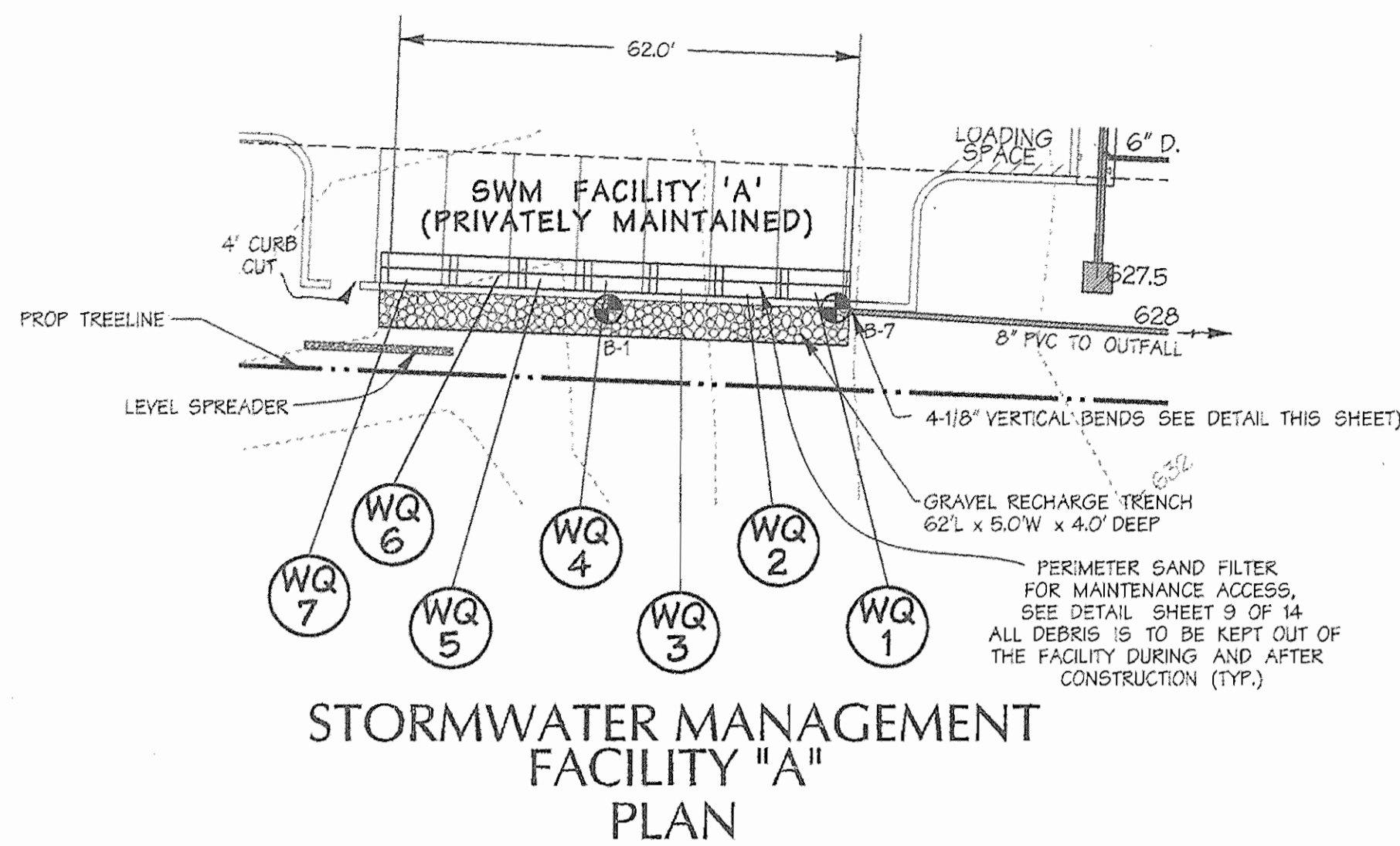
*...* 10/19/05 DATE  
SIGNATURE OF ENGINEER  
PRINT NAME BELOW SIGNATURE: ...



SOP-04-130



NOTE: ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.



**STORMWATER MANAGEMENT FACILITY "A" PLAN**

SCALE: 1"=20'  
NOTE: MAINTENANCE BY OWNER (OR ASSIGNEE).

**SUMMARY TABLE**

DA	AREA ACRES	WQV (CF)		Rev (CF)		Cpv (CF)		1 YEAR PEAK DISCHARGE	
		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	EXISTING	PROVIDED
A	0.44	1307	1904	436	496	N/A	N/A	0.03	0.02
B	1.97	4356	4589	1742	1966	5228	6954	0.09	0.14

**UNDERGROUND STORAGE FACILITY**

HYDROLOGIC EVENT	WSEL
Cpv	606.77

BMP	HAZARD CLASSIFICATION
PERIMETER FILTER	N/A
INFILTRATION TRENCH	N/A
UNDERGROUND STORAGE	N/A

**RECHARGE TRENCH/AREA**

DEVICE NO.	LENGTH	WIDTH	DEPTH	TOP ELEV.	VOLUME	DISCHARGE CONTROL
A	62.0'	5.0'	4.0'	618.50	496cf	619.00
B	63.0'	39.0'	2.0'	602.83	1966cf	603.33

**PERIMETER SAND FILTER**

DEVICE NO.	PRECAST CHAMBERS	BOTTOM ELEV.	SAND FILTER ELEV.		TANK INTERCONNECT	OUTLET WEIR		TOP ELEV.			
			BOTTOM	TOP		WEIR	DIA.		ELEV.	L	H
A	7	618.50	619.00	620.50	622.00	6.00"	622.00	1.5'	0.6'	622.00	627.50
B	7	603.00	603.50	605.00	608.00	6.00"	608.00	1.5'	0.6'	608.00	615.00

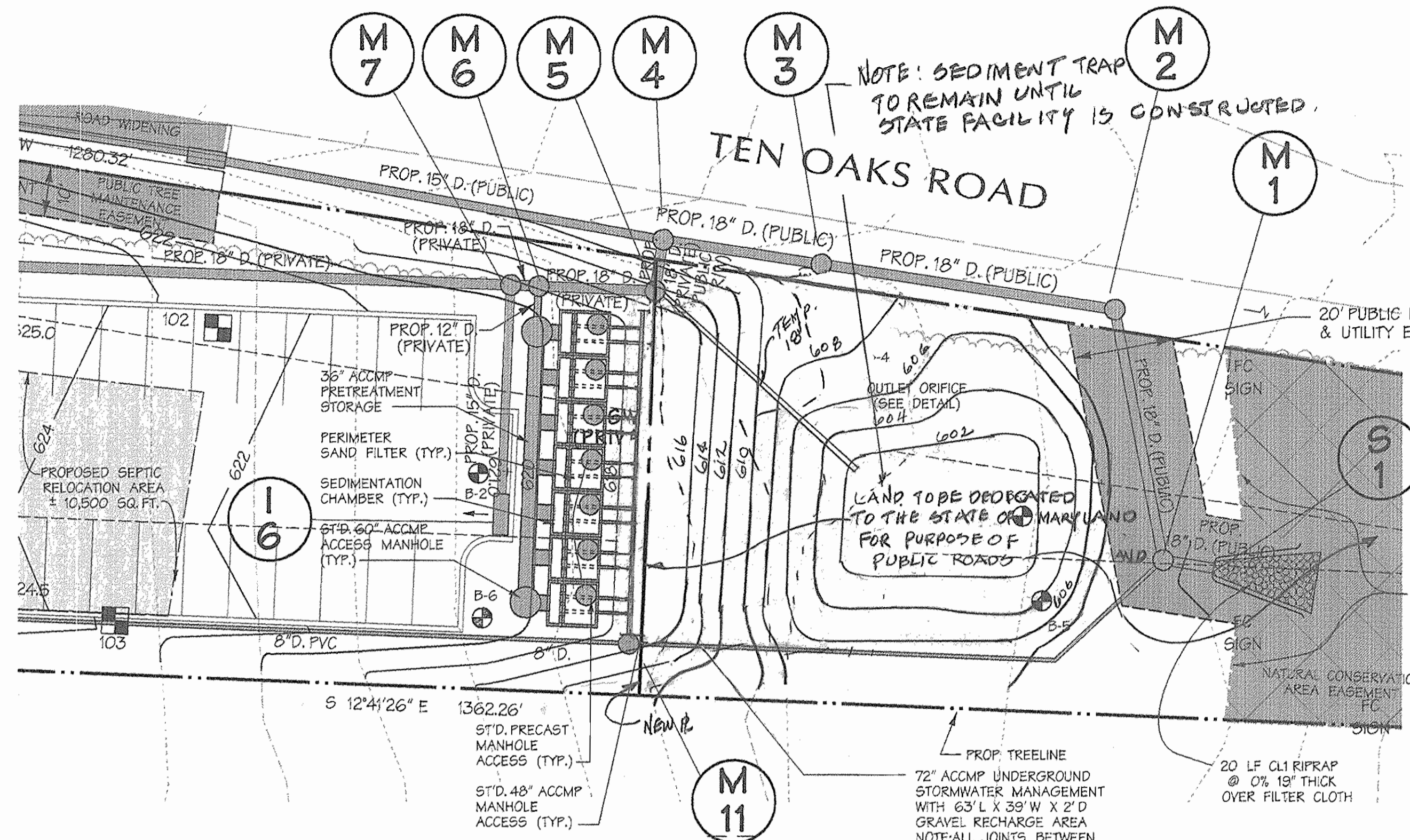
**SAND FILTER SPECIFICATIONS**

The contractor shall furnish and install 13 Wet Chamber Sand Filters in accordance with current EPA specifications and guidelines. The precast concrete tank shall be fabricated to reach a strength of 4500 PSI in 28 days. Walls and bottom shall be min. 6" thick. A min. reinforcing of two mats of 4" x 4" W4/W4 wire mesh shall be used. Each unit shall consist of two identical parallel chambers. The first chamber will serve as a solids settling "wet" chamber overflowing through the center partition wall into the filtration chamber. All pipe openings shall have cast in place Star (or equal) gaskets sized to accommodate 6" schedule 35 PVC pipe stubs. The two 6" dia. PVC drain collectors and support gravel shall be field installed as shown on the drawing. A geotextile woven drainage fabric membrane (AMOCO 1199 or equal) shall be installed on the carefully leveled gravel bed and extended up the four sides of the wall to a height of 6" above the filter sand, thus precluding sand from escaping through openings developing along the wall. The 6" of support gravel shall be 3/4" washed (DE No. 57) or equivalent. The 12" of filter sand shall be concrete sand (ASHTO M6) or equivalent. Preinstalled angle frames shall support traffic bearing cast iron covers and grates throughout. A 6" gravel bed shall be placed on undisturbed or compacted soils as a means of establishing a permanent supports and grade level for the tanks. The Wet Chamber Sand Filters shall be of the "Stamara Head" or "Hitchhead" (select one) type as manufactured by Gillespie & Son, Inc., Chestertown, MD or approved equal. The supplier of the filter system shall provide a minimum of two (2) days of field installation inspection in two trips by a factory trained DelCCR. Following standard procedures the CCR will certify in writing that installation of the filter system has been completed in accordance with the manufacturer's recommendation.

The Gillespie & Son, Inc. Modular Sand Filter conforms to current Delaware National Resources Environmental Control (DNREC) and Environmental Protection Agency (EPA) specifications. The standard pre-cast concrete tank is divided into two equal sized parallel chambers. The dimension of each being 7'-10" by 2'-0" by 2'-0".

