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## General Notes

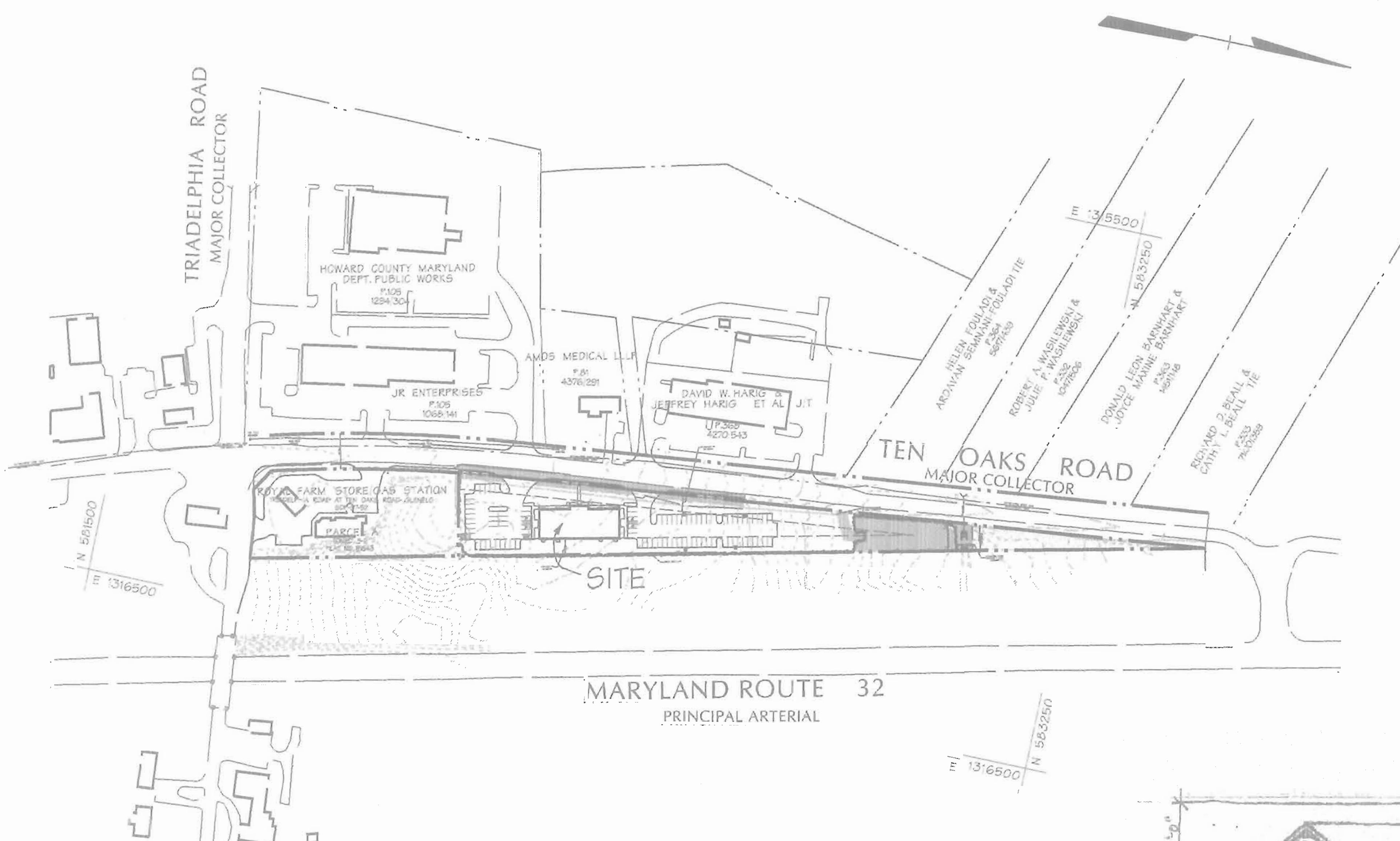
1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
2. The contractor shall notify the Department of Public Works Bureau of Engineering/Construction Inspection division at 410-313-1880 at least five (5) working days prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
4. 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.
5. All plan dimensions are to face of curb unless otherwise noted.
6. 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.
7. 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.
8. Water is private (well).
9. Sewer is private (septic)
10. 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.
11. 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.
12. There is no floodplain on this site
13. The wetlands delineation for this project was approved and appeared on plat 15543 and F-00-01.
14. Traffic study for this project was prepared by The Traffic Group, dated 11/13/03.
15. 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 & V, WP 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.
16. All outdoor lighting shall comply with the requirements of Zoning Section 134.
17. 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 Pabcel 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.
18. 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.
19. Soils analysis report prepared by Hillis-Carnes dated February 5, 2004.
20. Handicap parking details shall be in accordance with 'MD Building Code for the Handicapped" section 5.01-7.05.
21. Any damage to county owned right-of-way shall be corrected at the contractor's expense
22. All sidewalks shall be cross sloped at ¼" per foot.
23. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
24. All inlets shall be constructed in accordance with Howard County standards or MSHA standards as specified on structure schedule.
25. All materials and construction shall be in strict accordance with the Howard County Design Manual, Volume IV.
26. Building setback restrictions from property lines and right-of-way lines of any public road shall be in accordance with Triangle Howard Plat 15543.
27. All on site driveways and parking areas to be privately maintained.
28. All curb radii are 5 foot unless otherwise labeled and all curbs are to be 6" in height.
29. All equipment and tools to be placed so as not to interfere with vehicular or pedestrian movement unless specified.
30. Contractor shall be responsible for any damage to existing property which may occur as a result of his negligence during the execution of work.
31. All paving areas indicated are private.
32. All proposed HC ramps shall be in accordance with current ADA standards.
33. This property is located outside of the Metropolitan District
34. Electric, gas, cable and telephone lines designed by others.
35. No clearing, grading or construction is permitted within the wetland limits, 25' wetland buffer or retention forest conservation easement.
36. 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.
37. This property is located outside of the Metropolitan District
38. The Howard County Health Department has signed and approved the Perc Certification Plan, signed on 11-5-03.
39. Groundwater Appropriation Permit Number--------------------------------------
40. Maximum Daily Flow = 2,068 GPD
41. 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.
42. All sidewalks at intersections to have handicap ramps.

# Site Improvements & Building Additions For

# Ten Oaks Commercial Center

## 'Triangle Howard, Parcel B'

## Howard County Maryland



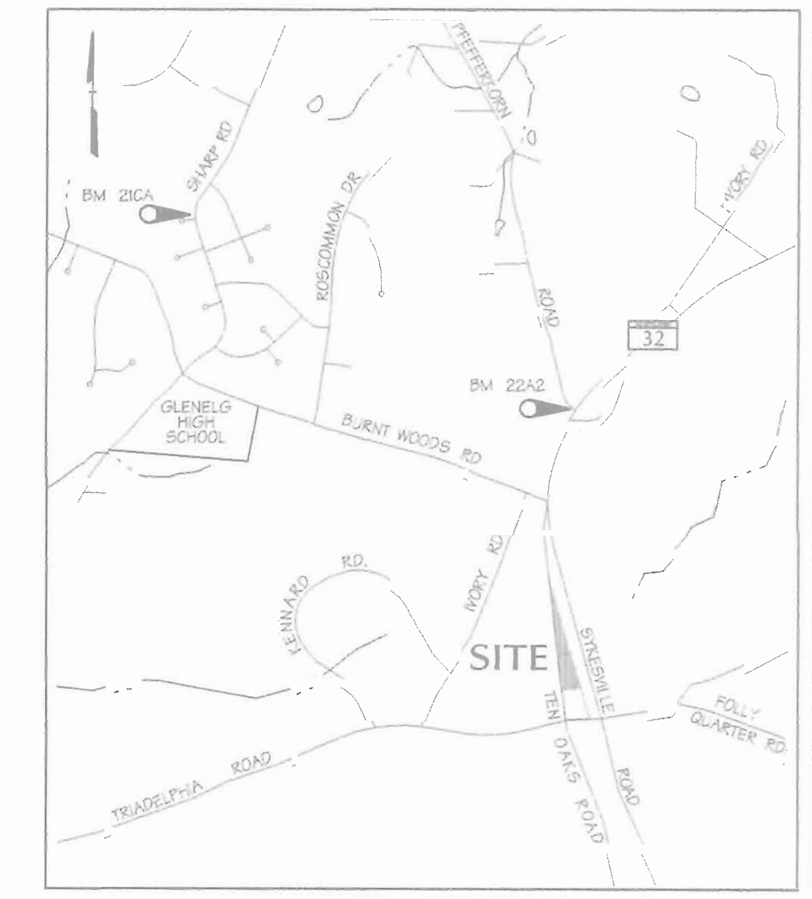

Overall Property Outline
Scale: 1"=200'

TEN OAKS ROAD (EAST) ELEVATION

NTS 10.16.03

## SITE ANALYSIS DATA CHART

1. General Site Data
   a. Present Zoning: B-2 per the 02/02/04 Comprehensive Zoning Plan.
   b. 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.
   c. Proposed Use of Site or Structure(s): commercial office building, carry-out restaurant, retail and parking.
   d. Proposed Water and Sewer Systems: ___ Public _X_ Private (well and septic)
   e. Any other relevant information NA
2. Area Tabulation
   a. Total Project Area: 2.4095 Acres (104,960 SF)
   b. Area of This Plan Submission: 2.4095 Acres (104,960 SF)
   c. Limit of Disturbed Area: 2.3 Acres
   d. Building Coverage of Site: 0.41 Acres and 16.9% of Gross Area (Proposed)
   e. Area of floodplain: 0 Acres
   f. Area of steep slopes: 0 Acres
   g. Net area of site: 2.4095 Acres
3. Parking Space Data
   a. Floor space on each level per building per use:
      FIRST FLOOR 8292 SF (Carry-out restaurant / retail)
      SECOND FLOOR 8346 SF (Office)
      TOTAL FLOOR AEA OF BUILDING 16,638 SF
   b. Maximum number of employees, tenants on-site per use: N/A
   c. Number of Parking Spaces Required by Zoning Regulations and Criteria:
      3000 SF CARRY-OUT RESTAURANT @ 6/1000= 18sp
      (MAXIMUM SEATS TO BE PROVIDED =30)
      5292 SF RETAIL @ 5/1000 = 27sp
      8346 SF OFFICE @ 3.3/1000 = 28sp
      TOTAL REQUIRED = 73sp
   d. Total Number of Parking Spaces Provided On-Site: 87
   e. Number of Handicapped Parking Spaces Provided: 4 (HC included in total)
   f. Proposed building is two stories




## 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 (1991) horizontal and NAVD 88 vertical and are based onthe following Howard County Geodetic Control Stations provided by the Howard County Departments of Public Works, Survey Division:

| DESIGNATION | NORTH (sFT) | EAST (sFT) | ELEVATION (sFT) |
|---|---|---|---|
| 21CA | 588897.368 | 1311235.695 | 612.653 |
| 22A2 | 585988.551 | 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 55 | 3881 TEN OAKS ROAD |
| | |

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

for COUNTY HEALTH OFFICER MD — 12/28/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MD — 12/27/05 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/4/06 DATE

DIRECTOR — 1/9/06 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:
3881 TEN OAKS 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

Professional Engr. No. 13876

| SUBDIVISION NAME | SECTION/AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

TITLE
COVER SHEET

| Des. By | RLH | Scale | 1"=200' | Proj. No. | 02136.00 |
|---|---|---|---|---|---|
| Drn. By | KDE | Date | 10/28/05 | | |
| Chk. By | KRK | Approved | | 1 of 19 | |

SDP-04-130

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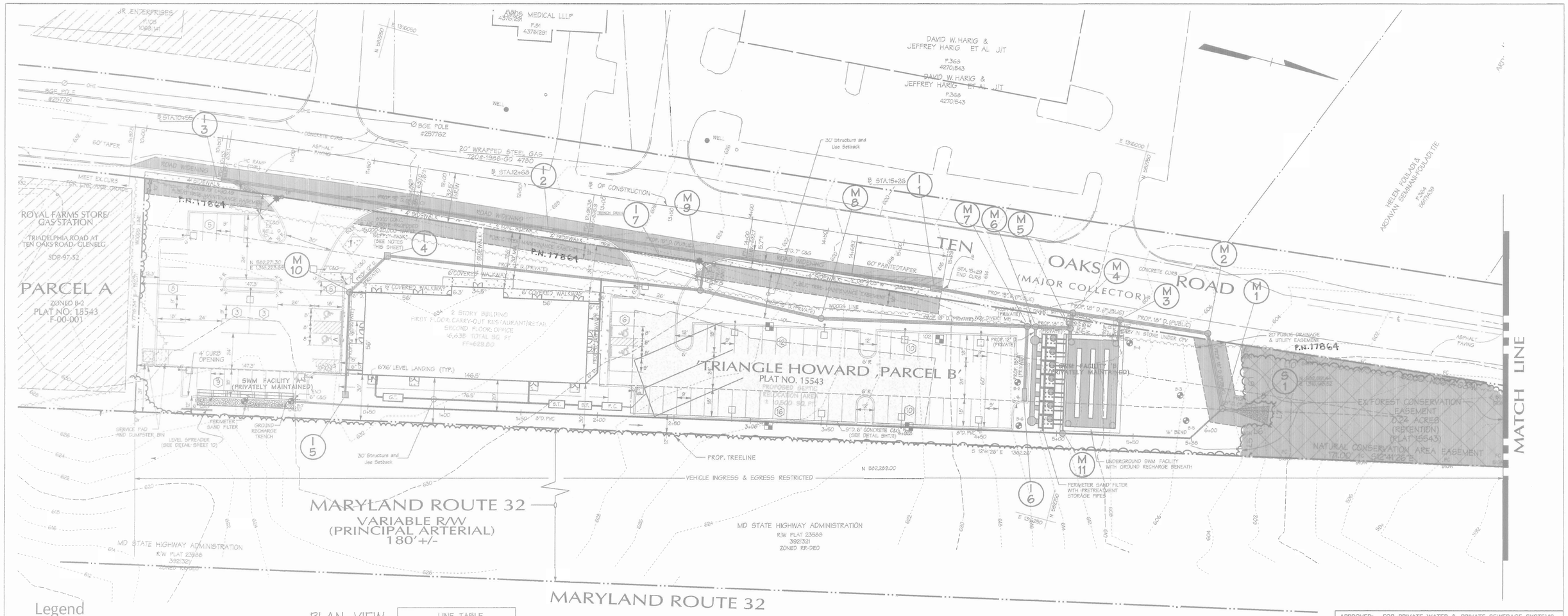



## Legend

WETLAND
BUFFER
WETLAND SYMBOL
EX. TREELINE

- ADJ. PROP. LINE
- PROPERTY BOUNDARY
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- PROPOSED EASEMENT
- SOIL DELINEATION
- MIN. BUILDING SETBACK LINE
- PROPOSED BUILDING (80'X 58')
- SLOPES 25% OR GREATER
- EXISTING WELL
- PASSING PERC TEST LOCATION
- EX. S.R.A.
- 100' WELL BUFFER
- PROP. TREE LINE
- EX. TREE LINE
- NATURAL AREA CONSERVATION EASEMENT
- AREA LIGHT BY OTHERS (SEE SHEET 15 FOR DETAIL)
- 250 WALL HIGH PRESSURE SODIUM (HPS) VAPOR, PENDANT 30' ELEVATION BRONZE FIBERGLASS POLE

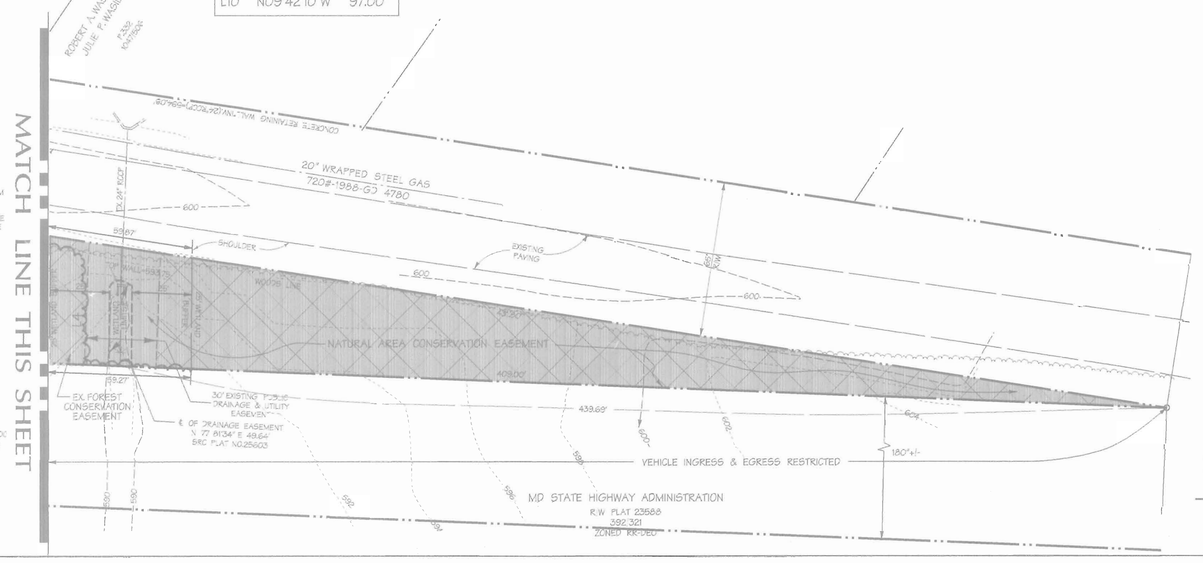
PROP. S.R.A.

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.

## 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' |




## 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.

10/12/05
Date

Professional Engr. No. 13876

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/20/05

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, MARYLAND 21044
410-730-5815

DEVELOPER:
3881 TEN OAKS MANAGEMENT, LLC
5221 LYNNGATE RD.
COLUMBIA, MARYLAND 21044
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DMW
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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

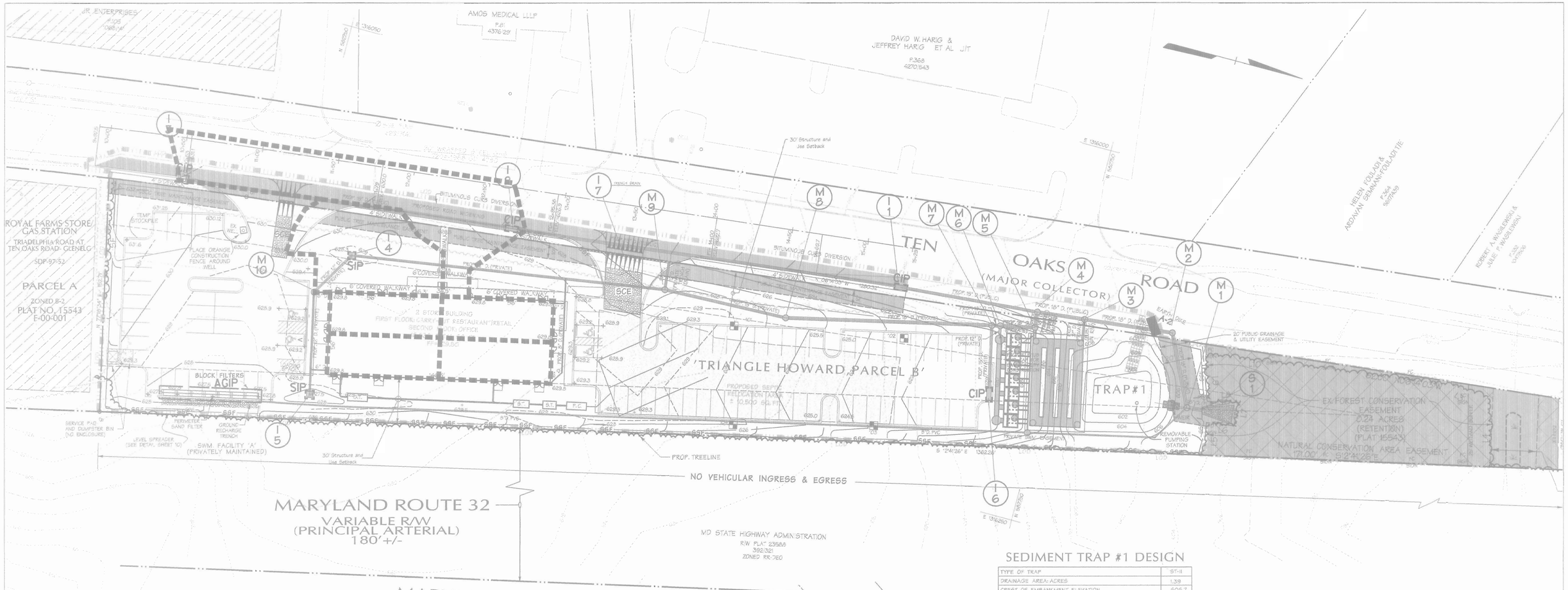

| | | | |
|---|---|---|---|
| SUBDIVISION NAME: TRIANGLE HOWARD | | SECTION / AREA: N/A | LOT/PARCEL #: B |
| PLAT NO.: 17864 | BLOCK #: 15 | ZONE: B-2 | TAX/ZONE MAP: 22 |
| ELEC. DISTRICT: 3RD | CENSUS TRACT: 6030.00 | | |
| WATER CODE: N/A | | SEWER CODE: N/A | |

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 | KRK | Approved | | | |

SDP-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 @ ½ DEPTH OF WET STORAGE | | 603.45 |
| DEPTH BELOW CREST | | 2.25 |
| BOTTOM ELEVATION | | 602.0' |
| WEIR LENGTH | | 6.0' |

## Legend

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

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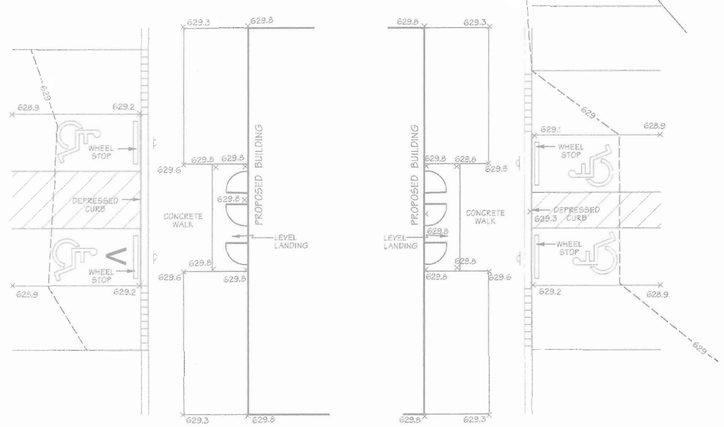
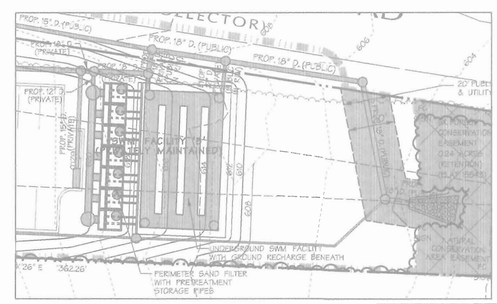
EARTH DIKE
SILT FENCE
SUPER SILT FENCE
TREE PROTECTION FENCE
LIMIT OF DISTURBANCE
STONE OUTLET STRUCTURE
STABILIZED CONSTRUCTION ENTRANCE
AT-GRADE INLET PROTECTION
STANDARD INLET PROTECTION
CURB INLET PROTECTION
BITUMINOUS CURB DIVERSION
EROSION CONTROL MATTING
NATURAL AREA CONSERVATION EASEMENT




## HANDICAPPED RAMP/ENTRANCE DETAIL

SCALE: 1" = 10'




## ULTIMATE GRADING

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

COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/21/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|

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'Triangle Howard, Parcel B'

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


| SUBDIVISION NAME | SECTION/AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N.A. | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6033.00 |

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 | 3 of 19 |
| Drn. By K.D.E. | Date 10/28/05 | | |
| Chk. By KRK | Approved | | |

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 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 OF DEVELOPER — 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 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.

SIGNATURE OF ENGINEER — DATE 10/19/05
PRINT NAME BELOW SIGNATURE — PROFESSIONAL ENGINEER NO. 13876
KENNETH R. KINGEY

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

U.S. NATURAL RESOURCE CONSERVATION SERVICE — DATE 10/21/05

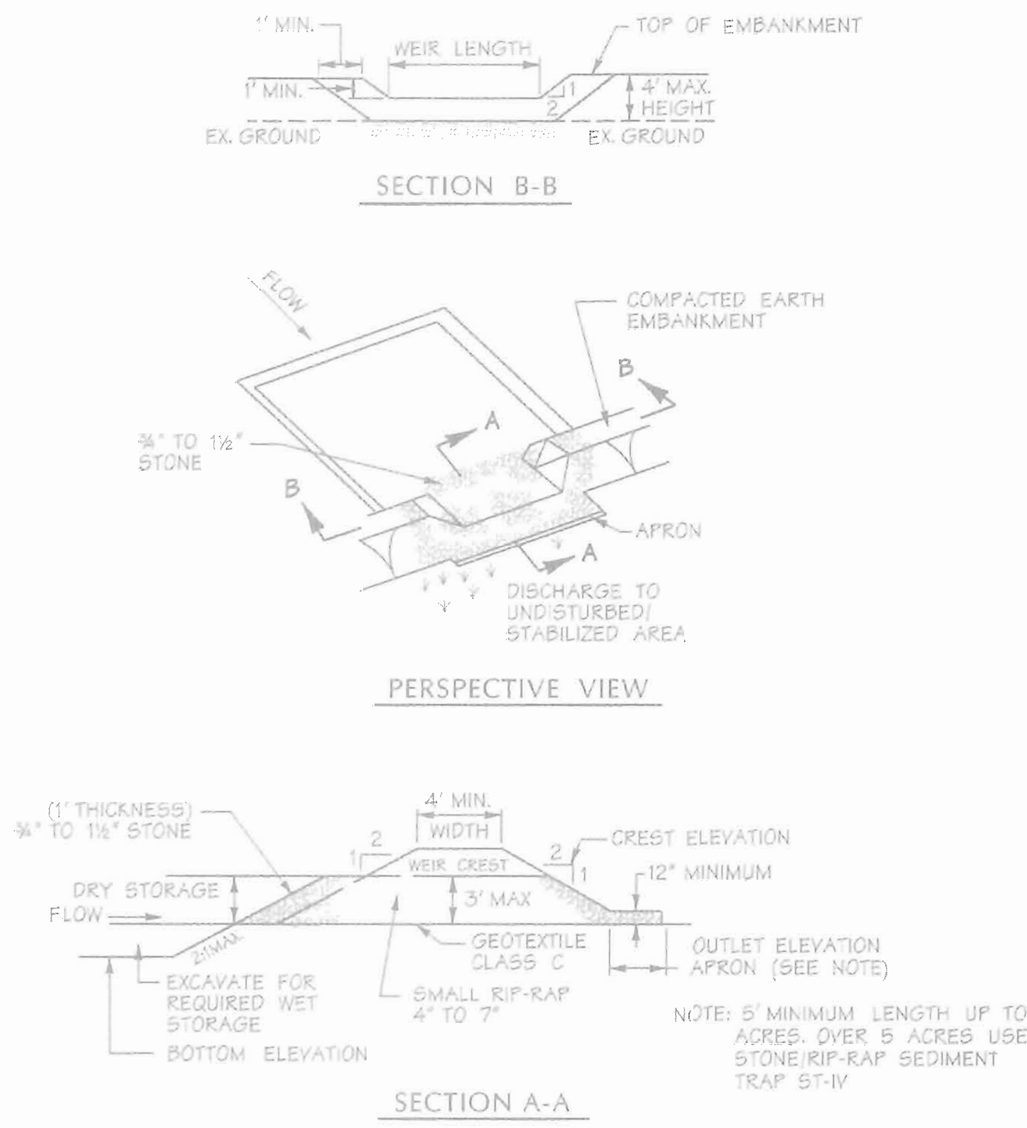
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD S.C.D. — DATE 10/21/05

10/19/05
Date

Professional Engr. No. 13876

SDP-04-130




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

## Stone Outlet Sediment Trap - ST II

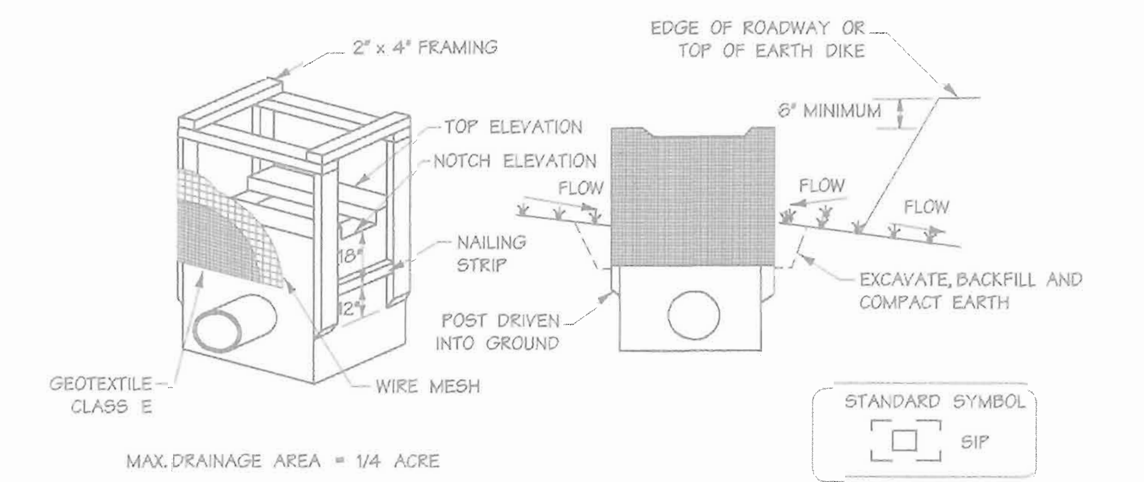
Not To Scale

### 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 ¾" TO 1½" 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




MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL — SIP

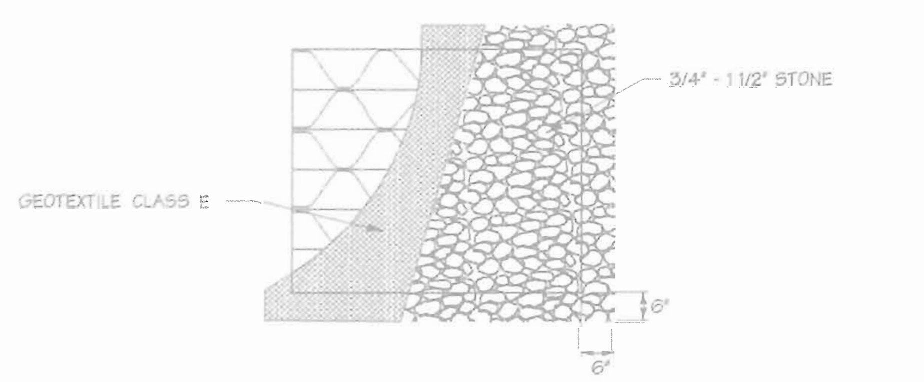
### CONSTRUCTION SPECIFICATIONS

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 ½" x ½" 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 SUMP, 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.

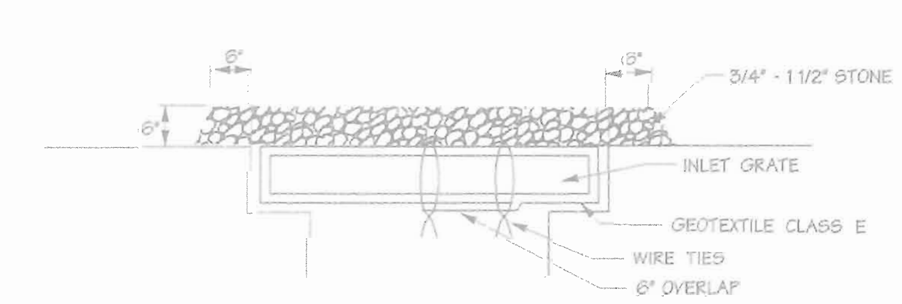
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 16 - 5 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Standard Inlet Protection

Not To Scale




PLAN /CUT AWAY VIEW




CROSS SECTION

STANDARD SYMBOL — AGIP

MAX. DRAINAGE AREA = 1/4 ACRE

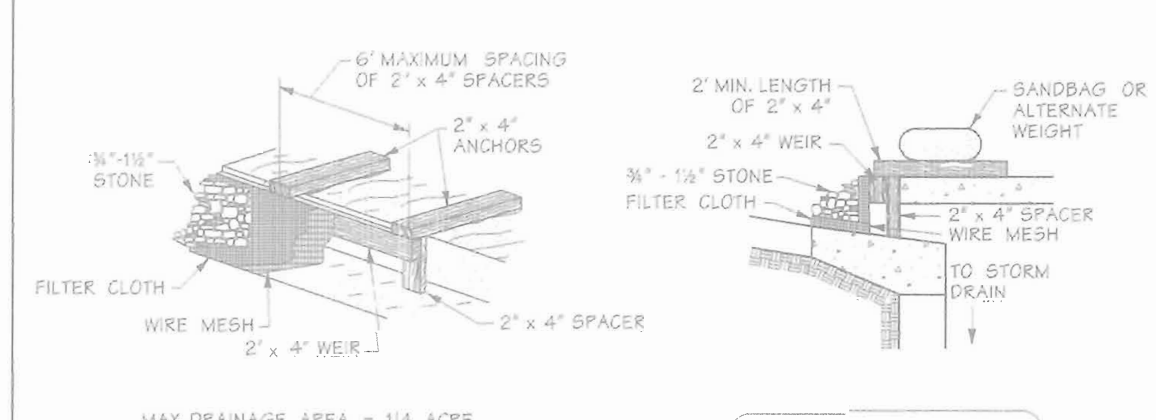
### CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
2. PLACE ¾" TO 1½" STONE, 4"-6" 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




MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL — CIP

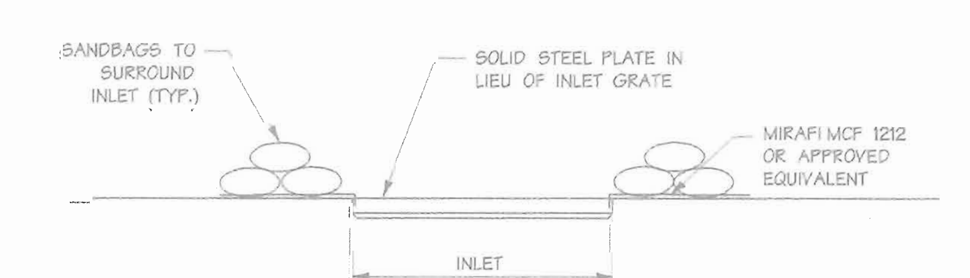
### CONSTRUCTION SPECIFICATIONS

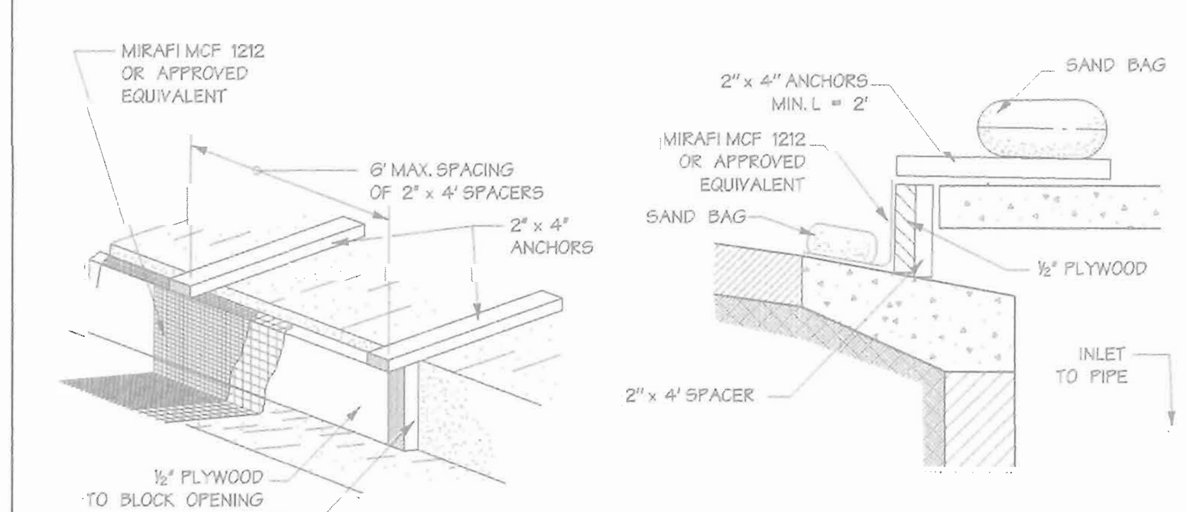
1. ATTACH A CONTINUOUS PIECE OF ½" x ½" WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" x 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" x 4" WEIR.
3. SECURELY NAIL THE 2" x 4" WEIR TO A 9" 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 ½" x ½" 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 ¾" X 1½" 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




E - 16 - 5D

## Inlet Capping /Blocking Detail

**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 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.

Don Paul Pistorio — 10-13-05
SIGNATURE OF DEVELOPER / PRINT NAME BELOW SIGNATURE — DATE
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 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.

