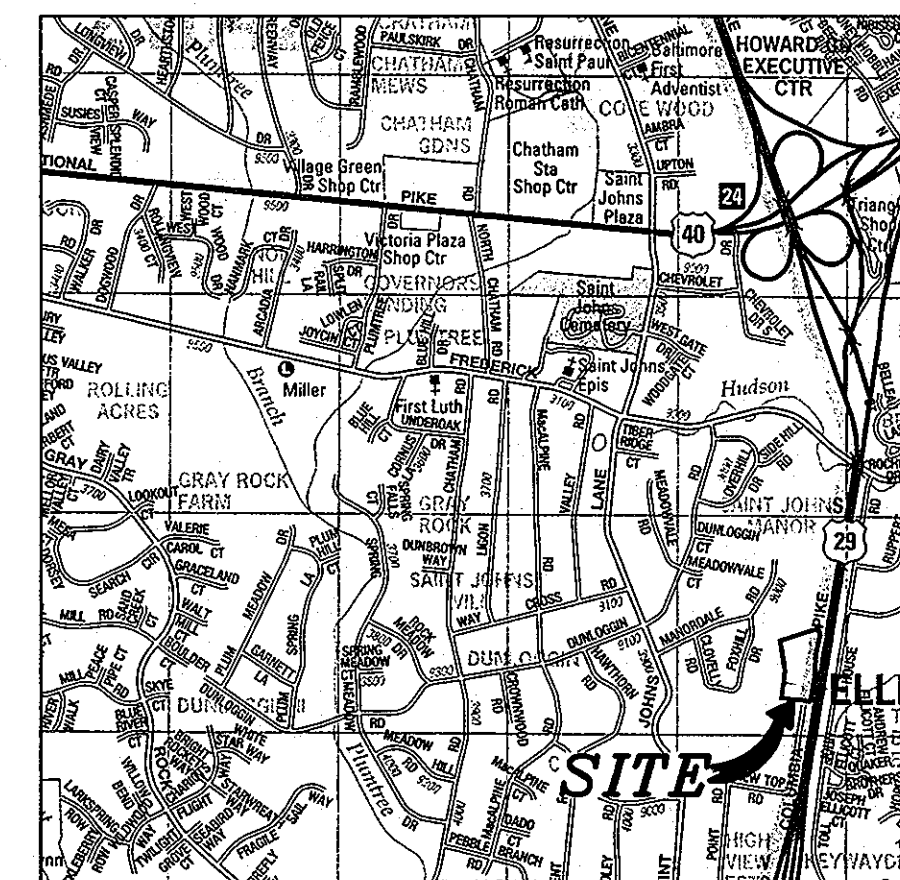


# GENERAL NOTES

- 1) THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/22/04 COMPREHENSIVE ZONING PLAN AND PER COMP. LITE ZONING AMENDMENTS EFFECTIVE 7/28/08.
- 2) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS ASHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- 3) THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1800 AT LEAST FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- 4) THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" @ 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- 5) ALL ASPECTS OF THIS PROJECT SHALL BE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVER(S) HAVE BEEN APPROVED.
- 6) THE BOUNDARY SHOWN IS BASED ON A MONUMENTED FIELD-RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC., DATED MARCH, 2003.
- 7) THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, MONUMENTS 2498 & 2493, WHICH ARE BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- 8) EXISTING TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY BENCHMARK ENGINEERING, INC., DATED MARCH 2003 AND SUPPLEMENTED IN NOVEMBER 2006. CONTOUR INTERVAL IS 2 FEET. ADDITIONAL OFFSITE TOPOGRAPHY WAS PURCHASED FROM HOWARD COUNTY GEOGRAPHICAL INFORMATION SYSTEMS.
- 9) EXISTING UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND RECORD DRAWINGS.
- 10) CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY AND SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.
- 11) THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER SHALL BE PUBLIC, CONNECTING TO EX. CONTRACT NO. 845-1455 UNDER CONTR. NO. 845-1455. DRAINAGE IS WITHIN THE PUBLIC DRAINAGE DISTRICT.
- 12) FOREST STAND DELINEATION PLAN WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MAY, 2003 AND APPROVED UNDER S-03-017.
- 13) NO WETLANDS OR 100-YEAR FLOODPLAIN EXIST WITHIN THE LIMITS OF PROJECT AS PER A CERTIFICATION LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED APRIL, 2003 AND APPROVED UNDER S-03-017.
- 14) NOISE LINE SHOWN ON PLANS FOR THIS PROJECT BASED ON DATA PROVIDED BY THE MSHA AS PER CONTRACT NO. H060525170 AND APPROVED UNDER S-03-017.
- 15) THE NOISE CONTOUR LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY 1992, AND CANNOT BE EMPLOYED TO EXACTLY LOCATE THE EXPOSED EXPOSURE. THE EXPOSED EXPOSURE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- 16) A.P.F.O. TRAFFIC STUDY WAS PREPARED BY THE MARS GROUP, INC. DATED MAY, 2003 AND APPROVED UNDER S-03-017.
- 17) THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNEY ENGINEERING ASSOCIATES, DATED NOVEMBER 30, 2005 AND APPROVED UNDER P-06-008.
- 18) THERE IS AN EXISTING DWELLING LOCATED ON-SITE (LOT 1) TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLINGS ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS REQUIRE.
- 19) TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERY LOCATIONS ON-SITE.
- 20) UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
- 21) ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- 22) BRL INDICATES BUILDING RESTRICTION LINE.
- 23) ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE.
- 24) THIS PLAN IS SUBJECT TO THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE AMENDED HOWARD COUNTY ZONING REGULATIONS. IF AT 150 FALLS UNDER THE CRITERIA ESTABLISHED IN THE INFILL DEVELOPMENT REGULATIONS OF COUNCIL BILL 45-2003, EFFECTIVE OCTOBER 2, 2003.
- 25) STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2007 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I AND II. QUALITY CONTROL WILL BE PROVIDED BY A SWI POND WITH SAND FILTER, MICRO-BIORETENTION FACILITIES, ROOFTOP AND NON-ROOFTOP DISCONNECTION. QUALITY CONTROL SHALL BE PROVIDED BY THE SWI POND.
- 26) ALL MICRO-BIORETENTION FACILITY NO. 1-A WILL BE PRIVATELY OWNED AND MAINTAINED BY THE BUILDERS. MICRO-BIORETENTION FACILITY NO. 1-B AND THE SWI POND WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED.
- 27) TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- 28) 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 (14 GAUGE), INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- 29) EXISTING LIGHTING SHALL BE DIRECTED REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIAL ZONING DISTRICTS. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 16.124 OF THE HOWARD COUNTY ZONING REGULATIONS. THE HOWARD COUNTY DESIGN MANUAL (VOLUME I) (1992) AND AS MODIFIED BY ORDINANCES FOR STREET LIGHTS IN ACCORDANCE WITH DEVELOPMENTS (1996). A MINIMUM SPACING OF TWENTY FEET (20') SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- 30) PERIMETER LANDSCAPING AND TRASH PAD SCREENING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL AND AS SHOWN ON SHEET OF THE ROAD CONSTRUCTION DRAWINGS FOR F-07-110. SURETY IN THE AMOUNT OF \$13,000.00 FOR 35 SHADE TREES, 18 EVERGREENS AND \$54,667.80 SHRUBS SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS PLAN, F-07-110.
- 31) FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE OR PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY AND NOT TO THE PIPESTEM LOT DRIVEWAY.
- 32) DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES FOR THE FOLLOWING MINIMUM REQUIREMENTS:
  - A) WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE)
  - B) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
  - C) GEOMETRY - MAX. 10% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.
  - D) STRUCTURE/CHALKERS/SHOULDERS - CAPABLE OF SUPPORTING 25 GROSS TONS (20% LOAD)
  - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
  - F) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
  - G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- 33) WAIVER PETITION WP-04-72 WAS REQUESTED AND APPROVED ON DECEMBER 28, 2003 TO WAIVE SECTION 16.121(c)(2) PER THE FOLLOWING CONDITIONS: THE PROPOSED OPEN SPACE LOT 9 SHALL BE DEDICATED TO THE HOA FOR SNOW PURPOSES. MINIMUM RESIDENTIAL LOT SIZES MUST BE 20,000 S.F. OR GREATER, AND ACCESS TO THESE OPEN SPACE LOTS SHALL BE DIRECTLY FROM THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD.
- 34) WAIVER PETITION WP-03-137 WAS REQUESTED AND APPROVED ON SEPTEMBER 23, 2003 TO WAIVE SECTION 16.120(c)(2) PER THE FOLLOWING CONDITIONS: THE PROPOSED USE-IN-COMMON MAINTENANCE AGREEMENT FOR LOT 1 OF THE HAWES PROPERTY, LOT 1 OF THE MOSNER PROPERTY AND PARCELS 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.
- 35) WAIVER PETITION WP-04-31, REQUESTED TO WAIVE SECTION 16.120(c)(4)(ii)(c), WAS ALLOWED TO EXPIRE AND BECOME NULL & VOID DUE TO INACTIVITY.
- 36) APPLICABLE HOWARD COUNTY DPZ FILE REFERENCES FOR THIS PROJECT INCLUDE:
  - 03-190, WP-03-137, WP-04-72, S-03-017, CONTR. #14-4481-D, P-06-008
  - 03-190, WP-03-137, WP-04-72, S-03-017, CONTR. #14-4481-D, P-06-008
- 37) A DESIGN MANUAL WAIVER WAS SUBMITTED TO THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED BY LETTER DATED JAN. 22, 2006 FOR DIM. III, CHAPTER 2, SECTION 2.4.1, TO ALLOW FOR GRADING DEVIATIONS FROM THE TYPICAL ROADWAY SECTION FOR A PUBLIC ACCESS PLANT (FIGURE 2.09 IN CONJUNCTION WITH TABLE 2.01) IN ORDER TO MEET EXISTING CONDITIONS FOR THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD. HOWARD COUNTY WILL NOT BE LIABLE FOR ANY DAMAGES TO THE PUBLIC R/W INCURRED DURING NECESSARY MAINTENANCE OF THE EXISTING RETAINING WALL LOCATED ON LOT 1.
- 38) A DESIGN MANUAL WAIVER WAS SUBMITTED TO THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED BY LETTER DATED JULY 26, 2003, FOR DIM. III, CHAPTER 2, SECTION 2.3.2.5.3 TO ALLOW FOR THE MINIMUM LENGTH OF A HORIZONTAL CURVE IN A PUBLIC ROADWAY TO BE LESS THAN 100' FOR A CUL-DE-SAC OR LOCAL ROAD IN ORDER TO MEET EXISTING CONDITIONS FOR THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD.
- 39) FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY PLACEMENT OF 2.51 ACRES OF REQUIRED AFFORESTATION INTO AN OFF-SITE EASEMENT ON PROPERTY IDENTIFIED AS THE ROSEBAR PROPERTY, PRESERVATION PARCEL A, LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS PARCEL 221, SITUATED ON THE WEST SIDE OF HOWARD ROAD. THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115/NEW COLONY VILLAGE. DPZ HAS DETERMINED THAT A REDLINE REVISION SHALL BE MADE TO SDP-97-115 TO SHOW 2.51 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL FC EASEMENT LOCATED ON ROSEBAR. SURETY IN THE AMOUNT OF \$54,667.80 FOR 2.51 ACRES OF REQUIRED AFFORESTATION SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THE FINAL PLAN, F-07-110/HAWES PROPERTY.
- 40) ALL AREAS OF CONTROLLED FILL TO BE AT 90% COMPACTION PER ASTM-1780 STANDARDS.
- 41) SHA APPROVAL IS REQUIRED FOR THE PROPOSED OUTFALL AND STORM DRAIN SYSTEM WITHIN THE SVA RIGHT-OF-WAY.
- 42) THE DRIVEWAY RELOCATION FOR EXISTING PARCELS 384 AND 257 MUST BE RESOLVED PRIOR TO FINAL PLAN APPROVAL.
- 43) THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR REMOVAL OF GRAFTING FROM THE RETAINING WALLS.
- 44) THE CURRENT OWNERS (VIVENCIO R. & JEANNE C. REYES) OF THE ADJOINING PARCEL (P.755, LOT 9) TO THE NORTH OF THIS PROPERTY HAVE SIGNED A LETTER OF ACKNOWLEDGMENT STATING THEY ARE AWARE THAT AN EXISTING DRAINAGE SWALE IS LOCATED AT THE REAR OF THEIR PROPERTY. THAT THIS SWALE CURRENTLY, AND WILL AFTER DEVELOPMENT OF THIS PROJECT, CONVEY RUNOFF FROM THIS SITE. THAT ANY NEW HOMES TO BE BUILT ON THEIR PROPERTY SHOULD NOT BE LOCATED IN THIS AREA UNLESS PROVISIONS ARE MADE TO RE-ROUTE THE WATER FLOW, AND THAT THIS SITUATION WILL NOT BE ELIMINATED BY THIS PROJECT. A COPY OF THIS LETTER IS ON FILE WITH THE DEVELOPER AND WITH PERTINENT HOWARD COUNTY REVIEW AGENCIES.
- 45) FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY PLACEMENT OF 2.51 ACRES OF REQUIRED AFFORESTATION INTO AN OFF-SITE EASEMENT ON PROPERTY IDENTIFIED AS THE ROSEBAR PROPERTY, PRESERVATION PARCEL A, LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS PARCEL 221, SITUATED ON THE WEST SIDE OF HOWARD ROAD. THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115/NEW COLONY VILLAGE. DPZ HAS DETERMINED THAT A REDLINE REVISION SHALL BE MADE TO SDP-97-115 TO SHOW 2.51 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL FC EASEMENT LOCATED ON ROSEBAR. SURETY IN THE AMOUNT OF \$54,667.80 FOR 2.51 ACRES OF REQUIRED AFFORESTATION SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THE FINAL PLAN, F-07-110/HAWES PROPERTY.
- 46) WAIVER PETITION WP-12-61, REQUESTED TO WAIVE SECTION 16.144(c) AND (d) REGARDING PAYMENT OF FEES, POSTING OF ALL MONIES AND FILING OF APPROPRIATE SURETY AND SUBMITTAL OF THE ORIGINAL PLAN WITHIN 30 DAYS, WP-12-061 WAS APPROVED ON NOVEMBER 3, 2011 AND EXTENDED THE DEADLINE FOR PAYMENT OF FEES AND POSTING OF SURETY TO OCTOBER 30, 2012 AND SUBMITTAL OF THE FINAL PLAN WITHIN 30 DAYS, 2012.

# HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 3 THRU 8, OPEN SPACE LOT 9 AND NON-BUILDABLE BULK PARCEL 'A' PARCEL 253 / ZONE: R-20 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND REVISED FINAL ROAD CONSTRUCTION PLANS F-07-110

BENCH MARKS - NAD '83  
HO. CO. #2418 EL=423.270  
N-582652.103 E-1,364,255.930  
STAMPED DISC ON CONC. MONUMENT 42'  
NW FROM PK SET ALONG N. EDGE OF  
MANAHAN ROAD, 128' FROM EX. T.W.H.S.;  
WITHIN TRANSMISSION LINE R/W  
HO. CO. #2413 EL=404.482  
N-580,648.904 E-1,364,974.471  
STAMPED DISC ON CONC. MONUMENT 159'  
NE FROM BGE POLE #501794; 97.3' SE  
FROM EX. 10" CEDAR TREE IN CENTER OF  
TRANSMISSION LINE R/W



VICINITY MAP  
ADD MAP 4815 GRID J-18  
SCALE: 1"=2000'

## LEGEND

- SOILS CLASSIFICATION AbC1
- SOILS DELINEATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING WOODS LINE
- PROPOSED WOODS LINE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- STEEP SLOPES 15% TO 24.9%
- STEEP SLOPES 25% OR GREATER
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- SILT DIVERSION FENCE
- SUPER SILT FENCE
- INLET PROTECTION
- EARTH DIKE
- RIP-RAP
- PIPE SLOPE DRAIN

## MINIMUM LOT SIZE CHART

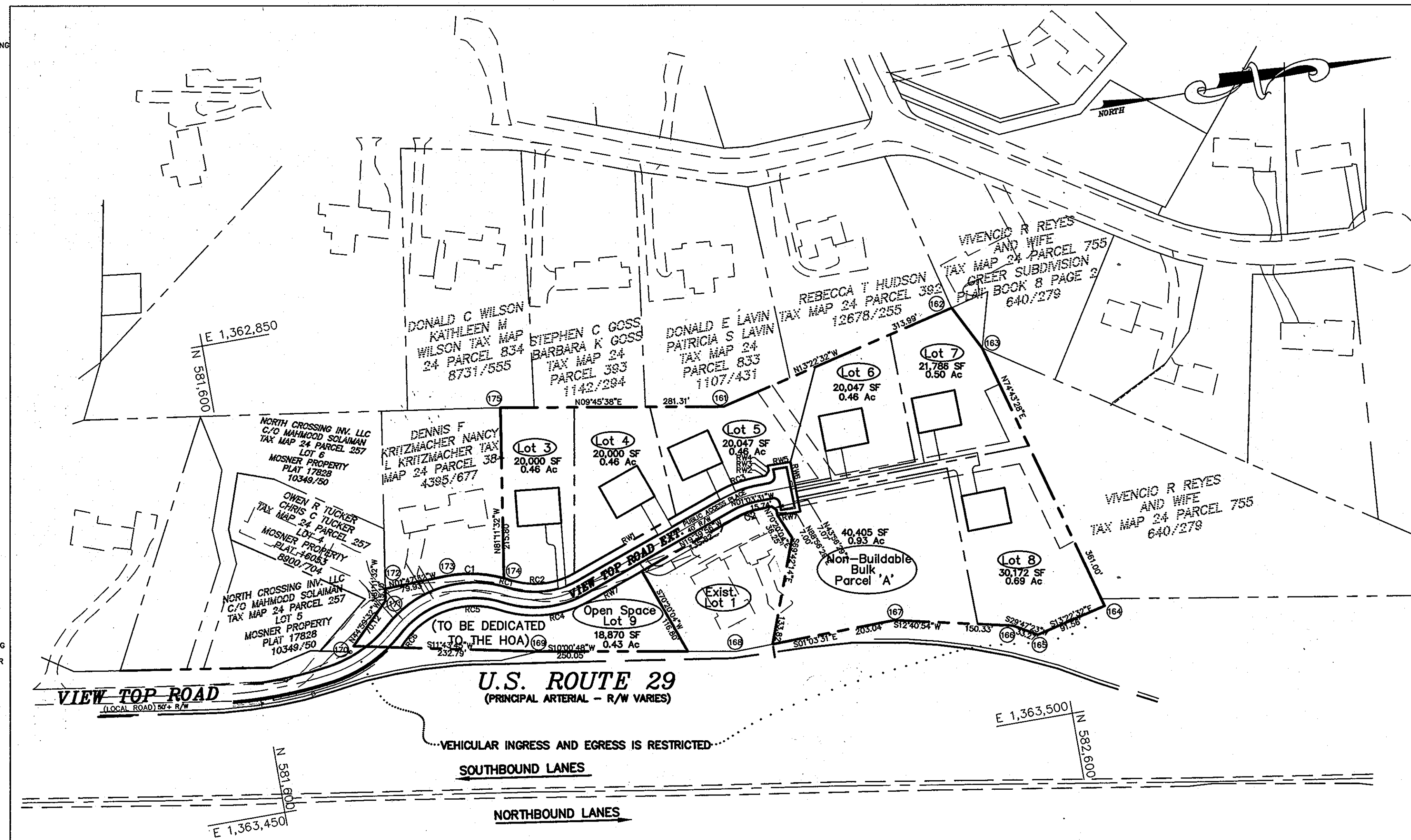
LOT #	GROSS AREA (SF)	PIPESTEM AREA (SF)	MIN. LOT SIZE (SF)
7	23,021	1,235	21,786
8	31,711	1,539	30,172

## RIGHT-OF-WAY CURVE DATA

CURVE	RADIUS	ARC	DELTA	TANGENT	CHORD
RC1	164.87'	8.27'	02°52'26"	4.14'	N26°24'42"E 8.27'
RC2	101.00'	45.46'	47°30'57"	44.46'	N04°05'29"E 81.38'
RC3	140.00'	45.46'	02°52'26"	22.93'	N102°14'31"E 45.27'
RC4	141.00'	116.97'	47°31'51"	62.08'	S04°05'58"W 113.64'
RC5	107.30'	125.70'	67°02'07"	71.18'	S05°29'43"E 118.63'
RC6	188.00'	14.32'	04°21'54"	7.16'	S39°59'37"E 14.32'

## SITE DATA TABULATION

- 1) GENERAL SITE DATA
  - a. PRESENT ZONING: R-20
  - b. LOCATION: TAX MAP 24 - GRID 17 - PARCEL 253
  - c. APPLICABLE DPZ FILE REFERENCES: S-03-017, F-03-190, WP-03-137, WP-04-072, P-06-008, CONTR. #14-4481-D
  - d. DEED REFERENCE: L7868 / F.846 (PLAT REFERENCE: 16323)
  - e. PROPOSED USE OF SITE: 7 SFD HOMES (INCLUDES 1 EXIST. SFD ON LOT 1)
  - f. PROPOSED WATER AND SEWER SYSTEMS: PUBLIC
- 2) AREA TABULATION
  - a. TOTAL AREA OF SITE.....5.61 Ac.± (INCL. LOT 1)
  - b. AREA OF 100 YEAR FLOODPLAIN (APPROX.).....N/A
  - c. AREA OF STEEP SLOPES (25% OR GREATER).....0.84 Ac.±
  - d. NET AREA OF SITE.....4.77 Ac.±
  - e. AREA OF THIS PLAN SUBMISSION.....5.61 Ac.±
  - f. LIMIT OF DISTURBANCE (APPROX.).....5.02 Ac.±
- 3) UNIT/LOT TABULATION
  - a. TOTAL NUMBER OF RESIDENTIAL LOTS PROPOSED ON THIS SUBMISSION.....7 (INCL. 1 EXIST. ON LOT 1)
  - b. TOTAL NUMBER OF OPEN SPACE LOTS PROPOSED ON THIS SUBMISSION.....1
  - c. OPEN SPACE DATA
    - a. MINIMUM RESIDENTIAL LOT SIZE SELECTED.....20,000 S.F.
    - b. OPEN SPACE REQUIRED FOR TOTAL AREA OF SITE (8% OF 5.61 AC).....0.34 Ac.±
    - c. TOTAL AREA OF PROPOSED OPEN SPACE LOTS PROVIDED WITH THIS SUBMISSION.....0.43 Ac.±
      - 1) OPEN SPACE AREAS LESS THAN 35' IN WIDTH (NON-CREDITED).....0.00 Ac.±
      - 2) TOTAL AREA OF OPEN SPACE MEETING MINIMUM OPEN SPACE REQUIREMENTS (CREDITED).....0.43 Ac.±
    - d. AREA OF RECREATIONAL OPEN SPACE REQUIRED.....N/A
    - e. TOTAL AREA OF RECREATIONAL OPEN SPACE PROVIDED.....0.00 Ac.±



## LOCATION PLAN

SCALE: 1"=100'

## SHEET INDEX

NO.	DESCRIPTION
1	COVER SHEET
2	ROAD CONSTRUCTION PLAN, NOTES AND DETAILS
3	ROADWAY PROFILE, NOTES, AND DETAILS
4	GRADING PLAN
5	SEEDMENT & EROSION CONTROL PLAN, NOTES, AND DETAILS
6	EROSION AND SEDIMENT CONTROL PLAN
7	(SHEET ELIMINATED)
8	STORMWATER MANAGEMENT PROFILES, NOTES AND DETAILS
9	STORM DRAIN AREA AND SOILS MAP
10	STORM DRAIN PROFILES
11	LANDSCAPE PLAN, NOTES AND DETAILS
12	(SHEET ELIMINATED)
13	MISCELLANEOUS SITE PLAN PROFILES, NOTES AND DETAILS
14	RETAINING WALL CONSTRUCTION DETAILS
15	OFF-SITE FOREST CONSERVATION PLAN, NOTES AND DETAILS
16	MICRO-BIORETENTION FACILITY SECTIONS AND DETAILS

## BOUNDARY CURVE DATA

CURVE	RADIUS	ARC	DELTA	TANGENT	CHORD
C1	164.87'	72.13'	25°04'05"	36.65'	S12°28'28"W 71.56'
C2	100.00'	32.47'	18°36'24"	16.38'	S10°21'44"E 32.33'

## BOUNDARY COORDINATE TABLE (NAD '83)

NO.	NORTHING	EASTING
161	582,233.9625	1,363,040.6109
162	582,539.4354	1,362,967.9745
163	582,568.6933	1,363,024.9128
164	582,663.8030	1,363,373.1586
165	582,574.7231	1,363,394.3404
166	582,545.8458	1,363,377.8090
167	582,399.1802	1,363,344.8090
168	582,196.1755	1,363,348.5575
169	581,949.9344	1,363,305.0797
170	581,722.0094	1,363,257.7577
171	581,771.5999	1,363,208.1806
172	581,773.9120	1,363,193.2587
173	581,853.8017	1,363,190.7589
174	581,823.6813	1,363,206.1755
175	581,956.7245	1,362,992.9202

## RIGHT-OF-WAY BEARINGS AND DISTANCES

LINE	BEARING	DIST.
RW1	N19°39'56"W	211.22'
RW2	N01°03'31"W	15.72'
RW3	N48°03'31"W	7.07'
RW4	S88°56'29"W	7.00'
RW5	N01°03'31"E	29.00'
RW6	N88°56'29"E	64.00'
RW7	S01°03'31"E	29.00'
RW8	S19°39'56"E	75.40'

THE PURPOSE OF THESE PLANS IS TO PROVIDE A REVISED LOT LAYOUT AND TO REVISE THE STORMWATER MANAGEMENT DESIGN.

