## SHEET INDEX A DESCRIPTION SITE PLAN GRADING PLAN SEDIMENT & EROSION CONTROL PLAN SEDIMENT & EROSION CONTROL DETAILS STORM DRAINAGE DRAINAGE AREA MAP SITE AND SEDIMENT CONTROL DETAILS LANDSCAPE PLAN

#### SITE ANALYSIS DATA CHART

1. General Site Data

b. Applicable DPZ File References: PLAT 17669, F-04-53, F-05-93, W/S 24-4120 D,

ROAD PROFILES

- ्रे <u>5-99-12, 1<del>-03-175, 1-05-13,</del> 7</u>8-979-м, <del>1-05-19</del>, 18-339, 18-359, <del>1-01-127</del>, 1<del>-03-1</del>
- C. Proposed Use of Site or Structure(s):

  WP-0144, WP-03-154, WP-05-24, F-07-138 PLAT 18931, 18932, 18933; WP-09-143

  C. Proposed Use of Site or Structure(s):

  CONDOMINIUM TOWNHOMES d. Proposed Water and Sewer Systems are: public
- e. Any Other Information Which May be Relevant: N/A
- 2. Area Tabulation a. Total Project Area: 4.32 Acres
- b. Area of This Plan Submission: 4.32 Acres
  c. Limit of Disturbed Area: 4.32 Acres
- b. Area of Buildings: c. Limit of Open Space:
- 3. Site Program
- a. Number of Units: 40
- b. Number of open space lots: \_\_\_ c. Parking Spaces Required: 92 (2.3 SP/UN)
  d. Parking Spaces Provided: 190 (4.8 SP/UN)

### GENERAL NOTES

1. 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.

2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

3. THE EXISTING TOPOGRAPHY IS TAKEN FROM F-04-53 GRADING PLAN AND SUPPLEMENTED BY FIELD SURVEY BY DMW DATED JAN. 17, 2006.

4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT 47G2 AND 47E4 WERE USED FOR THIS PROJECT.

5. STORMWATER MANAGEMENT QUALITY AND QUANTITY IS PROVIDED OFF SITE PER F-04-53 (WETPOND). RECHARGE PROVIDED IN GRASS SWALES ON SITE BY UNDERGROUND STORAGE.

6. EXISTING UTILITIES ARE BASED ON CONTRACT NO. 24-4120-D AND F-04-53 PLANS OF RECORD.

DEVELOPER'S EXPENSE. 8. SHC ELEVATIONS ARE LOCATED AT THE EASEMENT LINE.

9. FOR DRIVEWAY ENTRANCE DETAILS, REFER TO THE HOWARD COUNTY DESIGN MANUAL, YOLUME IV. STANDARD DETAIL R-606

7. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE

10. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:

a. WIDTH -- 12' (14' SERVING MORE THAN ONE RESIDENCE); b. SURFACE -- 6" OF COMPACTED CRUSHER RUN BASE W/ TAR AND CHIP COATING (1-1/2" MIN.);

c. GEOMETRY -- MAX 15% GRADE, MAX 10% GRADE CHANGE AND MIN. 45' TURNING RAD; DRIVEWAY TO BE CONSTRUCTED IN ACCORDANCE WITH THE PLAN AND TYPICAL SECTION PROVIDED ON THIS SITE DEVELOPMENT PLAN. d. STRUCTURES (CULVERTS/BRIDGES) -- CAPABLE OF SUPPORTING

25 GROSS TONS (H-25 LOADING); e. DRAINAGE ELEMENTS -- CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE: f. MAINTENANCE -- SUFFICIENT TO INSURE ALL WEATHER USE.

11. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION, THERE IS NO FOREST CLEARING. FOREST RETENTION, OR REFORESTATION PROPOSED ON SITE. THE FOREST CONSERVATION REQUIREMENTS WERE MET VIA OFF-SITE FOREST CONSERVATION EASEMENTS CREDIT ON EMERSON OPEN SPACE LOTS PER F-05-49.

12. THERE ARE NO EXISTING STRUCTURES ON THE SITE.

13. NO WETLANDS EXIST WITHIN THE LIMITS OF DISTURBANCE.

14. ALL SIDEWALKS SHALL BE CROSS SLOPED AT 14 INCH PER FOOT.

15. TRENCH BEDDING FOR STORM DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD G2.01.

16. DEPARTMENT OF PLANNING AND ZONING REFERENCE FILE NUMBERS: PLAT 17669, E-04-53; F-05-93, W/S 24-4120-D, S-99-12, F-03-175, F-03-43, ZB-979-M, \-<del>F-05-49.</del>PB-339.PB-359,<del>F-01-127</del>, P<del>-03-16</del>, <del>WP-01-14</del>, WP-03-154, WP-05-24, F-07-138, <sup>1</sup>F-10-020, WP-09-143, WP-10-054, F-11-023

17. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS OR MSHA STANDARDS AS SPECIFIED ON THE STRUCTURE SCHEDULE.

18. ALL MATERIALS AND CONSTRUCTION ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF HOWARD COUNTY DESIGN MANUAL YOLUME IV.

19. ALL ON-SITE DRIVEWAYS AND PARKING AREAS TO BE PRIVATELY MAINTAINED. 20. ALL CURB RADII ARE FIVE FOOT UNLESS OTHERWISE LABELED.

21. ALL PROPOSED HANDICAP RAMPS SHALL BE IN ACCORDANCE WITH THE

CURRENT A.D.A. STANDARDS. 22. THERE IS NO FLOODPLAIN ON THIS SITE.

23. PUBLIC WATER IS UTILIZED FOR THIS SITE. METERS WILL BE LOCATED INSIDE THE BUILDING PUBLIC SEWER SERVICE IS PROVIDED BY EXISTING 8" SANITARY CONTRACT NO. 24-4370-D.

24. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.

25. THERE ARE NO SLOPES GREATER THAN 25% AND COVERING AT LEAST 20,000 CONTIGUOUS S.F. LOCATED ON SITE.

26. ALL EXTERIOR LIGHTING SHALL COMPLY WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS. PROVIDE (1) 250 WATT HPS VAPOR PENDANT FIXTURE (CUT OFF) MOUNTED AT 30' ON BRONZE FIBERGLASS POLE USING A 12' ARM.

27. 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 SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

28. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

29. TRAFFIC STUDY APPROVED BY COMPREHENSIVE SKETCH PLAN (9/29/2000) BY WELLS AND ASSOCIATES 5-99-12.

30. NOISE STUDY TAKEN FROM F-04-53.

31. WATER IS PUBLIC.

32. SEWER IS PUBLIC.

33. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE EMERSON LANDSCAPE DESIGN CRITERIA. FINANCIAL SURERY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$52,050 MUST BE POSTED AS PART

34.NO IMPROVEMENTS SHALL BE CONSTRUCTED OR PLACED WITHIN THE PUBLIC WATER AND UTILITY EASEMENT THAT WILL IMPEDE OR HINDER ACCESS TO THE WATER MAIN.

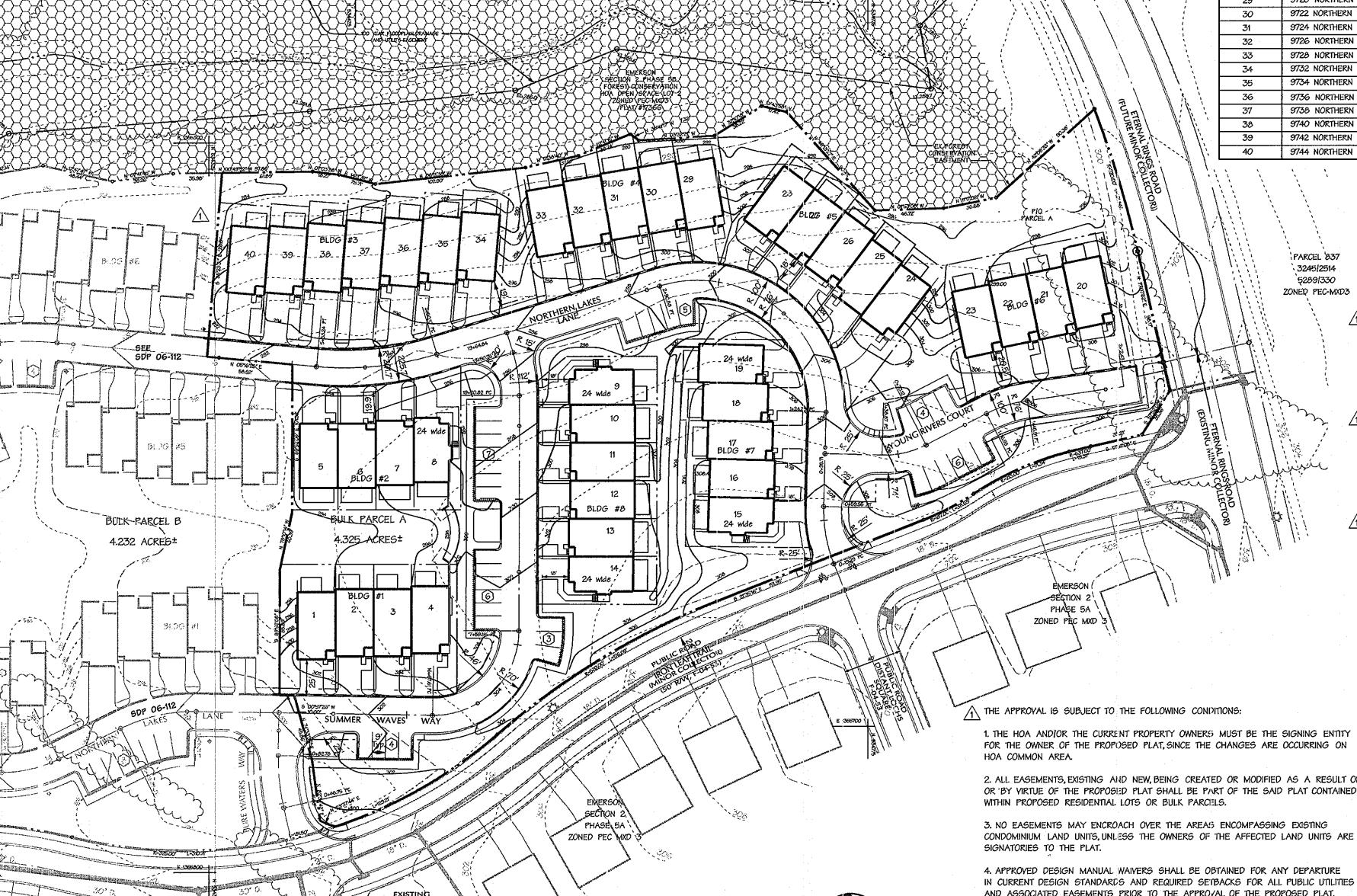
35. EMERSON SECTION 2 PHASE 7 WAS ALLOCATED 120 UNITS WITH THE RECORDATION OF PLAT#17669 PARCEL 'A" WAS ALLOCATED 60 UNITS AND PARCEL 'B" WAS ALLOCATED 60 Units. Additionally, parcel 'A" received 44 Tentative Unit Allocations From EMERSON SECTION 2 PHASE 6A, PLAT #17678 FOR A TOTAL OF 164 UNITS (60+60+44=164) WITH THE RECORDATION PLAT.EMERSON SECTION 2 PHASE 7. PARCEL 'A' WILL HAVE 64 EXCESS TENTATIVE HOUSING UNIT ALLOCATIONS RESERVED AND PARCEL 'B' WILL HAVE 23 EXCESS TENTATIVE HOUSING UNIT ALLOCATIONS RESERVED THE REMAINING 87 HOUSING UNIT FROM EMERSON SECTION 2 PHASE 7 (164-40-37=87) PARCEL A-1, SDP-06-159 AND THE REMAINING 67 HOUSING UNIT ALLOCATIONS ARE SHIFTED TO EMERSON ARE HERBY SHIFTED AS FOLLOWS: 20 HOUSING ALLOCATIONS ARE SHIFTED TO EMERSON SECTION 3 AREA 4, SECTION 2 PHASE 8, PARCEL 'B'.

