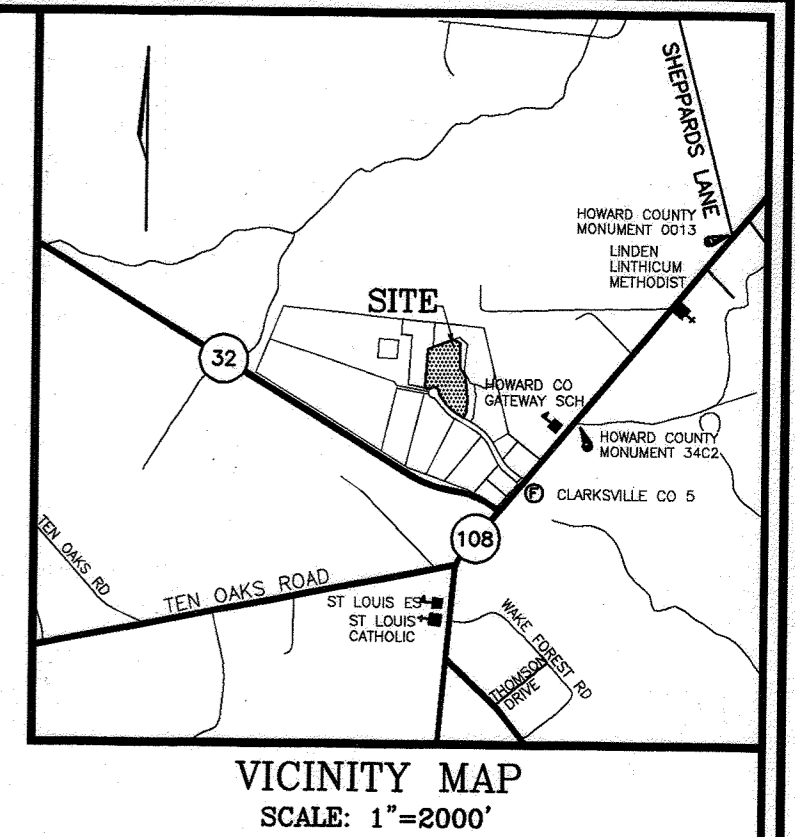


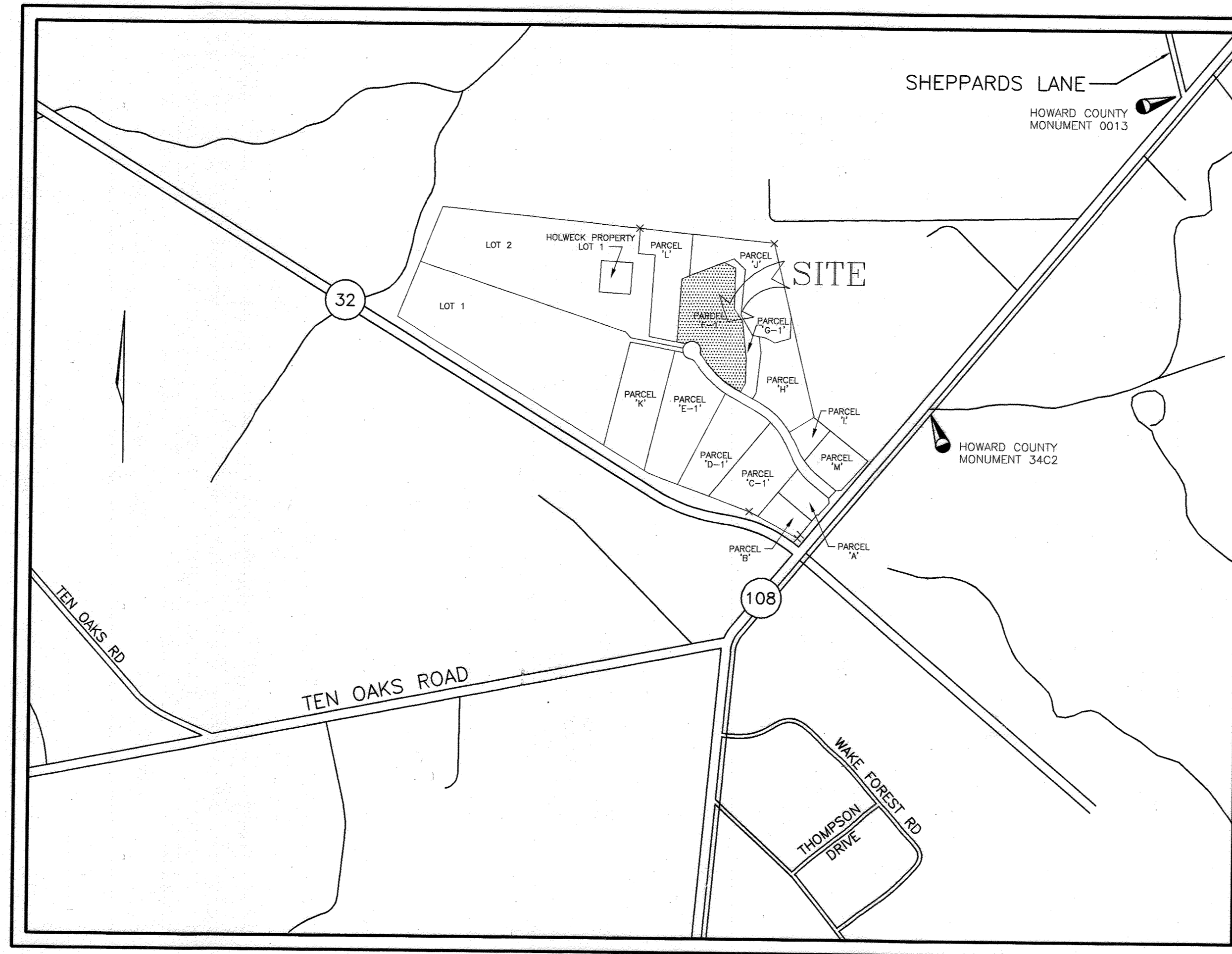
COLEMAN HONDA CAR DEALERSHIP SITE DEVELOPMENT PLANS HOWARD COUNTY, MARYLAND



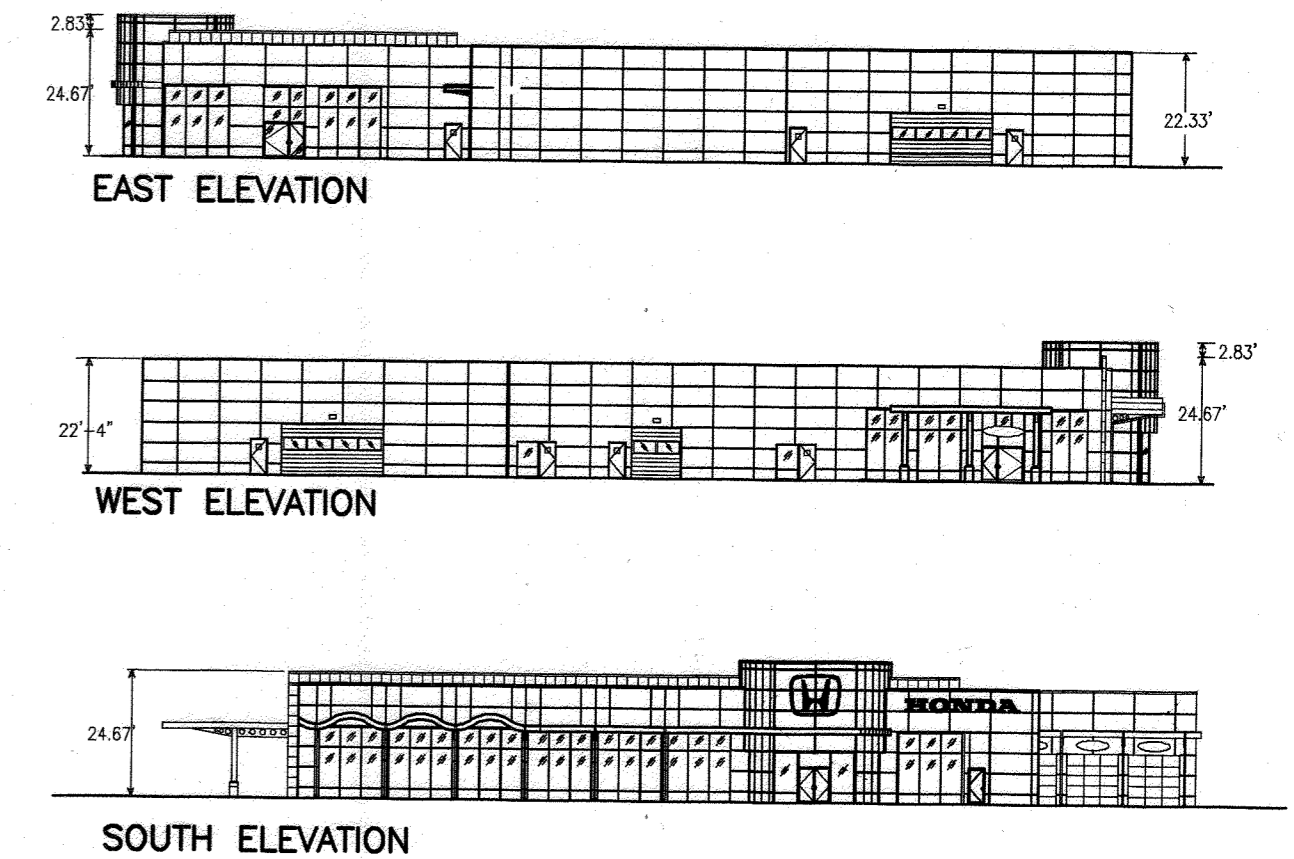
GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
3. 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
4. SITE ANALYSIS:
 - AREA OF PARCEL= 5.89 AC.
 - PRESENT ZONING: B-2
 - USE OF STRUCTURE:
 - AUTOMOBILE SALES : 20,743 SQ.FT (INCLUDING MEZZANINE)
 - AUTOMOBILE SERVICE : 10,861 SQ.FT (23 SERVICE BAYS)
 - BUILDING COVERAGE ON SITE: 0.7 AC OR 11% OF GROSS AREA
 - PAVED PARKING LOT/AREA ON SITE: 3.64 AC OR 62% OF GROSS AREA
 - AREA OF LANDSCAPE ISLAND: 0.25 AC= 10,765 SQ.FT.
5. PROJECT BACKGROUND:
 - LOCATION: CLARKSVILLE, MARYLAND TAX MAP: 34 PARCEL 'F-1' HOLWECK SUBD.
 - ZONING: B-2
 - SECTION/AREA: N/A
 - SITE AREA: 5.89 AC.
 - DPZ REFERENCES: F-98-144 APPROVED 12/15/98
 - F-94-38(#1179) APPROVED 1/13/94, F-95-75(#11584) APPROVED (1/23/95)
 - WP-93-90 APPROVED 7/16/93
6. 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.
7. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
8. 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.
9. ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3,500 P.S.I.
10. 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.
11. ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
12. 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.
13. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN VOLUME I OF HOWARD COUNTY DESIGN MANUAL.
14. STORMWATER MANAGEMENT PROVIDED UNDER F-94-38.
15. COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENTS 0013 AND 34C2 (NAD 83)
16. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
17. EXISTING TOPOGRAPHY IS FROM A TOPOGRAPHIC SURVEY PERFORMED BY MARKS AND VOGEL ASSOCIATES, INC. IN DEC 1997.
18. WATER FOR THIS PROJECT IS PUBLIC AND WILL BE CONNECTED TO EX. 8" WATER CONT. # 44-3323-D AND PROPOSED 8" WATER MAIN CONT. # 44-3759-D.
19. SEWER FOR THIS PROJECT IS PUBLIC AND WILL BE CONNECTED TO EX. SAN. FORCE MAIN CONT. # 30-3687-D.
20. ALL PAVING TO BE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER (SEE DETAILS ON SHEET 3).
21. ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE OR BITUMINOUS (SEE DETAIL SHEET 3), LIMITS AS SHOWN ON PLAN.
22. PROPOSED PAVING SECTIONS TO BE CONFIRMED BY PROJECT GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
23. PROJECT GEOTECHNICAL ENGINEER TO MONITOR WALL CONSTRUCTION, BACKFILL AND COMPACTION.
24. PROJECT GEOTECHNICAL ENGINEER TO APPROVE PAVING SUBBASE PRIOR TO INSTALLATION OF PAVING SECTION.
25. SITE LIGHTING TO CONFORM TO SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
26. CONTRACTOR TO PROVIDE TRACER WIRE OVER PROPOSED 1 1/4" PRESSURE SEWER WITH TERMINAL AT THE RIGHT-OF-WAY LINE AND AT THE GRINDER PUMP.
27. CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS ROUTES IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
28. WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE CUTTER PAN.
29. ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
30. ALL 2:1 SLOPES TO BE STABILIZED WITH SOD. SLOPES 3:1 OR FLATTER TO BE STABILIZED WITH SEED AND MULCH.



LOCATION MAP
SCALE: 1"=600'



BUILDING ELEVATIONS
NOT TO SCALE

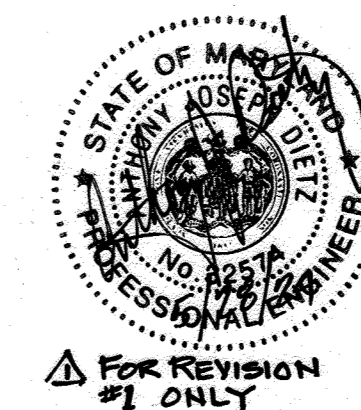
SHEET INDEX

SHT. NO.	CONTENTS
1	COVER SHEET
2	SITE LAYOUT PLAN
3	SITE DETAILS AND SECTIONS
4	SITE GRADING PLAN
5	STORM DRAIN & SEWER PROFILES
6	SOILS AND DRAINAGE AREA MAP
7	SEDIMENT & EROSION CONTROL PLAN
8	SEDIMENT & EROSION CONTROL NOTES AND DETAILS
9	LANDSCAPE PLAN
10	LANDSCAPE NOTES AND DETAILS
11	RETAINING WALL DETAILS

PROFESSIONAL CERTIFICATION

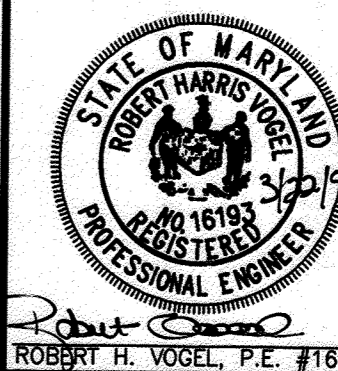
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 32574 EXPIRATION DATE: 1/16/2026

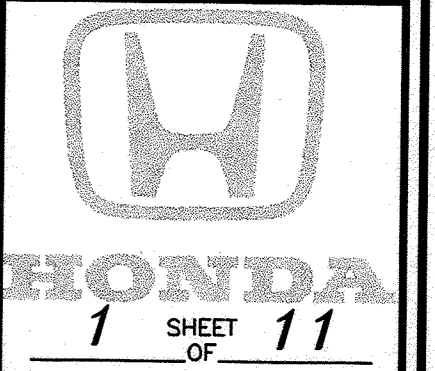


**COVER SHEET
FOR
COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWECK SUBDIVISION
SITE DEVELOPMENT PLAN**

TAX MAP #34 5TH ELECTION DISTRICT REFERENCE F 98-144
PARCEL 'F-1' HOWARD COUNTY, MARYLAND



DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: MARCH, 1999
SCALE: AS SHOWN
W.O. NO.: 98-74

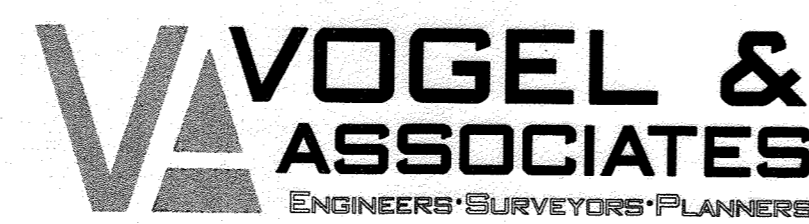


PARKING TABULATION

	REQUIRED	PROPOSED
SALES/OFFICE: 20,743 SQ.FT.(INCLUDING MEZZANINE)	41 SPACES	41 SPACES
23 BAY AUTOMOBILE SERVICE AREA: 3 SPACES/SERVICE BAY= 69 SPACES	69 SPACES	69 SPACES
23,140 SQ.FT. OUTDOOR DISPLAY: 1 SPACE/1000 SQ.FT.= 23 SPACES	24 SPACES	24 SPACES
TOTAL SPACES =	133 SPACES	133 SPACES
HANDICAP SPACES =	5 SPACES	5 SPACES

