

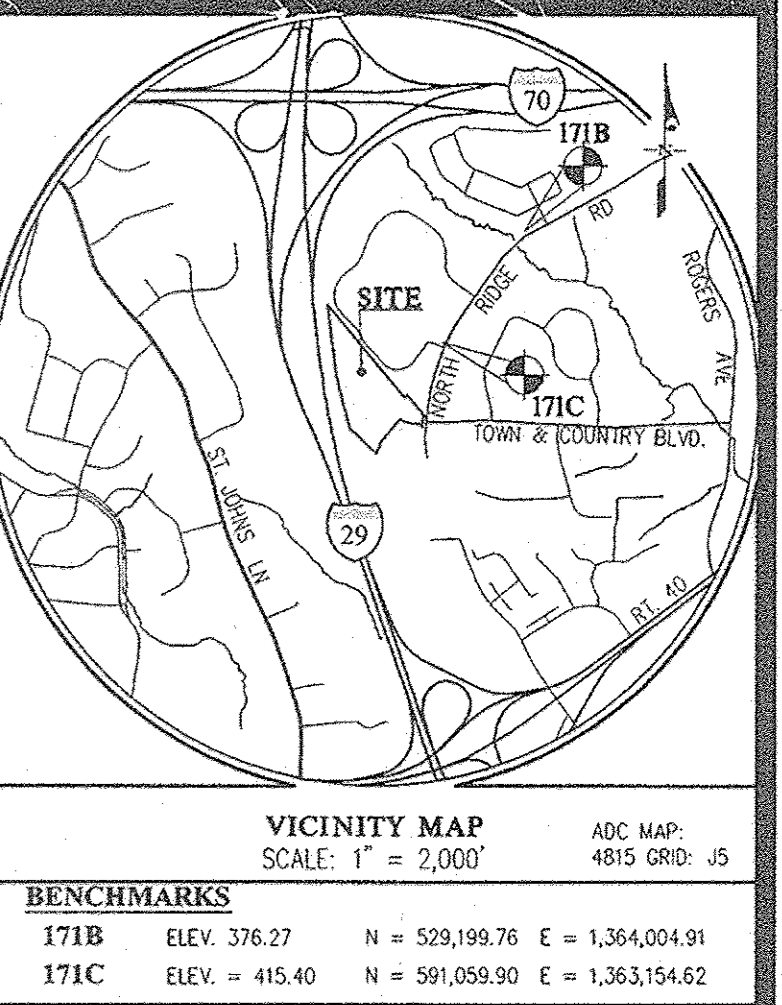
The Gatherings at Ellicott Mills

SITE DEVELOPMENT PLAN

PARCEL 'A'

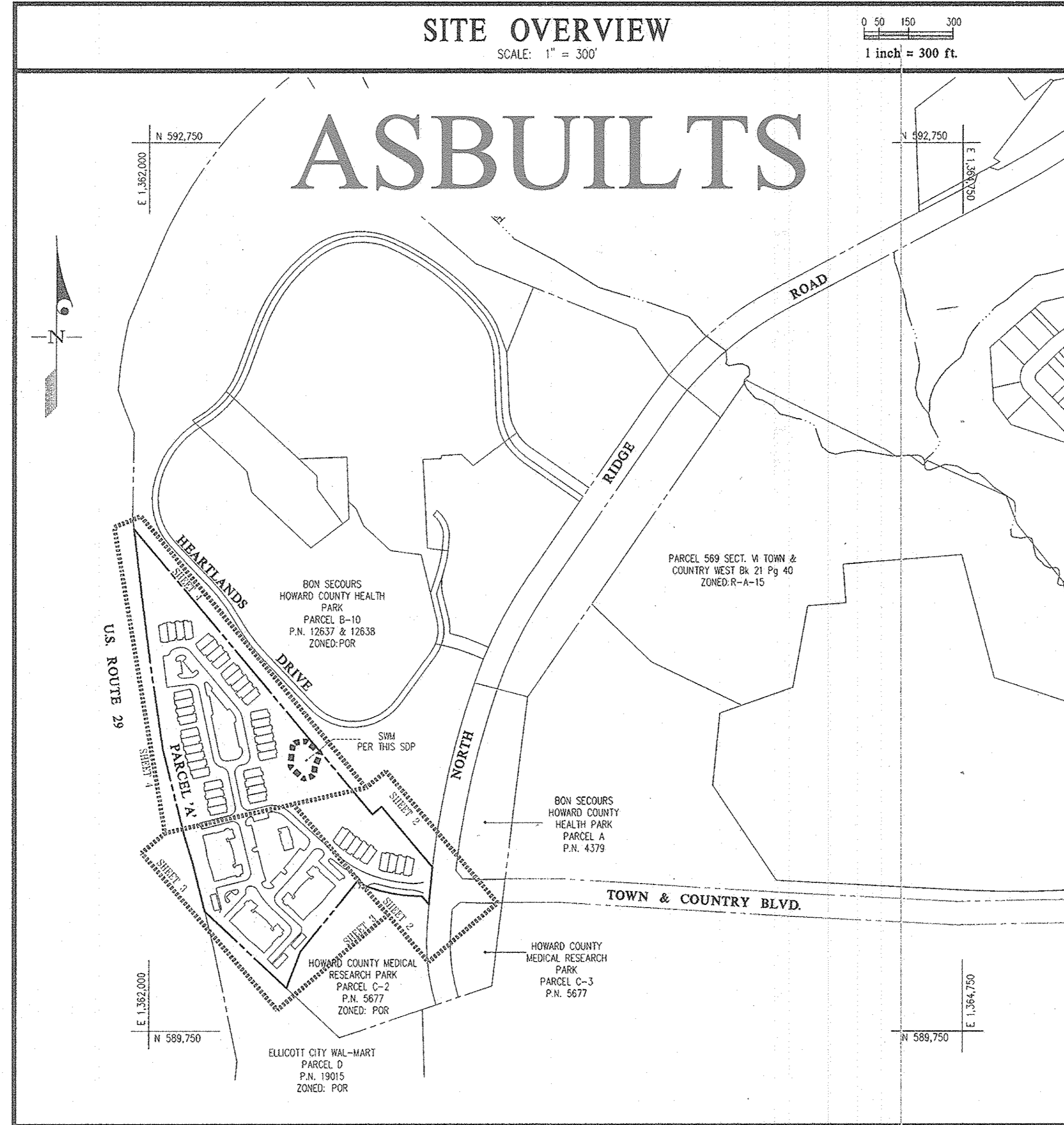
SECOND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1890 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION WORK.
- PROJECT BACKGROUND:
LOCATION: SEE VICINITY MAP IN THE TOP RIGHT CORNER OF THIS SHEET
TAX MAP & ORD: 17 / 23
ELECTION DISTRICT: 2
ZONING: POR PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN.
SITE AREA: 14.066 ACRES (GROSS AREA OF PARCEL A)
FOR OTHER SUBMISSIONS RELATED TO THIS SITE, SEE HOWARD COUNTY DEPT. OF PLANNING & ZONING FILE NOS.: F-96-14, SDP-84-49, SDP-87-210, ECP-12-028, F-12-62, WP-12-127, & F-13-059
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST 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.
- ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIIALLY BETWEEN ITEMS UNLESS OTHERWISE NOTED.
- EXISTING TOPOGRAPHY AND FEATURES COMPILED FROM PHOTOGRAMMETRIC BY MCKENZIE SNYDER, INC. (MARCH, 2011), PUBLIC INFORMATION AND GLW SURVEY DONE IN NOVEMBER 2011.
- COORDINATES ARE BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATION NUMBERS 171B & 171C.
- STORMWATER MANAGEMENT IS PROVIDED ON-SITE BY A VARIETY OF NONSTRUCTURAL AND MICRO SCALE PRACTICES (SEE SHEETS 12-14).
- PUBLIC WATER AND SEWER SHALL BE UTILIZED (AS PROVIDED BY THIS CONTRACT Nos. 849-D, 14-1156-D AND 14-4738-D). ALL BUILDINGS SHALL BE EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM FOR THE COMMUNITY AND APARTMENT BUILDINGS. A WATER METER IS LOCATED INSIDE EACH BUILDING VAULTS. FOR THE SINGLE FAMILY ATTACHED CONDOMINIUM BUILDINGS, THE WATER METERS ARE LOCATED IN METER VAULTS.
- THE EXISTING UTILITIES SHOWN HEREIN WERE DERIVED FROM AVAILABLE PUBLIC RECORDS. THE CONTRACTOR MUST DIG TEST PITS (BY HAND) AT ALL UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY EXACT LOCATION. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS.
- ALL ROADS LABELED AS "PUBLIC" ARE PUBLICLY MAINTAINED. ALL PROPOSED ROADS LABELED AS "PRIVATE" ARE PRIVATELY MAINTAINED AND DO NOT MEET PUBLIC ROAD STANDARDS FOR A CROWNED ROAD SECTION AND DRAINAGE. THESE ROADS WILL BE PRIVATE AND MAINTAINED BY A CONDOMINIUM ASSOCIATION.
- ANY DAMAGE TO THE ADJACENT COUNTY OWNED RIGHT-OF-WAY AND PROPERTY SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THERE ARE NO GRAVE SITES, CEMETERIES, WETLANDS, 100-YR FLOODPLAIN ON THIS SITE. THIS SITE CONTAINS A STREAM AS IDENTIFIED IN THE JULY 20, 2011 INVESTIGATION BY EXPLORATION RESEARCH, INC. THIS SITE ALSO BORDERS AN ADJACENT FOREST CONSERVATION AREA (FCO-4A) ON THE PARCEL-D.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS.
- OTHER STUDIES RELATED TO THE DEVELOPMENT OF THIS SITE AND SUBMITTED WITH THIS SDP:
• "ADEQUATE ROAD FACILITY TEST EVALUATION" DATED 05/14/2012 BY THE TRAFFIC GROUP.
• "WETLAND AND STREAM INVESTIGATION" DATED JULY 20, 2011 BY EXPLORATION RESEARCH, INC.
• NOISE STUDY BY FORENWCAN LLC, DATED DECEMBER 08, 2011.
• GEOTECHNICAL REPORT BY SPECIALIZED ENGINEERING DATED JANUARY 06, 2012.
- 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' SERVING MORE THAN ONE RESIDENCE
B. SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/1/4" AND CHIP COATING (1-1/2" MIN.), CONCRETE, OR PERVIOUS CONCRETE. SEE SHEETS 5-6 FOR DETAILS.
C. GEOMETRY - MAX. 14% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS.
D. STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
E. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YR. FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
F. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- BAY WINDOWS, WINDOW WELLS, CHIMNEYS, HEATING OR AIR CONDITIONING UNITS AND EXTERIOR STAIRWAYS IF NOT MORE THAN 18 FEET IN WIDTH MAY PROJECT NO MORE THAN 4 FEET INTO ANY REQUIRED SETBACK AREA IN ACCORDANCE WITH SECTION 128.A.1 OF THE ZONING REGULATIONS. THE HEIGHT AND SETBACK REQUIREMENT FOR POR ZONE ARE SHOWN ON THIS SHEET.
- ALL OUTSIDE LIGHTING SHALL COMPLY WITH SECTION 134 OF THE ZONING REGULATIONS.
- THIS PROJECT COMPLES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE PROPOSED METHODS INDICATED ON SHEETS 10-20 AND THE REQUIRED FOREST CONSERVATION SURETY POSTED WITH THE DEVELOPER AGREEMENT IS \$18,250.00. THERE IS A SEPARATE SURETY FOR THE OFF-SITE REFORESTATION AT "WINDSOR FOREST PARCEL-A" (P.N. 111.625) ASSOCIATED WITH THIS PROJECT. SEE "FOREST CONSERVATION OBLIGATION & SURETY" ON SHEET 20 FOR SURETY CALCULATIONS.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY OF \$41,250.00 FOR THE REQUIRED LANDSCAPING TO SATISFY SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL SHALL BE POSTED WITH THE DEVELOPER AGREEMENT FOR ADDITIONAL INFORMATION ON THE LANDSCAPE SURETY CALCULATIONS, SEE SHEET 19 AND 21).
- THE 65DBA NOISE CONTOUR LINE DRAWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65 DBA NOISE EXPOSURE. THE 65 DBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND UTILITY RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- PER ZONING SECTION 116.3, 10% OF THE TOTAL NUMBER OF UNITS MUST BE MIHU (13 UNITS TOTAL IN BUILDINGS 1, 2 & 3 WILL BE MIHU). THE MODERATE INCOME HOUSING UNIT FOR SALE DWELLING UNITS DOCUMENT WAS RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE ON 11/19/2013. THE MODERATE INCOME HOUSING UNIT COVENANT AND RESTRICTIONS FOR SALE DWELLING UNITS DOCUMENT WAS RECORDED IN THE HOWARD COUNTY LAND RECORDS OFFICE ON 11/19/2013.
- TRASH REMOVAL SHALL BE DONE THRU A PRIVATE REFUSE COLLECTION COMPANY.
- MAIL SERVICE FOR THE 3 APARTMENT BUILDINGS IS INSIDE EACH BUILDING. THERE ARE FOUR (4) CLUSTER MAIL BOXES LOCATED THROUGHOUT THE SITE TO SERVE THE SFA UNITS AND COMMUNITY BUILDING.
- THE 15' ENVIRONMENTAL SETBACK ONLY APPLIES TO HABITABLE CONDOMINIUM UNITS.
- ON JULY 27, 2012 A DESIGN MANUAL WAIVER OF SECTION 3.3.B.2.b OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME II WATER AND SEWER, REQUIRING PUBLIC WATER MAINS SERVING MORE THAN 50 UNITS TO BE LOOPED, WAS APPROVED UNDER THE FOLLOWING CONDITIONS:
1. THE DEVELOPER CONSTRUCTS THE WATER MAIN UP TO THE PROPERTY LINE FOR THE FUTURE EXTENSION AND COMPLETION OF THE WATER MAIN LOOP.
2. THE DEVELOPER CONTINUES TO PURSUE A GOOD FAITH EFFORT IN ACQUIRING THE NECESSARY OFFSITE EASEMENT FOR THE WATER MAIN LOOP.
3. THE DEVELOPER SHALL NOTIFY THE COUNTY BY DECEMBER 1, 2012 OF THE STATUS OF THE EASEMENT ACQUISITION.
4. IF THE DEVELOPER IS UNSUCCESSFUL IN ACQUIRING THE EASEMENT FROM THE ADJACENT PROPERTY OWNER BY DECEMBER 1, 2012, THE DEVELOPER AGREES TO FUND THE ACQUISITION OF THE EASEMENT THROUGH A CAPITAL PROJECT.
5. AFTER ACQUISITION OF THE EASEMENT BY THE COUNTY, THE DEVELOPER AGREES TO COMPLETE THE CONSTRUCTION OF THE OFF-SITE WATER MAIN LOOP.
6. THESE CONDITIONS WILL BE MADE PART OF THE DEVELOPER AGREEMENT FOR THE CONSTRUCTION OF THE PUBLIC WATER AND SEWER MAINS UNDER CONTRACT 14-4738-D



SITE ANALYSIS DATA CHART

1. GENERAL SITE DATA	
A. PRESENT ZONING:	POR
B. PROPOSED USE OF SITE:	AGE-RESTRICTED ADULT HOUSING
2. AREA TABULATION FOR PARCEL 'A'	
A. AREA OF PARCEL 'A' (PER P.N. 11833):	14,067 AC.
B. AREA OF THIS SDP SUBMISSION:	14,067 AC.
C. LIMIT OF GRADING DISTURBANCE (LOD):	11.82 AC.
3. PARCEL A DEVELOPMENT DATA	
A. PROPOSED NUMBER APT. BUILDINGS:	3
B. PROPOSED NUMBER OF UNITS/APT. BUILDING:	27 (81 APT. UNITS TOTAL)
C. PROPOSED NUMBER OF SFA CONDO UNITS:	46
D. PROPOSED NUMBER OF TOTAL UNITS:	127
E. REQUIRED COMMUNITY BUILDING SIZE:	2,260 S.F. MIN. (20 S.F. FOR FIRST 99 DWELLING UNITS + 10 S.F. FOR EACH ADD'L UNIT ABOVE)
F. PROPOSED COMMUNITY BUILDING SIZE:	99' (120x99=11,880 S.F.) + [10x28=280 S.F.] = 12,160 S.F.
G. PROPOSED POOL SIZE:	1,614 S.F. (5' DEEP, MAX. CAPACITY OF 154 PEOPLE @ 1 PERSON/12 S.F.)
H. PARKING REQUIRED:	
81 APT. UNITS @ 2 SPACES/UNIT	= 162 SPACES
46 SFA UNITS @ 2 SPACES/UNIT	= 92 SPACES
2,644 SF COMMUNITY CENTER @ 10 SPACES/1,000 SF PLUS	= 26 SPACES
1 SPACE/EMPLOYEE @ 2 EMPLOYEES	= 14 SPACES
1614 SF SWIMMING POOL AT 1 SPACE PER 10 PERSON	= 39 SPACES
D.M.V. TABLE 2.11 (0.3 SPACE/UNIT)	= 39 SPACES
TOTAL PARKING SPACES REQUIRED = 336 SPACES	
I. PARKING PROVIDED:	
COMMON SURFACE SPACES	= 77 SPACES
GARAGE SPACES (FREE STANDING)	= 46 SPACES
GARAGE SPACES (INSIDE APT. BLDGS)	= 78 SPACES (28 SPACES/APT. BLDG.)
GARAGE SPACES (INSIDE SFA UNITS)	= 92 SPACES (2 SPACES/SFA UNIT)
TANDEM DRIVEWAY SPACES (APT. BLDGS.)	= 96 SPACES (32 SPACES/APT. BLDG.)
TANDEM DRIVEWAY SPACES (SFA UNITS)	= 92 SPACES (2 SPACES/SFA UNIT)
TOTAL PARKING SPACES PROVIDED = 481 SPACES (43% EXCESS)	
J. OPEN SPACE	
1. RECREATION OPEN SPACE: THE REQUIRED RECREATION OPEN SPACE PER SUBDIVISION SECTION 16.121(c)(1)(iv) IS 400 S.F./UNIT (APT. OR SFA). THE REQUIRED AREA OF RECREATIONAL OPEN SPACE FOR 81 APT. UNITS AND 46 SFA UNITS WOULD BE 50,800 SQUARE FEET. THE RECREATIONAL OPEN SPACE AVAILABLE FOR THIS PROJECT IS OVER 50,800 S.F. (SEE THE "RECREATION OPEN SPACE DIAGRAM" ON SHEET-7 FOR THE 1.18 ACRES OF RECREATION OPEN SPACE PROVIDED).	
2. THE TOTAL OPEN SPACE REQUIRED PER ZONING SECTION 115.3.3 IS 20% OF THE SITE GROSS AREA WHICH WOULD BE 0.2814/8007 OR 2.81 ACRES. MORE THAN 2.81 ACRES IS PROVIDED BY THE 1.18 ACRES OF RECREATION OPEN SPACE AND 3.00 ACRES OF ON-SITE FOREST CONSERVATION EASEMENT TO MEET THE 20% OPEN REQUIRED.	

SHEET INDEX

- COVER SHEET
- SITE DEVELOPMENT PLAN / SITE DETAILS
- SITE DEVELOPMENT PLAN
- SITE DEVELOPMENT PLAN
- CURB AND PAVING DELINEATION PLAN
- CURB AND PAVING DELINEATION PLAN
- HANDICAP ACCESSIBILITY DETAILS / SITE DETAILS
- SEWER PROFILES
- STORM DRAIN PROFILES
- STORM DRAIN PROFILES
- STORM DRAIN DRAINAGE AREA MAP
- STORMWATER MANAGEMENT DRAINAGE AREA MAP
- STORMWATER MANAGEMENT DETAILS
- STORMWATER MANAGEMENT DETAILS
- SEDIMENT CONTROL PLAN - PHASE 1
- SEDIMENT CONTROL PLAN - PHASE 2
- SEDIMENT CONTROL NOTES and DETAILS
- SEDIMENT CONTROL NOTES and DETAILS
- FOREST CONSERVATION PLAN / OVERALL LANDSCAPE BUFFER ANALYSIS
- FOREST CONSERVATION NOTES and DETAILS
- LANDSCAPE PLAN / LANDSCAPE NOTES and DETAILS
- LANDSCAPE PLAN
- LANDSCAPE PLAN
- RETAINING WALL CONSTRUCTION DETAILS
- RETAINING WALL #1 & #2 ELEVATIONS
- OFF-SITE PLANTING PLAN ON WINDSOR FOREST, PARCEL 'A'

ADDRESS CHART

UNIT No.	STREET ADDRESS	UNIT No.	STREET ADDRESS
COMMUNITY BLDG.	8435 ADDERLEY AVENUE	21	8556 COLTRANE COURT
BUILDING 1	3011 DEXTER DRIVE	22	8558
BUILDING 2	8501 COLTRANE COURT	23	8560
BUILDING 3	8511 COLTRANE COURT	24	8562
		25	8566
GARAGE 1	3013 COLTRANE COURT	26	8568
GARAGE 2	3015 COLTRANE COURT	27	8570
GARAGE 3	8505 COLTRANE COURT	28	8572
		29	8576
1	8410 ADDERLEY AVENUE	30	8578
2	8412	31	8580
3	8414	32	8582
4	8416	33	8586
5	8420	34	8588
6	8422	35	8592
7	8424	36	8596
8	8426	37	8598
9	8428	38	8602
10	8530 COLTRANE COURT	39	8547
11	8532	40	8549
12	8534	41	8551
13	8536	42	8553
14	8540	43	8557
15	8542	44	8559
16	8544	45	8563
17	8546	46	8565
18	8548		
19	8550		
20	8554		

POR ZONING DISTRICT HEIGHT LIMITATIONS & SETBACKS

1. Maximum height limitations:	
a. Structure with minimum setback	50 feet
b. Structure with an additional 1 foot in height for every 3 feet of setback above the maximum	50 feet
2. Minimum structure size, not to prohibit the sale or lease of lots therein	
	3 acres
3. Minimum structure or use setbacks:	
a. From residential districts or uses except age-restricted housing from R-5-A-S or R-A-1-S	75 feet
b. From any other zoning district	0 feet
c. From public street right-of-way	10 feet
d. From public street right-of-way	30 feet
4. If a residential district is separated from the POR district by a public street right-of-way, only the setback from the public street right-of-way shall apply.	
5. Minimum distance between buildings for attached and apartment units within an age-restricted adult housing development:	
a. Face to face	30 feet
b. Face to side/rear to side	30 feet
c. Side to side	15 feet
d. Rear to rear	30 feet
e. Rear to face	75 feet

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. 12975, Expiration Date: May 26 2018.

2/15/18
Date
Carl K. Gutschick
Professional Engineer
Maryland Reg. No. 12975

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: *Mark A. Coyle* 2/25/18
Chief, Division of Land Development: *Walter L. ...* 2/25/18
Chief, Development Engineering Division: *Chad ...* 2.21.18

18. The MIHU documents referenced in general note #23 were recorded with plat nos. 22316-22317.

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-421-4188

DATE	REVISION	BY	APP'R

PREPARED FOR:
NORTHBRIDGE, LLC
24012 FREDERICK ROAD
SUITE 200
CLARKSBURG, MARYLAND 20871
JONATHAN W. SOULE
301-428-0800

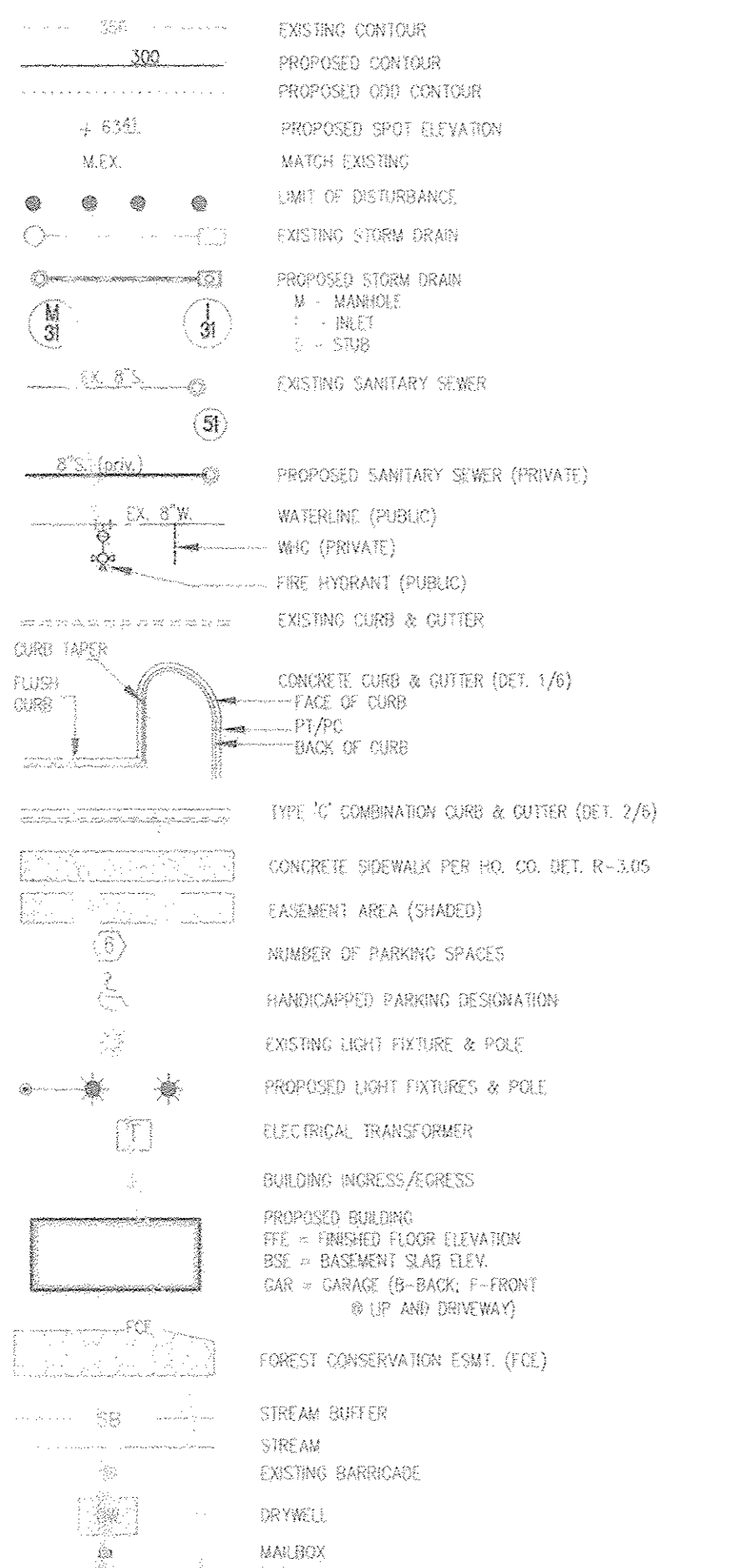
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXPIRATION DATE: MAY 26, 2018.

2-1-18
Date
Carl K. Gutschick
Professional Engineer
Maryland Reg. No. 12975

COVER SHEET
THE GATHERINGS at ELLICOTT MILLS
PARCEL A
AGE RESTRICTED ADULT HOUSING
PLAT Nos. 11833 & 22316-22317

SCALE: AS SHOWN	ZONING: POR	G. L. W. FILE No. 11005
DATE: FEB 2018 JAN. 2013	TAX MAP - GRID: 17 - 23	SHEET: 1 OF 26

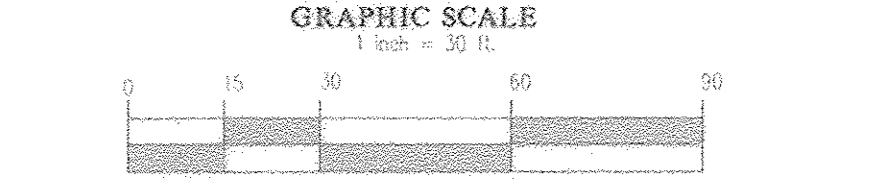
SITE DEVELOPMENT LEGEND



- NOTES:**
- FOR EACH UNIT, OPTIONAL BUILDING FEATURES (SUCH AS PATIO, EXTENSIONS, ETC.) ARE ONLY AVAILABLE IF THEY ARE SHOWN ON THESE SITE DEVELOPMENT PLANS.
 - FOR CURB TYPE, PAVING DETAILATION & CENTER LINE GEOMETRY INFORMATION SEE SHEETS 5 AND 6.
 - UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG THE CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT THE P.C./P.T'S, CORNERS AND TERMINUSES.
 - UNLESS NOTED OTHERWISE, ALL SIDEWALK RAMPS ARE TYPE 'C' PER HOWARD COUNTY DPW DETAIL R-4.04 (CURB INLET APPLICATION) AND R-4.05 (PARALLEL TO CURB APPLICATION). DETECTABLE WARNING TRUNCATED DOMES ARE PER HOWARD COUNTY DPW DETAIL R-4.07.
 - ALL ON-SITE PAVING AND ROADWAYS ARE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
 - ALL ON-SITE STORM SYSTEMS ARE PRIVATELY MAINTAINED. ALL ON-SITE WATER ARE PRIVATELY MAINTAINED EXCEPT THE PORTION OF THE 8" W.C. FIRE HYDRANTS AND W.C. THAT ARE WITHIN THE PUBLIC WATER & UTILITY EASEMENT.
 - FOR INFORMATION OF THE PUBLIC PORTION OF THE ON-SITE WATER LINE, SEE DPW CONTRACT Nos. 849-D, 14-1156-D AND 14-4738-D. THE PRIVATE PORTION OF ALL W.C. ARE 1" UNLESS NOTED OTHERWISE. ALL WATER METERS ARE LOCATED OUTSIDE THE BUILDINGS.
 - ALL PLAN DIMENSIONS ARE TO THE FACE OF STRUCTURE (BLDG, CURB, ETC.) AND ARE MEASURED PERPENDICULAR OR RADIAL BETWEEN ITEMS UNLESS NOTED OTHERWISE.
 - ALL CURB RISES ARE 5" (FACE OF CURB @ FLOW LINE) UNLESS NOTED OTHERWISE.
 - BRICK POINT ALL BUILDING CONSTRUCTION UNLESS NOTED OTHERWISE.
 - ALL GARAGE DRIVEWAY LENGTHS ARE A MINIMUM OF 10' (VALUE IN PARENTHESES INDICATE THE LENGTH OF EACH DRIVEWAY'S SHORT SIDE).
 - THERE IS A NO-STEP ACCESS FROM THE GARAGE INTO THE HOUSE (THE F.F.E. AND THE BACK OF GARAGE ELEVATION ARE THE SAME).
 - FOR UNITS WITH A DRYWELL SHOWN IN THE REAR, UNITS ALL BEAR DRAINPOINTS TO DRYWELL. SEE DETAIL SHEET 14.
 - SPLIT RAIL FENCE ALONG PART OF F.C. #1 AND RECREATIONAL OPEN SPACE #1 SHALL BE:
 - WITH TWO RAILS
 - LOOSEST WOOD FOR OTHER ROT RESISTANT WOODS
 - BRICK POINT ALL SFA BUILDING CONSTRUCTION WITHIN CLOSE PROXIMITY TO F.C.

LIGHTING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	MOUNTING
★	250 WATT TRIP, VAPOR LUMINA FIXTURE ON A BRONZE EMERGENCY PANEL USING A 12" ARM	30" POLE



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark A. Loyell 3/25/12
Director Date

Kat Stalinski 3/25/13
Chief, Division of Land Development Date

Chris Clark 2-21-13
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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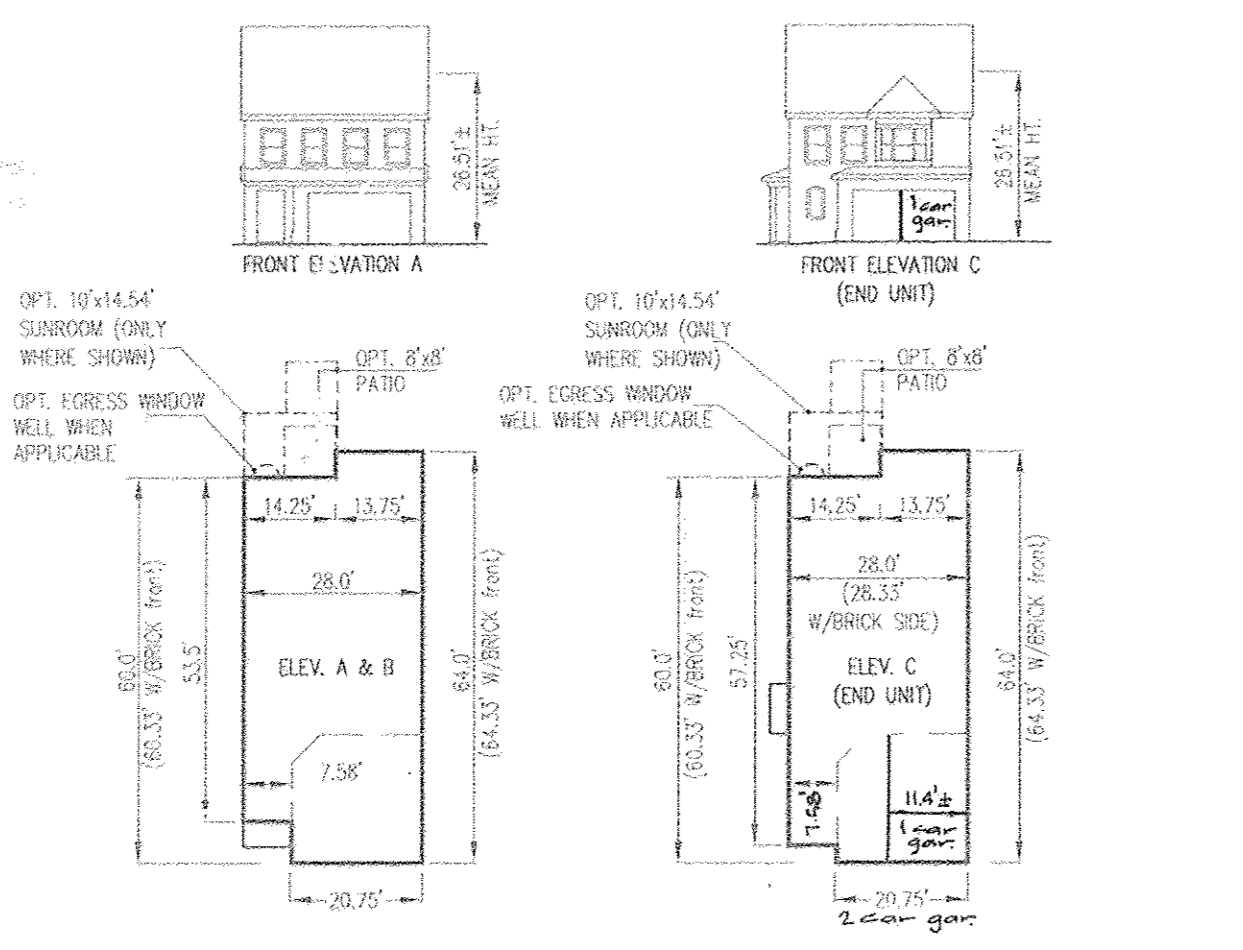
UNIVERSAL DESIGN GUIDELINES FOR AGE-RESTRICTED ADULT HOUSING IN HOWARD COUNTY

THE HOWARD COUNTY ZONING REGULATIONS ALLOW FOR "ACTIVE ADULT HOUSING" AS EITHER A CONDITIONAL USE IN RESIDENTIAL ZONING DISTRICTS OR AS A PERMITTED USE IN THE PLANNED SENIOR COMMUNITY PLANNED OFFICES, RECREATION, COMMUNITY CENTER, TRANSITION, AND RESIDENTIAL INSTITUTIONAL ZONING DISTRICTS. AGE-RESTRICTED DEVELOPMENT MUST BE APPROPRIATELY DESIGNED FOR ADULTS AT LEAST 55 YEARS OF AGE. SITE IMPROVEMENTS MUST ENSURE ACCESSIBLE ROUTES BETWEEN PARKING, DWELLING UNITS AND COMMON AREAS. INDIVIDUAL DWELLINGS MUST INCORPORATE UNIVERSAL DESIGN FEATURES TO BE ADAPTABLE FOR RESIDENTS WITH MOBILITY AND FUNCTIONAL LIMITATIONS THAT OFTEN RESULT FROM AGING.

DESIGN STANDARDS FOR SITE ACCESSIBILITY AND USABLE COMMON AREAS HAVE BEEN ESTABLISHED FOR MULTI-FAMILY HOUSING BY THE AMERICANS WITH DISABILITIES ACT AND THE FAIR HOUSING ACT OF 1989. WHILE RECOGNIZED STANDARDS FOR INDIVIDUAL UNITS FOR OLDER ADULTS HAVE NOT BEEN ESTABLISHED, UNIVERSAL DESIGN IS AN EVOLVING CONCEPT THAT PROVIDES SOME GUIDANCE.

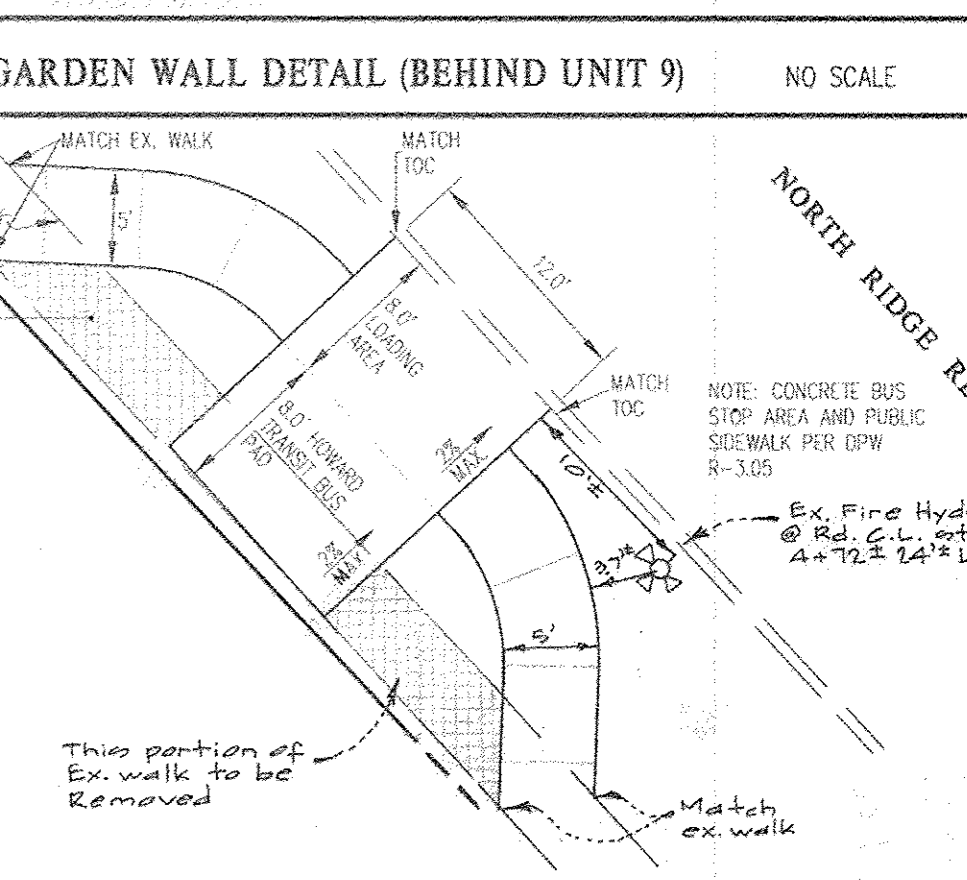
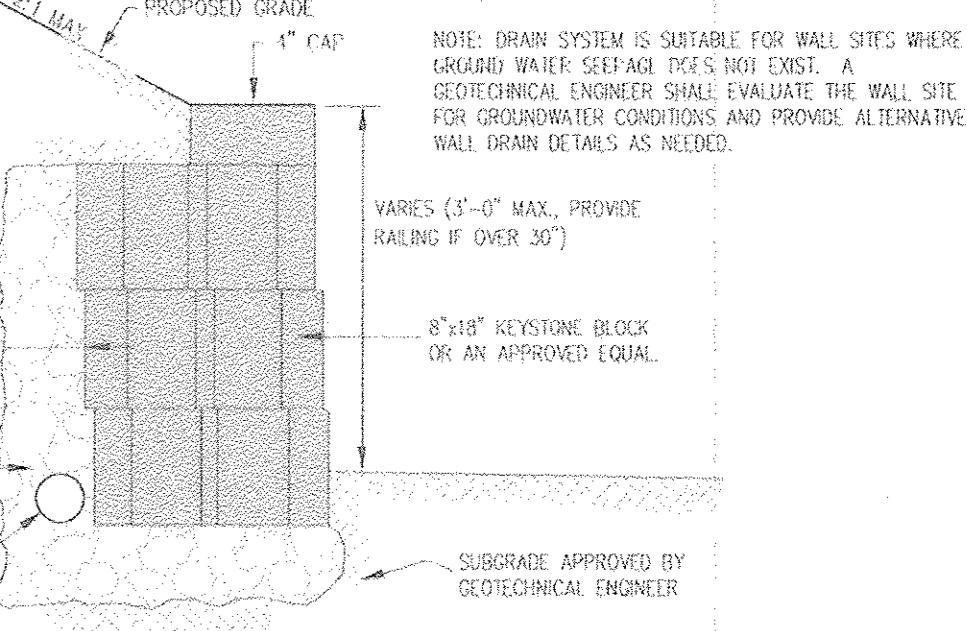
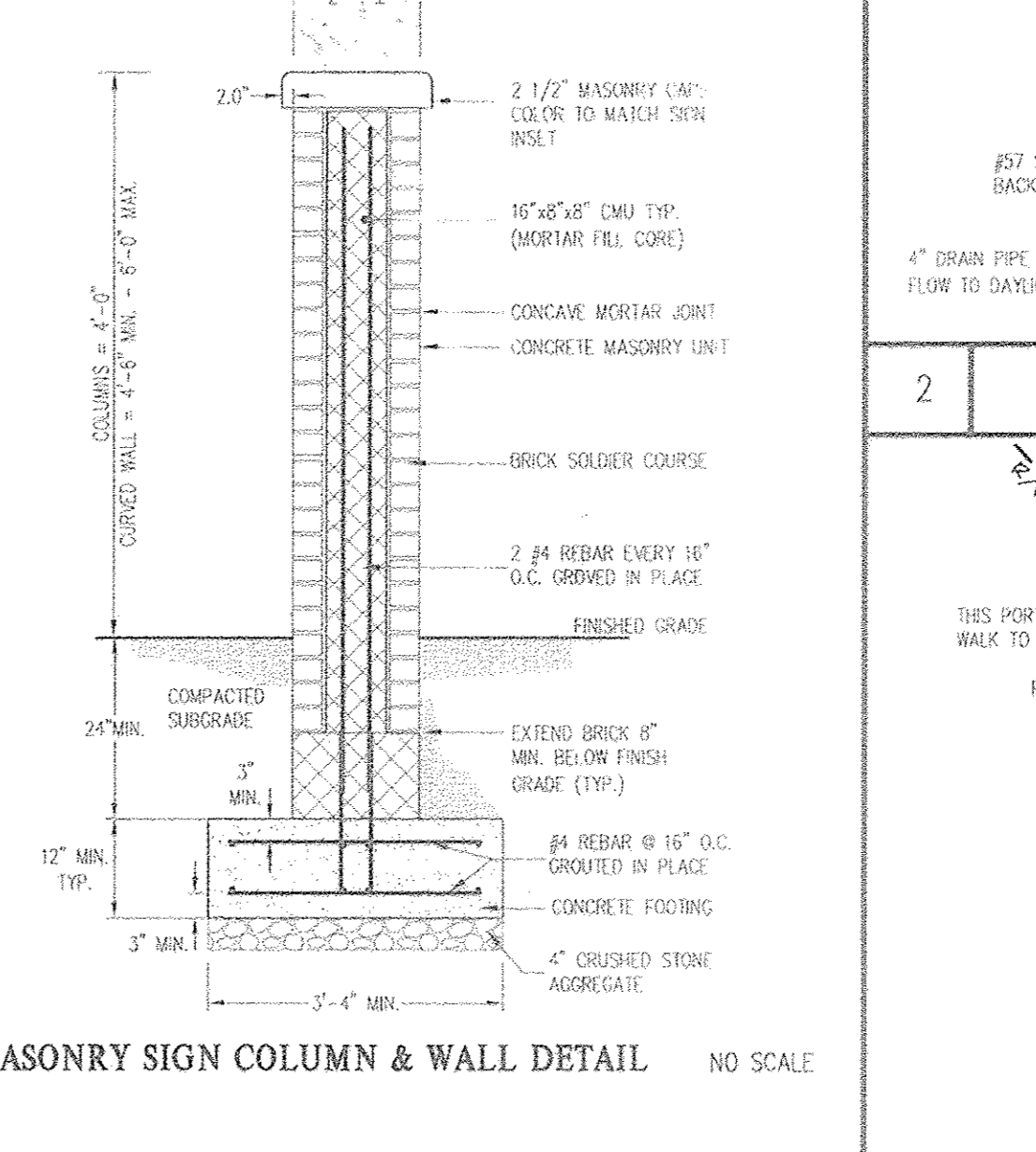
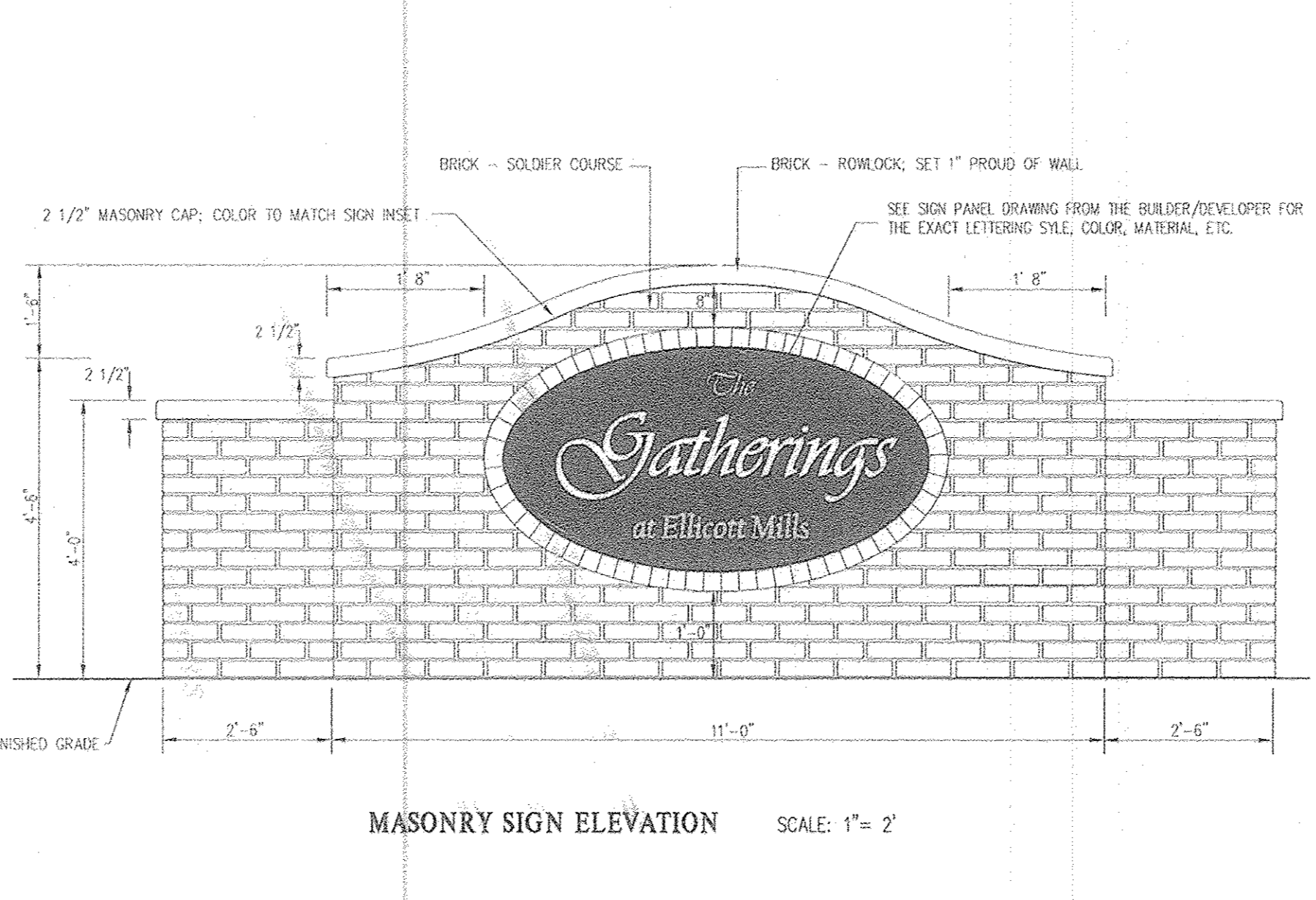
ACCORDINGLY, THE DEPARTMENT OF PLANNING AND ZONING MET WITH SEVERAL SENIOR HOUSING DEVELOPERS, REPRESENTATIVES OF THE HOMES FOR LIFE COALITION OF HOWARD COUNTY, THE OFFICE ON AGING AND THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS TO DISCUSS MINIMUM REQUIREMENTS, OPINION VIEWS MORE EXPRESSED REGARDING THE FEATURES THAT SHOULD BE REQUIRED BY CONDOMINIUM DEVELOPERS. DEVELOPERS' MAJOR CONCERNS WERE THAT THE CURRENT MARKET DOESN'T PERCEIVE A NEED FOR MOST UNIVERSAL DESIGN FEATURES SINCE THE OLDEST BOOMERS ARE STILL RELATIVELY YOUNG AND AREN'T FOCUSED ON HOW THEIR NEEDS MAY CHANGE OVER TIME. CONCERN WAS ALSO EXPRESSED ABOUT INCREASING THE COST OF SENIOR HOUSING IF MANY UNIVERSAL DESIGN FEATURES ARE REQUIRED RATHER THAN OPTIONAL.

- THESE GUIDELINES REFLECT A MIDDLE POSITION FOCUSING ON REQUIRING THOSE FEATURES THAT ARE RELATIVELY INEXPENSIVE IF PART OF INITIAL CONSTRUCTION, BUT WOULD REQUIRE MAJOR RENOVATION TO RETROFIT IN THE FUTURE. ITEMS THAT ARE EITHER RELATIVELY LESS EXPENSIVE TO RETROFIT IN THE FUTURE ARE LISTED AS DESIRABLE OR OPTIONAL.
- REQUIRED**
- FOR MULTI-FAMILY APARTMENT OR CONDO DEVELOPMENT, AN ACCESSIBLE PATH BETWEEN PARKING DWELLING UNITS, AND COMMON AREAS THAT MEET ADA STANDARDS.
 - FOR SINGLE FAMILY DETACHED AND ATTACHED DEVELOPMENTS, A "NO-STEP" ACCESS TO THE FRONT DOOR ENTRANCE TO ALL DWELLING UNITS AND COMMON BUILDINGS IF A NO-STEP FRONT ENTRANCE IS NOT FEASIBLE, AN ALTERNATE NO-STEP SIDE OF GARAGE ENTRY TO THE FIRST FLOOR MAY BE PROVIDED (A NO-STEP ENTRANCE IS DESIRABLE, BUT NOT REQUIRED AT OTHER ENTRANCES).
 - 36" WIDE FRONT DOOR WITH EXTERIOR LIGHTING AT THE ENTRANCE (EXTERIOR DOORS SHALL BE PROVIDED WITH AN ARCHITECTURAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE EXTERIOR DOOR, THE ILLUMINATION OF THE EXTERIOR LIGHT SHALL BE CONTROLLED FROM INSIDE THE DWELLING UNITS, EXCEPTION: LIGHTS THAT ARE CONTINUOUSLY ILLUMINATED OR AUTOMATICALLY CONTROLLED).
 - ALL INTERIOR DOORWAYS AT LEAST 32" CLEAR WIDTH IN THE OPEN POSITION (2/10 DOORS OR A 36" IS PREFERABLE).
 - 36" WIDE FULLY ACCESSIBLE REARTE MUST CONNECT THROUGH OUT THE FIRST FLOOR OF THE DWELLING UNIT. THE MAXIMUM VERTICAL FLOOR LEVEL CHANGE IS 3" INCH, EXCEPT WHEN A TAPERED THRESHOLD IS USED, THE MAXIMUM HEIGHT IS 3/4" INCH (40-42" IS PREFERABLE).
 - COMPLETE LIVING AREA INCLUDING MASTER BEDROOM AND BATH ON FIRST LEVEL (OR ELEVATOR ACCESS IF MULTI-STORY APARTMENTS).
 - LEVER HANDLES ON INTERIOR AND EXTERIOR DOORS.
 - CLEAR FLOOR SPACE OF 30" X 48" INCHES CENTERED ON THE APPLIANCE OR FIXTURE SHALL BE PROVIDED AT EACH FIXTURE IN THE KITCHEN. FLOOR SPACES CAN OVERLAP (FAIR HOUSING ACT).
 - REINFORCED WALLS TO ALLOW FOR THE LATER INSTALLATION OF GRAB BARS AROUND THE TOILET, TUB, AND SHOWER STALL.
 - MANEUVERING SPACE WITHIN THE BATHROOM TO PERMIT A PERSON USING A MOBILITY AID TO ENTER THE ROOM, CLOSE AND REOPEN THE DOOR, WITH A CLEAR FLOOR SPACE OF 30" X 48" SHOULD BE PROVIDED AT EACH FIXTURE AND CENTERED ON EACH FIXTURE, THE 30" X 38" FLOOR SPACES CAN OVERLAP EACH OTHER (NOTE: THIS IS A REQUIREMENT IN THE FAIR HOUSING ACT GUIDELINES).
 - WALL MOUNTED LIGHT SWITCHES, ELECTRICAL OUTLETS, OR ENVIRONMENTAL CONTROLS SHALL BE MOUNTED FOR A REACHING RANGE OF WINDOW 15" OFF THE FLOOR AND A MAXIMUM 48" ABOVE THE FLOOR.
- DESIRABLE**
- LOW MAINTENANCE EXTERIOR MATERIALS.
 - COVERED MAIN ENTRY.
 - ENTRY DOOR APPROACH WITH 18"-24" OF CLEARANCE AT SIDE ADJACENT TO HANDLE.
 - SMOOTH TRANSITIONS BETWEEN ROOMS (VERTICAL THRESHOLD OF 2" OR LESS).
 - SLIP RESISTANT FLOORINGS.
 - MAXIMIZE ACCESSIBLE PATH BETWEEN MAIN LIVING ROOMS (PREFERABLE 38-42").
 - LEVER HANDLES ON KITCHEN AND BATHROOM SINKS, PLUS SHOWER.
 - ANTI-SKID DEVICES ON ALL FLOORING FIXTURES.
 - 5' TURNING RADIUS OR T-TURN IN KITCHEN AND FIRST FLOOR BATHROOM.
 - PARALLEL AND FORWARD APPROACH MANEUVERING SPACE IN FRONT OF APPLIANCES AND PLUMBING FIXTURES.
 - MAIN ELECTRICAL BREAKER BOX LOCATED ON THE FIRST FLOOR.
 - SWITCHES, DOORBELLS, THERMOSTATS, AND BREAKER BOXES SHOULD BE LOCATED NO MORE THAN 48" ABOVE THE FLOOR. ELECTRICAL RECEPTACLES SHOULD BE AT LEAST 15" ABOVE THE FLOOR.
 - STACKING OF CLOSETS LARGE ENOUGH TO ACCOMMODATE FUTURE INSTALLATION OF AN ELEVATOR.
 - REINFORCING IN SHOWER STALLS TO PERMIT FUTURE INSTALLATION OF A WALL-HUNG SEVEN SEAT.
- CUSTOM OPTIONS**
- SECURITY SYSTEM.
 - VISUAL ID OF VISITORS.
 - VISUAL SMOKE DETECTORS.
 - HANDRAILS ON BOTH SIDES OF EXTERIOR AND INTERIOR STAIRS.
 - TASK LIGHTING IN KITCHEN, BATH AND OTHER WORKSPACES.
 - ROCKER LIGHT SWITCHES.
 - LIGHTING IN CLOSETS AND PANTRY.
 - CLOSET ROOFS ADJUSTABLE FROM 3' TO 5'6".
 - SLIP RESISTANT FLOORING IN KITCHEN AND BATH.
 - MULTI-LEVEL OR ADJUSTABLE KITCHEN COUNTERTOPS AND WORKSPACES.
 - PULLOUT SHELVES FOR KITCHEN BASE CABINETS.
 - FRONT MOUNTED CONTROLS ON STOVE.
 - INSTALLATION OF GRAB BARS IN BATHROOM.
 - HAND-HELD SHOWERHEAD IN SHOWER.
 - CURBLESS SHOWER.
- NOTE:**
THERE IS A NO-STEP ACCESS FROM THE GARAGE INTO THE HOUSE (THE F.F.E. AND THE BACK OF GARAGE ELEVATION ARE THE SAME).

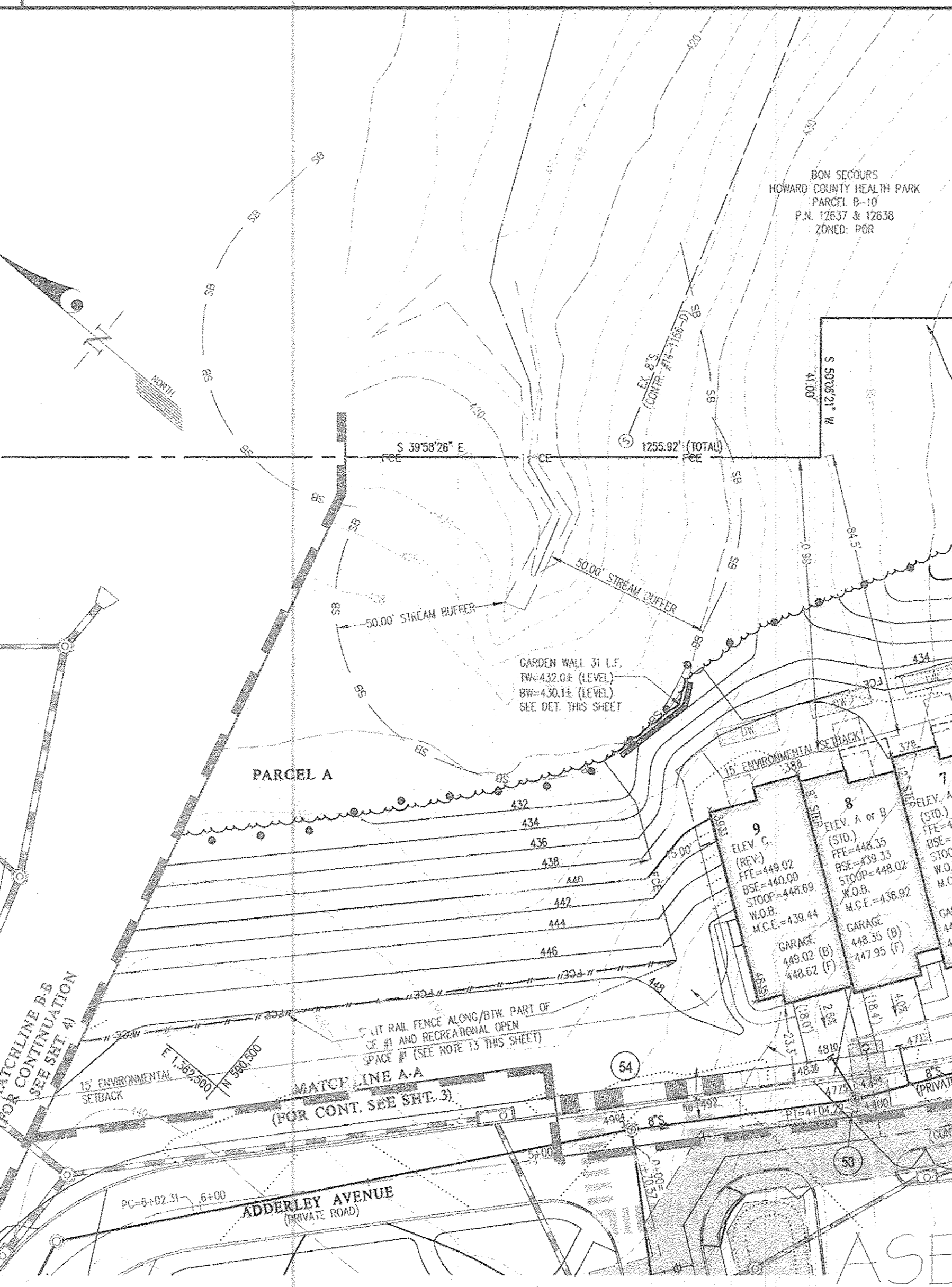


SIGN NOTES

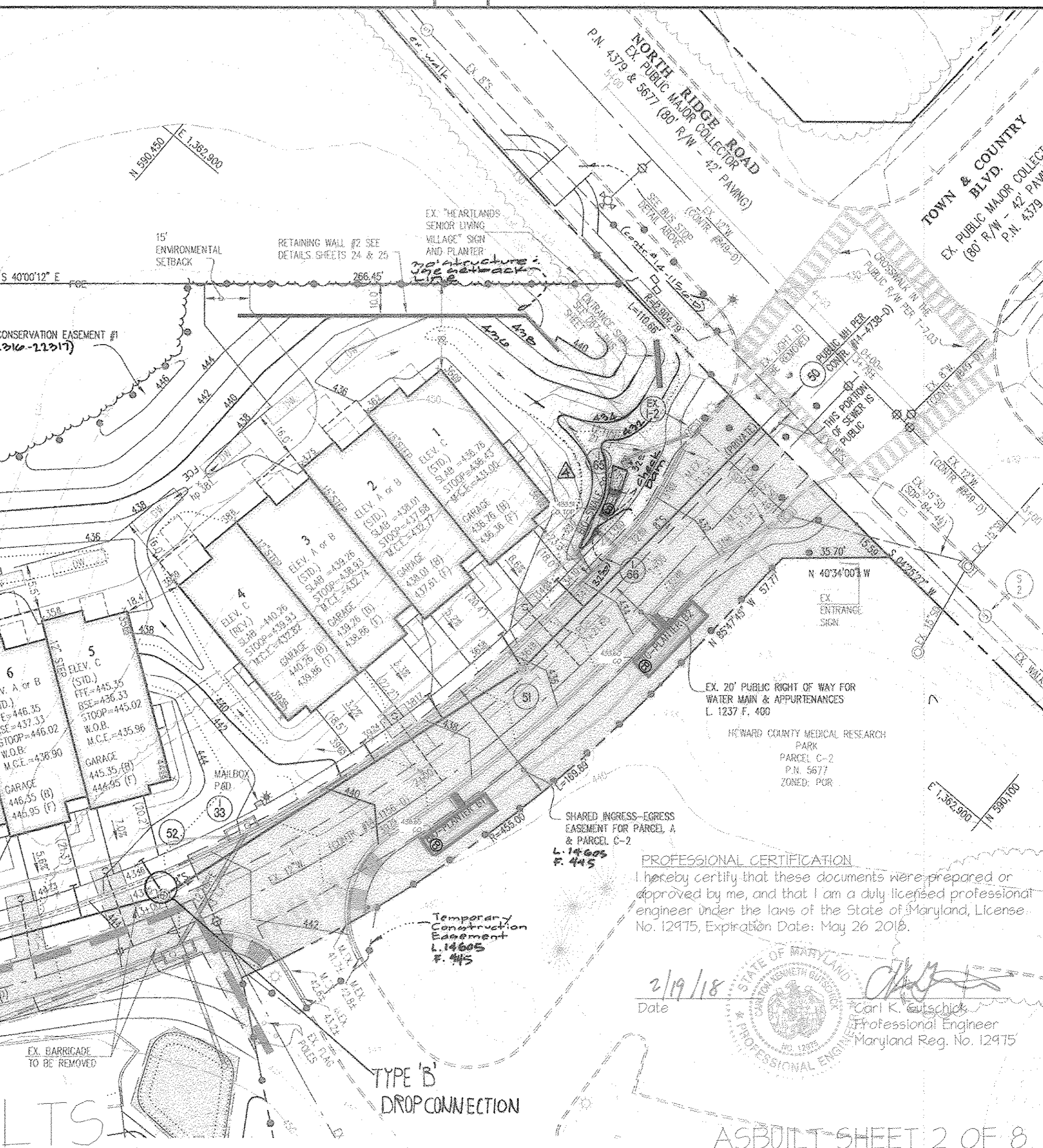
- HIGH DENSITY FOAM INSET IN BRICK OR STONE ENTRANCE WALL THAT IS SET INTO THE HELD SIDE. SET AT A 45° ANGLE TOWARD THE INTERSECTION OF TOWN & COUNTRY BOULEVARD AND NORTH RIDGE ROAD.
- PANEL IS ROUTED OUT OF HIGH DENSITY FOAM AND PAINTED.
- PANEL SIZE IS APPROXIMATELY 3 FEET TALL BY 6 FEET WIDE.
- SCRIPT LETTERING WITH ACCENT BORDER AS SHOWN.



