

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 "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

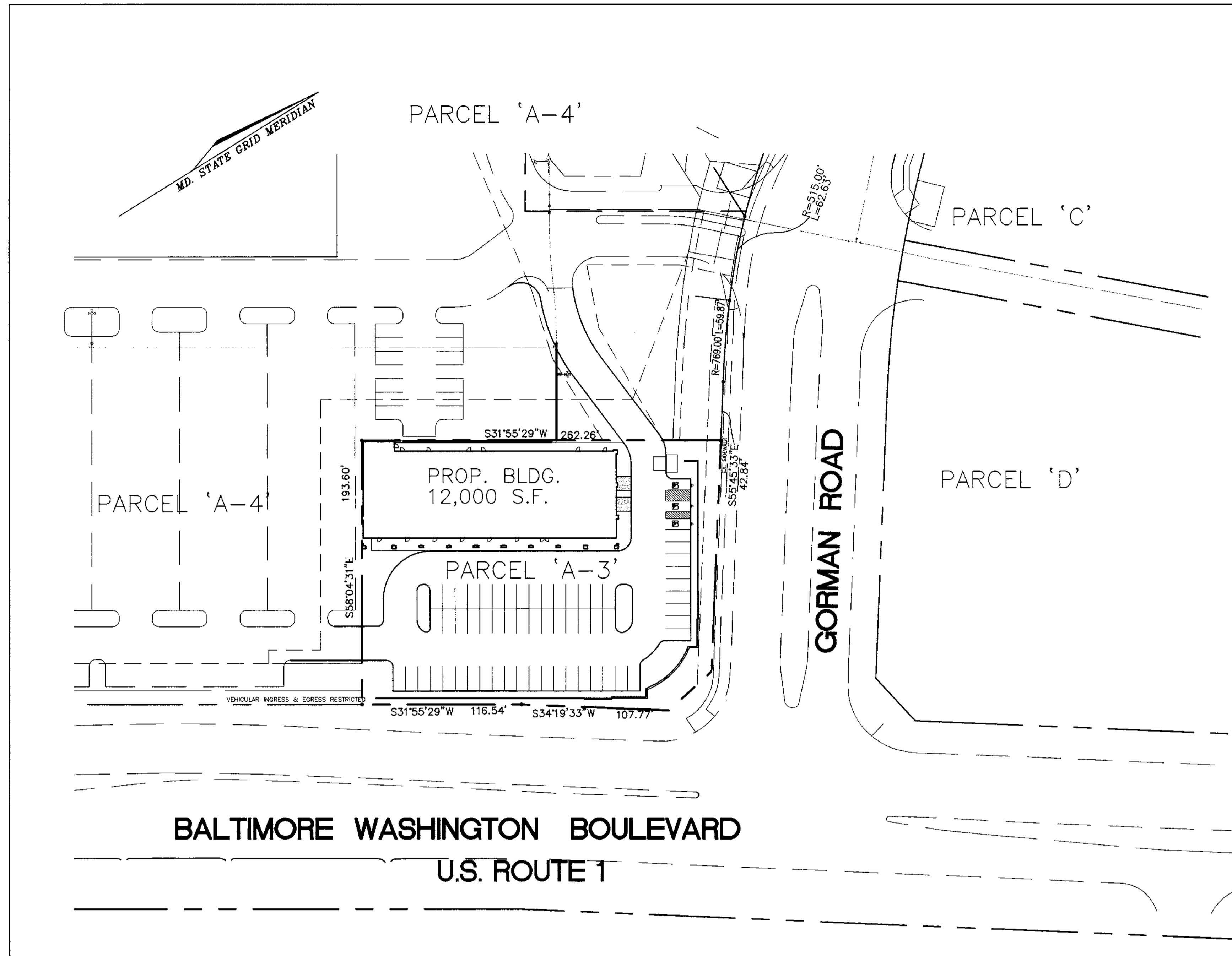
MISS UTILITY	1-800-257-7777
C & P TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	313-2366
AT&T CABLE LOCATION DIVISION	393-3553
B.G.&E. CO. CONTRACTOR SERVICES	850-4620
B.G.&E. CO. UNDERGROUND DAMAGE CONTROL	787-4620
STATE HIGHWAY ADMINISTRATION	531-5533
- SITE ANALYSIS:
 - AREA OF PARCEL/AREA OF SUBMISSION: A-3 = 1.147AC +/-
 - PRESENT ZONING: B-2
 - USE OF STRUCTURES: RETAIL
 - TOTAL BUILDING AREA: 12,000 SQ. FT.
 - BUILDING COVERAGE ON SITE: 12,000 AC OR 24% OF GROSS AREA
 - PAVED PARKING LOT/AREA ON SITE: 0.64 AC +/- OR 55.7% OF GROSS AREA
 - NO. OF PARKING SPACES PROVIDED: 63 SPACES
 - NUMBER OF LANDSCAPE ISLAND REQUIRED: 1 ISLAND PER 20 PARKING SPACES
 - NUMBER OF LANDSCAPE ISLAND PROVIDED: 4 ISLANDS
- PROJECT BACKGROUND:
 - LOCATION: SAVAGE, MARYLAND TAX MAP: 47 PARCEL: A-3
 - ZONING: B-2
 - SECTION/AREA: N/A
 - SITE AREA: 1.147 AC +/-
 - DPZ REFERENCES: S30-28, P91-02, F-92-74, F-98-149
 - DISTURBED AREA: 1.36 AC.
- 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 START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3,500 P.S.I.
- 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.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOILS TEST.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C'.
- VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL.
- STORMWATER MANAGEMENT (QUANTITY & QUALITY) IS PROVIDED FOR UNDER F-92-74.
- COORDINATES AND ELEVATIONS ARE BASED ON THE FOLLOWING HOWARD COUNTY MONUMENTS

47B	N 529,701.5793	E 1,361,469.7579
47C	N 532,036.8853	E 1,362,819.0580
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- FOR PAVING SECTIONS DETAIL SEE SHEET 2 OF 6.
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE (SEE DETAIL ON SHEET 2 OF 6).
- PAVING SECTIONS TO BE CONFIRMED BY PROJECT GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
- A WATER METER SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION ON THE INCOMING WATER LINE TO THE BUILDING.
- CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS ROUTES IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
- EXISTING TOPOGRAPHY IS BASED ON AERIAL TOPOGRAPHIC SURVEY PERFORMED BY POTOMAC AERIAL SURVEYS DATED DECEMBER 1997.
- THIS PROJECT IS SERVED BY PUBLIC WATER AND PUBLIC SEWER (CONTRACT #24-3701D).
- THE CONTRACTOR WILL REMOVE EX. CURB & GUTTER AS NOTED ON THE SITE PLAN. THE CONTRACTOR WILL LEAVE A CLEAN EDGE AT EXISTING PAVING FOR TIE-IN OF PROPOSED PAVING.
- THE CONTRACTOR WILL CONSTRUCT ALL CONC. CURB & GUTTER NOTED ON THE SITE PLAN TO BE FULLY DEPRESSED SO THAT THERE IS NOT A LIP.
- SITE LIGHTING TO BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- ALL 2:1 SLOPES TO BE STABILIZED WITH SEDIMENT AND EROSION CONTROL MATTING.
- REFERENCE USE-IN-COMMON, MAINTENANCE AND GRADING EASEMENT BETWEEN PARCELS A-3, A-4, A-5 AND A-6 LIBER 4387 FOLD 0016.

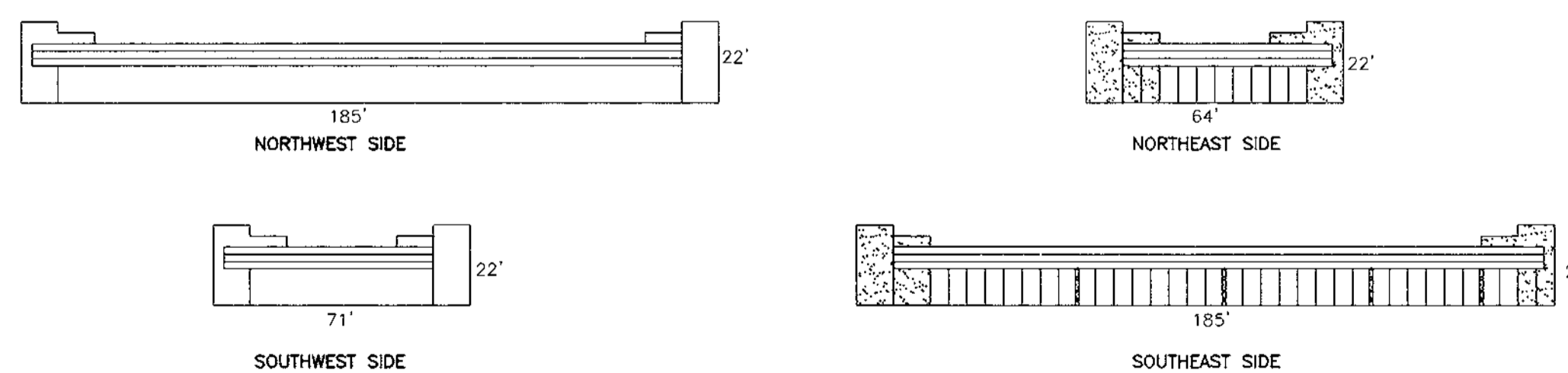
PARKING TABULATION

REQUIRED
 RETAIL- 12,000 SQ. FT.
 5 SPACES PER 1,000 SQ. FT. = 60 SPACES

PROVIDED
 RETAIL- 62 SPACES (INCLUDING 3 HANDICAP)



SITE PLAN
 SCALE: 1" = 50'



BUILDING ELEVATIONS
 NOT TO SCALE



3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel. 410.461.5828 Fax 410.465.3966

OWNER/DEVELOPER
 Lincoln Freestate, LLC
 c/o Lincoln Property Company
 1530 Wilson Boulevard
 Suite 200
 Arlington, Virginia 22209
 Tel. No. (703) 522-4600

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9/13/99
 DIRECTOR DATE

[Signature] 9/16/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

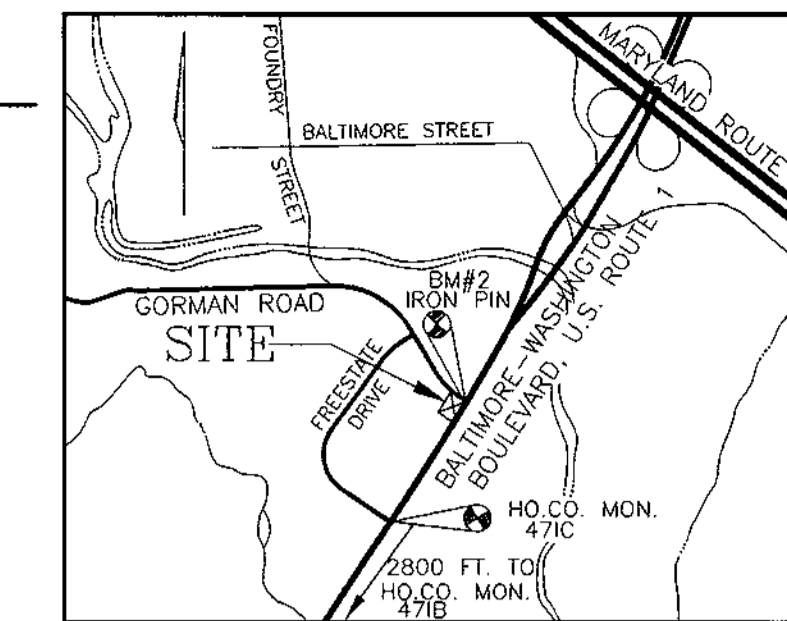
[Signature] 9/17/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.		REVISION		DATE	
ADDRESS CHART					
PARCEL NO.		STREET ADDRESS			
A-3		8851 GORMAN ROAD			
SUBDIVISION NAME		SECTION/AREA		PARCEL NUMBER	
FREESTATE		N/A		PARCEL A-3	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13266-13267	18	B-2	47	6TH	6069.02
WATER CODE		SEWER CODE			
C05		7220000 & 5090000			

BENCHMARKS

HO. CO. MON 47C
 N 532,036.8853
 E 1,362,819.0580

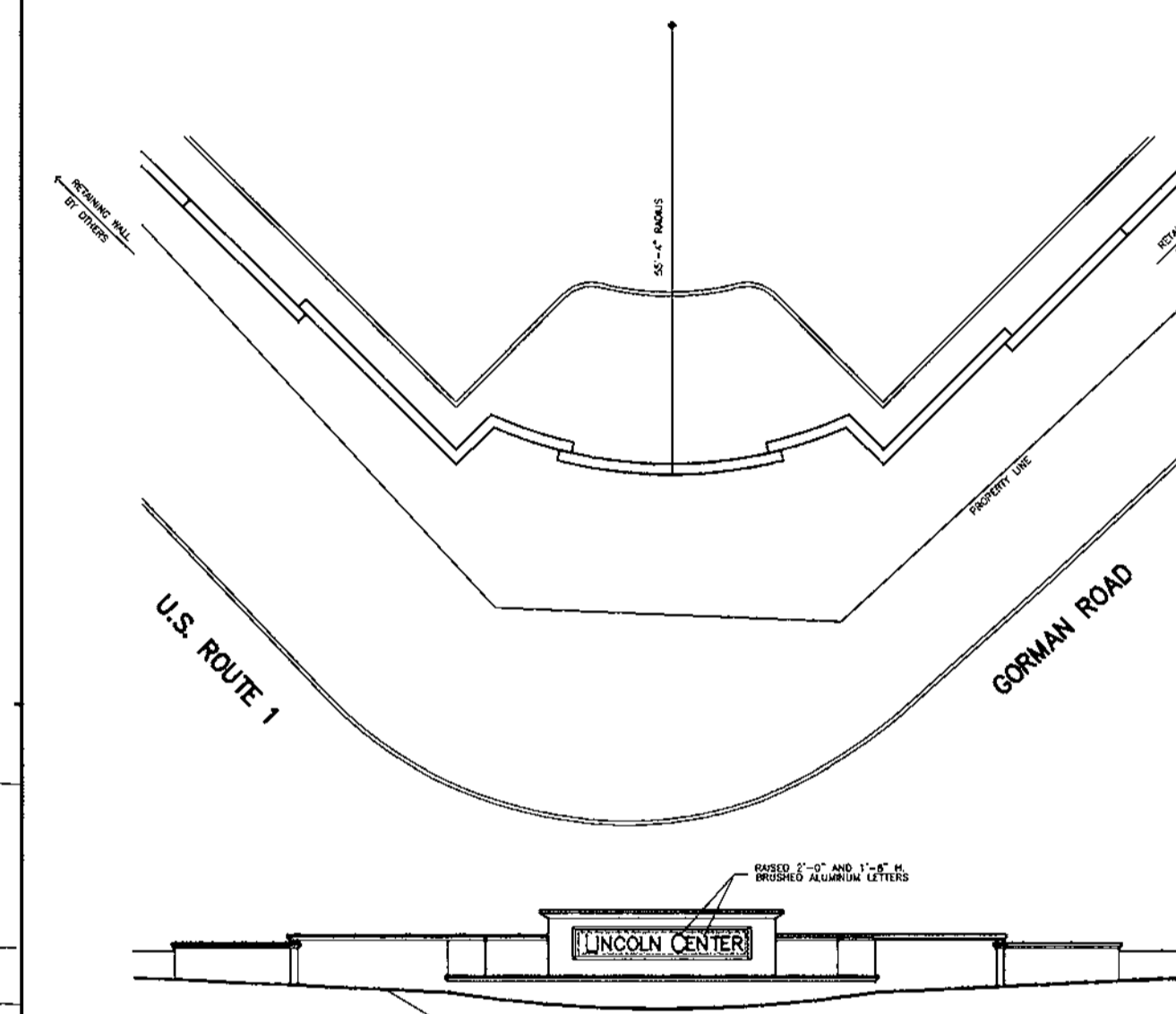
HO. CO. MON 47B
 N 529,701.5793
 E 1,361,469.7579



