

**GENERAL NOTES**

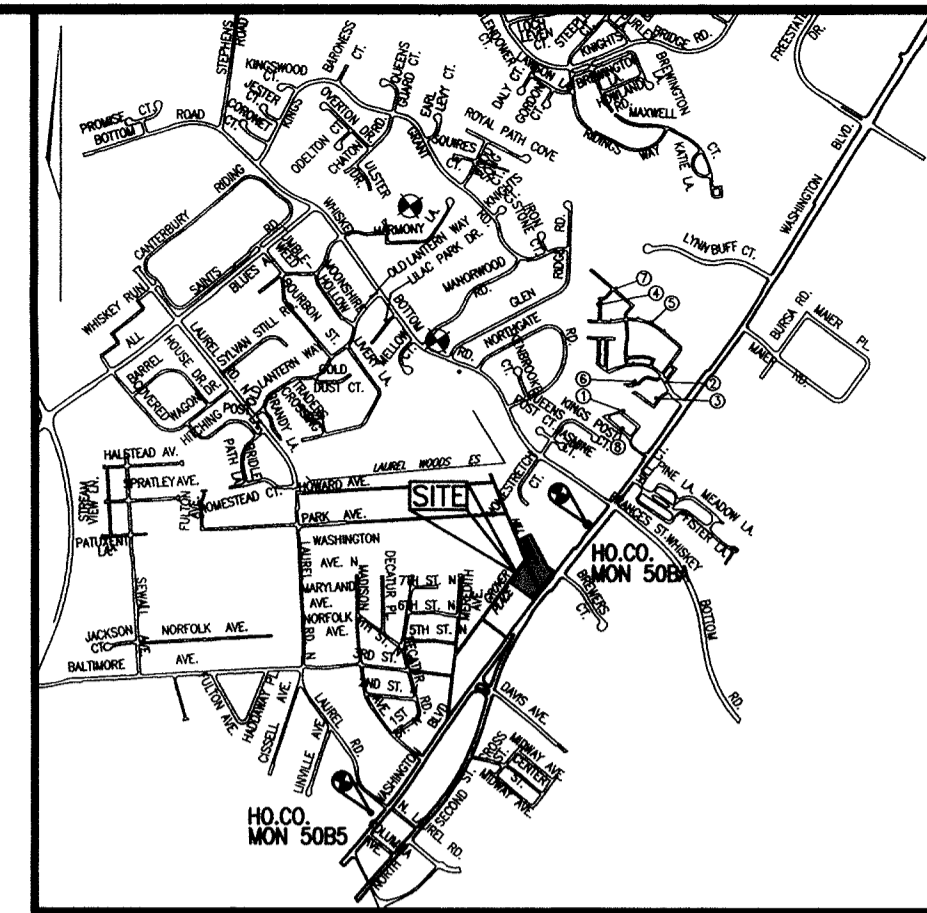
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:  
 MISC. UTILITY  
 MESS. TELEPHONE 1-800-257-7777  
 HOWARD COUNTY BUREAU OF UTILITIES: 725-9976  
 AT&T CABLE LOCATION DIVISION: 313-2366  
 B.G.&E. CO. CONTRACTOR SERVICES: 393-3553  
 B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 850-4620  
 STATE HIGHWAY ADMINISTRATION: 787-4620  
 531-5533
- PROJECT BACKGROUND:  
 LOCATION: TAX MAP 50, PARCEL 379, 408, 423  
 ZONING: CA  
 DEED REFERENCE: 9901/220  
 DPZ REFERENCES: WP-96-112, WP-98-30, F-99-109, F-98-10, BA 366-D, WP-05-45, S-05-03, WP-05-109 AND SDP-06-50 FILES.
- ANY DAMAGE TO PUBLIC RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. 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 TO THE COUNTY'S RIGHT OF WAY INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOILS TEST.
- ALL ASPECTS OF THE PROJECT WITHIN THE HOWARD COUNTY RIGHT OF WAY ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (VOL. IV).
- DEED REFERENCE: 479/676, 832/562, 815/344
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED AUGUST 2005.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL, DATED AUGUST 2004.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC. PROPOSED SEWER FOR THE SITE WILL BE CONNECTED TO EXISTING PUBLIC SEWER CONTRACT #29-S. AND PROPOSED PUBLIC WATER WILL BE CONNECTED TO EXISTING PUBLIC CONT.# 1-W.
- STORMWATER MANAGEMENT REQUIREMENTS FOR THIS PROJECT IS PROVIDED BY SAND FILTERS (Wq), GRAVEL UNDER SAND FILTER (Rw) AND STORAGE PIPE (Cp) PRIVATELY OWNED AND MAINTAINED AND PROVIDED UNDER-06-50.
- WETLANDS DELINEATION WAS PERFORMED BY EXPLORATION RESEARCH, INC., DATED JULY, 2004.
- NO FLOODPLAIN IS LOCATED ONSITE.
- NO STEEP SLOPES ARE LOCATED ONSITE.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS AND STREAMS OR REQUIRED BUFFERS, EXCEPT AS PERMITTED UNDER APPROVED WP-05-45.
- FOREST STAND DELINEATION PLAN PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MAY, 2003. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL ARE PROVIDED UNDER SDP-06-50.
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED APRIL 7, 2004. APPROVED BY STATE HIGHWAY ADMINISTRATION AND DEVELOPMENT ENGINEERING DIVISION OF HOWARD COUNTY WITH S-05-03.
- ALL EXTERIOR LIGHT FIXTURE SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL RESIDENTIAL PROPERTIES AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS. SEE SHEET 6 OF 9 OF THIS DRAWING SET.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETARY LOCATIONS ON SITE.
- STREET TREES ARE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(a)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$6,600 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE REQUIRED 22 STREET TREES UNDER THIS PLAN
- A NOISE STUDY IS NOT REQUIRED.
- THIS SUBDIVISION IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS EFFECTIVE 10/2/03. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/ GRADING PERMIT APPLICATIONS.
- A WETLAND PERMIT IS REQUIRED FOR THE DISTURBANCE SHOWN ON THIS PLAN. MDE TRACKING # 200561163.

# FINAL ROAD CONSTRUCTION PLAN

## PATUXENT SQUARE APARTMENTS AND RETAIL CENTER

### PARCEL A AND NON BUILD ABLE PARCEL B

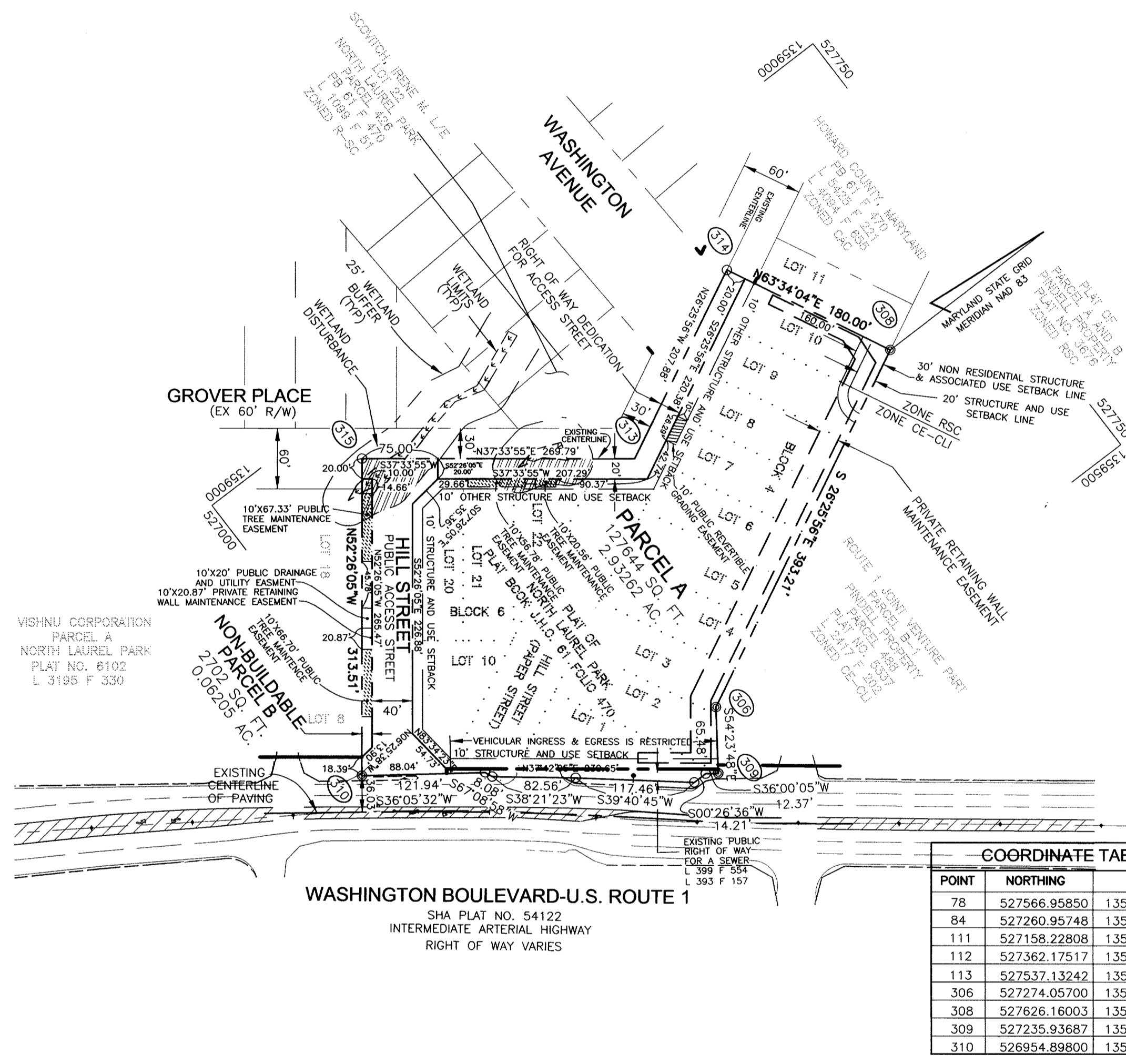
#### HOWARD COUNTY, MARYLAND



**VICINITY MAP**  
SCALE 1"=2000'

**BENCHMARK INFORMATION**  
THE BEARINGS SHOWN ON THIS PLAN ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED IN THE MARYLAND COORDINATE SYSTEM (MAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS:  
508A (N) 527,561.678 (E) 1,359,772.604  
5085 (N) 524,999.375 (E) 1,357,925.748

- WP-05-45: A WAIVER PETITION HAS BEEN SUBMITTED AND APPROVED, DATED NOVEMBER 30, 2004, TO WAIVE SECTION 16.116 (c) (1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH PROHIBITS THE GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, PAVING AND NEW STRUCTURES WITHIN 25 FEET OF A WETLAND IN ANY ZONING DISTRICT AND WITHIN 50' OR 75' OF A STREAM IN RESIDENTIAL AND NON RESIDENTIAL ZONING DISTRICTS. THIS PLAN PROPOSES THE FILLING OF WETLANDS, A STREAM AND THE DISTURBANCE OF THE 25' WETLAND BUFFER AND 50' STREAM BUFFER FOR THE CONSTRUCTION OF HILL STREET, GROVER PLACE, PARKING LOT PAVING AND A PORTION OF THE NEW BUILDING.
- THE SUBJECT PROPERTY IS ZONED "CAC" CORRIDOR ACTIVITY CENTER PER THE 2/2/04 COMPREHENSIVE ZONING PLAN.
- ALL EXISTING STRUCTURES ARE TO BE REMOVED.
- FINANCIAL SURETY FOR THE REQUIRED 70 SHADE TREES, 2 EVERGREEN TREES, 205 SHRUBS AND 613 LINEAR FEET OF WALL HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$ 39,710.00. PER SDP-06-50.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL WITH A FOREST CONSERVATION OBLIGATION OF 1.02 ACRES PROVIDED BY A FEE-IN-LIEU OF \$22,216.00 WAS PAID UNDER SDP-06-50.
- WP-05-109: A WAIVER PETITION HAS BEEN SUBMITTED AND APPROVED, DATED APRIL 12, 2006, TO WAIVE SECTION 16.146 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WHICH REQUIRES THE SUBMISSION OF A PRELIMINARY PLAN FOR MULTI-FAMILY RESIDENTIAL AND NON-RESIDENTIAL MIXED-USE DEVELOPMENT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993). "A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2 1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3" LONG.. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2 1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) -3" LONG.. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- FOR ROUTE 1 CONSTRUCTION DETAILS REFERENCE PLANS AND SPECIFICATIONS APPROVED IN CONSTRUCTION WITH MSHA ACCESS PERMIT AND PERMIT CONDITIONS.
- THE FINAL ROAD CONSTRUCTION PLANS WILL BE REVISED BY THE REDLINE REVISION PROCESS WHEN THE BALANCE OF THE HILL STREET RIGHT-OF-WAY IS ACQUIRED IN ORDER TO EXTEND HILL STREET CONSTRUCTION.



- BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAIN.**
- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN THE WETLANDS OR BUFFER.
  - PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLAND.
  - DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE.
  - PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE NONTIDAL WETLANDS OR BUFFER.
  - REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS IN EXCESS OF NONTIDAL WETLANDS LOST UNDER THE ORIGINAL STRUCTURE OR FILL.
  - RECTIFY ANY NONTIDAL WETLANDS TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
  - ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE OF THE FOLLOWING RECOMMENDED SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNOLA SP.), AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE DIVISION. KENTUCKY 33 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER AREAS.
  - SEEDS AND MULCH TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
  - AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NONTIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
  - TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM. USE 1 WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
  - STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
  - CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

**SITE ANALYSIS:**

**DENSITY TABULATION**

NUMBER OF PROPOSED PARCELS:	2
AREA OF LOTS AND/OR PARCELS	2.97064 ACRES
AREA OF ROADWAYS INCLUDING WIDENING STRIPS	0.57670 ACRES
AREA OF PROPOSED PARCEL TO BE RECORDED	3.54734 ACRES
100-YEAR FLOODPLAIN	0.00 AC.
STEEP SLOPES OUTSIDE FLOODPLAIN	0.00 AC.
NET AREA OF PARCEL	
APPROXIMATE LIMIT OF DISTURBANCE:	0.6 AC.

**GENERAL SITE DATA**

PRESENT ZONING:	CAC
PROPOSED USE OF SITE:	RETAIL AND APARTMENT UNITS
PROPOSED WATER SYSTEM:	PUBLIC
PROPOSED SEWER SYSTEM:	PRIVATE

**SHEET INDEX**

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 9
EXISTING CONDITION PLAN	2 OF 9
PUBLIC ROAD RIGHT-OF-WAY - HILL STREET & STREET TREE PLANTINGS & DETAILS	3 OF 9
GRADING AND SEDIMENT & EROSION CONTROL PLAN	4 OF 9
STORM DRAIN DRAINAGE AREA MAP	5 OF 9
STORM DRAIN PROFILE AND DETAILS	6 OF 9
ROAD IMPROVEMENTS AND CROSS & DETAILS	7 OF 9
PUBLIC ROAD RIGHT-OF-WAY - WASHINGTON BOULEVARD	8 OF 9
TRAFFIC SIGNS AND DETAILS - PUBLIC RIGHT-OF-WAY	8 OF 9
CONSTRUCTION DETAILS - WASHINGTON BOULEVARD	9 OF 9

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William F. Marshall* 11-29-06  
 CHIEF, BUREAU OF HIGHWAYS AS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Colleen* 12/5/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT AS DATE

*Michael* 12/1/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION AS DATE

**OWNER**  
 HOWARD COUNTY HOUSING COMMISSION  
 C/O LEONARD VAUGHAN  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND  
 21046-2164

**DEVELOPER**  
 DEVELOPER  
 ORCHARD DEVELOPMENT  
 C/O SCOTT ARMIGER  
 5032 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND  
 21042

FINAL ROAD CONSTRUCTION PLAN  
 COVER SHEET  
**PATUXENT SQUARE APARTMENTS AND RETAIL CENTER**  
 PARCEL A AND NON-BUILDABLE PARCEL B  
 OF THE NORTH LAUREL SUBDIVISION

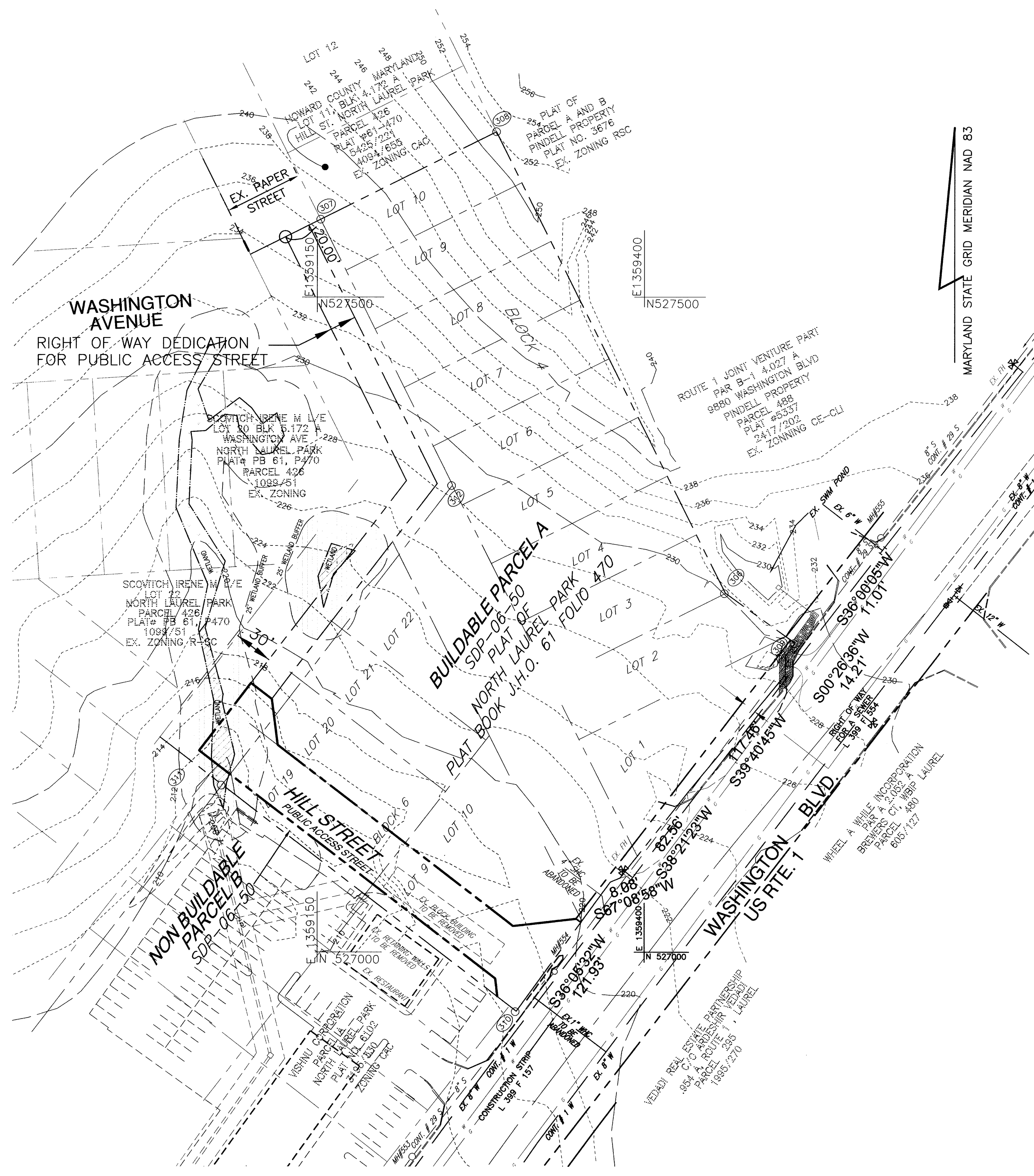
A RESUBDIVISION OF LOTS 1 THRU 10, BLOCK 4 AND 9,10 AND 19 THRU 22 & BLOCK 6

TAX MAP 50 GRID 4, 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 REF-S-05-03

**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: RJMY  
 CHECKED BY: RHHV  
 DATE: 10-31-2006  
 SCALE: AS SHOWN  
 W.O. NO.: 04-11.00

1 SHEET OF 9



COORDINATE LIST		
POINT	NORTH	EAST
306	527274.05700	1359461.90600
308	527626.16003	1359286.87408
309	527235.93687	1359515.14501
310	526954.89800	1359302.25099
313	527359.88755	1359218.22573
314	527546.03518	1359125.69093
315	527146.03479	1359053.74334

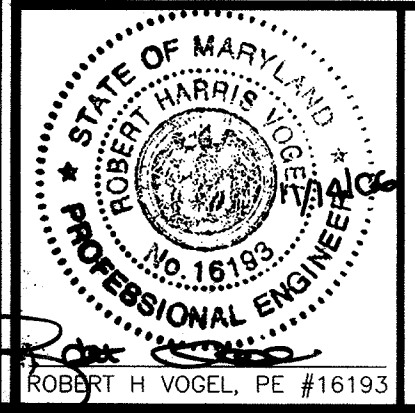
**EXISTING CONDITION PLAN**  
SCALE: 1" = 50'

**OWNER**  
HOWARD COUNTY HOUSING COMMISSION  
C/O LEONARD VAUGHAN  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND  
21046-2164

**DEVELOPER**  
DEVELOPER  
ORCHARD DEVELOPMENT  
C/O SCOTT ARMIGER  
5032 DORSEY HALL DRIVE  
ELLICOTT CITY, MARYLAND  
21042

