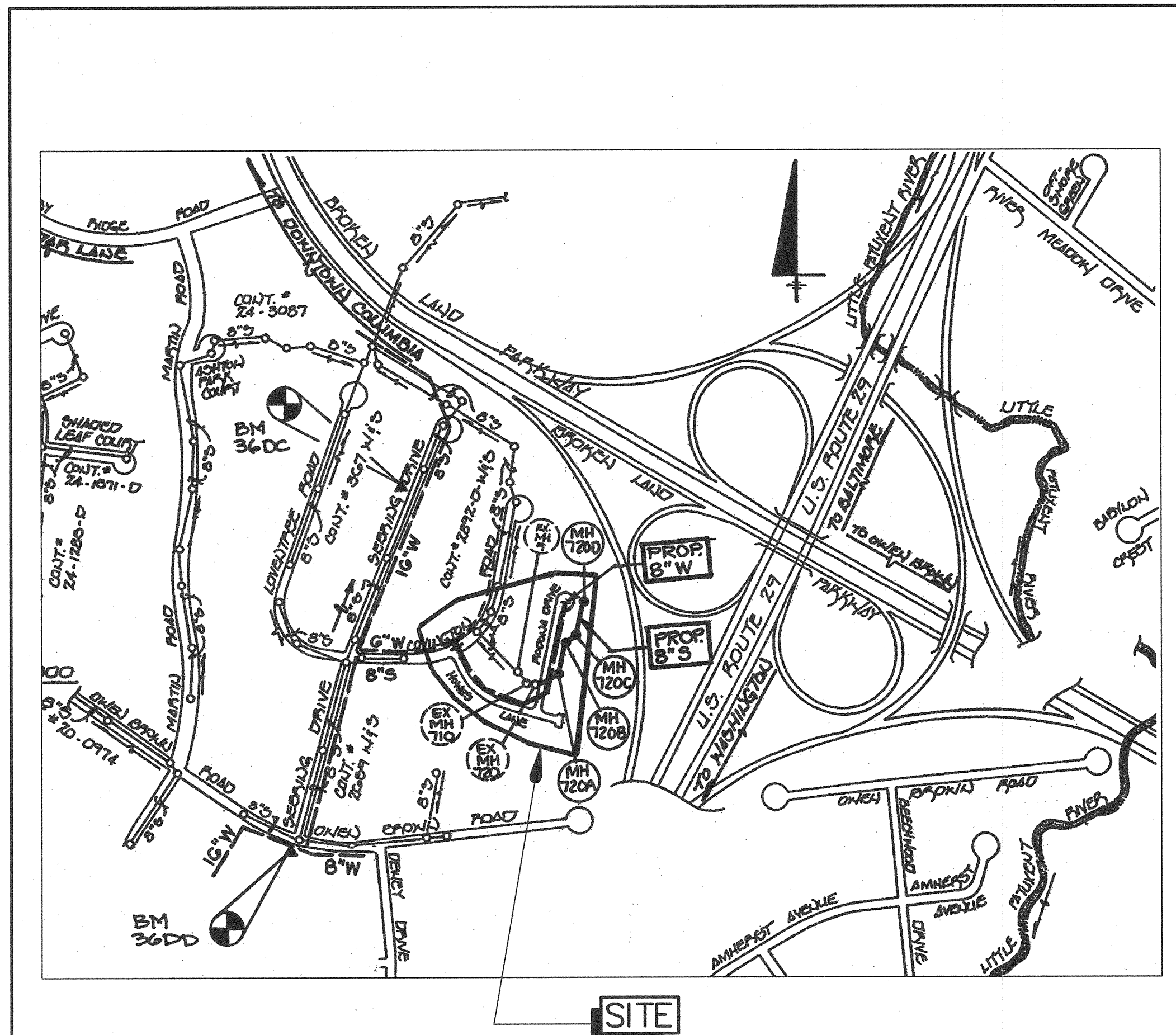


HOWES LANE & RODONA DRIVE 8-INCH WATER MAIN AND 8-INCH SEWER MAIN

CAPITAL PROJECT W-8698 CONTRACT NO. 24-4038

ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIER
	ESTIMATED	AS BUILT		
8" WATER	890 LF	890 LF	DIP	GRIFFIN PIPE
6" WATER	6 LF	9 LF	DIP	GRIFFIN PIPE
6" x 6" TAPPING SLEEVE & VALVE	1 EA	1 EA	RESILIENT SEAT GATE VALVE	DRESSOR/BRS
FIRE HYDRANT	1 EA	1 EA	AWWA C-502	MUELLER/BRS
1" WATER	75 LF	75 LF	TYPE "K" COPPER TUBE	READING/BRS
2" WATER	25 LF	25 LF		
8" SEWER	450 LF	431 LF	DIP PVC	JM MANU./BRS
4" SEWER	12 LF	15 LF	DIP PVC	JM MANU./BRS
MANHOLES	4 EA	4 EA		ATLANTIC CONC.
SHALLOW MANHOLES	1 EA	3 EA		
MANHOLES - DEPTH > 6'	5 VF	5 VF		



TYPE OF BUILDING:
NUMBER OF PARCELS: 2
WATER HOUSE CONNECTIONS: 2
SEWER HOUSE CONNECTIONS: 1
DRAINAGE AREA: LITTLE PATUXENT

VICINITY MAP
SCALE: 1" = 600'

WATER AND SEWER CODES FOR COUNTY USE ONLY
WATER CODE: E30
SEWER CODE: 5521000

GENERAL NOTES:

PART I

- APPROXIMATE LOCATIONS 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.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83/91, AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATION NOS. 36DC AND 36DD.
- ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
- TOPOGRAPHIC SURVEY WAS PERFORMED IN FEBRUARY 2002 BY DANIEL CONSULTANTS, INC.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". 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 THE 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.
- 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 [] AT THE LOCATIONS OF THE TEST PITS. 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T.....1-800-252-1133
BGE(CONTRACTOR SERVICES).....410-850-4620
BGE(UNDERGROUND DAMAGE CONTROL).....410-787-9068
BUREAU OF UTILITIES.....410-313-4900
VERIZON.....1-800-743-0033
COLONIAL PIPELINE CO.....1-410-795-1390
MISS UTILITY.....1-800-257-7777
STATE HIGHWAY ADMINISTRATION.....410-531-5533

- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.