VICINITY MAP
 SCALE: 1" = 2000'

SHEET INDEX

- SHEET #1COVER SHEET
- SHEET #2SITE PLAN, SECTIONS AND DETAILS
- SHEET #3GRADING PLAN, SOILS MAP, DRAINAGE AREA MAP AND PROFILES
- SHEET #4SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS
- SHEET #5LANDSCAPE PLAN, NOTES & DETAILS
- SHEET #6RETAINING WALL, NOTES & DETAILS

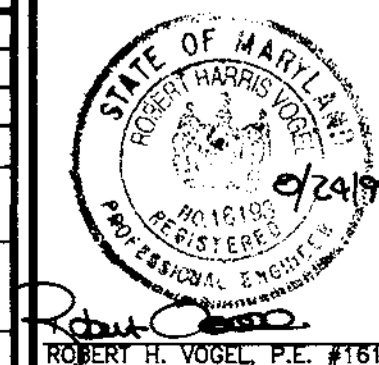


SCHEMATIC SIGN DETAIL
 NOT TO SCALE

SIGN DETAIL FOR INFORMATION PURPOSES ONLY-SIGN PERMIT REQUIRED

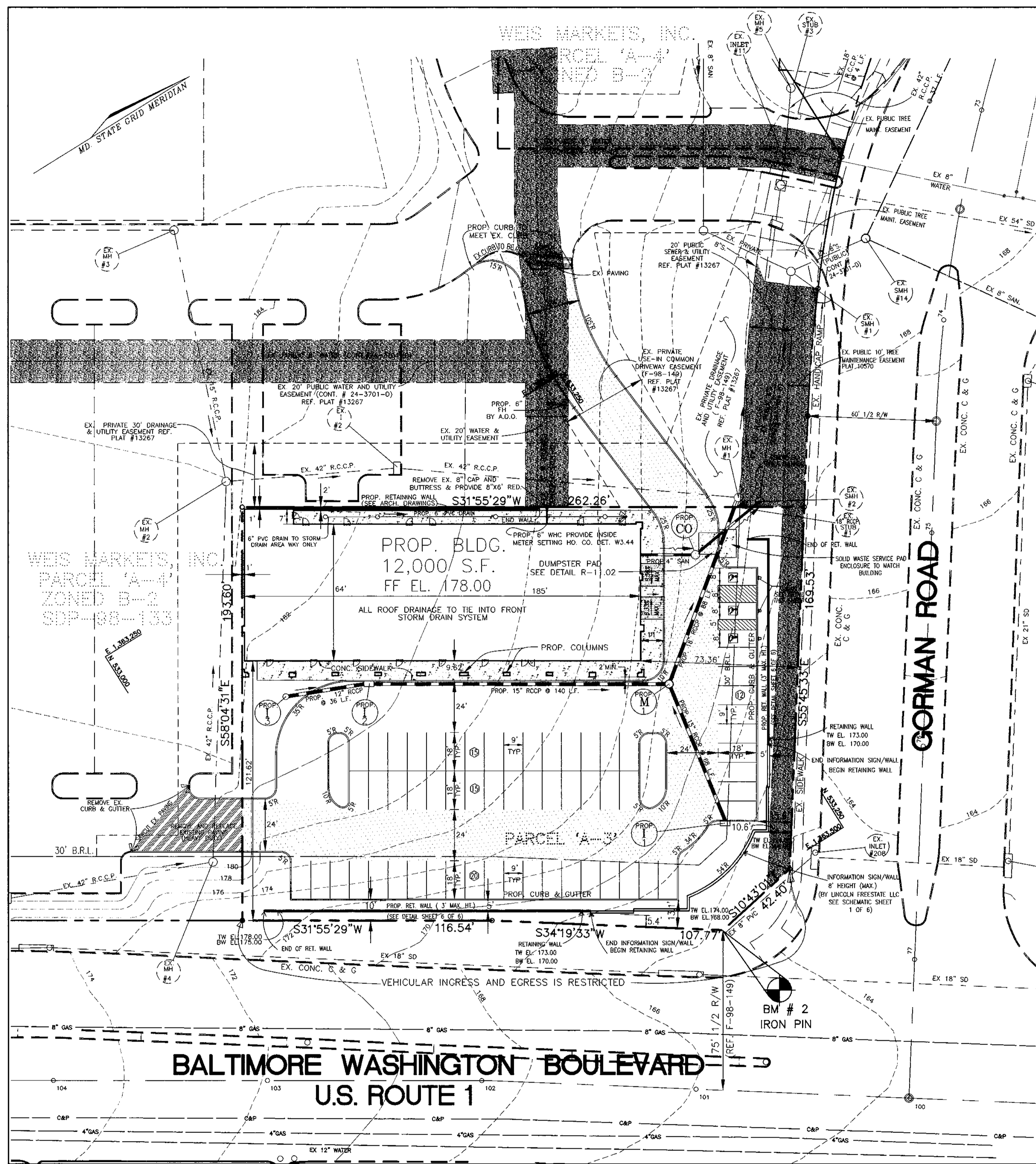
COVER SHEET FOR
PARCEL A-3
 FREESTATE

TAX MAP #47 BLOCK 18 F-98-149
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



DESIGN BY: R.H.V.
 DRAWN BY: J.E.R.
 CHECKED BY: R.H.V.
 DATE: AUGUST, 1999
 SCALE: AS SHOWN
 W.O. NO.: 98-119

1 SHEET OF 6



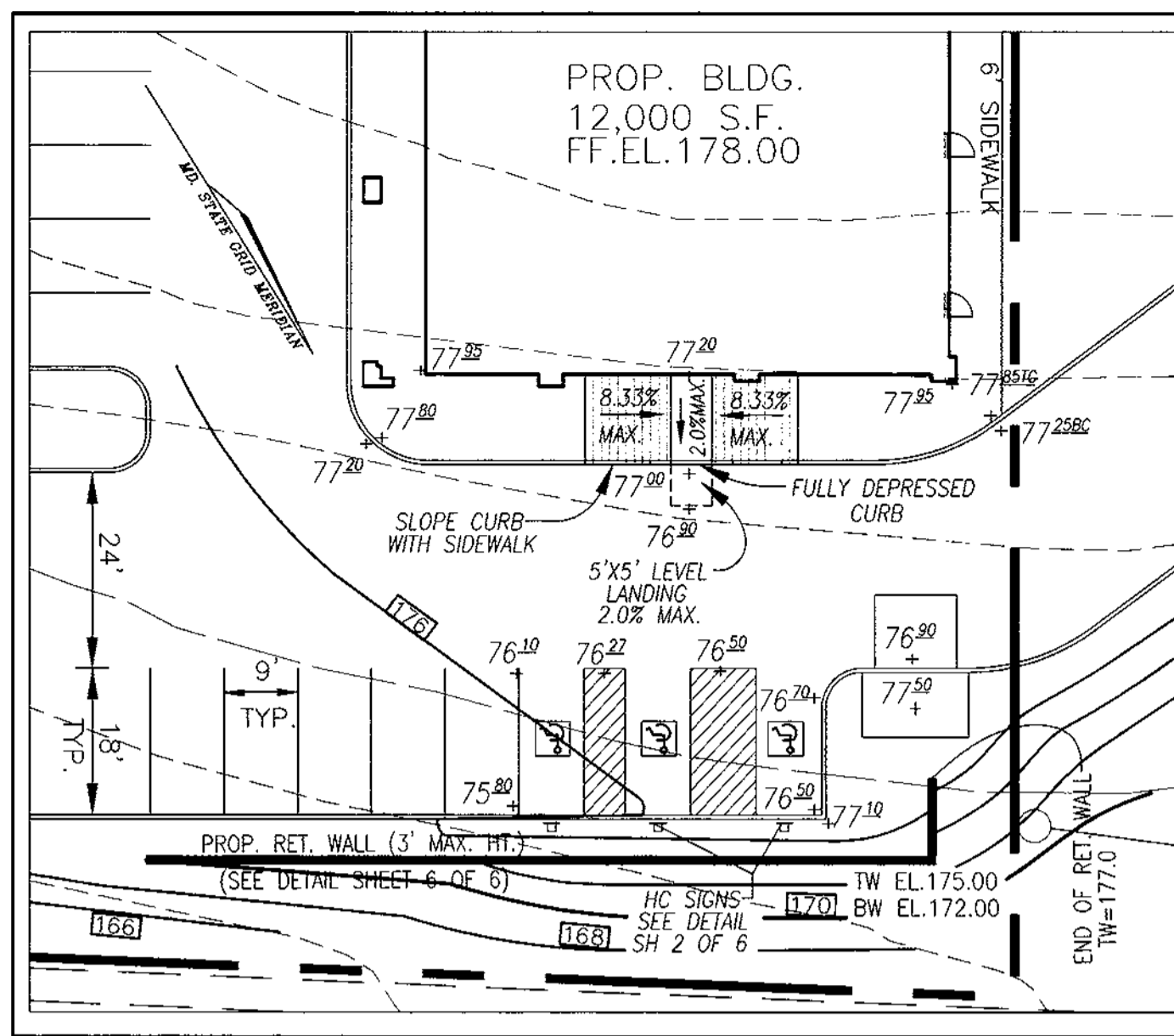
LEGEND

- EXISTING GROUND 178
- PROPOSED GRADE 172
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- EX. EASEMENT
- PROPERTY LINE
- PROPOSED C&G
- PROP. STORM DRAIN
- PROP. SEWER
- PROP. WATER MAIN
- PROP. HEAVY DUTY PAVEMENT
- PROP. 4" CONC. SIDEWALK
- PROP. LIGHT DUTY PAVEMENT

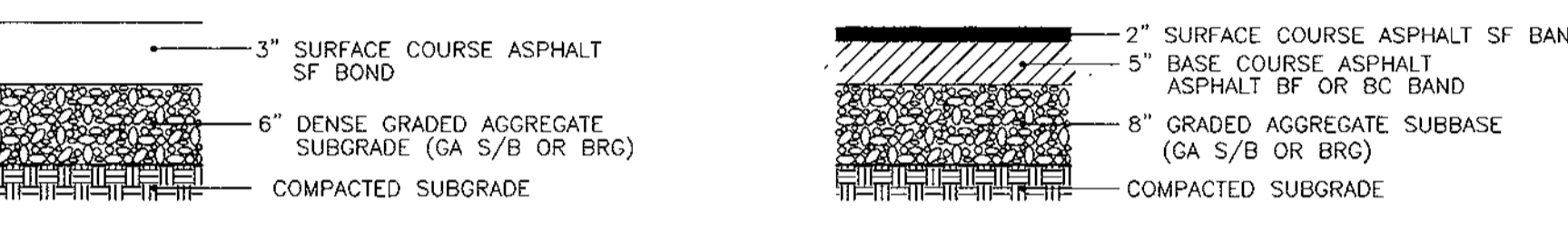
SITE PLAN
SCALE: 1" = 30'

VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel. 410.461.5828 Fax 410.465.3966

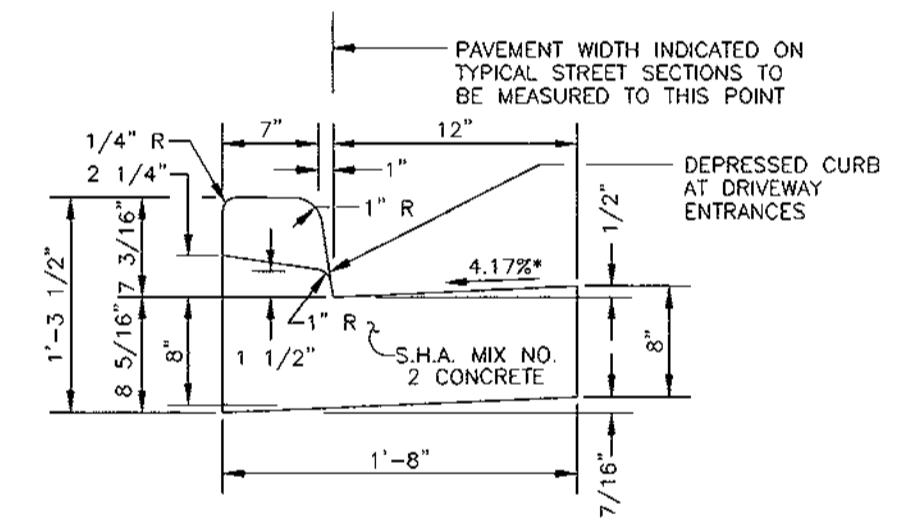
OWNER/DEVELOPER
Lincoln Freestate, LLC
c/o Lincoln Property Company
1530 Wilson Boulevard
Suite 200
Arlington, Virginia 22209
Tel. No. (703) 522-4600



