

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 DRAWING.
 - MISS UTILITY: 1-800-257-7777
 - HOWARD COUNTY BUREAU OF UTILITIES: 313-2368
 - 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
- PROJECT BACKGROUND:
 - LOCATION : ELLICOTT CITY, MARYLAND; TAX MAP 25, PARCELS A-1 THRU E-1
 - ZONING : POR
 - SUBDIVISION : VILLAGE CREST - PARCEL C-1, D-1 AND E-1, A SUBDIVISION OF PARCEL '4' & A RESUBDIVISION OF NON-BUILDABLE PARCEL 'A-3'.
 - SECTION/AREA : N/A
 - LIMIT OF DISTURBANCE, AREA : 232952.48 SF OR 5.35 AC.
 - DPZ. REF. P-00-07-S-99-18, S-00-05-F-01-60, P-01-20, F-02-47, F-02-112, F-04-077, **SDP-17-007**.
- 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, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS 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 INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS
- 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.
- 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 SOIL TEST PRIOR TO CONSTRUCTION.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C'.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PERFORMED BY FISHER COLLINS & CARTER, INC. DATED DECEMBER 21, 1998.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AERIAL PHOTOGRAMETRIC SURVEY PERFORMED BY WINGS AERIAL MAPPING COMPANY DATED MARCH, 1995.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- ALL PAVING PER DETAILS.
- CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- PUBLIC WATER AND SEWER AVAILABLE THROUGH CONTRACT NO.14-3855-D.
- ALL EXTERIOR SITE LIGHTING TO CONFORM TO SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- BUILDING TO HAVE INSIDE WATER METER SETTING.
- APFO TRAFFIC STUDY NOT REQUIRED FOR THIS PROJECT. PROPOSED SITE IS GREATER THAN 1 MILE TO CLOSEST MAJOR COLLECTOR INTERSECTION. THE DEVELOPER IS PROPOSING HOUSING FOR ELDERLY FOR VILLAGE CREST SUBDIVISION. THE SITE DEVELOPMENT OF PROPOSED PRIVATE COMMUNITY RECREATION CENTER. PROPOSED PRIVATE COMMUNITY RECREATION CENTER INCLUDES SWIMMING POOLS, TENNIS COURTS, SMALL EXERCISE ROOM, CONFERENCE ROOM AND COMMUNITY MEETING ROOM. THESE ARE SEASONAL AND ALTERNATE USES OF FACILITIES.
 - PROPOSED USE: PRIVATE COMMUNITY RECREATION CENTER OPEN TO THE MEMBERS THAT MUST BE RESIDENTS AND/OR HOME OWNERS IN THE SUBDIVISIONS OF VILLAGE CREST AND AUTUMN VIEW SECTIONS (3 & 4, 5) AND WORTHINGTON FIELDS. WORTHINGTON RESERVE, AUTUMN RIVER AND THEIR GUESTS.
- STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED UNDER F-02-47 AND SDP-02-94. A WET POND (POND#1) TO PROVIDE CPV AND WQV AND A STONE INFILTRATION FACILITY TO PROVIDE RE. THE FACILITIES ARE PRIVATELY OWNED AND PRIVATELY MAINTAINED BY THE H.O.A.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- ANY PROPOSED FOOD FACILITIES AND SWIMMING POOLS ARE SUBJECT TO PLAN REVIEW AND APPROVAL BY THE HOWARD COUNTY HEALTH DEPT. PRIOR TO CONSTRUCTION.
- FOREST CONSERVATION OBLIGATIONS FOR THIS SITE ARE PROVIDED FOR UNDER F-02-47.
- THE PREVIOUS SITE DEVELOPMENT PLAN (SDP-02-02) FOR THIS SITE WAS DENIED BY A DPZ "PLAN DENIAL" LETTER DATED 06/27/03.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. FOREST MANAGEMENT PRACTICES AS DESCRIBED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE PERMITTED.
- ACCESS TO WATER HAS BEEN PROVIDED UNDER CON#14-404-D & CON#14-404-D. ACCESS TO SEWER HAS BEEN PROVIDED UNDER CON#14-404-D.

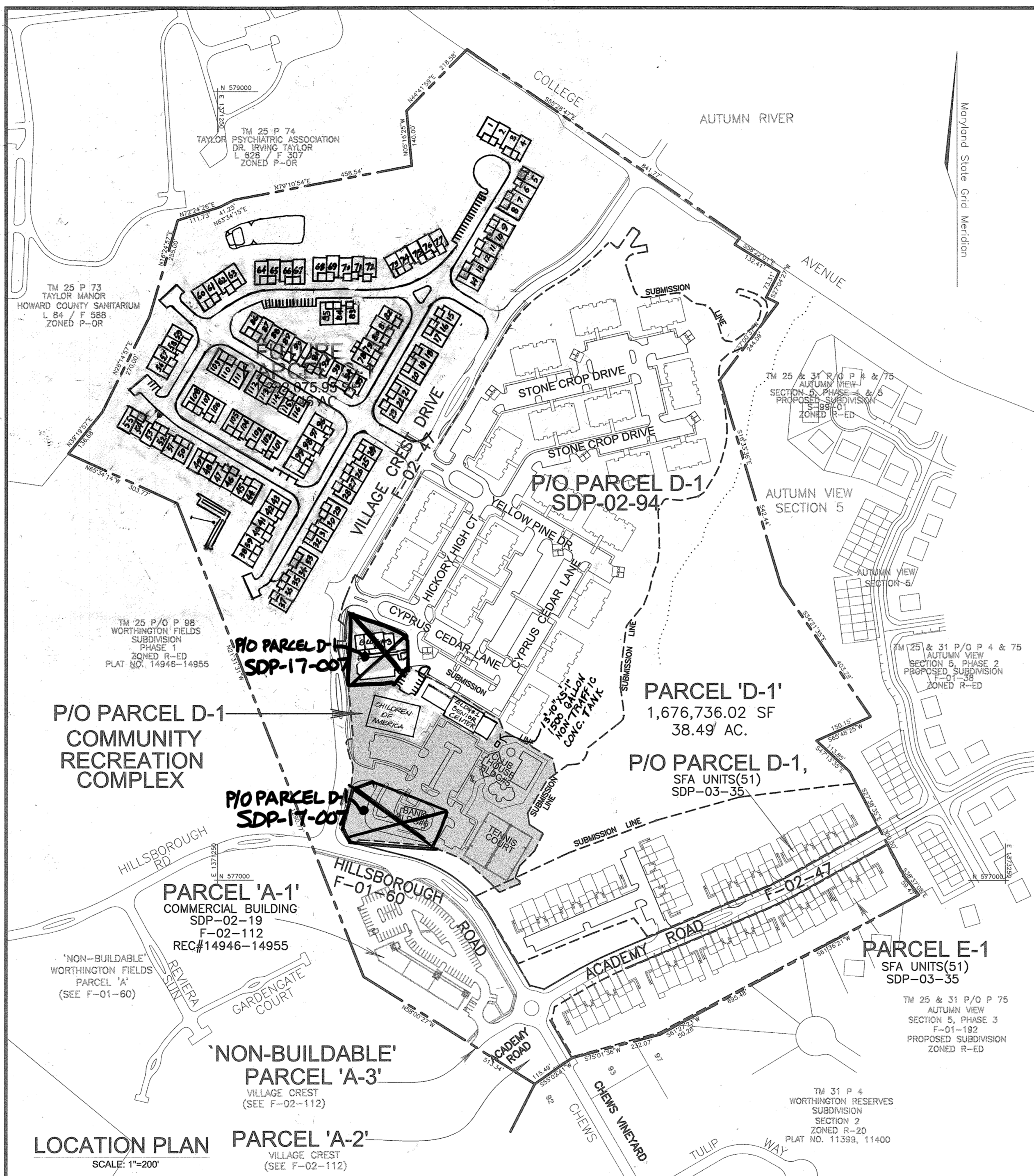
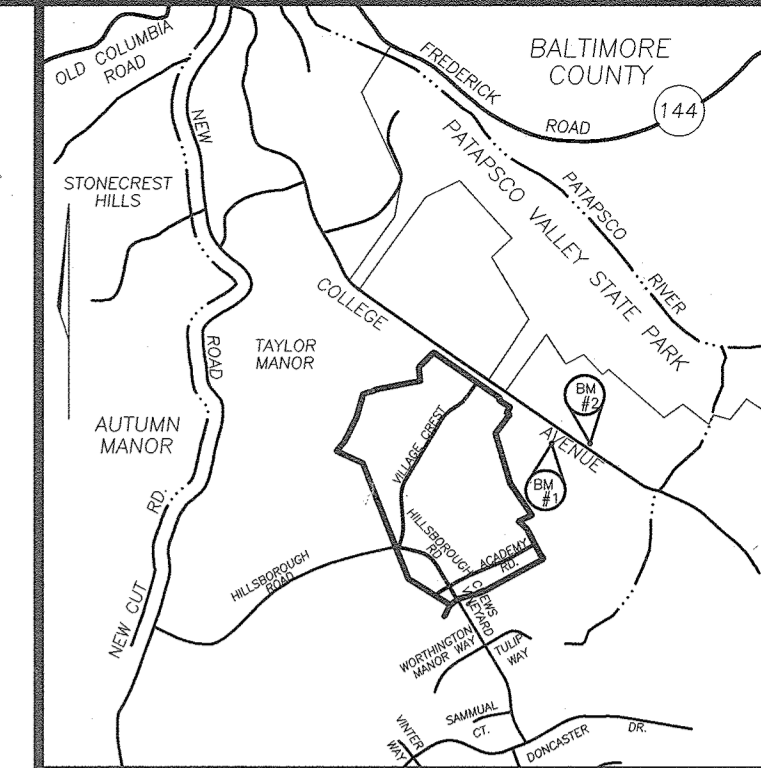
SITE DEVELOPMENT PLAN

VILLAGE CREST

PART OF PARCEL D-1

COMMUNITY RECREATION COMPLEX

SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 9
SITE AND UTILITY PLAN	2 OF 9
GRADING AND SEDIMENT CONTROL PLAN	3 OF 10
SITE DETAILS I	4 OF 10
SITE DETAILS II	5 OF 10
PROFILES AND DETAILS I	6 OF 10
PROFILES AND DETAILS II	7 OF 10
SEDIMENT AND EROSION CONTROL DETAILS	8 OF 10
STORM DRAIN DRAINAGE AREA MAP	9 OF 10
LANDSCAPE PLAN	10 OF 10



SITE ANALYSIS
 AREA OF TRACT: 73.84 AC.
 AREA OF SITE: PARCEL 'D-1' : 38.49 AC.
 ZONED: POR
 PROPOSED USE: COMMUNITY RECREATION COMPLEX
 TOTAL BUILDING COVERAGE: **22,402 SF.**
 TENNIS COURT: 16615.20 SF.
 POOL DECK: 17744.99 SF.
 SIDEWALK: 9178 SF.
 DUMPSTER: 476 SF.
 PAVING: 60,054 SF.
 AREA OF DISTURBANCE: 217,364.44SF. (4.99 AC.)
 AREA OF SUBMISSION: 214,750.80 SF. (4.93 AC.)

RECREATIONAL OPEN SPACE
 POOL: 17744.99 SF.
 POOLHOUSE: 2611.00 SF.
 TENNIS COURT: 16615.20 SF.
 SENIOR CENTER SPACE: 13,088 SF.
TOTAL = 15,069.19 SF. (1.149 AC.)

VICINITY MAP
 SCALE: 1"=2000'
BENCHMARKS
 BENCHMARK NO. 1: COUNTY CONTROL #304400R
 3/4" REBAR 0.8' BELOW SURFACE
 N. 578233.92, E. 1373142.33
 ELEV. = 374.389
 BENCHMARK NO. 2: COUNTY CONTROL #304400R
 3/4" REBAR 0.6' BELOW SURFACE
 N. 578128.03, E. 1373460.71
 ELEV. = 362.575

BUILDING TABULATIONS
 SENIOR CENTER (BLDG#1): 2 LEVELS
FIRST LEVEL = 10,411 SF (SENIOR CENTER SPACE)
SECOND LEVEL = 2,687 SF (SENIOR CENTER SPACE)
SECOND LEVEL = 4,888 SF (MEDICAL OFFICE SPACE)
TOTAL SECOND LEVEL = 7,575 SF

PARKING SPACE TABULATIONS
 SENIOR CENTER (BLDG.#1): 2 LEVELS
 3 SPACES PER 1,000 SF @ 13,088 SF = 40 SPACES REQUIRED
MEDICAL OFFICE - 5 SPACES PER 1,000 SF. @ 4,888 SF = 25 SPACES REQUIRED (SECOND LEVEL SENIOR CENTER BLDG.)
TOTAL 65 SPACES REQUIRED

CHILDREN DAYCARE CENTER (BLDG#4): 10,000 SF.
 OVERHANG: 144 SF
CLUB HOUSE/SWIMMING POOL (BLDG#5):
 MAIN POOL: 3823 SF.
 POOL: 1855 SF.
 KIDDE POOL: 314 SF.
 LEVELS: 2
 USE:
 : POOL CLUB HOUSE LEVEL1
 : POOL CLUB HOUSE LEVEL2
 GROSS AREA:
 : POOL CLUB HOUSE LEVEL1: 1991 SF.
 : POOL CLUB HOUSE LEVEL2: 1991 SF.
 USABLE AREA OPEN TO PUBLIC:
 : POOL CLUB HOUSE LEVEL1: 1,009 SF.
 : POOL CLUB HOUSE LEVEL2: 1,602 SF.
 COVERED OVERHANG AREA:
 : POOL CLUB HOUSE LEVEL1: 0 SF.
 : POOL CLUB HOUSE LEVEL2: 0 SF.

CHILDREN DAYCARE CENTER (BLDG#4):
 3 SPACES PER 1,000 SF @ 10,000 SF = 30 SPACES REQUIRED
CLUB HOUSE/SWIMMING POOL (BLDG#5): 1 SPACE PER 7 PEOPLE ALLOWED IN POOL
 1 PERSON PER 12 S.F. @ 5,992 S.F. = 499 PEOPLE / 7 = 72 SPACES REQ.
 COMMUNITY ROOM 10 SPACES PER 1000 SF @ 460 SF = 5 SPACES REQ.
 EXERCISE ROOM 10 SPACES PER 1000 S.F. @ 460 S.F. = 5 SPACES REQ.
TOTAL 82 SPACES REQUIRED

TENNIS COURT : 6 SPACES PER COURT AT 2 COURTS = 12 SPACES REQ.
TOTAL = 189 SPACES REQUIRED
100 SPACES*

THIS SDP THE NUMBER OF PARKING SPACES (SDP-04-025) PROVIDED IN THE RECREATION COMPLEX
TOTAL NUMBER OF PARKING SPACES PROVIDED IN THE RECREATION COMPLEX **217 SPACES***
 HANDICAPPED SPACES REQUIRED = 7
 HC. ACCESSIBLE SPACES PROVIDED = 3 SPACES FROM ELDERLEY HOUSING (SDP-02-94) (LOCATED @ SENIOR BUILDING)
 HC. ACCESSIBLE SPACES PROVIDED = 7 SPACES FROM THIS COMPLEX
TOTAL = 10 HC. ACCESSIBLE SPACES PROVIDED (7 STD./2 VAN)

OWNER
 TAYLOR FAMILY
 LIMITED PARTNERSHIP A
 56 LAND DESIGN & DEVELOPMENT
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 ATTN: MR. DONALD R. REUWER
 PHONE: (410) 480-9105

DEVELOPER
 LAND DESIGN & DEVELOPMENT
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 ATTN: MR. DONALD R. REUWER
 PHONE: (410) 480-9105

NO.	REVISION	DATE
1	REVISE DAYCARE BUILDING (BLDG#4)	7/22/2009
2	RESITED/REDESIGNED THE SENIOR CENTER AND BLDG #3.	1/10/2005

ADDRESS CHART	STREET ADDRESS
PARCEL NO.	
D-1 (SENIOR CENTER - BLDG#1)	8165 CYPRIUS CEDAR LANE
D-1 (DAYCARE CENTER BLDG#4)	8020 VILLAGE CREST DRIVE
D-1 (CLUB HOUSE BLDG#5)	8010 VILLAGE CREST DRIVE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
VILLAGE CREST	N/A	D-1

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	GENUSUS TR.
16104-16109	20	POR	25	2ND	6027

WATER CODE G-01 SEWER CODE 1253100

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE: 8/9/04

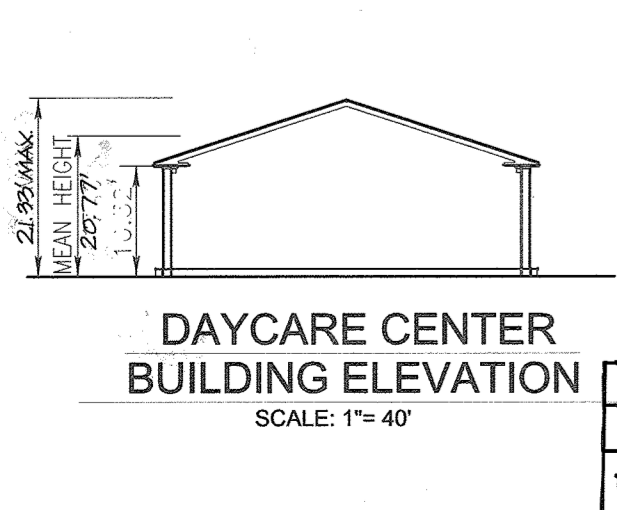
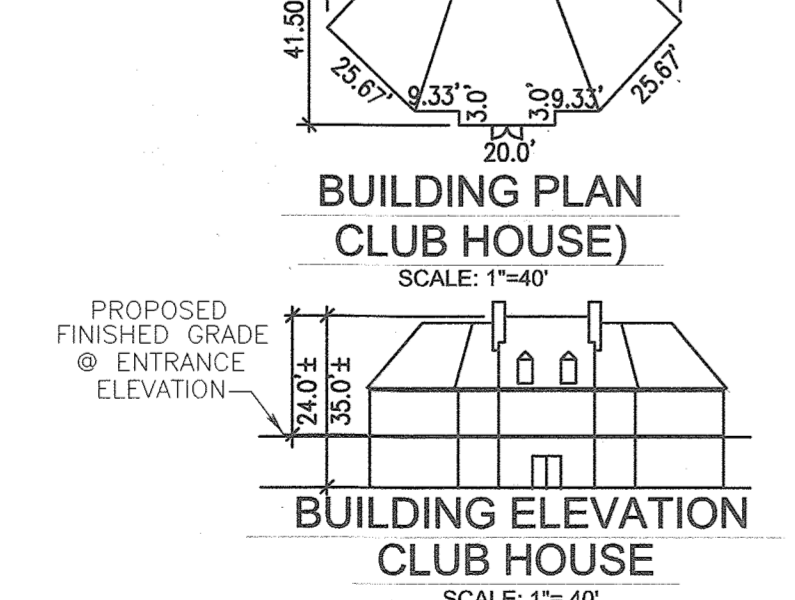
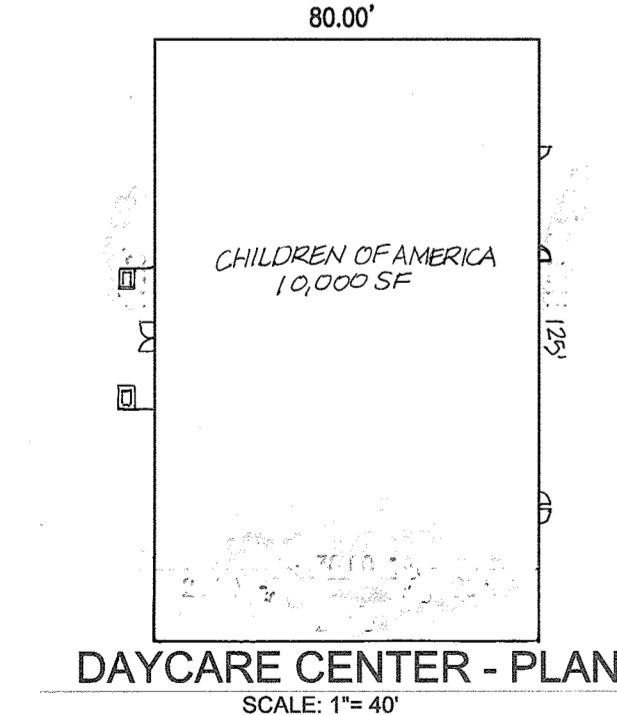
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 3/15/04

 DIRECTOR DATE: 3/15/04

COVER SHEET
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX
 TAX MAP #25 BLOCK 20
 2ND ELECTION DISTRICT
 PARCEL P/O 98
 HOWARD COUNTY, MARYLAND

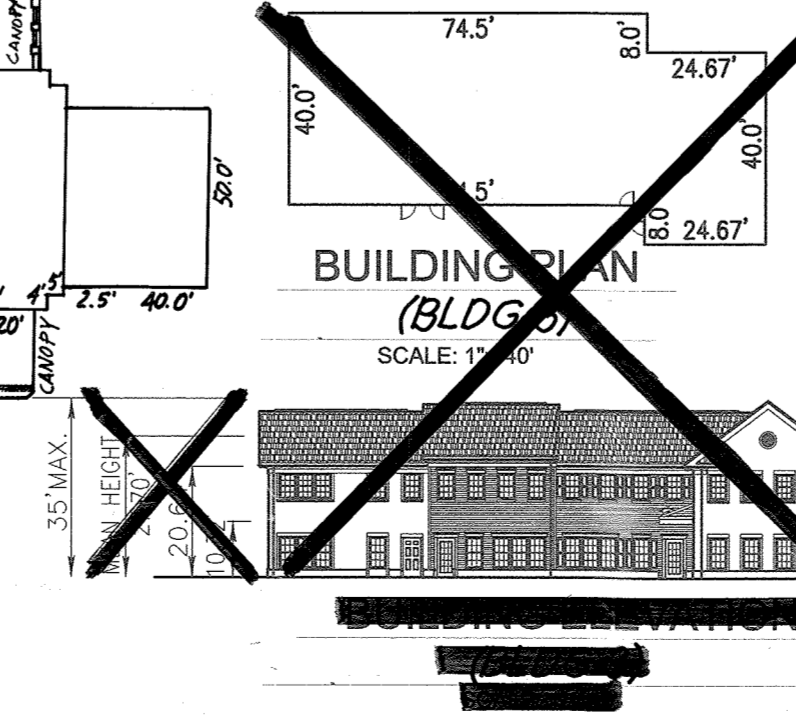
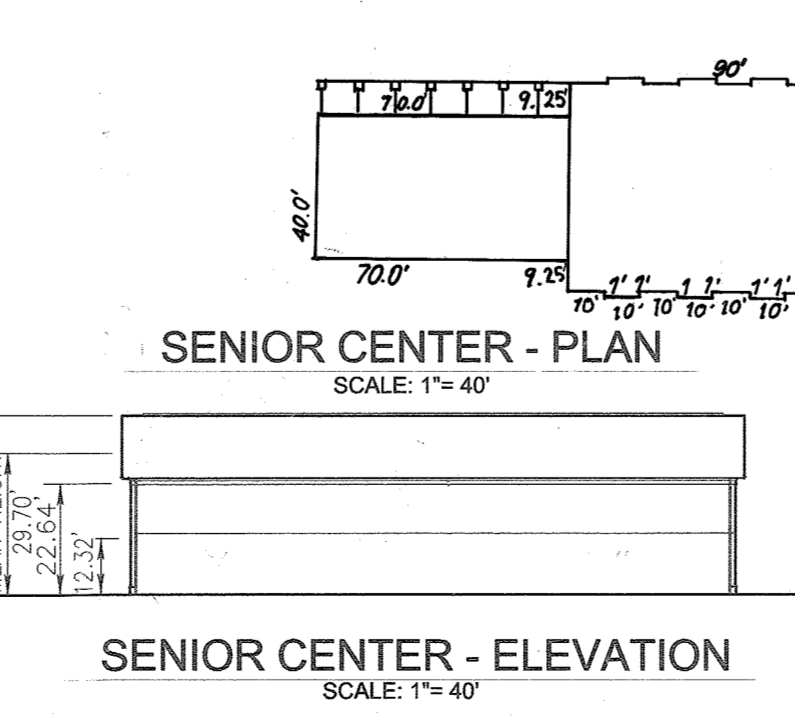
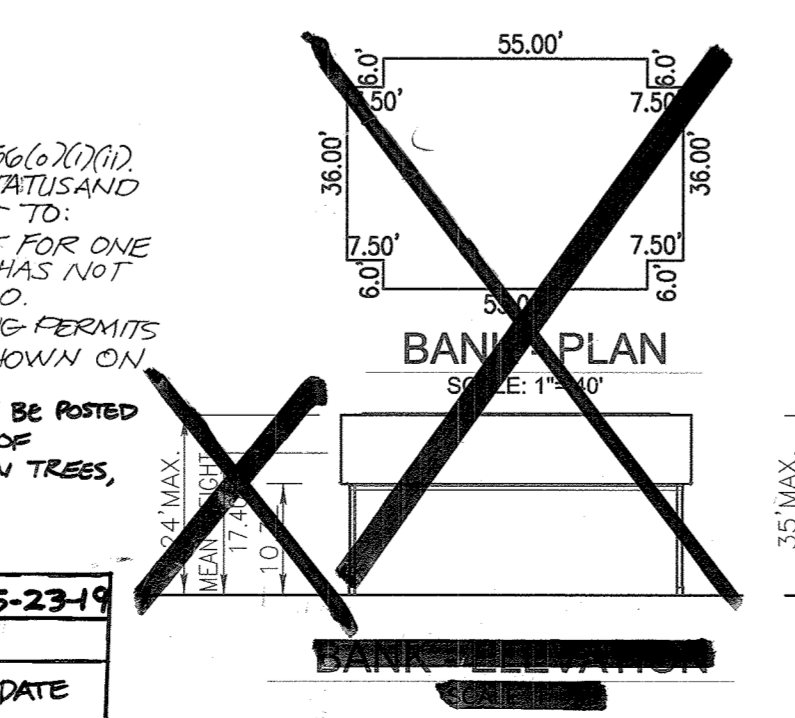
FREDERICK WARD ASSOCIATES, INC.
 ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
 www.frederickward.com