PART II WATER

- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE RESTRAINED AND 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 INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- FIVE DAYS PRIOR TO TIE-IN CONNECTIONS, CONTACT THE HOWARD COUNTY BUREAU OF UTILITIES, 410-313-4900, FOR ASSISTANCE.

PART III SEWER

- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- GRAVITY SEWER MAIN SHALL BE D.I.P. OR PVC UNLESS OTHERWISE NOTED.
- HOUSES WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CAN NOT BE SERVED.

ENGINEER'S CERTIFICATION
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 AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John R. Robinson DATE 7/1/02
WALLACE, MONTGOMERY & ASSOCIATES, LLP
110 WEST ROAD - SUITE 345
TOWSON, MARYLAND 21204
(410) 494-9093

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
John R. Robinson 7/1/02
U.S.D.A. - NATURAL RESOURCES CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robinson 7/1/02
APPROVED DATE
HOWARD SOIL CONSERVATION DISTRICT

DEVELOPER'S CERTIFICATION
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."
Emald G. L. Epson 6/26/02
SIGNATURE OF DEVELOPER DATE
PRINT NAME BELOW SIGNATURE
Emald G. L. Epson

MDE PERMIT NO.

NOTE:
"SEDIMENT CONTROL TO BE IMPLEMENTED IN ACCORDANCE WITH VOLUME 4, ARTICLE 15 OF THE HOWARD COUNTY DESIGN MANUAL AND THESE PLANS."

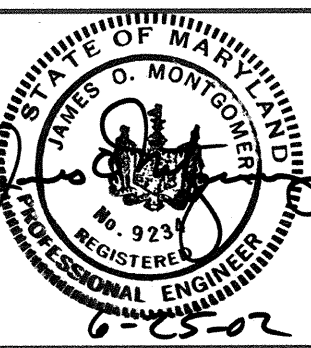
BENCHMARKS				
NO.	ELEV.	NORTHING	EASTING	DESCRIPTION
36DC	381.01	559590.570	1350440.606	STANDARD CONCRETE MONUMENT ON WEST SIDE OF SEBRING DRIVE, 10.0' SOUTH OF EDGE OF PAVEMENT, 2' WEST OF EDGE OF PAVEMENT, AND 42' NORTHWEST OF FIRE HYDRANT.
36DD	393.15	558056.573	1349892.314	STANDARD CONCRETE MONUMENT ON SOUTH SIDE OF OWEN BROWN ROAD, 2.0' SOUTH OF EDGE OF PAVEMENT, 47.5' EAST OF FIRE HYDRANT, AND 63' WEST OF BGE POLE # 243772.

INDEX OF SHEETS	
SHEET	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE SHEET
3	SEDIMENT CONTROL DETAILS
4	SEDIMENT CONTROL NOTES

AS-BUILT JAN. 17, 2003

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
John M. Vengone 6/29/02
DIRECTOR OF PUBLIC WORKS DATE
John R. Robinson 6/26/02
CHIEF, BUREAU OF ENGINEERING DATE
Emald G. L. Epson 6-26-02
BUREAU OF UTILITIES DATE
CHIEF, UTILITY DESIGN DIVISION DATE

WALLACE, MONTGOMERY & ASSOCIATES, LLP
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

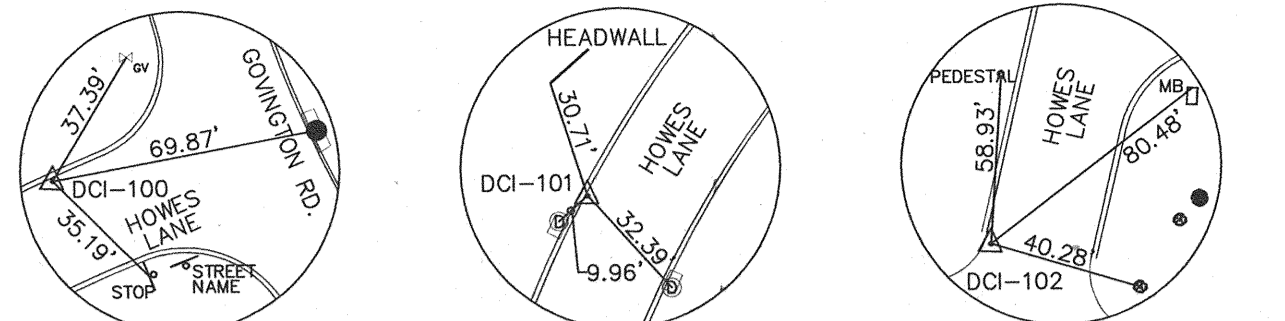


DES:	WCW				
DRN:	SDH				
CHK:	JJS				
DATE:	JUNE 2002	BY	NO.	REVISION	DATE

TITLE SHEET
600' SCALE MAP NO. 36 BLOCK NO. 13

HOWES LANE & RODONA DRIVE
8-INCH WATER MAIN & 8-INCH SEWER MAIN
CAPITAL PROJECT W-8698
CONTRACT NO. 24-4038
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

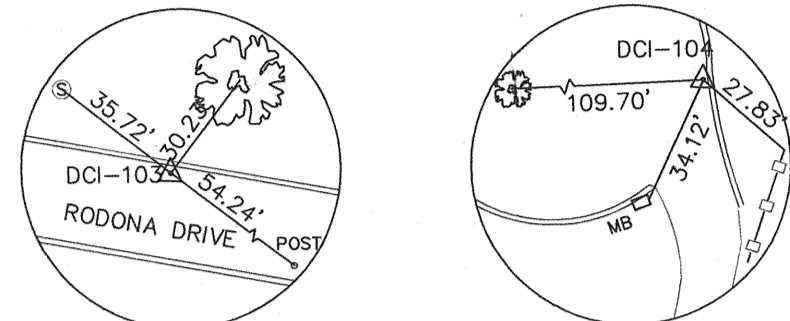
SCALE AS SHOWN
SHEET 1 OF 4



DCI-100 : P.K. NAIL
NORTHING = 558622.3224
EASTING = 1350584.7111
ELEVATION = 370.97 FT.

DCI-101 : P.K. NAIL
NORTHING = 558666.4532
EASTING = 1350724.5227
ELEVATION = 367.23 FT.