SIGNATURE OF ENGINEER / PRINT NAME BELOW SIGNATURE — 10/19/05 DATE #13876
KENNETH R. KIOSBY

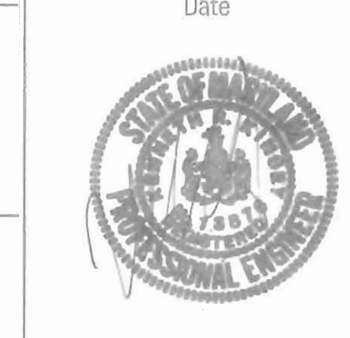
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

U.S. NATURAL RESOURCE CONSERVATION SERVICE — 10/31/05 DATE

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

HOWARD S.C.D. — 10/31/05 DATE

10/19/05
Date



Professional Engr. No. 13876

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

for COUNTY HEALTH OFFICER — 12/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12/24/05 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/4/06 DATE

DIRECTOR — 1/3/06 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:
3881 TEN OAKS 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

| SUBDIVISION NAME | SECTION AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

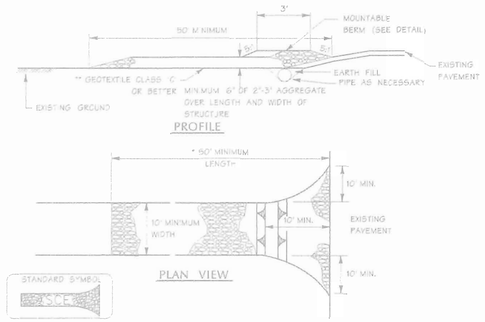
| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

TITLE
# SEDIMENT & EROSION CONTROL DETAILS

| Des. By | C.R.W. | Scale | Proj. No. 02136.00 |
|---|---|---|---|
| Drn. By | W.D.E. | Date 10/28/05 | 4 of 19 |
| Chk. By | KRK | Approved | |

SDP-04-130

Wed Oct 12 13:34:20 2005 n:\02136\sheet files\02136.sc4



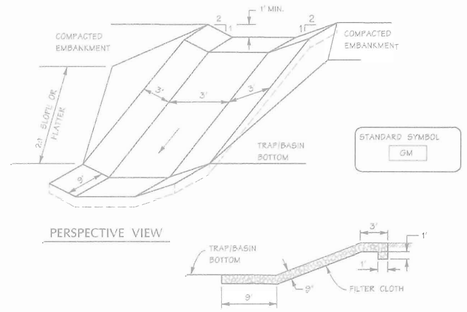

CONSTRUCTION SPECIFICATIONS

1. LENGTH - MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT).
2. WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC CLASS C (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY, PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — F - 17 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Stabilized Construction Entrance

Not To Scale



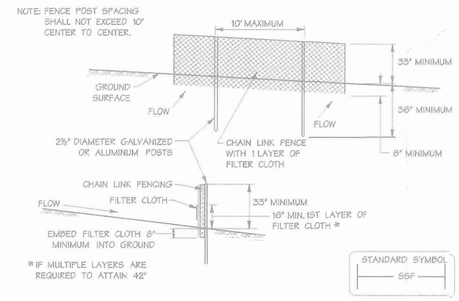

CONSTRUCTION SPECIFICATIONS

1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 9' x 3' x 9" GABION BASKETS FORMING A TRAPEZOIDAL CROSS SECTION 1' DEEP, WITH 2:1 SIDE SLOPES, AND A 3' BOTTOM WIDTH.
2. GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS.
3. THE STONE USED TO FILL THE GABION BASKETS SHALL BE 4" - 7".
4. GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
5. GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT ON SLOPES STEEPER THAN 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — S - 7 - 2 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Gabion Inflow Protection

NOT TO SCALE




CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 8' LENGTH POSTS.
2. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE. THE CHAIN LINK FENCING SHALL BE SIX (6) GAUGE OR HEAVIER.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
5. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — H - 26 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Super Silt Fence

Not To Scale

1. DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE EROSION AND SEDIMENT CONTROL MEASURE SHOWN HEREON.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; (b) 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 (313-1855).
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 THERETO.
5. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, 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/BASING 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), SODS (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). 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 DISTURBED | 2.10 | ACRES |
| AREA TO BE ROOFED OR PAVED | 1.10 | 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 DETERMINED BY CONTRACTOR 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.

## Sediment Control General Notes

sedctrl.cel / HOGENN

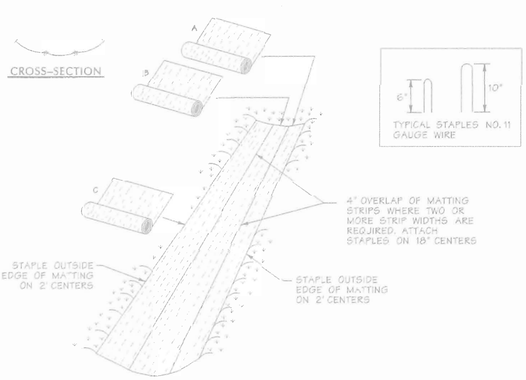
TEMPORARY METHODS:

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 CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING 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 AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED 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 SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

## Dust Control Specifications




CONSTRUCTION SPECIFICATIONS

1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH, SPACING BETWEEN STAPLES IN 6".
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4", SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — G-22-2 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Erosion Control Matting

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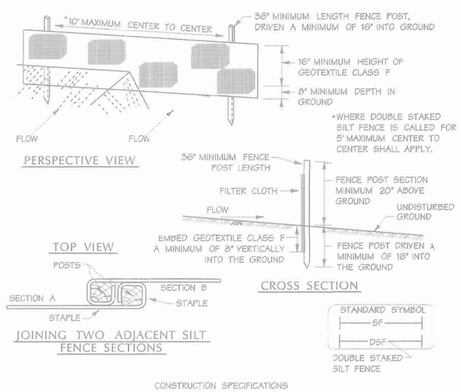



CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1½" x 1½" SQUARE (MINIMUM) CUT, OR 1¾" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

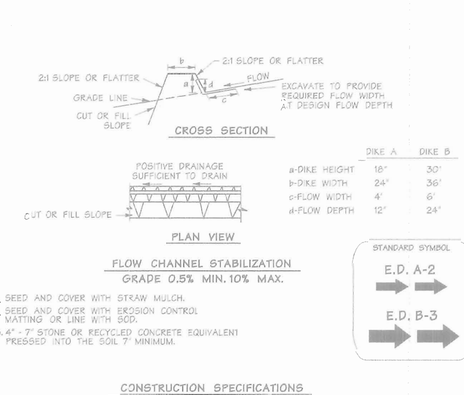
| | | |
|---|---|---|
| TENSILE STRENGTH | 50 LBS/IN (MIN.) | TEST: MSMT 509 |
| TENSILE MODULUS | 20 LBS/IN (MIN.) | TEST: MSMT 509 |
| FLOW RATE | 0.3 GAL FT/MIN (MAX) | TEST: MSMT 322 |
| FILTERING EFFICIENCY | 75% (MIN.) | TEST: MSMT 322 |

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — E - 15 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Silt Fence

Not To Scale




| | DIKE A | DIKE B |
|---|---|---|
| a-DIKE HEIGHT | 18" | 30" |
| b-DIKE WIDTH | 24" | 36' |
| c-FLOW WIDTH | 4' | 6' |
| d-FLOW DEPTH | 12" | 24" |

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. SEED AND COVER WITH STRAW MULCH.
2. SEED AND COVER WITH EROSION CONTROL MATTING OR LINE WITH SOD.
3. 4" - 7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM.

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.
2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.
5. THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.
8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

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## Earth Dike

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 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."

Don Paul Pistorio — 10-13-05
SIGNATURE OF DEVELOPER — DATE
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 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."

10/19/05
SIGNATURE OF ENGINEER — DATE
PRINT NAME BELOW SIGNATURE — #13876
KENNETH R. KINSBY

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

Jim Myers/GB — 10/24/05
U.S. NATURAL RESOURCE CONSERVATION SERVICE — DATE

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

10/31/05
HOWARD S.C.D. — DATE

10/19/05
Date

Professional Engr. No. 13876

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

Robert J. Weber — 12/21/05
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/20/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

1/5/06
DIRECTOR — 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:
3881 TEN OAKS 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


| SUBDIVISION NAME | SECTION/AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| FILE # | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 15 | B-2 | 22 | 2ND | 6030.00 |

WATER CODE: N/A — SEWER CODE: N/A

TITLE
# SEDIMENT & EROSION CONTROL DETAILS

| | | | | |
|---|---|---|---|---|
| Des. By | R.L.H. | Scale | | Proj. No. 02136.00 |
| Drn. By | K.D.E. | Date | 10/28/05 | 5 of 19 |
| Chk. By | KRK. | Approved | | |

SDP-04-130

Wed Oct 19 15:20:40 2005

# STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

## SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. SITE PREPARATION

I. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms waterways, or sediment control basins.

II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

III. Schedule required soil test to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

I. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.

II. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substitutes for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

III. Lime materials shall be ground limestone (hydrated or brunt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such finenses that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.

IV. Incorporate lime and fertilizer into the top 3 - 5 inches of soil by disking or other suitable means.

C. SEEDBED PREPARATION

I. TEMPORARY SEEDING

A. Seedbed preparation shall consist of loosening soil to a depth of 3 inches to 5 inches by means of suitable agricultural or construction equipment, such a disk harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

B. Apply fertilizer and lime as prescribed on the plans.

C. Incorporate lime and fertilizer into the top 3 - 5 inches of soil by disking or other suitable means.

II. PERMANENT SEEDING

A. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (PPM).
3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if Lovegrass or Serecia Lespedeza is to be planted. Then a sandy soil (< 30% silt plus clay) would be acceptable.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by the soils on site, adding topsoil is required in accordance with Section 21 - Standard and Specification for Topsoil.

B. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5 inches to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

C. Apply soil amendments as per soil test or as included on the plans.

D. Mix soil amendments into the top 3 - 5 inches of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3 inches of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. SEED SPECIFICATIONS

I. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

II. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80 F. can weaken bacteria and make the inoculant less effective.

E. METHODS OF SEEDING

I. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or cultipacker seeder.

A. If fertilizer is being applied at the time of seeding, the application rates amounts shall not exceed the following:
Nitrogen; maximum of 100 pounds per acre total of soluble
Nitrogen; P2O5 (phosphorous): 200 pounds per acre; K2O (potassium): 200 pounds per acre.

B. Lime: Use only ground agricultural limestone, (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use wet or hydrated lime when hydroseeding.

C. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

II. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

A. Seed spread dry shal be incorporated into the subsoil at the rates prescribed on the temporary or permanent seeding summaries or tables 26 or 28. The seeded area shall then be rolled with a weighted roller to provide good seed soil contact.

B. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

III. Drill or cultipacker seeding: Mechanized seeders that apply and cover seed with soil.

A. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least ¼ inch of soil covering.

Seedbed must be firm after planting.

B. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

I. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, rotted, decayed, or excessively dusty, and shall be free of noxious weeds seeds as specified in the Maryland Seed Law.

II. Wood cellulose fiber mulch (WCFM)

A. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

B. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

C. WCFM, including dye shall contain no germination or growth inhibiting factors.

D. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.

E. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.

F. WCFM must conform to the following physical requirements: Fiber length to approximately 10 mm., diameter approximately 1mm., ph range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. MULCHING SEEDED AREAS - Mulch shall be applied to all seeded areas where one species of grass is desired.

I. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

II. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons per acre. Mulch shall be applied in a uniform loose depth of between 1inches and 2 inches. Mulch applied shall achieve a uniform distribution and depth so that the surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons per acre.

III. Wood cellulose fiber ,sed as a mulch shall be applied at a net dry weight of 1,500 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

H. SECURING STRAW MULCH - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depenating upon size of area and erosion hazard:

I. A mulch anchoring tool is a tractor drawn implement design to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

II. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

III. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys or on crest of banks. The remainder of area should appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

IV. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet ong.

## SECTION II - TEMPORARY SEEDING

VEGETATION - Annual grass or grain used to provide cover or disturbed areas for up to 12 months. For longer duration of vegetative cover, permanent seeding is required.

| Seed Mixture (Hardiness Zone 6B) | | | | | Fertilizer Rate (10-10-10) | Lime Rate |
|---|---|---|---|---|---|---|
| No. | Species | Application Rate (Lb./Ac.) | Seeding Dates | Seeding Depths | | |
| 1 | Annual Ryegrass | 50 | 3/15-6/1 | ¼"-½" | 600 Lbs./Ac. (15 Lbs./1000 SF) | 2 Tons/Ac. (100 Lbs./1000 SF) |
| 2 | Weeping Lovegrass | 4 | 3.15-6/1 | ¼"-½" | | |

## SECTION III - PERMANENT SEEDING

Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

| Seed Mixture No. 3 (Hardiness Zone 6B) | | | | | ** Fertilizer Rate (10-20-20) | | | ** Lime Rate |
|---|---|---|---|---|---|---|---|---|
| % | Species | Application Rate (Lb./Ac.) | Seeding * Dates | Seeding Depths | N | P205 | K20 | |
| 55 | Rebel II Tall Fescue | 125 | 3.15-6/1 | ¼"-½" | 90 Lb./Ac. (2 Lb./1000 Sq.Ft.) | 175 Lb./Ac. (4 Lb. 1000 Sq.Ft.) | 175 Lb./Ac. (4 Lb. 1000 Sq.Ft.) | 2 Tons/Ac. (100 Lb./ 1000 Sq.Ft.) |
| 10 | Pennfine Perennial Ryegrass | 15 | | | | | | |
| 5 | Kenblue Kentucky Bluegrass | 10 | | | | | | |

* For 9-16 through 8-14 add two (2) pounds of Weeping Lovegrass per acre or ten (10) pounds of Millet per acre to seed mixture (i.e. Mix #3 shown).

** At time of fine grading, fertilizer and lime rates will be based on soil test results (see section I.B.I). Copy of recommended rates to be supplied to the Sediment Control Inspector.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

G - 20 - 1A

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

Vegetative Stabilization

## SECTION IV - SOD

To provide quick cover on disturbed areas (2:1 grade or flatter)

A. GENERAL SPECIFICATIONS

I. Class of turfgrass sod shall be Maryland or Virginia State certified or approved. Sod labels shall be made available to the job foreman and inspector.

II. Sod shall be machine cut at a uniform soil thickness of ¾", plus or minus¼", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.

III. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.

IV. Sod shall not be harvested or transplanted when moisture content (exceedively dry or wet) may adversely affect its survival.

V. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. SOD INSTALLATION

I. During periods of exceedively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.

II. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which air drying of the roots.

III. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secure to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.

IV. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. the operations laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. SOD MAINTENANCE

I. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done during the heat of the day to prevent wilting.

II. After the first week, sod watering is required as necessary to maintain adequate moisture content.

III. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 inches and 3 inches unless otherwise specified.

## SECTION V - TURFGRASS ESTABLISHMENT

Areas where turfgrass may be desired may include lawns, parks, playgrounds, and commercial sires which will receive a medium high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and rated to prepare a proper seedbed. Stones and debris over 1¼inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

Note: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

A. TURFGRASS MIXTURES

I. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended certified Kentucky Bluegrass cultivars seeding rates:1.5 to 2.0 pounds per 1000 square feet. A minimum of three Bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

II. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass cultivars/certified Kentucky Bluegrass seeding rates: 2 pounds mixture per 1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.

III. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: certifies Tall Fescue cultivars 95-100%, certified Kentucky Bluegrass cultivars 0 - 5%, seeding rates: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

IV. Kentucky Bluegrass/Fine Fescue - Shade mixture - For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: certified Kentucky Bluegrass cultivars 30-40% and certified Fine Fescue and 60-70%. Seeding rate: 1½ - 3 pounds per 1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen. With each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

Note: Turfgrass varieties should be selected form those listed in the most current University of Maryland publication, agronomy mimeo number 77, "Turfgrass Cultivar Recommendations for Maryland".

B. IDEAL TIMES OF SEEDING

Western Maryland: March 15 - June 1, August 1 - October 1 (hardiness zones - 5B, 6A).

Central Maryland: March 1 - May 15, August 15 - October 15 (hardiness zone - 6B).

Southern Maryland, Eastern Shore: March 1 - May 15, August 15 - October 15 (hardiness zones - 7A , 7B).

C. IRRIGATION

If soil moisture is different, supply new seedlings with adequate water for plant growth (1½" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. REPAIRS AND MAINTENANCE

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

I. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

II. If the stand provides less than 40% ground coverage, re-establish following original lime, fertilizer, seedbed preparation and seeding recommendations.

III. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.

IV. Maintenance fertilizer rates for permanent seedings are shown in Table 24, for lawns and other medium high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" bulletin number 17.

## 21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

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

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2%o in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

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

III. For sites having disturbed areas under 5 acres:

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

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

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

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit ⅔ - ⅔ higher in elevation.

iii. Topsoil shall be uniformly distributed in a ⅔ - ⅔ layer and lightly compacted to a minimum thickness of ⅔. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

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

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a PH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

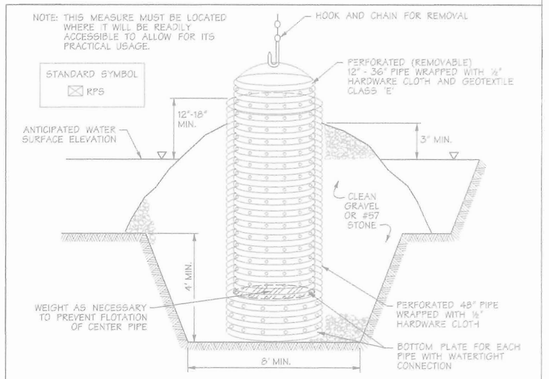
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

iv. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT
2. NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION (410.313.1880)
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
4. INSTALL SILT FENCE, SUPER SILT FENCE AND TREE PROTECTION FENCE. — 10 DAYS
5. CONSTRUCT BITUMINOUS CURB DIVERSION ALONG TEN OAKS ROAD — 1 DAY
6. CLEAR AND GRADE SITE FOR SEDIMENT TRAP, INSTALL SEDIMENT TRAP AND DIVERSION DIKE. — 1 WEEK
7. WITH THE PERMISSION OF THE SEDIMENT CONTROL OF THE INSPECTOR. CLEAR AND GRADE SITE, DO NOT OVER-EXCAVATE IN SEPTIC AREA. — 2 WEEKS
8. CONSTRUCT THE BUILDING. — 12 WEEKS
9. CONSTRUCT THE STORM DRAIN SYSTEM, SEPTIC SYSTEM AND STORMWATER MANAGEMENT FACILITY A. PROVIDE INLET PROTECTION BLOCK SWM FACILITY A GRATES. — 4 WEEKS
10. INSTALL WELL AND UTILITY CONNECTIONS. — 1 WEEK
11. INSTALL CURB AND GUTTER AND PAVING. — 1 WEEK
12. INSTALL LANDSCAPING AND STABILIZE ALL REMAINING DISTURBED AREAS. — 2 WEEKS
13. FLUSH STORM DRAINS. — 1 DAY
14. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, INSPECT AND REPAIR AS REQUIRED SSF BELOW TRAP, REMOVE TRAP AND ALL OTHER SEDIMENT CONTROL MEASURES EXCEPTING SSF BELOW TRAP, CONSTRUCT SWM FACILITY B, REHABILITATE RIPRAP OUTLET PROTECTION. — 4 WEEKS
15. UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE THE DISTURBANCE. OPEN ALL WQ DEVICES AND INLETS. — 1 WEEK
16. CONDUCT AS-BUILT SURVEY OF SWM FACILITIES. — 1 WEEK




ELEVATION (CUT AWAY)

CONSTRUCTION SPECIFICATIONS

1. THE OUTER PIPE SHOULD BE 48" DIAMETER OR SHALL, IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH ½" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATONS.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE ½" x 6" SLITS OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH ½" HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E.
4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

D - 12 - 5

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

Removable Pumping Station — NOT TO SCALE

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/23/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| 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**
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

| SUBDIVISION NAME | SECTION / AREA | LOT OR PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N.A. | B |

| FILE # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | R-D | 22 | 3RD | 6030.00 |

WATER CODE: N.A. — SEWER CODE: N.A.

TITLE
# SEDIMENT & EROSION CONTROL DETAILS

| Des. By | R.L.H. | Scale | | Proj. No. | 02136.00 |
|---|---|---|---|---|---|
| Drn. By | K.D.E. | Date | 10/28/05 | 6 of 19 | |
| Chk. By | KRK | Approved | | | |

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 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 OF DEVELOPER — DATE 10-13-05
PRINT NAME BELOW SIGNATURE
DON PAUL PISTORIO

ENGINEERS CERTIFICATE:

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.

SIGNATURE OF ENGINEER — DATE 10/19/05
PROFESSIONAL ENGINEER NO. #13876
PRINT NAME BELOW SIGNATURE
KENNETH R. KNOSEY

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

U.S. NATURAL RESOURCE CONSERVATION SERVICE — DATE 10/21/05

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

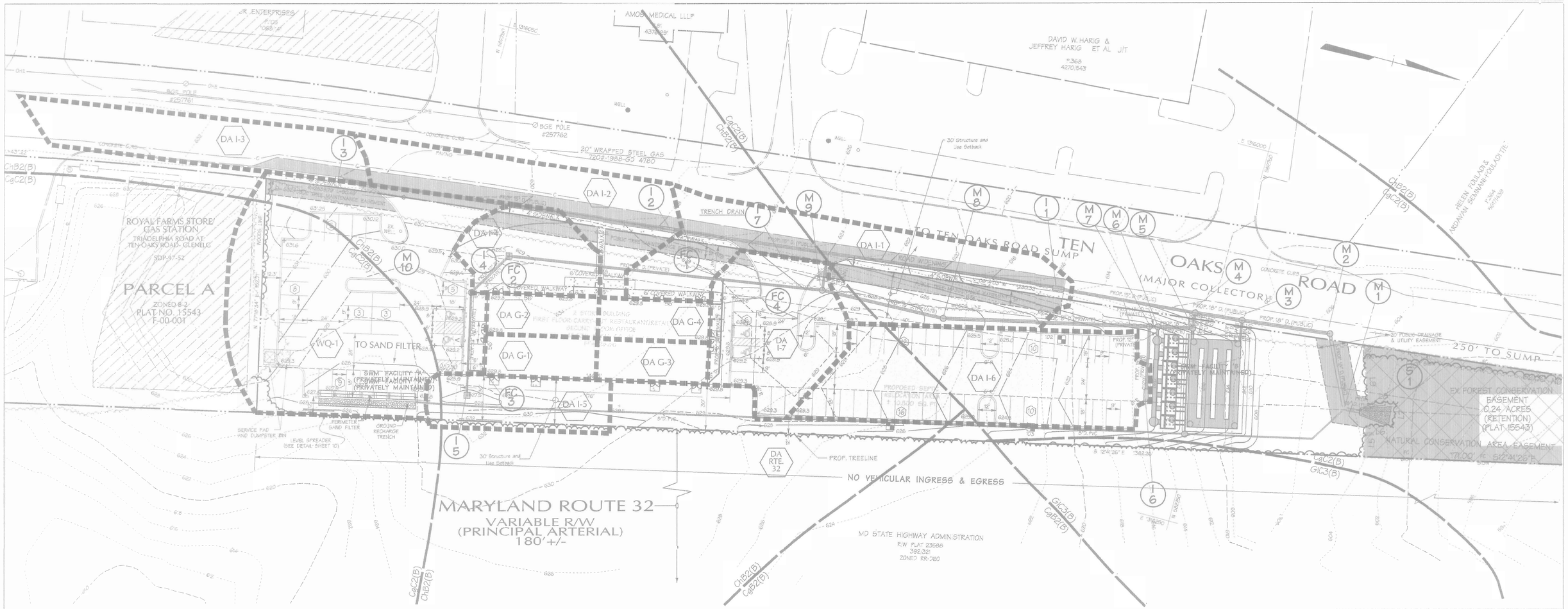
HOWARD — DATE 10/21/05

10/19/05
Date

STATE OF MARYLAND — KENNETH R. KNOSEY — 13876 — PROFESSIONAL ENGINEER

Professional Engr. No. 13876

SDP- 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= 0.4 AC, 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

- DRAINAGE DIVIDE
- WETLAND
- BUFFER
- WETLAND SYMBOL
- EX. TREELINE
- ±DL PROP. LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- EX. DRAINAGE AND UTILITY EASEMENT
- SOIL DELINEATION
- MIN. BUILDING SETBACK LINE
- PROPOSED BUILDING (80' X 55')
- SLOPES 25% OR GREATER
- EXISTING WELL
- PERKS TEST LOCATION
- EX. S.W.M.
- 100' WELL BUFFER
- NATURAL AREA-CONSERVATION EASEMENT
- PROP. S.W.M.

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.

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAD — DATE 12/22/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| 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
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**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

STATE OF MARYLAND — KEVIN K. DAFT — No. 13876 — PROFESSIONAL ENGINEER

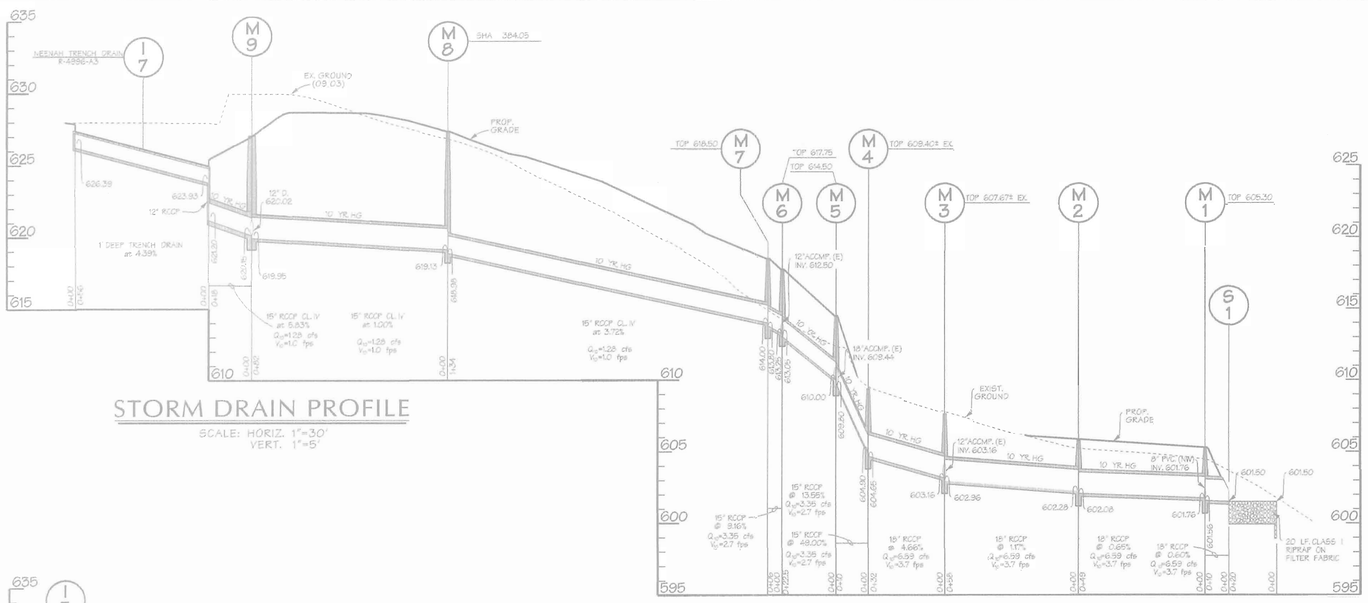
Professional Engr. No. 13876

| | | | | |
|---|---|---|---|---|
| SUBDIVISION NAME: TRIANGLE HOWARD | | SECTION AREA: N.A. | | AREA: B |
| PLAT NO.: 17864 | BLOCK #: 16 | ZONE: B-2 | TAX MAP: 22 | ELECT. DISTRICT: 2ND | CENSUS TRACT: 6030.00 |
| WATER CODE: N/A | | SEWER CODE: N.A. | | |

TITLE
# DRAINAGE AREA MAP

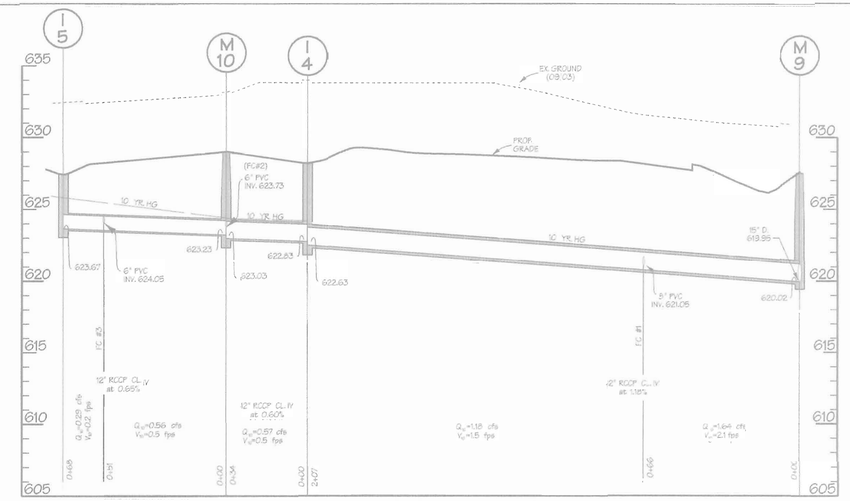
| | | | |
|---|---|---|---|
| Des. By | | Scale 1" = 30' | Proj. No. 02136.00 |
| Drn. By KDE | | Date 10/28/05 | 7 of 19 |
| Chk. By KRK | | Approved | |

SDP-04-130




## STORM DRAIN PROFILE

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

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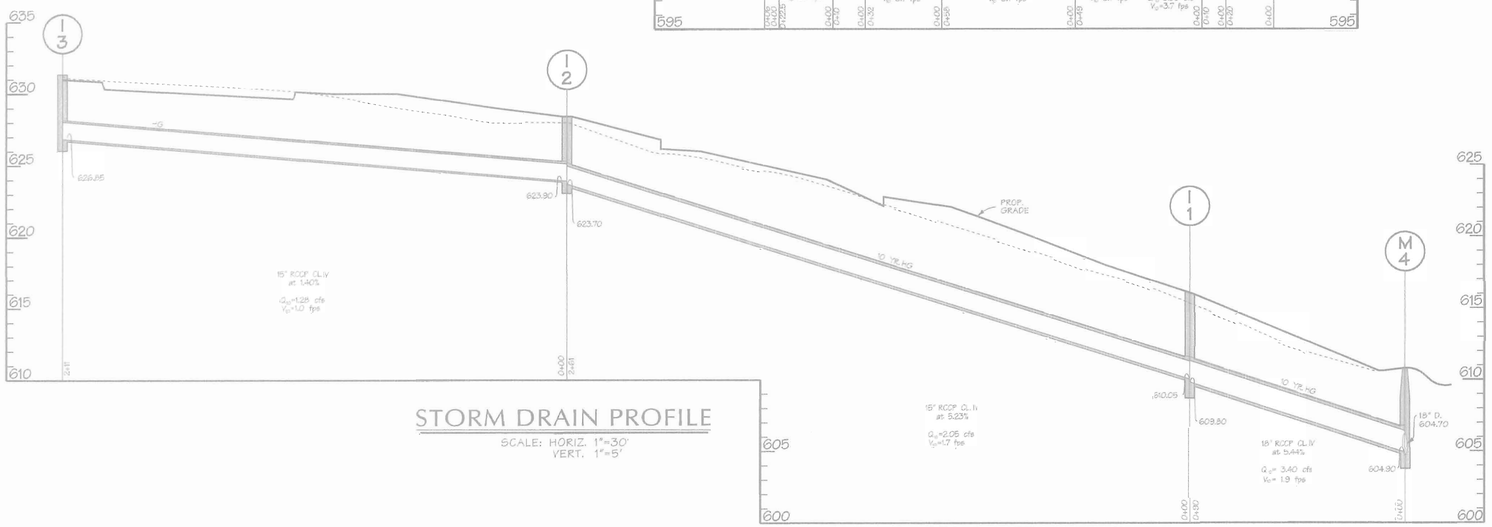
SCALE: HORIZ. 1"=30'
VERT. 1"=5'




## STORM DRAIN PROFILE

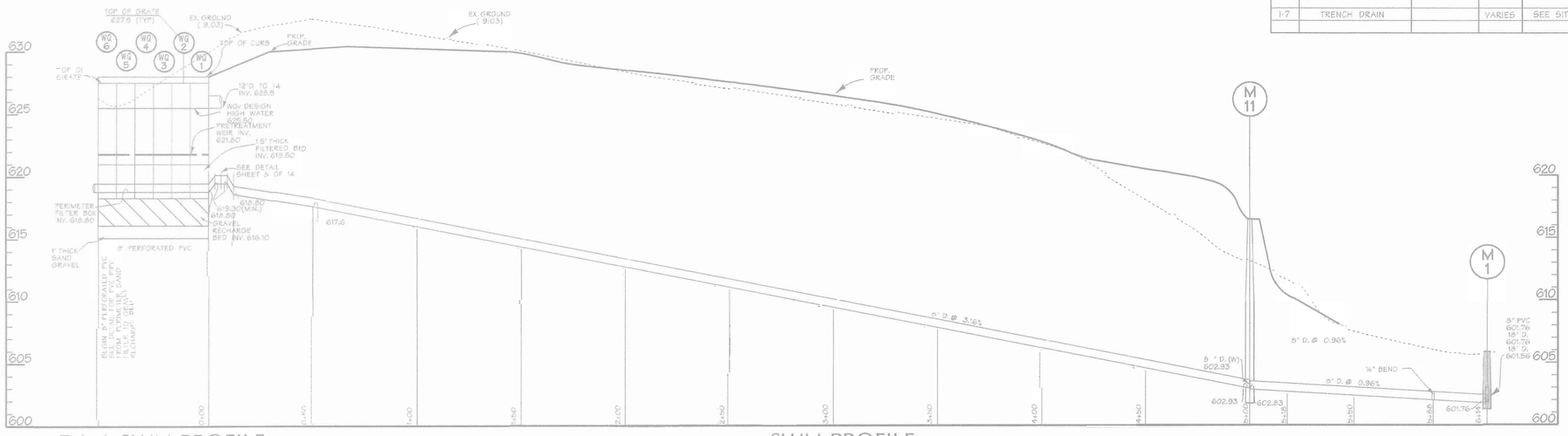
SCALE: HORIZ. 1"=30'
VERT. 1"=5'

