

ELEVATION & FOOTPRINT

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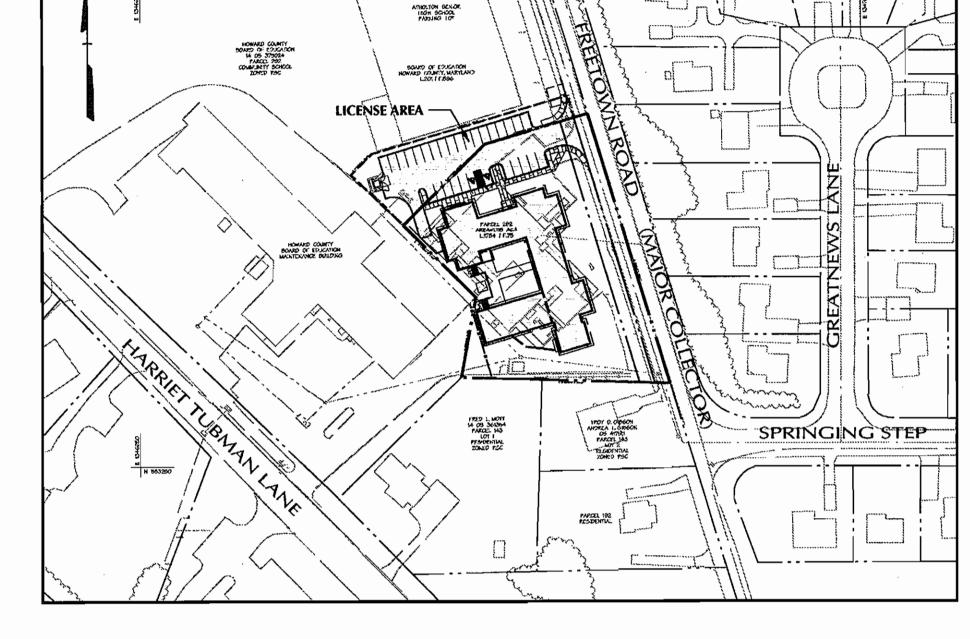
SHEET	DESCRIPTION
1	COYER SHEET
2	SITE AND GRADING PLAN
3	DEMOLITION PLAN
4	STORMWATER MANAGEMENT REDEVELOPMENT PLAN
5	STORMWATER MANAGEMENT SPECIFICATIONS AND BORING LOG
6	DRAINAGE AREA AND SOILS MAP
7	FOREST CONSERVATION AND FOREST STAND DELINEATION PLAN
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15	SEDIMENT AND EROSION CONRTOL DETAILS

General Notes

- 1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications
- 2. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection division at 410-313-1880 at least five (5) working days prior to the start of work. 3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least
- 48 hours prior to any excavation work being done. Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCO).
- All street and regulatory signs be in place prior to the placement of any 5. Street light placement and the type of fixture and pole shall be in accordance with the Howard County Design Manual, Volume III (1993)
- and as modified by "Guidelines for Street Lights in Residential Developments (June 1993)." A minimum 20 feet spacing shall be between the light and any tree.
- 6. The existing topography is taken from field run survey with 2' contour intervals prepared by DMW dated July 9,2005
- 7. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Monument Nos. 41CC and 3513 were used for this project.
- 8. Sldewalk ramps shall meet current ADA requirements.
- 9. Water is public, Contract No. 24-3265-D 10. Sewer is public Contract No. 20-0916-D
- 11. Stormwater Management for this project will be provided using a stormceptor facility. All computations are based on the MDI 2000 Maryland Stormwater Design Manual Volumes 1 & ! and Howard County requirements. No recharge or stream channel protection volume is required because the project is a redevelopment site
- 12. Existing utilities are based on field survey and plans of record.
- 13. There are no wetlands wetland buffers, streams, nor stream buffers on this site.
- 14. There is no floodplain on this site.
- 15. No traffic study is required for this project. 16. Street trees shall be planted at least 5' from any Inlet structure.
- 17. This project complies with Section 16.1200 of the Howard County Code for Forest Conservation. Under this plan, no forest clearing or retention is proposed. Forest Conservation will be provided by payment of a fee-in-lieu in the ammount of \$ 1,590.90. 18. Relocated fire hydrant and relocated sanitary sewer shall be done under Contract # 2A-4414-D
- 19. There are no cemeterles on this site.
- 20. No Historic Resources as designated by Howard County exist on this site.
- 21. No Steep slopes as defined by Howard County exist on this site. 22. A design manual waiver is being requested to waive sections 4.1.1.B2 & 5.2.4.1 of the Howard County Design Manual, Vol. I to allow a pipe size of less than 12" for storm drainage. A Design Manual waiver to Section 5.A.B.5 of Design Manual Vol. II is also
- being requested to waive the 10' setback from the sewer easement to the building. 23. This project is subject to Council Resolution 41-2006 which was approved May 1,2006.
- 24. This project is also subject to a License Agreement between Howard County Board of Education and Howard County Maryland dated February 27, 2006 which allows the use of the License area for a parking lot.
- 25. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
- 26. This project is not subject to APFO requirements.

Parking Tabulation

1. Parking Requirements are based on the Parking Study Dated April 3, 2006 by Synthesis, Inc. Required Parking 30 Spaces Parking Provided: 2 HC



GRASSROOTS

CRISIS INTERVENTION CENTER OF HOWARD COUNTY

Howard County, Maryland

SITE LOCATION PLAN

SCALE: 1" = 100'

County Council Of Howard County, Maryland

Resolution No. 41 -2006

Introduced by: The Chairman at the request of the County Executive

A RESOLUTION pursuant to Section 16.301 of the Howard County Code granting a variance from

Intervention Center located at 6700 Freetown Road.

the front, rear, and side primary structure setbacks and use setbacks at the Grassroots Crisis

1. General Site Data

Site Analysis Data Chart

a. Present Zoning: R-SC Per the Feb. 2, 2004 Comprehensive Zoning Plan b. Applicable DP7. File References: SDP-76-20, SDP-89-20, SDP-01-116 and SDP-01-116 Crisis Intervention Center c. Existing Use of Site or Structure(s): d. Proposed Use of Site or Structure(s): Crisis Intervention Center

Proposed Water and Sewer Systems: Public X Private ____

2. Area Tabulation

2nd Floor =

a.Total Area of Site: Parking Liscense Agreement Area: Building Parcel Area: R/W b. Area of Floodplain:	1.34 Ac.± 0.22 Ac. 0.92 Ac. 0.2 Ac. 0 Ac.
c. Area of Steep Slopes (25% or Greater):	O Ac.
civilia di decap dispos (2018 di dicessi).	
d. Net Area of Site:	1.34 Ac.
e. Area of Proposed Building:	0.28 Aa
f. Area of Proposed Open Space Lots:	O Ac.
g. Area of Proposed Public Roads:	O Ac.
h. Building Coverage	21%
i. Limit of Disturbance (Project Area) =	1.22 Ac.±
J. Maximum number of employees =	15
k. Floor Space	
Basement =	2,523 SF
1st Floor =	12,220 SF

BENCHMARK

DESCRIPTION N 552494.279 N 553573.696 E. 1346098.12

12,220 SF 10,407 SF

2006 Legislative Session

00 Medy 1___ 2006

NOTE: ([text in brackets)] indicates deletions from existing law, TEXT IN ALL CAPITALS indicates additions to existing law; Strike-out indicates inaterial deleted by amendment. Underlining indicates material added by amendment

WHEREAS, Section 16.301 of the Howard County Code provides that variances for 2 governmental uses from the strict application of the zonling regulations are granted by the County 3 Council by Resolution following a public hearing; and

WHEREAS, the Grassroots Crisis Intervention Center, Inc. has proposed the 6 construction of a new Grassroots Crisis Intervention Center at 6700 Freetown Road in Columbia;

WHEREAS, the site is zoned R-SC, a category that imposes certain primary structure 10 setbacks (building restriction lines) and use setbacks for certain uses and structures; and

WHEREAS, the Grassroots Crisis Intervention Center has proposed:

on both sides of the property line; and

- 1. A 24 foot primary structure setback along the entire front (eastern) edge of the
- A 0 foot primary structure and use setback along the entire rear (western) edges of A 0 foot primary structure and use setback along the side (northern) property line
- WHEREAS, the Board of Education of Howard County owns the property abutting the 21 boundary on the western and northern sides and it is the intention of Grassroots Crisis 22 Intervention Center to have a parking lot straddle the northern boundary line; and

WHEREAS, use of the property owned by the Board of Education of Howard County on the northern boundary is covered by a License Agreement dated February 27, 2006; and

WHEREAS, the primary structure setbacks (building restriction lines) and use setbacks 28 affect the appropriate placement of the new Grassroots Crisis Intervention Center and its parking 29 lot on the site; and

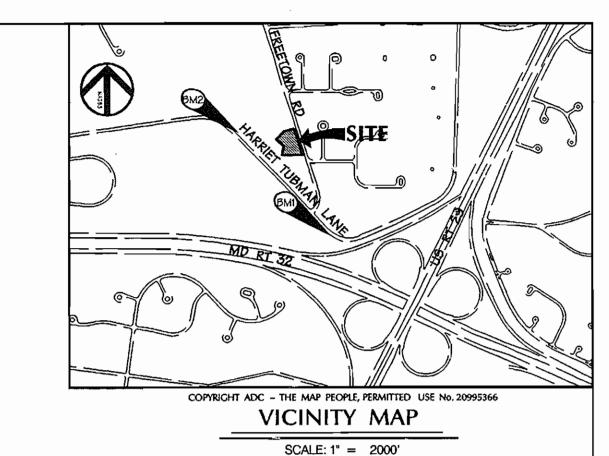
WHEREAS, the Grassroots Crisis Intervention Center has requested a variance from the 2 strict application of the primary structure setbacks (building restriction lines) and use setbacks

- 3 for the renovation and expansion of the Grassroots Crisis Intervention Center within: 1. The 30 foot primary structure setback (building restriction line) along the front
 - (eastern) edge of the property: 2. The 30 foot primary structure setback (building restriction line) and the 20 foot use setback along the rear (western) edge of the property; and
 - 3. The 7.5 foot primary structure setback (building restriction line) and the 20 foot use setback along the side (northern) edge of the property; and

WHEREAS, the County Council finds that the proposed variance from the primary 12 structure setbacks (building restriction line) and use setbacks of the R-SC district for this 13 governmental purpose is in the public interest.