# SITE DEVELOPMENT PLAN

EMERSON SECTION 2 AREA 7

PARCEL A UNITS 1 THRU 40

Howard County, Maryland



36. THE MINIMUM BUILDING SETBACK RESTRICTIONS FROM PROPERTY LINES AND PUBLIC ROAD RIGHT-OF-WAY LINES FOR ALL SFA UNITS SHALL BE IN ACCORDANCE WITH THE APPROVED EMERSON DEVELOPMENT CRITERIA PER PB-339 AND PB-359 FRONT: 5' FROM THE PROPERTY LINE TO THE HOUSE OR GARAGE, SIDE: 5' FROM THE PROPERTY

37. THIS DEVELOPMENT WILL NOT INCLUDE ANY MODERATE INCOME DWELLING UNITS.

LINE FOR END UNITS, REAR: 15' FROM THE PROPERTY LINE.

38. THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO.75-2003 AND THE COMP LITE ZONING AMENDMENTS EFFECTIVE 7/28/06. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN OR BUILDING PERMIT APPLICATION. Berkshire Place at Haddon Hall

RESTRICTIONS, THE CONDOMINIUM ASSOCIATION DOCUMENTS ARE TO BE RECORDED IN THE LAND RECORDS DEFICE 1.12571 / 6 329 RECORDS OFFICE. L. 12571 / F. 329 40.0N FEBRUARY 8,2007, THE HOWARD COUNTY PLANNING BOARD APPROVED THIS SDP WITH THE FOLLOWING

39. THE COMMON OPEN SPACE AREA FOR THIS PROJECT IS SUBJECT TO THE 1 HOA COVENANTS AND

REQUESTED SETBACK REDUCTIONS AS REQUIRED BY THE EMERSON DEVELOPMENT CRITERIA: 1) A REDUCTION OF THE SPACING SETBACK BETWEEN STRUCTURES FOR A BACK TO BACK ORIENTATION FOR UNIT 9 TO UNIT 19 FROM 50 FEET TO 43.7 FEET AND BETWEEN UNIT 10 TO UNIT 18 FROM 50 FEET TO 45.5 FEET AND 2) A REDUCTION OF THE REAR SETBACK FOR UNIT 26 TO THE REAR PROJECT BOUNDARY LINE FROM 15 FEET TO 13 FEET. 11. A WAIVER WAS GRANTED ON APRIL 14, 2009 (WP-09-143) OF SECTION 16.156(0)(1)(11) TO EXTEND THE APPROVAL STATUS FOR SDP-06-113 IN ORDER TO APPLY FOR BUILDING PERMITS FOR ALL SINGLE FAMILY ATTACHED OR CONDOMINIUM DWELLING UNITS APPROVED WITHIN 2 YEARS OF SIGNATURE APPROVAL OF THE SDP FOR THIS PROJECT; AND FROM SECTION 16.120(C)(4) REQUIRING THAT ALL SFA RESIDENTIAL LOTS HAVE A MINIMUM OF 15'OF FRONTAGE ON A PUBLIC ROAD OR LOCATED ON A PRIVATE ROAD NOT EXCEEDING 200' MEASURED FROM THE EDGE OF THE PUBLIC RIGHT-OF-WAY ALONG THE CENTERLINE OF THE PRIVATE ROAD.

LOCATION MAP

SCALE: 1"=50'

1 42. THIS PROPERTY IS SUBJECT TO PLAT "EMERSON SECTION 2, AREA 7 LOTS 1-14, 224-40 AND NON-BUILDABLE BULK PARCEL C, A RESUBDIMSON OF SECTION 2 AREA 7 PARCEL A" RECORDED AS PLAT NOS. 21092, 21093, 21094 AND 21095, F NO. - F-10-020.

4 43. A WAIYER WAS GRANTED ON DECEMBER 4,2009 (WP-10-054) OF SECTION 16.1C2(C)(2) WHICH STATES THAT A RESUBDIVISION PLAT WILL COVER THE ENTIRE PARCEL AREA BEING SUBDIMDED: AND SECTION 16.102(D) WHICH REQUIRES RESUBDIMSION PLAN APPROVAL TO MODIFY A PREVIOUSLY RECORDED PLAT FOR RESIDENTIAL PROPERTIES BY ADDING OR DELETING LOTS OR MODIFYING LOT LINES AND WHICH EXEMPTS RESUBDIVISIONS FROM SKETCH AND PRELIMINARY PLANS ONLY IF THERE IS NO PUBLIC ROAD REQUIREMENTS REQUIRED AND THERE IS NO ADDITION TO THE AREA PREVIOUSLY RECORDED EXCEPT FOR THE INCLUSION OF DEEDED ACREAGE WHICH ONLY PROVIDES THE SITE WITH ACCESS OR PUBLIC ROAD FRONTAGE.

9737 NORTHERN LAKES LANE 9735 NORTHERN LAKES LANE 8626 SUMMER WAVES WAY 8624 SUMMER WAYES WAY 8622 SUMMER WAVES WAY 8620 SUMMER WAYES WAY 8618 SUMMER WAVES WAY 9703 NORTHERN LAKES LANE 9707 NORTHERN LAKES LANE 9711 NORTHERN LAKES LANE 8511 YOUNG RIVERS COURT 8509 YOUNG RIVERS COURT 8507 YOUNG RIVERS COURT 8505 YOUNG RIVERS COURT 9708 NORTHERN LAKES LANE 9710 NORTHERN LAKES LANE 9712 NORTHERN LAKES LANE 9714 NORTHERN LAKES LANE 9716 NORTHERN LAKES LANE 9720 NORTHERN LAKES LANE 9722 NORTHERN LAKES LANE 9724 NORTHERN LAKES LANE 9726 NORTHERN LAKES LANE 9728 NORTHERN LAKES LANE 9732 NORTHERN LAKES LANE

9734 NORTHERN LAKES LANE

9736 NORTHERN LAKES LANE

9738 NORTHERN LAKES LANE

9740 NORTHERN LAKES LANE

9742 NORTHERN LAKES LANE

9744 NORTHERN LAKES LANE

PARCEL 837

3245/2514

52891330

ZONED PEC-MXD3

ADDRESS CHART

STREET ADDRESS

8601 SUMMER WAVES WAY

8603 SUMMER WAVES WAY

8605 SUMMER WAYES WAY

8607 SUMMER WAVES WAY

9741 NORTHERN LAKES LANE

9739 NORTHERN LAKES LANE

284.57 288.47 285.04 288.94 292.94 289.24 293.65 289.95 294.27 290.57 294.71 291.*0*1 295.17 291.47 295.17 14 289.95 294.91 291.21 294.47 290.77 293.84 290.14 289.77 293.47 292.70 289.00 295.20 299.10 298.92 295.02 298.60 294.70 23 294.38 298.28 24 295.11 291.41 294.37 290.67 26 290.06 293.76 289.43 293.33 292.87 288.97 288.47 30 288.04 291.94 291.71 287.81 287.16 33 286.78 290.68 34 289.29 285.39 288.89 284.99 36 284.42 288.32 37 288.13 284.23 *38* 283.22 39 282.56 281.88 285.78 40 MiN C is minimum floor elevation

SEWER HOUSE

CONNECTION TABLE

289.50

290.22

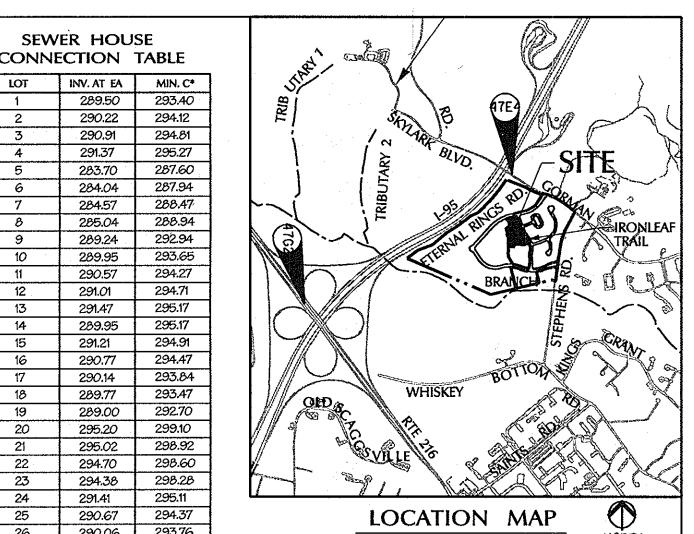
290.91

291.37

283.70

284.04

of unit that can be served by proposed



BENCHMARK DESCRIPTION

COORDINATES IN MARYLAND NAD83(91) (HORIZONTAL)

BM1 47E4 NORTHING: 163326.2295 EASTING: 413136.2550

BM2 47G2 NORTHING: 162440.1212 FASTING: 4118539279

APPROVED: HOWARD COUNTY DEPT, OF PLANNING & ZONING

FLEVATION: 364.210ft

45. THE ROADS SHOWN HEREON (YOUNG RIVERS COURT, SUMMERS WAYES WAY AND NORTHERN LAKES LANE) ARE INTENDED TO BE PRIVATE AND TO BE OWNED AND MAINTAINED BY THE BERKSHIRE PLACE AT HADDON HALL HOMEOWNERS ASSOCIATION, INC. EACH CONDOMINIUM UNIT OWNER AND LOT OWNER WILL HAVE THE RIGHT TO USE THE PRIVATE ROADS PER LIBER 11314, FOLIO 293. ACCESS RIGHTS AND MAINTENANCE RESPONSIBILITIES ASSOCIATED WITH A PORTION OF THE PRIVATE ROADS DESIGNATED HEREIN BETWEEN ADJACENT PARCEL B AND THIS SUBDIVISION ARE RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY MARYLAND IN LIBER 10867, FOLIO 378 AND LIBER 12286, FOLIO 156

1 46. BASED ON A DECISION BY THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING OF 13' FROM THE CORNER OF ADJOINING OPEN SPACE LOT 2 WHICH CONTAINS AN EXISTING RECORDED FOREST CONSERVATION EASEMENT AS APPROVED BY THE HOWARD COUNTY PLANNING BOARD ON FEBRUARY 8,2007, PROVIDED THE LOCATION OF THE BUILDING DOES NOT MOYE FROM THE LOCATION APPROVED AT THAT TIME, EYEN THOUGH A LOT LINE HAS BEEN CREATED VIA PLAT #21092 THAT FALLS WITHIN THE APPROVED 13' SETBACK AREA. THE PLAT NUMBER FOR OPEN SPACE LOT NO. 2 IS PLAT NO. 17366.

1 47. DECKS CAN PROJECT 10'INTO THE BRL, BUT MUST BE AT LEAST 5 FEET FROM THE PROPERTY LINE.

1. THE HOA AND/OR THE CURRENT PROPERTY OWNERS MUST BE THE SIGNING ENTITY FOR THE OWNER OF THE PROPOSED PLAT, SINCE THE CHANGES ARE OCCURRING ON

2. ALL EASEMENTS, EXISTING AND NEW, BEING CREATED OR MODIFIED AS A RESULT OF OR BY VIRTUE OF THE PROPOSED PLAT SHALL BE PART OF THE SAID PLAT CONTAINED

CONDOMINIUM LAND UNITS, UNLESS THE OWNERS OF THE AFFECTED LAND UNITS ARE

AND ASSOCIATED EASEMENTS PRIOR TO THE APPROVAL OF THE PROPOSED PLAT. 5. WATER AND SEWER PLANS SHALL BE REDLINED TO REFLECT ANY CHANGES TO THE

RECORDATION OF THE PROPOSED PLAT. G. ANY PREVIOUSLY APPROVED SITE DEVELOPMENT PLANS FOR THE PROPERTY MUST BE REDLINED OR RESUBMITTED TO REFLECT THE CHANGES IN THE PROJECT RESULTING FROM THE APPROVAL OF THIS WAIVER AND THE APPROVAL OF THE REVISION PLAT, IF ANY

OF THE APPROVED CHANGED AREAS ARE PART OF THAT PLAN.

DESIGN AND/OR ASSOCIATED EASEMENTS PRIOR TO SIGNATURE APPROVAL AND

44. A WAIVER FROM DESIGN MANUAL VOLUME 2-SECTION 5.3.B.1 WAS APPROVED ON MARCH 10, 2010 BY HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS TO ALLOW FOR AN EASEMENT OVER A WATER OR SEWER MAIN LESS THAN 15" IN DIAMETER TO BE LESS THAN THE REQUIRED 20' IN WIDTH OCCURS TO THE REAR OF UNITS 15-19, AND ITS WORST CASE, IN FRONT OF EXISTING CONDOMINIUM UNIT 23.