ENTRANCE SIGN DETAILS SCALE AS SHOWN



SITE DEVELOPMENT PLAN



PREPARED FOR:
NORTHRIDGE, LLC
24012 FREDERICK ROAD
SUITE 200
CLARKSBURG, MARYLAND 20871
JONATHAN W. SOULE
301-428-0800

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2014.

2-1-13

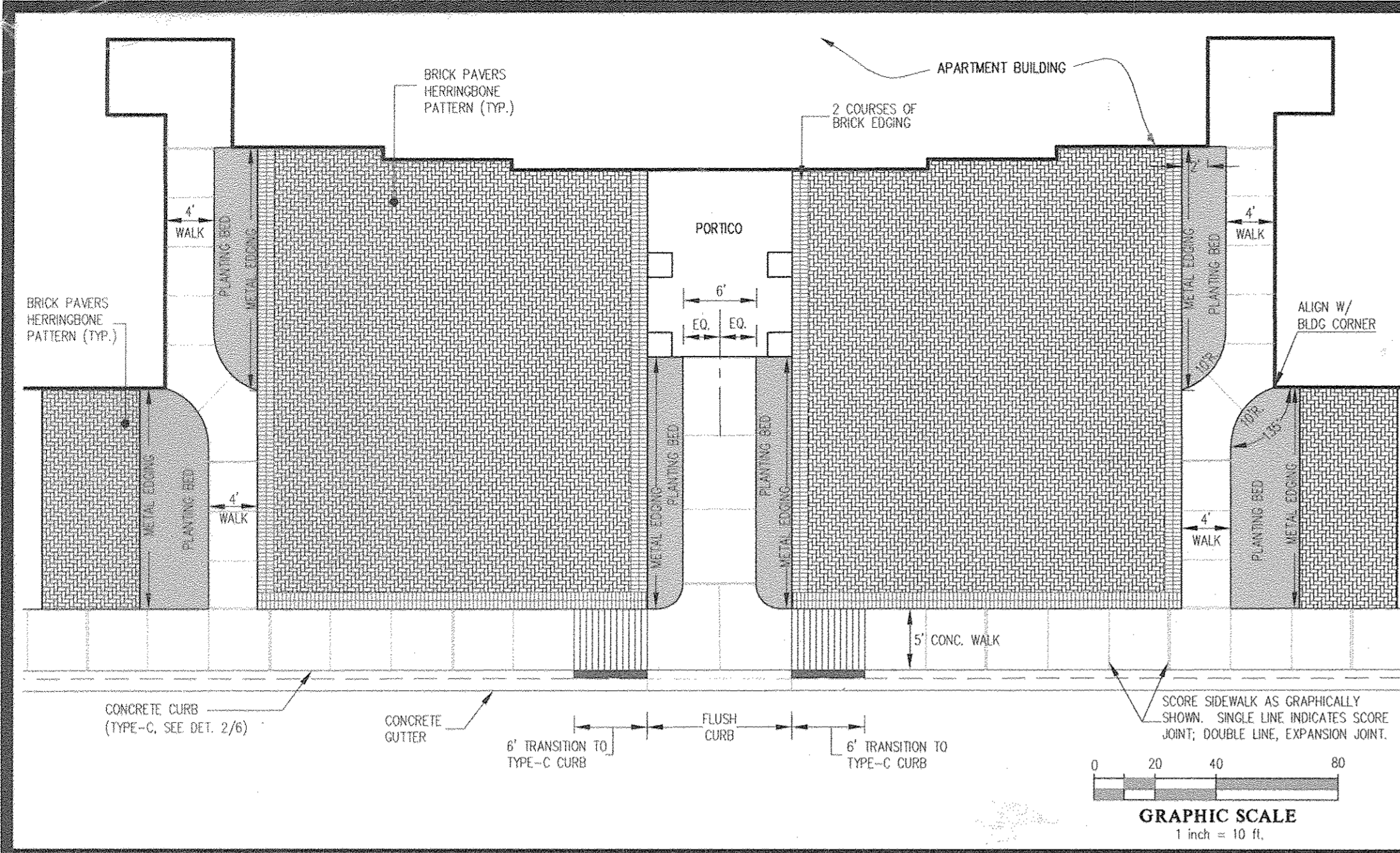
GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 200 - BURTONTOWNE OFFICE PARK
BURTONTOWNE, MARYLAND 20866
TEL: 301-421-0242 FAX: 410-880-1820 DC/WA: 301-988-2524 FAX: 301-421-4188

DATE: 2-1-13

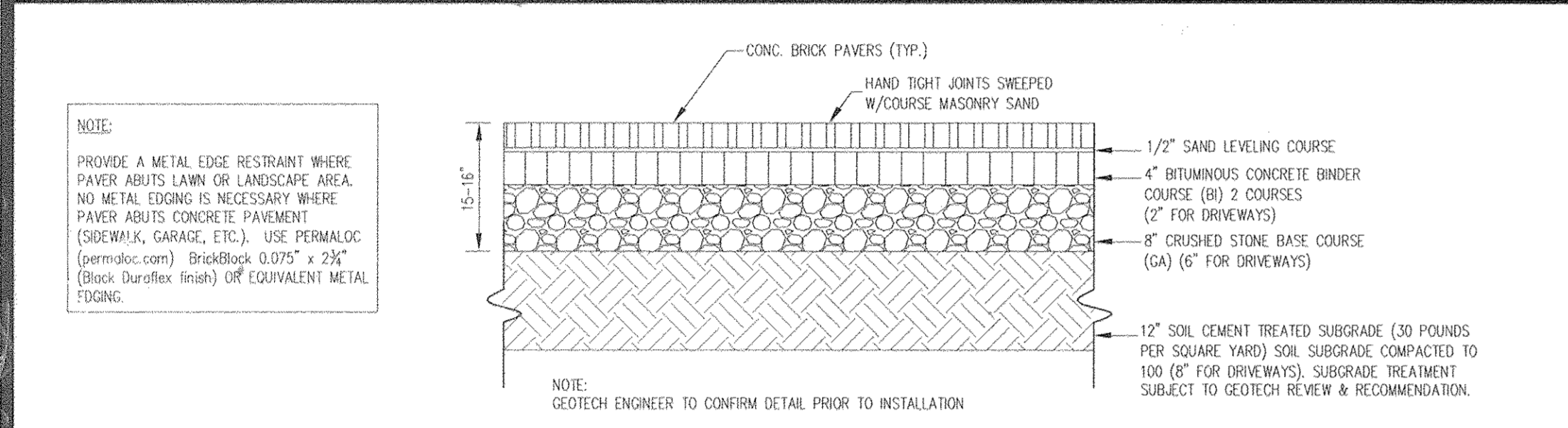
REVISION

BY: [Signature]

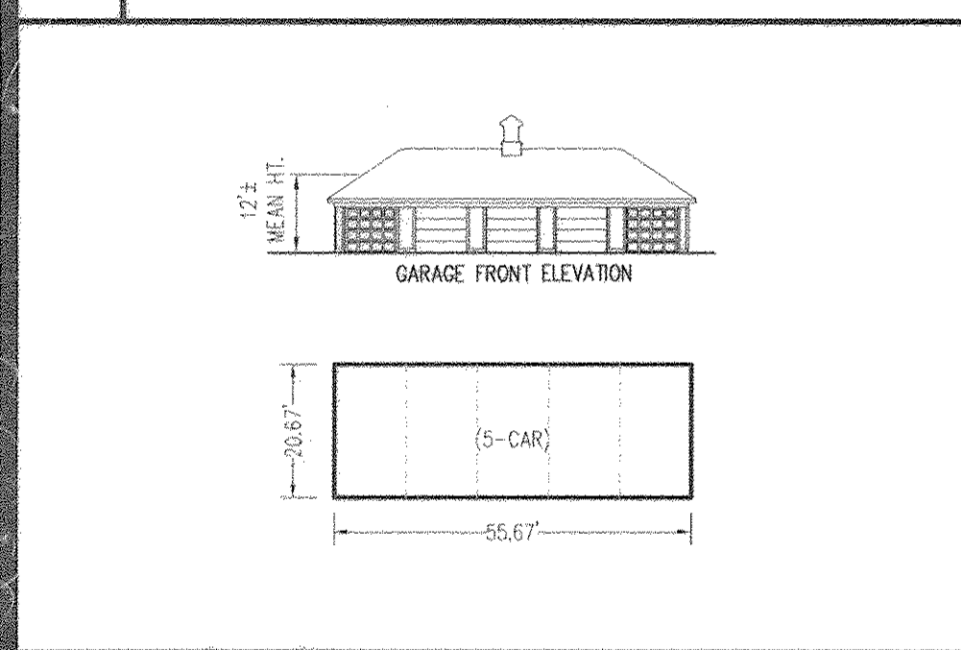
APP'R: [Signature]



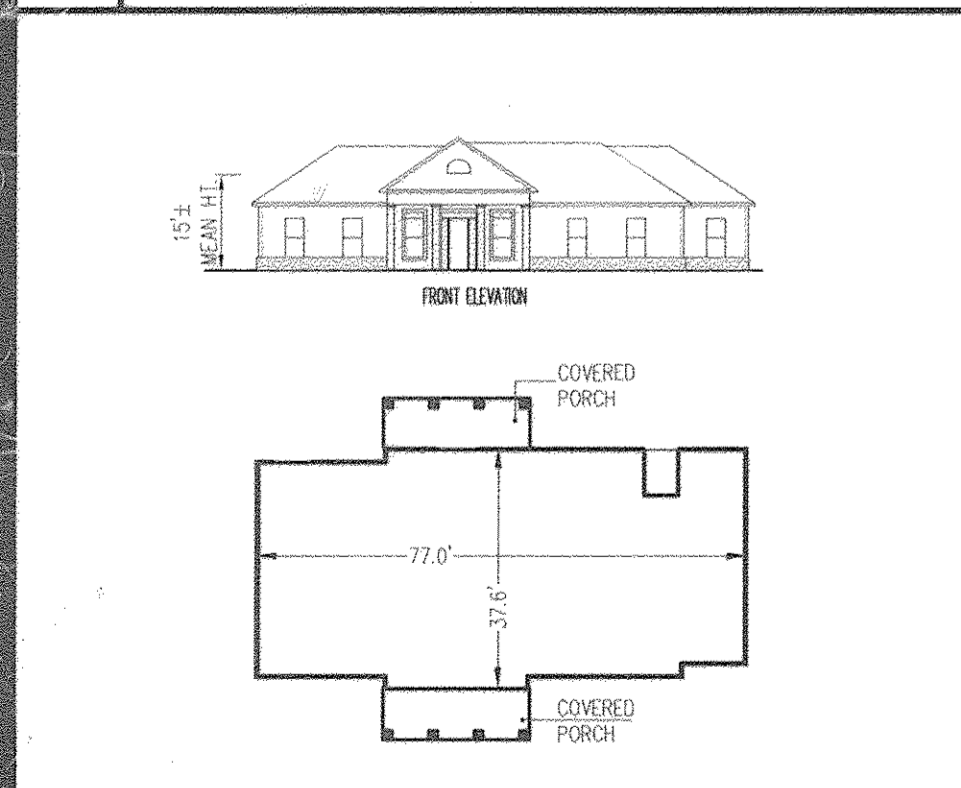
1 TYPICAL FRONT ENTRY AREA and DRIVEWAY BRICK PAVING PATTERN SCALE: 1" = 10'



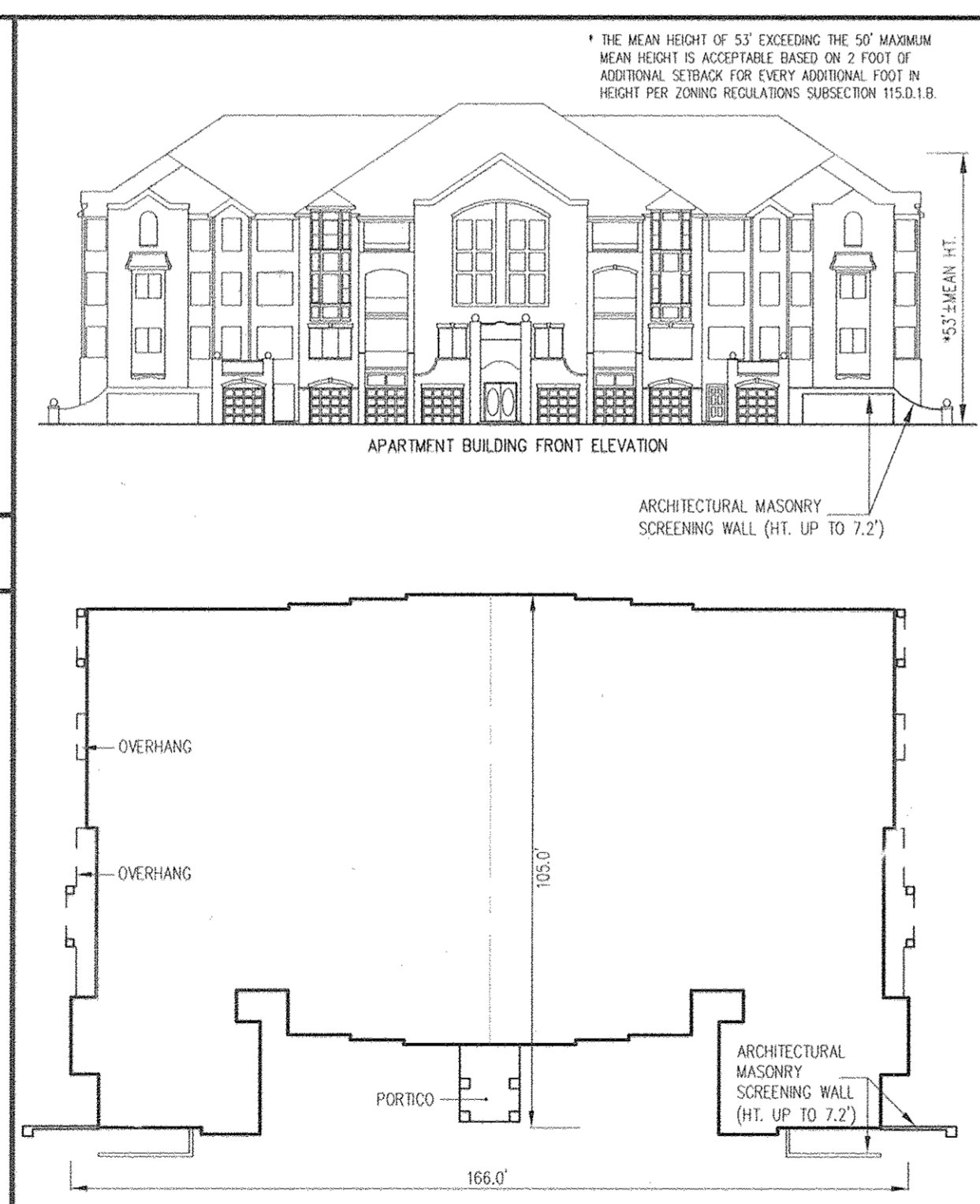
2 BRICK PAVER SECTION DETAIL NO SCALE



3 GARAGE FOOTPRINT and ELEVATION (STANDARD ORIENTATION SHOWN) SCALE: 1" = 30'

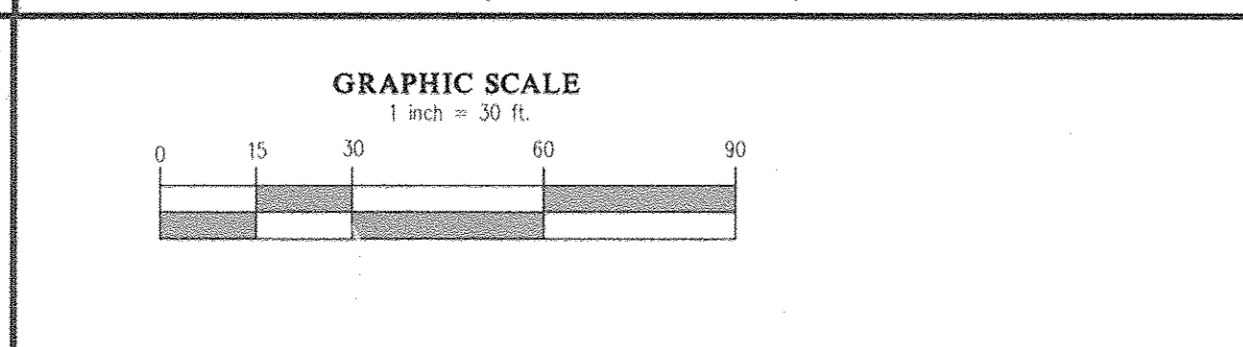


4 COMMUNITY BLDG. FOOTPRINT and ELEV. (STANDARD ORIENTATION SHOWN) SCALE: 1" = 30'



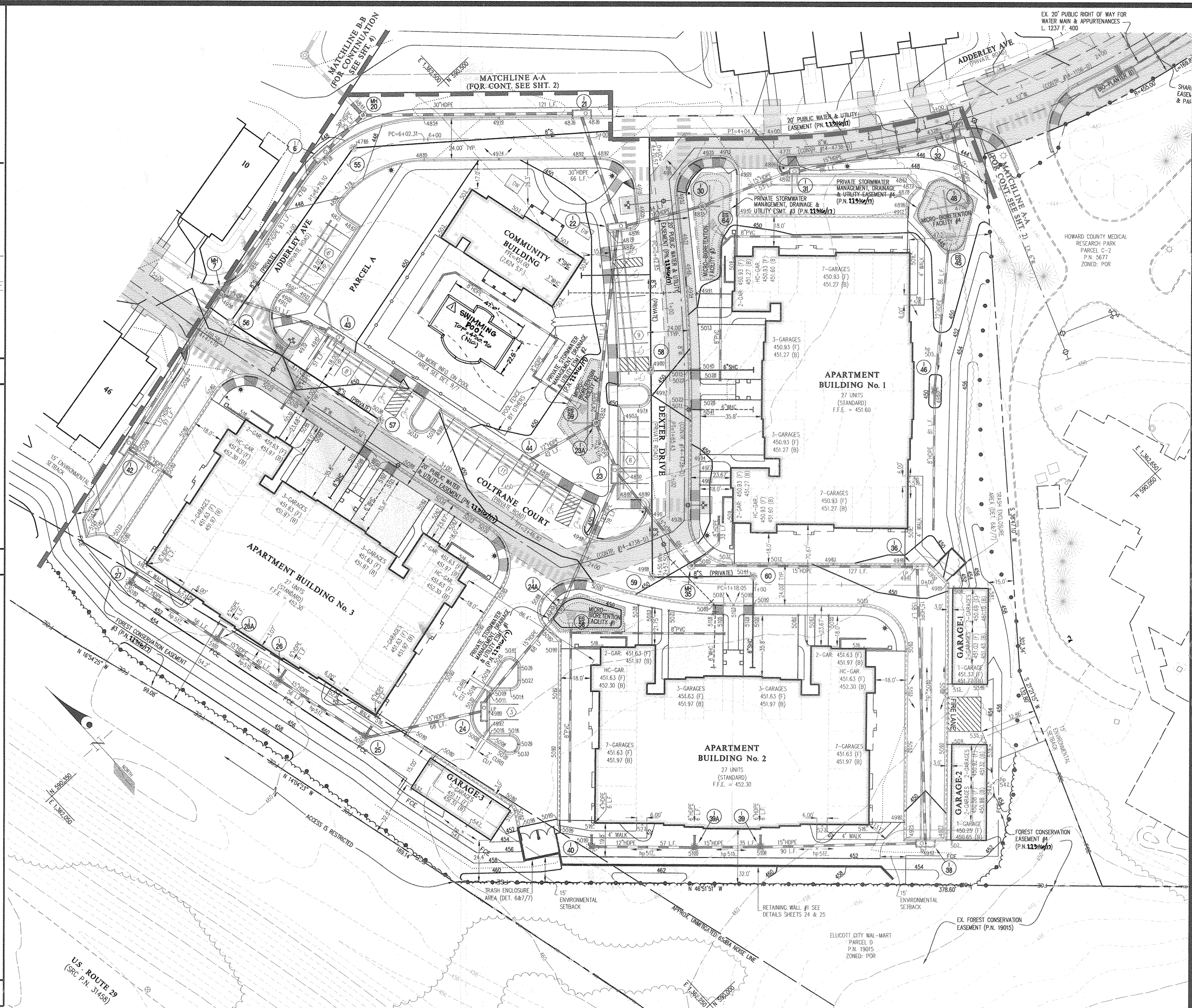
NORTHEDGE APARTMENT BUILDING FOOTPRINT and ELEVATION (STANDARD ORIENTATION SHOWN) SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Walter M. Laughlin* Date: 3/25/13
 Chief, Division of Land Development: *Victoria L. Smith* Date: 3/25/13
 Chief, Development Engineering Division: *Chad C. Adams* Date: 2-21-13



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-985-2524 FAX: 301-421-4186

NO.	DATE	REVISION	BY	APP'R
11-14-2014		Revise Community Swimming Pool		



PREPARED FOR:
 NORTHEDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

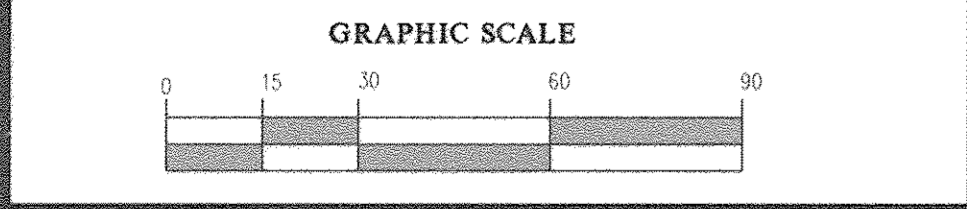
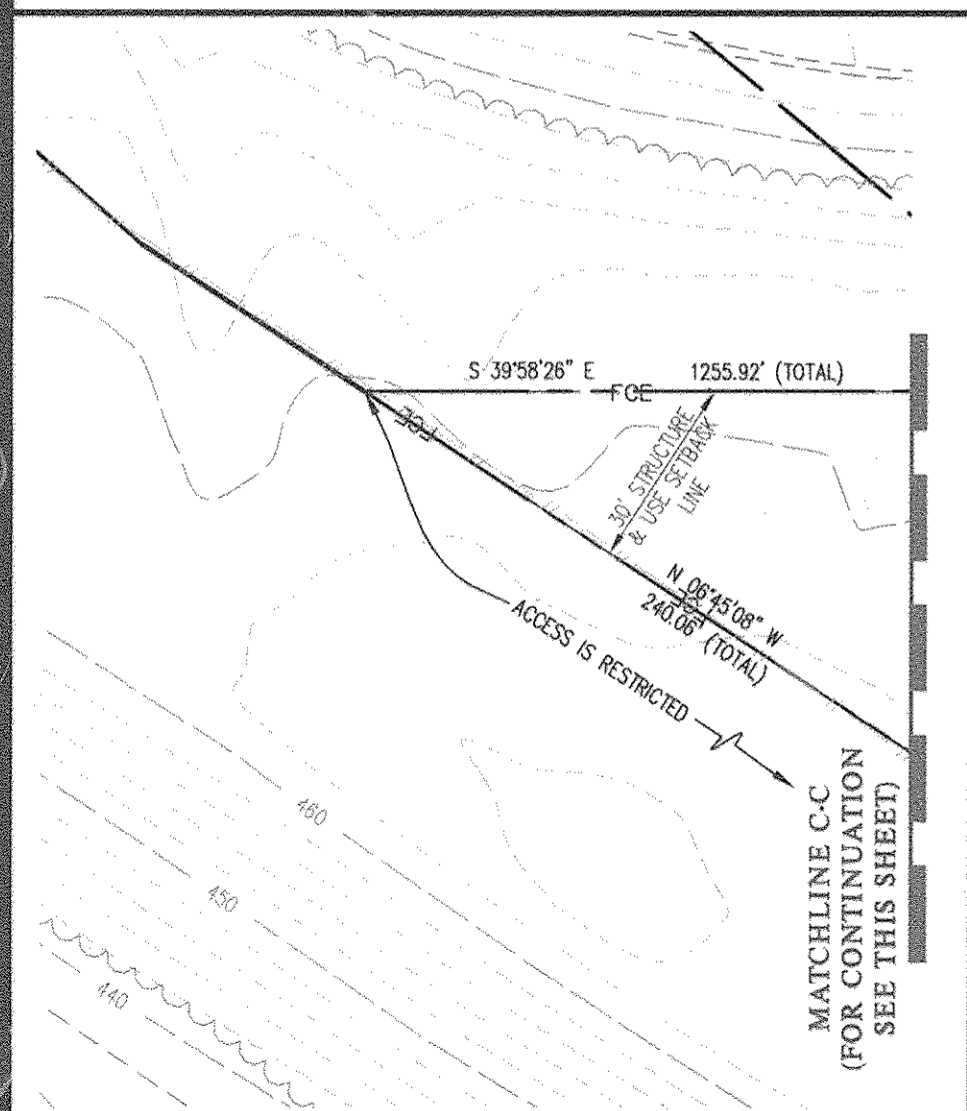
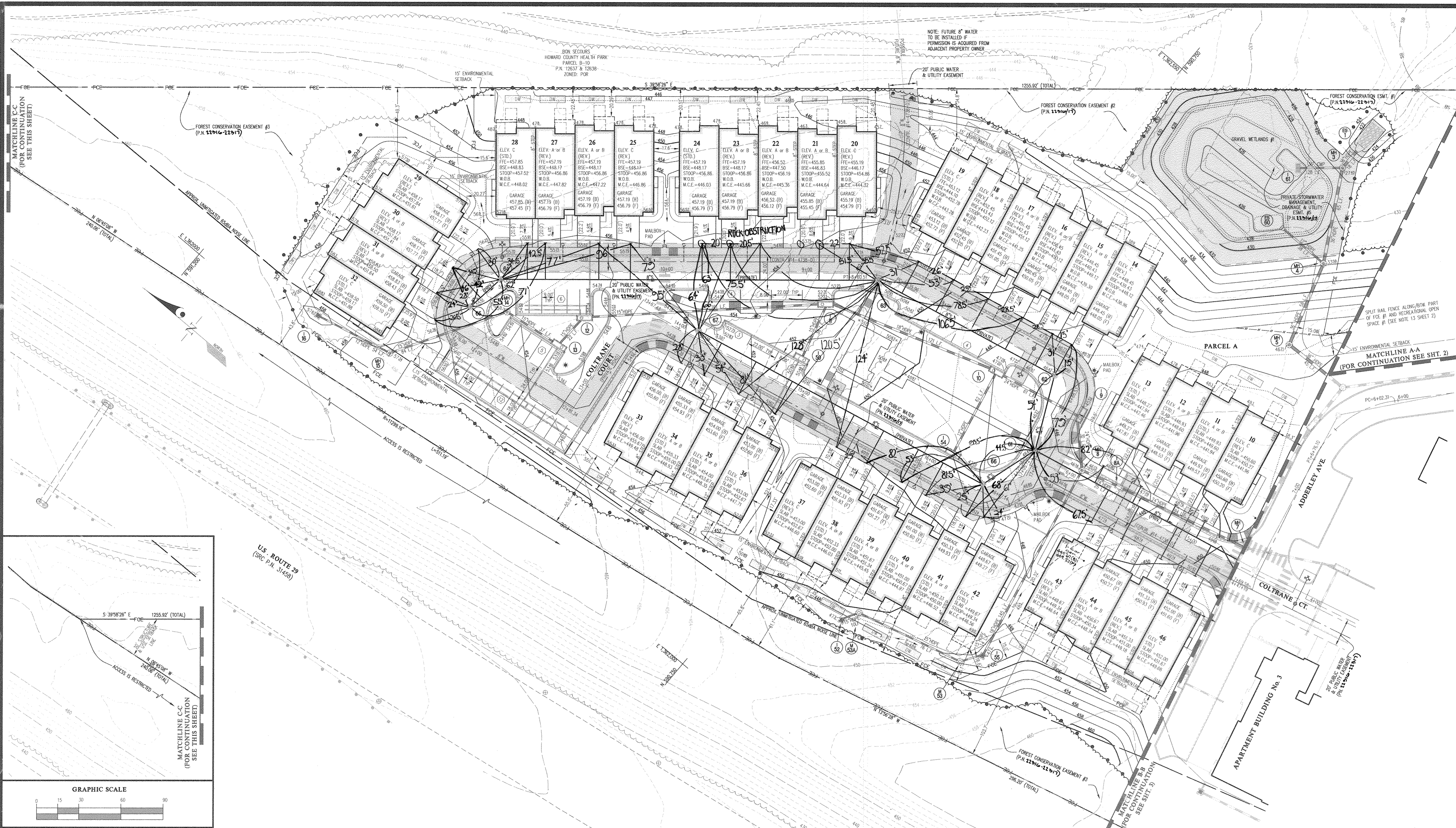
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975
 EXPIRATION DATE: MAY 26, 2014

SITE DEVELOPMENT PLAN INFORMATION
THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. H833 & 22216-22217

NO ASBUILT INFORMATION 02/19/2018

SCALE	ZONING	G. L. W. FILE NO.
1" = 30'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	3 OF 26

HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 2



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Barbara A. Long* 2/25/13

Chief, Division of Land Development: *Walt Sanderson* 3/25/13

Chief, Development Engineering Division: *Shel Edmond* 2.21.13

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
 BURTONVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
1/10/2011	Revise Lot 45 to a 1-car garage	gt	klp
2-2-2011	AS-BUILT	gt	klp

PREPARED FOR:
 NORTHRISE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

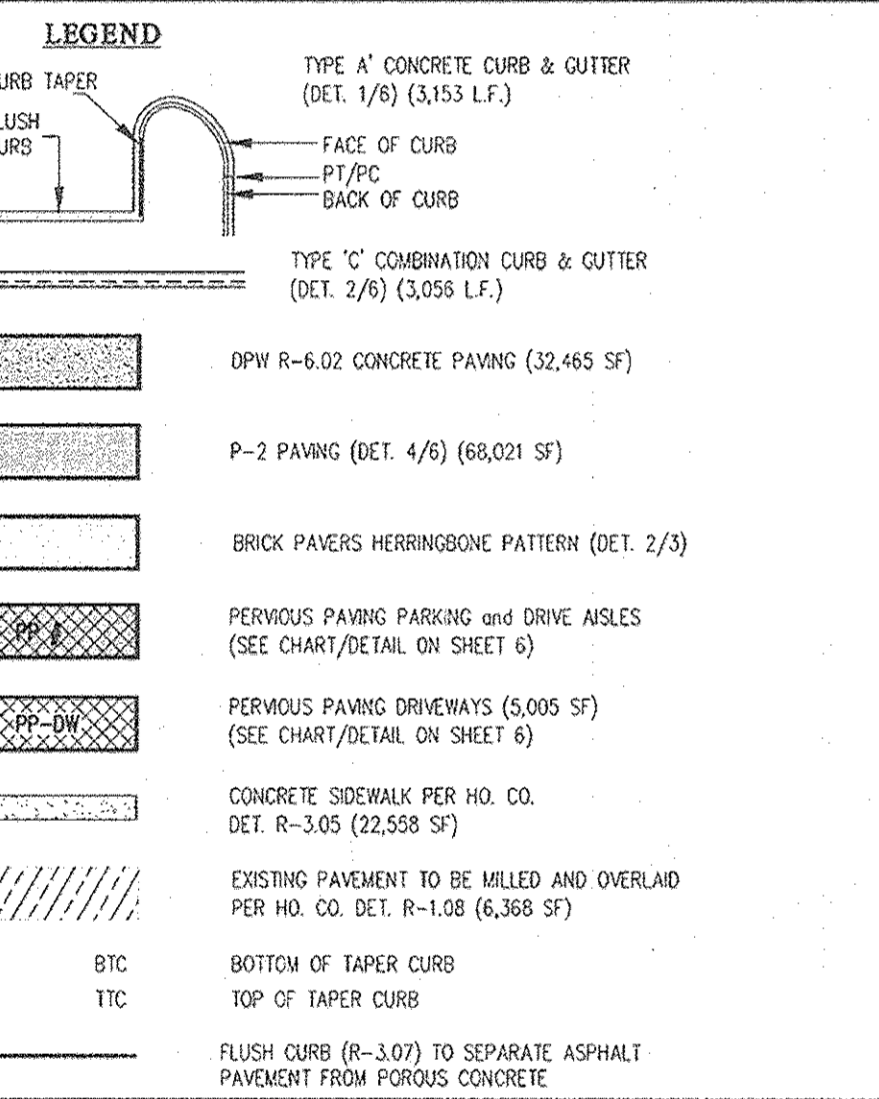
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 DULY LICENSED PROFESSIONAL
 ENGINEER UNDER THE LAWS OF THE
 STATE OF MARYLAND,
 LICENSE NO. 12975
 EXPIRATION DATE: MAY 26, 2014

SITE DEVELOPMENT PLAN
THE GATHERINGS at ELLICOTT MILLS 02/19/2018
PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 22316-12317

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	4 OF 26

CURB DELINEATION TABLE				COLTRANE COURT (station 0+00 to 5+25)			
PT. No.	STATION	OFFSET	DESCRIPTION	PT. No.	STATION	OFFSET	DESCRIPTION
1	1+13.84	12.00' RT.	PC	668	0+12.00	37.00' LT.	PC
2	1+95.13	13.16' RT.	TIC	669	0+37.00	12.00' LT.	PT
3	1+99.27	12.30' RT.	BTC	700	1+01.08	12.00' LT.	TIC
4	2+03.62	12.00' RT.	PT	771	1+07.08	12.00' LT.	BTC
5	2+05.06	12.00' RT.	BTC	772	1+18.05	12.00' LT.	PC
6	2+09.16	16.00' RT.	TIC	773	1+18.86	12.00' LT.	BTC
7	2+09.19	30.00' RT.	TTC/CORNER OF PARKING BAY	774	1+24.54	12.00' LT.	TIC
8	2+18.39	30.00' RT.	BTC	775	1+22.51	12.00' LT.	PC
9	2+27.83	30.00' RT.	BTC	776	1+96.14	12.32' LT.	TIC
10	2+36.86	30.00' RT.	TIC	777	2+03.01	14.91' LT.	BTC
11	2+46.82	30.00' RT.	PT	778	2+07.79	16.82' LT.	BTC
12	3+19.19	30.00' RT.	CORNER OF PARKING BAY	779	2+11.87	25.17' LT.	TIC
13	3+25.19	12.00' RT.	MIDPOINT	865	2+13.76	31.99' LT.	PT
14	3+31.19	30.00' RT.	TTC/CORNER OF PARKING BAY	871	2+13.83	35.53' LT.	PC
15	3+38.19	30.00' RT.	BTC	872	2+35.12	37.36' LT.	PC
16	3+47.19	30.00' RT.	BTC	883	2+36.41	27.59' LT.	TIC
17	3+55.19	30.00' RT.	TIC	884	2+39.84	20.87' LT.	BTC
18	4+09.19	30.00' RT.	CORNER OF PARKING BAY	885	2+44.19	16.44' LT.	BTC
19	4+14.19	12.00' RT.	PT	886	2+50.96	13.07' LT.	TIC
20	4+15.19	12.00' RT.	PC	887	2+58.19	12.00' LT.	PT
21	4+24.01	14.05' RT.	TIC	888	3+22.27	12.00' LT.	TIC
22	4+27.45	16.20' RT.	BTC	889	3+28.27	12.00' LT.	BTC
23	4+70.91	16.81' RT.	BTC	890	3+40.11	12.00' LT.	BTC
24	4+77.94	13.22' RT.	TIC	891	3+46.11	12.00' LT.	TIC
25	4+85.65	12.00' RT.	PT	892	4+13.19	12.00' LT.	PC
				893	4+18.95	12.77' LT.	TIC
				894	4+26.19	16.25' LT.	BTC
				895	4+30.93	21.00' LT.	BTC
				896	4+34.42	28.24' LT.	TIC
				897	4+35.19	34.00' LT.	PT
				898	4+57.52	43.14' LT.	BEGIN TRANS. TO TYPE C
				899	4+57.91	33.15' LT.	BEGIN TYPE C
				900	4+58.64	28.23' LT.	TIC
				901	4+62.14	21.00' LT.	BTC
				902	4+66.89	16.25' LT.	BTC
				903	4+74.13	12.77' LT.	TIC
				904	4+79.89	12.00' LT.	PT

NOTE:
BTC = BOTTOM OF TAPER CURB
TIC = TOP OF TAPER CURB



- NOTES:**
- ALL CURB AND OUTER ARE TYPE-C (DET. 2/6) UNLESS NOTED OTHERWISE ON THIS PLAN.
 - ALL CURB RADIUS ARE 5' (FACE OF CURB OR FLOW LINE) UNLESS NOTED OTHERWISE.
 - PROVIDE MIN. 4' L.F. OF TRANSITION FROM TYPE-A TO TYPE-C CURBS UNLESS NOTED OTHERWISE.
 - ALL SIDEWALKS ARE 5' WIDE (FROM BACK OF CURB) UNLESS NOTED OTHERWISE.
 - FOR TYPICAL ROAD SECTION, PAVING SECTIONS AND CURB DETAILS, SEE SHEET 6.
 - ALL PAVEMENT MARKINGS TO BE APPLIED USING "SELF-STAINING ALKYL TRAFFIC PAINT" BY SHERWIN WILLIAMS OR APPROVED EQUAL. ALL PAVEMENT ARROWS, "ONLY" MARKINGS, STOP BARS, STOP BAR MARKINGS AND CROSSWALK MARKINGS MUST BE INSTALLED IN THERMOPLASTIC.
 - TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST 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 AND PUTTING THE ROADWAY INTO SERVICE.

GRAPHIC SCALE
1 inch = 30 ft

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
David L. Galt 2/19/18
 Director
Carl K. Gutschick 2/25/13
 Chief, Division of Land Development
Carl K. Gutschick 2/21/13
 Chief, Development Engineering Division

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. 129175, Expiration Date: May 26, 2018.



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
 BURTONVILLE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VAC: 301-889-2524 FAX: 301-421-4186

PREPARED FOR:
 NORTHTRIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

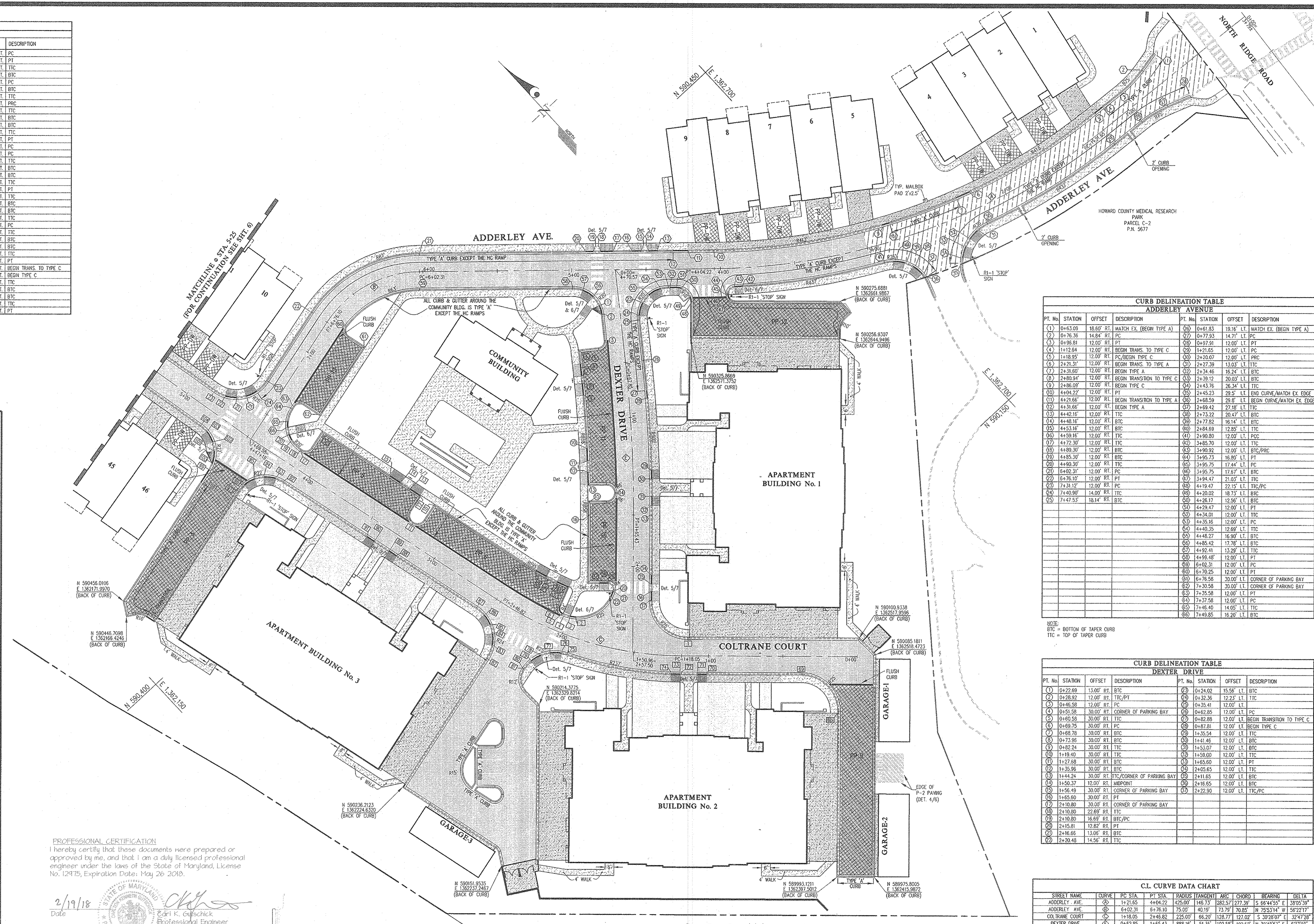
PROFESSIONAL CERTIFICATION
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CURB and PAVING DELINEATION PLAN
THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 12,216 - 21,217

SCALE: 1" = 30'
 ZONING: POR
 DATE: FEB. 2018
 TAX MAP - GRID: 17 - 23
 SHEET: 5 OF 26
 G. L. W. FILE NO.: 11005

DES. MBT DRN. KLP CHK. CKG
 DATE REVISION BY APPR.



CURB DELINEATION TABLE				ADDERLEY AVENUE			
PT. No.	STATION	OFFSET	DESCRIPTION	PT. No.	STATION	OFFSET	DESCRIPTION
1	0+63.09	16.60' RT.	MATCH EX (BEGIN TYPE A)	36	0+61.83	19.16' LT.	MATCH EX (BEGIN TYPE A)
2	0+76.36	14.84' RT.	PC	37	0+77.93	14.71' LT.	PC
3	0+96.81	12.00' RT.	PT	38	0+97.91	12.00' LT.	PT
4	1+12.84	12.00' RT.	BEGIN TRANS. TO TYPE C	39	1+21.65	12.00' LT.	PC
5	1+18.95	12.00' RT.	PC/BEGIN TYPE C	40	2+20.07	12.00' LT.	PC
6	2+21.31	12.00' RT.	BEGIN TRANS. TO TYPE A	41	2+27.39	13.03' LT.	TIC
7	2+31.60	12.00' RT.	BEGIN TYPE A	42	2+34.46	16.24' LT.	BTC
8	2+80.94	12.00' RT.	BEGIN TRANSITION TO TYPE C	43	2+39.12	20.03' LT.	BTC
9	2+86.09	12.00' RT.	BEGIN TYPE C	44	2+43.76	26.34' LT.	TIC
10	4+04.22	12.00' RT.	PT	45	2+45.23	29.5' LT.	END CURVE/MATCH EX. EDGE
11	4+21.66	12.00' RT.	BEGIN TRANSITION TO TYPE A	46	2+88.59	29.8' LT.	BEGIN CURVE/MATCH EX. EDGE
12	4+36.67	12.00' RT.	BEGIN TYPE A	47	2+89.42	22.18' LT.	TIC
13	4+42.16	12.00' RT.	TIC	48	2+73.22	20.47' LT.	BTC
14	4+48.16	12.00' RT.	BTC	49	2+77.82	16.14' LT.	BTC
15	4+53.16	12.00' RT.	BTC	50	2+84.69	12.85' LT.	TIC
16	4+58.16	12.00' RT.	TIC	51	2+90.80	12.00' LT.	PC
17	4+72.30	12.00' RT.	TIC	52	3+85.70	12.00' LT.	TIC
18	4+80.30	12.00' RT.	BTC	53	3+89.92	12.00' LT.	BTC/PC
19	4+85.30	12.00' RT.	BTC	54	4+82.41	13.29' LT.	TIC
20	4+89.30	12.00' RT.	TIC	55	3+85.75	17.44' LT.	PC
21	4+02.31	12.00' RT.	PC	56	3+95.75	17.67' LT.	BTC
22	6+76.10	12.00' RT.	PT	57	3+94.47	21.03' LT.	TIC
23	7+31.12	12.00' RT.	PC	58	4+19.47	22.15' LT.	TIC/PC
24	7+40.90	14.00' RT.	TIC	59	4+20.02	18.73' LT.	BTC
25	7+47.53	18.14' RT.	BTC	60	4+28.17	12.95' LT.	BTC
				61	4+34.17	12.00' LT.	TIC
				62	4+34.01	12.00' LT.	TIC
				63	4+35.16	12.00' LT.	PC
				64	4+40.35	12.69' LT.	TIC
				65	4+48.27	16.90' LT.	BTC
				66	4+85.42	17.78' LT.	BTC
				67	4+82.41	13.29' LT.	TIC
				68	4+89.48	12.00' LT.	PT
				69	6+02.31	12.00' LT.	PC
				70	6+70.25	12.00' LT.	PT
				71	6+76.58	30.00' LT.	CORNER OF PARKING BAY
				72	7+30.58	30.00' LT.	CORNER OF PARKING BAY
				73	7+35.58	12.00' LT.	PT
				74	7+37.58	12.00' LT.	PC
				75	7+46.40	14.05' LT.	TIC
				76	7+49.85	16.20' LT.	BTC

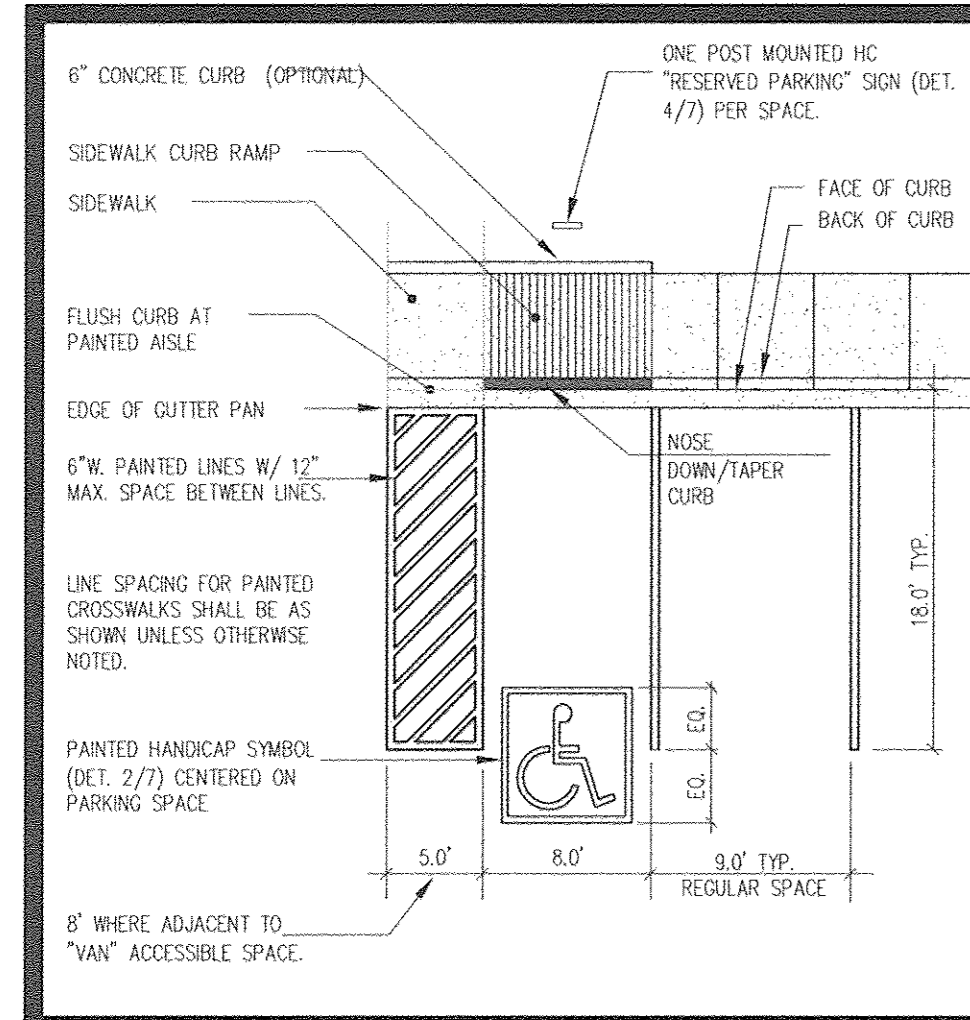
NOTE:
BTC = BOTTOM OF TAPER CURB
TIC = TOP OF TAPER CURB

CURB DELINEATION TABLE				DEXTER DRIVE			
PT. No.	STATION	OFFSET	DESCRIPTION	PT. No.	STATION	OFFSET	DESCRIPTION
1	0+22.69	13.00' RT.	BTC	23	0+24.02	15.56' LT.	BTC
2	0+28.92	12.00' RT.	TIC/PT	24	0+32.36	12.23' LT.	TIC
3	0+46.58	12.00' RT.	PC	25	0+35.41	12.00' LT.	PC
4	0+51.58	30.00' RT.	CORNER OF PARKING BAY	26	0+42.85	12.00' LT.	PC
5	0+63.58	30.00' RT.	TIC	27	0+42.85	12.00' LT.	BEGIN TRANSITION TO TYPE C
6	0+69.75	30.00' RT.	PC	28	0+49.75	12.00' LT.	BEGIN TYPE C
7	0+68.78	30.00' RT.	BTC	29	1+35.54	12.00' LT.	TIC
8	0+73.96	30.00' RT.	BTC	30	1+41.46	12.00' LT.	BTC
9	0+82.24	30.00' RT.	TIC	31	1+53.07	12.00' LT.	BTC
10	1+19.40	30.00' RT.	TIC	32	1+59.00	12.00' LT.	TIC
11	1+27.68	30.00' RT.	BTC	33	1+65.60	12.00' LT.	PT
12	1+35.96	30.00' RT.	BTC	34	1+65.60	12.00' LT.	TIC
13	1+44.24	30.00' RT.	TTC/CORNER OF PARKING BAY	35	2+15.65	12.00' LT.	BTC
14	1+50.37	12.00' RT.	MIDPOINT	36	2+16.65	12.00' LT.	BTC
15	1+56.49	30.00' RT.	CORNER OF PARKING BAY	37	2+22.90	12.00' LT.	TIC/PC
16	1+65.60	30.00' RT.	PT				
17	2+10.80	30.00' RT.	CORNER OF PARKING BAY				
18	2+10.80	22.69' RT.	TIC				
19	2+10.80	16.69' RT.	BTC/PC				
20	2+15.81	12.92' RT.	PT				
21	2+16.66	13.06' RT.	BTC				
22	2+20.48	14.56' RT.	TIC				

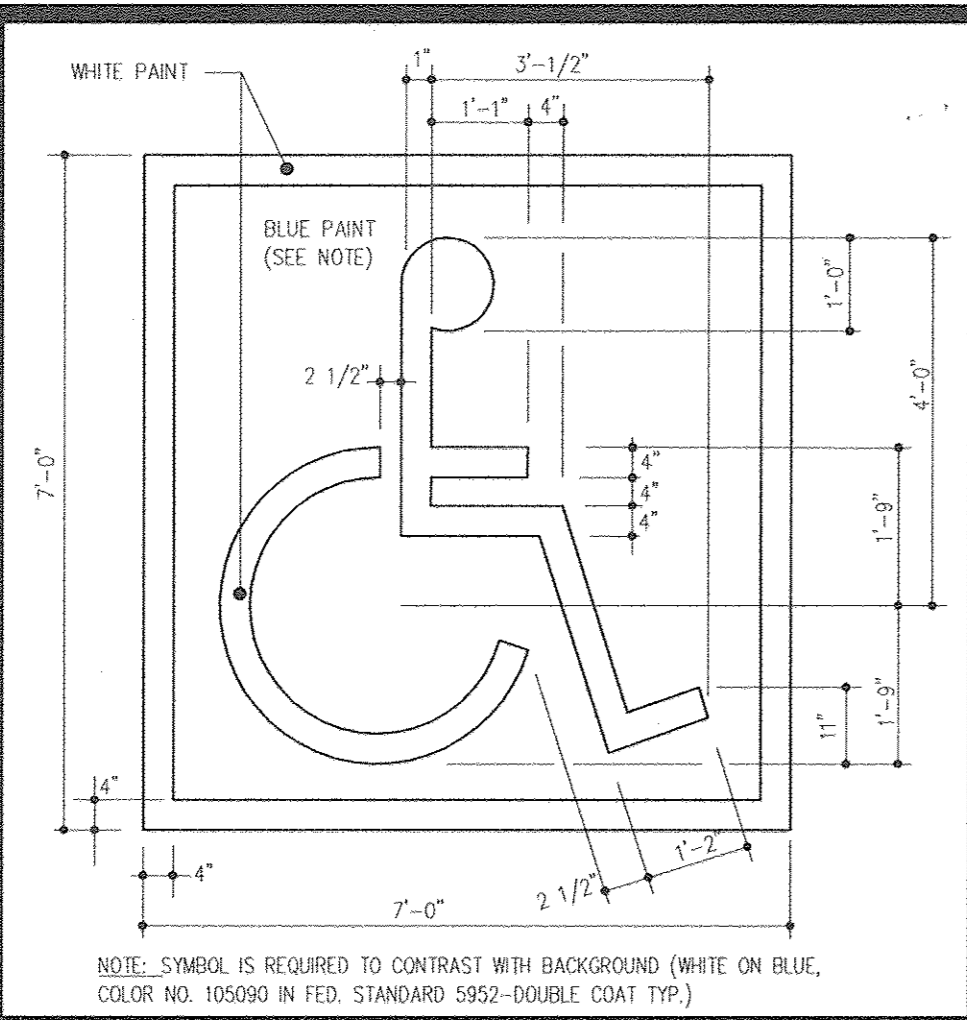
C.I. CURVE DATA CHART								
STREET NAME	CURVE	PC STA.	PT STA.	RADIUS	TANGENT ARC	CHORD	BEARING	DELTA
ADDERLEY AVE.	⊖	1+12.84	4+04.22	425.00'	145.73'	282.47'	127.27° 30'	55° 44' 55"
ADDERLEY AVE.	⊖	6+42.31	6+76.10	75.00'	40.19'	23.71'	70.88°	18° 53' 14"
COLTRANE COURT	⊖	1+18.05	2+46.82	225.00'	66.20'	128.77'	127.02°	5° 30' 28"
DEXTER DRIVE	⊖	0+42.85	1+65.43	888.16'	51.30'	102.58'	102.52°	18° 39' 47"

ASBUILT SHEET 3 OF 8

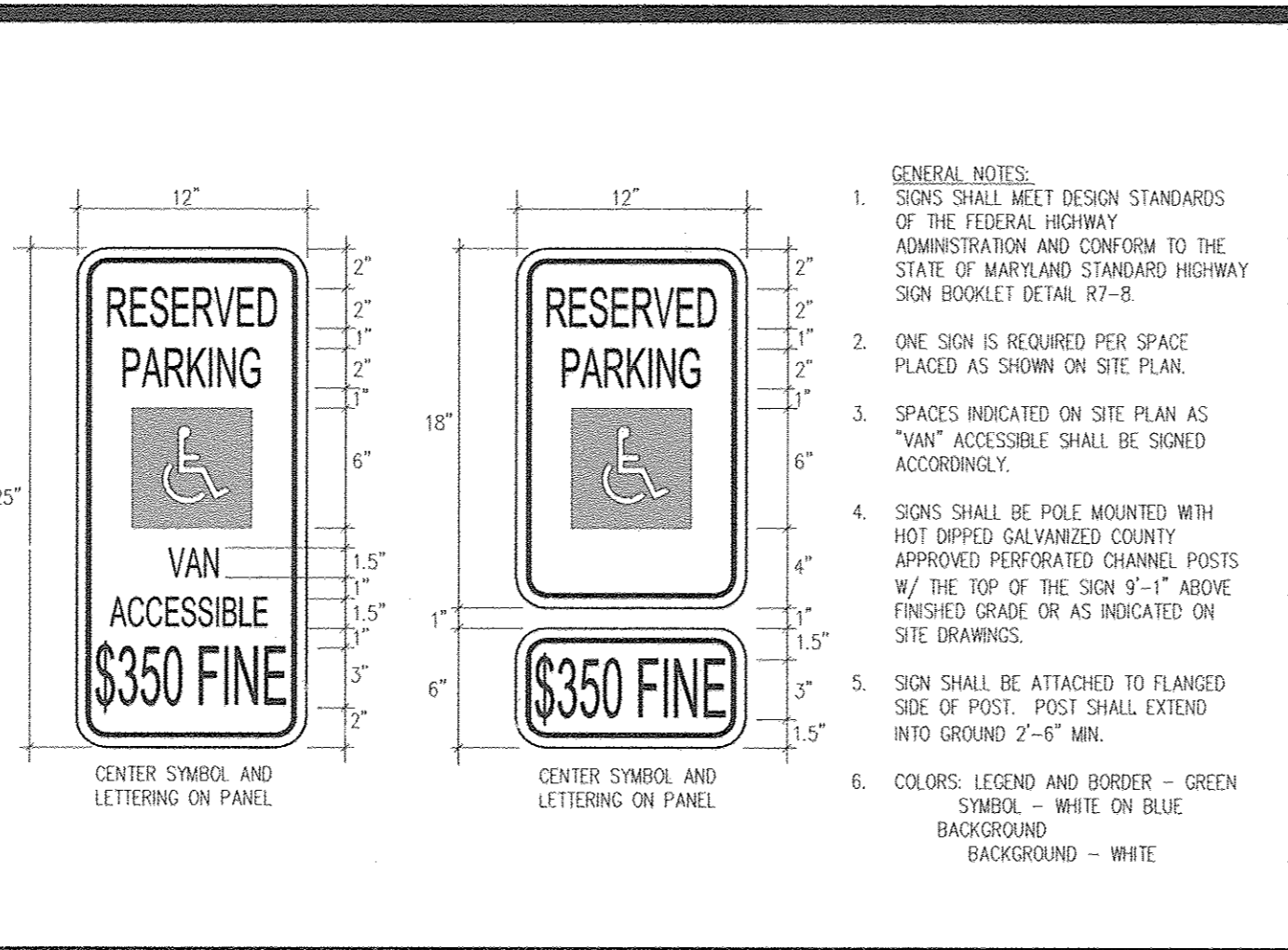
ASBUILTS



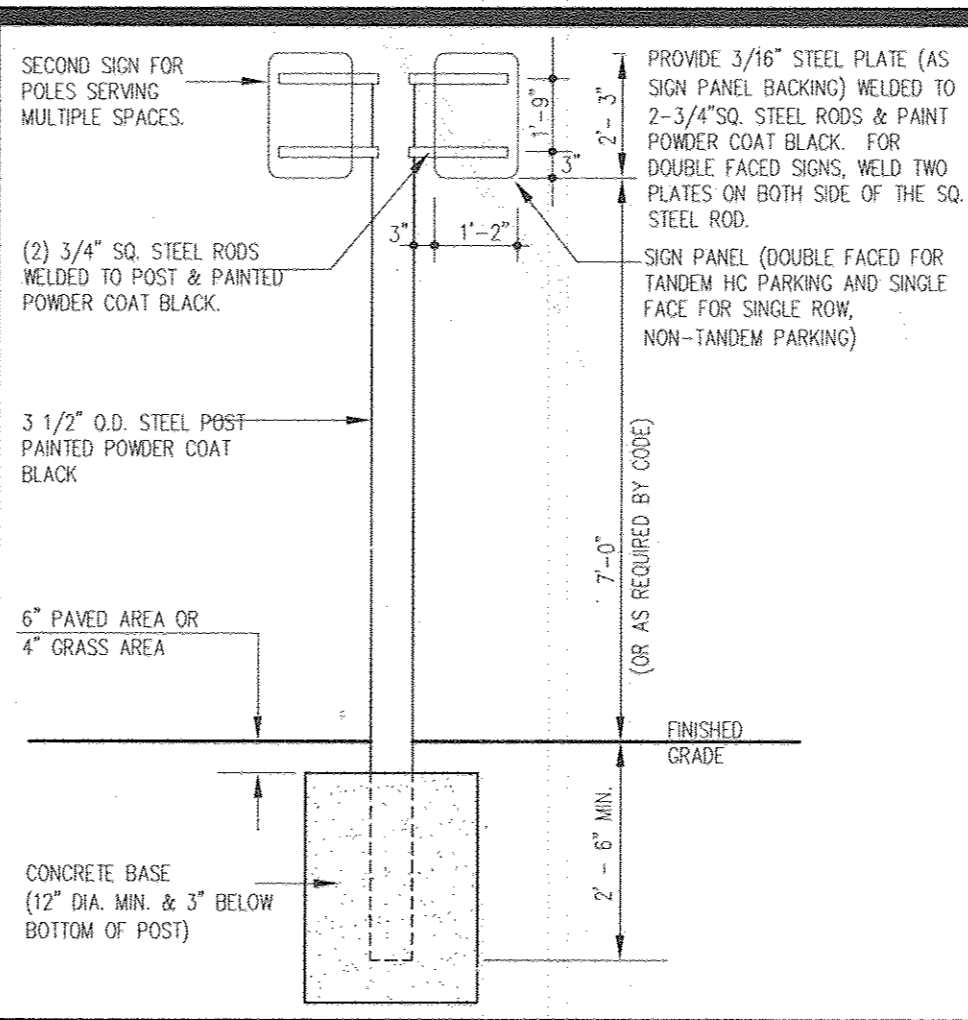
1 PARKING SPACE LAYOUT NO SCALE



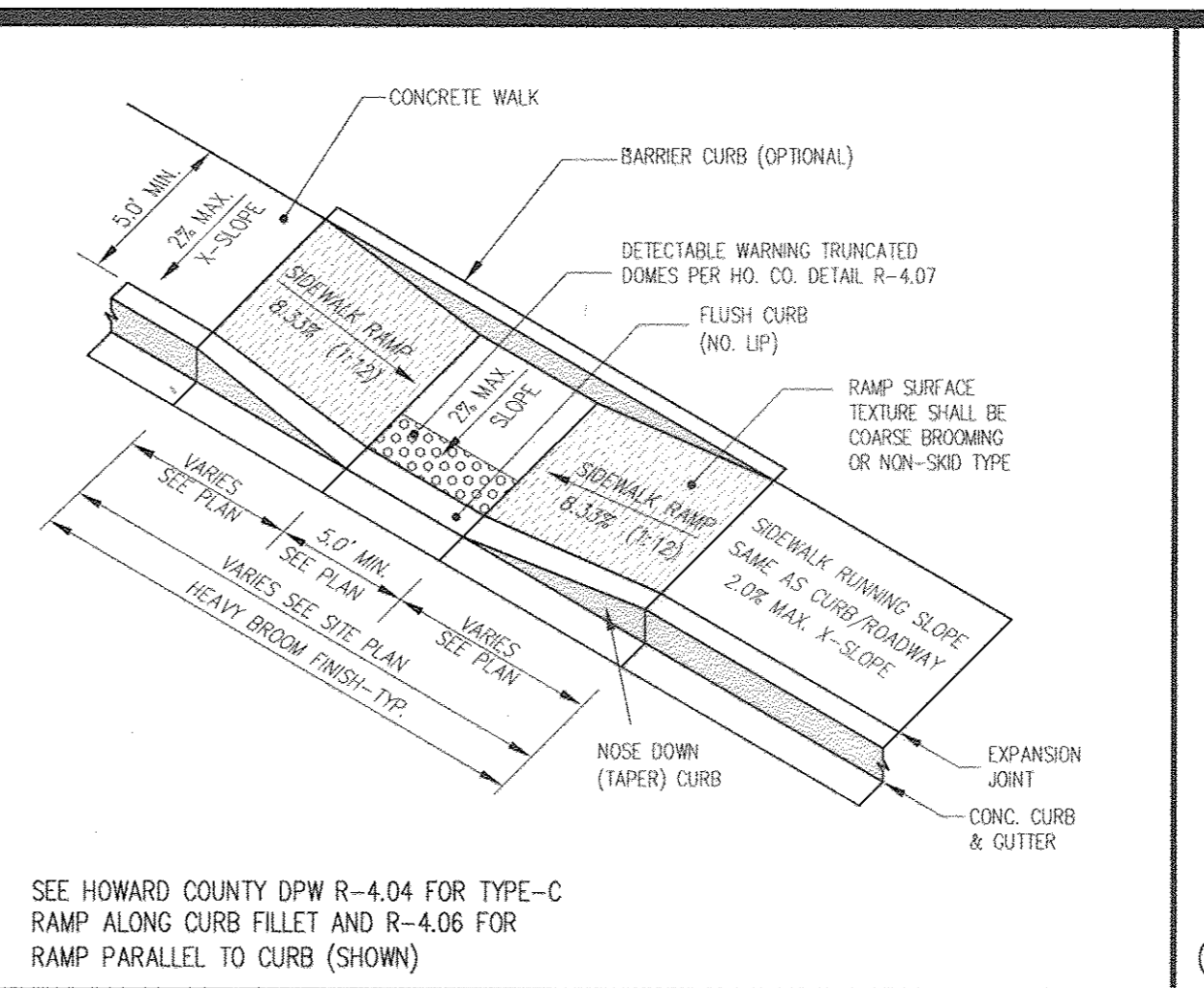
2 HANDICAP SPACE STENCIL LAYOUT NO SCALE



