

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 light and any tree.
- The existing topography is taken from low level flight and aerial survey with 2 contour intervals prepared by SJI dated April 8, 2002.
- The coordinates shown herein 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. AFD Traffic Analysis is not required for this project. This project is located farther than 1/4 miles from the intersection of two major collector roadways.
- Sidewalk ramps shall meet current ADA requirements.
- Project background information:
 Subdivision Name: Owens Property - Phase II
 Total Area: 59.36 Acres in Phases I and II
 Tax Map: 31
 Phase I - Lots/Parcel: 243
 Phase I - Area: 27.74 Acres
 Phase II - Buildable Lot Area: 10,739 ACRES
 Phase II - Open Space Lot Area: 5,480 ACRES
 Zoning: R-20
 Elevation District: 1
 Preliminary Plan Approval Date: 9/20/04
 File Numbers: P-03-08, S-02-15, F-04-29
 12. All sidewalks at intersections to have handicapped ramps. See detail on sheet 5 of 25.
 13. Street trees shall be planted at least 5' from any inlet structure.
 14. This project complies with the requirements of Section 16.12(2) of the Howard County Code for Forest Conservation. Development of Phase II of the Owens Property involves the clearing of approximately 0.39 acres of forest, and the retention of approximately 2.47 acres on the site. A total of 4.0 acres of reforestation will be provided on-site, with the remaining 12.2 acres to be retained on-site (at 2:1 retention ratio) at the Master Property.
 15. 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.
 16. The stormwater management pond will be owned by the Owens Property H.O.A. - there will be a public easement (Howard County) on the facility.
 17. 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 19 of 25.
 18. There will be no Howard County services provided on the flag or pipestem lots.
 19. 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. The 10' x 4' trash pad to be owned and maintained by the H.O.A.
 20. 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.
 21. Existing utilities shown are taken from record drawings obtained from Howard County Water & Sewer Contract Nos. 14-3639-D and 14-3676-D.
 22. Boundary shown herein is based on field survey by DMW dated September, 2002.
 23. A wetland report was prepared by DMW dated February, 2002.
 24. A noise study is not required for this project.
 25. There are no known cemeteries or grave sites on this property.
 26. See Howard County Site Inventory HO-420 Cedar Mill for the historic structure on the site, built in 1916, which will be demolished prior to reconstruction of the plat.
 27. All existing driveways and existing buildings located within limits of Phase II are to be removed.
 28. Financial surety for the required landscaping in the amount of \$95,600 must be posted as part of the developer's agreement. (599 shade trees, 36 evergreen trees)
 29. Financial surety for the Forest Conservation requirements in the amount of \$153,510 must be posted as part of the developer's agreement.
 30. The Maryland Department of the Environment Tracking Number is 200460972.
 31. Water and Sewer Contract Number 14-4295-D
 32. 95% compaction in fill areas to be per AASHTO T-190 standards.
 33. Landing Road is a Scenic Road.
 34. The path to Ellis Lane between Lots 50 and 51 and on Glynchester Farm Lot 53 will be constructed as part of Owens Phase II with the permission of the owner of Glynchester Farm Lot 53.
 35. BPI's at the Site Development Plan stage shall be designed to conform with the requirements in effect at the time of submission.
 37. All sign posts used for traffic control signs installed in the County Right of Way shall be mounted on a 2" galvanized steel perforated square tube post (4" outer diameter) inserted into 2 1/2" galvanized steel perforated square tube sleeve (6" gauge) - 3' long. A galvanized steel/pole cap shall be mounted on top of each post.

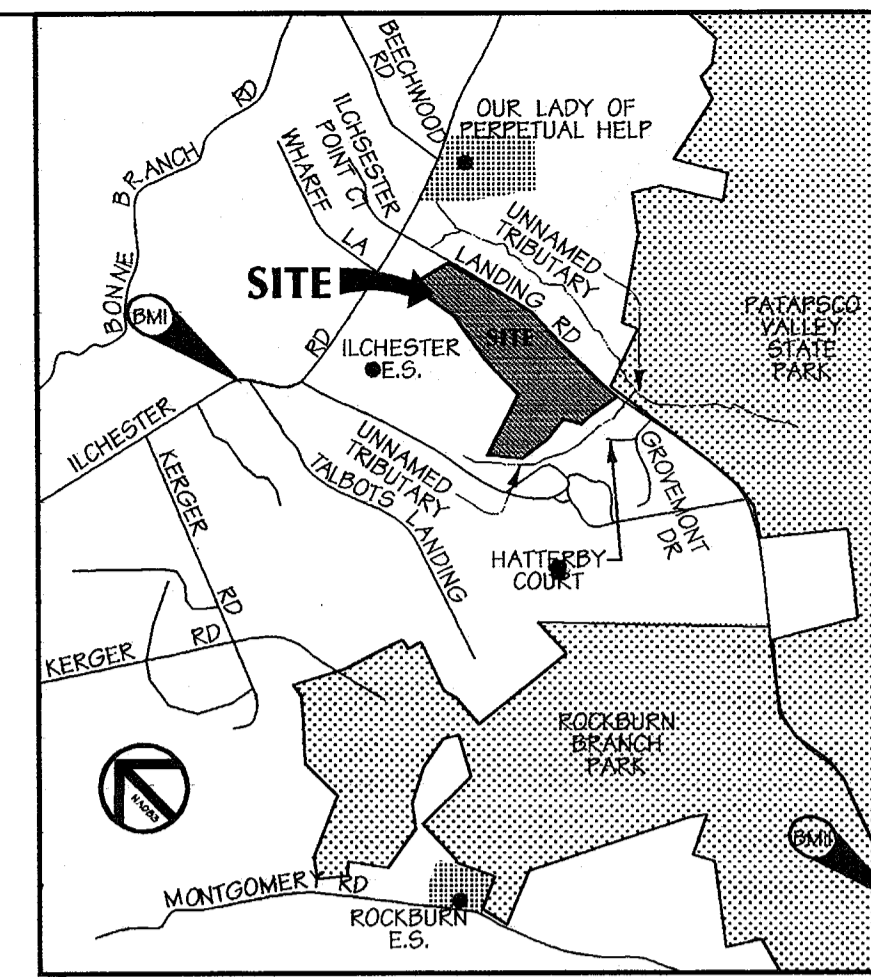
Final Plan

Owens Property – Phase II

Lots 43–97, Open Space Lots 98,99 and 100

Non-Buildable Bulk Parcels 'C' and 'D'

Howard County, Maryland



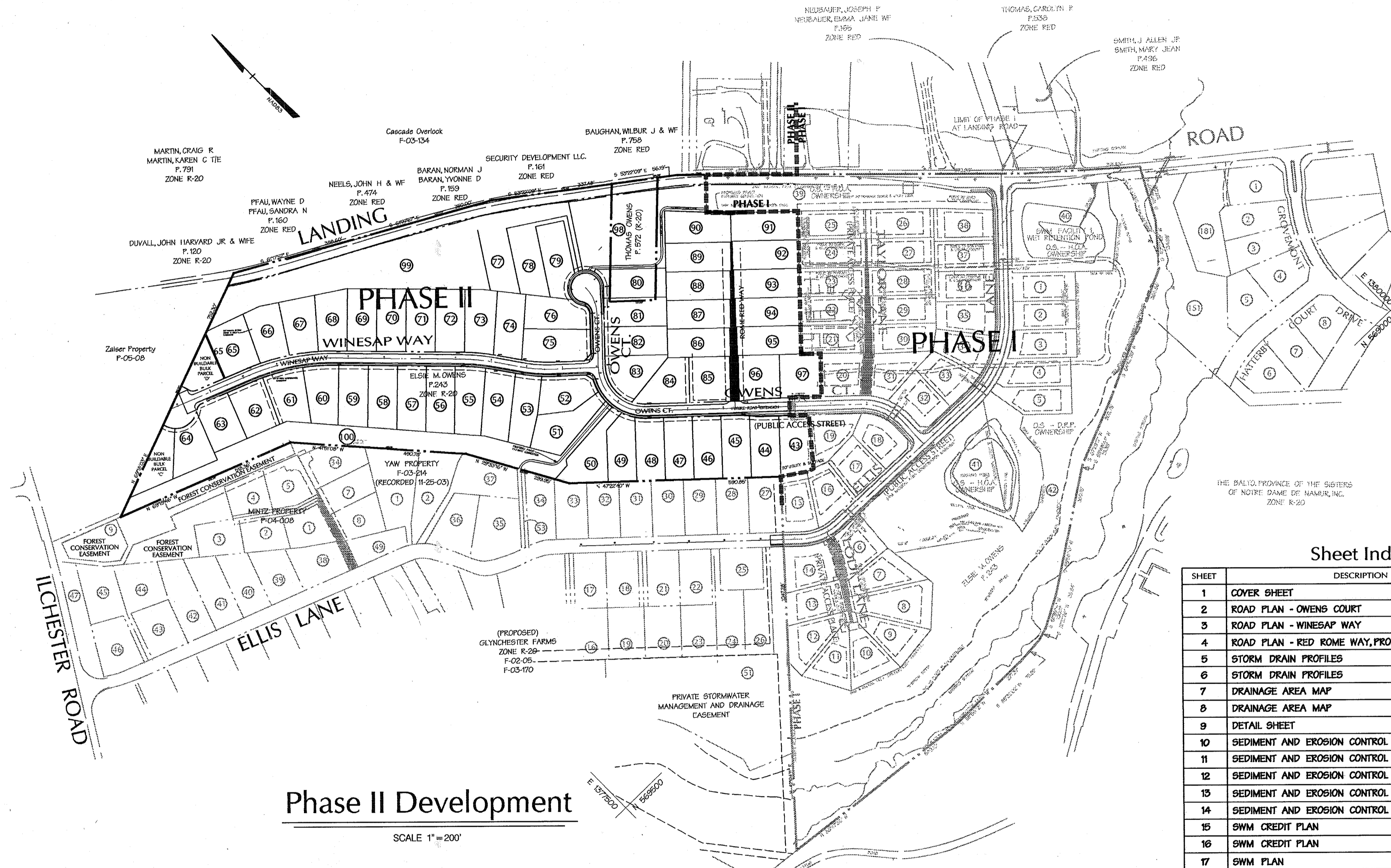
LOCATION MAP

SCALE: 1" = 2000'

BENCHMARK

DESCRIPTION

BMI
 #31EA-DISC SET IN CONCRETE
 N 56964122
 E 1374916325
 ELEVATION = 468.90
 2 FT. SOUTH OF SIDEWALK ON ILCHESTER ROAD
 147 1/2 FT. FROM GATE IN FENCE ON TRANSMISSION LINE R.O.W.
 #32
 #37CA-DISC SET IN CONCRETE
 N 564321666
 E 1382742890
 ELEVATION = 266.965
 20' S. SOUTH OF CENTERLINE OF LANDING ROAD
 25 MILES NORTHWEST ON LANDING ROAD FROM
 INTERSECTION OF LANDING ROAD AND MONTGOMERY RD.



Phase II Development

SCALE 1" = 200'

Sheet Index

| SHEET | DESCRIPTION |
|-------|---|
| 1 | COVER SHEET |
| 2 | ROAD PLAN - OWENS COURT |
| 3 | ROAD PLAN - WINESAP WAY |
| 4 | ROAD PLAN - RED ROME WAY, PROFILE AND DETAILS |
| 5 | STORM DRAIN PROFILES |
| 6 | STORM DRAIN PROFILES |
| 7 | DRAINAGE AREA MAP |
| 8 | DRAINAGE AREA MAP |
| 9 | DETAIL SHEET |
| 10 | SEDIMENT AND EROSION CONTROL PLAN |
| 11 | SEDIMENT AND EROSION CONTROL PLAN |
| 12 | SEDIMENT AND EROSION CONTROL DETAILS |
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| 14 | SEDIMENT AND EROSION CONTROL SPECIFICATIONS |
| 15 | SWM CREDIT PLAN |
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| 19 | SWM DETAILS |
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| 21 | LANDSCAPE PLAN |
| 22 | LANDSCAPE PLAN |
| 23 | SWM POND PLANTING PLAN |
| 24 | FOREST CONSERVATION PLAN |
| 25 | FOREST CONSERVATION PLAN |
| 26 | FOREST CONSERVATION PLAN |
| 27 | FOREST CONSERVATION PLAN |

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. ... 1-19-06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy ... 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 1/27/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

FINAL PLAN
OWENS PROPERTY
PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 TAX MAP 31 PARCEL 243,572

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

DMW
 Draft-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: **OWENS PROPERTY - PHASE II**
FINAL PLAN
COVER SHEET

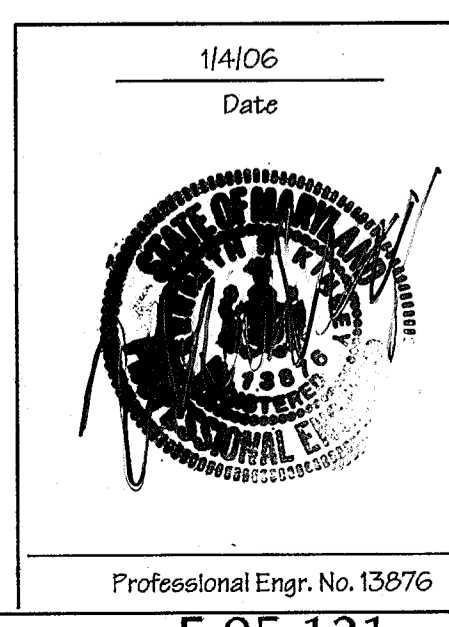
| | | | | | |
|--------|-----|----------|----------|----------------|---------|
| Des By | ADL | Scale | AS SHOWN | Proj. No. | 01086.D |
| Drn By | ADL | Date | 1/14/06 | 1 of 27 | |
| Chk By | KRK | Approved | | | |

Professional Engr. No. 13876

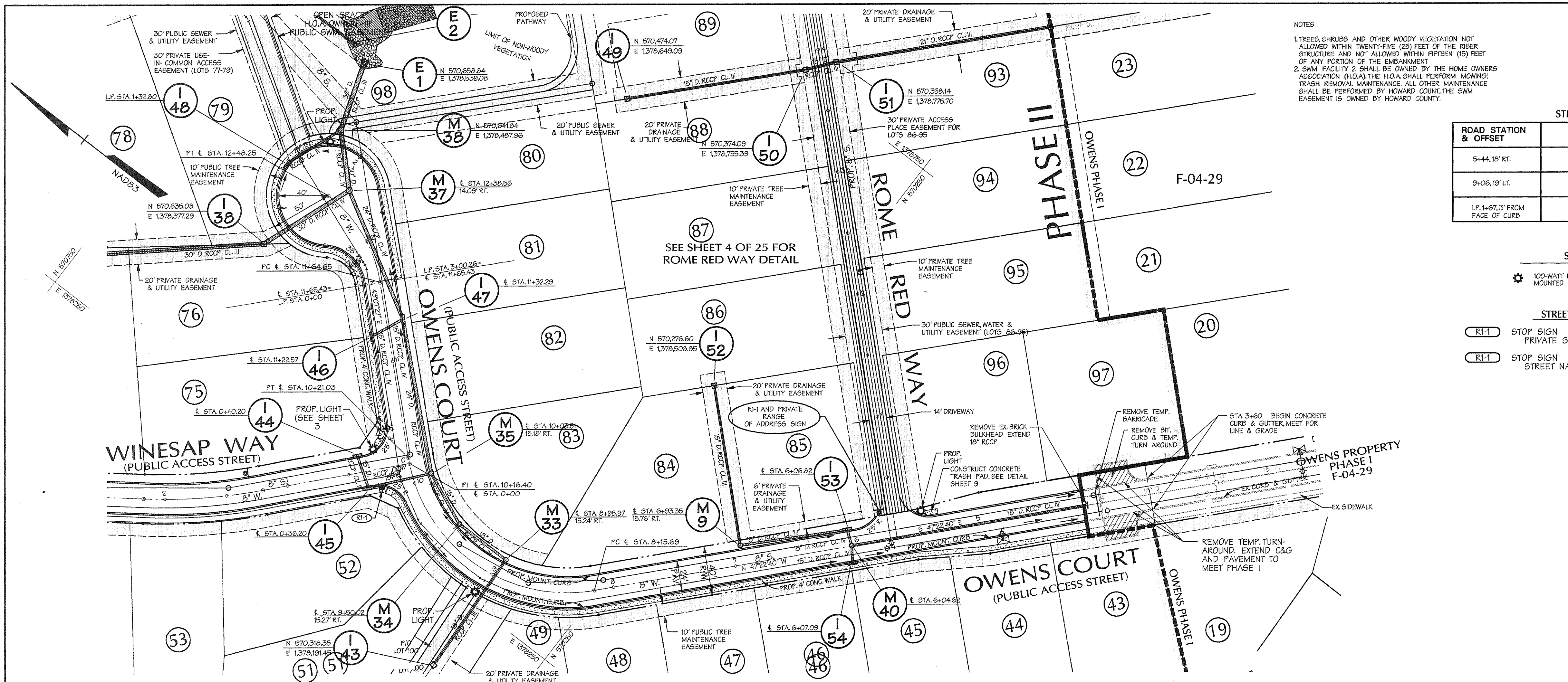
Site Analysis Data Chart

- General Site Data**
 - Present Zoning: R-20
 - Applicable DPZ File References: F-04-29, P-03-08, S-02-15, F-05-08.
 - Proposed Use of Site or Structure(s): **SFD RESIDENTIAL**
 Proposed Water and Sewer Systems: Public Private
- Area Tabulation**
 - Total Area of Site: 27,739 Ac.±
 - Approximate Area of 100 Year Floodplain: 0 Acres
 - Approximate Area of Steep Slopes (25% or Greater): 0 Acres
 - Net Area of Site: 27,739 Acres
 - Area of Proposed Building Lots: 19,297 Acres
 - Area of Proposed Open Space Lots: 5.48 Acres
 - Area of Proposed Public Roads: 2.962 Acres

- Unit/Lot Tabulation**
 - Total Number of Residential Units/Lots Allowed for Project by Right: N/A
 - Total Number of Residential Units/Lots Proposed on this Submission: 55 SFD
 - Density of Project Per Gross Acre: 2.3 LOTS / ACRE
 - Total Number of Preservation Parcels Proposed: 0
 - Total Number of Open space Lots Proposed: 3
 - Total Number of Non - Buildable Bulk Parcels Proposed: 2
 - Total Number of Lot/ Parcel Proposed: 58
- Open Space Data**
 - Minimum Residential Lot Size Selected: 14,000 Square Feet
 - Open Space Required: 0.32 Acres (30% of gross area)
 - Total Open Space Provided on This Submission: 0.32 Acres (5.48 Ac. Phase II and 2.84 Ac. from excess in Phased I) 30%
 - Area of Recreation Open Space Required: 11,000 S.F. (200 S.F./LOT)
 - Area of Rec. Open Space Provided on This Submission: An excess area of Recreational Open Space was provided with Owens Property Phase I, F-04-29, (7,600SF required, 107,620SF provided). Phase II requires 11,000SF (55 LOTS x 200SF). This requirement will be met using 11,000SF of the excess. The recreational Open Space is located on Open Space Lot 41, Phase I.



F-05-121



| FROM-TO | DELTA | RADIUS | LENGTH | TANGENT | CHORD |
|---------------------|-----------|---------|---------|---------|-----------------------|
| 8+15.69 - 10+21.03 | 90°30'07" | 130.00' | 205.34' | 131.14' | N 02°07'37" W 184.66' |
| 11+64.65 - 12+48.25 | 43°07'27" | 111.07' | 83.60' | 43.89' | N 21°33'43" E 81.64' |

NOTES
 1. TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
 2. SWM FACILITY 2 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (HOA). THE HOA SHALL PERFORM MOWING, TRASH REMOVAL, MAINTENANCE. ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY, THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.

| ROAD STATION & OFFSET | DESCRIPTION |
|--------------------------------|--|
| 5+44, 15' RT. | 100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE |
| 9+06, 19' LT. | 100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE |
| LP, 1+67, 3' FROM FACE OF CURB | 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

STREET SIGN LEGEND
 RT-1 STOP SIGN PRIVATE STREET NAME SIGN "ROME RED WAY"
 RT-1 STOP SIGN STREET NAME SIGN "WINESAP WAY"

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Madala 1-19-06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cindy Hammett 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. Madala 1/27/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL PLAN OWENS PROPERTY PHASE II

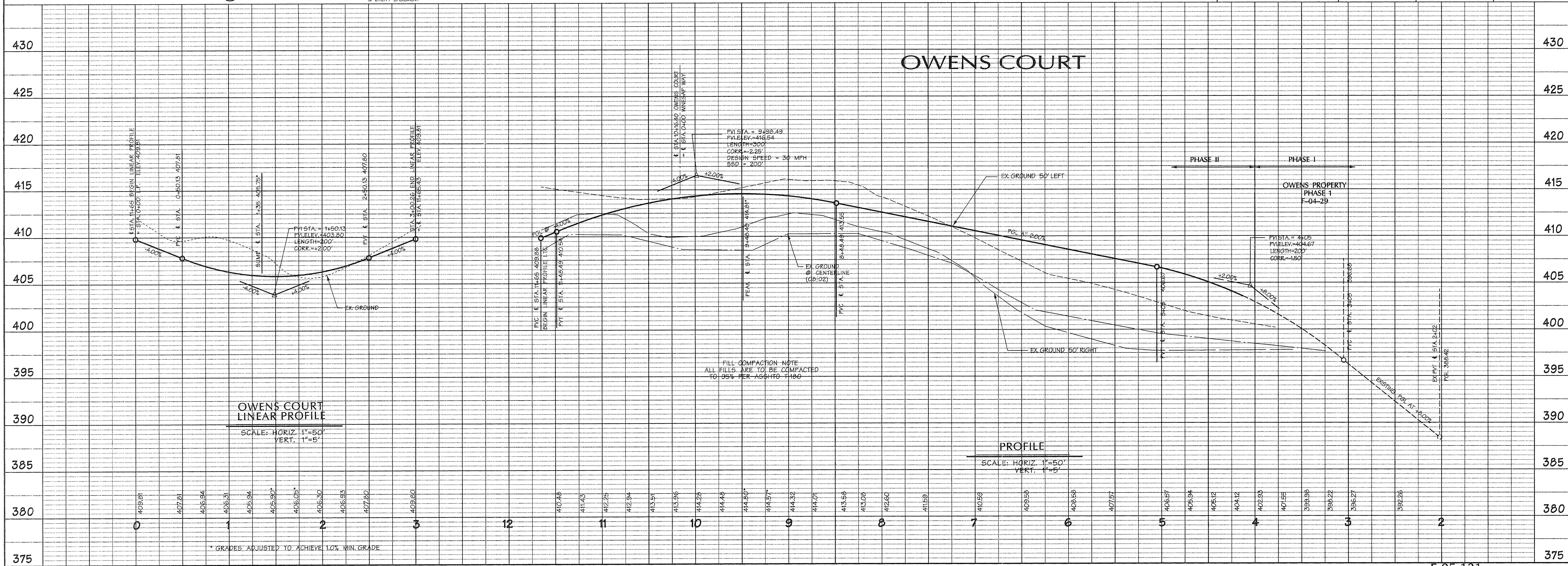
LOTS 43 THRU 97 AND OPEN SPACES LOTS 98, 99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 TAX MAP 51 PARCEL 243, 572

OWNER/DEVELOPER:
 PATAPSCO LANDING, LLC
 c/o James Keely and Co. Inc.
 P.O. Box 529
 61 E. Pasadena Road
 Timonium, MD 21093

1/4/06
Date

Professional Engr. No. 13876

| | | |
|--|----------------|-------------------|
| TITLE ROAD CONSTRUCTION PLAN OWENS COURT STA. 4+00 TO 12+48 | | |
| Des. By KAD | Scale 1" = 50' | Proj. No. 01086.D |
| Drn. By WDE | Date 1/4/06 | 2 of 27 |
| Chk. By KRK | Approved | |



1/4/06 PHASE II 1/10/06/2005

| CURVE DATA | | | | | |
|-------------------|-----------|---------|---------|---------|-----------------------|
| FROM-TO | DELTA | RADIUS | LENGTH | TANGENT | CHORD |
| 1+20.36 - 2+17.15 | 12°30'42" | 443.24' | 96.79' | 48.53' | N 41°43'07" W 96.60' |
| 2+17.15 - 3+48.12 | 9°34'50" | 600.00' | 100.33' | 50.28' | N 40°15'11" W 100.21' |
| 7+33.49 - 9+83.44 | 23°52'07" | 600.00' | 249.95' | 126.82' | N 56°58'40" W 248.15' |

STREET LIGHT LEGEND

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

OPEN SPACE LOT

FOREST CONSERVATION EASEMENT

| STREET LIGHT TABLE | |
|-----------------------|--|
| ROAD STATION & OFFSET | DESCRIPTION |
| 0+25.16+4' RT. | 100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE |
| 4+02.14+3' LT. | 100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE |
| 8+60.14+5' RT. | 100-WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE |

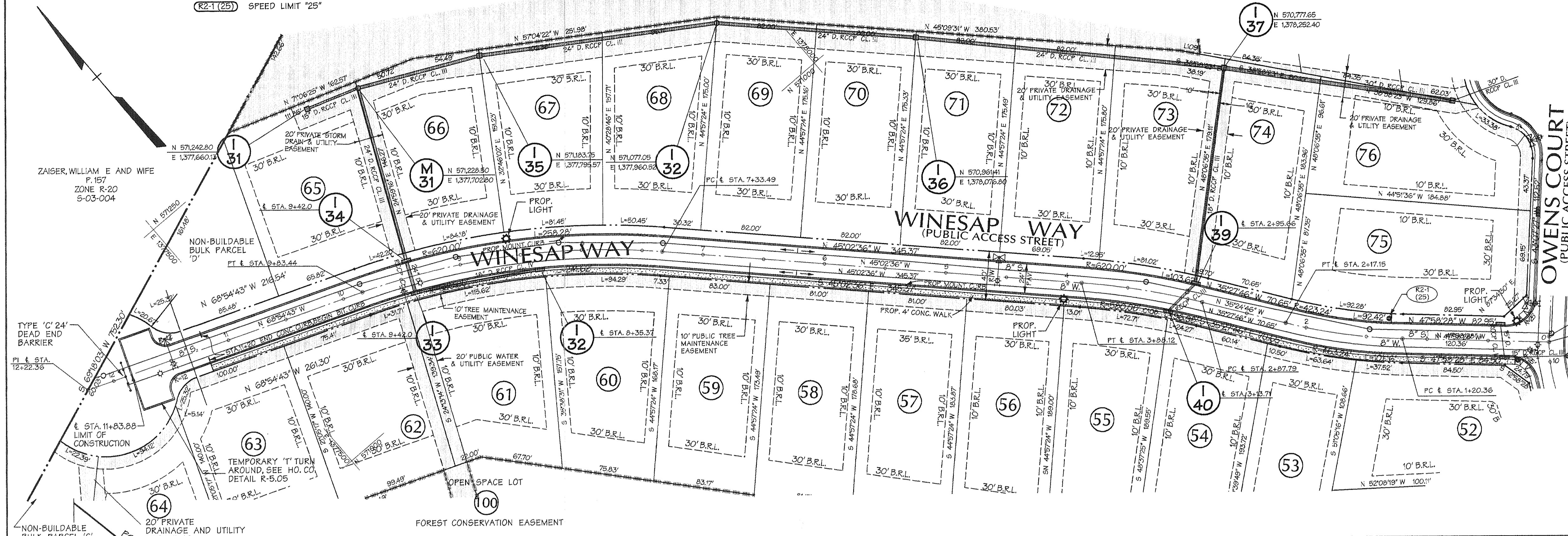
NOTES

1. TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RIBBON STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.

2. SWM FACILITY 2 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (HOA). THE HOA SHALL PERFORM MAINTENANCE TRASH REMOVAL MAINTENANCE. ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY. THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.

STREET SIGN LEGEND

R2-1 (25) SPEED LIMIT "25"



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William Z. Mabe Jr. 1-19-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Christy Hammett 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Will Cummings 1/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

FINAL PLAN OWENS PROPERTY PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98.99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
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
Dan McCune Walker, Inc.
300 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 298-3553
Fax 298-4705

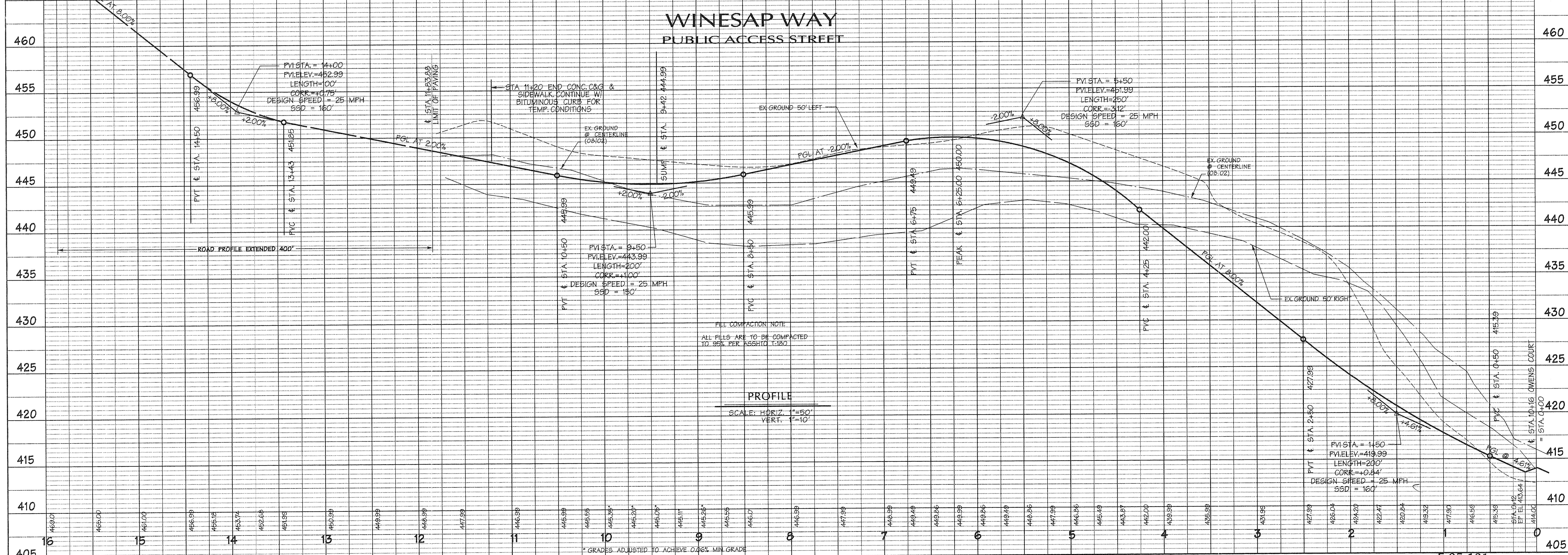
A Team of Land Planners,
Landscape Architects,
Golf Course Architects,
Engineers, Surveyors &
Environmental Professionals

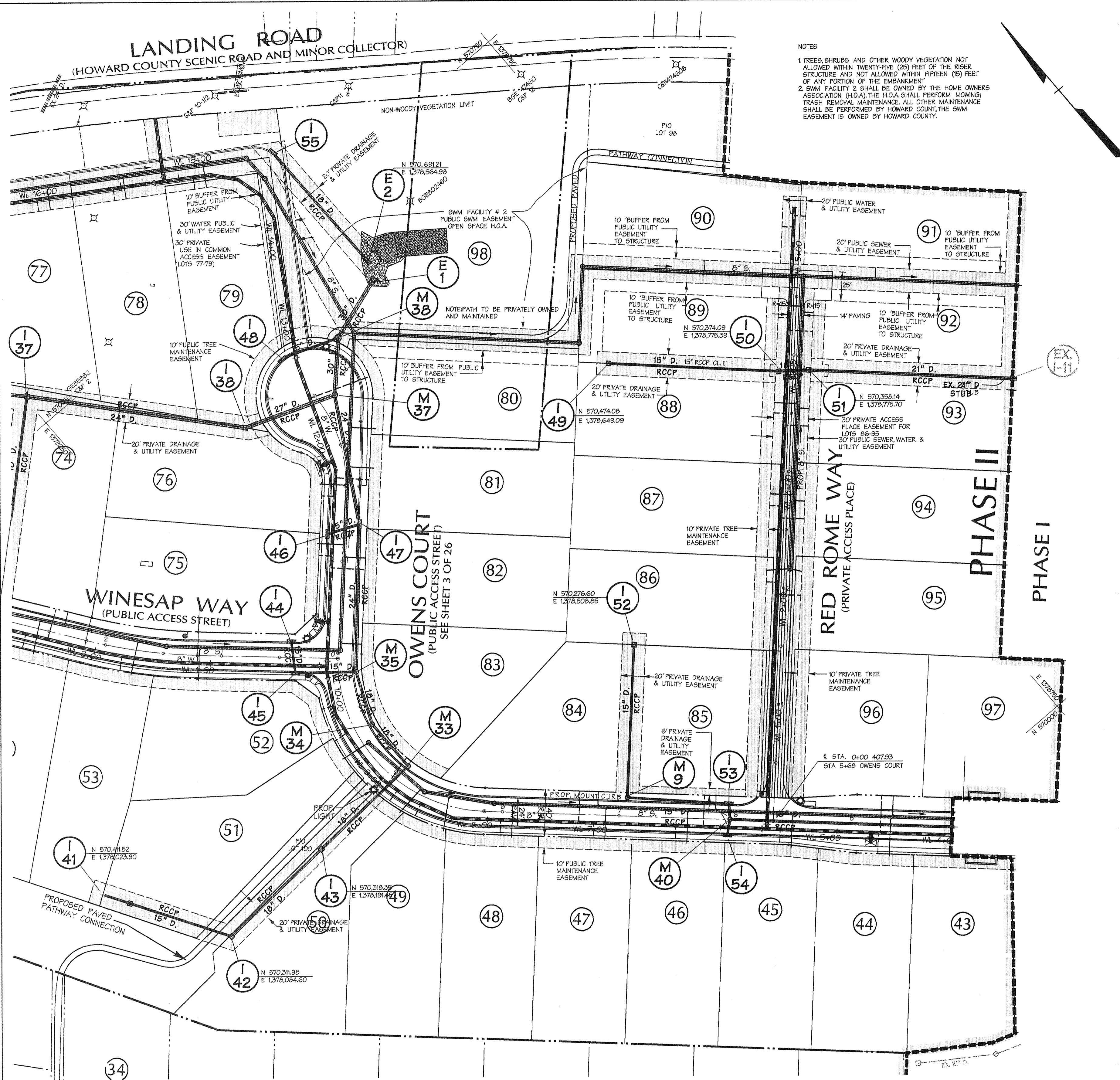
TITLE ROAD CONSTRUCTION PLAN WINESAP WAY

| | | | | | |
|---------|-----|----------|----------|-----------|---------|
| Des. By | KAD | Scale | 1" = 50' | Proj. No. | 01086.D |
| Drn. By | WDE | Date | 1/4/06 | 3 of 27 | |
| Chk. By | KRK | Approved | | | |

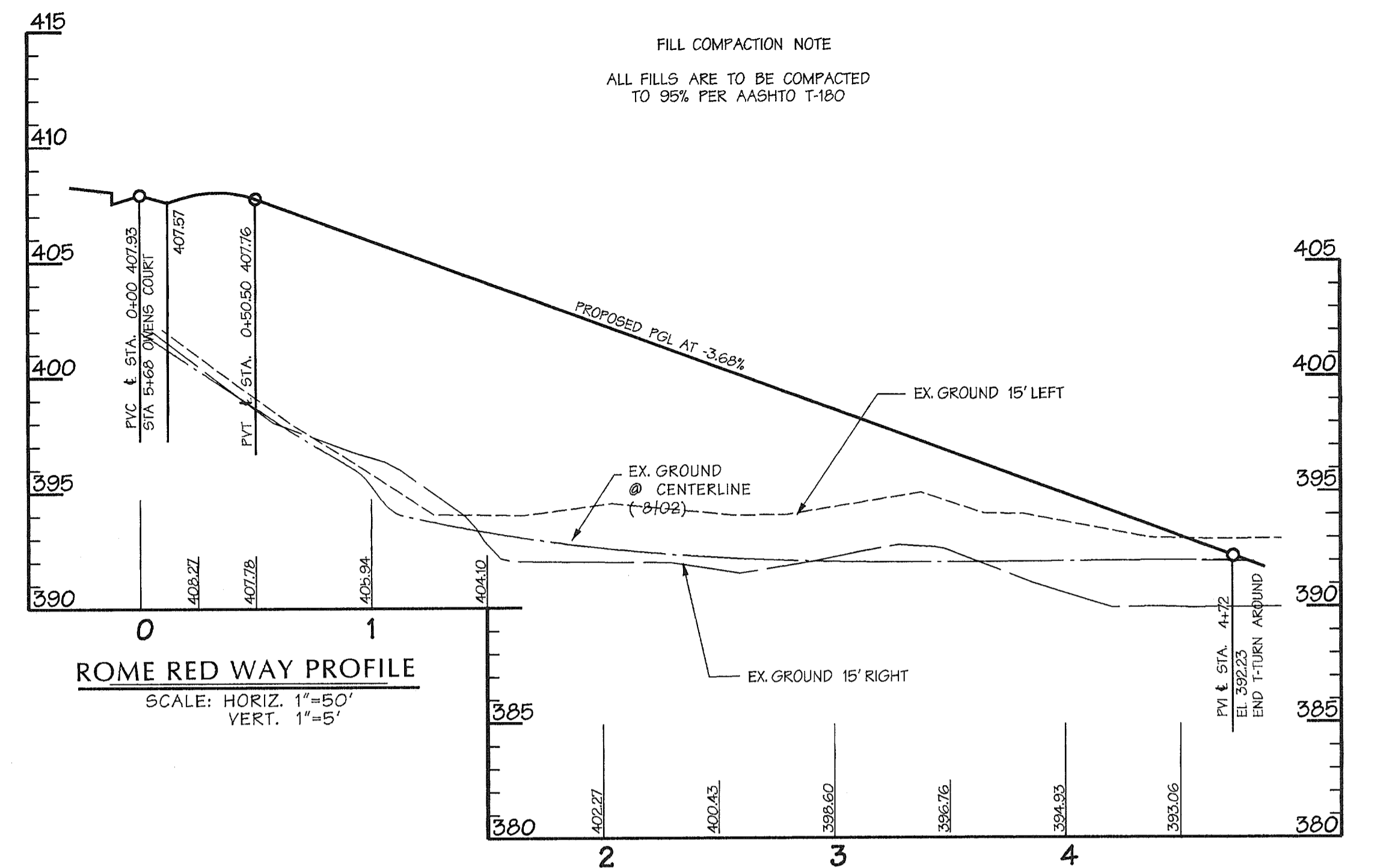
114106
Date

Professional Engr. No. 13876





NOTES
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 2. SWM FACILITY 2 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (H.O.A.). THE H.O.A. SHALL PERFORM MAINTENANCE TRASH REMOVAL MAINTENANCE. ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY. THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.



RED ROME WAY & STORM DRAIN LAYOUT
 SCALE: 1" = 50'

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William T. Mahan II
 CHIEF, BUREAU OF HIGHWAYS MS 1-19-06 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chris D...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION qms 1/27/06 DATE

Candid Hammett
 CHIEF, DIVISION OF LAND DEVELOPMENT JA 2/9/06 DATE

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

FINAL PLAN
OWENS PROPERTY
 PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98, 99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 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