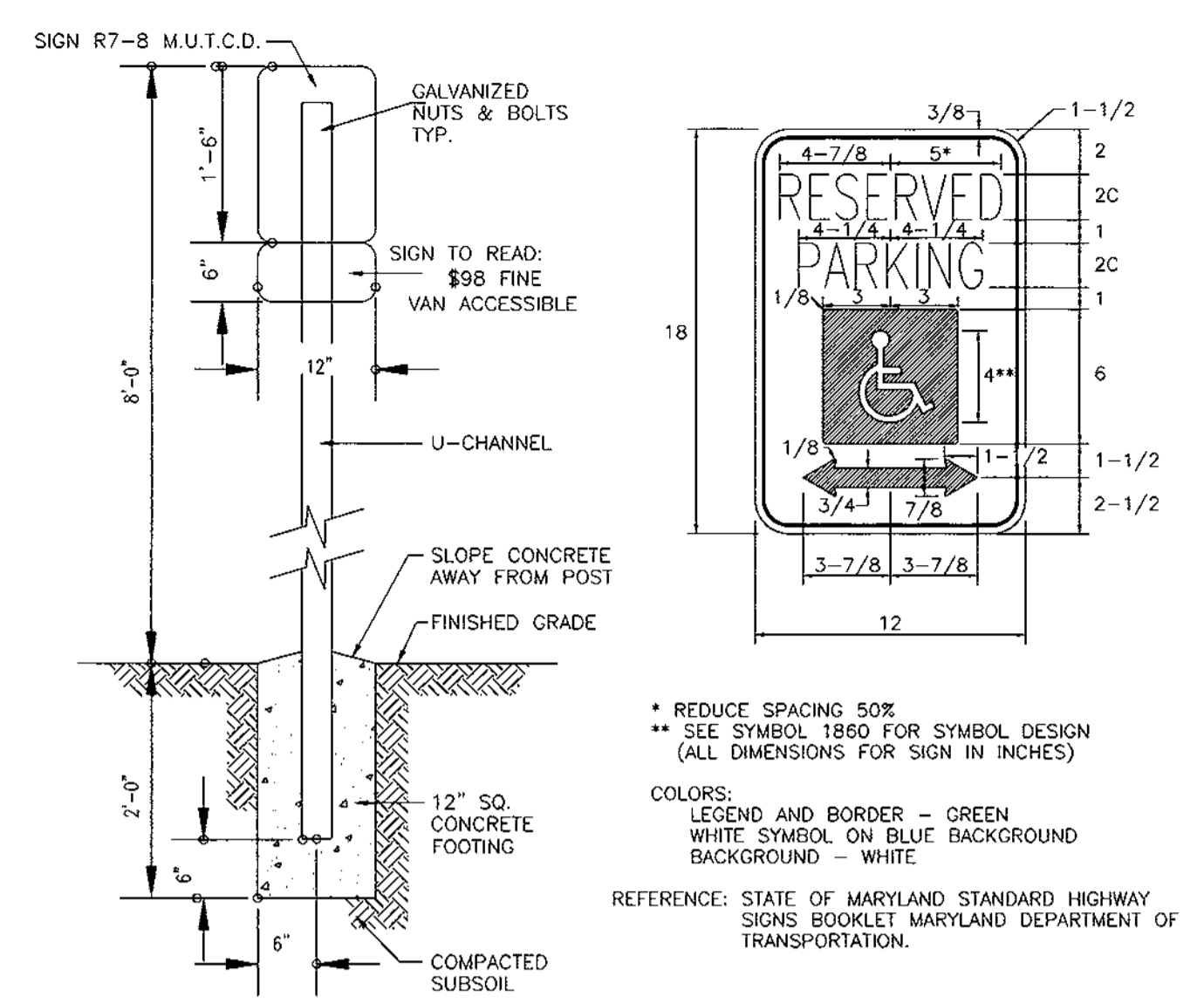
HANDICAP DETAIL
SCALE: 1" = 20'



TYPICAL PAVEMENT SECTION
NOT TO SCALE



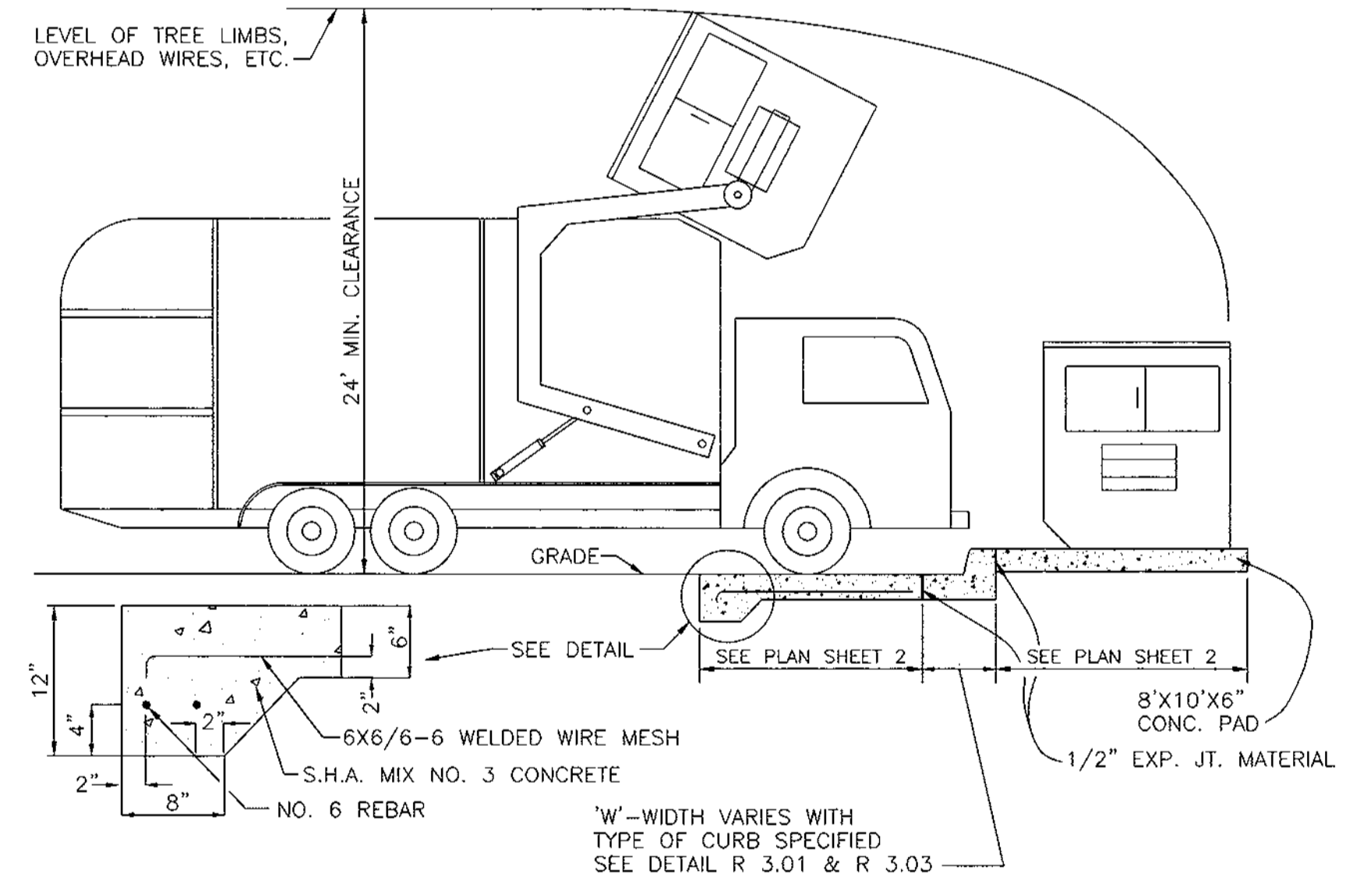
STANDARD COMBINATION CURB & GUTTER
HOWARD COUNTY STANDARD R-3.01
NOT TO SCALE



HANDICAP SIGN
NOT TO SCALE

- NOTE:**
- SIDEWALK TO HAVE MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF PROPOSED TRAFFIC.
 - CONSTRUCT IN ACCORDANCE WITH PROJECT SPECIFICATION.
 - SEE SITE PLAN FOR SIDEWALK LOCATION.
 - PROVIDE ACCESSIBLE RAMP IN ACCORDANCE WITH STANDARD RAMP DETAIL.
 - PLACE 6x6-W2.0 W/WF IN CENTER OF SLAB.
 - PLACE EXPANSION JOINT @ 20' MAX.
 - PLACE CONTROL JOINTS AT 4' TO 10' MAX. (SEE DETAIL R-3.01)
 - ALL OTHER SIDEWALKS SHALL BE CONSTRUCTED USING THE MATERIALS AND DEPTHS INDICATED ABOVE.

TYPICAL SIDEWALK DETAIL
NOT TO SCALE



SOLID WASTE SERVICE PAD
HOWARD COUNTY STD. R 11.01
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9/13/99
DIRECTOR DATE

[Signature] 9/10/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/12/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	REVISION	DATE

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
A-3	8851 GORMAN ROAD

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
FREESTATE	N/A	PARCEL A-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13266-13267	18	B-2	47	6TH	6069.02

WATER CODE C05 SEWER CODE 7220000 & 5090000

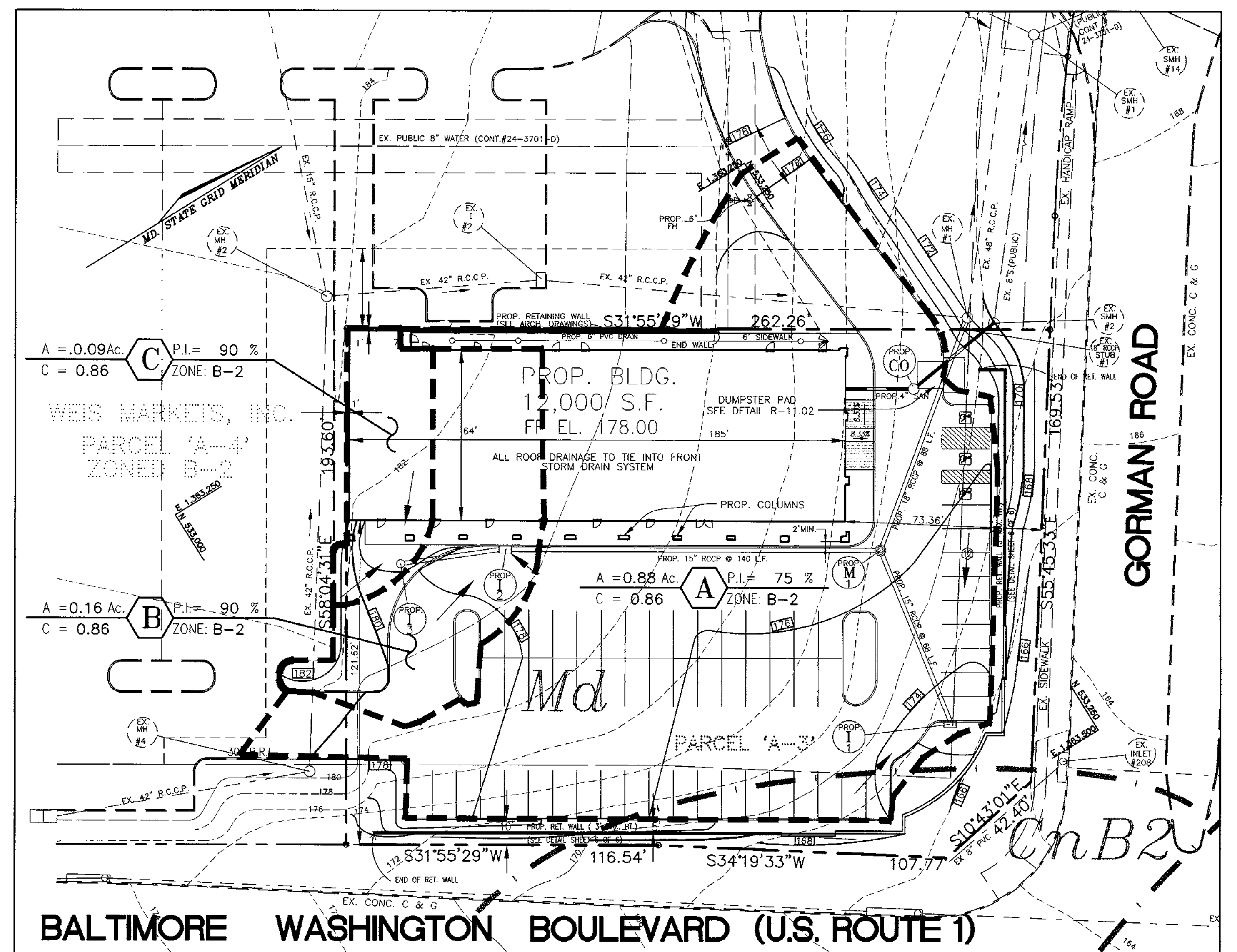
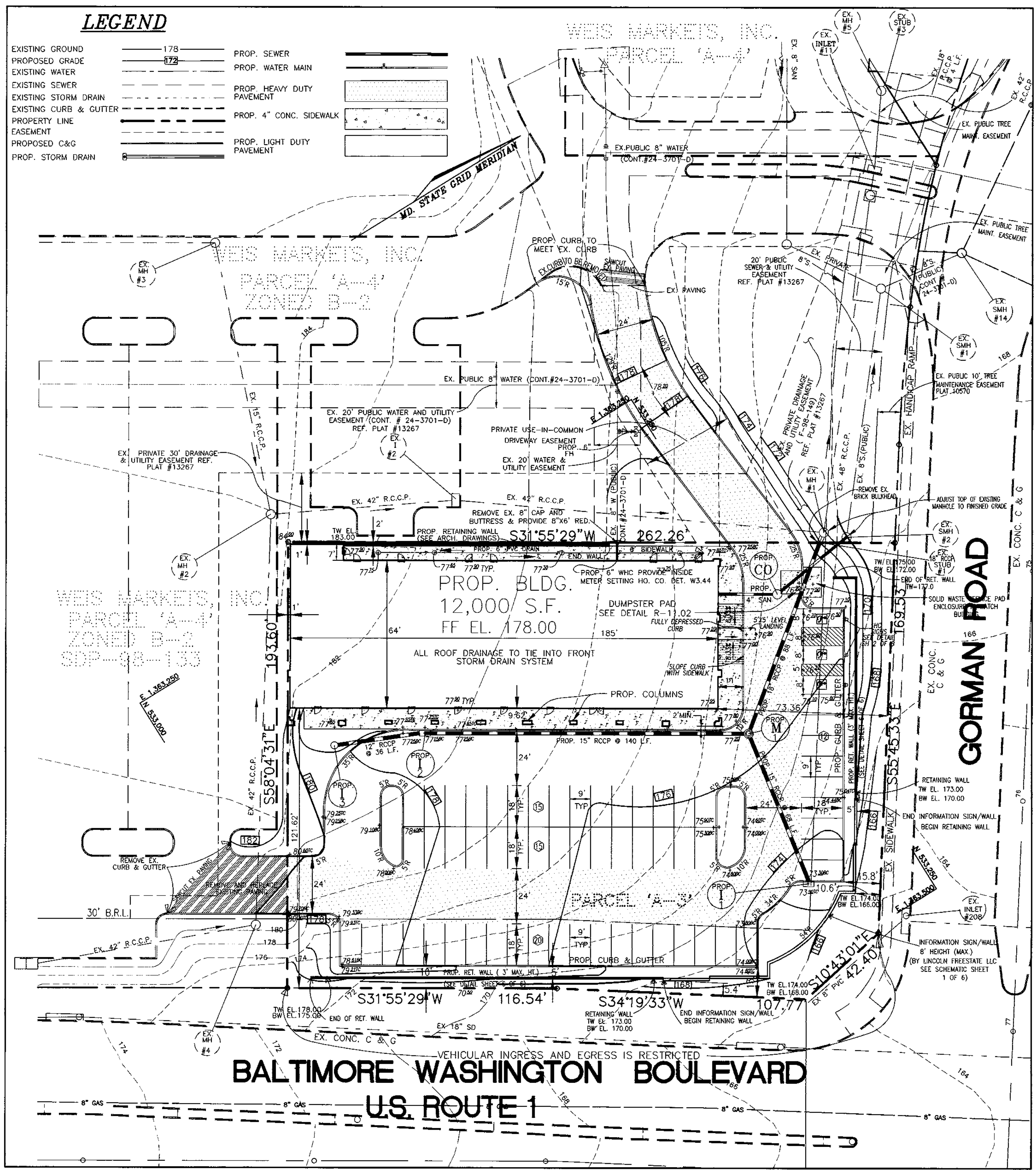
SITE PLAN, DETAILS & SECTIONS FOR
PARCEL A-3
FREESTATE