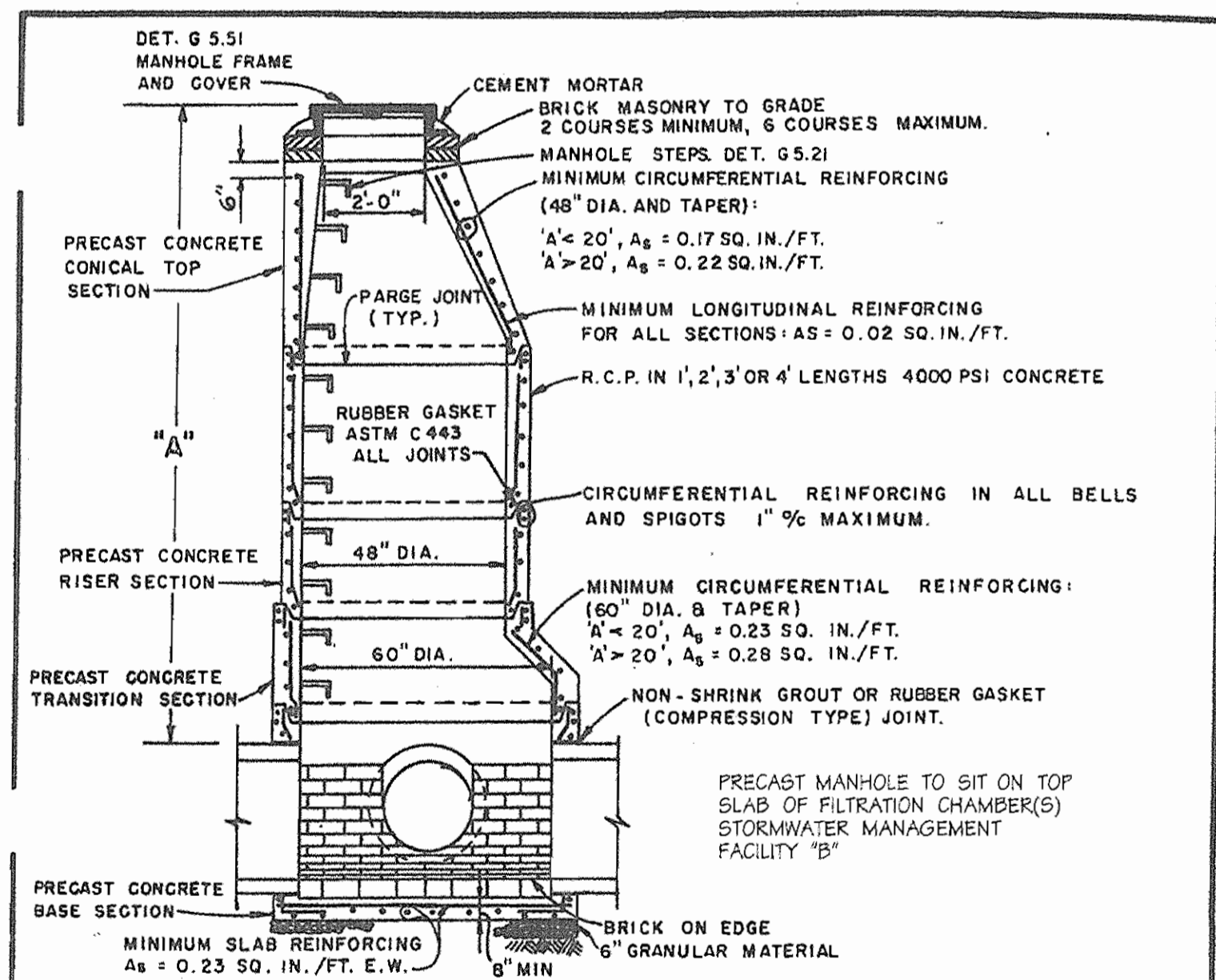
**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES**

- The stormwater facilities shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facilities are functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Debris and litter shall be removed from all perimeter sand filters and the ED facility during regular mowing operations as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches deep in the bottom of the facilities.
- A log book shall be maintained to determine the rate at which the facilities drain.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the filter systems have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.



**STORMWATER MANAGEMENT FACILITY "B" PLAN**

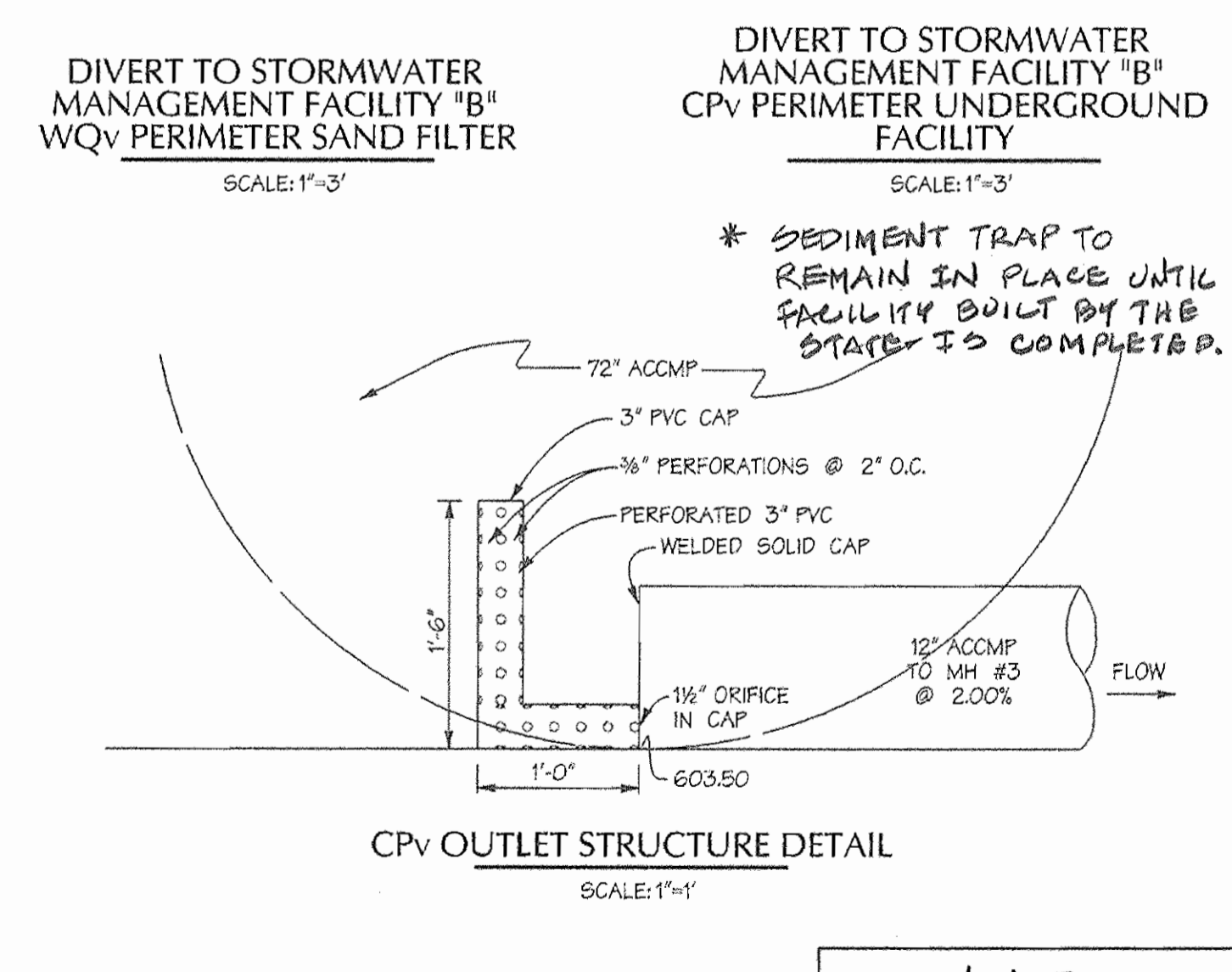
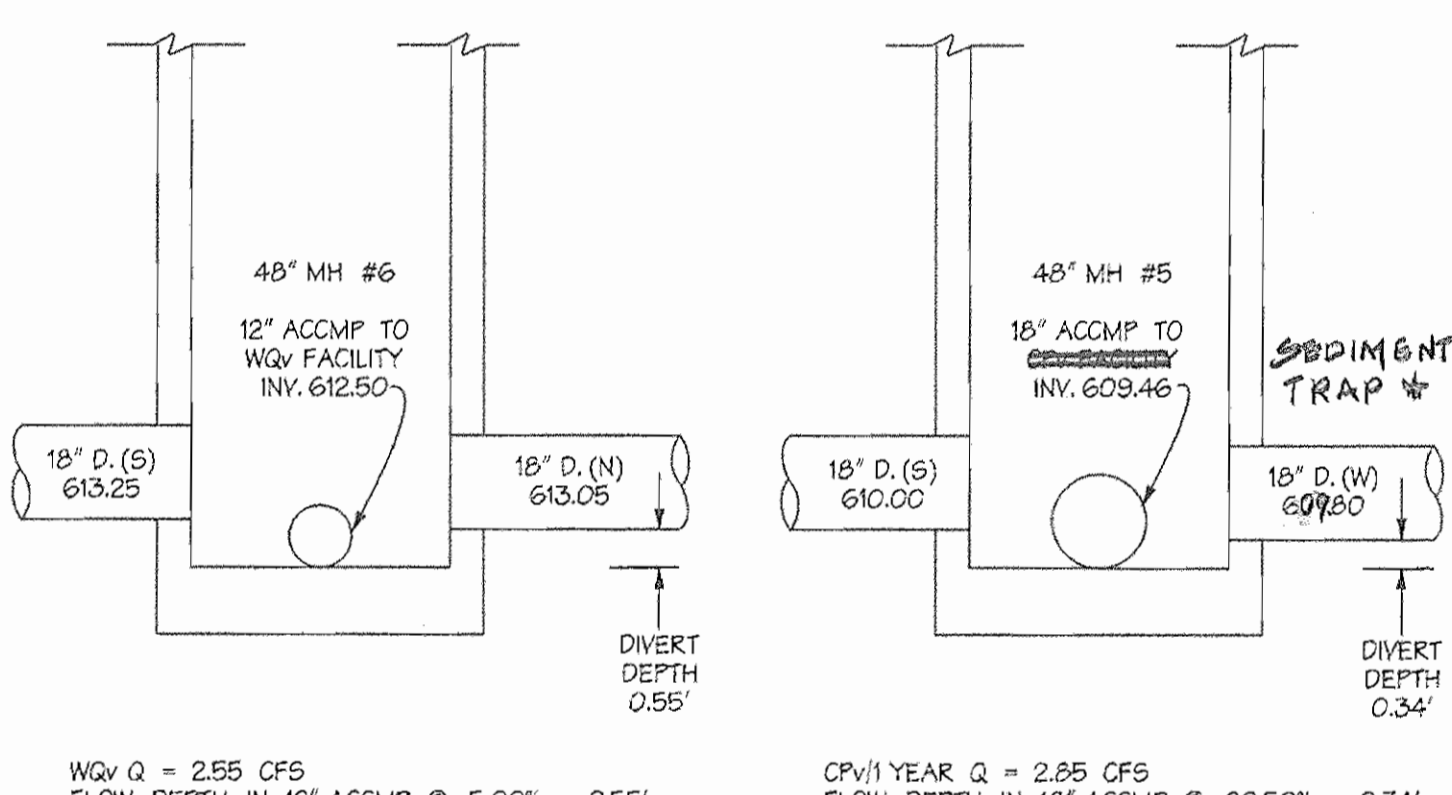
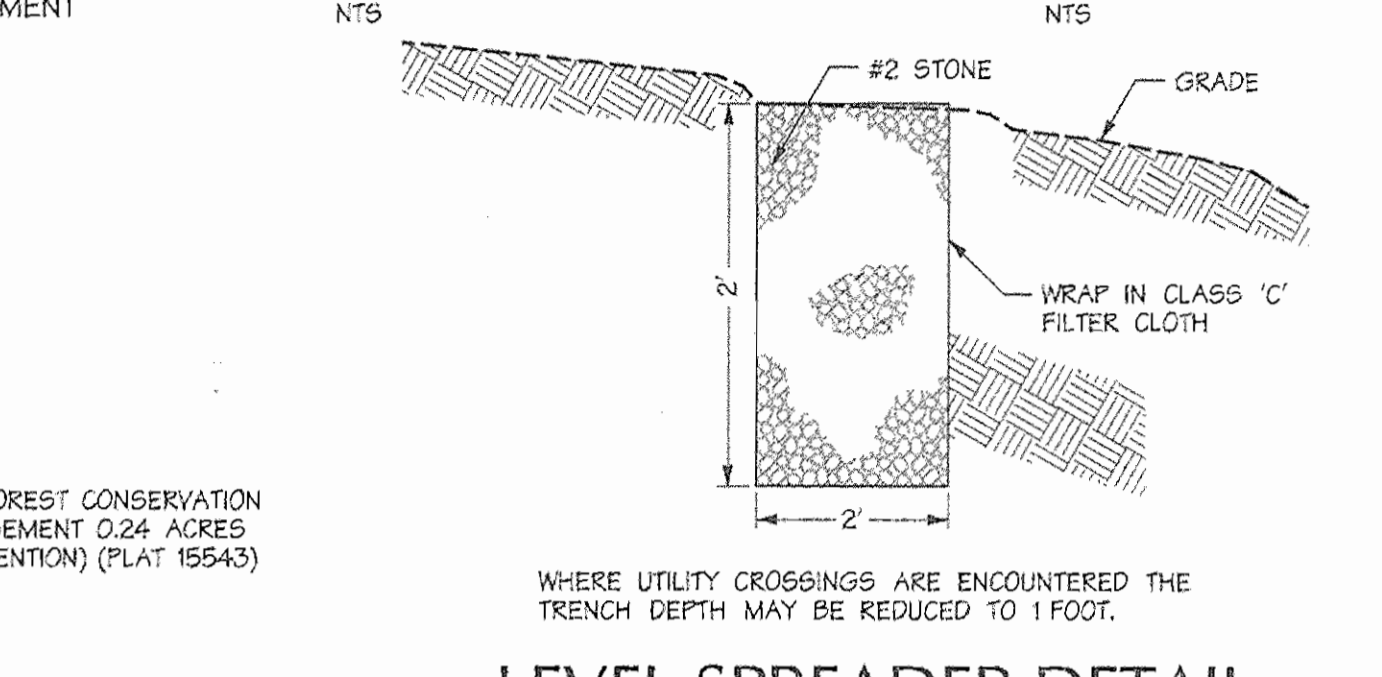
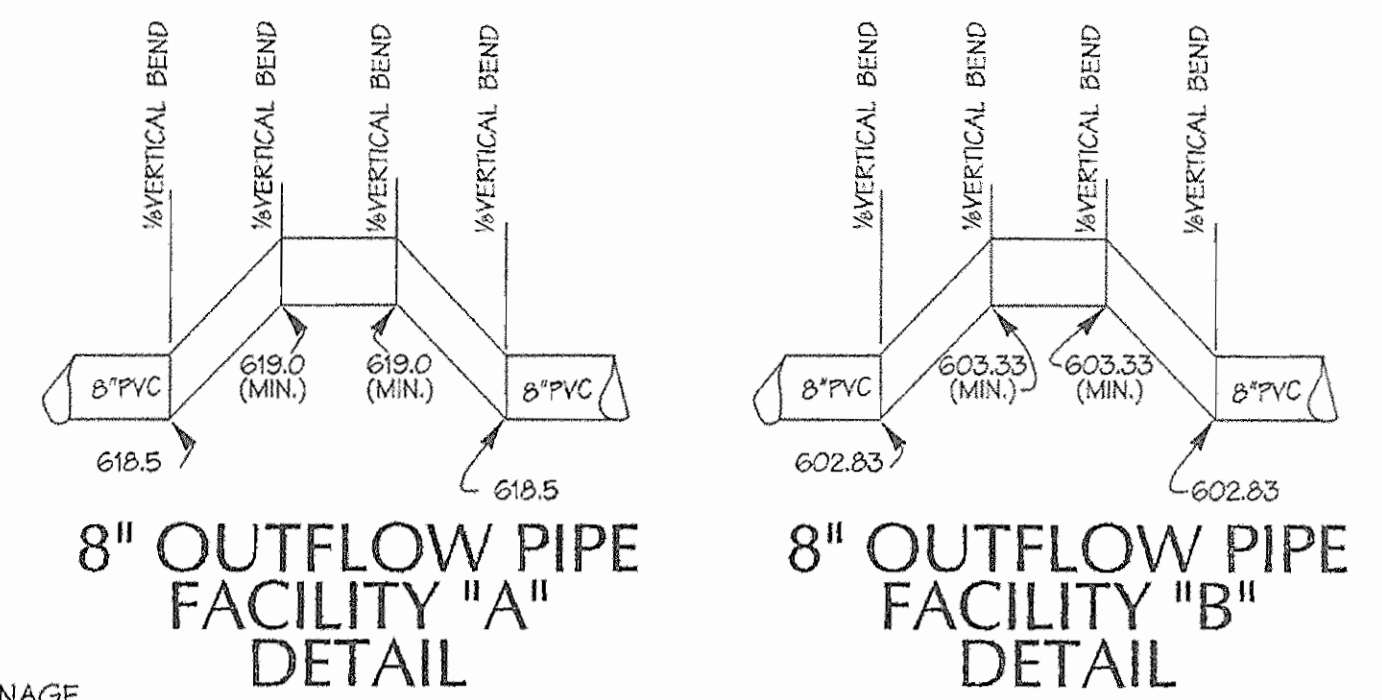
SCALE: 1"=20'  
NOTE: MAINTENANCE BY OWNER (OR ASSIGNEE).



**GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES**

- MANHOLE BASE SHALL BE BEDDED ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
- EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/3 OF WAY TO TOP OF PIPE.
- CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
- MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G5.21. MANHOLE COVER SHALL BE AS SPECIFIED ON DETAIL G5.51.
- PROVIDE 2 COATS COAL TAR EPOXY COATING, 1/16 MIL DRY, SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY)
- PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
- MANHOLE CHANNELS SHALL BE FORMED TO PROVIDE A SMOOTH HYDRAULIC TRANSITION BETWEEN PIPES. BENCHES SHALL BE TO TOP OF PIPE OR AS SHOWN ON PLANS. MANHOLE CHANNELS AND BENCHES SHALL BE FORMED FROM SEWER BRICK, GRADE SS, ASTM C-32.
- MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C-478 EXCEPT AS SHOWN.

HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORKS  
STANDARD PRECAST MANHOLES  
DRAWN BY: J.M.C.  
CHECKED BY: G.S.11  
SCALE: NONE  
APPROVED: Chief - Bureau of Engineering



**DEVELOPERS CERTIFICATE:**  
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Don Paul Pastore  
10-13-05  
DATE

**ENGINEERS CERTIFICATE:**  
I HEREBY CERTIFY THAT THIS PLAN FOR FOND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED BY ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE ADVISED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE FOND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FOND WITHIN 30 DAYS OF COMPLETION.

13876  
10/19/05  
DATE

APPROVED FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DIRECTOR

Date	No.	Revision Description
6/6/07	1	CONSTRUCT TEMP 18" PIPE TO TRAP REMOVE 72" SWM. PIPED FROM DESIGN

**Ten Oaks Commercial Center**  
"Triangle Howard, Parcel B"

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

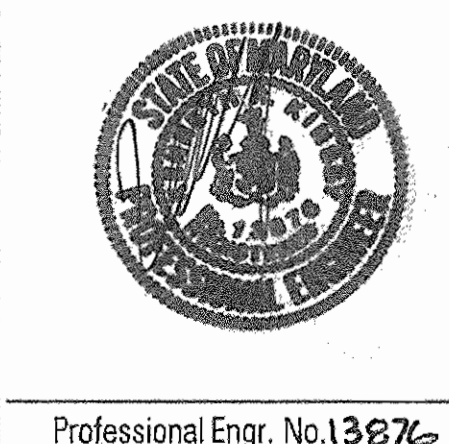
DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Duff McQueen-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 286-3333  
Fax 286-4705

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

DESIGNER	DATE	SCALE	PROJECT NO.
CRW	10/28/05	As Shown	02136.00

10 of 19



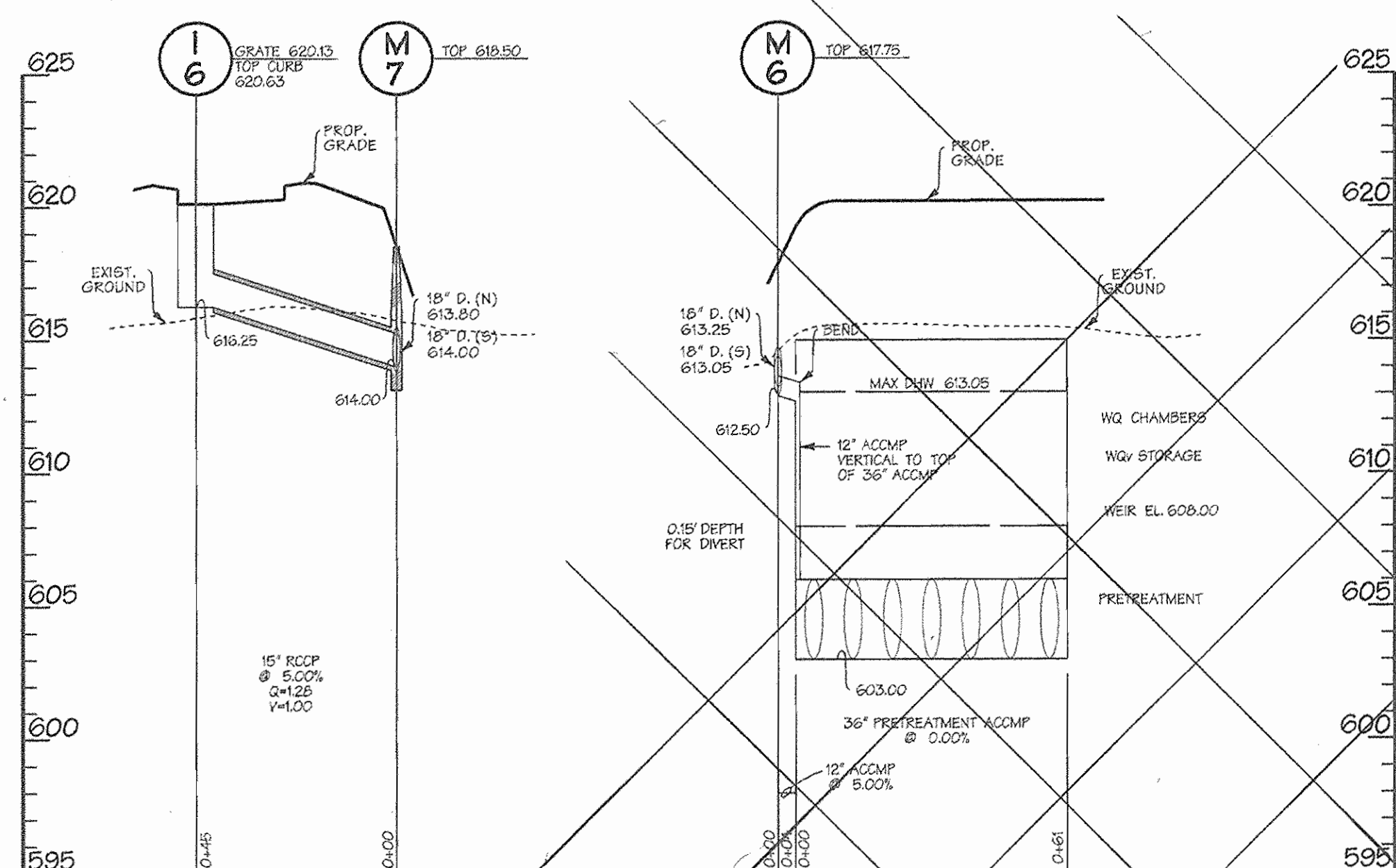
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL FOND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

