

GENERAL NOTES

- 1. ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
2. DEED REFERENCE: 479/676, 832/562, 815/344
3. THE PROJECT BOUNDARY IS BASED ON A SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 2005.

SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS AND RETAIL CENTER
5-STORY RETAIL AND APARTMENT BUILDING
PARCEL A AND NON-BUILDABLE PARCEL B OF THE NORTH LAUREL SUBDIVISION
A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10 AND 19 THRU 22 & BLOCK 6

SITE ANALYSIS: GENERAL SITE DATA
PRESENT ZONING: CAC
PROPOSED USE OF SITE: RETAIL, APARTMENT UNITS, AND CHILD DAYCARE

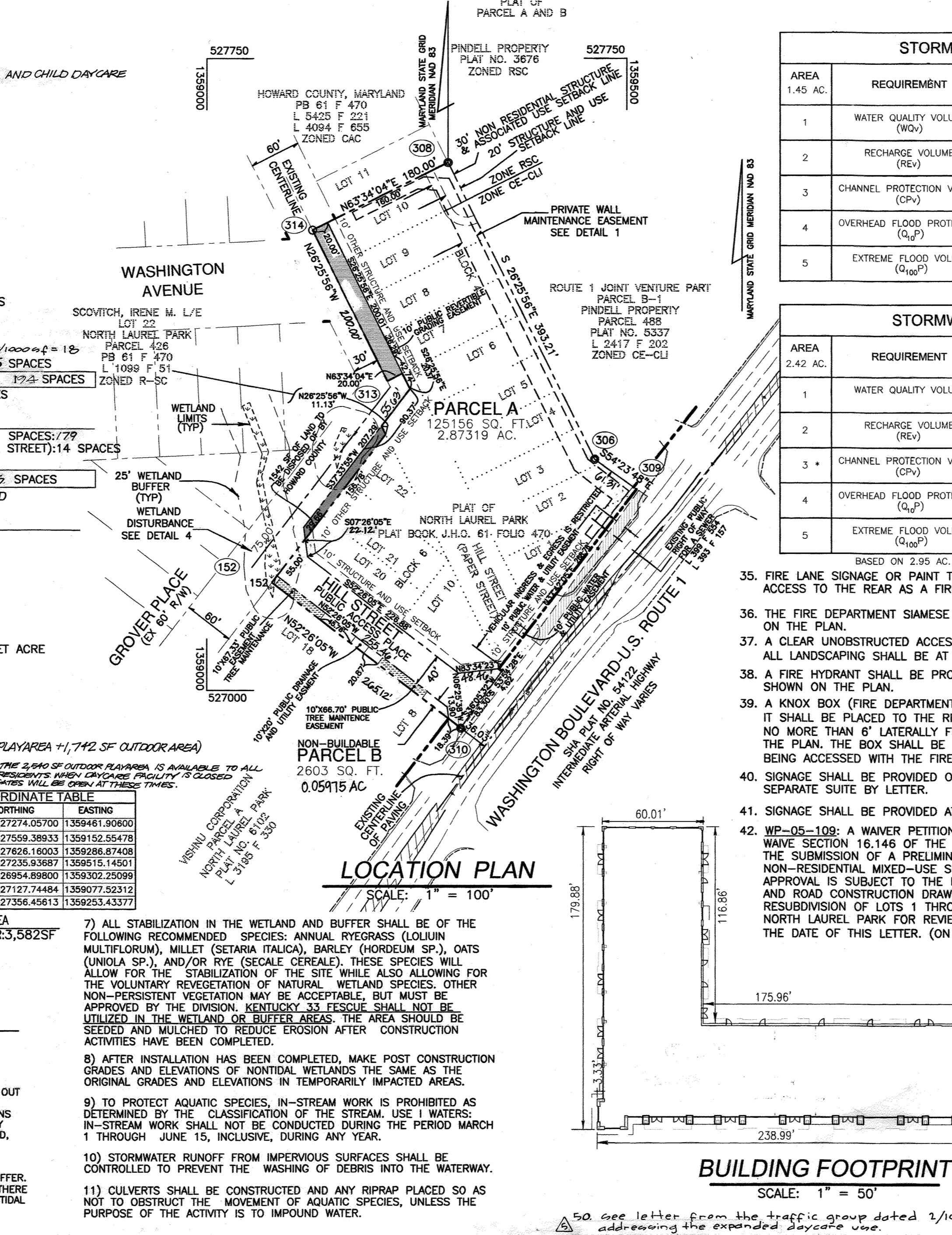
AREA TABULATION
TOTAL AREA OF BUILDABLE UNITS: 20,341 SF
TOTAL TOTAL AREA (GROSS): 147,076 SF (3.3626 AC.)

RESIDENTIAL
NUMBER OF UNITS ALLOWED AND PROPOSED 80
PARKING SPACES REQUIRED: 195 SPACES

COMMERCIAL
PARKING SPACES REQUIRED: 51,471 sq ft daycare x 5 spaces/1,000 sq ft = 258 SPACES
TOTAL PARKING SPACES REQUIRED: 173 SPACES

DENSITY TABULATION
NUMBER OF PARCELS: 2 (A & B)
TRACT AREA 3.3626 AC.
100-YEAR FLOODPLAIN 0.00 AC.

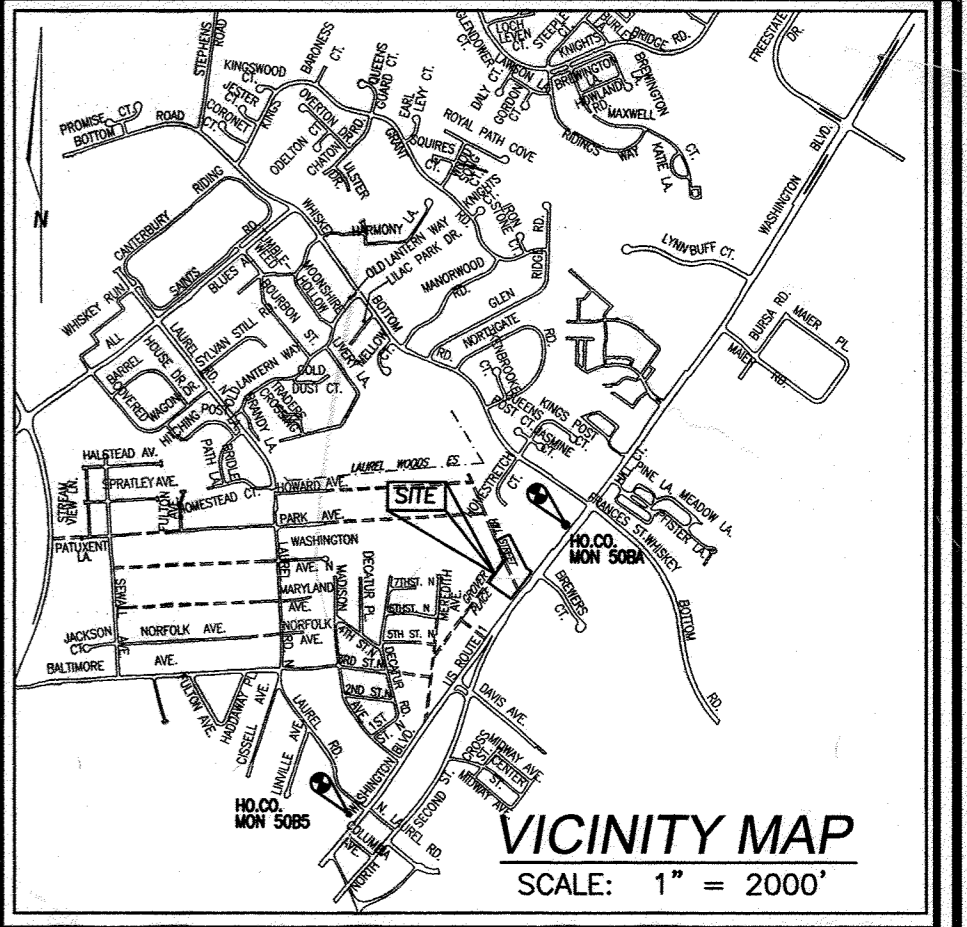
COORDINATE TABLE
POINT NORTHING EASTING
308 527274.05700 1359461.80600
307 527559.38933 1359152.25478



STORMWATER MANAGEMENT REQUIREMENTS - REDEVELOPMENT
AREA 1.45 AC.
REQUIREMENT WATER QUALITY VOLUME (WQv) 0.0197 AC. FT.

STORMWATER MANAGEMENT REQUIREMENTS - NEW DEVELOPMENT
AREA 2.42 AC.
REQUIREMENT WATER QUALITY VOLUME (WQv) 0.1553 AC. FT.

PERMIT INFORMATION CHART
PROJECT NAME: PATUXENT SQUARE APARTMENTS AND RETAIL CENTER
SECTION/AREA: N/A
LOT/PARCEL: PARCELS A & B
DEED REF. PLAT NO. 479/676, 832/562, 815/344

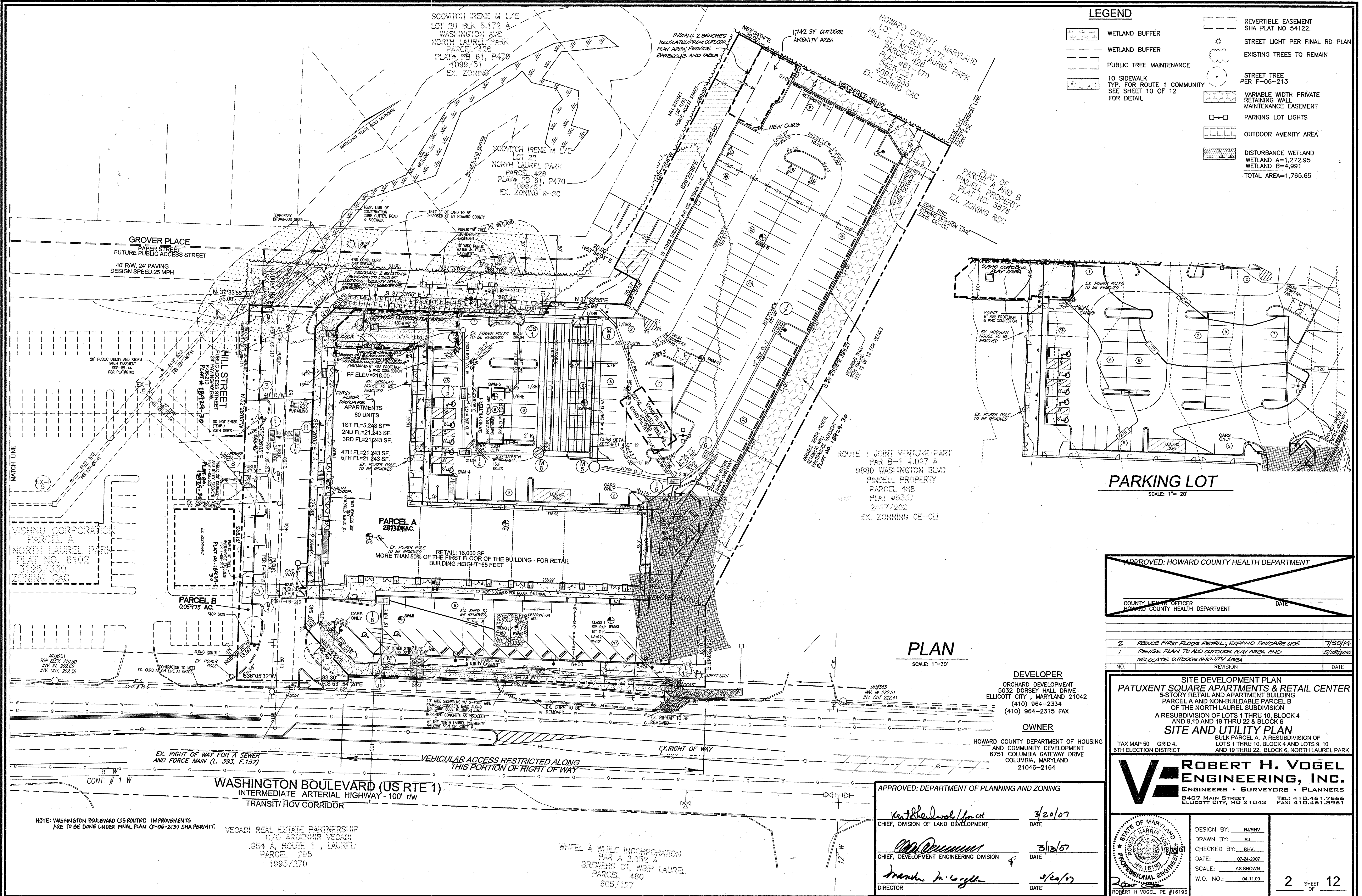


BENCHMARK INFORMATION
THE BEARINGS SHOWN ON THIS PLAT ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED IN THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS:

SHEET INDEX
COVER SHEET 1 OF 12
SITE AND UTILITY PLAN 2 OF 12
GRADING AND SEDIMENT CONTROL PLAN 3 OF 12

ADDRESS CHART
BLDG. NO 1
STREET ADDRESS 9800 HILL STREET
DEVELOPER ORCHARD DEVELOPMENT
OWNER HOWARD COUNTY DEPARTMENT OF HOUSING

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043
TEL: 410.461.7666 FAX: 410.461.8961



LEGEND

	WETLAND BUFFER		REVERSIBLE EASEMENT SHA PLAT NO 54122.
	PUBLIC TREE MAINTENANCE		STREET LIGHT PER FINAL RD PLAN
	10 SIDEWALK TYP. FOR ROUTE 1 COMMUNITY SEE SHEET 10 OF 12 FOR DETAIL		EXISTING TREES TO REMAIN
	VARIABLE WIDTH PRIVATE RETAINING WALL MAINTENANCE EASEMENT		STREET TREE PER F-06-213
	PARKING LOT LIGHTS		DISTURBANCE WETLAND WETLAND A=1,272.95 WETLAND B=4,991 TOTAL AREA=1,765.65
	OUTDOOR AMENITY AREA		

PARKING LOT
SCALE: 1" = 20'

PLAN
SCALE: 1" = 30'

DEVELOPER
ORCHARD DEVELOPMENT
5032 DORSEY HALL DRIVE
ELLCOTT CITY, MARYLAND 21042
(410) 964-2334
(410) 964-2315 FAX

OWNER
HOWARD COUNTY DEPARTMENT OF HOUSING
AND COMMUNITY DEVELOPMENT
6751 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046-2164

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT
DATE

NO.	REVISION	DATE
2	REDUCE FIRST FLOOR RETAIL, EXPAND DAYCARE USE	7/30/14
1	REVISE PLAN TO ADD OUTDOOR PLAY AREA AND RELOCATE OUTDOOR AMENITY AREA	5/28/2010

SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS & RETAIL CENTER
5-STORY RETAIL AND APARTMENT BUILDING
PARCEL A AND NON-BUILDABLE PARCEL B
OF THE NORTH LAUREL SUBDIVISION
A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
AND 9, 10 AND 19 THRU 22 & BLOCK 6
SITE AND UTILITY PLAN
BULK PARCEL A, A RESUBDIVISION OF
LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10
AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK
TAX MAP 50 GRID 4,
6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
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8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.6961

	DESIGN BY: RJR/VV	2	SHEET OF 12
	DRAWN BY: RJ		
	CHECKED BY: R/V		
	DATE: 07-24-2007		
	SCALE: AS SHOWN		
	W.O. NO.: 04-11.00		

APPROVED: DEPARTMENT OF PLANNING AND ZONING

	3/20/07
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
	3/12/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
	3/20/07
DIRECTOR	DATE

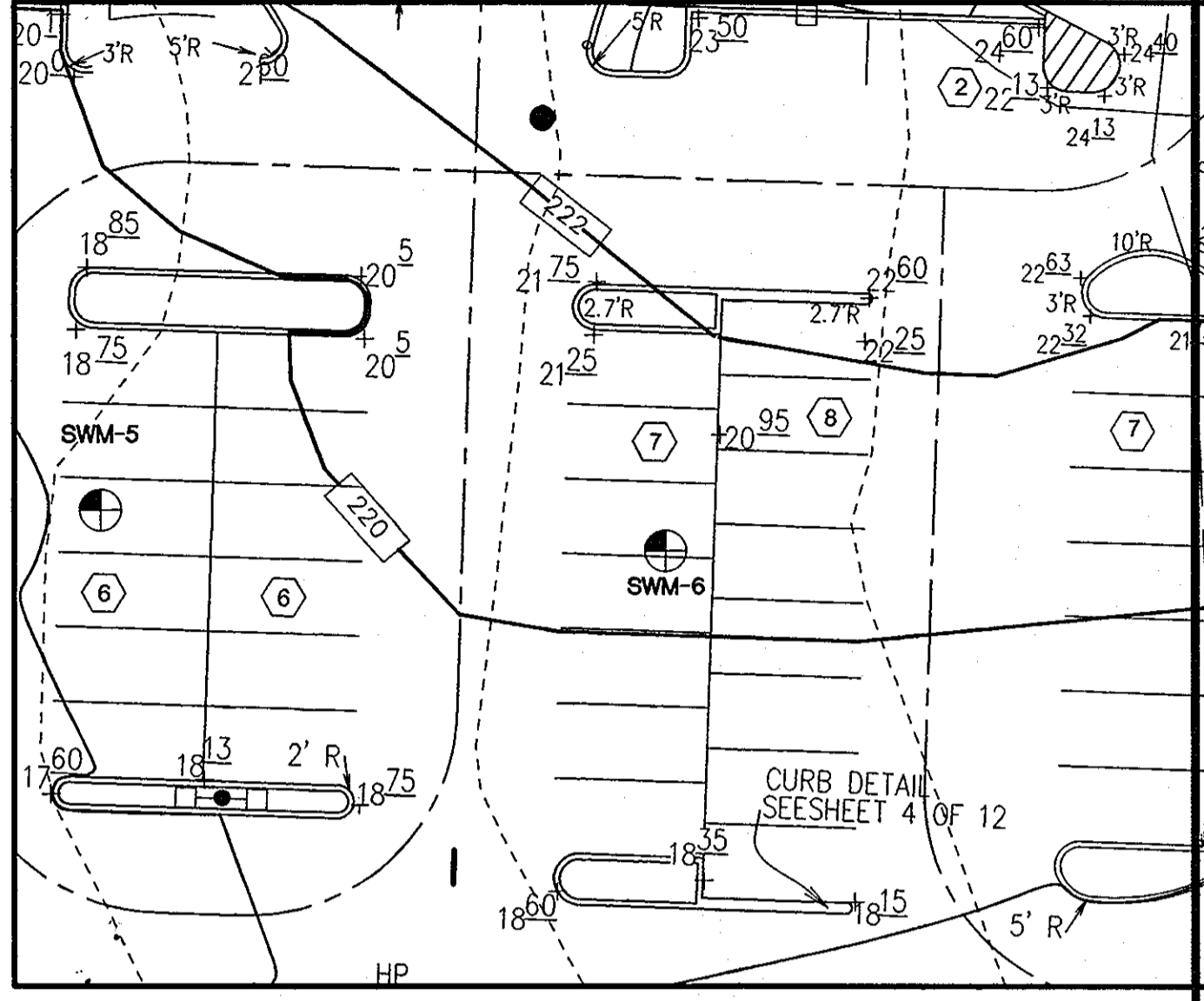
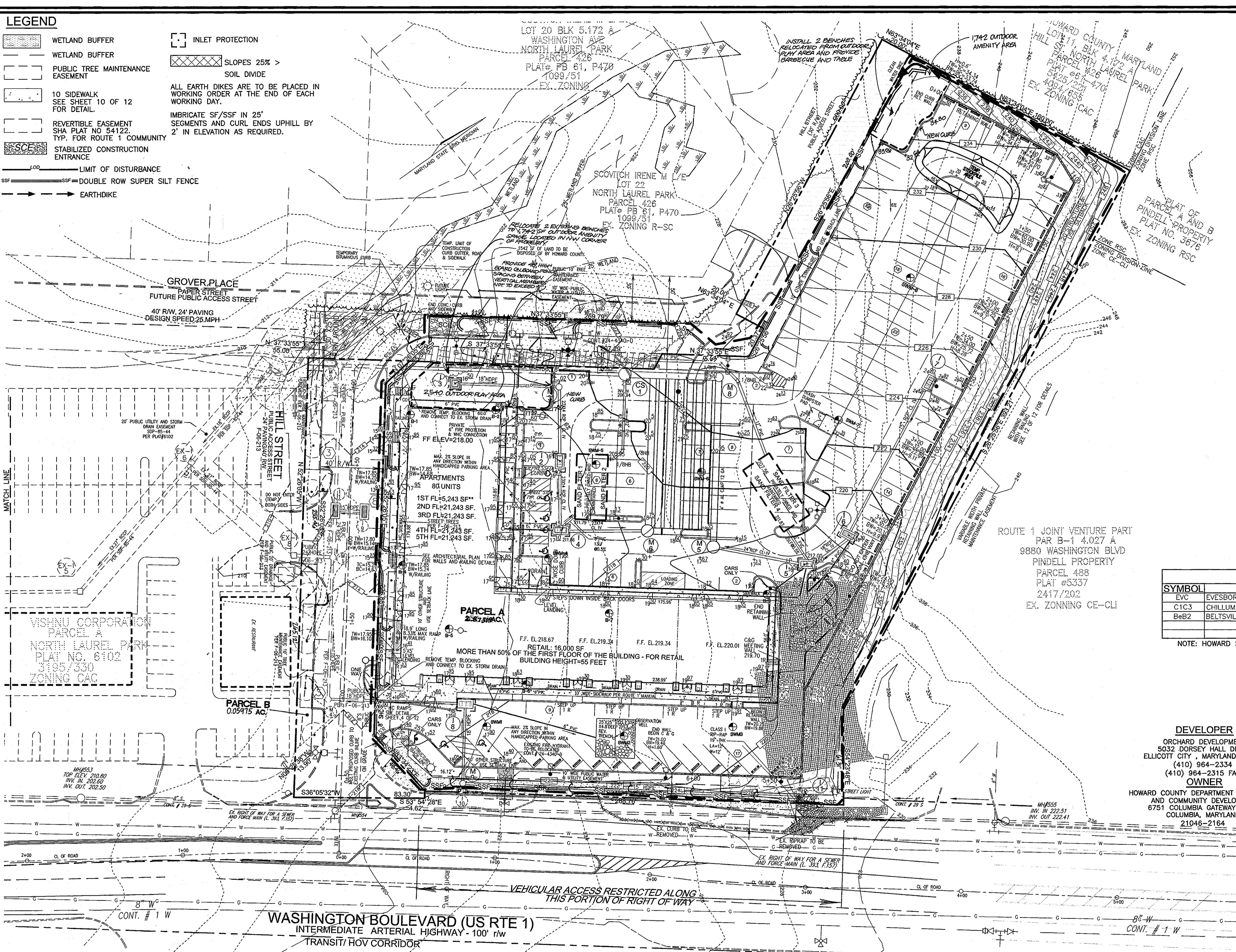
NOTE: WASHINGTON BOULEVARD (US ROUTE) IMPROVEMENTS ARE TO BE DONE UNDER FINAL PLAN (F-06-213) SHA PERMIT.

VEDADI REAL ESTATE PARTNERSHIP
C/O ARDESHIR VEDADI
354 A, ROUTE 1, LAUREL
PARCEL 285
1995/270

WHEEL A WHILE INCORPORATION
PAR A 2.052 A
BREWERS CT, WBIP LAUREL
PARCEL 480
605/127

LEGEND

- WETLAND BUFFER
- PUBLIC TREE MAINTENANCE EASEMENT
- 10' SIDEWALK
SEE SHEET 10 OF 12 FOR DETAIL
- REVERSIBLE EASEMENT
SHA PLAT NO 54122
TYP. FOR ROUTE 1 COMMUNITY
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- DOUBLE ROW SUPER SILT FENCE
- EARTHDIKE
- INLET PROTECTION
- SLOPES 25% >
SOIL DIVIDE
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
- IMBRICATE SF/SSF IN 25' SEGMENTS AND CURL ENDS UPHILL BY 2' IN ELEVATION AS REQUIRED.



SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	K VALUE	TYPE
EVC	EVESBORO LOAMY SAND, 5% TO 15% SLOPE	.17	A
C1C3	CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED	.43	B
BeB2	BELTSVILLE SILT LOAM, 1% TO 5% SLOPES, MODERATELY	.43	C

NOTE: HOWARD SOIL SURVEY, MAP NUMBER 26

DEVELOPER
 ORCHARD DEVELOPMENT
 5032 DORSEY HALL DRIVE
 ELLICOTT CITY, MARYLAND 21042
 (410) 964-2334
 (410) 964-2315 FAX

OWNER
 HOWARD COUNTY DEPARTMENT OF HOUSING
 AND COMMUNITY DEVELOPMENT
 6751 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046-2164

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT		
COUNTY HEALTH OFFICER	DATE	
HOWARD COUNTY HEALTH DEPARTMENT		
NO.	REVISION	DATE
1	REVISE PLAN TO ADD OUTDOOR PLAY AREA AND RELOCATE OUTDOOR AMENITY AREA	5/29/2007

SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS & RETAIL CENTER
 5-STORY RETAIL AND APARTMENT BUILDING
 PARCEL A AND NON-BUILDABLE PARCEL B
 OF THE NORTH LAUREL SUBDIVISION
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 BULK PARCEL A, A RESUBDIVISION OF
 LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10
 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK
 TAX MAP 50 GRID 4,
 6TH ELECTION DISTRICT

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 FAX: 410.461.8961

NOTE: WASHINGTON BOULEVARD (US ROUTE 1) IMPROVEMENTS ARE TO BE DONE UNDER FINAL PLAN (P-06-213) SHA PERMIT

PLAN
 SCALE: 1"=30'

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

2/28/07
 SIGNATURE OF ENGINEER
 ROBERT H. VOGEL

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Keat Shadlock/for ch
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE 3/20/07

Chief, Development Engineering Division
 DATE 2/13/07

Director
 DATE 2/20/07

DEVELOPER'S CERTIFICATE

"I WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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."

Michael B. Shuddy 2/27/07
 SIGNATURE OF DEVELOPER
 DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