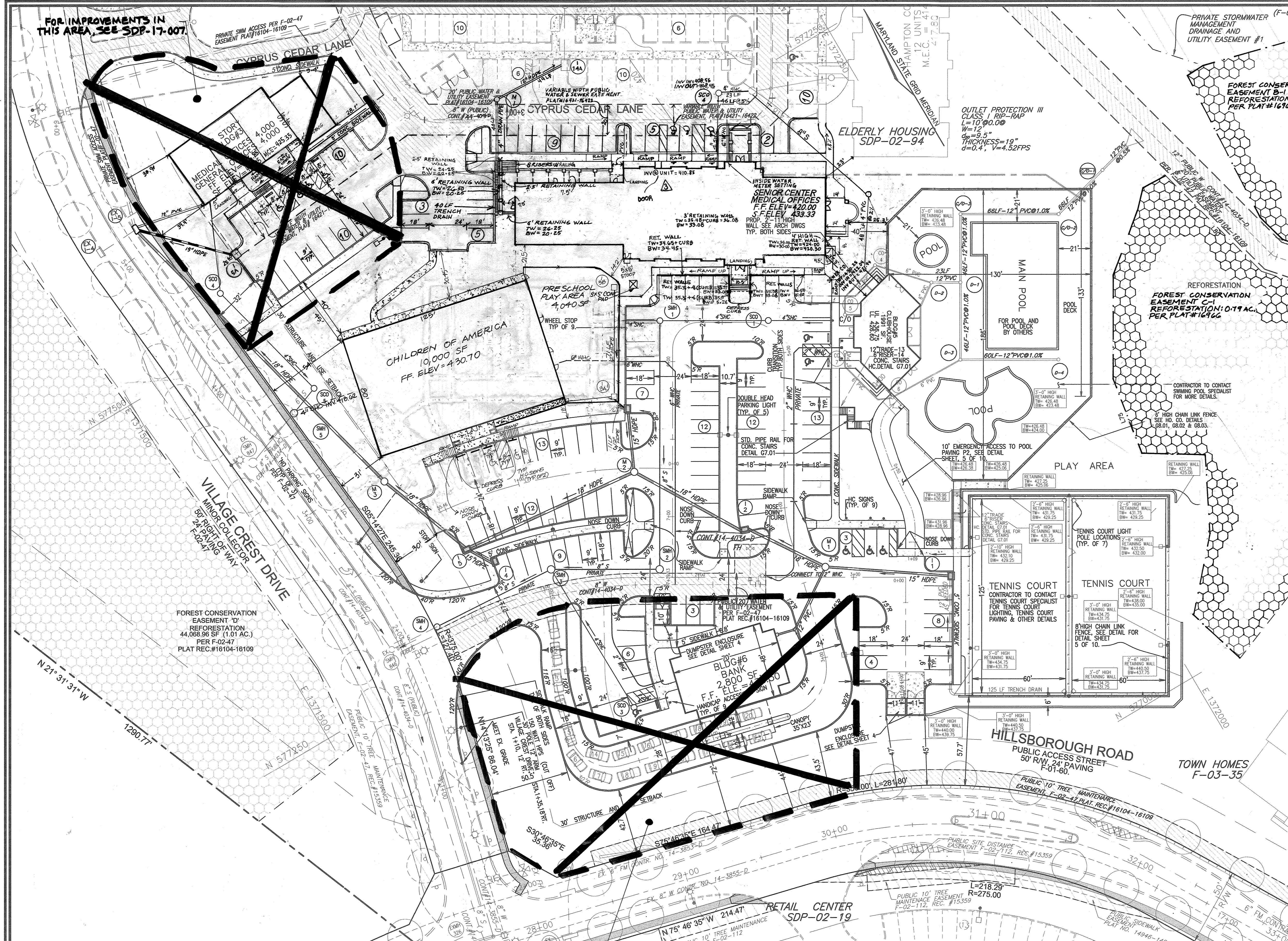
DESIGN BY: RJ
 DRAWN BY: RJW
 CHECKED BY: RHV
 DATE: DEC. 2003
 SCALE: AS SHOWN
 W.O. NO.: 2018121.04
 1 SHEET OF 11



32. WP-09-154 APPROVED MAY 5, 2009 TO WAIVE SECTIONS 16.196(a)(2), 16.196(a)(7)(ii) AND 16.196(a)(7)(iii) TO REACTIVATE SDP-04-25 TO APPROVED PLAN STATUS AND EXTEND BUILDING PERMIT DEADLINES, SUBJECT TO:
 1) DEVELOPER SHALL APPLY FOR A BUILDING PERMIT FOR ONE OF THE BUILDINGS SHOWN ON SDP-04-025 THAT HAS NOT BEEN CONSTRUCTED ON OR BEFORE 05/09/10.
 2) DEVELOPER SHALL APPLY FOR ALL THE BUILDING PERMITS FOR ALL OF THE REMAINING DEVELOPMENT SHOWN ON SDP-04-25, ON OR BEFORE 05/09/11.
 33. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS A PART OF THE GRADING PERMIT IN THE AMOUNT OF \$16,770.00 FOR 31 SHADE TREES, 45 EVERGREEN TREES, AND 24 SHRUBS.

NO.	REVISION	DATE
5	REVISE THE PLAN TO REMOVE ITEMS THAT WERE CONSTRUCTED UNDER SDP-17-007	5-23-19





NOTES

1. ALL CURB RADII ARE 5 FEET UNLESS NOTED OTHERWISE. ALL SIDEWALK RADII ARE 2 FEET UNLESS NOTED OTHERWISE.

LEGEND

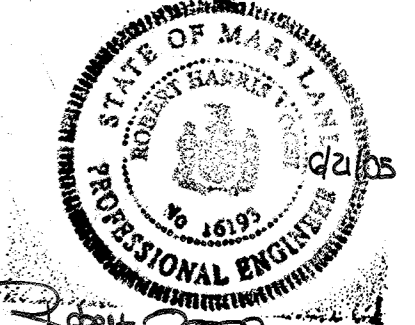
- EXISTING TREES TO REMAIN
- EXISTING TREES TO REMAIN
- LIGHT POLES
- PARKING LIGHT
- STREET LIGHT
- BOLLARD

FOREST CONSERVATION EASEMENT

CURVE TABLE		
CURVE	LENGTH	RADIUS
C1	148.03	982.66

LINE TABLE		
LINE	LENGTH	BEARING
L68	244.44	S88°29'45"W
L69	24.88	N16°31'31"W
L70	16.03	N16°00'50"W
L71	52.72	N41°13'37"E
L72	51.26	N27°02'19"E
L73	41.30	N57°35'53"W
L74	51.43	N09°55'14"E
L75	65.97	N30°24'14"E
L76	45.24	N51°00'14"E
L77	14.53	N45°09'47"E
L78	17.14	S82°10'33"E
L81	24.94	N71°46'37"E
L82	45.16	N32°18'50"E
L83	26.93	S62°26'49"E
L84	14.07	M47°18'58"E
L85	56.60	N09°44'11"E
L86	31.45	N45°59'56"E
L87	12.28	S86°30'20"E
L88	38.30	S55°35'08"E
L89	31.52	S80°47'20"E
L90	41.43	S42°11'18"E
L91	45.46	S27°09'16"E
L92	23.39	S87°16'41"W
L93	43.03	S83°28'35"W
L94	41.12	S71°00'30"W
L95	82.09	S63°52'44"W
L80	87.97	N14°26'54"W

PLAN
SCALE: 1"=30'



NO.	REVISION	DATE
3	ADD NEW DOORS	1/11/05
2	RESITED/REDESIGNED THE SENIOR CENTER AND BLDG. #3	1/10/2005

OWNER
TAYLOR FAMILY
LIMITED PARTNERSHIP A
C/O LAND DESIGN & DEVELOPMENT
8000 MAIN STREET
ELLCOTT CITY, MD 21043
ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

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SITE AND UTILITY PLAN
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX

TAX MAP #25 BLOCK 20
2ND ELECTION DISTRICT

PARCEL P/O 98
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS |

7125 RIVERWOOD DRIVE
COLUMBIA, MARYLAND 21046-2354
410-720-6900
410-720-6226 fax

www.frederickward.com

DESIGN BY: RJ
DRAWN BY: RJ
CHECKED BY: RHV
DATE: FEB. 2004
SCALE: AS SHOWN
W.O. NO.: 2018121.04

2 SHEET OF 11

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard C. ... 3/1/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE

Conde ... 3/15/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

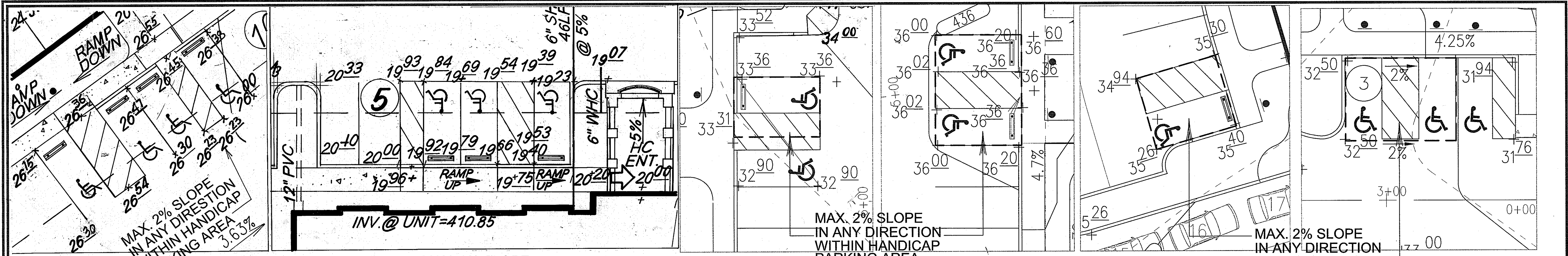
Robert H. Vogel 2/15/04
DIRECTOR DATE

NO.	REVISION	DATE
5	REVISE THE PLAN TO REMOVE ITEMS THAT WERE CONSTRUCTED UNDER SDP-17-007	6-23-09
4	REVISE DAYCARE BUILDING (BLDG #4) 7/23/09	
1	ADDING 1500 GALLON CONC. TANK	3-15-05

FOR IMPROVEMENTS IN THIS AREA, SEE SDP-17-007.

FOR IMPROVEMENTS IN THIS AREA, SEE SDP-17-007.

M:\PROJECTS\15\2018121\ENGR\1500\1500.dwg (p001) SDP\025PLAN.dwg Wed Feb 11 10:32:16 2004 RDM



PARKING @ BLDG #3
SCALE: 1"=10'

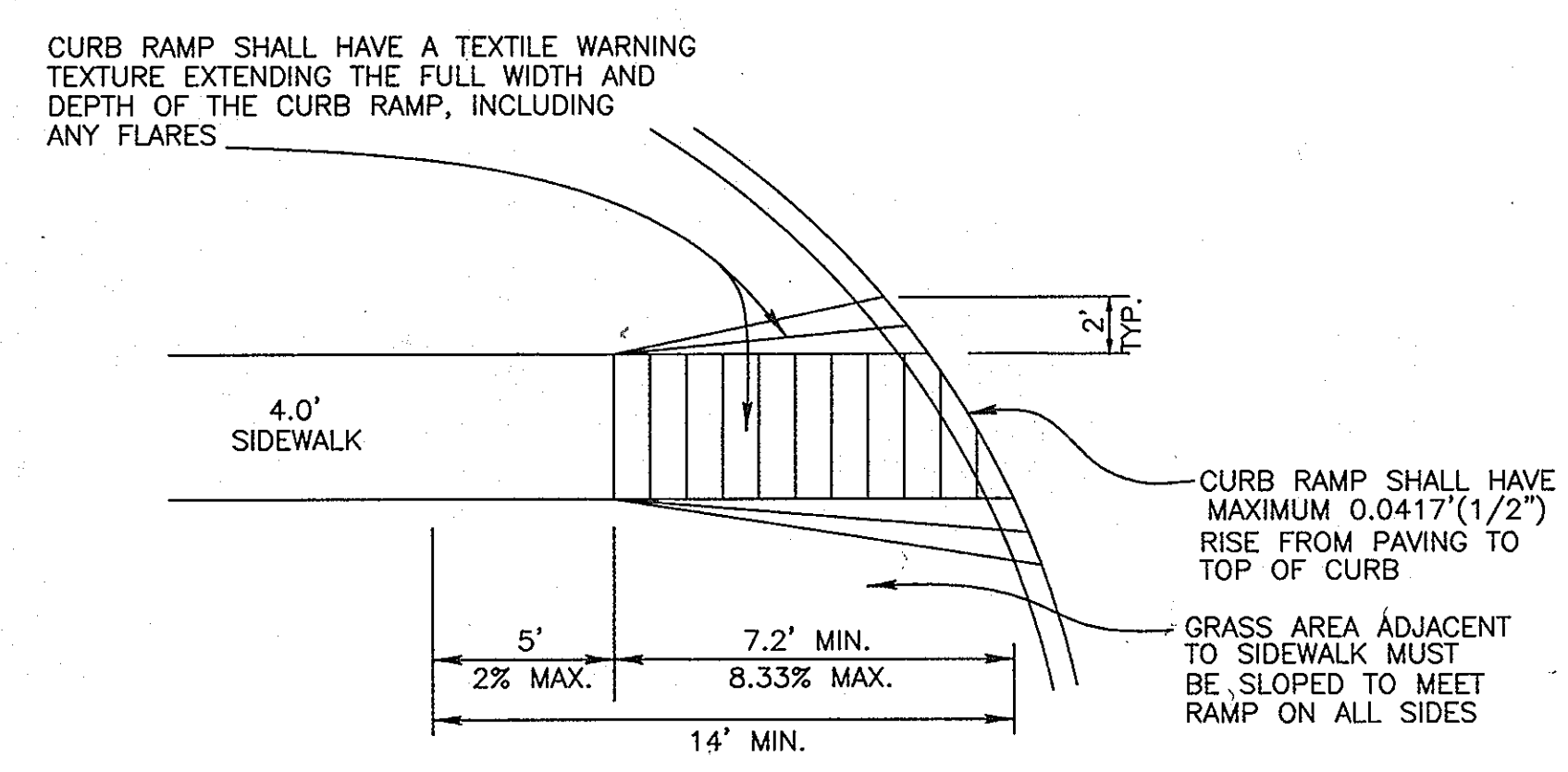
PARKING @ BLDG #1
SCALE: 1"=10'

PARKING @ DAYCARE CENTER
SCALE: 1"=10'