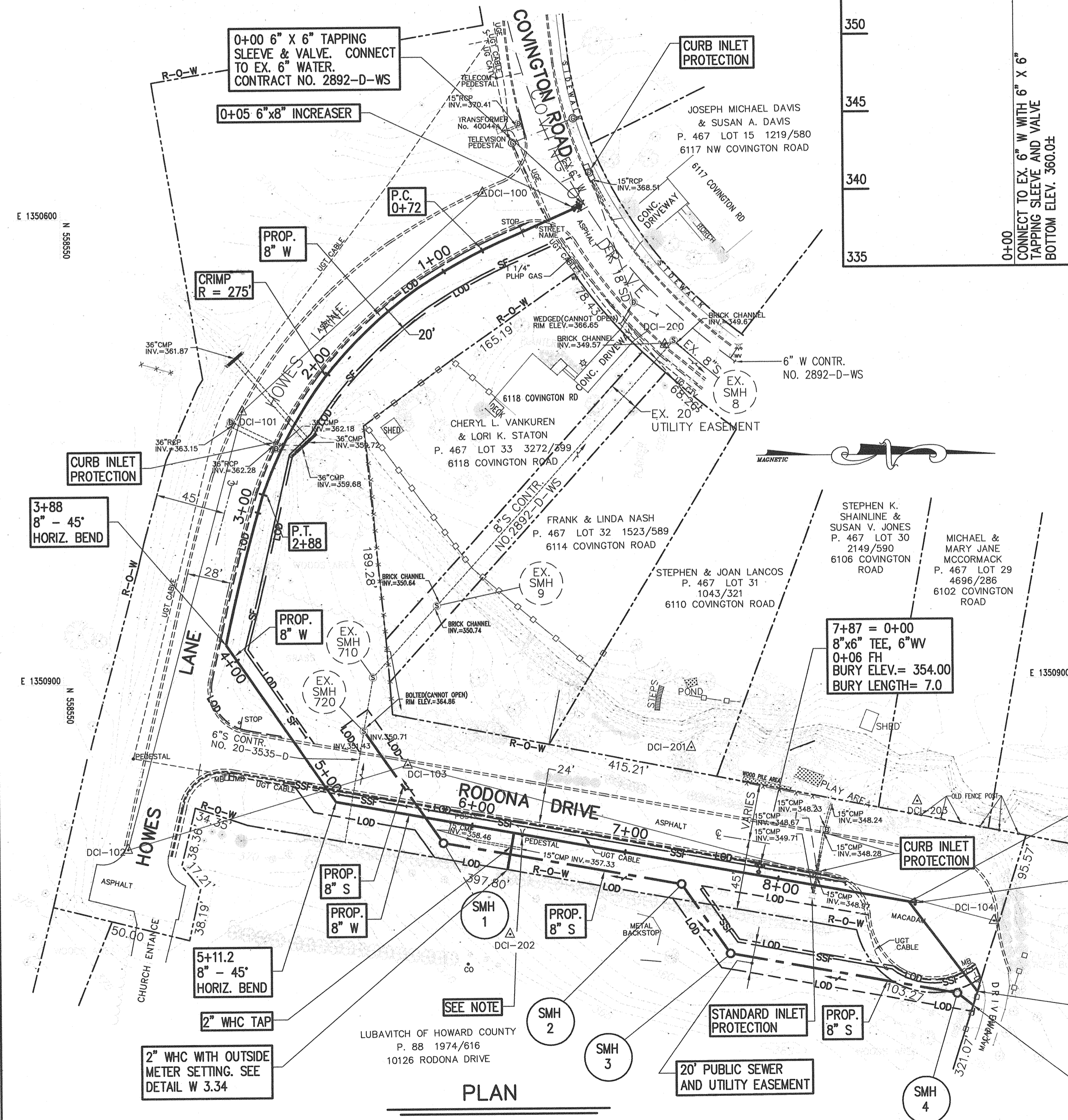
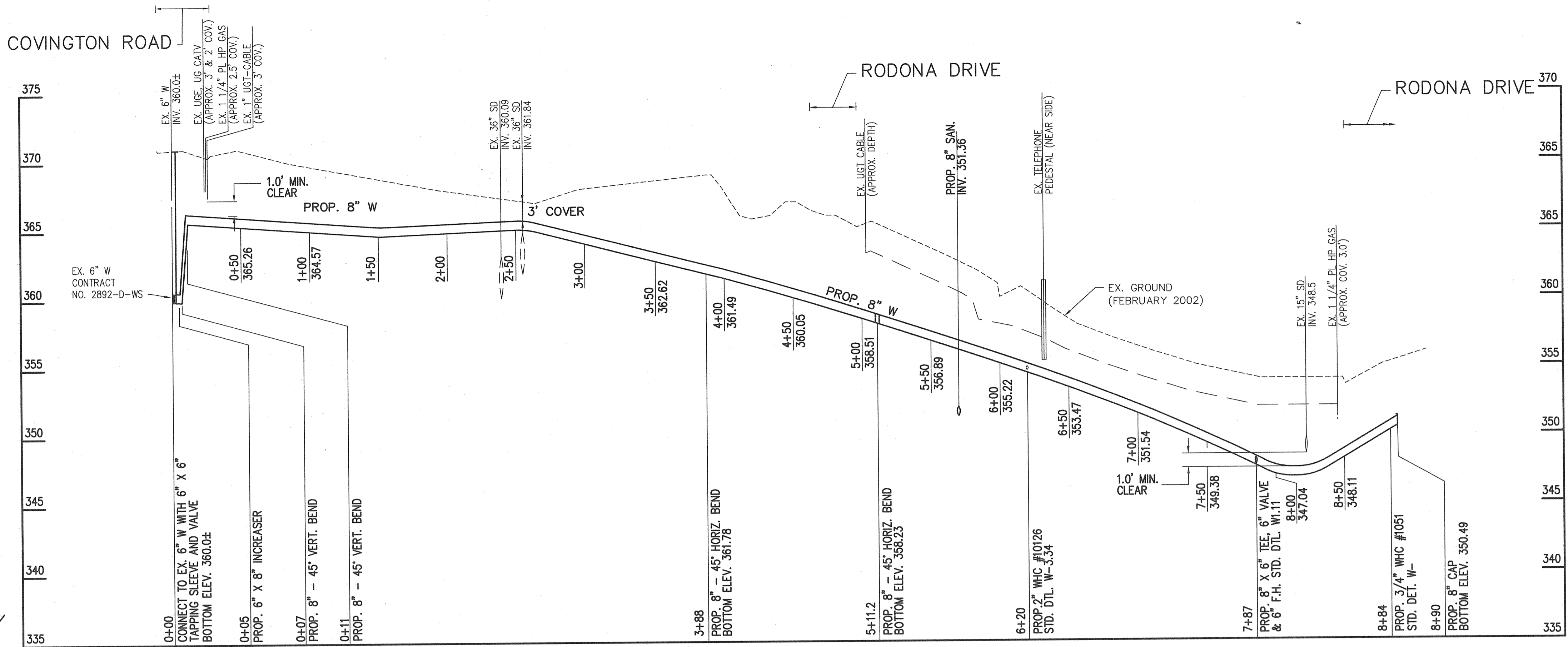
DCI-102 : P.K. NAIL(END CURB)
NORTHING = 558590.7694
EASTING = 1351006.4494
ELEVATION = 370.33 FT.



