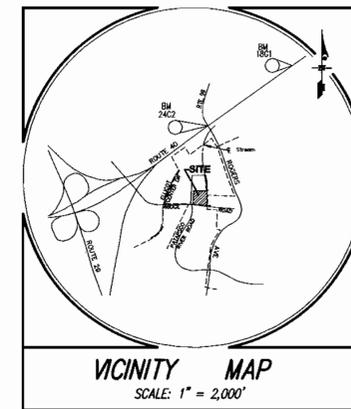


PARK VIEW @ ELLICOTT CITY - PARCELS 'A' & 'B'

(PARKVIEW II -- AFFORDABLE ELDERLY HOUSING)

ELLICOTT CITY ELECTION DISTRICT# 2
HOWARD COUNTY, MARYLAND

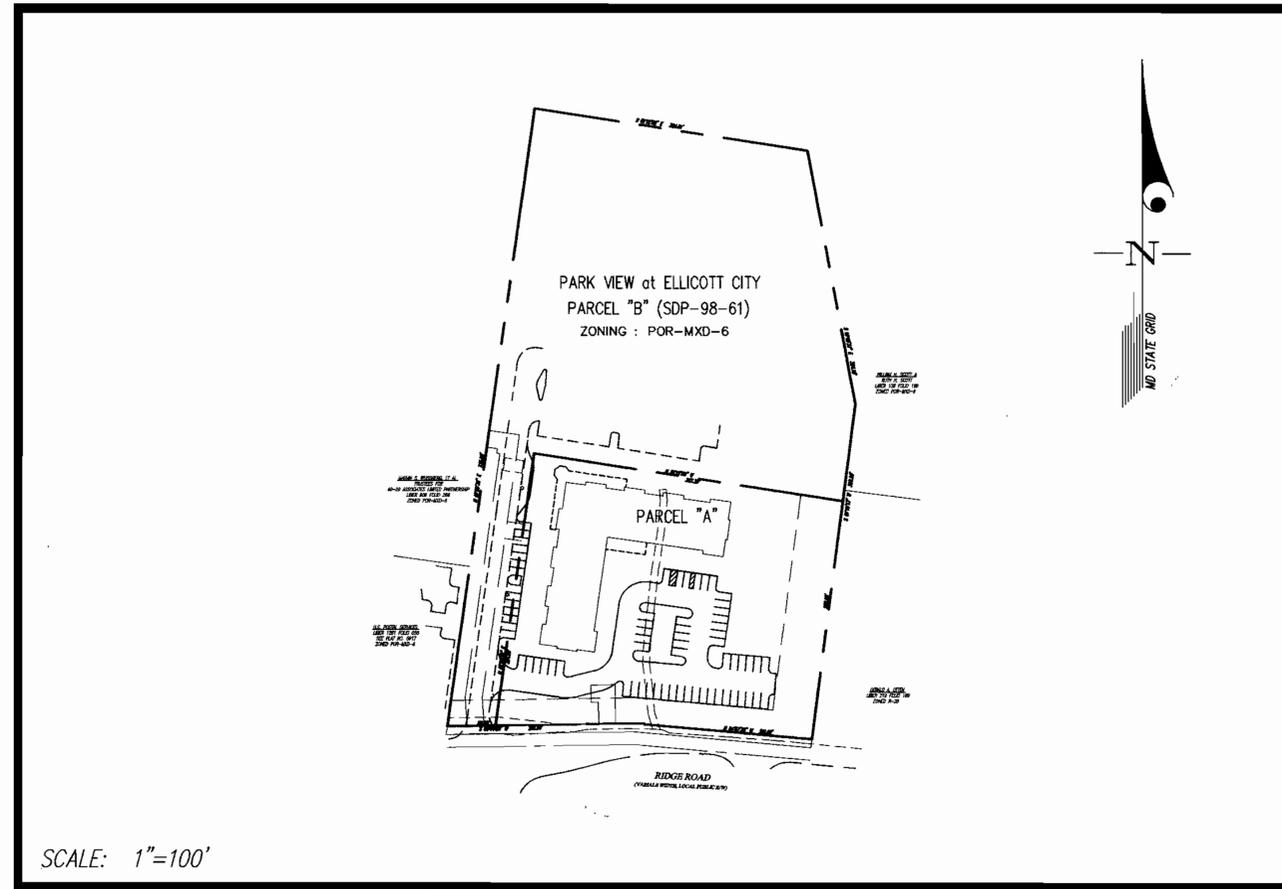


HOWARD COUNTY CONTROL STATIONS
CONTROL STATION 24C2
ELEVATION 354.23
N 388949 E 1385040
DESCRIPTION: CONIC MONUMENT AT SURFACE, 35' SOUTH OF LEFT TURN LANE OF LANE OF ROUTE 40 WEST, 14' EAST OF EAST EDGE OF CROSSOVER TO ROUTE 99 SOUTH

CONTROL STATION 18G1
ELEVATION 407.24
N 388949 E 1387752
DESCRIPTION: CONIC MONUMENT AT SURFACE, 4' NORTH OF MAC. SHOULDER OF ROUTE 40 WEST 18' WEST OF YELLOW BLINKING SIGNAL

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) 313-1880 at least five (5) working days prior to 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: Tax Map 24
Zoning: POR-MXD-6
Election District: 2nd Election District
Section/Area: N/A
Site Area: 2.53± ac. (Parcel-A) and 3.99± ac. (Parcel-B)
Approved Name and Dept. of Planning & Zoning Ref. File Nos.: F-98-156, SDP-98-61, contract Nos. 14-3642-D & 14-1329-D, Plot #13220, Plot #14758 and F-01-162.
- 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.
- All plan dimensions are to the face of curb or face of building unless otherwise noted. Dimensions are measured perpendicular to roadway between items unless otherwise noted.
- Existing topography and features were derived from SDP-98-61, available public records and from survey by Gutshick, Little & Weber, P.A. done in March, 2000.
- Coordinates are based on the previously recorded plot (#13220) as project by Howard County Geodesic Control Sta. Nos. 24C2 and 18G1.
- This site will be served by public water & sewer under the existing Contract #14-3642-D and Contract #14-3649-D which are in the Patapsco Drainage areas.
- Stormwater Management (for quantity and quality) is provided by a private on-site detention pond.
- All on-site storm drains proposed under this SDP are private.
- The existing utilities shown herein were derived from available public records. The contractor must have dig test pits at all utility crossings and connection points to verify exact location.
- All proposed ramps shall be in accordance with current A.D.A. Standards. Maximum sidewalk cross slope shall be 2% two percent. Provide a minimum of 5x5 feet by five foot level landing (2x max.) at the top and bottom of all ramps and building ingress/egress points.
- All driveways and parking are privately owned and maintained.
- Any damage to County owned right-of-way to be corrected at the contractor's expense.
- Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01, Class "C" bedding, unless otherwise noted.
- Outer pan of curbs shall be pitched to conform to the adjacent drainage pattern of the adjoining parking for vehicular use. For concrete curb and gutter, see detail on sheet 8.
- All curb fillets are 5' radius unless noted otherwise. Spot deviations along curb line are for the FLOW LINE, unless noted otherwise.
- There are no known grave sites or cemeteries on this site.
- Other topics related to this site:
- Traffic Study prepared by The Traffic Group.
- Subsurface Exploration and Geotechnical Evaluation by Harding-Kight Associates, Inc. dated 9/5, 10/2 & 10/4/00.
- Wetland delineation study by Exploration Research Inc. dated 9-11-00 and 9-29-00 approved October, 2000 (U.S. Army Corps of Engineers jurisdictional determination, CENAG-OP-RMS, 000-87005-15). Plot of revision #14758.
- All outside lighting shall comply with Zoning Regulation Section 134 which requires lights to be installed direct/reflect light downwards and inwards on site away from all adjoining public streets and residential public streets areas. See electrical drawings to be submitted for building permit for more information.
- All buildings shall have an inside water meter setting. All buildings shall be equipped with an automatic Fire Prevention Sprinkler System.
- The existing dumpster on Parcel "B", built under SDP-98-61, shall also serve this site (Parcel "A").
- This SDP is exempt from the Forest Conservation Ordinance in accordance with section 16.1202(b)(2)(i) by "Declaration of Intent" for cutting, clearing or grading of forest resources less than 40,000 square feet. There is no forest (by definition) on this site (see sheet 11).
- Outdoor staircases and railing shall be in accordance with Howard County DPW det. #67.01 and 67.03 (det. G2.02 may be used if it is acceptable to the developer). All ramps shall be 6" max. and all tread shall be a min. of 12".
- There is no 100-yr flood plain in this site.
- Financial surety for the required landscaping has been posted as part of the DPW developer's agreement in the amount of \$18,890.00 (see sheet #4 for detail).



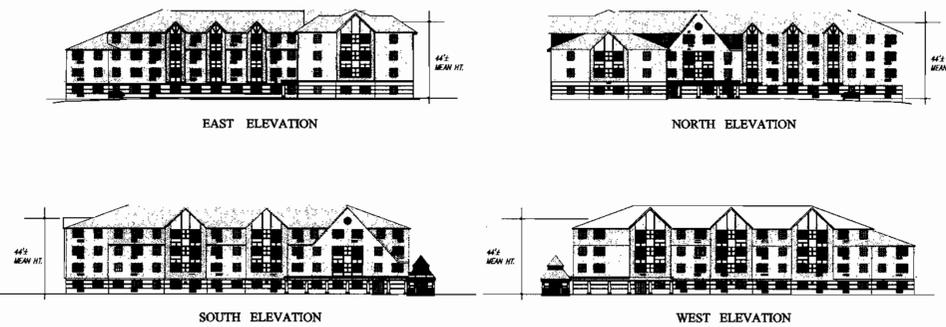
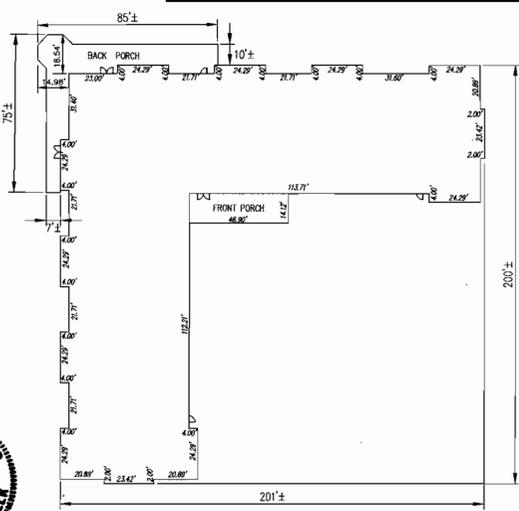
SHEET INDEX

No.	TITLE
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	LANDSCAPE PLAN
4	LANDSCAPE NOTES & DETAILS
5	UTILITY PROFILES
6	SEDIMENT CONTROL AND GRADING PLAN
7	SEDIMENT CONTROL NOTES AND DETAILS
8	SITE DETAILS
9	SWM DETAILS
10	STORMWATER MANAGEMENT SPECIFICATIONS & BORING LOG
11	EXISTING CONDITION & FOREST STAND DELINEATION
12	EXISTING CONDITION DRAINAGE AREA MAP
13	POST DEVELOPMENT DRAINAGE AREA MAP
14	STORM DRAIN DRAINAGE AREA MAP

SITE ANALYSIS DATA CHART

- General Site Data
 - Present Zoning: POR-MXD-6
 - Proposed Use of Site or Structures: Affordable Elderly Housing
 - Proposed Number of dwelling units: 91 apt. units on Parcel-A (81 existing on Parcel-B)
- Area Tabulation
 - Total Project Area: 2.53± acres (Parcel-A), 3.99± acres (Parcel-B)
 - Area of This Plan Submission: 2.7± acres which is for the new development on Parcel-A and for the minor changes to a small portion of the existing improvements on Parcel-B in order to tie together certain features (sidewalks, curb/gutter, utilities, etc.) common to the two parcels.
 - Limit of Disturbed Area by this SDP: 2.7± acres
 - Building area (on Parcel-A):

1st FLOOR	=	20,033 S.F.
2nd FLOOR	=	20,033 S.F.
3rd FLOOR	=	20,033 S.F.
4th FLOOR	=	18,506 S.F.
TOTAL	=	78,605 S.F.
 - Building Coverage of Site: 20,033 S.F. (building footprint) + 2,302 S.F. (porches) = 22,335 S.F. (or 20.3±% of Parcel-A site area)
 - Total paved surfaces (parking, driveways, sidewalks, etc.) on site: 0.70± Ac. (or 27.7% of Parcel-A site area)
- Open Space Data
 - Open Space Required on Site: N/A
 - Open Space Proposed: N/A
- Parking Space Data
 - PARKING PROVIDED**
68 spaces are provided (64 are standard 9x18' spaces and 4 are handicapped spaces of which one is van accessible) for Parcel-A. There are no changes to the number of existing parking spaces on Parcel-B.
 - REQUIRED PARKING PER ZONING REGULATIONS**
Per Sec. 1330.2b. ("Housing for Elderly or handicapped" at 2.0 spaces per 5 dwelling units) the required number of parking spaces is 37 for Parcel-A.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: [Signature] Date: 4/1/01
Chief, Division of Land Development: [Signature] Date: 5/21/01
Chief, Development Engineering Division: [Signature] Date: 5/22/01



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 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

NO.	DATE	REVISION	BY	APP'R.