> PROFESSIONAL CERTIFICATION THEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAVIS OF THE STATE OF MARYLAND, LICENSE NO. 806 | , EXPIRATION DATE: 8-26-1

FOR REVISION / 1-5-11

Professional Engr. No. 806 (

Fax 296-4705

1-03-2011

OWNER(S) / DEVELOPER

SUITE 150 COLUMBIA, MD 21044

COLUMBIA BUILDERS INC. 10715 LITTLE PATUXENT PARKWAY

SECTION/AREA
SEC. 2 AREA 7.PARCEL A PLAT# OR L/F GRID # ZONE TAX/ZONE MAP ELECT. DISTRICT 6 7520000

A Team of Land Planners,

UNITS 1-40

of 12

SEWER PRIVATE TO PUBLIC, ADDED LOT LINES, UTIL, ESMT. EXPANSION

Revision Description

REVISED SITE DEVELOPMENT PLAN

EMERSON SECTION 2 AREA 7 PARCEL A

UNITS 1 THRU 40

**TOWNHOMES** 

¥18931 - 18933 (F-07-) COVER SHEET 21092-21095 (F-10-20)

21313-21215 (F-11-023) Scale AS NOTED | Proj. No. 95054.Q

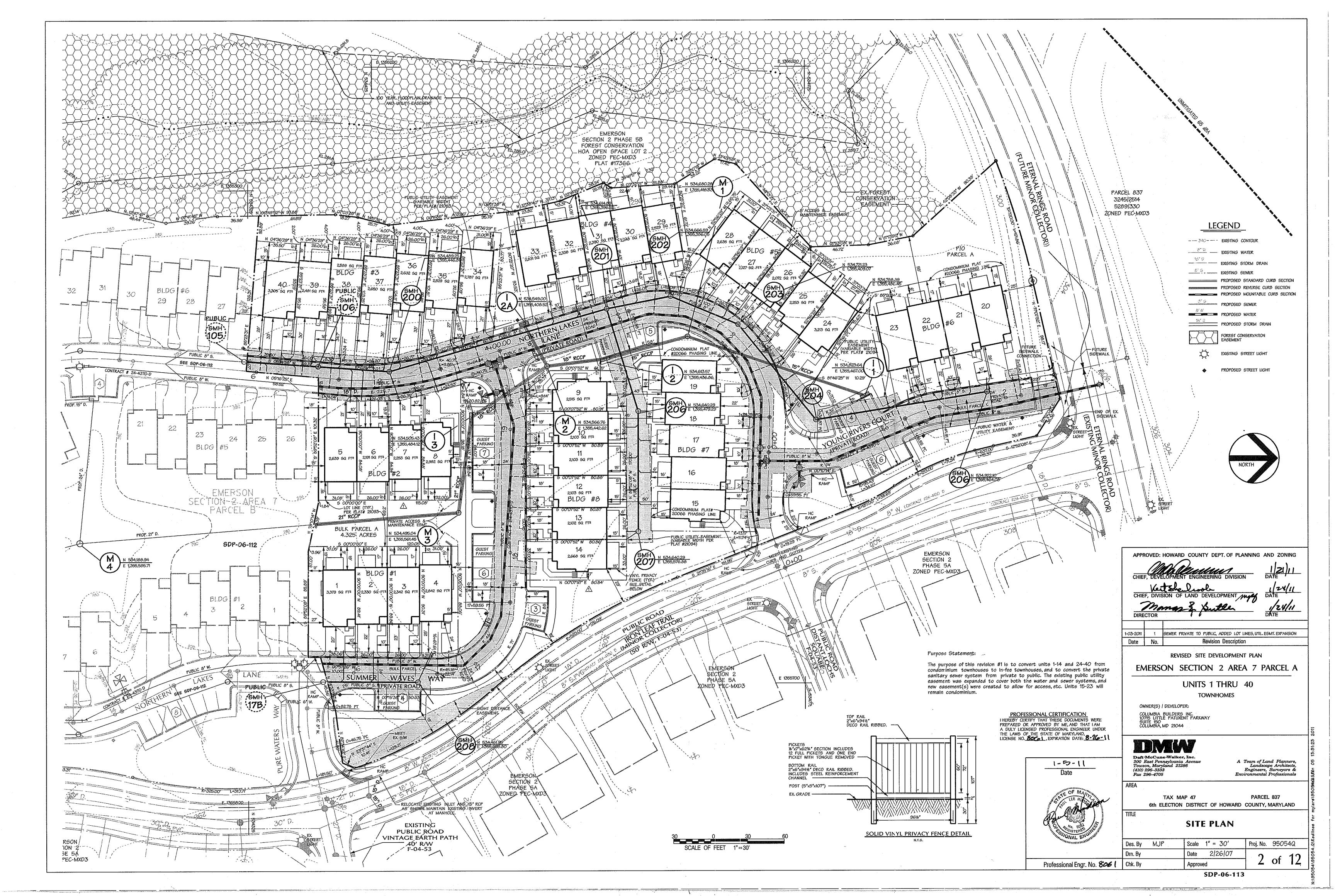
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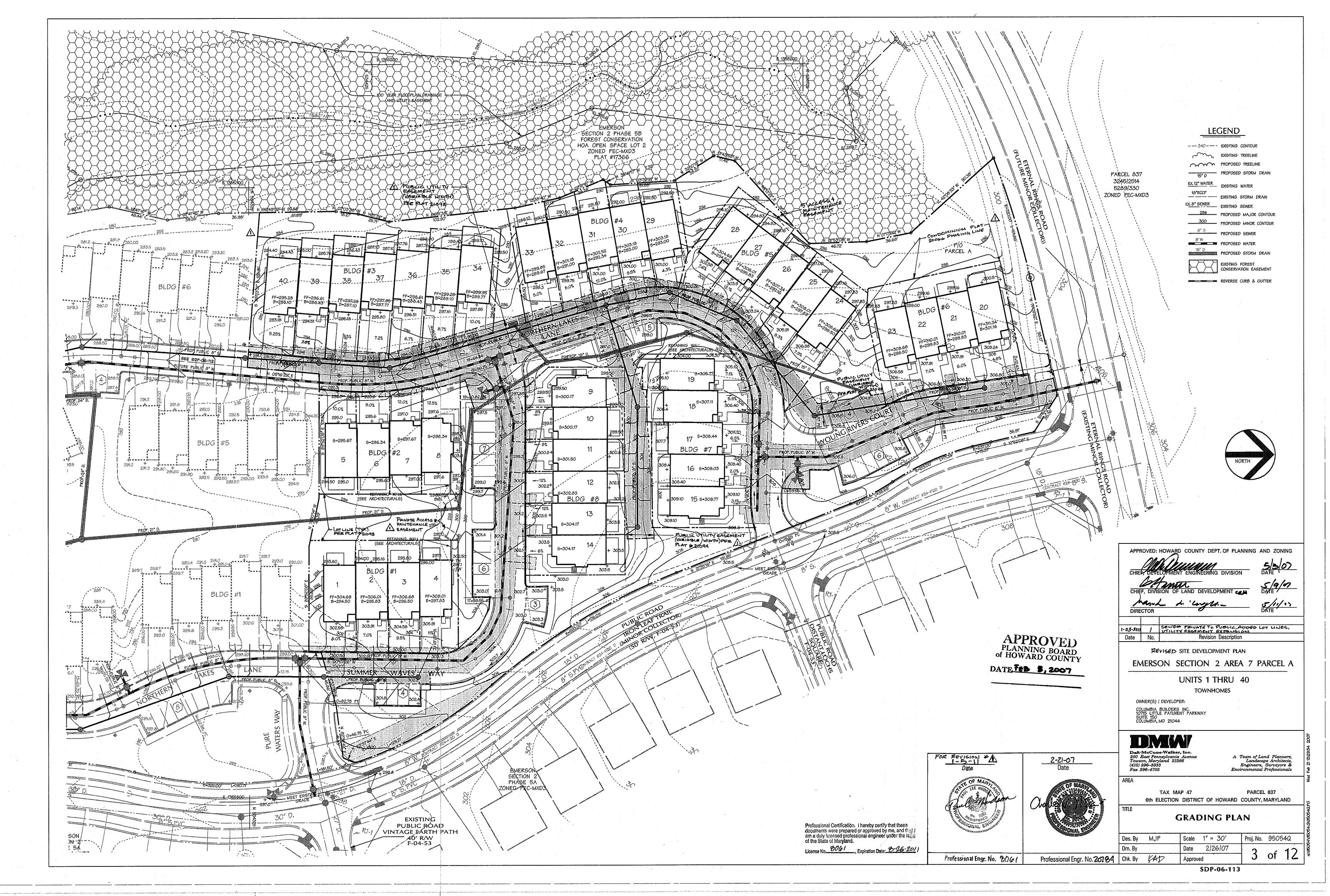
SDP-06-113

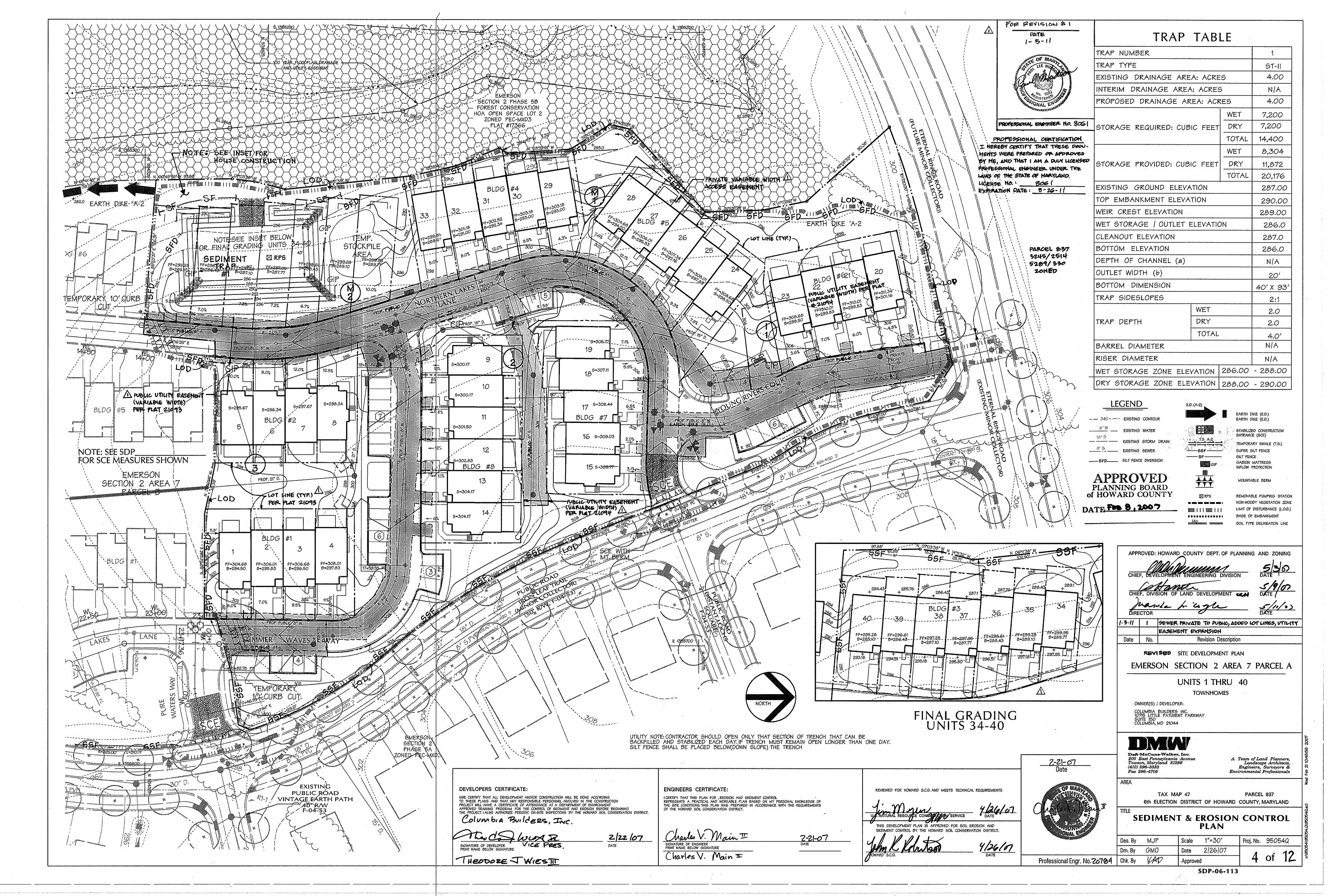
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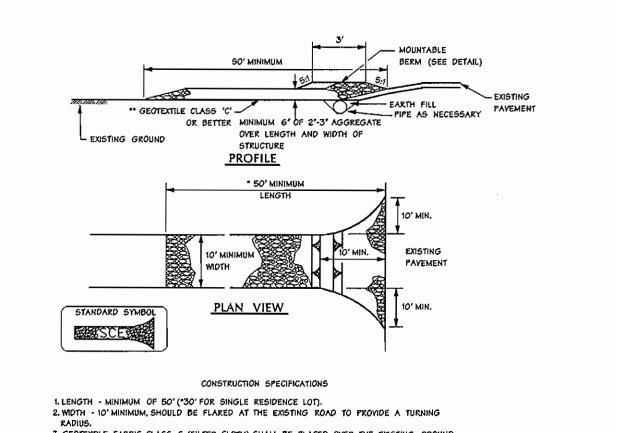
Dm. By