OWNER/DEVELOPER

Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600



3691 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 K. Kauter 5/14/99
DIRECTOR DATE

Carole Hamilton 5/14/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John P. Dawson 5/12/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

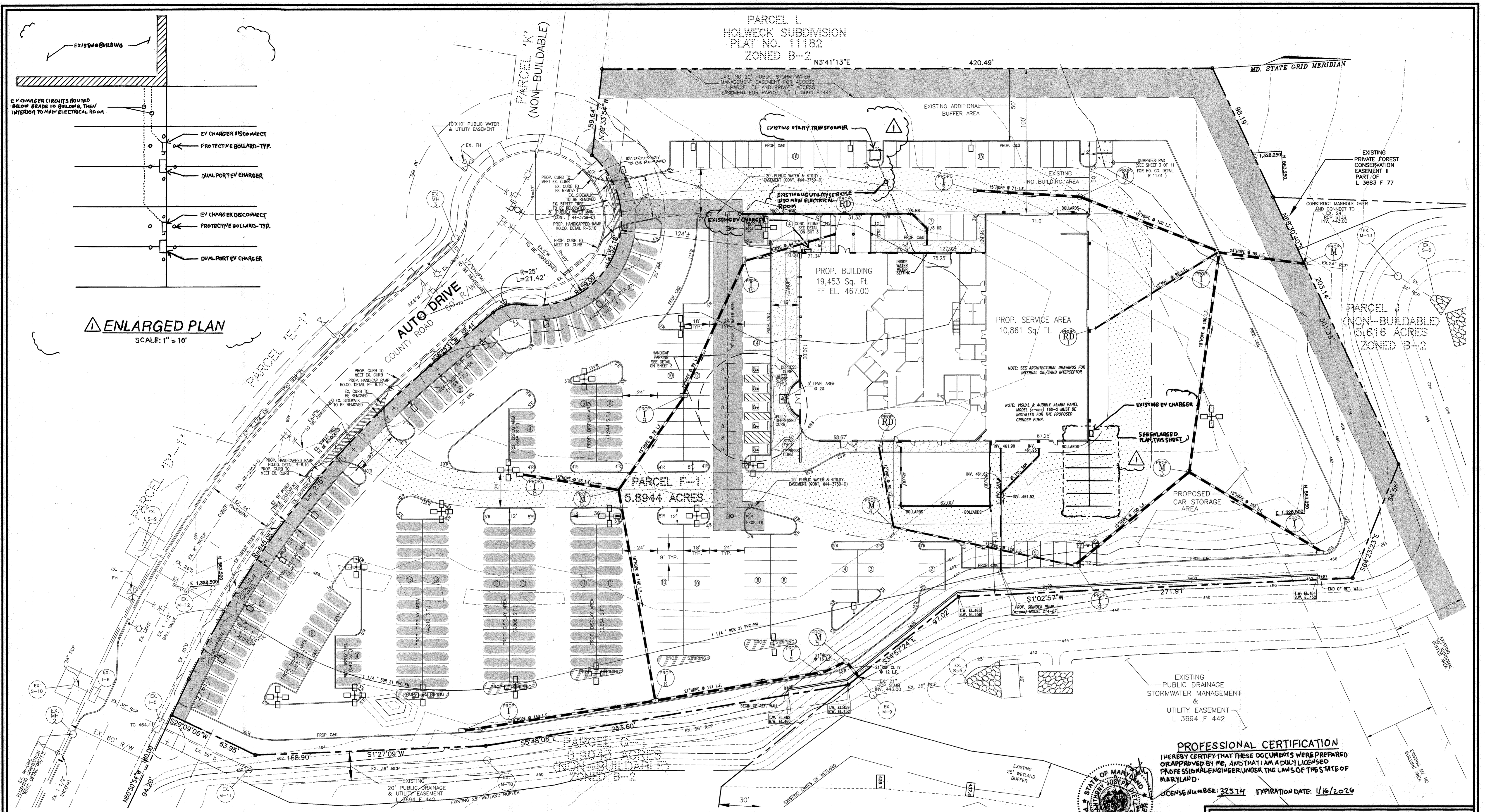
NO.	REVISION	DATE
1	Revised to show new EV charging stations	5/16/24

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
F-1	12441 AUTO DRIVE

SUBDIVISION NAME		SECTION/AREA	PARCEL NUMBER
HOLWECK		N/A	PARCEL F-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13459-13460	18	B-2	34	5TH	6051

WATER CODE	110	SEWER CODE	6653000
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ENLARGED PLAN
SCALE: 1" = 10'

LAYOUT PLAN
SCALE: 1" = 30'

LEGEND

EXISTING GROUND	444	PROP. PARKING AREA LIGHTING	□
PROPOSED GRADE	688	PROP. WALL MOUNTED LIGHTING	□
EXISTING WATER	—	AUTO DISPLAY AREA	—
EXISTING SEWER	—		
EXISTING STORM DRAIN	—		
EXISTING CURB & GUTTER	—		
PROPERTY LINE	—		
PROPOSED C&G	—		
PROP. STORM DRAIN	—		
PROP. SEWER	—		
PROP. WATER MAIN EASEMENT	—		
PROP. HEAVY DUTY PAVEMENT	—		
PROP. 4" CONC. SIDEWALK	—		
PROP. LIGHT DUTY PAVEMENT	—		

NOTE: SITE LIGHTING TO CONFORM TO SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

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

OWNER/DEVELOPER
Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5/14/99 DATE
DIRECTOR

[Signature] 5/14/99 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 5/13/99 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	REVISION	DATE
1	Revised to show new EV charging stations	5/20/99

ADDRESS CHART

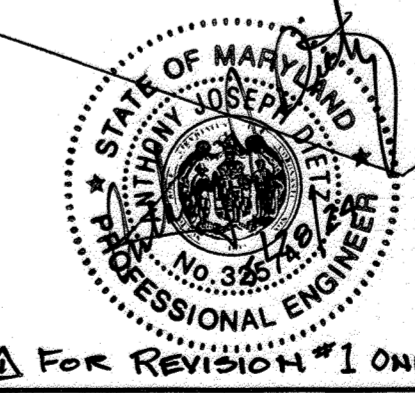
PARCEL NO.	STREET ADDRESS
F-1	12441 AUTO DRIVE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
HOLWECK	N/A	PARCEL F-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13459-13460	18	B-2	34	5TH	6051

WATER CODE 110 SEWER CODE: 6653000

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 32514 EXPIRATION DATE: 1/16/2029



SITE LAYOUT PLAN FOR COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWECK SUBDIVISION
SITE DEVELOPMENT PLAN

TAX MAP #34 PARCEL 'F-1' 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND REFERENCE F 98-144

DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: MARCH, 1999
SCALE: 1" = 30'
W.O. NO.: 98-74

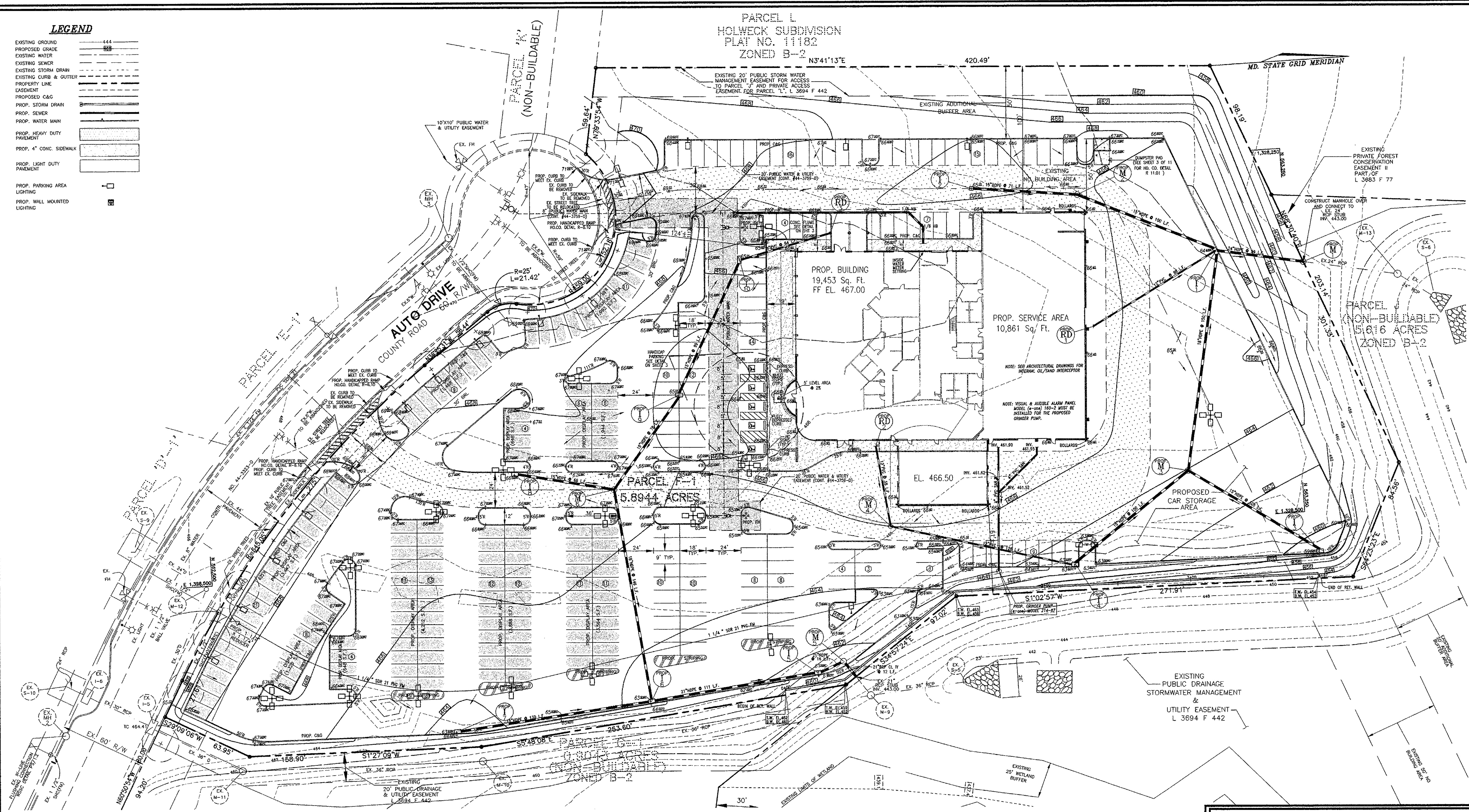
HONDA

2 SHEET OF 11

LEGEND

- EXISTING GROUND 444
- PROPOSED GRADE 468
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- PROPERTY LINE
- EASEMENT
- PROPOSED C&G
- PROP. STORM DRAIN
- PROP. SEWER
- PROP. WATER MAIN
- PROP. HEAVY DUTY PAVEMENT
- PROP. 4" CONC. SIDEWALK
- PROP. LIGHT DUTY PAVEMENT
- PROP. PARKING AREA LIGHTING
- PROP. WALL MOUNTED LIGHTING

PARCEL L
HOLWECK SUBDIVISION
PLAT NO. 11182
ZONED B-2



GRADING PLAN

SCALE: 1" = 30'

OWNER/DEVELOPER
Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600

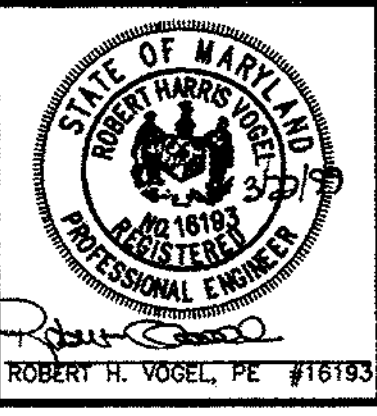
VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Howard Hunter 5/14/99
 DIRECTOR DATE
Cindy Hamstra 5/14/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Robert H. Vogel 5/13/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

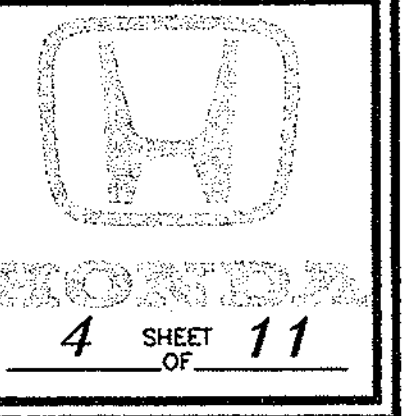
NO.	REVISION	DATE

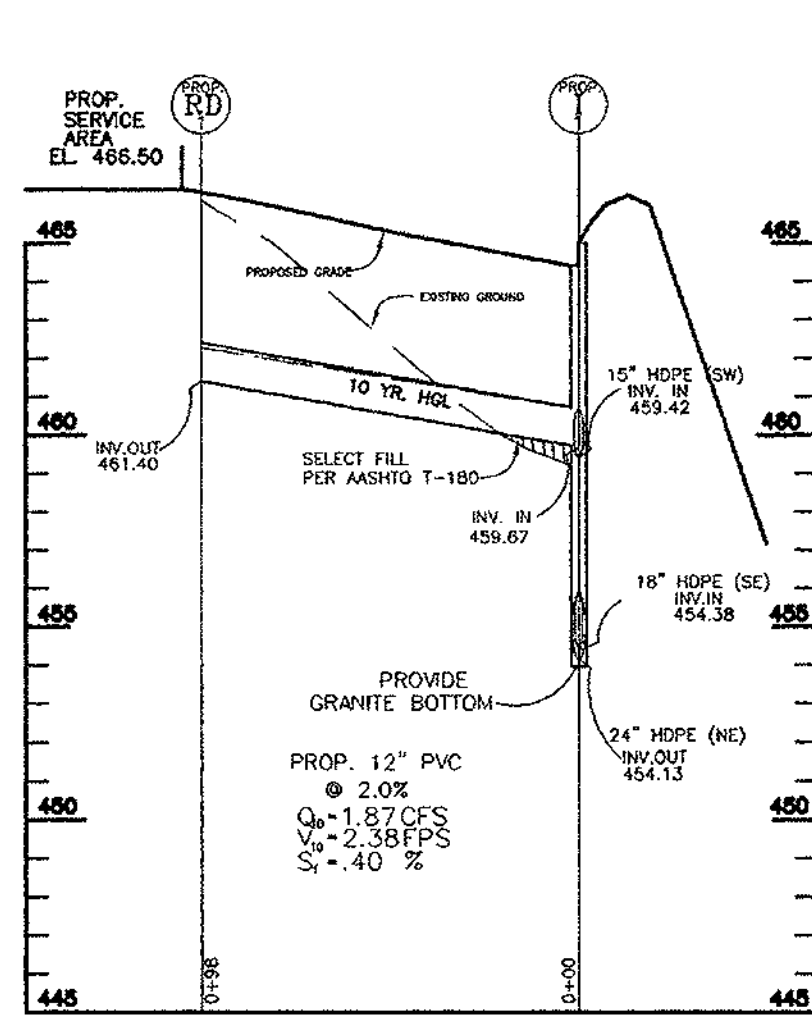
ADDRESS CHART			
PARCEL NO.	STREET ADDRESS		
F-1	12441 AUTO DRIVE		
SUBDIVISION NAME		SECTION/AREA	PARCEL NUMBER
HOLWECK		N/A	PARCEL F-1
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE
13459-13460	18	B-2	34
WATER CODE		SEWER CODE	CENSUS TR.
110		6653000	5TH
			6051

SITE GRADING PLAN FOR COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWECK SUBDIVISION
 SITE DEVELOPMENT PLAN
 TAX MAP #34 PARCEL 'F-1'
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REFERENCE F 98-144