1/4/06
 Date

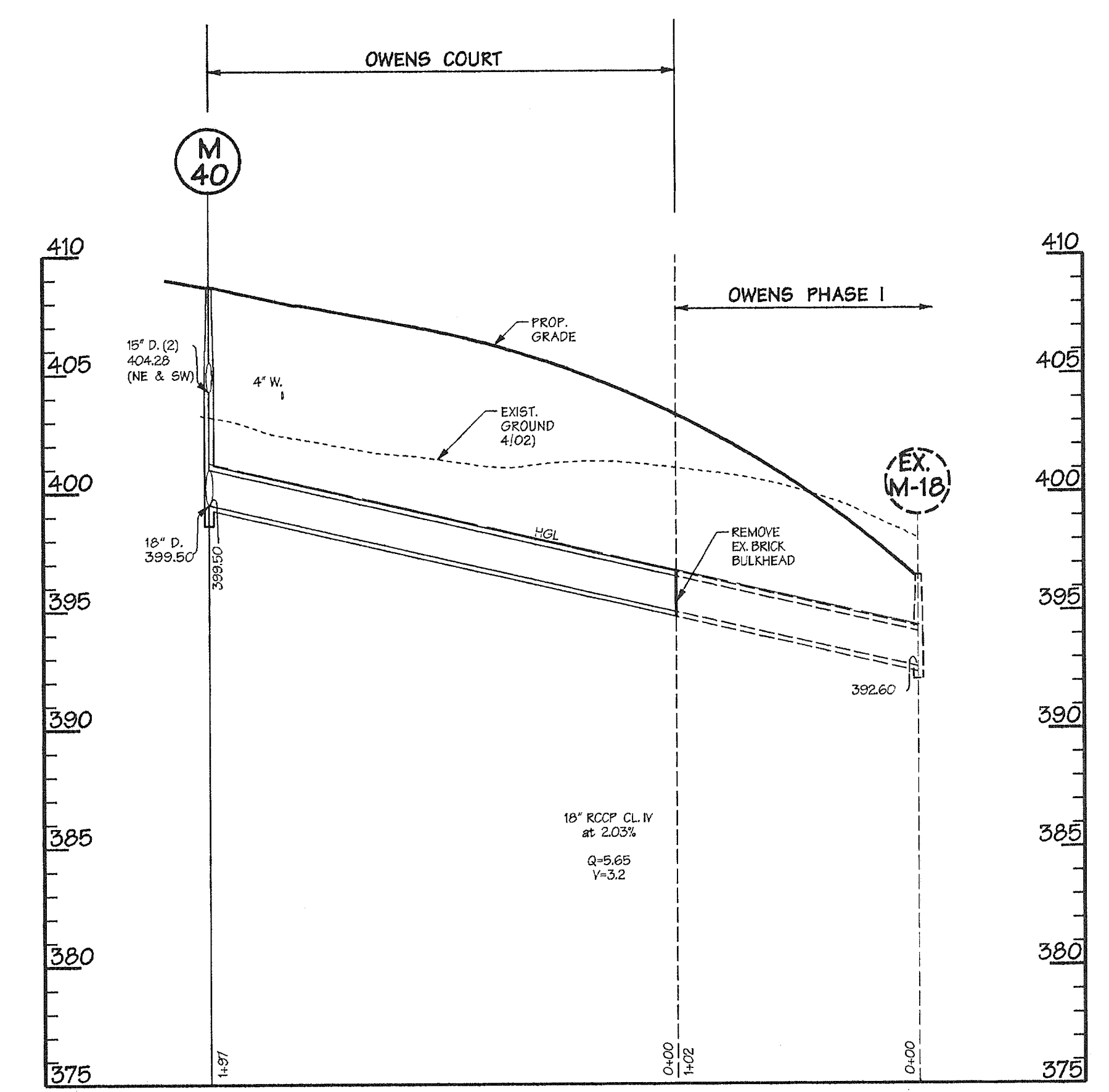
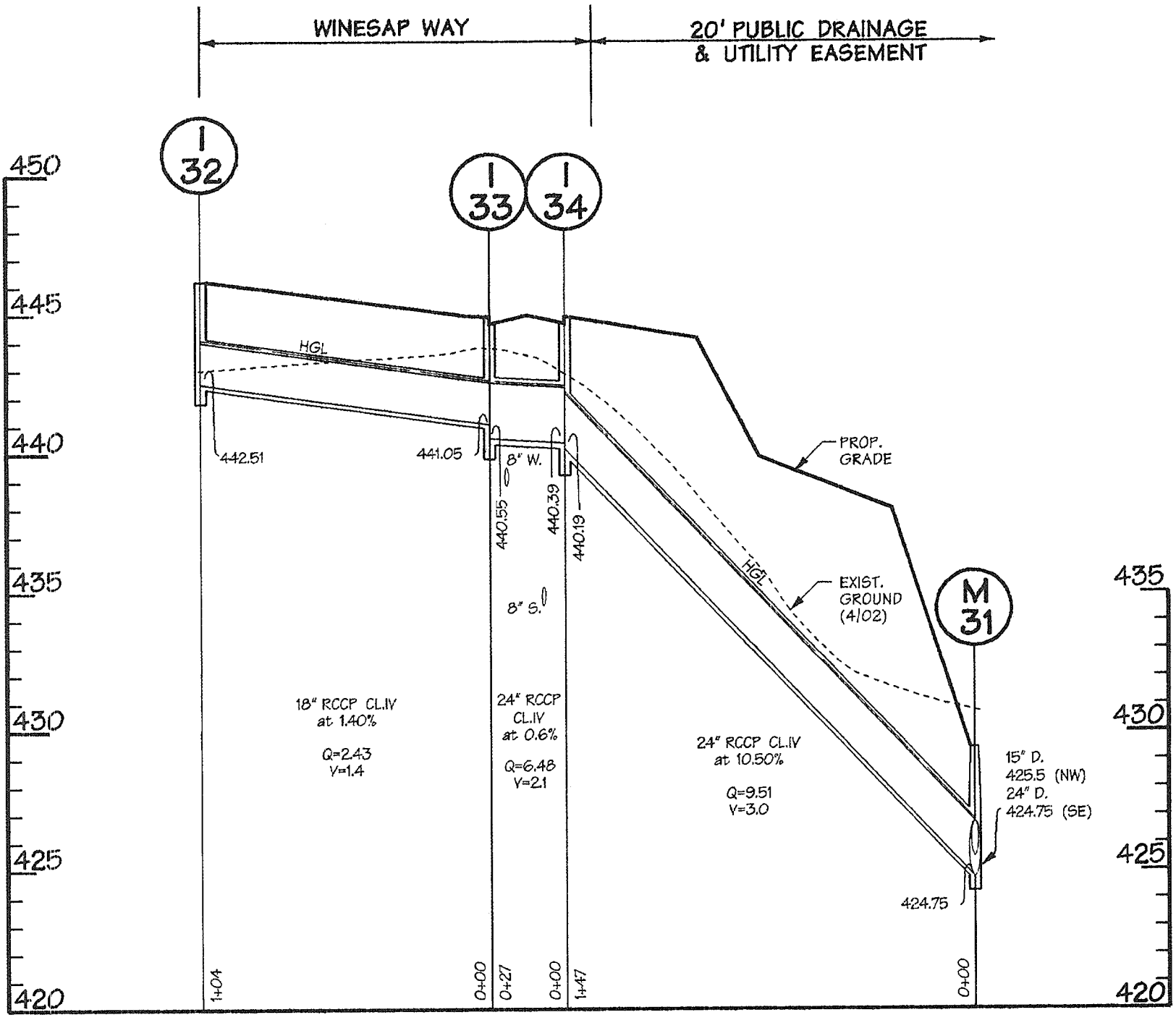
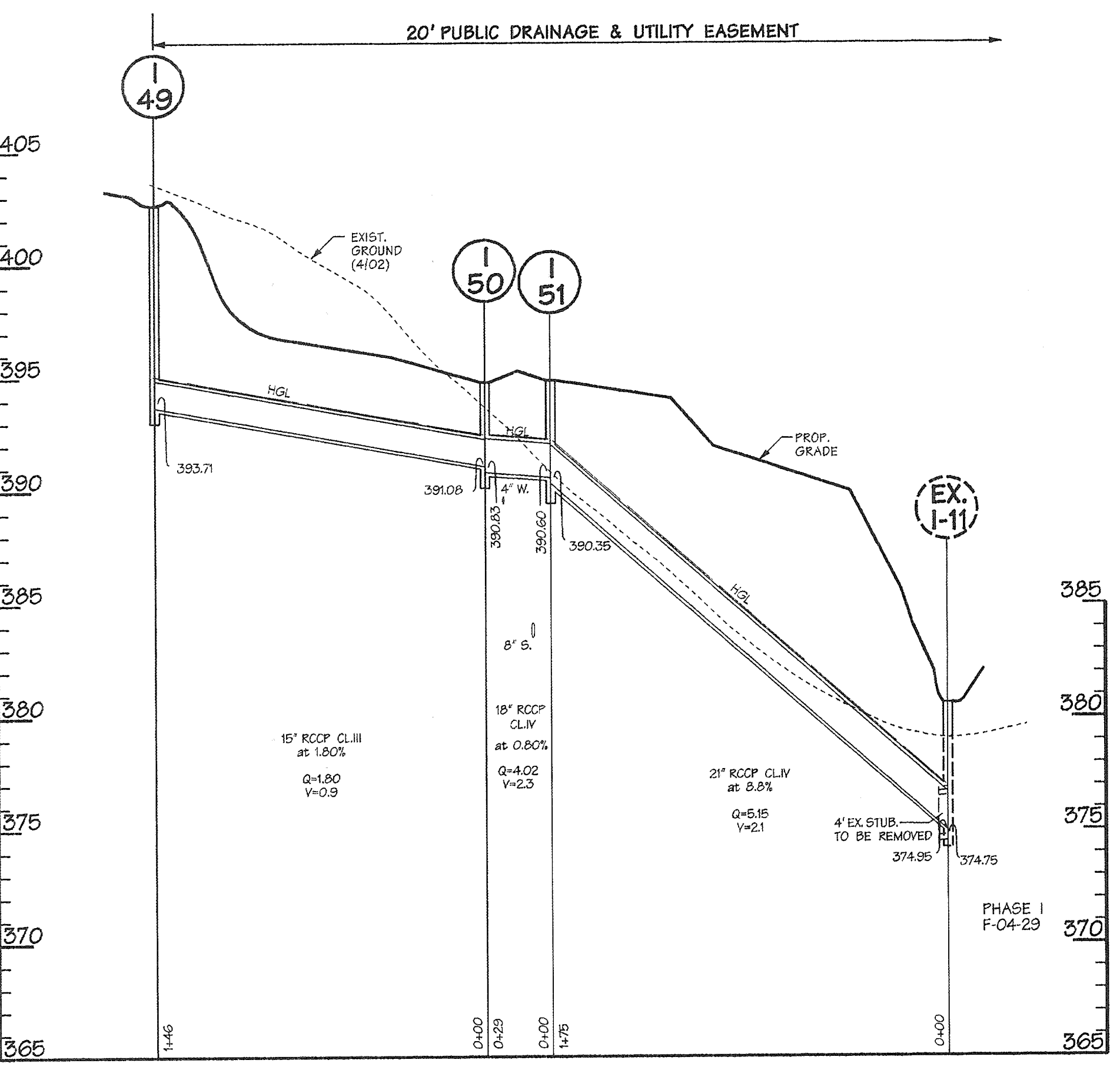
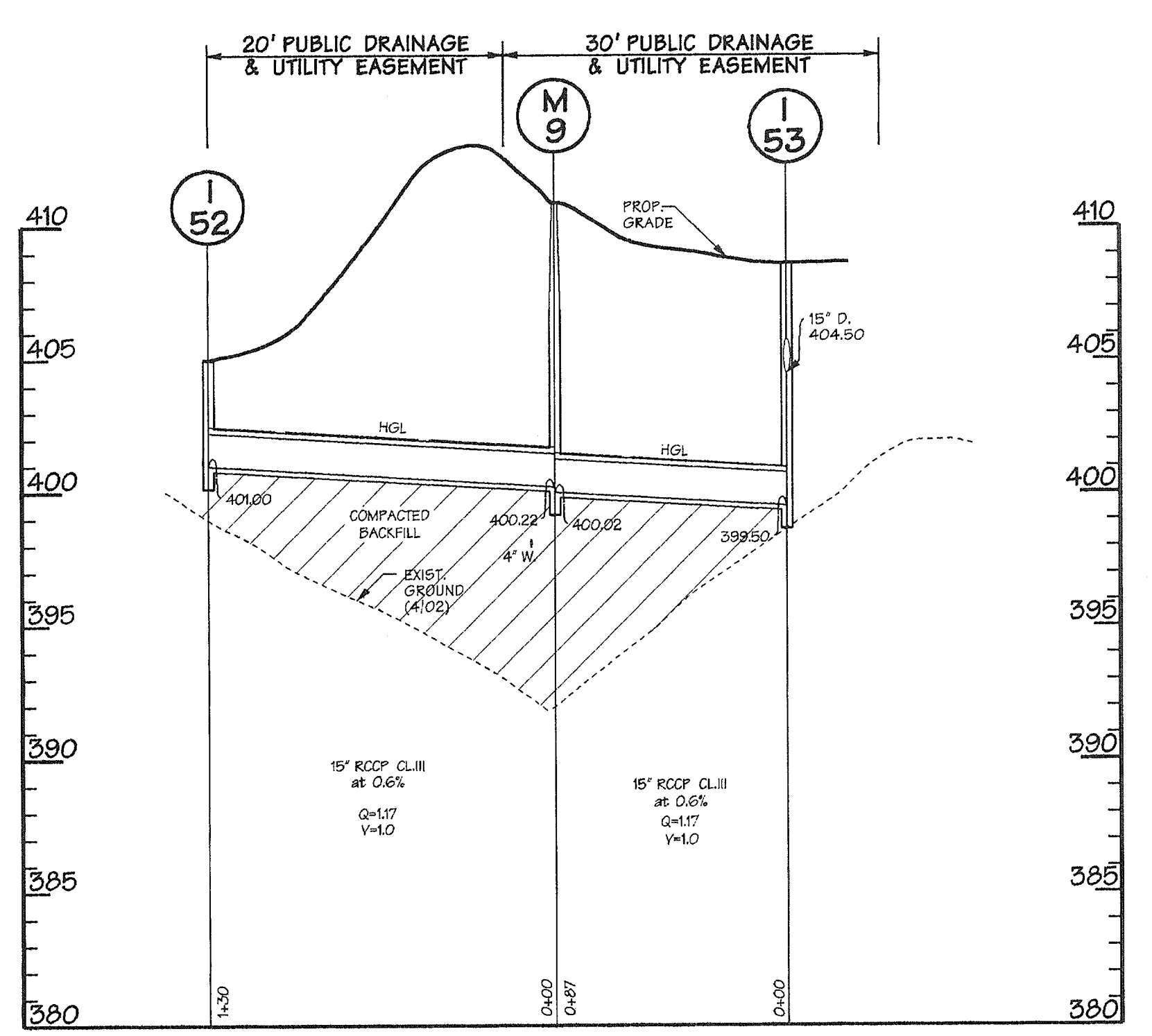
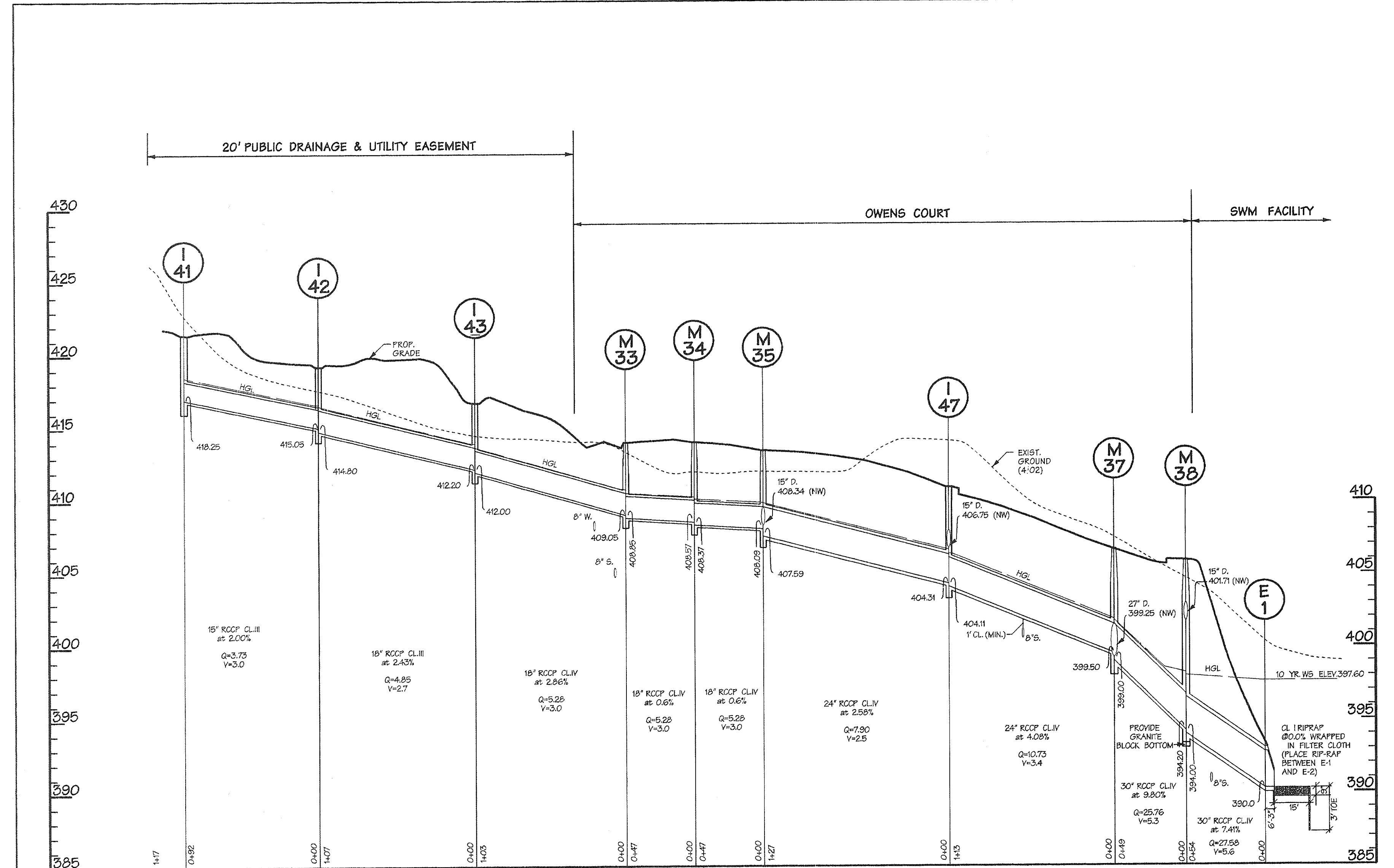
Professional Engr. No. 13876

DMW
 Duft 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
ROAD CONSTRUCTION PLAN
 RED ROME WAY, PROFILE AND DETAILS

| | | | | | |
|---------|-----|----------|----------|-----------|---------|
| Des. By | KAD | Scale | AS SHOWN | Proj. No. | 01026.D |
| Dwn. By | WDE | Date | 1/4/06 | 4 of 27 | |
| Chk. By | KRK | Approved | | | |



| NO. | TYPE | INV. OUT | TOP ELEV. (TC) |
|-----|------------------|----------|----------------|
| 31 | YARD INLET - 'D' | SD-4.39 | 425.95 |
| 32 | 'A-10' INLET | SD-4.41 | 442.51 |
| 33 | 'A-10' INLET | SD-4.41 | 440.55 |
| 34 | 'A-10' INLET | SD-4.41 | 440.19 |
| 35 | YARD INLET - 'D' | SD-4.39 | 422.95 |
| 36 | YARD INLET - 'D' | SD-4.39 | 417.04 |
| 37 | YARD INLET - 'D' | SD-4.39 | 414.30 |
| 38 | YARD INLET - 'D' | SD-4.39 | 399.74 |
| 39 | 'A-10' INLET | SD-4.41 | 427.25 |
| 40 | 'A-10' INLET | SD-4.41 | 428.50 |
| 41 | YARD INLET - 'D' | SD-4.39 | 418.25 |
| 42 | YARD INLET - 'D' | SD-4.39 | 414.80 |
| 43 | YARD INLET - 'D' | SD-4.39 | 412.00 |
| 44 | 'A-10' INLET | SD-4.41 | 409.10 |
| 45 | 'A-10' INLET | SD-4.41 | 408.70 |
| 46 | 'A-10' INLET | SD-4.41 | 406.92 |
| 47 | 'A-10' INLET | SD-4.41 | 404.11 |
| 48 | 'A-10' INLET | SD-4.41 | 402.02 |
| 49 | YARD INLET - 'D' | SD-4.39 | 393.71 |
| 50 | YARD INLET - 'D' | SD-4.39 | 390.83 |
| 51 | YARD INLET - 'D' | SD-4.39 | 390.35 |
| 52 | YARD INLET - 'D' | SD-4.39 | 400.00 |
| 53 | 'A-10' INLET | SD-4.41 | 404.50 |
| 54 | 'A-10' INLET | SD-4.41 | 404.50 |
| 55 | 'A-10' INLET | SD-4.41 | 392.40 |

| NO. | TYPE | SIZE | INV. OUT | TOP ELEV. |
|-----|------------|------|----------|-----------|
| 31 | STD. G5.12 | 48" | 424.55 | 429.42 |
| 32 | STD. G5.12 | 48" | 419.70 | 429.00 |
| 33 | STD. G5.12 | 48" | 408.85 | 414.01 |
| 34 | STD. G5.12 | 48" | 408.37 | 414.03 |
| 35 | STD. G5.12 | 48" | 407.59 | 413.47 |
| 37 | STD. G5.13 | 60" | 399.00 | 406.66 |
| 38 | STD. G5.13 | 60" | 394.00 | 406.00 |
| 40 | STD. G5.12 | 48" | 404.03 | 408.69 |
| 41 | STD. G5.12 | 48" | 397.91 | 407.92 |
| 42 | STD. G5.12 | 48" | 399.04 | 404.26 |
| 9 | STD. G5.12 | 48" | 400.02 | 410.8 |

| NO. | TYPE | SIZE | INV. OUT | TOP ELEV. |
|-----|---------------------------|------|----------|-----------|
| 1 | CONC. END SECTION SD-5.51 | 30" | 388.0 | 390.5 |
| 2 | CONC. END SECTION SD-5.51 | 18" | 388.0 | 389.5 |

| NO. | TYPE & CLASS | LENGTH |
|-----|--------------|--------|
| 15" | RCCP CL.III | 442' |
| 18" | RCCP CL.III | 298' |
| 24" | RCCP CL.III | 908' |
| 27" | RCCP CL.III | 81' |
| 30" | RCCP CL.III | 103' |
| 15" | RCCP CL.IV* | 168' |
| 18" | RCCP CL.IV* | 829' |
| 21" | RCCP CL.IV* | 175' |
| 24" | RCCP CL.IV* | 471' |

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

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William T. Walker 1-19-06
CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Judy Hancock 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT JAH DATE

Chad Drumm 1/27/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION CDD DATE

FINAL PLAN
OWENS PROPERTY
PHASE II
LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
TAX MAP 31 PARCEL 243

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

AREA
TAX MAP 31 PARCEL 243
1ST ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

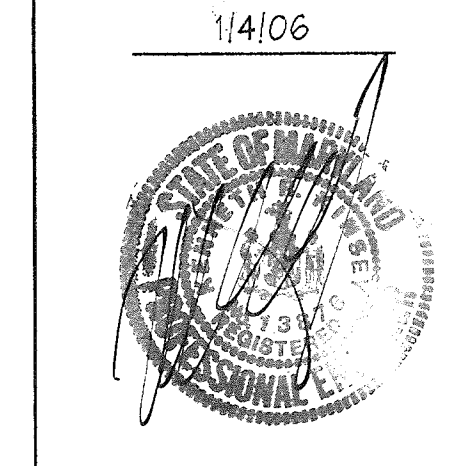
TITLE
STORM DRAIN PROFILES

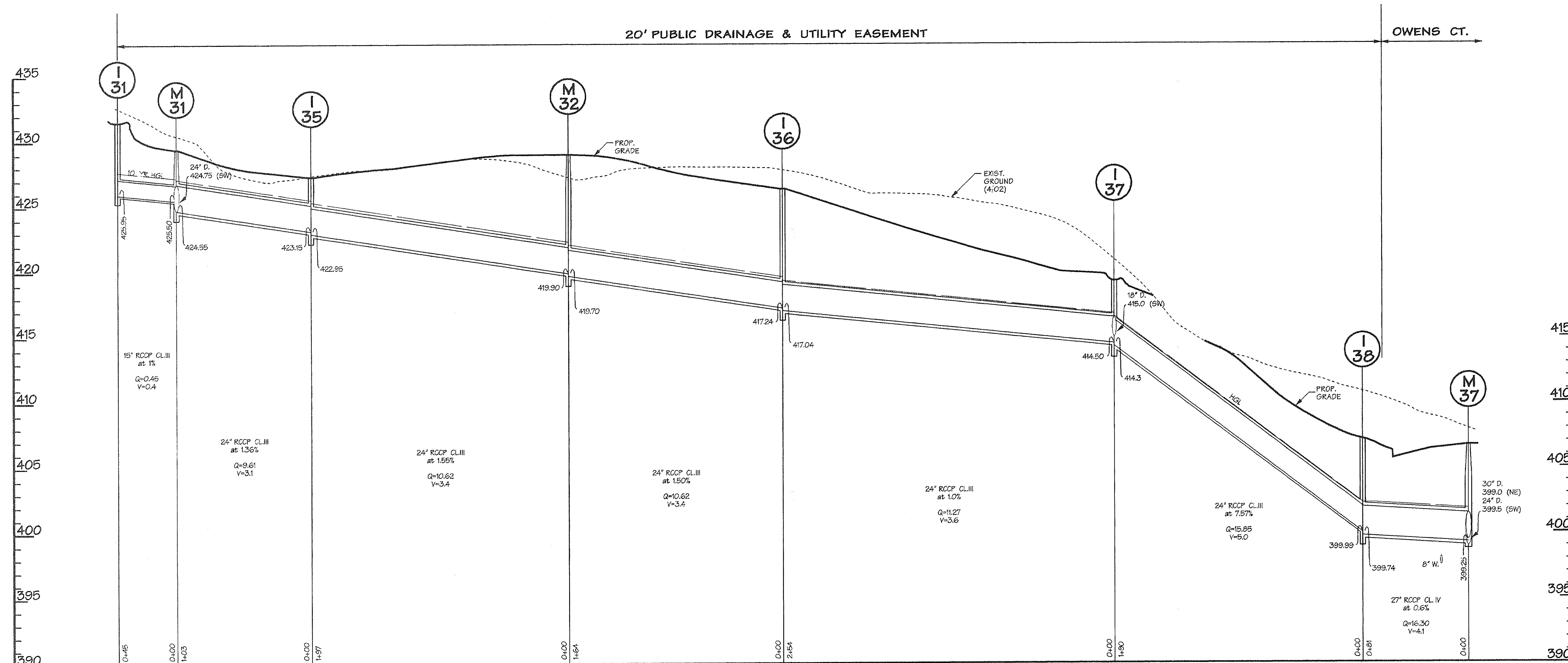
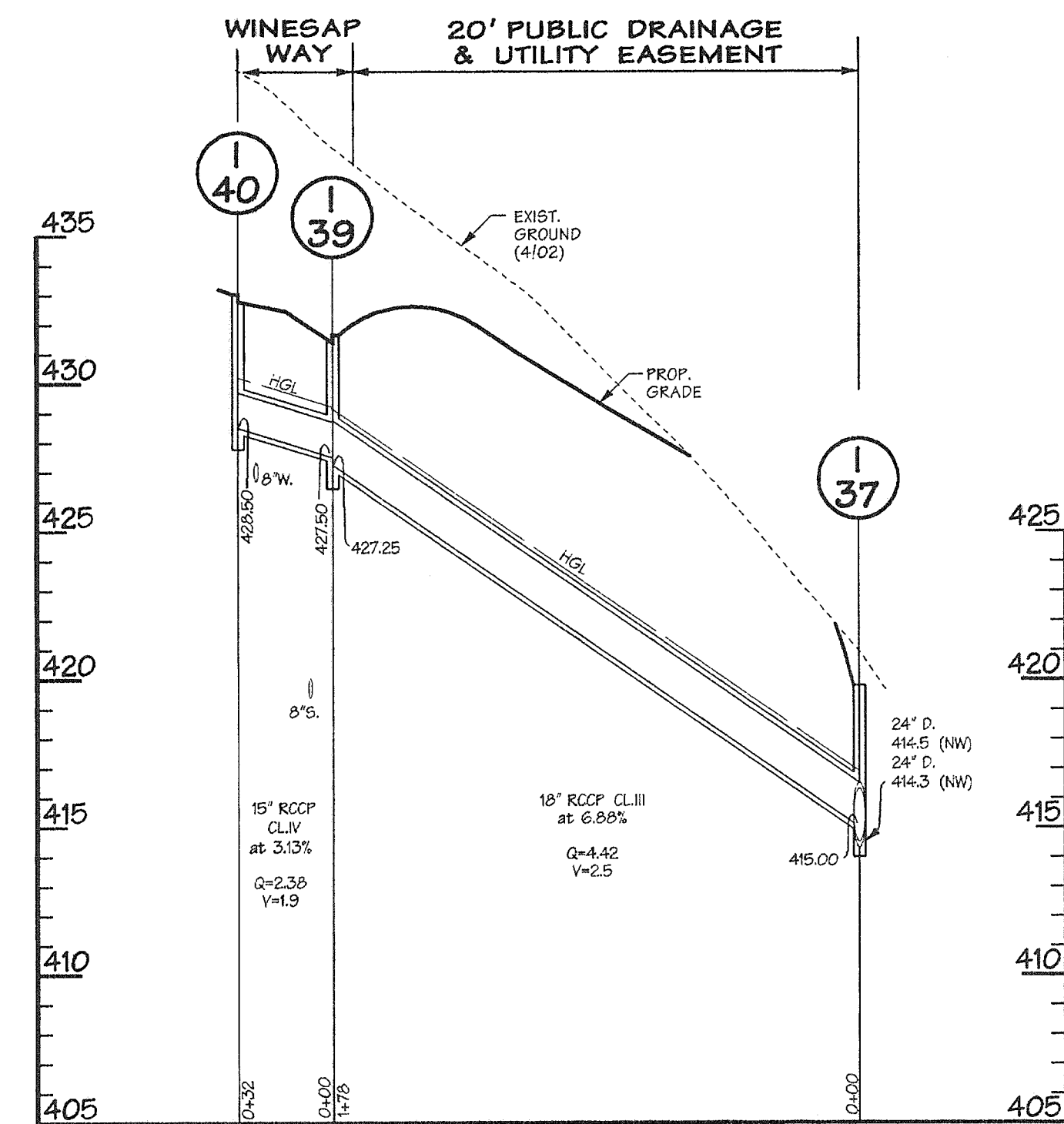
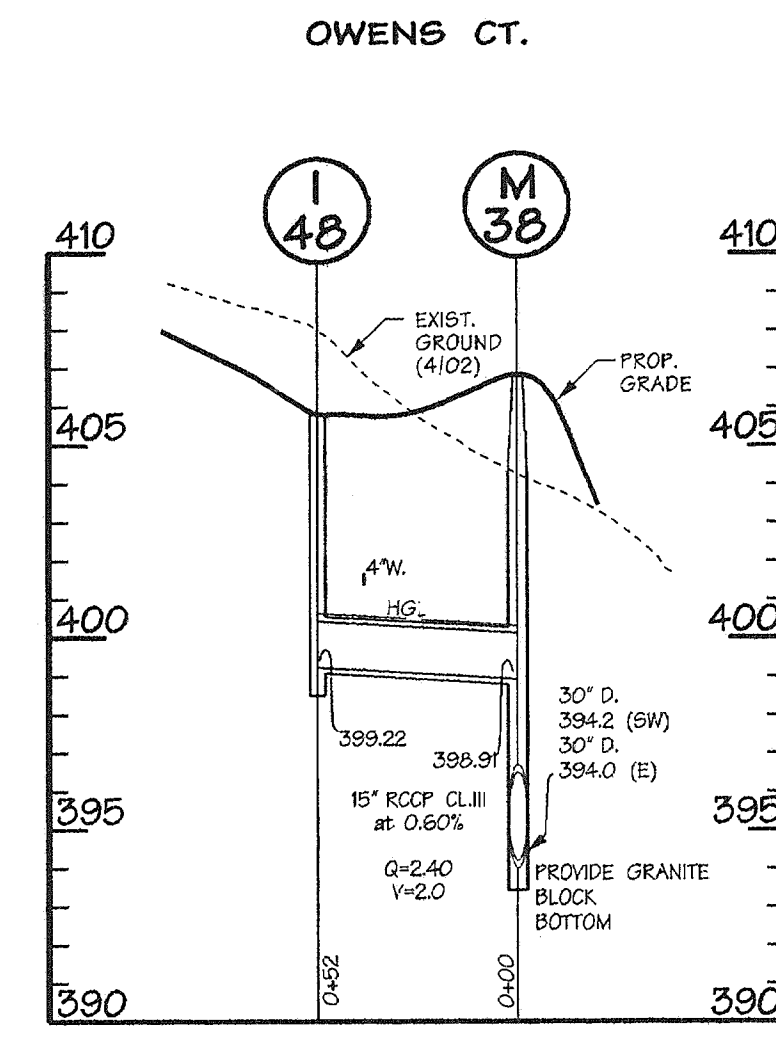
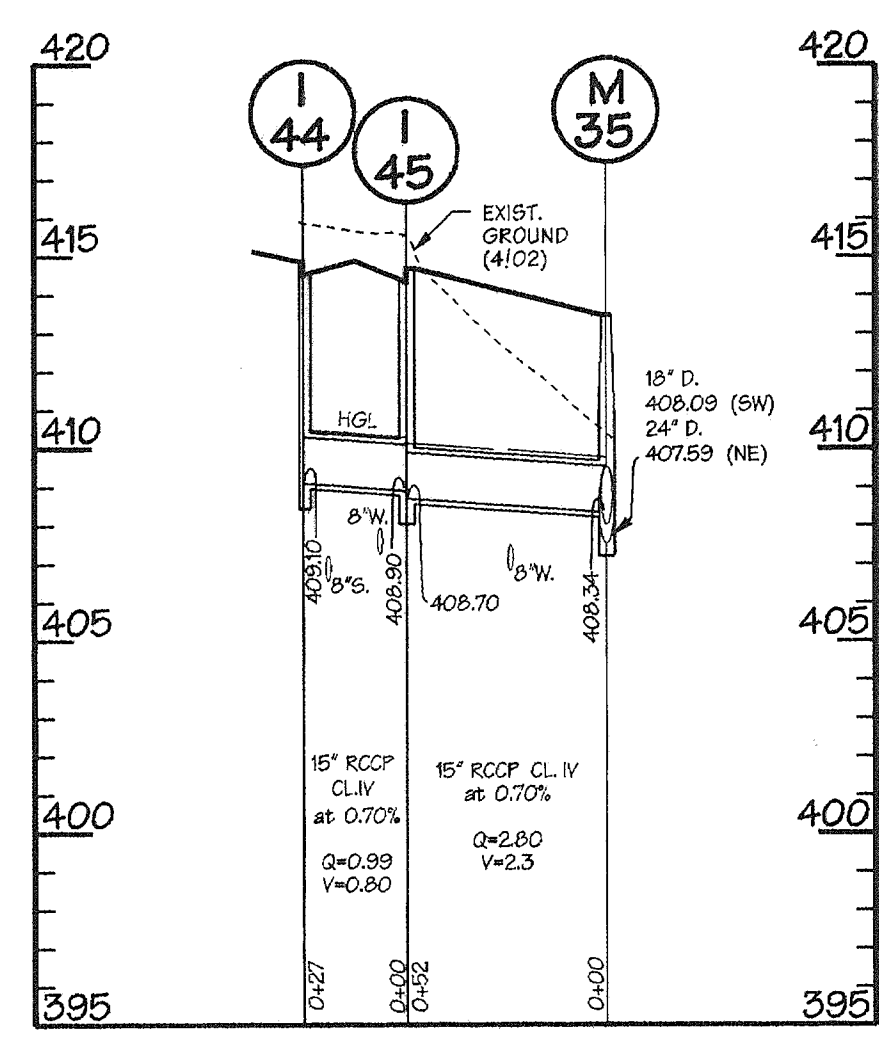
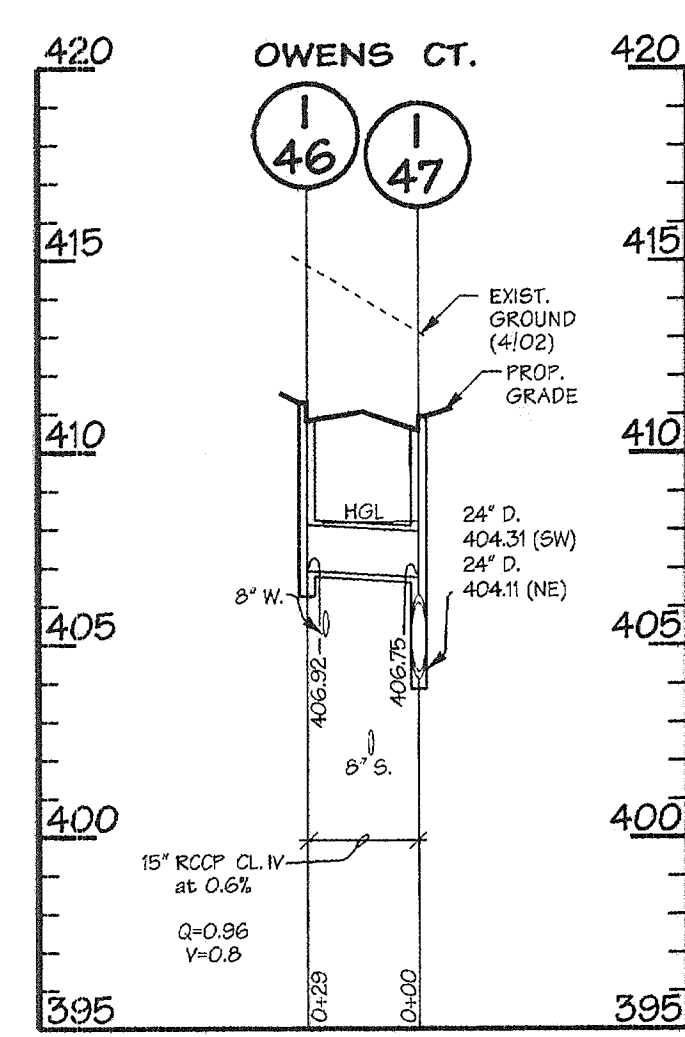
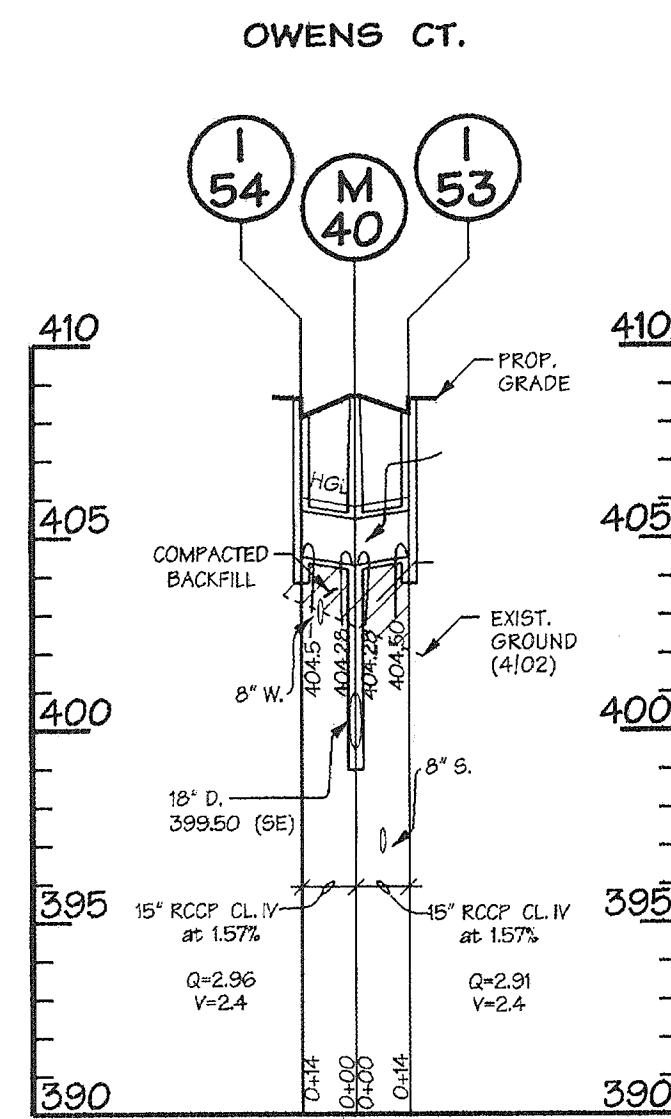
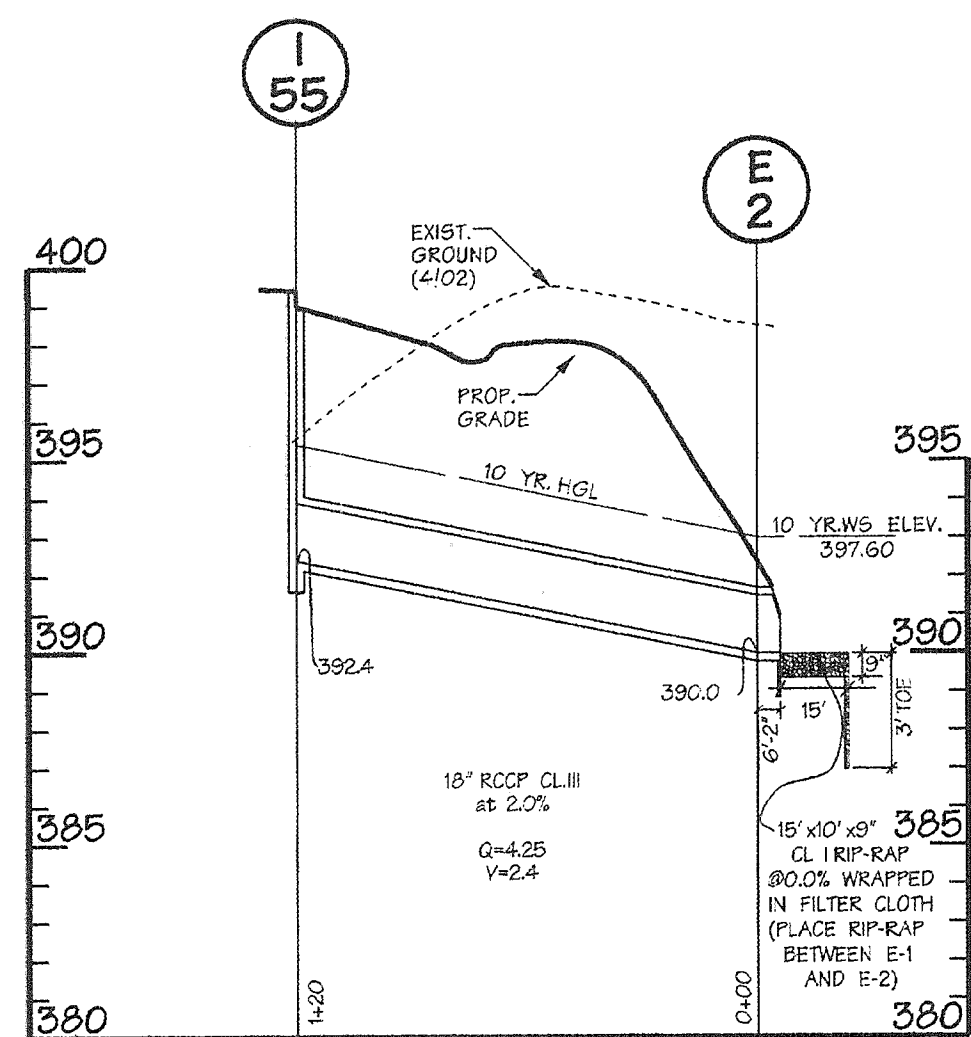
Des. By Scale AS SHOWN Proj. No. 01086.D
Dwn. By Date 1/4/06
Chk. By K.R.K. Approved

Professional Engr. No. 13876

5 of 27

Thu Dec 22 16:41:33 2006\1086\PHASE I\1086p2.dwg





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

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
with 7 initials 1-19-06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Andy Hamer 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mark ... 1/21/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL PLAN
OWENS PROPERTY
PHASE II
 LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 TAX MAP 31 PARCEL 243

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

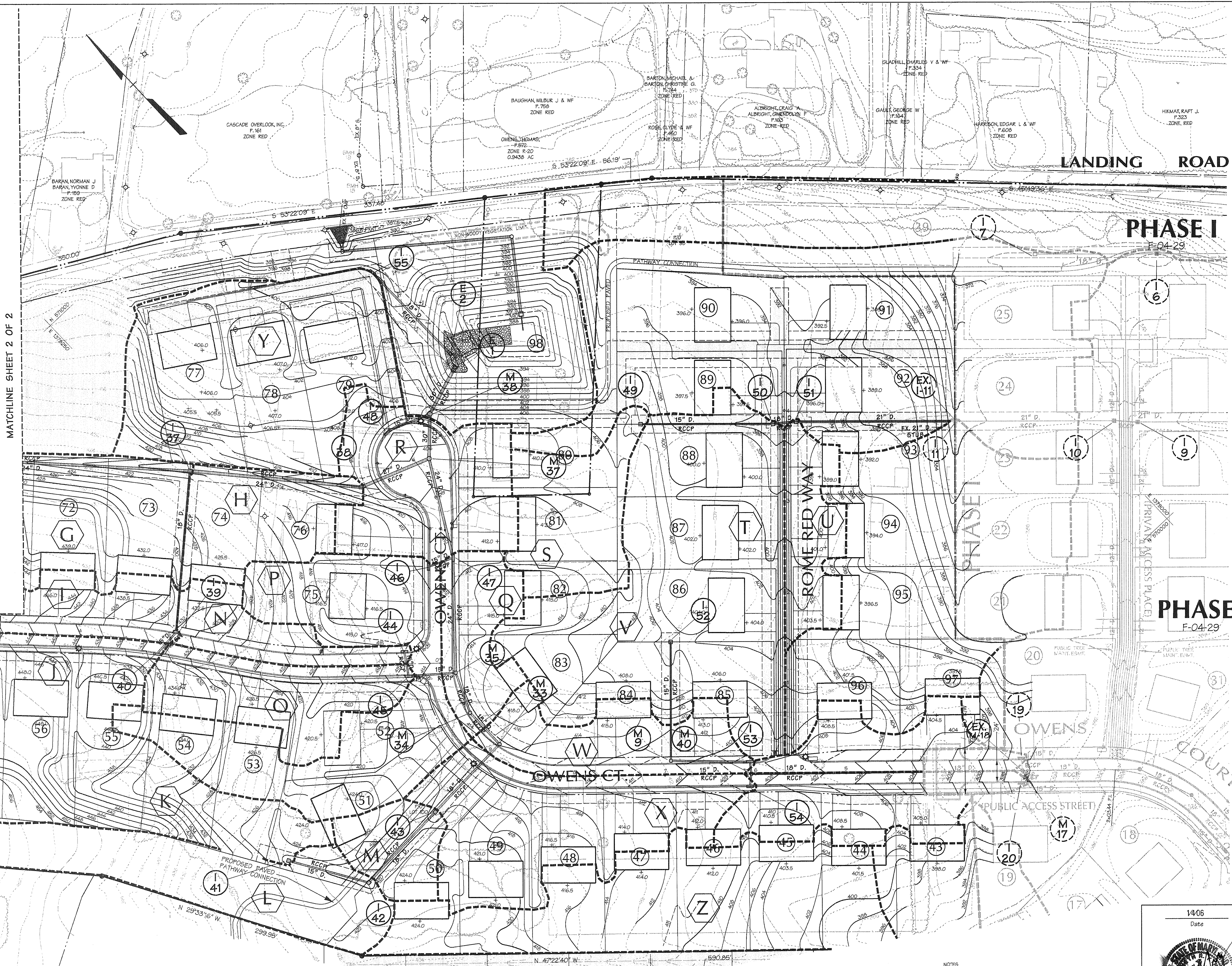
DMW
 Daft McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 294-3333
 Fax 296-4706

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

1/4/06
 Date

Professional Engr. No. 13876

| | | |
|----------------|--|-------------------|
| AREA | TAX MAP 31 | PARCEL 243 |
| | 1ST ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND | |
| TITLE | STORM DRAIN PROFILES | |
| Des. By | Scale AS SHOWN | Proj. No. 01086.D |
| Drn. By | Date 1/4/06 | |
| Chk. By K.R.K. | Approved | 6 of 27 |



MATCHLINE SHEET 2 OF 2

PHASE I
F-04-29

PHASE I
F-04-29

| | | |
|---------------------|-----|---------------------------|
| 0.44 Ac.± C=0.31 | (H) | ZONING= R-20 14 % IMP. |
| 0.23 Ac.± C=0.40 | (M) | ZONING= R-20 26 % IMP. |
| 0.26 Ac.± C=0.58 | (N) | ZONING= R-20 50 % IMP. |
| 0.49 Ac.± C=0.58 | (O) | ZONING= R-20 51 % IMP. |
| 1.17 Ac.± C=0.32 | (P) | ZONING= R-20 16 % IMP. |
| 0.32 Ac.± C=0.46 | (Q) | ZONING= R-20 34 % IMP. |
| 0.64 Ac.± C=0.50 | (R) | ZONING= R-20 40 % IMP. |
| 0.47 Ac.± C=0.31 | (S) | ZONING= R-20 14 % IMP. |
| 1.23 Ac.± C=0.43 | (T) | ZONING= R-20 30 % IMP. |
| 0.30 Ac.± C=0.67 | (U) | ZONING= R-20 63 % IMP. |
| 0.52 Ac.± C=0.34 | (V) | ZONING= R-20 19 % IMP. |
| 0.46 Ac.± C=0.64 | (W) | ZONING= R-20 59 % IMP. |
| 0.87 Ac.± C=0.52 | (X) | ZONING= R-20 42 % IMP. |
| 1.27 Ac.± C=0.51 | (Y) | ZONING= R-20 41 % IMP. |
| 1.26 Ac.± C=0.33 | (Z) | ZONING= R-20 17 % IMP. |

LEGEND

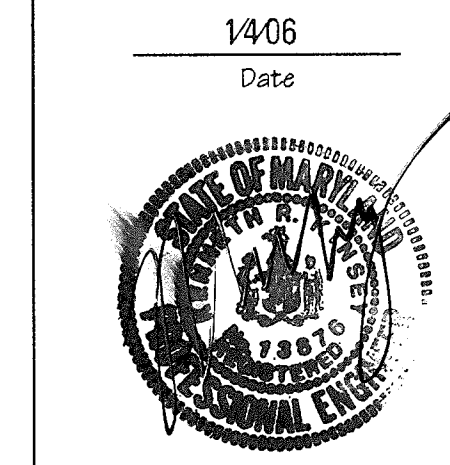
| | |
|--|-----------------------|
| | HEAD OF STREAM |
| | STREAM CENTERLINE |
| | 75' STREAM BUFFER |
| | WETLAND |
| | 25' WETLAND BUFFER |
| | EX TREE LINE |
| | EX 5' CONTOUR |
| | EX 25' CONTOUR |
| | EX STRUCTURE |
| | PROP. TREE LINE |
| | PROPERTY BOUNDARY |
| | RIGHT OF WAY LINE |
| | ROADWAY CENTERLINE |
| | PROP. LOT NUMBER |
| | ADJACENT LOT LINE |
| | PROP. LOT LINE |
| | BUILDING SETBACK LINE |
| | DRAINAGE AREA LIMITS |
| | STRUCTURE NUMBER |
| | DRAINAGE AREA |

| | | |
|--|---------|------|
| APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS | | |
| | 1-19-06 | DATE |
| APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING | | |
| | 2/9/06 | DATE |
| | 1/21/06 | DATE |

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

FINAL PLAN
OWENS PROPERTY
PHASE II
LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
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

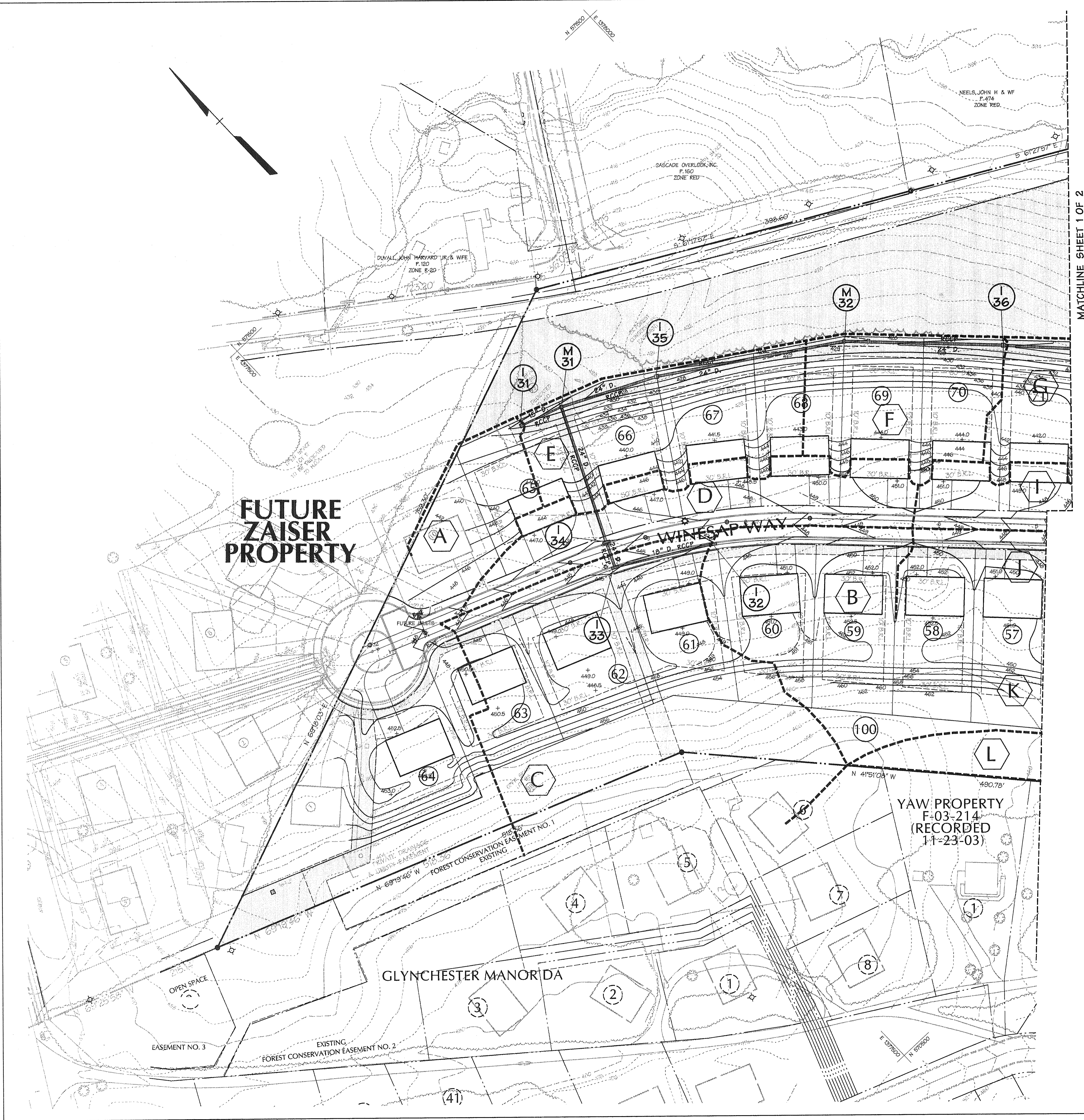


NOTES

- TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
- SWIM FACILITY 2 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (H.O.A.). THE H.O.A. SHALL PERFORM MOONING TRASH REMOVAL, MAINTENANCE. ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY. THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.

| | | | |
|--|--------------|-------------------|---------|
| TITLE STORM DRAIN DRAINAGE AREA MAP | | | |
| Des By | Scale 1"=50' | Proj. No. 01086.D | |
| Drn By | Date 1/06 | | 7 of 27 |
| Chk By | Approved | | |