### STRUCTURE SCHEDULE

| NO. | DESCRIPTION | DETAIL NO. | TOP ELEV. | LOCATION | COMMENTS |
|---|---|---|---|---|---|
| S-1 | FES | SD-5.51 | N/A | N. 582,851.44 | |
| | | | | E. 1,316,148.52 | |
| M-1 | St'd Precast Manhole | G-5.11 | 605.5 | N. 582,841.50 | |
| | | | | E. 1,316,148.57 | |
| M-2 | St'd Precast Manhole | G-5.11 | 605.5 | N. 582,819.63 | |
| | | | | E 1,316,104.66 | |
| M-3 | St'd Precast Manhole | G-5.11 | 607.5 | N. 582,762.02 | USE CAST IRON |
| | 5' DIA | | | E. 1,316,110.96 | GRATING COVER |
| M-4 | St'd Precast Manhole | G-5.11 | 609.0 | N. 582,731.02 | DROP MANHOLE |
| | | | | E. 1,316,114.34 | |
| M-5 | St'd Precast Manhole | G-5.11* | 629.5 | N. 582,732.10 | * SEE DETAIL |
| | | | | E. 1,316,124.39 | |
| M-6 | St'd Precast Manhole | G-5.11* | 618.0 | N. 582,709.96 | * SEE DETAIL |
| | | | | E. 1,316,129.38 | |
| M-7 | St'd Precast Manhole | G-5.11 | 618.0 | N. 582,704.59 | |
| | | | | E 1,316,130.59 | |
| M-8 | St'd Precast Manhole | G-5.11 | 627.6 | N. 582,573.26 | |
| | | | | E. 1,316,160.52 | |
| M-9 | St'd Precast Manhole | G-5.11 | 627.8 | N. 582,492.31 | |
| | | | | E. 1,316,163.09 | |
| M-10 | St'd Precast Manhole | G-5.11 | 629.8 | N. 582,271.30 | |
| | | | | E. 1,316,223.69 | |
| M-11 | St'd 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 | 615.5 | SEE SITE PLAN | |
| | | SD-4.40 | | | TC @ CL INLET |
| I-2 | Type A-5 Inlet | SD-4.01 or | 628.0 | SEE SITE PLAN | |
| | | SD-4.40 | | | TC @ CL INLET |
| I-3 | Type A-5 Inlet | SD-4.01 or | 631.1 | SEE SITE PLAN | |
| | | SD-4.40 | | | TC @ CL INLET |
| I-4 | YARD INLET | G-5.11 | 628.3 | N. 582,288.56 | USE CAST IRON |
| | | | | E. 1,316,192.38 | 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 | | VARIES | SEE SITE PLAN | |

### PIPE SCHEDULE

| SIZE | TYPE | LENGTH |
|---|---|---|
| 6" | 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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/28/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| 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

10/19/05
Date

Professional Engr. No. 13876


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

| SUBDIVISION NAME | SECTION / AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030 |

| SYSTEM CODE | BASIN CODE |
|---|---|
| N/A | N/A |

TITLE
## STORM DRAIN PROFILE

| Des. By | Scale 1"= 30' | Proj. No. 02136.00 |
|---|---|---|
| Drn. By | Date 10/28/05 | 8 of 19 |
| Chk. By KRK | Approved | |

SDP-04-130

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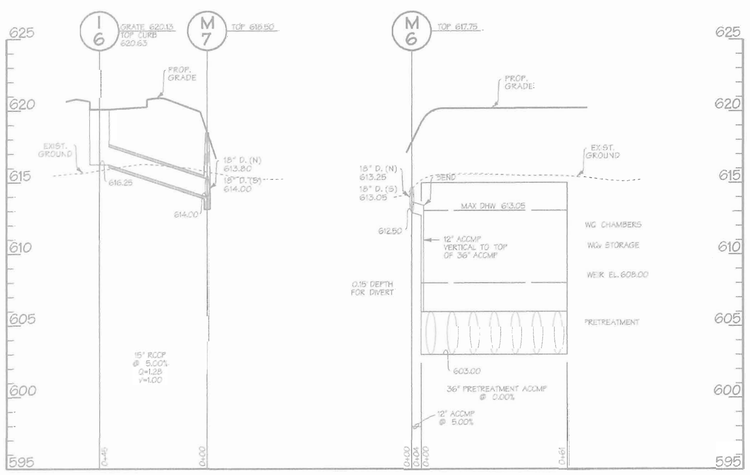
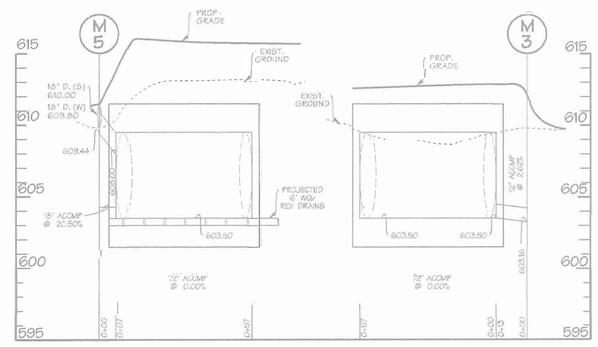
2005 11:38:47 PM k:\dwg\02136.dgn c:\pgm\02136.50\sheet files\02136.50pro 02136.50pro




## 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

for COUNTY HEALTH OFFICER — DATE 12/6/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/6/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|
| | | |
| | | |

# Ten Oaks Commercial Center

"Triangle Howard, Parcel B"

OWNER:
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DEVELOPER:
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Fax 296-4705

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


10/19/05
Date

STATE OF MARYLAND — KEVIN R. KELLEY — No. 13876 — PROFESSIONAL ENGINEER

Professional Engr. No. 13876

| SUBDIVISION NAME | | | SECTION / AREA | | PARCEL # |
|---|---|---|---|---|---|
| TRIANGLE HOWARD | | | N/A | | B |
| PLAT NO. | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
| 17864 | 16 | B-2 | 23 | 2ND | 6030 |
| WATER CODE | | | SEWER CODE | | |
| N/A | | | 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 KRK | Approved | |

SDP-04-130

Wed Oct 12 10:42:58 2005
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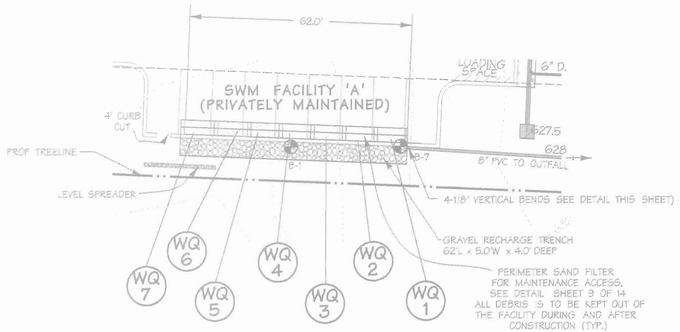
2005 1:42:05 PM kdelay c:\hpm\02136.hpm n:\02136\sheet files\02136.50\prc2

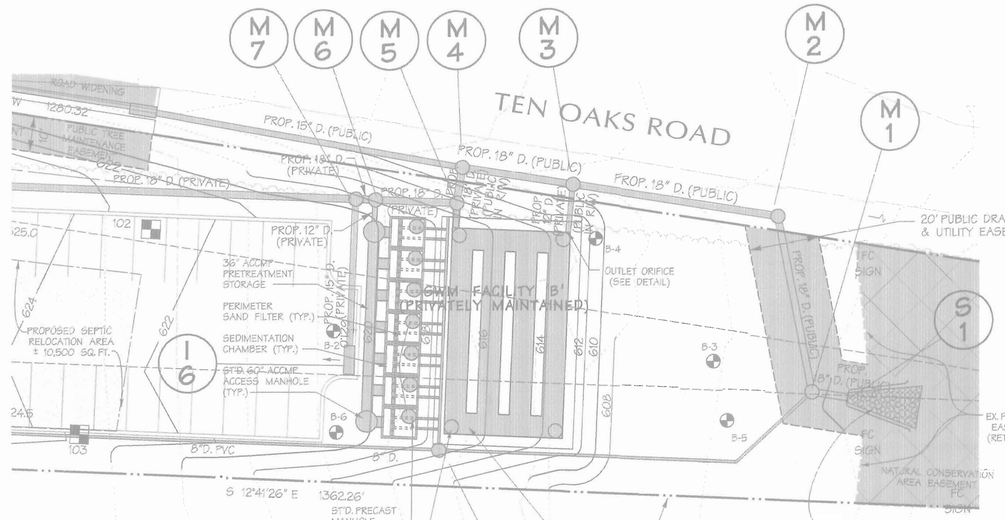
NOTE: ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.




## STORMWATER MANAGEMENT FACILITY "A" PLAN

SCALE: 1"=20'

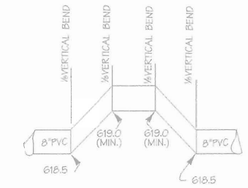
NOTE: MAINTENANCE BY OWNER ( OR ASSIGNEE).




## STORMWATER MANAGEMENT FACILITY "B" PLAN

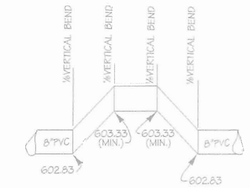
SCALE: 1"=20'

NOTE: MAINTENANCE BY OWNER ( OR ASSIGNEE).




## 8" OUTFLOW PIPE FACILITY "A" DETAIL

NTS




## 8" OUTFLOW PIPE FACILITY "B" DETAIL

NTS

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

## LEVEL SPREADER DETAIL

NTS

### 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 | 608.77 |

| 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 | ELEV. | |
| 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 weir openings 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 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 ¾" 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 even 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 Del DOR. Following standard procedures the DOR will certify in writing that installation of the filter system has been completed in accordance with the manufacturers recommendation.

The Gillespie & Son, Inc. Modular Sand Filter conforms to current Delaware Natural 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

The corresponding surface area being 15.66 sq. ft. and the volume being as specified. Each filter tank will require 8 cu. ft. of ¾" 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 cover(s) must meet HS-20 truck load bearing in traffic areas.

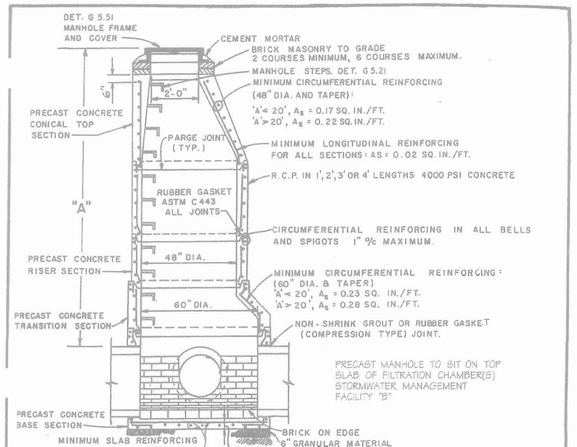
Material List

1. Concrete mix must reach 4500 PSI at 28 days.
2. Reinforcing to be min. two mats of 4" x 4" W4/W4 wire mesh.
3. Support frames for grates and covers shall be rust proof painted steel angle cast in place.
4. Grates shall be 26" x 24" x 1½" cast iron ( East Jordan 6958 type "M-27" or equal).
5. Solid covers shall be 26" x 24" x 1½" cast iron ( East Jordan 6958 type "A" or equal).
6. Under drain piping and inter connecting piping between tanks shall be PVC class SDR 35 min.
7. Piping gaskets shall be compatible with PVC schedule 35 pipe (Star Seal or equal).
8. Filter bed support stone shall be ¾" washed stone (DE No. 57 or equal) - 8 cu. ft. per filter.
9. Geotextile membrane shall be woven drainage fabric (Amoco 1198, Mirafi-700XG or equal) 16 sq. ft. per filter.
10. 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

1. 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.
2. 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.
3. Debris and litter shall be removed from all perimeter sand filters and the ED facility during regular mowing operations as needed.
4. Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
5. Remove silt when it exceeds four (4) inches deep in the bottom of the facilities.
6. A log book shall be maintained to determine the rate at which the facilities drain.
7. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
8. 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.




### GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES

1. MANHOLE BASE SHALL BE BEDDED ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
2. EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/3 OF WAY TO TOP OF PIPE.
3. CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
4. MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G5.21. MANHOLE COVER SHALL BE AS SPECIFIED ON DETAIL G5.51
5. PROVIDE 2 COATS COAL TAR EPOXY COATING, ~16 MIL. DRY. SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY)
6. PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
7. 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.
8. MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C 478 EXCEPT AS SHOWN.

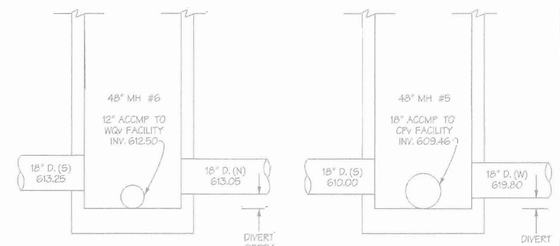
REV. MAR. 1986 REV. JAN. 1985 REV. JAN. 1984 REV. JAN. 1982

* EXCEPT STORM DRAIN PIPE

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved 2-10-81
Chief - Bureau of Engineering

STANDARD PRECAST MANHOLES

DRAWN BY: J.M.C.
CHECKED BY: F.A.W.
SCALE: NONE
G5.11




WQv Q = 2.55 CFS
FLOW DEPTH IN 12" ACCMP @ 5.00% = 0.55'

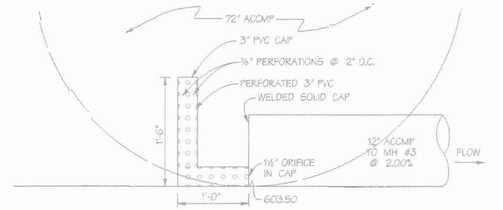
DIVERT TO STORMWATER MANAGEMENT FACILITY "B" WQv PERIMETER SAND FILTER

SCALE: 1"=3'

CPv/1 YEAR Q = 2.86 CFS
FLOW DEPTH IN 18" ACCMP @ 20.50% = 0.34'

DIVERT TO STORMWATER MANAGEMENT FACILITY "B" CPv PERIMETER UNDERGROUND FACILITY

SCALE: 1"=3'




CPv OUTLET STRUCTURE DETAIL

SCALE: 1"=1'

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

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

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

PLAN NUMBER

10/19/05
Date

Professional Engr. No. 13876

**DEVELOPERS CERTIFICATE:**

I AM 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 OF DEVELOPER — DATE 10-13-05
PRINT NAME BELOW SIGNATURE
DON PAUL PISTORIO

**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 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.

SIGNATURE OF ENGINEER — REG. NO. 13876 — DATE 10/19/05
PRINT NAME BELOW SIGNATURE
KENNETH R. KNOTT

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

COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/23/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/3/06

| 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
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


| SUBDIVISION NAME | SECTION/AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N.A. | B |

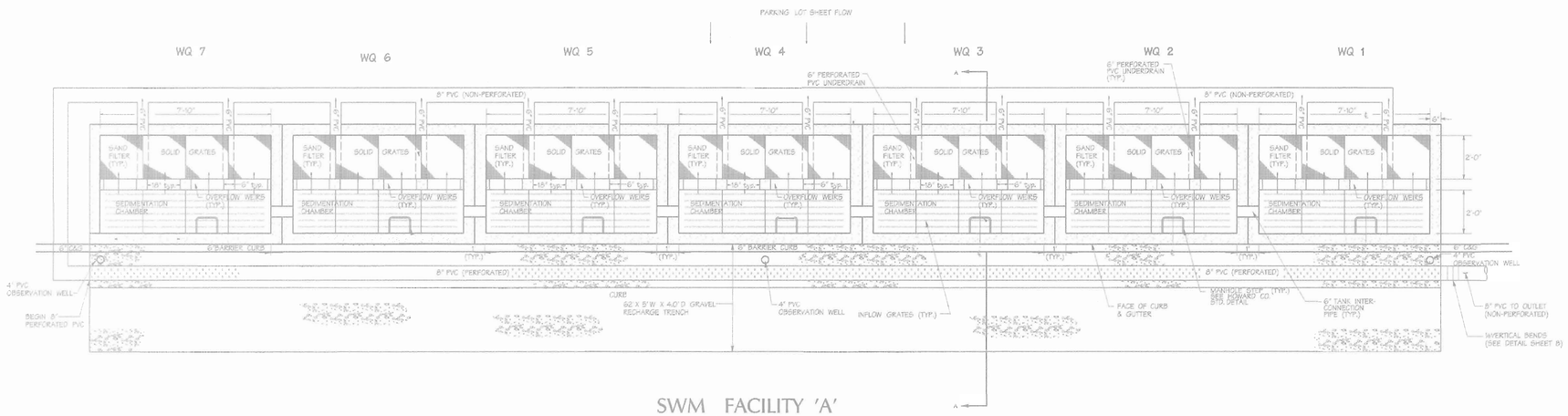
| PLAT # | BLOCK # | ZONE | TAX ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17264 | 18 | R-S | 22 | 3RD | 6030 |

WATER CODE N.A. — SEWER CODE N.A.

TITLE
# SWM PLAN AND DETAILS

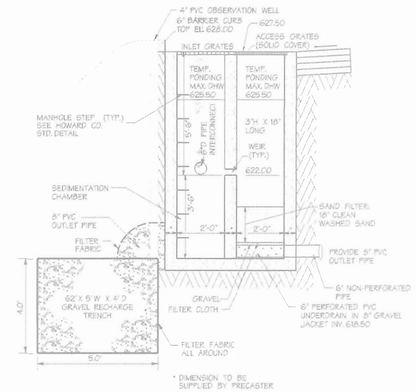
| Des. By | CRW | Scale: As Shown | Proj. No. 02136.00 |
|---|---|---|---|
| Drn. By | WDE | Date 10/28/05 | 10 of 19 |
| Chk. By | KRK | Approved | |

SDP-04-130




## SWM FACILITY 'A'

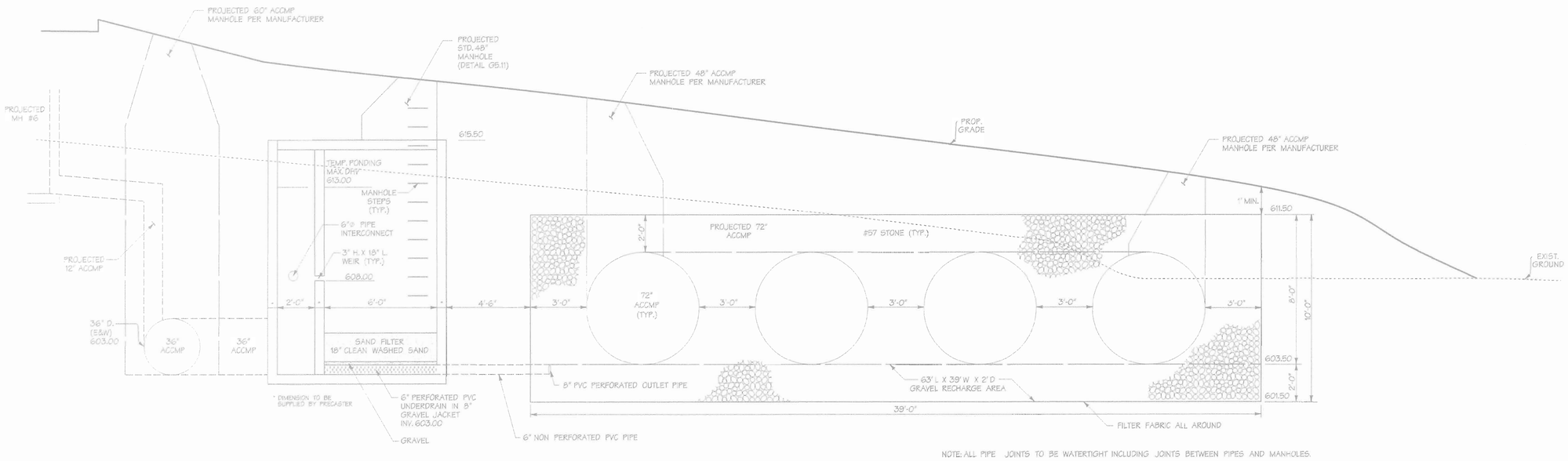
Scale: 1" = 3'




## SWM FACILITY 'A'

### SECTION A–A

Scale: 1" = 3'




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

## SWM FACILITY 'B'

### SECTION 'B – B'

Scale: 1" = 3'

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

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

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

PLAN NUMBER

**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 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.

Don Paul Rotwerp — 10-13-05
SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE: DON PAUL ROTWERP

**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 CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I WILL NOTIFY 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.

SIGNATURE OF ENGINEER — 13876 REG. NO. — 10/19/05 DATE
PRINT NAME BELOW SIGNATURE: KENNETH E. KUNDSEN

10/19/05
Date

Professional Engr. No. 13876

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

Robert J. Weber — 12/21/05
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/22/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

1/5/06
DIRECTOR — DATE

| Date | No. | Revision Description |
|---|---|---|
| | | |
| | | |

# Ten Oaks Commercial Center

'Triangle Howard, Parcel B'

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

DEVELOPER:
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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


| SUBDIVISION NAME | | SECTION / AREA | | LOT/PARCEL # |
|---|---|---|---|---|
| TRIANGLE HOWARD | | N/A | | B |
| PLAT # 17864 | BLOCK # 16 | ZONE B-2 | TAX/ZONE MAP 22 | ELEC. DISTRICT 3RD | CENSUS TRACT 6030.00 |
| TAXPAYER CODE N/A | | SEWER CODE N/A | WATER CODE N/A | |

TITLE
# STORMWATER MANAGEMENT
## FACILITY 'A' PLAN AND SECTIONS

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

SDP-04-130

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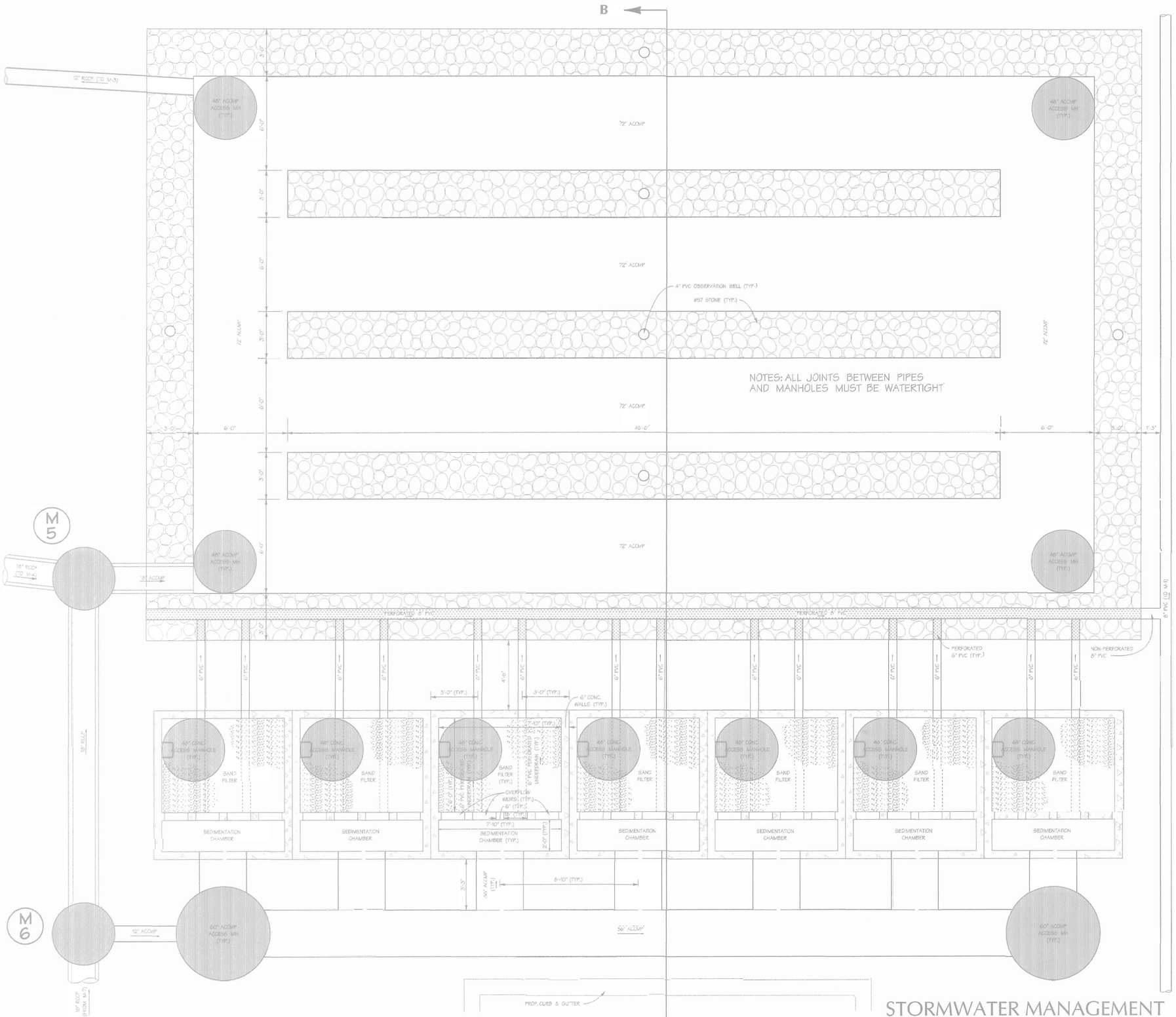
Wed Oct 12 10:50:04 2005




# STORMWATER MANAGEMENT FACILITY "B" PLAN

SCALE: 1"=3'

NOTES:

1. 48" ACCMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
2. 48" CONCRETE ACCESS MANHOLE SHALL BE PER HOWARD COUNTY DETAIL G-6[1].
3. 60" ACCMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
4. ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.

**DEVELOPERS CERTIFICATE:**

I AM 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 THIS 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.

Don Paul Pistorio — 10-13-05

SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE

DON PAUL PISTORIO

**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 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.

SIGNATURE OF ENGINEER — 13876 REG. NO. — 10/12/05 DATE
PRINT NAME BELOW SIGNATURE

KENNETH R. KINSEY

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

for COUNTY HEALTH OFFICER — 12/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12/23/05 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/9/06 DATE

DIRECTOR — 1/9/06 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:**
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5221 LYNNGATE RD.
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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: TRIANGLE HOWARD | | SECTION / AREA: N/A | LOT / PARCEL #: B |
| PLAT # 17864 | BLOCK # 15 | ZONE B-2 | TAX / ZONE MAP 22 | ELEC. DISTRICT 2ND | CENSUS TRACT 6030.00 |
| WATER CODE N/A | | SEWER CODE N/A | |

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

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

SDP-04-130

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
The underground facility 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 backsliding, cave-in, or sediment transport into the excavation. Large tree roots shal 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 side walls of the trench shall be roughened where sheared 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 objectionable material 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 area. 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.

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

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 construction.

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 reworked 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 horizontally to 1 foot vertically 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-1785 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 S, and 12" through 48" shall meet the requirements of AASHTO M294 Type S.

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, Mix No. 3.

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

b. Concrete (pre-cast) - Per pre-cast manufacturer specification. Provide design drawing, 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, bar 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 carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their 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 sightly condition. All exposed surfaces of the facility, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

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
0.08" thick equivalent opening size of #80 sieve. Must maintain 125 gpm per sq. ft. flow rate. ASTM-D-4833 (puncture strength - 125 lb.), ASTM-D-4632 (tensile strength - 300 lb.)

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. 6,1,2 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" #7 stone.

3. Contamination - Care shall be exercised to prevent natural or fill soils from intermixing 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 0.02" 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. ⅜" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes.
F 758, type PS 28 or AASHTO-M-278.

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
Total Disturbed Area (Ac) - 1.90
Water Shed - Patapsco River
Water Shed Area to Facility (Ac) - 1.66
Freeboard Provided (Ft) - N/A
Stream Classification - I
Water Quality Storage Provided - perimeter sand filter

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

Page 1 of 1

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

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 01-23-04; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter ___ ; Rock Core Dia. ___ ; Boring Method HSA; Foreman Ola Aranmolate; Inspector ___ ; Completed 01-23-04

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO. | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 12" Topsoil |
| | Brown moist medium stiff sandy silt ML | 2.5 | | | 3-3-4 | 1 | 10" | No groundwater encountered while drilling |
| | Brown colored moist to wet medium stiff to soft micaceous silt with trace of sand ML | | | | 8-7-8 | 2 | 18" | |
| | | | | | 8-7-8 | 3 | 14" | Caved in at 6.0' at Completion |
| | | | | | 6-7-7 | 4 | 12" | |
| | | 15.0 | | | 7-8-12 | 5 | 16" | |
| | Bottom of Test Hole at 15.0' | | 20.0 | | | | | |

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
GROUND WATER DEPTH: AT COMPLETION Dry; AFTER 24 hrs. Dry FT.; AFTER ___ FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING

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

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

Page 1 of 1

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

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 01-22-04; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter ___ ; Rock Core Dia. ___ ; Boring Method HSA; Foreman Ola Aranmolate; Inspector ___ ; Completed 01-22-04

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO. | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 2" Topsoil |
| | Brown multi-colored moist to wet soft to medium stiff micaceous silt with trace of sand ML | | | | 5-8-10 | 1 | 10" | No groundwater encountered while drilling |
| | | | | | 5-8-7 | 2 | 12" | Caved in at 5.0' at Completion |
| | | | | | 4-5-5 | 3 | 12" | |
| | | | | | 5-7-9 | 4 | 16" | |
| | | 15.0 | | | 22-23-23 | 5 | 18" | |
| | Bottom of Test Hole at 15.0' | | 20.0 | | | | | |

GROUND WATER DEPTH: AT COMPLETION Dry; AFTER 24 hrs. Dry FT.; AFTER ___ FT.

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30";COUNT MADE AT 6" INTERVALS

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

Page 1 of 1

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

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 01-22-04; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter ___ ; Rock Core Dia. ___ ; Boring Method HSA; Foreman Ola Aranmolate; Inspector ___ ; Completed 01-22-04

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO. | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 4" Topsoil |
| | Brown moist soft sand silt (ML) | 2.5 | | | 6-9-13 | 1 | 12" | No groundwater encountered while drilling; Caved in at 3.0' at Completion |
| | Brown moist medium stiff silt trace mica (ML) | 5.0 | | | 6-8-10 | 2 | 8" | |
| | Bottom of Test Hole at 5.0' | | 10.0 / 15.0 / 20.0 | | | | | |

GROUND WATER DEPTH: AT COMPLETION Dry; AFTER 24 hours Dry FT.; AFTER ___ FT.

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30";COUNT MADE AT 6" INTERVALS

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

Page 1 of 1

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

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 01-07-05; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter 6"; Rock Core Dia. -; Boring Method HSA; Foreman Lamont Smith; Inspector ___ ; Completed 01-07-05

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO. | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 6" Topsoil |
| | Brown, orange, moist, medium dense sandy silt with mica, traces of clay | 1.5 | | D | 2-3-3 | 1 | 10" | No groundwater encountered While drilling |
| | Brown, orange, moist, medium dense sandy silt with mica | | | D | 3-3-4 | 2 | 12" | |
| | | | 5.0 | | | | | (I(nstalled 5.0' In-situ pipe) |
| | | | | D | 2-3-4 | 3 | 14" | Caved in at 7.0' at Completion |
| | | 10.0 | | D | 5-7-6-6 | 4 | 8" | |
| | Bottom of Test Hole at 10.0' | | 15.0 | | | | | At Completio Dry Caved at 5 ft. |
| | | | 20.0 | | | | | |

GROUND WATER DEPTH: AT COMPLETION Dry FT; AFTER Dry FT; AFTER ___ FT.

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30";COUNT MADE AT 6" INTERVALS

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

Page 1 of 1

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

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 01-07-05; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter 6"; Rock Core Dia. -; Boring Method HSA; Foreman Lamont Smith; Inspector ___ ; Completed 01-07-05

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO. | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 6" Topsoil |
| | Brown, moist, loose, sandy silt, with mica and traces of clay | 2.0 | | I/D | 1-2-2 | 1 | 13" | No groundwater encountered While drilling |
| | Brown, orange, moist, medium dense sandy silt trace mica | | | D | 2-3-4 | 2 | 12" | |
| | | | 5.0 | | | | | (I(nstalled 5.0' In-situ pipe) |
| | | | | D | 3-3-4 | 3 | 13" | Caved in at 7.0' at Completion |
| | | 10.0 | | D | 3-3-4-5 | 4 | 12" | |
| | Bottom of Test Hole at 10.0' | | 15.0 | | | | | At Completio Dry Caved at 5 ft. |
| | | | 20.0 | | | | | |

GROUND WATER DEPTH: AT COMPLETION Dry FT.; AFTER Dry FT.; AFTER ___ FT.

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30";COUNT MADE AT 6" INTERVALS

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

Page 1 of 1

Project Name: Ten Oaks Commercial — Boring Number: B-6
Location: Howard County, Maryland — Job #: 04117B

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 01-07-05; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter 6"; Rock Core Dia. -; Boring Method HSA; Foreman Lamont Smith; Inspector ___ ; Completed 01-07-05

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 4" Topsoil |
| | Brown, orange, moist, loose sandy silt with mica traces of clay | 2.0 | | D | 1-2-3 | 1 | 12" | No groundwater encountered while drilling |
| | Brown, orange, moist, medium dense sandy silt with mica | | | D | 3-4-5 | 2 | 14" | |
| | | | 5.0 | D | 3-4-4 | 3 | 8" | Caved in at 6.5' at Completion |
| | | 10.0 | | D | 6-14-22-25 | 4 | 14" | |
| | Bottom of Test Hole at 10.0' | | 15.0 | | | | | At Completio Dry Caved at 5 ft. |
| | | | 20.0 | | | | | |

GROUND WATER DEPTH: AT COMPLETION Dry FT.; AFTER Dry FT.; AFTER ___ FT.

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30";COUNT MADE AT 6" INTERVALS

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

Page 1 of 1

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

SAMPLER: Datum ___ ; Surf. Elev. ___ ; Date Started 1/11/2005; Hammer Wt. 140 Lbs.; Hammer Drop 30 Inches; Pipe Size 2.0 Inches OD; Hole Diameter ___ ; Rock Core Dia. ___ ; Boring Method HSA; Foreman Lamont Smith; Inspector ___ ; Completed 1/11/2005

| ELEV. | SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion) | STRA. DEPTH | DEPTH SCALE | CON | SAMPLE BLOWS 6" | NO. | REC. | BORING & SAMPLING NOTES |
|---|---|---|---|---|---|---|---|---|
| | SURFACE | | 0.0 | | | | | 5" Topsoil |
| | Brown, moist, loose sandy silt with mica, traces of clay | 1.5 | | D | 2-2-1 | 1 | 10" | No groundwater encountered while drilling |
| | Brown, orange, moist, medium dense sandy silt with mica | | | D | 4-4-5 | 2 | 13" | |
| | | | 5.0 | | | | | Caved in at 4.8' at Completion |
| | | | | D | 5-8-11 | 3 | 15" | |
| | | 10.0 | | D | 7-9-9-10 | 4 | 12" | |
| | Bottom of Test Hole at 10.0' | | 15.0 | | | | | |
| | | | 20.0 | | | | | |

GROUND WATER DEPTH: AT COMPLETION Dry; AFTER ___ FT.; AFTER ___ FT.

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED. PT-PRESSED SHELBY TUBE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30";COUNT MADE AT 6" INTERVALS

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INSPECTION SCHEDULE

Prior notification shall be given to the engineer so that inspections may be made at the following stages:
1. Inlet and pipe delivery prior to installation; after installation
2. Rev storage before installation and after installation before backfill;
3. After sand filter is installed prior to top installation; during drain construction
4. Infiltration Trench ED upon completion of excavation; upon completion of sediment clean-up; upon placement of sand, perforated pipe, outlet structure.
5. Upon completion of permanent stabilization.