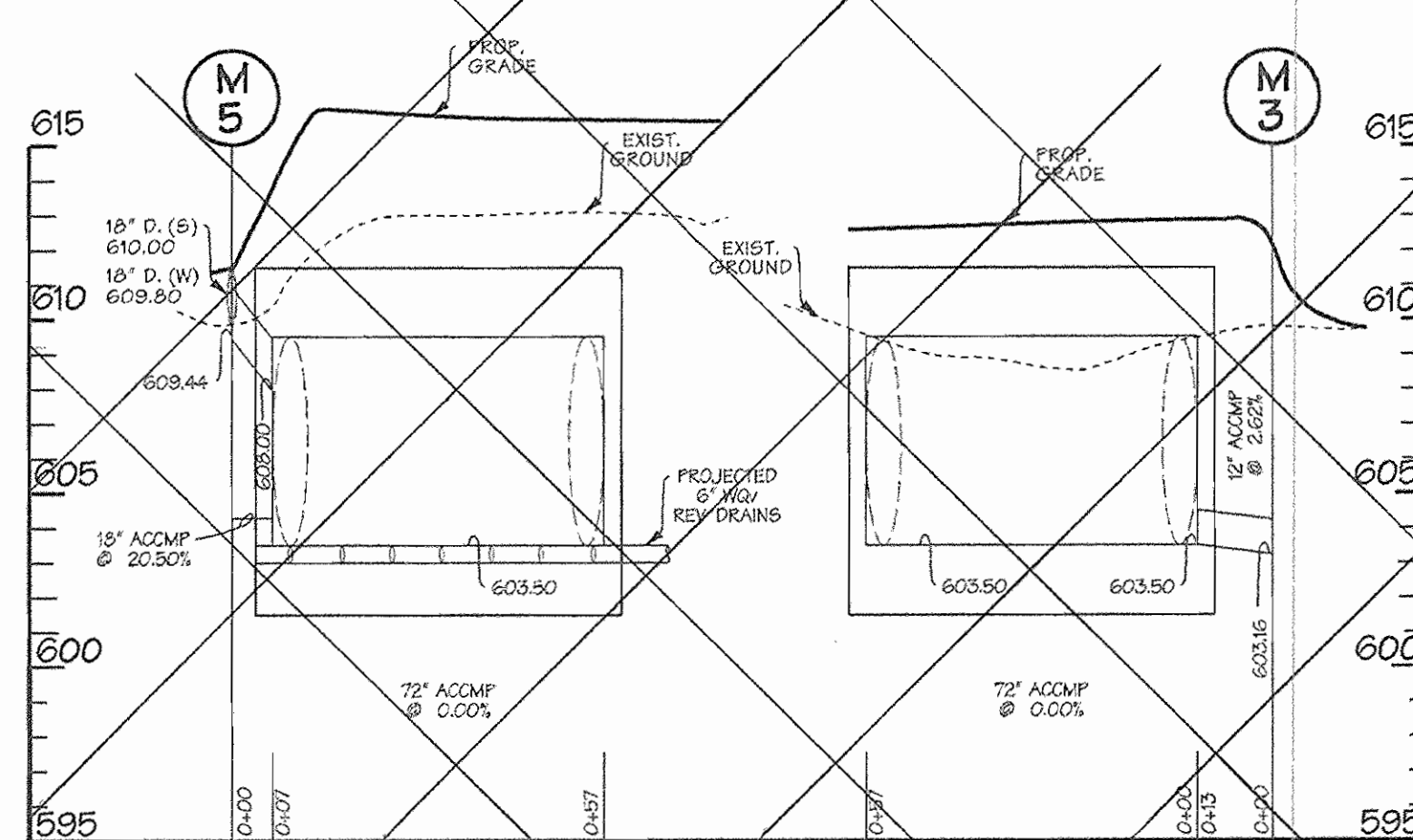
APPROVED: HOWARD SOIL CONSERVATION DISTRICT

SPR-04-130





**STORM DRAIN PROFILE**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'



**STORM DRAIN PROFILE**  
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. Weller*  
COUNTY HEALTH OFFICER DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*[Signature]* DATE 12/22/05

CHIEF DEVELOPMENT ENGINEERING DIVISION (M&E)  
*[Signature]* DATE 1/1/06

CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* DATE 1/1/06

DIRECTOR  
*[Signature]* DATE 1/1/06

U507	REMOVE 12" RCP PIPES FROM DESIGN
Date	No.
Revision Description	

**Ten Oaks Commercial Center**  
"Triangle Howard, Parcel B"  
DEVELOPER:  
OWNER: 3881 TEN OAKS MANAGEMENT, LLC  
3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Darr-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
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10/19/05  
Date  
Professional Engr. No. 13576



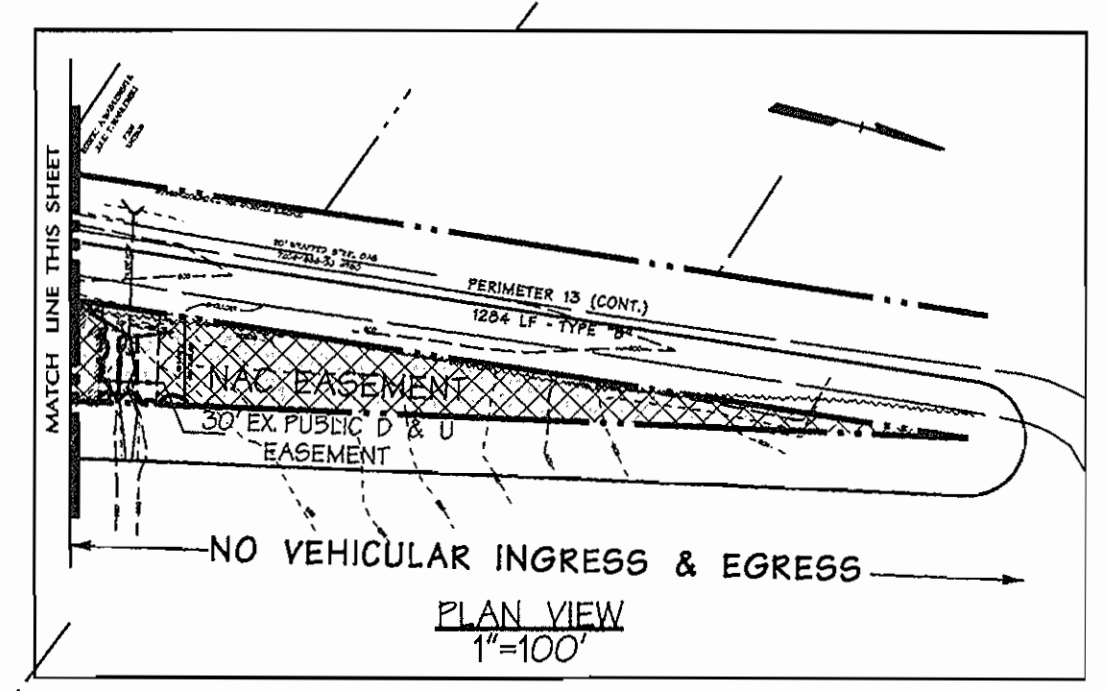
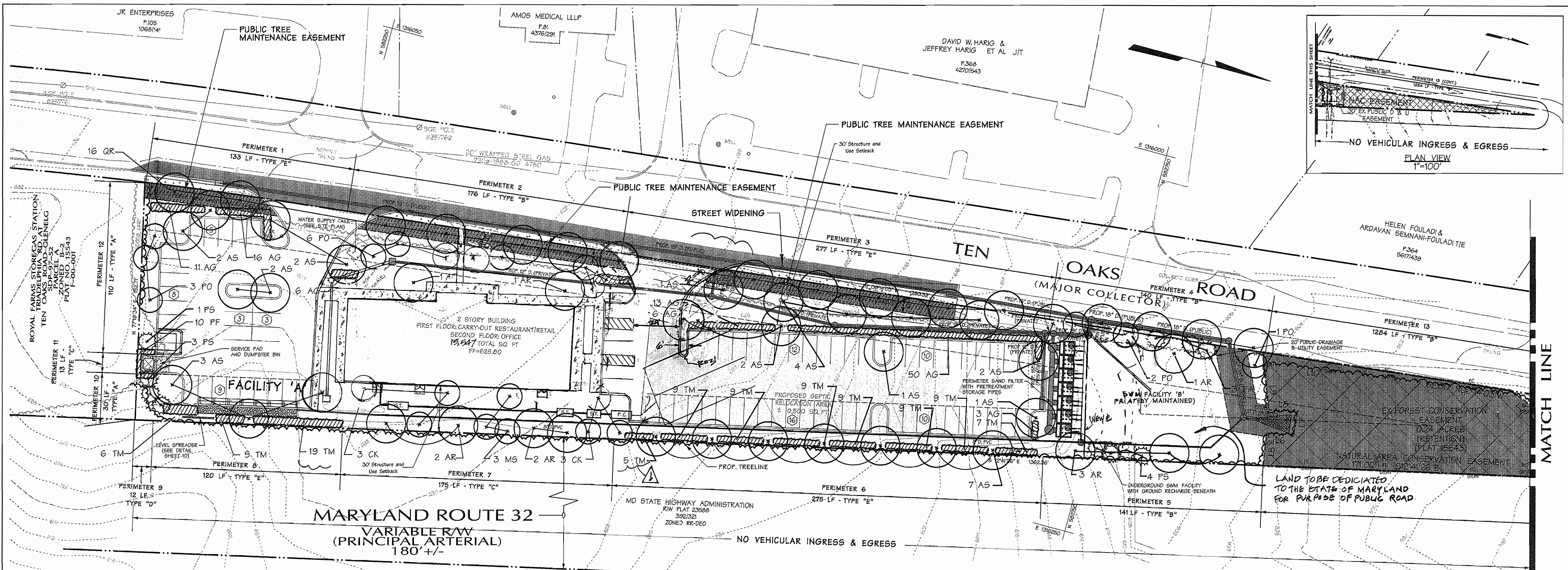
SECTION/AREA	N/A	SECTION/AREA	B
DATE	17864	DATE	6030
WATER CODE	N/A	WATER CODE	N/A