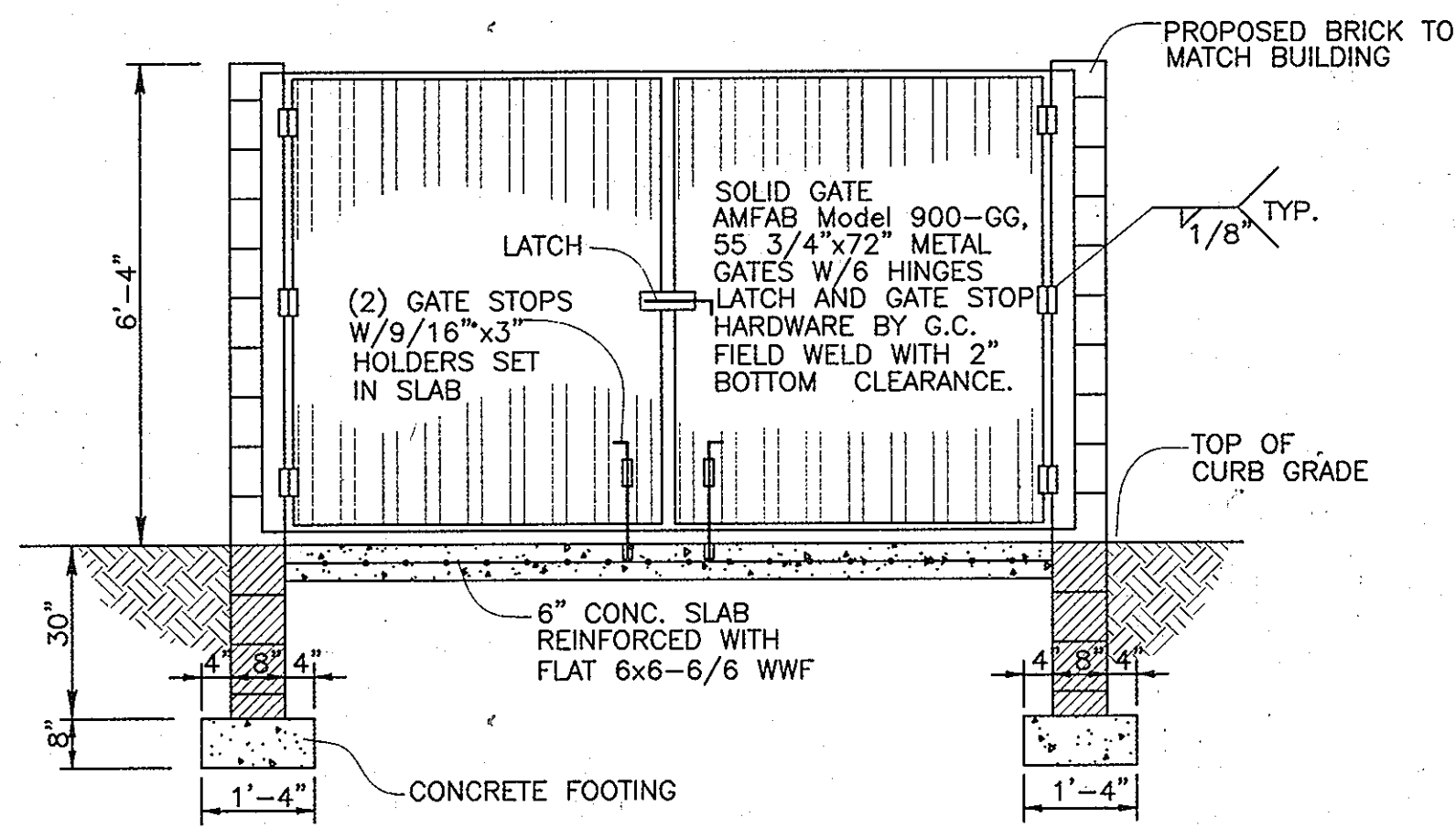
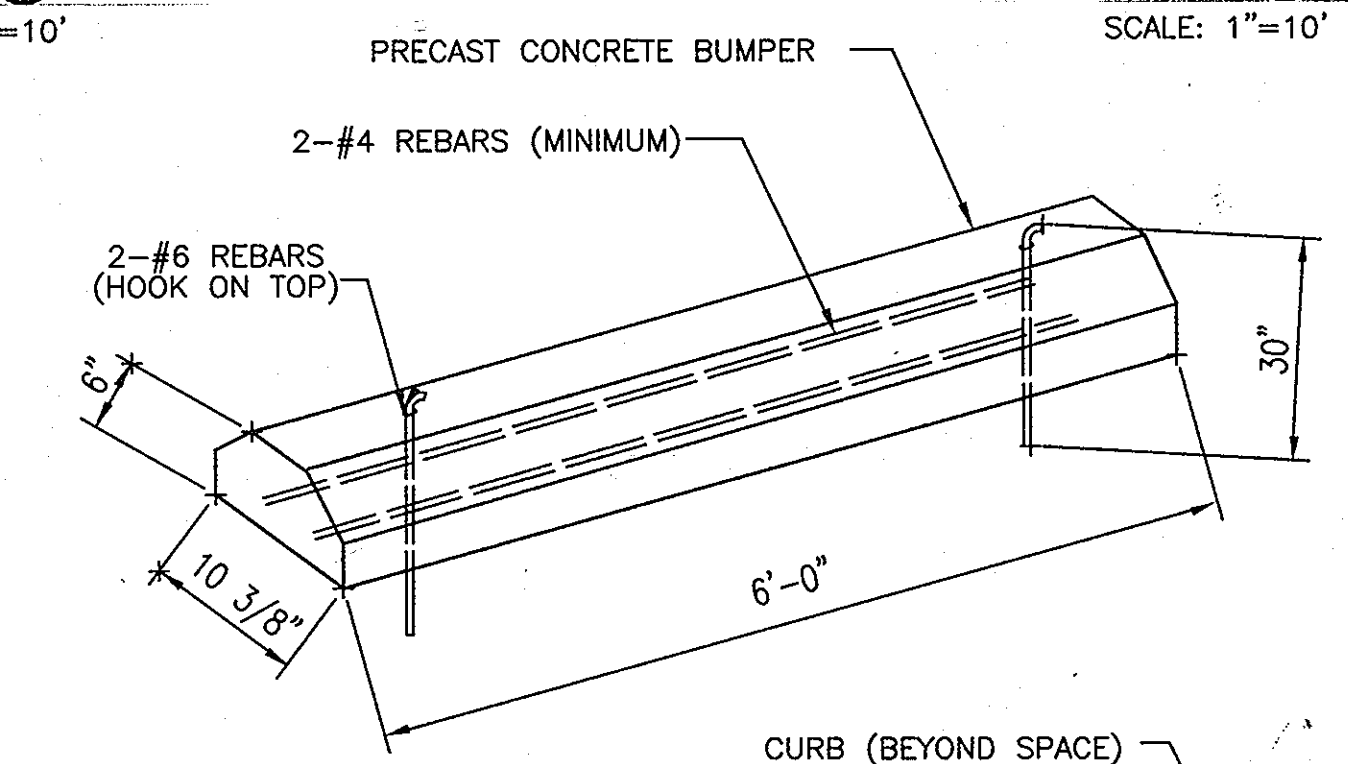
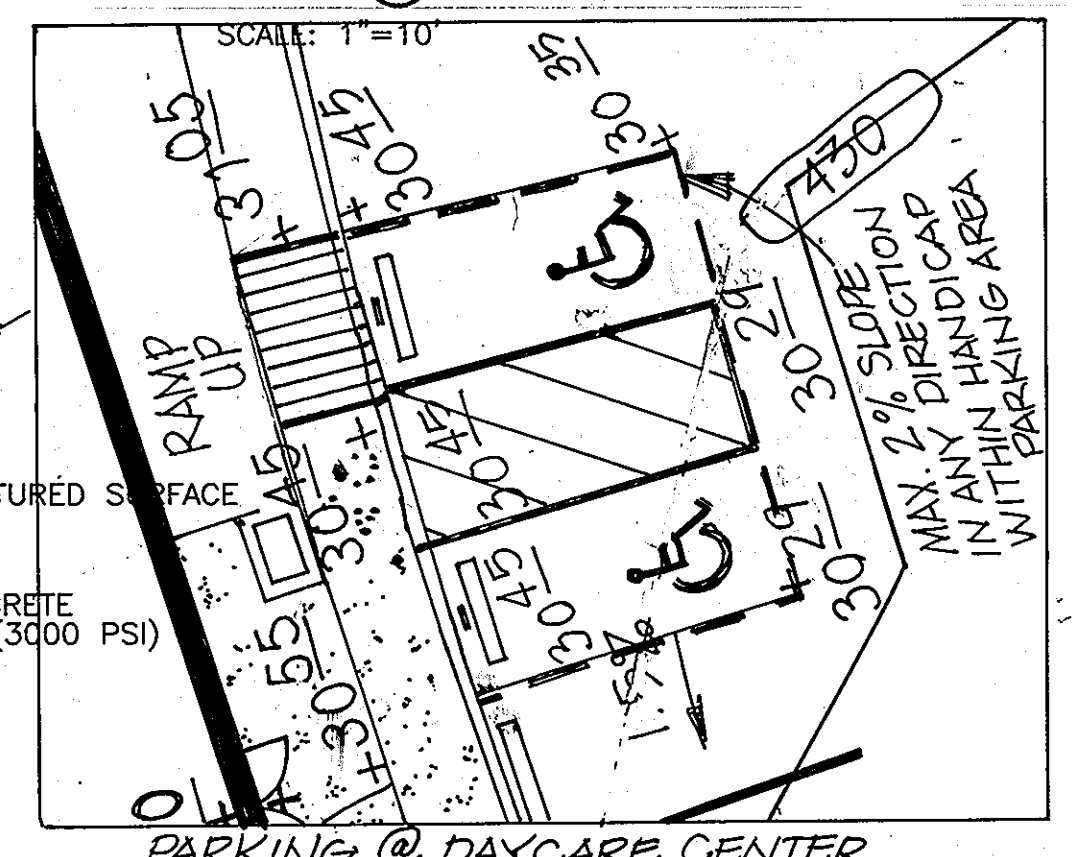
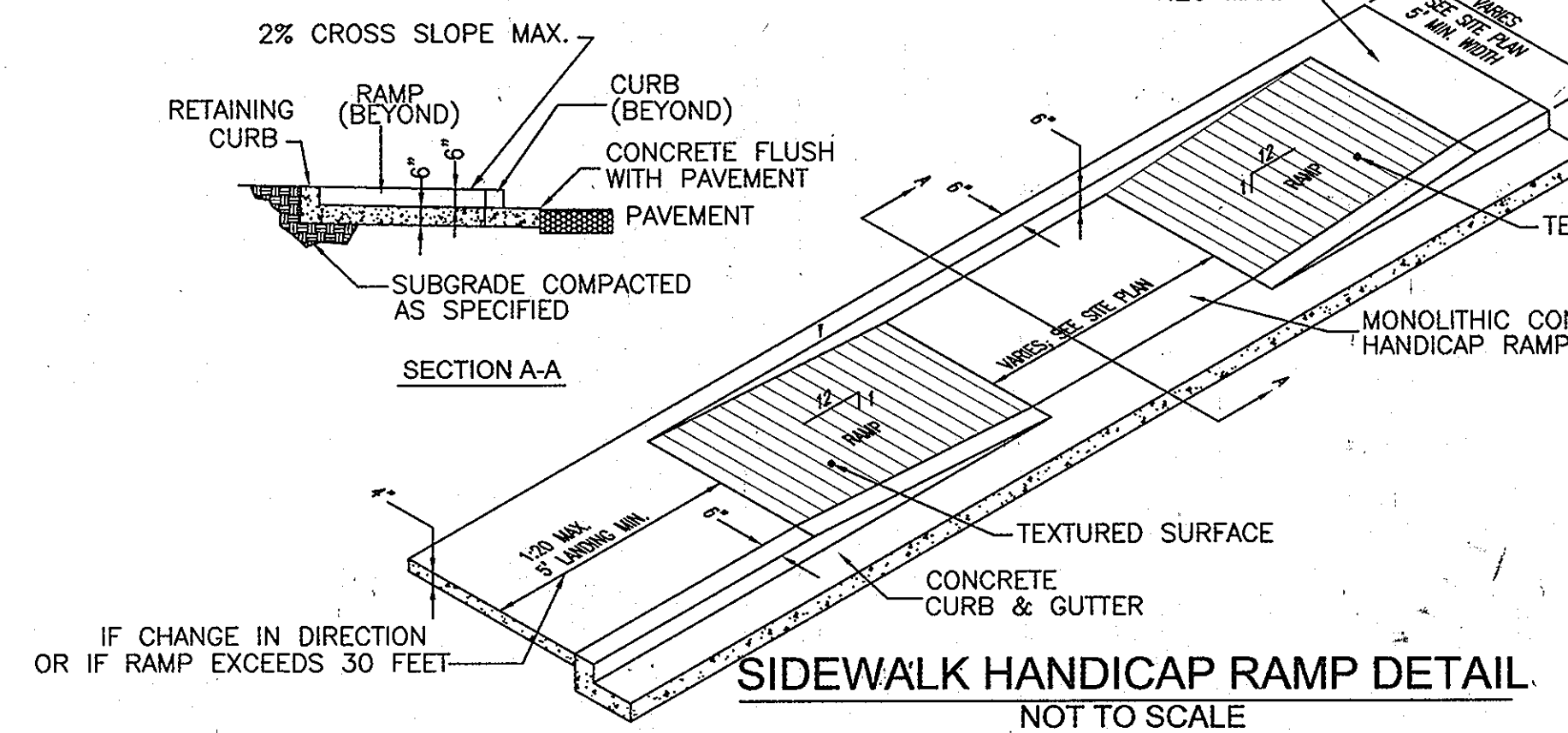
PARKING @ CLUBHOUSE
SCALE: 1"=10'

PARKING @ BANK
SCALE: 1"=10'

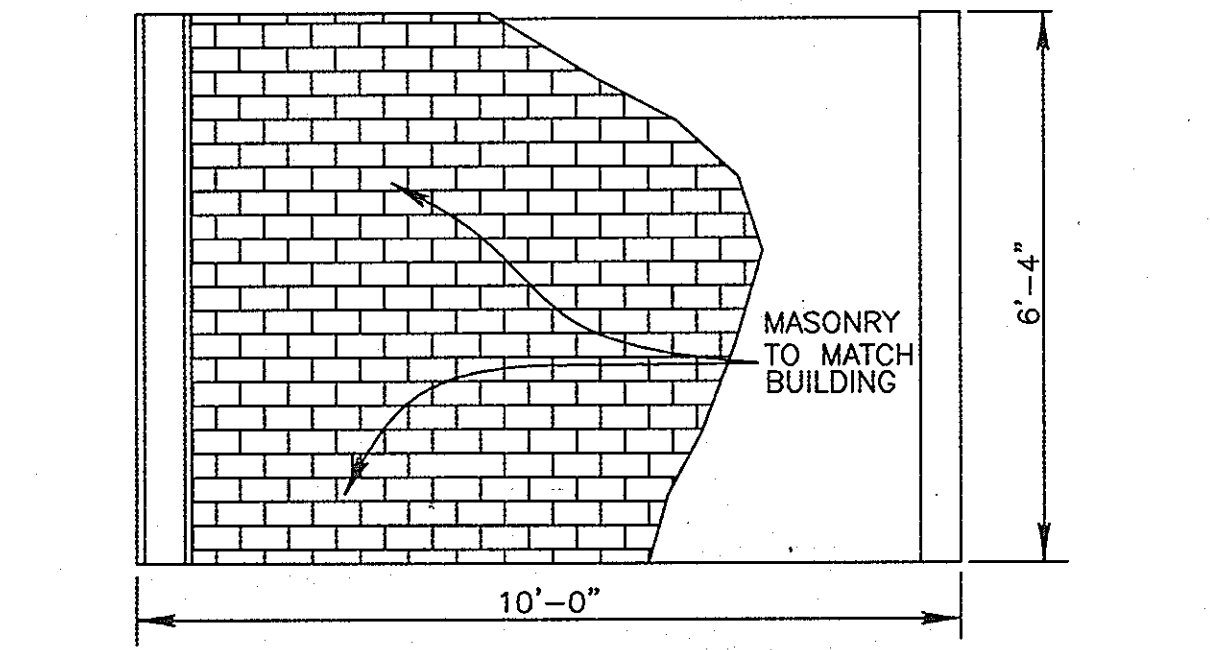
PARKING @ POOL
SCALE: 1"=10'



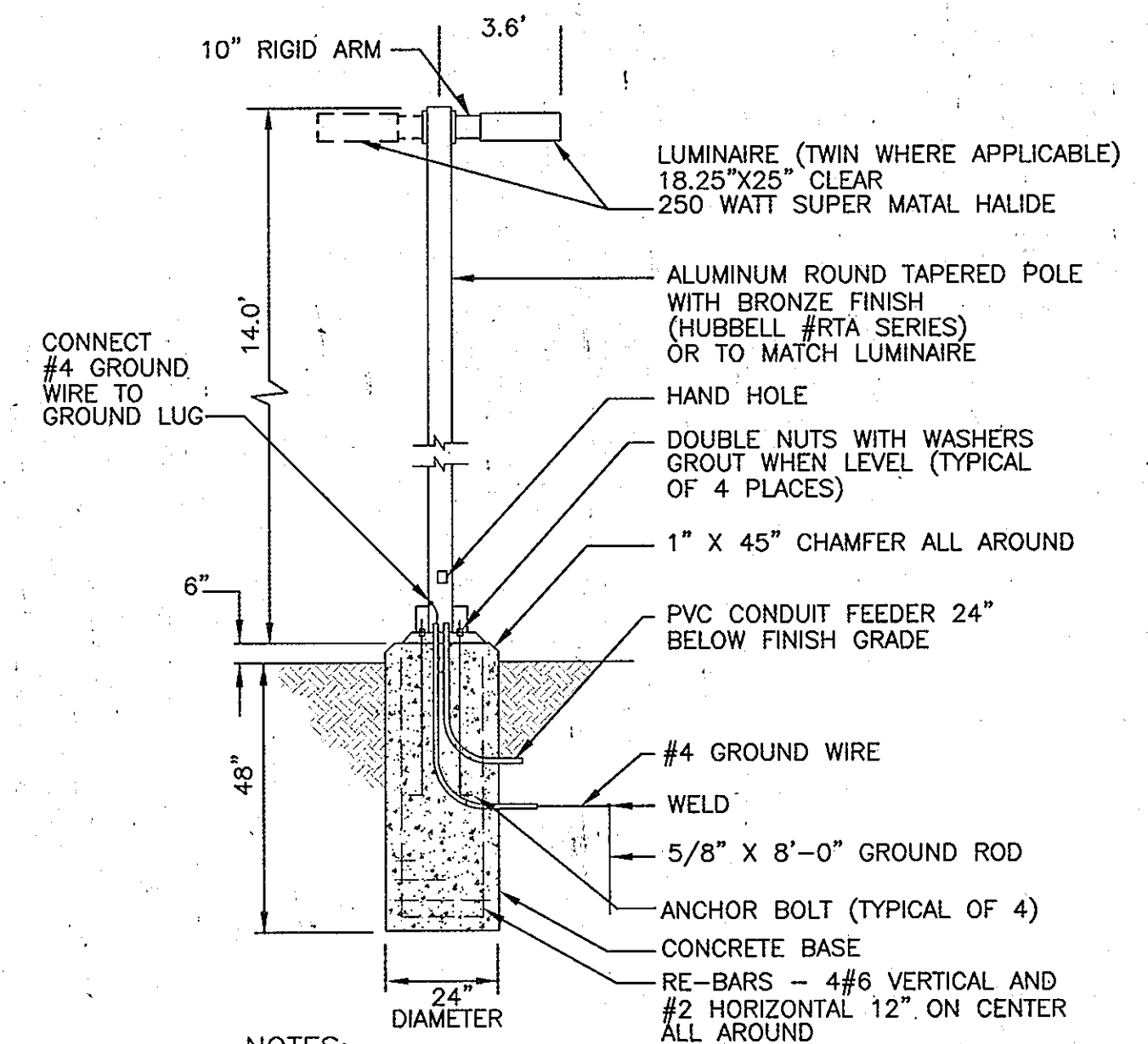
SIDEWALK RAMP
NOT TO SCALE



TRASH ENCLOSURE GATE DETAIL
NO SCALE

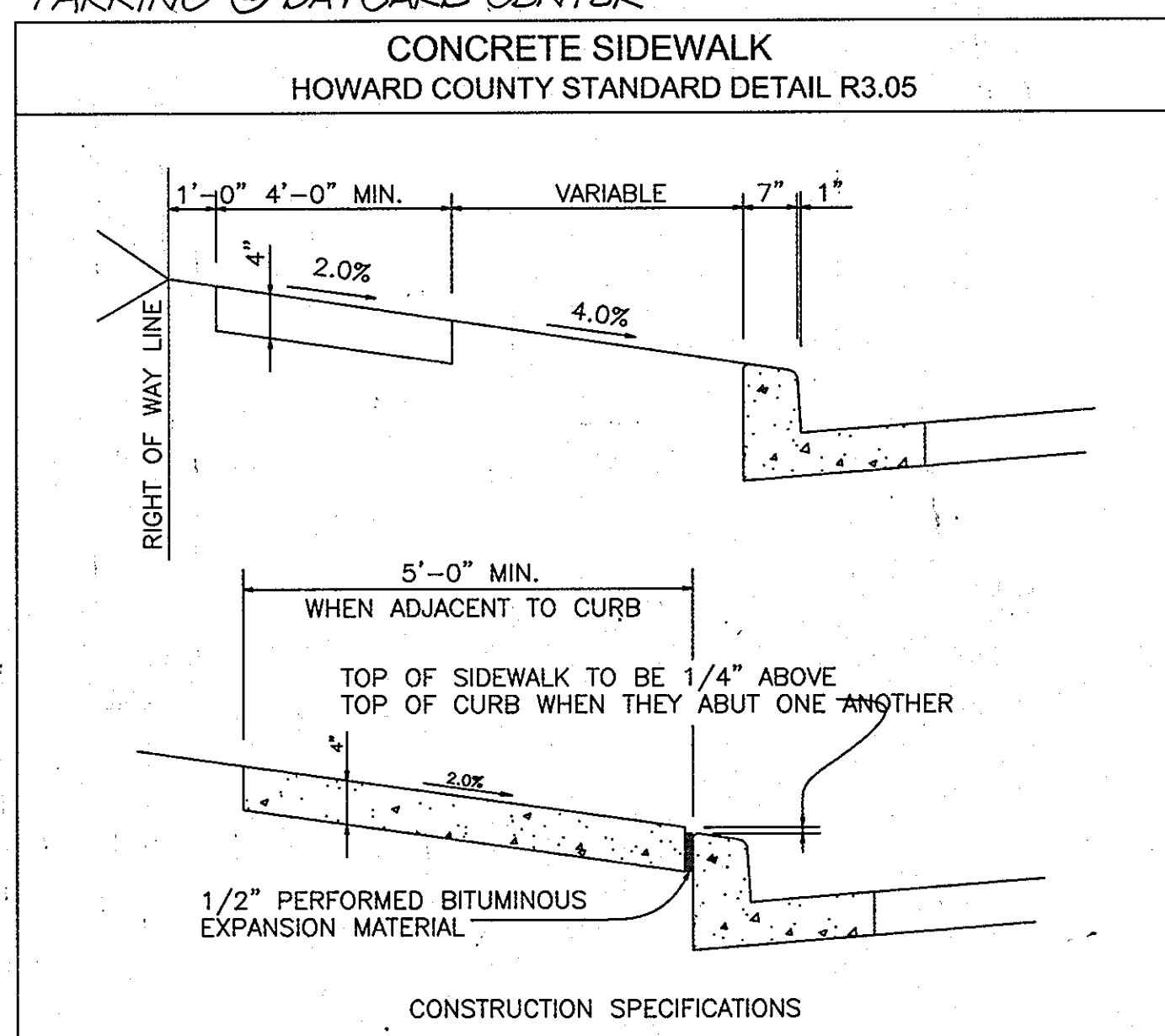


TRASH ENCLOSURE ELEVATION
NOT TO SCALE

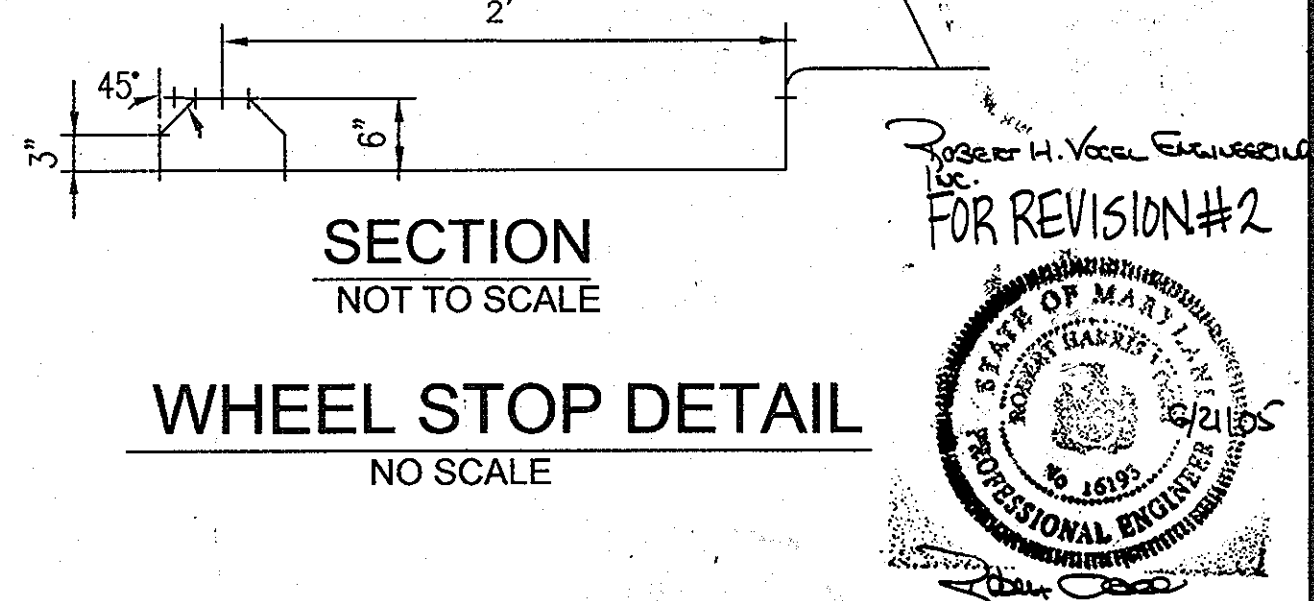


- NOTES:**
1. LIGHT TO BE KIM ENTABLATURE RECTILINEAR WITH 250 WATT FIXTURE.
 2. LIGHTING DETAIL FOR INFORMATIONAL PURPOSES ONLY. SEE ELECTRICAL AND ARCHITECTURAL PLANS FOR ACTUAL LIGHTING DETAILS AND SPECIFICATIONS.
 3. LIGHTING SHALL BE DIRECTED DOWN AND AWAY FROM ADJOINING PROPERTIES AND STREETS.

POLE BASE DETAIL
NO SCALE



1. SIDEWALK TO BE SCRIBED IN 5'-0" MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
3. 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
4. CONCRETE TO BE MIX NUMBER 2.
5. WHERE SIDEWALK ABUTS CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB.
6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 6" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 48 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE CURB.
7. SIDEWALK WIDTH ADJACENT TO CURB SHALL BE 5'-0" MINIMUM EXCEPT SIDEWALK ADJACENT TO CURB IN CUL-DE-SAC BULBS MAY BE 4.0' WIDE.
8. SIDEWALK LOCATED 2' OR MORE FROM CURB MAY BE 4'-0" IN WIDTH WITH A 5'X5' PAVED SECTION PLACED 200' APART.