Professional Engr. No. 13876



MATCHLINE SHEET 1 OF 2

| | | |
|---------------------|---|---------------------------|
| 0.34 Ac.± C=0.20 | A | ZONING= R-20 0 % IMP. |
| 0.81 Ac.± C=0.46 | B | ZONING= R-20 34 % IMP. |
| 1.80 Ac.± C=0.33 | C | ZONING= R-20 17 % IMP. |
| 0.67 Ac.± C=0.66 | D | ZONING= R-20 61 % IMP. |
| 0.75 Ac.± C=0.28 | E | ZONING= R-20 11 % IMP. |
| 0.60 Ac.± C=0.28 | F | ZONING= R-20 11 % IMP. |
| 0.79 Ac.± C=0.29 | G | ZONING= R-20 12 % IMP. |
| 0.50 Ac.± C=0.64 | I | ZONING= R-20 58 % IMP. |
| 0.53 Ac.± C=0.68 | J | ZONING= R-20 64 % IMP. |
| 1.90 Ac.± C=0.30 | K | ZONING= R-20 13 % IMP. |
| 0.89 Ac.± C=0.22 | L | ZONING= R-20 2 % IMP. |

LEGEND

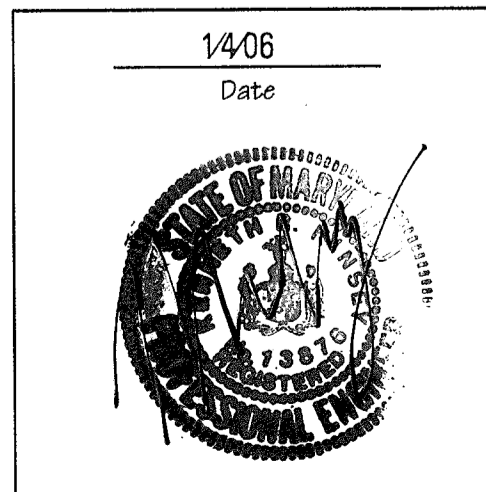
| | |
|--|-----------------------|
| | HEAD OF STREAM |
| | STREAM CENTERLINE |
| | 75' STREAM BUFFER |
| | WETLAND |
| | 25' WETLAND BUFFER |
| | EX. TREE LINE |
| | EX. 5' CONTOUR |
| | EX. 25' CONTOUR |
| | EX. STRUCTURE |
| | PROP. TREE LINE |
| | PROPERTY BOUNDARY |
| | RIGHT OF WAY LINE |
| | ROADWAY CENTERLINE |
| | PROP. LOT NUMBER |
| | ADJACENT LOT LINE |
| | PROP. LOT LINE |
| | BUILDING SETBACK LINE |
| | DRAINAGE AREA LIMITS |
| | STRUCTURE NUMBER |
| | DRAINAGE AREA |

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William F. ... 1-19-06
 CHIEF, BUREAU OF HIGHWAYS DATE

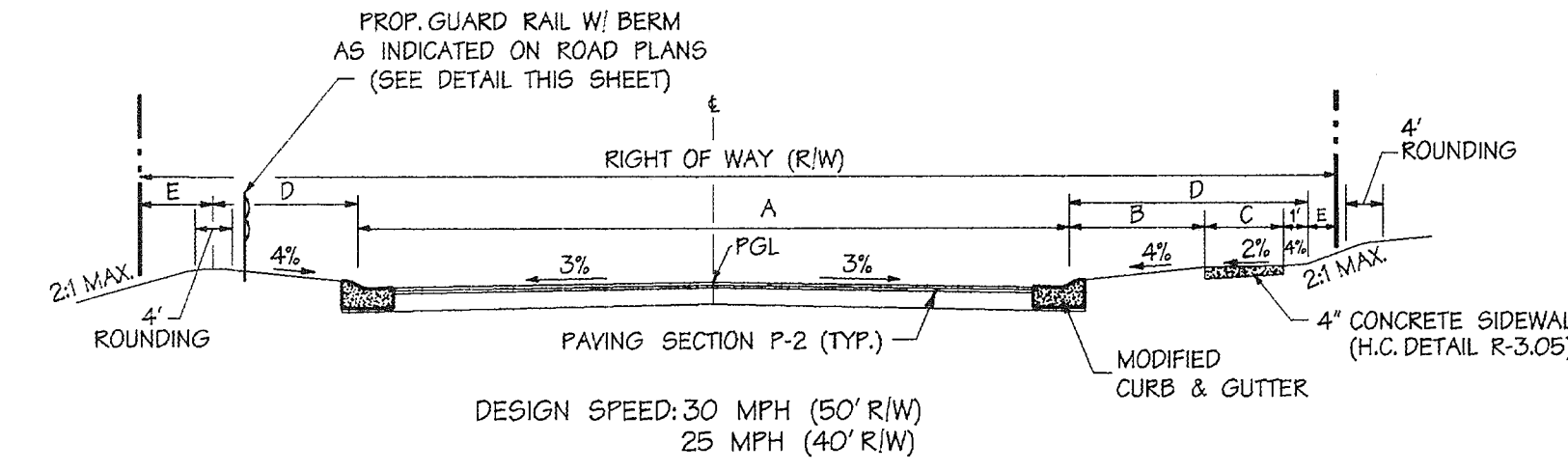
APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Cynthia ... 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 1/20/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

| Date | No. | Revision Description |
|---|----------------|----------------------|
| FINAL PLAN | | |
| OWENS PROPERTY | | |
| PHASE II | | |
| LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100 NON-BUILDABLE BULK PARCELS 'C' AND 'D' 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 Duff-McCune-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 | | |
| STORM DRAIN DRAINAGE AREA MAP | | |
| Des By | Scale 1" = 50' | Proj. No. 01086.D |
| Drn By | Date 14/06 | 8 of 27 |
| Chk By KRK | Approved | |



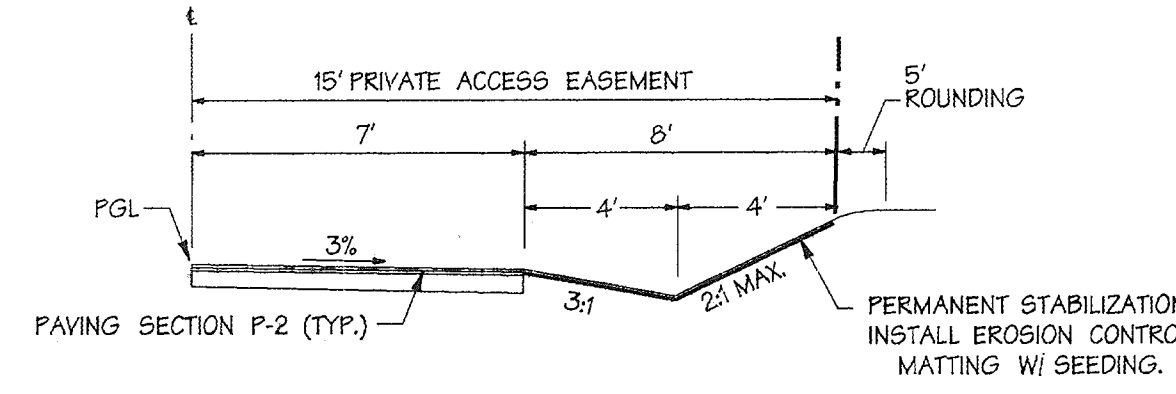
Professional Engr. No. 13876



| 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' |

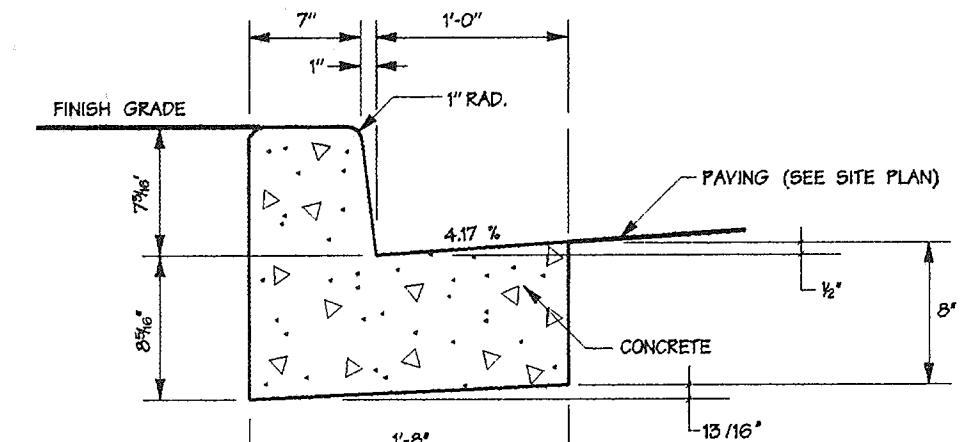
**WINESAP WAY & OWENS CT.
TYPICAL ROAD SECTION**

NO SCALE



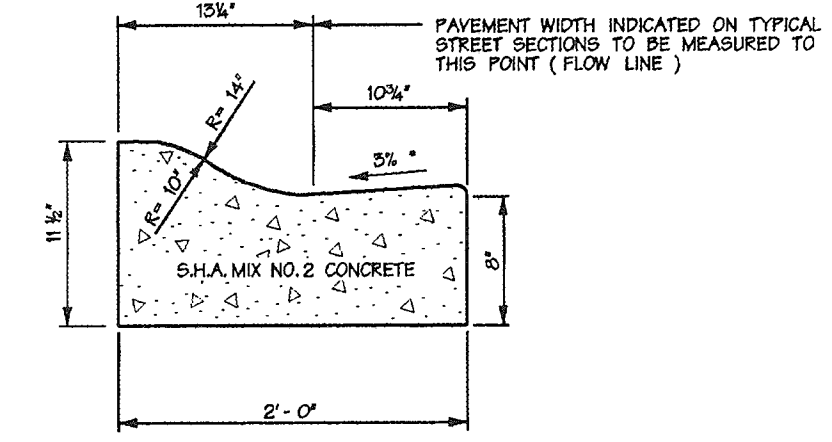
**ROME RED WAY
PRIVATE ACCESS PLACE
TYPICAL HALF ROAD SECTION**

NO SCALE



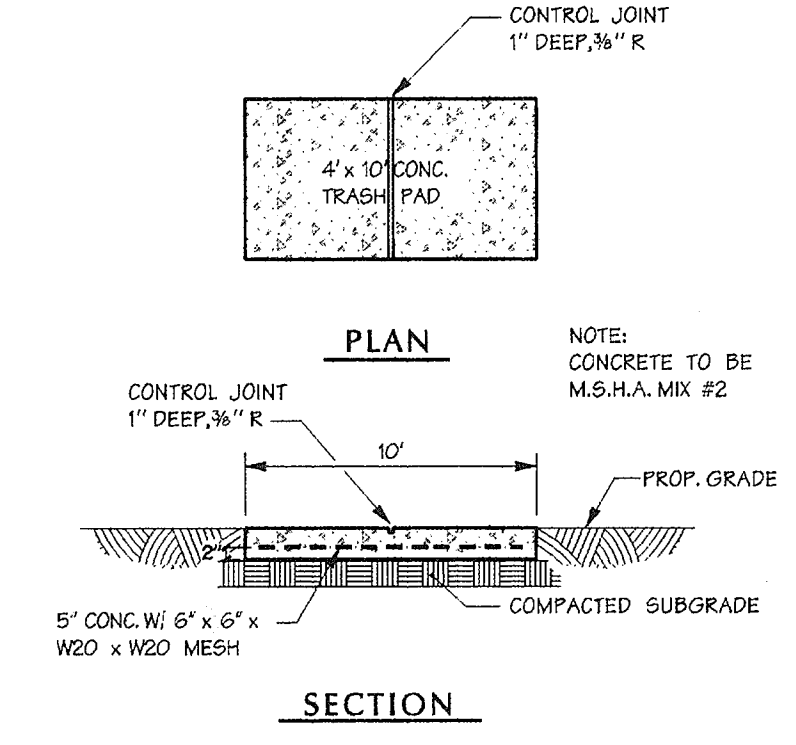
TYPE "A" CURB AND GUTTER R-3.01

NOT TO SCALE



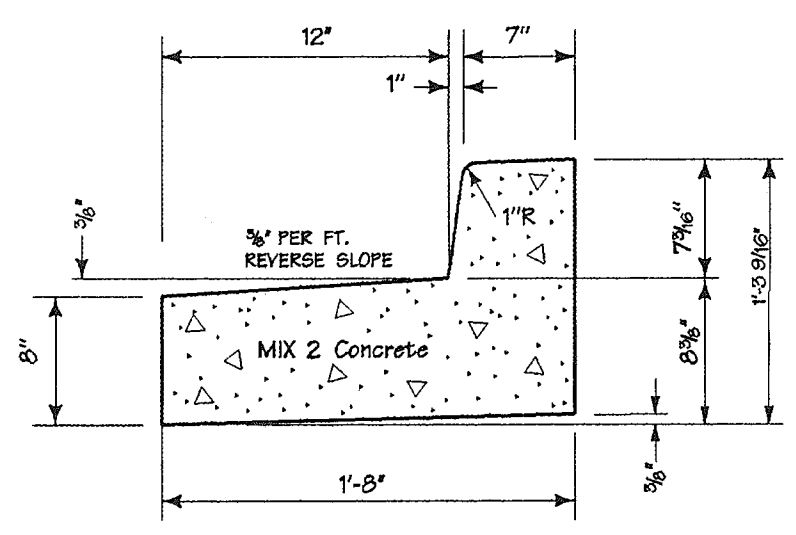
Modified Combination Curb & Gutter R-3.01

NOT TO SCALE



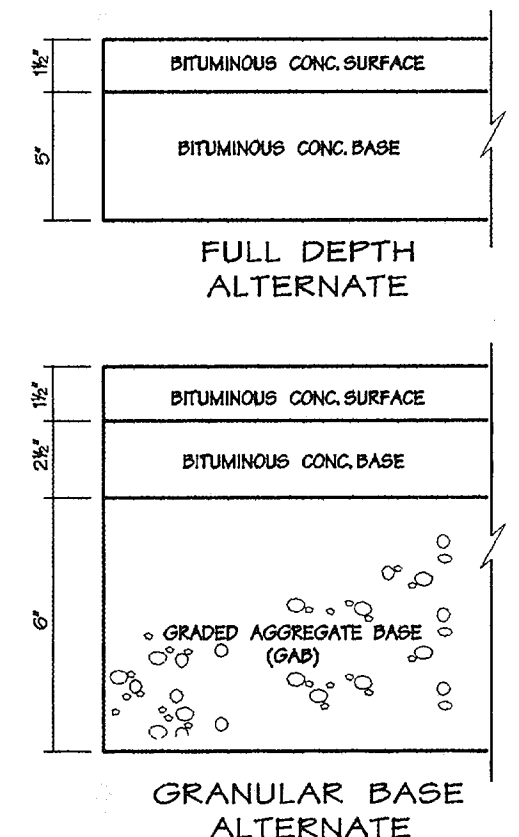
TYPICAL TRASH PAD DETAIL

NO SCALE



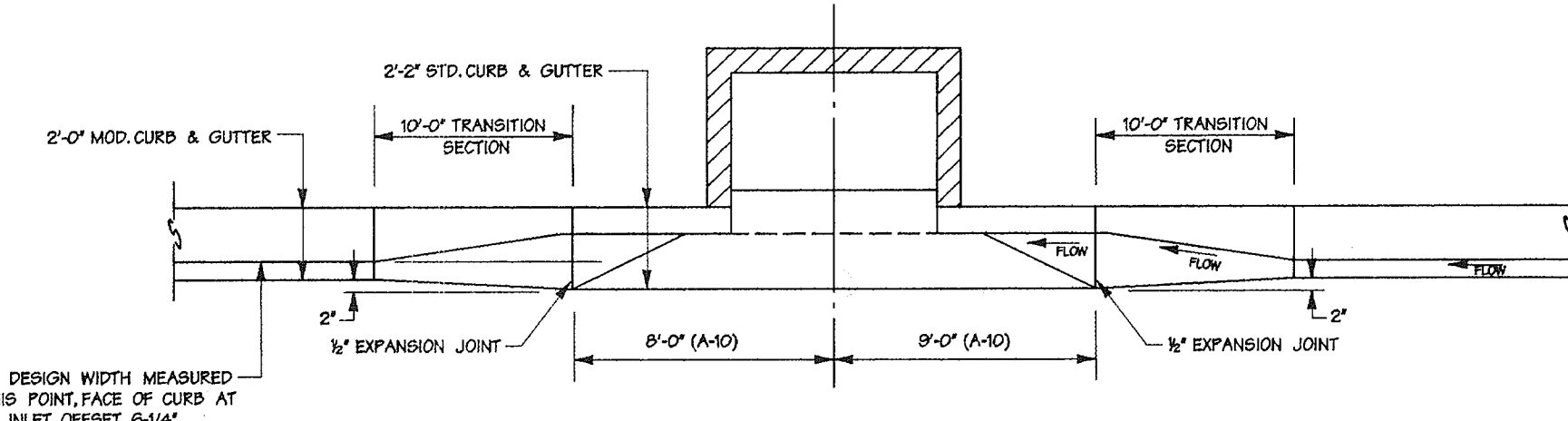
**REVERSE 7' COMBINATION
CURB & GUTTER R-3.01**

NOT TO SCALE



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

NOT TO SCALE



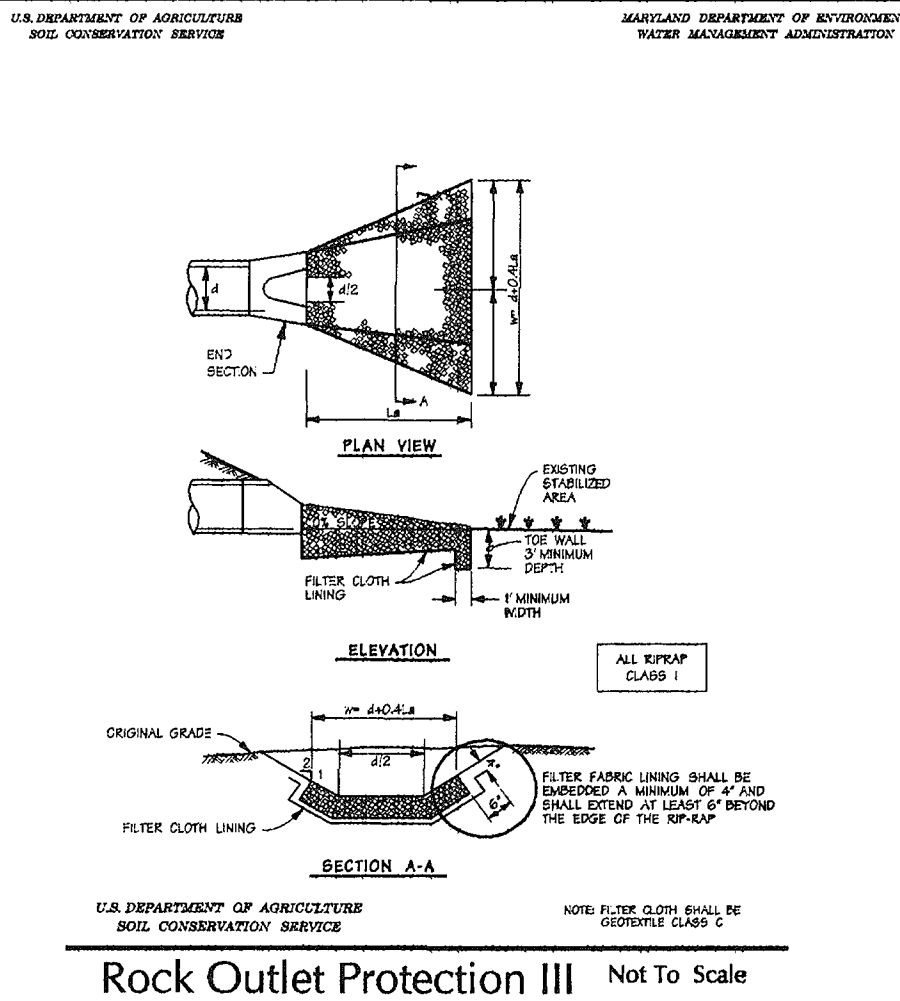
**TRANSITION CURB FROM MODIFIED CURB & GUTTER
TO STANDARD CURB & GUTTER AT A-10 INLETS**

NOT TO SCALE

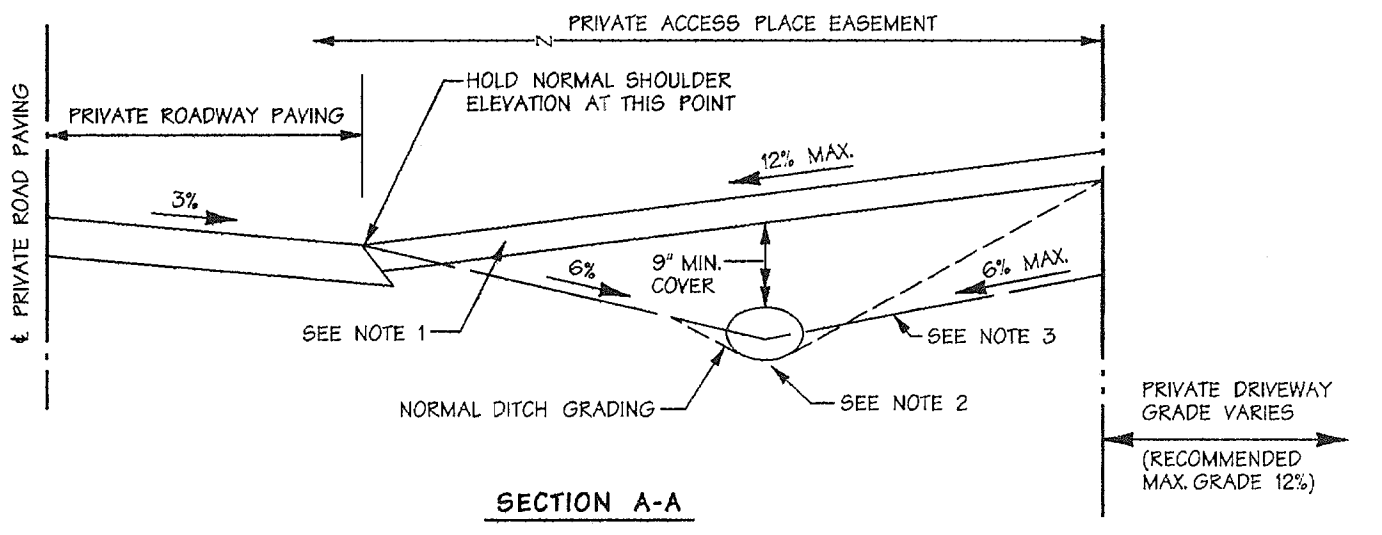
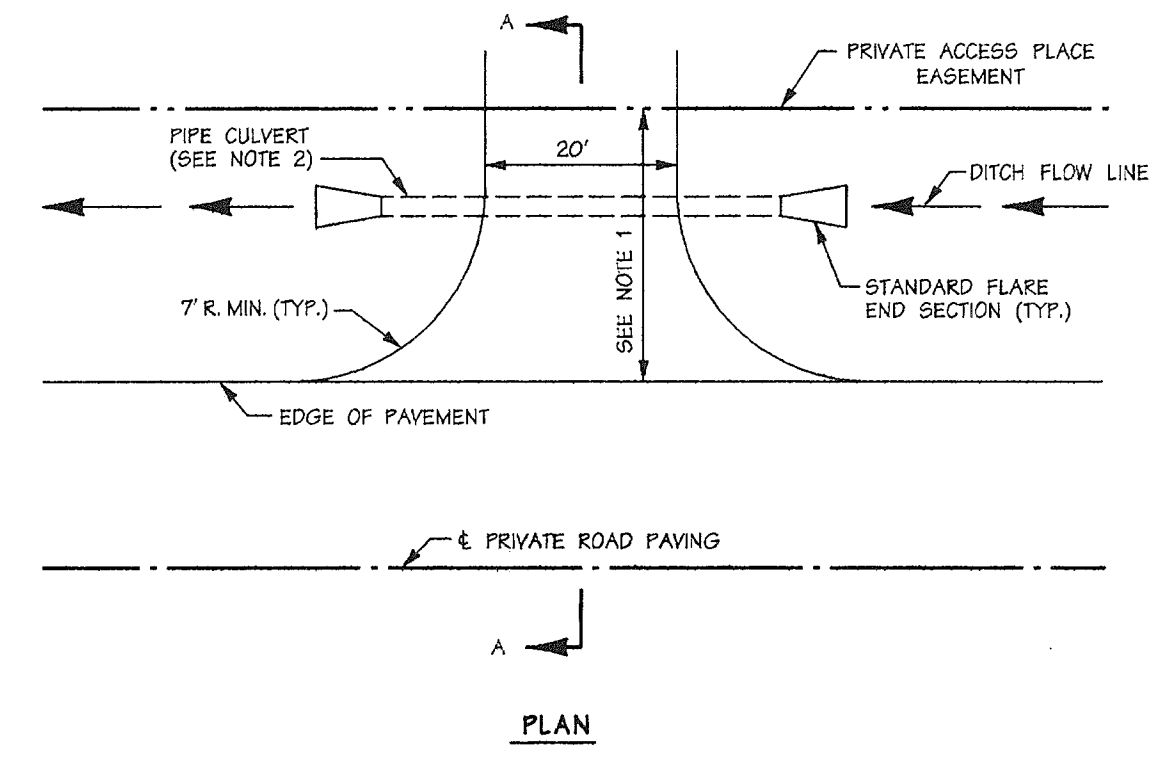
CONSTRUCTION SPECIFICATIONS

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 VOIDS 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

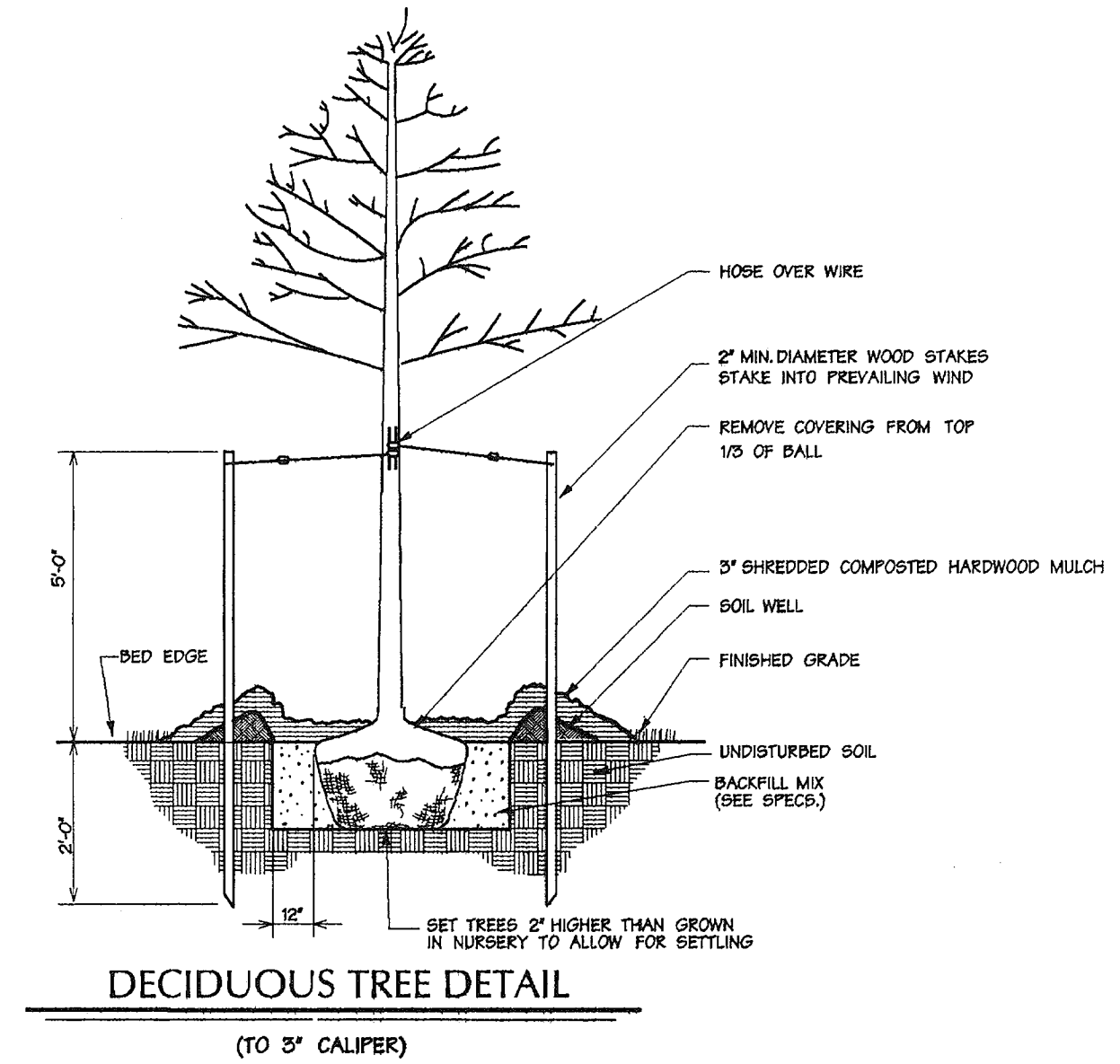


- NOTES:**
1. DRIVEWAY MUST BE PAVED FROM EDGE OF PUBLIC ROAD TO RIGHT OF WAY LINE USING STANDARD PAVING SECTION P-2 AS SHOWN ON THIS SHEET OR ALTERNATE SECTION EQUAL TO OR BETTER THAN P-2 AS APPROVED BY D.P.W.
 2. DRAINAGE CULVERT SHALL BE SIZED FOR A 10 YEAR FREQUENCY STORM AND THE SIZE OF PIPE SHALL BE 18" x 11" ARCH CMP (GA-14). THE DITCH INVERT SHALL BE LOWERED TO PROVIDE A MIN. DITCH GRADE OF 0.5% AND CLEARANCE SHOWN.
 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. TIE-IN GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 12%.



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

NOT TO SCALE



Macadam Path (Section)

NOT TO SCALE

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

With 7. m. h. s. 1-19-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

W. D. ... 1/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Candy Hamdy 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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

FINAL PLAN

**OWENS PROPERTY
PHASE II**

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98, 99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
TAX MAP 31 PARCEL 243,972

OWNER /DEVELOPER:

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

1/4/06
Date

Professional Engr. No. 13876

DMW
Dan McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3335
Fax 296-4706

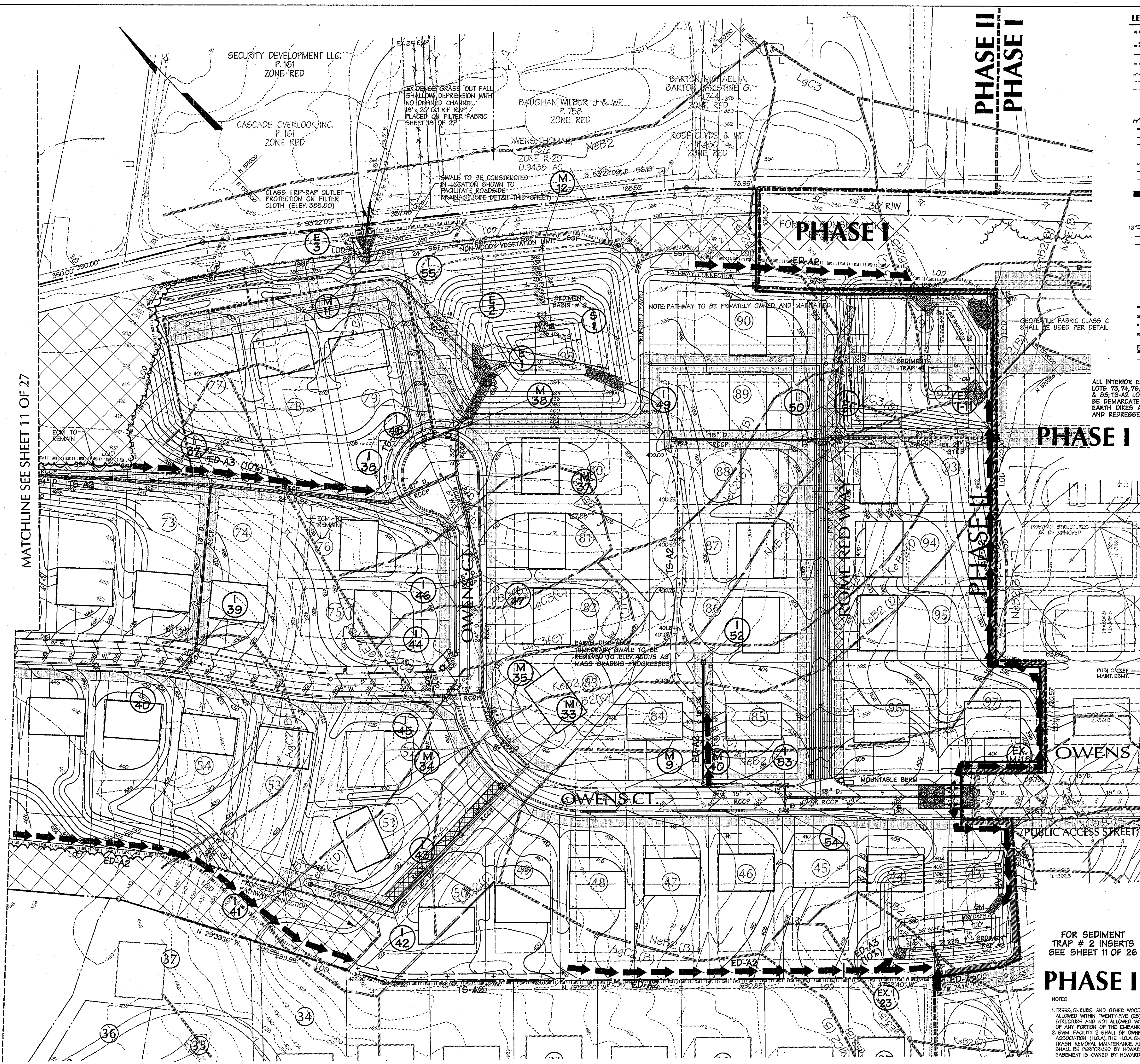
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE

ROAD CONSTRUCTION DETAILS

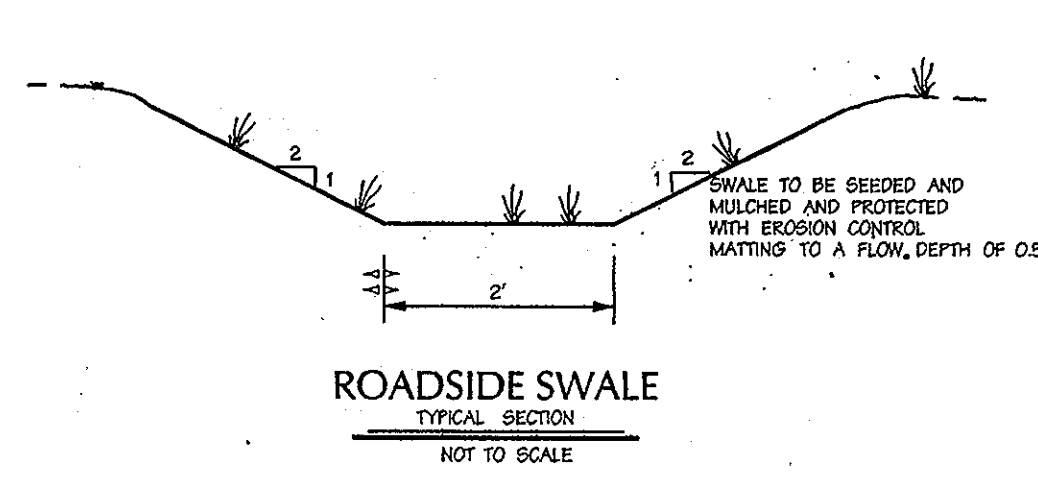
| | | |
|--------|----------------|-------------------|
| Des By | Scale AS SHOWN | Proj. No. 01086.D |
| Dwn By | Date 1/4/06 | 9 of 27 |
| Chk By | Approved | |

MATCHLINE SEE SHEET 11 OF 27



LEGEND

- 75' STREAM BUFFER
- WETLAND
- 25' WETLAND BUFFER
- 100 YR WEE + 1' FREEBOARD (E. FLOODPLAIN EASEMENT)
- EX TREE LINE
- EX MINOR CONTOUR
- EX MAJOR CONTOUR
- EX STRUCTURE
- PROP. TREE LINE (IF SHOWN)
- PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROADWAY CENTERLINE
- PROP. LOT NUMBER
- ADJACENT LOT LINE
- PROP. LOT LINE
- BUILDING SETBACK LINE
- ED-A2
- ED-A2
- TS-A2
- TS-A2
- SBF
- SF
- GM
- GM
- GM
- RFS
- NON-WOODY VEGETATION ZONE
- LIMIT OF DISTURBANCE (L.O.D.)
- BASE OF EMBANKMENT
- SOIL TYPE DELINEATION LINE
- EROSION CONTROL MATTING
- EXISTING FC PATHS



ENGINEER'S CERTIFICATION:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature]
 SIGNATURE OF ENGINEER
 PRINT NAME BELOW SIGNATURE
KENNETH R. KUSEY

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

[Signature] 2/10/06
 U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

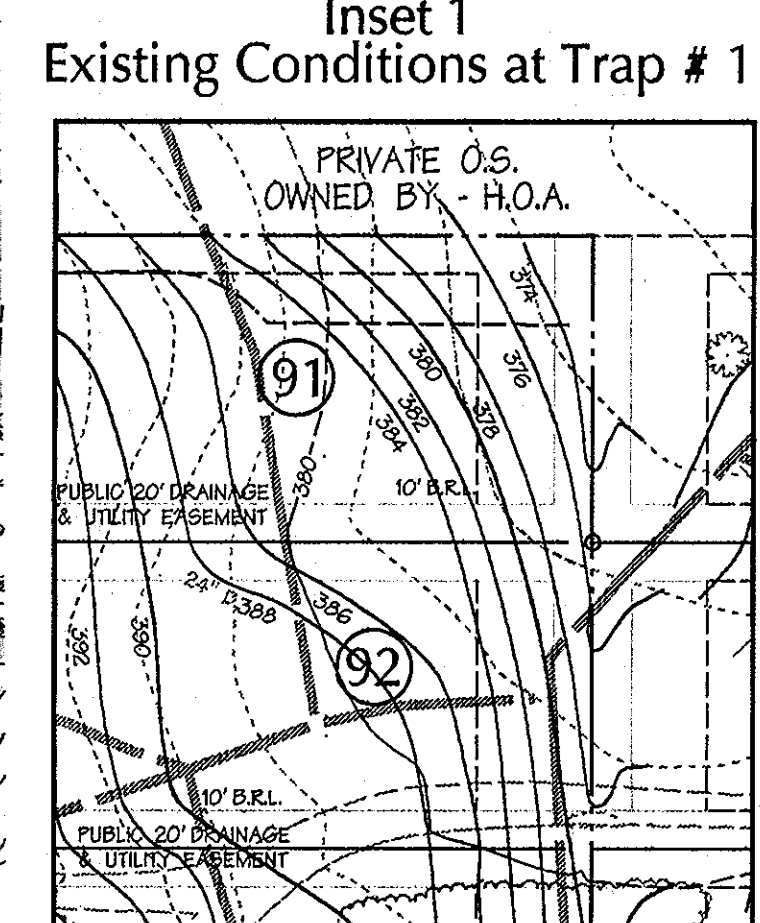
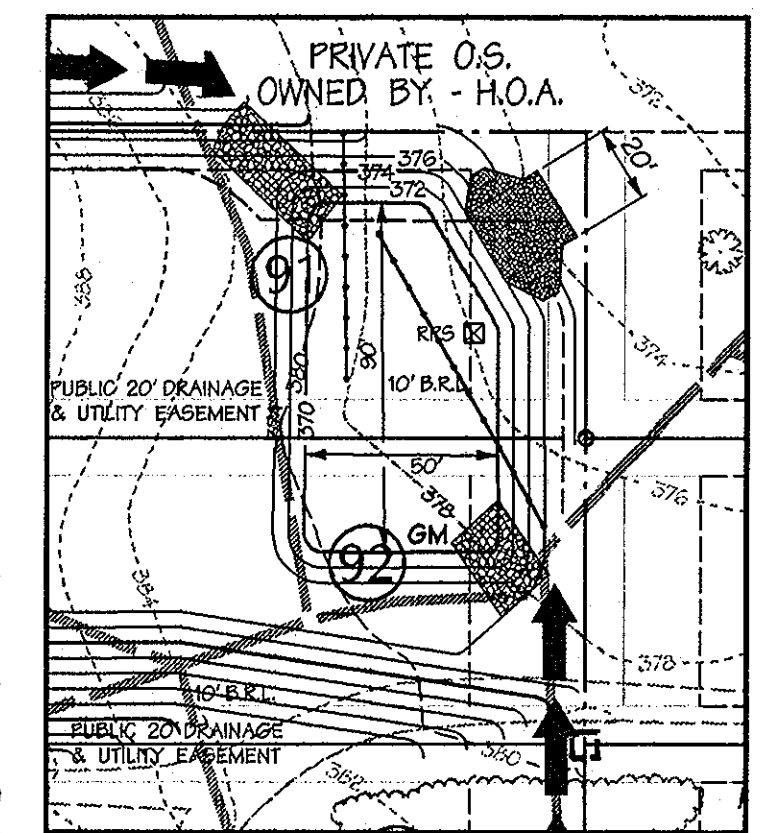
[Signature] 2/10/06
 HOWARD S.C.D. DATE

DEVELOPER'S CERTIFICATION:
 I ME CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 1/3/06
 SIGNATURE OF DEVELOPER DATE
 PRINT NAME BELOW SIGNATURE
MARK E. BUDA

ALL INTERIOR EARTH DIKES AND TEMPORARY SWALES (I.e. EP-A2 LOTS 73, 74, 76, 77, 78, AND 79; TS-A2 CURB OF EP-A2 LOTS 84 & 85; TS-A2 LOTS 80, 81, 82, 83, 84, 85, 86, 87, 88, AND 89) SHALL BE DEMARCATED WITH HIGH VISIBILITY FENCE. THESE INTERIOR EARTH DIKES AND TEMPORARY SWALES SHALL BE INSPECTED AND REDRESSED TO SPECIFICATIONS BY THE END OF EACH DAY.

PHASE I



FOR SEDIMENT TRAP # 2 INSERTS SEE SHEET 11 OF 26

PHASE I

NOTES

- TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
- SWM FACILITY # 2 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.

114106
 Date

Professional Engr. No. 13876

FOR REVISIONS BY BENCHMARK ENGINEERING, INC.