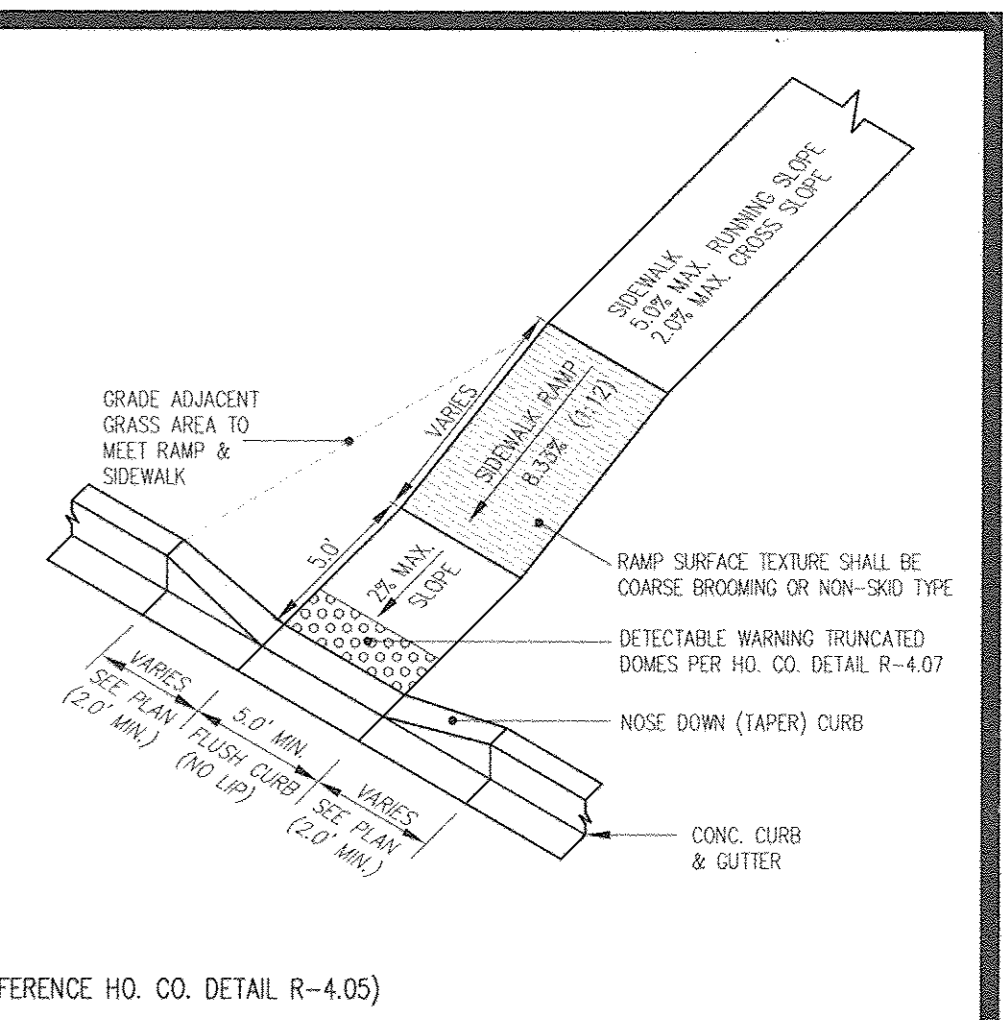
3 HANDICAP PARKING SIGNS DETAIL NO SCALE



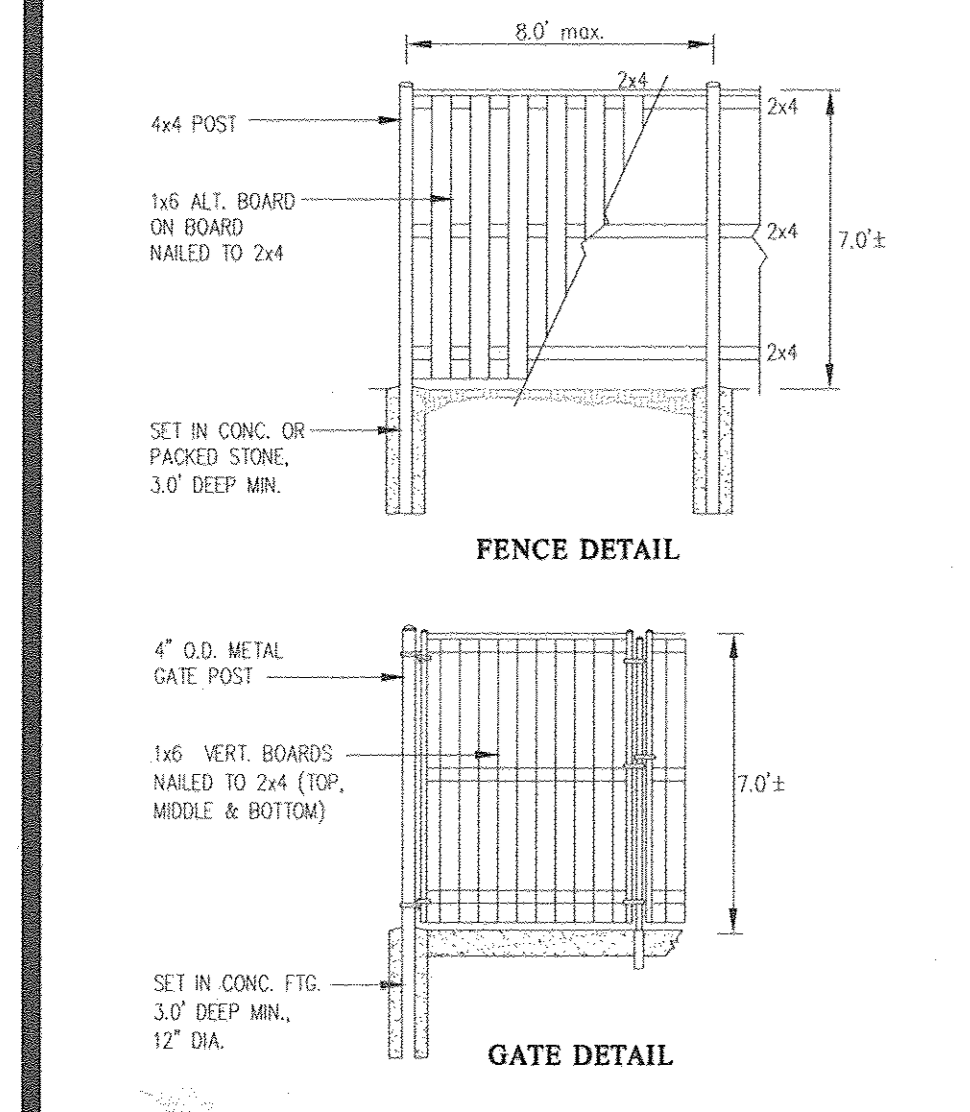
4 POST & SIGN DETAIL FOR PARKING RESTRICTION SIGN NO SCALE



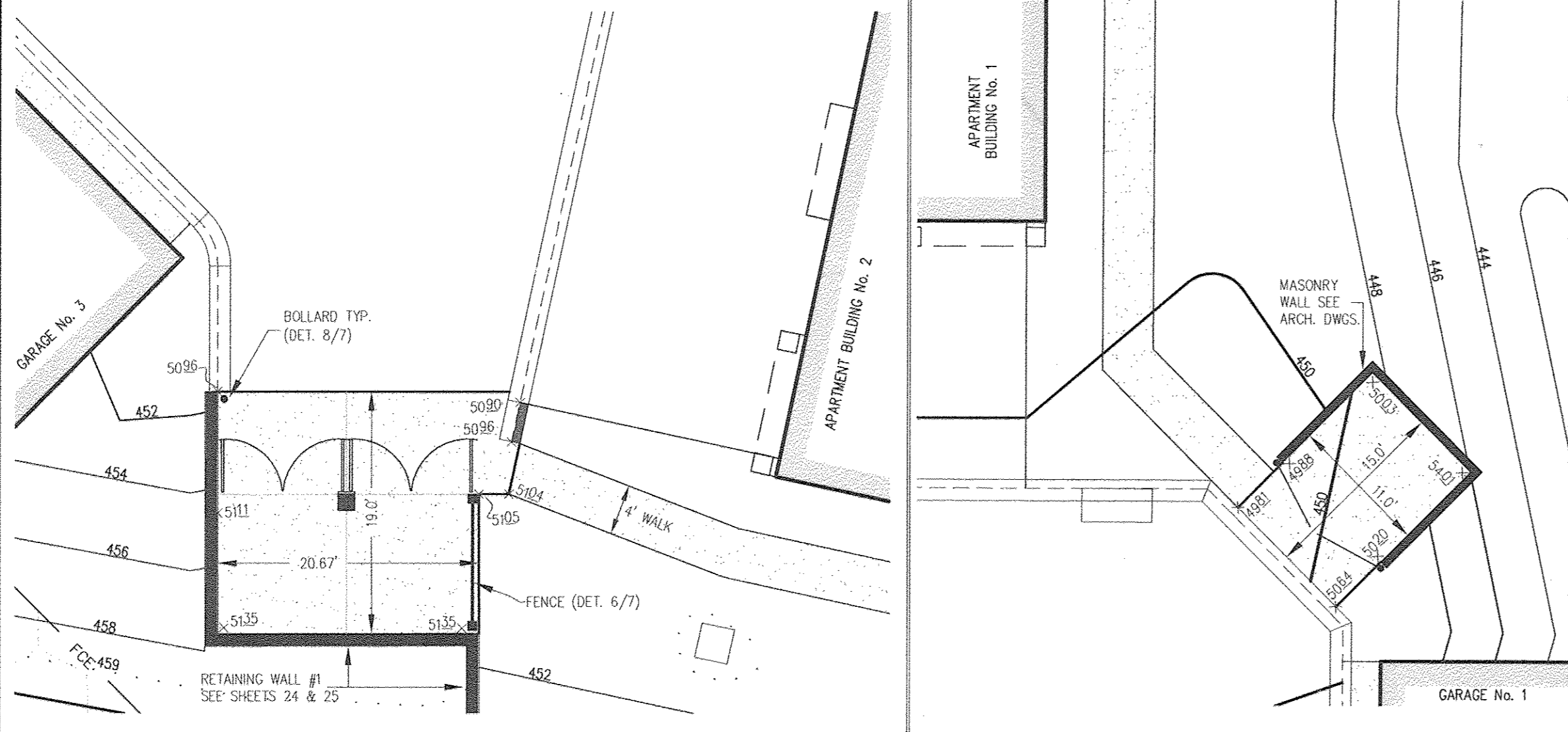
5 TYPE-C SIDEWALK RAMP NO SCALE



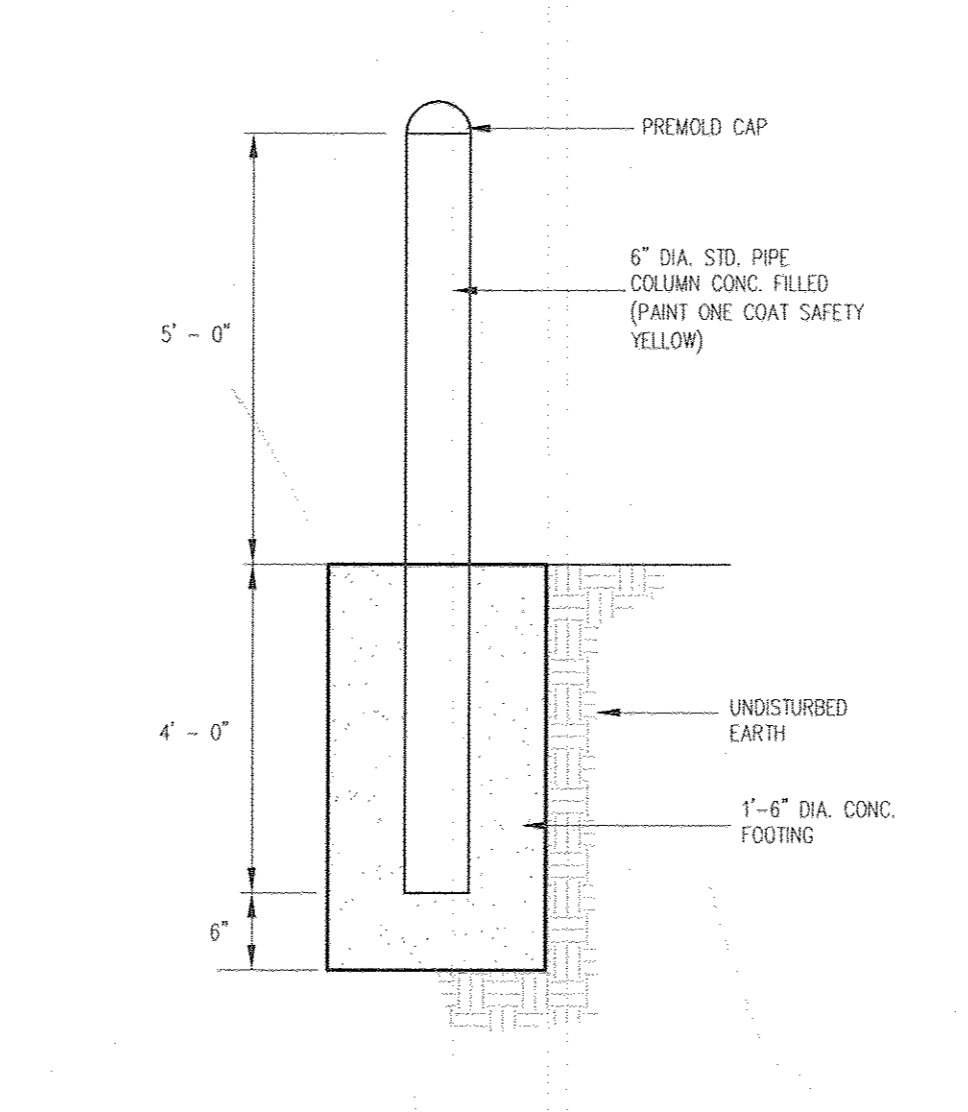
6 SIDEWALK RAMP PERPENDICULAR TO CURB NO SCALE



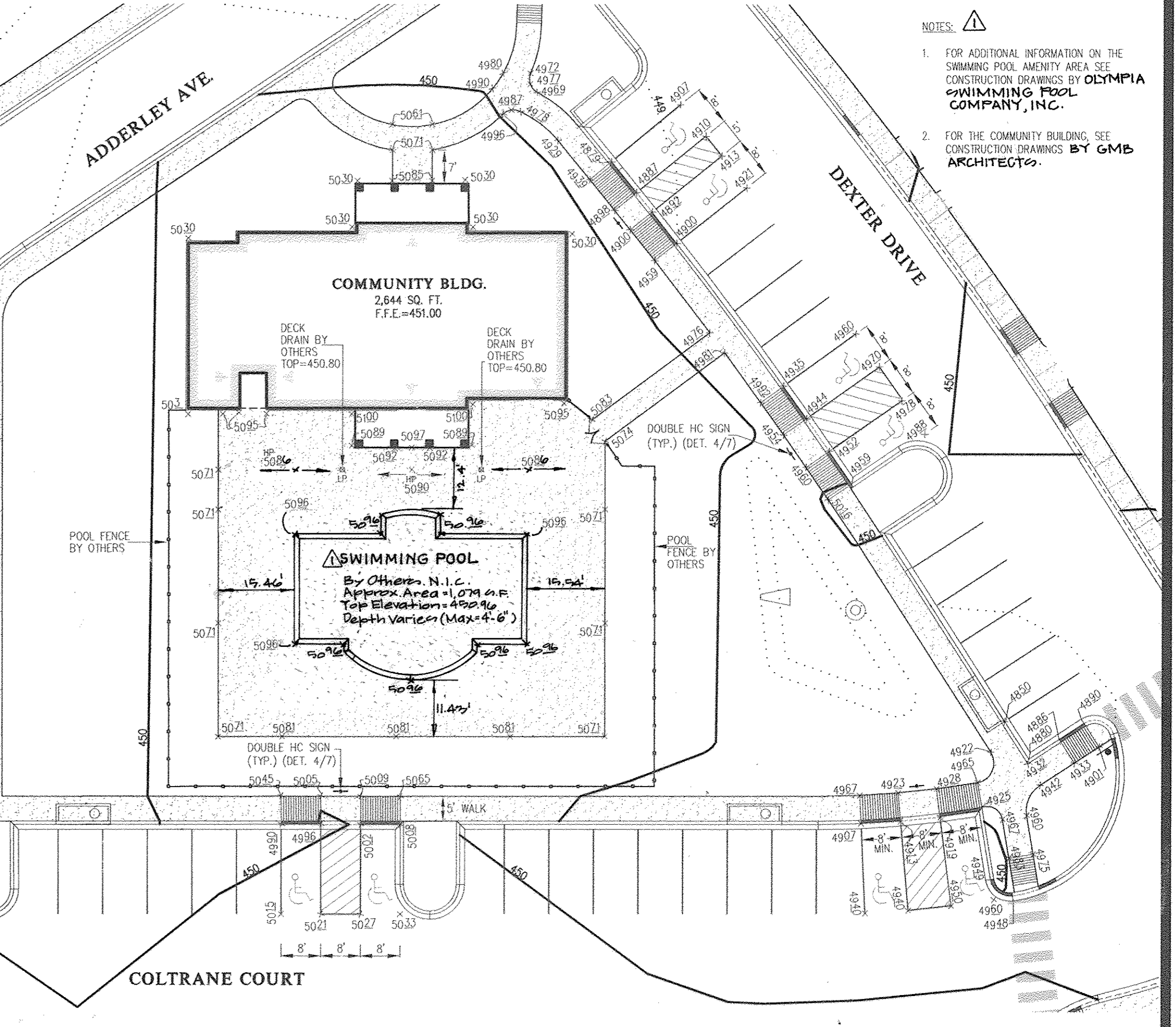
6 GATE and FENCE DETAIL FOR TRASH ENCLOSURE NO SCALE



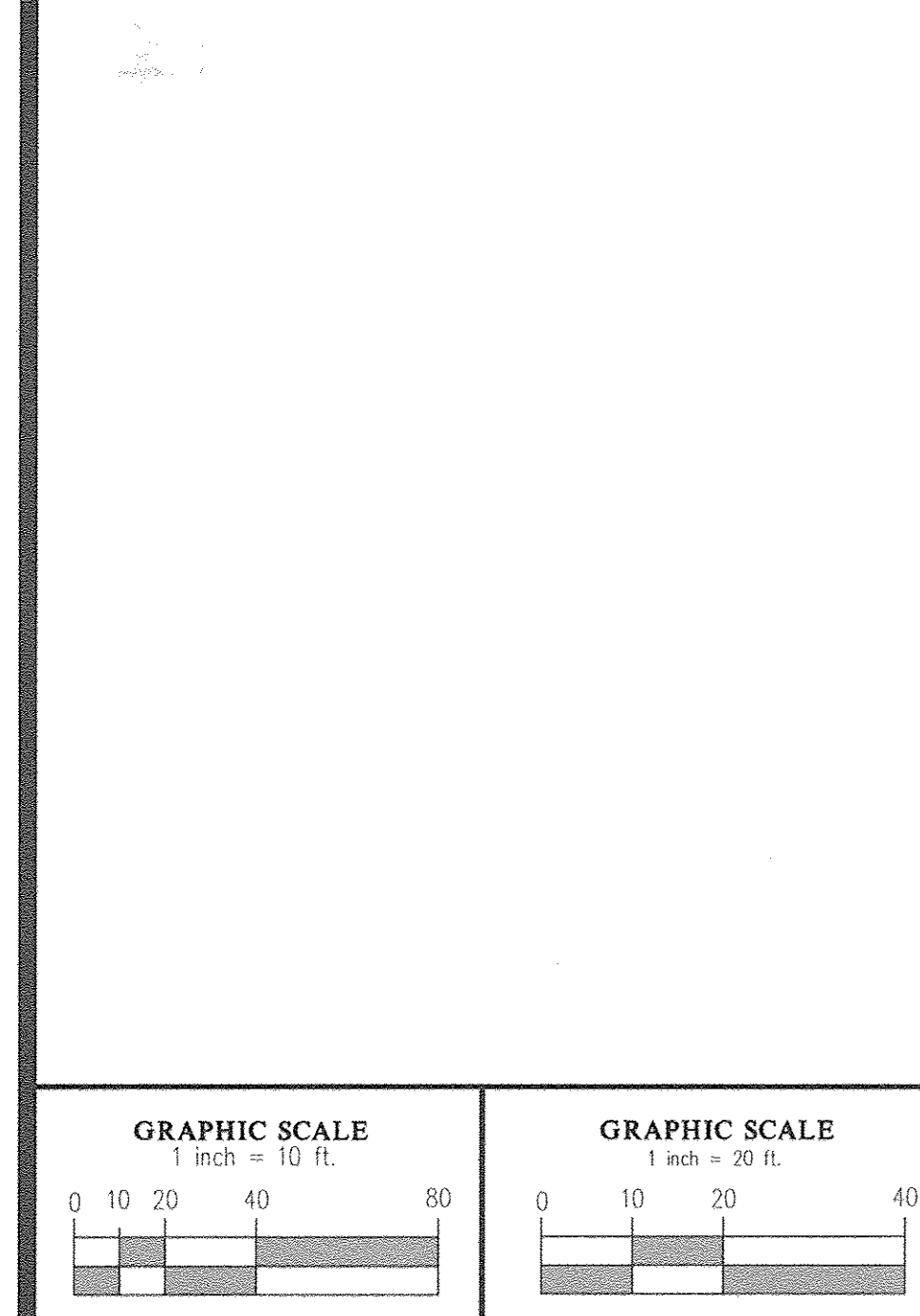
7 TRASH ENCLOSURE DETAILS SCALE 1" = 10'



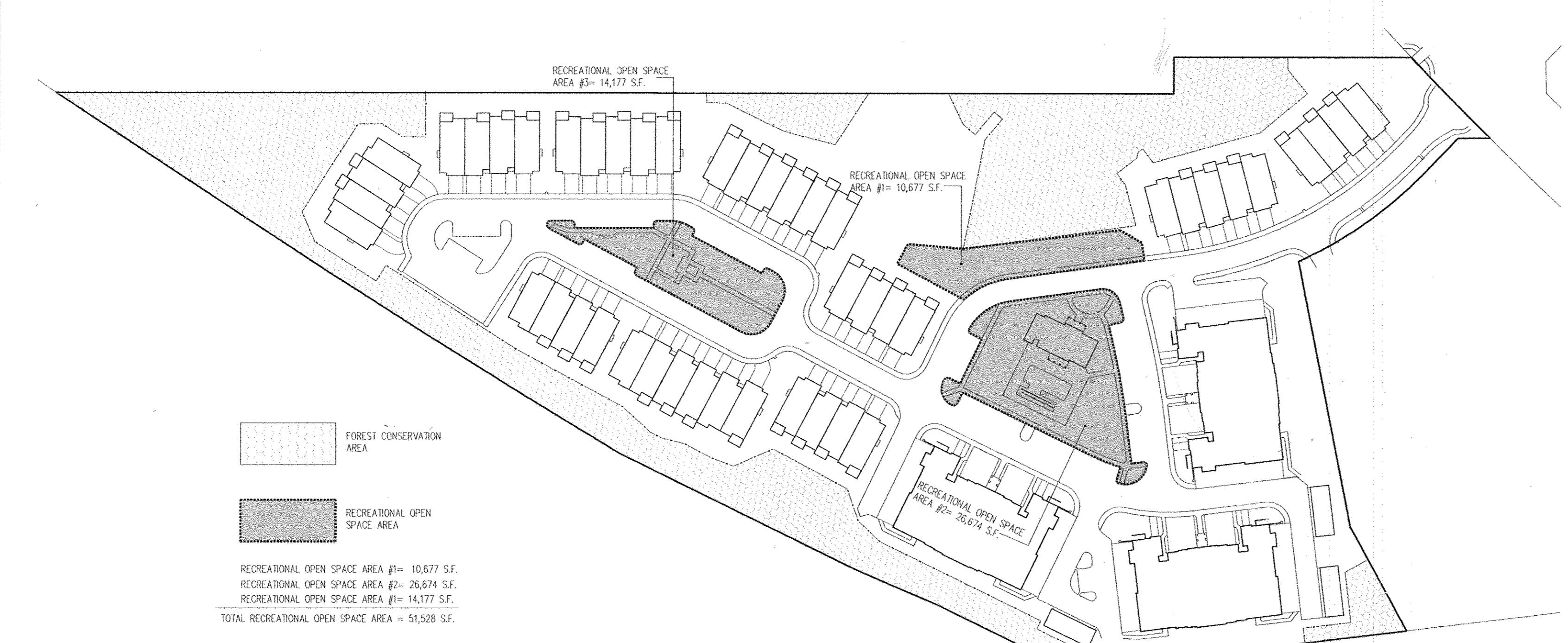
8 BOLLARD DETAIL NO SCALE



10 HANDICAP ACCESSIBILITY DETAILS / SITE DETAILS SCALE: 1"=20'



9 RECREATIONAL OPEN SPACE DIAGRAM SCALE: 1"=10'



9 RECREATIONAL OPEN SPACE DIAGRAM SCALE: 1"=10'

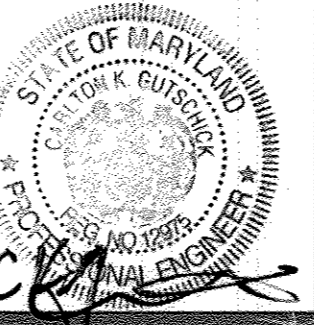
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Mark D. Long* 3/25/13
 Chief, Division of Land Development: *Ketshelwood* 3/25/13
 Chief, Development Engineering Division: *Chad Clark* 2.21.13

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
11-14-2014	Revise Community Swimming Pool	g+	

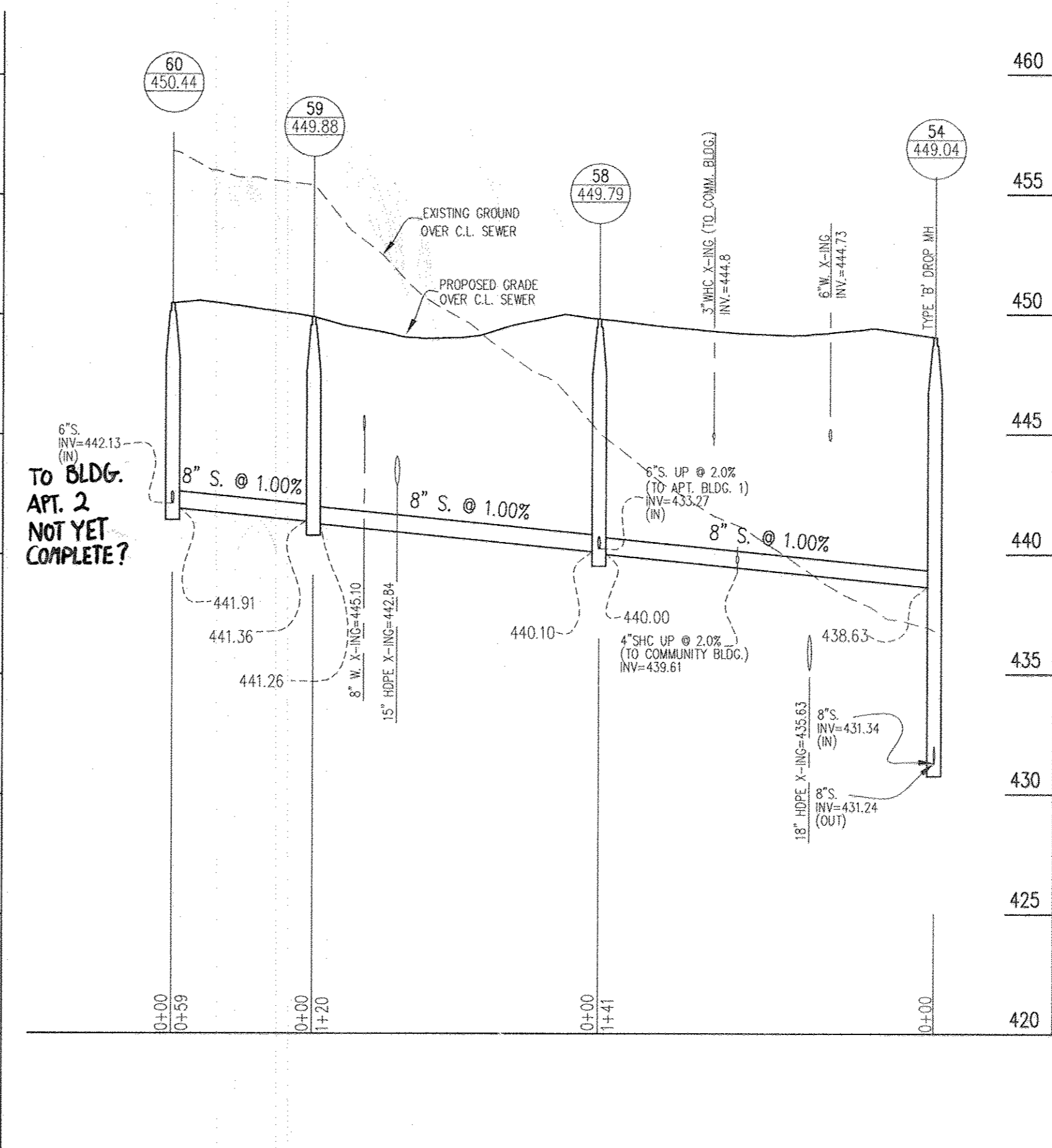
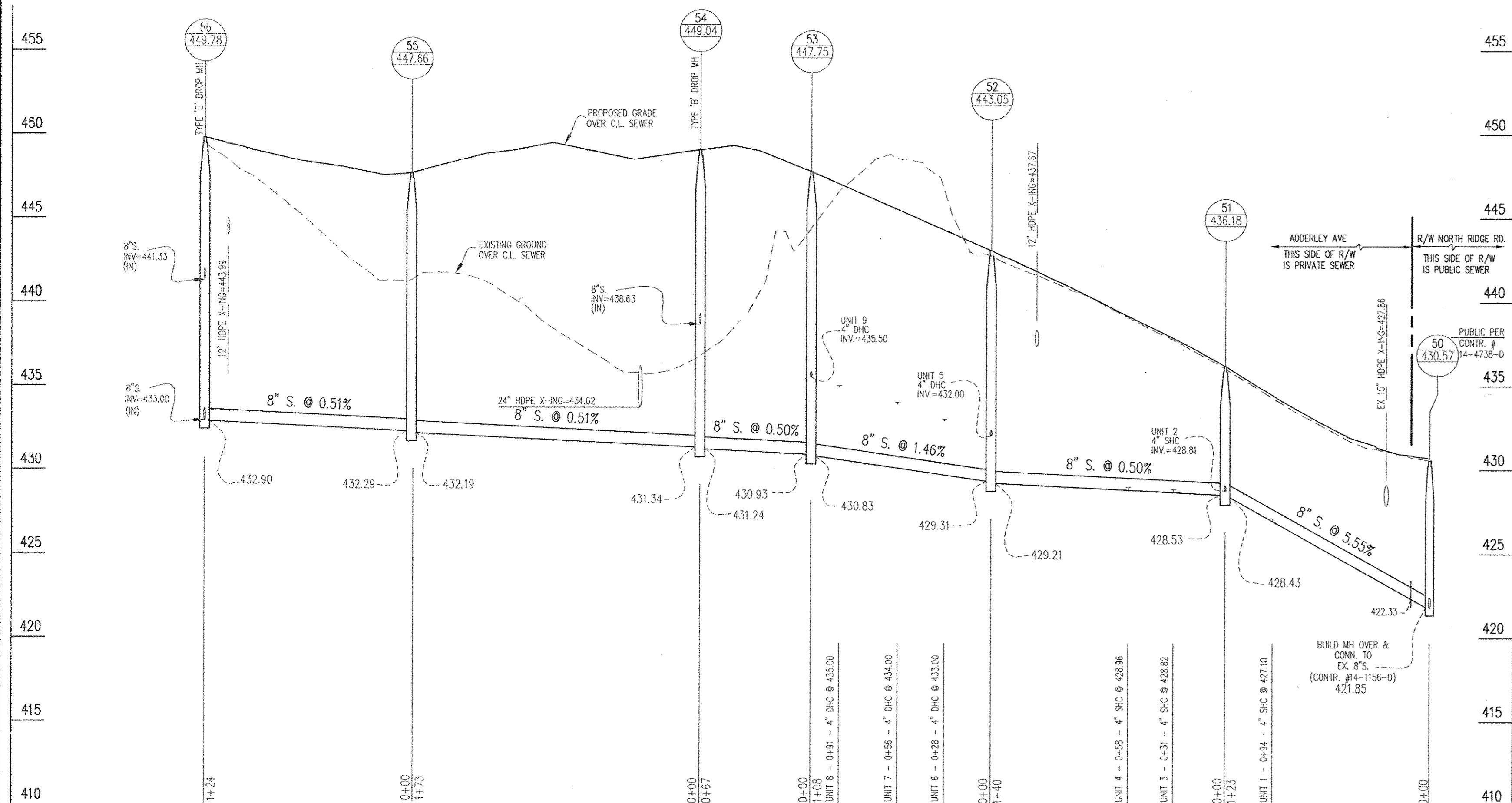
PREPARED FOR:
 NORTHBRIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12975
 EXPIRATION DATE: MAY 26, 2014

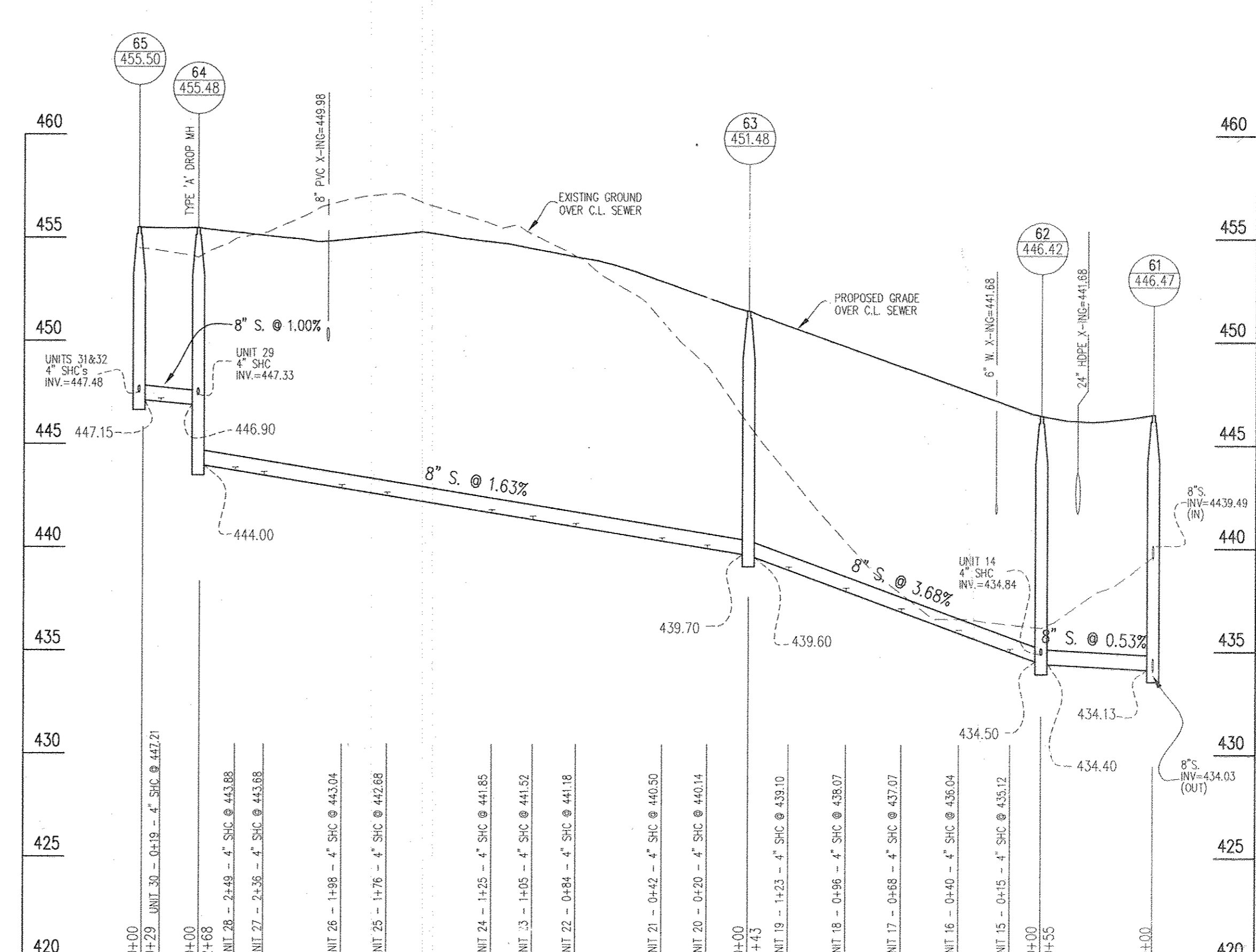
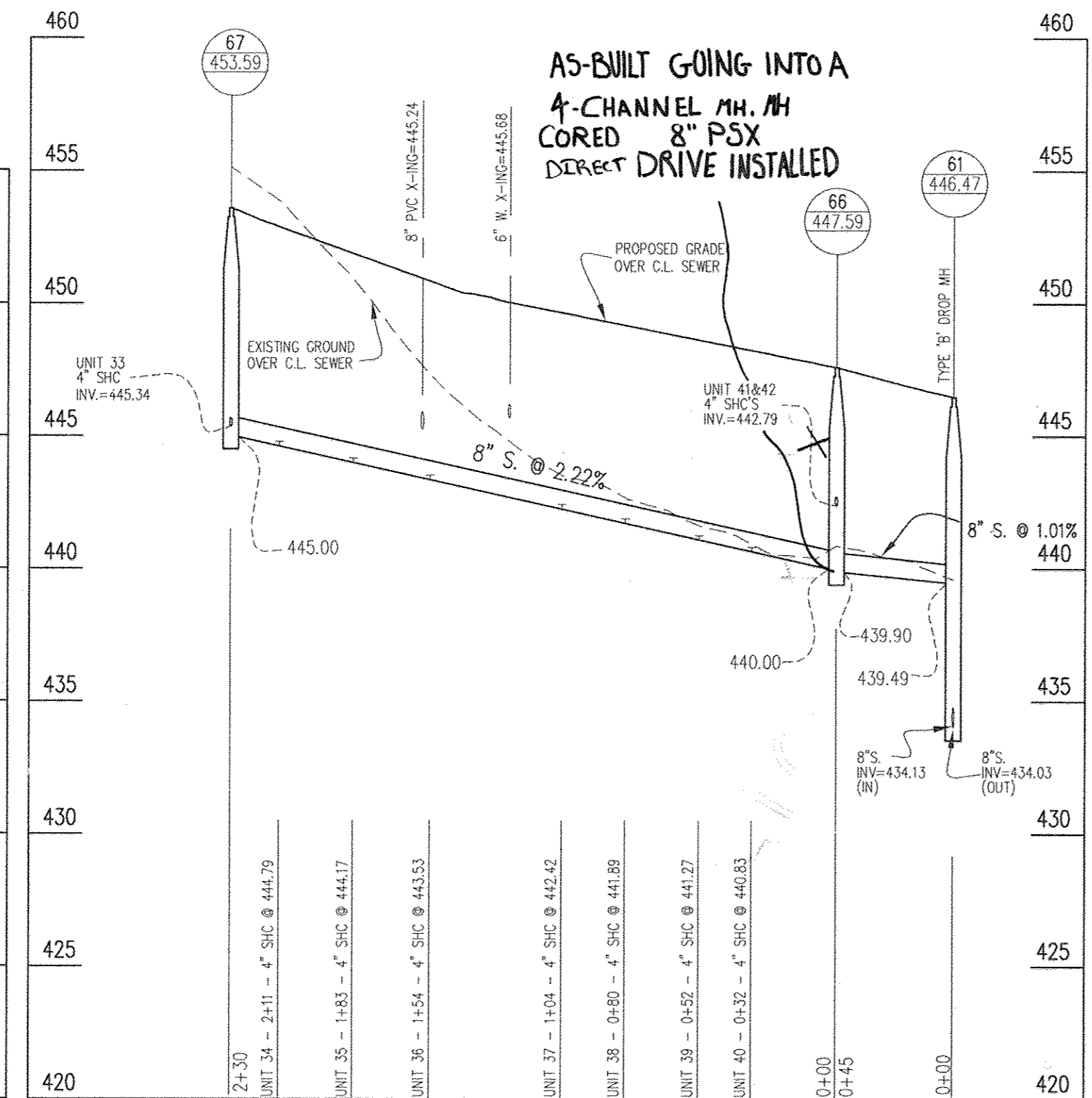
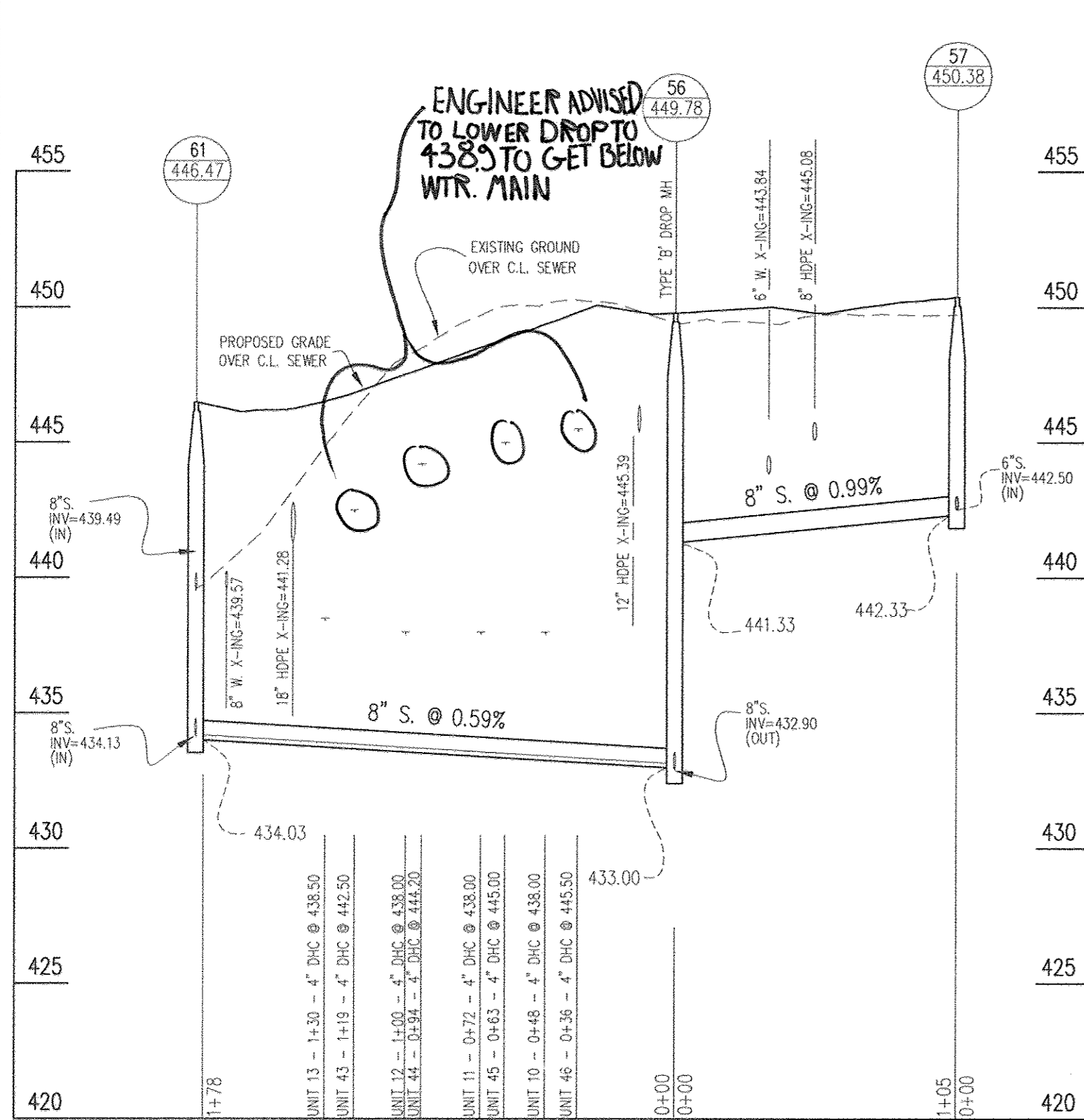


HANDICAP ACCESSIBILITY DETAILS / SITE DETAILS
THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 12210-12217
 HOWARD COUNTY, MARYLAND

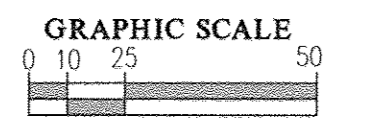
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	7 OF 26



UNIT No.	INVERT 4" SHC AT SEWER MAIN	DROP HOUSE CONNECTION INVERT	LENGTH FROM SEWER MAIN TO "A"	"A" INVERT 4" SHC 1' BEHIND WALK/ESMT. AT 2.00%	LENGTH FROM "A" TO BACK OF HOUSE	INVERT OF 4" SHC AT BACK OF HOUSE @ 2%	MIN. CELLAR ELEVATION (MCE)	B.S.E. / SLAB ELEVATION
1	427.10	N/A	13.00	427.36	82	429.00	431.00	436.76
2	428.02	428.81	14.50	429.09	84	430.77	432.77	438.01
3	428.96	N/A	10.00	429.02	86	430.74	432.74	439.26
4	429.36	N/A	9.00	429.12	85	430.82	432.82	440.26
5	432.00	432.00	14.00	432.28	84	433.96	435.96	436.33
6	429.84	433.00	11.00	433.22	84	434.90	436.90	437.33
7	430.25	434.00	10.00	434.20	84	435.88	437.88	438.33
8	430.76	435.00	12.00	435.24	84	436.82	438.82	439.33
9	435.50	435.50	15.00	435.80	82	437.44	439.44	440.00
10	433.42	438.00	13.00	438.26	85	439.96	441.96	450.60
11	433.56	438.00	13.00	438.26	84	439.94	441.94	449.93
12	433.75	438.00	13.00	438.26	85	439.96	441.96	448.93
13	433.92	438.50	13.00	438.76	85	440.46	442.46	448.27
14	434.11	434.84	24.00	435.32	82	436.96	438.96	439.43
15	435.12	N/A	24.00	435.80	85	437.30	439.30	440.43
16	436.04	N/A	24.00	436.52	85	438.22	440.22	441.43
17	437.07	N/A	24.00	437.55	85	439.25	441.25	442.43
18	438.07	N/A	24.00	438.55	84	440.23	442.23	443.43
19	439.10	N/A	24.00	439.58	85	441.28	443.28	444.10
20	440.14	N/A	24.00	440.62	85	442.32	444.32	446.17
21	440.90	N/A	24.00	440.98	83	442.64	444.64	446.83
22	441.18	N/A	24.00	441.66	85	443.36	445.36	447.50
23	441.52	N/A	24.00	442.00	83	443.66	445.66	448.17
24	441.85	N/A	24.00	442.33	85	444.03	446.03	448.17
25	442.88	N/A	24.00	443.16	85	444.86	446.86	448.17
26	443.04	N/A	24.00	443.52	85	445.22	447.22	448.17
27	443.88	N/A	24.00	444.16	83	445.82	447.82	448.17
28	443.88	N/A	24.00	444.36	83	446.02	448.02	448.83
29	447.33	447.33	25.00	447.83	89	449.61	451.61	458.17
30	449.21	N/A	27.00	449.75	83	451.41	453.41	458.17
31	447.46	447.46	25.00	447.98	83	449.64	451.64	458.83
32	447.46	447.46	25.00	447.98	86	449.84	451.84	459.50
33	445.34	445.34	24.00	445.82	83	447.48	449.48	456.00
34	444.79	N/A	24.00	445.27	83	446.93	448.93	455.33
35	444.17	N/A	24.00	444.65	85	446.35	448.35	454.00
36	443.83	N/A	24.00	444.07	85	446.71	448.71	453.00
37	442.82	N/A	24.00	442.80	85	444.80	446.80	453.00
38	441.89	N/A	24.00	442.37	83	444.03	446.03	452.33
39	441.47	N/A	24.00	441.75	85	443.45	445.45	451.67
40	440.83	N/A	24.00	441.31	83	442.97	444.97	451.00
41	442.79	442.79	24.00	443.27	83	444.93	446.93	450.33
42	442.79	442.79	25.00	443.29	84	444.97	446.97	449.67
43	443.86	442.50	24.00	442.96	83	444.64	446.64	449.67
44	443.69	444.20	24.00	444.68	83	446.34	448.34	450.67
45	443.20	445.00	24.00	445.45	85	447.18	449.18	451.33
46	443.35	445.50	24.00	445.95	85	447.68	449.68	452.00



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



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* Date: 2/25/12
 Chief, Division of Land Development: *[Signature]* Date: 3/25/13
 Chief, Development Engineering Division: *[Signature]* Date: 2.21.13

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
 BURTONTVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

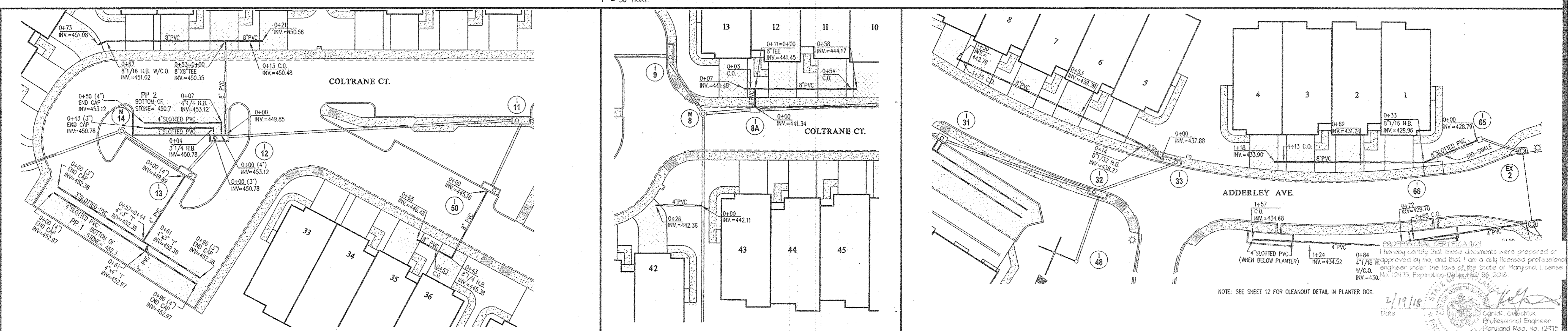
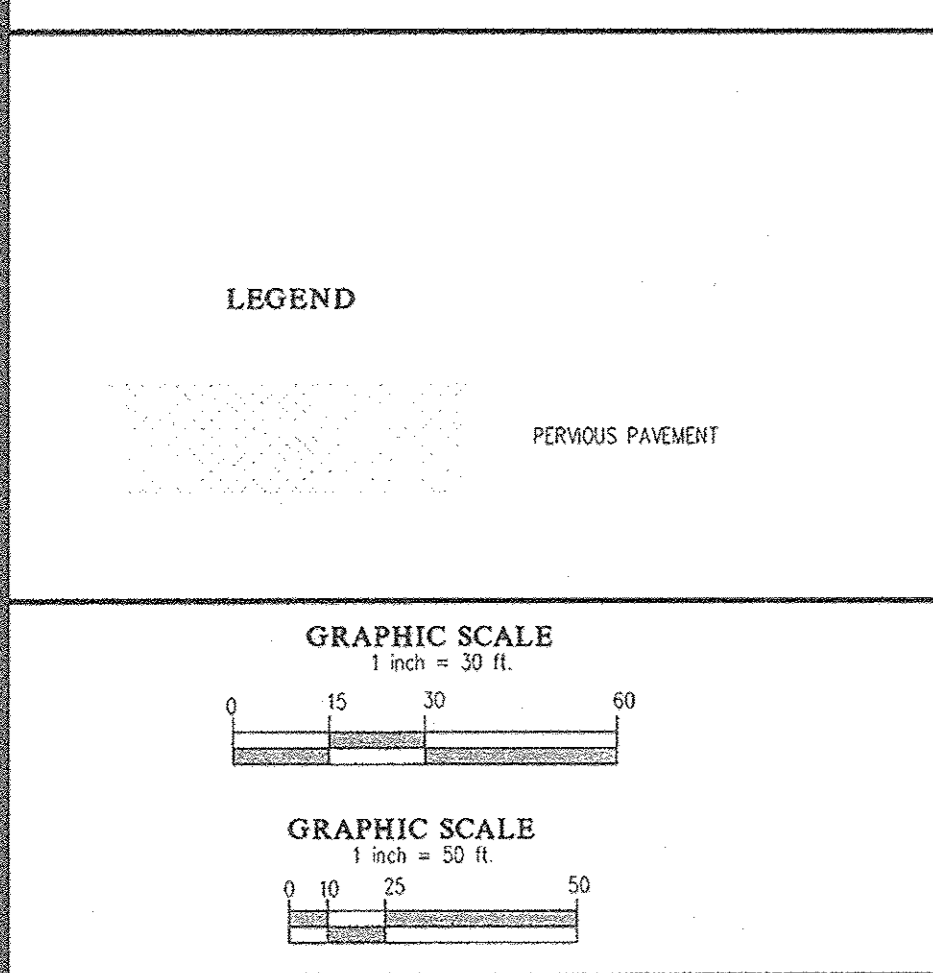
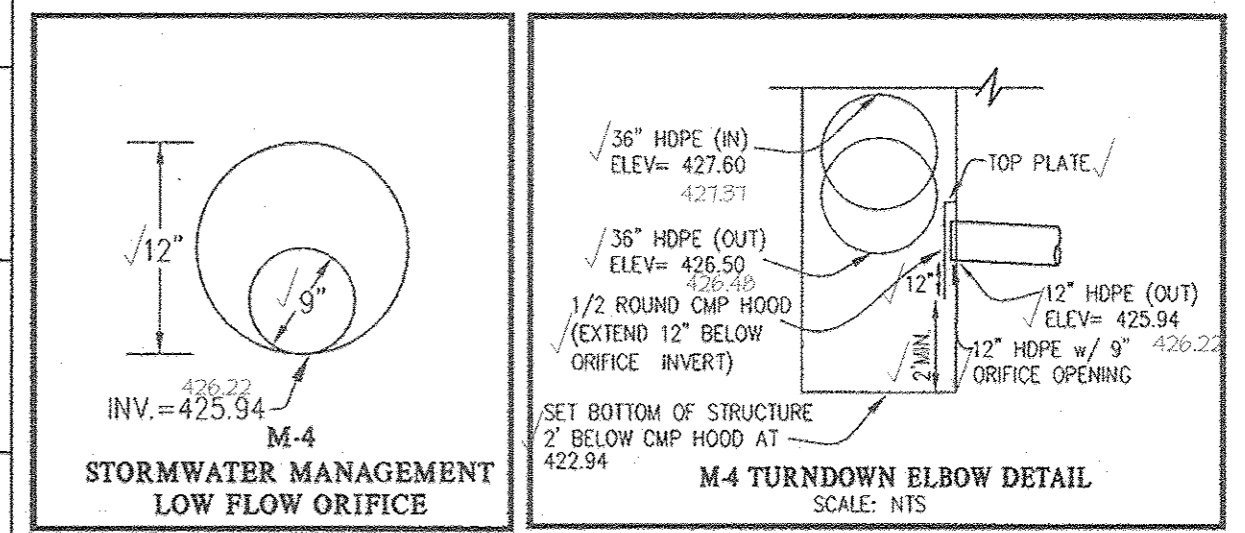
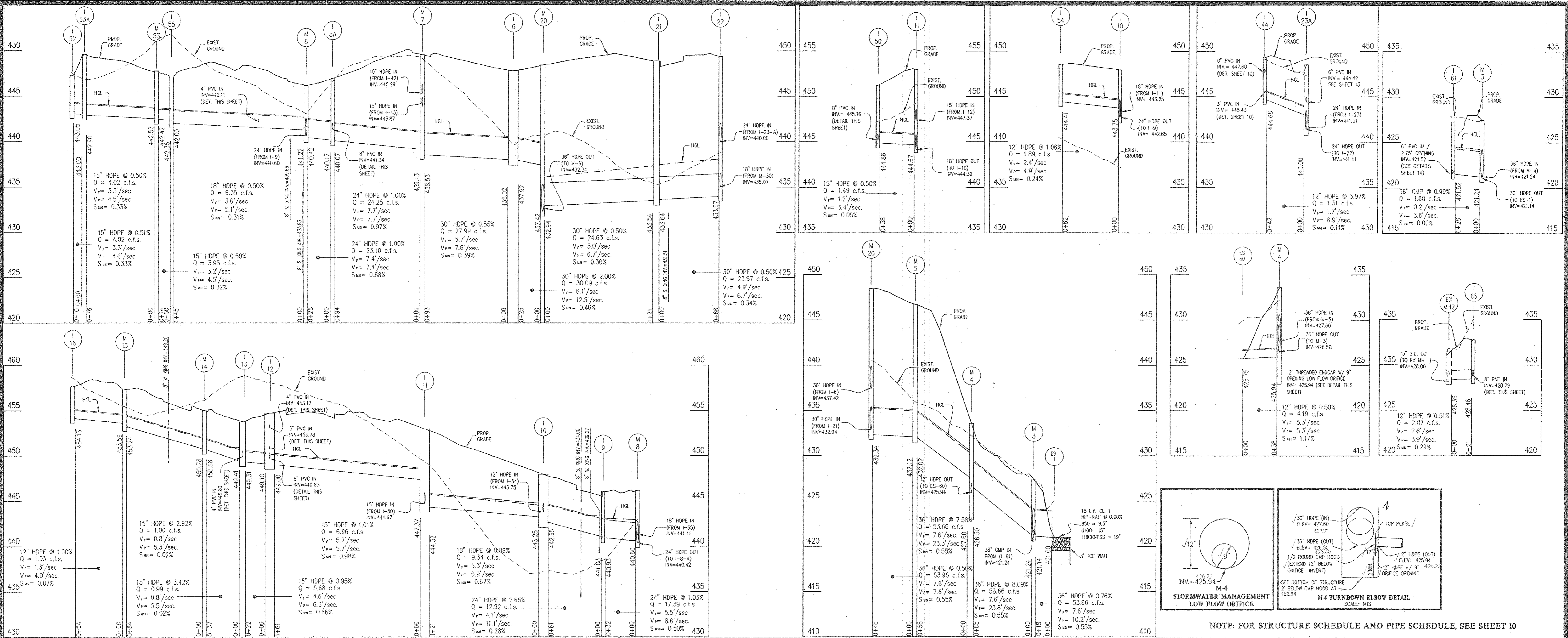
DATE	REVISION	BY	APPR.
2-22-2014	AS-BUILT	KIT	

PREPARED FOR:
 NORTHTRIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12975
 EXPIRATION DATE: MAY 26, 2014
 2-17-13 *[Signature]*

PRIVATE SEWER PROFILES
THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 22121-02-1177
 SCALE: AS SHOWN
 ZONING: POR
 G. L. W. FILE No. 11005
 DATE: JAN. 2013
 TAX MAP - GRID: 17 - 23
 SHEET: 8 OF 26

NO ASBUILT INFORMATION 02/19/2018
 HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 2



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Barbara A. Gough* Date: 3/25/13

Chief, Division of Land Development: *Val Stenhouse* Date: 3/25/13

Chief, Development Engineering Division: *John E. Johnson* Date: 2-21-13

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:
NORTHRISE, LLC
24012 FREDERICK ROAD
SUITE 200
CLARKSBURG, MARYLAND 20871
JONATHAN W. SOULE
301-428-0800

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE
PLANS 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. 12875
EXPIRATION DATE: MAY 26, 2014