TITLE  
**STORM DRAIN PROFILE**

Des. By	Scale 1"=30'	Proj. No. 02136.00
Drn. By	Date 10/28/05	9 of 19
Chk. By KRE	Approved	

SPP-04-130





**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROAD								ADJACENT TO PERIMETER PROPERTIES	
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	P 10	P 12
LANDSCAPE TYPE 'A'										
LINEAR FEET OF PERIMETER									30 LF	110 LF
LANDSCAPE TYPE 'B'		P 2		P 4	P 5			P 13		
LINEAR FEET OF PERIMETER		176 LF		140 LF	141 LF			1284 LF		
LANDSCAPE TYPE 'C'							P 7			P 11
LINEAR FEET OF PERIMETER							175 LF			13 LF
LANDSCAPE TYPE 'D'								P 9		
LINEAR FEET OF PERIMETER								12 LF		
LANDSCAPE TYPE 'E'									P 8	
LINEAR FEET OF PERIMETER	133 LF		277 LF			275 LF	120 LF			
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1284	N/A
CREDIT FOR PERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED										
SHADE TREES	3	4	7	3	3	7	4	3	1	1
EVERGREEN TREES	4	4	4	4	4	9	9	9	1	1
SHRUBS	33	69	69	69	69	30	30	30	10	10
NUMBER OF PLANTS PROVIDED*										
SHADE TREES	3	3	7	2	3	7	4	3	1	1
EVERGREEN TREES	4	4	4	4	4	9	9	9	1	1
OTHER TREES (2:1 SUBSTITUTION)	33	69	69	69	69	30	30	30	10	10
SHRUBS (10:1 SUBSTITUTION)										
SHRUBS (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)										

NOTE: STREET TREES WILL BE PROVIDED @ 140 LF. 16 STREET TREES SHOWN ON THIS SHEET.

NOTE: THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS.

NOTE: 7 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 3.5 SHADE TREES, 14 ORNAMENTALS HAVE BEEN SUBSTITUTED FOR 14 EVERGREENS, 3 EVERGREENS HAVE BEEN SUBSTITUTED FOR 15 SHADE TREES, 20 SHRUBS HAVE BEEN SUBSTITUTED FOR 2 EVERGREENS.

\* SHADE TREE VALUE FOR PERIMETER 9 IS 0.2, THEREFORE THE 'NUMBER OF PLANTS REQUIRED' IS LISTED AS 0. SHADE TREE VALUE FOR PERIMETER 11 IS 0.3, THEREFORE THE 'NUMBER OF PLANTS REQUIRED' IS LISTED AS 0.

**SCHEDULE B**

NUMBER OF PARKING SPACES.....	7
INTERNAL ISLANDS REQUIRED.....	5
120 SPACES.....	5
INTERNAL ISLANDS PROVIDED.....	5
200 SQ. FT./ISLAND.....	5
SHADE TREES REQUIRED.....	5
120 SPACES.....	5
SHADE TREES PROVIDED.....	5

DATE	NO.	REVISION DESCRIPTION
12/21/05	3	ENR. BOUNDARY W/ S. FRANKLIN ISLAND

**PLANT LIST**

QTY	SYM	BOTANICAL NAME/ COMMON NAME	SIZE	REMARKS
<b>SHADE TREES</b>				
10	AR	ACER RUBRUM 'OCTOBER GLORY'	2 1/2" - 3" CAL.	B & B FULL HEAD
27	AS	ACER SACCHARUM 'GREEN MOUNTAIN'	2 1/2" - 3" CAL.	B & B FULL HEAD
16	QR	QUERCUS RUBRA	2 1/2" - 3" CAL.	B & B FULL HEAD
<b>EVERGREEN TREES</b>				
3	PA	PICEA ABIES	6' - 8' HT.	B & B
8	PS	PINUS STROBUS	6' - 8' HT.	B & B
<b>ORNAMENTAL TREES</b>				
6	CK	CORNUS KOUSA	8' - 10' HT.	B & B
3	MS	MAGNOLIA STELLATA	8' - 10' HT.	B & B
12	PO	PRUNUS X INCAM 'OKAME'	8' - 10' HT.	B & B
<b>SHRUBS</b>				
109	AG	ABELIA GRANDIFLORA	2-1/2' x 3' HT.	B & B OR CONTAINER
10	PF	PHOTINIA X FRAGERI	6' HT.	B & B OR CONTAINER
92	TM	TAXUS X MEDIA 'DENSIFORMIS'	2-1/2' x 3' HT.	B & B OR CONTAINER

**General Planting Notes**

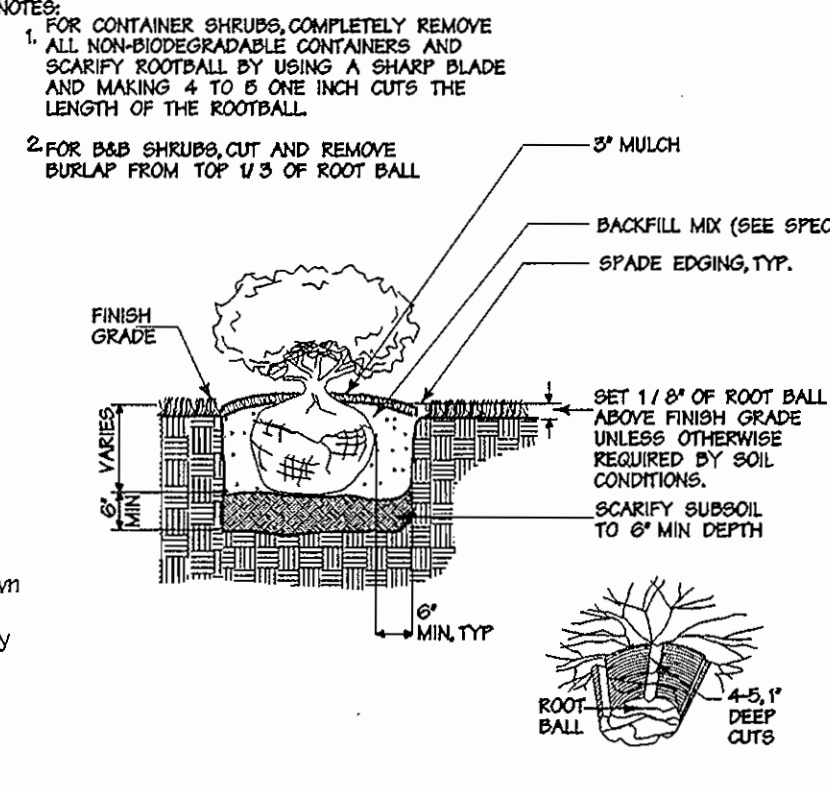
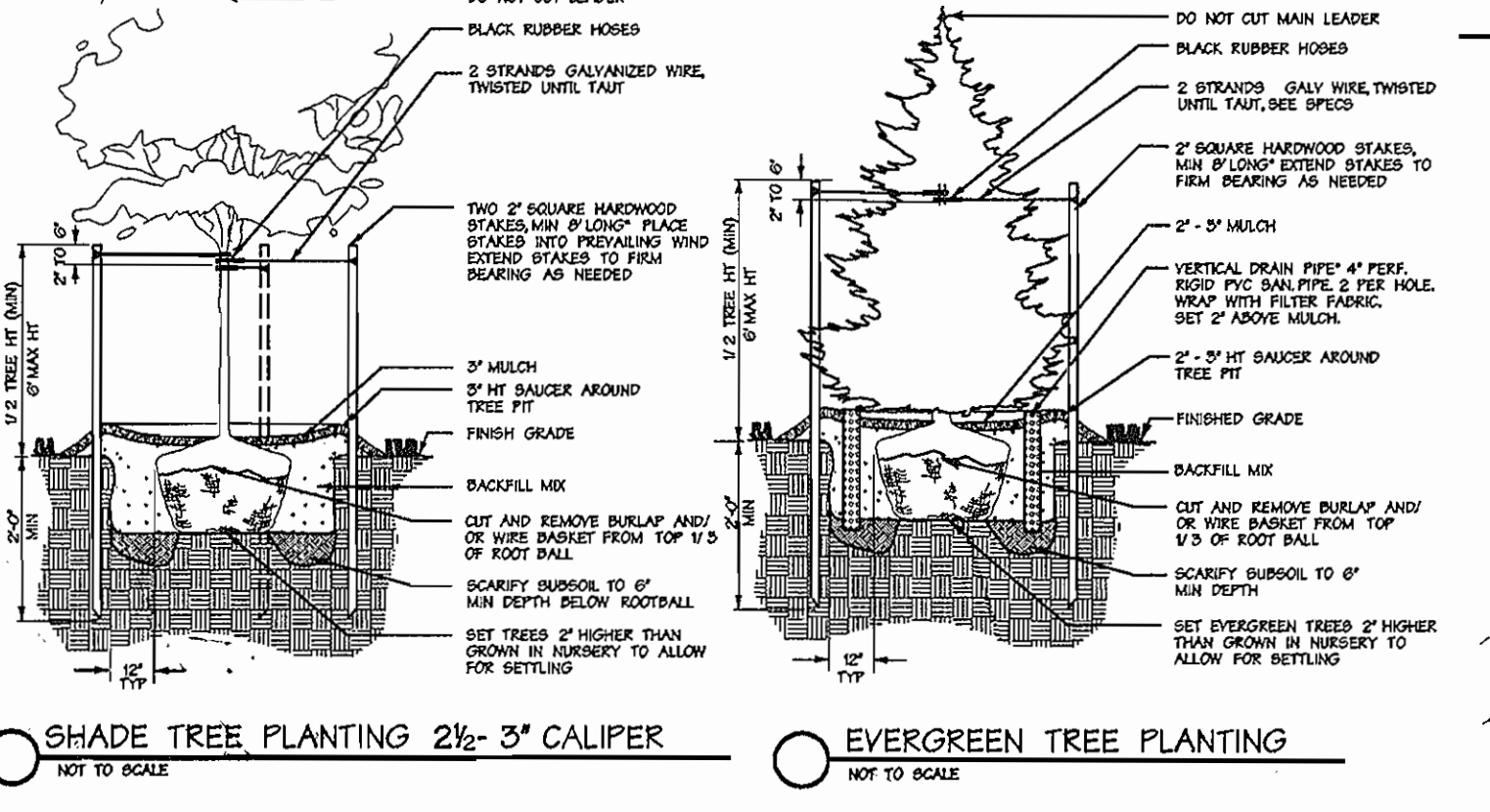
- All plant material to meet A.A.N. Standards.
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAWV.
- No substitutions to be made without consent of Landscape Architect or Owner.
- All beds to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting.
- Landscape Architect/Owner shall select, verify and/or approve all plant material. As Owner's discretion, specimen and other plants material will be selected.
- Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection with acceptance, all electric, water, drainage, and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- Contractor shall notify Miss Utility 72 hours prior to construction.
- The owner, tenants, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions Section

- 16.124 of the Ho.Co. code and the Ho.Co. Landscape Manual. Financial surety for the amount of \$25,000.00 (50 shade trees, 25 evergreen trees, and 201 shrubs).
- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings as shown on this plan may be made without prior approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.