FINAL ROAD CONSTRUCTION PLAN  
EXISTING CONDITION PLAN  
**PATUXENT SQUARE APARTMENTS AND RETAIL CENTER**  
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  
TAX MAP 50 GRID 4, BULK PARCEL A, A RESUBDIVISION OF  
LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10  
REF-S-05-03 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK

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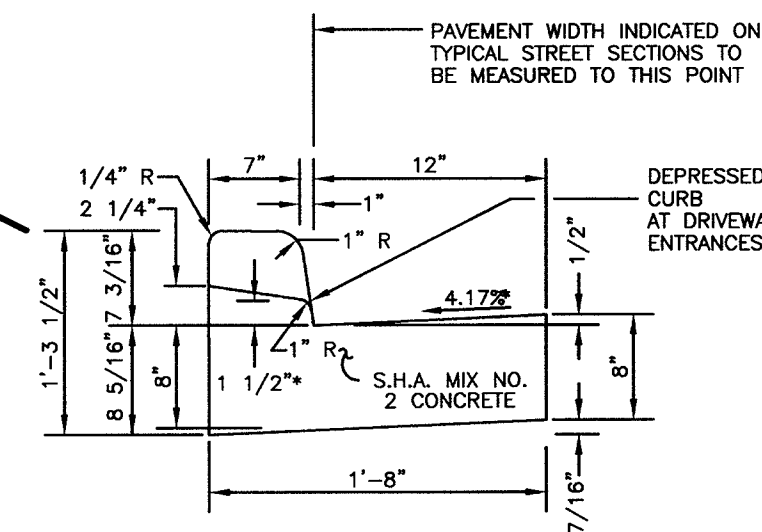
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APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William R. DeWald* 11-29-06  
CHIEF, BUREAU OF HIGHWAYS  
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Scott Armiger* 12/5/06  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*William R. DeWald* 12/1/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

PROP. PUBLIC UTILITY EASEMENT	(NO HATCH)
PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT	(HATCH)
WETLAND DISTURBANCE	(HATCH)
EXISTING UTILITY EASEMENT	(HATCH)
WETLANDS BUFFER	(HATCH)
PROP. STREET LIGHT	(SYMBOL)
PROP. STREET SIGNS	(SYMBOL)

**LEGEND**  
 PROPOSED STREET TREE  
 AREA OF 15 TO 24.9 PERCENT SLOPES  
 10' PUBLIC REVERSIBLE GRADING EASEMENT

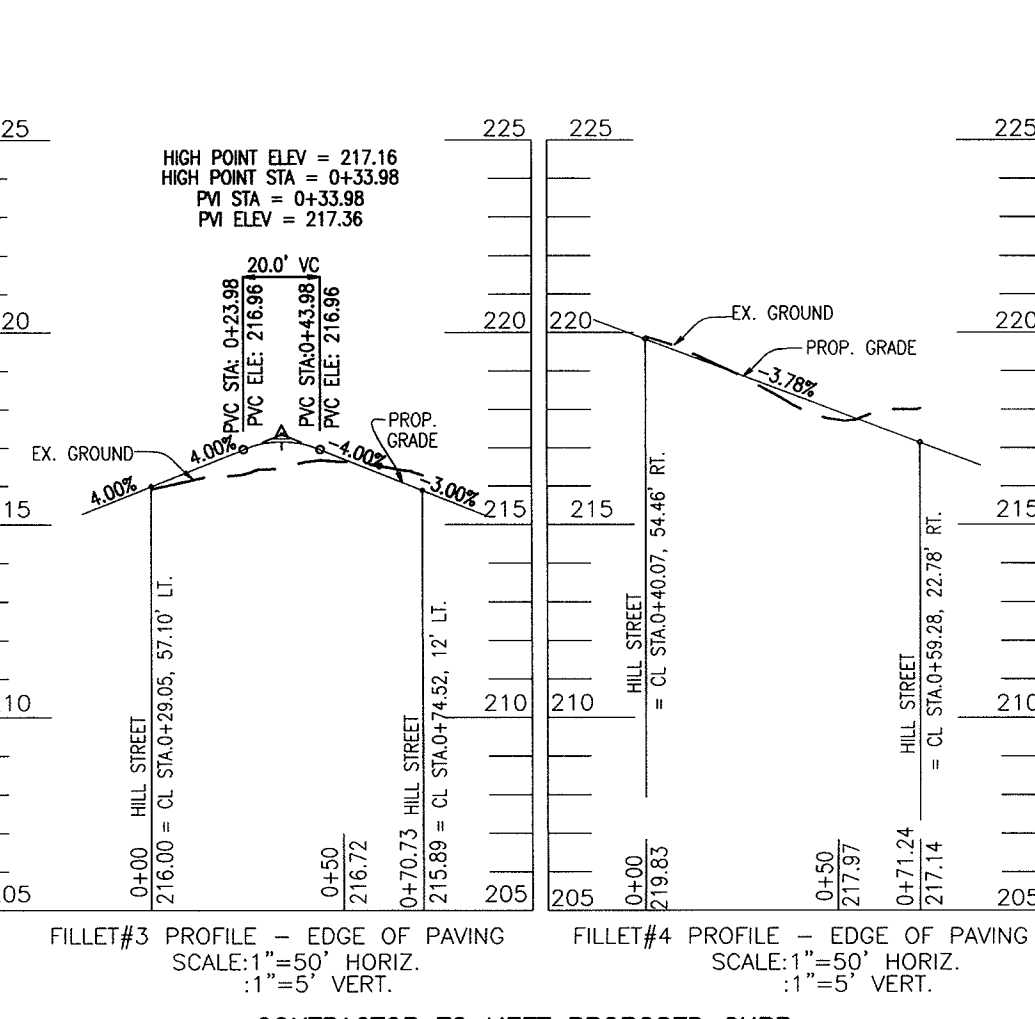
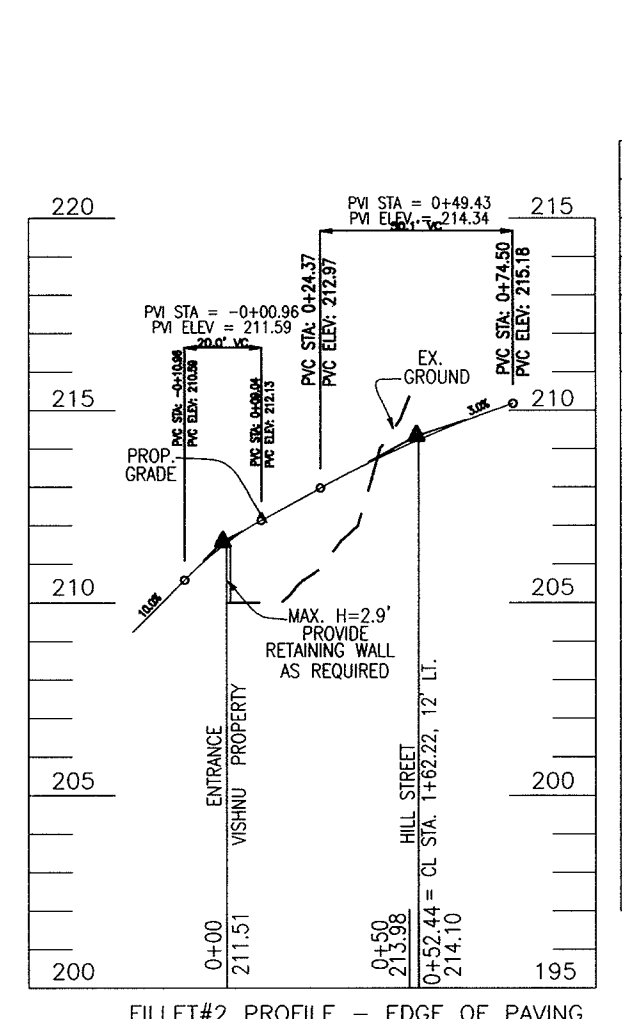
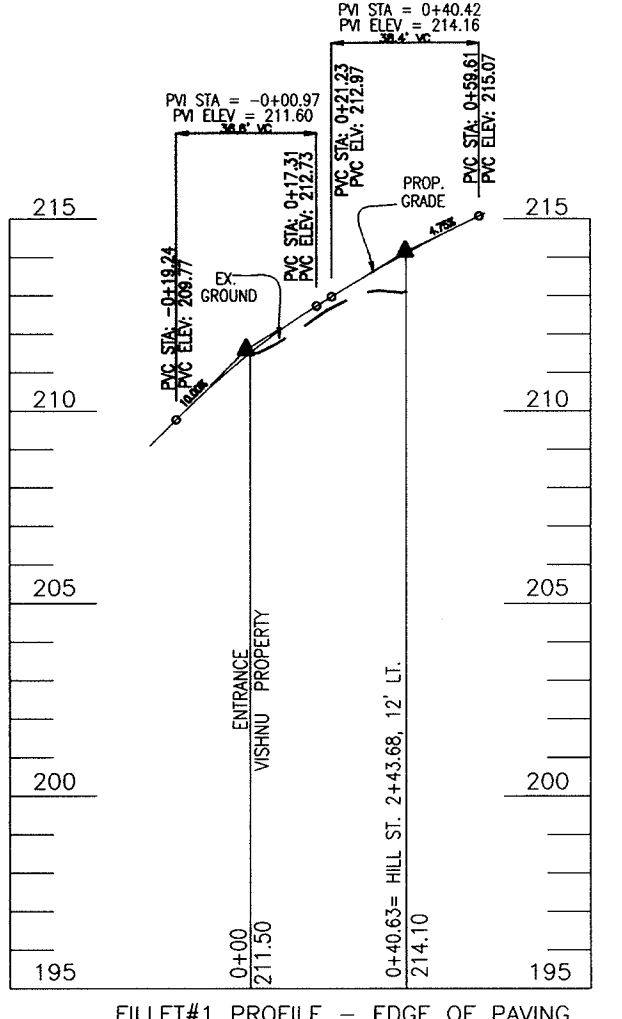
CONSTRUCTION CAN NOT OCCUR WITHIN HILL STREET BEYOND STA. 3+50 UNTIL THE PAPER STREET R/W IS OBTAINED BY THE COUNTY THROUGH LEGISLATION



NOTE: DEPRESSED CURB IN HANDICAP ACCESSIBLE AREAS SHALL HAVE A 0.0417(1/2)\"/>

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

FOR ROUTE 1 CONSTRUCTION REFERENCE SHA ACCESS PERMIT, CONSTRUCTION PLAN



CONTRACTOR TO MEET PROPOSED CURB AND PROPOSED PAVING INLINE ON GRADE WITH EXISTING ROUTE 1 CURB & PAVING

**GENERAL NOTES**

- FINANCIAL SURETY FOR THE REQUIRED STREET TREES SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$6,600 FOR 22 STREET TREES.
- AT THE TIME OF PLANT INSTALLATION, ALL TREES LISTED AND APPROVED ON THIS PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS 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 SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.

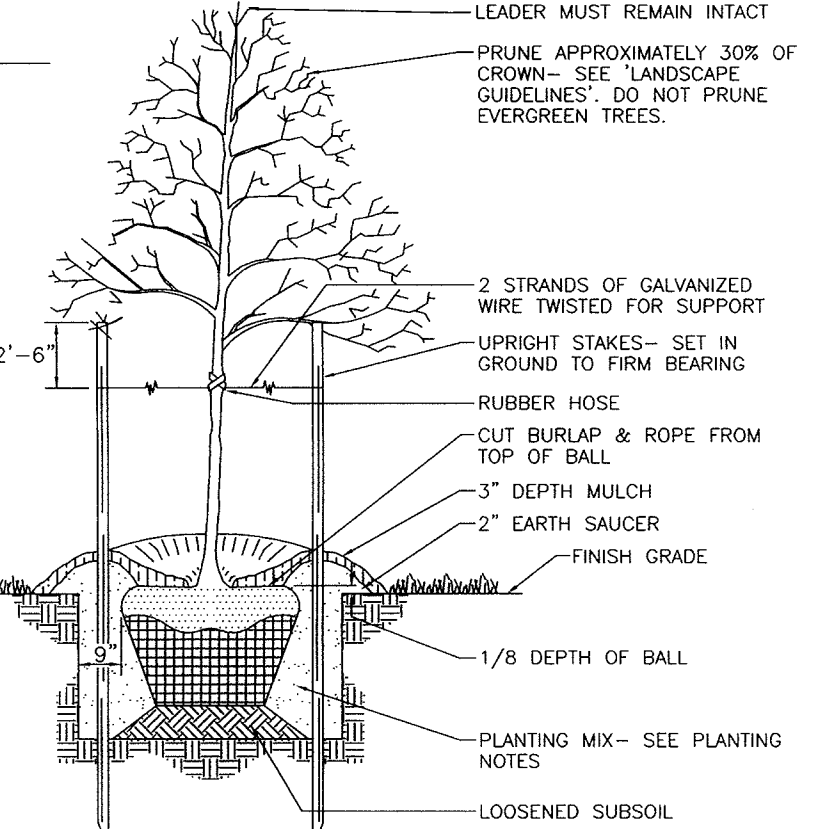
**DEVELOPER'S LANDSCAPE CERTIFICATE**

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.

*Scott Armiger*  
 DEVELOPER'S NAME: SCOTT ARMIGER  
 ORCHARD DEVELOPMENT

**NOTES**

- SEE "LANDSCAPE SPECIFICATION GUIDELINES" FOR BALTIMORE, WASHINGTON METROPOLITAN AREA" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- 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

**STREET LIGHT LOCATION CHART**

DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 10	HILL STREET	0+51.72	53.25' RT.	100 WATT HPS VAPOR PREMIERS POST-TOP FIXTURE MOUNTED ON A 14\"/>
2 OF 10	HILL STREET	3+68.29	18.85' LT.	
2 OF 10	HILL STREET	5+60.94	20.60' RT.	

**STREET TREE CALCULATIONS**

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
HILL STREET	886/40	22	22
WASHINGTON BLVD. (US RTE 1) IMPROVEMENTS	(IN THE MEDIAN)	GRASS MEDIAN	GRASS MEDIAN

**PLANT LIST /HILL STREET**

PLANT LIST	NO OF TREES	SIZE/ROOT
AMUR MAPLE (SHADE TREES - GROWTH HEIGHT=20')	22	2 1/2" - 3" Col. B & B

**SIGNAGE LOCATION CHART**

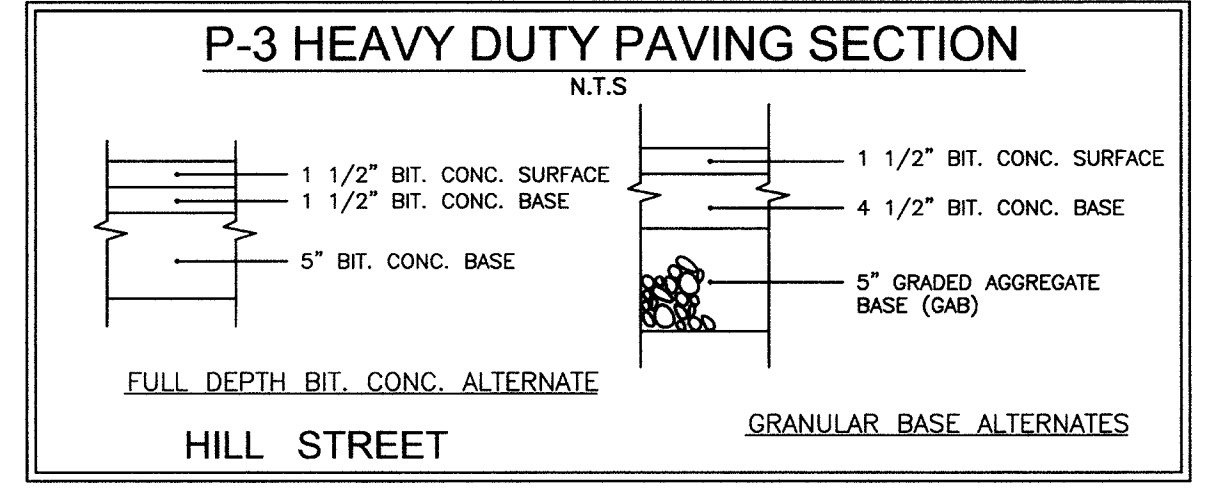
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
HILL STREET	0+57.69	18' LT.	STOP SIGN MUTCD R1-1
HILL STREET	1+06.94	18' RT.	ONE WAY SIGN SEE THIS SHEET FOR DETAIL

**LINE TABLE**

LINE	LENGTH	BEARING
L1	291.47'	N52°28'06"W
L2	476.11'	N37°33'55"E
L3	220.29'	N26°25'56"W

**CURVE TABLE**

CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
C1	89.54'	57.00'	90°00'01"	57.00'	S07°26'05"E	80.61'
C2	63.67'	57.00'	63°59'51"	35.62'	N05°34'00"E	60.41'



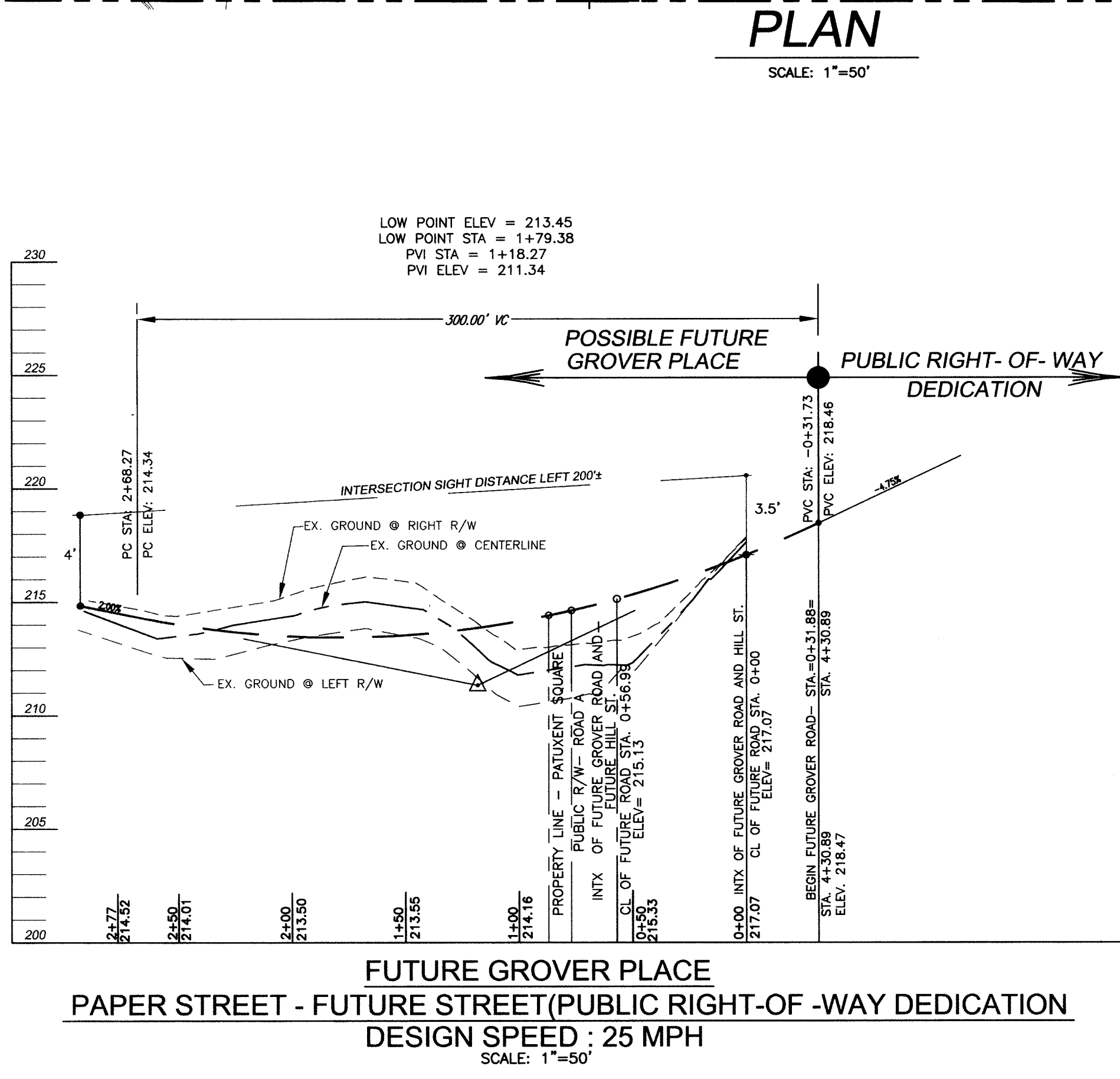
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*William J. Smith* 11-29-06  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John M. ...* 12/5/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