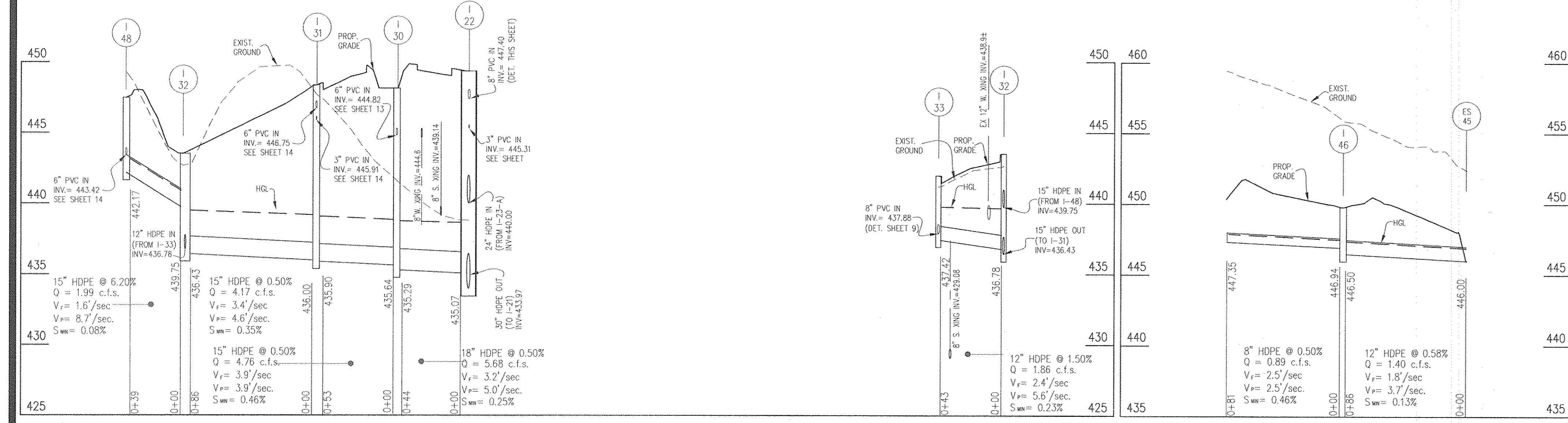
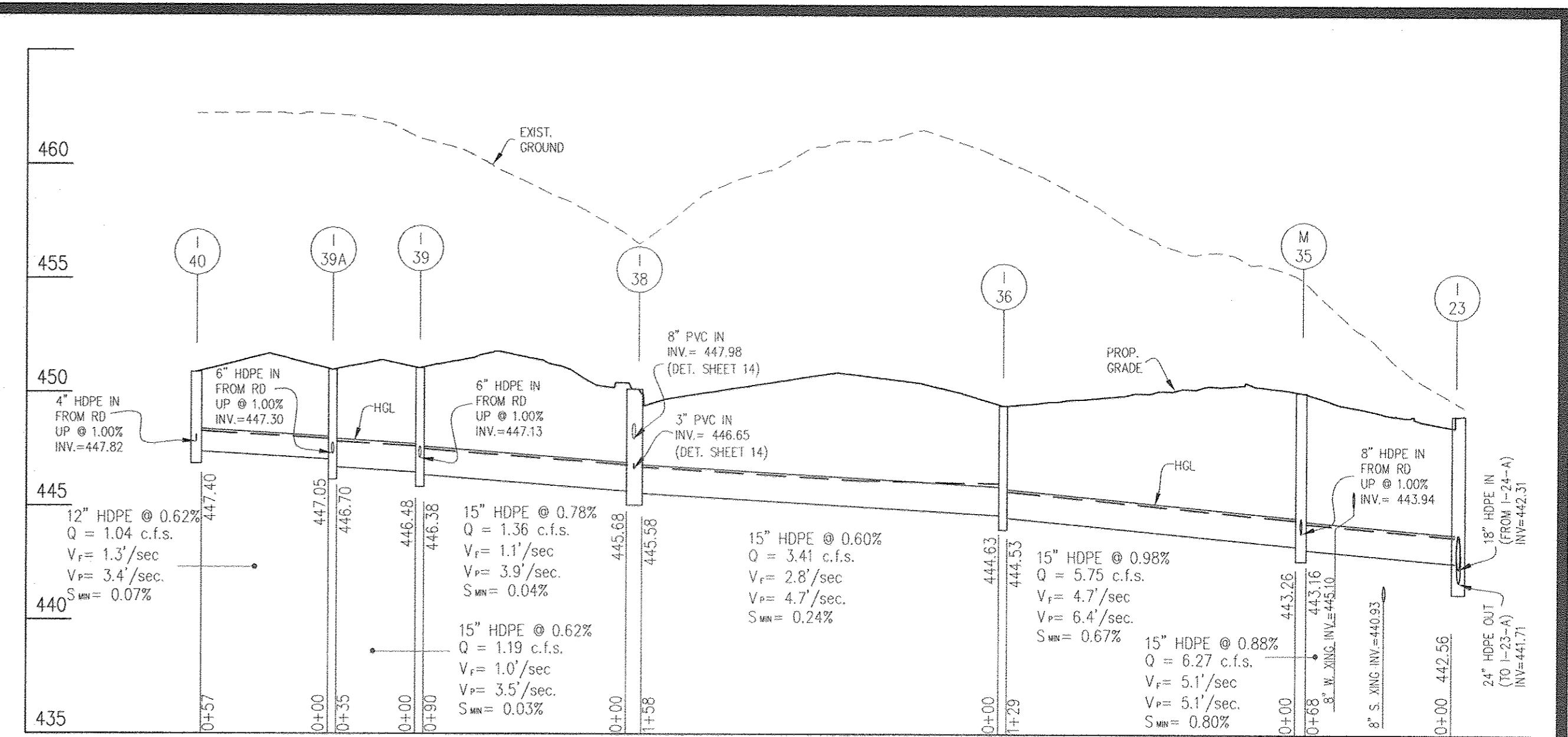
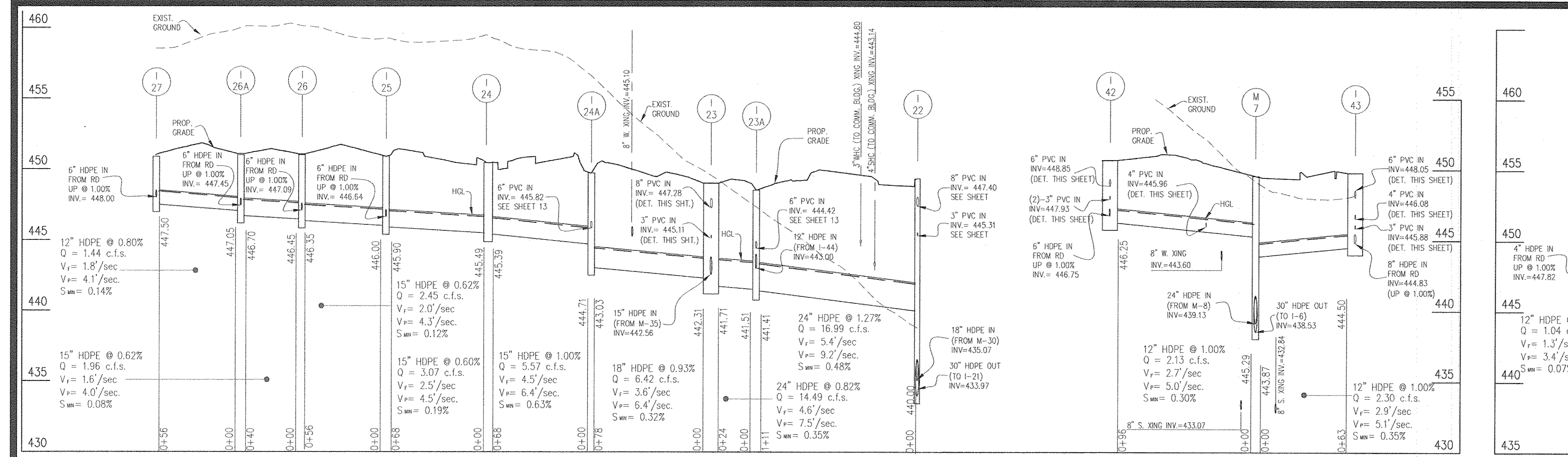
Carl K. Gubnick
Professional Engineer
Maryland Reg. No. 12875

STORM DRAIN PROFILES

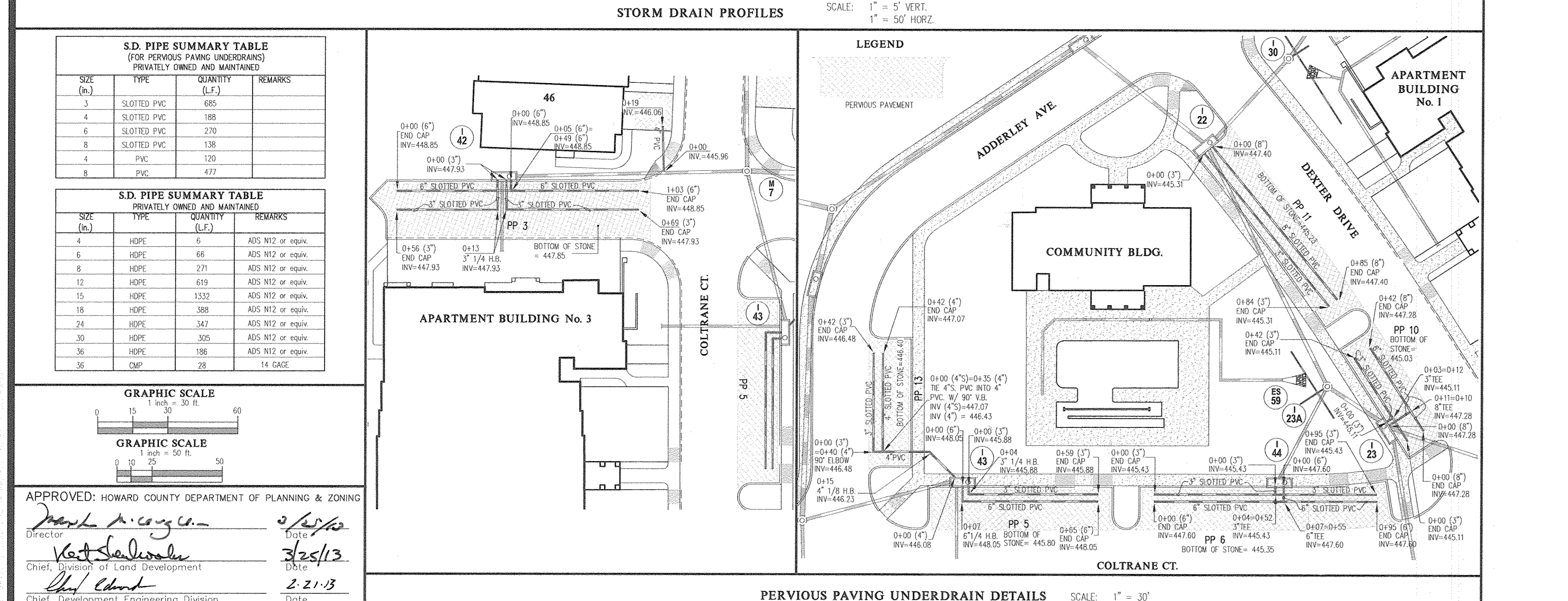
THE GATHERINGS at ELLICOTT MILLS
PARCEL A
AGE RESTRICTED ADULT HOUSING
PLAT Nos. 11833 & 12321-21217

ELECTION DISTRICT No. 2

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	POR	11005
DATE FEB. 2018 JAN. 2013	TAX MAP - GRID 17 - 23	SHEET 9 OF 26



S.D. STRUCTURE SCHEDULE											
NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	NOTES	LOCATION	OWNERSHIP & MAINTENANCE	
			UPPER	LOWER	UPPER	LOWER					
ES-1	END SECTION		424.00		421.00		HO. CO. D. 5.51		N: 590617.5483 E: 136258.6721	PRIVATE	
M-3	MANHOLE	5'-0"	427.44		421.24	421.14	HO. CO. G. 5.13		N: 590617.5778 E: 136258.0995	PRIVATE	
M-4	MANHOLE	5'-0"	433.59		427.60	425.94	HO. CO. G. 5.13		N: 590584.2857 E: 136259.7514	PRIVATE	
M-5	MANHOLE	5'-0"	446.71		432.12	432.02	HO. CO. G. 5.13		N: 590608.8008 E: 136250.3222	PRIVATE	
I-6	A-10	3'-0"	447.85	447.85	438.02	437.92	HO. CO. D. 4.03		7+53.77 16.38' Right ADDERLEY AVENUE	PRIVATE	
M-7	MANHOLE	5'-0"	449.56		445.29	438.53	HO. CO. G. 5.13		5+33.78 8.44' Right COLTRANE COURT	PRIVATE	
M-8	MANHOLE	5'-0"	446.16		441.27	440.42	HO. CO. G. 5.13		5+33.78 8.44' Right COLTRANE COURT	PRIVATE	
I-8-A	DOUBLE 'S'	2'-7-1/2"	447.02	446.81	441.34	440.07	HO. CO. D. 4.23	NO THROAT	6+67.64 12.08' Right ADDERLEY AVENUE	PRIVATE	
I-9	A-10	3'-0"	446.02	446.02	441.03	440.93	HO. CO. D. 4.03		7+42.83 20.00' Left COLTRANE COURT	PRIVATE	
I-10	A-10	3'-0"	448.10	447.70	443.75	442.65	HO. CO. D. 4.03		8+56.26 20.00' Left COLTRANE COURT	PRIVATE	
I-11	A-10	3'-0"	453.12	452.73	447.37	444.32	HO. CO. D. 4.03		10+60.53 30.00' Left COLTRANE COURT	PRIVATE	
I-12	A-10	3'-0"	454.74	454.70	453.12	449.00	HO. CO. D. 4.03		12+48.72 30.00' Left COLTRANE COURT	PRIVATE	
I-13	A-10	3'-0"	453.83	453.66	449.89	449.31	HO. CO. D. 4.03		14+12.78 27.93' Right COLTRANE COURT	PRIVATE	
M-14	MANHOLE	4'-0"	455.00		450.78	450.68	HO. CO. G. 5.12		15+10.09 12.00' Right ADDERLEY AVENUE	PRIVATE	
M-15	MANHOLE	4'-0"	457.34		453.59	453.24	HO. CO. G. 5.12		N: 591051.0592 E: 136203.7717	PRIVATE	
I-16	'S'	2'-7-1/2"	457.63		454.13	terminal	HO. CO. D. 4.22		N: 591072.5234 E: 136202.2346	PRIVATE	
M-20	MANHOLE	5'-0"	448.44		437.42	432.34	HO. CO. G. 5.13		6+38.71 20.97' Right ADDERLEY AVENUE	PRIVATE	
I-21	A-10	3'-0"	448.86	448.86	433.64	433.54	HO. CO. D. 4.03		5+10.09 12.00' Right ADDERLEY AVENUE	PRIVATE	
I-22	A-10	3'-0"	449.42	449.20	447.40	433.97	HO. CO. D. 4.03		0+51.41 24.50' Right DEXTER DRIVE	PRIVATE	
I-23	A-10	3'-0"	449.00	449.00	447.28	441.71	HO. CO. D. 4.03		1+58.30 30.00' Right DEXTER DRIVE	PRIVATE	
I-23-A	MANHOLE	5'-0"	448.75		444.42	441.41	HO. CO. G. 5.13		1+66.71 43.26' Right DEXTER DRIVE	PRIVATE	
I-24	A-10	3'-0"	450.39	450.37	445.49	445.39	HO. CO. D. 4.03		N: 590213.1418 E: 136227.1957	PRIVATE	
I-24-A	MANHOLE	4'-0"	450.15		445.82	443.03	HO. CO. G. 5.12		N: 590213.1418 E: 136227.1957	PRIVATE	
I-25	'S'	2'-7-1/2"	450.90		446.64	445.90	HO. CO. D. 4.22		N: 590251.3911 E: 136202.9453	PRIVATE	
I-26	'S'	2'-7-1/2"	451.00		447.09	446.35	HO. CO. D. 4.22		N: 590308.3444 E: 136293.2892	PRIVATE	
I-26-A	'S'	2'-7-1/2"	451.00		447.45	446.70	HO. CO. D. 4.22		N: 590351.5749 E: 136282.0813	PRIVATE	
I-27	'S'	2'-7-1/2"	450.90		448.00	447.50	HO. CO. D. 4.22		N: 590409.9178 E: 136218.0507	PRIVATE	
I-30	MANHOLE	4'-0"	449.15		444.82	435.29	HO. CO. G. 5.12		0+43.20 Left 26.26' COLTRANE COURT	PRIVATE	
I-31	A-5	4'-0"	448.49	448.49	446.75	435.90	HO. CO. D. 4.03		3+47.08 Left 20.93' ADDERLEY AVENUE	PRIVATE	
I-32	A-10	3'-0"	443.78	443.29	439.75	436.43	HO. CO. D. 4.01		2+96.15 Right 12.00' ADDERLEY AVENUE	PRIVATE	
I-33	A-10	3'-0"	442.20	441.70	437.88	437.42	HO. CO. D. 4.03		2+61.38 Right 12.00' ADDERLEY AVENUE	PRIVATE	
M-35	MANHOLE	4'-0"	450.05		443.94	443.16	HO. CO. G. 5.12		1+38.78 Right 31.77' COLTRANE COURT	PRIVATE	
I-36	DOUBLE 'S'	2'-7-1/2"	449.44		444.63	444.53	HO. CO. D. 4.23		0+65.91 Right 10.88' COLTRANE COURT	PRIVATE	
I-38	A-10	3'-0"	450.03	450.03	447.98	445.58	HO. CO. D. 4.03		N: 589884.8738 E: 136240.2796	PRIVATE	
I-39	'S'	2'-7-1/2"	451.06		447.13	446.38	HO. CO. D. 4.22		N: 590141.7665 E: 136233.7073	PRIVATE	
I-39-A	'S'	2'-7-1/2"	451.00		447.30	446.70	HO. CO. D. 4.22		N: 590073.2888 E: 136245.2005	PRIVATE	
I-40	'S'	2'-7-1/2"	450.90		447.82	447.40	HO. CO. D. 4.22		N: 590114.4748 E: 136281.4360	PRIVATE	
I-42	A-10	3'-0"	450.59	450.59	448.85	446.25	HO. CO. D. 4.03		N: 590467.7017 E: 136220.6837	PRIVATE	
I-43	A-10	3'-0"	449.80	449.78	448.05	444.50	HO. CO. D. 4.03		J+95.08 Right 30.00' COLTRANE COURT	PRIVATE	
I-44	A-10	3'-0"	449.30	449.30	447.60	444.68	HO. CO. D. 4.03		2+59.71 Right 30.01' COLTRANE COURT	PRIVATE	
ES-45	END SECTION		447.00		446.00		HO. CO. D. 5.51		N: 590227.4453 E: 136264.9589	PRIVATE	
I-46	'S'	2'-7-1/2"	449.80		446.94	446.50	HO. CO. D. 4.22		N: 590105.0526 E: 136258.0449	PRIVATE	
I-48	MANHOLE	4'-0"	447.75		443.42	442.17	HO. CO. G. 5.12		N: 590239.7563 E: 136278.3219	PRIVATE	
I-50	A-10	3'-0"	451.29	450.90	445.16	444.86	HO. CO. D. 4.03		1+48.94 Left 20.00' COLTRANE COURT	PRIVATE	
I-52	'S'	2'-7-1/2"	447.30		443.05	terminal	HO. CO. D. 4.22		N: 590696.2403 E: 136206.2389	PRIVATE	
M-53	MANHOLE	4'-0"	447.77		442.52	442.42	HO. CO. G. 5.12		N: 590600.2389 E: 136278.2383	PRIVATE	
M-53A	MANHOLE	4'-0"	449.59		443.00	442.90	HO. CO. G. 5.12		N: 590677.4783 E: 136278.3580	PRIVATE	
I-54	A-10	3'-0"	448.64	448.42	444.41	444.00	HO. CO. D. 4.03		10+15.64 Left 10.00' COLTRANE COURT	PRIVATE	
I-55	'S'	2'-7-1/2"	447.20		442.35	442.00	HO. CO. D. 4.22		N: 590590.5269 E: 136241.5587	PRIVATE	
ES-60	END SECTION		426.75		425.75		HO. CO. D. 5.51		N: 590621.0255 E: 136251.0590	PRIVATE	
I-61	DOUBLE 'S'	2'-7-1/2"	427.50		421.52	421.52	HO. CO. D. 4.23		N: 590644.5371 E: 136254.7828	PRIVATE	
I-65	'S'	2'-7-1/2"	432.85		428.79	428.46	HO. CO. D. 4.22		N: 590786.3179 E: 136294.3723	PRIVATE	
I-66	COG-10		434.24	433.62			SHA MD 374.68		1+07.14 Left 12.00' ADDERLEY AVENUE	PRIVATE	



S.D. PIPE SUMMARY TABLE (FOR PERVIOUS PAVING UNDERDRAINS) PRIVATELY OWNED AND MAINTAINED		S.D. PIPE SUMMARY TABLE PRIVATELY OWNED AND MAINTAINED	
SIZE (in.)	TYPE	QUANTITY (L.F.)	REMARKS
3	SLOTTED PVC	685	
4	SLOTTED PVC	188	
6	SLOTTED PVC	270	
8	SLOTTED PVC	138	
4	PVC	120	
8	PVC	477	

SIZE (in.)	TYPE	QUANTITY (L.F.)	REMARKS
4	HDPE	6	ADS N12 or equiv.
6	HDPE	66	ADS N12 or equiv.
8	HDPE	271	ADS N12 or equiv.
12	HDPE	619	ADS N12 or equiv.
15	HDPE	1332	ADS N12 or equiv.
18	HDPE	388	ADS N12 or equiv.
24	HDPE	347	ADS N12 or equiv.
30	HDPE	305	ADS N12 or equiv.
36	HDPE	186	ADS N12 or equiv.
36	CMP	28	14 GAGE

PERVIOUS PAVING UNDERDRAIN DETAILS	
NO.	DESCRIPTION
PP 1	4" SLOTTED PVC
PP 2	4" SLOTTED PVC
PP 3	4" SLOTTED PVC
PP 4	4" SLOTTED PVC
PP 5	4" SLOTTED PVC
PP 6	4" SLOTTED PVC
PP 7	4" SLOTTED PVC
PP 8	4" SLOTTED PVC
PP 9	4" SLOTTED PVC
PP 10	4" SLOTTED PVC
PP 11	4" SLOTTED PVC
PP 12	4" SLOTTED PVC
PP 13	4" SLOTTED PVC
PP 14	4" SLOTTED PVC
PP 15	4" SLOTTED PVC
PP 16	4" SLOTTED PVC
PP 17	4" SLOTTED PVC
PP 18	4" SLOTTED PVC
PP 19	4" SLOTTED PVC
PP 20	4" SLOTTED PVC
PP 21	4" SLOTTED PVC
PP 22	4" SLOTTED PVC
PP 23	4" SLOTTED PVC
PP 24	4" SLOTTED PVC
PP 25	4" SLOTTED PVC
PP 26	4" SLOTTED PVC
PP 27	4" SLOTTED PVC
PP 28	4" SLOTTED PVC
PP 29	4" SLOTTED PVC
PP 30	4" SLOTTED PVC
PP 31	4" SLOTTED PVC
PP 32	4" SLOTTED PVC
PP 33	4" SLOTTED PVC
PP 34	4" SLOTTED PVC
PP 35	4" SLOTTED PVC
PP 36	4" SLOTTED PVC
PP 37	4" SLOTTED PVC
PP 38	4" SLOTTED PVC
PP 39	4" SLOTTED PVC
PP 40	4" SLOTTED PVC
PP 41	4" SLOTTED PVC
PP 42	4" SLOTTED PVC
PP 43	4" SLOTTED PVC
PP 44	4" SLOTTED PVC
PP 45	4" SLOTTED PVC
PP 46	4" SLOTTED PVC
PP 47	4" SLOTTED PVC
PP 48	4" SLOTTED PVC
PP 49	4" SLOTTED PVC
PP 50	4" SLOTTED PVC
PP 51	4" SLOTTED PVC
PP 52	4" SLOTTED PVC
PP 53	4" SLOTTED PVC
PP 54	4" SLOTTED PVC
PP 55	4" SLOTTED PVC
PP 56	4" SLOTTED PVC
PP 57	4" SLOTTED PVC
PP 58	4" SLOTTED PVC
PP 59	4" SLOTTED PVC
PP 60	4" SLOTTED PVC
PP 61	4" SLOTTED PVC
PP 62	4" SLOTTED PVC
PP 63	4" SLOTTED PVC
PP 64	4" SLOTTED PVC
PP 65	4" SLOTTED PVC
PP 66	4" SLOTTED PVC
PP 67	4" SLOTTED PVC
PP 68	4" SLOTTED PVC
PP 69	4" SLOTTED PVC
PP 70	4" SLOTTED PVC
PP 71	4" SLOTTED PVC
PP 72	4" SLOTTED PVC
PP 73	4" SLOTTED PVC
PP 74	4" SLOTTED PVC
PP 75	4" SLOTTED PVC
PP 76	4" SLOTTED PVC
PP 77	4" SLOTTED PVC
PP 78	4" SLOTTED PVC
PP 79	4" SLOTTED PVC
PP 80	4" SLOTTED PVC
PP 81	4" SLOTTED PVC
PP 82	4" SLOTTED PVC
PP 83	4" SLOTTED PVC
PP 84	4" SLOTTED PVC
PP 85	4" SLOTTED PVC
PP 86	4" SLOTTED PVC
PP 87	4" SLOTTED PVC
PP 88	4" SLOTTED PVC
PP 89	4" SLOTTED PVC
PP 90	4" SLOTTED PVC
PP 91	4" SLOTTED PVC
PP 92	4" SLOTTED PVC
PP 93	4" SLOTTED PVC
PP 94	4" SLOTTED PVC
PP 95	4" SLOTTED PVC
PP 96	4" SLOTTED PVC
PP 97	4" SLOTTED PVC
PP 98	4" SLOTTED PVC
PP 99	4" SLOTTED PVC
PP 100	4" SLOTTED PVC

NO ASBUILT

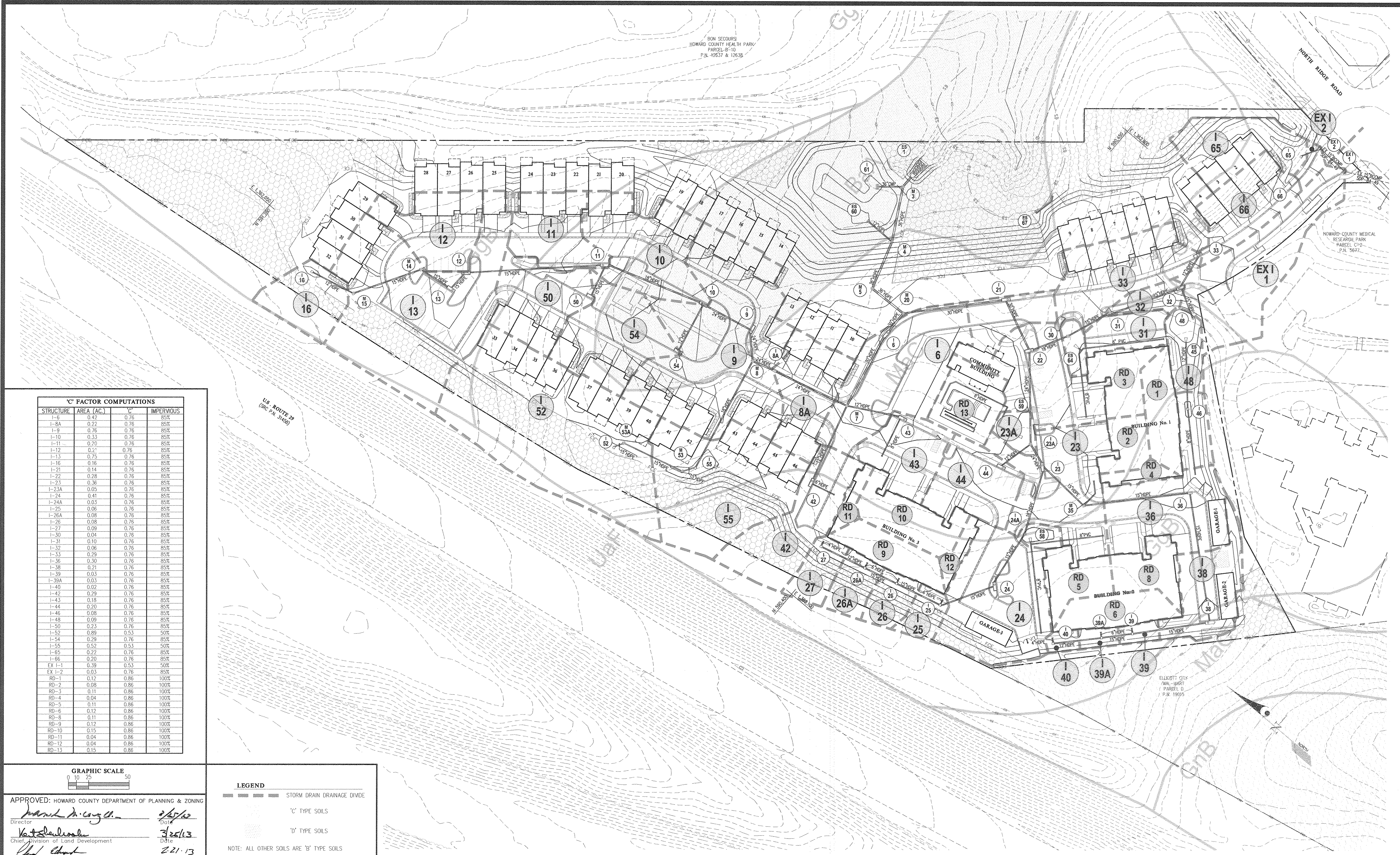
STORM DRAIN PROFILES INFORMATION 02/19/2010

THE GATHERINGS at ELLICOTT MILLS
PARCEL A
AGE RESTRICTED ADULT HOUSING
PLAT Nos. 11833 & 22210-22217

SCALE: AS SHOWN ZONING: POR G. L. W. FILE No. 11005

DATE: JAN. 2013 TAX MAP - GRID: 17 - 23 SHEET: 10 OF 26

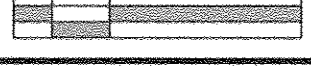
ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND



'C' FACTOR COMPUTATIONS

STRUCTURE	AREA (AC.)	'C'	IMPERVIOUS
I-6	0.42	0.76	85%
I-8A	0.22	0.76	85%
I-9	0.76	0.76	85%
I-10	0.33	0.76	85%
I-11	0.20	0.76	85%
I-12	0.21	0.76	85%
I-13	0.75	0.76	85%
I-16	0.16	0.76	85%
I-21	0.14	0.76	85%
I-22	0.28	0.76	85%
I-23	0.36	0.76	85%
I-23A	0.05	0.76	85%
I-24	0.41	0.76	85%
I-24A	0.03	0.76	85%
I-25	0.06	0.76	85%
I-26A	0.08	0.76	85%
I-26	0.08	0.76	85%
I-27	0.09	0.76	85%
I-30	0.04	0.76	85%
I-31	0.10	0.76	85%
I-32	0.06	0.76	85%
I-33	0.29	0.76	85%
I-36	0.30	0.76	85%
I-38	0.21	0.76	85%
I-39	0.03	0.76	85%
I-39A	0.03	0.76	85%
I-40	0.02	0.76	85%
I-42	0.29	0.76	85%
I-43	0.18	0.76	85%
I-44	0.20	0.76	85%
I-46	0.08	0.76	85%
I-48	0.09	0.76	85%
I-50	0.23	0.76	85%
I-52	0.89	0.53	50%
I-54	0.29	0.76	85%
I-55	0.52	0.53	50%
I-65	0.22	0.76	85%
I-66	0.20	0.76	85%
EX-1-1	0.39	0.53	50%
EX-1-2	0.03	0.76	85%
RD-1	0.12	0.86	100%
RD-2	0.08	0.86	100%
RD-3	0.11	0.86	100%
RD-4	0.04	0.86	100%
RD-5	0.11	0.86	100%
RD-6	0.12	0.86	100%
RD-8	0.11	0.86	100%
RD-9	0.12	0.86	100%
RD-10	0.15	0.86	100%
RD-11	0.04	0.86	100%
RD-12	0.04	0.86	100%
RD-13	0.15	0.86	100%

GRAPHIC SCALE



LEGEND

- STORM DRAIN DRAINAGE DIVIDE
 - 'C' TYPE SOILS
 - 'D' TYPE SOILS
- NOTE: ALL OTHER SOILS ARE 'B' TYPE SOILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Mark A. Long* Date: 2/5/13
 Chief, Division of Land Development: *Kate Schaefer* Date: 2/21/13
 Chief, Development Engineering Division: *Paul Hunt* Date: 2/21/13

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

PREPARED FOR:
 NORTHRIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

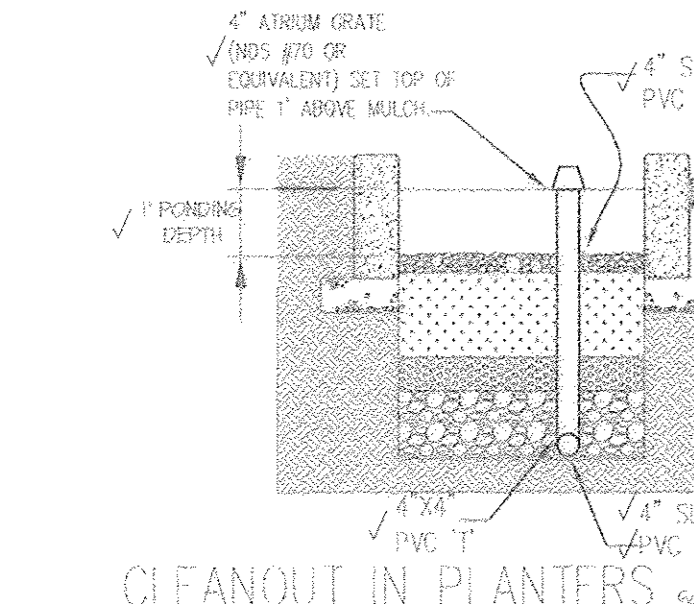
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975
 EXPIRATION DATE: MAY 26, 2014
Cliff



STORM DRAIN DRAINAGE AREA MAP
THE GATHERINGS at ELLICOTT MILLS
PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos 11833 & 22216-22217
 02/19/2013

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	11 OF 26

Drainage Area	Area (sq') Impervious	Area (sq')	% Impervious
1	3729	1000	100%
2	1400	1226	80%
3	3355	228	1472%
4	1589	35	4540%
5	1137	24	4738%
6	1631	20	8155%
7	4088	22	18582%
8	3734	1812	206%
9	3066	125	2444%
10	4716	1000	4716%
11	7663	736	1041%
12	2724	222	1227%
13	3729	1639	228%
14	3810	2	190500%
15	12295	72	17078%
16	809	142	570%
17	1421	925	153%
18	5535	1929	285%
19	1286	329	391%
20	2723	1029	265%
21	5438	922	59%
22	1862	1008	185%
23	3729	1000	3729%
24	832	72	11556%
25	2787	1102	252%
26	6588	2	329400%
27	6660	272	2448%
28	1286	2	64300%
29	3589	102	3518%
30	15189	1302	1158%
31	7990	808	987%
32	13807	808	1708%
33	7431	2	371550%
34	75548	925	8168%
35	4892	1029	475%
36	10217	1029	100%
37	1330	2	66500%
38	3279	2	163950%



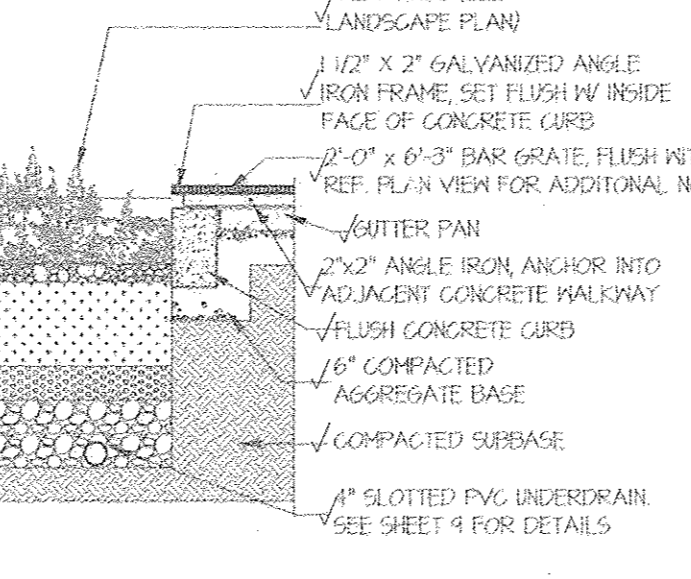
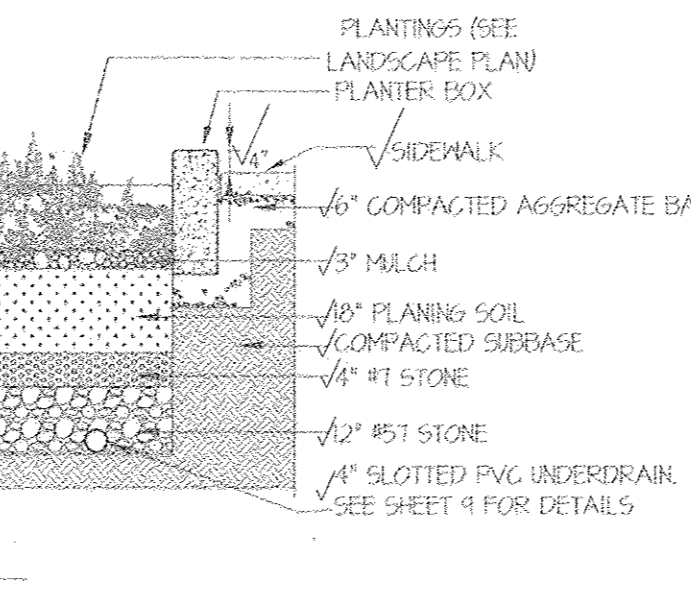
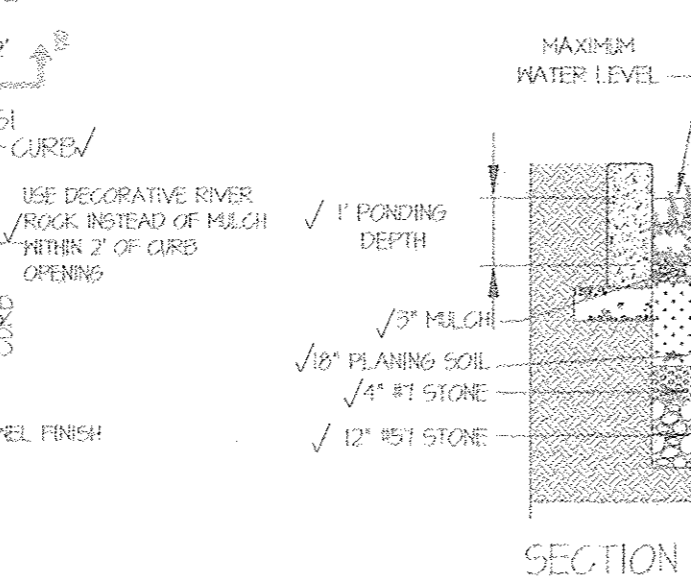
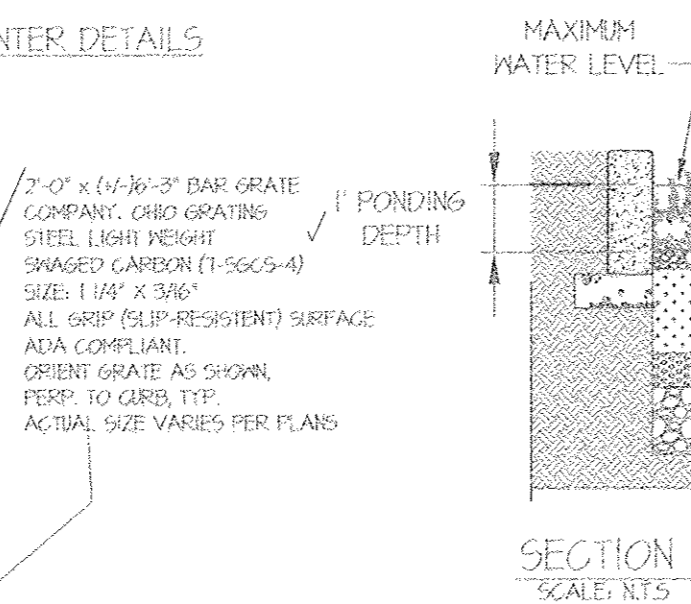
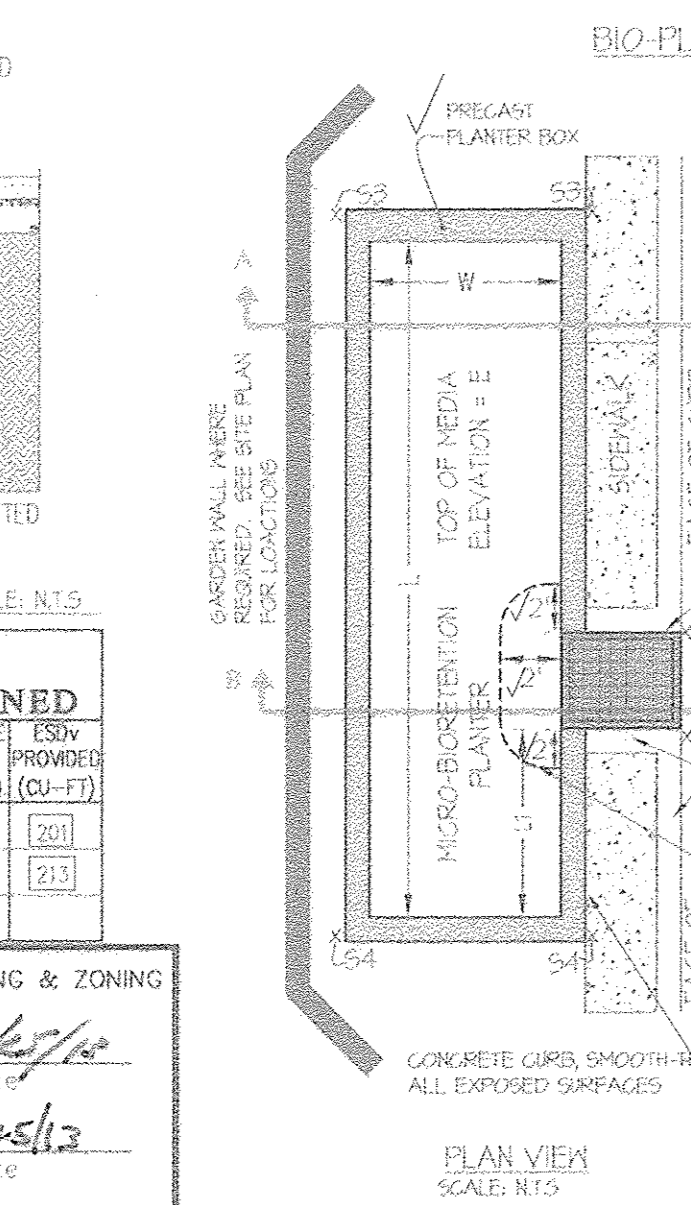
PLANTER NO.	W	L	U	E	S1	S2	S3	S4	STORAGE NO.	ESD PROVIDED (CU-FIT)	ESD (CU-FIT)
B1	15	12	12	12	12	12	12	12	101	20	20
B2	15	12	12	12	12	12	12	12	102	20	20

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Paula K. Leach 3/25/18
Director

Neil S. Leach 3/25/17
Chief, Division of Land Development

Neil S. Leach 2-21-17
Chief, Development Engineering Division



LEGEND

P.D.W. TYPE

ESD SWM DEVICE

ESD TYPES OF DEVICES:

- MER - MICRO-BIORETENTION
- CW - GRAVEL WETLAND
- PP - PERVIOUS PAVEMENT (SEE DETAIL SHEET 6)
- S - GRASS SWALE
- BS - BIO-SWALE
- D - DRY WELL (HO.CO D-9.01, 7'X11'X5'(V))
- P.D.W. - PERVIOUS DRIVEWAY (SEE DETAIL SHEET 6)

ESD DRAINAGE DIVIDE

- 'C' TYPE SOILS
- 'D' TYPE SOILS

NOTE: ALL OTHER SOILS ARE 'B' TYPE SOILS

STORMWATER MANAGEMENT REQUIREMENT	
DEVELOPMENT AREA:	12.11 AC.
% IMPERVIOUS:	60%
Pe:	2"
ESDv REQUIRED:	1.19 AC-FIT
STORMWATER MANAGEMENT PROVIDED BY DEVICE	
MICRO-BIORETENTION:	0.067 AC-FIT
GRAVEL WETLAND:	0.644 AC-FIT
PERVIOUS PAVEMENT:	0.291 AC-FIT
SWALES:	0.015 AC-FIT
GRASS SWALE:	0.156 AC-FIT
BIO-SWALE:	0.087 AC-FIT
DRY WELLS:	0.015 AC-FIT
PERVIOUS DRIVEWAYS:	0.002 AC-FIT
FOREST CONSERVATION EASEMENT:	0.015 AC-FIT
ROOFTOP DISCONNECT:	0.002 AC-FIT
TOTAL:	1.205 AC-FIT

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. 12915, Expiration Date: May 26 2018.

2/17/18
Date

Carl K. Gutschick
Professional Engineer
Maryland Reg. No. 12915



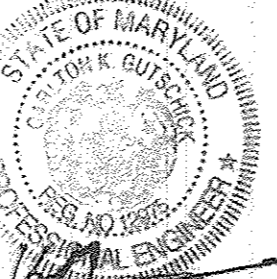
GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 200 - BURTSMVILLE OFFICE PARK
BURTSMVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
4.12.17	Bio-swale revised	gl	ag

PREPARED FOR:
NORTHRISE, LLC
24012 FREDERICK ROAD
SUITE 200
CLARKSBURG, MARYLAND 20871
JONATHAN W. SOULE
301-428-0800

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12915, EXPIRATION DATE: MAY 26, 2018.

2-15
Carl K. Gutschick

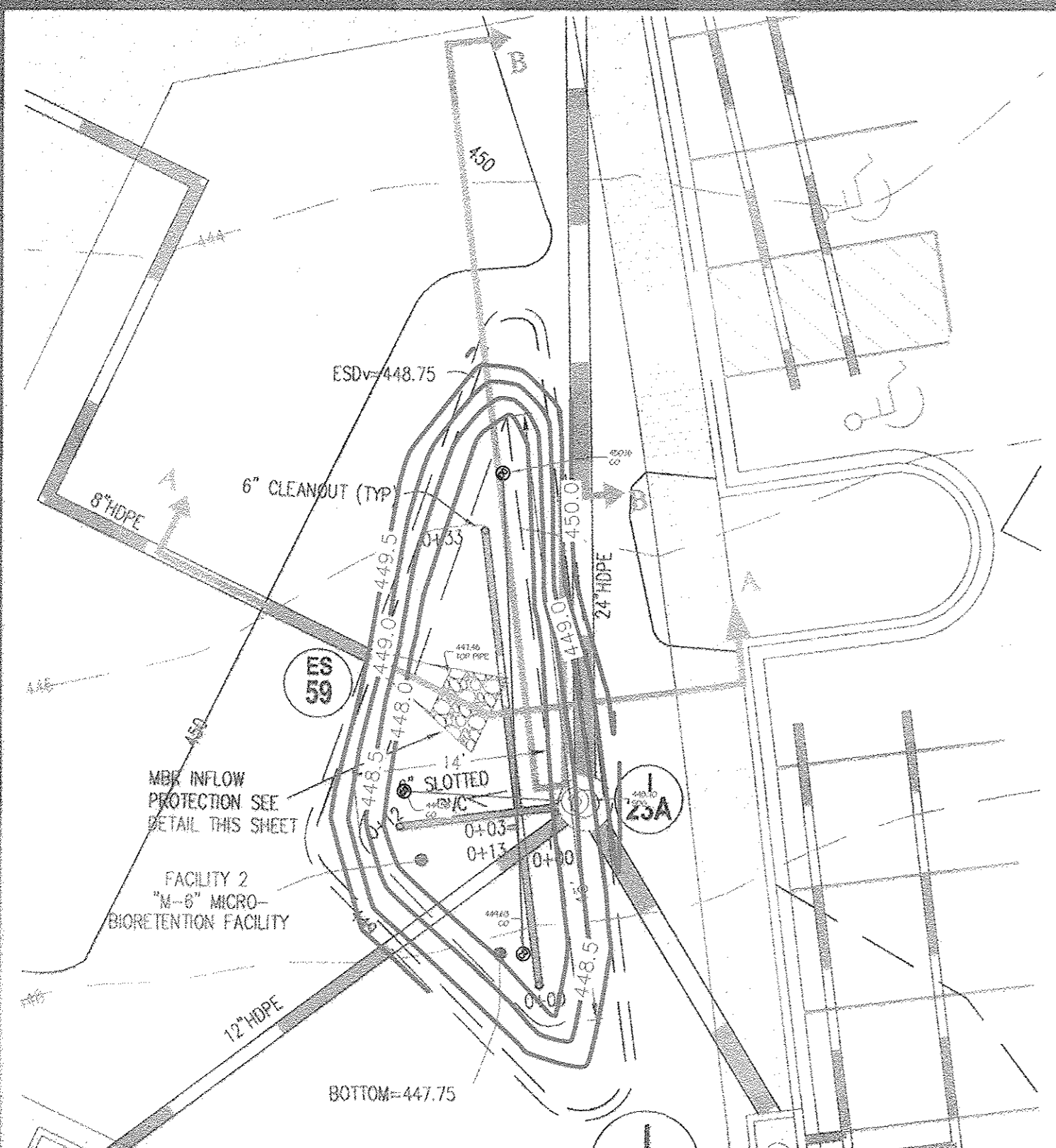


STORMWATER MANAGEMENT DRAINAGE AREA MAP

THE GATHERINGS at ELLICOTT MILLS
PARCEL A
AGE RESTRICTED ADULT HOUSING
PLAT Nos. 11833 & 2221e-22217

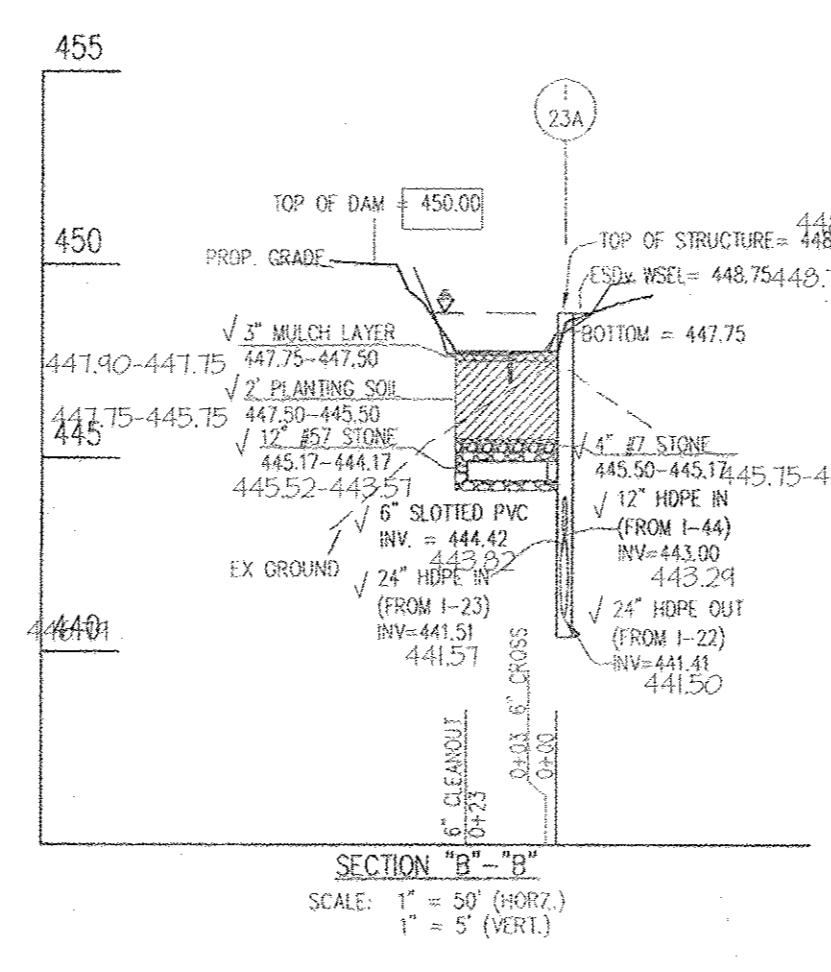
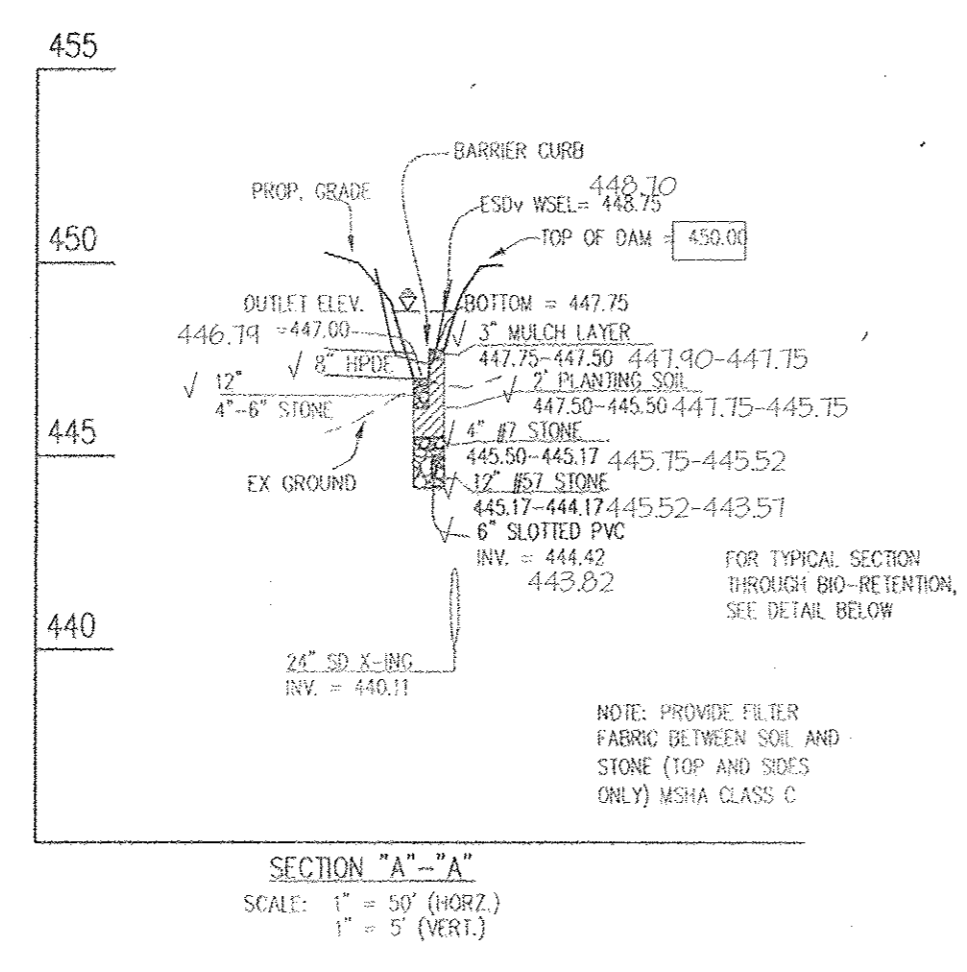
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	POR	11005
DATE	TAX MAP - GRID	SHEET
FEB. 2018 JAN. 2013	17 - 23	12 OF 26

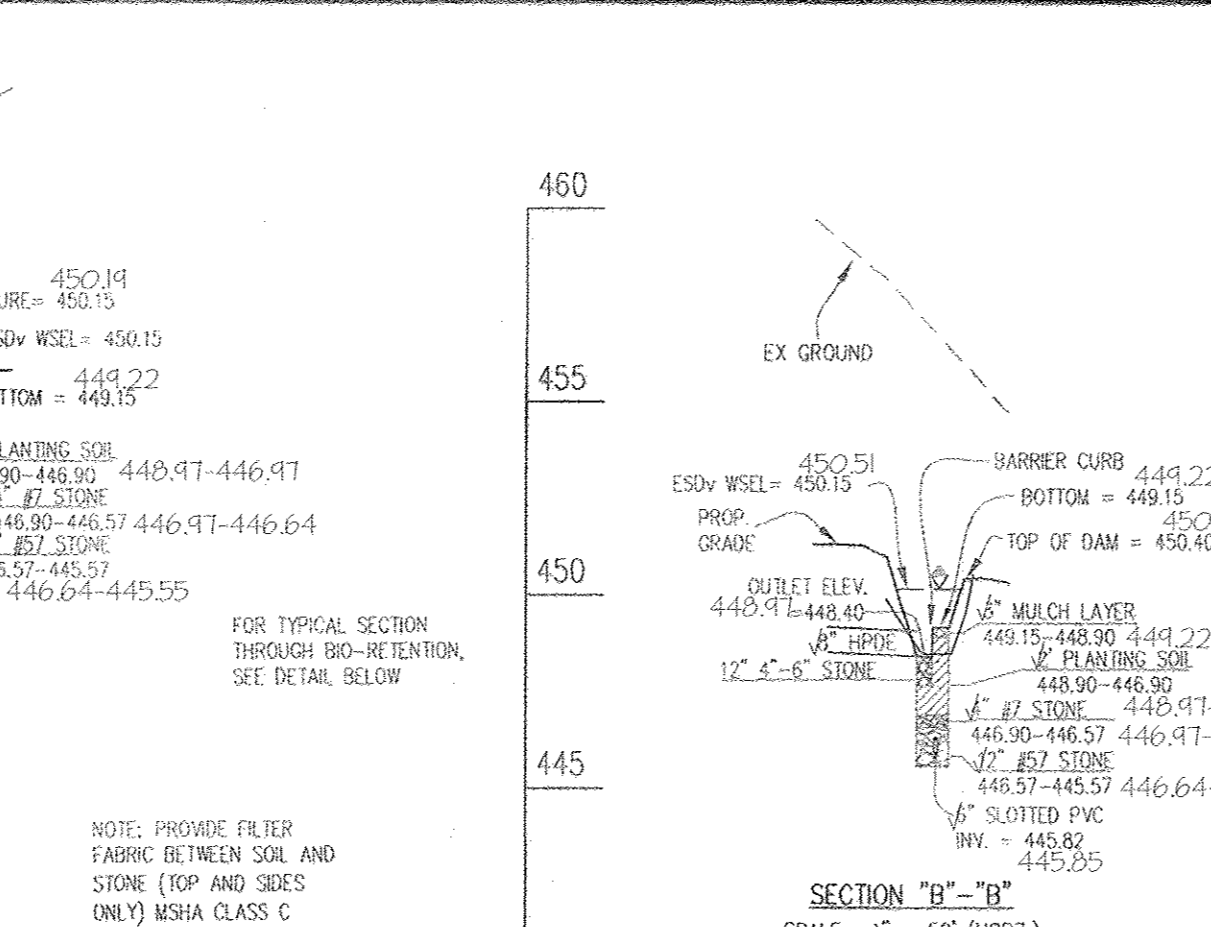
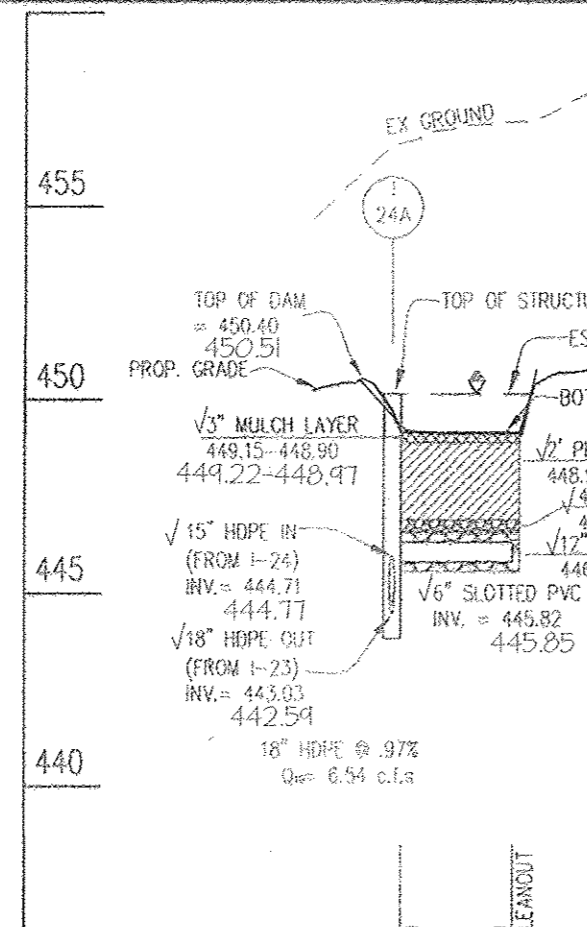
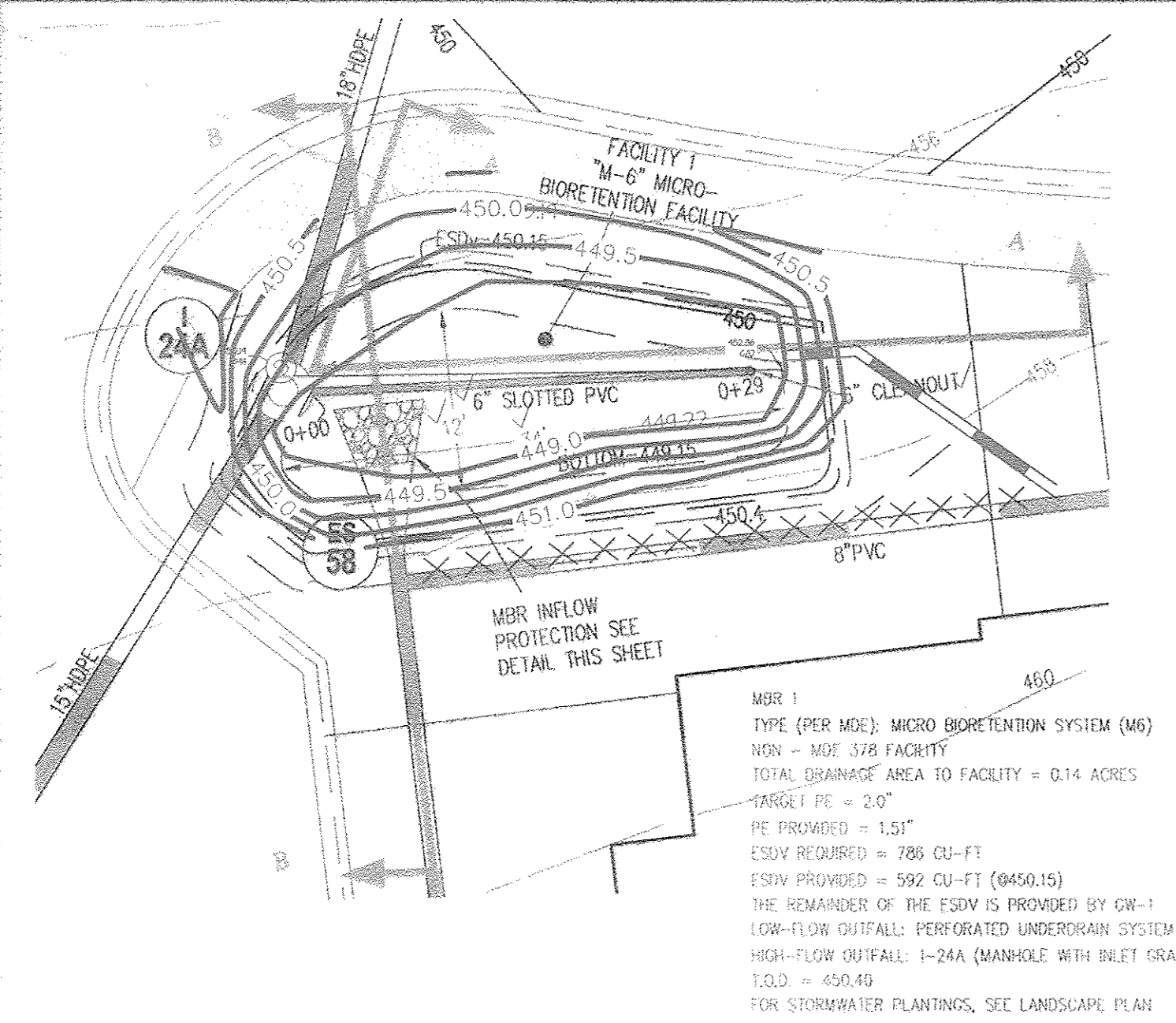


MBR-2
 TYPE (PER MBR): MICRO BIORETENTION SYSTEM (M6)
 NON - MDE 378 FACILITY
 TOTAL DRAINAGE AREA TO FACILITY = 0.20 ACRES
 TARGET PE = 2"
 PE PROVIDED = 0.96"
 ESDV REQUIRED = 1,058 CU-FIT
 ESDV PROVIDED = 505 CU-FIT (84% 75)
 THE REMAINDER OF THE ESDV IS PROVIDED BY GW-1
 LOW-FLOW OUTFALL: PERFORATED UNDERDRAIN SYSTEM
 HIGH-FLOW OUTFALL: 1-2 1/2" (MANHOLE WITH INLET GRATE, TOP = 448.75)
 T.O.D. = 449.0
 FOR STORMWATER PLANTINGS, SEE LANDSCAPE PLAN

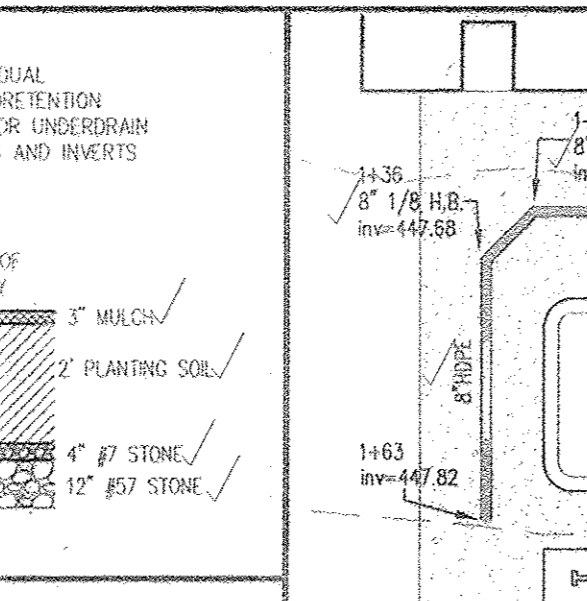
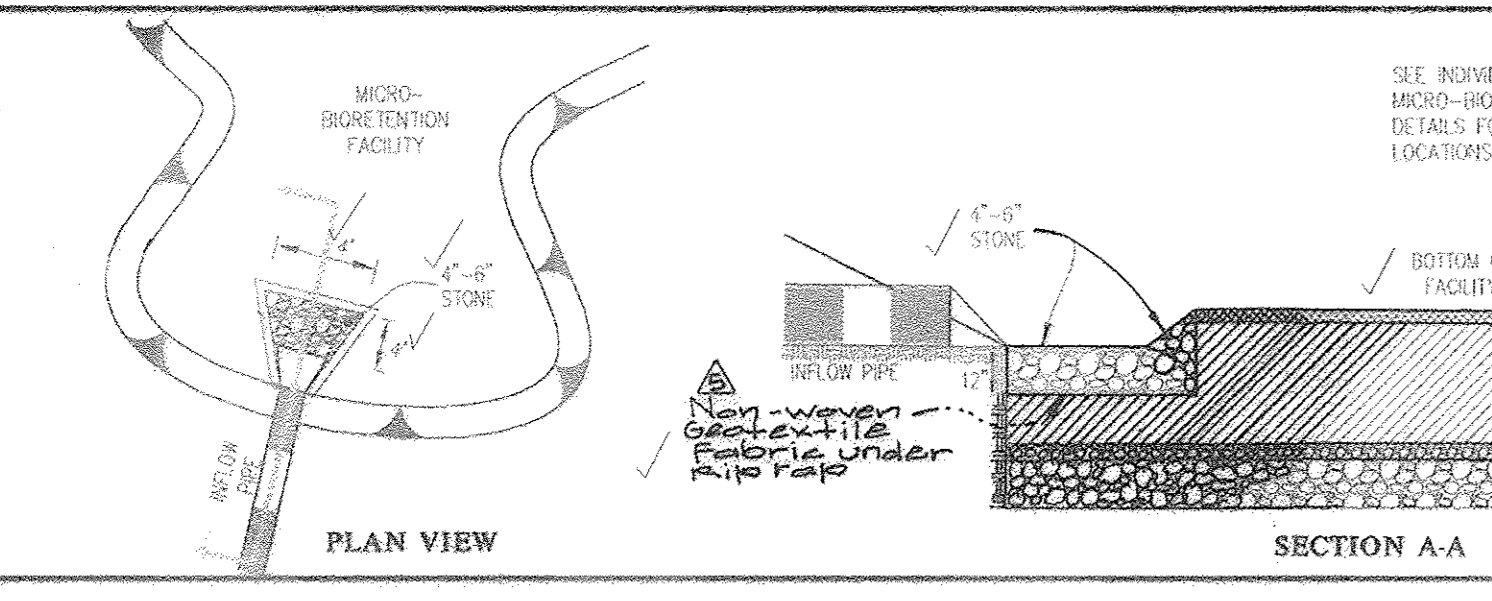
S.D. PIPE SUMMARY TABLE PRIVATELY OWNED AND MAINTAINED			
SIZE (INCHES)	TYPE	QUANTITY (L.F.)	REMARKS
6	SLOTTED PVC	130	SCHEDULE 40
6	HDPE	97	ADS N12 or equiv.
8	HDPE	129	ADS N12 or equiv.