TAX MAP #47 BLOCK 18
6TH ELECTION DISTRICT

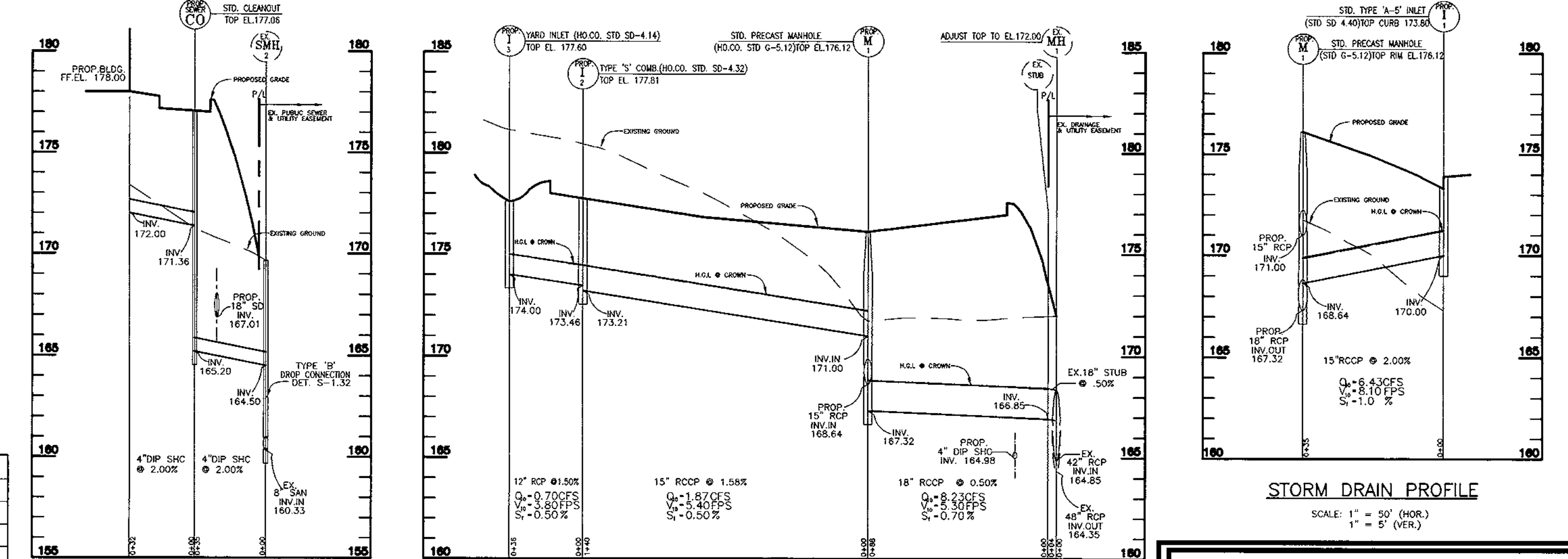
FILE NO. F-98-149
HOWARD COUNTY, MARYLAND

DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: AUGUST, 1999
SCALE: AS SHOWN
W.O. NO.: 98-119

2 SHEET OF 6



SOILS AND DRAINAGE AREA MAP
SCALE: 1" = 30'



GRADING PLAN
SCALE: 1" = 30'

SOILS CHART		
SYMBOL	NAME/DESCRIPTION	TYPE
M	MADE LAND	B
ChB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	C

HO. CO. SOIL SURVEY MAP NO. 34

STRUCTURE SCHEDULE					
NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
I-1	TYPE "A-S" INLET	-	-	173.80**	HO. CO. STD. SD 4.40
I-2	TYPE "S" COMB. INLET	-	-	177.75**	HO. CO. STD. SD 4.32
I-3	YARD INLET	-	-	177.60*	HO. CO. STD. SD 4.14
M-1	STD. PRECAST MANHOLE	171.00 (15" RCP)	167.32 (18" RCP)	176.12*	HO. CO. STD. G 5.12
MR-2	EX. STD. PRECAST MANHOLE	166.85 (18" RCP)	167.32 (18" RCP)	171.80* (X)	ADJUST TOP TO EX. GRADE

* TOP OF RIM/GRATE ** TOP OF CURB

OWNER/DEVELOPER
Lincoln Freestate, LLC
c/o Lincoln Property Company
1530 Wilson Boulevard
Suite 200
Arlington, Virginia 22209
Tel. No. (703) 522-4600

ENGINEERS CERTIFICATE
I HEREBY 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.

ROBERT H. VOGEL
SIGNATURE OF ENGINEER
08/23/99
DATE

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

ROBERT H. VOGEL
SIGNATURE OF DEVELOPER
August 25, 1999
DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
USDA-NATURAL RESOURCES CONSERVATION SERVICE
DATE 9/1/99

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SCD
DATE 9/1/99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DIRECTOR
DATE 9/13/99

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE 9/1/99

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE 9/1/99

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
A-3	8851 GORMAN ROAD

NO.	REVISION	DATE

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13266-13267	18	B-2	47	6TH	6069.02

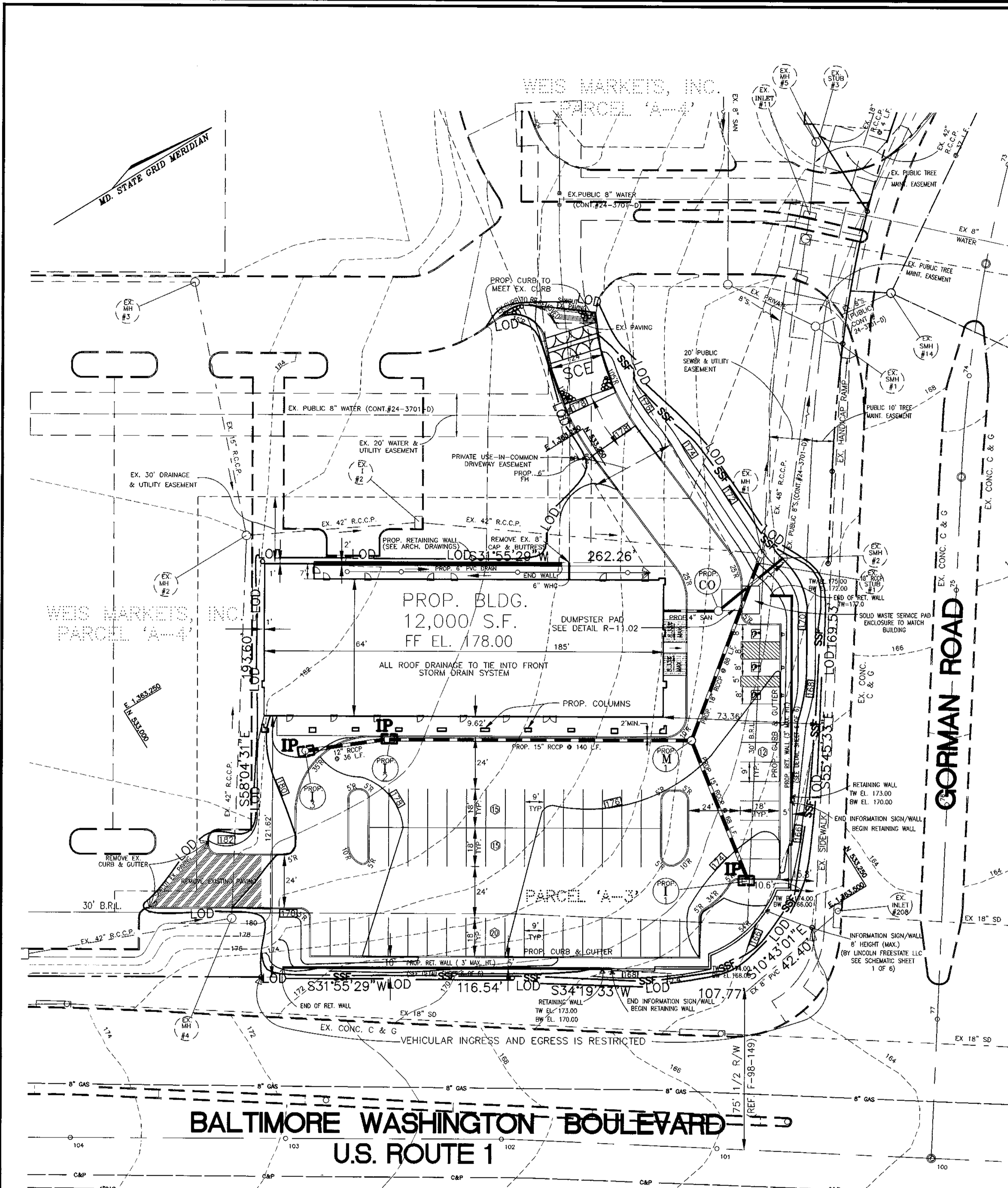
WATER CODE C05 SEWER CODE 7220000 & 5090000

GRADING PLAN, SOILS MAP, DRAINAGE AREA MAP AND PROFILES FOR PARCEL A-3 FREESTATE
TAX MAP #47 BLOCK 18 6TH ELECTION DISTRICT
FILE NO. F-98-149
HOWARD COUNTY, MARYLAND

DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: AUGUST, 1999
SCALE: AS SHOWN
W.O. NO.: 98-119

3 SHEET OF 6

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel. 410.461.5828 Fax 410.465.3566



21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE
To provide a suitable soil medium for vegetative growth. Soils of concern are low moisture content, low nutrient levels, low pH, material toxic to plants, and/or unacceptable soil gradation.

- CONDITION WHERE PRACTICE APPLIES**
- This practice is limited to areas having 2:1 or flatter slope where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the existing zone is not deep enough to support plants or furnish continuing supplies of moisture to plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- Topsoil salvaged from the existing site may be used provided it meets the following criteria in these specifications. Typically, the depth of topsoil to be salvaged or stored shall be based on the depth of the topsoil in the existing site as determined by soil sampling and laboratory analysis. Topsoil shall not be a mixture of topsoil and subsoil, and shall contain less than 1% by volume of cinders, stones, slag, coarse aggregate, or other materials larger than 1 1/2" in diameter.
- Topsoil shall be free of plants or plant parts such as stems, roots, and leaves. Topsoil shall be free of rocks, stones, and other materials larger than 1 1/2" in diameter.
- Topsoil shall be free of any material that is highly acidic or composed of heavy clays, ground limestones, or other materials that would impede the growth of plants. Topsoil shall be free of any material that is highly acidic or composed of heavy clays, ground limestones, or other materials that would impede the growth of plants.

TEMPORARY SEEDING

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, if not 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 November 15, seed with 2 1/2 bushel per acre of annual ryegrass (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 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 unrattled 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 8 feet or higher, use 348 gal. per acre (9 gal./1000 sq. ft.) for anchoring.

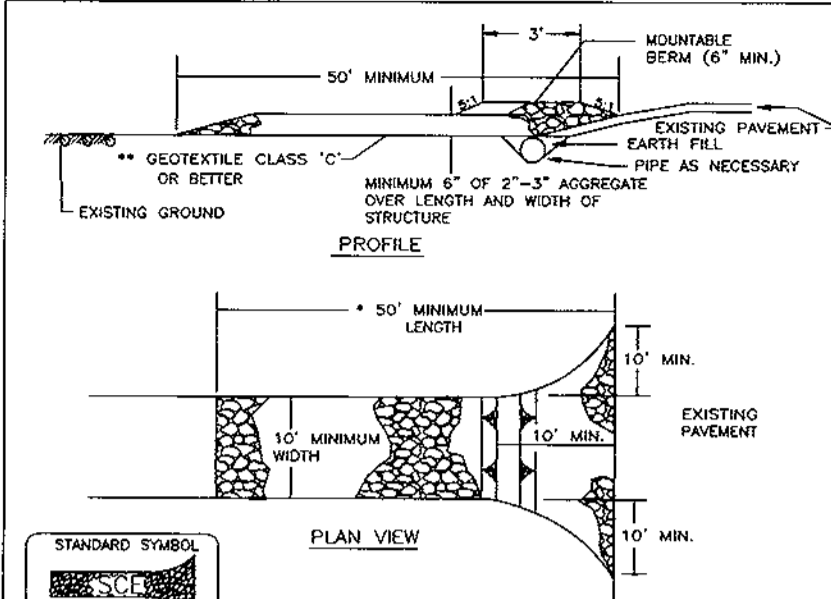
SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
- INSTALL PERIMETER SILT FENCE.
- BEGIN CLEARING AND GRADING OF SITE.
- CONSTRUCT STORM DRAIN SYSTEM AND INSTALL INLET PROTECTION DEVICES.
- INSTALL UTILITIES.
- INSTALL WALLS AND BRING SITE TO FINAL GRADE.
- CONSTRUCT BUILDING.
- FINE GRADE SITE AND INSTALL CURB AND OUTER AND PAVING.
- STABILIZE ALL AREAS DISTURBED AND INSTALL LANDSCAPING.
- DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.