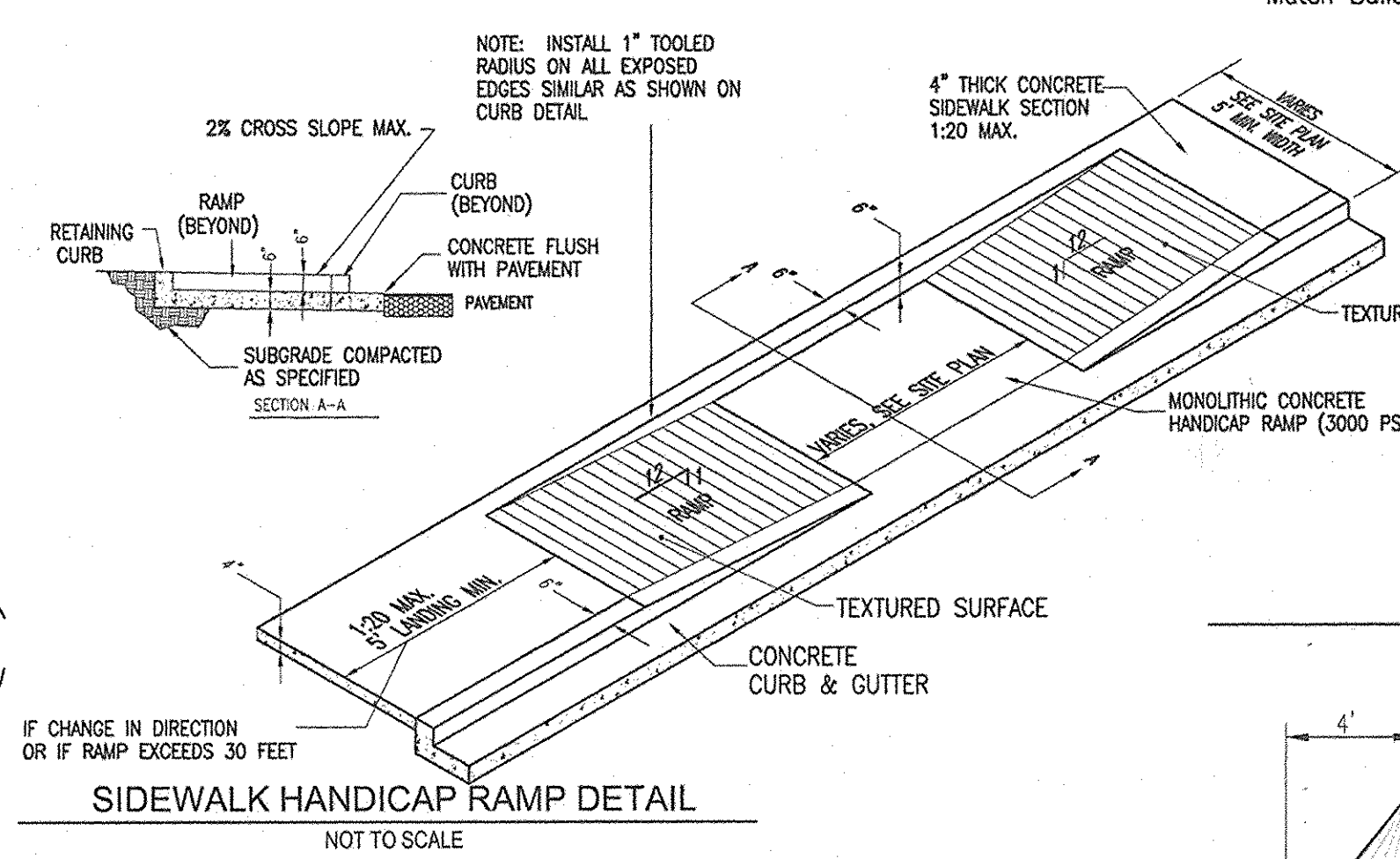
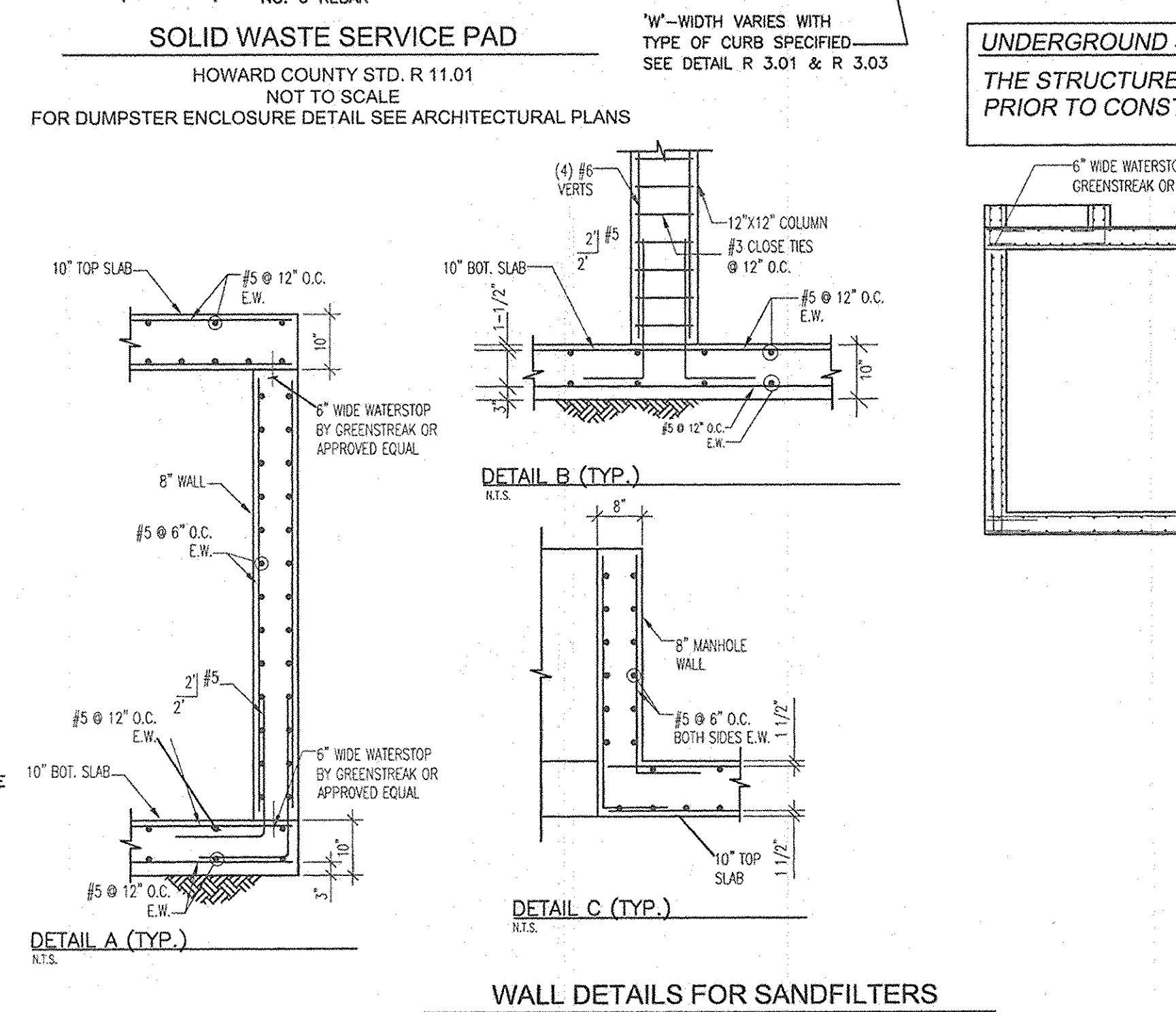
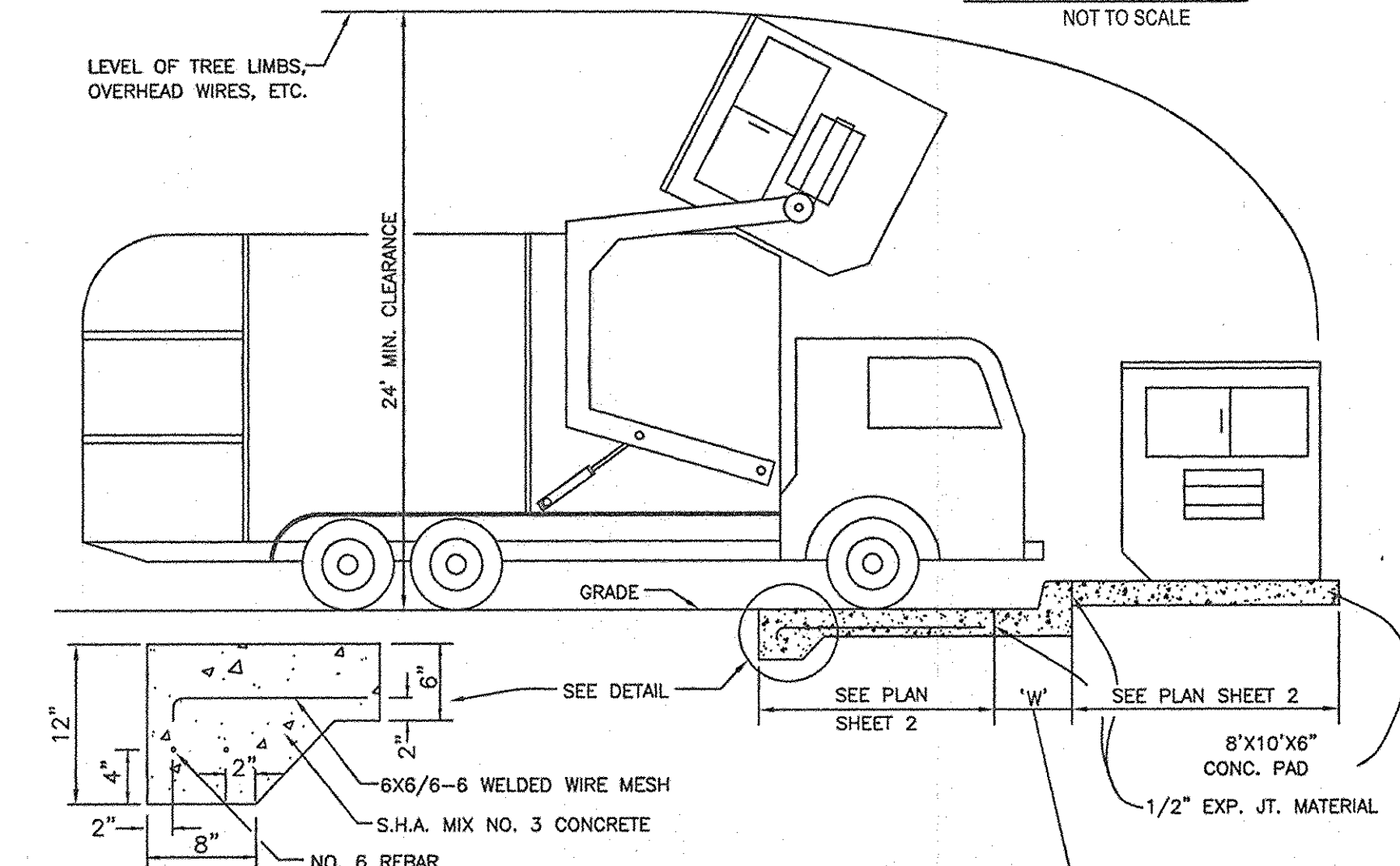
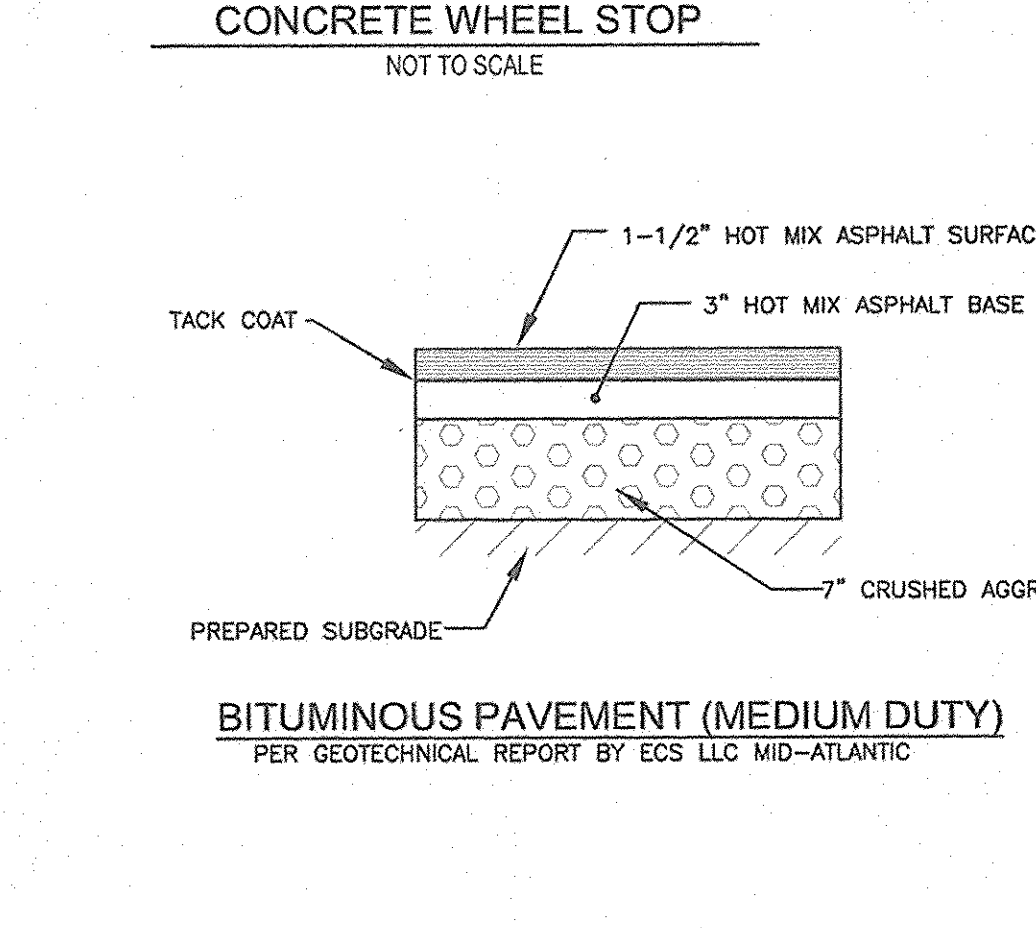
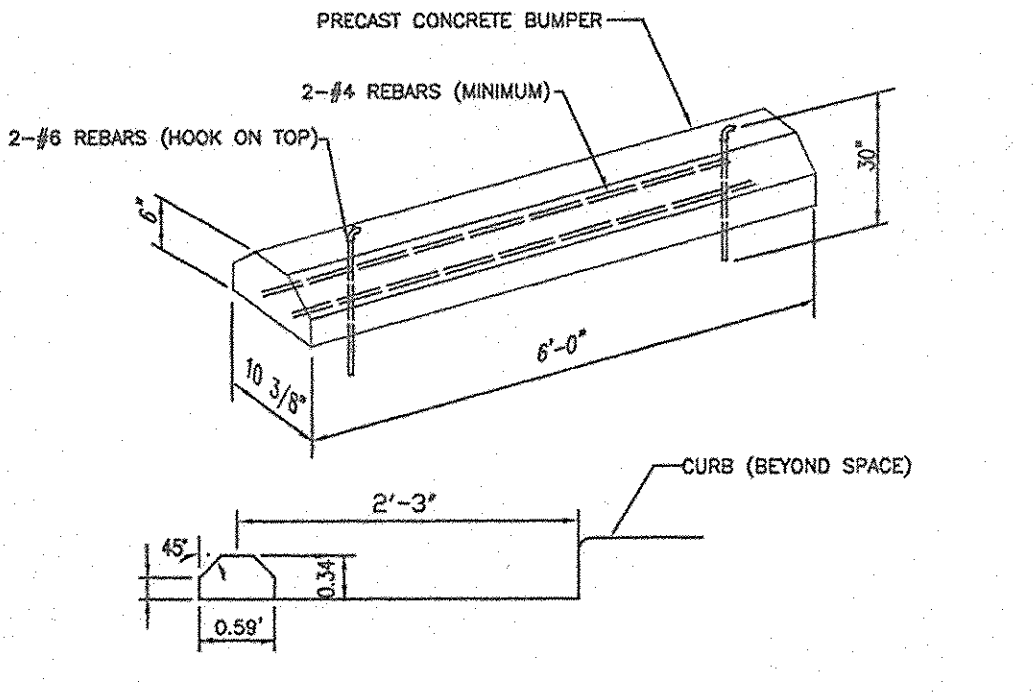
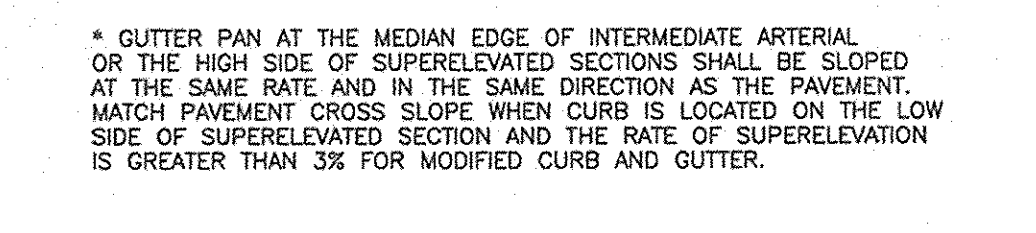
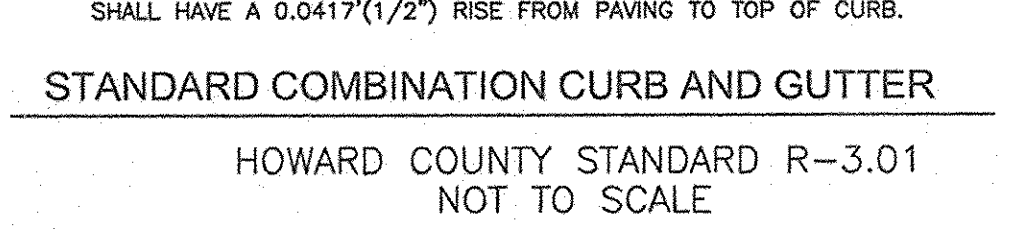
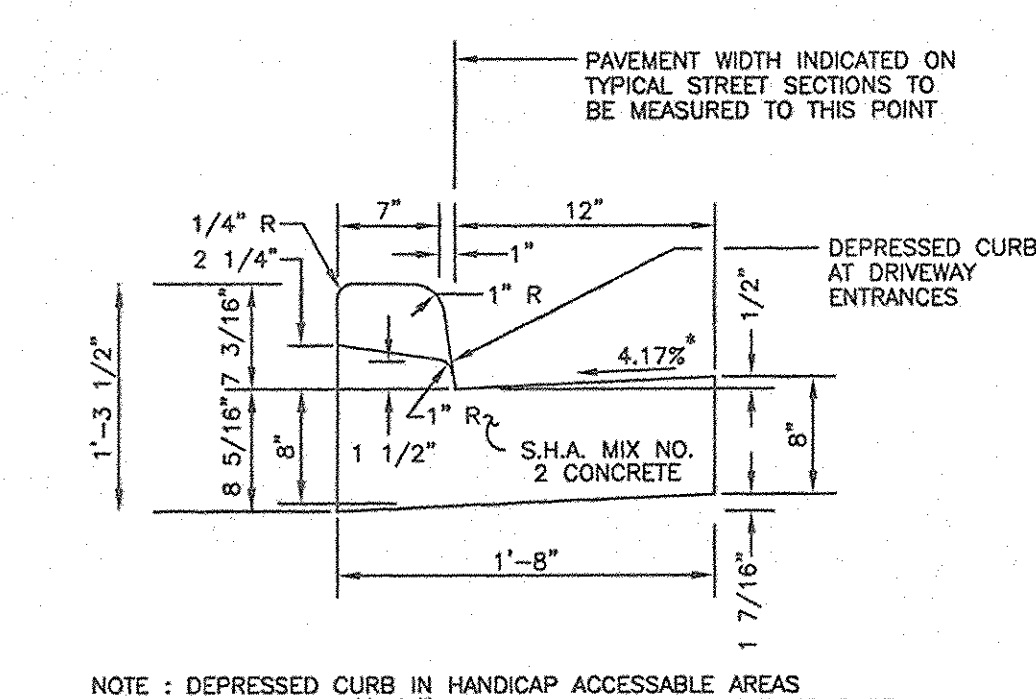
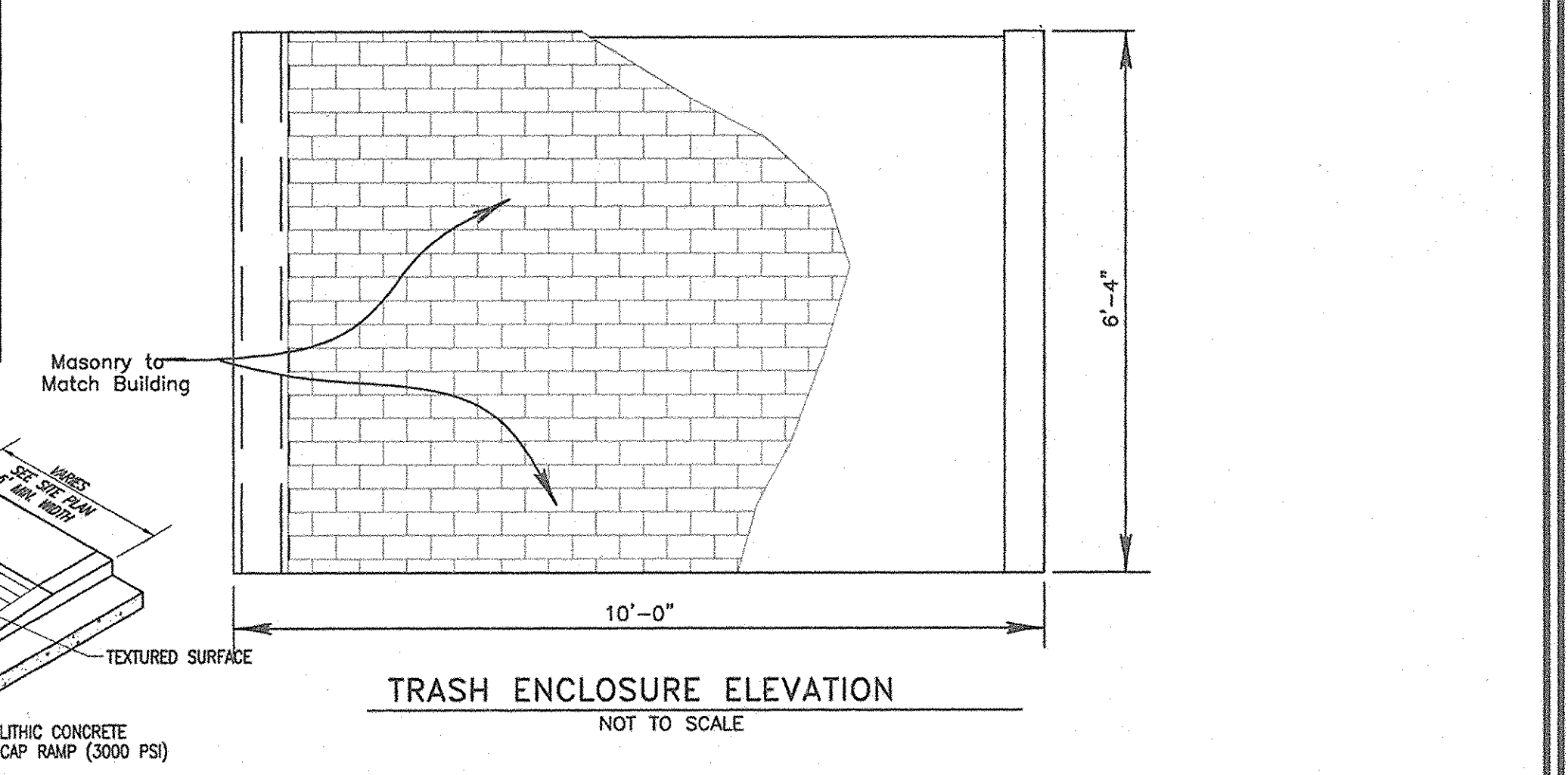
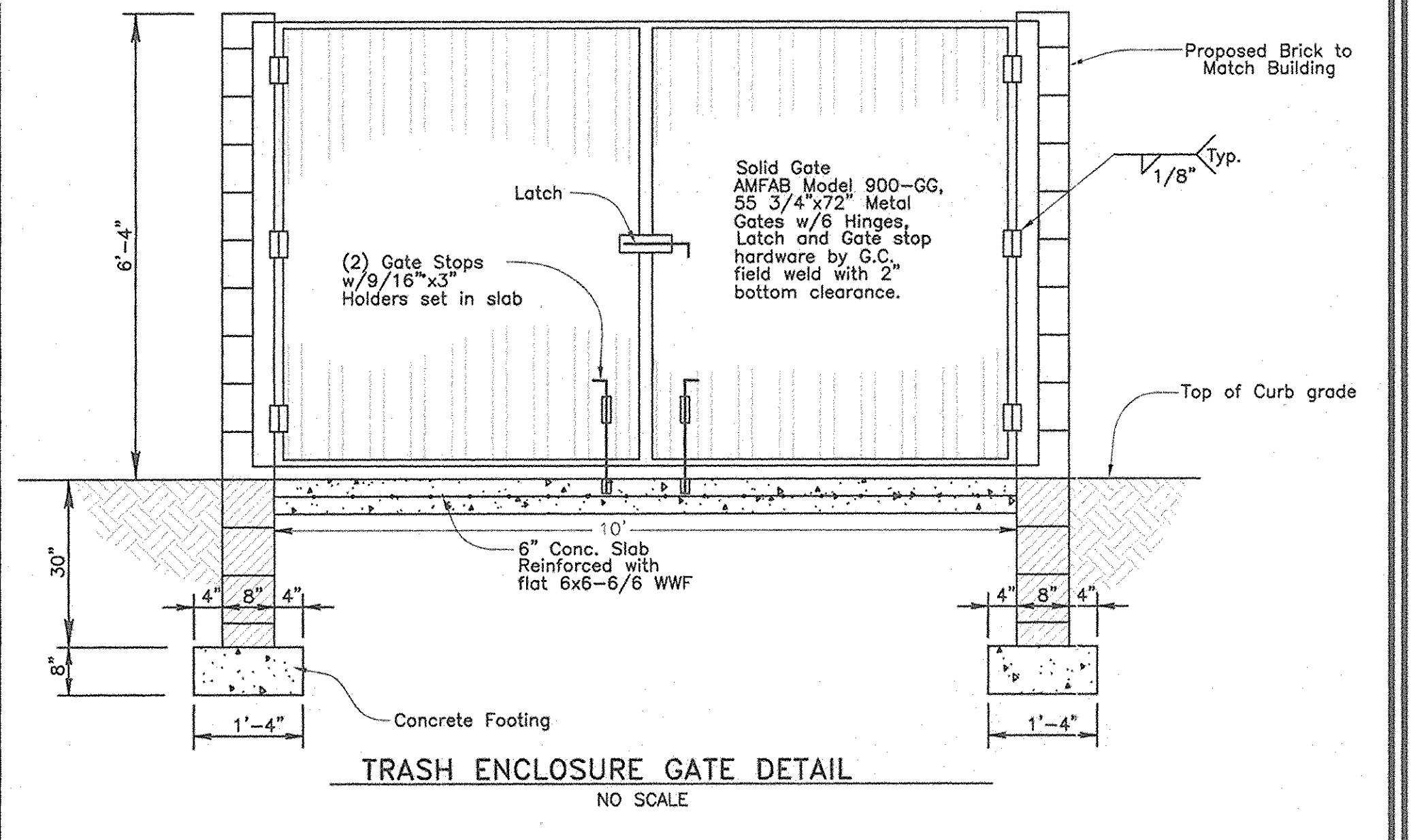
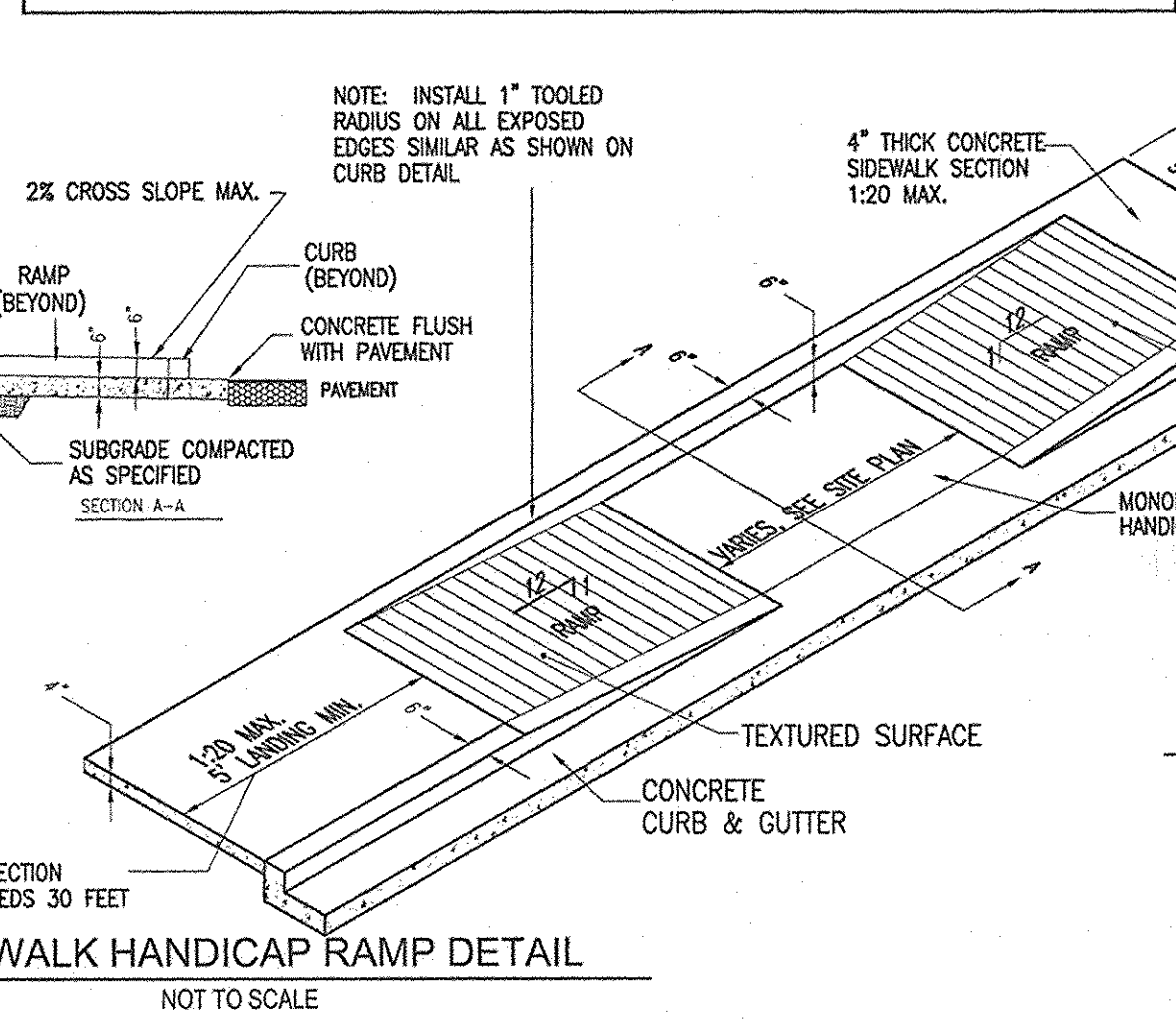
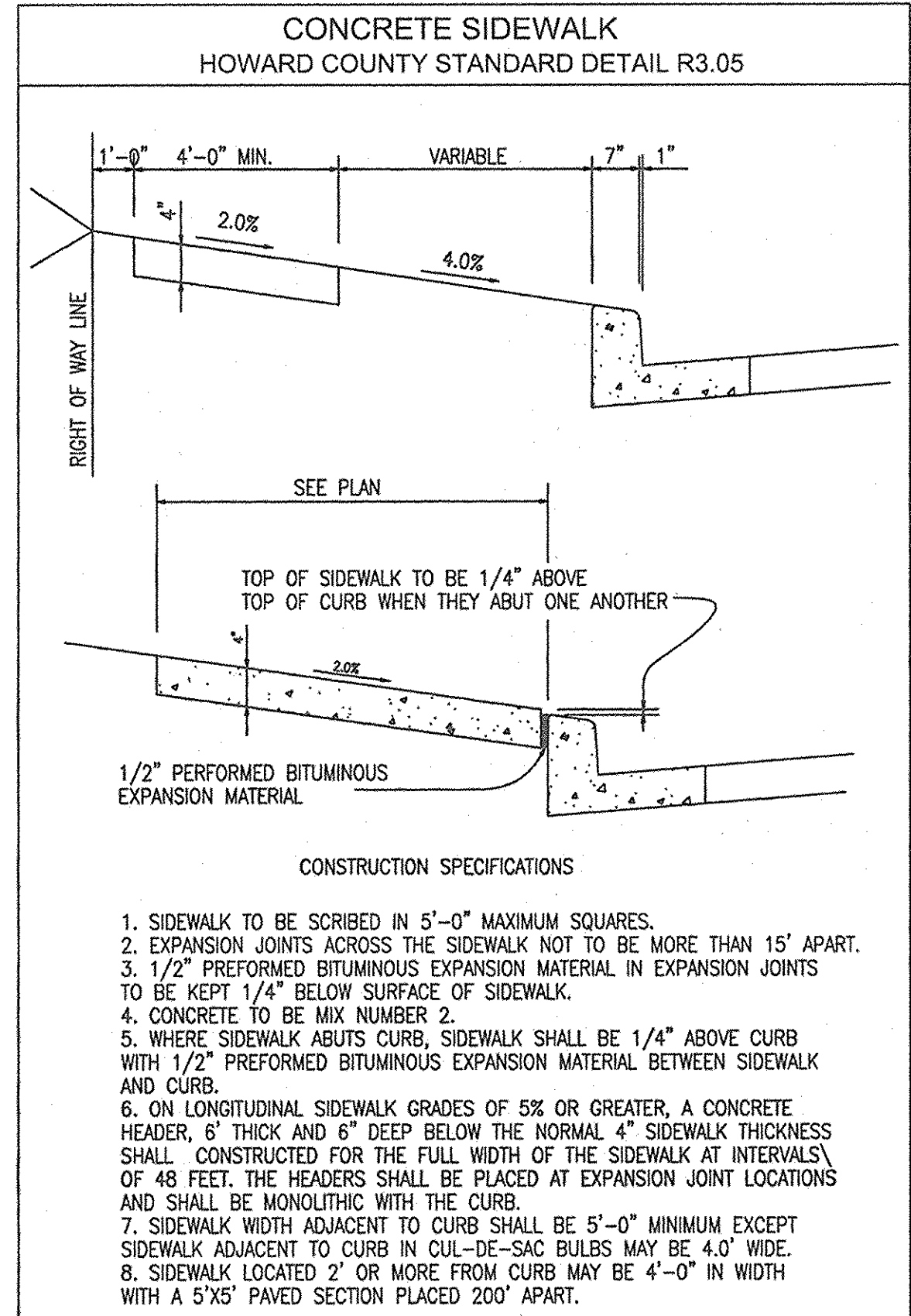
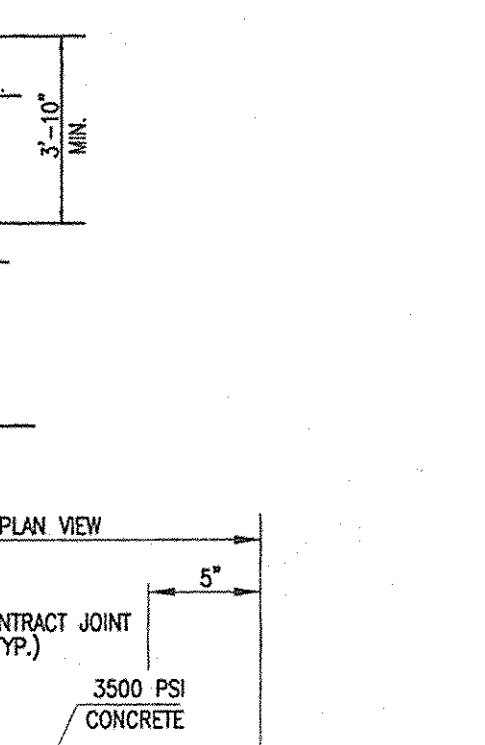
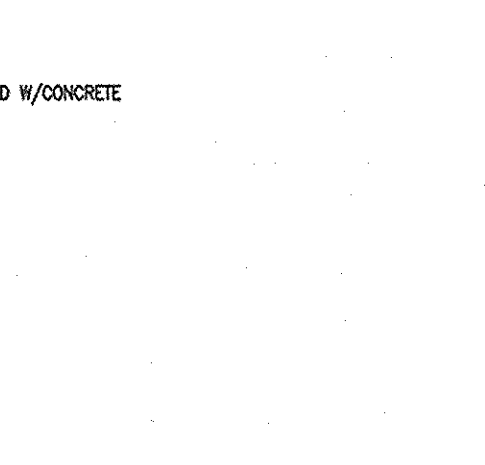
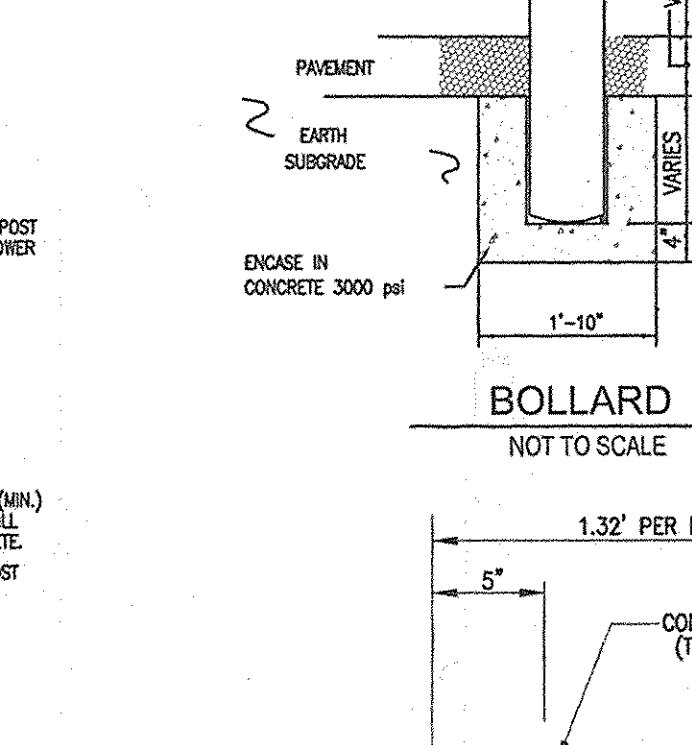
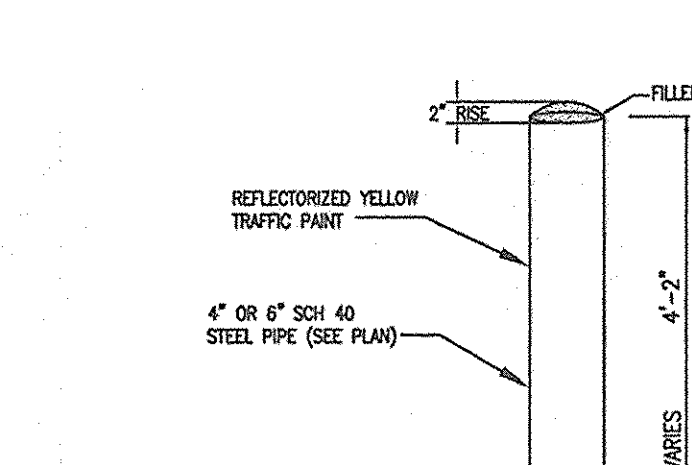
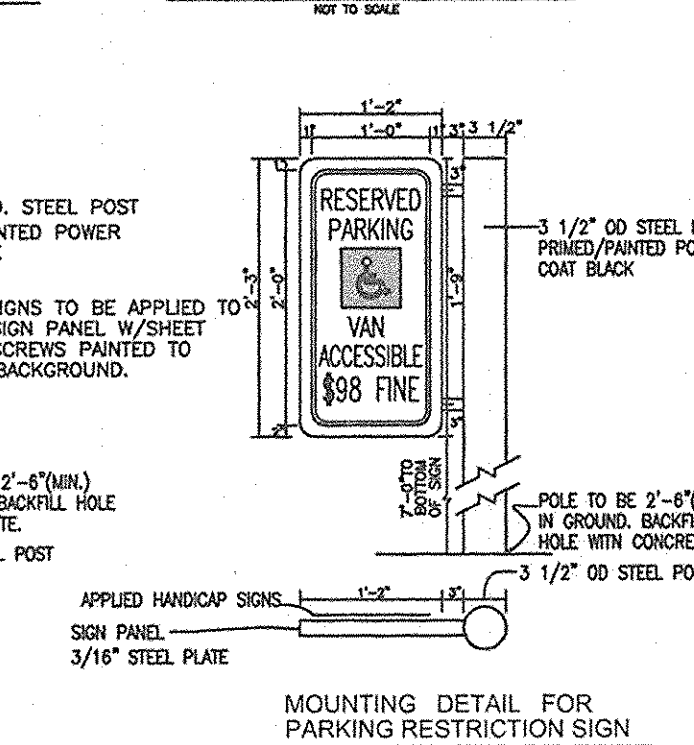
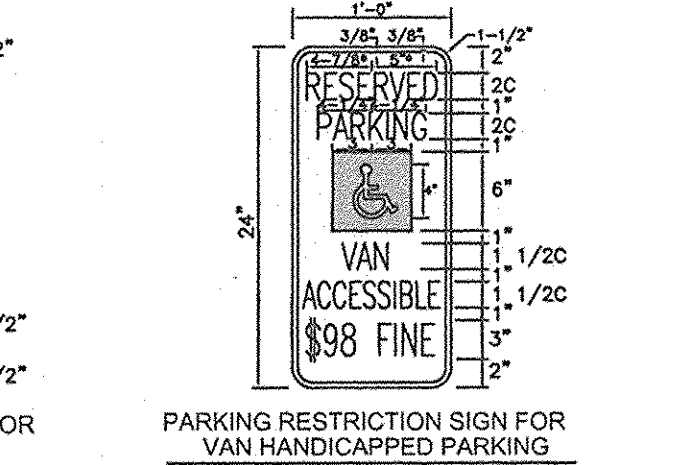
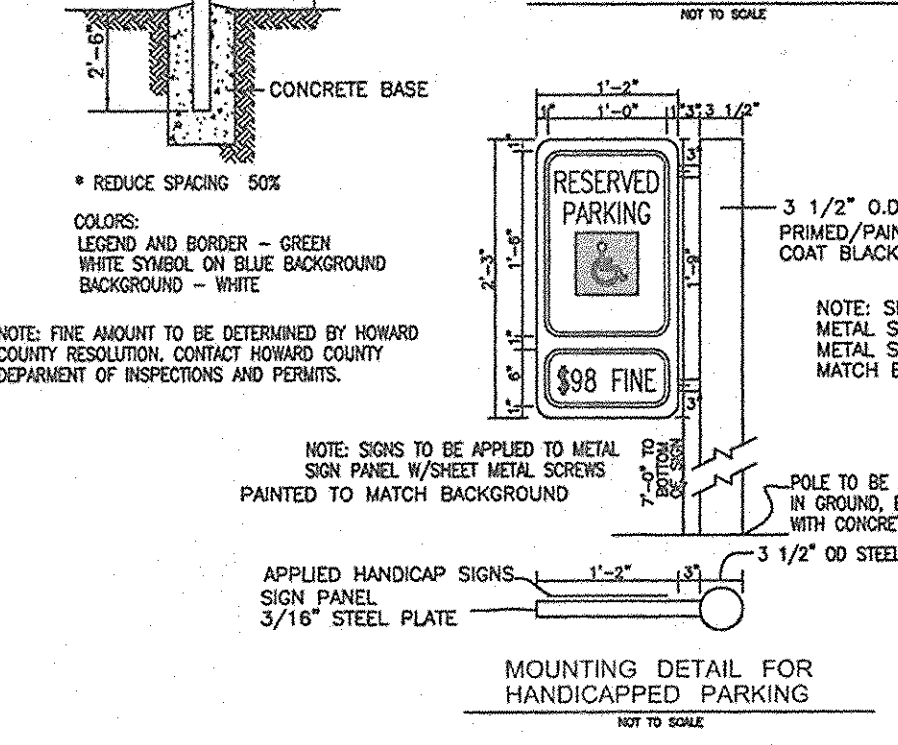
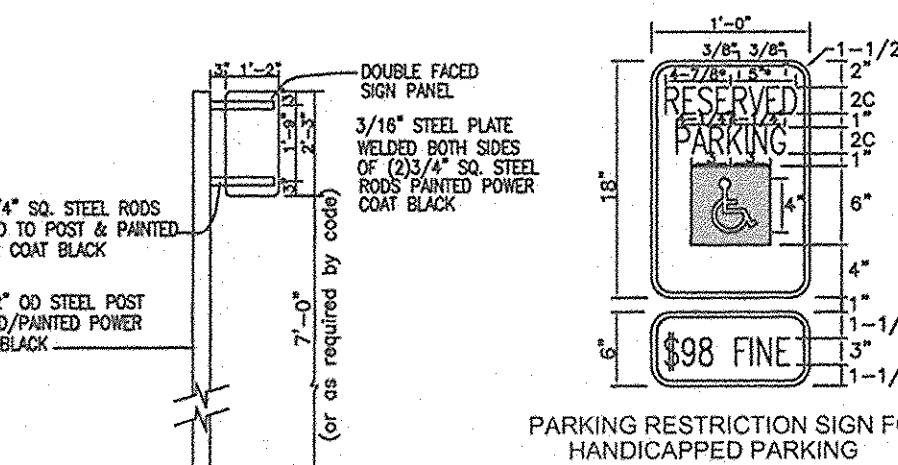
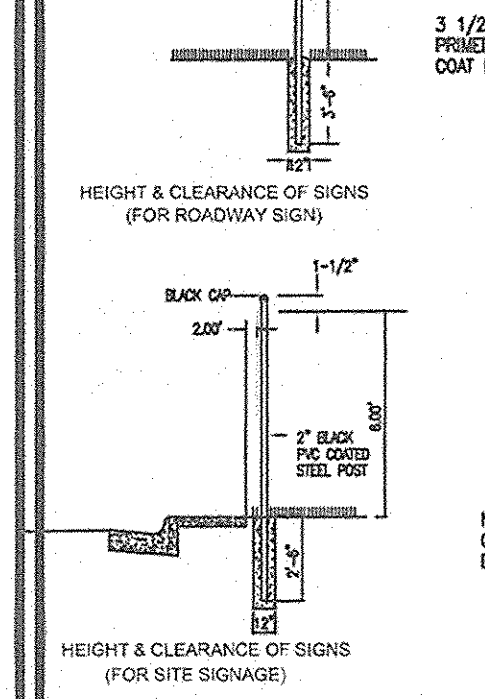
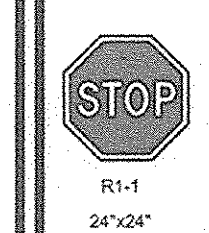
Jim M... 3/9/07
 DATE

