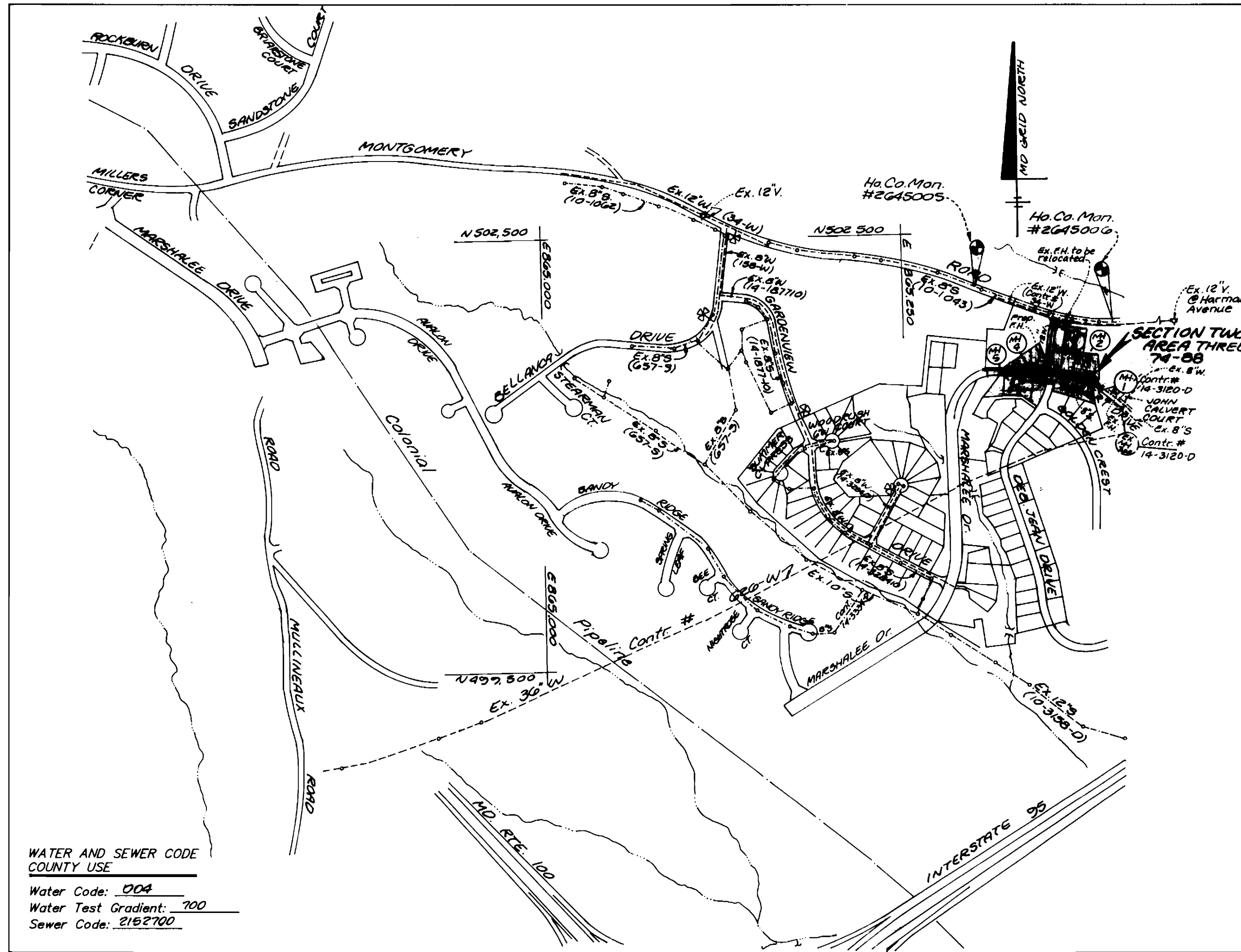


BENCH MARKS:

Ho. Co. Monument # 2645005
Elev 291.929
Concrete Monument 0.3' Below Surface
At Top Of Bank

Ho. Co. Monument # 2645006
Elev N/A
Concrete Monument 0.2' Below Surface
At Top Of Bank



WATER AND SEWER CODE
COUNTY USE
Water Code: 004
Water Test Gradient: .700
Sewer Code: 2162700

Type of Buildings:	Single Family Detached
Number of Lots/Parcels:	15 (12 Buildable - 3 O.S.)
Number of W.H.C.'S:	11
Number of S.H.C.'S:	11
Drainage Area:	Deep Run
Treatment Plant:	Patapsco Wastewater Treatment Plant

VICINITY MAP
Scale: 1"=600'

INDEX OF SHEETS	
SHEET NO.	TITLE
1	COVER SHEET
2	PLAN VIEW
3	PROFILES

General Notes

- PART I**
- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
 - All horizontal controls are based on Maryland State Coordinates.
 - All vertical controls are based on U.S.G.S. data.
 - All pipe elevations shown are invert elevations.
 - Clear all utilities by a minimum of 6". Clear all poles by 2' 0" minimum or tunnel as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the Contractor's work requires the bracing of additional poles, any cost incurred by the Owner for bracing of additional poles or damages shall be deducted from money owned the Contractor. The Contractor shall coordinate with the utility companies to schedule the bracing of the poles.
 - For details not shown on the drawings and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (latest edition). The Contractor shall have a copy of Volume IV on the job.
 - Where test pits have been made on existing utilities, they are noted by the symbol (circle with cross) at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the Contractor two weeks in advance of construction operations at his own expense.
 - Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 - SHA: 531-5533
 - BGE (Contractor Services): 850-4620
 - BGE (Underground damage control): 787-9068
 - Miss Utility: 1-800-257-7777
 - Colonial Pipeline Company: 795-1390
 - Howard County Dept. of Public Works, Bureau of Utilities: 313-4900
 - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs within the construction strip are not to be removed or damaged by the Contractor.
 - Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.

PART II: WATER

- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3 1/2" cover unless otherwise noted.
- Valves adjacent to the tees shall be strapped to the tees.
- All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
- Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The Contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.

PART III: SEWER

- All sewer mains to be PVC and D.I.P. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers. Standard Detail G-52. Where water tight manhole frame and cover is used, set top of frame 1'-6" above finished grade unless otherwise noted on drawings.
- House (s) with the symbol "C.N.S" indicates that cellar cannot be served.
- Manholes shown with 12" and 16" walls are for brick manholes only.

WATER & SEWER CONSTRUCTION PLANS
MARSHALEE WOODS
SECTION TWO AREA THREE
LOTS 74 - 88

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-3514-D

QUANTITIES				
AS BUILT				
ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
12" W	918 LF	870 LF	DIP	Griffin Pipe Products
8" W	305 LF	111 LF	DIP	Griffin Pipe Products
6" W	432 LF	36 LF	DIP	Griffin Pipe Products
12" x 12" CROSS	1 Ea.	1 Ea.	LIP	Union Foundry
12" x 8" CROSS	1 Ea.	1 Ea.	DIP	Mueller Co.
12" Valves	1 Ea.	1 Ea.	Cast Iron/Valve	Mueller Co.
Fire Hydrant	1 Ea.	1 Ea.	Cast Iron	Mueller Co.
8" SAN.	517 LF	517 LF	PVC	J.M. Mather Products
8" SEWER (D.I.P.)	350 LF	350 LF	DIP	Griffin Pipe Products
312" MANHOLES	2 Ea.	2 Ea.	Precast Concrete	Terre-Clay Products
4" BHC	270 LF	270 LF	PVC	J.M. Mather Products
3/4" WHC	283 LF	312 LF	"N" Copper	Cambria Metals
12" x 12" SV	1 Ea.	1 Ea.	Cast Iron/Valve	Mueller Co.
12" x 8" Reducer	2 Ea.	2 Ea.	DIP	Union Foundry
8" Valve	1 Ea.	1 Ea.	Cast Iron/Valve	Mueller Co.
6" x 4" Reducer	1 Ea.	1 Ea.	DIP	Union Foundry
12" x 8" Reducer	1 Ea.	1 Ea.	DIP	Union Foundry
NAME OF UTILITY CONTRACTOR:	Utilities Unlimited Inc.			CHECK BOX: SURVEY & DRAFTING DIVISION AS BUILT DATE:

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
J.A. Wainfall 5/13/96
Signature Date
NATURAL RESOURCES CONSERVATION SERVICE

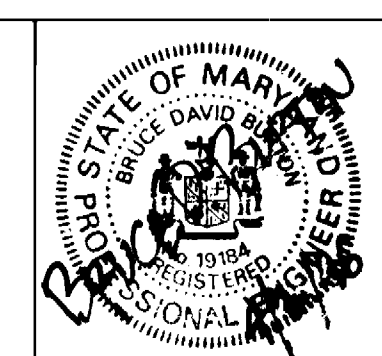
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John P. Dutton 5/13/96
Signature Date
HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND FINAL ROAD CONSTRUCTION PLANS: F-96-30

DEPARTMENT OF PUBLIC WORKS
Robert S. Sauer 5-8-96
Signature Date
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
[Signature] 5/1/96
Signature Date
CHIEF-DEVELOPMENT ENGINEERING DIVISION

LDE, INC.
9250 RAMSEY ROAD, SUITE 106
COLUMBIA, MARYLAND 21045
(410) 715-1070 (301) 596-3424



DESIGNED	EDS / SH		
DRAWN	AD		
CHECKED	BOB		
DATE	10/95	BY	NO.
		REVISION	
		DATE	

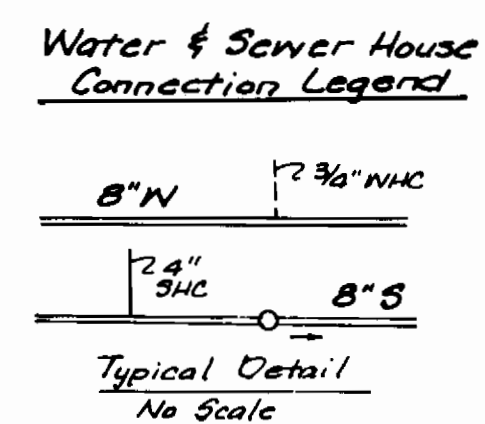
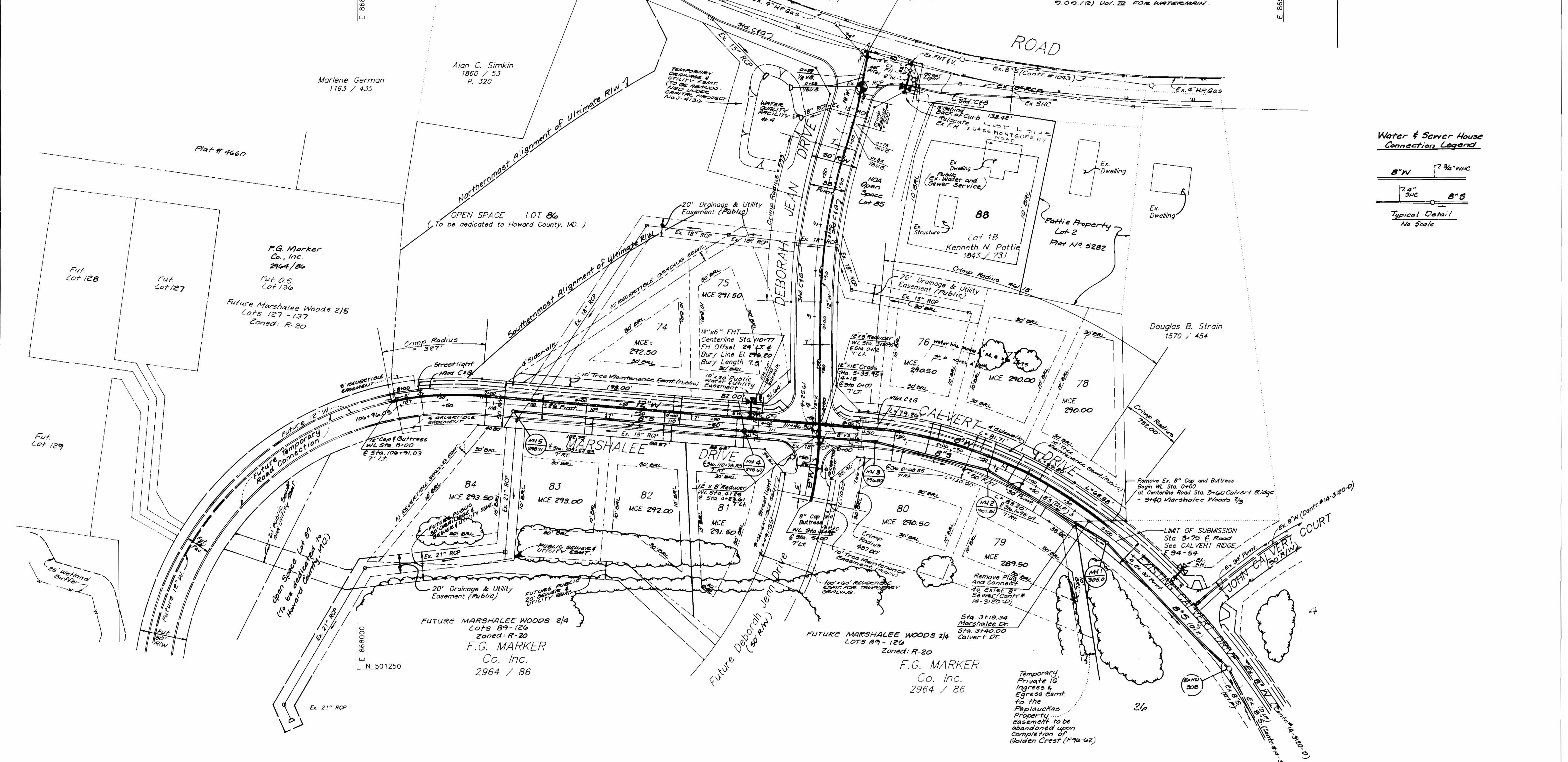
TITLE SHEET
600 SCALE MAP NO. 37
BLOCK 11

MARSHALEE WOODS
SECTION TWO AREA THREE
LOTS 74 - 88
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-3514-D

SCALE AS SHOWN
SHEET 1 OF 3

Sewer House Connection Table

Lot	Inv. @ Main	Inv. @ R	10' @ Cellar EL.
74	287.60	286.24	292.50
75	286.87	287.51	291.50
76	286.83	286.59	290.50
77	286.44	286.08	290.00
78	285.24	286.94	290.00
79	285.30	285.58	289.50
80	285.94	286.24	290.50
81	286.97	287.33	291.50
82	287.69	288.05	292.00
83	286.45	288.81	293.00
84	289.17	289.57	293.50

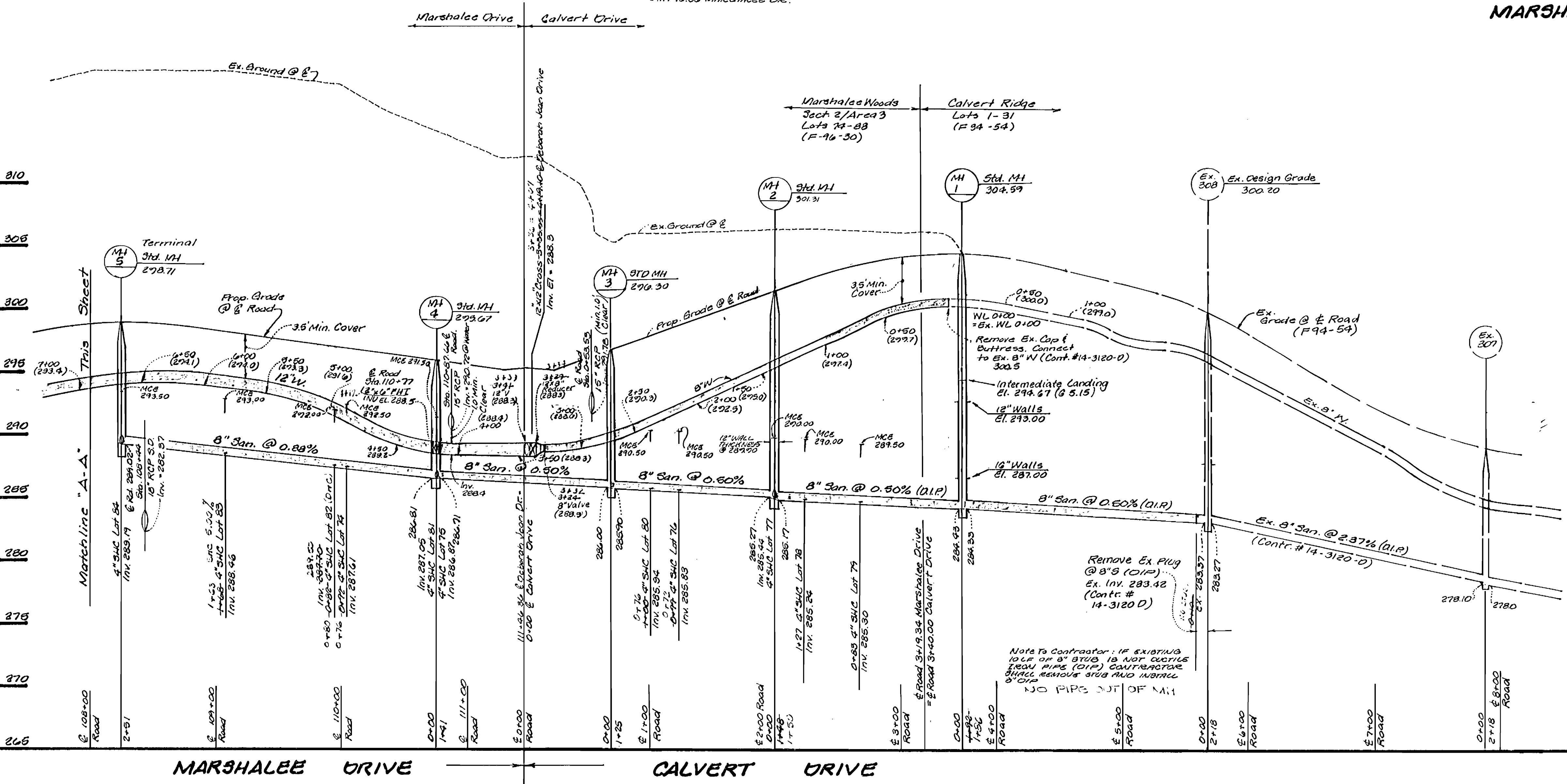
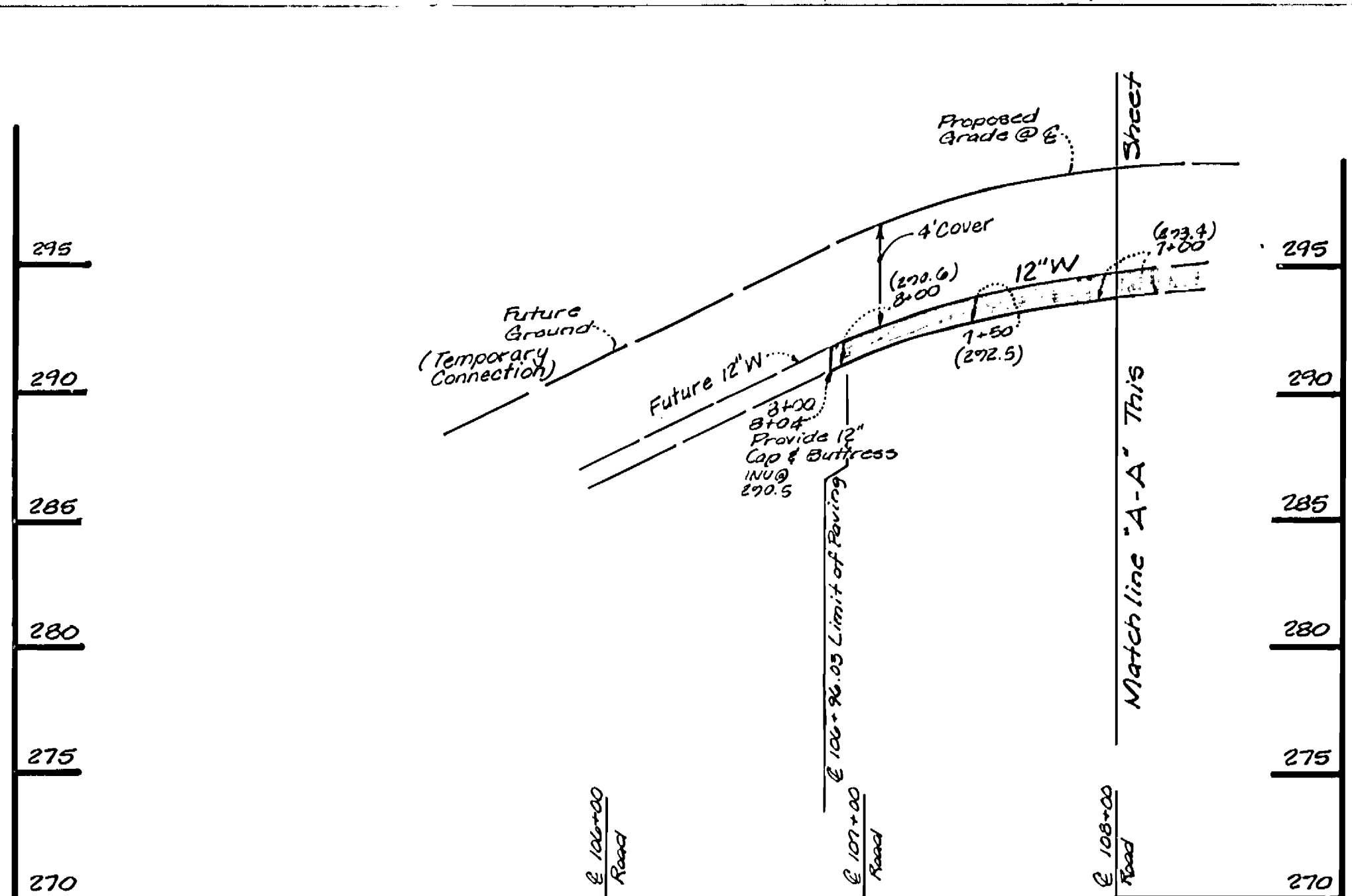
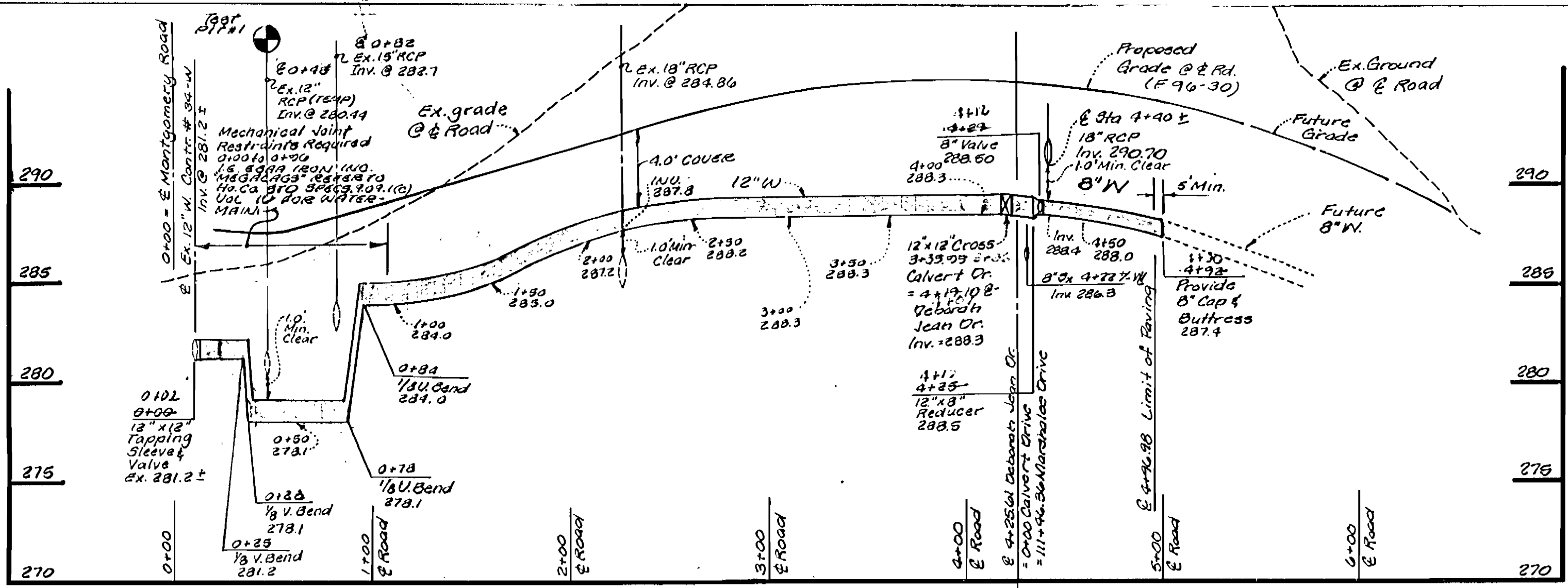


SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND FINAL ROAD CONSTRUCTION PLANS: F96-20

DEPARTMENT OF PUBLIC WORKS	DEPARTMENT OF PLANNING & ZONING	LDE, INC. 9250 RUMSEY ROAD, SUITE 106 COLUMBIA, MARYLAND 21045 (410) 715-1070 (301) 596-3424	DESIGNED JH/EOS DRAWN BE/1 CHECKED 800 DATE Oct. 1995	SCALE 1" = 50'
<i>R. B. ...</i> CHIEF - BUREAU OF UTILITIES	<i>[Signature]</i> CHIEF - DEVELOPMENT ENGINEERING DIVISION		DATE Oct. 1995	SCALE 1" = 50'
5-9-96 DATE	5/15/96 DATE		BY NO.	SCALE
			REVISION	DATE
			DATE	600 SCALE MAP NO. 97
			DATE	BLOCK 11

MARSHALEE WOODS
SECTION TWO - AREA THREE
LOTS 74 - 88
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
Contract No 14-3514-D

2 of 3



SEWER AS-BUILT			NAFER AS-BUILT		
FROM:	TO:	Dist.	FROM:	TO:	Dist.
MH 4	Lot 74 75'		MH 4	Lot 74	86'
F.H. 1	Lot 74 76'		F.H.	Lot 74	83'
MH 4	Lot 75 33'		MH 4	Lot 75	36'
F.H. 1	Lot 75 8'		F.H.	Lot 75	25'
MH 3	Lot 76 63'		MH 3	Lot 76	73'
MH 2	Lot 76 79'		MH 2	Lot 76	70'
MH 3	Lot 77 128'		MH 3	Lot 77	117'
MH 2	Lot 77 35'		MH 2	Lot 77	35'
Lot 78	Lot 77 35'		MH 2	Lot 78	65'
MH 1	Lot 78 131'		MH 1	Lot 78	103'
MH 2	Lot 78 42'		MH 2	Lot 79	65'
Lot 77	Lot 78 35'		MH 1	Lot 79	81'
MH 2	Lot 79 75'		MH 2	Lot 80	104'
MH 1	Lot 79 78'		MH 3	Lot 80	28'
MH 3	Lot 80 50'		F.H.	Lot 81	52'
MH 2	Lot 80 78'		MH 4	Lot 81	20'
F.H. 1	Lot 81 51'		F.H.	Lot 82	105'
MH 4	Lot 81 13'		MH 4	Lot 82	30'
F.H. 1	Lot 82 31'		MH 5	Lot 83	30'
MH 4	Lot 82 78'		Lot 85	Lot 83	12'
MH 5	Lot 83 30'		Lot 84	Lot 83	31'
Lot 84	Lot 83 31'		MH 5	Lot 84	36'
MH 5	Lot 84 21'		Lot 84	Lot 84	20'
Lot 83	Lot 84 31'		F.H.	12" VALVE	55'
			ENT. S.M.	9" VALVE	74'
			MH 4	8" VALVE	35'
			MH 3	4 1/2" DEPTH VALVE	53'
			MH 4	8" VALVE	35'
			MH 3	3 1/2" VALVE	38'
			F.H.	12" VALVE	72'
			MH 4	8" VALVE	71'
			F.H.	F.H. VALVE	16'
			MH 4	3" VALVE	18'

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND FINAL ROAD CONSTRUCTION PLANS: F 96-30

DEPARTMENT OF PUBLIC WORKS
 DEPARTMENT OF PLANNING & ZONING
 DATE: 5-8-96
 DATE: [Signature]