DEVELOPER:
Shelter Development, LLC (Developer)
218 N. Charles Street, Suite 200
Baltimore, Maryland 21201
PH: 410-962-0595

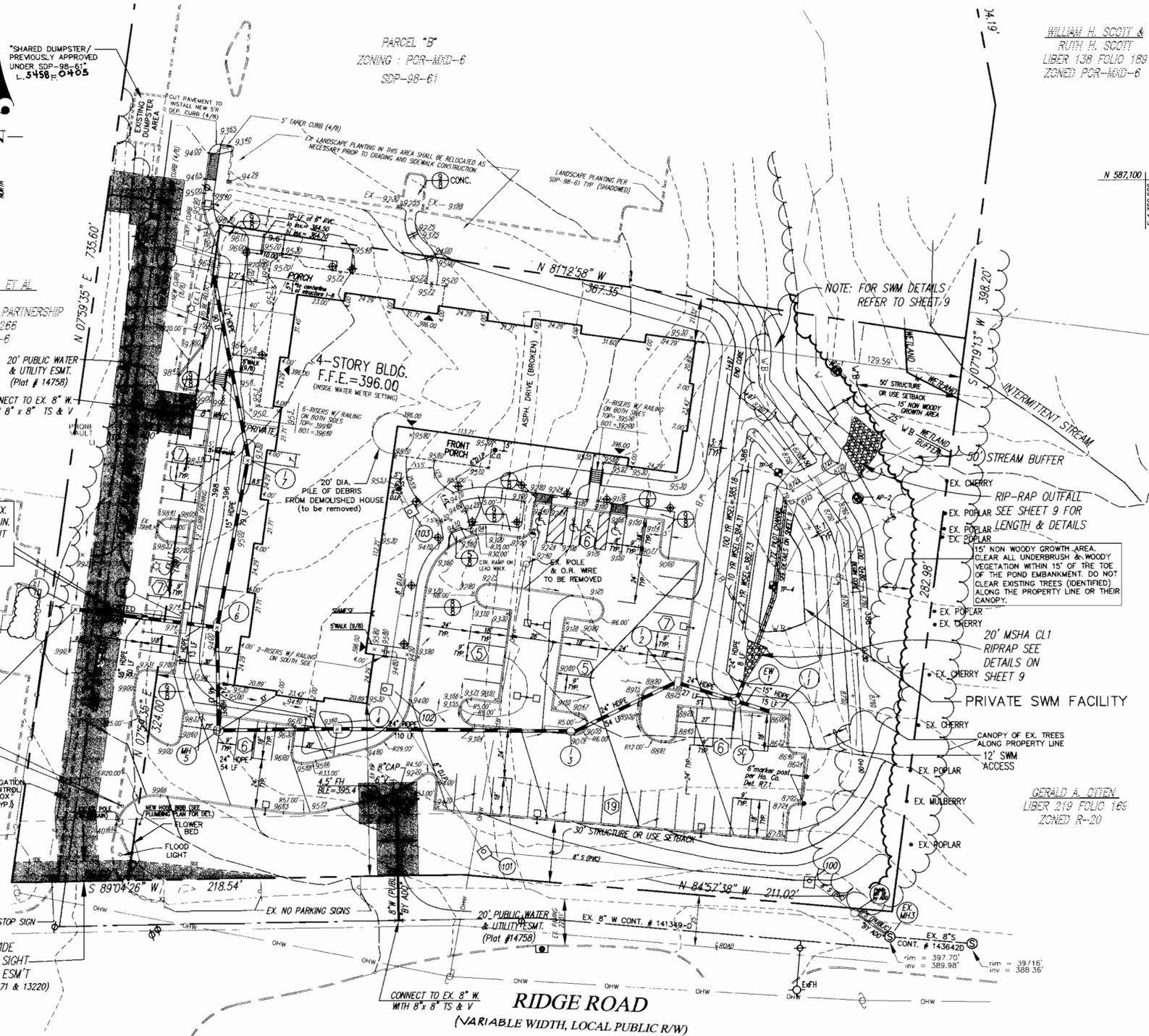
OWNER:
Howard County Housing Commission
6751 Columbia Gateway Drive
Gateway Bldg. 3rd Floor
Columbia, MD 21046

COVER SHEET
PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
(PARKVIEW II -- AFFORDABLE ELDERLY HOUSING)
PLAT Nos. 13220 & 14758
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

BID: March 01, 2001

WATER CODE:	SEWER CODE:	BUILDING ADDRESS			
F01	145220	8700 Ridge Road - Ellicott City, MD 21013			
Subdivision Name:		SECTION/AREA	PARCEL(S)		
ROGERS PROPERTY, Parcels A & B		N/A	A+B		
PLAT	ZONE	TAX MAP	BLOCK	ELEC. DIST.	CENSUS TRACT
13220 & 14758	POR-MXD-6	24	6	2	6029

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	POR-MXD-6	99092
DATE	TAX MAP - GRID	SHEET
4-30-01	24 - 6	1 of 14



SITE LEGEND

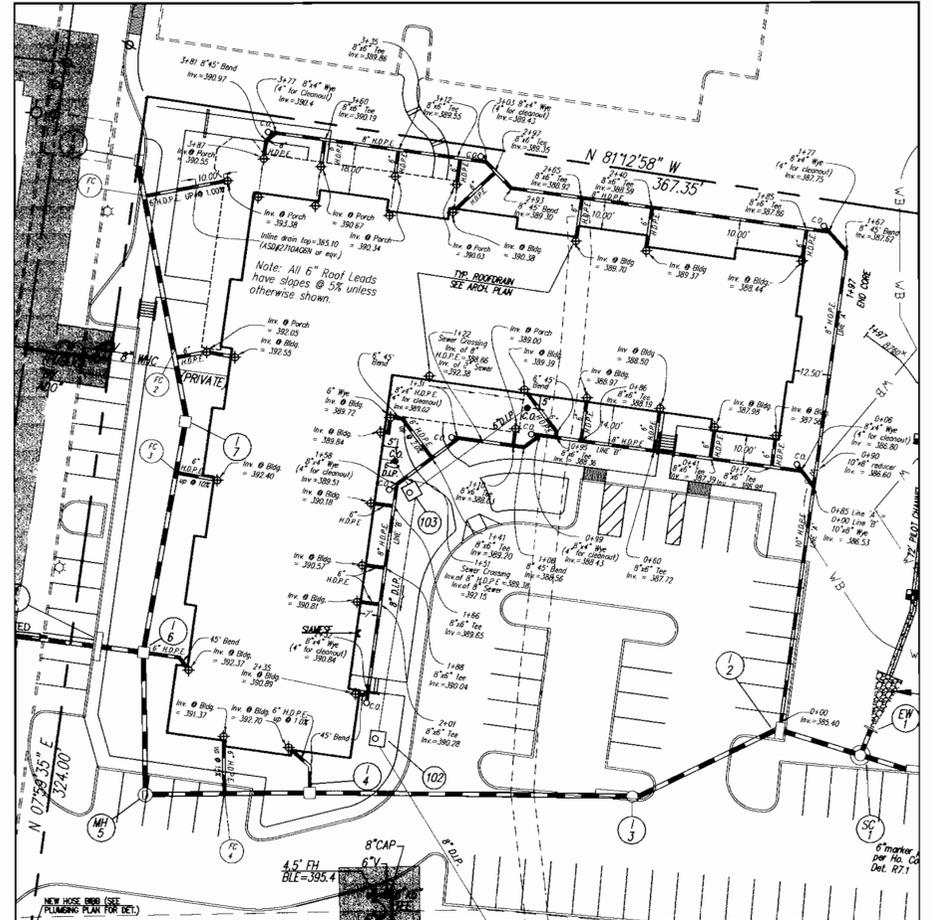
- 322--- EXISTING CONTOUR
- 320--- PROPOSED CONTOUR
- - - - - EXISTING CURB LINE
- - - - - PROPOSED CURB LINE (with fillet pts.)
- EXISTING WATER LINE
- PROPOSED WATER LINE
- FH FIRE HYDRANT
- EXFH EX. FIRE HYDRANT
- EX. 8" S EXISTING SEWER LINE & MANHOLE
- PROPOSED SEWER LINE & MANHOLE (DIS: ductile iron sewer)
- 24" HDPE PROPOSED STORM DRAIN LINE & STRUCTURES
- 25' HIGH, 125-250 WATT EMCO LIGHT
- INGROUND KIM LIGHT(150-PAR)
- SOIL BORINGS
- 396.00 DOOR LOCATION (and threshold elev.)
- EX. TREELINE
- PROP. TREELINE
- NUMBER OF PARKING SPACES (in each bay)
- SDE SIGHT DISTANCE EASEMENT

Stormwater Management Pond Summary

Item	EX. Q(cfs)	Q _{in} (cfs)	Q _{out} (cfs)	WSEL.	Stor. Prov. (Ac.-Ft.)
2-Year	5.8	11.3	5.4	382.73	0.15
10-Year	13.4	19.9	10.8	384.31	0.29
100 Year	N/A	30.0	23.8	385.18	0.40

Note: The proposed pond is a 2/10 year management detention pond w/o stormceptor for quality control. It is a Class "a" MD-378 Facility. It shall be privately owned and maintained by the developer, and the total drainage area is 3.75 Ac.

SEE SHEET #8 FOR THE FOLLOWING SITE DETAIL:
 - STD. & HANDICAP PARKING, SIGNAGE AND RAMPS
 - PAVING DELINEATION & SECTION
 - SIDEWALK PAVING
 - CONCRETE CURB & GUTTER



MARVIN S. WEISSBERG, ET AL
TRUSTEES FOR
40-28 ASSOCIATES LIMITED PARTNERSHIP
LIBER 906 FOLIO 266
ZONED POR-MND-6

REMOVE EX. SLOT DRAIN AND CUT EX. PAVING TO INSTALL NEW STORM DRAIN. PATCH TO MATCH EXISTING PAVEMENT & INSTALL C&G. TEST PIT AREA FOR EXISTING UTILITY CROSSINGS.

EX INFILTRATION PIT
U.S. POSTAL SERVICES
LIBER 1081 FOLIO 058
SEE PLAT NO. 5917
ZONED POR-MND-6

REMOVE OR PROPERLY ABANDON EX. IRRIGATION SYSTEM ALONG BACK OF EX. CURB PRIOR TO INSTALLATION OF NEW PAVING.