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

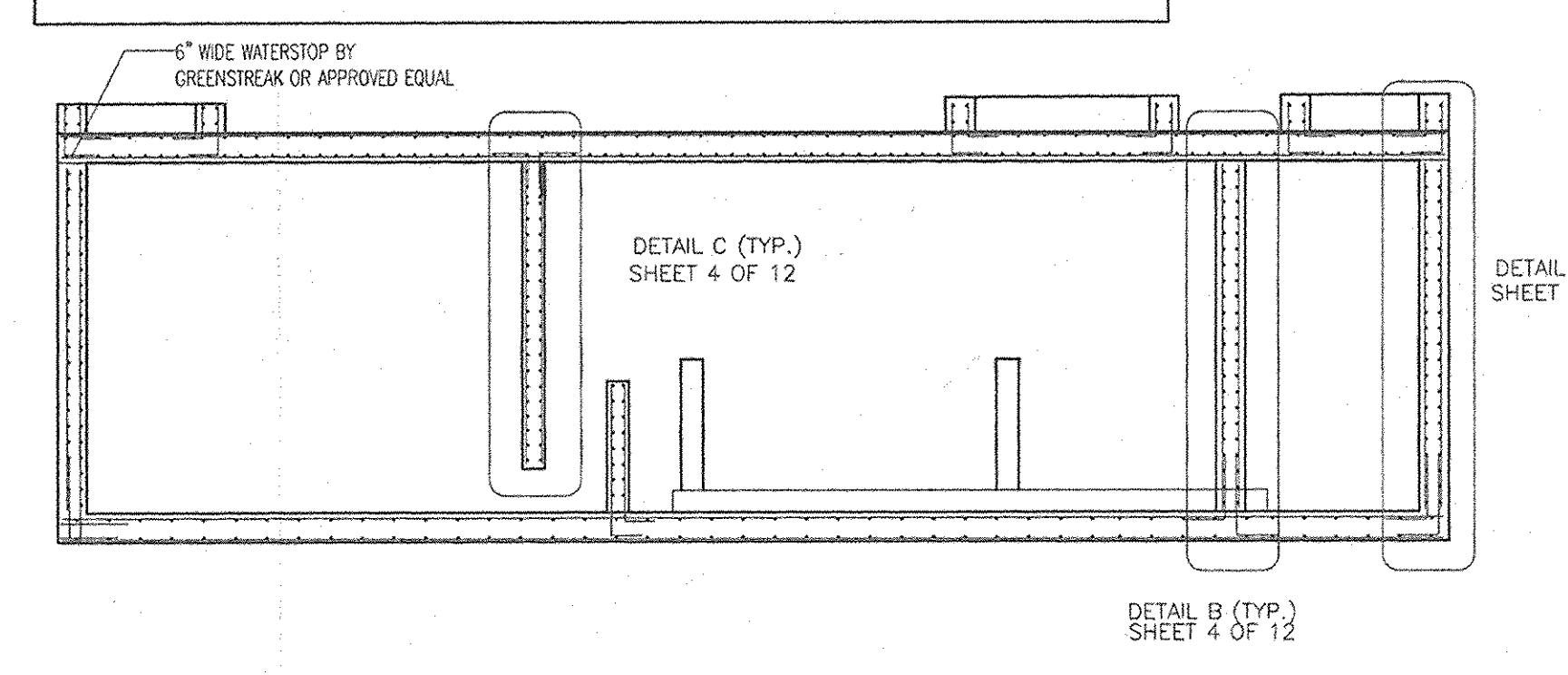
John R. Johnson 3/9/07
 DATE

DESIGN BY: RJ/RHV
 DRAWN BY: RJ
 CHECKED BY: RHV
 DATE: 07-24-2007
 SCALE: AS SHOWN
 W.O. NO.: 04-11-00

3 SHEET OF 12



UNDERGROUND SENS FILTERS: THE STRUCTURE MUST BE DESIGNED BY A STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. THIS PERTAINS ALL CUSTOM STRUCTURES.



APPROVED: DEPARTMENT OF PLANNING AND ZONING. Kent Shepley / for CHIEF, DIVISION OF LAND DEVELOPMENT DATE 3/20/07. Marsha A. Gupel DIRECTOR DATE 3/20/07

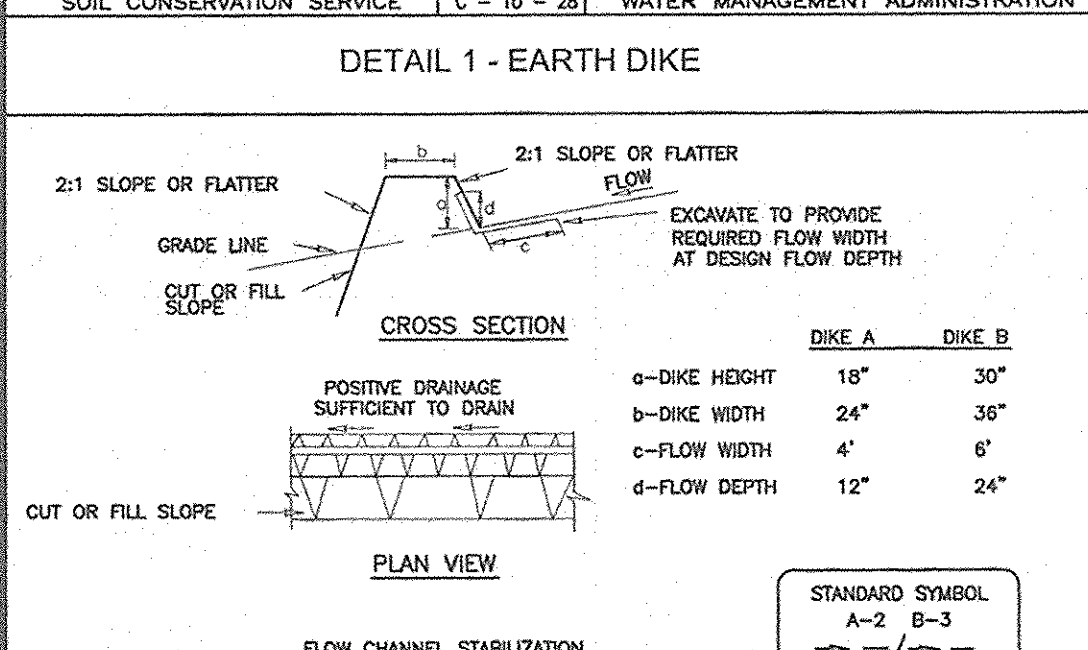
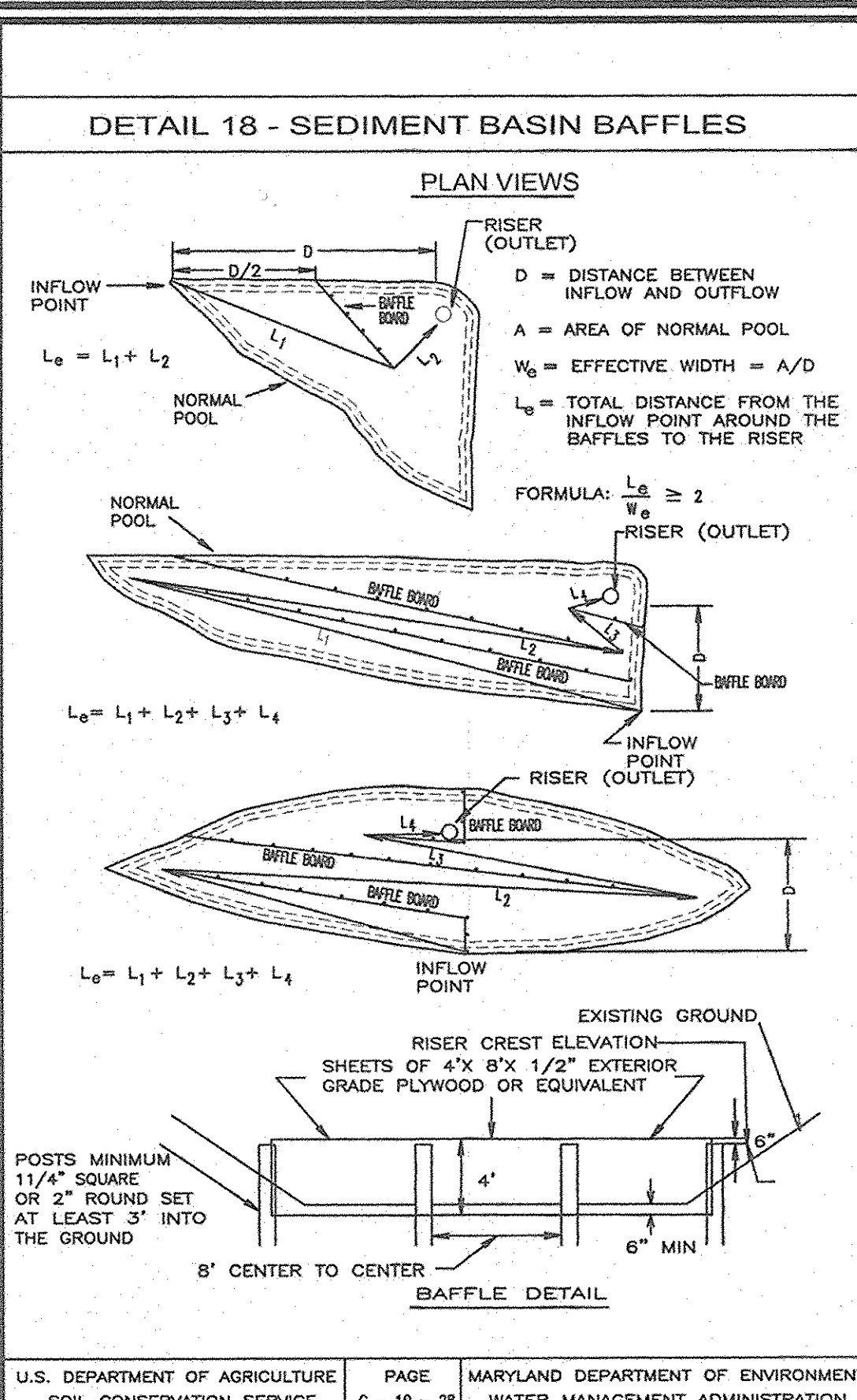
DEVELOPER: ORCHARD DEVELOPMENT, 5032 DORSEY HALL DRIVE, ELLICOTT CITY, MARYLAND 21042. OWNER: HOWARD COUNTY DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT, 6751 COLUMBIA GATEWAY DRIVE, COLUMBIA, MARYLAND 21046-2164.

Table with columns: NO., REVISION, DATE. Includes approval stamp from HOWARD COUNTY HEALTH DEPARTMENT.

SITE DEVELOPMENT PLAN PATUXENT SQUARE APARTMENTS & RETAIL CENTER 5-STORY RETAIL AND APARTMENT BUILDING PARCEL A AND NON-BUILDABLE PARCEL B OF THE NORTH LAUREL SUBDIVISION

ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET, ELLICOTT CITY, MD 21043. TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RJR/V. DRAWN BY: RJ. CHECKED BY: RHV. DATE: 07-24-2007. SCALE: AS SHOWN. W.O. NO.: 04-11.00. 4 SHEET OF 12

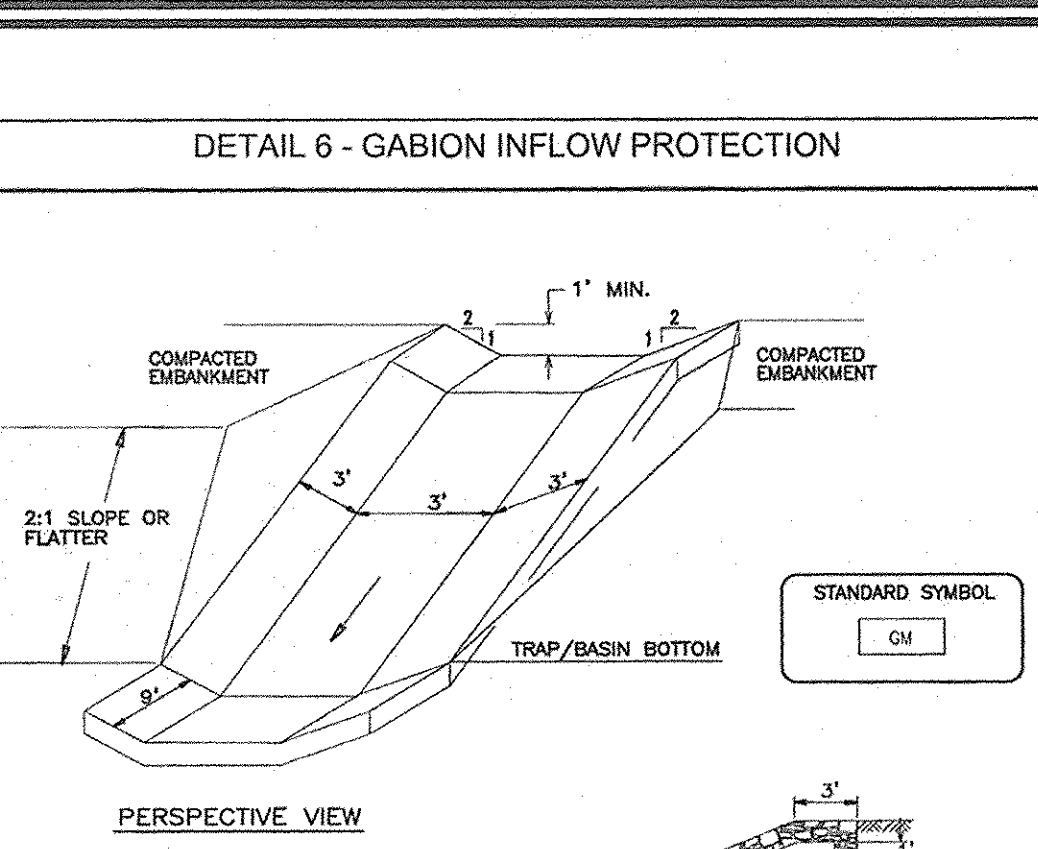


CONSTRUCTION SPECIFICATIONS

1. TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.
2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBSTRUCTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.
5. THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.
8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A-1-6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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APPROVED: DEPARTMENT OF PLANNING AND ZONING
Kent Sheedow for CH
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/20/07



CONSTRUCTION SPECIFICATIONS

1. GABION INFLOW PROTECTION SHALL BE CONSTRUCTED OF 9" X 9" GABION BASKETS FORMING A TRIANGULAR CROSS SECTION 1' DEEP, WITH 2:1 SIDE SLOPES, AND A 3' BOTTOM WIDTH.
2. GEOTEXTILE CLASS C SHALL BE INSTALLED UNDER ALL GABION BASKETS.
3. THE STONE USED TO FILL THE GABION BASKETS SHALL BE 4" - 7".
4. GABIONS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5. GABION INFLOW PROTECTION SHALL BE USED WHERE CONCENTRATED FLOW IS PRESENT ON SLOPES STEEPER THAN 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B-7-2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1850).
2. 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.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1 (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SLOPES, SOIL TEMPORARY SEEDING, AND MULCHING (SEC. C). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

SUBDIVISION	PARCEL	3.30 ACRES
TOTAL AREA	DISTURBED	2.87 ACRES
AREA TO BE ROOFED OR PAVED		2.52 ACRES
AREA TO BE VEGETATIVELY STABILIZED		0.82 ACRES
TOTAL CUT		50,000 +/- CY
TOTAL FILL		500,000 +/- CY
TOTAL FILL OFFSITE WASTE/BORROW AREA LOCATION		
8. TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.
9. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
10. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
11. 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B-7-3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT, MOE PERMIT/TRACKING # 200664292-06-NT.	DURATION
2. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1850) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.	
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.	4 DAYS
4. INSTALL PERIMETER SUPER SILT FENCE AND ALL REMAINING PERIMETER CONTROLS.	6 DAYS
5. WITH INSPECTOR'S APPROVAL, BEGIN CLEARING AND GRUBBING, MASS GRADING AND BUILDING CONSTRUCTION. EXISTING BUILDING MAY REMAIN UNTIL... BASE PAVING IS ACHIEVED.	3 MONTHS
6. GRADE SITE TO SUB-BASE AS SITE IS GRADED. BEGIN INSTALLATION OF STORM DRAIN SYSTEMS, WATER & SEWER, AND STORM WATER MANAGEMENT, WITH INSPECTOR'S APPROVAL, GRADE ROADS TO SUB GRADE.	3 MONTHS
7. WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE BEGIN INSTALLATION OF CURB AND GUTTER.	3 WEEKS
8. BEGIN PAVING ROADS AND INSTALL SIDEWALKS.	3 WEEKS
9. STABILIZE THE SITE WITH THE INSPECTOR'S APPROVAL REMOVE TEMPORARY BRICK BULKHEAD DAM IN STORM DRAIN BETWEEN M-1 AND EXISTING INLET.	2 WEEKS
10. INSTALL LANDSCAPING AS SHOWN ON LANDSCAPE PLAN.	2 WEEK
11. WITH PERMISSION OF THE INSPECTOR, FLUSH STORM DRAIN SYSTEM AND REMOVE ALL SEDIMENT CONTROLS FROM THE SITE. STABILIZED ALL DISTURBED AREAS IMMEDIATELY AND REMOVE ALL JUNK, TRASH AND DEBRIS FROM SITE.	1 WEEK

NOTES:

DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE AND REPAIRS ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.

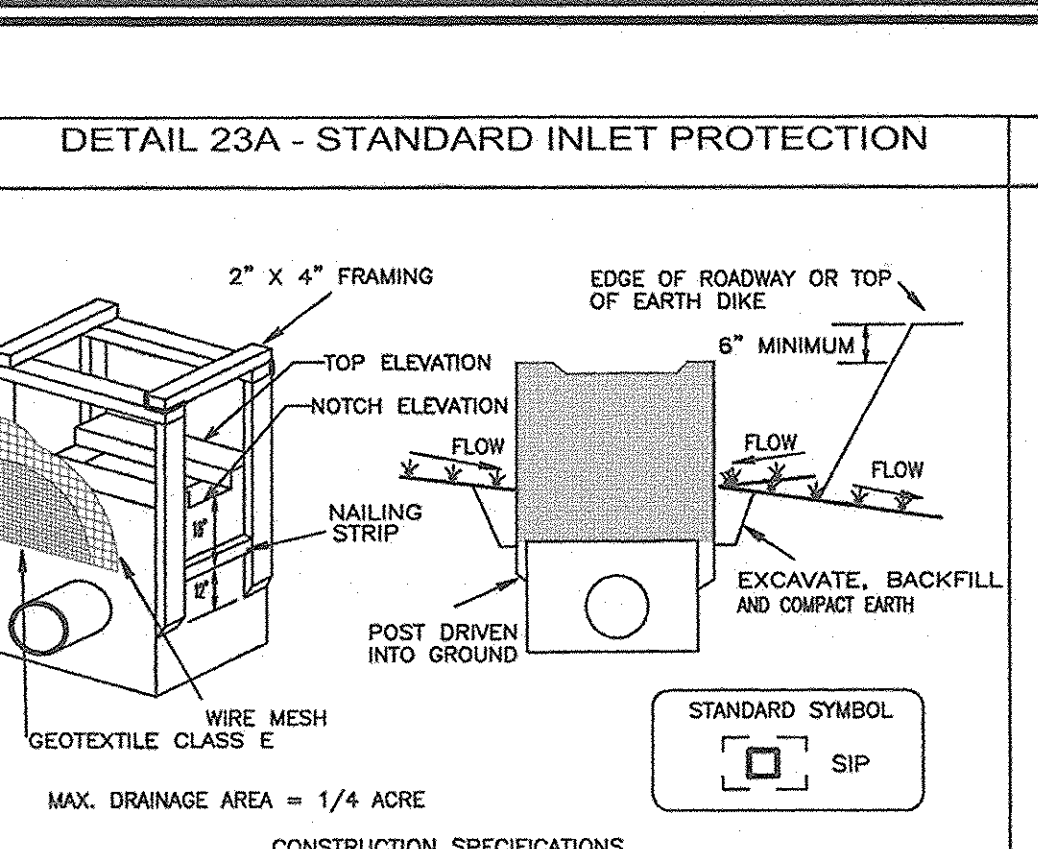
FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.

B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

DEVELOPER'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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

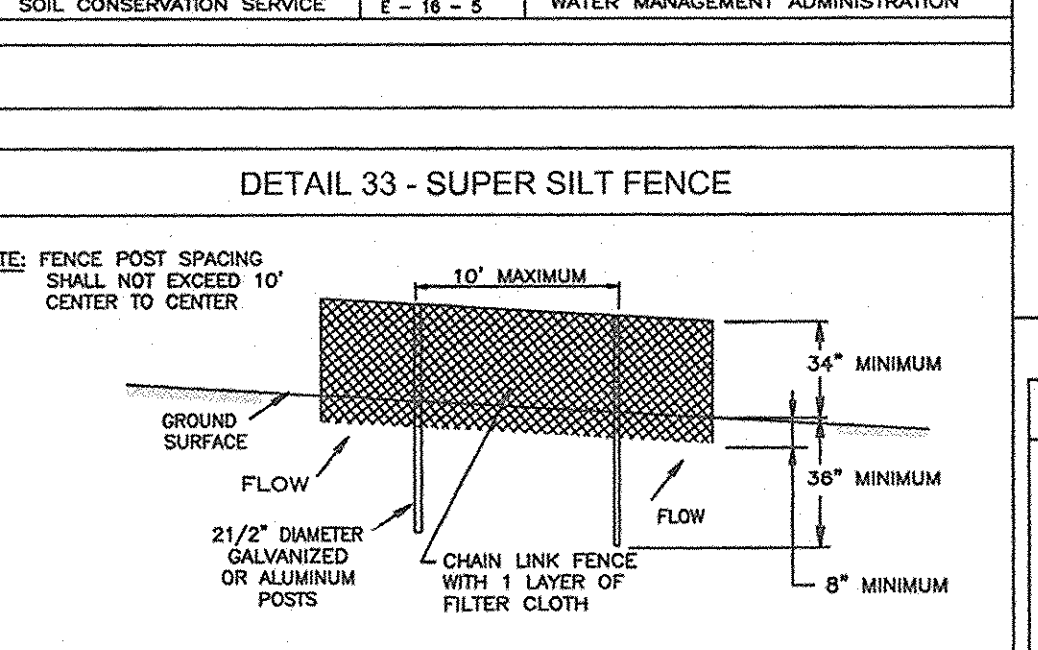
Mitchell B. Sheedy
 SIGNATURE OF DEVELOPER
 DATE: 2/27/07



CONSTRUCTION SPECIFICATIONS

1. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION.
2. DRIVE THE 2" X 4" CONSTRUCTION GRADE LUMBER POSTS 1' INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2" X 4" FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL 23A. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.
3. STRETCH THE 1/2" X 1/2" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. THE ENDS MUST MEET AND OVERLAP AT A POST.
4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTEXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED DOWN.
5. BACKFILL AROUND THE INLET IN CLAYEY 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
6. IF THE INLET IS NOT IN A SUMP, CONSTRUCT A COMPACTED EARTH DIKE ABOVE THE NOTCH ELEVATION WITH THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.
7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

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

1. 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.
2. 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.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.
7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL/FT ² /MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322
8. IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42"

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

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

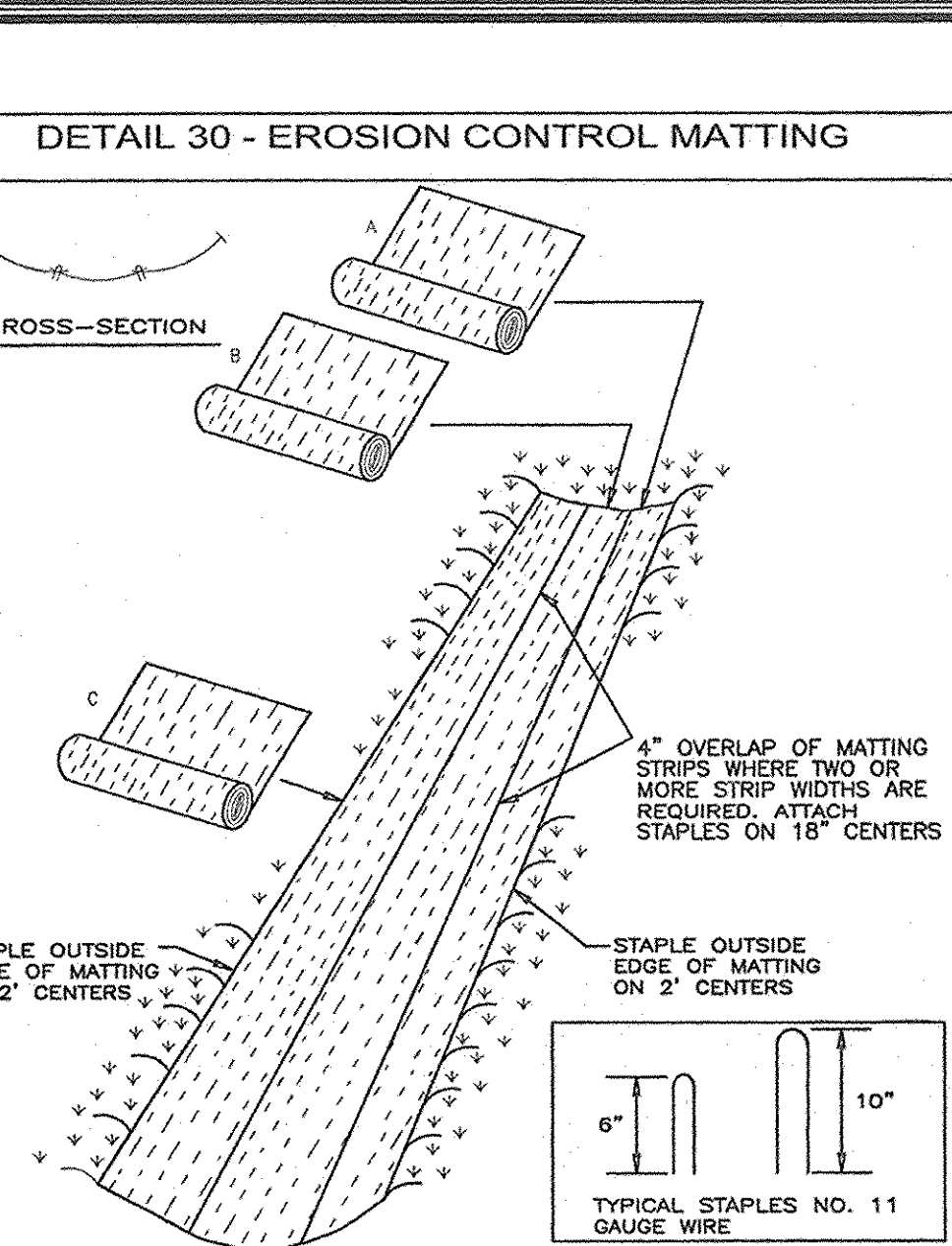
Robert H. Vogel
 SIGNATURE OF ENGINEER
 DATE: 2/28/07