LDE, INC.
 9250 RUMSEY ROAD, SUITE 106
 COLUMBIA, MARYLAND 21045
 (410) 715-1070 (301) 596-3424



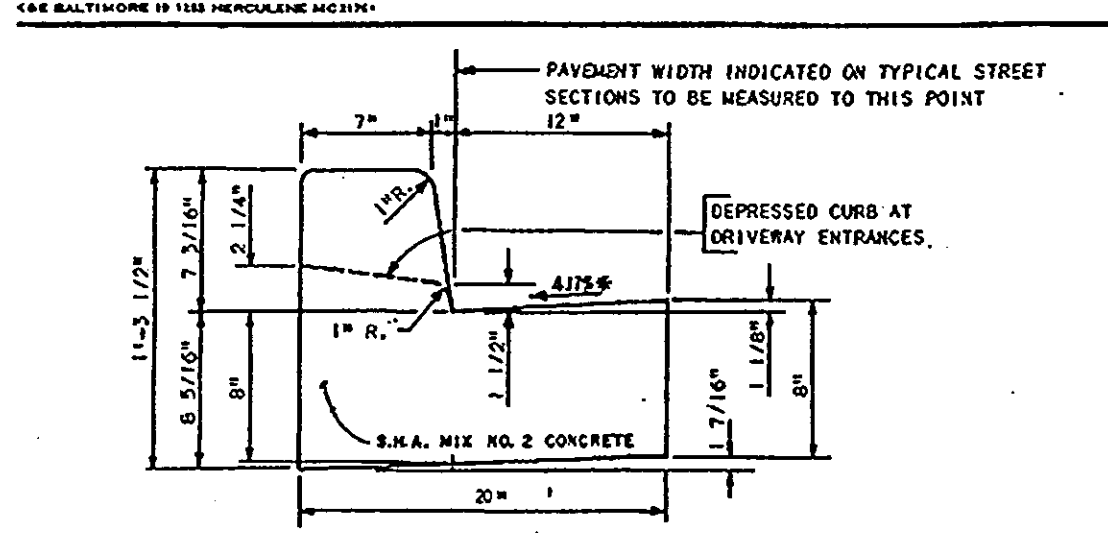
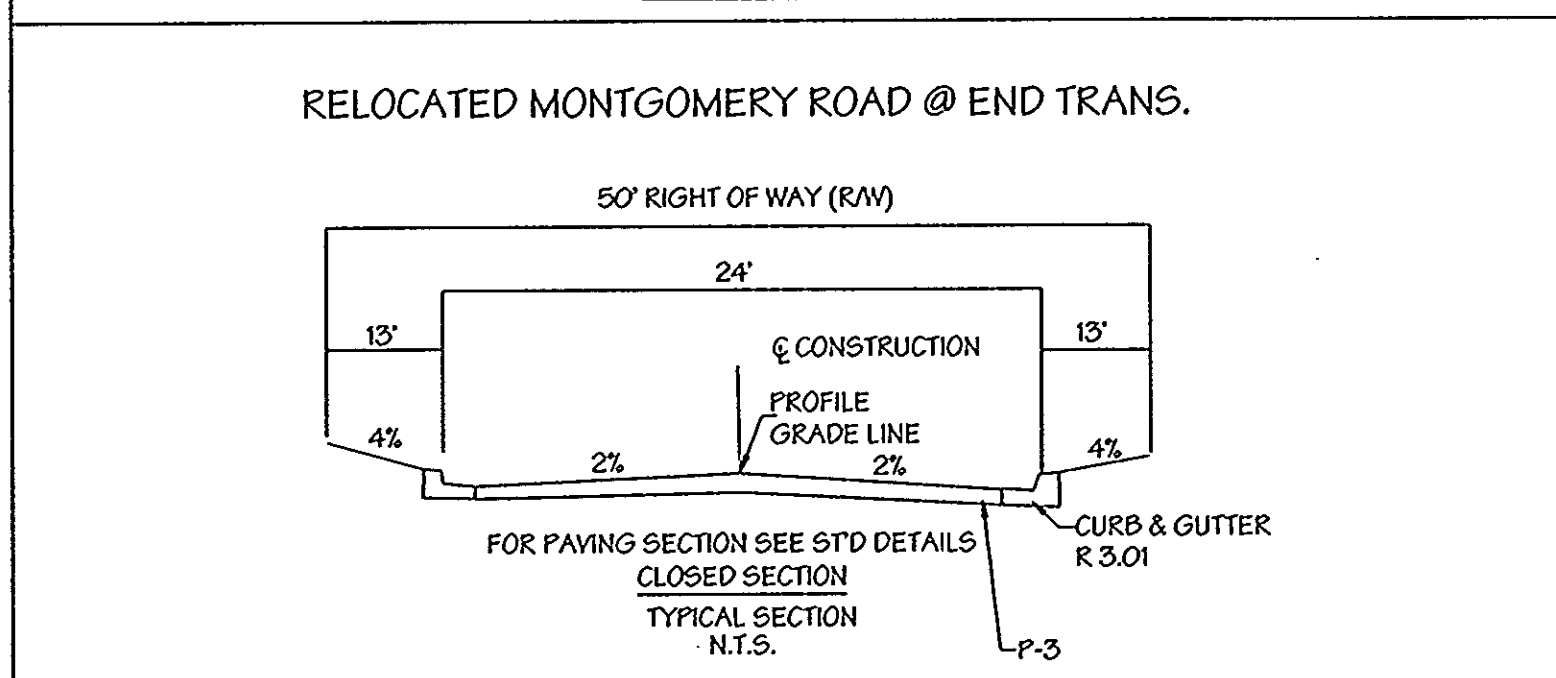
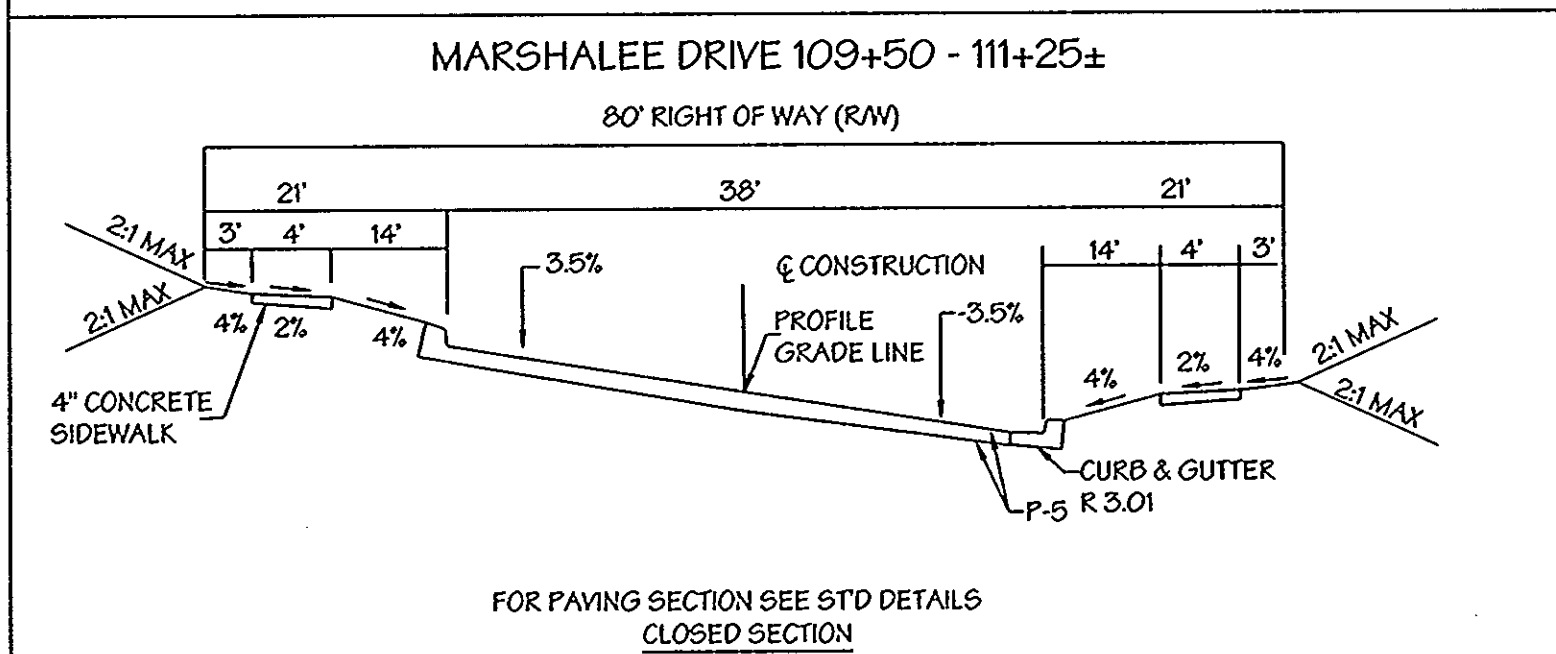
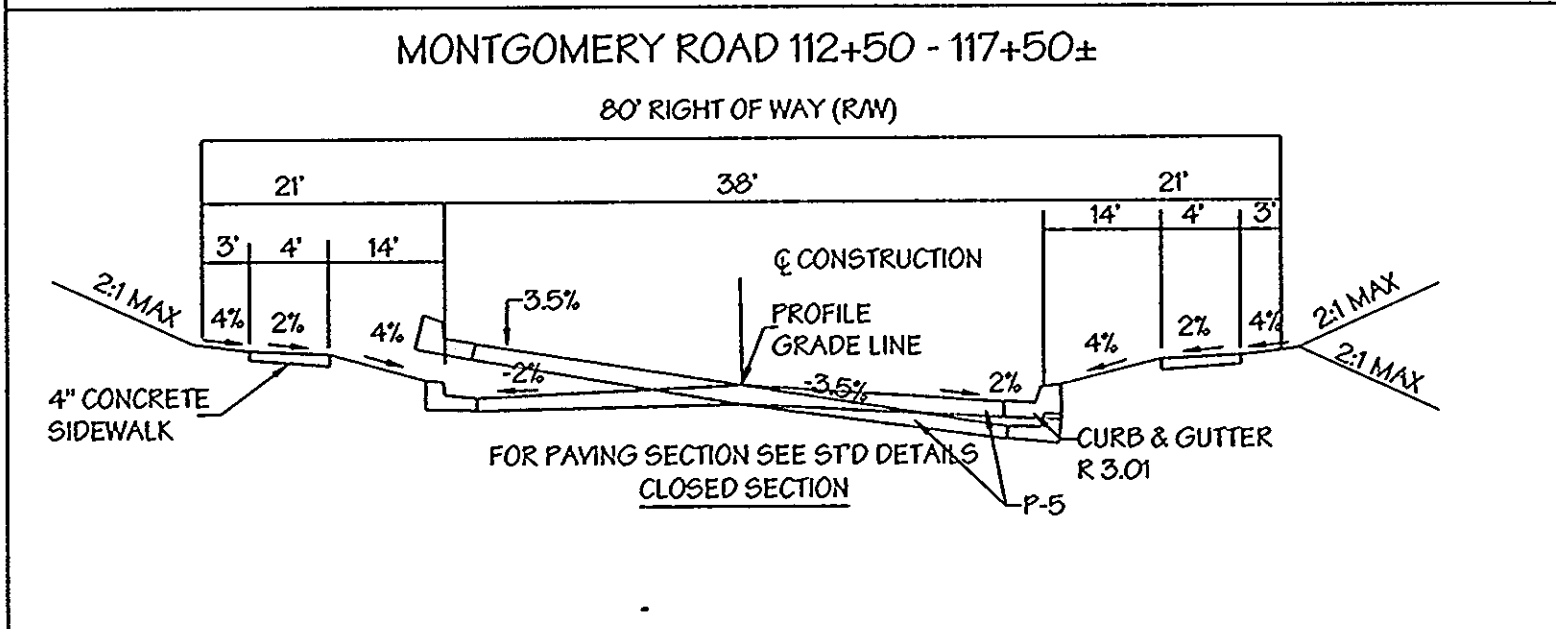
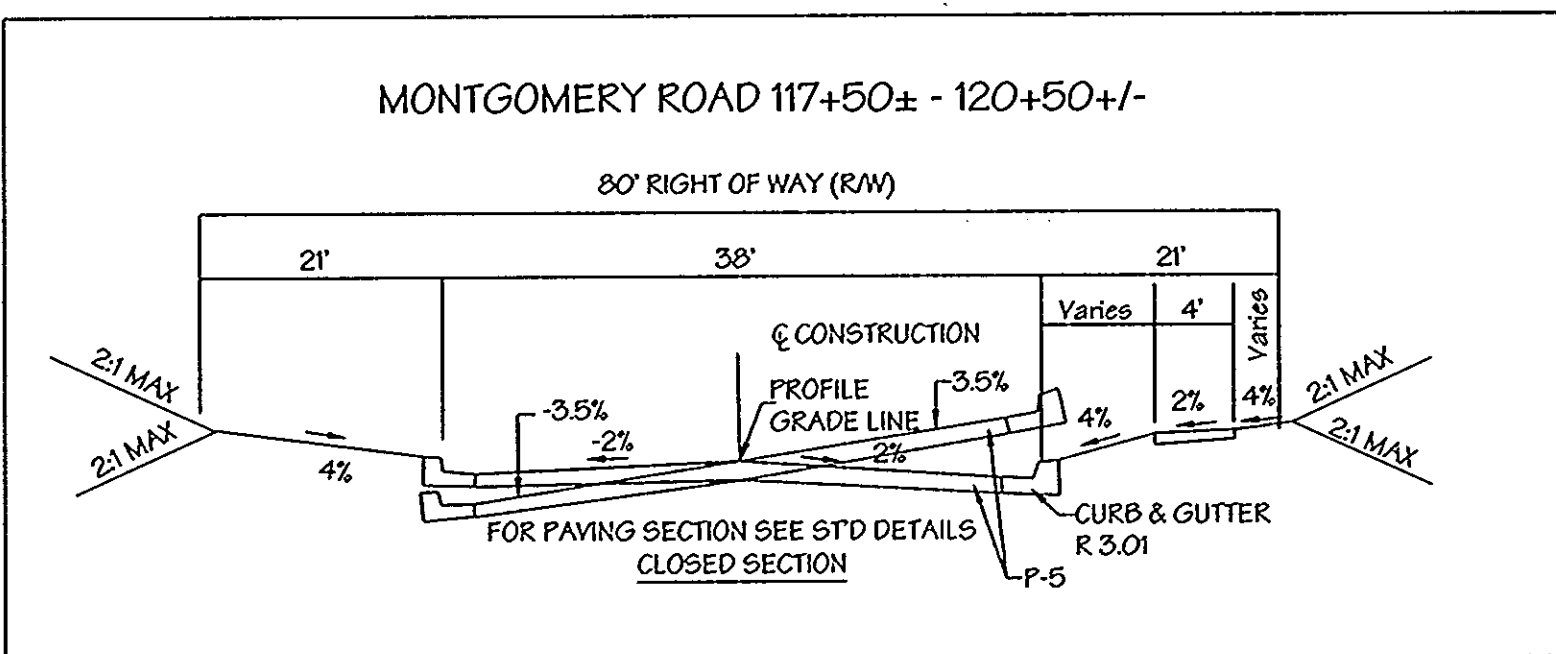
DESIGNED	8/25/94
DRAWN	081
CHECKED	008
DATE	Oct. 1995
BY	NO.
REVISION	
DATE	

PROFILE

600 SCALE MAP NO. 37 BLOCK 11

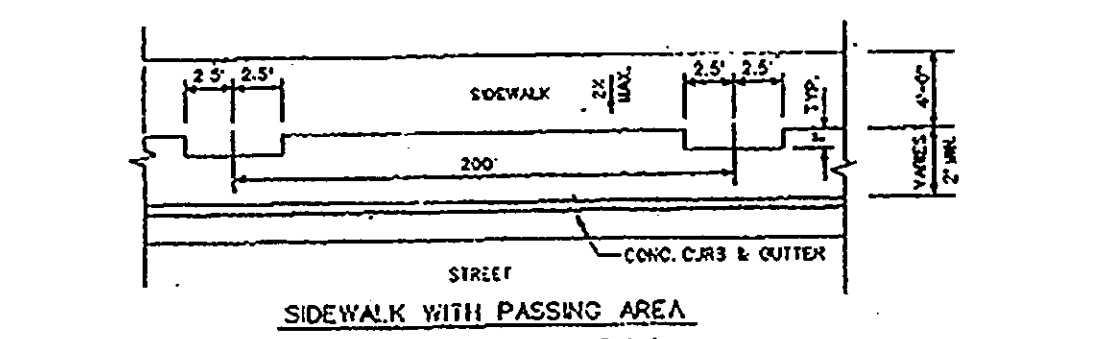
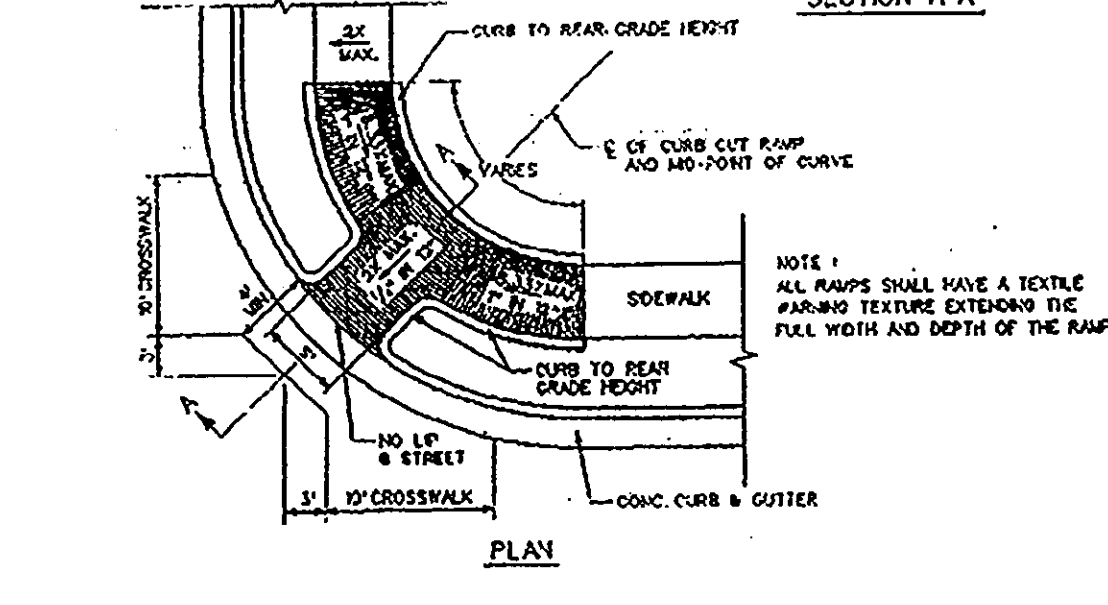
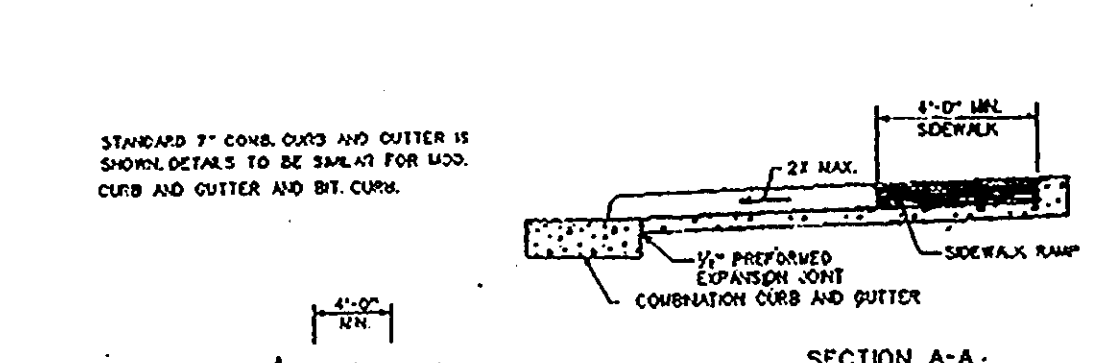
MARSHALEE WOODS
 SECTION TWO - AREA THREE
 LOTS 74 - 83
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 Contract No. 14-3514-D

SCALE
 Hor. 1" = 50'
 Vert. 1" = 5'
 SHEET
 3 OF 3

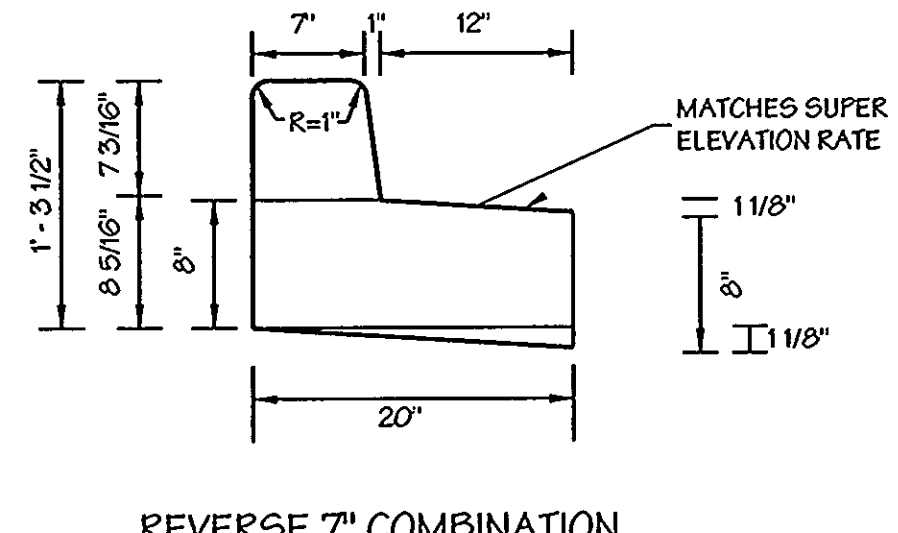


CUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER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

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief - Bureau of Engineering

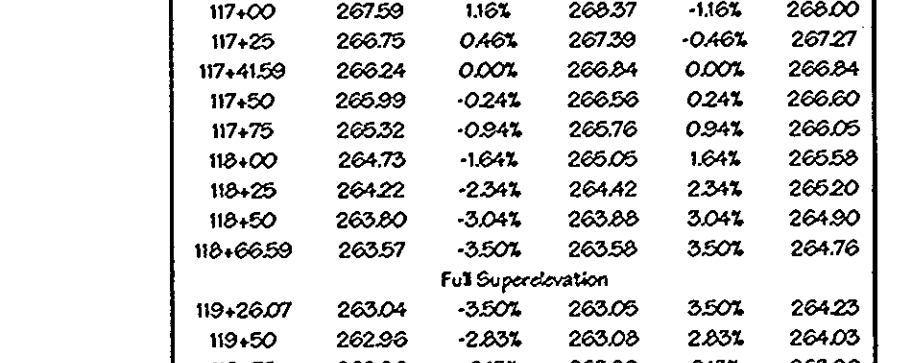


HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief - Bureau of Engineering



NO SCALE

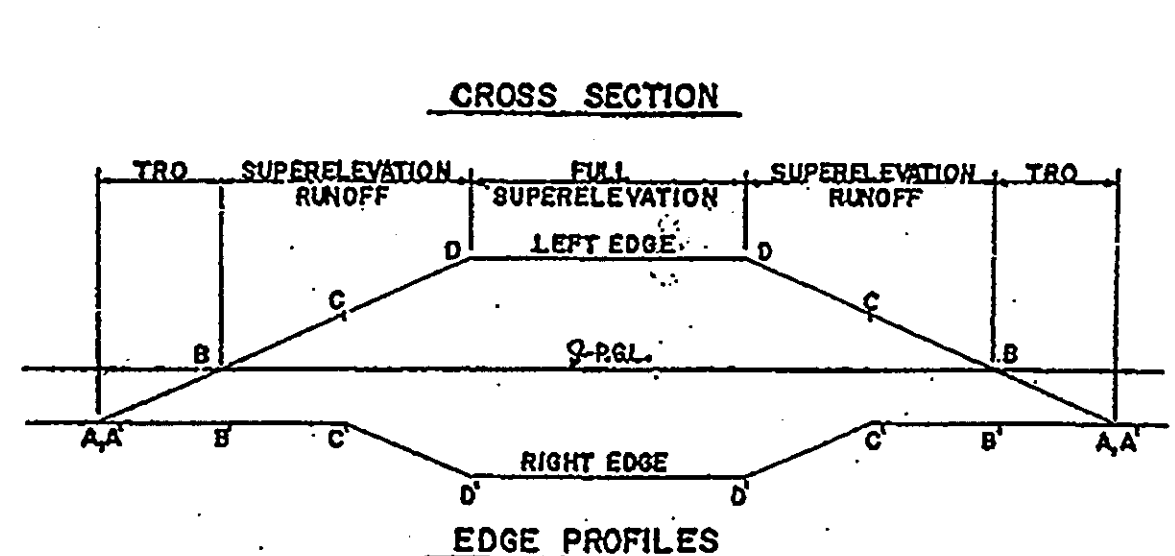
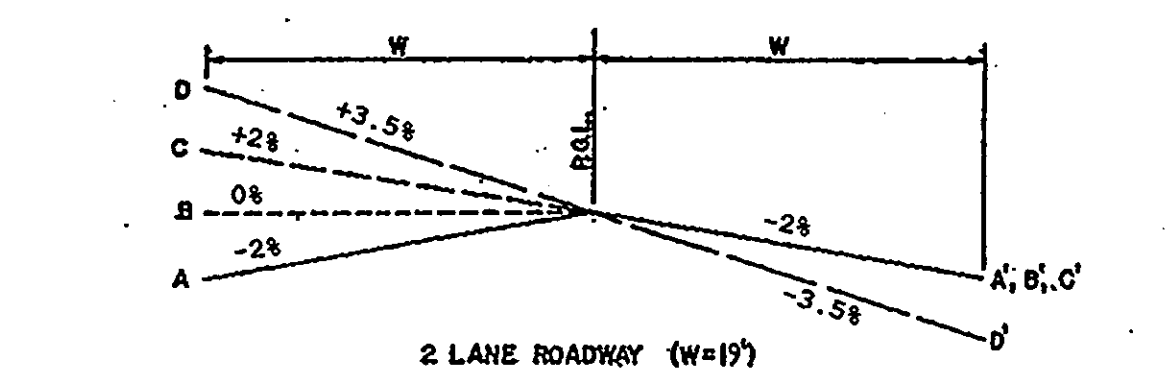
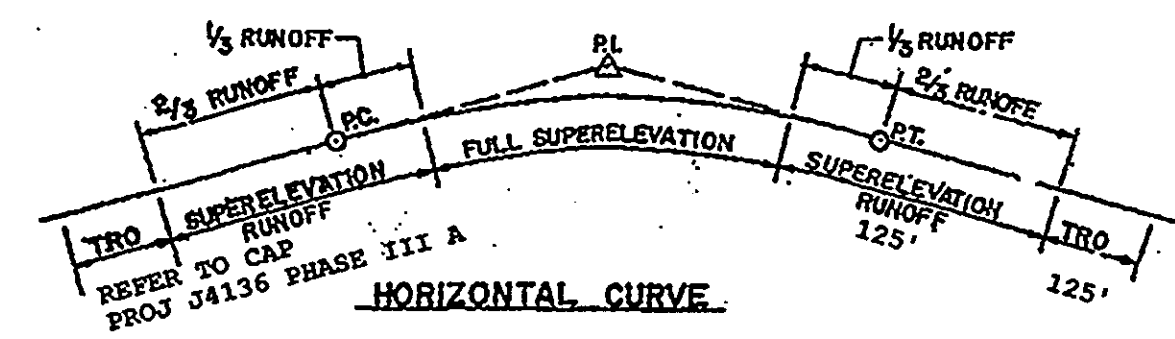
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief - Bureau of Engineering



Marshalee Drive - Superelevation Table

CL STATION	CL ELEVATION	Cross Slope Left Side	IC Left	Cross Slope Right Side	IC Right
116+16.59	270.85	3.50%	272.05	-3.50%	270.87
116+25	270.52	3.25%	271.67	-3.25%	270.57
116+50	269.52	2.50%	270.54	-2.50%	269.69
116+75	268.92	1.80%	269.41	-1.80%	268.80
117+00	267.59	1.16%	268.37	-1.16%	268.00
117+25	266.75	0.46%	267.29	-0.46%	267.27
117+41.59	266.24	0.00%	266.84	0.00%	266.84
117+50	265.99	-0.24%	266.59	0.24%	266.60
117+75	265.32	-0.84%	266.76	0.84%	266.05
118+00	264.75	-1.64%	266.05	1.64%	265.59
118+25	264.22	-2.34%	264.42	2.34%	265.20
118+50	263.80	-3.04%	263.88	3.04%	264.90
118+66.59	263.57	-3.50%	263.59	3.50%	264.76
119+26.07	263.04	-3.50%	263.05	3.50%	264.23
119+50	262.99	-2.80%	263.09	2.80%	264.05
119+75	262.98	-2.10%	263.20	2.10%	263.90
119+79.64	262.97	-2.00%	263.23	2.00%	263.89
120+00	263.05	-2.00%	263.30	1.43%	263.87
120+25	263.21	-2.00%	263.46	0.73%	263.90
120+50	263.47	-2.00%	263.71	0.00%	264.03
120+51.07	263.48	-2.00%	263.72	0.00%	264.04
120+75	263.80	-2.00%	264.08	-0.67%	264.24
121+00	264.15	-2.00%	264.43	-1.37%	264.46
121+22.50	264.17	-2.00%	264.45	-2.00%	264.37

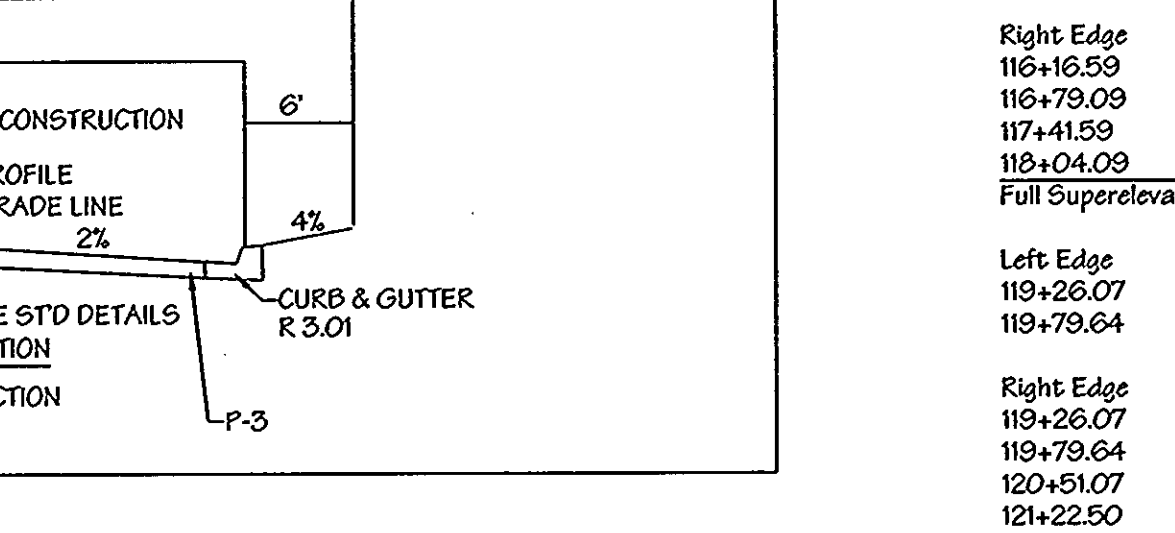
Notes: Normal / Existing Typical Section Roadway Beyond 121+22.50



LEGEND
PC - POINT OF CURVATURE
PT - POINT OF TANGENCY
TRO - TANGENT RUNOUT
PGL - PROFILE GRADE LINE

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
METHOD OF ATTAINING SUPERELEVATION MODIFIED

FIGURE: 2-07
DATE: 1/28
REVISED:



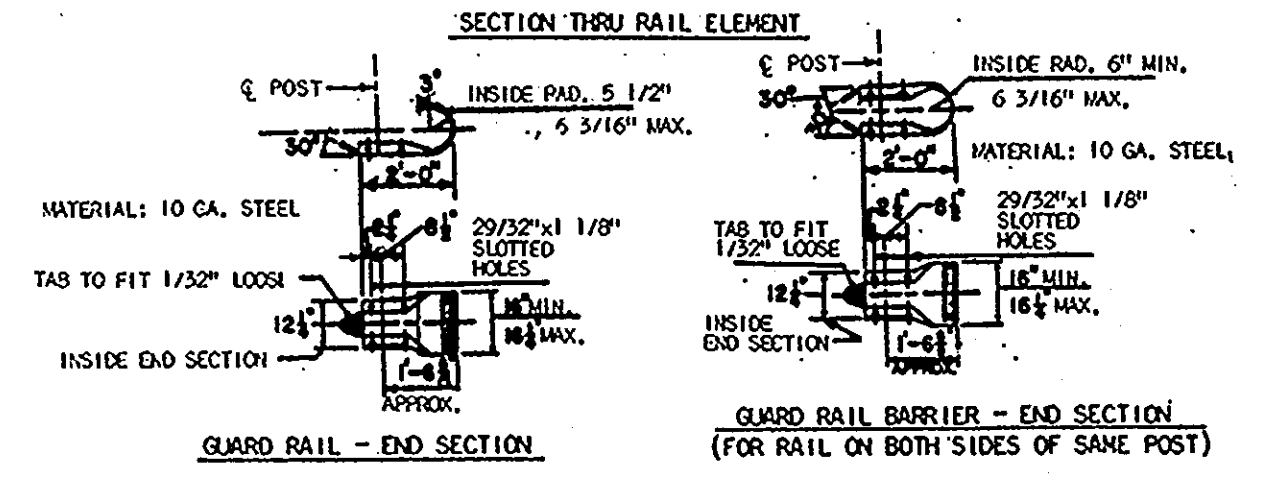
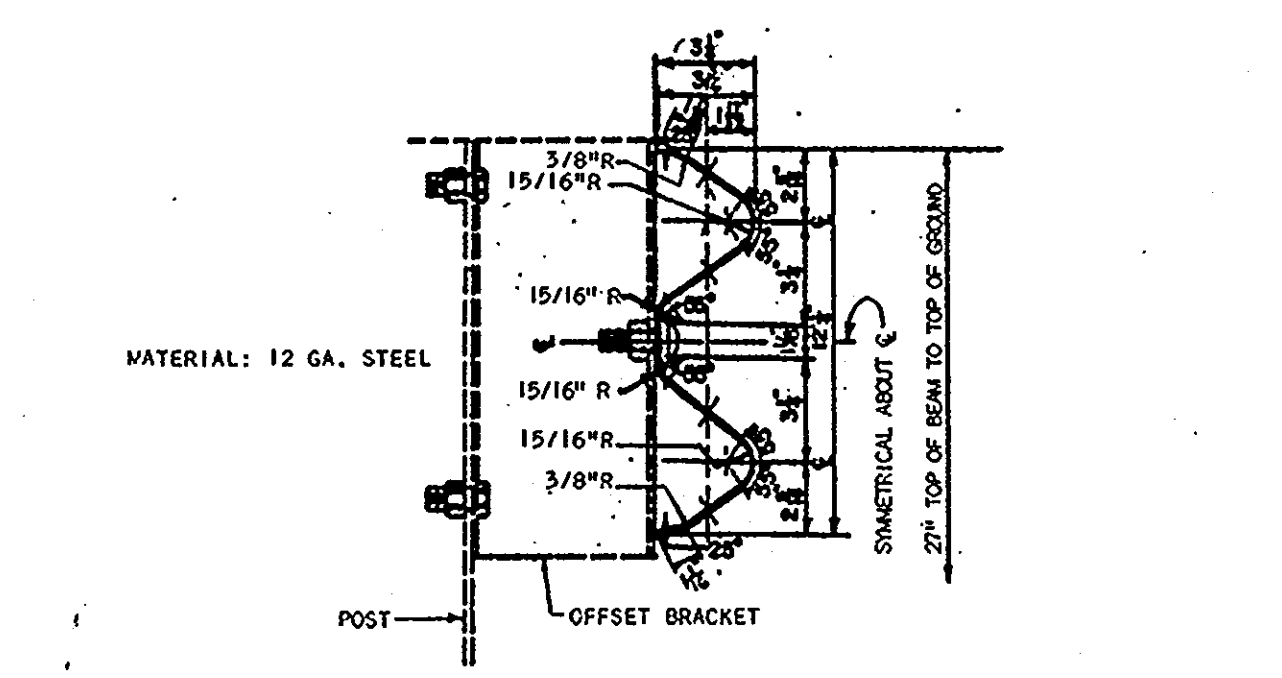
FOR PAVING SECTION SEE STD DETAILS CLOSED SECTION TYPICAL SECTION N.T.S.

Left Edge
116+16.59 Begin Transition from 3.5% to 2%
116+79.09 Begin Transition from 2% to 0%
117+41.59 Begin Transition from 0% to -2%
118+04.09 Begin Transition from -2% to -3.5%
118+66.59 End Transition to -3.5% Right (Full Superelevation)

Right Edge
116+16.59 Begin Transition from -3.5% to -2%
116+79.09 Begin Transition from -2% to 0%
117+41.59 Begin Transition from 0% to 2%
118+04.09 Begin Transition from 2% to 3.5%
Full Superelevation 118+66.59 to 119+26.07

Left Edge
119+26.07 Begin Transition from -3.5% to -2%
119+79.64 End Transition to -2%

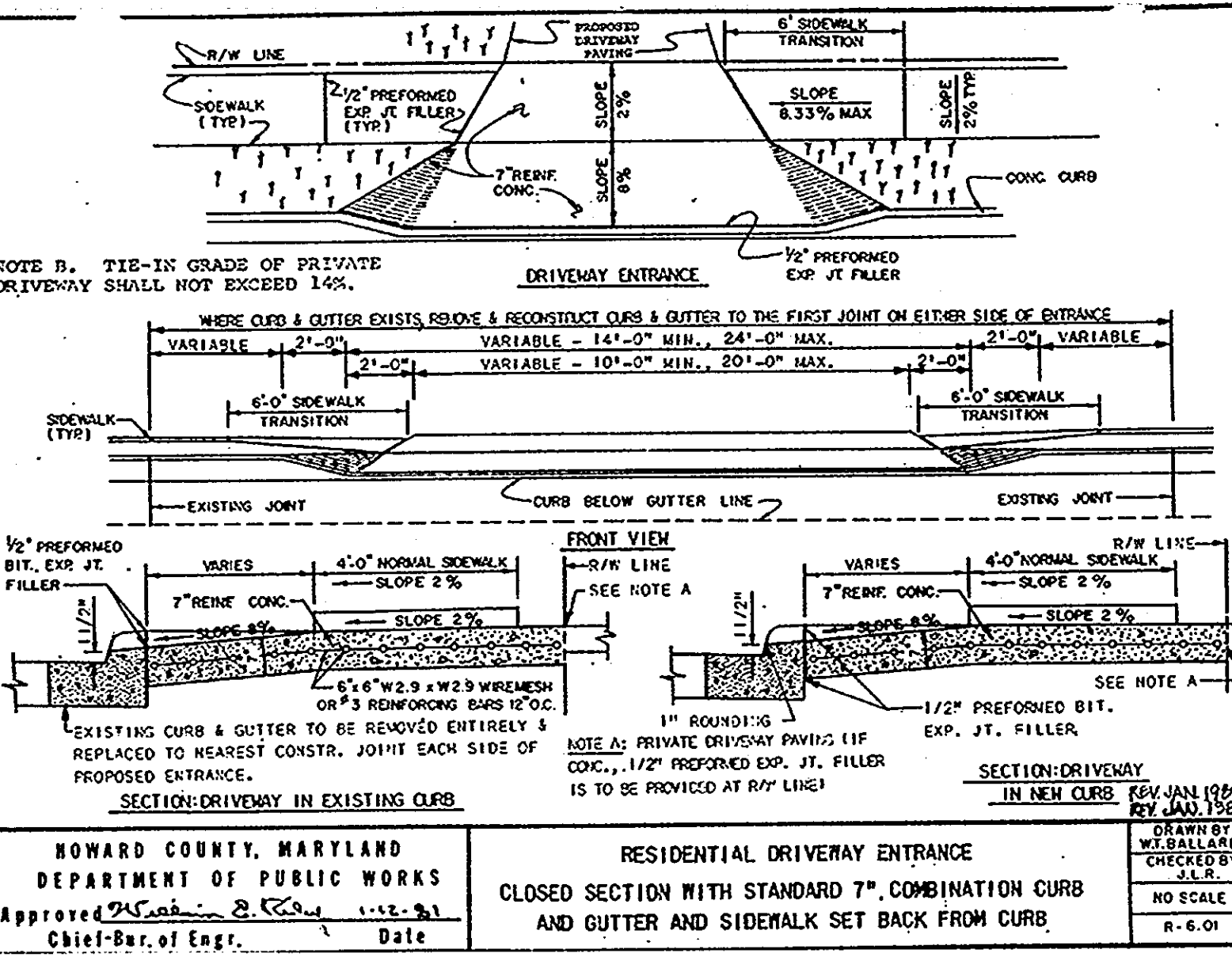
Right Edge
119+26.07 Begin Transition from 3.5% to 2%
119+79.64 Begin Transition from 2% to 0%
120+51.07 Begin Transition from 0% to -2%
121+22.50 End Transition to -2%



NOTES:
1. ALL DIMENSIONS ARE SUBJECT TO MFG. TOLERANCES.
2. RAIL ELEMENTS ARE FURNISHED SHOP CURVED OR CONVEX TO RADIUS BETWEEN 20 FT. AND 150 FT.
3. THE STEEL FOR RAIL ELEMENTS AND BOLTS IS OF A QUALITY TO DEVELOP SPECIFICATION VALUES FOR BEAM AND TENSILE STRENGTHS.
4. FOR MATERIALS, MATERIAL PROCESSING AND ASSEMBLY, SEE SPECIFICATIONS.
5. FOR OFFSET BRACKET DETAIL, SEE STD. NO. R-7.02
6. POSTS TO BE W-9.
7. BACK-UP PLATE (11" LENGTH OF BEAM) CENTERED ON OFFSET BRACKET BOLT TO BE PLACED WHERE NO OVERLAP OF RAIL SPLICE OCCURS.