MICRO-BIORETENTION 2 DETAILS SCALE: 1" = 10'

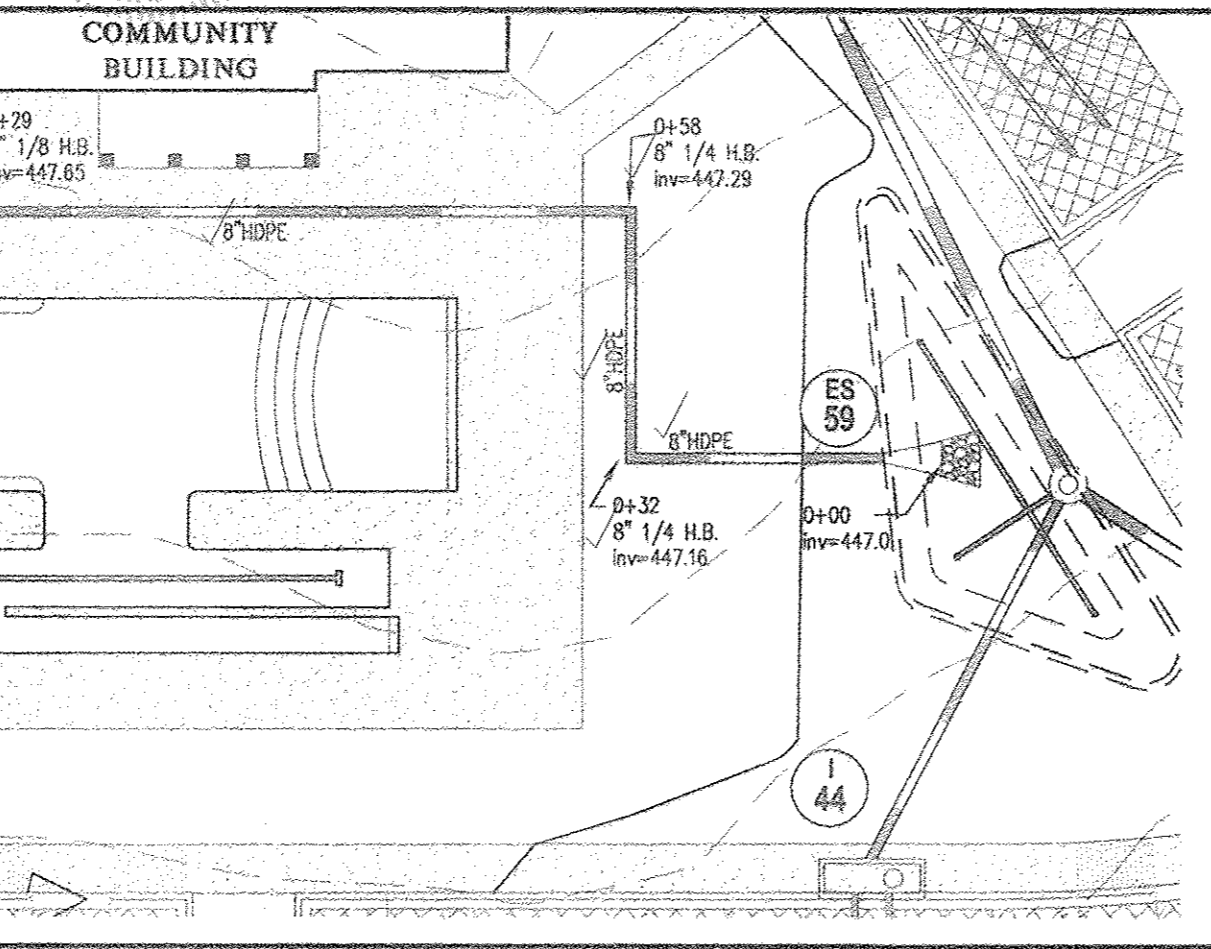
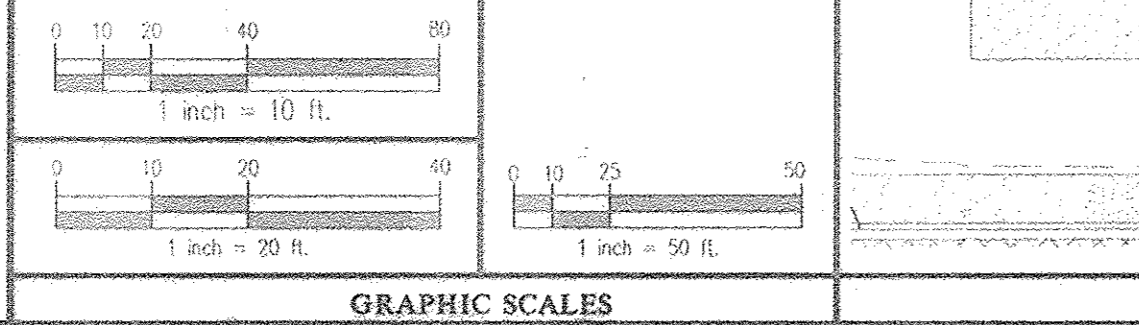


MICRO-BIORETENTION 1 DETAILS SCALE: 1" = 10'

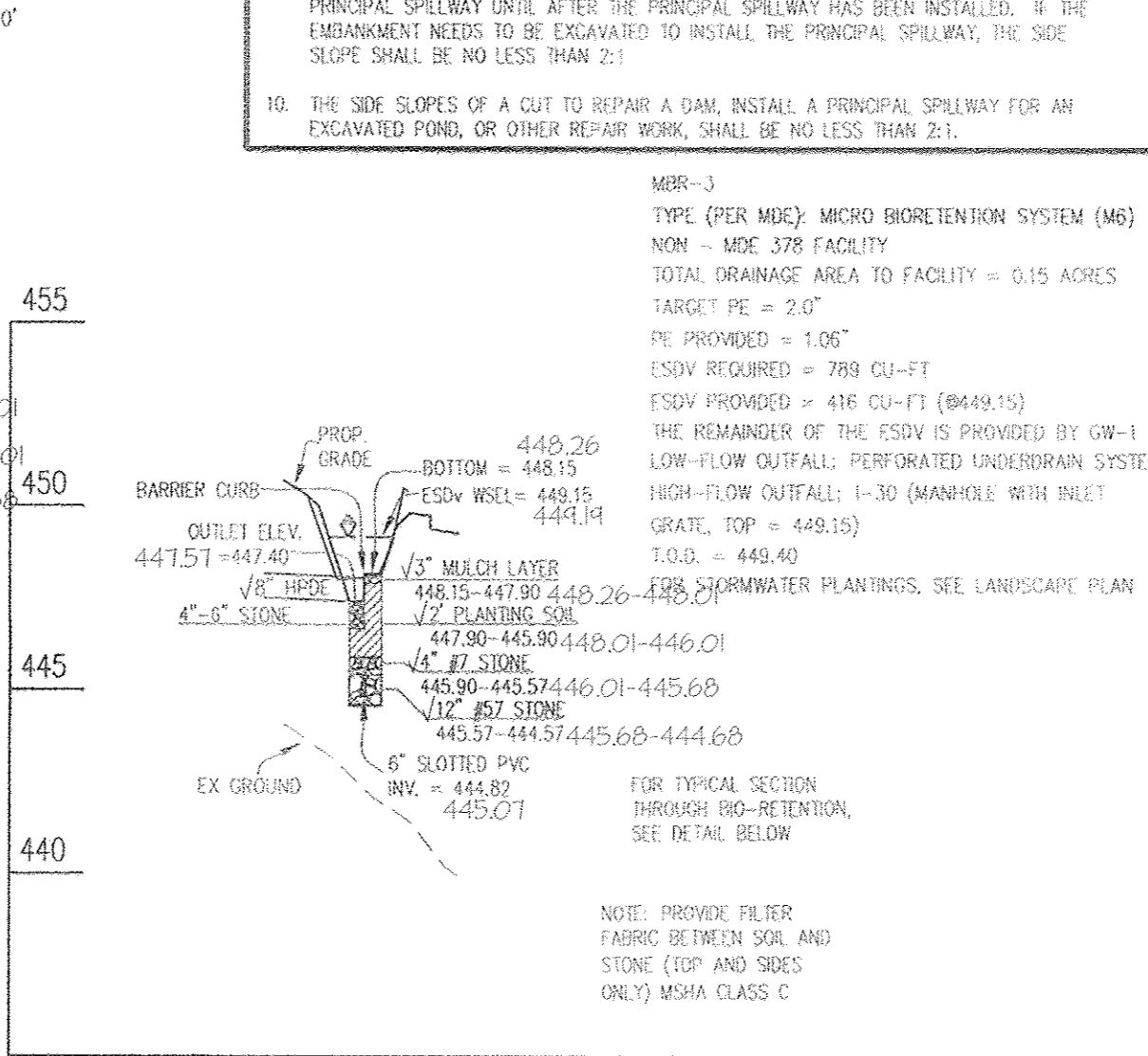
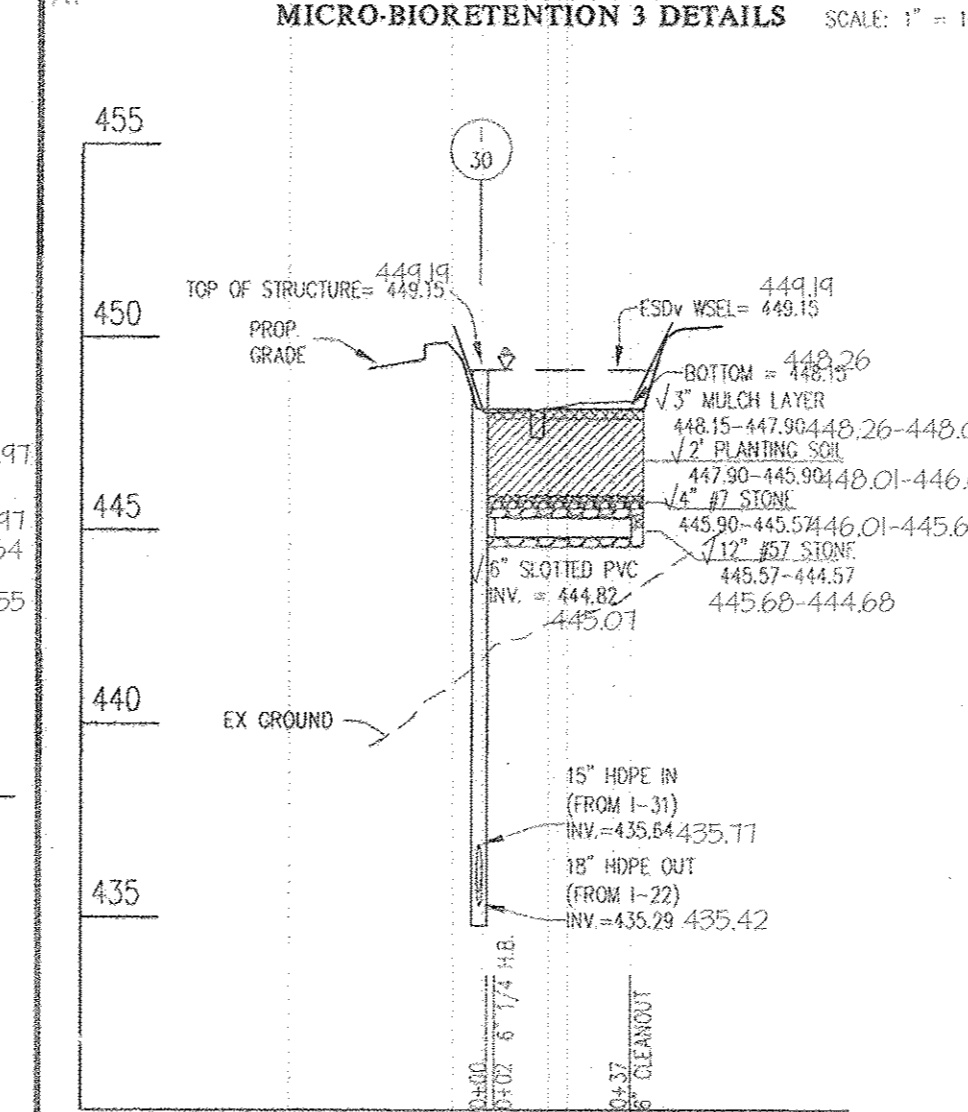
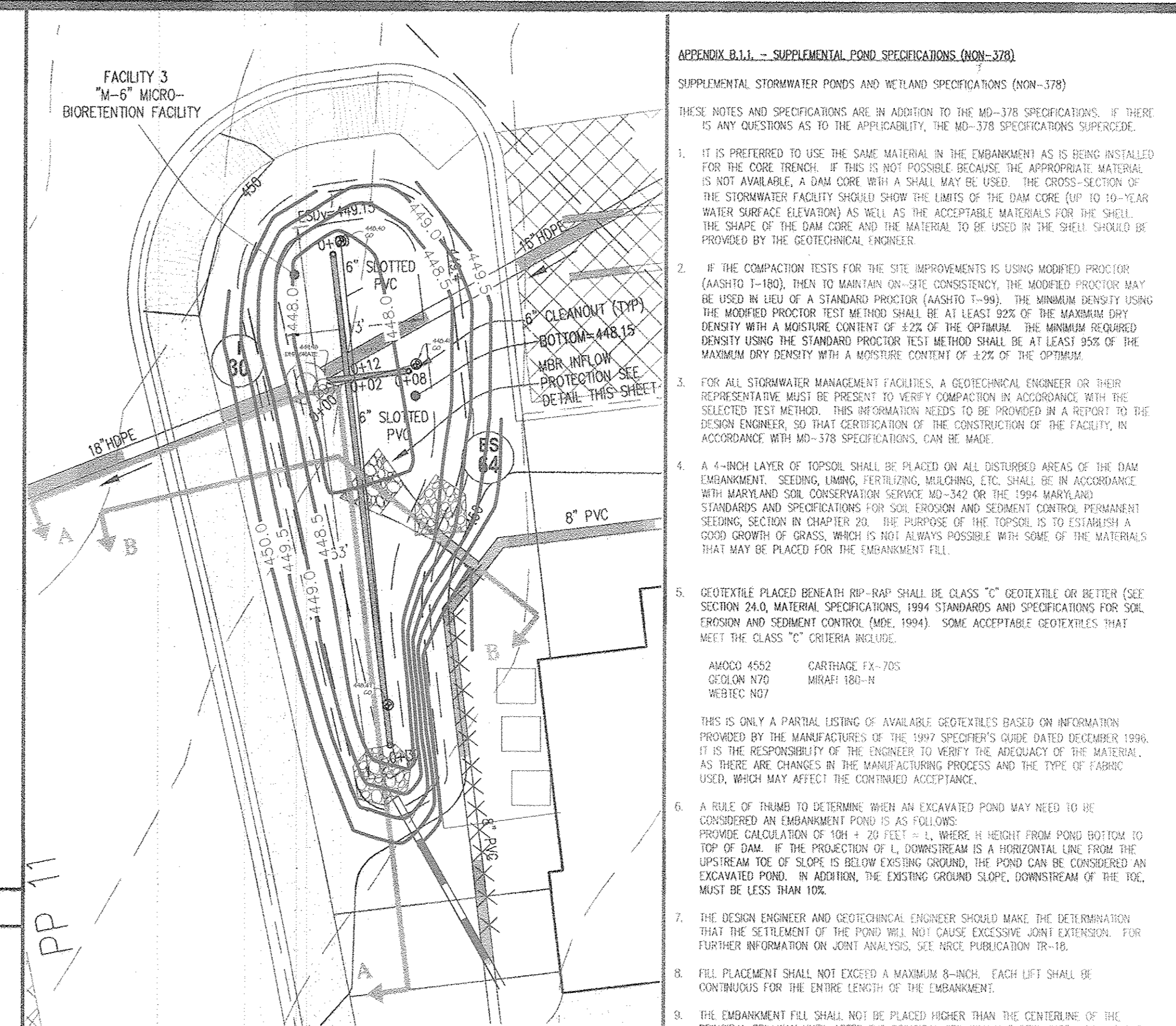


TYPICAL MICRO-BIORETENTION SECTION & INFLOW PROTECTION DETAIL SCALE: NTS

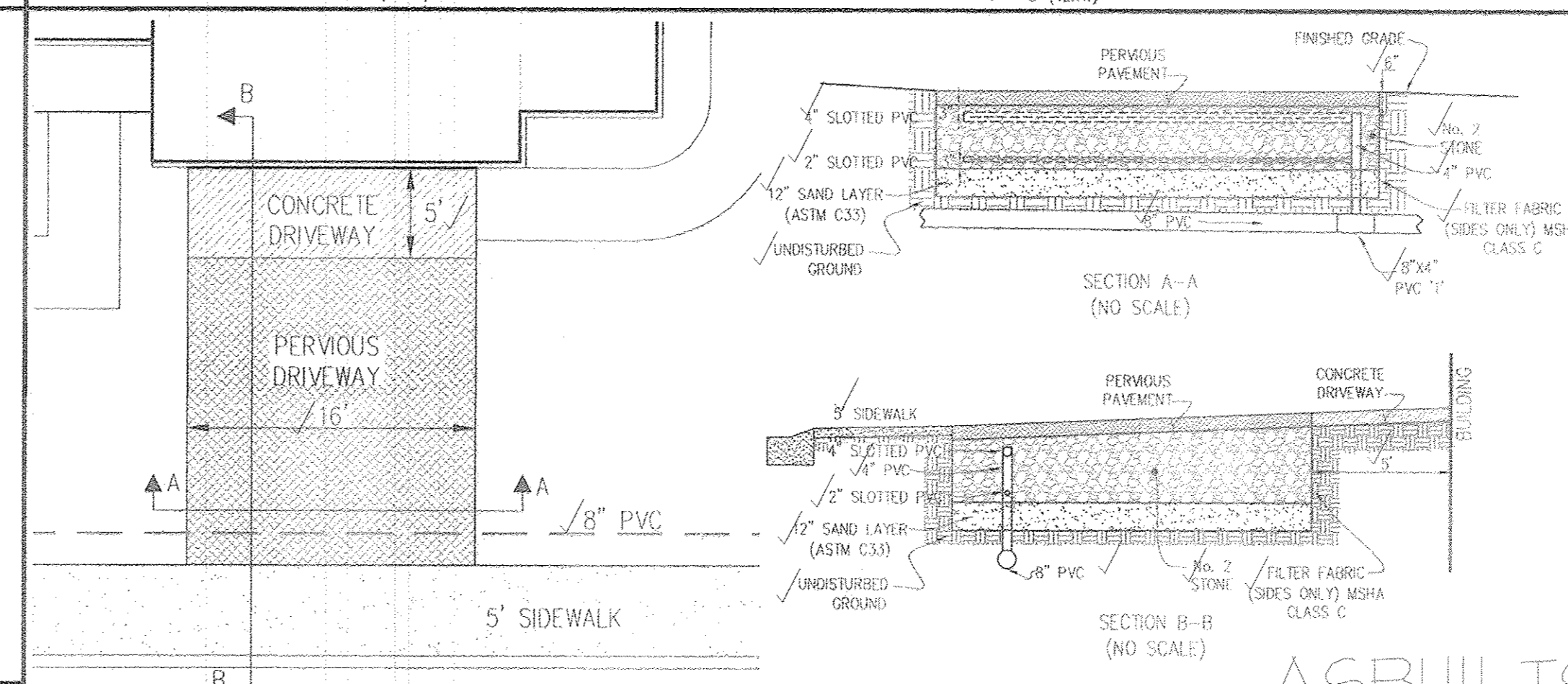
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Mark A. Gutzsch* Date: 3/5/13
 Chief, Division of Land Development: *Kathleen* Date: 3/25/13
 Chief, Development Engineering Division: *David* Date: 3/21/13



ROOF LEADER DETAILS SCALE: 1" = 20'



MICRO-BIORETENTION 3 DETAILS SCALE: 1" = 10'



PERVIOUS DRIVEWAY DETAILS SCALE: NTS

APPENDIX B.1.1 - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)
 SUPPLEMENTAL STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)
 THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTION AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERSEDE.
 1. IT IS PREFERRED TO USE THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT POSSIBLE BECAUSE THE APPROPRIATE MATERIAL IS NOT AVAILABLE, A DAM CORE WITH A SHALL MAY BE USED. THE CROSS-SECTION OF THE STORMWATER FACILITY SHOULD SHOW THE LIMITS OF THE DAM CORE (TOP TO 10-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHELL. THE SHAPE OF THE DAM CORE AND THE MATERIAL TO BE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
 2. IF THE COMPACTION TESTS FOR THE SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (ASTM D 1585), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MODIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (ASTM D 1557). THE MINIMUM DENSITY USING THE MODIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 90% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF 2.2% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 90% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF 4.2% OF THE OPTIMUM.
 3. FOR ALL STORMWATER MANAGEMENT FACILITIES, A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE MUST BE PRESENT TO VERIFY COMPACTION IN ACCORDANCE WITH THE DESIGN ENGINEER, SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDANCE WITH MD-378 SPECIFICATIONS, CAN BE MADE.
 4. A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARSHLAND SOIL CONSERVATION SERVICE MD-347 OR THE 1994 MARSHLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. PERMANENT SEEDING, SECTION IN CHAPTER 20. THE PURPOSE OF THE TOPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE PLACED FOR THE EMBANKMENT FILL.
 5. GEOTEXTILE PLACED BENEATH ROP SHALL BE CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 2400 MATERIAL SPECIFICATIONS, FROM STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MSE, 1994). SOME ACCEPTABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA INCLUDE:
 ARMO 4552 CARTRIDGE EX-705
 GOLON N70 MIRA1 180-N
 WREXER N07
 THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURERS OF THE 1997 SPECIFIER'S GUIDE DATED DECEMBER 1996. IT IS THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ADEQUACY OF THE MATERIAL, AS THERE ARE CHANGES IN THE MANUFACTURING PROCESS AND THE TYPE OF FABRIC USED, WHICH MAY AFFECT THE CONTINUED ACCEPTANCE.
 6. A SOLE OF TRENCH TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMENT POND IS AS FOLLOWS:
 PROVIDE CALCULATION OF 10H + 20 FEET = L, WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L, DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE IS BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE EXISTING GROUND SLOPE, DOWNSTREAM OF THE TOE, MUST BE LESS THAN 10%.
 7. THE DESIGN ENGINEER AND GEOTECHNICAL ENGINEER SHOULD MARK THE DETERMINATION THAT THE SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT EXTENSION. FOR FURTHER INFORMATION ON JOINT ANALYSIS, SEE NCE PUBLICATION TR-16.
 8. FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANKMENT.
 9. THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1.
 10. THE SIDE SLOPES OF A CUT TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO LESS THAN 2:1.

GENERAL NOTES
 1. MATERIAL SPECIFICATIONS
 THE ALLOWABLE MATERIALS TO BE USED IN BIORETENTION AREA ARE DETAILED IN TABLE B.2.
 2. PLANTING SOIL
 THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A OBSTACLE TO PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMOUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.05.020.
 THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
 PH RANGE 5.2 - 7.0
 ORGANIC MATTER 1.5 - 4% (BY WEIGHT)
 MAGNESIUM 35 LB./AC.
 PHOSPHORUS (PHOSPHATE) - P205 75 LB./AC.
 POTASSIUM (POTASH - K2O) 80 LB./AC.
 SOLUBLE SALTS NOT TO EXCEED 500 PPM
 ALL BIORETENTION AREAS SHALL HAVE A MINIMUM OF ONE TEST. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, PHOSPHORUS, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOP SOIL WAS EXCAVATED.
 SINCE DIFFERENT LABS CALIBRATE THEIR TESTING EQUIPMENT DIFFERENTLY, ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. SHOULD THE PH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (HIGHER) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR.
 3. COMPACTION
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION AREA AND THE BIORETENTION BASKET. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. BIORETENTION APPENDIX B.3 CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS, BIORETENTION AND OPEN CHANNELS B.L.S AREAS ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARCH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TIRE TREADS. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LOGS, OR HIGH PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
 COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
 ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIMAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING ROTOTILLING BASE.
 WHEN BACKFILLING THE TOPSOIL, OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.
 WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.
 4. PLANT MATERIAL
 SEE LANDSCAPE PLAN, THIS SPP SET.
 5. PLANT INSTALLATION
 MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 3" TO 5" SHREDED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
 ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/3RD OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING HOLE SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. REGULARLY WATER GROUND BED COVER AFTER INSTALLATION.
 TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.
 GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLOTS SHALL BE PLANTED FOLLOWING THE ROW-GRASS GROUND COVER PLANTING SPECIFICATIONS.
 6. UNDERDRAINS
 UNDERDRAINS ARE TO BE PLACED ON A 3'-0" WIDE SECTION OF FILTER CLOTH PIPE IS PLACED NEXT, FOLLOWED BY THE GRAVEL BEDDING. THE ENDS OF UNDERDRAIN PIPES NOT TERMINATING IN AN OBSERVATION WELL SHALL BE CAPPED.
 THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5% OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).
 7. MISCELLANEOUS
 THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

OPERATION AND MAINTENANCE SCHEDULE FOR
 LANDSCAPE INFILTRATION (M-3) MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), ENHANCED FILTERS (M-9)
 A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. 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 VOL. IAR 6, TABLE A.4.1 AND 2.
 B. THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONCERNED BEYOND TREATMENT. REPLACEMENT PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
 C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PERMANENT MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
 D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
OPERATION AND MAINTENANCE SCHEDULE FOR
 PRIVATELY OWNED AND MAINTAINED SUBMERGED GRAVEL WETLANDS (M-2)
 A. DURING THE FIRST YEAR OF OPERATION, THE OWNER SHALL INSPECT THE FACILITY AFTER EVERY HEAVY STORM AND REPLACE VEGETATION AS NEEDED.
 B. THE OWNER SHALL REMOVE SEDIMENT ACCUMULATED IN THE PRE-TREATMENT AREAS AS NECESSARY.
 C. SIGNS OF UNWELL FLOW WITHIN THE WETLAND MAY MEAN THAT THE GRAVEL OR UNDERDRAIN IS CLOGGED. THE GRAVEL OR UNDERDRAIN SHALL BE REMOVED, CLEANED, AND REPLACED, AS NEEDED.
 D. THE OWNER SHALL ENSURE A DENSE STAND OF WETLAND VEGETATION IS MAINTAINED THROUGHOUT THE LIFE OF THE FACILITY AND REPLACE VEGETATION AS NEEDED.
 E. THE OWNER SHALL ENSURE THE INLETS AND OUTLETS TO EACH GRAVEL WETLAND CELL ARE FREE FROM DEBRIS.
 F. THE OWNER SHALL REPAIR EROSION AT INFLOW POINTS AND ENSURE FLOW SPLITTERS ARE FUNCTIONAL TO PREVENT STORM WATER FROM BYPASSING THE FACILITY.

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
 BURTONTVILLE, MARYLAND 20886
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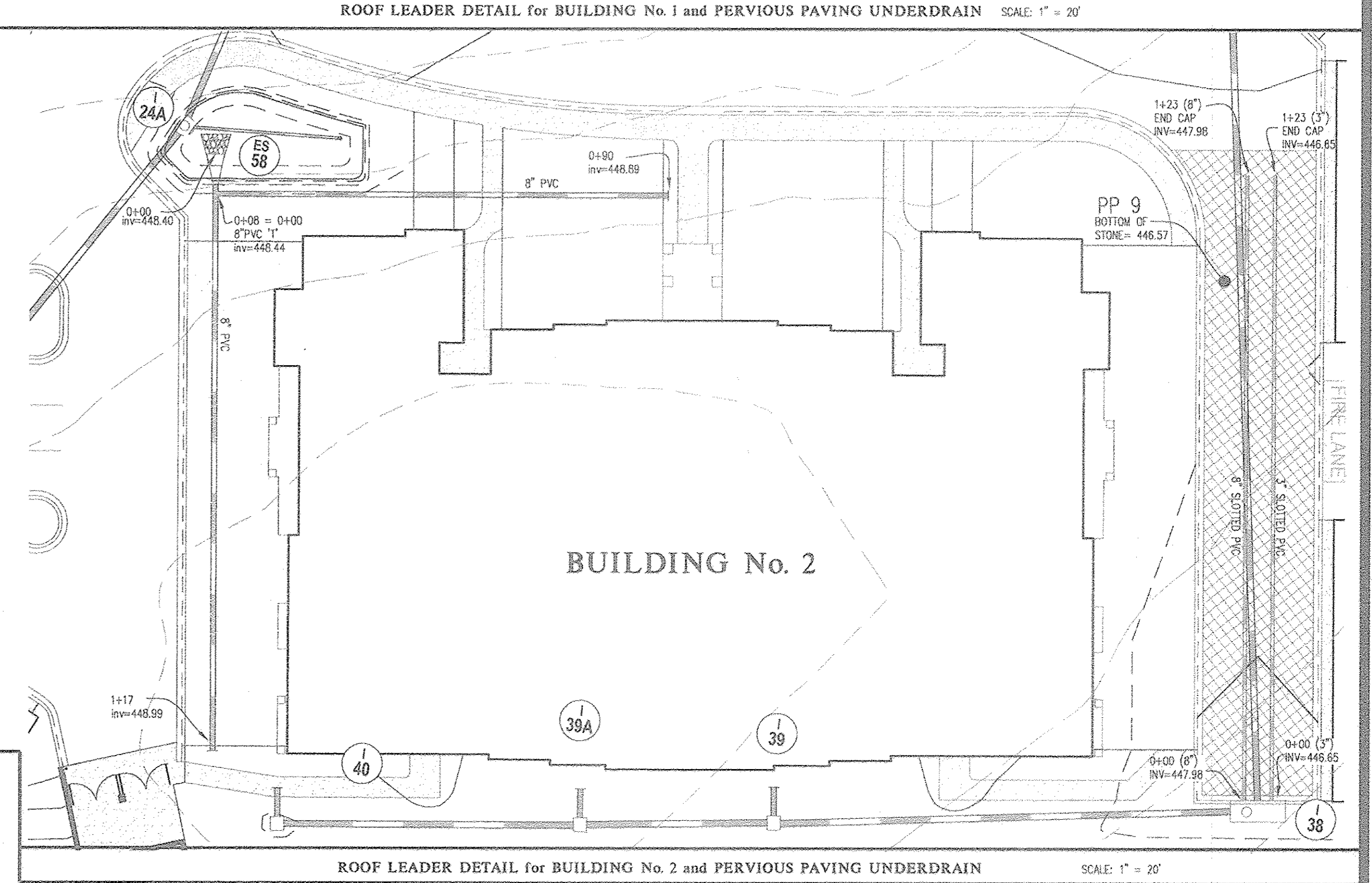
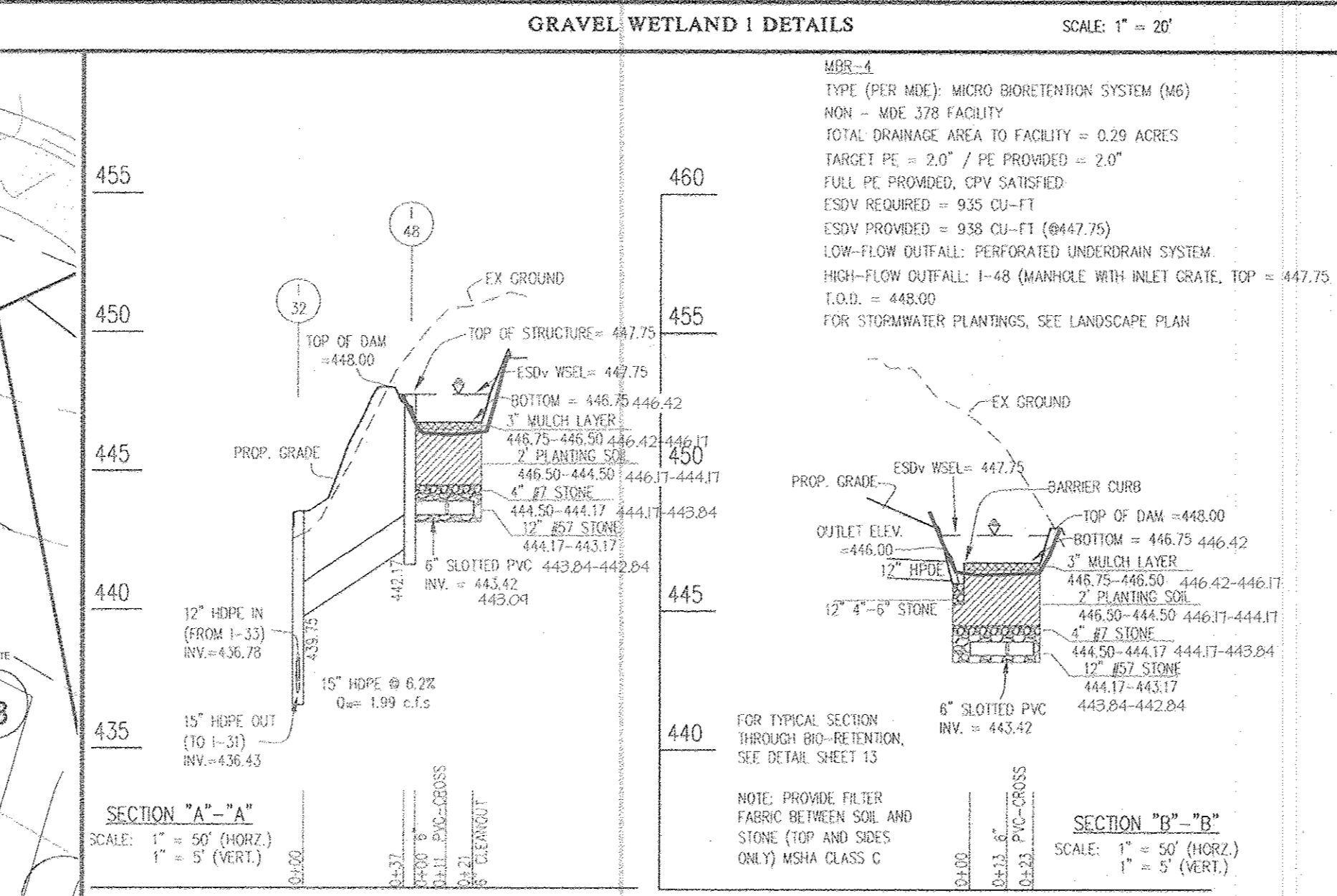
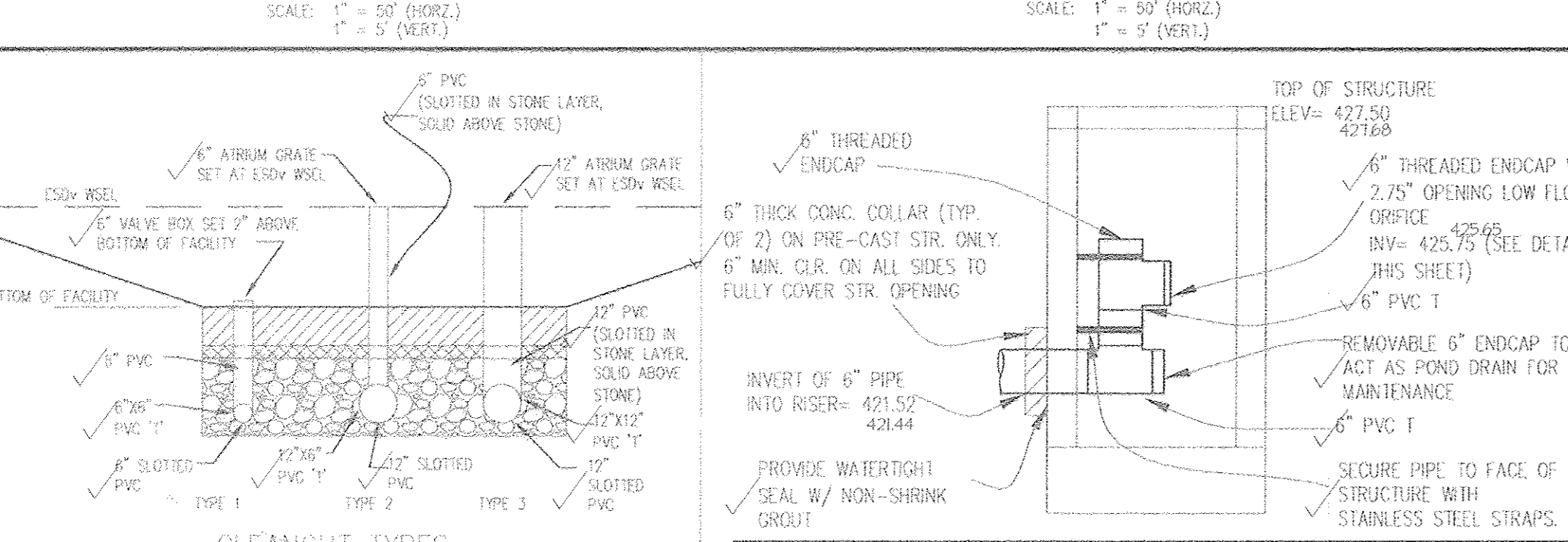
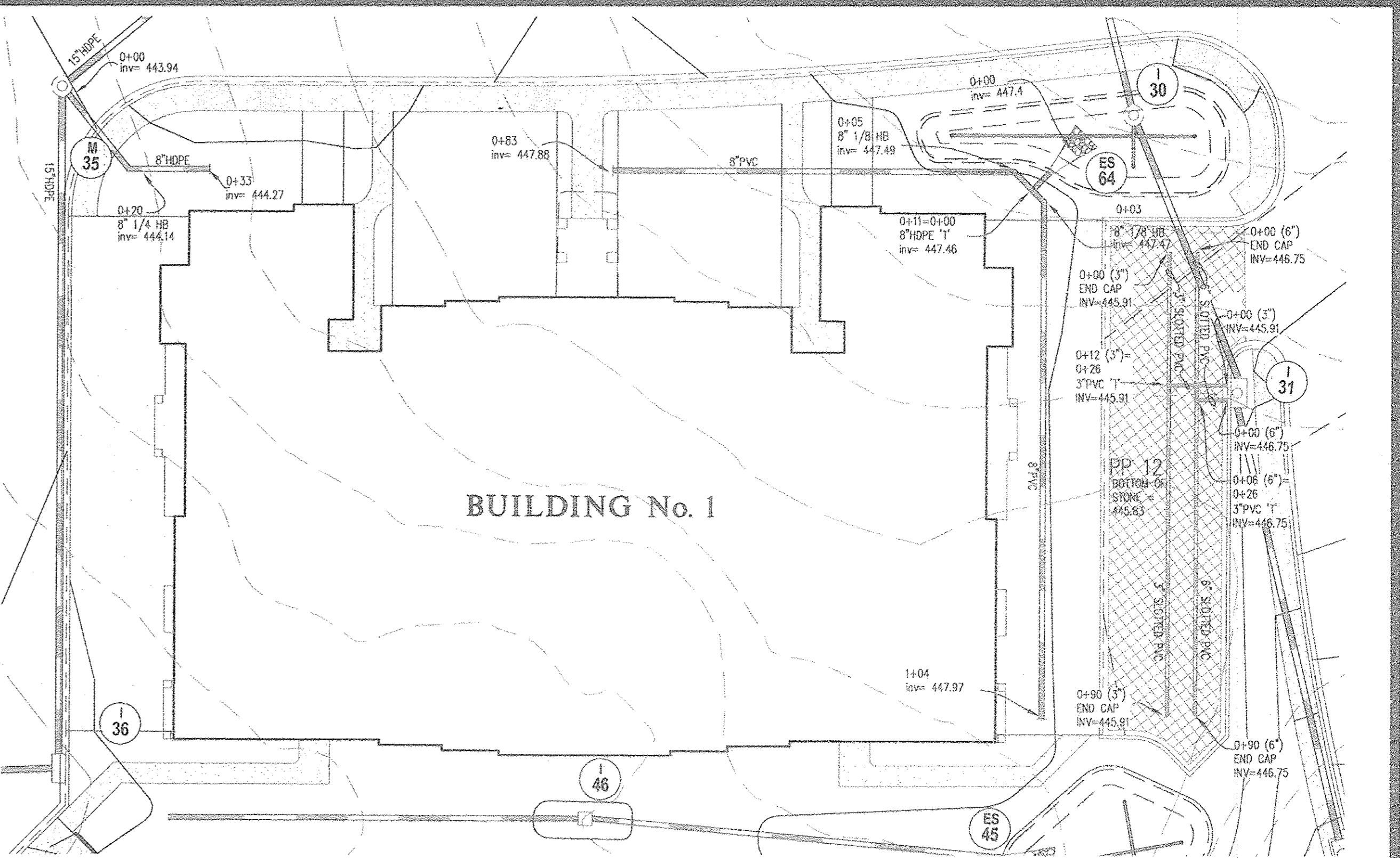
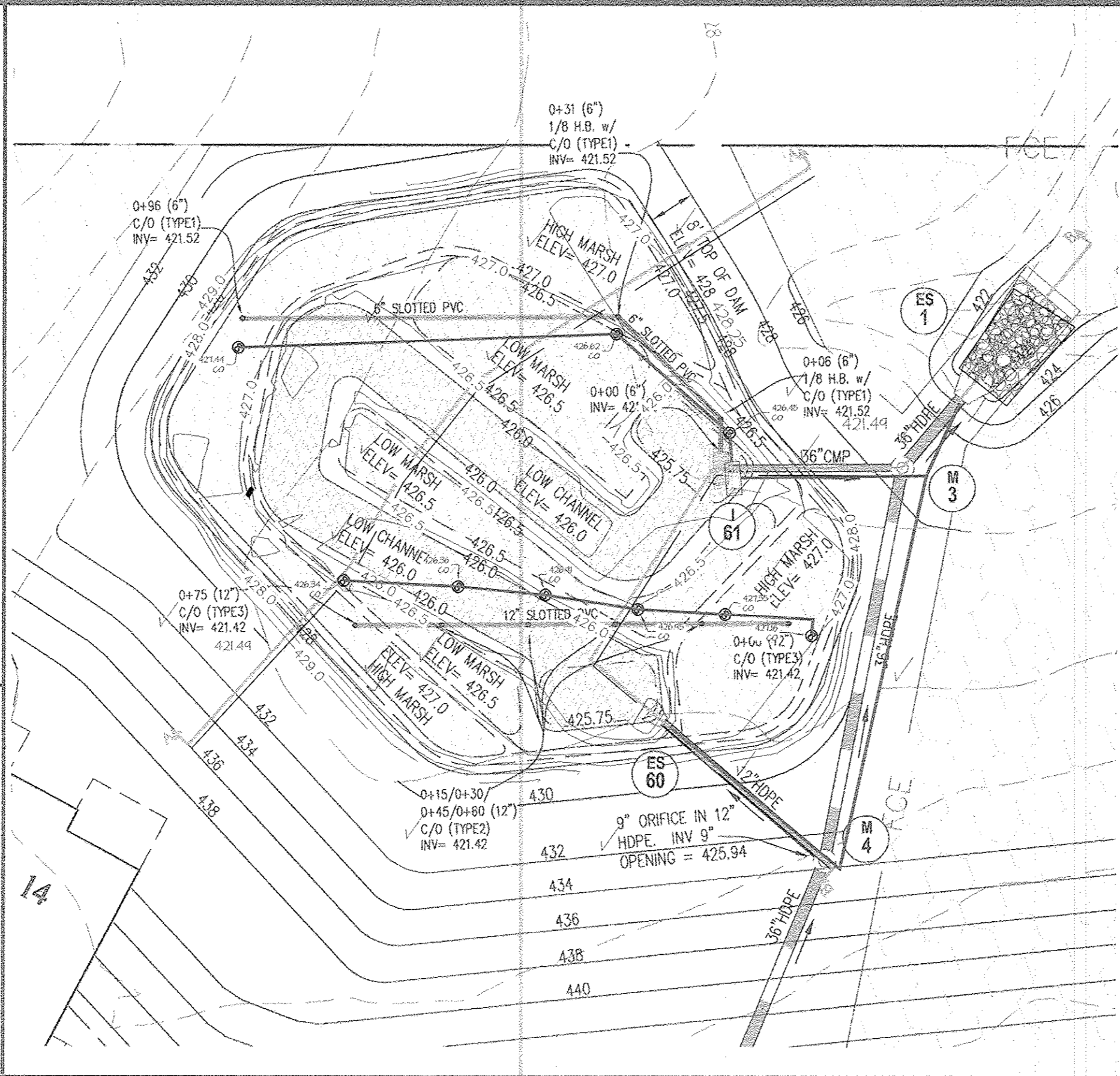
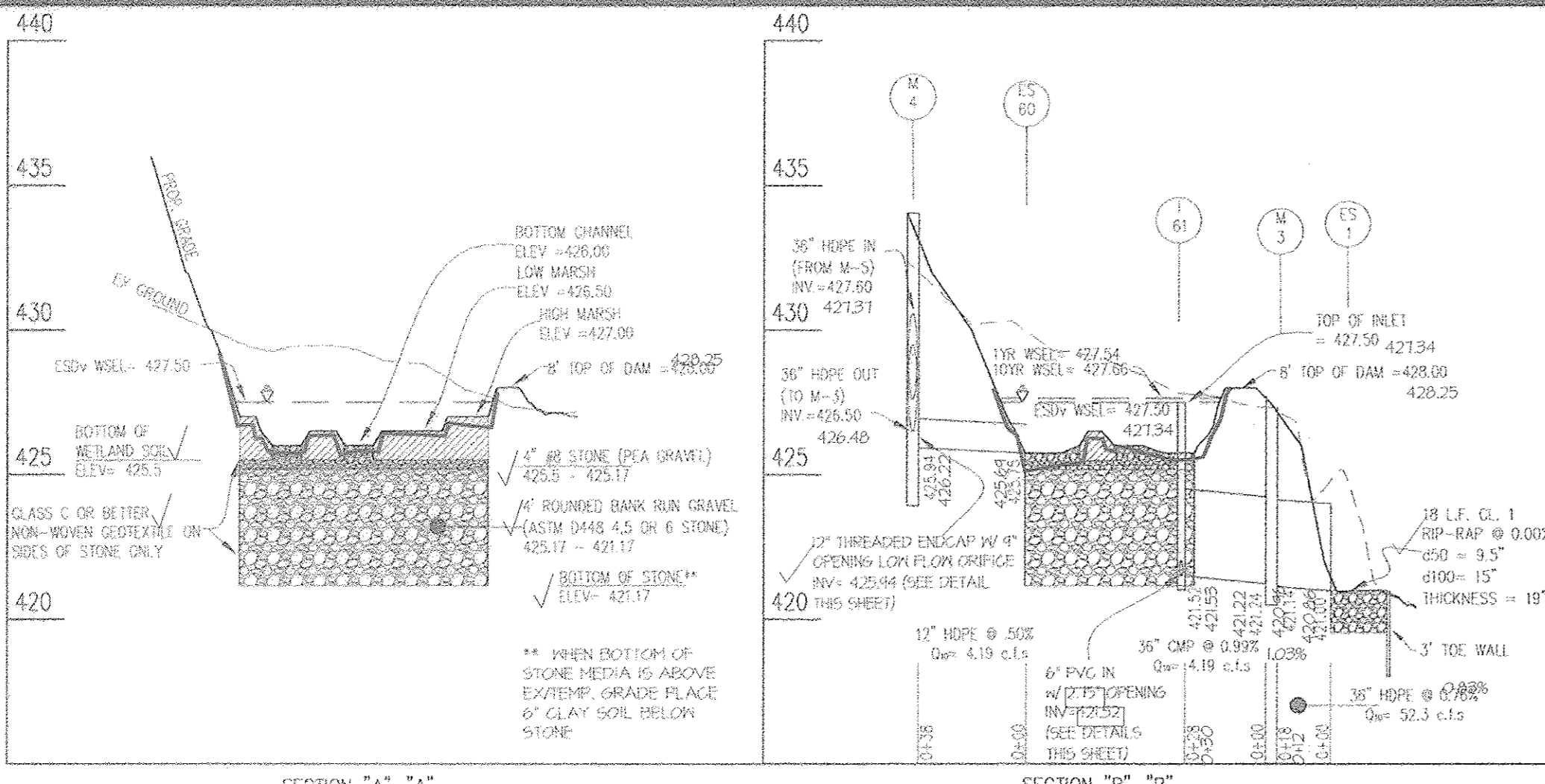
DATE	REVISION	BY	APP'R.
10.17.17	Micro-Bioretentation inflow detail revised	gt	DD

PREPARED FOR:
 NORTHRIIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12975
 EXPIRATION DATE: MAY 26, 2014
 2-1-13

STORMWATER MANAGEMENT DETAILS
THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 12316-12317
 ELECTION DISTRICT No. 2

SCALE	ZONING	G. L. W. FILE NO.
1" = 50'	POR	11005
DATE: FEB. 2013	TAX MAP - GRID: 17 - 23	SHEET: 13 OF 26



CLEANOUT TYPES

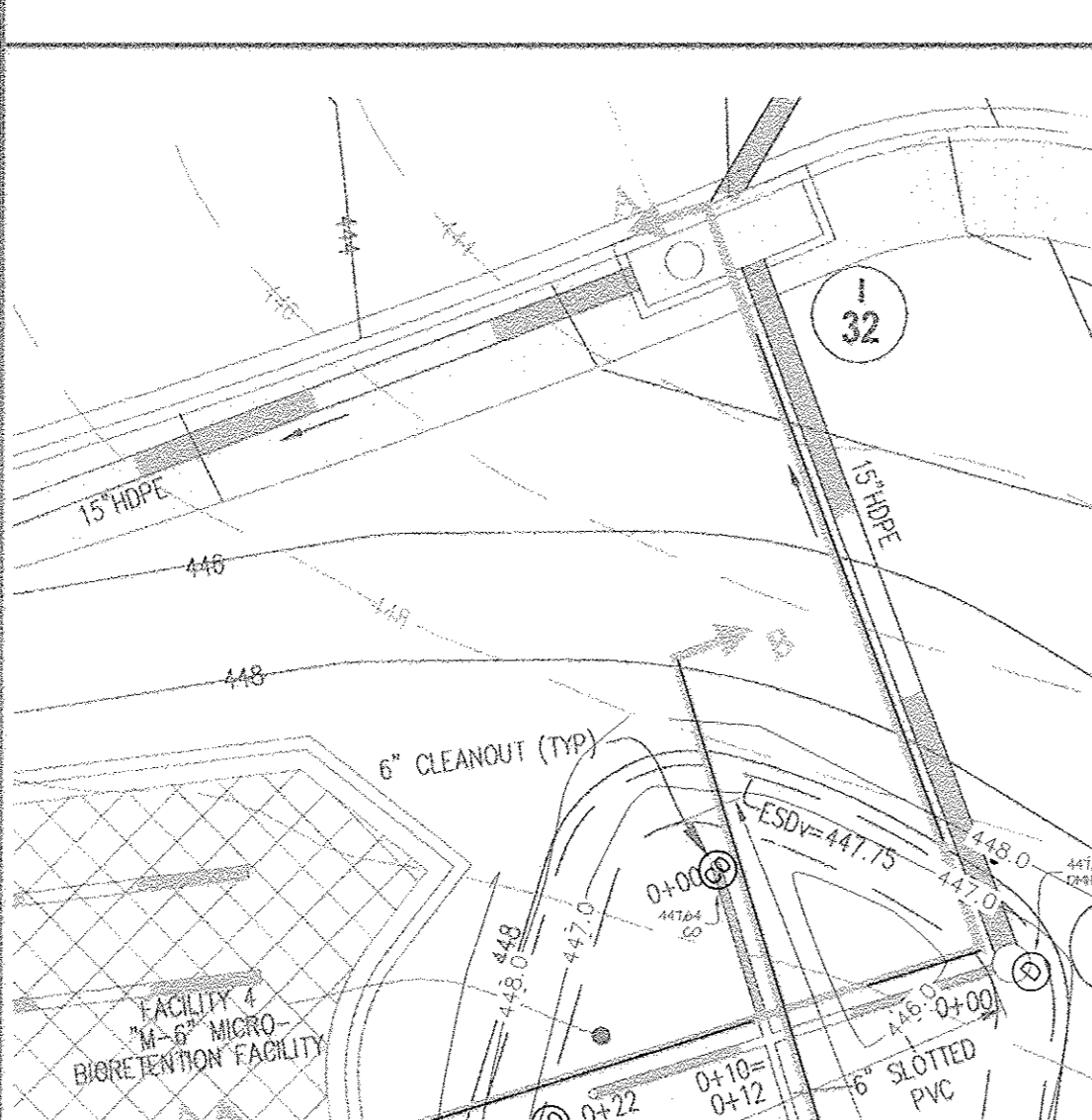
TYPE 1
TYPE 2
TYPE 3

GENERAL NOTES

1. PRELIMINARY

2. CLAY SOIL

IF BOTTOM OF STONE MEDIA IS ABOVE EXTERIOR GRADE, A LOW PERMEABILITY LINER OR SOIL SHOULD BE USED TO MINIMIZE INFILTRATION, PRESERVE HORIZONTAL FLOW IN THE GRAVEL, AND MAINTAIN THE WETLAND PLANTS. ACCEPTABLE OPTIONS INCLUDE: (A) 6\"/>



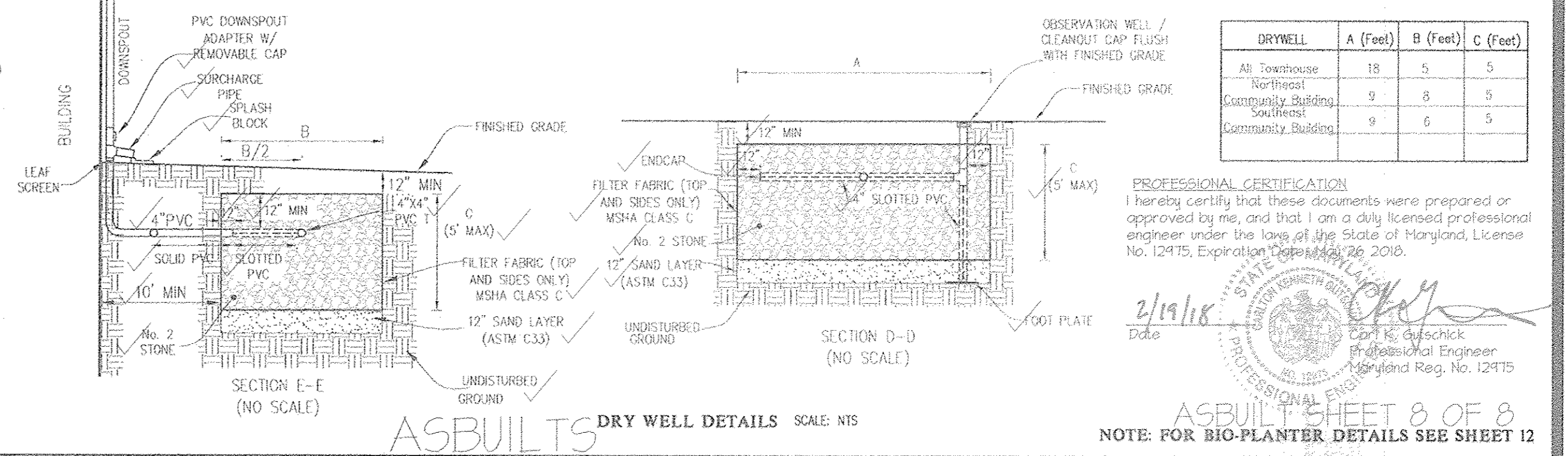
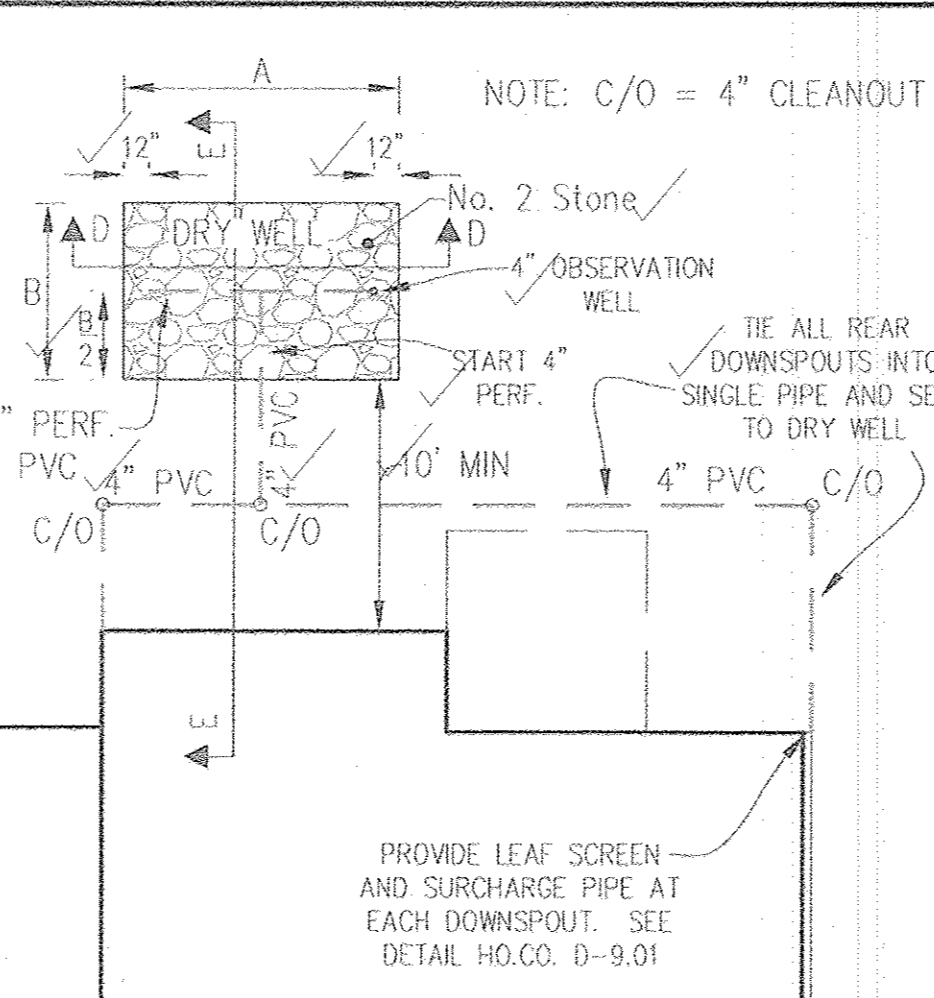
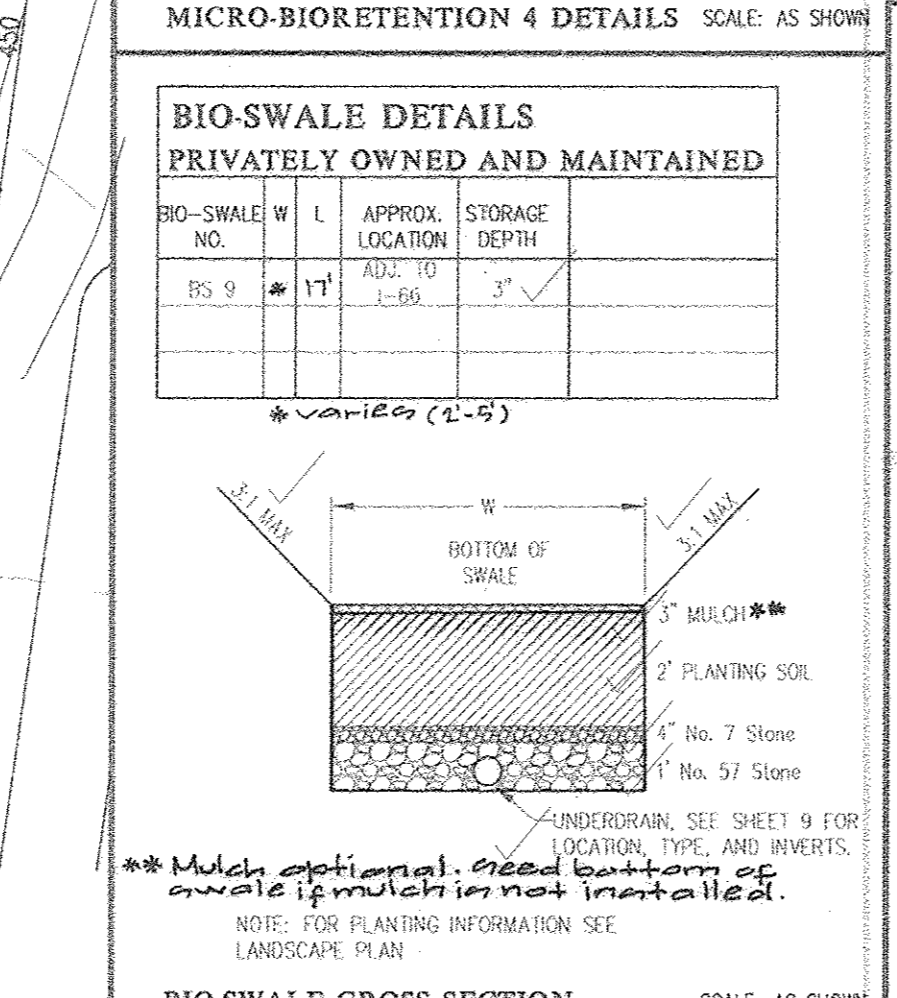
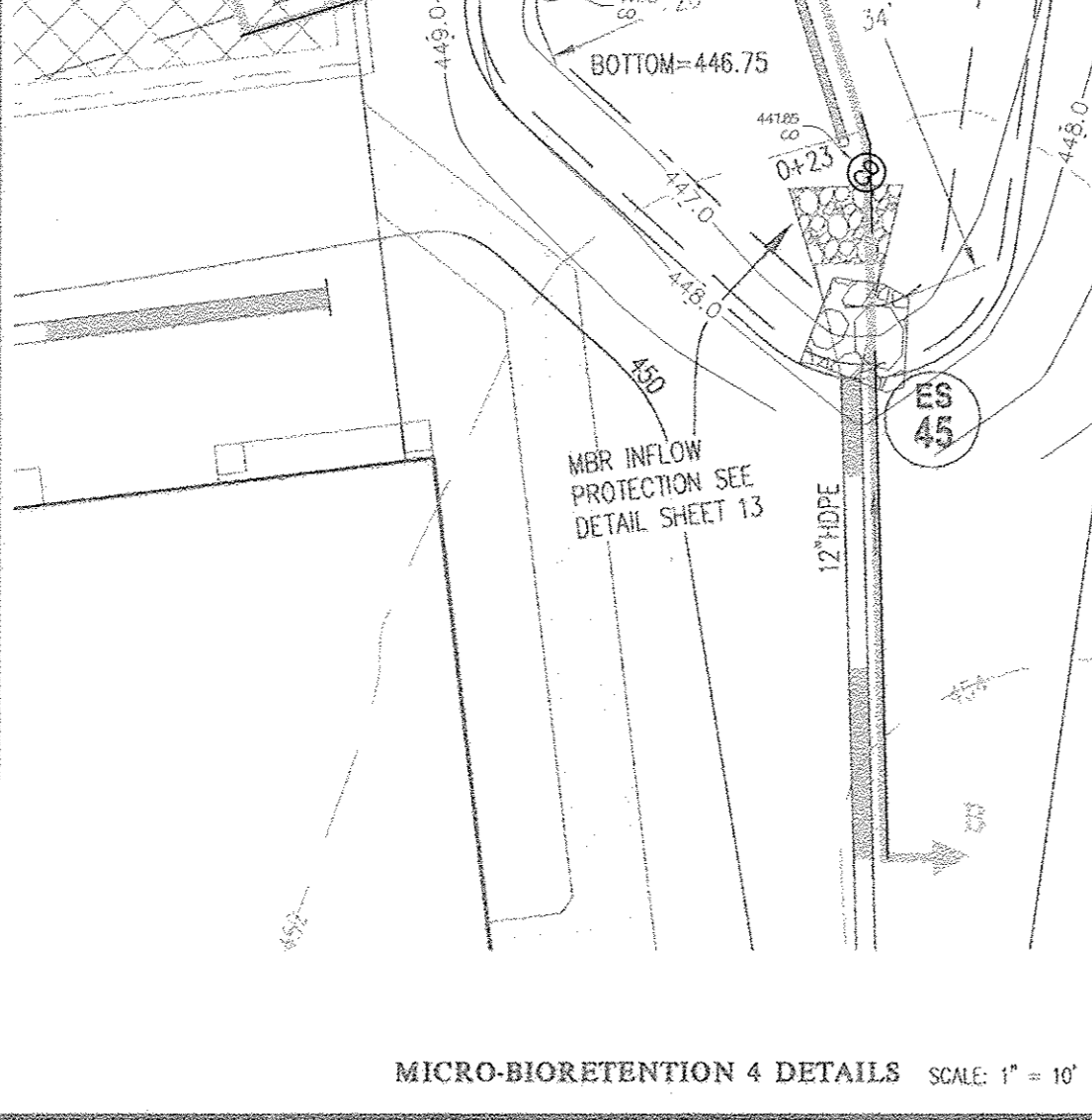
S.D. PIPE SUMMARY TABLE PRIVATELY OWNED AND MAINTAINED			
SIZE (INCHES)	TYPE	QUANTITY (L.F.)	REMARKS
6	SLOTTED PVC	225	SCHEDULE 40
6	SLOTTED PVC	356	SCHEDULE 40
8	SLOTTED PVC	123	SCHEDULE 80
8	PVC	394	SCHEDULE 80
8	HPIPE	106	ADS N12 OR EQ21
12	SLOTTED PVC	75	SCHEDULE 40

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Howard County* Date: 2/21/13

Chief, Division of Land Development: *Howard County* Date: 2/21/13

Chief, Department Engineering Division: *Howard County* Date: 2-21-13



GLWGUTSCHICK LITTLE & WEBER, P.A.