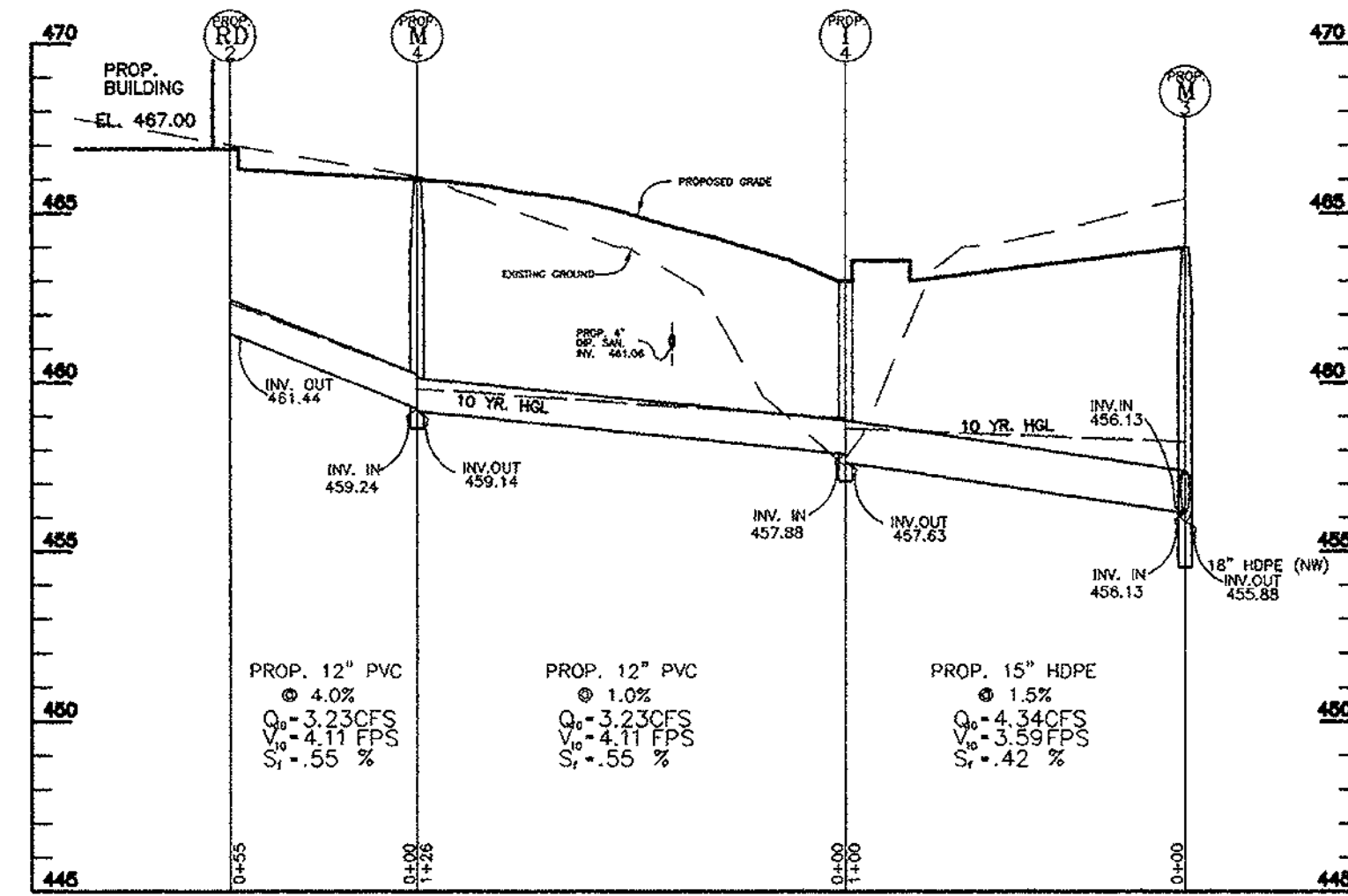


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 SCALE: 1" = 30'
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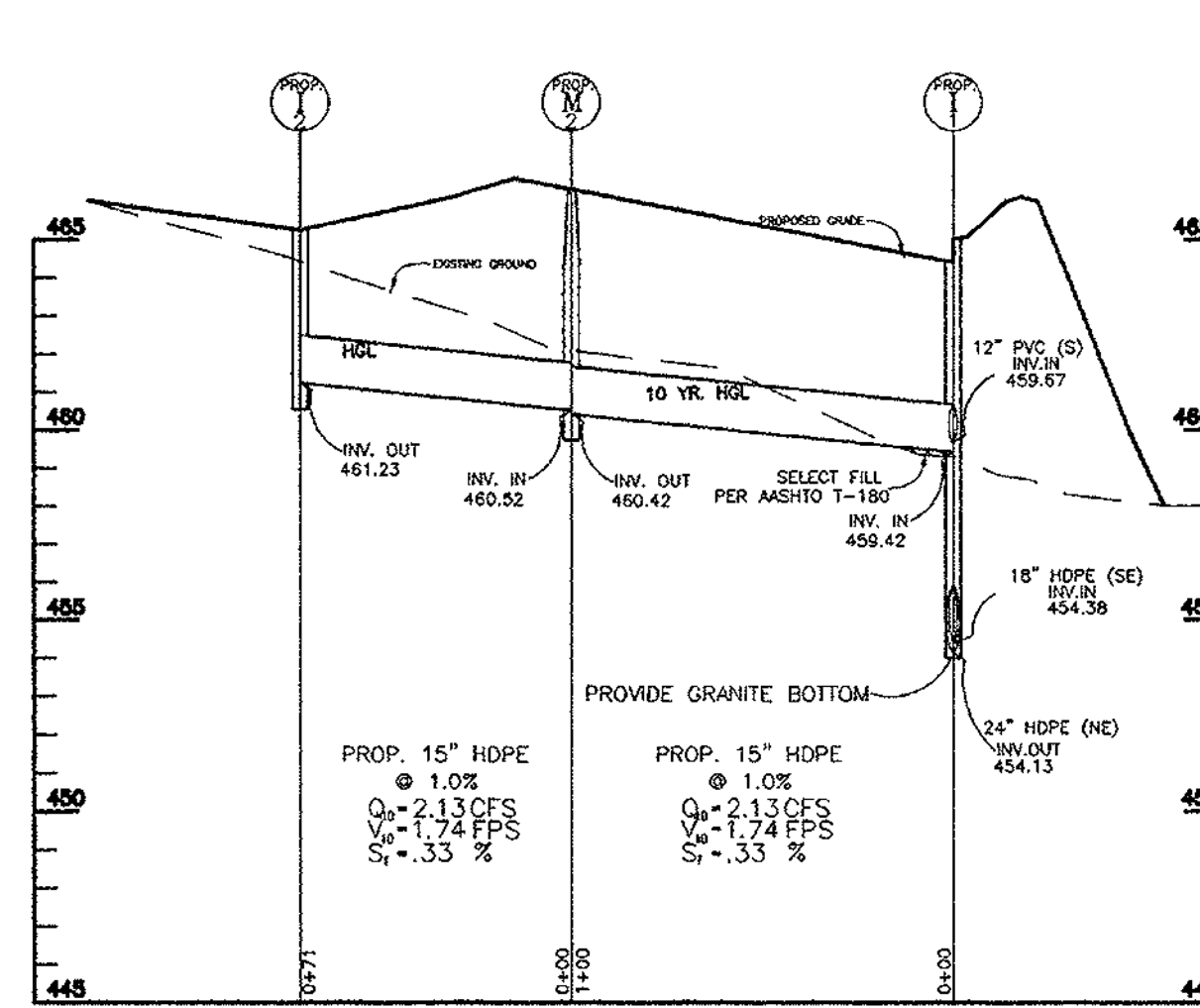




