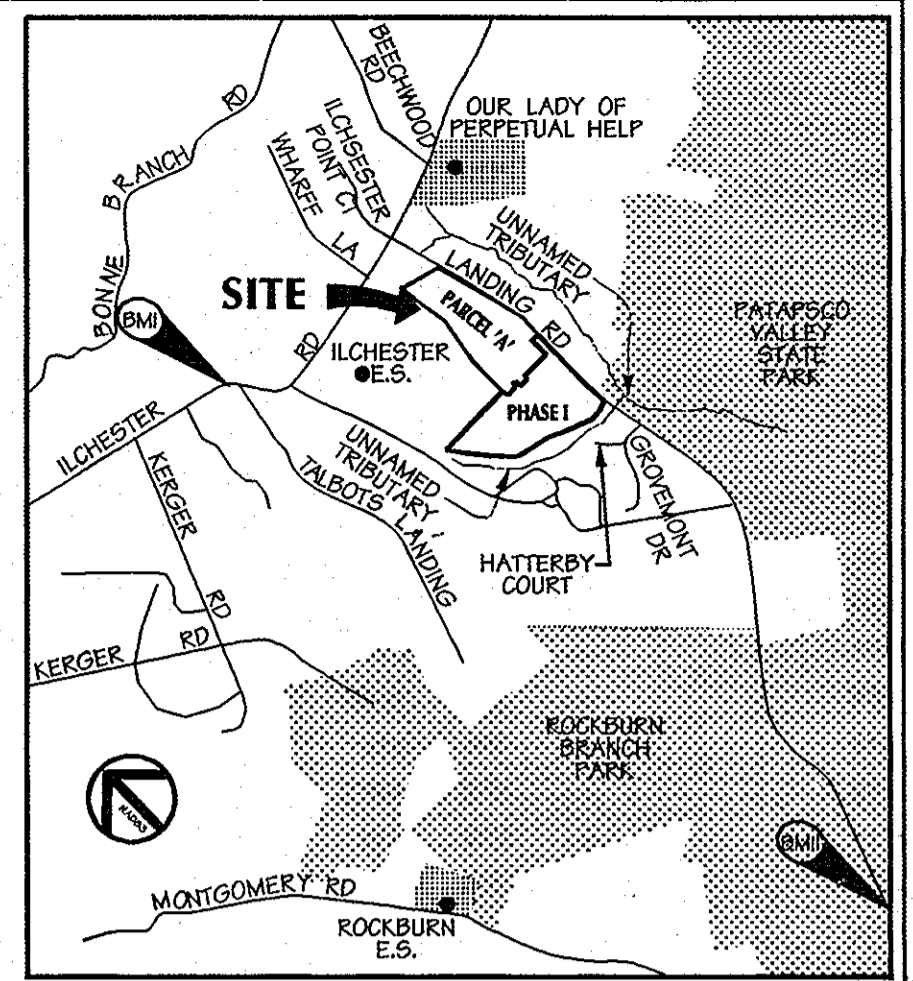


SHEET	DESCRIPTION
1	COVER SHEET
2	ROAD CONSTRUCTION PLAN - LANDING ROAD
3	ROAD CONSTRUCTION PLAN - ELLIS LANE
4	ROAD CONSTRUCTION PLAN - ELLIS LANE
5	ROAD CONSTRUCTION PLAN - OWENS COURT
6	ROAD CONSTRUCTION PLAN - TAYLOR LANE & LODILANE
7	ROAD CONSTRUCTION DETAILS
8	LANDING ROAD STRIPING AND MARKING PLAN
9	STORM DRAIN PROFILES
10	STORM DRAIN PROFILES
11	DRAINAGE AREA MAP - DEVELOPED CONDITIONS
12	DRAINAGE AREA MAP - DEVELOPED CONDITIONS
13	DRAINAGE AREA MAP - DEVELOPED CONDITIONS
14	DRAINAGE AREA MAP - ULTIMATE CONDITIONS
15	DRAINAGE AREA MAP - ULTIMATE CONDITIONS
16	EROSION & SEDIMENT CONTROL PLAN - EX CONDITIONS
17	EROSION & SEDIMENT CONTROL PLAN - EX CONDITIONS
18	GRADING, EROSION & SEDIMENT CONTROL PLAN
19	GRADING, EROSION & SEDIMENT CONTROL PLAN
20	EROSION & SEDIMENT CONTROL DETAILS
21	EROSION & SEDIMENT CONTROL SPECIFICATIONS AND NOTES
22	SWM PLAN
23	SWM PLAN
24	SWM PLAN
25	SWM PLAN
26	SWM PLAN
27	LANDSCAPE PLAN
28	LANDSCAPE PLAN
29	LANDSCAPE PLAN
30	FOREST CONSERVATION PLAN
31	FOREST CONSERVATION PLAN
32	FOREST CONSERVATION PLAN
33	PIER PLAN
34	PIER PLAN

Final Plan Owens Property Phase I

LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
Howard County Maryland



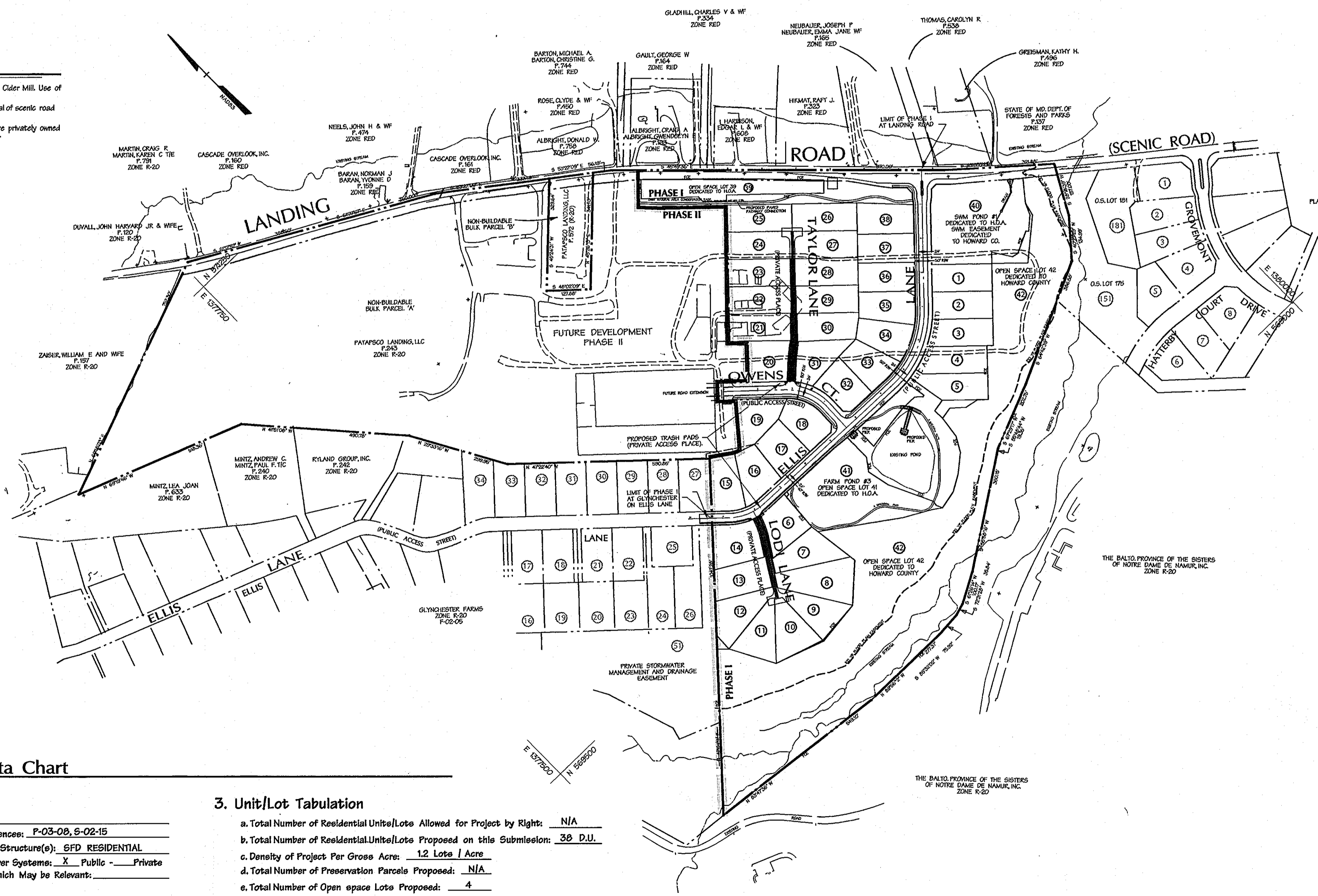
LOCATION MAP
SCALE: 1" = 200'

BENCHMARK
DESCRIPTION

BM1
#31EA-DISC SET IN CONCRETE
N 563641.123
E 674915.935
ELEVATION = 468.90
2 FT. SOUTH OF SIDEWALK ON ILCHESTER ROAD
472.1 FT. FROM GATE IN FENCE ON TRANSMISSION LINE ROW.
BM2
#31CA-DISC SET IN CONCRETE
N 564321.656
E 1302742.080
ELEVATION = 296.965
20.6' SOUTH OF CENTERLINE OF LANDING ROAD
25' MILES NORTHWEST ON LANDING ROAD FROM
INTERSECTION OF LANDING ROAD AND MONTGOMERY RD.

General Notes

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection division at 410-313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs be in place prior to the placement of any asphalt.
- Street light placement and the type of fixture and pole shall be in accordance with the Howard County Design Manual, Volume II (1993) and as modified by "Guidelines for Street Lights in Residential Developments (June 1993)". A minimum 20 feet spacing shall be between the lights and any trees.
- The existing topography is taken from low level flight and aerial survey with 2 contour intervals prepared by SDI dated April 8, 2002.
- The 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. 31EA and 37DCA were used for this project.
- The traffic study for this project was prepared by The Traffic Group and was approved on March 28, 2002. APFD Traffic Analysis is not required for this project. This project is located farther than 10 miles from the intersection of two major collector roadways.
- Sidewalk ramps shall meet current ADA requirements.
- Project background information:
Subdivision Name: Owens Property - Phase I
Total Tract Area: 59.36± Acres
Tax Map: 31
Phase I - Lot/Parcel: 243
Phase I - Area: 31.02± Acres
Phase I - Buildable Lot Area: 39 (13.11± Acres)
Phase I - Open Space Lot Area: 4 (15.73± Acres)
Zoning: R-20
Election District: 1
Preliminary Plan Approval Date: 6-17-03
File Numbers: P-03-08, S-02-15
- All sidewalks at intersections to have handicap ramps, see detail on sheet 6.
- Street trees shall be planted at least 5' from any inlet structure.
- This project complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation. Development of Phase I of the Owens Property involves the clearing of approximately 8.52 acres of forest, and the retention of approximately 5.08 acres on the site. The net forest area generating a reforestation obligation of 2.90 acres. Approximately 2.88 acres of reforestation is currently provided, and the additional 0.02 acres will be used to offset reforestation obligations associated with the future phase of the development.
- Stormwater Management for this project will be addressed with the installation of one Stormwater Management Facility (wet pond) which will control the runoff per the latest approved Design Standards. Credits are being utilized to meet the stormwater management requirement. Credits used include Natural Area Conservation, Rooftop Disconnections, Open Grass Channels and Sheet Flow to Buffer.
- The Stormwater management pond will be owned by the Owens Property H.O.A. - these will be a public easement (Howard County) on the facility.
- Routine maintenance shall be performed by the Home Owner's Association, and non-routine maintenance shall be performed by Howard County. The routine and non-routine schedule is shown on sheet 25.
- As a result of the Preliminary Plan being submitted to the county prior to Nov. 15, 2001 (on June 5, 2001), this subdivision is subject to compliance with the Fourth Edition of the Subdivision and Land Development Regulations. In addition, because the Preliminary Plan did not obtain signature approval prior to Nov. 1, 2001, it is subject to compliance with Bill 50-2001 which amends the Zoning Regulations, and the amended Zoning Regulations which became effective on 10/1/02.
- All utility lines to Howard County services provided on the flag or pipestem lots.
- A 10' x 4' trash pad will be placed at the edge of the County roadway to provide a place for the residents on the Private Access Road to place refuse and recyclable items.
- Water and sewer extensions for this project will be public, and the site lies within the metropolitan district. The drainage area is the Patapsco Watershed.
- Existing utilities shown are taken from record drawings obtained from Howard County Water & Sewer Contract Nos. 14-3639-D and 14-3976-D.
- Boundary shown hereon is based on field survey by DMW dated September, 2002.
- Wetland report was prepared by DMW dated February, 2002.
- A noise study is not required for this project.
- There are no known cemeteries or grave sites on this property.
- See Howard County Site Inventory HO-420 Cider Mill.
- All existing driveways and existing buildings located within limits of Phase I are to be removed.
- The Phase II submission milestone window for preliminary plan submission for 55 units begins 7-11-03 and ends 11-04.
- Financial surety for the required landscaping in the amount of \$25,700.00 must be posted as part of the developer's agreement. (70 shade 30 nonshade).
- Financial surety for the Forest Conservation requirements in the amount of \$106,938.36 must be posted as part of the developer's agreement.
- The Maryland Department of the Environment Tracking Number is 200460572.
- Water and Sewer Contract Number 14-4099-D.
- See Howard County Site Inventory HO-420 Cider Mill. Use of property as a cider mill ceased in 2003.
- See S-02-15 approved 06/19/02 for approval of scenic road.
- Proposed Rain Gardens on lots 4 and 5 are privately owned and will be maintained by the individual lot owner.



Phase I Development

SCALE 1" = 200'

Site Analysis Data Chart

1. General Site Data

- a. Present Zoning: R-20
- b. Applicable DPZ File References: P-03-08, S-02-15
- c. Proposed Use of Site or Structure(s): SFD RESIDENTIAL
- Proposed Water and Sewer Systems: Public Private
- Any Other Information Which May be Relevant:

2. Area Tabulation

- a. Total Tract Area: 59.36 ± Acres.
- Total Area of Phase I: 31.02 ± Acres.
- Net Area of Phase I: 27.09 ± Acres.
- b. Buildable Area Parcel 'A': 26.8 ± Acres.
- c. Buildable Area Parcel 'B': 0.94 ± Acres.
- d. Area of Proposed Building Lots: 13.11 ± Acres.
- e. Area of Proposed Open Space Lots: 15.73 ± Acres.
- f. Area of Proposed Preservation Parcels: N/A
- g. Approximate Area of 100 Year Floodplain: 4.4 ± Acres.
- h. Area of Proposed Public Roads: 2.78 ± Acres.
- i. Area of Proposed Private Roads: 0.50 ± Acres (Included in lots).
- j. Approximate Area of Steep Slopes (25% or Greater): 0.14 ± Acres.

3. Unit/Lot Tabulation

- a. Total Number of Residential Units/Lots Allowed for Project by Right: N/A
- b. Total Number of Residential Units/Lots Proposed on this Submission: 38 D.U.
- c. Density of Project Per Gross Acre: 1.2 Lots / Acre
- d. Total Number of Preservation Parcels Proposed: N/A
- e. Total Number of Open Space Lots Proposed: 4
- f. Total Number of Buildable Bulk Parcels Proposed: 2
- g. Total Number of Lot/Lot Parcels Proposed: 44

4. Open Space Data

- a. Minimum Residential Lot Size Selected: 14,000 Square Feet
- b. Open Space Required: 9.6 Acres (30% of gross area)
- c. Total Open Space Provided on This Submission: 15.73 Acres (50%)
- d. Area of Recreation Open Space Required: 7,600 S.F. (200 S.F./LOT)
- e. Area of Rec. Open Space Provided on This Submission: 7,600 ± S.F.

DATA SOURCES:
WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, EX. STRUCTURES, ETC., DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002.
BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT INCORP. - WALKER, INC.
SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968.
PORTIONS OF 100 YR FLOODPLAIN TAKEN FROM RECORDED PLAN 15586 OF GYNCHESTER FARMS FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL DATED 9-8-98 (DMW) AND 100 YR FLOOD PLAN STUDY FOR GROVEMONT SUBDIVISION DATED 4, 1997 (TSA GROUP, INC.) AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Mahoney 2-28-05
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Chris Spivak 3/15/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3/15/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL PLAN
**OWENS PROPERTY
PHASE I**
LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
TAX MAP 31 PARCEL 243, 672

OWNER / DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keely and Co. Inc.
P.O. Box 528
61 E. Padonia Road
Timonium, MD 21093

NO AS-BUILT INFO. ON THIS SHEET.

12-16-04
Date

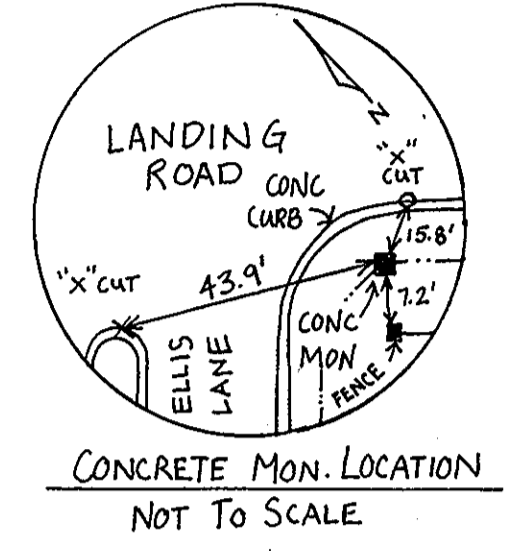
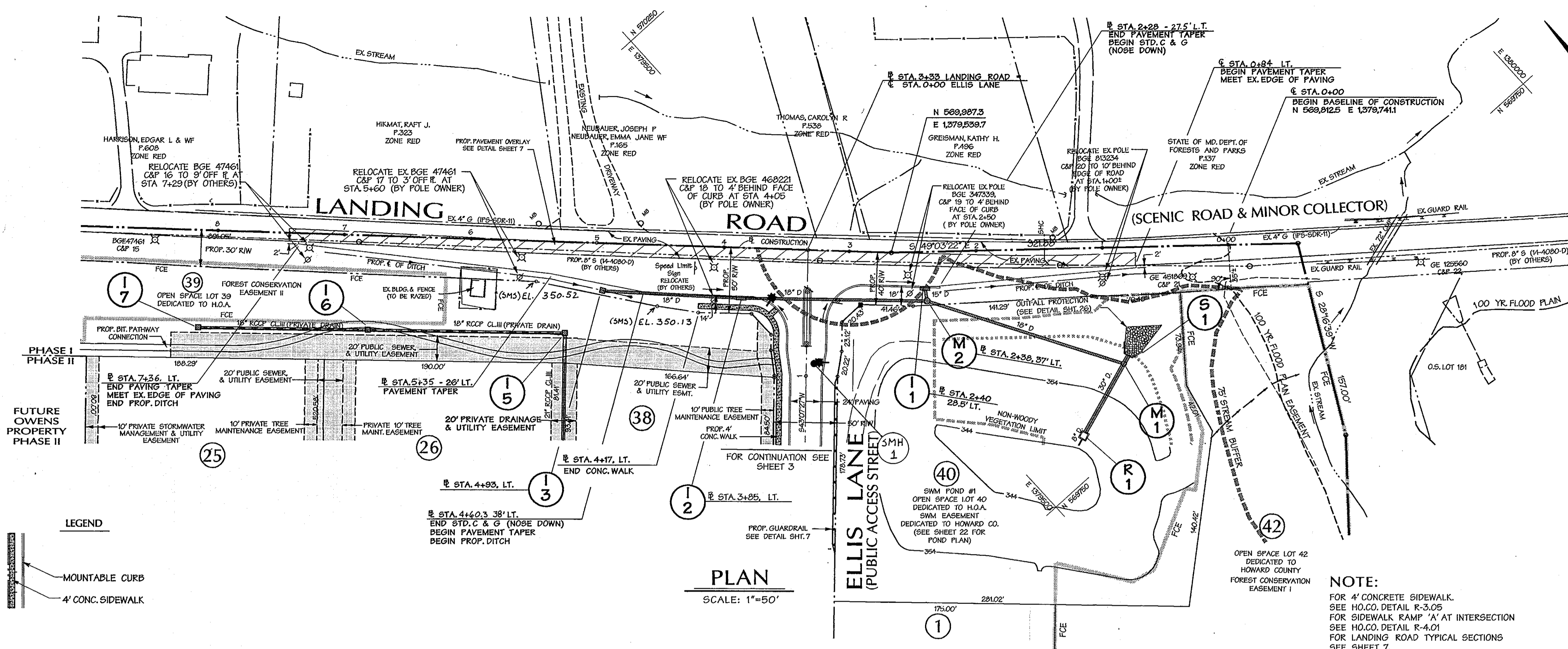
Professional Engr. No. 10551

DMW
Daft McCune-Walker, Inc.
200 East Pennsylvania Avenue
Thousand, Maryland 21286
(410) 296-3833
Fax 296-4706

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

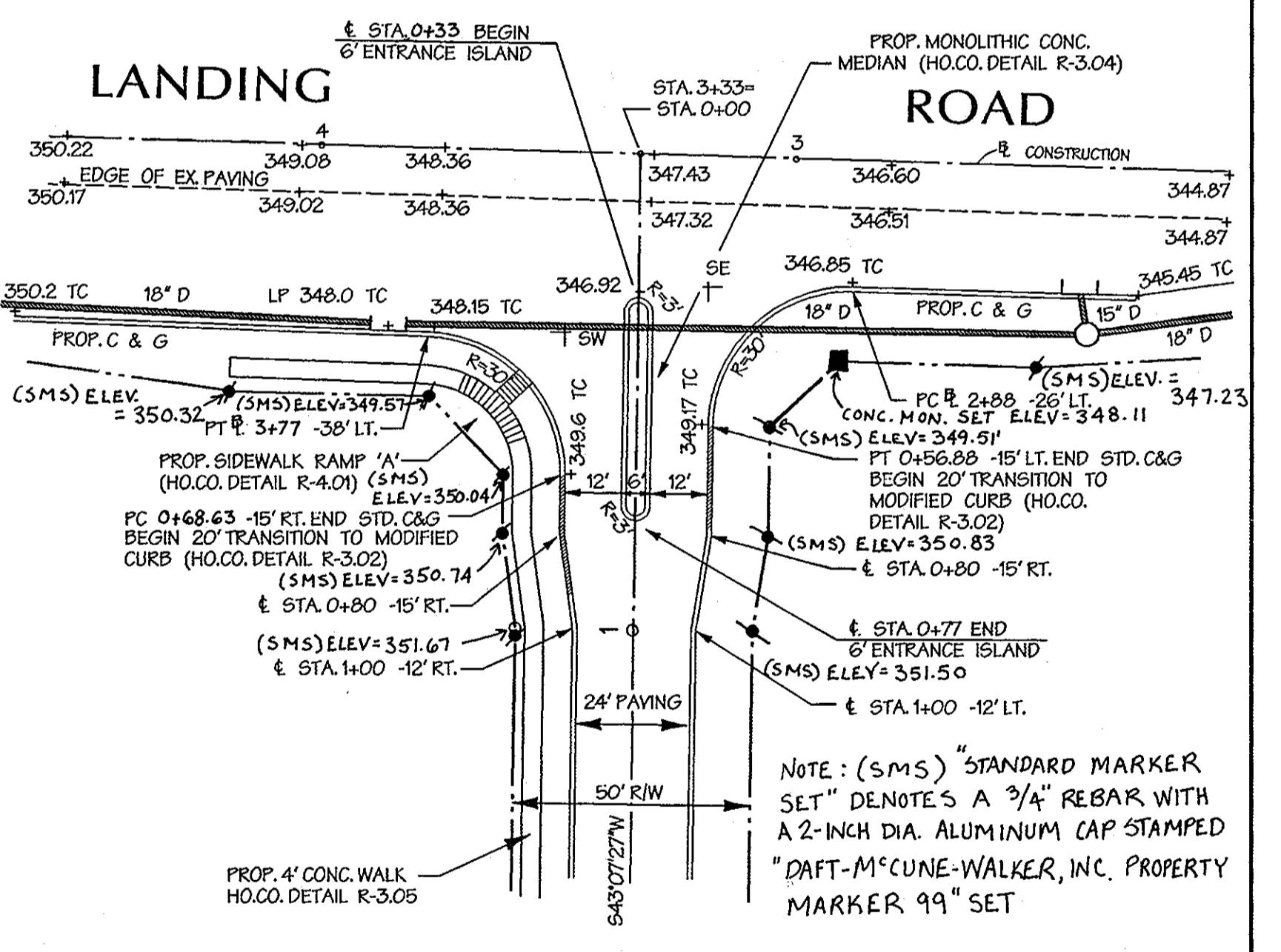
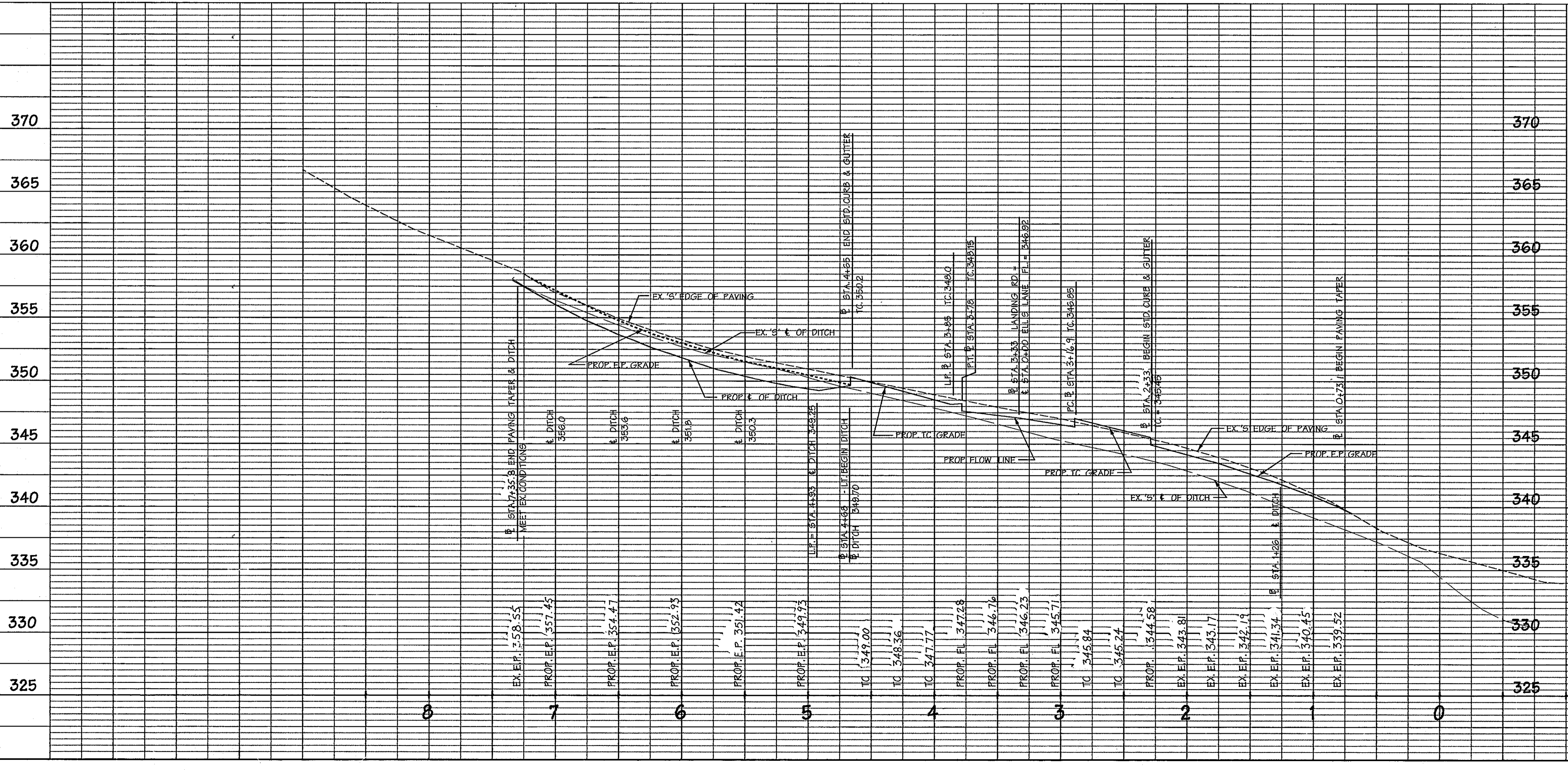
TITLE
Cover Sheet

Des By	Scale 1" = 200'	Proj. No. 01086.A1
Dm By	Date 9-3-04	
Chk By	Approved	1 OF 34



AS-BUILT
2-3-05
Date
Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS <i>William J. Madson</i> CHIEF, BUREAU OF HIGHWAYS 2-28-05 DATE	
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING <i>Cindy Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT 2/15/05 DATE	
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING <i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/15/05 DATE	
Date	Revision Description
	FINAL PLAN
OWENS PROPERTY PHASE I	
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B' TAX MAP 31 PARCEL 243,572	
OWNER/DEVELOPER: PATAPSCO LANDING, LLC c/o James Keilty and Co. Inc. P.O. Box 528 61 E. Padonia Road Timonium, MD 21093	
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, Engineers, Surveyors & Environmental Professionals	
TITLE ROAD CONSTRUCTION PLAN LANDING ROAD	
Des. By MAT	Scale AS SHOWN
Drn. By ADL/KDE	Date 9-3-04
Chk. By	Approved
Proj. No. 01086.A1	2 of 34



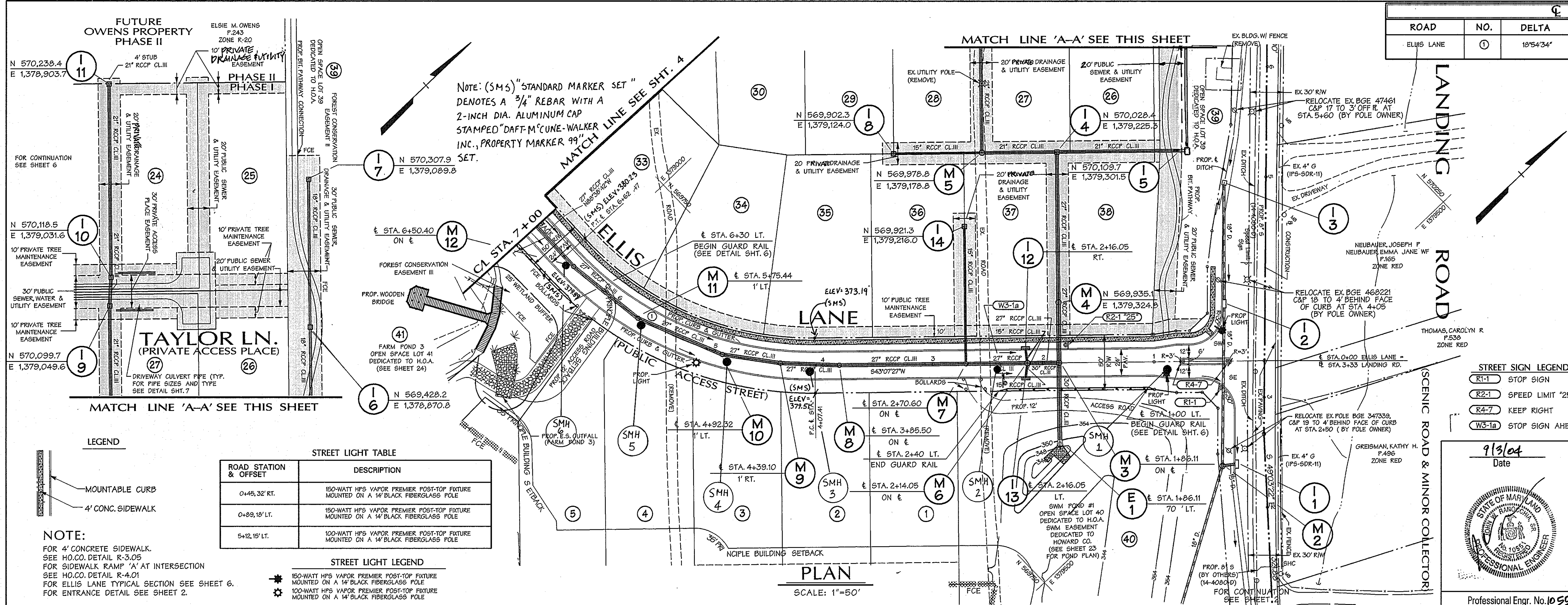
HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN AND THIS AS-BUILT PLAN ALSO MEETS THE APPROVED PLANS AND SPECIFICATIONS.

[Signature]
Professional Engr. No. 10551

PROFILES
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

F-04-29 AS-BUILT

CURVE DATA						
ROAD	NO.	DELTA	RADIUS	LENGTH	TANGENT	CHORD
ELLIS LANE	1	18°54'34"	303.00'	255.06'	135.64'	N 67°14'22" E 247.60'



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. ... 2-28-05
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Wanda ... 2/5/05
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

APPROVED: HOWARD COUNTY DEPT. OF ENGINEERING
... 2/4/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Revision Description

Date	No.	Revision Description
		FINAL PLAN

OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243, 572

OWNER/DEVELOPER:

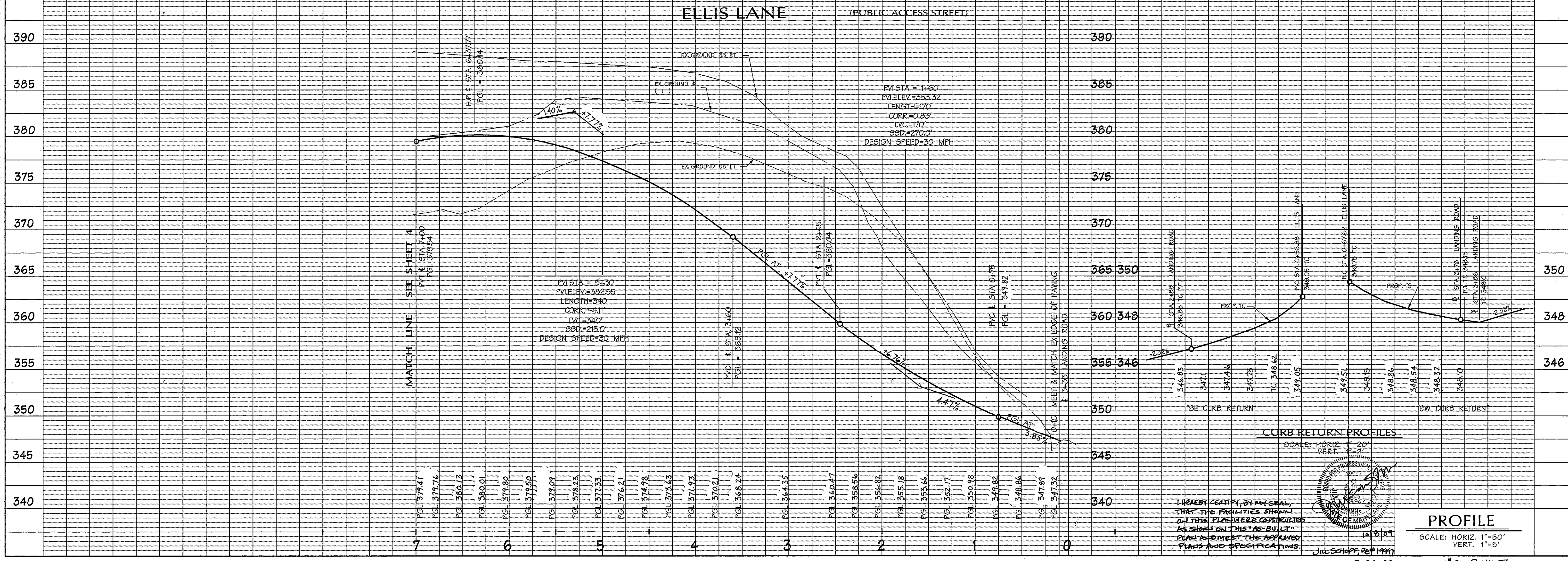
DMW
 Dan McCune-Walken, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3355
 Fax 286-4705

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

TITLE: ROAD CONSTRUCTION PLAN
 ELLIS LANE STA. 0+00 - 7+00

Des. By MAT Scale AS SHOWN Proj. No. 01086.A1
 Dwn. By AD/ECY Date 9-3-04
 Chk. By Approved 3 of 34

Professional Engr. No. 10591



CURVE DATA						
ROAD	NUMBER	DELTA	RADIUS	LENGTH	TANGENT	CHORD
ELLIS LANE	②	18° 16' 58"	155'	49.46	24.94	N 79° 52' 17" W 49.25'
ELLIS LANE	③	22° 51' 22"	220.99'	88.61	44.94	N 58° 52' 17" W 88.07'

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Mahan
 CHIEF, BUREAU OF HIGHWAYS MS 2-28-05
 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Hamilton
 CHIEF, DIVISION OF LAND DEVELOPMENT JA 3/5/05
 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

10-5-06 3 Rev. of Ellis Ln sta. 12+00 to 13+31, Add Curve 3
 7-27-05 2 REVISE 1-23, ADD M-20, REVISE EASEMENT
 Date No. Revision Description

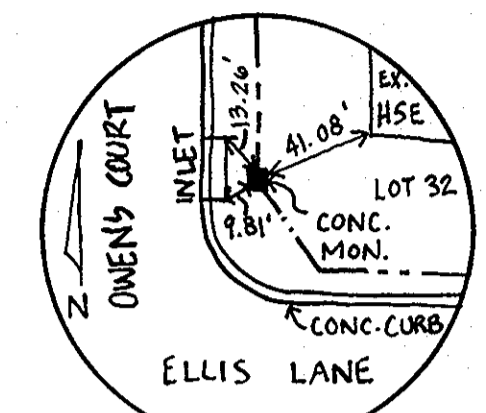
FINAL PLAN
OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243, 572

OWNER/DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keely and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road,
 Timonium, MD 21093

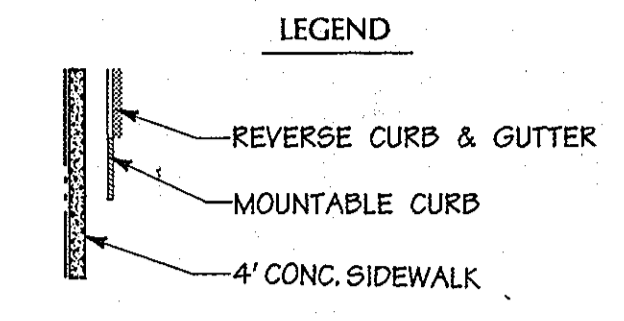
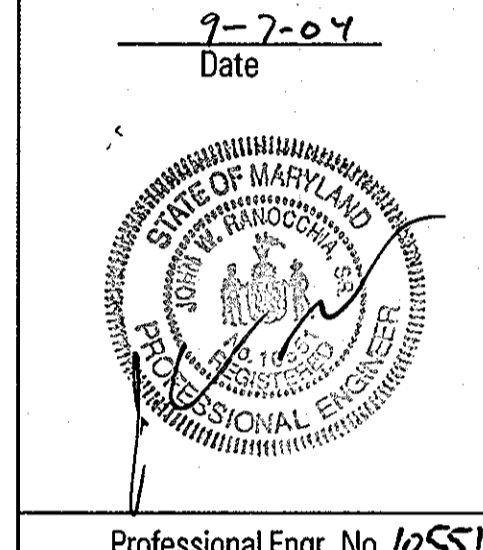
DMW
 ARCHITECTS & ENGINEERS
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-4333
 Fax 286-4705

TITLE ROAD CONSTRUCTION PLAN
ELLIS LANE STA. 7+00 - 13+31+/-

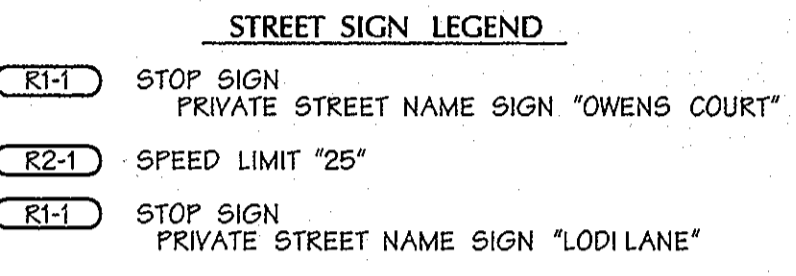
Des. By MAT Scale AS SHOWN Proj. No. 01086.01
 Dm. By AD/ECY Date 9-3-04
 Chk. By Approved 4 of 34



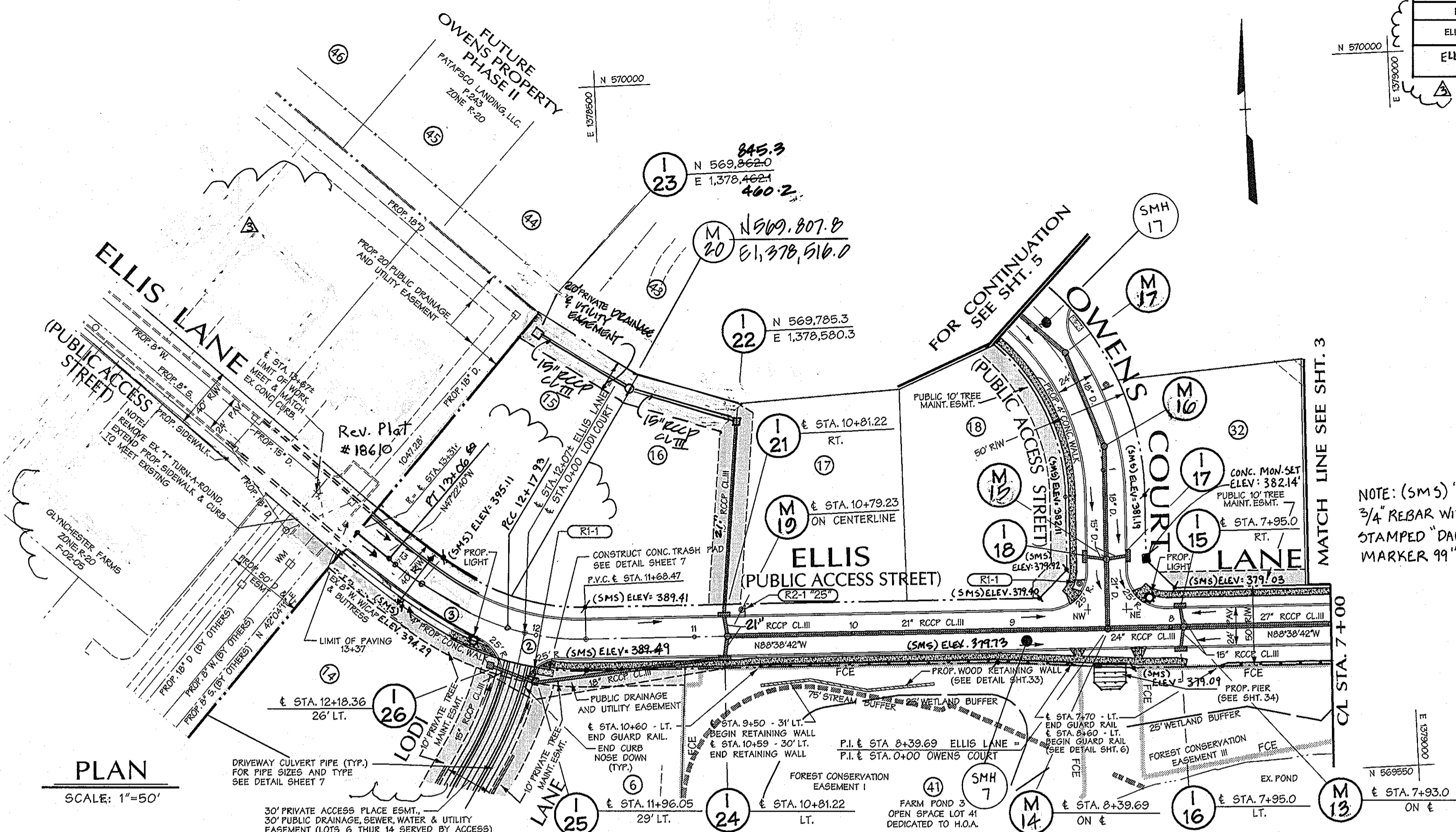
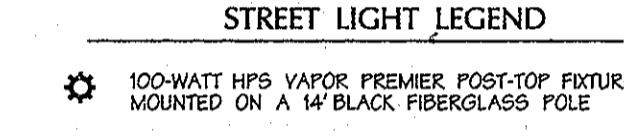
NOTE: (SMS) "STANDARD MARKER SET" DENOTES A 3/4" REBAR WITH A 2-INCH DIA. ALUMINUM CAP STAMPED "DAFT-M'CUNE-WALKER, INC., PROPERTY MARKER 99" SET.



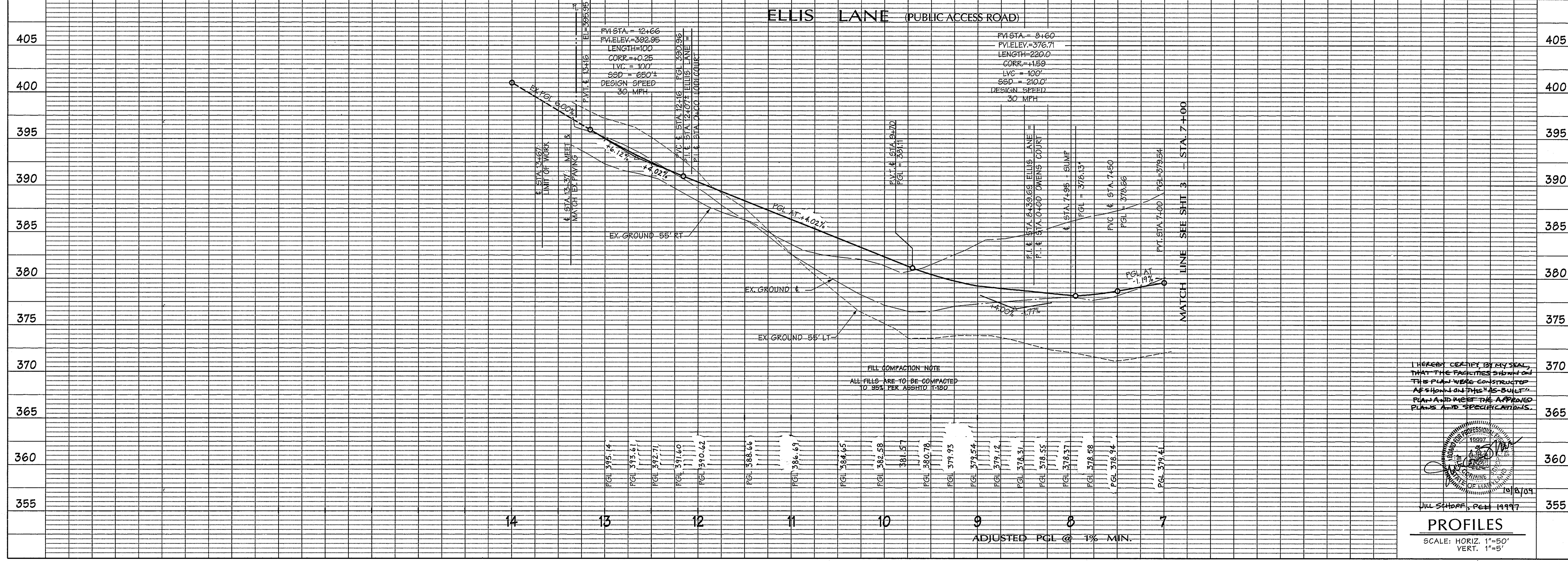
NOTE:
 FOR 4' CONCRETE SIDEWALK.
 SEE H.O.CO. DETAIL R-3.05
 FOR SIDEWALK RAMP 'A' AT INTERSECTION
 SEE H.O.CO. DETAIL R-4.01
 FOR ELLIS LANE TYPICAL SECTION
 SEE SHEET 7.



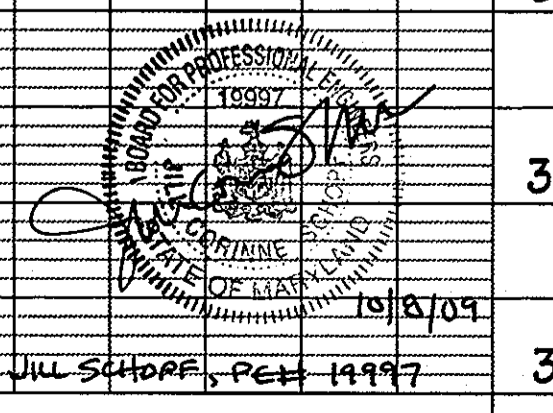
ROAD STATION & OFFSET	DESCRIPTION
8+13, 19' RT.	100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE
12+35, 15' LT.	100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE



PLAN
 SCALE: 1"=50'



I HEREBY CERTIFY BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS 'AS-BUILT' PLAN AND MET THE APPROVED PLANS AND SPECIFICATIONS.