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Howard S.C.D. 5/22/01 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: 5/1/01 Date
 Chief, Division of Land Development: 5/31/01 Date
 Chief, Development Engineering Division: 5/22/01 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.
 Natural Resources Conservation Service: 5/22/01 Date

DEVELOPER'S/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."
 SHELTER DEVELOPMENT, LLC
 4/27/01 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."
 4/25/01 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWNE OFFICE PARK
 BURTONTOWNE, MARYLAND, 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

DEVELOPER: Shelter Development, LLC (Developer)
 218 N. Charles Street, Suite 200
 Baltimore, Maryland 21201
 PH: 410-962-0595

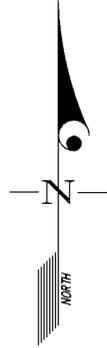
OWNER: Howard County Housing Commission
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SITE PLAN
PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
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 PLAT Nos. 13220 & 14758
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SCALE	ZONING	G. L. W. FILE No.
1"=30'	POR-MND-6	99092
DATE	TAX MAP - GRID	SHEET
4/30/01	24	2 of 14

This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.

The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.



hcm
Hord Coplan Macht LLC
 ARCHITECTURE
 LANDSCAPE ARCHITECTURE
 PLANNING
 INTERIOR DESIGN
 111 MARKET PLACE SUITE 710
 BALTIMORE MARYLAND 21202
 410 837 7311 FAX 410 837 6530

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscap Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.
 SHELTER DEVELOPMENT, LLC

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] Date: 4/16/01
 [Signature] Date: 5/21/01
 [Signature] Date: 5/22/01

By: [Signature] Date: 4/27/01
 Name: **THOMAS K. HETREMAN**
 SENIOR VICE PRESIDENT

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
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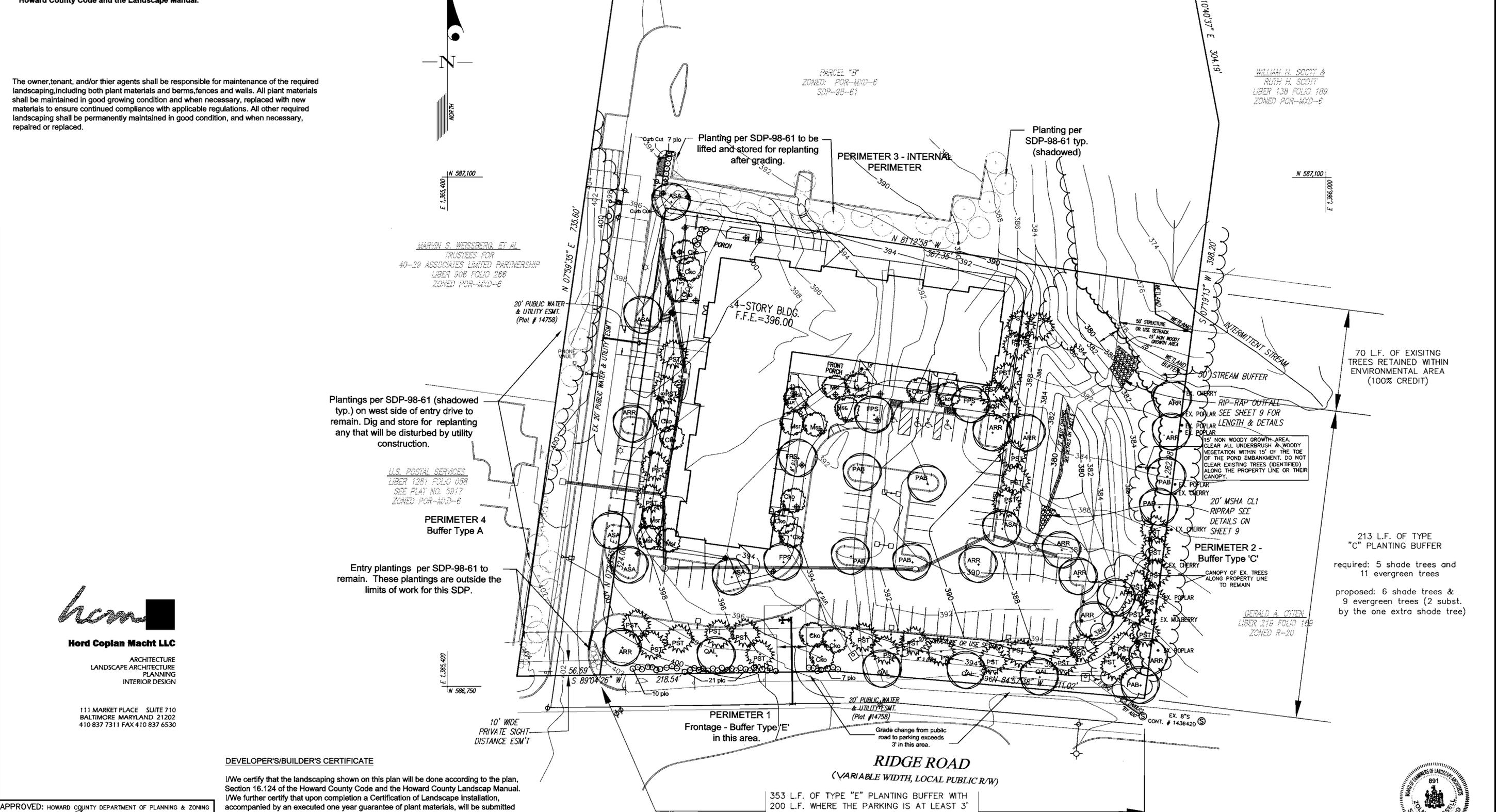
DATE	REVISION	BY	APP'R.

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 218 N. Charles Street, Suite 200
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OWNER:
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LANDSCAPE PLAN
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SCALE	ZONING	G. L. W. FILE No.
1" = 30'	POR-MXD	99092
DATE	TAX MAP - GRID	SHEET
4-30-01	24	3 of 14



THIS PLAN IS TO BE USED FOR PLANTING PURPOSES ONLY!!

SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	E Buffer	C Buffer (for perim.#2 #3 & 4 are internal)
Linear Feet of Roadway Frontage/Perimeter	340	Perimeter 2 - 283 LF
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	No	Perimeter 2 - 70 LF Perimeter 4 - existing from Phase I (100%)
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	Yes, 200 LF - 3' grade change	0
Number of Plants Required:		for 213' - Perimeter 2
Shade Trees	9	5
Evergreen Trees	0	11
Shrubs	38	0
Number of Plants Provided:		
Shade Trees	5	6
Evergreen Trees	8	9
Other Trees (2:1 substitution)		
Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	38	

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces:	68
Number of Trees Required:	7
Number of Trees Provided:	7
Shade Trees	
Other Trees (2:1 substitution)	

SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

Number of Dwelling Units:	91
Number of Trees Required: (1: DU SFA; 1:3 DU APTS.)	30
Number of Trees Provided:	15
Shade Trees	
Other Trees (2:1 substitution)	31 (19 evg'n + 22 om'l trees)

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	250 LF - Buffer Type B
Number of Trees Required:	
Shade Trees	5 (credit...see below)
Evergreen Trees	6 (credit...see below)
Credit for Existing Vegetation (No, Yes and %)	No
Credit for Other Landscaping (No, Yes and %)	Yes...100% credit for the "C" buffer along perimeter 2 and the massing of plant material as internal planting (under Sch.-C) around the SWM pond
Number of Trees Provided:	
Shade Trees	
Evergreen Trees	
Other Trees (2:1 substitution)	

PHASE II PLANT LIST

QTY. SYM. COMMON/BOTANICAL NAME CALIPER HEIGHT REMARKS

DECIDUOUS SHADE TREES					
12	ARR	Acer saccharum 'Green Mountain'			
		Green Mountain Sugar Maple	2.5-3" cal.	14-16' ht.	Full
6	ASA	Betula nigra 'Heritage'			
		Heritage Birch (Multiple Stem)	3 stem	14-16' ht.	Multi-stem
4	FPS	Liriodendron tulipifera			
		Tulip Poplar	2.5-3" cal.	14-16' ht.	Full
7	PAB	Platanus x acerifolia 'Bloodgood'			
		Bloodgood London Planetree	2.5-3" cal.	14-16' ht.	Full
4	QAL	Quercus rubra Red Oak			
			2.5-3" cal.	14-16' ht.	Full

EVERGREEN TREES					
36	PST	Pinus strobus Easter White Pine		6-8' ht.	Full

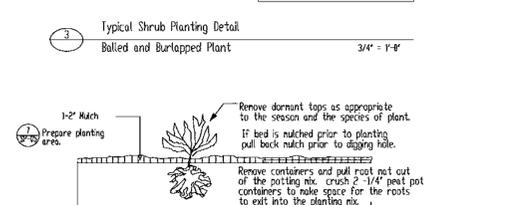
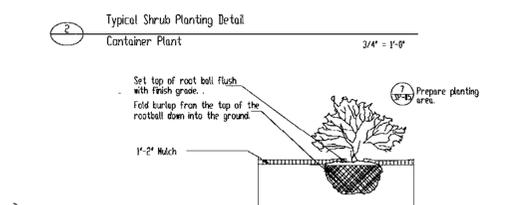
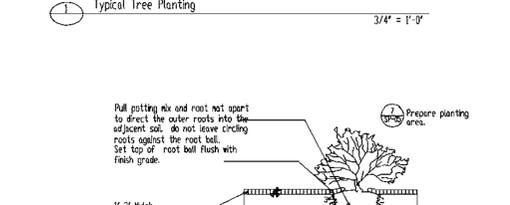
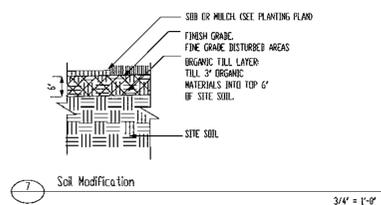
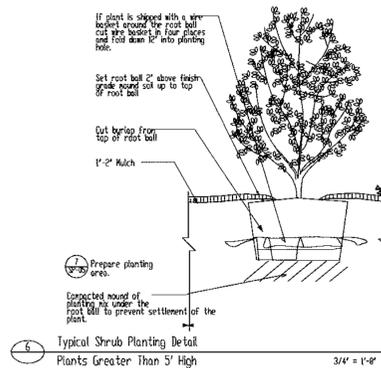
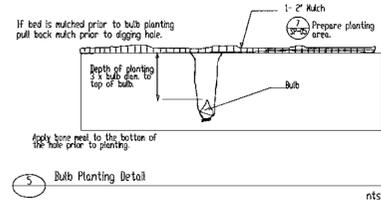
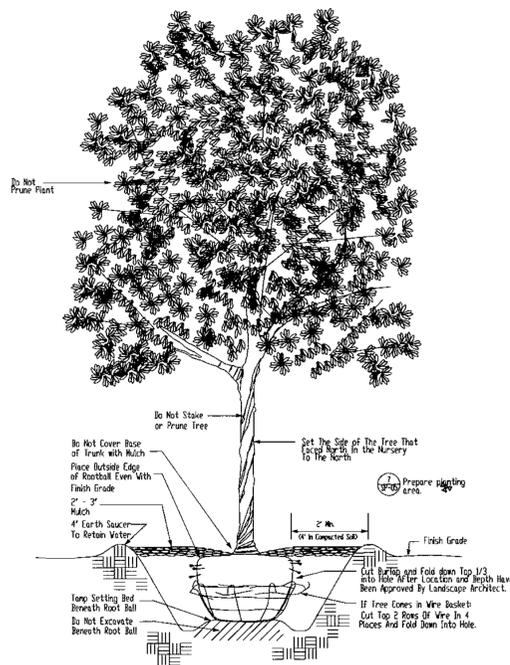
ORNAMENTAL TREES					
13	Cko	Cornus kousa Kousa Dogwood	Multi-stem	8-10' ht.	Heavy
9	Msr	Magnolia stellata 'Royal Star'			
		Royal Star Magnolia		6 - 8' ht.	Heavy