NOW, THEREFORE, BE IT RESOLVED by the County Council of Howard County, 16 Maryland, this 1 day of 12, 2006 that, for the construction of a new Grassroots 17 Crisis Intervention Center at 6700 Freetown Road, it grants a variance from:

- The 30 foot primary structure setback (building restriction line) along the front (eastern) edge of the property;
- The 30 foot primary structure setback (building restriction line) and the 20 foot use setback along the rear (western) edge of the property; and
- The 7.5 foot primary structure setback (building restriction line) and the 20 foot use setback along the side (northern) edge of the property.



DATA SOURCES coordinates established in The Maryland Coordinate System - NAU 83(1991)

552494.279 1347062.42 Disc Set in Concrete

2. Elevations shown on this win are referred to the North American Vertical Datum

3. All utilities shown hereon are based solely on field location. No comparison to, or enhancement has been made from any utility drawings. The location of any underground utility shown-hereon is approximate and must be verified prior

4. The direction of under ground pipes shown hereon are approximate and; therefore

5. The date of the latest field work performed by DMW is JULY 9, 2005 6. The survey was performed without the benefit of a Title Report.

DATA SOURCES

BOUNDARY SHOWN PER BOUNDARY SURVEY DATED JULY 9, 2005, PREPARED BY DAFT- MCCUNE - WALKER INC.

AREIAL SURVEY WITH 2'CONTOUR INTERVALS PREPARED BY 3DI, DATED APRIL 8, 2002 AND ON-SITE FIELD RUN TOPOGRAPHY BY DMW, INC.

ADDRESS CHART LOT/PARCEL # STREET ADDRESS

PERMIT INFORMATION CHART Lot/Parcel No. 292 & 406 Plat # or L/F 1728/175 Grid # 24 Zoning R-SC Tax Map No. 35 Elect Distr 5 Census Tract 80580:

: HOWARD COUNTY DEPARTMENT OF PLANNING AND

11/28/06

CHIEF, DEVELOPMENT ENGINEERING DIVISION (2 CHIEF, DIVISION OF LAND DEVELOPMENT / TKM 11/2 DATE

DATE NO. REVISION

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

OWNER /DEVELOPER

PROJECT

TITLE

3430 COURT HOUSE DRIVE ELLICOTT CITY, MARYLAND 21043

GRASSROOTS CRISIS INTERVENTION CENTER

ARFA TAX MAP 35, GRID 24 ZONED R-SC PARCELS 292 and 406 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND SDP-76-20 SDP-89-20

COVER SHEET

A Team of Land Planners,

200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333 Landscape Architects Engineers, Surveyors & Environmental Professional

DESIGNED BY :

DRAWN BY:

PROJECT NO



Daft·McCune·Walker, Inc.

Fax 296-4705

SCALE : Professional Engr. No. 20784

DRAWING NO.