Chk. By









- 3. GEOTEXTILE FABRIC CLASS C (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. "THE PLAN APPROYAL AUTHORITY MAY NOT REQUIRE SINGLE
- FAMILY RESIDENCES TO USE GEOTEXTILE. 4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE

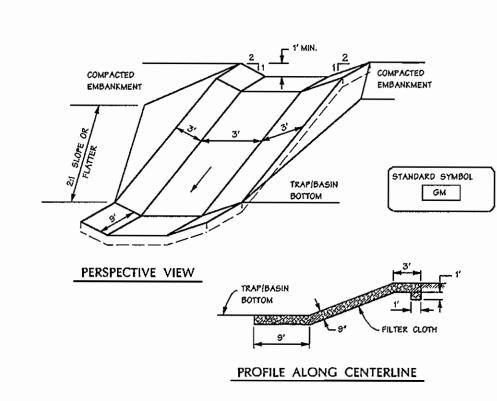
6. LOCATION. - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT

WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE, VEHICLES LEAVING

THE SITE MUST TRAYEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE

S. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONYEY A PIPE WILL NOT BE NECESSARY, PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED, A 6' MINIMUM WILL BE REQUIRED.

Stabilized Construction Entrance



CONSTRUCTION SPECIFICATIONS 1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 9'x 3'x 9" GABION BASKETS FORMING A TRAPEZOIDAL CROSS SECTION 1' DEEP, WITH 2:1 SIDE SLOPES 2. GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS. 3. THE STONE USED TO FILL THE GABION BASKETS SHALL BE 4" - 7".

4. GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS

5. GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

ON SLOPES STEEPER THAN 4:1.

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Gabion Inflow Protection

NOT TO SCALE

NOTE: FENCE POST SPACING

SHALL NOT EXCEED 10'

IIN IIN IIN IIN IIN IIN

GROUND -

SURFACE

21/2" DIAMETER GALYANIZED-

EMBED FILTER CLOTH 8"-1

MINIMUM INTO GROUND

\*IF MULTIPLE LAYERS ARE

REQUIRED TO ATTAIN 42"

OR ALUMINUM POSTS

CHAIN LINK FENCING

FILTER CLOTH-

CENTER TO CENTER.

SPECIFICATION FOR A 6' FENCE SHALL BE USED SUBSTITUTING 42' FABRIC AND 6' LENGTH POSTS. 2. THE POSTS DO NOT NEED TO BE SET IN CONCRETE. 3. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE, THE CHAIN LINK FENCING SHALL BE SIX (6) GAUGE OR HEAVIER. 4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION. 5. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND. 6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOYED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT. MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE WATER MANAGEMENT ADMINISTRATION BOIL CONSERVATION SERVICE Not To Scale **Super Silt Fence** 

CONSTRUCTION SPECIFICATIONS

LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING, THE

1. FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE

10' MAXIMUM

∠ CHAIN LINK FENCE

WITH 1 LAYER OF

33" MINIMUM

FILTER CLOTH \*

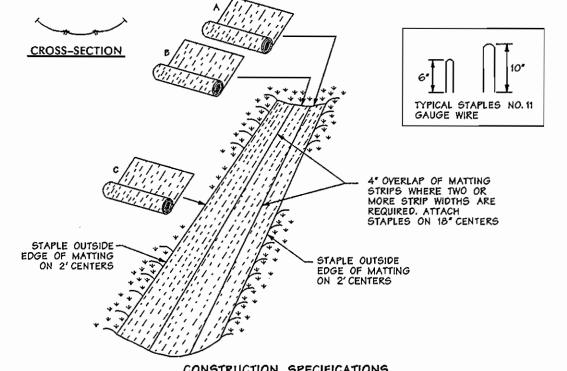
- 16" MIN. 1ST LAYER OF

FILTER CLOTH

33" MINIMUM

36" MINIMUM

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS 1. KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING 2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN

STAPLES.

3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.

4. STAPLES SMALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.

5. WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4", SHIPLAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2

DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY
THE FLOW MUST BE KEYED-IN. U.S. DETAKTIONT OF AGRICULTURE
SOIL CONSERVATION SERVICE

DRIVEN A MINIMUM OF 16" INTO GROUND BY MAXIMUM CENTER TO CENTER SHALL APPLY. PERSPECTIVE VIEW POST LENGTH FENCE POST SECTION filter aloth— MINIMUM 20" ABOYE GROUND UNDISTURBED TIS HIS HIS HIS HIS HIS HIS EMBED GEOTEXTILE CLASS F-- FENCE POST DRIVEN A MINIMUM OF 8" YERTICALLY THE INTO THE GROUND MINIMUM OF 16' INTO POSTS T STANDARD SYMBOL -----8F----OINING TWO ADJACENT SILT FENCE SECTIONS DSF T DOUBLE STAKED **BILT FENCE** CONSTRUCTION SPECIFICATIONS 1. FENCE POSTS SHALL BE A MINIMUM OF 36' LONG DRIVEN 16' MINIMUM INTO THE GROUND, WOOD POSTS SHALL BE 1½" x 1½" SQUARE (MINIMUM) CUT, OR 1¾" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LEGG THAN LOO POUND PER LINEAR FOOT. 2 GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR GEOTEXTILE CLASS F: TENSILE STRENGTH 50 LB9/IN (MIN.) TEST: MSMT 509
TENSILE MODULUS 20 LB9/IN (MIN.) TEST: MSMT 609
FLOW RATE 0.3 GAL FT/MIN (MAX.) TEST: MSMT 322
FILTERING EFFICIENCY 76% (MIN.) TEST: MSMT 322
3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS. 4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN

U.S. DEPARTMENT OF AGRICULTURE

Not To Scale

A -1-6

Charles V. Main #

Earth Dike

## **Erosion Control Matting**

## TEMPORARY METHODS:

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY, MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING. 2. VEGETATIVE COYER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COYER. 3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

4. IRRIGATION - THIS IS GENERALLY DONE AS AN AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THE RUNOFF BEGINS TO FLOW. 5. BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE AFFECTIVE IN CONTROLLING SOIL BLOWING.

6. CALCIUM CHLORIDE - APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED 1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD

2 TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR

3. STONE - COYER SURFACE WITH CRUSHED STONE OR COARSE GRAYEL. **Dust Control Specifications** 

VALUABLE PROTECTION IF LEFT IN PLACE.

U.S. DEPARTMENT OF AGRICULTURE Silt Fence Not To Scale

**DEVELOPERS CERTIFICATE:** 

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE

THEODORE J WIES TIT

2:1 SLOPE OR FLATTER 2:1 SLOPE OR FLATTER . CUT OR FILL a-DIKE HEIGHT 18" SUFFICIENT TO DRAIN b-DIKE WIDTH 24" \*\*\*\* c-FLOW WIDTH 4' d-FLOW DEPTH 12" CUT OR FILL SLOPE - IV PLAN VIEW STANDARD SYMBOL FLOW CHANNEL STABILIZATION E.D. A-2 GRADE 0.5% MIN. 10% MAX. 1. SEED AND COYER WITH STRAW MULCH. 2. SEED AND COYER WITH EROSION CONTROL MATTING OR LINE WITH SOD. 3.4" - 7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM. CONSTRUCTION SPECIFICATIONS 1. ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%. 2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE. 3. RUNOFF DIYERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY. 4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE, FUNCTIONING OF THE DIRE.

THE DIRE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS

REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.

6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.

7. ALL EARTH REMOYED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.

8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

1. DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND. PROVIDE THE NECESSARY MAINTENANCE ON THE EROSION AND SEDIMENT CONTROL MEASURE SHOWN HEREON.

2. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; (b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 3. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY

CONSTRUCTION (313-1855). 4. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL\* AND REVISIONS THERETO.

5. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES,

PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1. B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OF GRADED AREAS ON THE PROJECT SITE. 6. ALL SEDIMENT TRAPS/BASING SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE "HOWARD COUNTY DESIGN MANUAL", STORM DRAINAGE.

7. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS (SEC. 51), SODS (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

8. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

9. SITE ANALYSIS: TOTAL AREA OR SITE AREA DISTURBED AREA TO BE ROOFED OR PAYED AREA TO BE YEGETATIVELY STABILIZED TOTAL CUT

HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

4.3 ACRES 2.3 ACRES 2.00 ACRES 22,780 CUBIC YARDS\* 11,000 CUBIC YARDS

4.3 ACRES

TOTAL FILL OFF-SITE WASTE/BORROW AREA LOCATION . \* TO BE DETERMINED BY CONTRACTOR WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.EXCESS CUT TO BE PLACED ON PARCEL B PER AGREEMENT BETWEEN OWNERS OF PARCEL A AND PAARCEL B.

10. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 11. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE

12. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

13. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

Sediment Control General Notes

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10 GROUND-FLOW 42" CHAIN LINK FENCE 2½" DIAMETER GALVANIZED -OR ALUMINUM POSTS WITH 1 LAYER OF MIRAFI MCF 1212 OR APPROVED EQUIVALENT OYER UPHILL SIDE OF FENCE SIX (6) GAUGE OR HEAVIER CHAIN LINK FENCING-MIRAFI MCF 1212 OR APPROVED EQUIVALENT-- 2%" DIAMETER GALYANIZED STABILIZE AREA WITH EROSION CONTROL MATTING-OR ALUMINUM POSTS SECURE WITH 6' No. 11 GAUGE STAPLES AT 2'-0' O/C. 33" MINIMUM EMBED MIRAFI MCF 1212 OR APPROVED -EQUIVALENT & MINIMUM INTO GROUND STANDARD SYMBOL LAY MIRAFI MCF 1212 OR APPROVED -EQUIVALENT IN BOTTOM OF 24" MIN. WIDE TRENCH

CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42' FABRIC AND 6' LENGTH POSTS. 2. THE POSTS DO NOT NEED TO BE SET IN CONCRETE. 3. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE OR TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE. THE CHAIN LINK FENCING SHALL

BE SIX (6) GAUGE OR HEAVIER.

4. MIRAFI MCF 1212 OR APPROVED EQUIVALENT SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.

5. MIRAFI MCF 1212 OR APPROVED EQUIVALENT SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.

6. WHEN TWO SECTIONS OF MIRAFI MCF 1212 OR APPROVED EQUIVALENT ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.

7. MAINTENANCE SHALL BE PERFORMED AS NEEDED.

8. MAXIMUM FLOW SLOPE 10.0%.

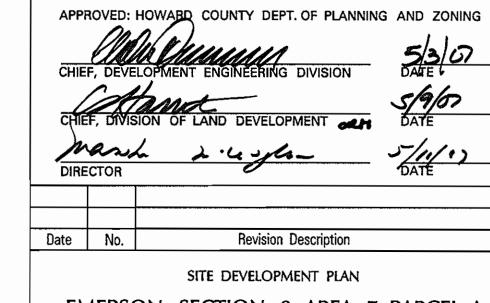
9. MAXIMUM DRAINAGE AREA 5 ACRES.