PROFILES
 SCALE: HORIZ. 1"=50'
 VERT. 1"=5'

CURVE DATA						
ROAD	NO.	DELTA	RADIUS	LENGTH	TANGENT	CHORD
OWENS COURT	3	36°57'54"	155.00'	131.83'	70.20'	N 23°00'41" W 127.90'

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Mahan Jr. 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Hamilton 3/3/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/3/05

2-21-05 2 ELIMINATE INLET AND EASEMENT (1-24)
 Date No. Revision Description

FINAL PLAN
OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243,572

OWNER/ DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keilty and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road,
 Timonium, MD 21093

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

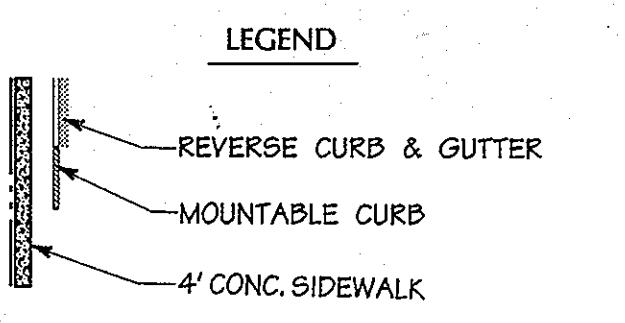
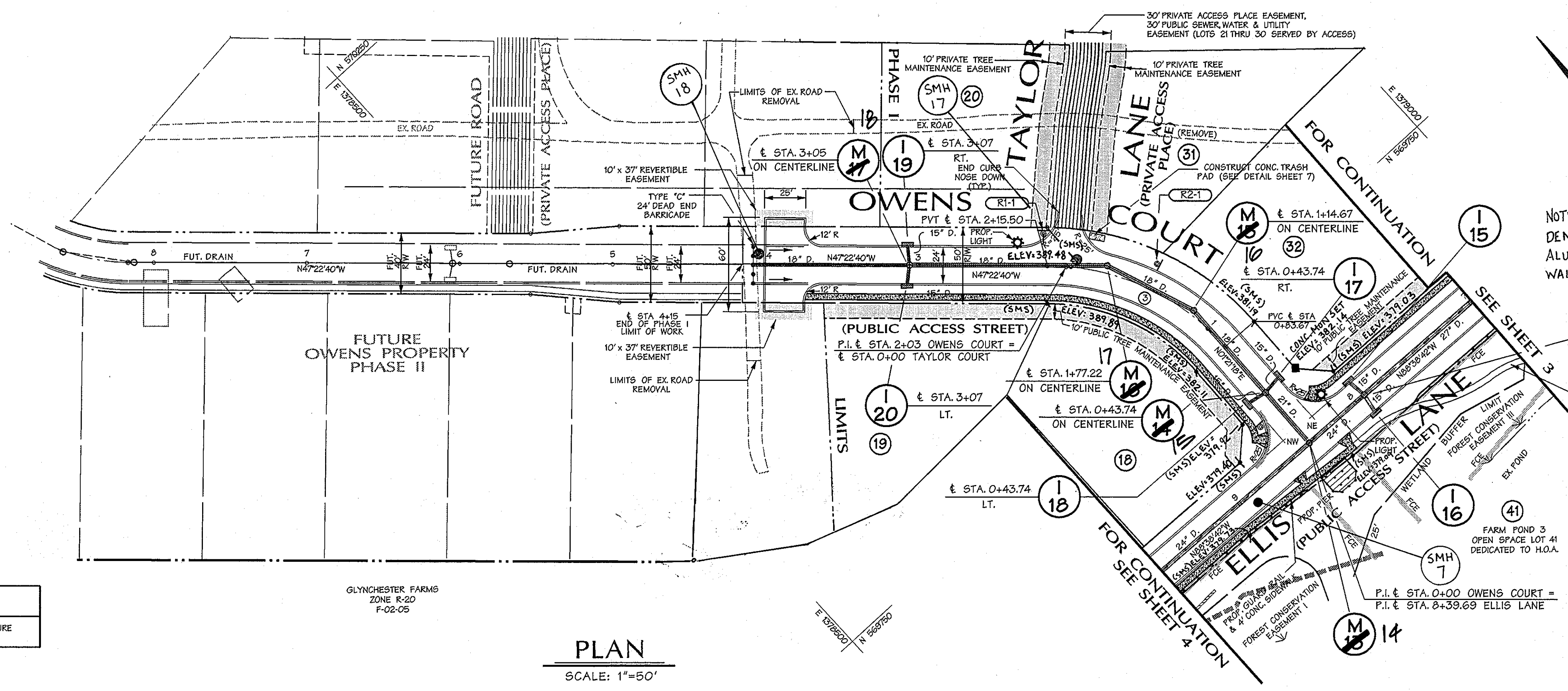
TITLE ROAD CONSTRUCTION PLAN
OWENS COURT STA. 0+00 - 4+15+/-

Des. By MAT Scale AS SHOWN Proj. No. 01086.A1
 Dwn. By ADL/ECY Date 9-3-04
 Chk. By Approved

JILL SCHOPPE, PE # 19197
 9/3/04 Date
 PROFESSIONAL ENGR. NO. 10551

NOTE: (SMS) "STANDARD MARKER SET" DENOTES A 3/4" REBAR WITH A 2-INCH DIA. ALUMINUM CAP STAMP "DAFF-MSCUNE WALKER, INC., PROPERTY MARKER 99" SET.

I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLAN AND SPECIFICATIONS.



NOTE:
 FOR 4' CONCRETE SIDEWALK, SEE H.O.CO. DETAIL R-3.05
 FOR SIDEWALK RAMP 'A' AT INTERSECTION SEE H.O.CO. DETAIL R-4.01
 FOR OWENS COURT TYPICAL SECTION SEE SHEET 7.

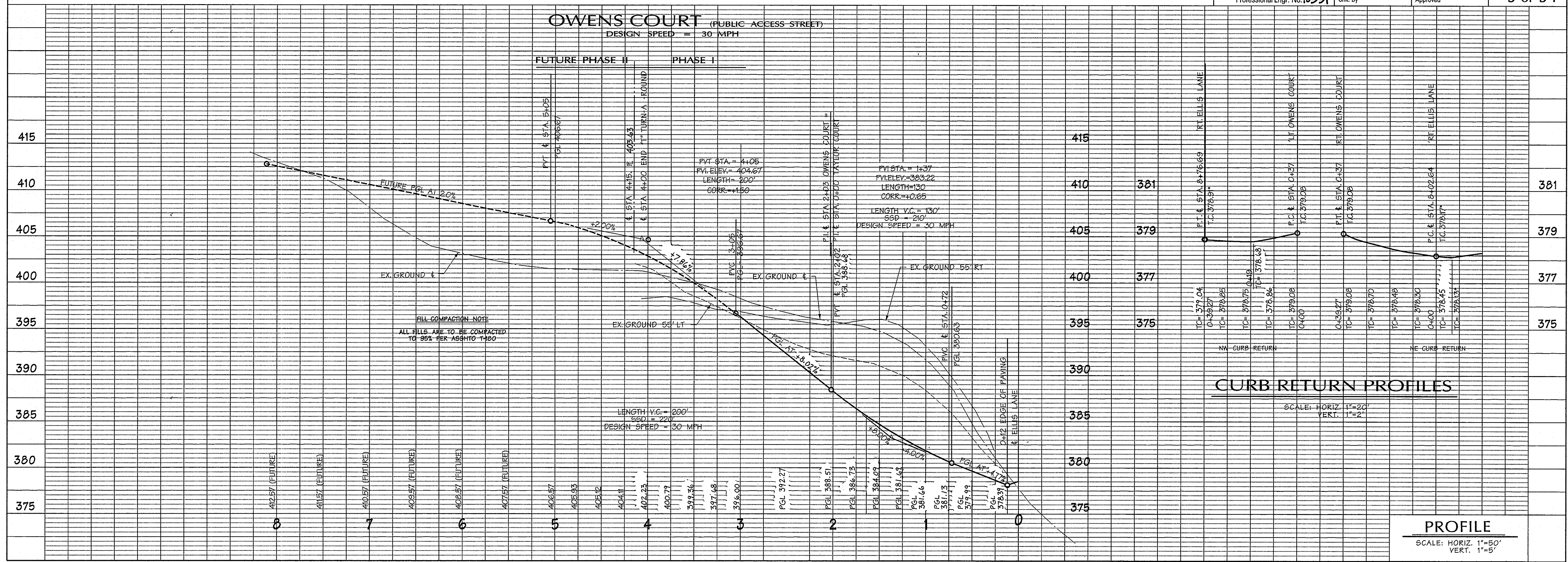
STREET SIGN LEGEND
 R2-1 SPEED LIMIT "25"
 R1-1 STOP SIGN PRIVATE STREET NAME SIGN "TAYLOR LANE"

ROAD STATION & OFFSET	DESCRIPTION
2+35, 15' RT.	100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE

STREET LIGHT LEGEND
 * 100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE

PLAN
 SCALE: 1"=50'

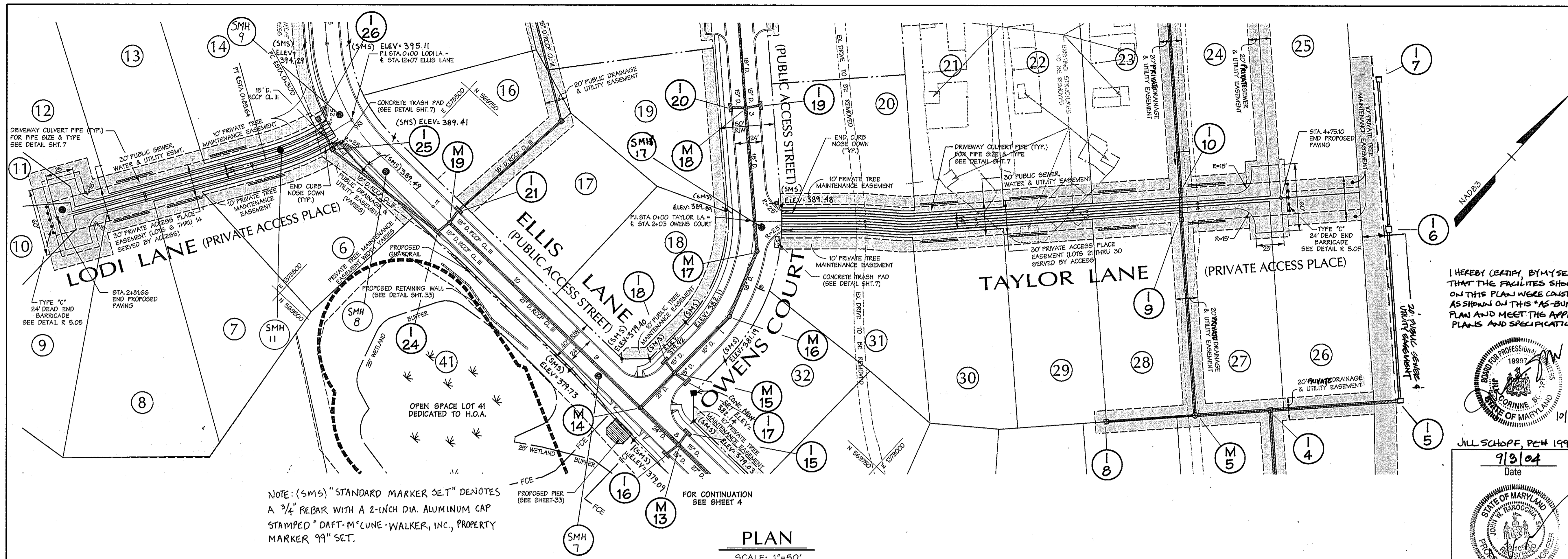
OWENS COURT (PUBLIC ACCESS STREET)
 DESIGN SPEED = 30 MPH



CURB RETURN PROFILES

SCALE: HORIZ. 1"=20'
 VERT. 1"=2'

PROFILE
 SCALE: HORIZ. 1"=50'
 VERT. 1"=5'



NOTE: (SMS) "STANDARD MARKER SET" DENOTES A 3/4" REBAR WITH A 2-INCH DIA. ALUMINUM CAP STAMPED "DAFT-M'CUNE-WALKER, INC., PROPERTY MARKER 99" SET.

PLAN
SCALE: 1"=50'

NOTE:
FOR LODI LANE AND TAYLOR LANE
TYPICAL SECTION SEE SHEET 7

I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.



JILL SCHOPF, PE# 19997
9/3/04
Date



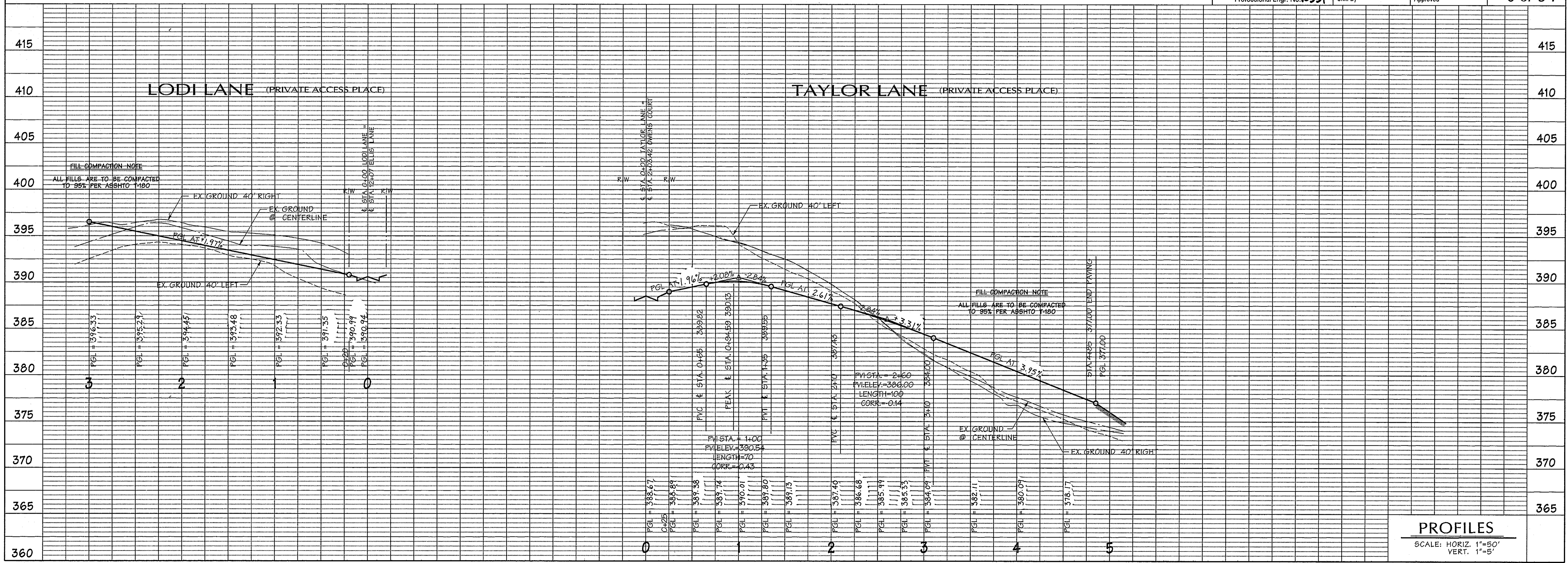
Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker, Jr. 2-28-05
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Chad K. Hunter 3/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT
CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/3/05

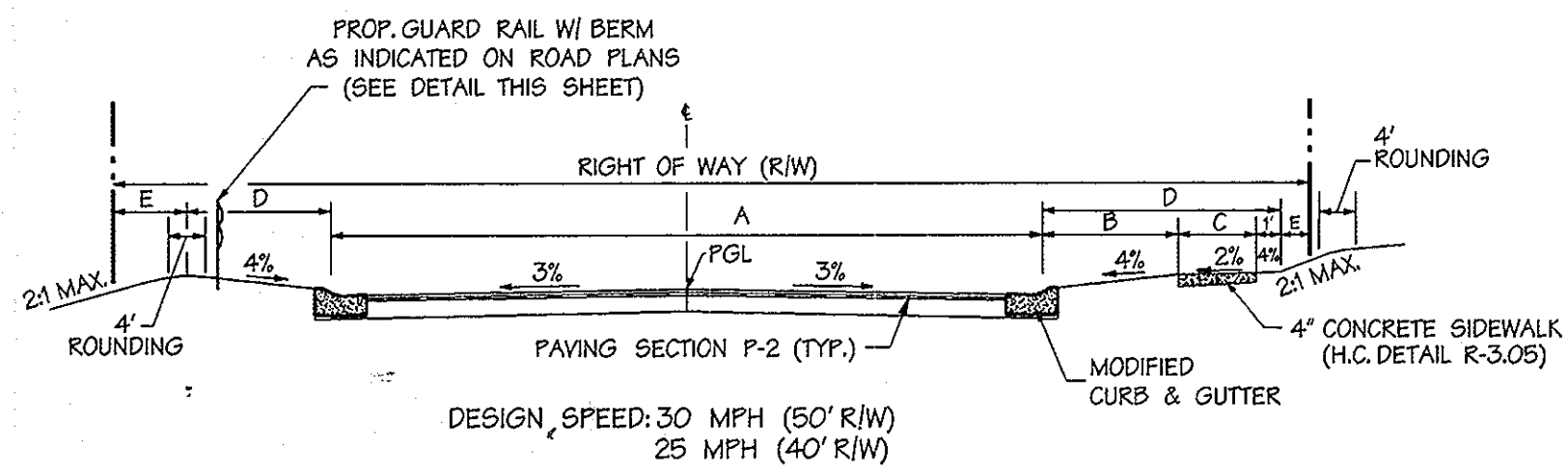
Revision Description
Date No. Description
FINAL PLAN
OWENS PROPERTY PHASE I
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
TAX MAP 31 PARCEL 243, 572
OWNER/DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keelty and Co. Inc.
P.O. Box 522
61 E. Padonia Road
Timonium, MD 21093

DMW
AR East McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3633
Fax 296-4709
A Team of Land Planners,
Landscape Architects,
Golf Course Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE ROAD CONSTRUCTION PLAN
TAYLOR LANE AND LODI LANE
Des. By MAT Scale A5 SHOWN Proj. No. 01086.A1
Dwn. By Date 9-3-04
Chk. By Approved
6 of 34



PROFILES
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

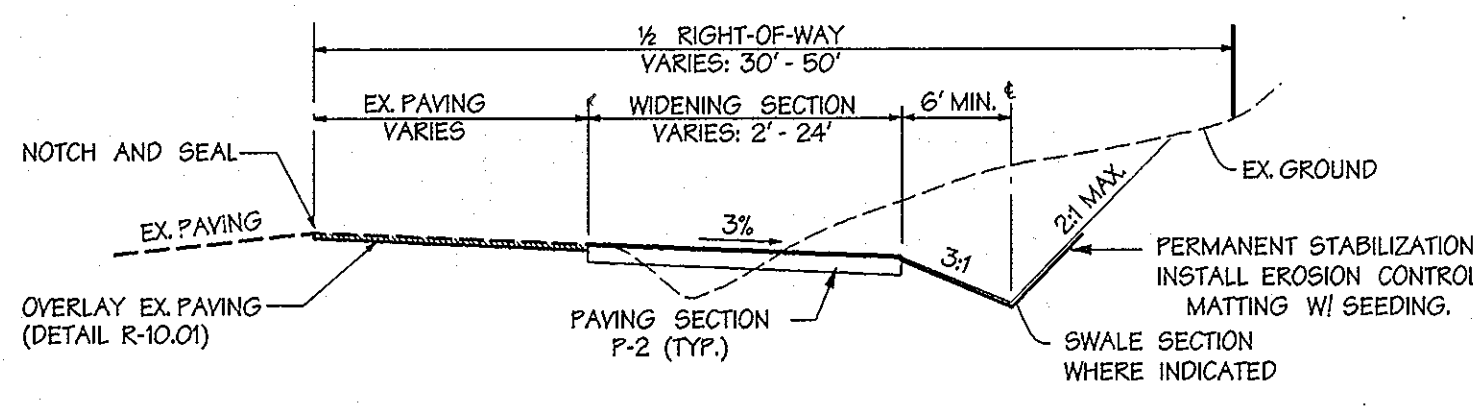


CLASSIFICATION	A	B	C	D	E	R/W
ACCESS STREET 500 ADT	24'	3'	4'	8'	0'	40'
1000 ADT	24'	7'	4'	12'	1'	50'

(ELLIS LANE)
(OWENS COURT)

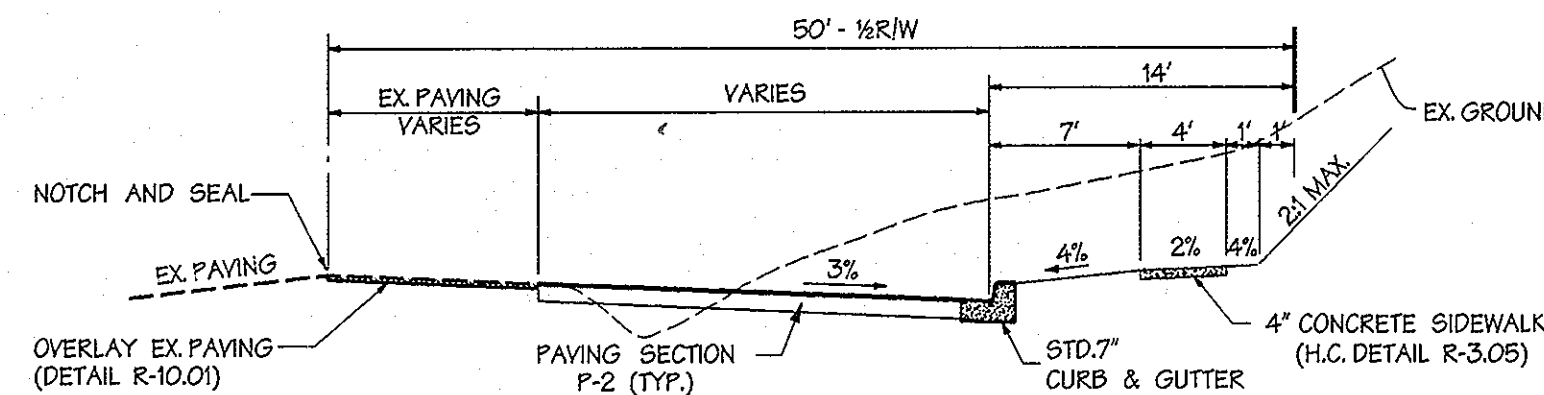
**ELLIS LN. & OWENS CT.
TYPICAL ROAD SECTION**

NO SCALE



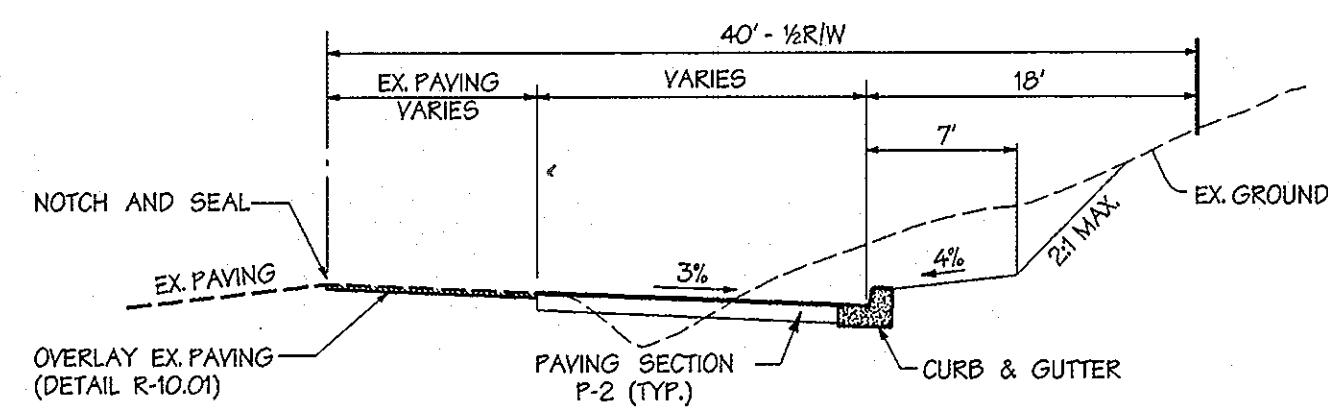
**TYPICAL SECTION
LANDING ROAD TAPER**
STA. 0+75 TO 2+28 AND STA. 4+65 TO 7+30

NO SCALE



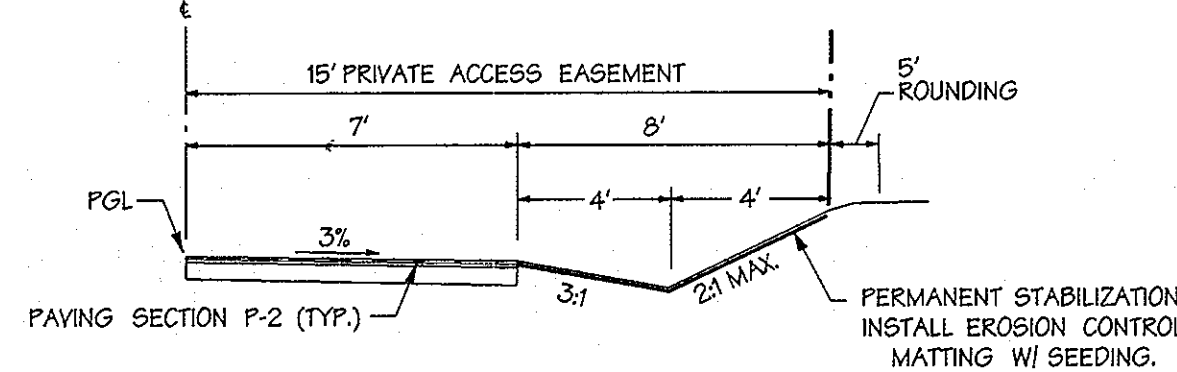
**TYPICAL SECTION
LANDING ROAD 1/2 50' R/W**

NO SCALE



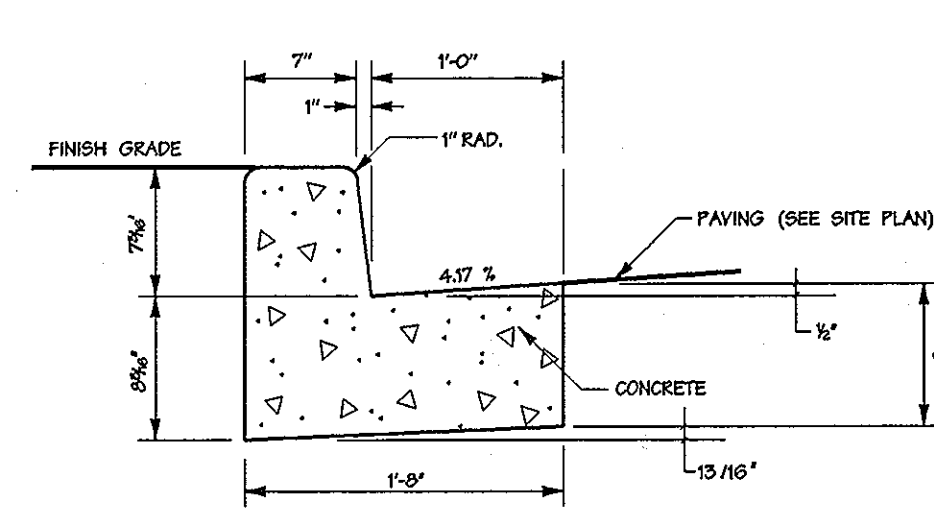
**TYPICAL SECTION
LANDING ROAD 1/2 40' R/W**

NO SCALE



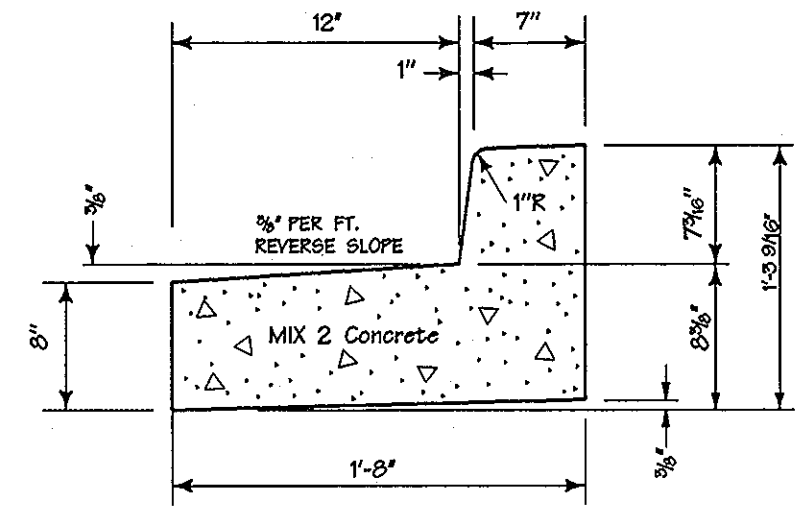
**TAYLOR LANE & LODI LANE
PRIVATE ACCESS PLACE
TYPICAL HALF ROAD SECTION**

NO SCALE



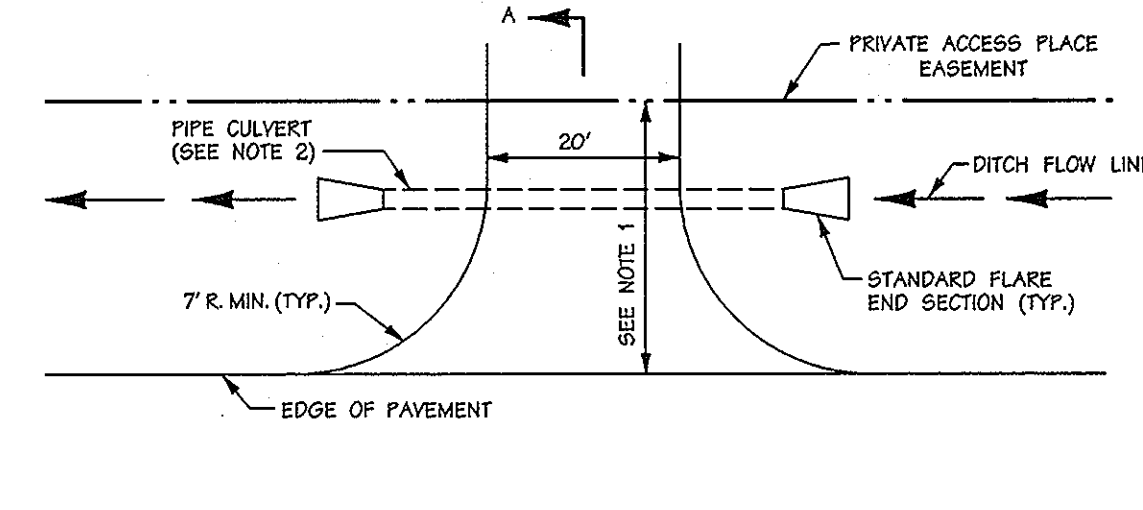
**SECTION
TYPE 'A' CURB AND GUTTER R-3.01**

NOT TO SCALE

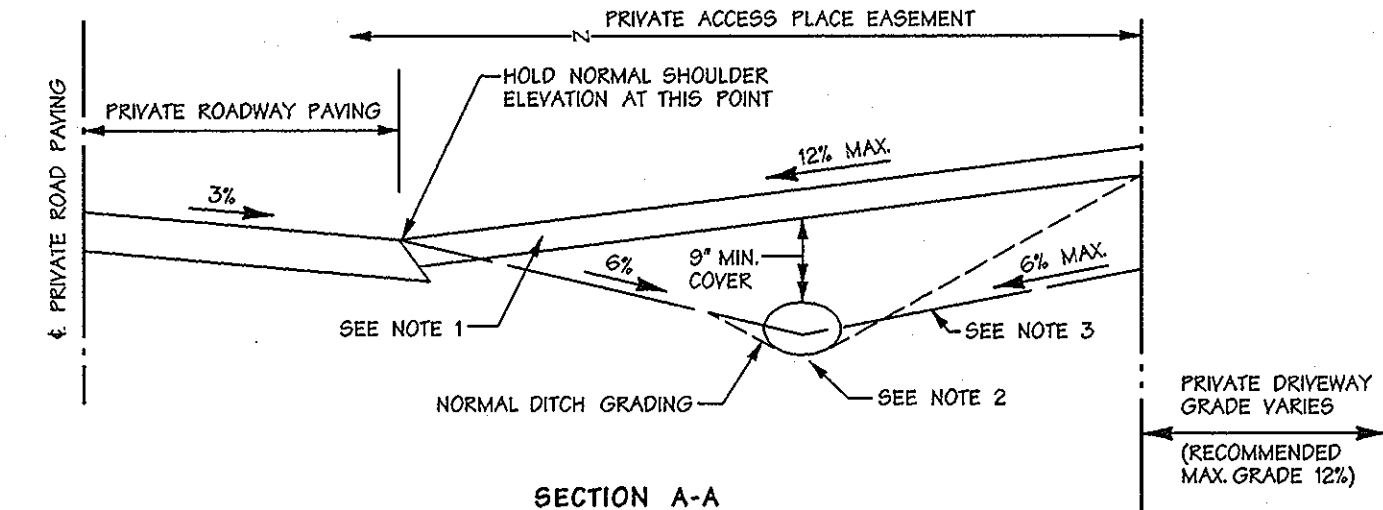


REVERSE 7\"/>

NOT TO SCALE

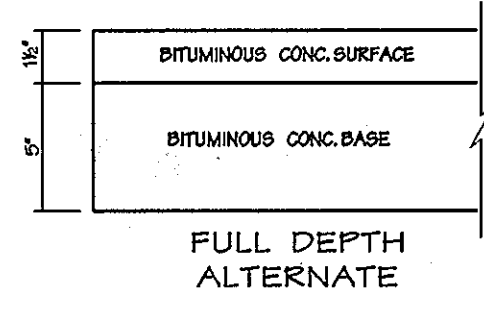
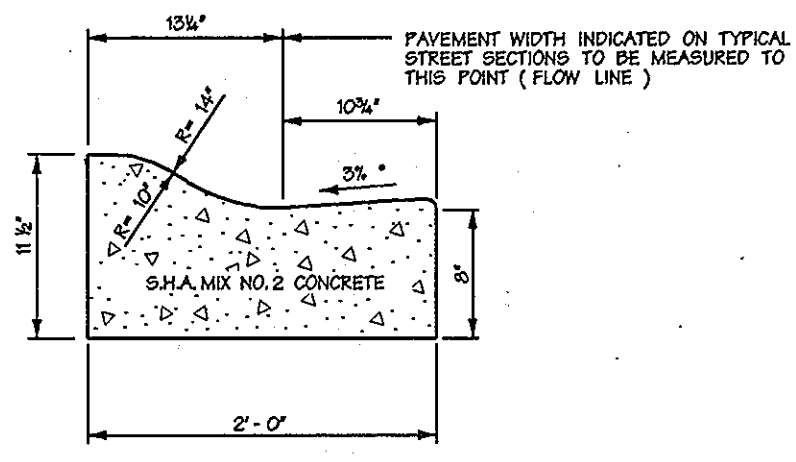


PLAN

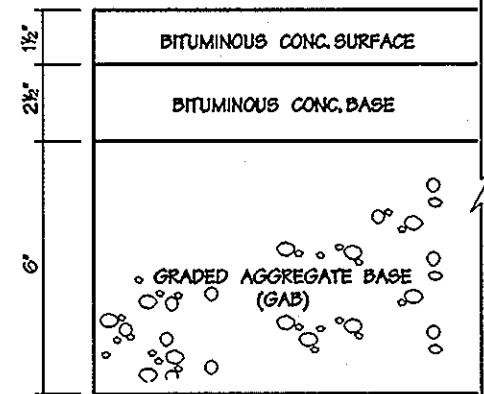


**TYPICAL RESIDENTIAL DRIVEWAY ENTRANCE
CONNECTION TO OPEN SECTION ROADWAY**

NOT TO SCALE



**FULL DEPTH
ALTERNATE**



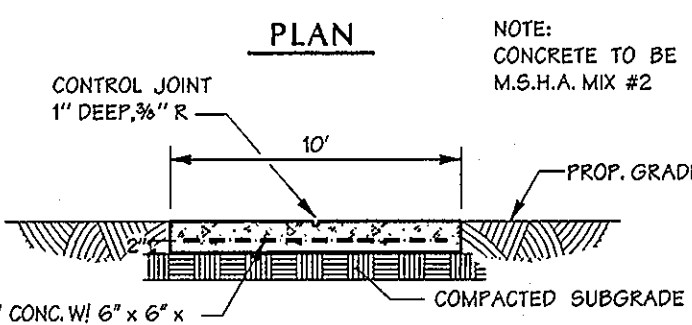
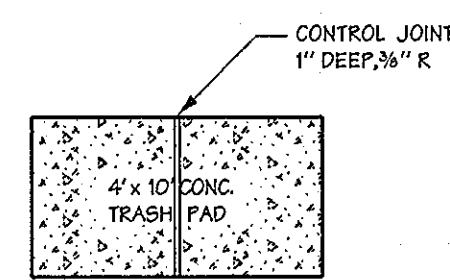
**GRANULAR BASE
ALTERNATE**

**PAVING SECTION P-2
PUBLIC ACCESS STREET**

NOT TO SCALE

Modified Combination Curb & Gutter R-3.01

NOT TO SCALE



TYPICAL TRASH PAD DETAIL

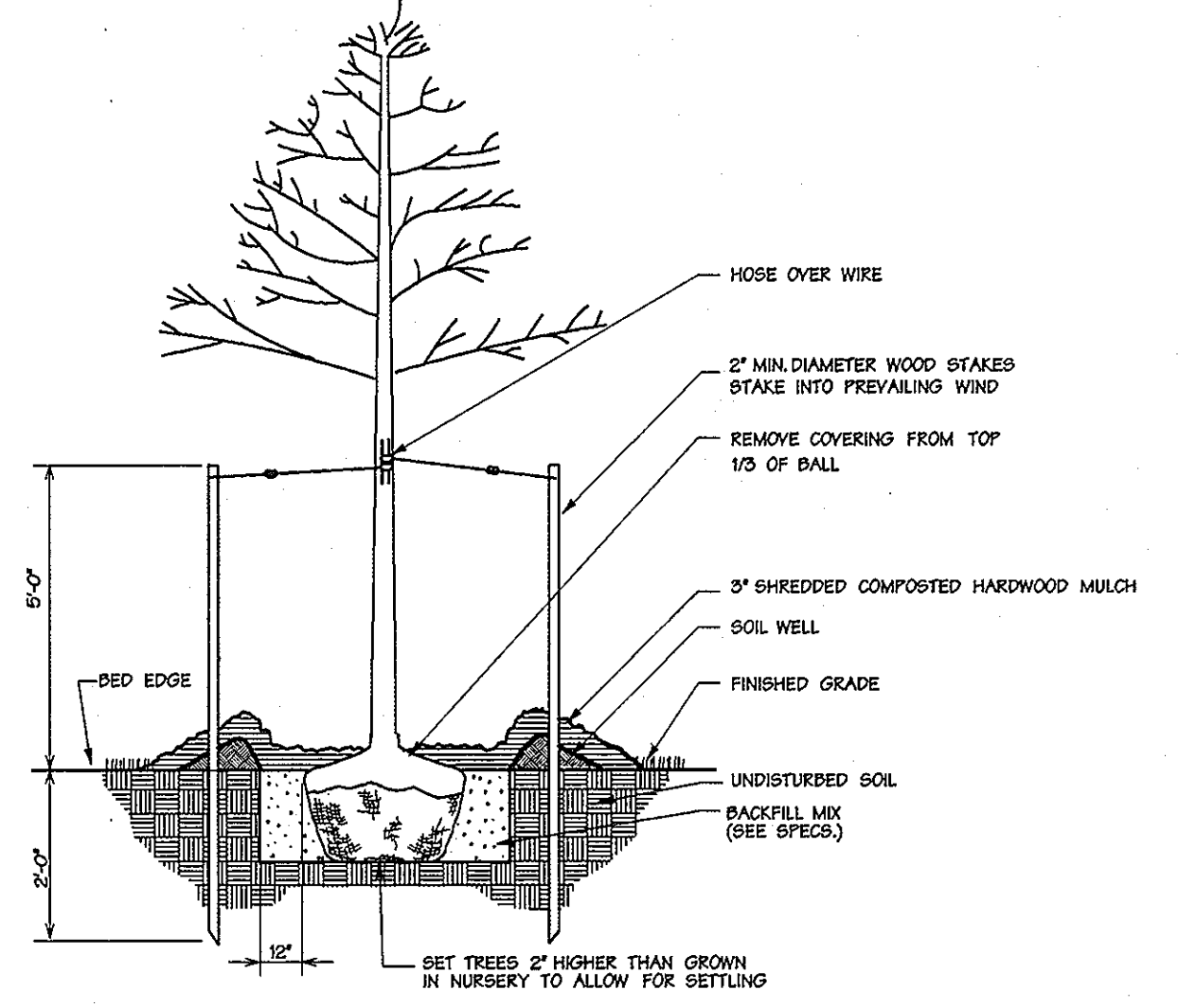
NO SCALE

CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER RIP-RAP OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. GEOTEXTILE CLASS C SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE SHALL BE A MINIMUM OF ONE FOOT.
4. STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE JOINTS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
5. THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.

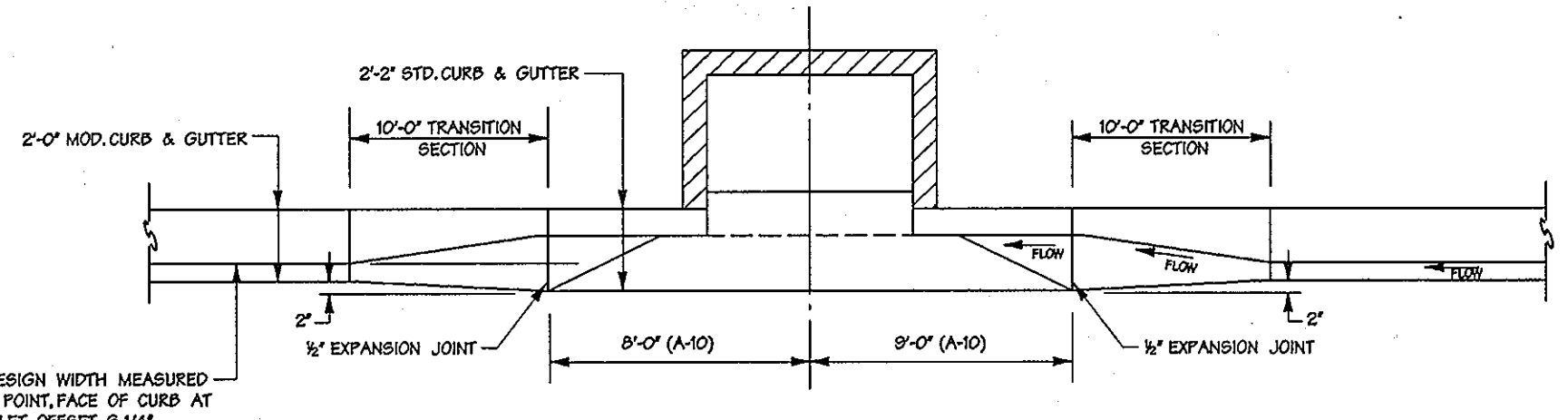
ROCK OUTLET PROTECTION SPECIFICATIONS

MD DEPARTMENT OF TRANSPORTATION
MD DEPARTMENT OF ENVIRONMENTAL & WATER MANAGEMENT



DECIDUOUS TREE DETAIL

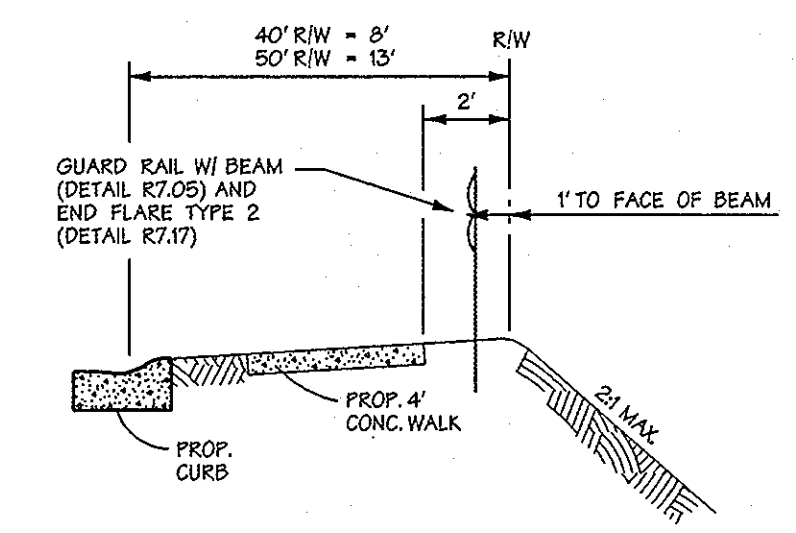
(TO 3\"/>



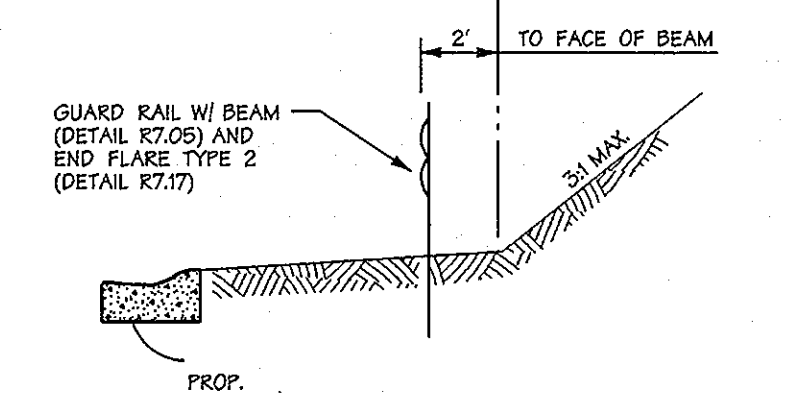
**TRANSITION CURB FROM MODIFIED CURB & GUTTER
TO STANDARD CURB & GUTTER AT A-10 INLETS**

NOT TO SCALE

- NOTES:**
1. DRIVEWAY MUST BE PAVED FROM EDGE OF PUBLIC ROAD TO RIGHT OF WAY LINE USING STANDARD PAVING SECTION P-2 AS SHOWN ON THIS SHEET OR ALTERNATE SECTION EQUAL TO OR BETTER THAN P-2 AS APPROVED BY D.P.W.
 2. DRAINAGE CULVERT SHALL BE SIZED FOR A 10 YEAR FREQUENCY STORM AND THE SIZE OF PIPE SHALL BE 18\"/>
 3. SWALE FLOW MAY BE PROVIDED OVER DRIVEWAY LOCATED AT OR NEAR THE CREST OF VERTICAL CURVES ON THE PUBLIC ROAD WHERE QUANTITY OF FLOW IS SMALL AS APPROVED BY D.P.W.
 4. THE IN GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 12%.



ELLIS LANE STA. 6+30 - 10+70 LT.



ELLIS LANE STA. 1+00 - 2+40 LT.

GUARD RAIL WITH BEAM DETAIL

NOT TO SCALE

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William J. Mahoney 2-28-01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Cindy Christ 3/15/05
CHIEF, DIVISION OF LAND DEVELOPMENT

Date No. Revision Description

**FINAL PLAN
OWENS PROPERTY
PHASE I**

LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
TAX MAP 31 PARCEL 243, 572

OWNER /DEVELOPER:

PATAPSCO LANDING, LLC
c/o James Keelby and Co. Inc.
P.O. Box 528
61 E. Padonia Road,
Timonium, MD 21093

DMW
Darr McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3338
Fax 296-4708

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

TITLE
ROAD CONSTRUCTION DETAILS

Des By	MAT	Scale	AS SHOWN	Proj. No.	01086.A1
Dim By	ECY	Date	9-3-04		
Chk By		Approved			7 of 34

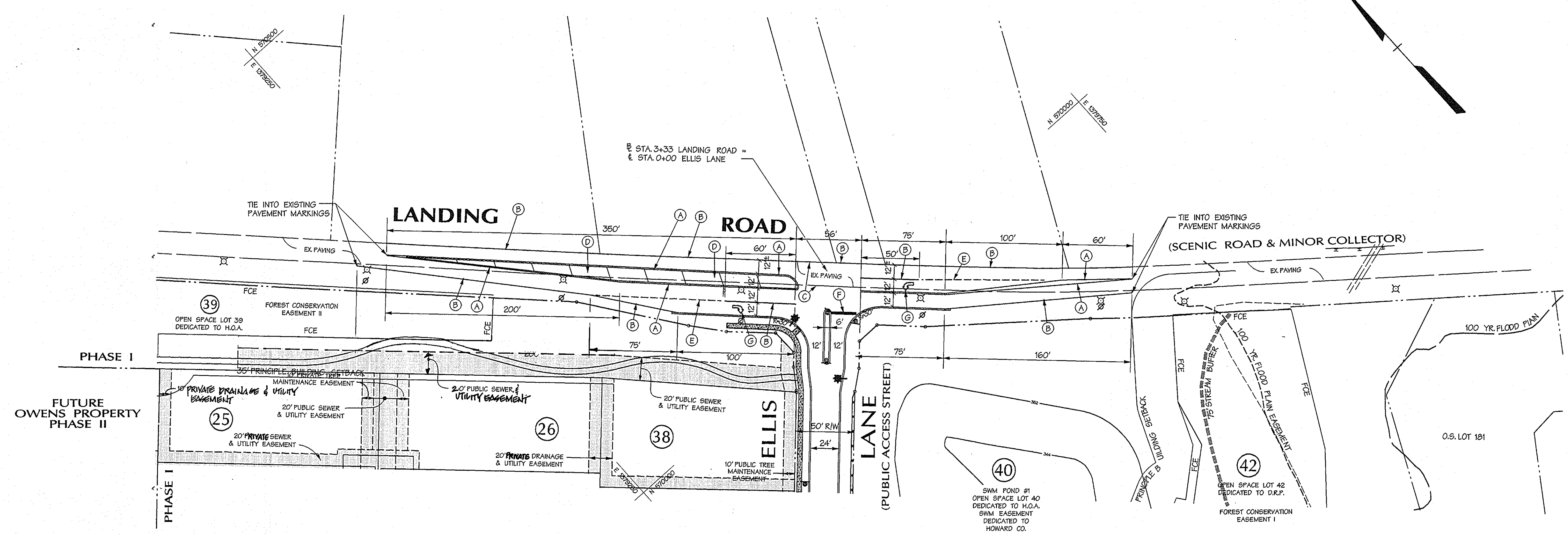
NO AS-BUILT INFO ON THIS SHEET

9/3/04
Date

Professional Engr. No. 10551

F-04-29

- PAVEMENT MARKING LEGEND**
- (A) 5" SOLID DOUBLE YELLOW PAVEMENT MARKING LINE
 - (B) 5" SOLID WHITE PAVEMENT MARKING LINE
 - (C) REMOVE EXISTING PAVEMENT MARKINGS
 - (D) 12" WIDE YELLOW HATCH LINE, SPACED EVERY 30' (45° ANGLE)
 - (E) 5" WIDE PUPPY TRACKS
| 6' | 2' | 6' | 2' | 6' | 2' |
 - (F) STOP BAR (24" WIDE) (THERMOPLASTIC)
 - (G) (THERMOPLASTIC TURN ARROW)



Approved: Howard County DPW
William J. ... 2-28-05
 Chief Bureau of Highway MS Date

Approved: Howard County DPZ
Wanda K. ... 3/15/05
 Chief, Division of Land Development Date

... 3/15/05
 Chief, Development Engineering Division Date

NOTE:
 CONTACT TRAFFIC ENGINEER (410-313-5752)
 PRIOR TO PLACEMENT OF ANY MARKINGS.