DCI-103 : P.K. NAIL
NORTHING = 558771.3522
EASTING = 1350953.1256
ELEVATION = 362.83 FT.

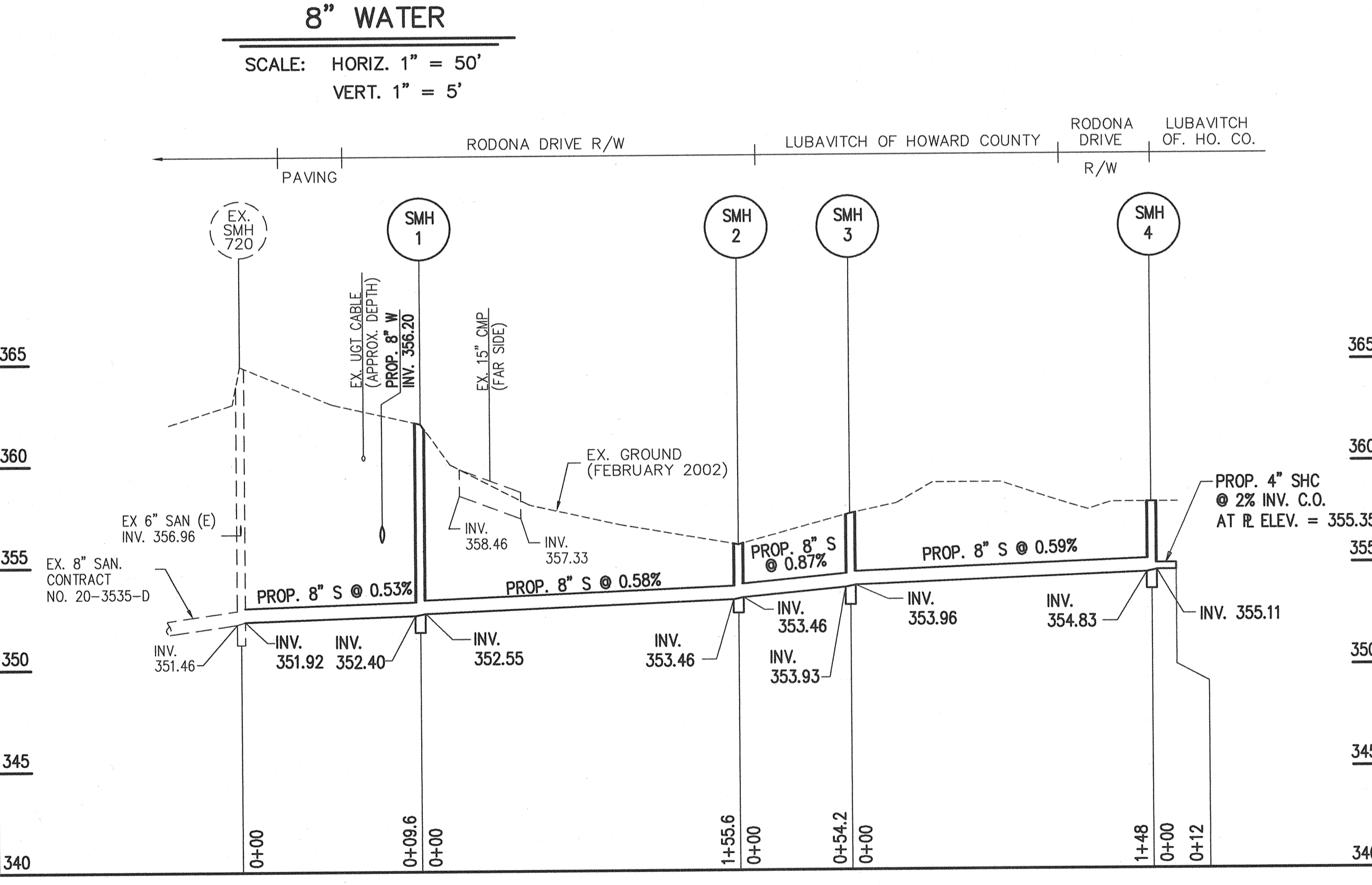
DCI-104 : P.K. NAIL
NORTHING = 559147.9848
EASTING = 1351056.6330
ELEVATION = 356.37 FT.

NOTE:
PROTECT AND MAINTAIN EXISTING
PEDESTAL AND UNDERGROUND CABLE
DURING CONSTRUCTION.