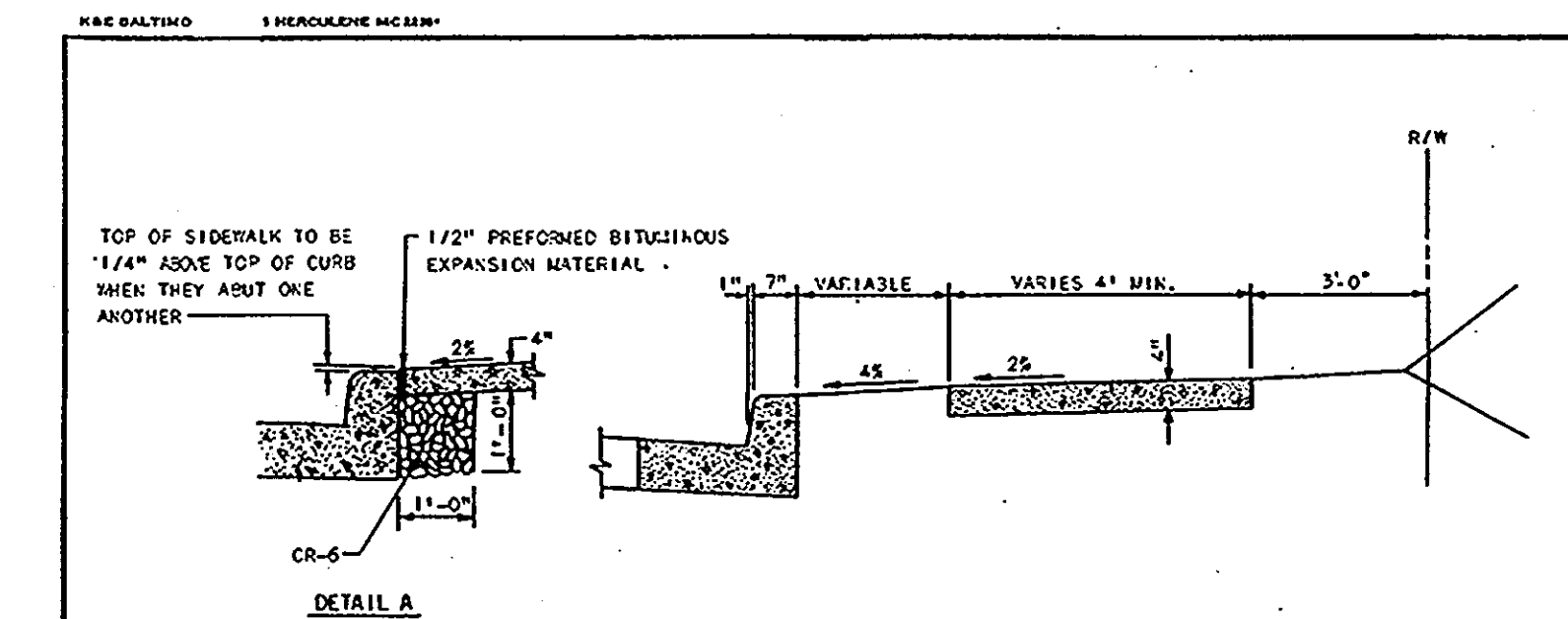
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
GUARD RAIL W/ BEAM
GENERAL NOTES AND DETAILS

APPROVED: [Signature] Chief, Bureau of Engr.
DATE: 1-18-01
DRAWN BY: W.T. BALLARD
CHECKED BY: J.L.B.
NO SCALE
R-7.01



HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief - Bureau of Engr. Date: 1-18-01

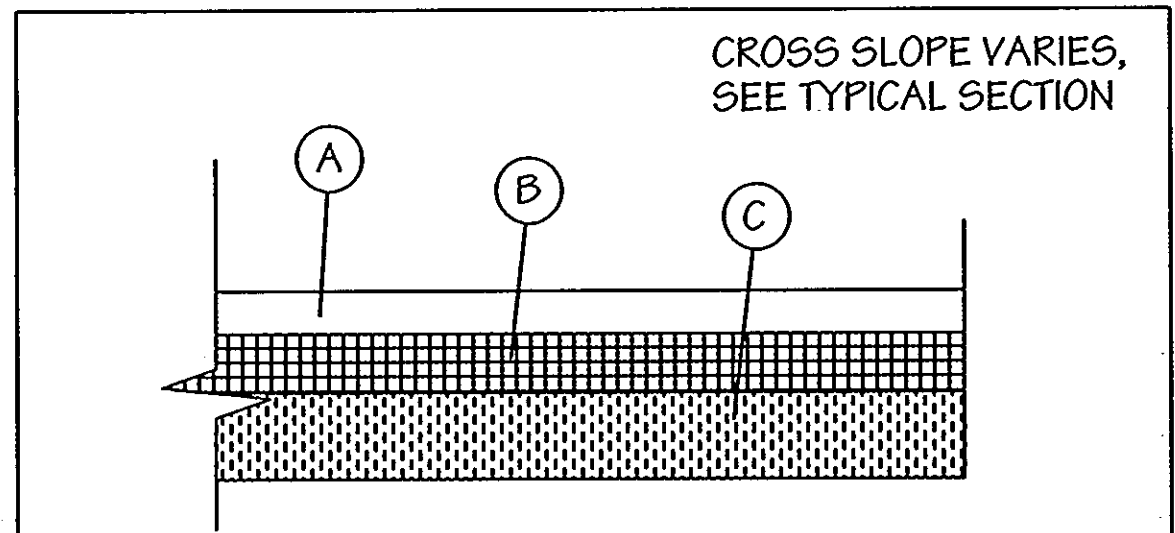
RESIDENTIAL DRIVEWAY ENTRANCE
CLOSED SECTION WITH STANDARD 7' COMBINATION CURB AND GUTTER AND SIDEWALK SET BACK FROM CURB
NO SCALE
R-6.01



NOTES:
1. SIDEWALK TO BE SCRIBED IN 5' MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
3. 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
4. CONCRETE TO BE MIX NO.2.
5. WHEN SIDEWALK ADJUTS CURB, WALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB AND RESTING ON A COMPACTED CRUSHED STONE BASE. SEE DETAIL A THIS SHEET.
6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 6" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL BE CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 40 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief - Bureau of Engr. Date: 1-18-01

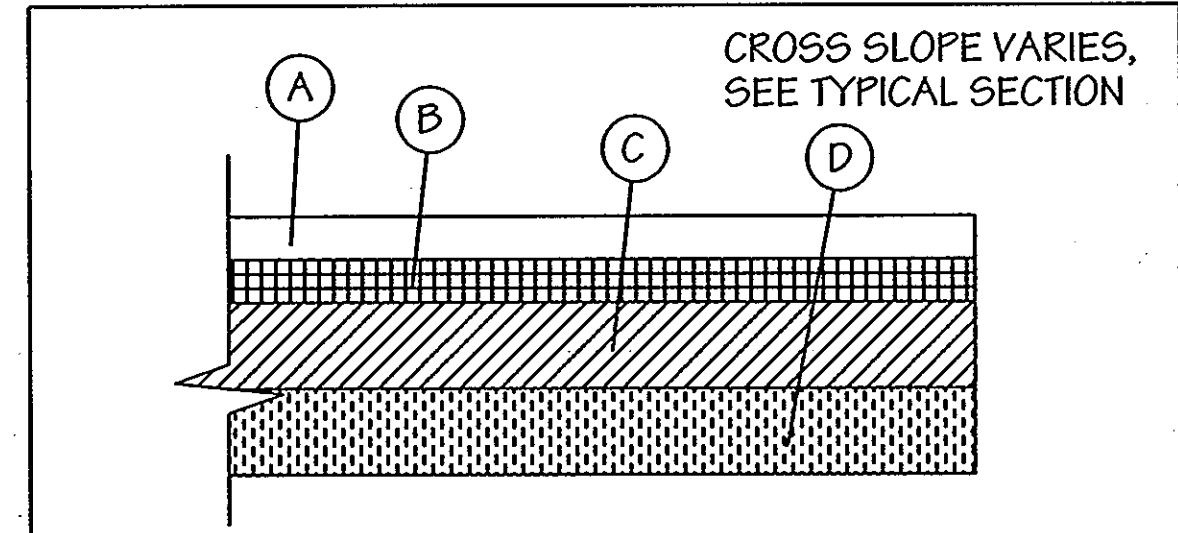
MODIFIED CONCRETE SIDEWALK
NO SCALE
R-3.03



(A) - 1 1/2" BITUMINOUS CONCRETE SURFACE (SF)
(B) - 4 1/2" BITUMINOUS CONCRETE BASE (BI)
(C) - 5" GRADED AGGREGATE BASE (GAB)

NOTE: Micaceous soils subgrades require the use of either of the aggregate base pavement sections as shown on the pavement section tables. Either the full depth bituminous concrete section of the aggregate base pavement sections can be used for all other subgrade soils.

TYPICAL PAVING SECTION - "P-3"
N.T.S.



(A) - 1 1/2" BITUMINOUS CONCRETE SURFACE (SF)
(B) - 1 1/2" BITUMINOUS CONCRETE BASE (BI)
(C) - 5" BITUMINOUS CONCRETE BASE (BI)
(D) - 6" GRADED AGGREGATE BASE (GAB)

NOTE: Micaceous soils subgrades require the use of either of the aggregate base pavement sections as shown on the pavement section tables. Either the full depth bituminous concrete section of the aggregate base pavement sections can be used for all other subgrade soils.

TYPICAL PAVING SECTION - "P-5"
N.T.S.

DEPARTMENT OF PUBLIC WORKS
Director of Public Works: [Signature] Date: 8/10/06
Chief, Bureau of Engineering: [Signature] Date: 8/9/06

LDE Inc.
Engineers, Surveyors, Planners
2520 Rumsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540

DESIGNED	E.D.S.
DRAWN	L.D.E.
CHECKED	B.D.B.
DATE	2/2005
BY	NO.
REVISION	REVISION
DATE	DATE


Typical Road Sections & Road Details
MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE: As Shown
SHEET: 2 of 18

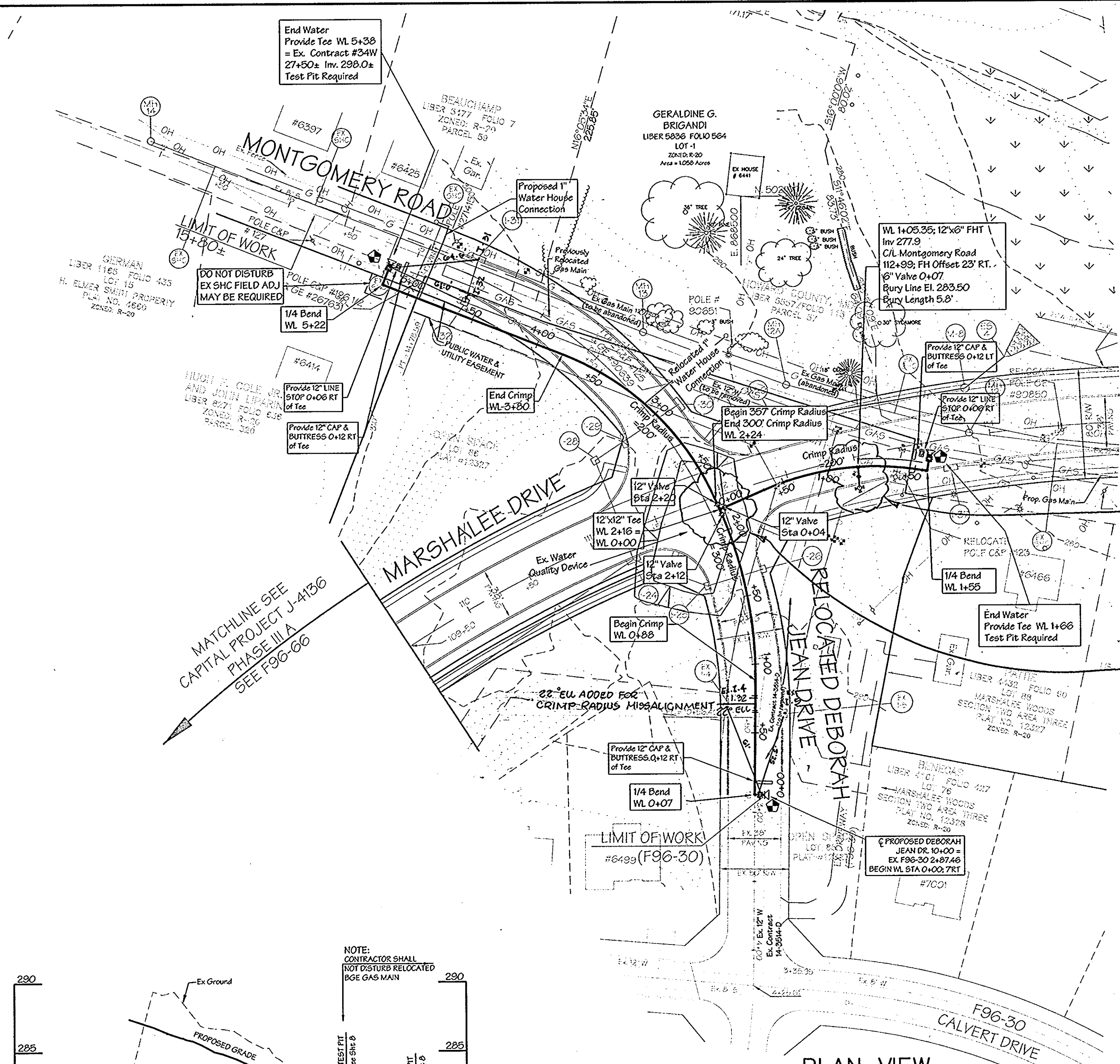
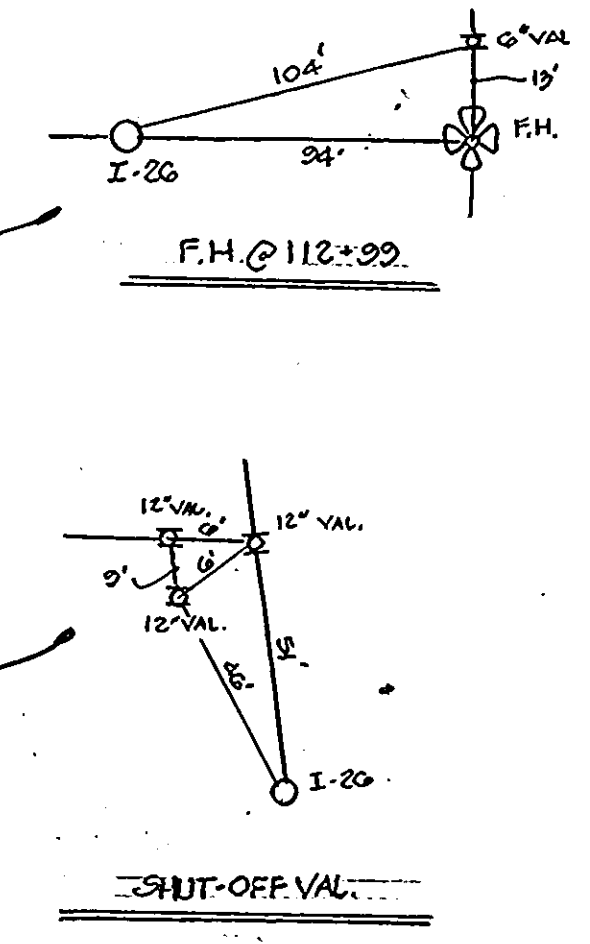
GENERAL NOTES

PART I: GENERAL

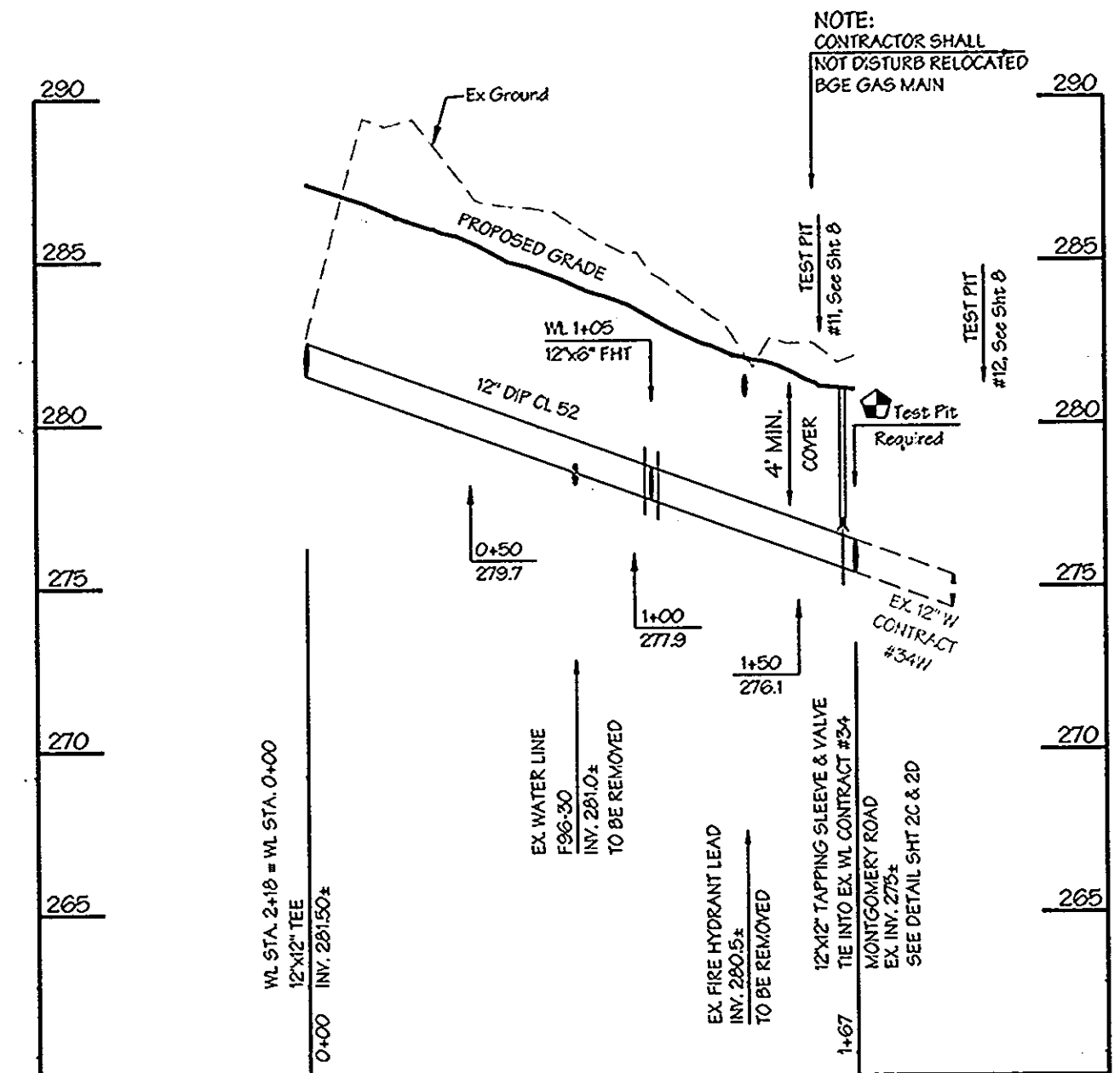
1. Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates, NAD 83/91.
3. All vertical controls are based on NAVD 88.
4. All pipe elevations shown are invert elevations unless otherwise noted on the plans.
5. Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the Contractor's work requires the bracing of additional poles, any cost incurred by the Owner for bracing of additional poles or damages shall be deducted from monies owed the Contractor. The Contractor shall coordinate with the utility companies to schedule the bracing of the poles, if required.
6. For details not shown on the drawing, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (latest edition). The Contractor shall have a copy of Volume IV on the job.
7. Where test pits have been made on existing utilities, they are noted by the symbol  at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawing (See Sheet). Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the Contractor two weeks in advance of construction operations at his own expense.
8. Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 - a. AT&T: (800) 252-1133
 - b. BGE (Contractor Services): (410) 850-4620
 - c. BGE (Underground damage control): (410) 787-9068
 - d. Bureau of Utilities: (410) 313-4900
 - e. Miss Utility: 1-800-257-7777
 - f. State Highway Administration: (410) 531-5533
 - g. Verizon: 1-800-743-0033 / 410-224-9210
 - h. Construction Inspection Division (410-313-1880)
9. Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs within the construction area are not to be removed or damaged by the Contractor.
10. Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.

PART II: WATER

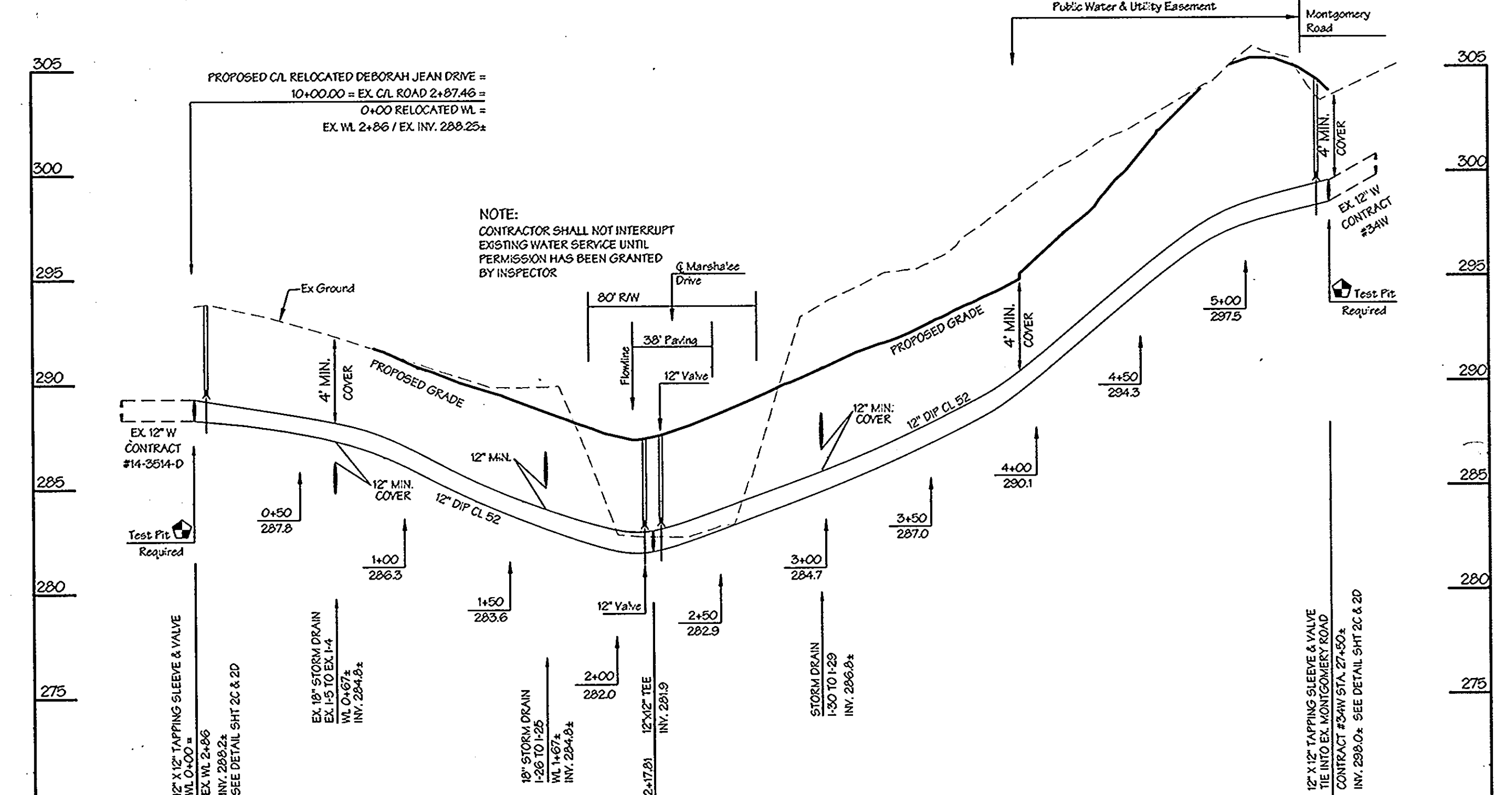
1. All water main materials shall be as specified and approved by the Howard County Department of Public Works.
2. Tops of all water mains to have a minimum of 3 1/2' cover unless otherwise noted.
3. Valves adjacent to the tees shall be strapped to the tees.
4. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
5. Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
6. The Contractor shall not operate any water main valves on the existing water system.
7. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
8. For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1 1/2" connection with a 1" meter. (Model 70).
9. Water house connection ball valves shall be set within the grassy area 2' behind the sidewalk or curb line.
10. Mechanical joints shall be required in all fill areas.




PLAN VIEW
SCALE: 1" = 50'

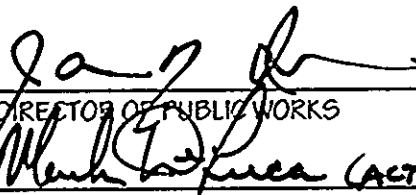
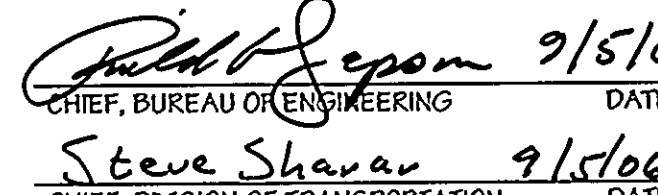


RELOCATED PUBLIC 12" WATER MAIN - ROAD STATIONS 111+90+/- THRU 113+50+/- MONTGOMERY ROAD
SCALE: 1" = 50 HORIZ - 1" = 5' VERT.



RELOCATED PUBLIC 12" WATER MAIN ROAD STATIONS 15+15+/- MONTGOMERY ROAD THRU 10+00 DEBORAH JEAN DRIVE
SCALE: 1" = 50 HORIZ - 1" = 5' VERT.

NOTE TO CONTRACTORS:
THE LOCATION OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF ANY EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. WHERE TEST PITS ARE REQUIRED, THE SYMBOL  IS SHOWN. ANY CONFLICTS SHOULD BE BROUGHT TO THE ENGINEERS ATTENTION FOR POSSIBLE REDESIGN / FIELD ADJUSTMENTS.

DEPARTMENT OF PUBLIC WORKS
 9/1/06
 DIRECTOR OF PUBLIC WORKS DATE
 9/1/06
 CHIEF, BUREAU OF HIGHWAYS DATE

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540

DESIGNED	E.D.S.		
DRAWN	L.D.E.		
CHECKED	K.C.I.	Z	AS-BUILT DATA SHOWN
DATE	8/2/006		

Plan View
WATER MAIN RELOCATION
 Marshalee Drive Sta. 109+50 thru 111+88.17
 Montgomery Road 111+88+/- thru 113+50+/-
 Relocated Deborah Jean Drive 10+00 thru 12+19.32
 & Montgomery Road - 12+19.32 thru 14+10+/-
 MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
 CAPITAL PROJECT J-4136
 PHASE III B
 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 RELOCATED CONTRACT # 14-3514-D & 34W

SEQUENCE OF CONSTRUCTION

- Contractor shall test pit the existing 12" Water Mains for verification of existing invert elevations and existing horizontal joint locations. Contractor shall notify LDE, Inc. prior to beginning any work at 410-715-1070, if 12" x 12" Tapping Sleeve station, per sheet 2B, is within 2 feet of existing pipe joint or if cover over proposed cap & buttress is less than 3.5 feet. Where applicable, the proposed Tapping Sleeve, Line Stop and proposed end cap shall be contained to one pipe length. With permission from Howard County inspector, contractor may "mechanically restrain" pipe joint if required.

- Contractor shall take all necessary precautions to protect the newly relocated (2006) Gas Main during 12" water main relocation.

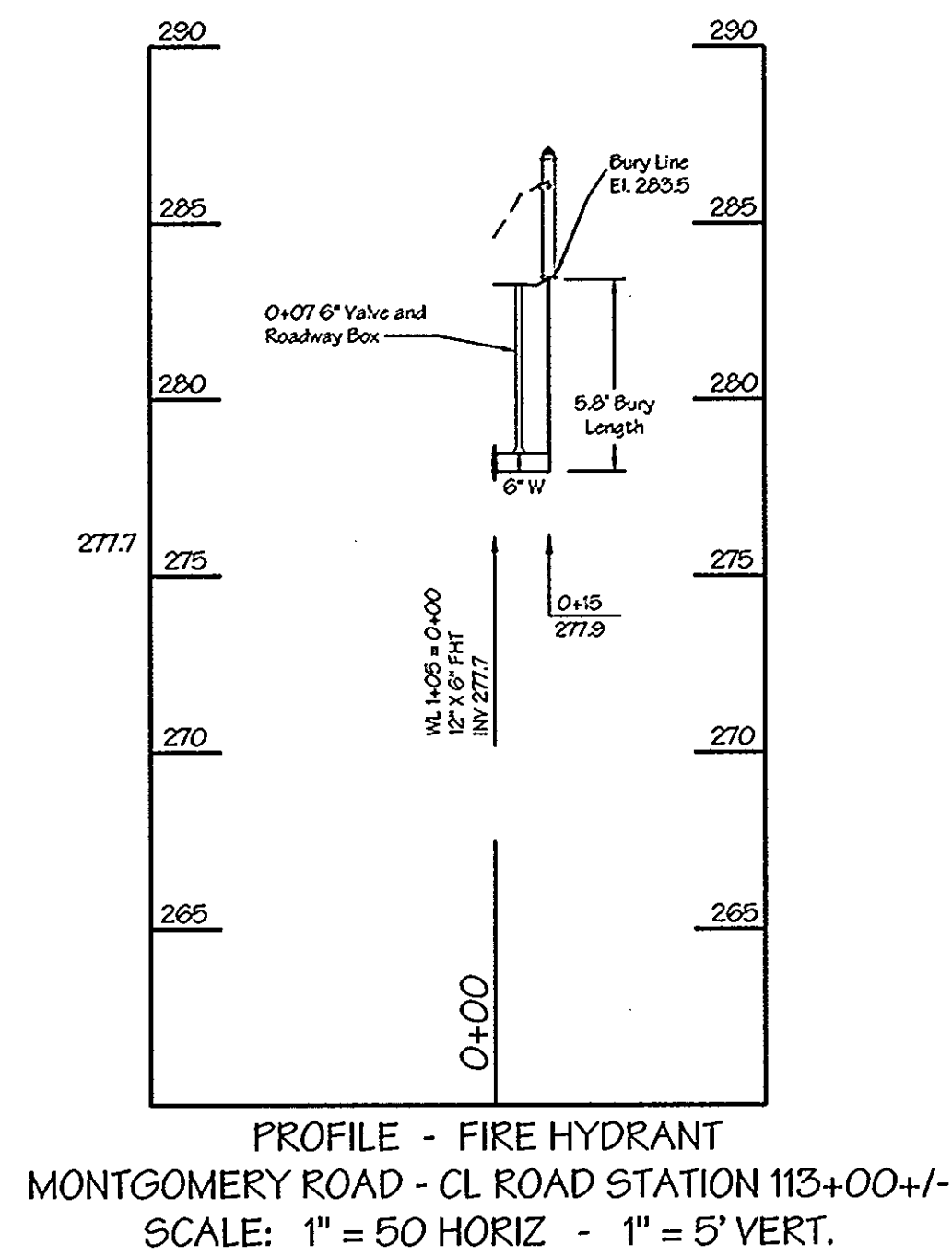
TAPPING SLEEVE & VALVE

1. Install two proposed 12" x 12" Tapping Sleeve & Valve on the existing Water Main # 34W at Water Main Stations 5+37.65 & 1+65.52 as shown in PLAN VIEW - Sheet 2B along existing Montgomery Road.
2. Install Tapping Sleeve & Valve on the existing Water Main # 14-3514-D at Water Main Station 0+00 as shown in PLAN VIEW - Sheet 2B along Deborah Jean Drive.
3. All valves shall be closed upon completion of proposed sleeve installation.
4. Install concrete buttress' at all 12" x 12" Tapping Sleeves per Ho. Co. Standard Detail W-2.23. Contractor shall have a geotechnical engineer certify the bearing pressure of the existing soils to be 3000 psf minimum prior to installation of all buttress or adjust buttress design as specified by the contractors Geotechnical/Structural engineer..
5. Upon completion of above, attach tapping device to open 12" valve and tap into existing main. All existing water main "coupons" shall be recovered upon pipe tap and cutter retraction.
6. Close 12" Valve & remove tapping device.
7. Repeat steps 5 & 6 for the remaining two (2) 12" taps.
8. Complete installation of relocated 12" water main in accordance with the PLAN VIEW - Sheet 2B and Howard County specifications.
9. Upon completion of 12" relocated water main installation and with permission from Howard County inspector, test relocated 12" water mains.
10. Install short / workable piece of pipe to 12" valve at tapping sleeves. Connect end of tested 12" relocated water main to above workable piece via spacer & sleeve per Ho. Co. Standard Detail W-4.15.
11. Open 12" valves and place 12" relocated mains in service.
12. Provide new water service connections to Parcels 59 & 57.

EXISTING 12" WATER MAIN ABANDONMENT & REMOVAL AT DEBORAH JEAN DRIVE

NOTE: Deborah Jean Drive shutdown and water main capping per PLAN VIEW - Sheet 2B, shall occur overnight. All effected residences shall be notified at least 5 days prior to shutdown.