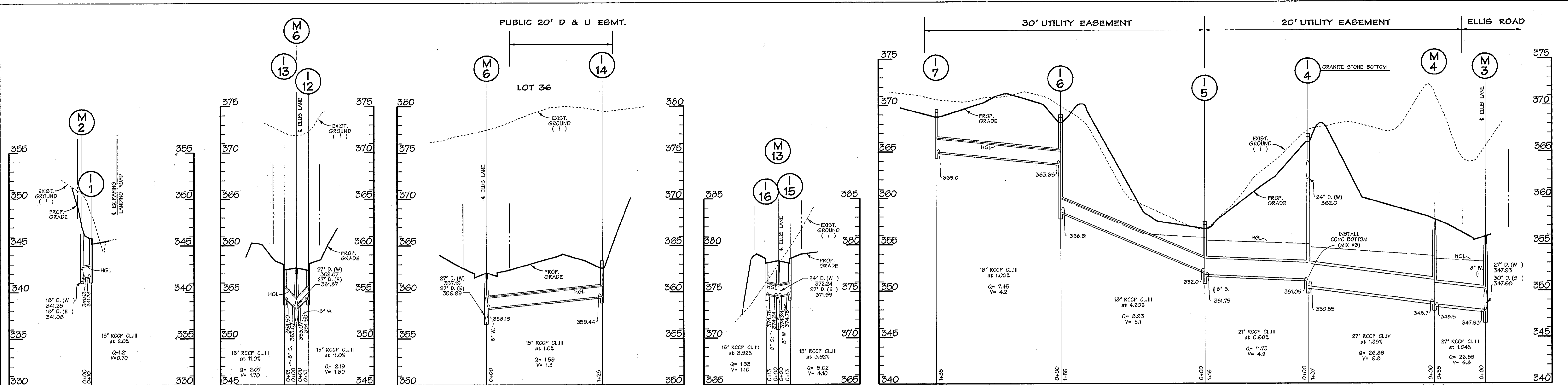
DATA SOURCES
 WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/04.
 LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, EX. STRUCTURES, ETC., DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002.
 BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT-MCCUNE - WALKER, INC.
 SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968.
 PORTIONS OF 100 YR. FLOODPLAIN TAKEN FROM RECORDED PLAT #15586 OF GLYNCHESTER FARMS, FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL DATED 2-15-88 (DMW) AND 100 YR FLOOD PLAN STUDY FOR GOVERNMENT SUPERVISION DATED 4-18-97 (SEA GROUP, INC.), AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

No AS-BUILT INFO. ON THIS SHEET

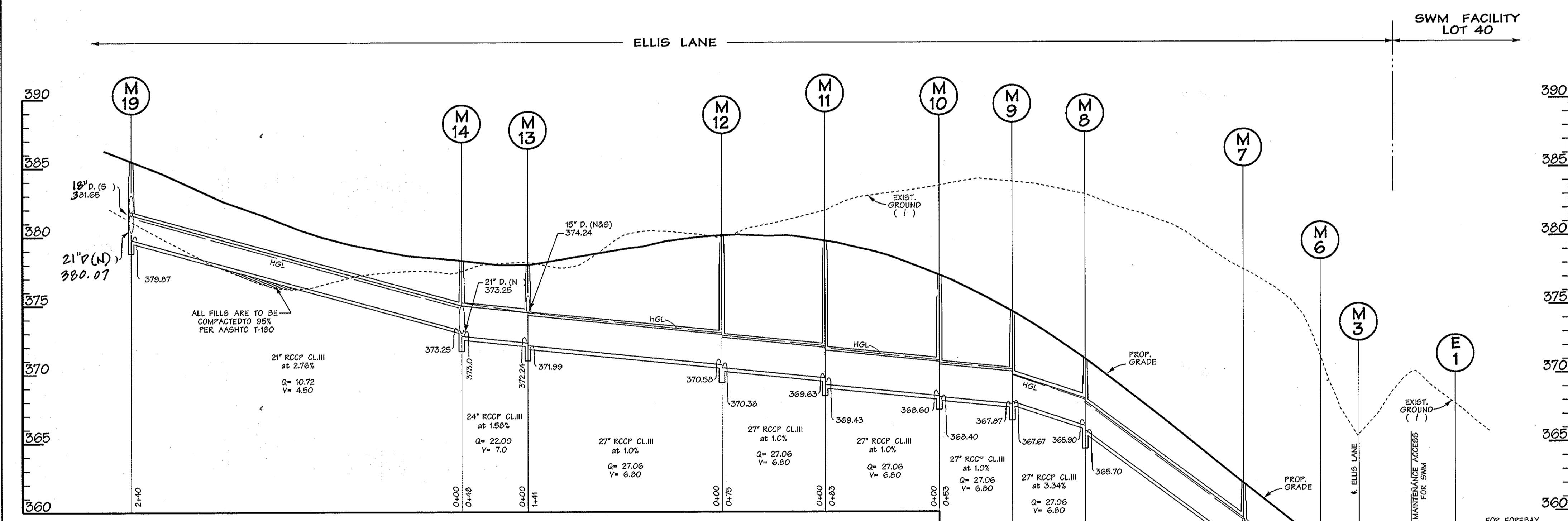
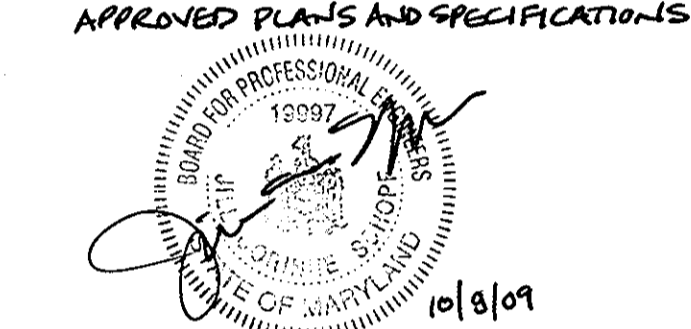
9/3/04
 Date

Professional Engr. No. 10551

Date	No.	Revision Description
OWNER/ DEVELOPER:		
FATAPSCO LANDING, LLC c/o James Kealty and Co. Inc. P.O. Box 528 61 E. Padonia Road. Timonium, MD 21093		
DMW Daft-McCune-Walker, Inc. A Team of Land Planners, 200 East Pennsylvania Avenue Landscape Architects, Towson, Maryland 21286 Engineers, Surveyors & (410) 296-3833 Environmental Professionals Fax 296-4706		
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #
OWENS PROPERTY	PHASE I	240,572
PLAT OR LOT	TRACED	DATE
10/11/16/17	R-20	31
TITLE		
OWENS PROPERTY - PHASE I LANE STRIPING & MARKING PLAN LANDING ROAD & ELLIS LANE		
Des By	MAT	Scale 1" = 50'
Drn By	ECY	Date 9-3-04
Chk By		Approved
		Proj. No. 01086.01
		8 of 34



I HEREBY CERTIFY BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.



INLET SCHEDULE

NO.	TYPE	INV. OUT	TOP ELEV. (TC)
1	A-10 SD-4.41	341.44	345.64
2	A-10 SD-4.41	343.31	348.04
3	YARD INLET - 'K' SD-4.36	347.0	349.02
4	YARD INLET - 'D' SD-4.39	350.55	356.00
5	YARD INLET - 'D' SD-4.39	351.75	356.00
6	YARD INLET - 'D' SD-4.39	358.51	368.00
7	YARD INLET - 'D' SD-4.39	365.0	368.50
12	A-10 SD-4.41	354.84	358.04
13	A-10 SD-4.41	354.31	358.04
14	YARD INLET - 'D' SD-4.39	359.44	362.50
15	A-10 SD-4.41	375.30	378.40
16	A-10 SD-4.41	375.16	378.36

PIPE SCHEDULE (TOTAL) PE# 19997

NO.	TYPE & CLASS	LENGTH
15"	RCCP CL.III	470
18"	RCCP CL.III	920
21"	RCCP CL.III	1124
24"	RCCP CL.III	48'
27"	RCCP CL.III	796'
30"	RCCP CL.III	72'
27"	RCCP CL.IV	137'

NOTE: 1-4 INSTALL CONC. BOTTOM
* THROAT ELEVATION

MANHOLE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
1	STD. G5.12	60"	338.75	347.0
2	STD. G5.12	48"	341.08	346.98
3	STD. G5.12	60"	347.68	355.93
4	STD. G5.12	60"	349.39	357.7
6	STD. G5.12	48"	349.17	357.72
7	STD. SHALLOW G5.12	48"	356.99	362.03
8	STD. SHALLOW G5.12	48"	356.70	371.12
9	STD. G5.12	48"	367.42	374.42
10	STD. G5.12	48"	368.00	377.10
11	STD. G5.12	48"	369.08	379.68
12	STD. G5.12	48"	369.95	380.15
13	STD. G5.12	48"	371.43	378.23
14	STD. G5.12	48"	372.08	378.28
19	STD. SHALLOW G5.12	48"	379.00	385.80

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Mahoney 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Hamilton 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 1-14-09 2 PIPE SCHEDULE REVISED
 1-14-09 2 PIPE INTERSECTIONS M-19 REVISED

Date	No.	Revision Description
1-14-09	2	PIPE SCHEDULE REVISED
1-14-09	2	PIPE INTERSECTIONS M-19 REVISED

FINAL PLAN
OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keely and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road
 Timonium, MD 21083

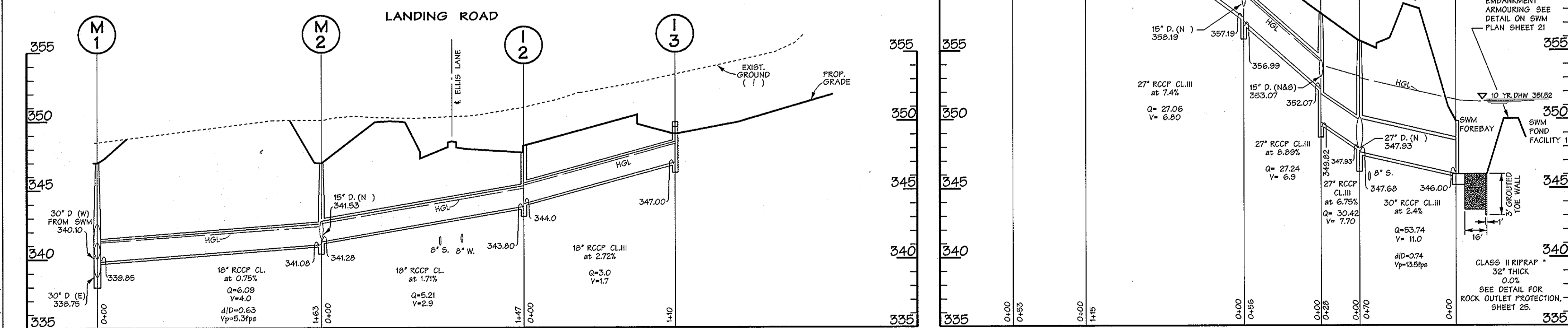
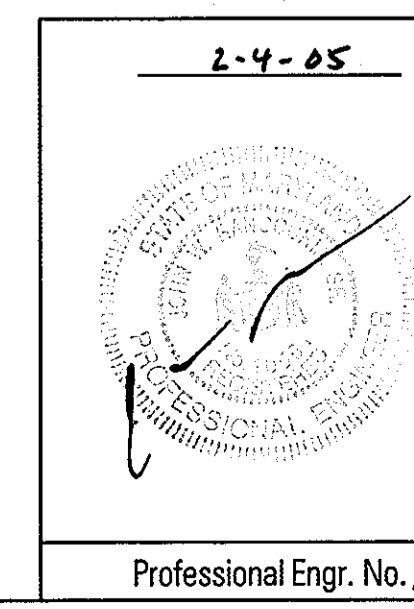
DMW
 Deane McCune-Walken, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3332
 Fax 286-4705

AREA	TAX MAP	PARCEL
	ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND	
TITLE	STORM DRAIN PROFILES	
Des. By	MAT	Scale A5 SHOWN
Drn. By	KDE	Date 9-3-04
Proj. No.	01086.A1	
Chk. By	Approved	9 of 34

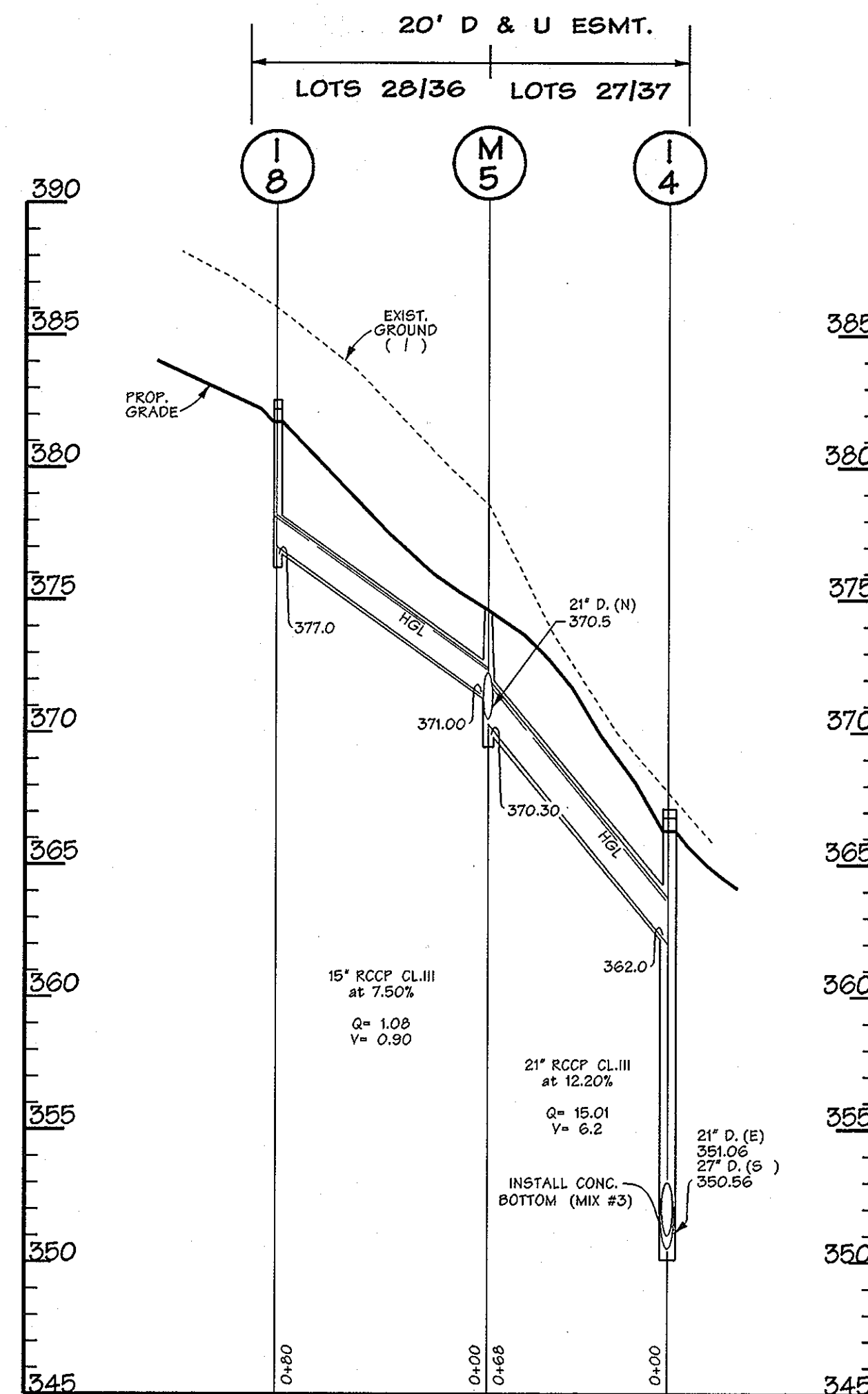
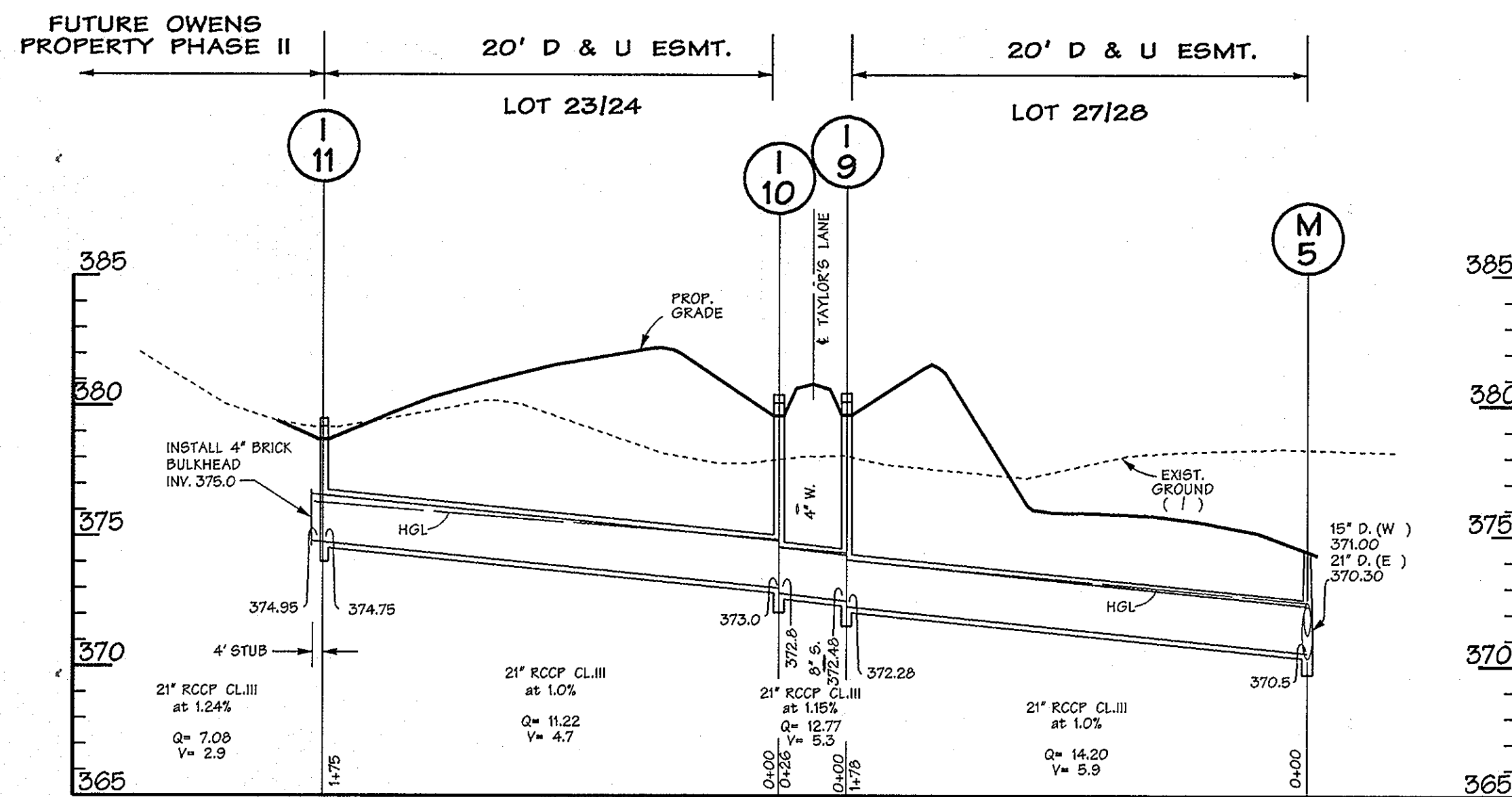
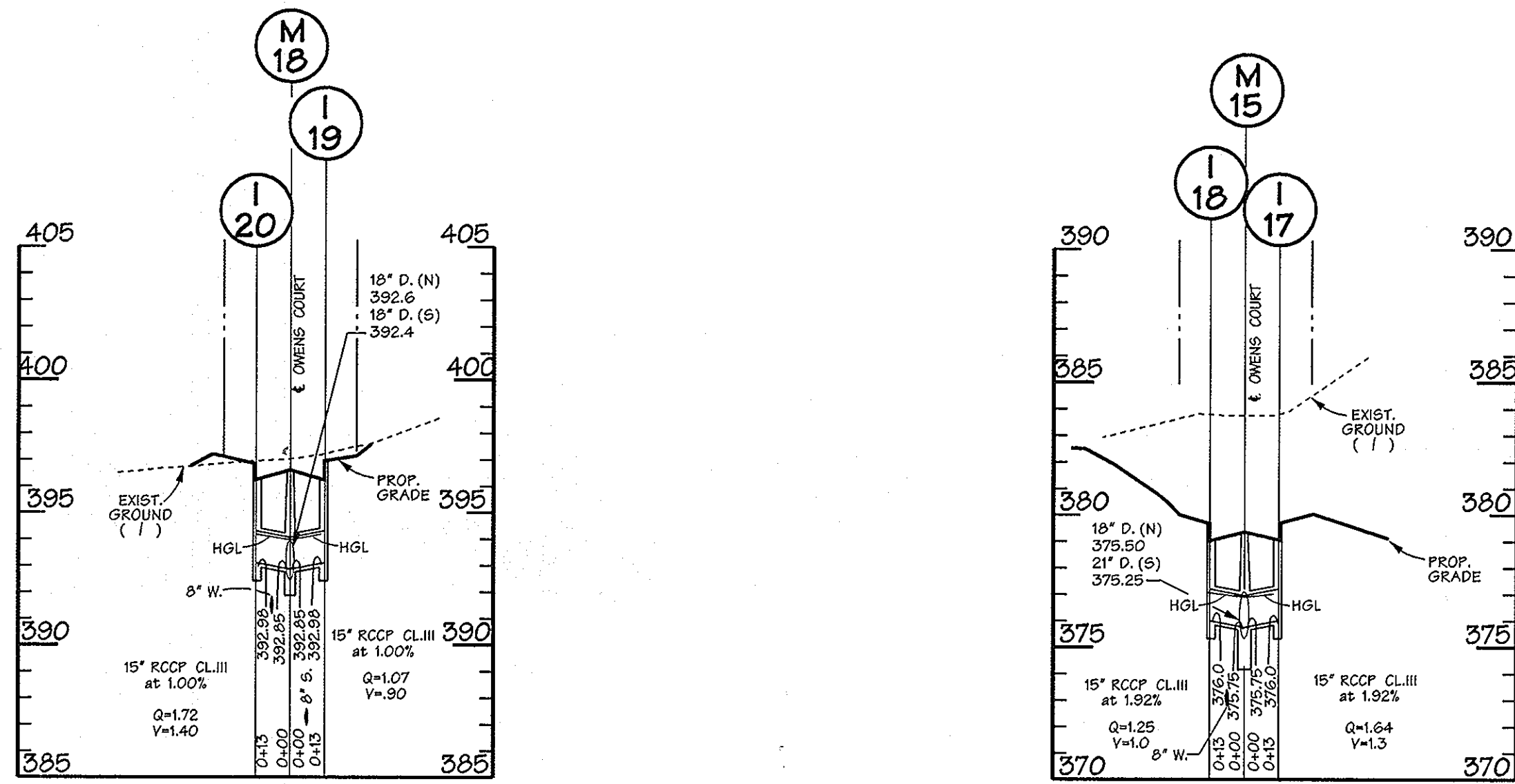
END SECTION SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
1	CONC. ENDWALL EW-2PC	30"	345.84	349.84

* PER RIPRAP SIZING GRAPH
 LENGTH (WIDTH) IS TO BE 26 FT.
 HOWEVER THERE IS ONLY ENOUGH ROOM
 IN FOREBAY FOR 16' LENGTH/WIDTH BEFORE
 IT MEETS THE FOREBAY EMBANKMENT.
 BECAUSE THE FOREBAY EMBANKMENT IS FULLY
 ARMORED THE 16' LENGTH FOR INFLOW APRON
 WILL BE OK.



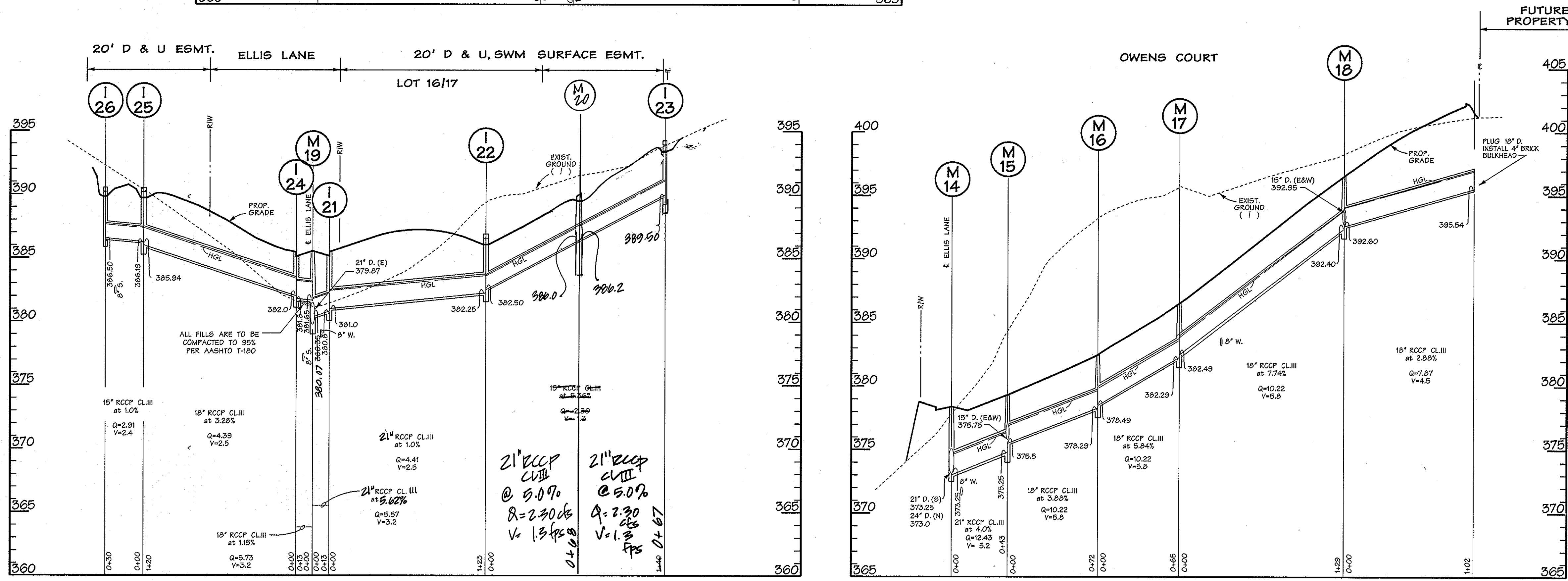
PROFILES
 SCALE: HORIZ. 1"=50'
 VERT. 1"=5'



INLET SCHEDULE				
NO.	TYPE	Q ₁₀	INV. OUT	TOP ELEV. (TC)
8	YARD INLET - 'D'	SD 4.39	377.0	* 381.70
9	YARD INLET - 'D'	SD 4.39	372.28	* 379.50
10	YARD INLET - 'D'	SD 4.39	372.80	* 379.50
11	YARD INLET - 'D'	SD 4.39	374.75	* 378.70
17	A-10	WIDE SD 4.41	376.06	380.21
18	A-10	WIDE SD 4.41	375.98	380.18
19	A-10	WIDE SD 4.41	392.65	387.25
20	A-10	WIDE SD 4.41	392.89	387.19
21	A-10	WIDE SD 4.41	380.66	386.01
22	'D' INLET	SD 4.39	382.25	* 386.00
23	'D' INLET	SD 4.39	389.50	* 393.50
24	A-10	WIDE SD 4.41	381.80	385.79
25	'D' INLET	SD 4.39 **	387.23	* 390.75
26	'D' INLET	SD 4.39 **	388.36	* 391.36

MANHOLE SCHEDULE				
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
5	STD. SHALLOW	G5.12	48"	370.30 374.50
15	STD. SHALLOW	G5.12	48"	374.73 379.73
16	STD. SHALLOW	G5.12	48"	371.69 382.94
17	STD. SHALLOW	G5.12	48"	381.50 386.70
18	STD. SHALLOW	G5.12	48"	392.35 396.75
20	STD.	G5.12	48"	388.0 389.5

END SECTION SCHEDULE				
NO.	TYPE	SIZE	INV. OUT	TOP ELEV.
1	N/A			
2	N/A			



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker 2-29-05
 CHIEF, BUREAU OF HIGHWAYS AS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cathy Hamilton 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION *pro* 3/16/05 DATE

Date	No.	Revision Description
1-27-09	2	REVISE PROFILE M-10 TO I-23, ADD M-20

FINAL PLAN
OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 245, 572

OWNER/DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keely and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road,
 Timonium, MD 21093

DMW
 Draft McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3338
 Fax 296-4705

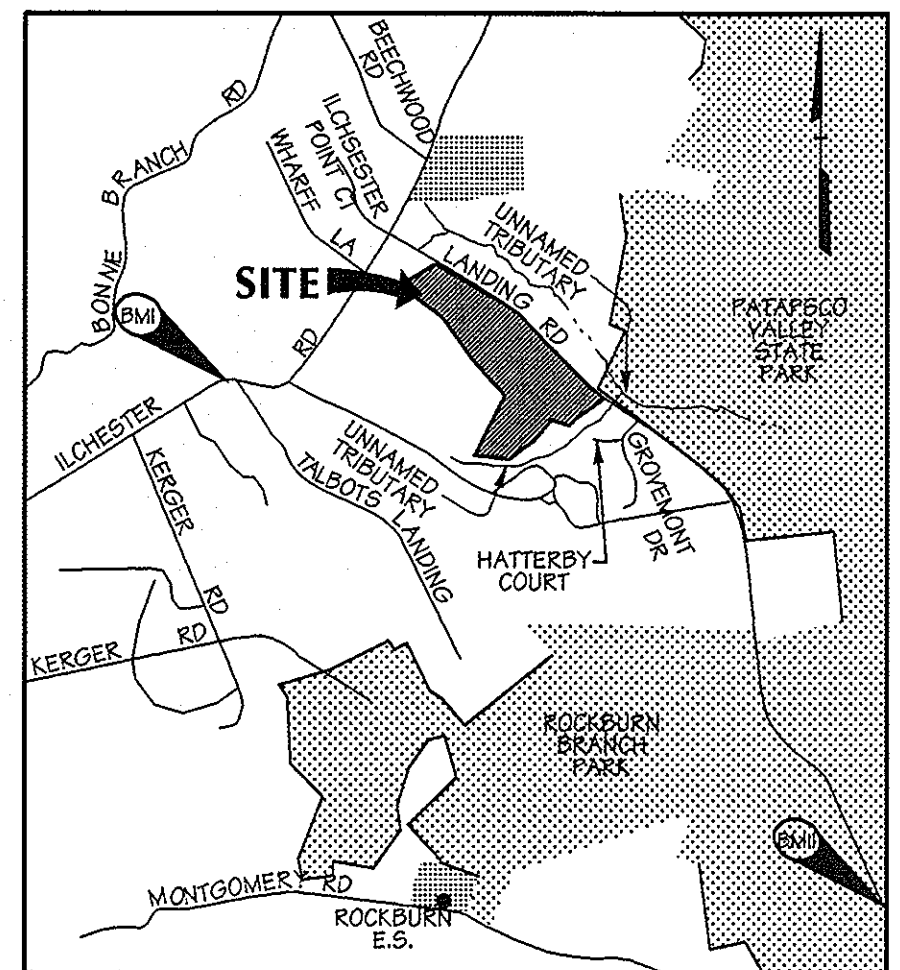
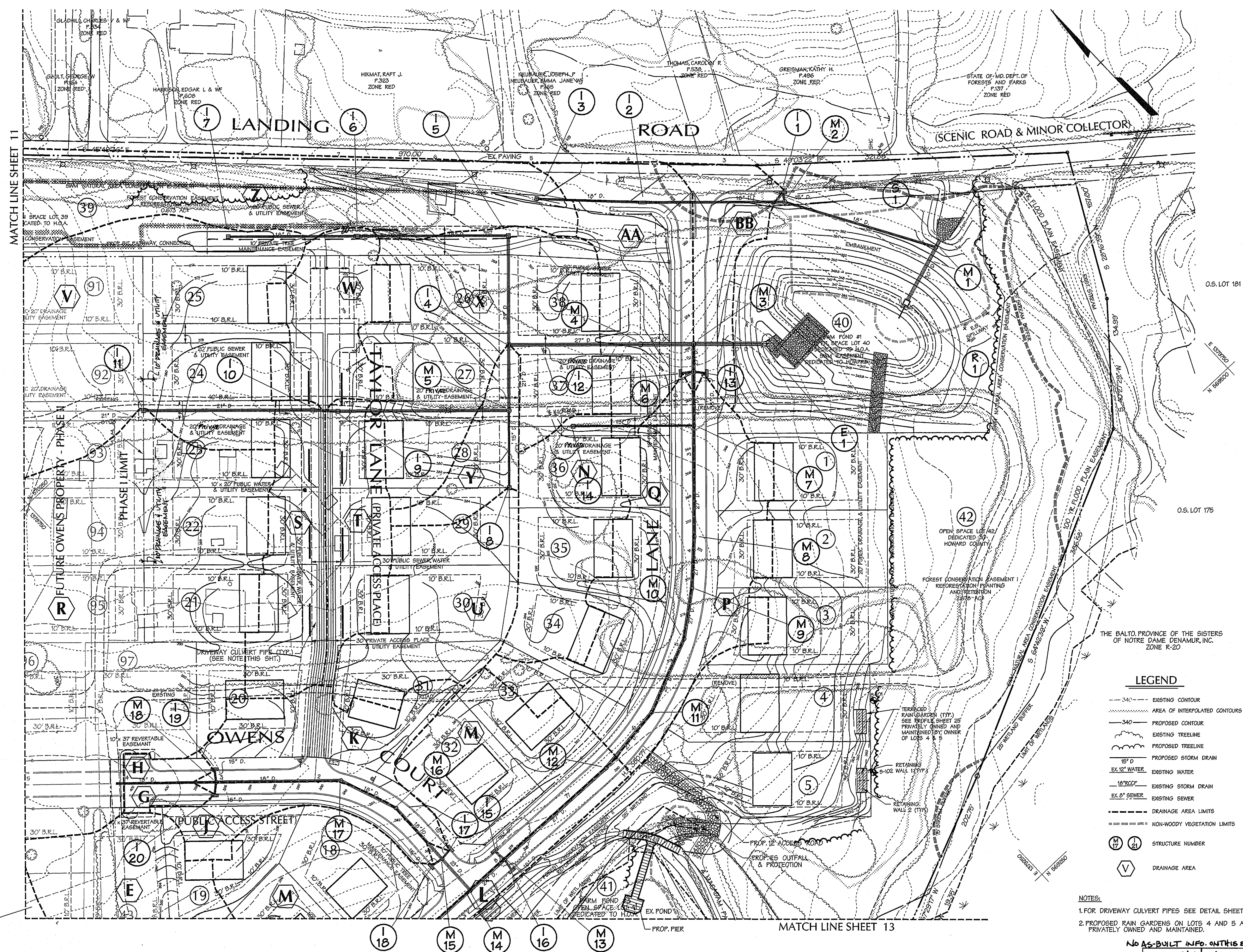
A Team of Land Planners,
 Landscape Architects,
 Golf Course Architects,
 Engineers, Surveyors &
 Environmental Professionals

JILL SCHOPF, P.E. #19997
 9/3/04
 Date

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 JILL SCHOPF

I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

PROFILES
 SCALE: HORIZ 1"=50'
 VERT. 1"=5'



LOCATION MAP
SCALE: 1" = 2000'

BENCHMARK DESCRIPTION

BM1
#318A-DISC SET IN CONCRETE
N 559641.923
E 1374915.925
ELEVATION = 468.90
2 FT. SOUTH OF SIDEWALK ON ILCHESTER ROAD
1471 FT. FROM GATE IN FENCE ON TRANSMISSION LINE R.O.W.

BM2
#370CA-DISC SET IN CONCRETE
N 554321.656
E 1382742.880
ELEVATION = 256.965
20.0' SOUTH OF CENTERLINE OF LANDING ROAD
25 MILES NORTHWEST ON LANDING ROAD FROM
INTERSECTION OF LANDING ROAD AND MONTGOMERY RD.

DATA SOURCES:

THE BALTO. PROVINCE OF THE SISTERS OF NOTRE DAME DE NAMUR, INC. ZONE R-20

LEGEND

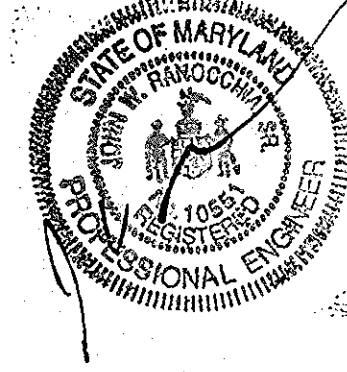
- 340 --- EXISTING CONTOUR
- AREA OF INTERPOLATED CONTOURS
- 340 --- PROPOSED CONTOUR
- 340 --- EXISTING TREELINE
- 340 --- PROPOSED TREELINE
- 15" D --- EXISTING STORM DRAIN
- 15" D --- EXISTING WATER
- 15" TRCP --- EXISTING STORM DRAIN
- 8" SEWER --- EXISTING SEWER
- --- DRAINAGE AREA LIMITS
- --- NON-WOODY VEGETATION LIMITS
- (M 1) STRUCTURE NUMBER
- (V) DRAINAGE AREA

NOTES:

- FOR DRIVEWAY CULVERT PIPES SEE DETAIL SHEET 6.
- PROPOSED RAIN GARDENS ON LOTS 4 AND 5 ARE PRIVATELY OWNED AND MAINTAINED.

NO AS-BUILT INFO. ON THIS SHEET

91304
Date



Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Wilson, Jr. 2-28-05
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Andy Benetta 3/15/05
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 3/15/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Date	No.	Revision Description

FINAL PLAN
OWENS PROPERTY PHASE I
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
TAX MAP 31 PARCEL 243, 572

OWNER /DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keety and Co. Inc.
P.O. Box 528
61 E. Padonia Road
Timonium, MD 21093

DMW
Darrin Cass/Walkers, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 286-3233 Fax 286-4705

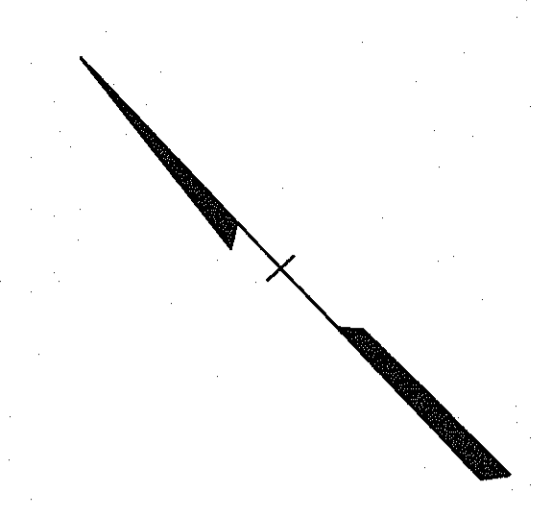
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE
STORM DRAIN - DRAINAGE AREA MAP DEVELOPED CONDITIONS

Des By MAT	Scale 1" = 50'	Proj. No. 01086.A1
Dwn By KDE/MAT	Date 9-3-04	11 OF 34
Chk By	Approved	

PHASE I DEVELOPED CONDITIONS

1.05 Ac.± C=0.28	ZONING= R-20 7% IMP.	0.45 Ac.± C=0.45	ZONING= R-20 33% IMP.	1.32 Ac.± C=0.55	ZONING= R-20 35% IMP.	0.74 Ac.± C=0.50	ZONING= R-20 40% IMP.	0.36 Ac.± C=0.64	ZONING= R-20 50% IMP.	0.42 Ac.± C=0.59	ZONING= R-20 45% IMP.	1.93 Ac.± C=0.40	ZONING= R-20 13% IMP.
0.04 Ac.± C=0.71	ZONING= R-20 78% IMP.	0.50 Ac.± C=0.52	ZONING= R-20 44% IMP.	0.54 Ac.± C=0.42	ZONING= R-20 15% IMP.	8.67 Ac.± C=0.29	ZONING= R-20 5% IMP.	0.60 Ac.± C=0.31	ZONING= R-20 11% IMP.	1.12 Ac.± C=0.41	ZONING= R-20 13% IMP.	0.61 Ac.± C=0.59	ZONING= R-20 33% IMP.
0.04 Ac.± C=0.71	ZONING= R-20 75% IMP.	0.25 Ac.± C=0.71	ZONING= R-20 60% IMP.	0.53 Ac.± C=0.62	ZONING= R-20 60% IMP.	0.48 Ac.± C=0.61	ZONING= R-20 44% IMP.	2.28 Ac.± C=0.32	ZONING= R-20 8% IMP.	0.23 Ac.± C=0.27	ZONING= R-20 4% IMP.	0.31 Ac.± C=0.59	ZONING= R-20 42% IMP.



PHASE I DEVELOPED CONDITIONS

1.04 Ac.± C=0.26	D	ZONING= R-20 0 % IMP.
1.05 Ac.± C=0.36	E	ZONING= R-20 7 % IMP.
8.67 Ac.± C=0.29	R	ZONING= R-20 5 % IMP.
2.28 Ac.± C=0.32	V	ZONING= R-20 8 % IMP.
1.93 Ac.± C=0.40	Z	ZONING= R-20 13 % IMP.

LEGEND

- 340 --- EXISTING CONTOUR
- 340 --- PROPOSED CONTOUR
- AREA OF INTERPOLATED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- 15" D PROPOSED STORM DRAIN
- EX. 12" WATER EXISTING WATER
- 18" R/OCP EXISTING STORM DRAIN
- EX. 6" SEWER EXISTING SEWER
- DRAINAGE AREA LIMITS
- (M) (21) STRUCTURE NUMBER
- (V) DRAINAGE AREA

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William J. ... 2-28-05
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Cindy ... 3/15/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 3/14/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Date	No.	Revision Description
FINAL PLAN		
OWENS PROPERTY PHASE I		
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'		
TAX MAP 31 PARCEL 243, 572		

OWNER /DEVELOPER:

PATAPSCO LANDING, LLC
c/o James Keelty and Co. Inc.
P.O. Box 528
61 E. Padonia Road.
Timonium, MD 21093

NO AS-BUILT INFO. ON THIS SHEET

9/3/04
Date

Professional Engr. No. 10551

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

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

TITLE
**STORM DRAIN - DRAINAGE AREA MAP
DEVELOPED CONDITIONS**

Des By MAT	Scale 1"=50'	Proj. No. 01086.A1
Dm By KDE/MAT	Date 9-3-04	12 OF 34
Chk By	Approved	

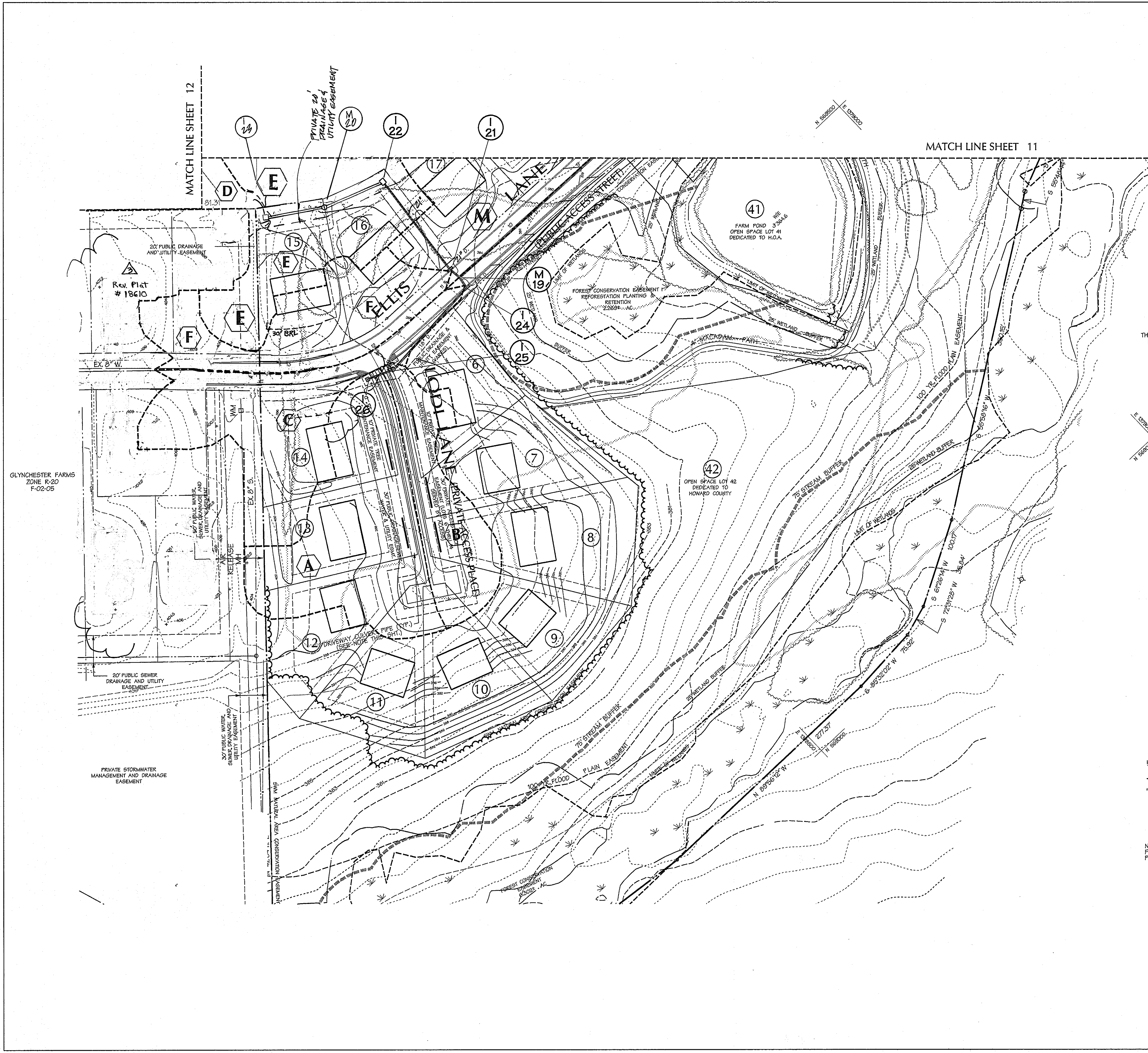
MINTZ, ANDREW C.
MINTZ, PAUL F. TIC
P. 240
ZONE R-20

RYLAND GROUP, INC.
P. 242
ZONE R-20

GLYNCHESTER FARMS
ZONE R-20
F-02-05

MATCH LINE SHEET 11

MATCH LINE SHEET 13



THE BALTO. PROVINCE OF THE SISTERS OF NOTRE DAME DENAMUR, INC. (ZONE R-20)

GLYNCHESTER FARMS ZONE R-20 F-02-05

PHASE I DEVELOPED CONDITIONS

0.78 Ac.± C=0.55	A	ZONING= R-20 34 % IMP.
0.38 Ac.± C=0.59	B	ZONING= R-20 42 % IMP.
0.67 Ac.± C=0.39	C	ZONING= R-20 24 % IMP.
1.04 Ac.± C=0.26	D	ZONING= R-20 0 % IMP.
1.05 Ac.± C=0.36	E	ZONING= R-20 7 % IMP.
0.52 Ac.± C=0.48	F	ZONING= R-20 38 % IMP.
0.25 Ac.± C=0.71	L	ZONING= R-20 60 % IMP.
1.32 Ac.± C=0.55	M	ZONING= R-20 35 % IMP.