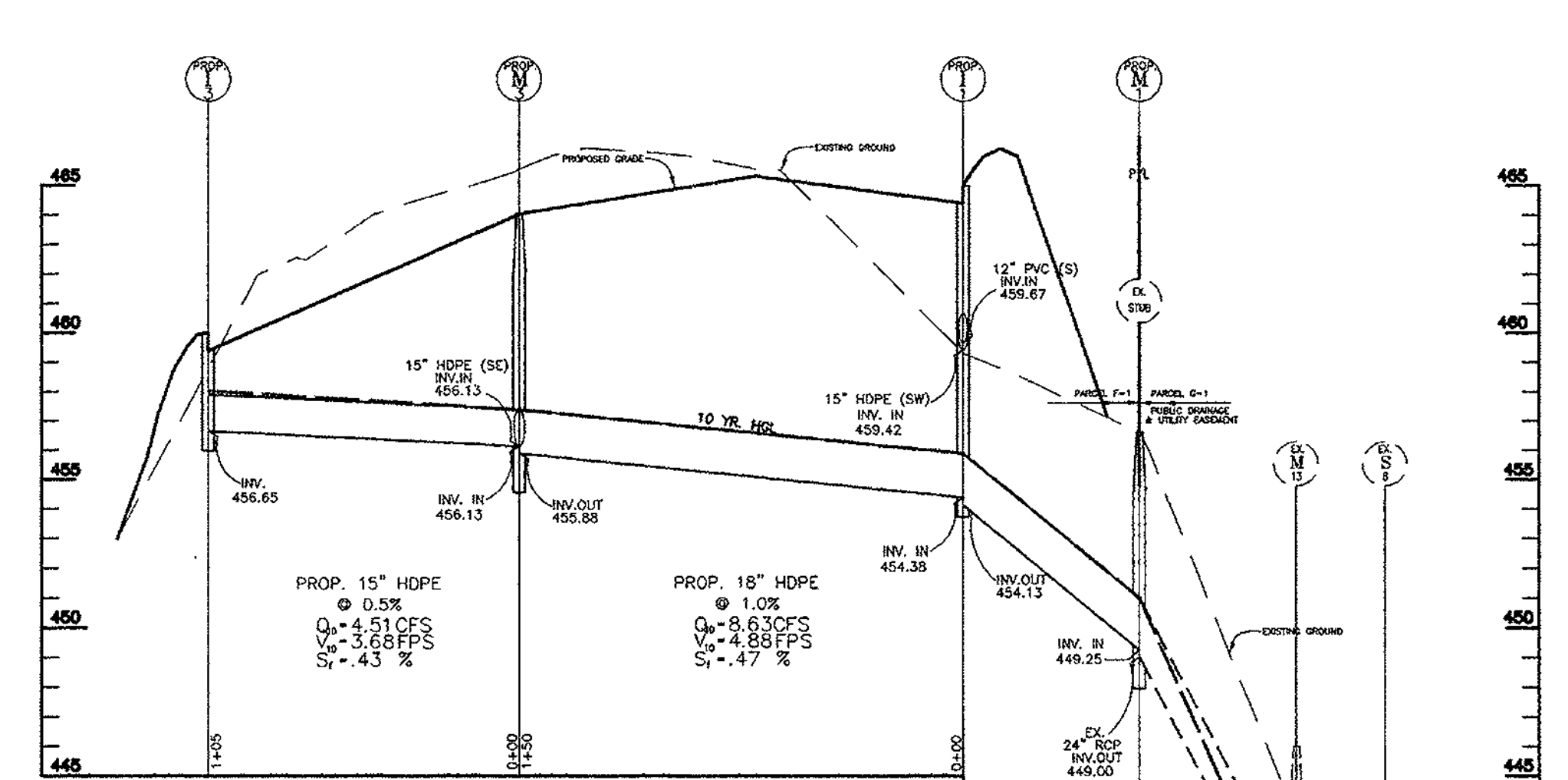
STORM DRAIN PROFILE



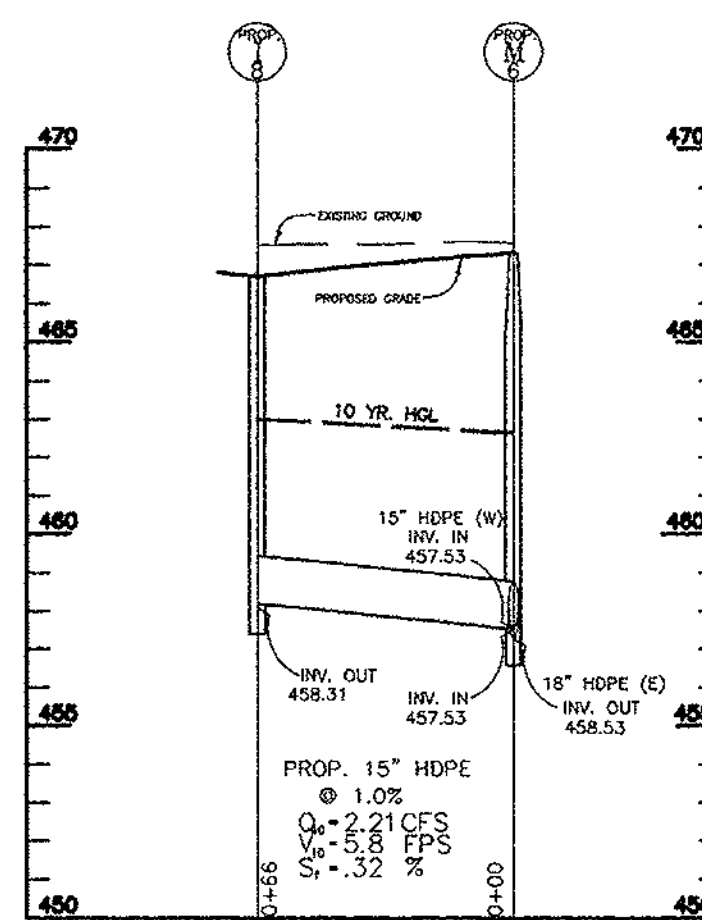
STORM DRAIN PROFILE



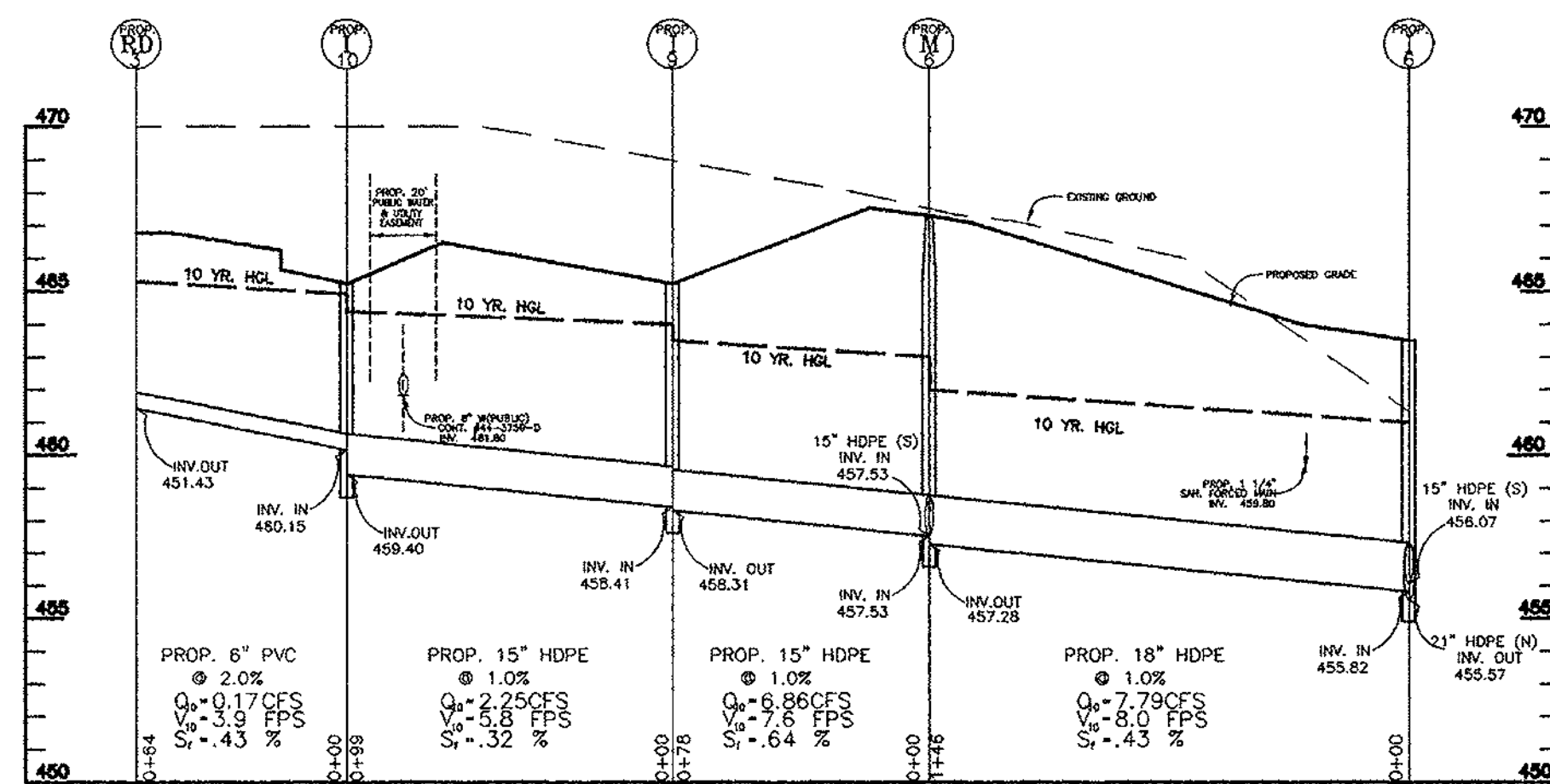
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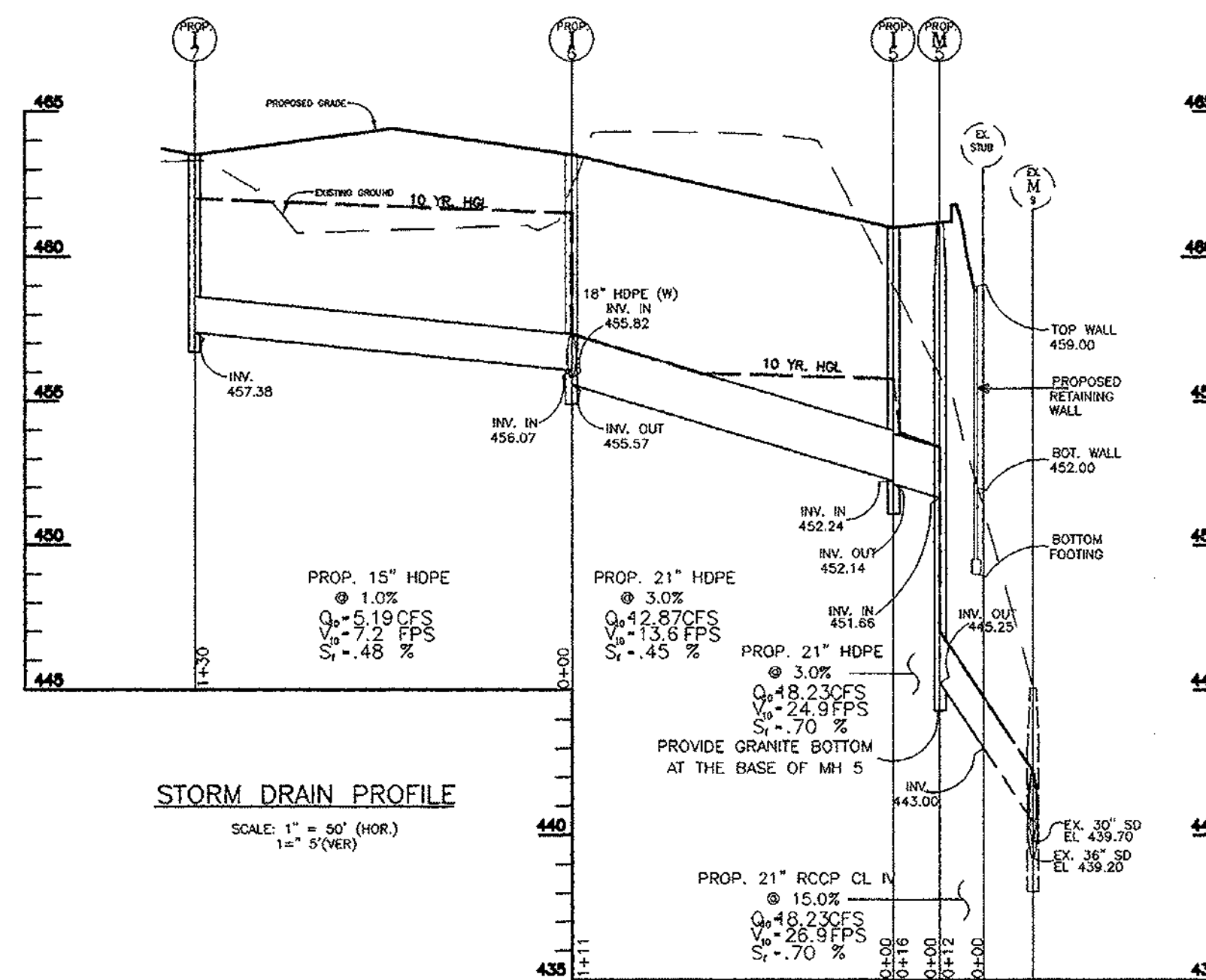
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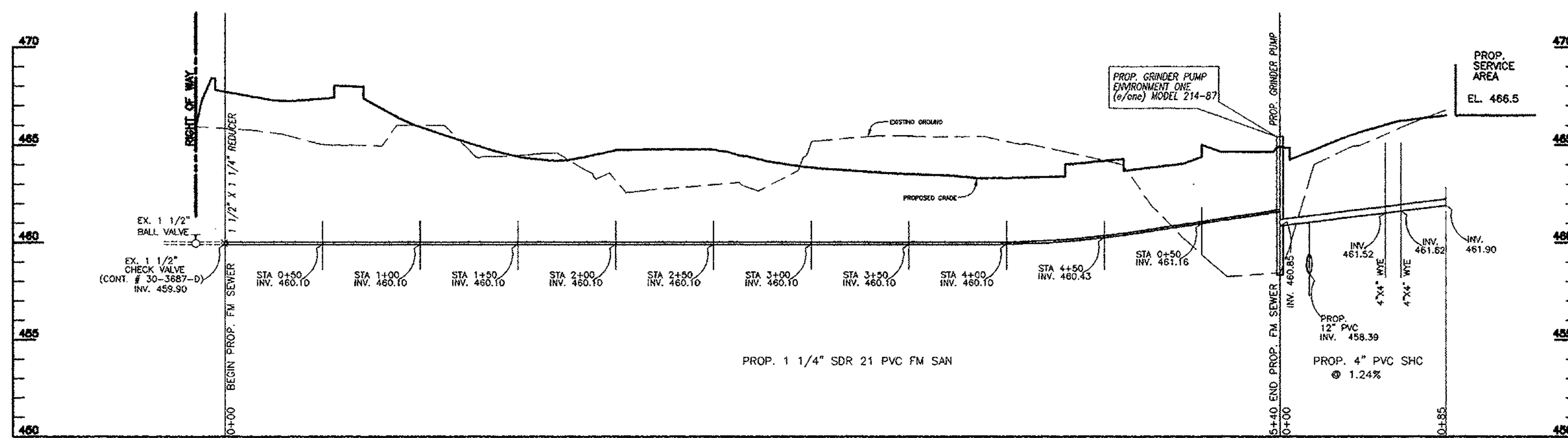
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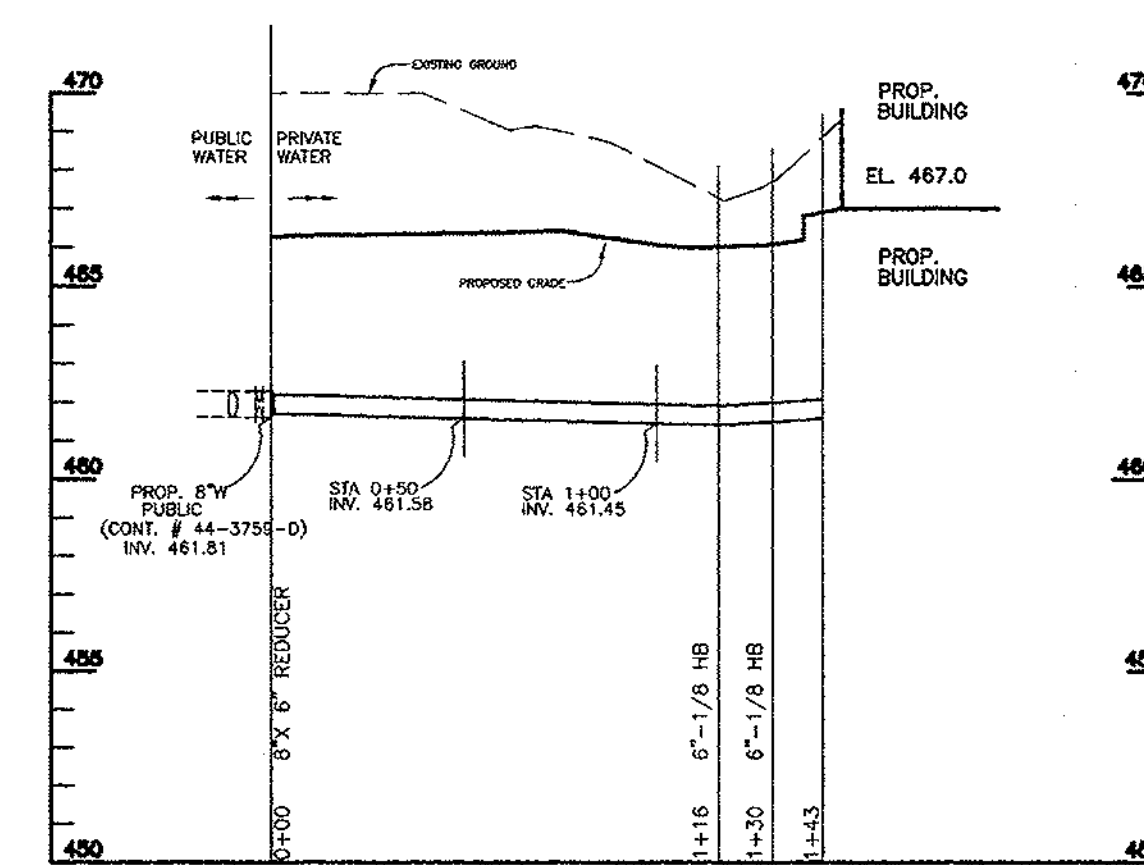
STORM DRAIN PROFILE



STORM DRAIN PROFILE



SEWER PROFILE



8" WHC PROFILE

STRUCTURE SCHEDULE						
NO.	TYPE	TOP EL.	INV. IN.	INV. OUT.	LOCATION	REMARKS
I-1	DOUBLE 'S' COMBINATION INLET	465.00*	459.42(15" HDPE)SW 454.38(18" HDPE)SE 459.67(12" PVC)S	454.13	N563200.9699 E1328317.3721	SD 4.34
I-2	DOUBLE 'S' INLET	465.25**	-	456.23	N563037.6683 E1328263.2034	SD 4.23
I-3	DOUBLE 'S' COMBINATION INLET	460.00*	-	456.65	N563258.5398 E1328527.2756	SD 4.34
I-4	DOUBLE 'S' COMBINATION INLET	463.60*	-	457.63	N563090.7561 E1328524.8315	SD 4.34
I-5	DOUBLE 'S' COMBINATION INLET	461.80*	-	452.14	N562910.0296 E1328588.0075	SD 4.34
I-6	DOUBLE 'S' COMBINATION INLET	464.10*	456.07(15" HDPE)S 455.82(18" HDPE)W	455.57	N562794.8179 E1328599.5647	SD 4.34
I-7	DOUBLE 'S' COMBINATION INLET	464.10*	-	457.38	N562861.4726 E1328610.9814	SD 4.34
I-8	DOUBLE 'S' COMBINATION INLET	467.10*	-	458.31	N562711.4829 E1328437.9017	SD 4.34
I-9	DOUBLE 'S' INLET	465.25	458.41	458.31	N562828.1230 E1328390.8459	SD 4.23
I-10	DOUBLE 'S' INLET	465.25	460.15	459.40	N562875.0297 E1328300.9073	SD 4.23
M-1	STANDARD MANHOLE	457.00**	449.25	449.00	N563260.8262 E13283288.3634	G-5.12
M-2	STANDARD MANHOLE	466.31**	460.52	460.42	N563109.6672 E1328272.2218	G-5.12
M-3	STANDARD MANHOLE	464.03	456.13(15" HDPE)SE 456.13(15" HDPE)NE	455.88	N563172.4327 E1328466.3441	G-5.12
M-4	SHALLOW MANHOLE	466.00**	459.24	459.14	N562966.6490 E1328490.6563	G-5.12
M-5	STANDARD MANHOLE	461.66	451.66	445.25	N562928.0943 E1328581.1308	G-5.12
M-6	STANDARD MANHOLE	467.60	457.53(15" HDPE)W 457.53(15" HDPE)E	457.28	N562779.1614 E1328452.8264	G-5.12

* - TOP OF CURB ** - TOP OF RIM/GRATE

STORM DRAIN PIPE SCHEDULE

PIPE DESCRIPTION	LENGTH (L.F.)
DIAMETER TYPE	
6" PVC	64
12" PVC	279
15" HDPE	619
18" HDPE	426
21" HDPE	139
24" HDPE	59

HDPE - HIGH DENSITY POLYETHYLENE PIPE
PVC - POLYVINYL CHLORIDE PIPE

OWNER/DEVELOPER
Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600

VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* 5/14/95 DATE
Chief, Division of Land Development: *[Signature]* 5/14/95 DATE
Chief, Development Engineering Division: *[Signature]* 5/15/95 DATE

NO.	REVISION	DATE

ADDRESS CHART
PARCEL NO. F-1 STREET ADDRESS 12441 AUTO DRIVE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
HOLWECK	N/A	PARCEL F-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13459-13480	18	B-2	34	5TH	6051

WATER CODE 110 SEWER CODE 6853000

STORM DRAIN & SEWER PROFILES FOR
COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWECK SUBDIVISION
SITE DEVELOPMENT PLAN

TAX MAP #34 PARCEL 'F-1' 5TH ELECTION DISTRICT REFERENCE F 98-144 HOWARD COUNTY, MARYLAND

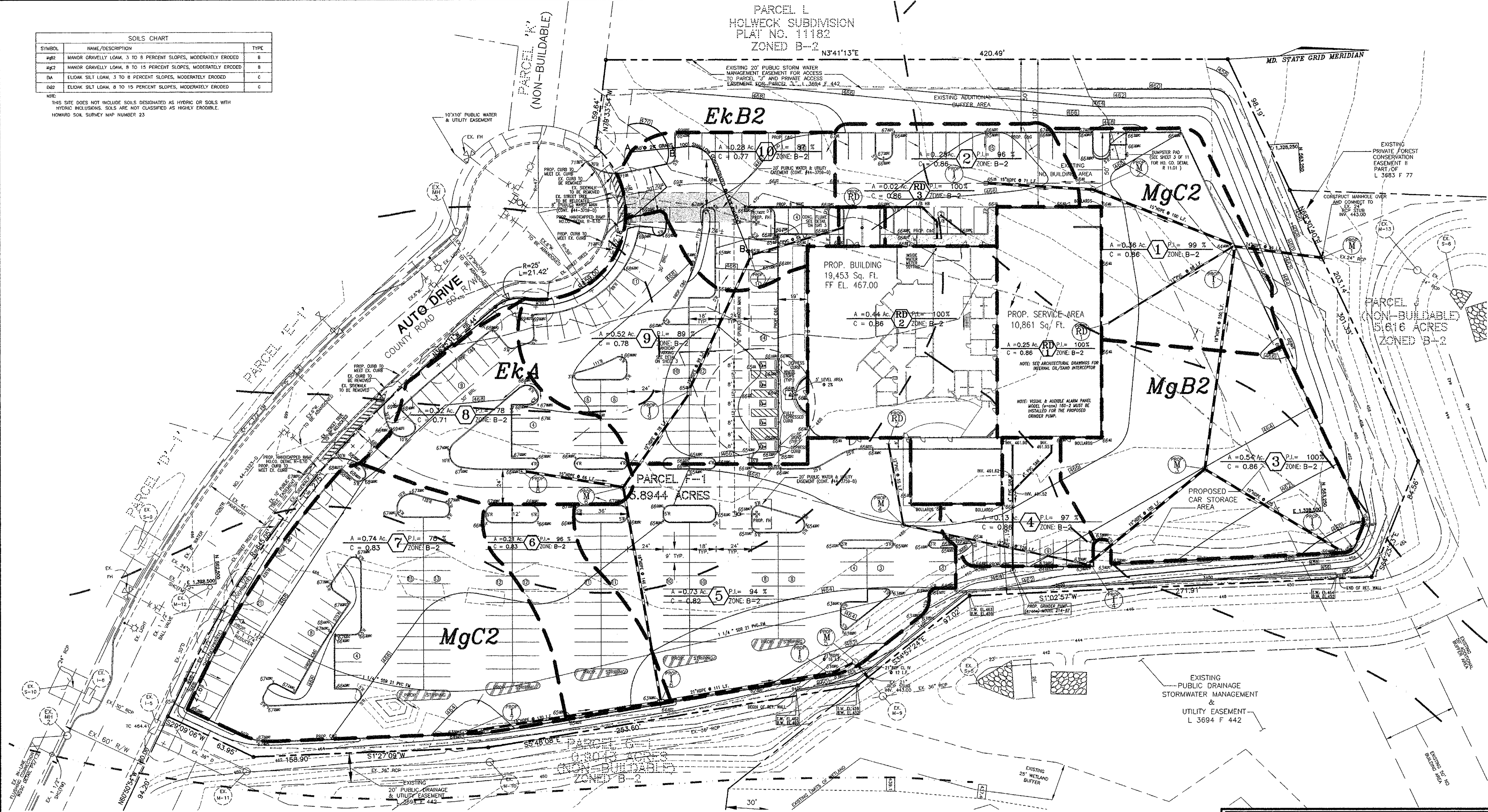
DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: MARCH, 1999
SCALE: AS SHOWN
W.O. NO.: 88-74