WATER MAIN STAKE-OUT TABLE			
STATION	DESCRIPTION	NORTH	EAST
8" WATER			
0+00	6" x 6" TS&V	558887.11	1350592.39
0+72	PC	558822.44	1350623.04
2+88	PT	558679.49	1350778.15
3+88	8"-45' HORIZ. BEND	558654.95	1350875.15
6+20=0+00	2" WHC TAP	558834.57	1350994.45
5+11.2	8"-45' HORIZ. BEND	558724.93	1350976.63
7+87	8" x 6" TEE	559019.02	1351023.86
8+85=0+00	1" WHC TAP	559091.22	1351041.43
2" WATER #10126			
0+00=6+20	2" WHC TAP	558834.57	1350994.45
0+26	METER VAULT	558830.55	1351020.22
1" WATER #10151			
0+00=8+85	1" WHC TAP	559091.22	1351041.43
0+75	METER VAULT	559136.83	1351102.20

8" SEWER MAIN STAKE-OUT TABLE			
STRUCTURE	NORTH	EAST	
SMH 1	558793.84	1351003.71	
SMH 2	558946.89	1351031.38	
SMH 3	558978.13	1351076.45	
SMH 4	559123.90	1351103.07	
4" SHC AT PROP. LINE	559134.01	1351110.98	



AS-BUILT REPLACEMENT SHEET—JAN. 17, 2003

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

8/14/03
8-12-03

WALLACE, MONTGOMERY & ASSOCIATES, LLP
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

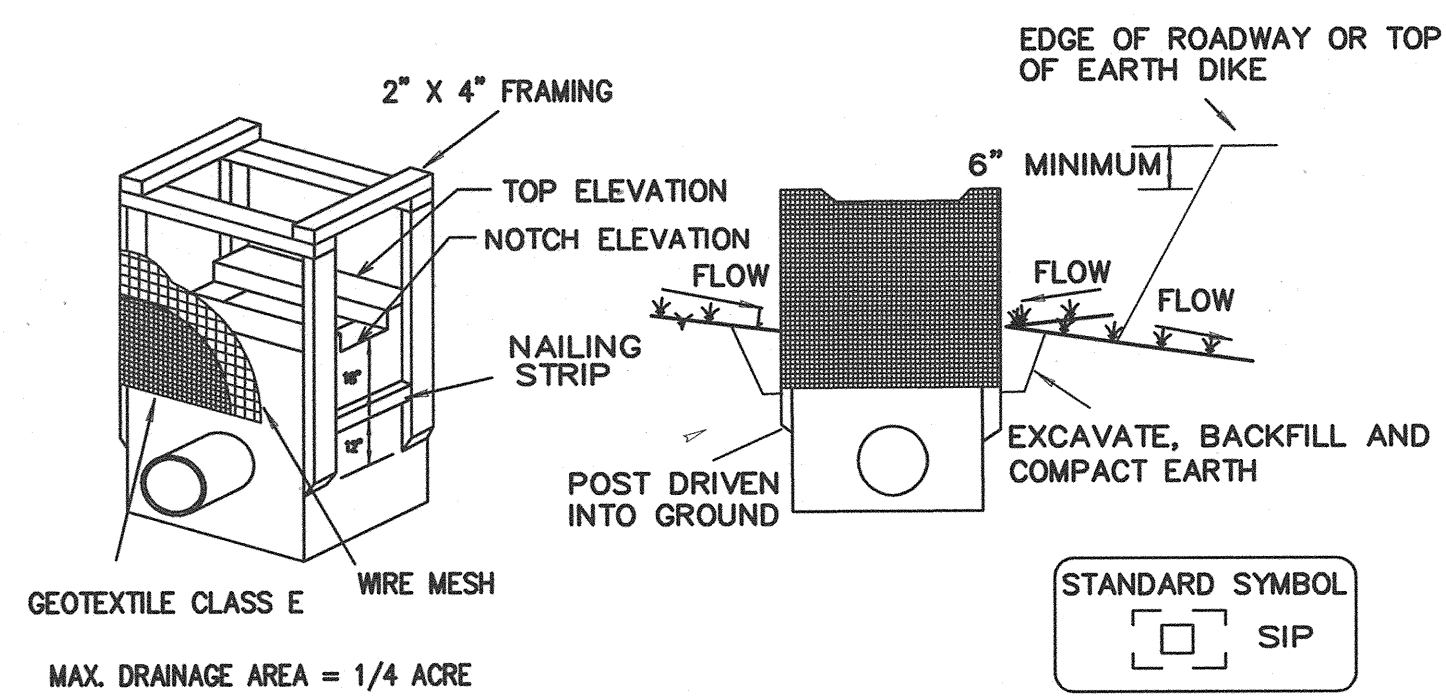
DES: WCV	WMA	REVISED FOR AS-BUILTS	1/17/03
DRN: SDH			
CHK: JJS			
DATE: JUNE 2002	BY: NO.	REVISION	DATE

PLAN AND PROFILE SHEET

600' SCALE MAP NO. 36 BLOCK NO. 13

HOWES LANE & RODONA DRIVE
8-INCH WATER MAIN & 8-INCH SEWER MAIN
CAPITAL PROJECT W-8698
CONTRACT NO. 24-4038
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 4

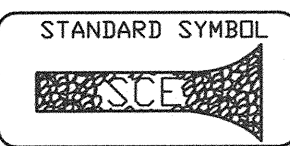
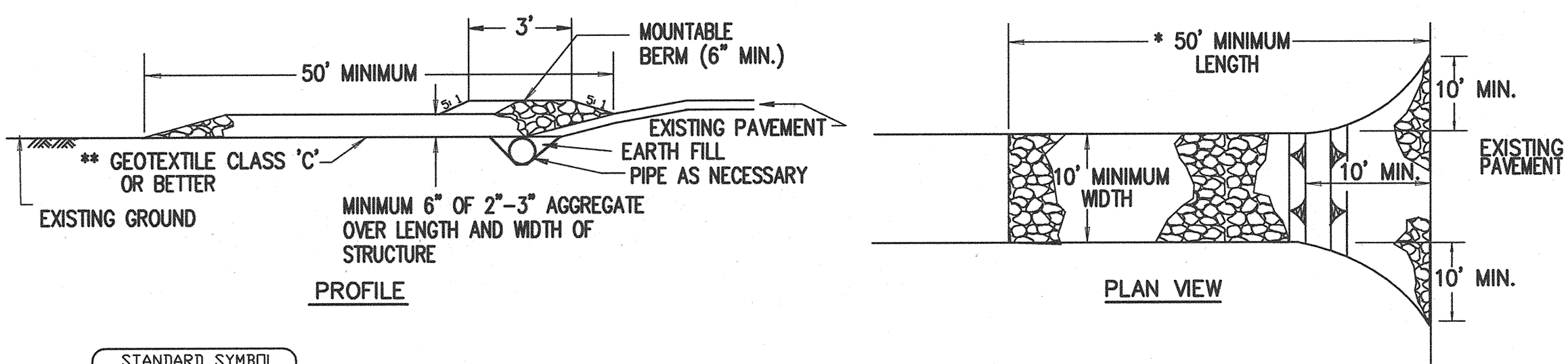