## 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. 40091  
Expiration Date 2-13-2013

## OWNER/DEVELOPER

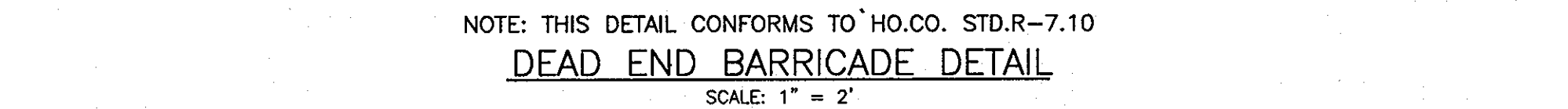
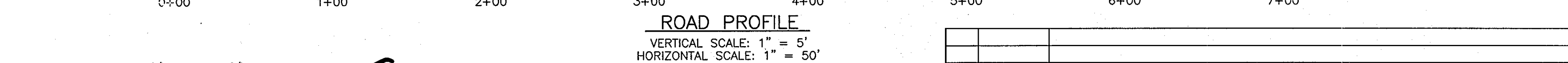
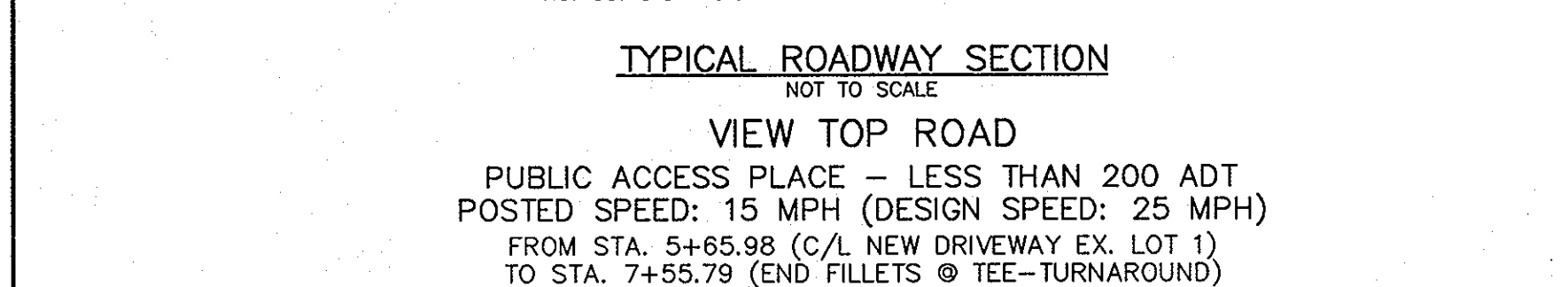
3804 VIEW TOP, LLC  
1055 WEST JOPPA ROAD  
APT. 330  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAWES

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









APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William D. McLaughlin*  
CHIEF, BUREAU OF HIGHWAYS

5-5-08  
DATE:

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Cindy Kammeth*  
CHIEF, DIVISION OF LAND DEVELOPMENT

5/5/08  
DATE:

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

5/5/08  
DATE:

1	9/13/11	REVISED LOT LAYOUT, STORMWATER MANAGEMENT AND LOT GRADING
NO.	DATE	REVISION

# BENCHMARK

• ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS

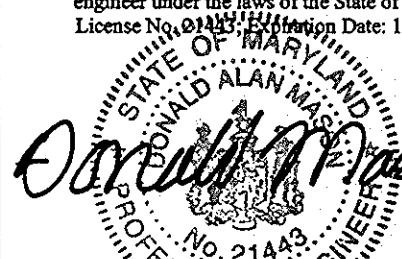
## ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418  
 ELLICOTT CITY, MARYLAND 21043

PHONE: 410-465-6105      FAX: 410-465-6644

E-MAIL: [bei@bei-civilengineering.com](mailto:bei@bei-civilengineering.com)

**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. 0121543, Expiration Date: 12-21-2008



*David M. Pinner*

**3-13-28**

DEVELOPER/CONTRACT PURCHASER:			PROJECT: <b>HAWES PROPERTY</b> SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 1 & 5-10 AND O.S. LOTS 3 & 4		
SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 PHONE: (410) 465-4244			LOCATION: TAX MAP 24 -- GRID 17 PARCEL 253 -- ZONE R-20 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
			TITLE: FINAL/CONSTRUCTION PLAN ROAD PROFILE, NOTES AND DETAILS		
			DATE: DECEMBER 20, 2006 MARCH 14, 2008	PROJECT NO. 1574	
			DRAWING 3 OF 4		



H:\10-024 HAWES\10-024 HAWES\DWG\24-ECF-AUGUST 2011.DWG

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

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Walter R. Smith* 4-16-12  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Jeffrey Slovan* 4/23/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Kat Steinhilber* 4/30/12  
CHIEF, DIV. OF LAND DEVELOPMENT

BY THE OWNER / DEVELOPER:

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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD CONSERVATION DISTRICT.

OWNER / DEVELOPER - OWNER'S AGENT  
BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

OWNER - JEFFREY SLOMAN, PE #40091 3/30/12

OWNER/DEVELOPER

3804 VIEW TOP, LLC  
1055 WEST JOPPA ROAD  
APT. 330  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAWES

- STORM LEGEND
- EW 100 END WALL NUMBER
  - ES 100 END SECTION NUMBER
  - MH 100 STORM MANHOLE NUMBER
  - I 100 STORM INLET NUMBER
  - MB-Z MICRO-BIOTENTION FACILITY NUMBER

STORMWATER MANAGEMENT POND 'SWM POND 2' AND MICRO-BIOTENTION FACILITY 'MB-A' ARE TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.

SEE SHEET 16 OF 16 FOR MICROBIOTENTION FACILITY PLANTINGS

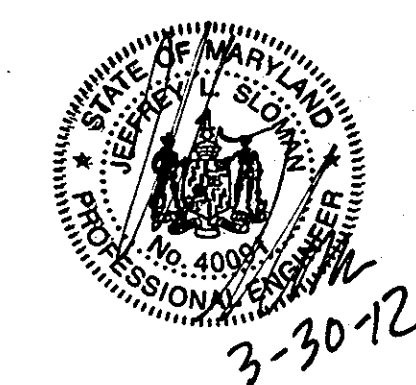
NOTE: THIS SHEET IS FOR FINAL GRADING PURPOSES ONLY.

NOTE: SPOIL FROM TRACKING IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

NOTE: THIS SHEET REPLACES SHEET 4 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

PROFESSIONAL CERTIFICATION

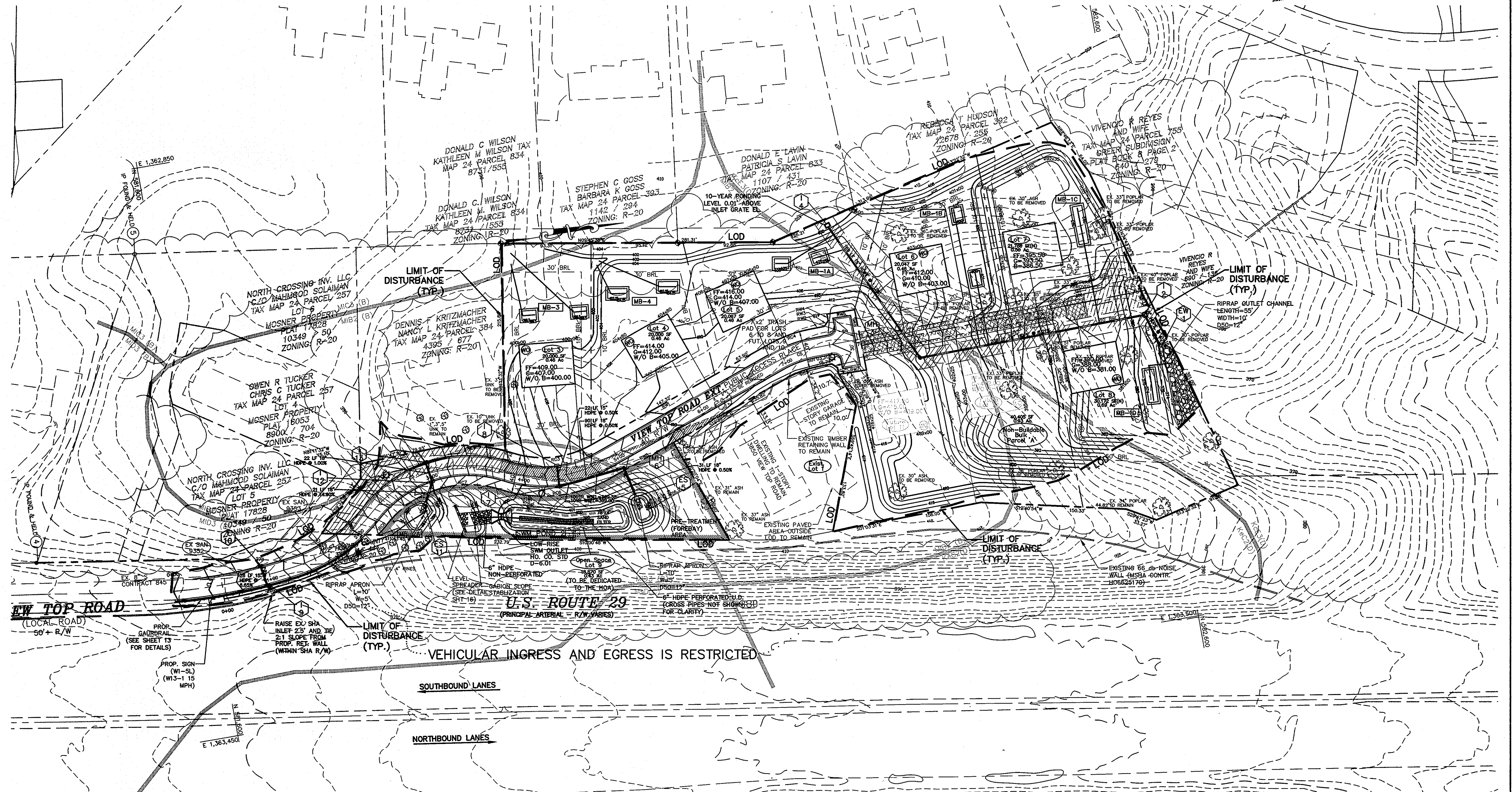
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091  
Expiration Date 2-13-2013



MILDENBERG, BOENDER & ASSOC., INC.  
Engineers Planners Surveyors  
6800 Deepwater Road, Suite 150, Ellicott City, Maryland 21075  
(410) 997-0296 Fax (410) 997-0298 Fax

HAWES PROPERTY  
LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'  
TAX MAP 24 GRID 17 PARCEL 253  
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
GRADING PLAN

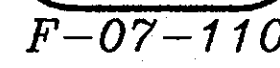
Project	date	SBP 2011
10-024	10/2/2012	SBP 2011
illustration	1/19/2012	engineering
scale	12/15/2011	scale
1"=50'	11/2/2011	approval
no.	description	revisions
1	CHANGED SWM POND TO PUBLIC (PER HOWARD CO)	
2	RESPOND TO HOWARD COUNTY COMMENTS	
3	RESPOND TO HOWARD COUNTY COMMENTS	
4	RESPOND TO HOWARD COUNTY COMMENTS	



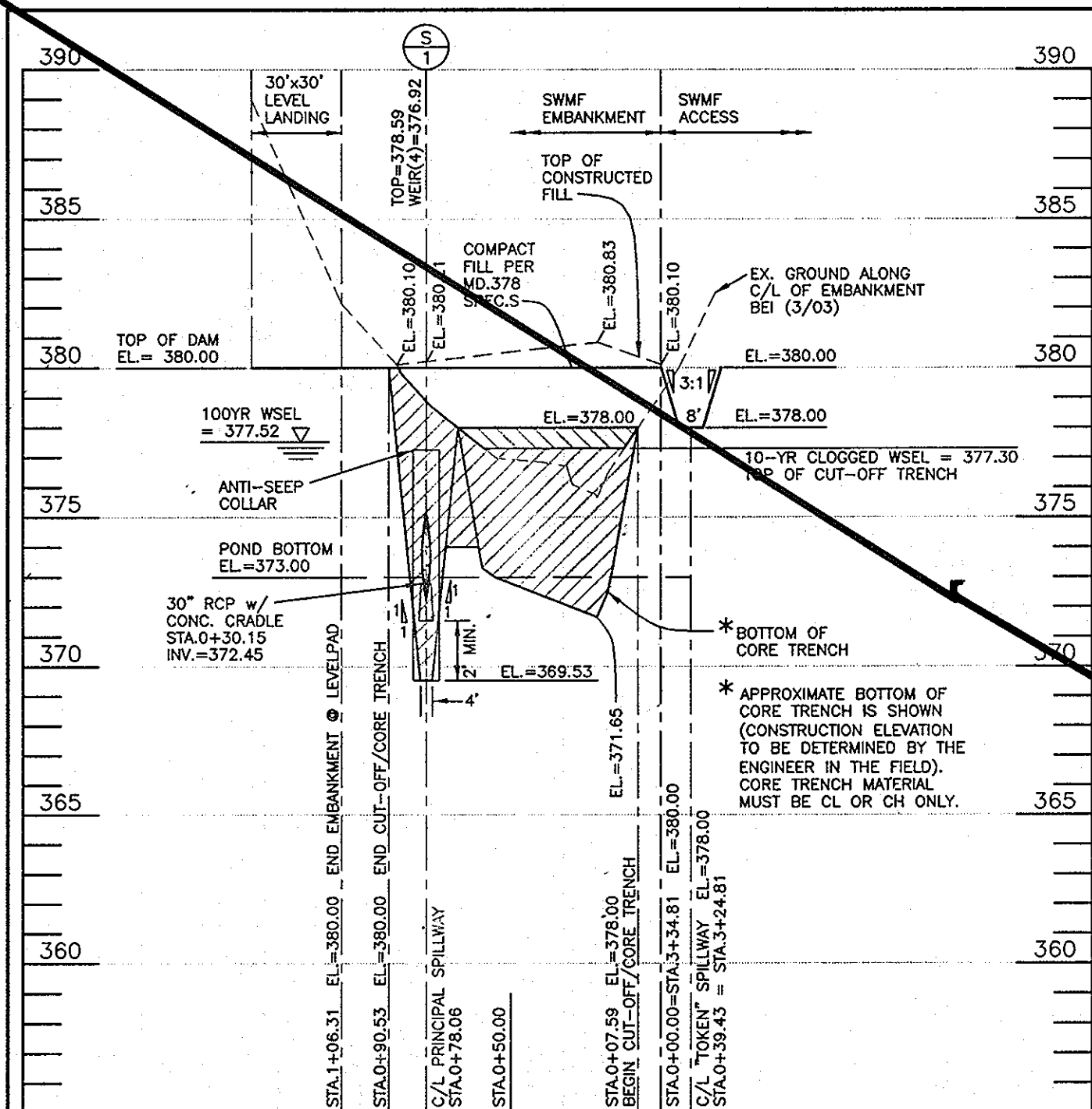






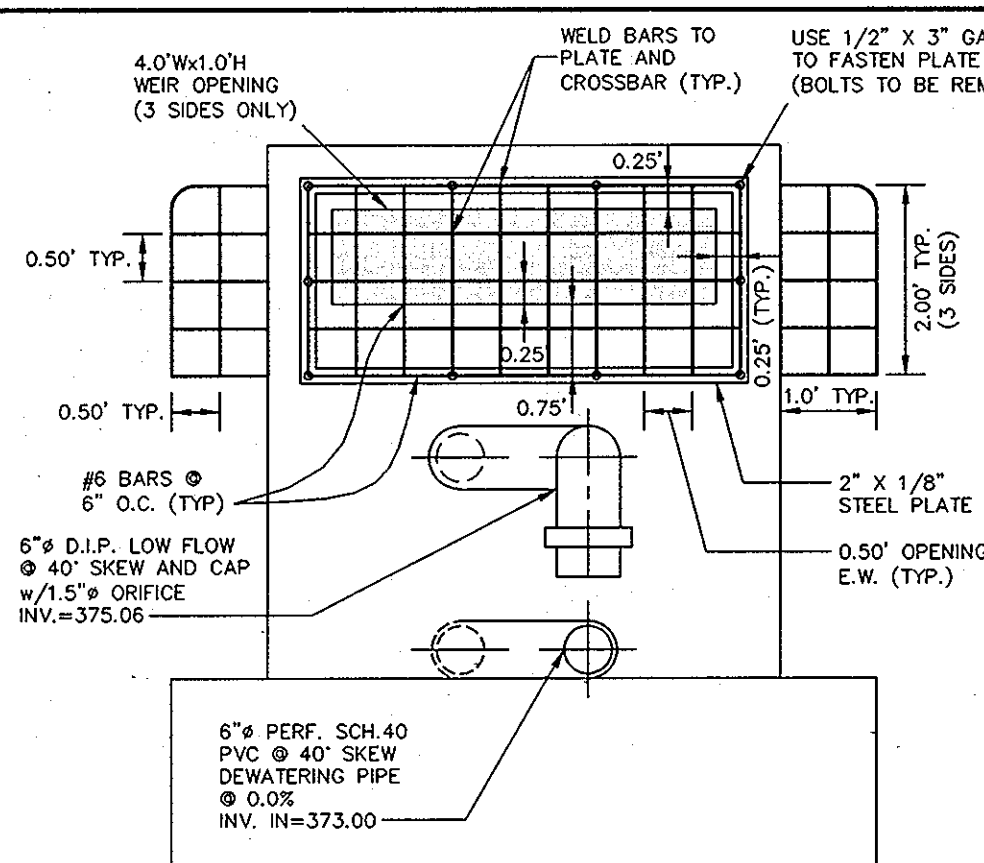




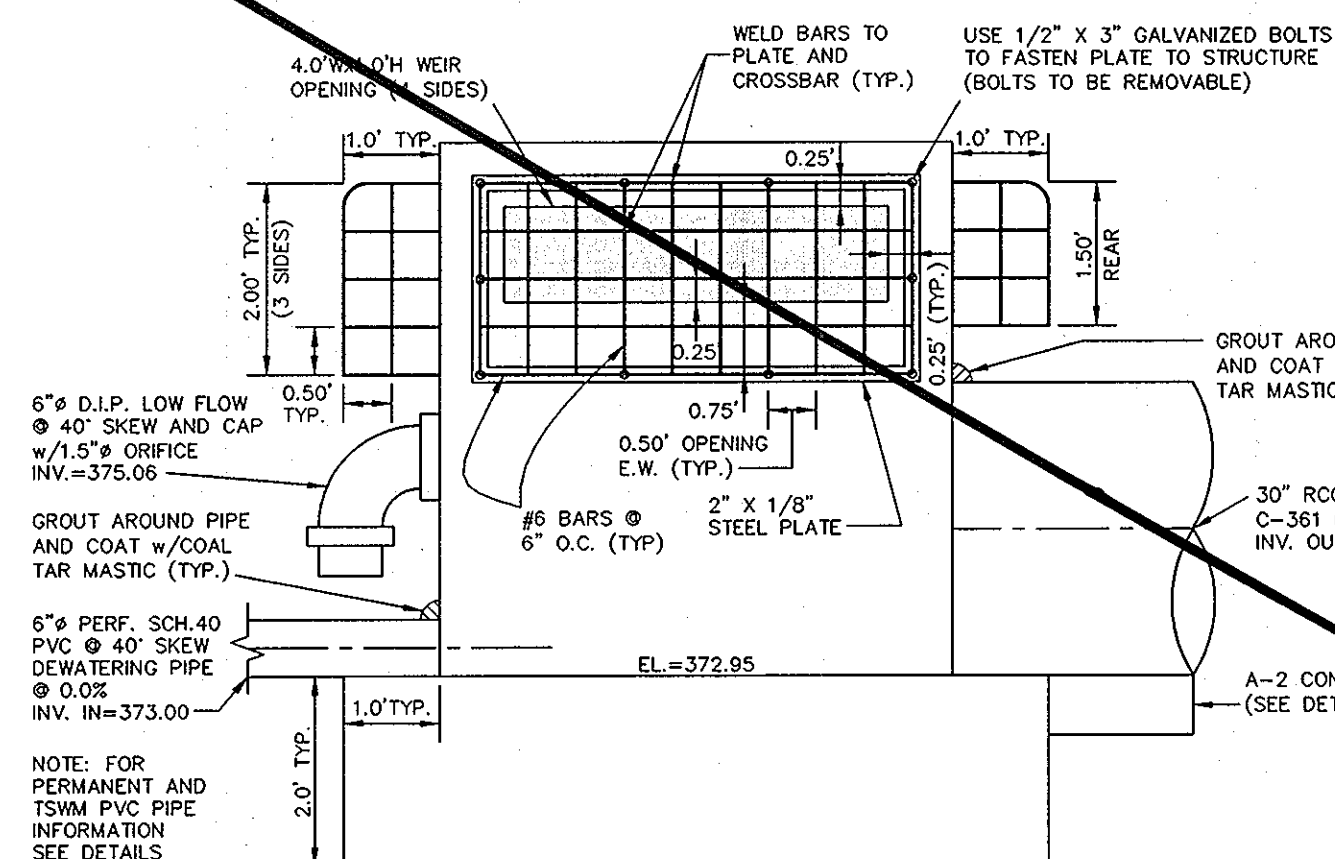


PROFILE ALONG C/L EMBANKMENT

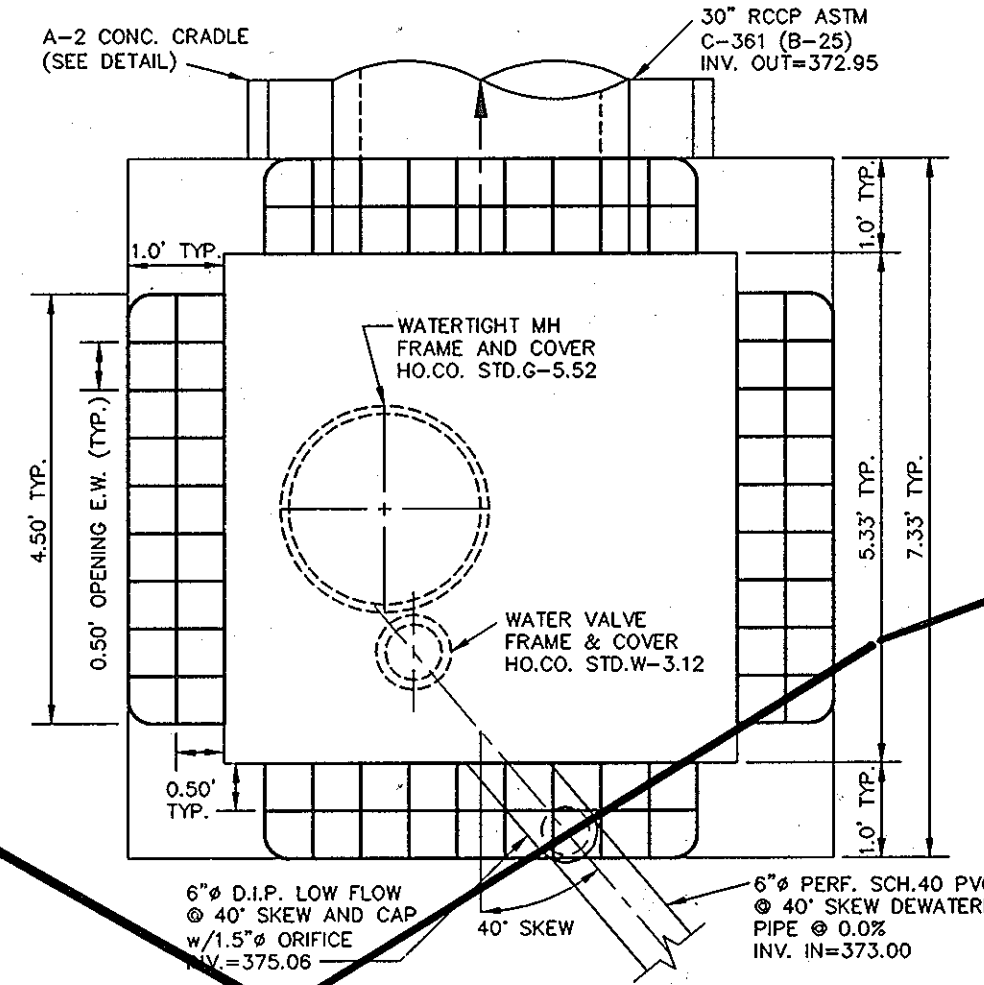
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'



FRONT VIEW



SIDE VIEW (TYP.)