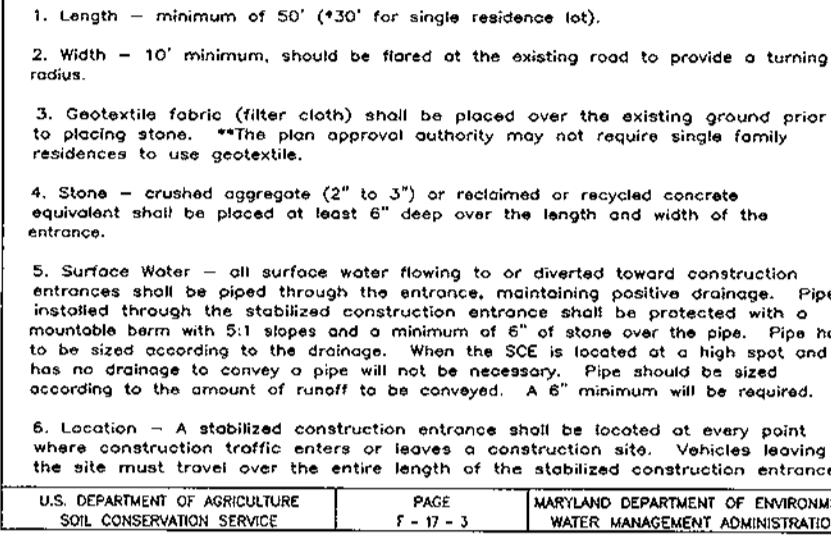
SEDIMENT CONTROL NOTES

- All Grading Permits shall be obtained prior to the starting of any grading work.
- 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 (992-2437).
- All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS AS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1; (b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, Storm Drainage, of the Howard County Design Manual.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50), and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow proper germination and establishment of grasses.
- 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.
- Site Analysis:
Area of easements on Parcel A-3 = 1.147 AC +/- acres
Area of easements on Parcel A-4 = 0.22 AC +/- acres
Total area of site, R/W and easements = 1.37 AC +/- acres
Area disturbed on Parcel A-3 = 0.23 AC +/- acres
Area disturbed on Parcel A-4 = 0.23 AC +/- acres
Total Area disturbed = 0.46 AC +/- acres
Area to be roofed or paved = 0.99 AC +/- acres
Area to be vegetatively stabilized = 0.37 AC +/- acres
Total cut = 1.825 +/- cu. yds.
Total fill = 1.829 +/- cu. yds.
Offsite waste/borrow area location = N/A
- Excess borrow to be obtained from a site with an approved sediment control plan and active grading permit.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 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.
- It is the contractor's responsibility to clean/restore the adjacent SWM facilities due to sediment emanating from construction activities on this site.

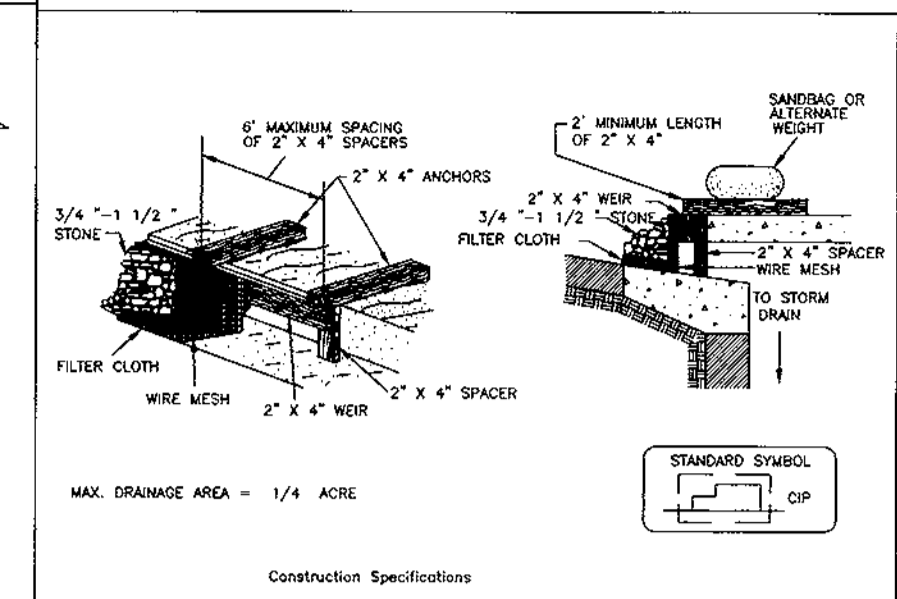
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)



DETAIL 33 - SUPER SILT FENCE



CONSTRUCTION SPECIFICATIONS

- Place a continuous piece of wire mesh (30" minimum width by throat length plus 4") in the 2" x 4" wire mesh (30" minimum width by throat length plus 2") as shown on the standard drawing.
- Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" wire.
- Securely nail the 2" x 4" wire to a 6" long vertical stake to be located between the wire and the inlet face (max. 4' apart).
- Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the wall of upper location). These 2" x 4" anchors shall extend across the inlet lip and be held in place by bedding or alternate weight.
- The assembly shall be placed so that the end spaces are a minimum 1" beyond both ends of the throat opening.
- Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass the inlet by installing a temporary curb or expandable curb to direct the flow to the inlet.

CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" 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 42" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and frays rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth abut each other, they shall be overlapped by 8" and folded.
- Maintenance shall be performed as needed and all bulges removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to fence posts with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
Tensile Strength: 50 lbs/in (min.)
Tear Modulus: 20 lbs/in (min.)
Punch Resistance: 0.3 gals/1000 sq. ft. (max.)
Filtering Efficiency: 75% (min.)

CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" 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 42" fabric and 6" length posts.
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- Filter cloth shall be fastened securely to fence posts with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
Tensile Strength: 50 lbs/in (min.)
Tear Modulus: 20 lbs/in (min.)
Punch Resistance: 0.3 gals/1000 sq. ft. (max.)
Filtering Efficiency: 75% (min.)

DESIGN CRITERIA

Slope	Slope Steepness	Slope Length (Minimum)	Silt Fence Length (Minimum)
0 - 10%	0 - 10:1	100 feet	1,500 feet
10 - 20%	10:1 - 5:1	200 feet	1,000 feet
20 - 30%	5:1 - 3:1	100 feet	500 feet
30 - 50%	3:1 - 2:1	100 feet	250 feet
50% +	2:1 +	100 feet	250 feet

PERMANENT SEEDING NOTES

Apply to graded or cleared areas 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, if not previously loosened.

Soil Amendments: Use one of the following schedules:

- Preferred—Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper 3 inches of soil. At time of seeding apply 400 lbs. per acre 30-0-0 ureaformal fertilizer (9 lbs./1000 sq. ft.).
- Acceptable—Apply 2 tons per acre dolomitic limestone (92 lbs./1000sq. 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 500 lbs. per acre (14 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of 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. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.

Mulching: Apply 1 1/2 to 2 tons per acre (70-90 lbs./1000 sq. ft.) of unrattled 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 8 feet or higher, use 348 gallons per acre (9 gal./1000 sq. ft.) for anchoring.

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

OWNER/DEVELOPER
Lincoln Freestate, LLC
c/o Lincoln Property Company
1530 Wilson Boulevard
Suite 200
Arlington, Virginia 22209
Tel. No. (703) 522-4600

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

SEDIMENT & EROSION CONTROL PLAN, NOTES AND DETAILS
FOR
PARCEL A-3
FREESTATE

TAX MAP #47 BLOCK 18
6TH ELECTION DISTRICT

FILE NO. F-98-149
HOWARD COUNTY, MARYLAND

DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: AUGUST, 1999
SCALE: AS SHOWN
W.O. NO.: 98-119

4 SHEET OF 6

SDP-99-73

LEGEND

EXISTING GROUND	---
PROPOSED GRADE	---
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
PROPERTY LINE EASEMENT	---
PROPOSED C&G	---
PROP. STORM DRAIN	---
PROP. SEWER	---
PROP. WATER MAIN	---

SEDIMENT CONTROL PLAN

SCALE: 1" = 30'

ENGINEERS CERTIFICATE
I HEREBY 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.

ROBERT H. VOGEL
SIGNATURE OF ENGINEER
DATE: 8/23/99

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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 INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

August 25, 1999
SIGNATURE OF DEVELOPER
DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Director: Cheryl Simmons 9/1/99
Chief, Division of Land Development: Cindy Stannard 9/1/99
Chief, Development Engineering Division: Mike Damman 9/1/99

ADDRESS CHART

NO.	REVISION	DATE

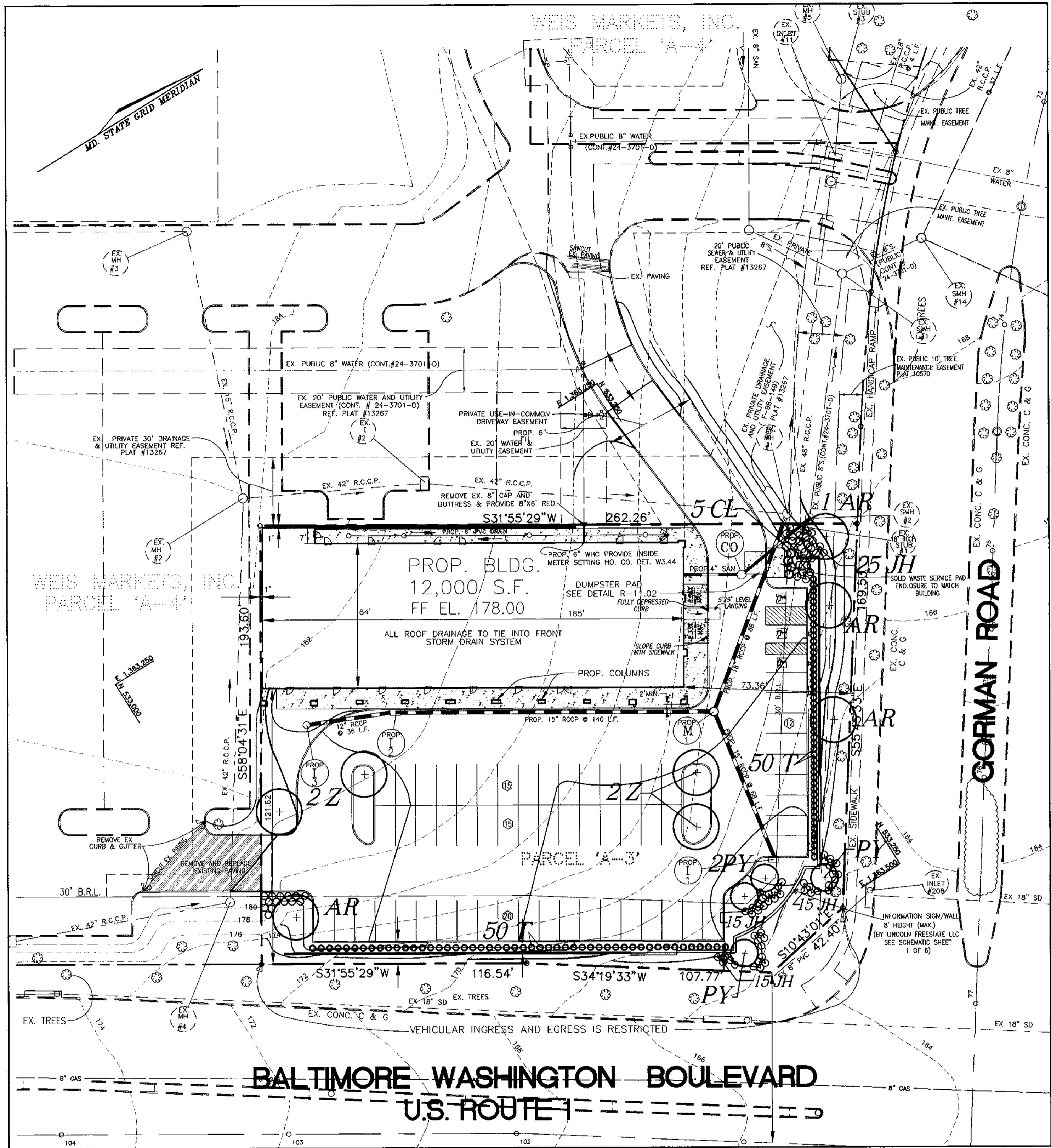
PARCEL NO., STREET ADDRESS
A-3 8851 GORMAN ROAD

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
FREESTATE	N/A	PARCEL A-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13266-16267	18	B-2	47	6TH	6069.02

WATER CODE	SEWER CODE
C05	7220000 & 5090000

STATE OF MARYLAND
NOTARY PUBLIC
ROBERT H. VOGEL, PE #16183



LANDSCAPING PLAN
SCALE: 1" = 30'

LEGEND

EXISTING GRAUND	178
PROPOSED GRADE	178
EXISTING WATER	178
EXISTING SEWER	178
EXISTING STORM DRAIN	178
EXISTING CURB & GUTTER	178
PROPERTY LINE EASEMENT	178
PROPOSED C&G	178
PROP. STORM DRAIN	178
PROP. SEWER	178
PROP. WATER MAIN	178

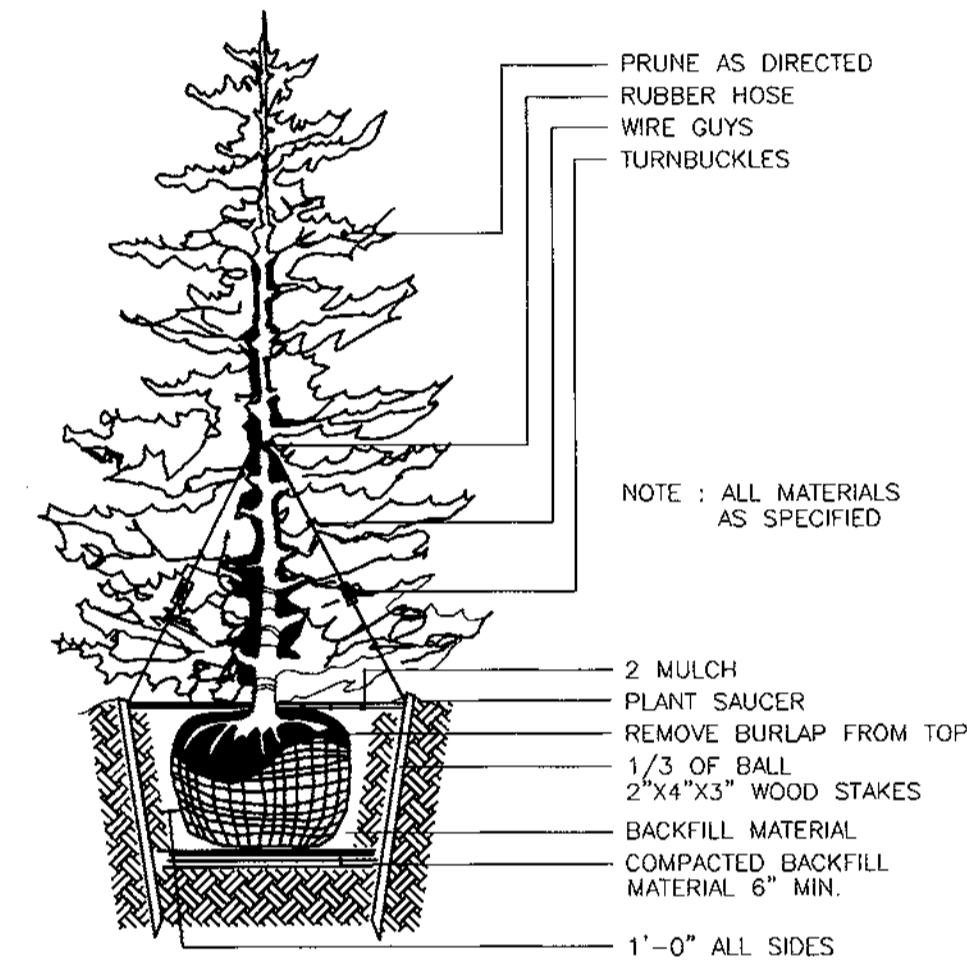
OWNER/DEVELOPER
Lincoln Freestate, LLC
c/o Lincoln Property Company
1530 Wilson Boulevard
Suite 200
Arlington, Virginia 22209
Tel. No. (703) 522-4600