[Signature] 10-30-13
 PROFESSIONAL ENGINEER

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21443 Expiration Date: 12-21-14

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

[Signature] 1-19-06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] 1/21/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 2/19/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

| Date | No. | Revision Description | By |
|----------|-----|---|----|
| 10-31-13 | 1 | REVISE CALL OUT FOR EX. CULVERT UNDER LANDSCAPING | EQ |

FINAL PLAN OWENS PROPERTY PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98, 99 & 100 NON-BUILDABLE BULK PARCELS 'C' AND 'D' TAX MAP 31 PARCEL 243, 572

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

DMW
 Dan MacCune-Walkers, Inc.
 300 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3535 Fax 296-4706

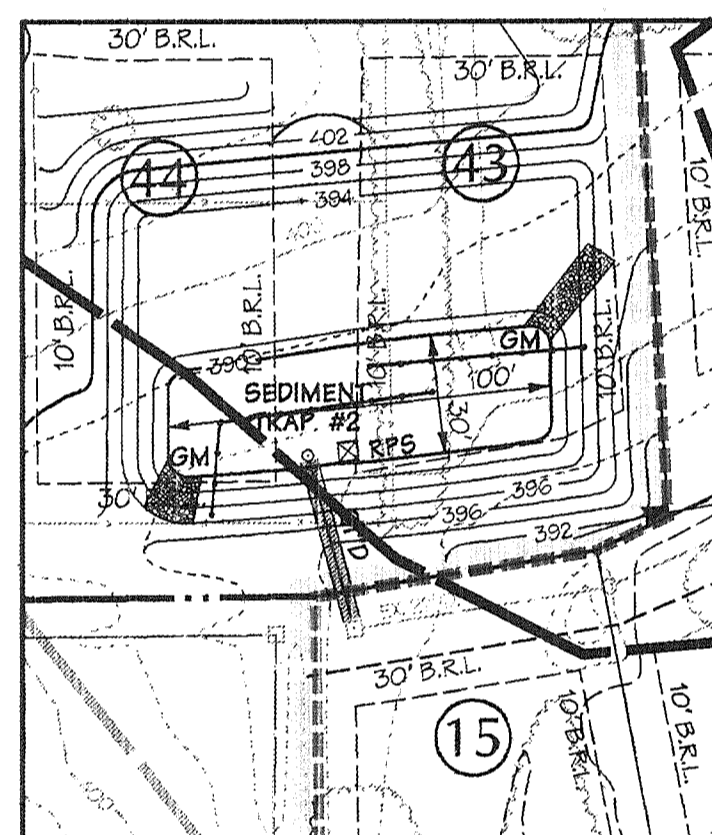
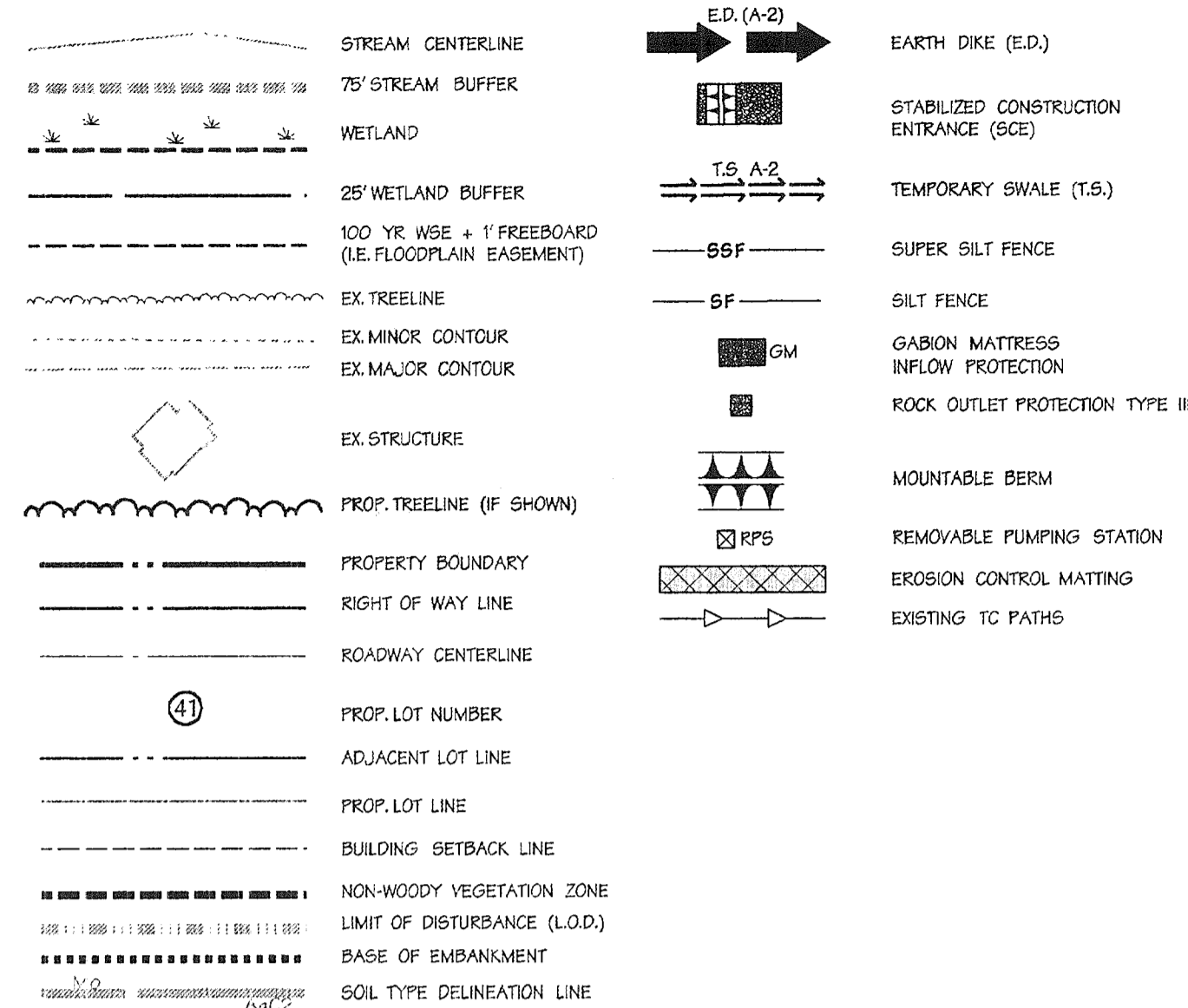
A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

TITLE: **FINAL GRADING AND SEDIMENT & EROSION CONTROL PLAN**

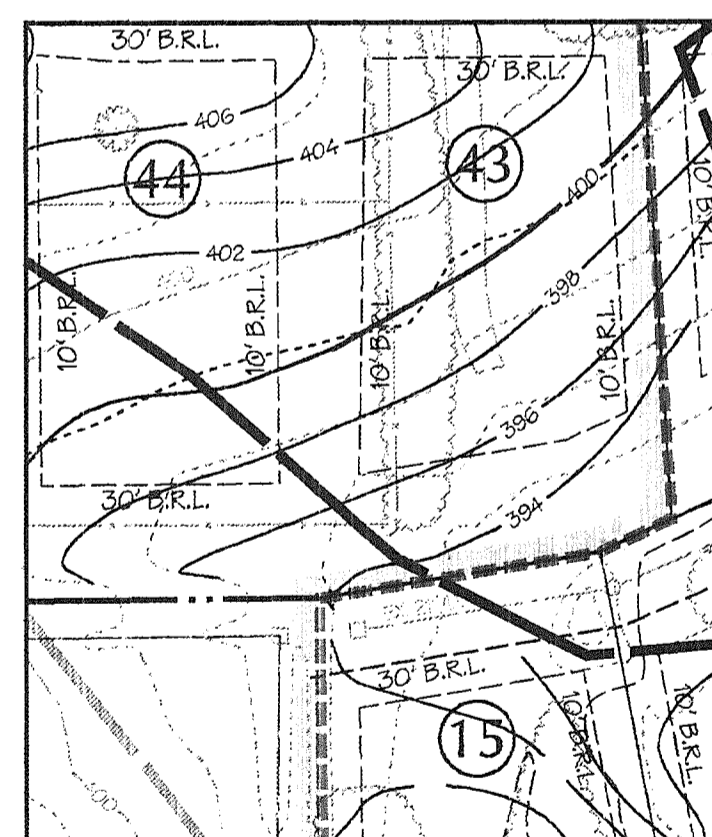
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|---------|-----|----------|--------|-----------|----------|
| Des. By | MRT | Scale | 1"=50' | Proj. No. | 01086.D |
| Drn. By | ADL | Date | 1/4/06 | | |
| Chk. By | KRK | Approved | | | 10 of 27 |

F-05-121

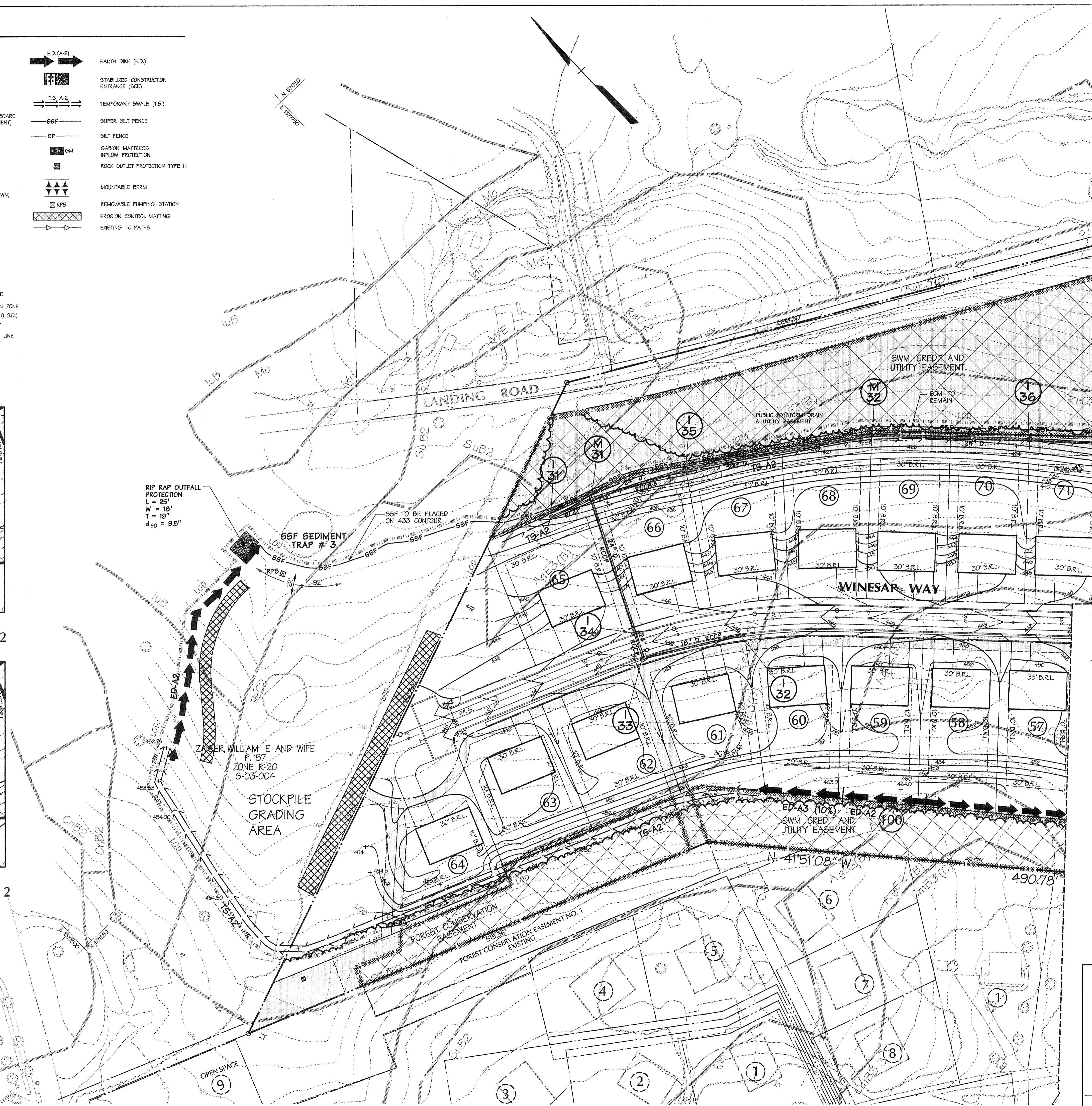
LEGEND



Inset 1
Existing Conditions at Trap # 2



Inset 2
Ultimate Conditions at Trap # 2



MATCHLINE SEE SHEET 10 OF 27

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
 Jon Myers, Inc. 2/2/06
 DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SOIL CONSERVATION DISTRICT
 APPROVED: [Signature] 2/2/06
 DATE

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.

SIGNATURE OF DEVELOPER: [Signature]
 PRINT NAME BELOW SIGNATURE: MARK E. BUDA
 DATE: 1/13/06

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 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: [Signature]
 PRINT NAME BELOW SIGNATURE: KEVIN R. KUSY
 DATE: 1/14/06

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

[Signature]
 CHIEF, BUREAU OF HIGHWAYS 1/19/06
 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 9/0
 DATE

[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT 2/9/06
 DATE

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

FINAL PLAN
OWENS PROPERTY
PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98 99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 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

1/4/06
Date

Professional Engr. No. 15676

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,
Golf Course Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE: FINAL GRADING AND SEDIMENT & EROSION CONTROL PLAN

| | | | | | |
|---------|-----|----------|--------|-----------|----------|
| Des. By | MRT | Scale | 1"=50' | Proj. No. | 01086.D |
| Dwn. By | ADL | Date | 1/4/06 | | |
| Chk. By | KRK | Approved | | | 11 of 27 |

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- A. SITE PREPARATION
1. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
3. Schedule required soil test to determine solum amendment composition and application rates for sites having disturbed area over 5 acres.
B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
1. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres.
2. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment.
3. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide).

- C. SEEDBED PREPARATION
1. TEMPORARY SEEDING
A. Seeded preparation shall consist of loosening soil to a depth of 3 inches to 5 inches by means of suitable agricultural or construction equipment, such as a disc harrow or chisel plows or rippers mounted on construction equipment.
B. Apply fertilizer and lime as prescribed on the plans.
C. Incorporate lime and fertilizer into the top 3 - 5 inches of soil by disking or other suitable means.

- II. PERMANENT SEEDING
A. Minimum soil conditions required for permanent vegetative establishment:
1. Soil pH shall be between 6.0 and 7.0.
2. Soil shall contain less than 500 parts per million (PPM).
3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain a sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by the soils on site, adding topsoil is required in accordance with Section 21 - Standard and Specification for Topsoil.

- B. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5 inches to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
C. Apply soil amendments as per soil test or as included on the plans.
D. Mix soil amendments into the top 3 - 5 inches of topsoil by disking or other suitable means.
E. SEED SPECIFICATIONS
1. All seed must meet the requirements of the Maryland State Seed Law.

- 2. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species.
3. SEED MIXTURES
A. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
B. Lime: Use only ground agricultural limestone, (up to 3 tons per acre may be applied by hydroseeding).

- C. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
II. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
A. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the temporary or permanent seeding summaries or tables 25 or 26.
B. Where practical, seed should be applied in two directions perpendicular to each other.

Table 25: Seed Mixture (Hardiness Zone 6B). Columns: No., Species, Application Rate (lb./Ac.), Seeding Dates, Seeding Depths, Fertilizer Rate (10-10-10), Lime Rates.

- III. Drill or outdrill seeding: Mechanized seeders that apply and cover seed with soil.
A. Outdrill seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering.
B. Where practical, seed should be applied in two directions perpendicular to each other.
F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)
1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color and shall not be muddy, caked, decayed, or excessively dusty.
2. Wood cellulose fiber mulch (WCFM)
A. WCFM must conform to the following physical requirements:
B. WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.

- C. WCFM shall be dyed green or contain a green dye in the package that provides an appropriate color to facilitate visual inspection.
D. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation.
E. WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.

- G. MULCHING SEEDED AREAS - Mulch shall be applied to all seeded areas where one species of grass is desired.
1. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section.
2. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons per acre.

- II. SECURING STRAW MULCH - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water.
1. A mulch anchoring tool is a tractor drawn implement design to punch and anchor mulch into the soil surface.
2. Wood cellulose fiber may be used for anchoring straw.

- 3. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys or on crest of banks.
4. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations.

SECTION II - TEMPORARY SEEDING

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

Table 26: Seed Mixture (Hardiness Zone 6B). Columns: No., Species, Application Rate (lb./Ac.), Seeding Dates, Seeding Depths, Fertilizer Rate (10-10-10), Lime Rates.

SECTION III - PERMANENT SEEDING

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

Table 27: Seed Mixture No. 3 (Hardiness Zone 6B). Columns: % Species, Application Rate (lb./Ac.), Seeding Dates, Seeding Depths, Fertilizer Rate (10-20-20), Lime Rate.

* For 5-16 through 8-14 add two (2) pounds of Weeping Lovegrass per acre or ten (10) pounds of Millet per acre to seed mixture (i.e. Mix #3 shown).

SECTION IV - SOD

To provide quick cover on disturbed areas (2:1 grade or flatter)
A. GENERAL SPECIFICATIONS
1. Class of turfgrass sod shall be Maryland or Virginia State certified or approved.

- II. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting.
III. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
IV. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
V. Sod shall be harvested, delivered, and installed within a period of 36 hours.

- B. SOD INSTALLATION
1. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
2. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other.
3. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints.
4. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet.

- C. SOD MAINTENANCE
1. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week after sod installation.
2. After the first week, sod watering is required as necessary to maintain adequate moisture content.
3. The first mowing of sod should not be attempted until the sod is firmly rooted.

SECTION V - TURFGRASS ESTABLISHMENT

Areas where turfgrasses may be desired may include lawns, parks, playgrounds, and commercial areas which receive a medium, high level of maintenance.

- A. TURFGRASS MIXTURES
1. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management.
2. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where rapid establishment is necessary.

- 3. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management.
4. Kentucky Bluegrass/Fine Fescue - Shade mixture - For use in areas with shade in bluegrass lawns.

- B. IDEAL TIMES OF SEEDING
Western Maryland: March 15 - June 1, August 1 - October 1 (hardiness zones - 5B, 6A).
Central Maryland: March 1 - May 15, August 15 - October 15 (hardiness zone - 6B).
Southern Maryland, Eastern Shore: March 1 - May 15, August 15 - October 15 (hardiness zones - 7A - 7B).

- C. IRRIGATION
If soil moisture is different, supply new seedlings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established.
D. REPAIRS AND MAINTENANCE
1. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.
2. If the stand provides less than 40% ground coverage, re-establish following original lime, fertilizer, seeded preparation and seeding recommendations.

- 3. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.
4. Maintenance fertilizer rates for permanent seedings are shown in Table 24, for lawns and other medium high maintenance turfgrass areas.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

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

PURPOSE
To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
CONDITIONS WHERE PRACTICE APPLIES
1. This practice is limited to areas having 2:1 or flatter slopes where:

- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

- 2. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization in the Soil Survey published by USDA-EC in cooperation with Maryland Agricultural Experiment Station.
1. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications.

- II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand.
2. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.

- 3. Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be applied at the rate of 4-8 tons/acre (200-400 pounds per 1000 square feet) prior to the placement of topsoil.
4. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used to weed control until sufficient time has elapsed (24 days min.) to permit dissipation of phytotoxic material.

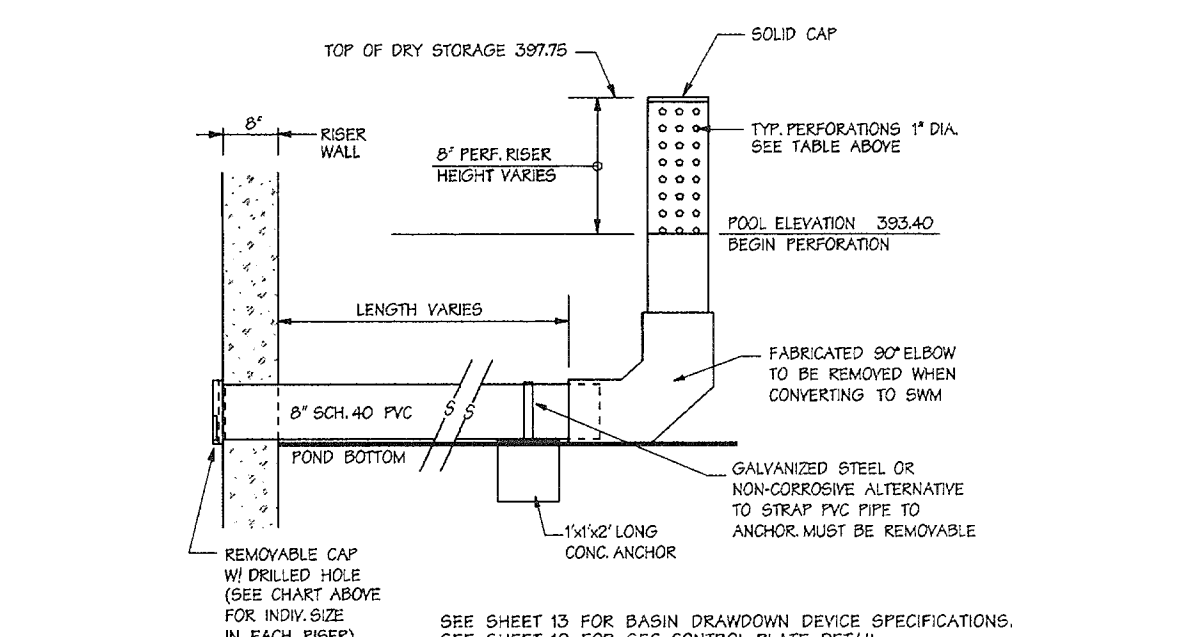
- 5. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
6. Topsoil Application
a. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

- b. Topsoil shall be uniformly distributed in a 4% - 8% layer and lightly compacted to a minimum thickness of 4".
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

- d. Composted sludge shall contain at least 1 percent nitrogen, 15 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0.
e. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb./1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 10/75.

Table with columns: BASIN #, LENGTH, WET POOL ELEV., PERE RISER HEIGHT, ORIFICE DRILLED HOLE SIZE, PERFORATION SPACING, PERFORATIONS PER VERT. FT.



Sediment Control Draw-Down Not to Scale

Sequence of Operations

- 1. Obtain Grading permit, Notify Maryland Department of Environmental and Nontidal Wetlands and Watersheds Inspections and Compliance sections at (410)-631-3510 at least five days in advance of beginning any work in streams, 100-year floodplain, nontidal wetlands and wetland buffers.
2. Notify HCD Department of Inspections 410-313-1855 at least 48 hours prior to beginning any work.
3. Orange high visibility fence shall be manually installed along the limits of disturbance.

- 4. With permission from the Sediment Control Inspector, clear and grub for and install the Stabilized Construction Entrance Install Super Silt Fence (SSF) around the sediment basin as shown on plans.
5. Clear and grub, install basin and grade swale at the back of lots 65-76. Notify HCD Inspector to gain permission to proceed.

- 6. Install remainder of Sediment and Erosion Control (SEC) measures including dikes and swales.
7. Notify HCD Department of Inspection, upon completion of said installation.
8. With the approval of the sediment control inspector, clear and grub the remainder of the site.
9. Mass grade site.
10. Install utilities and curb and gutter.
11. Pave Road.
12. Upon stabilization of site with established vegetation and with the permission of the Sediment Control Inspector, flush the storm drain system.

- 13. With the permission of the Sediment Control Inspector, remove sediment control measures and stabilize any areas disturbed by their removal.
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Approval signature and date block for HOWARD COUNTY DEPT. OF PLANNING & ZONING.

Table with columns: Date, No., Revision Description

FINAL PLAN OWENS PROPERTY PHASE II
LOTS 43 THRU 97 AND OPEN SPACES LOTS 98-99 & 100
NON-TAXABLE BULK PARCELS C AND D
OWNER/DEVELOPER: PATAPSCO LANDING, LLC

Professional Engineer seal for MORTIMER R. KIRK, No. 13876, State of Maryland.

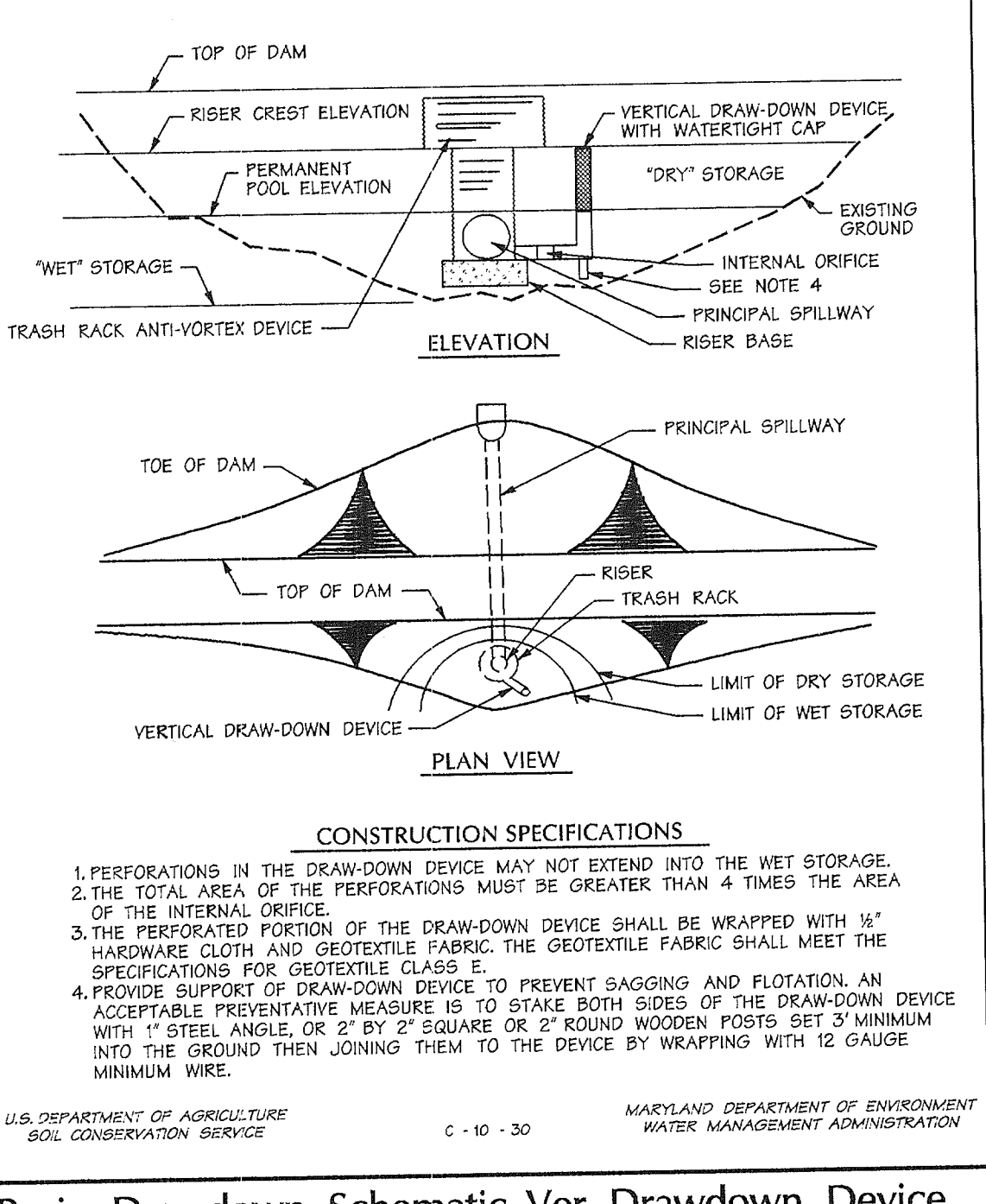
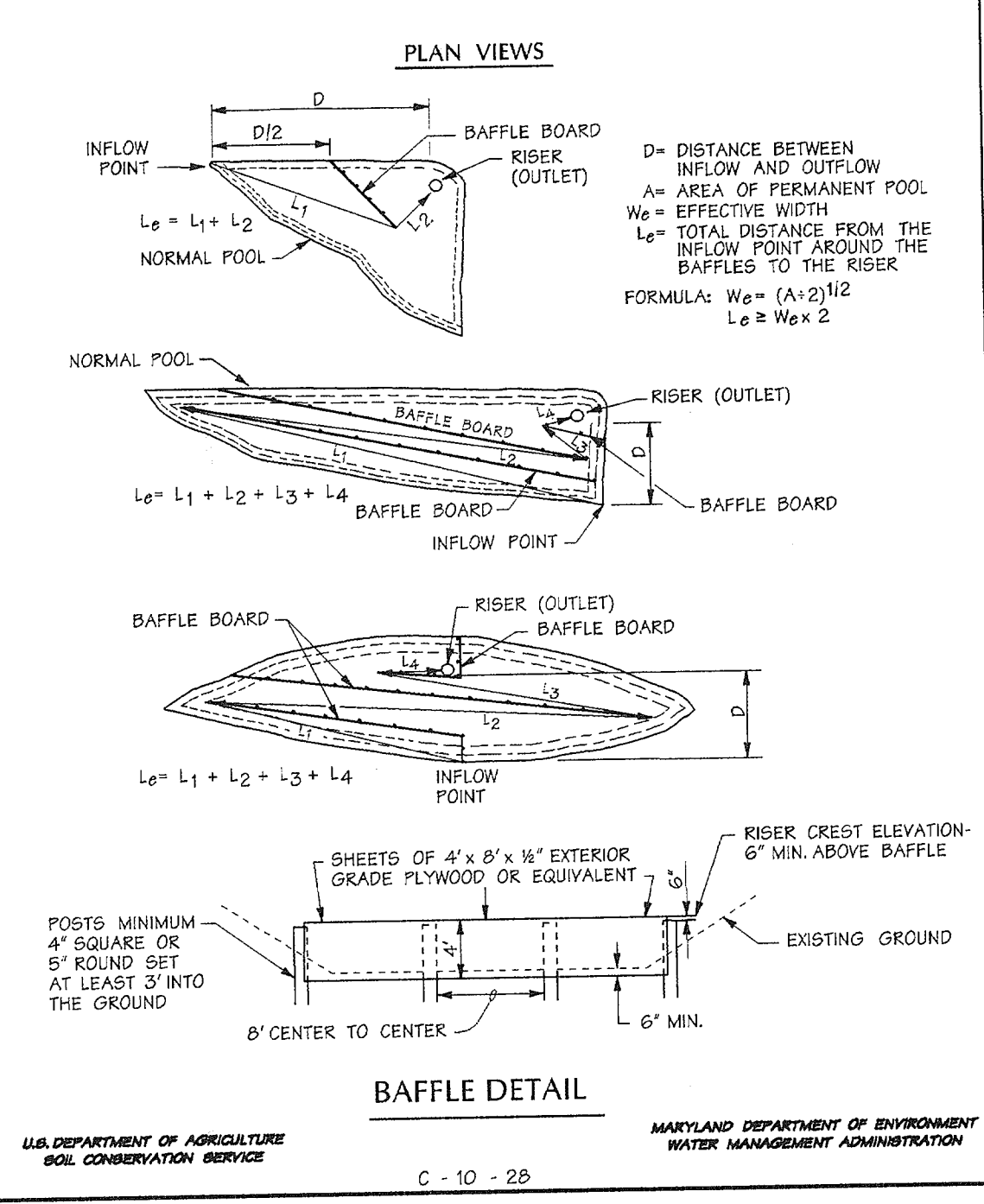
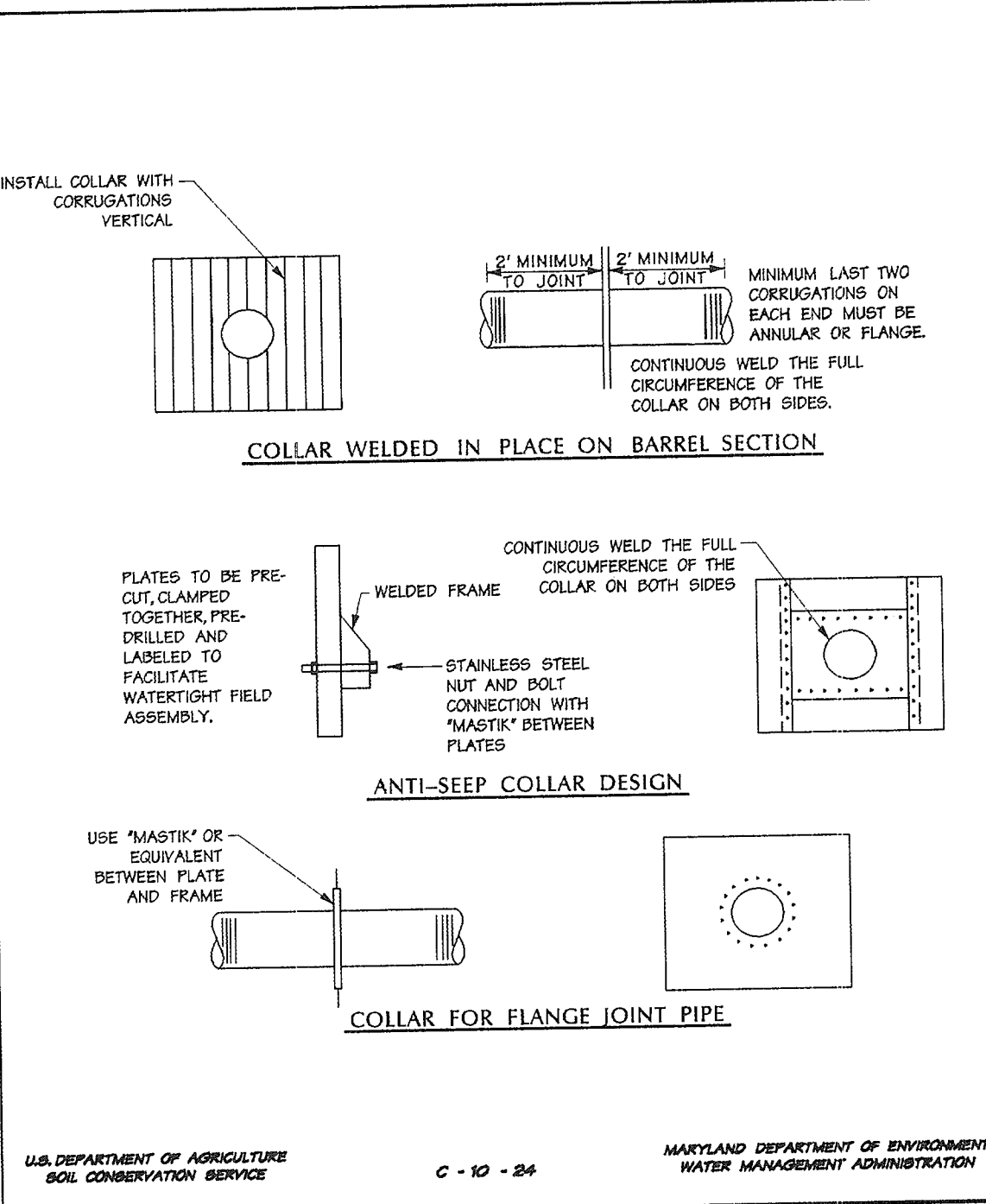
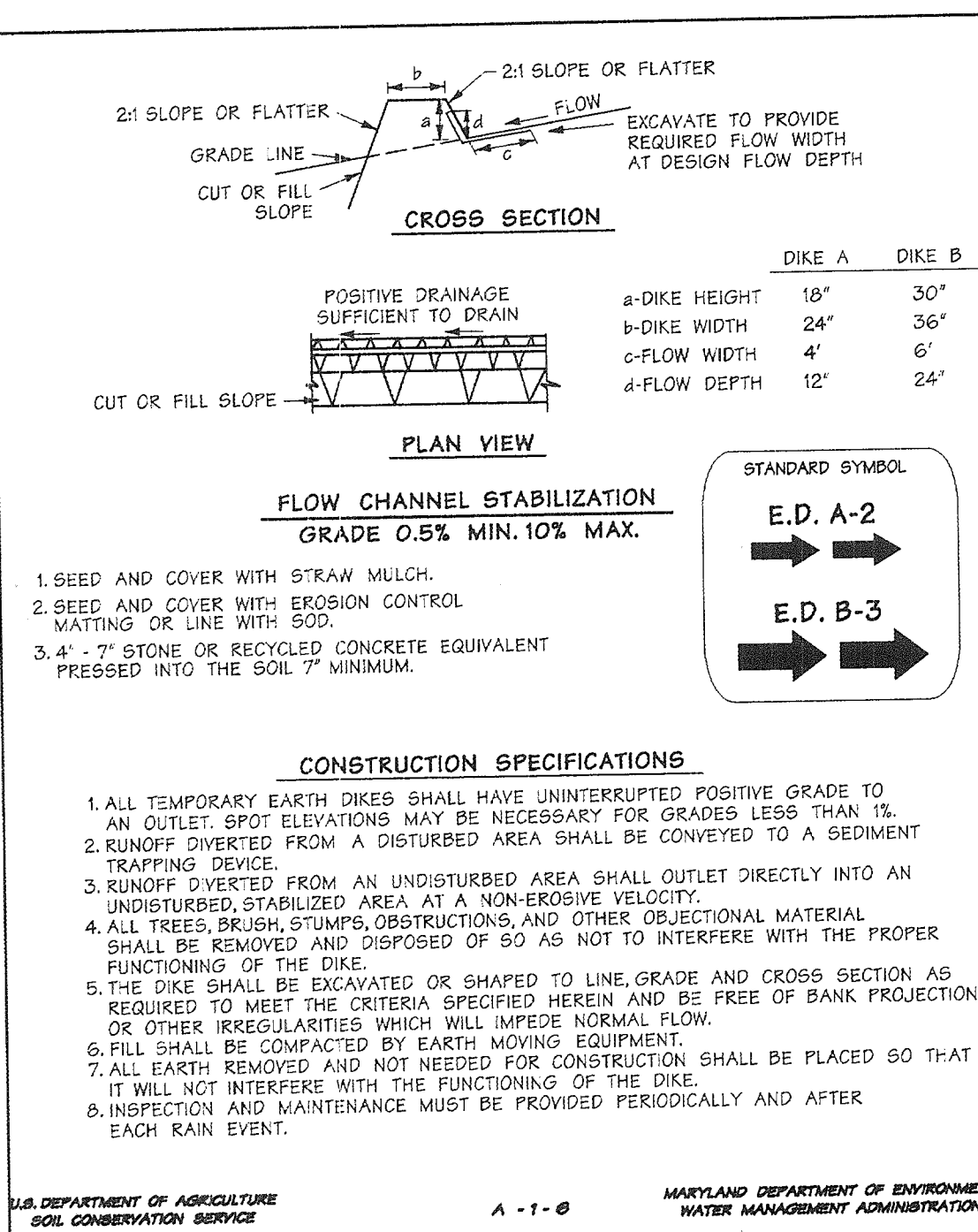
Final plan details table with columns: Des. By, MRT, Scale, NONE, Proj. No., 01086.D, Date, 1/4/06, Chk. By, KKR, Approved, 12 of 27

DEVELOPER'S CERTIFICATION: I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN...

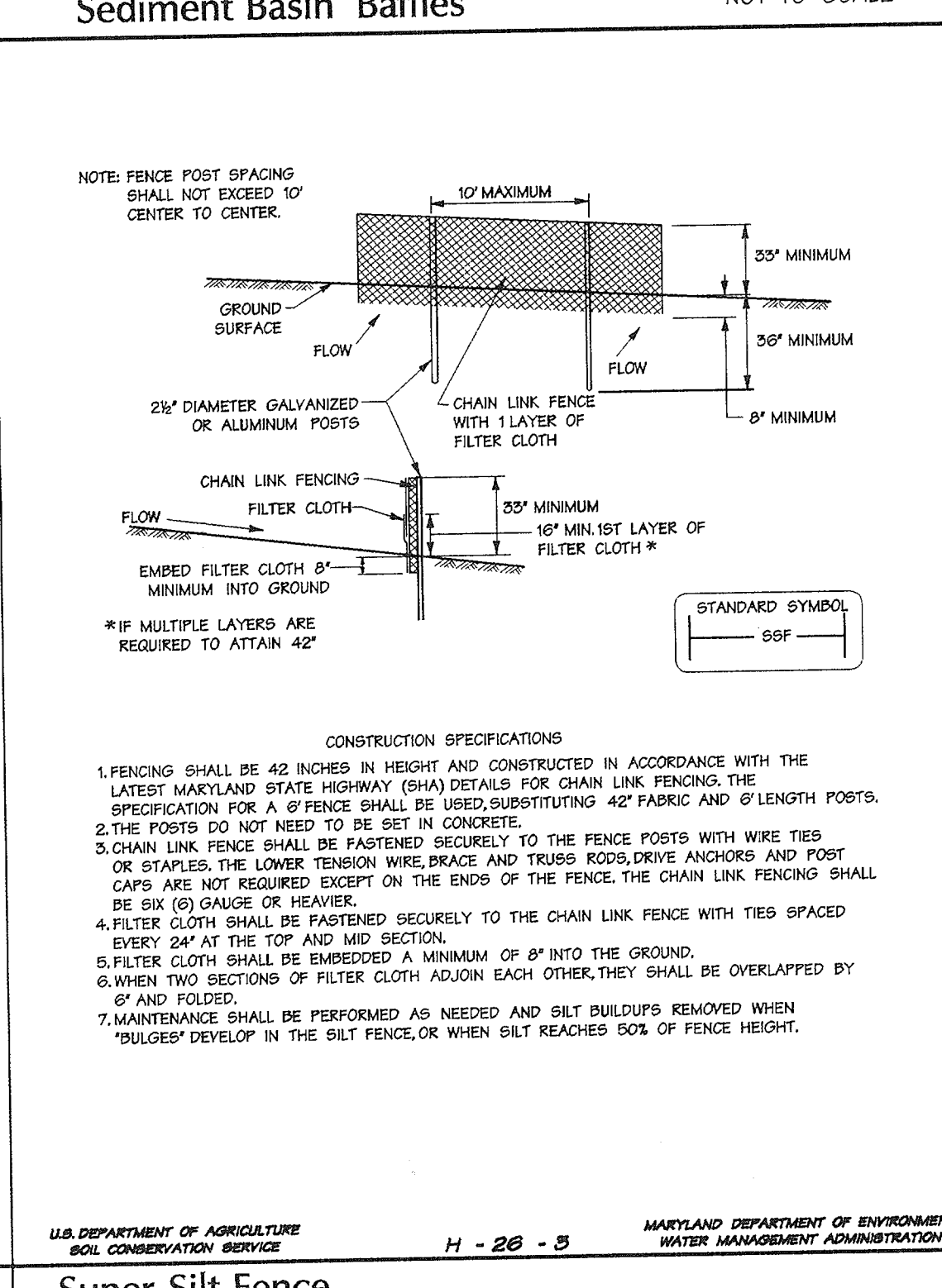
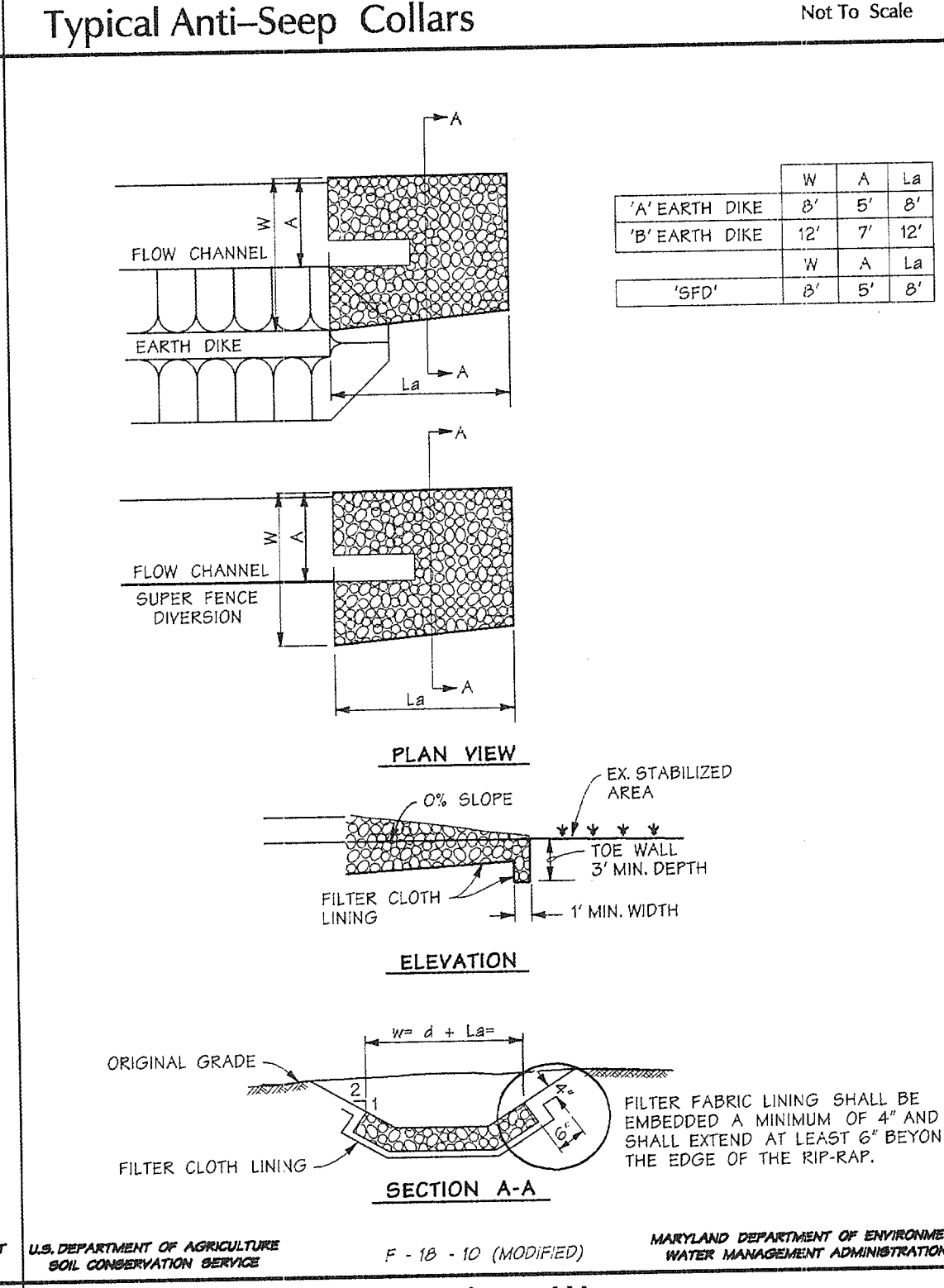
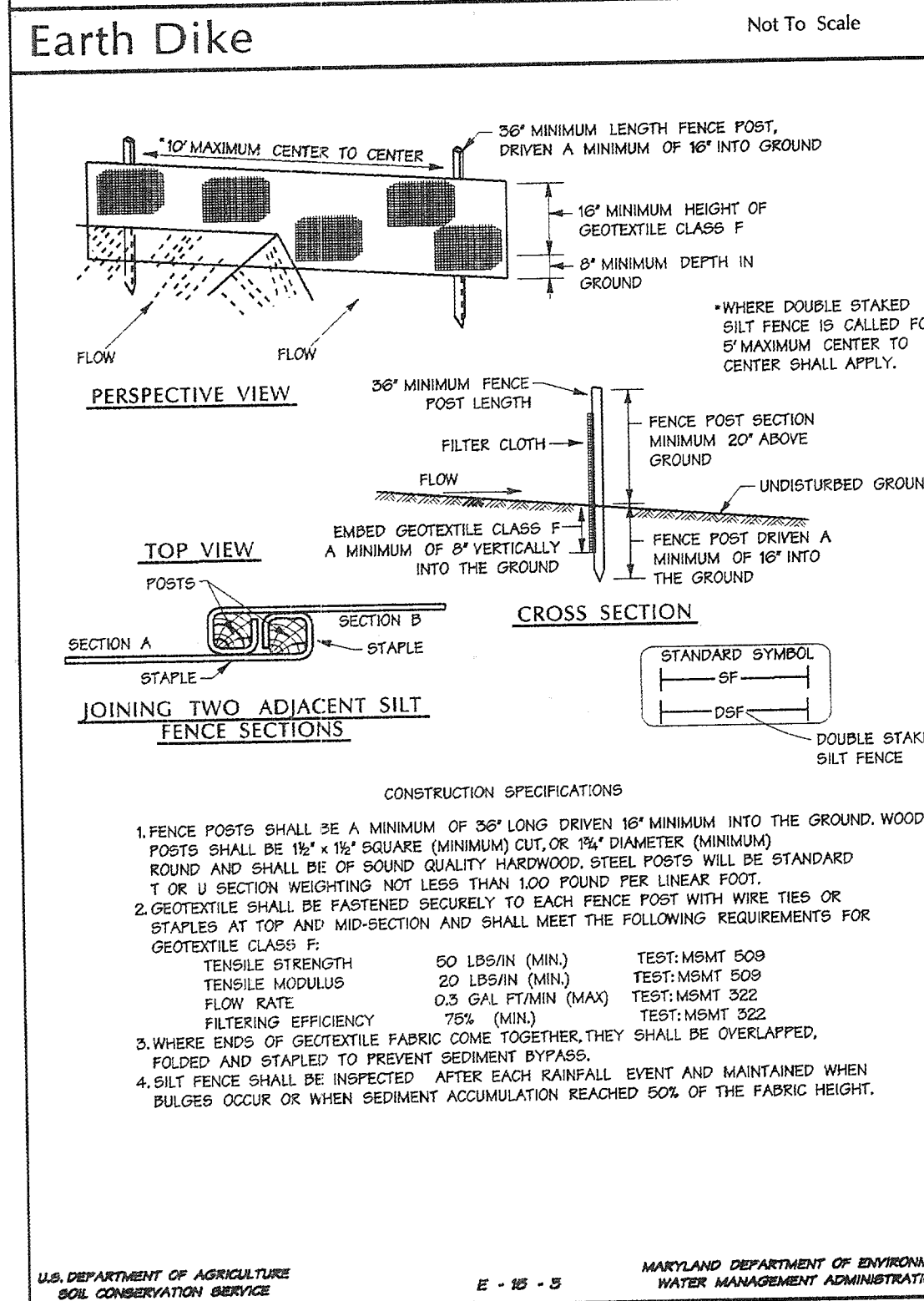
ENGINEER'S CERTIFICATION: I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS...

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS. Signature of Jim Myers, dated 2/2/06.

VEGETATIVE STABILIZATION SECTION. Includes references to standards and specifications for vegetative stabilization methods, sod, and turfgrass establishment.