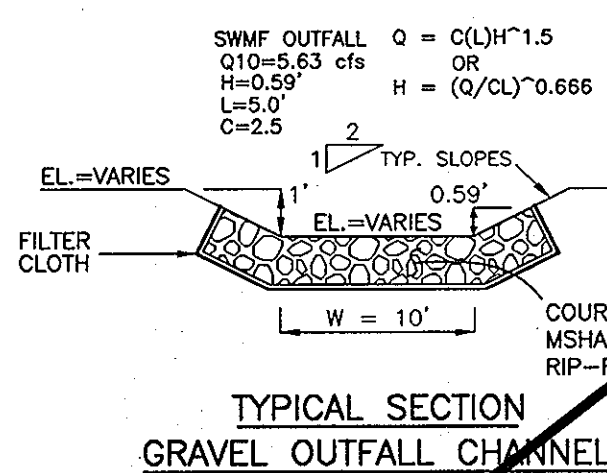
TOP VIEW

TRASH RACK DETAIL

SCALE: 1"=2'

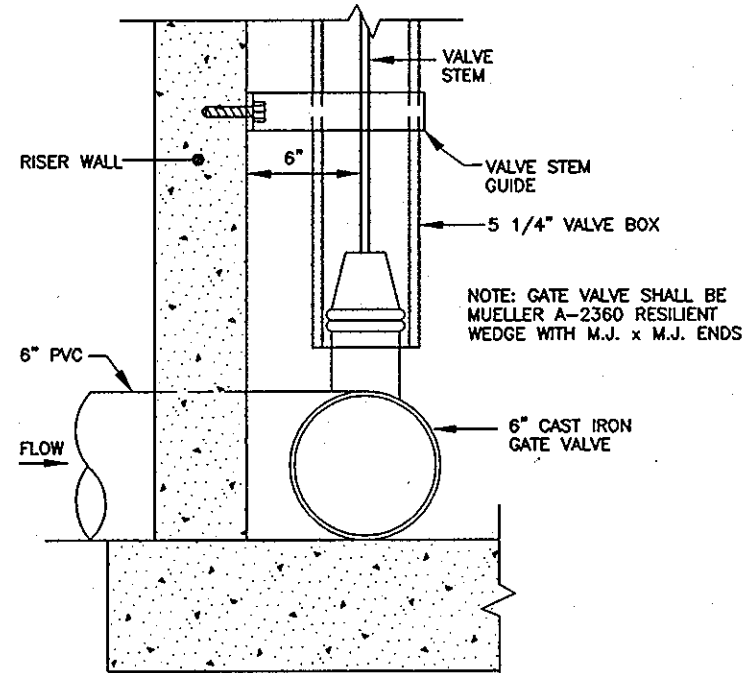
NOTES:

1. TRASH RACKS SHALL BE GALVANIZED AFTER FABRICATION
2. TRASH RACKS SHALL BE PAINTED BATTLESHIP GRAY.
3. TRASH RACKS SHALL BE PLACED ON ALL FOUR (4) SIDES OF RISER/OPENINGS
4. FOR ALL INVERTS, ELEVATIONS, AND LOCATIONS, REFER TO STRUCTURE SCHEDULE.



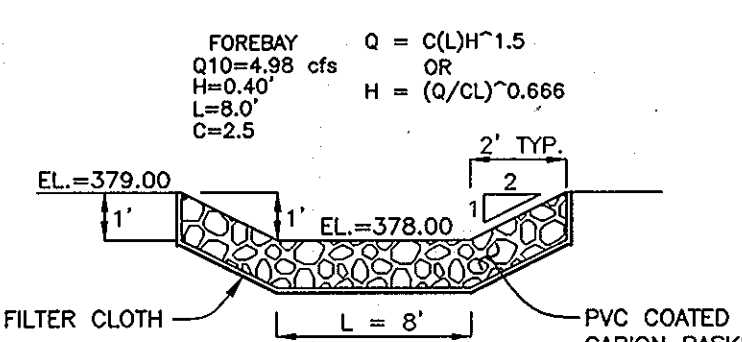
TYPICAL SECTION  
GRAVEL OUTFALL CHANNEL

NOT TO SCALE



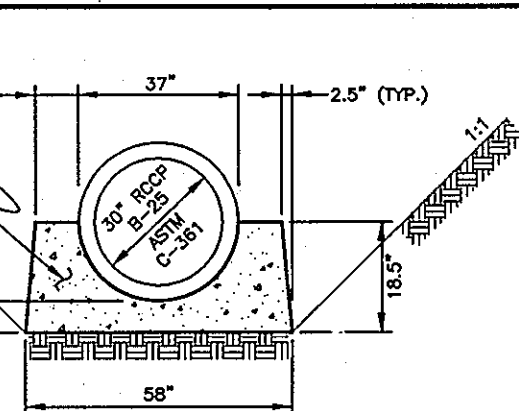
ANCHOR DETAIL  
FOR VALVE STEM

NOT TO SCALE



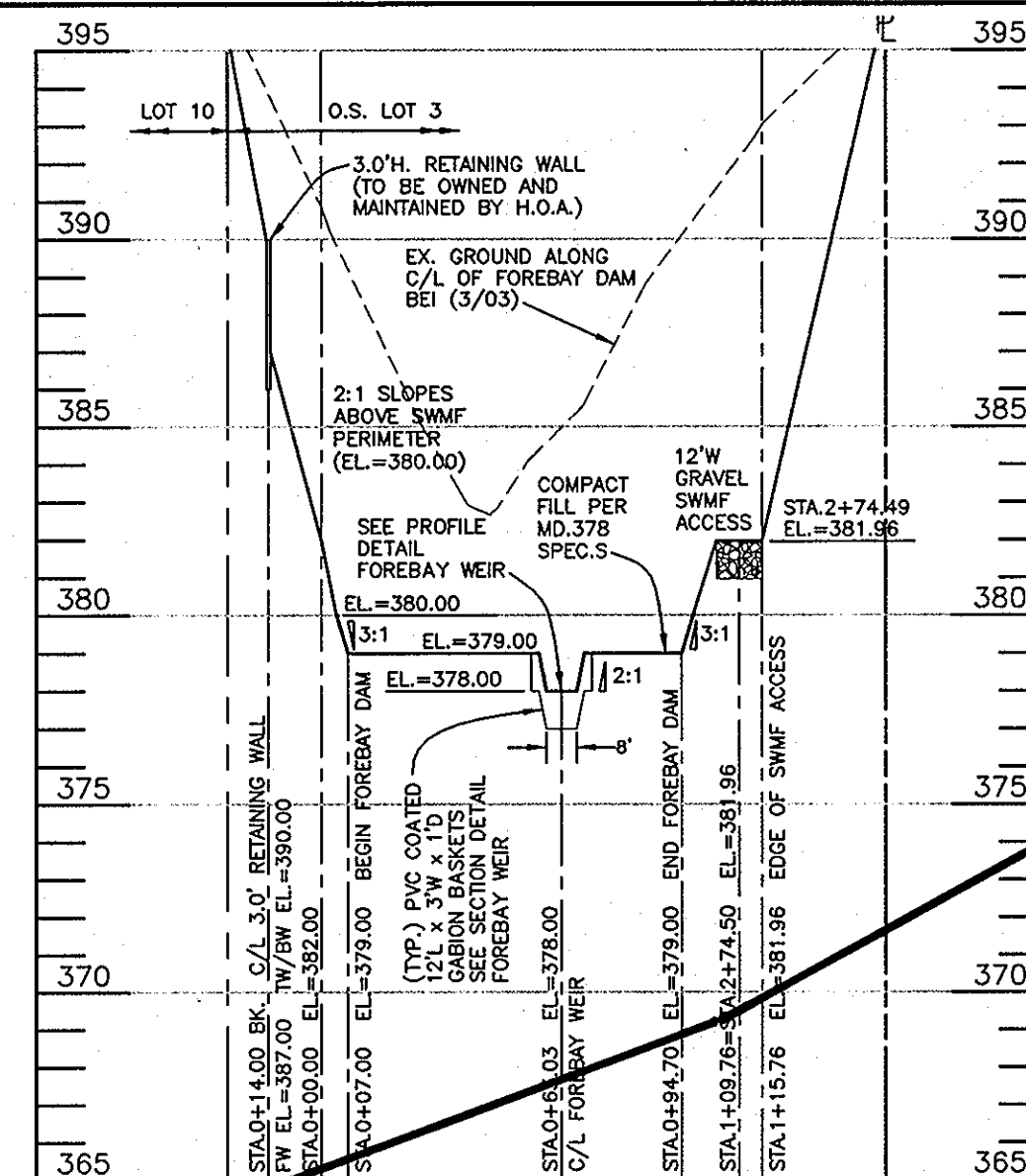
PROFILE DETAIL  
FOREBAY WEIR

NOT TO SCALE



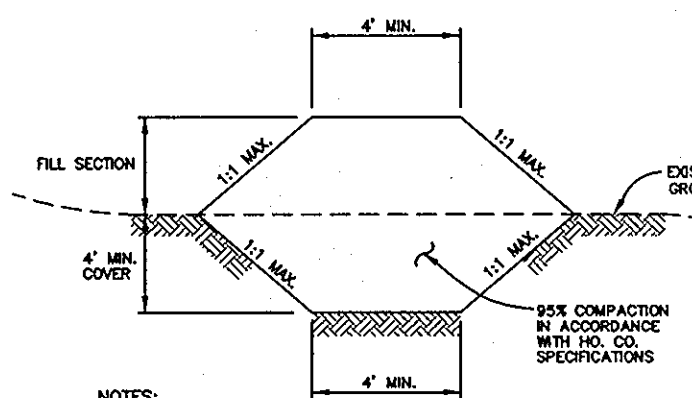
TYPE A-2  
CONCRETE CRADLE

NOT TO SCALE



PROFILE ALONG C/L FOREBAY DAM

HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

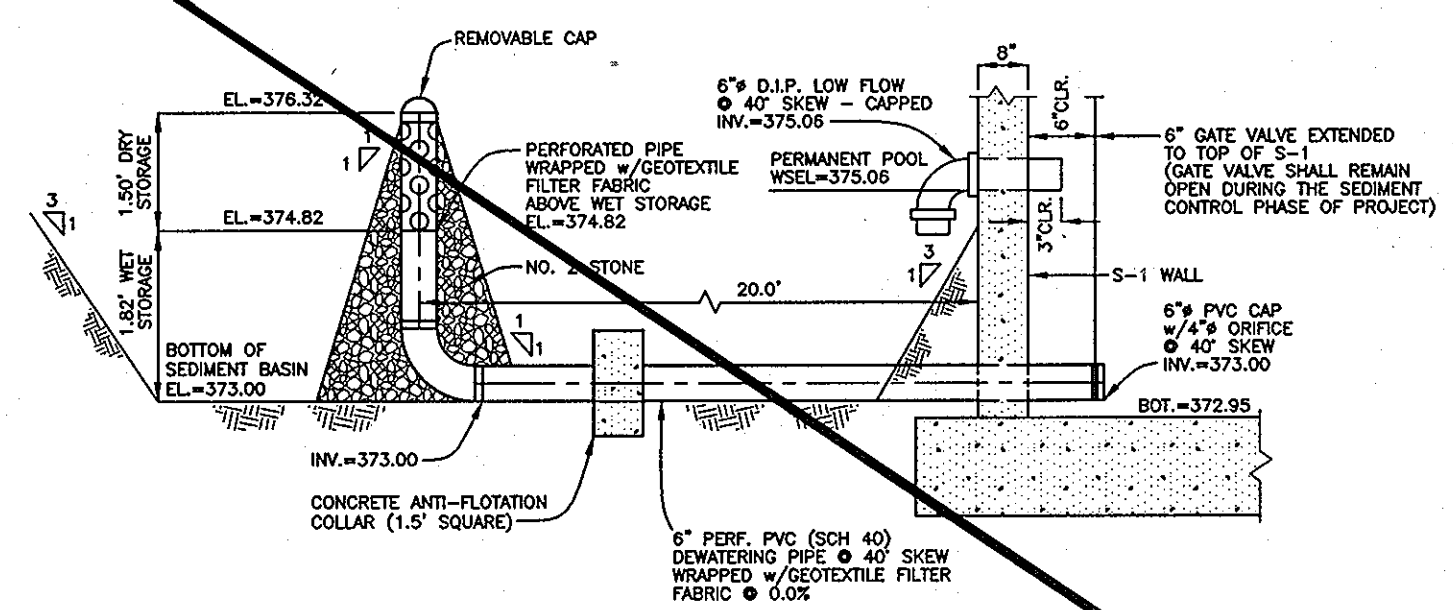


TYPICAL SECTION  
CUT-OFF/CORE TRENCH

NOT TO SCALE

NOTES:

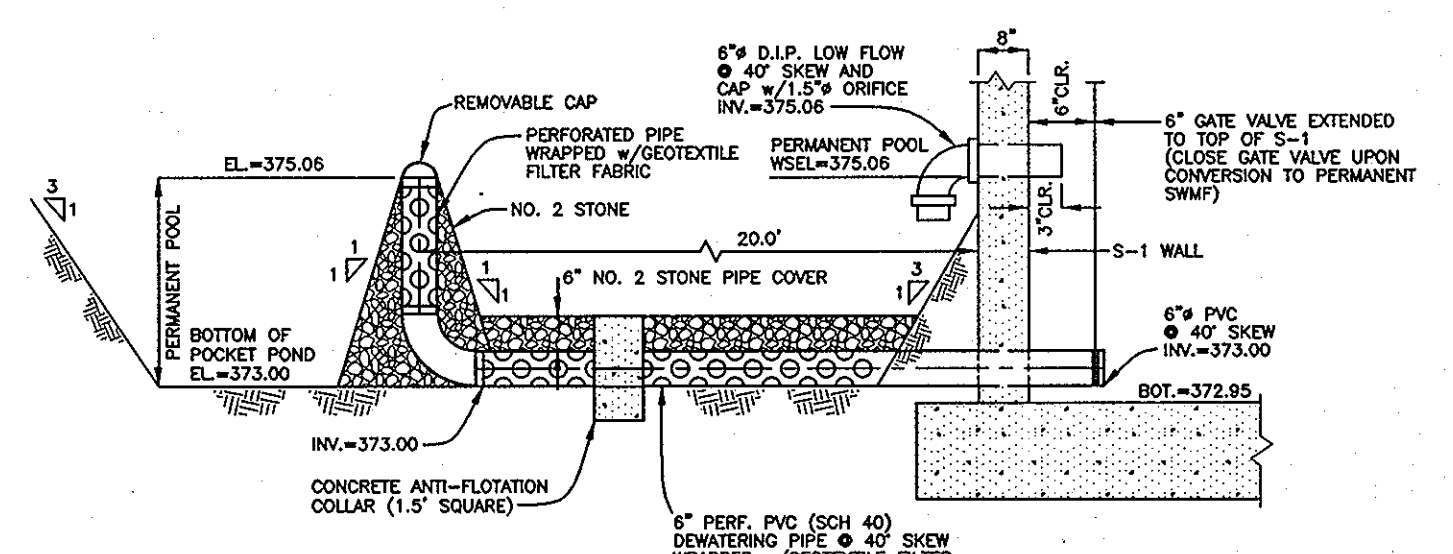
1. IF WATER IS ENCOUNTERED DURING THE CONSTRUCTION OF THE CORE TRENCH, IT IS TO BE REMOVED BY PUMPING.
2. CORE TRENCH SHALL CONSIST OF IMPERVIOUS MATERIAL (e.g. SILT CLAY) AS DIRECTED BY A GEOTECHNICAL ENGINEER ON-SITE AND MAY REQUIRE TO BE HAULED FROM AN OFFSITE LOCATION.



6\"/>

6\"/>

NOT TO SCALE



6\"/>

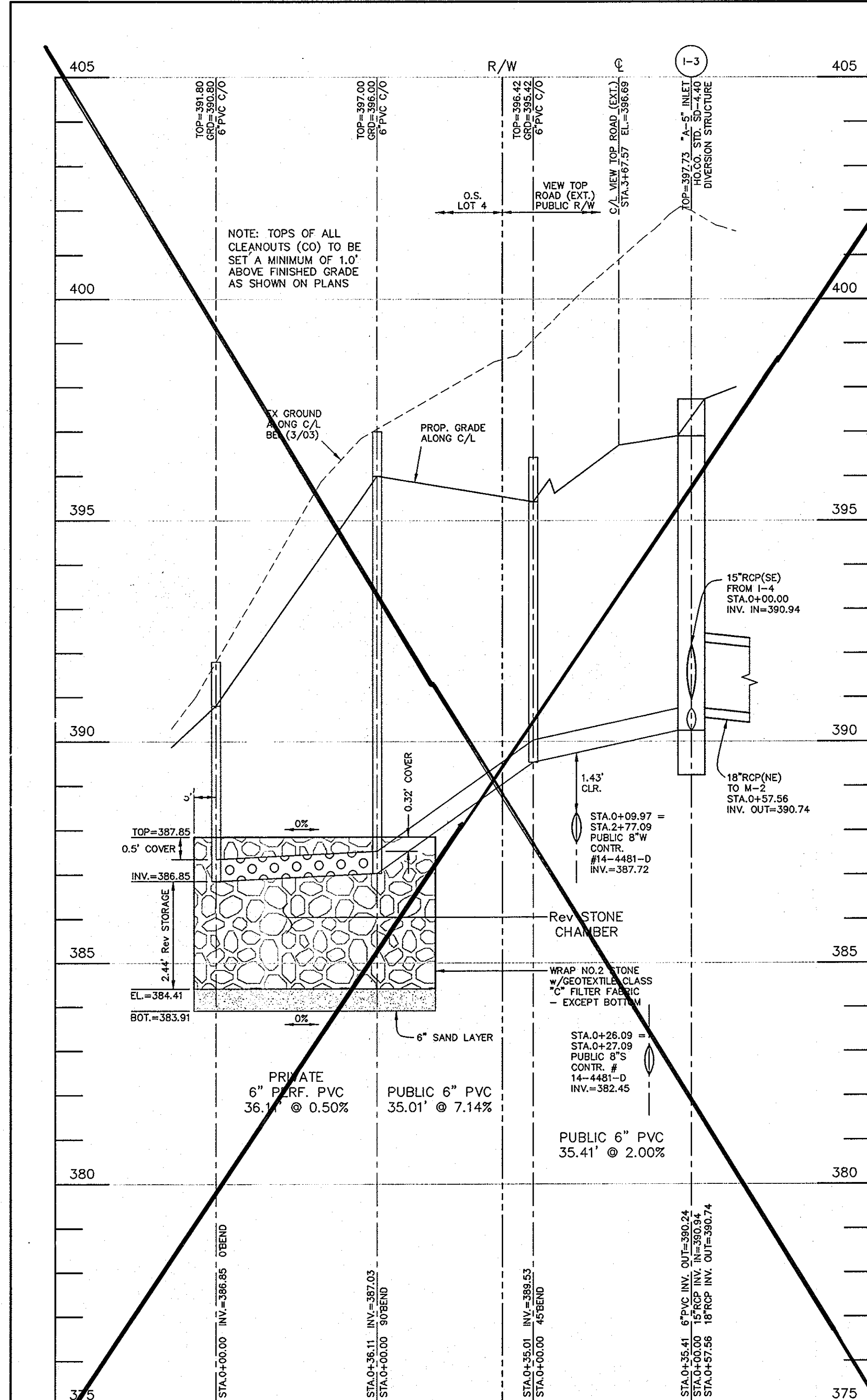
6\"/>

NOT TO SCALE

AS-BUILT CERTIFICATION	
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.	
PE NO. 21443	DATE
DONALD A. MASON	
BY THE OWNER/DEVELOPER:	
CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN TO IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.	
BY THE OWNER/DEVELOPER:	
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 OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENTATION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.	
OWNER/DEVELOPER: <i>James R. Moxley, III</i> DATE: 8-14-08	
BY THE ENGINEER:	
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.	
ENGINEER - DONALD A. MASON, P.E. # 21443 DATE: 3/13/08	
TECHNICAL REVIEW: HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT'S EROSION AND SEDIMENT CONTROL REQUIREMENTS.	
FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
APPROVED: DEPARTMENT OF PUBLIC WORKS	
CHIEF, BUREAU OF HIGHWAYS DATE: 5-5-08	
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 5/8/08	
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5/14/08	