3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3666

PLANTING NOTES

- PLANTS, RELATED MATERIALS, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
- ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BOYERS AND ALL FORMS OF INFESTATION OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HELED-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
- UNLESS OTHERWISE SPECIFIED, ALL PLANT MATERIAL SHALL CONFORM TO "AMERICAN STANDARD FOR NURSERY STOCK" ANSI Z60.1-1985, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INCLUDING ALL ADDENDA.
- UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREIN-AFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, SEPTEMBER, 1981, INCLUDING ALL ADDENDA.
- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANTING MATERIALS TO AVOID CONFLICTS WITH UTILITIES.
- PLANTING BED SHALL BE MULCHED WITH 3" OF SHREDDED HARDWOOD BARK MULCH. GROUNDCOVER BEDS SHALL BE MULCHED TO A DEPTH OF 2".
- ALL AREAS WITHIN THE CONTRACT LIMIT NOT COVERED BY BUILDING, PAVING, PLANTING BEDS OR OTHERWISE DESIGNATED ON THE PLANS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH "1983 MARLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PERMANENT SEEDING SPECIFICATIONS (SEE SHEET 6), INCLUDING ALL ADDENDA, AS DIRECTED BY THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIALS IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE.
PLANTING MIX SHALL BE DONE AS FOLLOWS:
DECIDUOUS PLANTS - TWO PARTS TOP SOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE, ADD 3 LBS. OF STANDARD 10-10-10 FERTILIZER PER CUBIC YARD OF PLANTING MIX.
EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL, ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX.
- TOPSOIL SHALL CONFORM TO LANDSCAPE GUIDELINES.
- THIS PLAN IS INTENDED FOR LANDSCAPE PLAN ONLY. SEE OTHER PLAN SHEETS FOR INFORMATION ON GRADING, SEDIMENT CONTROL, LAYOUT, ETC.
- CONTRACTOR TO ADJUST PLANTINGS AS REQUIRED WITH PRIOR APPROVAL OF THE ENGINEER OR LANDSCAPE ARCHITECT.



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

SCHEDULE A PERIMETER LANDSCAPE EDGE

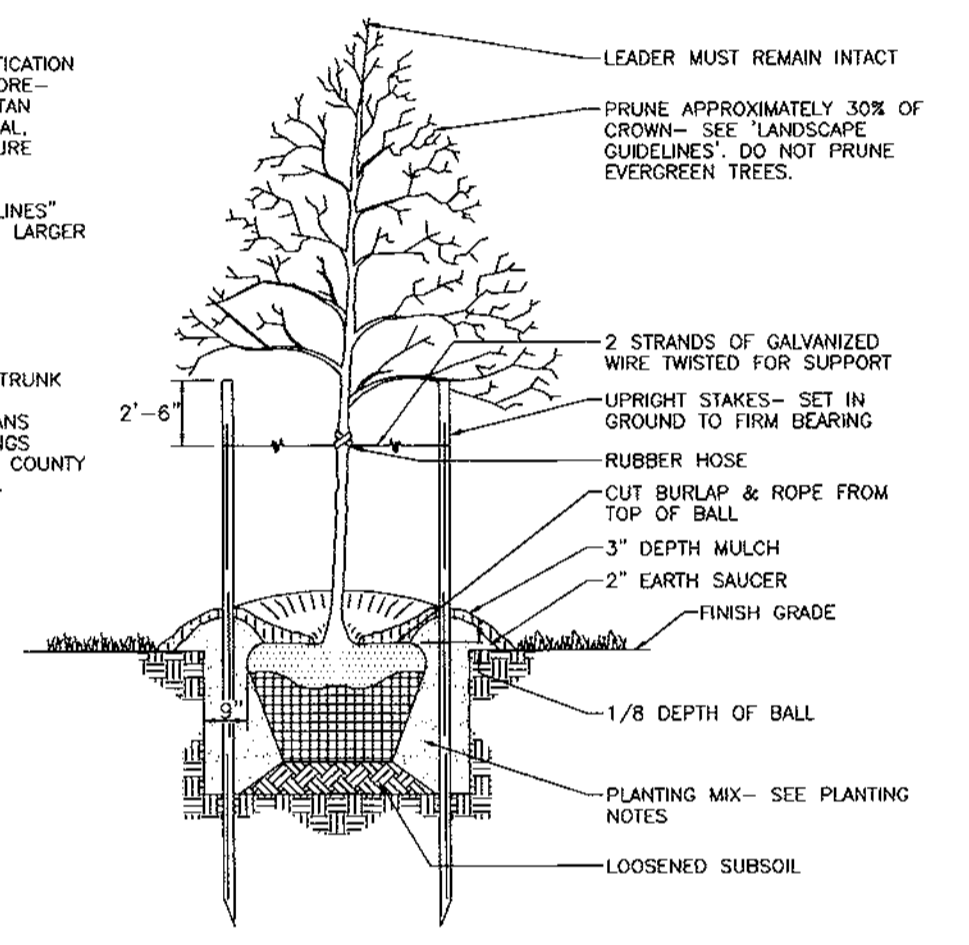
CATEGORY	ADJACENT TO GORMAN ROAD	ADJACENT TO ROUTE 1
LANDSCAPE TYPE	E	E
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	200	250
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED (BASED ON TOTAL PERIMETER)		
SHADE TREES (1:40)	5	7
EVERGREEN TREES	0	0
SHRUBS (1:4)	50	63
NUMBER OF PLANTS PROVIDED		
SHADE TREES (1:40)	3	1
EVERGREEN TREES	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	4
SHRUBS (10:1 SUBSTITUTION) (1:4)	75	109

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	63
NUMBER OF TREES REQUIRED	4
NUMBER OF TREES PROVIDED	
SHADE TREES	4
OTHER TREES (2:1 SUBSTITUTION)	0
SHRUBS (10:1 SUBSTITUTION)	0
NUMBER OF ISLANDS REQUIRED	4 (800 S.F.)
NUMBER OF ISLANDS PROVIDED	3 (1230 S.F.)

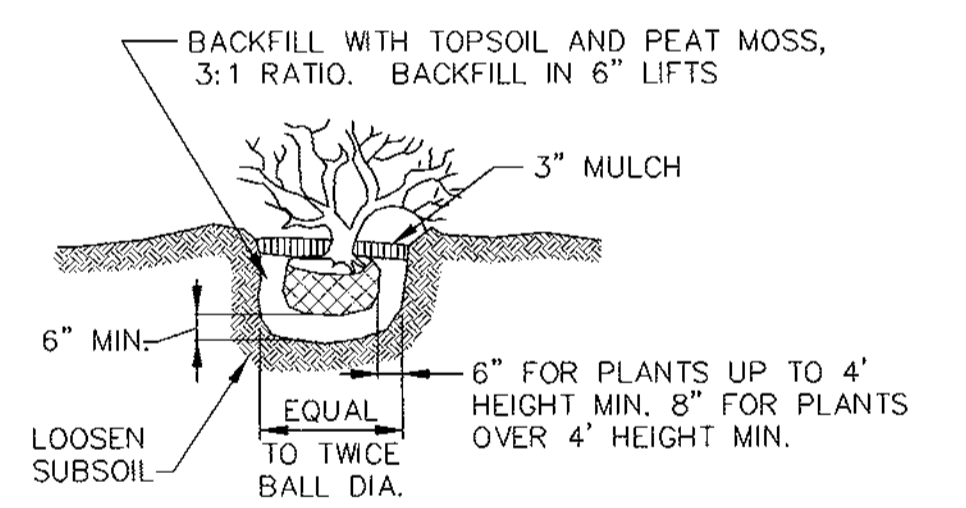
TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

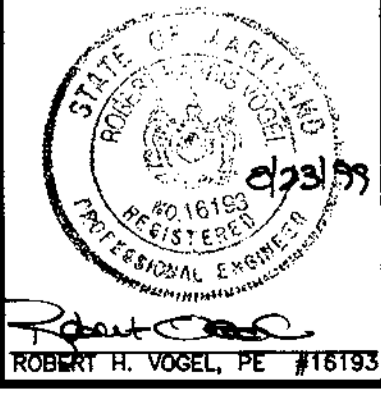


SHRUB PLANTING DETAIL

NOT TO SCALE



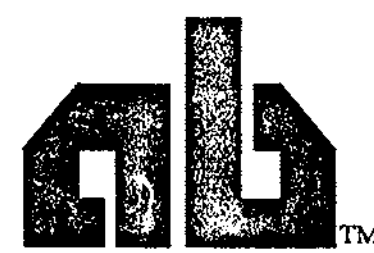
LANDSCAPING PLAN, NOTES AND DETAILS FOR PARCEL A-3 FREESTATE
TAX MAP #47 BLOCK 18 6TH ELECTION DISTRICT
FILE NO. F-98-149 HOWARD COUNTY, MARYLAND



DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: AUGUST, 1999
SCALE: 1" = 30'
W.O. NO.: 98-119

ALLAN BLOCK RETAINING WALL

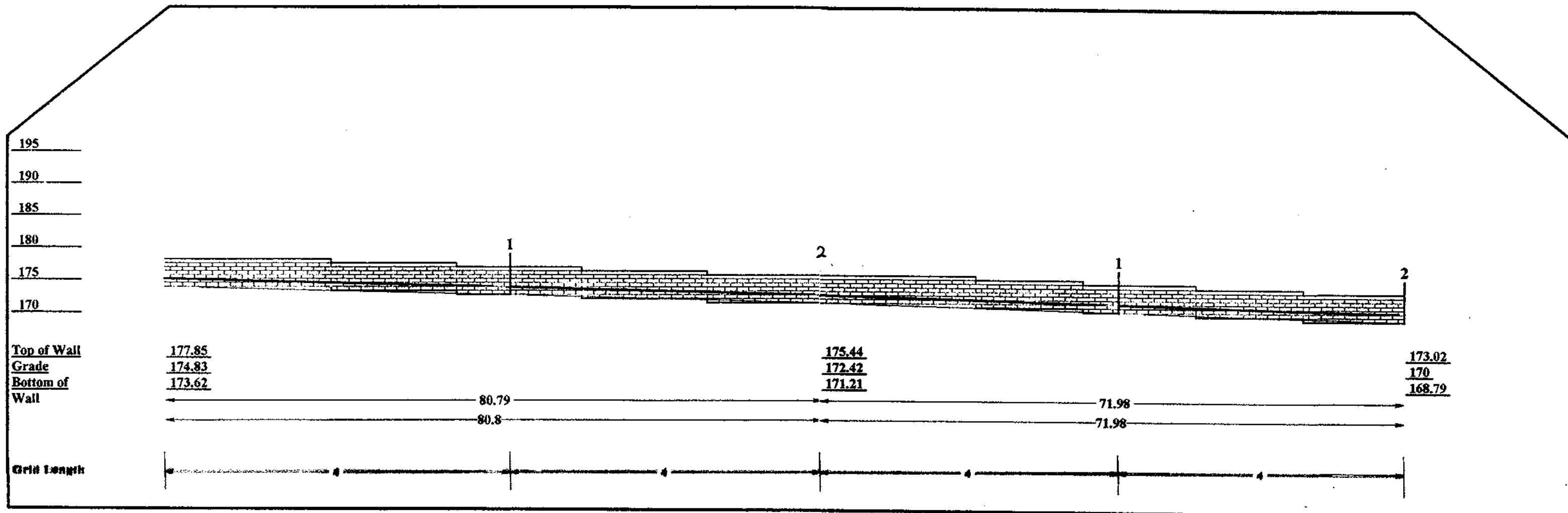
as manufactured by Nitterhouse Masonry Products, LLC (717)-267-4500



ALLAN BLOCK
7400 Metro Blvd.
Suite 185
Edina, MN 55439
Phone 612/835-5309
Fax 612/835-0013
http://www.allanblock.com

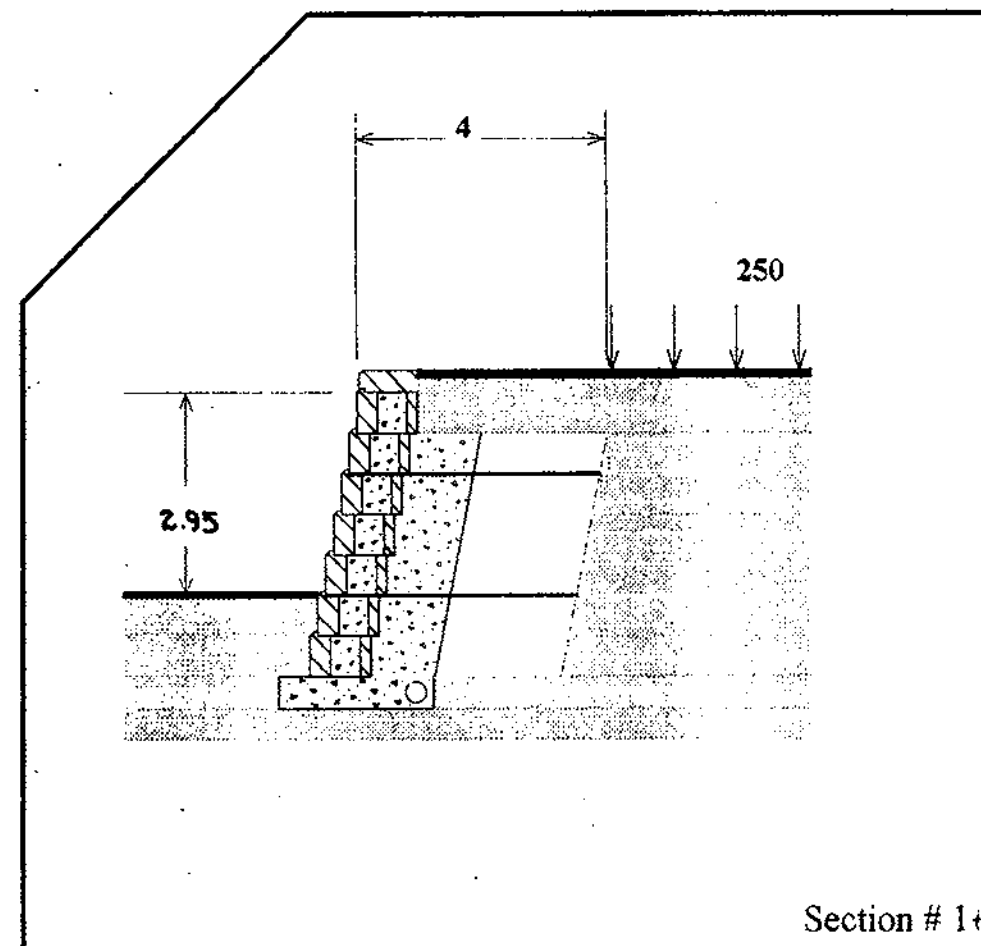
Project Name: FREESTATE PARCEL "A-3"
Location: Howard County, MD
Designer: DKS (2/13/99)
Number: Wall #1 0+00 to 0+81