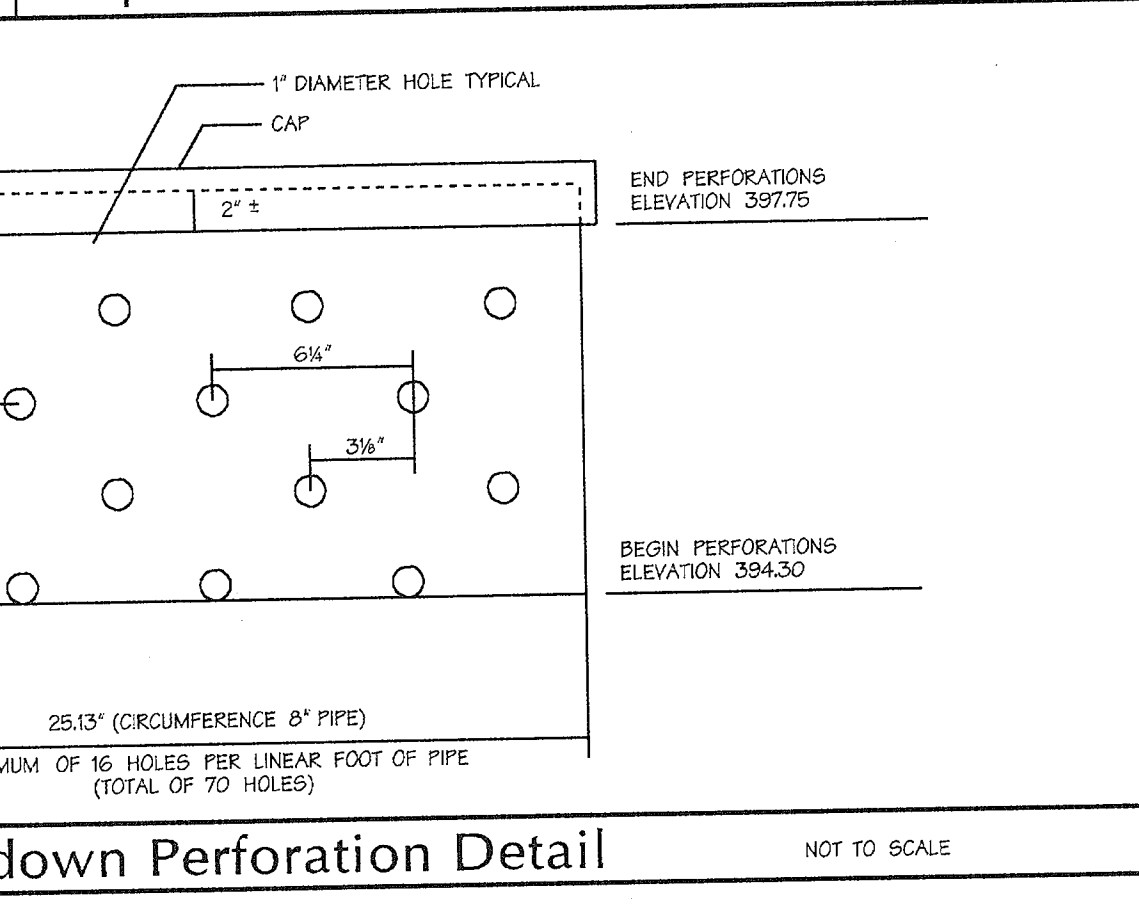
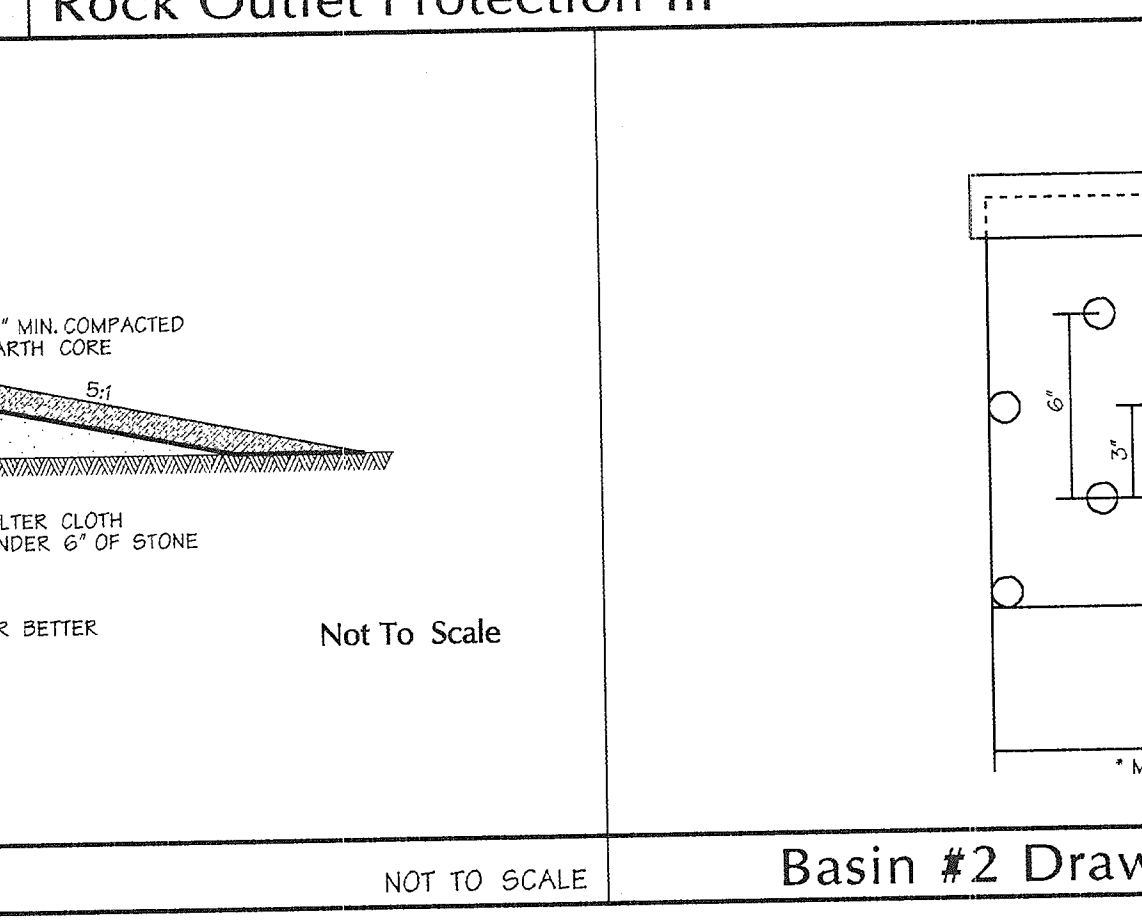
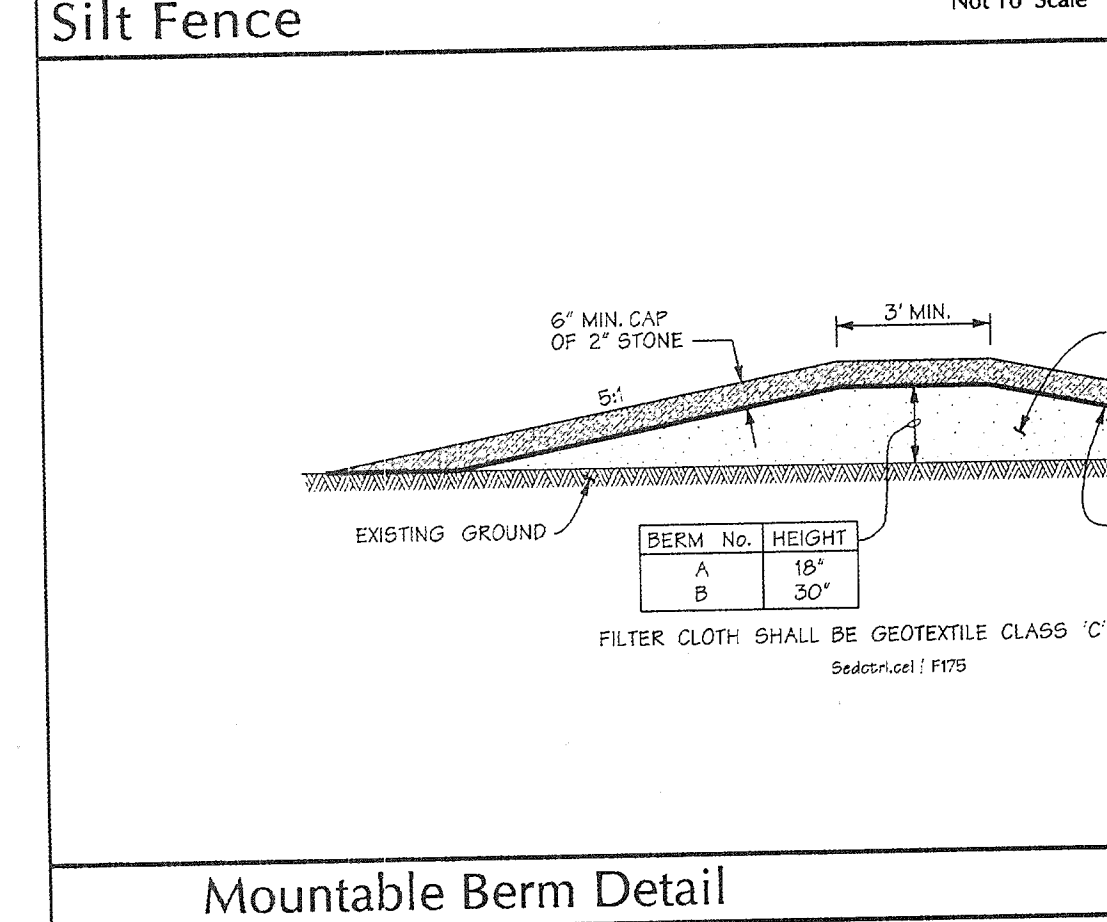
| BASIN NUMBER | | 2 |
|--|-------|-----------------|
| EXISTING DRAINAGE AREA: ACRES | | 13.01 |
| INTERIM DRAINAGE AREA: ACRES | | 13.02 |
| PROPOSED DRAINAGE AREA: ACRES | | 14.88 |
| STORAGE REQUIRED: CUBIC FEET | WET | 26,784 |
| | DRY | 26,784 |
| | TOTAL | 53,568 |
| STORAGE PROVIDED: CUBIC FEET | WET | 46,964 |
| | DRY | 62,289 |
| | TOTAL | 112,253 |
| EXISTING GROUND ELEVATION | | 392.50 |
| TOP EMBANKMENT ELEVATION | | 400.00 |
| EMERGENCY SPILLWAY CREST ELEVATION | | 398.00 |
| RISER CREST ELEVATION | | 397.75 |
| WET STORAGE ELEVATION | | 393.40 |
| CLEANOUT ELEVATION | | 399.75 |
| BOTTOM ELEVATION | | 388.00 |
| Q-1 INTO BASIN (C.F.S.) | | 0.30 |
| Q-1 OUT BARREL (C.F.S.) | | 0.84 |
| Q-1 OUT EMERGENCY SPILLWAY (C.F.S.) | | 0.00 |
| TOTAL Q-1 OUT OF BASIN (C.F.S.) | | 0.84 |
| Q-10 INTO BASIN (C.F.S.) | | 81.57 |
| Q-10 OUT BARREL (C.F.S.) | | 32.66 |
| Q-10 OUT EMERGENCY SPILLWAY (C.F.S.) | | 31.63 |
| TOTAL Q-10 OUT OF BASIN (C.F.S.) | | 64.29 |
| Q-10 INTO BASIN (C.F.S. (CLOGGED)) | | 81.57 |
| Q-10 OUT BARREL (C.F.S. (CLOGGED)) | | 32.51 |
| Q-10 OUT EMERGENCY SPILLWAY (C.F.S. (CLOGGED)) | | 36.49 |
| TOTAL Q-10 OUT OF BASIN (C.F.S. (CLOGGED)) | | 69.00 |
| Q OUT EMERGENCY SPILLWAY | | 0.00 |
| BASIN DEPTH | WET | 5.40' |
| | DRY | 4.35' |
| | TOTAL | 9.75' |
| DESIGN HIGHWATER 1 YEAR | | 397.59 |
| DESIGN HIGHWATER 10 YEAR | | 398.80 |
| DESIGN HIGHWATER 10 YEAR (CLOGGED) | | 398.88 |
| FREEBOARD PROVIDED | | 1.12' |
| BARREL DIAMETER | | 24" |
| RISER INTERIOR DIMENSIONS | | 4' x 4' |
| EMERGENCY SPILLWAY WIDTH | | 17' |
| WET STORAGE ZONE ELEVATION | | 388.00 - 393.40 |
| DRY STORAGE ZONE ELEVATION | | 393.40 - 397.75 |
| BOTTOM DIMENSIONS | | 56' x 106' |
| STORAGE REQUIRED AT CLEANOUT C.F. | | 13,392 |
| STORAGE PROVIDED AT CLEANOUT C.F. | | 11,809 |
| DIMENSION FROM CLEANOUT ELEV. TO RISER TOP | | 8.00' |
| START DRAWDOWN PERFORATIONS AT ELEV. | | 393.40 |
| INTERIM SWM REQUIRED | | YES |
| INTERIM SWM PROVIDED | | YES |



Basin Drawdown Schematic Ver. Drawdown Device

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections and Permits, Sediment Control Division prior to the start of any construction (05-1995).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control, and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within:
 - A seven calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes steeper than 2:1.
 - Fourteen days for all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the Howard County Design Manual, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1984 Maryland Standards and Specifications for Soil Erosion and Sediment Control for permanent seedings (Sec. 5), sods (Sec. 4), and temporary seedings (Sec. 5) and mulching (Sec. 5). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

| | |
|------------------------------------|--------------------|
| TOTAL AREA OF SITE | 27.7 ACRES |
| AREA DISTURBED | 26.0 ACRES |
| AREA TO BE ROOFED OR PAVED | 6.0 ACRES |
| AREA TO BE VEGETATIVELY STABILIZED | 17.0 ACRES |
| TOTAL CUT | 60,000 CUBIC YARDS |
| TOTAL FILL | 60,000 CUBIC YARDS |
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.



| TRAP NUMBER | 1 | 2 | 3 | |
|--------------------------------|-----------------|-----------------|-----------------|--------|
| TRAP TYPE | ST-1 | ST-1 | SBF | |
| EXISTING DRAINAGE AREA: ACRES | 4.90 | 1.39 | 2.69 | |
| INTERIM DRAINAGE AREA: ACRES | 5.00 | 3.31 | 1.45 | |
| PROPOSED DRAINAGE AREA: ACRES | 5.00 | 2.67 | 1.45 | |
| STORAGE REQUIRED: CUBIC FEET | WET | 9,000 | 5,950 | 4,842 |
| | DRY | 9,000 | 5,950 | 4,842 |
| | TOTAL | 18,000 | 11,916 | 9,684 |
| STORAGE PROVIDED: CUBIC FEET | WET | 22,627 | 7,034 | 4,268 |
| | DRY | 19,950 | 14,951 | 18,225 |
| | TOTAL | 42,577 | 21,985 | 23,093 |
| EXISTING GROUND ELEVATION | 374.40 | 391.50 | 433.00 | |
| TOP EMBANKMENT ELEVATION | 377.50 | 396.00 | 435.75 | |
| WEIR CREST ELEVATION | 376.50 | 395.00 | 435.75 | |
| WET STORAGE / OUTLET ELEVATION | 374.00 | 392.00 | 433.00 | |
| CLEANOUT ELEVATION | 371.00 | 390.75 | 432.00 | |
| BOTTOM ELEVATION | 370.00 | 390.00 | 431.00 | |
| DEPTH OF CHANNEL (a) | N/A | N/A | N/A | |
| OUTLET WIDTH (b) | 20" | N/A | N/A | |
| BOTTOM DIMENSION | 50' x 90' | 30' x 100' | 22' x 92' | |
| TRAP SLOPES | 2:1 | 2:1 | 2:1 | |
| | WET | 4:0' | 2:0' | 2:0' |
| | DRY | 1:5' | 1:5' | 2:75' |
| TRAP DEPTH | TOTAL | 5:5' | 3:5' | 4:75' |
| | BARREL DIAMETER | N/A | 21" | N/A |
| | RISER DIAMETER | N/A | 24" | N/A |
| WET STORAGE ZONE ELEVATION | 370.00 - 374.00 | 390.00 - 392.00 | 431.00 - 433.00 | |
| DRY STORAGE ZONE ELEVATION | 374.00 - 376.50 | 392.00 - 393.50 | 433.00 - 435.75 | |

DEVELOPER'S CERTIFICATION:
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Mark E. Buda*
Date: 1/3/06

ENGINEER'S CERTIFICATION:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Kevin R. Kusey*
Date: 2/2/06

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

Signature: *John M. ...*
Date: 2/2/06

Signature: *Mark E. Buda*
Date: 2/2/06

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
Walter Z. ...
CHIEF, BUREAU OF HIGHWAYS 2/3
DATE: 1-19-06

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
David ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION 9/0
DATE: 1/21/06

APPROVED: HOWARD COUNTY DEPT. OF LAND DEVELOPMENT
Cathy ...
CHIEF, DIVISION OF LAND DEVELOPMENT JA
DATE: 2/9/06

FINAL PLAN OWENS PROPERTY PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
TAX MAP 31 PARCEL 243, 272

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: McConne Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 396-3388
Fax 396-4706

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

FINAL SEDIMENT & EROSION CONTROL DETAILS

Des. By: MRT Scale: NONE Proj. No.: 01086.D
Dwn. By: MRT Date: 1/4/06
Chk. By: KRK Approved

Professional Engr. No. 13876

13 of 27

F-05-121

* NOTE: FOR DETAILED PLAN VIEW OF SWM FACILITY #2 SEE SHEET 17.

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 Ryan/63 2/2/06
U.S.D.A. NATURAL RESOURCE CONSERVATION SERVICE DATE

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

APPROVED: *[Signature]* 2/2/06
HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER

DEVELOPERS CERTIFICATE:

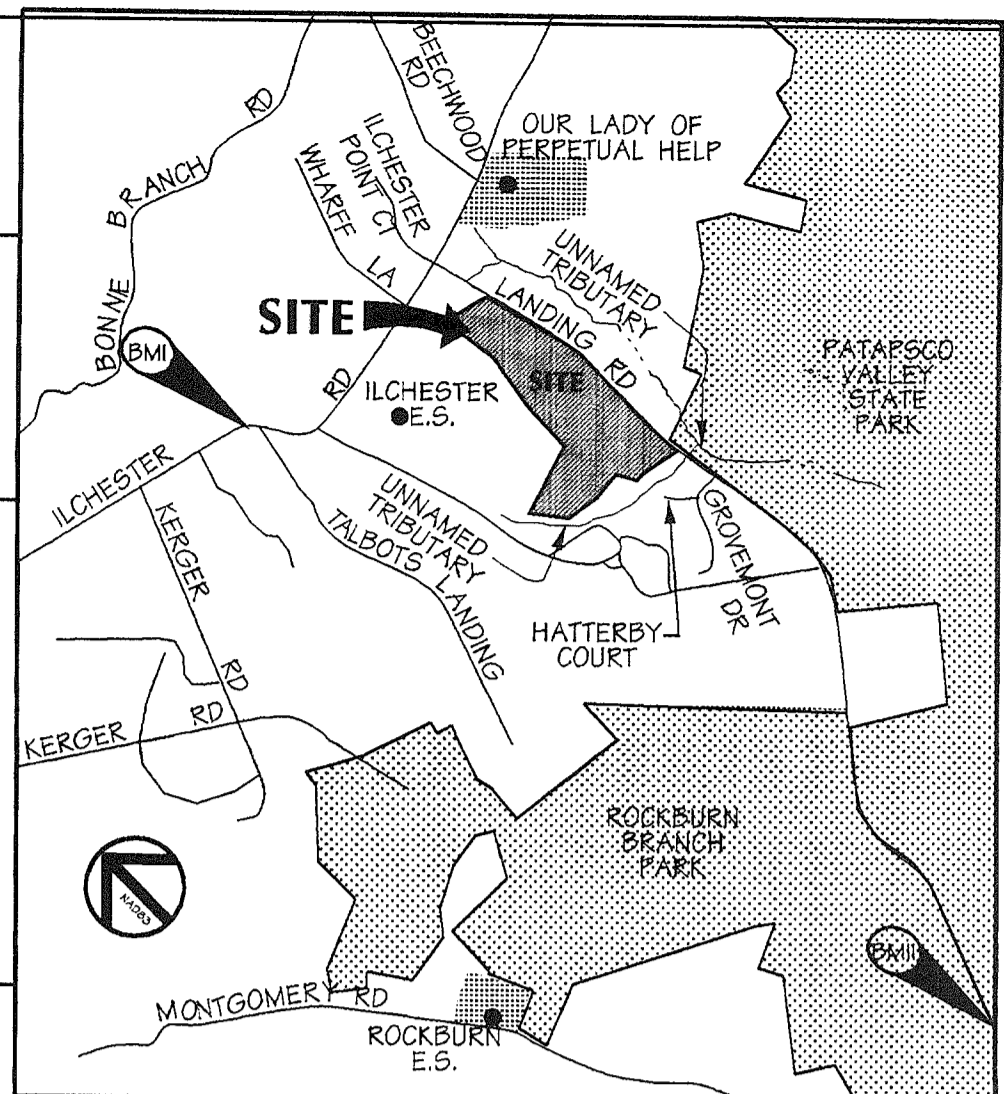
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING 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] 1/3/06
SIGNATURE OF DEVELOPER DATE
PRINT NAME BELOW SIGNATURE
MARK E BUDA

ENGINEERS CERTIFICATE:

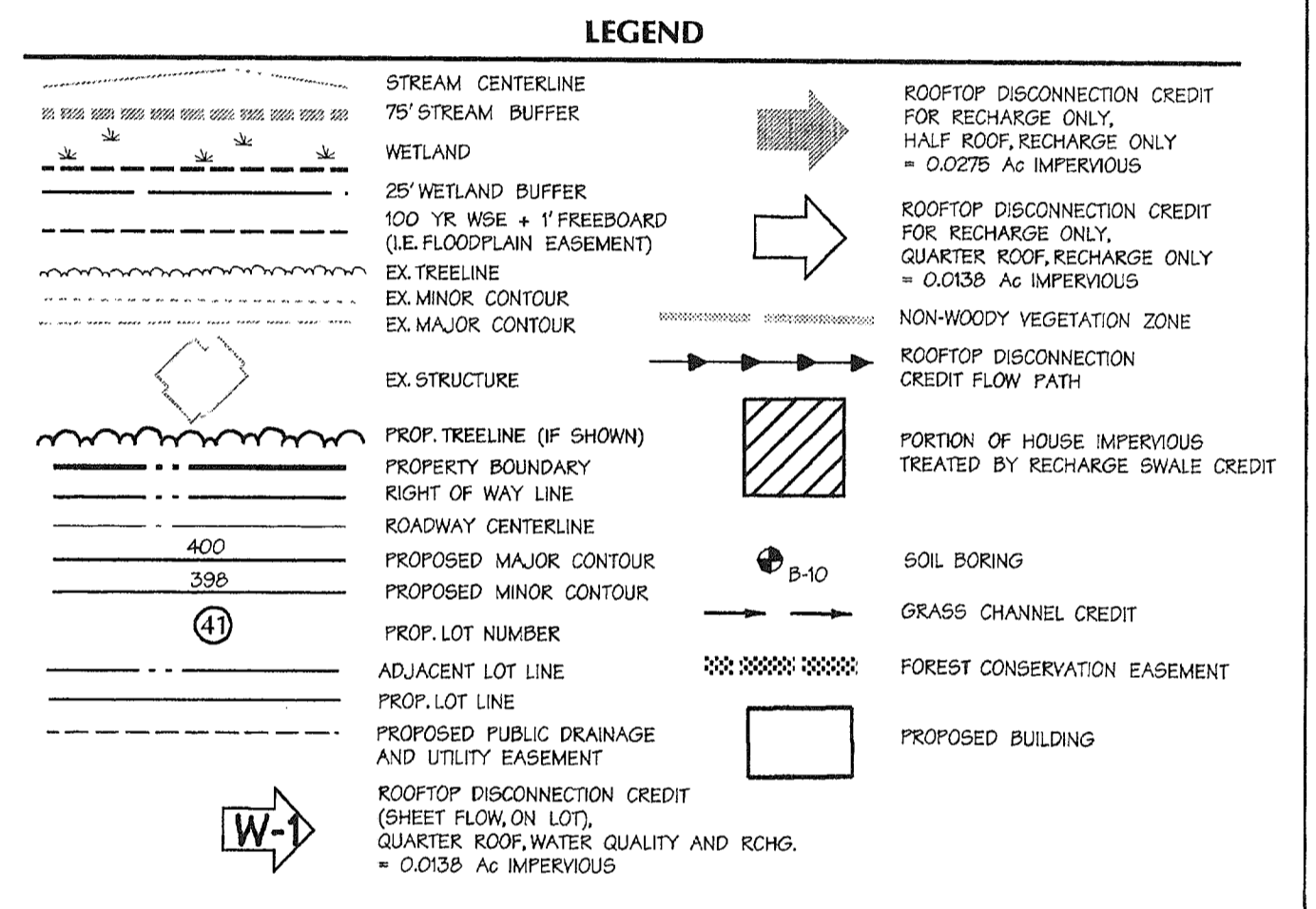
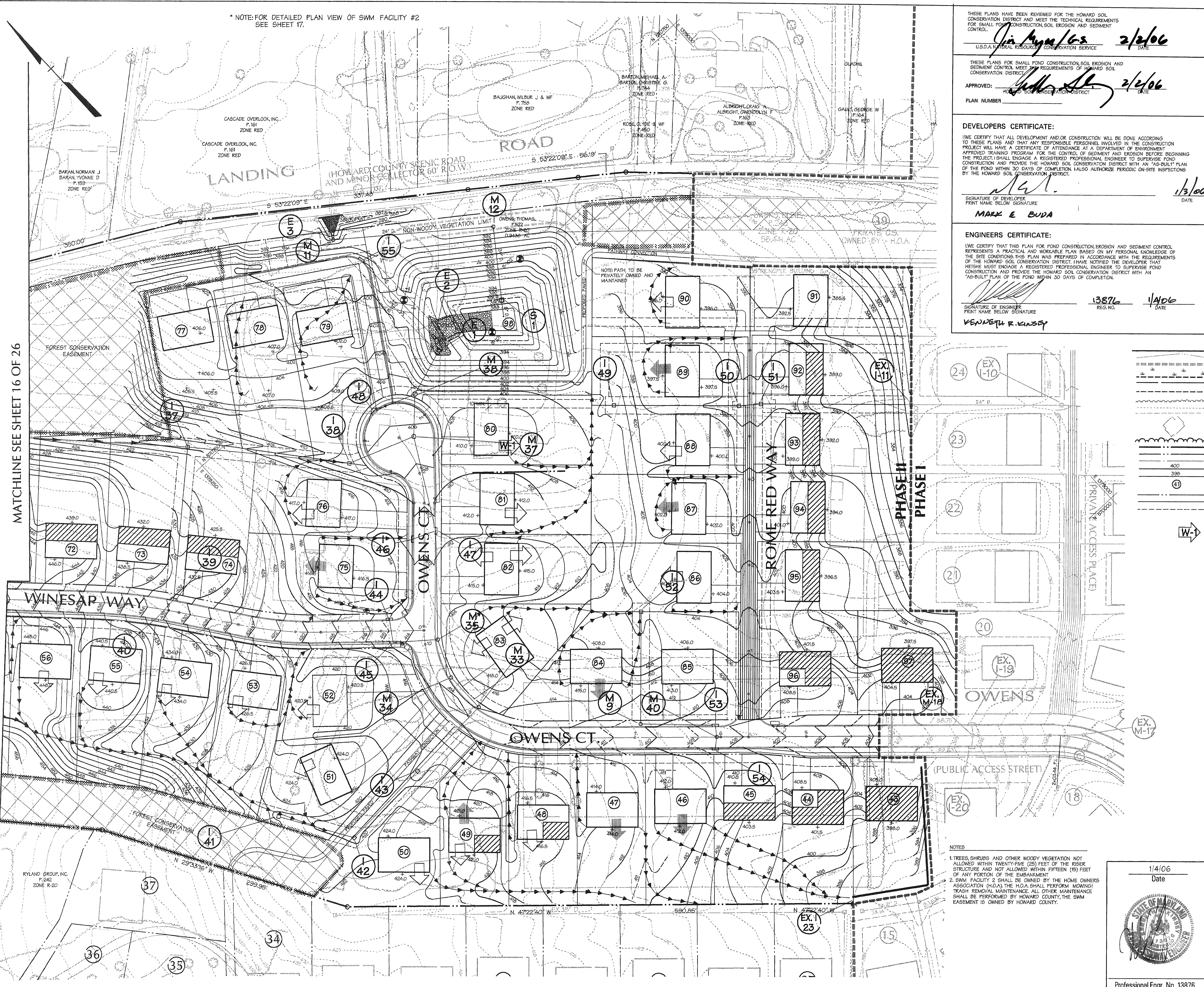
I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE. THE CONDITIONS THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE 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] 1/3/06
SIGNATURE OF ENGINEER DATE
PRINT NAME BELOW SIGNATURE
VENIETH R. KASSY



COPYRIGHT ADC - THE MAP PEOPLE, PERMITTED USE No. 20995366
LOCATION MAP
SCALE: 1" = 2000'

MATCHLINE SEE SHEET 16 OF 26



NOTES

- TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
- SWM FACILITY 2 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.

1/4/06
Date

Professional Engr. No. 13876

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William F. Walker 1-19-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] gm 1/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] JA 2/3/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

FINAL PLAN
OWENS PROPERTY
PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
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-McCune-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
STORMWATER MANAGEMENT
CREDIT AREA PLAN

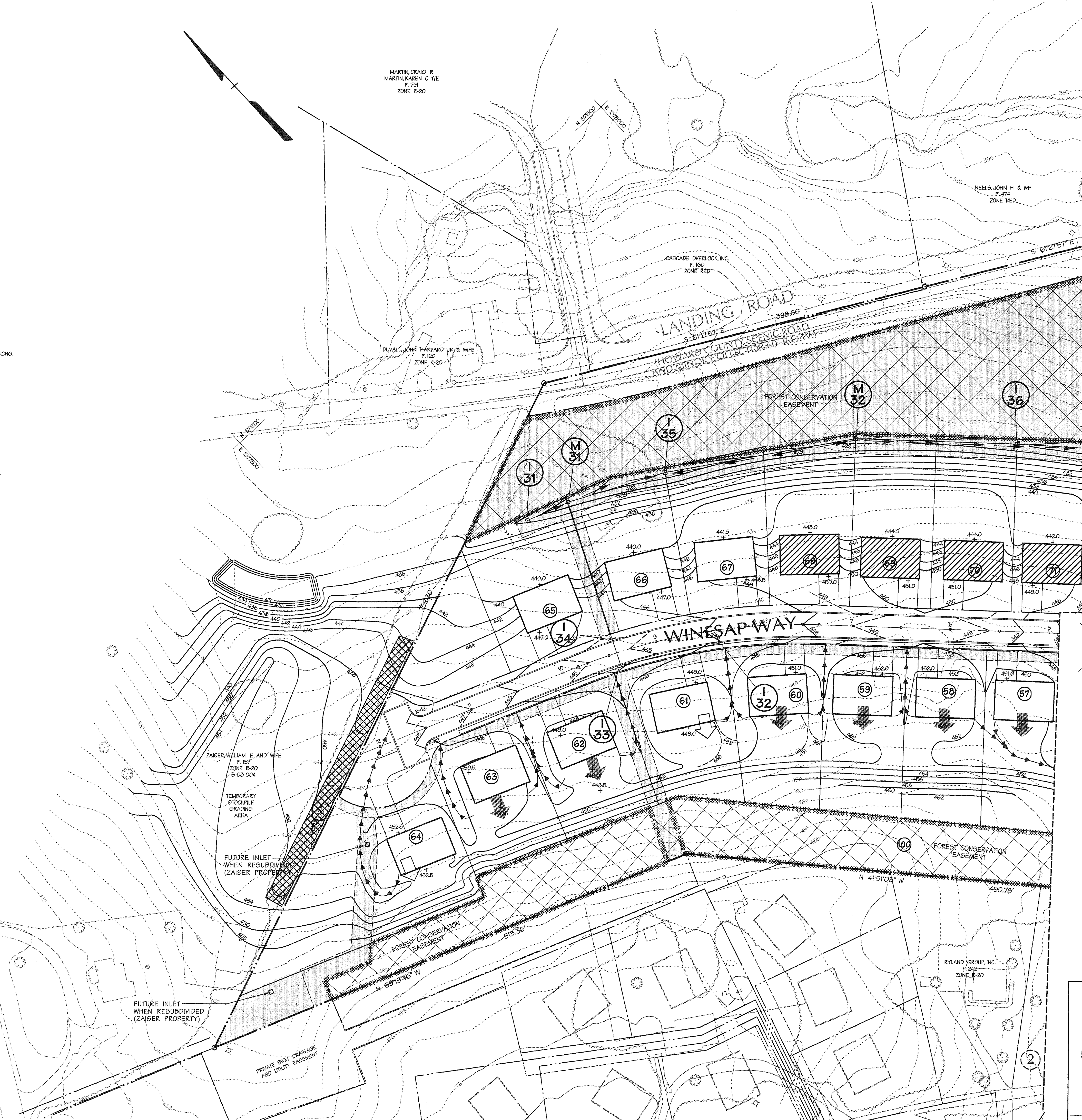
| | | | | | |
|----------|-----|----------|--------|-----------|----------|
| Des. By | CRW | Scale | 1"=50' | Proj. No. | 010B6.D |
| Dirn. By | WDE | Date | 1/4/06 | | |
| Chk. By | KRK | Approved | | | 15 of 27 |

LEGEND

- STREAM CENTERLINE
- 75' STREAM BUFFER
- WETLAND
- 25' WETLAND BUFFER
- 100 YR WBE + 1' FREEBOARD (I.E. FLOODPLAIN EASEMENT)
- EX. TREELINE
- EX. MINOR CONTOUR
- EX. MAJOR CONTOUR
- EX. STRUCTURE
- PROP. TREELINE (IF SHOWN)
- PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROADWAY CENTERLINE
- 400 PROPOSED MAJOR CONTOUR
- 350 PROPOSED MINOR CONTOUR
- (41) PROP. LOT NUMBER
- ADJACENT LOT LINE
- PROP. LOT LINE
- PROPOSED PUBLIC DRAINAGE AND UTILITY EASEMENT
- ROOFTOP DISCONNECTION CREDIT (SHEET FLOW ON LOT), QUARTER ROOF, WATER QUALITY AND RCHG. = 0.0138 Ac IMPERVIOUS
- ROOFTOP DISCONNECTION CREDIT FOR RECHARGE ONLY, HALF ROOF, RECHARGE ONLY = 0.0276 Ac IMPERVIOUS
- ROOFTOP DISCONNECTION CREDIT FOR RECHARGE ONLY, QUARTER ROOF, RECHARGE ONLY = 0.0138 Ac IMPERVIOUS
- NON-WOODY VEGETATION ZONE
- ROOFTOP DISCONNECTION CREDIT FLOW PATH
- PORTION OF HOUSE IMPERVIOUS TREATED BY RECHARGE SWALE CREDIT
- 3-10 SOIL BORING
- GRASS CHANNEL CREDIT
- FOREST CONSERVATION EASEMENT
- PROPOSED BUILDING

NOTES

1. TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT
2. SWM FACILITY 2 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.



MATCHLINE SEE SHEET 15 OF 26

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

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

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER

DEVELOPERS CERTIFICATE:

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

SIGNATURE OF DEVELOPER DATE: 1/3/06
 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.

SIGNATURE OF ENGINEER DATE: 1/4/06
 PRINT NAME BELOW SIGNATURE: **KENNETH R. KINSEY**
 REG. NO.: 13876

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William R. White 1-19-06
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John Dammann 1/27/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION gm DATE

John Smith 2/16
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

SUPERVISOR DATE

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

**FINAL PLAN
OWENS PROPERTY
PHASE II**

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98, 99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:

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

1/4/06
Date

Professional Engr. No. 13876

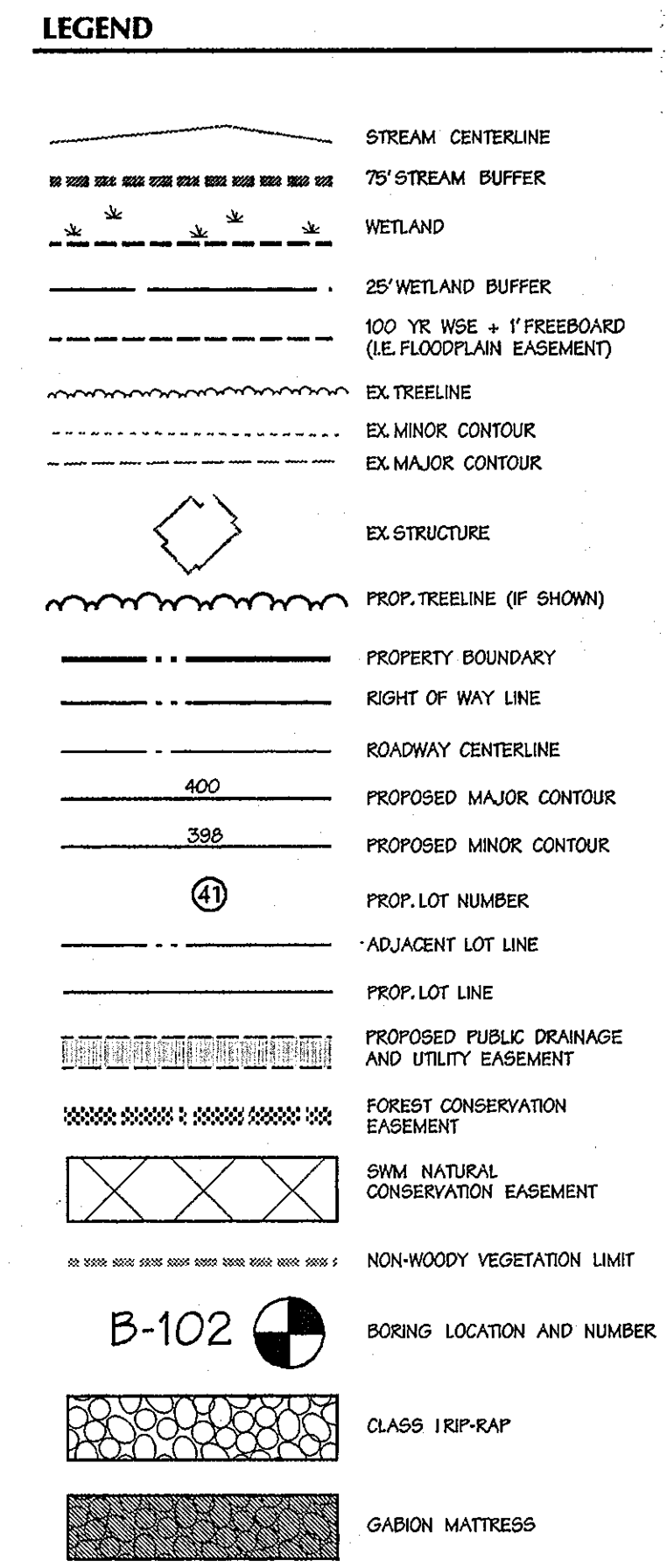
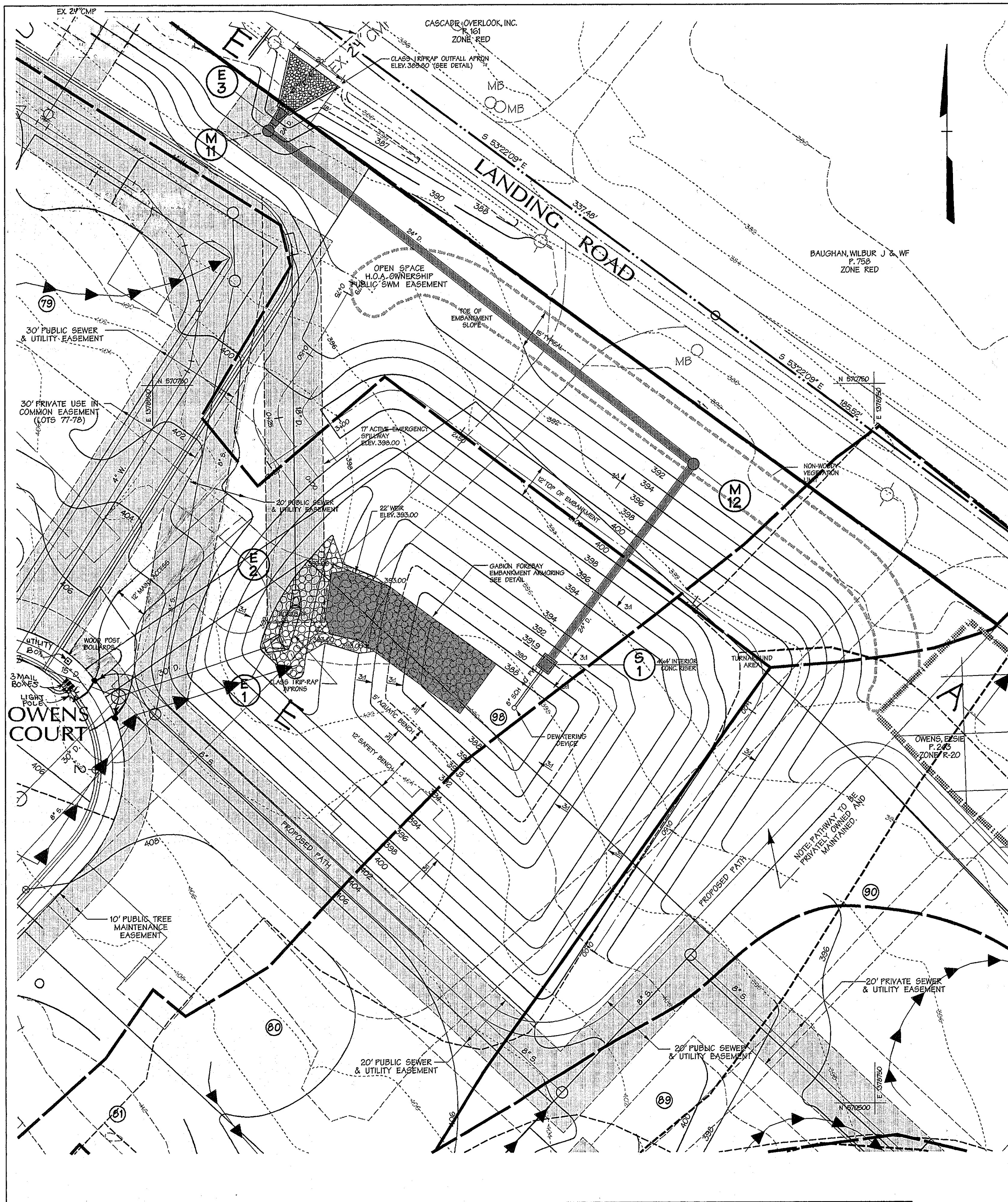
DMW
 Daft McCune Walker, Inc.
 300 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3833
 Fax 296-4705

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

TITLE

**STORMWATER MANAGEMENT
CREDIT AREA PLAN**

| | | |
|-------------|--------------|-------------------|
| Des. By CRW | Scale 1"=50' | Proj. No. 01086.D |
| Drn. By WDE | Date 1/4/06 | 16 of 27 |
| Chk. By KKK | Approved | |



POND 2 DESIGN FLOW SUMMARY PROPOSED CONDITIONS

| | |
|--|--------------------|
| STRUCTURE TYPE | RETENTION WET POOL |
| WATER QUALITY TYPE | 1" |
| STRUCTURE CLASSIFICATION | 0.0298 SQ. M. |
| WATERSHED AREA TO FACILITY (SWM) | |
| LEVEL OF MANAGEMENT REQUIRED | 25-YR. |
| LEVEL OF MANAGEMENT PROVIDED | 25-YR. |
| TOP WIDTH PROVIDED | 12' |
| MINIMUM HEIGHT OF FILL | 8.0' |
| FREEBOARD REQUIRED | 1.0' |
| FREEBOARD PROVIDED | 1.14' |
| WATER QUALITY VOL. WQY REQUIRED (Ac-ft) | 0.300 |
| WATER QUALITY VOL. WQY PROVIDED (Ac-ft) | 0.524 |
| RECHARGE REQUIRED (C. AREA METHOD, Re) (Ac) | 2.069 |
| RECHARGE PROVIDED (Ac) | 2.200 |
| CHANNEL PROTECTION VOL. C _{pr} REQUIRED (Ac-ft) | 0.482 |
| CHANNEL PROTECTION VOL. C _{pr} PROVIDED (Ac-ft) | 0.566 |
| EXISTING 1-YR STORM Q AT DESIGN POINT (cfs) | 178 |
| PROPOSED 1-YR STORM Q AT DESIGN POINT (cfs) | 0.28 |
| EXISTING 10-YR STORM Q AT DESIGN POINT (cfs) | 22.08 |
| PROPOSED 10-YR STORM Q AT DESIGN POINT (cfs) | 15.99 |
| EXISTING 25-YR STORM Q AT DESIGN POINT (cfs) | 27.43 |
| PROPOSED 25-YR STORM Q AT DESIGN POINT (cfs) | 27.27 |
| WQY WATER SURFACE ELEV. - NORMAL POOL | 363.40 |
| C _{pr} WATER SURFACE ELEV. | 365.19 |
| 10 YR WATER SURFACE ELEV. | 367.60 |
| 25-YR WATER SURFACE ELEV. | 368.01 |
| RISER CREST ELEV. | 367.50 |
| 100 YR CLOGGED WATER SURFACE ELEV. | 369.0 |
| POND VOLUME BELOW 100 YR CLOGGED WSE (Ac-ft) | 2.122 |
| FOREBAY VOLUME REQUIRED (Ac-ft) | 0.033 |
| FOREBAY VOLUME PROVIDED (Ac-ft) | 0.036 |

* WQY IS PROVIDED IN THE WET-POND PORTION OF THE FACILITY.
 ** RECHARGE PROVIDED IS BASED ON ENTIRE SITE (PHASE I AND PHASE II) AND IS TREATED COMPLETELY BY SWM.
 *** ABOVE WET POOL ELEVATION.

NOTES

- TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
- SWM FACILITY 2 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.

STORMWATER MANAGEMENT FACILITY OPERATION AND MAINTENANCE SCHEDULE

- ROUTINE MAINTENANCE: (HOME OWNERS ASSOCIATION)**
- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF FACILITY IS FUNCTIONING PROPERLY.
 - TOP AND SIDE SLOPES OF 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. VEGETATION SHALL NOT EXCEED 18" NOR SHALL IT BE LESS THAN 4" IN HEIGHT.
 - DEBRIS & LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 - VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- NON-ROUTINE MAINTENANCE: (HOWARD COUNTY)**
- STRUCTURAL COMPONENTS OF THE FACILITY 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.
 - SEDIMENT SHALL BE REMOVED FROM FACILITY AND FOREBAY NO LATER THAN WHEN 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.
 - VISIBLE SIGNS OF EROSION IN THE RIP-RAP OR GABION OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTED.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. White 1-19-06
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Mr. [Signature] 1/22/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION gm DATE

David [Signature] 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

| | | | |
|----------|-----|---|-----------------|
| 10-31-13 | 2 | REVISE CALLOUT FOR EX. CULVERT UNDER LANDING RD | BY: [Signature] |
| 9-28-13 | 1 | RELOCATE 12" SWM ACCESS ROAD | BY: BET |
| Date | No. | Revision Description | |

FINAL PLAN OWENS PROPERTY PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 TAX MAP 31 PARCEL 243,572

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

DMW
 Draft McQuinn Walker, Inc.
 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 POND DETAIL PLAN | | | |
| Des. By | CRW | Scale | 1"=20' |
| Drn. By | WDE | Date | 1/14/06 |
| Chk. By | KRK | Approved | |
| Proj. No. | | | 01086.0 |
| | | | 17 of 27 |

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.