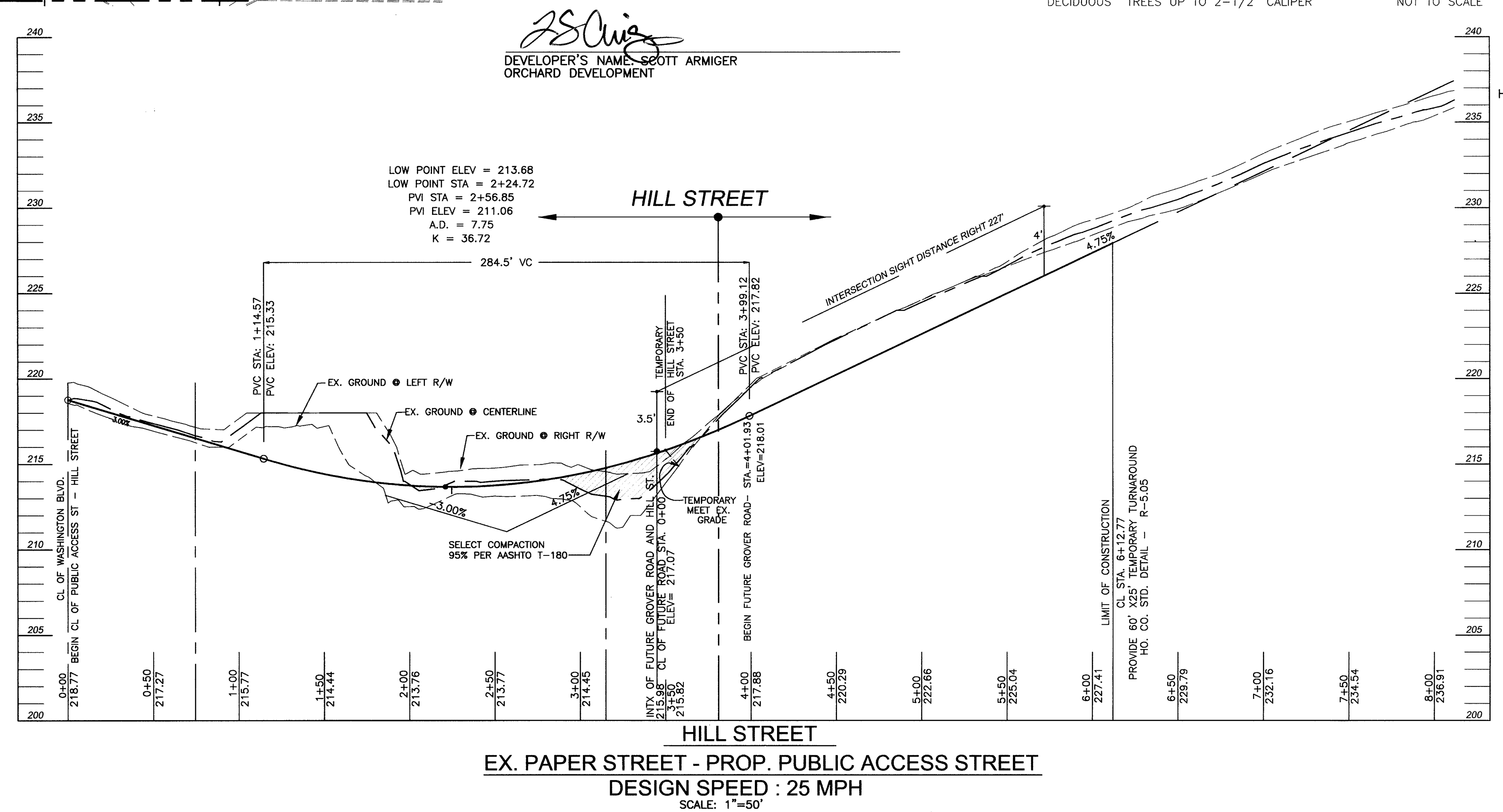
*Robert H. Vogel* 12/1/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**OWNER**  
 HOWARD COUNTY HOUSING COMMISSION  
 C/O LEONARD VAUGHAN  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND  
 21046-2164

**DEVELOPER**  
 ORCHARD DEVELOPMENT  
 C/O SCOTT ARMIGER  
 5032 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND  
 21042



**FUTURE GROVER PLACE**  
 PAPER STREET - FUTURE STREET(PUBLIC RIGHT-OF-WAY DEDICATION)  
 DESIGN SPEED : 25 MPH  
 SCALE: 1"=50'



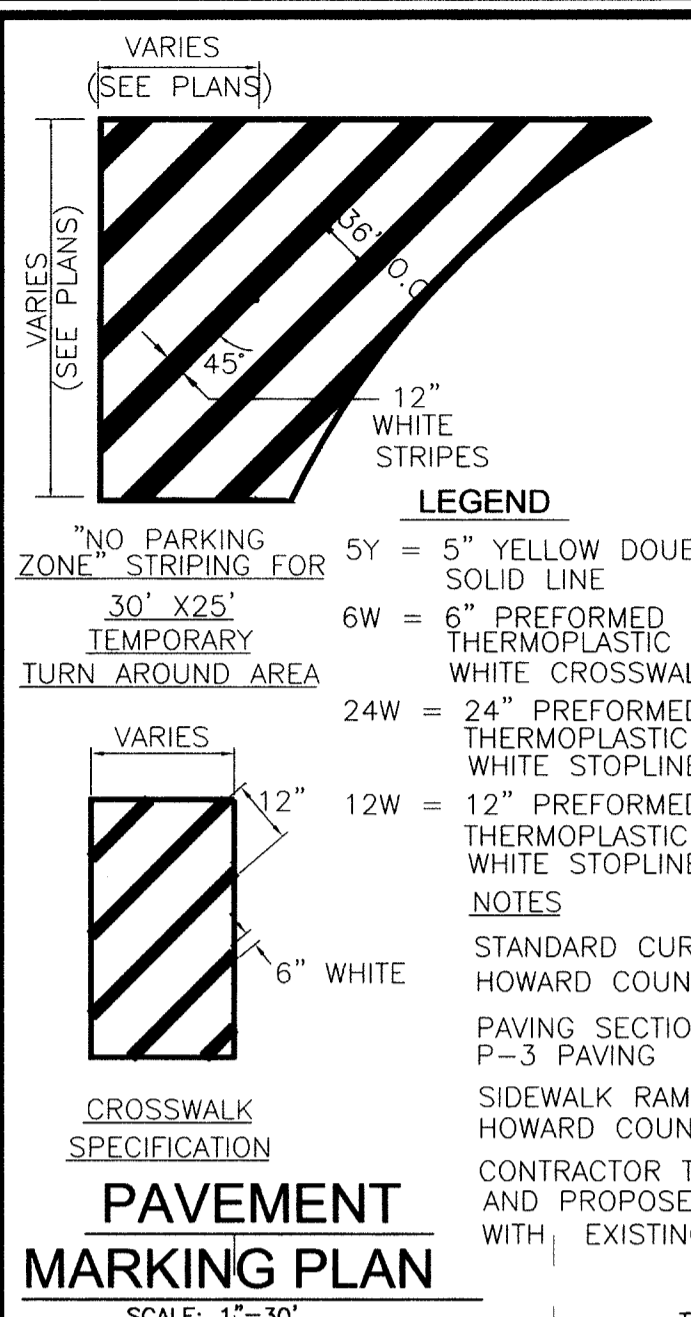
**HILL STREET**  
 EX. PAPER STREET - PROP. PUBLIC ACCESS STREET  
 DESIGN SPEED : 25 MPH  
 SCALE: 1"=50'

FINAL ROAD CONSTRUCTION PLAN  
 PUBLIC ROAD RIGHT-OF-WAY - HILL STREET & STREET TREE PLANTING & DETAILS  
**PATUXENT SQUARE APARTMENTS AND RETAIL CENTER**  
 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  
 TAX MAP 50, GRID 4, 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 REF: S-05-03

**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: R/RHV  
 DRAWN BY: R/JMY  
 CHECKED BY: R/HV  
 DATE: 10-31-2006  
 SCALE: AS SHOWN  
 W.O. NO.: 04-11.00

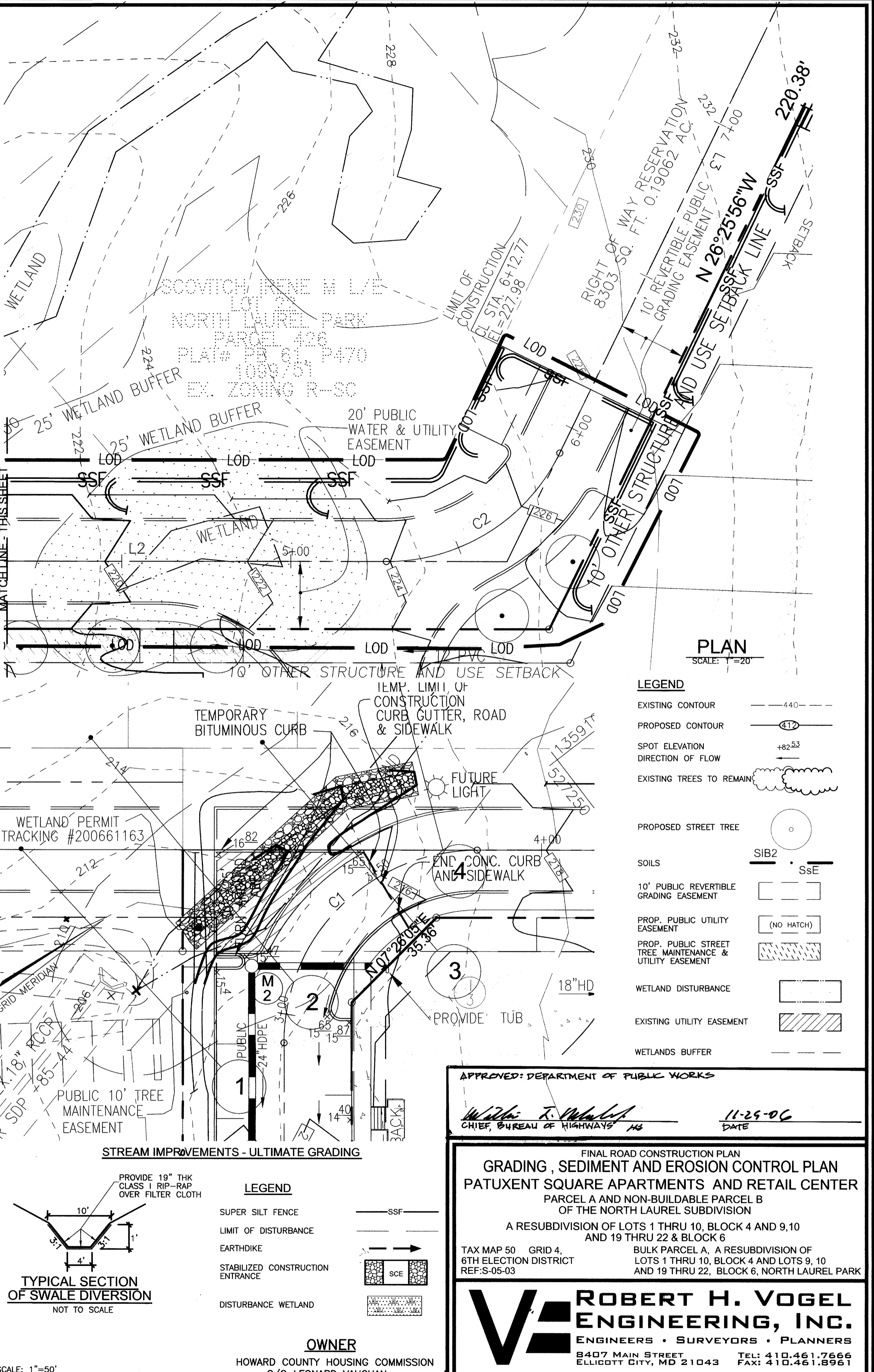
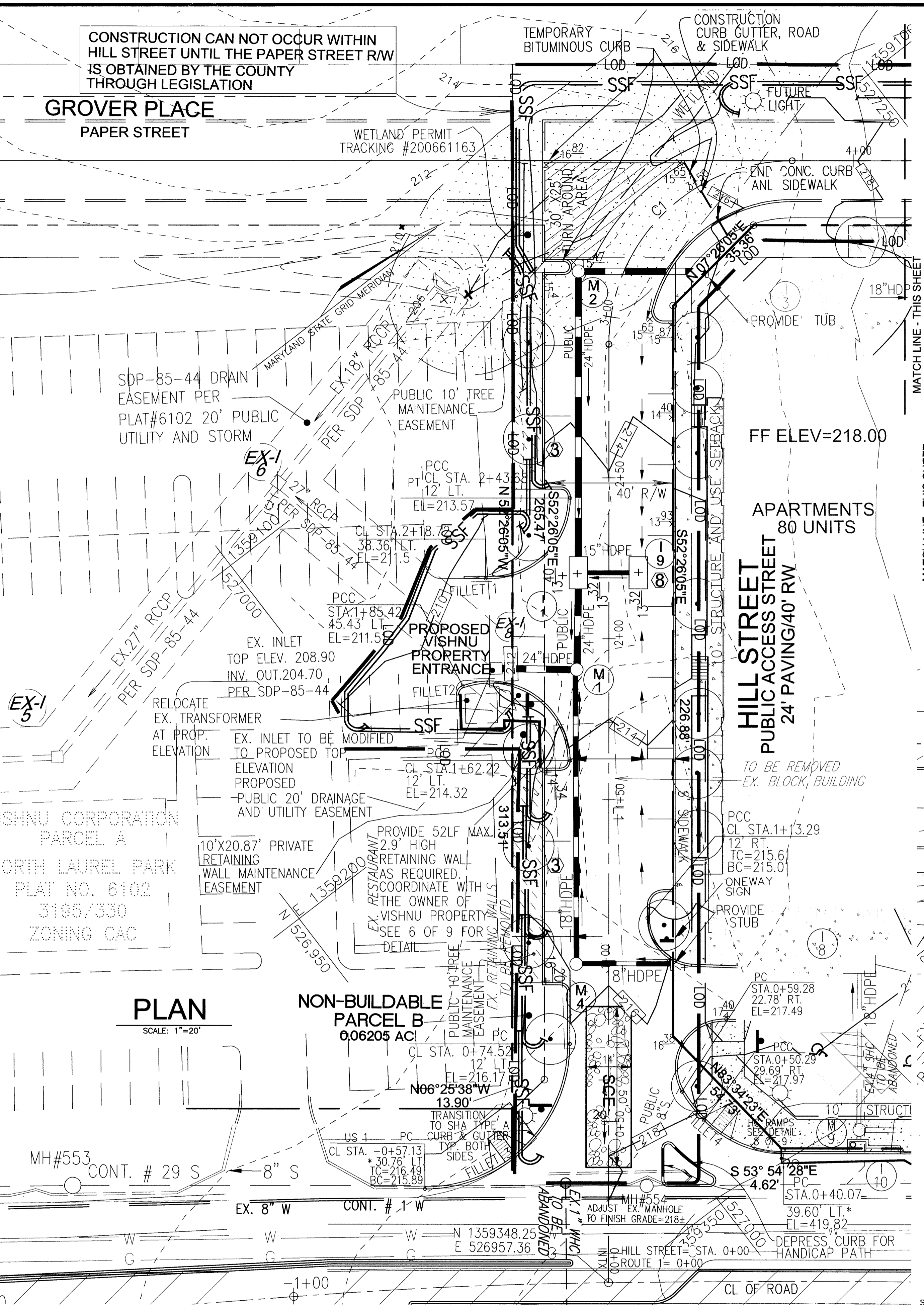
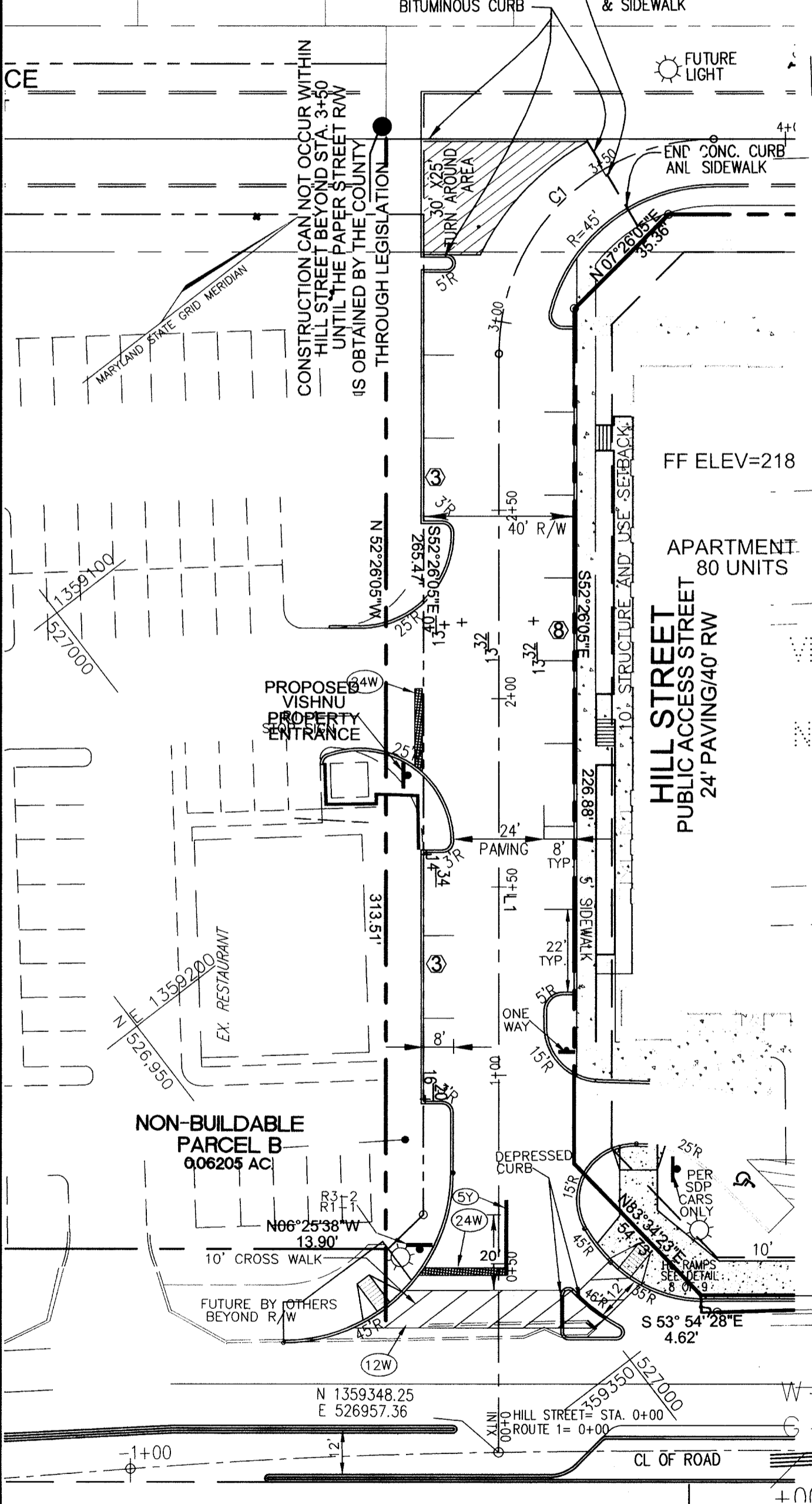
3 SHEET OF 9



FOR ROUTE 1 CONSTRUCTION REFERENCE SHA ACCESS PERMIT CONSTRUCTION PLAN

\* CONTRACTOR TO VERIFY ROUTE 1 CROSS SLOPE TO SET CURB ELEVATION.