SDP-06-137

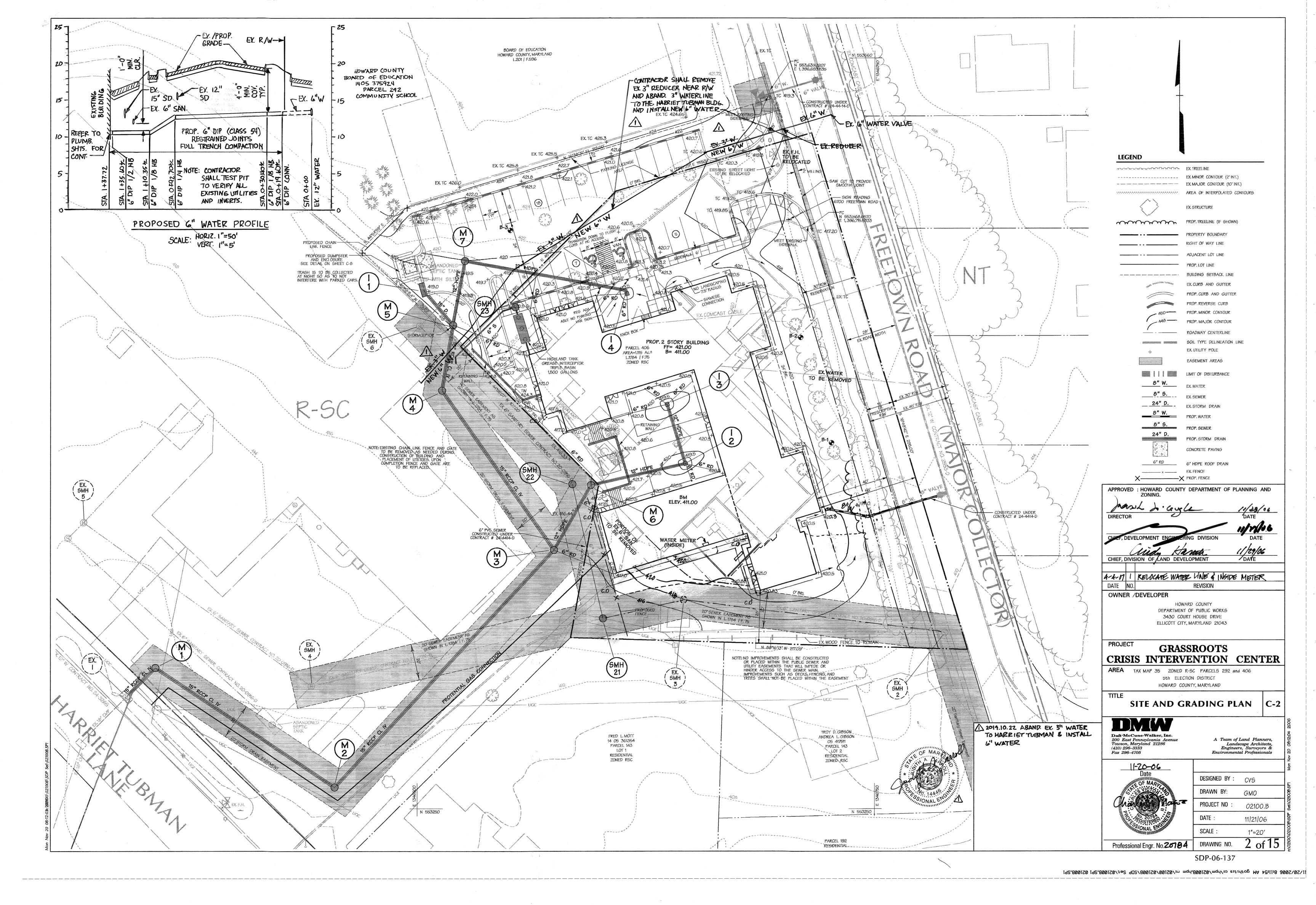
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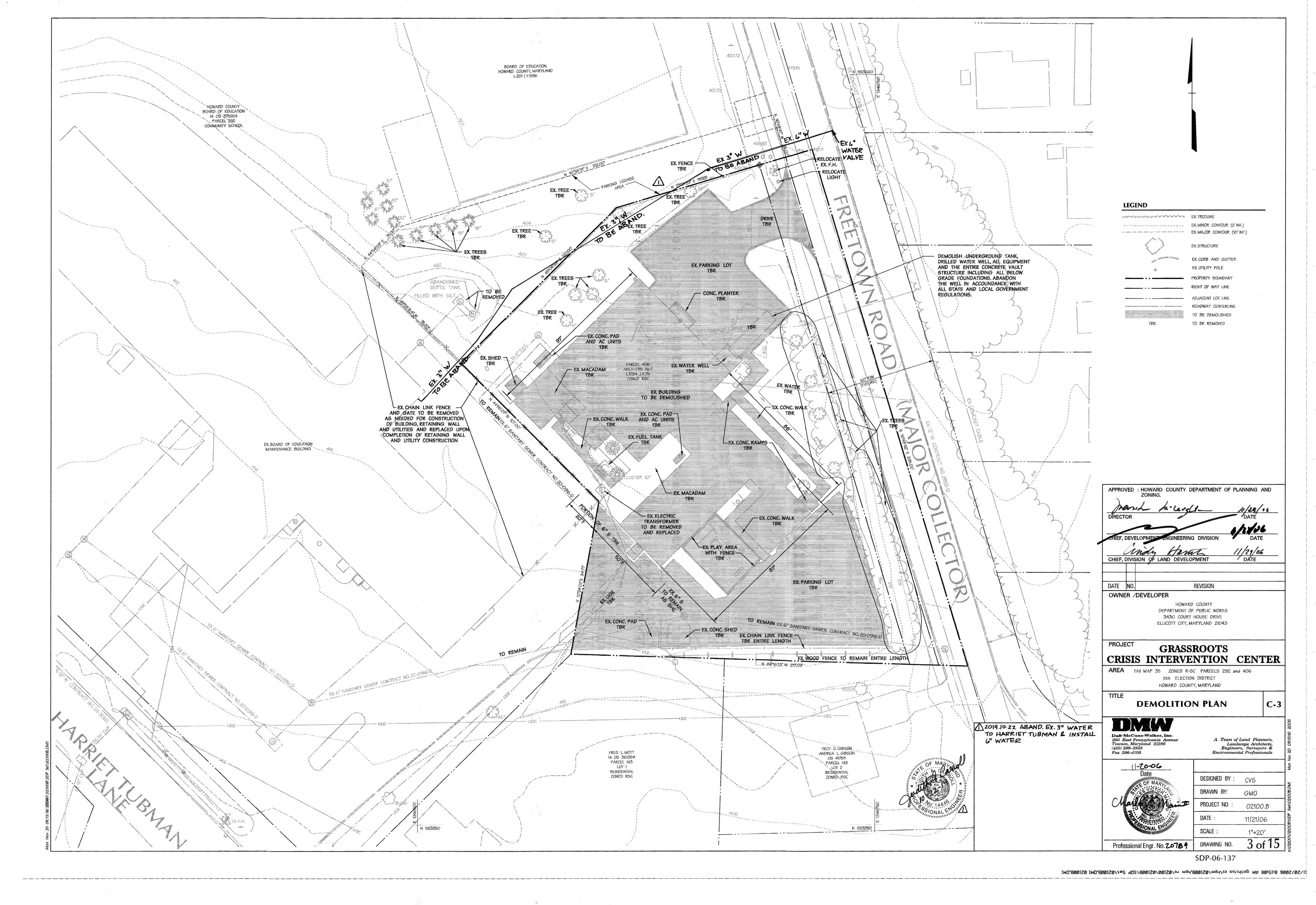
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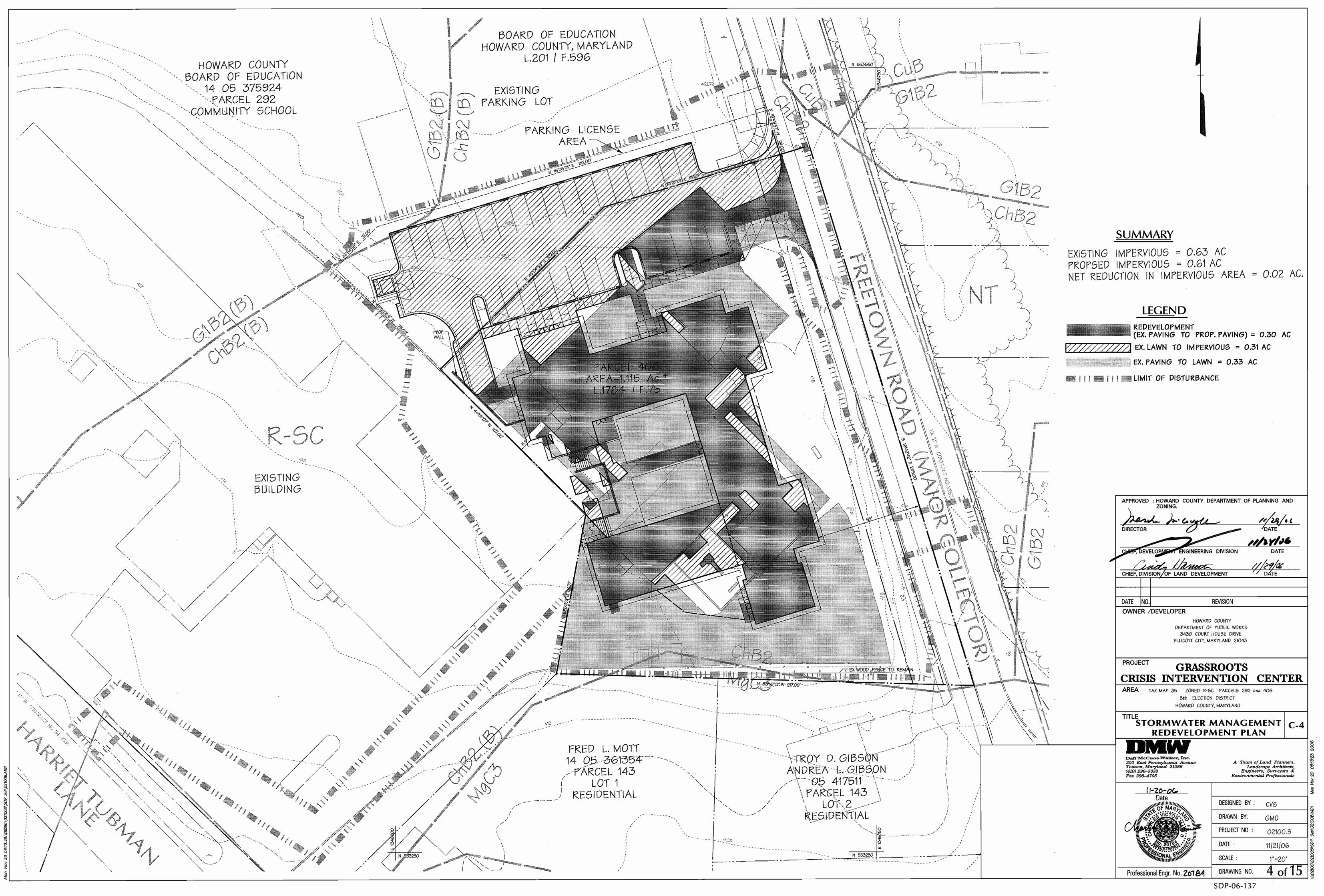
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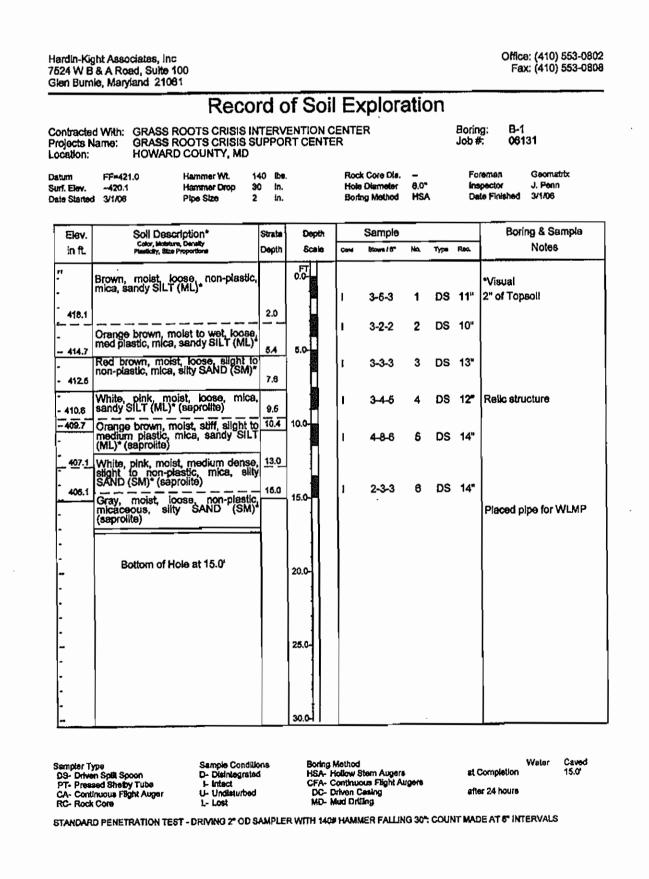
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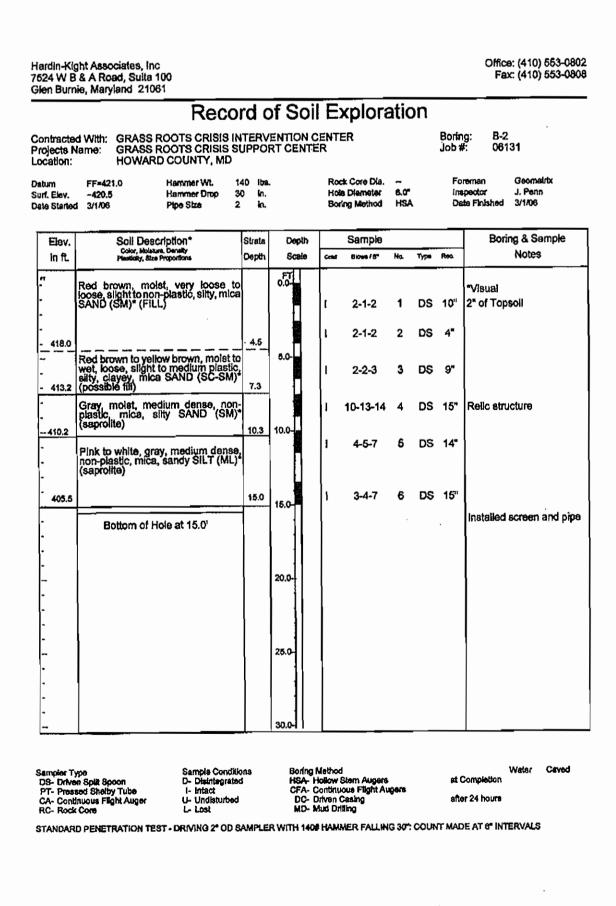
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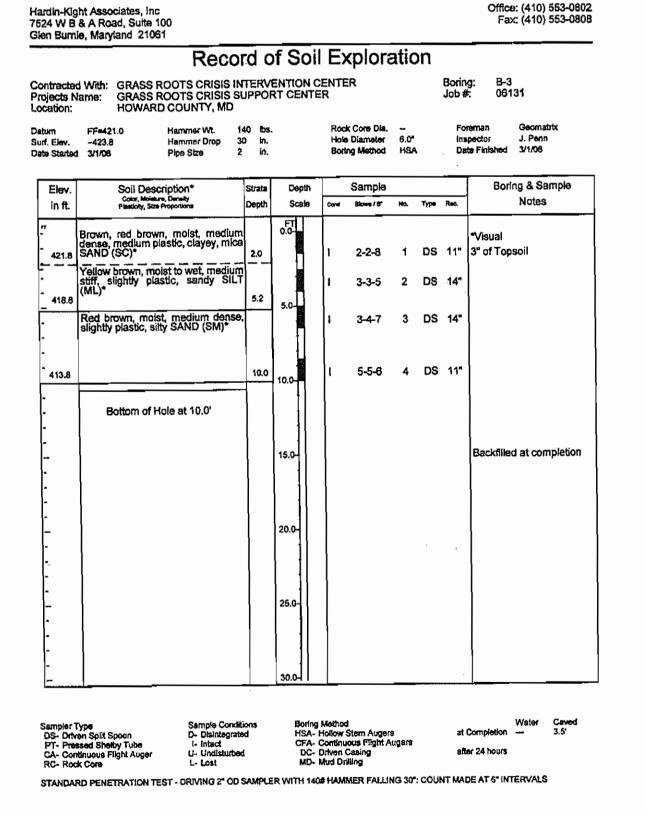