NO.	REVISION	DATE
4	REVISE PARKING AT DAYCARE BLDG.	7/22/09
3	RESITED/REDESIGNED THE SENIOR CENTER AND BLDG.#3	1/10/2005

OWNER
TAYLOR FAMILY
LIMITED PARTNERSHIP A
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ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

DEVELOPER
LAND DESIGN & DEVELOPMENT
8000 MAIN STREET
ELLICOTT CITY, MD 21043
ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

SITE DETAILS I
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX

TAX MAP #25 BLOCK 20
2ND ELECTION DISTRICT

PARCEL P/O 98
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS

7125 RIVERWOOD DRIVE
COLUMBIA, MARYLAND 21046-2354
410-720-6800
410-720-6226 fax

www.frederickward.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division DATE: 2/9/04

Chief, Division of Land Development DATE: 2/15/04

Director DATE: 2/15/04

DESIGN BY: RJR/HV

DRAWN BY: RJ

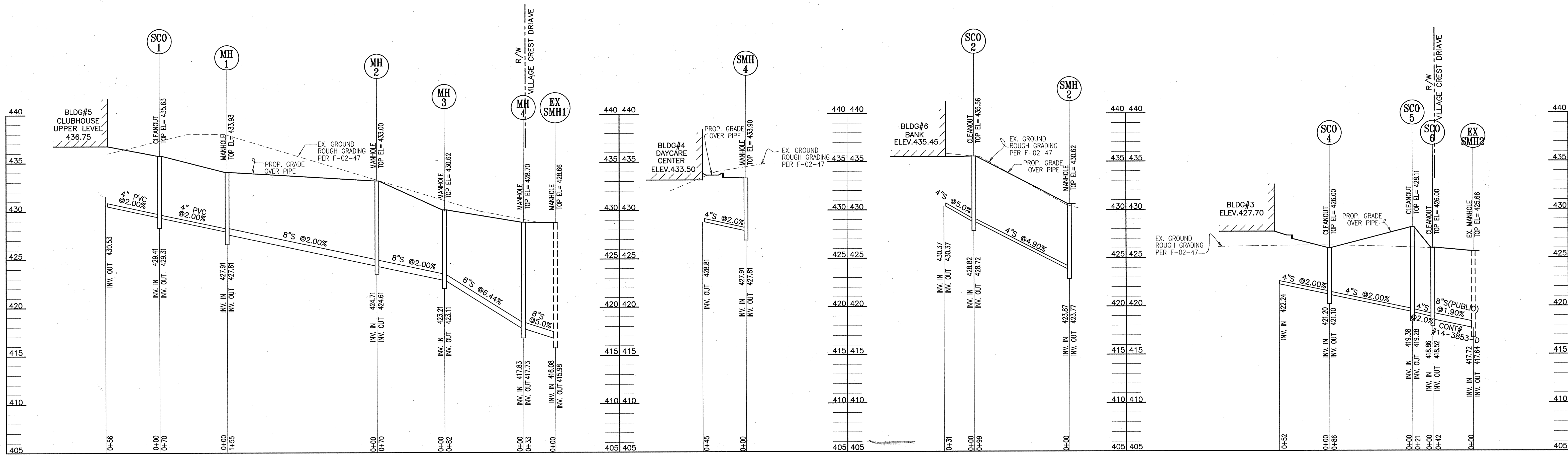
CHECKED BY: RHY

DATE: FEB., 2004

SCALE: AS SHOWN

W.C. NO.: 2018121.04

4 SHEET OF 11

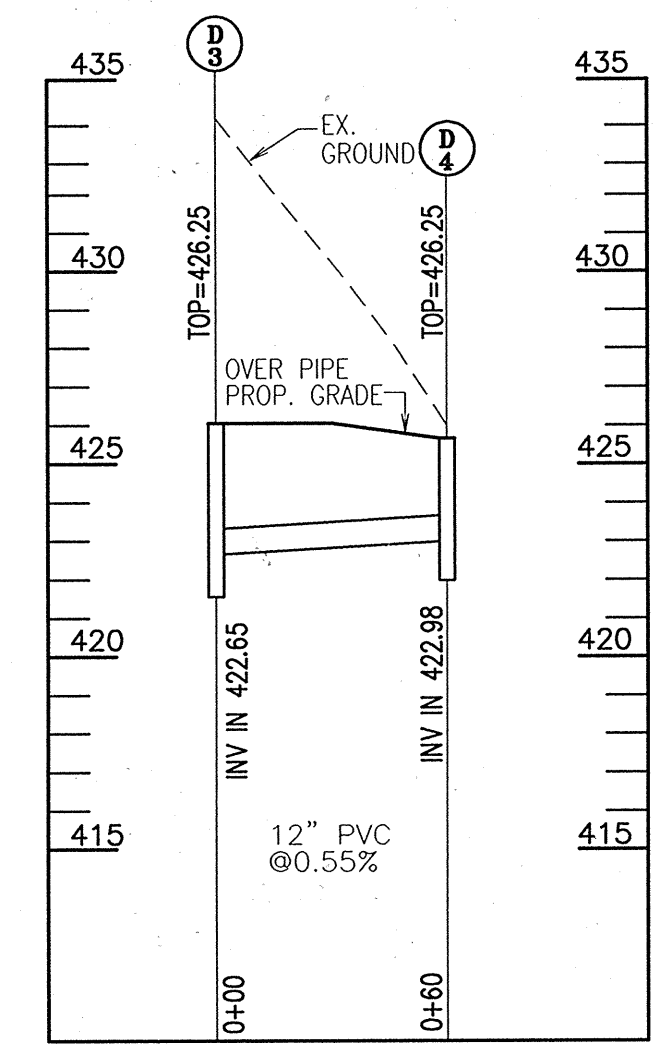


SEWER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.

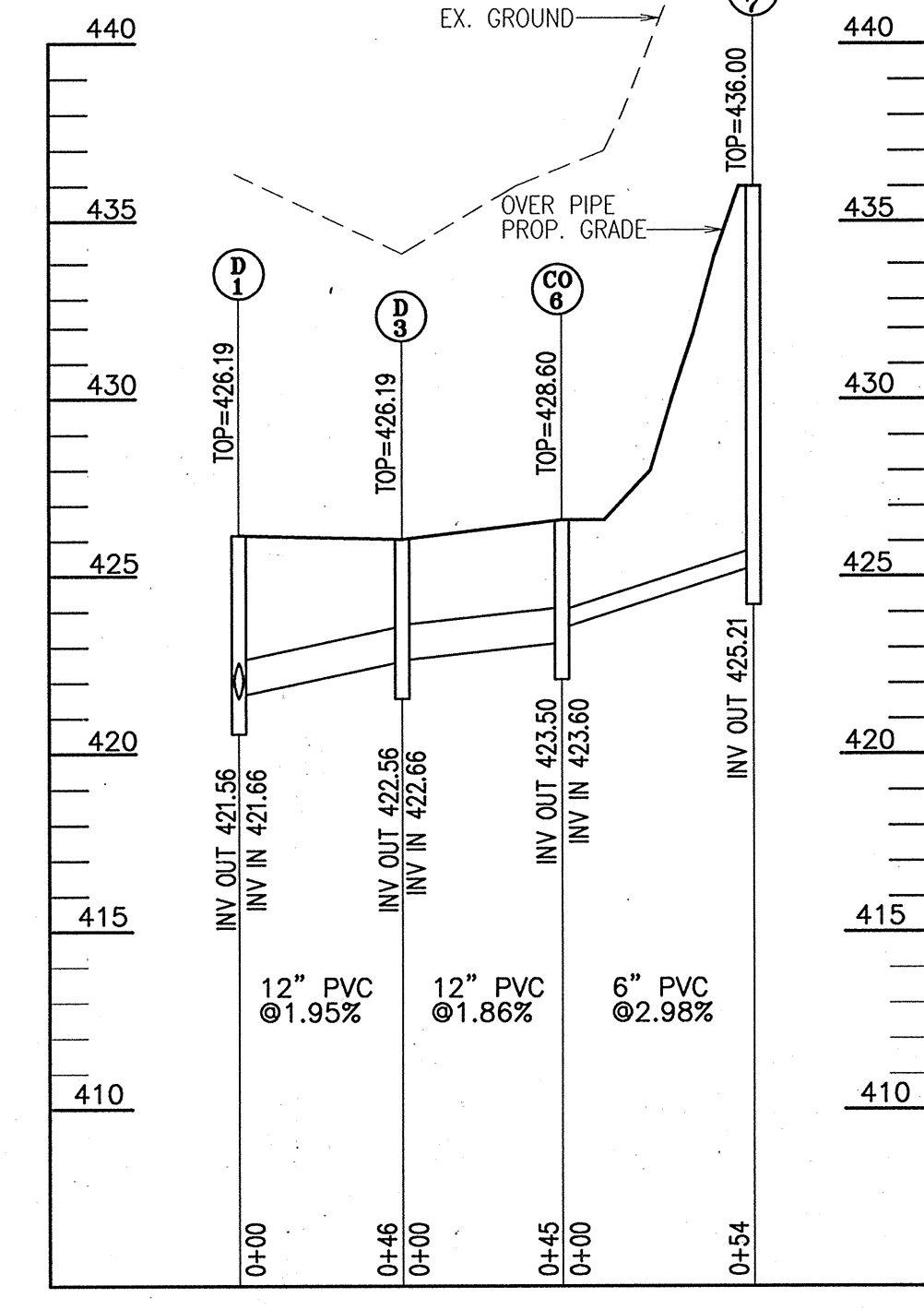
SEWER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.

SEWER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.

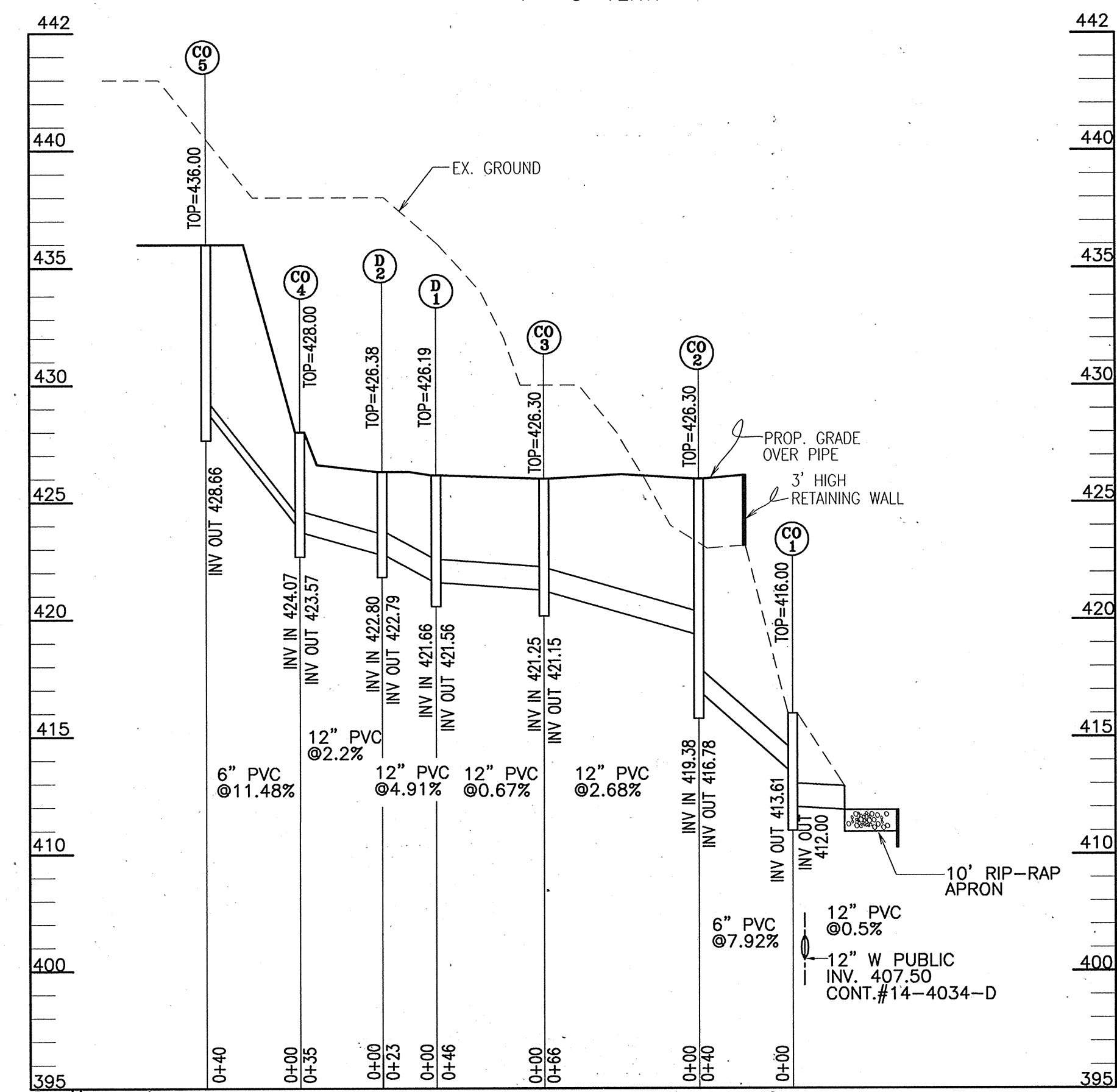
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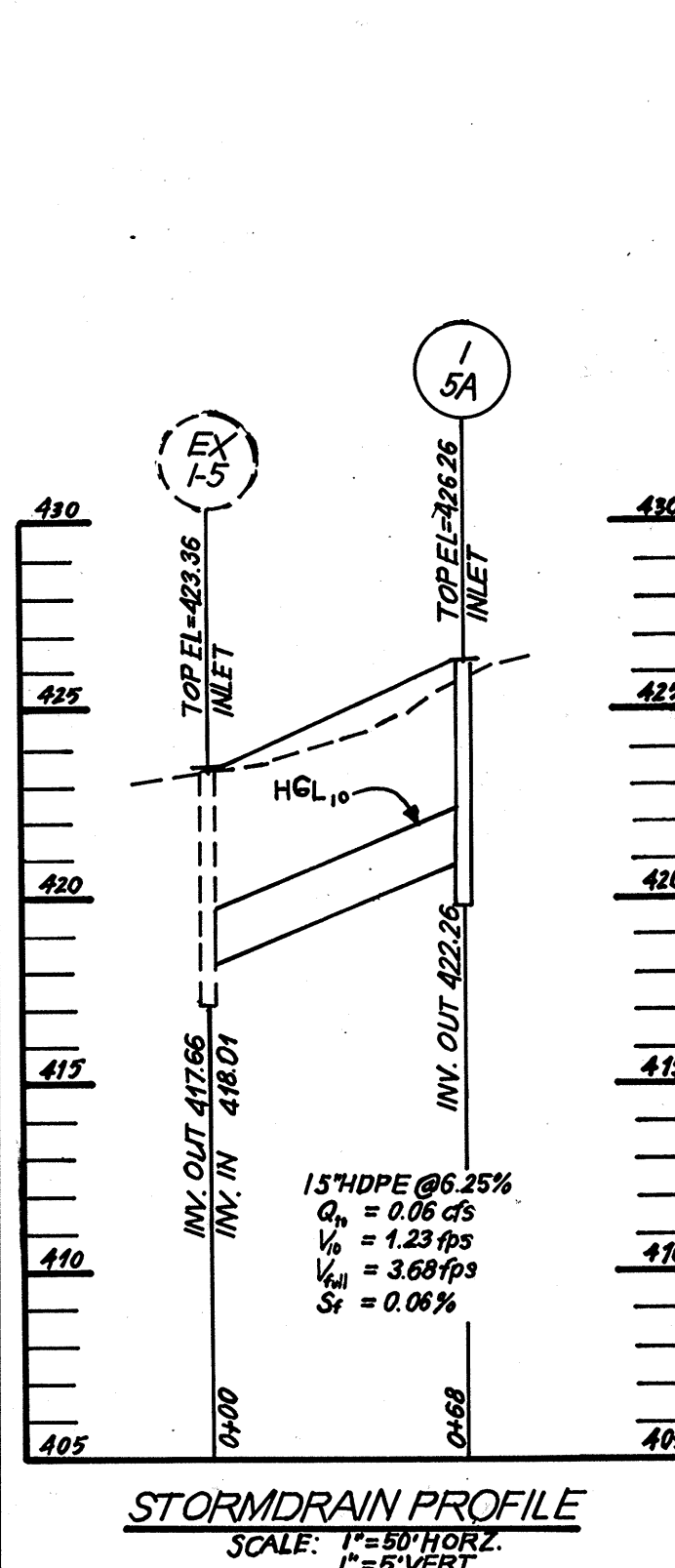
DECK POOL DRAINS PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



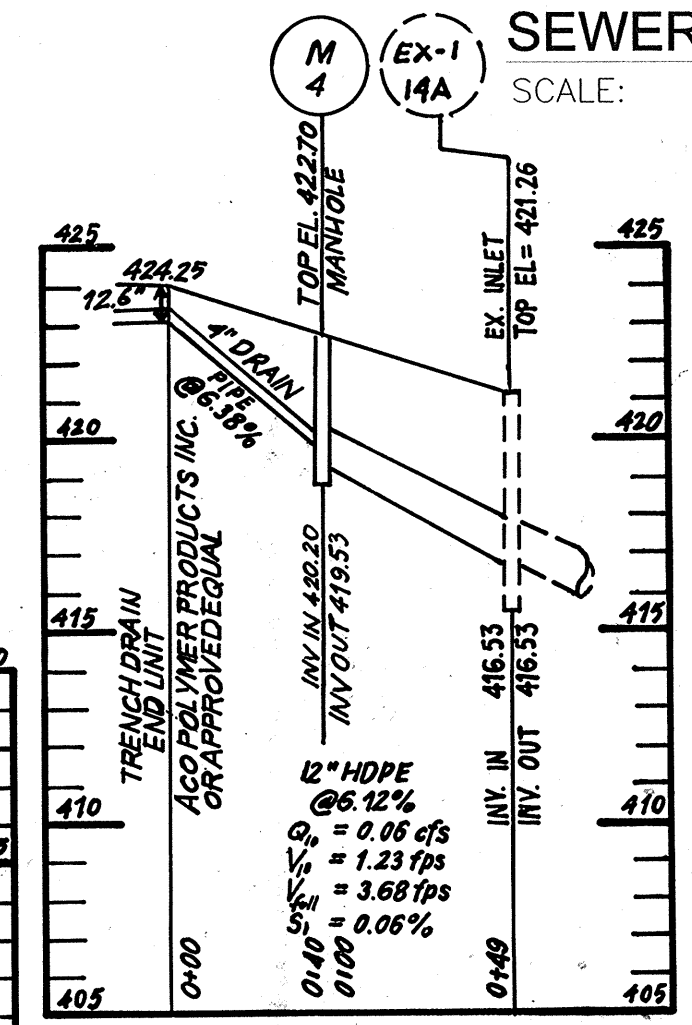
DECK POOL DRAINS PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



DECK POOL DRAINS PROFILES
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



STORMDRAIN PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



STORMDRAIN PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.

OWNER
TAYLOR FAMILY
LIMITED PARTNERSHIP A
c/o LAND DESIGN & DEVELOPMENT
8000 MAIN STREET
ELLCOTT CITY, MD 21043
ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

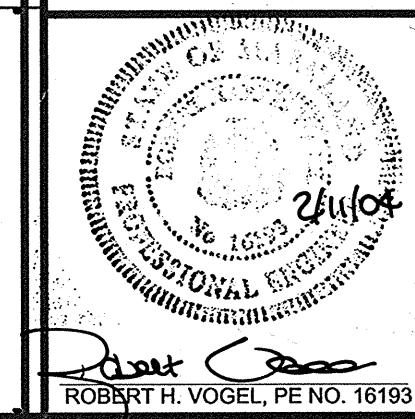
DEVELOPER

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8000 MAIN STREET
ELLCOTT CITY, MD 21043
ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

PROFILES AND DETAIL I
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX
TAX MAP #25 BLOCK 20
2ND ELECTION DISTRICT
PARCEL P/O 98
HOWARD COUNTY, MARYLAND

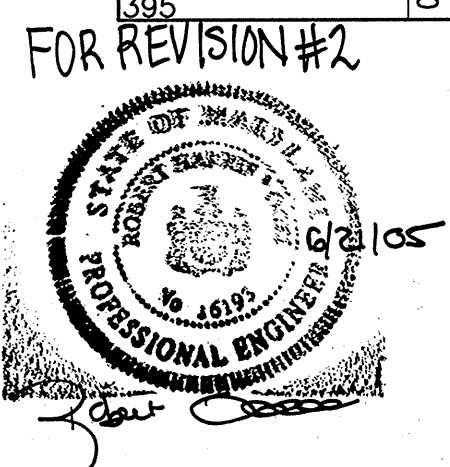
F.W.A.
FREDERICK WARD ASSOCIATES, INC.
ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
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DESIGN BY: JCO/RJ
DRAWN BY: RJ
CHECKED BY: RHY
DATE: FEB. 2004
SCALE: AS SHOWN
W.O. NO.: 2018121.04



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Donald R. Reuwer 3/9/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Donald R. Reuwer 3/15/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Donald R. Reuwer 3/15/04
 DIRECTOR DATE