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Mays
 USDA - NATURAL RESOURCES CONSERVATION SERVICE
 DATE: 3/19/07

DEVELOPER

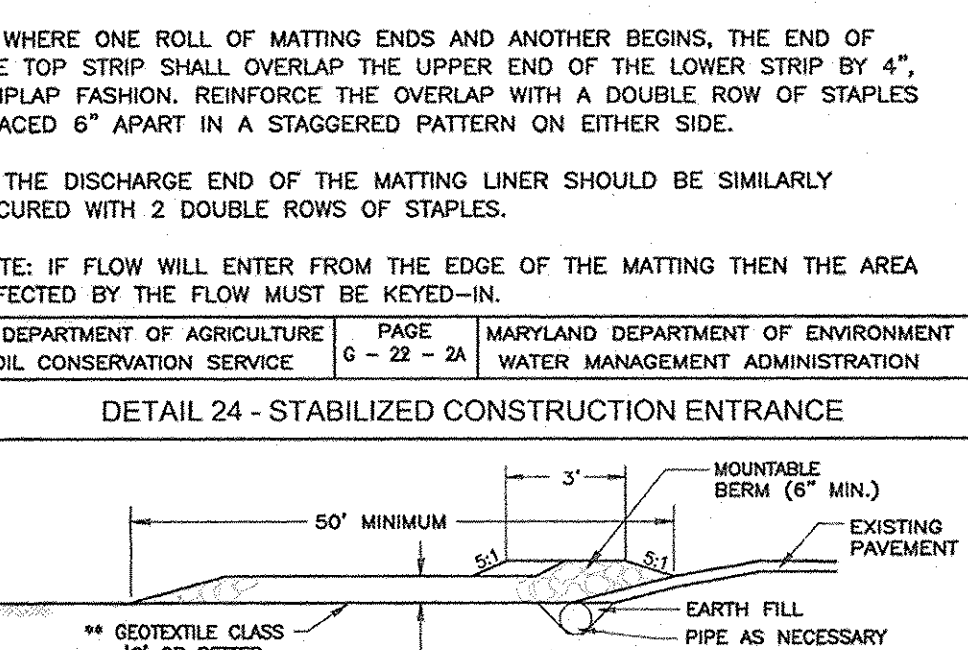
John C. Hinton
 DATE: 3/19/07



CONSTRUCTION SPECIFICATIONS

1. 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".
2. STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
3. BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
4. STAPLES SHALL BE PLACED 2" APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
5. 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", SHIP-LAP FASHION, REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
6. THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

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CONSTRUCTION SPECIFICATION

1. LENGTH - MINIMUM OF 50' (4' 30" FOR A SINGLE RESIDENCE LOT).
2. WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. 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.
4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPES INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BEAM 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 SITE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY. A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE, VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

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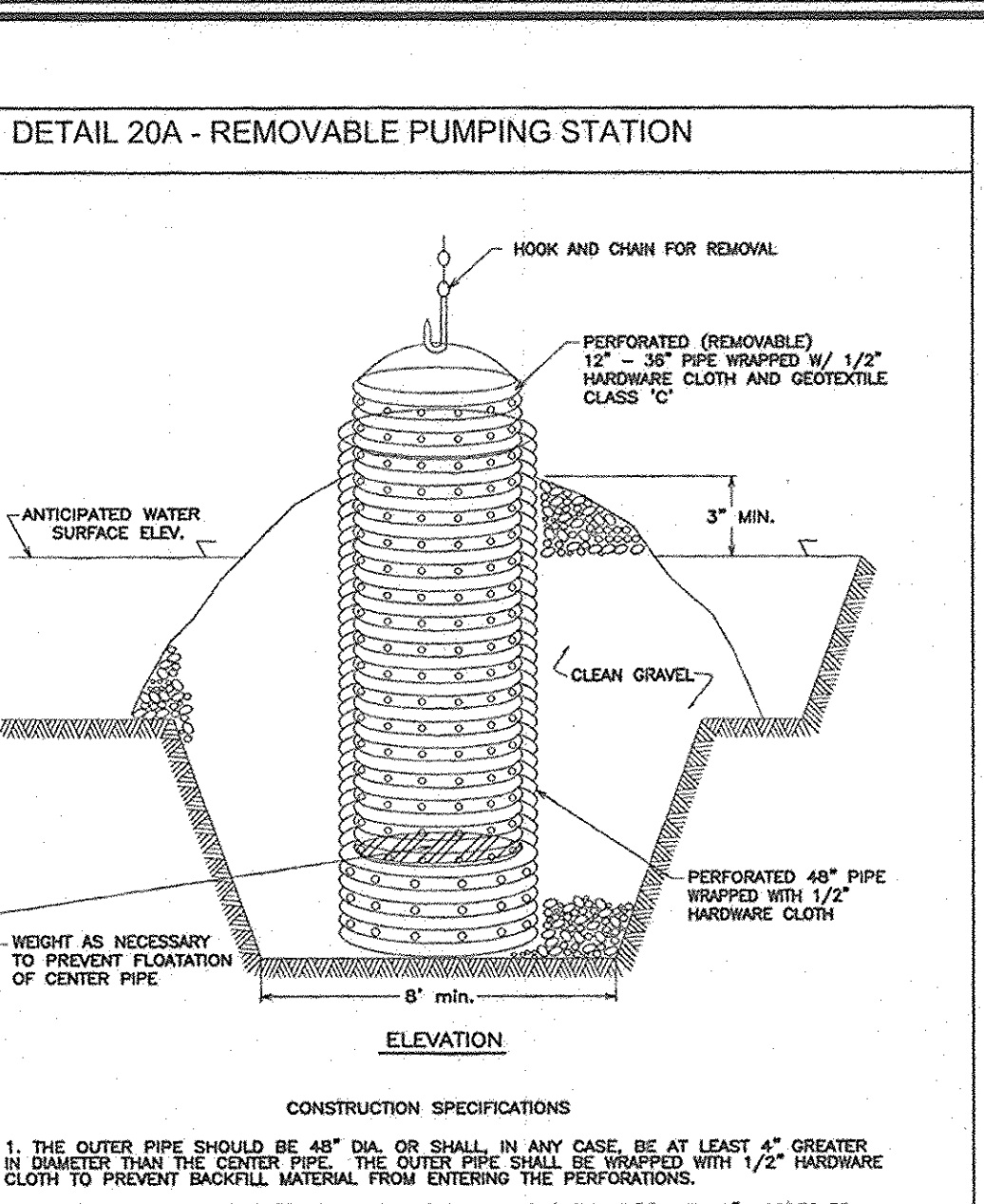
DEVELOPER

ORCHARD DEVELOPMENT
 5032 ORSEY HALL DRIVE
 ELLICOTT CITY, MARYLAND 21042
 (410) 984-2334
 (410) 984-2315 FAX
OWNER

HOWARD COUNTY DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
 6751 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046-2164

DESIGNER

Robert H. Vogel
 DATE: 2/28/07



CONSTRUCTION SPECIFICATIONS

1. THE OUTER PIPE SHOULD BE 48" DIA. OR SMALLER IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS. GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 8 TONS/ACRE (200-300 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE DRAIN PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORMING A COMPACTED 6" PAD BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATING SHALL BE 1/2" X 6" STUPE OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS C.
4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DRAINING A BASIN.

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PERMANENT SEEDING NOTES

DESIGNERS SHALL SPECIFY THE PREFERRED PROCEDURES FOR DRAINING OR PLANTS. IN PARTICULAR, DESIGNERS SHOULD SPECIFY PROCEDURES FOR DRAINING BASINS PRIOR TO ELIMINATION OF THE LAST SEDIMENT CONTROL FACILITY ON THE SITE OR PRIOR TO CONVERSION OF SEDIMENT CONTROL FACILITIES TO STORMWATER MANAGEMENT FACILITIES. RECOMMENDED PROCEDURES SHALL BE CONSISTENT WITH THESE STANDARDS. A TYPICAL SITE CONDITIONS MAY REQUIRE INNOVATIVE DRAINING DESIGNS. DRAINING MEASURES NOT REFERENCED IN THIS STANDARD MAY BE USED WITH THE CONSENT OF THE APPROVAL AUTHORITY.

DESIGNERS OF EXCAVATED AREAS

- A. DESIGNERS SHALL SPECIFY ON PLANS, AND IN SEQUENCES OF CONSTRUCTION INCLUDED ON PLANS, PRACTICES FOR DRAINING OF EXCAVATED AREAS. PLAN REVIEWERS SHALL CHECK TO SEE THAT PROCEDURES FOR DRAINING ARE INCLUDED ON PLANS.
- B. IN ALL CASES, WATER REMOVED FROM EXCAVATED AREAS SHALL BE DISCHARGED SUCH THAT IT SHALL PASS THROUGH A SEDIMENT CONTROL DEVICE PRIOR TO ENTERING RECEIVING WATERS. SEDIMENT CONTROL DEVICES SHALL NOT EXCEED THE DESIGN ELEVATION ASSOCIATED WITH DRAINING.

DRAINING OF EXCAVATED AREAS

1. DRAINAGE SHALL BE BY AN EXISTING SEDIMENT TRAP OR TRAP IN WHICH THE ENTIRE VOLUME OF WATER FROM THE AREA TO BE DRAINATED CAN BE CONTAINED WITHOUT DISCHARGE TO RECEIVING WATERS.
2. DRAINAGE OF TRAPS AND BASINS SHALL BE BY THE SAME MEANS AS THAT FOR THE DRAINAGE OF WATER FROM THE AREA TO BE DRAINATED CAN BE MANAGED WITHOUT EXCEEDING THE DESIGN OUTFLOW FROM THE TRAP OR BASIN.
3. REMOVABLE PUMPING STATION STANDARDS AND SPECIFICATIONS FOR REMOVABLE PUMPING STATION ARE LOOSENED.
4. USE OF A SUMP PIT STANDARDS AND SPECIFICATIONS FOR A SUMP PIT ARE ON DETAIL 20B.

DRAINING OF TRAPS AND BASINS

1. PUMPED WATER SHALL BE DISCHARGED THROUGH A SEDIMENT CONTROL DEVICE PRIOR TO ENTERING RECEIVING WATERS.
2. CLEANER WATER IS PUMPED THE SUCTION HOSE WILL LOWER AND EVENTUALLY ENVELOPE THE SUMP. LAZON WATER WHEN THIS HAPPENS THE PUMPING OPERATION WILL CEASE. PROVISIONS SHALL BE MADE TO PREVENT FLOODING.

21.0 STANDARDS 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 VEGETABLE 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

1. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATION.
 - B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR IS UNABLE TO CONTAIN SUPPLIES OF MOISTURE AND NUTRIENTS.
 - C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEEASIBLE.
2. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR A SUITABLE SUBSOIL. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION AND SPECIFICATIONS FOR TOPSOIL.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

1. 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 USED SHALL BE AT LEAST 4" AND SHALL BE OF AN UNIFORM CONSISTENT REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA IN CONFORMANCE WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
2. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAM SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SOILS OR SHALL CONTAIN LESS THAN 6% BY VOLUME OF CONCRETES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 2 1/2" IN DIAMETER.

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT
 DATE: _____

REVISIONS

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN

PATUXENT SQUARE APARTMENTS & RETAIL CENTER

5-STORY RETAIL AND APARTMENT BUILDING
 PARCEL A AND NON-BUILDING PARCEL B
 OF THE NORTH LAUREL SUBDIVISION
 A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
 AND 9,10 AND 19 THRU 22 & BLOCK 6

SEDIMENT & EROSION CONTROL DETAILS

BULK PARCEL A, A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK
 TAX MAP 50 GRID 4, 6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS - SURVEYORS - PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGNER

Robert H. Vogel
 DATE: 2/28/07

DEVELOPER

John C. Hinton
 DATE: 3/19/07

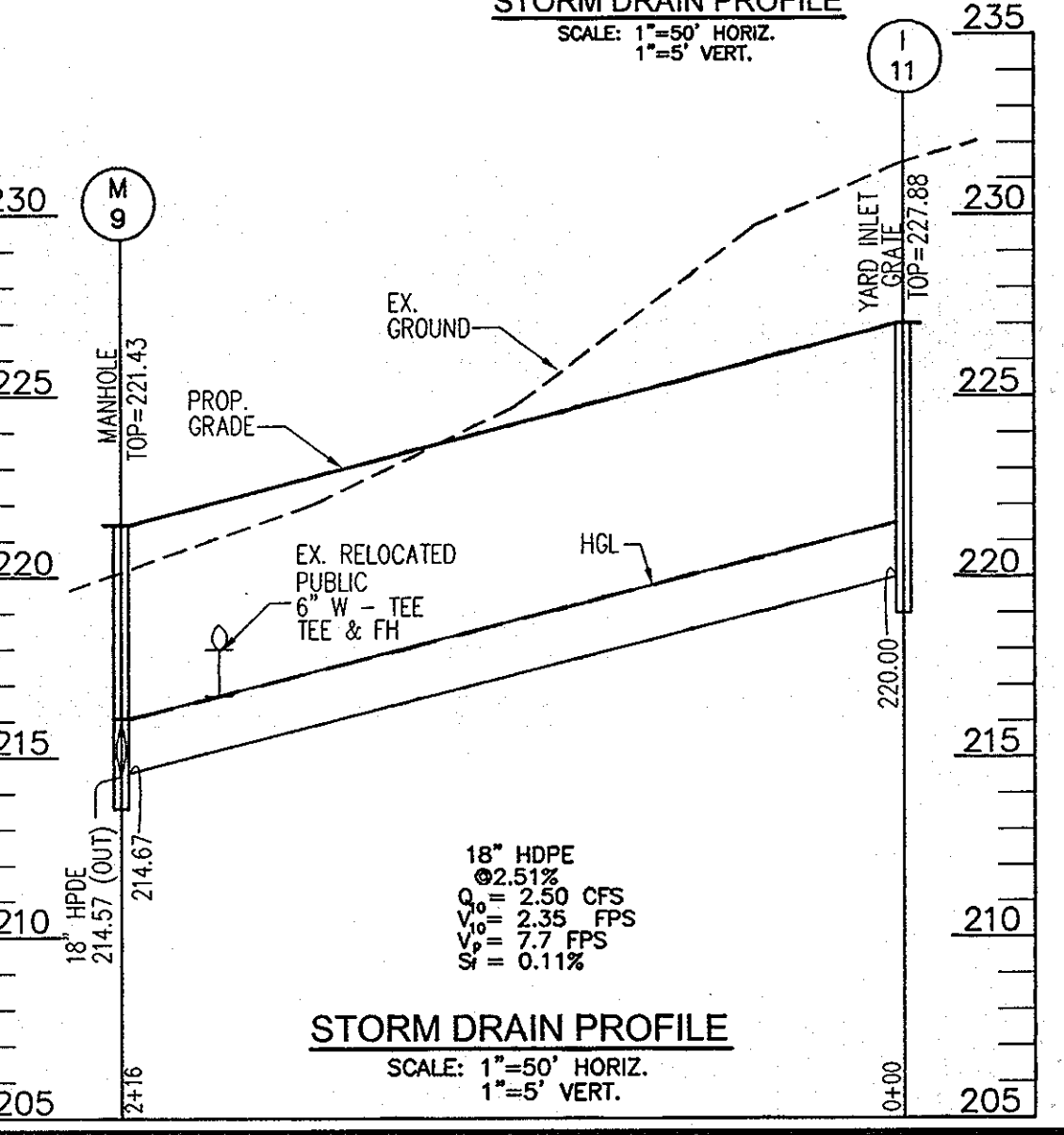
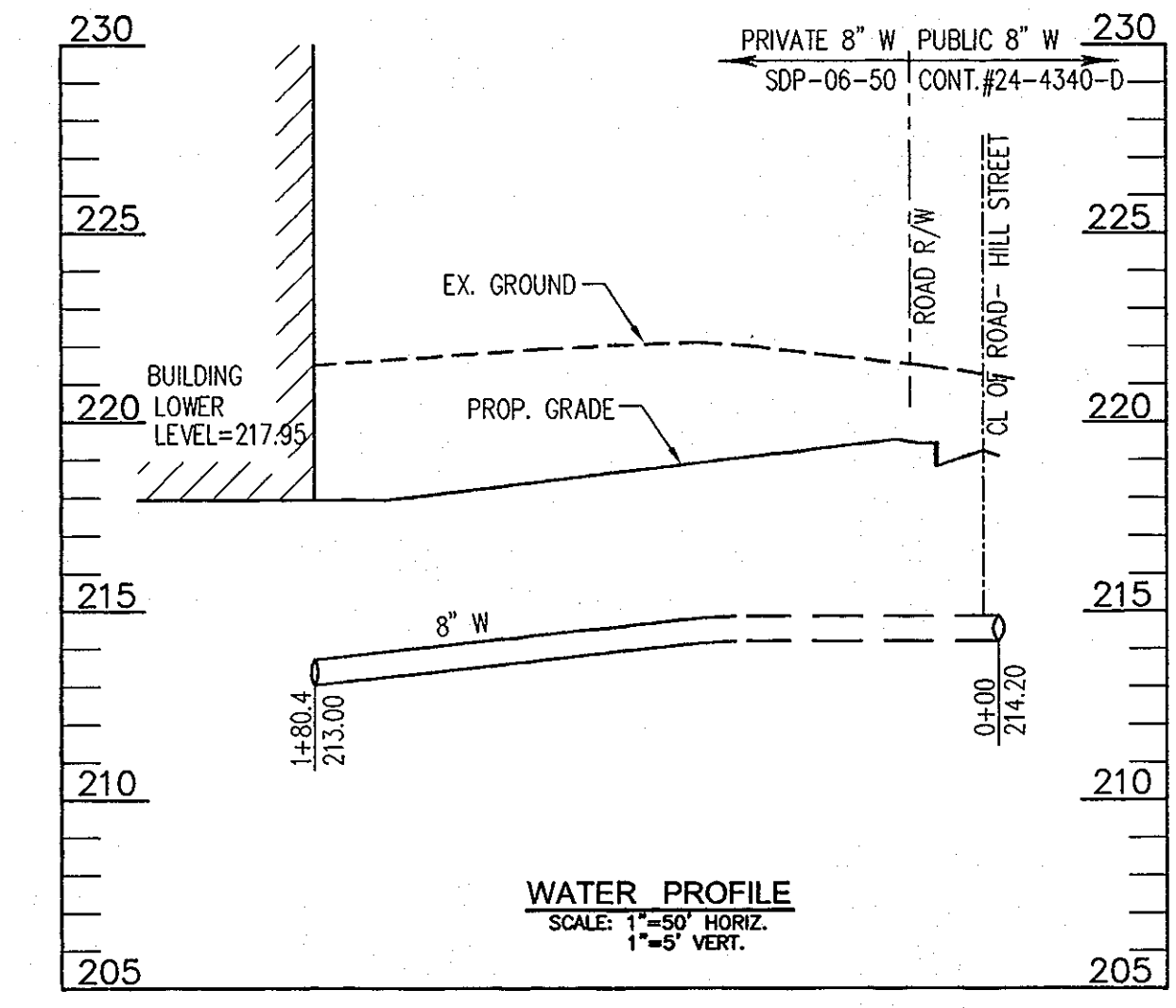
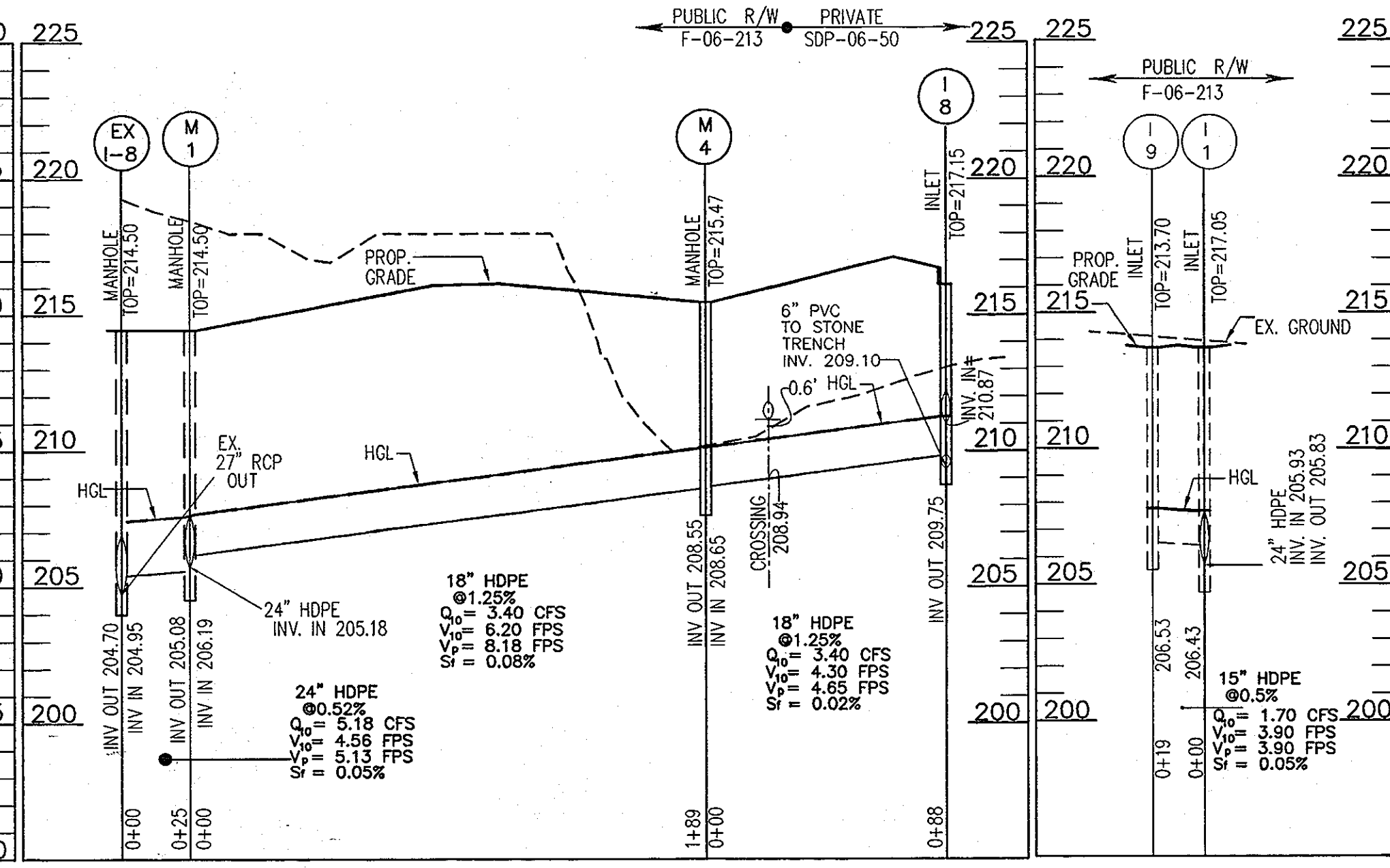
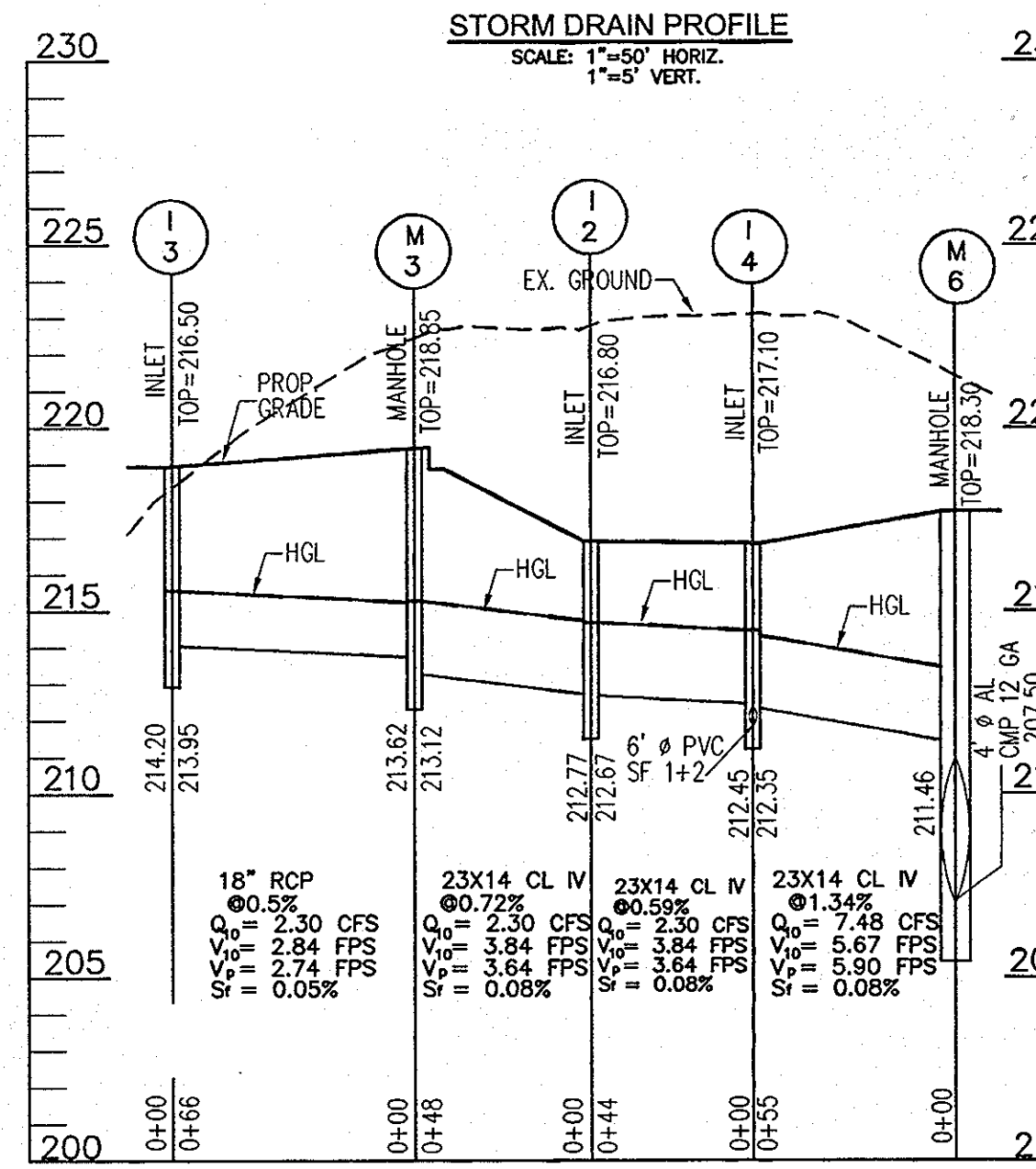
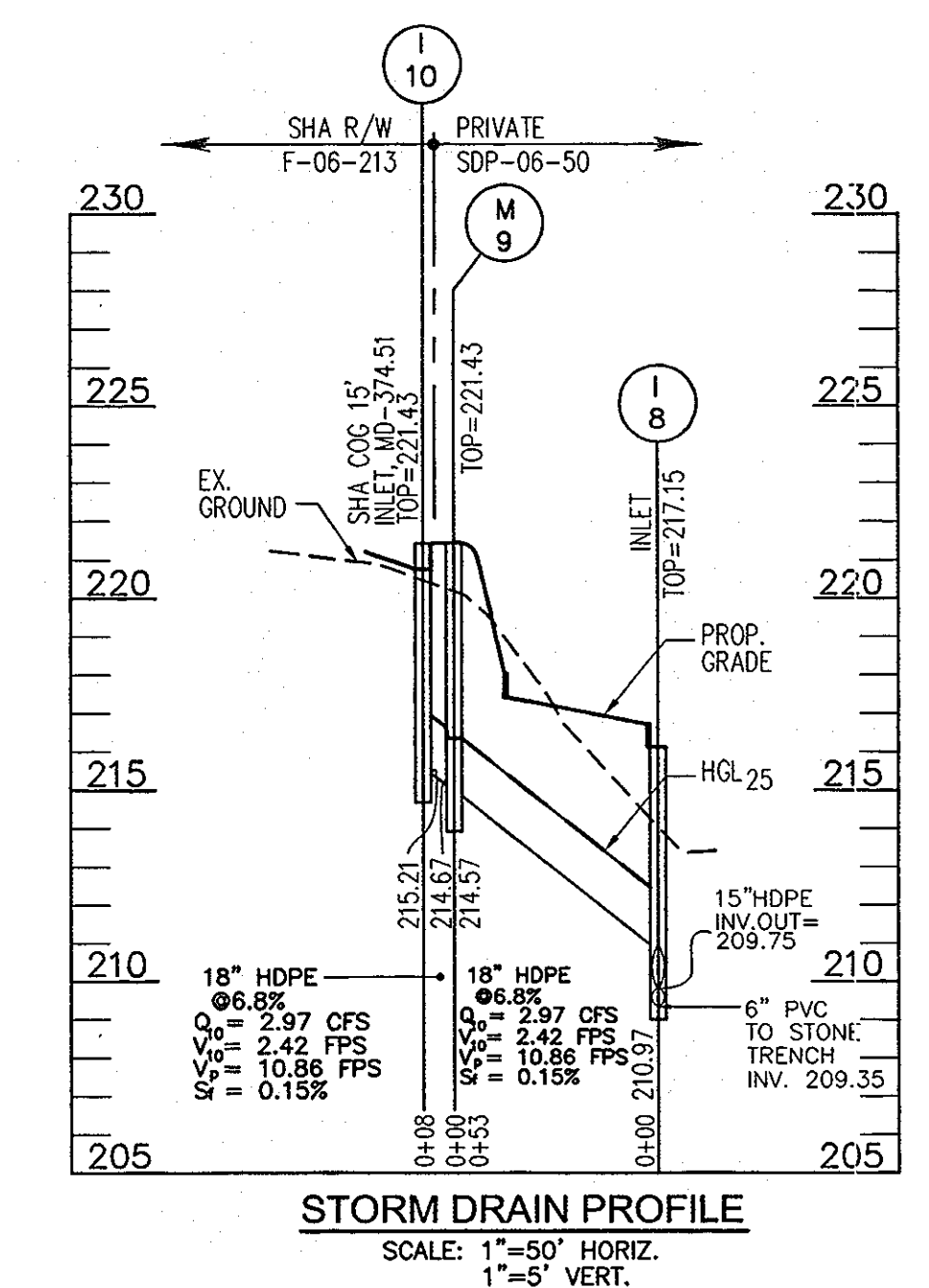
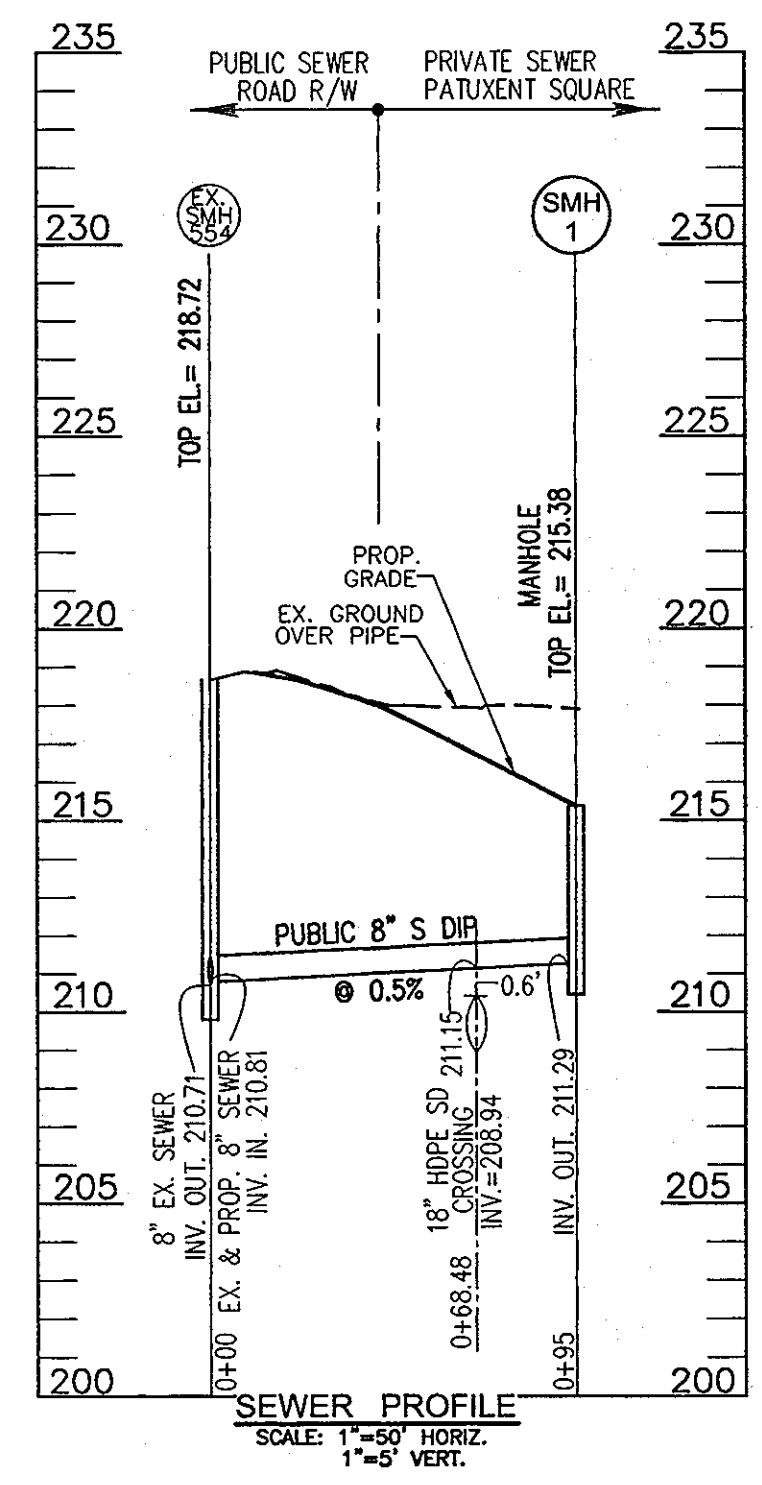
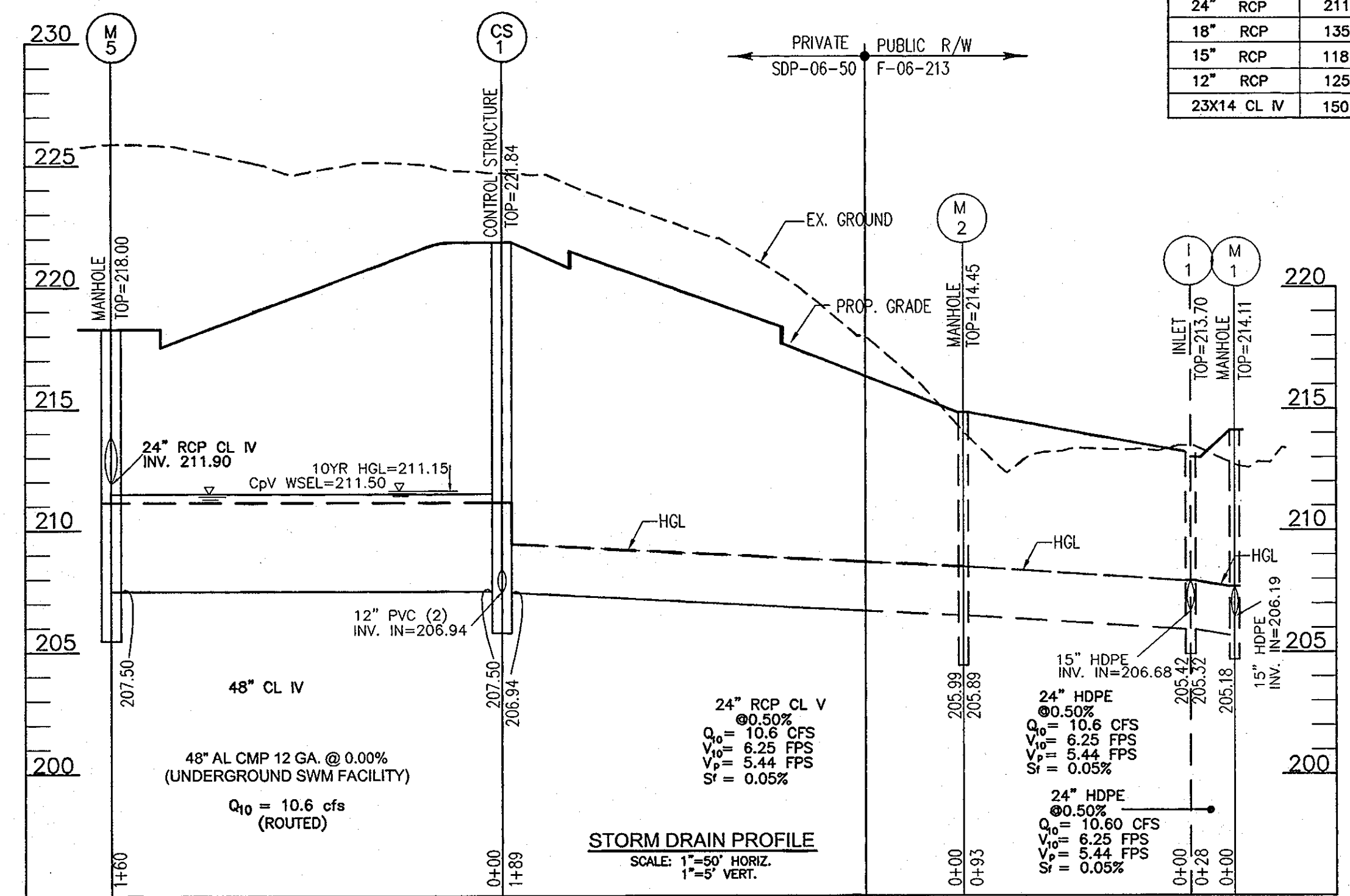
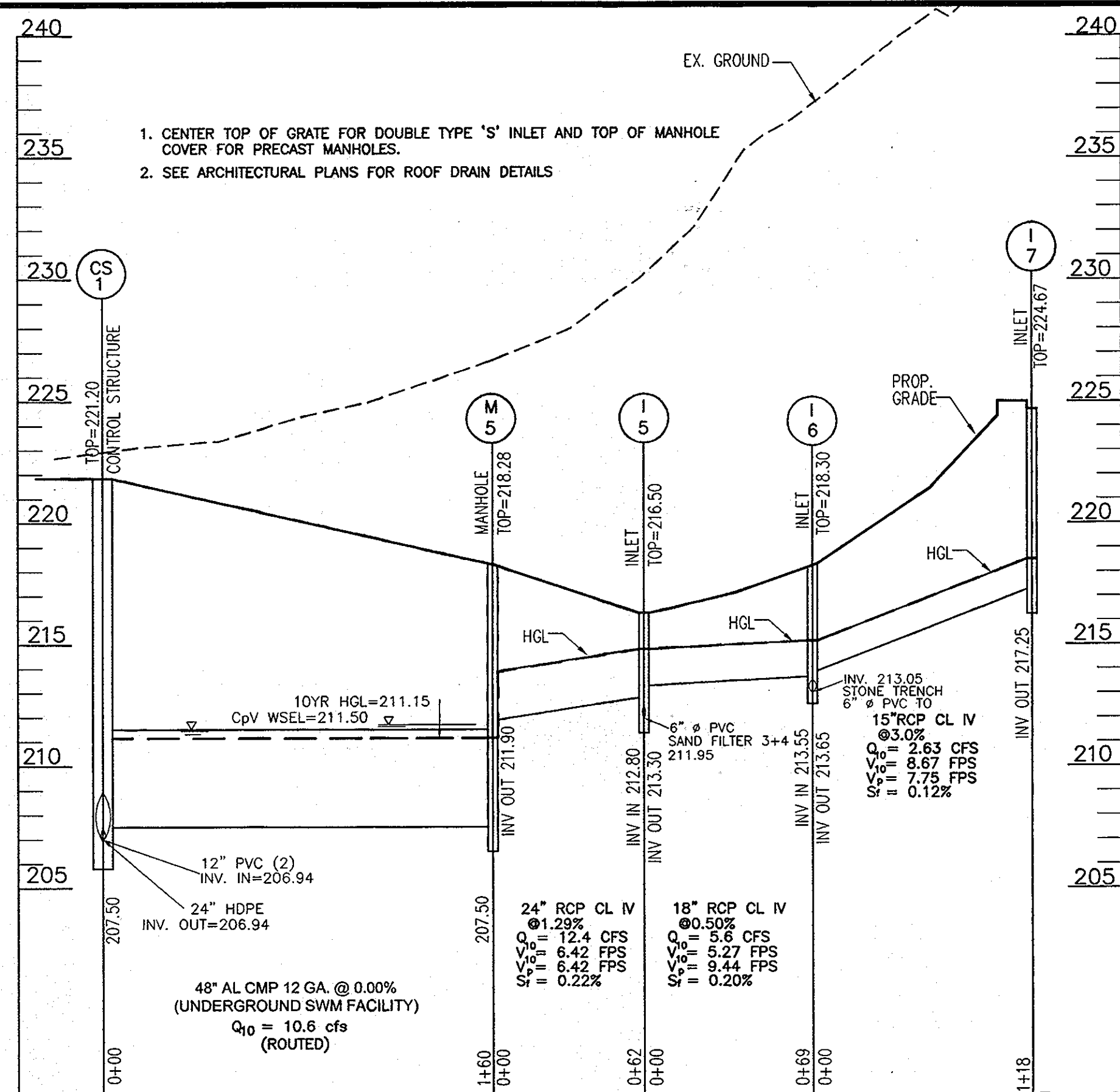
OWNER