STATE OF MARYLAND
ROBERT H. VOGEL, PE #16193

5 SHEET OF 11

SOILS CHART		
SYMBOL	NAME/DESCRIPTION	TYPE
ug2	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
hg2	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
dm	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
dn2	ELIOAK SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	C

NOTE:
THIS SITE DOES NOT INCLUDE SOILS DESIGNATED AS HYDRIC OR SOILS WITH HYDRIC INCLUSIONS. SOILS ARE NOT CLASSIFIED AS HIGHLY ERODIBLE.
HOWARD SOIL SURVEY MAP NUMBER 23

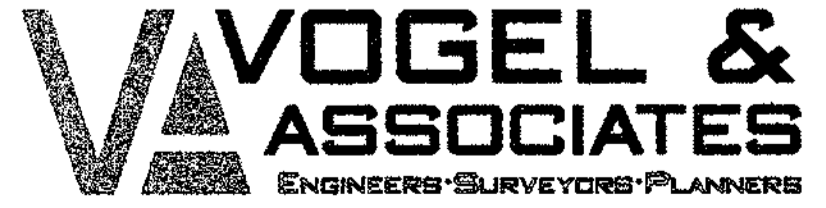


SOILS AND DRAINAGE AREA MAP

SCALE: 1" = 30'

LEGEND

- EXISTING GROUND -----444-----
- PROPOSED GRADE -----888-----
- EX. DRAINAGE AREA -----(dashed line)-----
- PROP. DRAINAGE AREA -----(solid line)-----
- SOILS DIVIDE -----(dotted line)-----



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

OWNER/DEVELOPER

Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600

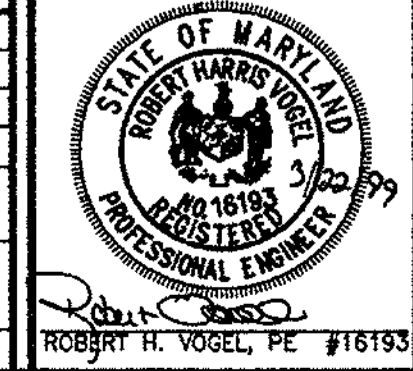
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard Smith 5/14/99
DIRECTOR DATE
Carole Hamilton 5/11/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Robert H. Vogel 5/13/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

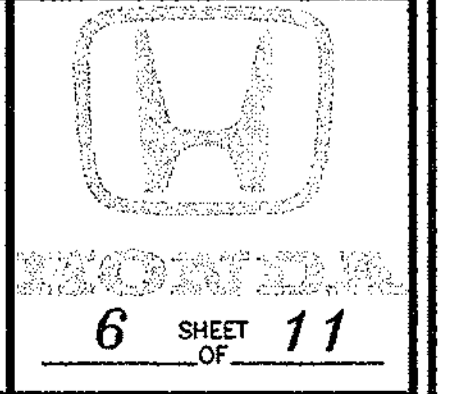
NO.		REVISION	DATE
ADDRESS CHART			
PARCEL NO.	STREET ADDRESS		
F-1	12441 AUTO DRIVE		
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER	
HOLWECK	N/A	PARCEL F-1	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE ELECT. DIST. CENSUS TR.
13459-13460	18	B-2	34 5TH 6051
WATER CODE	SEWER CODE		
110	6853000		

SOILS & DRAINAGE AREA MAP FOR COLEMAN HONDA CAR DEALERSHIP PARCEL 'F-1' HOLWECK SUBDIVISION

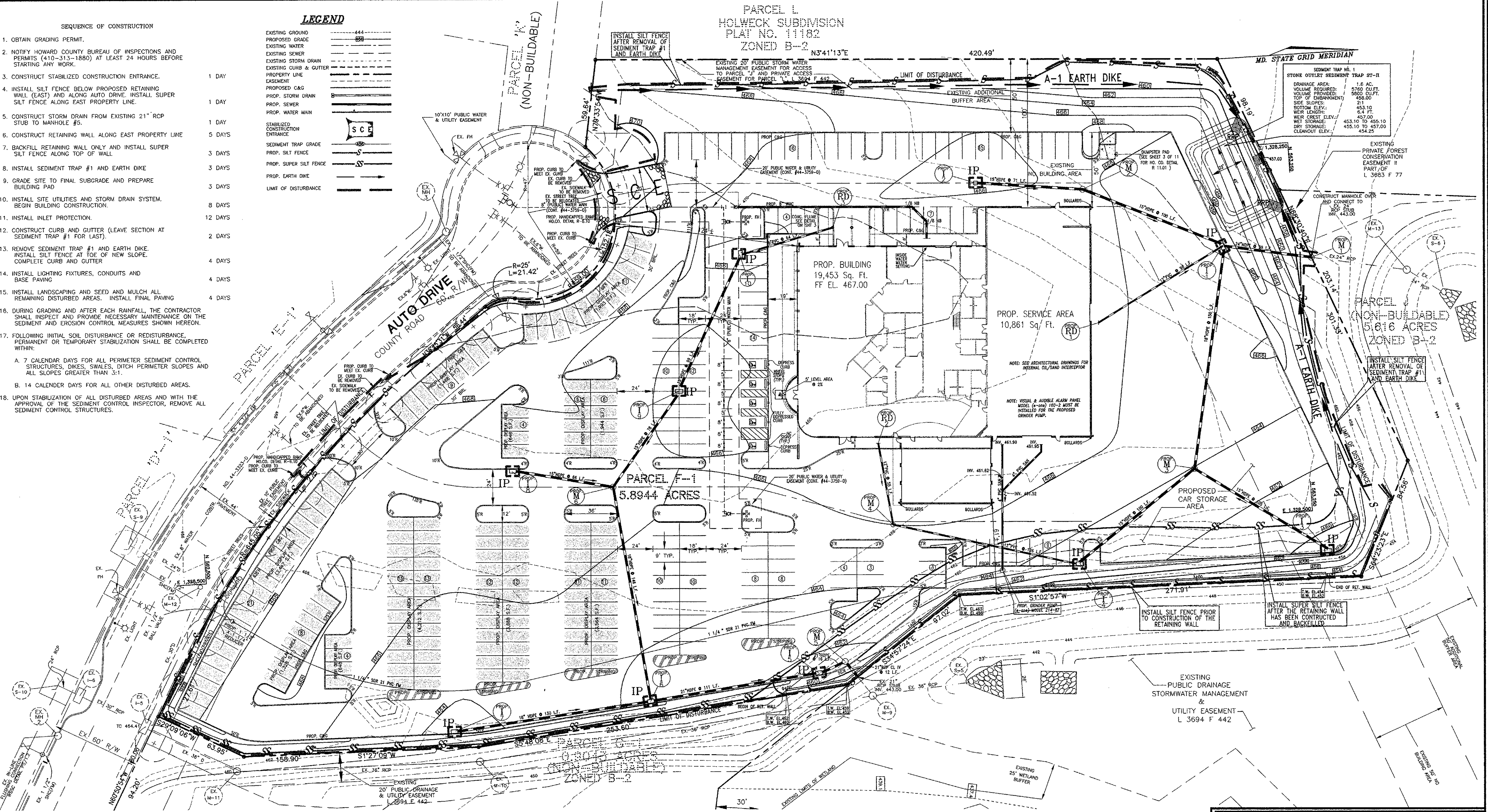
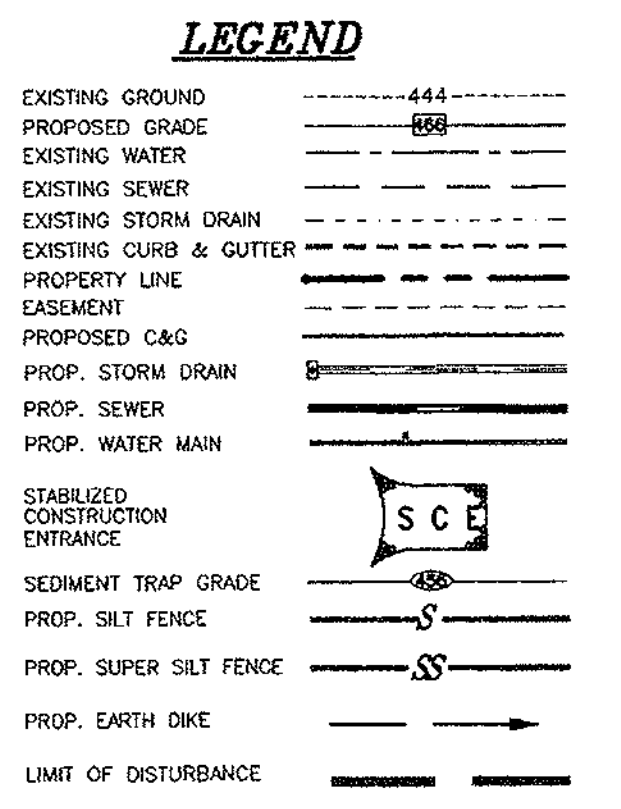
SITE DEVELOPMENT PLAN
TAX MAP #34 PARCEL 'F-1' 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE F 98-144



DESIGN BY: R.H.V.
DRAWN BY: J.R.H.
CHECKED BY: R.H.V.
DATE: MARCH, 1999
SCALE: 1" = 30'
W.O. NO.: 98-74

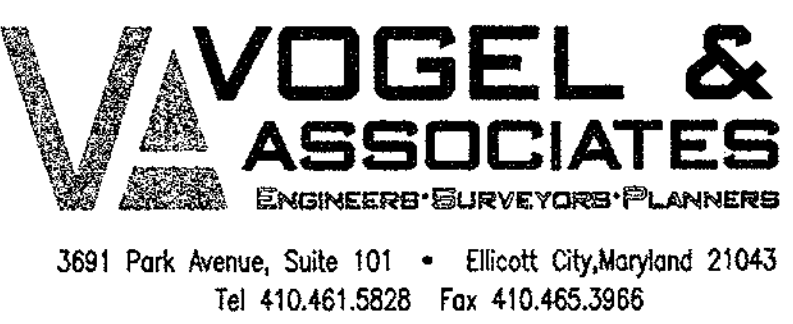


- SEQUENCE OF CONSTRUCTION
- OBTAIN GRADING PERMIT.
 - NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
 - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
 - INSTALL SILT FENCE BELOW PROPOSED RETAINING WALL (EAST) AND ALONG AUTO DRIVE. INSTALL SUPER SILT FENCE ALONG EAST PROPERTY LINE.
 - CONSTRUCT STORM DRAIN FROM EXISTING 21" RCP STUB TO MANHOLE #5.
 - CONSTRUCT RETAINING WALL ALONG EAST PROPERTY LINE.
 - BACKFILL RETAINING WALL ONLY AND INSTALL SUPER SILT FENCE ALONG TOP OF WALL.
 - INSTALL SEDIMENT TRAP #1 AND EARTH DIKE.
 - GRADE SITE TO FINAL SUBGRADE AND PREPARE BUILDING PAD.
 - INSTALL SITE UTILITIES AND STORM DRAIN SYSTEM. BEGIN BUILDING CONSTRUCTION.
 - INSTALL INLET PROTECTION.
 - CONSTRUCT CURB AND GUTTER (LEAVE SECTION AT SEDIMENT TRAP #1 FOR LAST).
 - REMOVE SEDIMENT TRAP #1 AND EARTH DIKE. INSTALL SILT FENCE AT TOE OF NEW SLOPE. COMPLETE CURB AND GUTTER.
 - INSTALL LIGHTING FIXTURES, CONDUITS AND BASE PAVING.
 - INSTALL LANDSCAPING AND SEED AND MULCH ALL REMAINING DISTURBED AREAS. INSTALL FINAL PAVING.
 - DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.
 - UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL STRUCTURES.



SEDIMENT & EROSION CONTROL PLAN
SCALE: 1" = 30'

OWNER/DEVELOPER
Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600



ENGINEER'S 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
ROBERT H. VOGEL
DATE: 3/22/99

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.
Jim Coleman
SIGNATURE OF DEVELOPER
DATE: 3/22/99

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
Cheer Simmons 3/25/99
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 3/25/99
HOWARD SCD DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
David L. Smith 3/14/99
DIRECTOR DATE
Chris Hamstra 5/14/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Chick Drummond 5/12/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	REVISION	DATE

ADDRESS CHART
PARCEL NO. STREET ADDRESS
F-1 12441 AUTO DRIVE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
HOLWECK	N/A	PARCEL F-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13459-13460	1B	B-2	34	5TH	6051

WATER CODE 110 SEWER CODE 6653000

SEDIMENT & EROSION CONTROL PLAN
FOR
COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWECK SUBDIVISION
SITE DEVELOPMENT PLAN

TAX MAP #34
PARCEL 'F-1'

REFERENCE F 98-144
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DESIGN BY: R.H.V.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: MARCH, 1999
SCALE: 1" = 30'
W.G. NO.: 98-74

7 SHEET OF 11

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 have low nutrient content, low nutrient retention ability, material toxic to plants, and/or unacceptable soil gradation.

CONDITION WHERE PRACTICE APPLIES

- This practice is limited to areas having 2:1 or flatter slopes with:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant 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 for topsoil application. Areas having slopes steeper than 2:1 shall have the appropriate stabilization on the plan.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- Topsoil salvaged from the existing site may be used, provided that it meets the standards as set forth in these specifications. Topsoil shall be salvaged from a given soil type can be found in the publications of USDA-ARS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a scientist and approved by the appropriate approval authority. Regardless, topsoil shall not contain more than 1% of coarse sand, gravel, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Limestone shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Material.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results dictating 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, a sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall not be less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sand or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control unless sufficient time has elapsed (14 days) to permit dissipation of phytotoxic materials.

- Note: 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 topsoil.
- Place a topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Material.
- V. Topsoil Application**
- When topsoiling, maintain needed erosion and sediment control practices as diversions, grade stabilization, traps and basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 6" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4"-8" layer, and lightly compacted to a minimum thickness of 4". Seeding 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 formation of depressions or water pockets.
 - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may be detrimental to proper grading and seedbed preparation.

TEMPORARY SEEDING

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

Seedbed 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 rye (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 (8 gal./1000 sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

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

Seedbed Preparation: Loosen upper 3 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 ureaform 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 60lbs. 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. 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 (8 gal./1000 sq. ft.) for anchoring.