CONSTRUCTION CAN NOT OCCUR WITHIN HILL STREET UNTIL THE PAPER STREET R/W IS OBTAINED BY THE COUNTY THROUGH LEGISLATION



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 12/5/06

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 12/1/06

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]*  
ORCHARD DEVELOPMENT

DATE: 11/4/06

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]*  
SIGNATURE OF ENGINEER  
ROBERT H. VOGEL

DATE: 11/14/06

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

*[Signature]*  
USA - NATURAL RESOURCES CONSERVATION SERVICE

DATE: 4/27/06

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

*[Signature]*  
HOWARD SCD

DATE: 4/27/06

OWNER

HOWARD COUNTY HOUSING COMMISSION  
C/O LEONARD VAUGHAN  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND  
21046-2164

DEVELOPER

ORCHARD DEVELOPMENT  
C/O SCOTT ARMIGER  
5032 DORSEY HALL DRIVE  
ELLCOTT CITY, MARYLAND  
21042

APPROVED: DEPARTMENT OF PUBLIC WORKS

*[Signature]*  
CHIEF, BUREAU OF HIGHWAYS

DATE: 11-25-06

FINAL ROAD CONSTRUCTION PLAN  
GRADING, SEDIMENT AND EROSION CONTROL PLAN  
PATUXENT SQUARE APARTMENTS AND RETAIL CENTER  
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

TAX MAP 50 GRID 4, 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 REF-S-05-03

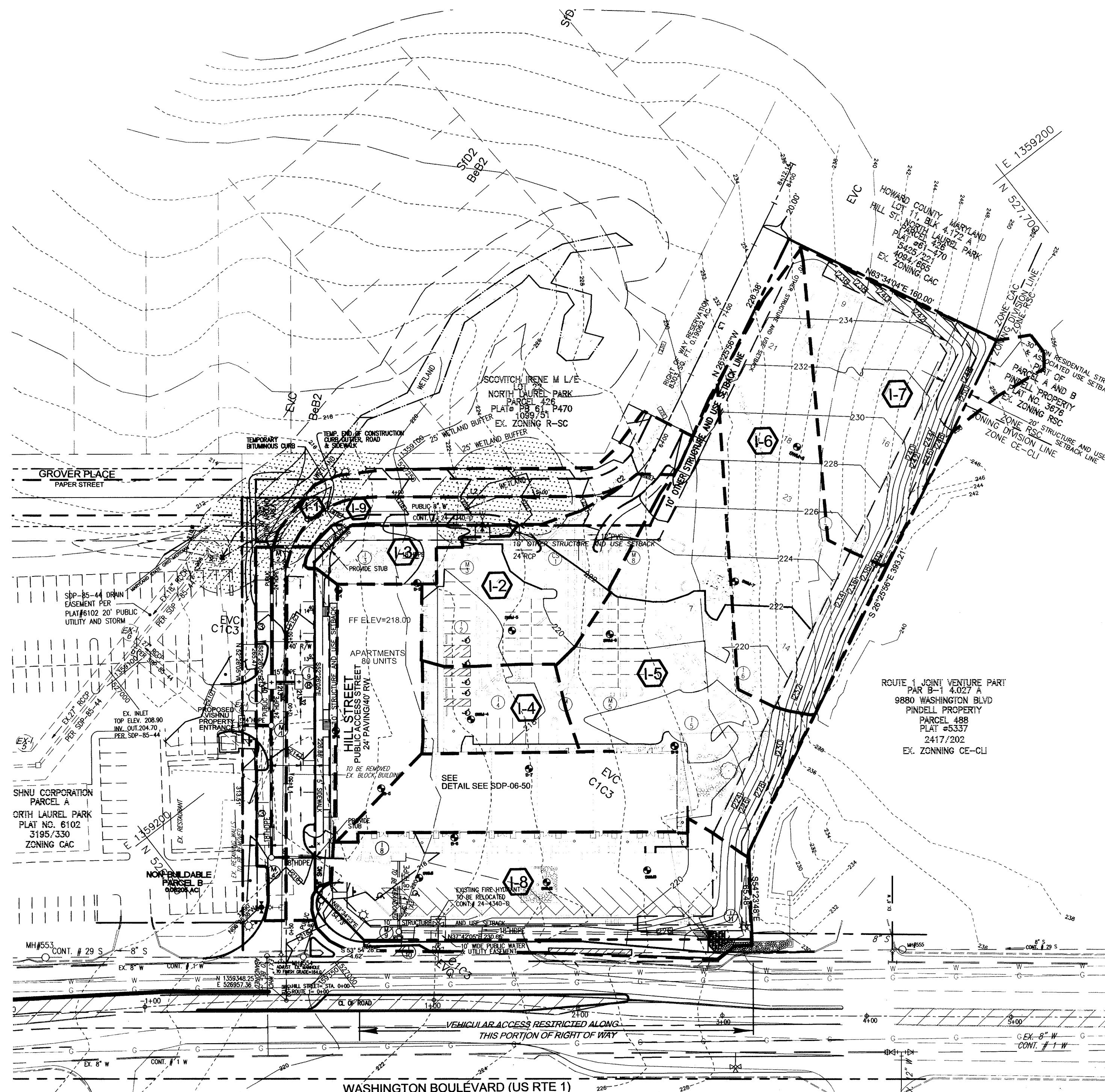
**ROBERT H. VOGEL, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET  
ELLCOTT CITY, MD 21043  
TEL: 410-461-7666  
FAX: 410-461-8961

DESIGN BY: RJRHV  
DRAWN BY: RJRHV  
CHECKED BY: RJRHV  
DATE: 10-31-2006  
SCALE: AS SHOWN  
W.O. NO.: 04-11.00

4 SHEET OF 9

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	

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%



**OWNER**  
 HOWARD COUNTY HOUSING COMMISSION  
 C/O LEONARD VAUGHAN  
 6751 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND  
 21046-2164

**DEVELOPER**  
 ORCHARD DEVELOPMENT  
 C/O SCOTT ARMIGER  
 5032 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND  
 21042

APPROVED: DEPARTMENT OF PUBLIC WORKS  
 \_\_\_\_\_ 11-29-06  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 \_\_\_\_\_ 12/5/06  
 CHIEF, DIVISION OF LAND DEVELOPMENT

\_\_\_\_\_ 12/1/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**PLAN**  
 SCALE: 1"=50'

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN  
 STREAM IMPROVEMENTS  
**PATUXENT SQUARE APARTMENTS AND RETAIL CENTER**  
 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  
 TAX MAP 50 GRID 4, BULK PARCEL A, A RESUBDIVISION OF  
 6TH ELECTION DISTRICT LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10  
 REF-S-05-03 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK

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

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5 SHEET OF 9

**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 (313-1865).
- ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (07) CALENDAR DAYS FOR ALL PERMETER STRUCTURES, DIKES, PERMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1. (08) 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 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOIL TEMPORARY SEEDING, AND MULCHING (SEC. 0). 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 PERMANENT REMEDIAL WORK HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**

TOTAL AREA	SUBDIVISION PARCEL	3.74 ACRES
AREA DISTURBED		0.60 ACRES
AREA TO BE RESEED OR PLANTED	0.60 ACRES (IN THE DISTRICT OF HAVY ONLY)	
AREA TO BE VEGETATIVELY STABILIZED		0.00 ACRES
TOTAL CUT		80 ± CY
TOTAL FILL		80 ± CY
OFFSITE WASTE/BORROW AREA LOCATION		SEE S-2, C-1
- TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER 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.

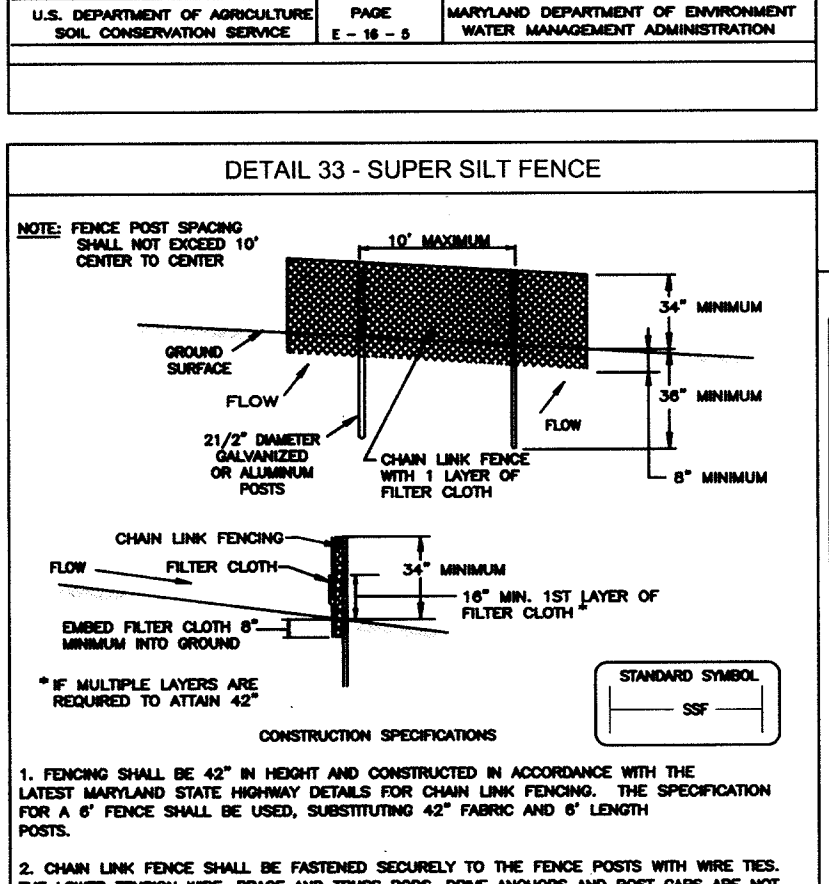
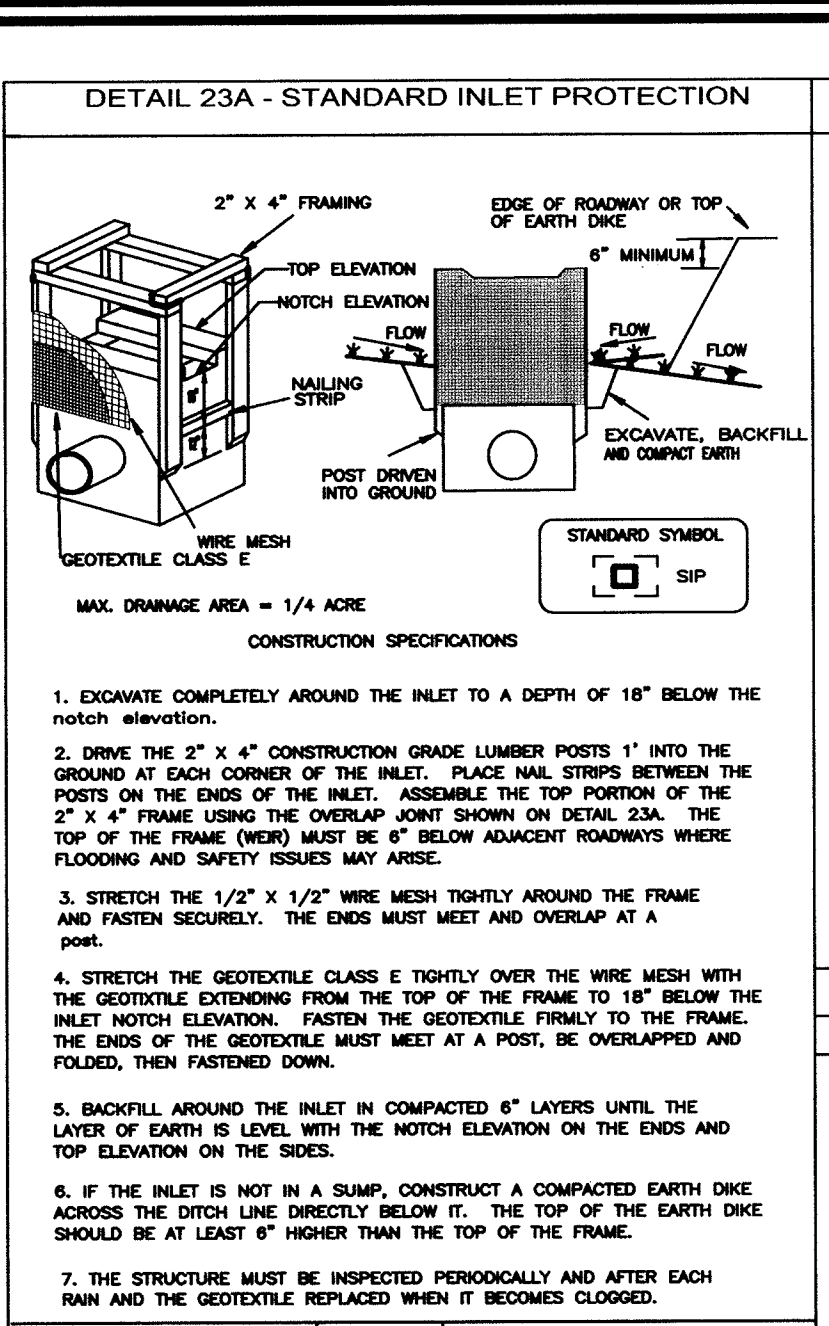
**SEQUENCE OF CONSTRUCTION**

ACTIVITY	DURATION
1. OBTAIN GRADING PERMIT, MDE PERMIT/TRACKING #200661163.	
2. NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1865) AND STATE HIGHWAY ADMINISTRATION (531-5533) AT LEAST 24 HOURS BEFORE STARTING ANY WORK.	4 DAYS
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.	6 DAYS
4. INSTALL PERMETER SUPER SILT FENCE AND ALL REMAINING PERMETER CONTROLS.	1 WEEKS
5. TRAPS AND TEMPORARY PIPES PER SDP-06-50 ARE TO REMAIN UNTIL STORM DRAIN AND SWM(SDP-06-50) ARE IN PLACE.	1 WEEKS
6. WITH INSPECTOR'S APPROVALS CLEAR AND GRUB SITE AND BEGIN MASS GRADING AT THE SAME TIME OF (SDP-06-50) SITE PLAN MASS GRADING.	2 DAYS
7. GRADE REMAINING SITE TO SUB-BASE AS SITE IS GRADED. INSTALL STORM DRAIN AND SEWER. STORM WATER MANAGEMENT AS GRADE ROADS TO SUB-GRADE.	3 WEEKS
8. WITH INSPECTOR'S APPROVALS WITH ROADS GRADED TO SUB-BASE AND INLETS ARE IN PLACE BEGIN INSTALLATION OF CURBS AND GUTTER.	6 MONTHS
9. AFTER CONSTRUCTION OF A BUILDING (PER SDP-06-50), BEGIN PAVING ROADS AND INSTALL SIDEWALKS STREET TREES AS SHOWN ON PLAN.	2 WEEKS
10. OBTAIN GRADING PERMIT AND START IMPROVEMENTS ON US RTE 1.	2 WEEKS
11. WITH INSPECTOR'S APPROVAL AND REMOVE SEDIMENT CONTROL DEVICES AND FINISH FINAL GRADING OF REST OF THE SITE.	1 WEEK
12. 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 ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.

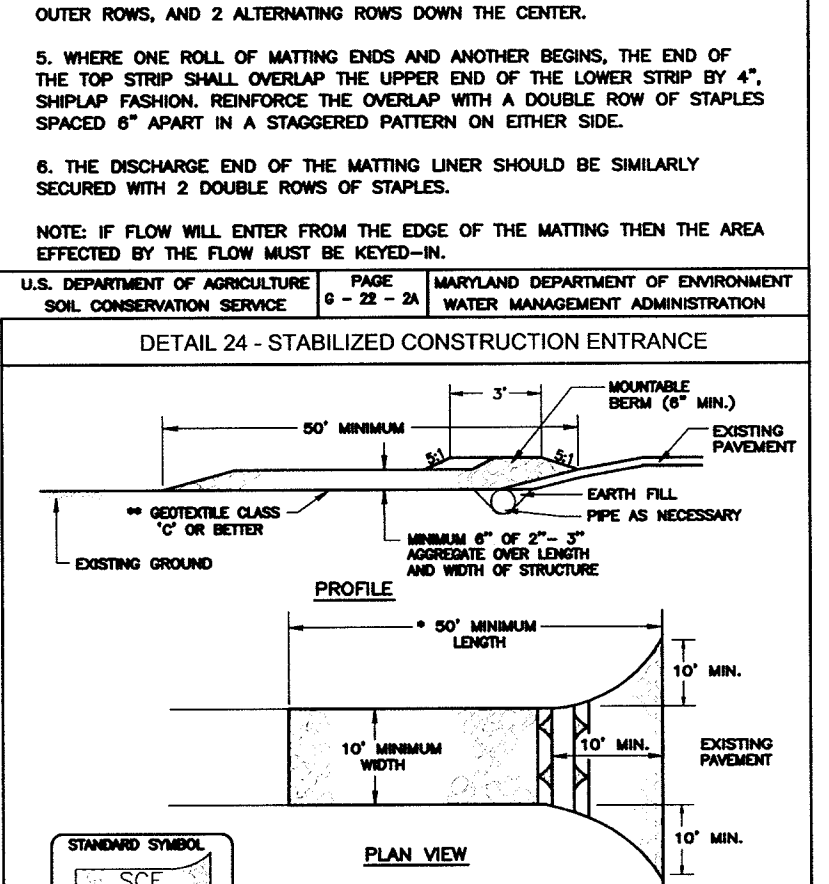
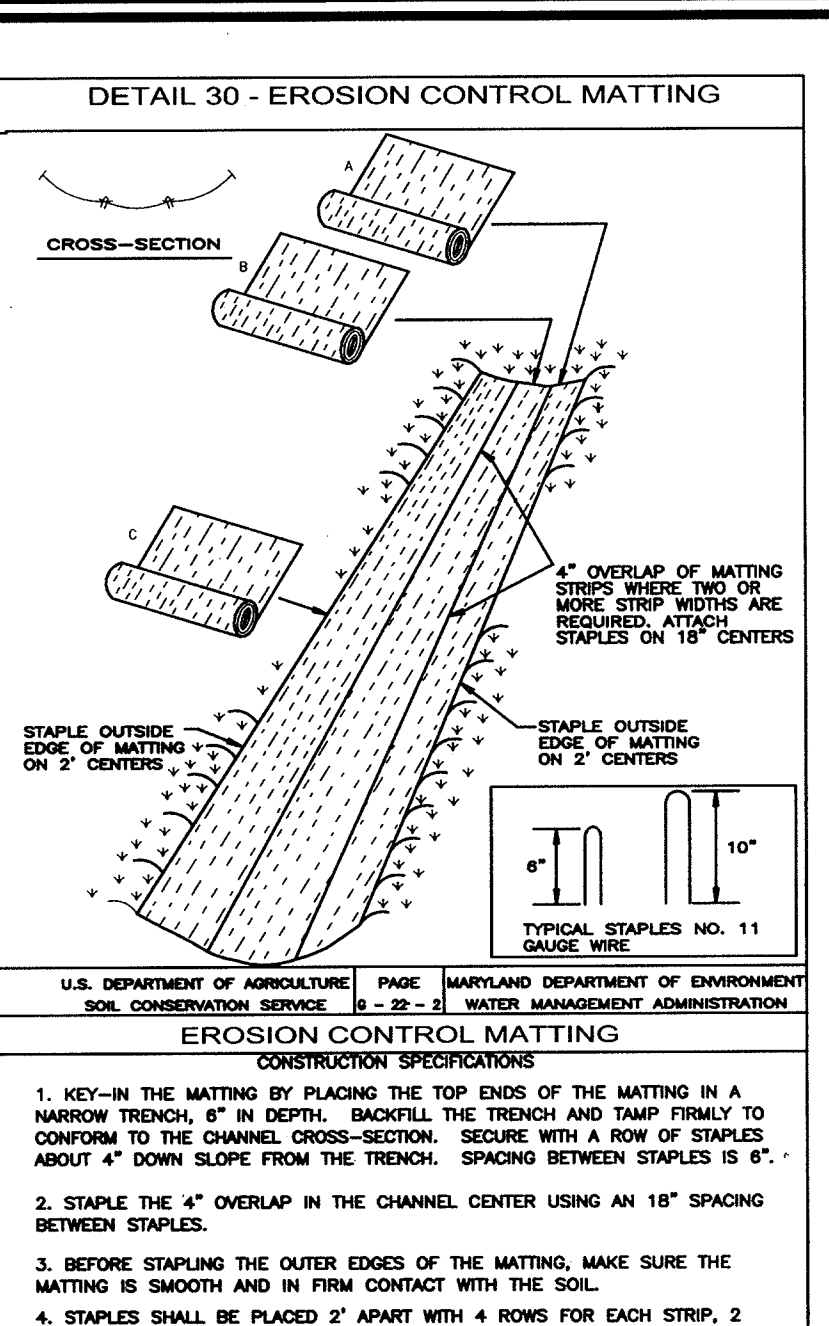
FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (07) CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. (08) 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.



**CONSTRUCTION SPECIFICATIONS**

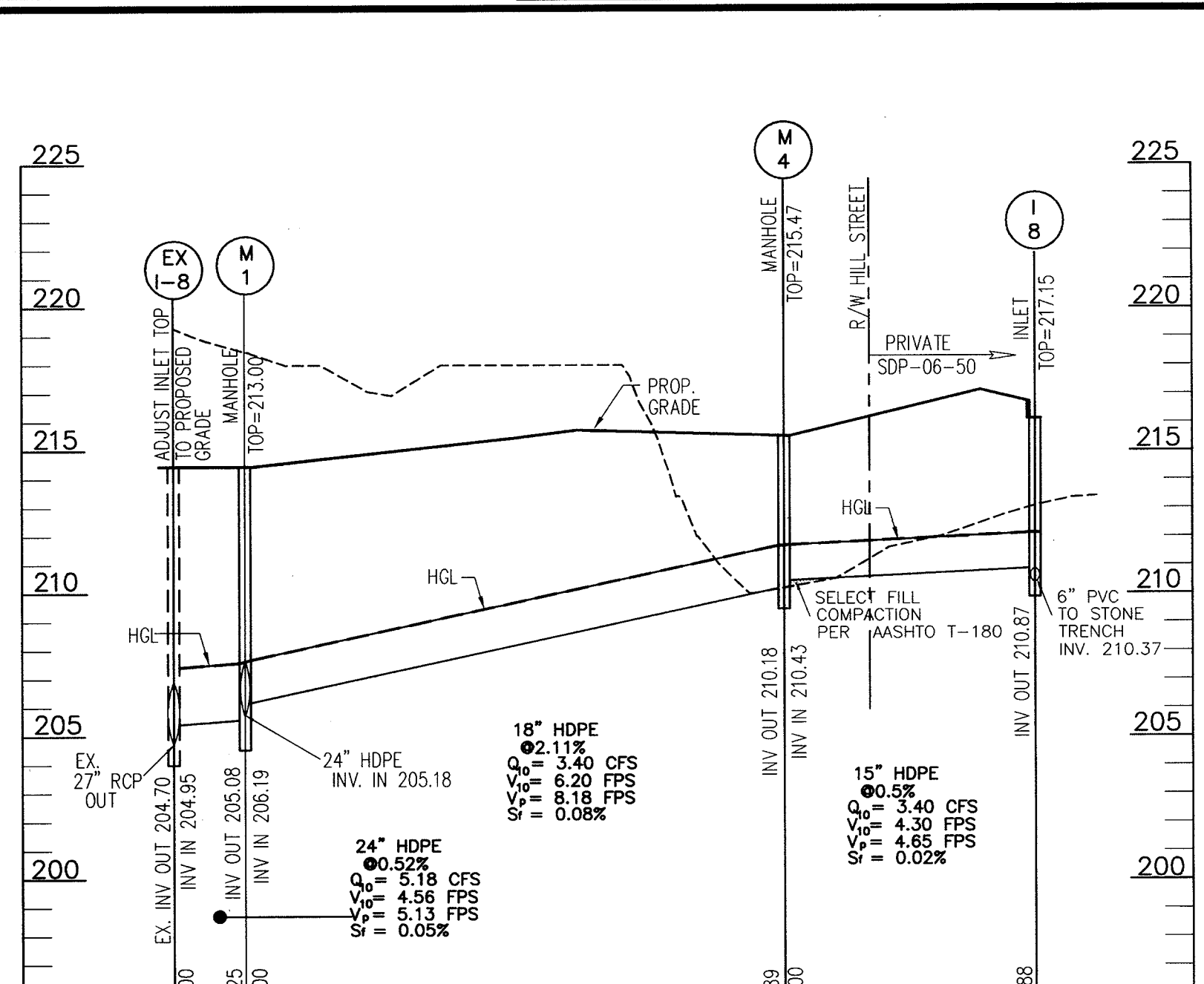
- FENCING SHALL BE 42\"/>
- CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE SHOULD BE TIGHTENED TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS 1:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST METHOD 509
TENSILE MODULUS	50 LBS/IN (MIN.)	TEST METHOD 509
FLOW RATE	0.3 GAL/FT <sup>2</sup> /MINUTE (MAX.)	TEST METHOD 302
FILTRATION EFFICIENCY	75% (MIN.)	TEST METHOD 302



**CONSTRUCTION SPECIFICATION**

- LENGTH - MINIMUM OF 50' (7:30 FOR A SINGLE RESIDENCE LOTS).
- SEED - 10\"/>
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. 10\"/>
- BASE COURSE - GRANULAR BACKFILL - GRANULAR BACKFILL SHALL BE PLACED AT LEAST 4\"/>
- FINISH COURSE - GRANULAR BACKFILL - GRANULAR BACKFILL SHALL BE PLACED AT LEAST 4\"/>
- 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.