ORCHARD DEVELOPMENT
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 (410) 984-2334
 (410) 984-2315 FAX

HOWARD COUNTY DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
 6751 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046-2164

DESIGN BY: RJH/RV
 DRAWN BY: RJH
 CHECKED BY: RNV
 DATE: 07-24-2007
 SCALE: AS SHOWN
 W.O. NO.: 04-11-00

5 SHEET OF 12
 SDP-06-50



NO.	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.	REMARKS
CS-1	CONTROL STRUCTURE	N 527291.37 E 1359209.18	221.20	206.94	206.94	MD-384.09 MODIFIED
M-3	STANDARD 4' MANHOLE	N 527247.27 E 1359186.65	218.85	213.62	213.12	G-5.12
M-5	8' PRECAST MANHOLE	N 527268.83 E 1359326.28	218.28	211.90	207.50	MD-384.09
M-6	8' PRECAST MANHOLE	N 527238.90 E 1359294.86	218.30	211.46	207.50	MD-384.09
M-9	STANDARD 4' MANHOLE	N 527048.08 E 1359358.14	221.43	214.67	214.57	G-5.12
I-2	DOUBLE TYPE 'S'	N 527219.76 E 1359225.87	216.80	212.77	212.67	SD-4.23
I-3	TYPE 'S'	N 527194.40 E 1359145.93	216.50	212.45	212.35	SD-4.22
I-4	DOUBLE TYPE 'S'	N 527194.39 E 1359262.19	217.10	212.45	212.35	SD-4.23
I-5	DOUBLE TYPE 'S'	N 527309.72 E 1359371.86	216.50	213.30	212.80	SD-4.23
I-6	DOUBLE TYPE 'S'	N 527342.43 E 1359372.25	218.30	213.65	213.55	SD-4.23
I-7	DOUBLE TYPE 'S'	N 527441.51 E 1359322.98	224.67	-	217.25	SD-4.23
I-8	DOUBLE TYPE 'S' COMBINATION	N 527079.44 E 1359317.32	217.15	-	209.75	SD-4.32
I-11	YARD INLET	N 527217.91 E 1359491.28	227.88	-	220.00	SD-4.14

SIZE	TYPE	LENGTH
15"	HDPE	30 LF
18"	HDPE	269 LF
24"	HDPE	121 LF
24"	RCP	211 LF
18"	RCP	135 LF
15"	RCP	118 LF
12"	RCP	125 LF
23X14	CL IV	150 LF

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT
 DATE

NO. REVISION DATE
 SITE DEVELOPMENT PLAN
 PATUXENT SQUARE APARTMENTS & RETAIL CENTER
 5-STORY RETAIL AND APARTMENT BUILDING
 PARCEL A AND NON-BUILDABLE PARCEL B
 OF THE NORTH LAUREL SUBDIVISION
 A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
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STORM DRAIN & UTILITY PROFILES
 BULK PARCEL A, A RESUBDIVISION OF
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 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK
 TAX MAP 50 GRID 4
 6TH ELECTION DISTRICT

DEVELOPER
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OWNER
 HOWARD COUNTY DEPARTMENT OF HOUSING
 AND COMMUNITY DEVELOPMENT
 6751 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046-2164

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Chief, Development Engineering Division
 Director

3/20/07
 DATE
 3/13/07
 DATE
 3/21/07
 DATE

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
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 ELLICOTT CITY, MD 21043
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 FAX: 410.461.8961

DESIGN BY: RJR/HV
 DRAWN BY: RJ
 CHECKED BY: RHV
 DATE: 07-24-2007
 SCALE: AS SHOWN
 W.O. NO.: 04-11.00

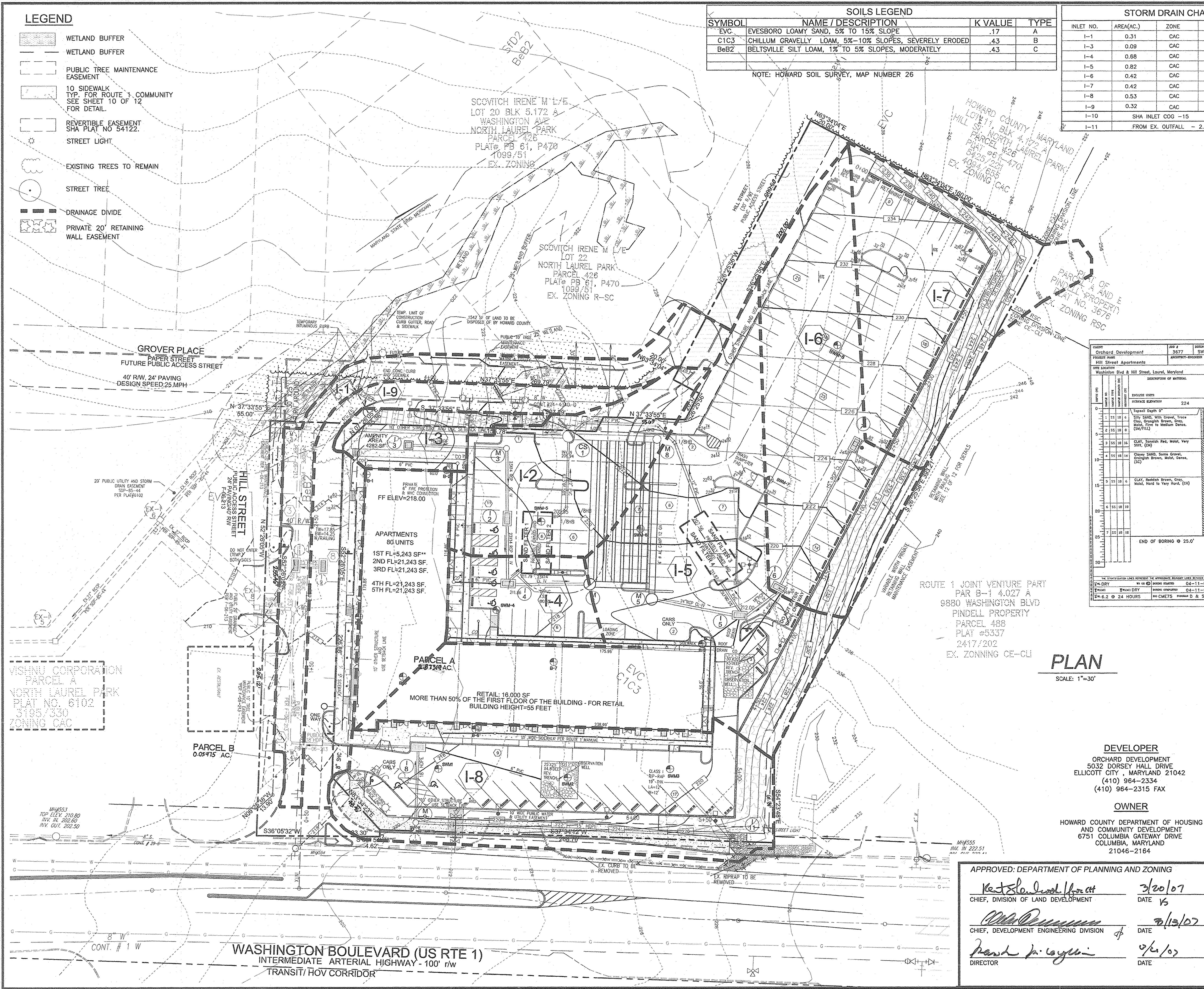
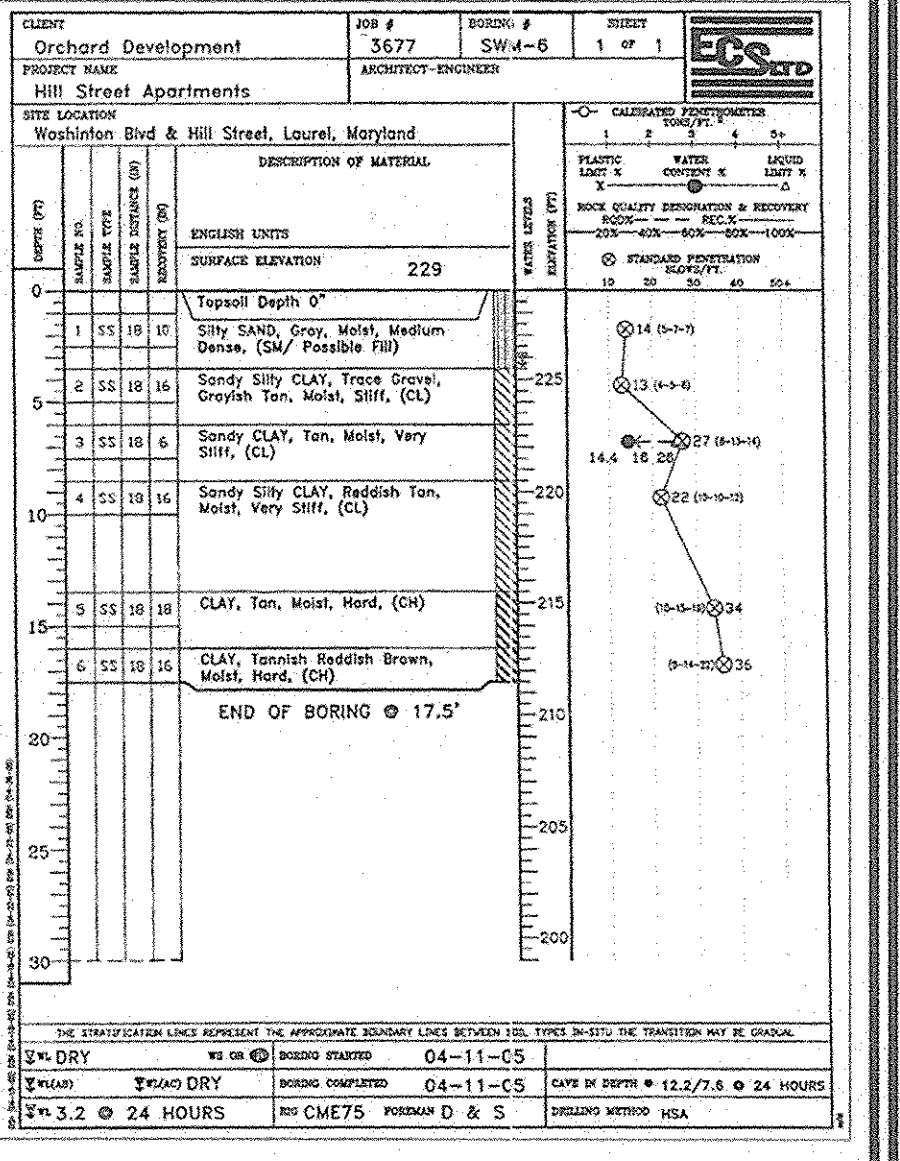
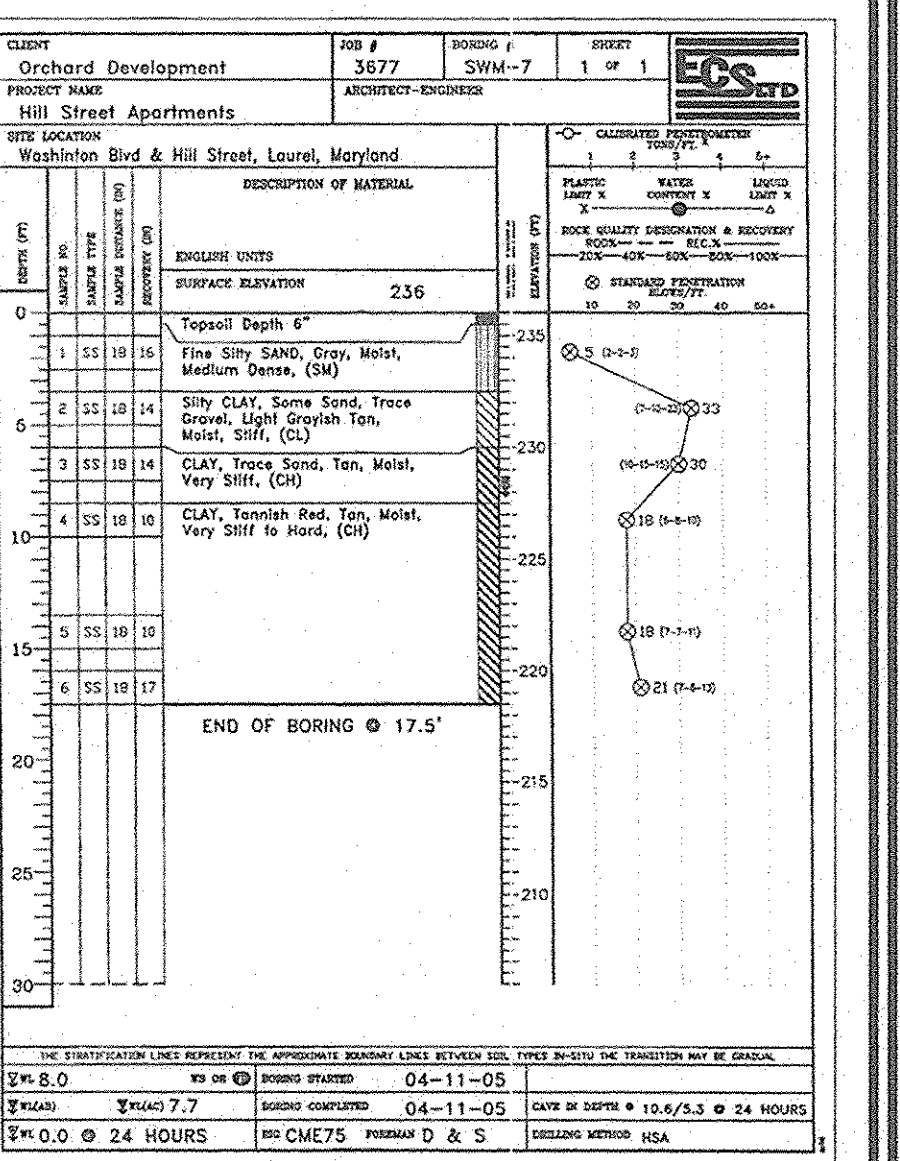
LEGEND

- WETLAND BUFFER
- PUBLIC TREE MAINTENANCE EASEMENT
- 10' SIDEWALK TYP. FOR ROUTE 1, COMMUNITY SEE SHEET 10 OF 12 FOR DETAIL.
- REVERSIBLE EASEMENT SHA PLAT NO 54122.
- STREET LIGHT
- EXISTING TREES TO REMAIN
- STREET TREE
- DRAINAGE DIVIDE
- PRIVATE 20' RETAINING WALL EASEMENT

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	K VALUE	TYPE
EVC	EVESBORO LOAMY SAND, 5% TO 15% SLOPE	.17	A
C1C3	CHILLUM GRAVELLY LOAM, 5%-10% SLOPES, SEVERELY ERODED	.43	B
BeB2	BELTSVILLE SILT LOAM, 1% TO 5% SLOPES, MODERATELY	.43	C

NOTE: HOWARD SOIL SURVEY, MAP NUMBER 26

STORM DRAIN CHART				
INLET NO.	AREA(AC.)	ZONE	'C' FACTOR	IMP.
I-1	0.31	CAC	0.72	85%
I-3	0.09	CAC	0.72	85%
I-4	0.68	CAC	0.72	85%
I-5	0.82	CAC	0.72	85%
I-6	0.42	CAC	0.72	85%
I-7	0.42	CAC	0.72	85%
I-8	0.53	CAC	0.72	85%
I-9	0.32	CAC	0.72	85%
I-10	SHA INLET COG -15			F-06-213
I-11	FROM EX. OUTFALL - 2.5 CFS			



PLAN
SCALE: 1"=30'

DEVELOPER
ORCHARD DEVELOPMENT
5032 DORSEY HALL DRIVE
ELLCOTT CITY, MARYLAND 21042
(410) 964-2334
(410) 964-2315 FAX

OWNER
HOWARD COUNTY DEPARTMENT OF HOUSING
AND COMMUNITY DEVELOPMENT
6751 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046-2164

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Ketola, David Horatt 3/20/07
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 15

David P. ... 3/13/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

David P. ... 3/1/07
DIRECTOR DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT DATE

NO. REVISION DATE

SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS & RETAIL CENTER
5-STORY RETAIL AND APARTMENT BUILDING
PARCEL A AND NON-BUILDABLE PARCEL B
OF THE NORTH LAUREL SUBDIVISION
A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
AND 9, 10 AND 19 THRU 22 & BLOCK 6

STORM DRAIN DRAINAGE AREA MAP
TAX MAP 60 GRID 4, BLOCK 4 AND LOTS 9, 10
6TH ELECTION DISTRICT

ROBERT H. VOGEL, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8966

DESIGN BY: RJR/HV
DRAWN BY: RJ
CHECKED BY: RHV
DATE: 07-24-2007
SCALE: AS SHOWN
W.O. NO.: 04-11.00

7 SHEET OF 12

GENERAL NOTES

1. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF THE REQUIRED PLANTING MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURVEY LINTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
2. THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
4. ALL PROPOSED TRANSFORMERS, EQUIPMENT BOXES AND UTILITY CABINETS MUST BE LOCATED IN AREAS NOT VISIBLE FROM ROUTE 1 AND THE PEDESTRIAN AREAS IN ACCORDANCE WITH THE ROUTE 1 MANUAL.

THE REQUIRED INDIVIDUAL LANDSCAPE ISLAND REQUIREMENT FOR THE 12' MINIMUM WIDTH AND 200 SF. AREA WERE PROVIDED THROUGH ALTERNATIVE COMPLIANCE BY PROVIDING A COMBINED OVERALL AREA EQUAL TO OR GREATER THAN THE INDIVIDUAL ISLAND SIZES ALONG THE PERIMETER OF THE PROPERTY IN ORDER TO PROVIDE THE REQUIRED NUMBER OF PARKING SPACES. WHEEL STOPS MUST BE PROVIDED FOR ALL PARKING SPACES WHERE THERE WILL BE HEAD-IN PARKING TO AVOID DAMAGE TO OTHER CARS AND THE LANDSCAPED PLANT MATERIALS.

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING (APARTMENT)**

NUMBER OF PARKING SPACES	120
NUMBER OF TREES AND ISLANDS REQUIRED	12
NUMBER OF TREES AND ISLANDS PROVIDED	12**
SHADE TREES	-
OTHER TREES (2:1 SUBSTITUTION)	-
LANDSCAPE ISLAND 200 SF X 12	2400 SF

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING (RETAIL)**

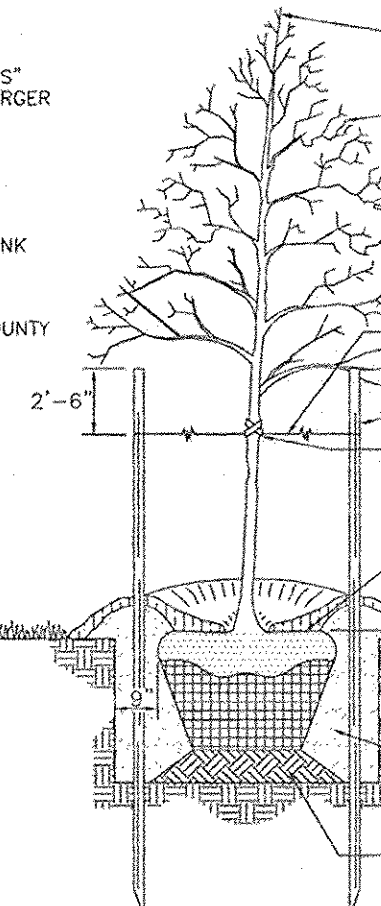
NUMBER OF PARKING SPACES	80
NUMBER OF TREES AND ISLANDS REQUIRED	4
NUMBER OF TREES AND ISLANDS PROVIDED	4**
SHADE TREES	-
OTHER TREES (2:1 SUBSTITUTION)	-
LANDSCAPE ISLAND 200 SF X 8	1600 SF
**TOTAL 16 + 2 ADDITIONAL LANDSCAPE ISLAND TREES ARE PROVIDED.	

**SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING**

NUMBER OF DWELLING UNITS	80
NUMBER OF TREES REQUIRED (1:DU SPA: 1:3 DU APTS)	27
NUMBER OF TREES PROVIDED	27
SHADE TREES	-
OTHER TREES (2:1 SUBSTITUTION)	-
SHRUBS (10:1 SUBSTITUTION)	-

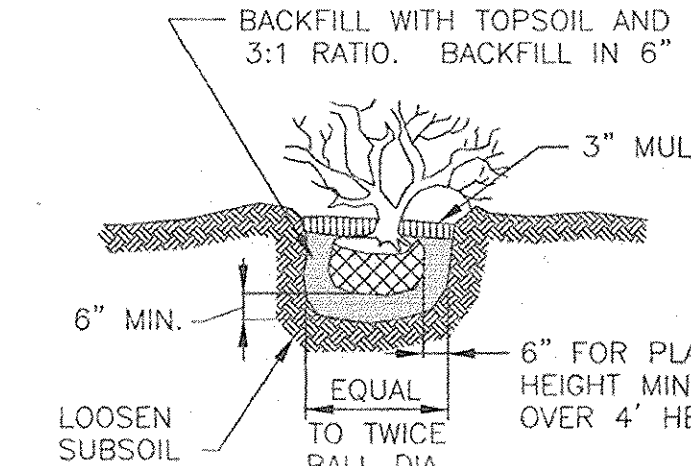
NOTES

1. SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREA" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
2. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
3. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
4. KEEP MULCH 1" FROM TRUNK.
5. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
6. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



TREE PLANTING AND STAKING

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



SHRUB PLANTING DETAIL

NOT TO SCALE

LEGEND

- WETLAND BUFFER
- WETLAND BUFFER
- PUBLIC TREE MAINTENANCE
- 10 SIDEWALK TYP. FOR ROUTE 1 COMMUNITY SEE SHEET 10 OF 12 FOR DETAIL
- PARKING LOT LIGHTS
- OUTDOOR AMENITY AREA
- DISTURBANCE WETLAND WETLAND A=1,272.95 WETLAND B=4,991 TOTAL AREA=1,765.65
- REVERTIBLE EASEMENT SHA PLAT NO 54122
- STREET LIGHT PER FINAL RD PLAN
- EXISTING TREES TO REMAIN
- STREET TREE PER F-06-213
- VARIABLE WIDTH PRIVATE RETAINING WALL MAINTENANCE EASEMENT

PLAN

SCALE: 1"=30'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kurt Sheppard 3/20/07
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John P. ... 3/13/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Mark ... 3/20/07
DIRECTOR DATE

**SCHEDULE A
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS								ADJACENT TO PERIMETER PROPERTIES	
	1	4	5	6	7	8	9	10	A	B
Perimeter/Frontage Designation	E	E	E	E	E	E	E	E	A	A
Linear Feet of Roadway	290'	254'	60'	77'	29'	109'	151'	458'	458'	160'
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	No	No	No	No	No	No	No	No	No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)	Yes*	No	No	No	No	No	No	Yes*	Yes*	Yes*
Number of Plants Required	1:40 6	1:40 7	1:40 2	1:50 2	1:40 1	1:40 3	1:40 4	1:60 0	1:60 2	1:60 2
Number of Plants Provided	6	7	2	2	1	3	4	0	2	2
Shade Trees	-	-	-	-	-	-	-	-	-	-
Other Trees (2:1 Substitution)	-	-	-	-	-	-	-	-	-	-
Shrubs (10:1 Substitution)	52	64	15	-	8	28	38	-	-	-

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
LS	25	LIQUIDAMBAR STYRACIFLUA AMERICAN SWEETGUM	2 1/2"-3" Col.	B & B
OR	25	QUERCUS ROBUR 'FASTIGIATA' COLLUMAR ENGLISH OAK	2 1/2"-3" Col.	B & B
ZS	24	ZELKOVA SERRATA 'VILLAGE GREEN' VILLAGE GREEN ZELKOVA	2 1/2"-3" Col.	B & B
AG	113	AZALEA 'GUMPO WHITE' GUMPO WHITE AZALEA	2 1/2"-3" HT.	B & B
HC	112	ILEX CORNUTA CHINESE HOLLY	2 1/2"-3" HT.	B & B
PN	2	PINUS NIGRA AUSTRALIAN PINE	6'-8' HT.	B & B

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LANDSCAPE PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

NOTE: STREET TREES ALONG HILL STREET ARE PER F-06-213.
FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$39,830.00 FOR 70 SHADE TREES, 2 EVERGREEN TREES, 205 SHRUBS AND 619 LF OF WALL.