EVERGREEN HEDGING PLANTS					
38	plo	Prunus laurocerasus 'Otto Luykens'		24" ht	Container
		Cherry Laurel			

SURETY FOR THE PLANTING PROVIDED TO FULFILL LANDSCAPE REQUIREMENT

Number of Shade Trees	33 @ \$300/tree = \$9,900.00
Number of Evergreen Trees	31 @ \$150/tree = \$4,650.00
Number of Ornamental Trees	22 @ \$150/tree = \$3,300.00
Number of Shrubs:	38 @ \$30/shrub = \$1,140.00

Financial surety for the proposed landscaping to meet the required landscaping is in the amount of \$18,990.00



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] Date: 4/16/01
 Chief, Division of Land Development: [Signature] Date: 5/30/01
 Chief, Development Engineering Division: [Signature] Date: 5/22/01

Hord Coplan Macht LLC
 ARCHITECTURE
 LANDSCAPE ARCHITECTURE
 PLANNING
 INTERIOR DESIGN
 111 MARKET PLACE SUITE 710
 BALTIMORE MARYLAND 21202
 410 837 7311 FAX 410 837 6530



DEVELOPER'S/BUILDER'S CERTIFICATE
 I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscap Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.
 SHELTON DEVELOPMENT, LLC
 Name: [Signature] Date: 4/27/01
 Jeffrey K. Hettreman
 SENIOR VICE PRESIDENT

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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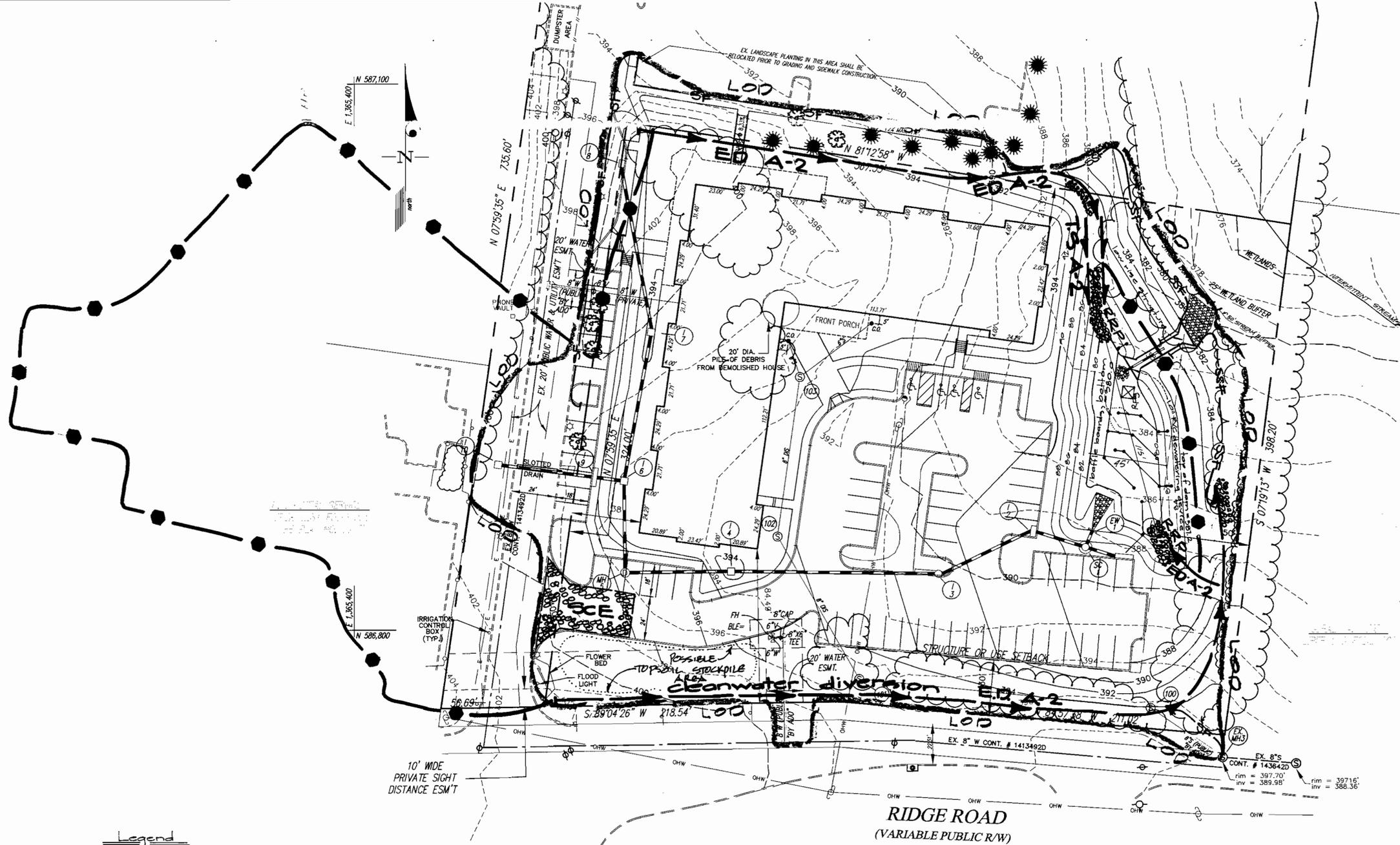
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LANDSCAPE NOTES & DETAILS
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AS SHOWN	POR - Mx 220	99092
DATE	TAX MAP - GRID	SHEET
4/30/01	24	4 OF 14



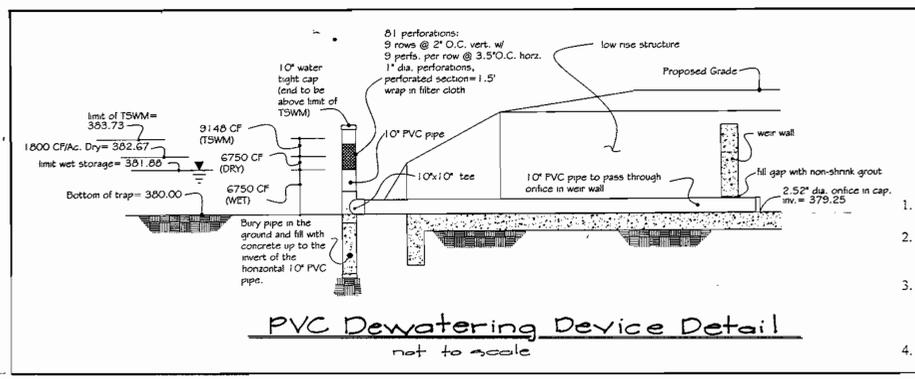
- Sequence of Construction**
1. Obtain grading permit and arrange on-site pre-construction meeting with sediment control inspector. (1 day)
 2. Install sediment control devices as shown on these plans. (2 weeks)
 3. With permission from the SCL to proceed, construct water and sewer, and storm drains. (1 month)
 4. Construct building. (2 months)
 5. Grade site. (1 month)
 6. Install curb & gutter, sidewalk and base paving. Fine grade site and stabilize all remaining areas with grass, seed and mulch. (4 weeks)
 7. Install surface paving. (2 weeks)
 8. Install landscaping. (2 weeks)
 9. When areas draining to the sediment control devices have been stabilized and permission is granted from the SCL, convert the sediment trap to the final SWM configuration and remove sediment control devices. (4 weeks)

SEDIMENT TRAP DATA

TRAP NO.	Trap #1
TRAP TYPE:	2.75 Ac.
EXISTING DRAINAGE AREA:	2.75 Ac.
PROPOSED DRAINAGE AREA:	6750 CF (1800 # O.A.)
WET STORAGE REQUIRED:	6750 CF (1800 # O.A.)
DRY STORAGE REQUIRED:	6750 CF
WET STORAGE PROVIDED:	7145 CF (TSWM Volume)
DRY STORAGE PROVIDED:	280.00
BOTTOM DIMENSIONS:	Varies
BOTTOM ELEVATION:	380.00
WEIR/RISER CREST ELEVATION:	382.80 (low rise structure)
WEIR LENGTH:	0.75'
CHANNEL DEPTH:	1.65' (conc. weir)
WET STORAGE ELEVATION:	381.88
DRY STORAGE ELEVATION:	383.75 (TSWM)
TOTAL STORAGE DEPTH:	1.85' (dry/TSWM)
TOTAL TOP OF EMBANKMENT:	387.20
CLEANOUT ELEVATION:	381.10
SIDE SLOPES:	2:1
managed 2:	5.2 cfs
before dev. 2:	5.0 cfs
after dev. 2:	13.5 cfs
overall length:	115 feet
overall width:	45 feet

Construction Specifications

1. Perforations in the draw-down device may not extend into the wet storage.
2. The total area of the perforations must be greater than 2 times the area of the internal orifice.
3. The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
4. Provide support of draw-down device to prevent sagging and floatation.



THIS PLAN IS FOR THE IMPLEMENTATION OF SEDIMENT CONTROL MEASURES ONLY!!!

- Legend**
- ED A-2 Earth Dike
 - TS A-2 Temporary Swale
 - GM Gabion Inflow Protection
 - Stabilized Construction Entrance
 - Super Silt Fence
 - Silt Fence
 - L.O.D. Limit of Disturbance
 - RPS Removable Ramping Station

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.
 Date: 4/25/01

DEVELOPER'S/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.
 Date: 5/22/01



This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
 Date: 5/22/01

These Plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.
 Date: 5/22/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Date: 4/16/01
 Date: 5/22/01
 Date: 5/22/01

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 BALT: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4186

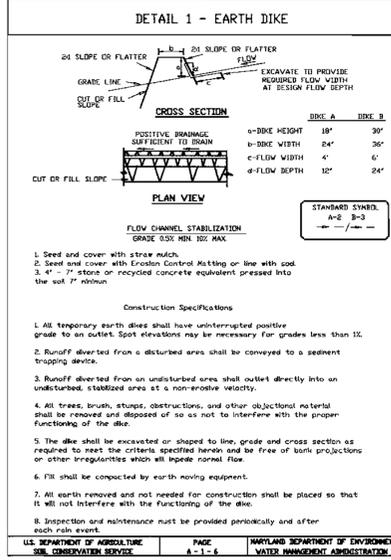
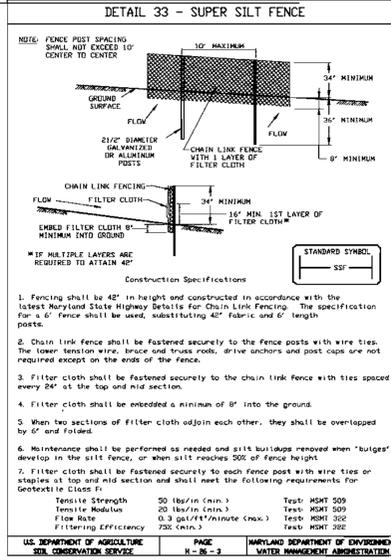
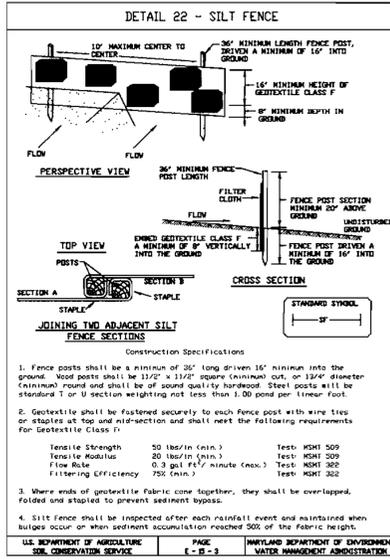
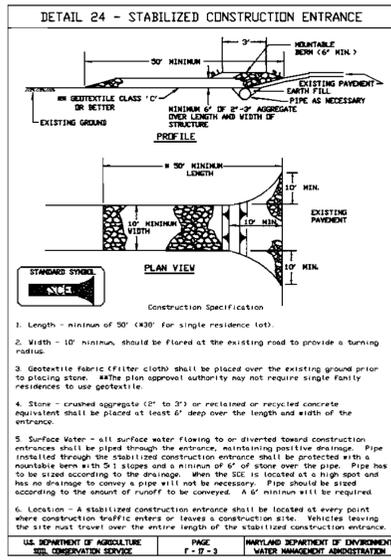
REVISION	DATE	BY	APP'R.