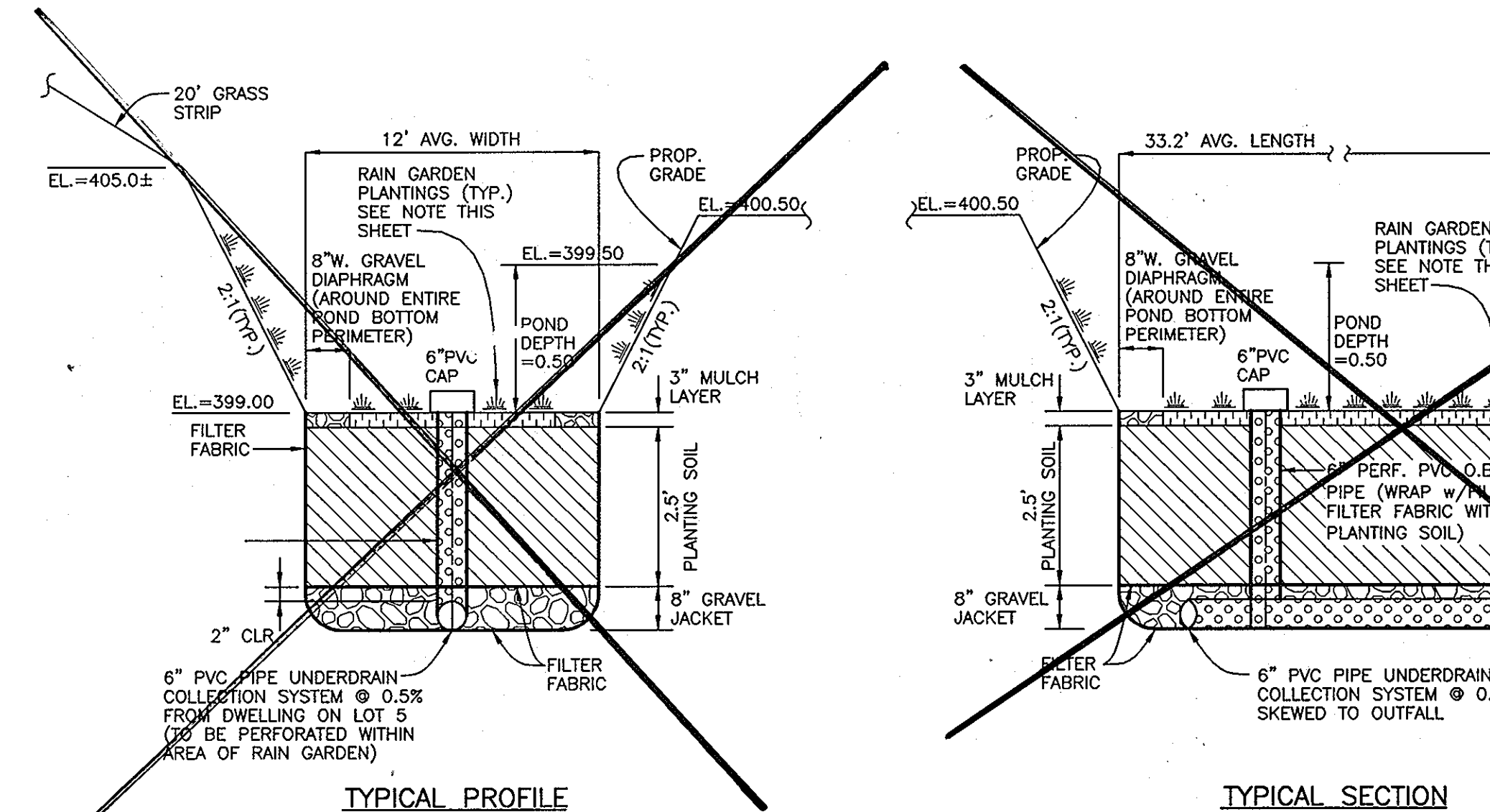
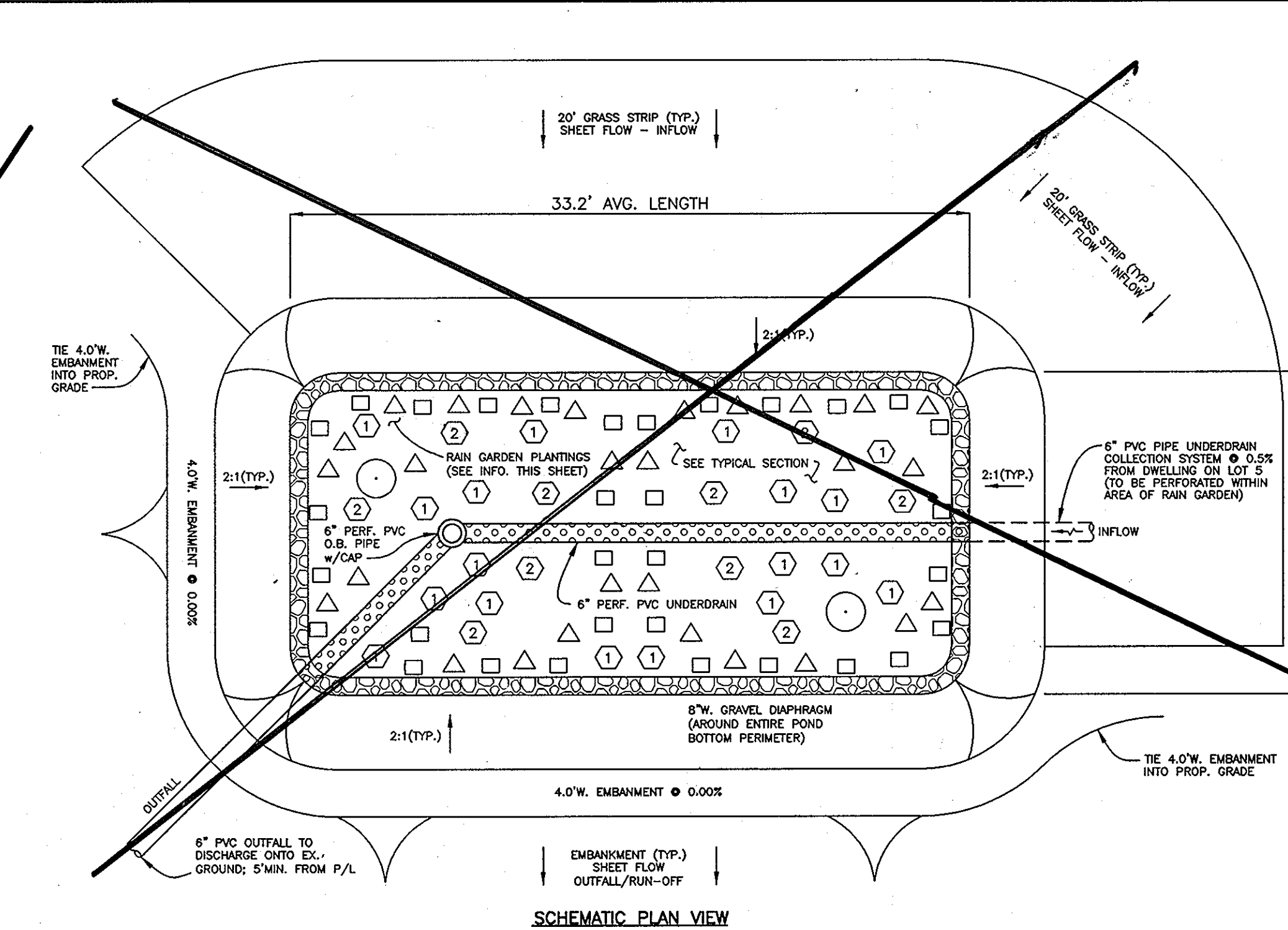
BENCHMARK ENGINEERING, INC.	
8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-8105 FAX: 410-465-6644 E-MAIL: bei@civilengineering.com	
PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 11911, Expiration Date: 12-31-2008	
DEVELOPER/CONTRACT PURCHASER:	
PROJECT: HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 1 & 5-10 AND O.S. LOTS 3 & 4	
LOCATION: TAX MAP 24 - GRID 17 PANEL 253 - ZONE: R-20 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: FINAL/CONSTRUCTION PLAN PROFILES, NOTES, AND DETAILS	
DATE: DECEMBER 20, 2006 MARCH 14, 2008	PROJECT NO. 1574
Des: MCR/DAM Draft: MCR Check: DAM	SCALE: AS SHOWN DRAWING 7 OF 16





PROFILE THRU Rev STONE CHAMBER  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 2'

IN-SITU INFILTRATION		
BORING NO.	DEPTH OF TEST	MEASURED RATE (IN./HR.)
B-1	7.0'	0.1875
B-2	17.0'	0.25
B-3	18.0'	0.0625
B-4	9.0'	0.125
B-5	11.0'	0.25
B-6	13.0'	0.3125
B-7	9.0'	0.1875



RAIN GARDEN DETAIL  
NOT TO SCALE

MATERIALS AND SPECIFICATIONS FOR RAIN GARDEN			
MATERIAL	SPECIFICATION	SIZE	NOTES:
PLANTINGS	SEE APPENDIX A, TABLE A.4	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2.5' TO 4.0' DEEP)	SAND: 30-60% SILT: 30-55% CLAY: 0-25%	N/A	USDA SOIL TYPE: LOAMY SAND, SANDY LOAM OR LOAM
MULCH	SHREDDED HARDWOOD (ASTM D-4751) GRAB TENSILE STRENGTH (ASTM D-4833) PUNCTURE RESISTANCE (ASTM D-4833)	N/A	AGED 6 MONTHS MINIMUM FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY
UNDERDRAIN GRAVEL	ASHTO M-43	0.375" TO 0.750"	
UNDERDRAIN PIPING	F798, TYPE PS28 OR ASHTO M-278	4" TO 6" RIGID SCH40 PVC SDR35 OR HDPE	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES

OPERATION & MAINTENANCE SCHEDULE FOR RAIN GARDENS

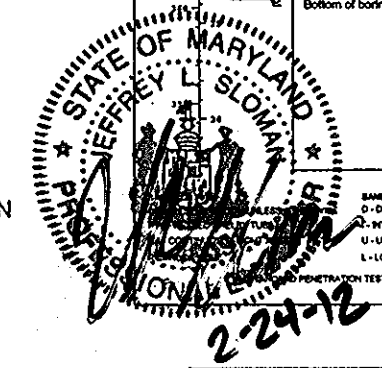
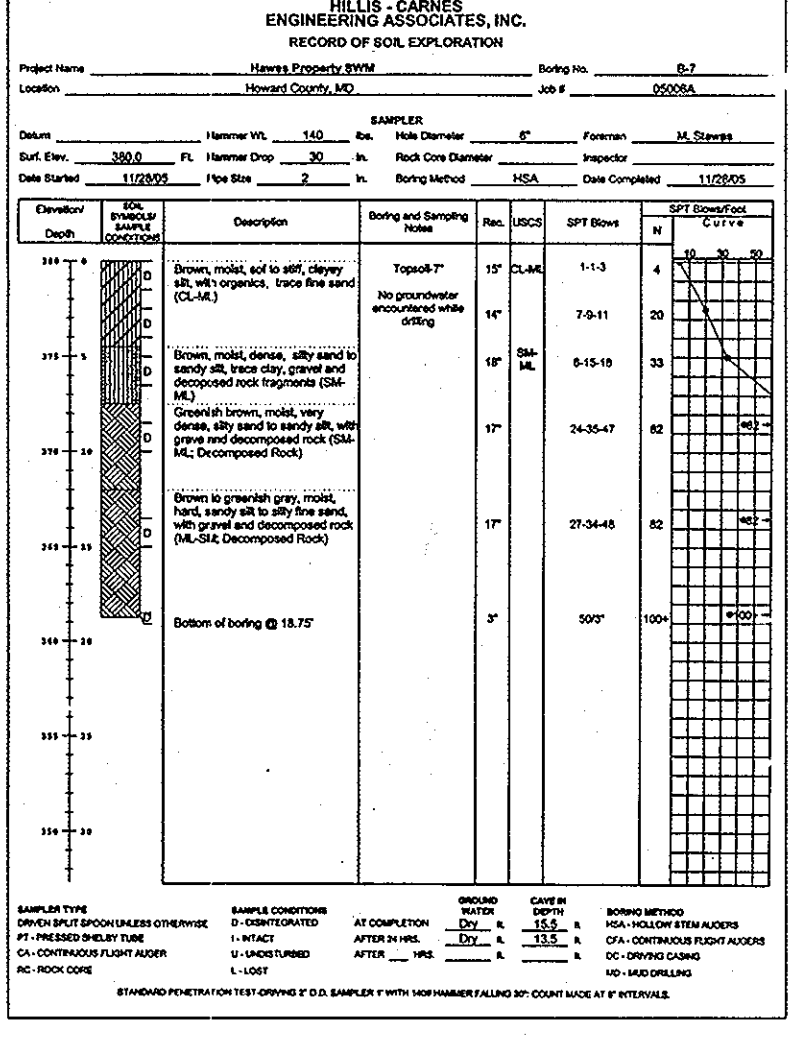
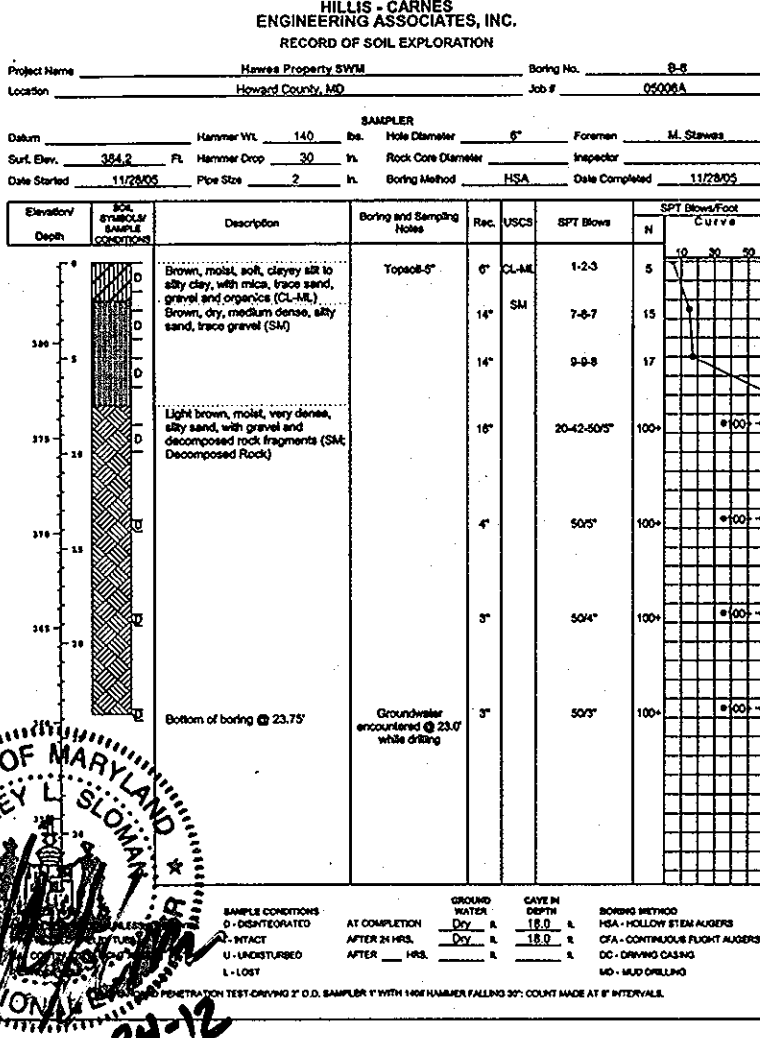
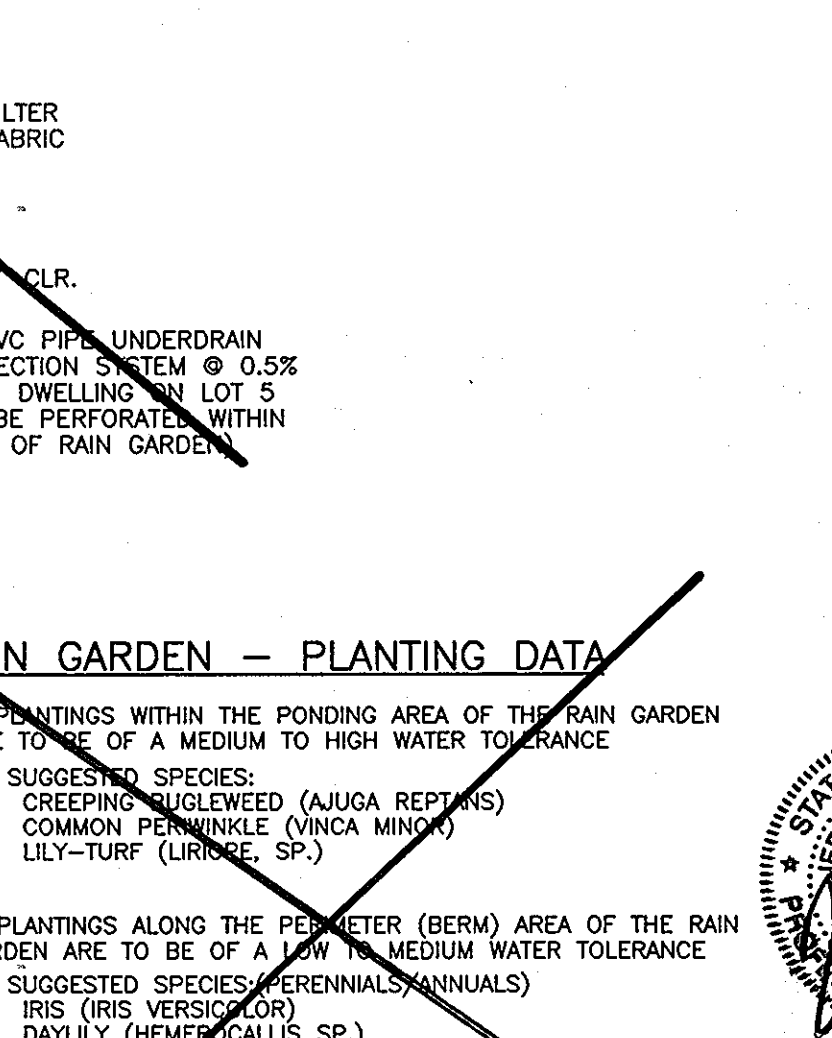
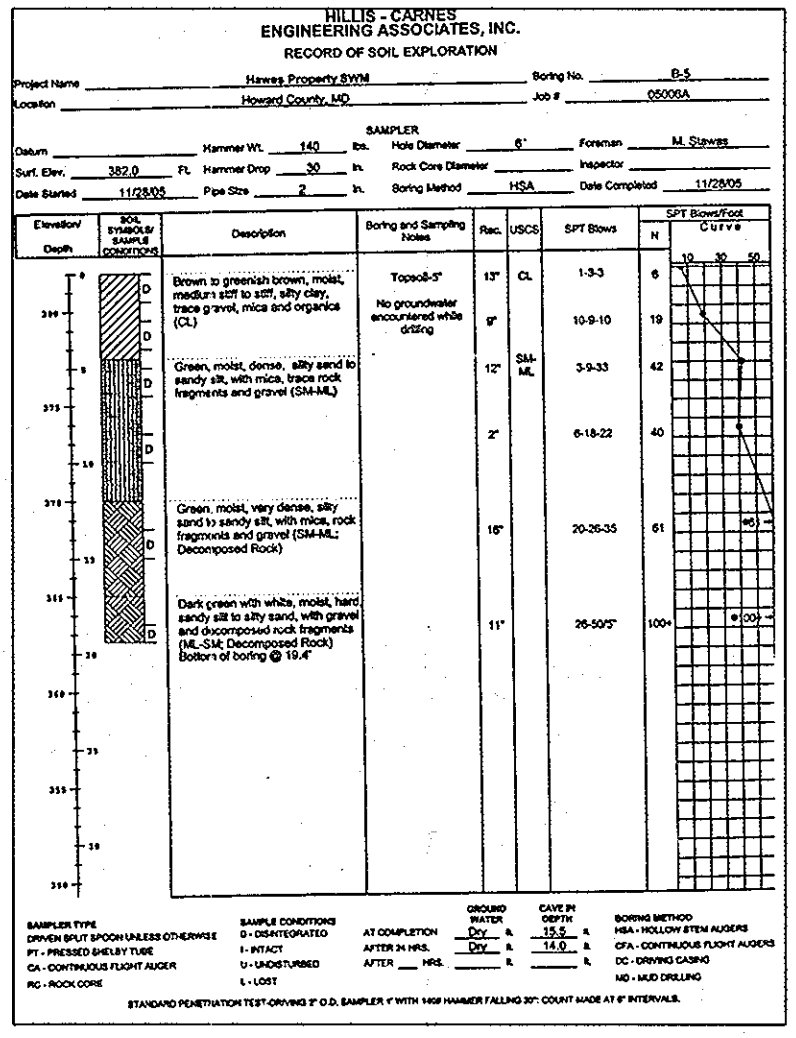
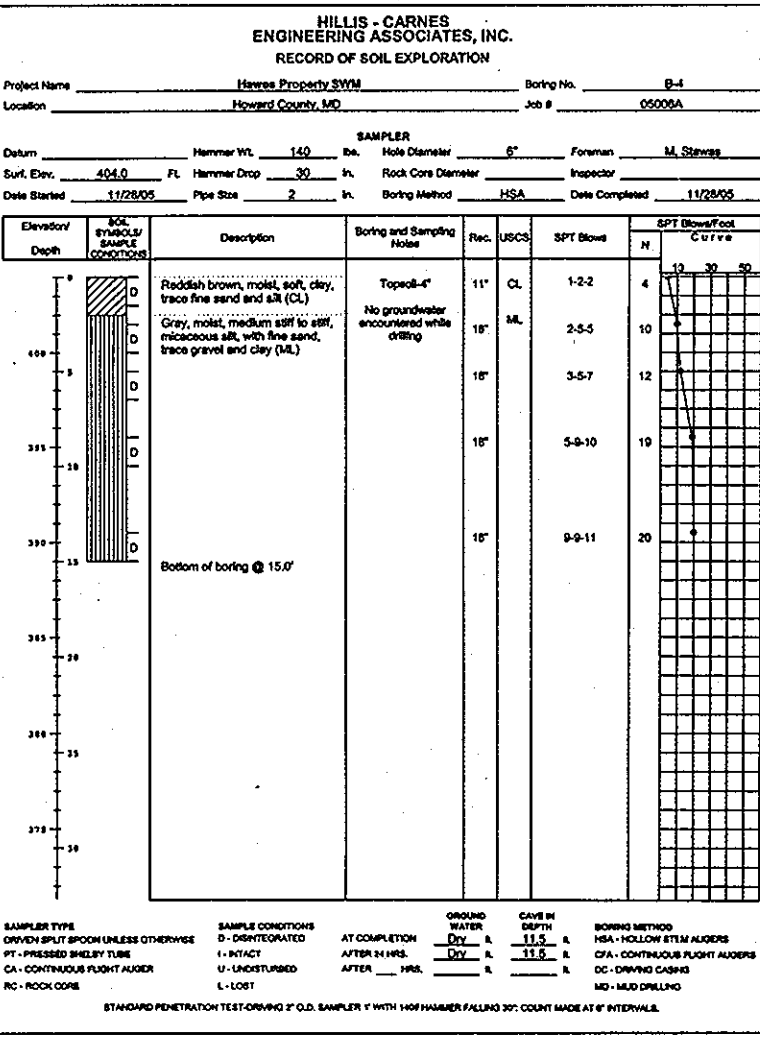
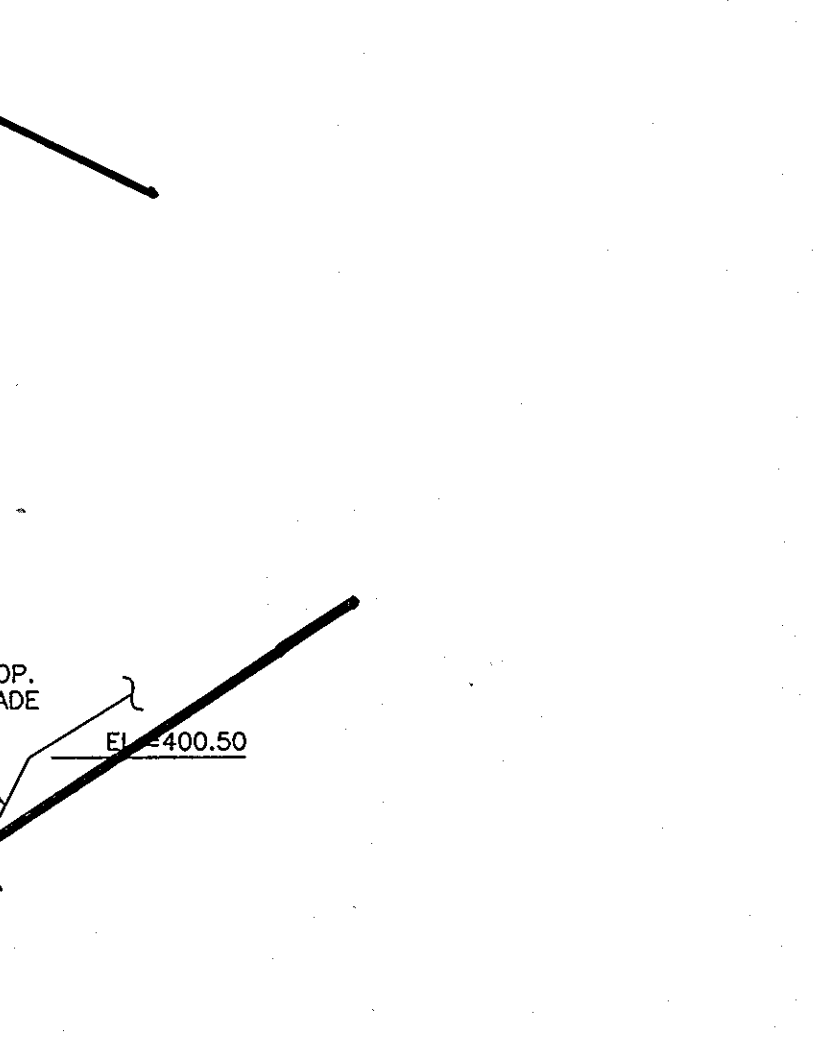
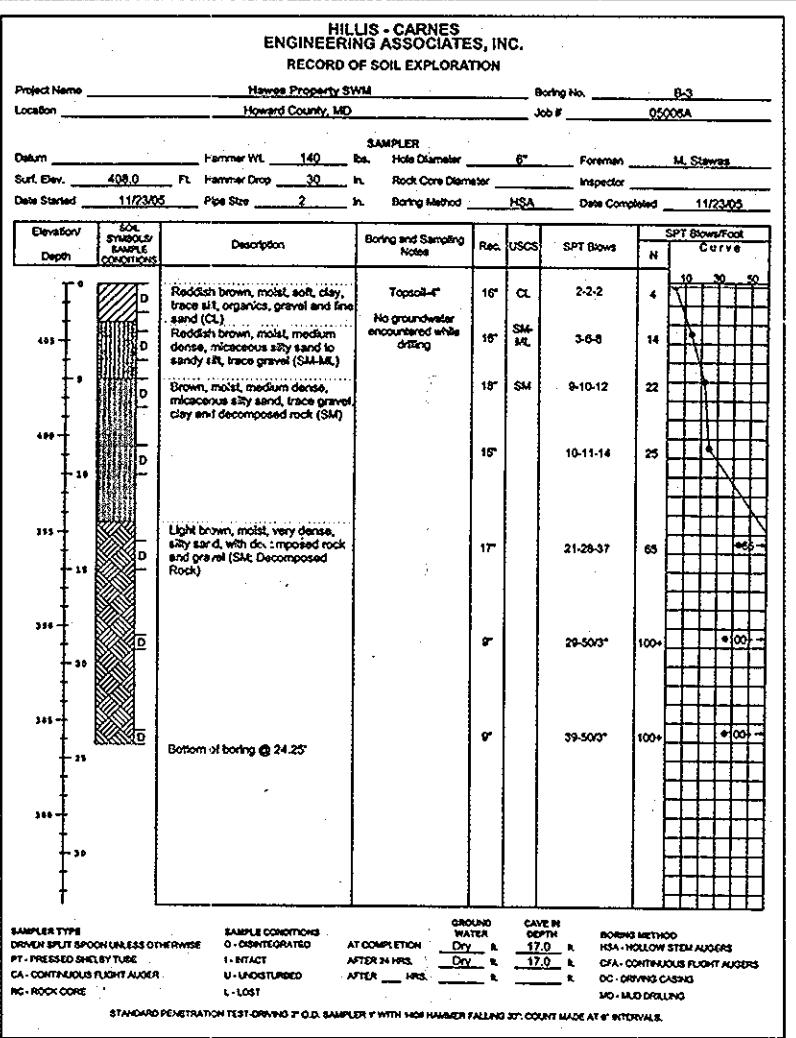
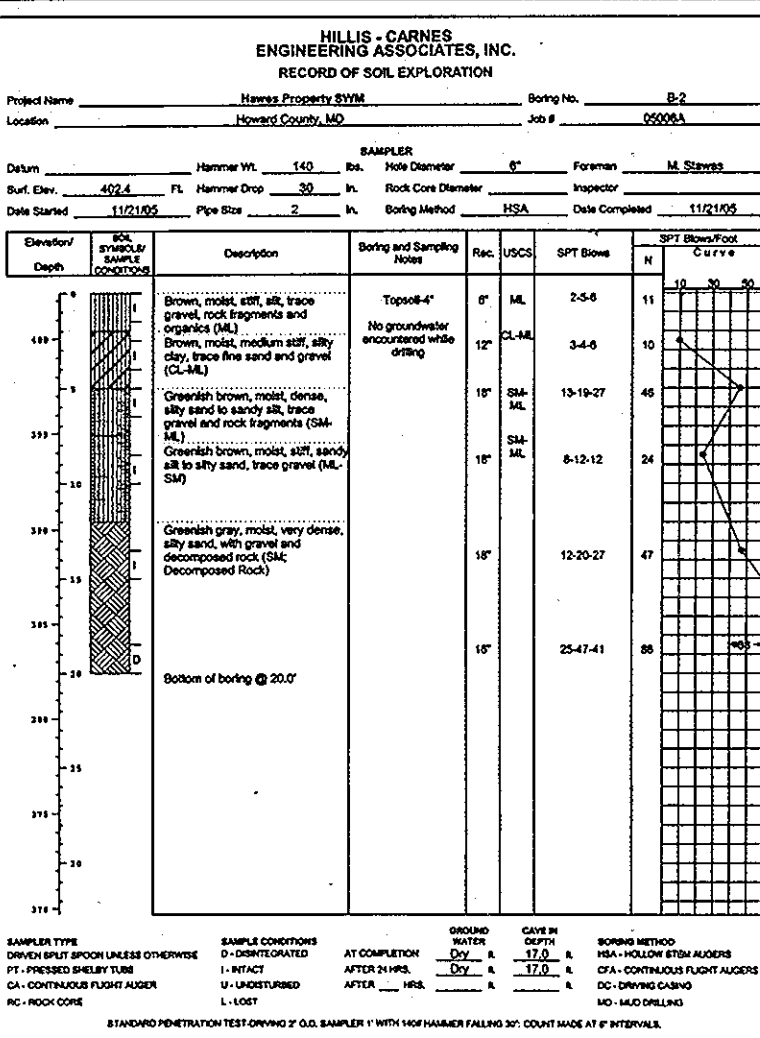
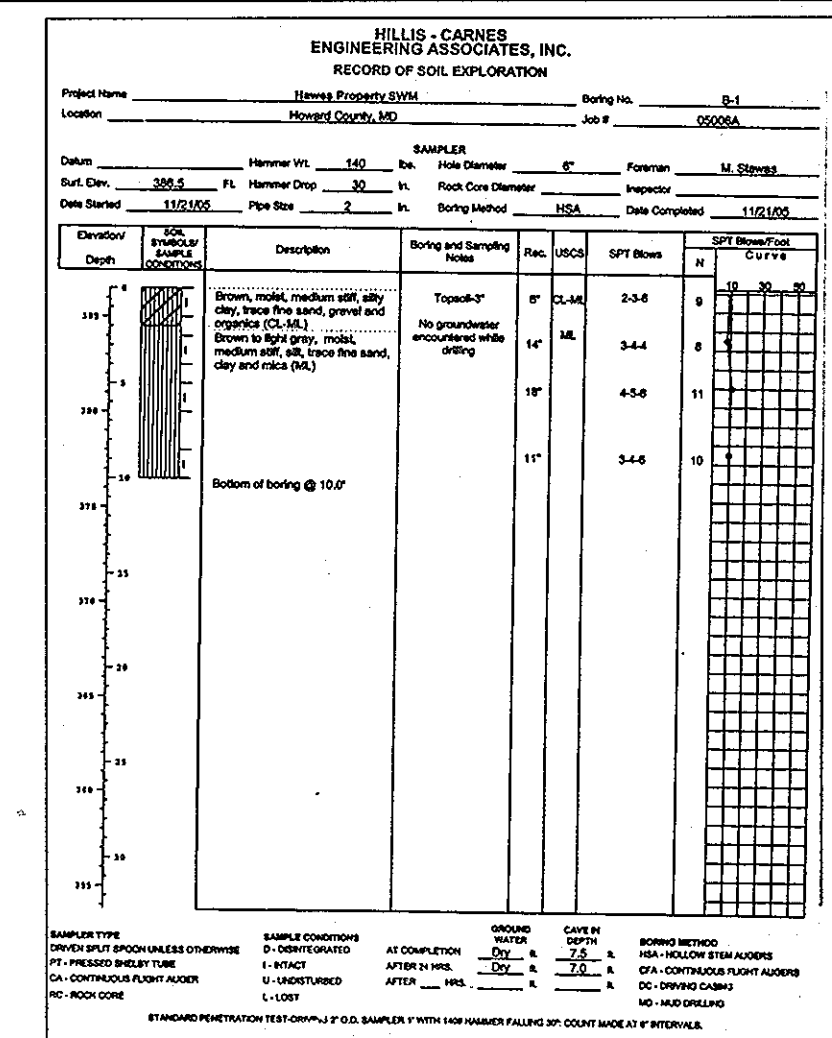
- ANNUAL MAINTENANCE OF PLANT MATERIAL AND MULCH LAYER IS REQUIRED. MAINTENANCE OF MULCH IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH-OUT. ANY REPLACEMENT OF MULCH SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE & INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL & PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN THE SPRING AND FALL. THIS INSPECTION WILL INCLUDE: REMOVAL OF DEAD & DISEASED VEGETATION CONSIDERED BEYOND TREATMENT; TREATMENT OF ALL DISEASED TREES & SHRUBS; AND REPLACEMENT OF ALL DEFICIENT STAKES & WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE THE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS-NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