Joe Myers 2/2/06
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: *[Signature]* 2/2/06
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPERS CERTIFICATE:

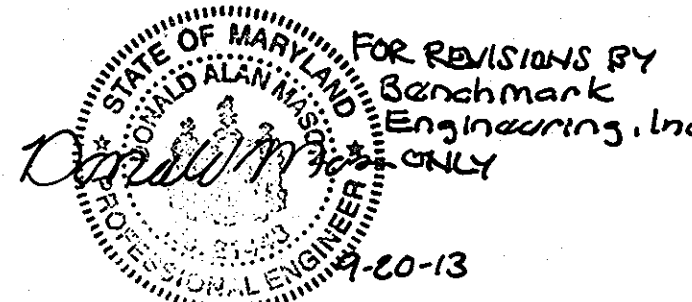
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[Signature] 1/3/06
 SIGNATURE OF DEVELOPER DATE
 MARK E. BUDA

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 NOTICED THE DEVELOPER THAT HEIGHT 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] 1/14/06
 SIGNATURE OF ENGINEER DATE
 KENNETH E. WISELEY

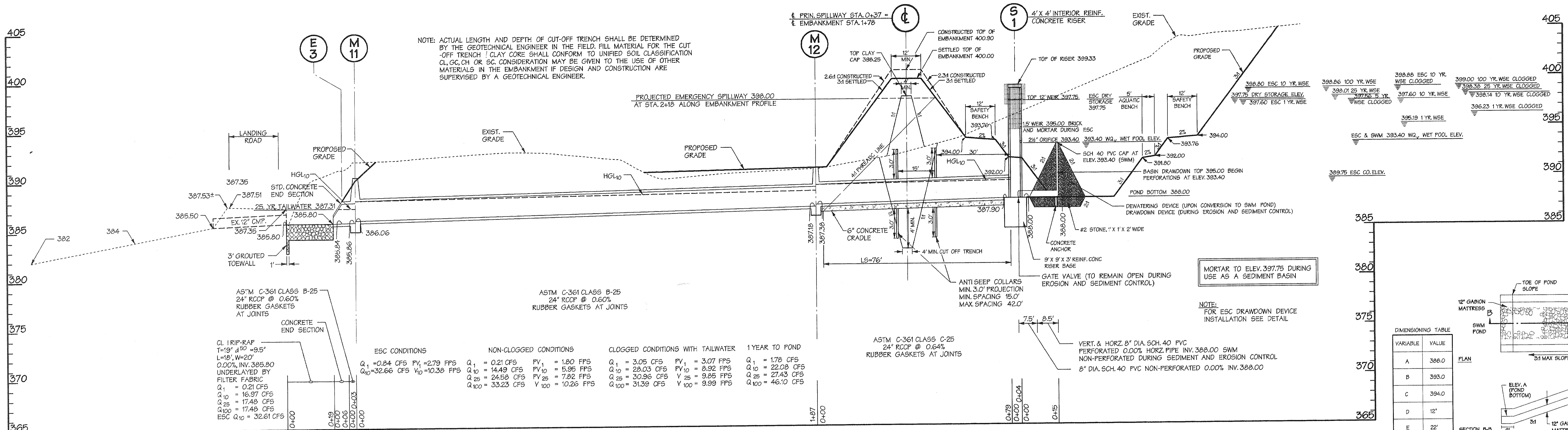


Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 21443 Expiration Date: 12-21-14

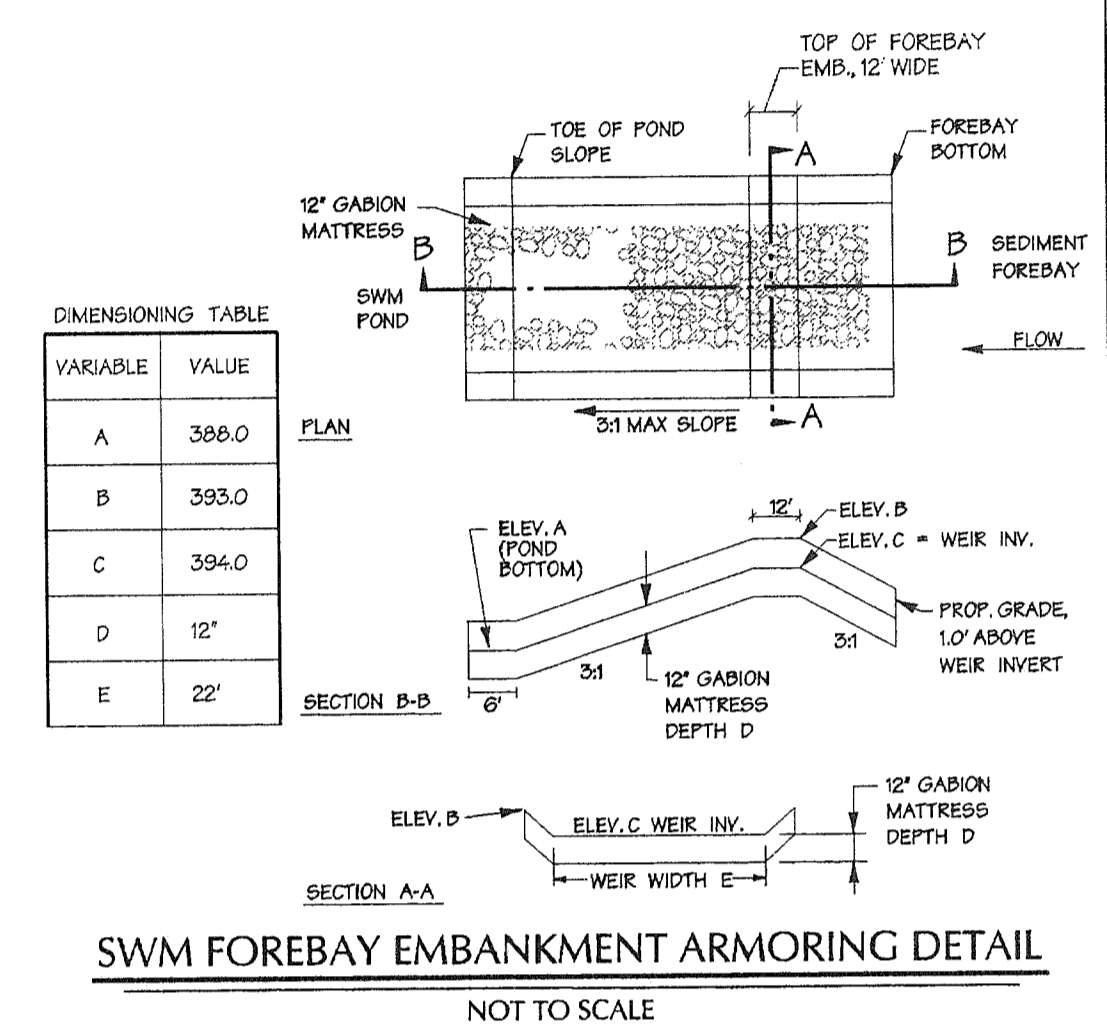
1/14/06
 Date

Professional Engr. No. 13876

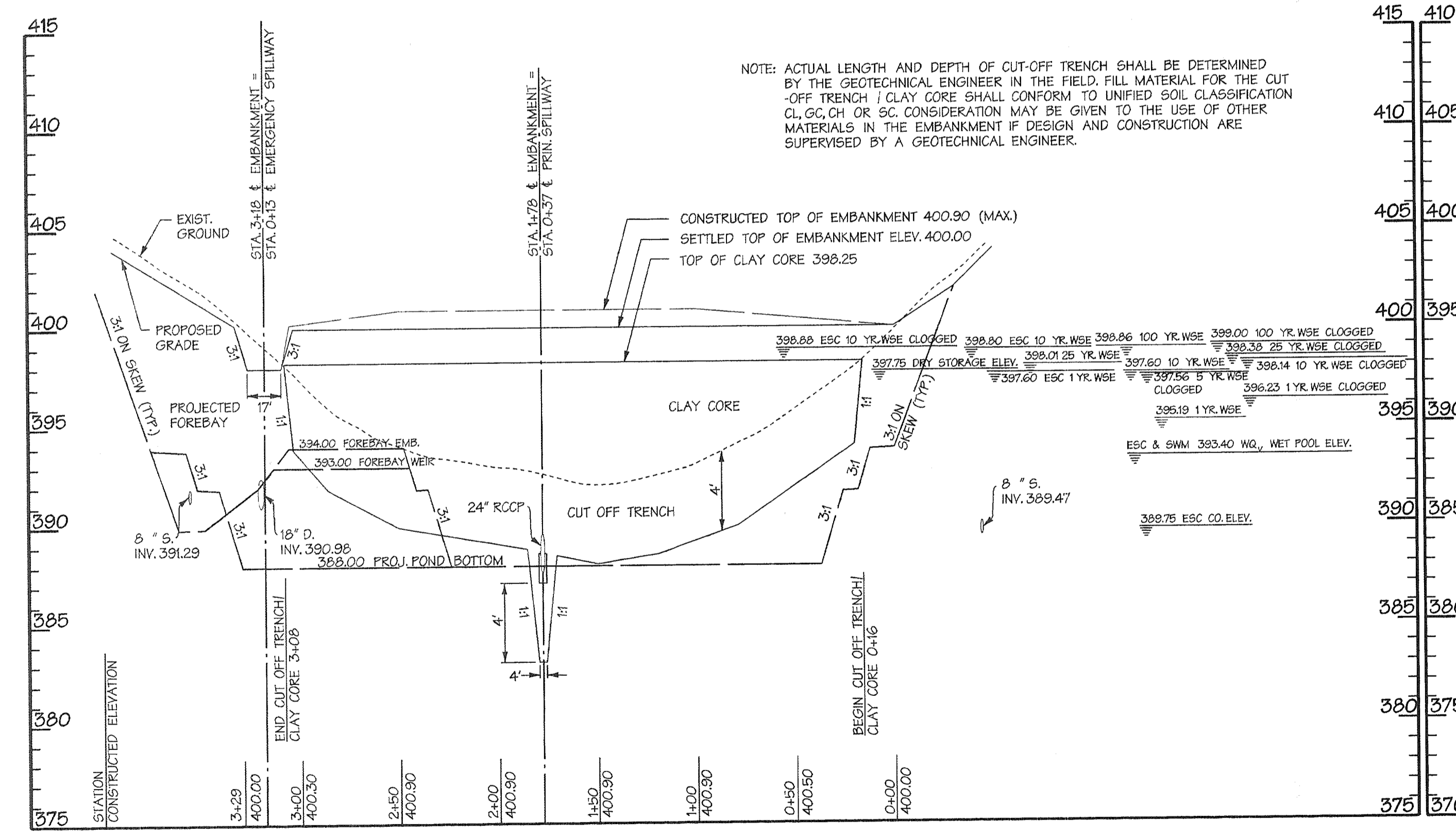


PROFILE THROUGH RISER / BARREL, SWM FACILITY # 2

SCALE: HORIZ. 1" = 20'
 VERT. 1" = 5'

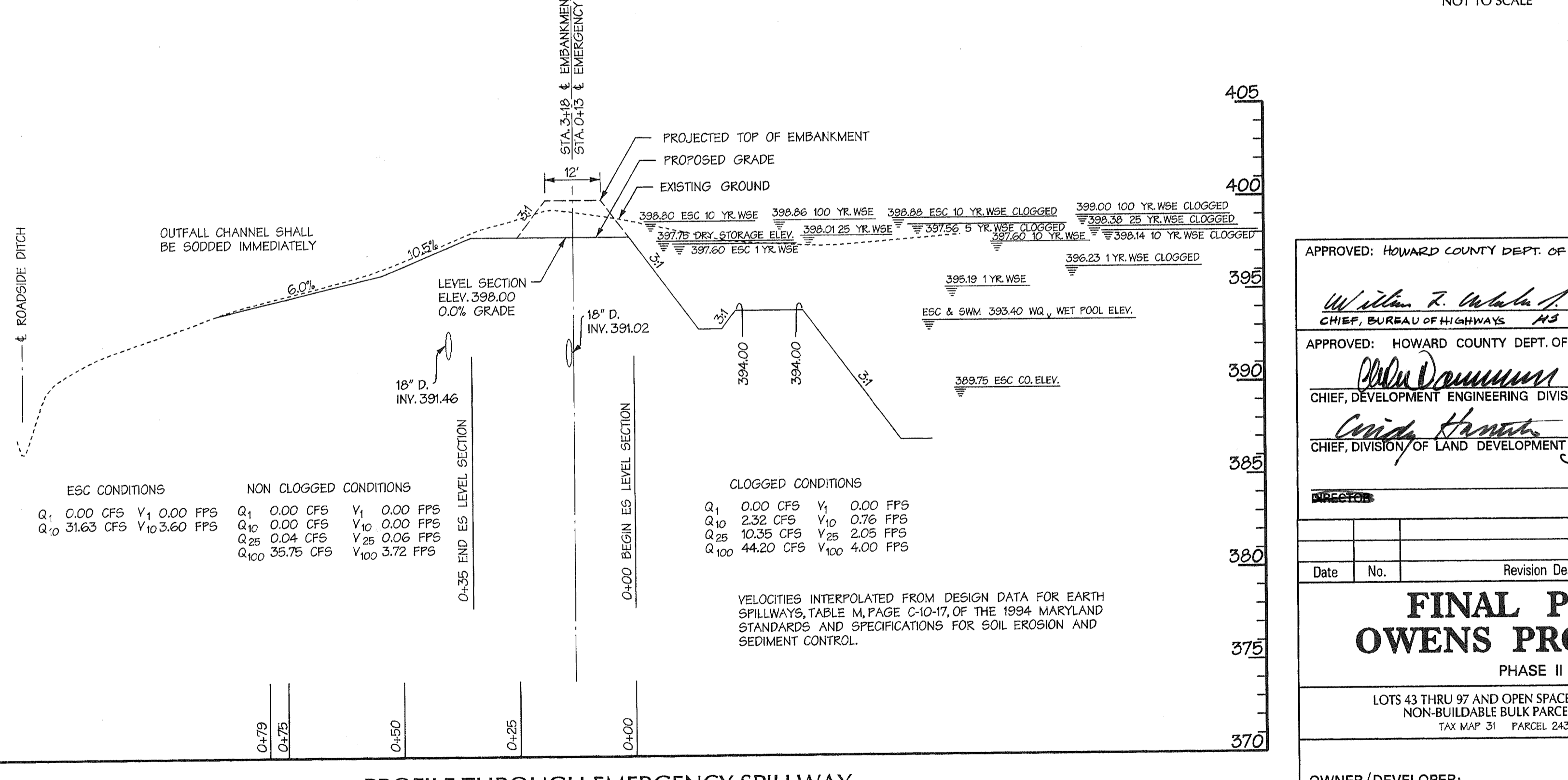


SWM FOREBAY EMBANKMENT ARMORING DETAIL



PROFILE ALONG CENTERLINE OF DAM SWM FACILITY # 2

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



PROFILE THROUGH EMERGENCY SPILLWAY

SCALE: HORIZ. 1" = 20'
 VERT. 1" = 5'

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
 William F. ... 1-19-04
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 ... 1/21/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION QMS DATE
 ... 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

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

FINAL PLAN
OWENS PROPERTY
 PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:

1/4/06
 Date

 Professional Engr. No. 13876

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

| Des. By | Scale | Proj. No. |
|---------|----------|-----------|
| CRW | A5 SHOWN | 01086.D |
| Dwn. By | Date | |
| WDE | 1/4/06 | |
| Chk. By | Approved | |
| KRK | | |

18 of 27

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
 ... 2/2/06
 DATE

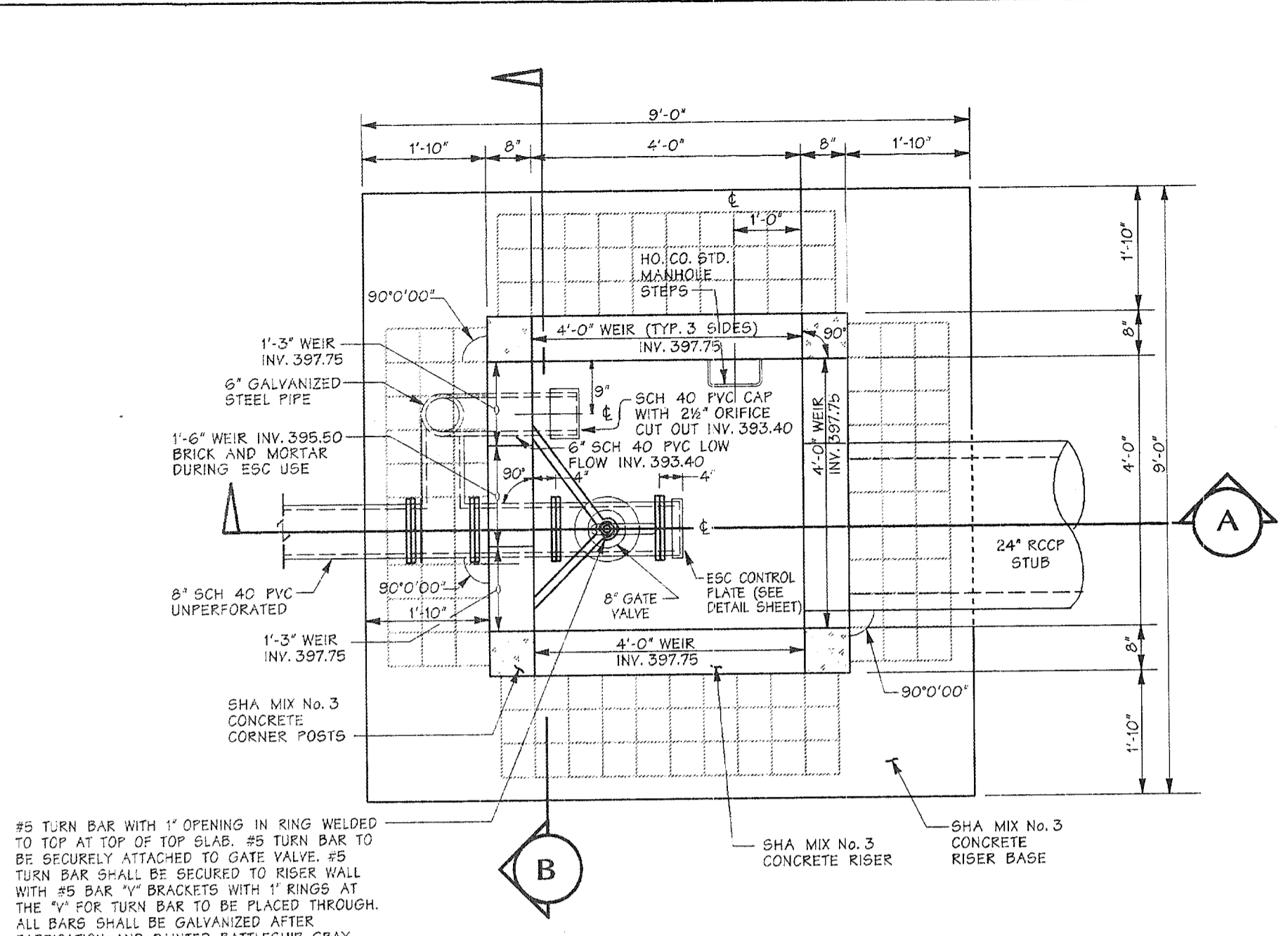
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 ... 2/2/06
 DATE

APPROVED: ...
 PLAN NUMBER

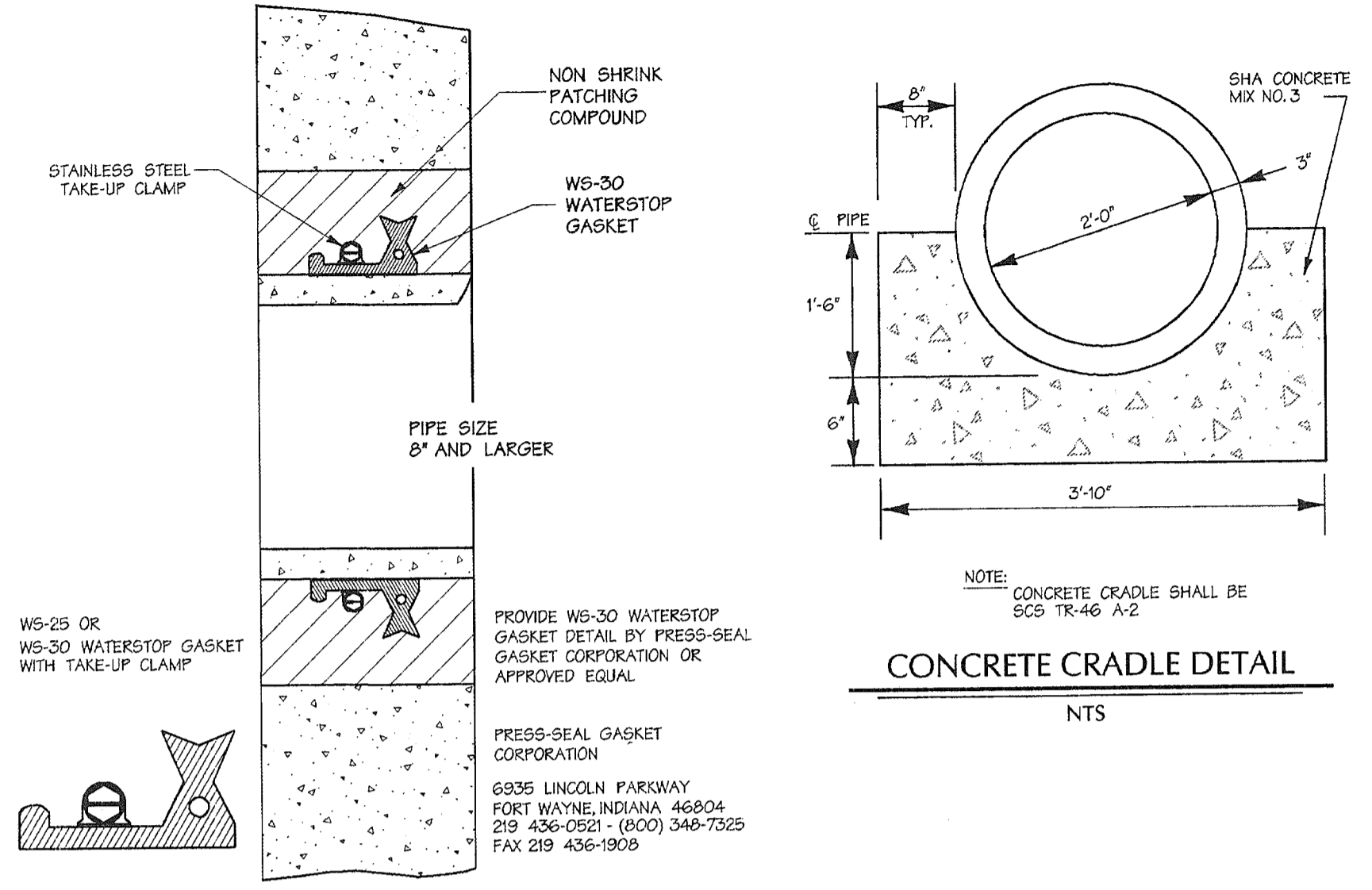
DEVELOPERS CERTIFICATE:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 ... 1/3/06
 DATE
 SIGNATURE OF DEVELOPER
 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 NOTICED THE DEVELOPER THAT HE/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.
 ... 1/3/06
 DATE
 SIGNATURE OF ENGINEER
 KENNETH R. KILGUSY

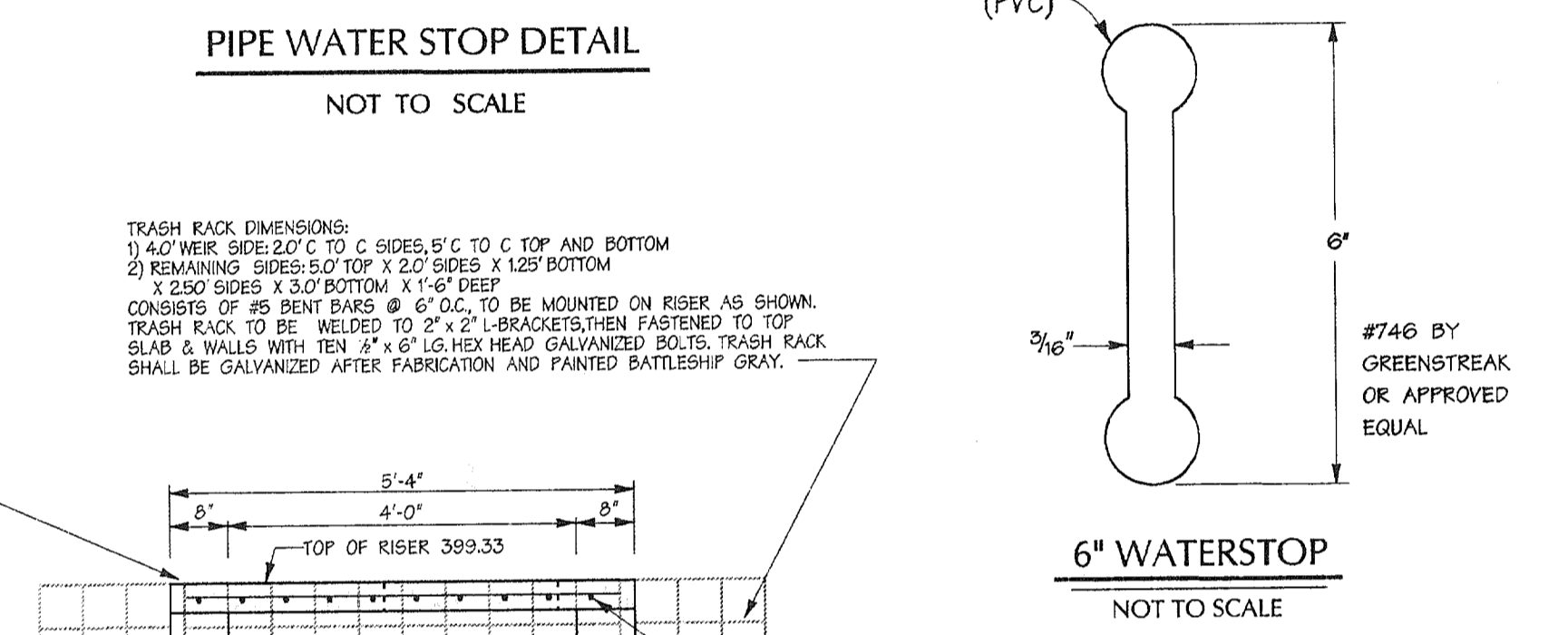
- NOTES
- TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT
 - SWM FACILITY 2 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (H.O.A.). THE H.O.A. SHALL PERFORM MOWING/TRASH REMOVAL MAINTENANCE. ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY. THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.



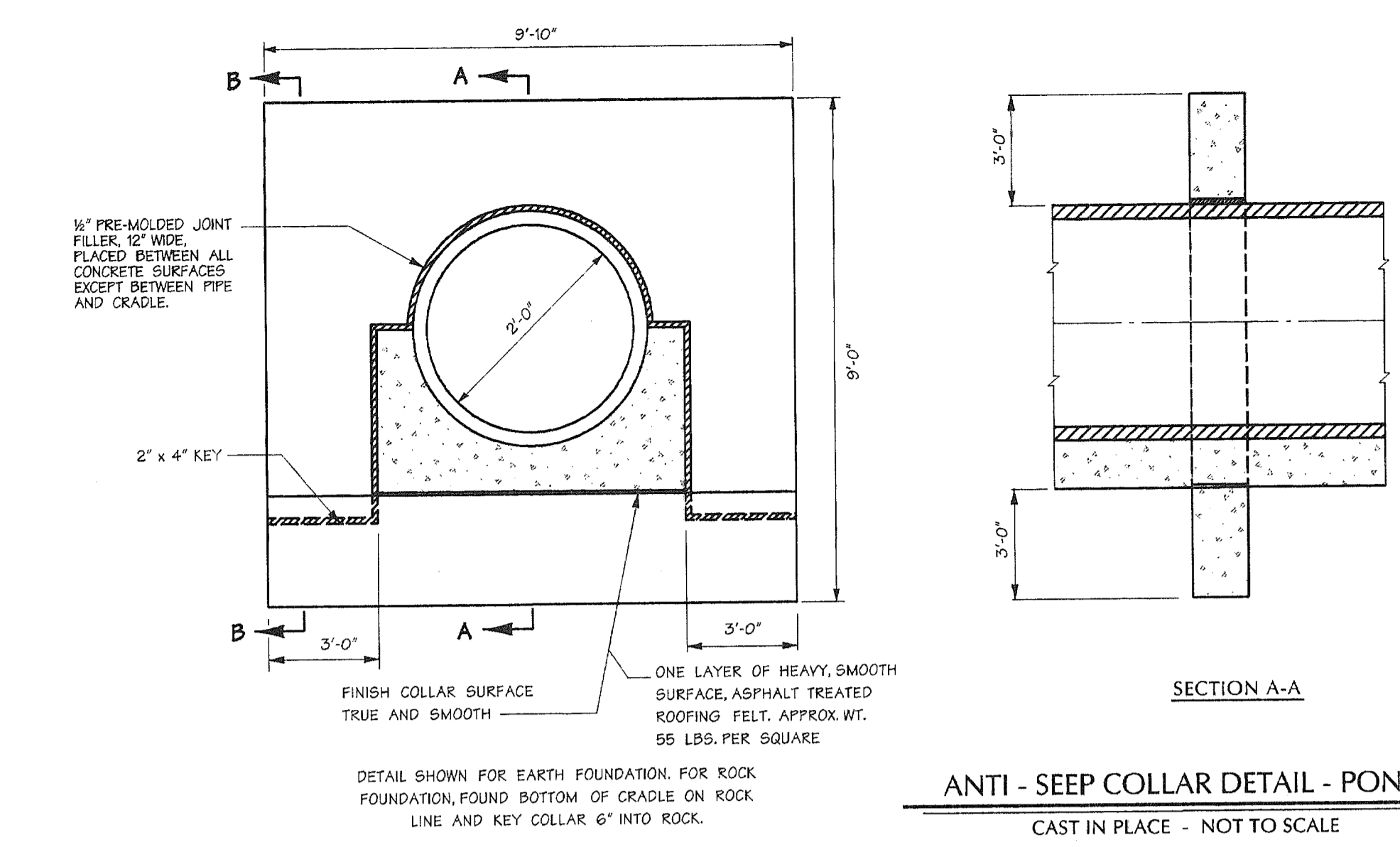
RISER PLAN (TOP SLAB REMOVED) - SWM POND 2
Scale: 1/2" = 1'-0"



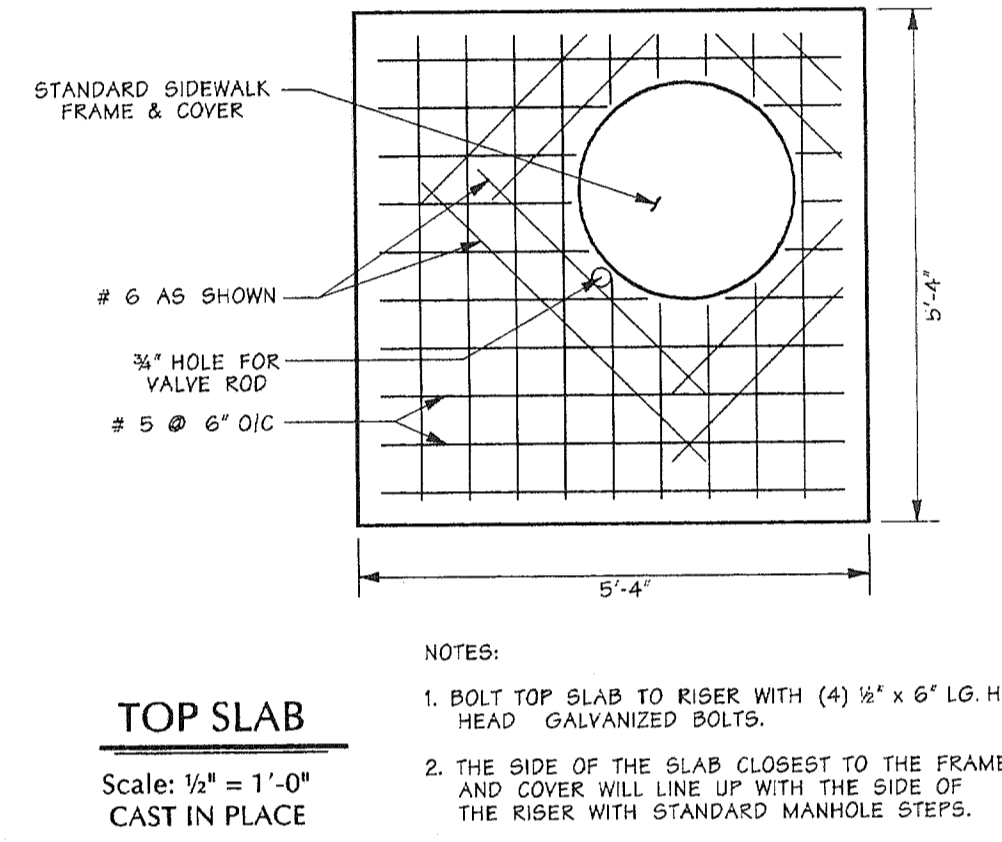
CONCRETE CRADLE DETAIL
NTS



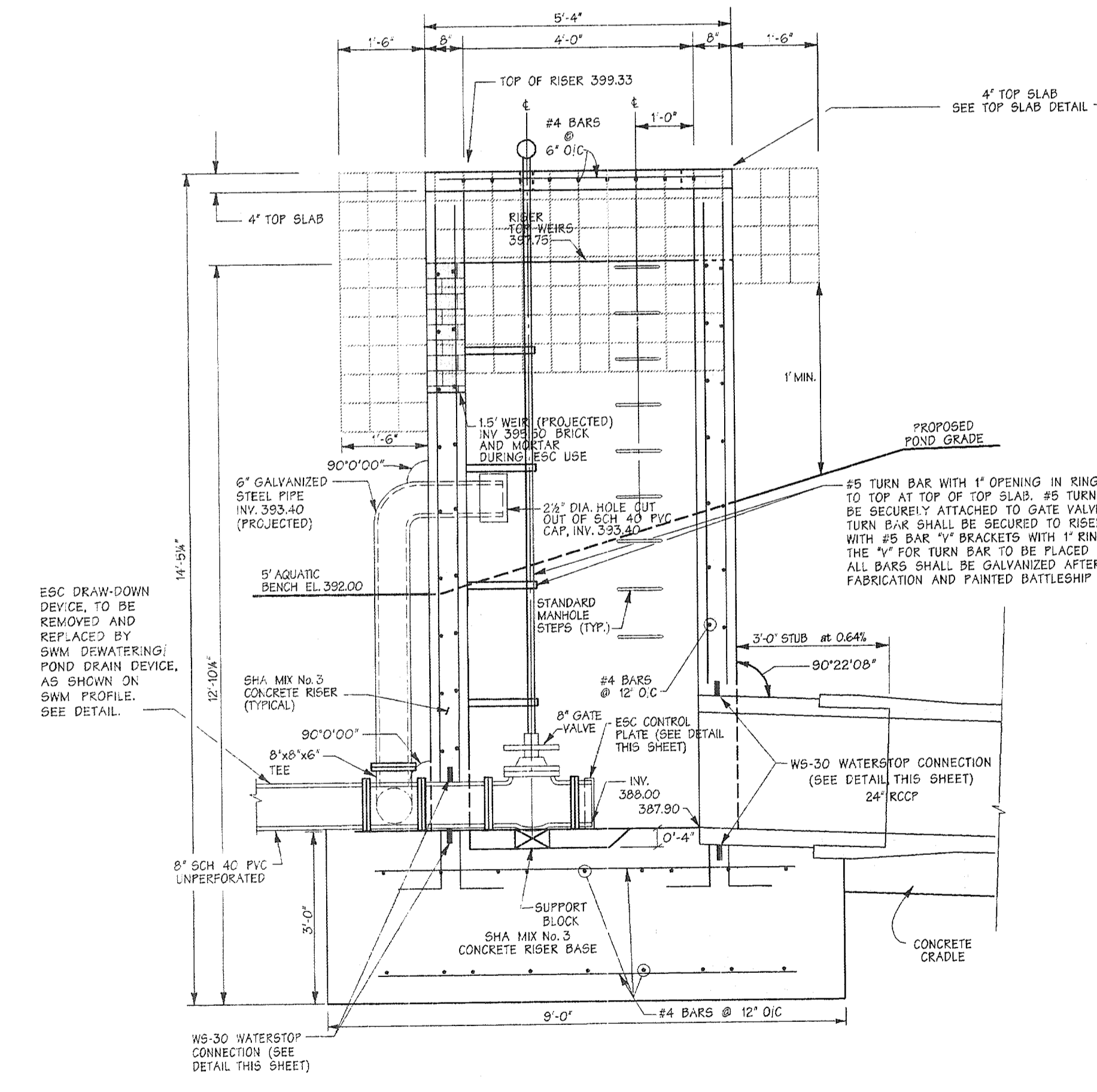
PIPE WATER STOP DETAIL
NOT TO SCALE



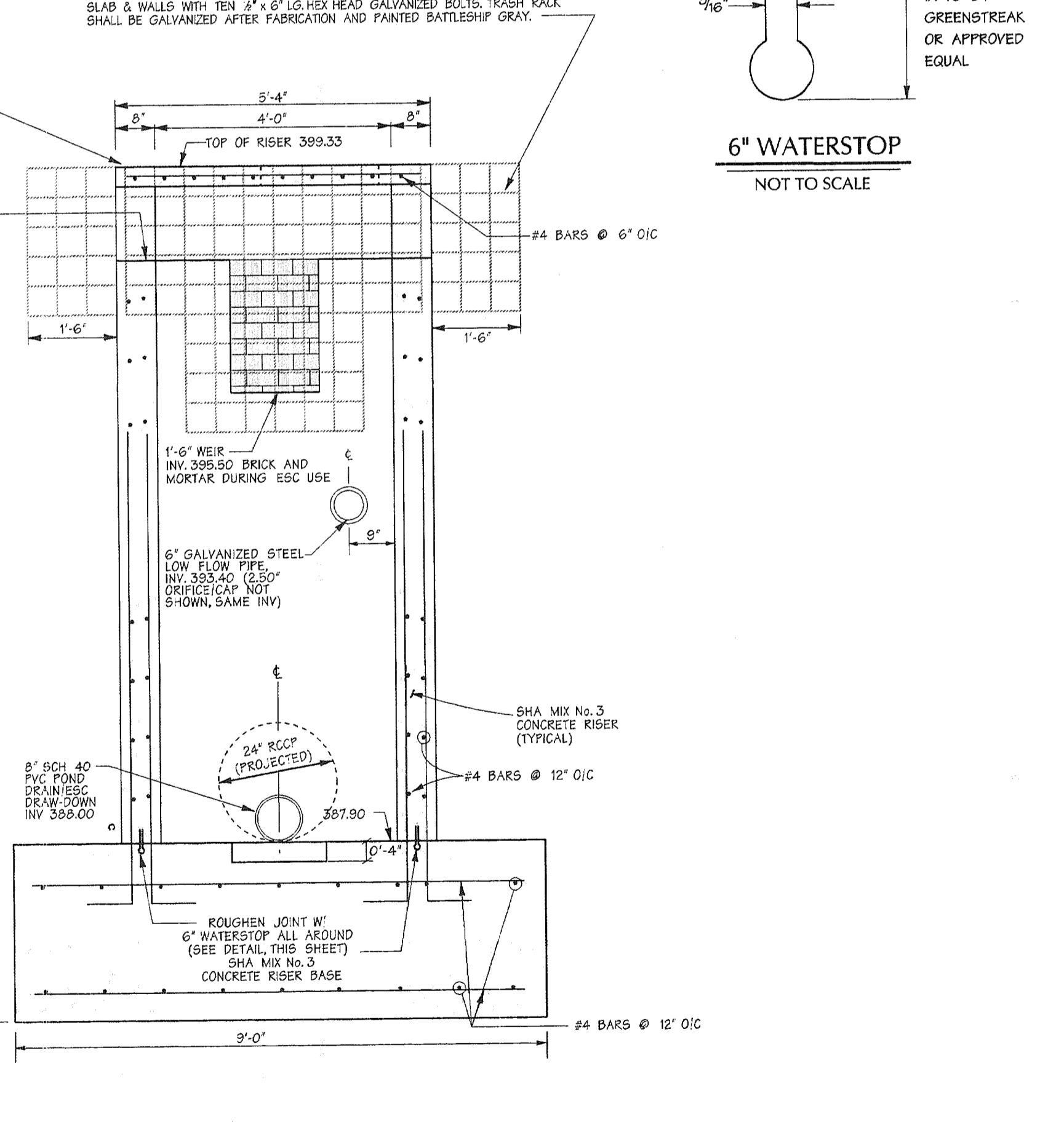
ANTI - SEEP COLLAR DETAIL - POND 2
CAST IN PLACE - NOT TO SCALE



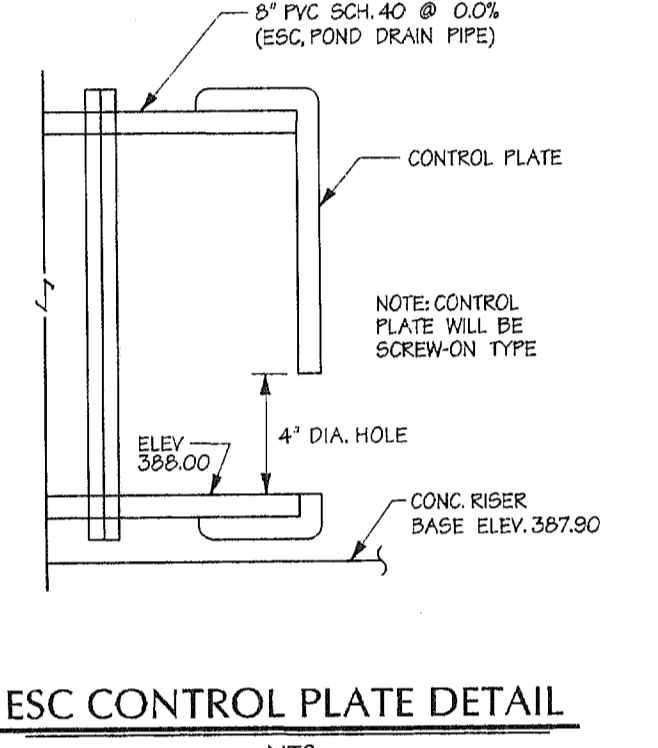
TOP SLAB
Scale: 1/2" = 1'-0"
CAST IN PLACE



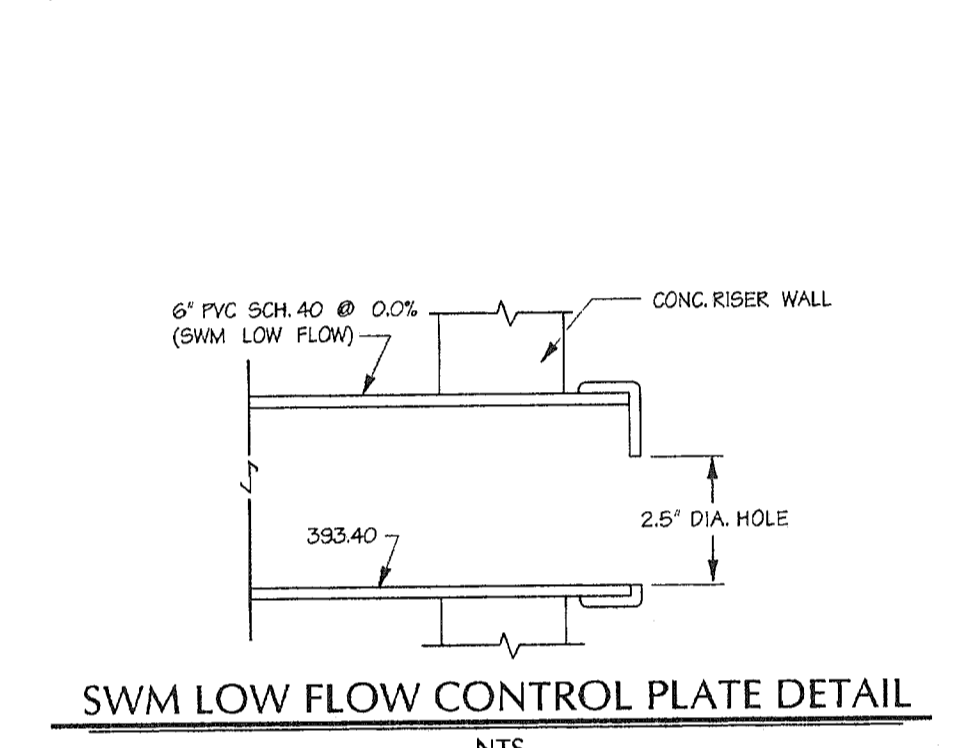
SECTION A
RISER DETAIL FOR SWM POND 2
Scale: 1/2" = 1'-0"
CAST IN PLACE



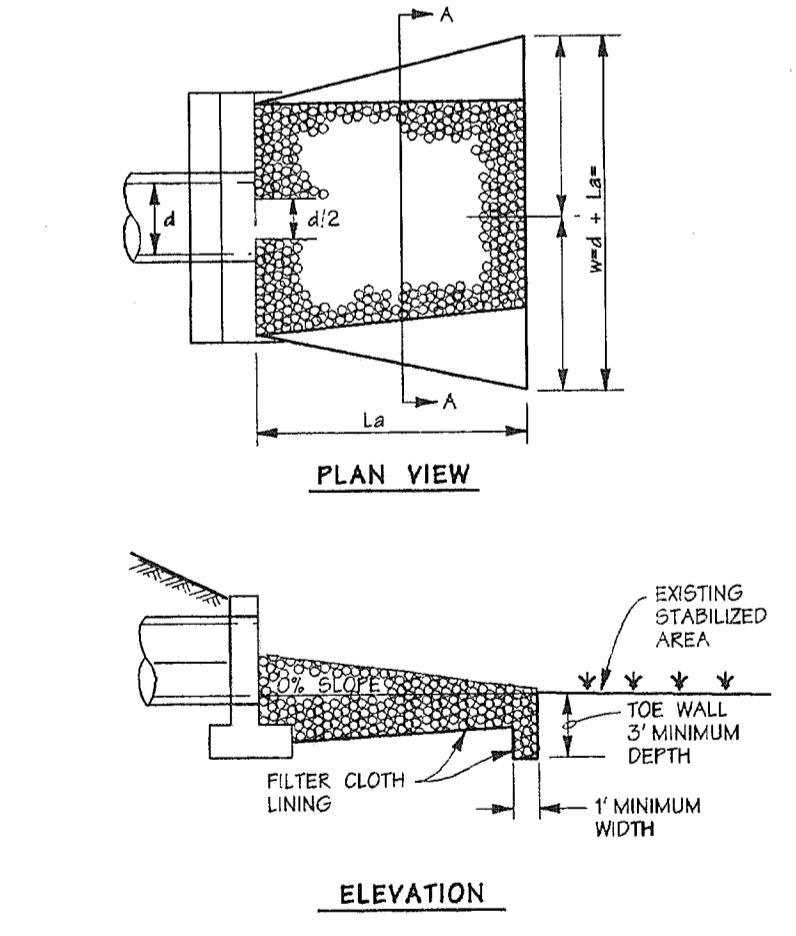
SECTION B
RISER DETAIL FOR SWM POND 2
Scale: 1/2" = 1'-0"
CAST IN PLACE



ESC CONTROL PLATE DETAIL
NTS



SWM LOW FLOW CONTROL PLATE DETAIL
NTS



SECTION A-A
ROCK OUTLET PROTECTION III
NOT TO SCALE

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]* 2/2/06
DATE

U.S. NATURAL RESOURCES CONSERVATION SERVICE

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

APPROVED: *[Signature]* 2/2/06
DATE

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 AUTHORIZED PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 1/3/06
DATE

SIGNATURE OF DEVELOPER
PRINT NAME BELOW SIGNATURE
MARK E. BUON

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.