NO.	REVISION	DATE
2	RESITED/REDESIGNED THE SENIOR CENTER AND BLDG. #3.	1/10/2005

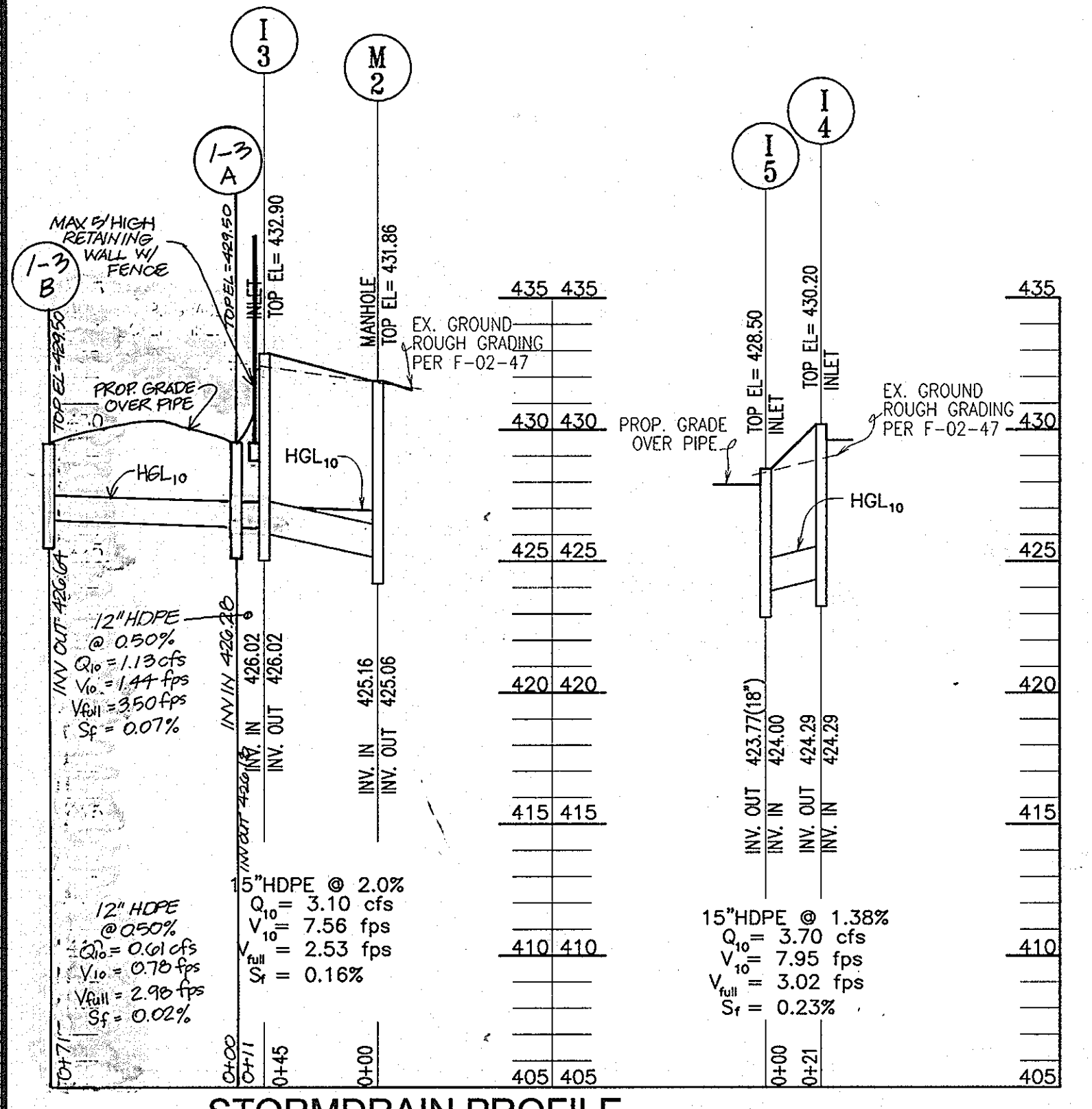


PIPE SCHEDULE		
SIZE	TYPE	LENGTH
15"	HDPE	147 LF
18"	HDPE	553 LF
12"	PVC	455 LF
12"	HDPE	82 LF

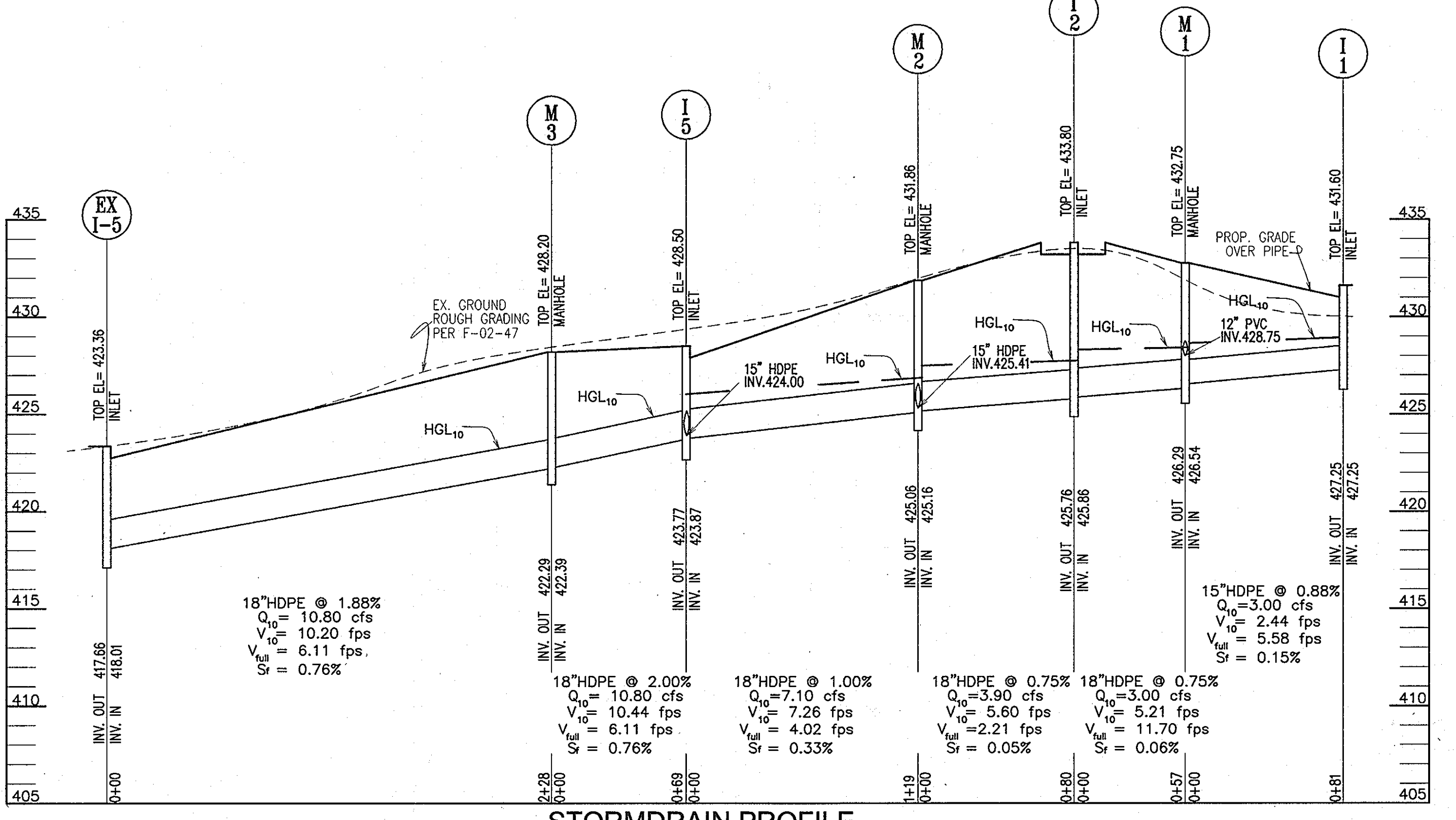
STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-1	DOUBLE TYPE 'S' COMBINATION INLET	0+01.01, 29.24' RT.	431.60	-	427.25	SD 4.34
M-1	PRECAST MANHOLE (4')	1371832.30 577181.91	432.75	426.54	426.29	G 5.12
I-2	DOUBLE TYPE 'S' COMBINATION INLET	3+90.71, 27.40' LT.	433.80	425.86	425.76	SD 4.34
M-2	PRECAST MANHOLE (4')	1371757.22 577297.52	431.86	425.16	425.06	G 5.12
I-3	DOUBLE TYPE 'S' COMBINATION INLET	6+28.41, 29.19' RT.	432.90	-	426.02	SD 4.34
I-5	DOUBLE TYPE 'S' COMBINATION INLET	1+47.58 29.21 LT.	428.50	423.87	423.77	SD 4.34
I-4	DOUBLE TYPE 'S' COMBINATION INLET	0+76.10, 27.42 LT.	430.20	-	424.29	SD 4.34
M-3	PRECAST MANHOLE (4')	1371615.35 577374.25	428.20	422.39	422.29	G 5.12
I-5A	DOUBLE TYPE 'S' COMBINATION INLET	1371606.83 577549.04	426.20	418.01	422.26	SD 4.34

NOTE: 1. TOP ELEVATIONS ARE TO THE CENTER OF THE STRUCTURE AT TOP OF CURB FOR DOUBLE TYPE 'S' COMB. INLETS, AND TOP OF MANHOLE COVER FOR PRECAST MANHOLES.
2. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN DETAILS.

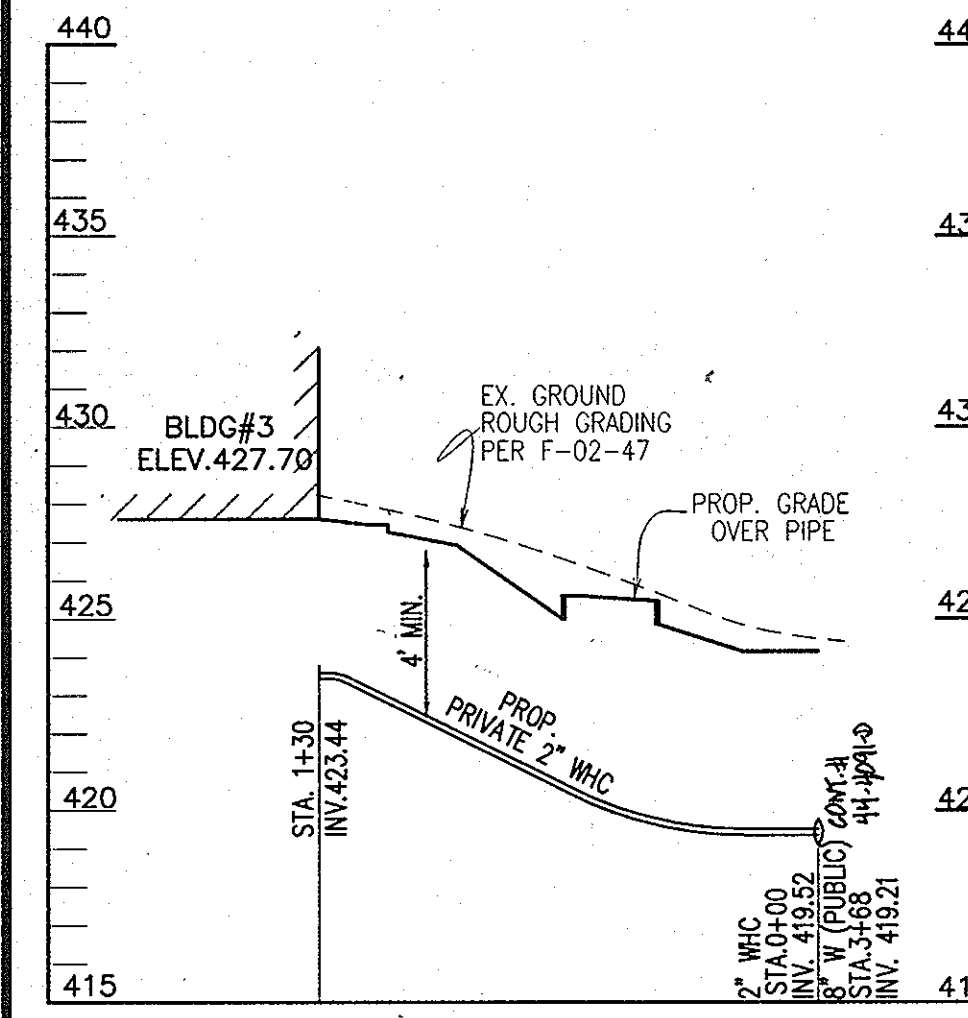
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-3A	2'x2' ADS INLET	N577349.77E1371769.81	429.80	426.28	426.10	
I-3B	2'x2' ADS INLET	N577406.84E1371506.96	429.90	-	426.04	



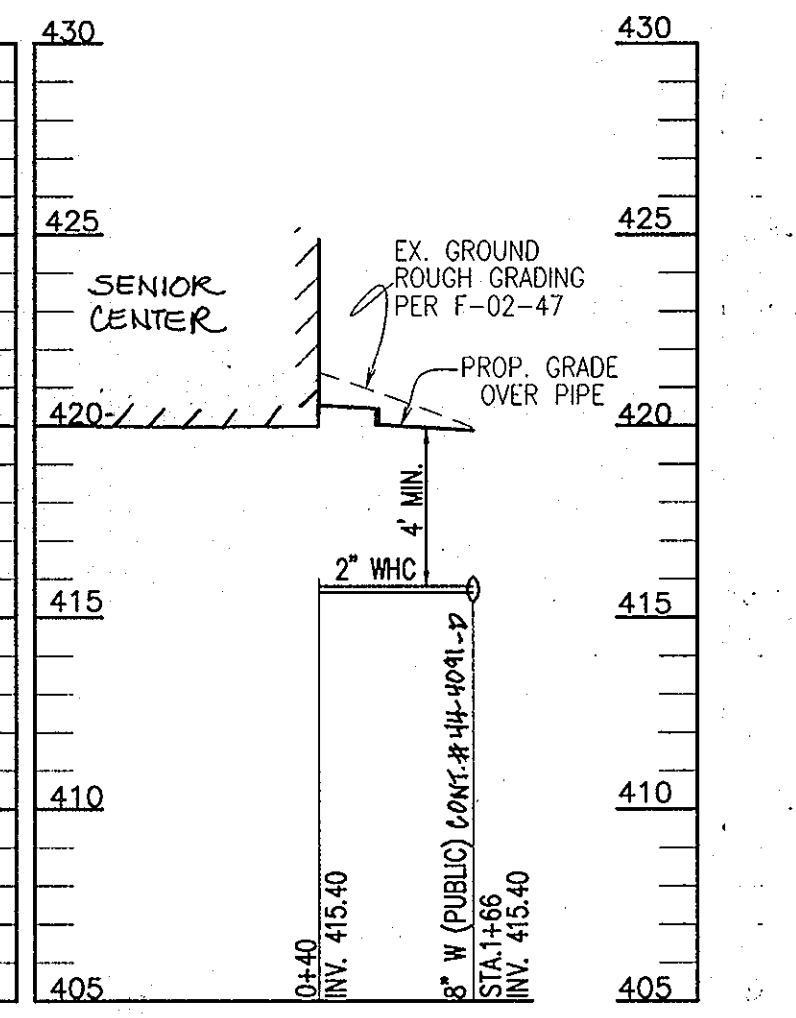
STORMDRAIN PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



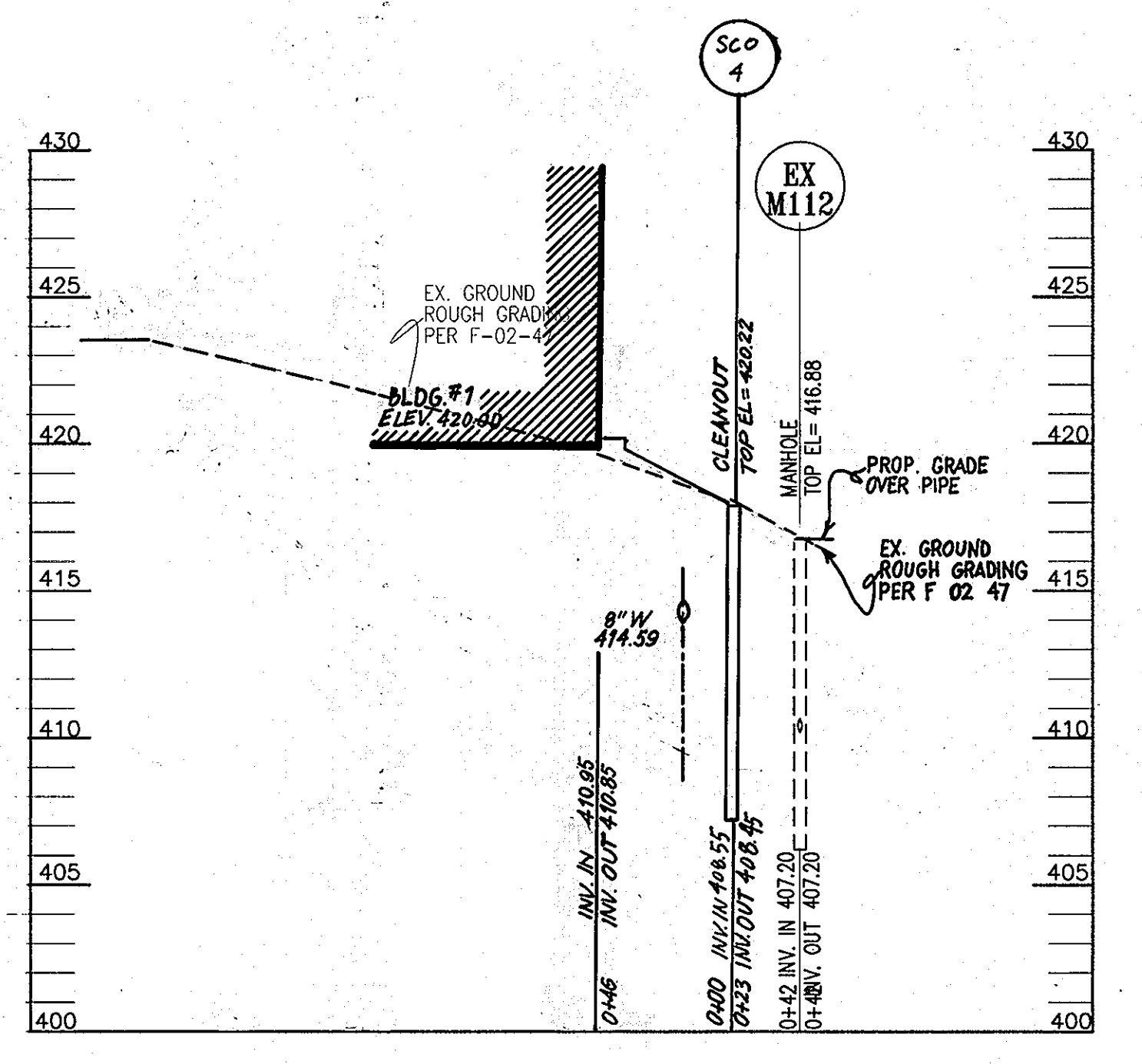
STORMDRAIN PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



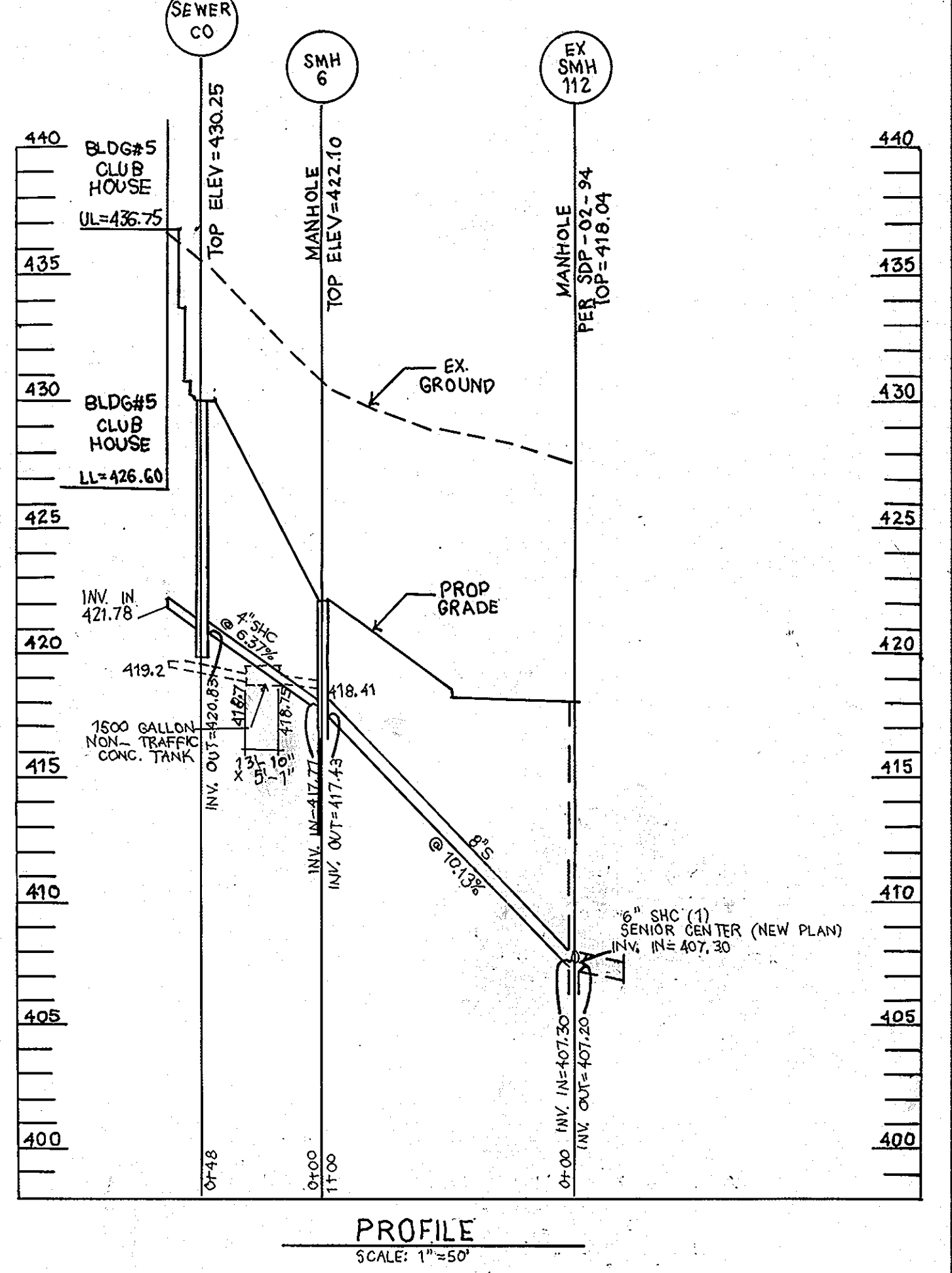
WATER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



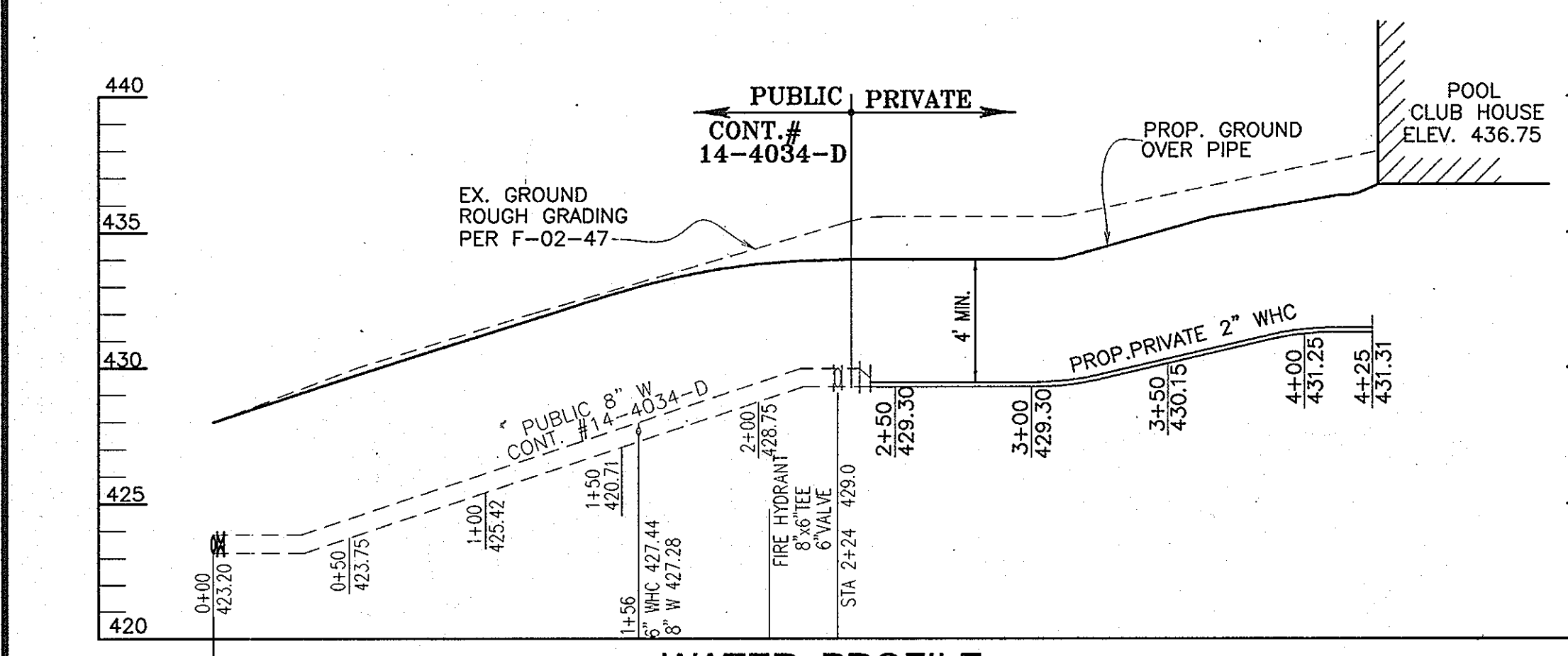
WATER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