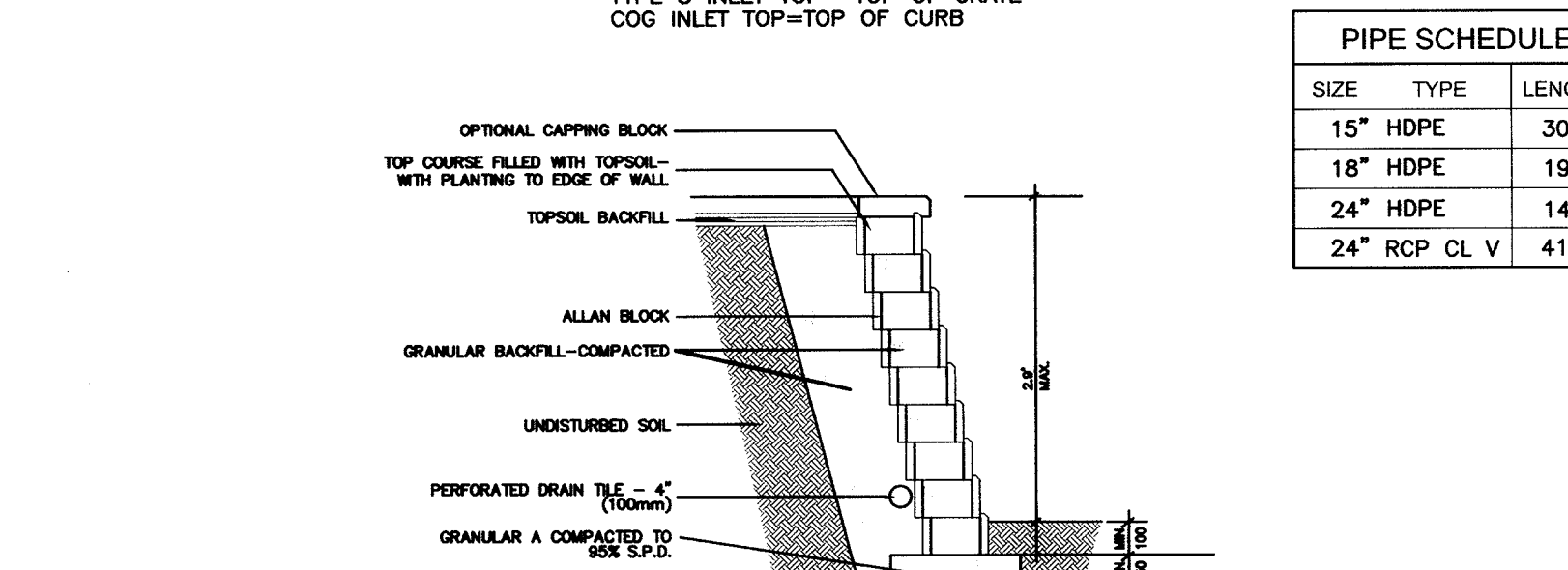


**STRUCTURE SCHEDULE**

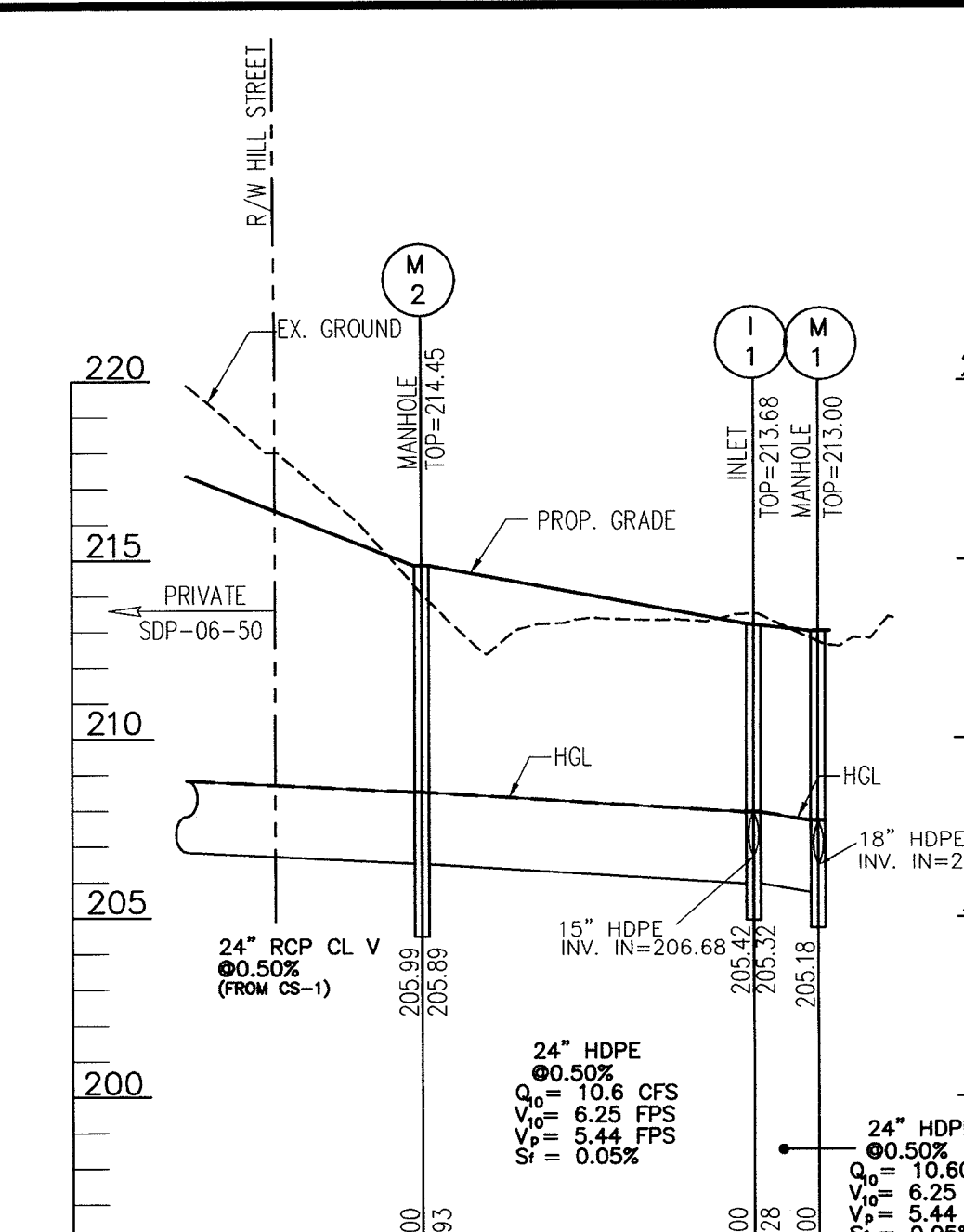
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.	REMARKS
M-1	STANDARD 4' MANHOLE	N 527065.50 E 1359191.27	213.00	206.19	205.08	G-5-12
M-2	STANDARD 4' MANHOLE	N 527141.36 E 1359093.49	214.45	205.89	205.89	G-5-12
M-4	STANDARD 4' MANHOLE	N 527008.07 E 1359265.72	215.47	210.43	210.18	G-5-12
I-1	DOUBLE TYPE 'S'	N 527084.26 E 1359167.70	213.32	206.43	205.83	SD-4-23
I-9	DOUBLE TYPE 'S'	N 527099.03 E 1359179.06	213.32	-	205.53	SD-4-23
I-10	SHA COG 15' INLET, MD-374.51	N 527043.45 E 1359363.92	*221.43	-	215.21	MD-374.51

**PIPE SCHEDULE**

SIZE	TYPE	LENGTH
15"	HDPE	30 LF
18"	HDPE	193 LF
24"	HDPE	146 LF
24"	RCP CL V	41 LF

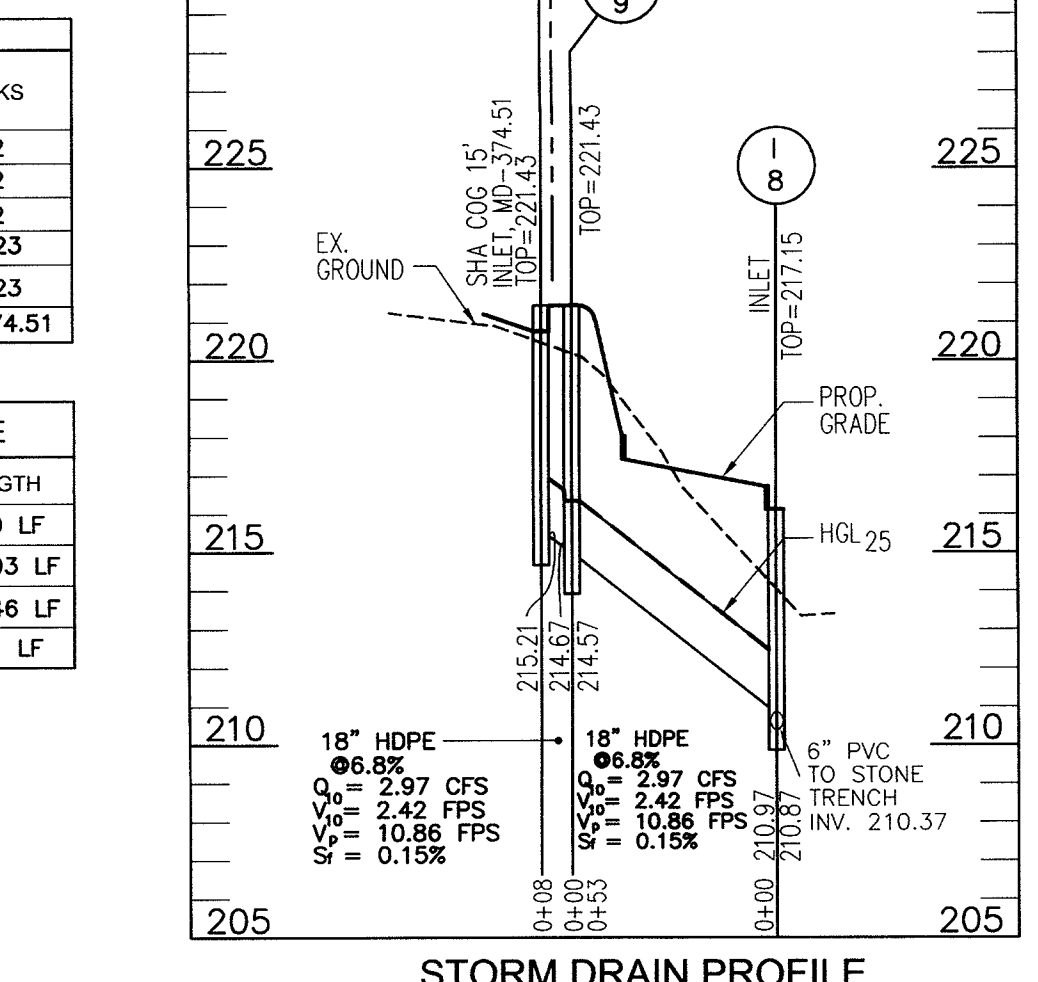


**52 LF GRAVITY RETAINING WALL OR APPROVED EQUAL LESS THAN OR EQUAL TO 2.9' HIGH**  
SEE WALL PLANS SHEETS 16-18

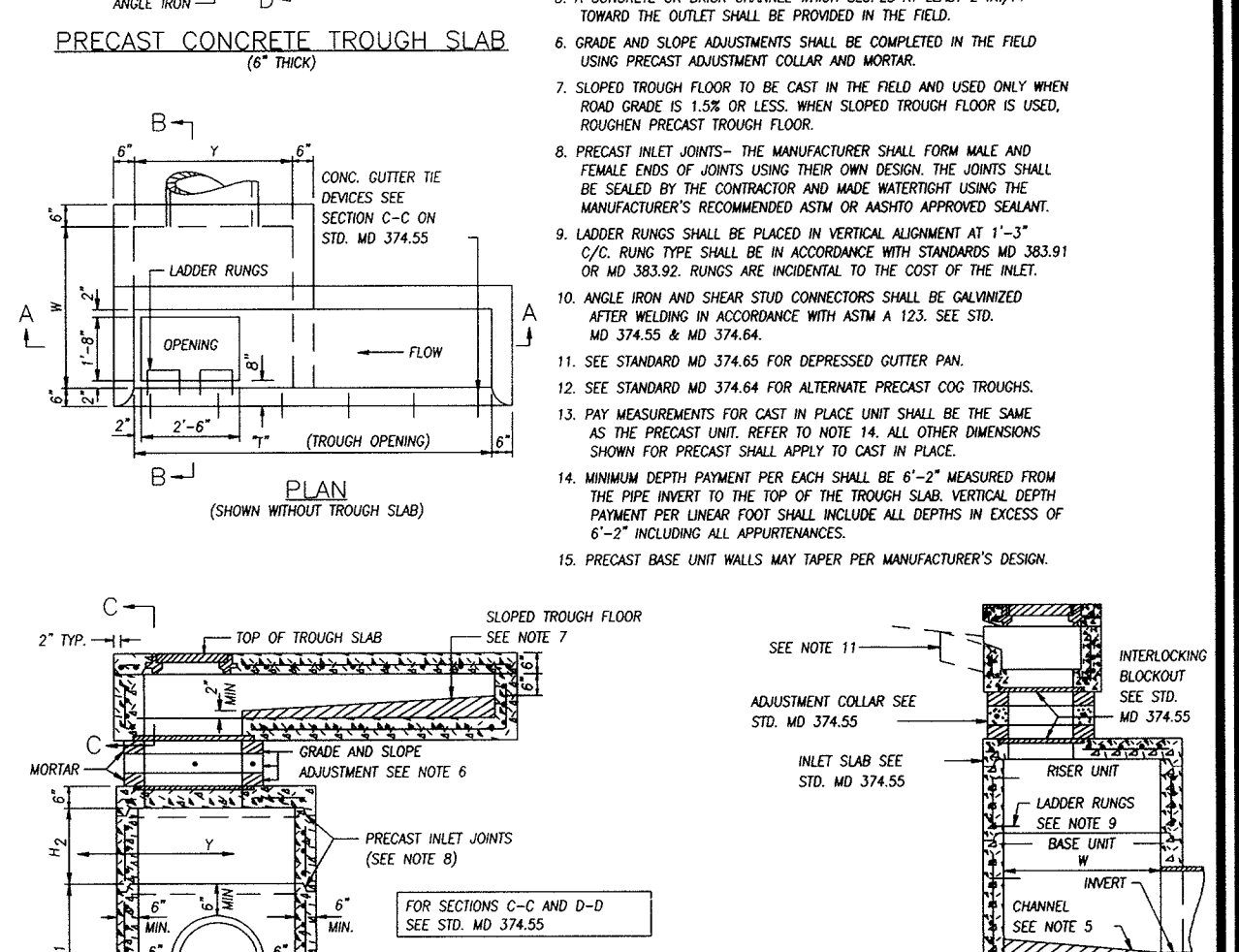
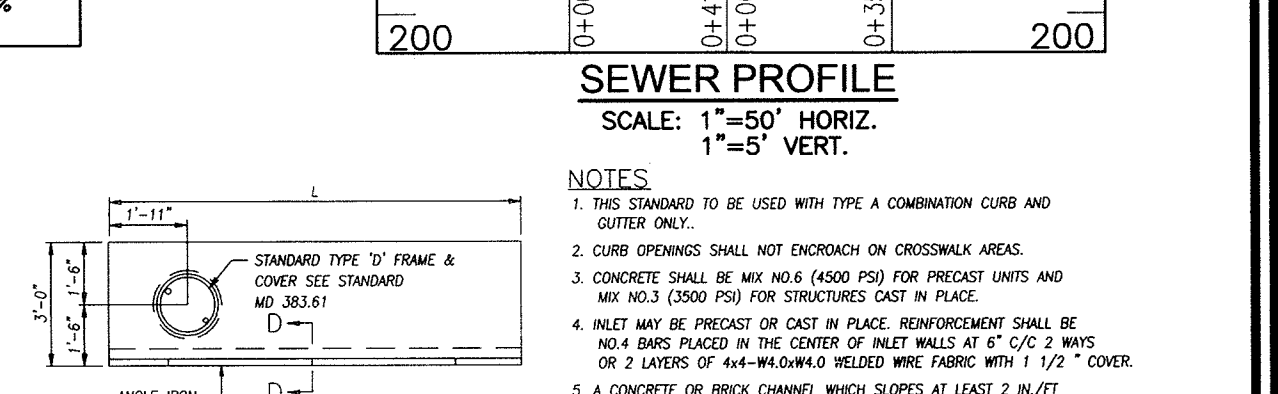
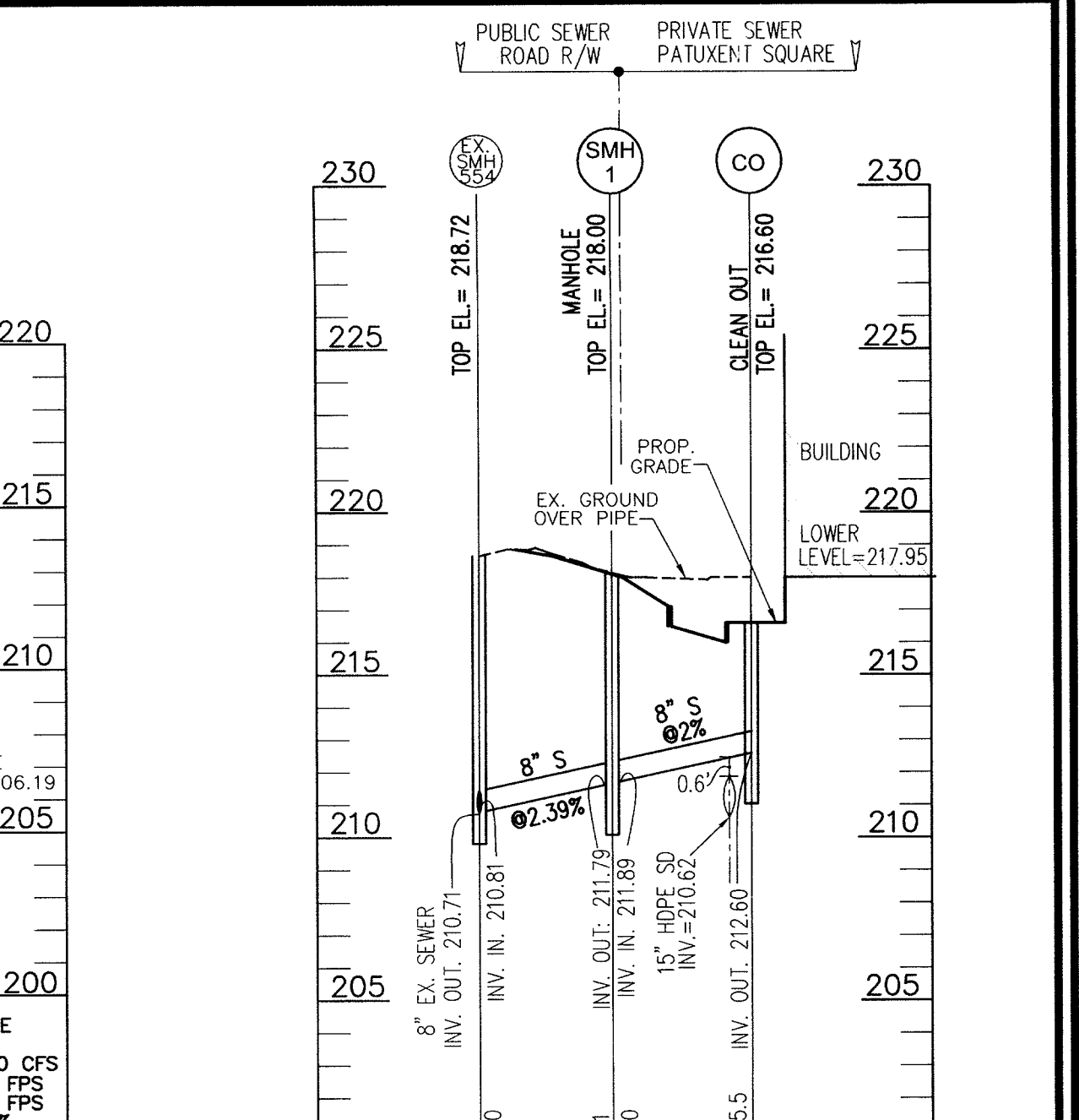