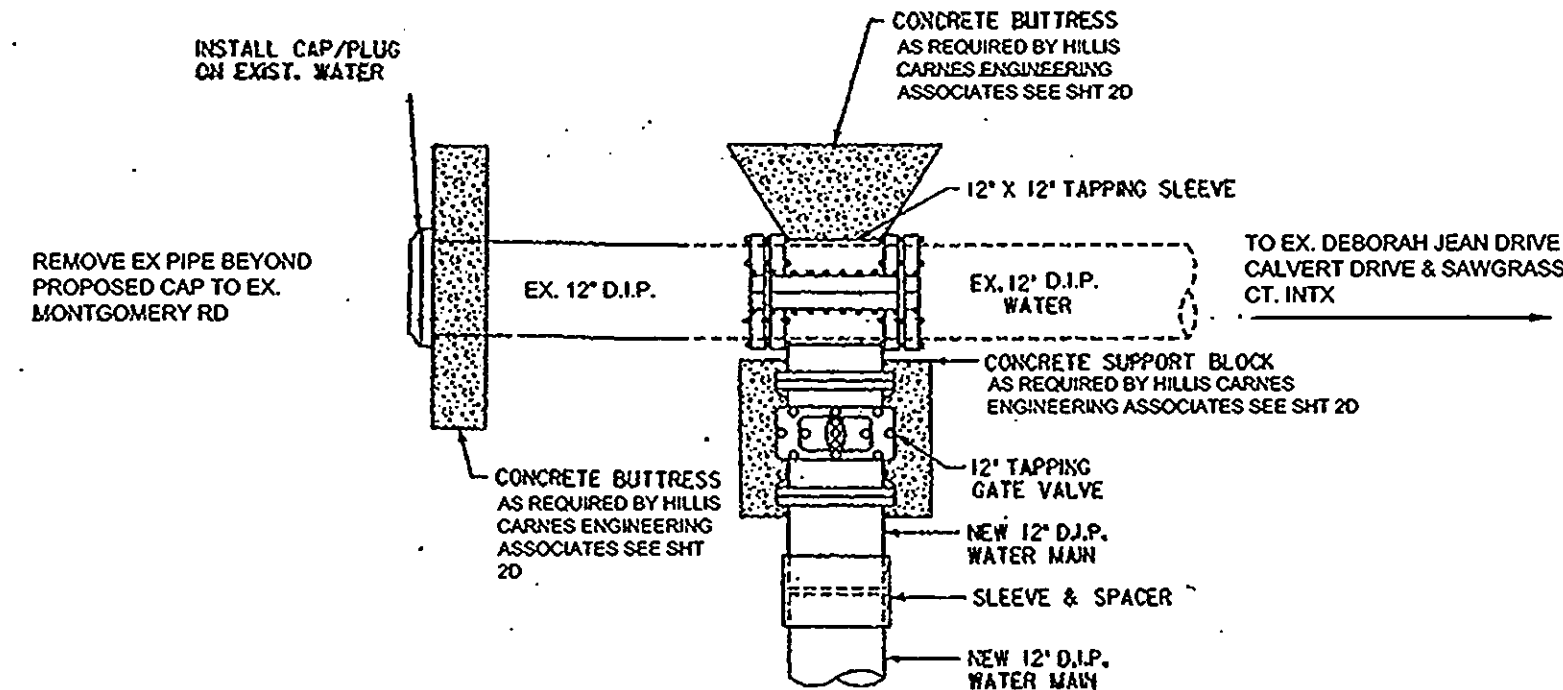
1. Prior to Deborah Jean Drive shutdown, contractor shall have a geotechnical engineer certify the bearing pressure of the existing soils to be 3000 psf minimum prior to installation of the buttress or adjust buttress design as specified by the contractors Geotechnical/Structural engineer.
2. Contractor shall close existing valves at the Deborah Jean Drive / Calvert Drive & Sawgrass Court intersection. Water service to Calvert Drive residences is backed through Contract #14-3120-D and #14-3529-D. Sawgrass Court is backed through Contract #14-3284-D.
3. With permission from Howard County inspector, proceed by closing existing valves at the existing Deborah Jean Drive / Montgomery Road and Deborah Jean Drive / Calvert Drive & Sawgrass Court intersections as well as at the proposed tapping sleeve and valve at Station 0+00 per PLAN VIEW - Sheet 2B. This will mark the beginning the shutdown for Deborah Jean Drive residences.
4. With water shutdown, cut ex 12" water main and install mechanical couplings (if required), end caps and buttress per Ho. Co. Standard Detail W-2.25. Again, contractor shall have a geotechnical engineer certify a bearing pressure of 3000 psf minimum prior to installation of all buttress or adjust buttress design as required.
5. Upon completion of cap & buttress installation, and with permission of Howard County inspector, restore water service to Deborah Jean Drive residences by opening valves at Station 0+00 and at the Deborah Jean Drive / Calvert Drive & Sawgrass Court intersections, marking the end of the shutdown.
6. Contractor shall proceed with the removal of the existing 12" water main.



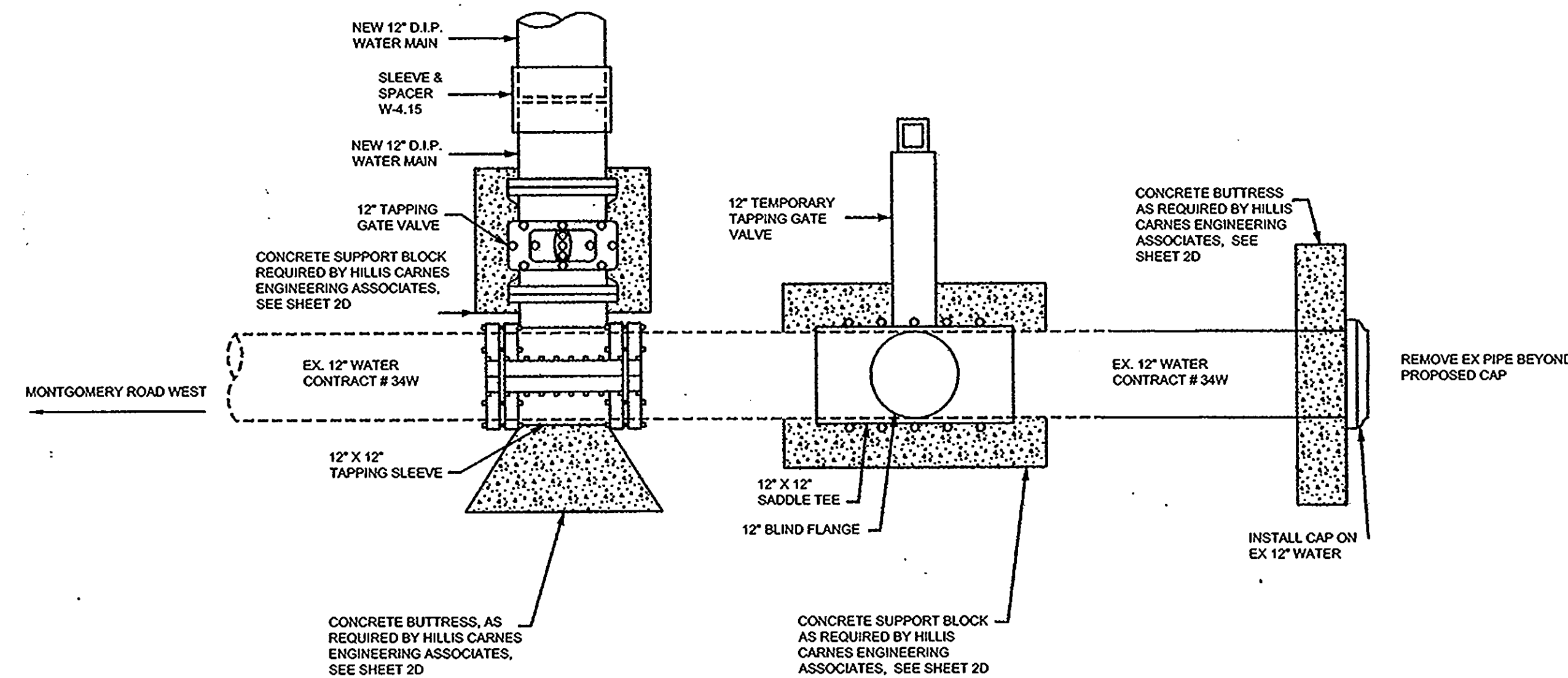
SEQUENCE OF CONSTRUCTION (con't)

EXISTING 12" WATER MAIN ABANDONMENT AT MONTGOMERY ROAD

1. Contractor shall have a geotechnical / structural engineer, design a proper support block capable of supporting load of LineStop Machine per Line Stop manufacturer specifications, taking into account existing soil conditions & bearing pressures.
2. Install saddle tees and temporary gate valves on existing Contract #34W as shown in PLAN VIEW - Sheet 2B. Temporary gate valve shall be closed.
3. Attach tapping machine to temporary gate valves at the two (2) LineStop locations.
4. Upon completion of above, open gate valve and tap into existing main. The existing water main "coupons" shall be recovered upon pipe tap and cutter retraction.
5. Close temporary gate valve & remove tapping device.
6. With properly designed support block in place per geotechnical / structural engineer design, install LineStop machine on each temporary gate valve.
7. Open temporary gate valves and simultaneously insert Line Stopping plugging device into existing main to stop flow through existing 12" main (Contract #34W). Flow will continue through newly relocated main.
8. Upon successful flow interruption, cut existing water main and install mechanical couplings (if required), end caps and buttress per Ho. Co. Standard Detail W-2.25. Contractor shall have a geotechnical engineer certify a bearing pressure of 3000 psf minimum prior to installation of all buttress or adjust buttress design as required.
9. Upon completion of cap & buttress installation, and with permission of Howard County inspector, remove LineStop machine, attach completion machine and install completion plug in each of the two (2) tee outlets of the above saddle tees.
10. Remove completion machine and temporary gate valves. Install 12" blind flanges on each tee outlet.
11. Contractor shall proceed with the removal of the existing 12" water main.



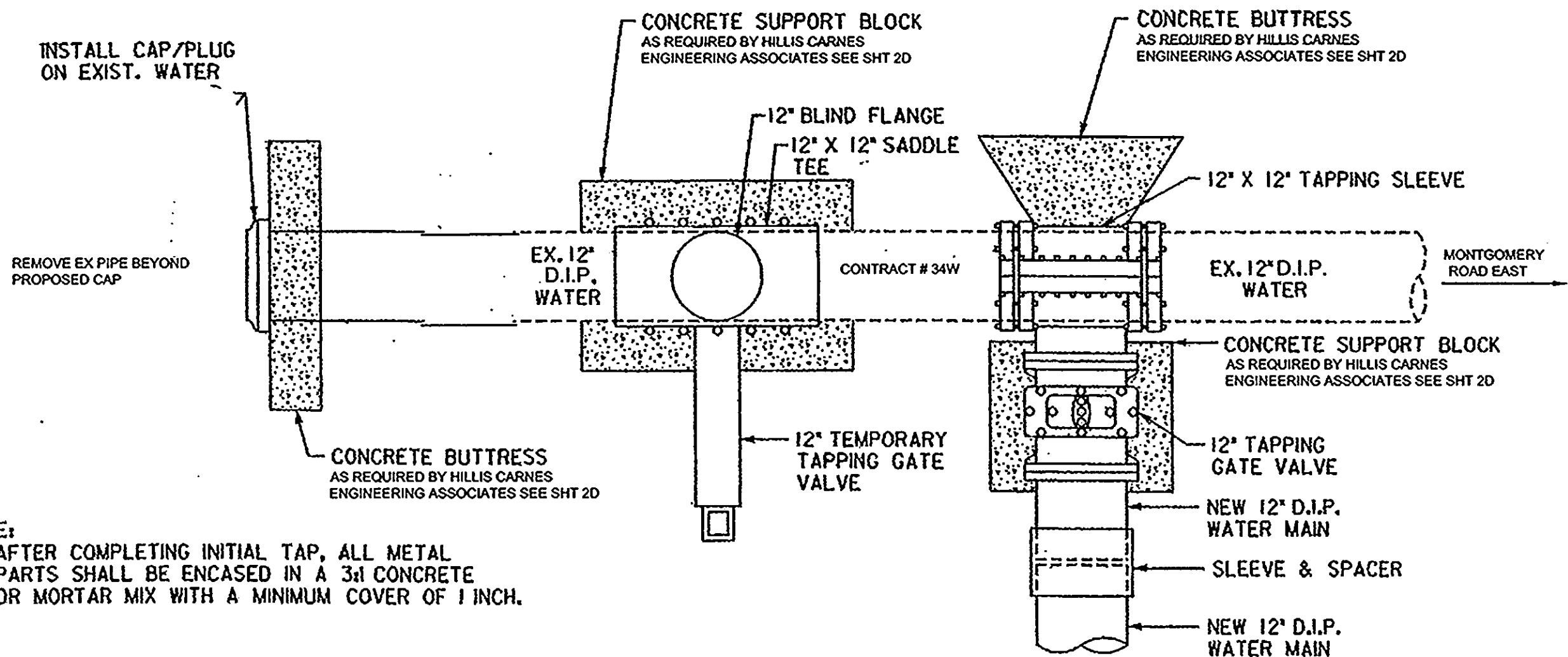
CONNECTION DETAIL ALONG DEBORAH JEAN DRIVE
EX WL STATION 2+87+/- = PROPOSED RELOCATION WL
STATION 0+00
N.T.S.



CONNECTION DETAIL ALONG MONTGOMERY ROAD
EX WL STATION 27+50+/- = PROPOSED RELOCATION
WL STATION 5+38
N.T.S.

ITEM	QUANTITIES ESTIMATED	QUANTITIES AS BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
12" TAPPING SLEEVE & VALVE (EA)	3	3	TYLER	TYLER/FERGUSON WATER WORKS
12" LINE STOP (EA)	2	2	HYDRO STOP	ADS ENVIRONMENTAL SER.
12" CAP & BUTTRESS (EA)	3	3	TYLER	TYLER/FERGUSON WATER WORKS
12" WATER (L.F.)	684	694	TYTON	TYTON JOINT PIPE/U.S. PIPE
12" VALVE (EA)	3	3	MUELLER	MUELLER/FERGUSON WATER WORKS
12" x 12" TEE (EA)	1	1	TYLER	TYLER
12" x 6" FIRE HYDRANT TEE (EA)	1	1	TYLER	"
12" - 1/4 BEND (EA)	3	3	TYLER	"
6" WATER (L.F.)	16	16	TYTON	TYTON JOINT PIPE/U.S. PIPE
6" VALVE (L.F.)	1	1	MUELLER	MUELLER CO./FERGUSON WATER WORKS
6" FIRE HYDRANT (EA)	1	1	MUELLER	"
1" WHC (L.F.)	98	98	TYPE "K"	"

NAME OF UTILITY CONTRACTOR: CHECK BOX: Survey & Drafting Division As Built Date:



CONNECTION DETAIL ALONG MONTGOMERY ROAD
EX WL STATION 23+40+/- = PROPOSED RELOCATION
WL STATION 1+65
N.T.S.

NOTE TO CONTRACTORS:

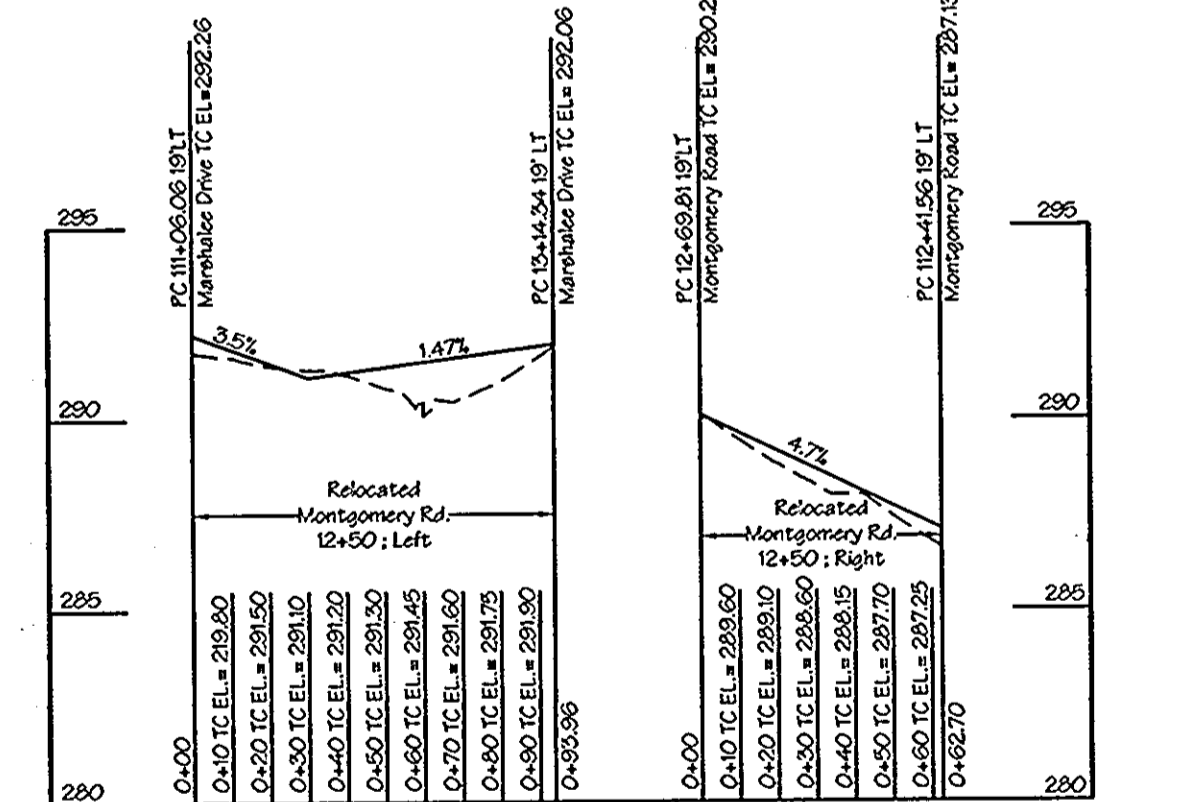
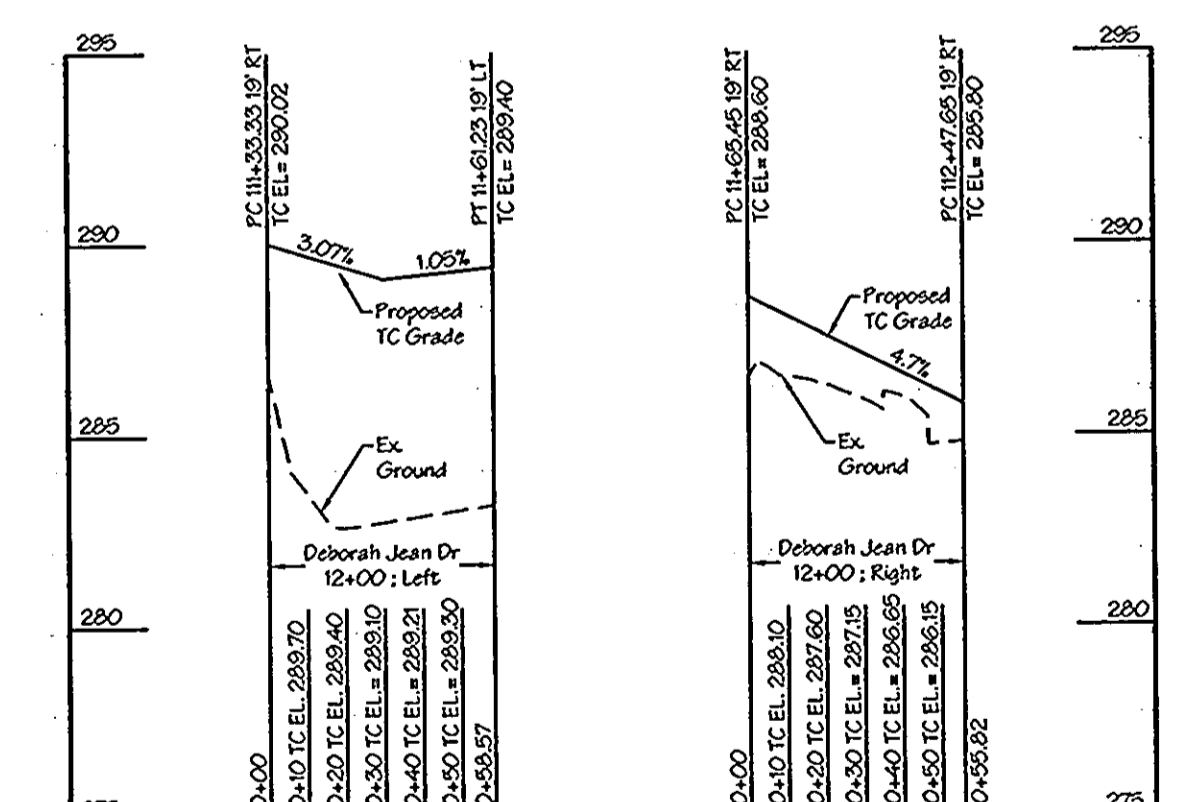
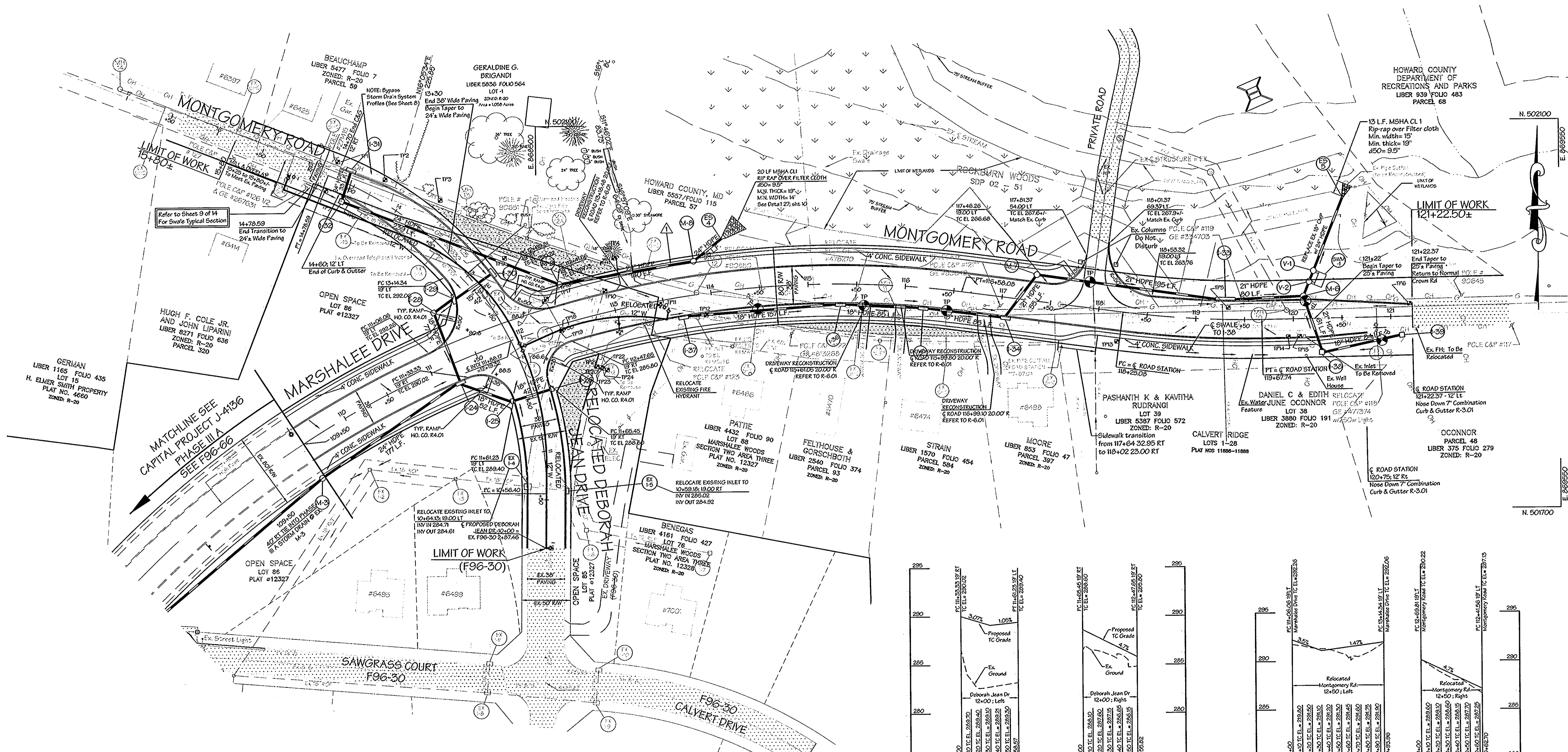
THE LOCATION OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF ANY EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. WHERE TEST PITS ARE REQUIRED, THE SYMBOL IS SHOWN. ANY CONFLICTS SHOULD BE BROUGHT TO THE ENGINEERS ATTENTION FOR POSSIBLE REDESIGN / FIELD ADJUSTMENTS.

CAPITAL PROJECT J-4136/1435/1436/1437/1438/1439/1440/1441/1442/1443/1444/1445/1446/1447/1448/1449/1450/1451/1452/1453/1454/1455/1456/1457/1458/1459/1460/1461/1462/1463/1464/1465/1466/1467/1468/1469/1470/1471/1472/1473/1474/1475/1476/1477/1478/1479/1480/1481/1482/1483/1484/1485/1486/1487/1488/1489/1490/1491/1492/1493/1494/1495/1496/1497/1498/1499/1500/1501/1502/1503/1504/1505/1506/1507/1508/1509/1510/1511/1512/1513/1514/1515/1516/1517/1518/1519/1520/1521/1522/1523/1524/1525/1526/1527/1528/1529/1530/1531/1532/1533/1534/1535/1536/1537/1538/1539/1540/1541/1542/1543/1544/1545/1546/1547/1548/1549/1550/1551/1552/1553/1554/1555/1556/1557/1558/1559/1560/1561/1562/1563/1564/1565/1566/1567/1568/1569/1570/1571/1572/1573/1574/1575/1576/1577/1578/1579/1580/1581/1582/1583/1584/1585/1586/1587/1588/1589/1590/1591/1592/1593/1594/1595/1596/1597/1598/1599/1600/1601/1602/1603/1604/1605/1606/1607/1608/1609/1610/1611/1612/1613/1614/1615/1616/1617/1618/1619/1620/1621/1622/1623/1624/1625/1626/1627/1628/1629/1630/1631/1632/1633/1634/1635/1636/1637/1638/1639/1640/1641/1642/1643/1644/1645/1646/1647/1648/1649/1650/1651/1652/1653/1654/1655/1656/1657/1658/1659/1660/1661/1662/1663/1664/1665/1666/1667/1668/1669/1670/1671/1672/1673/1674/1675/1676/1677/1678/1679/1680/1681/1682/1683/1684/1685/1686/1687/1688/1689/1690/1691/1692/1693/1694/1695/1696/1697/1698/1699/1700/1701/1702/1703/1704/1705/1706/1707/1708/1709/1710/1711/1712/1713/1714/1715/1716/1717/1718/1719/1720/1721/1722/1723/1724/1725/1726/1727/1728/1729/1730/1731/1732/1733/1734/1735/1736/1737/1738/1739/1740/1741/1742/1743/1744/1745/1746/1747/1748/1749/1750/1751/1752/1753/1754/1755/1756/1757/1758/1759/1760/1761/1762/1763/1764/1765/1766/1767/1768/1769/1770/1771/1772/1773/1774/1775/1776/1777/1778/1779/1780/1781/1782/1783/1784/1785/1786/1787/1788/1789/1790/1791/1792/1793/1794/1795/1796/1797/1798/1799/1800/1801/1802/1803/1804/1805/1806/1807/1808/1809/1810/1811/1812/1813/1814/1815/1816/1817/1818/1819/1820/1821/1822/1823/1824/1825/1826/1827/1828/1829/1830/1831/1832/1833/1834/1835/1836/1837/1838/1839/1840/1841/1842/1843/1844/1845/1846/1847/1848/1849/1850/1851/1852/1853/1854/1855/1856/1857/1858/1859/1860/1861/1862/1863/1864/1865/1866/1867/1868/1869/1870/1871/1872/1873/1874/1875/1876/1877/1878/1879/1880/1881/1882/1883/1884/1885/1886/1887/1888/1889/1890/1891/1892/1893/1894/1895/1896/1897/1898/1899/1900/1901/1902/1903/1904/1905/1906/1907/1908/1909/1910/1911/1912/1913/1914/1915/1916/1917/1918/1919/1920/1921/1922/1923/1924/1925/1926/1927/1928/1929/1930/1931/1932/1933/1934/1935/1936/1937/1938/1939/1940/1941/1942/1943/1944/1945/1946/1947/1948/1949/1950/1951/1952/1953/1954/1955/1956/1957/1958/1959/1960/1961/1962/1963/1964/1965/1966/1967/1968/1969/1970/1971/1972/1973/1974/1975/1976/1977/1978/1979/1980/1981/1982/1983/1984/1985/1986/1987/1988/1989/1990/1991/1992/1993/1994/1995/1996/1997/1998/1999/2000/2001/2002/2003/2004/2005/2006/2007/2008/2009/2010/2011/2012/2013/2014/2015/2016/2017/2018/2019/2020/2021/2022/2023/2024/2025/2026/2027/2028/2029/2030/2031/2032/2033/2034/2035/2036/2037/2038/2039/2040/2041/2042/2043/2044/2045/2046/2047/2048/2049/2050/2051/2052/2053/2054/2055/2056/2057/2058/2059/2060/2061/2062/2063/2064/2065/2066/2067/2068/2069/2070/2071/2072/2073/2074/2075/2076/2077/2078/2079/2080/2081/2082/2083/2084/2085/2086/2087/2088/2089/2090/2091/2092/2093/2094/2095/2096/2097/2098/2099/2100/2101/2102/2103/2104/2105/2106/2107/2108/2109/2110/2111/2112/2113/2114/2115/2116/2117/2118/2119/2120/2121/2122/2123/2124/2125/2126/2127/2128/2129/2130/2131/2132/2133/2134/2135/2136/2137/2138/2139/2140/2141/2142/2143/2144/2145/2146/2147/2148/2149/2150/2151/2152/2153/2154/2155/2156/2157/2158/2159/2160/2161/2162/2163/2164/2165/2166/2167/2168/2169/2170/2171/2172/2173/2174/2175/2176/2177/2178/2179/2180/2181/2182/2183/2184/2185/2186/2187/2188/2189/2190/2191/2192/2193/2194/2195/2196/2197/2198/2199/2200/2201/2202/2203/2204/2205/2206/2207/2208/2209/2210/2211/2212/2213/2214/2215/2216/2217/2218/2219/2220/2221/2222/2223/2224/2225/2226/2227/2228/2229/2230/2231/2232/2233/2234/2235/2236/2237/2238/2239/2240/2241/2242/2243/2244/2245/2246/2247/2248/2249/2250/2251/2252/2253/2254/2255/2256/2257/2258/2259/2260/2261/2262/2263/2264/2265/2266/2267/2268/2269/2270/2271/2272/2273/2274/2275/2276/2277/2278/2279/2280/2281/2282/2283/2284/2285/2286/2287/2288/2289/2290/2291/2292/2293/2294/2295/2296/2297/2298/2299/2300/2301/2302/2303/2304/2305/2306/2307/2308/2309/2310/2311/2312/2313/2314/2315/2316/2317/2318/2319/2320/2321/2322/2323/2324/2325/2326/2327/2328/2329/2330/2331/2332/2333/2334/2335/2336/2337/2338/2339/2340/2341/2342/2343/2344/2345/2346/2347/2348/2349/2350/2351/2352/2353/2354/2355/2356/2357/2358/2359/2360/2361/2362/2363/2364/2365/2366/2367/2368/2369/2370/2371/2372/2373/2374/2375/2376/2377/2378/2379/2380/2381/2382/2383/2384/2385/2386/2387/2388/2389/2390/2391/2392/2393/2394/2395/2396/2397/2398/2399/2400/2401/2402/2403/2404/2405/2406/2407/2408/2409/2410/2411/2412/2413/2414/2415/2416/2417/2418/2419/2420/2421/2422/2423/2424/2425/2426/2427/2428/2429/2430/2431/2432/243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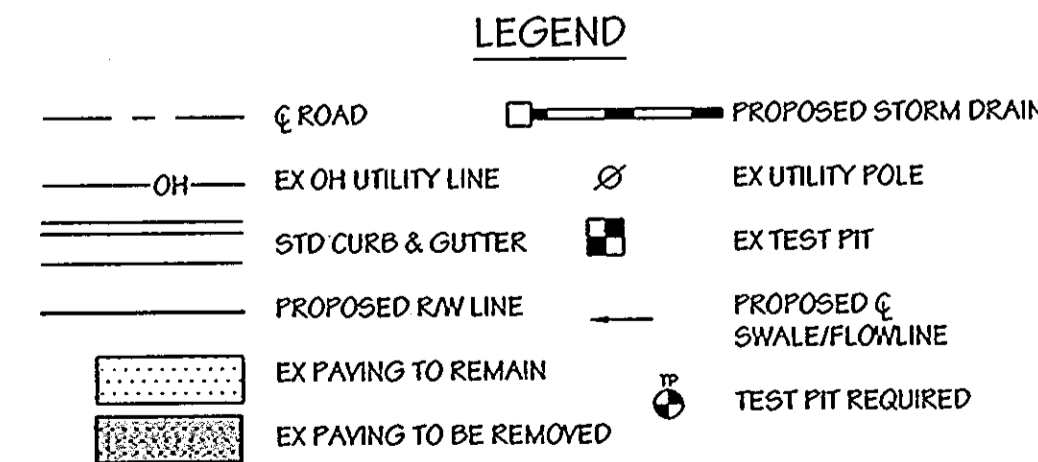
MARSHALEE DRIVE & MONTGOMERY ROAD COORDINATE POINTS		
STATION	NORTHING	EASTING
109+50	501775.1185	868259.6517
111+88.17 INTX.	501879.5059	868473.1049
116+58.08 PT	501926.3595	868936.3363
117+ INTX.		
118+25.08 PC	501904.0241	869101.8327
119+67.74 PT	501895.0758	869244.0946
121+22.68		
LIMIT OF WORK	501897.4384	869398.7025

RELOCATED MONTGOMERY ROAD & RELOCATED DEBORAH JEAN DRIVE		
STATION	NORTHING	EASTING
10+00	501665.6184	868507.9869
12+19.32	501879.5060	868473.1052
14+78.59	502051.4190	868287.1103

CURVE DATA TABLE							
Curve	Length	Radius	Chord Bearing	Chord Distance	Delta	Tangent	S/E
109+50 116+58.08	708.08'	1000.00'	N77°24'05"E	693.38'	40°34'12"	369.61'	.035'/ft
118+25.08 119+67.74	142.66'	1000.00'	S86°24'03"E	142.54'	8°10'27"	71.45'	.035'/ft
10+58.40 14+78.59	422.20'	350.00'	N33°56'39"W	397.06'	69°06'54"	241.07'	N/A



- NOTE:**
- The Existing Driveways to Montgomery Road, #6470, #6474 and #6498 shall be reconstructed per Howard County Standard Detail R-6.01. See sheet 2.
 - Sidewalk Ramps shall be provided per Howard County Standard Detail R-4.01, see sheet 2.
 - Existing Inlets Along Relocated Deborah Jean Drive (I-4) & (I-5) Shall be Relocated as Detailed Hereon. The Existing Inlets Shall be Shifted Holding the Existing Invert Elevations of F96-30.
 - Refer to sheet 3 for Profiles of I-26 to M-3 and I-30 to I-24.
 - The Contractor Shall be Responsible for Adjusting the Existing Sewer Manhole Tops to Proposed Grade Elevations.
 - Existing Inlets (12, 13, 14 & 15) and End Sections (S-5, S-6 & S-7) are to be removed.
 - See sheet 2 for the driveway reconstruction requirements.