DEVELOPER
ORCHARD DEVELOPMENT
5032 DORSEY HALL DRIVE
ELLICOTT CITY, MARYLAND 21042
(410) 964-2334
(410) 964-2315 FAX

OWNER
HOWARD COUNTY DEPARTMENT OF HOUSING
AND COMMUNITY DEVELOPMENT
6751 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND
21046-2164

DEVELOPER'S LANDSCAPE CERTIFICATE

I/WE CERTIFY THAT LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF THE PROJECT, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Micah B. Shady
DEVELOPER'S NAME: ORCHARD DEVELOPMENT

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

NO.	REVISION	DATE

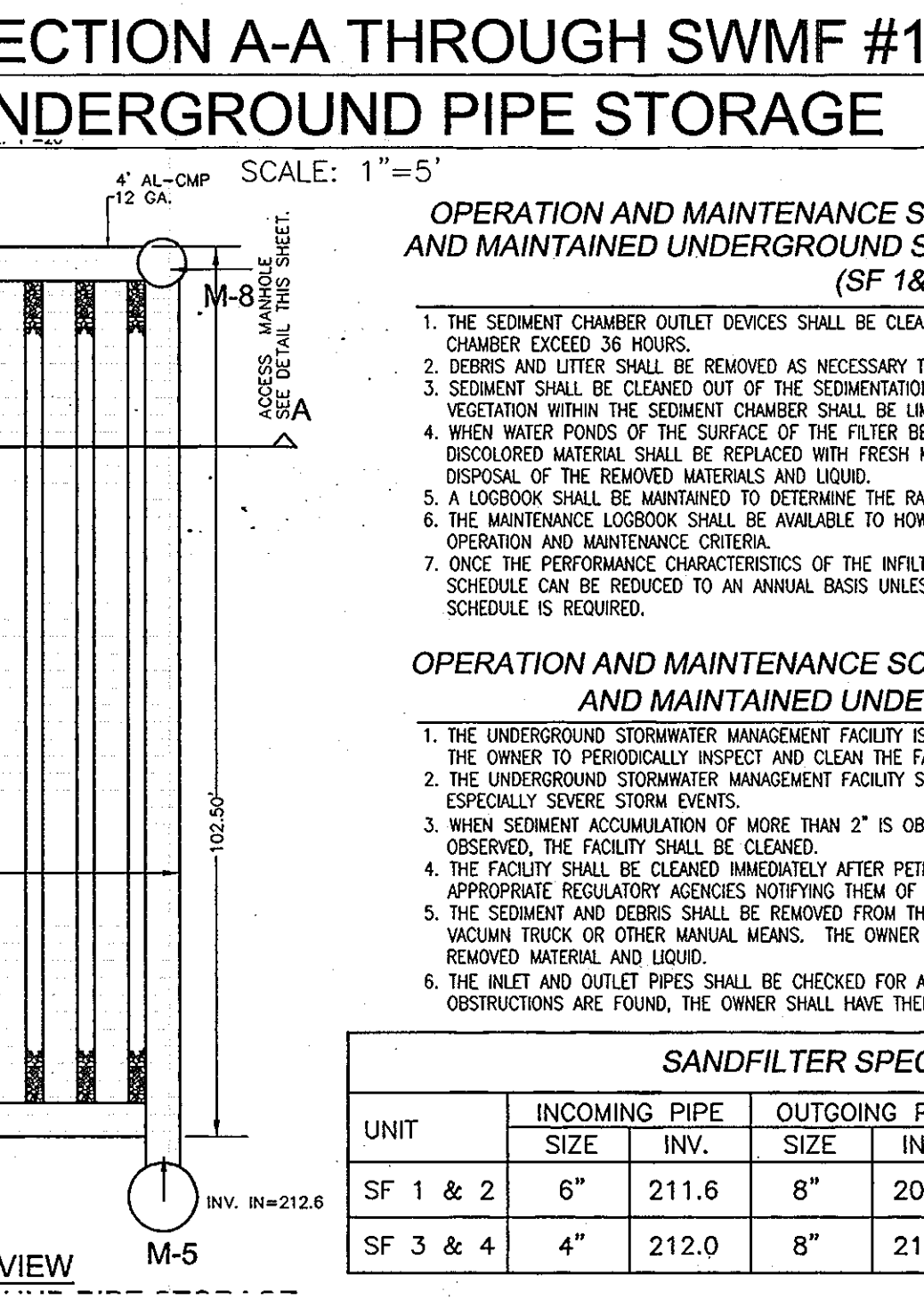
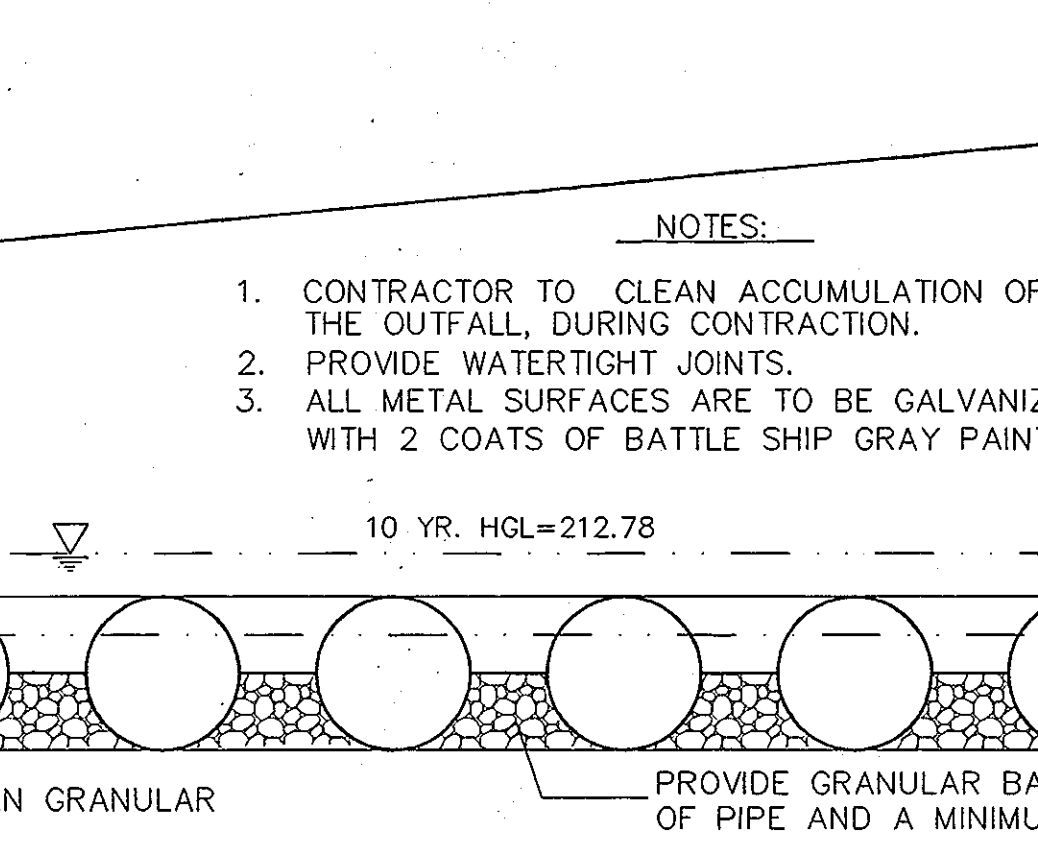
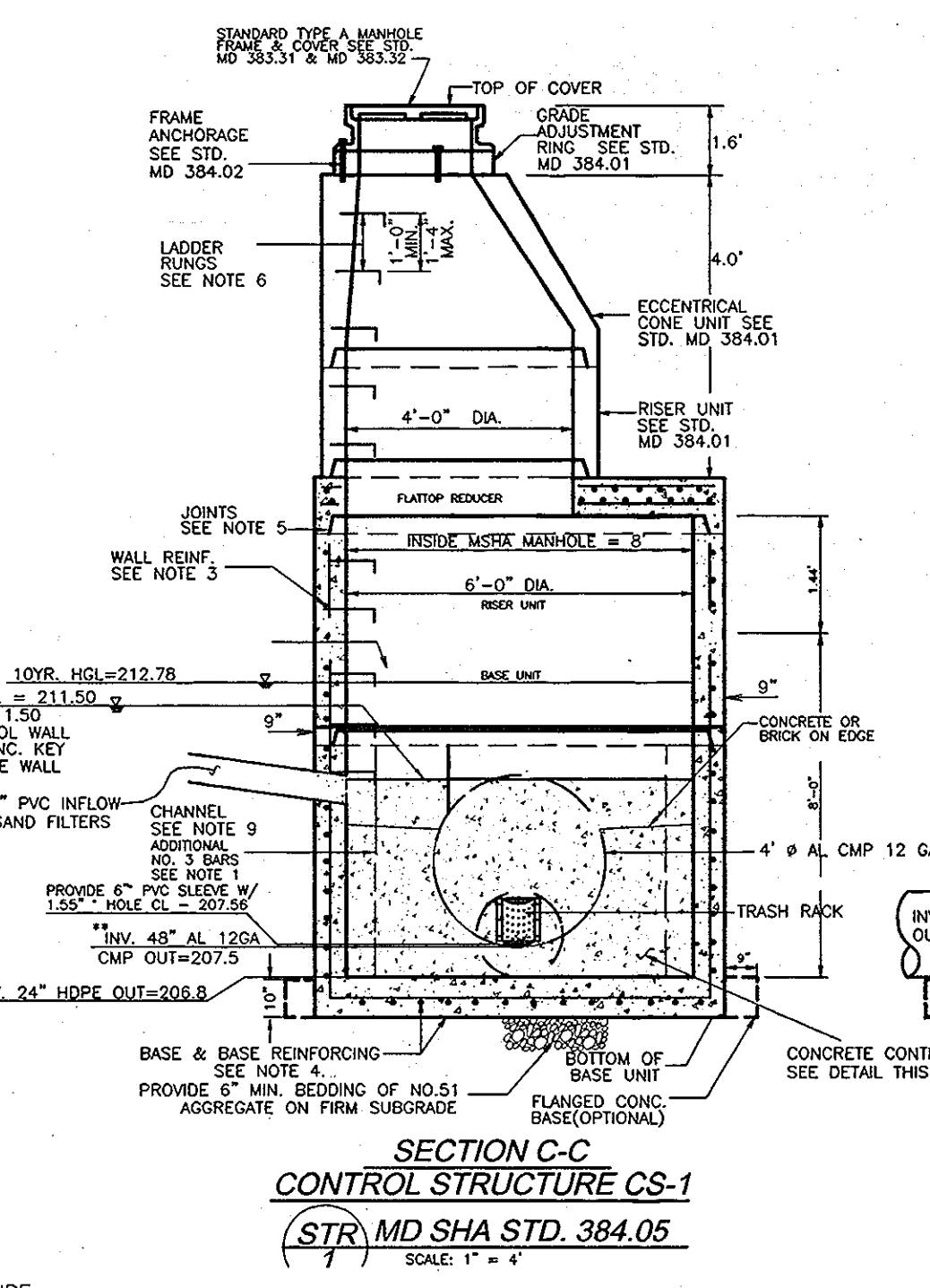
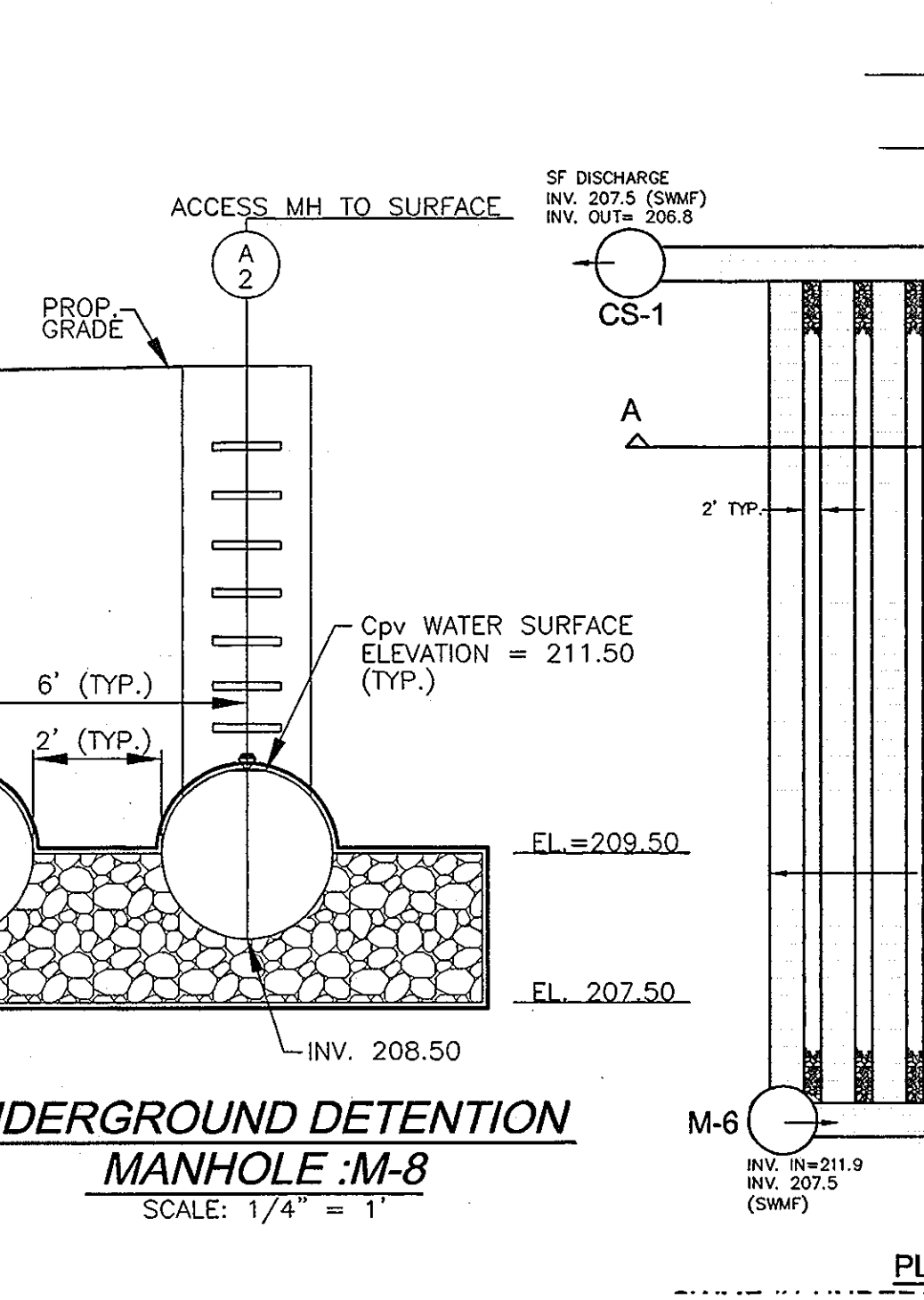
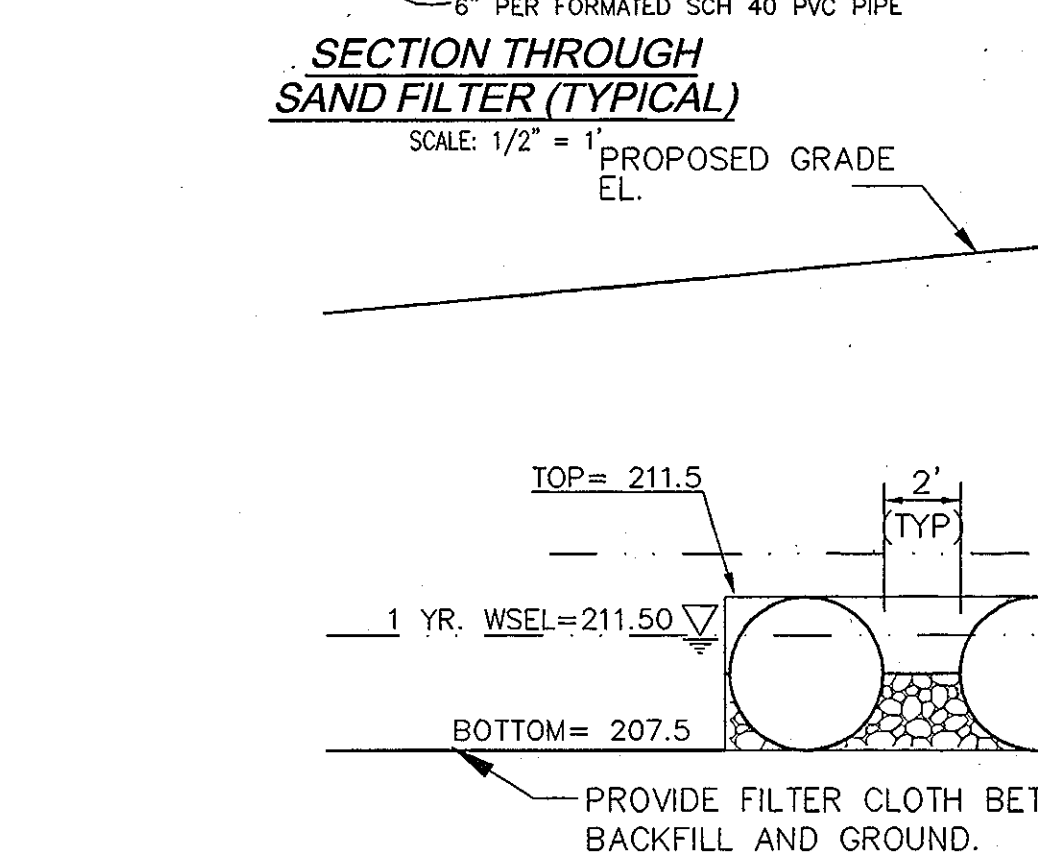
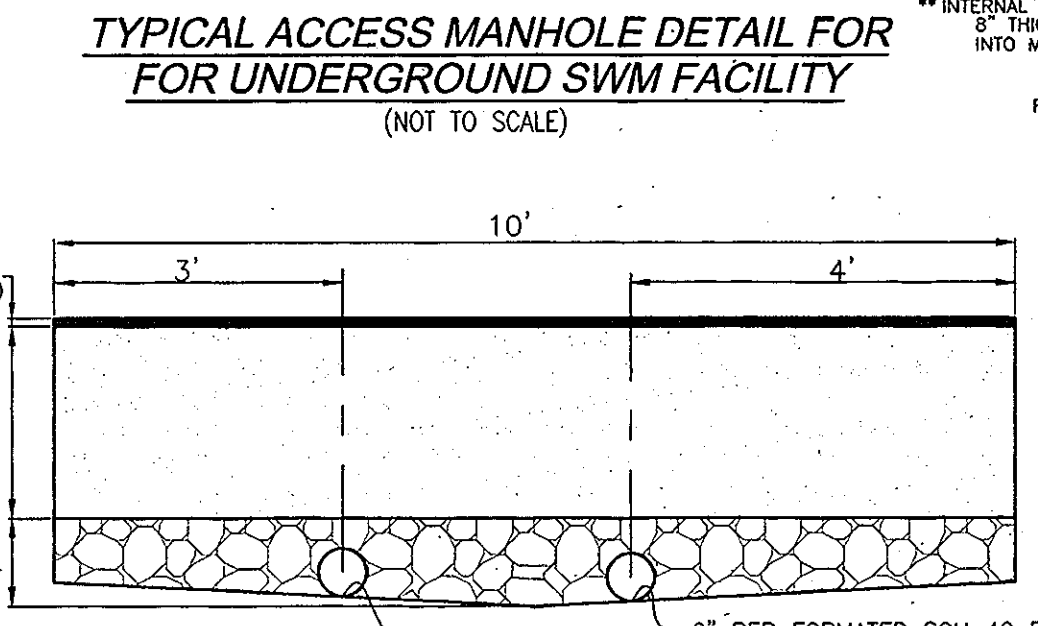
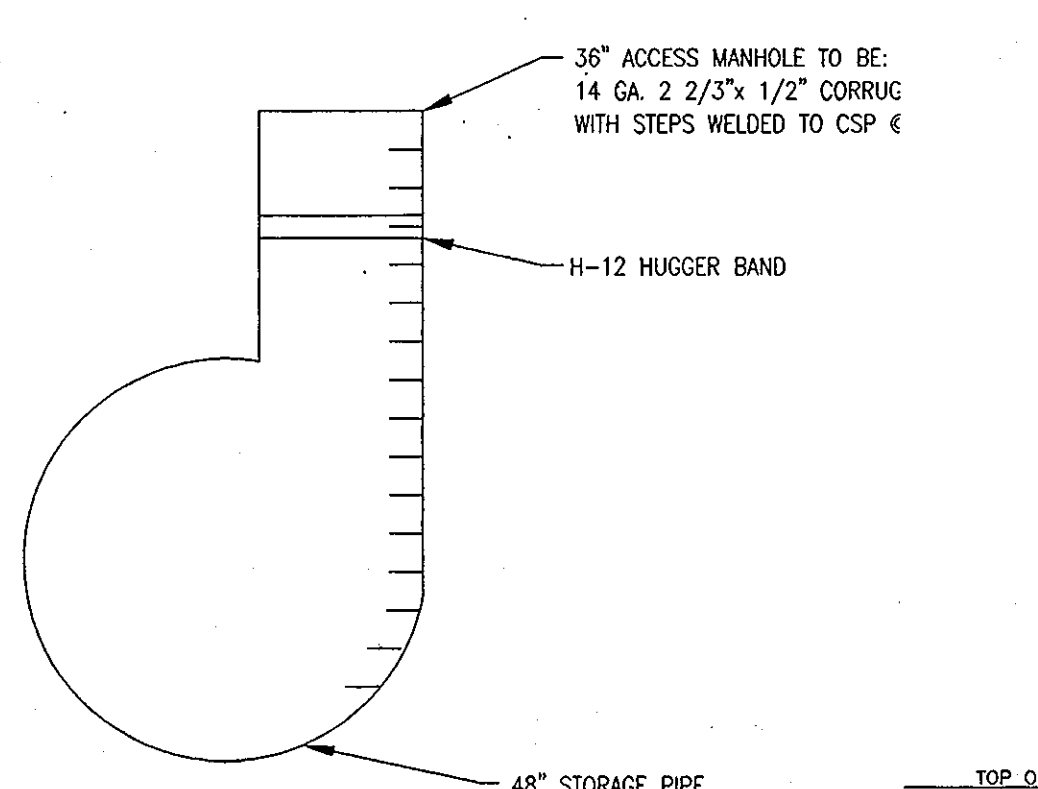
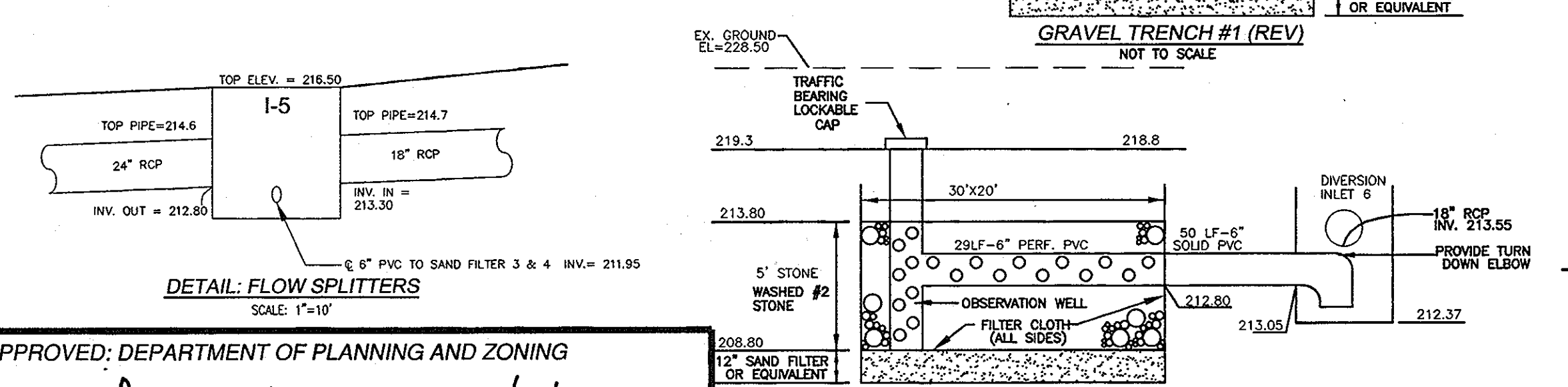
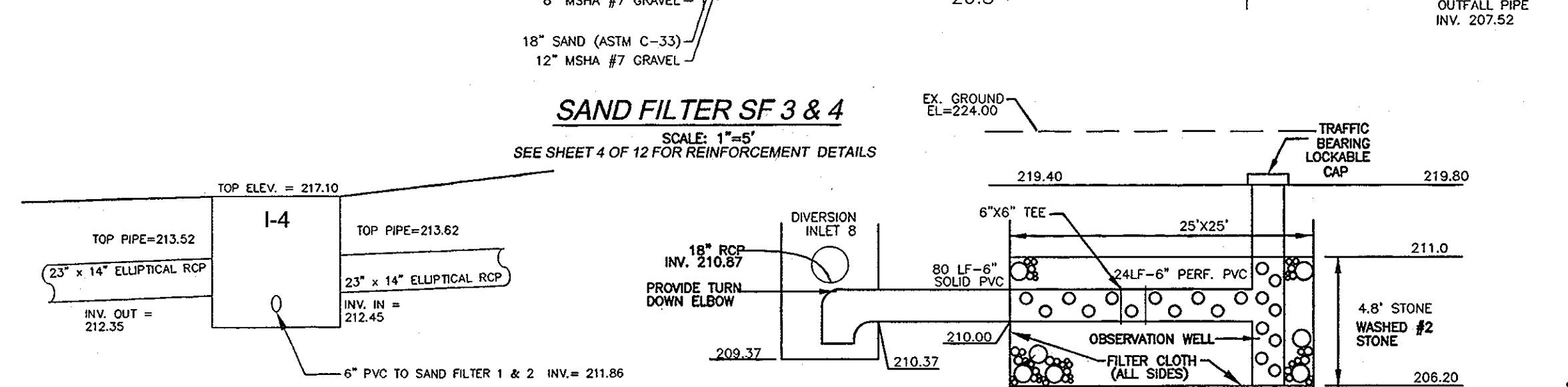
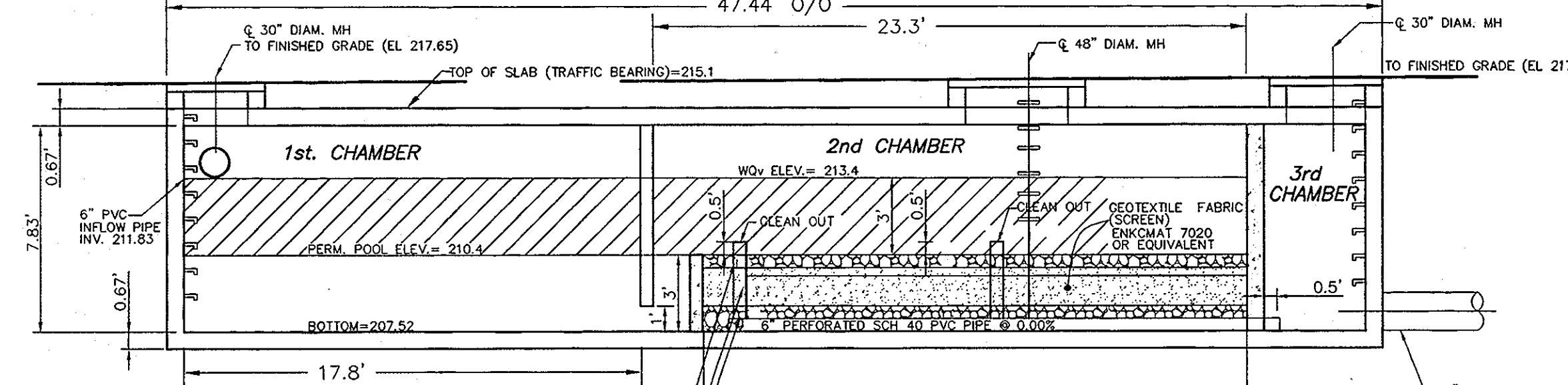
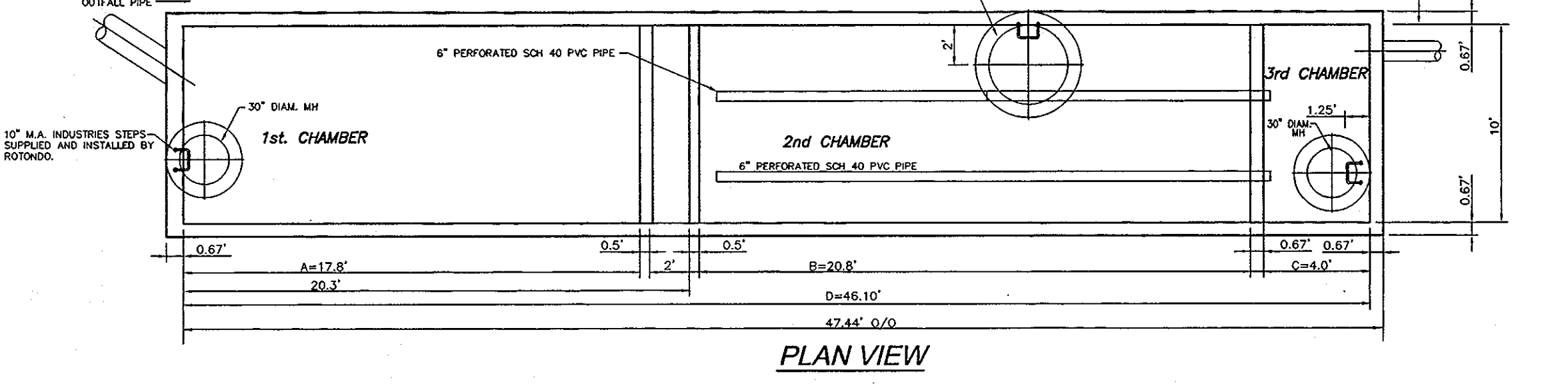
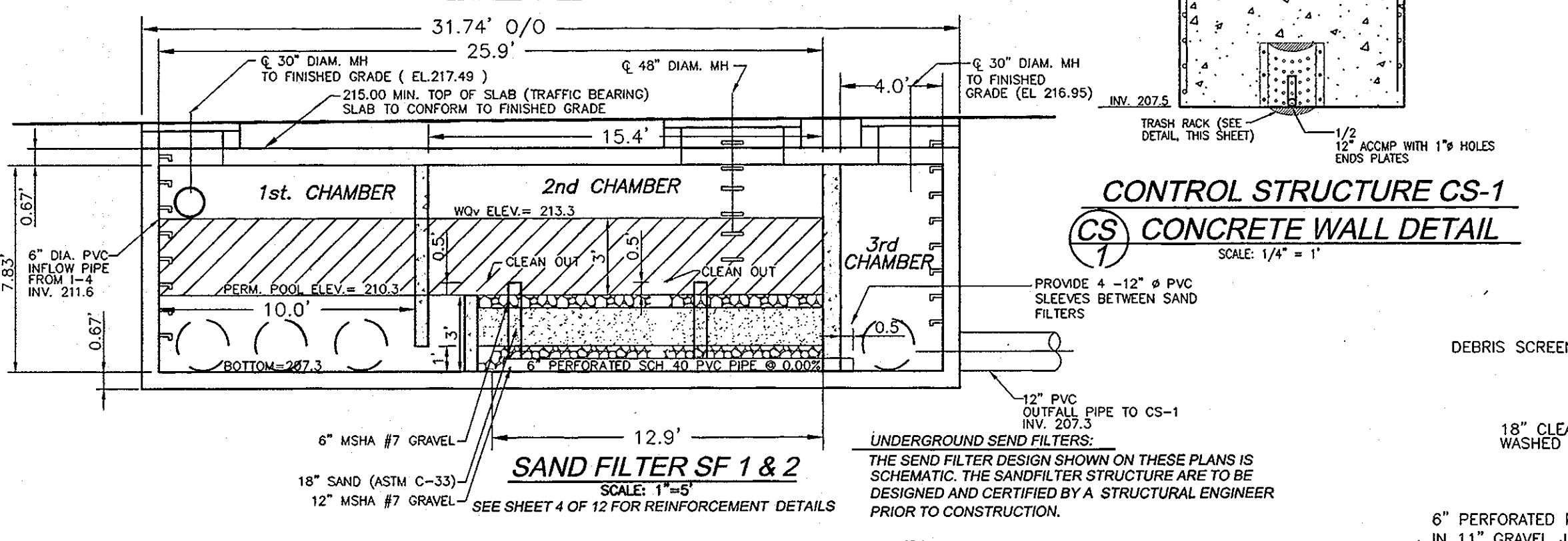
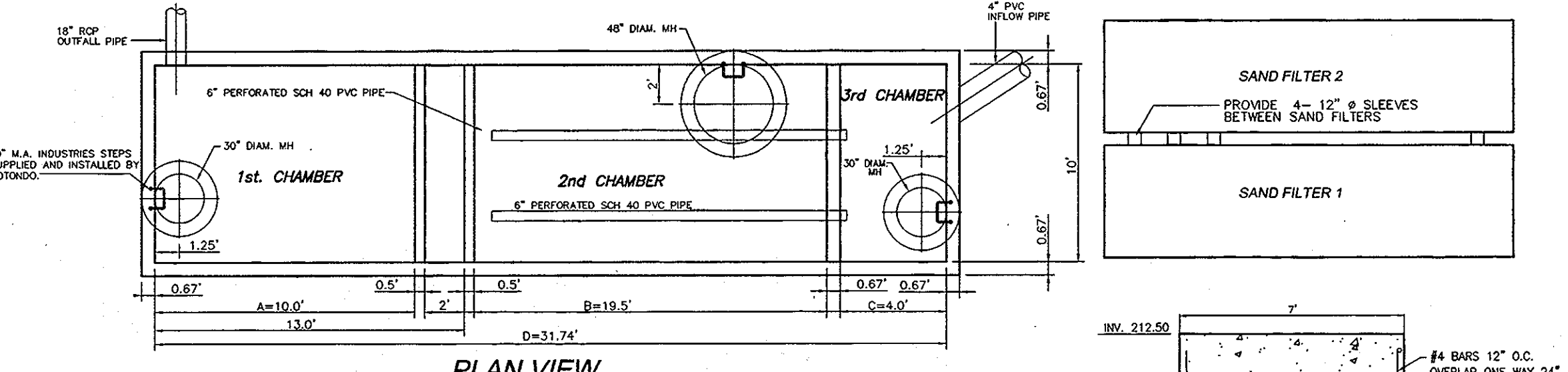
**SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS & RETAIL CENTER**
5-STORY RETAIL AND APARTMENT BUILDING
PARCEL A AND NON-BUILDABLE PARCEL B
OF THE NORTH LAUREL SUBDIVISION
A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
AND 9, 10 AND 19 THRU 22 & BLOCK 6
LANDSCAPE PLAN AND DETAILS
BULK PARCEL A, A RESUBDIVISION OF
LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10
AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RJRHV
DRAWN BY: RJ
CHECKED BY: RJRHV
DATE: 07-24-2007
SCALE: AS SHOWN
W.O. NO.: 04-11.00