CONSTRUCTION SPECIFICATIONS

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

STANDARD INLET PROTECTION

NOT TO SCALE

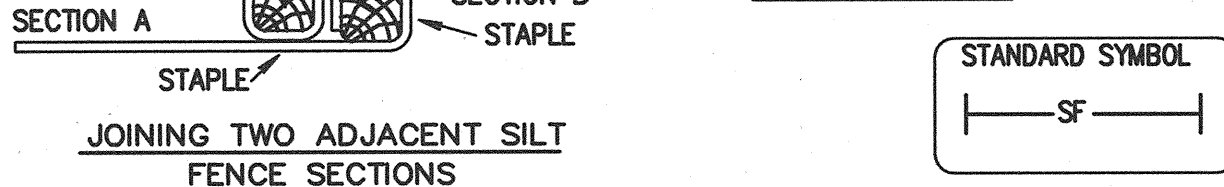
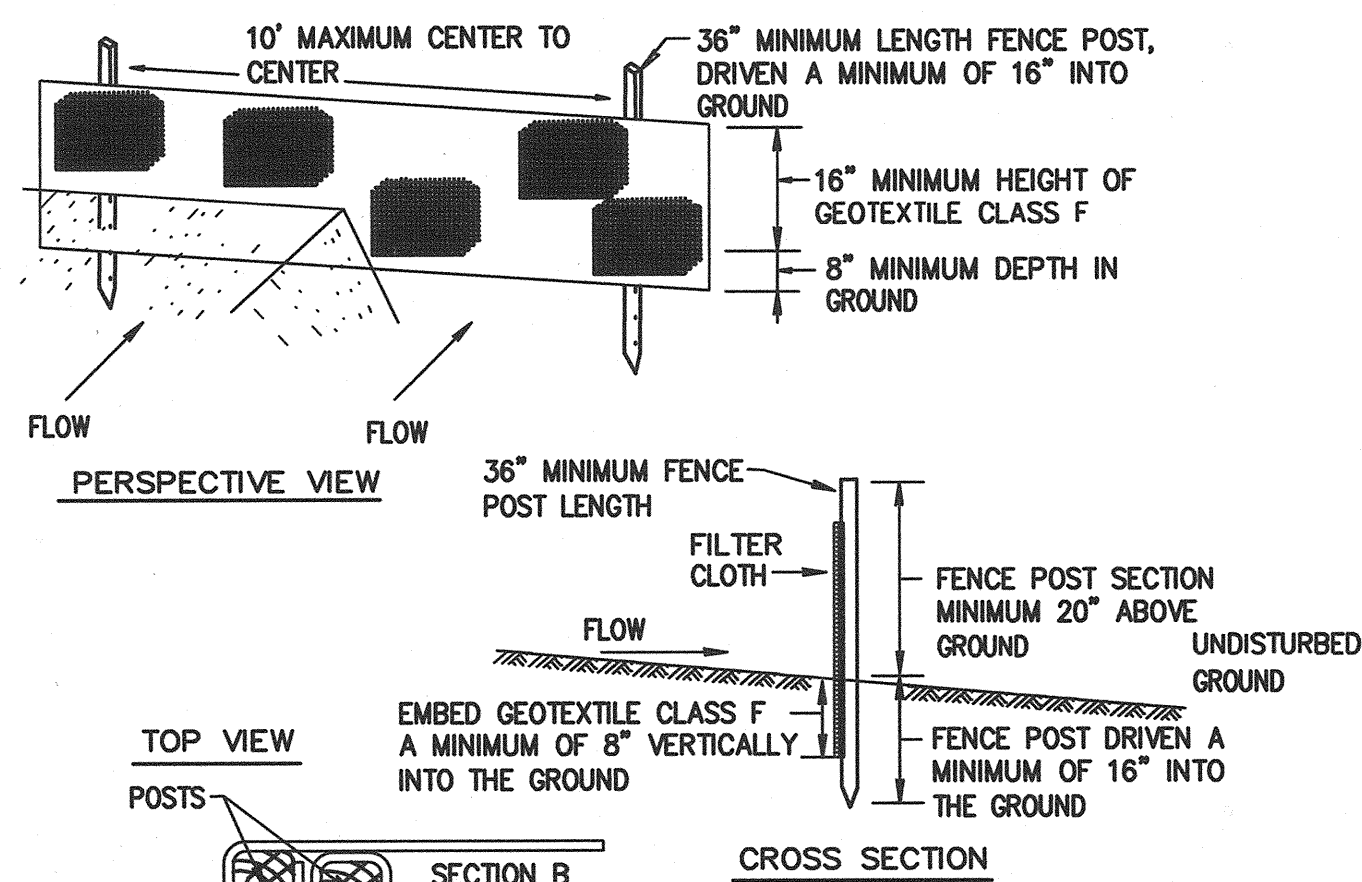


CONSTRUCTION SPECIFICATIONS

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

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



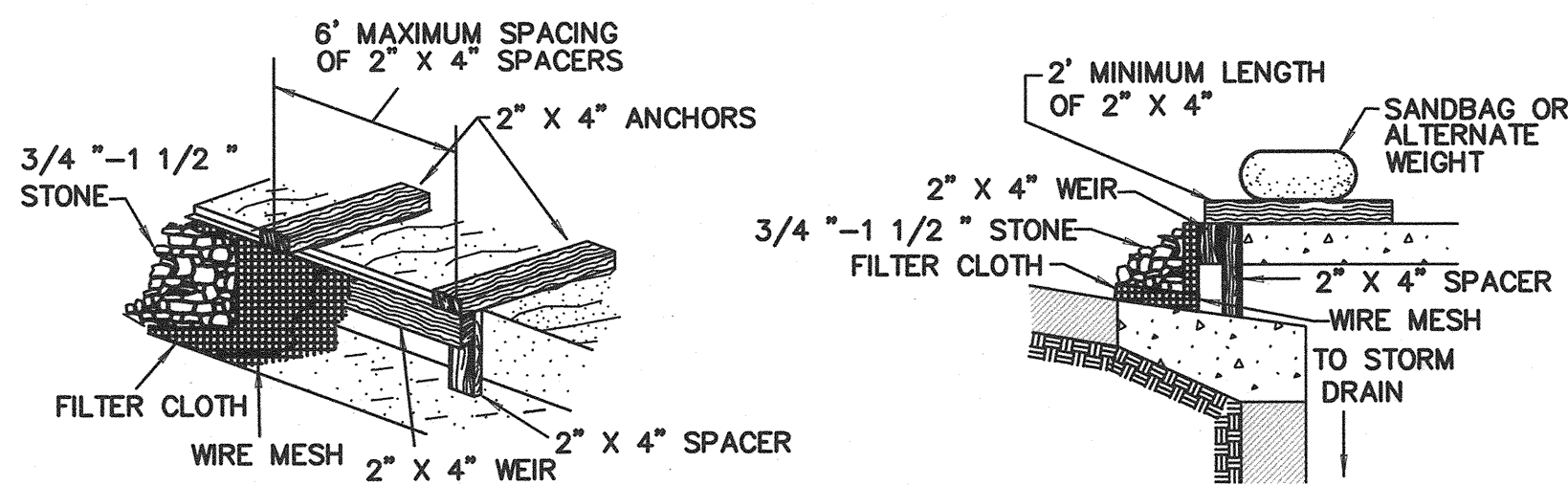
CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" X 1 1/2" SQUARE (MINIMUM) CUT, OR 1 3/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