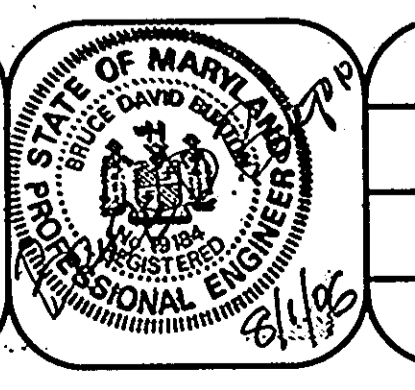
DEPARTMENT OF PUBLIC WORKS

[Signature] 8/16/06
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 8/19/06
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 8/19/06
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
Engineers, Surveyors, Planners
9250 Runney Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9340



DESIGNED	DRAWN	CHECKED	DATE	BY	NO.	REVISION	DATE
E.D.S.	L.D.E.	B.D.P.	2/2005	LDE	1	REVISE BYPASS STORM DRAIN	6/2006

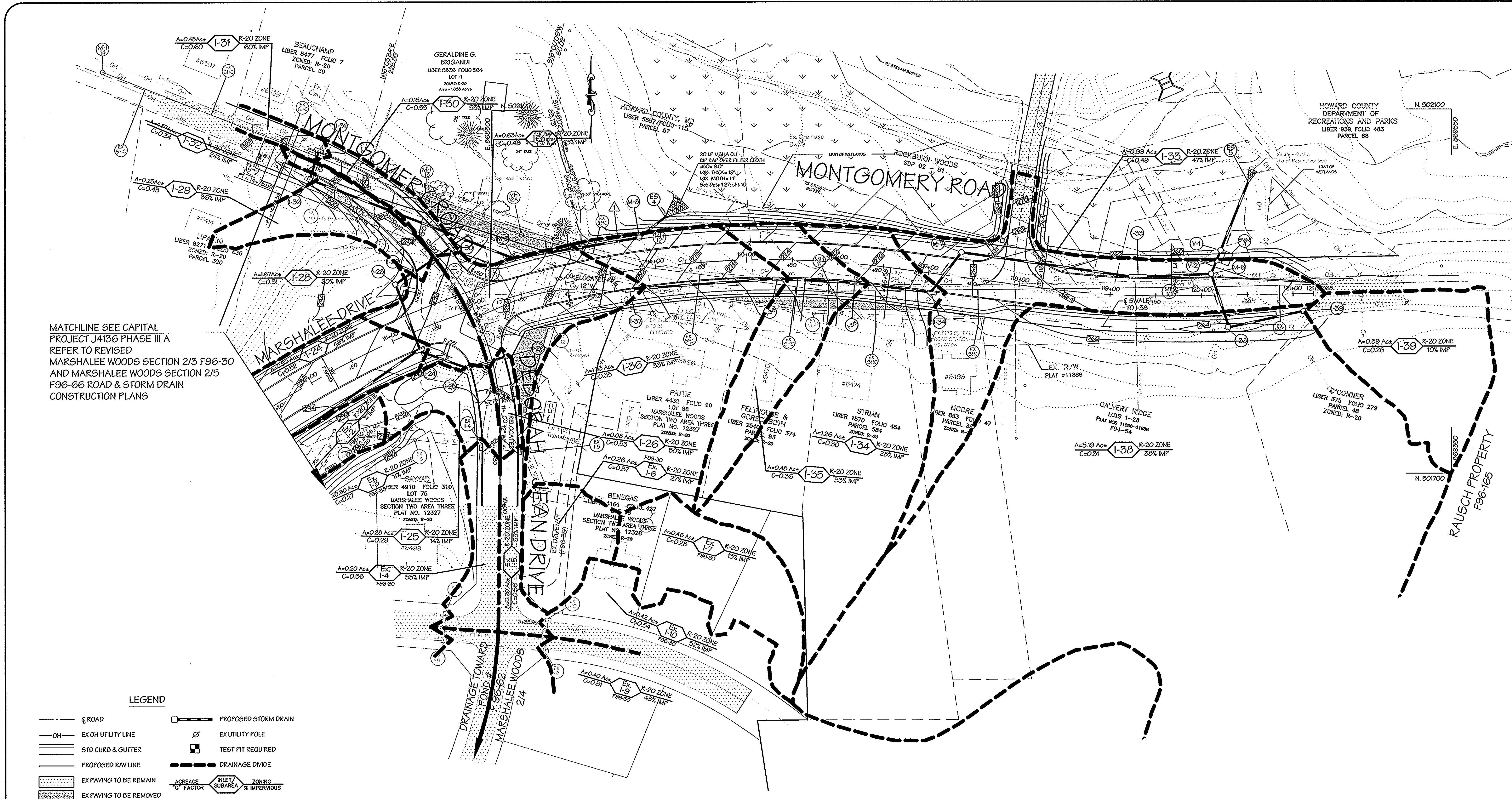
Plan View
Marshalee Drive
Sta. 109+50 thru 111+88.17
Montgomery Road 111+88.17 thru 121+22.68
Relocated Deborah Jean Drive 10+00 thru 12+19.32
& Montgomery Road - 12+19.32 thru 14+78.59

MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE
1" = 50'
SHEET
3 of 18

CAPITAL PROJECT J-4136/PHASE III B/PLAN/PLAN_7/17/2005/149235.FIA



MATCHLINE SEE CAPITAL PROJECT J4136 PHASE III A REFER TO REVISED MARSHALEE WOODS SECTION 2/3 F96-30 AND MARSHALEE WOODS SECTION 2/5 F96-66 ROAD & STORM DRAIN CONSTRUCTION PLANS

LEGEND

---	ROAD	---	PROPOSED STORM DRAIN
OH	EX OH UTILITY LINE	⊗	EX UTILITY POLE
---	STD CURB & GUTTER	⊠	TEST PIT REQUIRED
---	PROPOSED R/W LINE	---	DRAINAGE DIVIDE
---	EX PAVING TO BE REMAIN	ACREAGE	INLET
---	EX PAVING TO BE REMOVED	C FACTOR	SUBAREA
			ZONING
			% IMPERVIOUS

DEVELOPER CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Paul D. Burton 8/10/06
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE
 I 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.

Paul D. Burton 8/10/06
 SIGNATURE OF ENGINEER DATE

DEPARTMENT OF PUBLIC WORKS

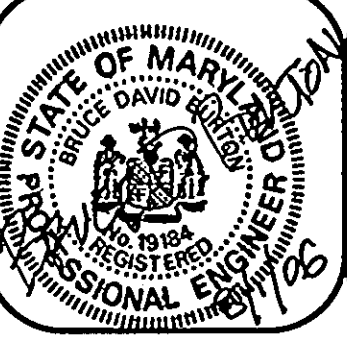
John J. ... 8/10/06
 DIRECTOR OF PUBLIC WORKS DATE

Walter J. ... 8-9-06
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Burton 8/10/06
 CHIEF, BUREAU OF ENGINEERING DATE

... 8/9/06
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Runsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX (410)715-9540



DESIGNED	E.D.S.		
DRAWN	L.D.E.		
CHECKED	B.D.B.		
DATE	LDE	REVISE BYPASS STORM DRAIN	6/2006
	BY	NO.	REVISION
			DATE
			MAP NO. 37
			BLOCK 15

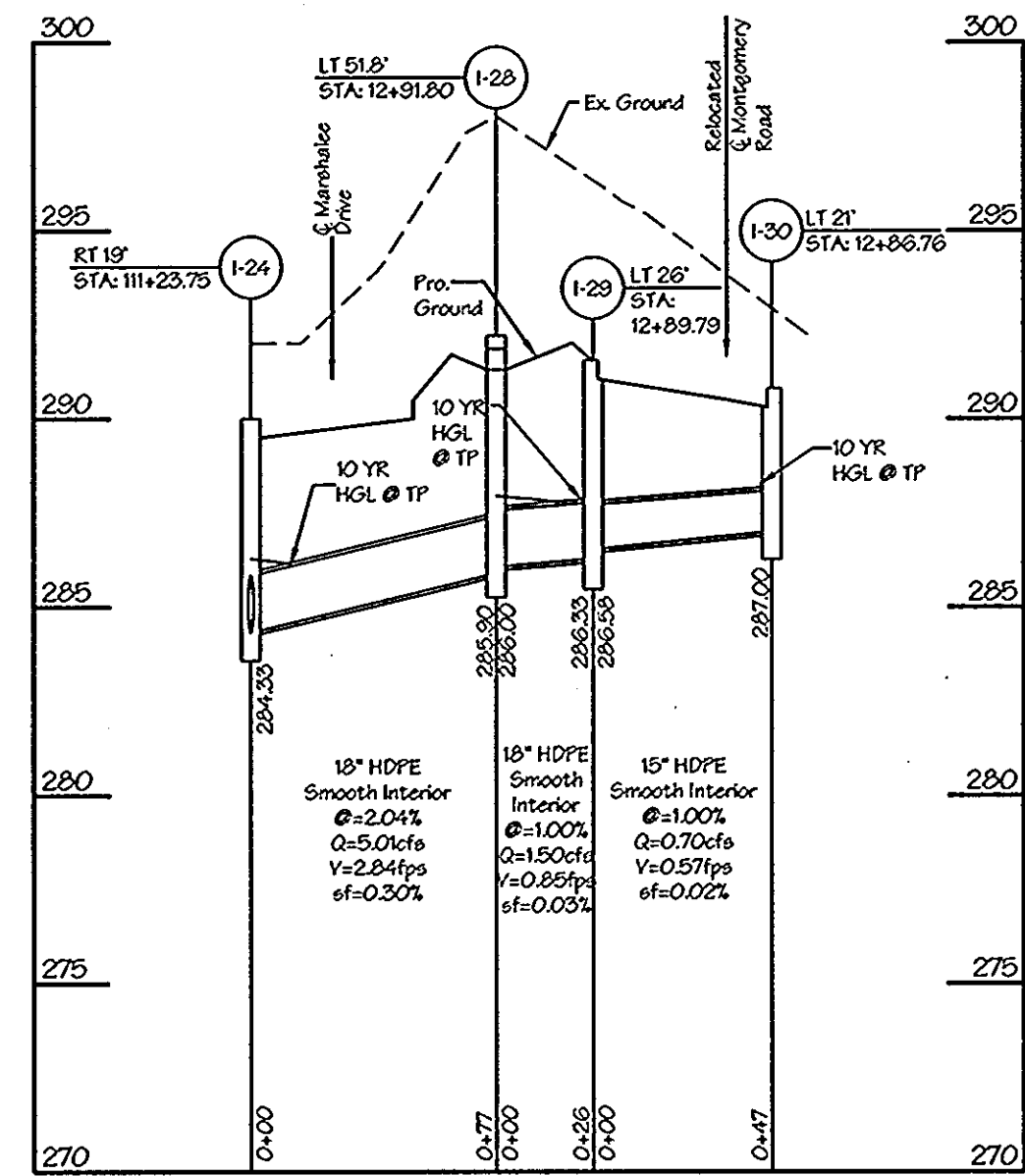
Drainage Area Map

MAP NO. 37 BLOCK 15

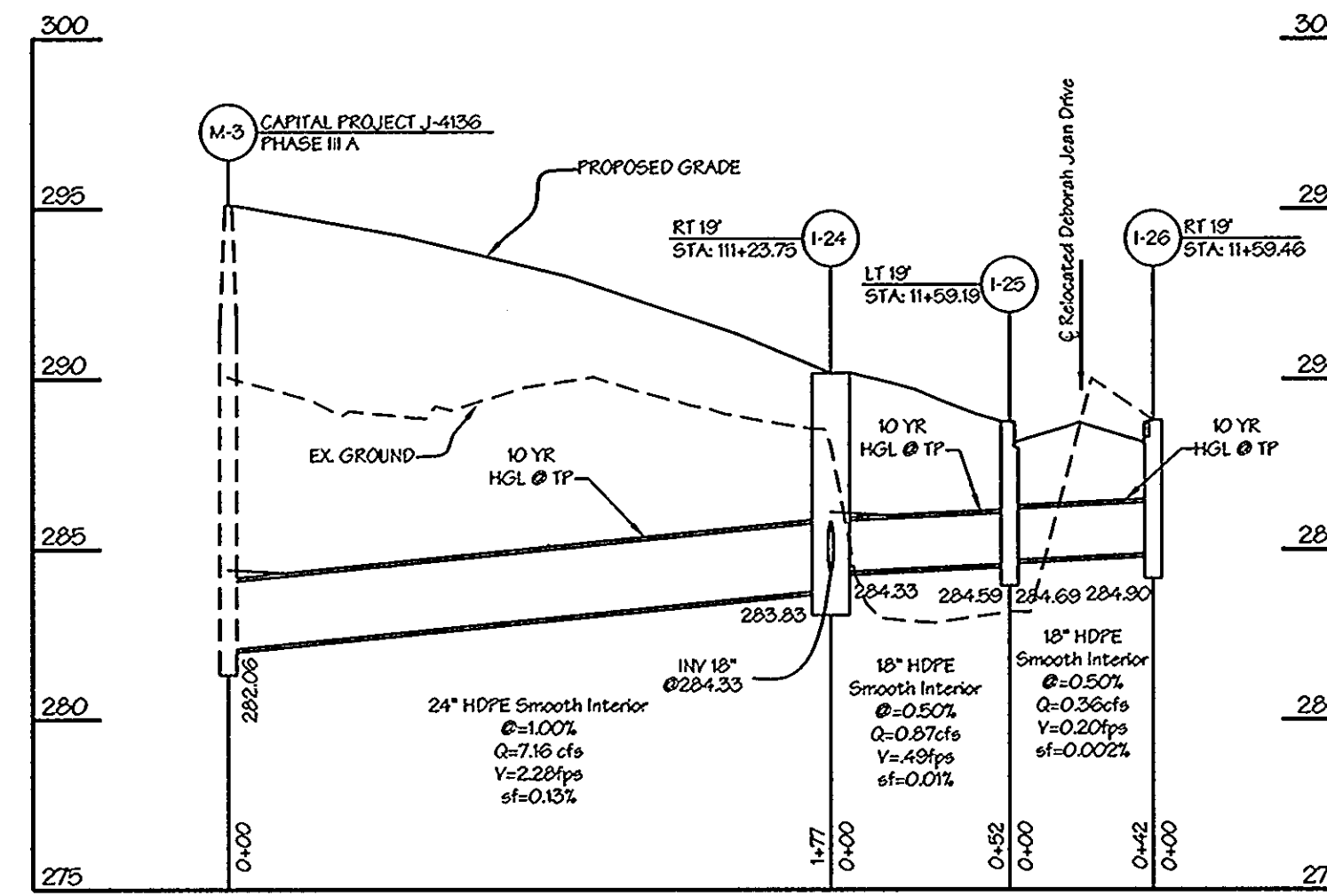
MARSHALEE DRIVE
 CAPITAL PROJECT J-4136
 PHASE III B
 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE
 1"=50'
 SHEET
 7 of 18

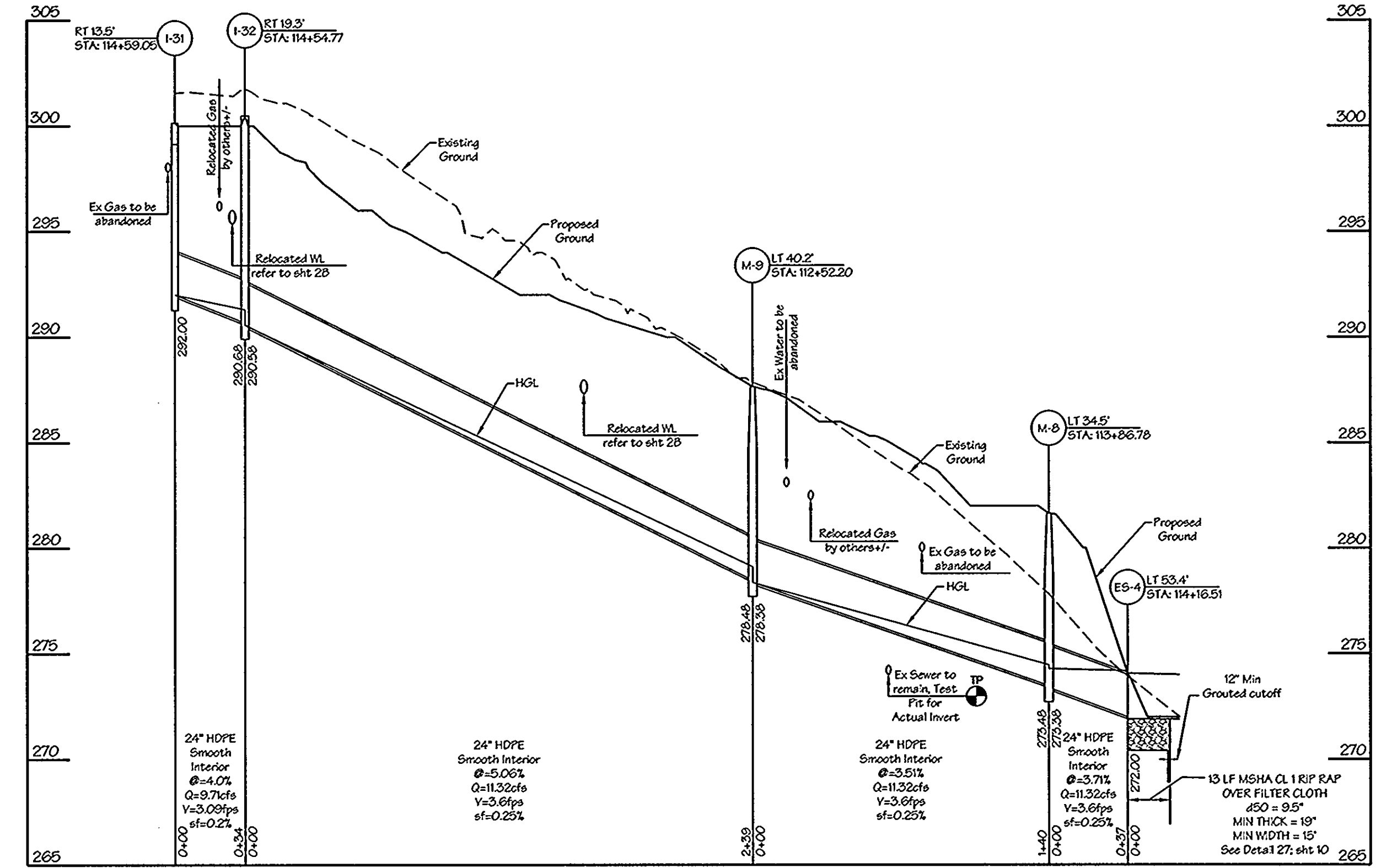
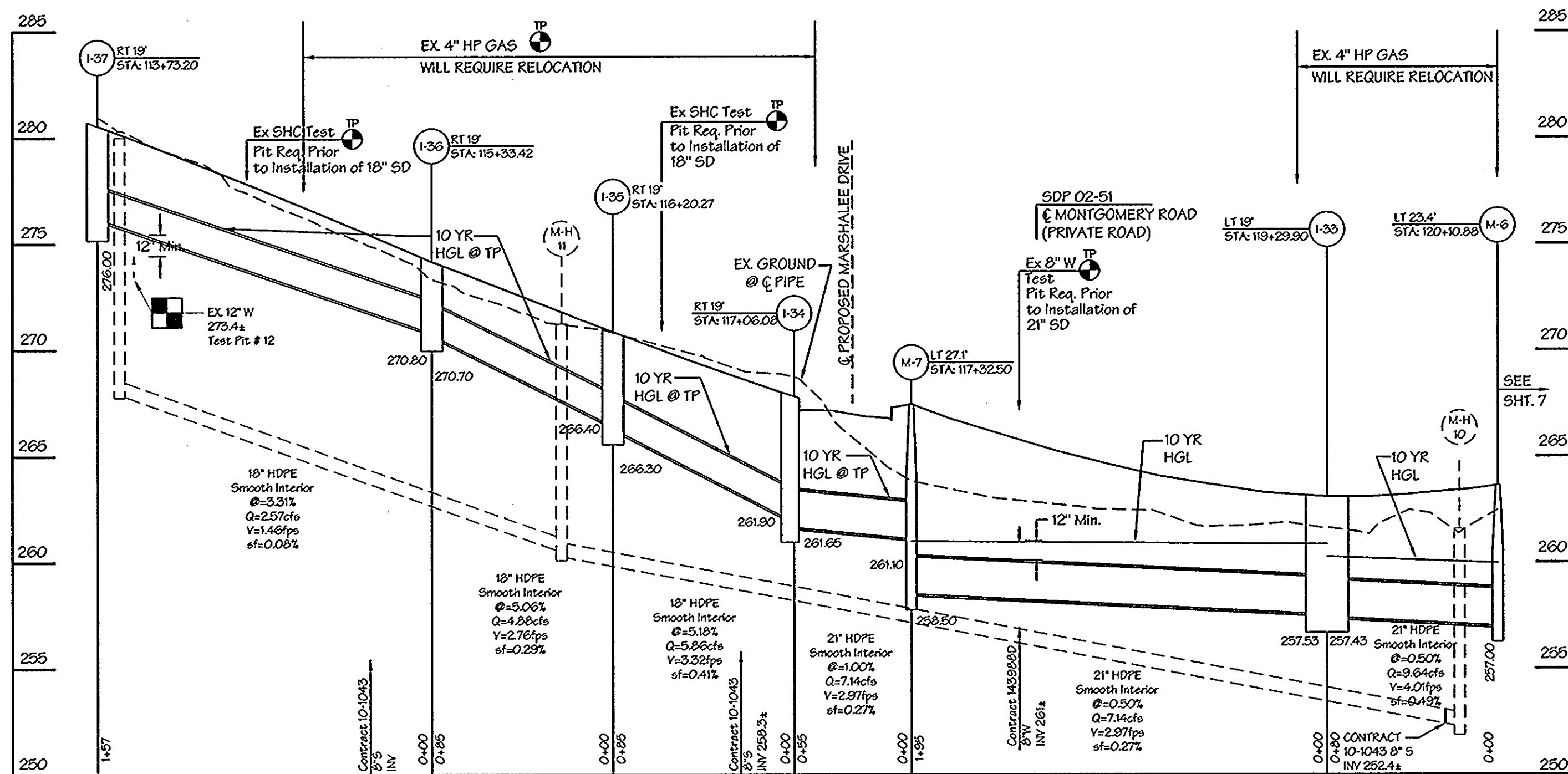
CAPITAL PROJECT J-4136.dwg/PSD/Map.dwg, 7/17/2006 2:05:57 PM



Storm Drain I-30 to I-24 toward Pond #3 F96-30 (Phase 3A)



Storm Drain I-26 to M-3 toward Pond #3 F96-30 (Phase 3A)



Notes:
For Test Pit Locations, refer to Sheet 3

Notes:

- Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit (See Sheet 3). The table containing the results of the test pit or pits is included herein.
- Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the Contractor two weeks in advance of construction operations at his own expense. Proposed Test Pits are represented by the symbol .
- LDE, Inc. shall be notified of all conflicts for possible redesign.

Test Hole #	Survey Marker	Ground Elevation	Field Measured	Top of Utility
1	Peg	301.41	3.21	298.20
2	Peg	298.86	2.57	296.29
3	Peg	295.39	3.66	291.74
4	Peg	283.69	3.67	280.02
5	P.K. Nail	282.09	3.28	278.81
6	P.K. Nail	283.02	3.38	279.64
7	Peg	300.41	4.32	296.09
8	P.K. Nail	289.64	4.02	285.62
9	P.K. Nail	284.12	4.59	279.54
10	P.K. Nail	281.36	4.41	276.95
11	P.K. Nail	278.69	4.25	274.43
12	Peg	284.62	3.31	281.31
13	P.K. Nail	261.38	3.81	257.57
14	P.K. Nail	261.30	3.82	257.48
15	Peg	288.29	3.78	284.51
16	Peg	288.76	0.91	287.85
17	Peg	286.93	6.09	280.84
18	Peg	286.99	1.19	285.79
19	Peg	287.50	3.51	283.99
20	Peg	287.50	1.59	285.91
21	Peg	287.66	3.53	284.13
22	Peg	287.74	4.66	283.08
23	Peg	287.78	1.12	286.67
24	Peg	287.78	1.12	286.67

Size	Class	Total Length*
15"	HDPE Smooth Interior	47
18"	HDPE Smooth Interior	608
21"	HDPE Smooth Interior	391
24"	HDPE Smooth Interior	734

* The total length of pipe does not take into account the slope of the pipe. This total is for linear feet only.

Str. No.	Structure Type	Inv. In	Inv. Out	Top Elevation or Upper / Lower	Detail	Location	Remarks
I-24	COG-10	284.33 / 284.33	283.83	290.52 / 290.15	MD-374.51	11+23.75; 19' RT	
I-25	COG-5	284.60	284.59	289.50 / 289.40	MD-374.51	11+59.19; 19' LT	
I-26	COG-5	284.90	284.90	288.75 / 288.60	MD-374.51	11+59.46; 19' RT	
I-28	Yard Inlet	286.00	285.90	290.00	MD-381.02	12+91.80; 51.8' LT	
I-29	COG-10	286.58	286.33	291.65 / 291.50	MD-374.51	12+89.78; 24.09' LT	
I-30	COG-10	-	287.00	291.12 / 290.68	MD-374.51	12+86.76; 19' RT	
I-31	COG-10	-	282.00	300.90 / 300.18	MD-374.51	14+59.05; 40.3' RT	
I-32	Type "D"	290.66	290.58	300.33	MD-378.05	14+54.77; 19.3' LT	See Note 1 - Throat Upfall Side Only
I-33	COG-20	257.53	257.43	262.98	MD-374.61	19+29.90; 19' LT	
I-34	COG-10	261.90	261.65	267.96 / 267.64	MD-374.51	117+08.09; 19' LT	
I-35	COG-10	266.40	266.30	270.91 / 270.47	MD-374.51	116+20.77; 19' RT	
I-36	COG-10	270.80	270.70	274.33 / 273.89	MD-374.51	115+33.42; 19' RT	
I-37	COG-10	-	278.00	280.74 / 280.30	MD-374.51	113+68.09; 21.0' RT	
I-38	Yard Inlet	259.35	259.10	263.50	MD-381.02	120+28.42; 35' RT	
I-39	Type "S"	-	260.02	265.00	MD-374.75	121+11.71; 19' RT	See Note 2
M-6	Manhole	257.00	256.75	256.30	MD-383.01	120+10.88; 23.4' LT	
M-7	Manhole	261.10	259.50	267.50	MD-383.01	117+32.50; 27.1' LT	
M-8	Manhole	273.48	273.38	281.80	MD-383.01	113+66.78; 34.5' LT	
M-9	Manhole	278.48	278.38	287.70	MD-383.01	112+52.20; 40.2' LT	
V-1	Junction Manhole	256.50	256.40	261.00	MD-383.01	120+21.68; 49.26' LT	See Sheet 18 / Vortecholics
V-2	Bypass Manhole	256.67	256.57	264.00	MD-383.01	120+17.05; 38.19' LT	See Sheet 18 / Vortecholics
ES-4	HDPE End Section	272.00	-	274.00	-	114+16.51; 53.42' LT	Typical HDPE Flare End Section
ES-5	HDPE End Section	256.00	-	258.00	-	-	Typical HDPE Flare End Section

- Existing Offsite Drainage shall be channeled toward I-32 behind proposed curb & gutter
- Field Verify Existing Surface Elevation. Inlet grate top shall be at existing ground elevation 265.0 +/-

DEVELOPER CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
Paul J. Sponner 5/9/06 DATE
SIGNATURE OF DEVELOPER

ENGINEER'S CERTIFICATE
I 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.
Prince D. Burton 8/9/06 DATE
SIGNATURE OF ENGINEER

DEPARTMENT OF PUBLIC WORKS
James D. Slaton 8/9/06 DATE
DIRECTOR OF PUBLIC WORKS
Wesley Zambelli 8/9/06 DATE
CHIEF, BUREAU OF HIGHWAYS
Paul J. Sponner 5/9/06 DATE
CHIEF, BUREAU OF ENGINEERING
John Stewart 8/9/06 DATE
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

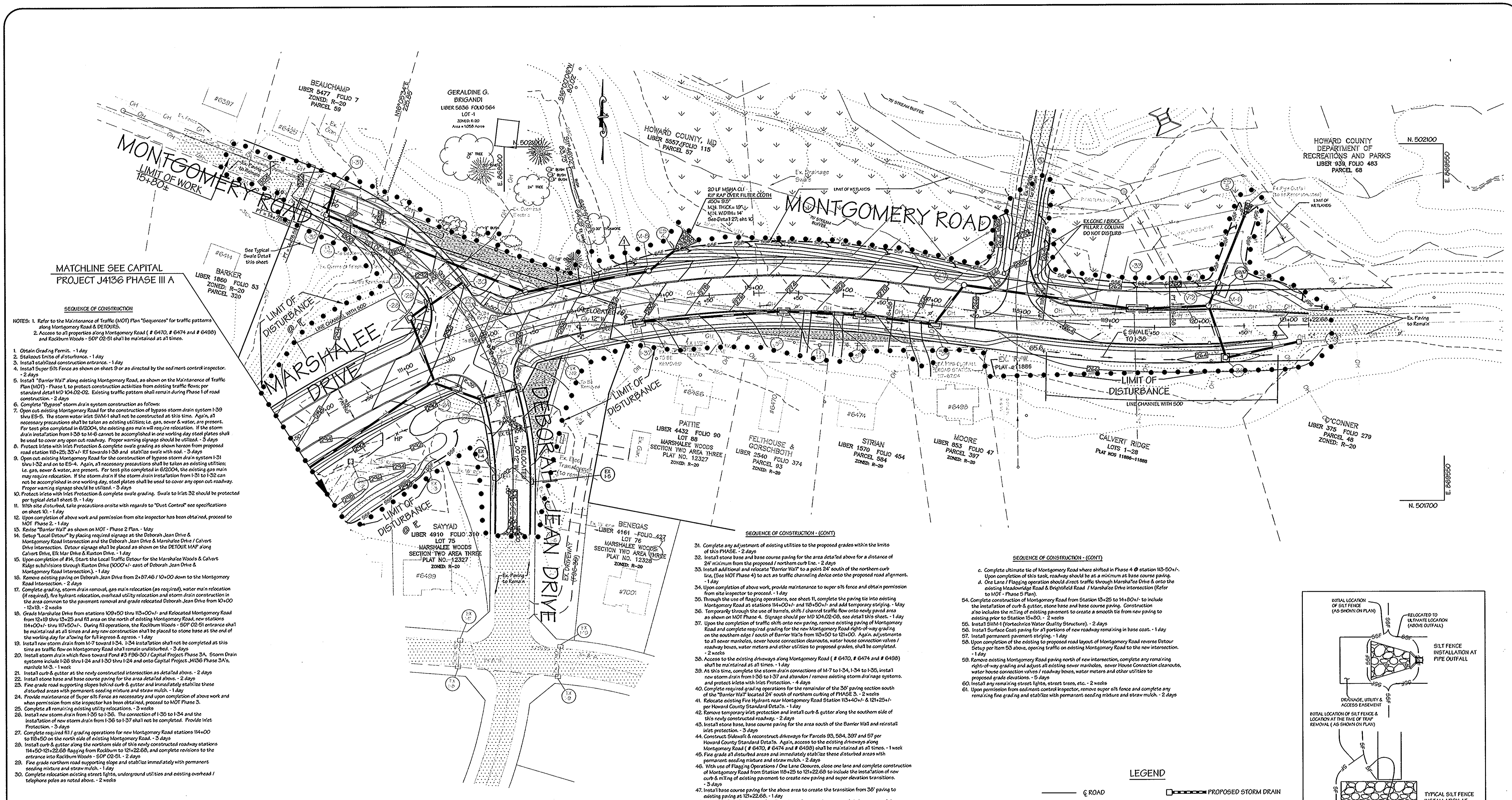
LDE Inc.
Engineers, Surveyors, Planners
9250 Runney Road, Suite 106 Columbia, Maryland - 21043
(410)715-1070 - (301)596-3424 - FAX(410)715-9540

DESIGNED E.D.S.
DRAWN L.D.E.
CHECKED B.D.B.
DATE LDE 2/2005
BY NO. REVISION
REVISION REVISION
DATE 6/2006
MAP NO. 37 BLOCK 15