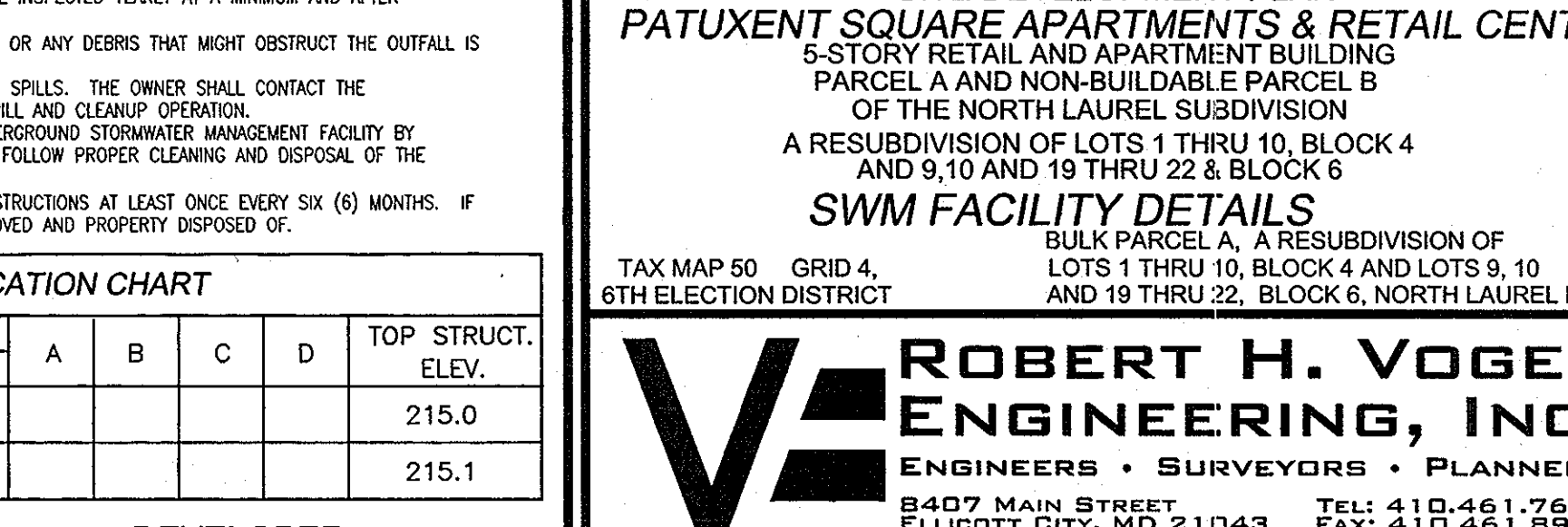
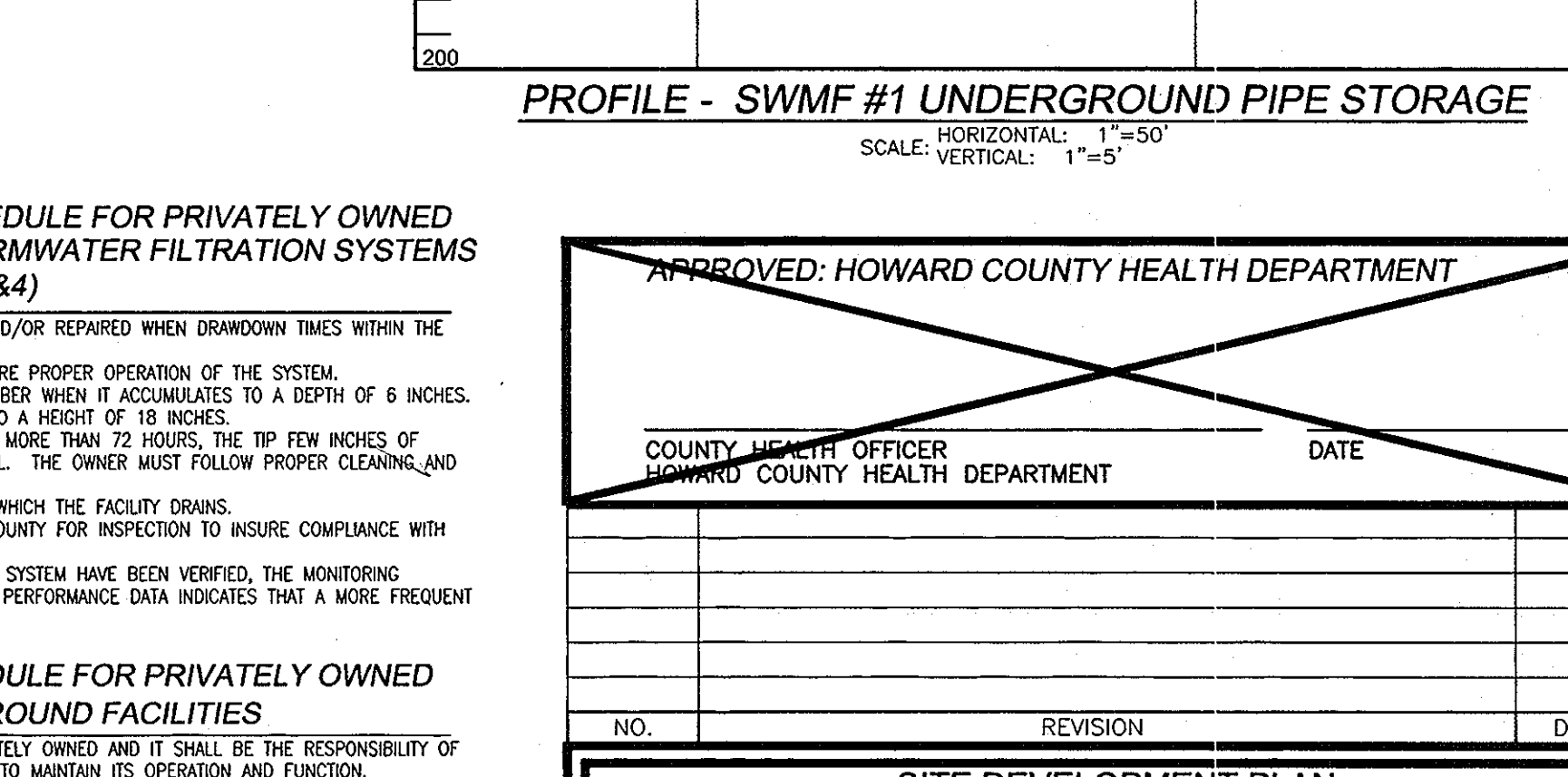
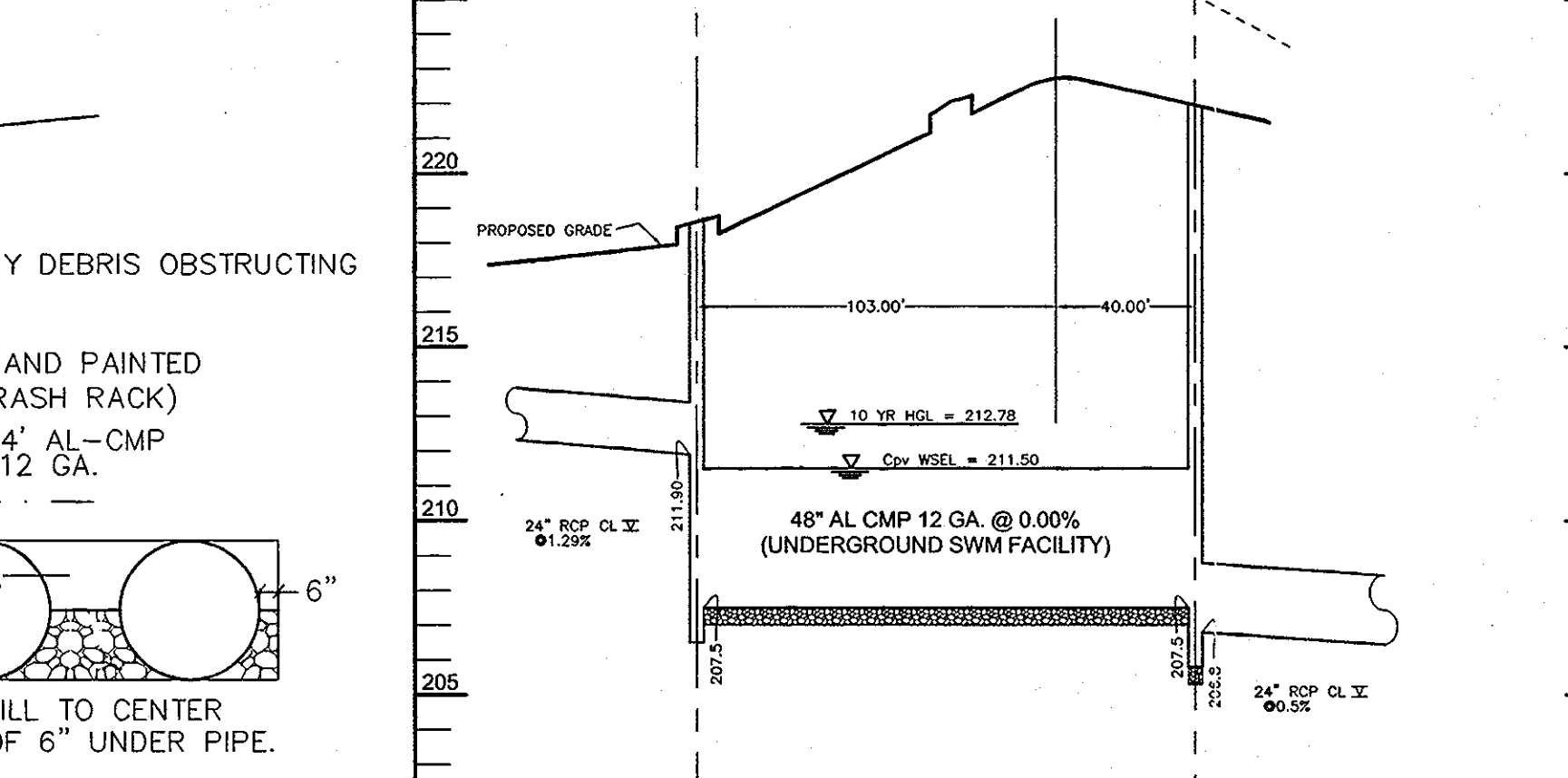
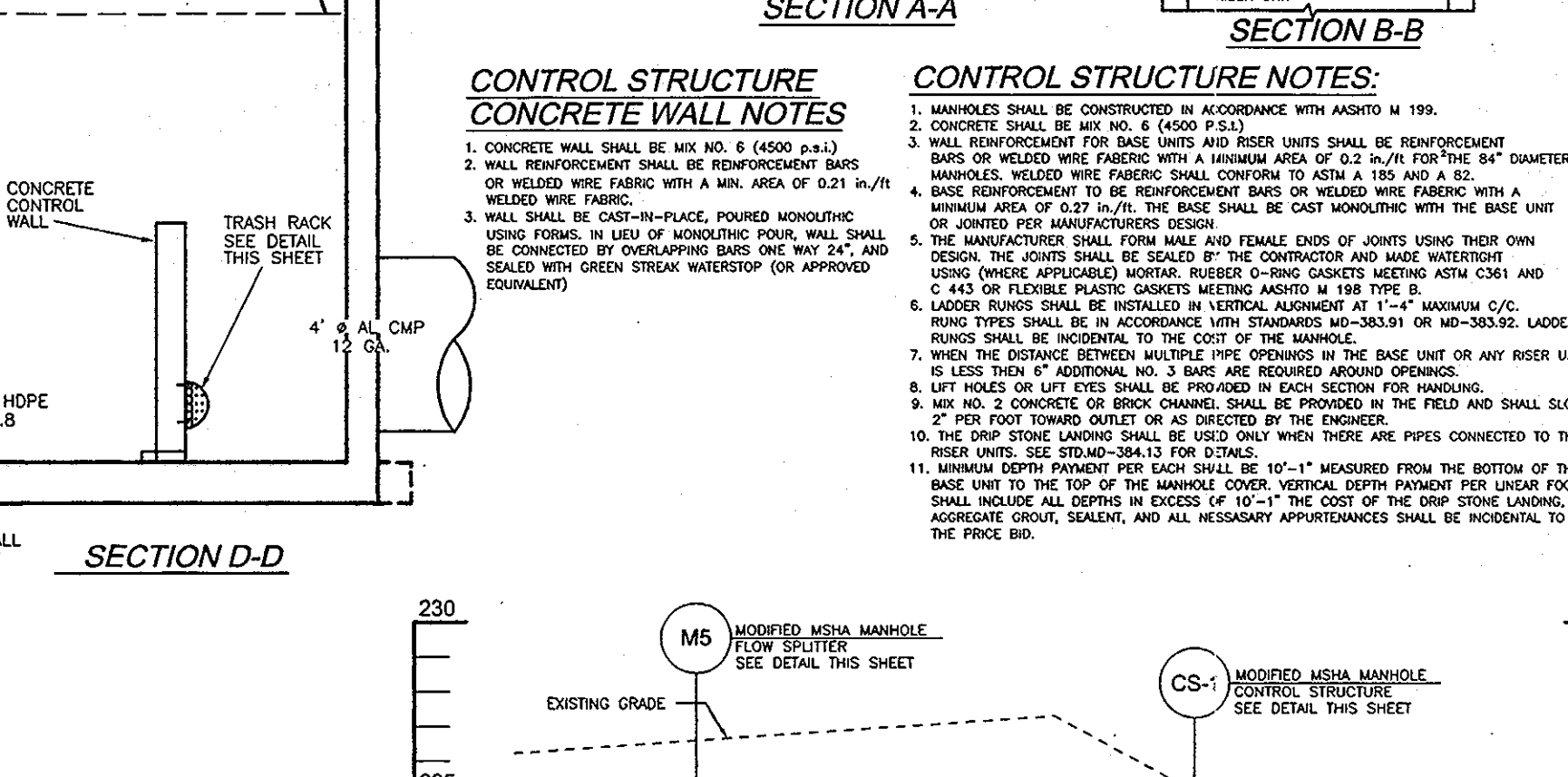
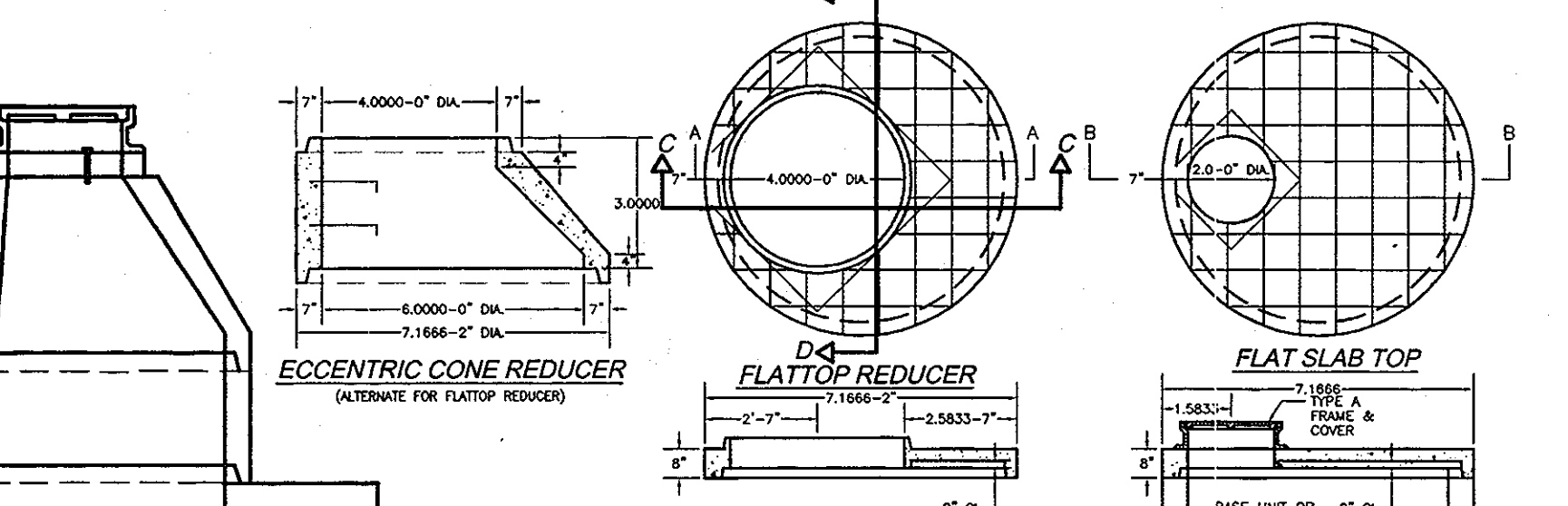
8 SHEET OF 12

WASHINGTON BOULEVARD (US RTE 1)
INTERMEDIATE ARTERIAL HIGHWAY - 100' r/w
TRANSIT/HOV CORRIDOR



SANDFILTER SPECIFICATION CHART

UNIT	INCOMING PIPE		OUTGOING PIPE		TOP STRUCT. ELEV.
	SIZE	INV.	SIZE	INV.	
SF 1 & 2	6"	211.6	8"	207.3	215.0
SF 3 & 4	4"	212.0	8"	211.50	215.1



DEVELOPER
 ORCHARD DEVELOPMENT
 5032 DORSEY HALL DRIVE
 ELLICOTT CITY, MARYLAND 21042
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OWNER
 HOWARD COUNTY DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
 6751 COLUMBIA GATEWAY DRIVE
 COLUMBIA, MARYLAND
 21046-2164

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Chief, Development Engineering Division
 Director

DEVELOPER'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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature of Developer: Michael B. Shady
 Date: 2/27/07

ENGINEER'S CERTIFICATE
 I, WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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.
 Signature of Engineer: Robert H. Vogel
 Date: 2/28/07

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 USDA - NATURAL RESOURCES CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 Signature of Reviewer: [Signature]
 Date: [Date]

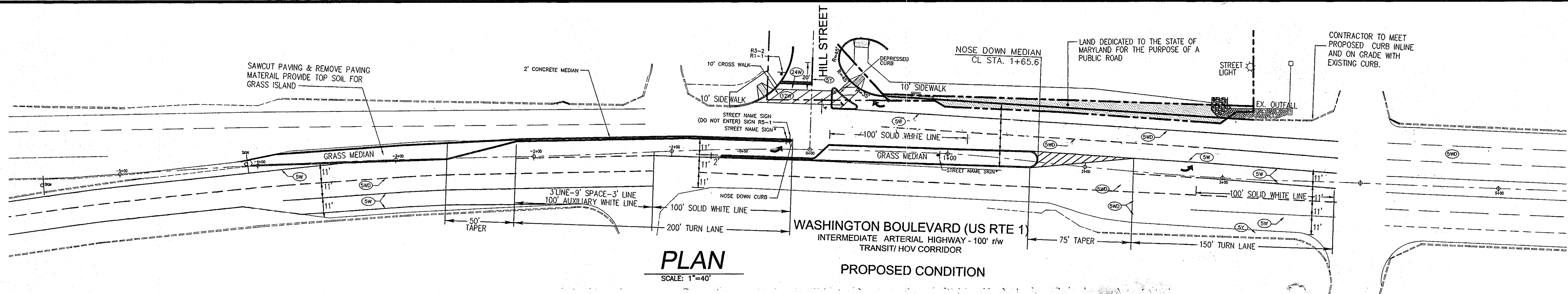
APPROVED: HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT
 DATE: [Date]

SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS & RETAIL CENTER
 5-STORY RETAIL AND APARTMENT BUILDING
 PARCEL A AND NON-BUILDABLE PARCEL B
 OF THE NORTH LAUREL SUBDIVISION
 A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
 AND 9, 10 AND 19 THRU 22 & BLOCK 6
SWM FACILITY DETAILS
 BULK PARCEL A, A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK
 TAX MAP 50 GRID 4
 6TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERING, INC.
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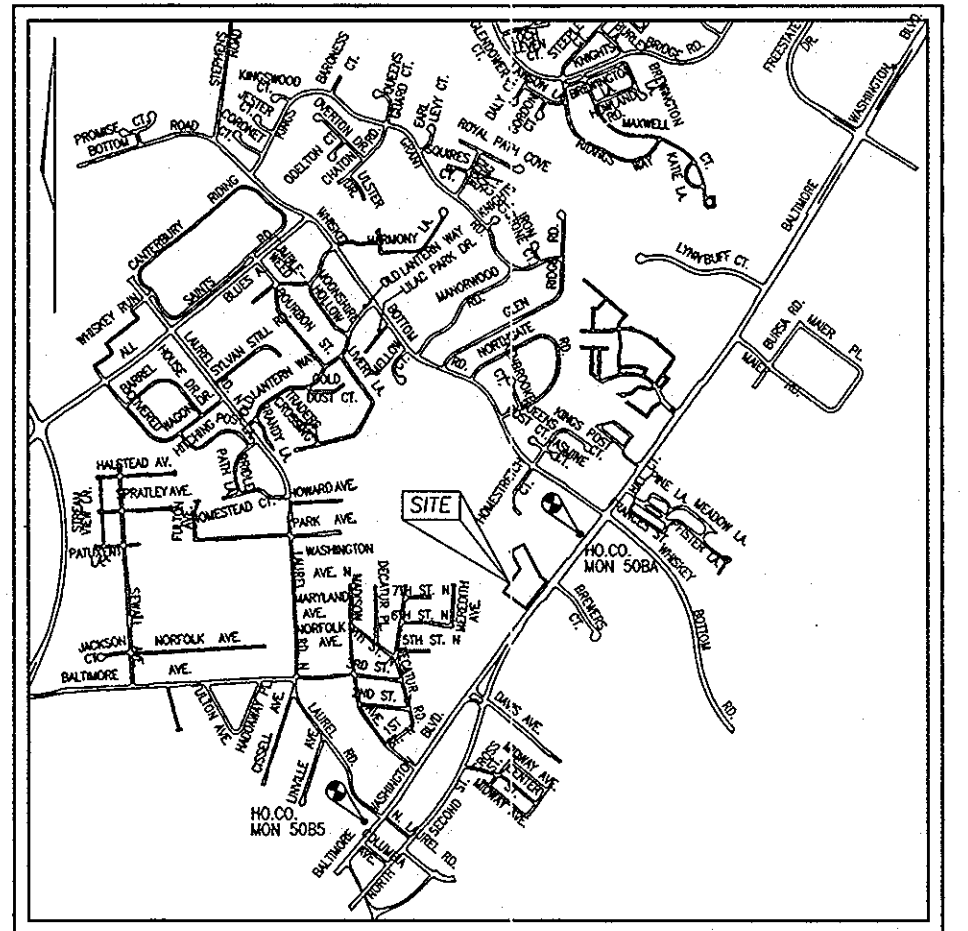
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 DRAWN BY: RJ
 CHECKED BY: RJH
 DATE: 07-24-2007
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9 SHEET OF 12
 SDP-06-50



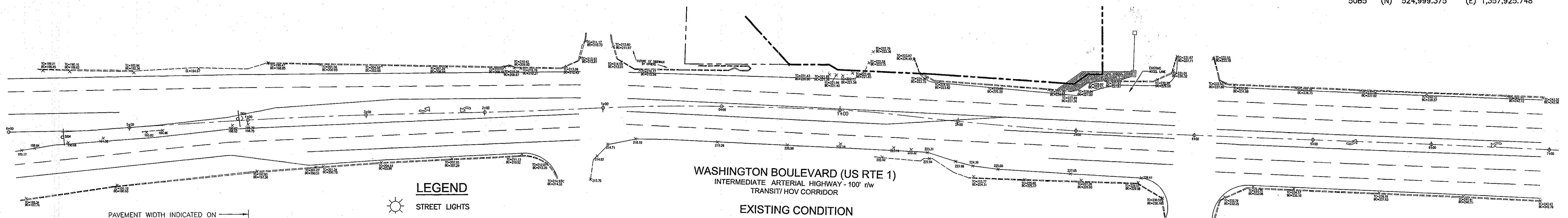
PLAN
SCALE: 1"=40'

FOR ROUTE 1 IMPROVEMENTS UTILIES APPROVED
MSHA ACCESS PERMIT



VICINITY MAP
SCALE: 1"=2000'

THE BEARINGS SHOWN ON THIS PLAN ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED IN THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS:
50BA (N) 527,561.678 (E) 1,359,772.604
50B5 (N) 524,999.375 (E) 1,357,925.748

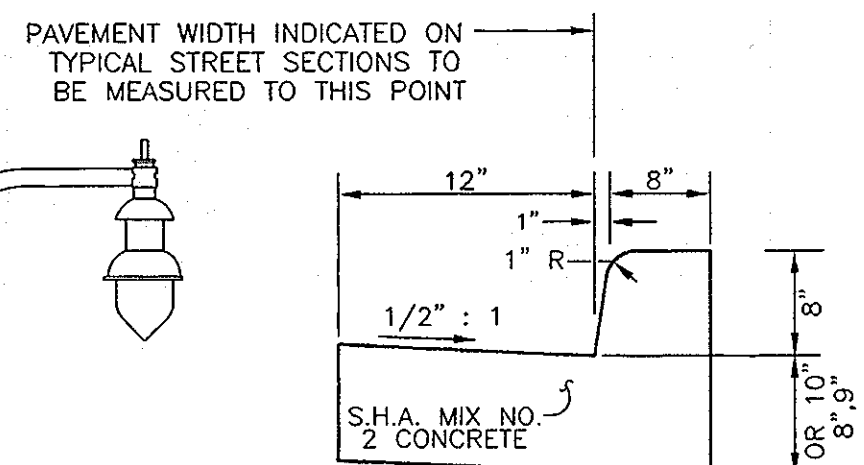


WASHINGTON BOULEVARD (US RTE 1)
INTERMEDIATE ARTERIAL HIGHWAY - 100' r/w
TRANSIT/ HOV CORRIDOR

EXISTING CONDITION

LEGEND

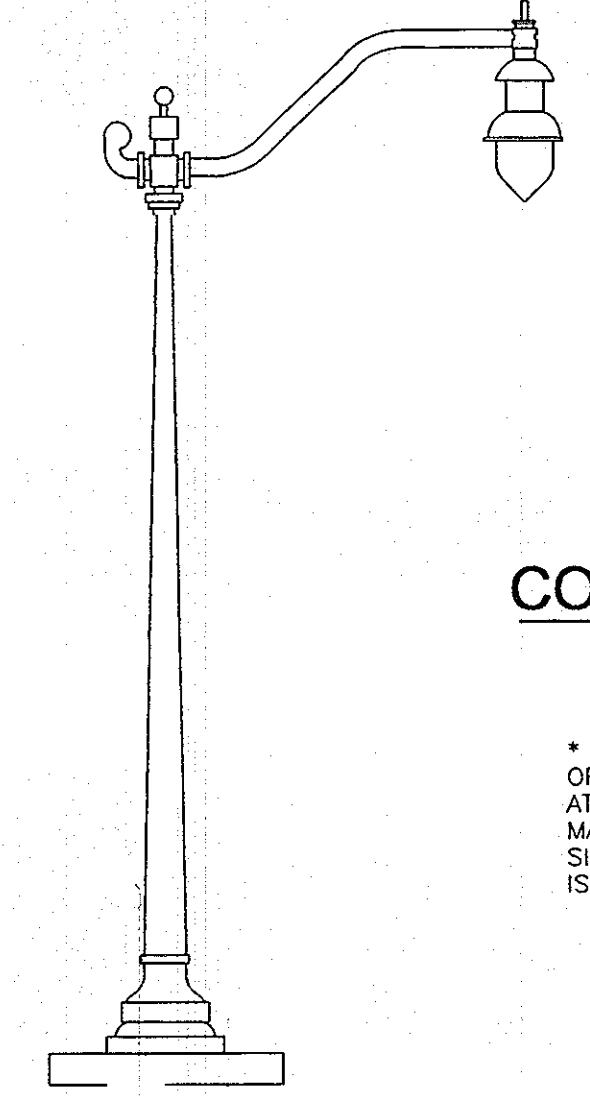
- STREET LIGHTS
- INTERNAL PARKING LOT LIGHTS



MD. TYPE 'A' CONCRETE COMBINATION CURB AND GUTTER

MD. NO. 620.02
NOT TO SCALE

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIAL OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.



LIGHT POLE DETAIL
NO SCALE

PER S-05-003 FOREST STAND TOTALS

STAND L-1	2.78 ACRES
STAND F-1	0.60 ACRES
TOTAL	3.38 ACRES PLUS OR MINUS

FOREST CONSERVATION NARRATIVE

THIS FOREST CONSERVATION NARRATIVE WAS PREPARED IN ACCORDANCE WITH THE HOWARD COUNTY FOREST MANUAL. THE SUBJECT PROPERTY HAS A GROSS TRACT OF 3.38 AC. THE ROAD RIGHT-OF-WAY OF 0.08 AC HAS BEEN SUBTRACTED OUT FOR A NET TRACT AREA OF 3.30 AC. EXISTING FOREST IS 0.60 ACRES AND THIS ENTIRE AREA SHALL BE CLEARED. THE REQUIRED FOREST REFORESTATION OF 1.02 ACRES SHALL BE FULFILLED BY A FEE-IN-LIEU (SEE WORKSHEET, THIS SHEET, FOR CALCULATED AMOUNT).



HOWARD COUNTY FOREST CONSERVATION WORKSHEET

NET TRACT AREA:

A. TOTAL TRACT AREA	3.38 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.00 AC
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.00 AC
D. NET TRACT AREA	3.38 AC

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED CAC.