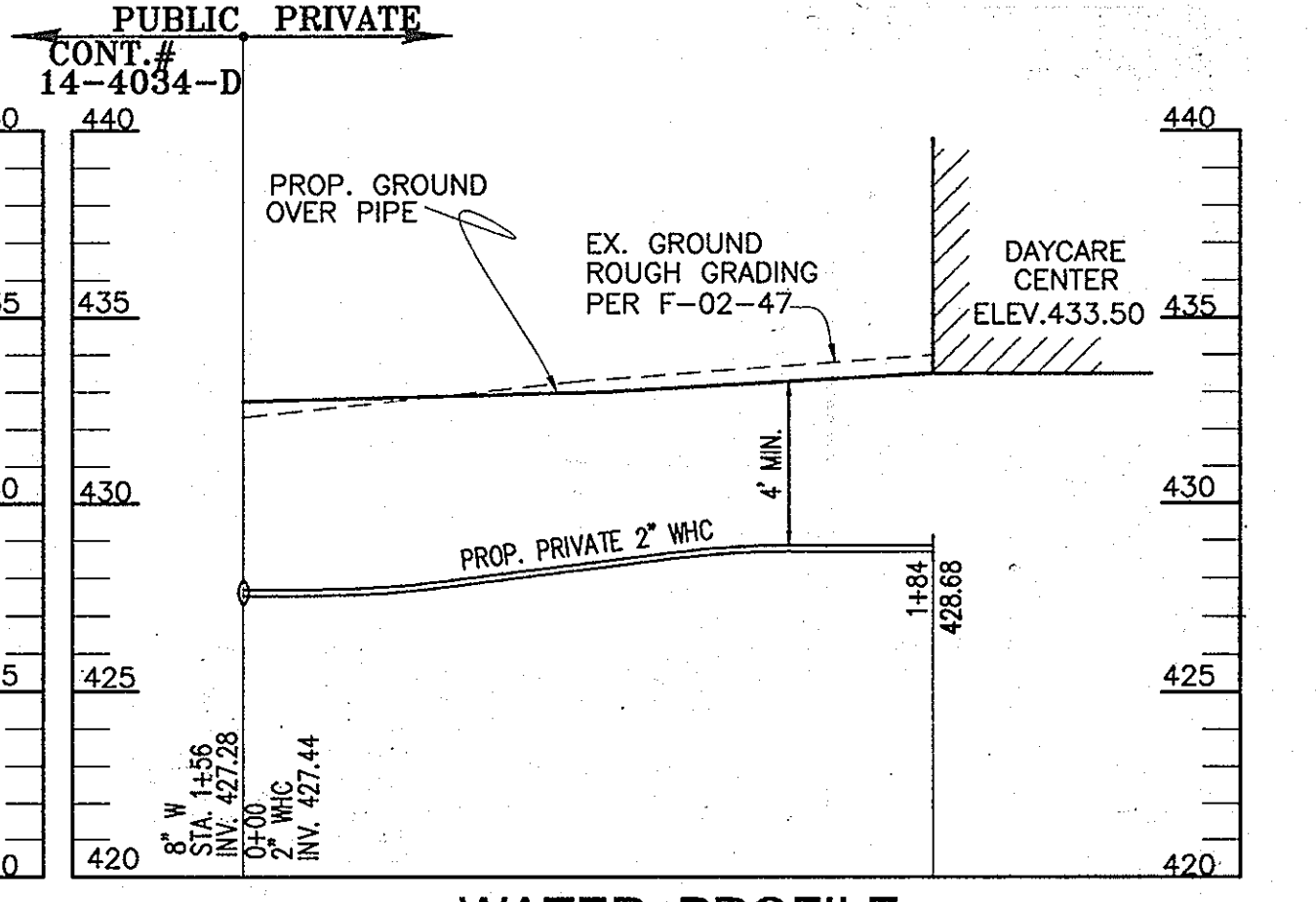
SEWER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



PROFILE
SCALE: 1" = 50'



WATER PROFILE
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



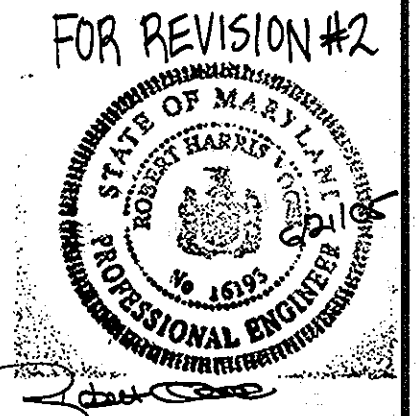
WATER PROFILE
SCALE: 1" = 50' HORZ.
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OWNER
TAYLOR FAMILY
LIMITED PARTNERSHIP A
C/O LAND DESIGN & DEVELOPMENT
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ELLCOTT CITY, MD 21043
ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

DEVELOPER
LAND DESIGN & DEVELOPMENT
8000 MAIN STREET
ELLCOTT CITY, MD 21043
ATTN: MR. DONALD R. REUWER
PHONE: (410) 480-9105

NO	REVISION	DATE
4	REVISE STORM DRAIN PROFILE AND STRUCTURE SCHEDULE	7/22/07
2	RESITED/REDESIGNED THE SENIOR CENTER AND BLDG.#3	1-10-05
1	ADDING 1500 GALLON CONC. TANK PROFILE	3-10-05
NO	REVISION	DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Donald R. Reuwer 3/6/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE
David K. Hamilton 3/15/04
 CHIEF, DIVISION OF LAND DEVELOPMENT & DATE
Robert H. Vogel 3/15/04
 DIRECTOR & DATE

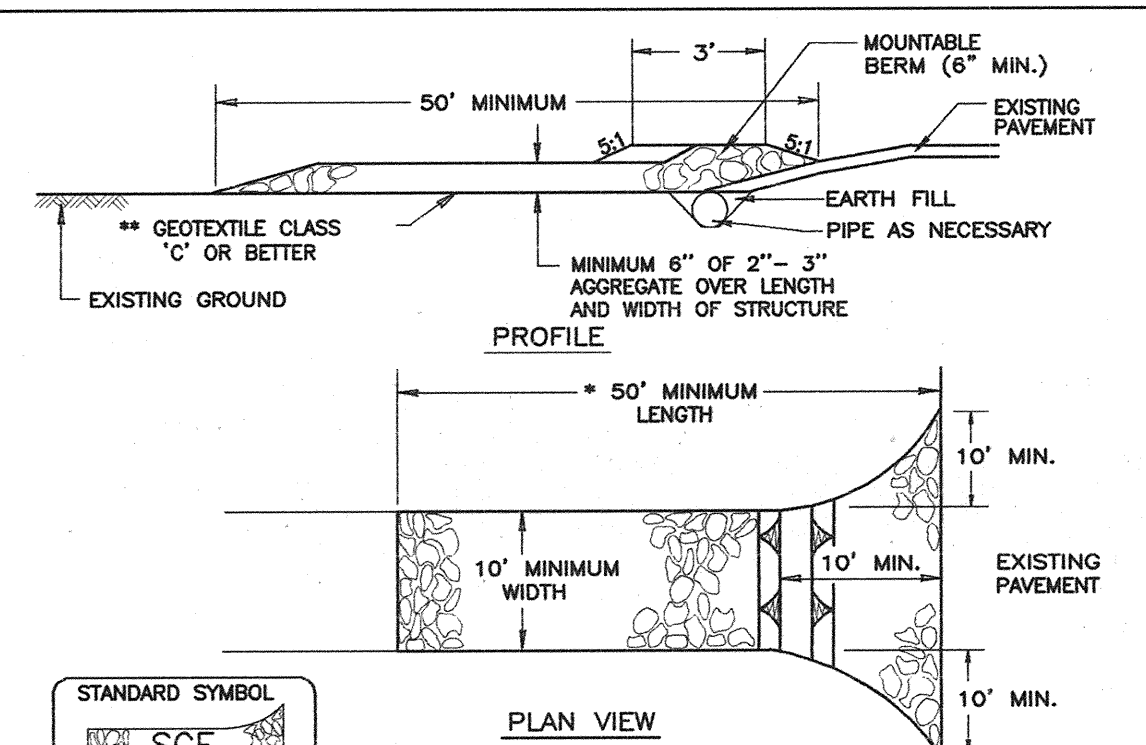


PROFILES AND DETAILS II
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX
 TAX MAP #25 BLOCK 20
 2ND ELECTION DISTRICT
 PARCEL PIO 98
 HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS
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DESIGN BY: JCR/J
 DRAWN BY: RJ
 CHECKED BY: RHV
 DATE: FEB. 2004
 SCALE: AS SHOWN
 W.O. NO.: 2018121.04

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

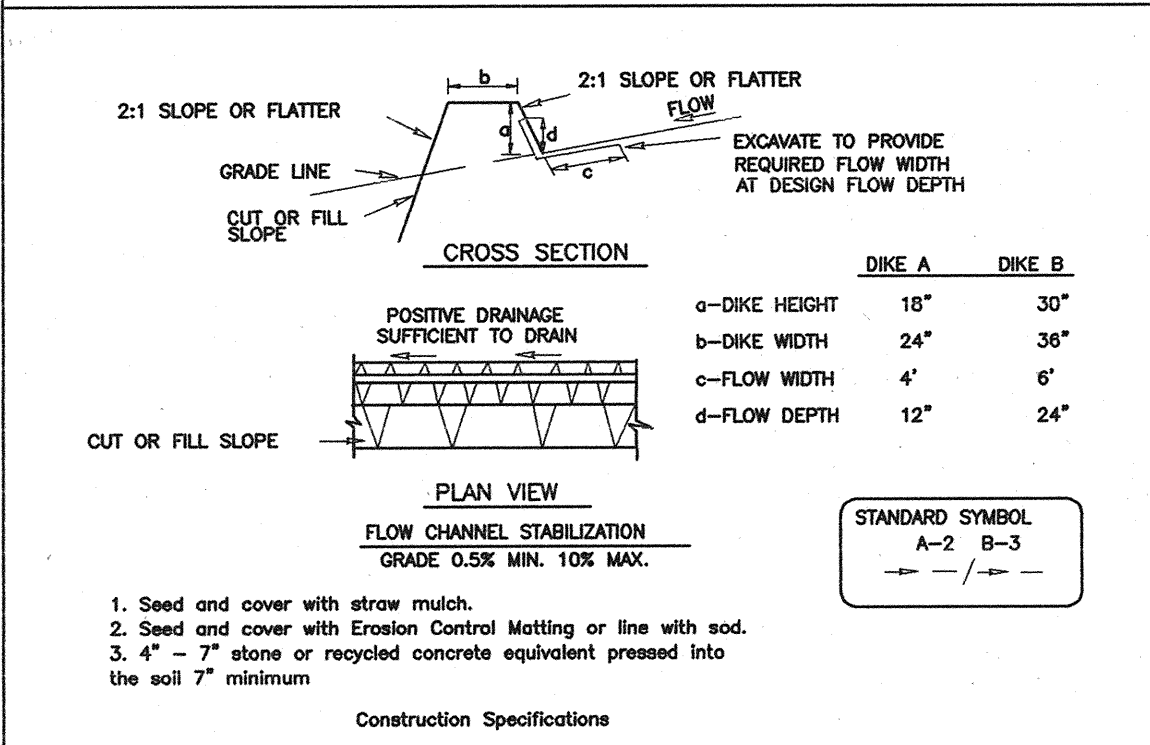


Construction Specifications

- Length - minimum of 50' (± 30' for a single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounded berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



Construction Specifications

- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or line with sod.
- 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
 - 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 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 that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SSS 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 soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A-1-6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

21.0 STANDARDS AND SPECIFICATIONS FOR TOP SOIL

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 moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results 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, organic content of topsoil shall be not less than 1.5 percent by weight.
 - Organic content of topsoil shall be not less than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) 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 natural topsoil.

Construction and Material Specifications

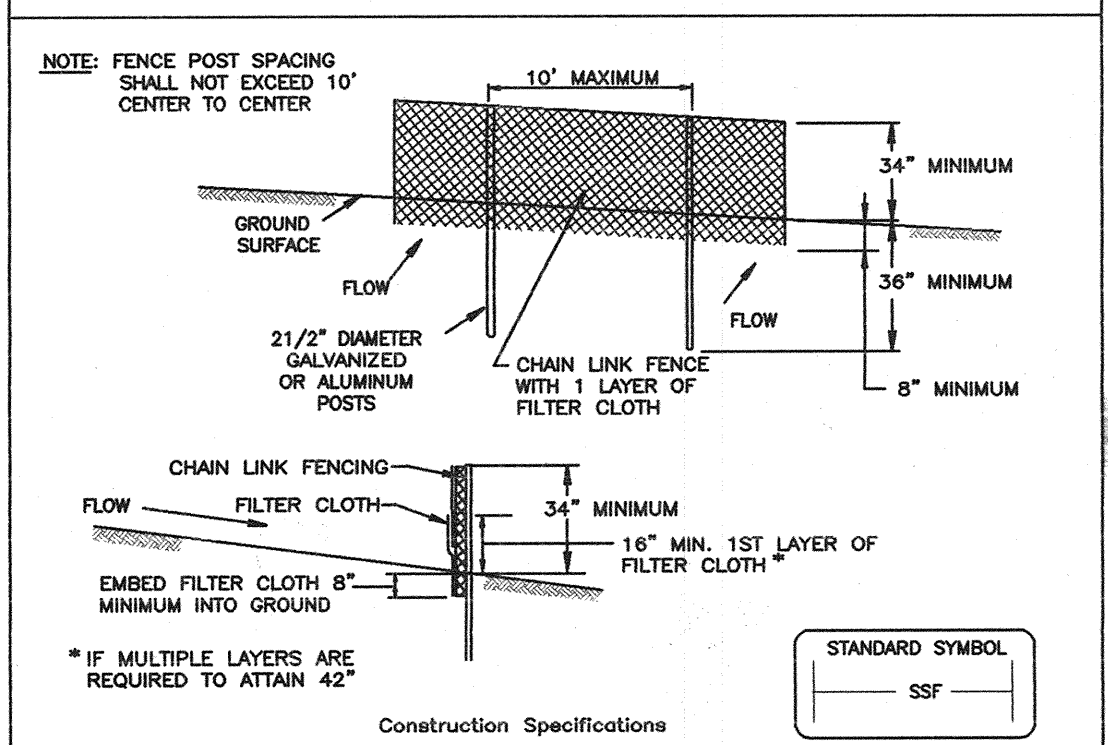
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SSS in cooperation 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 soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
- All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- 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 must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for 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	AREA OF SUBMISSION 4.93 AC
Area Disturbed	4.99 AC
Area to be roofed or paved	3.00 AC
Area to be vegetatively stabilized	1.99 AC
Total Cut	120,000 CUBIC YARD
Total Fill	45,000 CUBIC YARD
Offsite waste/borrow area location	
- 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.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
 - To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit

DETAIL 33 - SUPER SILT FENCE



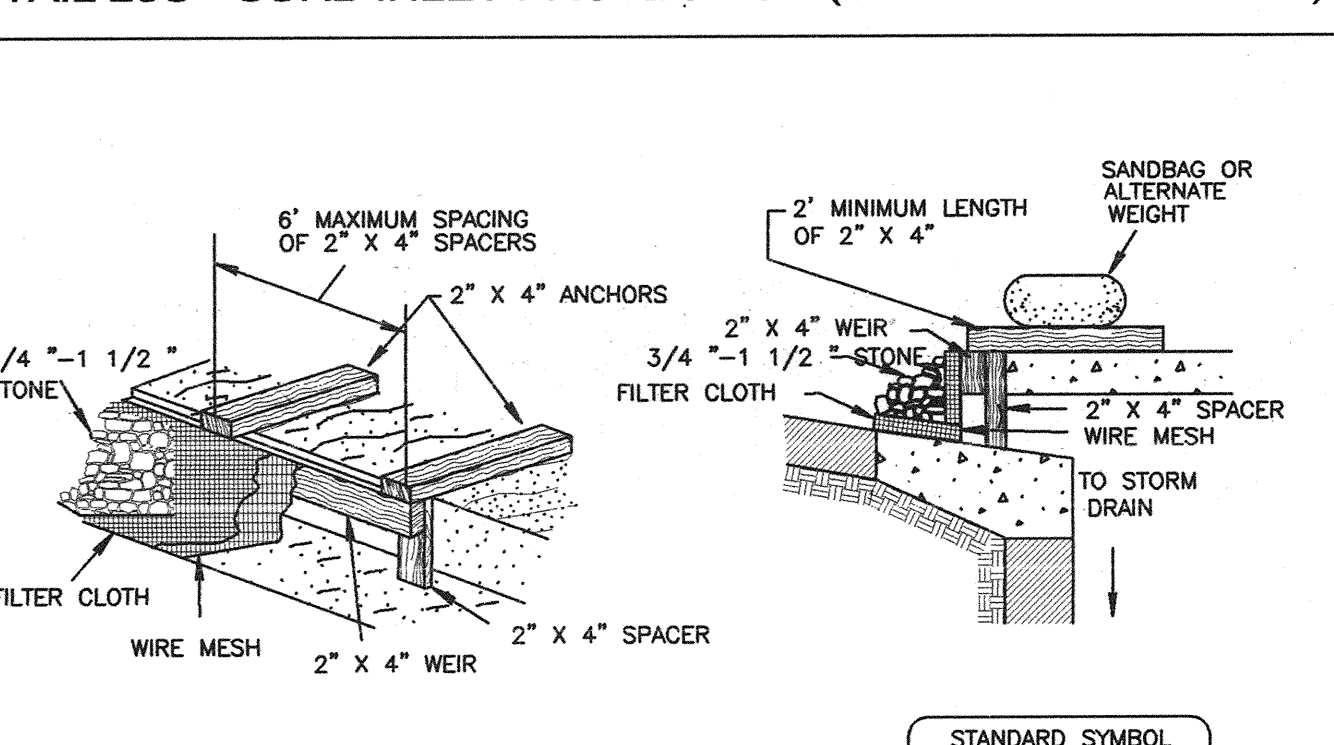
Construction Specifications

- 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 truss 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 adjoin each other, they shall be overlapped by 8" and folded.
- Maintenance shall be performed as needed and silt bulldups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	80 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

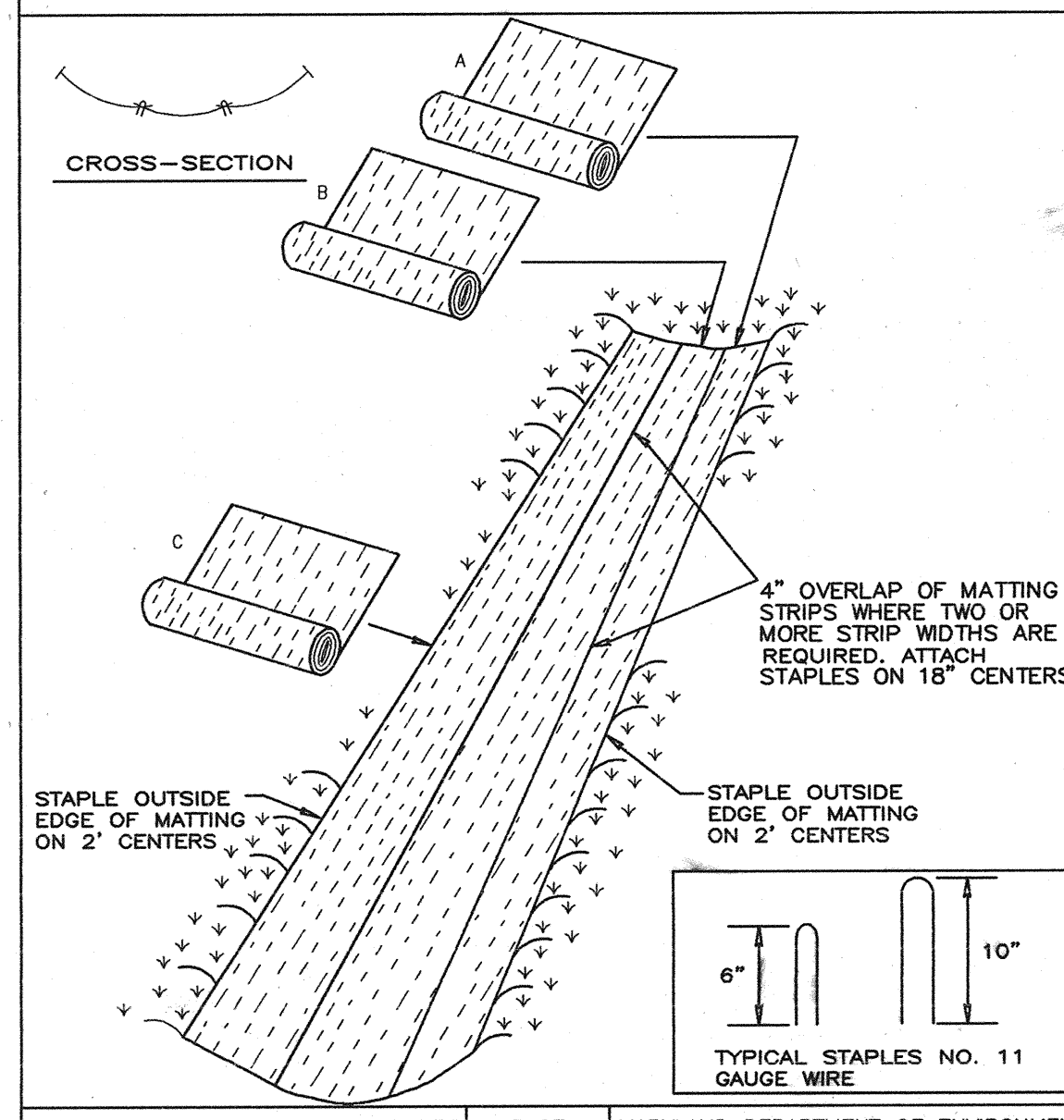


Construction Specifications

- Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring 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" weir.
- Securely nail the 2" x 4" weir to a 9" long vertical spacer to be located between the weir 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 weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers 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 earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-16-5B MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



Construction Specifications

- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
- Staple the 4" overlap in the channel center using an 18" spacing between staples.
- Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
- Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
- Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
- The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

NOTE: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-22-2A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TEMPORARY SEEDING NOTES

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 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

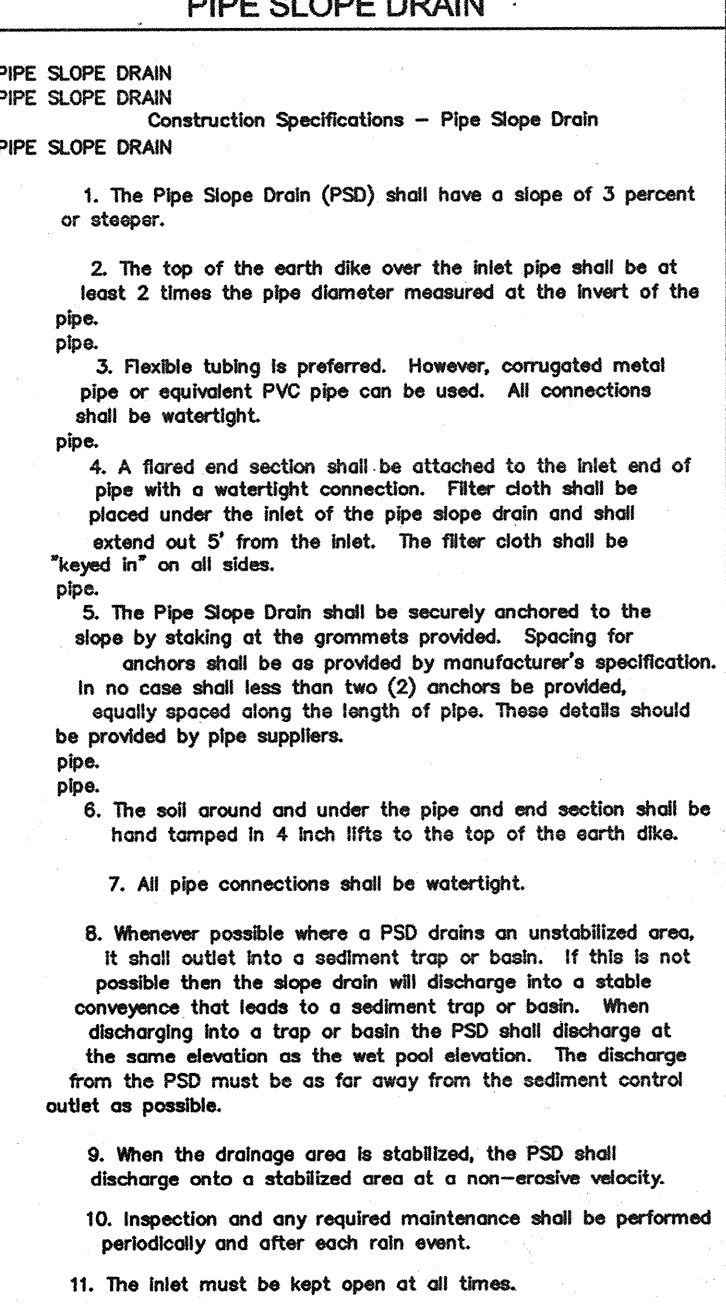
MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher,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

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

- Obtain grading permit.
- Notify Howard County Bureau of Inspections and Permits (313-1880) at least 24 hours before starting any work.
- Existing Sediment Basin to remain for Development of Parcel D-1 per (F-02-47).
- Construct Stabilized Construction Entrance and silt fence.
- Install dikes.
- With Inspector's approvals Clear and grub site to LOD.
- Begin construction of water and sewer.
- Rough grade site and begin construction of tennis courts and buildings.
- Install storm drain system, curb and gutter.
- With curb and gutter in place pave road and install sidewalks.
- Install landscaping.
- With inspector's approval and with parking lot paved complete construction of site.
- With inspector's approval flush storm drain system and remove all sediment controls from the site. Stabilize all disturbed areas immediately.
- During grading and after each rainfall, the contractor shall inspect and provide the necessary maintenance on the sediment and erosion control measures shown hereon.
- Following initial soil disturbance or redistribution permanent or temporary stabilization shall be complied with:
 - 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.