DATA SOURCES:

LEGEND

- 340 --- EXISTING CONTOUR
 - 340 --- PROPOSED CONTOUR
 - AREA OF INTERPOLATED CONTOURS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - 18" D EX 12" WATER EXISTING WATER
 - 18" RCCP EXISTING STORM DRAIN
 - EX. 8" SEWER EXISTING SEWER
 - DRAINAGE AREA LIMITS
 - NON-WOODY VEGETATION LIMITS
 - (M) (21) STRUCTURE NUMBER
 - (V) DRAINAGE AREA
- NOTE: FOR DRIVEWAY CULVERT PIPES SEE DETAIL SHEET 6.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS	
<i>William J. Chilton</i>	2-28-05 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Conrad Hamilton</i>	3/15/05 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	
10-5-06	REVISE ELLIS L.N. ROW
7-27-05	REVISE 1-23, ADD M-20, ADJUST DA
Date	No. Revision Description

FINAL PLAN
OWENS PROPERTY
PHASE I
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
TAX MAP 31 PARCEL 243,572

OWNER /DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keilty and Co. Inc.
P.O. Box 522
51 E. Padonia Road
Timonium, MD 21093

NO AS-BUILT INFO. ON THIS SHEET

9-3-04
Date

Professional Engr. No. 10551

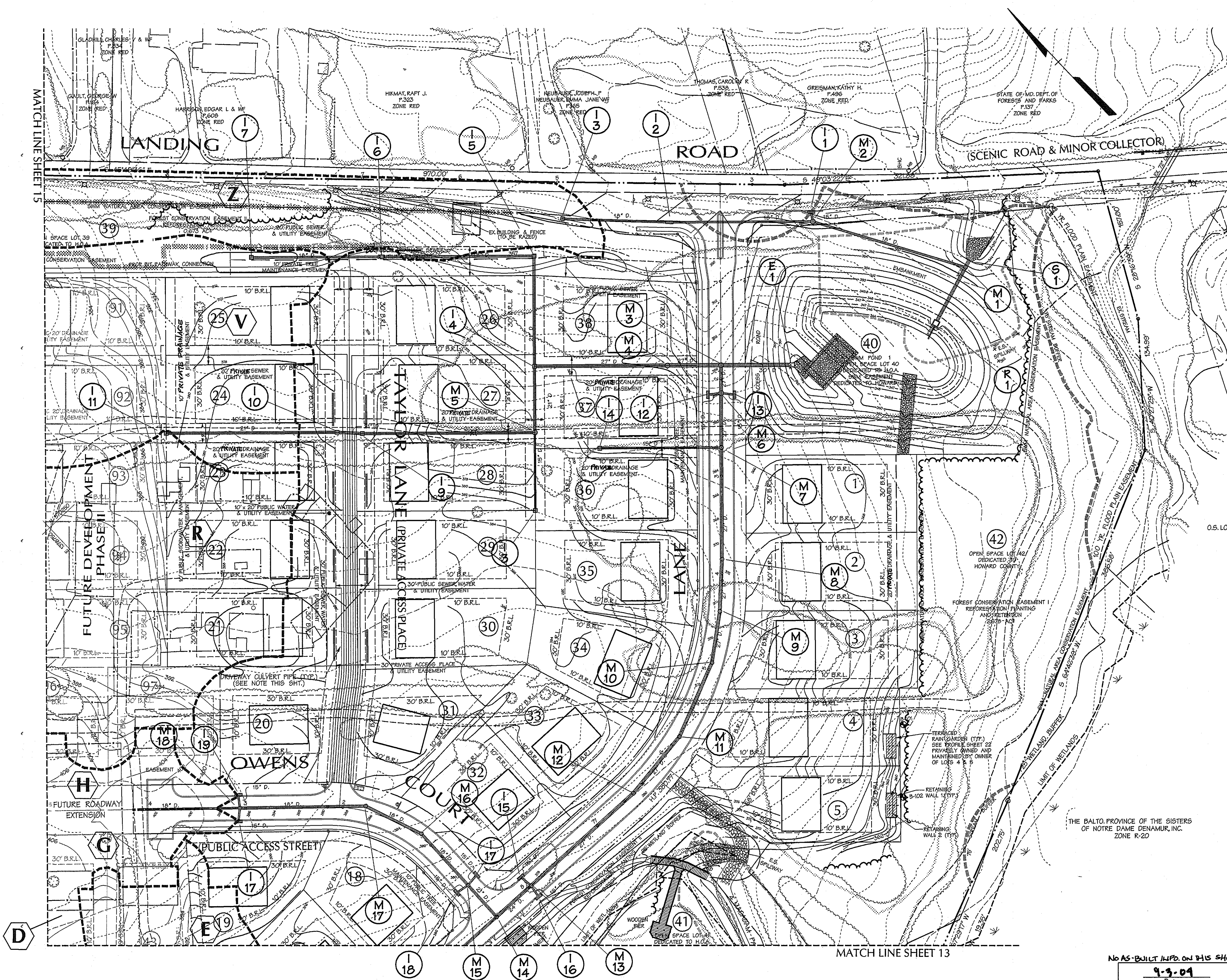
DMW
Duff McCreary Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 286-3333
Fax 298-4705

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

TITLE
STORM DRAIN - DRAINAGE AREA MAP
DEVELOPED CONDITIONS

Des By MAT	Scale 1"=50'	Proj. No. 01086.A1
Dm By KDE/MAT	Date 9-3-04	13 OF 34
Chk By	Approved	

10/20/04 10:00 AM



LEGEND

- 340 --- EXISTING CONTOUR
- 340 --- PROPOSED CONTOUR
- AREA OF INTERPOLATED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- 15" D PROPOSED STORM DRAIN
- EX 12" WATER EXISTING WATER
- 10" RCCP EXISTING STORM DRAIN
- EX 8" SEWER EXISTING SEWER
- ULTIMATE DRAINAGE AREA LIMITS
- 340 --- ULTIMATE PHASE II GRADING
- NON-WOODY VEGETATION BUFFER
- Ⓜ Ⓜ STRUCTURE NUMBER
- Ⓧ DRAINAGE AREA

NOTES:

- FOR DRIVEWAY CULVERT PIPES SEE DETAIL SHEET 6.
- PROPOSED RAIN GARDENS ON LOT 4 AND 5 ARE PRIVATELY OWNED AND MAINTAINED.

DATA SOURCES:

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS	
<i>William J. Walker, Jr.</i>	2-24-05
CHIEF, BUREAU OF HIGHWAYS	DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Cindy Hand</i>	3/5/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	3/3/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE

No.	Revision Description
	Date FINAL PLAN

OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243,572

OWNER /DEVELOPER:

PATAPSCO LANDING, LLC
 c/o James Keilty and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road
 Timonium, MD 21093

No AS-BUILT INFO ON THIS SHEET

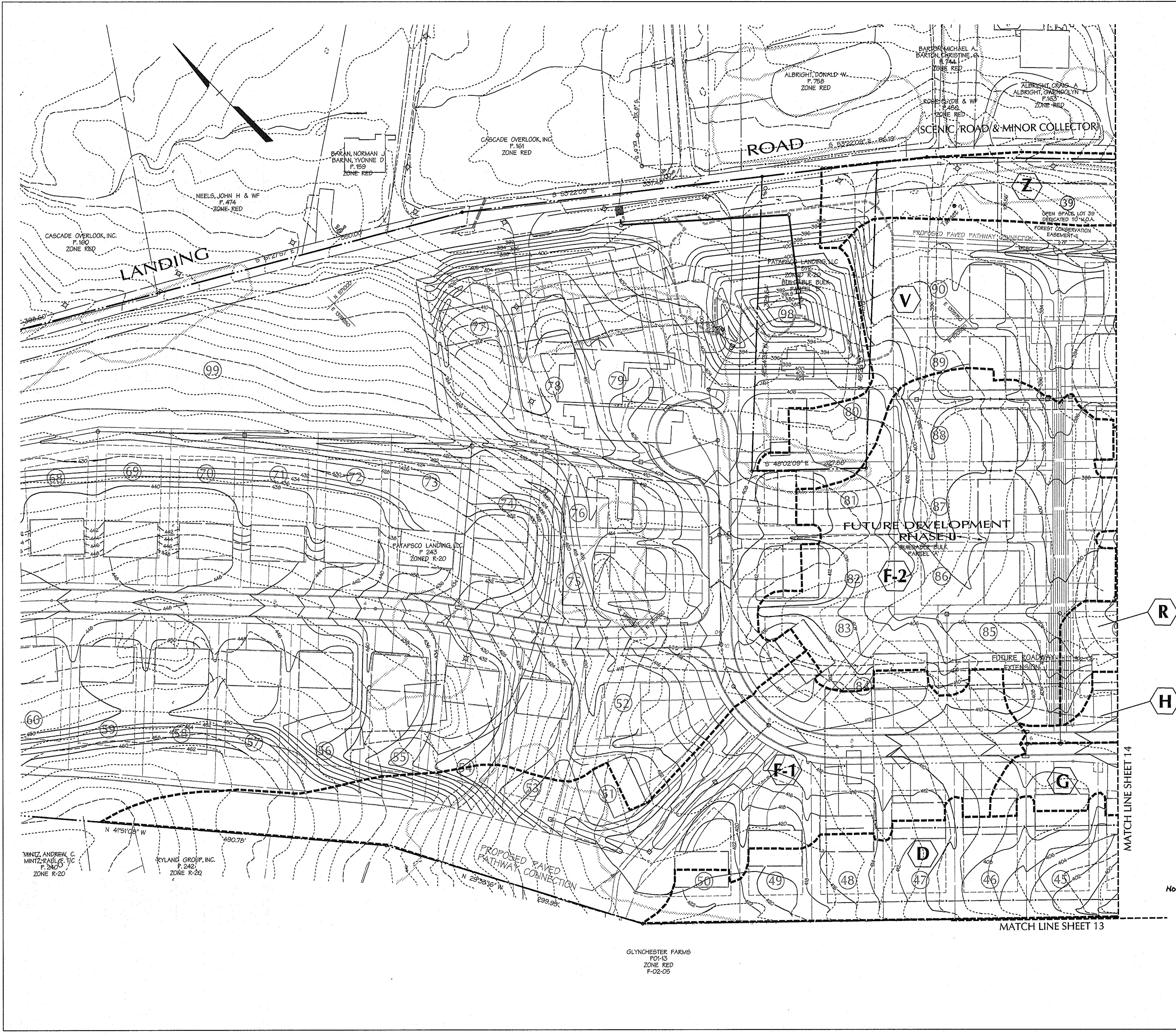
Date **9-3-04**

Professional Engr. No. 10551

PHASE I & II ULTIMATE DEVELOPED CONDITIONS

0.9 Ac.± C=0.41	E ZONING= R-20 12 % IMP.	1.85 Ac.± C=0.40	R ZONING= R-20 23 % IMP.
0.48 Ac.± C=0.58	G ZONING= R-20 26 % IMP.	2.64 Ac.± C=0.43	V ZONING= R-20 45 % IMP.
0.04 Ac.± C=0.71	H ZONING= R-20 15 % IMP.	1.30 Ac.± C=0.34	Z ZONING= R-20 23 % IMP.

TITLE		
STORM DRAIN - DRAINAGE AREA MAP ULTIMATE CONDITIONS		
Des By MAT	Scale 1"=50'	Proj. No. 01086.A1
Dm By ECY	Date 9-3-04	14 OF 34
Chk By	Approved	



PHASE I & II ULTIMATE DEVELOPED CONDITIONS

0.9 Ac.± C=0.41	D ZONING= R-20 12 % IMP.	2.64 Ac.± C=0.43	V ZONING= R-20 45 % IMP.
0.48 Ac.± C=0.58	G ZONING= R-20 26 % IMP.	1.30 Ac.± C=0.34	Z ZONING= R-20 23 % IMP.
0.04 Ac.± C=0.71	H ZONING= R-20 15 % IMP.	3.28 Ac.± C=0.44	F-1 ZONING= R-20 26 % IMP.
		2.48 Ac.± C=0.51	F-2 ZONING= R-20 26 % IMP.

LEGEND

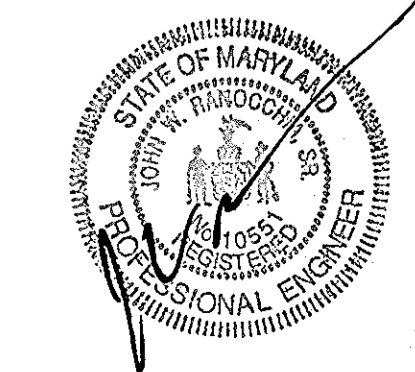
- 340 --- EXISTING CONTOUR
- 340 --- PROPOSED CONTOUR
- AREA OF INTERPOLATED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- 15" D PROPOSED STORM DRAIN
- EX. 12" WATER EXISTING WATER
- 18" RCP EXISTING STORM DRAIN
- EX. 8" SEWER EXISTING SEWER
- ULTIMATE DRAINAGE AREA LIMITS
- 340 --- ULTIMATE PHASE II GRADING
- NON-WOODY VEGETATION BUFFER
- (M) (21) STRUCTURE NUMBER
- (V) DRAINAGE AREA

DATA SOURCES:

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS	
<i>William J. Malen</i> CHIEF, BUREAU OF HIGHWAYS	2-28-05 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Judy Hammett</i> CHIEF, DIVISION OF LAND DEVELOPMENT	9/15/05 DATE
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	9/16/05 DATE

Date	No.	Revision Description
		FINAL PLAN
		OWENS PROPERTY PHASE I
		LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
		TAX MAP 31 PARCEL 243.672
OWNER /DEVELOPER:		
PATAPSCO LANDING, LLC c/o James Keilty and Co. Inc. P.O. Box 5228 61 E. Padonia Road Timonium, MD 21093		

NO AS-BUILT INFO. ON THIS SHEET
9/3/04
Date

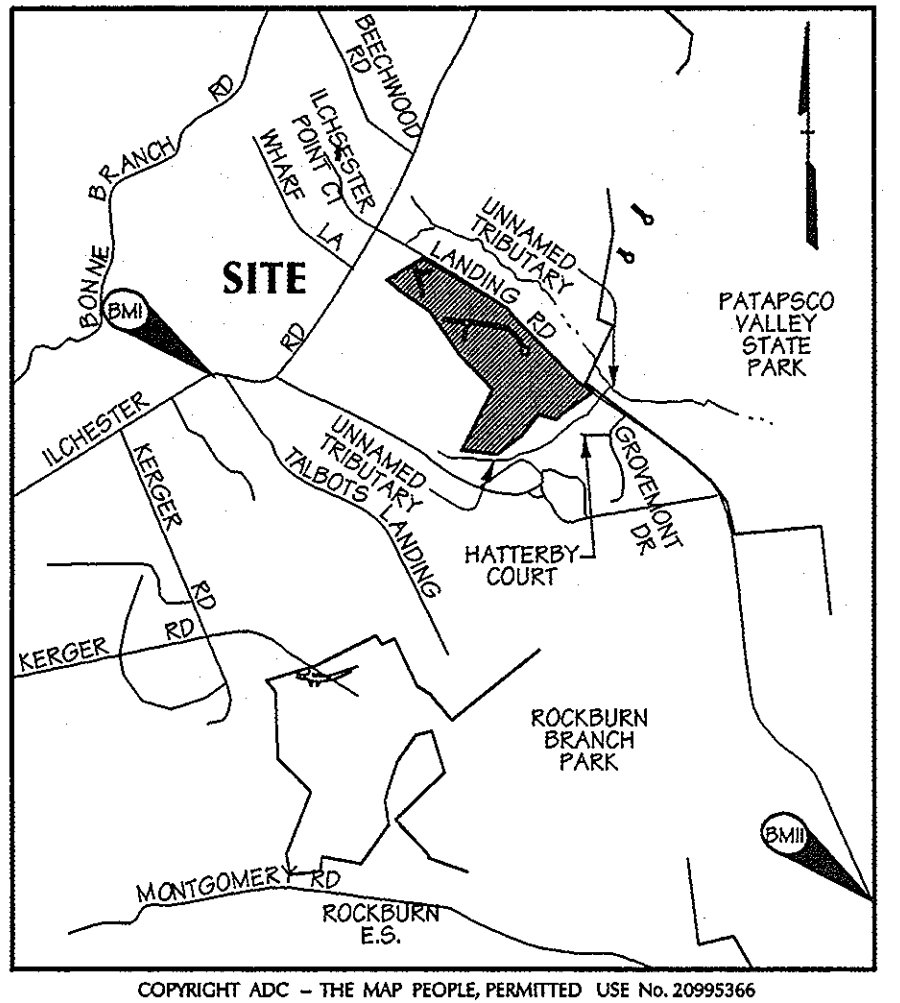
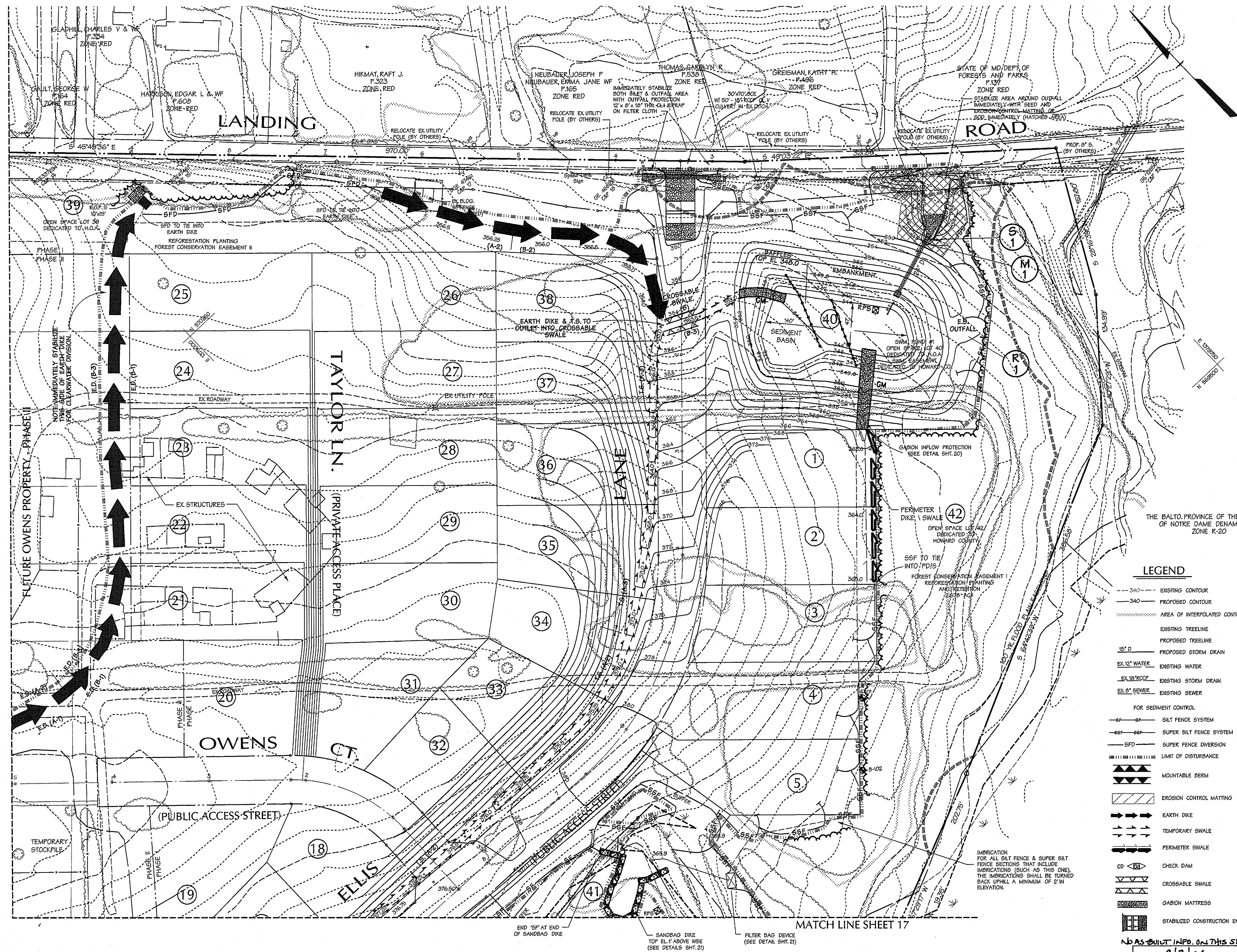


DMW
Duff-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-8333
Fax 296-4705
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
**STORM DRAIN - DRAINAGE AREA MAP
ULTIMATE CONDITIONS**

Des By	MAT	Scale	1" = 50'	Proj. No.	01088.A1
Dwn By	ECY	Date	9-3-04		
Chk By		Approved			15 OF 34

Professional Engr. No. 10551



LOCATION MAP

SCALE: 1" = 200'

BENCHMARK DESCRIPTION

BM1
#31EA-DISC SET IN CONCRETE
N 569641.123
E 1374916.305
ELEVATION = 468.90
2 FT. SOUTH OF SIDEWALK ON LICHESTER ROAD
471.1 FT. FROM GATE IN FENCE ON TRANSMISSION LINE R.O.W.
BM2
#257CA-DISC SET IN CONCRETE
N 564321.656
E 1302742.880
ELEVATION = 226.965
20.6' SOUTH OF CENTERLINE OF LANDING ROAD
25 MILES NORTHWEST ON LANDING ROAD FROM
INTERSECTION OF LANDING ROAD AND MONTGOMERY RD.

GENERAL NOTES

1. ALL EX-SITE STRUCTURES SHALL BE REMOVED PRIOR TO SITE CONSTRUCTION.
2. ALL EX-SITE UTILITY POLES SHALL BE ABANDONED OR REMOVED BY UTILITY OWNER PRIOR TO SITE CONSTRUCTION.
3. ALL EX-UTILITY POLES TO BE RELOCATED FOR NEW CONSTRUCTION SHALL BE COORDINATED WITH UTILITY OWNER.
4. ALL EX-TRAFFIC OR UTILITY SIGNS TO BE MOVED FOR NEW CONSTRUCTION SHALL BE COORDINATED WITH AGENCY OWNER OF SIGN.
5. FOR SEDIMENT BASIN DATA TABLE SEE SHEET 20 OF 34.

LEGEND

- 34.0 --- EXISTING CONTOUR
- 34.0 --- PROPOSED CONTOUR
- AREA OF INTERPOLATED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- 15" D --- PROPOSED STORM DRAIN
- EXISTING WATER
- EX. 12" WATER
- EX. 18" SEWER
- EX. 8" SEWER
- EXISTING STORM DRAIN
- EXISTING SEWER
- FOR SEDIMENT CONTROL
- SILT FENCE SYSTEM
- SUPER SILT FENCE SYSTEM
- SUPER FENCE DIVERSION
- LIMIT OF DISTURBANCE
- MOUNTABLE BERM
- EROSION CONTROL MATTING
- EARTH DIKE
- TEMPORARY SWALE
- PERIMETER SWALE
- CHECK DAM
- CROSSABLE SWALE
- GABION MATTRESS
- STABILIZED CONSTRUCTION ENTRANCE

DATA SOURCES:

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William S. Watson 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

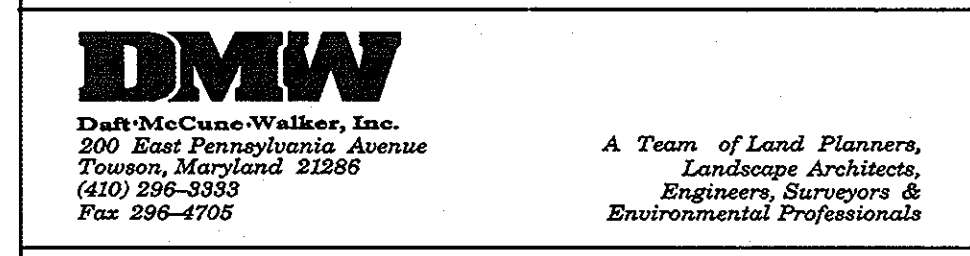
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Janice K. Smith 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/16/05
 DATE

Date	No.	Revision Description

FINAL PLAN OWENS PROPERTY PHASE I
 LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40 & 41
 TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keely and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road
 Timonium, MD 21093



TITLE EROSION & SEDIMENT CONTROL PLAN PHASE I GRADING CONDITIONS

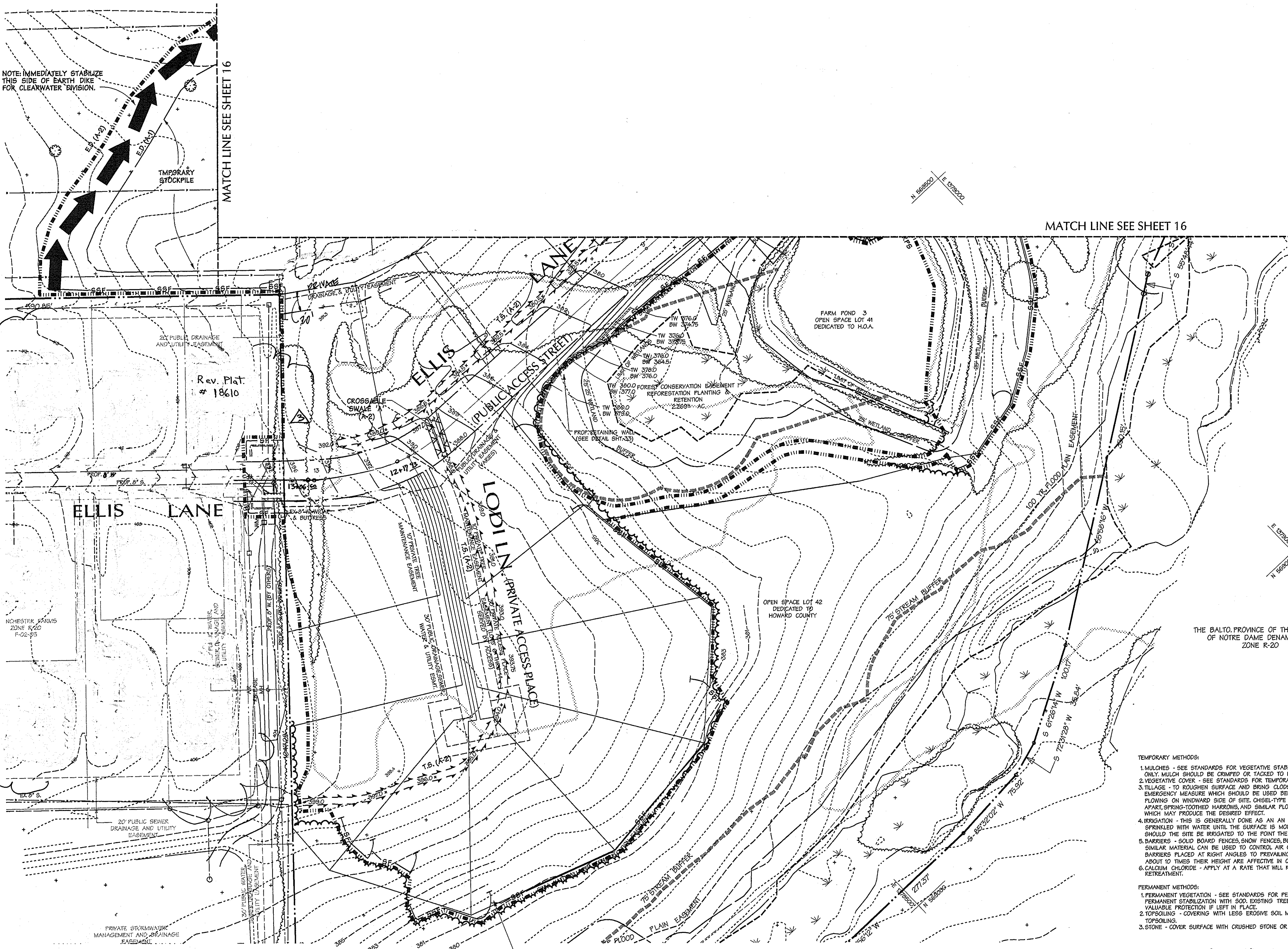
Des By	MAT	Scale	1" = 50'	Proj. No.	01086.A1
Dwn By	KDE /MAT	Date	9-3-04		
Chk By	Approved				16 OF 34

Professional Engr. No. 10551

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.
 APPROVED: *John W. Ramackin* 9/24/04
 HOWARD SOIL CONSERVATION DISTRICT
 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.
 SIGNATURE OF DEVELOPER: *MORRIS BUDA* 9/2/04
 PRINT NAME BELOW SIGNATURE: MORRIS BUDA DATE

ENGINEERS CERTIFICATE:
 I/WE 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 NOTICED 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: *John W. Ramackin* 10551 9/3/04
 REG. NO. DATE
 PRINT NAME BELOW SIGNATURE: John W. Ramackin



NOTE: IMMEDIATELY STABILIZE THIS SIDE OF EARTH DIKE FOR CLEARWATER DIVISION.

TEMPORARY STOCKPILE

MATCH LINE SEE SHEET 16

MATCH LINE SEE SHEET 16

LEGEND

- 340 --- EXISTING CONTOUR
 - 340 --- PROPOSED CONTOUR
 - AREA OF INTERPOLATED CONTOURS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - 15" D --- PROPOSED STORM DRAIN
 - PROPOSED RETAINING WALL
 - EX 12" WATER --- EXISTING WATER
 - 18" SLOPE --- EXISTING STORM DRAIN
 - EX 8" SEWER --- EXISTING SEWER
- FOR SEDIMENT CONTROL
- SILT FENCE SYSTEM
 - SUPER SILT FENCE SYSTEM
 - LIMIT OF DISTURBANCE
 - MOUNTABLE BERM
 - EROSION CONTROL MATTING
 - EARTH DIKE
 - TEMPORARY SWALE
 - PERIMETER SWALE
 - CD --- CHECK DAM
 - CROSSIBLE SWALE
 - GABION MATTRESS
 - STABILIZED CONSTRUCTION ENTRANCE

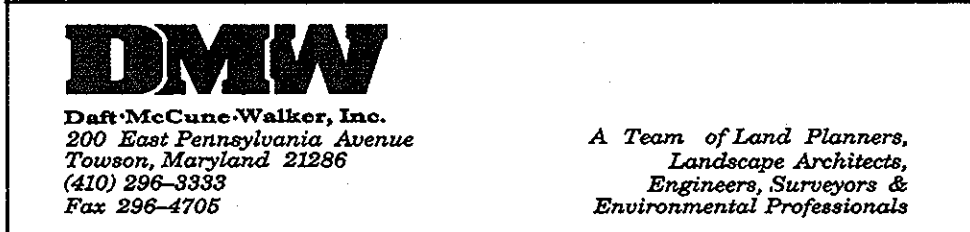
DATA SOURCES:

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS	
<i>William J. ...</i>	2-28-05
CHIEF, BUREAU OF HIGHWAYS	DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Judy ...</i>	3/15/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>...</i>	3/16/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
10-5-06	3 REVISION ELLIS LANE ROW
11-11-09	2 CHANGE EASEMENT
Date	No. Revision Description

FINAL PLAN
OWENS PROPERTY
PHASE I

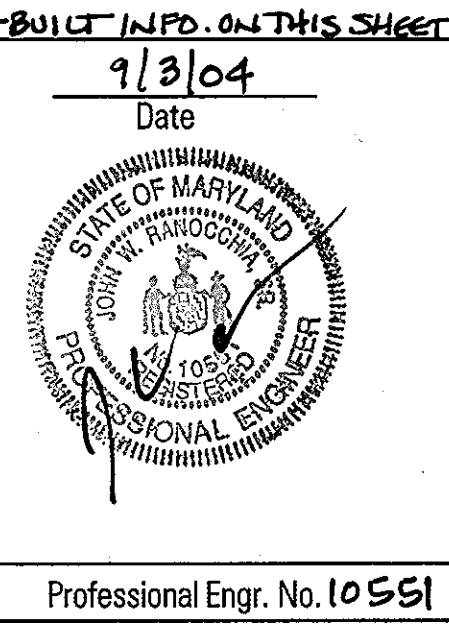
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40 & 41
TAX MAP 31 PARCEL 243,572

OWNER/ DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keilty and Co. Inc.
P.O. Box 528
61 E. Padonia Road
Timonium, MD 21093



TITLE
EROSION & SEDIMENT CONTROL PLAN
PHASE I GRADING CONDITIONS

Des By	MAT	Scale	1" = 50'	Proj. No.	01086.A1
Dm By	KDE	Date	9-3-04		
Chk By	Approved				17 OF 34



- TEMPORARY METHODS:**
- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
 - VEGETATIVE COVER - SEE STANDARDS FOR VEGETATIVE COVER.
 - STALAGE - TO ROUGHEN SURFACE AND BRING CLOSURE TO THE SURFACE THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS, BEGIN FLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE FLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARKONS, AND SIMILAR FLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
 - IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THE RUNOFF BEGINS TO FLOW.
 - 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.
 - CALCIUM CHLORIDE - APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

- PERMANENT METHODS:**
- 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.
 - TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
 - STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

Dust Control Specifications

NO AS-BUILT IN PD. ON THIS SHEET

9/3/04
Date

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.

APPROVED: *John E. Budz* 9/20/04
HOWARD SOIL CONSERVATION DISTRICT
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.

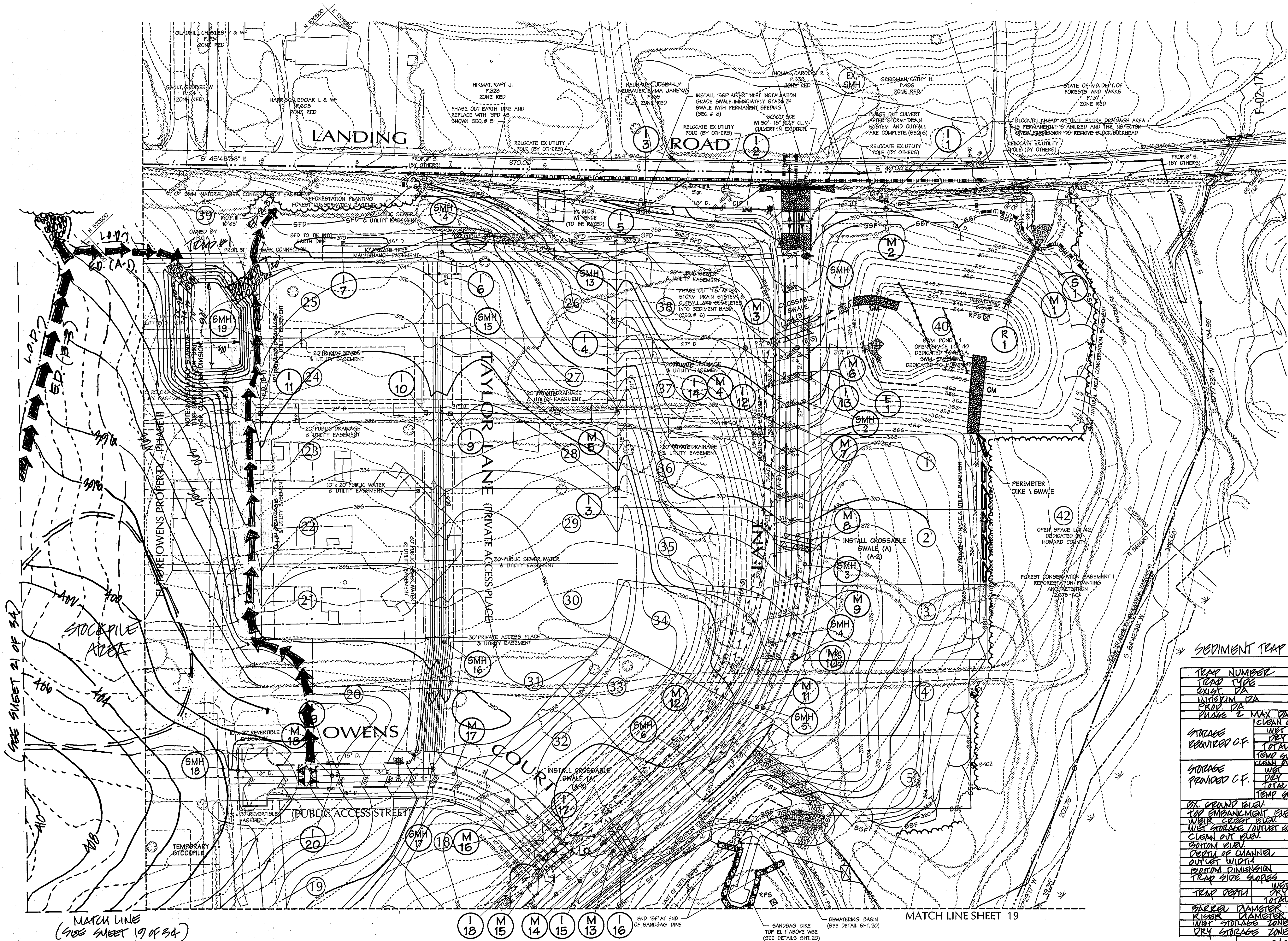
SIGNATURE OF DEVELOPER: *MDER E. BUDA*
PRINT NAME BELOW SIGNATURE: MDER E. BUDA
DATE: 9/17/04

ENGINEERS CERTIFICATE:

I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF 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: *John E. Budz*
PRINT NAME BELOW SIGNATURE: John E. Budz
REG. NO.: 10551
DATE: 9/3/04

IRRIGATION FOR ALL SILT FENCE & SUPER SILT FENCE SECTIONS THAT INCLUDE IMBRICATIONS (SUCH AS THIS ONE). THE IMBRICATIONS SHALL BE TURNED BACK UPHILL A MINIMUM OF 2' IN ELEVATION.



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- ... AREA OF INTERPOLATED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- EX. 12" WATER
- EX. 18" WATER
- EXISTING STORM DRAIN
- EX. 8" SEWER
- EXISTING SEWER
- FOR SEDIMENT CONTROL
- SILT FENCE SYSTEM
- SUPER SILT FENCE SYSTEM
- LIMIT OF DISTURBANCE
- MOUNTABLE BERM
- EROSION CONTROL MATTING
- EARTH DIKE
- TEMPORARY SWALE
- PERIMETER SWALE
- CHECK DAM
- CROSSABLE SWALE
- GABION MATTRESS
- STABILIZED CONSTRUCTION ENTRANCE

THE BALTO. PROVINCE OF THE SISTERS OF NOTRE DAME DENAMUR, INC. ZONE R-20

DATA SOURCES:

SEDIMENT TRAP TABLE

TRAP NUMBER	ST 1	
TRAP TYPE	4.00	
EXIST. DIA	4.33	
INSTALL DIA	4.33	
TRAP DIA	5.0	
PHASE 2 MAX DIA	5.0	
STORAGE PROVIDED C.F.	CLEAN OUT	4,500
	WET	9,000
	DRY	9,000
TOTAL	18,000	
STORAGE PROVIDED C.F.	TEMP SUM	0.45 AC-FI
	WET	4.74
	DRY	12.25
TOTAL	42.197	
TEMP SUM	0.45 AC-FI	
EX. GROUND ELEV.	274.40	
TOP EMPIREMENT ELEV.	277.50	
WET CLEAN OUT ELEV.	274.50	
WET STORAGE INLET ELEV.	274.00	
CLEAN OUT ELEV.	271.00	
BOTTOM ELEV.	272.00	
DEPTH OF CHANNEL	N/A	
OUTLET WIDTH	2.0'	
BOTTOM DIMENSION	50' x 90'	
TRAP SIDE SLOPES	2:1	
TRAP DEPTH	WET	4.0'
	DRY	4.0'
	TOTAL	8.0'
BARREL DIAMETER	N/A	
RIBS DIAMETER	N/A	
WET STORAGE ZONE	374.0 - 274.0	
DRY STORAGE ZONE	274.0 - 276.0	

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

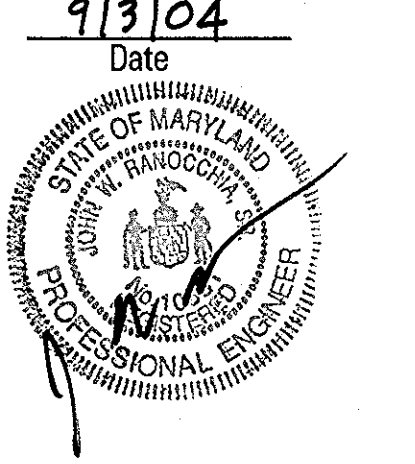
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Hammett 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 2/16/05
 DATE

6/28/05 | ADD ADDITIONAL STOCKPILE AREA
 Date No. Revision Description

FINAL PLAN
OWENS PROPERTY PHASE I
 PARCEL 'A', LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40 & 41
 TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keelty and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road,
 Timonium, MD 21093



DMW
 Dan & Co. Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-5838
 Fax 286-4706

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

TITLE: GRADING, EROSION & SEDIMENT CONTROL PHASE II GRADING CONDITIONS

Des By: MAT Scale: 1"=50' Proj. No.: 01086.A1
 Dwn By: KDE/MAT Date: 9-3-04
 Chk By: Approved 18 OF 34

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.
Jan Myra 9/20/04
 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.
Mark E. Budd 9/20/04
 APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE
 PLAN NUMBER

DEVELOPER'S 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.
 9/2/04
 SIGNATURE OF DEVELOPER
 PRINT NAME BELOW: SIGNATURE
MARK E. BUDD

ENGINEER'S CERTIFICATE:
 I/WE 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.
 9/20/04
 SIGNATURE OF ENGINEER
 PRINT NAME BELOW: SIGNATURE
John W. Ramonchic, S.E.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

- No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- Place heavy equipment mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- Rectify any nontidal wetlands, wetland buffers, waterways, or the 100-year floodplain temporarily impacted by any construction.
- All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria italica*), Oats (*Avena sp.*), and/or Rye (*Sociale cereale*). These species will allow for the stabilization of the site while also allowing the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in the wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream:

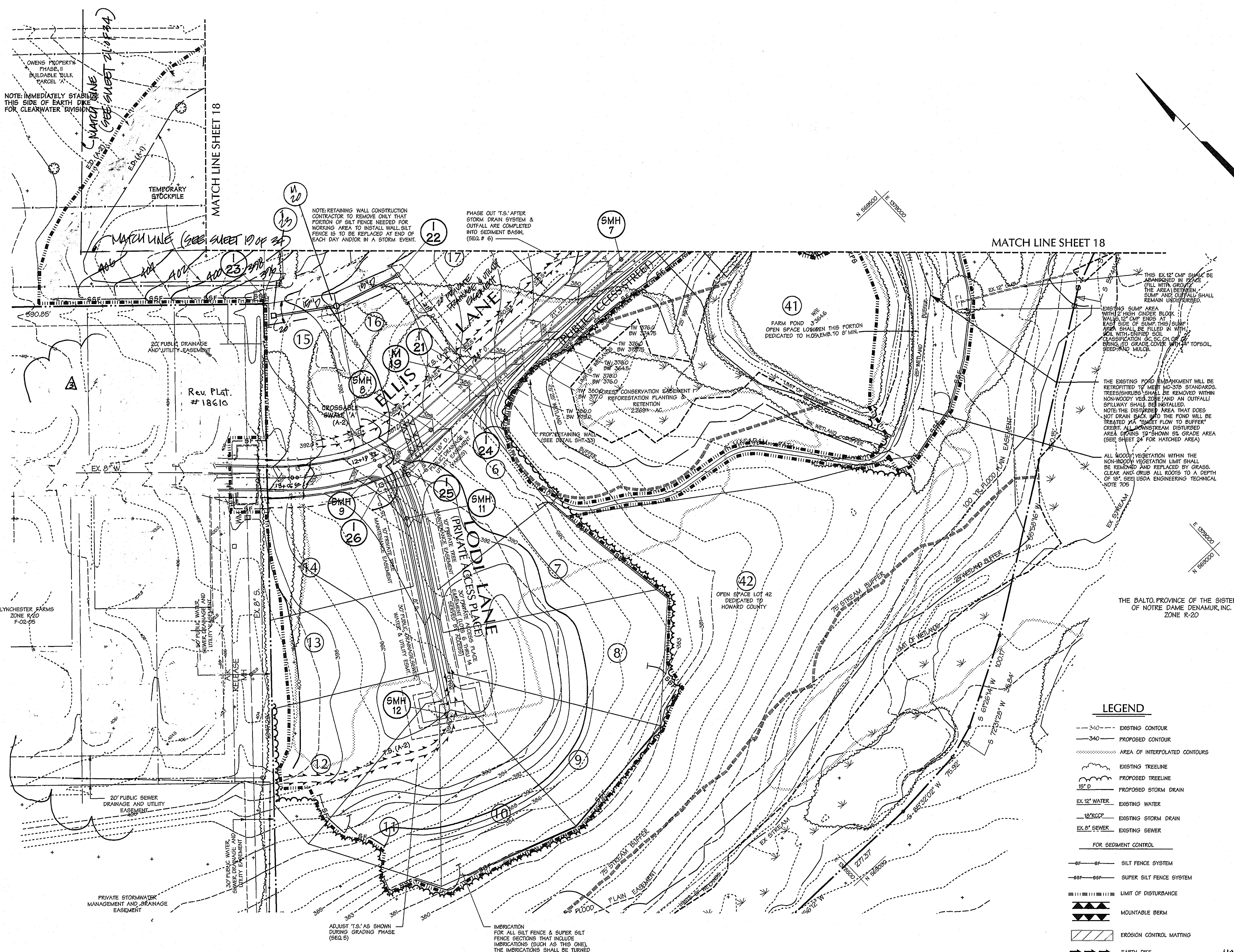
Use I Waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.

Use III Waters: In-stream work shall not be conducted during the period October 1 through April 30, inclusive, during any year.

Use IV Waters: In-stream work shall not be conducted during the period March 1 through May 31, inclusive, during any year.

- Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

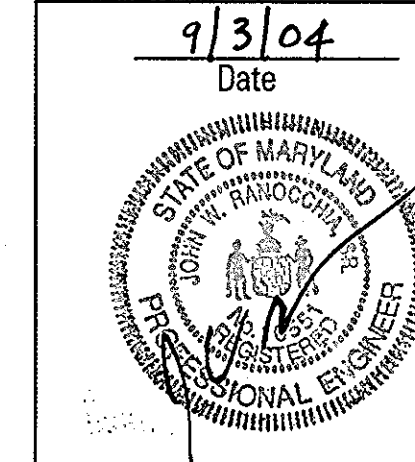
DATA SOURCES:



LEGEND

- 340 --- EXISTING CONTOUR
- 340 --- PROPOSED CONTOUR
- AREA OF INTERPOLATED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- 15" D PROPOSED STORM DRAIN
- EX 12" WATER EXISTING WATER
- EX 12" EXISTING STORM DRAIN
- EX 8" EXISTING SEWER
- FOR SEDIMENT CONTROL
- SILT FENCE SYSTEM
- SUPER SILT FENCE SYSTEM
- LIMIT OF DISTURBANCE
- MOUNTABLE BERM
- EROSION CONTROL MATTING
- EARTH DIKE
- TEMPORARY SWALE
- PERIMETER SWALE
- CD --- CHECK DAM
- CROSSABLE SWALE
- GABION MATTRESS
- STABILIZED CONSTRUCTION ENTRANCE

NO AS-BUILT INFO. ON THIS SHEET



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.

APPROVED: *[Signature]* 9/29/04
DATE

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

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.

APPROVED: *[Signature]* 9/29/04
DATE

SIGNATURE OF DEVELOPER
PRINT NAME BELOW SIGNATURE
MARK & BUD

ENGINEERS CERTIFICATE:
I/WE 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.

APPROVED: *[Signature]* 10/5/04 9/23/04
DATE

SIGNATURE OF ENGINEER
PRINT NAME BELOW SIGNATURE
John W. Rauscher

10-5-06	3	REVISE ELLIS LANE ROW
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS		
<i>[Signature]</i>	2-28-05	DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING		
<i>[Signature]</i>	3/15/05	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION		
1-27-05	2	REVISED 1-23, M-20 AND EASEMENT WITHIN SCALE
6-29-05	1	ADD ADDITIONAL STOCKPILE AREA
Date	No.	Revision Description

FINAL PLAN
OWENS PROPERTY PHASE I
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40 & 41
TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keely and Co. Inc.
P.O. Box 528
61 E. Padonia Road
Timonium, MD 21093

DMW
Duff McCreary Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax: 296-4706

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

TITLE GRADING AND SEDIMENT & EROSION CONTROL PHASE II GRADING			
Des By	MAT	Scale 1" = 50'	Proj. No. 01086.A1
Drn By	MAT	Date 9-3-04	19 OF 34
Chk By	Approved	Professional Engr. No. 10551	

MGWC 1.2: PUMP-AROUND PRACTICE



DESCRIPTION

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

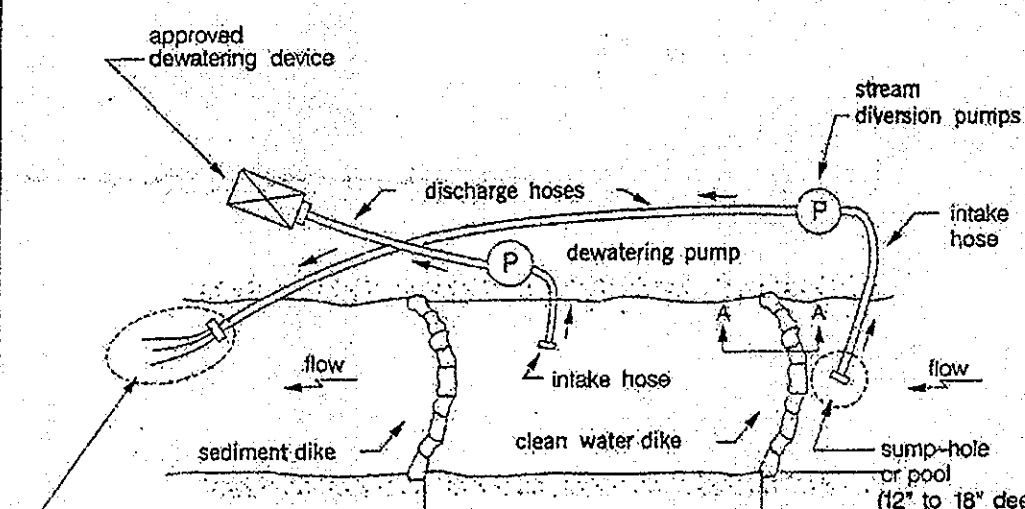
1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.

MGWC 1.2: PUMP-AROUND PRACTICE

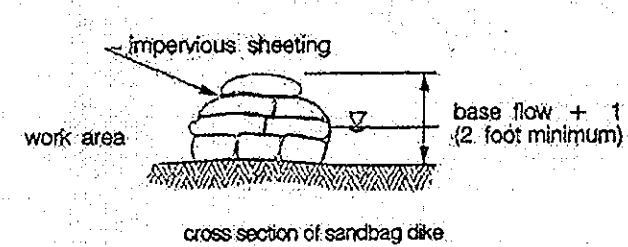
7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved device. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area, where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction).
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be regraded and revegetated as per the planning plan.

**Maryland's Guidelines To Waterway Construction
DETAIL 1.2: PUMP-AROUND PRACTICE**

PLAN VIEW



SECTION A-A



MGWC 1.5: SANDBAG/STONE CHANNEL DIVERSION

DESCRIPTION

The work should consist of installing sandbag or stone flow diversions for the purpose of erosion control when construction activities occur within the stream channel.

EFFECTIVE USES & LIMITATIONS

Diversions are used to isolate work areas from flow during the construction of in-stream projects. Diversions which have an insufficient flow capacity can fail and severely erode the disturbed channel section under construction. Therefore, in-channel construction activities should occur only during periods of low rainfall. This temporary measure may not be practical in large channels.

MATERIAL SPECIFICATIONS

Materials for sandbag and stone stream diversions should meet the following requirements:

- **Riprap:** Riprap should be washed and have a minimum diameter of 6 inches (0.15 meters).
- **Sandbags:** Sandbags should consist of materials which are resistant to ultra-violet radiation, tearing, and puncture and should be woven tightly enough to prevent leakage of the fill material (i.e., sand, fine gravel, etc.).
- **Sheeting:** Sheeting should consist of polyethylene or other materials which are impervious and resistant to puncture and tearing.