RAIN GARDEN - PLANTING DATA

- PLANTINGS WITHIN THE PONDING AREA OF THE RAIN GARDEN ARE TO BE OF A MEDIUM TO HIGH WATER TOLERANCE  
SUGGESTED SPECIES:  
COMMON PERIWINKLE (VINCA MINOR)  
LILY-TURF (LIRIOPE, SP.)
- PLANTINGS ALONG THE PERIMETER (BERM) AREA OF THE RAIN GARDEN ARE TO BE OF A LOW TO MEDIUM WATER TOLERANCE  
SUGGESTED SPECIES: PERENNIALS/ANNUALS  
IRIS (IRIS VERSICOLOR)  
DAYLILY (HEMEROCALLIS SP.)  
WHITE GLORY (ASTILE SP.)
- AVOID PLANTINGS WITH EXCESSIVE ROOT MASS IN POND AREA OF THE RAIN GARDEN NEAR O.B. PIPE AND UNDERDRAIN.

RAIN GARDEN - PLANTING SCHEDULE

- |  |    |
|--|----|
| ① VINCA MINOR (COMMON PERIWINKLE)      | 34 |
| ② AJUSTA REPTAN S (CREEPING BUGLEWEED) | 30 |
| ③ IRIS VERSICOLOR (IRIS)               | 16 |
| ④ HEEMEROCALLIS SP (DAYLILY)           | 10 |
| ⑤ ACER RUBRUM (RED MAPLE)              | 2  |



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DATE: 5-5-08  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DATE: 5/5/08  
CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 5/9/08

1 9/13/11 REVISED LOT LAYOUT, STORMWATER MANAGEMENT, AND LOT GRADING  
NO. DATE REVISION

**BENCHMARK ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE A SUITE 418  
ELLICOTT CITY, MARYLAND 21043  
PHONE: 410-465-6105 FAX: 410-465-6844  
E-MAIL: be@benchmark-engineering.com

PROJECT: HAWES PROPERTY  
SUBDIVISION (RE-SUBDIVISION OF LOT 2)  
LOTS 1 & 5-10 AND O.S. LOTS 3 & 4  
LOCATION: TAX MAP 24 - GRID 17  
PARCEL 253 - ZONE: R-20  
2nd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
TITLE: FINAL/CONSTRUCTION PLAN  
STORMWATER MANAGEMENT  
PROFILES, NOTES, AND DETAILS  
DATE: DECEMBER 20, 2006 PROJECT NO. 1574  
MARCH 14, 2008 DRAWING NO. 08 OF 16  
SCALE: AS SHOWN

Des: MCR/DAM Draft: MCR Check: DAM  
F-07-110



10-024 HAWES\10-024 HAWES.DWG 24-ECF-AUGUST 2011.DWG

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William H. H.* 4-16-12  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*John P. ...* 4/16/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*K. J. ...* 4/30/12  
CHIEF, D.D. ...

### OWNER/DEVELOPER

3804 VIEW TOP, LLC  
1055 WEST JOPPA ROAD  
APT. 330  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAWES

### DRAINAGE AREA SUMMARY

STRUCTURE NUMBER	DRAINAGE AREA (AC)	C FACTOR (10 YEAR)	TIME OF CONC. (MIN)
ES-1	N/A	N/A	10
I-2	0.12	0.24	10
MH-3	1.92**	0.43	10
I-4	1.37	0.23	10
ES-5	N/A	N/A	10
MH-6	N/A	N/A	10
I-7	0.30	0.87	10
I-8	0.18	0.58	10
I-9	0.06	0.68	10
I-10	0.74	0.68	10
ES-11	N/A	0.31	10
I-12	0.07	0.51	10
I-13	0.18	0.33	10

\*\*FLOW FROM LOTS 6 THRU 8, BULK PARCEL 'A', AND THE USE-IN-COMMON DRIVEWAY IS ASSUMED TO ENTER THE SYSTEM AT MH-3 FOR THE PURPOSE OF STORM DRAIN ANALYSIS

NOTE: THIS SHEET IS FOR DRAINAGE AREA DELINEATION ONLY

NOTE: THIS SHEET REPLACES SHEET 9 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING



### 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. 40091, Expiration Date 2-13-2013.

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers, Planners, Surveyors  
6800 Deepwater Road, Suite 150, Ellicott City, Maryland 21075  
(410) 997-0286 Fax

**HAWES PROPERTY**  
LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'  
TAX MAP 24 GRID 17 PARCEL 253  
2nd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
**PROPOSED DRAINAGE AREA MAP (STORM DRAIN)**

Project	date	Project	date
10-024	SEP 2011	10-024	SEP 2011
Illustration	engineering	Illustration	engineering
JLS	JLS	JLS	JLS
scale	scale	scale	scale
1"=40'	1"=40'	1"=40'	1"=40'
RESPOND TO HOWARD COUNTY COMMENTS	11/2/2011	RESPOND TO HOWARD COUNTY COMMENTS	11/2/2011
revisions	revisions	revisions	revisions

Project	date	Project	date
10-024	SEP 2011	10-024	SEP 2011
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revisions	revisions	revisions	revisions



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APT. 330  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAWES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Walter R. M... 4-16-12*  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*4/27/12*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*4/30/12*  
CHIEF, D... DATE

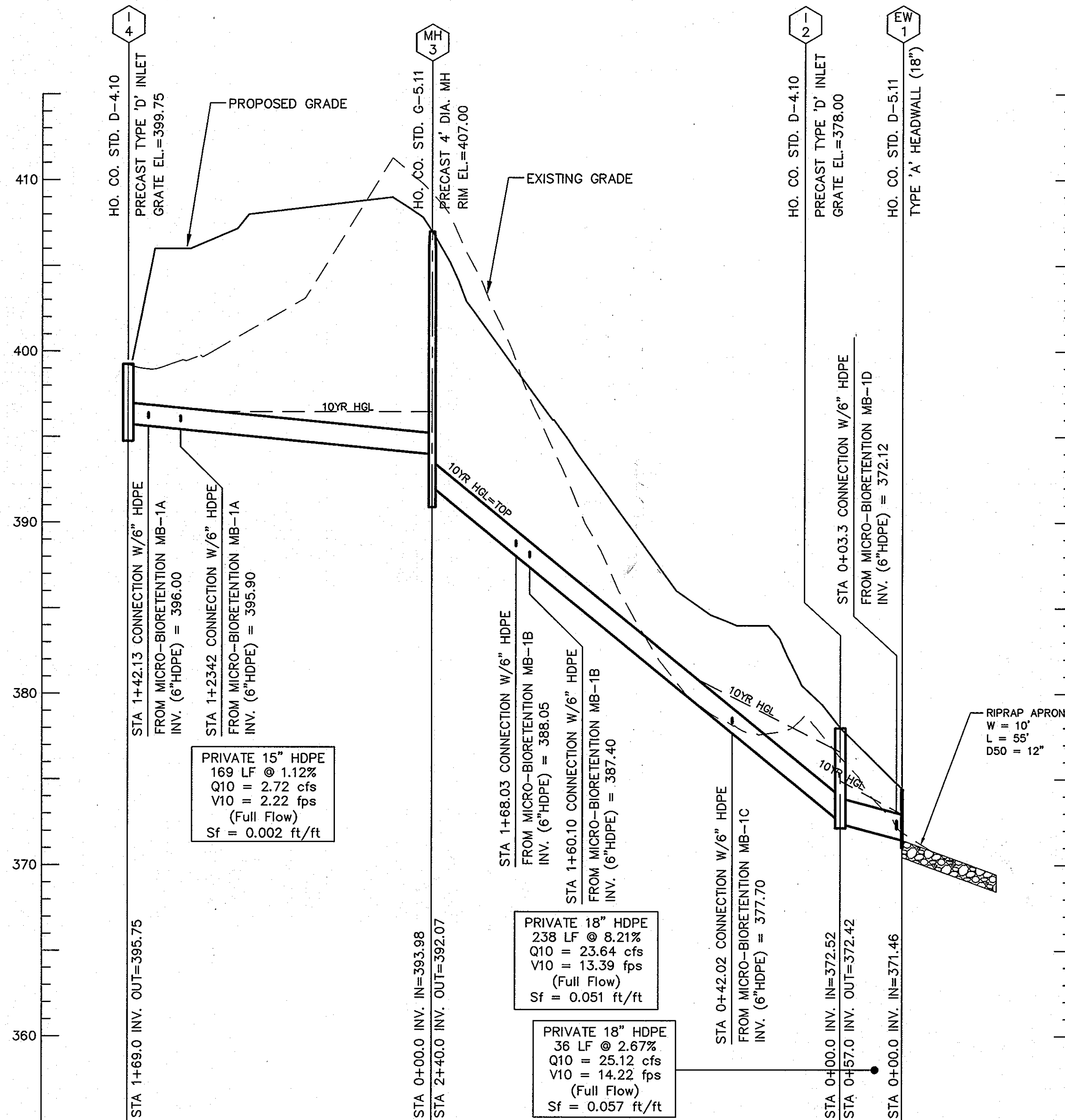
### PIPE SCHEDULE

SIZE	LENGTH	TYPE / CLASS
6"	215 LF	HDPE (PERFORATED)
6"	643 LF	HDPE (NON-PERFORATED)
15"	216 LF	HDPE
18"	439 LF	HDPE

### STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	COORDINATES	TOP/RIM/GRATE EL.	INV. IN	INV. OUT
EW-1	TYPE 'A' HEADWALL HO. CO. STD. D-5.11		N = 582,611.7856 E = 1,363,214.0246	N/A	371.46	N/A
I-2	PRECAST TYPE 'D' INLET HO. CO. STD. D-4.10		N = 582,594.2534 E = 1,363,162.2900	378.00 (GRATE)	374.25	374.15
MH-3	PRECAST 4' DIA. MANHOLE HO. CO. STD. G-5.11		N = 582,354.0465 E = 1,363,165.9681	409.00 (RIM)	394.11	393.96
I-4	PRECAST TYPE 'D' INLET HO. CO. STD. D-4.10		N = 582,292.7564 E = 1,363,033.3021	389.75 (GRATE)	N/A	395.75
ES-5	END SECTION HO. CO. STD. D-5.51	VIEW TOP ROAD EXT. STA. 4+95.4, 48.0' R		N/A	399.00	N/A
MH-6	PRECAST 4' DIA. MANHOLE HO. CO. STD. G-5.11	VIEW TOP ROAD EXT. STA. 5+00.1, 17.5' R		408.00 (RIM)	399.26	399.16
I-7	PRECAST TYPE 'A-5' INLET HO. CO. STD. D-4.01	VIEW TOP ROAD EXT. STA. 4+35.5, 11.0' R		403.00 (EP)	399.96	399.71
I-8	PRECAST TYPE 'A-5' INLET HO. CO. STD. D-4.01	VIEW TOP ROAD EXT. STA. 4+36.2, 11.0' L		403.00 (EP)	N/A	400.07
I-9	PRECAST TYPE 'A-5' INLET HO. CO. STD. D-4.01	VIEW TOP ROAD EXT. STA. 4+95.1, 11.0' R		369.85 (EP)	360.55	356.05
I-10	PRECAST TYPE 'A-5' INLET HO. CO. STD. D-4.01	VIEW TOP ROAD EXT. STA. 4+93.5, 11.0' L		369.85 (EP)	N/A	362.28
ES-11	END SECTION HO. CO. STD. D-5.51	VIEW TOP ROAD EXT. STA. 2+82.4, 11.0' R		N/A	383.00	N/A
I-12	PRECAST TYPE 'A-5' INLET HO. CO. STD. D-4.01	VIEW TOP ROAD EXT. STA. 3+00.0, 11.0' R		390.00 (EP)	386.53	386.28
I-13	PRECAST TYPE 'A-5' INLET HO. CO. STD. D-4.01	VIEW TOP ROAD EXT. STA. 3+00.0, 11.0' L		390.00 (EP)	N/A	387.85

NOTE: STRUCTURE 'I-9' IS REFERRED TO AS STRUCTURE 'I-6' IN THE PREVIOUSLY HOWARD COUNTY APPROVED PLAN SET (F-07-110). ALL STRUCTURES, STRUCTURE DATA, ETC. DOWNSTREAM FROM STRUCTURE I-9/I-6 TO THE EXISTING SHA INLET WILL NOT CHANGE FROM THE PREVIOUSLY APPROVED PLANS.