PIPE SLOPE DRAIN



Construction Specifications - Pipe Slope Drain

- The Pipe Slope Drain (PSD) shall have a slope of 3 percent or steeper.
- The top of the earth dike over the inlet pipe shall be at least 2 times the pipe diameter measured at the invert of the pipe.
- Flexible tubing is preferred. However, corrugated metal pipe or equivalent PVC pipe can be used. All connections shall be watertight.
- A forced end section shall be attached to the inlet end of pipe with a watertight connection. Filter cloth shall extend out 5' from the inlet. The filter cloth shall be "keyed in" on all sides.
- The Pipe Slope Drain shall be securely anchored to the slope by staking at the grommets provided. Spacing for anchors shall be as provided by manufacturer's specification. In no case shall less than two (2) anchors be provided, equally spaced along the length of pipe. These details should be provided by pipe suppliers.
- The soil around and under the pipe and end section shall be hand tamped in 4 inch lifts to the top of the earth dike.
- All pipe connections shall be watertight.
- Whenever possible where a PSD drains an unutilized area, it shall outlet into a sediment trap or basin. If this is not possible then the slope drain will discharge into a stable conveyance that leads to a sediment trap or basin. When discharging into a trap or basin the PSD shall discharge at the same elevation as the wet pool elevation. The discharge from the PSD must be as far away from the sediment control outlet as possible.
- When the drainage area is stabilized, the PSD shall discharge onto a stabilized area at a non-erosive velocity.
- Inspection and any required maintenance shall be performed periodically and after each rain event.
- The inlet must be kept open at all times.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-5-4A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 4 - PIPE SLOPE DRAIN

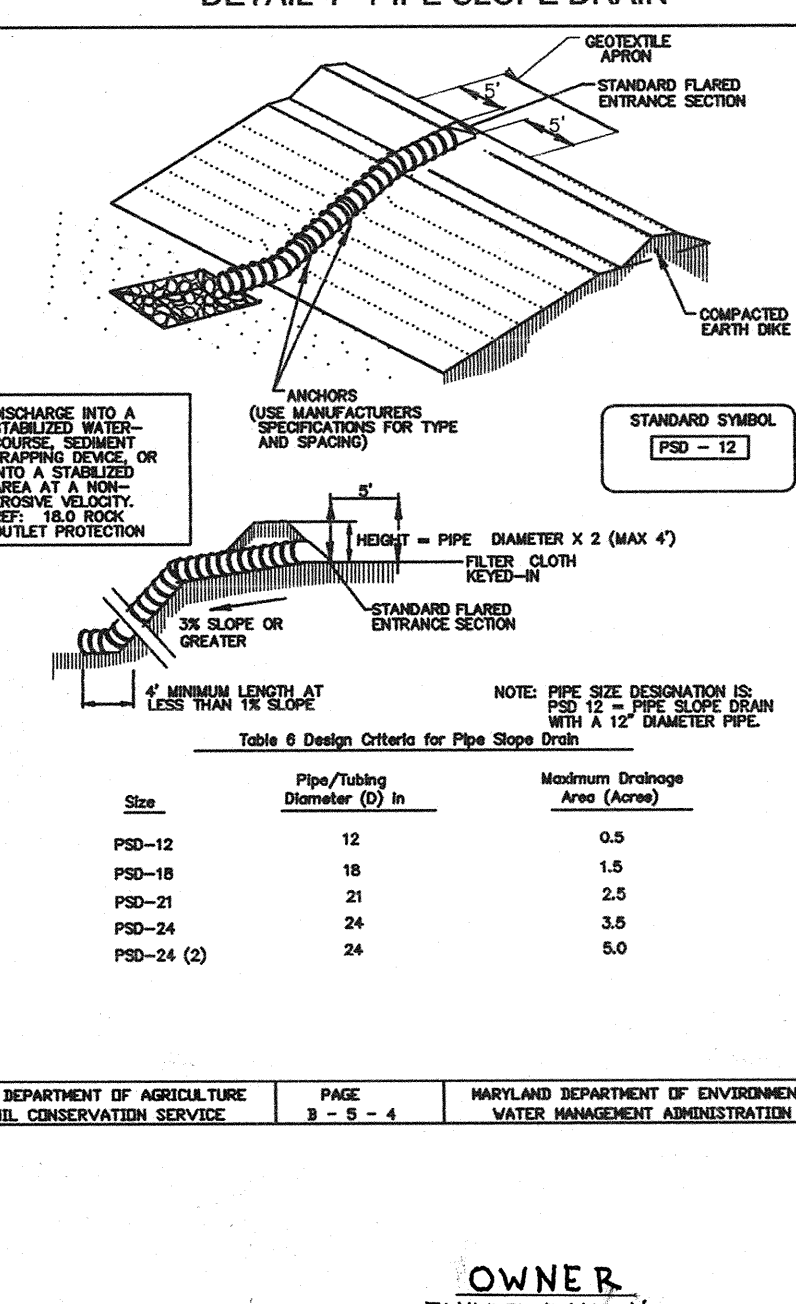


Table 6 Design Criteria for Pipe Slope Drain

Size	Pipe/Filtering Diameter (D) in	Maximum Drainage Area (Acres)
PSD-12	12	0.5
PSD-18	18	1.5
PSD-21	21	2.5
PSD-24	24	3.5
PSD-24 (2)	24	5.0

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-9-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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 three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, 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 three inches of soil. At the 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./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue, for the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 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 well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

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

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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: 2/11/04

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL MAINTAIN 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 PERMIT SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts
SIGNATURE OF DEVELOPER
DATE: 2/18/04

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Morris
USDA - NATURAL RESOURCES CONSERVATION SERVICE
DATE: 3/2/04

John R. Roberts
HOWARD SCD
DATE: 3/2/04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
DATE: 3/9/04

Chief, Division of Land Development
DATE: 3/15/04

Director
DATE: 3/15/04

SEDIMENT AND EROSION CONTROL DETAILS

VILLAGE CREST

PART OF PARCEL D-1

COMMUNITY RECREATION COMPLEX

TAX MAP #25 BLOCK 20
2ND ELECTION DISTRICT

PARCEL P/O 98
HOWARD COUNTY, MARYLAND

7125 RIVERWOOD DRIVE
COLUMBIA, MARYLAND 21046-2354
410-720-6900
410-720-6226 fax

FREDERICK WARD ASSOCIATES, INC.

ARCHITECTS | ENGINEERS | PLANNERS | SURVEYORS

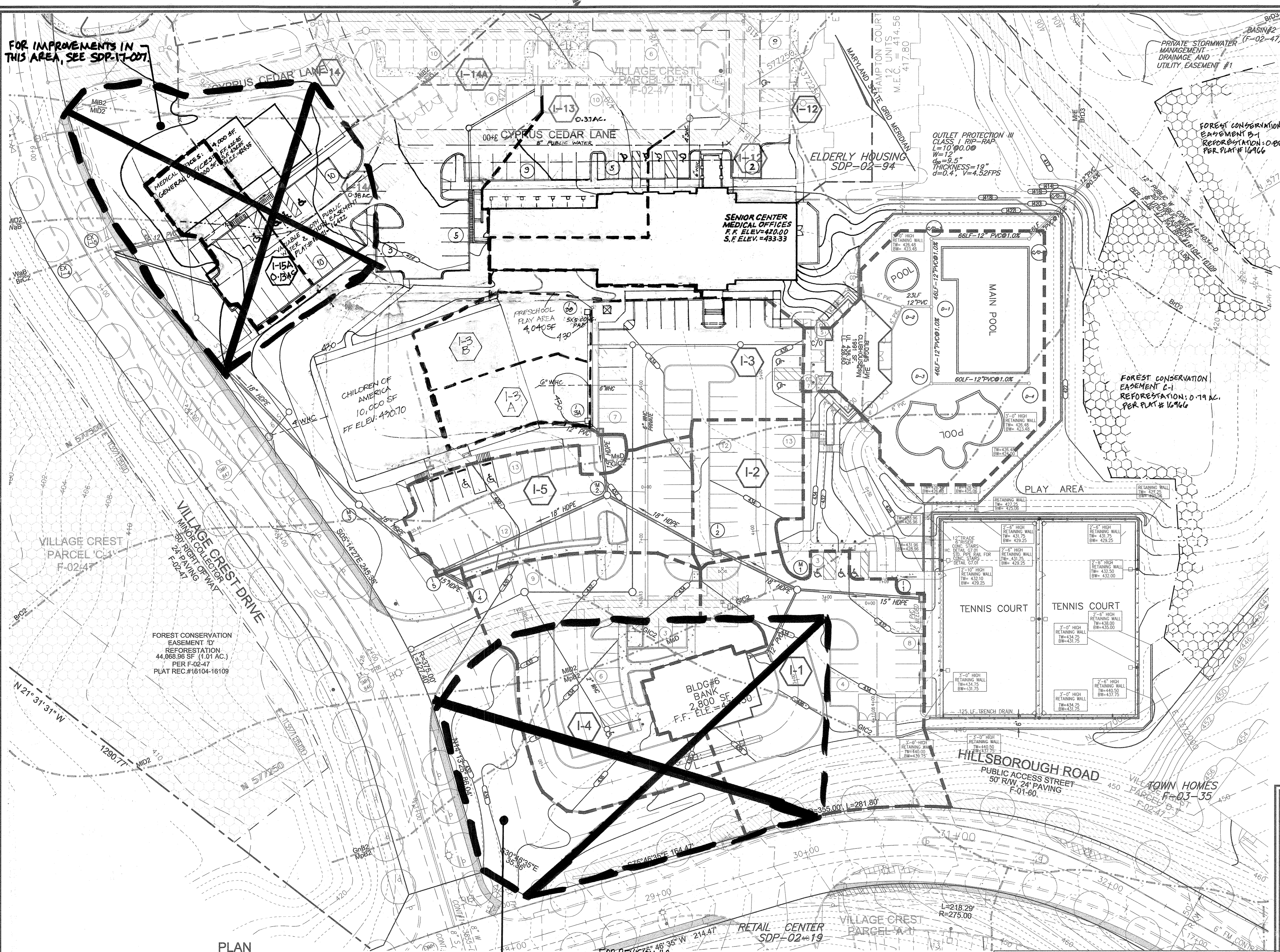
www.frederickward.com

DESIGN BY: RJ
DRAWN BY: RJ
CHECKED BY: RHV
DATE: FEB. 2004
SCALE: AS SHOWN
W.O. NO.: 2018121.04

8 SHEET OF 10

FOR IMPROVEMENTS IN THIS AREA, SEE SDP-17-007.

DRAINAGE AREA TABULATIONS					
No.	Area	'C'	% Imp.	Soil Types	Zone
I-1	0.48 Ac.	0.72	72	B	POR
I-2	0.15 Ac.	0.72	72	B	POR
I-3	0.51 Ac.	0.72	72	B	POR
I-4	0.61 Ac.	0.72	72	B	POR
I-5	0.28 Ac.	0.72	72	B	POR
I-5A	0.12 AC.	0.72	100	B	POR



FOREST CONSERVATION EASEMENT 'D' REFORESTATION 44,068.96 SF (1.01 AC.) PER F-02-47 PLAT REC.#16104-16109

FOREST CONSERVATION EASEMENT C-1 REFORESTATION: 0.19 AC. PER PLAT # 161466

OWNER
TAYLOR FAMILY LIMITED PARTNERSHIP A
5% LAND DESIGN & DEVELOPMENT
8000 MAIN STREET
ELlicott CITY, MD 21043
ATTN: MR. DONALD R. REUMER
PHONE: (410) 480-9106

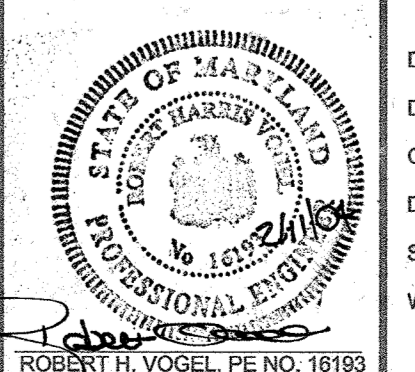
DEVELOPER
LAND DESIGN & DEVELOPMENT, INC.
8000 MAIN STREET
ELlicott CITY, MD 21043
ATTN: MR. DONALD R. REUMER
PHONE: (410) 480-9105

STORM DRAIN DRAINAGE AREA MAP
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX

TAX MAP #25 BLOCK 20 PARCEL P/O 98
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



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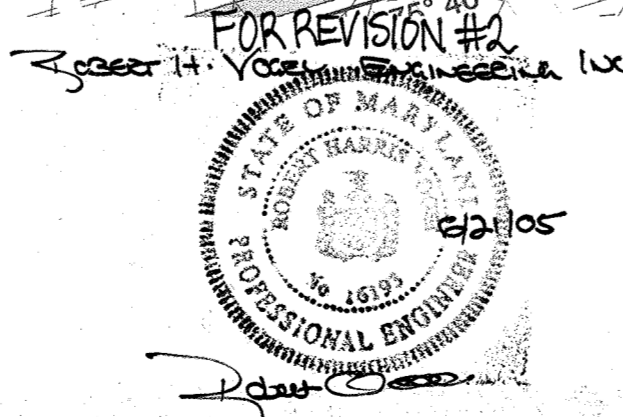


DESIGN BY: RJ
DRAWN BY: ELW
CHECKED BY: RHV
DATE: FEB. 2004
SCALE: AS SHOWN
W.O. NO.: 2018121.04

9 SHEET OF 11

PLAN
SCALE: 1"=30'

FOR IMPROVEMENTS IN THIS AREA, SEE SDP-17-007.

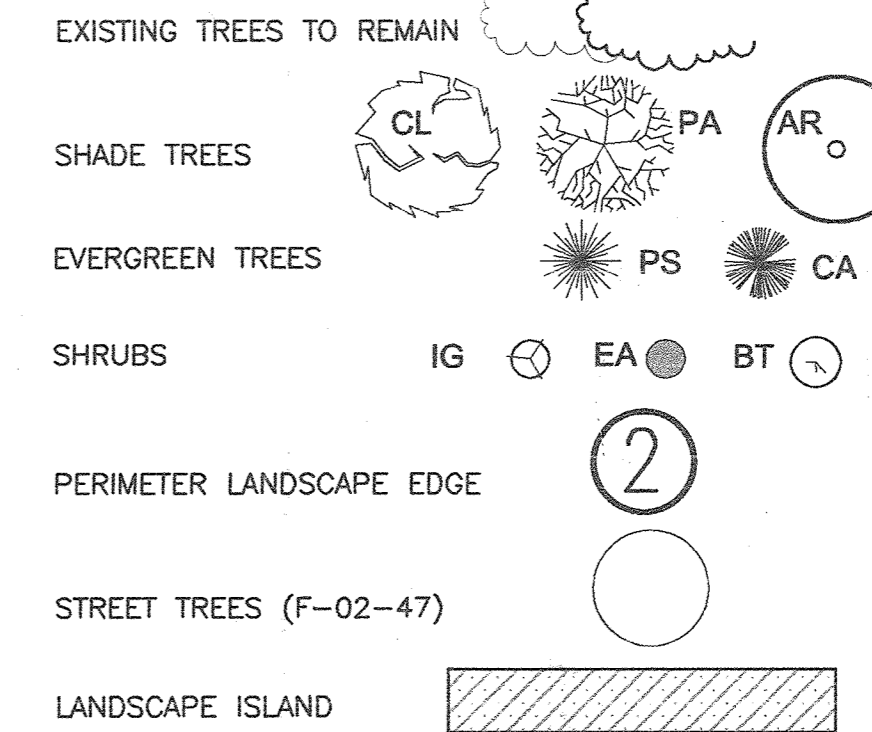


NO.	REVISION	DATE
5	REVISE THE PLAN TO REMOVE ITEMS THAT WERE CONSTRUCTED UNDER SDP-17-007	5-23-19
4	REVISE STORM DRAIN DRAINAGE AREA I-3A, I-3B	7/22/09
3	RESITING REVISED SENIOR CENTER + Bldg 3	1/10/2005
2	REVISION	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Howard County 3/9/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Donald R. Reumer 3/8/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Robert V. Vogel 3/15/04
 DIRECTOR DATE

FOR IMPROVEMENTS AND LANDSCAPING IN THIS AREA, SEE SDP-17-007.

LEGEND



CATEGORY	ADJACENT TO ROADWAYS							
	1	2	3	4	5	6	7	8
PERIMETER/FRONTAGE DESIGNATION	B	E	C	E	E	E	C	C
LINEAR FEET OF ROADWAY	69	72	105	93	97	68	127	683
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No	No	No	No
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	No	No	No	No	No	No	No	No
NUMBER OF PLANTS REQUIRED								
SHADE TREES	1:5	1	1:4	3	1:4	3	1:4	3
EVERGREEN TREES	1:2	1	1:2	5	1:2	5	1:2	6
SHRUBS	1:18	1	1:18	24	1:18	24	1:18	34
NUMBER OF PLANTS PROVIDED								
SHADE TREES	1	2	3	3	3	2	3	7
EVERGREEN TREES	2	2	5	3	2	6	6	34
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	-	-	-	24	24	-	-	8
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED	-	-	-	-	-	-	-	60
TOTAL								26
								45
								16
								53
								84

* (2:1 SUBSTITUTION) - 1 SHADE TREE / 2 EVERGREEN TREE
 ** (10:1 SUBSTITUTION) - 1 SHADE TREE / 10 SHRUBS
 *** FOR PERIMETER LANDSCAPING SEE SDP-17-007.

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	21	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" Cal.	B & B
CA	-	CEDRUS ATLANTICA 'GLAUCA' BLUE ATLAS CEDAR	6' - 8' Ht.	B & B
CL	7	CLADRASTIS LUTEA 'SWEETSHADE' SWEETSHADE YELLOWWOOD	2 1/2"-3" Cal.	B & B
PA	2	PHELLODENDRON AMURENSE 'SHADEMASTER' SHADEMASTER AMUR CORKTREE	2 1/2"-3" Cal.	B & B
PS	63	PINUS STROBUS WHITE PINE	6' - 8' Ht.	B & B
BT	60	BERBERIS THUNBERGII JAPANESE BARBERRY	24" X 36" HT 24" X 36" SPD	B & B
EA	21	EUONYMUS ALATUS WINGED EUONYMUS	24" X 36" HT 24" X 36" CANES	B & B
IG	24	ILEX GLABRA INKBERRY	24" X 36" HT 24" X 36" SPD	B & B

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	100
NUMBER OF LANDSCAPE ISLAND REQUIRED	5
NUMBER OF LANDSCAPE ISLAND PROVIDED	5
SHADE TREES	5
OTHER TREES (2:1 SUBSTITUTION)	-

OWNER
 TAYLOR FAMILY
 LIMITED PARTNERSHIP A
 7% LAND DESIGN & DEVELOPMENT
 8000 MAIN STREET
 ELLICOTT CITY, MD. 21043
 ATTN: MR. DONALD R. REUVER
 PHONE: (410) 480-9105

DEVELOPER

LAND DESIGN & DEVELOPMENT, INC.
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 ATTN: MR. DONALD R. REUVER
 PHONE: (410) 480-9105