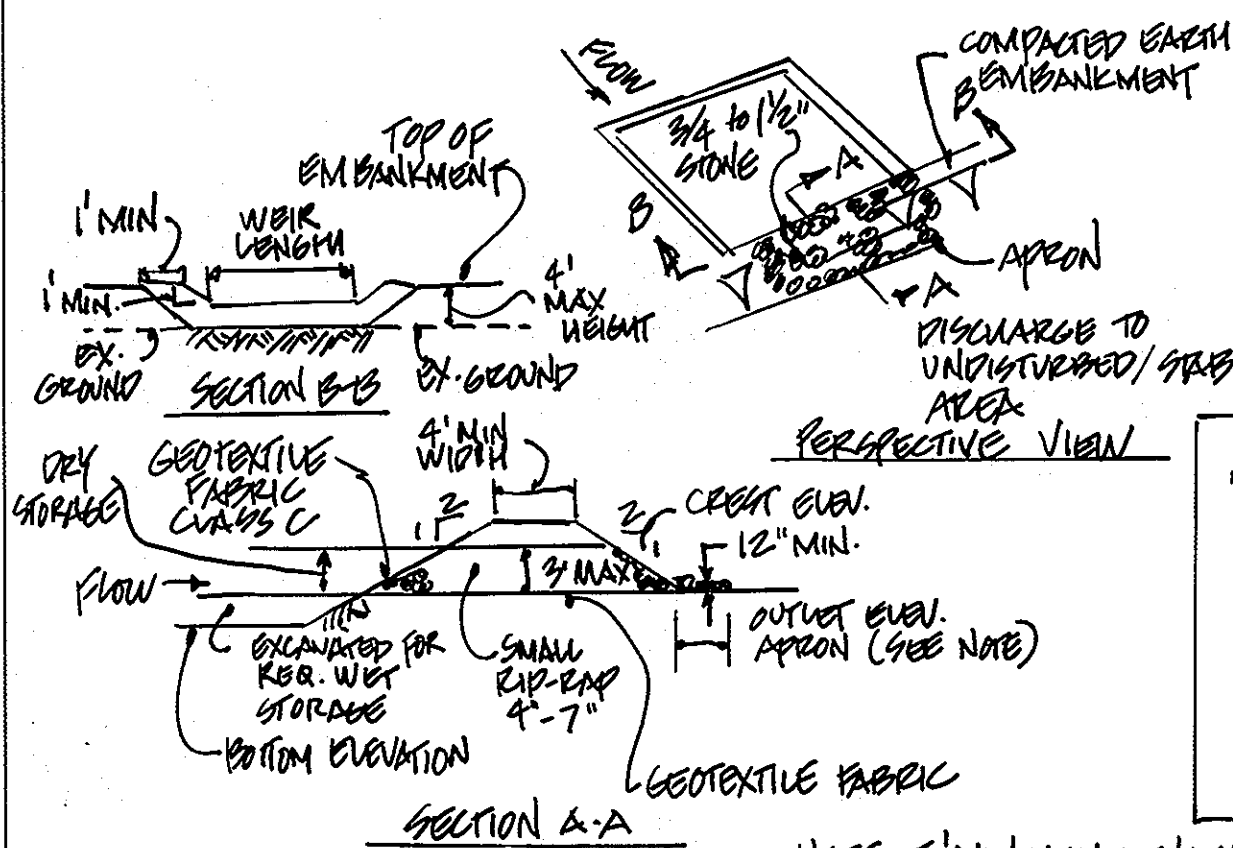
INSTALLATION GUIDELINES

All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the WMA or local authority. Installation should proceed from upstream to downstream during periods of low flow. If necessary, silt fence or silt wall bales should be installed around the perimeter of the work area.

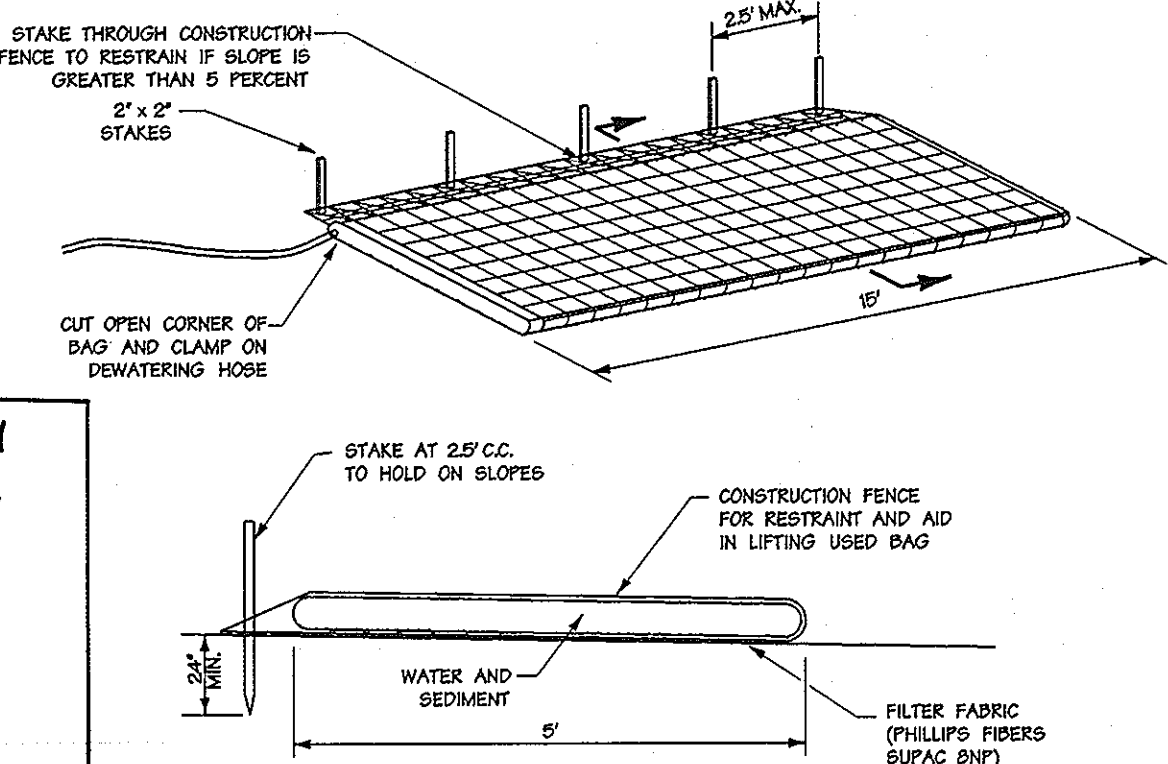
Sandbag/stone diversions can be used independently or as components of other stream diversion techniques. Installation of this measure should proceed as follows (refer to Detail 1.5):

1. The diversion structure should be installed from upstream to downstream.
2. The height of the sandbag/stone diversion should be a function of the duration of the project in the stream reach. For projects with a duration less than 2 weeks, the height of the diversion should be one-half the streambank height, measured from the channel bed, plus 1 foot (0.3 meters) or bankfull height, whichever is greater. For projects of longer duration, the top of the sandbag or stone diversion should correspond to bankfull height. For diversion structures utilizing sandbags, the stream bed should be sand prepared prior to placement of the base layer of sandbags in order to ensure a water-tight fit. Additionally, it may be necessary to prepare the bank in a similar fashion.
3. All excavated material should be deposited and stabilized in an approved area outside the 100-year floodplain unless otherwise authorized by the WMA.
4. Sediment-laden water from the construction area should be pumped to a dewatering basin.

2. REFER TO SECTION D FOR SPECIFICATIONS CONCERNING TRAP DEWATERING
10. MINIMUM TRAP DEPTH SHALL BE MEASURED FROM THE WET OBSERVATION.
11. THE ELEVATION OF THE OF ANY DIKE DIRECTING WATER INTO THE TRAP MUST BE 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.



NOTE: B' MINIMUM LENGTH UP TO 5' ACCESS OVER B' ACCESS WAS STONE/ RIP-RAP SEDIMENT TRAP ST-11



RISER #	LENGTH	WET POOL ELEV.	PERF. RISER HEIGHT	ORIFICE DRILLED HOLE SIZE	PERFORATION SPACING	PERFORATIONS PER VERT. FT.
BASIN 1	16.0'	347.1	3.1'	4.25"	2.5'	24

Sediment Control Draw-Down Not to Scale

**STONE OUTLET SEDIMENT TRAP - ST 11
CONSTRUCTION SPECIFICATIONS**

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT, THE POOL SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIALS OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIP-RAP 4" TO 7" IN SIZE WITH A 1" THICK LAYER OF 3/4" TO 1 1/2" WASHED AGGREGATE PLACED ON THE UPSTREAM FACE OF THE OUTLET STONE FACING SHALL BE WASHED AS NECESSARY TO PREVENT CLOGGING. GEOTEXTILE FILTER FABRIC SHALL 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 PLUNTON IS ABATED ONCE CONSTRUCTED THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATION IN FLOW 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.

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 EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I/WE 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/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Mark E. Budd*
Name: MARK E. BUDD
Date: 9/7/04

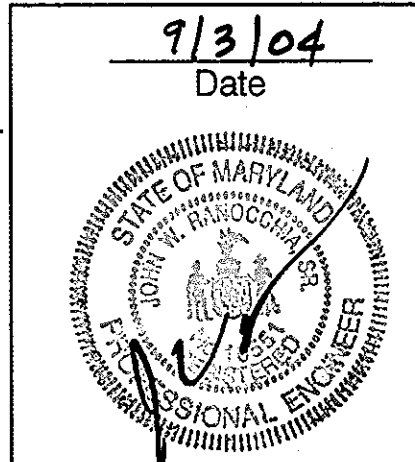
ENGINEERS CERTIFICATE:

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: *John-Rose Rancocchia*
Name: John-Rose Rancocchia
Date: 9/26/04

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

Signature: *Jim Mays*
Name: JIM MAYS
Date: 9/26/04
Signature: *John-Rose Rancocchia*
Name: JOHN-ROSE RANCOCCIA
Date: 9/26/04



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William F. Mullen 2-28-05
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Kamm 3/15/05
CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION gm 3/3/05

6-23-05 1 ADDITIONAL STOCKPILE AREA
Date No. Revision Description

FINAL PLAN
OWENS PROPERTY
PHASE I
LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40 & 41
TAX MAP 31 PARCEL 243,572

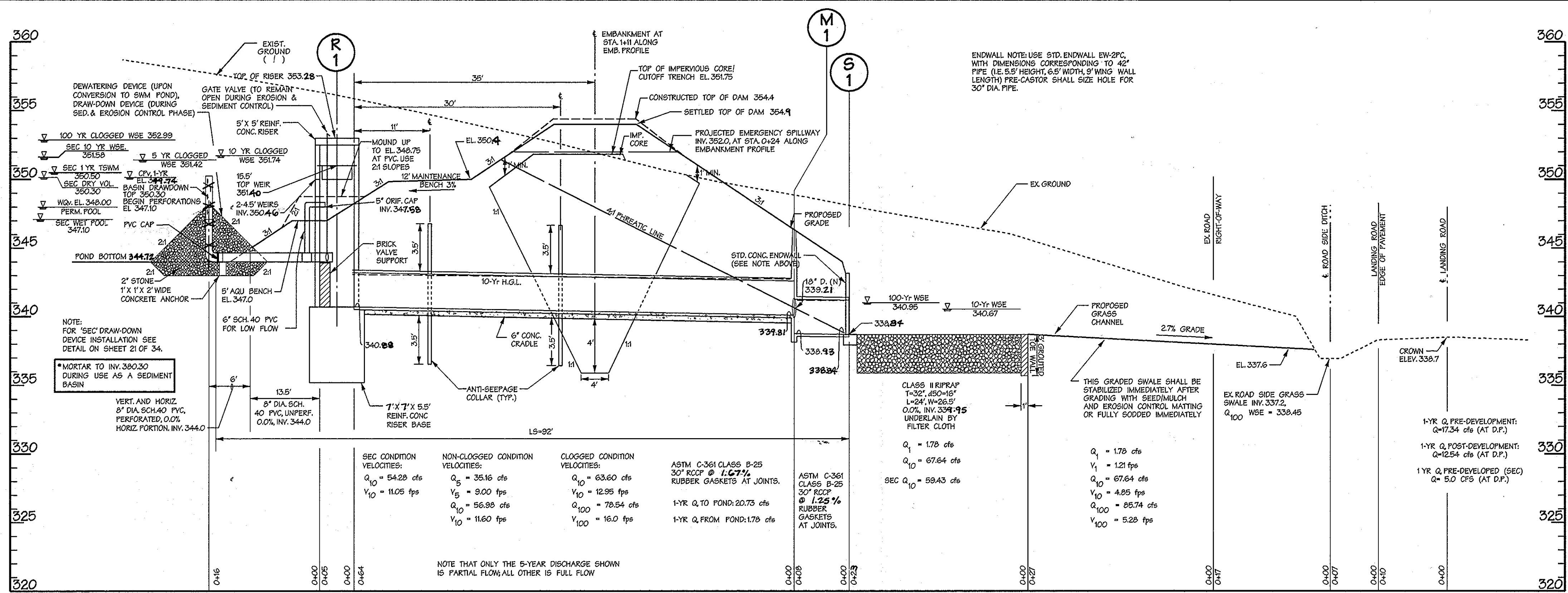
OWNER/ DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keilty and Co. Inc.
P.O. Box 5228
61 E. Padonia Road
Timonium, MD 21093

DMW
Darr McCreary-Walkers, Inc.
300 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax: 296-4706
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors and
Environmental Professionals

TITLE
SWM, EROSION AND SEDIMENT CONTROL
DETAILS & SWM SPECIFICATIONS

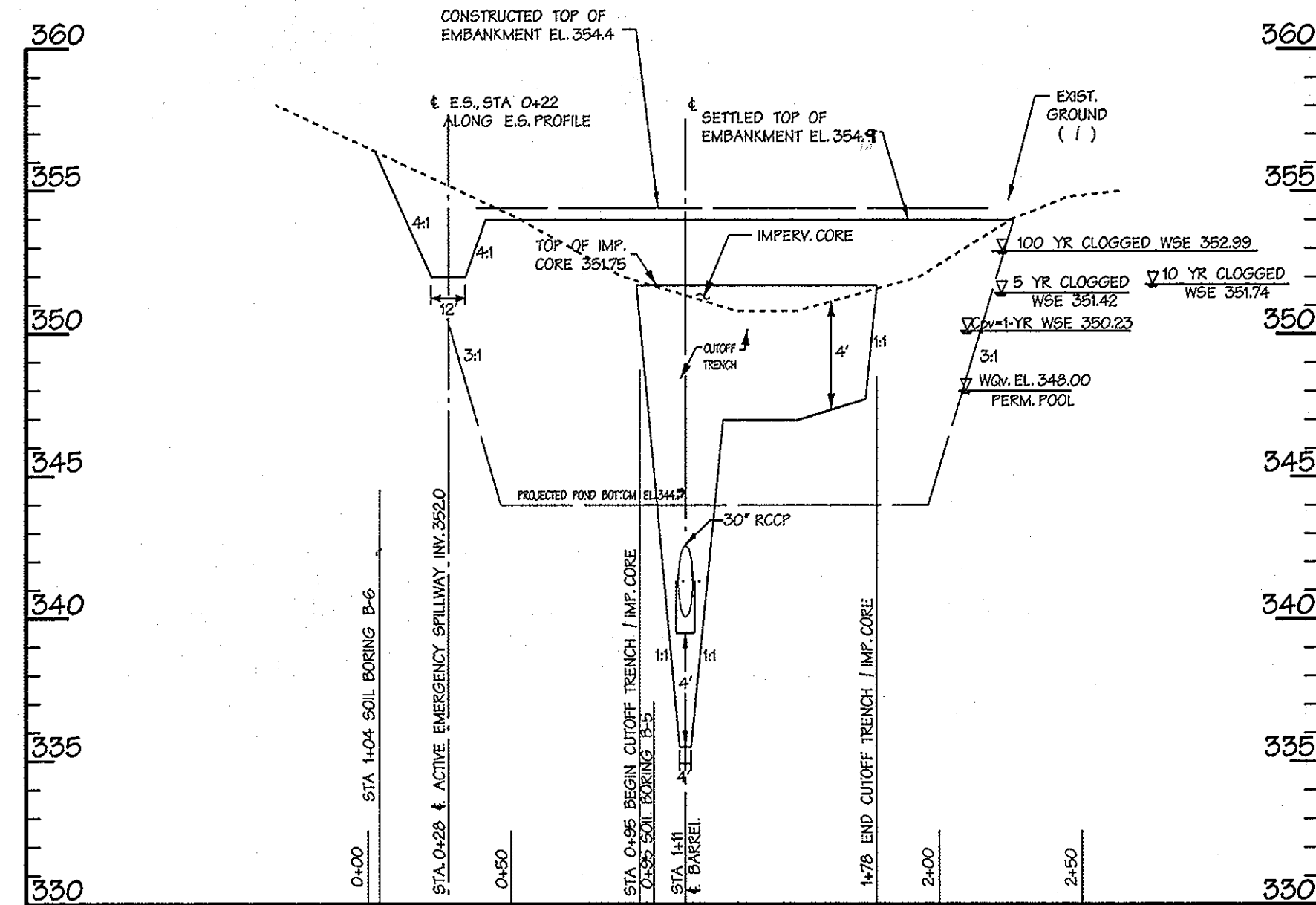
Des By	MAT	Scale	AS SHOWN	Proj. No.	01086.A1
Drn By	ECY	Date	9-3-04		
Chk By		Approved			21 OF 34

9/3/04 Date



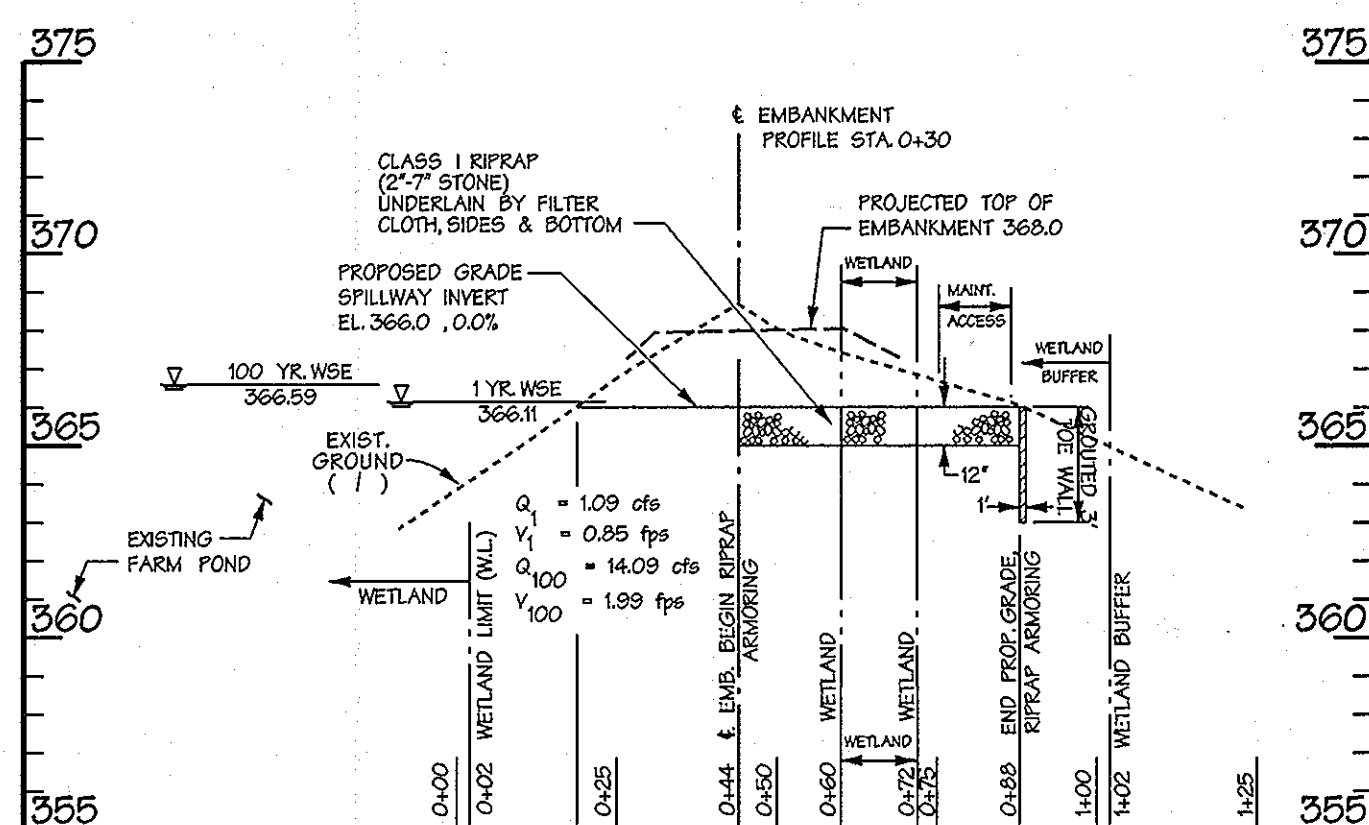
PROFILE FOR SWM FACILITY #1 THROUGH RISER/ BARREL

SCALE=VERT: 1"=5'
HORIZ: 1"=10'



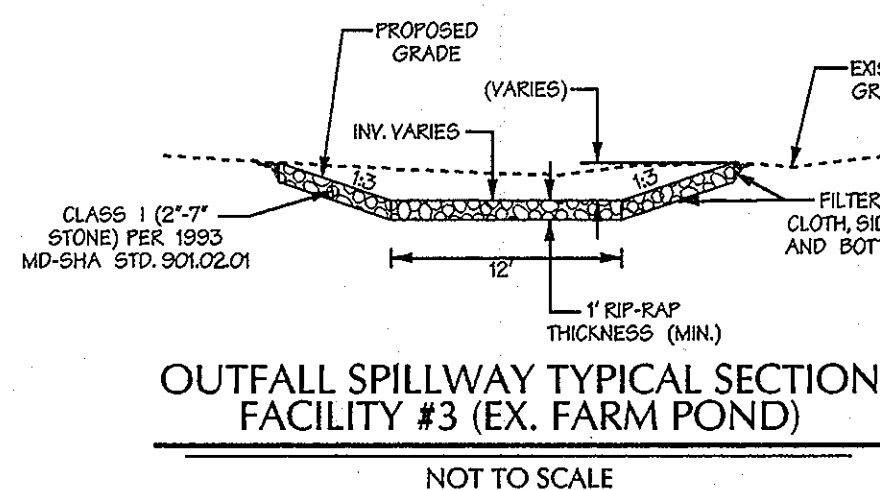
PROFILE FOR SWM FACILITY #1 ALONG CENTERLINE OF DAM

SCALE=VERT: 1"=5'
HORIZ: 1"=50'



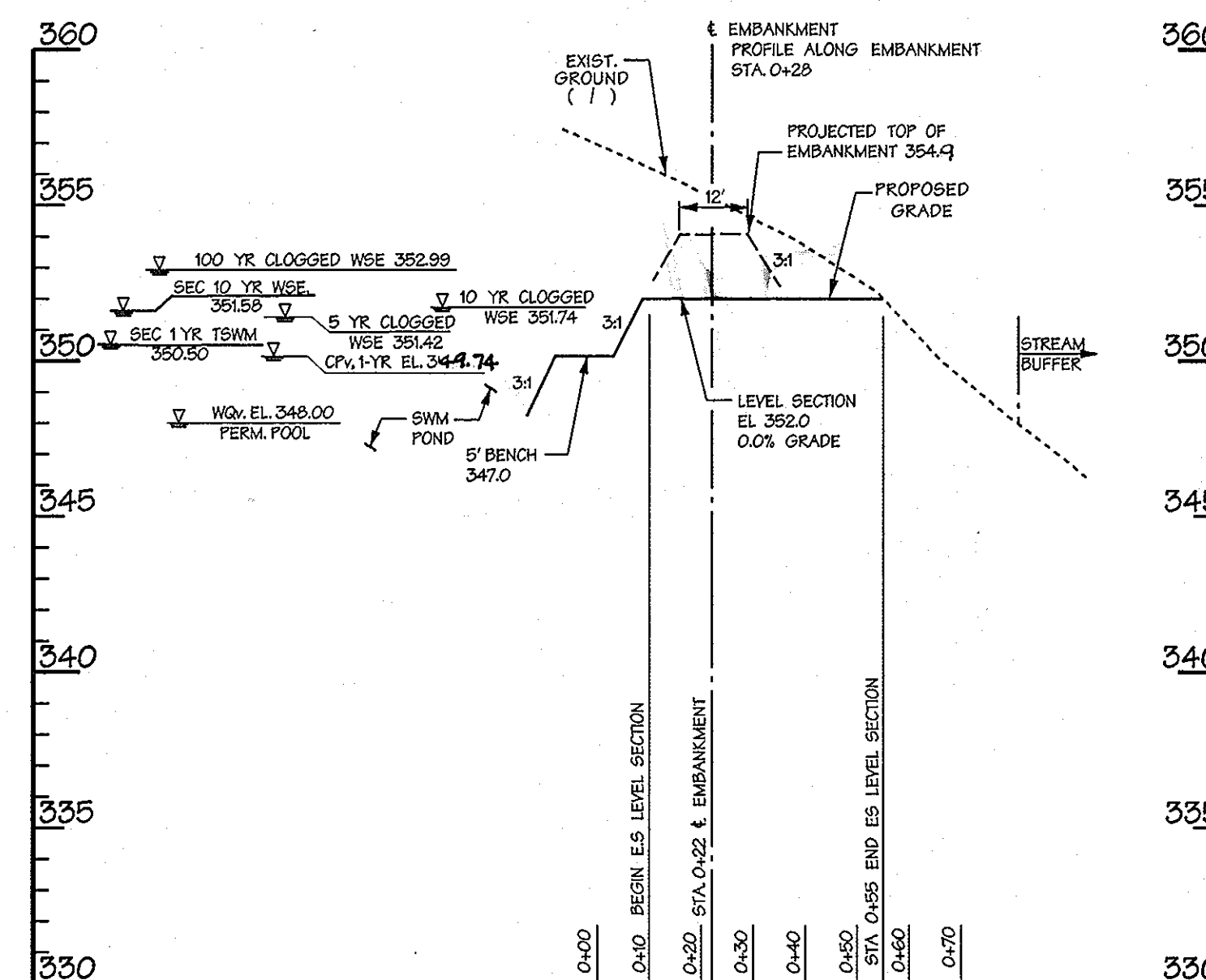
PROFILE THROUGH SPILLWAY, FACILITY #3 (EXISTING FARM POND)

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



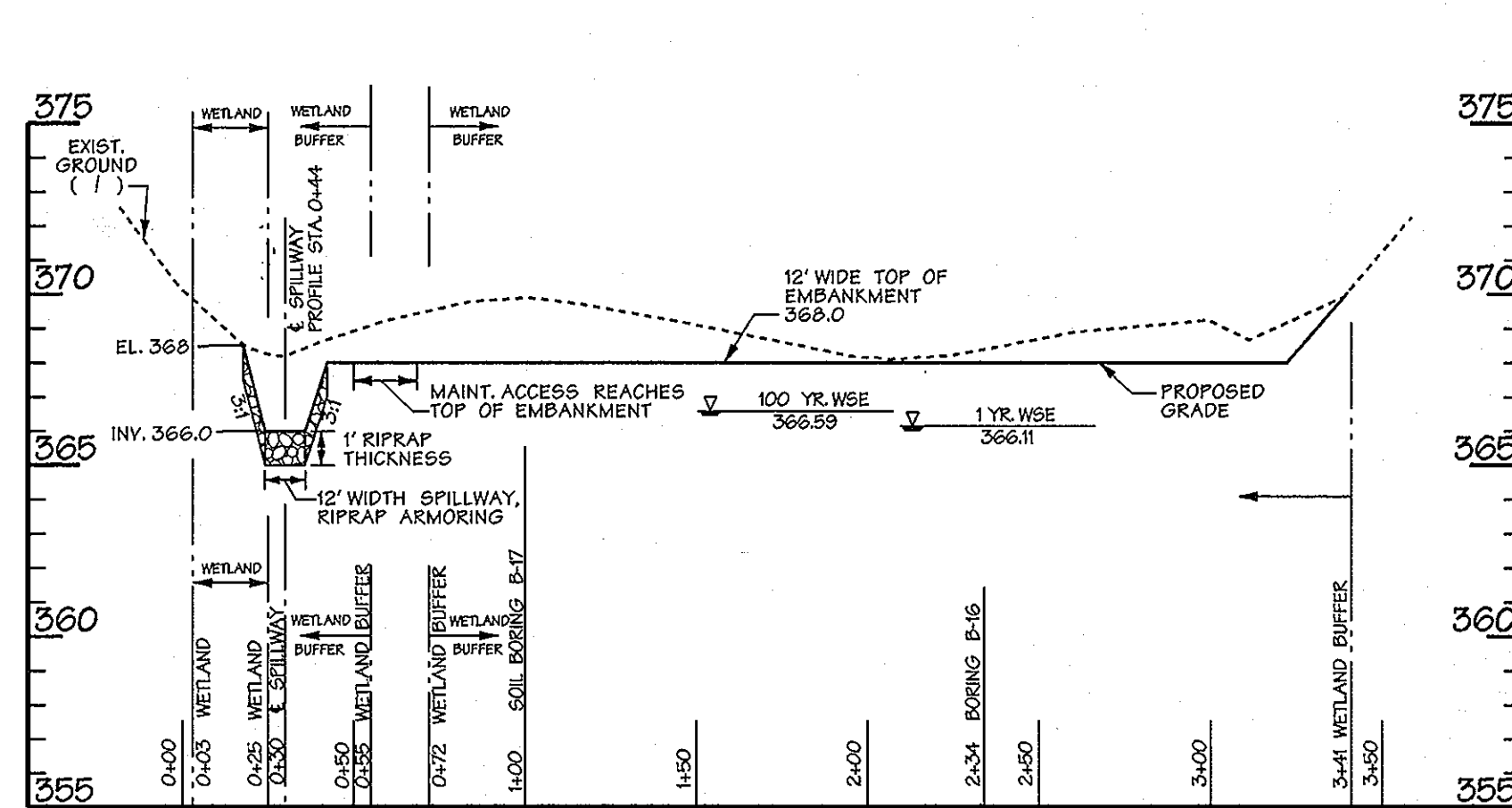
OUTFALL SPILLWAY TYPICAL SECTION
FACILITY #3 (EX. FARM POND)

NOT TO SCALE



PROFILE THROUGH EMERGENCY SPILLWAY, SWM FACILITY #1

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



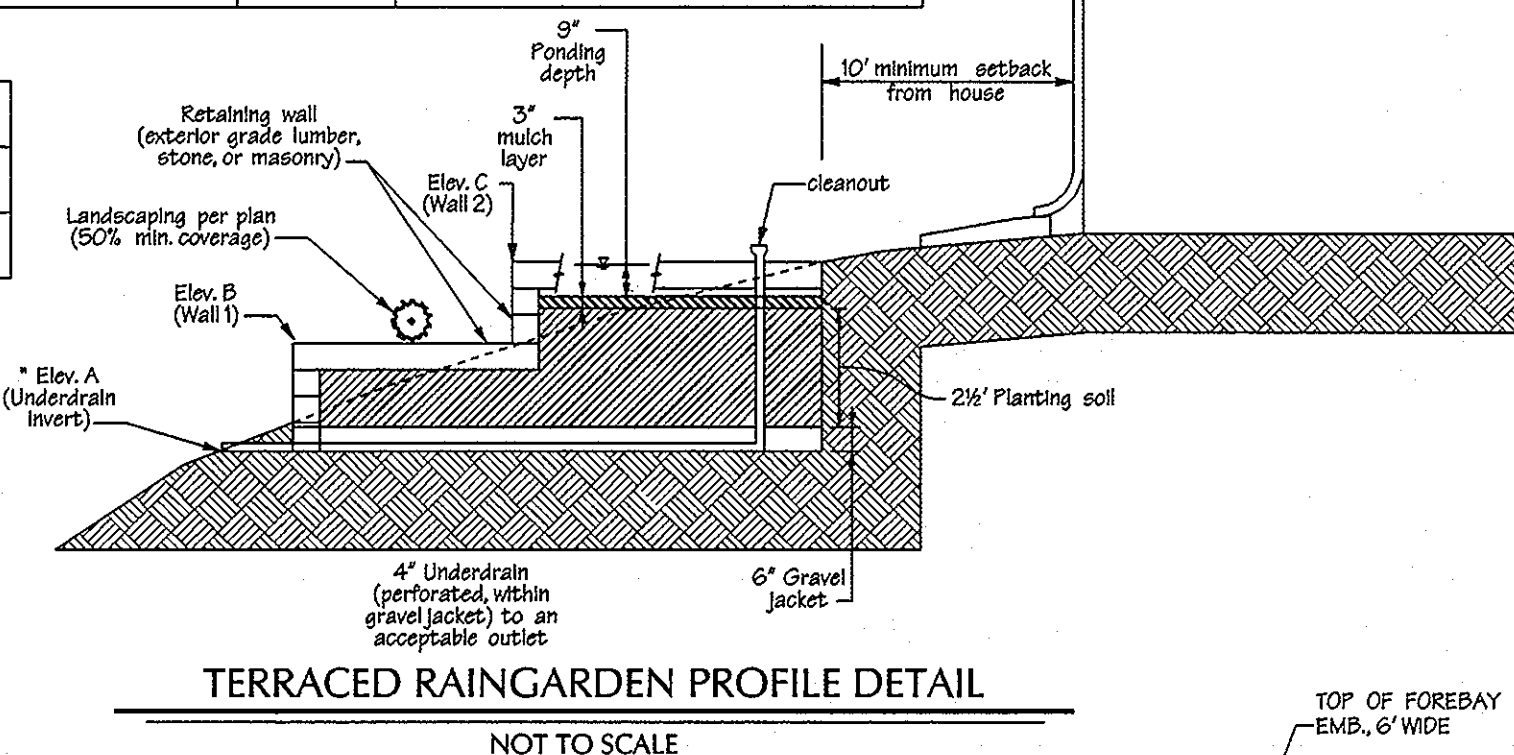
PROFILE ALONG EMBANKMENT, FACILITY #3 (EXISTING FARM POND)

SCALE=VERT: 1"=5'
HORIZ: 1"=50'

Material	Specification	Size	Notes
Plantings	See Table R5	n/a	Plantings are site specific
Planting Soil	Sand: 30% to 60% Silt: 30% to 55% Clay: 0% to 25%	n/a	USDA soil types loamy sand, sandy loam or loam
Mulch	Shredded hardwood	n/a	Aged six months minimum
Geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4632), puncture resistance (ASTM-D-4833)	n/a	Use as necessary beneath underdrains only
Underdrain	Gravel	3/8" to 3/4"	3/8" perforations @ 6" on center, 4 holes per row minimum of 3" gravel over pipes; gravel not necessary beneath pipes
Piping	AASHTO M-43 #57 or #67 F 758, Type PS 23 or AASHTO M-275	4" to 6" rigid schedule 40 PVC, SDR35, or HDPE	

ELEV. A	ELEV. B	ELEV. C
LOT 4 361	363	365
LOT 5 359	361	363

* NOTE: The underdrain shall outfall within the individual lot.



TERRACED RAINGARDEN PROFILE DETAIL

NOT TO SCALE

VARIABLE	VALUE
A	344.5
B	350.0
C	349.5
D	9'
E	24'

SWM FOREBAY EMBANKMENT ARMORING DETAIL

NOT TO SCALE

DATA SOURCES:
WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
LOCATIONS OF TREETYPES, STREAMS, TOPOGRAPHY, EX. STRUCTURES, ETC. DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002
BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT MCKEEN - WALKER, INC.
SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1960.
PORTIONS OF 100 YR. FLOODPLAIN TAKEN FROM RECORDED PLAT #15556 OF GLYNCHESTER FARMS, FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL DATED 9-15-99 (DMW) AND 100 YR. FLOOD PLAN STUDY FOR CROCKETT SUBDIVISION DATED 4/1997 (ISA GROUP, INC.) AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker, Inc.
CHIEF, BUREAU OF HIGHWAYS 2-28-05 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy K. Smith
CHIEF, DIVISION OF LAND DEVELOPMENT 2/15/05 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/16/05 DATE

Date	No.	Revision Description

FINAL PLAN
**OWENS PROPERTY
PHASE I**

LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
TAX MAP 31 PARCEL 243,572

OWNER / DEVELOPER:
PATAPSCO LANDING, LLC
c/o James Keety and Co. Inc.
P.O. Box 520
61 E. Padonia Road
Timonium, MD 21093

DMW
DRAFTING & ARCHITECTURE
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 286-3838
Fax 286-4705
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
STORMWATER MANAGEMENT PROFILES

Des By MRT	Scale AS SHOWN	Proj. No. 01086.A1
Dwn By ADL	Date 9-3-04	22 OF 34
Approved	Professional Engr. No. 10591	AS-BUILT

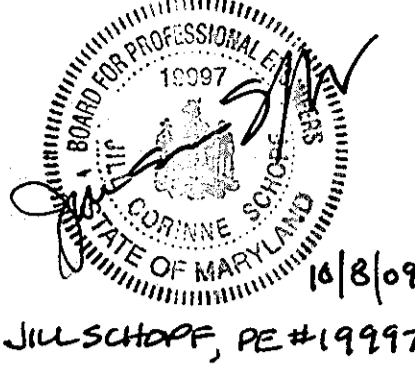
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
Jia Myung Lee 9/20/04 DATE
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

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.
MOBE E. BURDA 9/2/04 DATE

ENGINEERS CERTIFICATE:
I/WE 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 HIS/HE 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.
John W. Rameck, Jr. 9/2/04 DATE
SIGNATURE OF ENGINEER REG. NO. DATE

I HEREBY CERTIFY BY MY SEAL, THAT THE PROFILES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.
Jill Schopf, PE #1997 9/3/04 DATE
PROFESSIONAL ENGINEER
STATE OF MARYLAND
10/19/04

I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLAN AND SPECIFICATIONS.



- NOTES: 1) TREES, SHRUBS, AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE INLET STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
 2) SWM FACILITY 1 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (H.O.A.). THE H.O.A. SHALL PERFORM MOWING/TRASH REMOVAL MAINTENANCE. ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY. THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.
 3) FOR FACILITY 3 (EXISTING POND), TREAT 12" WIDE EARTH OUTFALL SPILLWAY SURFACE, INV. 366.0, WITH GRASS (UPSTREAM OF EMBANKMENT E) AND CLASS O RIPRAP (AS SHOWN) DOWNSTREAM OF EMBANKMENT E. CLASS O RIPRAP IS 2"-7" STONE, PER 1993 MD-SHA STD. 301.02.01 FOR MAINTENANCE RESPONSIBILITIES, SEE SHEET 24.
 4) RAINGARDEN FACILITIES SHALL BE OWNED AND MAINTAINED BY THE PRIVATE OWNERS OF LOTS 4 AND 5.

LEGEND

ROOFTOP DISCONNECTION FLOW PATHS	EX. EDGE OF ROAD
SOIL BORING	PROPOSED RIPRAP
PROPOSED BUILDING	PROPOSED STONE
PROPOSED LOT NUMBER	LOT LINES, SWM EASEMENTS
PROPOSED MAJOR CONTOURS	EXISTING CONTOURS, APPROXIMATE - ACCURATE TO WITHIN 1 FOOT.
PROPOSED MINOR CONTOURS	ROAD RIGHT OF WAY
EX. WOODS LINE	PROPOSED TREE LINE
EX. MAJOR CONTOURS	TOE OF SLOPE
EX. MINOR CONTOURS	PC 1/2 OF ARC
AREA OF INTERPOLATED CONTOURS	CENTERLINE OF ROAD
PROPERTY BOUNDARY	RADIUS OF ARC
EXISTING FENCES	NATURAL AREA CONSERVATION CREDIT
FOREST CONSERVATION EASEMENT	

**SECTION A-A
SWM OUTFALL CHANNEL BELOW RIPRAP APRON,
FACING DOWNSTREAM (TYPICAL SECTION)**

NOT TO SCALE

**POND 1
DESIGN FLOW SUMMARY PROPOSED CONDITIONS**

Structure Type	RETENTION	
Water Quality Type	WET POND	
Structure Classification	'A'	
Watershed Area to Facility (SWM)	0.0360 SQ MI.	
Level of Management Required	1-YR.	
Level of Management Provided	1-YR.	
Top Width Provided	11'	
Maximum Height of Fill	10.0'	
Freeboard Required	1.0'	
Freeboard Provided	1.66'	
Water Quality Vol. WQ ₁ Required (Ac-ft)	0.467	
Water Quality Vol. WQ ₂ Provided (Ac-ft)	0.504	
Recharge Required (Area method, Re ₁) (Ac)	2.069	
Recharge Provided (Ac)**	2.200	
Channel Protection Vol. Cp ₁ Required (Ac-ft)	1.447	
Channel Protection Vol. Cp ₂ Provided (Ac-ft)	2.094	
Existing 1-YR Storm Q at Design Point (cfs)	17.34	
Proposed 1-YR Storm Q at Design Point (cfs)	12.51	
WQ ₁ Water Surface Elev. = Normal Pool	347.75	
Cp ₁ Water Surface Elev.	349.74	
Riser Crest Elev.	350.46	
100 Yr. Clogged Water Surface Elev.	352.99	
Pond Volume Below 100 Yr. Clogged WSE (Ac-ft)	3.10	
Forebay Volume Required	0.058	
Forebay Volume Provided	0.080	

* WQ₁ IS PROVIDED IN THE WET-POND PORTION OF THE FACILITY. C_{p1} IS PROVIDED IN THE FACILITY (AS MANAGEMENT OF THE 1-YEAR STORM) ABOVE THE WQ₁ STORAGE VOLUME. THE 5, 10 AND 100-YEAR STORMS ARE PASSED THROUGH THE FACILITY.
 ** RECHARGE REQUIRED/PROVIDED IS BASED ON ENTIRE SITE (PHASE I AND PHASE II) AND IS TREATED COMPLETELY BY SWM NON-STRUCTURAL CREDITS.

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, AS 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.

9/2/09
 SIGNATURE OF DEVELOPER: *Mark E. Buda*
 PRINT NAME BELOW SIGNATURE: **MARK E. BUDA** DATE

ENGINEERS CERTIFICATE:
 I/WE 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.

9/2/09
 SIGNATURE OF ENGINEER: *[Signature]*
 REG. NO. 14551 DATE

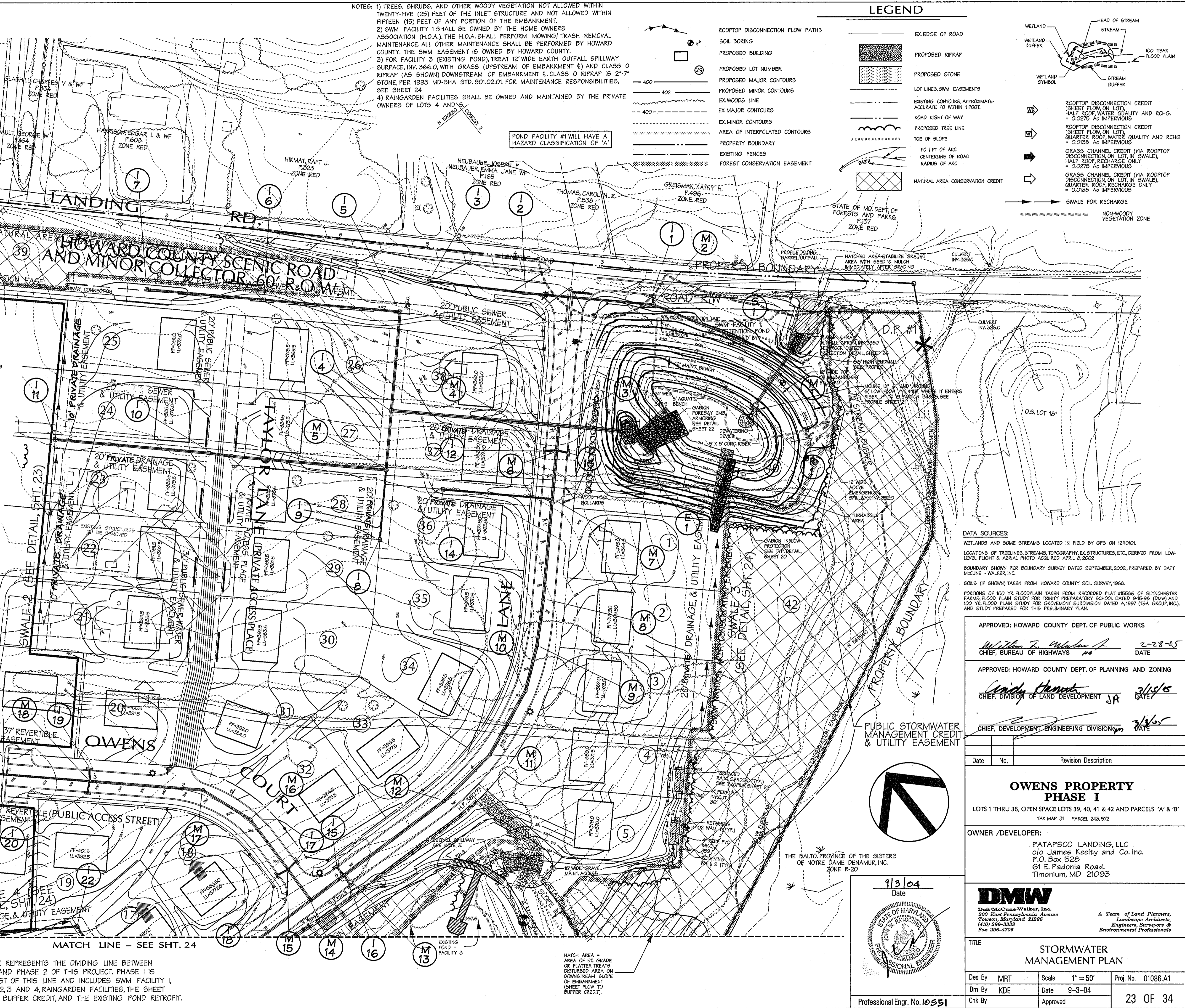
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

9/2/09
 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.

9/2/09
 APPROVED: *[Signature]* DATE

PLAN NUMBER



DATA SOURCES:
 WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
 LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, EX. STRUCTURES, ETC. DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002.
 BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT MACHINE - WALKER, INC.
 SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968.
 PORTIONS OF 100 YR. FLOODPLAIN TAKEN FROM RECORDED PLAT #15286 OF GLYNCHESTER FARMS FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL, DATED 9-15-99 (DMW) AND 100 YR. FLOOD PLAN STUDY FOR GROVEMONT SUBDIVISION DATED 4, 1997 (TSA GROUP, INC.) AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Sandy Thomas 3/15/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 3/16/06
 DATE

Date	No.	Revision Description

**OWENS PROPERTY
PHASE I**
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243, 572

OWNER / DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keety and Co. Inc.
 P.O. Box 52B
 61 E. Padonia Road.
 Timonium, MD 21093

9/3/04
 Date

Professional Engr. No. 10551

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

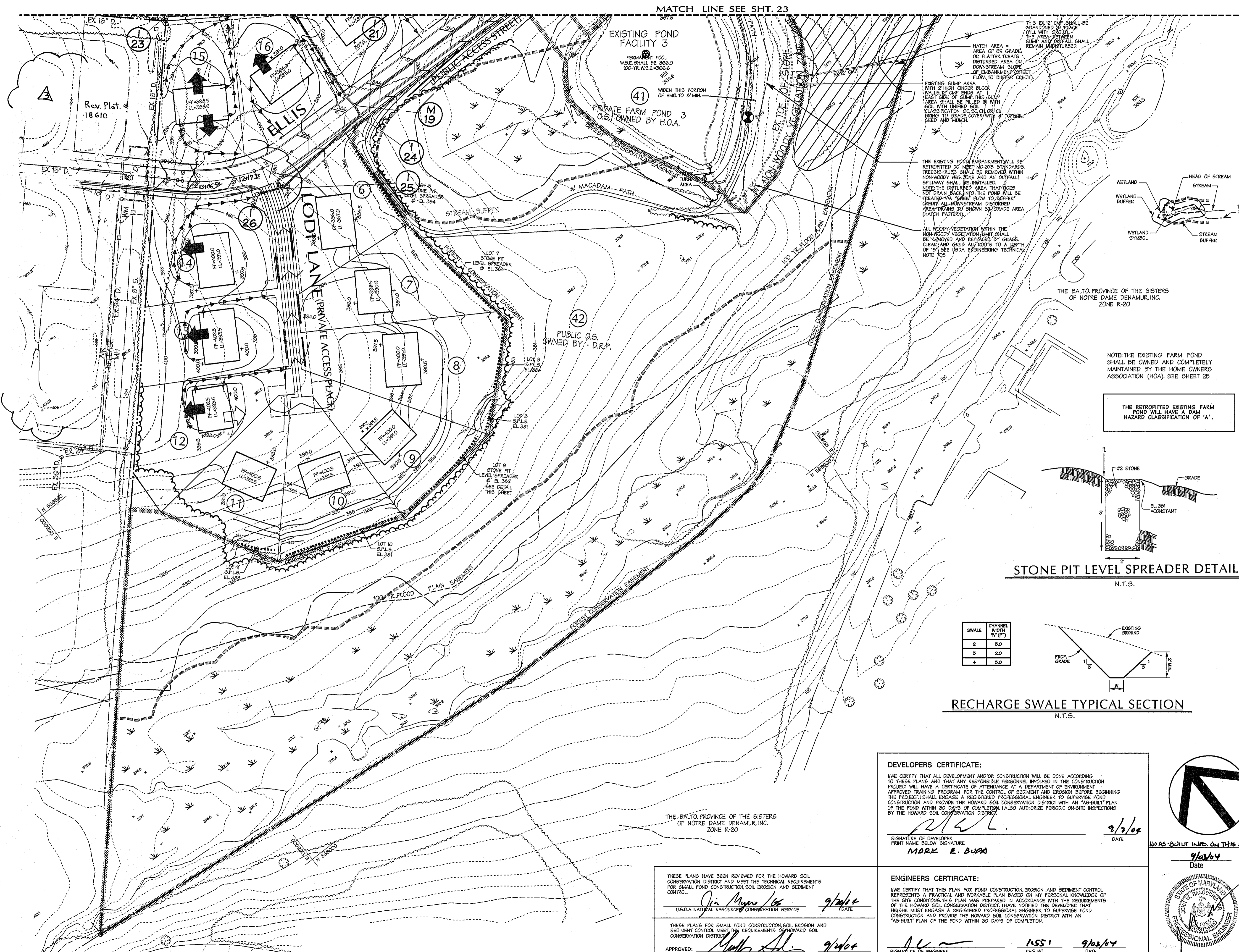
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE: **STORMWATER MANAGEMENT PLAN**

Des By: MRT	Scale: 1" = 50'	Proj. No.: 01086.A1
Dwn By: KDE	Date: 9-3-04	23 OF 34
Chk By:	Approved:	

Professional Engr. No. 10551 AS-BUILT

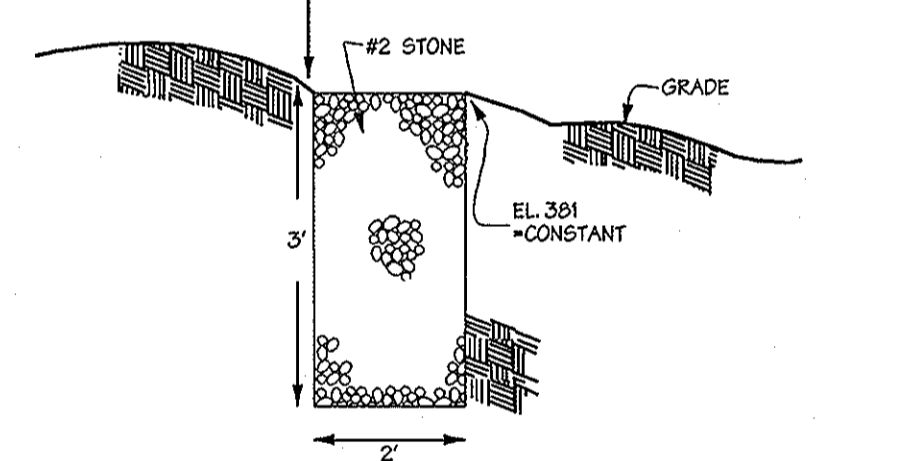
THIS LINE REPRESENTS THE DIVIDING LINE BETWEEN PHASE I AND PHASE 2 OF THIS PROJECT. PHASE I IS SOUTHEAST OF THIS LINE AND INCLUDES SWM FACILITY 1, SWALES 2, 3 AND 4, RAINGARDEN FACILITIES, THE SHEET FLOW TO BUFFER CREDIT, AND THE EXISTING POND RETROFIT.