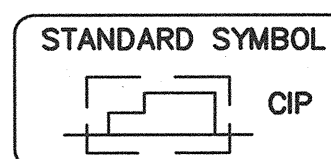
TENSILE STRENGTH	50 lbs/in (min.)	Test: MSMT 509
TENSILE MODULUS	20 lbs/in (min.)	Test: MSMT 509
FLOW RATE	0.3 gal ft / minute (max.)	Test: MSMT 322
FILTERING EFFICIENCY	75% (min.)	Test: MSMT 322
3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

SILT FENCE

NOT TO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

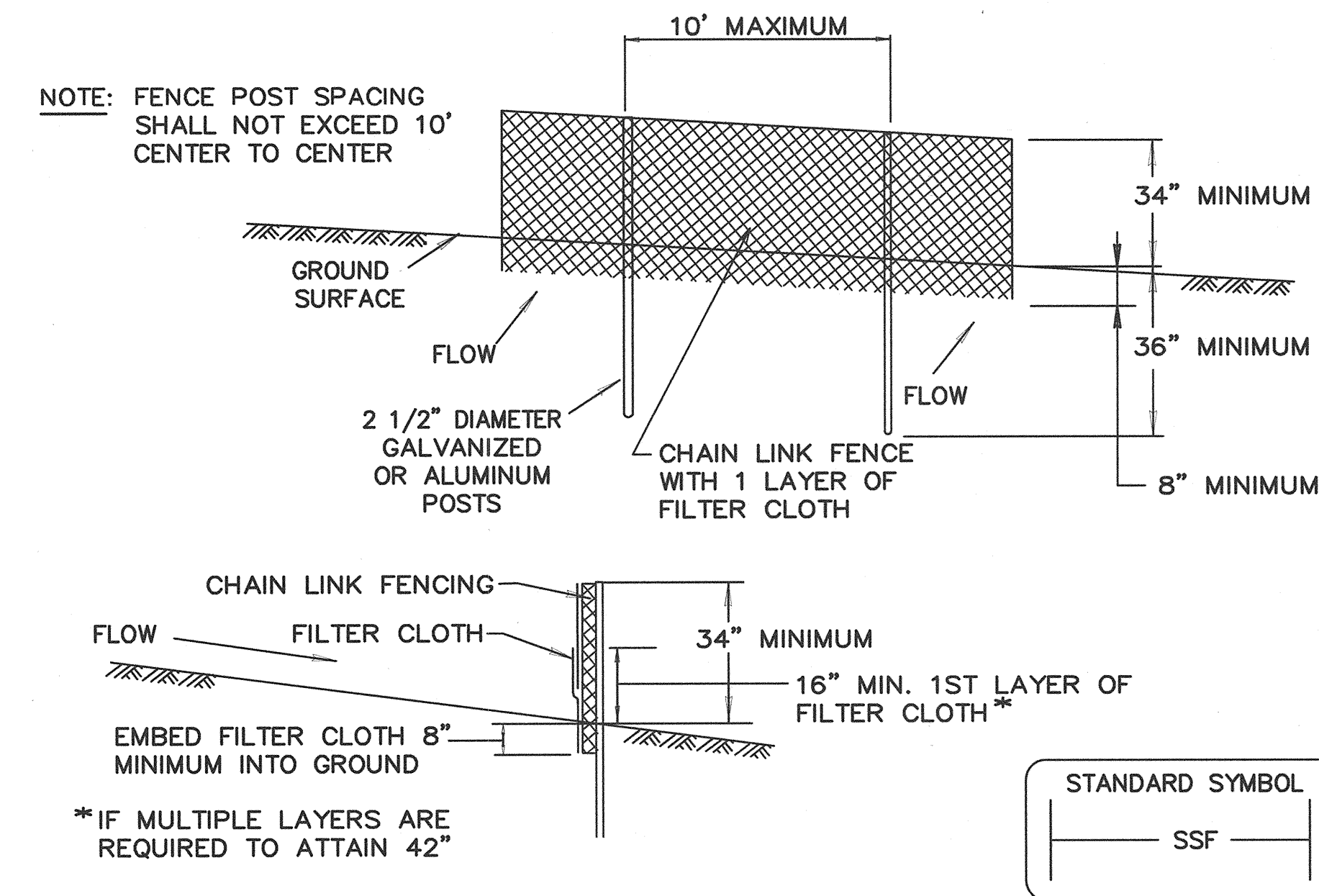


CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" X 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD.
2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" X 4" WEIR.
3. SECURELY NAIL THE 2" X 4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2' LENGTHS OF 2" X 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" X 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE 1/2" X 1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4" X 1 1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT FLOW TO THE INLET.