**LANDSCAPE PLAN
 VILLAGE CREST
 PART OF PARCEL D-1
 COMMUNITY RECREATION COMPLEX**

TAX MAP #25 BLOCK 20
 2ND ELECTION DISTRICT

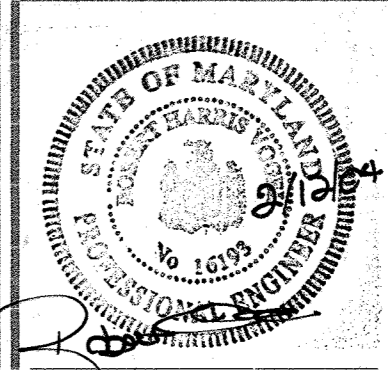
PARCEL P/D 98
 HOWARD COUNTY, MARYLAND



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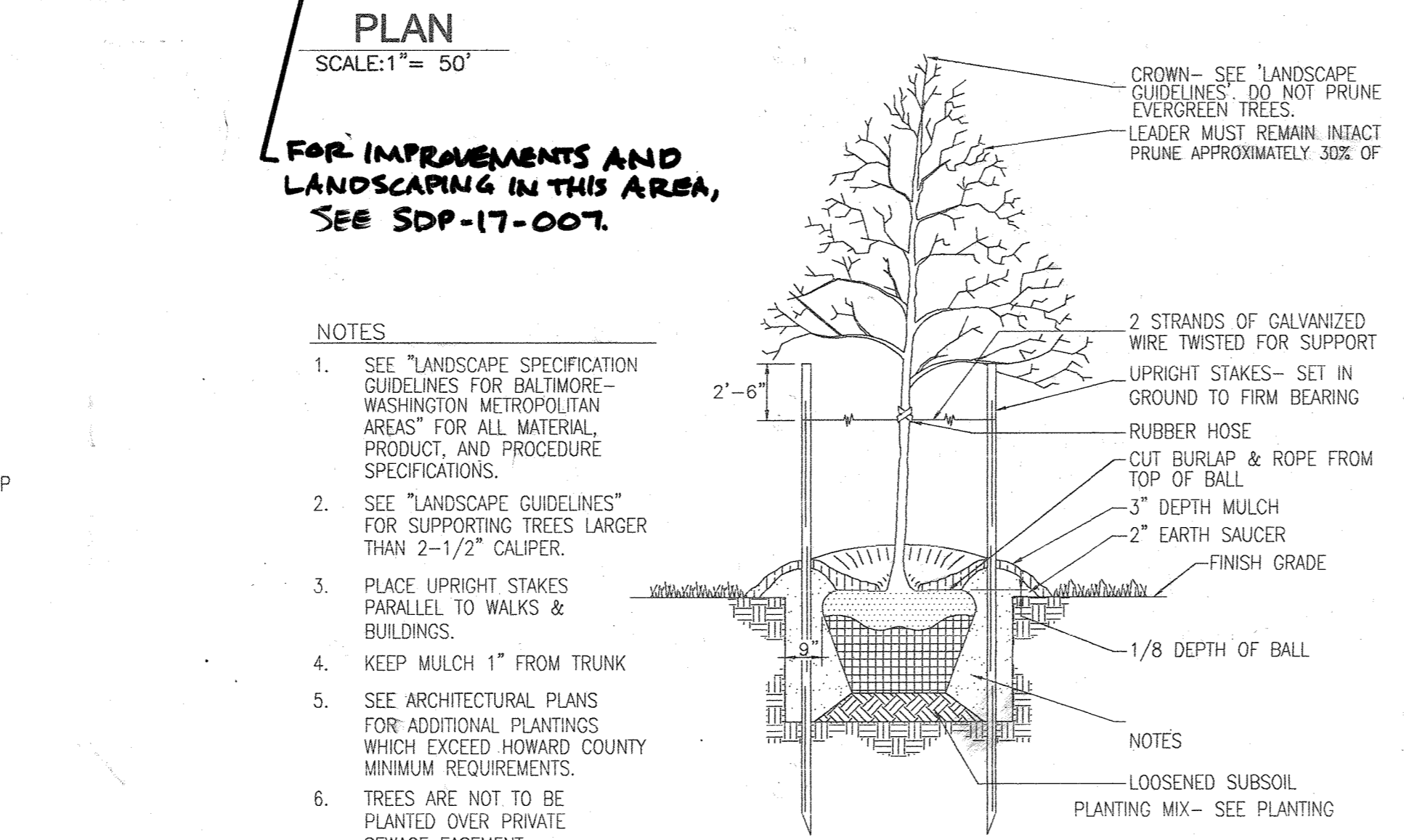
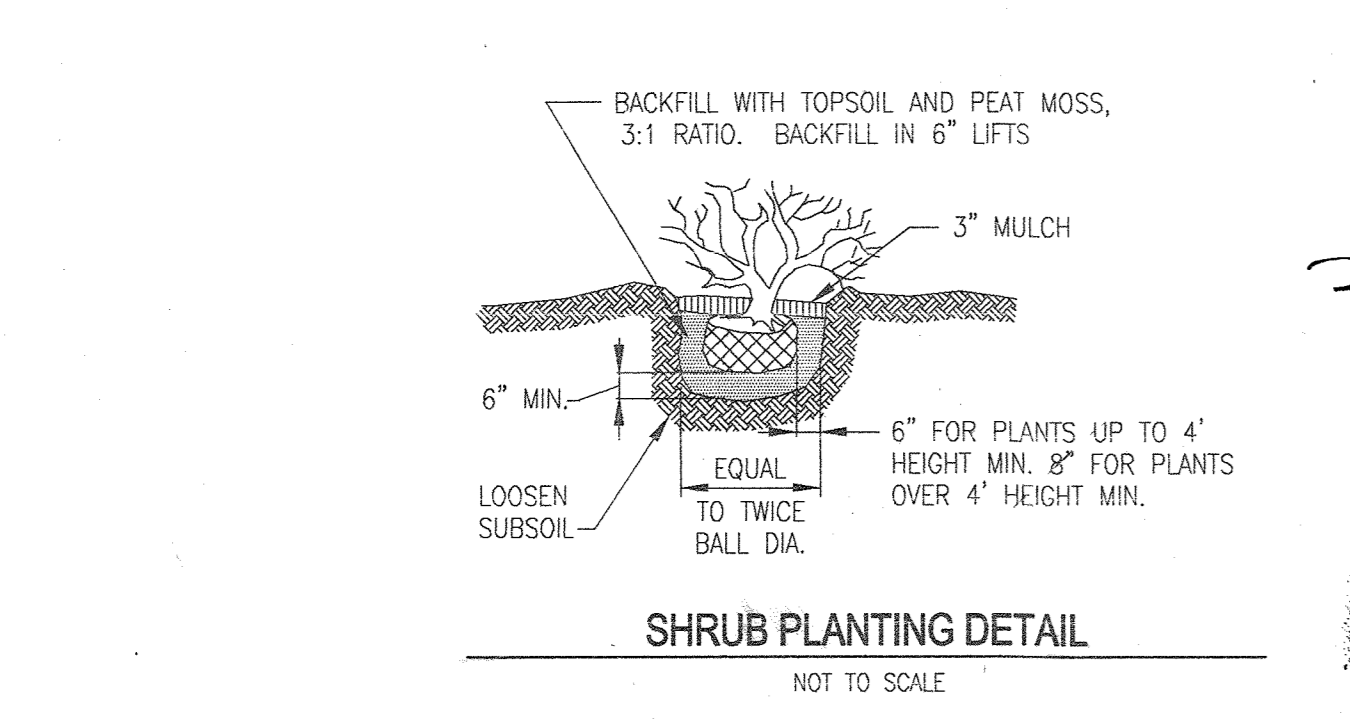
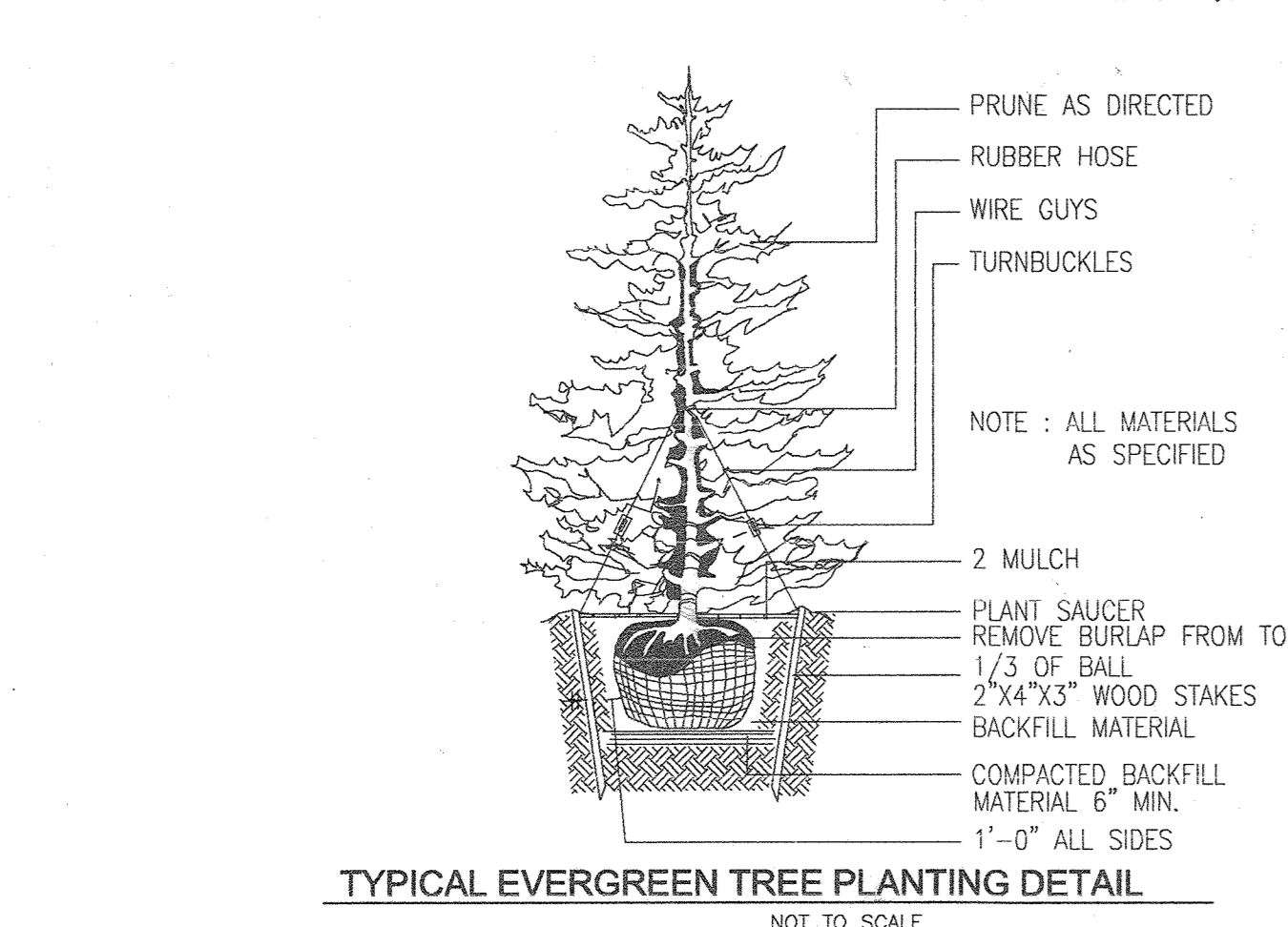
7125 RIVERWOOD DRIVE
 COLUMBIA, MARYLAND 21046-2354
 410-720-6900
 410-720-6226 fax

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DESIGN BY: ELW/RJ
 DRAWN BY: ELW/RJ
 CHECKED BY: RHV
 DATE: FEB. 2004
 SCALE: AS SHOWN
 W.O. NO.: 2018121.04

10 SHEET OF 11



FOR REVISION #2
 PROFESSIONAL ENGINEER
 ROBERT H. VOGEL, PE
 No. 18193

NO.	REVISION	DATE
5	REVISE THE PLAN TO REMOVE ITEMS THAT WERE CONSTRUCTED UNDER SDP-17-007	5-23-19
4	REVISE DAYCARE BUILDING (BLDG 4)	7/22/2009
2	RE-SITING REVISED SENIOR CENTER BLDG 3	1/10/2005

DEVELOPER'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(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER: [Signature] DATE: 2/18/04

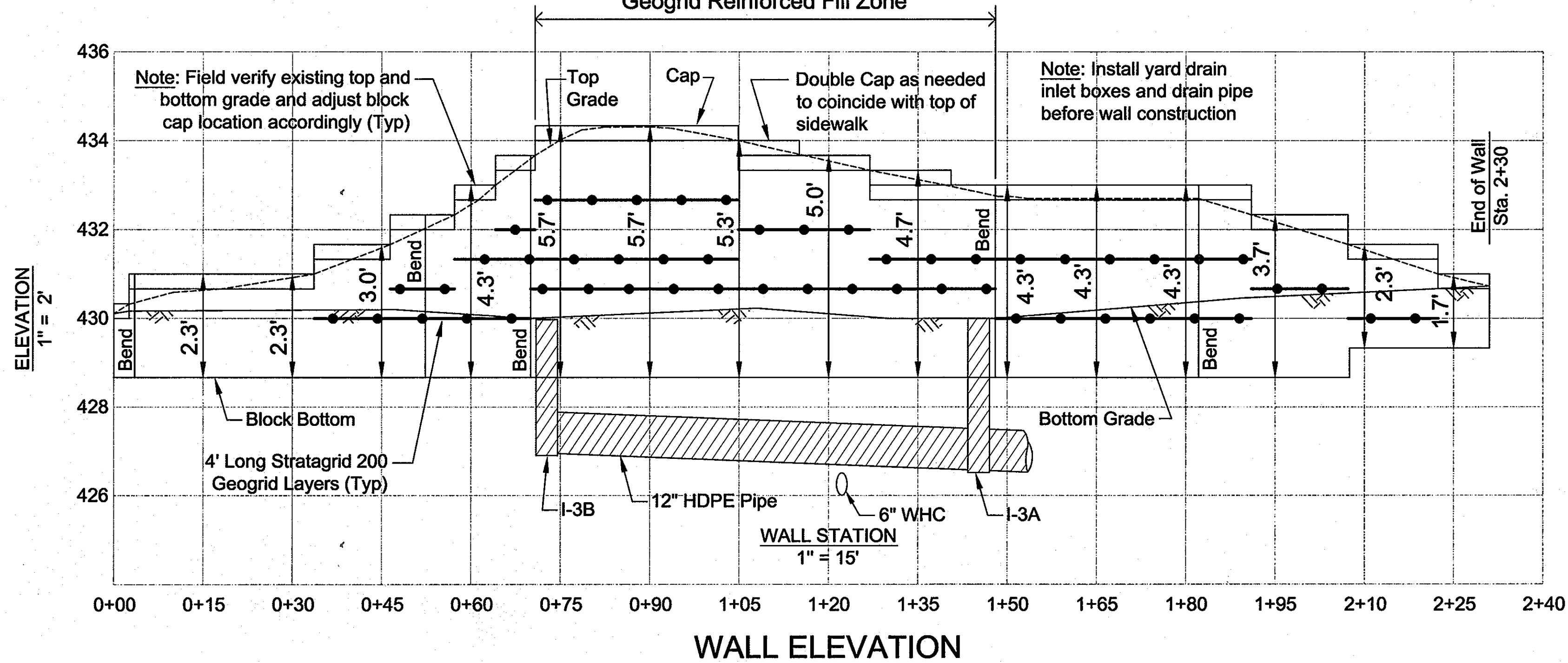
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 3/9/04
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 3/15/04
 DIRECTOR: [Signature] DATE: 3/15/04

GENERAL NOTES

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS A PART OF THE GRADING PERMIT IN THE AMOUNT OF \$16,770.00 FOR 31 SHADE TREES, 45 EVERGREEN TREES, AND 24 SHRUBS.
- LIGHT POLES TO BE KIM LIGHTING STANDARD ENTABLATURE, 25' BLACK STEEL ROUND POLES, FLUSH MOUNT. 250 WATT METAL HALIDE.
 ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAMW PLANTING SPECIFICATIONS.
 MAINTENANCE TO INCLUDE MONITORING AND HAND WATERING AS NEEDED FOR THE FIRST TWO GROWING SEASONS TO ESTABLISH WOODY PLANTS. SPECIALIZED PLANTING AREAS INCLUDING INTERIOR COURTYARDS AND ANNUAL BEDS MAY REQUIRE REGULAR HAND WATERING OR IRRIGATION.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

CR-6 Backfill Required in Geogrid Reinforced Fill Zone



SPECIFICATIONS
MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

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

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

PART 2: PRODUCTS

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

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

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

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

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

- 2.05 Reinforced Backfill
 - A. Reinforced backfill shall type SM unless otherwise shown on the plan, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-40

 Plasticity Index (PI) < 10 and Liquid Limit < 35 per ASTM D-4318.
 - B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

- 2.06 Geogrid Soil Reinforcement
 - A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.
 - B. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.
 - C. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.
 - D. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.
 - E. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.
 - F. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
 - G. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.
 - H. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

- 2.07 Drainage Pipe
 - A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

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

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

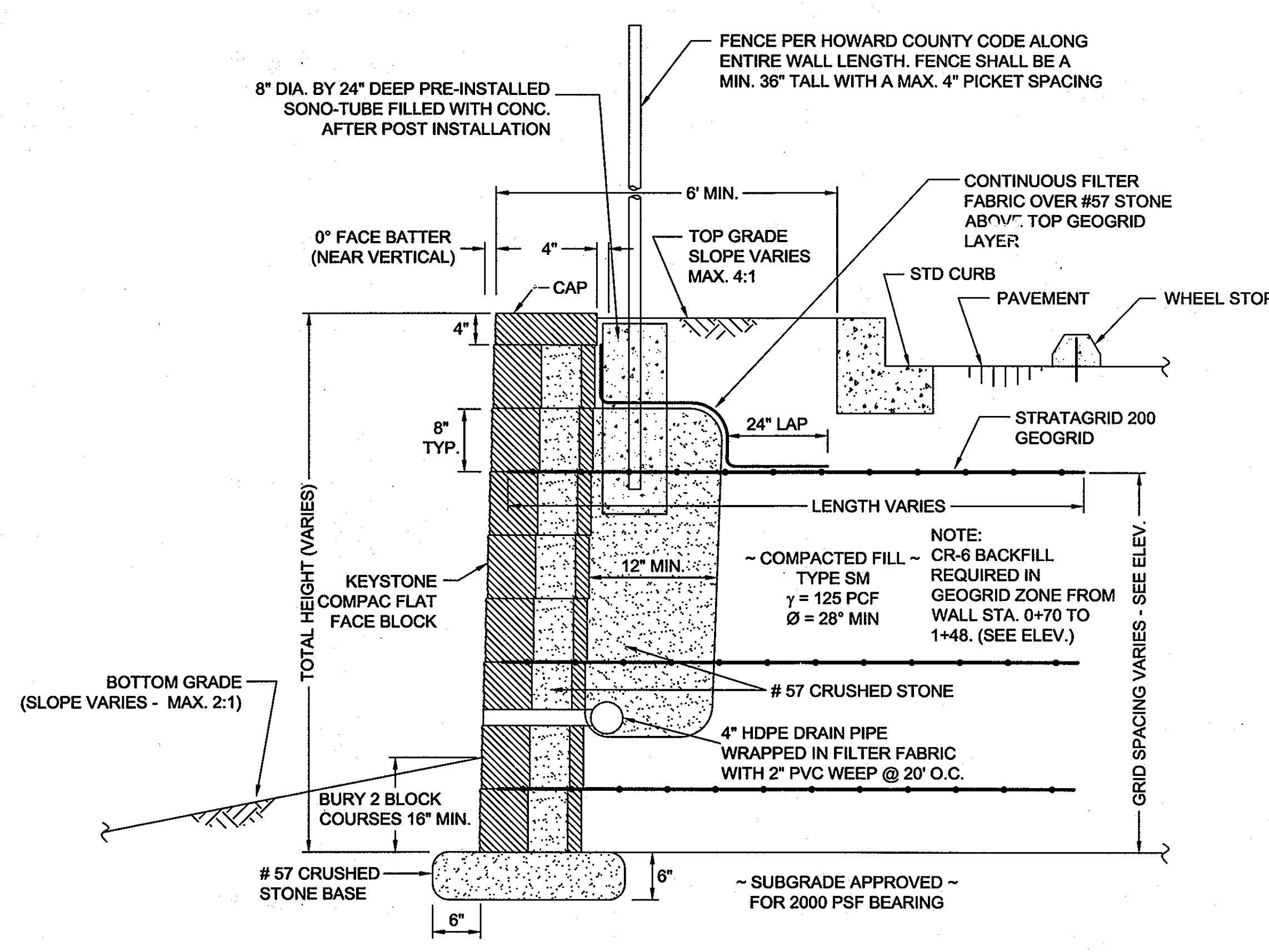
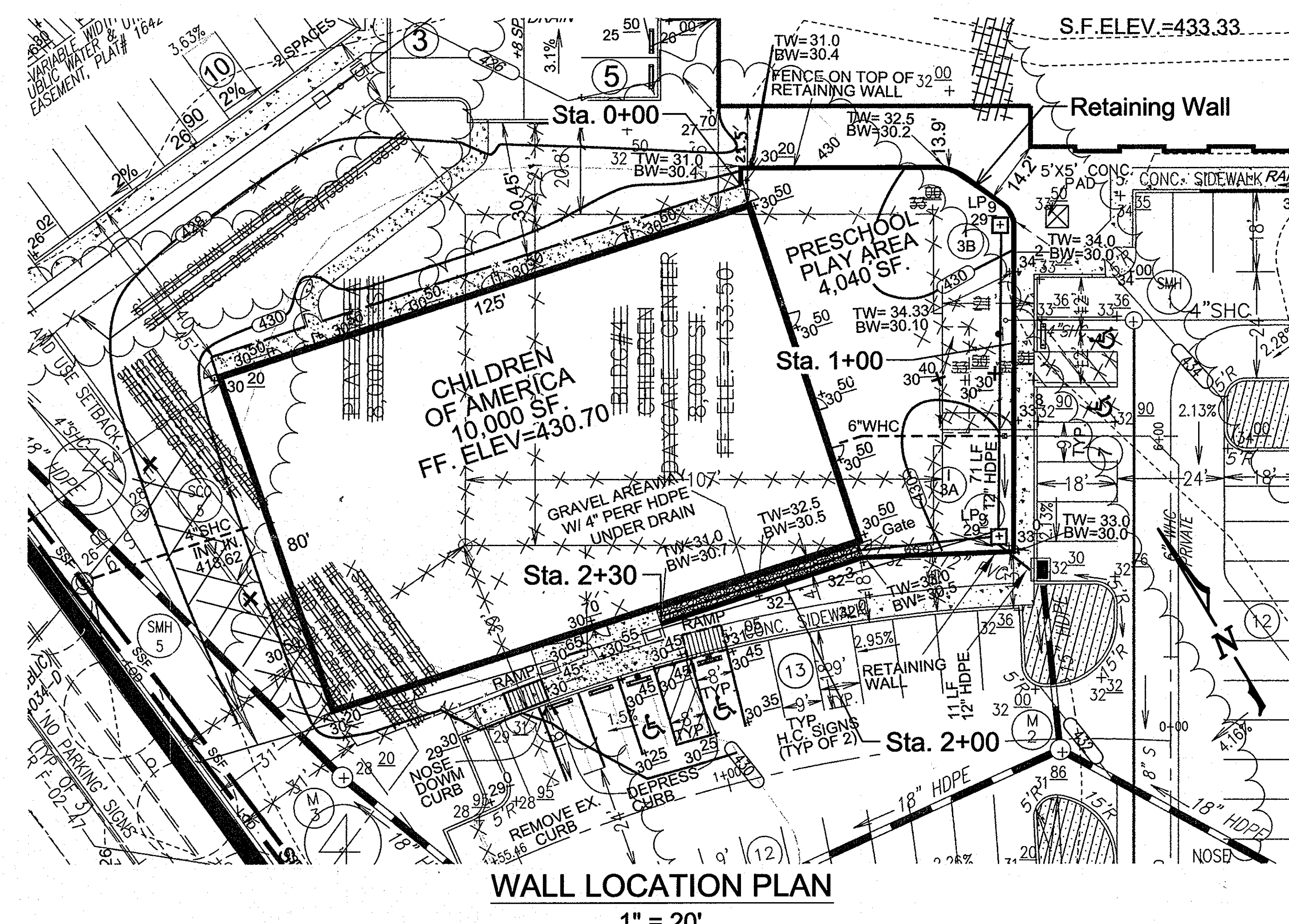
- 3.03 Modular Unit Installation
 - A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.
 - B. Place the front of units side-by-side.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

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

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

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

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



- NOTES:
- No trees shall be planted within 10 feet of the top of the retaining wall.
 - Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
 - For "Critical" walls, one soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
 - The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-359.
 - The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
 - Walls shall not be constructed on unconfined fill materials.
 - Walls shall not be constructed within a Howard Co. right-of-way or easement.

NO.	REVISION	DATE

NEW SHEET FOR ADDITION OF A RETAINING WALL 10-27-09

WALL CONSTRUCTION DETAILS
VILLAGE CREST
PART OF PARCEL D-1
COMMUNITY RECREATION COMPLEX

TAX MAP #25 BLOCK 20 PARCEL P/O 98
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

OWNER: TAYLOR FAMILY LIMITED PARTNERSHIP A C/O LAND DESIGN & DEVELOPMENT 8000 MAIN STREET ELLICOTT CITY, MD 21043 ATTN: MR. DONALD R. REUWER PHONE: (410) 480-6105

DEVELOPER: LAND DESIGN & DEVELOPMENT 8000 MAIN STREET ELLICOTT CITY, MD 21043 ATTN: MR. DONALD R. REUWER PHONE: (410) 480-9105

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division 10-23-09
Chief, Division of Land Development 11-09-09
Director 11/07/09

DESIGN BY: RWS
DRAWN BY: AM
CHECKED BY: RWS
DATE: JULY 22, 2009
SCALE: AS SHOWN
HCEA NO.: 09177-A

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434 EXPIRATION DATE: 02/13/11

11 SHEET OF 11