H - 26 - 4

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Not To Scale

**APPROVED** PLANNING BOARD of HOWARD COUNTY DATE FEB 8,2007



EMERSON SECTION 2 AREA 7 PARCEL A

UNITS 1 THRU 40

**TOWNHOMES** OWNER(S) / DEVELOPER:

COLUMBIA BUILDERS INC. SUITE 150 COLUMBIA, MD 21044

200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333 Fax 296-4705

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

5 of 13

area

TAX MAP 47 PARCEL 837 6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

**SEDIMENT & EROSION CONTROL** 

DETAILS Des. By JLS Scale 1"=30' Proj. No. 95054Q Dm. By GMO Date 2/26/07

**ENGINEERS CERTIFICATE:** REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. I CERTIFY THAT THIS PLAN FOR , EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. U.S. NATURAL RESOURCE CONSERVE SERVICE Columbia Builders, Inc. THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. 2/22/07 2-21-07

2-21-07

Professional Engr. No. 2078 | Chk. By Approved

#### STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

#### SECTION I - YEGETATIVE STABILIZATION METHODS AND MATERIALS

#### A. SITE PREPARATION

- i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms waterways, or sediment control
- II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- III. Schedule required soil test to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

#### B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

- i. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
- li. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear
- the name, trade name or trademark and warrantee of the producer. III. Lime materials shall be ground limestone (hydrated or brunt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide).
- IV. incorporate lime and fertilizer into the top 3 5 inches of soil by disking or other suitable means.

Limestone shall be ground to such fineness that at least 50% will pass through a

#100 mesh sleve and 98 - 100% will pass through a #20 mesh sleve.

#### C. SEEDBED PREPARATION

#### I. TEMPORARY SEEDING

- A. Seedbed preparation shall consist of loosening soil to a depth of 3 inches to 5 inches by means of suitable agricultural or construction equipment, such a disc harrows or chisel plows or rippers mounted on construction equipment. After the soll is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
- B. Apply fertilizer and lime as prescribed on the plans.
- C. Incorporate lime and fertilizer into the top 3 5 inches of soil by disking or other suitable means.

#### II. PERMANENT SEEDING

- A. Minimum soil conditions required for permanent vegetative establishment:
- 1. Soil ph shall be between 6.0 and 7.0.
- 2. Soluble salts shall be less than 500 parts per million (PPM). 3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount
- of moisture. An exception is if Lovegrass or Serecia Lespedeza is to be planted. Then a sandy soll (< 30% silt plus clay) would be acceptable. 4. Soil shall contain 1.5% minimum organic matter by weight.
- 5. Soil must contain sufficient pore space to permit adequate root penetration. 6. If these conditions cannot be met by the soils on site, adding topsoil is required in accordance with Section 21 - Standard and Specification for
- 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 topsolito 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 soll amendments into the top 3 5 inches of topsoll by disking or other sultable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an Irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3 inches of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

### D. SEED SPECIFICATIONS

- I. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such
- Note: Seed tags shall be made available to the inspector to verify type and rate of seed
- 11. Inoculant The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures

## E. METHODS OF SEEDING

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

above 75-80 F. can weaken bacteria and make the inoculant less effective.

- A. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following:
- Nitrogen; maximum of 100 pounds per acre total of soluble Nitrogen; P205 (phosphorous): 200 pounds per acre; K20 (potassium): 200 pounds per acre.
- B. Lime: Use only ground agricultural limestone, (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- C. Seed and fertilizer shall be mixed on site and seeding shall be done immediately
- 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. The seeded

area shall then be rolled with a weighed roller to provide good seed soll contact.

- B. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- III. Drill or cultipacker seeding: Mechanized seeders that apply and cover seed with soil.
- A. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 4 Inch of soll covering.

### Seedbed must be firm after planting.

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

## F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

- i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weeds seeds as specified in the Maryland Seed Law.
- II. Wood cellulose fiber mulch (WCFM)
- A. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

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

SECTION IV - SOD

A. GENERAL SPECIFICATIONS

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

torn or uneven ends will not be acceptable.

the upper 10 percent of the section.

or wet) may adversely affect its survival.

prior to its installation

air drying of the roots.

the underlying soil surface.

moisture content.

otherwise specified.

genetic line.

of the mixture by welaht.

feet. One or more cultivars may be blended.

Recommendations for Maryland".

(hardiness zones - 7A, 7B).

dry or hot seasons, or on adverse sites.

escedings within the planting season.

adequately stabilized.

B. IDEAL TIMES OF SEEDING

D. REPAIRS AND MAINTENANCE

A. TURFGRASS MIXTURES

SECTION Y - TURFGRASS ESTABLISHMENT

mowing of grasses will pose no difficulty.

B. SOD INSTALLATION

C. SOD MAINTENANCE

i. Class of turfgrass sod shall be Maryland or Yirginia State certified or approved. Sod

II. Sod shall be machine cut at a uniform soil thickness of ", plus or minus ", at the

time of cutting. Measurement for thickness shall exclude top growth and thatch.

deviation from standard widths and lengths shall be 5 percent. Broken pads and

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

iv. Sod shall not be harvested or transplanted when moisture content (excessively dry

V. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not

I. During periode of excessively high temperature or in areas having dry subsoil, the

II. The first row of sod shall be laid in a straight line with subsequent rows placed

parallel to and tightly wedged against each other. Lateral jointe shall be staggered

to promote more uniform growth and strength. Ensure that god is not stretched

or overlapped and that all joints are butted tight in order to prevent voids which

III. Wherever possible, sod shall be laid with the long edges parallel to the contour and

with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured

to prevent slippage on slopes and to ensure solld contact between sod roots and

IV. Sod shall be watered immediately following rolling or tamping until the underside of the

tamping and irrigating for any piece of sod shall be completed within eight hours.

i. In the absence of adequate rainfall, watering shall be performed daily or as often as

11. After the first week, sod watering is required as necessary to maintain adequate

III. The first mowing of sod should not be attempted until the sod is firmly rooted. No

more than 1/3 of the grass leaf shall be removed by the Initial cutting or subsequent

cuttings. Grass height shall be maintained between 2 inches and 3 inches unless

Areas where turfgrase may be desired may include lawns, parke, playgrounds, and

commercial sires which will receive a medium high level of maintenance. Areas to receive

seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches.

diameter shall be removed. The resulting seedbed shall be in such condition that future

Note: Choose certified material. Certified material is the best guarantee of cultivar purity.

Section, provides a reliable means of consumer protection and assures a pure

management. Irrigation required in the areas of central Maryland and Eastern Shore.

Recommended certified Kentucky Bluegrass cultivare seeding rate: 1.5 to 2.0 pounds

ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

II. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where

rapid establishment is necessary and when turf will receive medium to intensive

management. Certified Perennial Ryegrass cultivars/certified Kentucky Bluegrass

III. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas

IV. Kentucky Bluegrass/Fine Fescue - Shade mixture - For use in areas with shade in

Bluegrass lawns. For establishment in high quality, intensively managed turf area.

Mixture includes; certified Kentucky Bluegrass cultivars 30-40% and certified Fine

Fescue and 60-70%. Seeding rate: 1½- 3 pounds per 1000 square feet. A minimum

University of Maryland publication, agronomy mimeo number 77, "Turfgrass Cultivar

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

Southern Maryland, Eastern Shore: March 1 - May 15, August 15 - October 15

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

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.

Inspect all seeded areas for failures and make necessary repairs, replacements, and

fertilizer, seedbed preparation and seeding recommendations

using half of the rates originally applied may be necessary.

publication "Lawn Care in Maryland" bulletin number 171.

This is especially true when seedings are made late in the planting season, in abnormally

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

II. If the stand provides less than 40% ground coverage, re-establish following original lime,

III. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing

IV. Maintenance fertilizer rates for permanent seedings are shown in Table 24, for lawns and

2-21-07

other medium high maintenance turfgrass areas, refer to the University of Maryland

of 3 Kentucky Bluegrass cultivars must be chosen. With each cultivar ranging from

Note: Turfgrass varieties should be selected form those listed in the most current

a minimum of 10% to a maximum of 35% of the mixture by weight.

seeding rate: 2 pounds mixture per 1000 square feet. A minimum of 3 Kentuckv

Bluegrase cultivare must be chosen, with each cultivar ranging from 10% to 35%

and/or for areas receiving low to medium management in full sun to medium shade.

Kentucky Bluegrass cultivars 0 - 5%, seeding rate: 5 to 8 pounds per 1000 square

Recommended mixture includes; certified Tall Fescue cultivars 95-100%, certified

I. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive

The certification program of the Maryland Department of Agriculture, Turf and Seed

leveled and raked to prepare a proper seedbed. Stones and debris over 11/2 inches in

necessary during the first week and in sufficient quantities to maintain moist soil to

a depth of 4 Inches. Watering should be done during the heat of the day to prevent

new sod pad and soll surface below the sod are thoroughly wet. the operations laying,

subsoil shall be lightly irrigated immediately prior to laying the sod.

transplanted within this period shall be approved by an agronomist or soil scientist

Individual pieces of sod shall be cut to the suppliers width length. Maximum allowable

labels shall be made available to the job foreman and inspector.

- C. WCFM, including dye shall contain no germination or growth inhibiting factors.
- D. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.
- E. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
- F. WCFM must conform to the following physical requirements: Fiber length to approximately 10 mm., diameter approximately 1mm., ph range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90%
- Note: Only sterile straw mulch should be used in areas where one species of grass
- G. MULCHING SEEDED AREAS Muich shall be applied to all seeded areas where one species of arass is desired.
  - I. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
  - II. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons per acre. Mulch shall be applied in a uniform loose depth of between linches and 2 inches. Mulch applied shall achieve a uniform distribution and depth so that the surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons per acre.
  - III. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of
- H. SECURING STRAW MULCH Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
  - I. A mulch anchoring tool is a tractor drawn implement design to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
  - II. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallone of water.
  - ili. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys or on crest of banks. The remainder of area should appear uniform after binder application. Synthetic binders - such as Acrylic DLR (agro-tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
  - IV. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

#### 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.

	Seed Mi	ixture (Hardiness Zon	Fertilizer Rate	Lime Rate			
No.	Species	Application Rate (Lb.[Ac.)	Seeding Dates	Seeding Depths	(10-10-10)	Liniv Ravo	
1	Annual Ryegrass	50	3/15-6/1	14"-1/2"	600 Lb6.!Ac.	2 Tons/Ac. (100 Lbs./1000 SF)	
2	Weeping Lovegrass	4	3/15-6/1	14"-12"	(15 Lbs.[1000 SF)		

### SECTION III - PERMANENT SEEDING

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

	Seed Mixture	e No.3 (Hardiness	Zone 6B)	one 6B)		•• Fertilizer Rate (10-20-20)		** Lime
%	Species	Application Rate (Lb./Ac.)	Seeding * Dates	Seeding Depths	N	P205	K20	Rate
85	Rebei II Tall Fescue	125	3/15-6/1		90	175	175	2 TonelAc.
10	Pennfine Perennial Ryegrass	15		14"-12"	Lb./Ac. (2 Lb./ 1000	Lb./Ac. (4 Lb./ 1000	Lb. Ac. (4 Lb.  1000	(100 Lb.) 1000 Sq.Ft.)
5	Kenblue Kentucky Bluegrass	10			Sq.Ft.)	Sq.Ft.)	Sq.Ft.)	-4,

- \* 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).
- \*\* At time of fine grading, fertilizer and lime rates will be based on soil test results; (see section
- 1.B.1). Copy of recommended rates to be supplied to the Sediment Control Inspector.

#### U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

G - 20 - 1A

**DEVELOPERS CERTIFICATE:** 

Columbia Builders, Inc.

theodo wod 70

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE

THEODORE J WIESTI

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

2/22/07

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

Vegetative Stabilization

## **ENGINEERS CERTIFICATE:**

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

Charles V. Main #

#### 21.0 STANDARD AND SPECIFICATIONS FOR

## TOPSOIL

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

DEFINITION

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

#### CONDITIONS WHERE PRACTICE APPLIES

- i. This practice is limited to areas having 2:1 or flatter slopes where:
- a. The texture of the exposed subsoll/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
- c. The original soil to be vegetated contains material toxic to plant growth.
- d. The soil is so acidic that treatment with limestone is not feasible.
- II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

#### CONSTRUCTION AND MATERIAL SPECIFICATIONS

- i. Topsoil salvages from the existing site may be used provided that is meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- il. Topsoil Specifications Soil to be used as topsoil must meet the following:
- i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate appropriate approval authority. Regardless, topsoli shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, siag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/23/6 in diameter.
- ii. Topeoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, polson lvy, thistle, or others as
- ill. Where the subsoll is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

#### III. For sites having disturbed areas under 5 acres:

million shall not be used.