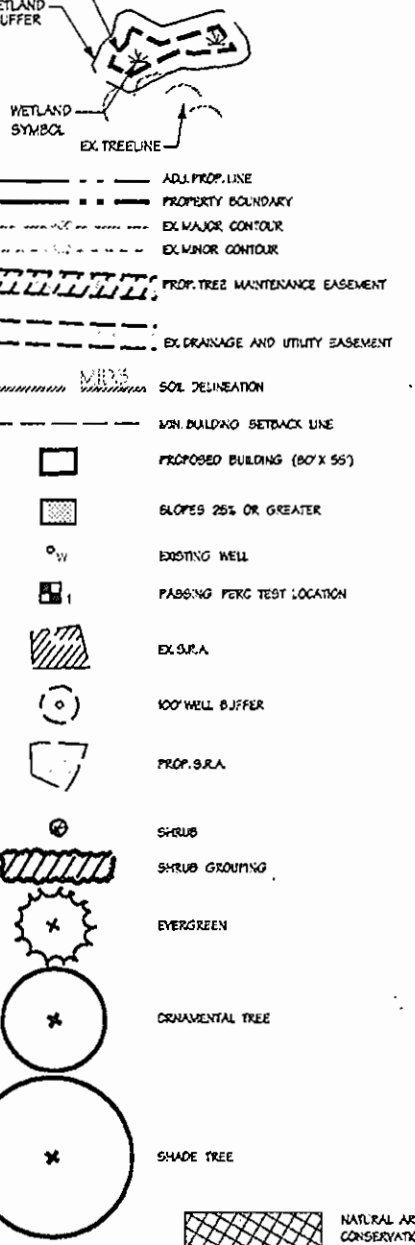
**Developer's/Builder's Certificate**

I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County code and the Howard County Landscape Manual. I/we further certify that upon completion, a certification of landscape installation, accompanied by an executed one-year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

*Dr. Paul Pistorio*  
NAME: PAUL PISTORIO DATE: 12-21-05



**Legend**



12/21/05  
Date  
Professional L.A. No. 405

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. Walter*  
FOR COUNTY HEALTH OFFICER 12/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Heather*  
CHIEF DEVELOPMENT ENGINEERING DIVISION 12/21/05 DATE

*Chris Hanna*  
CHIEF DIVISION OF LAND DEVELOPMENT 1/1/06 DATE

*David L. Geyer*  
DIRECTOR 1/1/06 DATE

Date	No.	Revision Description
12/21/05	1	REMOVE 70' B.W.M. PIPES FROM DESIGN
12/21/05	2	SHIFT BUILDING & ADJUST LANDSCAPE

**Ten Oaks Commercial Center**

'Triangle Howard, Parcel B'

OWNER: 3881 TEN OAKS PROPERTIES, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
5221 LYNNGATE RD.  
COLUMBIA, MARYLAND 21044  
410-730-5815

**DMW**  
Dart-McCune-Walker, Inc.  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
(410) 286-3313  
Fax 296-4705

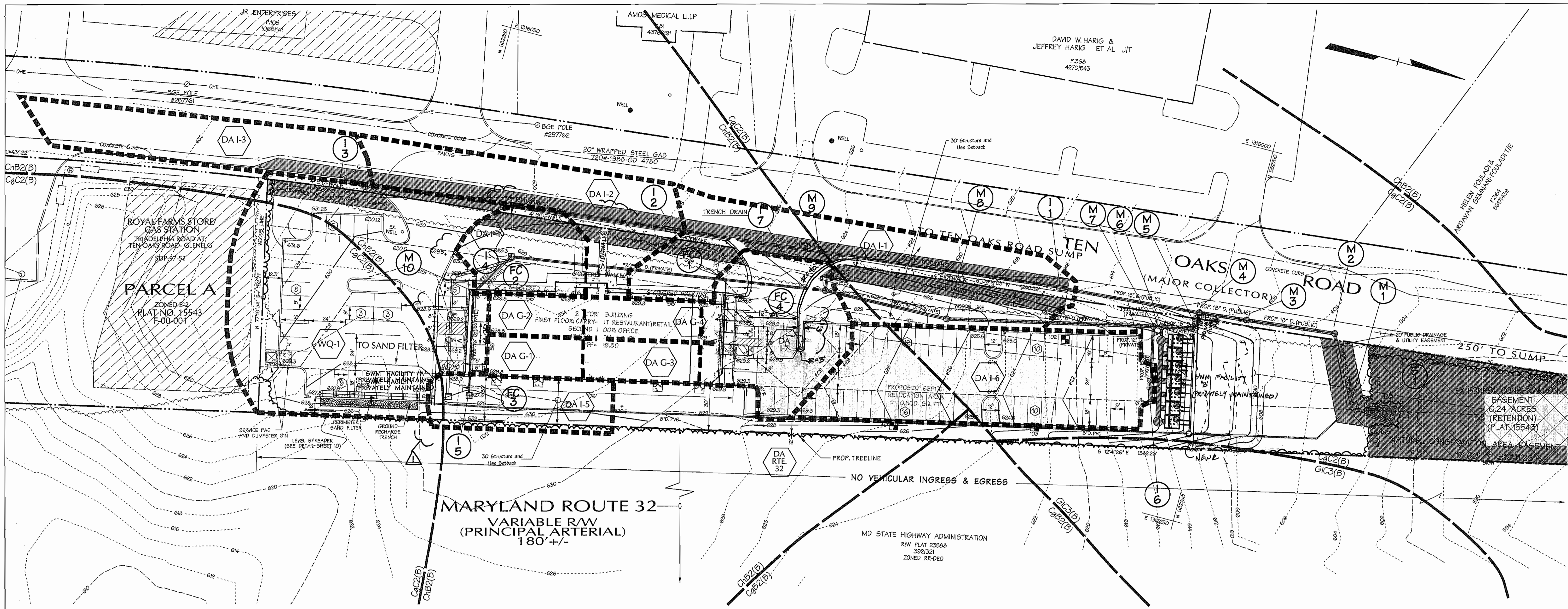
SECTION NAME	SECTION/AREA	DATE	NO. SHEETS	TOTAL SHEETS
TRIANGLE HOWARD	N/A	12/21/05	1	1
17864	10	10	22	32
WATER CODE	N/A	SEWER CODE	N/A	

**LANDSCAPE PLAN**

Des. By: CRH Scale: 1" = 30'  
Dm. By: CRH Date: 10/28/05  
Chk. By: KKK Approved: 16 of 19

SDP-04-130



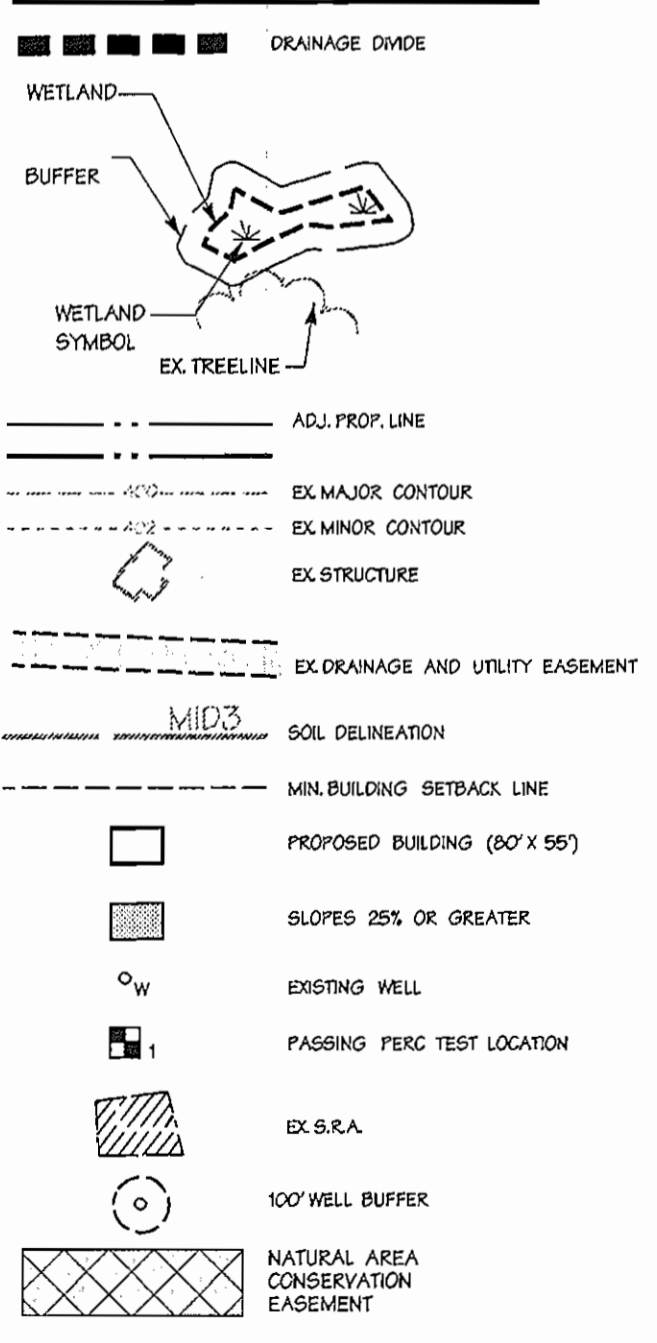


**PARCEL A**  
 ZONED B-2  
 PLAT NO. 15543  
 F-00-001

**MARYLAND ROUTE 32**  
 VARIABLE R/W  
 (PRINCIPAL ARTERIAL)  
 180' +/-

**TEN OAKS ROAD**  
 MAJOR COLLECTOR

**Legend**



A = 0.16 AC C = 0.95	DA I-3	Z = B-2 IMP. = 100%	A = 0.04 AC C = 0.95	DA G-3	Z = B-2 IMP. = 100%
A = 0.18 AC C = 0.76	DA I-2	Z = B-2 IMP. = 77%	A = 0.04 AC C = 0.95	DA G-4	Z = B-2 IMP. = 100%
A = 0.31 AC C = 0.81	DA I-1	Z = B-2 IMP. = 80%	A = 0.28 AC C = 0.95	DA I-6	Z = B-2 IMP. = 100%
A = 0.08 AC C = 0.35	DA I-5	Z = B-2 IMP. = 13%	A = 0.39± C = 0.78	WQ 1	Z = B-2 IMP. = 80%
A = 0.19 AC C = 0.81	DA I-7	Z = B-2 IMP. = 80%	A = 0.04 AC C = 0.95	DA G-1	Z = B-2 IMP. = 100%
A = 0.10 AC C = 0.35	DA I-4	Z = B-2 IMP. = 10%	A = 0.04 AC C = 0.95	DA G-2	Z = B-2 IMP. = 100%

**PROP. S.R.A.**  
 THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENDSORCHMENTS INTO THE PUBLIC SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWERAGE EASEMENT SHALL NOT BE NECESSARY.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Dale* 12/1/06  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Michael J. ...* 12/21/05  
 CHIEF DEVELOPMENT ENGINEERING DIVISION DATE

*Conrad ...* 1/14/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Mark ...* 1/5/06  
 DIRECTOR DATE