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DATE	REVISION	BY	APPR.
1-13-17	Bio-swale as revised	g+	dds

PREPARED FOR:
NORTHTRIDGE, LLC
24012 FREDERICK ROAD
SUITE 200
CLARKSBURG, MARYLAND 20871
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EXPIRATION DATE: MAY 26, 2014

ASBULTS STORMWATER MANAGEMENT DETAILS

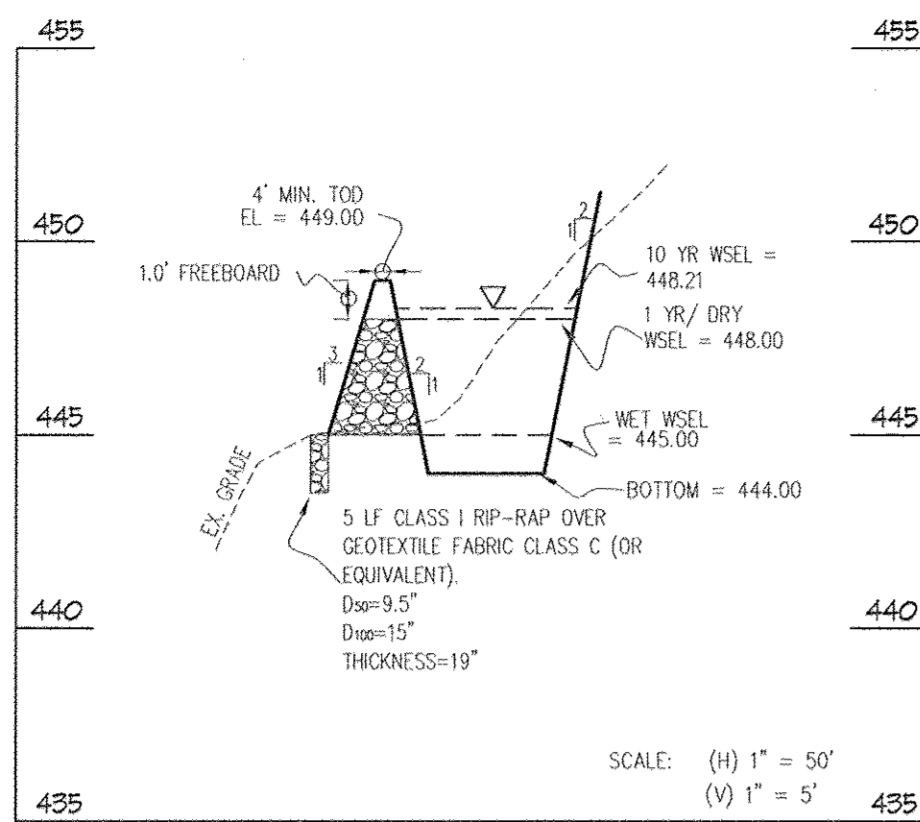
THE GATHERINGS at ELLICOTT MILLS
PARCEL A
AGE RESTRICTED ADULT HOUSING
PLAT Nos. H183 & 12-210-12-217

SCALE: AS SHOWN
ZONING: POR
G. L. W. FILE NO.: 11005

DATE: FEB. 2018
JAN. 2013
TAX MAP - GRID: 17 - 23
SHEET: 14 OF 20

SEDIMENT AND EROSION CONTROL PHASE I SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT AND ARRANGE PRE-CONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR. (1 DAY). ACCESS TO PARCEL C-2 IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE), SILT FENCE (SF), SUPER SILT FENCE (SSF), AND INLET PROTECTION (CIP). (5 DAYS)
- INSTALL TRAPS 1 & BASIN 2 (21 DAYS)
- INSTALL TEMPORARY SWALES C & D AND EARTH Dikes A & B (14 DAYS)
- ONCE PERMISSION HAS BEEN GRANTED FROM THE SEDIMENT CONTROL INSPECTOR, MASS GRADE SITE AND INSTALL RETAINING WALLS 1 & 2. (45 DAYS)
- INSTALL UTILITIES. DELAY CONSTRUCTION OF M-4 UNTIL BASIN IS REMOVED (28 DAYS)
- BEGIN CONSTRUCTION OF BUILDINGS, CURB & GUTTER, SIDEWALK, AND ALL PAVEMENT. DELAY CONSTRUCTION OF PERVIOUS PAVEMENT UNTIL ALL CONSTRUCTION ON THE AREA DRAINING TO THAT PERVIOUS PAVEMENT IS COMPLETE. (180 DAYS)
- ONCE ALL AREA DRAINING TO TRAP 1 HAS BEEN STABILIZED, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE TRAP 1, AND EARTH DIKES A & B. BRING GRADES IN THIS AREA TO ULTIMATE CONFIGURATION. (15 DAYS)
- ONCE 1-33 TO M-5 TO BASIN 2 HAS BEEN INSTALLED, CURB AND GUTTER FROM 1-33 TO M-6, AND THE AREA BETWEEN ADDERLEY AVE AND THE STREAM BUFFER HAS BEEN STABILIZED AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, TEMPORARY SWALE D CAN BE REMOVED. ONCE SWALE D IS REMOVED, BRING GRADES IN THIS AREA TO ULTIMATE CONFIGURATION AND INSTALL RETAINING WALL 3, INSTALL M-4 AND COMPLETE STORM DRAIN FROM M-3 TO M-5. BLOCK OUTLET FROM M-5 TO M-4. (30 DAYS)
- ONCE ALL AREA HAS BEEN STABILIZED AND ALL STORM DRAIN HAS BEEN INSTALLED, CONTRACTOR MAY REMOVE BASIN 2 & TEMP 36" HOPE, BEGIN CONSTRUCTION OF GRAVEL, WETLAND AND UNDERCROCK OUTLET FROM M-5 TO M-4. DURING BASIN REMOVAL, REMOVE SEDIMENT 1' BELOW BOTTOM OF BASIN. MICRO-BIORETENTION FACILITIES MAY BE INSTALLED ONCE ALL CONSTRUCTION ON THE AREA DRAINING TO THE MICRO-BIORETENTION IS COMPLETE. CONTRACTOR DOES NOT HAVE TO REMOVE BASIN UNTIL IT IS NECESSARY TO INSTALL UNITS 14-19. (30 DAYS)
- AFTER BASIN 2 AND TRAP 1 HAVE BEEN REMOVED, PROCEED TO PHASE 2.



SEDIMENT TRAP 1 PROFILE THROUGH PRINCIPAL SPILLWAY

SEDIMENT TRAP 1 DATA TABLE

STONE OUTLET SEDIMENT TRAP
 EXISTING DRAINAGE AREA: 1.6 AC
 WORST CASE INTERIM DRAINAGE AREA: 1.82 AC
 WET STORAGE VOL. REQUIRED: 0.08 AC-FT
 WET STORAGE VOL. PROVIDED: 0.08 AC-FT
 WET STORAGE ELEV.: 448.00
 DRY STORAGE REQUIRED: 0.08 AC-FT
 DRY STORAGE PROVIDED: 0.33 AC-FT
 DRY STORAGE WSEL: 448.00
 EXISTING Q-1YR = 0.24 cfs
 INTERIM Q-1YR = 0 cfs
 SAFE PASS OF 10-YR STORM PROVIDED
 $Q_p = 7.63$ cfs
 10-YR WSEL = 448.21 ft
 BOTTOM ELEVATION: 444.00
 TOP OF EMBANKMENT: 449.00
 WEIR CREST ELEVATION: 448.00
 WEIR LENGTH: 12'
 EMERGENCY SPILLWAY ELEV.: NONE
 CLEANOUT ELEVATION: 444.50
 EMBANKMENT TOP WIDTH: 4'
 SIDE SLOPES: 2:1 INTERIOR - 3:1 EXTERIOR

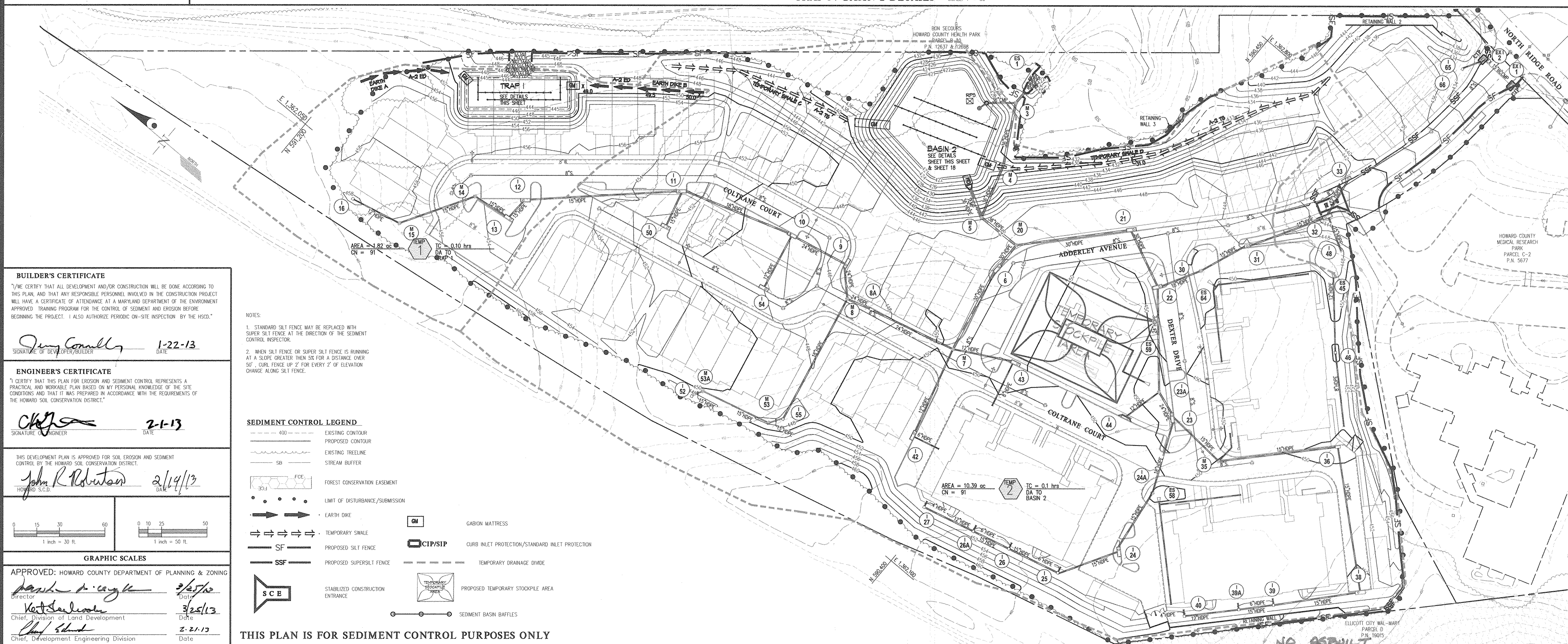
BAFFLE COMPUTATION

- D = 65 FT.
 A WET POOL = 11,033 SOFT
 $We = A/D = 170$
 $Le = 2We = 340$ FT REQUIRED
 $Le = 340$ FT PROVIDED
- D = 110 FT.
 A WET POOL = 11,033 SOFT
 $We = A/D = 101$
 $Le = 2We = 202$ FT REQUIRED
 $Le = 260$ FT PROVIDED
- D = 50 FT.
 A WET POOL = 3,800 SOFT
 $We = A/D = 76$
 $Le = 2We = 152$ FT REQUIRED
 $Le = 205$ FT PROVIDED
- D = 55 FT.
 A WET POOL = 3,800 SOFT
 $We = A/D = 69$
 $Le = 2We = 138$ FT REQUIRED
 $Le = 140$ FT PROVIDED

SEDIMENT BASIN 2 DATA TABLE

INTERIM DRAINAGE AREA: 10.39 AC
 WET STORAGE VOL. REQUIRED: 0.43 AC-FT
 WET STORAGE VOL. PROVIDED: 0.43 AC-FT
 WET STORAGE ELEV.: 422.77
 DRY STORAGE REQUIRED: 0.43 AC-FT
 DRY STORAGE PROVIDED: 0.87 AC-FT
 DRY STORAGE WSEL: 425.9
 BASIN CLEANOUT ELEVATION: 420.88
 EXISTING Q-1YR = 1.41 cfs
 INTERIM Q-1YR = 1.23 cfs
 SAFE PASS OF 10-YR STORM PROVIDED
 $Q_p = 44.69$ cfs
 10-YR WSEL = 426.96 ft
 BOTTOM ELEVATION: 421.0
 TOP OF EMBANKMENT: 428.0
 QUICKEST 48" CMP RISER
 RISER WEIR CREST ELEVATION: 425.90
 RISER WEIR LENGTH: 12.57'
 RISER TRASH RACK/ANTIVORTEX: 72"
 DEWATERING DEVICE = 8" PERFORATED PVC
 WITH 8" PVC BARREL AT 0.0%
 DEWATERING INVERT AT 36" RISER = 422.77
 INVERT FIRST PERFORATION = 422.77
 DEWATERING PERFORATION CONFIGURATION:
 WITH 1" HOLES @ 2' C-C @ 0.0%
 12 HOLES PER CIRCUMFERENTIAL ROW
 18 HOLES RUNNING VERTICALLY
 216 HOLES TOTAL
 EMERGENCY SPILLWAY ELEV.: NA
 SIDE SLOPES: 2:1 INTERIOR - 3:1 EXTERIOR

TRAP 1 / BASIN 2 DETAILS SCALE: 1" = 30'



BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD.

John Conolly 1-22-13
 SIGNATURE OF DEVELOPER/BUILDER DATE

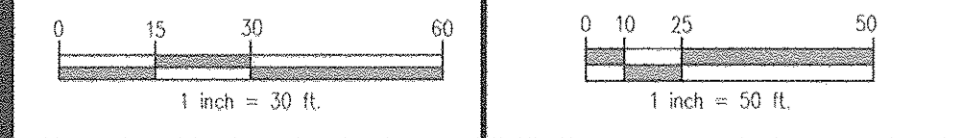
ENGINEER'S CERTIFICATE

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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 2-1-13
 SIGNATURE OF ENGINEER DATE

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

John R. Robertson 2/14/13
 HOWARD S.C.D. DATE



GRAPHIC SCALES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Mark A. Cagle 3/25/13
 Director Date
Neil J. Anderson 3/25/13
 Chief, Division of Land Development Date
Chad Stank 2-21-13
 Chief, Development Engineering Division Date

SEDIMENT CONTROL LEGEND

	400'	EXISTING CONTOUR
		PROPOSED CONTOUR
	SB	EXISTING TREELINE
		STREAM BUFFER
	FCE	FOREST CONSERVATION EASEMENT
		LIMIT OF DISTURBANCE/SUBMISSION
		EARTH DIKE
		TEMPORARY SWALE
		PROPOSED SILT FENCE
		PROPOSED SUPERSILT FENCE
		STABILIZED CONSTRUCTION ENTRANCE
		GABION MATTRESS
		CURB INLET PROTECTION/STANDARD INLET PROTECTION
		TEMPORARY DRAINAGE DIVIDE
		PROPOSED TEMPORARY STOCKPILE AREA
		SEDIMENT BASIN BAFFLES

THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

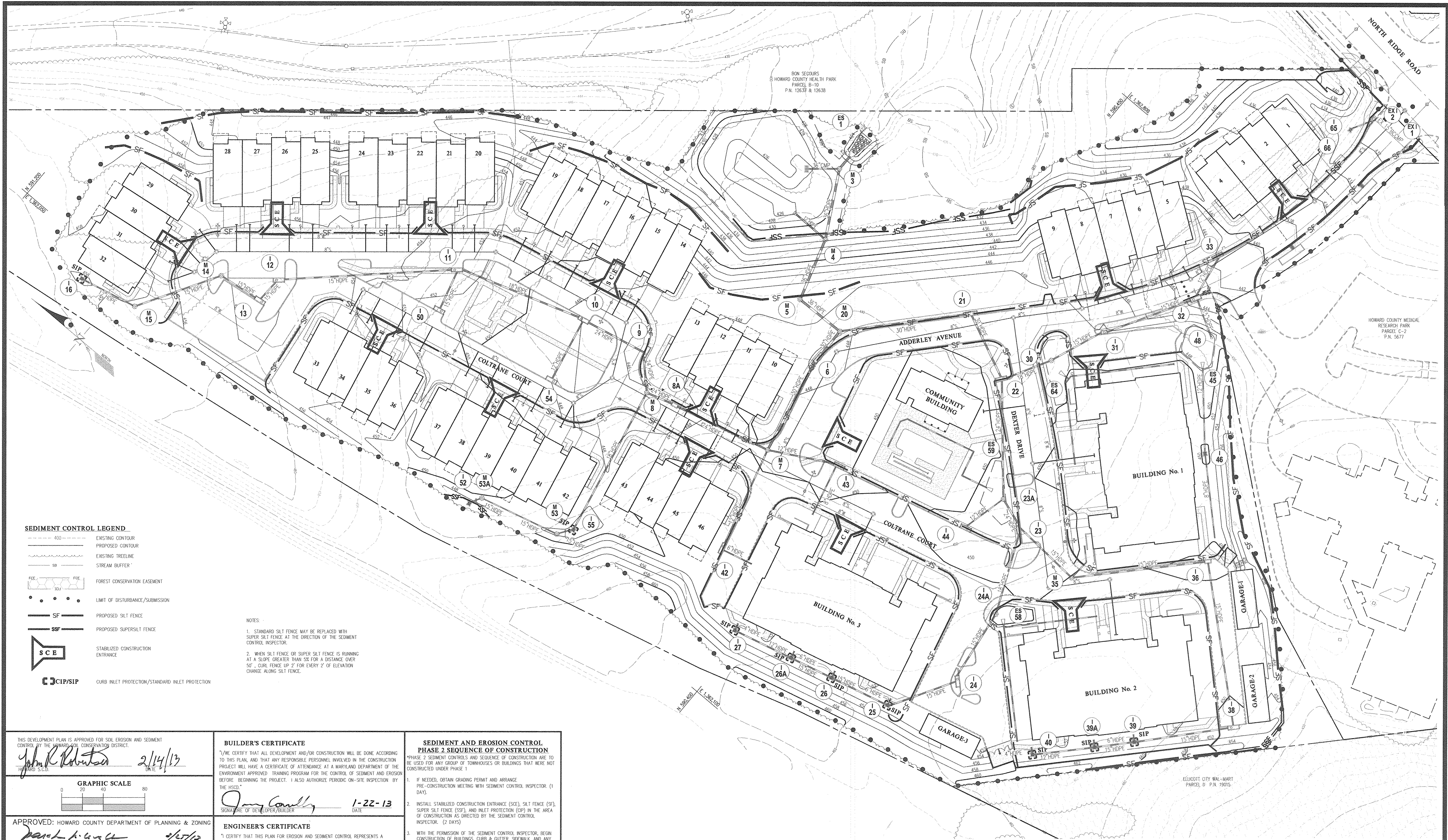
PREPARED FOR:
 NORTHDRIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12975
 EXPIRATION DATE: MAY 28, 2014
 2-1-13



SEDIMENT CONTROL PLAN - PHASE I INFORMATION
THE GATHERINGS at ELLICOTT MILLS 02/19/2013
PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 22216-22217
 ELECTION DISTRICT No. 2
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1" = 50'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	15 OF 26



SEDIMENT CONTROL LEGEND

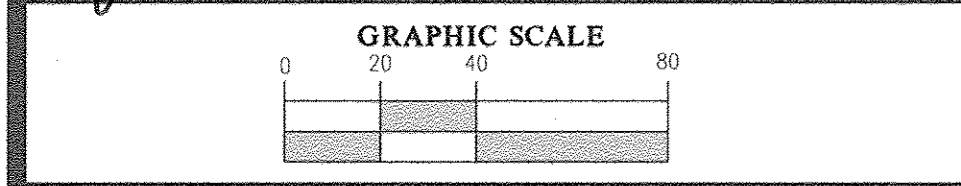
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREELINE
- STREAM BUFFER*
- FOREST CONSERVATION EASEMENT
- LIMIT OF DISTURBANCE/SUBMISSION
- PROPOSED SILT FENCE
- PROPOSED SUPERSILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- CURB INLET PROTECTION/STANDARD INLET PROTECTION

NOTES:

1. STANDARD SILT FENCE MAY BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
2. WHEN SILT FENCE OR SUPER SILT FENCE IS RUNNING AT A SLOPE GREATER THAN 5% FOR A DISTANCE OVER 50', CURB FENCE UP 2" FOR EVERY 2' OF ELEVATION CHANGE ALONG SILT FENCE.

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

John K. Robertson 2/14/13
 Director, HSCD



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David A. Gage 2/27/13
 Director

V. S. L. L. L. 3/25/13
 Chief, Division of Land Development

Ch. Ch. 2-27-13
 Chief, Development Engineering Division

BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD.

Jerry Conolly 1-22-13
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S 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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Ch. Ch. 2-1-13
 SIGNATURE OF ENGINEER DATE

- SEDIMENT AND EROSION CONTROL PHASE 2 SEQUENCE OF CONSTRUCTION**
- *PHASE 2 SEDIMENT CONTROLS AND SEQUENCE OF CONSTRUCTION ARE TO BE USED FOR ANY GROUP OF TOWNHOUSES OR BUILDINGS THAT WERE NOT CONSTRUCTED UNDER PHASE 1
1. IF NEEDED, OBTAIN GRADING PERMIT AND ARRANGE PRE-CONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR. (1 DAY)
 2. INSTALL STABILIZED CONSTRUCTION ENTRANCE (SCE), SILT FENCE (SF), SUPER SILT FENCE (SSF), AND INLET PROTECTION (CIP) IN THE AREA OF CONSTRUCTION AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. (2 DAYS)
 3. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN CONSTRUCTION OF BUILDINGS, CURB & GUTTER, SIDEWALK, AND ANY PAVEMENT. DELAY CONSTRUCTION OF PERVIOUS PAVEMENT UNTIL ALL CONSTRUCTION ON THE AREA DRAINING TO THAT PERVIOUS PAVEMENT IS COMPLETE. (60 DAYS)
 4. ONCE ALL CONSTRUCTION IN EITHER THE BUILDING PAD OR GROUP OF TOWNHOUSES IS COMPLETE AND ALL THE AREA HAS BEEN STABILIZED, INSTALL ANY PERVIOUS PAVEMENT, MICRO-BIODEGRADABLE OR DRYWELLS IN THE AREA. (10 DAYS)

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:
 NORTHBRIDGE, LLC
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 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULLE
 301-428-0800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12975
 EXPIRATION DATE: MAY 26, 2014

Ch. Ch. 2-1-13



THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY **NO ASBUILT**

SEDIMENT CONTROL PLAN - PHASE 2 INFORMATION

THE GATHERINGS at ELLICOTT MILLS 02/19/2013
PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 12910-12917

SCALE 1" = 40'	ZONING POR	G. L. W. FILE No. 11005
DATE JAN. 2013	TAX MAP - GRID 17 - 23	SHEET 16 OF 26

B-4.2 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION
THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES
WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

- SEED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENEED, IT MUST NOT BE LOOSE OR DRAGGED SOUTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- USE OTHER FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- INCORPORATE LIME FINE TEXTURE INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

- A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - a. SOIL PH BETWEEN 6.0 AND 7.0.
 - b. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - c. SOIL SOLIDS LESS THAN 40 PERCENT PLUS BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOGGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
- SOIL SOLIDS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
- SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LIME AREAS TO SMOOTH THE SURFACE. REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WOULD NOT PERMIT PREPARATION. TRACK SEED APPLICATION WITH A ROLLER OR FLAT TIRE TRUCK EQUIPPED WITH A ROLLER OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WOULD NOT PERMIT PREPARATION. TRACK SEED APPLICATION WITH A ROLLER OR FLAT TIRE TRUCK EQUIPPED WITH A ROLLER OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WOULD NOT PERMIT PREPARATION.

B. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRAINAGE.
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN USE TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SURVEY PUBLISHED BY USDA-NRCS.
- TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUOUS SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - d. THE SOIL IS SO AODIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
- SOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
 - a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILTY LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF ONDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.
 - b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THIMBLE, OR OTHERS AS SPECIFIED.
 - c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
- SOIL APPLICATION
- EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. UNIFORMITY IN DISTRIBUTION OF TOPSOIL TO A MINIMUM THICKNESS OF 4 INCHES, SPREADING IS TO 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 MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

- SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATES AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSES MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
- FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FINE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
- LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME) MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING, WHICH CONTAINS AT LEAST 50 PERCENT TYPICAL ONDERS (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #200 MESH SIEVE.
- LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. WHERE THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

B-4.3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE
TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES
TO THE SURFACE OF ALL PERMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

A. SEEDING

1. SPECIFICATIONS

- ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
- MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS APPROPRIATE SEEDING MIXTURE MUST BE APPLIED BEFORE THE GROUND THAW.
- MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS APPROPRIATE SEEDING MIXTURE MUST BE APPLIED BEFORE THE GROUND THAW.
- INCULCANTS: THE INCULCANT FOR TREATING LEADOM SEEDS IN THE SEED MIXTURE MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA. PREPARED SPECIFICALLY FOR THE SPECIES. INCULCANTS MUST NOT BE USED LATER THAN THE DATE SPECIFIED ON THE CONTAINER. ADD FRESH INCULCANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INCULCANT AS COOL AS POSSIBLE. USED, TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN KILL BACTERIA AND MAKE THE INCULCANT LESS EFFECTIVE.
- SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

- DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
 - i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE CUMULATIVE SEEDING TABLE B.3. OR PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SOIL TO SOIL CONTACT.
- DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - i. CULTIPACKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING SEEDBED MUST BE FROM AFTER PLANTING.
 - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE; TOTAL SOLUBLE NITROGEN: P205 (PHOSPHORUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
 - ii. LIME: USE ONLY HIGH PURITY, INDUSTRIAL GRADE 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.
 - iii. MIX SEED AND FERTILIZER ON SITE AND USE IMMEDIATELY AND WITHOUT INTERMIXING.
 - iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

- STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, BEATEN, OR EXCESSIVELY DISPERSED. STRAW IS TO BE FREE OF STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.
- WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM AND DEFTLY SIFTED MULCH. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION. WCFM MUST CONTAIN NO CERAMIC OR GROWTH INHIBITING FACTORS.
- WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER Aeration and will blend with seed, fertilizer and other additives to form a homogeneous slurry. THE MULCH MATERIAL MUST BE A BUTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND PRELATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
- WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

- APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM AND DEFTLY SIFTED MULCH ON THE SOIL SURFACE. IT IS NOT EXPOSED WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
- WOOD CELLULOSE FIBER USED TO MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO A MISTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

- PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO PREVENT LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
 - i. MULCH ANCHORING TOOL: IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTO SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 - ii. WOOD CELLULOSE FIBER MULCH: WCFM MAY BE USED FOR ANCHORING STRAW APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - iii. SYNTHETIC BINDERS SUCH AS ACRYLIC UREA (ACRO-TAK), DCA-70, PEG-RET, TERRA-TAK, TERRA MANUFACTURER, APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVY AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 - iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4.4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

A. SEED MIXTURES

- SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BEING ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
- FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONG AS PRESCRIBED IN SECTION B-4-4-3A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

No.	SPECIES	APPLICATION RATE (lb/oc)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-10)		LIME RATE
					N	P	
1	ANNUAL RYEGRASS	40 lb/oc	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 INCHES	436 lb/oc (90 lb / 1,000 sq ft)	2 tons/oc (400 lb / 1,000 sq ft)	
2	PEARL MILLET	20 lb/oc	May 16 to July 31	0.5 INCHES			

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 313-1855
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND REVISIONS THEREOF.
- REVISIONS INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - a. 3 CALENDAR DAYS AS TO THE SURFACE OF ALL PERMETER ODDS, SWALES, DITCHES, PERMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1 HORIZONTAL TO 1 VERTICAL (3:1 AND FLATTER).
 - b. 7 CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SOIL TEMPORARY SEEDINGS AND MULCHING (SEC. B). TEMPORARY STABILIZATION, WITH MULCH ALONE, CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND."
- CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF SEED PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
- IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:
 - WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDNESS ZONE: 5B)
 - CENTRAL MD: MARCH 10 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 6)
 - SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 7A, 7B)
- TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
- IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FULLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN THE PLANTING SEASON, IN ANOMALY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)		LIME RATE
					N	P	
9	Certified Tall Fescue blend (95% by weight), Falcov IV, Penn 1901 & Rebel Excel	6-8 lb/oc	Mar. 1 to May 15, Aug. 1 to Oct. 15	1/4 - 1/2 IN.	1.0 lb/oc / 1000 sq ft	1.0 lb/oc / 1000 sq ft	
	Certified Kentucky Bluegrass blend (50% by weight), Courtyard, Raven & Yankee	10 lb/oc	Mar. 1 to May 15, Aug. 1 to Oct. 15	1/4 - 1/2 IN.	1.0 lb/oc / 1000 sq ft	1.0 lb/oc / 1000 sq ft	

* Other cultivars listed as "grown" in the most current UNID 17-77 may also be used

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES.

PURPOSE

- TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.
- AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

CONDITIONS WHERE PRACTICE APPLIES

MULCH ANCHORING TOOL: IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTO SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.

SPECIFICATIONS

- MULCHES: SEE SECTION B-4-2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS, SECTION B-4-3 SEEDING AND MULCHING, AND SECTION B-4-4 TEMPORARY STABILIZATION.
- VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION.
- TILLAGE: TILL TO PLOUGH SURFACE AND BRING CLDS TO THE SURFACE BEING PLOUGHED ON WINDWARD SIDE OF CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION: SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. THE SITE MUST NOT BE IRRIGATED TO THE POINT THAT RUNOFF OCCURS.
- BARRIERS: SOLD BOARD FENCES, SILT FENCES, SNOW FENCES, BURGLAR FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.
- CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

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

John Robertson 2/2/13
HOWARD S.C.D. DATE

ENGINEER'S 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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT.

Chris... 2-1-13
DATE

BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION HAS BEEN DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORITY PERIODIC ON-SITE INSPECTION BY THE HCD.

Jimmy Connelly 1-22-13
SIGNATURE OF DEVELOPER/BUILDER DATE

B-4.5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE
TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES
EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

A. SEED MIXTURES

- GENERAL USE
 - a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2, ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DORIES OR FOR SPECIAL PURPOSES SUCH AS WINDLIFE OR ACTIVE BROWN TURTLE HABITAT ARE TO BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE MANUAL, SECTION 342 - TREATMENT AREA PLANTING.
 - c. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (500 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
- TURFGRASS MIXTURES
 - a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

SEDIMENT CONTROL NOTES

- KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS: SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE. FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS: CERTIFIED KENTUCKY BLUEGRASS: SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
- KENTUCKY BLUEGRASS/TINE FESCUE: SHADE MIXTURE. FOR USE IN AREAS WITH SHADE AND/OR LIMITED LIGHT FOR ESTABLISHMENT IN FULL SUN. RECOMMENDED MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED TINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

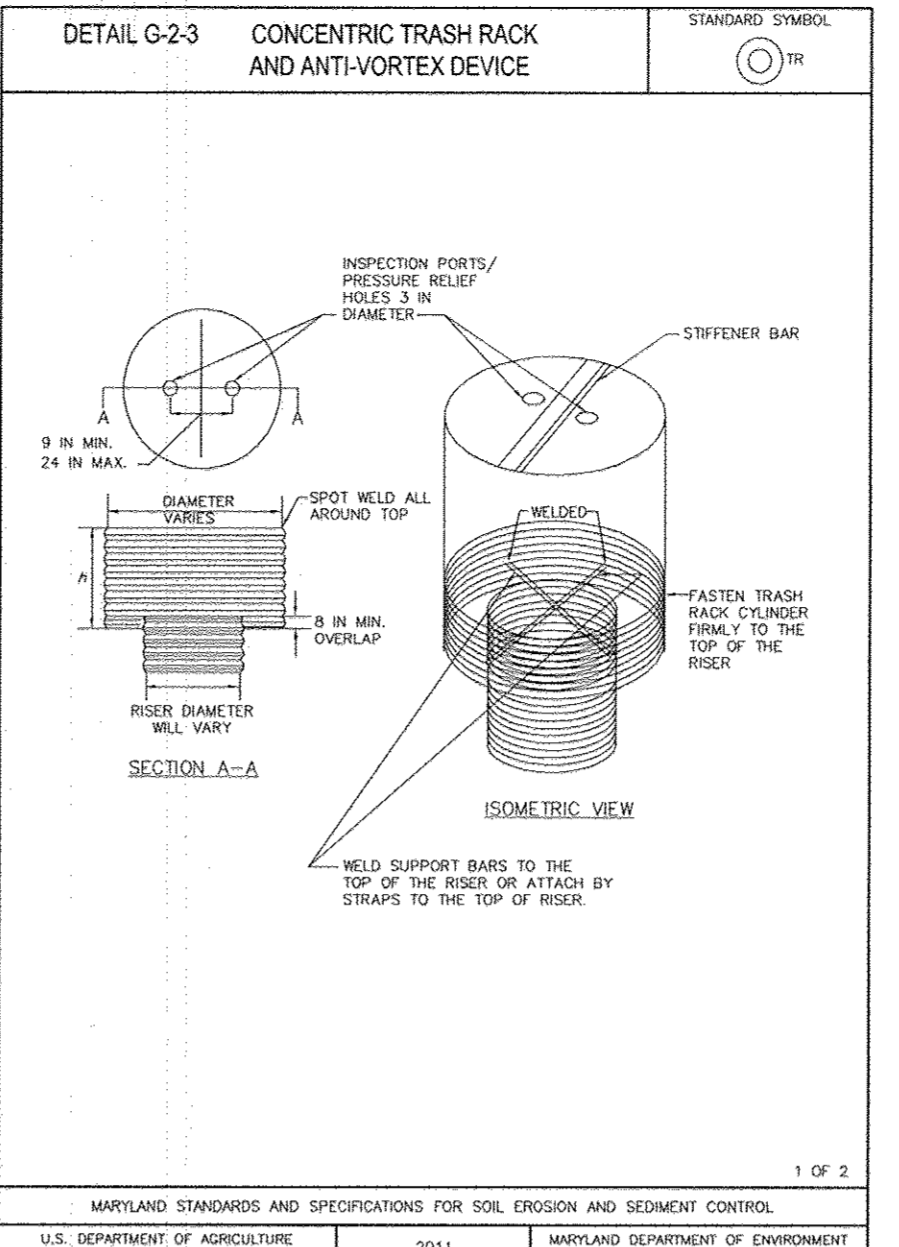
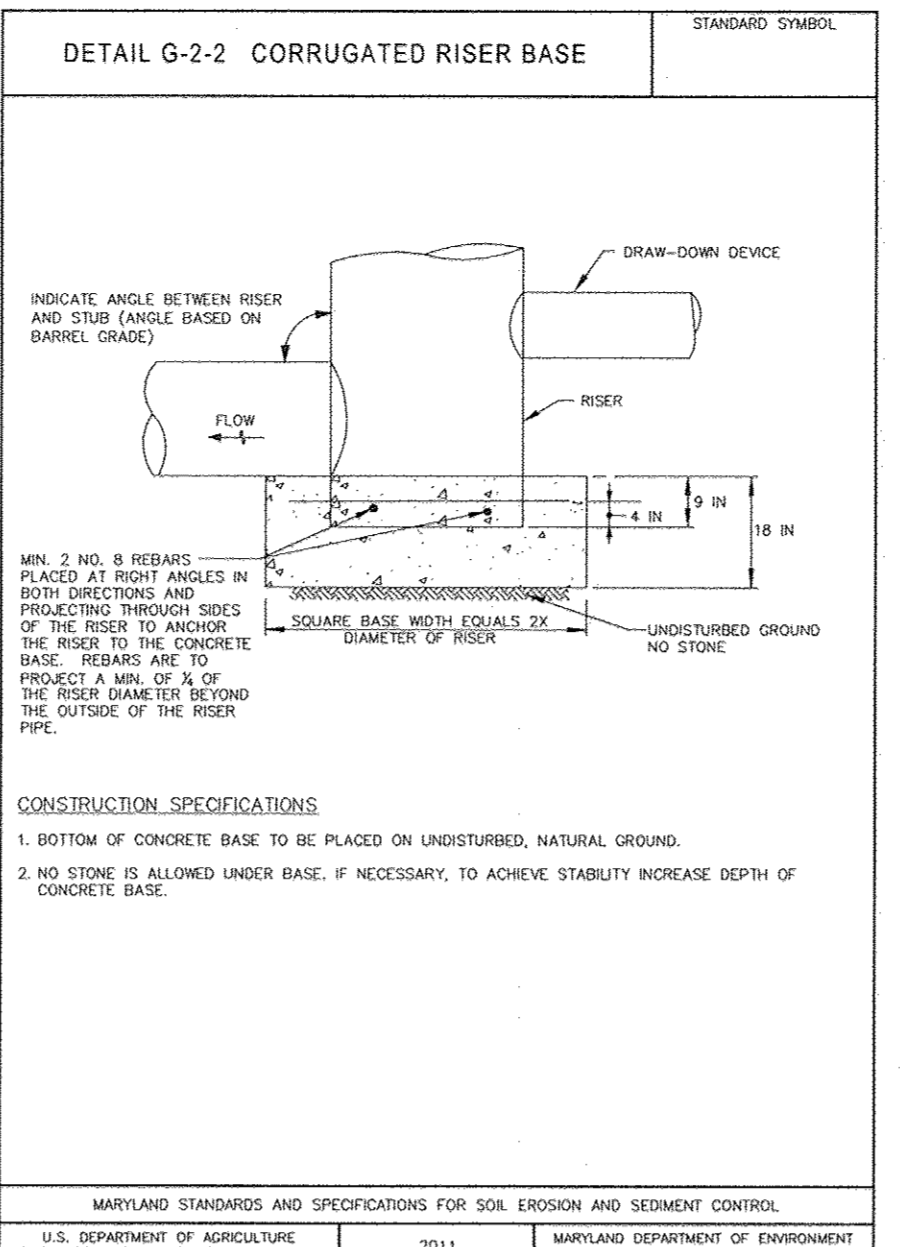
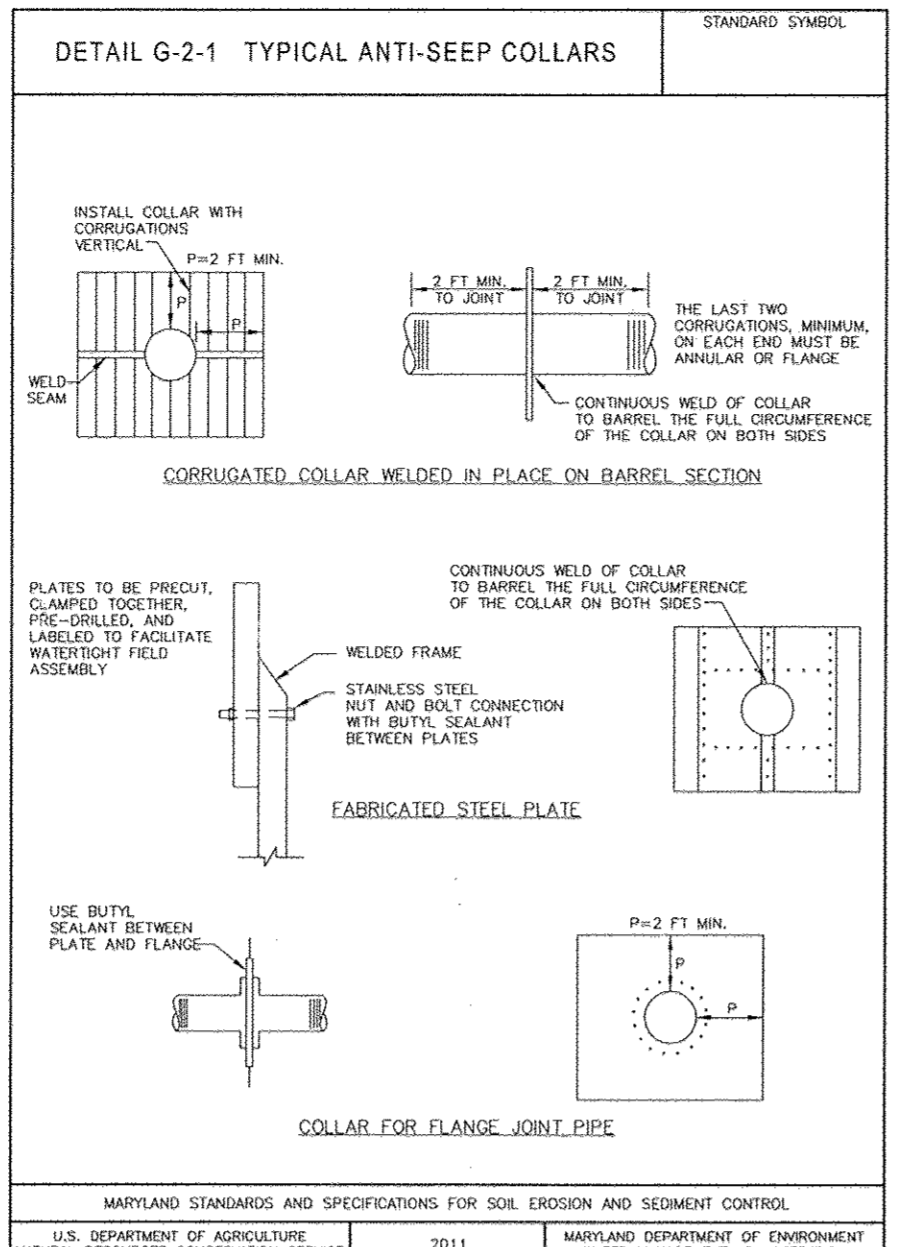
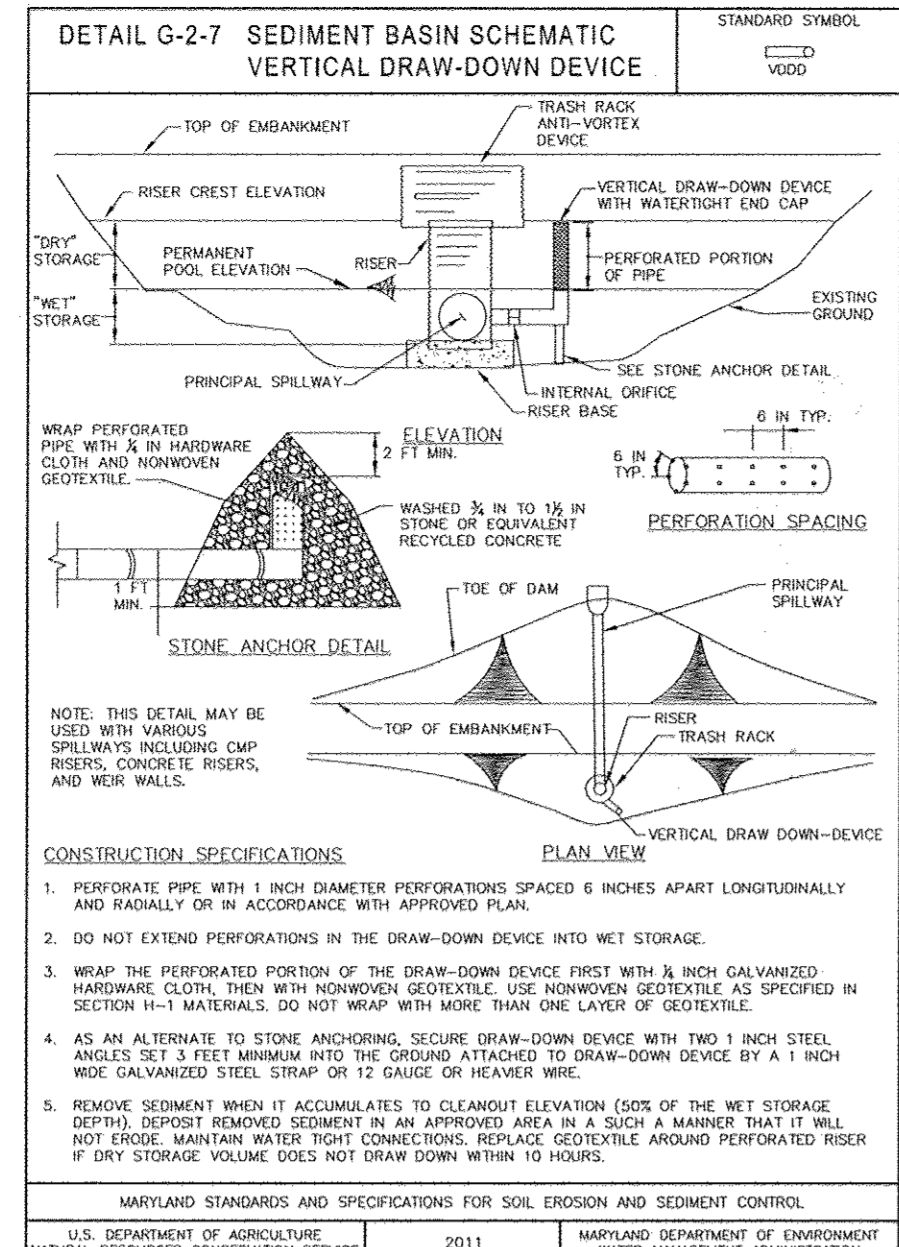
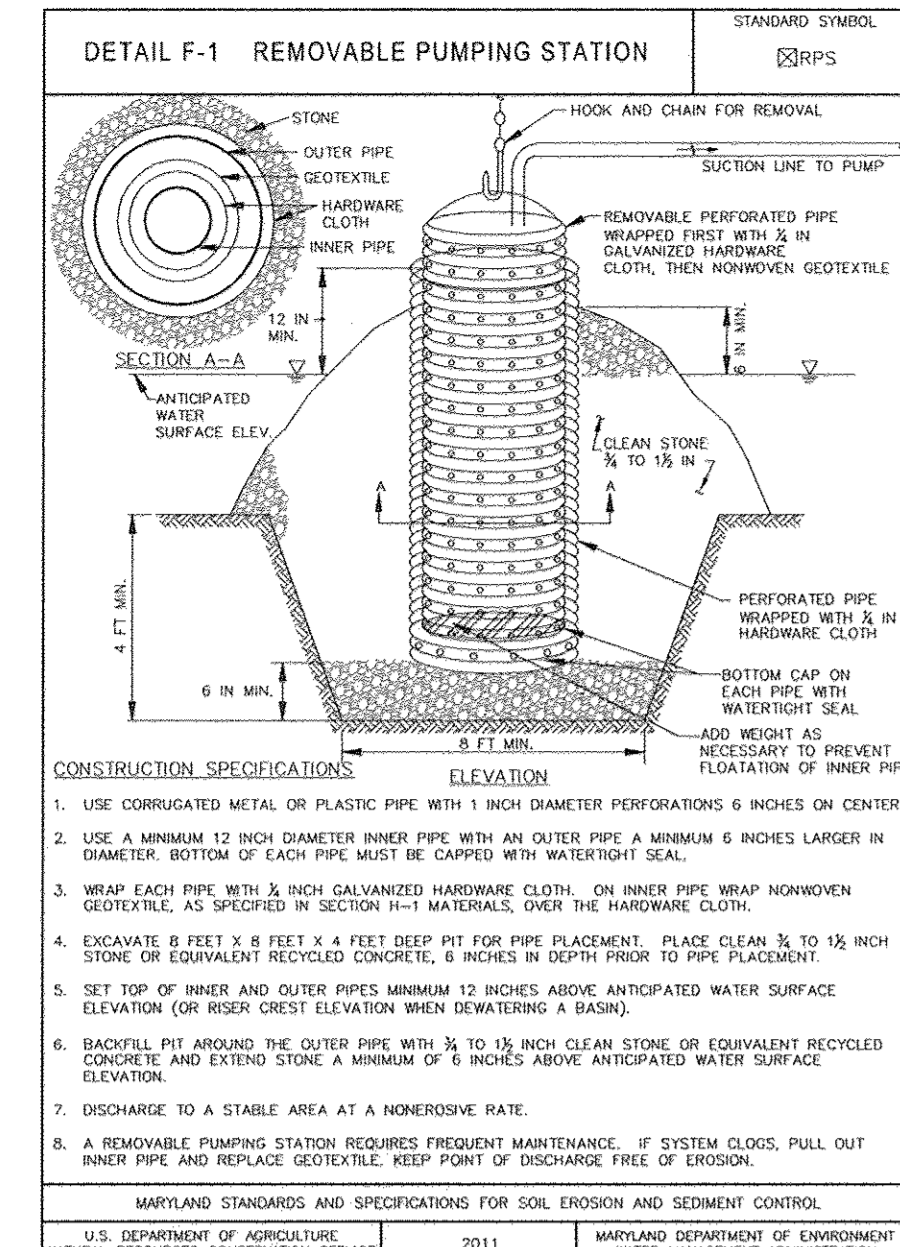
NOTES

- TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND."
- CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF SEED PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
- IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:
 - WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDNESS ZONE: 5B)
 - CENTRAL MD: MARCH 10 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 6)
 - SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 7A, 7B)
- TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
- IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FULLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN THE PLANTING SEASON, IN ANOMALY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)		LIME RATE
					N	P	
9	Certified Tall Fescue blend (95% by weight), Falcov IV, Penn 1901 & Rebel Excel	6-8 lb/oc	Mar. 1 to May 15, Aug. 1 to Oct. 15	1/4 - 1/2 IN.	1.0 lb/oc / 1000 sq ft	1.0 lb/oc / 1000 sq ft	
	Certified Kentucky Bluegrass blend (50% by weight), Courtyard, Raven & Yankee	10 lb/oc	Mar. 1 to May 15, Aug. 1 to Oct. 15	1/4 - 1/2 IN.	1.0 lb/oc / 1000 sq ft	1.0 lb/oc / 1000 sq ft	