CURB INLET PROTECTION (COG OR COS INLETS)

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT
7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL/FT ² /MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

SUPER SILT FENCE

NOT TO SCALE

AS-BUILT JAN.17, 2003

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Alan M. Deane 6/26/02
DIRECTOR OF PUBLIC WORKS DATE

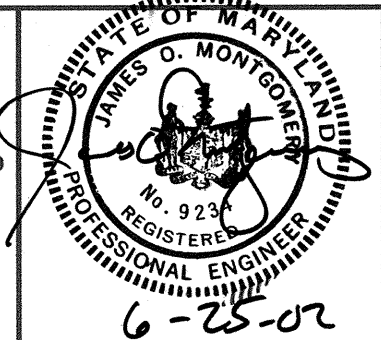
Paul J. Deane 6/26/02
CHIEF, BUREAU OF ENGINEERING DATE

John R. Nab 6/27/02
CHIEF, BUREAU OF UTILITIES DATE

John R. Nab 6/26/02
CHIEF, UTILITY DESIGN DIVISION DATE

WALLACE, MONTGOMERY & ASSOCIATES, LLP
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21284

6-25-02



DES: WCW					
DRN: SDH					
CHK: JJS					
DATE: JUNE 2002	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 36	BLOCK NO. 13

SEDIMENT CONTROL DETAILS

HOWES LANE & RODONA DRIVE
8-INCH WATER MAIN & 8-INCH SEWER MAIN
CAPITAL PROJECT W-8698
CONTRACT NO. 24-4038
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 4

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - APPLY 60 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.).

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

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

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED** - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.)
- ACCEPTABLE** - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A.) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, B.) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	=	2.51	ACRES
AREA DISTURBED	=	0.71	ACRES
AREA TO BE ROOFED OR PAVED	=	0.014	ACRES (EXISTING & PROPOSED)
AREA TO BE VEGETATIVELY STABILIZED	=	0.696	ACRES (EXISTING & PROPOSED)
TOTAL CUT	=	1182	CU. YDS.
TOTAL FILL	=	1182	CU. YDS.
OFF SITE WASTE/BORROW AREA LOCATION:	SITE WITH AN ACTIVE GRADING PERMIT AS APPROVED BY ENGINEER		
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- PLACE EXCAVATED SOIL ON THE UPHILL SIDE OF THE TRENCHES.

SEQUENCE OF CONSTRUCTION

- CONTACT HOWARD COUNTY BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION (410-313-1880) PRIOR TO STARTING DATE. (4 DAYS)
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
- EXCAVATE AND INSTALL PROPOSED 8" WATER MAIN. (30 DAYS)
EXCAVATE AND INSTALL PROPOSED 8" GRAVITY SEWER MAIN. (30 DAYS)
FOR DISTURBED AREAS THAT DO NOT DRAIN TO A SEDIMENT CONTROL DEVICE, STABILIZE AREAS TO BE PAVED WITH GRADED AGGREGATE BASE COURSE AND GRASS AREAS WITH TOPSOIL, SEED, AND MULCH BY THE END OF EACH WORKING DAY.
- RESTORE TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS WITH TEMPORARY PAVING HOWARD COUNTY STANDARD SPECIFICATION. (2 DAYS)
- UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)
- INSTALL PERMANENT PAVING PATCH OVER TRENCH. (2 DAYS)

RESTORATION NOTES:

- SAW CUT THE EXISTING BITUMINOUS PAVING, CURB AND GUTTER, AND SIDEWALK.
- CUT AND REPAIR BITUMINOUS PAVING IN ACCORDANCE WITH STANDARD DETAIL G4.01.
- REPAIR CURB AND GUTTER IN ACCORDANCE WITH STANDARD DETAIL R 3.01 AND MATCH EXISTING CONDITIONS.
- REPAIR CONCRETE SIDEWALK IN ACCORDANCE WITH STANDARD DETAIL R 3.05 AND MATCH EXISTING CONDITIONS.

RESTORATION SCHEDULE			
STATION	TO STATION	DISTANCE	MATERIAL
WATER MAIN			
0+00	0+26	26 FT.	BITUMINOUS PAVING (ASPHALT)
0+26	0+28	2 FT.	CURB & GUTTER
0+28	4+62	434 FT.	SEEDING
4+62	4+64	2 FT.	CURB & GUTTER
4+64	4+98	34 FT.	BITUMINOUS PAVING (ASPHALT)
4+98	5+00	2 FT.	CURB & GUTTER
5+00	8+50	250 FT.	SEEDING
8+50	8+52	2 FT.	CURB & GUTTER
8+52	8+88	36 FT.	MACADAM
0+00=6+20	0+26	26 FT.	SEEDING
0+00=8+84	0+56	59 FT.	MACADAM
0+56	0+58	2 FT.	CURB & GUTTER
0+58	0+72	14 FT.	SEEDING
SEWER MAIN			
EX. SMH 720	0+19	19 FT.	SEEDING
0+19	0+21	2 FT.	CURB & GUTTER
0+21	0+55	34 FT.	BITUMINOUS PAVING (ASPHALT)
0+55	0+57	2 FT.	CURB & GUTTER
0+57	SMH 1	31.5 FT.	SEEDING
SMH 1	SMH 2	155.5 FT.	SEEDING
SMH 2	SMH 3	55 FT.	SEEDING
SMH 3	SMH 4	27 FT.	SEEDING
SMH 4	0+13	13 FT.	SEEDING

AS-BUILT JAN. 17, 2003

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>John M. [Signature]</i> 6/25/02 DIRECTOR OF PUBLIC WORKS</p> <p><i>John K. [Signature]</i> 6/27/02 BUREAU OF UTILITIES</p>	<p>WALLACE, MONTGOMERY & ASSOCIATES, LLP CIVIL AND STRUCTURAL ENGINEERS 110 WEST ROAD TOWSON, MARYLAND 21204</p> <p><i>[Signature]</i> 6/26/02 REGISTERED PROFESSIONAL ENGINEER</p>	<p>DES: WCV</p> <p>DRN: SDH</p> <p>CHK: JJS</p> <p>DATE: JUNE 2002</p>	<p>BY NO. REVISION DATE</p>	<p>600' SCALE MAP NO. 36 BLOCK NO. 13</p>	<p style="text-align: center;">SEDIMENT CONTROL NOTES</p>	<p style="text-align: center;">HOWES LANE & RODONA DRIVE 8-INCH WATER MAIN & 8-INCH SEWER MAIN CAPITAL PROJECT W-8698 CONTRACT NO. 24-4038 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND</p>	<p>SCALE AS SHOWN</p> <p>SHEET 4 OF 4</p>
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