- I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
- demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher. b. Organic content of topsoil shall be not less than 1.5 percent by

a, pH for topsoil shall be between 6.0 and 7.5. If the tested soll

- c. Topsoil having soluble sait content greater than 500 parts per
- d. No sod or seed shall be placed on soll which has been treated with soll sterliants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit discipation of phyto-toxic

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

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

### Y. Topsoil Application

- i. When topsolling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes. Slope Silt Fence and Sediment Traps and Basins.
- ii. Grades on the areas to be topsolied, which have been previously established, shall be maintained, albeit 4% - 8% higher in elevation.
- iii. Topsoil shall be uniformly distributed in a 4% 8% layer and lightly compacted to a minimum thickness of 4%. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water
- iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoll is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed
- VI. Alternative for Permanent Seeding instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
  - I. Composted Sludge Material for use as a soll conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for eites having dieturbed areas under 5 acres shall conform to the following requirements:
  - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
  - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and O.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements
  - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square
- iv. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb/1,000 square feet, and 1/3 the normal lime application

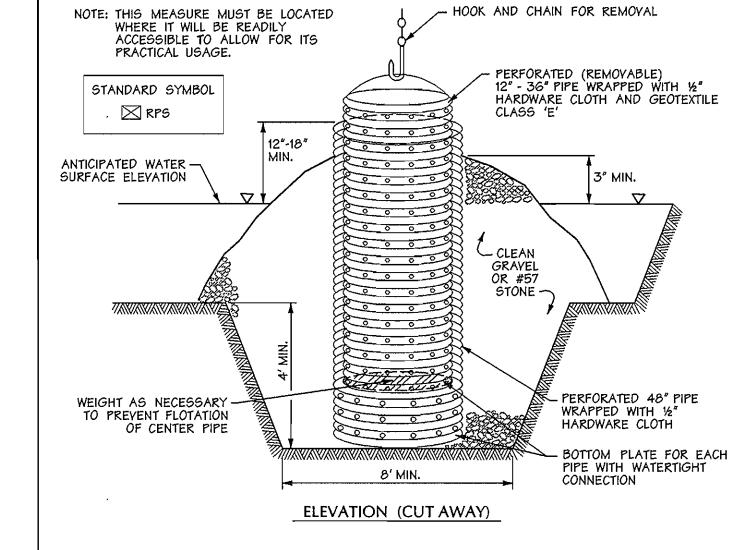
References: Guidelines Specifications, Soll Preparation and Sodding. MD-YA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND

#### Sequence of Construction-Parcel A

1. Obtain Grading Permit. Notify Maryland Department of Environmental Nontidal Wetlands and Waterways Inspections and Compliance sections at 410-631-3510 at least five days in advance of beginning any work in streams, 100-year floodplains, nontidal 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 limit of disturbance where the limit is within 50 feet of forest conservation easement, 100-year floodplain, wetlands buffer or stream buffer. This shall be completed by an inspector at the pre-construction meeting. \_\_\_\_ 4. With permission from the sediment Control inspector, clear and grub for and install the Stabilized Construction Entrance. Grade Sediment Trap #1 and Install Super Silt Fence, Silt Fence Diversion and Earth Dikes. Notify HCD Inspector to gain permission to proceed. 5. With the permission of the Sediment control inspector clear and grade remainder of the site. \_\_\_ 6. Install utilities, block inlets with inlet Protection, install mountable curbs and construct mountable berms, as roadway construction proceeds to maintain drainage to sediment trap. Begin building construction. (Building Units 34-40 will be delay until Sediment Control Inspector allows the removal of Sediment Trap #1. \_\_\_\_ At that time Super Silt Fence will beplaced below units 34-40 as shown on plan insert.) — — 60 Dave 7. Pave Road. 8. Upon stabilization of the site with established vegetation and with the permission of the Sediment Control inspector, flush the storm drain system. 9. With the permission of the Sediment Control inspector, remove sediment control measures and stabilize any areas disturbed by their removal. 10. Construct Units 34-40. Stabilize remaining area. \_\_\_\_ 11. With the permission of the Sediment Control inspector, remove super silt fence and stabilize any areas disturbed by its removal. \_\_\_\_\_

\*\*Note: Road and Utility Construction for Parcels A and B will be occurring simultaneously.\*\*



#### CONSTRUCTION SPECIFICATIONS

1. THE OUTER PIPE SHOULD BE 48" DIAMETER OR SHALL, IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE, THE OUTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS. 2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE

3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE 1/2" x 6" SLITS OR 1" DIAMETER HOLES 6" ON CENTER, THE CENTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH FIRST. THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E.

4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE

ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE D - 12 - 5

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## Removable Pumping Station

NOT TO SCALE



2-21-07

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING Date No. Revision Description SITE DEVELOPMENT PLAN

EMERSON SECTION 2 AREA 7 PARCEL A UNITS 1 THRU 40

**TOWNHOMES** 

Daft McCune-Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286

(410) 296–3333

Fax 296-4705

area

OWNER(S) / DEVELOPER:

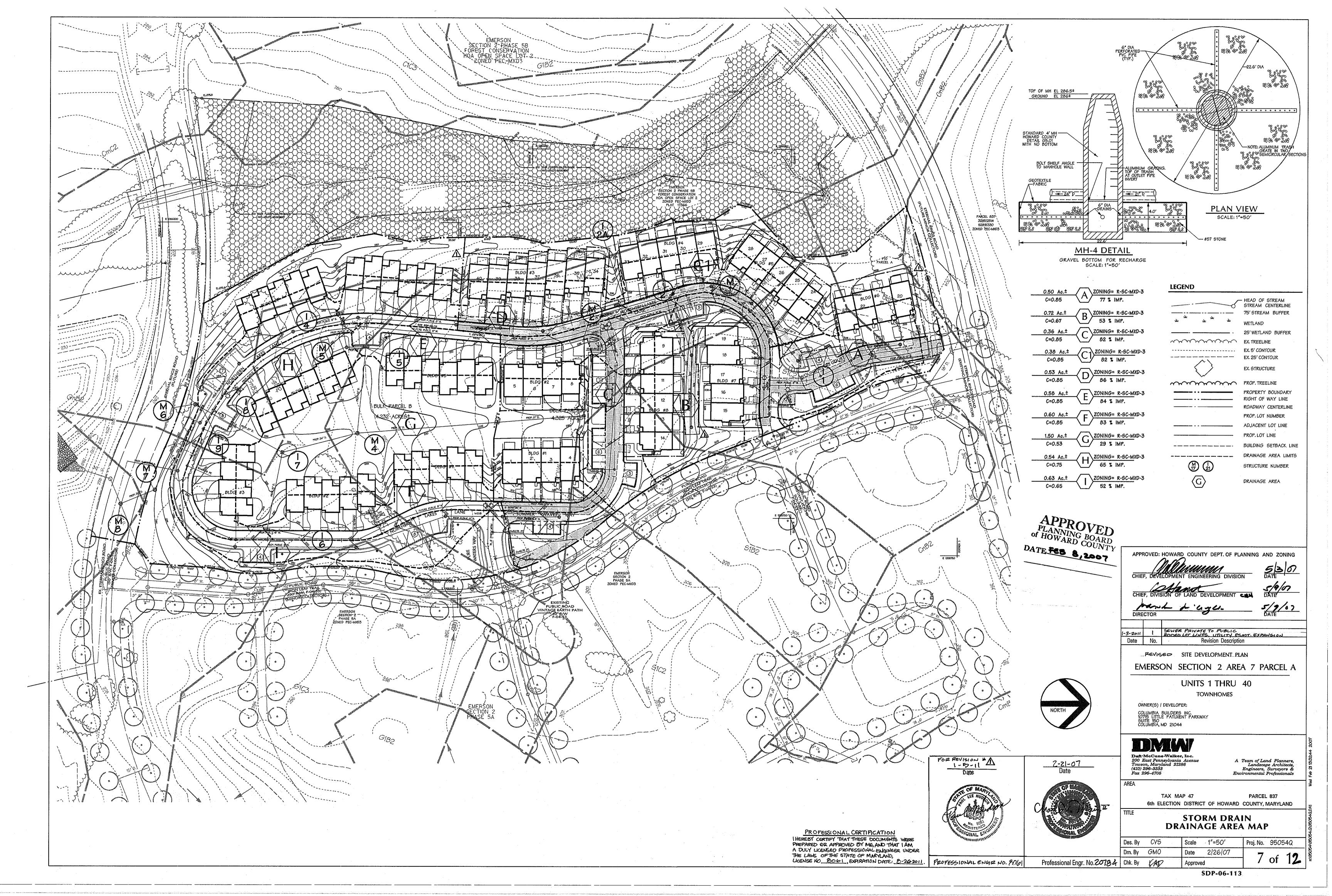
A Team of Land Planners, Landscape Architects, Engineers, Surveyors &

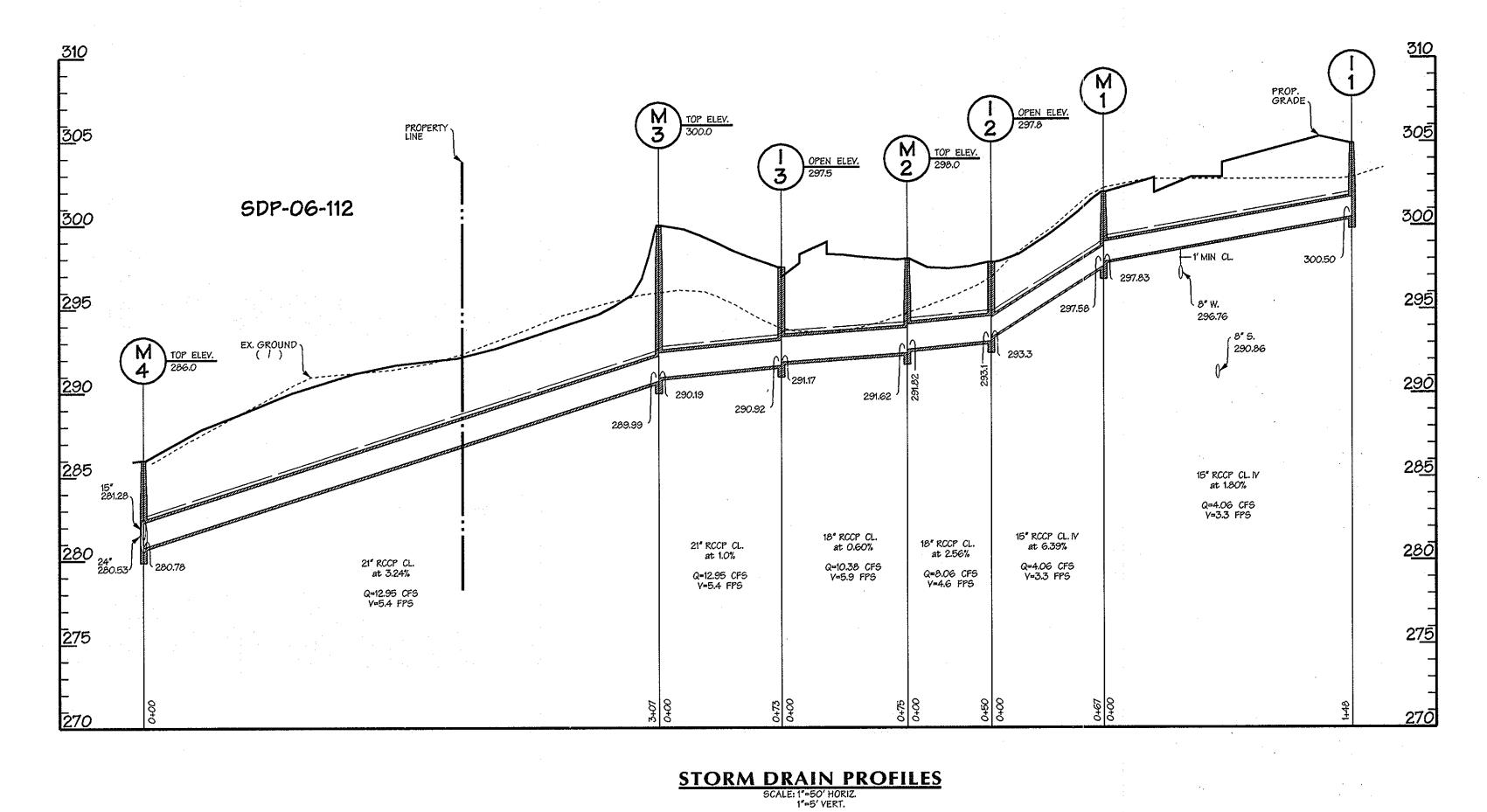
TAX MAP 47 PARCEL 837

6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

**SEDIMENT & EROSION CONTROL** DETAILS

Scale 1"=30' Proj. No. 95054Q Des. By JLS Dm. Bv GMO Date 2/26/07 6 of 13 Professional Engr. No. 2018 4 Chk. By Approved





BUILDINGS #2

26' 26' 26' 26' 26'

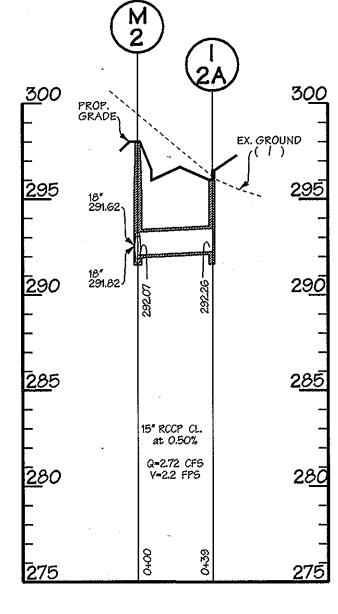
**BUILDINGS #5** 

LOT LINE (TYP.)