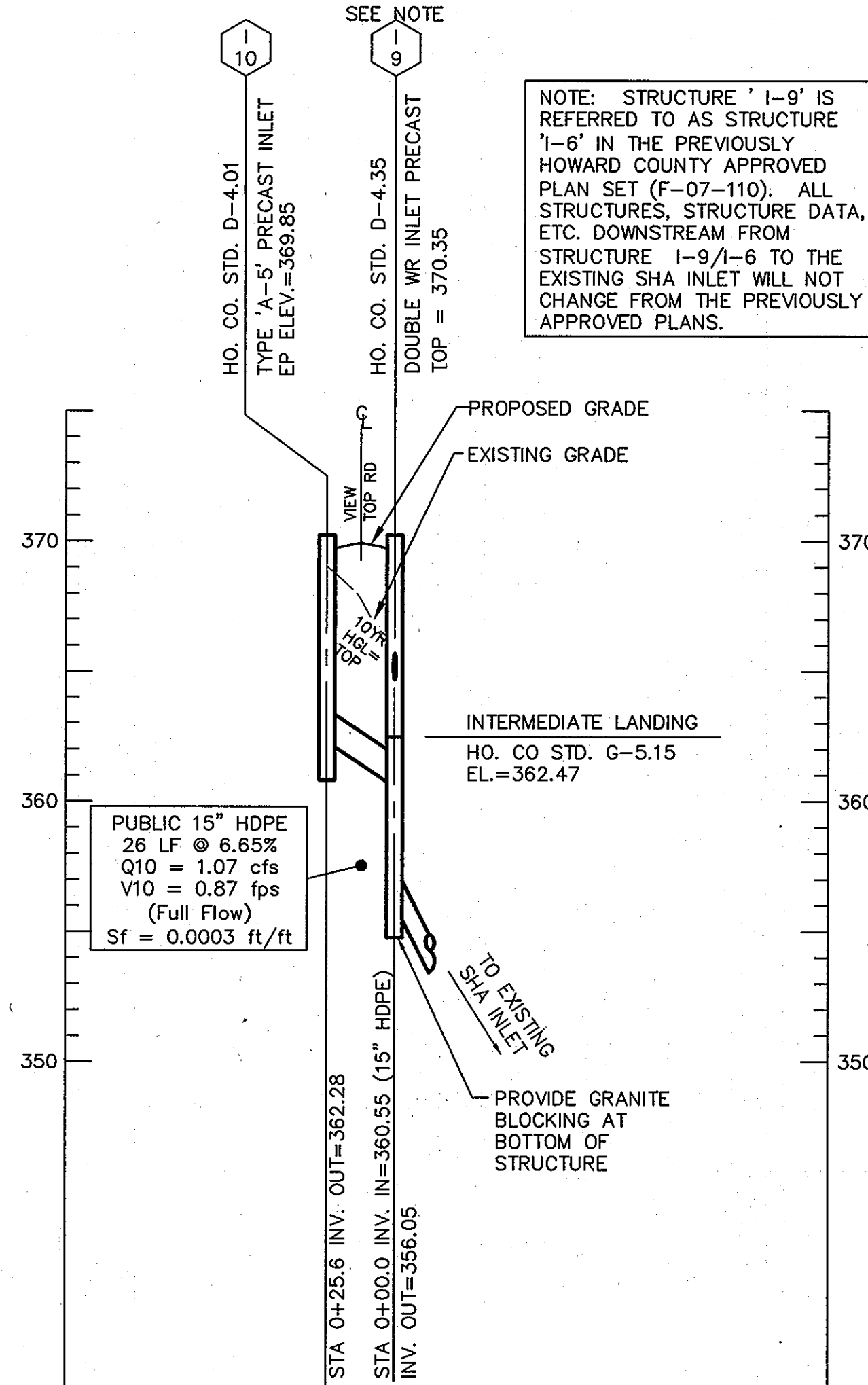


PROFILE - STRUCTURES I-4 TO ES-1

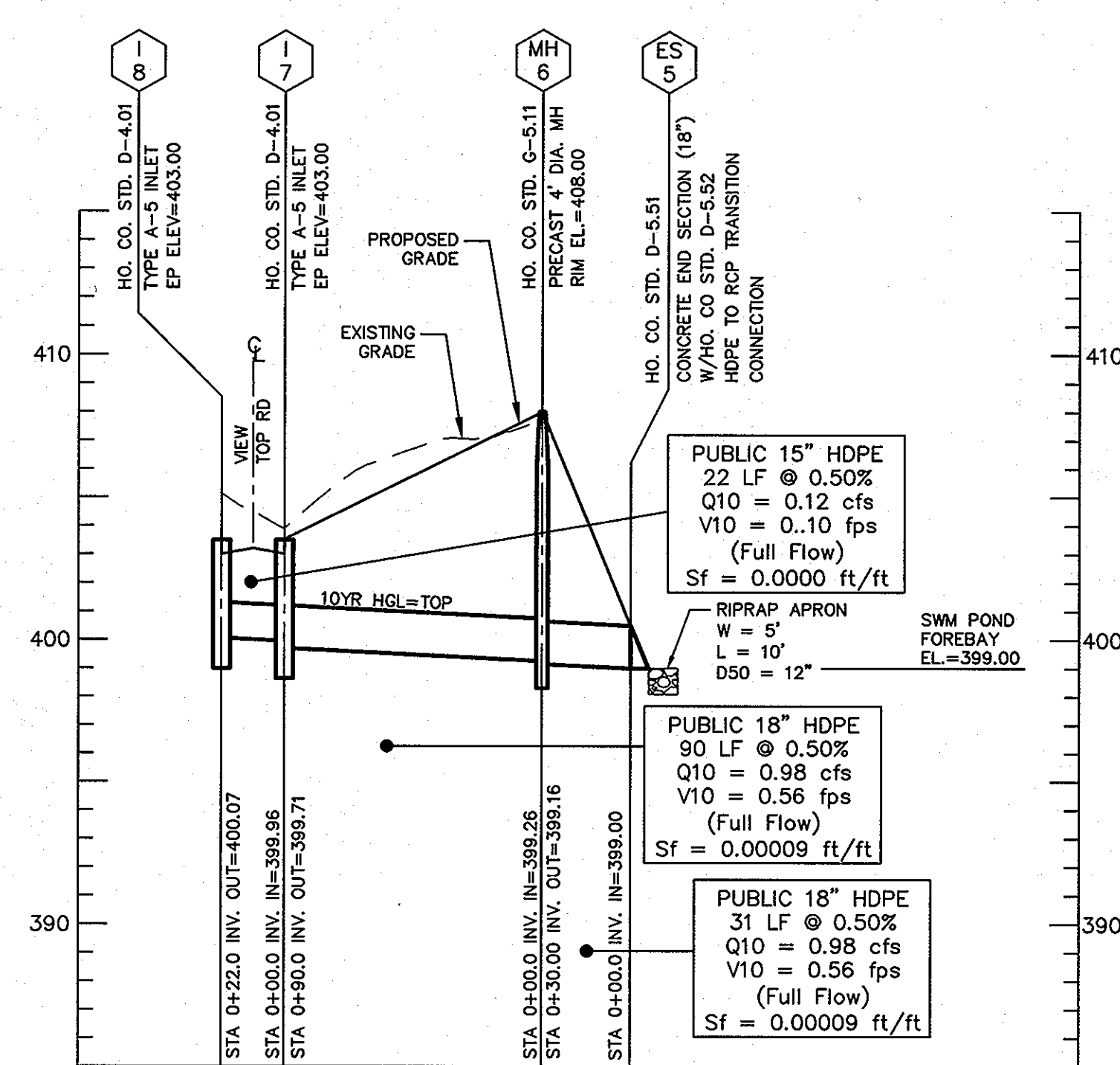
SCALE: 1"=50' HOR  
1"=5' VER

PROFILE - STRUCTURES I-10 TO I-9

SCALE: 1"=50' HOR  
1"=5' VER

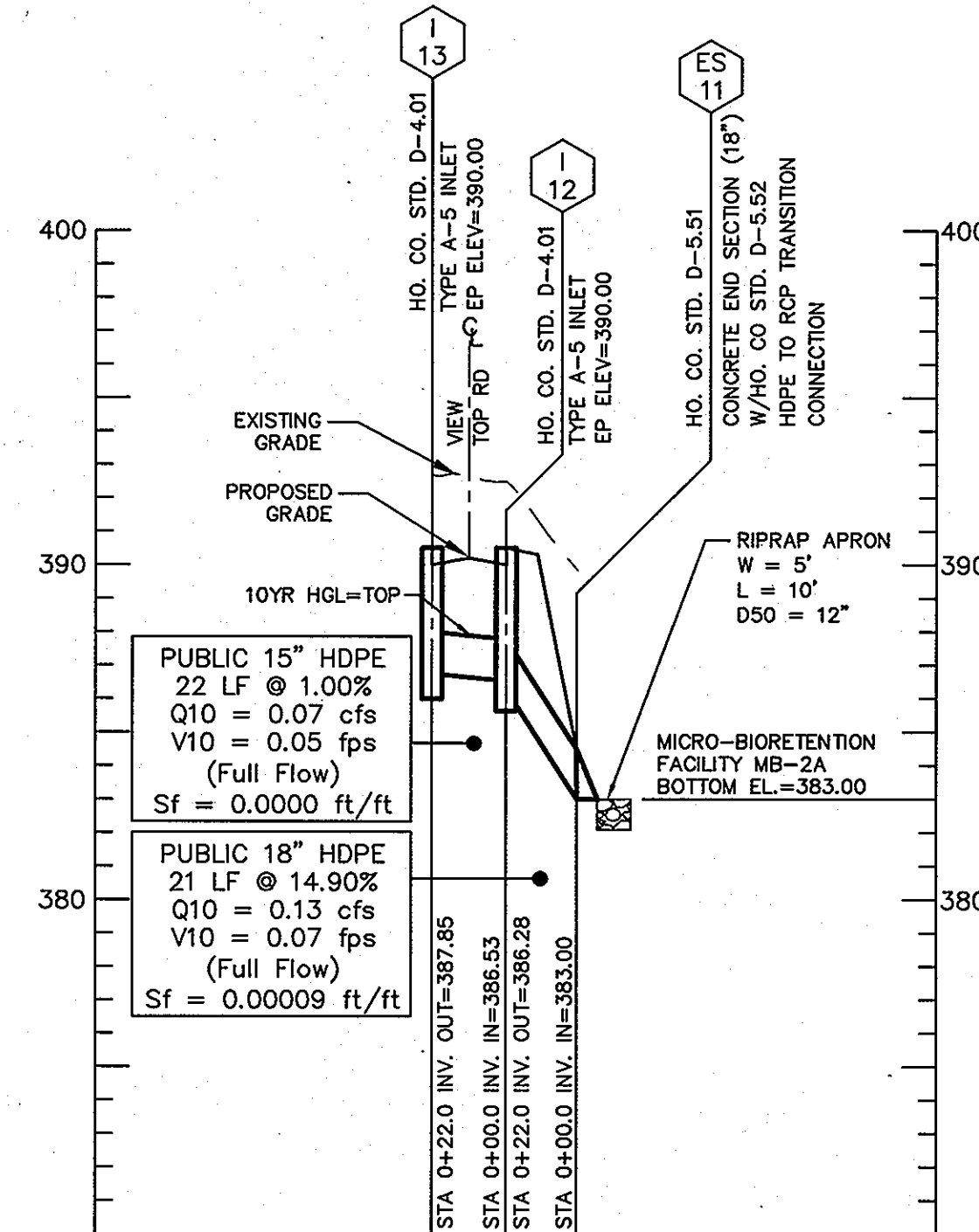


NOTE: STRUCTURE 'I-9' IS REFERRED TO AS STRUCTURE 'I-6' IN THE PREVIOUSLY HOWARD COUNTY APPROVED PLAN SET (F-07-110). ALL STRUCTURES, STRUCTURE DATA, ETC. DOWNSTREAM FROM STRUCTURE I-9/I-6 TO THE EXISTING SHA INLET WILL NOT CHANGE FROM THE PREVIOUSLY APPROVED PLANS.



PROFILE - STRUCTURES I-8 TO ES-5

SCALE: 1"=50' HOR  
1"=5' VER



PROFILE - STRUCTURES I-13 TO ES-11

SCALE: 1"=50' HOR  
1"=5' VER

ALL MEASUREMENTS TO MANHOLES AND INLETS ARE TO THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.

NOTE: THIS SHEET REPLACES SHEET 10 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

### 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. 40091  
Expiration Date 2-13-2013

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Engineers Planners Surveyors  
6800 Deepwater Road, Suite 150, Ellicott City, Maryland 21075  
(410) 987-0286 Cell (410) 987-0288 Fax

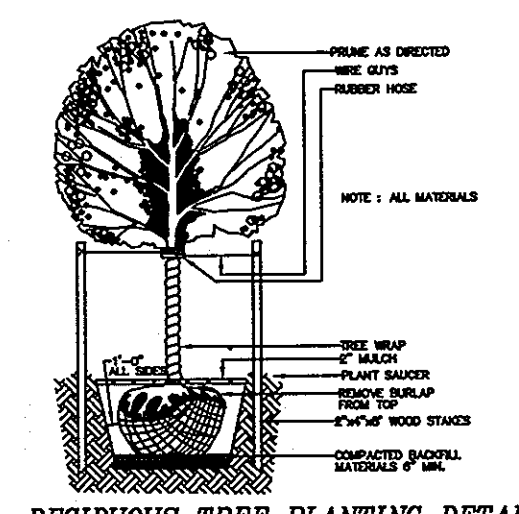
**HAWES PROPERTY**  
LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'  
TAX MAP 24 GRID 17 PARCEL 253  
2nd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

### STORM DRAIN PROFILES

Project date 10-024 SEP 2011  
Illustration engineering JLS  
Scale JLS  
Approval JLS  
AS SHOWN RJH

RESPOND TO HOWARD COUNTY COMMENTS 1/19/2012  
RESPOND TO HOWARD COUNTY COMMENTS 11/2/2011  
description revisions





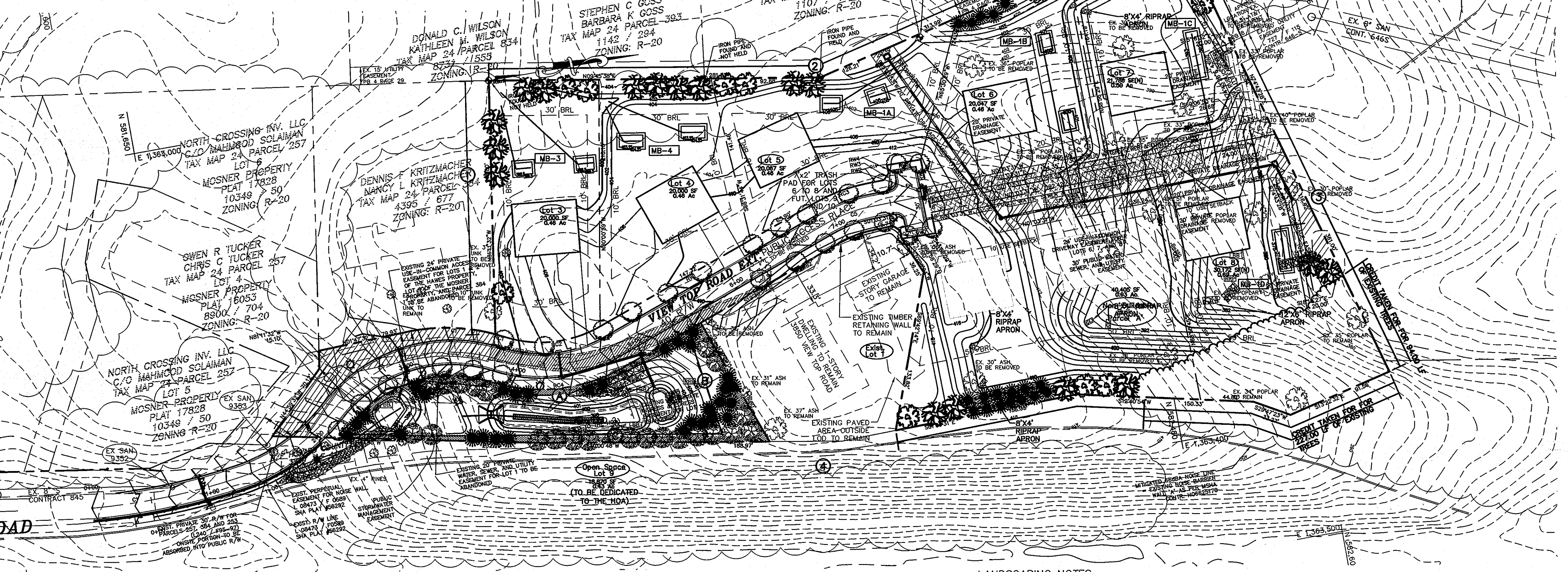
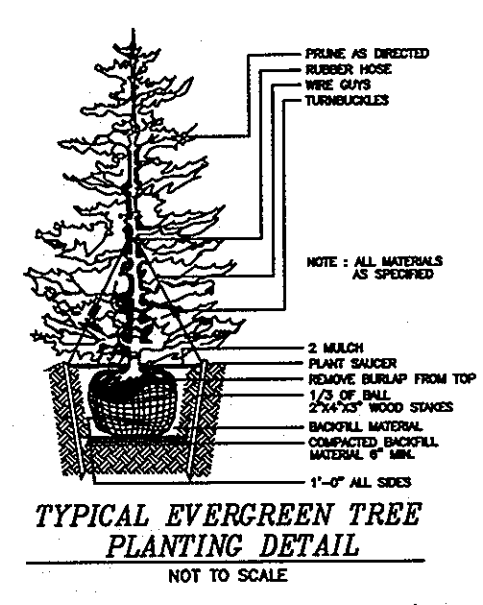
**SCHEDULE B : STORMWATER MANAGEMENT AREA LANDSCAPING**

LINEAR FEET OF PERIMETER	(A-C) 1,186 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND #)	N/A
NUMBER OF TREES REQUIRED	24 SHADE TREES 30 EVERGREEN TREES

SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 858 LF	B
1 SHADE TREE / 50 LF	17
1 EVERGREEN / 40 LF	22
SWM PERIMETER B - 83 LF	B
1 SHADE TREE / 50 LF	2
1 EVERGREEN / 40 LF	2
SWM PERIMETER C - 245 LF	B
1 SHADE TREE / 50 LF	5
1 EVERGREEN / 40 LF	6
TOTAL PLANTING OBLIGATION	
SHADE TREES	24
EVERGREEN TREES	30

**STORMWATER MANAGEMENT AREA PLANTING SCHEDULE**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
24		ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2 1/2" - 3" CAL.
30		PINUS STROBUS OR EQUIVALENT	WHITE PINE OR EQUIVALENT	6' - 8' HT.
TOTAL				
54 TREES (24 SHADE TREES, 30 EVERGREENS)				



**SCREEN CALCULATIONS**

TRASH PAD - 11 LF - TYPE C BUFFER  
1 EVERGREENS REQUIRED  
10 SHRUBS PROVIDED  
NOTE - EVERGREEN SHRUBS HAVE BEEN PROPOSED TO BUFFER THE TRASH PAD AREA.

**STREET TREE CALCULATIONS**

VIEW TOP ROAD - 1170 / 40 = 29  
TOTAL TREES REQUIRED = 29 TREES  
TOTAL TREES PROVIDED = 29 TREES

**STREET TREE PLANTING SCHEDULE**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
29		PRUNUS SARGENTII OR EQUIVALENT	SARGENT CHERRY OR EQUIVALENT	2-1/2" - 3" CAL.
TOTAL				
29 TREES				

**OWNER/DEVELOPER**

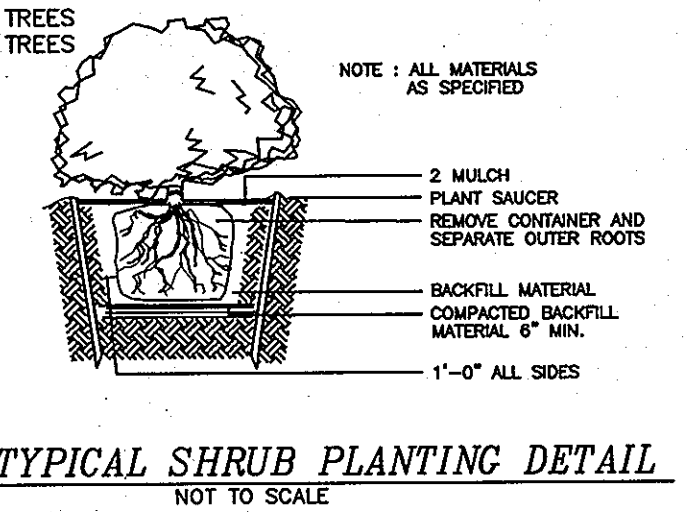
3804 VIEW TOP, LLC  
1055 WEST JOPPA ROAD  
APT. 330  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAWES

APPROVED:   
CHIEF, BUREAU OF HIGHWAYS 4-16-12  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/30/12  
DATE

AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWIT LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

DEVELOPER'S/BUILDER'S CERTIFICATE  
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPING MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
  
DEVELOPER/CONTRACT PURCHASER 4/30/12  
DATE



**TYPICAL SHRUB PLANTING DETAIL**  
NOT TO SCALE

MB-Z MICRO-BIORETENTION FACILITY NUMBER

**LANDSCAPE REQUIREMENT PLANTING SCHEDULE**

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
15		QUERCUS RUBRA OR EQUIVALENT	RED OAK OR EQUIVALENT	2 1/2" - 3" CAL.
20		PRUNUS SARGENTII OR EQUIVALENT	SARGENT CHERRY OR EQUIVALENT	2-1/2" - 3" CAL.
18		PINUS STROBUS OR EQUIVALENT	WHITE PINE OR EQUIVALENT	6' - 8' HT.
10		TAXUS MEDIA 'HICKSI'	HICKS YEW OR EQUIVALENT	2 1/2" - 3" HT.
TOTAL				
53 TREES (35 SHADE TREES, 18 EVERGREENS, 10 SHRUBS)				

**SCHEDULE A : PERIMETER LANDSCAPED EDGE**

CATEGORY	ADJACENT TO PERIMETER PROPERTIES			ADJACENT TO ROADWAYS	TRASH PAD	TOTAL
LANDSCAPE TYPE	A (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	B (PERIMETER 4)*	C	
LINEAR FEET OF PERIMETER	215.80' LF	595.30 LF	425.02 LF	961.04 LF	11 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	YES, 94.00 LF.	YES, 227.00 LF		
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO		
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	4 SHADE TREE 0 EVERGREEN TREES 0 SHRUBS	10 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	15 SHADE TREES 18 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 1 EVERGREEN TREES 0 SHRUBS	35 SHADE TREES 19 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SHRUBS	4 SHADE TREE 0 EVERGREEN TREES 0 SHRUBS	10 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	15 SHADE TREES 18 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 10 SHRUBS	35 SHADE TREES 18 EVERGREEN TREES 10 SHRUBS

\* NOTE THAT PART OF PERIMETER 4 HAS BEEN EXCLUDED SINCE THERE IS AN EXISTING HOUSE TO REMAIN.