ELEVATION VIEW



Project Name: FREESTATE PARCEL "A-3"
Location: Howard County, MD
Designer: DKS (2/13/99)
Number: Wall #1 0+81 to 1+53

ELEVATION VIEW



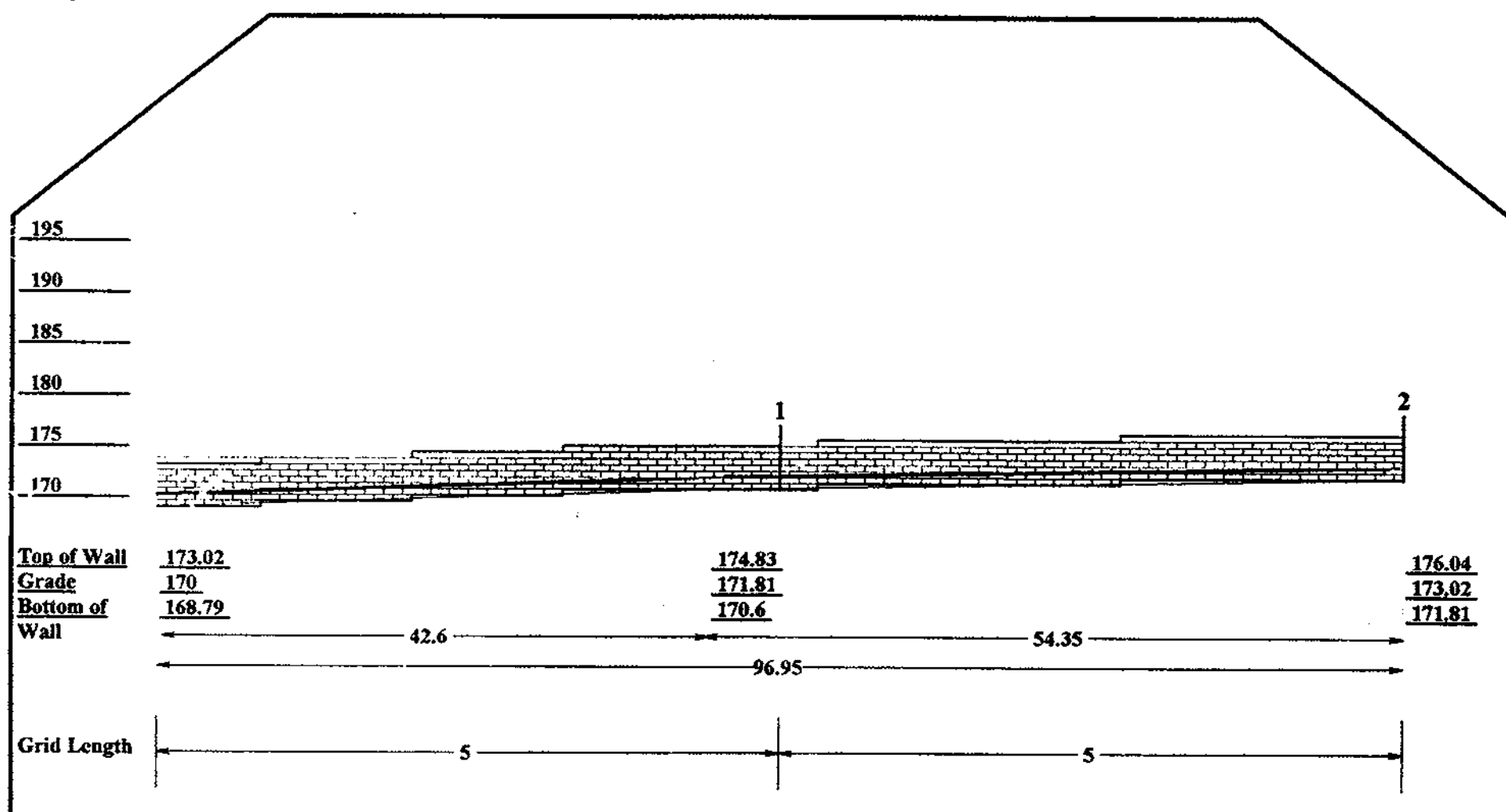
Project Name: FREESTATE PARCEL "A-3"
Location: Howard County, MD
Designer: DKS (2/13/99)
Number: Wall #1 ALL SECTIONS SAME



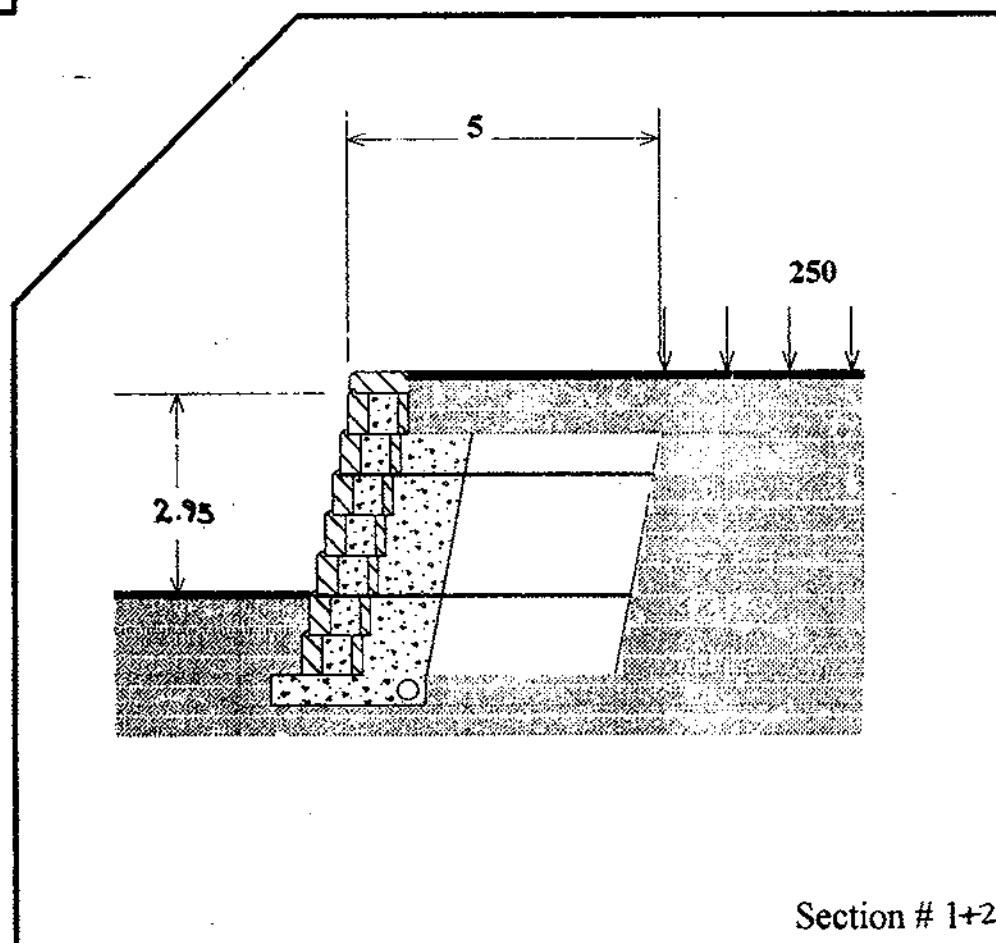
ALLAN BLOCK
7400 Metro Blvd.
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Edina, MN 55439
Phone 612/835-5309
Fax 612/835-0013
http://www.allanblock.com

Project Name: FREESTATE PARCEL "A-3"
Location: Howard County, MD
Designer: DKS (2/13/99)
Number: Wall #2

ELEVATION VIEW



Project Name: FREESTATE PARCEL "A-3"
Location: Howard County, MD
Designer: DKS (2/13/99)
Number: Wall #2



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Project Section # 1+2

AB Custom	Wall Height = 4.228 (ft.) Facia Height = 0.604 (ft.) Facia Depth = 0.97 (ft.) Facia Angle = 6 (deg.) Soil Bearing Capacity = 2500 (PSF)
Retained Soil	Friction Angle = 26 (deg.) Unit Weight = 125 (PCF)
Infill Soil	Friction Angle = 26 (deg.) Unit Weight = 125 (PCF)
Surcharge Details	Surcharge = 250 (PSF) Design Angle Above Wall = 0 (deg.)
Factors of Safety	Sliding = 1.83 Overturning = 4.99 Design Bearing Capacity = 647 (PSF)
Geogrid Info.	GeoGrid Type = FORTRAC 35/20-20 Number of Grid Layers = 2 Length of Grid Layers = 4 (ft.)

Specification Guidelines: Allan Block Modular Retaining Wall Systems

- SECTION 1**
- PART 1: GENERAL**
- 1.1 Scope: Work includes furnishing and installing modular concrete block retaining wall units to the lines and grades designated on the construction drawings and as specified herein.
 - 1.2 Applicable Sections of Related Work: Geogrid Wall Reinforcement [see section 2].
 - 1.3 Reference Standards: ASTM C1327/07 Standard Specifications for Segmental Retaining Wall Units.
 - 1.4 Delivery, Storage, and Handling:
 - Contractor shall check the materials upon delivery to ensure proper material has been received.
 - Contractor shall prevent excessive mud, wet cement, and like materials from coming in contact with the materials.
 - Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project.
- PART 2: MATERIALS**
- 2.1 Modular Wall Units:
 - Wall units shall be ALLAN BLOCK Retaining Wall units as produced by a licensed Manufacturer.
 - Wall units shall have minimum 28 day compressive strength of 3000 psi [20.7MPa] in accordance with ASTM C1327/07. The concrete units shall have adequate freeze-thaw protection with an average absorption rate of 7.5 lb/ft³ [120 kg/m³] for northern climates and 10 lb/ft³ [140 kg/m³] for southern climates.
 - Exterior dimensions shall be uniform and consistent. Maximum dimensional deviations shall be .125 inch, [3mm] not including finished face.
 - Wall units shall provide a minimum of 110 pounds total weight per square foot of wall face area [1.76 kg/m²]. Fill contained within the units may be considered 80% effective weight.
 - Exterior face shall be textured. Color as specified by owner.
 - 2.2 Wall Rock:
 - Base material shall be well graded compactible aggregate, 0.25 inch to 1.5 inch, [6.4mm - 38mm] with no more than 10% passing the #20 sieve.
 - Drainage material shall be the same as base material.
 - Backfill material shall be site excavated soils when approved by the engineer unless otherwise specified in the drawings. Unsuitable soils for backfill [heavy clays or organic soils] shall not be used in the reinforced soil mass.
 - Where additional fill is required, contractor shall submit sample and specifications to the Engineer for approval.
- PART 3: WALL CONSTRUCTION**
- 3.1 Excavation:
 - Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall use caution not to over-excavate beyond the lines shown, or to disturb the base elevations beyond those shown.
- SECTION 2**
- PART 1: GENERAL**
- 1.1 Scope: Work includes furnishing and installing geogrid reinforcement, wall fill, and backfill to the lines and grades designated on the construction drawings and as specified herein.
 - 1.2 Applicable Sections of Related Work: Section 1: ALLAN BLOCK Modular Retaining Wall Systems.
 - 1.3 Reference Standards: See specific geogrid manufacturer reference standards.
 - 1.4 Delivery, Storage, and Handling:
 - Contractor shall check the geogrid upon delivery to ensure that the proper material has been received.
 - Geogrid shall be stored above 20° F [2° C].
 - Contractor shall prevent excessive mud, wet cement, or other foreign materials from coming in contact with the geogrid material.
- PART 2: GRID MATERIALS**
- 2.1 Definitions:
 - Geogrid products shall be of high density polyethylene or polyester yarns encapsulated in a protective coating specifically fabricated for use as a soil reinforcement material.
 - Concrete retaining wall units are as detailed on the drawings and shall be ALLAN BLOCK Retaining Wall Units.
 - Drainage material is free draining granular material as defined in section: Modular Concrete Retaining Wall systems as "Drainage Material".
 - Backfill is the soil used as fill for the reinforced soil mass.
 - Foundation soil is the in-situ soil.
 - 2.2 Products:
 - Geogrid shall be the type as shown on the drawings having the property requirements as described within the manufacturer's specifications.
 - 2.3 Acceptable Manufacturers:
 - A manufacturer's product shall be approved by the engineer.
- PART 3: WALL CONSTRUCTION**
- 3.1 Foundation Soil Preparation:
 - Foundation soil shall be excavated to the lines and grades as shown on the construction drawings, or as directed by the Engineer.
 - Foundation soil shall be examined by the Engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength.
 - Over-excavated areas shall be filled with approved compacted backfill material.
 - Foundation soil shall be proof rolled prior to fill and geogrid placement.
 - 3.2 Wall Construction:
 - Wall construction shall be as specified under Section 1, Part 3, Wall Construction.
 - 3.3 Geogrid Installation:
 - Install ALLAN BLOCK wall to designated height of first geogrid layer, backfill and compact behind wall to depth equal to designed grid length.
- SECTION 3**
- PART 1: GENERAL**
- 1.1 Scope:
 - Foundation soil shall be excavated as dimensioned on the plans and compacted to a minimum 90% compaction prior to placement of the base material.
 - Foundation soil shall be examined by the Engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable material.
 - 1.2 Base:
 - Base material shall be placed as shown on construction drawing. Top of base shall be located to allow bottom wall units to be buried to proper depths as per wall height and specification.
 - Base material shall be installed on undisturbed native soil or suitable replacement fill compacted at 90% standard proctor.
 - Base shall be compacted at 90% standard proctor to provide a level hard surface on which to place the first course of blocks. The base shall be constructed to insure proper wall embedment and the final elevation shown on the plans. Well-graded sand can be used to smooth the top 1/2 inch [12.5mm] on the leveling pad.
 - Base material shall be a 3 inch [75mm] minimum depth for walls over 4 feet and a 1 inch [25mm] minimum depth for walls over 4 feet [11.2m].
 - 1.3 Unit Installation:
 - The first course of wall units shall be placed on the prepared base with the raised lip facing out and the front edges tight together. The units shall be checked for level and alignment as they are placed.
 - Units that are in full contact with base. Proper care shall be taken to develop straight lines and smooth curves on base course as per wall layout.
 - All cavities in and around the base row shall be filled with base materials and compacted. Backfill from end and back of entire base row to firmly lock in place. Check again for level and alignment. All excess material shall be swept from top of units.
 - Install next course of wall units on top of base row. Position blocks to be offset from seams of blocks below. Perfect "running bond" is not essential, but a 3 inch [75mm] minimum offset is recommended.
 - Check each block for proper alignment and level. Fill all cavities in and around wall units and to a 12 inch [305mm] depth behind block with drainage material. Spread backfill in uniform lifts not exceeding 8 inches [200mm]. Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Hand-operated plate compaction equipment shall be used on the block and within 3 feet [9m] of wall to achieve consolidation. Compact to 90% S.P. in backfill as detailed on construction plans.
 - Install each subsequent course in like manner. Repeat procedure to the extent of wall height.
 - Allowable construction tolerances at the wall face is 2 degrees vertically and 1 inch [25mm] in 10 feet [3m] horizontally.
- Specification Guidelines: Geogrid Reinforcement Systems**
- SECTION 2**
- PART 1: GENERAL**
- 1.1 Scope:
 - Cut geogrid to designed embedment length and place on top of ALLAN BLOCK to back edge of lip. Extend horizontally as compacted backfill placement.
 - Place next course of ALLAN BLOCK on top of grid and fill block cores with drainage fill to lock in place. Remove back in grid and slope to minimum tension.
 - Lay geogrid in the proper elevation and orientation shown on the construction drawings or as directed by the Engineer.
 - Correct orientation (length direction) of the geogrid shall be verified by the contractor.
 - Follow manufacturer's guidelines for overlap requirements.
 - 1.2 Backfill Placement and Backfill Placement:
 - Backfill material shall be placed in lifts and compacted as specified under Section 1, Part 3.4, Unit Installation.
 - Backfill shall be placed, spread and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid.
 - Only hand-operated compaction equipment shall be allowed within 3 feet [9m] of the wall face.
 - Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 6 inches [150mm] is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles should be kept to a minimum to prevent stress from digging the fill and damaging the geogrid.
 - Subsided equipment may pass over the geogrid reinforcement at slow speeds, less than 10 MPH [16 km/h]. Sudden braking and sharp turning shall be avoided.
 - The backfill shall be compacted to achieve 90% standard proctor. Soil test of the backfill material shall be submitted to the Engineer for review and approval prior to the placement of any backfill. The contractor is fully responsible for achieving the specified compaction requirements. The Engineer may direct the contractor to remove, correct or amend any soil found not in compliance with these specifications.
- SPECIAL CONSIDERATIONS**
- Geogrid can be interrupted by periodic penetration of a column, pier or footing structure.
 - ALLAN BLOCK walls will occur vertical and horizontal reinforcing with rebar and grout.
 - If site conditions will not allow geogrid embedment length, consider the following alternatives:
 - Masonry Reinforced Walls + Soil Nailing
 - Earth Anchors + Rock Bolt + Increased Wall Batter
 - ALLAN BLOCK can be used in a wide variety of water applications.
- Consult the Allan Block Technical Service Department for details. Specifications subject to change without notice.
- TECHNICAL SUPPORT**
For engineering and technical assistance on projects that fall beyond the scope of these guidelines, contact the ALLAN BLOCK CORPORATION at 1-800/899-5309.