BUILDINGS #1 & #6 MOTE: NO LOT LINES FOR BUILDING #6

BUILDINGS #4

2′ x 10′ Opt. Bay — Window (Typ.)



-LOTLING (TYP)

and gutter

TYPICAL DRIVEWAY DETAIL

BUILDING #8

/ 2' x 3' Opt. Fireplace

\_2' x 3' Opt. Bay Window

BUILDING #3

BUILDING #7

## INLET SCHEDULE (TOTAL)

NO.	ТҮРЕ	INV. OUT	TOP ELEV. (TC)
1	'A-10' INLET W=2'-6"SD-4.41	300.50	305.40
2	'A-10' INLET W=2'-6"SD-4.41	293.10	297.80
2A	'A-10' INLET W=2'-6"SD-4.41	292.26	296.40
3	'A-10' INLET W=3'-0"SD-4.41	291.65	297.50
X 23	'A-10' INLET TO BE RELOCATED	SET IN	FEILD

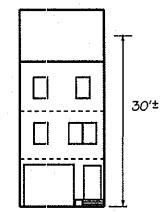
MANHOLE SCHEDULE (TOTAL)

			•	
NO.	ТҮРЕ	SIZE	INV. OUT	TOP ELEV.
1	STD. G5.12	48"	297.58	302.00
2	STD. G5.12	48"	292.40	298.00
3	STD. G5.12	48"	290.72	300.00

PIPE SCHEDULE (TOTAL)

NO.		TYPE &	CLASS	LENGTH
15"	RCCP	CL.IV		254'
18"	RCCP	CL.IV		125'
21"	RCCP	CL.IV		380'

\*ALL PIPE AT ROAD CROSSINGS OR WITHIN PUBLIC RIGHT OF WAYS TO BE CLASS IV



TYPICAL BUILDING ELEVATION

APPROVED
PLANNING BOARD
of HOWARD COUNTY DATE FEB 8, 2007

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING GEWER PRIVATE TO PUBLIC, ADDED LOT LINES, UTILITY EASEMENT EXPANSION Revision Description

Date No. PEVISED SITE DEVELOPMENT PLAN

EMERSON SECTION 2 AREA 7 PARCEL A

UNITS 1 THRU 40

TOWNHOMES

OWNER(S) / DEVELOPER:

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

8 of 12

Drn. By GMO

TAX MAP 47 PARCEL 837 6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

STORM DRAIN PROFILES

AND **BUILDING LAYOUTS** Des. By MJP Scale 1"=50' Proj. No. 95054Q

Date 2/26/07

SDP-06-113



2-21-07

PROFESSIONAL CERTIFICATION

THEREBY 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. <u>8061</u>, EXPIRATION DATE: 8-262011. Professional Engr. No. 20784 | Chk. By AT

MOUNTABLE CURB AND GUTTER

TYPICAL DRIVEWAY DETAIL

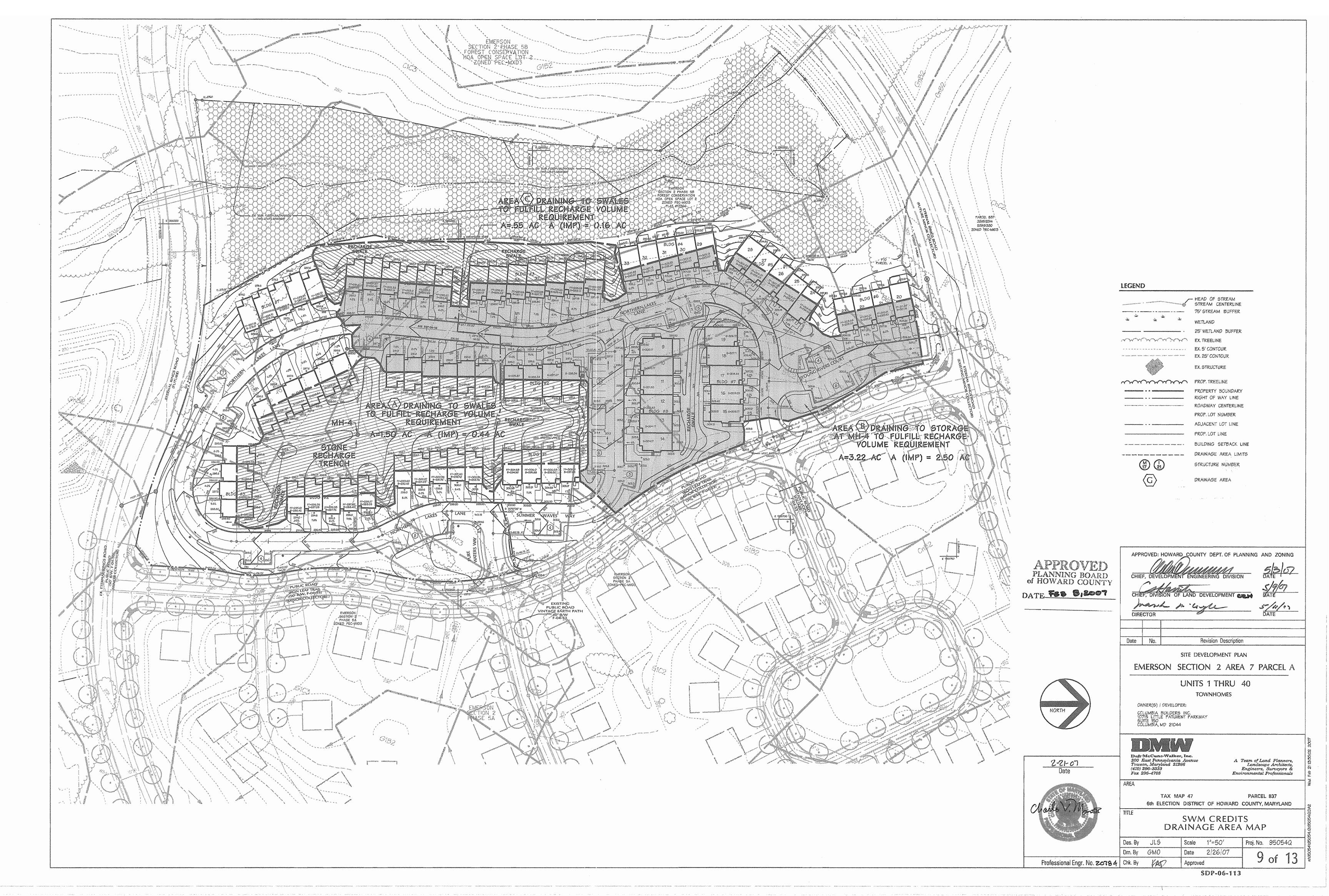
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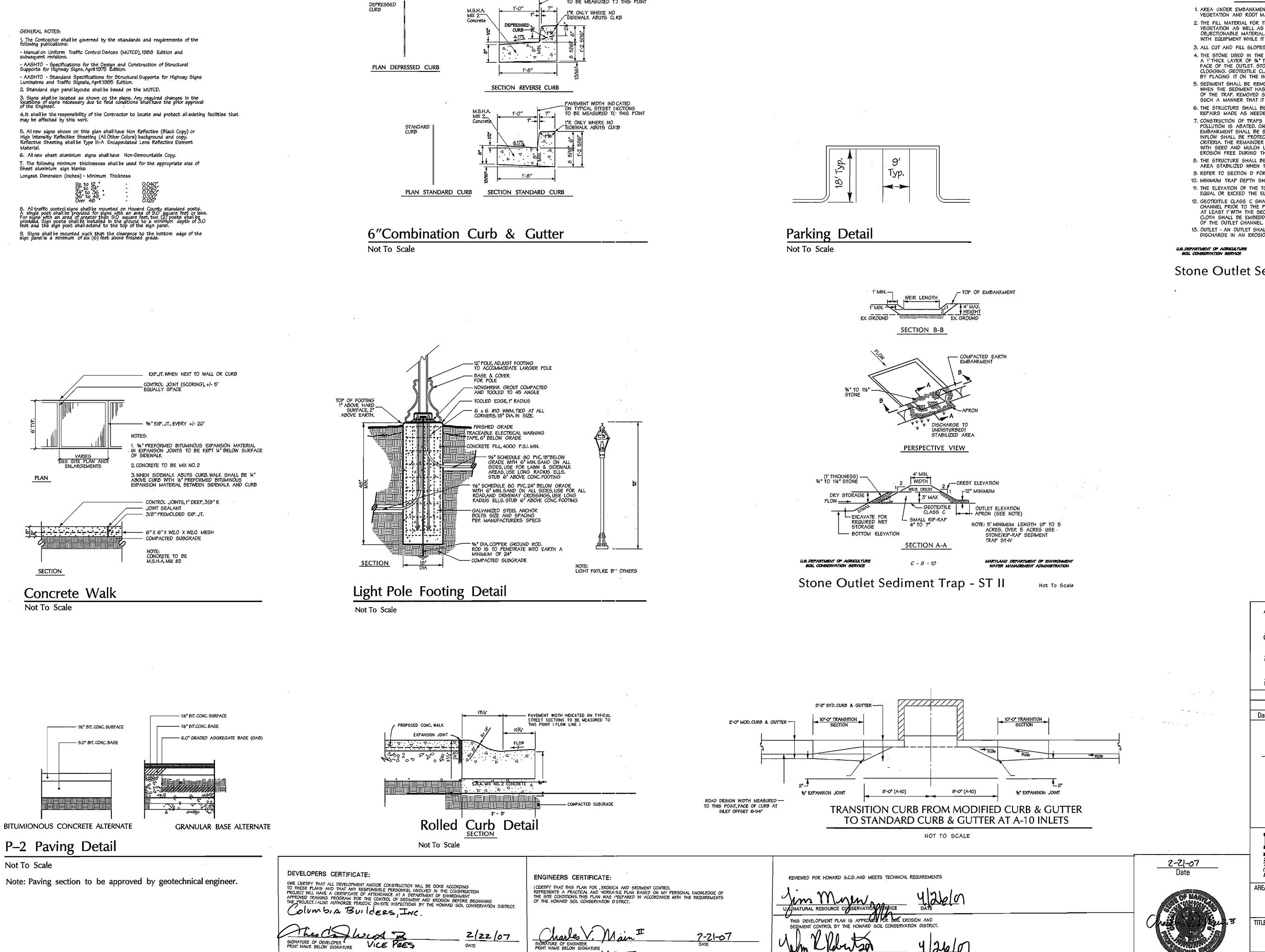
PROFESSIONAL ENGRNO: 8061

FOR REVISION #

1-5-11

Approved





Charles V. Main J

SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE

THEODORE J WIES TIT

AVEMENT WIDTH INDICATED

#### CONSTRUCTION SPECIFICATIONS

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

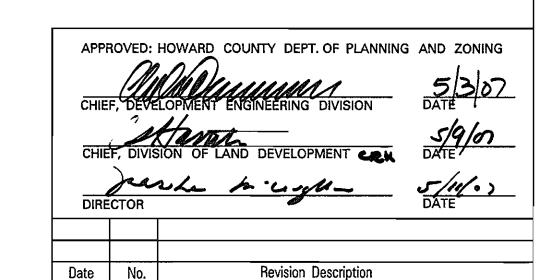
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