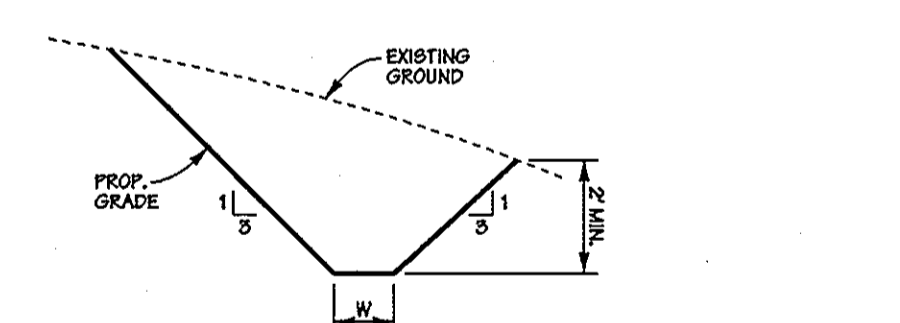
LEGEND

- ROOFTOP DISCONNECTION CREDIT (SHEET FLOW ON LOT), HALF ROOF WATER QUALITY AND RCHG. = 0.0275 Ac IMPERVIOUS
- ROOFTOP DISCONNECTION CREDIT (SHEET FLOW ON LOT), QUARTER ROOF, WATER QUALITY AND RCHG. = 0.0138 Ac IMPERVIOUS
- GRASS CHANNEL CREDIT (VIA ROOFTOP DISCONNECTION ON LOT IN SWALE), HALF ROOF, RECHARGE ONLY = 0.0275 Ac IMPERVIOUS
- GRASS CHANNEL CREDIT (VIA ROOFTOP DISCONNECTION ON LOT IN SWALE), QUARTER ROOF, RECHARGE ONLY = 0.0138 Ac IMPERVIOUS
- NON-WOODY VEGETATION ZONE
- SWALE FOR RECHARGE
- ROOFTOP DISCONNECTION FLOW PATHS
- SOIL BORING
- PROPOSED BUILDING
- PROPOSED LOT NUMBER
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- EX WOODS LINE
- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- AREA OF INTERPOLATED CONTOURS
- PROPERTY BOUNDARY
- EXISTING FENCES
- EX EDGE OF ROAD
- FOREST CONSERVATION EASEMENT
- PROPOSED RIPRAP
- LOT LINES, SWM EASEMENTS
- EXISTING CONTOURS, APPROXIMATE - ACCURATE TO WITHIN 1 FOOT.
- ROAD RIGHT OF WAY
- PROPOSED TREE LINE
- TOE OF SLOPE
- PC / PT OF ARC
- CENTERLINE OF ROAD
- RADIUS OF ARC

DATA SOURCES:
 WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
 LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, EX. STRUCTURES, ETC. DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 2, 2002.
 BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT MCGUINE - WALKER, INC.
 SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968.
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SWALE	CHANNEL WIDTH (FT)
2	8.0
3	2.0
4	8.0



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker 2-28-05
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy K. Smith 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/16/05

10-B-04	3	REVISE ELLIS LANE ROW
Date	No.	Revision Description

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/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mark E. Bupa 2/2/04
 SIGNATURE OF DEVELOPER
 PRINT NAME BELOW SIGNATURE
 MARK E. BUPA

ENGINEERS CERTIFICATE:
 I/WE 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 NOTICED 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.

John W. Ramachio, S.E. 1/5/1 9/03/04
 SIGNATURE OF ENGINEER
 PRINT NAME BELOW SIGNATURE
 JOHN W. RAMACHIO, S.E.

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.

Jim Meyer 9/26/04
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

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

APPROVED: *John W. Ramachio, S.E.* 9/26/04
 HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER

OWENS PROPERTY PHASE I
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243, 672

OWNER / DEVELOPER:
 PATAFSCO LANDING, LLC
 c/o James Fealty and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road
 Timonium, MD 21093

DMW
 Daft McCuine Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3253
 Fax 296-4705

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

TITLE: **STORMWATER MANAGEMENT PLAN**

Des By	MRT	Scale	1" = 50'	Proj. No.	01086.A1
Dwn By		Date	9-3-04		
Chk By		Approved			24 OF 34

Professional Engr. No. 10557

STORMWATER MANAGEMENT POND GENERAL CONSTRUCTION SPECIFICATIONS

1. GENERAL All stormwater management facilities shall be constructed in accordance with Howard County's "Standard Specifications and Details for Construction", (1985) and the N.R.C.S. Maryland "Standards and Specifications for Ponds", (MD-378, 2000).

2. SITE PREPARATION Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots, and other objectionable material shall be removed.

3. EARTH FILL MATERIAL - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials.

4. STRUCTURE BACKFILL 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.

5. 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.

6. PIPE CONDUITS All pipes shall be circular in cross section. All perforated pipes shall have a minimum of 3.51 square inches of opening per square foot of pipe surface.

REINFORCED CONCRETE PIPE - All of the following criteria shall apply for reinforced concrete pipe: 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

PLASTIC PIPE - All of the following criteria shall apply for plastic pipe: 1. Materials - PVC pipe shall be PVC Schedule 40 conforming to ASTM D-1785 or ASTM D-2241. Corrugated high density polyethylene (HDPE) pipe, couplings and fittings shall conform to following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type 5.

7. CONCRETE Concrete must meet minimum requirements set forth in Maryland State Highway Administration Standard Specifications for Construction and Materials, Section 918 (Portland Cement Concrete Mixtures), Mix Number 3.

8. ROCK RIP-RAP Rock rip-rap shall meet the requirements of the Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

9. 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.

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

11. 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.

12. SEEDING Seeding, fertilizing and mulching shall be as follows:

Seed Mix: 50% Kenbue Kentucky Bluegrass 40% Pennlawn Creeping Red Fescue 10% Straker Redtop Applied at a rate of 150 pounds per acre.

Rebel II Tall Fescue (125 pounds per acre) Pennington Perennial Ryegrass (15 pounds per acre) Kenbue Kentucky Bluegrass (10 pounds per acre)

Pennington Pennington Ryegrass (70 pounds per acre) Aurora Hard Fescue (50 pounds per acre) Common White Clover (6 pounds per acre) Winter Rye (45 pounds per acre)

Fertilizer: 600 pounds per acre 10-10-10 fertilizer before seeding. 400 pounds per acre 30-0-0-Ureaforn Fertilizer at time of seeding.

Mulch: Straw at 4,000 pounds per acre. Anchoring: Mulching tool or wood cellulose fiber binder at a net dry binder rate 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 or at rates recommended by the manufacturer.

13. FILTER CLOTH All filter cloth shall conform to the 1994 Maryland Standards and Specifications for soil erosion and sediment control, or the latest edition.

14. GABIONS All gabions shall be PVC coated woven wire baskets. Stone size shall be 4 inches to 7 inches, (Class IV gabions)

15. FENCE Split rail fencing: Fencing shall be constructed in accordance with the details on these plans. The split rail fence shall be constructed of lowest grade spruce, round side out, with posts spaced 10 feet on center. The fabric shall be 4" x 2", 14 gauge, black vinyl coated welded wire mesh attached to the inside of the fence with stainless steel electrical staples 12 inches on center, each rail, and shall extend 6 inches below finished grade.

Chain link fencing: Construct fencing in accordance with the State Highway Administration Standard details 630.01 and 630.02. Use specifications for a 6-foot fence, substituting 42" fabric and 6"-8" line posts. Construct the gate in accordance with SH&A Standard Detail 630.01 with 42" fabric. The fabric used for the fence and gate must conform to AASHTO Designation M181-74.

16. INSPECTION SCHEDULE 1. Prior notification shall be given to the engineer so that inspections may be made at the following stages: (1) Upon completion of excavation to subfoundation and where required, including but not limited to: (i) Care trenches for structural embankments. (ii) Inlet-Outlet Structures and Anti-Seep Structures, watertight connectors on pipes and (iii) Trenches for exterior storm drainage facilities.

(2) During placement of structural fill, reinforcing and concrete, and installation of piping and catch basins (3) During backfill foundations and trenches (4) During embankment construction and (5) Upon completion of final grading and establishment of permanent stabilization.

2. Geotechnical compaction testing of the facility embankment is required. certification must be provided to the designated engineer in charge of the as-built. 3. A copy of all material supply tickets must be given to the designated engineer in charge of the as-built.

17. MAINTENANCE SCHEDULE Stormwater Management Facility 1: Joint Maintenance Routine Maintenance (performed by the HOA): 1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.

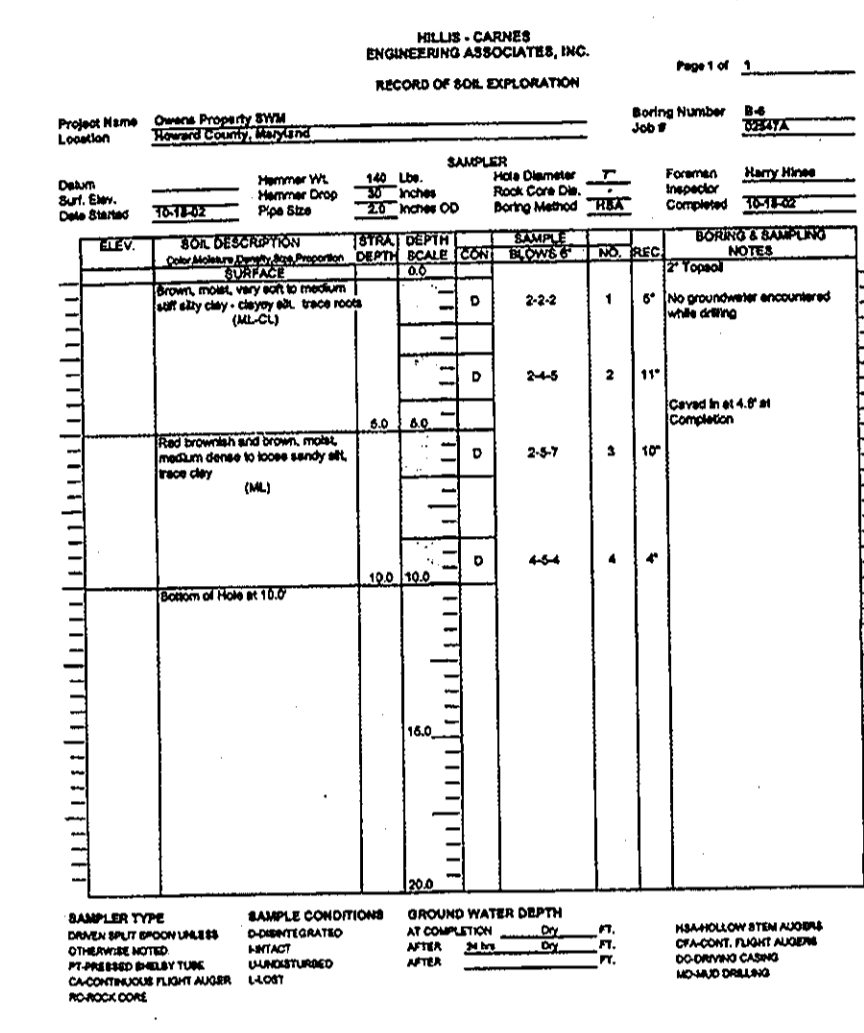
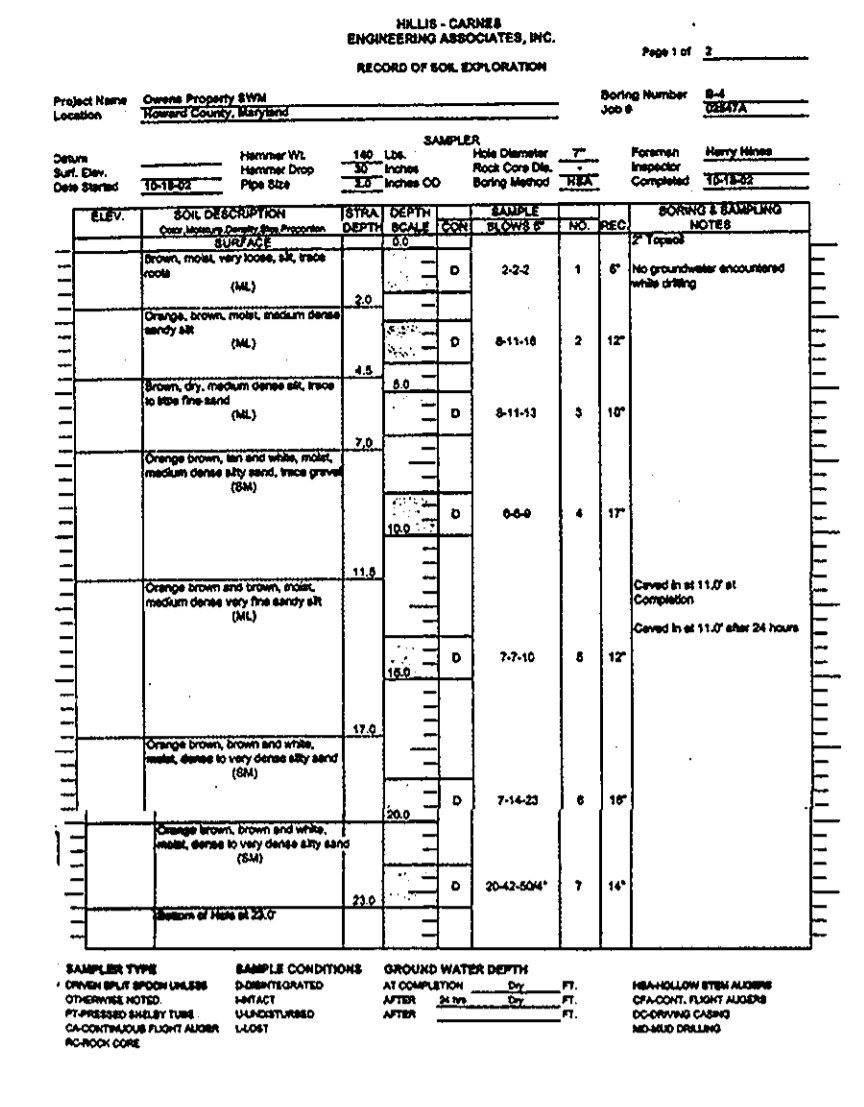
2. Debris and litter shall be removed during regular mowing operations and as needed. 3. When deemed necessary for aesthetic reasons, and upon approval from the Department of Public Works, sediment shall be removed from the pond. 4. Sediment shall be removed from forays when the depth exceeds 1'.

Non-Routine Maintenance (performed by Howard County): 1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.

2. Sediment shall be removed from the pond and forebay, no later than when the capacity of the pond, or forebay, is half full of sediment, or when deemed necessary for aesthetic reasons upon approval from the Department of Public Works.

18. OPERATION, MAINTENANCE AND INSPECTION Inspection of ponds shown hereon shall be performed at least twice annually, in accordance with the checklist and requirements contained within USPA, SCS "Standards and Specifications for Ponds" (MD-378), the pond owner's and any heirs, successors or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof.

19. UTILITIES No utilities may be constructed within/along any MD-378 Embankment.



OWENS PROPERTY SWM Infiltration Study Page 3

EVALUATION Based on the State of Maryland's 2000 Maryland Stormwater Design Manual, Volume 1 B.17, infiltration basins and trenches are not cost-effective practices when an infiltration rate of less than 0.52 inches per hour is obtained.

EMBRANKMENT AND CUT-OFF TRENCH CONSTRUCTION The areas of the proposed SWM facilities should be stripped of topsoil and any other unsuitable materials from the embankment or structure areas in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative.

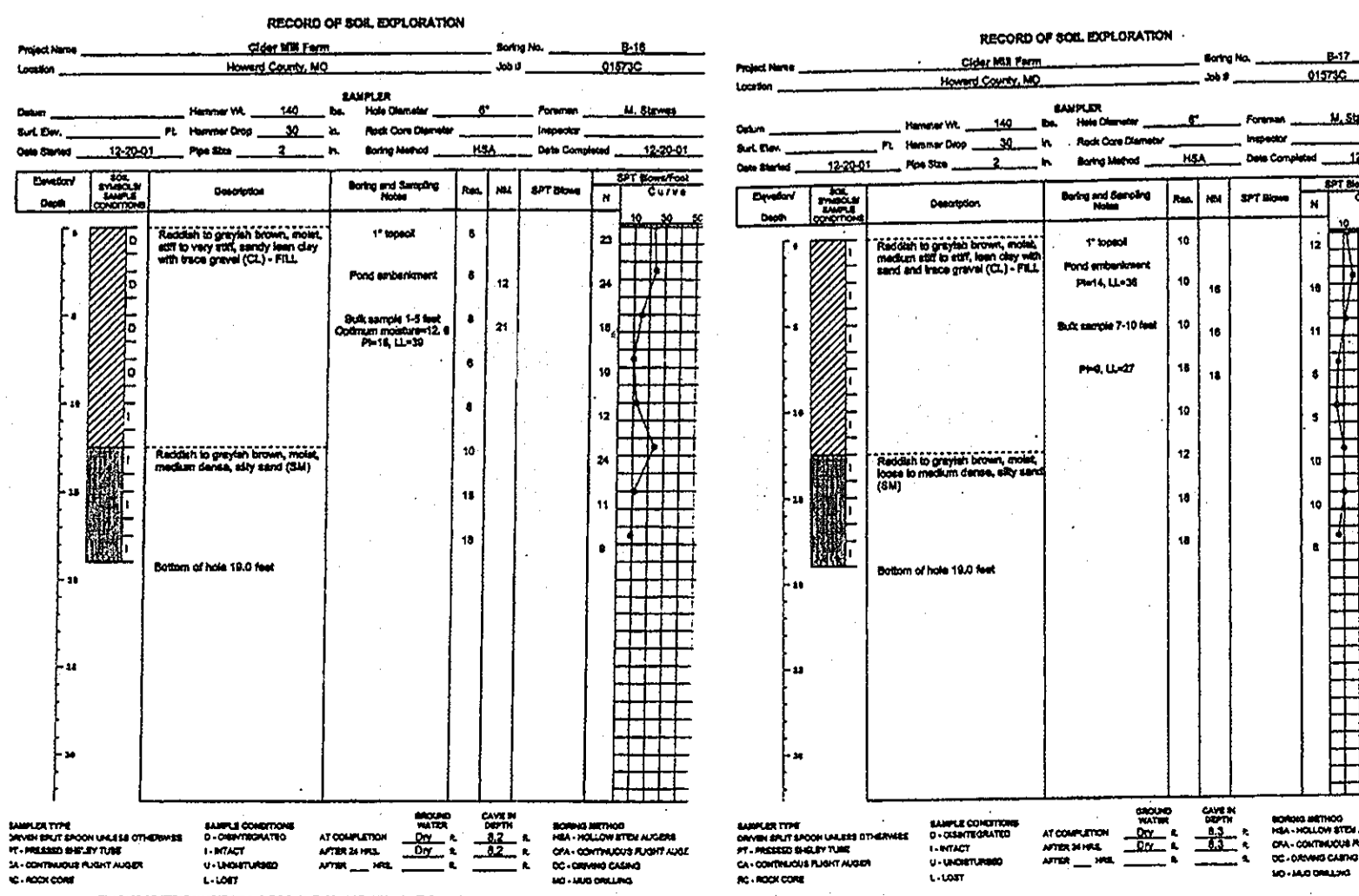
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS DATE 7-28-05

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT DATE 3/5/05

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/5/05

SOIL BORING LOGS FOR EXISTING POND (FACILITY 3) EMBANKMENT

MD-378 EMBANKMENT CERTIFICATION LETTER FOR EXISTING POND (FACILITY 3)

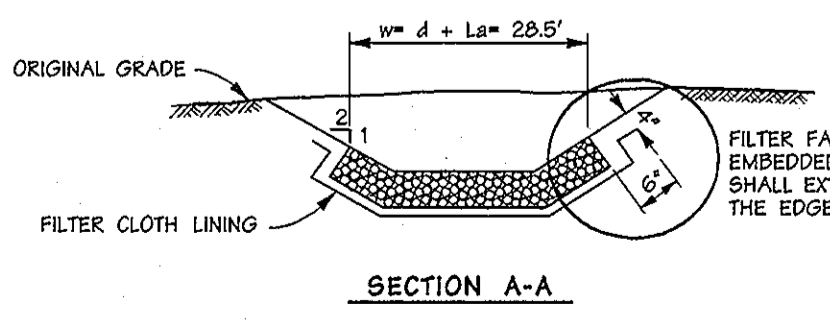
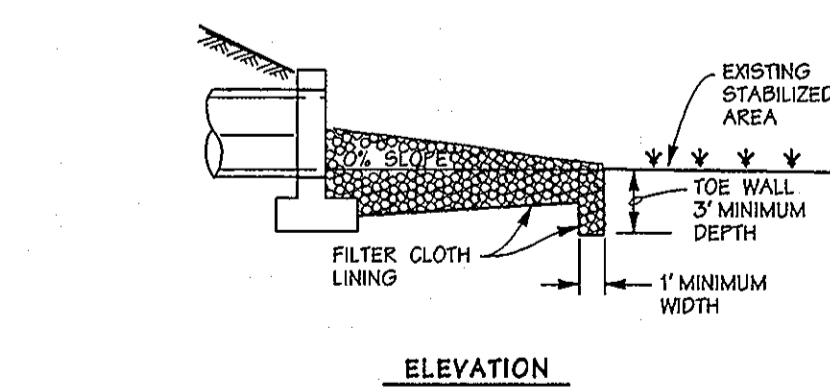
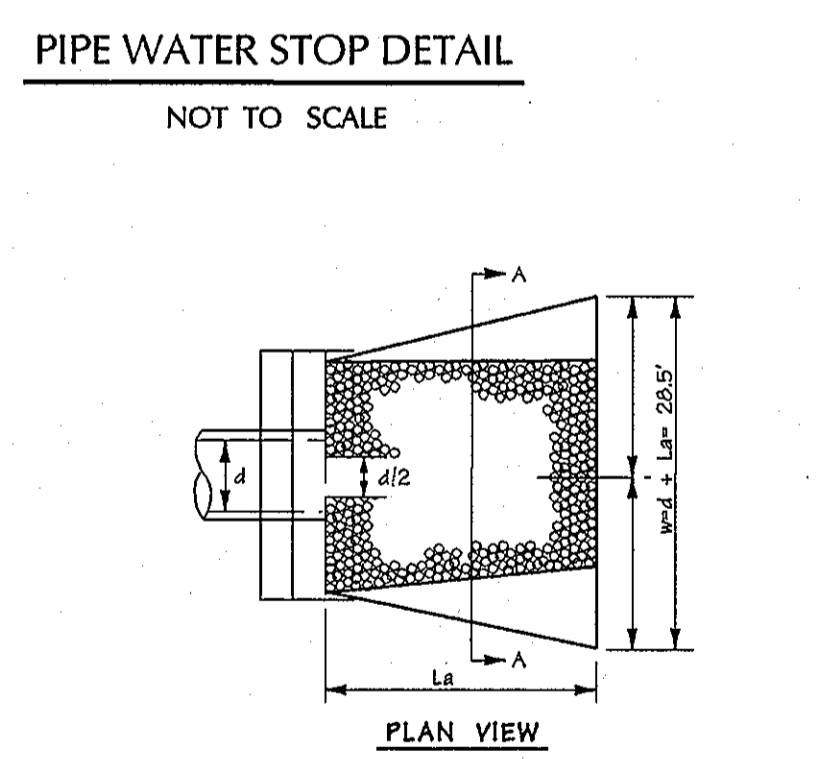
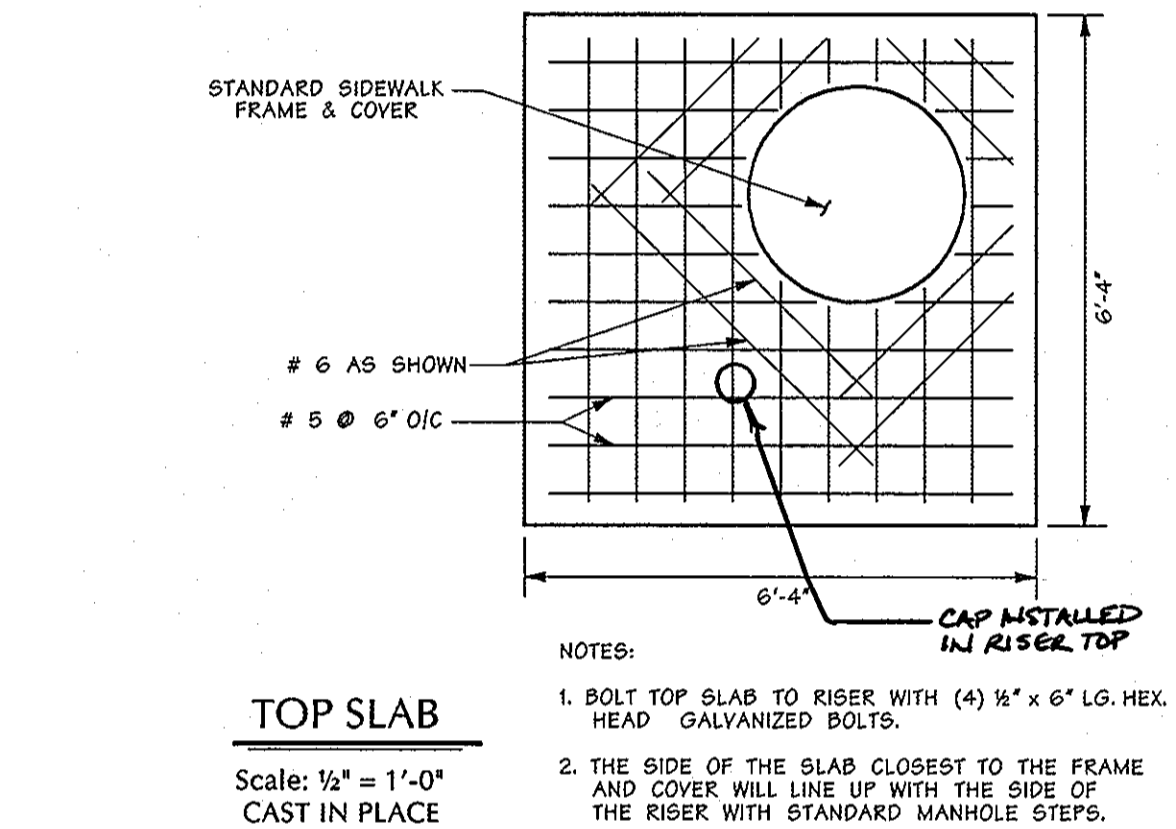
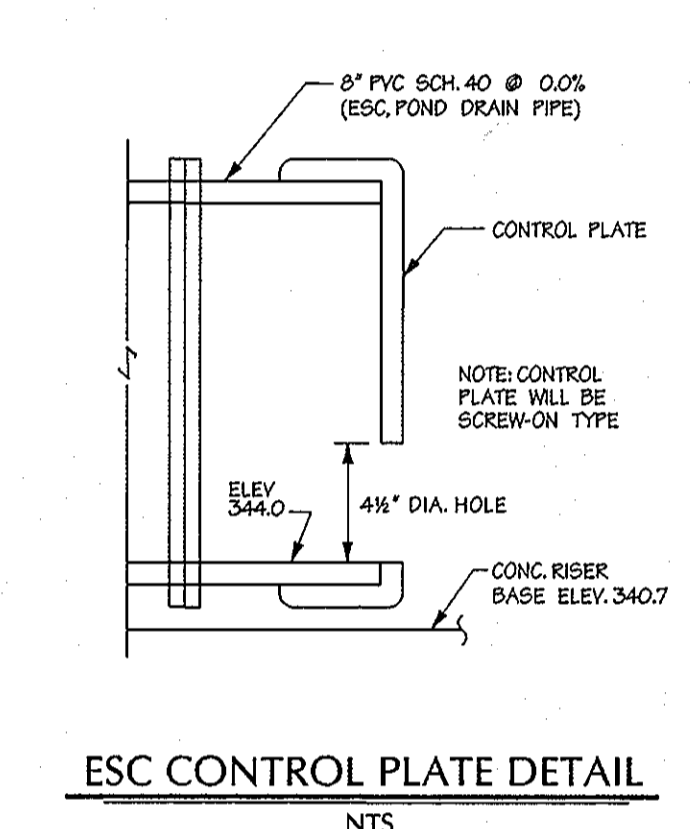
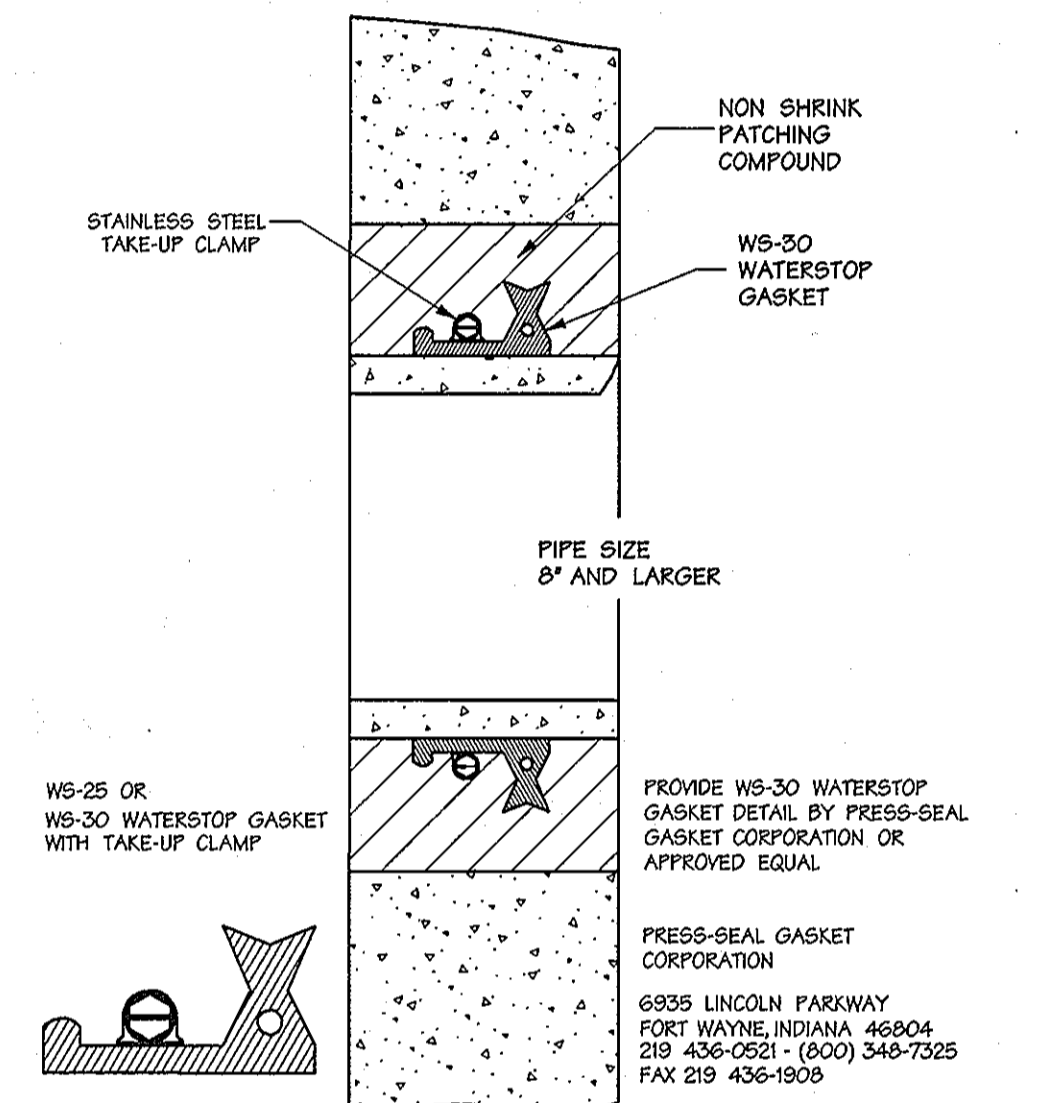
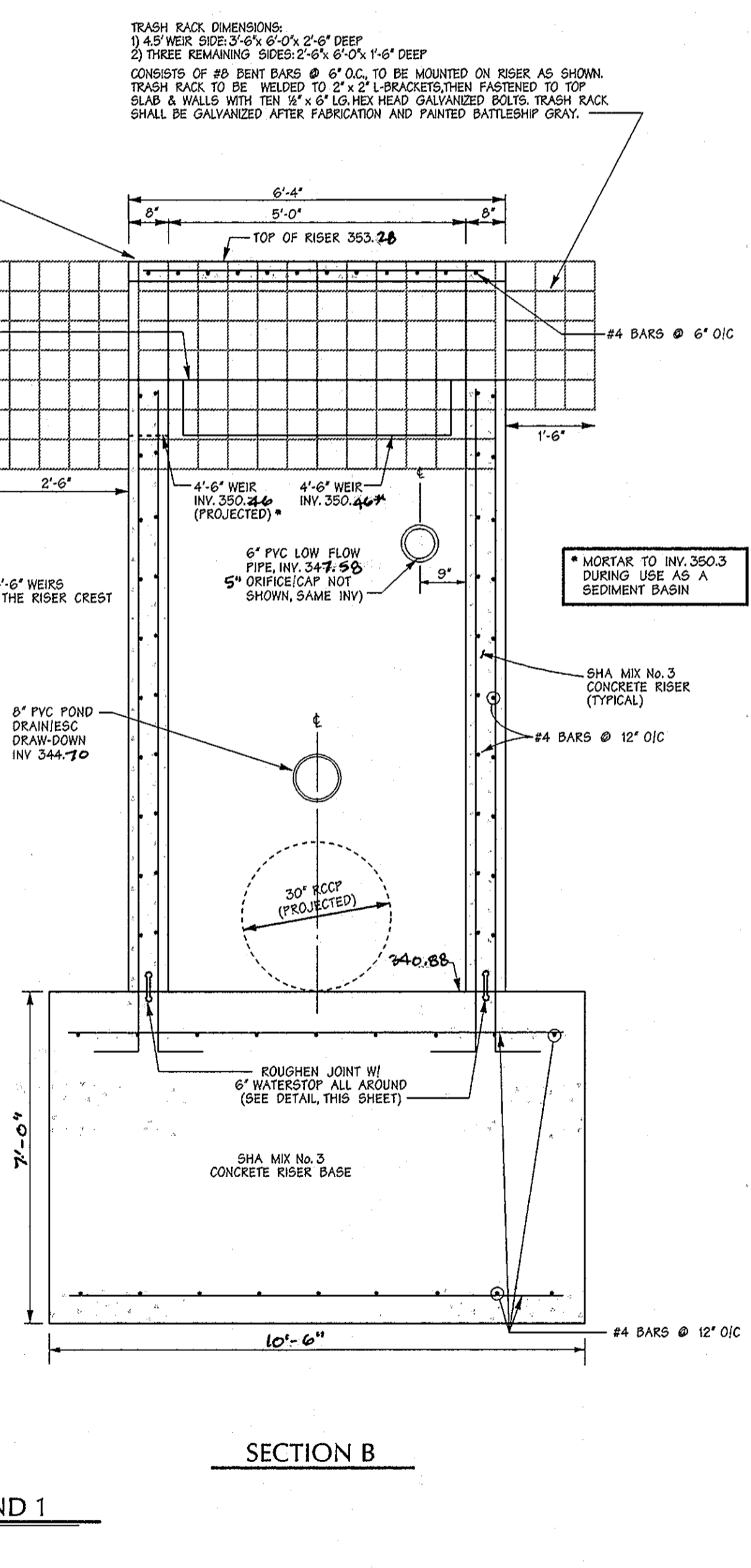
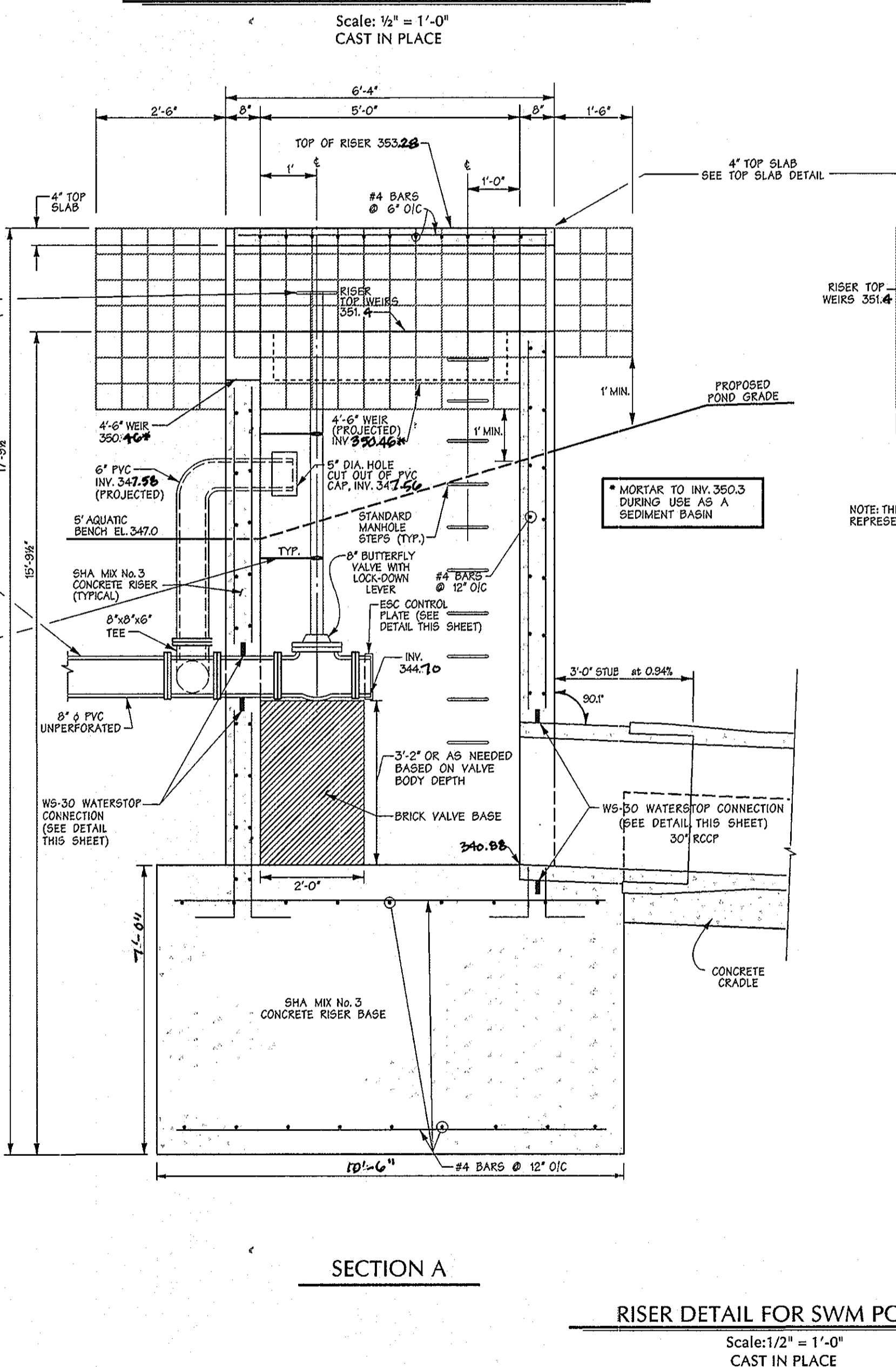
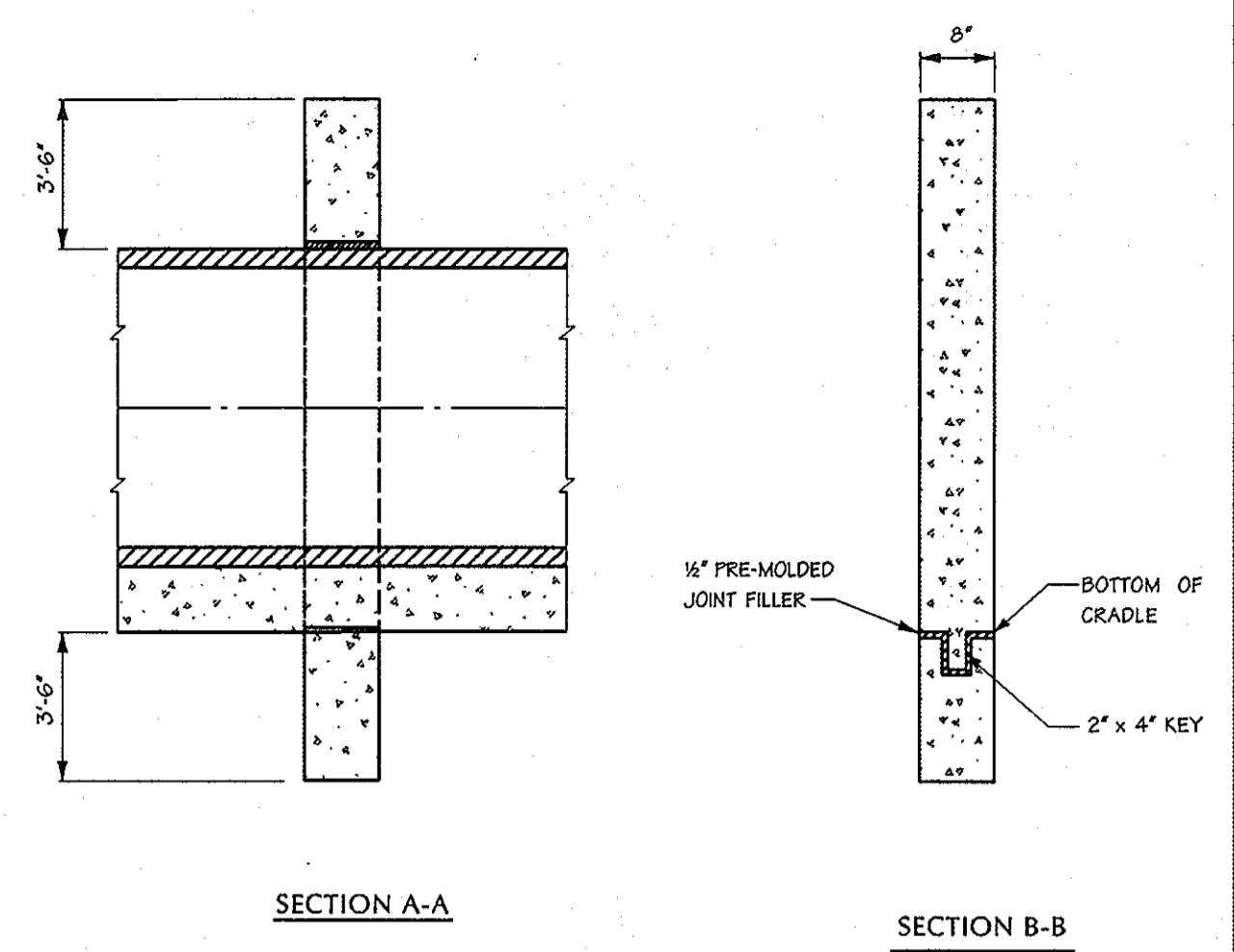
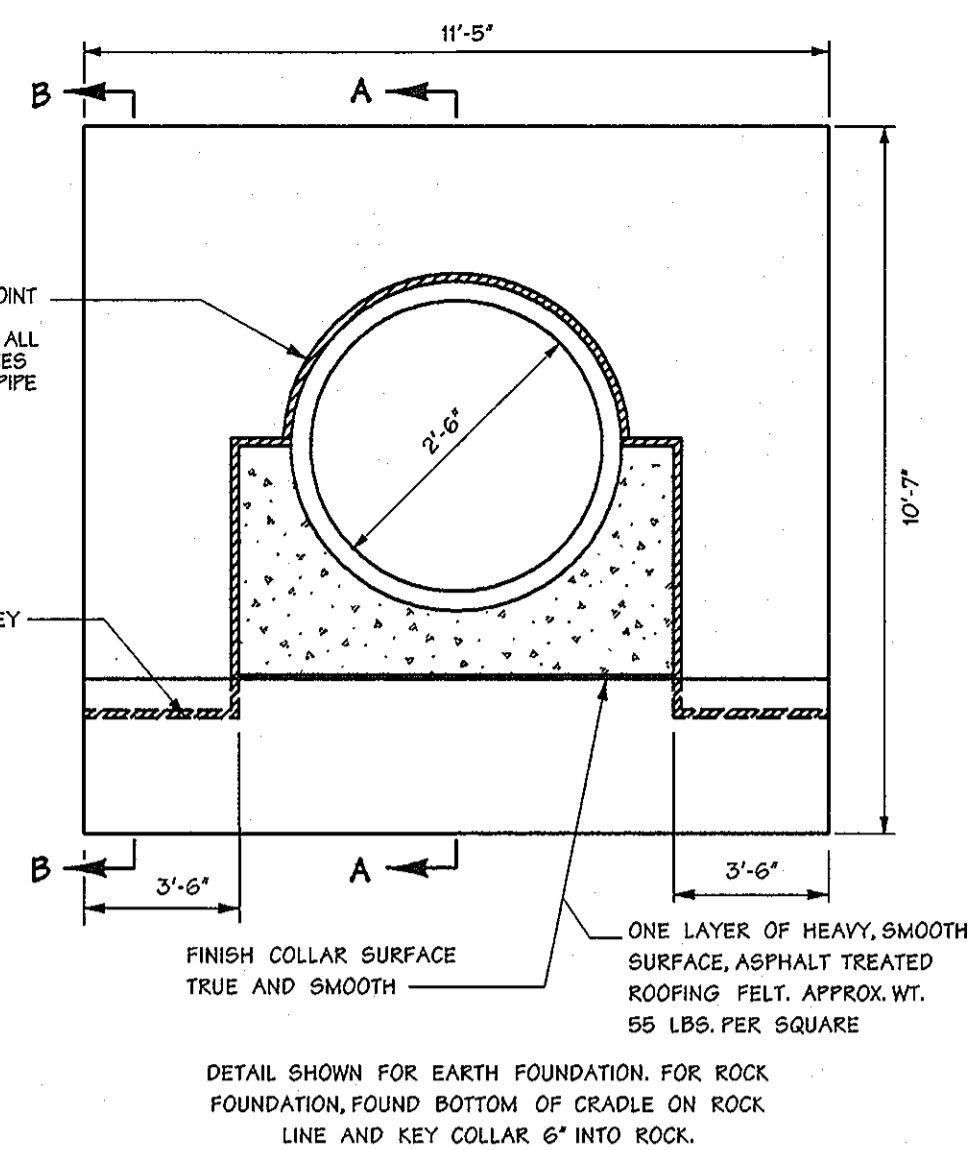
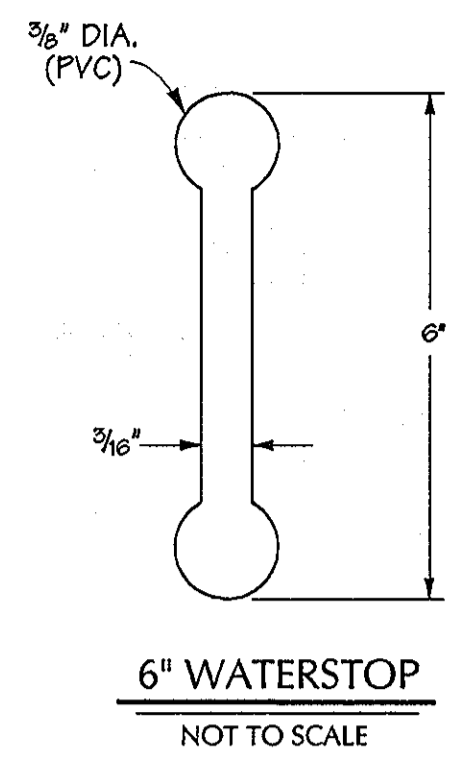
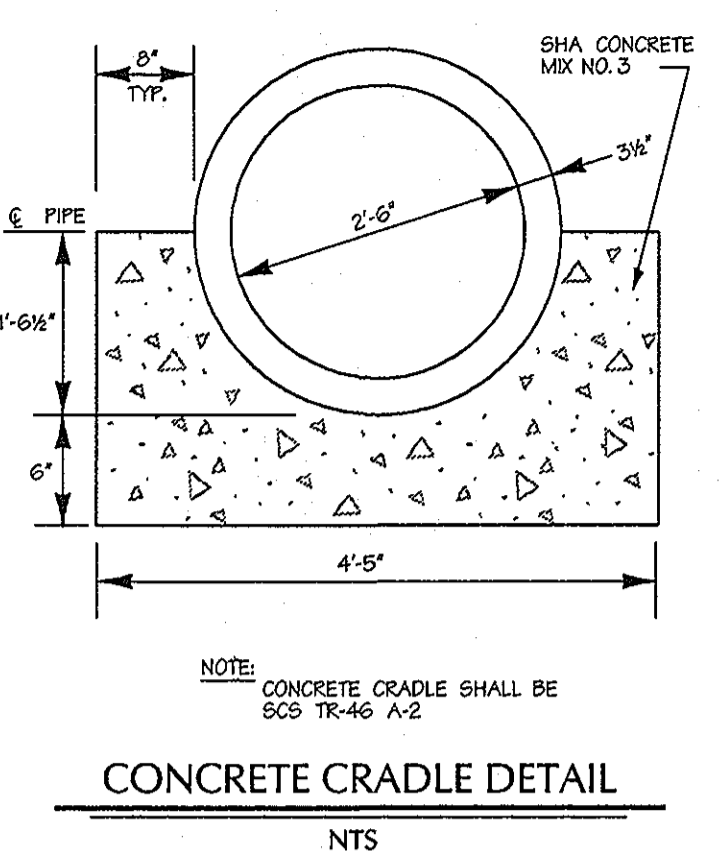
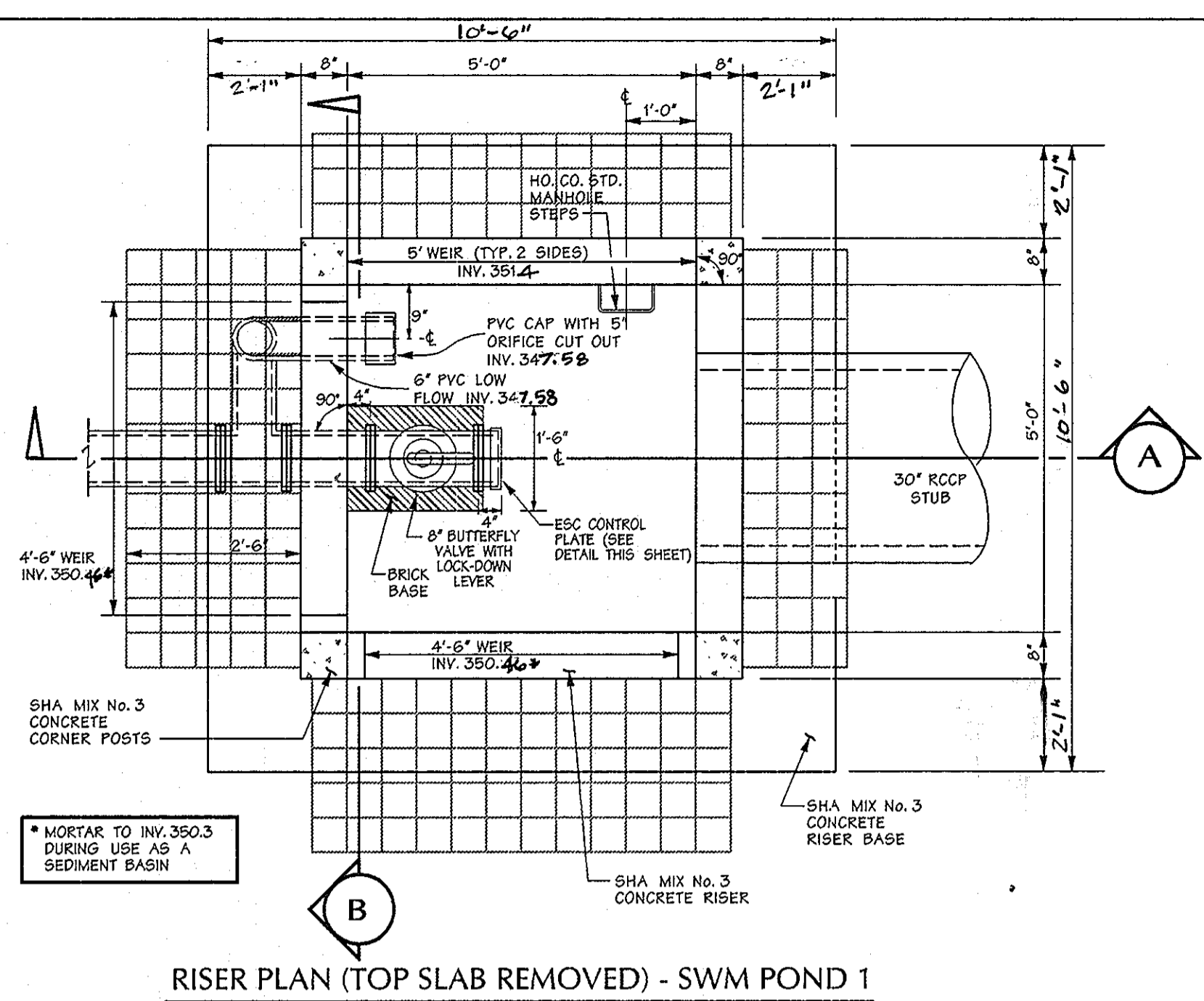


HILLS-CARNES ENGINEERING ASSOCIATES, INC. April 10, 2002. This letter is offered in response to a Howard Soil Conservation District review request for the existing farm pond on the referenced property. The comment states, "The existing farm pond must be removed, upgraded or certified that it meets current standards as it exists." I understand that your civil engineer, DMW, Inc. is currently investigating the hydro geologic features of the pond in order to determine what types of rip-rap and seeding improvements are required to bring the pond up to current Maryland Soil Conservation Service 378 standards.