NO WORK SHALL PROCEED UNTIL THE ENGINEER INSPECTS AND APPROVES THE WORK PREVIOUSLY COMPLETED.

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 appurtenances 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.

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 Pond Code 378, 2000.
   C. Maryland Department of Transportation State Highway Administration, January, 2001 Standard Specifications for Construction and Materials.
2. This site lies within Patapsco River watersheds.
3. Stormwater management is approved under Bill No. 105-84.
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.

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 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.

Don Paul Pistorio — 10-13-05
SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE
DON PAUL PISTORIO

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 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.

[signature] — 13876 — 10/19/05
SIGNATURE OF ENGINEER — REG. NO. — DATE
PRINT NAME BELOW SIGNATURE
KENNETH R. KINSEY

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

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
[signature] — CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12/20/05 DATE
Cindy Hamilton — CHIEF, DIVISION OF LAND DEVELOPMENT — 1/4/06 DATE
[signature] — DIRECTOR — 1/9/06 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:
3881 TEN OAKS 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

| SUBDIVISION NAME | SECTION/AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

10/19/05
Date

STATE OF MARYLAND — KENNETH R. KINSEY — 13876 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 13876

TITLE
STORMWATER MANAGEMENT
DETAILS AND SPECIFICATIONS

| Des. By KAD | Scale AS SHOWN | Proj. No. 02136.00 |
|---|---|---|
| Drn. By WDE | Date 10/28/05 | 13 of 19 |
| Chk. By KRK | Approved | |

SDP-04-130

Wed Oct 12 13:56:11 2005
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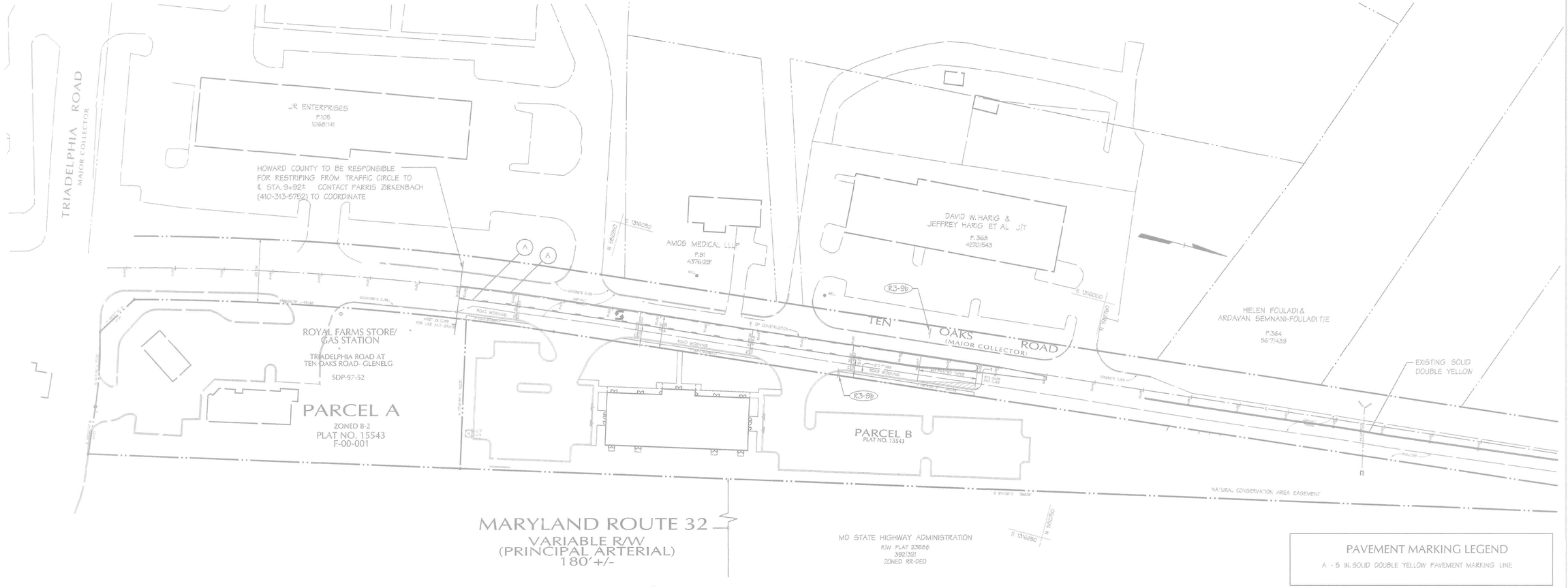
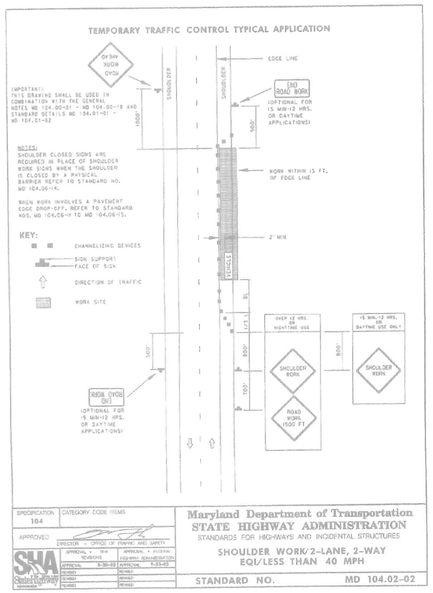
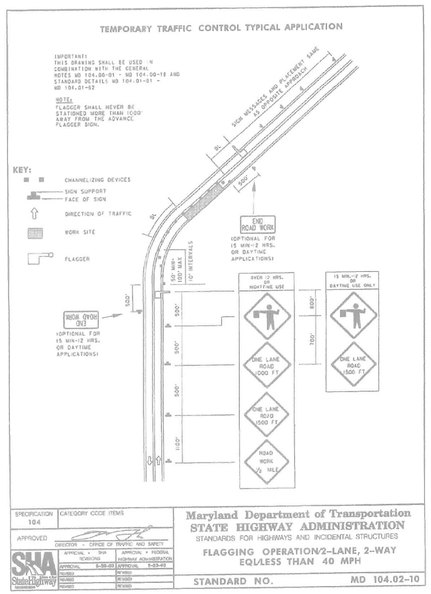
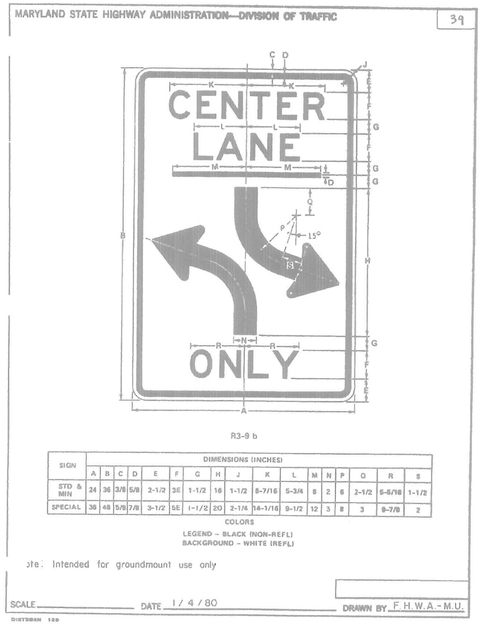



## PAVEMENT MARKING LEGEND

A - 5 IN. SOLID DOUBLE YELLOW PAVEMENT MARKING LINE



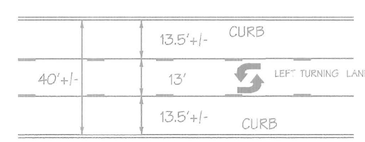




| SIGN | DIMENSIONS (INCHES) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S |
| STD & MIN | 24 | 36 | 3/8 | 5/8 | 2-1/2 | SE | 1-1/2 | 16 | 1-1/2 | 8-7/16 | 5-3/4 | 8 | 2 | 6 | 2-1/2 | 5-5/16 | 1-1/2 |
| SPECIAL | 36 | 48 | 5/8 | 7/8 | 3-1/2 | SE | 1-1/2 | 20 | 2-1/4 | 14-1/16 | 9-1/2 | 12 | 3 | 8 | 3 | 9-7/8 | 2 |

COLORS
LEGEND - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)

Note: Intended for groundmount use only




NOTE:
HOWARD COUNTY TO FIELD LOCATE TWIN ARROWS.

NOTE: LANES TAPER TO 3 -11' LANES FROM STA.14+70 STA.15+29

## PAVEMENT MARKING DETAIL

N.T.S.

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

COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/20/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/3/06

| 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
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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

10/13/05
Date

Professional Engr. No. 13876

| SUBDIVISION NAME | SECTION / AREA | LOT OR PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

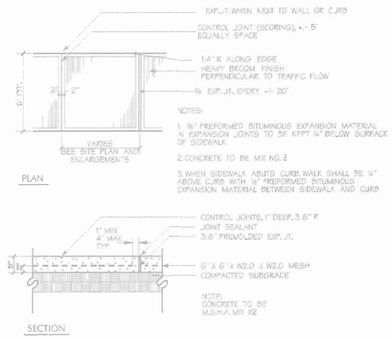
| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 19 | B-2 | 22 | 3RD | 6030.00 |

WATER CODE N/A — SEWER CODE N/A

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

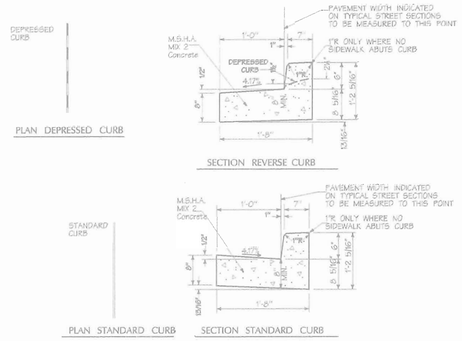
| | | | |
|---|---|---|---|
| Des. By KAD | Scale 1"= 50' | Proj. No. 02138.00 | 14 of 19 |
| Drn. By | Date 10/28/05 | | |
| Chk. By KRK | Approved | | |

SDP-04-130




## Concrete Walk

Not To Scale




## 6"Combination Curb & Gutter

Not To Scale

GENERAL NOTES:

1. The Contractor shall be governed by the standards and requirements of the following publications:

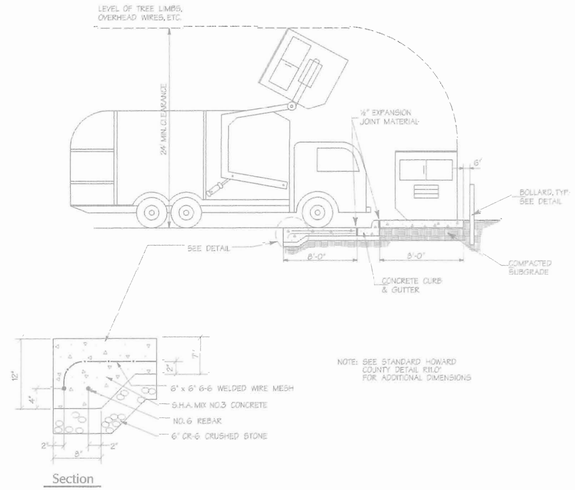
- Manual on Uniform Traffic Control Devices (MUTCD), 1988 Edition and subsequent revisions.
- AASHTO - Specifications for the Design and Construction of Structural Supports for Highway Signs, April 1985 Edition.
- AASHTO - Standard Specifications for Structural Supports for Highway Signs Luminaires and Traffic Signals, April 1988 Edition.

2. Standard sign panel layouts shall be based on the MUTCD.
3. Signs shall be located as shown on the plans. Any required changes in the locations of signs necessary due to field conditions shall have the prior approval of the Engineer.
4. It shall be the responsibility of the Contractor to locate and protect all existing facilities that may be affected by this work.
5. 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.
6. All new sheet aluminium signs shall have Non-Demountable Copy.
7. The following minimum thicknesses shall be used for the appropriate size of Sheet aluminium sign blanks:

Longest Dimension (inches) - Minimum Thickness

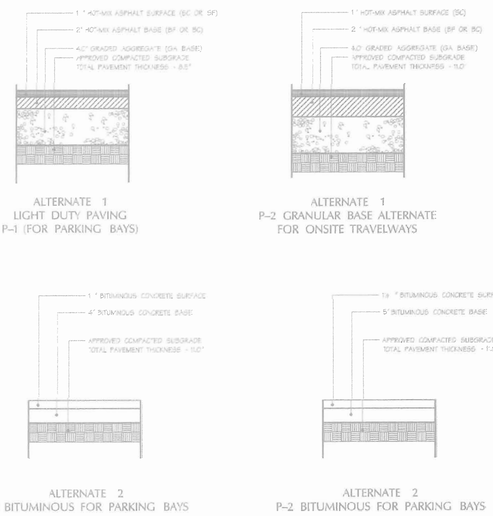
| | | |
|---|---|---|
| Up to 30" | - | 0.040" |
| 30" to 60" | - | 0.063" |
| 60" to 96" | - | 0.080" |
| 96" to 48" | - | 0.100" |
| Over 48" | - | 0.125" |

8. 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, two (2) posts shall be provided. Sign posts shall be installed in the ground to a minimum depth of 3.0 feet and the sign post shall extend to the top of the sign panel.
9. Signs shall be mounted such that the clearance to the bottom edge of the sign panel is a minimum of six (6) feet above finished grade.



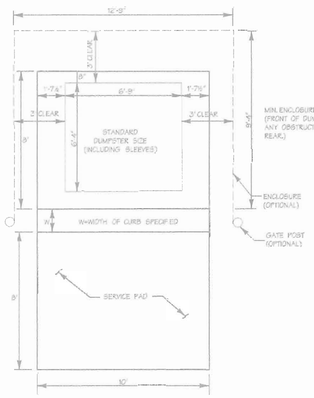

## Service Pad & Dumpster Bin

Not To Scale



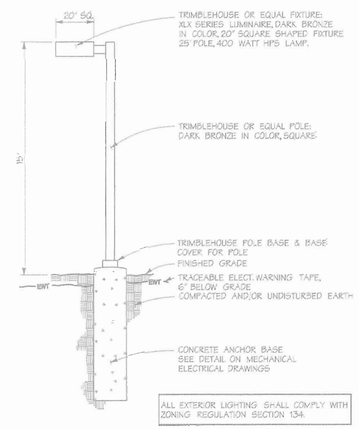

## Paving Detail

Not To Scale



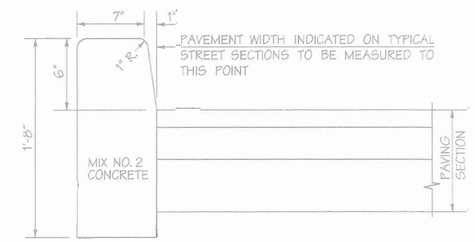

## Dumpster Enclosure

Not To Scale



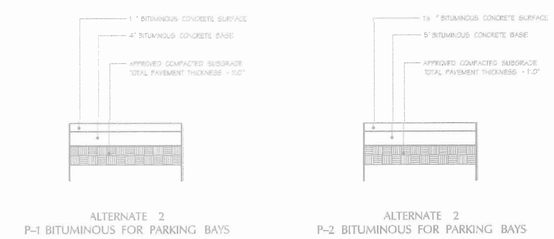

## Sharp Cut off Area Light

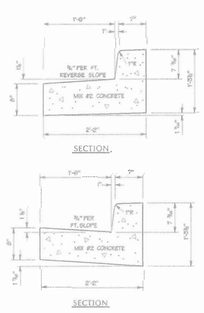
Not To Scale




## Standard Barrier Curb

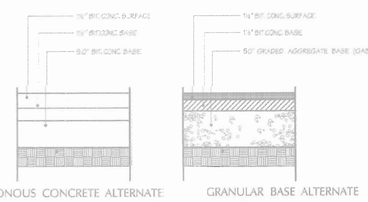
Not To Scale




## 7" Combination Curb and Gutter

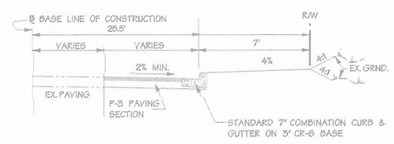
Not To Scale




## P-3 Paving Detail

FOR TEN OAKS ROAD WIDENING

Not To Scale




## TEN OAKS ROAD WIDENING DETAIL

Not To Scale

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/20/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| 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:
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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

Professional Engr. No. 13876

| | | | |
|---|---|---|---|
| SUBDIVISION NAME: TRIANGLE HOWARD | | SECTION AREA: N.A. | PARCEL #: B |
| PLAT # 17864 | BLOCK # 16 | ZONE 8-2 | TAX ZONE MAP 22 | ELEC. DISTRICT 2ND | CENSUS TRACT 6032.00 |
| WATER CODE N.A. | | SEWER CODE N.A. | |

TITLE

## SITE DETAILS

| | | | | | |
|---|---|---|---|---|---|
| Des. By | RLH | Scale | AS SHOWN | Proj. No. | 02136.00 |
| Dm. By | KDE | Date | 10/28/05 | 15 of 19 | |
| Chk. By | KBK | Approved | | | |

SDP-04-130

## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO ROAD | | | | | | | | | | ADJACENT TO PERIMETER PROPERTIES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LANDSCAPE TYPE "A" | | | | | | | | | | | P 10 | | P 12 |
| 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 | 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 | N/A | N/A |
| NUMBER OF PLANTS REQUIRED | | | | | | | | | | | | | |
| SHADE TREES | 3 | 4 | 7 | 3 | 3 | 7 | 4 | 3 | -- | -- | 1 | 0 | 2 |
| 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 | -- | -- | -- | -- | -- |
| EVERGREEN TREES | -- | -- | -- | 3 | 4 | -- | -- | -- | 1 | -- | 2 | -- | 1 |
| OTHER TREES (2 :1 SUBSTITUTION) | -- | 6 | -- | 3 | -- | -- | 9 | -- | -- | -- | -- | -- | 3 |
| SHRUBS (10 :1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | 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
1/20 SPACES
INTERNAL ISLANDS PROVIDED..........5
200 SQ. FT./ISLAND
SHADE TREES REQUIRED..................5
1/20 SPACES
SHADE TREES PROVIDED..................5

## PLANT LIST

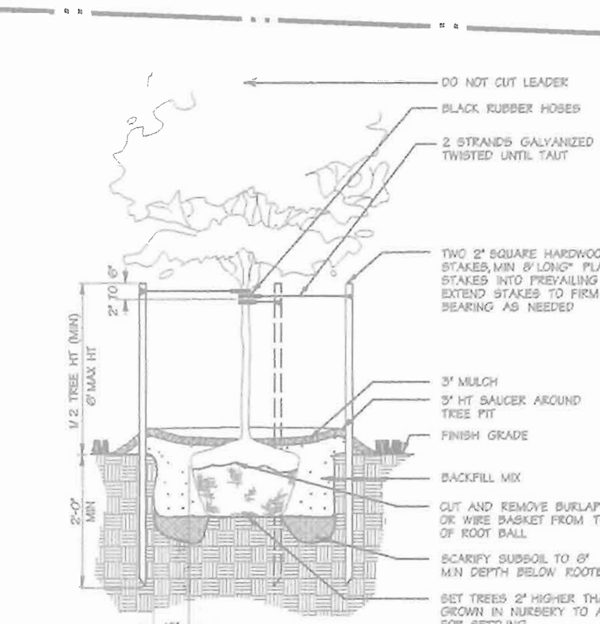
| QTY | SYM | BOTANICAL NAME/ COMMON NAME | SIZE | REMARKS |
|---|---|---|---|---|
| SHADE TREES | | | | |
| 10 | AR | ACER RUBRUM 'OCTOBER GLORY' October Glory Red Maple | 2 1/2" - 3" CAL. 12' - 14' HT. | B & B FULL HEAD |
| 27 | AS | ACER SACCHARUM 'GREEN MOUNTAIN' Sugar Maple | 2 1/2" - 3" CAL. 12' - 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 |
| EVERGREEN TREES | | | | |
| 3 | PA | PICEA ABIES Norway Spruce | 6' - 8' HT. | B & B |
| 8 | PS | PINUS STROBUS Eastern White Pine | 6' - 8' HT. | B & B |
| ORNAMENTAL TREES | | | | |
| 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 |
| SHRUBS | | | | |
| 109 | AG | ABELIA GRANDIFLORA Glossy Abelia | 2-1/2' x 3' HT. | B & B OR CONTAINER |
| 10 | PF | PHOTINIA X FRASERI Red Tip Photina | 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

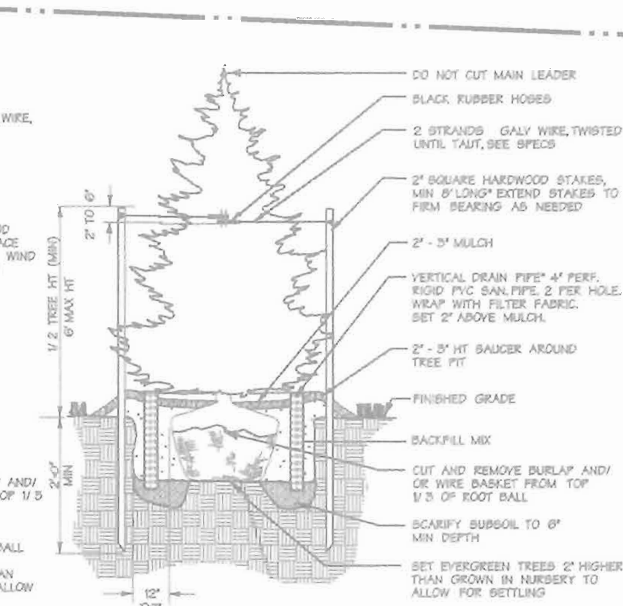
1. All plant material to meet A.A.N. Standards.
2. Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
3. No substitutions to be made without consent of Landscape Architect or Owner.
4. All beds to be topped with three inches of harwood mulch.
5. Landscape Contractor to verify location of utilities with Owner before planting.
6. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
7. 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.
8. Contractor shall notify Miss Utility 72 hours prior to construction.
9. 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.
10. 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 $26,880.00 (58 shade trees, 23 evergreen trees, and 201 shrubs).
11. 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.
12. 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.

Don Paul Pistorio — 10-13-05
NAME: DON PAUL PISTORIO — DATE

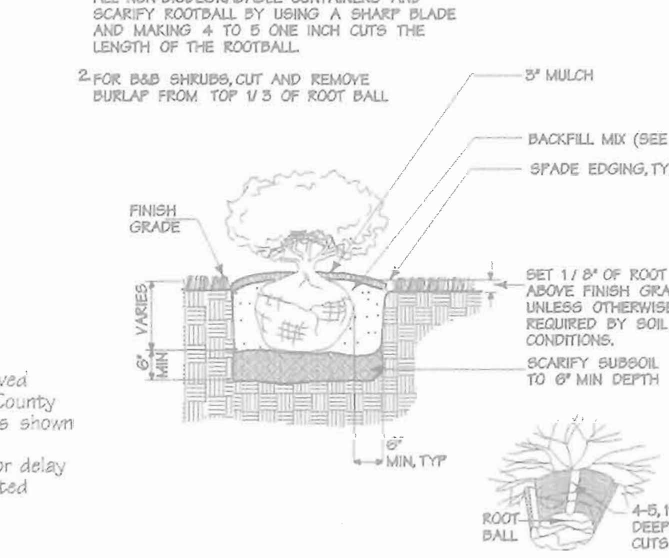



SHADE TREE PLANTING 2½- 3" CALIPER
NOT TO SCALE



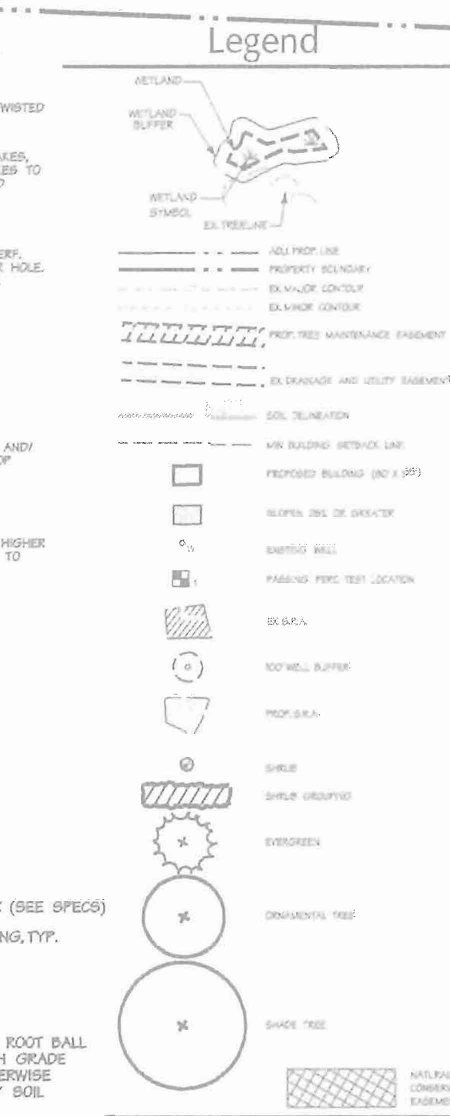

EVERGREEN TREE PLANTING
NOT TO SCALE

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL




Shrub Bed Planting
Not To Scale

Legend



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

for COUNTY HEALTH OFFICER — 12/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12/28/05 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/4/06 DATE

DIRECTOR — 1/5/06 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:
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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

STATE OF MARYLAND — KENNETH R. KINGET — NO. 405 — REGISTERED LANDSCAPE ARCHITECT

Professional L.A. No. 405

| SUBDIVISION NAME | SECTION AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

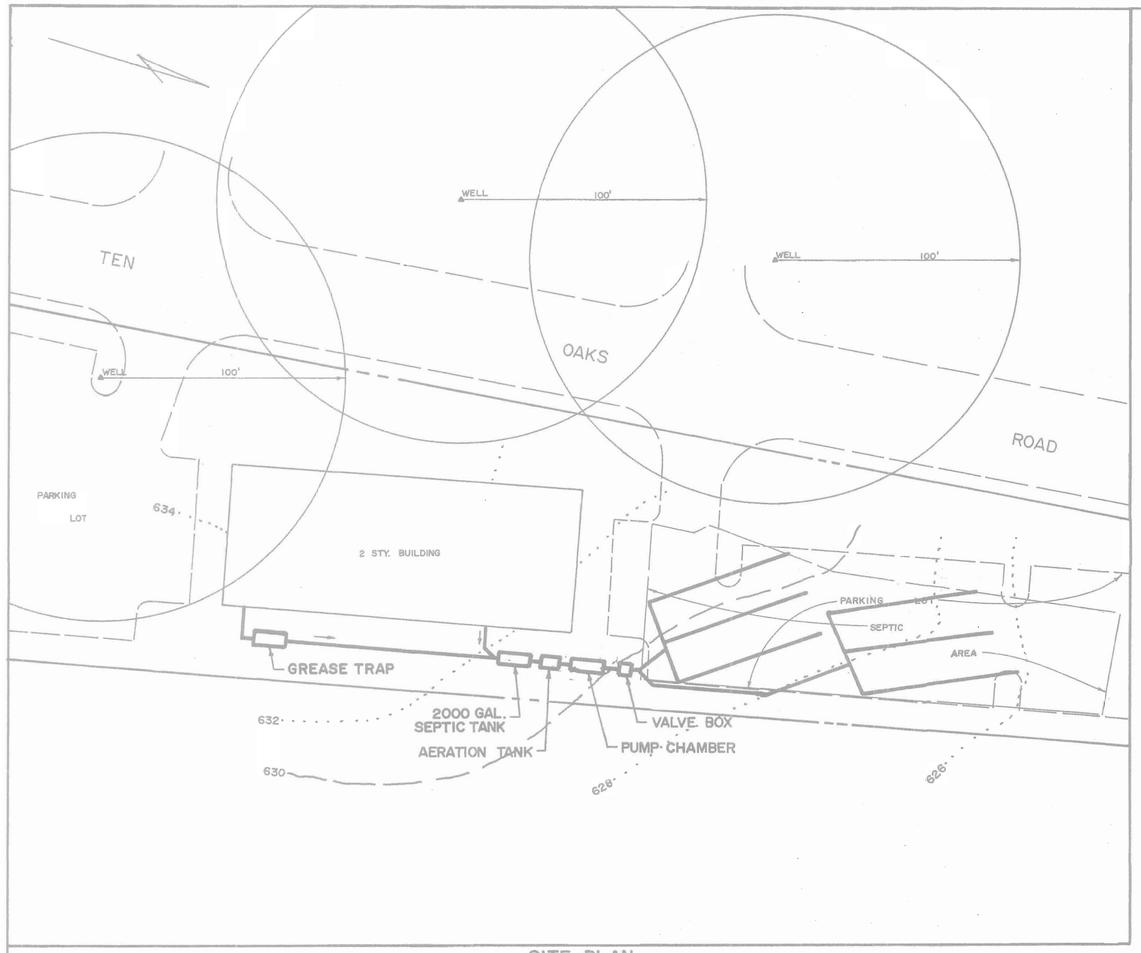
| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

TITLE
# LANDSCAPE PLAN

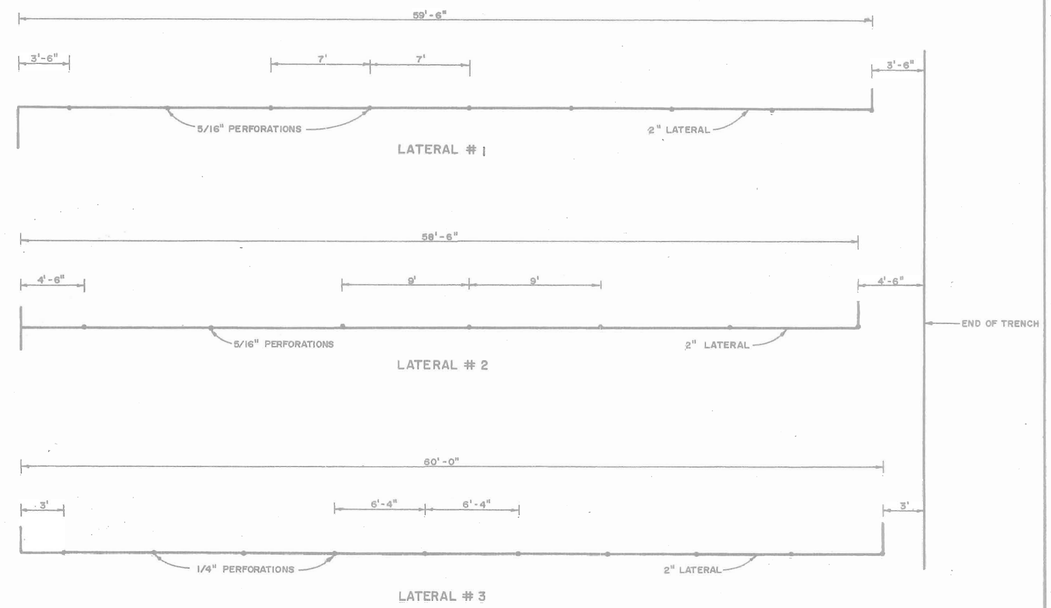
| Des. By | CRH | Scale | 1"= 30' | Proj. No. 02136.00 |
|---|---|---|---|---|
| Drn. By | CRH | Date | 10/28/05 | 16 of 19 |
| Chk. By | KRK | Approved | | |

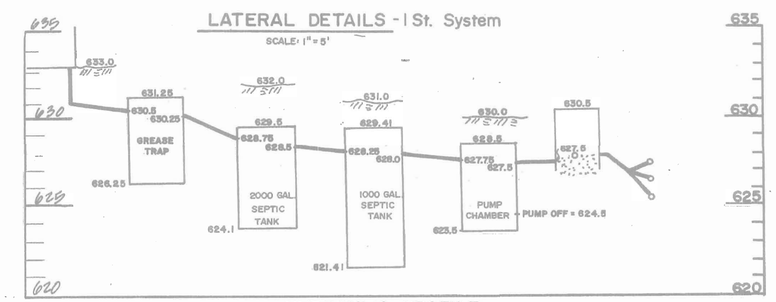
SDP-04-130




SITE PLAN
SCALE: 1" = 30'

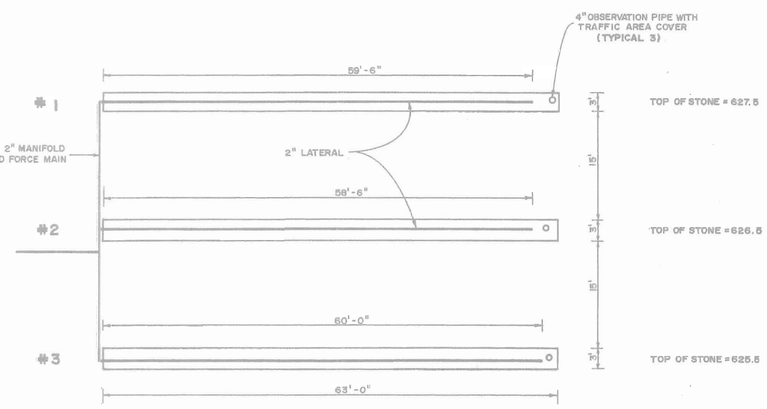
LATERAL END CAP
USE ON ALL LATERALS
N.T.S.



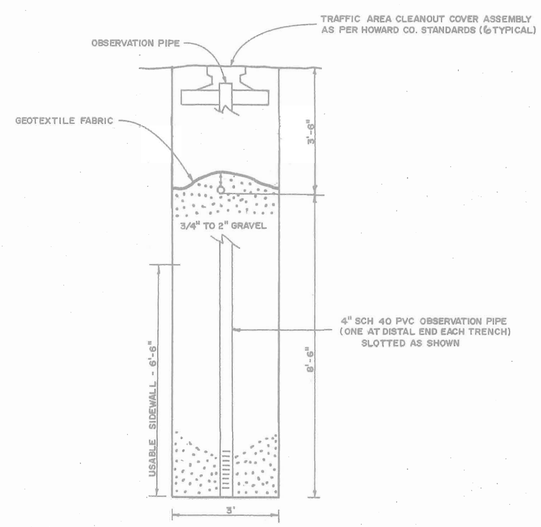




LATERAL DETAILS - 1 St. System
SCALE: 1" = 5'

HYDRAULIC PROFILE
SCALE: V: 1/4" = 1'
H: NTS




TRENCH LAYOUT - 1 St. System
SCALE: 1" = 10'




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

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/28/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/3/06

| 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
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

| SUBDIVISION NAME | SECTION / AREA | NEW PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

TITLE
SITE PLAN

STATE OF MARYLAND — JAMES D. CLISE — No. 10086 — REGISTERED PROFESSIONAL ENGINEER

James D. Clise

SITE PLAN AMMENDED 9/8/04

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

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

TEN OAKS COMMERCIAL CENTER
HOWARD COUNTY

LOW PRESSURE WASTEWATER SYSTEM — DRAWING NO. 17 OF 19

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 Manufactures 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 – 17

- 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.

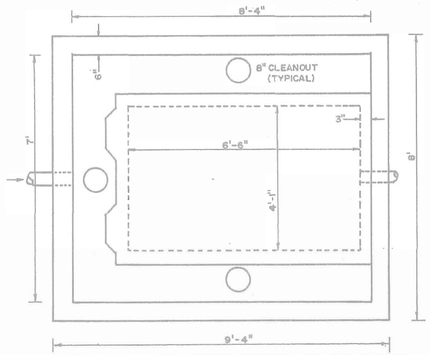
- All piping to be schedule 40 PVC of the size shown.

- 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.

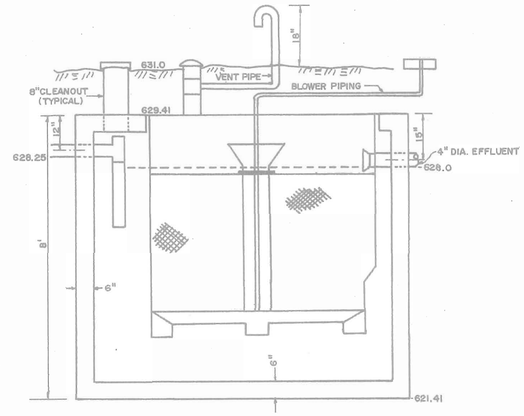
- Trench stone to be clean bank gravel. Crushed limestone is not acceptable.