[Signature] 1/3/06
DATE

SIGNATURE OF ENGINEER
PRINT NAME BELOW SIGNATURE
KENNETH R. KINSEY

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE F-18-10 (HEAD)

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION III NOT TO SCALE

1/4/06
Date

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

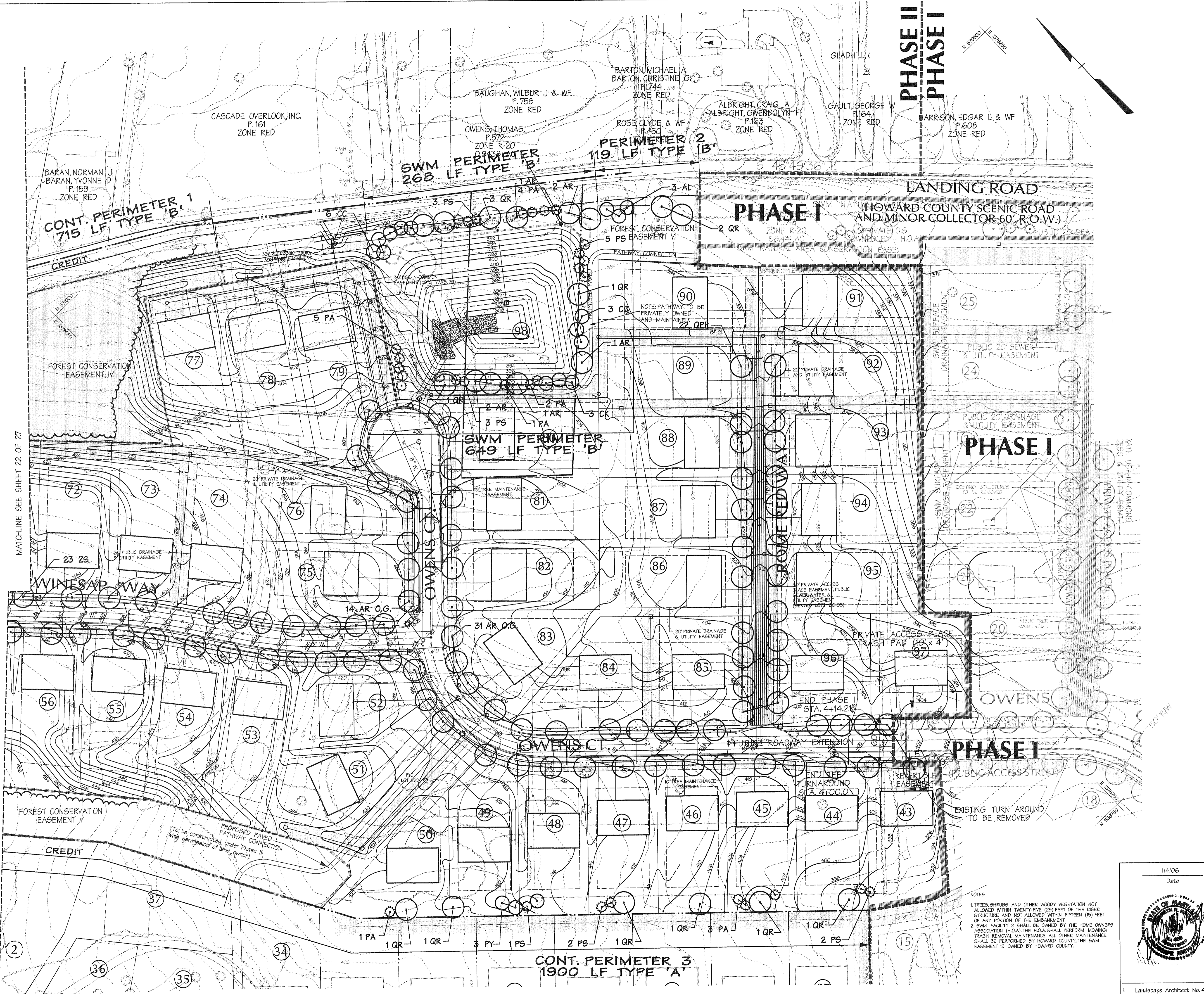
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
STORMWATER MANAGEMENT DETAILS

Des. By CRW Scale AS SHOWN Proj. No. 01086.D
Dwn. By WDE Date 1/4/06
Chk. By KRK Approved 19 of 26

Professional Engr. No. 13876

| | | |
|---|---------|----------------------|
| APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS | | |
| <i>[Signature]</i> CHIEF, BUREAU OF HIGHWAYS | 1-19-06 | DATE |
| APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING | | |
| <i>[Signature]</i> CHIEF, DEVELOPING ENGINEERING DIVISION | 1/27/06 | DATE |
| <i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT | 2/1/06 | DATE |
| Date | No. | Revision Description |
| FINAL PLAN | | |
| OWENS PROPERTY | | |
| PHASE II | | |
| LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100 TAX MAP 31 PARCEL 243,572 | | |
| OWNER/DEVELOPER: PATAPSCO LANDING, LLC c/o James Keetty and Co. Inc. P.O. Box 525 61 E. Padonia Road, Timonium, MD 21093 | | |



**SCHEDULE D
STORMWATER MANAGEMENT
AREA LANDSCAPING**

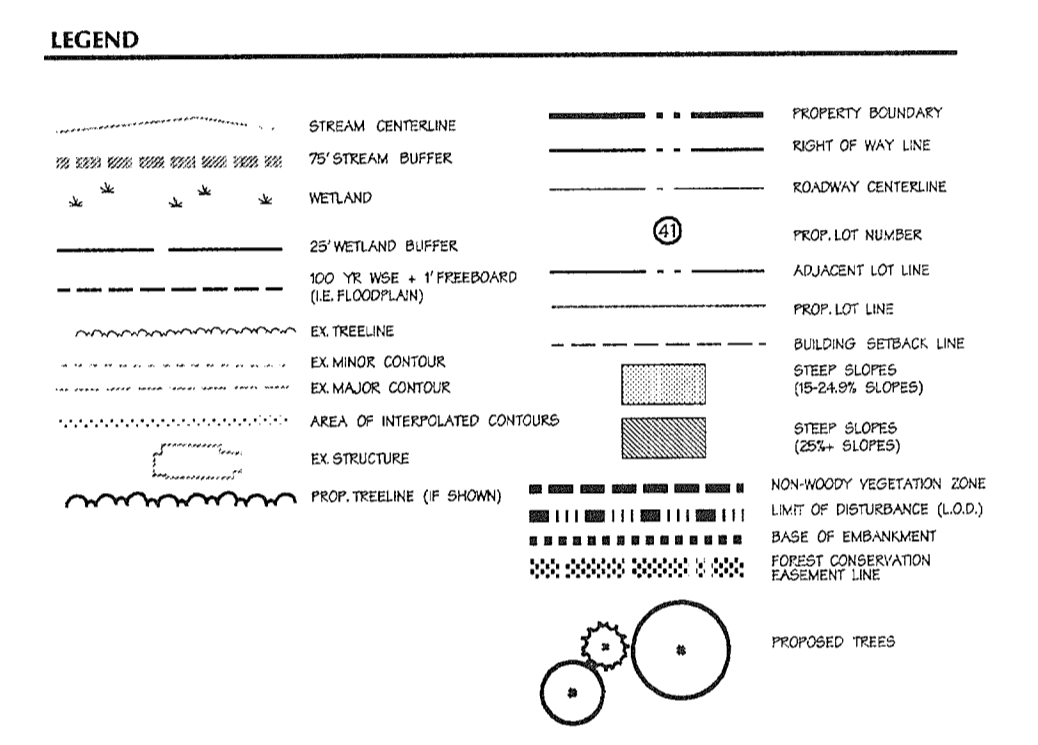
| | |
|-----------------------------------|-------|
| FOND # | 1 |
| LINEAR FT OF PERIMETER (TYPE 'B') | 97 LF |
| NUMBER OF TREES REQUIRED | |
| SHADE TREES @ 150 LF | 15 |
| EVERGREEN TREES @ 140 LF | 20 |
| CREDIT FOR EXISTING VEGETATION | NA |
| CREDIT FOR OTHER LANDSCAPING | NA |
| NUMBER OF TREES PROVIDED | |
| SHADE TREES | 12 |
| EVERGREEN TREES | 20 |
| ORNAMENTAL TREES | 12 |

* THE DEVELOPER WILL PROVIDE ALL OWN LANDSCAPE OBLIGATIONS WITH THE FINAL PLANS.

**SCHEDULE A
PERIMETER LANDSCAPE EDGE**

| CATEGORY | ADJACENT TO ROADWAYS | | ADJACENT TO PERIMETER PROPERTIES | |
|---|----------------------|---------|----------------------------------|--------|
| | F 1 | F 2 | F 1 | F 2 |
| LANDSCAPE TYPE 'A' | | | 7' 5" | 7' 5" |
| LINEAR FEET OF PERIMETER | | | 1800 LF. | 71 LF. |
| LANDSCAPE TYPE 'B' | | | | |
| LINEAR FEET OF PERIMETER | 75 LF. | 119 LF. | | |
| LANDSCAPE TYPE 'C' | | | | |
| LINEAR FEET OF PERIMETER | | | | |
| CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED) | 75 LF. | 0 LF. | 180 LF. | 71 LF. |
| CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED) | NA | NA | NA | NA |
| NUMBER OF PLANTS REQUIRED | | | | |
| SHADE TREES | 0 | 2 | 12 | 0 |
| EVERGREEN TREES | 0 | 5 | 0 | 0 |
| SHRUBS | 0 | 0 | 0 | 0 |
| NUMBER OF PLANTS PROVIDED | | | | |
| SHADE TREES | 0 | 2 | 6 | 0 |
| EVERGREEN TREES | 0 | 0 | 0 | 0 |
| OTHER TREES (2:1 SUBSTITUTION) (SHRUBS (10:1 SUBSTITUTION)) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | 0 | 0 | 0 | 0 |

* PERIMETER #4 IS ADJACENT TO ZANER PROPERTY, WHICH WILL BE DEVELOPED BY THE OWNER AND THEREFORE ASSIGNED TO BE AN INTERIOR PHASING LINE.
NOTE: STREET TREES WILL BE PROVIDED @ A SPACING OF 140 LF.
THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS WITH THE FINAL PLANS.
NOTE: LOT STREET TREES SHOWN THIS SHEET.



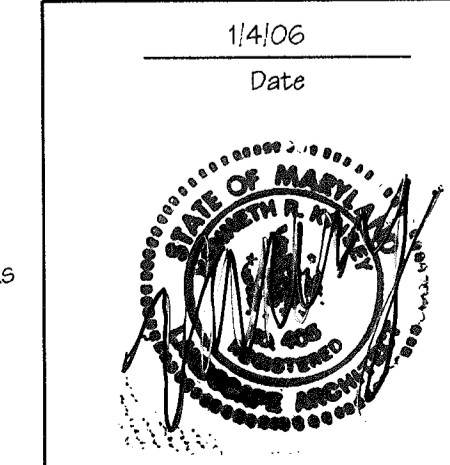
APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William J. Walker 1-19-06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Candy Hunt 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Calvin Damann 1/21/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

| Date | No. | Revision Description |
|--|-----|----------------------|
| | | |
| FINAL PLAN OWENS PROPERTY PHASE II | | |
| LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100 NON-BUILDABLE BULK PARCELS 'C' AND 'D' TAX MAP 31 PARCEL 243,572 | | |
| OWNER/DEVELOPER: PATAPSCO LANDING, LLC c/o Jarriss Kealty and Co. Inc. P.O. Box 5229 61 E. Padonia Road, Timonium, MD 21093 | | |
| DMW Darr McCune Walker, Inc. 300 East Pennsylvania Avenue Towson, Maryland 21286 (410) 286-3333 Fax 286-4705 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals | | |
| TITLE OWENS PROPERTY - PHASE II FINAL LANDSCAPE PLAN | | |
| Des By | CRH | Scale 1"=50' |
| Drn By | CRH | Date 1/4/06 |
| Chk By | KRR | Approved |
| | | Proj. No. 01086.D |
| | | 21 of 27 |

MATCHLINE SEE SHEET 22 OF 27



NOTES
 1. TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RESER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
 2. SWM FACILITY 2 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.

PRIVATE ACCESS PLACE STREET TREE PLANT LIST

| QTY | SYM | BOTANICAL NAME / COMMON NAME | SIZE | REMARKS |
|-----|-----|-------------------------------|------------------|---------|
| 22 | QPH | QUERCUS PHellos WILLOW OAK | 2 1/2" - 3" CAL. | B & B |

PUBLIC ROAD STREET TREE PLANT LIST

| QTY | SYM | BOTANICAL NAME / COMMON NAME | SIZE | REMARKS |
|-----|---------|--|------------------|---------|
| 46 | AR O.G. | ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE | 2 1/2" - 3" CAL. | B & B |
| 60 | ZB | ZELKOVA SERIKATA JAPANESE ZELKOVA | 2 1/2" - 3" CAL. | B & B |

PERIMETER PLANT LIST

| QTY | SYM | BOTANICAL NAME / COMMON NAME | SIZE | REMARKS |
|-----|-----|---|-------------------------------|--------------------|
| 8 | QR | QUERCUS RUBRA RED OAK | 2 1/2" - 3" CAL. 22-34 HT. | B & B FULL HEAD |
| 4 | PA | PICEA ABIES NORWAY SPRUCE | 6'-8" HT. | B & B |
| 5 | PS | PINUS STROBUS EASTERN WHITE PINE | 6'-8" HT. | B & B UNSHAGED |
| 3 | AL | AMELANDHER LAEVIS ALLEGHANY SERVICEBERRY | 1 1/2" - 2" CAL. 6 HT. | B & B FULL HEAD |
| 3 | PY | PRUNUS YEDONENSIS YOSHINO CHERRY | 1 1/2" - 2" CAL. 6 HT. | B & B FULL HEAD |

SWM PERIMETER PLANT LIST

| QTY | SYM | BOTANICAL NAME / COMMON NAME | SIZE | REMARKS |
|-----|-----|--|---------------------------|--------------------|
| 7 | AR | ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE | 2 1/2" - 3" CAL. | B & B |
| 5 | QR | QUERCUS RUBRA RED OAK | 2 1/2" - 3" CAL. | B & B FULL HEAD |
| 12 | PA | PICEA ABIES NORWAY SPRUCE | 6'-8" HT. | B & B |
| 13 | PS | PINUS STROBUS EASTERN WHITE PINE | 6'-8" HT. | B & B UNSHAGED |
| 9 | CC | CERCIS CANADENSIS EASTERN REDBUD | 1 1/2" - 2" CAL. 6 HT. | B & B FULL HEAD |
| 3 | CK | CORNUS KOUSA KOUSA DOGWOOD | 1 1/2" - 2" CAL. 6 HT. | B & B FULL HEAD |

LEGEND

| | | | |
|---|-------------------------------|---|-------------------------------|
| — | STREAM CENTERLINE | — | PROPERTY BOUNDARY |
| — | 75' STREAM BUFFER | — | RIGHT OF WAY LINE |
| — | WETLAND | — | ROADWAY CENTERLINE |
| — | 20' WETLAND BUFFER | — | PROF. LOT NUMBER |
| — | 20' W. W. (FLOODPLAIN) | — | ADJACENT LOT LINE |
| — | EX. TREELINE | — | PROF. LOT LINE |
| — | EX. MINOR CONTOUR | — | BUILDING SETBACK LINE |
| — | EX. MAJOR CONTOUR | — | SOFT SLOPES (5-24% SLOPES) |
| — | AREA OF INTERPOLATED CONTOURS | — | STEEP SLOPES (25%+ SLOPES) |
| — | EX. STRUCTURE | — | NON-WOODY VEGETATION ZONE |
| — | PROP. TREELINE (IF SHOWN) | — | LIMIT OF DISTURBANCE (L.O.D.) |
| — | | — | BASE OF EMBANKMENT |
| — | | — | EASEMENT EASEMENT LINE |
| — | | — | PROPOSED STREET TREE |

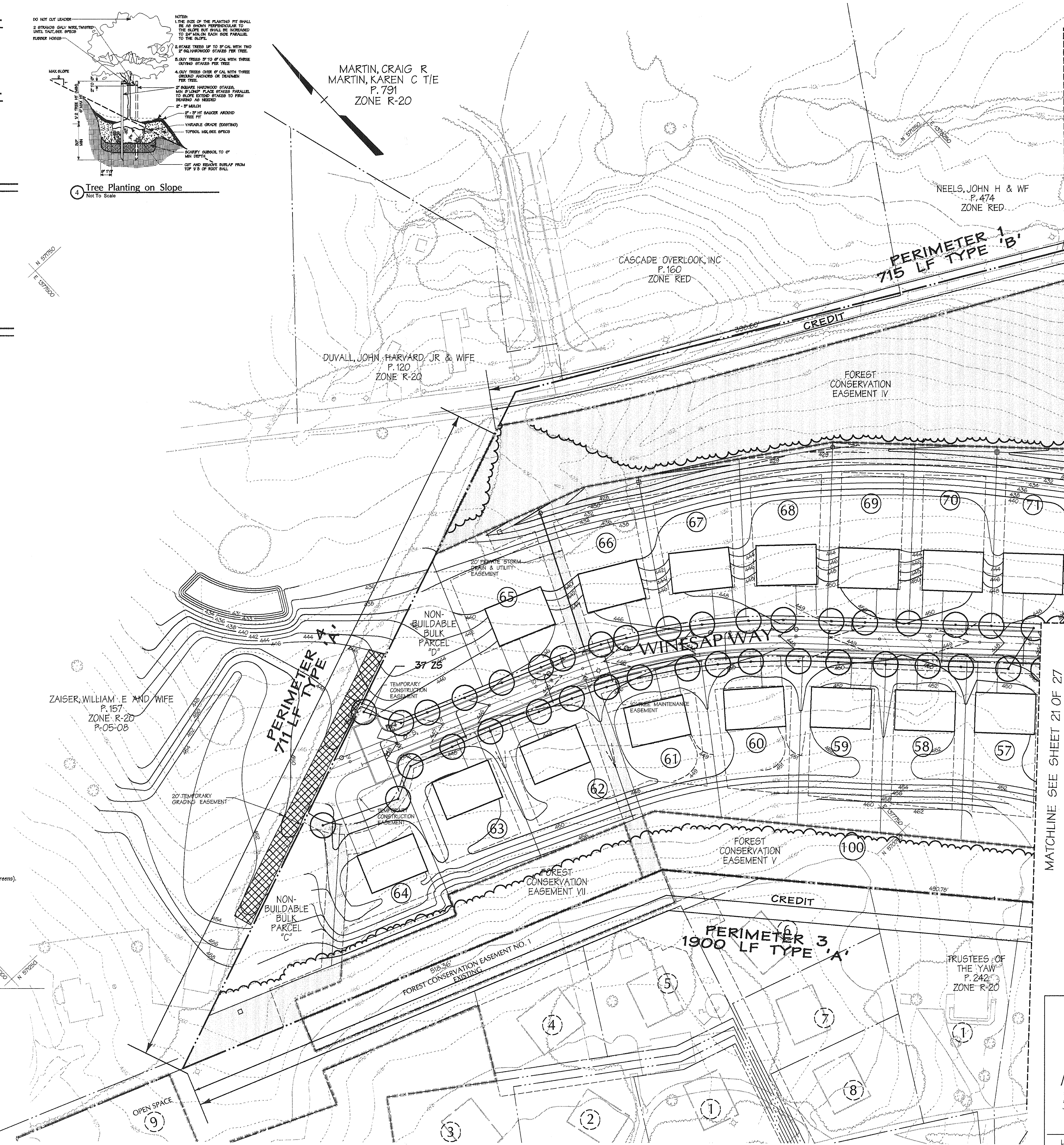
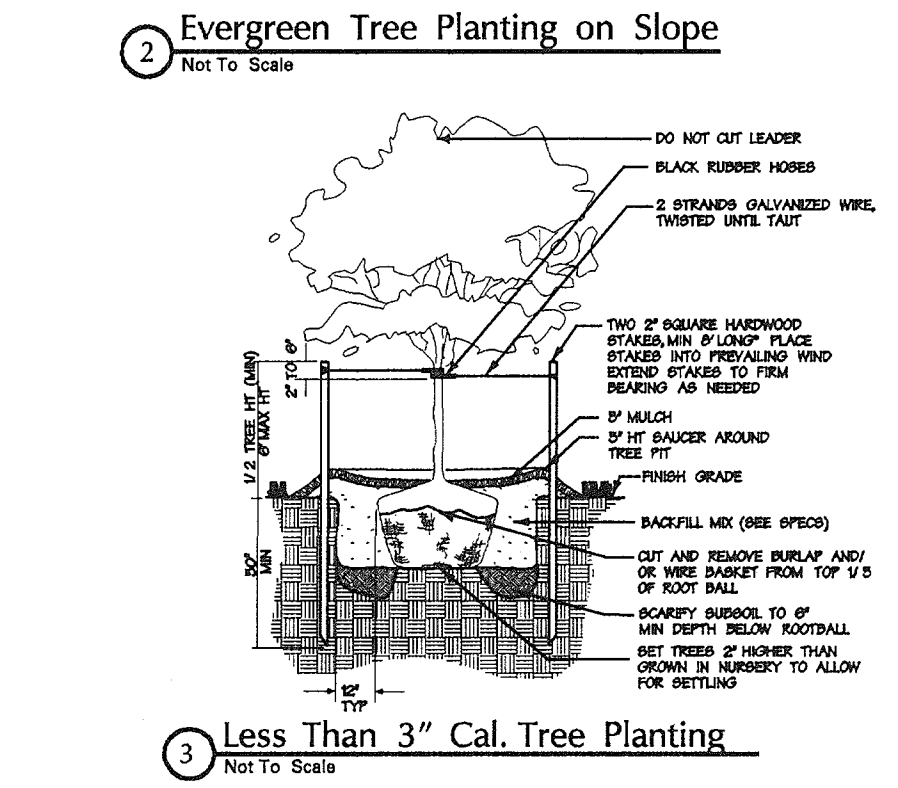
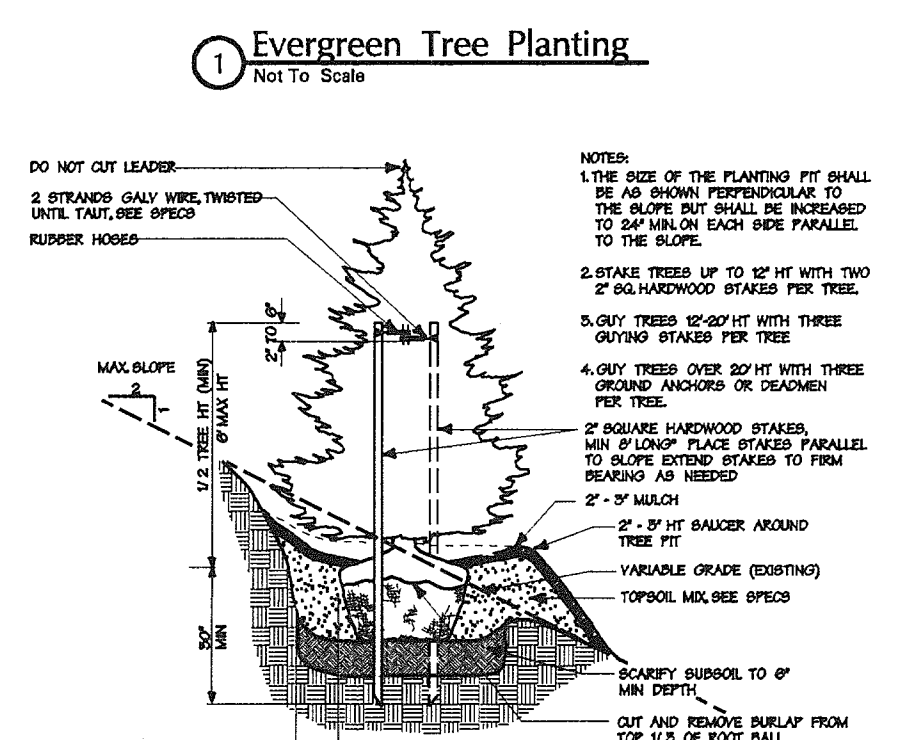
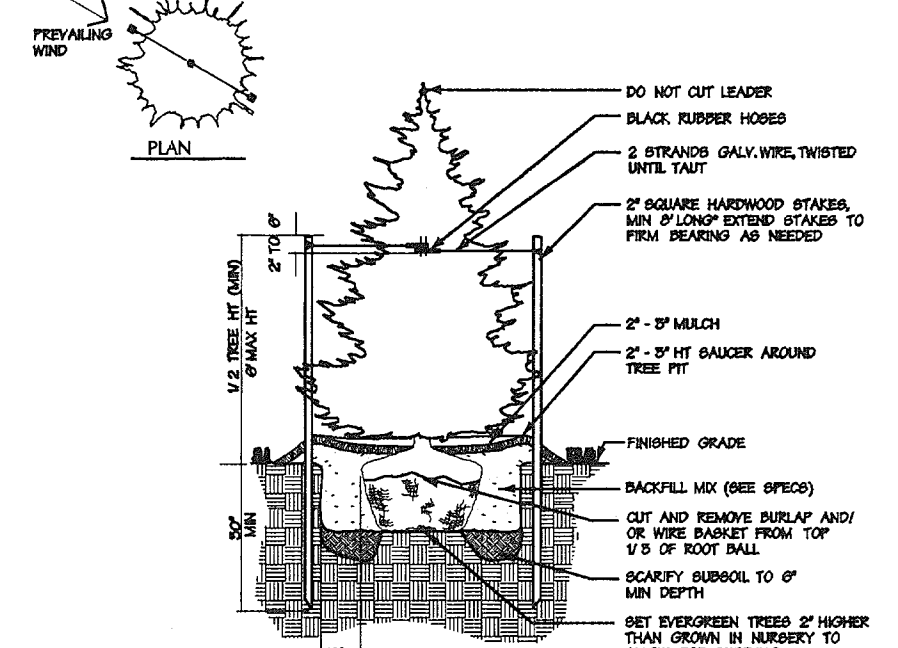
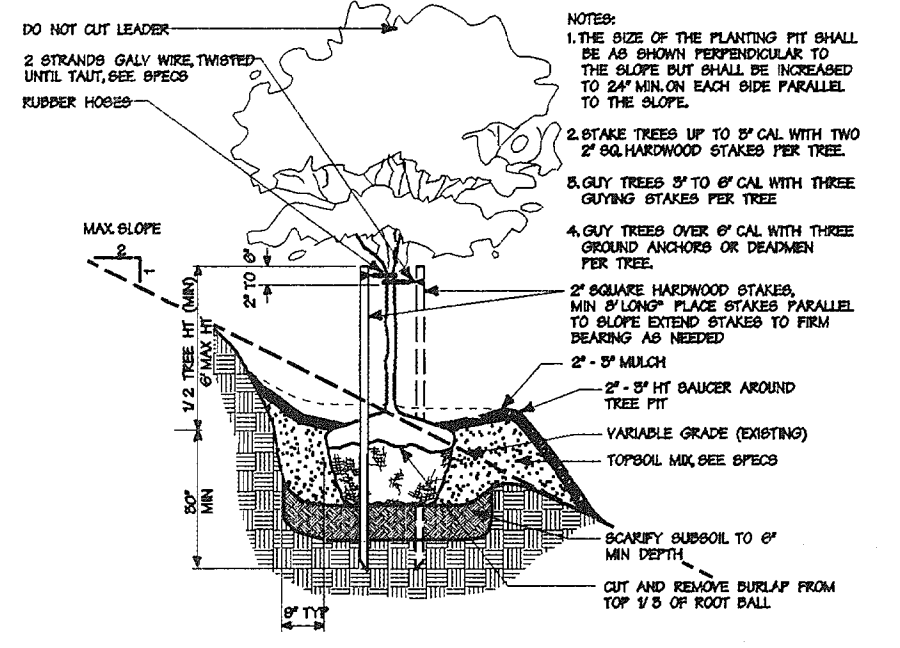
- General Planting Notes**
- All plant material to meet A.A.N. Standards.
 - Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMM.
 - No substitutions to be made without consent of Landscape Architect or Owner.
 - All beds to be topped 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, owner's agent, 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 \$51,600.00 must be posted as part of the developer's agreement. (159 shade, 26 evergreens).
 - Developer's/Builder's Certificate

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. 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 Departments of Planning and Zoning.

NAME: *mt wt.* DATE: 1/4/06

MADE BY: *BLVA*

Financial surety for the required landscaping in the amount of \$51,600.00 must be posted as part of the developer's agreement. (159 shade, 26 evergreens).



MATCHLINE SEE SHEET 21 OF 27

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William F. ... 1-19-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Andy ... 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris ... 1/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

**FINAL PLAN
OWENS PROPERTY
PHASE II**

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
TAX MAP 31 PARCEL 243,572

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

1/4/06
Date

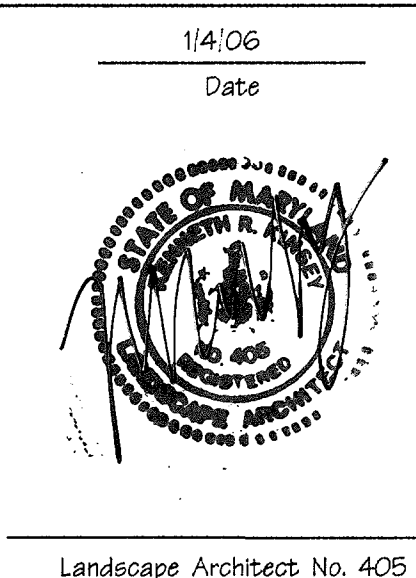
DMW
Dart-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3833
Fax 296-4705

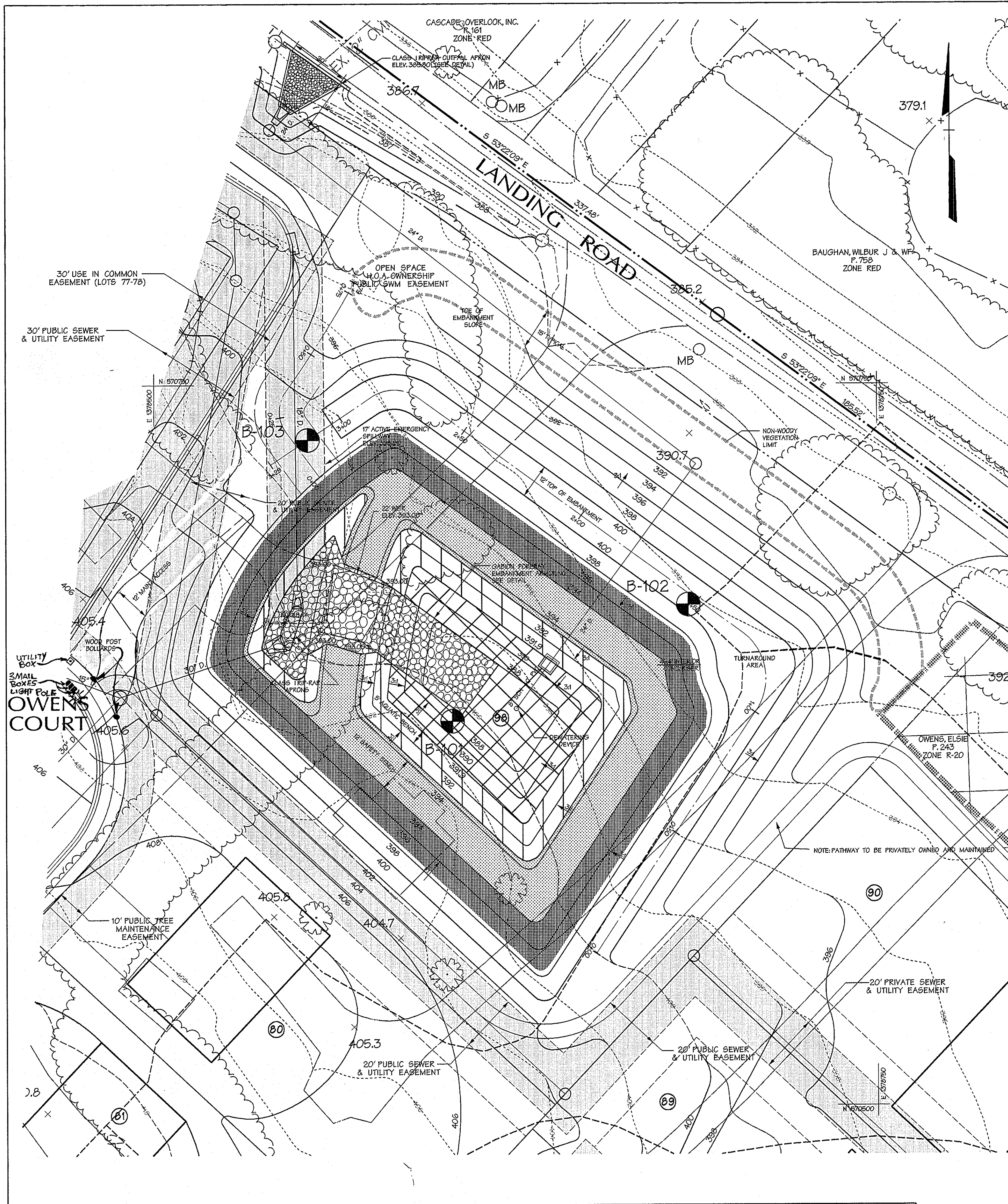
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
OWENS PROPERTY - PHASE II
FINAL LANDSCAPE PLAN

| | | | | |
|--------|-------|----------|-----------|----------|
| Des By | Scale | 1"=50' | Proj. No. | 01086.0 |
| Drn By | ADL | Date | 1/4/06 | |
| Chk By | KRK | Approved | | 22 of 27 |

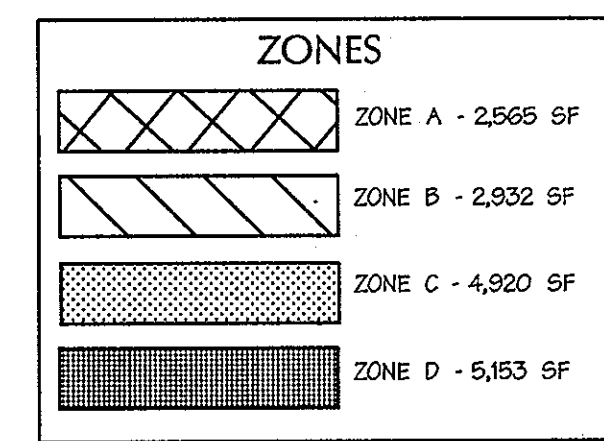
Landscape Architect No. 405





LEGEND

- STREAM CENTERLINE
- 75' STREAM BUFFER
- WETLAND
- 25' WETLAND BUFFER
- 100 YR. WSE + 1' FREEBOARD (I.E. FLOODPLAIN EASEMENT)
- E.X. TREELINE
- E.X. MINOR CONTOUR
- E.X. MAJOR CONTOUR
- E.X. STRUCTURE
- PROP. TREELINE (IF SHOWN)
- PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROADWAY CENTERLINE
- 400' PROPOSED MAJOR CONTOUR
- 398' PROPOSED MINOR CONTOUR
- PROP. LOT NUMBER
- ADJACENT LOT LINE
- PROP. LOT LINE
- PROPOSED PUBLIC DRAINAGE AND UTILITY EASEMENT
- FOREST CONSERVATION EASEMENT
- SWM NATURAL CONSERVATION EASEMENT
- NON-WOODY VEGETATION LIMIT
- BORING LOCATION AND NUMBER



Water Quality Planting Plan **

| Species | Size | Plant Spacing | Quantity | Remarks |
|-------------------|-----------------|---------------|-----------|---------|
| <i>Napharctus</i> | quart container | 72" | 80 | OBL |
| TOTALS | | | 80 | |

| Species | Size | Plant Spacing | Quantity | Remarks |
|-----------------------------|------------------|---------------|------------|---------|
| <i>Sagittaria latifolia</i> | quart container* | 36" | 125 | OBL |
| <i>Iris versicolor</i> | quart container* | 36" | 125 | OBL |
| <i>Feltandra virginica</i> | quart container* | 36" | 125 | OBL |
| TOTALS | | | 375 | |

| Species | Size | Plant Spacing | Quantity | Remarks |
|--------------------------------|------------------|---------------|------------|---------|
| <i>Scirpus tabernaemontani</i> | quart container* | 36" | 150 | OBL |
| <i>Lobelia cardinalis</i> | quart container | 36" | 150 | FACW |
| <i>Anclypis incarnata</i> | quart container | 36" | 150 | OBL |
| <i>Panicum virgatum</i> | quart container | 36" | 150 | FAC |
| <i>Saururus cernuus</i> | quart container* | 36" | 150 | OBL |
| TOTALS | | | 600 | |

| Species | Size | Plant Spacing | Quantity | Remarks |
|-------------------------|-----------------|---------------|------------|---------|
| <i>Panicum virgatum</i> | quart container | 36" | 400 | FAC |
| TOTALS | | | 400 | |

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

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

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William E. ... 1-19-06
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
... 1/21/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION gm DATE

Cindy ... 2/9/06
 CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

| Date | No. | Revision Description | BY |
|---------|-----|------------------------------|---------|
| 9-20-13 | 1 | RELOCATE 12' SWM ACCESS ROAD | BY: BEZ |

FINAL PLAN
OWENS PROPERTY
 PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
 NON-BUILDABLE BULK PARCELS 'C' AND 'D'
 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

DMW
 Dan McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3833
 Fax 296-4708

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

| Des. By | Scale | Proj. No. |
|---------|----------|-----------|
| CRW | 1"=20' | 01086.D |
| Dm. By | Date | |
| WDE | 1/4/06 | |
| Chk. By | Approved | |
| KRK | | |

23 of 27

FOR REVISIONS BY
 BENCHMARK
 ENGINEERING, INC.
 ONLY

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21443, Expiration Date: 12-31-14

1/4/06
 Date

LANDSCAPE ARCHITECT NO. 405

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

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

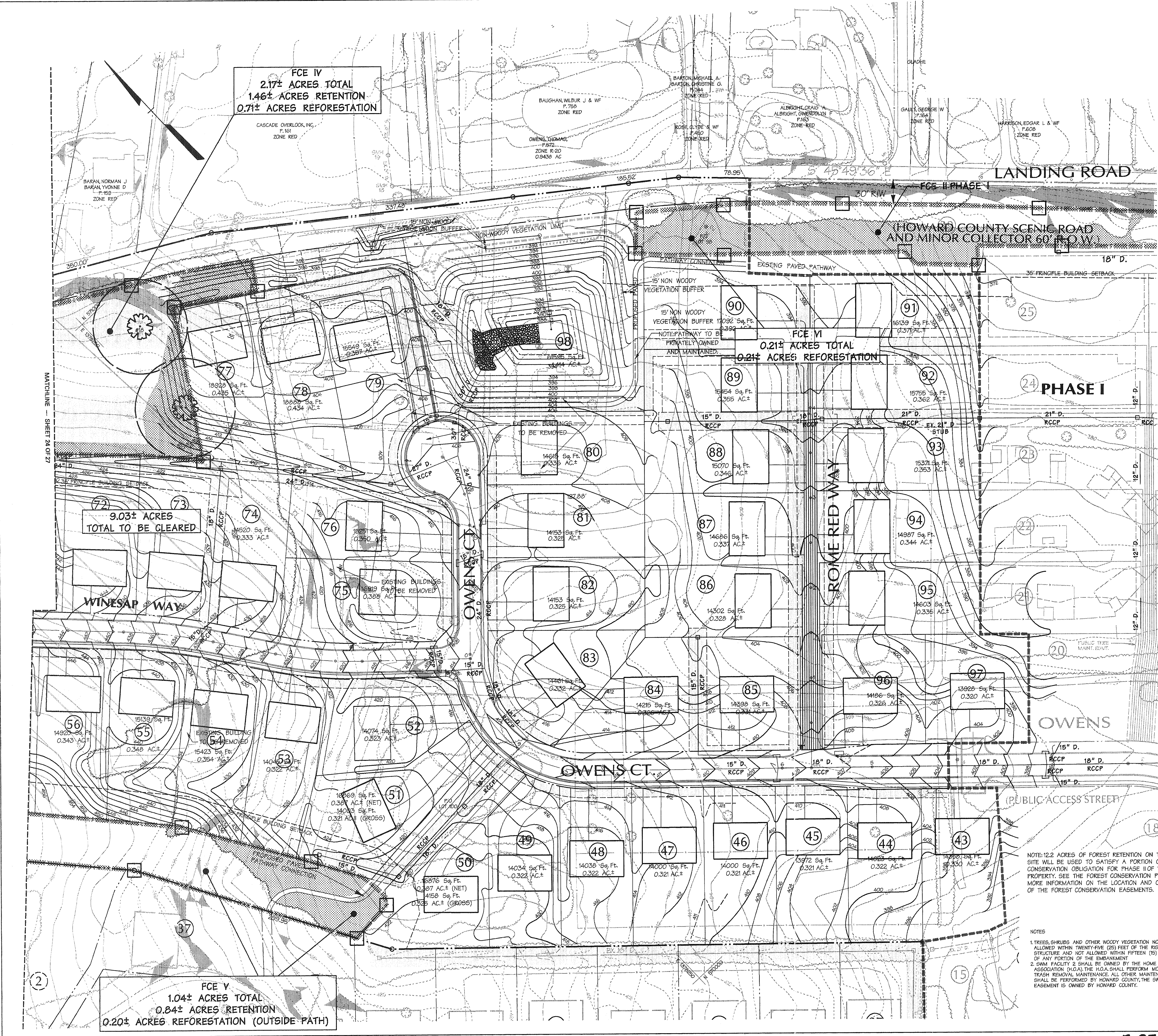
APPROVED: HOWARD SOIL CONSERVATION DISTRICT
 DATE

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

DATE: 1/4/06
 SIGNATURE OF DEVELOPER: MARK E. ...

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.

DATE: 1/4/06
 SIGNATURE OF ENGINEER: ...



LEGEND

- STREAM CENTERLINE
- FOREST CONSERVATION EASEMENT LINE
- REForestation
- FOREST CLEARING
- EX. TREE LINE
- EX. MINOR CONTOUR (2' INT.)
- EX. MAJOR CONTOUR (10' INT.)
- PROP. MINOR CONTOUR (2' INT.)
- PROP. MAJOR CONTOUR (10' INT.)
- AREA OF INTERPOLATED CONTOURS
- EX. STRUCTURE
- PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- LIMIT OF DISTURBANCE
- NON-WOODY VEGETATION ZONE
- LIMITS OF PHASE 2
- ROADWAY CENTERLINE
- PROP. LOT NUMBER
- ADJACENT LOT LINE
- PROP. LOT LINE
- STEEP SLOPES (15-24.9% SLOPES)
- STEEP SLOPES (25%+ SLOPES)
- SPECIMEN TREES WITH CRITICAL ROOT ZONES
- SPECIMEN TREES TO BE REMOVED
- PERMANENT FOREST PROTECTION SIGNS

SITE DATA:

| | PHASE I | PHASE II | TOTAL |
|---------------------|----------|----------|----------|
| GROSS SITE | 31.64 AC | 27.74 AC | 59.42 AC |
| FLOODPLAIN | 4.33 AC | 0.0 AC | 4.33 AC |
| NET TRACT AREA | 27.31 AC | 27.74 AC | 55.09 AC |
| FOREST ON NET TRACT | 13.60 AC | 11.70 AC | 25.30 AC |
| FOREST CLEARED | 8.82 AC | 8.99 AC | 17.81 AC |
| FOREST RETAINED | 5.08 AC | 2.71 AC | 7.79 AC |

GOALS AND OBJECTIVES

THE GOALS AND OBJECTIVES OF THIS FOREST CONSERVATION PLAN ARE TO IDENTIFY FOREST RESOURCES TO BE RETAINED AND CLEARED UNDER THE DEVELOPMENT OF THE SECOND PHASE OF THE OWENS PROPERTY AND TO IDENTIFY ON-SITE PLANTING AREAS AND OFF-SITE RETENTION AREAS (ON THE MYRTLE PROPERTY) TO FULLY SATISFY REFORESTATION OBLIGATIONS FOR OWENS PHASE II.

APPROXIMATELY 8.99 ACRES OF EXISTING FOREST WILL BE CLEARED UNDER PHASE II AND 2.71 ACRES OF FOREST WILL BE RETAINED. THE PHASE II REFORESTATION OBLIGATION IS 7.23 ACRES WHICH WILL BE SATISFIED THROUGH 1.12 ACRES OF ON-SITE REFORESTATION PLANTINGS AND 12.1 ACRES OF OFF-SITE FOREST RETENTION AT THE MYRTLE PROPERTY (SATISFYING A 2:1 OBLIGATION OF 6:1 ACRES).

WHEN EVALUATED WITH OWENS PHASE I, A TOTAL REFORESTATION OBLIGATION OF 16.11 ACRES IS GENERATED. A TOTAL OF 4.0 ACRES OF REFORESTATION WILL BE PROVIDED ON-SITE (1.12 ACRES AT OWENS II, 2.88 ACRES AT OWENS I) WITH THE REMAINING 12.1 ACRES OBLIGATION TO BE MET OFF-SITE (AT A 2:1 RETENTION RATIO) AT THE MYRTLE PROPERTY, WHERE 12.1 ACRES HAVE BEEN IDENTIFIED FOR PERMANENT FOREST RETENTION SPECIFICALLY FOR THIS PROJECT.

ON-SITE REFORESTATION PLANTINGS WILL CONSIST OF 1" CALIBER STOCK TO ENCOURAGE RESPECT FOR PLANTINGS AND PROVIDE AESTHETICALLY PLEASING REFORESTATION AREAS. ALL REFORESTATION AND FOREST RETENTION AREAS WILL BE PLACED INTO "NON-DISTURBANCE" FOREST CONSERVATION EASEMENTS (FCE) TO ENSURE LONG-TERM VIABILITY AND SUCCESS OF THE AREAS, AND TO PROTECT THE NATURAL RESOURCES WITHIN THESE AREAS.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS

William J. ... 1-19-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Cynthia ... 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 1/27/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

**FINAL PLAN
OWENS PROPERTY
PHASE II**

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98 99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
TAX MAP 31 PARCEL 243,572

OWNER/DEVELOPER:

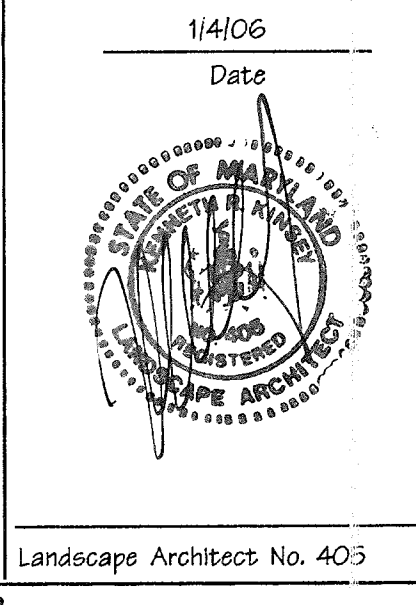
PATAPSCO LANDING, LLC
c/o James Keedy and Co. Inc.
P.O. Box 528
61 E. Padonia Road
Timonium, MD 21093

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

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

**OWENS PROPERTY - PHASE II
FINAL FOREST
CONSERVATION PLAN**

Des By: Scale: 1"=50' Proj. No.: 01006.D
 Drr By: ADLJOE Date: 1/14/06
 Chk By: KRK Approved: **24 of 27**

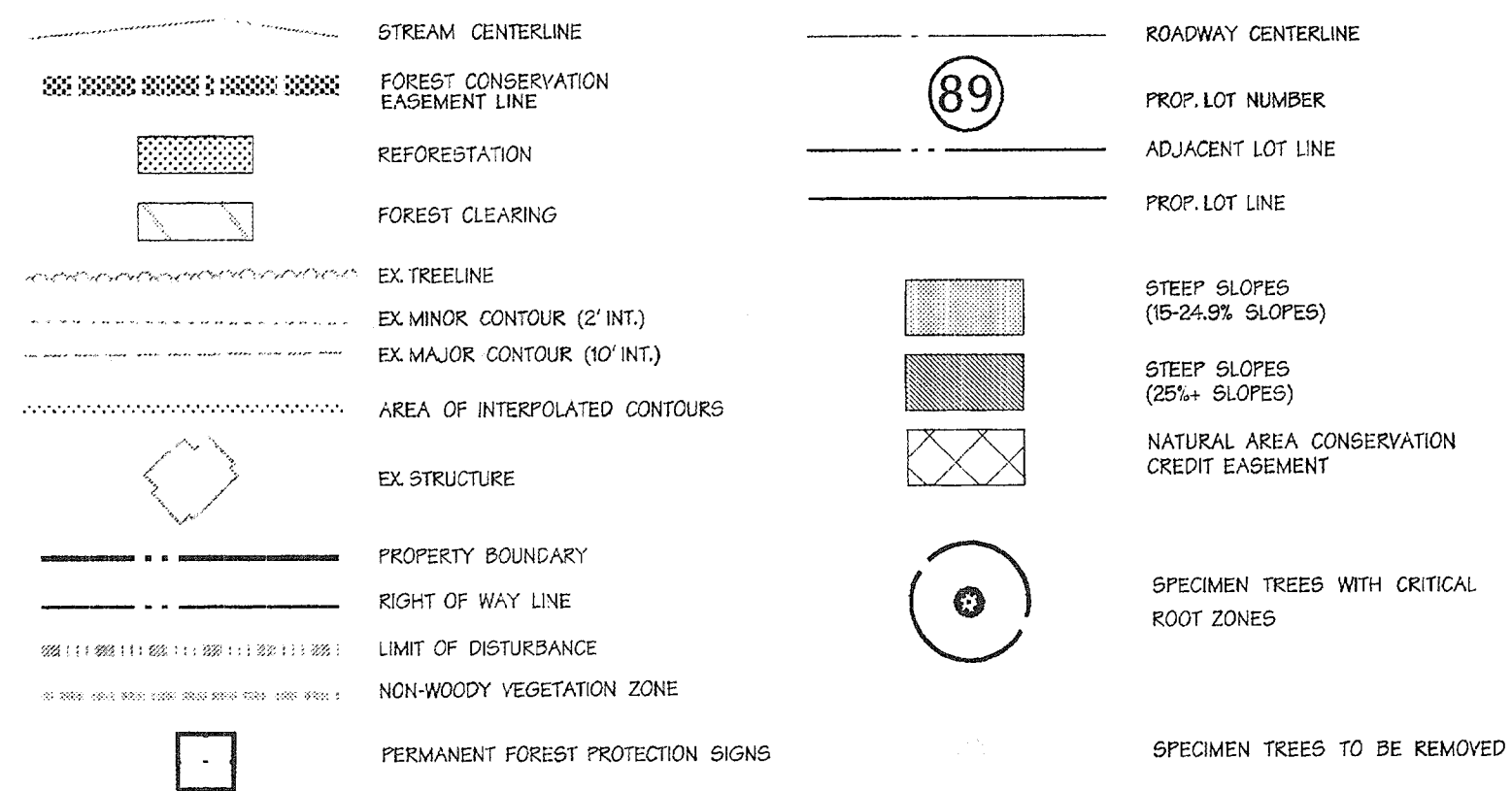


NOTES

1. TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.

2. SWM FACILITY 2 SHALL BE OWNED BY THE HOME OWNERS ASSOCIATION (HOA). THE HOA SHALL PERFORM MOWING, TRASH REMOVAL MAINTENANCE, ALL OTHER MAINTENANCE SHALL BE PERFORMED BY HOWARD COUNTY. THE SWM EASEMENT IS OWNED BY HOWARD COUNTY.