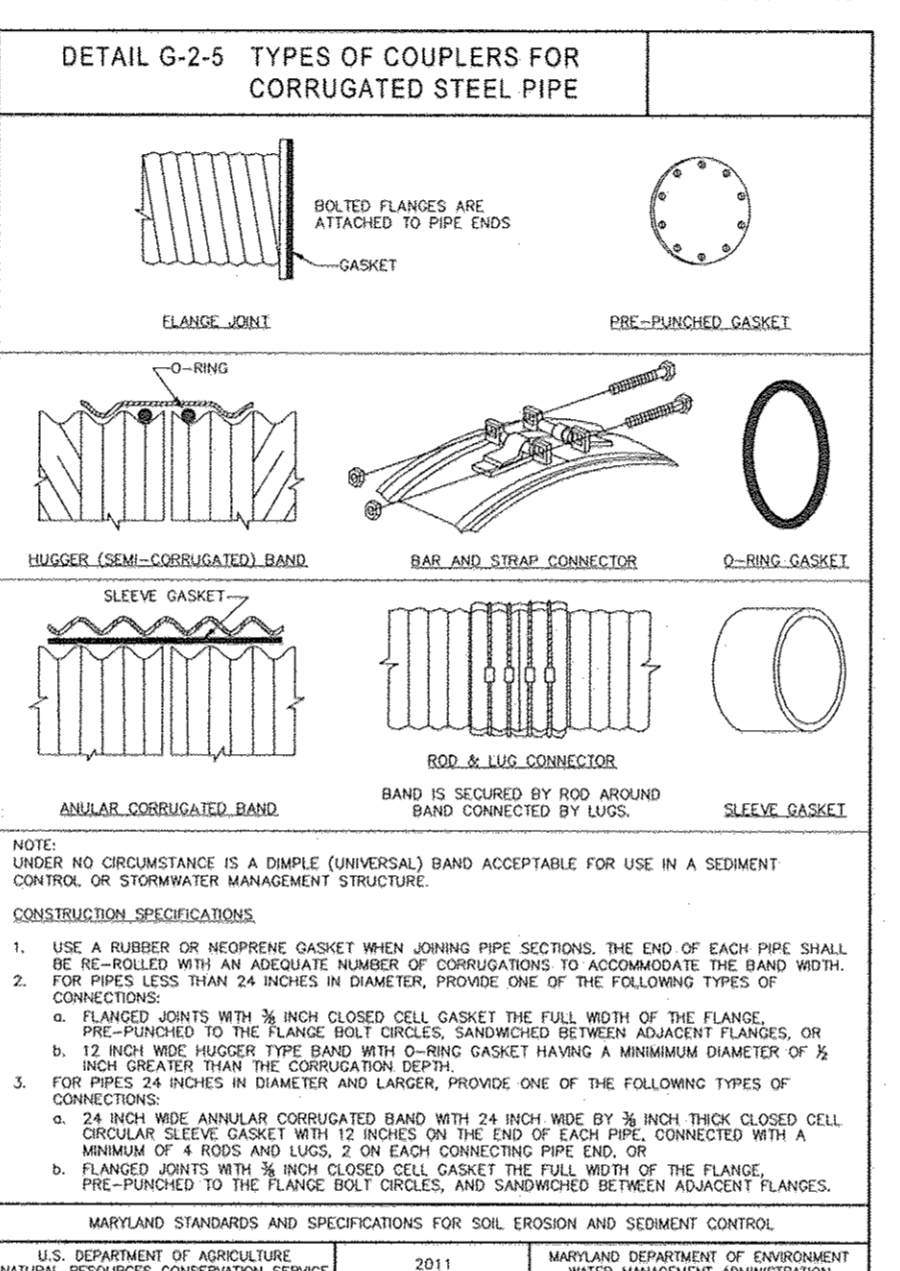
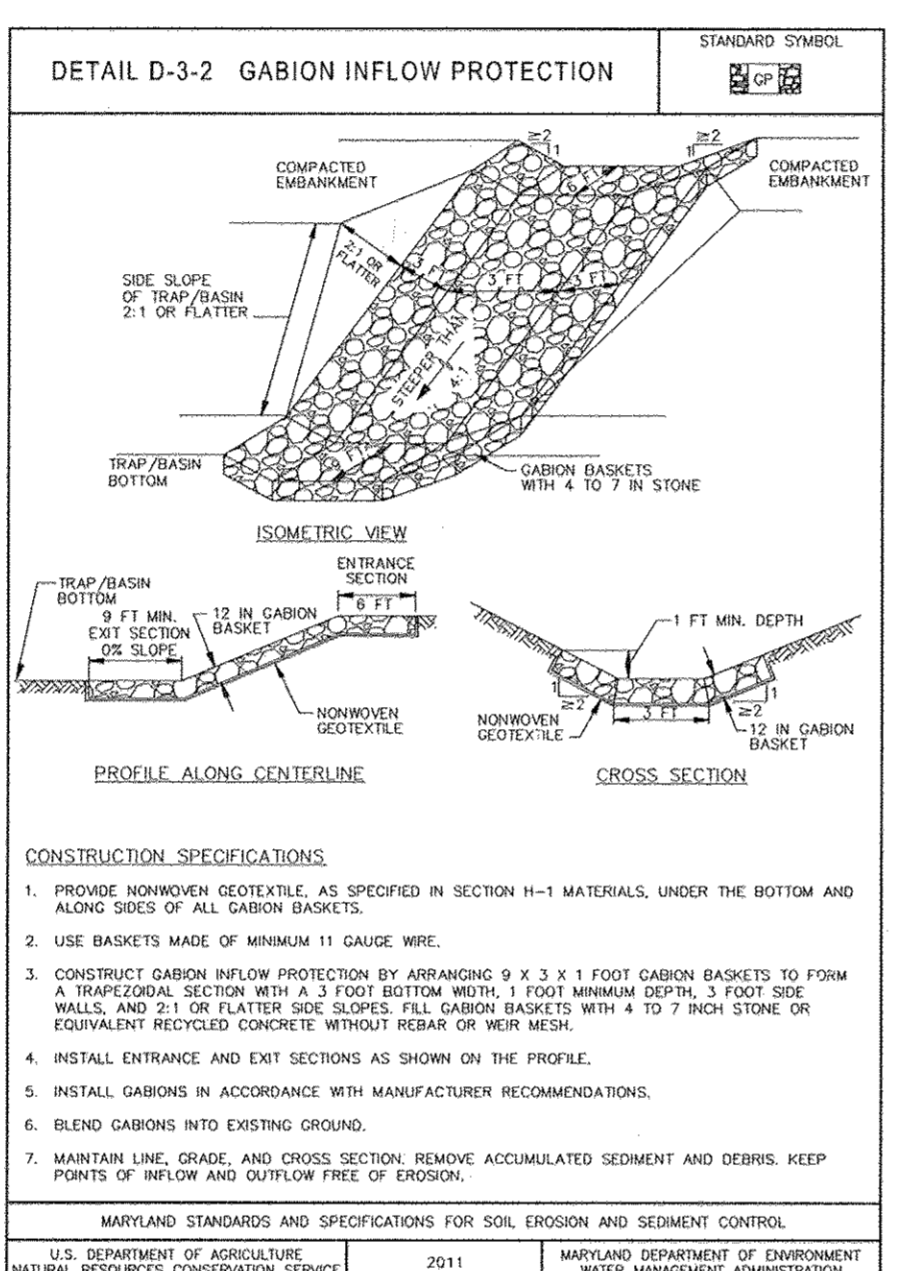
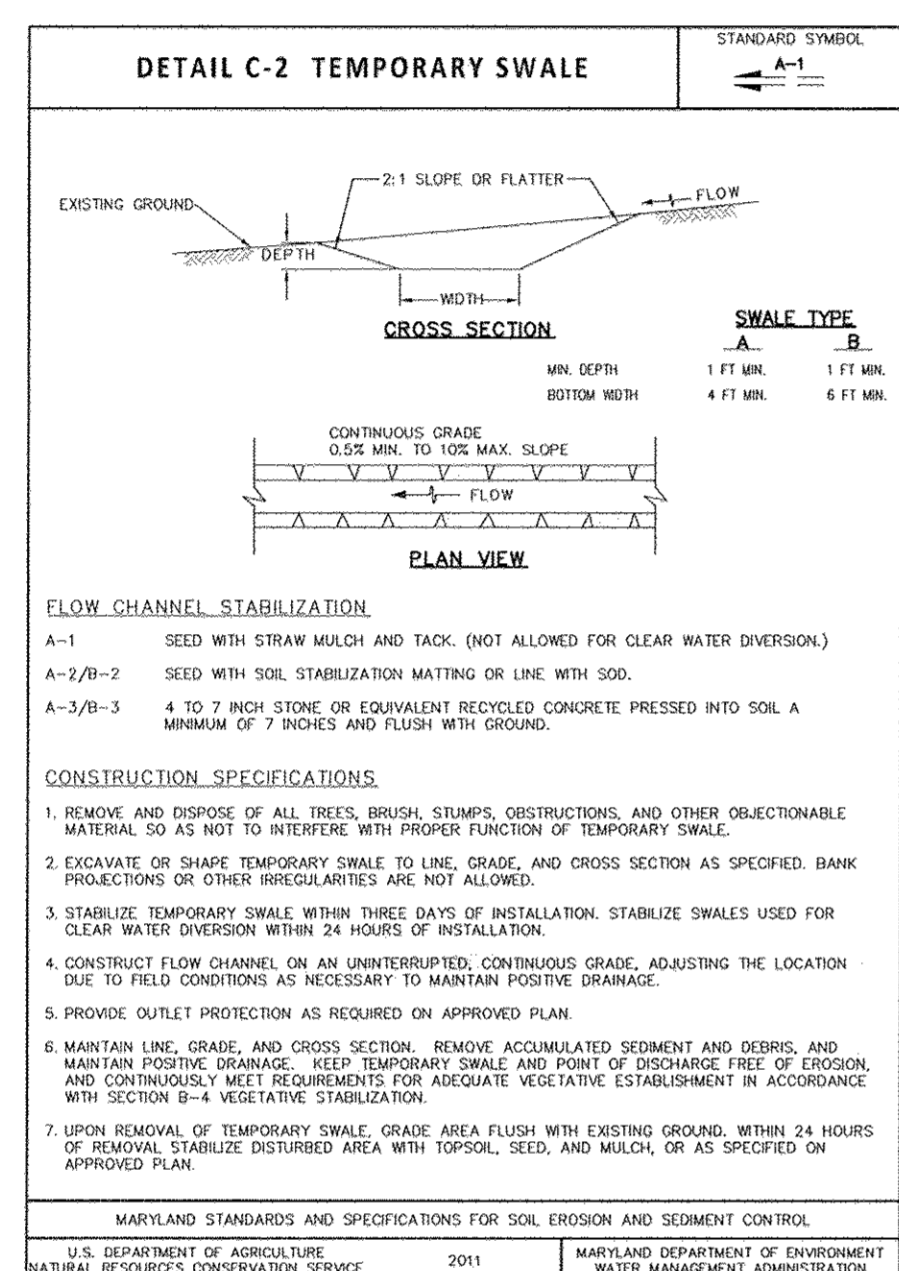
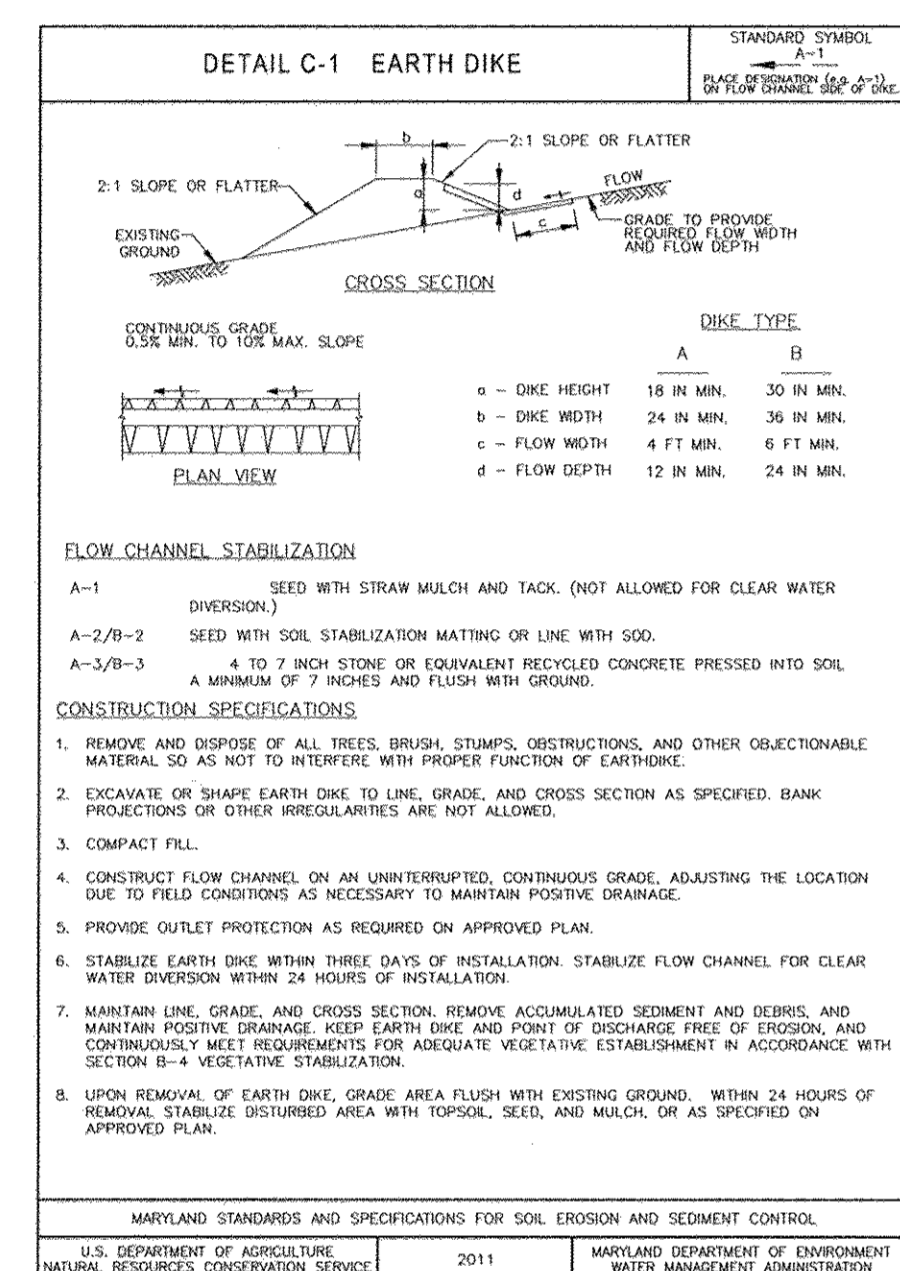
* Other cultivars listed as "grown" in the most current UNID



DETAIL G-2-3 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

RISER DIAM. (IN)	TRASH RACK CIRCUMFER. (IN)	TRASH RACK THICKNESS (GAUGE)	MINIMUM SIZE SUPPORT BAR (IN)	MINIMUM SIZE THICKNESS (GAUGE)	MINIMUM TOP STIFFENER
12	18	16	14	#6 REBAR	16
15	21	16	15	#6 REBAR	16
18	27	16	16	#6 REBAR	16
21	30	16	19	#6 REBAR	16
24	36	16	21	#6 REBAR	14
27	42	16	21	#6 REBAR	14
36	54	14	25	#6 REBAR	12
42	60	14	27	#6 REBAR	12
48	72	12	29	1/4 IN PIPE OR 1/4 X 1/4 X 1/4 ANGLE	10
54	78	12	33	1/4 IN PIPE OR 1/4 X 1/4 X 1/4 ANGLE	10
60	90	12	37	1/4 IN PIPE OR 2 X 2 X 1/4 ANGLE	8
66	96	10	41	2 X 2 X 1/4 ANGLE	8
72	102	10	44	2 X 2 X 1/4 ANGLE	8
78	114	10	47	2 X 2 X 1/4 ANGLE	8
84	120	10	50	2 X 2 X 1/4 ANGLE	8

NOTE: THE ABOVE TRASH RACK AND ANTI-VORTEX DEVICE INFORMATION IS FOR CORRUGATED METAL PIPE ONLY. CONCRETE RISERS MUST MEET THE REQUIREMENTS OF MD 375.



BUILDER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE COMMENCING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOSCD."

Signature: *Greg Connelly* DATE: 1-22-13

ENGINEER'S 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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature: *John R. Roberts* DATE: 2-1-13

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

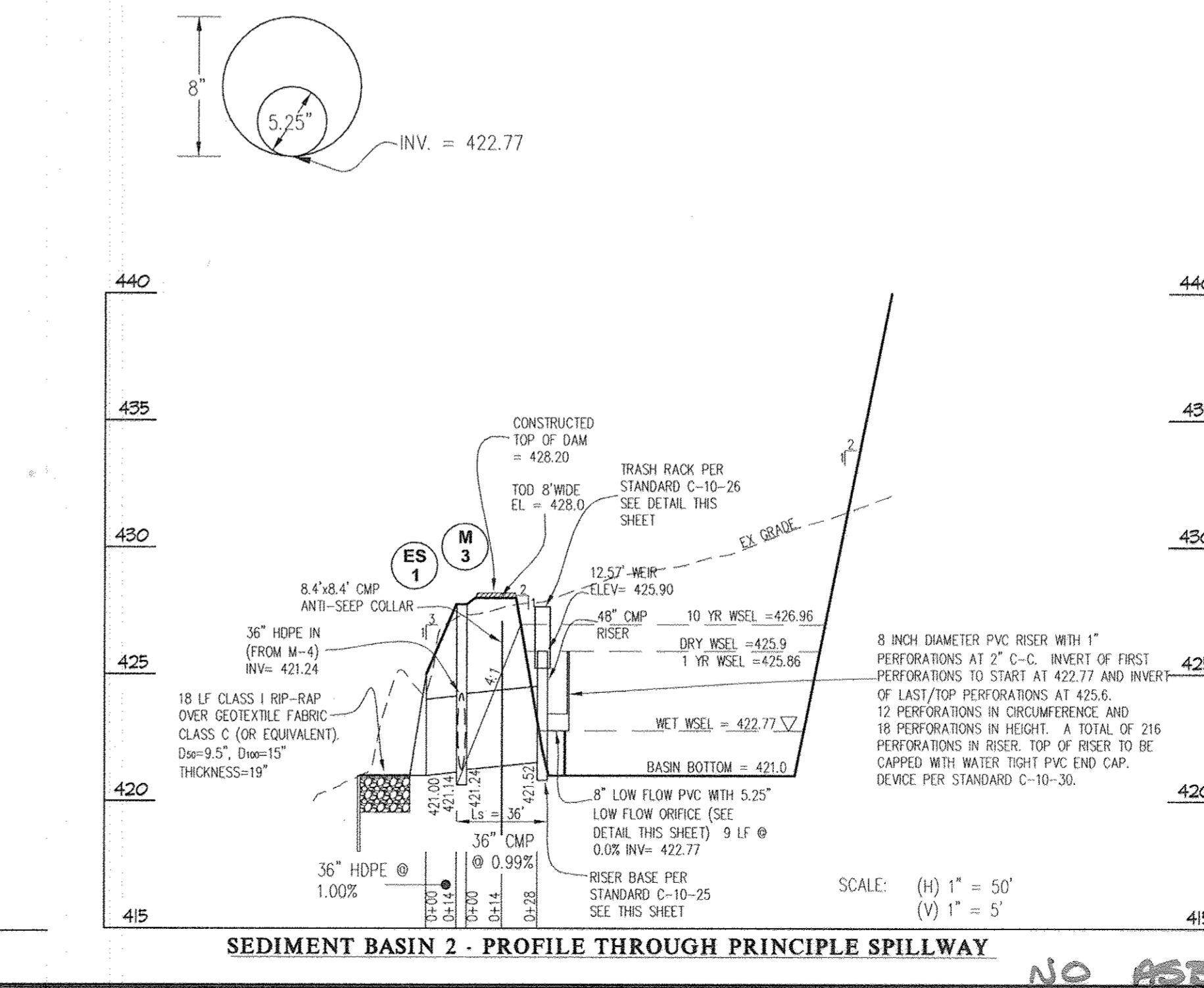
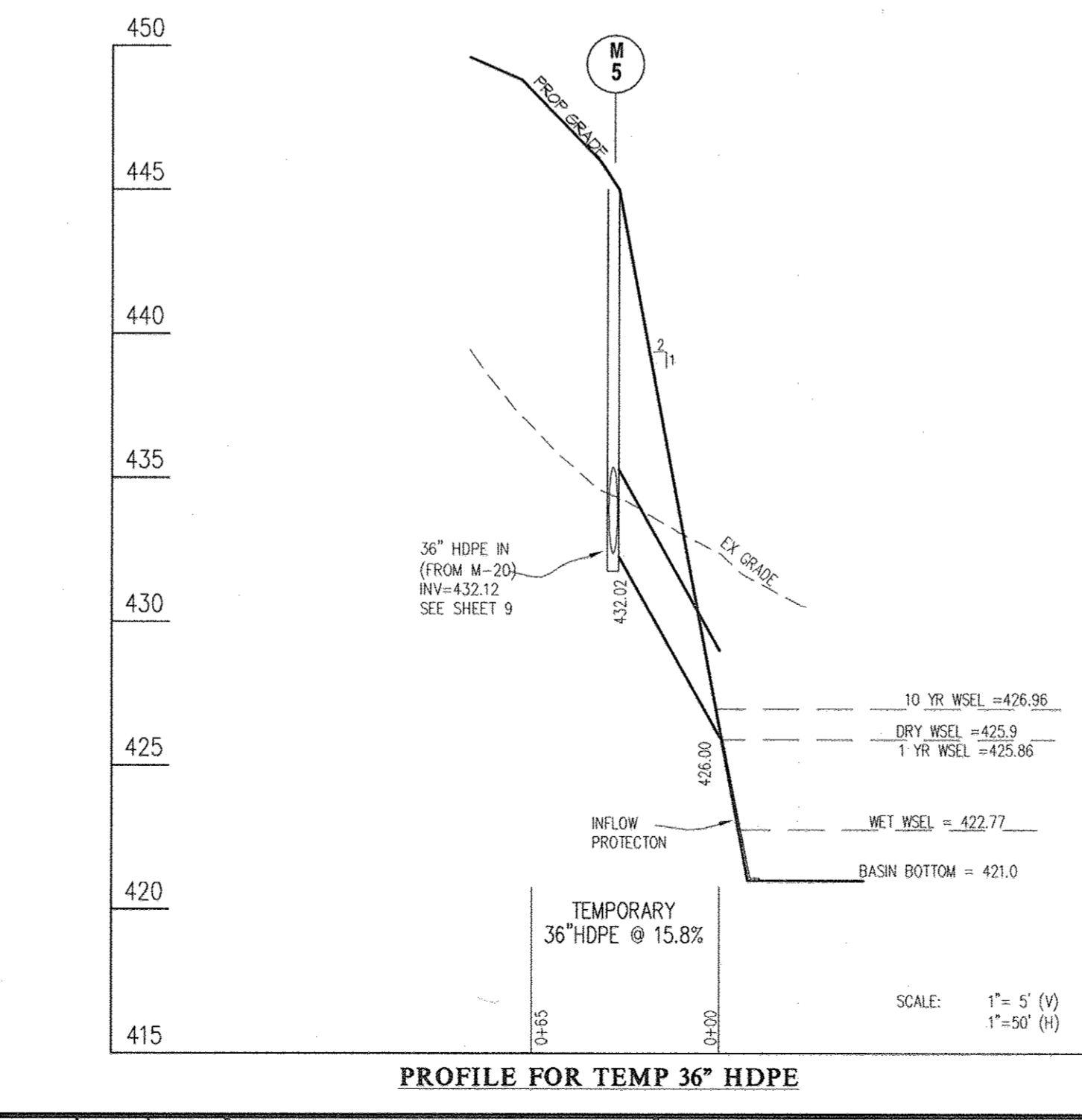
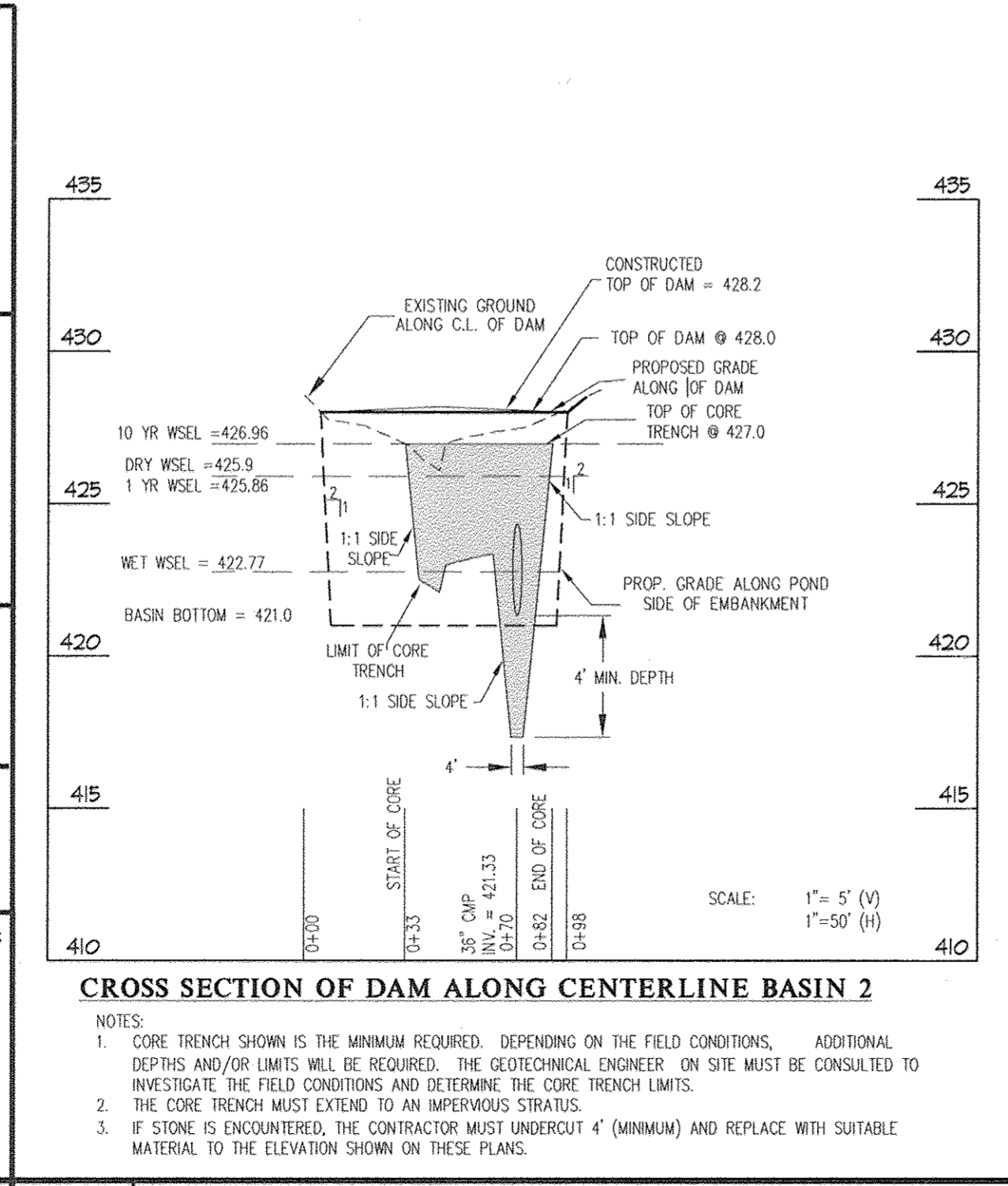
Director: *John R. Roberts* Date: 2/27/13

Chief, Division of Land Development: *John R. Roberts* Date: 2/27/13

Chief, Development Engineering Division: *John R. Roberts* Date: 2-21-13

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
 BURTONTVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186



DATE	REVISION	BY	APPR.

PREPARED FOR: NORTHBRIDGE, LLC 24012 FREDERICK ROAD SUITE 200 CLARKSBURG, MARYLAND 20871 JONATHAN W. SOULE 301-428-0800

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2014

Signature: *John R. Roberts* DATE: 2-1-13

SEDIMENT CONTROL DETAILS INFORMATION

THE GATHERINGS at ELLICOTT MILLS 02/19/2013

PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT No. 11833 & 12316-12317

SCALE: 1" = 50'

ZONING: POR

G. L. W. FILE No. 11005

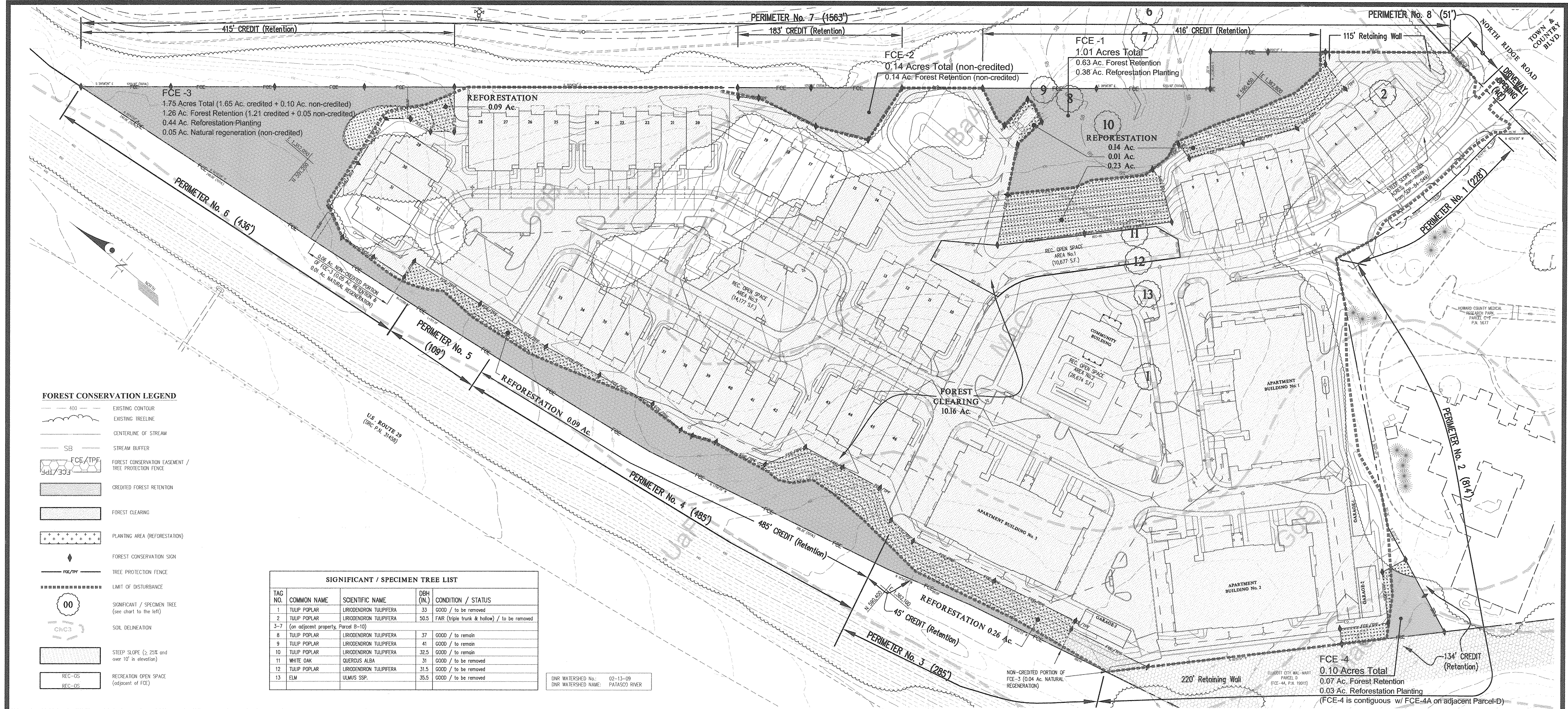
DATE: JAN. 2013

TAX MAP - GRID: 17 - 23

SHEET: 18 OF 26

ELECTION DISTRICT No. 2

HOWARD COUNTY, MARYLAND



FOREST CONSERVATION LEGEND

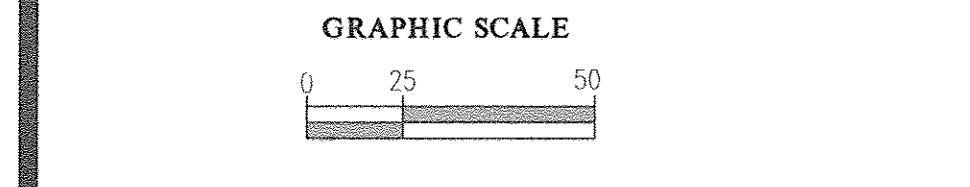
- 400 EXISTING CONTOUR
- EXISTING TREELINE
- CENTERLINE OF STREAM
- SB STREAM BUFFER
- FCE/TPF FOREST CONSERVATION EASEMENT / TREE PROTECTION FENCE
- CREDITED FOREST RETENTION
- FOREST CLEARING
- PLANTING AREA (REFORESTATION)
- FOREST CONSERVATION SIGN
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- SIGNIFICANT / SPECIMEN TREE (see chart to the left)
- SOIL DELINEATION
- STEEP SLOPE (> 25% and over 10' in elevation)
- REC-OS RECREATION OPEN SPACE (adjacent to FCE)

SIGNIFICANT / SPECIMEN TREE LIST

TAC NO.	COMMON NAME	SCIENTIFIC NAME	DBH (IN.)	CONDITION / STATUS
1	TULIP POPLAR	LIRIODENDRON TULIPIFERA	33	GOOD / to be removed
2	TULIP POPLAR	LIRIODENDRON TULIPIFERA	50.5	FAIR (triple trunk & hollow) / to be removed
3-7	(on adjacent property, Parcel B-10)			
8	TULIP POPLAR	LIRIODENDRON TULIPIFERA	37	GOOD / to remain
9	TULIP POPLAR	LIRIODENDRON TULIPIFERA	41	GOOD / to remain
10	TULIP POPLAR	LIRIODENDRON TULIPIFERA	32.5	GOOD / to remain
11	WHITE OAK	QUERCUS ALBA	31	GOOD / to be removed
12	TULIP POPLAR	LIRIODENDRON TULIPIFERA	31.5	GOOD / to be removed
13	ELM	ULMUS SSP.	35.5	GOOD / to be removed

DNR WATERSHED No.: 02-13-09
 DNR WATERSHED NAME: PATASCO RIVER

BUFFER TYPE	SHADE TREES/LF	EVG. TREES/LF	SHRUBS/LF
A	1:60	0	0
B	1:50	1:40	0
C	1:40	1:20	0
D	1:60	1:10	0
E	1:40	0	1:4



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Patrick A. Long 3/25/13
 Director Date

Kurt Salas 3/25/13
 Chief, Division of Land Development Date

Chad Shank 2-21-13
 Chief, Development Engineering Division Date

SCHEDULE-A: PERIMETER LANDSCAPE EDGE

PERIMETER No.	1	2	3	4	5	6	7	8	TOTAL
USE SITUATION	ADJ. TO PERIMETER PROPERTIES	APTS ADJ. TO PERIMETER PROPERTIES	REAR OF APTS ADJ. TO ROADWAY	REAR OF SFA ADJ. TO ROADWAY	PARKING ADJ. TO ROADWAY	SIDE OF SFA ADJ. TO ROADWAY	SFA ADJ. TO PERIMETER PROPERTIES	SIDE OF SFA ADJ. TO ROADWAY	
LANDSCAPE TYPE	A	A	B	C	E	C	A	C	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	228'	814'	285'	485'	109'	436'	1563'	51'	
CREDIT FOR EXISTING VEGETATION	4 EX. TREES (100X CREDIT)	134' (FOREST RETENTION)	45' (FOREST RETENTION)	485' (FOREST RETENTION)	109' (FOREST RETENTION)	436' (FOREST RETENTION)	1014' (FOREST RETENTION)	NO	
CREDIT FOR WALL, FENCE OR BERM	NO	2204' LF OF RET. WALL (site is lower)	NO	NO	NO	NO	1154' LF OF RET. WALL (site is lower)	NO	
NUMBER OF PLANTS REQUIRED	0	FOR 460 LF	FOR 240 LF	0	0	0	FOR 434 LF	2	22
SHADE TREES	0	8	5	0	0	0	0	3	16
EVERGREEN TREES	0	0	6	0	0	0	0	0	6
SHRUBS	0	0	0	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED	4 EX. TREES PROVIDED AS PART OF SDP-84-49	8	5	0	0	0	7	2	22
SHADE TREES	0	8	5	0	0	0	7	2	22
EVERGREEN TREES	0	0	6	0	0	0	0	0	6
OTHER TREES (0 2:1 substitution)	0	0	0	0	0	0	0	0	0
SHRUBS (10:1 substitution)	0	0	0	0	0	0	0	0	0

SCHEDULE-B: PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	77 COMMON SURFACE SPACES
NUMBER OF SHADE TREES REQUIRED (1 PER 10 RES. SPACES, 1 PER 20 COMMERCIAL SPACES 1)	8
NUMBER OF TREES PROVIDED	8
SHADE TREES	8
OTHER TREES (2:1 SUBSTITUTION)	0

SCHEDULE-C: RESIDENTIAL INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	46 SINGLE FAMILY ATTACHED 81 (27 UNITS PER APARTMENT/CONDO BLDG.)
NUMBER OF TREES REQUIRED (1 PER SFA DU, 1 PER 3 APTS DU)	46 SINGLE FAMILY ATTACHED 27 APARTMENTS
NUMBER OF TREES PROVIDED	73 (or equivalent substitutions)
SHADE TREES	73
OTHER TREES (2:1 substitutions with ornamental or evergreen trees)	0

PRIVATE STREET TREE REQUIREMENTS

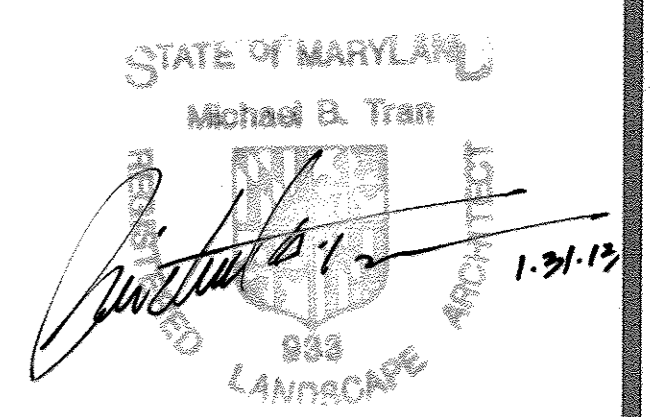
LOCATION	LENGTH OF CURB (L.F.)	NUMBER OF TREES REQUIRED	NUMBER OF TREES PROVIDED
ALONG ADDERLEY AVE.	1,201'	30 (at approx. 40 c.c.)	30

TABULATION OF LANDSCAPE & PRIVATE STREET TREES FOR REQUIRED LANDSCAPE SURETY

	SCHD.-A	SCHD.-B	SCHD.-C	ADDERLEY AVE.	TOTAL
TOTAL SHADE TREES REQUIRED	22	8	73	30	133
TOTAL EVGRN. TREES REQUIRED	0	0	0	0	0

\$39,900.00 SURETY REQUIRED FOR 133 SHADE TREES AT \$300/TREE
 \$1,350.00 SURETY REQUIRED FOR 9 EVERGREEN TREES AT \$150/TREE
 \$41,250.00 TOTAL LANDSCAPE SURETY REQUIRED (to be posted w/ the Developer Agreement)

NOTE:
 SOME OF THE REQUIRED SHADE TREES (UP TO A MAXIMUM OF 50%) MAY BE SUBSTITUTED WITH ORNAMENTAL TREES AND EVERGREEN TREES AT A RATIO OF 2:1 (2 ornamental or evergreen trees for 1 shade tree). SUCH SUBSTITUTIONS WOULD NOT CHANGE THE TOTAL SURETY REQUIRED (i.e. \$300.00 = 1 shade tree = 2 ornamental or evergreen trees)



GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
 BURTONTVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:
 NORTH RIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

FOREST CONSERVATION PLAN / OVERALL LANDSCAPE BUFFER ANALYSIS

THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 12210-12217

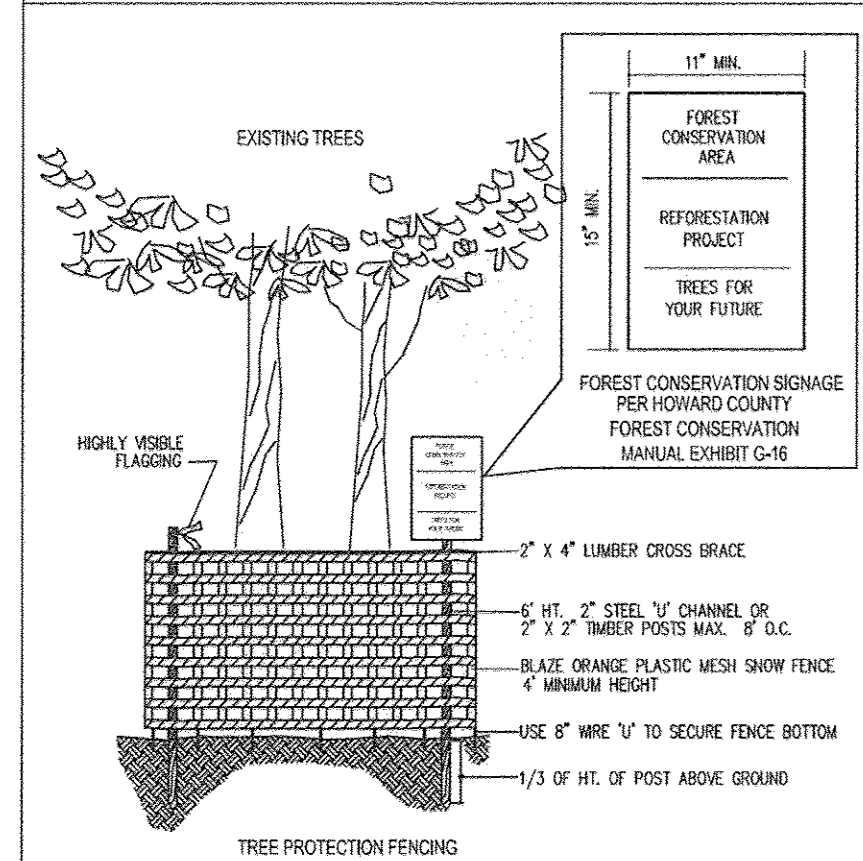
ELECTION DISTRICT No. 2

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	19 OF 26

TREE PROTECTION FENCE & FOREST CONSERVATION SIGNAGE

NOT TO SCALE



- NOTES:**
1. THE TREE PROTECTION FENCING SHOWN ON THESE PLANS IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY, BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FOREST CONSERVATION EASEMENT AT THE END OF THE TREE PROTECTION FENCING.
 2. FOREST CONSERVATION SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSERVATION EASEMENT AT 50 TO 100' APART.
 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

TREE PLANTING AND MAINTENANCE CALENDAR

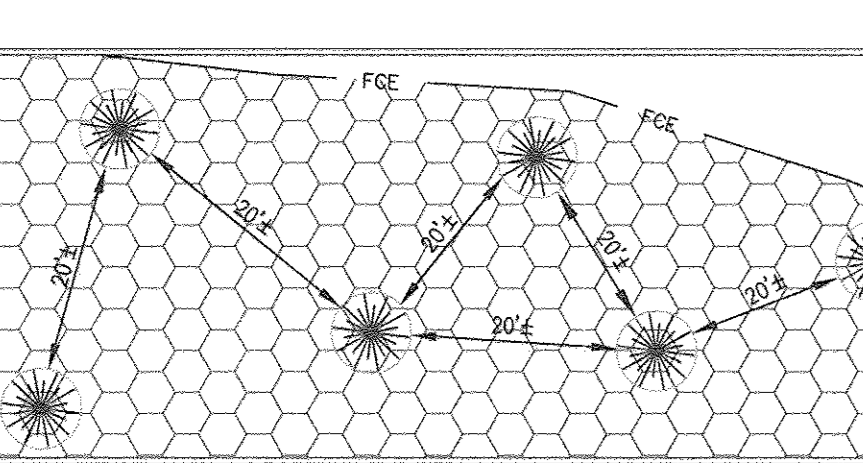
TASKS	MONTHS											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
TRANSPLANT OF 2" DBH OR GREATER	[RECOMMENDED WITH ADDITIONAL CARE]											
PLANTING SEEDLINGS, #BPS	[RECOMMENDED]											
MINIMUM MONITORING #BPS	*					*					*	
FERTILIZER + (IF NEEDED)	[RECOMMENDED]											
WATER ++	[RECOMMENDED]											
PRUNING	[RECOMMENDED]											

KEY

- * ACTIVITIES DURING THESE MONTHS ARE DEPENDENT UPON GROUND CONDITIONS
- [RECOMMENDED WITH ADDITIONAL CARE]
- [RECOMMENDED]
- ++ DEPENDENT UPON SITE CONDITIONS
- ++ DEPENDENT UPON SITE CONDITIONS, WEEKLY WATERING IS GREATLY RECOMMENDED FROM MAY THROUGH OCTOBER UNLESS WEEKLY RAINFALL EQUALS 1"

NOTE: THE PLANTING AND CARE OF TREES IS MOST SUCCESSFUL WHEN COORDINATED WITH THE LOCAL CLIMATIC CONDITIONS. THIS CALENDAR SUMMARIZES SOME OF THE RECOMMENDED TIME FRAMES FOR BASIC REFORESTATION AND STRESS REDUCTION ACTIVITIES.

SOURCE: ADAPTED FROM THE MARYLAND STATE FOREST CONSERVATION MANUAL



NOTE: FORESTATION PLANTING IS TO BE RANDOM PATTERN AT APPROX. 20'± O.C.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Wanda A. Coyle* Date: *3/25/13*
 Chief, Division of Land Development: *Wanda A. Coyle* Date: *3/25/13*
 Chief, Development Engineering Division: *Wanda A. Coyle* Date: *3/25/13*

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GENERAL NOTES

1. THIS REFORESTATION PLAN IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY CODE.
2. IMPLEMENTATION OF THIS PLAN MUST BE PERFORMED BY A CONTRACTOR THAT IS KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION TECHNIQUES AND PRACTICES.
3. THE OWNER IS RESPONSIBLE FOR A 2-YEAR (MIN.) POST-CONSTRUCTION MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE SURVIVAL AND GROWTH OF THE CONSERVATION AREA. TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY. IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING (IF APPLICABLE) WILL NOT MEET SURVIVAL RATE STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS.
4. AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, CERTIFICATION BY A QUALIFIED CONSULTANT WILL BE REQUIRED BEFORE TO THE OWNER CAN BE RELEASED FROM HIS/HER FOREST CONSERVATION OBLIGATION TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.
5. THE DEVELOPER/BUILDER SHALL (IN WRITING) NOTIFY ALL LOT OWNERS OF THIS DEVELOPMENT OF THE EXISTENCE OF FOREST CONSERVATION AREAS AND THAT DISTURBANCE TO THE FOREST CONSERVATION AREAS OR THE REMOVAL OF FOREST CONSERVATION SIGNAGE IS PROHIBITED.
6. REFORESTATION/AFFORESTATION TREE PLANTINGS SHOULD BE INSTALLED IN A CURVILINEAR PATTERN TO FACILITATE MAINTENANCE, BUT AVOID A GRID APPEARANCE. EACH SPECIES OF TREE SHALL BE DISTRIBUTED EVENLY WITHIN EACH FOREST CONSERVATION EASEMENT AREA.
7. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

CONSTRUCTION PERIOD PROTECTION PROGRAM

1. THE LIMIT OF FOREST RETENTION SHALL BE STAKED AND FLAGGED.
2. A PRE-CONSTRUCTION MEETING AT THE SITE SHOULD BE HELD TO CONFIRM THE LIMITS OF CLEARING SCOPED. THE MEETING SHOULD INCLUDE THE OWNER OR THE OWNER'S REPRESENTATIVE, THE ON-SITE FOREMAN IN CHARGE OF LAND DISTURBANCE, THE ENVIRONMENTAL CONSULTANT AND THE APPROPRIATE HOWARD COUNTY INSPECTORS.
3. FOREST PROTECTION DEVICES AND SIGNS (SEE DETAILS) SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING. THE PROTECTION DEVICES AND SIGNS SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD. NONE OF THE DEVICES SHALL BE ANCHORED OR ATTACHED IN ANY WAY TO THE TREES TO BE SAVED.
4. EQUIPMENT, VEHICLES AND BUILDING MATERIALS SHALL NOT BE WITHIN THE PROTECTED AREA. ACTIVITIES STRICTLY TO IMPLEMENT ANY REFORESTATION PLANTING AND MAINTENANCE (I.E. WATERING, FERTILIZING THINNING, PRUNING, REMOVAL OF DEAD AND DISEASED TREES WHERE NECESSARY, ETC.) OF THE CONSERVATION AREA ARE PERMITTED. CLEARING FOR THE PURPOSE OF SODDING OR PLANTING GRASS IS NOT PERMITTED WITHIN THE FOREST CONSERVATION AREAS ONCE THEY'RE ESTABLISHED.
5. AT THE END OF THE CONSTRUCTION PERIOD, THE DESIGNATED QUALIFIED PROFESSIONAL SHALL CONVEY TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL FOREST RETENTION AREAS HAVE BEEN PRESERVED, ALL REFORESTATION AND/OR AFFORESTATION PLANTINGS (IF APPLICABLE) HAVE BEEN INSTALLED AS REQUIRED BY THE FOREST CONSERVATION PLAN AND THAT ALL PROTECTION MEASURES REQUIRED FOR THE POST-CONSTRUCTION PERIOD HAVE BEEN INSTALLED. UPON REVIEW OF THE FINAL CERTIFICATION DOCUMENT FOR COMPLETENESS AND ACCURACY, THE PROGRAM COORDINATOR WILL NOTIFY THE OWNER OF RELEASE FROM THE CONSTRUCTION PERIOD OBLIGATIONS. THE 2-YEAR (MIN.) POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD THEN COMMENCES.

FOREST CONSERVATION PROGRAM SEQUENCE

1. OBTAIN ALL NECESSARY PERMITS.
2. STAKEOUT LIMITS OF DISTURBANCE.
3. FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE SITE GRADING AND CONSTRUCTION.
4. INSTALL FOREST CONSERVATION SIGNS AND FOREST PROTECTION DEVICES (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES).
5. COMMENCE SITE CONSTRUCTION.
6. PREPARE SITE SOIL BY MULCHING AND REMOVAL OF TRASH AND WEEDS INCLUDING AN APPLICATION OF HERBICIDES TO CONTROL NOXIOUS WEEDS AND INVASIVE SPECIES.
7. INSTALL FOREST PLANTING AND THE REMAINDER OF THE CONSERVATION SIGNS ALONG THE EDGE OF THE CONSERVATION EASEMENT. MOVE CONSERVATION SIGNS INSTALLED IN #4 (ABOVE) TO THE EDGE OF THE CONSERVATION EASEMENT.
8. INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
9. POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
10. FINAL INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION SURETY.

FOREST CONSERVATION OBLIGATION & SURETY

THE FOREST CONSERVATION OBLIGATION FOR THIS DEVELOPMENT AS CALCULATED IN THE FOREST CONSERVATION WORKSHEET IS 2.09 ACRES OF FOREST RETENTION AND 3.80± ACRES OF REFORESTATION PLANTING FOR TOTAL OF 5.89 ACRES OF FOREST CONSERVATION EASEMENT TO BE RECORDED.

PROPOSED METHOD OF SATISFYING THE ABOVE FOREST CONSERVATION ON-SITE AND OFF-SITE:

ON-SITE:

RECORD 4 (FOUR) FOREST CONSERVATION EASEMENTS TOTALING 3.00± ACRES OF WHICH 2.76± ACRES ARE CREDITED AND THEY CONTAIN 1.50± ACRES OF CREDITED RETENTION AND 0.86± ACRES OF REFORESTATION PLANTING. THE NON-CREDITED 0.24± ACRE OF FOREST CONSERVATION EASEMENT CONTAIN 0.19± ACRE OF NON-CREDITED RETENTION AND 0.05± ACRES OF NATURAL REGENERATION AREAS.

THE FOREST CONSERVATION SURETY POSTED WITH THE DEVELOPER AGREEMENT IS \$0.50/SF OF THE REFORESTATION PLANTING. THE SURETY FOR THE ON-SITE REFORESTATION WOULD BE:

(0.8564 AC) (43560 SF/AC) (\$0.50/SF) = \$18,692.39 or \$18,692.00 (rounded)

OFF-SITE:

AT LEAST 3.13± ACRES OF OFF-SITE REFORESTATION FCE IS RECORDED FOR THIS DEVELOPMENT AT THE "FOREST CONSERVATION PLAT OF EASEMENT, WINDSOR FOREST PARCEL-A" ON P.N. 12124P.

A SEPARATE FOREST CONSERVATION SURETY IS REQUIRED FOR THE THAT F-PLAN AND THE SURETY FOR THE OFF-SITE REFORESTATION PLANTING WOULD BE:

(3.1310 AC) (43,560 SF/AC) (\$0.50/SF) = \$68,193.18 or \$68,193.00 (rounded)

TOTAL SURETY: FOR BOTH ON-SITE & OFF-SITE REFORESTATION PLANTING WOULD BE \$86,845.57 or \$86,846.00 (rounded).

FOREST CONSERVATION WORKSHEET

Project Name:	The Gatherings at Ellicott Mills, Parcel-A	DPZ File No.:	SDP-12-038
1 Site Data		Acreage	
A. Gross Site Area			14.0607
B. Area within 100-yr floodplain, if any			0.0000
C. Area of existing easement for major utility transmission lines, if any			0.0000
D. Area of external public road (frontage) dedication, if any			0.0000
E. Net Tract Area			14.0607
F. Land Use Category (for age restricted housing, POR zoning)		Residential-Suburban	
2 Input Data			
A. Net Tract Area			14.0607
B. Reforestation Threshold (percent of net tract = 20 %)			2.8121
C. Afforestation Threshold (percent of net tract = 15 %)			2.1091
D. Existing Forest on Net Tract Area			12.2494
E. Forest Clearing on Net Tract Area			10.1587
F. Forest Retention on Net Tract Area			2.0907
3 Reforestation Calculations			
A. Net tract forest clearing above reforestation threshold			9.4373
B. Net tract forest clearing below reforestation threshold			0.7214
C. Planting up to afforestation threshold			0.0000
D. Reforestation planting required for clearing above threshold			2.3593
E. Reforestation planting required for clearing below threshold			1.4428
F. Total reforestation planting required (3C+3D+3E)			3.8021
4 Forest Conservation Required			
A. Forest Retention Area (2F)			2.0907
B. Forest Planting Area (3F)			3.8021
C. Total minimum FCE required for retention and reforestation			5.8928

FOREST CONSERVATION AREA TABULATION

Forest Conservation Easement No.	Credited Retention Area (Acres)	*Non-credited Retention Area (Acres)	Credited Reforestation Planting (Acres)	Non-credited Natural Regeneration Area (Acres)	Total Area of Forest Conservation Easement (Non-credit portion in parenthesis, if any)
FCE-1	0.6271		0.3814		1.0085
FCE-2		0.1355			0.1355 (0.1355)
FCE-3	1.2102	0.0498	0.4399	0.05	1.7499 (0.0998)
FCE-4	0.0681		0.0351		0.1032
TOTAL PROVIDED ON-SITE	1.9054	0.1853	0.8564	0.05	2.9971 (0.2353)
QUANTITY REQUIRED	2.0907		3.8021		5.8928
QUANTITY TO BE PROVIDED OFF-SITE	0.1853		2.9457		2.8957 + 0.2353
TOTAL OFF-SITE FORESTATION PLANTING INCLUDING QUANTITY OF "CREDITED RETENTION"			3.1310	TOTAL MINIMUM FCE REQUIRED OFF-SITE	3.1310

* The retention areas in this column do not meet the definition of a forest for sizes; however, these areas are not cleared and are not subtracted from the quantity of existing forest calculated in the Forest Conservation Worksheet. To protect these areas from being cleared, they are included in a FCE as non-credited retention. The total non-credit retention quantity is added to the off-site planting to satisfy the total credited Forest Conservation Easement that's required

FOREST CONSERVATION PLANTING QUANTITY SCHEDULE

FOREST PLANTING LOCATION NO.	FCE-1	FCE-2	FCE-3	FCE-4	TOTAL
AREA TO BE PLANTED (IN AC.)	0.3814	0.00	0.4399	0.0351	0.8564
BASE QUANTITY OF 2" CAL. TREES REQUIRED (AT 100 TREES/AC.)	38	0	44	4	86
CREDIT FOR LANDSCAPE TREES	1	0	5	0	66
REQUIRED QUANTITY OF 2"-2 1/2" CAL. TREES TO BE PLANTED	37	0	39	4	80

FOREST CONSERVATION PLANT LIST

PLANT NAME (BOTANICAL/COMMON)	FOREST PLANTING AREA				
	FCE-1	FCE-2	FCE-3	FCE-4	TOTAL
ACER RUBRUM/RED MAPLE	9	0	7	0	16
CERES CANADENSIS/EASTERN REDBUD	10	0	14	2	26
LIRIODENDRON TULIPEFERA/TULIP TREE	9	0	11	2	22
NYSSA SYLVATICA	9	0	7	0	16
TOTAL	37	0	39	4	80

NOTE:
 1. THE QUANTITY SHOWN ABOVE IS FOR PLANTING WITH 2"-2 1/2" CAL. TREES AT 20' X 20' SPACING.

STATE OF MARYLAND
 Michael B. Tran
 993 LANDSCAPE ARCHITECT
 1/11/13

FOREST CONSERVATION NOTES and DETAILS INFORMATION

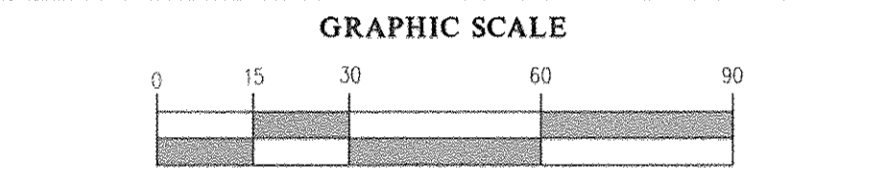
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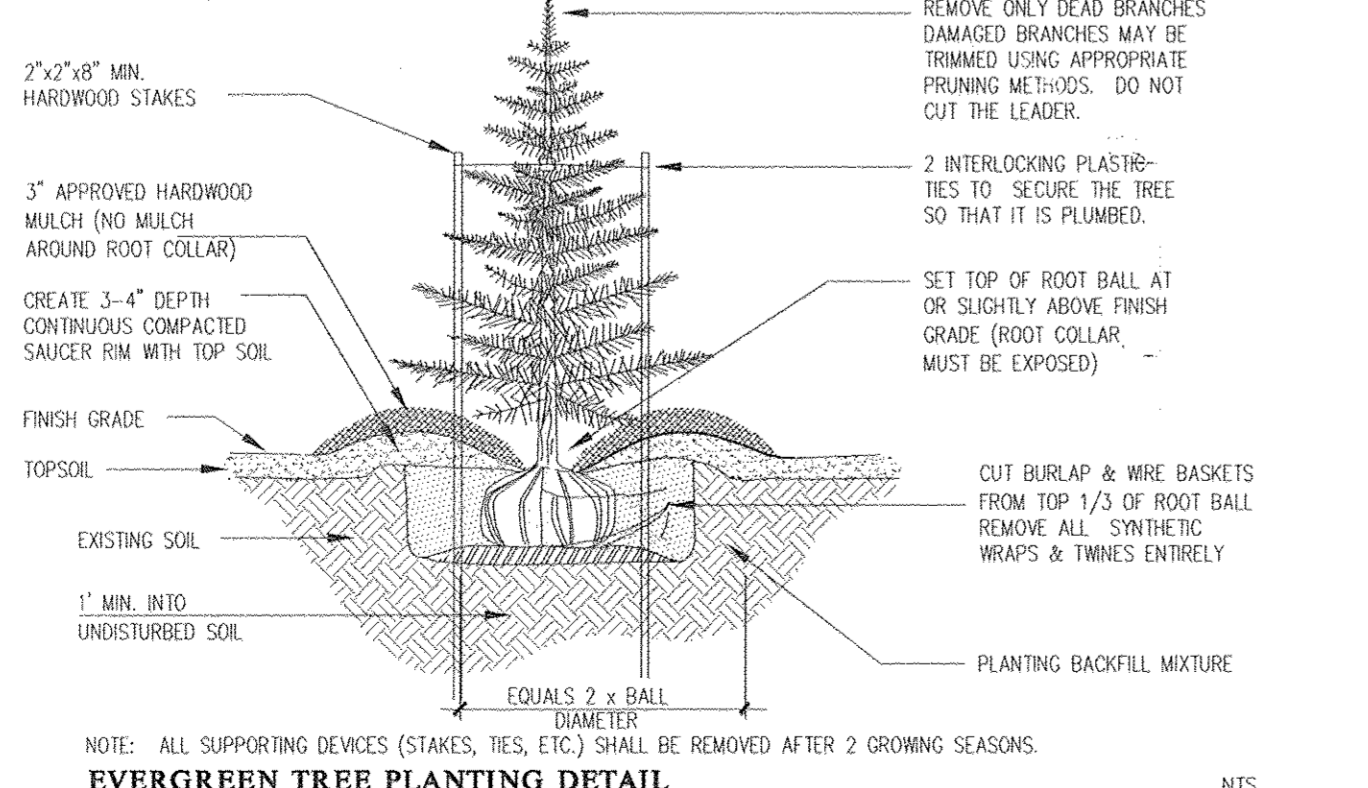
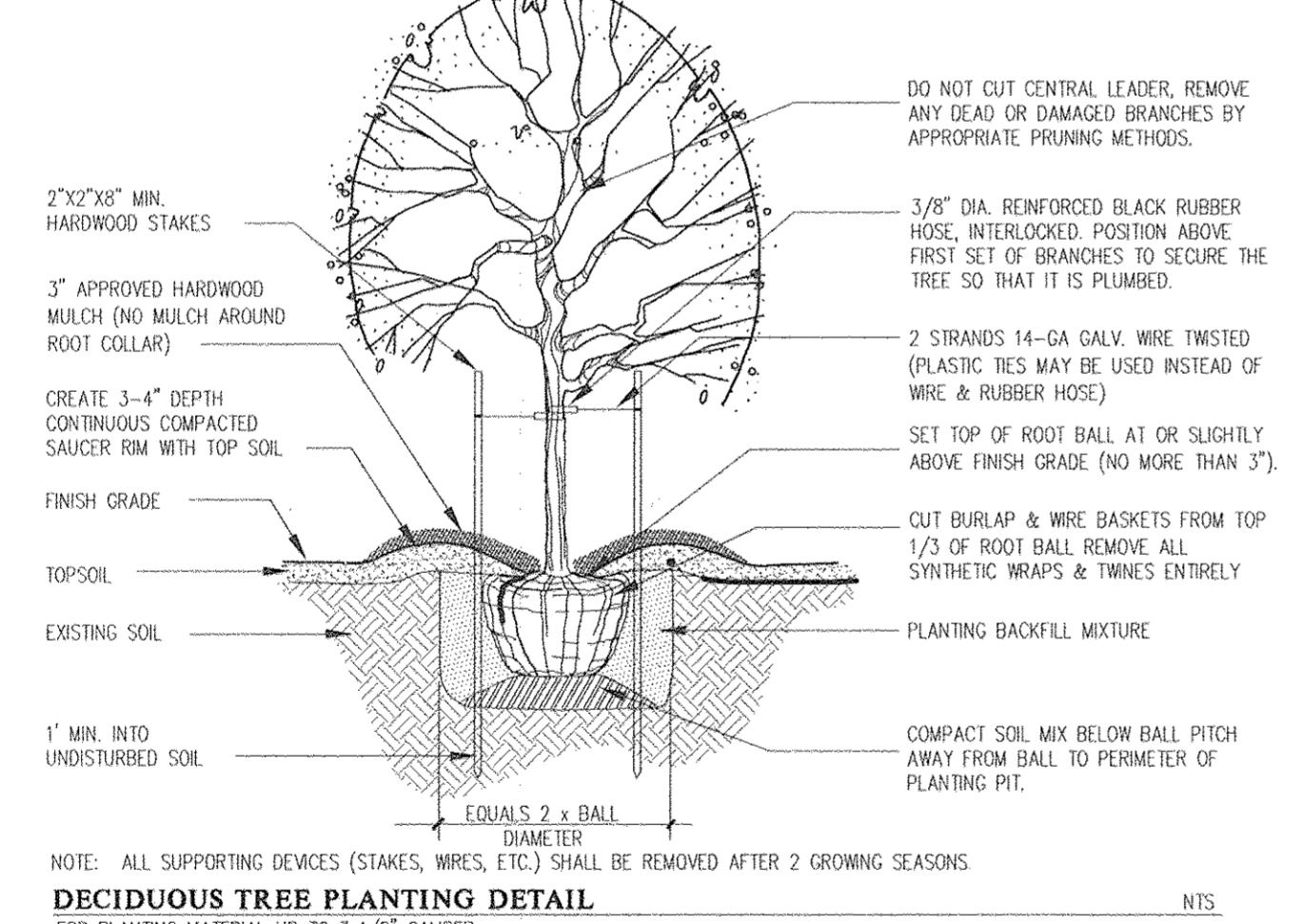
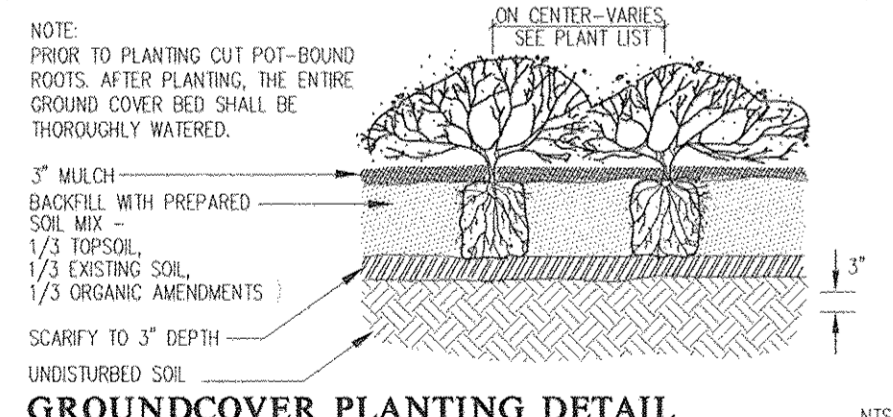
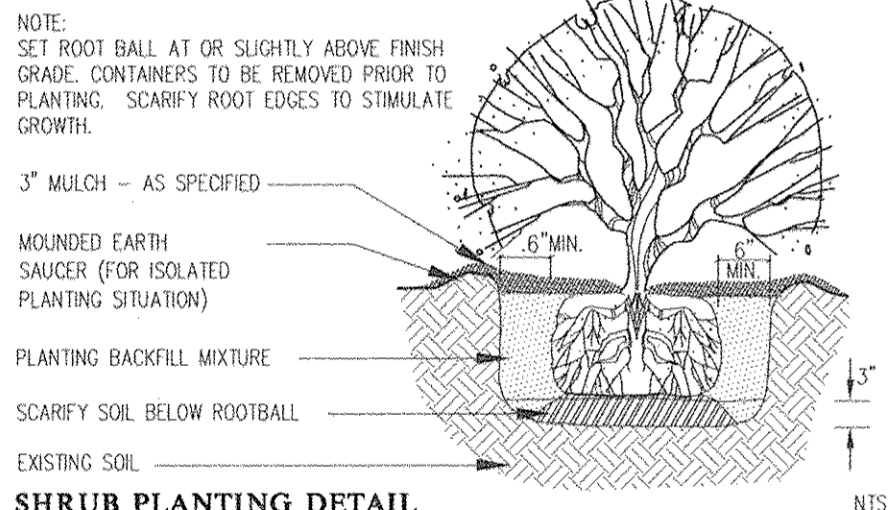
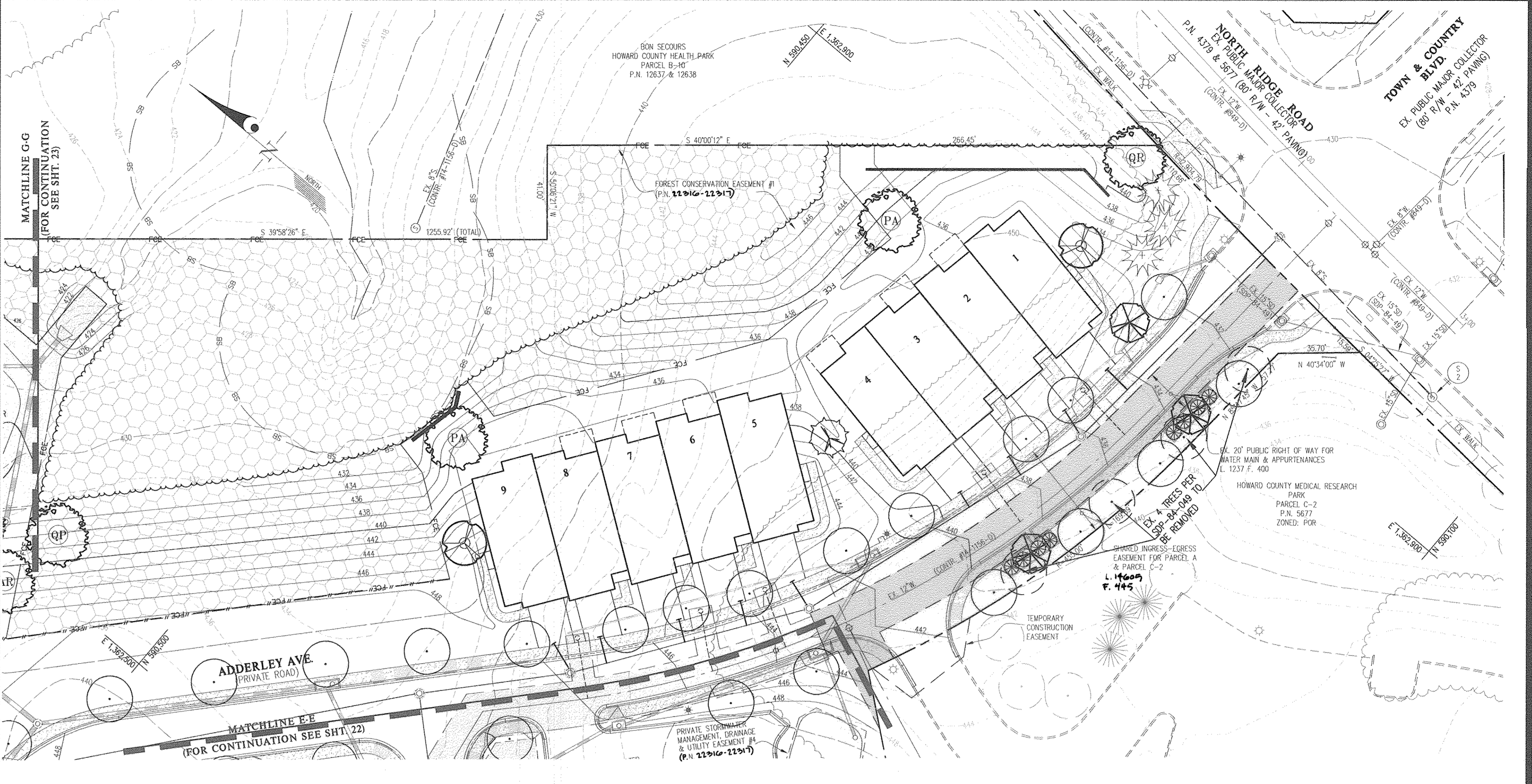
LANDSCAPE NOTES

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE & THE HOWARD COUNTY LANDSCAPE MANUAL.
- CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES, ON SHEET No.1 SHALL APPLY.
- FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK. CONTACT CONSTRUCTION MANAGER OR OWNER IF ANY RELOCATIONS ARE REQUIRED.
- PLANT QUANTITIES SHOWN ON THE PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL TAKE PRECEDENCE.
- ALL PLANT MATERIAL SHALL BE FULL, HEAVY, WELL FORMED, SYMMETRICAL, AND CONFORM TO THE A.A.N. SPECIFICATIONS. IN ADDITION, ALL REQUIRED PLANTING FOR THE LANDSCAPE ISLANDS IN THE PARKING LOT SHALL CONFORM TO THE HOWARD COUNTY LANDSCAPE MANUAL. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THIS PLAN. SEE SHEET 21 FOR PLANTING DETAILS.
- NO SUBSTITUTION SHALL BE MADE WITHOUT PRIOR APPROVAL FROM HOWARD COUNTY DPZ AND THE OWNER OR HIS REPRESENTATIVE.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED, OR MULCHED SHALL BE SOULDED OR SEEDED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATION. A MINIMUM OF 4" OF TOPSOIL SHALL BE PROVIDED TO ALL PLANTING AREAS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL DRAINAGE CONDITIONS THAT MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS.
- ALL EXPOSED EARTH WITHIN THE LIMITS OF PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER THE PLANTING DETAILS.
- DO NOT PLANT WITHIN THE PUBLIC WATER, SEWER AND UTILITY EASEMENT.
- VERIFY THE LOCATION AND DEPTH OF THE COMMUNICATION LINE(S) WITHIN THE AT&T R/W PRIOR TO ANY PLANTING WITHIN THIS R/W. THE CONTRACTOR SHALL CONTACT CLW FOR ANY NECESSARY RELOCATION OF PLANT MATERIALS.
- THE SCHEDULES ON SHEET 19 ARE PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE OPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$41,250.00 FOR THE FOLLOWING PLANTS:
 9 EVERGREEN TREES AT \$150/TREE = \$ 1,350.00
 133 SHADE TREES AT \$300/TREE = \$39,900.00

TO REQUEST A LANDSCAPE INSPECTION TO OBTAIN THE RELEASE OF THE POSTED LANDSCAPE SURETY, SUBMIT A WRITTEN REQUEST OF LANDSCAPE INSPECTION, ALONG WITH A COPY OF THE ONE YEAR LANDSCAPE PLANT WARRANTY, TO THE DIVISION OF LAND DEVELOPMENT, HO. CO. DEPT. OF PLANNING AND ZONING.



SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
SHADE TREES				
AA	30	ACER RUBRUM 'AUTUMN BLAZE' / AUTUMN BLAZE RED MAPLE	2 1/2-3" CAL	B&B (STREET TREE)
AR	27	ACER RUBRUM 'OCTOBER SUNSET' / OCTOBER SUNSET MAPLE	2 1/2-3" CAL	B&B
PA	2	PLATANUS X ACERIFOLIA / LONDON PLANETREE	2 1/2-3" CAL	B&B
OR	6	QUERCUS RUBRA / NORTHERN RED OAK	2 1/2-3" CAL	B&B
OP	11	QUERCUS FALCATUS / PIN OAK	2 1/2-3" CAL	B&B
OW	10	QUERCUS PHellos / WILLOW OAK	2 1/2-3" CAL	B&B
EVERGREEN TREES				
	5	ILEX X NELLIE R. STEVENS / NELLIE R. STEVENS HOLLY	6-8" HT.	B&B, INTACT LEADER
	5	PICEA OMORICA / SCANDIAN SPRUCE	8-10" HT.	B&B, INTACT LEADER
	13	PICEA ABIES / NORWAY SPRUCE	8-10" HT.	B&B, INTACT LEADER
ORNAMENTAL TREES (SEE PLANTING LEGEND BELOW FOR ORNAMENTAL TREE SYMBOLS)				
BN	12	BETULA NIGRA 'DURAEAT' / DURAEAT RIVER BIRCH	8-10" HT.	B&B, MULTI-STEM W/ 4" MIN. CLEAR TRUNK
CC	8	CORYLUS CANADENSIS / EASTERN HICORY	2 - 2 1/2" CAL	B&B, TREE FORM W/ 4" MIN. CLEAR TRUNK
U	10	LAGOSTROBIUM NIGRA 'WATCHEZ' / GRAPE MYRTLE 'WATCHEZ'	8-10" HT.	B&B, MULTI-STEM W/ 4" MIN. CLEAR TRUNK
PC	7	PRUNUS CERASIFERA 'THUNDERCLOUD' / THUNDERCLOUD PLUM	2 - 2 1/2" CAL	B&B
PIO	23	PRUNUS X NINCAMP 'OKAME' / OKAME CHERRY	2 - 2 1/2" CAL	B&B
PY	22	PRUNUS YEDENSIS / YOSHINO CHERRY	2 - 2 1/2" CAL	B&B
SHRUBS				
	47	CARYOPTERIS CLANDONENSIS / DARK KNIGHT BLUE BEARD	15"-18" SPR.	CONTAINER
	31	SPINARIA JAPONICA 'MAGIC CARPET' / BRIDAL WREATH	15"-18" SPR.	CONTAINER
	18	BRODIAEA DAVOUR 'WHITE BALL' / WHITE BALL DWARF BUTTERFLY BUSH	18"-24" SPR.	CONTAINER
	42	CORONIS SERICEA 'RUBY' / RUBY RED OSIER DOGWOOD	18"-24" SPR.	CONTAINER
	28	TEA VIRGINICA 'HENRY'S GARNET' / VIRGINIA SWEETSPICE	18"-24" SPR.	CONTAINER
HERBACEOUS				
	140	HEMEROCALLIS 'JOAN SENIOR' DAYLILY	18" O.C.	CONTAINER
	128	HEMEROCALLIS 'STRAWBERRY CANDY' DAYLILY	18" O.C.	CONTAINER
	171	HEMEROCALLIS 'CHERRY CHEEKS' DAYLILY	18" O.C.	CONTAINER
	139	HEMEROCALLIS 'CHICAGO APACHE' DAYLILY	18" O.C.	CONTAINER
	51	RUBROCKIA HIRTA 'AUTUMN COLOR' BLACK-EYED SUSAN	18" O.C.	CONTAINER
	141	LAVANDULA X INTERMEDIA 'PROVENCE' LAVENDER	18" O.C.	CONTAINER
	446	SAGITTARIA LATIFOLIA / DUCK POTATO	18" O.C.	CONTAINER
	296	PONTEDRIA CORDATA / PICKERWEED	18" O.C.	CONTAINER
	344	IRIS PSEUDOCAROLIS IRIS VERSICOLOR / YELLOW FLAG / BLUE FLAG	18" O.C.	CONTAINER
	389	CAREX STRICTA / TUSSOCK SEDGE	18" O.C.	CONTAINER
	409	SCIRPUS PLONGENS / COMMON THREE-SQUARE	18" O.C.	CONTAINER
	494	POLYGONUM DENSIFLORUM / DENSE-FLOWER SMARTWEED	18" O.C.	CONTAINER
	110	PELTANDRA VIRGINICA / ARROW ARUM	18" O.C.	CONTAINER
	403	SAURURUS CERMIUS / LIZARD'S TAIL	18" O.C.	CONTAINER



SPECIFICATIONS: PLANT MATERIALS AND PLANTING METHODS

- PLANT MATERIALS**
THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP AND TRANSPANT ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.
 - PLANT NAMES:**
PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM WITH "AAN" STANDARDS.
 - PLANT STANDARDS:**
ALL PLANT MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK" LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (HERE- AFTER REFERRED TO AS AAN STANDARDS). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS AND MECHANICAL INJURIES.
 - PLANT MEASUREMENTS:**
ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE.
 - CALIPER MEASUREMENTS SHALL BE TAKEN SIX INCHES (6") ABOVE GRADE FOR TREES UP TO FOUR-INCH (4") CALIPER AND TWELVE (12") ABOVE GRADE FOR TREES GREATER THAN FOUR INCHES (4") IN CALIPER.
 - MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX FEET (6'). MAXIMUM EIGHT FEET (8').
 - CALIPER, HEIGHT, SPREAD AND SIZE OF BALL SHALL BE GENERALLY AS FOLLOWS:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
2" - 2.5"	12'-14'	5'-6'	28" DIAMETER
3" - 3.5"	14'-16'	6'-8'	32" DIAMETER
3.5" - 4"	14'-16'	8'-10'	36" DIAMETER
4" - 4.5"	16'-18'	8'-10'	40" DIAMETER
4.5" - 5"	16'-17'	10'-12"	44" DIAMETER
5" - 5.5"	16'-20'	10'-12"	48" DIAMETER
5.5" - 6"	18'-20'	12'-14"	52" DIAMETER
 - ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE SIZE RANGES INDICATED ABOVE AS INDICATED IN THE "AAN" STANDARDS.
 - LEGIBLE IDENTIFICATION:**
LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.
 - PLANT INSPECTION:**
THE OWNER MAY REQUEST, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, TO INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.
- PLANTING METHODS**
ALL PROPOSED PLANT MATERIALS THAT MEET THE SPECIFICATIONS IN SECTION A ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:
 - PLANTING SEASONS:**
THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 1ST TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL PLANTING MIXTURES ARE USED. THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 15TH TO DECEMBER 1ST. NO PLANTING SHALL BE DONE WHEN THE GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN WET TOPSOIL SHALL BE USED AT ANY TIME.
 - DIGGING:**
ALL PLANT MATERIAL SHALL BE DUG, BALLED AND BURLAPPED (B&B) IN ACCORDANCE WITH THE "AAN STANDARDS".
 - EXCAVATION OF PLANT PITS:**
THE LANDSCAPING CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
 - LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.
 - ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES; DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL, DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE.
 - IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 18" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DEPTH MINIMUM.
 - DIAMETER AND DEPTH OF TREE PITS SHALL GENERALLY BE AS FOLLOWS:

PLANT SIZE	ROOT BALL	PIT DIA.	PIT DEPTH
2" - 2.5" CAL	28"	56"	24"
3" - 3.5" CAL	32"	64"	28"
3.5" - 4" CAL	36"	72"	32"
4" - 4.5" CAL	40"	80"	36"
4.5" - 5" CAL	44"	88"	40"
5" - 5.5" CAL	48"	96"	44"
5.5" - 6" CAL	52"	104"	48"
 - A 20% COMPACTION FIGURE OF THIS SOIL TO BE REMOVED IS ASSUMED AND WILL BE ALLOWED IN CALCULATION OF EXTRA TOPSOIL. THE TABULATED PIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT EXCEED THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.
- STAKING, CUYING AND WRAPPING:**
ALL PLANT MATERIAL SHALL BE STAKED OR CUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
 - STAKES: SHALL BE SOUND WOOD 2" X 2" ROUGH SAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS, MINIMUM 7'-0" FOR MAJOR TREES AND 5'-0" MINIMUM FOR MAJOR TREES.
 - WIRE AND CABLE: WIRE SHALL BE #10 GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CALIPER, PROVIDE 5/16" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 5" CALIPER, PROVIDE 3/16", 7 STRAND CABLE CADDIM PLATED STEEL, WITH GALVANIZED "EYE" THIMBLES OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.
 - HOSE: SHALL BE NEW, 2 PLY REINFORCED RUBBER HOSE, MINIMUM 1/2" I.D. "PLASTIC LOCK TIES" OR "PAUL'S TREES BRACES" MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIPER.
 - ALL TREES UNDER 3" IN CALIPER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED PLANTING DETAILS.
- PLANT PRUNING, EDGING AND MULCHING:**
ALL PLANT MATERIAL SHALL BE PRUNED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCHES. ALL CUTS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED ANTISEPTIC TREE WOUND DRESSING.
 - ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOIL WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.
 - AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A 3" LAYER OF FINE, SHREDDED PINE BARK, PEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.
- PLANT INSPECTION AND ACCEPTANCE:**
THE DESIGN REVIEW COMMITTEE SHALL BE RESPONSIBLE FOR INSPECTING ALL PLANTING PROJECTS ON A PERIODIC BASIS TO ASSURE THAT ALL WORK IS PROCEEDING IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- PLANT GUARANTEE:**
ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION OF ONE FULL GROWING SEASON, AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK IN THE PLANTING PROJECT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.
 - FOR THIS PURPOSE, THE "GROWING SEASON" SHALL BE THAT PERIOD BETWEEN THE END OF THE "SPRING" PLANTING SEASON, AND THE COMMENCEMENT OF THE "FALL" PLANTING SEASON.
 - GUARANTEE FOR PLANTING PERFORMED AFTER THE SPECIFIED END OF THE "SPRING" PLANTING SEASON, SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING "SPRING" PLANTING SEASON.

DEVELOPERS/BULDERS CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL AND THE M.F. LANDSCAPE DESIGN CRITERIA. 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.

NAME: James Connelly DATE: 1-22-13
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] DATE: 3/27/13
 Chief, Division of Land Development: [Signature] DATE: 3/25/13
 Chief, Development Engineering Division: [Signature] DATE: 2-21-13

PLANTING LEGEND

STATE OF MARYLAND
 Michael B. Tran
 ARCHITECT
 933 LANDSCAPE ARCHITECTS

THIS PLAN IS FOR PLANTING PURPOSES ONLY

NO ASBUILT INFORMATION 02/19/2015

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

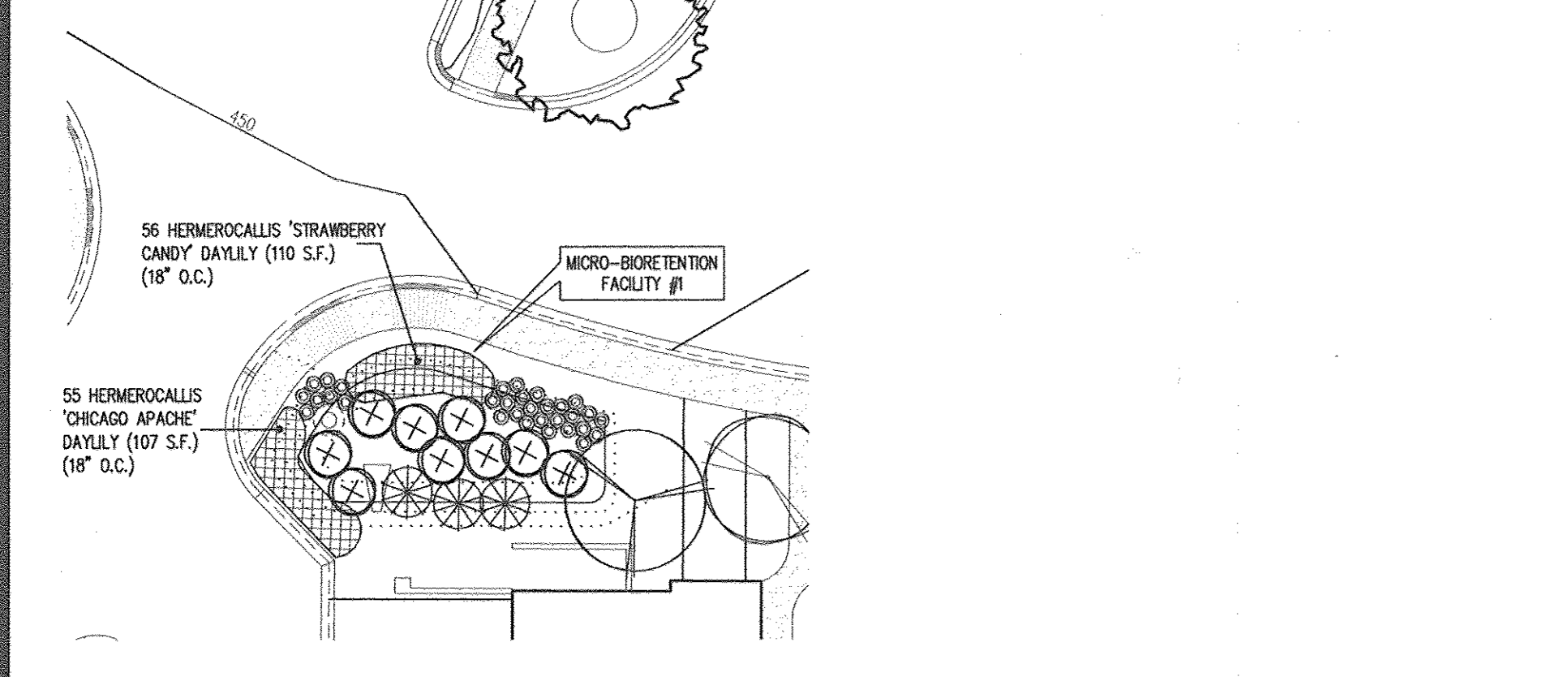
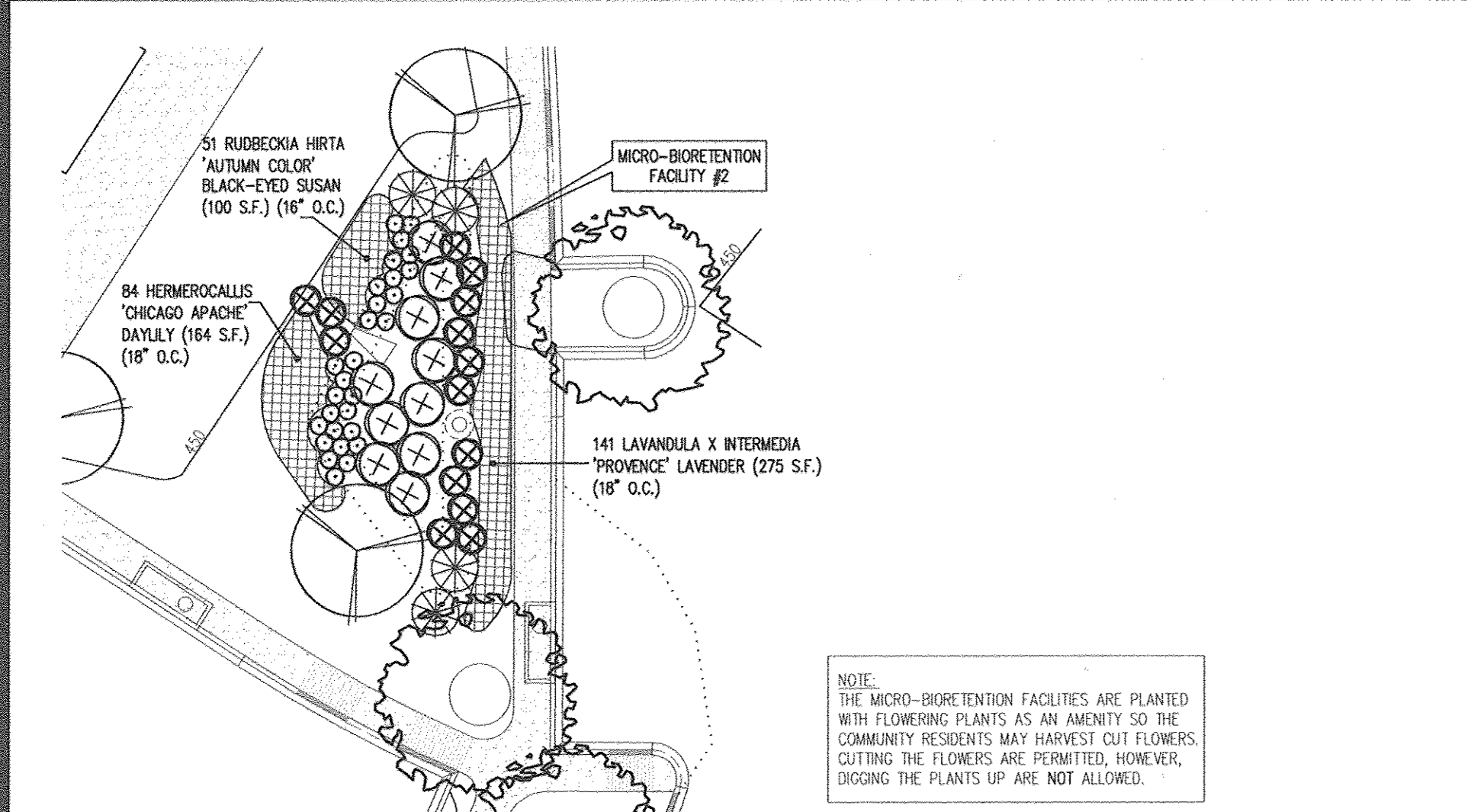
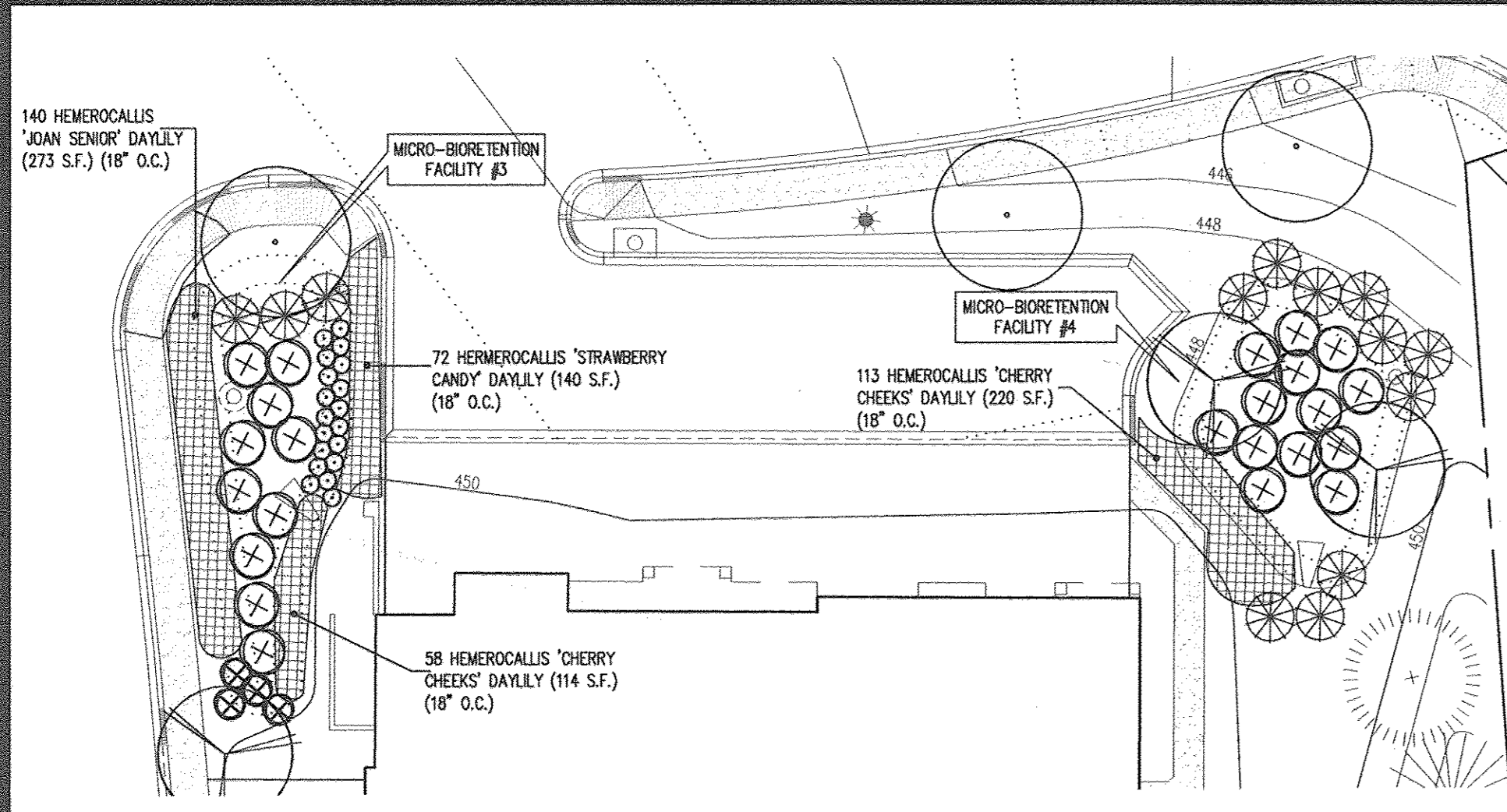
PREPARED FOR:
 NORTHRIDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
 301-428-0800

LANDSCAPE PLAN / LANDSCAPE NOTES and DETAILS

THE GATHERINGS at ELICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 22316-22317

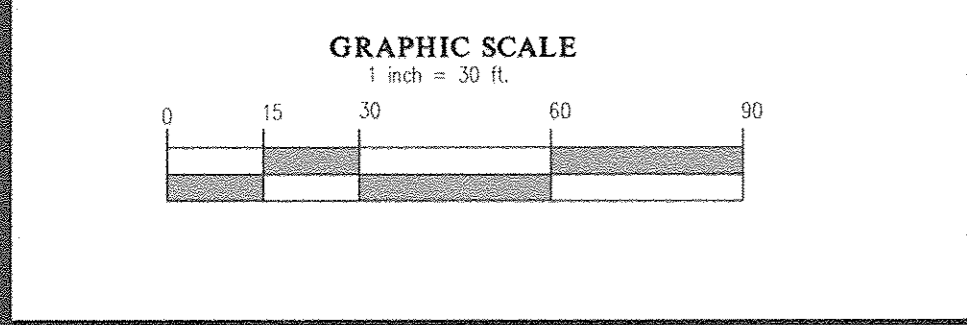
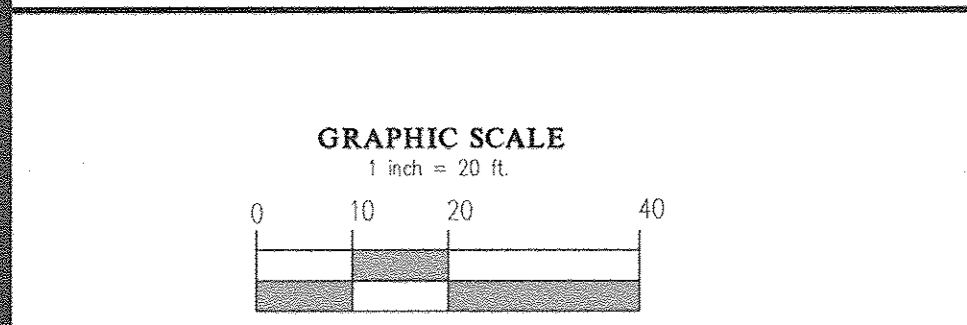
ELECTION DISTRICT No. 2

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	21 OF 26



NOTE:
THE MICRO-BIORETENTION FACILITIES ARE PLANTED WITH FLOWERING PLANTS AS AN AMENITY SO THE COMMUNITY RESIDENTS MAY HARVEST CUT FLOWERS. CUTTING THE FLOWERS ARE PERMITTED, HOWEVER, DIGGING THE PLANTS UP ARE NOT ALLOWED.

ESD PLANTING DETAILS FOR MICRO-BIORETENTION FACILITIES SCALE: 1" = 20'



NOTE:
THE OWNER OR CONDOMINIUM ASSOCIATION MAY SUBSTITUTE THE TREES (BY THE COMMUNITY BUILDING AND SWIMMING POOL) THAT ARE IDENTIFIED WITH ASTERISK (*) IN ACCORDANCE WITH THE "PLANT SUBSTITUTIONS" PROVISIONS ON PAGE 12 OF THE HOWARD COUNTY LANDSCAPE MANUAL.

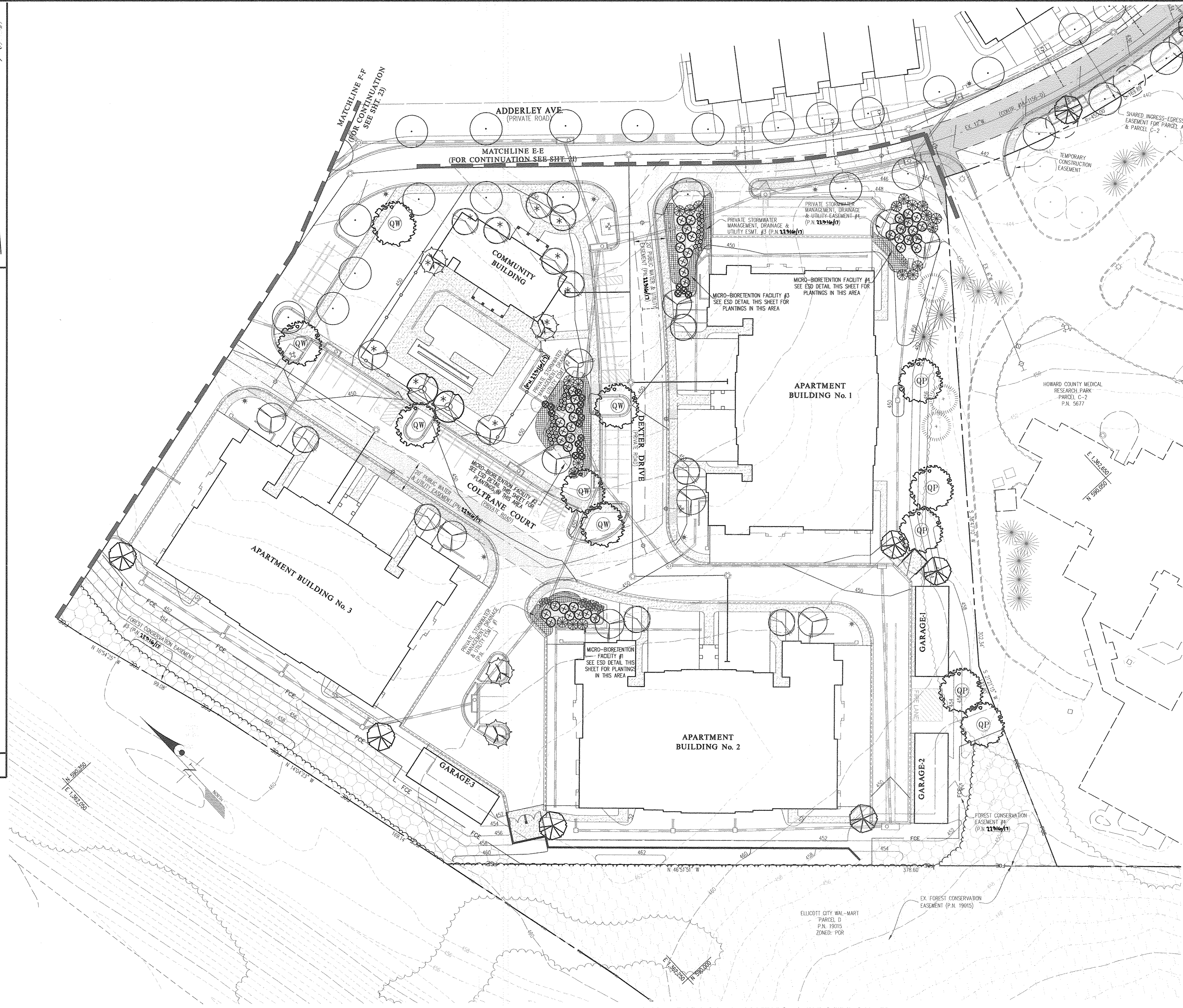
STATE OF MARYLAND
Michael B. Tran
ARCHITECT
933 LANDSCAPE
1.31.17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: *[Signature]* 2/25/13
Chief, Division of Land Development: *[Signature]* 3/25/13
Chief, Development Engineering Division: *[Signature]* 2.21.13

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CAD\DRAWINGS\11005\PLANS BY GLW\SDP\11005_21-23 LS.dwg DES. M&T DRN. KLP CHK. CKG

DATE	REVISION	BY	APP'R



THIS PLAN IS FOR PLANTING PURPOSES ONLY
NO AS-BUILT INFORMATION

PREPARED FOR:
NORTHBRIDGE, LLC
24012 FREDERICK ROAD
SUITE 200
CLARKSBURG, MARYLAND 20871
JONATHAN W. SOULE
301-428-0800

LANDSCAPE PLAN
THE GATHERINGS at ELICOTT MILLS
PARCEL A
AGE RESTRICTED ADULT HOUSING
PLAT Nos. 11833 & 11834-22-17

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	22 OF 26

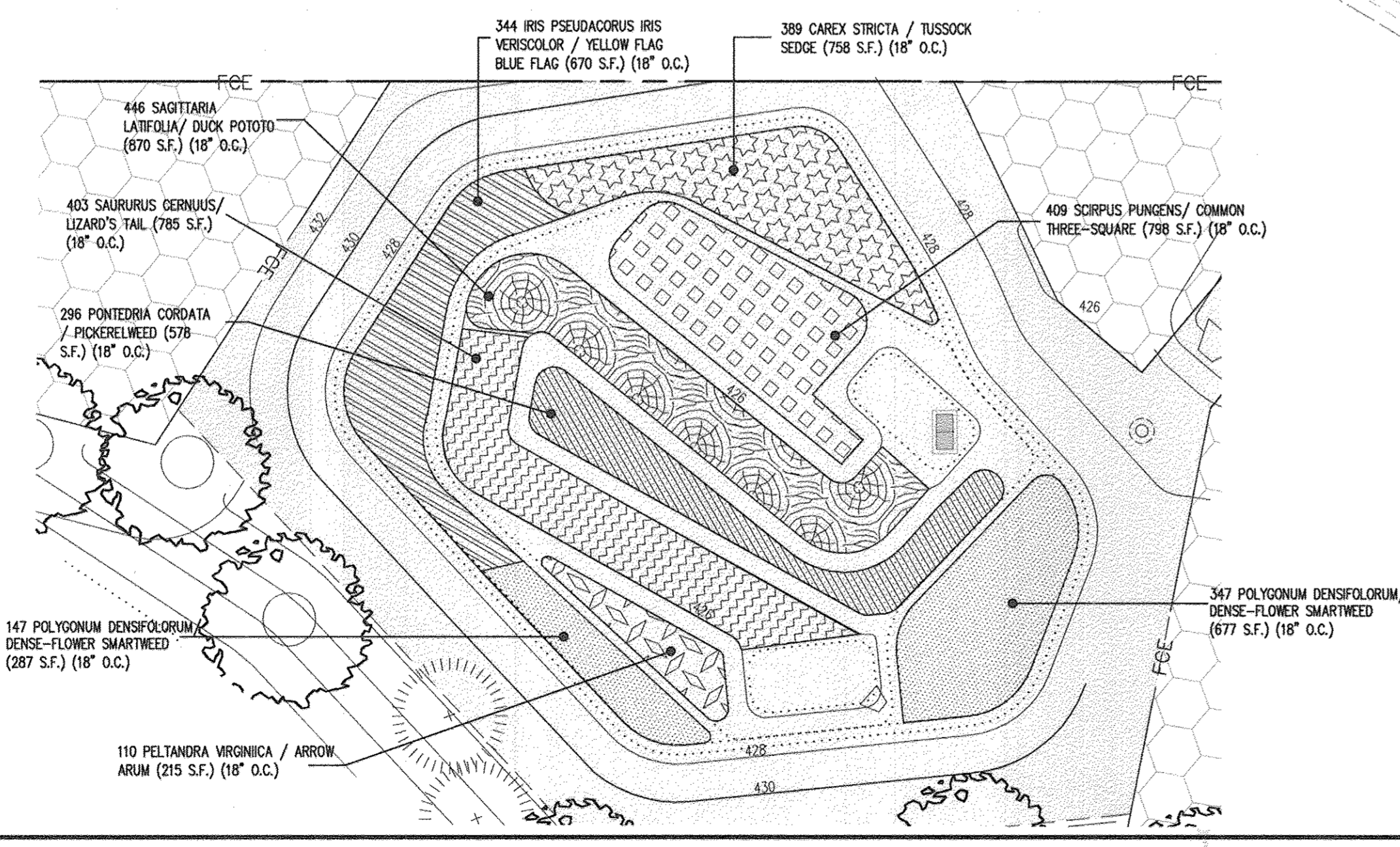
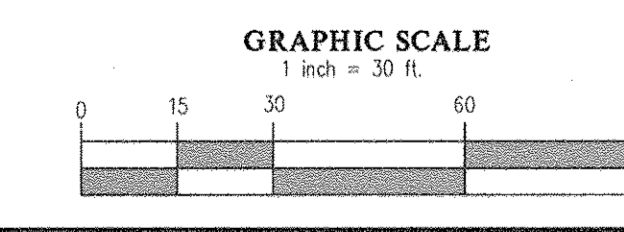
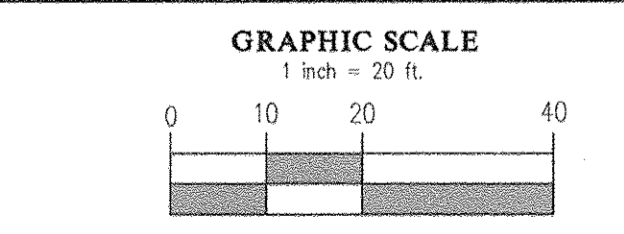
ELECTION DISTRICT No. 2

HOWARD COUNTY, MARYLAND



STATE OF MARYLAND
 Michael B. Tran
 933 LANDSCAPE ARCHITECT
 1-31-13

NOTE:
 THE OWNER OR CONDOMINIUM ASSOCIATION MAY SUBSTITUTE THE TREES (IN THE CENTRAL ISLAND) THAT ARE IDENTIFIED WITH ASTERISK (*) IN ACCORDANCE WITH THE "PLANT SUBSTITUTIONS" PROVISIONS ON PAGE 12 OF THE HOWARD COUNTY LANDSCAPE MANUAL.



ESD PLANTING DETAIL FOR GRAVEL WETLANDS #1 SCALE: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Debra M. Gyle Director 3/25/13
Kate Schaefer Chief, Division of Land Development 3/25/13
Chris Church Chief, Development Engineering Division 2-21-13

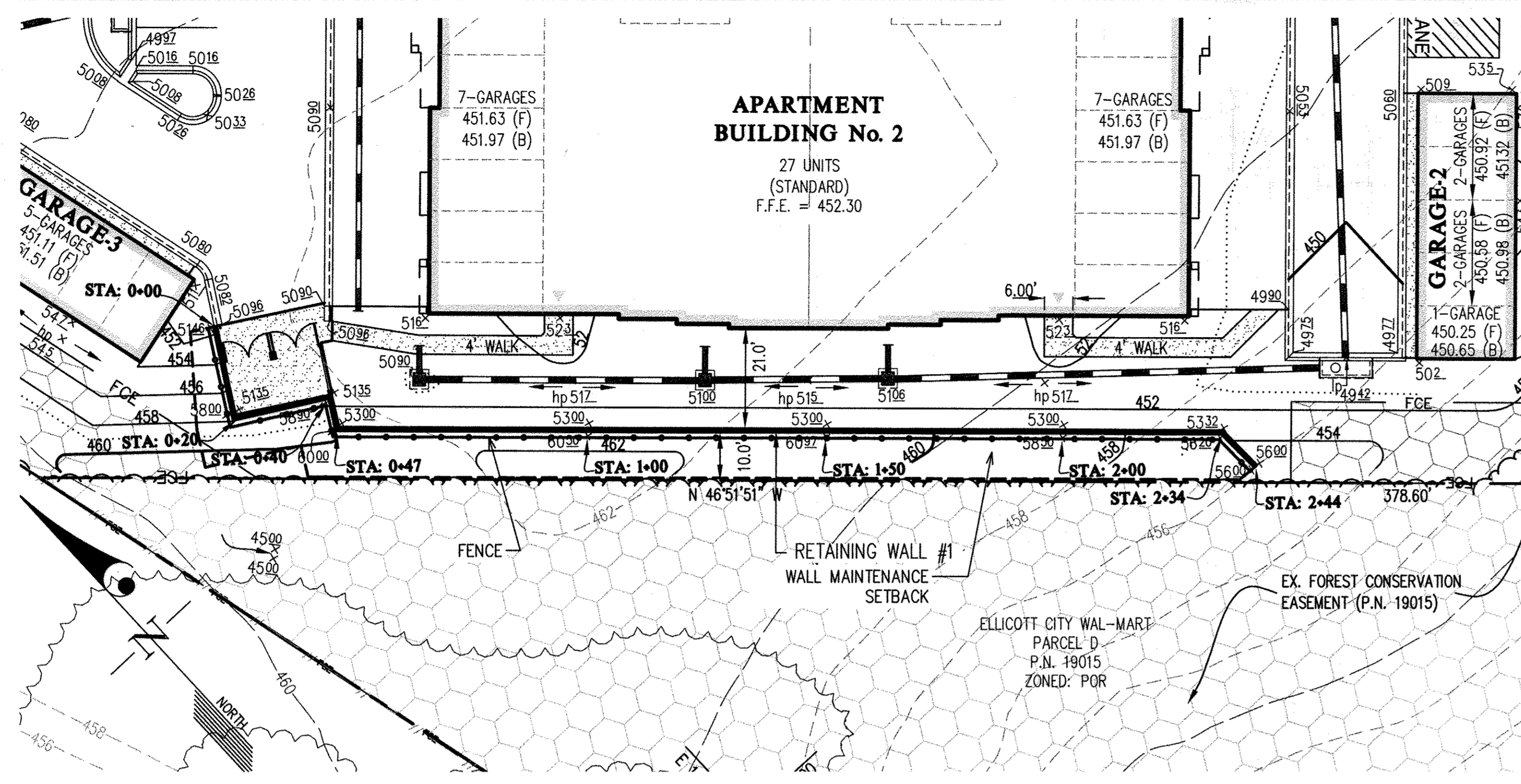
GLW GUTSCHICK LITTLE & WEBER, P.A.
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 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

PREPARED FOR:
 NORTHEDGE, LLC
 24012 FREDERICK ROAD
 SUITE 200
 CLARKSBURG, MARYLAND 20871
 JONATHAN W. SOULE
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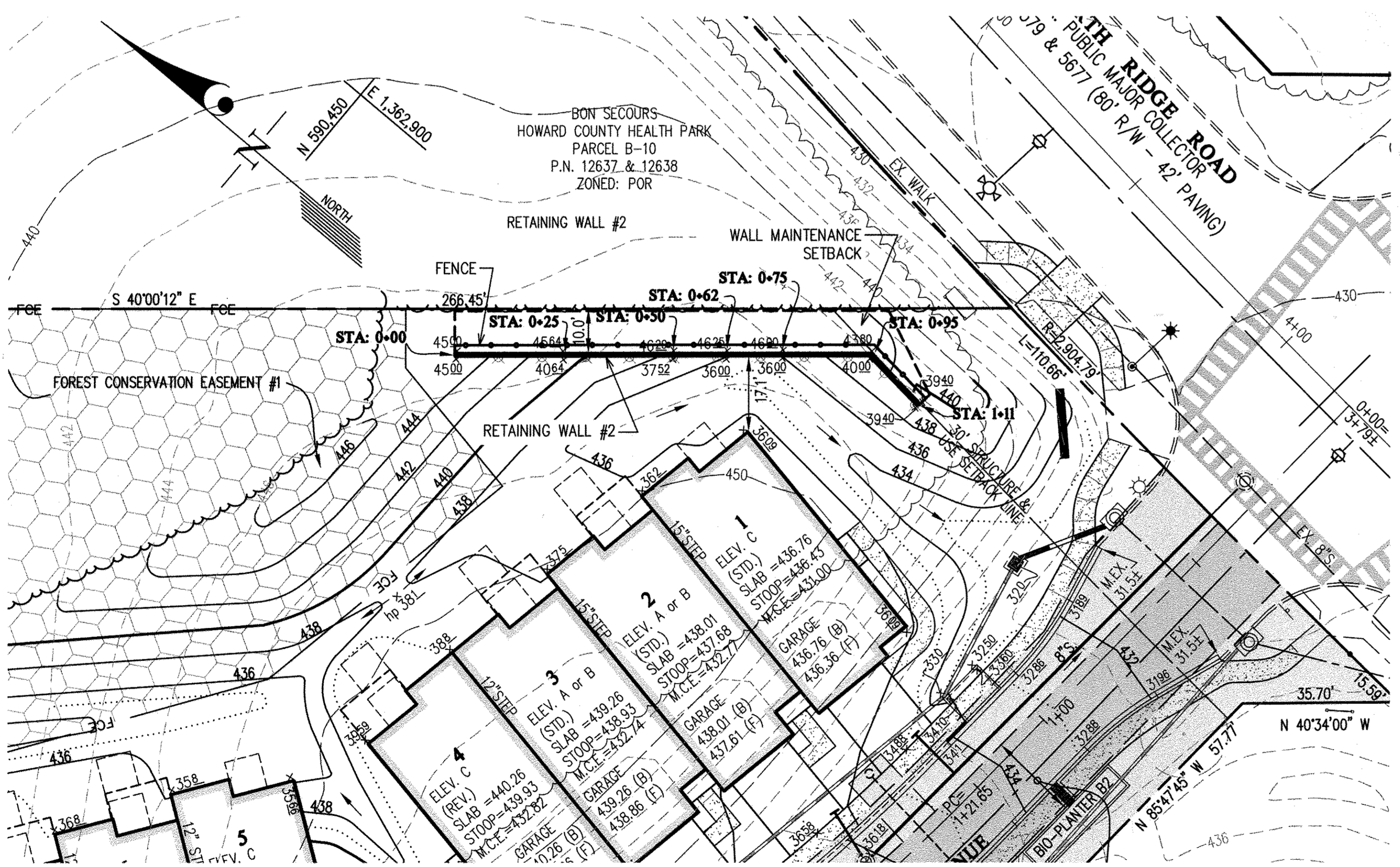
THIS PLAN IS FOR PLANTING PURPOSES ONLY **NO AS-BUILT INFORMATION**

LANDSCAPE PLAN
THE GATHERINGS at ELLICOTT MILLS 02/19/2018
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 21216-21217

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	POR	11005
DATE	TAX MAP - GRID	SHEET
JAN. 2013	17 - 23	23 OF 26



WALL #1 LOCATION PLAN
1" = 20'



WALL #2 LOCATION PLAN
1" = 20'

SPECIFICATIONS
MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

- 1.01 Description**
A. Work shall consist of furnishing and construction of a Modular Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.
B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.
C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

- 1.02 Delivery, Storage and Handling**
A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.
B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

- 2.01 Modular Concrete Retaining Wall Units**
A. Modular concrete units shall conform to the following architectural requirements:
face color - color may be specified by the Owner.
face finish - sculptured rock face in angular tri-planer or flat configuration. Other face finishes will not be allowed without written approval of Owner.
bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.
exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.
B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.
C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:
compressive strength = 3000 psi minimum;
absorption = 8 % maximum (6% in northern states) for standard weight aggregates;
dimensional tolerances = ± 1/8" from nominal unit dimensions - not including rough split face, ± 1/16" unit height - top and bottom planes;
unit size - 8" (H) x 18" (W) x 12 (D) minimum;
unit weight - 75 lbs/unit minimum for standard weight

- aggregates;
inter-unit shear strength - 1000 pif minimum at 2 psi normal pressure;
geogrid/unit peak connection strength - 1000 pif minimum at 2 psi normal force.
D. Modular concrete units shall conform to the following constructability requirements: (if applicable)
vertical setback = 1/8"± per course (near vertical) or 1"± per course per the design;
alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;
maximum horizontal gap between erected units shall be 1/2 inch.

- 2.02 Shear Connectors**
A. Shear connectors shall be 1/2 inch diameter thermoset isophthalic polyester resin-protuded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F.
B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

- 2.03 Base Leveling Pad Material**
A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

- 2.04 Unit Drainage Fill**
A. Unit drainage fill shall consist of #57 crushed stone

- 2.05 Reinforced Backfill**
A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:
- | Sieve Size | Percent Passing |
|------------|-----------------|
| 2 inch | 100-75 |
| 3/4 inch | 100-75 |
| No. 40 | 0-60 |
| No. 200 | 0-40 |
- Plasticity Index (PI) <10 and Liquid Limit <35 per ASTM D-4318.
B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

- 2.06 Geogrid Soil Reinforcement**
A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.
2.07 Drainage Pipe
A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

- 3.01 Excavation**
A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

- 3.02 Base Leveling Pad**
A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.
B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

- 3.03 Modular Unit Installation**
A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.
B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.
C. Install shear/connecting devices per manufacturer's recommendations.
D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.

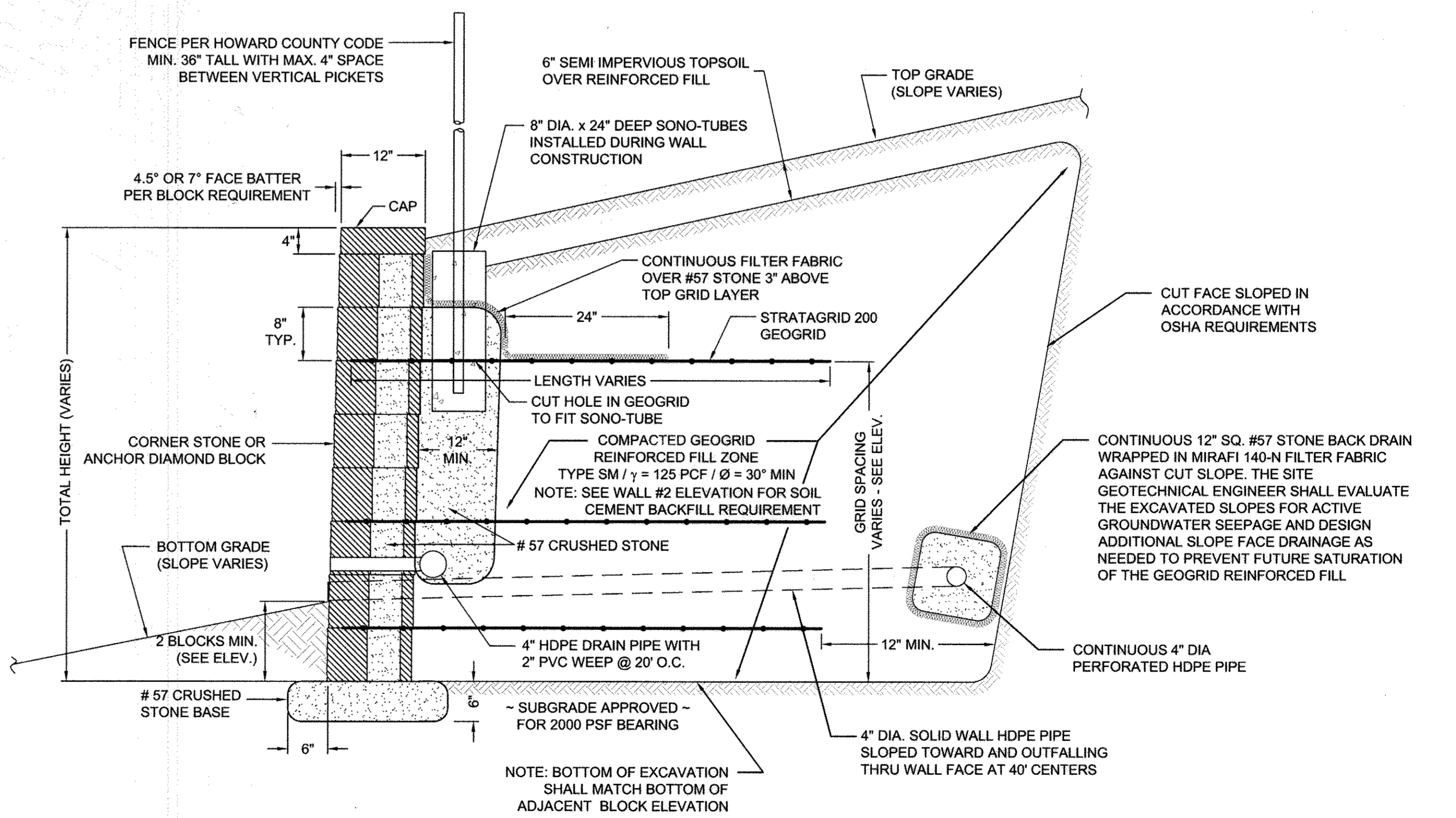
- 3.04 Structural Geogrid Installation**
A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.
B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.
C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to

- backfill placement on the geogrid.
D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

- 3.05 Reinforced Backfill Placement**
A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.
B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.
C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.
D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.
E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.

- 3.06 Cap Installation**
A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

- 3.07 Field Quality Control**
A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.
B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.



TYPICAL WALL SECTION
N.T.S.

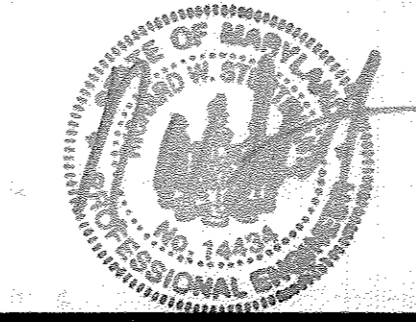
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] 2/15/13
 Chief, Division of Land Development: [Signature] 3/25/13
 Chief, Development Engineering Division: [Signature] 2-21-13

HILLIS-CARNES ENGINEERING ASSOCIATES
 10975 Guilford Road, Suite A Annapolis Junction, MD
 (410) 880-4788 Fax: (410) 880-4098

DES. HM	DRN. HM	CHK. RWS	DATE	REVISION	BY	APP.

PREPARED FOR:
 NORTHEDGE, LLC
 24012 Frederick Road Suite 200
 Clarksburg, MD 20871
 ATTN: Jonathan W. Soule
 301-428-0800

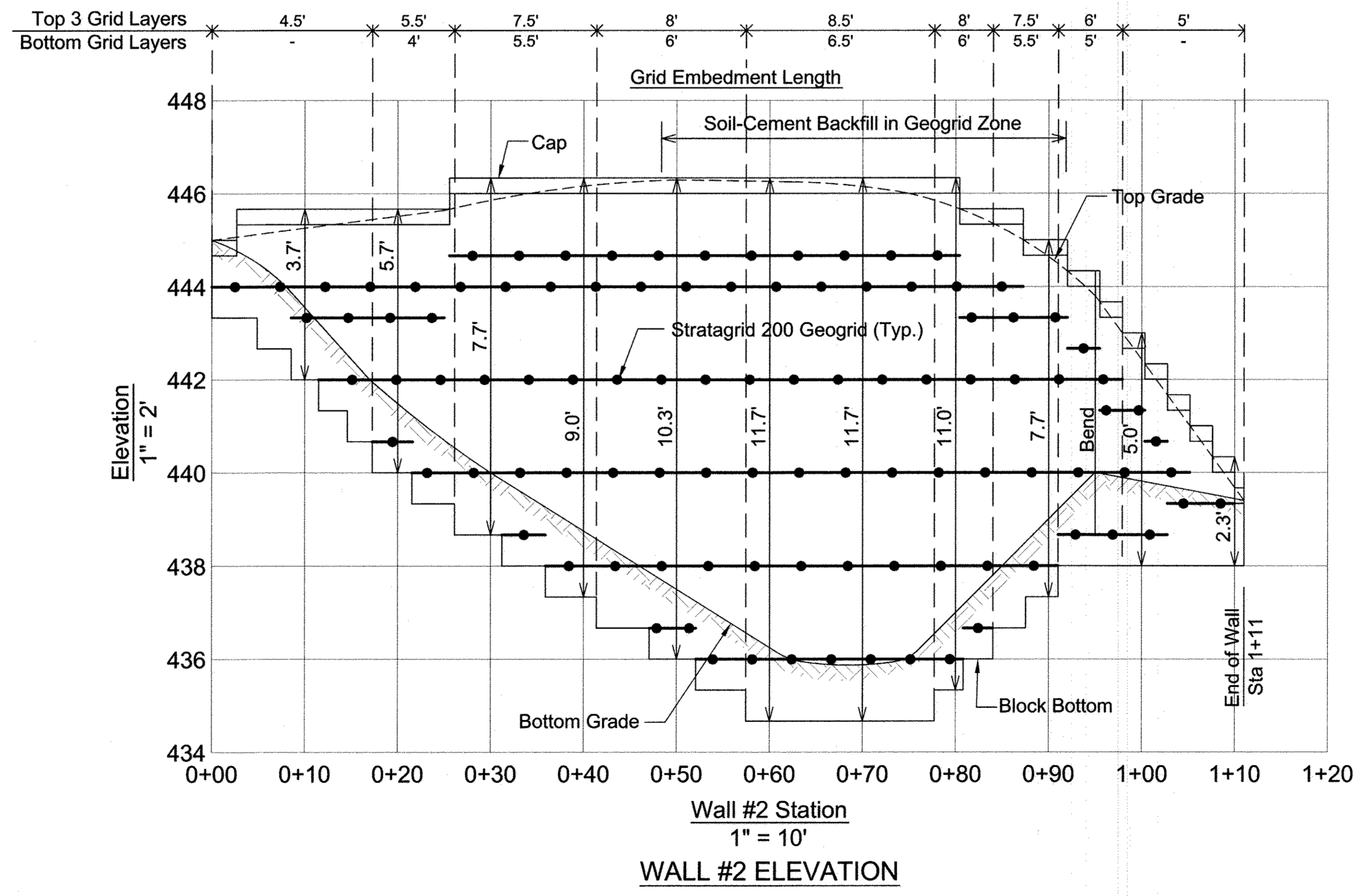
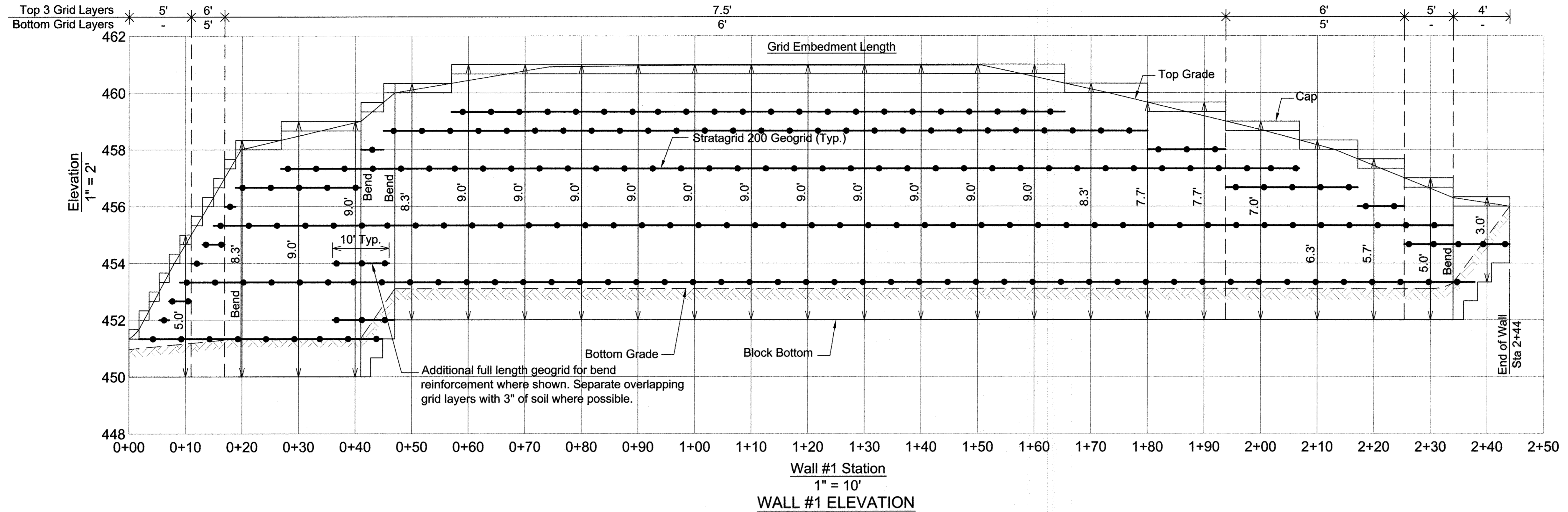
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434.
 EXPIRATION DATE: 05/31/13



ELECTION DISTRICT No. 2

RETAINING WALL CONSTRUCTION DETAILS INFORMATION
THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 11910-11917
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	HCEA JOB NO.
AS SHOWN	POR	11023-T
DATE	TAX MAP - GRID	SHEET
OCT. 2012	17 - 23	24 OF 26



Note:
 Due to constricted wall maintenance easement on wall #2 between sta. 0+41 and 0+84, place compacted soil cement backfill in the geogrid reinforced fill zone. Soil-Cement shall consist of 120 lbs Portland cement thoroughly mixed with 1 cu. yd. type SM soil at 2% over optimum moisture placed within 1 hour of mixing.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* Date: 2/25/13
 Chief, Division of Land Development: *[Signature]* Date: 2/25/13
 Chief, Development Engineering Division: *[Signature]* Date: 2-21-13

HILLIS-CARNES
 ENGINEERING ASSOCIATES
 10875 Guilford Road, Suite A Annapolis Junction, MD
 (410) 880-4788 Fax: (410) 880-4098

PREPARED FOR:
 NORTHTRIDGE, LLC
 24012 Frederick Road Suite 200
 Clarksburg, MD 20871
 ATTN: Jonathan W. Soule
 301-428-0800

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS
 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. 14434.
 EXPIRATION DATE: 05/13/13



RETAINING WALL #1 & #2 ELEVATIONS
 THE GATHERINGS at ELLICOTT MILLS
 PARCEL A
 AGE RESTRICTED ADULT HOUSING
 PLAT Nos. 11833 & 11916-11917
 ELECTION DISTRICT No. 2

SCALE	ZONING	HCEA JOB NO.
AS SHOWN	POR	11023-T
DATE	TAX MAP - GRID	SHEET
OCT. 2012	17 - 23	25 OF 26

NO ASBUILT
 INFORMATION
 02/19/2018

DES.	DRN.	CHK.	DATE	REVISION	BY	APPR.
H.M.	H.M.	R.W.S.				