DATE	NO.	REVISION DESCRIPTION
1-23-08	3	ENT. RADIUS TO W. S. RADIUS ISLAND
6/2/06	1	REV. D.A. FOR BUILDING SHIFT

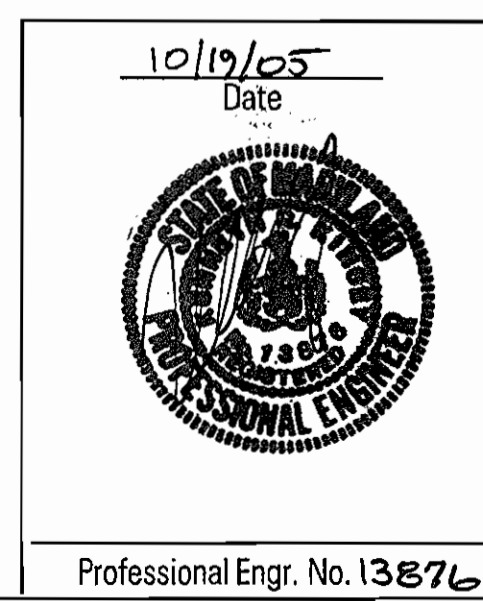
**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'

**OWNER:**  
 3881 TEN OAKS PROPERTIES, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

**DEVELOPER:**  
 MANAGEMENT, LLC  
 5221 LYNNGATE RD.  
 COLUMBIA, MARYLAND 21044  
 410-730-5815

**DMW**  
 Daft-McCune-Walker, Inc.  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3333  
 Fax 296-4705

A Team of Land Planners,  
 Landscape Architects,  
 Golf Course Architects,  
 Engineers, Surveyors &  
 Environmental Professionals



10/19/05  
 Date

SUBDIVISION NAME	SECTION/AREA	SHEET/NO.
TRIANGLE HOWARD	N/A	8
17864	10	B-2
17864	22	3RD
WATER CODE	N/A	SEWER CODE
N/A	N/A	6030.00

**TITLE**  
**DRAINAGE AREA MAP**

Des. By	Scale 1" = 30'	Proj. No. 02136.00
Dim. By KDE	Date 10/28/05	7 of 19
Chk. By KDK	Approved	

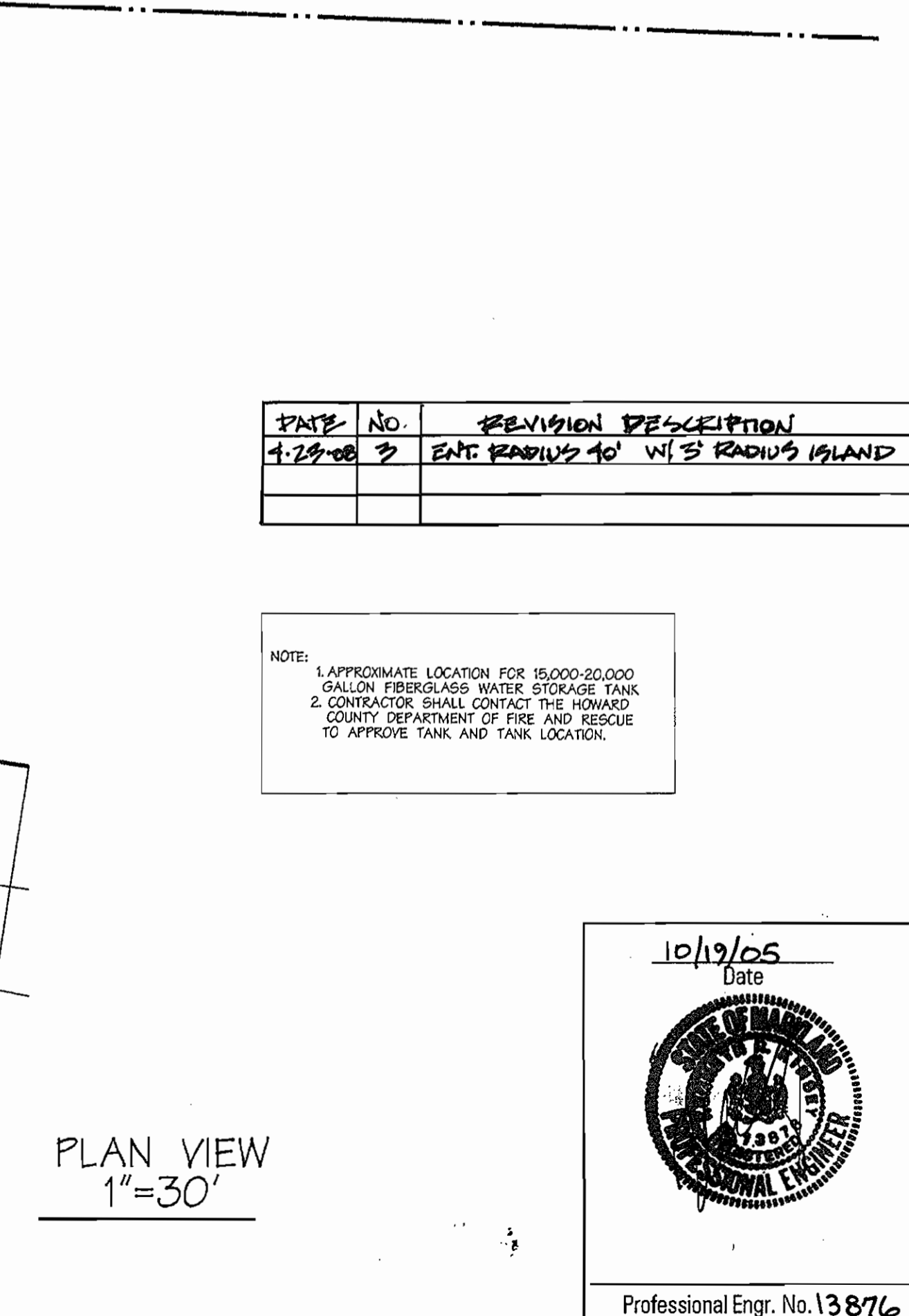
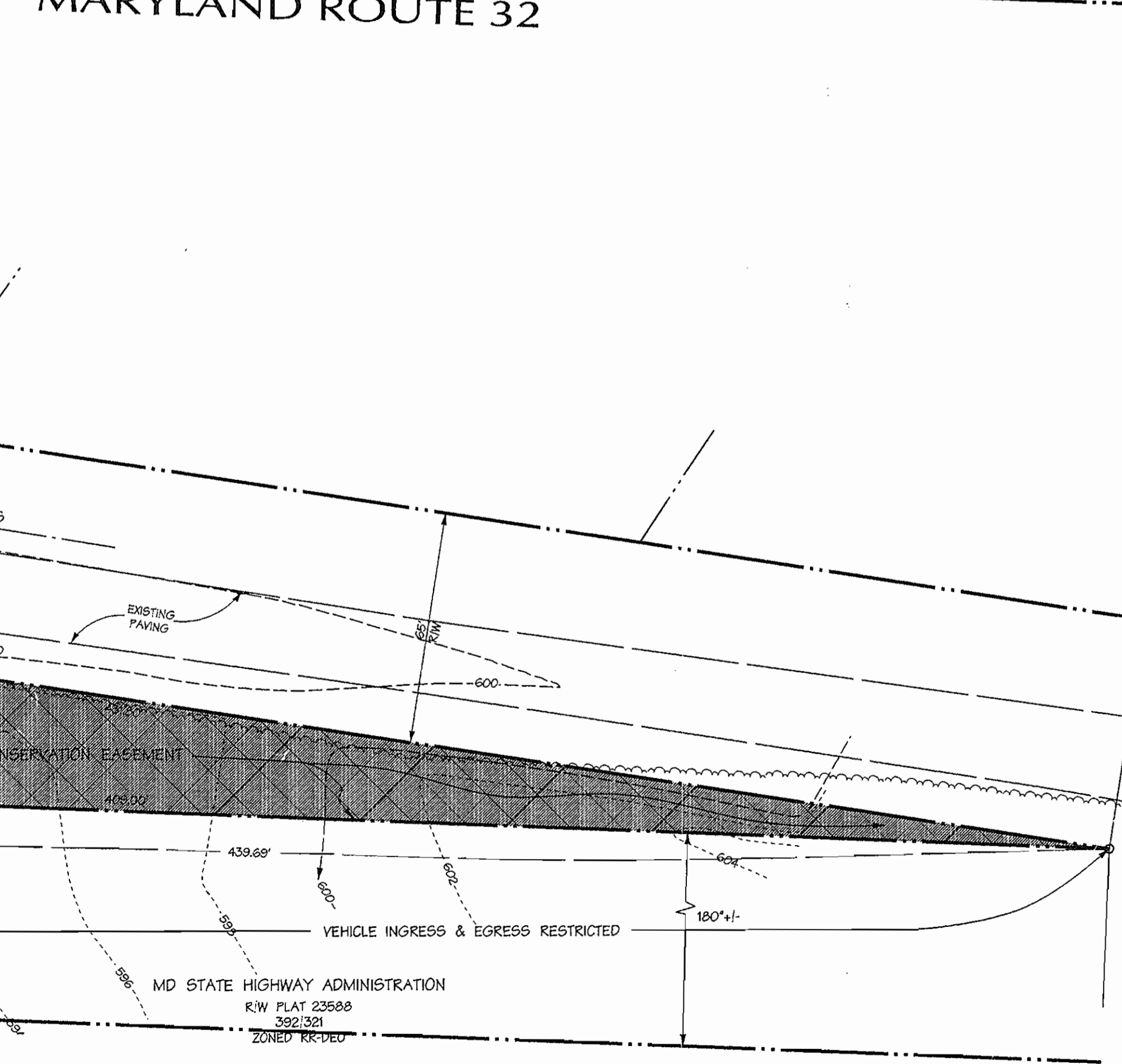
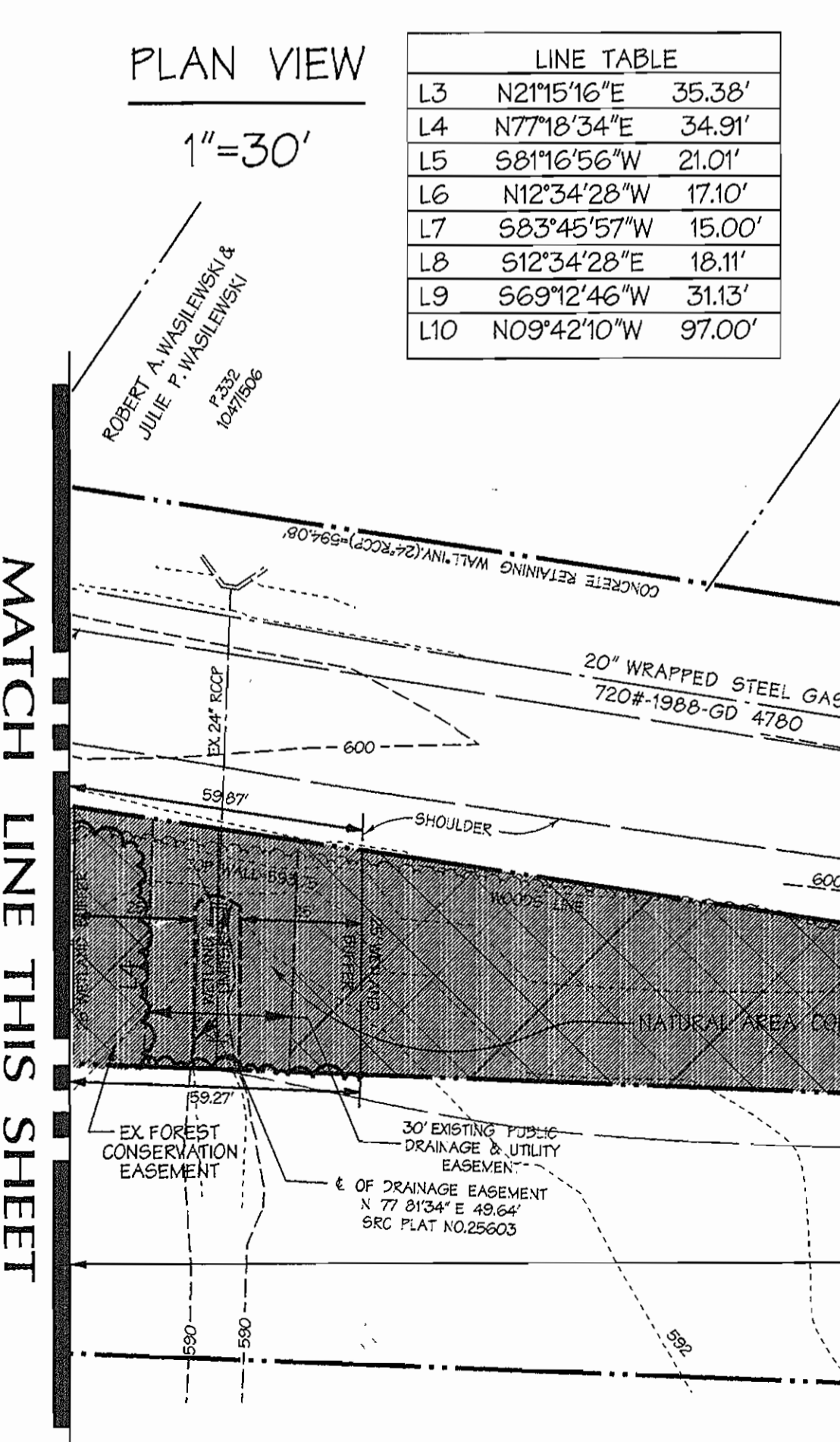
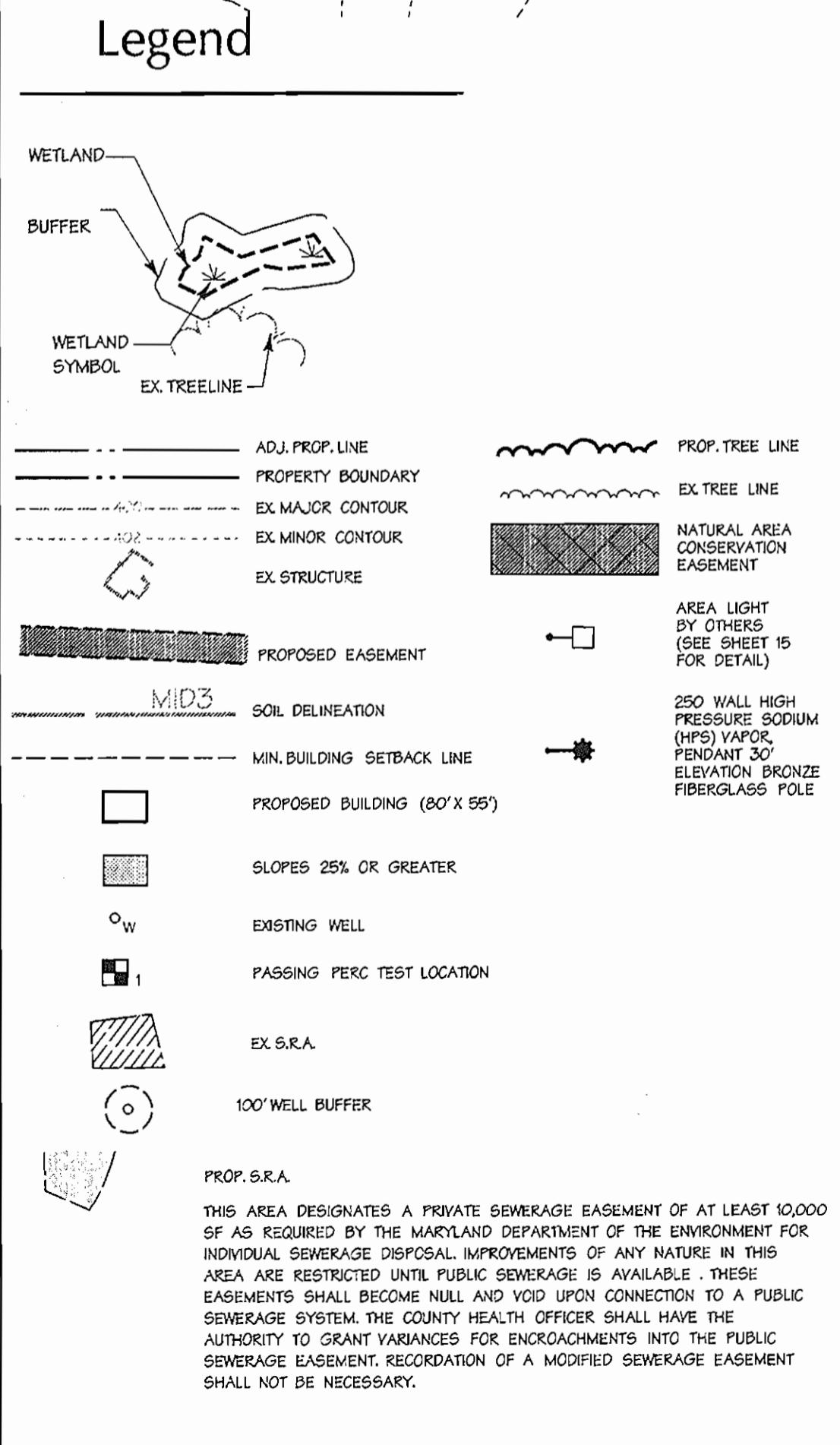
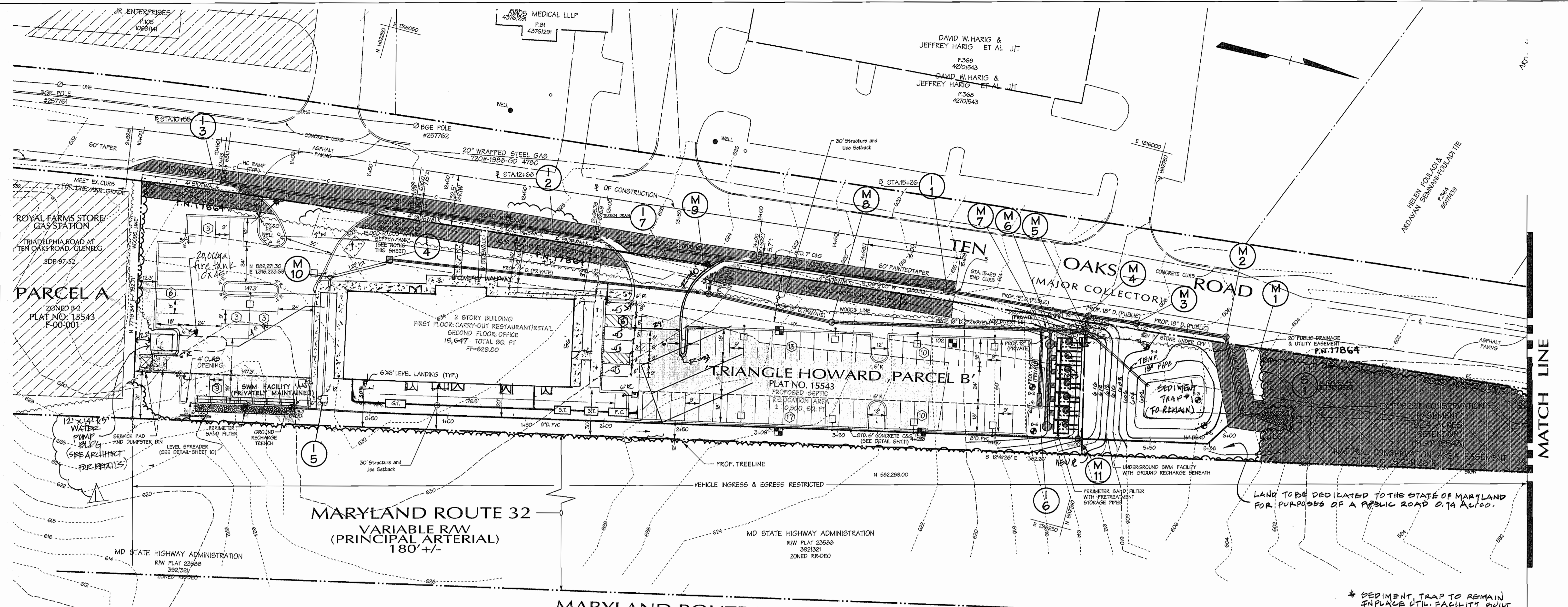
Professional Engr. No. 13876