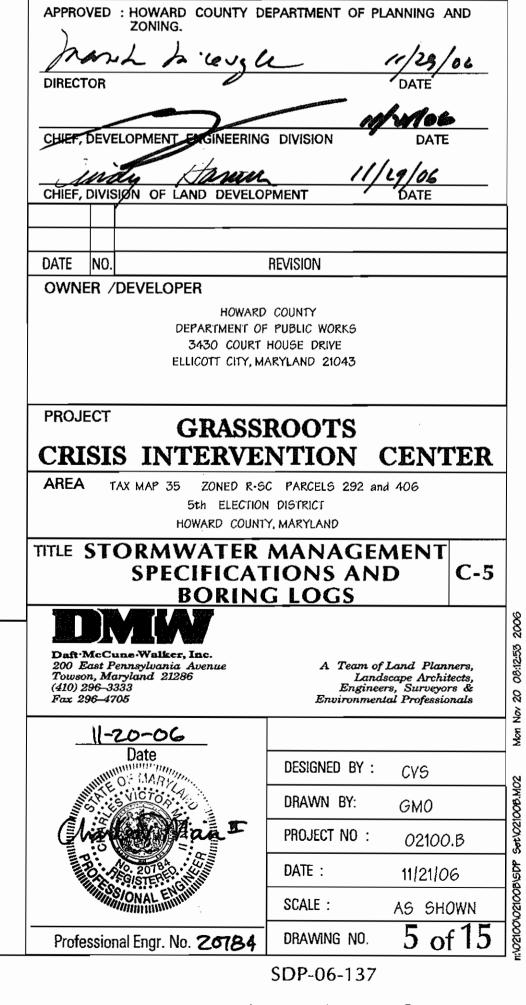


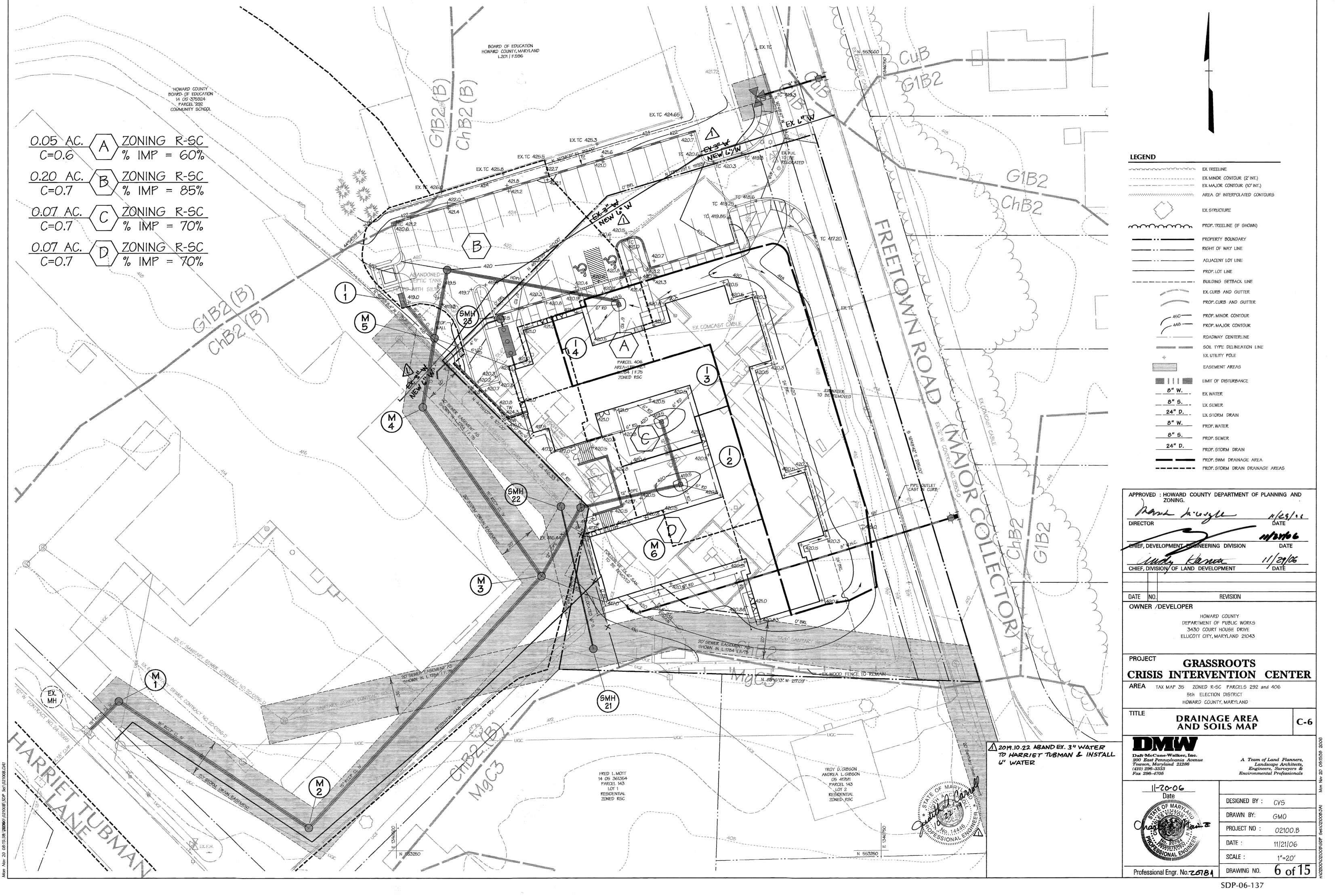


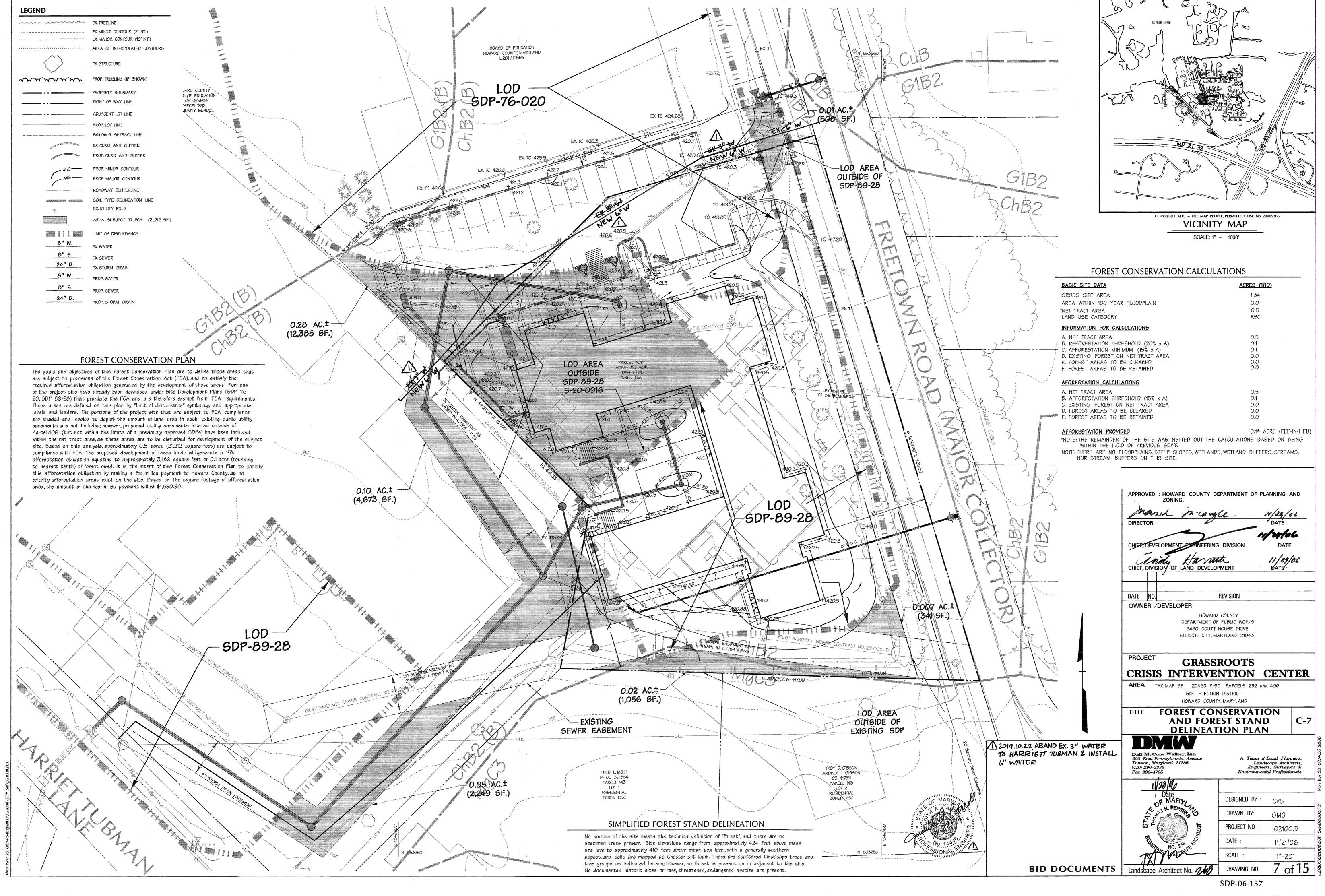


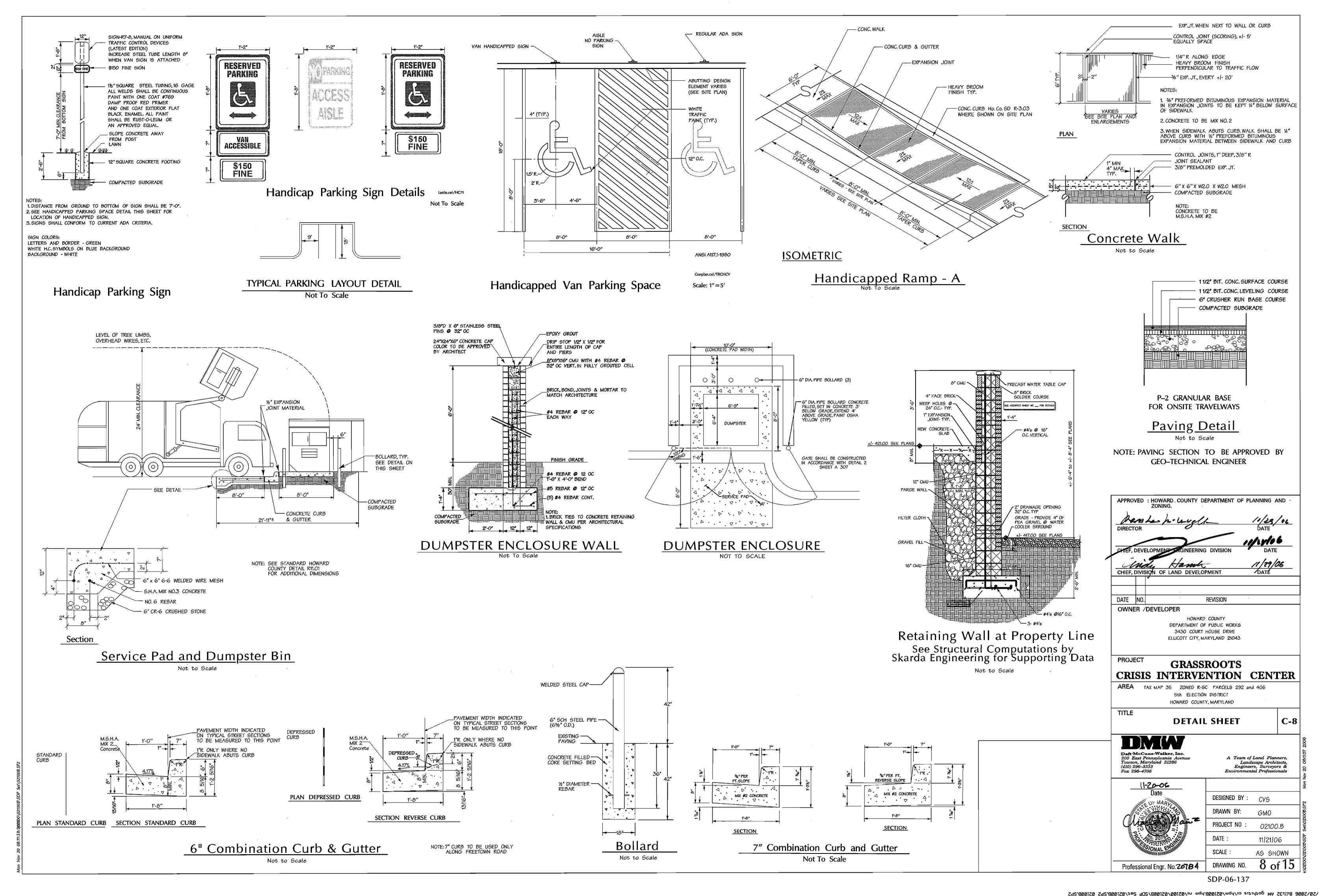


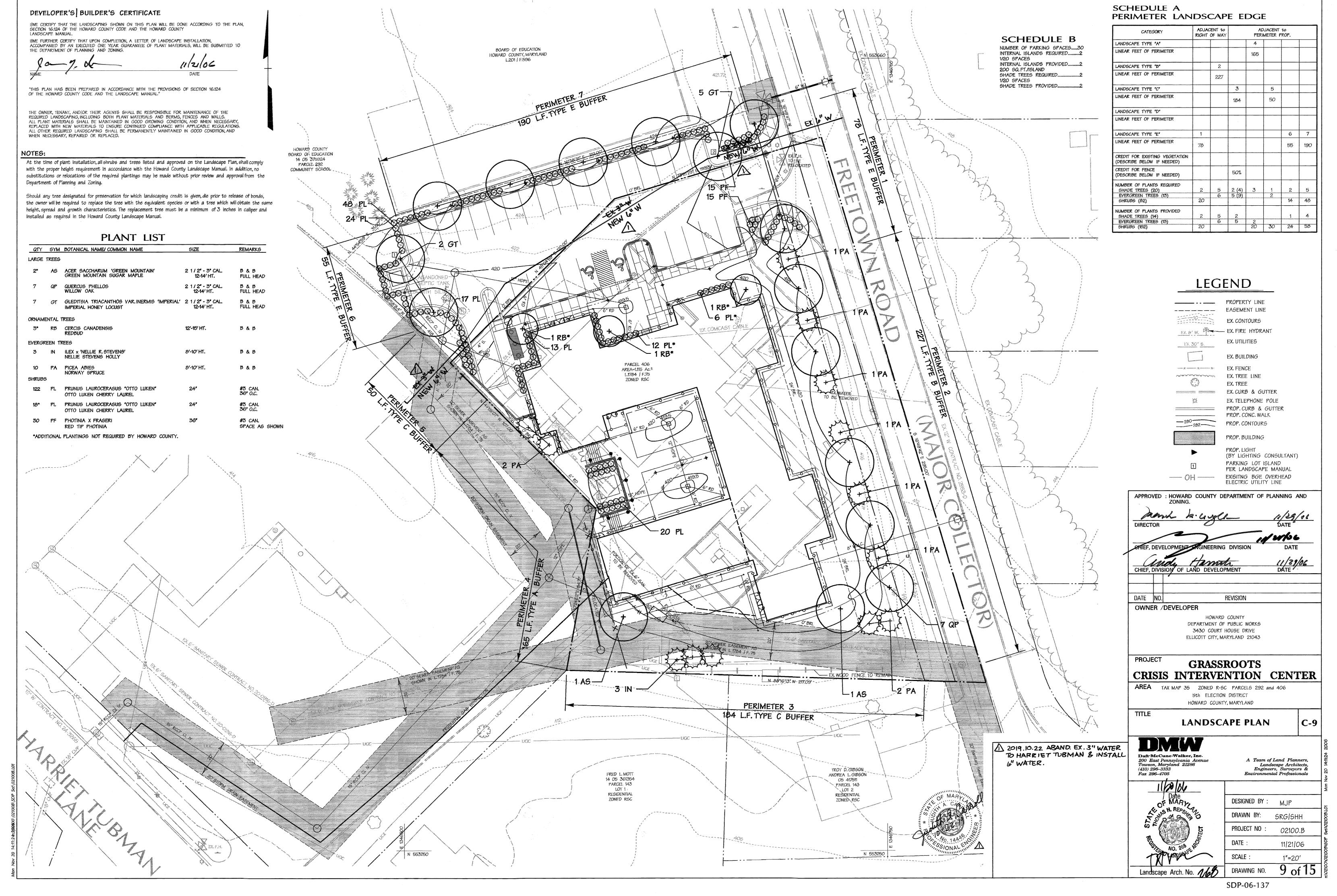




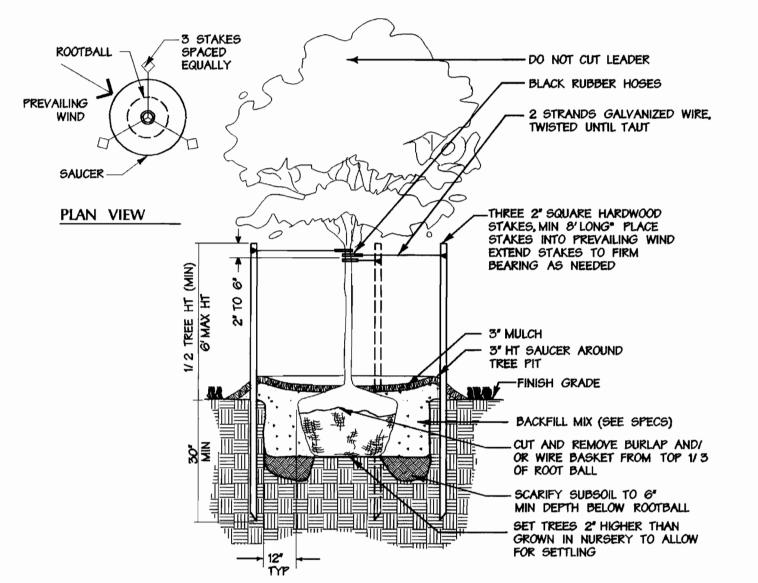






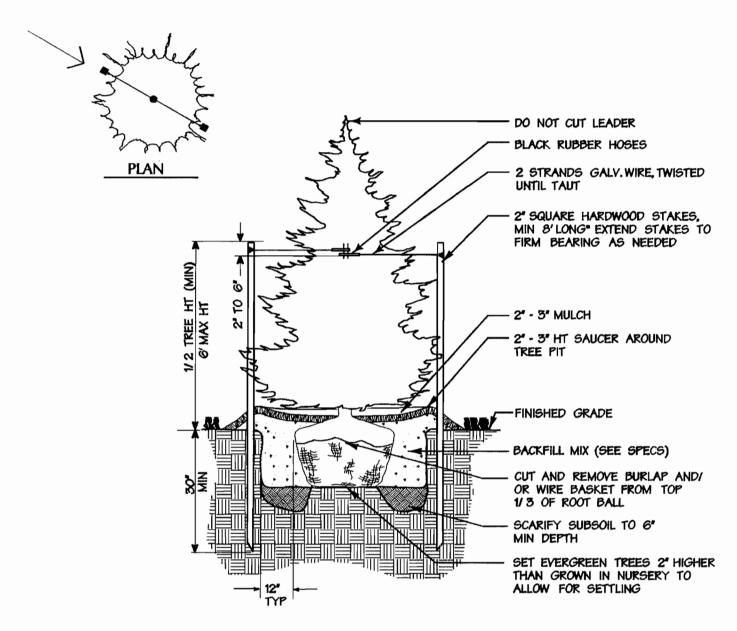




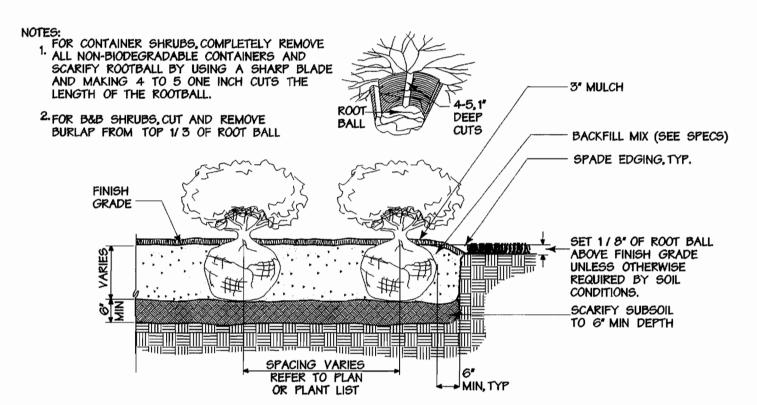


PREVAILING