- 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.



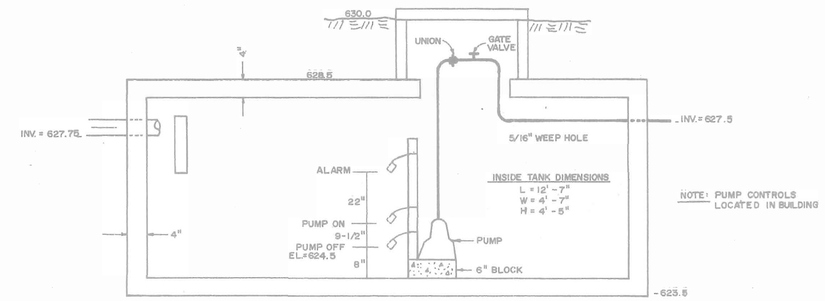

2000 GAL. AERATION TANK - PLAN VIEW

SCALE: 1/2" = 1'




2000 GAL. AERATION TANK - SECTION

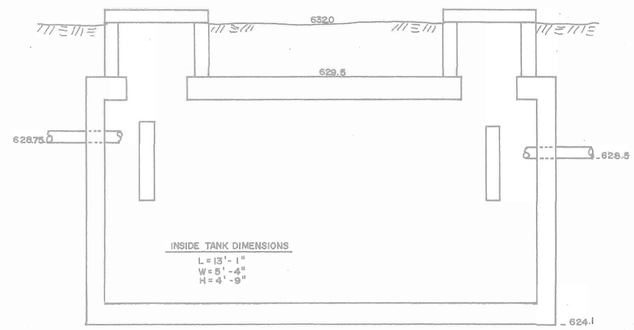
SCALE: 1/2" = 1'




NOTE: PUMP CONTROLS LOCATED IN BUILDING

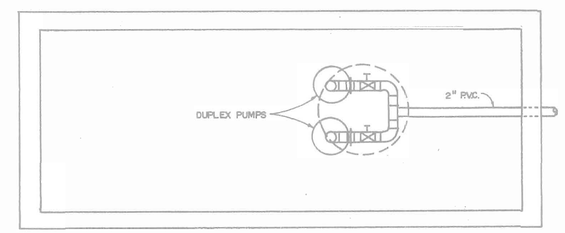
TOP SEAM 1500 GAL. PUMP CHAMBER

N.T.S.



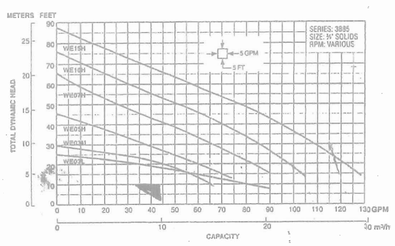

2000 GAL. MID-SEAM SEPTIC TANK

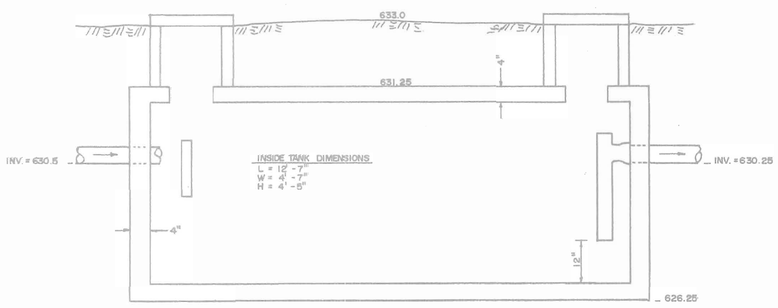
N.T.S.




1500 GAL. PUMP CHAMBER PLAN

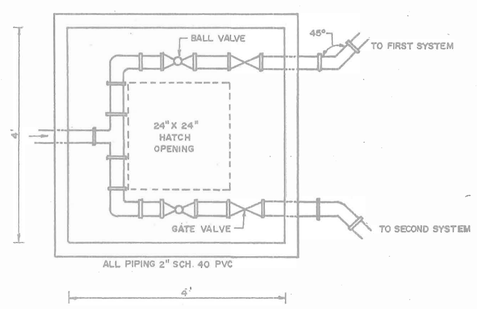
N.T.S.



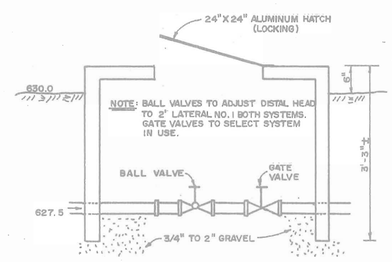

TOP SEAM 1500 GAL. GREASE TRAP

N.T.S.




VALVE BOX – PLAN VIEW

SCALE: 3/4" = 1'




VALVE BOX - SECTION

SCALE: 3/4" = 1'

| APPROVED: FOR PRIVATE WATER & PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT | |
|---|---|
| for COUNTY HEALTH OFFICER | 12/21/05 DATE |
| APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING | |
| CHIEF, DEVELOPMENT ENGINEERING DIVISION MAD | 12/20/05 DATE |
| CHIEF, DIVISION OF LAND DEVELOPMENT | 1/4/06 DATE |
| DIRECTOR | 1/5/06 DATE |

| Date | No. | Revision Description |
|---|---|---|
| | | |
| | | |

STATE OF MARYLAND — JAMES D. CLEIN — No. 10000 — REGISTERED PROFESSIONAL ENGINEER

James D. Clein

**Ten Oaks Commercial Center**

'Triangle Howard, Parcel B'

OWNER:
3881 TEN OAKS PROPERTIES, LLC
5221 LYNNGATE RD.
COLUMBIA, MD. 21044
410-730-5818

DEVELOPER:
3881 TEN OAKS MANAGEMENT, LLC
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COLUMBIA, MD 21044
410-730-5818

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

| SUBDIVISION NAME | | SECTION / AREA | | PARCEL # |
|---|---|---|---|---|
| TRIANGLE HOWARD | | N/A | | B |
| PLAT # | BLOCK # | ZONE | TAX / ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |
| WATER CODE | | SEWER CODE | | |
| N/A | | N/A | | |

TITLE

SITE PLAN

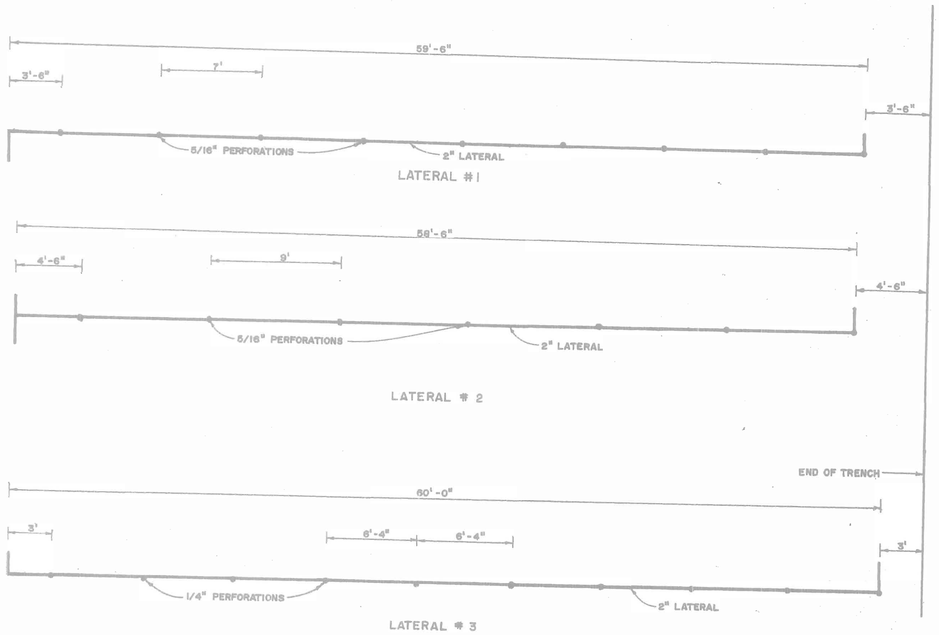
**S/E ENGINEERING, INC.**
WESTMINSTER, MARYLAND

| | | |
|---|---|---|
| SCALE: AS SHOWN | APPROVED: JDC | DRAWN BY: RSK |
| DATE: DECEMBER, 2005 | | DESIGNED BY: JDC |

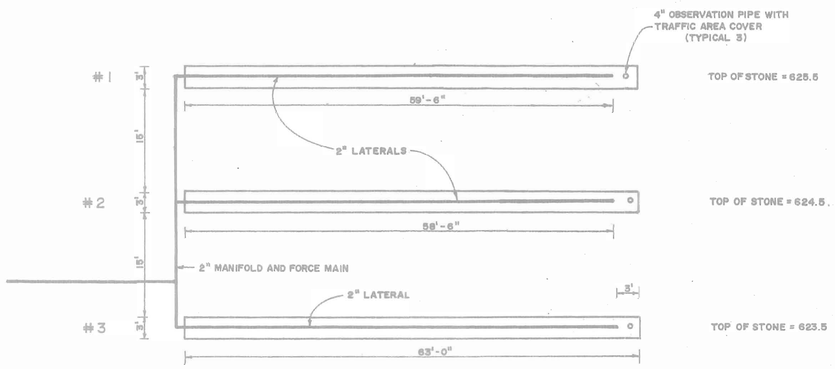
TEN OAKS COMMERCIAL CENTER
HOWARD COUNTY

LOW PRESSURE WASTEWATER SYSTEM — DRAWING NO. 18 OF 19

SDP 04-130




LATERAL DETAILS – 2nd. System
SCALE: 1"=5'




TRENCH LAYOUT – 2nd. System
SCALE: 1"=10'

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

for Robert J. Weber — 12/21/05
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/23/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

1/5/06
DIRECTOR — DATE

| Date | No. | Revision Description |
|---|---|---|
| | | |

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

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| SUBDIVISION NAME | SECTION/AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

TITLE
SITE PLAN

STATE OF MARYLAND — JAMES D. CLISE — REG. 10068 — REGISTERED PROFESSIONAL ENGINEER

James D. Clise

2ND TRENCH SYSTEM AMMENDED 9/8/04

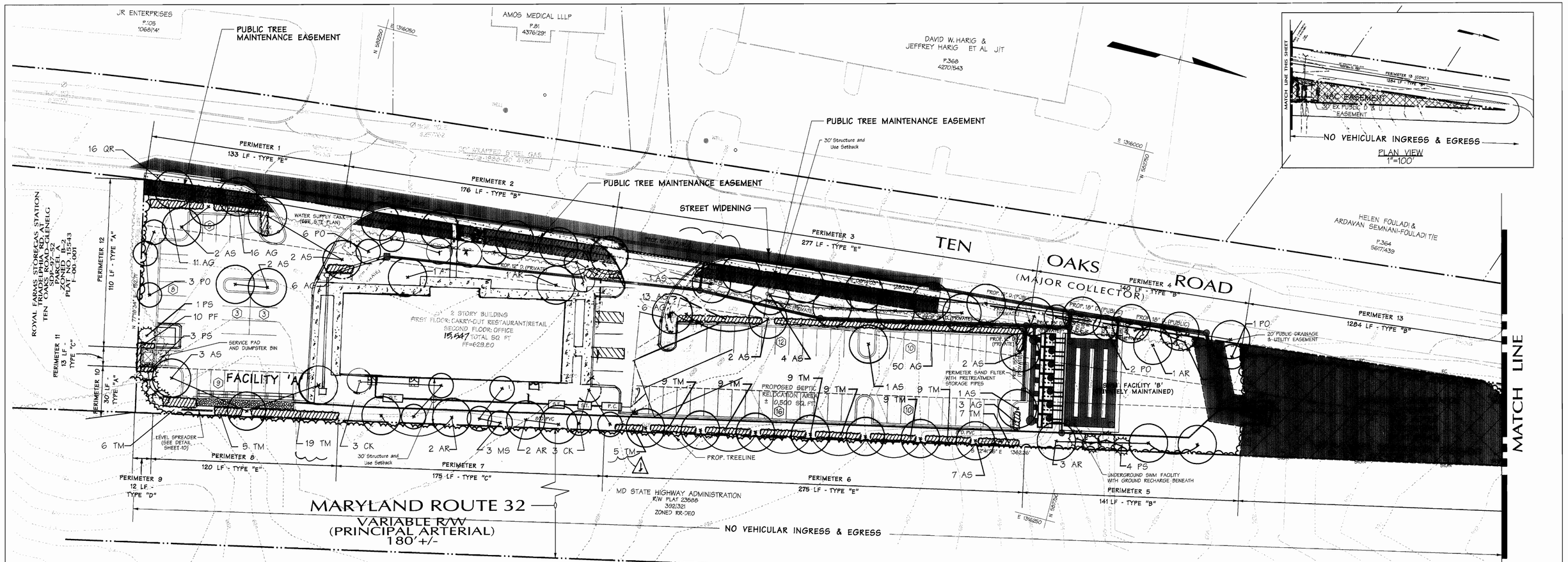
S/E ENGINEERING, INC.
WESTMINSTER, MARYLAND

| SCALE: AS SHOWN | APPROVED: | DRAWN BY: RSK |
|---|---|---|
| DATE: JULY, 2004 | JDC | DESIGNED BY: JDC |

TEN OAKS COMMERCIAL CENTER
HOWARD COUNTY

LOW PRESSURE WASTEWATER SYSTEM — DRAWING NO 12 OF 12

SDP-04-130




## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO ROAD | | | | | | | | | | ADJACENT TO PERIMETER PROPERTIES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LANDSCAPE TYPE "A" | | | | | | | | | | | P 10 | P 12 |
| 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 | 1284 | N/A | 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 | N/A |
| NUMBER OF PLANTS REQUIRED | | | | | | | | | | | | |
| SHADE TREES | 3 | 4 | 7 | 3 | 3 | 7 | 4 | 3 | -- | -- | 1 | 0 | 2 |
| 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 | -- | -- | -- | -- | -- |
| EVERGREEN TREES | -- | -- | -- | 3 | 4 | -- | -- | -- | 1 | -- | 2 | -- | 1 |
| OTHER TREES (2 :1 SUBSTITUTION) | -- | 6 | -- | 3 | -- | -- | 9 | -- | -- | -- | -- | -- | 3 |
| SHRUBS (10 :1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | 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
1/20 SPACES
INTERNAL ISLANDS PROVIDED.....5
200 SQ. FT./ISLAND
SHADE TREES REQUIRED.....5
1/20 SPACES
SHADE TREES PROVIDED.....5

## PLANT LIST

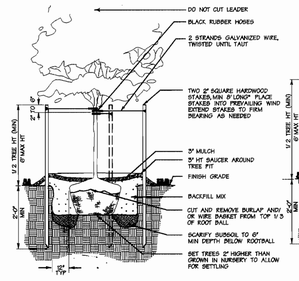
| QTY | SYM | BOTANICAL NAME/ COMMON NAME | SIZE | REMARKS |
|---|---|---|---|---|
| **SHADE TREES** | | | | |
| 10 | AR | ACER RUBRUM 'OCTOBER GLORY' October Glory Red Maple | 2 1/2" - 3" CAL. 12' - 14' HT. | B & B FULL HEAD |
| 27 | AS | ACER SACCHARUM 'GREEN MOUNTAIN' Sugar Maple | 2 1/2" - 3" CAL. 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 |
| **EVERGREEN TREES** | | | | |
| 3 | PA | PICEA ABIES Norway Spruce | 6' - 8' HT. | B & B |
| 8 | PS | PINUS STROBUS Eastern White Pine | 6' - 8' HT. | B & B |
| **ORNAMENTAL TREES** | | | | |
| 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 |
| **SHRUBS** | | | | |
| 109 | AG | ABELIA GRANDIFLORA Glossy Abelia | 2-1/2" x 3' HT. | B & B OR CONTAINER |
| 10 | PF | PHOTINIA X FRASERI Red Tip Photina | 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

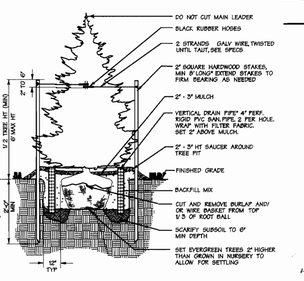
1. All plant material to meet A.A.N. Standards.
2. Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
3. No substitutions to be made without consent of Landscape Architect or Owner.
4. All beds to be topped with three inches of hardwood mulch.
5. Landscape Contractor to verify location of utilities with Owner before planting.
6. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
7. 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.
8. Contractor shall notify Miss Utility 72 hours prior to construction.
9. 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.
10. 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 $26,880.00 (58 shade trees, 23 evergreen trees, and 201 shrubs).
11. 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.
12. 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.

Dan Paul Pistorio 10-18-05
NAME: DAN PAUL PISTORIO DATE

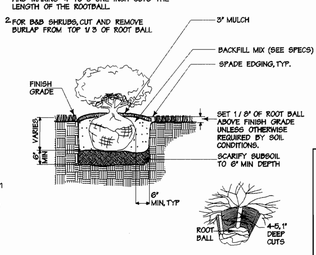



SHADE TREE PLANTING 2½- 3" CALIPER
NOT TO SCALE




EVERGREEN TREE PLANTING
NOT TO SCALE

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.




Shrub Bed Planting
Not To Scale

## Legend

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

Robert J. Weber 12/21/05
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/28/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

1/5/06
DIRECTOR DATE

| Date | No. | Revision Description |
|---|---|---|
| 6/21/06 | 1 | 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
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

STATE OF MARYLAND · KENNETH W. WALKER · NO. 405 · REGISTERED · LANDSCAPE ARCHITECT

Professional L.A. No. 405

| SUBDIVISION NAME | SECTION / AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |
| PLAT # 17864 · BLOCK # 15 · ZONE 8-2 | TAX/ZONE MAP 22 · ELECT. DISTRICT 3RD | CENSUS TRACT 6030.00 |
| WATER CODE N/A | SEWER CODE N/A | |

TITLE
# LANDSCAPE PLAN

| | | | | | |
|---|---|---|---|---|---|
| Des. By | CRH | Scale | 1"= 30' | Proj. No. | 02136.00 |
| Drn. By | CRH | Date | 10/28/05 | 16 of 19 | |
| Chk. By | KWW | Approved | | | |

SDP-04-130

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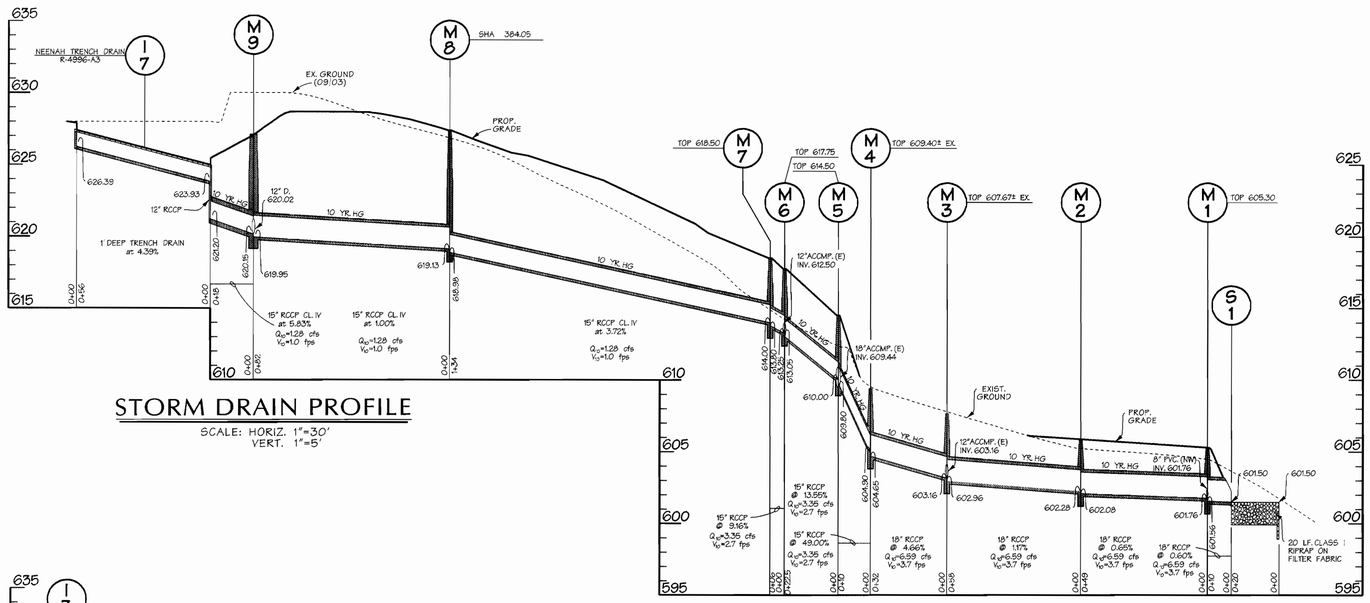
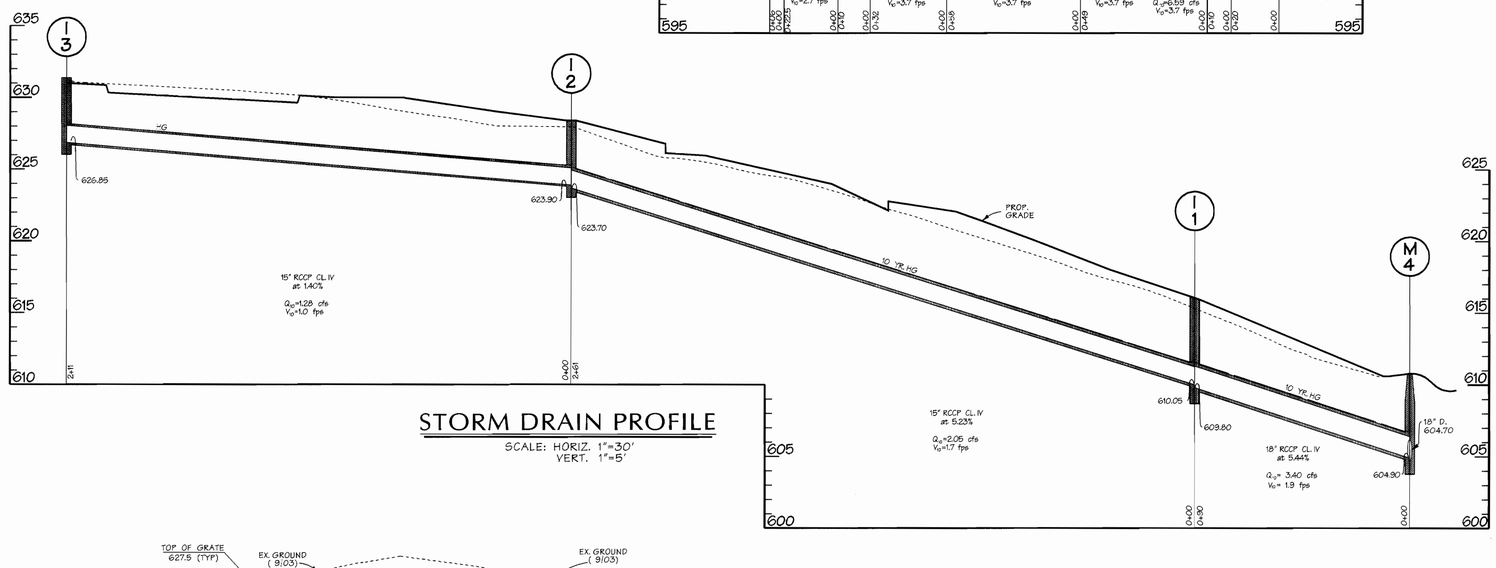


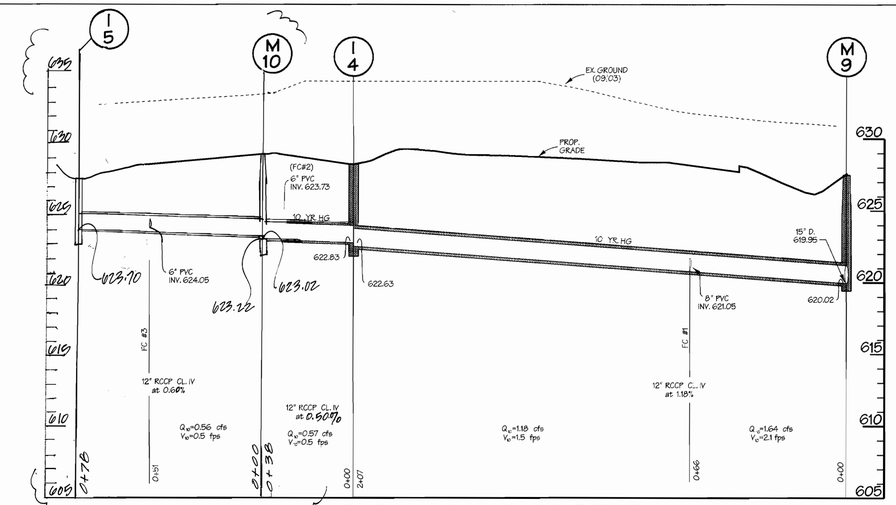

## STORM DRAIN PROFILE

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




## STORM DRAIN PROFILE

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




## STORM DRAIN PROFILE

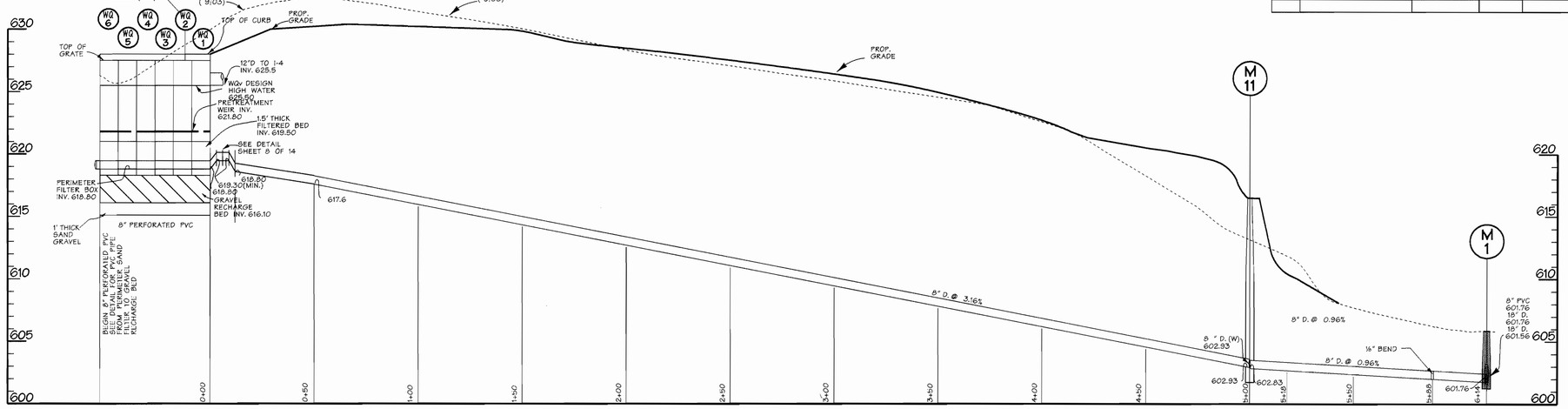
SCALE: HORIZ. 1"=30'
VERT. 1"=5'

### STRUCTURE SCHEDULE

| NO. | DESCRIPTION | DETAIL NO. | TOP ELEV. | LOCATION | COMMENTS |
|---|---|---|---|---|---|
| S-1 | FES | SD-5.51 | N/A | N. 582,851.44 | |
| | | | | E. 1,316,148.52 | |
| M-1 | St'd Precast Manhole | G-5.11 | 605.5 | N. 582,841.50 | |
| | | | | E. 1,316,149.57 | |
| M-2 | St'd Precast Manhole | G-5.11 | 605.5 | N. 582,819.63 | |
| | | | | E. 1,316,104.66 | |
| M-3 | St'd Precast Manhole | G-5.11 | 607.5 | N. 582,762.02 | USE CAST IRON |
| | 5' DIA | | | E. 1,316,110.96 | GRATING COVER |
| M-4 | St'd Precast Manhole | G-5.11 | 609.0 | N. 582,731.02 | DROP MANHOLE |
| | | | | E. 1,316,114.34 | |
| M-5 | St'd Precast Manhole | G-5.11* | 629.5 | N. 582,732.10 | * SEE DETAIL |
| | | | | E. 1,316,124.39 | |
| M-6 | St'd Precast Manhole | G-5.11* | 618.0 | N. 582,709.96 | * SEE DETAIL |
| | | | | E. 1,316,129.38 | |
| M-7 | St'd Precast Manhole | G-5.11 | 618.0 | N. 582,704.59 | |
| | | | | E. 1,316,130.59 | |
| M-8 | St'd Precast Manhole | G-5.11 | 627.6 | N. 582,573.26 | |
| | | | | E. 1,316,160.52 | |
| M-9 | St'd Precast Manhole | G-5.11 | 627.8 | N. 582,492.31 | |
| | | | | E. 1,316,163.09 | |
| M-10 | St'd Precast Manhole | G-5.11 | 629.8 | N. 582,255.90 | |
| | | | | E. 1,316,214.39 | |
| M-11 | St'd 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 | 615.5 | SEE SITE PLAN | |
| | | SD-4.40 | | | TC @ CL INLET |
| I-2 | Type A-5 Inlet | SD-4.01 or | 628.0 | SEE SITE PLAN | |
| | | SD-4.40 | | | TC @ CL INLET |
| I-3 | Type A-5 Inlet | SD-4.01 or | 631.1 | SEE SITE PLAN | |
| | | SD-4.40 | | | TC @ CL INLET |
| I-4 | YARD INLET | G-5.11 | 628.3 | N. 582,288.56 | USE CAST IRON |
| | | | | E. 1,316,192.38 | GRATING COVER |
| I-5 | YARD INLET | SPECIAL | 627.5 | N. 582,273.32 | |
| | | | | E. 1,316,291.92 | |
| I-6 | S COMB. | SD-4.34 | 620.63 | SEE SITE PLAN | |
| | | | | | |
| I-7 | TRENCH DRAIN | | VARIES | 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'

10/17/05
Date

Professional Engr. No. 13876

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/28/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|
| 6-14-06 | 1 | REVISE PROFILE S-5 to M-10 |

# 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
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


| SUBDIVISION NAME | SECTION / AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 15 | B-2 | 22 | 3RD | 6030 |

WATER CODE N/A — SEWER CODE N/A

TITLE: STORM DRAIN PROFILE

| | | | |
|---|---|---|---|
| Des. By | Scale 1"= 30' | Proj. No. 02136.00 | |
| Drn. By | Date 10/28/05 | 8 of 19 | |
| Chk. By KRK | Approved | | |

SDP-04-130

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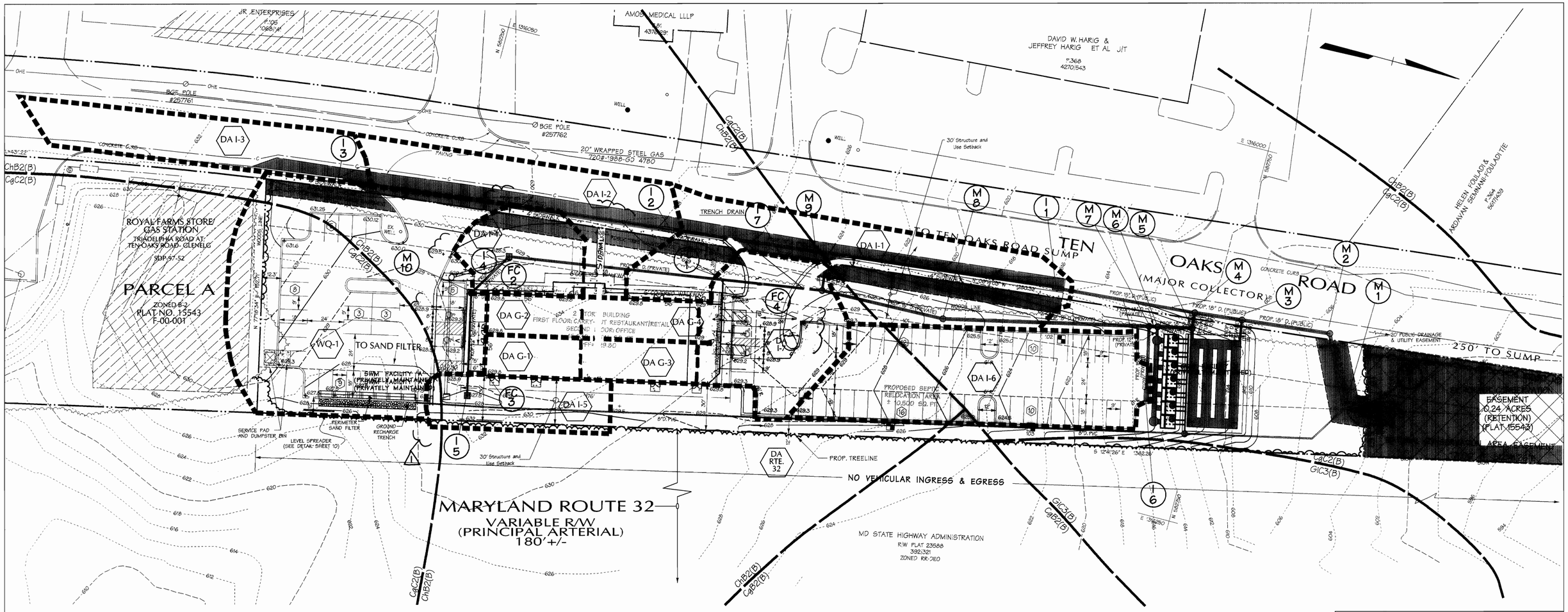
Wed Oct 12 13:36:59 2005 n:\02136\sheet files\02136.SDpro




## Legend

| | | | |
|---|---|---|---|
| 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± AC, 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% | |

DRAINAGE DIVIDE
WETLAND
BUFFER
WETLAND SYMBOL
EX. TREELINE
ADJ. PROP. LINE
EX. MAJOR CONTOUR
EX. MINOR CONTOUR
EX. STRUCTURE
EX. DRAINAGE AND UTILITY EASEMENT
SOIL DELINEATION
MIN. BUILDING SETBACK LINE
PROPOSED BUILDING (80' X 55')
SLOPES 25% OR GREATER
EXISTING WELL
PASSING PERC TEST LOCATION
EX. S.R.A.
100' WELL BUFFER
NATURAL AREA CONSERVATION EASEMENT

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.