Storm Drain Profiles

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 8 of 18



- NOTES:** 1. Refer to the Maintenance of Traffic (MOT) Plan "Sequences" for traffic patterns along Montgomery Road & DETOURS.
2. Access to all properties along Montgomery Road (# 6470, # 6474 and # 6488) and Rockburn Woods - SDP 02-51 shall be maintained at all times.
- Obtain Grading Permit - 1 day
 - Stakeout limits of disturbance - 1 day
 - Install established construction entrance - 1 day
 - Install Super Silt Fence as shown on sheets 9 or as directed by the sediment control inspector - 2 days
 - Install "Barrier Wall" along existing Montgomery Road, as shown on the Maintenance of Traffic Plan (MOT) - Phase 1 to protect construction activities existing traffic flows per standard detail MD 104.02-02. Existing traffic pattern shall remain during Phase 1 of road construction - 2 days
 - Complete "bypass" storm drain system construction as follows:
 - Open up existing Montgomery Road for the construction of bypass storm drain system I-39 thru E5-5. The storm water inlet SWM-1 shall not be constructed at this time. Again, at necessary precautions shall be taken as existing utilities (i.e. gas, sewer & water, are present. For test pits completed in 6/20/04, the existing gas main will require relocation. If the storm drain installation from I-39 to M-6 cannot be accomplished in one working day steel plates shall be used to cover any open cut roadway. Proper warning signage should be utilized - 3 days
 - Protect inlets with Inlet Protection & complete swale grading as shown below from proposed road station 110+25.33' to RT towards I-39 and stabilize swale with soil - 3 days
 - Open up existing Montgomery Road for the construction of bypass storm drain system I-31 thru I-32 and on to E5-5. Again, all necessary precautions shall be taken as existing utilities (i.e. gas, sewer & water, are present. For test pits completed in 6/20/04, the existing gas main may require relocation. If the storm drain in the storm drain installation from I-31 to I-32 can not be accomplished in one working day steel plates shall be used to cover any open cut roadway. Proper warning signage should be utilized - 3 days
 - Protect inlets with Inlet Protection & complete swale grading. Swale to Inlet 32 should be protected per typical detail sheet 9 - 1 day
 - With site disturbed, take precautions onsite with regards to "Dust Control" see specifications on sheet 10 - 1 day
 - Upon completion of above work and permission from site inspector has been obtained, proceed to MOT Phase 2 - 1 day
 - Remove "Barrier Wall" as shown on MOT - Phase 2 Plan - 1 day
 - Setup "Local Detour" by placing required signage at the Deborah Jean Drive & Marshalee Drive / Calvert Drive Intersection. Detour signage shall be placed as shown on the DETOUR MAP along Calvert Drive, Elk Mar Drive & Ruxton Drive - 1 day
 - Upon completion of #14, Start the Local Traffic Detour for the Marshalee Woods & Calvert Ridge subdivisions through Ruxton Drive (100' +/- east of Deborah Jean Drive & Montgomery Road Intersection) - 1 day
 - Remove existing paving on Deborah Jean Drive from 2+87.46 / 10+00 down to the Montgomery Road Intersection - 2 days
 - Complete grading, storm drain removal, gas main relocation (as required), water main relocation (if required), fire hydrant relocation, overhead utility relocation and storm drain construction in the area common to the pavement removal and grade relocated Deborah Jean Drive from 10+00 to 12+15 - 2 weeks
 - Grade Marshalee Drive from stations 109+50 thru 113+00 +/- and Relocate Montgomery Road from 12+19 thru 13+25 and fill area on the north of existing Montgomery Road, new stations 114+00 +/- thru 117+50 +/- . During fill operations, the Rockburn Woods - SDP 02-51 entrance shall be maintained at all times and any new construction shall be placed to stone base at the end of the working day for allowing for full ingress & egress - 1 day
 - Install new storm drain from 117+50 to 124+15.44 installation shall not be completed at this time as traffic flow on Montgomery Road shall remain undisturbed - 3 days
 - Install storm drain which flows toward Pond #3 F96-30 / Capital Project Phase 3A. Storm Drain systems include I-25 thru I-24 and I-30 thru I-24 and onto Capital Project J4136 Phase 3A, manhole M-3 - 1 week
 - Install curb & gutter at the newly constructed intersection as detailed above - 2 days
 - Install stone base and base course paving for the area detailed above - 2 days
 - Final grade road supporting slopes behind curb & gutter and immediately stabilize these disturbed areas with permanent seeding mixture and straw mulch - 1 day
 - Provide maintenance of Super silt Fence as necessary and upon completion of above work and when permission from site inspector has been obtained, proceed to MOT Phase 3 - 3 days
 - Complete all remaining existing utility relocations - 3 weeks
 - Install new storm drain from I-35 to I-36. The connection of I-35 to I-34 and the installation of new storm drain from I-36 to I-37 shall not be completed. Provide Inlet Protection - 3 days
 - Complete required fill / grading operations for new Montgomery Road stations 114+00 to 118+50 on the north side of existing Montgomery Road - 3 days
 - Install curb & gutter along the north side of this newly constructed roadway stations 114+50 to 121+22.68 flagging from Rockburn to 121+22.68, and complete revisions to the entrance into Rockburn Woods - SDP 02-51 - 2 days
 - Final grade northern road supporting slope and stabilize immediately with permanent seeding mixture and straw mulch - 1 day
 - Complete relocation existing street lights, underground utilities and existing overhead / telephone poles as noted above - 2 weeks

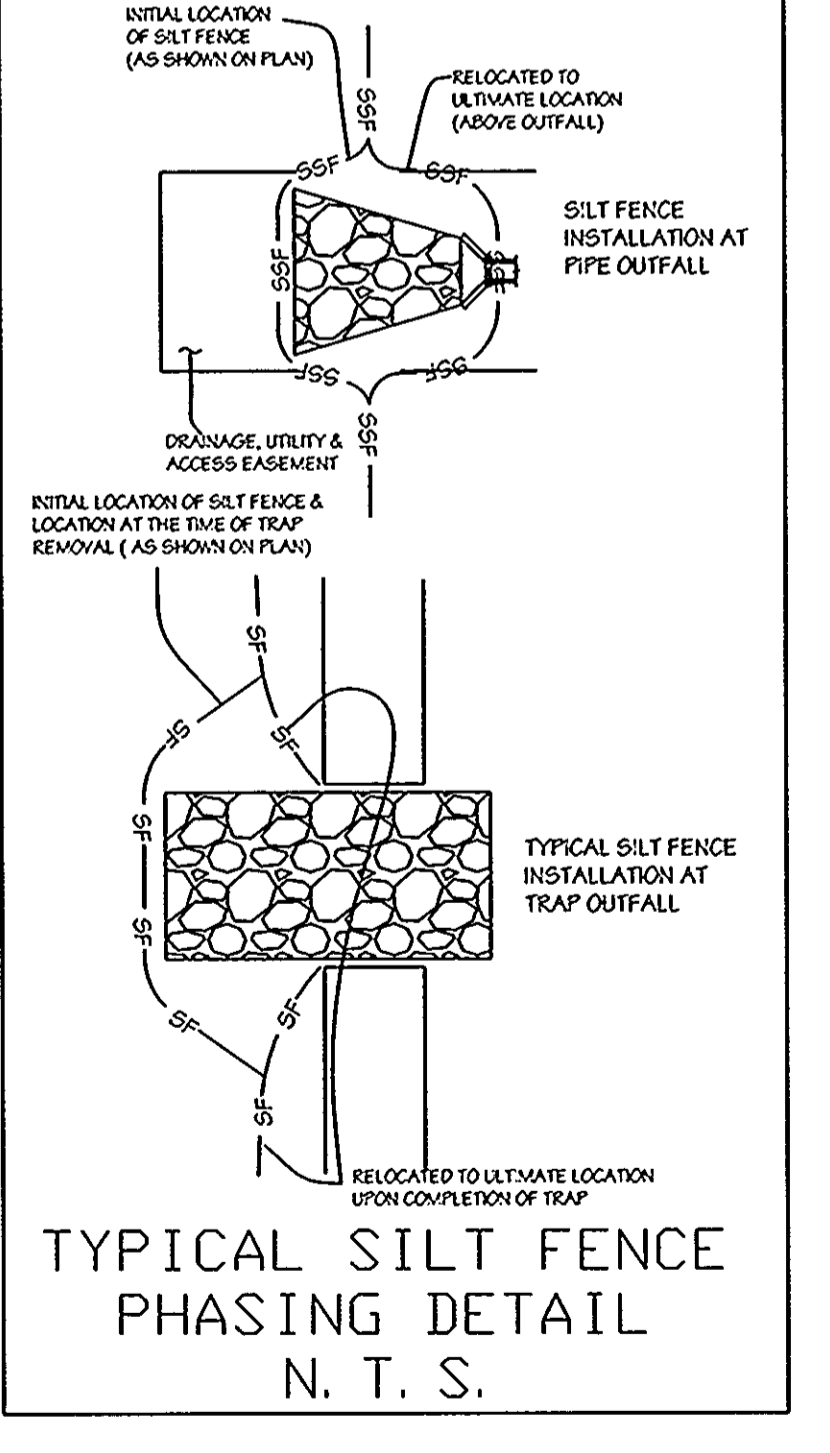
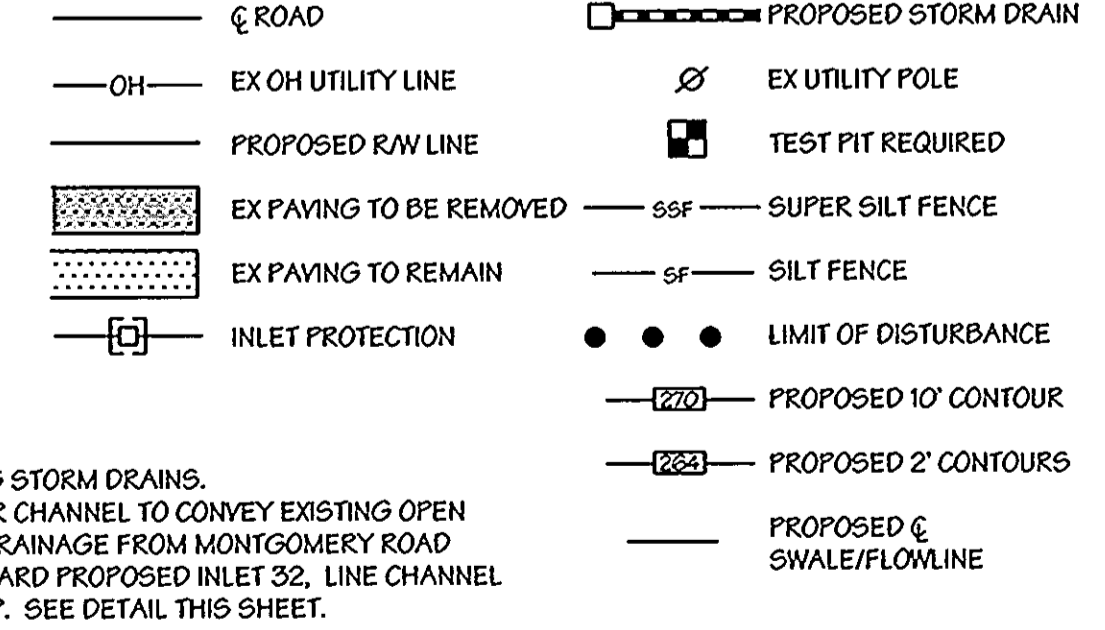
SEQUENCE OF CONSTRUCTION - (CONT)

- Complete any adjustment of existing utilities to the proposed grades within the limits of this PHASE - 2 days
- Install stone base and base course paving for the area detailed above for a distance of 24' minimum from the proposed northern curb line - 2 days
- Install additional and relocate "Barrier Wall" to a point 24' south of the northern curb line. (See MOT Phase 4) to act as traffic channeling device onto the proposed road alignment - 1 day
- Upon completion of above work, provide maintenance to super silt fence and obtain permission from site inspector to proceed - 1 day
- Through the use of flagging operations, see sheet 11, complete the paving tie into existing Montgomery Road at stations 114+00 +/- and 118+50 +/- and add temporary striping - 1 day
- Temporarily through the use of barriers, shift / channel traffic flow onto newly paved area as shown on MOT Phase 4. Signage should be per MD 104.02-03, see detail 104 sheet - 1 day
- Upon the completion of traffic shifts onto new paving, remove existing paving of Montgomery Road and complete required grading for the new Montgomery Road right-of-way grading on the southern edge / south of Deborah Jean Drive from 114+00 to 121+00. Again, adjustments to all sewer manholes, sewer house connection clearouts, water house connection valves / roadway boxes, water meters and other utilities to proposed grades, shall be completed - 2 weeks
- Access to the existing driveways along Montgomery Road (# 6470, # 6474 and # 6488) shall be maintained at all times - 1 day
- At this time, complete the storm drain connections of M-7 to I-34, I-34 to I-35, install new storm drain from I-36 to I-37 and abandon / remove existing storm drainage systems, and protect inlets with Inlet Protection - 4 days
- Complete required grading operations for the remainder of the 36" paving section south of the "Barrier Wall" located 24' south of northern curbing of PHASE 3 - 2 weeks
- Relocate existing Fire Hydrant near Montgomery Road Station 113+40 +/- & 121+25 +/- per Howard County Standard Data - 1 day
- Remove temporary inlet protection and install curb & gutter along the southern side of this newly constructed roadway - 2 days
- Install stone base, base course paving for the area south of the Barrier Wall and reestablish inlet protection - 3 days
- Construct Sidewalk & reconstruct Driveways for Parcels 83, 584, 397 and 57 per Howard County Standard Data. Again, access to the existing driveways along Montgomery Road (# 6470, # 6474 and # 6488) shall be maintained at all times - 1 week
- Final grade all disturbed areas and immediately stabilize these disturbed areas with permanent seeding mixture and straw mulch - 2 days
- With use of Flagging Operations / One Lane Closures, close one lane and complete construction of Montgomery Road from Station 118+25 to 121+22.68 to include the installation of new curb & miter of existing pavement to create new paving and super elevation transitions - 3 days
- Install base course paving for the above area to create the transition from 36" paving to existing paving at 121+22.68 - 1 day
- Install Surface Coat paving for all portions of new roadway currently in base coat - 1 day
- Install temporary pavement striping with 30" Paving from 113+00 +/- to 121+22.68 - 1 day
- Traffic Patterns shall remain shifted onto existing Montgomery Road at Station 113+50 +/- until all phases of Capital Project J4136 Marshalee Drive is completed from Meadowlands (the 102) to new intersection at Deborah Jean (See Phase 5 Detour Map).
- Upon complete setup of Detour signage and during off peak or night time only using one lane construction / flagging operations proceed as follows simultaneously - 1 day
 - Detour traffic at Shady Oak Lane / Marshalee Drive and Montgomery Road Intersection thru Marshalee Drive and Close Montgomery Road 1200' east of Parkway Court. (Refer to MOT - Phase 5 Plan)
 - Remove the covering of the detour signage and remove the Road Closure Signage at the Deborah Jean Drive / Calvert Drive Intersection and Block / Close Montgomery Road at northwestern point of the proposed intersection.

SEQUENCE OF CONSTRUCTION - (CONT)

- Complete ultimate tie of Montgomery Road where shifted in Phase 4 @ station 113+50 +/- . Upon completion of this task, roadway should be at a minimum at base course paving.
 - One Lane / Flagging operation should direct traffic through Marshalee Drive & use the existing Meadowlands Road & Brightfield Road / Marshalee Drive Intersection (Refer to MOT - Phase 5 Plan).
- Complete construction of Montgomery Road from Station 13+25 to 14+50 +/- to include the installation of curb & gutter, stone base and base course paving. Construction also includes the mitering of existing pavement to create a smooth tie from new paving to existing prior to Station 15+00 - 2 weeks
 - Install SWM-4 (Vortices Water Quality Structure) - 2 days
 - Install Surface Coat paving for all portions of new roadway remaining in base coat - 1 day
 - Install permanent pavement striping - 1 day
 - Upon completion of the existing to proposed road layout of Montgomery Road reverse Detour Setup per Item 50 above, opening traffic on existing Montgomery Road to the new intersection - 2 days
 - Remove existing Montgomery Road paving north of new intersection, complete any remaining right-of-way grading and adjust all existing sewer manholes, sewer house connection clearouts, water house connection valves / roadway boxes, water meters and other utilities to proposed grade elevations - 3 days
 - Install any remaining street lights, street trees, etc. - 2 weeks
 - Upon permission from sediment control inspector, remove super silt fence and complete any remaining fine grading and stabilize with permanent seeding mixture and straw mulch - 2 days

LEGEND



NOTES: 1) REMOVE ALL EXISTING STORM DRAINS.
2) PROVIDE TRIANGULAR CHANNEL TO CONVEY EXISTING OPEN SECTION ROADWAY CHANNEL FROM MONTGOMERY ROAD STATION 14+85± TOWARD PROPOSED INLET 32, LINE CHANNEL W/ MSHA CL I RIP-RAP. SEE DETAIL THIS SHEET.

DEVELOPER CERTIFICATE
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING 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. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS AND WHEN NECESSARY.

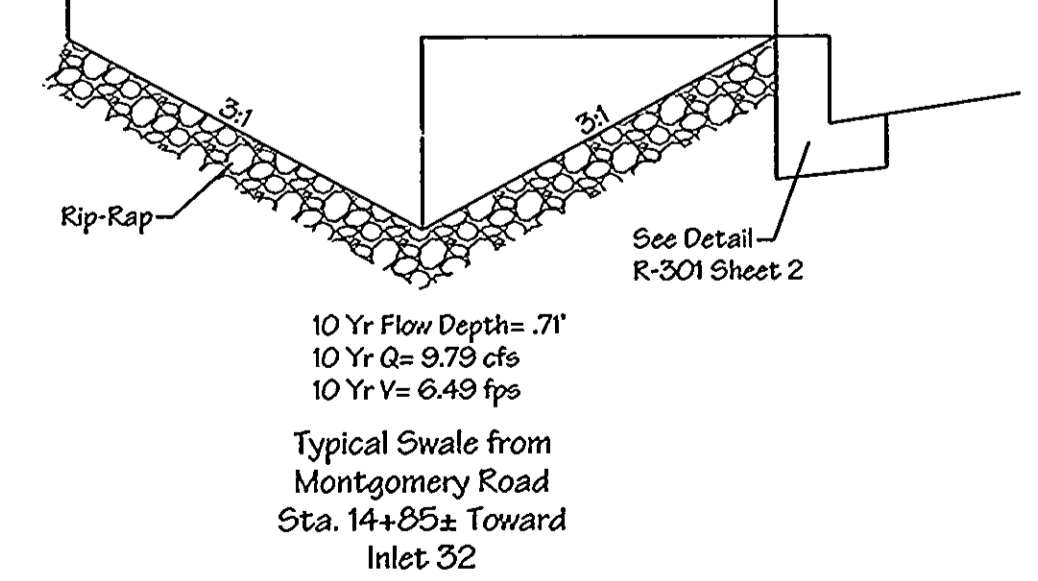
Michael J. Spon 8/9/06
SIGNATURE OF DEVELOPER DATE

John J. White 8/9/06
HOWARD S.C.D. DATE

ENGINEER'S CERTIFICATE
I 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.

Bruce D. Barton 8/9/06
SIGNATURE OF ENGINEER DATE

Jim Meyer 8/9/06
HOWARD S.C.D. DATE



DEPARTMENT OF PUBLIC WORKS

Michael J. Spon 8/9/06
DIRECTOR OF PUBLIC WORKS DATE

John J. White 8/9/06
CHIEF, BUREAU OF ENGINEERING DATE

William Z. Hubert 8/9/06
CHIEF, BUREAU OF HIGHWAYS DATE

Jim Meyer 8/9/06
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
Engineers, Surveyors, Planners
9250 Runsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX (410)715-9540

DESIGNED E.D.S. DRANN L.D.E. CHECKED D.B.B. DATE 2/2005

NO.	REVISION	DATE
1	REVISE BYPASS STORM DRAIN	6/2006
2		
3		
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10		

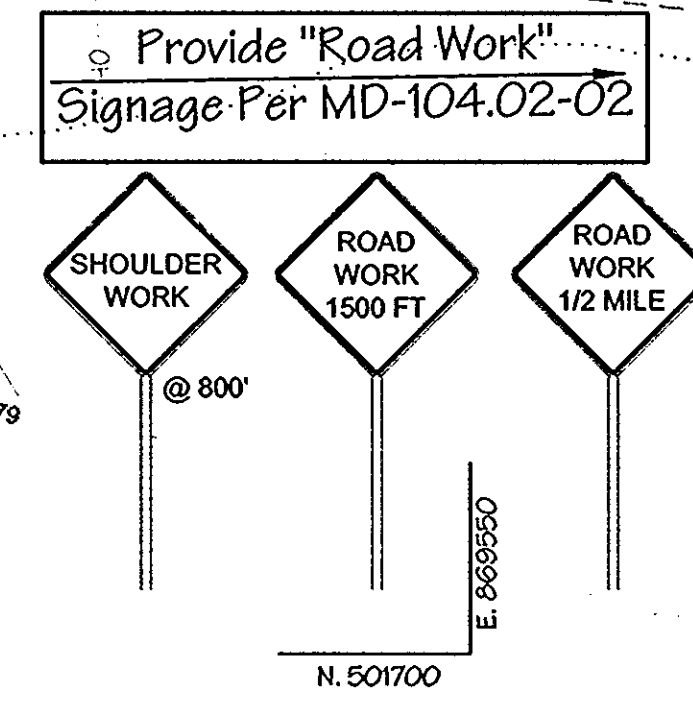
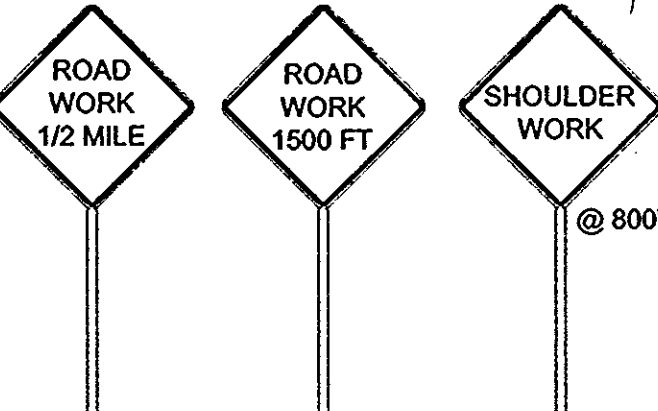
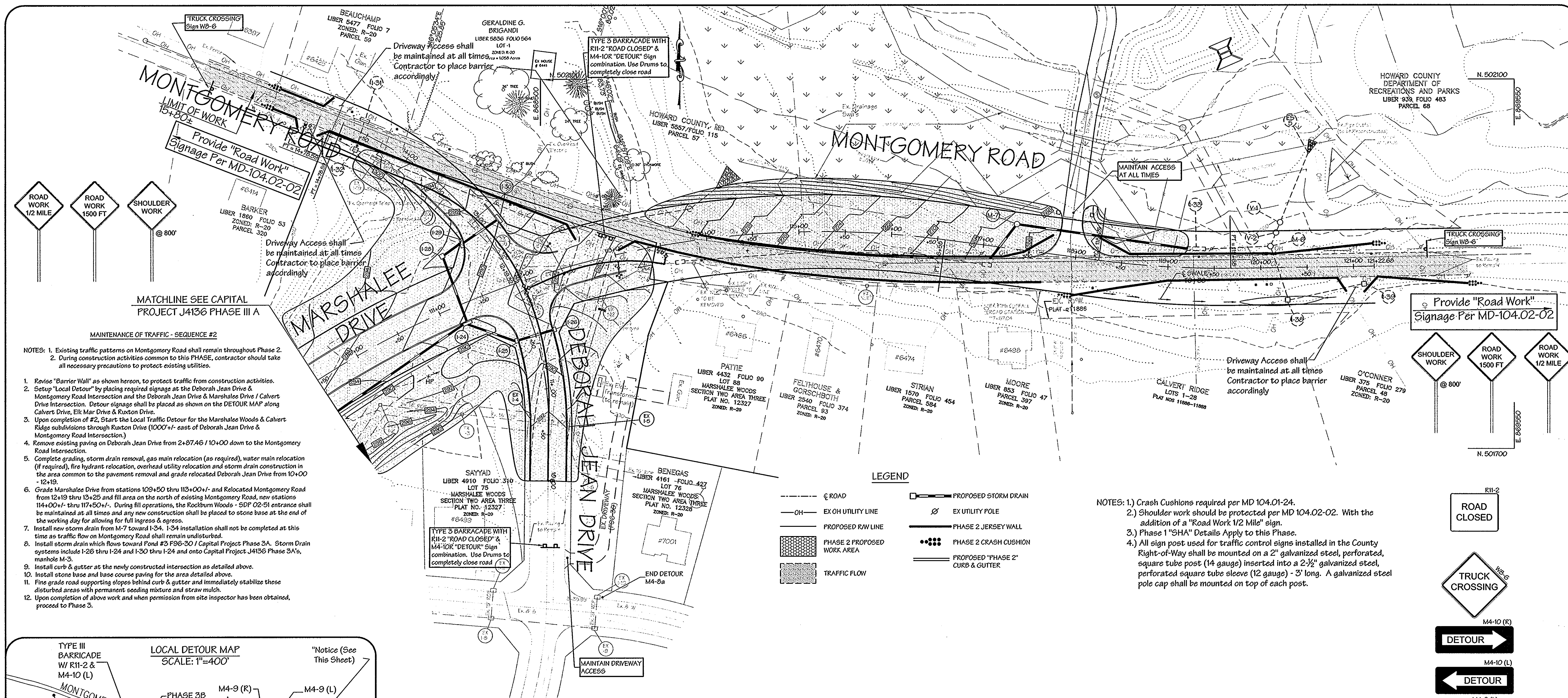
Grading and Soil Erosion & Sediment Control Plan

MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 9 of 18

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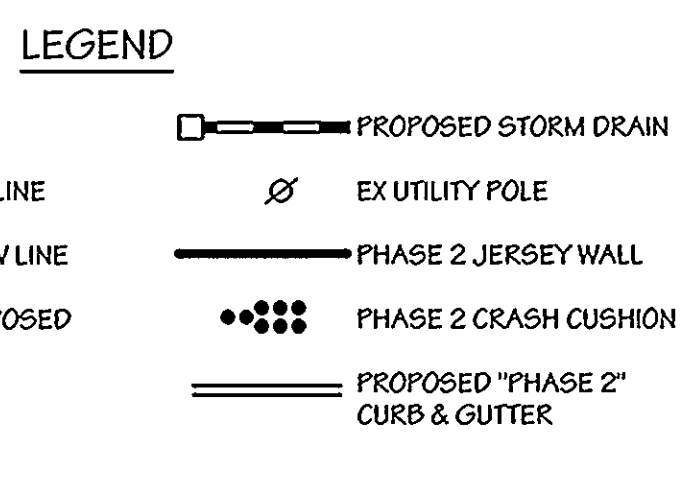


MATCHLINE SEE CAPITAL PROJECT J4136 PHASE III A

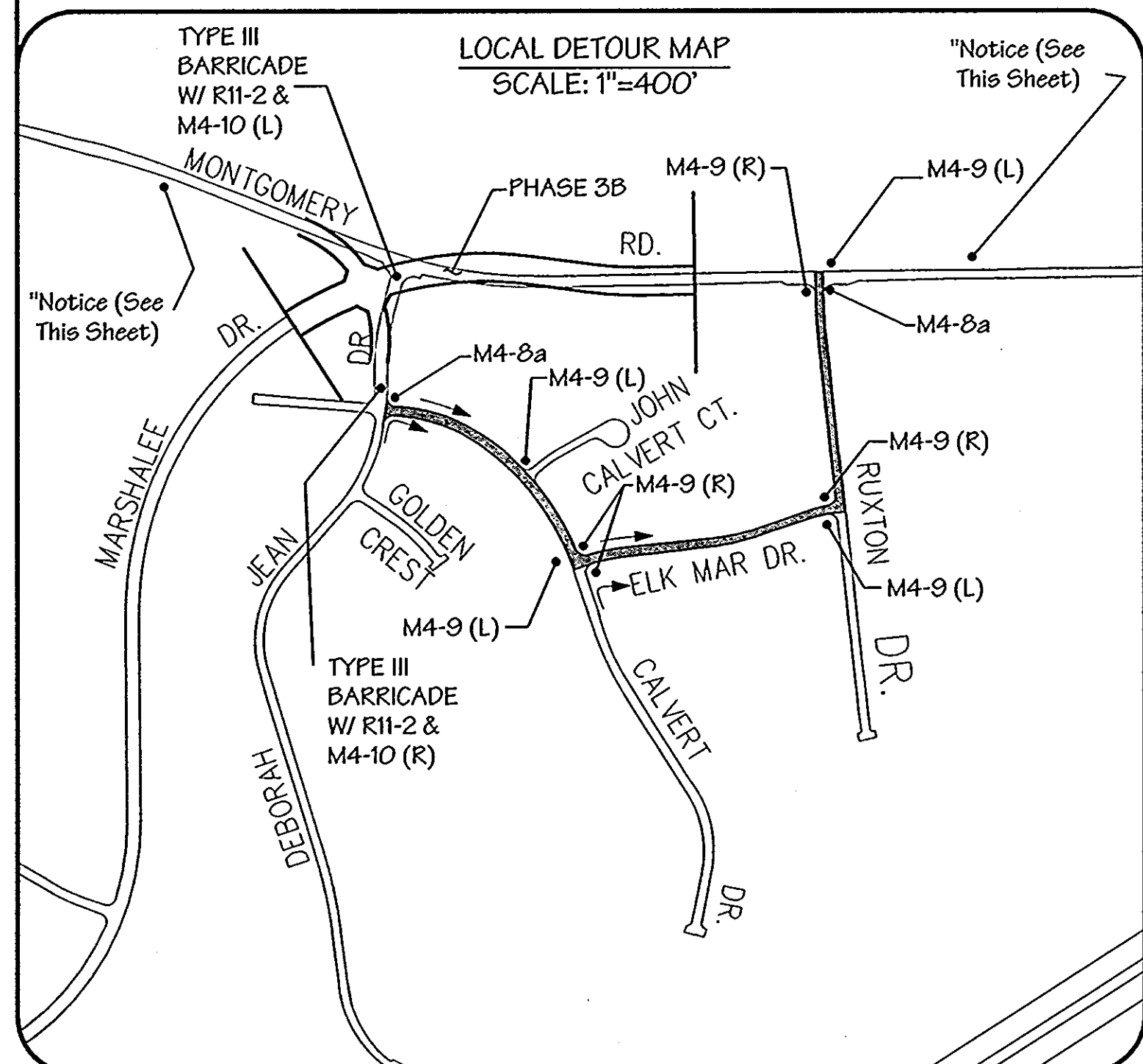
MAINTENANCE OF TRAFFIC - SEQUENCE #2

NOTES: 1. Existing traffic patterns on Montgomery Road shall remain throughout Phase 2.
2. During construction activities common to this PHASE, contractor should take all necessary precautions to protect existing utilities.

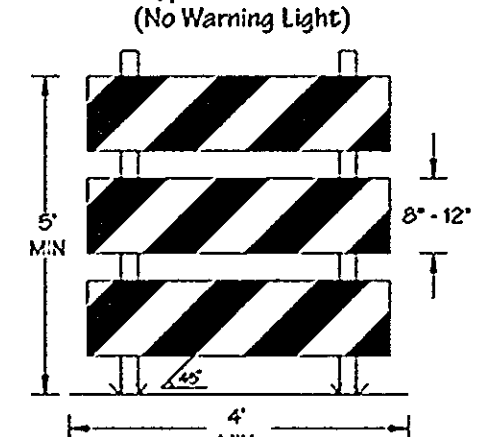
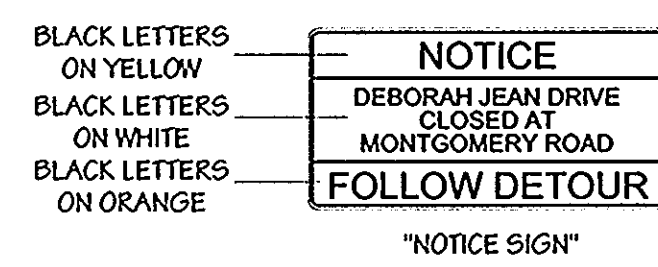
1. Revise "Barrier Wall" as shown hereon, to protect traffic from construction activities.
2. Setup "Local Detour" by placing required signage at the Deborah Jean Drive & Montgomery Road Intersection and the Deborah Jean Drive & Marshalee Drive / Calvert Drive Intersection. Detour signage shall be placed as shown on the DETOUR MAP along Calvert Drive, Elk Mar Drive & Ruxton Drive.
3. Upon completion of #2, Start the Local Traffic Detour for the Marshalee Woods & Calvert Ridge subdivisions through Ruxton Drive (1000'+/- east of Deborah Jean Drive & Montgomery Road Intersection.)
4. Remove existing paving on Deborah Jean Drive from 2+87.46 / 10+00 down to the Montgomery Road Intersection.
5. Complete grading, storm drain removal, gas main relocation (as required), water main relocation (if required), fire hydrant relocation, overhead utility relocation and storm drain construction in the area common to the pavement removal and grade relocated Deborah Jean Drive from 10+00 - 12+19.
6. Grade Marshalee Drive from stations 109+50 thru 113+00+/- and Relocated Montgomery Road from 12+19 thru 13+25 and fill area on the north of existing Montgomery Road, new stations 114+00+/- thru 117+50+/- . During fill operations, the Rockburn Woods - SDF 02-51 entrance shall be maintained at all times and any new construction shall be placed to stone base at the end of the working day for allowing for full ingress & egress.
7. Install new storm drain from M-7 toward I-34. I-34 installation shall not be completed at this time as traffic flow on Montgomery Road shall remain undisturbed.
8. Install storm drain which flows toward Pond #3 F96-30 / Capital Project Phase 3A. Storm Drain systems include I-26 thru I-24 and I-30 thru I-24 and onto Capital Project J4136 Phase 3A's, manhole M-3.
9. Install curb & gutter at the newly constructed intersection as detailed above.
10. Install stone base and base course paving for the area detailed above.
11. Fine grade road supporting slopes behind curb & gutter and immediately stabilize these disturbed areas with permanent seeding mixture and straw mulch.
12. Upon completion of above work and when permission from site inspector has been obtained, proceed to Phase 3.



- NOTES: 1.) Crash Cushions required per MD 104.01-24.
2.) Shoulder work should be protected per MD 104.02-02. With the addition of a "Road Work 1/2 Mile" sign.
3.) Phase 1 "SHA" Details Apply to this Phase.
4.) All sign post 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.



NOTE: Contractor shall install Barrier / Jersey wall end treatments & flare ways at all private driveways and truck entrances / exits in accordance with MD 104.01-24.