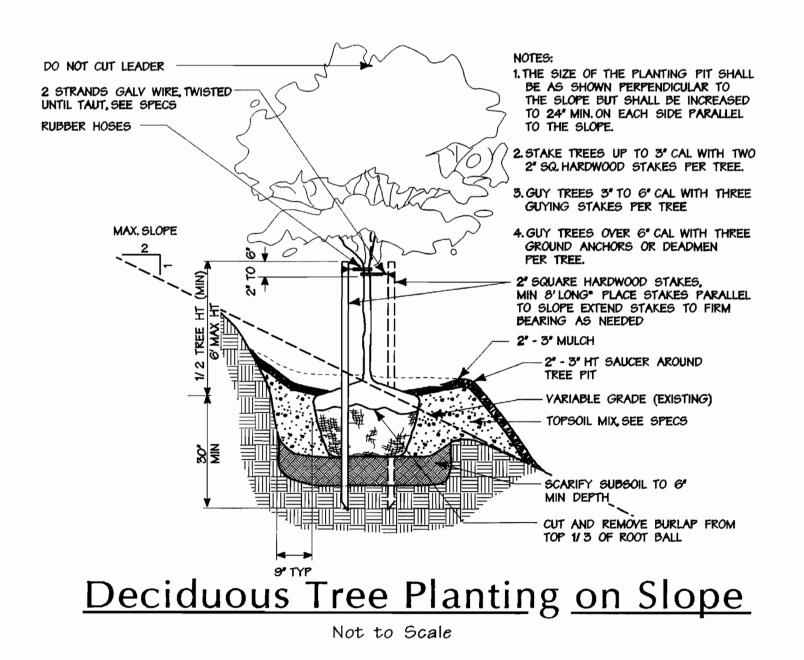
Deciduous Tree Planting Detail

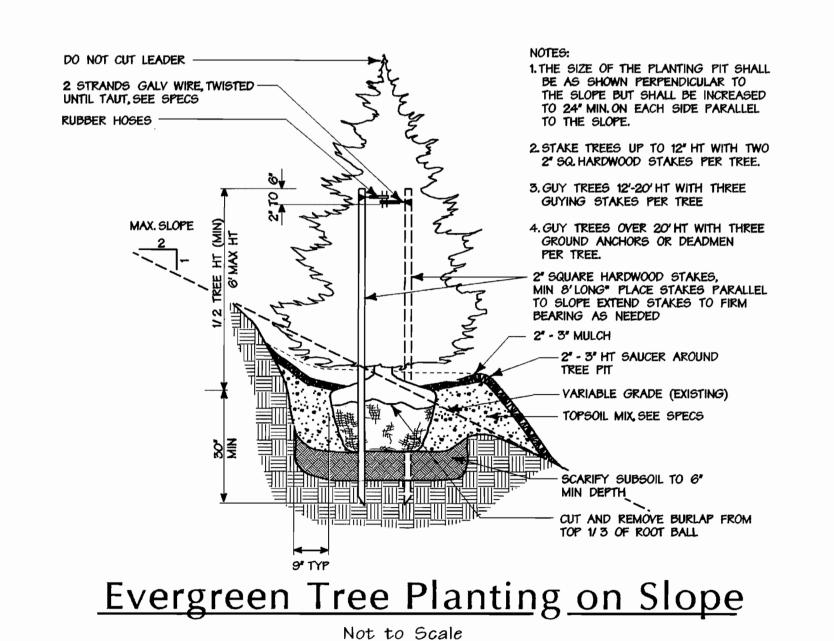


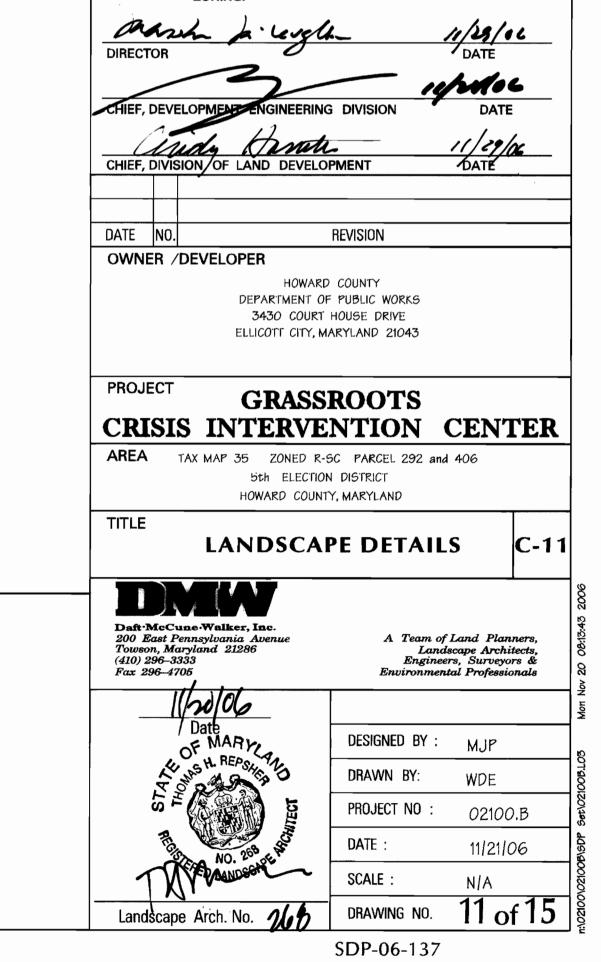
Evergreen Tree Planting Detail



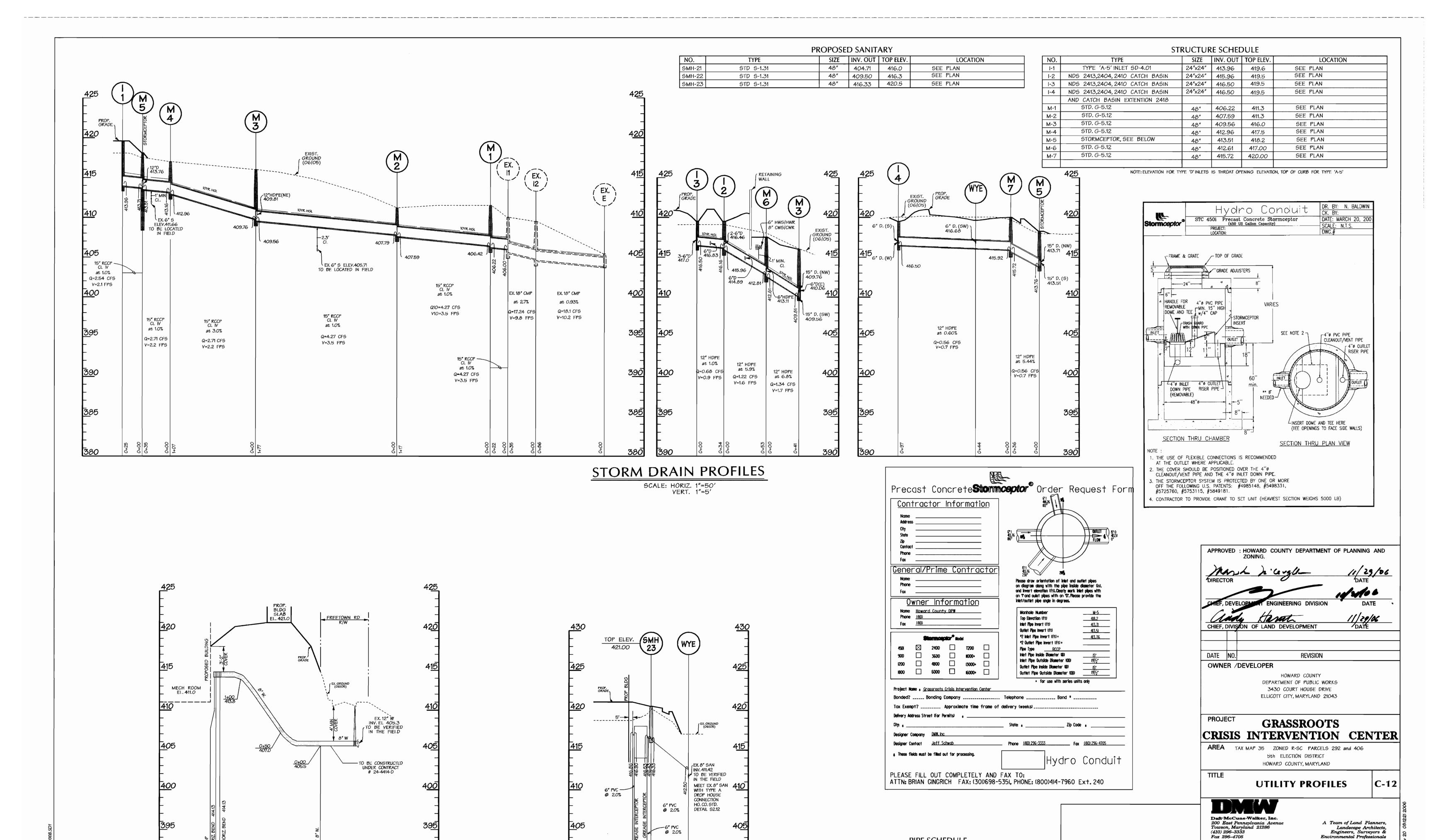
Shrub Bed Planting Detail







APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND



SANITARY PROFILE