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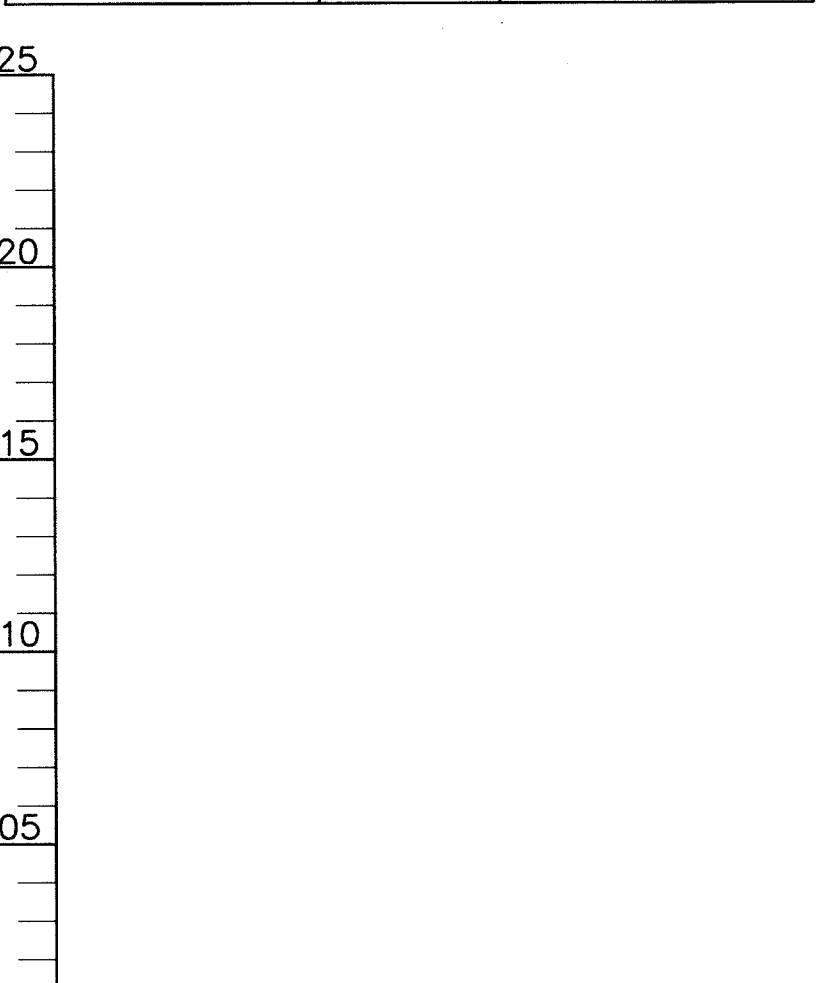
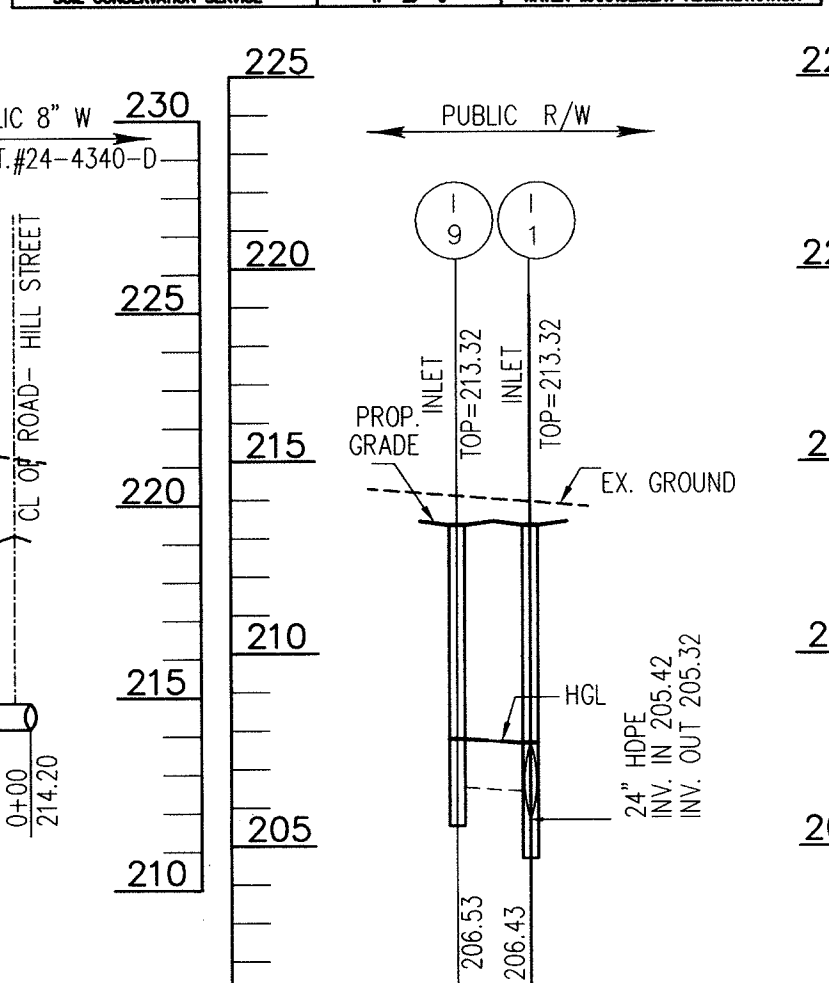
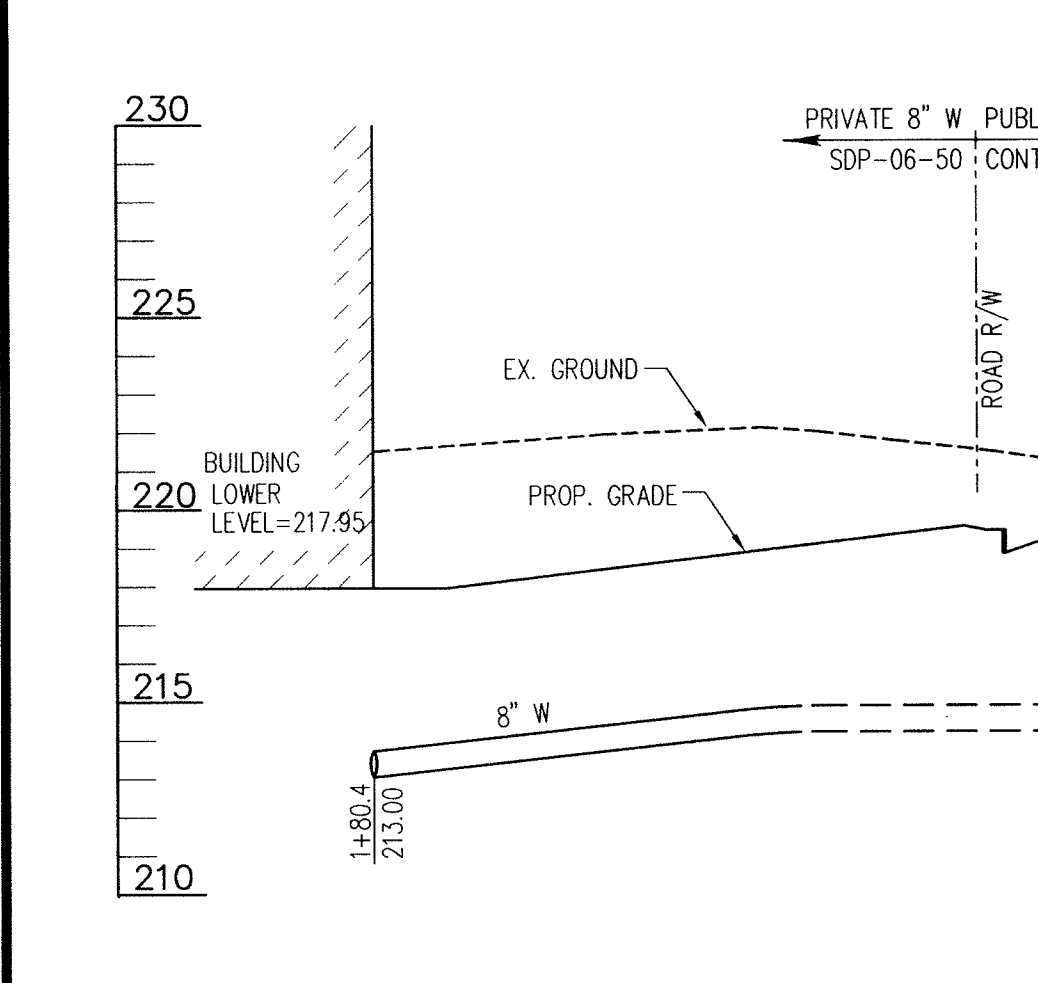


**52 LF GRAVITY RETAINING WALL OR APPROVED EQUAL LESS THAN OR EQUAL TO 2.9' HIGH**  
SEE WALL PLANS SHEETS 16-18



**PIPE SCHEDULE**

PIPE SIZE	MIN. TO MAX.	Y	X	BASE	INLET	INLET #
12"	30" - 48"	4"	4"	37 1/2"	17 1/2"	6"
15"	42" - 60"	4"	4"	41"	17 1/2"	6"
18"	48" - 66"	4"	4"	45"	17 1/2"	6"
24"	60" - 78"	4"	4"	51"	17 1/2"	6"
30"	72" - 90"	4"	4"	57"	17 1/2"	6"
36"	84" - 102"	4"	4"	63"	17 1/2"	6"



**APPROVED: DEPARTMENT OF PUBLIC WORKS**

*W. J. Whelan* 11-29-06  
CHIEF, BUREAU OF HIGHWAYS

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

*Ch. Williams* 12/5/06  
CHIEF, DIVISION OF LAND DEVELOPMENT

*Ch. Williams* 12/1/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**DEVELOPER'S CERTIFICATE**

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*Scott Armer* 11/14/06  
ORCHARD DEVELOPMENT  
SCOTT ARMER

**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 STANDARD 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* 11/14/06  
SIGNATURE OF ENGINEER  
ROBERT H. VOGEL

**REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS**

*Jim M...* 4/27/06  
USDA - NATURAL RESOURCES CONSERVATION SERVICE

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

*John L. Whelan* 4/27/06  
HOWARD SCD

**OWNER**

HOWARD COUNTY HOUSING COMMISSION  
C/O LEONARD VAUGHAN  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND  
21046-2164

**DEVELOPER**

ORCHARD DEVELOPMENT  
C/O SCOTT ARMER  
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ELICOTT CITY, MARYLAND  
21042

**FINAL ROAD CONSTRUCTION PLAN**  
STORM DRAIN PROFILE AND DETAILS

**PATUXENT SQUARE APARTMENTS AND RETAIL CENTER**  
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

TAX MAP 50 GRID 4.  
6TH ELECTION DISTRICT  
REF-S-05-03

**OWNER**

HOWARD COUNTY HOUSING COMMISSION  
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21046-2164

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6 SHEET OF 9

**R1-1**

SIGN SIZE	DIMENSIONS (INCHES)					
	A	B	C	D	E	F
MIN	24	1/2	8	8C	4	10
STD	30	3/4	10	10C	5	12-1/2
EXPWY	36	1	12	12C	6	15
SPECIAL	48	1 1/2	16	16C	8	20
SBCE	6	3/8	6	6C	3	7-3/4

**REFERENCES**  
MUTCD SECTION - 2B-4, 2B-5, 2B-6, 2B-9  
MUTCD SUPPLEMENT - 2B-3, 2B-3.1, 2B-4.1, 2B-9

**COLORS**  
LEGEND - WHITE  
BACKGROUND - RED

APPROVED: [Signature] DATE: [ ]

MARYLAND DEPARTMENT OF TRANSPORTATION  
State Highway Administration  
OFFICE OF TRAFFIC & SAFETY

STOP

Section:        Standard No. R1-1  
Drawn By:        Date:       

**R3-2**

SIGN SIZE	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	J	K	L
MIN	24	1/2	1/2	13-1/2	13-1/2	1-1/2	2-1/2	13-1/2	13-1/2	2	1/2
STD	30	1/2	1/2	15-1/2	15-1/2	1-1/2	3-1/2	15-1/2	15-1/2	2-1/2	5/8
EXPWY	36	3/4	3/4	17-1/2	17-1/2	2-1/4	3-3/4	17-1/2	17-1/2	3	3/4
SPECIAL	48	1	1	21	21	3	5	21	21	4	1

**REFERENCES**  
MUTCD SECTION - 2B-15  
MUTCD SUPPLEMENT - 2B-15

**COLORS**  
LEGEND - BLACK  
CIRCLE & DIAGONAL - RED  
BACKGROUND - WHITE

APPROVED: [Signature] DATE: [ ]

MARYLAND DEPARTMENT OF TRANSPORTATION  
State Highway Administration  
OFFICE OF TRAFFIC & SAFETY

NO LEFT TURN (SYMBOL)

Section:        Standard No. R3-2  
Drawn By:        Date:       

**R5-1**

SIGN SIZE	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
STD	30	48	2	5	17-1/8	14-1/2	12-1/2	9-3/4
EXPWY	36	60	2-1/2	6	21-1/4	17-1/2	15	12
FWY	48	80	3	8	23-1/2	20	14-1/2	

SIGN SIZE	DIMENSIONS (INCHES)					
	J	K	L	M	N	
STD	6-1/2	10	1-7/8	2-1/2	1/2	
EXPWY	7-1/2	12-3/8	2-1/8	3	1/2	
FWY	11	15	3-1/4	4	1/2	

**REFERENCES**  
MUTCD SECTION - 2B-26  
MUTCD SUPPLEMENT - 2B-26

**COLORS**  
LEGEND - WHITE  
BACKGROUND - RED  
SPECIAL SHEETING

APPROVED: [Signature] DATE: [ ]

MARYLAND DEPARTMENT OF TRANSPORTATION  
State Highway Administration  
OFFICE OF TRAFFIC & SAFETY

DO NOT ENTER

Section:        Standard No. R5-1  
Drawn By:        Date:       

**R5-1a**

SIGN SIZE	DIMENSIONS (INCHES)						
	A	B	C	D	E	F	G
MIN	30	18	1/2	3	10	2	18-1/8
STD	36	24	3/4	4-1/2	10	3	15-5/8
SPECIAL	42	30	1	5	10	4	17-3/4

**REFERENCES**  
MUTCD SECTION - 2B-27  
MUTCD SUPPLEMENT - 2B-27

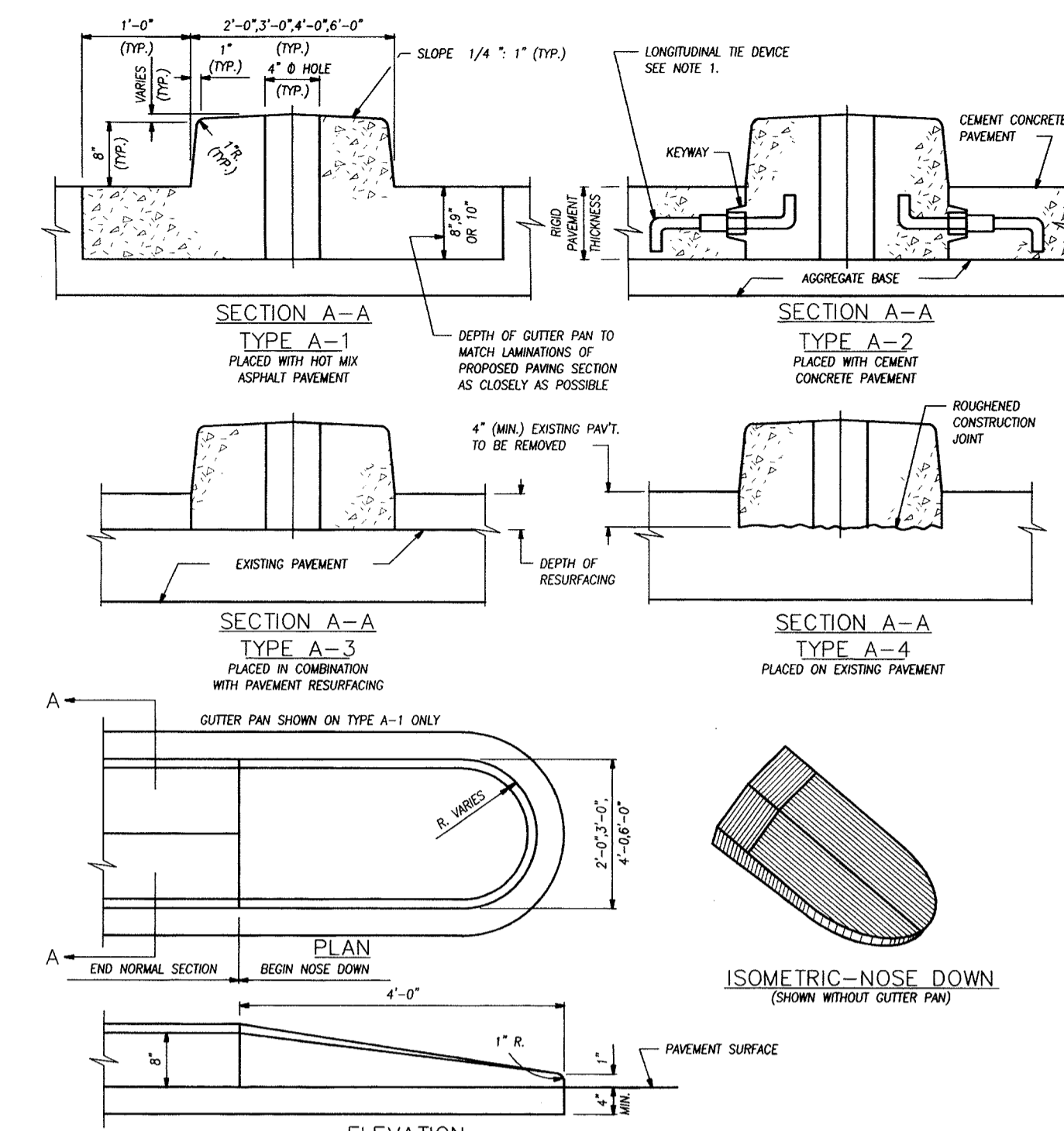
**COLORS**  
LEGEND - WHITE  
BACKGROUND - RED  
SPECIAL SHEETING

APPROVED: [Signature] DATE: [ ]

MARYLAND DEPARTMENT OF TRANSPORTATION  
State Highway Administration  
OFFICE OF TRAFFIC & SAFETY

WRONG WAY

Section:        Standard No. R5-1a  
Drawn By:        Date:       