SPP 04-130









\* SEDIMENT TRAP TO REMAIN IN PLACE UNTIL FACILITY BUILT BY THE STATE IS COMPLETED.

APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 Robert W. Wain  
 COUNTY HEALTH OFFICER 1/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief Development Engineering Division 12/20/05 DATE

Chief, Division of Land Development 1/14/06 DATE

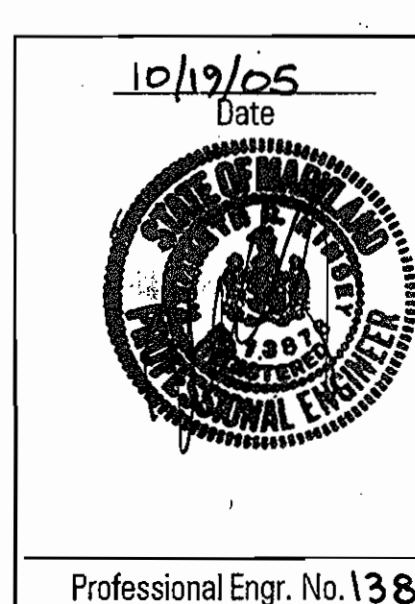
Director 1/21/06 DATE

DATE	NO.	REVISION DESCRIPTION
4/29/08	3	ENC. RADIUS TO W/S RADIUS ISLAND
6/14/07	1	REMOVE 72" S.W.M. PIPES FROM DESIGN
4/21/06	1	Shift bldg. to the south adj. plan & s/w

NOTE:  
 1. APPROXIMATE LOCATION FOR 15,000-20,000 GALLON FIBERGLASS WATER STORAGE TANK.  
 2. CONTRACTOR SHALL CONTACT THE HOWARD COUNTY DEPARTMENT OF FIRE AND RESCUE TO APPROVE TANK AND TANK LOCATION.

**Ten Oaks Commercial Center**  
 'Triangle Howard, Parcel B'  
 OWNER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD. COLUMBIA, MARYLAND 21044 410-730-5815  
 DEVELOPER: 3881 TEN OAKS MANAGEMENT, LLC  
 5221 LYNNGATE RD. COLUMBIA, MARYLAND 21044 410-730-5815

**DMW**  
 Dan McCune-Walkers, Inc.  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 (410) 296-3333  
 Fax 296-4705  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals



PLAT	BLOCK	ZONE	SECTION	TRACT	DATE
17864	15	B-2	22	31P	06/30/00

TITLE: **SITE PLAN**

Des. By	RLH	Scale	1" = 30'	Proj. No.	02136.00
Drn. By	KDE	Date	10/28/05	2 of 19	
Chk. By	KEL	Approved			

Professional Engr. No. 13876

SDP-04-130