DEPARTMENT OF PUBLIC WORKS

John M. ... 8/9/06
DIRECTOR OF PUBLIC WORKS DATE

Walter ... 8/9/06
CHIEF, BUREAU OF HIGHWAYS DATE

... 8/9/06
CHIEF, BUREAU OF ENGINEERING DATE

... 8/9/06
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
Engineers, Surveyors, Planners
9250 Runsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX (410)715-9540

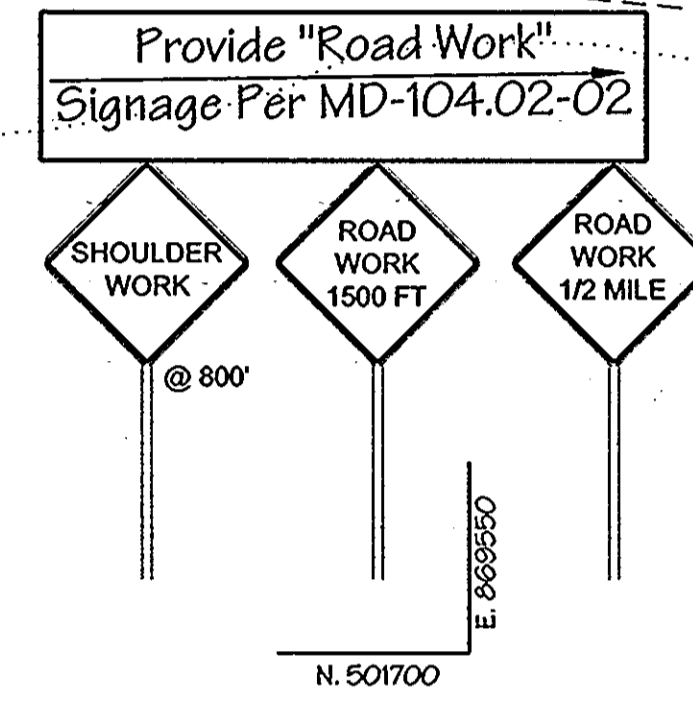
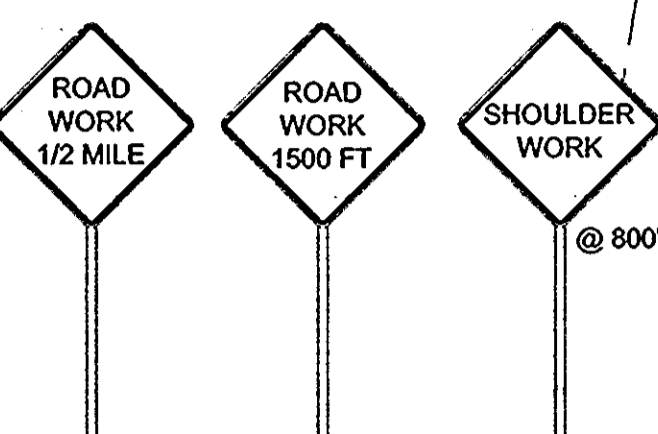
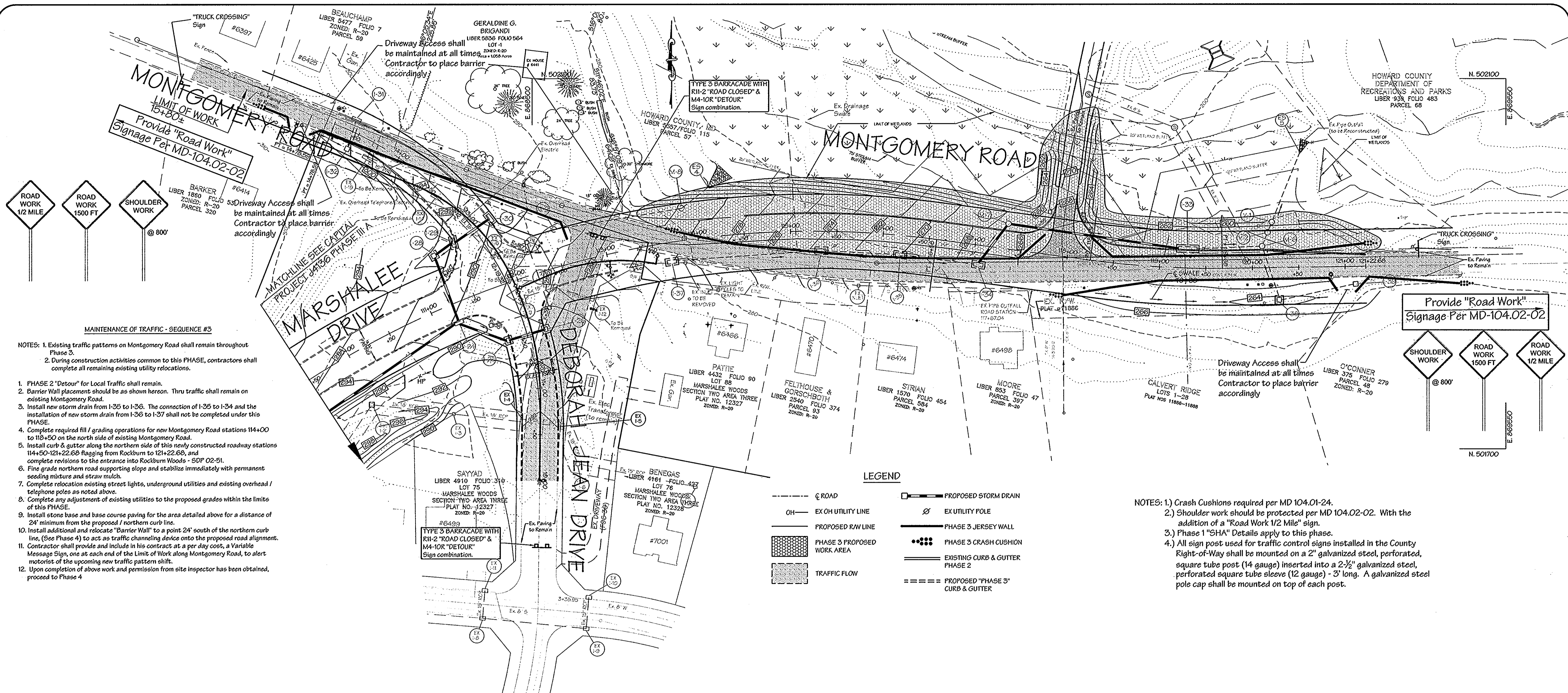
DESIGNED	E.D.S.		
DRAWN	L.D.E.		
CHECKED	B.D.B.		
DATE	LDE	REVISE BYPASS STORM DRAIN	6/2006
	BY NO.	REVISION	DATE

Maintenance of Traffic Plan
PHASE 2
MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE
1"=50'
SHEET
12 of 18

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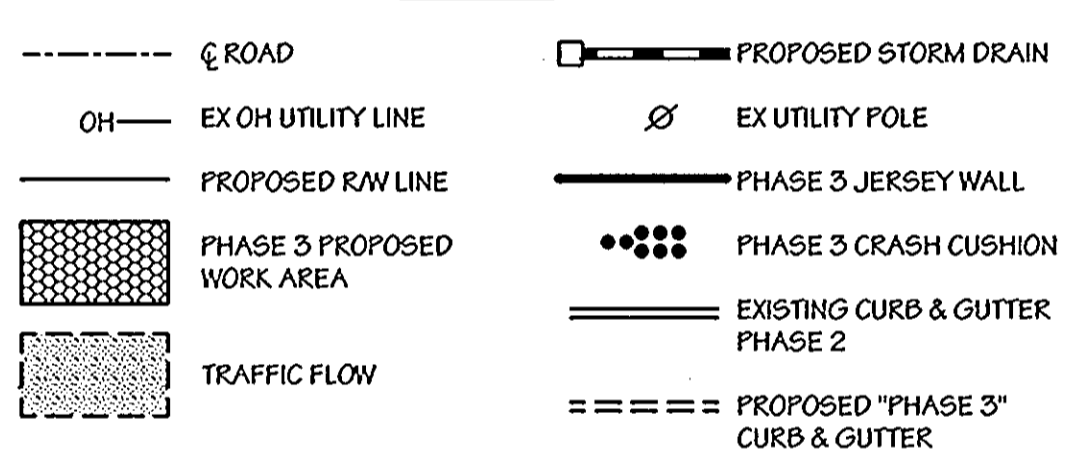


MAINTENANCE OF TRAFFIC - SEQUENCE #3

NOTES: 1. Existing traffic patterns on Montgomery Road shall remain throughout Phase 3.
 2. During construction activities common to this PHASE, contractors shall complete all remaining existing utility relocations.

1. PHASE 2 "Detour" for Local Traffic shall remain.
2. Barrier Wall placements should be as shown hereon. Thru traffic shall remain on existing Montgomery Road.
3. Install new storm drain from I-35 to I-36. The connection of I-35 to I-34 and the installation of new storm drain from I-36 to I-37 shall not be completed under this PHASE.
4. Complete required fill / grading operations for new Montgomery Road stations 114+00 to 118+50 on the north side of existing Montgomery Road.
5. Install curb & gutter along the northern side of this newly constructed roadway stations 114+50-121+22.68 flagging from Rockburn to 121+22.68, and complete revisions to the entrance into Rockburn Woods - SDP 02-51.
6. Fine grade northern road supporting slope and stabilize immediately with permanent seeding mixture and straw mulch.
7. Complete relocation existing street lights, underground utilities and existing overhead / telephone poles as noted above.
8. Complete any adjustment of existing utilities to the proposed grades within the limits of this PHASE.
9. Install stone base and base course paving for the area detailed above for a distance of 24' minimum from the proposed / northern curb line.
10. Install additional and relocate "Barrier Wall" to a point 24' south of the northern curb line. (See Phase 4) to act as traffic channeling device onto the proposed road alignment.
11. Contractor shall provide and include in his contract at a per day cost, a Variable Message Sign, one at each end of the Limit of Work along Montgomery Road, to alert motorists of the upcoming new traffic pattern shift.
12. Upon completion of above work and permission from site inspector has been obtained, proceed to Phase 4.

LEGEND



- NOTES: 1.) Crash Cushions required per MD 104.01-24.
 2.) Shoulder work should be protected per MD 104.02-02. With the addition of a "Road Work 1/2 Mile" sign.
 3.) Phase 1 "SHA" Details apply to this phase.
 4.) All sign post 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.

NOTE:
 Contractor shall install Barrier / Jersey wall end treatments & flare rates at all private driveways and truck entrances / exits in accordance with MD 104.01-24.

DEPARTMENT OF PUBLIC WORKS

[Signature] 8/9/06
 DIRECTOR OF PUBLIC WORKS DATE
[Signature] 8/9/06
 CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 8/10/06
 CHIEF, BUREAU OF ENGINEERING DATE
[Signature] 8/9/06
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540

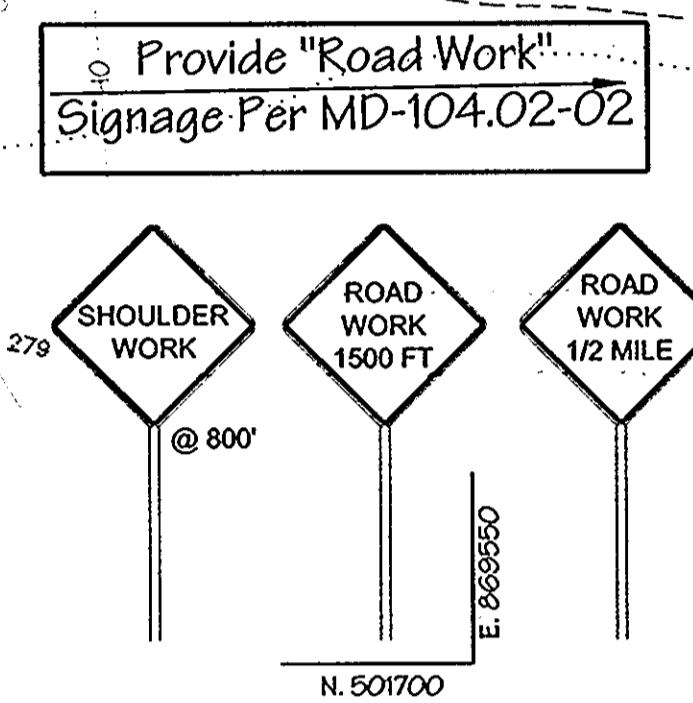
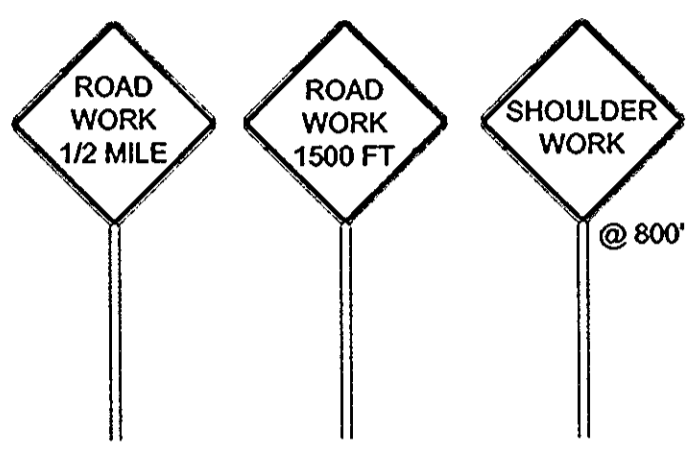
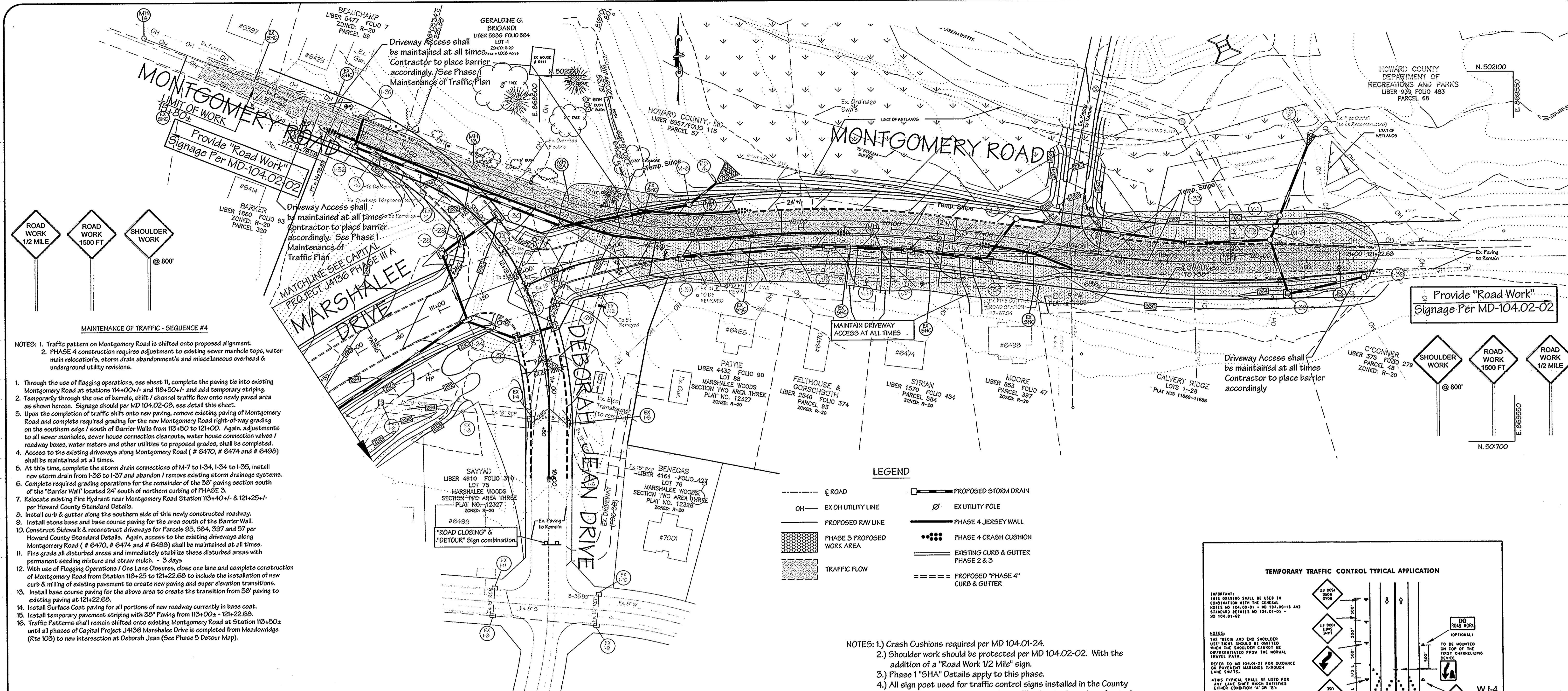


DESIGNED E.D.S.			
DRAWN L.D.E.			
CHECKED B.D.B.			
DATE 2/2005	LDE	REVISION BYPASS STORM DRAIN	6/2006

Maintenance of Traffic Plan
 PHASE 3
 MAP NO. 37 BLOCK 15

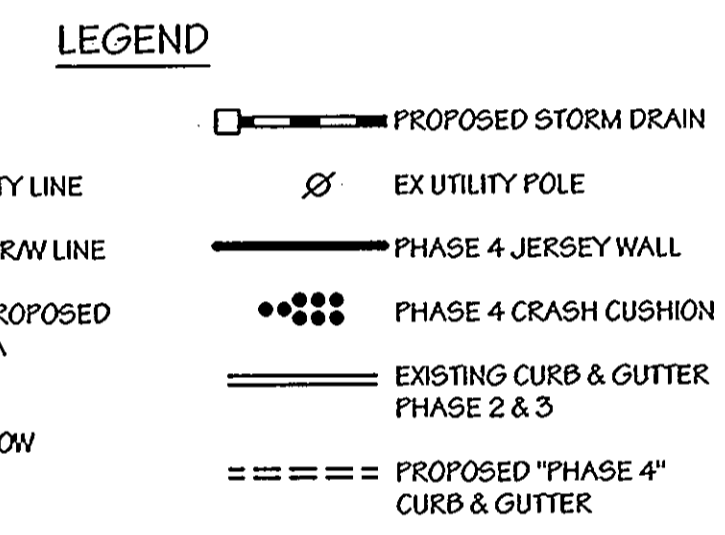
MARSHALEE DRIVE
 CAPITAL PROJECT J-4136
 PHASE III B
 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE
 1"=50'
 SHEET
 13 of 18

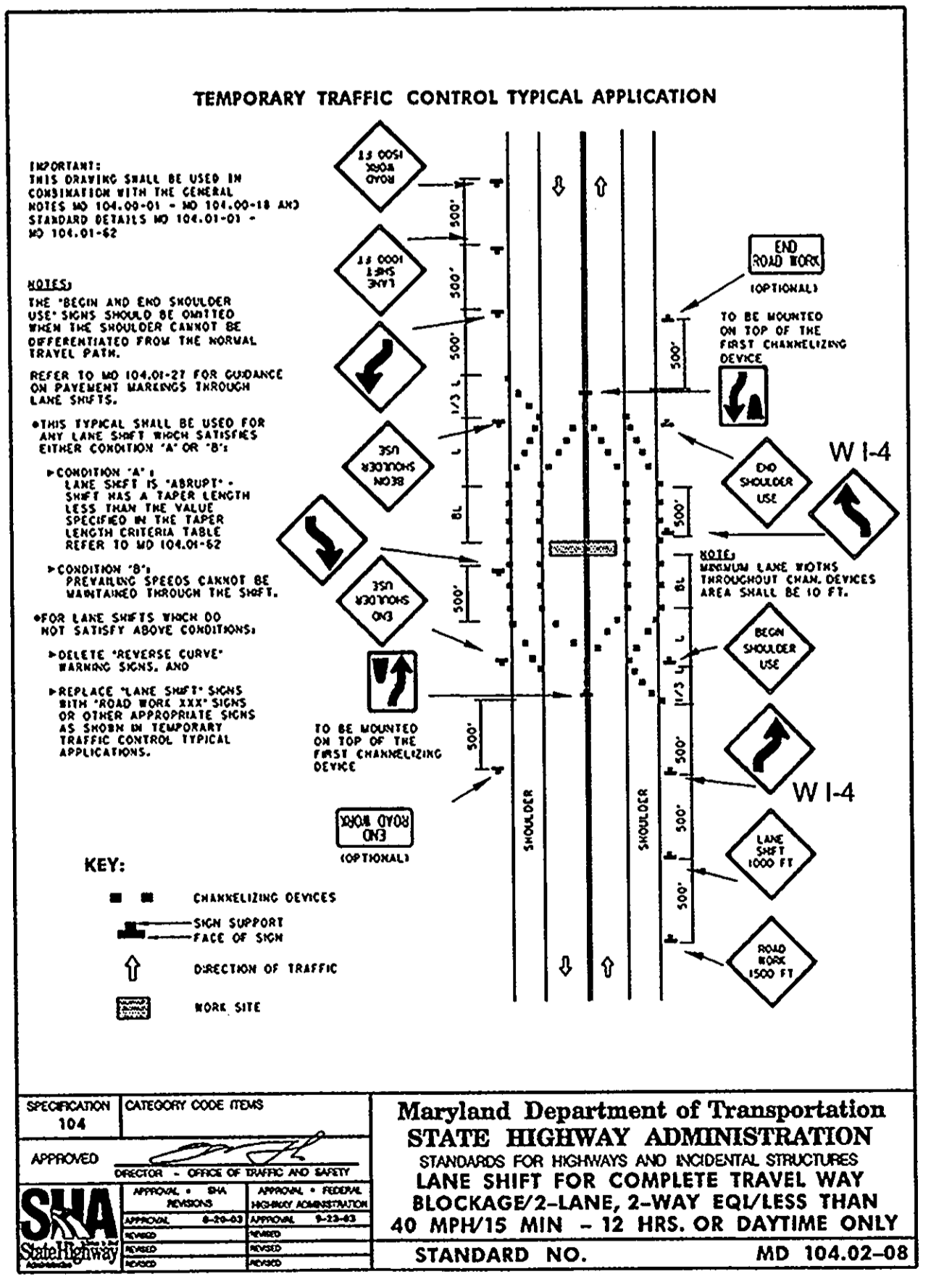


- MAINTENANCE OF TRAFFIC - SEQUENCE #4**
- NOTES:
1. Traffic pattern on Montgomery Road is shifted onto proposed alignment.
 2. PHASE 4 construction requires adjustment to existing sewer manhole tops, water main relocation's, storm drain abandonment's and miscellaneous overhead & underground utility revisions.
 3. Through the use of flagging operations, see sheet 11, complete the paving tie into existing Montgomery Road at stations 114+00 +/- and 118+50 +/- and add temporary striping.
 4. PHASE 4 construction requires adjustment to existing sewer manhole tops, water main relocation's, storm drain abandonment's and miscellaneous overhead & underground utility revisions.
 5. Upon the completion of traffic shifts onto new paving, remove existing paving of Montgomery Road and complete required grading for the new Montgomery Road right-of-way grading on the southern edge south of Barrier Walls from 113+50 to 121+00. Again, adjustments to all sewer manholes, sewer house connection cleanouts, water house connection valves / roadway boxes, water meters and other utilities to proposed grades, shall be completed.
 6. Access to the existing driveways along Montgomery Road (# 6470, # 6474 and # 6496) shall be maintained at all times.
 7. At this time, complete the storm drain connections of M-7 to I-34, I-34 to I-36, install new storm drain from I-36 to I-37 and abandon / remove existing storm drainage systems.
 8. Complete required grading operations for the remainder of the 3rd paving section south of the "Barrier Wall" located 24' south of northern curbing of PHASE 3.
 9. Relocate existing Fire Hydrant near Montgomery Road Station 113+40 +/- & 121+25 +/- per Howard County Standard Details.
 10. Install curb & gutter along the southern side of this newly constructed roadway.
 11. Install stone base and base course paving for the area south of the Barrier Wall.
 12. Construct Sidewalk & reconstruct driveways for Parcels 93, 964, 397 and 57 per Howard County Standard Details. Again, access to the existing driveways along Montgomery Road (# 6470, # 6474 and # 6496) shall be maintained at all times.
 13. Fine grade all disturbed areas and immediately stabilize these disturbed areas with permanent seeding mixture and straw mulch. - 3 days
 14. With use of Flagging Operations / One Lane Closures, close one lane and complete construction of Montgomery Road from Station 118+25 to 121+22.68 to include the installation of new curb & milling of existing pavement to create new paving and super elevation transitions.
 15. Install base course paving for the above area to create the transition from 3rd paving to existing paving at 121+22.68.
 16. Install Surface Coat paving for all portions of new roadway currently in base coat.
 17. Install temporary pavement striping with 3rd Paving from 113+00 +/- - 121+22.68.
 18. Traffic Patterns shall remain shifted onto existing Montgomery Road at Station 113+50 +/- until all phases of Capital Project J4136 Marshalee Drive is completed from Meadowridge (Rte 103) to new intersection at Deborah Jean (See Phase 5 Detour Map).

NOTE:
Contractor shall install Barrier / Jersey wall end treatments & flare rates at all private driveways and truck entrances / exits in accordance with MD 104.01-24.



- NOTES:
- 1.) Crash Cushions required per MD 104.01-24.
 - 2.) Shoulder work should be protected per MD 104.02-02. With the addition of a "Road Work 1/2 Mile" sign.
 - 3.) Phase 1 "SHA" Details apply to this phase.
 - 4.) All sign post 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.



DEPARTMENT OF PUBLIC WORKS

[Signature] 8/9/06
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 8/9/06
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 8/9/06
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

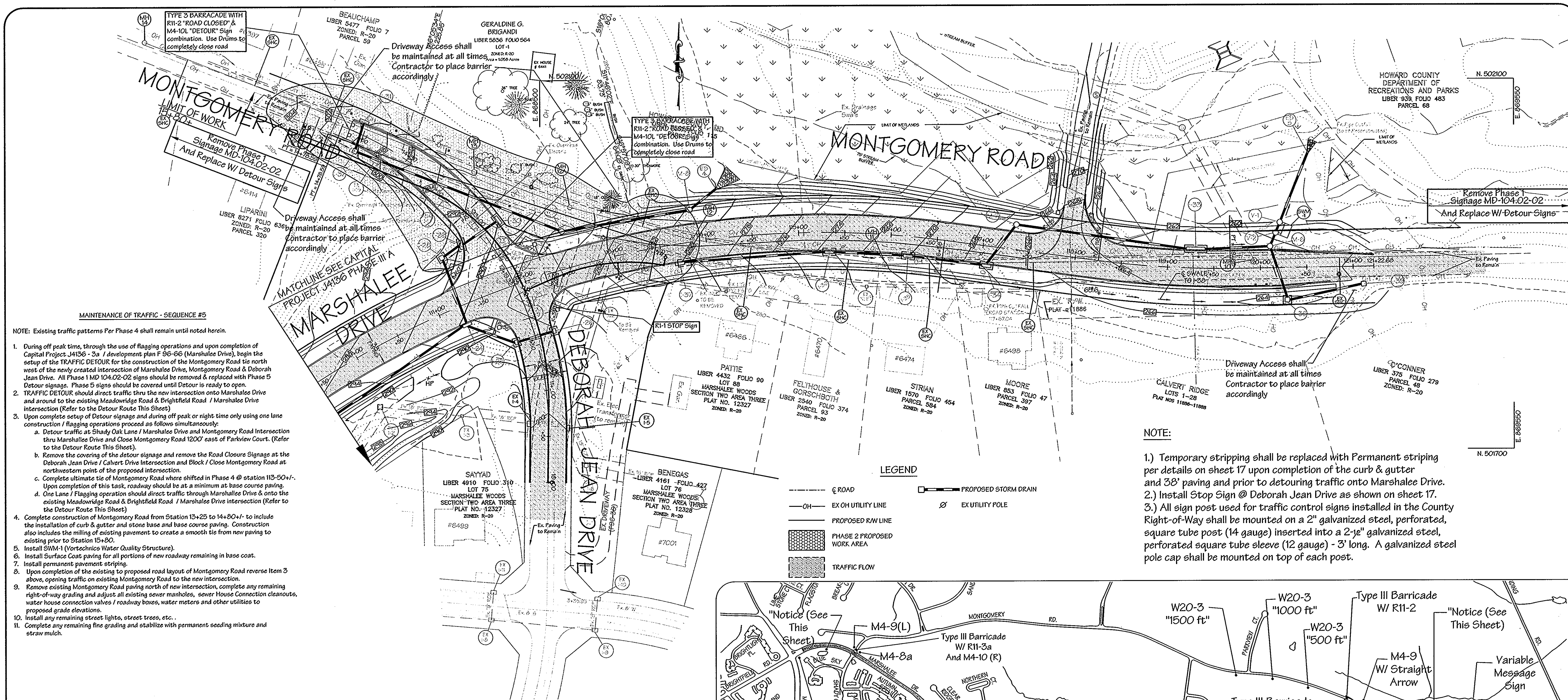
LDE Inc.
Engineers, Surveyors, Planners
2920 Rumsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9340

DESIGNED	E.D.S.		
DRAWN	L.D.E.		
CHECKED	B.D.B.		
DATE	2/2005		
LOE	BY	NO.	
REVISION	REVISION	DATE	6/2006

Maintenance of Traffic Plan
PHASE 4
MAP NO. 37 BLOCK 15

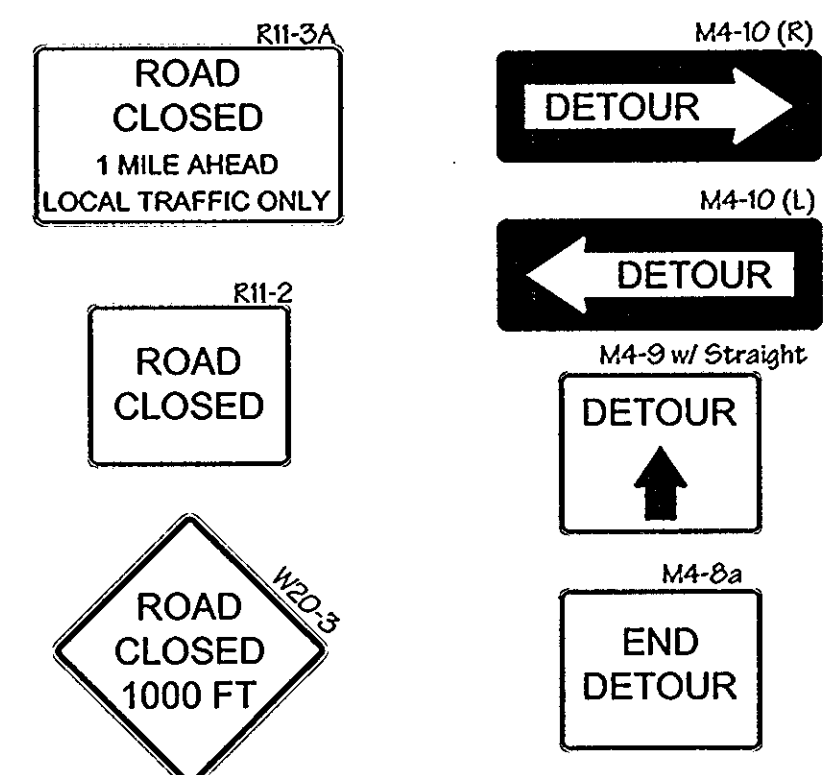
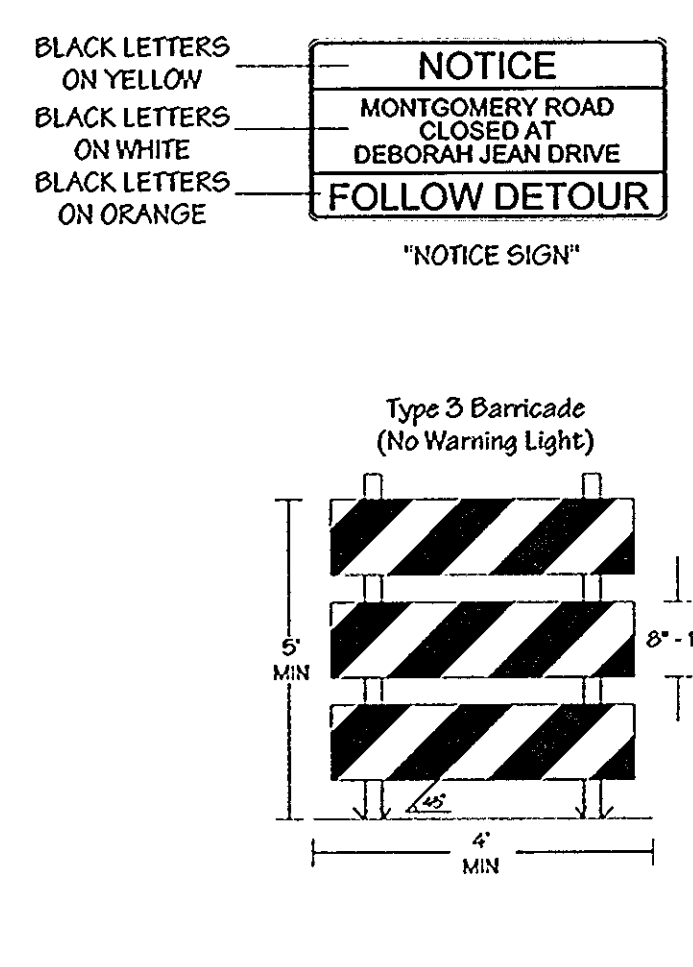
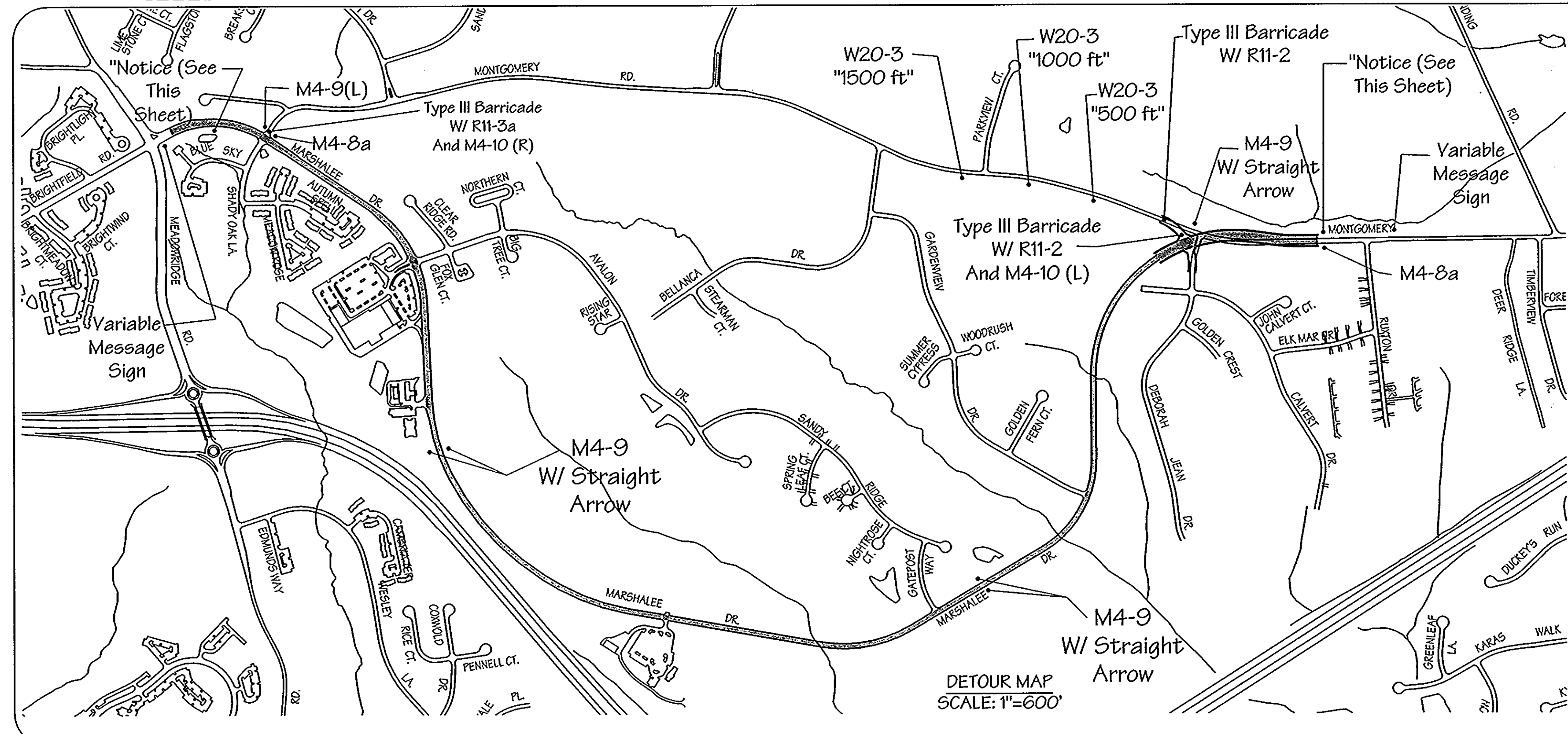
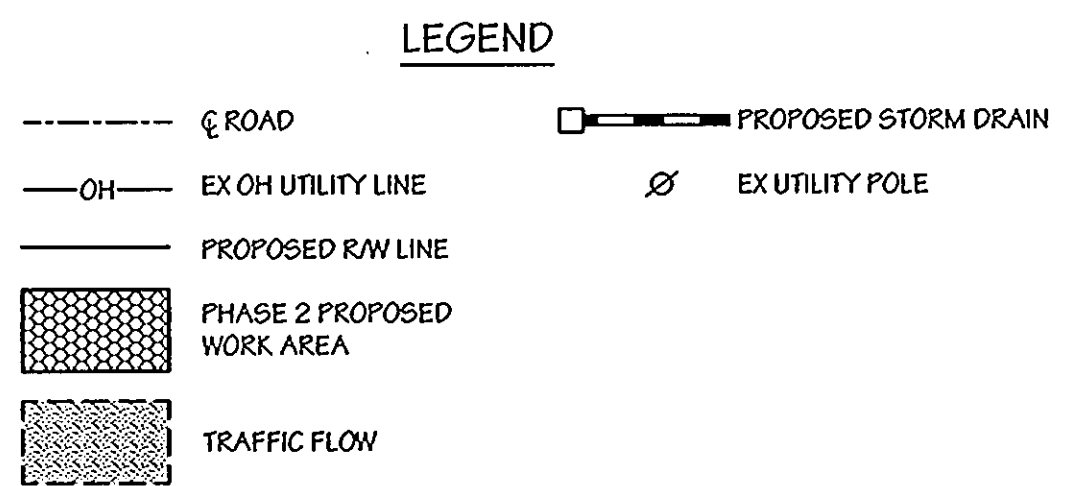
MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE: 1"=50'
SHEET 14 of 18



- MAINTENANCE OF TRAFFIC - SEQUENCE #5**
- NOTE: Existing traffic patterns Per Phase 4 shall remain until noted herein.
- During off peak time, through the use of flagging operations and upon completion of Capital Project J4136 - 3a / development plan F 96-66 (Marshalee Drive), begin the setup of the TRAFFIC DETOUR for the construction of the Montgomery Road tie north west of the newly created intersection of Marshalee Drive, Montgomery Road & Deborah Jean Drive. All Phase 1 MD 104.02-02 signs should be removed & replaced with Phase 5 Detour signage. Phase 5 signs should be covered until Detour is ready to open.
 - TRAFFIC DETOUR should direct traffic thru the new intersection onto Marshalee Drive and around to the existing Meadowridge Road & Brightfield Road / Marshalee Drive intersection (Refer to the Detour Route This Sheet)
 - Upon complete setup of Detour signage and during off peak or night time only using one lane construction / flagging operations proceed as follows simultaneously:
 - Detour traffic at Shady Oak Lane / Marshalee Drive and Montgomery Road Intersection thru Marshalee Drive and Close Montgomery Road 1200' east of Parkview Court. (Refer to the Detour Route This Sheet)
 - Remove the covering of the detour signage and remove the Road Closure Signage at the Deborah Jean Drive / Calvert Drive Intersection and Block / Close Montgomery Road at northwestern point of the proposed intersection.
 - Complete ultimate tie of Montgomery Road where shifted in Phase 4 @ station 113+50+/-'. Upon completion of this task, roadway should be at a minimum at base course paving.
 - One Lane / Flagging operation should direct traffic through Marshalee Drive & onto the existing Meadowridge Road & Brightfield Road / Marshalee Drive intersection (Refer to the Detour Route This Sheet)
 - Complete construction of Montgomery Road from Station 13+25 to 14+80+/-' to include the installation of curb & gutter and stone base and base course paving. Construction also includes the milling of existing pavement to create a smooth tie from new paving to existing prior to Station 15+80.
 - Install SWM-1 (Vortech Water Quality Structure).
 - Install Surface Coat paving for all portions of new roadway remaining in base coat.
 - Install permanent pavement striping.
 - Upon completion of the existing to proposed road layout of Montgomery Road reverse Item 3 above, opening traffic on existing Montgomery Road to the new intersection.
 - Remove existing Montgomery Road paving north of new intersection, complete any remaining right-of-way grading and adjust all existing sewer manholes, sewer House Connection cleanouts, water house connection valves / roadway boxes, water meters and other utilities to proposed grade elevations.
 - Install any remaining street lights, street trees, etc..
 - Complete any remaining fine grading and stabilize with permanent seeding mixture and straw mulch.