**LANDSCAPING NOTES**

- THE PROPOSED LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS SHOWN ON THESE PLANS
- THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL INTERNAL PLANTINGS; THE PRESERVATION OF THE EXISTING PERIMETER VEGETATION; AND FOR THE PERIMETER PLANTINGS AS SHOWN ON THESE PLANS. BONDING FOR THE PROPOSED PLANTINGS IS THE OBLIGATION OF THE DEVELOPER AS PART OF THE DEVELOPER'S AGREEMENT.
- TREES MUST BE A MINIMUM OF FOUR (4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE (5) FEET FROM ANY STORM DRAIN.
- A MINIMUM DISTANCE OF TWENTY (20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM STREET LIGHTS.
- TREES MUST BE PLANTED A MINIMUM OF FIVE (5) FEET FROM AN OPEN SPACE ACCESS STRIP AND TEN (10) FEET FROM A DRIVEWAY.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC.-16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- STREET TREES SHALL BE PLANTED SIX (6) FEET BEHIND THE FACE OF CURB WHEN THERE ARE NO SIDEWALKS.
- ALL LANDSCAPING PLANT TYPES SHOWN ON THESE PLANS ARE RECOMMENDATIONS AND MAY BE SUBSTITUTED WITH APPROVED EQUIVALENTS FROM THE HOWARD COUNTY LANDSCAPE MANUAL.
- NO TREES SHALL BE PLACED WITHIN 10' BEHIND A RETAINING WALL OR WITHIN A RELATED MAINTENANCE EASEMENT, WHICHEVER IS GREATER.
- PERIMETER LANDSCAPING AND TRASH PAD SCREENING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL AND AS SHOWN ON THIS LANDSCAPE PLAN SHEET OF THE ROAD CONSTRUCTION DRAWINGS FOR F-07-110. SURETY IN THE AMOUNT OF \$13,500 FOR THE REQUIRED 35 SHADE TREES, 18 EVERGREEN TREES, AND 10 SHRUBS SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT UNDER THIS FINAL PLAN, F-07-110.

NOTE: THIS SHEET REPLACES SHEET 11 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

**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. 40091  
Expiration Date 2-13-2013



project	date	SEP 2011
10-024	illustration	JLS
	scale	1"=50'
	approval	RH

RESPOND TO HOWARD COUNTY COMMENTS	date	11/2/2011
revisions		

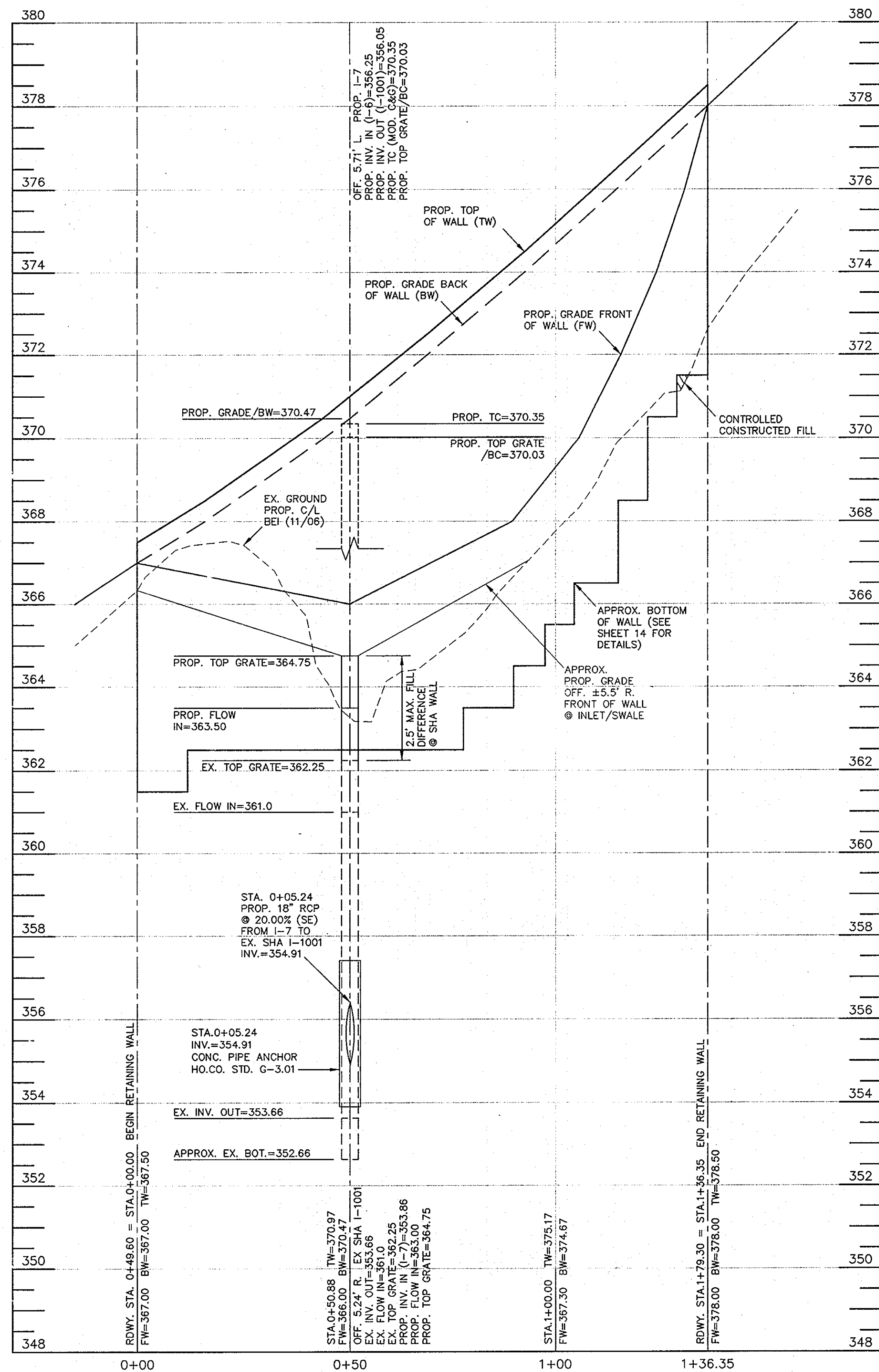
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TAX MAP 24 GRID 17 PARCEL 253  
2nd ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
LANDSCAPING PLAN, NOTES, AND DETAILS

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
6800 Deerpath Road, Suite 150, Elkridge, Maryland 21075  
(410) 997-0298 Bldg. (410) 997-0298 Fax



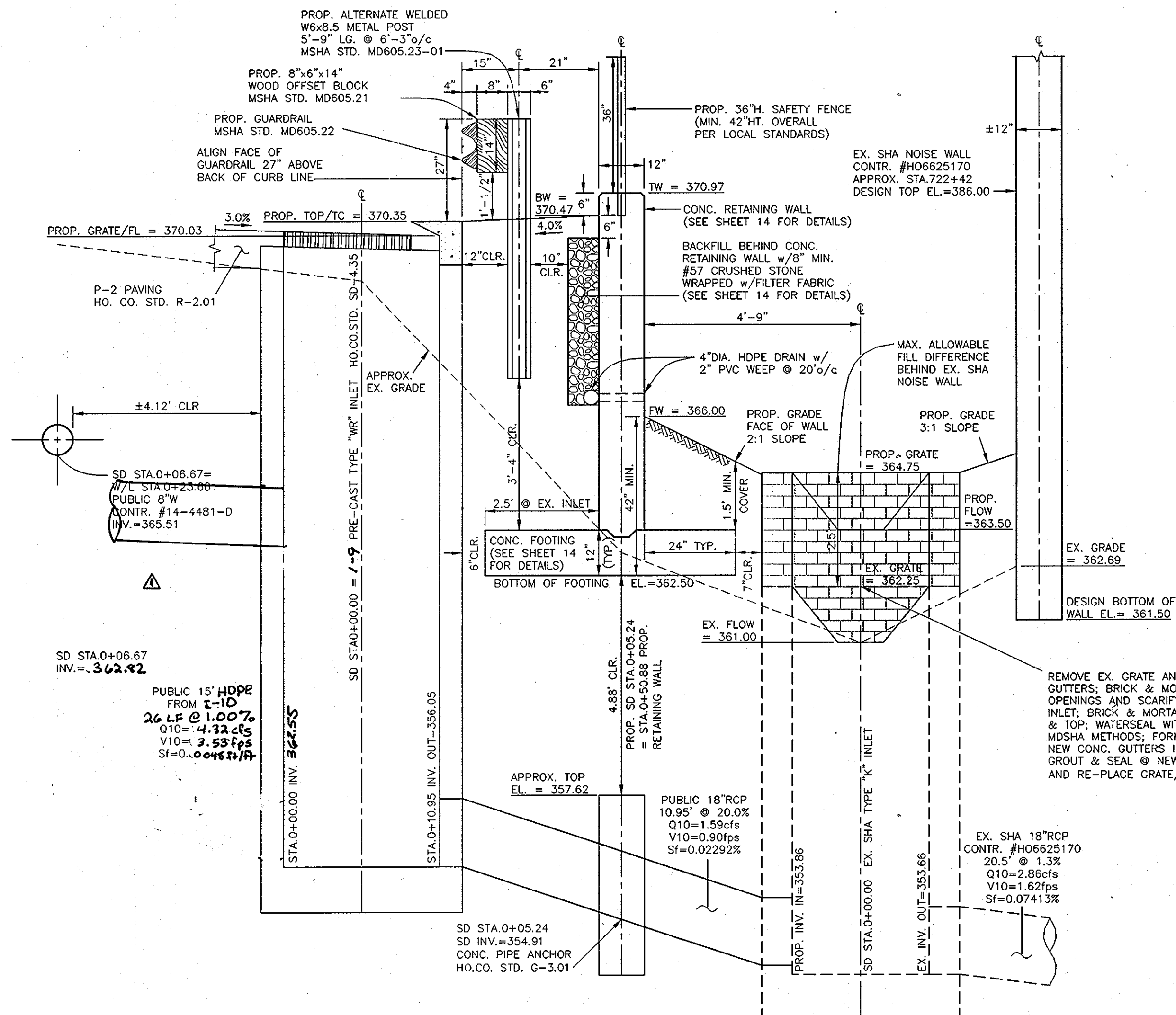




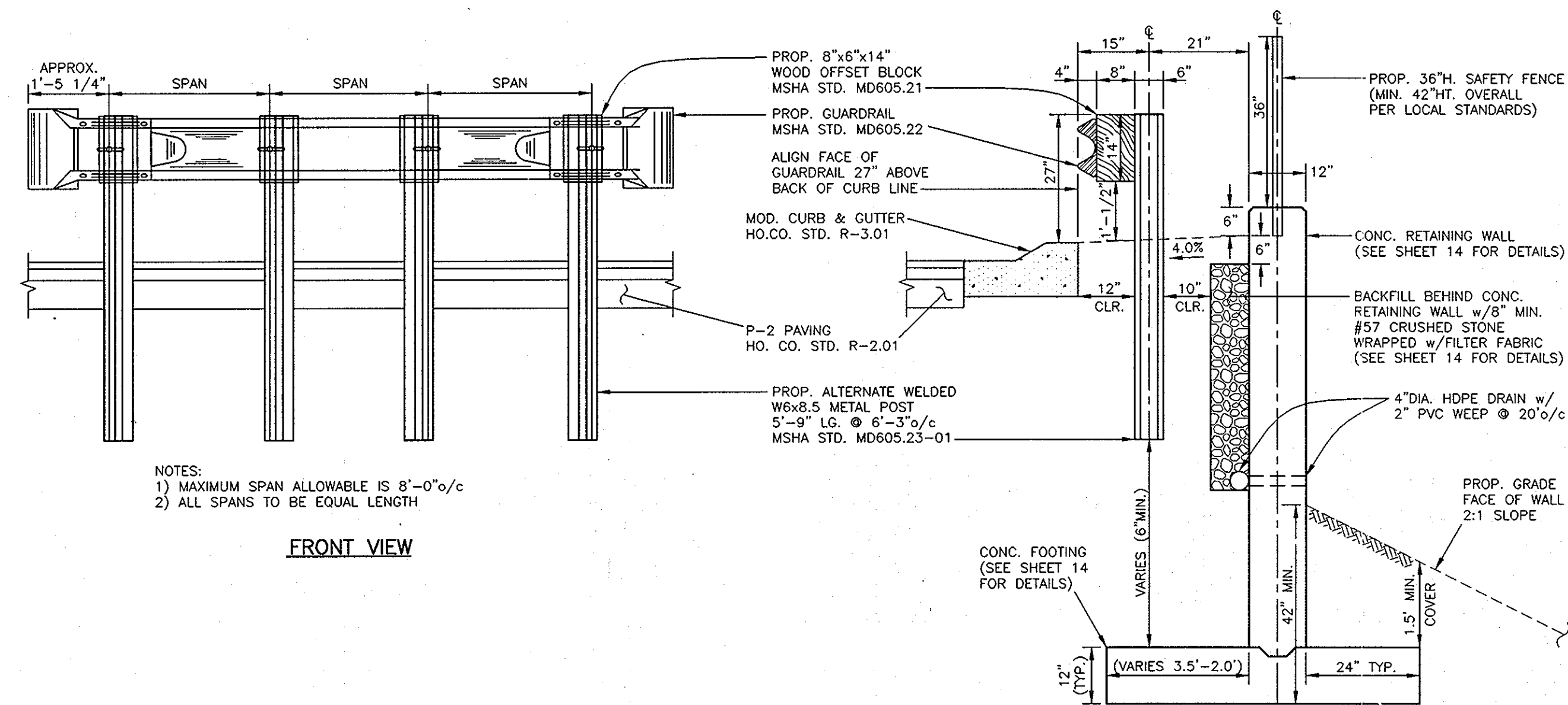


PROFILE - RETAINING WALL  
HORIZONTAL SCALE: 1" = 20'  
VERTICAL SCALE: 1" = 2'

THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR REMOVAL OF GRAFFITI FROM THE RETAINING WALLS

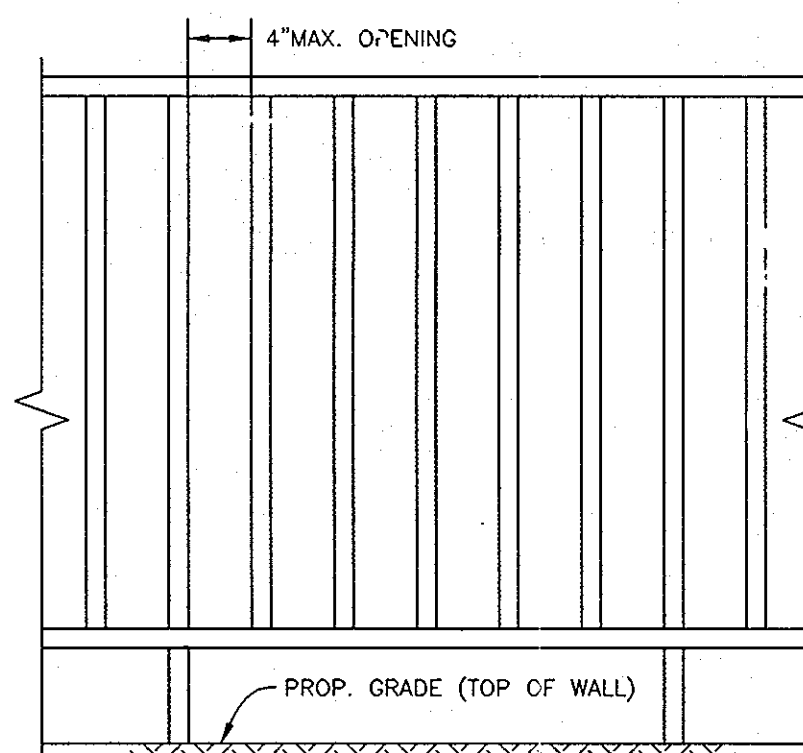


RDWY. C/L STA. 0+99.17 OFF. 19.84' R  
C/L WALL STA. 0+50.55  
SECTION/DETAIL  
IMPROVEMENTS @ EX. SHA INLET  
SCALE: 1" = 2'



GUARDRAIL DETAIL  
NOT TO SCALE

TYPICAL SECTION



SECTION 1021.0 GUARDS  
1021.1 General: Where required by the provisions of Sections 406.5, 408.3.2, 1005.5, 1014.7, 1016.5 and 1825.5, guards shall be designed and constructed in accordance with the requirements of this section and Section 1815.8. A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level.  
1021.2 Height: The guards shall be at least 42 inches (1067 mm) in height measured vertically above the leading edge of the tread or adjacent walking surface.  
Exceptions  
1. In other than occupancies in Use Group E, guards shall not be less than 34 inches (864 mm) in height above the leading edge of the tread along stairs which are not more than 20 feet (6096 mm) in height or which reverse direction at an intermediate landing with 12 inches (305 mm) or less measured horizontally between successive flights.  
2. Guards along open-sided floor areas, mezzanines and landings in occupancies in Use Group R-3 shall not be less than 36 inches (914 mm) in height.  
1021.3 Opening limitations: In occupancies in Use Groups A, B, E, H-4, I, I-2, M and R, and in public garages and open material such that a sphere with a diameter of 4 inches (102 mm) cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect.

TYPICAL SAFETY FENCE  
NOT TO SCALE

NO.	DATE	REVISION
1	2-28-12	To revise storm drains and storm water management

**BENCHMARK**  
ENGINEERS • LAND SURVEYORS • PLANNERS

**ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE • SUITE 418  
ELLICOTT CITY, MARYLAND 21043  
PHONE: 410-465-6105 FAX: 410-465-6844  
E-MAIL: bel@bel-civilengineering.com

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. 21143 Expiration Date: 12-31-2008

*Robert M. Bell*  
No. 21143  
PROFESSIONAL ENGINEER  
3-13-08

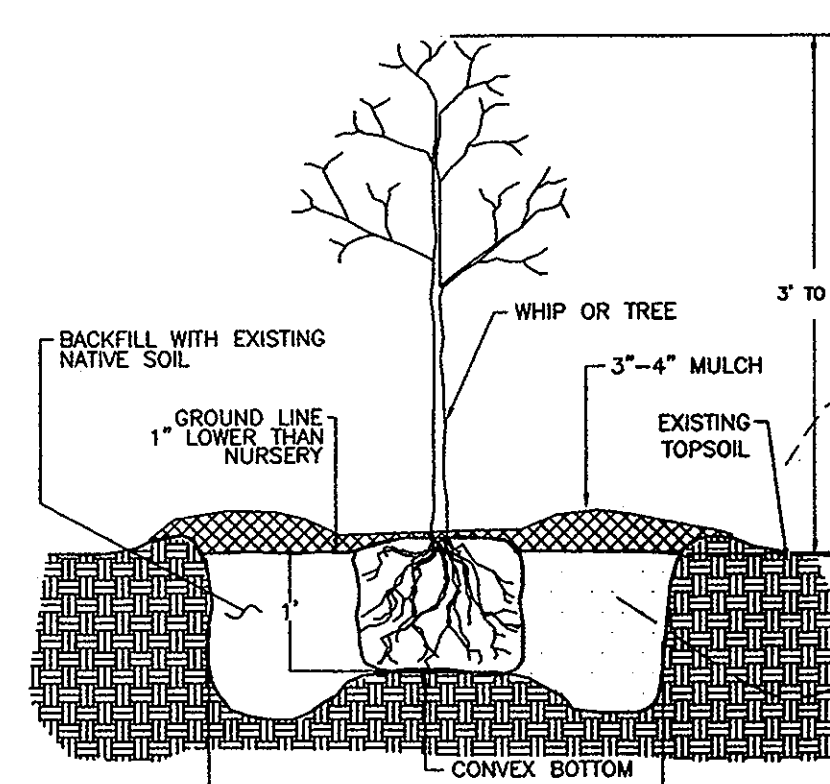
DEVELOPER/CONTRACT PURCHASER:	PROJECT:
SEC RITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLICOTT CITY, MARYLAND 21041 PHONE: (410) 465-4244	HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 1 & 5-10 AND O.S. LOTS 3 & 4
	LOCATION:
	TAX MAP 24 - GRID 17 PARCEL 253 - ZONE: R-20 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
	TITLE:
	FINAL/CONSTRUCTION PLAN MISCELLANEOUS SITE PLAN PROFILES, NOTES, AND DETAILS
	DATE:
DECEMBER 20, 2006 MARCH 14, 2008	PROJECT NO. 1574
Des: MCR/DAM Draft: MCR Check: DAM	SCALE: AS SHOWN DRAWING 13 OF 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	DATE: 5-1-08
<i>William Z. ...</i> CHIEF, BUREAU OF HIGHWAYS	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	DATE: 5/5/08
<i>Cindy ...</i> CHIEF, DIVISION OF LAND DEVELOPMENT	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE: 5/1/08









TREE PLANTING DETAIL  
CONTAINER GROWN

NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

NOTE: - NO 15% TO 25% SLOPES OR SLOPES GREATER THAN 25% EXIST ON-SITE.  
- THE EXISTING 1.98 ACRES AFFORESTATION IS TO SATISFY THE ON-SITE REQUIREMENTS FOR F-99-19, ROSEBAR PROPERTY.

AFFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
	Acer rubrum	VT	D-W	FAC	11'	CONT/BARE ROOT 3' - 5' HT. *
	Red Maple					
	Nyssa sylvatica	T	M-W	FAC	11'	CONT/BARE ROOT 3' - 5' HT. *
	Black Gum					
	Prunus serotina	I	M-W	FAC+	11'	CONT/BARE ROOT 3' - 5' HT. *
	Black Cherry					
	Quercus alba	I	M-W	FAC+	11'	CONT/BARE ROOT 3' - 5' HT. *
	White Oak					
	Quercus rubra	MT	D-M	UPL	11'	CONT/BARE ROOT 3' - 5' HT. *
	Red Oak					
	Quercus velutina	MT	M	FAC+	11'	CONT/BARE ROOT 3' - 5' HT. *
	Black Oak					
	Sassafras albidum	MT	D-M	FACU	11'	CONT/BARE ROOT 3' - 5' HT. *
	Common Sassafras					

TOTAL TREES  
\* NOTE: SEEDLINGS CAN BE USED IN PLACE OF THE 3' - 5' TREES. IN ORDER TO DETERMINE THE NUMBER OF SEEDLINGS REQUIRED, MULTIPLY THE QUANTITY LISTED BY 2. ALSO, MINIMUM ON-CENTER SPACING SHOULD BE REDUCED TO 8'.