OWNER/DEVELOPER
Lincoln Freestate, LLC
c/o Lincoln Property Company
1530 Wilson Boulevard
Suite 200
Arlington, Virginia 22209
Tel. No. (703) 522-4600

VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS
3591 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

James D. Scatter 9/13/99
DIRECTOR DATE

Cindy Hamlett 9/10/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul D. Dammus 9/12/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER DATE

ADDRESS CHART
PARCEL NO. STREET ADDRESS
A-3 8851 GORMAN ROAD

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
FREESTATE	N/A	PARCEL A-3

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13286-67	18	B-2	47	6TH	606902

WATER CODE COS SEWER CODE 7220000 & 5090000

NO.	REVISION	DATE

RETAINING WALL DETAILS FOR PARCEL A-3 FREESTATE

TAX MAP #47 BLOCK 18 FILE NO. F-98-149
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN BY: _____
DRAWN BY: _____
CHECKED BY: _____
DATE: _____
SCALE: _____
W.O. NO.: 98-119

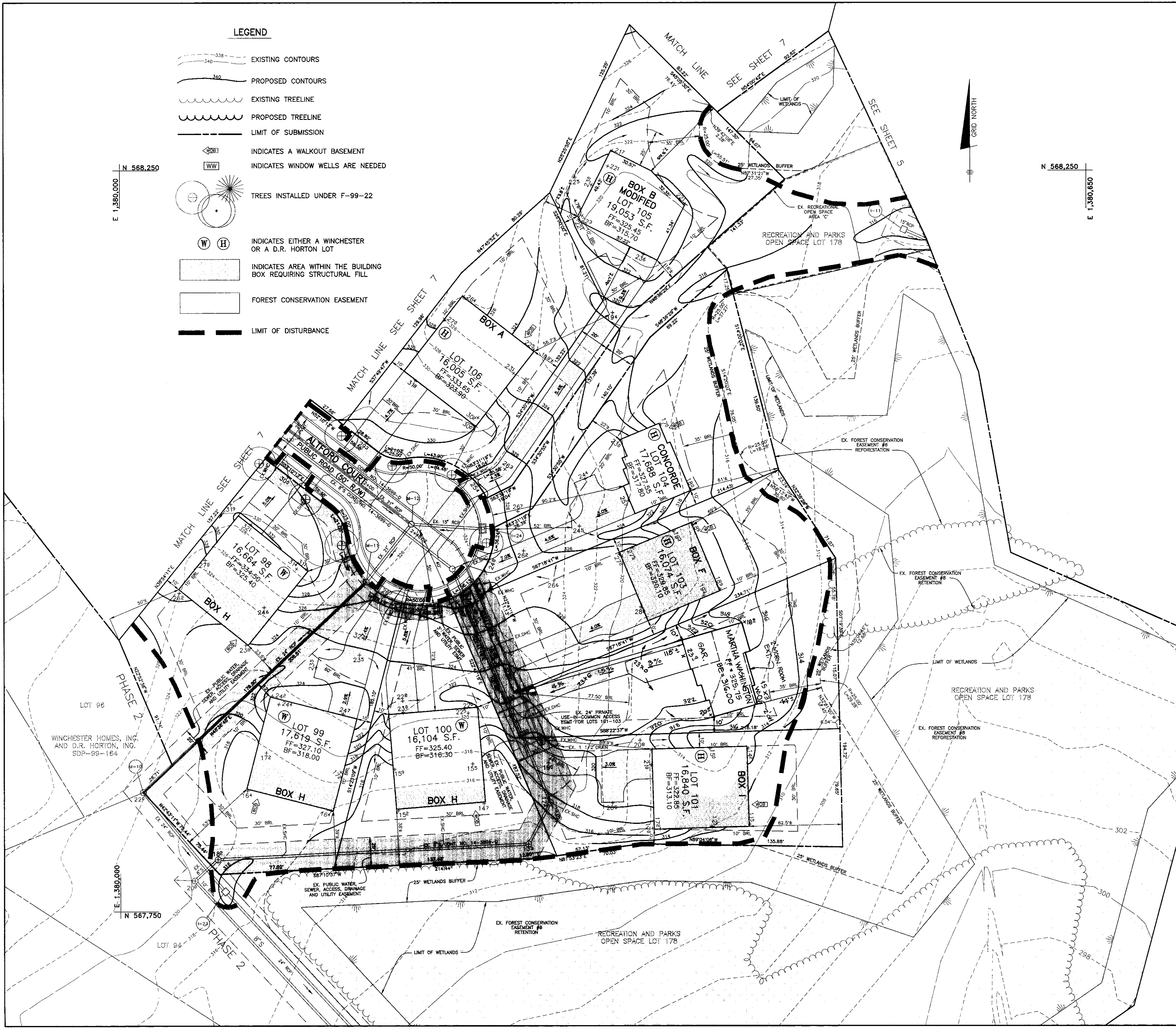
6 SHEET OF 6

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- LIMIT OF SUBMISSION
- INDICATES A WALKOUT BASEMENT
- INDICATES WINDOW WELLS ARE NEEDED
- TREES INSTALLED UNDER F-99-22
- INDICATES EITHER A WINCHESTER OR A D.R. HORTON LOT
- INDICATES AREA WITHIN THE BUILDING BOX REQUIRING STRUCTURAL FILL
- FOREST CONSERVATION EASEMENT
- LIMIT OF DISTURBANCE

N 568,250
E 1,380,000

N 568,250
E 1,380,650



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

William J. ... 10/19/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamatta 10/19/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John S. ... 10/19/99
DIRECTOR DATE

NO.	DATE	REVISION
1	8-3-00	RESITE LOT 102 WITH A MARTHA WASHINGTON

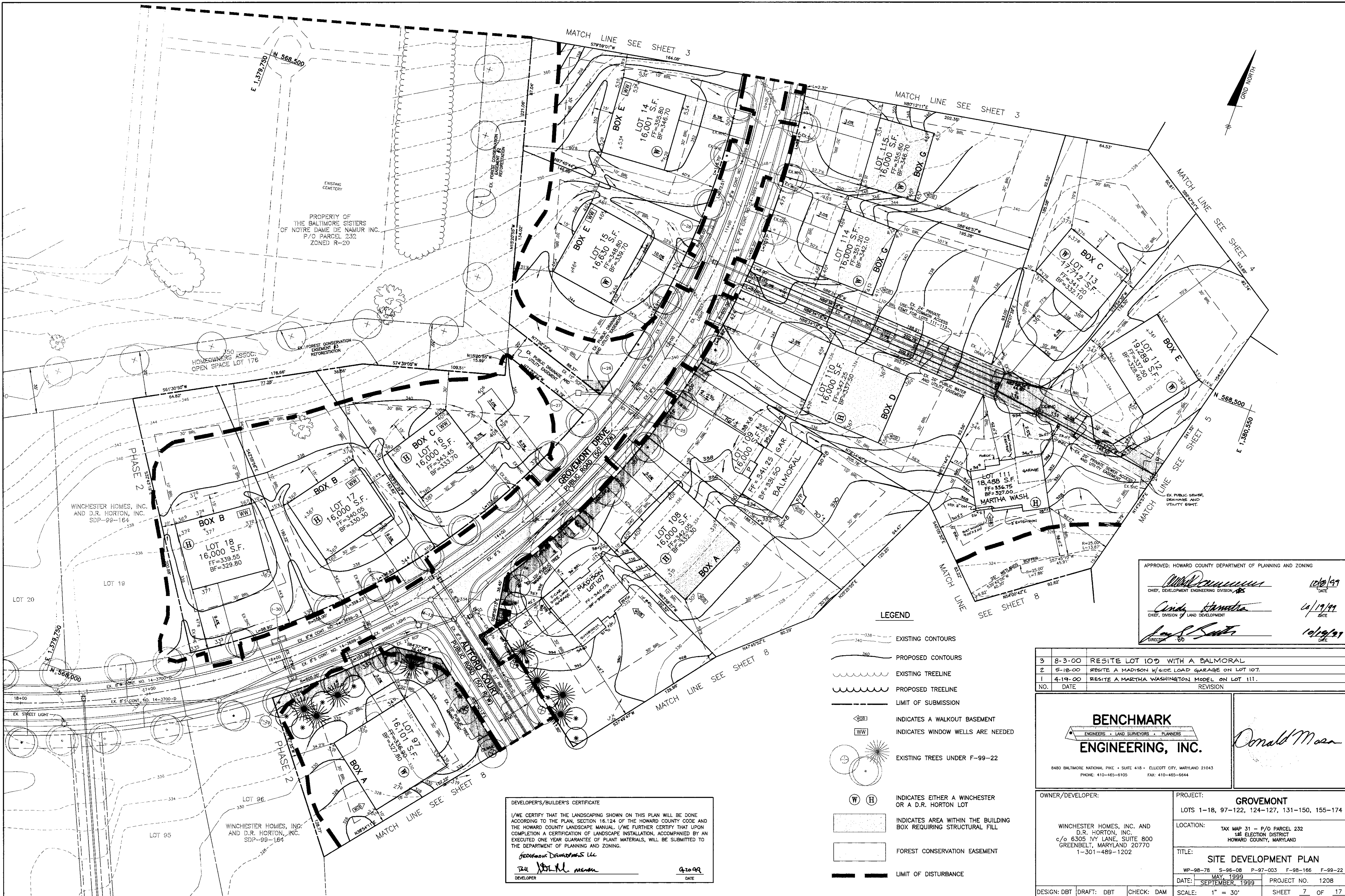
BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-485-6105 FAX: 410-485-6844

Donald Moan

OWNER/DEVELOPER: WINCHESTER HOMES, INC. AND D.R. HORTON, INC. c/o 6305 IVY LANE, SUITE 800 GREENBELT, MARYLAND 20770 1-301-489-1202	PROJECT: GROVEMONT LOTS 1-18, 97-122, 124-127, 131-150, 155-174
	LOCATION: TAX MAP 31 - P/O PARCEL 232 14 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: SITE DEVELOPMENT PLAN	WP-98-78 S-96-08 P-97-003 F-98-166 F-99-22
DATE: MAY 1999 SEPTEMBER 1999	PROJECT NO. 1208
DESIGN: DBT DRAFT: DBT CHECK: DAM	SCALE: 1" = 30' SHEET 8 OF 17



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/19/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10/19/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/19/99
 DIRECTOR

- LEGEND**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING TREELINE
 - PROPOSED TREELINE
 - LIMIT OF SUBMISSION
 - INDICATES A WALKOUT BASEMENT
 - INDICATES WINDOW WELLS ARE NEEDED
 - EXISTING TREES UNDER F-99-22
 - INDICATES EITHER A WINCHESTER OR A D.R. HORTON LOT
 - INDICATES AREA WITHIN THE BUILDING BOX REQUIRING STRUCTURAL FILL
 - FOREST CONSERVATION EASEMENT
 - LIMIT OF DISTURBANCE

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 LANDSCAPE 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.

[Signature]
 DEVELOPER

9/20/99
 DATE

NO.	DATE	REVISION
3	8-3-00	RESITE LOT 109 WITH A BALMORAL
2	5-18-00	RESITE A MADISON W/SIDE LOAD GARAGE ON LOT 107.
1	4-19-00	RESITE A MARTHA WASHINGTON MODEL ON LOT 111.

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

[Signature]

OWNER/DEVELOPER: WINCHESTER HOMES, INC. AND D.R. HORTON, INC. c/o 6305 IVY LANE, SUITE 800 GREENBELT, MARYLAND 20770 1-301-489-1202	PROJECT: GROVEMONT LOTS 1-18, 97-122, 124-127, 131-150, 155-174
DESIGN: DBT DRAFT: DBT CHECK: DAM	LOCATION: TAX MAP 31 - P/O PARCEL 232 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: MAY 1999	TITLE: SITE DEVELOPMENT PLAN
PROJECT NO. 1208	WP-98-78 S-96-08 P-97-003 F-98-166 F-99-22
SHEET 7 OF 17	DATE: SEPTEMBER, 1999
SCALE: 1" = 30'	