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/22/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|
| 6/21/06 | 1 | REV. DA. per 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:**
3881 TEN OAKS MANAGEMENT, LLC
5221 LYNNGATE RD.
COLUMBIA, MARYLAND 21044
410-730-5815

10/19/05
Date

Professional Engr. No. 13876

**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

| SUBDIVISION NAME | SECTION / AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N.A. | B |

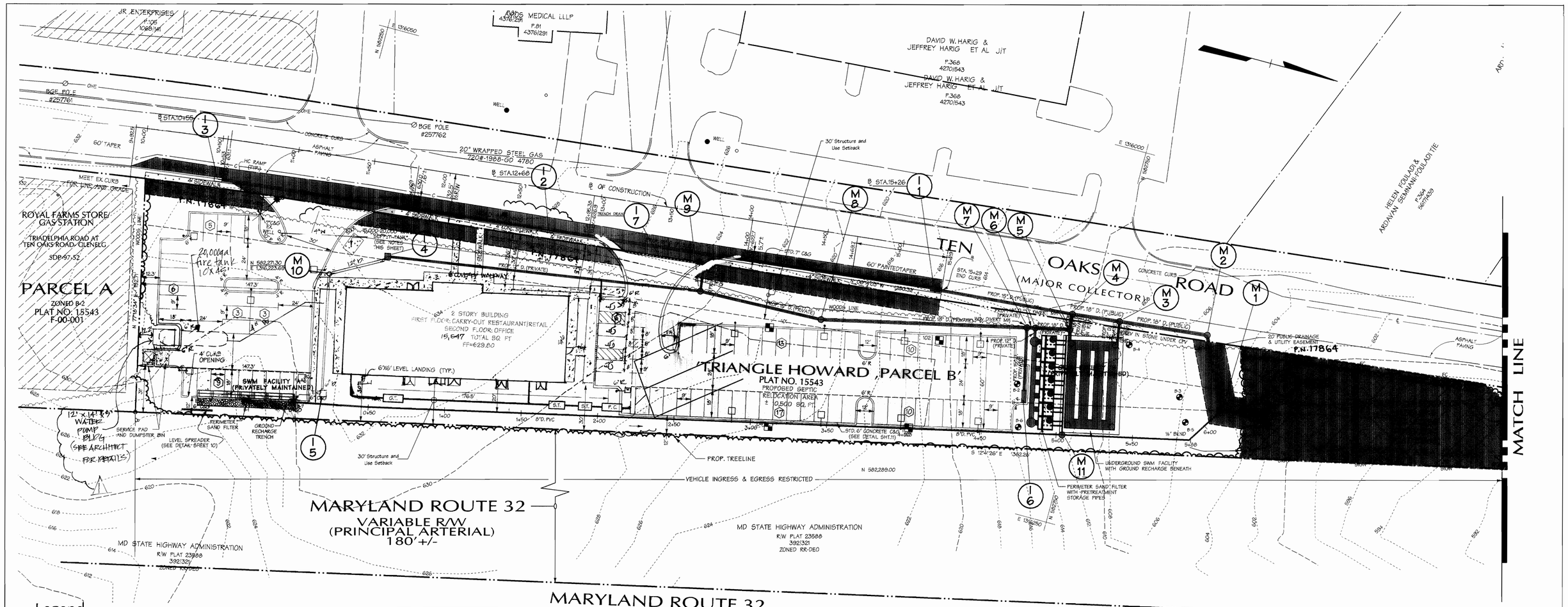
| PLAT NO. | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 16 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N.A. | N.A. |

TITLE
# DRAINAGE AREA MAP

| | | | |
|---|---|---|---|
| Des. By | | Scale 1"= 30' | Proj. No. 02136.00 |
| Drn. By KDE | | Date 10/28/05 | 7 of 19 |
| Chk. By KRK | | Approved | |

SDP-04-130

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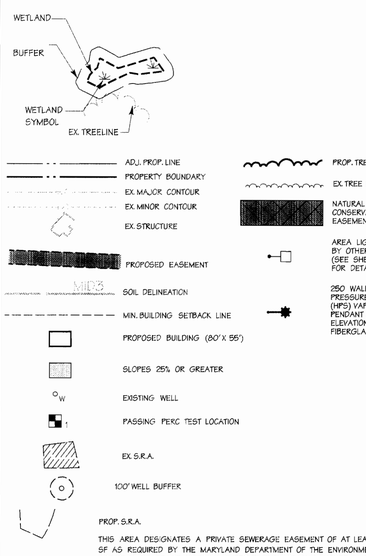


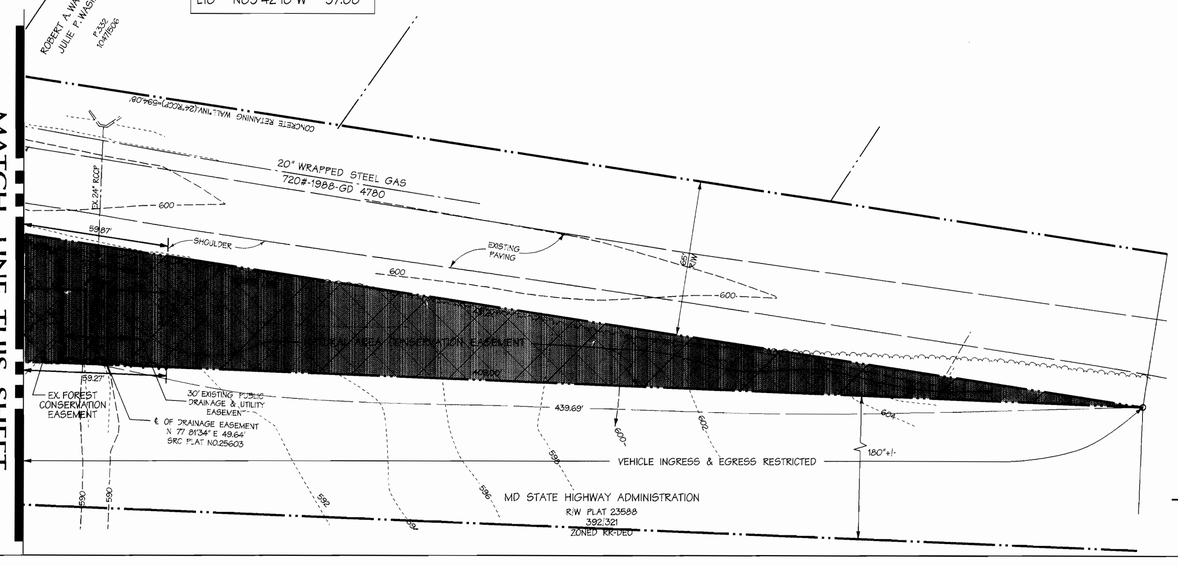

PROP. S.R.A.

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.

## 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' |




## 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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/20/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/9/06

| Date | No. | Revision Description |
|---|---|---|
| 6/21/06 | 1 | shift bldg. to the south adj. plan & s/w |

# Ten Oaks Commercial Center

'Triangle Howard, Parcel B'

**OWNER:**
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5221 LYNNGATE RD.
COLUMBIA, MARYLAND 21044
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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 | LOT/PARCEL # |
|---|---|---|---|
| TRIANGLE HOWARD | | N/A | B |
| PLAT # 17864 | BLOCK # 15 / ZONE B-2 | TAX/ZONE MAP 22 / ELEC. DISTRICT 3RD | CENSUS TRACT 6030.00 |
| WATER CODE N/A | | SEWER CODE N/A | |

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 KRK | Approved | | |

SDP-04-130

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

Howard County — Maryland

## Sheet Index

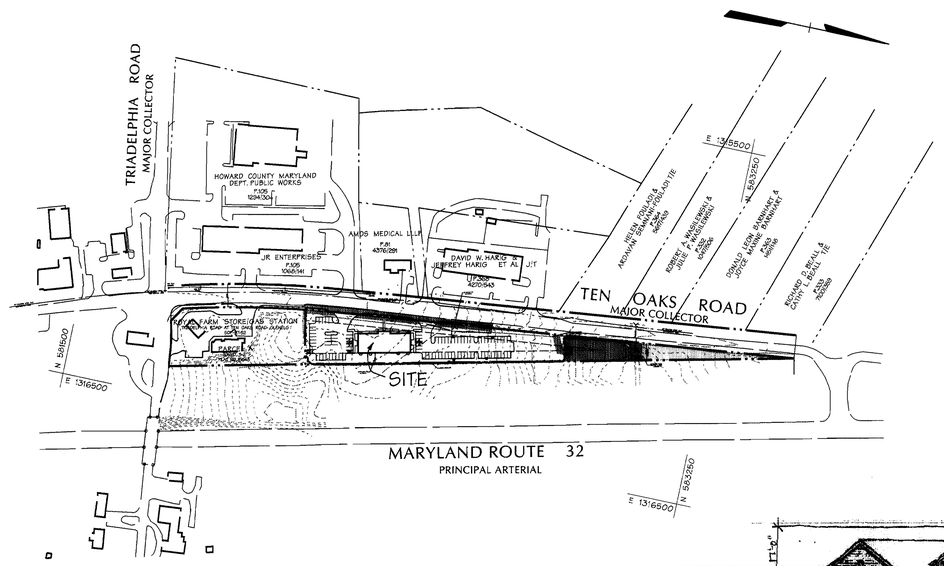


| SHEET | DESCRIPTION |
|---|---|
| 1 | COVER SHEET |
| 2 | SITE PLAN |
| 3 | GRADING AND SEDIMENT CONTROL PLAN |
| 4 | SEDIMENT CONTROL DETAILS |
| 5 | SEDIMENT CONTROL DETAILS |
| 6 | SEDIMENT CONTROL NOTES |
| 7 | STORM DRAIN DRAINAGE AREA MAP |
| 8 | STORM DRAIN PROFILES |
| 9 | STORM DRAIN PROFILES |
| 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 |

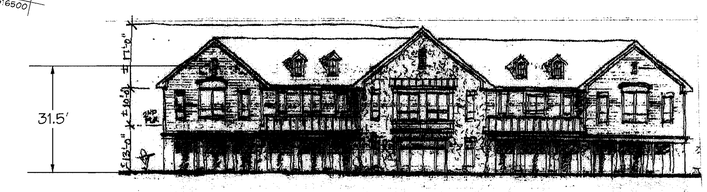


## General Notes

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
2. 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.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
4. 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.
5. All plan dimensions are to face of curb unless otherwise noted.
6. 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.
7. 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.
8. Water is private (well).
9. Sewer is private (septic).
10. 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..
11. 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.
12. There is no floodplain on this site.
13. The wetlands delineation for this project was approved and appeared on plat 15543 and F-00-01.
14. Traffic study for this project was prepared by The Traffic Group, dated 11/13/03.
15. 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 & V,WP 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.
16. All outdoor lighting shall comply with the requirements of Zoning Section 134.
17. 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.
18. 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.
19. Soils analysis report prepared by Hillis-Carnes dated February 5, 2004.
20. Handicap parking details shall be in accordance with 'MD Building Code for the Handicapped' section 9.01-7.05.
21. Any damage to county owned right-of-way shall be corrected at the contractor's expense.
22. All sidewalks shall be cross sloped at ¼" per foot.
23. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
24. All inlets shall be constructed in accordance with Howard County standards or MSHA standards as specified on structure schedule.
25. All materials and construction shall be in strict accordance with the Howard County Design Manual, Volume IV.
26. Building setback restrictions from property lines and right-of-way lines of any public road shall be in accordance with Triangle Howard Plat 15543.
27. All on site driveways and parking areas to be privately maintained.
28. All curb radii are 5 foot unless otherwise labeled and all curbs are to be 6" in height.
29. All equipment and tools to be placed so as not to interfere with vehicular or pedestrian movement unless specified.
30. Contractor shall be responsible for any damage to existing property which may occur as a result of his negligence during the execution of work.
31. All paving areas indicated are private.
32. All proposed HC ramps shall be in accordance with current ADA standards.
33. This property is located outside of the Metropolitan District.
34. Electric, gas, cable and telephone lines designed by others.
35. No clearing, grading or construction is permitted within the wetland limits, 25' wetland buffer or retention forest conservation easement.
36. Landscaping shall be provided in accordance with the Landscape Plan on sheet 12 and financial surety in the amount of $26,850.00 ($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.
37. This property is located outside of the Metropolitan District.
38. The Howard County Health Department has signed and approved the Perc Certification Plan, signed on 11-5-03.
39. Groundwater Appropriation Permit Number HO2001G004 (02)
40. Maximum Daily Flow = 2,068 GPD
41. 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.
42. All sidewalks at intersections to have handicap ramps.



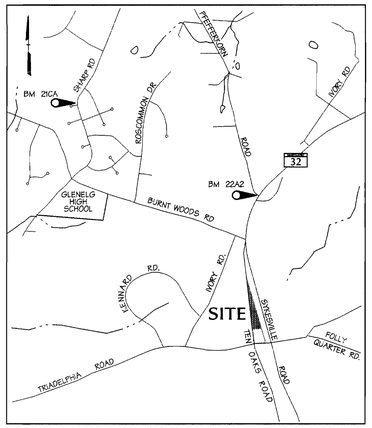

Overall Property Outline
Scale: 1"=200'




TEN OAKS ROAD (EAST) ELEVATION
NTS 10.16.03

## SITE ANALYSIS DATA CHART

1. General Site Data
   a. Present Zoning: B-2 per the 02.02.04 Comprehensive Zoning Plan.
   b. 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.
   c. Proposed Use of Site or Structure(s): commercial office building, carry-out restaurant, retail and parking.
   d. Proposed Water and Sewer Systems: ___ Public X Private (well and septic)
   e. Any other relevant information: N/A
2. Area Tabulation
   a. Total Project Area: 2.4095 Acres (104,960 SF)
   b. Area of This Plan Submission: 2.4095 Acres (104,960 SF)
   c. Limit of Disturbed Area: 2.3 Acres
   d. Building Coverage of Site: 0.41 Acres and 16.9% of Gross Area (Proposed)
   e. Area of floodplain: 0 Acres
   f. Area of steep slopes: 0 Acres
   g. Net area of site: 2.4095 Acres
3. Parking Space Data
   a. Floor space on each level per building per use:
      FIRST FLOOR 8000 SF (Carry-out restaurant / retail) (8256 SF incl. porch & stairs)
      SECOND FLOOR 7547 SF (Office) (8940 SF incl. porch & stairs)
      TOTAL FLOOR AEA OF BUILDING 15,547 SF (18,196 SF incl. porch & stairs)
   b. Maximum number of employees, tenants on-site per use: N/A
   c. 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 = 25 sp
      7547 SF OFFICE @ 3.3/1000 = 25 sp
      TOTAL REQUIRED = 68 sp
   d. Total Number of Parking Spaces Provided On-Site: 81 (13 sp. excess)
   e. Number of Handicapped Parking Spaces Provided: 4 (HC included in total)
   f. Proposed building is two stories.




## 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 (1991) horizontal and NAVD 88 vertical and are based onthe following Howard County Geodetic Control Stations provided by the Howard County Departmentte of Public Works, Survey Division:

| DESIGNATION | NORTH (sFT) | EAST (sFT) | ELEVATION (sFT) |
|---|---|---|---|
| 21CA | 588897.368 | 1311235.695 | 612.653 |
| 22A2 | 585988.551 | 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 Sharry 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 55 | 3881 TEN OAKS ROAD |
| | |

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

for COUNTY HEALTH OFFICER — DATE 12/28/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/27/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/9/06

| 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**
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

Professional Engr. No. 13876

| SUBDIVISION NAME | | SECTION / AREA | | LOT/PARCEL # |
|---|---|---|---|---|
| TRIANGLE HOWARD | | N/A | | B |
| PLAT # 17864 | BLOCK # 10 | ZONE B-2 | TAX/ZONE MAP 22 | ELECT. DISTRICT 3RD | CENSUS 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 |
| Drm. By KDE | Date 10/28/05 | | |
| Chk. By KEK | Approved | | |

SDP-04-130

Wed Oct 12 15:28:14 2005 n:\02136\sheet files\02136.CVR

## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO ROAD | | | | | | | | | | ADJACENT TO PERIMETER PROPERTIES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LANDSCAPE TYPE "A" | | | | | | | | | | | P 10 | | P 12 |
| 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 | 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 | N/A | N/A |
| NUMBER OF PLANTS REQUIRED<br>SHADE TREES<br>EVERGREEN TREES<br>SHRUBS | <br>3<br>--<br>33 | <br>4<br>4<br>-- | <br>7<br>--<br>69 | <br>3<br>4<br>-- | <br>3<br>4<br>-- | <br>7<br>--<br>69 | <br>4<br>9<br>-- | <br>3<br>--<br>30 | <br>--<br>1<br>-- | <br>--<br>--<br>-- | <br>1<br>--<br>-- | <br>0<br>1<br>-- | <br>2<br>--<br>-- |
| NUMBER OF PLANTS PROVIDED*<br>SHADE TREES<br>EVERGREEN TREES<br>OTHER TREES (2 :1 SUBSTITUTION)<br>SHRUBS (10 :1 SUBSTITUTION)<br>(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | <br>3<br>--<br>--<br>33 | <br>3<br>--<br>6<br>-- | <br>7<br>--<br>--<br>69 | <br>2<br>3<br>3<br>-- | <br>3<br>4<br>--<br>-- | <br>7<br>--<br>--<br>69 | <br>4<br>--<br>9<br>-- | <br>3<br>--<br>--<br>30 | <br>--<br>1<br>--<br>-- | <br>--<br>--<br>--<br>-- | <br>--<br>2<br>--<br>-- | <br>--<br>--<br>--<br>10 | <br>--<br>1<br>3<br>-- |

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
1/20 SPACES
INTERNAL ISLANDS PROVIDED..........5
200 SQ.FT./ISLAND
SHADE TREES REQUIRED....................5
1/20 SPACES
SHADE TREES PROVIDED....................5

## PLANT LIST

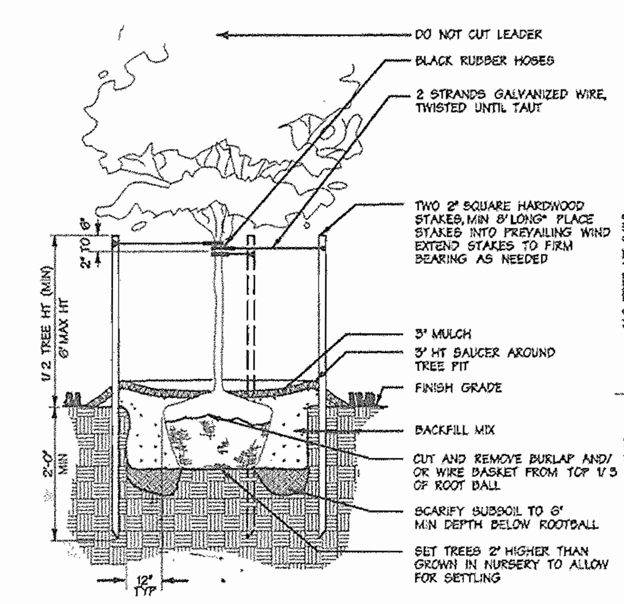
| QTY | SYM | BOTANICAL NAME/ COMMON NAME | SIZE | REMARKS |
|---|---|---|---|---|
| **SHADE TREES** | | | | |
| 10 | AR | ACER RUBRUM 'OCTOBER GLORY'<br>October Glory Red Maple | 2 1/2" - 3" CAL.<br>12' - 14' HT. | B & B<br>FULL HEAD |
| 27 | AS | ACER SACCHARUM 'GREEN MOUNTAIN'<br>Sugar Maple | 2 1/2"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

General Planting Notes

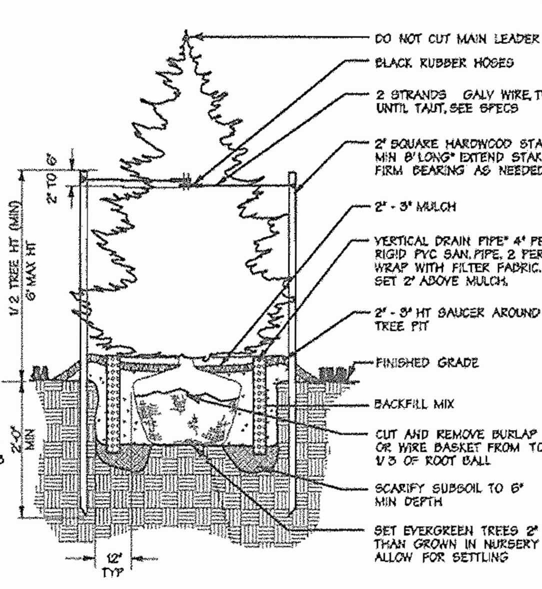
1. All plant material to meet A.A.N. Standards.
2. Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
3. No substitutions to be made without consent of Landscape Architect or Owner.
4. All beds to be topped with three inches of hardwood mulch.
5. Landscape Contractor to verify location of utilities with Owner before planting.
6. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
7. 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.
8. Contractor shall notify Miss Utility 72 hours prior to construction.
9. 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.
10. 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 $26,880.00 (58 shade trees, 23 evergreen trees, and 201 shrubs).
11. 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.
12. 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.

Don Paul Pistorio 10-13-05
NAME: DON PAUL PISTORIO DATE

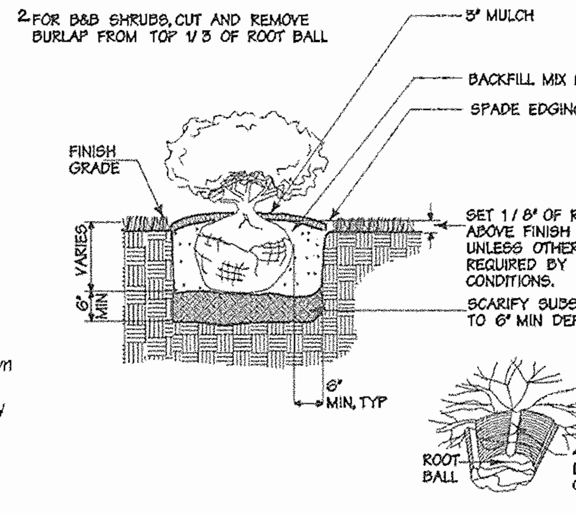


SHADE TREE PLANTING 2½- 3" CALIPER
NOT TO SCALE



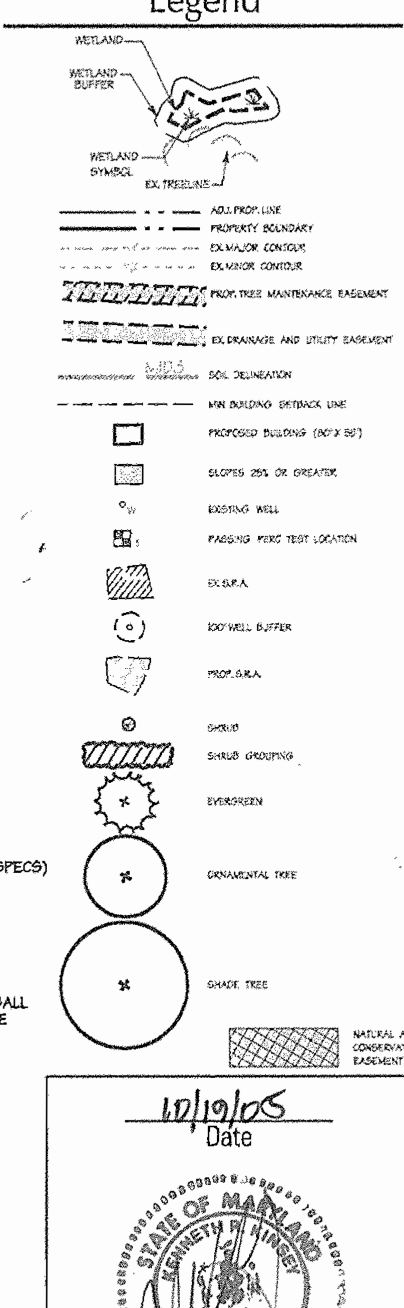
EVERGREEN TREE PLANTING
NOT TO SCALE

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL



Shrub Bed Planting
Not To Scale

Legend




10/19/05
Date

Professional L.A. No. 405

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

for COUNTY HEALTH OFFICER 12/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ 12/28/05 DATE

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

DIRECTOR 1/5/06 DATE

| Date | No. | Revision Description |
|---|---|---|
| 6/06/07 | 2 | REMOVE 72" S.W.M. PIPES FROM DESIGN |
| 6/21/06 | 1 | 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
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

| SUBDIVISION NAME | SECTION/AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

WATER CODE N/A SEWER CODE N/A

TITLE
# LANDSCAPE PLAN

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

SDP-04-130

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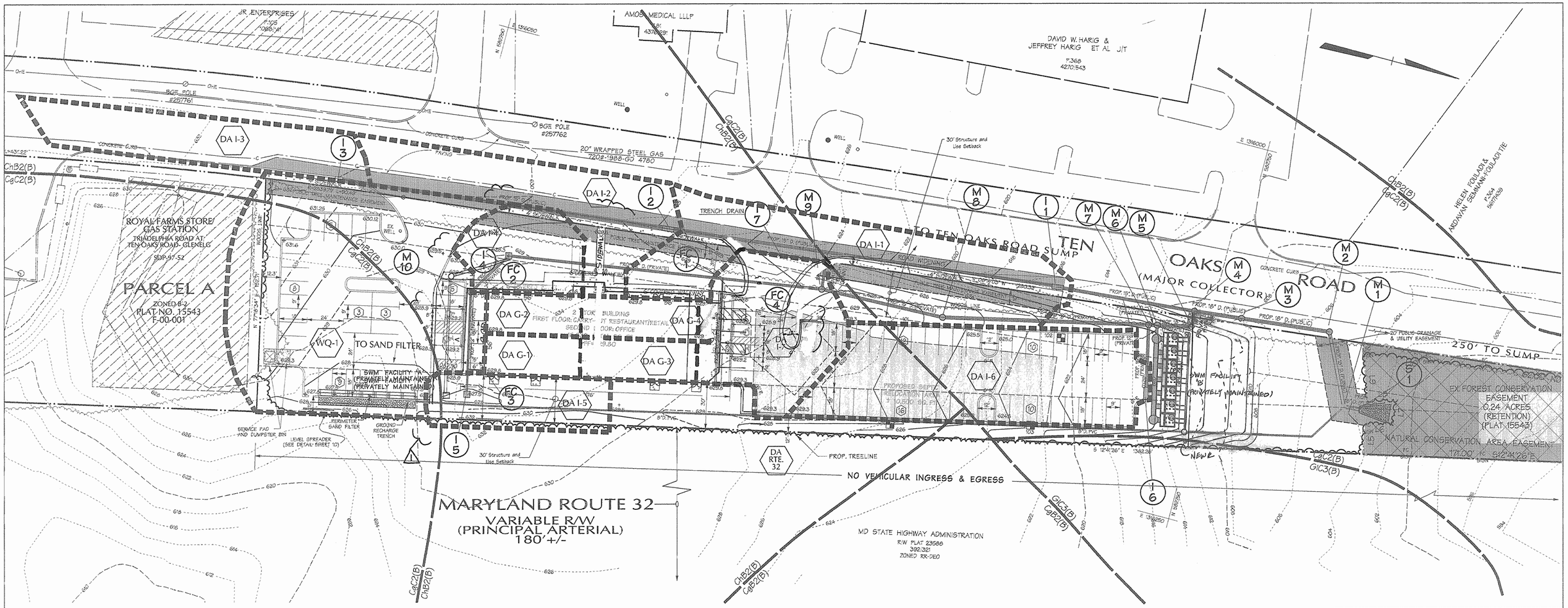


## Legend

| | | | |
|---|---|---|---|
| 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% |

DRAINAGE DIVIDE
WETLAND
BUFFER
WETLAND SYMBOL
EX. TREELINE
ADJ. PROP. LINE
EX. MAJOR CONTOUR
EX. MINOR CONTOUR
EX. STRUCTURE
EX. DRAINAGE AND UTILITY EASEMENT
SOIL DELINEATION
MIN. BUILDING SETBACK LINE
PROPOSED BUILDING (80' X 55')
SLOPES 25% OR GREATER
EXISTING WELL
PASSING PERC TEST LOCATION
EX. S.R.A.
100' WELL BUFFER
NATURAL AREA CONSERVATION EASEMENT

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.

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAD — DATE 12/22/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|
| 6/6/07 | 2 | REMOVE 72" S.W.M. PIPES FROM DESIGN |
| 6/2/06 | 1 | REV. D.A. per 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:
3881 TEN OAKS MANAGEMENT, LLC
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COLUMBIA, MARYLAND 21044
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10/19/05
Date

Professional Engr. No. 13876


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

| SUBDIVISION NAME | SECTION/AREA | | PARCEL # |
|---|---|---|---|
| TRIANGLE HOWARD | N.A. | | B |
| PLAT # 17864 / BLOCK # 15 / ZONE B-2 | TAX/ZONE MAP 22 | ELECT. DISTRICT 3RD | CENSUS TRACT 6030.00 |
| WATER CODE N/A | SEWER CODE N/A | | |

TITLE
# DRAINAGE AREA MAP

| | | | |
|---|---|---|---|
| Des. By | Scale 1"= 30' | Proj. No. 02136.00 | |
| Drn. By KDE | Date 10/28/05 | 7 of 19 | |
| Chk. By KRK | Approved | | |

SDP-04-130

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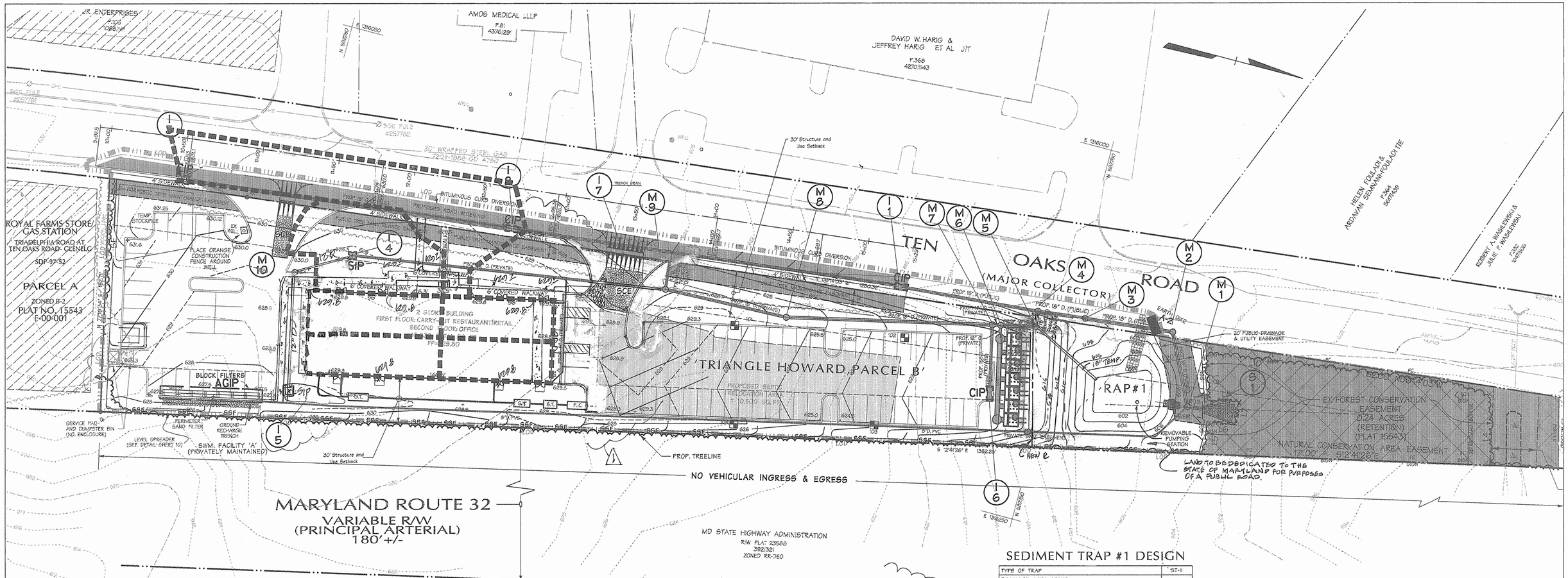


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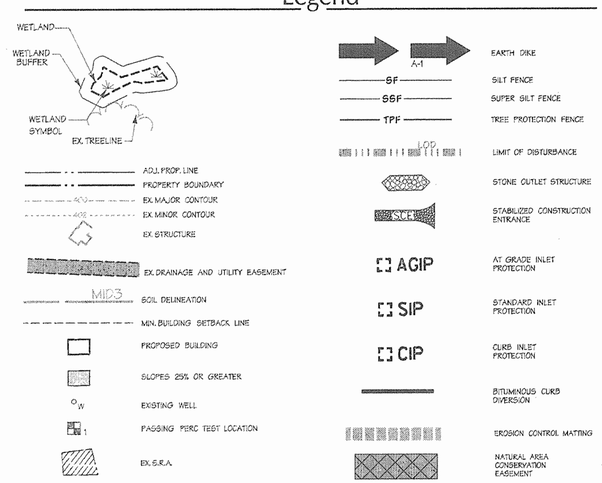
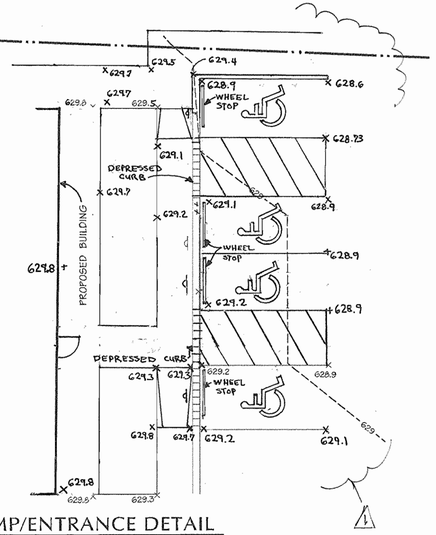


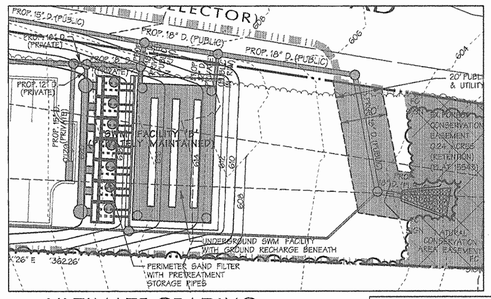




## HANDICAPPED RAMP/ENTRANCE DETAIL

SCALE: 1" = 10'

## 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 @ ½ DEPTH OF WET STORAGE | | 603.45 |
| DEPTH BELOW CREST | | 2.25 |
| BOTTOM ELEVATION | | 602.0' |
| WEIR LENGTH | | 6.0' |




## ULTIMATE GRADING

**DEVELOPERS CERTIFICATE:**

I WILL 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.

Jon Paul Pistorio — 10-13-05
SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE
JON 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 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.