DEVELOPER
 Shelter Development, LLC (Developer)
 218 N. Charles Street, Suite 200
 Baltimore, Maryland 21201
 PH: 410-962-0595

OWNER
 Howard County Housing Commission
 6751 Columbia Gateway Drive
 Gateway Bldg. 3rd floor
 Columbia, Maryland 21046

SEDIMENT CONTROL & GRADING PLAN
PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
 (PARKVIEW II -- AFFORDABLE ELDERLY HOUSING)
 PLAT Nos 13220 & 14758

SCALE	ZONING	G. L. W. FILE No.
1"=30'	POR-MX20	99092
DATE	TAX MAP - GRD	SHEET
4-30-01	24 - 6	6 OF 14



SEDIMENT CONTROL NOTES

1. 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.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. Following initial soil disturbance or disturbance, permanent or temporary stabilization shall be completed within:

- 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec. C).

6. Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

7. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

8. Site Analysis:

Total Area of Site (Acres)	2,536 AC
Area Disturbed (by Grading)	2,702 AC
Area to be roofed or paved	1,256 AC
Area to be vegetatively stabilized	1,444 AC
Total Cut	4,250 C.Y.
Total Fill	4,250 C.Y.
Off-site waste/borrow area location	N/A

9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day, whichever is shorter.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30, and from August 15 thru October 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted, weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 6 feet or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

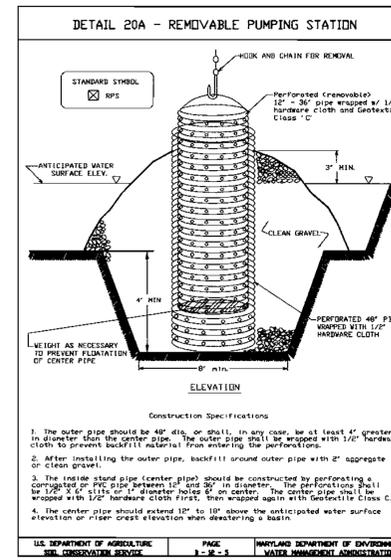
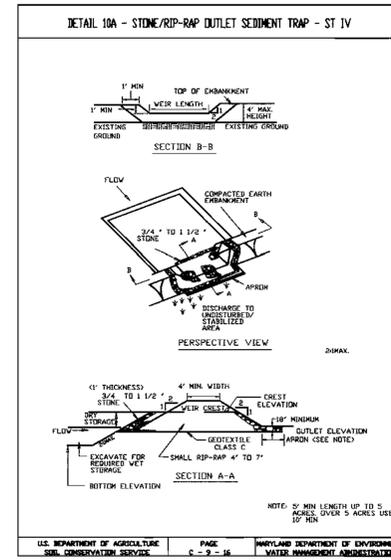
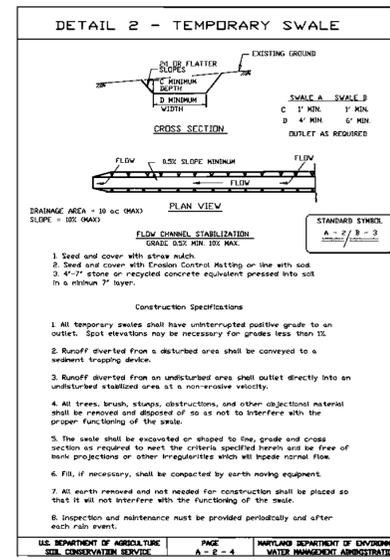
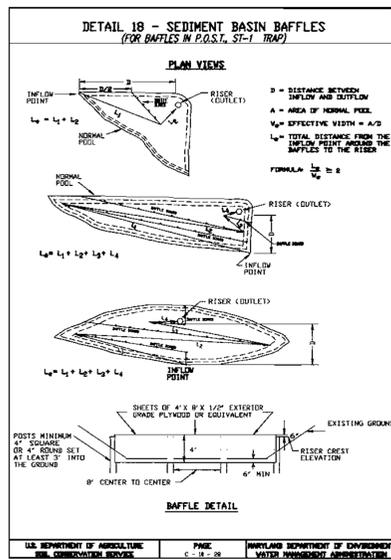
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 6 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.



SEDIMENT CONTROL NOTES & DETAILS

1. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

2. For sites having disturbed areas under 5 acres:

- Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:

- On soil meeting topsoil specifications, obtain test results indicating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt greater than 500 parts per mill shall not be used.
 - No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.
- 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.

3. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

4. Topsoil Application:

- When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 6" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water.
- Topsoil shall not be placed while the topsoil or subsoil is frozen or muddy conditions, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

5. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be applied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at a rate of 40/1,000 square feet, and 1/3 the normal lime application rate.
- Rip-rap for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
- Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
- Rip-rap should blend into existing ground.
- Rip-rap for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
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- Rip-rap should blend into existing ground.

U.S. DEPARTMENT OF AGRICULTURE, PAGE: H-6-6, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

Tree Protection Fence

1. Fencing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The Specification for a 6' fence shall be used, substituting 48" fabric and 6' length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and bridle rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid-section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 2' and folded.

6. Maintenance shall be performed as needed and silt bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Gettable Class F:

Tensile Strength	50 lbs/in (min.)	Test: MMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MMT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: MMT 302
Filtering Efficiency	75% (min.)	Test: MMT 302

U.S. DEPARTMENT OF AGRICULTURE, PAGE: H-16-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

Developer's/Builder's Certificate

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Sherman Development, LLC

John K. Williams 4/27/01
Sherman Development, LLC President

Clark 4/25/01

Dust Control

Definition:
Controlling dust blowing and movement at construction sites and roads.

Purpose:
To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies:
This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications:

Temporary Methods:

1. Mulches - See standards for vegetative stabilization with mulches only mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12" apart, spring-tooled harrows, and similar plows are examples of equipment which may produce the desired effect.
4. Irrigation - This is generally done as an emergency treatment. Site is irrigated with water until the surface is moist. Repeat as needed if no time should the site be irrigated to the point that runoff begins to flow.
5. Barriers - Solid board fences, wire fences, snow fences, straw bales, and similar material can control dust and soil blowing. Barriers placed at right angle to prevailing currents of air at intervals of about ten times their height are effective in controlling soil blowing.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need treatment.

Permanent Methods:

1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may offer valuable protection if left in place.
2. Topsoiling - Covering with less erosive soil material. See standards for top soil.
3. Stone - Cover surface with crushed stone or gravel.

References:

1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA,ARS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Joseph R. Kuntz* 4/14/01
Chief, Division of Land Development: *Chad Hamstra* 5/11/01
Chief, Development Engineering Division: *John Williams* 5/22/01

Tree Protection Fence

1. Fencing shall be 48" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The Specification for a 6' fence shall be used, substituting 48" fabric and 6' length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and bridle rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid-section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

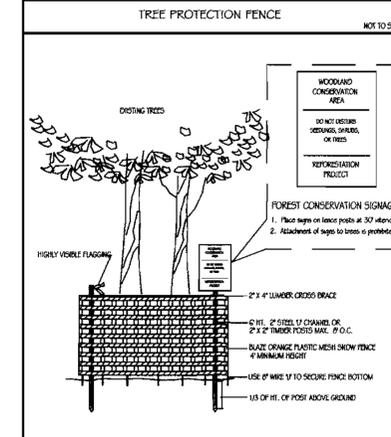
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 2' and folded.

6. Maintenance shall be performed as needed and silt bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Gettable Class F:

Tensile Strength	50 lbs/in (min.)	Test: MMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MMT 509
Flow Rate	0.3 gal/ft ² /minute (max.)	Test: MMT 302
Filtering Efficiency	75% (min.)	Test: MMT 302

U.S. DEPARTMENT OF AGRICULTURE, PAGE: H-16-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



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Sherman Development, LLC

John K. Williams 4/27/01
Sherman Development, LLC President

Clark 4/25/01

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John K. Williams 4/27/01
Sherman Development, LLC President

Clark 4/25/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Joseph R. Kuntz* 4/14/01
Chief, Division of Land Development: *Chad Hamstra* 5/11/01
Chief, Development Engineering Division: *John Williams* 5/22/01

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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: 301-999-2524 FAX: 301-421-4186

CADD DRAWINGS \99092\DESIGN\99092sp7.dwg DES. DRN. CHK.

DATE: _____ REVISION: _____ BY: _____ APP'R: _____

DEVELOPER: *Shelter Development, LLC (Developer)*
218 N. Charles Street, Suite 200
Baltimore, Maryland 21201
TEL: (410) 962-0595

OWNER: *Howard County Housing Commission*
6751 Columbia Gateway Drive
Gateway Bldg. 3rd Floor
Columbia, MD 21046

SEDIMENT CONTROL NOTES & DETAILS

PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
(PARKVIEW II - AFFORDABLE ELDERLY HOUSING)
PLAT Nos. 13220 & 14758