ENGINEERS CERTIFICATE: IWE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL AND SEDIMENT CONTROL MEASURES WAS PREPARED BY AN EXPERIENCED ENGINEER OF THE SITE. 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.

OWENS PROPERTY SWM Infiltration Study Page 3. DATA SOURCES: WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01. LOCATIONS OF TREENLINES, STREAMS, TOPOGRAPHY, EX. STRUCTURES, ETC. DERIVED FROM LOW-LEVEL FLYOVER & AERIAL PHOTO ACQUIRED APRIL 8, 2002.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT DATE 3/5/05. CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3/5/05. ENGINEERS CERTIFICATE: IWE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL... PATAPGCO LANDING, LLC c/o James Keely and Co. Inc. 61 E. Padonia Road, Timonium, MD 21093. TITLE: STORMWATER MANAGEMENT SPECIFICATIONS. Des By MRT Scale 1"=50' Proj. No. 01086.A1. Dm By ADL Date 9-3-04 25 OF 34. Chk By Approved Professional Engr. No. 10551



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.

APPROVED: *Jim Myers, L.S.* 9/20/09 DATE

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

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.

APPROVED: *Mark E. Buda* 9/21/09 DATE

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE: **MARK E. BUDA**

ENGINEERS CERTIFICATE:

I/WE 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.

APPROVED: *John W. Reno, C.E.S.* 9-2-09 DATE

SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE: **John W. Reno, C.E.S.**

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE F-10-10 (HEAD)

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION III NOT TO SCALE

DATA SOURCES:

WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.

LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, ETC. DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002.

BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT MCCUNE - WALKER, INC.

SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968.

PORTIONS OF 100 YR. FLOODPLAIN TAKEN FROM RECORDED PLAT #15586 OF GLYNCHESTER FARMS FLOOD PLAN STUDY FOR TERRY PREPARATORY SCHOOL DATED 3-15-90 (DMW) AND 100 YR. FLOOD PLAN STUDY FOR GROVEMONT SUBDIVISION DATED 4-1997 (ISA GROUP, INC.) AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

Walter J. Williams 2-28-05 DATE

CHIEF, BUREAU OF HIGHWAYS MS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Cindy Korman 3/15/05 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT JA

APPROVED: *Jill Schopf* 3/15/05 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION gm

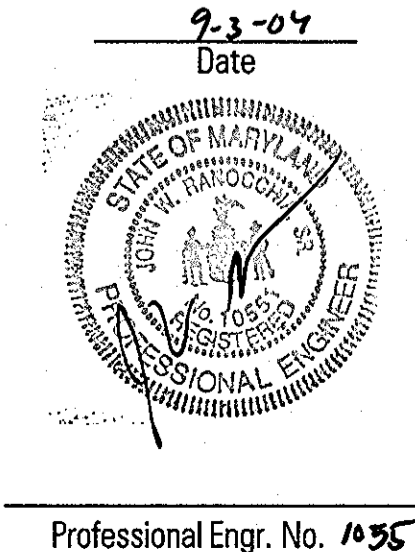
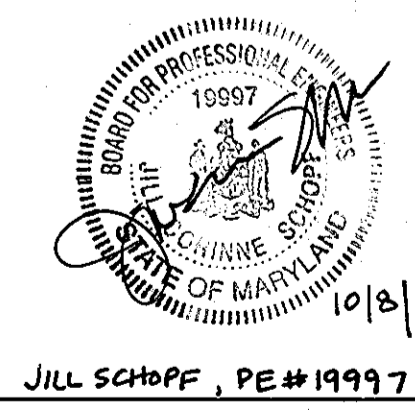
OWENS PROPERTY PHASE I

LOTS 1 THRU 38 AND OPEN SPACES LOTS 39, 40 & 41

TAX MAP 31 PARCEL 243, 572

OWNER/DEVELOPER:

PATAPSCO LANDING, LLC
c/o James Keely and Co. Inc.
P.O. Box 5225
61 E. Padonia Road
Timonium, MD 21093



DMW Dan McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 286-3839 Fax 286-4705

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

TITLE: STORMWATER MANAGEMENT DETAILS

Des By	MRT	Scale	AS SHOWN	Proj. No.	01086.A1
Dm By	MRT	Date	9-3-04		
Chk By	Approved				26 OF 34

Professional Engr. No. 10357

AS-BUILT

LEGEND

- STREAM CENTERLINE
- 75' STREAM BUFFER
- WETLAND
- 25' WETLAND BUFFER
- 100 YR WSE + 1 FREEBOARD (I.E. FLOODPLAIN)
- EX TREELINE
- EX MINOR CONTOUR
- EX MAJOR CONTOUR
- AREA OF INTERPOLATED CONTOURS
- EX STRUCTURE
- PROP. TREELINE (IF SHOWN)
- PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROADWAY CENTERLINE
- PROP. LOT NUMBER
- ADJACENT LOT LINE
- PROP. LOT LINE
- BUILDING SETBACK LINE
- STEEP SLOPES (15-24% SLOPES)
- STEEP SLOPES (25%+ SLOPES)
- NON-WOODY VEGETATION ZONE
- LIMIT OF DISTURBANCE (L.O.D.)
- BASE OF EMBANKMENT
- FOREST CONSERVATION EASEMENT LINE
- PROPOSED STREET SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED FLOWERING TREE

**SCHEDULE A
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	
		P 2	P 3
LANDSCAPE TYPE 'A'			
LINEAR FEET OF PERIMETER		2422 LF.	1011 LF.
LANDSCAPE TYPE 'B'	P 1		
LINEAR FEET OF PERIMETER	786 LF.		
LANDSCAPE TYPE 'C'			
LINEAR FEET OF PERIMETER			
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	568 LF.*	2422 LF.	485 LF.
CREDIT FOR BERK (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED			
SHADE TREES	8	0	9
EVERGREEN TREES	20	0	0
SHRUBS	0	0	0
NUMBER OF PLANTS PROVIDED			
SHADE TREES	8	0	2**
EVERGREEN TREES	20	0	14
OTHER TREES (2:1 SUBSTITUTION)	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED			

NOTE: STREET TREES WILL BE PROVIDED @ A SPACING OF 1/40 LF. THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS.
 * NOTE: LANDSCAPE CREDIT HAS BEEN TAKEN FOR RETENTION OF EXISTING HEDGEROW ALONG LAND ROAD (I.E. SCENIC ROAD). THIS CREDIT WILL BE APPLIED TO DECIDUOUS MATERIAL ONLY. EVERGREEN PLANTING REQUIREMENTS WILL BE PROVIDED FOR ALL 786 LF.
 ** NOTE: 14 EVERGREEN TREES HAVE BEEN SUBSTITUTE FOR 7 SHADE TREES.
 NOTE: 125 STREET TREES SHOWN THIS SHEET, MINIMUM DISTANCE BETWEEN TREES & STREETLIGHTS TO BE 10 FEET.

PRIVATE ACCESS PLACE STREET TREE PLANT LIST

QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
SHADE TREES				
12	FX	PLATANUS X ACERIFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE	2 1/2" - 3" CAL.	B & B
26	QPH	QUERCUS PHELLOS WILLOW OAK	2 1/2" - 3" CAL.	B & B

NOTE: PRIVATE ACCESS PLACE "STREET TREES" ARE BONDED WITH THE LANDSCAPE REQUIREMENTS.

PUBLIC ROAD STREET TREE PLANT LIST

QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
SHADE TREES				
26	AR.O.G.	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL.	B & B
71	AR.R.S.	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2" - 3" CAL.	B & B

NOTE: PUBLIC ROAD "STREET TREES" ARE BONDED WITH THE FINAL PLANS.

DATA SOURCES:
 WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
 LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, EX STRUCTURES, ETC., DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002.
 BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER 2002, PREPARED BY DAFT MAGNIE - WALKER, INC.
 SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1966.
 PORTIONS OF 100 YR FLOODPLAIN TAKEN FROM RECORDED PLAN #195866 OF GLYNCHESTER FARMS FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL DATED 9-15-99 (DMW) AND 100 YR FLOOD PLAN STUDY FOR GROVEMONT SUBDIVISION DATED 4, 1997 (TSA GROUP, INC.), AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. O'Connell 2-28-05
 CHIEF, BUREAU OF HIGHWAYS
 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Hamilton 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

[Signature] 3/2/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

10-5-06	3	REV ELLIS LN. ROW
Date	No.	Revision Description

**FINAL PLAN
OWENS PROPERTY
PHASE I**
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243,572

OWNER / DEVELOPER:
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 Fax 286-4708

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

TITLE FINAL PERIMETER & STREET TREE PLAN			
Des By	AJS	Scale	1" = 100'
Drn By		Date	9-3-04
Chk By		Approved	
			Proj. No. 01086.A1
			27 OF 34

NOTE:
 SEE SHEET 28, SWM
 POND LANDSCAPE PLAN

NO AS-BUILT INFO ON THIS SHEET

9/7/04
 Date

Landscape Architect No. 931

Perimeter Plant List

QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
SHADE TREES				
6	QP	QUERCUS PALUSTRIS PIN OAK	2 1/2" - 3" CAL. 12"-14" HT	B & B FULL HEAD
4	QR	QUERCUS RUBRA RED OAK	2 1/2" - 3" CAL. 12"-14" HT	B & B FULL HEAD
EVERGREEN TREES				
24	PA	PICEA ABIES NORWAY SPRUCE	6'-8" HT.	B & B
15	PS	PINUS STROBUS EASTERN WHITE PINE	6'-8" HT.	B & B UNSHAGED

NOTE: SEE SHEET 27 FOR SWM LANDSCAPING AND SWM PERIMETER LANDSCAPE REQUIREMENTS.
 SEE SHEET 28 FOR LANDSCAPE AND WATER QUALITY PLANTING NOTES AND DETAILS.

Water Quality Planting Specifications

PART 1 GENERAL

1.01 DESCRIPTION: Work consists of all labor, materials, equipment and services necessary for and incidental to the execution and completion of WETLAND PLANTS as indicated on the Drawings and specified herein.

A. Include:

1. Furnishing of all plant material.
2. Soil preparation, planting operations.
3. Maintenance and guarantee.

1.02 QUALITY ASSURANCE

- A. American Association of Nurserymen (A.A.N.): "American Standard for Nursery Stock", (A.N.S.I. Z60.1) as expanded herein.
- B. Nomenclature: In accordance with HORTUS III by L.H. Bailey.
- C. United States Department of Agriculture: Textural Classification Diagram for Soils.

1.03 STANDARD OF COMPARISON

A. When the Drawings indicate a total quantity of five (5) or more of an individual plant (other than bulbs or perennials) the Contractor shall obtain approval of a standard of comparison prior to delivery on site. Assemble samples of all plants to be evaluated as standards at the principal business location of the Contractor. Notify Owner to schedule an inspection for approval of standards and to obtain record photographs. Photographs of each "standard" shall be used for comparison of all material subsequently installed on the site.

1.04 SUBMITTALS

A. Source: Notify the Owner, in writing, of source of all material before delivery.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Root stock of the plant material shall be kept moist during transport from the source to the job site and until planted.
- B. Transport and handle plants so that foliage, roots, or balls are protected from breakage, sun and winds. Tops or roots of plants allowed to dry out or which have been damaged or disturbed root balls will be cause for rejection.

1.06 DRAWINGS

A. The Contractor shall use quantities of wetland plants noted on the plant list.

1.07 PROJECT CONDITIONS

- A. Planting shall commence following approval of the as-built certification of the subject water quality facility.
- B. All emergent wetland plantings shall be installed between April 15 and June 30 or as directed by the Landscape Architect. Do not plant when ground is frozen. Do not use frozen planting soil at any time.

1.08 DEFINITIONS

- A. Start of Planting: Installation of plant material into excavated pits or beds.
- B. Payment Release Inspection: Conducted monthly by the Owner or designated representative to verify quantity only for partial payment to the Contractor. Payment release inspection does not waive any requirements of the standard of comparison or initial acceptance clause.
- C. Initial Inspection: Conducted at the request of the Contractor and the Owner when 90% or more of all planting and related tasks are complete.
- D. Initial Acceptance: Occurs when all plant material is in place in accordance with the specifications and approved by the Owner.
- E. Maintenance Period: From start of planting to final acceptance.
- F. Guarantee Period: From initial acceptance and continuing for 90 days thereafter, excluding the period from November 1 to April 15.
- G. Final Acceptance: Occurs after Contractor has completed all outstanding items, as determined by the Owner, at the end of the maintenance and guarantee period.

1.09 GUARANTEE AND REPLACEMENT

- A. All plants in an impaired, dead or dying condition prior to initial acceptance and prior to final acceptance shall be removed and replaced. Replacement materials shall be the same size as other unplaced material considering growth that has occurred since original installation. Methods of installation shall be identical to the original. The contractor shall guarantee 85% survivorship at the end of the guarantee period.
- B. Replacements shall be made between April 15 and June 30, the season following the initial planting, and shall conform to the planting specifications listed above.
- C. The contractor shall notify the Landscape Architect to arrange a site meeting to determine the replacement requirements, at the end of the guarantee period.

PART 2 PRODUCTS

2.01 PLANTS

- A. Sound, healthy, vigorous, free from plant diseases, insect pests or their eggs.
- B. Plants cut back from larger sizes or pruned prior to delivery will not be accepted.
- C. It is anticipated that these plants will need to be obtained from a nursery source. These plant species are normally unavailable from standard landscape nursery sources.
- D. Shape and Form: Plant materials shall be symmetrical and typical for the variety and species.
- E. Containers: The soil/root masses shall be thoroughly moist upon delivery to the job site. Any dry and light weight plants shall be rejected. If not planted immediately after being delivered to the job site, the plants shall be stored out of direct exposure to the sun and wind and their root masses maintained moist, through periodic watering, until the time of planting.

Until the removal of the plants from the containers, the soil/root masses shall be the size of the specified soil exists on the bottom of the containers, the plants will be rejected since they have not been grown sufficiently long in the containers to root into the soils contained therein.

The plants shall appear healthy with no leaf spots, leaf damage, leaf discolorations, leaf wilting, or evidence of insects on the leaves.

The container size shall be at least as large as indicated in the specifications or shown in the plant tables/lists. Plants shall not be rejected if supplied in containers larger than specified.

F. Fiber or Peat Pot: If not planted immediately after being delivered to the job site, the plants shall be stored out of direct exposure to the sun and wind and their pots and associated root masses maintained moist, through periodic watering, until the time of planting.

The plants shall be well-rooted through the sides and bottoms of the pots and firmly contained therein. Should the plants be removed from the pots by holding them from their tops and gently pulling on the pots, the plants shall be rejected.

If growing, the plants shall appear healthy with no foliar spots, discolorations, wilting, or other evidence of the presence of disease or insects.

Plants shall not be rejected if supplied in pots larger than specified.

The number of plants, stems, or culms per pot as specified or shown in the plant tables/lists at least shall be present, on the average, or the plants shall be rejected.

G. Dormant Propagule (Herbaceous): If not planted immediately after being delivered to the job site, the dormant propagules shall be stored out of the direct exposure to the sun and wind, and they shall be protected by covering with straw, peat moss, compost, or other suitable materials and shall be maintained moist, through periodic watering, until the time of planting.

The bodies and shoots associated with the propagules shall have turgor or be rigid to the touch. If the bodies and/or shoots associated with the propagules are soft or mushy or appear rotten or decomposed, the plant materials shall be rejected.

Rhizome (stolon) sections shall provide a minimum of two shoots per section or Rhizome (stolon) sections containing at least a terminal shoot shall be a minimum of four inches in length (in order to ensure sufficient stored energy to support the new growth). Rhizome sections containing shoots that are soft or mushy or otherwise appear rotten shall not be accepted.

Suckers shall contain a terminal shoot and be a minimum of four inches in length (in order to ensure sufficient stored energy to support the new growth).

Growing Bare Root Plant (Herbaceous): The plants shall contain new roots that are clean and white in coloration.

If not planted immediately after delivery to the job site, the plants shall be stored out of direct exposure to the sun and wind and the new roots shall be protected by the use of straw, peat moss, compost, or other suitable materials and shall be maintained moist, through periodic watering, until the time of planting.

The plants shall appear healthy with no foliar spots, discolorations, wilting, or other evidence of the presence of disease or of insects.

2.02 FERTILIZER

A. Plant Fertilizer: Slow release fertilizer such as Osmocote 19-6-12 analysis (3-4 month release) or equal approved by the Landscape Architect.

B. Slow release fertilizer shall be applied at the time of planting and at the following rate:

All emergent plant material - planting pit application of 1 oz. per container or bare root plant.

C. Pesticides, herbicides and fungicides will not be used unless judged necessary by the wetland landscaper. If applied, quantities recommended by the Department of Agriculture shall not be exceeded.

D. Fertilizer shall be delivered to the site in the original unopened containers with formulas attached.

3.01 PREPARATION

A. Locations: As shown on the Drawings, to dimensions if shown, to scale if not dimensioned. Locations subject to review by the Landscape Architect before starting excavation.

B. No plant material shall be installed until the Landscape Architect has approved the finish grade of the planted areas.

3.02 PLANTING PROCEDURES

- A. Set plants straight and plumb.
- B. Plant material shall be planted in existing soil with each planting pit excavated to size sufficient to contain the entire root stock or root mass without cramping.
- C. Where water is not available on-site, the Contractor shall furnish sufficient quantities to complete the Work at no additional cost to the Owner.

3.04 CLEAN-UP

A. During planting operations, excess and waste materials shall be removed from the site on a daily basis.

B. Repair turf areas and other existing conditions damaged during planting operations, including regrading, seed, mulch and fertilization to the satisfaction of the Owner.

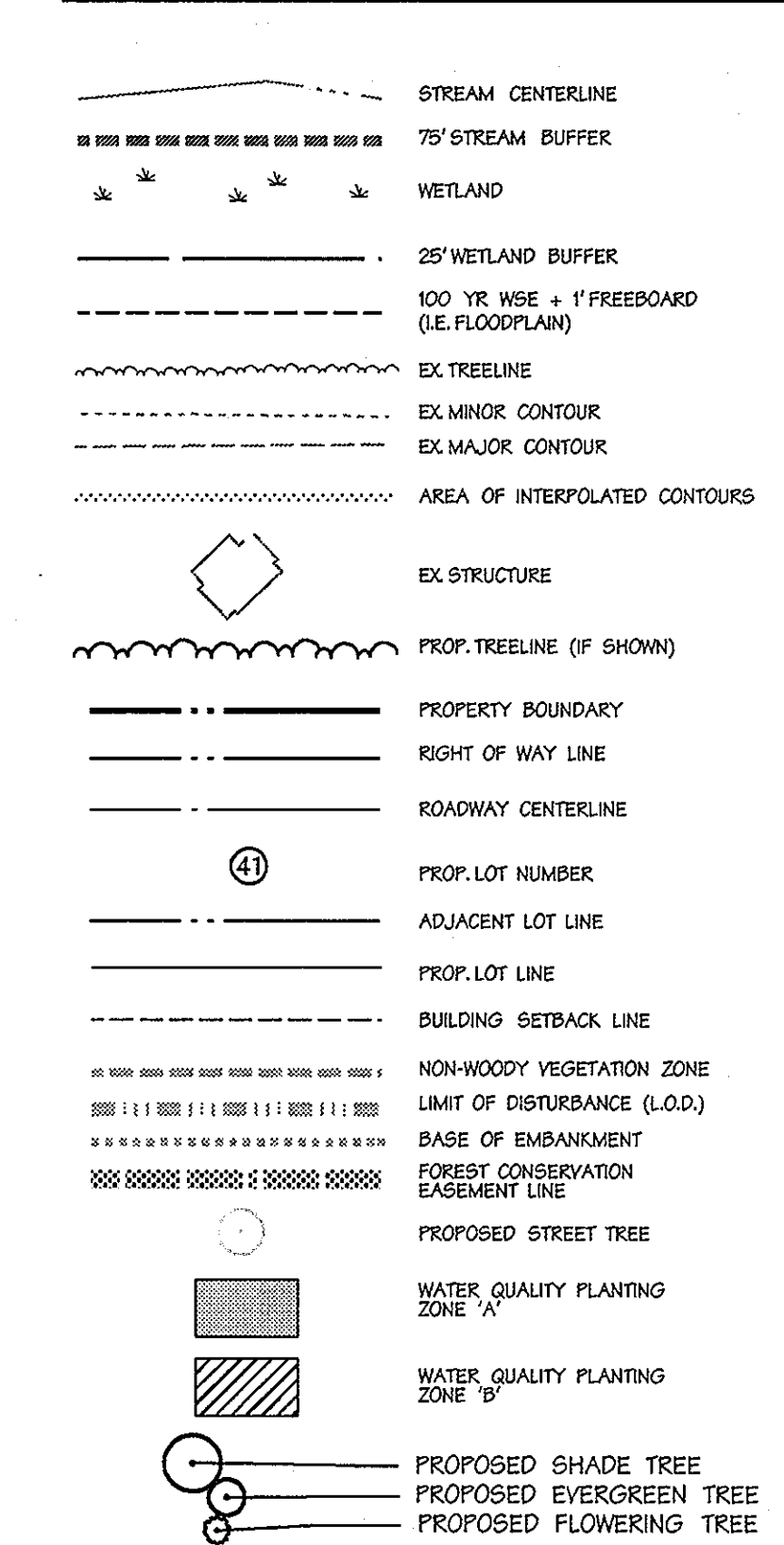
3.05 MAINTENANCE

A. Watering of plant material shall take place at the end of each for fourteen (14) consecutive days after planting has been completed. The watering shall completely saturate the soil and partially immerse the plant material.

B. During maintenance period, on approximately the 1st and 15th of each month, the Contractor shall provide sufficient supervision, equipment, materials and manpower to:

1. Keep all plants in a healthy growing condition by watering when necessary, removing dead or dying branches, controlling insect infestations, removing sprouts, weeding.
 2. Remove and replace dead or damaged plant material. Where replacement is not possible due to season, remove dead material, etc. and level pit until planting is possible.
- B. Notify Owner for review of activities prior to initiating maintenance operations each month.

LEGEND



WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
 LOCATIONS OF TREELINES, STREAMS, TOPOGRAPHY, EX STRUCTURES, ETC. DERIVED FROM LOW-LEVEL FLIGHT & AERIAL PHOTO ACQUIRED APRIL 8, 2002
 BOUNDARY SHOWN PER BOUNDARY SURVEY DATED SEPTEMBER, 2002, PREPARED BY DAFT MCNEIL - WALKER, INC.
 SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1968.
 PORTIONS OF 100 YR FLOODPLAIN TAKEN FROM RECORDED PLAT #15586 OF GLYNCHESTER FARMS FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL DATED 9-5-98 (DWM) AND 100 YR FLOOD PLAN STUDY FOR CREWPOINT SUBDIVISION DATED 4, 1997 (TSA GROUP, INC.) AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
 [Signature] 2-27-04
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
 [Signature] 3/15/04
 CHIEF, DIVISION OF LAND DEVELOPMENT
 APPROVED: [Signature] 3/16/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Date	No.	Revision Description

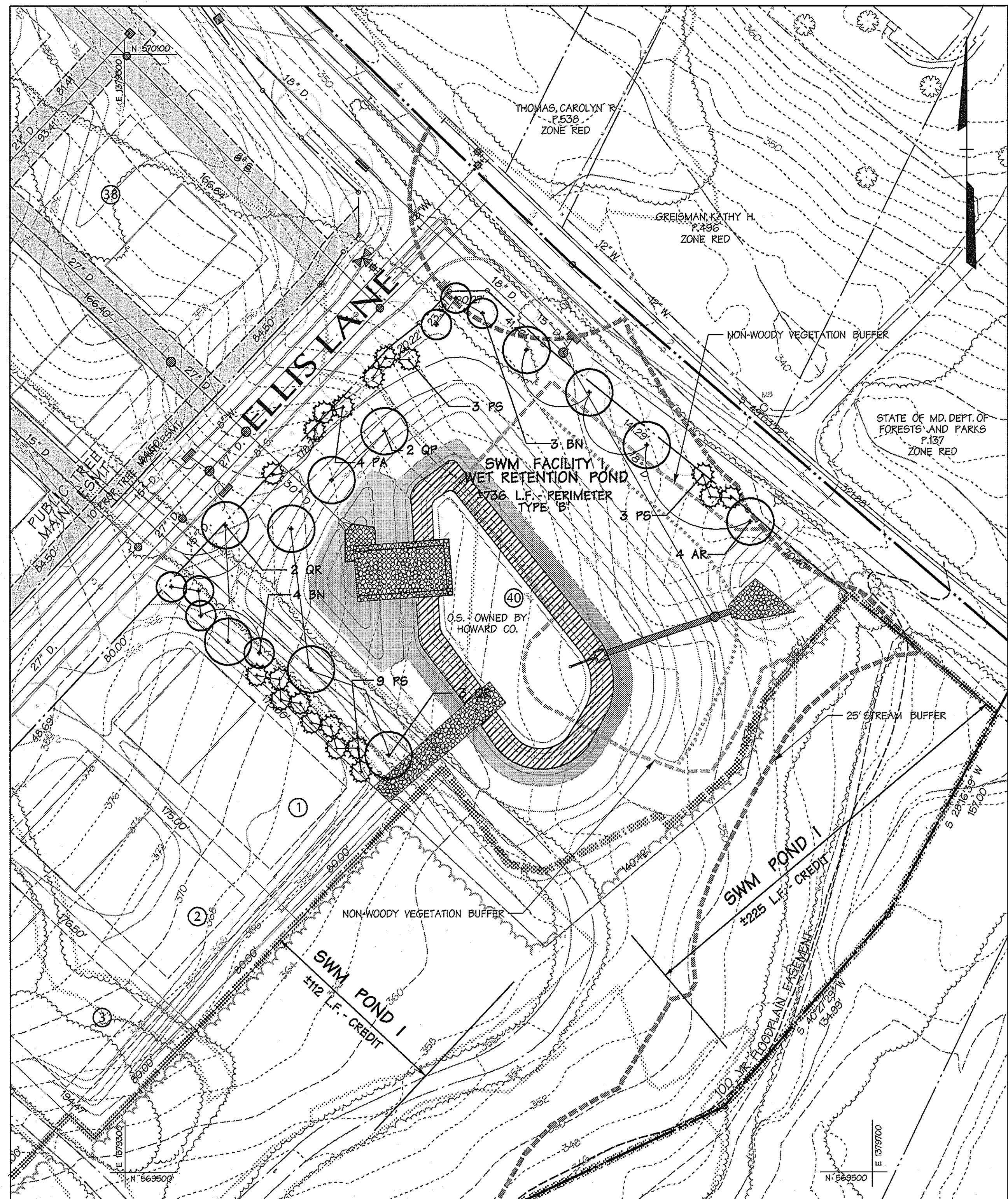
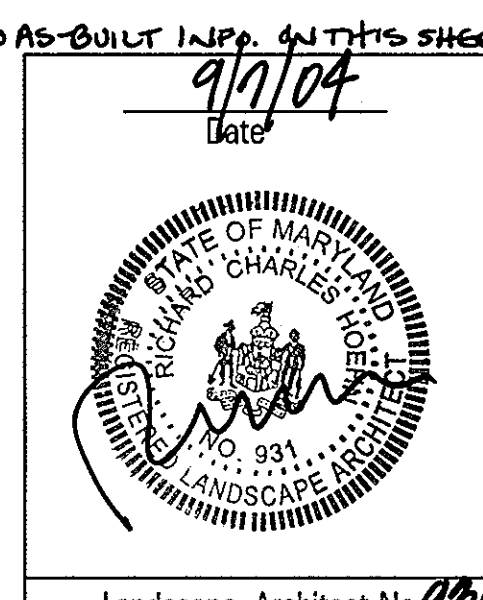
FINAL PLAN
OWENS PROPERTY
PHASE I
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243,572

OWNER / DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keetty and Co. Inc.
 P.O. Box 5229
 61 E. Padonia Road
 Timonium, MD 21093

DMW
 Dawn McQuinn Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 286-3333
 Fax 296-4705
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE: SWM POND I LANDSCAPE & WATER QUALITY PLANTING PLAN

Des By	AJS	Scale	AS SHOWN	Proj. No.	01086.A1
Dm By		Date	9-3-04		
Chk By		Approved			28 OF 34



SWM POND I LANDSCAPE PLAN

SCALE 1"=40'

Water Quality Planting Plan**
 Facility #:

QTY	SYM	BOTANICAL NAME / COMMON NAME	SIZE	REMARKS
SHADE TREES				
4	AR	ACER RUBRUM 'RED SUNSET' / RED SUNSET RED MAPLE	2 1/2" - 3" CAL. / 12'-14" HT	B & B FULL HEAD
2	QP	QUERCUS PALUSTRIS / PIN OAK	2 1/2" - 3" CAL. / 12'-14" HT	B & B FULL HEAD
5	QR	QUERCUS RUBRA / RED OAK	2 1/2" - 3" CAL. / 12'-14" HT	B & B FULL HEAD
EVERGREEN TREES				
4	PA	PICEA ABIES / NORWAY SPRUCE	6'-8" HT.	B & B
15	PS	PINUS STROBUS / WHITE PINE	6'-8" HT.	B & B HEAVY / UNSHEARED
ORNAMENTAL TREES				
7	BN	BETULA NIGRA / RIVER BIRCH	8'-10" HT.	B & B

ZONE "A" (11,691 ± s.f.)				
Species	Size	Spacing	Quantity	Remarks
Scirpus tabernaemontani	quart container*	36"	300	OBL
Iris pseudacoris	quart container*	36"	300	OBL
Lobelia cardinalis	quart container*	36"	300	FAC/W
Iris versicolor	quart container*	36"	300	OBL
Panicum virgatum	quart container*	36"	300	FAC
Saururus cernuus	quart container*	36"	300	OBL
TOTALS			1500	

ZONE "B" (5,092 ± s.f.)				
Species	Size	Spacing	Quantity	Remarks
Sagittaria latifolia	quart container*	36"	327	OBL
Peltandra virginica	quart container*	36"	327	OBL
TOTALS			654	

* Dormant rhizomes of Scirpus, Iris and Saururus, dormant tubers of Sagittaria, and 1st year bulbs of Peltandra may be substituted if plantings are to be installed during dormant season.

** Alternate species and install in random pattern, distributing each species across the hydrologic gradient of each planting zone. Single species massings to be avoided.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

POND #	1
LINEAR FT OF PERIMETER (TYPE "B")	1075 LF
NUMBER OF TREES REQUIRED	
SHADE TREES @ 1/50 L.F.	15
EVERGREEN TREES @ 1/40 L.F.	18
CREDIT FOR EXISTING VEGETATION	337
CREDIT FOR OTHER LANDSCAPING	NA
NUMBER OF TREES PROVIDED**	
SHADE TREES	11
EVERGREEN TREES	19
ORNAMENTAL TREES	7

* THE DEVELOPER WILL PROVIDE ALL SWM LANDSCAPE OBLIGATIONS
 ** ONE EVERGREEN AND SEVEN FLOWERING TREES HAVE BEEN SUBSTITUTED FOR FOUR SHADE TREES.

Landscape Notes

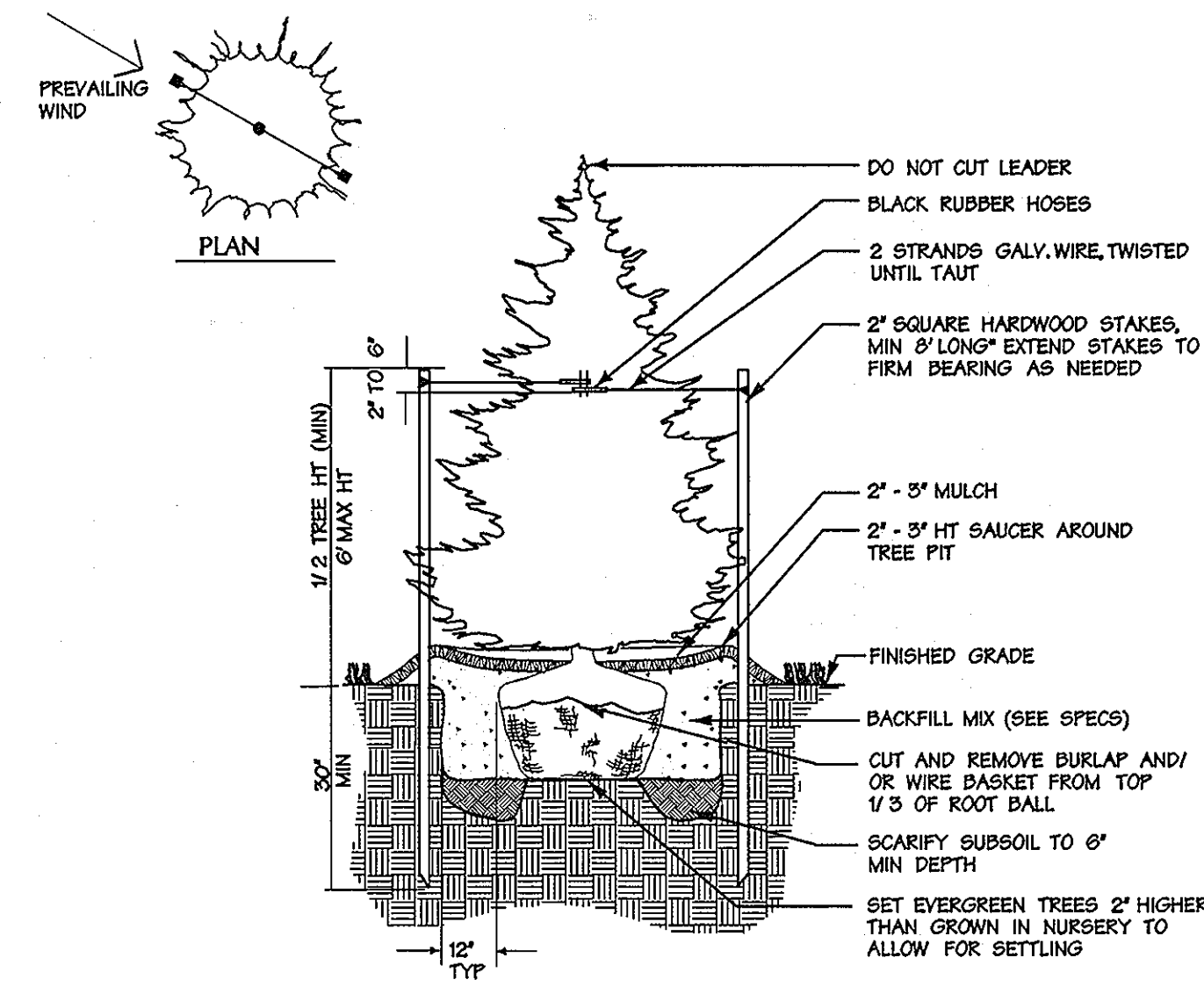
- The contractor shall review architectural/engineering plans to become thoroughly familiar with grading and surface utilities.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow. See Seasonal Plant List for planting times of bulbs and seasonal plants.
- The contractor shall coordinate with lighting and irrigation contractors regarding timing of installation of plant material. No tree may be planted closer than 2' to any street light - contact Traffic Division at 410-313-5752 for exact street light locations.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. Soil quantity take-offs are the responsibility of the contractor. All discrepancies shall be reported to the landscape architect for clarification prior to bidding. The contractor shall furnish plant material in sizes as specified in plant list.
- The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball, and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- No substitutions shall be made without written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials.
- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting bed lines are not to be obstructed. All shrubs and ground cover areas shall be planted in continuous prepared bed and top dressed with 3-inch shredded hardwood mulch. Mulch shall have been shredded within the last six months.
- All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf, watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees shall be guaranteed for 12 months from the date of acceptance. All shrubs and ground covers shall be guaranteed for 12 months from the date of acceptance.
- The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soil conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, fertilizers, lime, and topsoil. Proper planting soils must be verified prior to planting of materials.
- PLANTING MIX:**
 a. Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
 b. Thoroughly mixed in the following proportions for tree and shrub planting mix:
 5 cy existing soil
 2 cy sharp sand
 3 cy wood residuals
 4.5 lbs treble superphosphate
 5 lbs dolomite limestone (eliminate for acid loving plants)
 c. For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 cf and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation:
 2 cy sharp sand
 3 cy organic material
 4.5 lbs treble superphosphate
 5 lbs dolomite limestone (eliminate for acid loving plants)
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds and planters.
- All disturbed areas on the site not planted with shrubs or ground cover shall be fine graded and seeded or sodded as noted on landscape plan.
- All sod shall be obtained from areas having growing conditions familiar to areas to be covered. Areas to be sodded shall be raised of stones and debris. Debris and stones over 1 inch in diameter shall be removed from the site. All damaged sod will be rejected. All sod must be placed with staggered joints, tightly butted, with no inequalities in grade. Place all sod in rows at right angles to slopes (where applicable).
- All planting procedures shall conform to Daft McCune Walker Inc. specifications.
- Some field located plants are not graphically shown on this plan but are within the limit of construction line. All plants (field located plants and graphically shown plants) are noted on the plant list.

General Planting Notes

- All plant material to meet A.A.N. Standards.
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW.
- No substitutions to be made without consent of Landscape Architect or Owner.
- All beds to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting.
- Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion, specimen and other plant material will be selected.
- Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection with acceptance, all electric, water, drainage, and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- Contractor shall notify Miss Utility 72 hours prior to construction.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Ho.Co. code. Financial surety for the required landscaping in the amount of \$26,700.00 must be posted as part of the developer's agreement. (70 shade, 35 evergreens).
- 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.

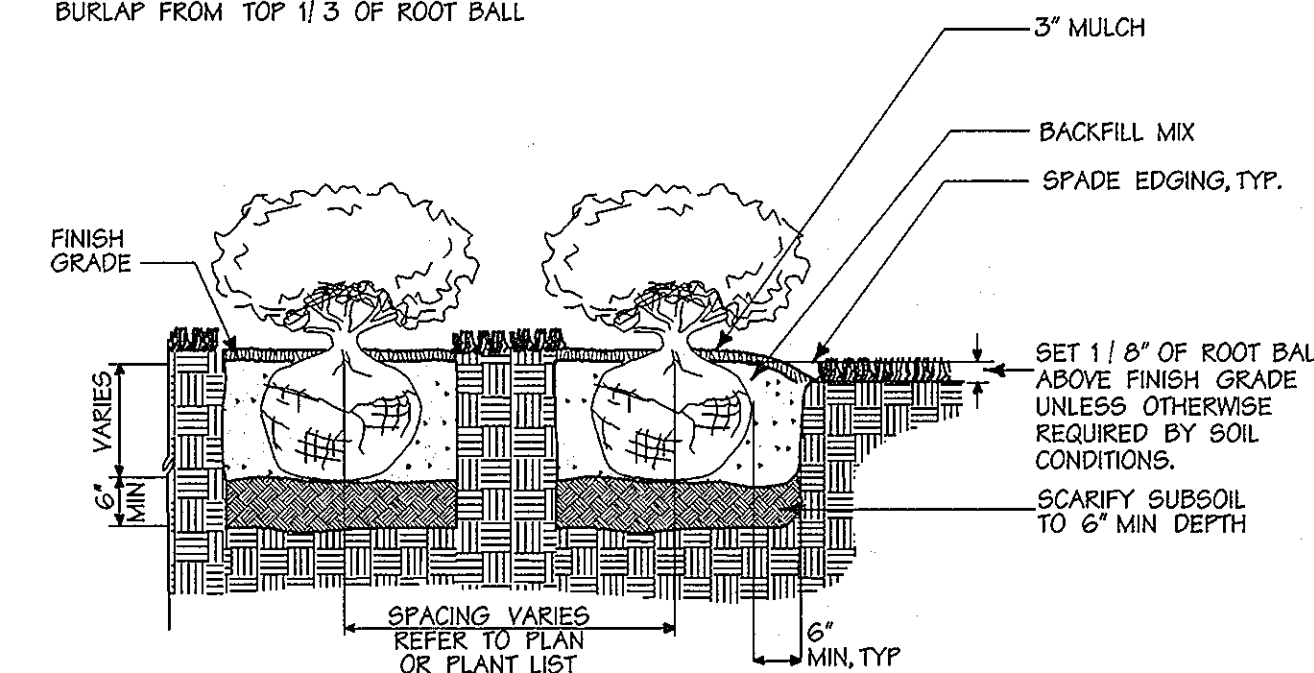
NAME: MARK E. BUDA DATE: 9/7/09



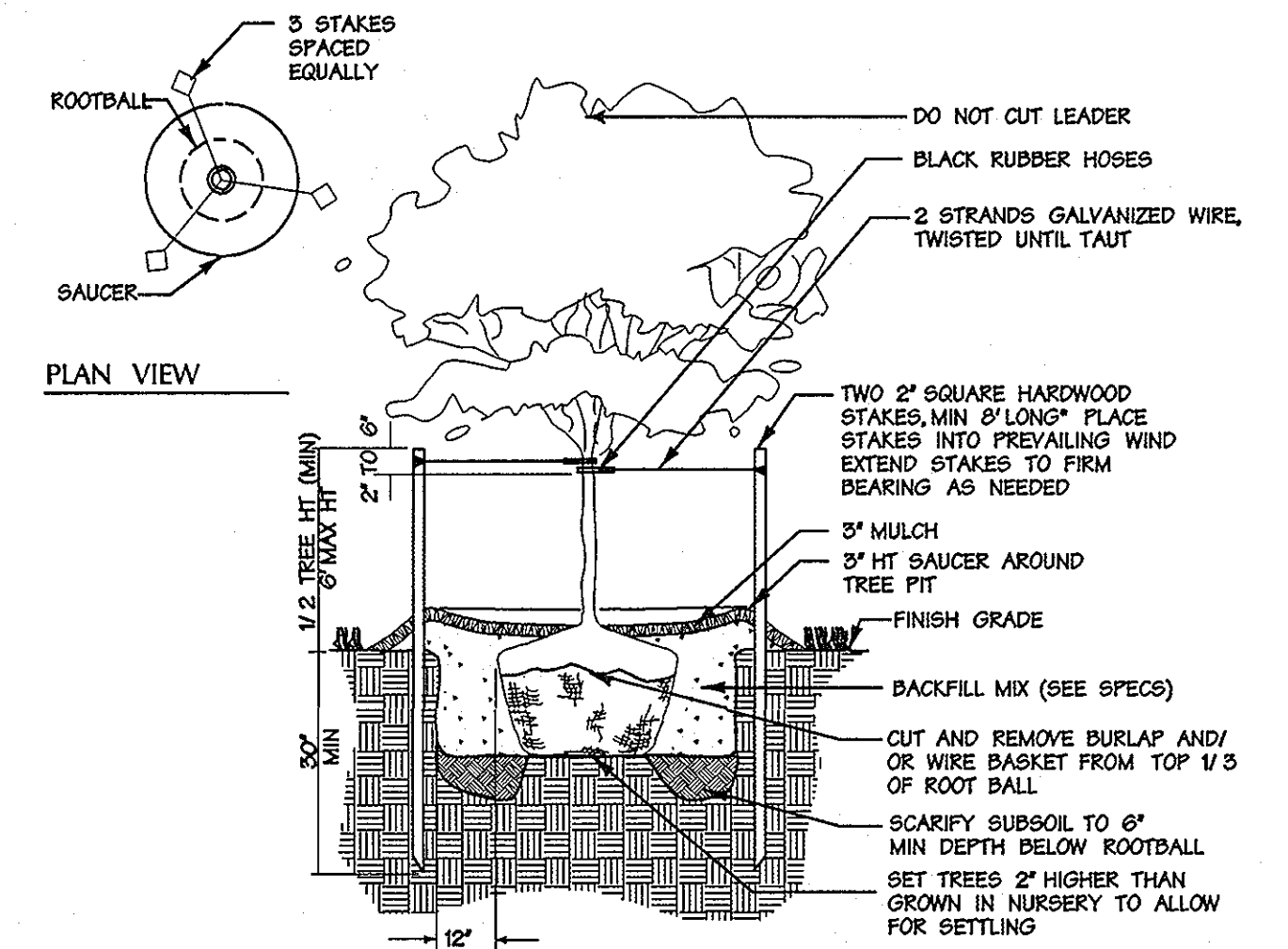
1 Evergreen Tree Planting Not To Scale

NOTES:

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



3 Shrub Planting Not To Scale

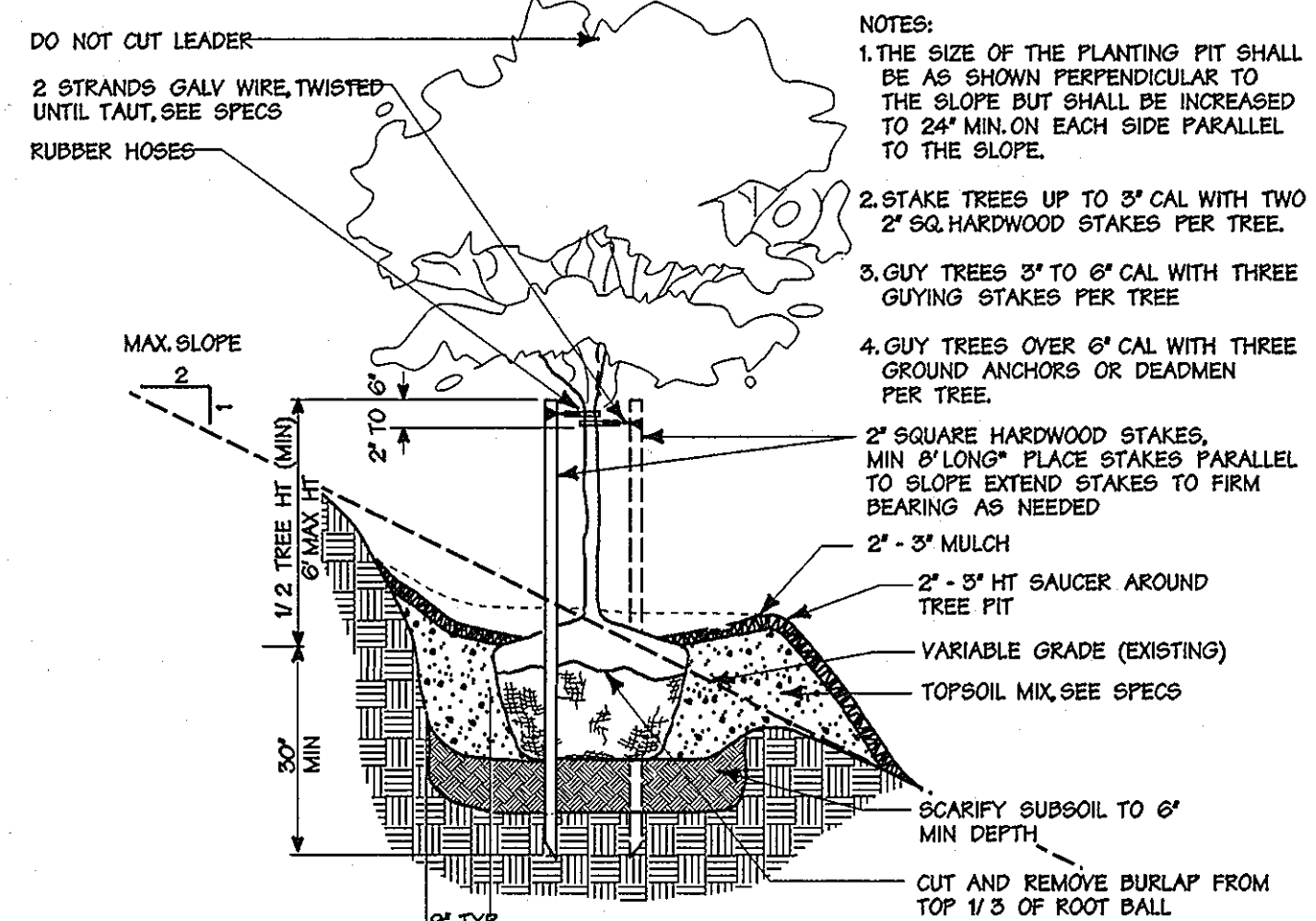


2 Less Than 3" Cal. Tree Planting Not To Scale

NOTES:

- THE SIZE OF THE PLANTING PIT SHALL BE AS SHOWN PERPENDICULAR TO THE SLOPE BUT SHALL BE INCREASED TO 24" MIN. ON EACH SIDE PARALLEL TO THE SLOPE.
- STAKE TREES UP TO 12' HT WITH TWO 2" SQ. HARDWOOD STAKES PER TREE.
- GUY TREES 12'-20' HT WITH THREE GUYING STAKES PER TREE.
- GUY TREES OVER 20' HT WITH THREE GROUND ANCHORS OR DEADMEN PER TREE.
- 2" SQUARE HARDWOOD STAKES, MIN 8' LONG PLACE STAKES PARALLEL TO SLOPE EXTEND STAKES TO FIRM BEARING AS NEEDED.
- 2" - 3" HT SAUCER AROUND TREE PIT.
- VARIABLE GRADE (EXISTING).
- TOPSOIL MIX SEE SPECS.
- SCARIFY SUBSOIL TO 6" MIN DEPTH.
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.