C - 9 - 10A

Stone Outlet Sediment Trap - ST II

**APPROVED** PLANNING BOARD OF HOWARD COUNTY

DATE FOR 8,2007



SITE DEVELOPMENT PLAN

EMERSON SECTION 2 AREA 7 PARCEL A

UNITS 1 THRU 40

**TOWNHOMES** 

OWNER(S) / DEVELOPER: COLUMBIA BUILDERS INC. 10715 LITTLE PATUXENT PARKWAY SUITE 150 COLUMBIA, MD 21044

# 

200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333

Fax 296-4705

Professional Engr. No. 20784 Chk. By KAD

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

of 13

area

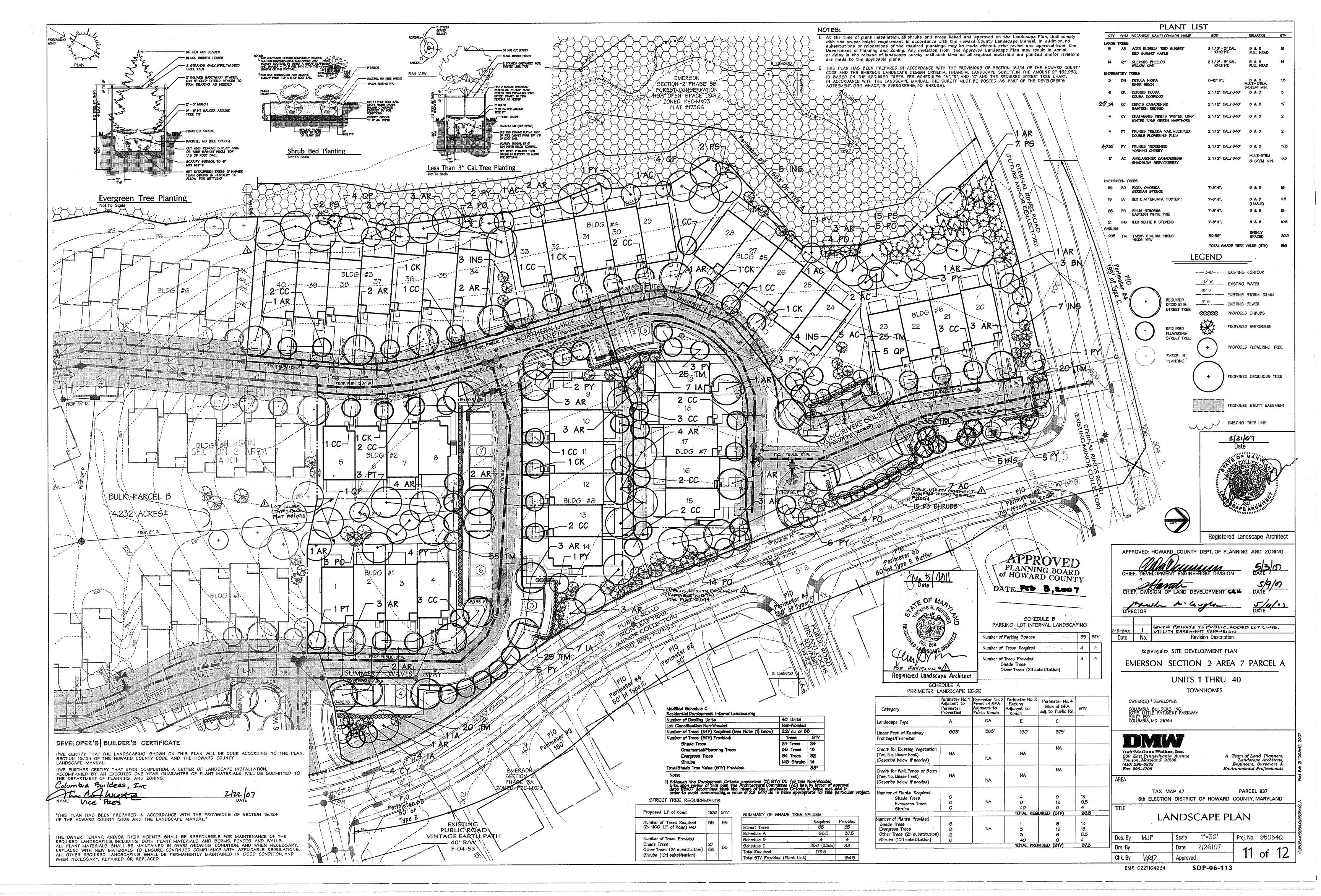
PARCEL 837 TAX MAP 47 6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

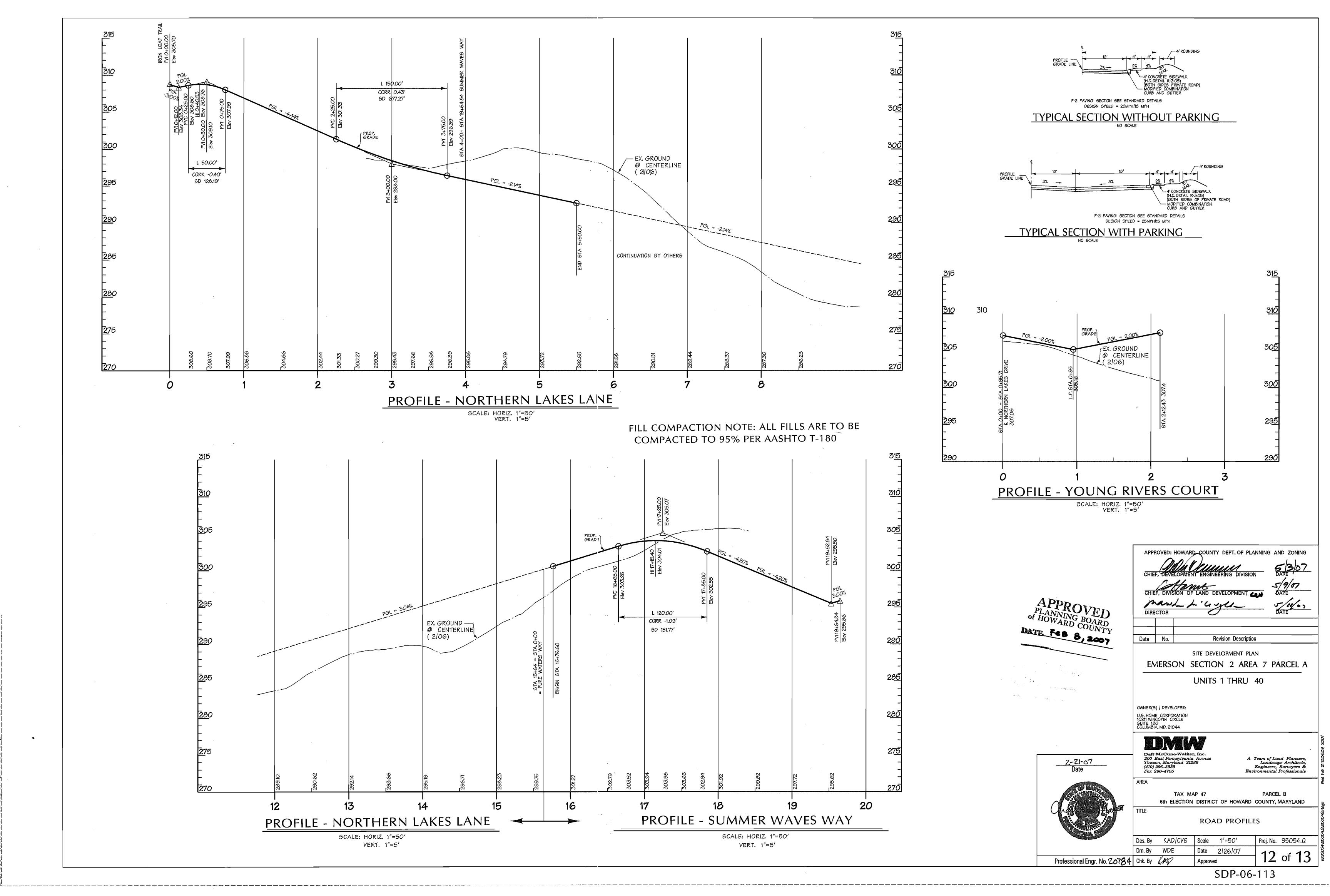
## SITE AND SEDIMENT CONTROL

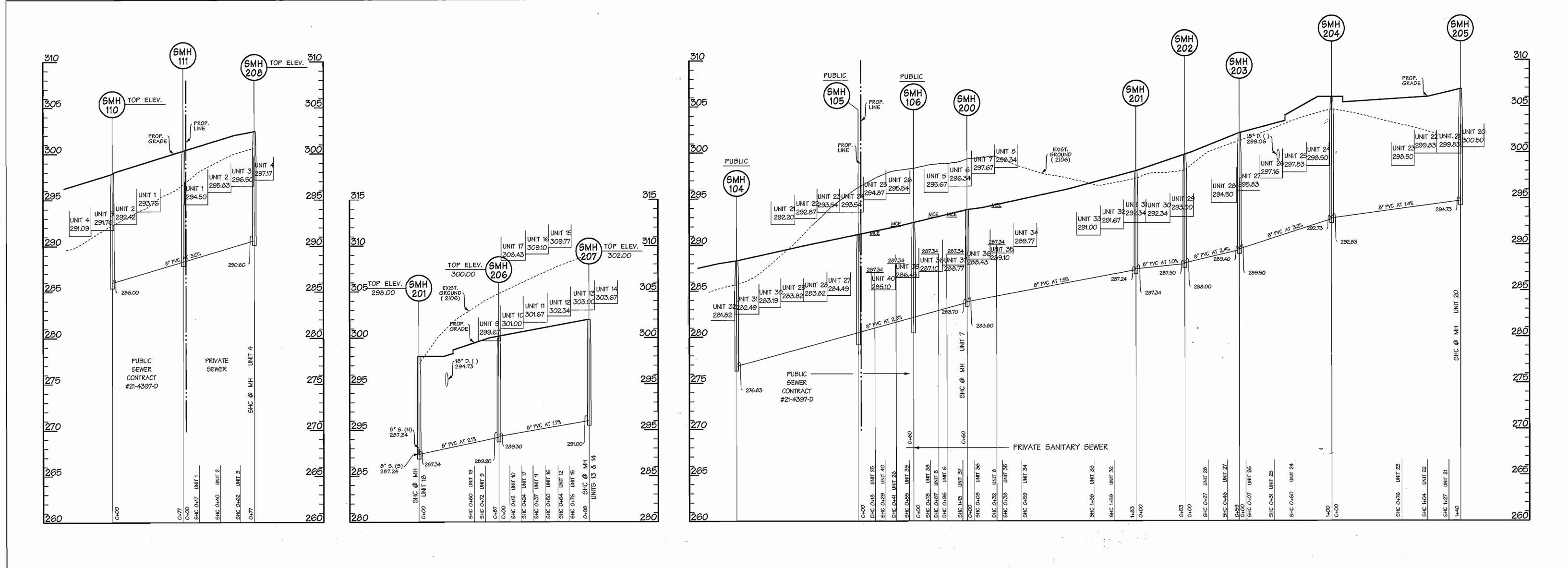
**DETAILS** Scale AS SHOWN Proj. No. 95054Q Des. By JLS

Date 2/26/07

Approved

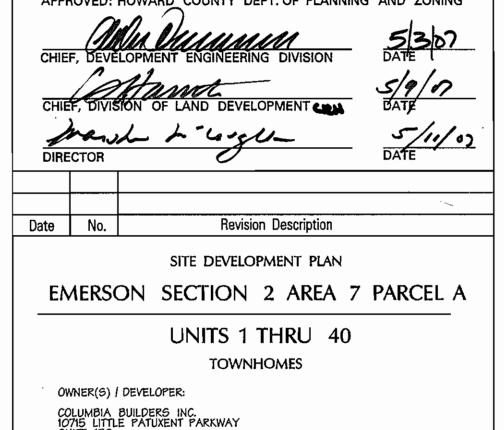


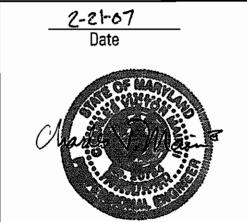




SANITARY PROFILES SCALE: HORIZ. 1"=50' VERT. 1"=5'







PARCEL 837 TAX MAP 47 6th ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND LOT/PARCEL #243,572

Proj. No. 95054Q Des. By MJP Date 2/26/07 Drn. By MDT

Professional Engr. No. 20184 Chk. By

13 of 13