10/19/05
SIGNATURE OF ENGINEER — DATE
PRINT NAME BELOW SIGNATURE — # 13876
KENNETH R. KINSEY

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

Jim Myers — 10/27/05
U.S. NATURAL RESOURCE CONSERVATION SERVICE — DATE

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

10/26/05
HOWARD S.C.D. — DATE

10/19/05
Date

Professional Engr. No. 13876

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

12/21/05
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/21/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

1/9/06
DIRECTOR — DATE

| Date | No. | Revision Description |
|---|---|---|
| 10-6-07 | 4 | REMOVE 72" SWM PIPES FROM DESIGN |
| 6-14-06 | 1 | REVISE BUILDING, PARKING, STORM DRAINS, PERVIOUS |

# 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
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


| | | | |
|---|---|---|---|
| SUBDIVISION NAME: TRIANGLE HOWARD | SECTION / AREA: N/A | LOT/PARCEL #: B | |
| PLAT # 17864 | BLOCK # 18 | ZONE B-2 | TAX/ZONE MAP 22 |
| ELEC. DISTRICT 3RD | CENSUS TRACT 6030.00 | | |
| 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 | KRK | Approved | | | |

SDP-04-130

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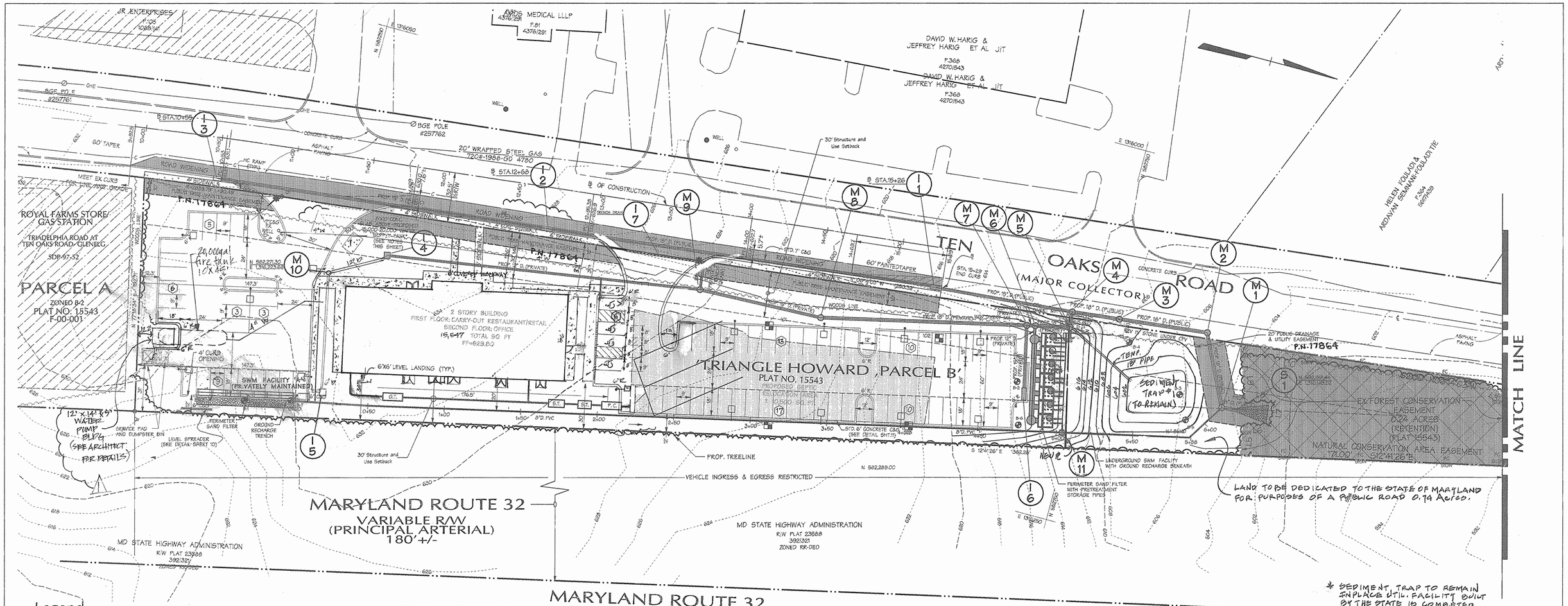
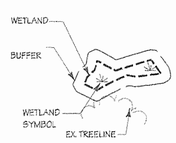



* SEDIMENT TRAP TO REMAIN IN PLACE UTIL. FACILITY BUILT BY THE STATE IS COMPLETED.

## Legend




- ADJ. PROP. LINE
- PROPERTY BOUNDARY
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- PROPOSED EASEMENT
- SOIL DELINEATION
- MIN. BUILDING SETBACK LINE
- PROPOSED BUILDING (80' x 55')
- SLOPES 25% OR GREATER
- EXISTING WELL
- PASSING PERC TEST LOCATION
- EX. S.R.A.
- 100' WELL BUFFER
- PROP. TREE LINE
- EX. TREE LINE
- NATURAL AREA CONSERVATION EASEMENT
- AREA LIGHT BY OTHERS (SEE SHEET 15 FOR DETAIL)
- 250 WATT HIGH PRESSURE SODIUM (HPS) VAPOR, PENDANT 30' ELEVATION BRONZE FIBERGLASS POLE

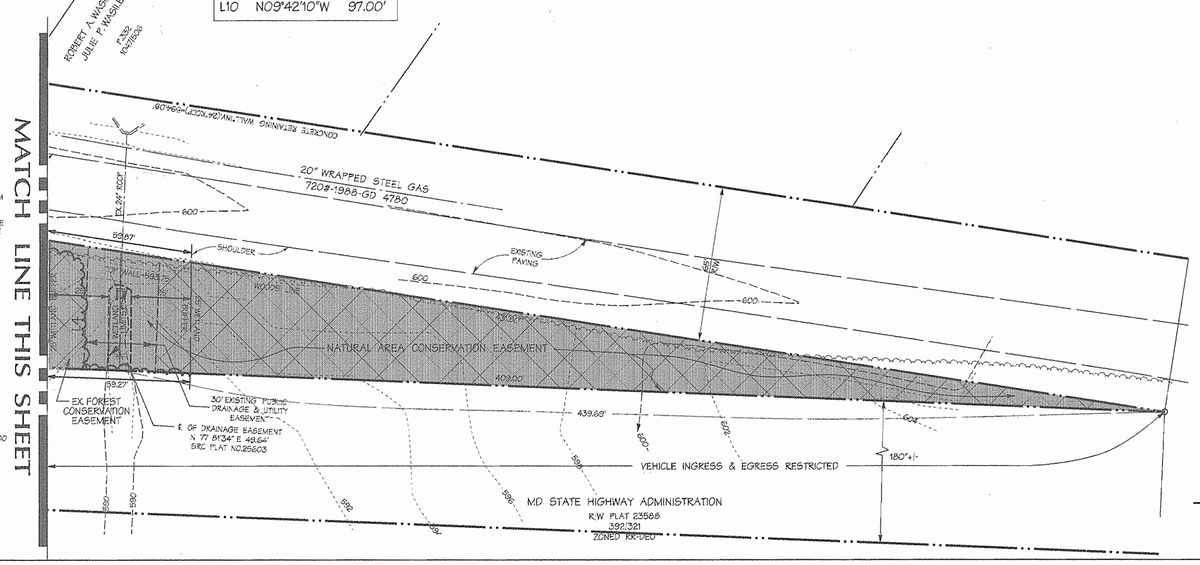
PROP. S.R.A.

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.

## 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' |




## 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 J. Weber — COUNTY HEALTH OFFICER | 12/21/05 DATE |

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

| | |
|---|---|
| MRJ — CHIEF, DEVELOPMENT ENGINEERING DIVISION | 12/30/05 DATE |
| Andy Hamilton — CHIEF, DIVISION OF LAND DEVELOPMENT | 1/4/06 DATE |
| Marsha S. McLaughlin — DIRECTOR | 1/9/06 DATE |

| Date | No. | Revision Description |
|---|---|---|
| 01/10/07 | 3 | REMOVE 72" S.W.M. PIPES FROM DESIGN |
| 6/21/06 | 1 | shift bldg. to the south adj. plan & s/w |

# 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
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

Professional Engr. No. 13876

| SUBDIVISION NAME | SECTION / AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELEC. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 15 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

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 | KEK | Approved | | | |

SDP-04-130

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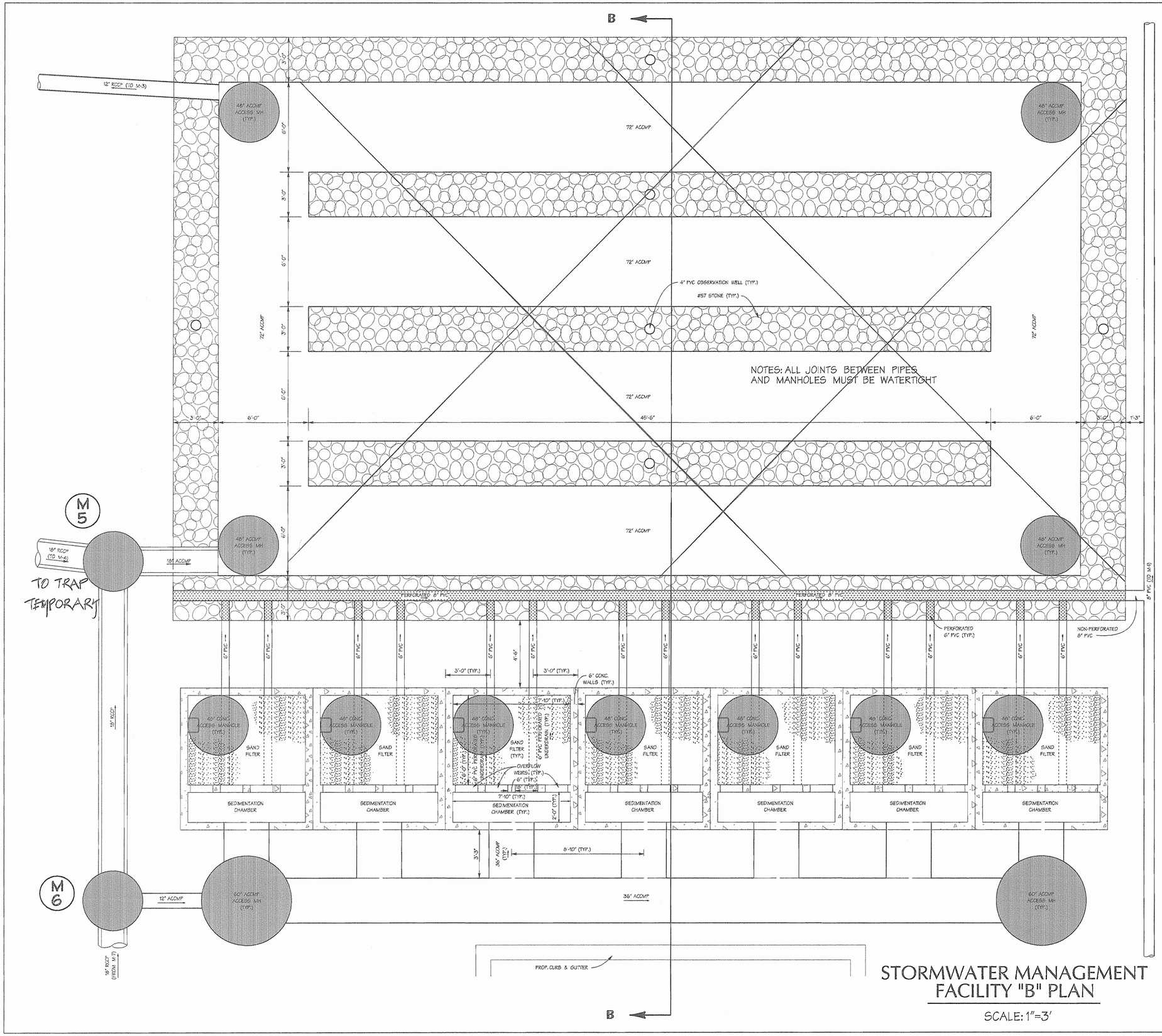


# STORMWATER MANAGEMENT FACILITY "B" PLAN

SCALE: 1"=3'

NOTES:

1. 48" ACCMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
2. 48" CONCRETE ACCESS MANHOLE SHALL BE PER HOWARD COUNTY DETAIL G-5.11.
3. 60" ACCMP ACCESS MANHOLE SHALL BE PER MANUFACTURER.
4. ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.

**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 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.

Don Paul Pistorio — 10-13-05
SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE
DON PAUL PISTORIO

**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 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.

SIGNATURE OF ENGINEER — 13876 REG. NO. — 10/19/05 DATE
PRINT NAME BELOW SIGNATURE
KENNETH R. KINSEY

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

for Robert L. Weber — 12/21/05
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/28/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

Cindy Hewston — 1/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

1/9/06
DIRECTOR — DATE

| Date | No. | Revision Description |
|---|---|---|
| 6/7/07 | 4 | 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**
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

Professional Engr. No. 13876

| SUBDIVISION NAME | SECTION/AREA | NEW PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 15 | R-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

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

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

SDP-04-130


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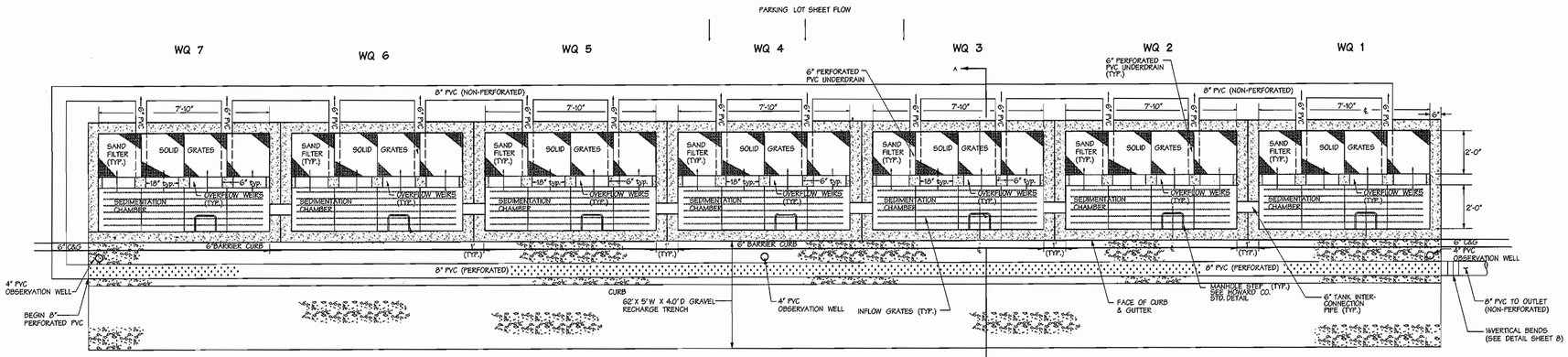
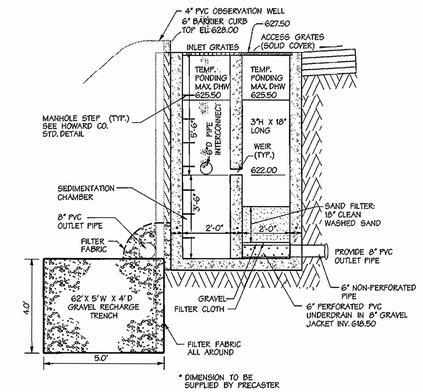



## SWM FACILITY 'A'

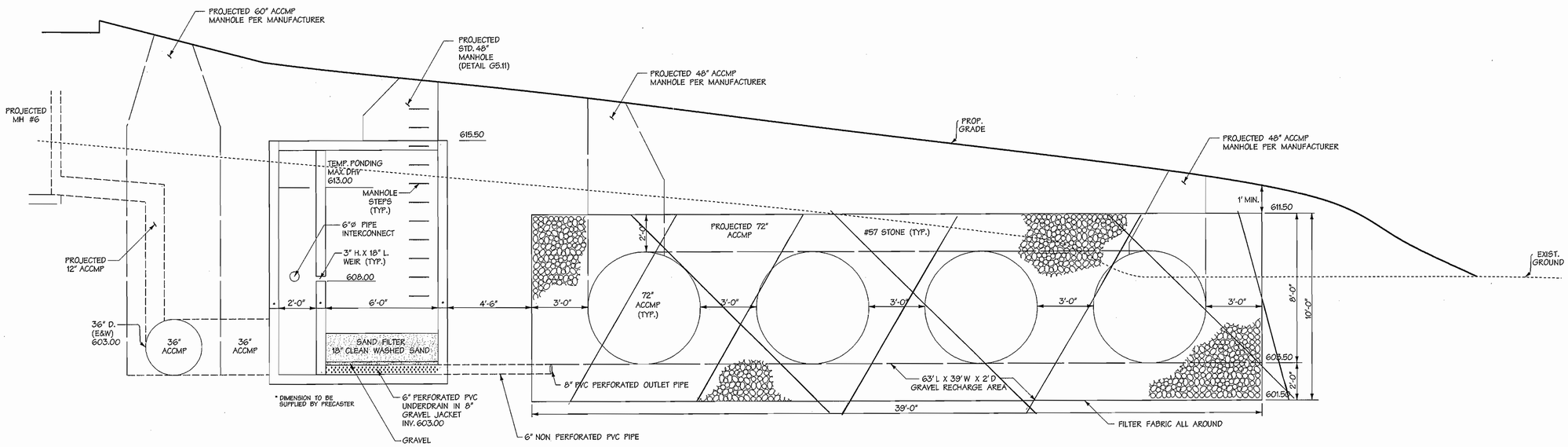
Scale: 1" = 3'




## SWM FACILITY 'A'

### SECTION A–A

Scale: 1" = 3'




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

## SWM FACILITY 'B'

### SECTION 'B – B'

Scale: 1" = 3'

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

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

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

PLAN NUMBER

**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 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.

Don Paul Pistorio — 10-13-05

SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE: DON PAUL PISTORIO

**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 THIS SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THIS 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.

13876 — 10/19/05

SIGNATURE OF ENGINEER — REG. NO. — DATE
PRINT NAME BELOW SIGNATURE: KENNETH E. LINDSEY

10/19/05
Date

STATE OF MARYLAND — KENNETH E. LINDSEY — 13876 — PROFESSIONAL ENGINEER

Professional Engr. No. 13876

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 12/28/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/9/06

| Date | No. | Revision Description |
|---|---|---|
| 4/7/07 | 2 | REMOVE 72" S.W.M. 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
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**DMW**
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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

| SUBDIVISION NAME | SECTION / AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT BOOK | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17964 | 15 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

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 | 11 of 19 | |
| Chk. By KEK | Approved | | |

SDP-04-130

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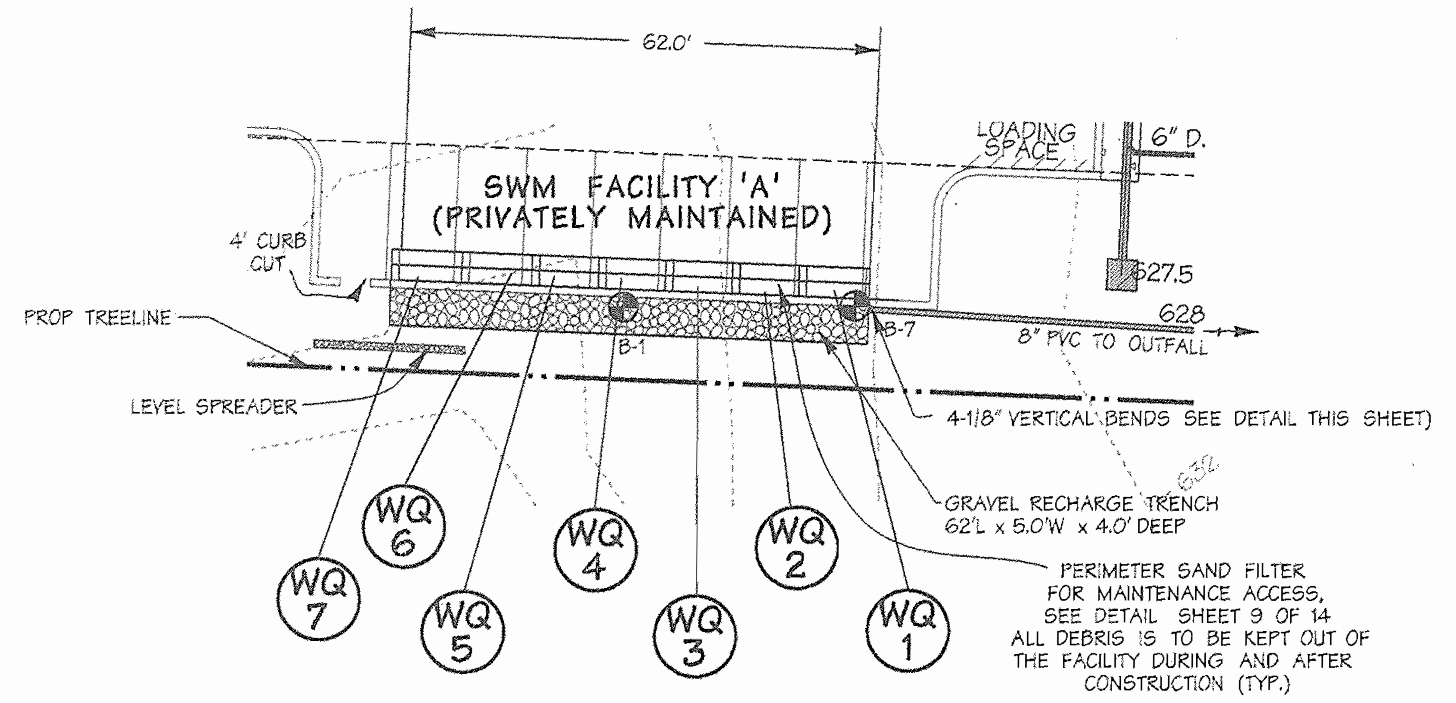
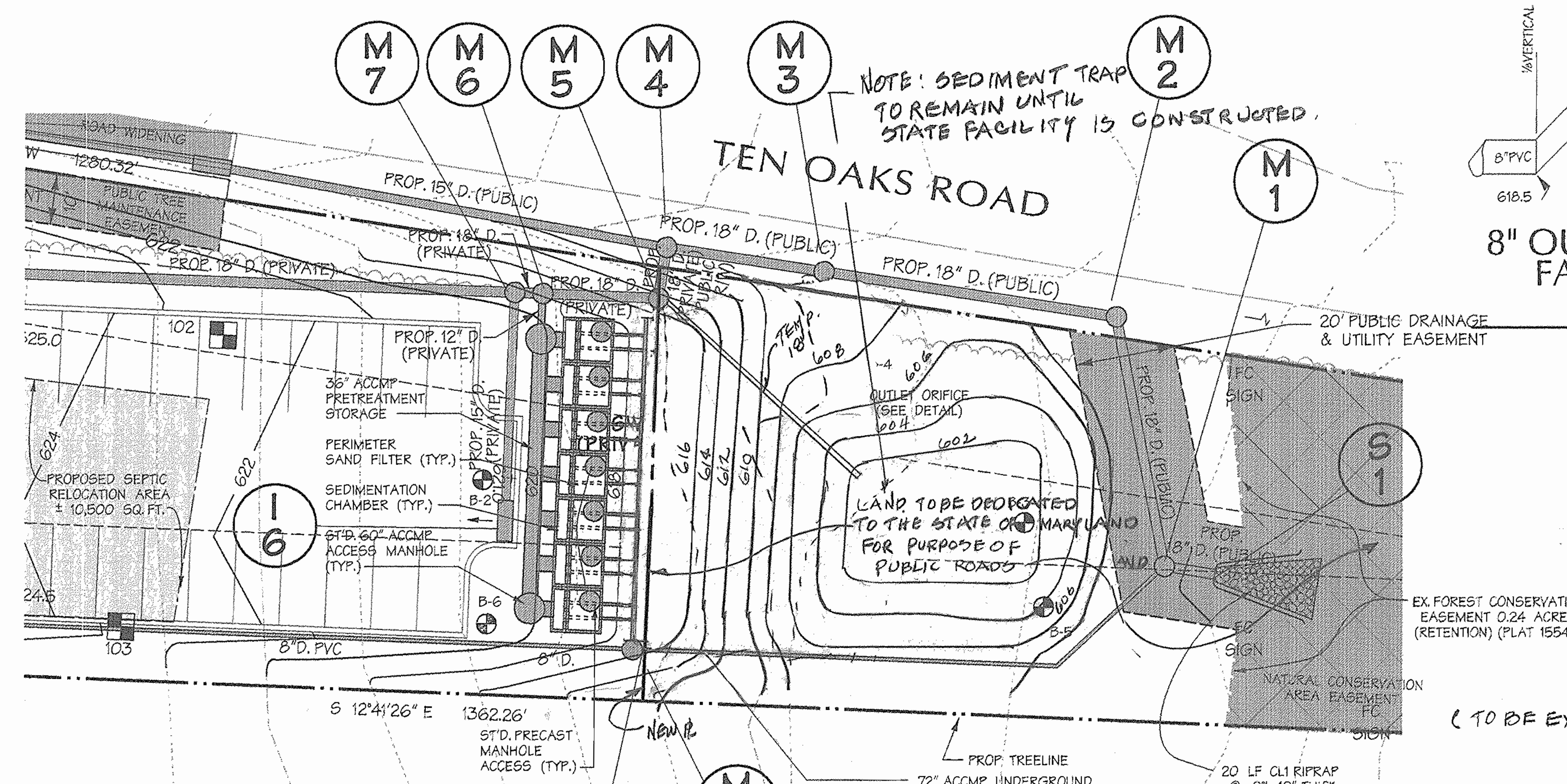
NOTE: ALL PIPE JOINTS TO BE WATERTIGHT INCLUDING JOINTS BETWEEN PIPES AND MANHOLES.




# STORMWATER MANAGEMENT FACILITY "A" PLAN

SCALE: 1"=20'

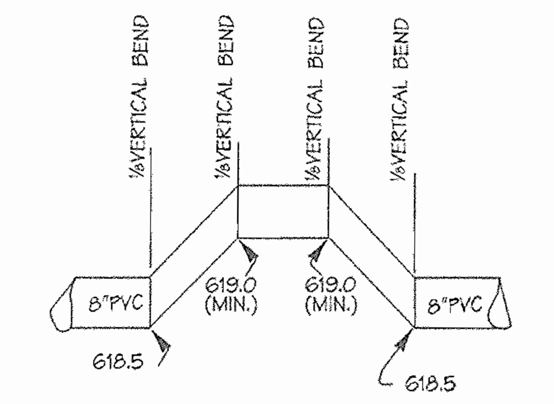
NOTE: MAINTENANCE BY OWNER ( OR ASSIGNEE).




# STORMWATER MANAGEMENT FACILITY "B" PLAN

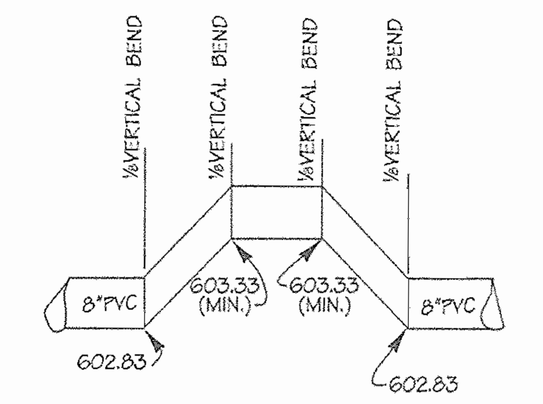
SCALE: 1"=20'

NOTE: MAINTENANCE BY OWNER ( OR ASSIGNEE).



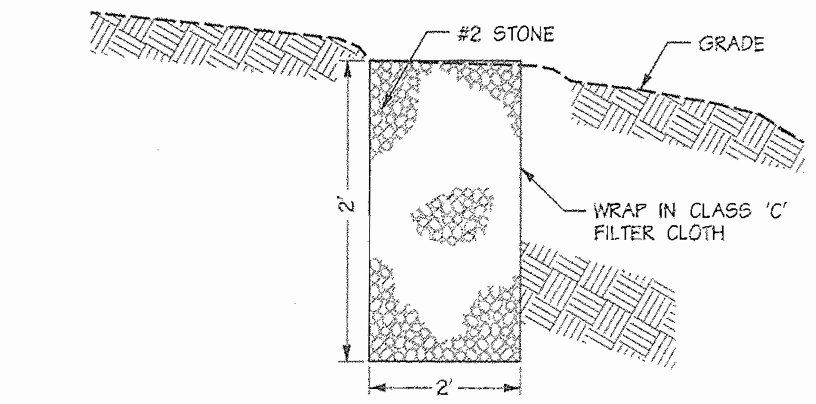

## 8" OUTFLOW PIPE FACILITY "A" DETAIL

NTS




## 8" OUTFLOW PIPE FACILITY "B" DETAIL

NTS




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

## LEVEL SPREADER DETAIL

NTS

### 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 | | OUTLET WEIR | | | TOP ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | BOTTOM | TOP | WEIR | DIA. | ELEV. | L | H | ELEV. | |
| 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 weir openings 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 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 ¾" 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 Del CCR. Following standard procedures the CCR will certify in writing that installation of the filter system has been completed in accordance with the manufacturers 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

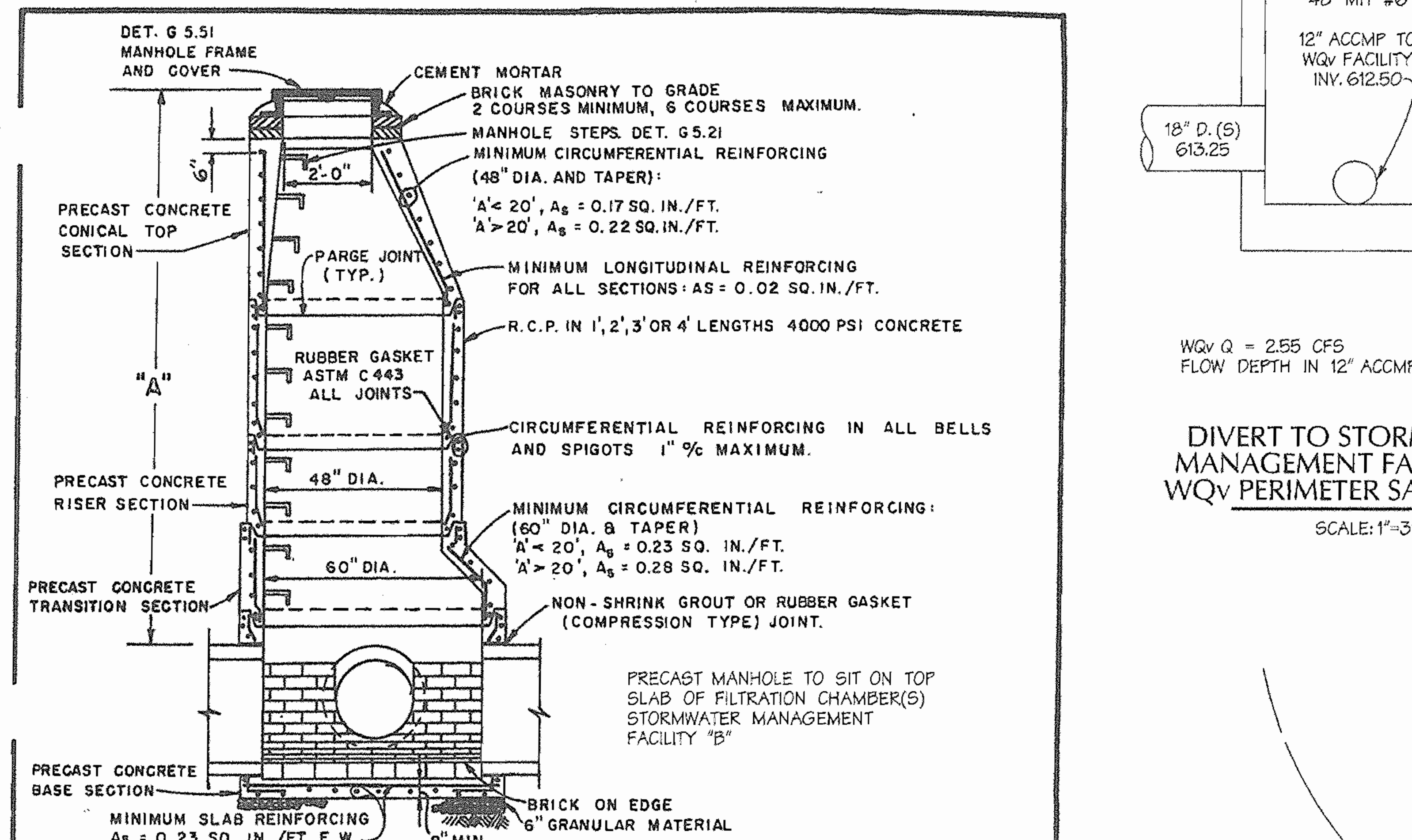
The corresponding surface area being 15.66 sq. ft. and the volume being as specified. Each filter tank will require 8 cu. ft. of ¾" washed support stone and 16 sq. ft. of geotextile membrane. A 6" PVC pipe underdrain shall be installed in the sand chamber as shown. A 6" layer of stone and geotextile fabric shall be installed in support of a 12" layer of filter sand. ( See Material List ) Tank cover(s) must meet HS-20 truck load bearing in traffic areas.

Material List
1. Concrete mix must reach 4500 PSI at 28 days.
2. Reinforcing to be min. two mats of 4" x 4" W4/W4 wire mesh.
3. Support frames for grates and covers shall be rust proof painted steel angle cast in place.
4. Grates shall be 26" x 24" x 1½" cast iron ( East Jordan 6958 type "M-2" or equal).
5. Solid covers shall be 26" x 24" x 1½" cast iron ( East Jordan 6958 type "A" or equal).
6. Under drain piping and inter connecting piping between tanks shall be PVC class SDR 35 min.
7. Piping gaskets shall be compatible with PVC schedule 35 pipe (Star Seal or equal).
8. Filter bed support stone shall be ¾" washed stone (DE No. 57 or equal) - 8 cu. ft. per filter.
9. Geotextile membrane shall be woven drainage fabric (Amoco 1198, Mirafi-700XG or equal) 16 sq. ft. per filter.
10. Filter sand shall be Concrete sand (AASHTO M6, C-33 or equal).

Notes: Items 4 and 5 are pertaining to traffic bearing conditions. An underbeddding 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

1. 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.
2. 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.
3. Debris and litter shall be removed from all perimeter sand filters and the ED facility during regular mowing operations as needed.
4. Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
5. Remove silt when it exceeds four (4) inches deep in the bottom of the facilities.
6. A log book shall be maintained to determine the rate at which the facilities drain.
7. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
8. 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.



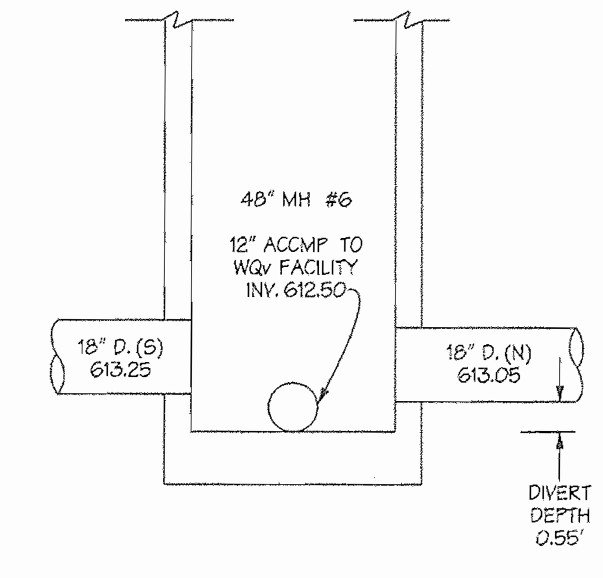

## GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES

1. MANHOLE BASE SHALL BE BEDDED ON 6-INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
2. EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR OR SELECT MATERIAL 1/3 OF WAY TO TOP OF PIPE.
3. CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET (COMPRESSION TYPE) JOINT.
4. MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G5.21. MANHOLE COVER SHALL BE AS SPECIFIED ON DETAIL G5.51
5. PROVIDE 2 COATS COAL TAR EPOXY COATING, ·16 MIL. DRY. SANITARY SEWER ONLY. (EXTERIOR SURFACE ONLY)
6. PROVIDE PIPE JOINT WITHIN 2'-0" MAXIMUM FROM OUTSIDE OF MANHOLE WALL.
7. 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.
8. MANHOLE SHALL BE IN ACCORDANCE WITH ASTM C 478 EXCEPT AS SHOWN.