4 Evergreen Tree Planting on Slope Not To Scale

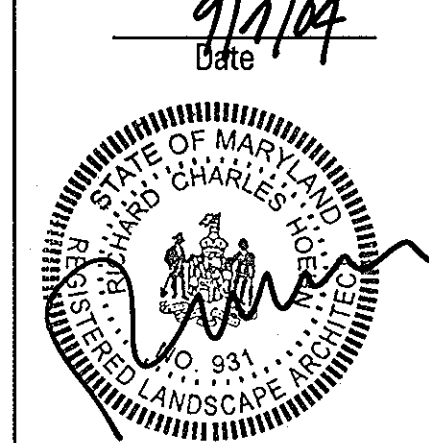


5 Tree Planting on Slope Not To Scale

NOTES:

- THE SIZE OF THE PLANTING PIT SHALL BE AS SHOWN PERPENDICULAR TO THE SLOPE BUT SHALL BE INCREASED TO 24" MIN. ON EACH SIDE PARALLEL TO THE SLOPE.
- STAKE TREES UP TO 3" CAL WITH TWO 2" SQ. HARDWOOD STAKES PER TREE.
- GUY TREES 3' TO 6' CAL WITH THREE GUYING STAKES PER TREE.
- GUY TREES OVER 6' CAL WITH THREE GROUND ANCHORS OR DEADMEN PER TREE.
- 2" SQUARE HARDWOOD STAKES, MIN 8' LONG PLACE STAKES PARALLEL TO SLOPE EXTEND STAKES TO FIRM BEARING AS NEEDED.
- 2" - 3" MULCH.
- 2" - 3" HT SAUCER AROUND TREE PIT.
- VARIABLE GRADE (EXISTING).
- TOPSOIL MIX SEE SPECS.
- SCARIFY SUBSOIL TO 6" MIN DEPTH.
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.

NO AS-BUILT INFO ON THIS SHEET



Landscape Architect No. 991

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS	
<i>William J. ...</i> CHIEF, BUREAU OF HIGHWAYS	7-28-09 DATE
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING	
<i>Cindy ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT	3/5/05 DATE
<i>...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	3/3/05 DATE
Date	No. Revision Description
FINAL PLAN	
OWENS PROPERTY PHASE I	
LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'	
TAX MAP 21 PARCEL 243, 672	
OWNER /DEVELOPER:	
PATAPSCO LANDING, LLC c/o James Keilty and Co. Inc. P.O. Box 528 61 E. Padonia Road. Timonium, MD 21093	
DMW	
Daft McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3533 Fax 296-4705	
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
TITLE FINAL LANDSCAPE NOTES AND DETAILS	
Des By MM	Scale 1" = 50'
Drn By AJS	Proj. No. 01086.A1
Chk By	Date 9-3-04
Approved	29 OF 34

- LEGEND**
- STREAM CENTERLINE
 - 75' STREAM BUFFER
 - WETLAND
 - 25' WETLAND BUFFER
 - 100 YR WSE + 1' FREEBOARD (E. FLOODPLAIN EASEMENT)
 - EX FOREST EDGE
 - EX SCRUB-SHRUB EDGE
 - EX MINOR CONTOUR
 - EX MAJOR CONTOUR
 - AREA OF INTERPOLATED CONTOURS
 - EX STRUCTURE
 - PROP. TREE LINE (IF SHOWN)
 - PROPERTY BOUNDARY
 - RIGHT OF WAY LINE
 - ROADWAY CENTERLINE
 - ① PROP. LOT NUMBER
 - ADJACENT LOT LINE
 - PROP. LOT LINE
 - BUILDING SETBACK LINE (STEEP SLOPES) (15-24.9% SLOPES)
 - STEEP SLOPES (25%+ SLOPES)
 - NON-WOODY VEGETATION ZONE
 - LIMIT OF DISTURBANCE (L.O.D.)
 - BASE OF EMBANKMENT
 - SOIL TYPE DELINEATION LINE
 - FOREST CONSERVATION EASEMENT LINE
 - FOREST RETENTION
 - AFFORESTATION/ REFORESTATION AREA
 - FOREST CLEARING
 - PERMANENT FOREST PROTECTION SIGNS
 - TEMPORARY TREE PROTECTION FENCE
 - PLANTING ZONE BREAK LINE

FOREST CONSERVATION EASEMENT 'II'
 0.63± ACRES TOTAL
 0.63± AC. REFORESTATION (ZONE III)

FOREST CONSERVATION EASEMENT 'III'
 0.26± ACRES TOTAL
 0.26± AC. REFORESTATION (ZONE III)

FOREST CONSERVATION EASEMENT 'I'
 11.23± ACRES TOTAL
 5.08± ACRES RETENTION (OUTSIDE PATH)
 1.99± ACRES TOTAL REFORESTATION (OUTSIDE PATH IN ZONES I, II & III; INCLUDES 0.23 ACRES IN FLOODPLAIN)
 0.06± ACRES PROPOSED MACADAM PATH
 4.33± ACRES FLOODPLAIN (INCLUDES 0.23± ACRES REFORESTATION)

8.52± ACRES CLEARING (TOTAL)
 (INCLUDES 0.1± AC FOR MACADAM PATH THROUGH FCE)

8.52± ACRES CLEARING (TOTAL)

FLOODPLAIN 4.33± ACRES (TOTAL)

8.52± ACRES CLEARING (TOTAL)

FLOODPLAIN 4.33± ACRES (TOTAL)

DATA SOURCES:
 WETLANDS AND SOME STREAMS LOCATED IN FIELD BY GPS ON 12/10/01.
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 SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1966.
 PORTIONS OF 100 YR FLOODPLAIN TAKEN FROM RECORDED PLAT 15586 OF GLYNCHESTER FARMS FLOOD PLAN STUDY FOR TRINITY PREPARATORY SCHOOL DATED 9-15-99 (DMA) AND 100 YR FLOOD PLAN STUDY FOR GOVERNMENT SUBDIVISION DATED 4-1997 (S&A GROUP, INC.) AND STUDY PREPARED FOR THIS PRELIMINARY PLAN.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William F. Walker, Jr. 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

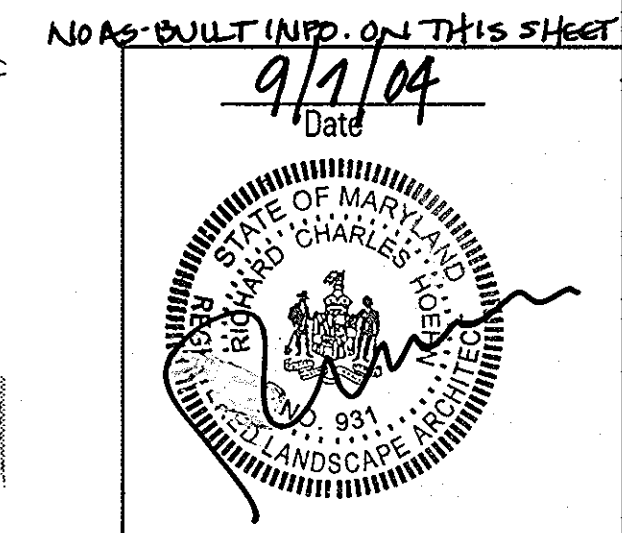
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Carly Hamilton 2/28/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/6/05
 DATE

Date	No.	Revision Description
2-27-09	2	OPEN DRAIN ENLARGED LOTS 18 & 16

FINAL PLAN
OWENS PROPERTY PHASE I
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243, 672

OWNER / DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keelty and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road
 Timonium, MD 21093



DMW
 Daft McCune-Walker, Inc.
 300 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3353
 Fax 296-4705

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

TITLE
FINAL FOREST CONSERVATION PLAN

Des By	SNH	Scale	1" = 50'	Proj. No.	01086.A1
Drn By	AJS/KDE/MAT	Date	9-3-04		
Chk By		Approved			30 OF 34

**8.52± ACRES
CLEARING (TOTAL)**
(INCLUDES 0.1± AC FOR
MACADAM PATH THROUGH
FCE)

**PLANT ZONE III
2.26± ACRES**

MATCH LINE SHEET 30 OF 34

MATCH LINE SHEET 30 OF 34

LEGEND

- STREAM CENTERLINE
- 75' STREAM BUFFER
- WETLAND
- 25' WETLAND BUFFER
- 100 YR WSE + 1' FREEBOARD (I.E. FLOODPLAIN EASEMENT)
- EX. FOREST EDGE
- EX. SCRUB-SHRUB EDGE
- AREA OF INTERPOLATED CONTOURS
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- EX. STRUCTURE
- PROP. TREELINE (IF SHOWN)
- PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROADWAY CENTERLINE
- ④ PROP. LOT NUMBER
- ADJACENT LOT LINE
- PROP. LOT LINE
- BUILDING SETBACK LINE
- STEEP SLOPES (15-24.9% SLOPES)
- STEEP SLOPES (25%+ SLOPES)
- NON-WOODY VEGETATION ZONE
- LIMIT OF DISTURBANCE (L.O.D.)
- BASE OF EMBANKMENT
- SOIL TYPE DELINEATION LINE
- FOREST CONSERVATION EASEMENT LINE
- FOREST RETENTION
- AFFORESTATION/ REFORESTATION AREA
- FOREST CLEARING
- PERMANENT FOREST PROTECTION SIGNS
- X — TEMPORARY TREE PROTECTION FENCE

DATA SOURCES:

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APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William J. Walker, Jr. 2-28-05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cecily Hamuda 3/15/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3/16/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Date	No.	Revision Description

FINAL PLAN
OWENS PROPERTY
PHASE I
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243, 572

OWNER /DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keelty and Co. Inc.
 P.O. Box 525
 61 E. Fadohla Road
 Timonium, MD 21093

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

TITLE
FINAL FOREST CONSERVATION PLAN

Des By	SNH	Scale	1" = 50'	Proj. No.	01086.A1
Dm By		Date	9-3-04		
Chk By		Approved			31 OF 34

NO AS-BUILT INFO ON THIS SHEET
 9/2/04
 Date



Landscape Architect No. 929

**FOREST CONSERVATION
EASEMENT 'I'**
11.23± ACRES TOTAL
5.08± ACRES RETENTION (OUTSIDE PATH)
1.99± ACRES TOTAL REFORESTATION (OUTSIDE PATH IN ZONES I, II, & III;
INCLUDES 0.23 ACRES IN FLOODPLAIN)
0.06± ACRES PROPOSED MACADAM PATH
4.33± ACRES FLOODPLAIN (INCLUDES 0.23± ACRES REFORESTATION)

**FLOODPLAIN
4.33± ACRES (TOTAL)**

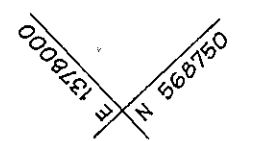
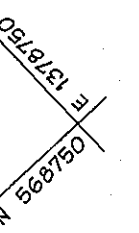
LOBI LANE (PRIVATE ACCESS) PLANT

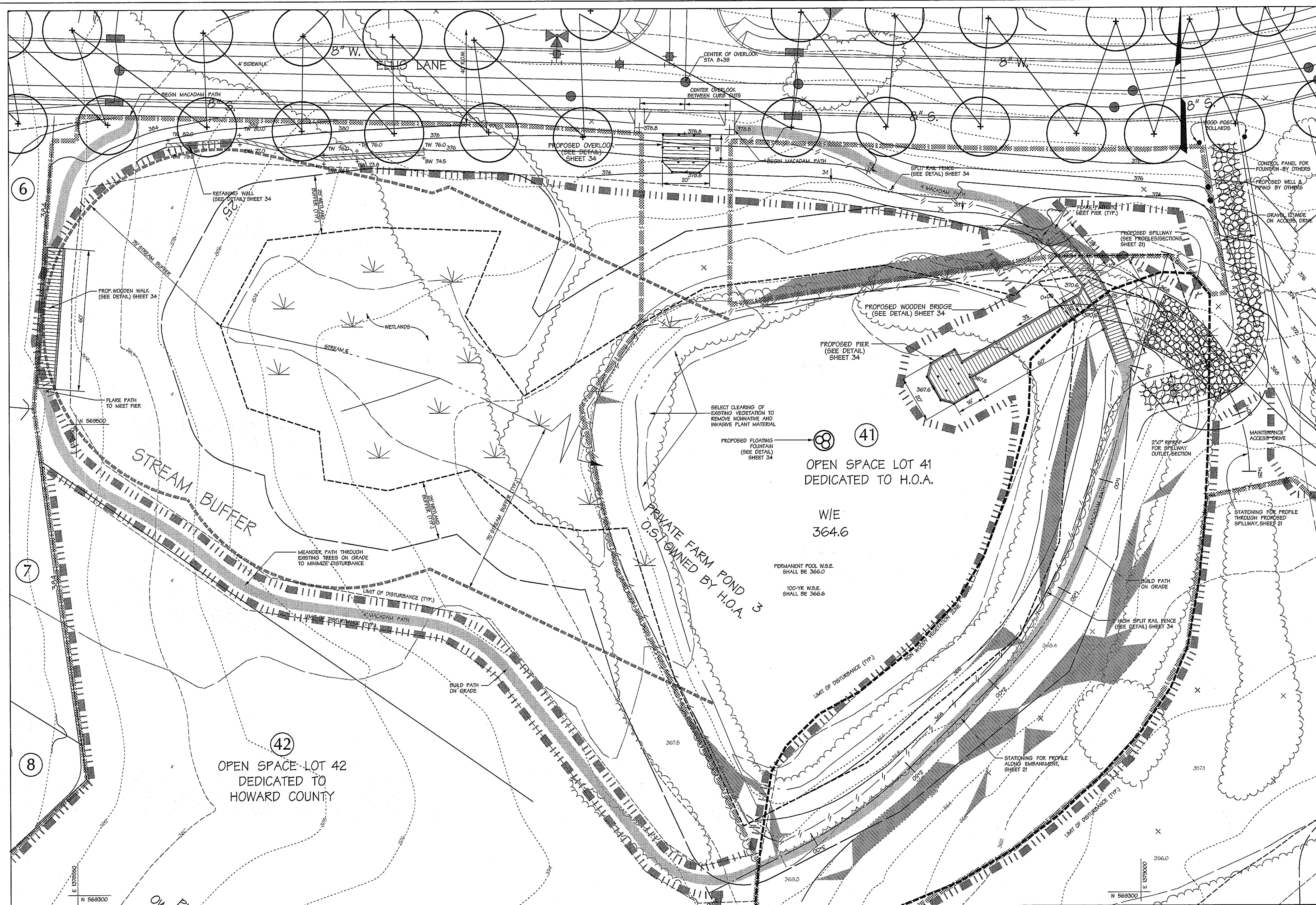
GLYNCHESTER FARMS
ZONE R-20
F-02-05

PRIVATE STORMWATER
DRAINAGE AND UTILITY
EASEMENT

EXISTING 5.00± ACRE FOREST
CONSERVATION EASEMENT

THE BALTO. PROVINCE OF THE SISTERS
OF NOTRE DAME DENAMUR, INC.
ZONE R-20





- LEGEND**
- STREAM CENTERLINE
 - 75' STREAM BUFFER
 - WETLAND
 - 25' WETLAND BUFFER
 - EX TREELINE
 - EX MINOR CONTOUR
 - EX MAJOR CONTOUR
 - EX STRUCTURE
 - PROPERTY BOUNDARY
 - RIGHT OF WAY LINE
 - ROADWAY CENTERLINE
 - ④ --- PROP. LOT NUMBER
 - PROP. LOT LINE
 - BUILDING SETBACK LINE
 - NON-WOODY VEGETATION ZONE
 - LIMIT OF DISTURBANCE (L.O.D.)
 - FOREST CONSERVATION EASEMENT LINE

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APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William F. Walker 2-28-05
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Andy Hamilton 3/16/05
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

[Signature] 3/3/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION gmo DATE

Date	No.	Revision Description
		FINAL PLAN

OWENS PROPERTY PHASE I
 LOTS 1 THRU 38, OPEN SPACE LOTS 39, 40, 41 & 42 AND PARCELS 'A' & 'B'
 TAX MAP 31 PARCEL 243,572

OWNER / DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keelty and Co. Inc.
 P.O. Box 528
 61 E. Padonia Road,
 Timonium, MD 21093

NO RE-BUILT INFO ON THIS SHEET
 9/7/04
 Date



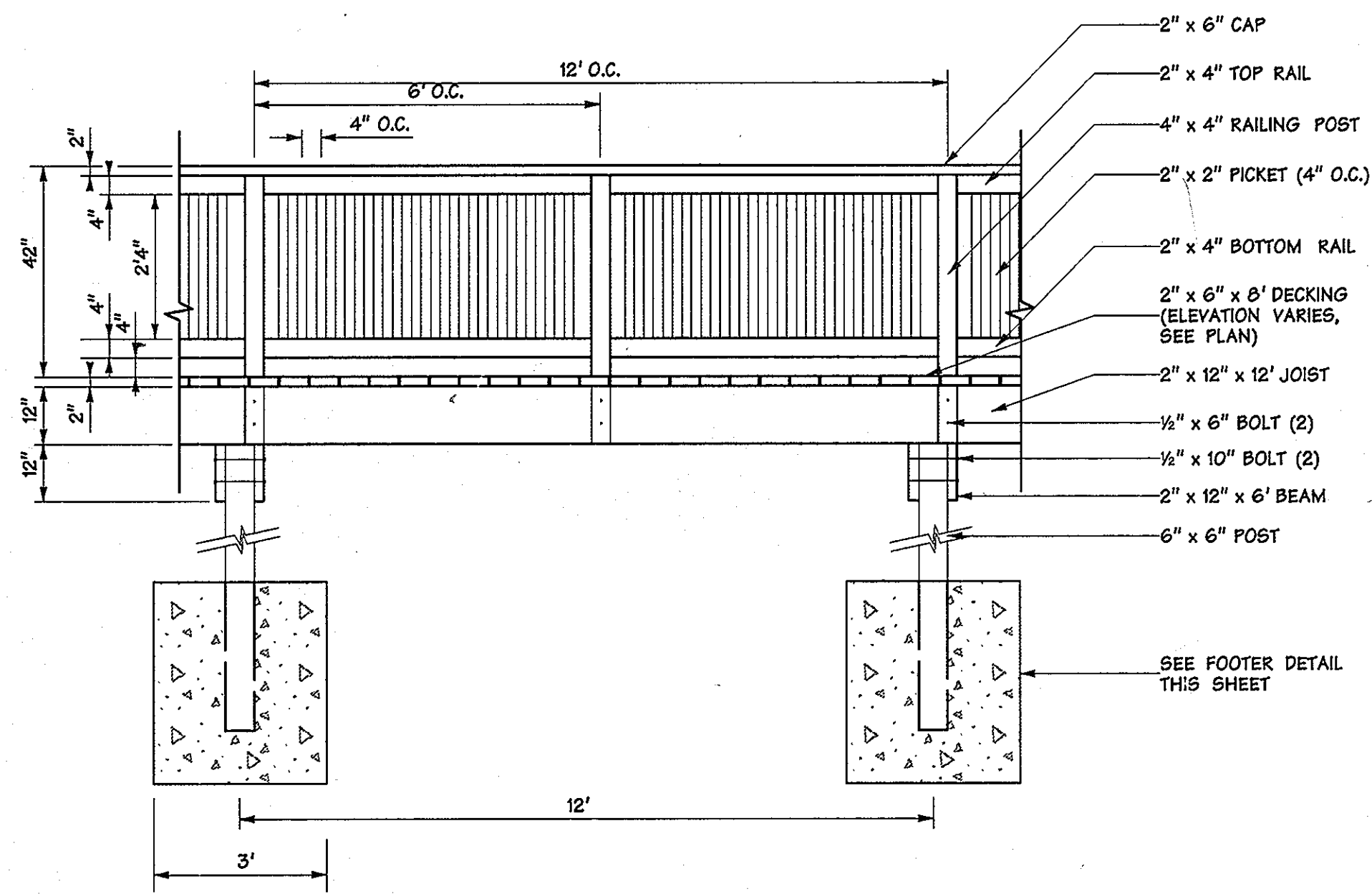
DMW
 Daft McCune Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4708

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

TITLE PROPOSED MACADAM PATH & PIER LAYOUT PLAN			
Des By	MJP	Scale	1" = 20'
Proj. No.	01086.A1	Date	9-3-04
Drn By		Approved	
Chk By			

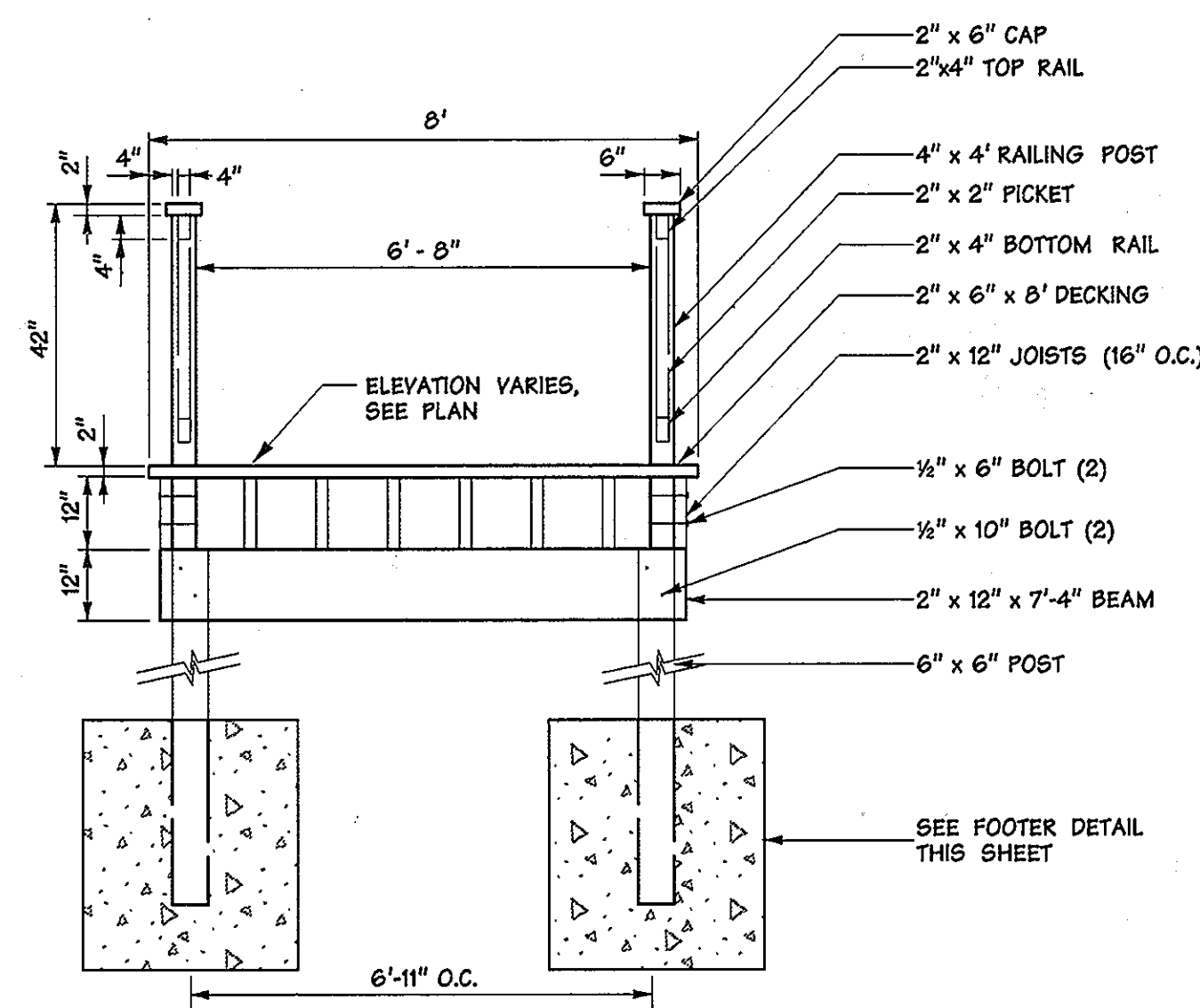
Landscape Architect No. 1191

Macadam Path & Pier Detail
 1" = 20' - 0"



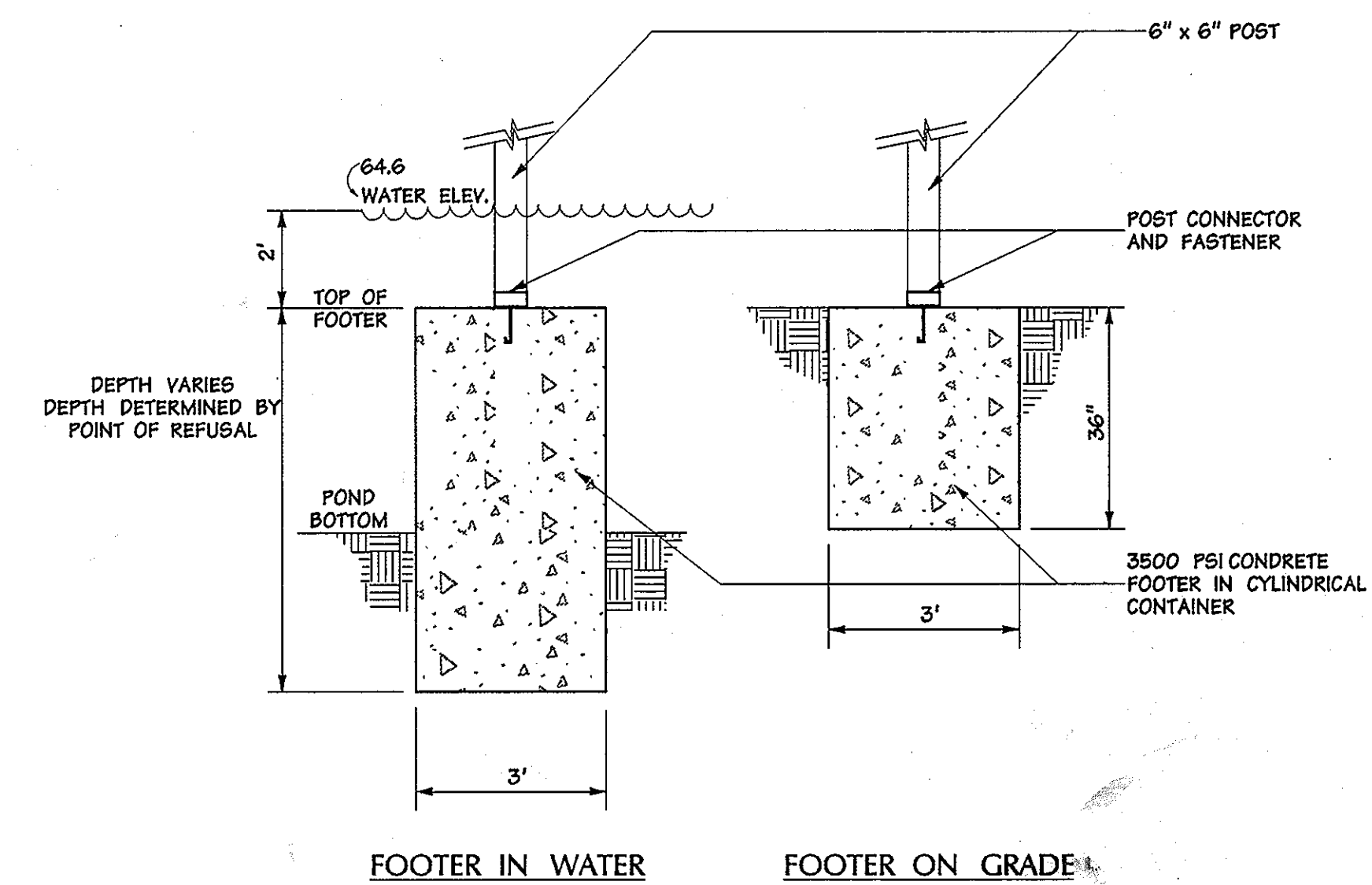
Pier Elevation

N.T.S.



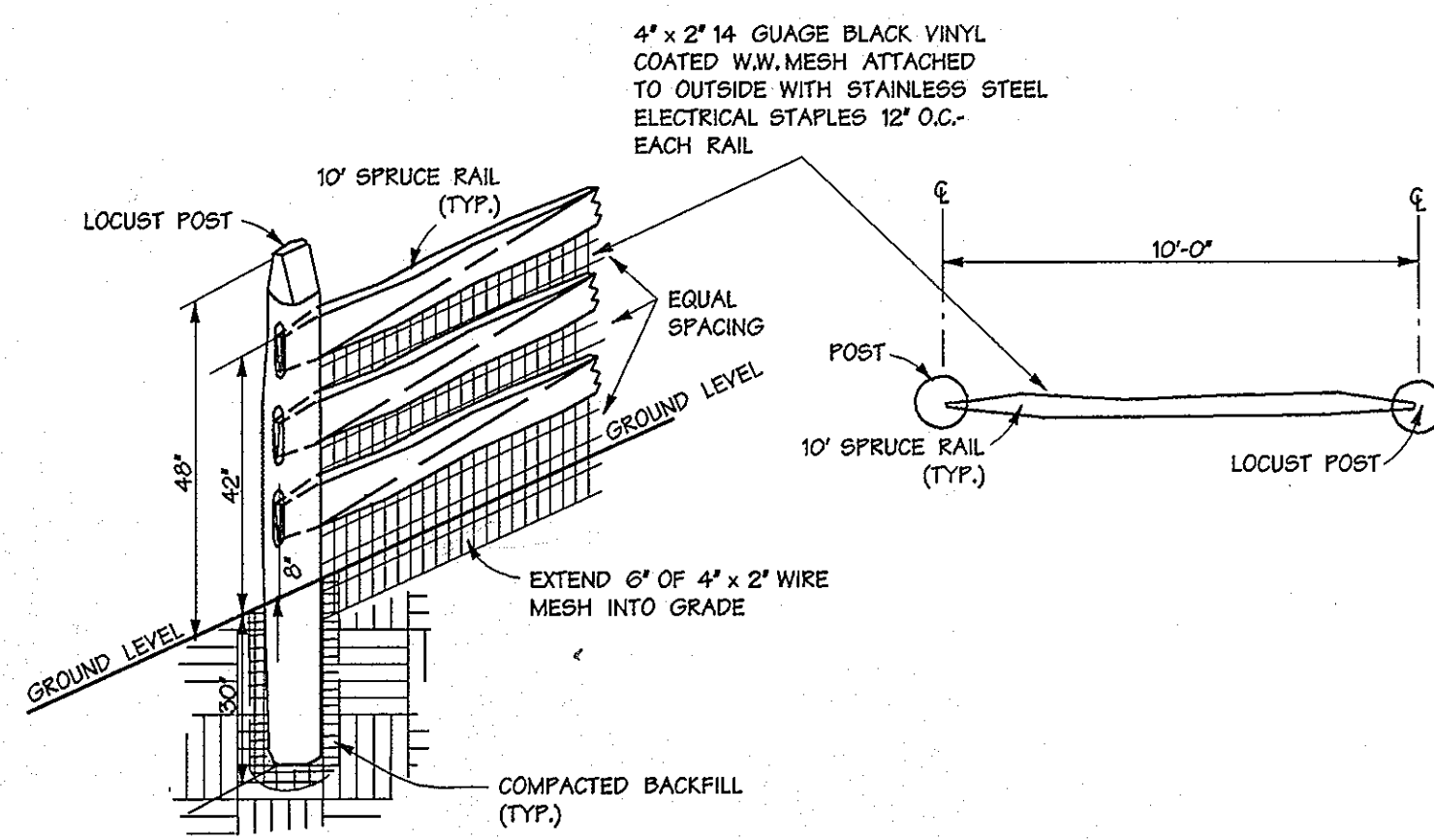
Pier Section

N.T.S.



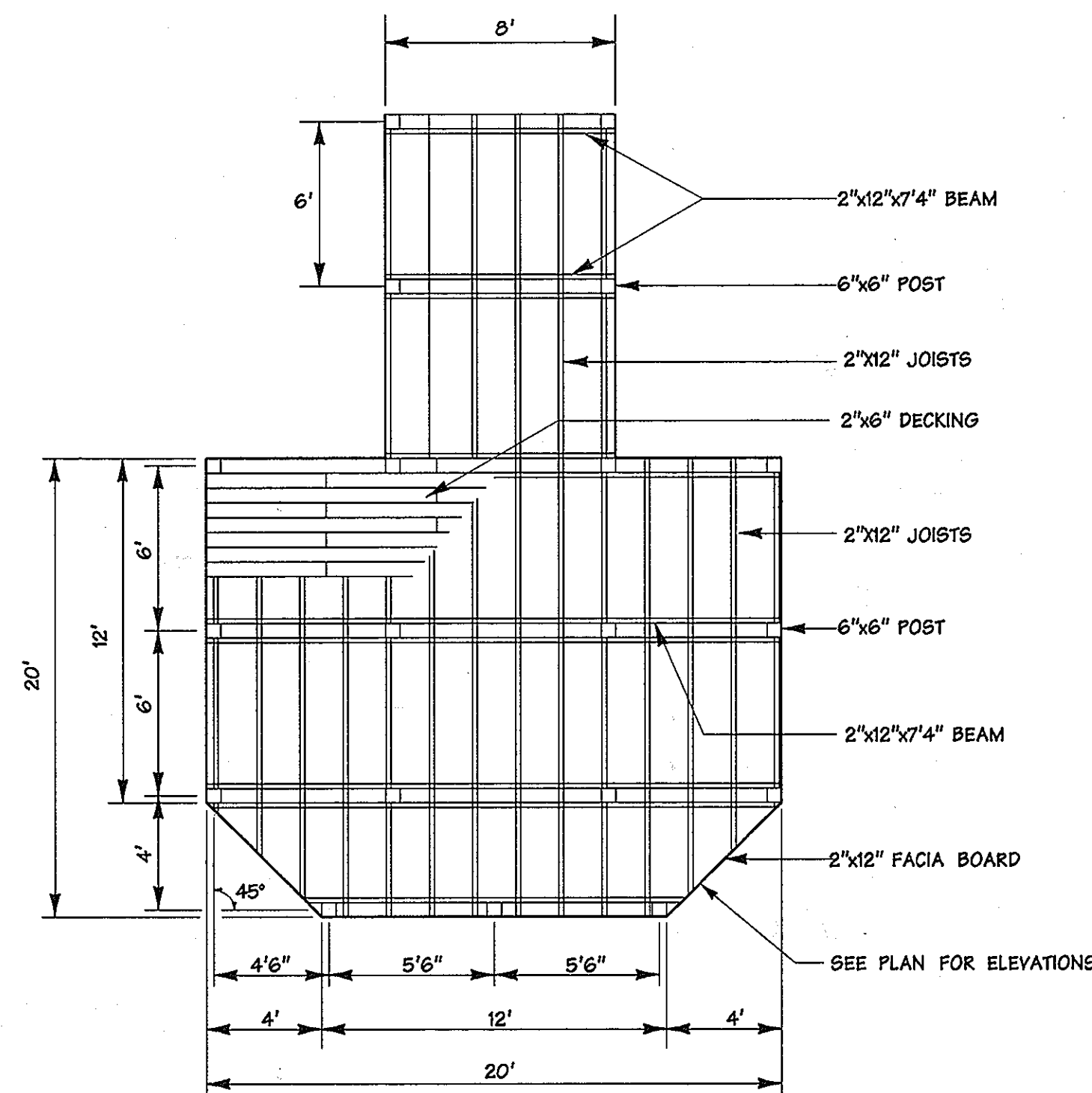
Footer Detail

N.T.S.



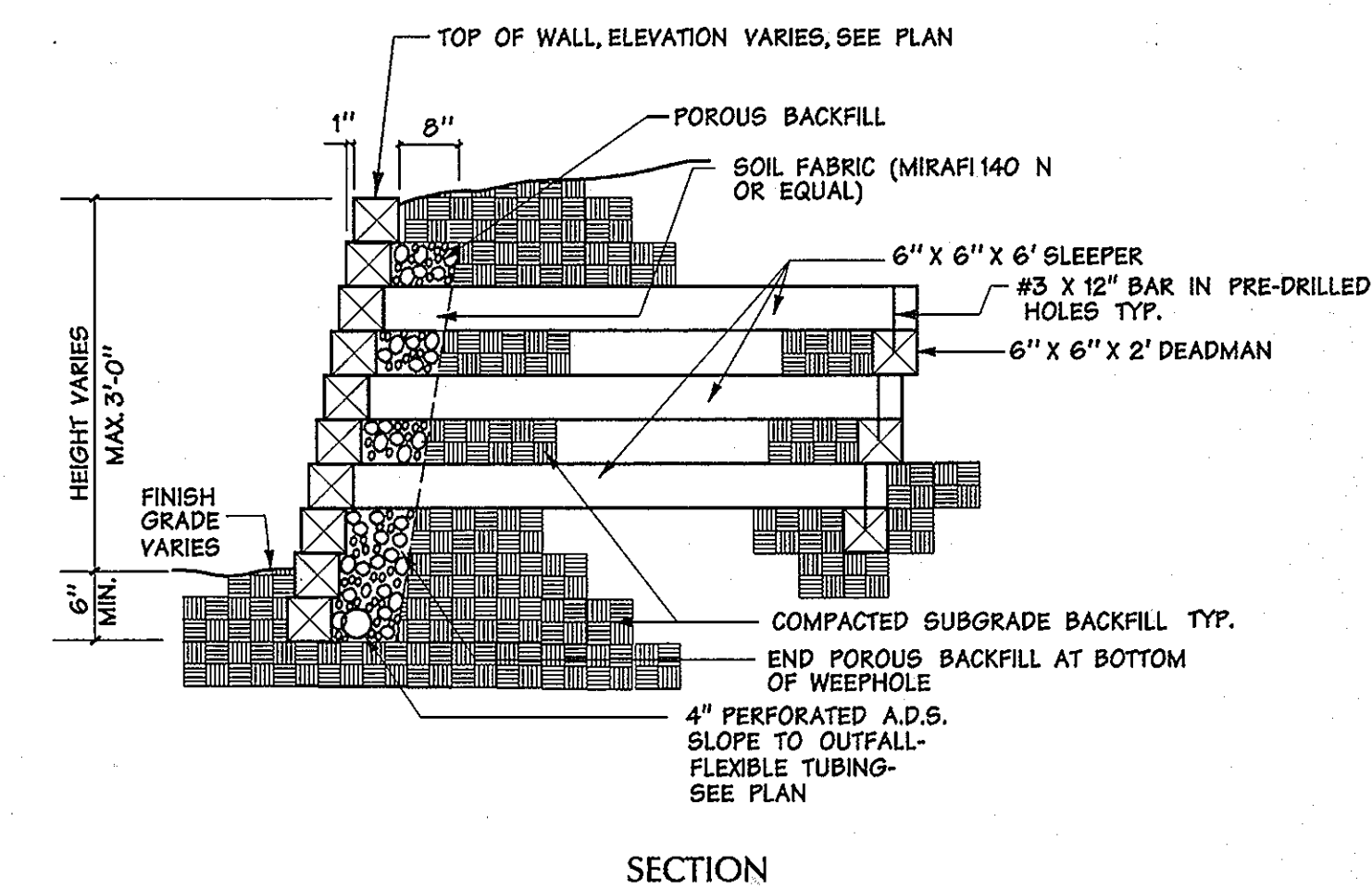
Split Rail Fence

N.T.S.



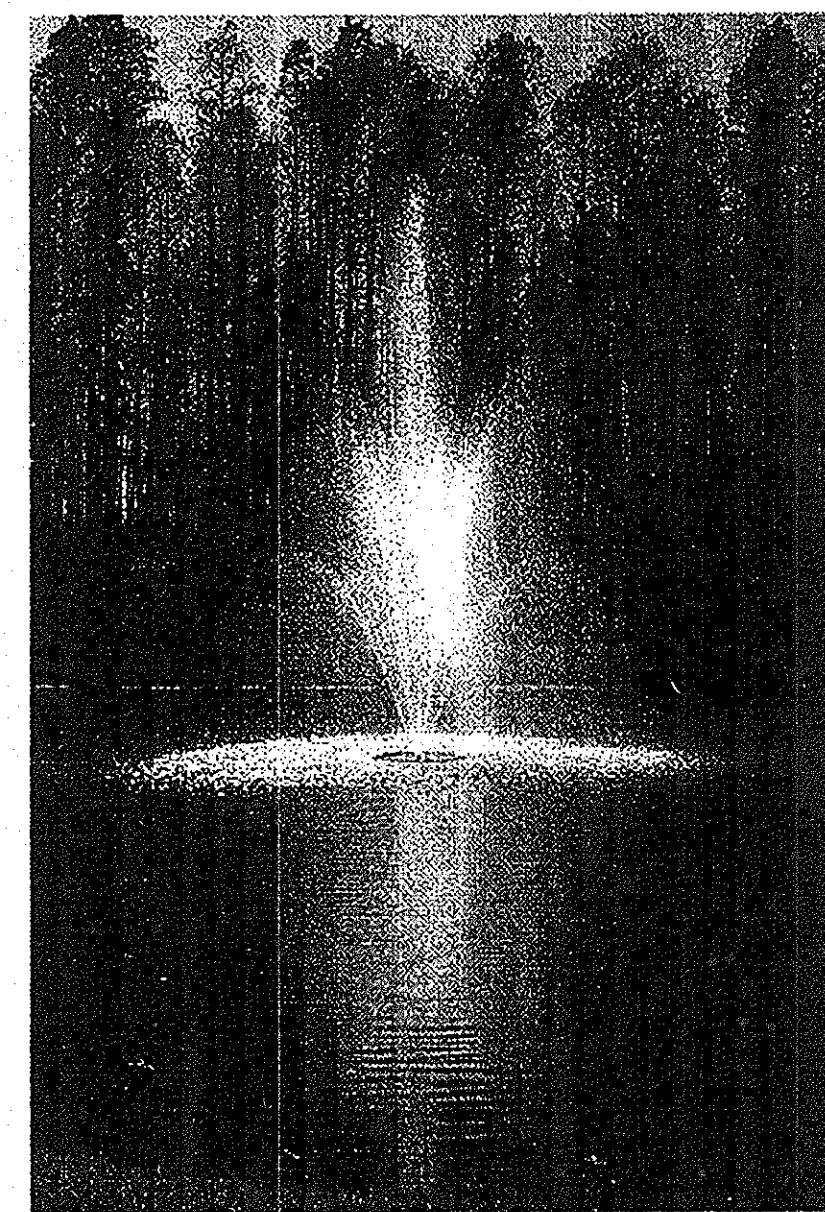
Observation Deck & Pier Terminus
Beam and Joist Detail

N.T.S.



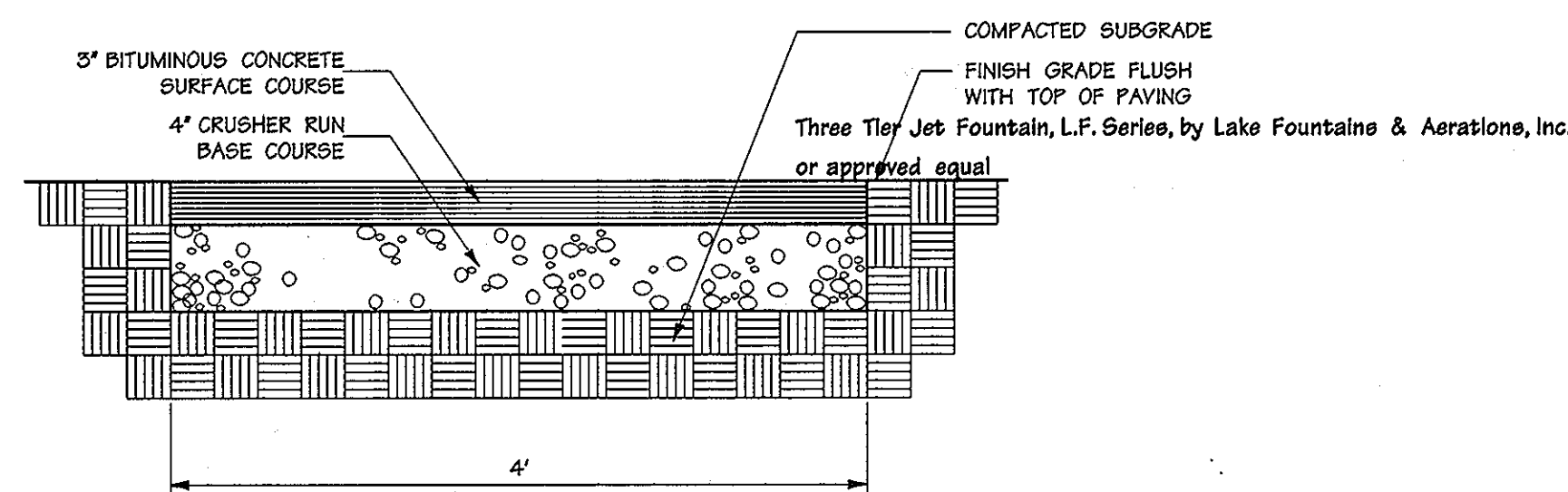
Battered Timber Retaining Wall

N.T.S.



Three Tier Jet Fountain

N.T.S.



Macadam Path (Section)

N.T.S.

NOTE:
1. THIS PLAN IS FOR BIDDING AND LAYOUT PURPOSES ONLY. CONTRACTOR SHALL VERIFY THAT ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH ALL LOCAL BUILDING CODES AND WILL OBTAIN ALL NECESSARY PERMITS.

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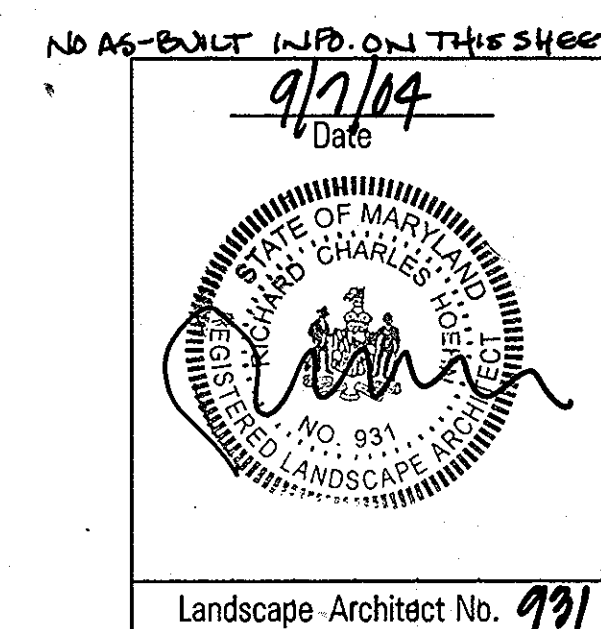
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William Z. Walker 2-28-04
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Henderson 3/16/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3/3/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL PLAN
**OWENS PROPERTY
PHASE I**
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TAX MAP 31 PARCEL 243,572

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A Team of Land Planners,
Landscape Architects,
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TITLE: PROPOSED MACADAM PATH & PIER LAYOUT PLAN & DETAILS

Des By	MJP	Scale	AS SHOWN	Proj. No.	01086.A1
Dm By		Date	9-3-04		
Chk By		Approved			34 OF 34

Landscape Architect No. 991