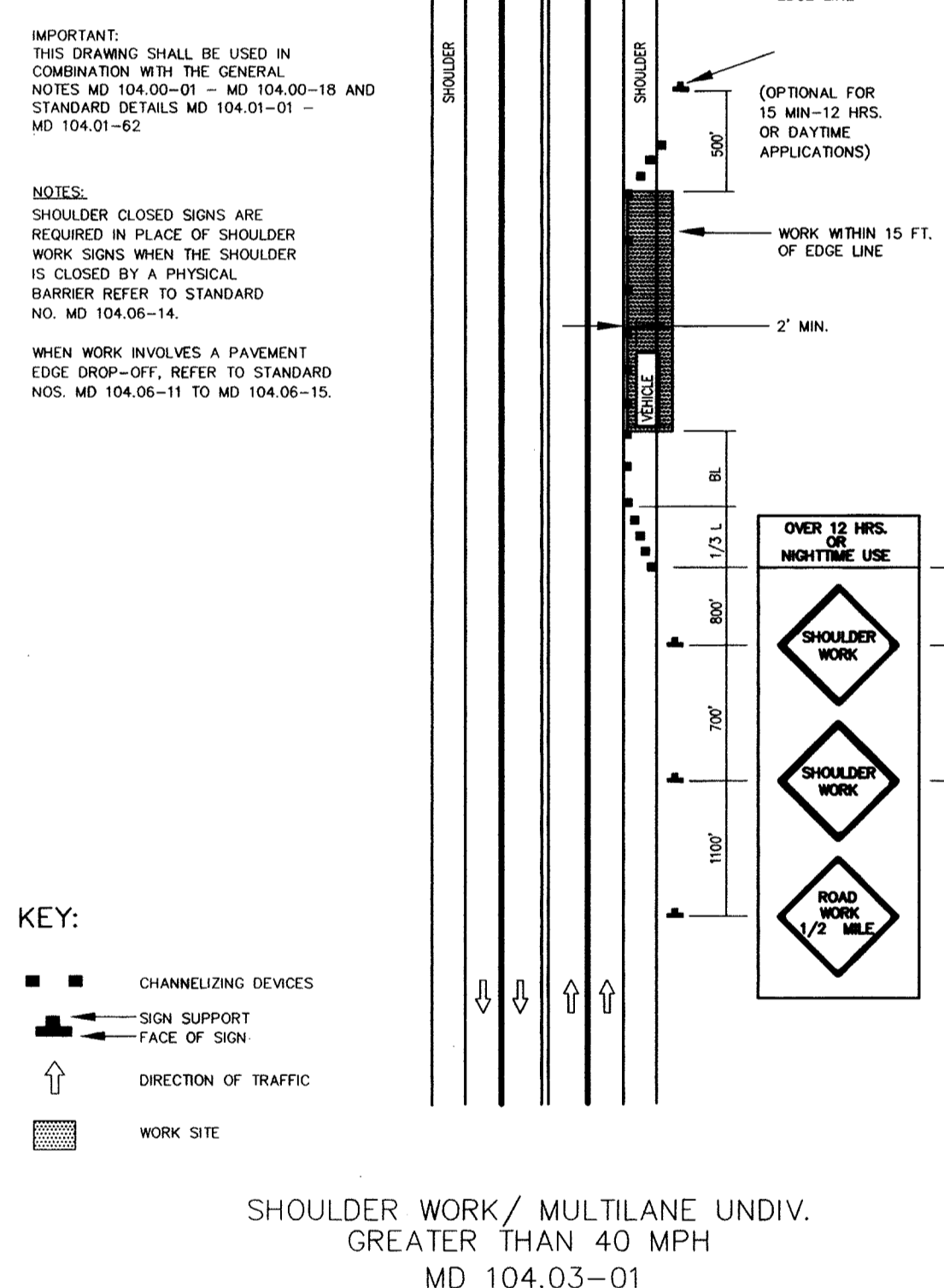


**NOTES**

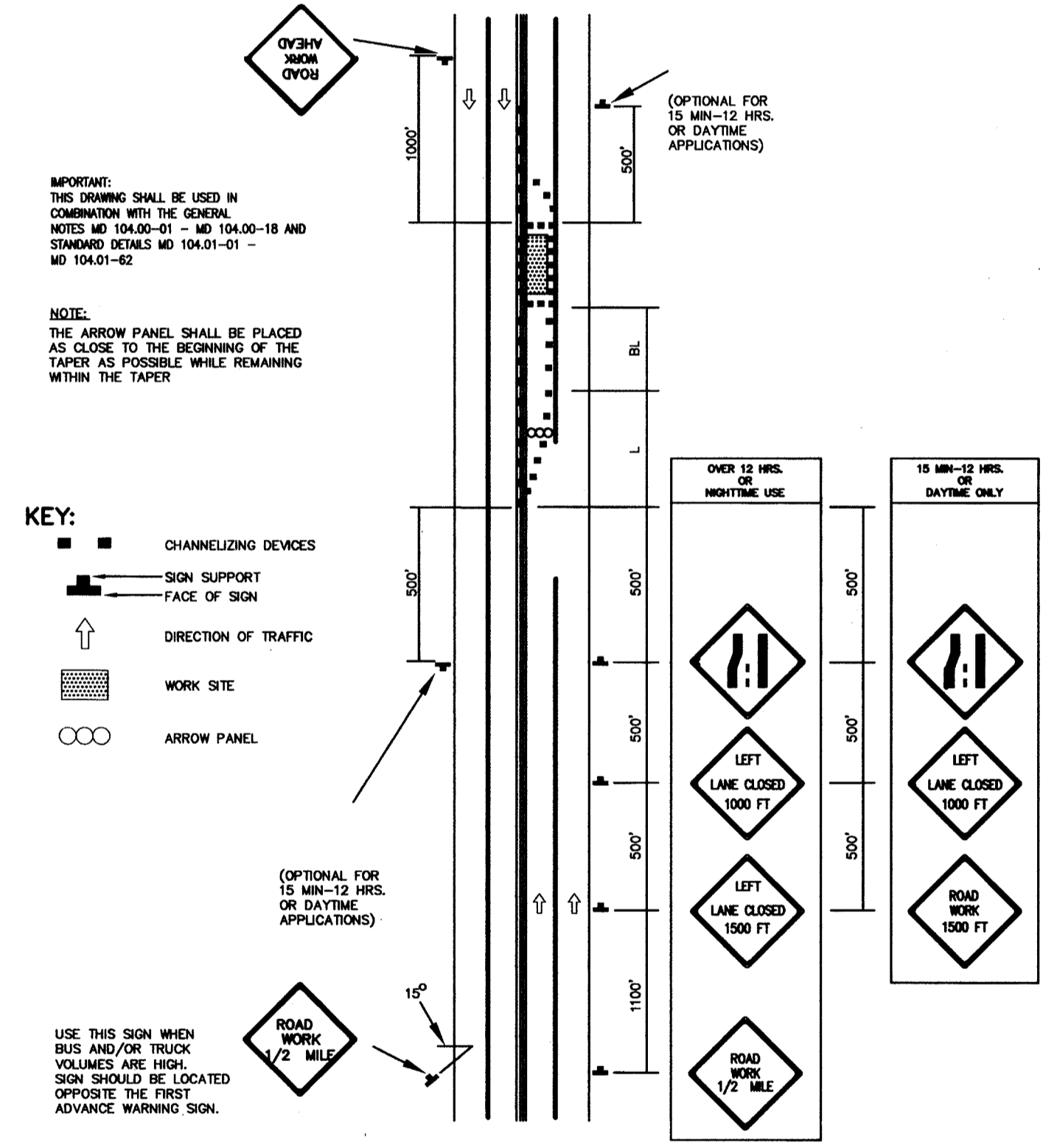
- UNLESS OTHERWISE SPECIFIED LONGITUDINAL TIE BAR DEVICE, TYPE 'A' OR TYPE 'B', PLACED AT MIDDLE OF KEYWAY & SPACED ACCORDING TO SPECIFICATIONS FOR CONCRETE PAVEMENT SHALL BE USED AT CONSTRUCTION JOINT BETWEEN MONOLITHIC CONCRETE MEDIAN (OR GUTTER PAN) AND CONCRETE PAVEMENT. SEE STANDARD MD 572.61.
- JOINT SPACING WILL BE A MAXIMUM OF 10'-0" APART. SEE SPECIFICATIONS FOR LOCATION AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED. CONCRETE PAVEMENT, JOINTS SHALL MATCH PAVEMENT JOINTS.
- ALLOW 4" O HOLES IN MEDIAN FOR SIGNS, SPACED AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

STANDARD MONOLITHIC CONCRETE MEDIAN  
TYPE 'A'  
STANDARD NO. MD 645.01

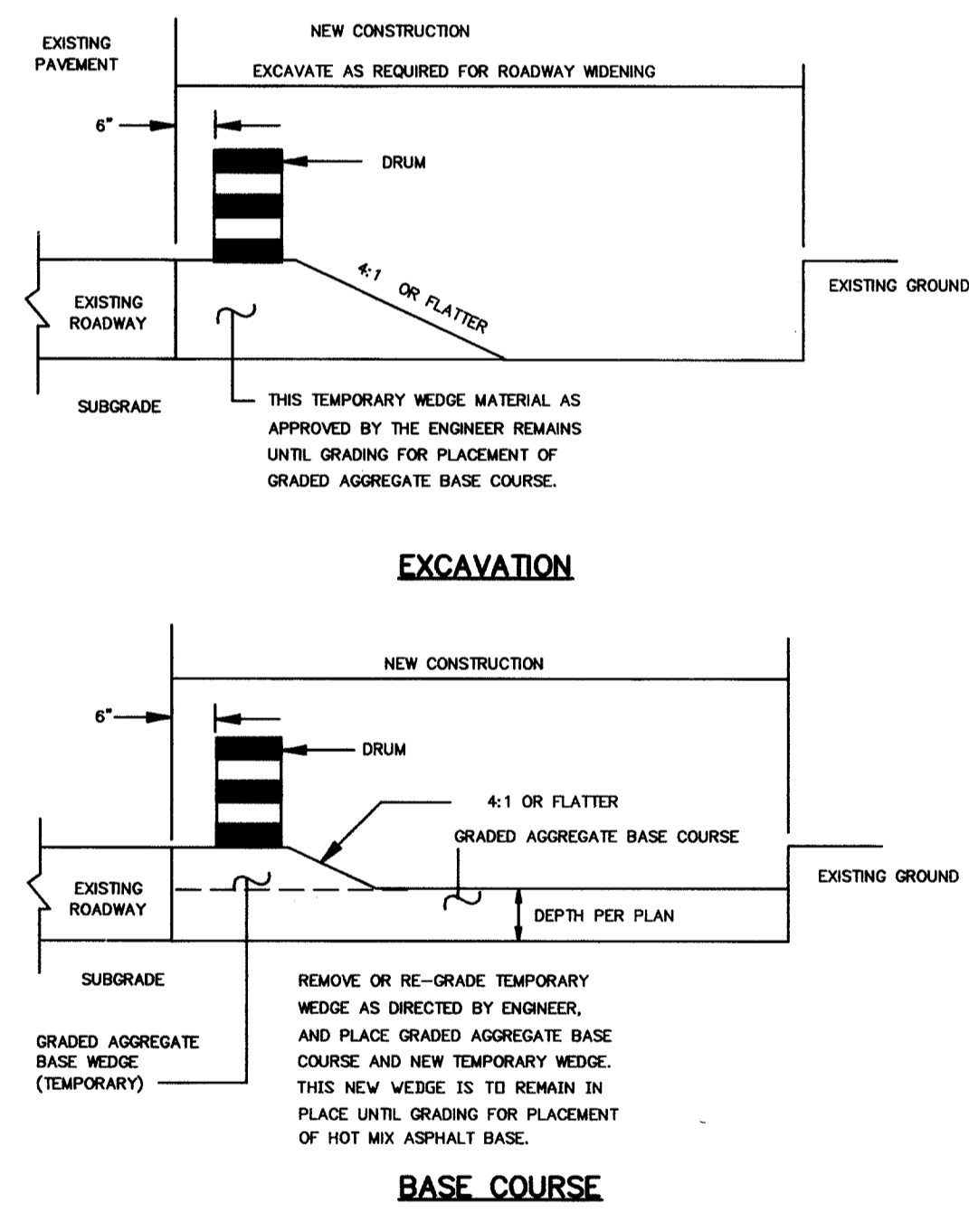
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



STAGED ROADWAY CONSTRUCTION  
MD 104.01-28

APPROVED: DEPARTMENT OF PUBLIC WORKS  
[Signature] DATE: 11-29-06  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
[Signature] DATE: 12/5/06  
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] DATE: 12/1/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

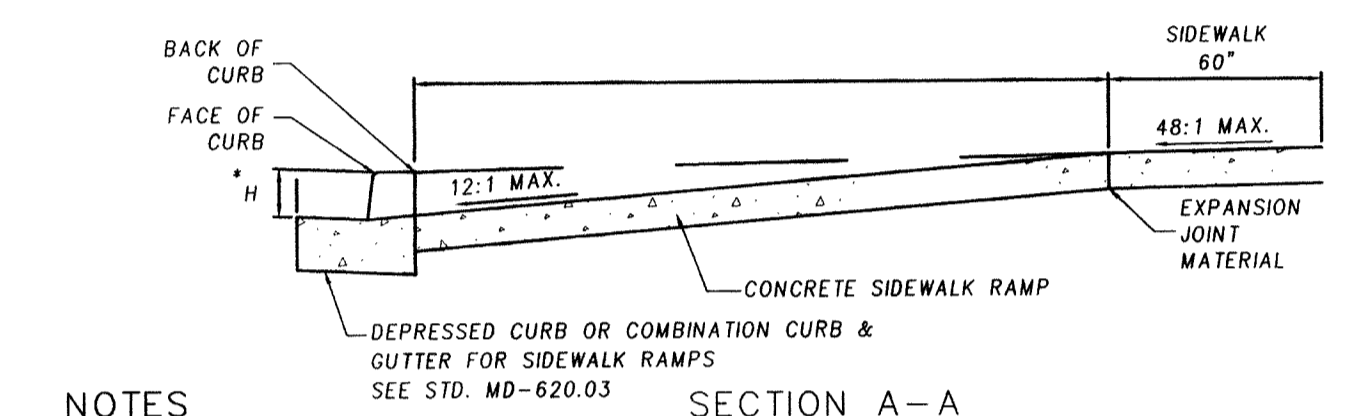
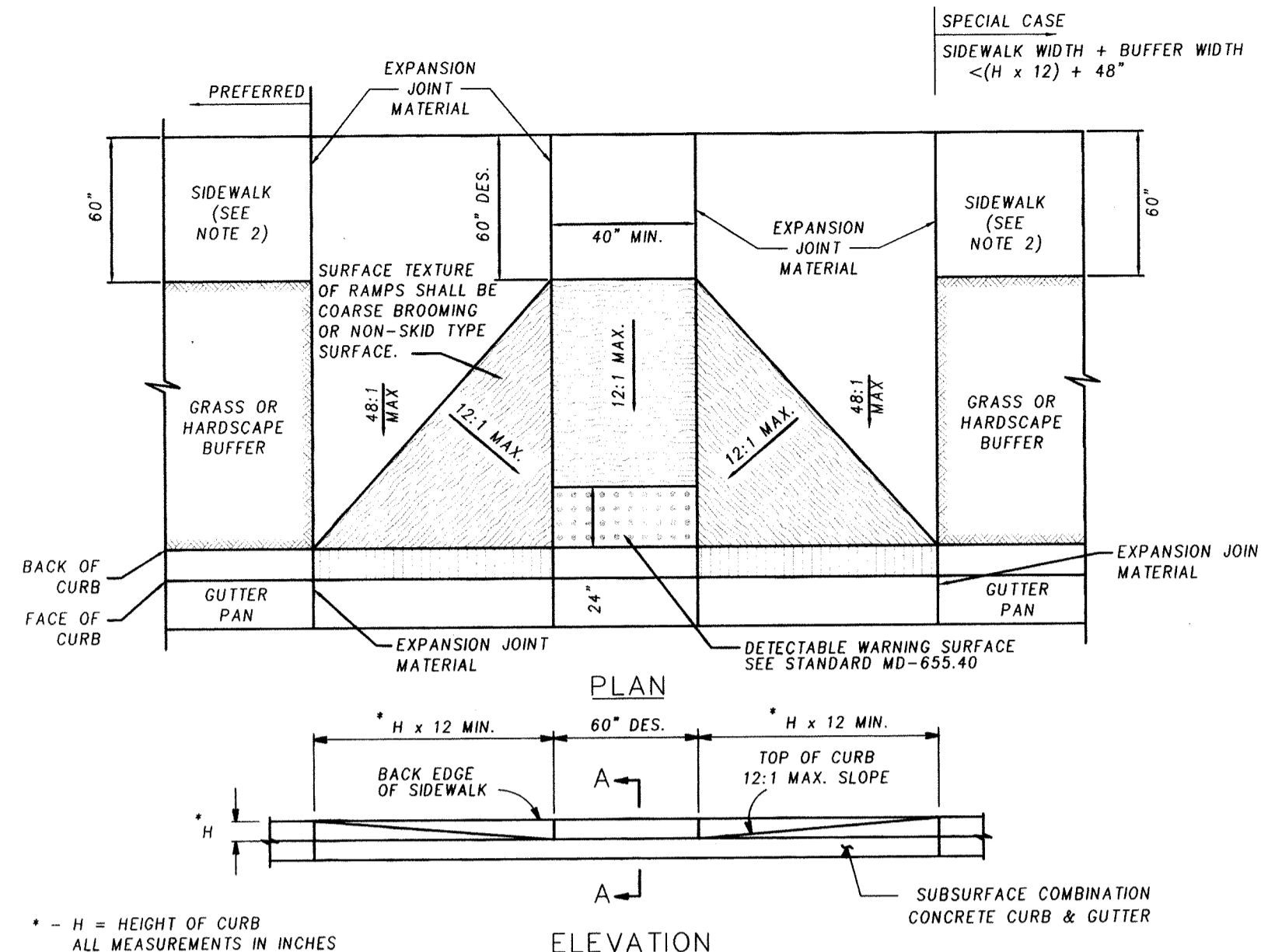
NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN  
ROAD IMPROVEMENTS, CROSS SECTIONS & DETAILS  
PUBLIC RIGHT-OF-WAY, WASHINGTON BOULEVARD  
PATUXENT SQUARE APARTMENTS AND RETAIL CENTER  
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  
TAX MAP 50 GRID 4, BULK PARCEL A, A RESUBDIVISION OF  
6TH ELECTION DISTRICT LOTS 1 THRU 10, BLOCK 4 AND LOTS 9, 10  
REF-S-05-03 AND 19 THRU 22, BLOCK 6, NORTH LAUREL PARK

**ROBERT H. VOGEL, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET, ELICOTT CITY, MD 21043  
TEL: 410-461-7666  
FAX: 410-461-8961