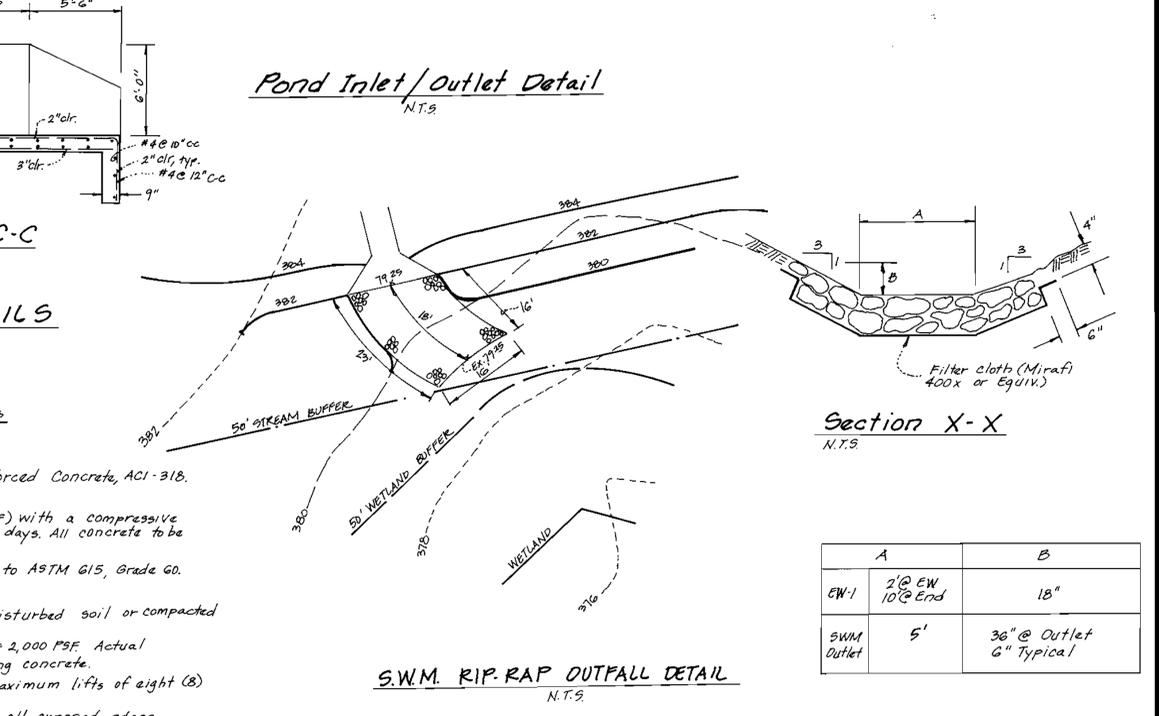
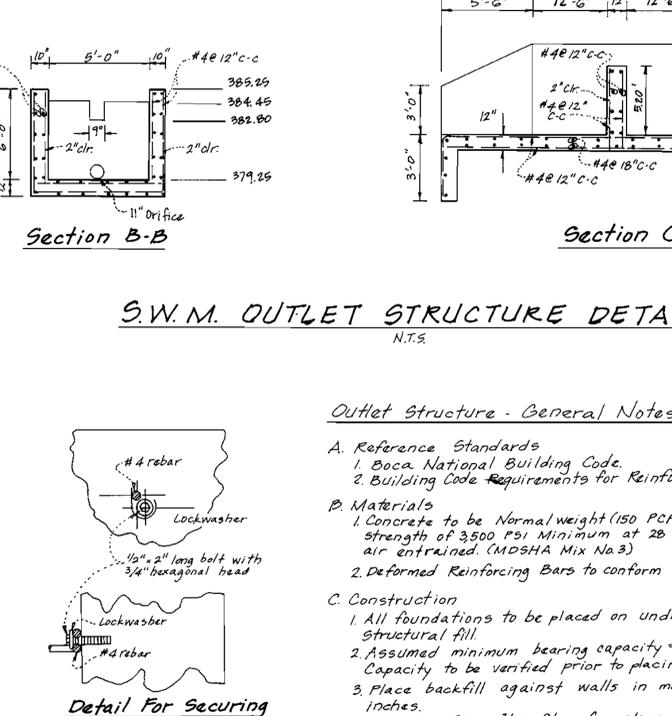
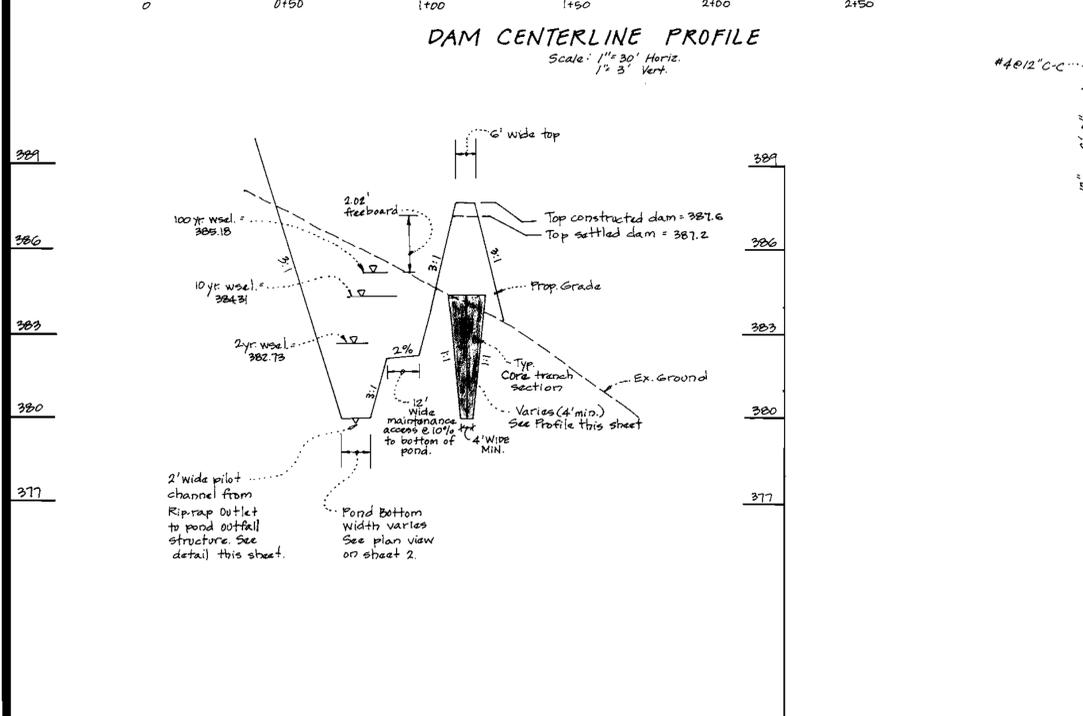
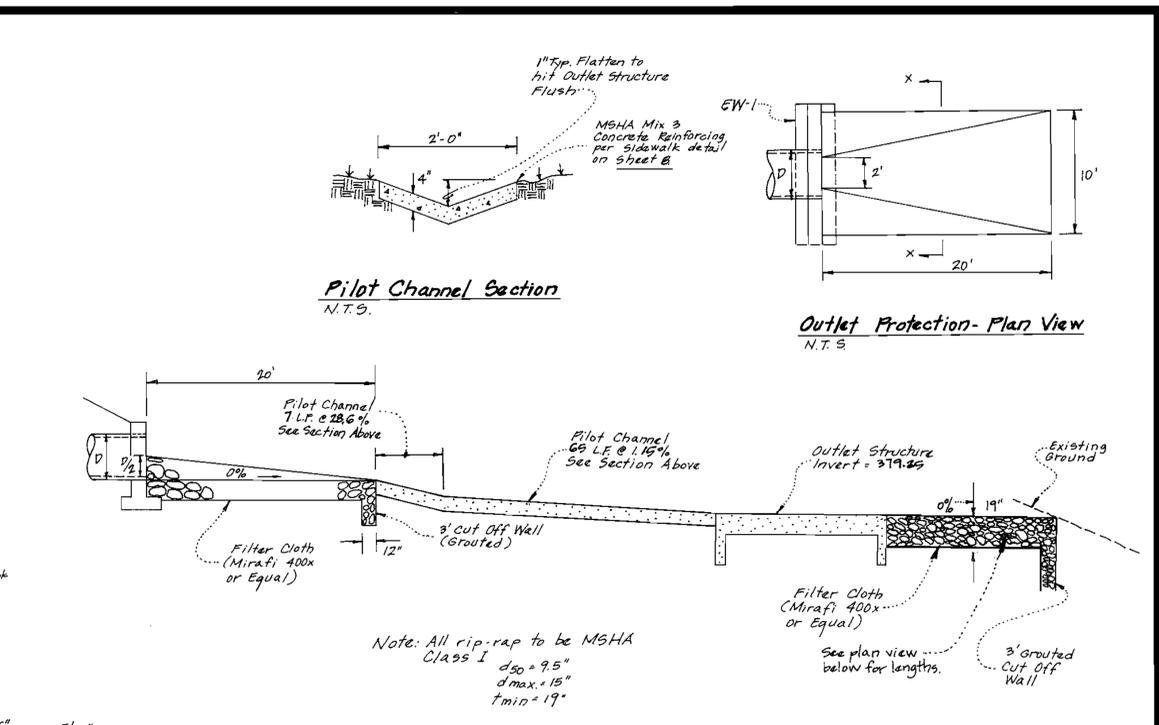
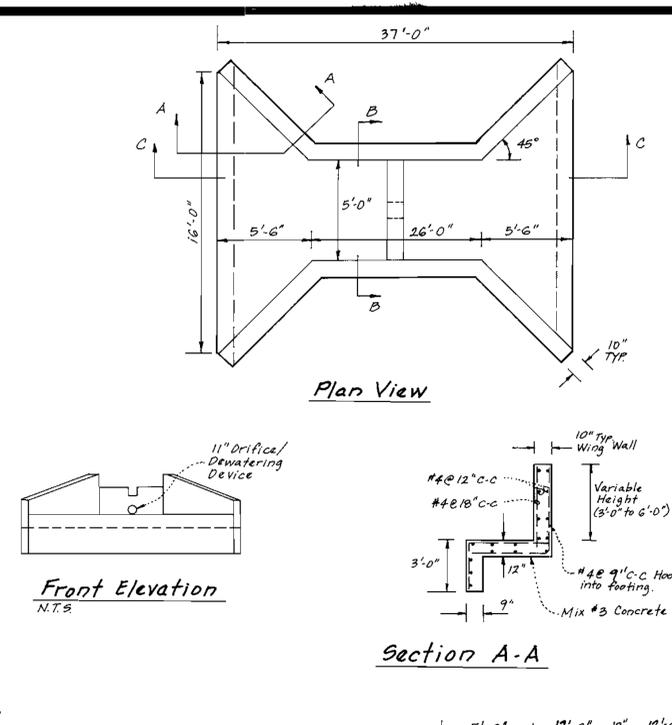
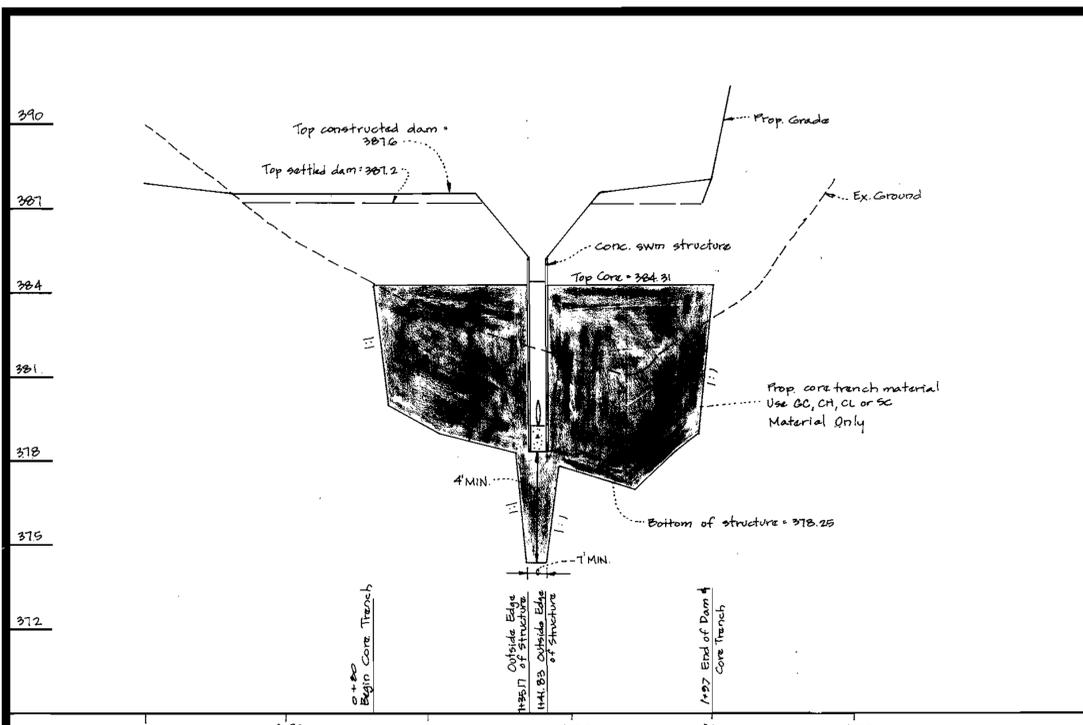
ELECTION DISTRICT No. 2

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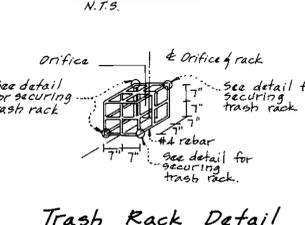
DATE: 4/30/01 TAX MAP - GRID: 24 - 6 SHEET: 7 OF 14

BID: March 01, 2001

SDP-01-50



- Outlet Structure - General Notes**
- Reference Standards
 - Boca National Building Code.
 - Building Code Requirements for Reinforced Concrete, ACI-318.
 - Materials
 - Concrete to be Normal weight (150 PCF) with a compressive strength of 3500 PSI Minimum at 28 days. All concrete to be air entrained. (MSHA Mix No. 3)
 - Deformed Reinforcing Bars to conform to ASTM A615, Grade 60.
 - Construction
 - All foundations to be placed on undisturbed soil or compacted structural fill.
 - Assumed minimum bearing capacity = 2,000 PSF. Actual Capacity to be verified prior to placing concrete.
 - Place backfill against walls in maximum lifts of eight (8) inches.
 - Provide 3/4" x 3/4" Chamfer along all exposed edges.