LEGEND



PLANT LIST

Trees required = 224 (1.12 acres x 200/trees)

| Species | Size | Spacing | Quantity | Light preference | Indicator status | |
|---------------------------|------------------------|------------|------------|------------------|------------------|------|
| <i>Acer rubrum</i> | red maple | 1" caliper | 15' x 15' | 50 | sun to shade | FAC |
| <i>Amelanchier laevis</i> | Allegheny serviceberry | 1" caliper | 15' x 15' | 24 | sun to shade | FACU |
| <i>Cercis canadensis</i> | Eastern redbud | 1" caliper | 15' x 15' | 30 | sun to shade | FACU |
| <i>Fraxinus serotina</i> | black cherry | 1" caliper | 15' x 15' | 50 | sun | FACU |
| <i>Quercus alba</i> | white oak | 1" caliper | 15' x 15' | 30 | sun to shade | FACU |
| <i>Quercus prinus</i> | chestnut oak | 1" caliper | 15' x 15' | 40 | sun to shade | UPL |
| | | | 224 | | | |

FOREST CONSERVATION EASEMENT SUMMARY

| Phase I | | | |
|--------------|---------------|--------------------------|-----------------------|
| FCE # | Total Acreage | Acreage Forest Retention | Acreage Reforestation |
| 1 | 7.07 | 5.08 | 1.99 |
| 2 | 0.63 | 0.00 | 0.63 |
| 3 | 0.26 | 0.00 | 0.26 |
| Phase II | | | |
| FCE # | Total Acreage | Acreage Forest Retention | Acreage Reforestation |
| 4 | 2.17 | 1.46 | 0.71 |
| 5 | 1.04 | 0.84 | 0.20 |
| 6 | 0.21 | 0.00 | 0.21 |
| 7 | 0.37 | 0.37 | 0.00 |
| TOTAL | 11.75 | 7.75 | 4.00 |

MARTIN, CRAIG R
MARTIN, KAREN C TIE
P. 791
ZONE R-20

NEELS, JOHN H & WF
P. 474
ZONE RED

CASCADE OVERLOOK, INC
P. 160
ZONE RED

DUVALL, JOHN HARVARD, JR & WIFE
P. 120
ZONE R-20

ZAISER, WILLIAM E AND WIFE
P. 157
ZONE R-20
P-05-08

TRUSTEES OF THE YAW
P. 242
ZONE R-20

FCE VII
0.37± ACRES TOTAL
0.37± ACRES RETENTION
0.00± ACRES REFORESTATION

FCE V CONTINUED
1.04± ACRES TOTAL
0.84± ACRES RETENTION
0.20± ACRES REFORESTATION (OUTSIDE PATH)

FCE IV CONTINUED
2.17± ACRES TOTAL
1.46± ACRES RETENTION
0.71± ACRES REFORESTATION

9.03± ACRES
TOTAL TO BE CLEARED

SPECIMEN TREE CHART

| TREE | DESCRIPTION | CONDITION | PROPOSED STATUS |
|------|------------------|-----------|-----------------|
| 1 | 42" WHITE OAK | FAIR | TO BE REMOVED |
| 2 | 51" CHESTNUT OAK | FAIR | TO BE REMOVED |
| 3 | 30" WHITE OAK | GOOD | TO BE REMOVED |
| 4 | 30" RED OAK | GOOD | TO BE REMOVED |
| 5 | 31" TULIP POPLAR | GOOD | TO BE REMOVED |
| 6 | 38" RED OAK | GOOD | TO BE REMOVED |
| 7 | 43" CHESTNUT OAK | POOR | TO BE REMOVED |
| 8 | 30" CHESTNUT OAK | FAIR | TO BE REMOVED |
| 9 | 33" CHESTNUT OAK | GOOD | TO BE REMOVED |
| 10 | 40" RED OAK | FAIR | TO BE REMOVED |
| 11 | 34" RED OAK | FAIR | TO BE REMOVED |
| 12 | 33" TULIP POPLAR | GOOD | TO BE REMOVED |
| 13 | 33" BLACK GUM | FAIR | TO BE REMOVED |
| 14 | 37" TULIP POPLAR | GOOD | TO BE REMOVED |
| 15 | 36" TULIP POPLAR | GOOD | TO BE REMOVED |
| 16 | 40" RED OAK | FAIR | TO BE REMOVED |
| 17 | 44" TULIP POPLAR | FAIR | TO BE REMOVED |
| 18 | 35" SCARLET OAK | FAIR | TO BE SAVED |
| 19 | 31" RED OAK | GOOD | TO BE SAVED |
| 20 | 31" BEECH | GOOD | TO BE SAVED |
| 21 | 30" WHITE OAK | FAIR | TO BE SAVED |
| 22 | 30" WHITE OAK | GOOD | TO BE SAVED |

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William T. Anderson 1-16-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Carly Hunt 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

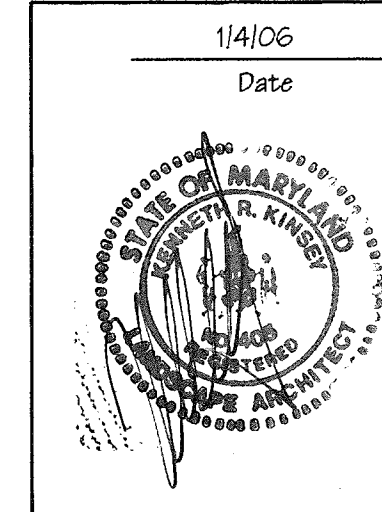
Orlando 1/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Date No. Revision Description

**FINAL PLAN
OWENS PROPERTY
PHASE II**

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'C' AND 'D'
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 McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-0339
Fax 296-4705

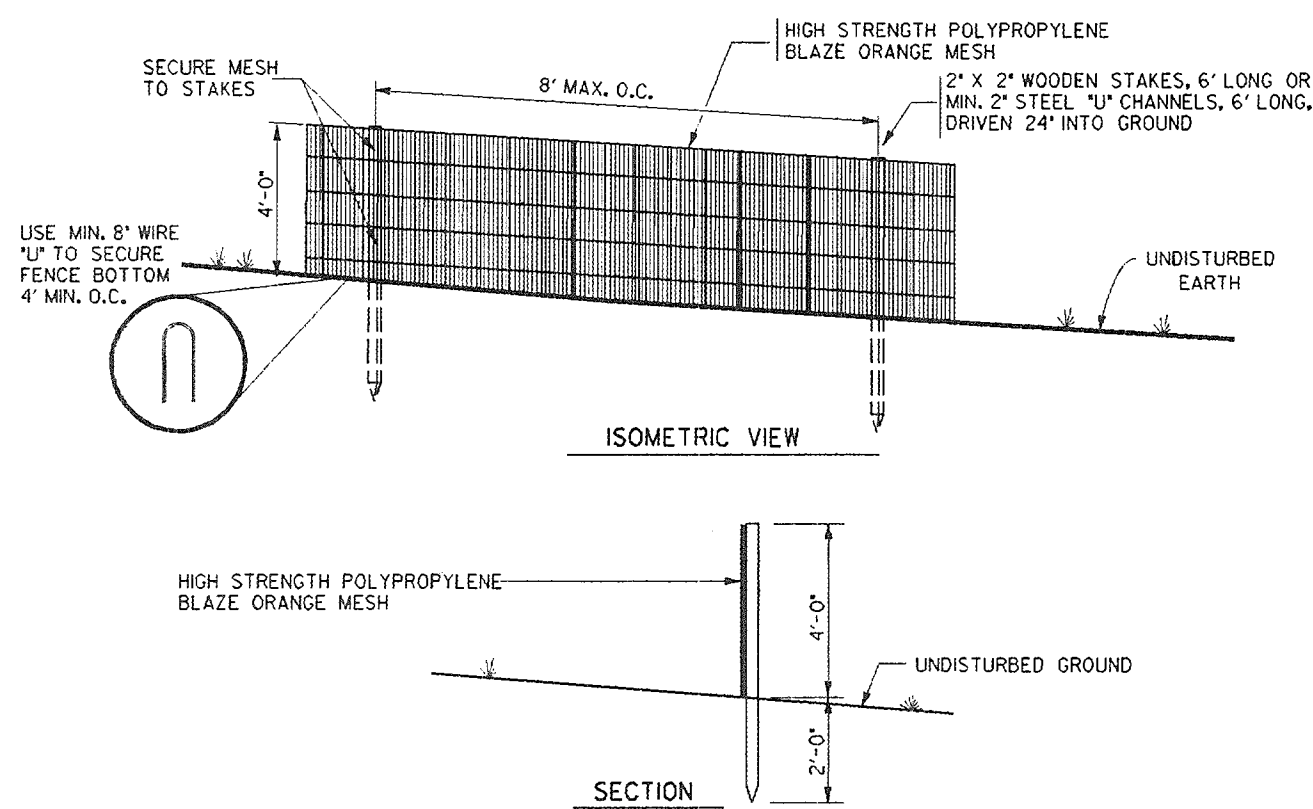
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
**OWENS PROPERTY - PHASE II
FINAL FOREST
CONSERVATION PLAN**

Des By ADL Scale 1"=50' Proj. No. 01086.D
Drm By ADL Date 1/4/06
Chk By KRK Approved

25 of 27

F-05-121

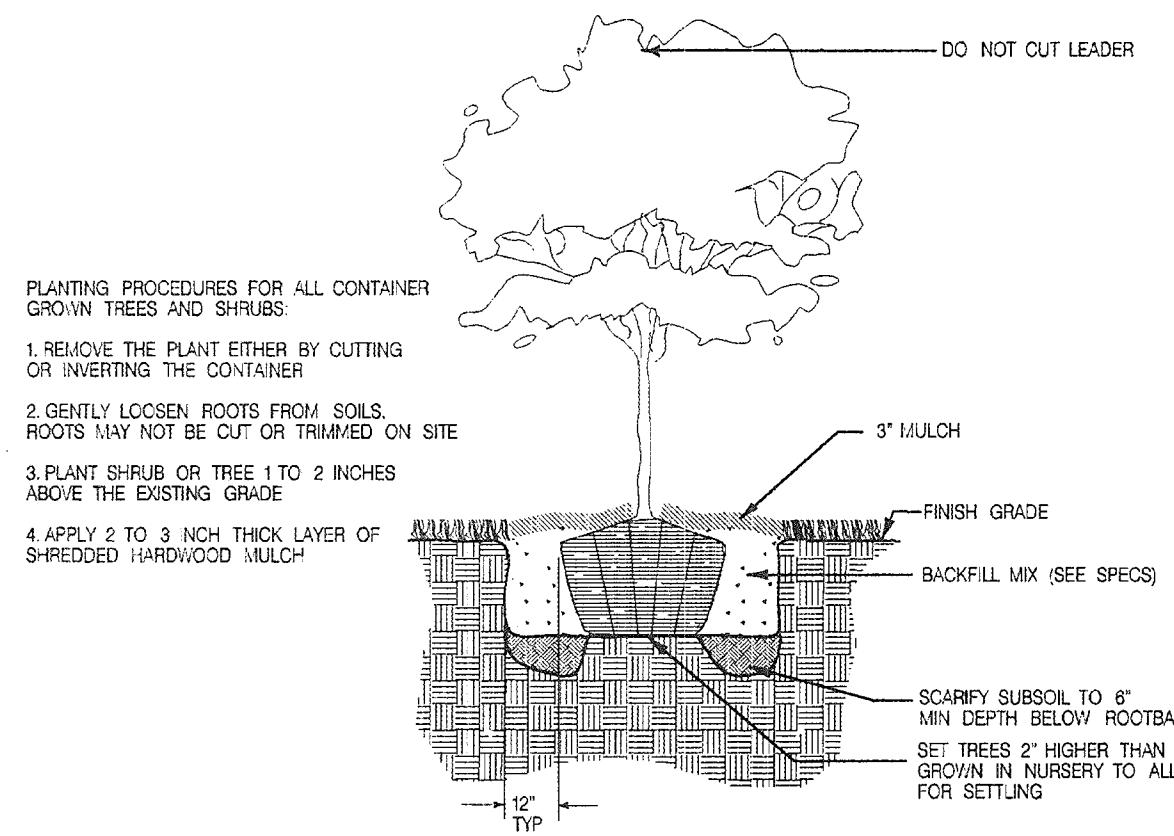


- NOTES:
- THIS DETAIL IS FOR FOREST PROTECTION DEVICE ONLY.
 - FOREST RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF FOREST RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING THE DEVICE.
 - ROOT DAMAGE SHALL BE AVOIDED.
 - PROTECTION SIGNAGE MAY ALSO BE USED.
 - FOREST PROTECTION FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

Forest Protection Fence

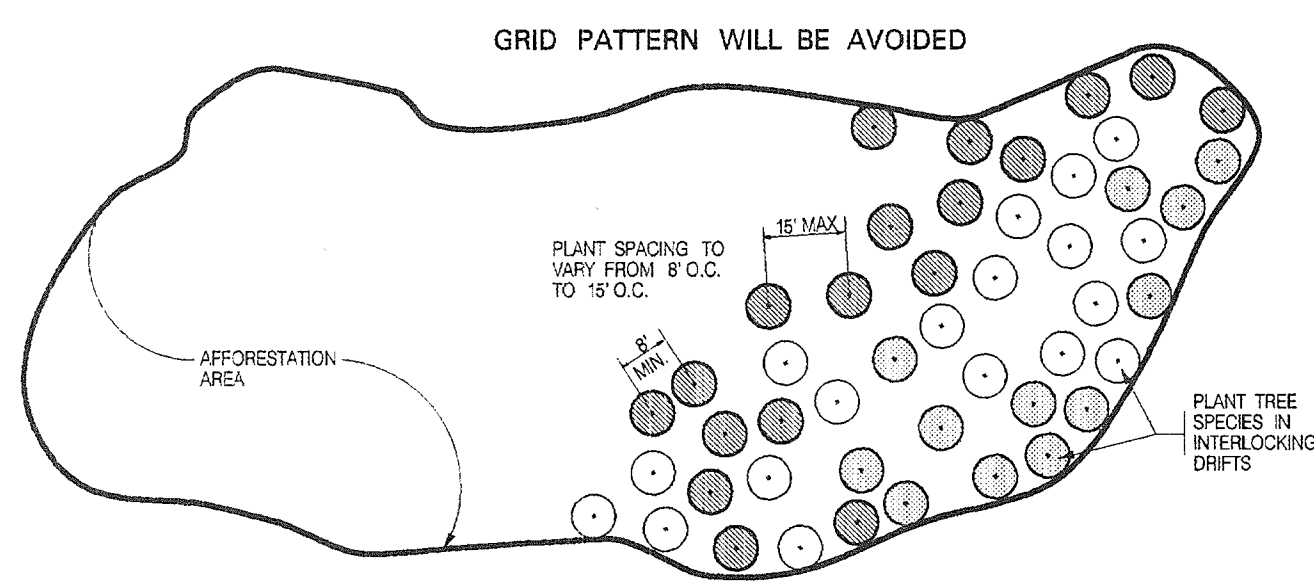
Not To Scale

* WHERE SUPER SILT FENCE (S.S.F.) IS TO BE INSTALLED ADJACENT TO FOREST RETENTION AREAS, ATTACH HIGH VISIBILITY TAPE OR FLAGGING TO THE TOP EDGE OF S.S.F. AT 8' INTERVALS AND USE S.S.F. IN LIEU OF BLAZE ORANGE FENCE. TEMPORARY FOREST PROTECTION SIGNAGE MAY BE ATTACHED TO S.S.F.



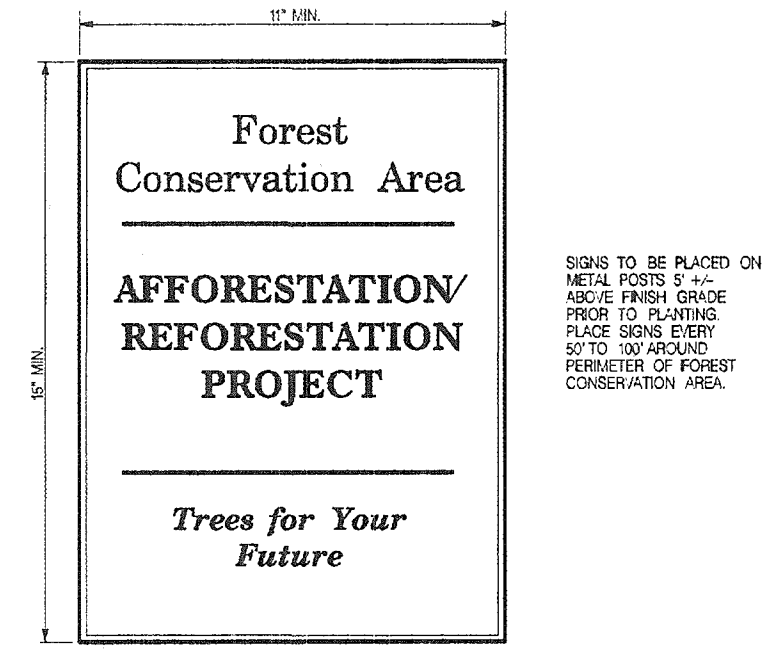
Typical Tree Planting (For container grown)

Not To Scale



Planting Design Schematic

Not To Scale



Permanent Signage

Not To Scale

FOREST CONSERVATION CALCULATIONS-PHASE I AND II COMBINED

| BASIC SITE DATA | ACRES (1/10) |
|---|--------------|
| GROSS SITE AREA | 59.36 |
| AREA WITHIN 100 YEAR FLOODPLAIN | 4.33 |
| AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE) | 0.00 |
| NET TRACT AREA | 55.03 |
| LAND USE CATEGORY | RESIDENTIAL |

| INFORMATION FOR CALCULATIONS | |
|--------------------------------------|-------|
| A. NET TRACT AREA | 55.09 |
| B. REFORESTATION THRESHOLD (20% x A) | 11.01 |
| C. AFFORESTATION MINIMUM (15% x A) | 8.26 |
| D. EXISTING FOREST ON NET TRACT AREA | 25.30 |
| E. FOREST AREAS TO BE CLEARED | 17.09 |
| F. FOREST AREAS TO BE RETAINED | 7.92 |

| REFORESTATION CALCULATIONS | |
|--|-------|
| A. NET TRACT AREA | 55.03 |
| B. REFORESTATION THRESHOLD (20% x A) | 11.01 |
| C. EXISTING FOREST ON NET TRACT AREA | 25.30 |
| D. FOREST AREAS TO BE CLEARED | 17.59 |
| E. FOREST AREAS TO BE RETAINED | 7.76 |
| F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD | 14.26 |
| G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD | 3.27 |
| H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD | 0.00 |

| CLEARING BELOW THE THRESHOLD | |
|--|------------|
| IF FOREST AREAS TO BE RETAINED ARE LESS THAN THE REFORESTATION THRESHOLD (IF F IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY: | |
| REFORESTATION FOR CLEARING ABOVE THRESHOLD | 3.57 |
| REFORESTATION FOR CLEARING BELOW THRESHOLD | 6.54 |
| TOTAL REFORESTATION REQUIRED | 10.11 |
| (F x 1.4) + (G x 2) | 0.00 |
| CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD | 4.0 ACRES |
| REFORESTATION PROVIDED ON SITE | 12.2 ACRES |
| RETENTION PROVIDED OFF SITE | |

GOALS AND OBJECTIVES
The goals and objectives of this Forest Conservation Plan are to identify forest resources to be retained and cleared under the development of the second phase of the Owens Property, and to identify on-site planting areas and off-site retention areas (on the Myrtle Property) to fully satisfy reforestation obligations for Owens Phase II.

Approximately 9.94 acres of existing forest will be cleared under Phase II, and 2.67 acres of forest will be retained. The Phase II reforestation obligation is 7.23 acres, which will be satisfied through 1.12 acres of on-site reforestation plantings and 12.2 acres of off-site forest retention at the Myrtle property (satisfying a 21 obligation of 6.1 acres).

When evaluated cumulatively with Owens Phase I, a total reforestation obligation of 10.11 acres is generated. A total of 4.0 acres of reforestation will be provided on-site (1.12 acres at Owens II, 2.88 acres at Owens I), with the remaining Owens II 6.1 acre obligation to be met off-site (at a 21 retention ratio) at the Myrtle Property, where 12.2 acres have been identified for permanent forest retention specifically for this project.

On-site reforestation plantings will consist of 1" caliper stock to encourage respect for plantings and to provide aesthetically pleasing reforestation areas. All reforestation and forest retention areas will be placed into "non-disturbance" forest conservation easements (FCEs) to ensure long-term viability and success of the areas, and to protect the natural resources within these areas.

FOREST RETENTION
Site retention/Soil Protection areas will be delineated with temporary forest protection fencing and retention area signage as appropriate. See forest protection fence and temporary signage Detail prior to the beginning of any construction activity. Attachment of signs to trees is prohibited.

PRECONSTRUCTION MEETING/CONSTRUCTION PERIOD PRACTICES
Any changes to the plan due to on-site conditions must be approved by the Howard County Department of Planning and Zoning. No grading, excavation, utility placement, sediment and erosion control activities, or vehicular traffic will occur within forest retention areas. Storage of equipment and materials shall not be permitted in the forest retention areas. There will be no burial or disposal of discarded material on-site within the retention area. There will be no open burning within 100 feet of woodlands. Temporary structures including, but not limited to construction trailers, sanitary facilities, etc. shall not be placed within the forest retention areas. Employee parking shall not be permitted in the forest retention areas.

POST CONSTRUCTION MANAGEMENT/MAINTENANCE BY CONTRACTOR
Aidless trees or tree limbs which pose an immediate safety hazard will be felled. Trees dropped within the forest retention area will not be removed. All temporary forest protection structures will be removed after construction and permanent signage will be placed where indicated on the plan. A 2-year Contractor's Maintenance and Monitoring Period shall begin at mobilization. Seventy five percent survivorship must be guaranteed for this period. The site shall be inspected at the end of the two year period to ascertain survivorship and provide for replacement if necessary. The Contractor's maintenance of new planting shall consist of watering, cultivating, weeding, and mulching as necessary to insure survival. Contractor shall protect planting areas and plants at all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection barriers and signs as required for protection. If any plants become damaged or injured, because sufficient protection was not provided, treat or replace as directed by Landscape Architect at no additional cost to Owner.

ALL FOREST RETENTION & REFORESTATION AREAS SHOWN ON THIS PLAN TO BE PLACED IN FOREST CONSERVATION EASEMENT

STANDARDS AND SPECIFICATIONS FOR PLANTING

- PLANT MATERIAL SELECTION 1" CALIPER OR GREATER**
Nursery grown plant materials should meet or exceed the requirements of the American Nurseryman Specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well-furnished root systems, and be free of disease, insect pests and mechanical injuries.
- PLANTING SITE PREPARATION**
Sites shall not be disturbed outside the area necessary for planting individual specimens and the removal of exotic invasive plant material. These areas should be established as shown on the temporary seeding notes on sheet #.
- PLANTING PERIOD**
All material shall be planted between September 15 and May 31. Material shall not be installed when ground is frozen.
- PLANT MATERIAL STORAGE**
Plants should be planted within 24 hours of delivery if possible. Plant material which are left unplanted for more than 24 hours shall be protected from direct sun and weather and kept moist. Nursery stock should not be left unplanted for more than two weeks.
- ON-SITE INSPECTION**
Prior to planting, planting stock shall be inspected by the landscape architect or other qualified professional familiar with this plan. Plant material not conforming to standard nurseryman specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced.
- TOPSOIL FOR PLANTING SOIL**
A. On-site material or imported from same source as topsoil used on site for finish grading.
1. Uniform composition, free of subsoil, clay lumps, stones, stumps, roots or similar objects larger than 1 inch.
2. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, Canada thistle, or others as specified.
3. All topsoil shall be tested by a recognized laboratory for pH and soluble salts. A pH of 4.5 to 7.5 is required. Soluble salts shall not be higher than 500 parts per million.
- ADDITIVE FOR BACKFILL SOIL**
A. Wood Residuals:
1. Source shall be well composted, not chemically treated.
2. Physical properties - grading:

| U.S. Sieve | Dry Weight Percent Passing |
|------------|----------------------------|
| 3/8" | 100 |
| 1/2" | 90 - 100 |
| No. 8 | 70 - 100 |
| No. 35 | 0 - 30 |

3. Organic content by ash analysis: 90 - 100 percent dry weight
4. Chemistry:
Soil:
a. Saturation Extract Conductivity (EC) ———— NI - 3.5
b. Reaction (pH) ———— 5.0 - 5.5
5. Salinity: Maximum saturation extract conductivity 1.0 millimhos per cm at 25 degrees centigrade.

B. Sand

1. Physical Properties - Grading

| U.S. Sieve | Dry Weight Percent Passing |
|------------|----------------------------|
| No. 4 | 100 |
| No. 10 | 95 - 100 |
| No. 18 | 90 - 100 |
| No. 35 | 65 - 100 |
| No. 60 | 0 - 50 |
| No. 100 | 0 - 20 |
| No. 270 | 0 - 7 |

2. Chemistry:
Saturation Extract Conductivity (EC) ———— NI - 3.0
Sodium Absorption Ratio (SAR) ———— NI - 6.0
Boron - ppm in saturation extract solution ———— NI - 1.0
Reaction (pH) ———— 6.0 - 7.5
Available calcium - sodium acetate extractable - ppm ———— NI - 2000
dry weight

3. Treble Superphosphate: Commercial product containing 18 to 20 percent available phosphoric acid.

8. MULCH
A. Shredded long fiber hardwood.
B. Mulch shall have been shredded within the last six (6) months.

9. LAYOUT AND EXCAVATION OF PLANTING AREAS
A. Plants shall be placed in each zone at random locations shown at spacing as indicated on the plan.
B. The Landscape Architect or qualified professional will check location of plants in the field and shall adjust to exact position before planting begins.
C. Subsoil shall not be worked when moisture content is so great that excessive compaction will occur, nor when it is so dry that clods will not readily break. Water shall be applied, if necessary, to bring soil to an optimum moisture content before tilling and planting.
D. Tree pits shall not be excavated more than 24 hours in advance of planting operation. Tree pits shall be excavated to the following dimensions:

| Excavation for | Width | Depth |
|-----------------|---------------|--------------|
| Container Trees | Can + 2 in. | Can + 4 in. |
| B&B Trees | Ball + 12 in. | Ball + 4 in. |

| Excavation for | Width | Depth |
|----------------|---------------------|-----------------------------------|
| Shrubs | Ball or Can + 8 in. | Can + 4 in., not less than 12 in. |

10. PREPARING PLANT MATERIALS FOR PLANTING
A. Container stock shall be removed carefully after cans have been cut on two sides with approved cutter. Do not use spade to cut cans. Do not lift or handle container plants by tops, stems or trunks at any time.
B. Do not bind or handle any plant with wire or rope at any time so as to damage bark or break branches. Lift and handle plants only from bottom of ball.
C. Balled and burlapped (B&B) plants shall have firm balls of earth. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operation. B&B material shall be dug only when dormant. Pre-dug stored B&B material shall be inspected and approved at the storage site.
D. Do not force roots for bare rooted trees into excavated pits - custom dig pits to receive roots without deformation, during the mixing process.

12. INSTALLATION OF CONTAINERIZED PLANT MATERIAL
A. Scarify the walls and bottom of all plant pits immediately prior to the placement of plant and backfill mix. The Contractor shall remove all glazing of soil caused by an auger or mechanical hole digger.
B. Wells around trees and shrubs after planting is complete, form a soil well 3 inches high around each plant, extending to the outer limit of the plant pit accordance with planting details shown on the Drawings.
C. Smooth planted areas to conform to specified grades after full settlement as occurred. Contractor shall bear final responsibility for proper surface drainage of planted areas. Any discrepancy in the drawings or specifications, construction on the site or prior work done by another party, which Contractor feels precludes establishing proper drainage, shall be brought to the attention of the Landscape Architect in writing.
D. Water all plants immediately after planting.
E. Spread mulch in required areas to the compacted depth of 2 inches.
F. Install tree shelters around new plantings.

GUARANTEE:
A MINIMUM SURVIVAL RATE OF 75% IS TO BE GUARANTEED BY THE DEVELOPER AT THE END OF THE TWO YEAR MAINTENANCE PERIOD.

- NOTE:
- THE PRECISE LOCATION OF PLANT MASSINGS WILL BE LOCATED IN THE FIELD BY LANDSCAPE ARCHITECT.
 - GRID PATTERNS WILL BE AVOIDED
 - PLANT MATERIAL MAY BE GROUPED IN CLUSTERS OF NO MORE THAN 5 TO 7 INDIVIDUAL PLANTS OF THE SAME SPECIES. PLANTS WILL BE INSTALLED IN A RANDOM FASHION WITHIN SPECIFIED ZONES.
 - ALL PROPOSED SPECIES ARE TREES. NO SHRUBS SHALL BE PLANTED.

A SURETY IN THE AMOUNT OF \$23,262 (2.67 ACRES x \$0.20/s.f.) WILL BE REQUIRED FOR ON-SITE FOREST RETENTION FOR PHASE II ONLY. A SURETY IN THE AMOUNT OF \$106,287 (12.2 ACRES x \$0.20/s.f.) WILL BE REQUIRED FOR OFF-SITE FOREST RETENTION AT THE MYRTLE SITE. A SURETY IN THE AMOUNT OF \$ 23,969* (1.12 ACRES x \$0.50/s.f.)* WILL BE REQUIRED FOR ON-SITE REFORESTATION. THE TOTAL SECURITY AMOUNT REQUIRED FOR PHASE II WILL BE \$153,518.00*.

*NOTE: SURETY AMOUNT HAS BEEN REDUCED BY \$425.00 TO OFFSET LANDSCAPING ADDED FOR PERIMETER 2. AS SHOWN BELOW.

OVERSTORY TREES
2 TREES @ 200 SF CREDIT EACH = 400 SF CREDIT

ORNAMENTAL TREES
3 TREES @ 150 SF CREDIT EACH = 450 SF CREDIT
950 TOTAL CREDIT
x \$0.50 SF CREDIT
\$425.00 SURETY CREDIT

DATA SOURCES:
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 MCGUNE - WALKER, INC.
SOILS (IF SHOWN) TAKEN FROM HOWARD COUNTY SOIL SURVEY, 1966.

APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
Walter J. Walker, Jr. 1-19-06
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING
Gina Thomas 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 1/21/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

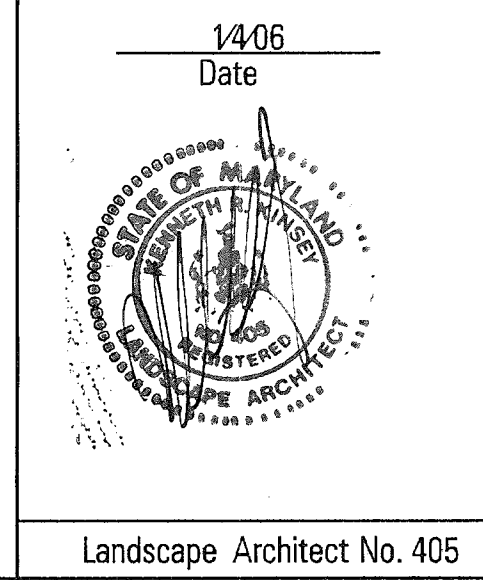
| Date | No. | Revision Description |
|------|-----|----------------------|
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FINAL PLAN

OWENS PROPERTY PHASE II

LOTS 43 THRU 97 AND OPEN SPACES LOTS 98,99 & 100
NON-BUILDABLE BULK PARCELS 'A' AND 'B'
TAX MAP '31' PARCELS 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
Daft McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

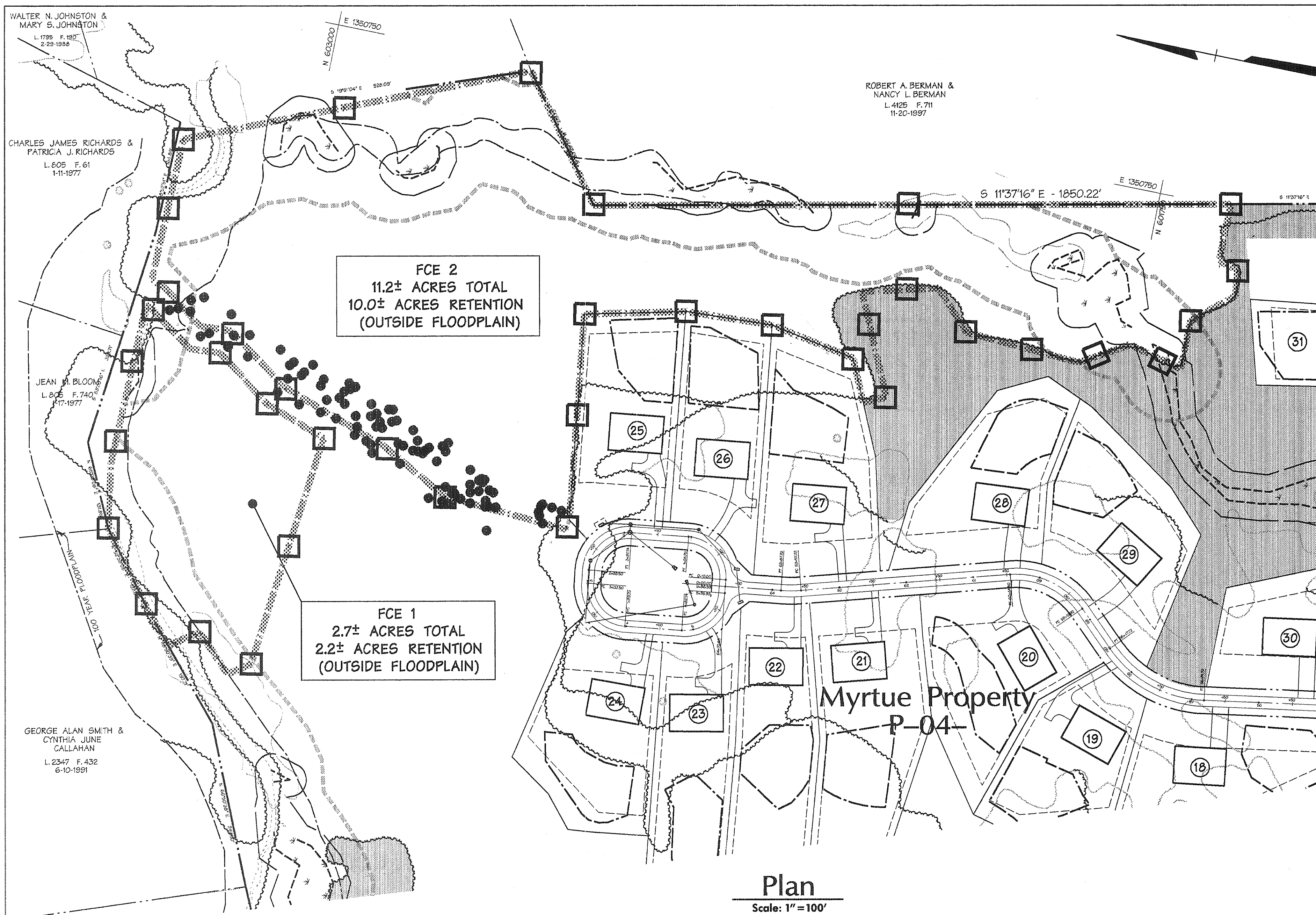
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
FINAL FOREST CONSERVATION NOTES & DETAILS

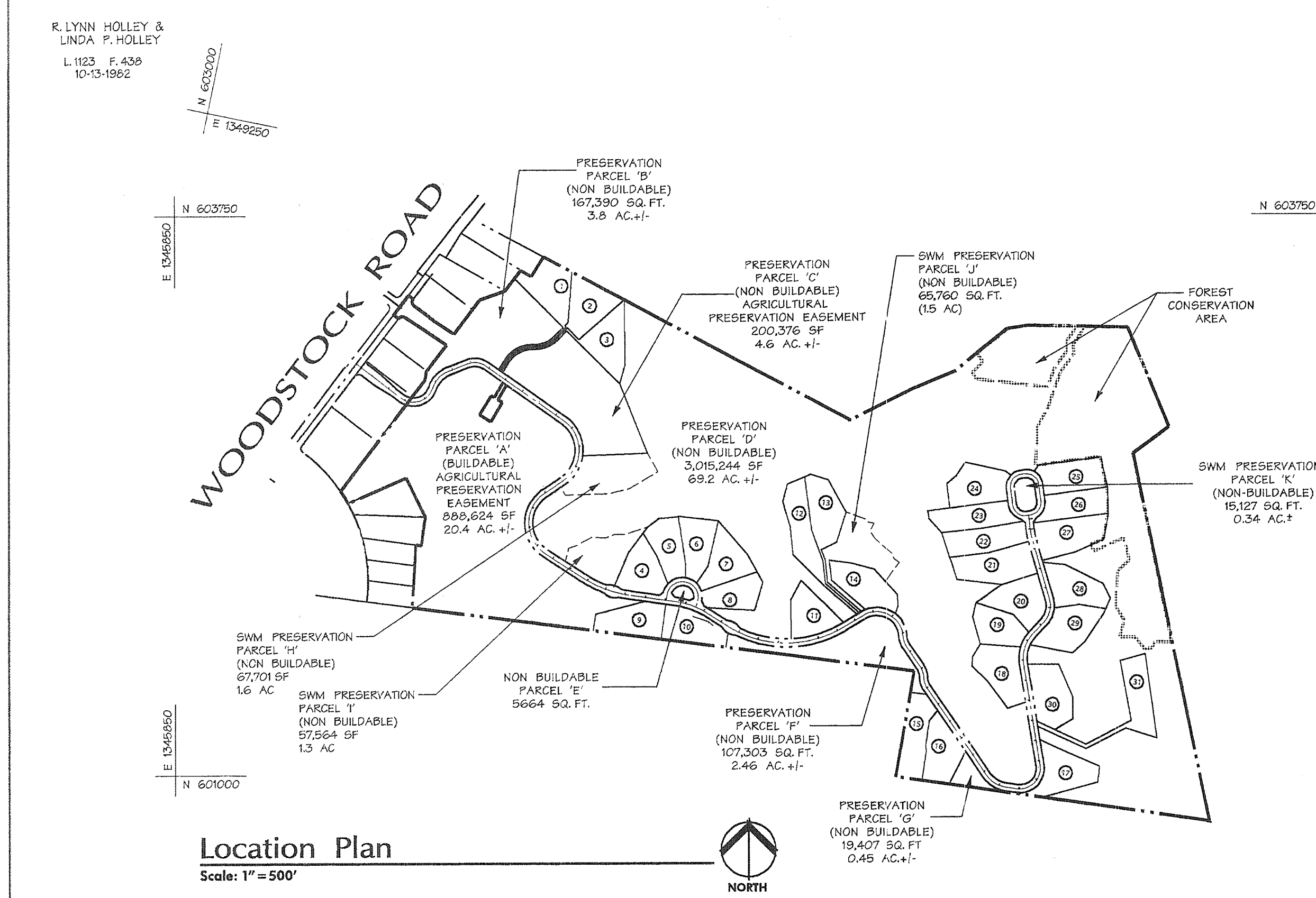
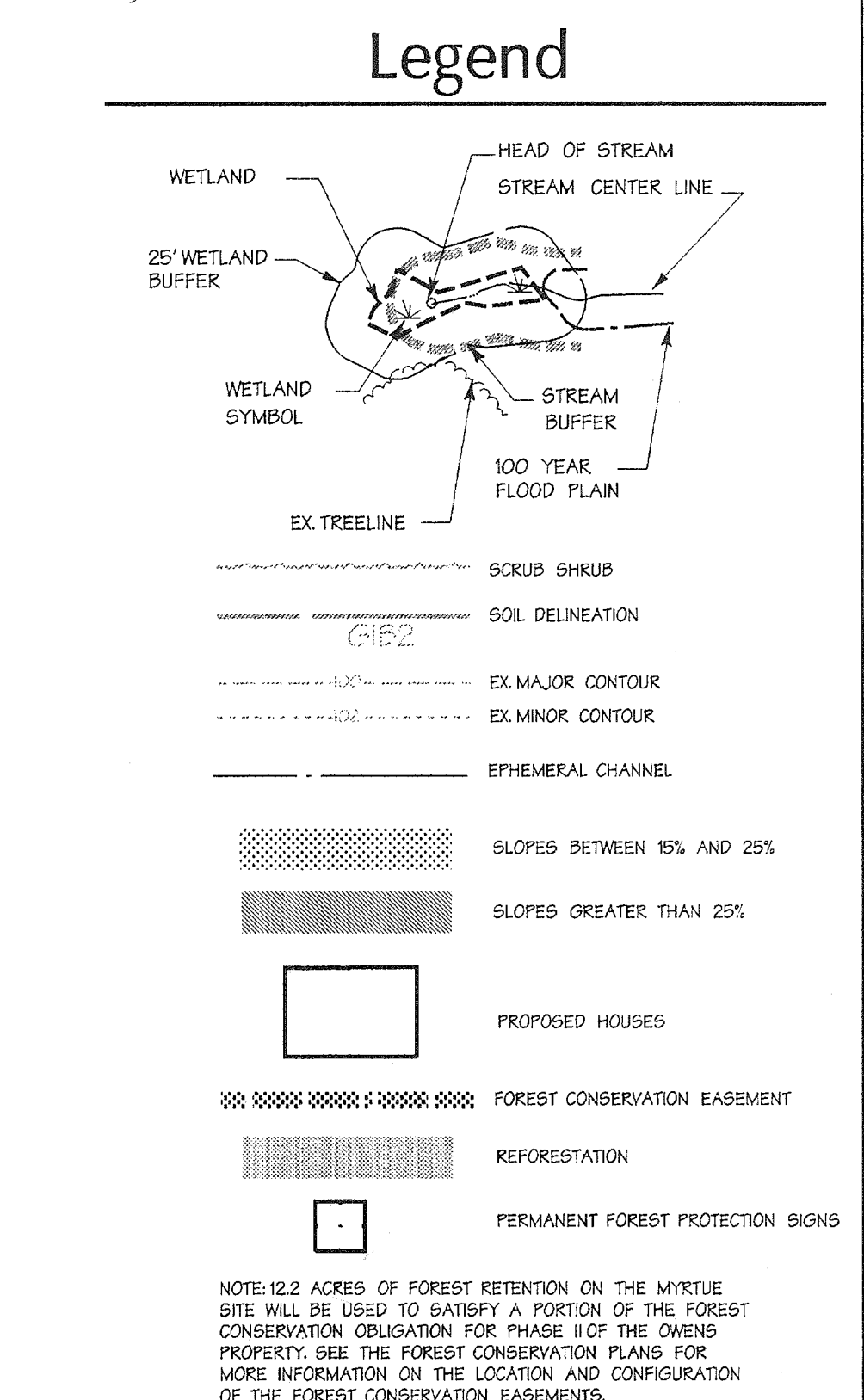
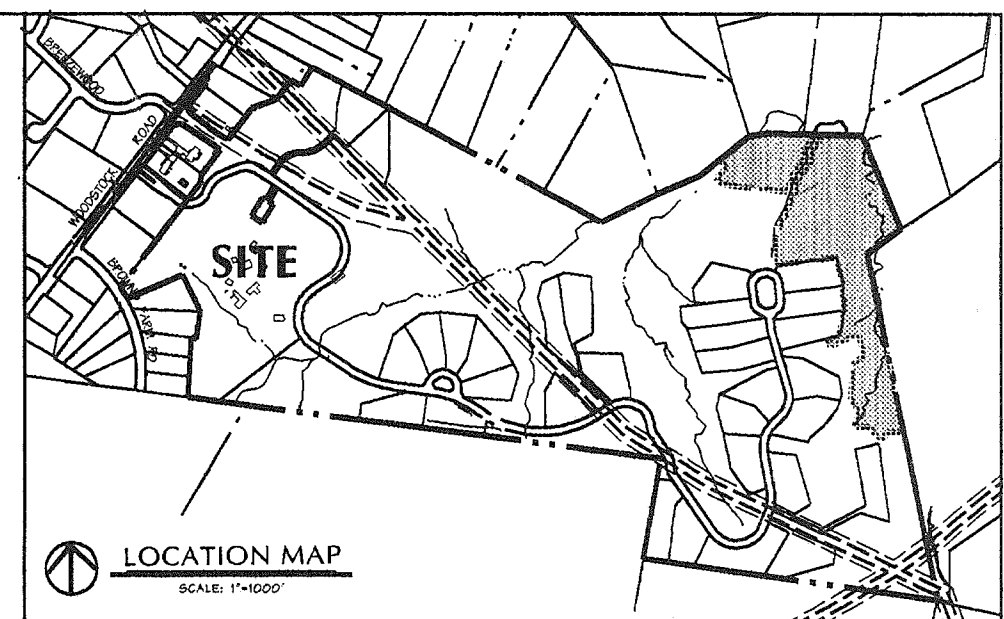
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|--------|-----|----------|----------|-----------|----------|
| Des By | SNH | Scale | 1" = 50' | Proj. No. | 01086.D |
| Dwn By | | Date | 1/4/06 | | |
| Chk By | KRK | Approved | | | 26 OF 27 |

Landscape Architect No. 405

F-05-121



12.2 ACRES OF NON-FLOOD PLAIN FOREST RETAINED ON MYRTUE PROPERTY (MAP 10, GRID 10, P. 225) TO PARTIALLY FULFILL THE OWENS PHASE II FOREST CONSERVATION OBLIGATION



APPROVED: HOWARD COUNTY DEPT. OF PUBLIC WORKS
William Z. ... 1-19-06
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
... 1/27/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION

... 2/9/06
CHIEF, DIVISION OF LAND DEVELOPMENT

| Date | No. | Revision Description |
|--|-----|----------------------|
| FINAL PLAN PHASE II | | |
| OWENS PROPERTY | | |
| (MYRTUE PROPERTY SHOWN) | | |
| LOTS 43 THRU 97 AND OPEN SPACES LOTS 98, 99 & 100 | | |
| NON-BUILDABLE BULK PARCELS 'C' AND 'D' | | |
| TAX MAP 31 PARCEL 243, 572 | | |
| MYRTUE PROPERTY MAP 10, GRID 10, PARCEL 225 | | |
| OWNER/DEVELOPER: | | |
| PATAPSCO LANDING, LLC c/o James Keelty and Co. Inc. P.O. Box 528 61 E. Padonia Road Timonium, MD 21093 | | |

1/4/06
Date

Landscape Architect No. 405

DMW
Daft McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3533
Fax: 296-4706

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

TITLE
FOREST CONSERVATION PLAN
OFFSITE FOREST CONSERVATION AREAS

| | | | | | |
|---------|-----|----------|----------|-----------|---------|
| Des. By | KAD | Scale | AS SHOWN | Proj. No. | 01086.D |
| Dm. By | WDE | Date | 1/4/06 | 27 of 27 | |
| Chk. By | KRK | Approved | | | |

F-05-121