* EXCEPT STORM DRAIN PIPE

REV. MAR. 1986 REV. JAN. 1985 REV. JAN. 1984 REV. JAN. 1982

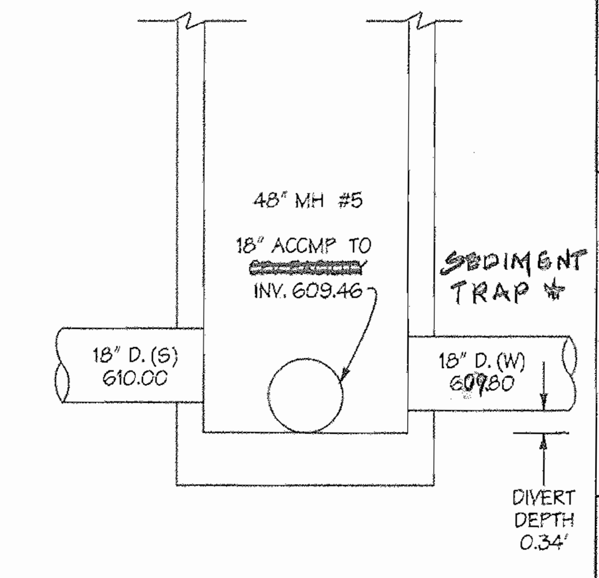
| HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS Approved [signature] 3-10-81 Chief - Bureau of Engineering | STANDARD PRECAST MANHOLES | DRAWN BY: J.M.C. CHECKED BY: F.A.W. SCALE: NONE G5.11 |
|---|---|---|




WQv Q = 2.55 CFS
FLOW DEPTH IN 12" ACCMP @ 5.00% = 0.55'

## DIVERT TO STORMWATER MANAGEMENT FACILITY "B" WQv PERIMETER SAND FILTER

SCALE: 1"=3'

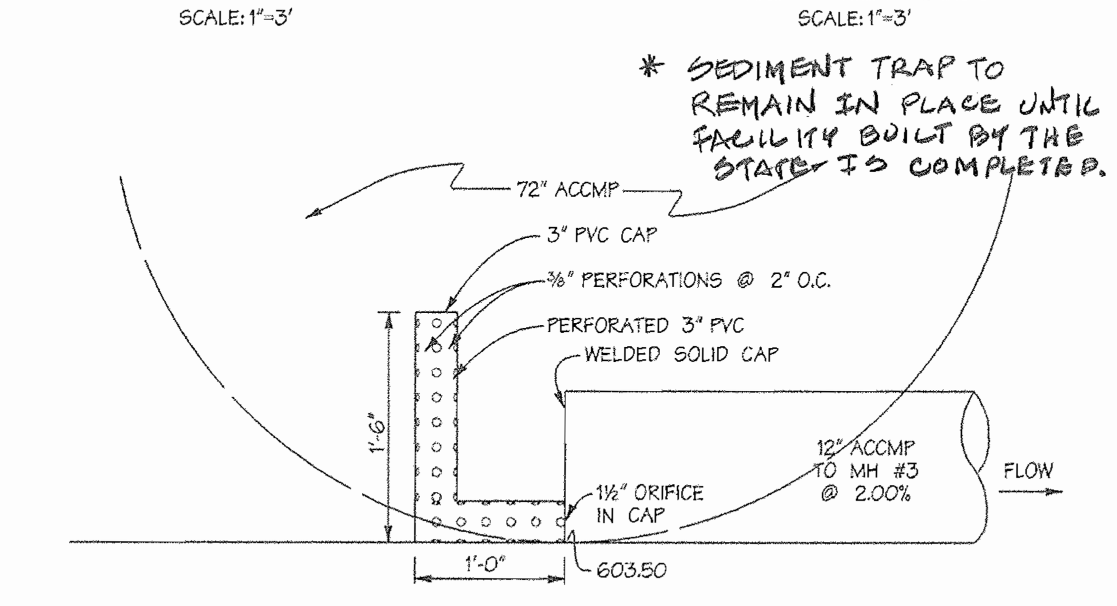



CPv/1 YEAR Q = 2.85 CFS
FLOW DEPTH IN 18" ACCMP @ 20.50% = 0.34'

## DIVERT TO STORMWATER MANAGEMENT FACILITY "B" CPv PERIMETER UNDERGROUND FACILITY

SCALE: 1"=3'

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




## CPv OUTLET STRUCTURE DETAIL

SCALE: 1"=1'

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

~~U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE — DATE~~

~~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~~

~~PLAN NUMBER~~

N/A. [initials]

10/19/05
Date

Professional Engr. No. 13876

**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 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] 10-13-05
SIGNATURE OF DEVELOPER — DATE
PRINT NAME BELOW SIGNATURE
DON PAUL PISTORIO

**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 CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIRMENTS 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.

[signature] 13876 10/19/05
SIGNATURE OF ENGINEER — REG. NO. — DATE
PRINT NAME BELOW SIGNATURE
KENNETH R. KINSEY

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

[signature] 12/21/05
COUNTY HEALTH OFFICER MD — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[signature] 12/23/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE

[signature] 1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] 1/9/06
DIRECTOR — DATE

| Date | No. | Revision Description |
|---|---|---|
| | | CONSTRUCT TEMP 18" PIPE TO TRAP |
| 6/6/07 | 2 | REMOVE 72" S.W.M. PIPES 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
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

| SUBDIVISION NAME: TRIANGLE HOWARD | SECTION/AREA: N/A | | PARCEL #: B |
|---|---|---|---|
| PLAT# 17864 / BLOCK # 18 / ZONE B-2 | TAX/ZONE MAP 22 | ELECT. DISTRICT 3RD | CENSUS TRACT 6030 |
| WATER CODE: N/A | SEWER CODE: N/A | | |

TITLE
# SWM PLAN AND DETAILS

| Des. By | CRW | Scale: As Shown | Proj. No. 02136.00 |
|---|---|---|---|
| Drn. By | WDE | Date 10/28/05 | 10 of 19 |
| Chk. By | KRK | Approved | |

SPP-04-130

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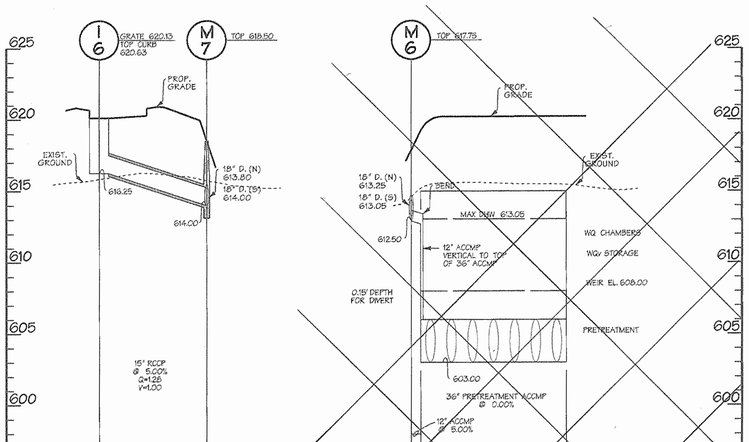
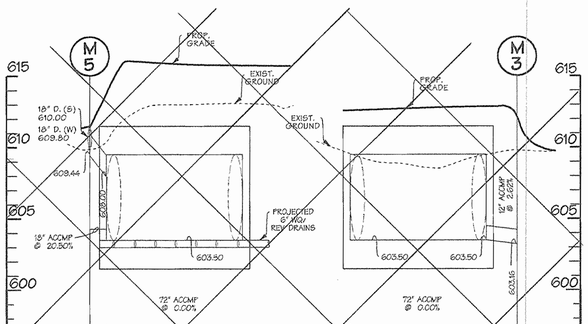
2005 1:47:20 PM kdorley c:\hpm\02136.hpm n:\02136\sheet files\02136.ml 02136.ml




## 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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MAJ — DATE 12/29/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|
| 1/5/07 | 1 | REMOVE 72" C.M.P. 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
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**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

STATE OF MARYLAND — KEVIN R. KEMPER — No. 13876 — PROFESSIONAL ENGINEER

Professional Engr. No. 13876

| | | | |
|---|---|---|---|
| SUBDIVISION NAME: TRIANGLE HOWARD | | SECTION/AREA: N/A | LOT/PARCEL #: B |
| PLAT ~~BOOK~~ 17864 | BLOCK # 19 | ZONE R-12 | TAX/ZONE MAP 22 |
| ELECT. DISTRICT 3rd | CENSUS TRACT 6030 | WATER CODE N/A | SEWER 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 KRK | Approved | | |

SDP-04-130

2005 1:42:55 PM kdenteg c:\hpm\02136.hpm n:\02136\share files\02136.SD.pro2 02136.SD.pro2

Wed Dec 12 13:40:26 2006 n:\02136\dwgs files\02136.SD.pro2

## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO ROAD | | | | | | | | | | ADJACENT TO PERIMETER PROPERTIES | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LANDSCAPE TYPE 'A' | | | | | | | | | | | P 10 | | P 12 |
| 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 | 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 | N/A | N/A |
| NUMBER OF PLANTS REQUIRED<br>SHADE TREES<br>EVERGREEN TREES<br>SHRUBS | 3<br>--<br>33 | 4<br>4<br>-- | 7<br>--<br>69 | 3<br>4<br>-- | 3<br>4<br>-- | 7<br>--<br>69 | 4<br>9<br>-- | 3<br>--<br>30 | --<br>1<br>-- | --<br>--<br>-- | 1<br>--<br>-- | 0<br>1<br>-- | 2<br>--<br>-- |
| NUMBER OF PLANTS PROVIDED*<br>SHADE TREES<br>EVERGREEN TREES<br>OTHER TREES (2 :1 SUBSTITUTION)<br>SHRUBS (10 :1 SUBSTITUTION)<br>(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | 3<br>--<br>--<br>33 | 3<br>--<br>6<br>-- | 7<br>--<br>--<br>69 | 2<br>3<br>3<br>-- | 3<br>4<br>--<br>-- | 7<br>--<br>--<br>69 | 4<br>--<br>9<br>-- | 3<br>--<br>--<br>30 | --<br>1<br>--<br>-- | --<br>--<br>--<br>-- | --<br>2<br>--<br>-- | --<br>--<br>--<br>10 | --<br>1<br>3<br>-- |

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
1/20 SPACES
INTERNAL ISLANDS PROVIDED..........5
200 SQ. FT./ISLAND
SHADE TREES REQUIRED....................5
1/20 SPACES
SHADE TREES PROVIDED....................5

| DATE | NO. | REVISION DESCRIPTION |
|---|---|---|
| 4-22-08 | 3 | ENT. RADIUS 40' W/ 3' RADIUS ISLAND |
| | | |
| | | |

## PLANT LIST

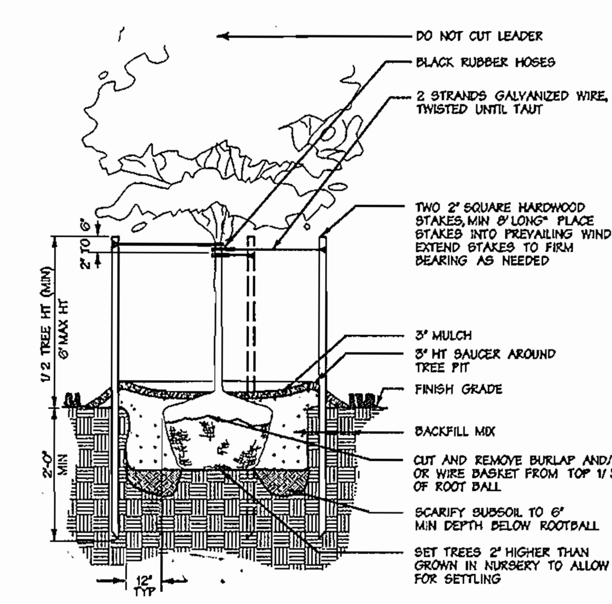
| QTY | SYM | BOTANICAL NAME/ COMMON NAME | SIZE | REMARKS |
|---|---|---|---|---|
| **SHADE TREES** | | | | |
| 10 | AR | ACER RUBRUM 'OCTOBER GLORY'<br>October Glory Red Maple | 2 1/2" - 3" CAL.<br>12' - 14' HT. | B & B<br>FULL HEAD |
| 27 | AS | ACER SACCHARUM 'GREEN MOUNTAIN'<br>Sugar Maple | 2 1/2"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

General Planting Notes

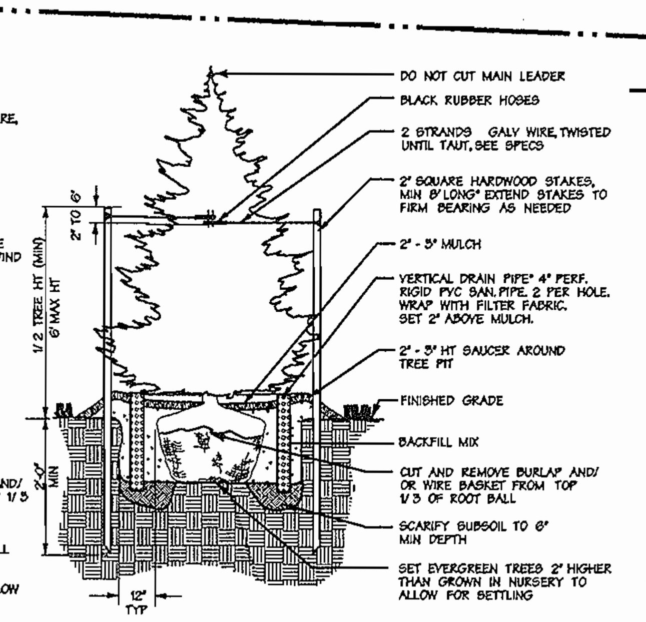
1. All plant material to meet A.A.N. Standards.
2. Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
3. No substitutions to be made without consent of Landscape Architect or Owner.
4. All beds to be topped with three inches of hardwood mulch.
5. Landscape Contractor to verify location of utilities with Owner before planting.
6. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
7. 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.
8. Contractor shall notify Miss Utility 72 hours prior to construction.
9. 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.
10. 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 $26,880.00 (58 shade trees, 23 evergreen trees, and 201 shrubs).
11. 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.
12. 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.

Don Paul Pistorio 10-13-05
NAME: DON PAUL PISTORIO DATE

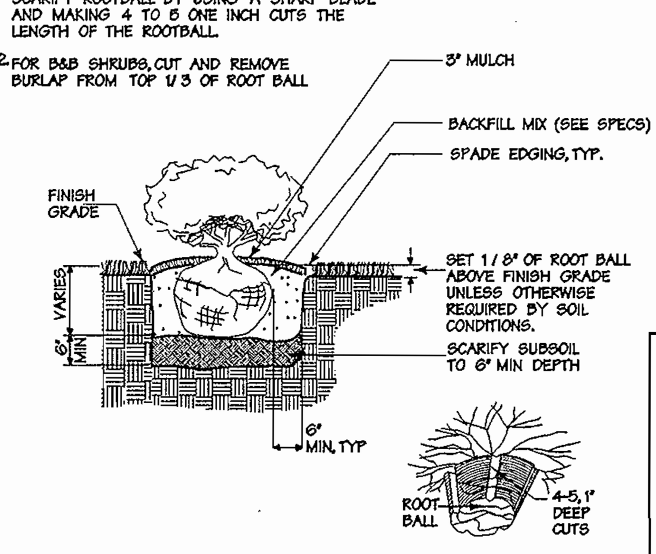



SHADE TREE PLANTING 2½- 3" CALIPER
NOT TO SCALE



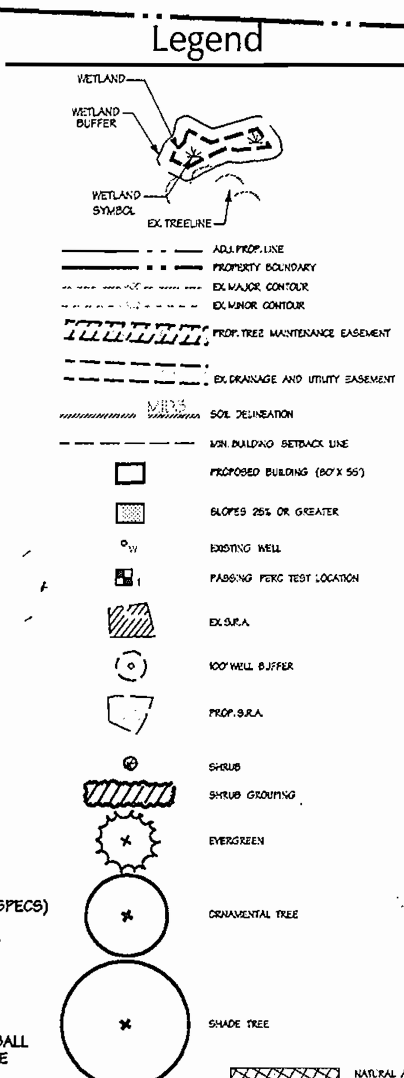

EVERGREEN TREE PLANTING
NOT TO SCALE

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL

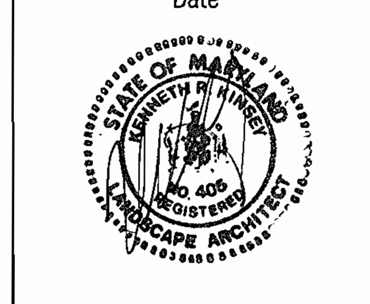



Shrub Bed Planting
Not To Scale

Legend




10/19/05
Date




Professional L.A. No. 405

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

for COUNTY HEALTH OFFICER — 12/21/05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 12/28/05 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 1/4/06 DATE

DIRECTOR — 1/5/06 DATE

| Date | No. | Revision Description |
|---|---|---|
| 6/06/07 | 2 | REMOVE 72" S.W.M. PIPES FROM DESIGN |
| 6/21/06 | 1 | 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.
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(410) 296-3333
Fax 296-4705

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

| SUBDIVISION NAME | SECTION/AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 18 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N/A | N/A |

TITLE
# LANDSCAPE PLAN

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

SDP-04-130

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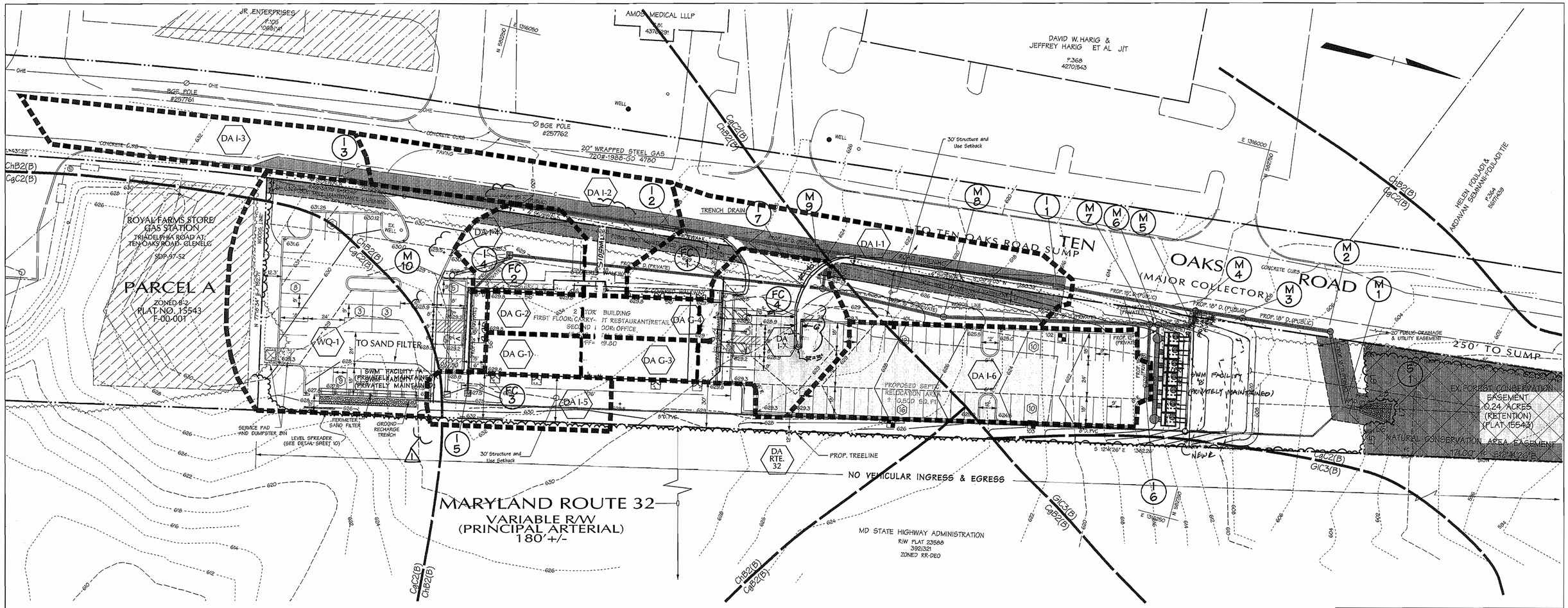


| | | | |
|---|---|---|---|
| A= 0.16 AC, C= 0.95 | DA I-3 | Z= B-2, IMP.= 100% | |
| A= 0.18 AC, C= 0.76 | DA I-2 | Z= B-2, IMP.= 77% | |
| A= 0..31 AC, C= 0.81 | DA I-1 | Z= B-2, IMP.= 80% | |
| A= 0.08 AC, C= 0.35 | DA I-5 | Z= B-2, IMP.= 13% | |
| A= 0.19 AC, C= 0.81 | DA I-7 | Z= B-2, IMP.= 80% | |
| 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

- DRAINAGE DIVIDE
- WETLAND
- BUFFER
- WETLAND SYMBOL
- EX. TREELINE
- ADJ. PROP. LINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- EX. DRAINAGE AND UTILITY EASEMENT
- MID3 SOIL DELINEATION
- MIN. BUILDING SETBACK LINE
- PROPOSED BUILDING (80' X 55')
- SLOPES 25% OR GREATER
- EXISTING WELL
- PASSING PERC TEST LOCATION
- EX. S.R.A.
- 100' WELL BUFFER
- NATURAL AREA CONSERVATION EASEMENT
- 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.

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

for COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/28/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| DATE | No. | REVISION DESCRIPTION |
|---|---|---|
| 4-23-08 | 3 | EXT. RADIUS 40' W/ 3' RADIUS ISLAND |
| 6/6/07 | 2 | REMOVE 72" S.W.M. PIPES FROM DESIGN |
| 6/21/06 | 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 LYNNGATE RD.
COLUMBIA, MARYLAND 21044
410-730-5815

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

10/19/05
Date

Professional Engr. No. 13876

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

| SUBDIVISION NAME | SECTION / AREA | PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N.A. | B |

| PLAT # | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 15 | B-2 | 22 | 3RD | 6030.00 |

| WATER CODE | SEWER CODE |
|---|---|
| N.A. | N.A. |

TITLE
# DRAINAGE AREA MAP

| | | | |
|---|---|---|---|
| Des. By | | Scale 1" = 30' | Proj. No. 02136.00 |
| Drn. By | KDE | Date 10/28/05 | 7 of 19 |
| Chk. By | KRK | Approved | |

SDP-04-130

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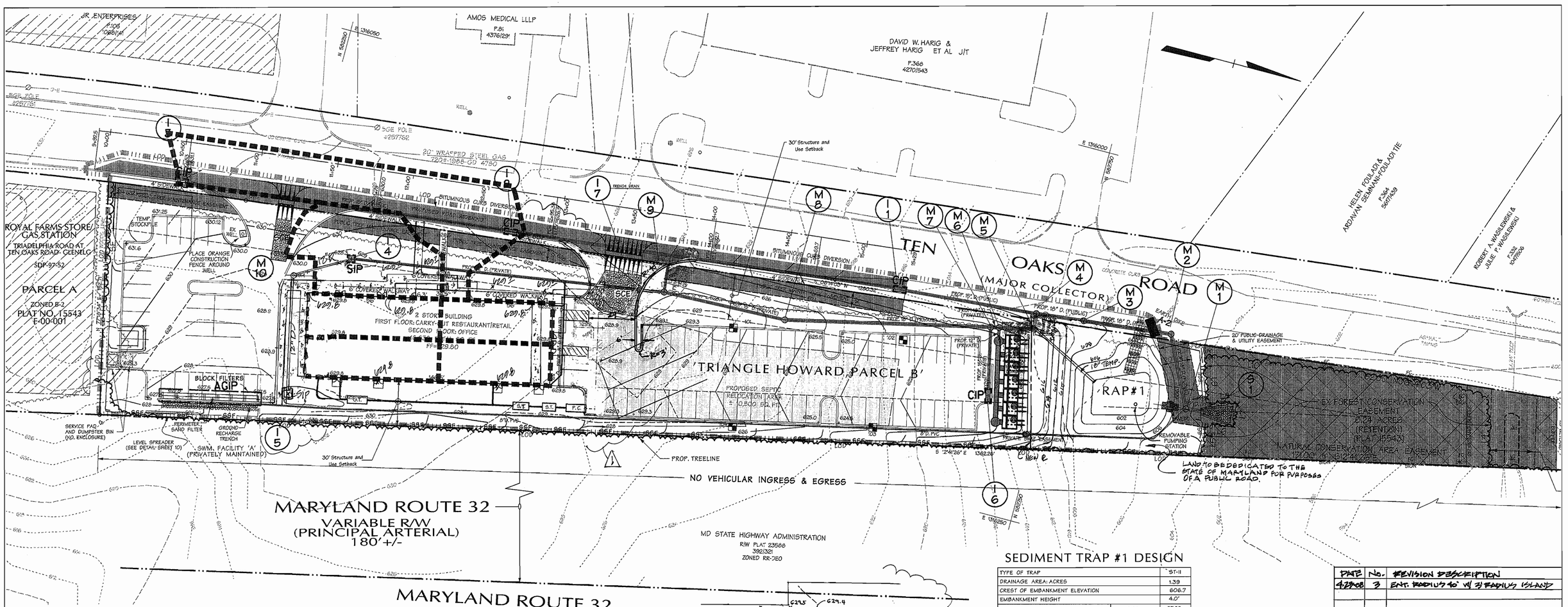
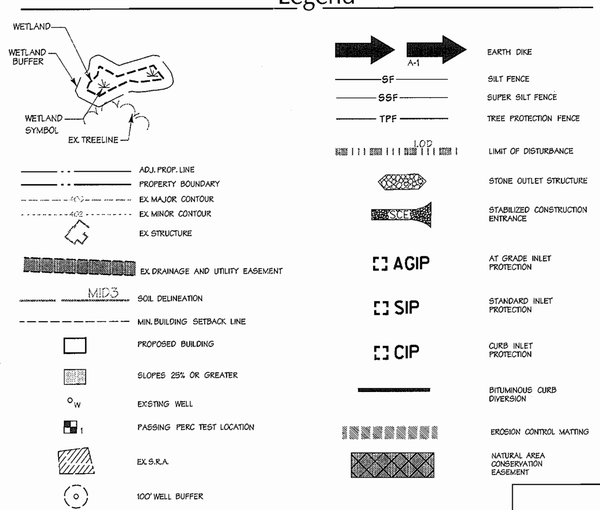
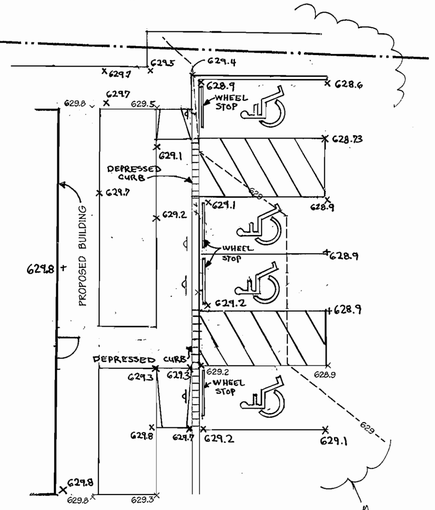



## Legend



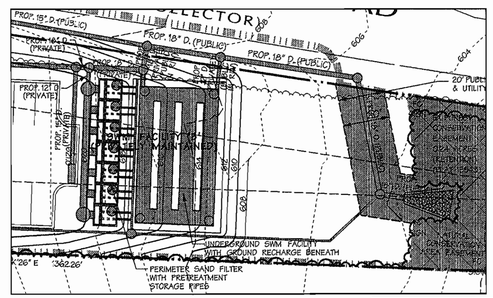




## HANDICAPPED RAMP/ENTRANCE DETAIL

SCALE: 1" = 10'

## 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 @ ½ DEPTH OF WET STORAGE | | 603.45 |
| DEPTH BELOW CREST | | 2.25 |
| BOTTOM ELEVATION | | 602.0' |
| WEIR LENGTH | | 6.0' |




## ULTIMATE GRADING

| DATE | No. | REVISION DESCRIPTION |
|---|---|---|
| 4-29-08 | 3 | ENT. RADIUS TO 30' W/ 3 RADIUS ISLAND |

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

COUNTY HEALTH OFFICER — DATE 12/21/05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12/21/05

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/4/06

DIRECTOR — DATE 1/5/06

| Date | No. | Revision Description |
|---|---|---|
| 6-6-07 | 2 | REMOVE 72" S.W.M. PIPES FROM DESIGN |
| 6-14-10 | 1 | REVISE BUILDING, PARKING, STORM DRAINS, RETAILS |

# 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

**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 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 OF DEVELOPER — DATE 10-13-05
PRINT NAME BELOW SIGNATURE
JON 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 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.

SIGNATURE OF ENGINEER — DATE 10/19/05
PRINT NAME BELOW SIGNATURE — #13876
KENNETH R. KINSEY

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

U.S. NATURAL RESOURCE CONSERVATION SERVICE — DATE 10/21/05

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

HOWARD S.C.D. — DATE 10/21/05

10/19/05
Date

STATE OF MARYLAND — 13876 — PROFESSIONAL ENGINEER

Professional Engr. No. 13876


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


| SUBDIVISION NAME | SECTION/AREA | LOT/PARCEL # |
|---|---|---|
| TRIANGLE HOWARD | N/A | B |

| PLAT # OR LOT | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DISTRICT | CENSUS TRACT |
|---|---|---|---|---|---|
| 17864 | 16 | B-2 | 22 | 3RD | 6030.00 |

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 | KRK | Approved | | | |

SDP-04-130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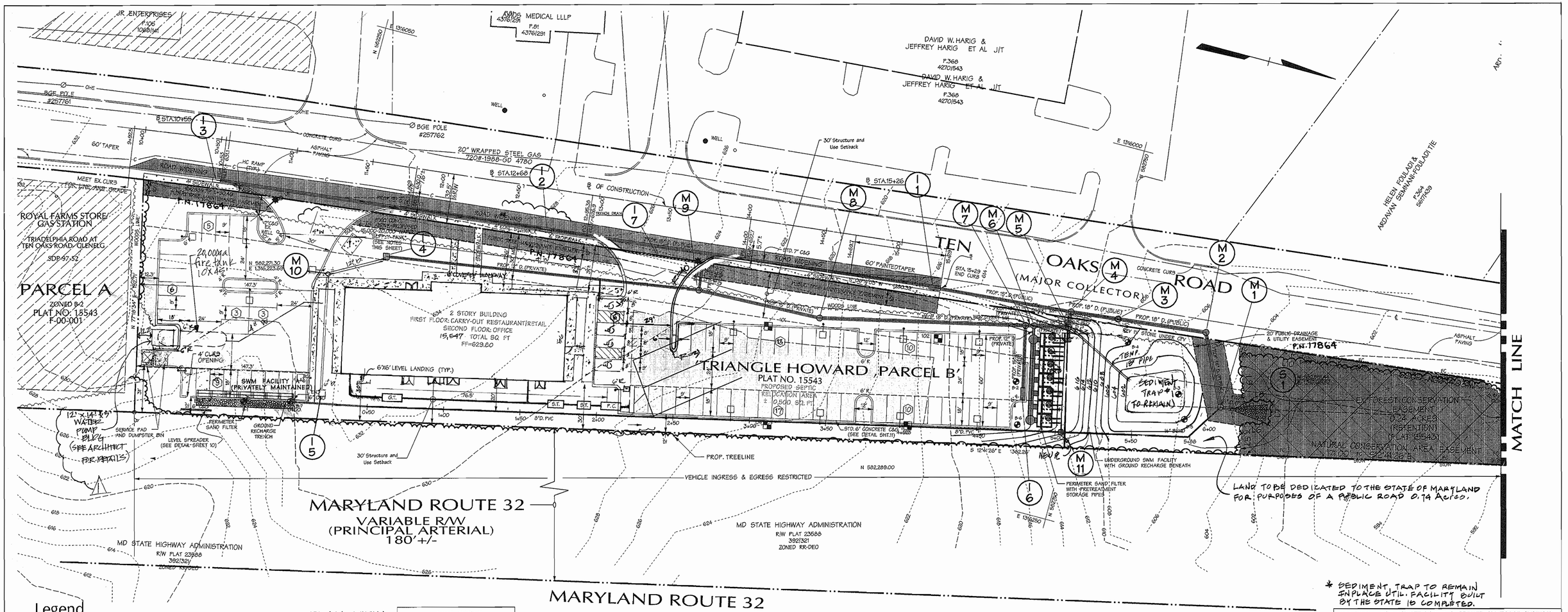



LAND TO BE DEDICATED TO THE STATE OF MARYLAND FOR PURPOSES OF A PUBLIC ROAD 0.74 ACRES.

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

## Legend

WETLAND
BUFFER
WETLAND SYMBOL
EX. TREELINE

- ADJ. PROP. LINE
- PROPERTY BOUNDARY
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. STRUCTURE
- PROPOSED EASEMENT
- MID3 SOIL DELINEATION
- MIN. BUILDING SETBACK LINE
- PROPOSED BUILDING (80'X 55')
- SLOPES 25% OR GREATER
- EXISTING WELL
- PASSING PERC TEST LOCATION
- EX. S.R.A.
- 100' WELL BUFFER
- PROP. TREE LINE
- EX TREE LINE
- NATURAL AREA CONSERVATION EASEMENT
- AREA LIGHT BY OTHERS (SEE SHEET 15 FOR DETAIL)
- 250 WALL HIGH PRESSURE SODIUM (HPS) VAPOR, PENDANT 30' ELEVATION BRONZE FIBERGLASS POLE

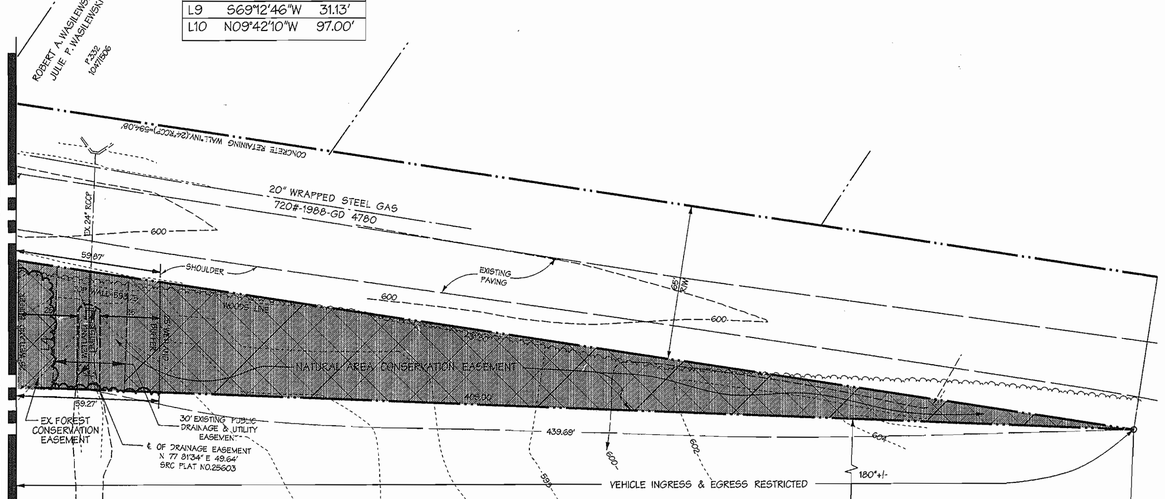
PROP. S.R.A.

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.

## 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' |




## PLAN VIEW

1"=30'

| DATE | NO. | REVISION DESCRIPTION |
|---|---|---|
| 4-29-08 | 3 | EXT. RADIUS 40' W/ 5' RADIUS ISLAND |

| Date | No. | Revision Description |
|---|---|---|
| 6/16/07 | 4 | 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.

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

Robert J. Weber — 12/21/05
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

12/20/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

1/4/06
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

1/9/06
DIRECTOR — DATE

# Ten Oaks Commercial Center

'Triangle Howard, Parcel B'

OWNER:
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10/19/05
Date

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| SUBDIVISION NAME | | | SECTION / AREA | | LOT/PARCEL # |
|---|---|---|---|---|---|
| TRIANGLE HOWARD | | | N/A | | B |
| PLAT # 15543 | BLOCK # 16 | ZONE B-2 | TAX/ZONE MAP 22 | ELECT. DISTRICT 3RD | CENSUS TRACT 6030.00 |
| WATER CODE N/A | | | SEWER CODE N/A | | |

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 | RRK | Approved | | | |

SDP-04-130

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