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

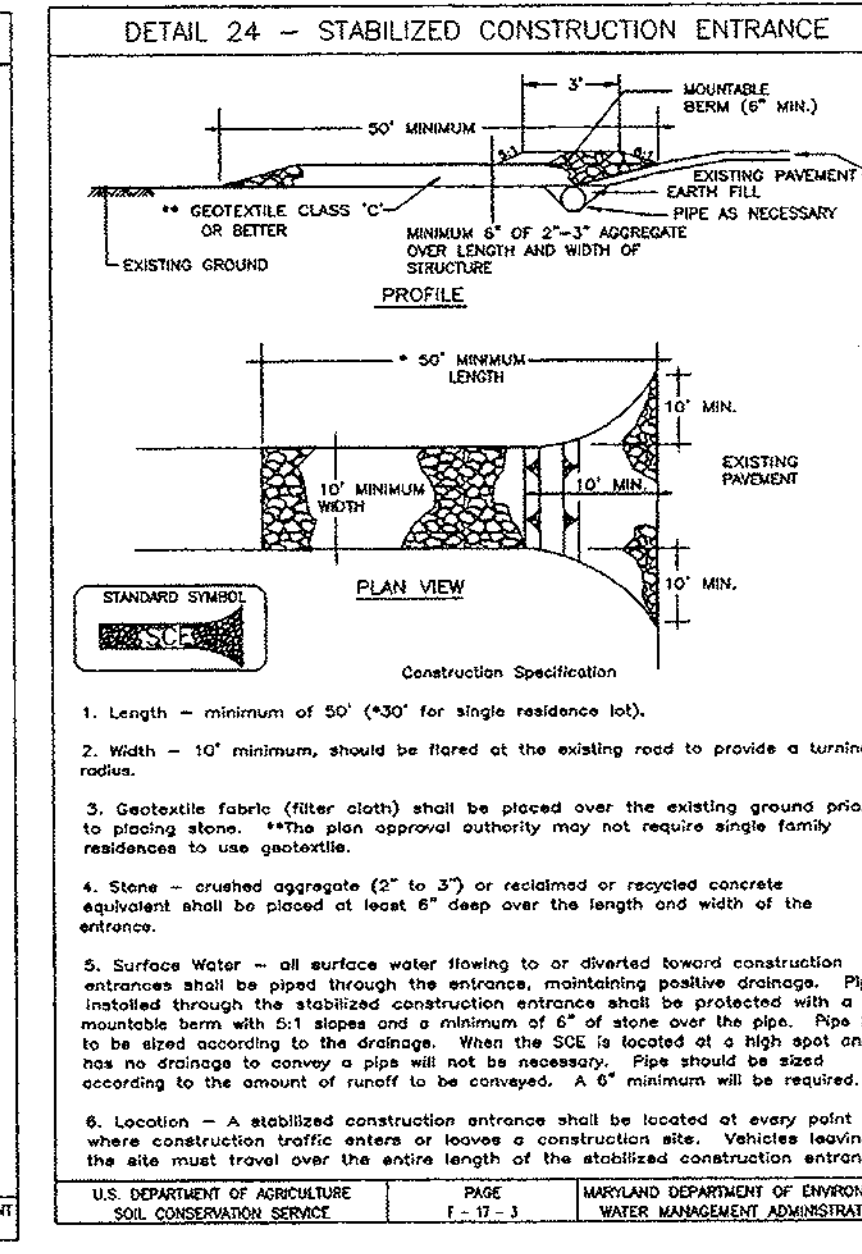
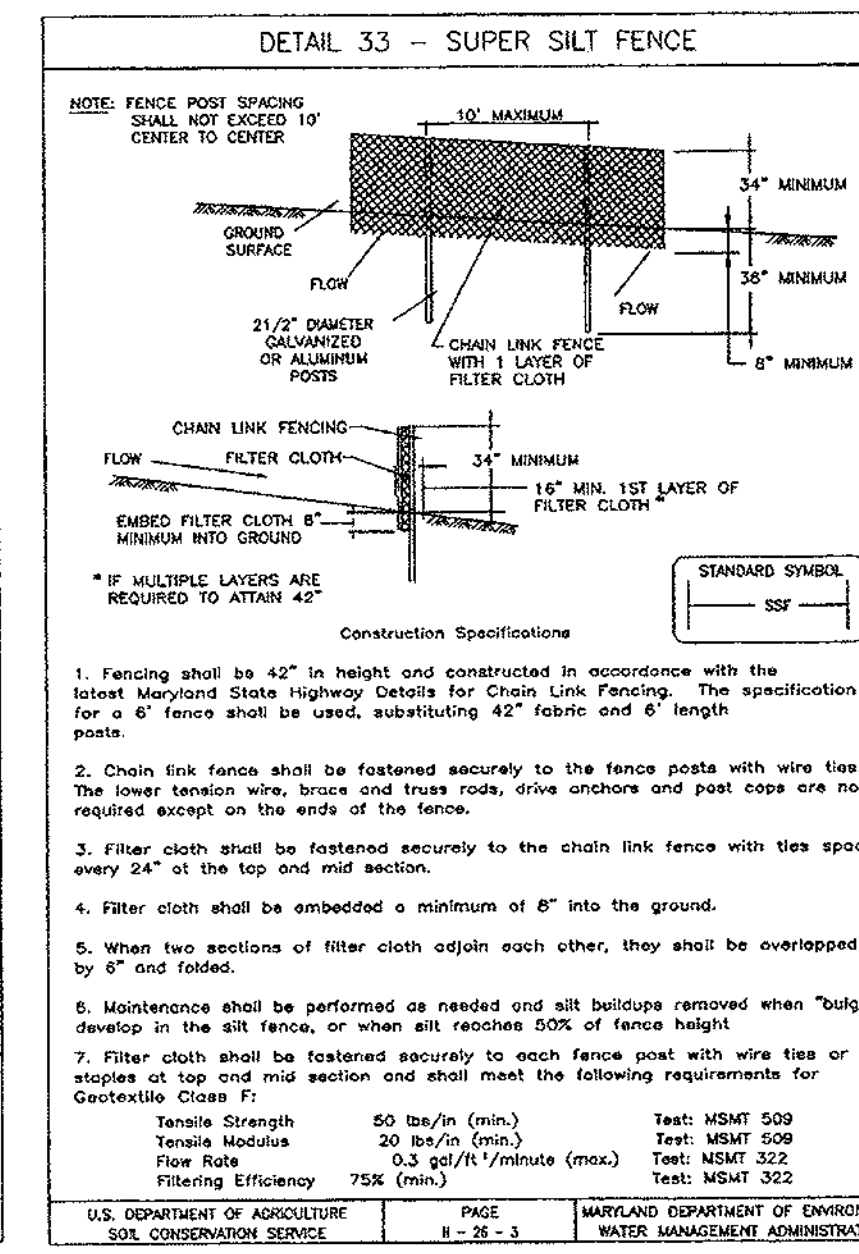
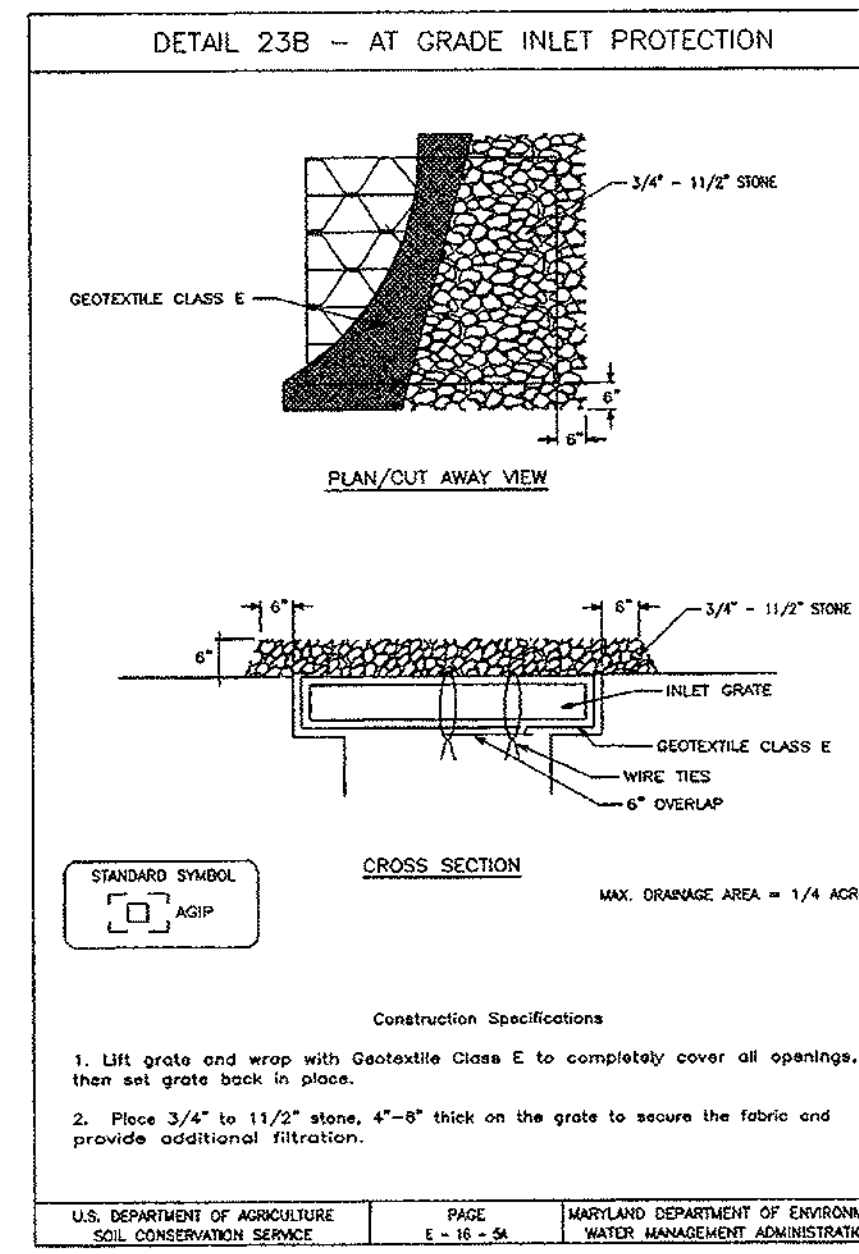
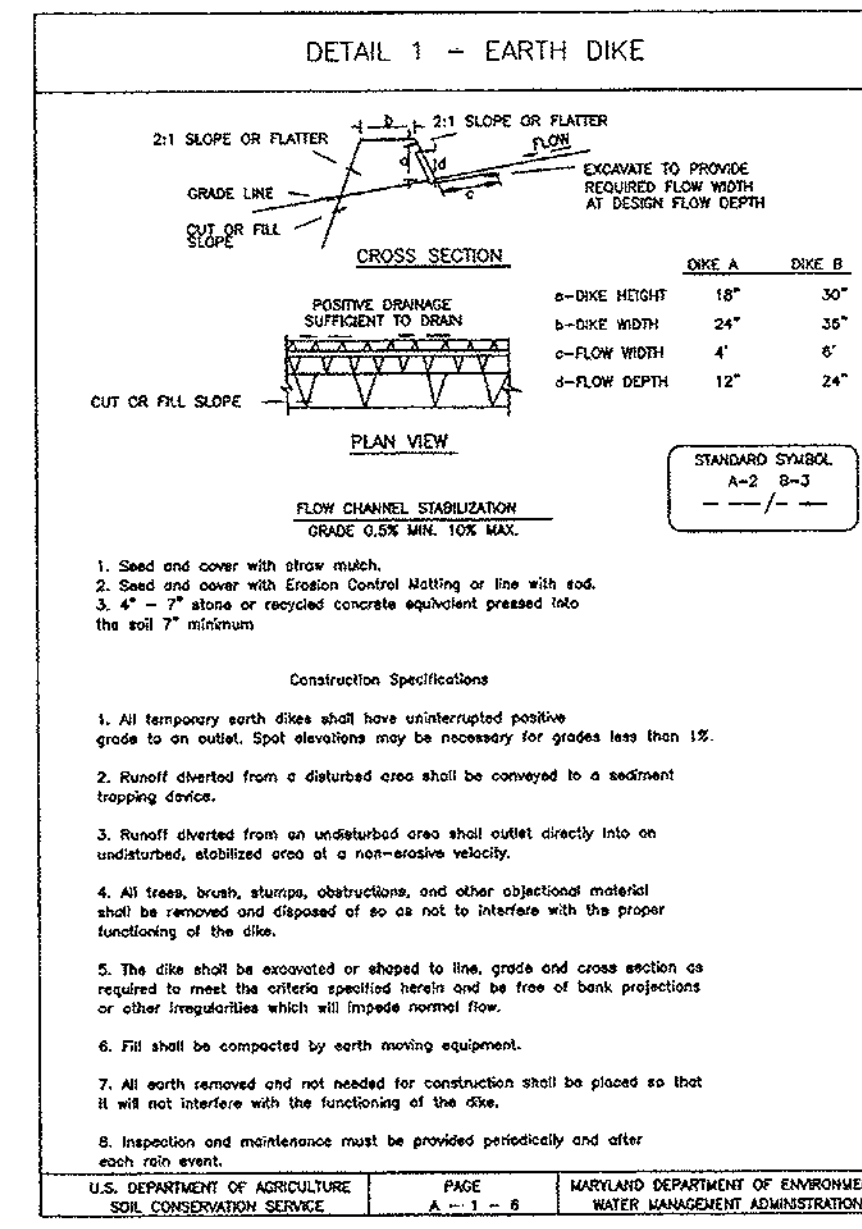
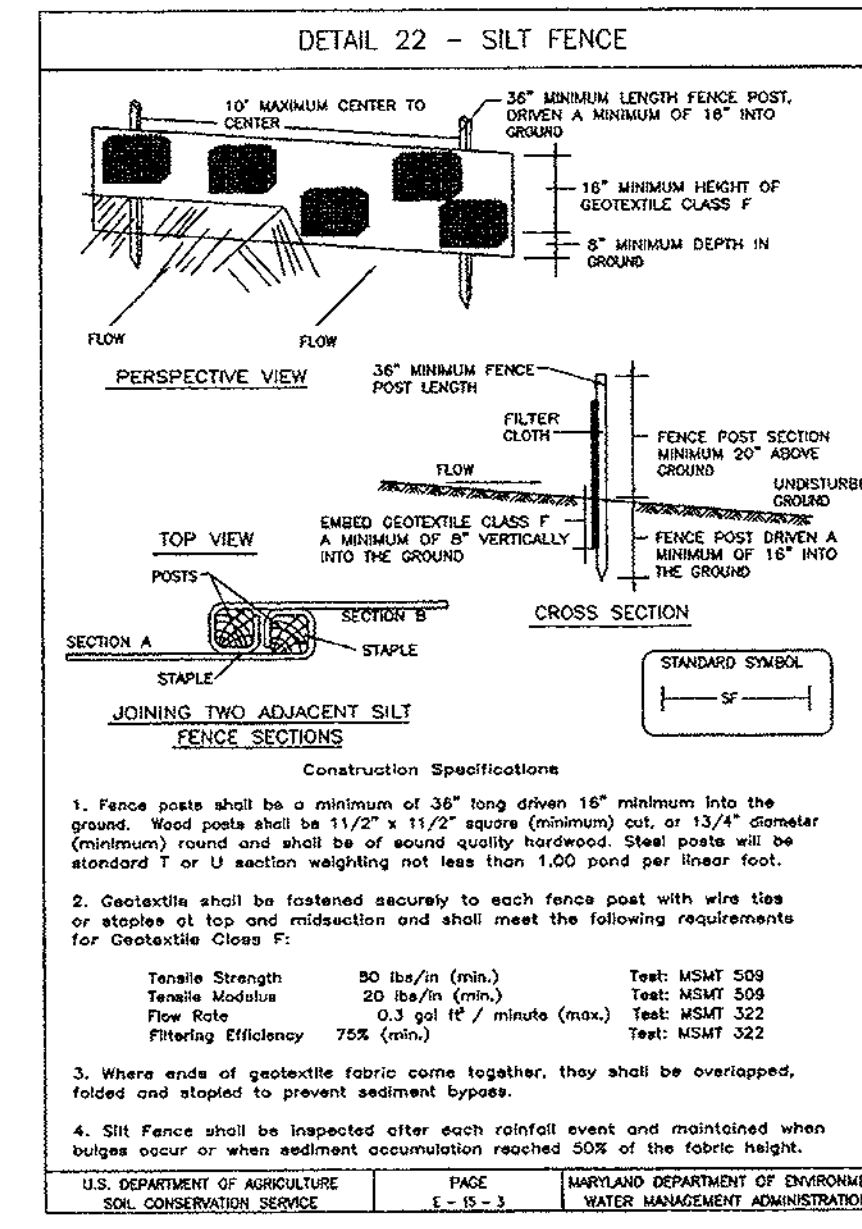
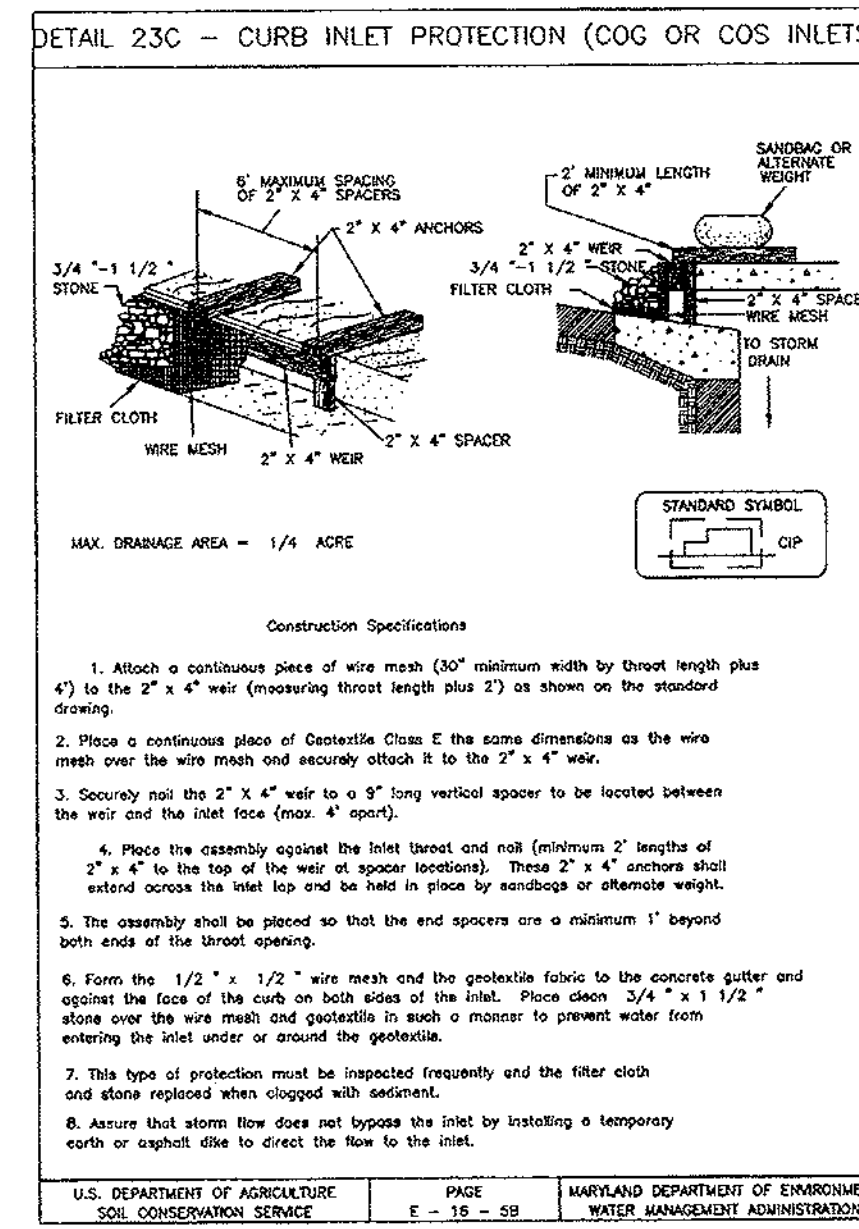
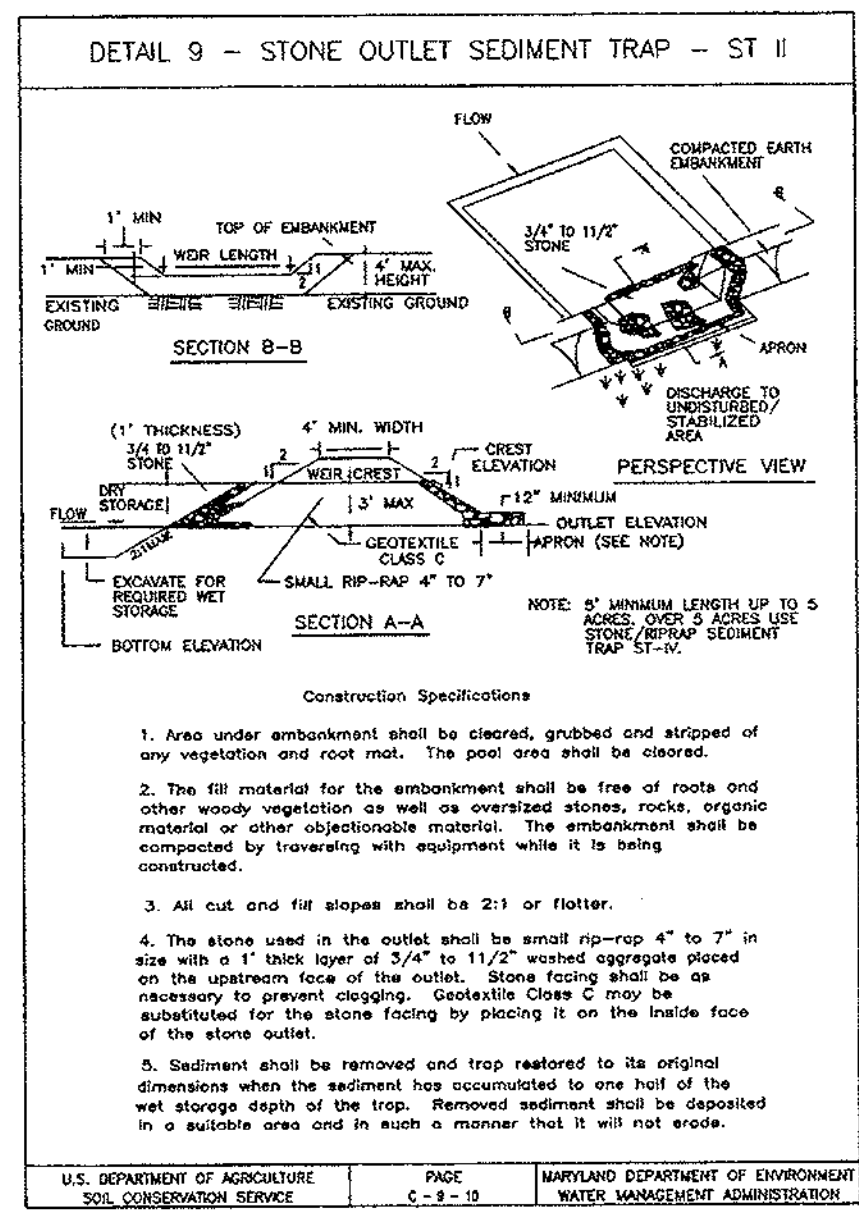
SEDIMENT CONTROL NOTES