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

WATER CONNECTION

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

PIPE SCHEDULE

LENGTH

440'

125' 485'

260'

TYPE & CLASS

HDPE

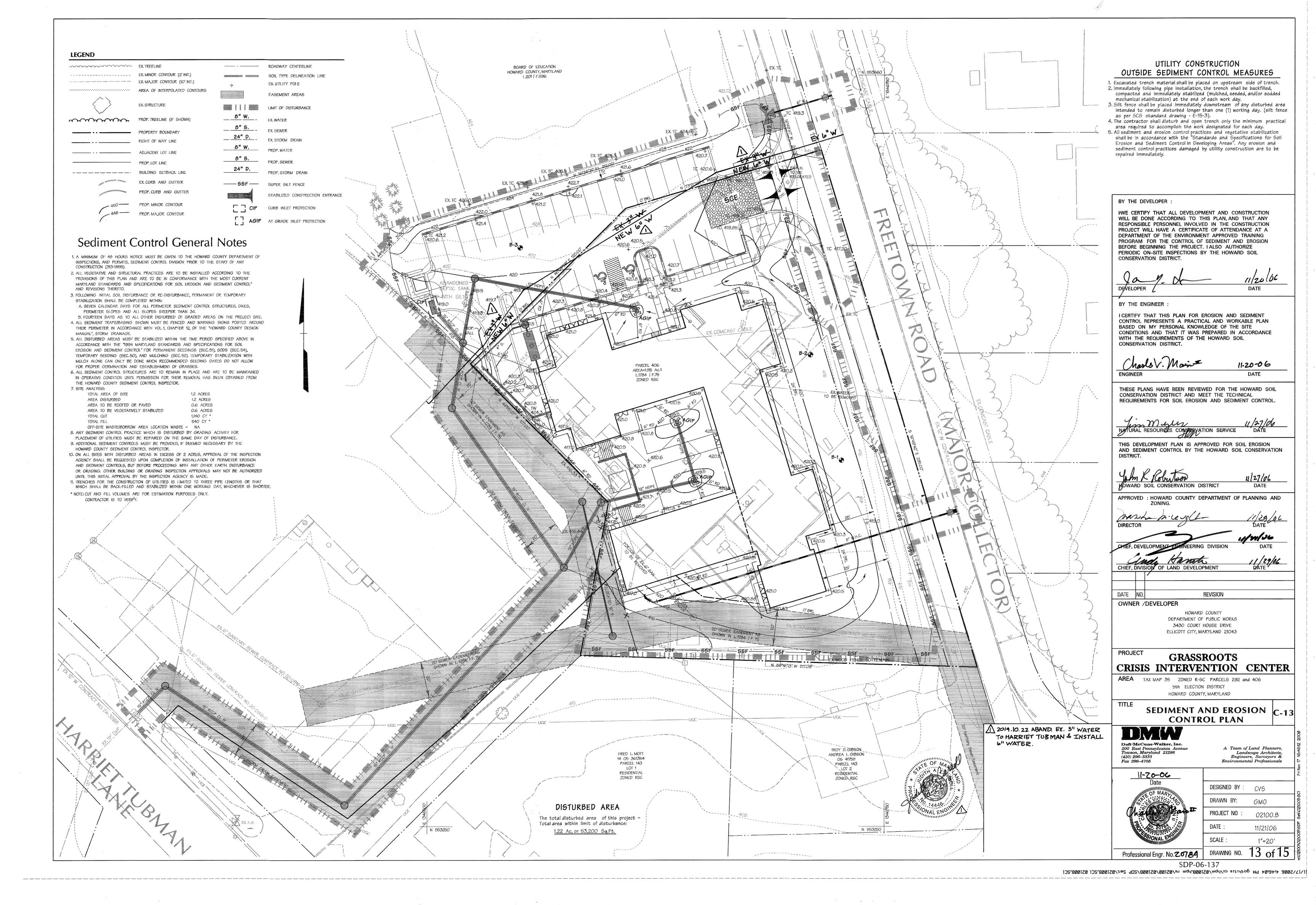
HDPE

HDPE

Professional Engr. No. 25184

11-20-06

DESIGNED BY : CVS DRAWN BY: GMO PROJECT NO: 02100.B 11/21/06 AS SHOWN drawing no.



STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- I. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms waterways, or sediment control
- II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- III. Schedule required soil test to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
 - i. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
 - II. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
 - III. Lime materials shall be ground limestone (hydrated or brunt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.
 - IV. Incorporate lime and fertilizer into the top 3 5 inches of soil by disking or other suitable means.

C. SEEDBED PREPARATION

A. SITE PREPARATION

I. TEMPORARY SEEDING

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

II. PERMANENT SEEDING

- A. Minimum soil conditions required for permanent vegetative establishment:
- Soil ph shall be between 6.0 and 7.0.
- 2. Soluble salts shall be less than 500 parts per million (PPM). 3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if Lovegrass or Serecia Lespedeza is to be
- planted. Then a sandy soil (< 30% silt plus clay) would be acceptable. 4. Soil shall contain 1.5% minimum organic matter by weight. 5. Soil must contain sufficient pore space to permit adequate root penetration. 6. If these conditions cannot be met by the soils on site, adding topsoil is required in accordance with Section 21 - Standard and Specification for
- B. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of \cdot 5 inches to permit bonding of the topsoilto the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
- C. Apply soil amendments as per soil test or as included on the plans.
- D. Mix soil amendments into the top 3 5 inches of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3 inches of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. SEED SPECIFICATIONS

I. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such

- Note: Seed tags shall be made available to the inspector to verify type and rate of seed
- II. Inoculant The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80 F. can weaken bacteria and make the inoculant less effective.

E. METHODS OF SEEDING

- Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and
- fertilizer), broadcast or drop seeder, or cultipacker seeder. A. If fertilizer is being applied at the time of seeding, the application rates amounts
- will not exceed the following: Nitrogen; maximum of 100 pounds per acre total of soluble Nitrogen; P205 (phosphorous): 200 pounds per acre; K20 (potasslum): 200 pounds per acre.
- B. Lime: Use only ground agricultural limestone, (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- C. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
- II. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
- A. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the temporary or permanent seeding summaries or tables 25 or 26. The seeded area shall then be rolled with a weighed roller to provide good seed soil contact.
- B. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
- III. Drill or cultipacker seeding: Mechanized seeders that apply and cover seed with soil.
- A. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 14 inch of soil covering.

Seedbed must be firm after planting.

B. Where practical, seed should be applied in two directions perpendicular to each

other. Apply half the seeding rate in each direction. U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE Vegetative Stabilization

MARYLAND DEPARTMENT OF ENVIRONMENT G - 20 - 1A

WATER MANAGEMENT ADMINISTRATION

F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

- 1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weeds seeds as specified in the Maryland Seed Law.
- II. Wood cellulose fiber mulch (WCFM)
- A. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
- B. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
- C. WCFM, including dye shall contain no germination or growth inhibiting factors.
- D. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.
- E. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
- F. WCFM must conform to the following physical requirements: Fiber length to approximately 10 mm., diameter approximately 1mm., ph range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90%
- Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
- G. MULCHING SEEDED AREAS Mulch shall be applied to all seeded areas immediately
 - l. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 - II. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons per acre. Mulch shall be applied in a uniform loose depth of between linches and 2 inches. Mulch applied shall achieve a uniform distribution and depth so that the surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons per acre.
 - III. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- H. SECURING STRAW MULCH Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
 - l. A mulch anchoring tool is a tractor drawn implement design to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
 - II. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - III. Application of liquid binders should be heavier at the edges where wind catches mulch such as in valleys or on crest of banks. The remainder of area should appear uniform after binder application. Synthetic binders - such as Acrylic DLR (agro-tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
 - IV. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3.000 feet long.

SECTION II - TEMPORARY SEEDING

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

Seed Mixture (Hardiness Zone 7A)					Fertilizer Rate	Lines Bata	
No.	Species	Application Rate (Lb./Ac.)	Seeding Dates	Seeding Depths	(10-10-10)	Lime Rate	
1	Annual Ryegrass	50	2/1 - 4/30 8/15 - 11/1	14"-1/2"	600 Lbs./Ac.	2 Tons/Ac.	
2	Weeping Lovegrass	4	5/1 - 8/14	1/4"-1/2"	(15 Lbs./1000 SF)	(100 Lbs./1000 SF)	

SECTION III - PERMANENT SEEDING

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

	Seed Mixture No. 3 (Hardiness Zone 7A)				** Fertilizer Rate (10-20-20)			** Lime	
%	Species	Application Rate (Lb./Ac.)	Seeding * Dates	Seeding Depths	N	P205	K20	Rate .	
85	Rebel II Tall Fescue	125			90	175	175	0 714	
10	Pennfine Perennial Ryegrass	15	3/1 - 5/15 8/15 - 11/15	3/1 - 5/15 8/15 - 11/15	1/4"-1/2"	Lb./Ac. (2 Lb./ 1000	Lb./Ac. (4 Lb./ 1000	Lb./Ac. (4 Lb./ 1000	2 Tons/Ac. (100 Lb./ 1000 Sq.Ft.)
5	Kenblue Kentucky Bluegrass	10			Sq.Ft.)	Sq.Ft.)	Sq.Ft.)	, ,	

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

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

SECTION IV - SOD

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

A. GENERAL SPECIFICATIONS

- I. Class of turfgrass sod shall be Maryland or Virginia State certified or approved. Sod labels shall be made available to the job foreman and inspector.
- II. Sod shall be machine cut at a uniform soil thickness of ¾", plus or minus ¼", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.
- III. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- IV. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

V. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. SOD INSTALLATION

- I. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
- II. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which air drying of the roots.
- III. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
- IV. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. SOD MAINTENANCE

- I. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done during the heat of the day to prevent
- II. After the first week, sod watering is required as necessary to maintain adequate moisture content.
- III. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 inches and 3 inches unless otherwise specified.

SECTION V - TURFGRASS ESTABLISHMENT

Areas where turfgrass may be desired may include lawns, parks, playgrounds, and commercial sires which will receive a medium high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1½inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

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

A. TURFGRASS MIXTURES

- 1. 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. A minimum of three Bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.
- II. Kentucky Bluegrass/Perennial Rye Full sun mixture For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass cultivars/certified Kentucky Bluegrass seeding rate: 2 pounds mixture per 1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.
- III. 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 95-100%, certified Kentucky Bluegrass cultivars 0 - 5%, seeding rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
- IV. Kentucky Bluegrass/Fine Fescue Shade mixture For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; certified Kentucky Bluegrass cultivars 30-40% and certified Fine Fescue and 60-70%. Seeding rate: 1½- 3 pounds per 1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen. With each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.
- Note: Turfgrass varieties should be selected form those listed in the most current University of Maryland publication, agronomy mimeo number 77, "Turfgrass Cultivar Recommendations for Maryland".

B. IDEAL TIMES OF SEEDING

Western Maryland: March 15 - June 1, August 1 - October 1 (hardiness zones - 5B, 6A). Central Maryland: March 1 - May 15, August 15 - October 15 (hardiness zone - 68). Southern Maryland, Eastern Shore: March 1 - May 15, August 15 - October 15 (hardiness zones - 7A, 7B).

C. IRRIGATION

If soil moisture is different, supply new seedlings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. REPAIRS AND MAINTENANCE

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

- I. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.
- II. If the stand provides less than 40% ground coverage, re-establish following original lime, fertilizer, seedbed preparation and seeding recommendations.
- III. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.
- IV. Maintenance fertilizer rates for permanent seedings are shown in Table 24, for lawns and other medium high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" bulletin number 171.

TABLE 28 STONE SIZE

	Size Range	D ₅₀	D ₁₀₀	AASHTO	Weight
Number 57 *	3%" - 1½"	1/2"	1½″	M-43	N/A
Number 1	2" - 3"	2½"	3"	M-43	N/A
Rip-Rap **	4" - 7"	5½"	7"	N/A	N/A
Class I	N/A	9.5″	15"	N/A	150 Lb. max.
Class II	N/A	16"	24"	N/A	700 Lb. max.
Class III	N/A	23"	34"	N/A	2000 Lb. max.

- * This classification is to be used on the inside face of stone outlets and check dams
- ** This classification is to be used when ever small rip-rap is required. The State Highway Administration designation for this stone is stone for gabions (905.01.04).

STONE FOR GABION BASKETS

Basket ¹	Thickn e ss	Size of Individual Stones		
Inches	ММ	Inches	ММ	
6	150	3 - 5	75 - 125	
9	225	4 - 7	100 - 175	
12	300	4 - 7	100 - 175	
18	460	4 - 7	100 - 175	
36	910	4 - 12	100 - 300	

Note: Recycled concrete equivalent may be substituted for all stone classifications. Recycled concrete equivalent shall be concrete broken into the sizes meeting the appropriate classification, shall contain no steel reinforcement, and shall have a density of 150 pounds per cubic foot.

TABLE 27 GEOTEXTILE FABRICS

Class	Apparent Opening Size MM. Max.	Grab Tensile Strength Lb. Min.	Burst Strength PSI. Min.
Α	0.30 **	250	500
В	0.60	200	320
С	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (slit fence)	0.40-0.80 *	90	190

** .50 MM max. for super silt fence * US Standard sieve CW-02215

The properties shall be determined in accordance with the following procedures:

Apparent opening size memt 323 - Grab tensile strength ASTMD 1682: 4 x 8" specimen, 1 x 2" clamps, 12" min strain rate in both principal

directions of geotextile fabric. - Burst strength: ASTMD D 3786.