- Notes for Trash Rack**
- Bars will not be required against the floor or Weir wall of the riser structure.
 - Bolts to be placed into a concrete anchor.
 - All exposed metal surfaces are to be galvanized after fabrication and painted with two (2) coats of battleship grey paint.



DEVELOPER'S/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 MARILAND 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 COUNTY ENGINEER.
Howard County Development, LLC 4/6/01
John K. [Signature]
ENGINEER'S CERTIFICATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 5/22/01
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
[Signature] 5/22/01
DATE
NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] Director 6/1/01
[Signature] Chief, Division of Land Development 5/14/01
[Signature] Chief, Development Engineering Division 5/22/01



GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3509 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				DEVELOPER Shelter Development, LLC (Developer) 218N Charles Street, Ste. 200 Baltimore, Maryland 21201 Tel: (410) 962-0595		Owner Howard County Housing Corp. 6791 Columbia Gateway Dr. Gateway Bldg. 2nd Floor Columbia, Maryland 21046		S.W.M. DETAILS PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B' (PARKVIEW II - AFFORDABLE ELDERLY HOUSING) Plat Nos. 13220 & 14758 ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND			SCALE As shown	ZONING RFR-MXEDU	G. L. W. FILE No. 99092
DES.	DRN.	CHK.	DATE	REVISION	BY	APP'R.	DATE	DATE	TAX MAP - GRID	SHEET			
							4/30/01	4/30/01	24-G	9 of 14			

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The bottom shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10-year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The flowable fill shall have a minimum of 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding) over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. **Materials** - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

2. **Bedding** - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipes, when used with flowable fill or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

3. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Simple bands are not considered to be watertight.

4. **Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.**

5. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Simple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-raked an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepanched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell neoprene gasket; and a 12-inch wide lugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe. A 24-inch wide by 3/8-inch thick closed cell neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

6. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

7. **Backfilling** shall conform to "Structure Backfill".

8. **Other details** (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. **Materials** - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. **Bedding** - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe to a depth of 6 inches. The bedding / cradle shall be of the pipe's outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this Standard. Gravel bedding is not permitted.

3. **Laying pipe** - Bell and spigot pipe shall be placed with the bell and spigot joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire length, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. **Backfilling** shall conform to "Structure Backfill".

5. **Other details** (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. **Materials** - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type 3, and 12" through 24" inch shall meet the requirements of AASHTO M298 Type 3.

2. **Joints and connections** to anti-seep collars shall be completely watertight.

3. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. **Backfilling** shall conform to "Structure Backfill".

5. **Other details** (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. The water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

STORMWATER MANAGEMENT FACILITY OPERATIONS AND MAINTENANCE GUIDELINES

Operations:

- Owner shall keep accurate records of inspections and maintenance type repairs. These records should also include a copy of the "as-built" plans and small pond summary sheet.
- Owner shall make a visual inspection of the facility at least twice a year. Once in the summer and once in the winter. Additional inspections shall be made during and after extreme rainfalls. The summer after the facility has been mowed and during the winter when the vegetation is inactive.
- During the extreme weather or rainfall events, the owner shall check for overtopping, seepage, or dam failure. In order to avoid overtopping, either place sandbags on top of the embankment or lower the water elevation by using a dewatering device.
- If a severe problem develops, the owner shall contact a Professional Engineer to assess the problem and make a suggestion to remedy the situation. The Howard Soil Conservation District or Maryland Dam Safety Division shall be contacted before major repairs are made.

Maintenance:

During the semi-annual visual inspections, the following items must be checked and documented by the owner:

- Spillways and Outlet Device**
 - Pipes - check for sagging, misalignment, gaps at joints, cracks, leaks, and wear along inside surface of pipes. Also remove any blockages.
 - Trash Rocks - inspect and replace if necessary. Actual time for removal of trash rocks should be limited. Trash rocks shall be painted once a year.
 - Concrete Surfaces - check for cracks or any other signs of failure.
 - Foraboy and Spillway - check for stone & wire mesh deterioration or loss and spillway failure.
 - Rip Rap Outlet - check for stone deterioration or stone loss.
 - Dewatering Device - remove blockages.

II. Embankments

- Vegetation** - proper vegetative cover is required on all embankments. The owner shall follow proper seeding specifications for reseeding.
- Trees and Brush** - trees and brush shall be removed from the embankment. Stumps can be removed using slashcut.
- Mowing** - mowing is necessary to control the establishment of woody growth and to maintain the vegetative cover. The embankment, a 25-foot wide (except in wetland/stream buffers) strip adjacent to the toe, upstream and downstream of the embankment, and the area within 50 feet of the control structures need to be mowed. Mowing shall be done at least once a year (mid to late summer) but may be done more often.
- Seepage** - the following warning signs should be looked for when inspecting for seepage problems: cracks (longitudinal and vertical), soft spots or boggy areas on downstream embankment, seepage along downstream toe of embankment.
- Stability** - large cracks, slides, sloughing and excessive settlement are signs of embankment instability and need for repair. Repairs must be approved by Howard Soil Conservation District.
- Rodents** - check for burrows, which can lead to seepage, and remove rodents when encountered.

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

- The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection / Monitoring Form. Inspections shall be done by using a clear Plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depth exceeds the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available to Howard County officials upon their request.

DEVELOPER'S/BUILDER'S CERTIFICATE

I 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 of 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 HSDC.

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.

SHAW DEVELOPMENT, LLC
 Date: 4/25/01
 [Signature]

HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Date: 4/25/01
 [Signature]

NATURAL RESOURCES CONSERVATION SERVICE
 Date: 4/25/01
 [Signature]

SMM FACILITY BORING LOGS

Record of Soil Exploration

Contracted With: SHIELTER DEVELOPMENT
 Project Name: PARKVIEW AT ELLICOTT CITY II
 Location: ELLICOTT CITY, MD

Station	Soil Description	Depth (ft)	Notes
270.0	Brown silt loam, med. to heavy, silty plastic, medium to heavy clay SAND (SM)	0.0 - 2.5	1.5' E. Zone T-4
270.5	Same as above	2.5 - 5.0	
271.0	Same as above	5.0 - 7.5	
271.5	Same as above	7.5 - 10.0	
272.0	Same as above	10.0 - 12.5	
272.5	Same as above	12.5 - 15.0	
273.0	Same as above	15.0 - 17.5	
273.5	Same as above	17.5 - 20.0	

Record of Soil Exploration

Contracted With: SHIELTER DEVELOPMENT
 Project Name: PARKVIEW AT ELLICOTT CITY II
 Location: ELLICOTT CITY, MD

Station	Soil Description	Depth (ft)	Notes
273.5	Same as above	20.0 - 22.5	
274.0	Same as above	22.5 - 25.0	
274.5	Same as above	25.0 - 27.5	
275.0	Same as above	27.5 - 30.0	
275.5	Same as above	30.0 - 32.5	
276.0	Same as above	32.5 - 35.0	
276.5	Same as above	35.0 - 37.5	
277.0	Same as above	37.5 - 40.0	

Record of Soil Exploration

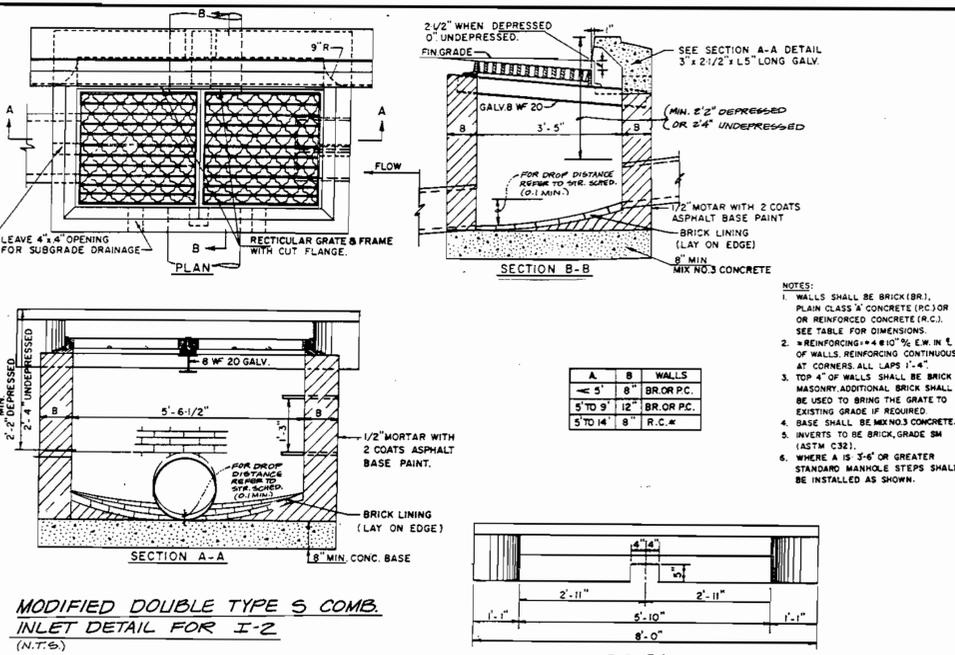
Contracted With: SHIELTER DEVELOPMENT
 Project Name: PARKVIEW AT ELLICOTT CITY II
 Location: ELLICOTT CITY, MD

Station	Soil Description	Depth (ft)	Notes
277.5	Same as above	40.0 - 42.5	
278.0	Same as above	42.5 - 45.0	
278.5	Same as above	45.0 - 47.5	
279.0	Same as above	47.5 - 50.0	
279.5	Same as above	50.0 - 52.5	
280.0	Same as above	52.5 - 55.0	
280.5	Same as above	55.0 - 57.5	
281.0	Same as above	57.5 - 60.0	

Record of Soil Exploration

Contracted With: SHIELTER DEVELOPMENT
 Project Name: PARKVIEW AT ELLICOTT CITY II
 Location: ELLICOTT CITY, MD

Station	Soil Description	Depth (ft)	Notes
281.5	Same as above	60.0 - 62.5	
282.0	Same as above	62.5 - 65.0	
282.5	Same as above	65.0 - 67.5	
283.0	Same as above	67.5 - 70.0	
283.5	Same as above	70.0 - 72.5	
284.0	Same as above	72.5 - 75.0	
284.5	Same as above	75.0 - 77.5	
285.0	Same as above	77.5 - 80.0	



MODIFIED DOUBLE TYPE 5 COMB INLET DETAIL FOR I-2 (N.T.S.)

SCALE	ZONING	G. L. W. FILE No.
1"=XX'	POR-MX-220	99092
DATE: 4/30/01	TAX MAP - GRD	SHEET 10 of 14
HOWARD COUNTY, MARYLAND		

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: [Signature] Date: 4/11/01
 Chief, Division of Land Development: [Signature] Date: 5/11/01
 Chief, Development Engineering Division: [Signature] Date: 5/22/01

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3000 NATIONAL DRIVE - SUITE 250 - BURTISVILLE OFFICE PARK
 BELT, MD 21015
 TEL: 301-421-4024 FAX: 410-880-1820

DATE	REVISION	BY	APPR.