- 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 redisturbance, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must 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
Total area of site R/W and easements: Parcel F-1 = 5.8944 AC +/- acres

Area disturbed.....	5.82 AC +/- acres
Area to be roofed or paved:	5.27 AC +/- acres
Area to be vegetatively stabilized.....	0.35 AC +/- acres
Total cut.....	6,458 cu. yds.
Total fill.....	5,140 cu. yds.

Excess cut/spoil to be placed in berm along western property line within limit of disturbance.

- 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.



Design Criteria			
Slope	Slope Steepness	Slope Length (Maximum)	Silt Fence Length (Minimum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

OWNER/DEVELOPER
Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600

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
ROBERT H. VOGEL

3/22/99
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.

Jim Coleman
SIGNATURE OF DEVELOPER

3/22/99
DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Dee Simmons
DATE 3/25/99
USDA-NATURAL RESOURCES CONSERVATION SERVICE

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

John Robertson
DATE 3/25/99
HOWARD SCD

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

David S. Rutter
DIRECTOR
DATE 5/14/99

Conda Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE 5/14/99

David Quacquarelli
CHIEF, DEVELOPMENT ENGINEERING DIVISION I
DATE 5/12/99

NO.	REVISION	DATE

ADDRESS CHART
PARCEL NO. STREET ADDRESS
F-1 12441 AUTO DRIVE

SUBMISSION NAME	SECTION/AREA	PARCEL NUMBER
HOLWEEK	N/A	PARCEL F-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13459-13460	18	B-2	34	5TH	6051

WATER CODE 110 SEWER CODE 6653000

SEDIMENT & EROSION CONTROL NOTES & DETAILS FOR
COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWEEK SUBDIVISION
SITE DEVELOPMENT PLAN

TAX MAP #34
PARCEL 'F-1'

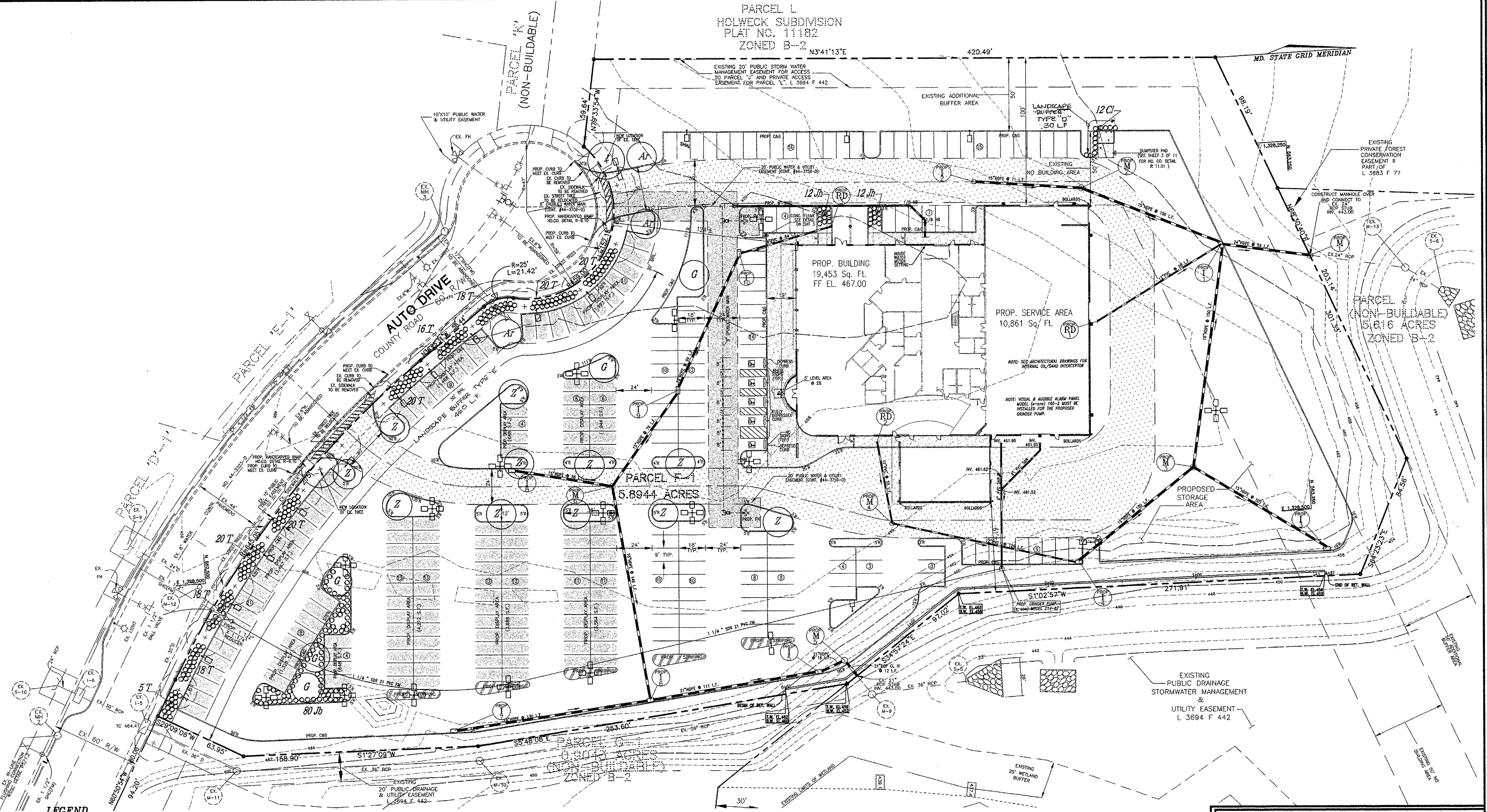
5TH ELECTION DISTRICT
REFERENCE F 98-144
HOWARD COUNTY, MARYLAND

DESIGN BY: R.H.V.
DRAWN BY: J.B.R.
CHECKED BY: R.H.V.
DATE: MARCH, 1999
SCALE: 1" = 30'
W.O. NO.: 88-74

8 SHEET OF 11

ROBERT H. VOGEL, PE #16193

PARCEL L
HOLWECK SUBDIVISION
PLAT NO. 11182
ZONED B-2



LANDSCAPING PLAN
SCALE: 1" = 30'

LEGEND

EXISTING GROUND	444
PROPOSED GRADE	468
EXISTING WATER	---
EXISTING SEWER	---
EXISTING STORM DRAIN	---
EXISTING CURB & GUTTER	---
PROPERTY LINE	---
PROPOSED C&G	---
PROP. STORM DRAIN	---
PROP. SEWER	---
PROP. WATER MAIN	---
EASEMENT	---
PROP. HEAVY DUTY PAVEMENT	---
PROP. 4" CONC. SIDEWALK	---
PROP. LIGHT DUTY PAVEMENT	---
PROP. PARKING AREA LIGHTING	---
PROP. WALL MOUNTED LIGHTING	---

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

OWNER/DEVELOPER
Jim Coleman
c/o 8817, LLC
10400 Auto Park Drive
Bethesda, Maryland 20817
Tel. No. (301)469-6600

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5/14/95
DIRECTOR DATE

[Signature] 5/14/95
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 5/13/95
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	REVISION	DATE

ADDRESS CHART
PARCEL NO. STREET ADDRESS
F-1 12441 AUTO DRIVE

SUBDIVISION NAME HOLWECK	SECTION/AREA N/A	PARCEL NUMBER PARCEL F-1
PLAT NO. 13459-13460	BLOCK NO. 18	ZONE B-2
TAX/ZONE 34	ELECT. DIST. 5TH	CENSUS TR. 6051
WATER CODE 110	SEWER CODE 6653000	

LANDSCAPE PLAN FOR COLEMAN HONDA CAR DEALERSHIP
PARCEL 'F-1' HOLWECK SUBDIVISION
SITE DEVELOPMENT PLAN

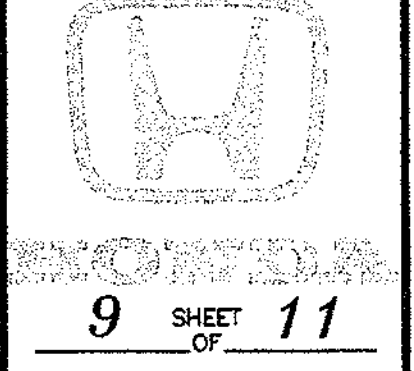
TAX MAP #34
PARCEL 'F-1'

5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

REFERENCE F 98-144
PARCEL 'F-1'