- NOTE:**
- Temporary striping shall be replaced with Permanent striping per details on sheet 17 upon completion of the curb & gutter and prior to detouring traffic onto Marshalee Drive.
 - Install Stop Sign @ Deborah Jean Drive as shown on sheet 17.
 - All sign post 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.



DEPARTMENT OF PUBLIC WORKS

[Signature] 8/19/06
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 8-9-06
CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 8/19/06
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 8/19/06
CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
Engineers, Surveyors, Planners
9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	E.D.S.	DATE	
DRAWN	L.D.E.	DATE	
CHECKED	B.D.B.	DATE	
DATE	LDE	REVISION	DATE
2/2005	BY	NO.	REVISION
			REVISE BYPASS STORM DRAIN
			6/2006

Maintenance of Traffic Plan
PHASE 5
MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

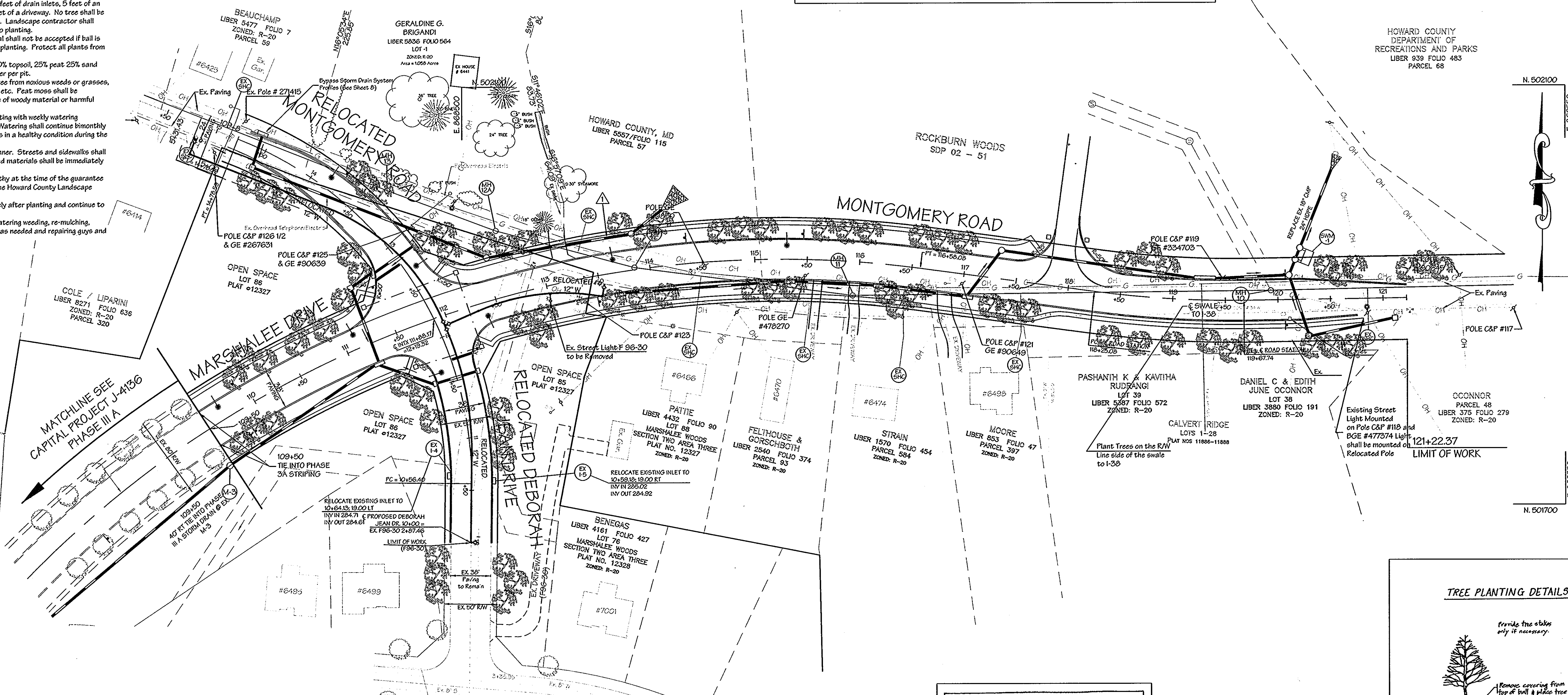
SCALE
1"=50'
SHEET
15 of 18

TREE PLANTING NOTES

1. Notify "Miss Utility" 72 hours prior to installation of all plant material.
2. Plant installation must conform to the minimum standards cited in the latest edition of Landscape Specification Guidelines, published by the Landscape Contractors Association.
3. Plants to be located in the field by the owner or owner's representative. Notify owner 72 hours in advance of planting.
4. A Certification of Landscape Installation is required as per the Howard County Landscape Ordinance.
5. The number, size, location of plants shall not be changed without the approval of the Landscape Architect. Substitutions must be included in the recommended plant list in the Howard County Landscape Ordinance.
6. Trees may not be planted within 5 feet of drain inlets, 5 feet of an open space access strip and 10 feet of a driveway. No tree shall be planted within 20' of a street light. Landscape contractor shall contact the Traffic Division prior to planting.
7. Baled and burlapped plant material shall not be accepted if ball is cracked or broken before or during planting. Protect all plants from drying by other sun of wind.
8. Tree pits shall be backfilled with 50% topsoil, 25% peat, 25% sand with one pound of 10-10-10 fertilizer per pit.
9. Top soil shall be sandy loam soil free from noxious weeds or grasses, roots, clay clumps, stones, sticks, etc. Peat moss shall be commercial with pi 4.5 to 5.5, free of woody material or harmful minerals.
10. All plants shall be watered at planting with weekly watering thereafter for the first 90 days. Watering shall continue bi-monthly or as necessary to maintain plants in a healthy condition during the guarantee period.
11. Maintain the site in an orderly manner. Streets and sidewalks shall be swept clean. All rejected or dead materials shall be immediately removed from the site.
12. Plant material to be alive and healthy at the time of the guarantee period (one year), as specified in the Howard County Landscape Ordinance.
13. Maintenance shall begin immediately after planting and continue to the end of guaranteed period.
14. Maintenance consist of pruning, watering weeding, re-mulching, resetting plants to proper grades as needed and repairing guys and stakes as needed.

Street Light Legend						
Street Name	Symbol	Centerline Station	Offset	Lamp Type	Post Type	Pole Type
Marshalee Drive	---	109+67.08	25' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Marshalee Drive	---	111+10.10	25' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Montgomery Road	---	112+40.49	25' Rt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Montgomery Road	---	113+65.40	25' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Montgomery Road	---	115+30.32	25' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Montgomery Road	---	120+83**	18' Rt.	250 Watt HPS	Overhead	BGE Pole - Arm length to be determined
Deborah Jean Drive	---	1+68	25' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Montgomery Road	---	12+70.45	23' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm
Montgomery Road	---	13+84.87	23' Lt.	250 Watt HPS	Pendant Mounted	30' Bronze Fiberglass Pole-12' Arm

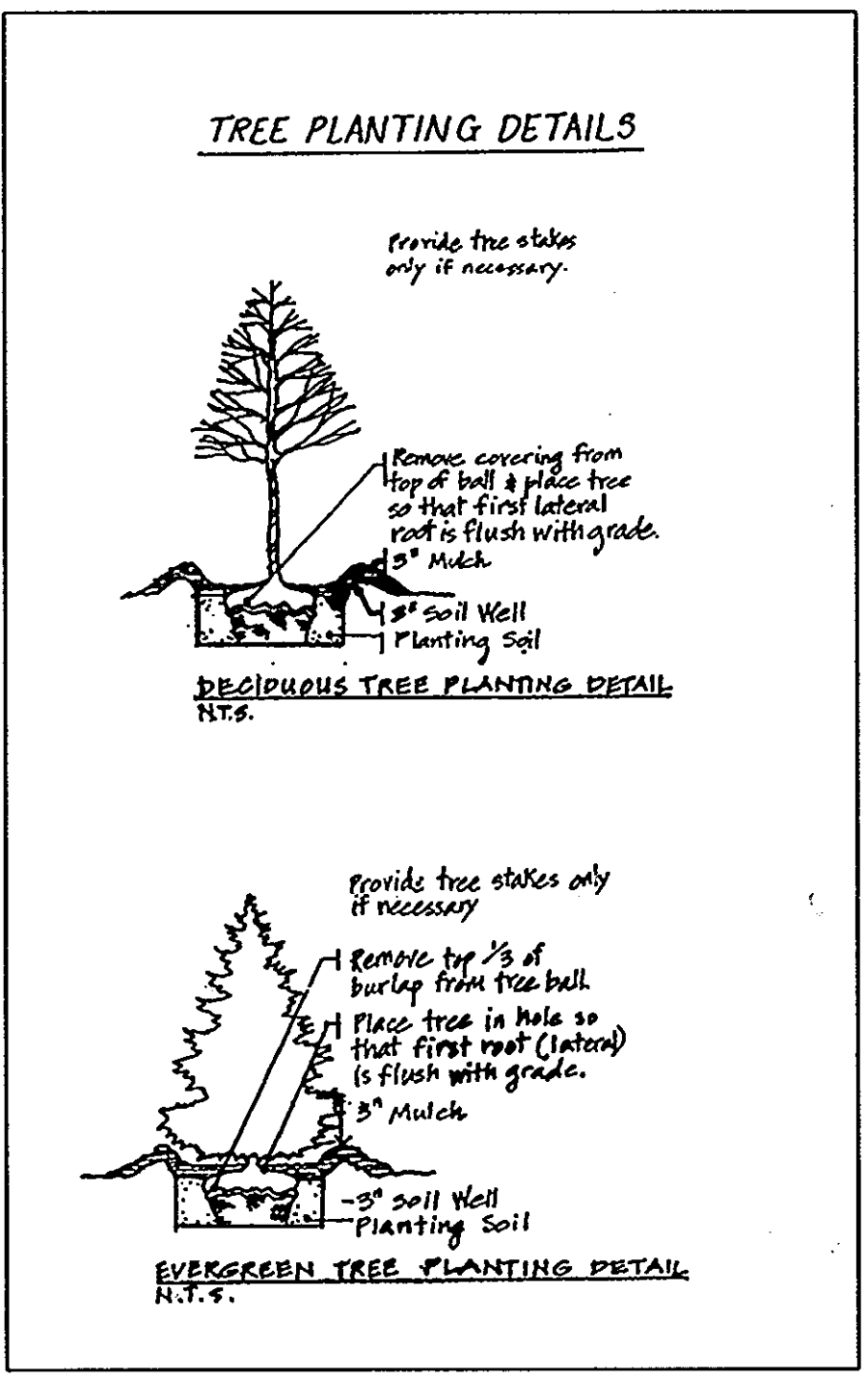
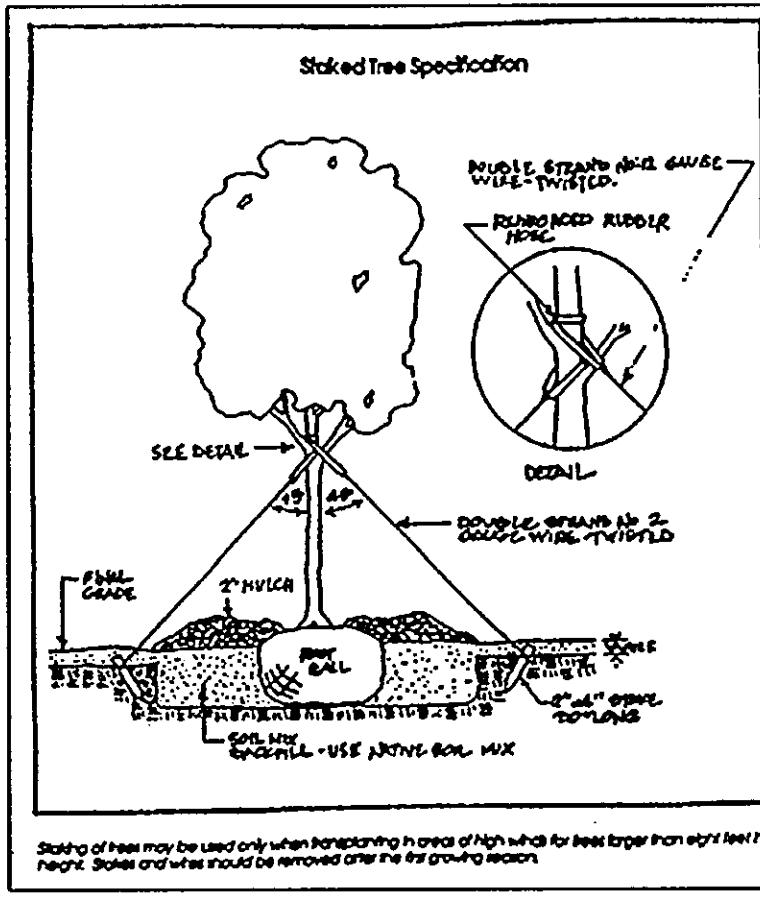
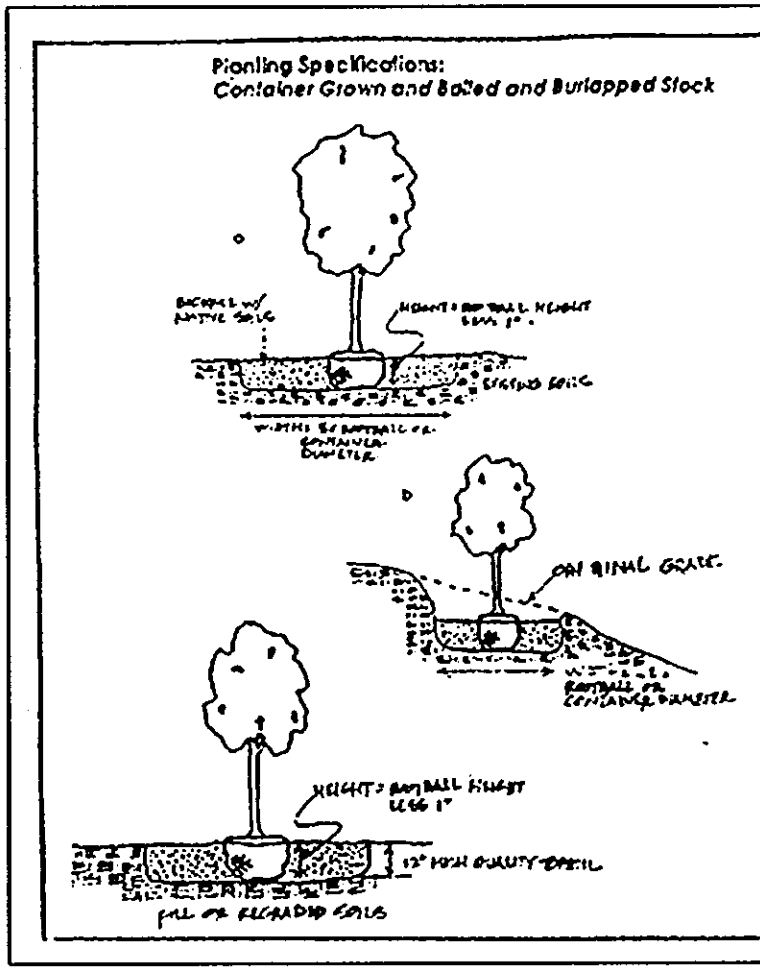
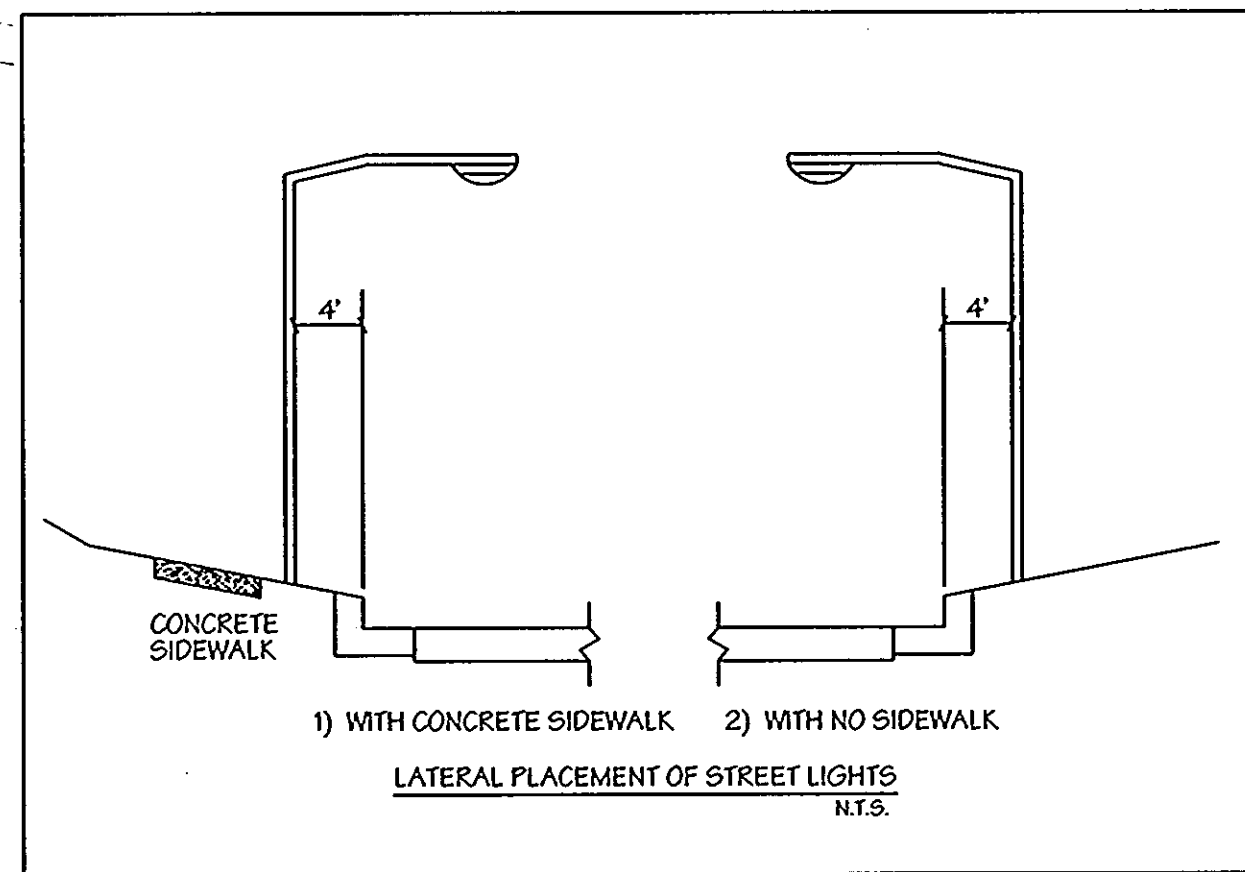
Note: Howard County will supply lighting & BGE will install.
** See Plan



STREET TREE REQUIREMENTS= 1 PER 40'

Montgomery Road 934 LF x 2 Sides = 46 Trees Req. --- 46 Provided
 Relocated Deborah Jean Drive 220 LF x 2 Sides = 11 Trees Req. --- 11 Provided
 Marshalee Drive 239 LF x 2 Sides = 12 Trees Req. --- 12 Provided
 Relocated Montgomery Road 260 LF x 2 Sides = 13 Trees Req. --- 13 Provided
TOTAL REQUIRED = 82 TREES --- 82 PROVIDED

STREET TREE PLANTING SCHEDULE				
NO.	KEY	BOTANICAL / COMMON NAME	SIZE	COMMENT
B2		Platanus x acerfolia 'Columbia' Columbia London Plane	2" - 2-1/2" Cal.	B&B
B2 Total Street Trees				



CAPITAL PROJECT J-4136/PHASE III A LANDSCAPE, 7/17/2006 2:56:56 PM

DEPARTMENT OF PUBLIC WORKS

[Signature] 8/19/06
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 8/19/06
 CHIEF, BUREAU OF HIGHWAYS DATE

[Signature] 8/19/06
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 8/19/06
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

LDE Inc.
 Engineers, Surveyors, Planners
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 (410)715-1070 - (301)596-3424 - FAX(410)715-9540

DESIGNED BY E.D.S.
 DRAWN BY L.D.E.
 CHECKED BY B.D.B.
 DATE 2/2005

REVISIONS:

NO.	REVISION	DATE
1	REVISE BYPASS STORM DRAIN	6/2006

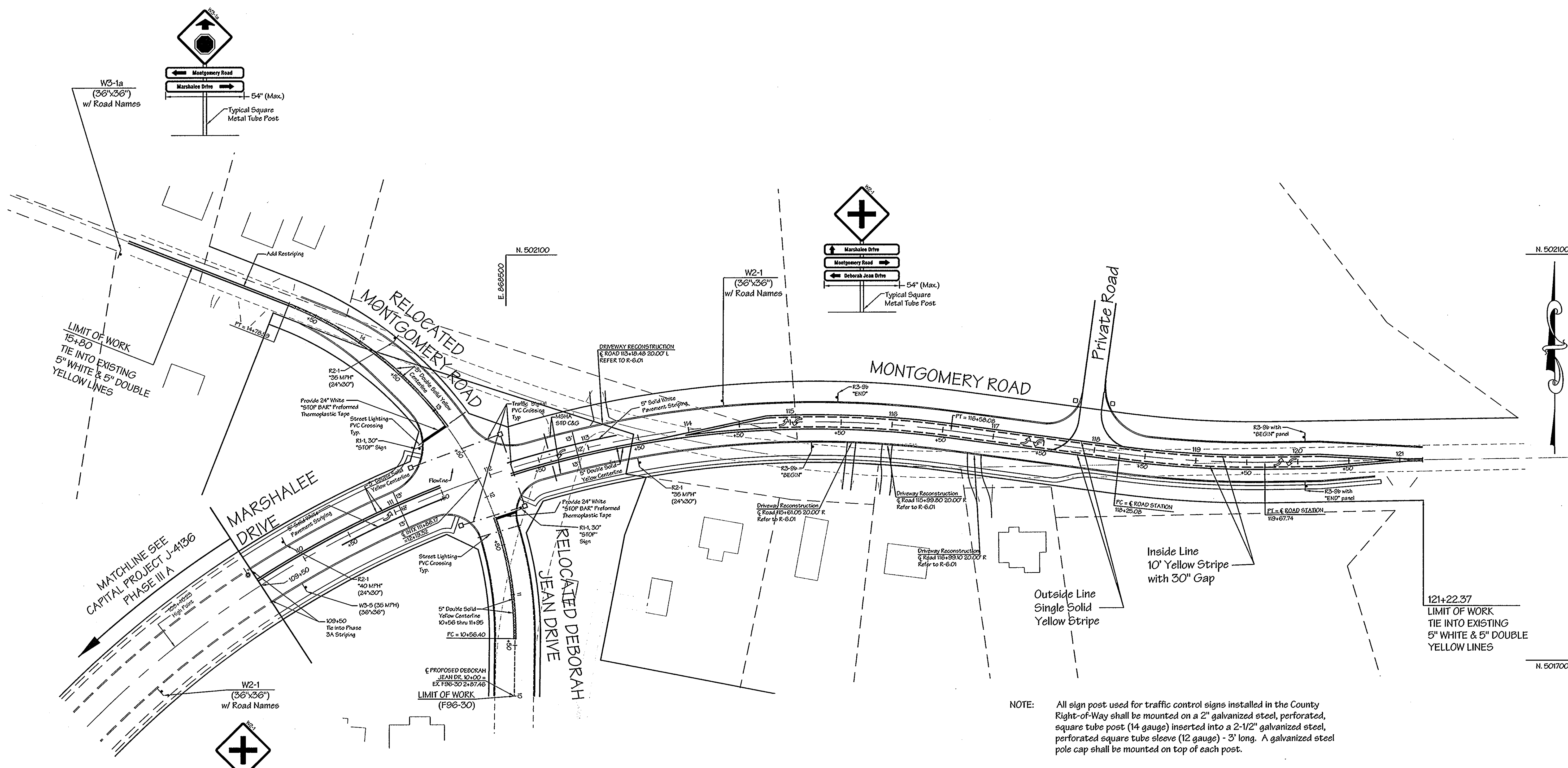
STREET LIGHT & LANDSCAPING PLAN

MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
 CAPITAL PROJECT J-4136
 PHASE III B
 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE
 1" = 50'
 SHEET
 16 of 18

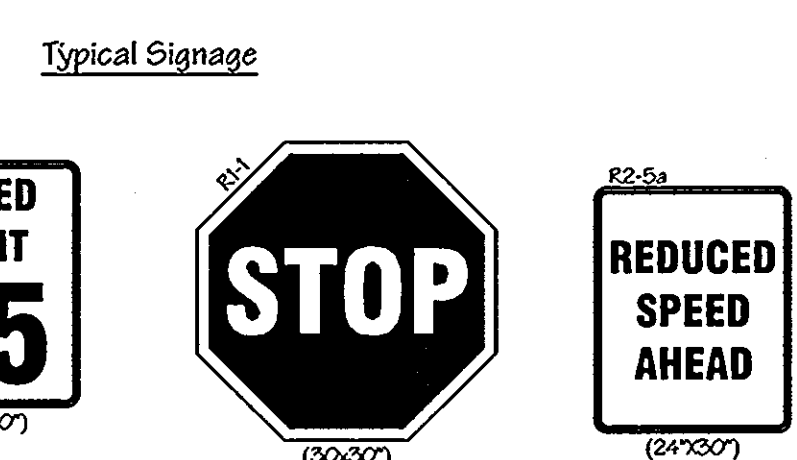
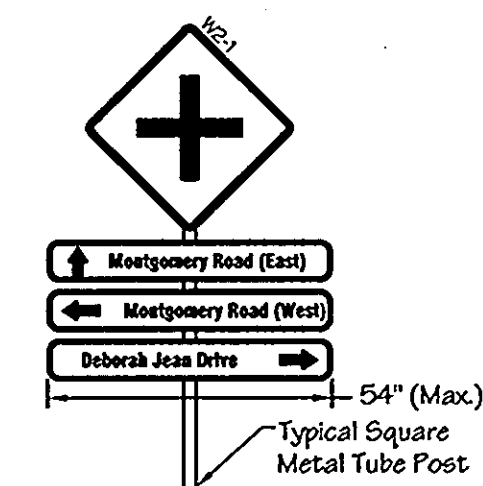
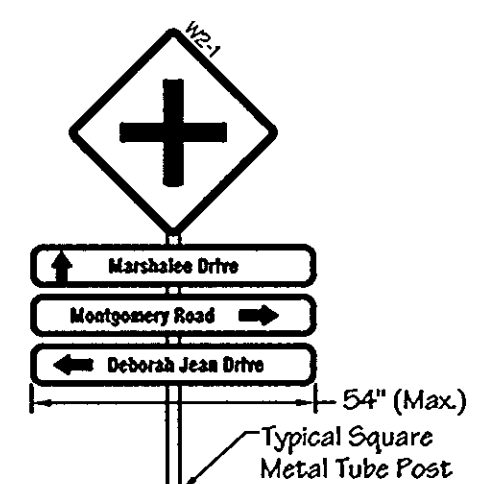
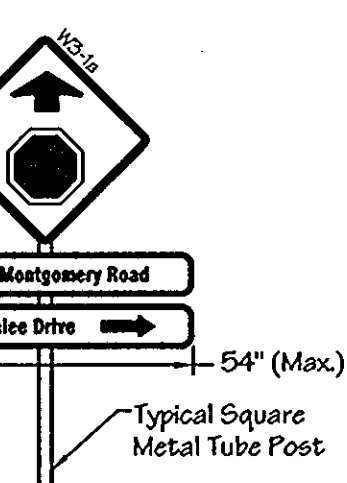
CAPITAL PROJECT J-4136.dwg/PWP/STR.dwg, P:\RESERVE, 2/12/05 4:02:21 PM



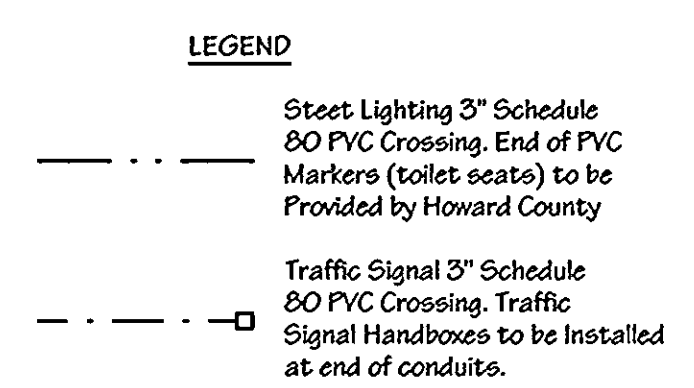
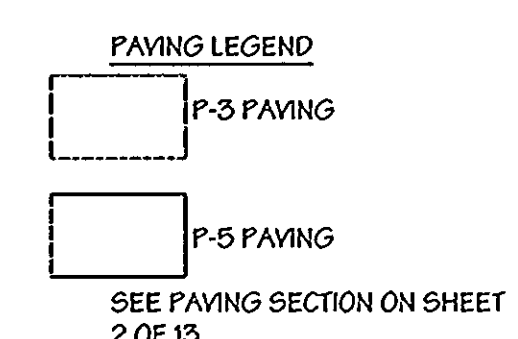
LIMIT OF WORK
15+80
TIE INTO EXISTING
5" WHITE & 5" DOUBLE
YELLOW LINES

121+22.37
LIMIT OF WORK
TIE INTO EXISTING
5" WHITE & 5" DOUBLE
YELLOW LINES

NOTE: All sign post 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.



- NOTES:
1. All signs shall be mounted on square metal tube posts.
 2. Sign locations are approximate. Traffic Engineer shall mark in field prior to installation.
 3. Traffic Engineer shall mark the pavement markings; i.e. stop bars & striping in the field.



DEPARTMENT OF PUBLIC WORKS

Jan 7 2/14/05
DIRECTOR OF PUBLIC WORKS DATE

Steve Shaver 2/11/05
CHIEF, BUREAU OF ENGINEERING DATE

Steve Shaver 2/11/05
CHIEF, DIVISION OF TRANSPORTATION DATE
PROJECTS AND WATERSHED MANAGEMENT

LDE Inc.
Engineers, Surveyors, Planners
9250 Runsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED E.D.S.					
DRAWN LDE					
CHECKED B.D.B.					
DATE 2/20/05					
BY	NO.	REVISION	DATE		

PAVING & STRIPING PLAN

MAP NO. 37 BLOCK 15

MARSHALEE DRIVE
CAPITAL PROJECT J-4136
PHASE III B
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE
1" = 50'
SHEET
17 OF 18