ARA	MDR	IDA	HR	MPD	CIA
0	0	0	0	1	0

E. AFFOREST THRESHOLD 15% X D = 0.50 AC
F. CONSERVATION THRESHOLD 15% X D = 0.50 AC

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) =	0.60 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD =	0.11 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD =	0.11 AC

BREAK EVEN POINT:
(0.2 X I) + F = BREAK EVEN POINT

J. FOREST RETENTION WITH NO MITIGATION =	0.52 AC
K. CLEARING PERMITTED WITHOUT MITIGATION =	0.08 AC

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED =	0.60 AC
M. TOTAL AREA OF FOREST TO BE RETAINED =	0.00 AC

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD =	0.03 AC
O. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD =	0.99 AC
P. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD =	0.00 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q) =	1.02 AC
S. TOTAL AFFORESTATION REQUIRED =	0.00 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED =	1.02 AC

TOTAL FOREST CONSERVATION OBLIGATION - 1.02 AC.
OBLIGATION TO BE FULFILLED BY FEE-IN-LIEU FOR THE (1.02 AC.) 44,431.20 SF x 0.50 = \$22,215.60

FEE-IN-LIEU IN AMOUNT OF \$22,215.60 FOR 1.02 ACRES OF REFORESTATION SHALL BE PAID TO THE FOREST CONSERVATION FUND.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kent Stender 3/20/07
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 3/13/07
CHIEF, DEPARTMENT OF PLANNING AND ZONING DATE

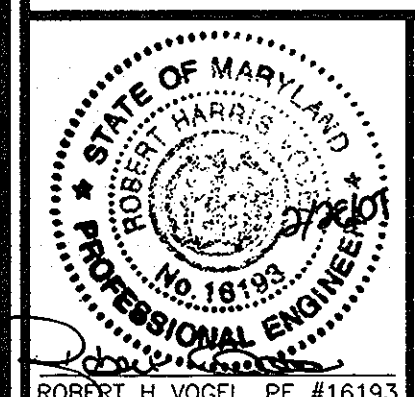
Robert H. Vogel 3/20/07
DIRECTOR DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____
HOWARD COUNTY HEALTH DEPARTMENT

SITE DEVELOPMENT PLAN
PATUXENT SQUARE APARTMENTS & RETAIL CENTER
5-STORY RETAIL AND APARTMENT BUILDING
PARCEL A AND NON-BUILDABLE PARCEL B
OF THE NORTH LAUREL SUBDIVISION
A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4
AND 9, 10 AND 19 THRU 22 & BLOCK 6
FOREST CONSERVATION WORKSHEET & ROUTE 1 DETAILS
BULK PARCEL A, A RESUBDIVISION OF
LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10
AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK

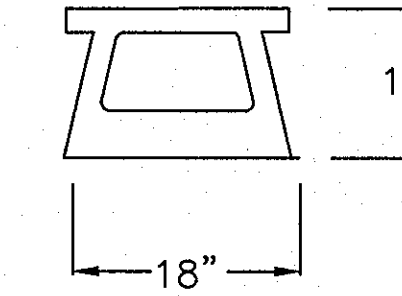
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



DESIGN BY: RJRHV
DRAWN BY: RJ
CHECKED BY: RHW
DATE: 07-24-2007
SCALE: AS SHOWN
W.O. NO.: 04-11-00

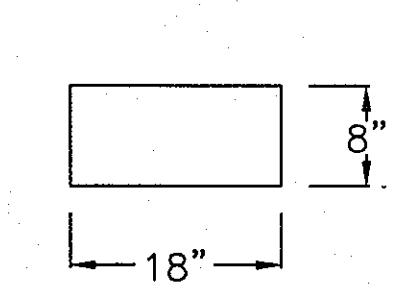
BLOCK DIMENSIONS

TOP VIEW

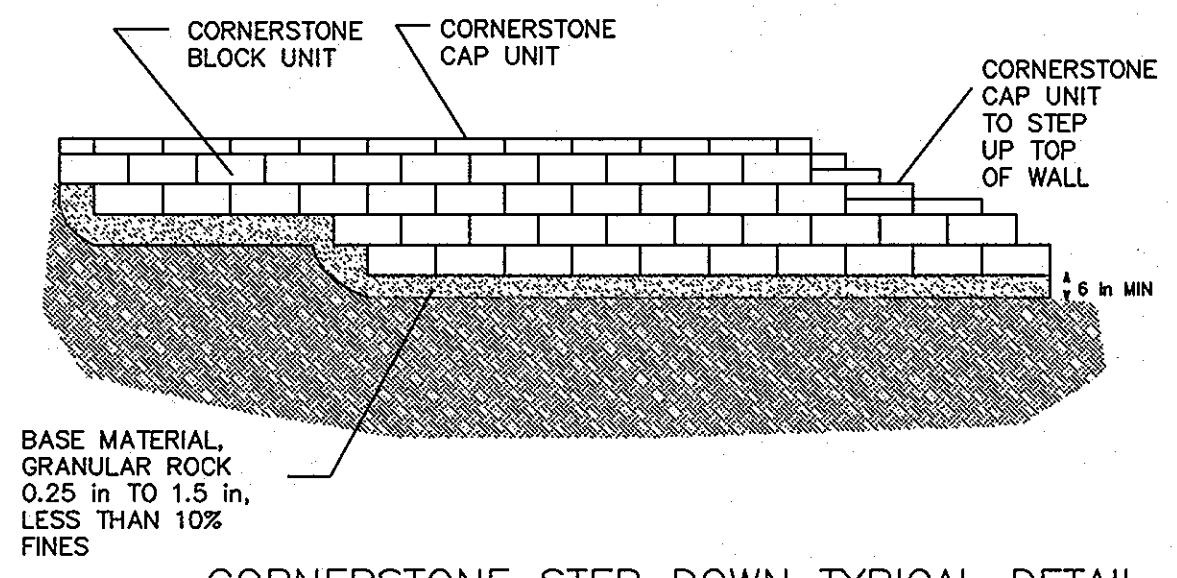
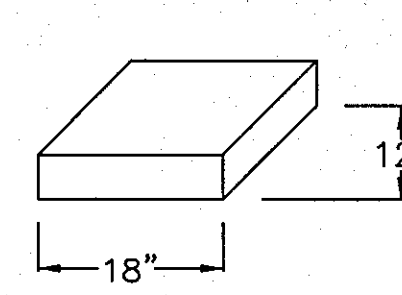


BLOCK DIMENSIONS

FRONT VIEW

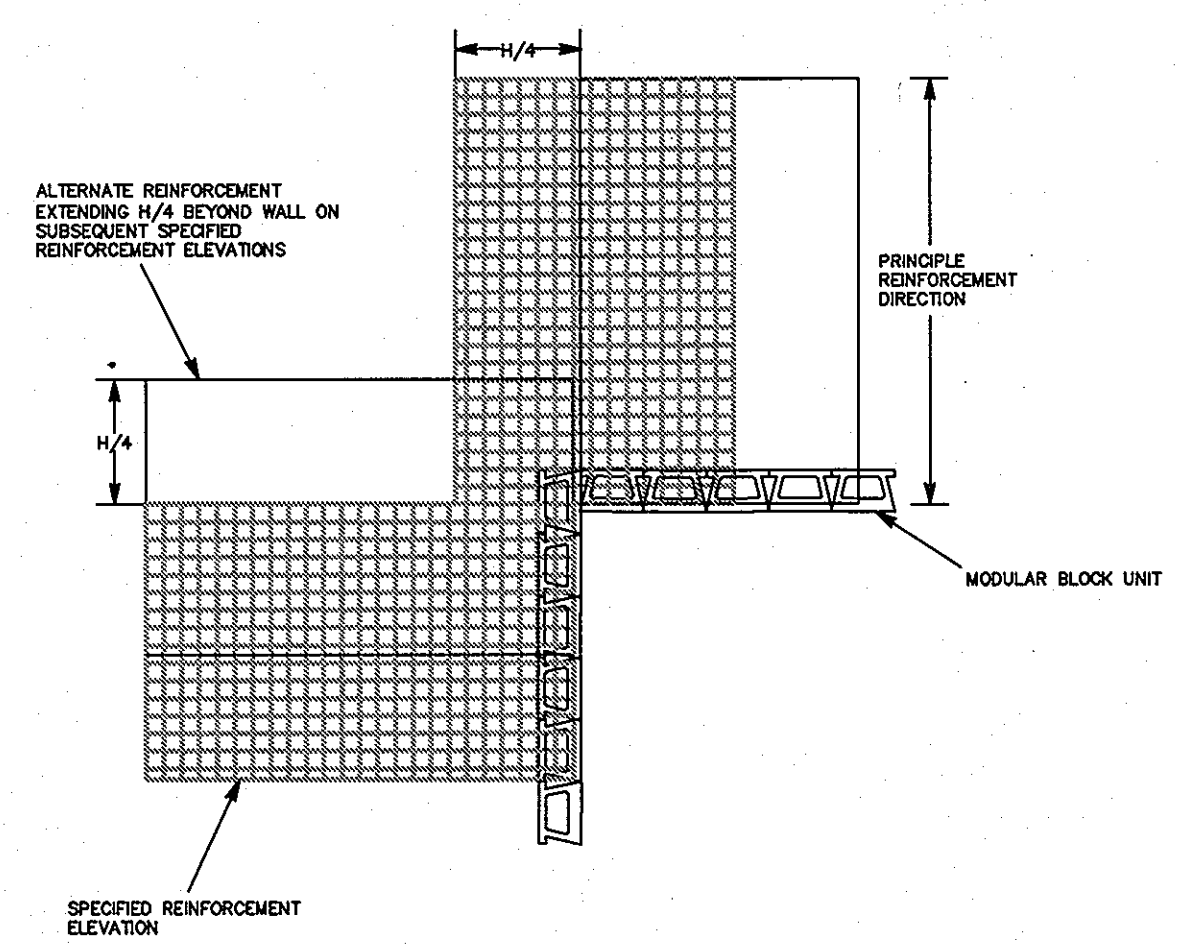


CAP DIMENSIONS

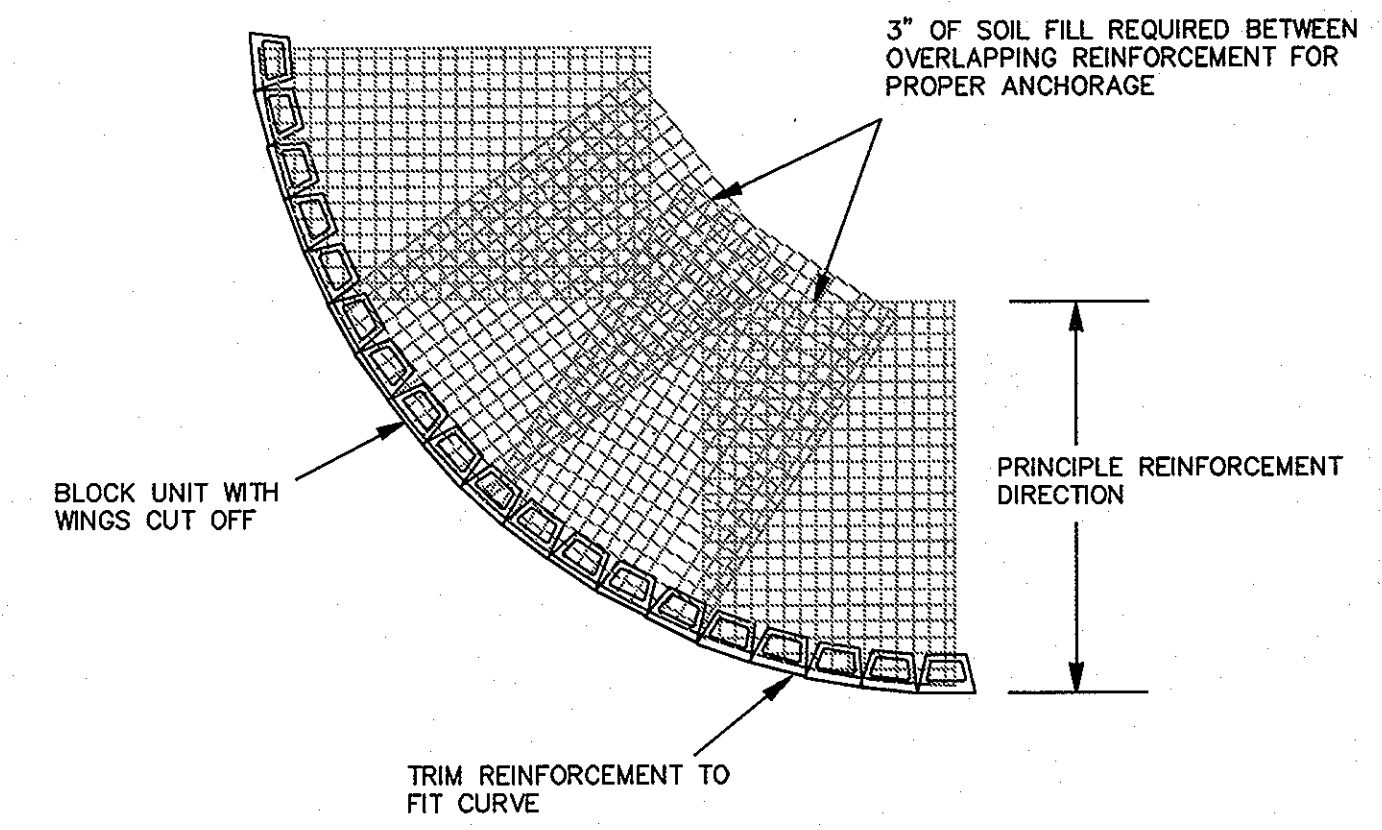


CORNERSTONE STEP DOWN TYPICAL DETAIL

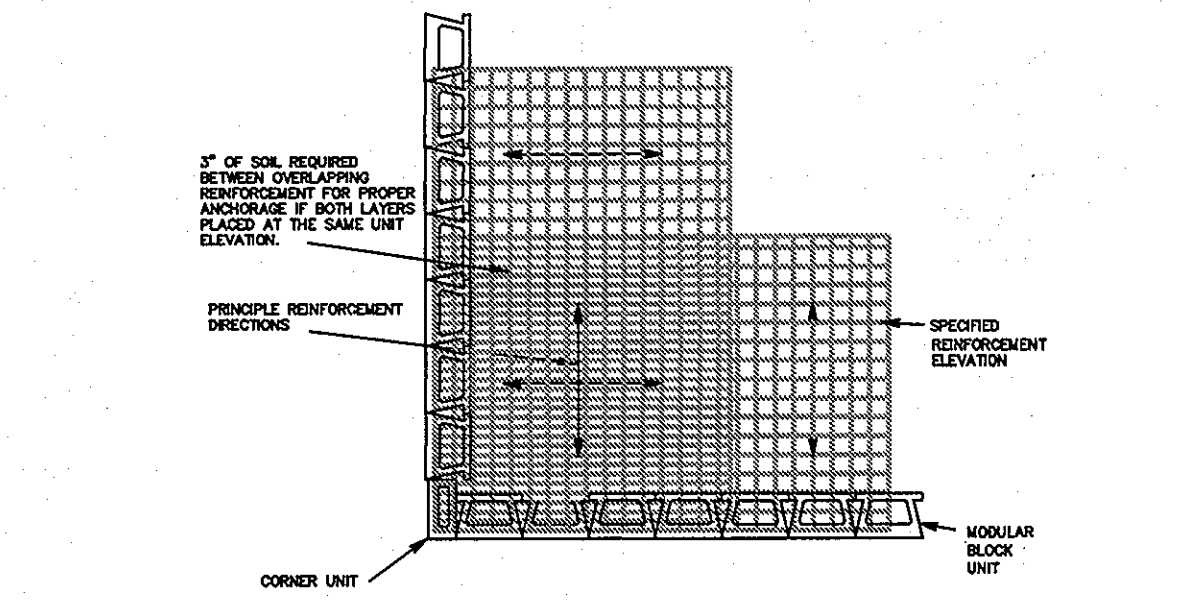
N. T. S.



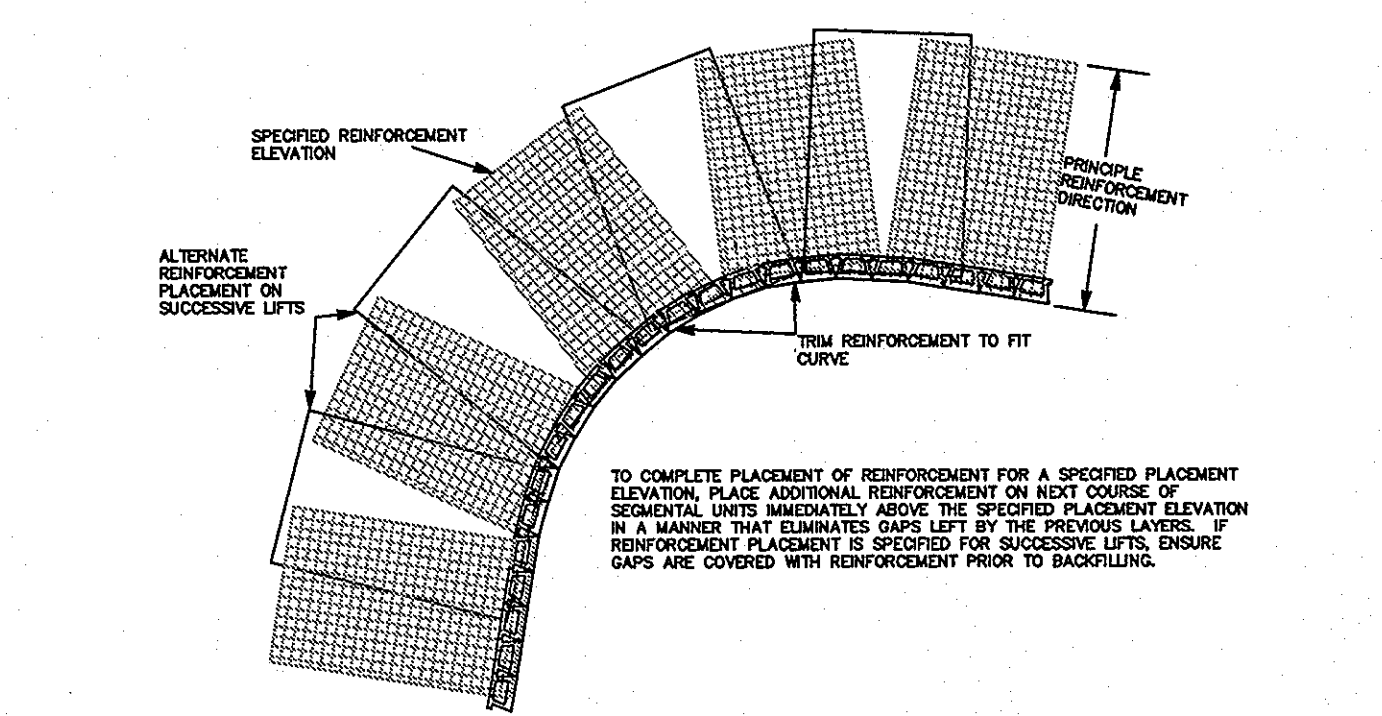
REINFORCEMENT PLACEMENT FOR INSIDE 90° CORNERS



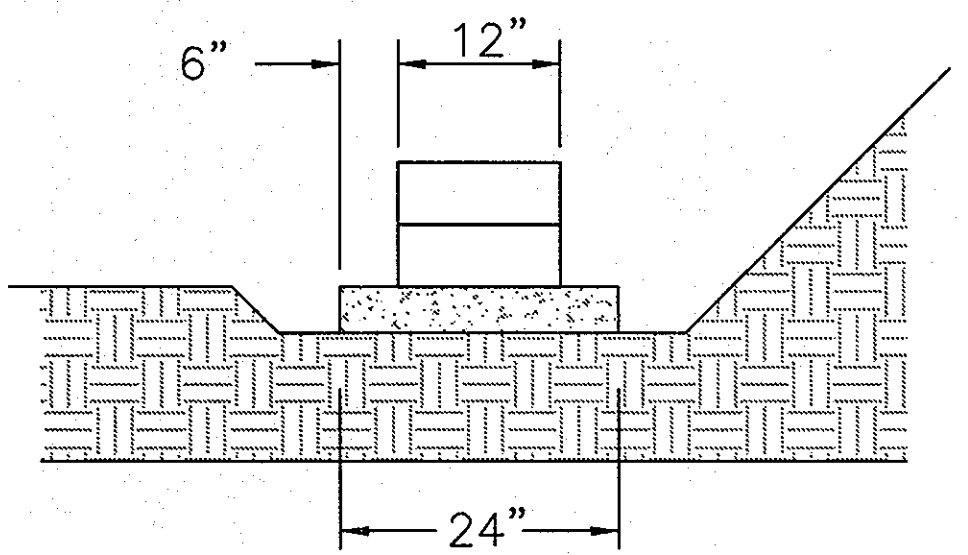
REINFORCEMENT PLACEMENT FOR OUTSIDE CURVES



REINFORCEMENT PLACEMENT FOR OUTSIDE 90° CORNERS



REINFORCEMENT PLACEMENT FOR INSIDE CURVES



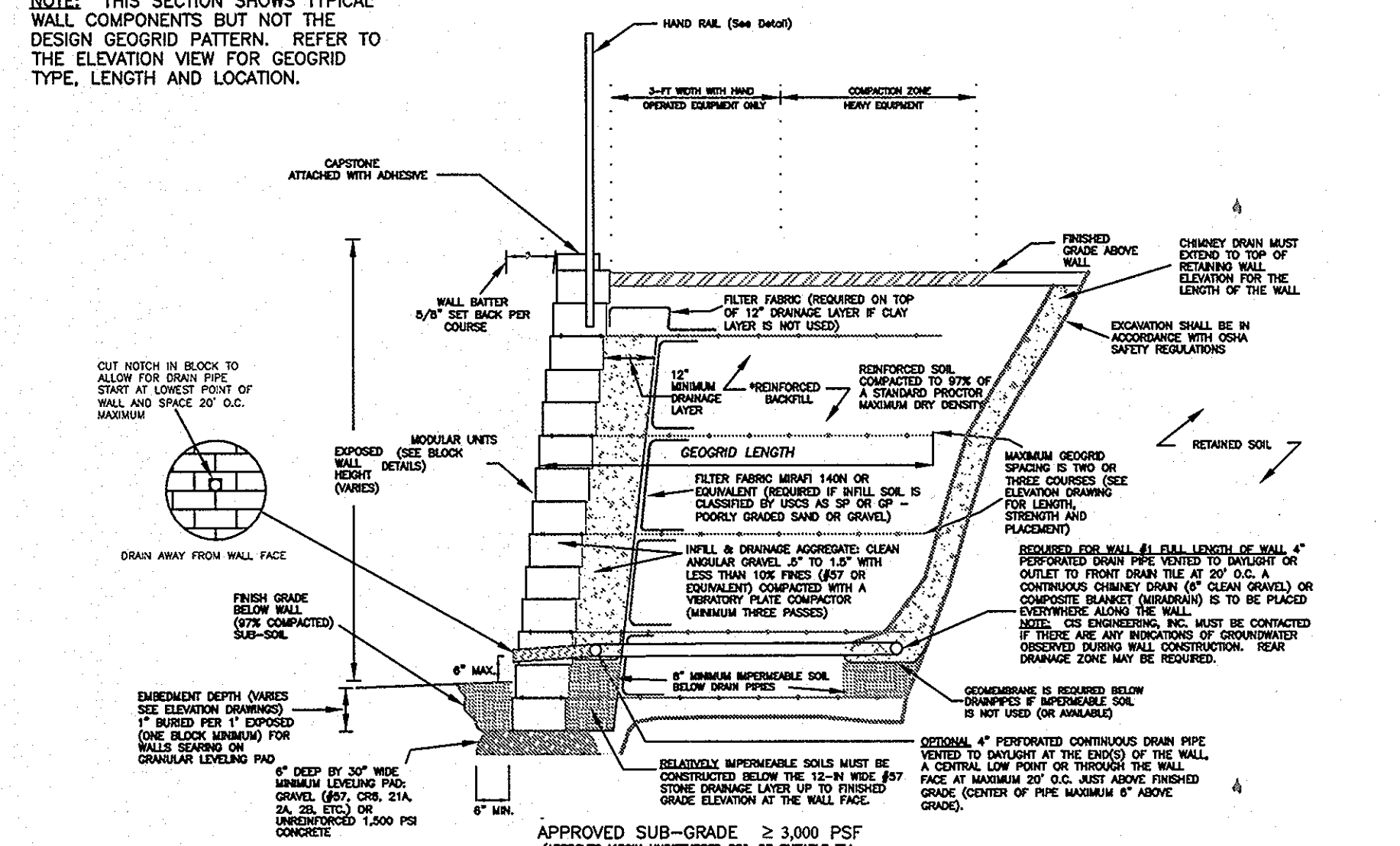
SECTION

LEVELING PAD DETAIL

TYPICAL GEOGRID WALL SECTION

N. T. S.

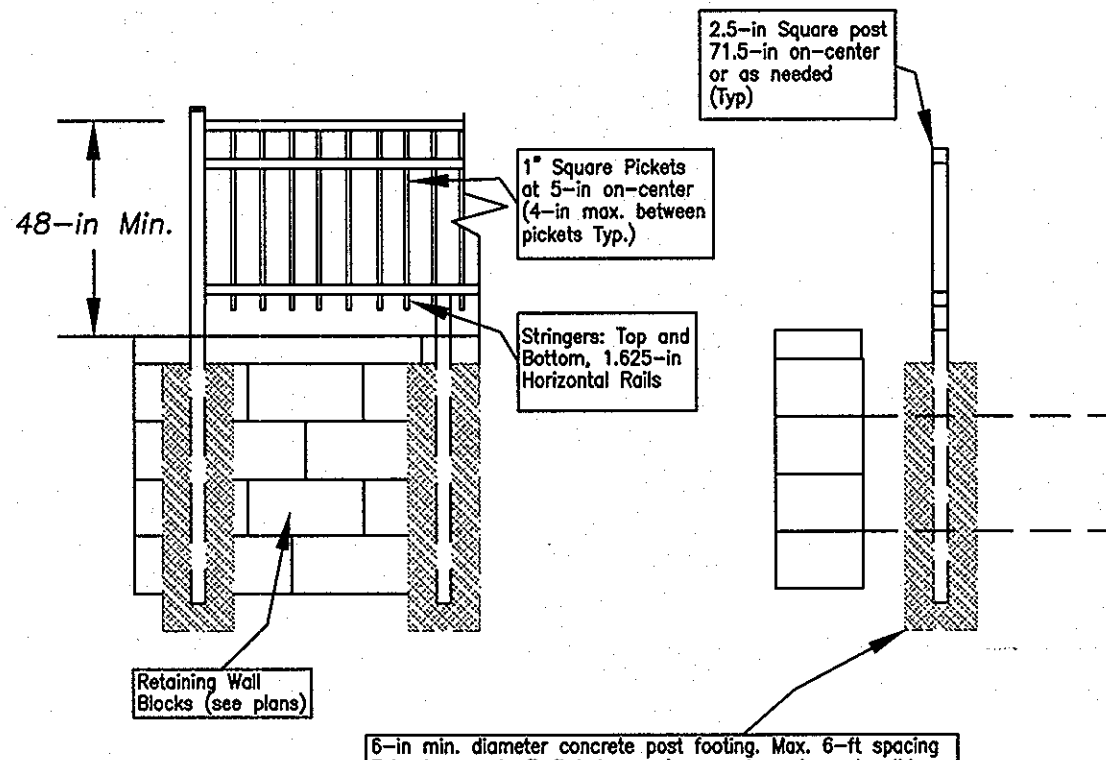
NOTE: THIS SECTION SHOWS TYPICAL WALL COMPONENTS BUT NOT THE DESIGN GEOGRID PATTERN. REFER TO THE ELEVATION VIEW FOR GEOGRID TYPE, LENGTH AND LOCATION.



TYPICAL FENCE DETAIL

(No Scale)

* "Vertical Orientation/Faces of Distinction Style #202"
Owners may substitute fence style and add fence of the retaining wall as needed per code.



6-in. min. diameter concrete post footing. Max. 6-ft spacing. Extend concrete 3-ft below surface grade and ground solid. SLEEVE-IT 1224R depth may be reduced to 2-ft (typ).

Note: Suitable guardrail posts may also be driven directly into the geogrid reinforced backfill.

PART 1: GENERAL

A. These plans refer only to the installation of the referenced Cornerstone 100 wall block. No other site grading or other information is intended by these plans. All site grading and wall location information was provided by others. The wall height may be reduced in the field as needed to meet site grades.

PART 2: CORNERSTONE PRODUCTS

- A. Modular concrete materials shall consist of Cornerstone 100 units in accordance with the requirements of ASTM C1372, ASTM C90, and ASTM C140.
- B. Base leveling pad shall consist of a compacted crushed stone base as shown on the drawings.
- C. Unit drainage fill shall consist of clean #57 stone.
- D. The retaining wall backfill selectively may be site excavated soil when approved by the geotechnical engineer or otherwise specified herein. Suitable wall backfill must meet the following:
USCS ML, SM or more granular
Liquid Limit (LL) ≤ 40; Plasticity Index (PI) ≤ 12
Standard Proctor maximum dry density ≥ 108 pcf
Internal Friction Angle φ ≥ 30°
Moisture content ≤ 3% of the optimum moisture content for compaction
- E. The retaining wall backfill also may consist of approved topsoil for planting provided it meets the friction angle requirements above. The geotechnical engineer must approve the backfill soils.
- F. The geogrid shall consist of Miraflex 3XTc geogrid or stronger as noted on Elevation View.

PART 3 EXECUTION

- A. All work must be performed in accordance with these plans, project documents, Cornerstone construction recommendations all applicable building and safety codes.
- B. At the end of each work day, the Contractor shall protect the retaining wall backfill zone from runoff from adjacent site areas.
- 3.01 Excavation**
A. Contractor shall excavate to the lines and grades shown on the construction drawings or as recommended by the geotechnical engineer.
B. In areas with soil subgrade the geotechnical engineer shall inspect the excavation and verify the subgrade for at least 3,000-psi soil bearing capacity prior to placement of leveling material or fill soils. The bottom of the wall shall be supported upon a granular leveling pad on approved natural ground or controlled structural fill. Unsuitable foundation soils must be overexcavated and replaced with approved compacted materials.
- 3.02 Base Leveling Pad**
A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a min. thickness of 6-in and extend laterally a min of 6-in in front and behind the modular wall unit.
B. Soil leveling pad shall be compacted to at least of 97% Standard Proctor density per ASTM D-698.
C. Geotechnical engineer must verify drilled pier and grade beam construction to support retaining wall.
- 3.03 Modular Unit Installation**
A. Retaining wall block and connection pins shall be installed in accordance with the manufacturer's construction manual.

3.04 Cap Installation

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

3.05 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 or as directed by CIS Engineering, Inc.
- 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 backfill placement on the geogrid.
- D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level.

3.06 Reinforced Backfill Placement

- A. Backfill shall be placed in 8-in max. loose lifts, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.
- B. Reinforced backfill shall be compacted to at least 97% of the maximum density as determined by ASTM D898. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be ≥ 3% of the optimum moisture content for compaction.
- C. Open-graded stone, gravel, reclaimed concrete, or planting soil backfill shall be compacted with the grading equipment or approved vibratory compaction equipment.
- D. Only lightweight hand-operated equipment shall be allowed within 3-ft from the tail of the modular concrete unit.
- E. It is recommended that Sono-tubes or SLEEVE-IT 1224R be installed during wall construction to allow for force installation (as needed).

3.07 As-built Construction Tolerances

- A. Vertical alignment: ± 1.5" over any 10' distance.
- B. Wall Batter: within 2 degrees of design batter.
- C. Horizontal alignment: ± 1.5" over any 10' distance.
- D. Max horizontal gap between blocks ≤ 1/2 inch.

Retaining Wall Design Information

Retained Soil Unit Weight (γ):	125 pcf	Foundation Bearing Capacity:	3,000 pcf
Wall Backfill Unit Weight (γ):	125 pcf	Internal Angle of Soil Backfill Friction (φ):	30°
Uniform Vertical Live Load:	100 pcf	Soil Cohesion (c):	0 pcf
Uniform Vertical Dead Load:	0 pcf		

Seismic F.F.
A=0.272 K_v=0.136g
- All F.S. reduced to 75% of Static Loading F.S. for seismic conditions with minimum F.S. (seismic) = 1.1

F.S. Sliding (min.):	1.5	F.S. Shear (min.):	1.5
F.S. Overturning (min.):	1.5	F.S. Bending (min.):	1.5
F.S. Bearing (min.):	2.0		
Global Stability		Internal Stability	
F.S. Circular Failure (min.):	1.3	F.S. Uncertainty (min.):	1.5
		F.S. Pullout (min.):	1.5

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Andy H... 11/1/07
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

... 11/1/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

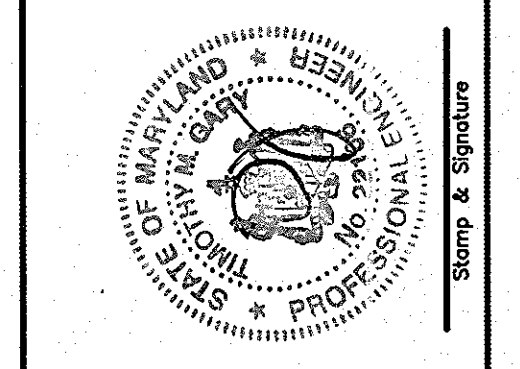
... 11/1/07
DIRECTOR DATE

OWNER
HOWARD COUNTY DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
6751 COLUMBIA GATEWAY DRIVE
COLUMBIA, MARYLAND 21046-2164

DEVELOPER
ORCHARD DEVELOPMENT
5032 DORSEY HALL DRIVE
ELICOTT CITY, MARYLAND 21042
(410) 964-2334
(410) 964-2315 (FAX)

CIS ENGINEERING, INC.
A division of CIS, Inc.
31 Sycolin Road, S.E.
Leesburg, VA 20175
Phone: (703) 669-9052
Fax: (703) 534-2107

REVISION #	DATE	BY	CHKD	REMARKS
1	05/10/07	JWP	TMG	Revised for On-site water conditions and soil friction
2	06/25/07	JWP	TMG	Revised Site Plan Dated 01/04/06
3	08/23/07	TMG	TMG	Add Existing Sewer (by others) and easement (by others) per Howard County
4	10/03/07	JWP	TMG	Revise Title Block and Notes for Howard County, MD REVISE REMAINING WALL SECTION TO INTERLOCKING BLOCK WALL



PATUXENT SQUARE APARTMENTS & RETAIL CENTER
5-STORY RETAIL AND APARTMENT BUILDING, PARCEL A AND NON-BUILDABLE PARCEL B OF THE NORTHERN LAUREL SUBDIVISION, A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4 AND 9, 10 AND 19 THRU 22 & BLOCK 6

BULK PARCEL A, A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10 AND 19 THRU 22, BLOCK 6 NORTH LAUREL PARK

TAX MAP 50 GRID 4
6TH ELECTION DISTRICT

CORNERSTONE LANDSCAPE RETAINING WALL
DETAILS & CONSTRUCTION SPECS. AND NOTES

SHEET 12 OF 12

TMG
02/20/2007
PLOT DATE: 022007
SDP-06-50