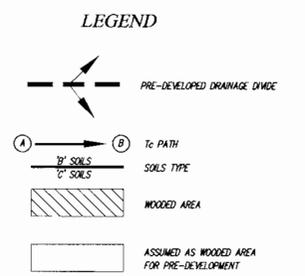
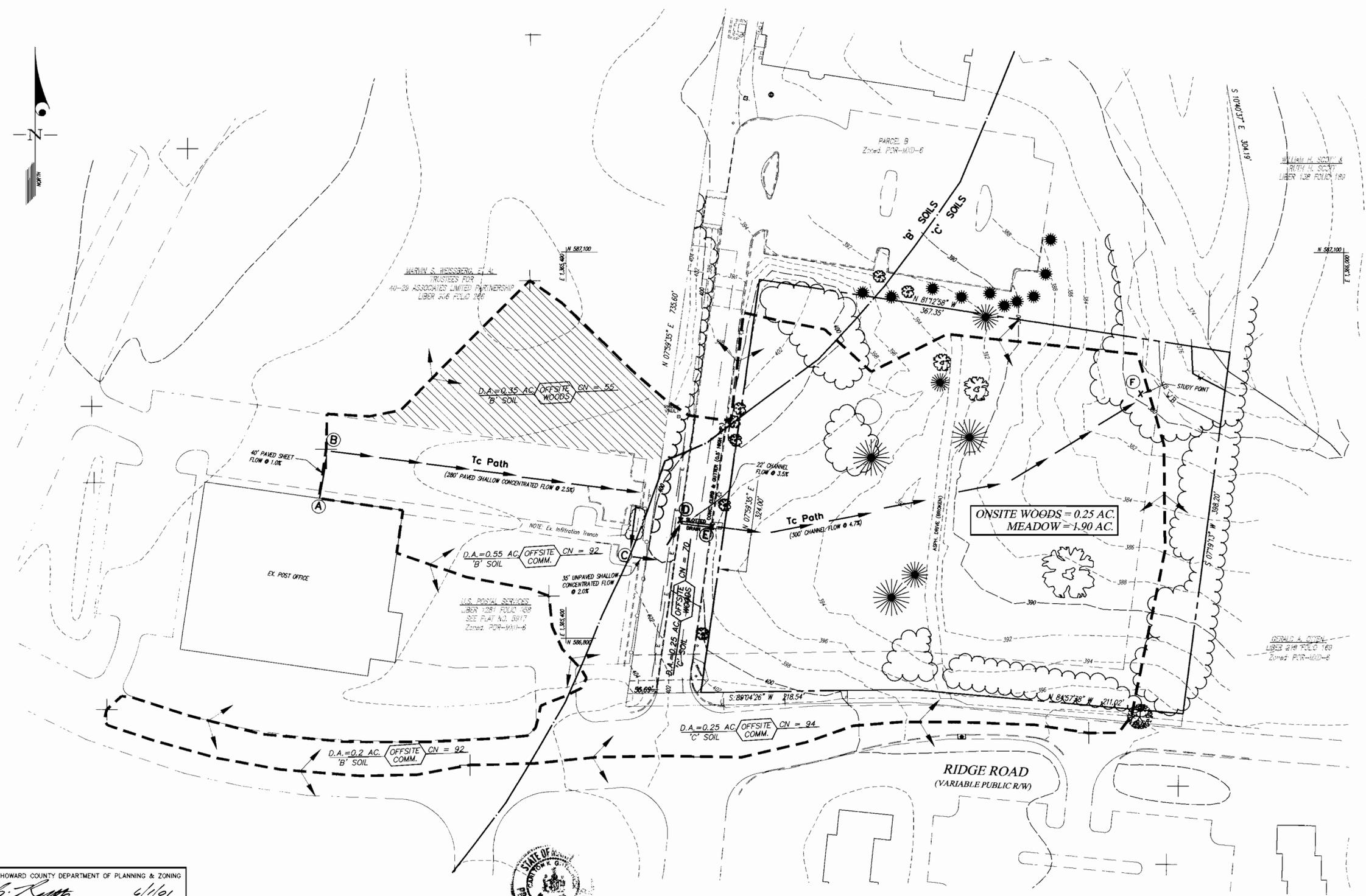
DEVELOPER
 Shelter Development, LLC (Developer)
 218 N. Charles Street, Suite 200
 Baltimore, Maryland 21201
 PH: 410-962-0585

OWNER
 HOWARD COUNTY HOUSING COMM.
 6751 COLUMBIA GATEWAY DRIVE
 GATEWAY BLDG. 8TH FLOOR
 COLUMBIA, MD 21046

STORMWATER MANAGEMENT SPECIFICATIONS & BORING LOGS

PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
 (PARKVIEW II - AFFORDABLE ELDERLY HOUSING)
 PLAT No. 13220 of 14798

ELECTION DISTRICT No. 2



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] Date: 6/1/01
[Signature] Date: 5/31/01
 Chief, Development Engineering Division Date: 5/31/01

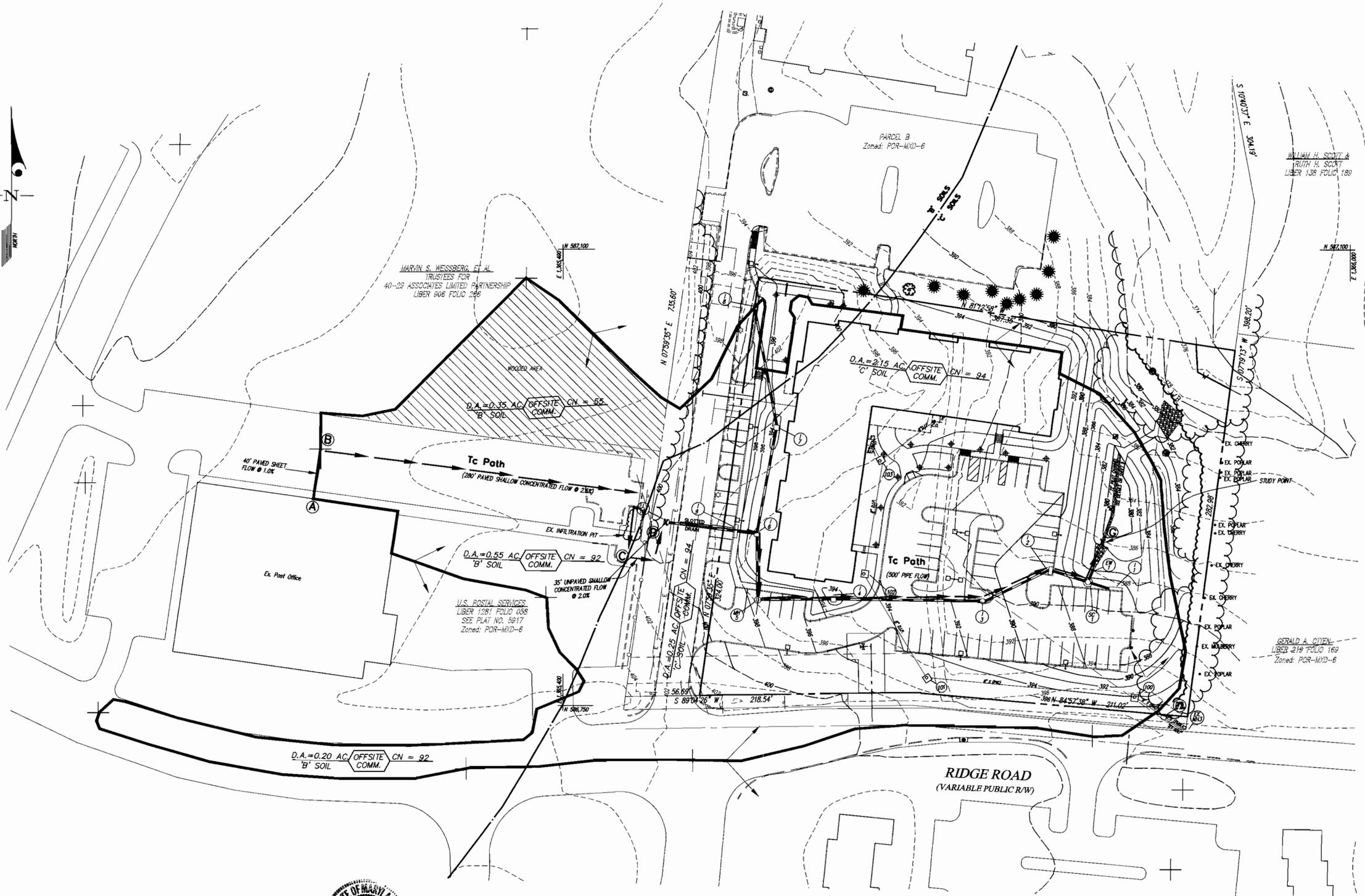


NOTE: FOR DRAINAGE AREA INFORMATION ONLY !

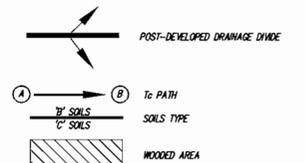
BID: MARCH 01, 2001

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: 301-421-4188	DEVELOPER Shelter Development, LLC (Developer) 218 N. Charles Street, Suite 200 Baltimore, Maryland 21201 TEL: (410) 962-0595		OWNER Howard County Housing Commission 6751 Columbia Gateway Drive Gateway Bldg. 3rd Floor Columbia, MD 21046		EXISTING CONDITION DRAINAGE AREA MAP PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B' (PARKVIEW II -- AFFORDABLE ELDERLY HOUSING) PLAT Nos 13220 & 14758		SCALE 1"=40'	ZONING POR - MXP	G. L. W. FILE No. 99092
	DATE 4/30/01	REVISION	TAX MAP - GRID 24-6	SHEET 12 OF 14	HOWARD COUNTY, MARYLAND				

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LEGEND



NOTE: FOR DRAINAGE AREA INFORMATION ONLY!

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Frank Rantz* Date: 4/1/01
Chief, Division of Land Development: *Cindy Hanster* Date: 5/13/01
Chief, Development Engineering Division: *Chris DeLorenzo* Date: 5/22/01



BID: March 01, 2001

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: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

DEVELOPER: Shelter Development, LLC (Developer)
218 N. Charles Street, Suite 200
Baltimore, Maryland 21201
TEL: (410) 962-0595

OWNER: Howard County Housing Commission
6751 Columbia Gateway Drive
Gateway Bldg., 3rd Floor
Columbia, MD. 21046

POST DEVELOPMENT DRAINAGE AREA MAP
PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
(PARKVIEW II -- AFFORDABLE ELDERLY HOUSING)
PLAT Nos 13220 & 14752
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	POR-MX2L	99092
DATE	TAX MAP - GRID	SHEET
4/30/01	24	13 of 14

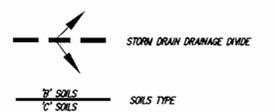
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DRAINAGE INFORMATION TABLE			
AREA	TOTAL ACRES	'C' FACTOR	
I-1	0.45	0.72	COMMERCIAL
I-2	0.45	0.72	COMMERCIAL
I-3	0.85	0.72	COMMERCIAL
I-4	0.04	0.72	COMMERCIAL
I-6	0.05	0.72	COMMERCIAL
I-7	0.05	0.72	COMMERCIAL
I-8	0.05	0.72	COMMERCIAL
I-9	0.30	0.72	COMMERCIAL
I-10	0.90	0.72	COMMERCIAL
RD	0.50	0.86	IMPERVIOUS

NOTE
B & C SOIL @ 2-6% SLOPES HAS SAME 'C' FACTOR FOR THE ABOVE LAND USES.

LEGEND



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Angela Kutt 4/1/01
Date

Vivian Hamstra 5/31/01
Date

Chris Hamstra 5/22/01
Date

Chief, Development Engineering Division



BID: March 01, 2001

GLW GUTSCHICK LITTLE & WEBER, P.A.
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TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

DEVELOPER
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218 N. Charles Street, Suite 200
Baltimore, Maryland 21201
TEL: (410) 962-0595

OWNER
Howard County Housing Commission
6701 Columbia Gateway Drive
Gateway Bldg, 3rd Floor
Columbia, MD 21046

STORM DRAIN DRAINAGE AREA MAP
PARK VIEW at ELLICOTT CITY - PARCELS 'A' & 'B'
(PARKVIEW II -- AFFORDABLE ELDERLY HOUSING)
PLAT Nos. 13220 & 14758
ELECTION DISTRICT No. 2
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=40'	POR- M X B C	99092
DATE	TAX MAP - GRID	SHEET
4/30/01	24-6	14 OF 14