NOTE: IF CONSTRUCTION SHOULD TAKE PLACE ON LOT 14, 15, 16, 18, 19, OR 20 AFTER THE AFFORESTATION AREA HAS BEEN INSTALLED, PROTECTIVE FENCING SHALL BE INSTALLED AT THE COMMON PROPERTY LINE WITH THE PRESERVATION PARCEL.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

PLANTING SPECIFICATIONS AND NOTES

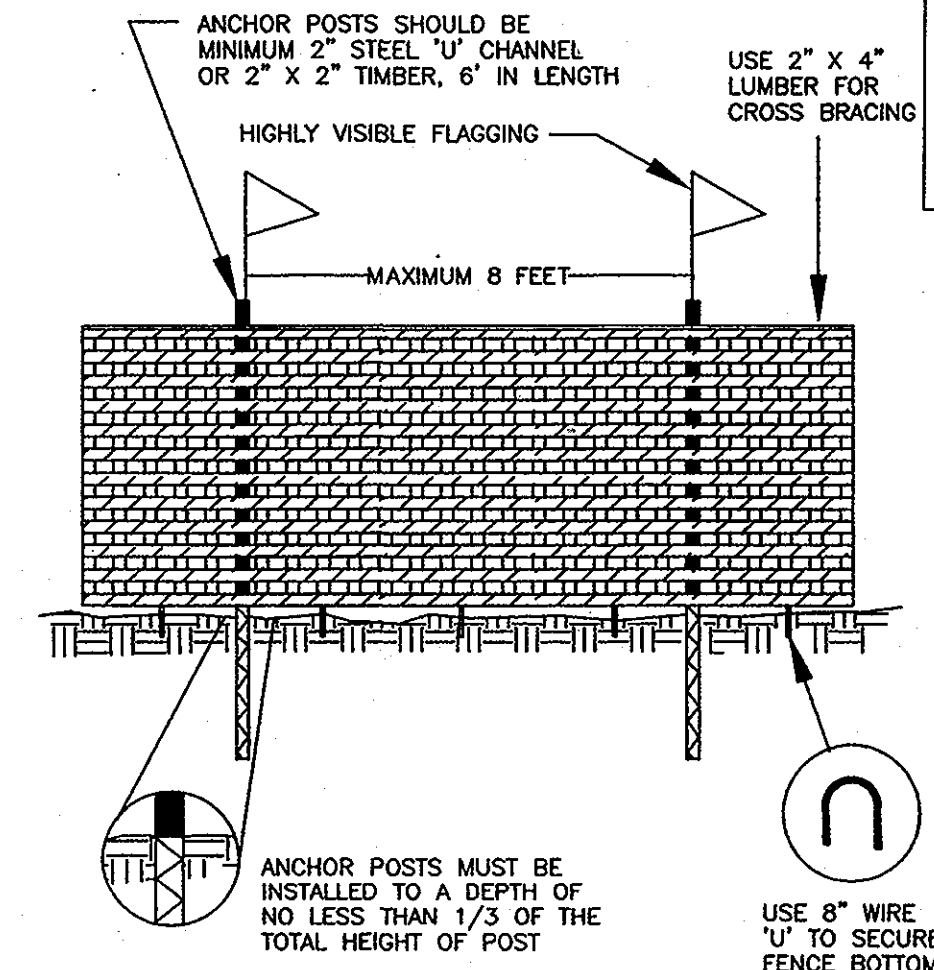
1. IF NECESSARY, PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT BE NECESSARY ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL.
2. DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT.
3. SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% VOLUME OF COMPOSTED SLUDGE.
4. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% VOLUME PEAT MOSS.
5. ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

1. FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
2. FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
3. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
4. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY PLACEMENT OF 2.51 ACRES OF REQUIRED AFFORESTATION INTO AN OFF-SITE EASEMENT ON PROPERTY IDENTIFIED AS THE ROSEBAR PROPERTY, PRESERVATION PARCEL A, LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS PARCEL 221, SITUATED ON THE WEST SIDE OF HOBBS ROAD. THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115/NEW COLONY VILLAGE. DPZ HAS DETERMINED THAT A RED-LINE REVISION SHALL BE MADE TO SDP-97-115 TO SHOW 2.51 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL F. EASEMENT LOCATED ON ROSEBAR. SURETY IN THE AMOUNT OF \$54,687.80 FOR 2.51 ACRES OF REQUIRED AFFORESTATION SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THE FINAL PLAN, F-07-110/HAWES PROPERTY.

PROTECTIVE FENCE DETAIL  
BLAZE ORANGE PLASTIC MESH



- NOTES:  
1. FOREST PROTECTION DEVICE ONLY.  
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.  
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.  
4. ROOT DAMAGE SHOULD BE AVOIDED.  
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.  
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

SOILS DESCRIPTIONS:

SYMBOL	DESCRIPTION
CgC2	CHESTER GRAVELLY SILT LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
ChA	CHESTER SILT LOAM, 0% TO 3% SLOPES --- TYPE B
ChB2	CHESTER SILT LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
GhA	GLENVILLE SILT LOAM, 0% TO 3% SLOPES --- TYPE C

MD DNR QUALIFIED PROFESSIONAL

MASHIDI TRINGA

OWNERS

ROSEBAR LIMITED PARTNERSHIP, LLP (LOTS 10 THRU 12) & ROBERT WAYNE NEWSOME AND MELISSA NEWSOME (LOT 13)  
P.O. BOX 39  
COLUMBIA, MARYLAND 21045  
(410) 792-2100

OWNER/DEVELOPER

3804 VIEW TOP, LLC  
1055 WEST JOPPA ROAD  
APT. 330  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAWES

NOTE: SIGNS ARE PERMANENT AND TO BE MOUNTED ON DURABLE POSTS OR POLES (4\"/>

APPROVED: DEPARTMENT OF PUBLIC WORKS  
DATE: 4/16/12  
CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
DATE: 4/30/12  
CHIEF DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 4/27/12

FOREST CONSERVATION AREA  
REFORESTATION PROJECT  
TREES FOR YOUR FUTURE  
SIGNAGE DETAIL  
NOT TO SCALE

FOREST CONSERVATION WORKSHEET

NET TRACT AREA:									
A.	Total tract area.....				=5.61				
B.	Area within 100 year floodplain.....				=0.00				
C.	Area to remain in agricultural production.....				=0.00				
D.	Net tract area.....				=5.61				
LAND USE CATEGORY:									
(from table 3.2.1, page 40, Manual)									
Input the number "1" under the appropriate land use zoning, and limit to only one entry.									
ARA	MOR	IDA	HR	MPD	CIA				
0	0	0	1	0	0				
E. Afforestation Threshold.....					15% x D = 0.84				
F. Conservation Threshold.....					20% x D = 1.12				
MIN. EXISTING FOREST COVER:									
G. Existing forest cover (excluding floodplain).....					=2.20				
H. Area of forest above afforestation threshold.....					=1.36				
I. Area of forest above conservation threshold.....					=1.08				
BREAK EVEN POINT:									
J. Forest retention above threshold with no mitigation.....					=1.34				
K. Clearing permitted without mitigation.....					=0.86				
PROPOSED FOREST CLEARING:									
L. Total area of forest to be cleared.....					=2.20				
M. Total area of forest to be retained.....					=0.00				
PLANTING REQUIREMENTS:									
N. Reforestation for clearing above conservation threshold.....					=0.27				
O. Reforestation for clearing below conservation threshold.....					=0.24				
Q. Credit for retention above conservation threshold.....					=0.00				
R. Total reforestation required.....					=0.51				
S. Total afforestation required.....					=0.00				
T. Total reforestation and afforestation required.....					=0.51				

LEGEND

- EXISTING SEPTIC EASEMENT
- PROPOSED 24' USE-IN-COMMON DRIVEWAY EASEMENT
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION EASEMENT (REFORESTATION)
- EXISTING WELL (DUG PER PERC PLAT SIGNED BY HOWARD COUNTY HEALTH OFFICER ON 7/1/98)
- FOREST CONSERVATION SIGNAGE
- TREE PROTECTIVE FENCING

DATE: MAR 2000  
PROJECT: 96087  
ENGINEERING: illustration  
S.D.: S.D.  
SCALE: 1"=100'  
DESCRIPTION: reforestation  
REVISIONS:

HAWES PROPERTY  
FOREST CONSERVATION EASEMENT GRANTED FROM ROSEBAR PROPERTY, PRESERVATION PARCEL A  
TAX MAP 14 - BLOCK 23 - HOWARD COUNTY, MARYLAND  
FOURTH ELECTION DISTRICT  
OFF-SITE REFORESTATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Belcoolt City, Maryland 21042  
(410) 607-0046 Fax: (410) 607-0049 Web

15 OF 16  
F-07-110



OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1), DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

A. MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVING RUNOFF ARE PROTECTED FROM FUTURE COMPACTION OF DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

- A. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- B. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- C. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- D. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

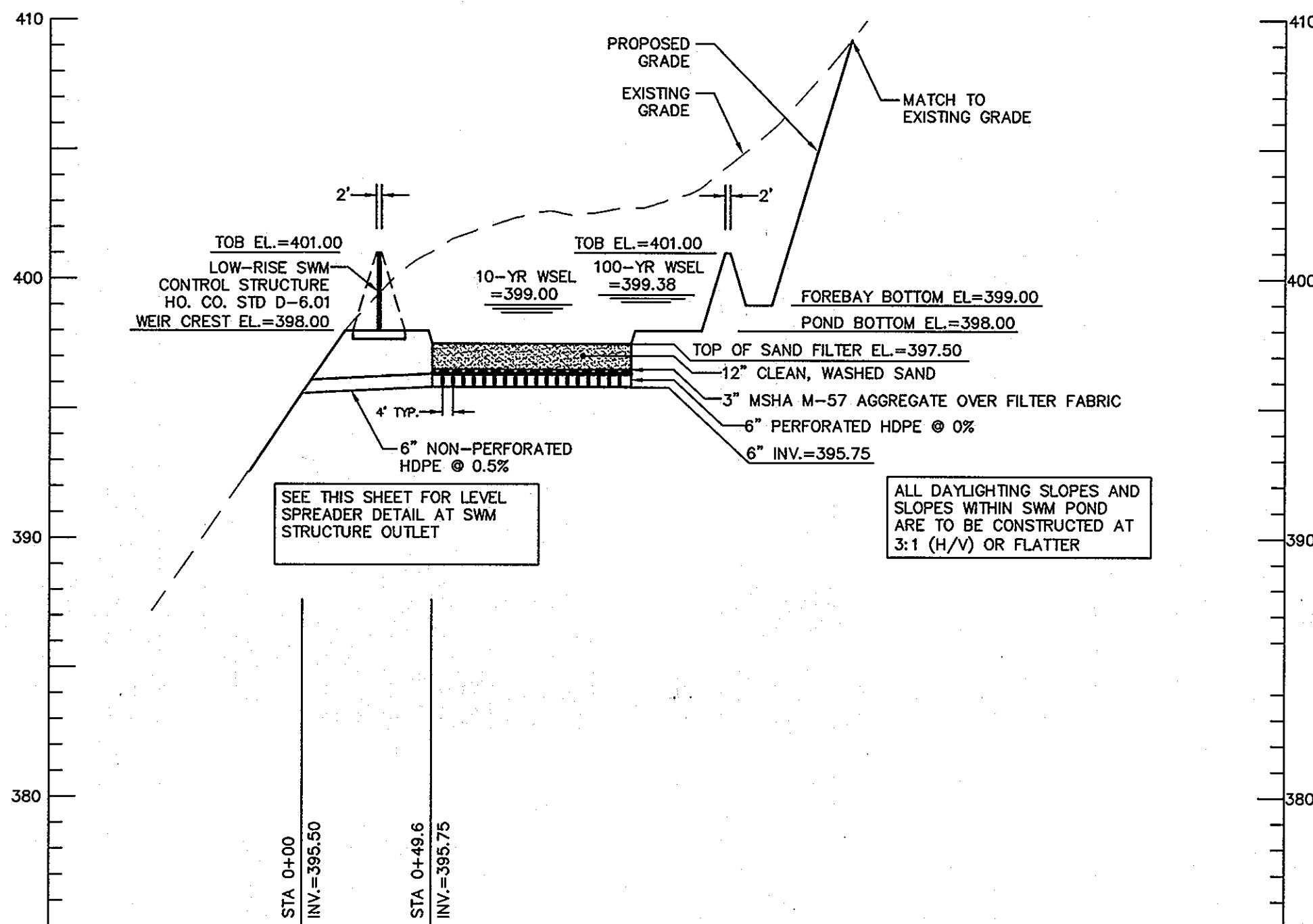
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1)

- A. THE STORMWATER FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- B. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
- C. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
- D. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- E. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- F. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
- G. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
- H. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- I. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- J. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1 Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil [2' to 4' deep]	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	n/a		PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3, $f'_c = 3500$ psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 550 R.09; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Grystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



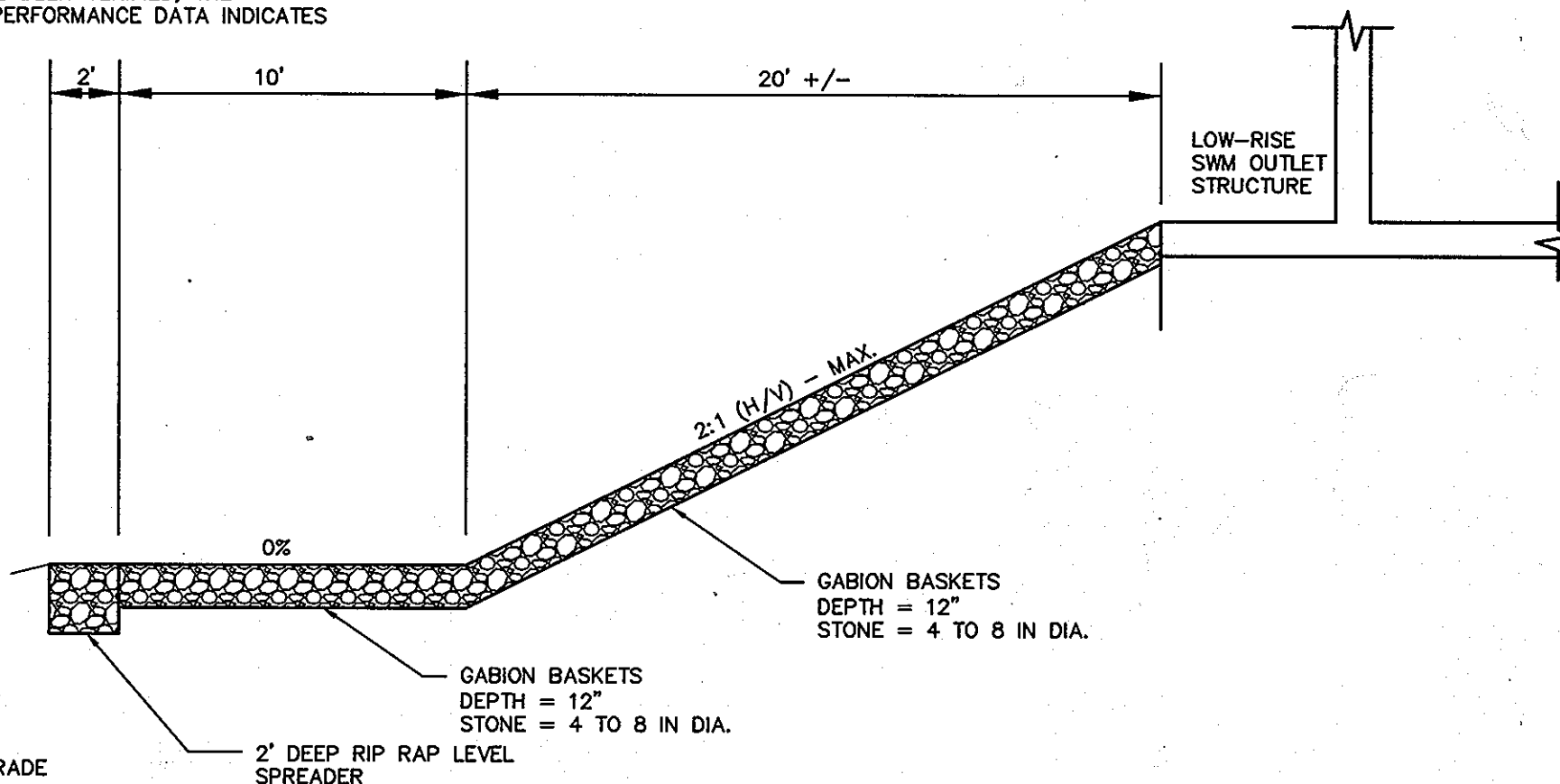
SECTION - SWM POND 2

SCALE: 1"=50' HOR  
1"=5' VER

POND DATA:

HAZARD CLASSIFICATION: N/A (NON MD-378)  
F-1, SAND FILTER  
DRAINAGE AREA: 0.93 Ac  
PROPOSED RCN: 68  
PROPOSED TC: 11.5 MINS.  
SAND FILTER AREA: 120 SF  
10-YR Q: 3.65 CFS  
10-YR WSEL: 399.00  
100-YR Q: 6.00 CFS  
100-YR WSEL: 399.36  
WQV + REV REQUIRED: 3,009 CF  
WQV + REV PROVIDED: 3,274 CF (INCLUDING FOREBAY)  
MAINTENANCE: JOINTLY MAINTAINED  
OWNERSHIP: PRIVATE

SWM POND AND MICRO-BIORETENTION FACILITY 'MB-2A' ARE TO BE PUBLICLY OWNED AND JOINTLY MAINTAINED. ALL OTHER MICRO-BIORETENTION FACILITIES ARE TO BE PRIVATELY OWNED AND MAINTAINED.



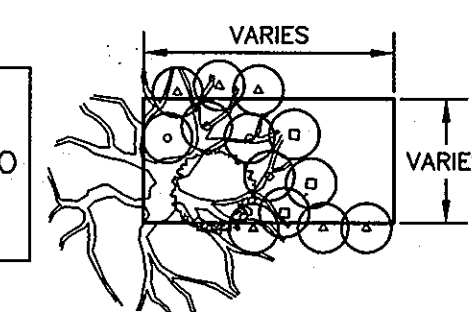
LEVEL SPREADER DETAIL

N.T.S.

PLANT LIST

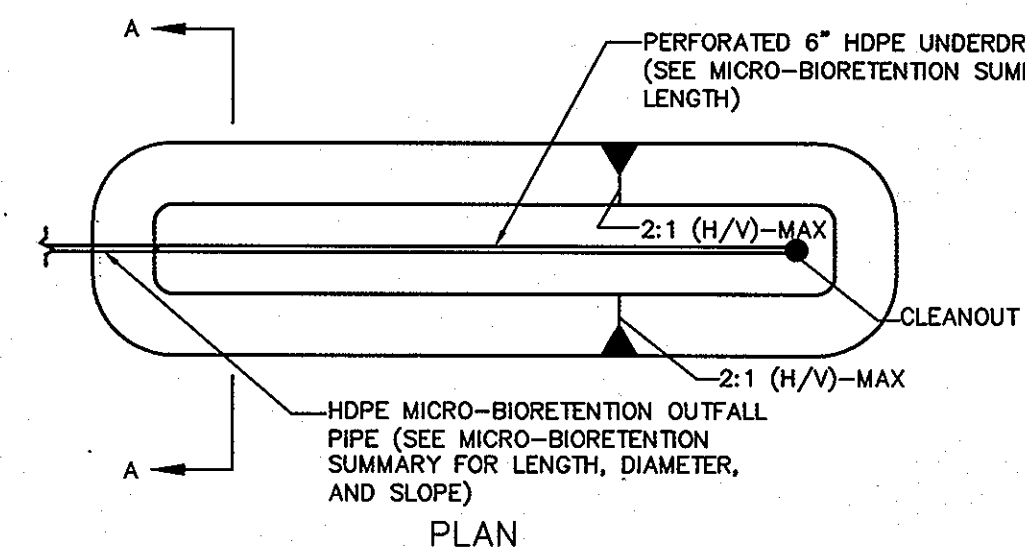
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
1	PL	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2-1/2" - 3" CAL.
1	IB	ILEX GLABRA	INK BERRY	2' - 3' HT.
6	LB	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	1 GAL. CONTAINER
4	ON	ONOCLEA SENSIBILIS	SENSITIVE FERN	1 GAL. CONTAINER
3	AN	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1 GAL. CONTAINER
TOTAL: 13 PERENNIALS, 1 SHRUB, 1 TREE (PER EACH FACILITY EXCEPT FOR MB-2A)				

FOR MICROBIORETENTION FACILITY MB-2A, QUANTITY FOR EACH PERENNIALS IS TO BE DOUBLED FROM WHAT IS SHOWN IN THE CHART

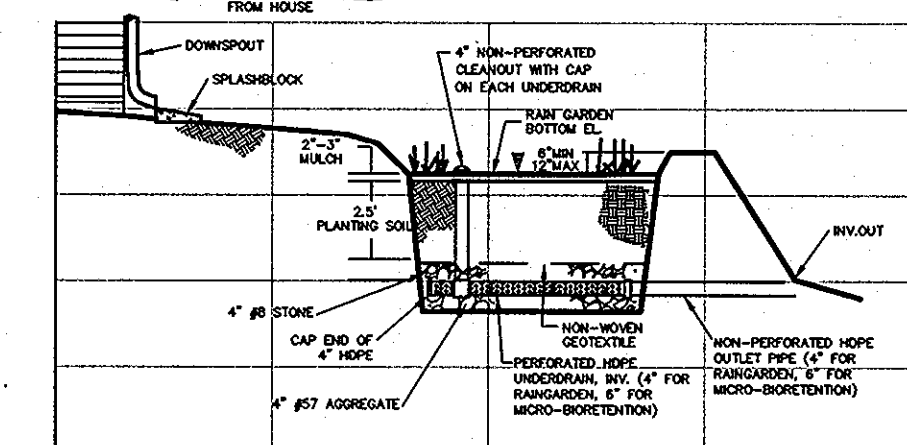


MICRO-BIORETENTION PLANTING DETAIL

N.T.S.



PLAN



NOT TO SCALE

TYPICAL MICRO-BIORETENTION DETAILS

NOTE: THIS SHEET REPLACES SHEET 6 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

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. 40091  
Expiration Date 2-13-2013



OWNER/DEVELOPER

3804 VIEW TOP, LLC  
1055 WEST JOPPA ROAD  
JOP, MD  
TOWSON, MARYLAND 21204  
ATTN: RUSSELL HAMB

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

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter W. W. 4-16-12  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

4/21/12  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

4/30/12  
CHIEF, DIV. OF PLANNING AND ZONING

FACILITY	BIORETENTION SURFACE AREA (A1) / DIMENSIONS	TOP OF MULCH EL.	UNDERDRAIN DIA. & OUTFALL PIPE DIA.	UNDERDRAIN INV. EL.	PERFORATED HDPE UNDERDRAIN LENGTH	PERFORATED HDPE UNDERDRAIN SLOPE (TO OVERFLOW INLET)	HDPE MICROBIORETENTION OUTFALL LENGTH (TO CONNECTION PIPE OR OUTFALL)	HDPE MICROBIORETENTION OUTFALL ELEVATION (CONNECTION PIPE OR OUTFALL)	HDPE MICRO-BIORETENTION OUTFALL SLOPE (TO CONNECTION PIPE OR OUTFALL)	TOP OF BANK EL.
MB-1A	300 SF (15'x10' EACH COMPONENT)	405.00	6"	402.00	14 LF (EACH COMPONENT)	0%	57 LF, 19 LF	396.00, 395.90	10.5%, 32.1%	406.00
MB-1B	300 SF (15'x10' EACH COMPONENT)	400.00	6"	397.00	14 LF (EACH COMPONENT)	0%	111 LF, 41 LF	388.05, 387.40	8.1%, 23.4%	401.00
MB-1C	400 SF (40'x10')	392.00	6"	389.00	39 LF	0%	65 LF	377.70	17.4%	393.00
MB-1D	335 SF (33.5'x10')	374.00	6"	371.00	32 LF	0%	26 LF	370.75	1.0%	375.00
MB-3	300 SF (15'x10' EACH COMPONENT)	398.00	6"	395.00	14 LF (EACH COMPONENT)	0%	65 LF, 94 LF	394.00	1.5%, 1.1%	399.00
MB-4	400 SF (20'x10' EACH COMPONENT)	403.00	6"	400.00	19 LF (EACH COMPONENT)	0%	15 LF, 67 LF	399.80	1.3%, 0.3%	404.00

NOTE: EACH MICRO-BIORETENTION DESIGNATION ("MB-1A, MB-3", ETC.) REPRESENTS THE ONE OR TWO MICRO-BIORETENTION COMPONENTS ON EACH LOT

Project	date	SBP 2011
10-024	10-024	10-024
Illustration	10-024	10-024
JLS	JLS	JLS
scale	scale	scale
AS SHOWN	AS SHOWN	AS SHOWN

Project	date	SBP 2011
10-024	10-024	10-024
Illustration	10-024	10-024
JLS	JLS	JLS
scale	scale	scale
AS SHOWN	AS SHOWN	AS SHOWN

HAWES PROPERTY  
LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'  
TAX MAP 24, GRID 17, PARCEL 253  
HOWARD COUNTY, MARYLAND  
2nd ELECTION DISTRICT  
MICRO-BIORETENTION AND SWM POND SECTIONS AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.  
Engineers Planners Surveyors  
6800 Deerpath Road, Suite 150, Elkridge, Maryland 21075  
(410) 997-0286 Fax: (410) 997-0288 Fax