DESIGN BY: RJRHV  
DRAWN BY: RJHMV  
CHECKED BY: RHW  
DATE: 10-31-2006  
SCALE: AS SHOWN  
W.O. NO.: 04-11.00

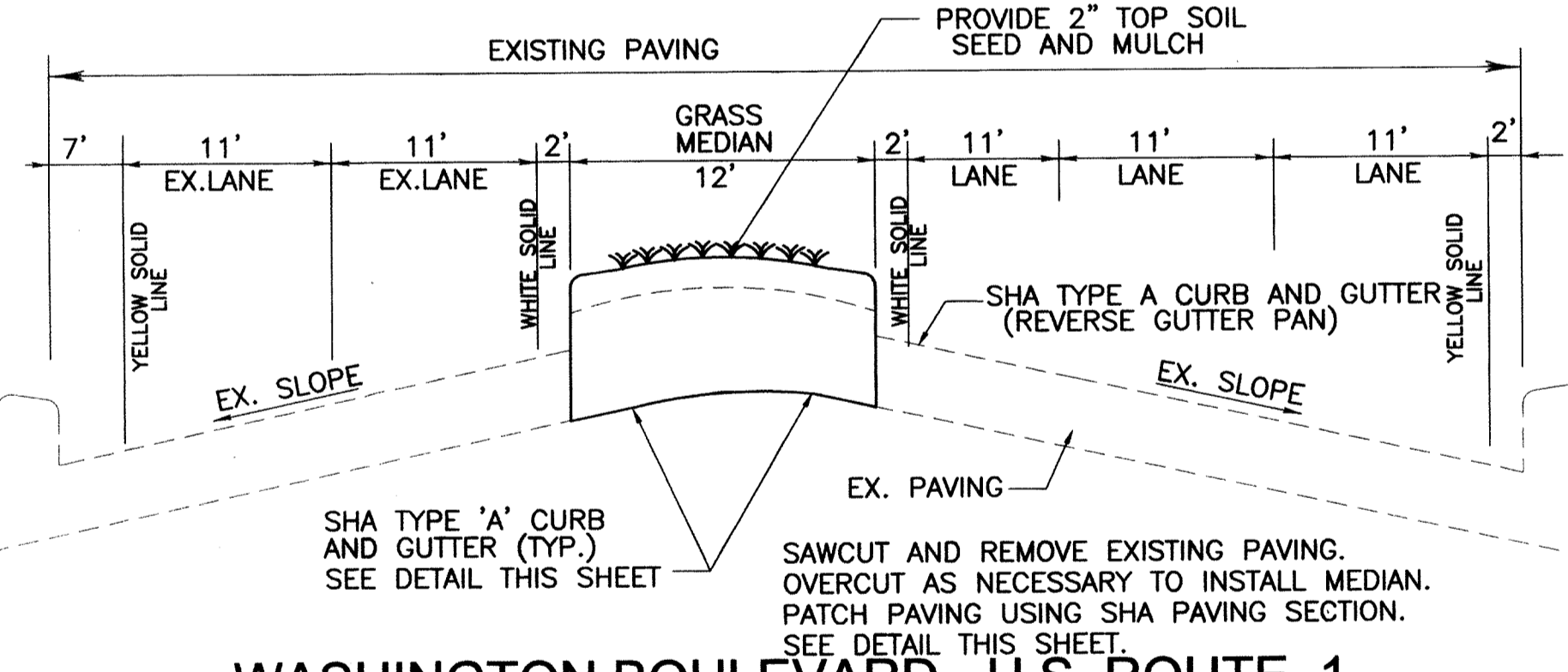
7 SHEET OF 9



**NOTES**

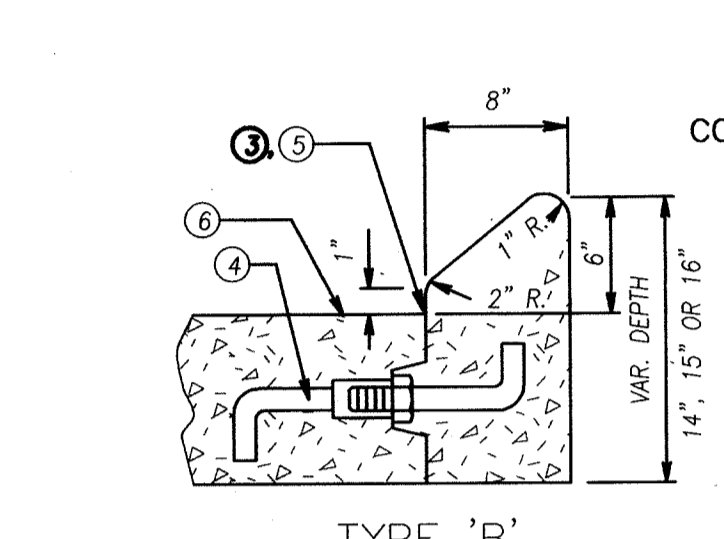
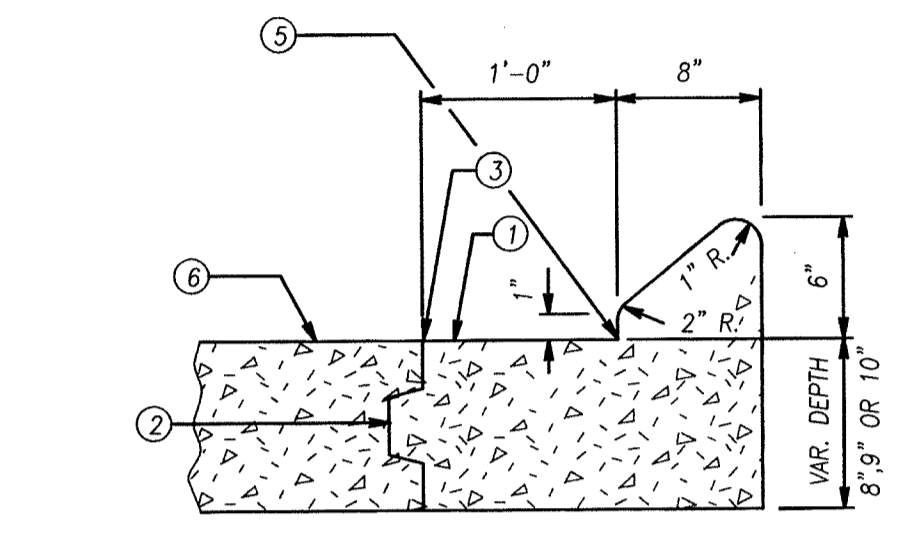
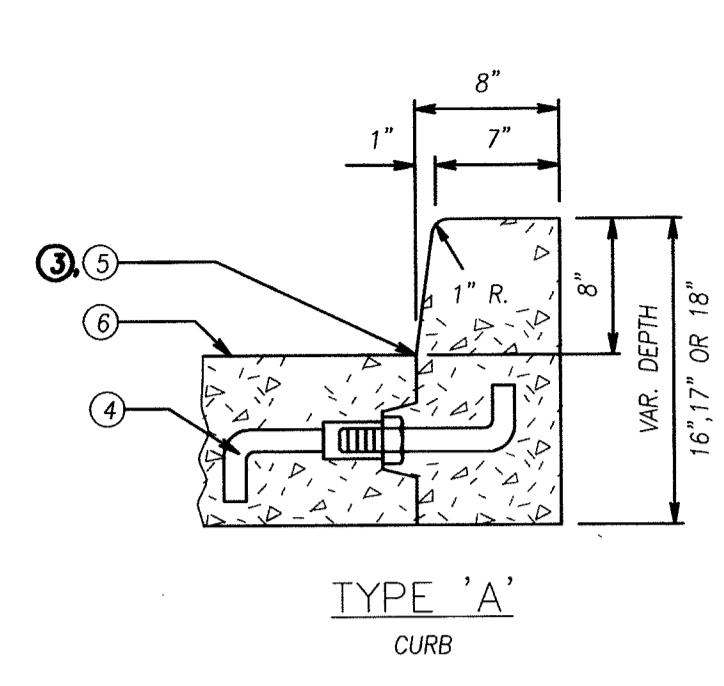
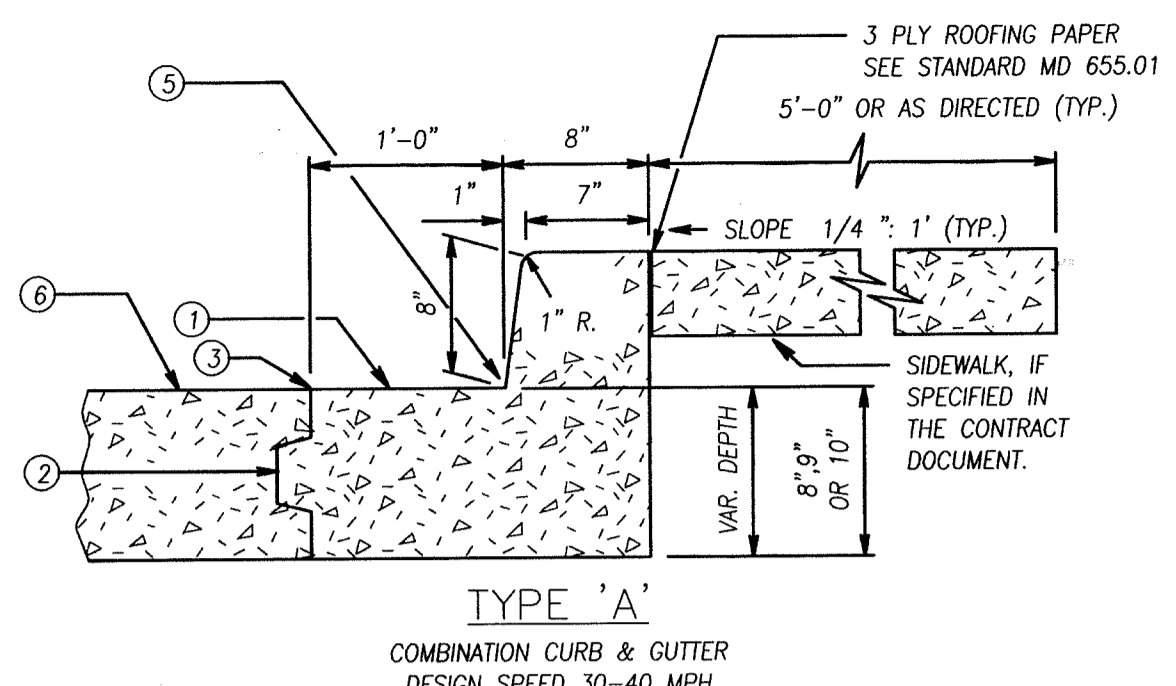
1. TO BE USED ON WIDE SIDEWALKS OR SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRY SPECIFIED IN THE DETAILS ABOVE CAN BE SATISFIED. MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION. 2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED. 3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. 4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01. 5. SIDEWALK RAMP SHALL BE INCLUDED IN PRICE BID FOR CONCRETE SIDEWALK. 6. DEPRESSURED CURB AND CURB TRANSITION SHALL BE INCLUDED IN PRICE BID FOR CURB OR CURB & GUTTER ADJACENT TO SIDEWALK RAMP. 7. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS. 8. SIDEWALK RAMP TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.

**HC RAMP FOR SHA RIGHT OF WAY**  
MD -655.11



**WASHINGTON BOULEVARD - U.S. ROUTE 1**  
**CROSS SECTION - ROAD IMPROVEMENTS**

**SECTION A-A**  
STATION 2+00 - 3+00  
NOT TO SCALE

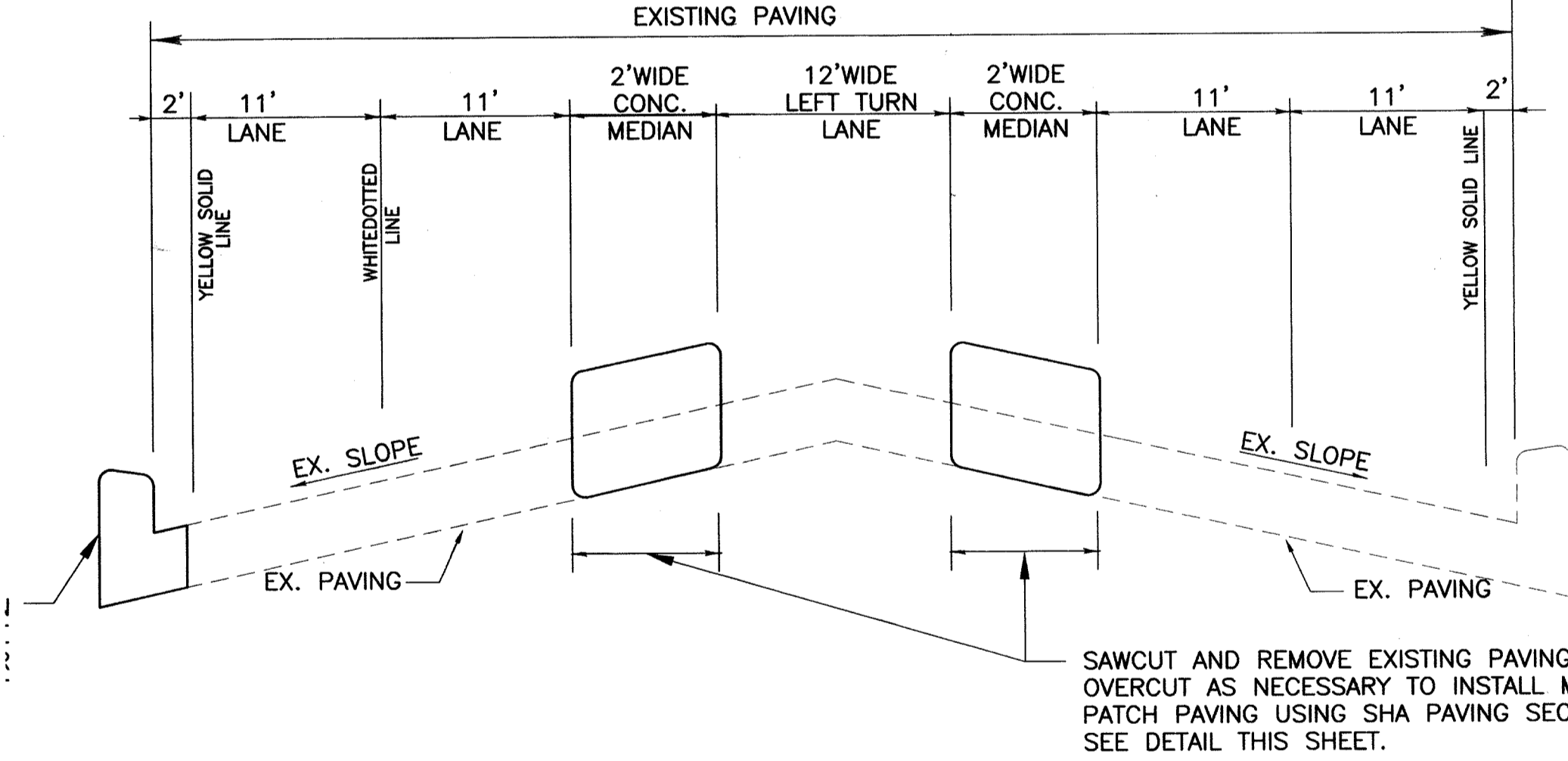


- NOTES**
- SLOPE GUTTER PAN 1/2" PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMP.
  - PROVIDE KEY AND LONGITUDINAL TIE BAR AS REQUIRED; SEE NOTE A
  - ROADWAY PAVEMENT CONSTRUCTION JOINT
  - LONGITUDINAL TIE DEVICE "J" BAR MODIFIED
  - FLOW LINE
  - ROADWAY PAVEMENT SLOPE

- NOTES**
- RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE KEYPED AND TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 572.61 FOR METHOD OF KEYWAY AND LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. THE DEVICES AND KEYS ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.
  - MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.
  - TYPE A OR B COMBINATION CURB AND GUTTER SHALL BE USED FOR ALL APPLICABLE NEW CONSTRUCTION AND IN THOSE AREAS WHERE THE COMBINATION CURB AND GUTTER IS TO BE REPLACED IN KIND.
  - TYPE A OR B CURB SHALL BE USED FOR THE REPLACEMENT OF LIKE KIND OF CURB ONLY. NOT TO BE USED FOR NEW CONSTRUCTION EXCEPT WHERE INDICATED ON APPROPRIATE INLET STANDARDS.

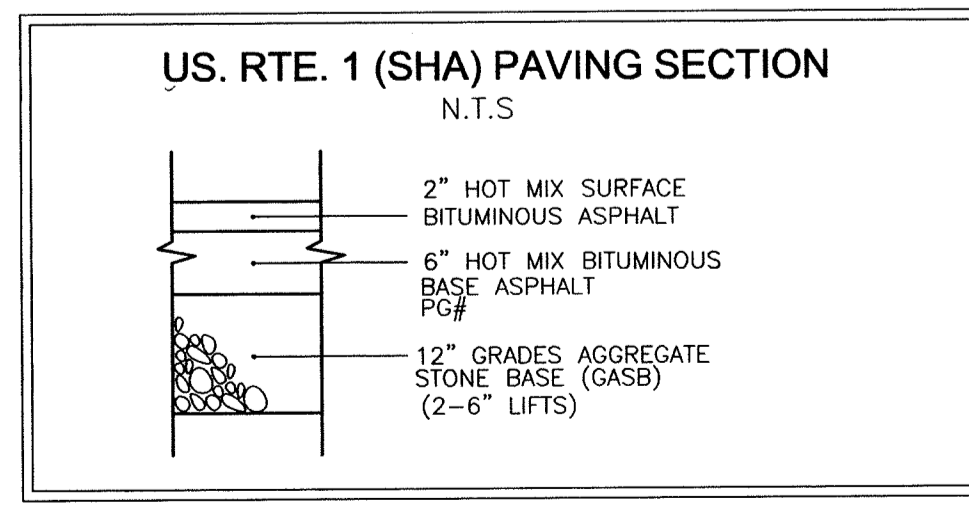
**STANDARD TYPES A & B CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER**

STANDARD NO. MD 620.02



**WASHINGTON BOULEVARD - U.S. ROUTE 1**  
**CROSS SECTION - ROAD IMPROVEMENTS**

**SECTION B-B**



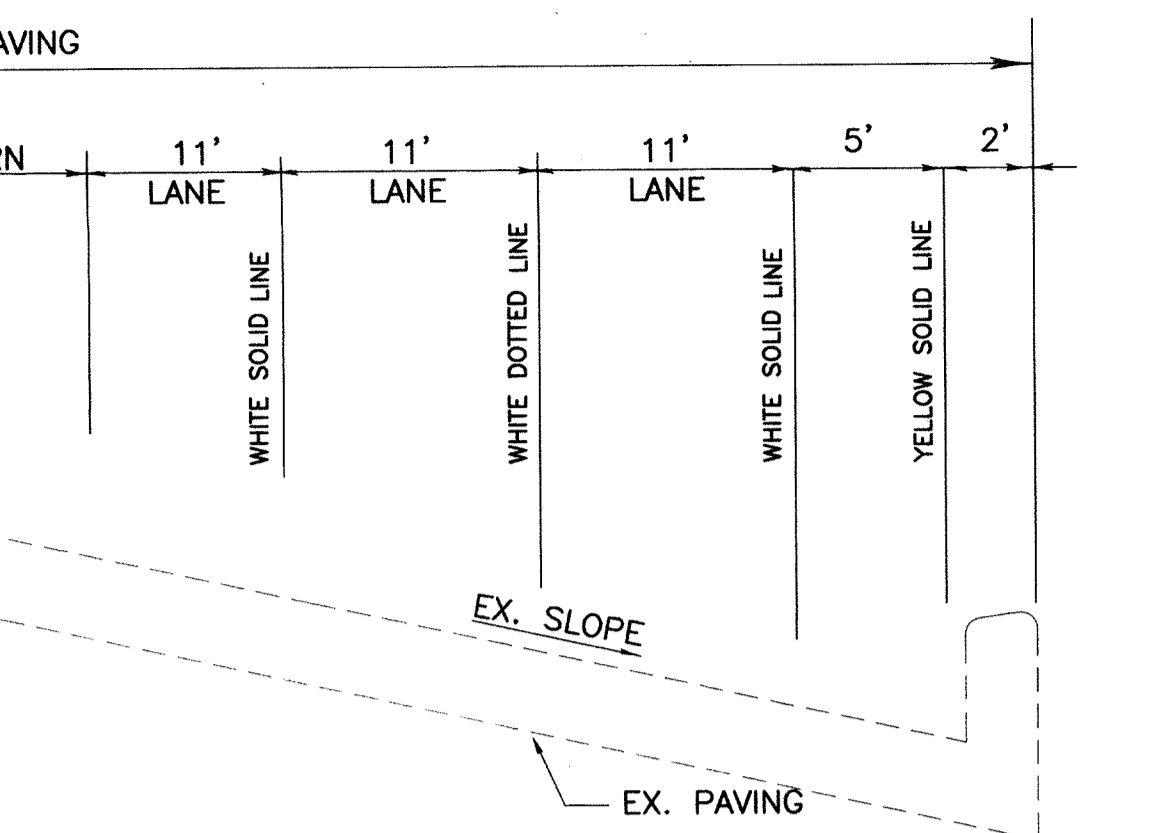
**OWNER**  
HOWARD COUNTY HOUSING COMMISSION  
C/O LEONARD VAUGHAN  
6751 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND  
21046-2164

**DEVELOPER**  
DEVELOPER  
ORCHARD DEVELOPMENT  
C/O SCOTT ARMIGER  
5032 DORSEY HALL DRIVE  
ELLCOTT CITY, MARYLAND  
21042

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*W. J. ...* 11-29-06  
CHIEF, BUREAU OF HIGHWAYS  
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*S. ...* 12/5/06  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE

*M. ...* 12/1/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE



**WASHINGTON BOULEVARD - U.S. ROUTE 1**  
**CROSS SECTION - ROAD IMPROVEMENTS**  
**SECTION C-C**  
STATION 2+35 - 4+00  
NOT TO SCALE

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN  
TRAFFIC SIGNS AND DETAILS  
PUBLIC RIGHT-OF-WAY, WASHINGTON BOULEVARD  
PATUXENT SQUARE APARTMENTS AND RETAIL CENTER  
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  
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

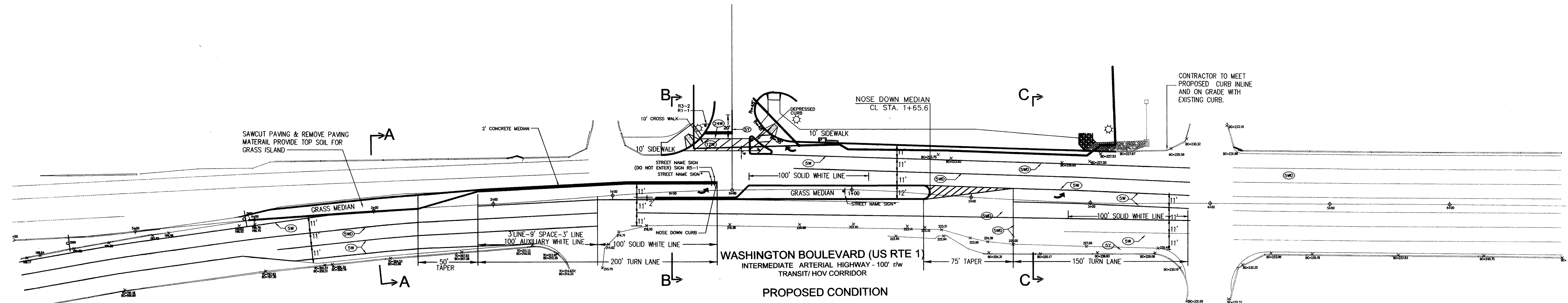
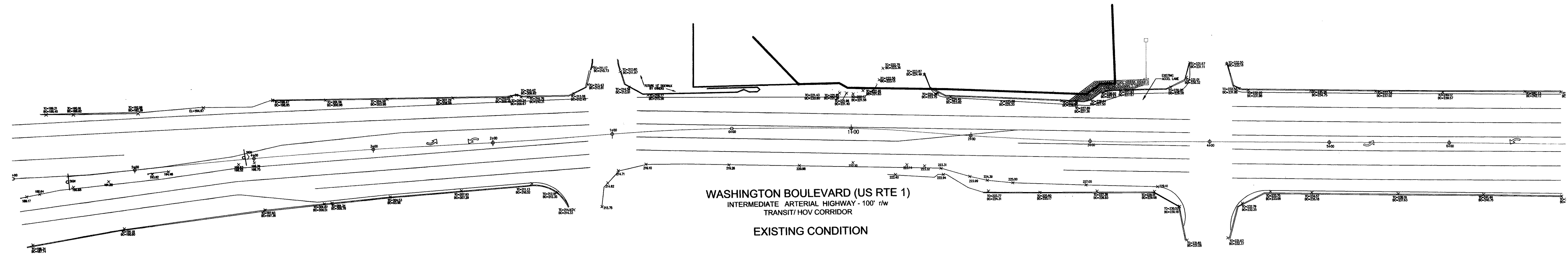
TAX MAP 50 GRID 4, 6TH ELECTION DISTRICT  
REF-S-05-03

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

DESIGN BY: RJRHV  
DRAWN BY: RJMY  
CHECKED BY: RHW  
DATE: 10-31-2006  
SCALE: AS SHOWN  
W.O. NO.: 04-11.00

8 SHEET OF 9





**LEGEND**

☉ STREET LIGHT

⬤ SIGN \*

\* STREET NAME SIGN SHALL BE FABRICATED BY HOWARD COUNTY.

**ROAD IMPROVEMENTS FOR US1**

APPROVED: DEPARTMENT OF PUBLIC WORKS

*Michelle Z. ...* 11-29-06  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Col ...* 12/5/06  
CHIEF, DIVISION OF LAND DEVELOPMENT

*...* 12/1/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**THIS SHEET FOR INFORMATION ONLY. FOR ROUTE 1 CONSTRUCTION REFERENCE SHA ACCESS PERMIT CONDITIONS AND PLAN.**

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN  
CONSTRUCTION DETAILS - PUBLIC RIGHT OF WAY  
WASHINGTON BOULEVARD  
**PATUXENT SQUARE APARTMENTS AND RETAIL CENTER**  
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

TAX MAP 50 GRID 4, 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  
6TH ELECTION DISTRICT REF-S-05-03

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

DESIGN BY: RJR/RV  
DRAWN BY: RJM/RV  
CHECKED BY: RRV  
DATE: 10-31-2006  
SCALE: AS SHOWN  
W.O. NO.: 04-11-00

STATE OF MARYLAND  
ROBERT H. VOGEL, PE #16193

9 SHEET OF 9