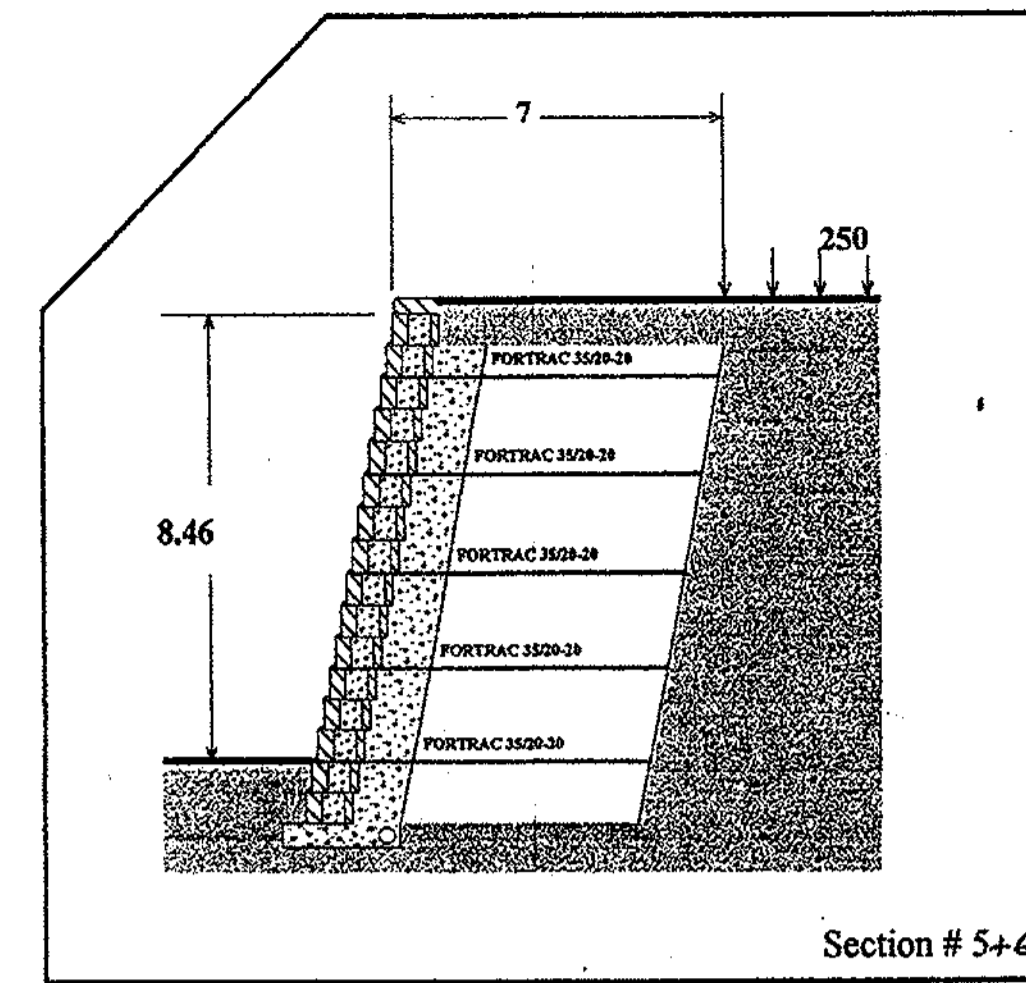
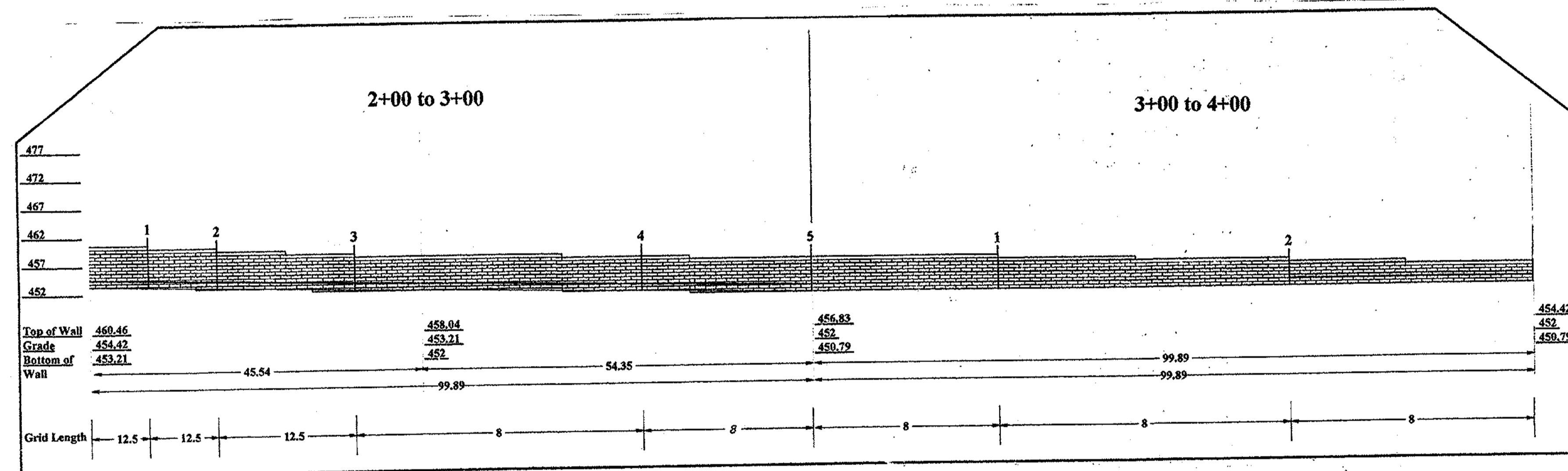
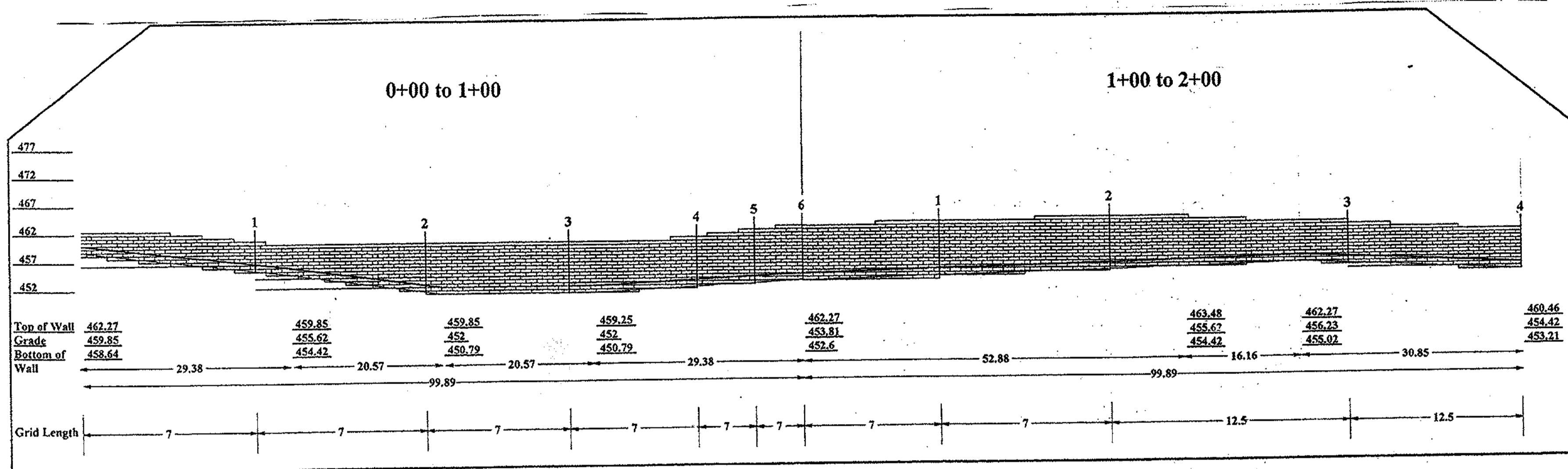


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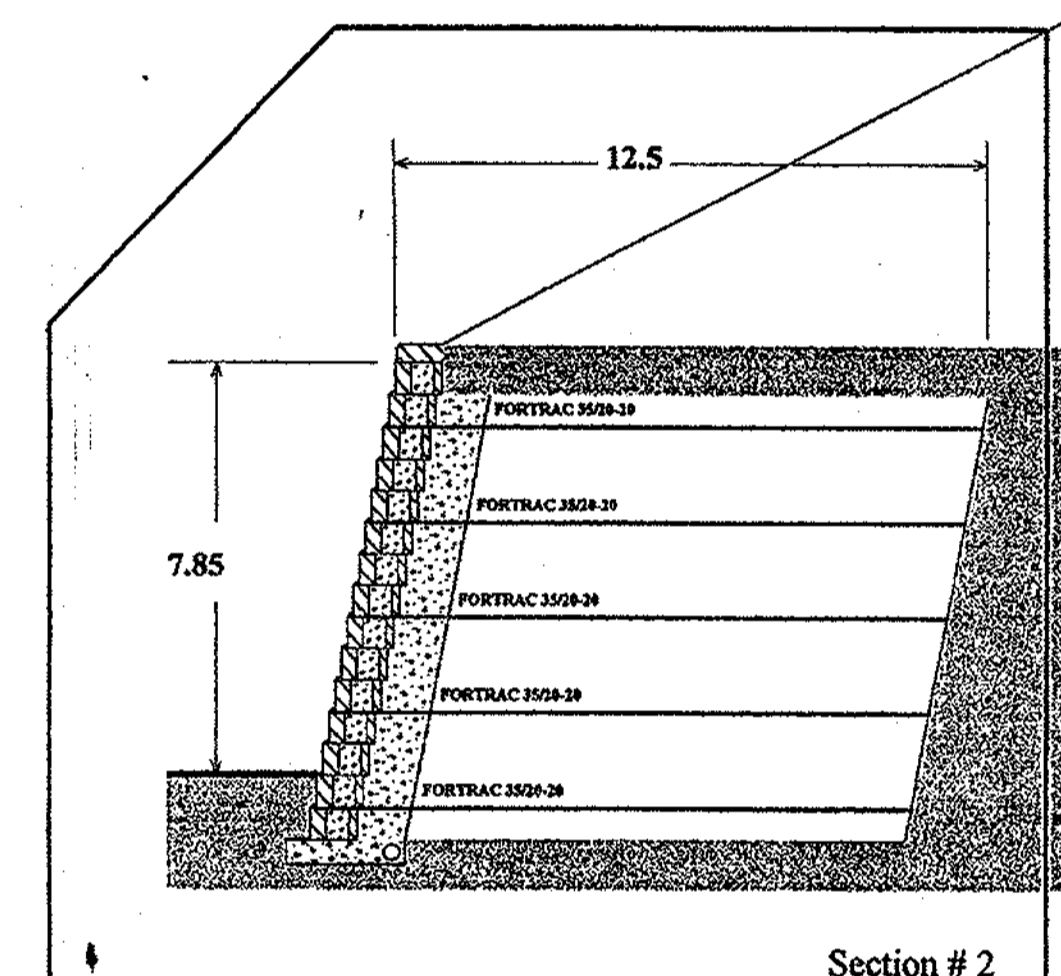


ALLAN BLOCK RETAINING WALL

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



Project Name: COLEMAN HONDA
 Location: Clarksville, MD
 Designer: DKS (2/10/99)
 Number: 0+00 to 1+00



Project Name: COLEMAN HONDA
 Location: Clarksville, MD
 Designer: DKS (2/10/99)
 Number: 1+00 to 2+00

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

Project Section # 5+6

AB Custom	Wall Height = 9.664 (ft.) Facia Height = 0.604 (ft.) Facia Depth = 0.97 (ft.) Facia Angle = 6 (deg.) Soil Bearing Capacity = 2500 (PSF)
Retained Soil	Friction Angle = 28 (deg.) Unit Weight = 120 (PCF)
Infill Soil	Friction Angle = 28 (deg.) Unit Weight = 120 (PCF)
Surcharge Details	Surcharge = 250 (PSF) Design Angle Above Wall = 0 (deg.)
Factors of Safety	Sliding = 2.23 Overturning = 4.79 Design Bearing Capacity = 1600 (PSF)
Geogrid Info.	Geogrid Type = FORTRAC 3520-20 Number of Grid Layers = 5 Length of Grid Layers = 7 (ft.)

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

Project Section # 2

AB Custom	Wall Height = 9.05 (ft.) Facia Height = 0.604 (ft.) Facia Depth = 0.97 (ft.) Facia Angle = 6 (deg.) Soil Bearing Capacity = 2500 (PSF)
Retained Soil	Friction Angle = 28 (deg.) Unit Weight = 120 (PCF)
Infill Soil	Friction Angle = 28 (deg.) Unit Weight = 120 (PCF)
Surcharge Details	Surcharge = 0 (PSF) Design Angle Above Wall = 23.82 (deg.)
Factors of Safety	Sliding = 1.91 Overturning = 5.82 Design Bearing Capacity = 1818 (PSF)
Geogrid Info.	Geogrid Type = FORTRAC 3520-20 Number of Grid Layers = 5 Length of Grid Layers = 12.5 (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 C1372-97 Standard Specifications for Segmental Retaining Wall Units.
 1.4 Delivery, Storage, and Handling
 A. Contractor shall check the materials upon delivery to assure proper material has been received.
 B. Contractor shall prevent excessive mud, wet cement, and like materials from coming in contact with the materials.
 C. Contractor shall protect the materials from damage. Damaged material shall not be incorporated in the project.
PART 2: MATERIALS
 2.1 Modular Wall Units
 A. Wall units shall be ALLAN BLOCK Retaining Wall units as produced by a licensed Manufacturer.
 B. Wall units shall have minimum 28 day compressive strength of 3000 psi (207MPa) in accordance with ASTM C1372-97. The concrete units shall have adequate freeze/thaw protection with an average absorption rate of 7.5 lb/ft³ (120 kg/m³) for uniform climates and 10 lb/ft³ (160 kg/m³) for southern climates.
 C. Exterior dimensions shall be uniform and consistent. Maximum dimensional deviations shall be .125 inch. (Do not include tapered face).
 D. Wall units shall provide a minimum of 110 pounds total weight per square foot of wall face area (1.79 kg/m²). Fill contained within the units may be considered 80% effective weight.
 E. Exterior face shall be textured. Color as specified by owner.
 2.2 Wall Back
 A. 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.
 B. Drainage material shall be the same as base material.
 C. 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.
 D. Where additional fill is required, contractor shall submit sample and specifications to the Engineer for approval.
PART 3: WALL CONSTRUCTION
 3.1 Excavation
 A. 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.
 3.2 Foundation Soil Preparation
 A. Foundation soil shall be excavated to the lines and grades as shown on the construction drawings, or as directed by the Engineer.
 B. Foundation soil shall be examined by the Engineer to assure 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.
 3.3 Base
 A. Base material shall be placed as shown on construction drawings. Top of base shall be located to allow bottom wall units to be bedded to proper depths as per wall height and specifications.
 B. Base material shall be installed on undisturbed native soils or suitable replacement fills compacted at 90% standard proctor.
 C. 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. Wallgraded sand can be used to smooth the top 1/2 inch (12.5mm) on the leveling soil.
 D. Base material shall be a 3 inch (76mm) minimum depth for walls under 4 feet and a 6 inch (150mm) minimum depth for walls over 4 feet (1.2m).
 3.4 Unit Installation
 A. 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 on the face as placed.
 B. Insure that units are in full contact with base. Proper care shall be taken to develop straight lines and smooth curves on base courses as per wall layout.
 C. All cavities in and around the base row shall be filled with base materials and compacted. Backfill front 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.
 D. Install next course of wall units on top of base row. Position blocks to be offset from corners of blocks below. Perfect "running bond" is not essential, but a 3 inch (76mm) minimum offset is recommended.
 E. 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 9 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 construction. Compact to 90% S.P. in backfill beyond consolidation zone.
 F. Install each subsequent course in like manner. Repeat procedure to the extent of wall height.
 G. Allowable construction tolerance of the wall face to 2 degrees vertically and 1 inch (25mm) in 10 feet (3m) horizontally.
 3.5 Geogrid Installation
 A. Install ALLAN BLOCK wall to designated height of first geogrid layer, backfill and compact behind wall to depth equal to designed grid length.
 B. Cut geogrid to designed embedment length and place on top of ALLAN BLOCK to back edge of lip. Extend horizontally on compacted backfill.
 C. Place next course of ALLAN BLOCK on top of grid and fill block cores with drainage fill to lock in place. Remove stock in grid and sticks to maintain tension.
 D. Lay geogrid of the proper elevation and orientation shown on the construction drawings or as directed by the Engineer.
 E. Correct orientation (length direction) of the geogrid shall be verified by the contractor.
 F. Follow manufacturer's guidelines for overlap requirements.
PART 4: FILL PLACEMENT AND BACKFILL PLACEMENT
 A. Backfill material shall be placed in lifts and compacted as specified under Section 1, Part 3.4, Unit Installation.
 B. Backfill shall be placed, spread and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid.
 C. Only hand-operated compaction equipment shall be allowed within 3 feet (1.0m) of the wall face.
 D. 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 shall be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
 E. Rubber-tired 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.
 F. The backfill shall be compacted to achieve 90% standard proctor. Cut tests 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.

Specification Guidelines: Geogrid Reinforcement Systems

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 Section of Related Work
 Section 1: ALLAN BLOCK Modular Retaining Wall Systems.
 1.3 Reference Standards
 See specific geogrid manufacturer's reference standards.
 1.4 Delivery, Storage, and Handling
 A. Contractor shall check the geogrid upon delivery to assure that the proper material has been received.
 B. Geogrid shall be stored above 20° F (2° C).
 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
 A. Geogrid products shall be of high density polyethylene or polypropylene encapsulated in a protective coating specifically fabricated for use as a soil reinforcement material.
 B. Concrete retaining wall units are as detailed on the drawings and shall be ALLAN BLOCK Retaining Wall Units.
 C. Drainage material is free draining granular material as defined in section: Modular Concrete Retaining Wall Systems as "Drainage Material".
 D. Backfill is the soil used as fill for the reinforced soil mass.
 E. Foundation soil is the in-situ soil.
 2.2 Products
 A. 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. A manufacturer's product shall be approved by the engineer.
PART 3: WALL CONSTRUCTION
 3.1 Foundation Soil Preparation
 A. Foundation soil shall be excavated to the lines and grades as shown on the construction drawings, or as directed by the Engineer.
 B. Foundation soil shall be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength.
 C. Over-excavated areas shall be filled with approved compacted backfill material.
 D. Foundation soil shall be proof rolled prior to fill and geogrid placement.
 3.2 Wall Construction
 A. Wall construction shall be as specified under Section 1, Part 3, Wall Construction.
 3.3 Geogrid Installation
 A. Install ALLAN BLOCK wall to designated height of first geogrid layer, backfill and compact behind wall to depth equal to designed grid length.

TECHNICAL SUPPORT
 For engineering and technical assistance on projects that fall beyond the scope of these guidelines, contact the ALLAN BLOCK CORPORATION at 1-800/899-5300.

VOGEL & ASSOCIATES
 ENGINEERS SURVEYORS PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.8828 Fax 410.465.3968

HIGHEST CROSS SECTIONS FOR PROJECT SHOWN.
 COMPLETE DESIGN PACKAGE WILL BE AVAILABLE
 BEFORE START OF CONSTRUCTION.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] DATE 5/14/99
 DIRECTOR
 [Signature] DATE 5/14/99
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] DATE 5/13/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	REVISION	DATE

ADDRESS CHART
 PARCEL NO. STREET ADDRESS
 F-1 12441 AUTO DRIVE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
HOLWECK	N/A	PARCEL F-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
13459-13460	18	B-2	34	5TH	6051

WATER CODE 110 SEWER CODE 8683000

RETAINING WALL DETAILS FOR
COLEMAN HONDA CAR DEALERSHIP
 PARCEL 'F-1' HOLWECK SUBDIVISION
 SITE DEVELOPMENT PLAN
 TAX MAP #34 PARCEL 'F-1' 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND REFERENCE F 98-144

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

HONDA

11 SHEET OF 11