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polyamides. The geotextile fabric shall resist deterioration from ultraviolet exposure

In addition, classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with msmt

507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

H - 24 - 1

CHIEF, DEVELOPMENT

OWNER /DEVELOPER

DATE NO.

PROJECT

modules when tested in accordance with msmt 509. The material shall also have a 0.3 gal./ft./min. flow rate and seventy-five

Class F geotextile fabric for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile

percent (75%) minimum filtering efficiency when tested in accordance with memt 322. Geotextile fabrice used in the

construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amount of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a

temperature range of O to 120 degrees fahrenheit.

MATERIALS SPECIFICATIONS

CONSERVATION DISTRICT.

BY THE DEVELOPER

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

DATE

BY THE ENGINEER

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.

11-20-06 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

MATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION

AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION

11/27/16

CONTROL NOTES Daft McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 A Team of Land Planners Landscape Architects Engineers, Surveyors & Fax 296-4705

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND

Cude, Kanas

REVISION

HOWARD COUNTY

DEPARTMENT OF PUBLIC WORKS

3430 COURT HOUSE DRIVE

ELLICOTT CITY, MARYLAND 21043

GRASSROOTS

CRISIS INTERVENTION CENTER

5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

AREA TAX MAP 35 ZONED R-SC PARCELS 292 and 406

CHIEF, DIVISION OF LAND DEVELOPMENT

1-20-06

DESIGNED BY : CVS DRAWN BY: GMO PROJECT NO 02100.B DATE: 11/21/06 SCALE AS SHOWN

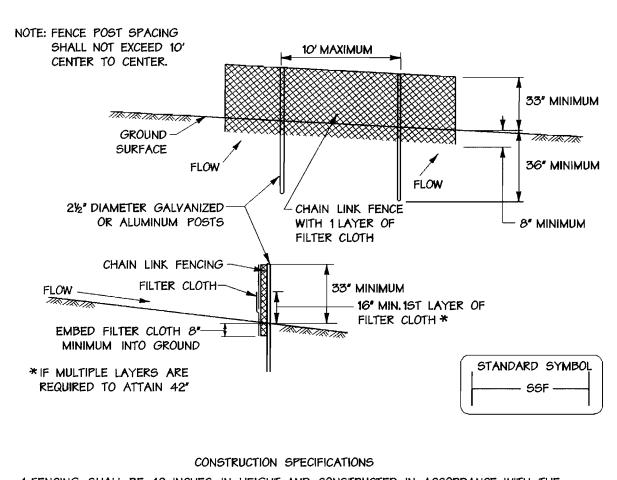
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SEDIMENT AND EROSION C-14

Professional Engr. No. 20784

DRAWING



- 1. FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED SUBSTITUTING 42' FABRIC AND 6' LENGTH POSTS.
- 2. THE POSTS DO NOT NEED TO BE SET IN CONCRETE 3, CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST
- CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE. THE CHAIN LINK FENCING SHALL BE SIX (6) GAUGE OR HEAVIER. 4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED
- EVERY 24" AT THE TOP AND MID SECTION. 5. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND. 6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY
- 7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN

"BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.

U.S. DEPARTMENT OF AGRICULTURE	

H - 26 - 5

MARYLAND DEPARTMENT OF ENVIRONMENT

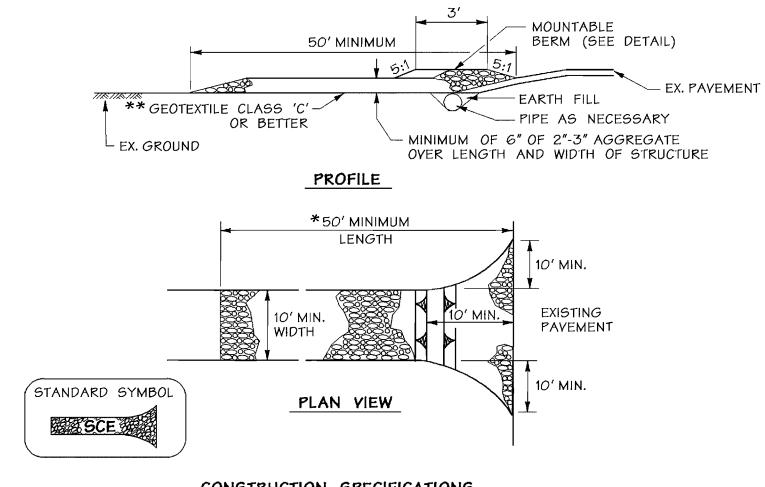
. Obtain Grading permit. 2. Notify HCD Department of Inspections 410-313-1855 at least 48 hours prior to beginning any work. 1 DAY Department of Inspections (410)313-1855 at least 48 hours prior to beginning work. 1 DAY 3. Clear and grub for and install the Stabilized Construction Entrance and install Super Silt Fence (SSF). 4. Notify HCD Department of Inspection, upon completion of said installation. 1 DAY 1 DAY Demolish existing buildings and remove pavement. . Grade site and begin building construction. 1 WEEK 7. Install utilities. Construction outside of silt fence protections shall be graded and stabilized in one 6 MONTHS work day. This is subject to the sediment control inspector, who can require sediment and erosion control measures at any time if deemed necessary. 1 WEEK 8. Fine grade and construct paving and sidewalks. 9. With the permission of the Sediment Control Inspector, remove sediment control measures and 1 WEEK stabilize any areas disturbed by their removal.

Sequence of Operations

DESIGN CRITERIA

SLOPE	SLOPE STEEPNESS	SLOPE LENGTH (MAXIMUM)	SILT FENCE LENGTH (MAXIMUM)
0 - 10%	O - 10:1	UNLIMITED	UNLIMITED
10 - 20%	10:1 - 5:1	200 FEET	1,500 FEET
20 - 33%	5:1 - 3:1	100 FEET	1,000 FEET
33 - 50%	3:1 - 2:1	100 FEET	500 FEET
50% +	2:1 +	50 FEET	250 FEET

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT H - 26 - 3A SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION



CONSTRUCTION SPECIFICATIONS

- 1. LENGTH MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT). 2. WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING
- 3. GEOTEXTILE FABRIC CLASS C (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE.** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE
- FAMILY RESIDENCES TO USE GEOTEXTILE. 4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE
- ENTRANCE. 5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED. 6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT
- WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAYEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

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MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Super Silt Fence

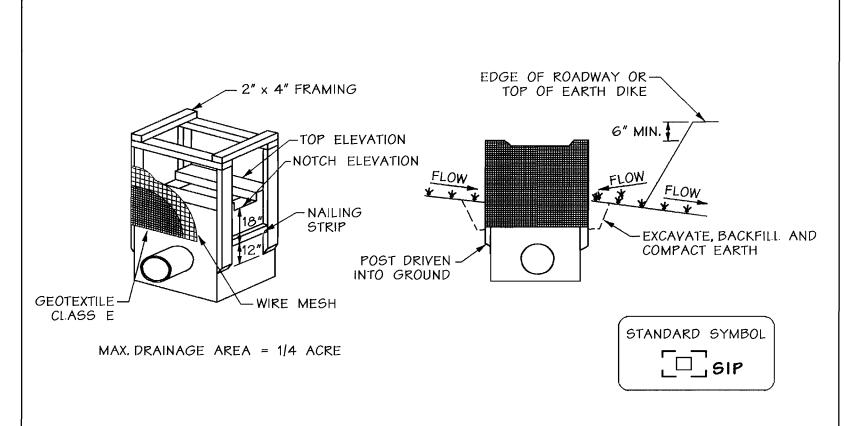
SOIL CONSERVATION SERVICE

Not To Scale

Super Silt Fence

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Stabilized Construction Entrance



CONSTRUCTION SPECIFICATIONS

- 1. EXCAYATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION. 2. DRIVE THE 2" x 4" CONSTRUCTION GRADE LUMBER POSTS 1' INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2" x 4" FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.
- 3. STRETCH THE 1/2" x 1/2" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY.
- THE ENDS MUST MEET AND OVERLAP AT A POST. 4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTEXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED DOWN.
- 5. BACKFILL AROUND THE INLET IN COMPACTED 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES. 6. IF THE INLET IS NOT IN A SUMP, CONSTRUCT A COMPACTED EARTH DIKE ACROSS THE DITCH LINE DIRECTLY BELOW IT. THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER
- THAN THE TOP OF THE FRAME. 7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

U.S. DEPARTMENT OF AGRICULTURE

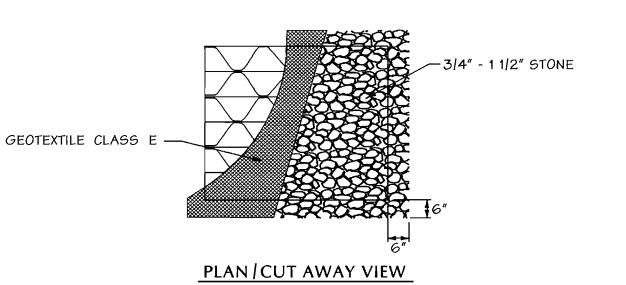
Standard Inlet Protection

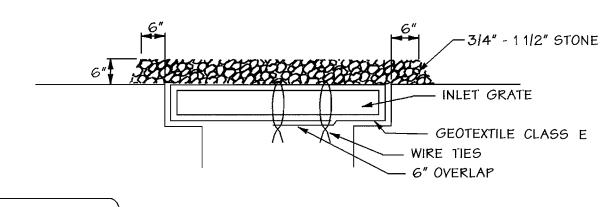
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Not To Scale

At Grade Inlet Protection

Not To Scale





STANDARD SYMBOL [AGIP

CROSS SECTION MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE. 2. PLACE 34" TO 11/2" STONE, 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE

ADDITIONAL FILTRATION.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT

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

BY THE ENGINEER

BY THE DEVELOPER:

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.

ENGINEER

DATE THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL

CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

4/27/04

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND

11/27/10

Samo

Date No.

OWNER /DEVELOPER HOWARD COUNTY

REVISION

DEPARTMENT OF PUBLIC WORKS 3430 COURT HOUSE DRIVE ELLICOTT CITY, MARYLAND 21043

GRASSROOTS

PROJECT

CRISIS INTERVENTION CENTER AREA TAX MAP 35 ZONED R-SC PARCELS 292 and 406

> 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SEDIMENT AND EROSION C-15 **CONTROL DETAILS**

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

Fax 296-4705

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



DESIGNED BY : CYS DRAWN BY: GM0 PROJECT NO DATE: SCALE AS SHOWN

Professional Engr. No. 20184

DRAWING NO.

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