

| QUANTITIES | | | | |
|--------------------------|----------------------|------------|----------------------------|-------------|
| ITEMS | QUANTITIES ESTIMATED | AS-BUILT | | |
| | | QUANTITIES | TYPE | SUPPLIER |
| 8" SEWER MAIN (PVC) | 64 | 64 | National Pipe Spa-35 | H.D. Supply |
| SEWER MANHOLE | 1 | 1 | | |
| SEWER MANHOLE (vert fit) | 6 | 6 | | |
| 4" SHC | 1 | 1 | Horne C.O.S | H.D. Supply |
| 8" WATER MAIN (PVC) | 384 | 386 | North American C-900 DR-18 | H.D. Supply |
| 6" WATER MAIN (PVC) | 36 | 66 | North American C-900 DR-18 | H.D. Supply |
| 8x12 TAPPING SLEEVE | 1 | 1 | Ford 1350-8A | H.D. Supply |
| 8x6 TEE | 2 | 2 | Star Pipe M3 | H.D. Supply |
| FIRE HYDRANT | 2 | 2 | Kennedy C509 | H.D. Supply |
| 2" HMC | 1 | 1 | | |

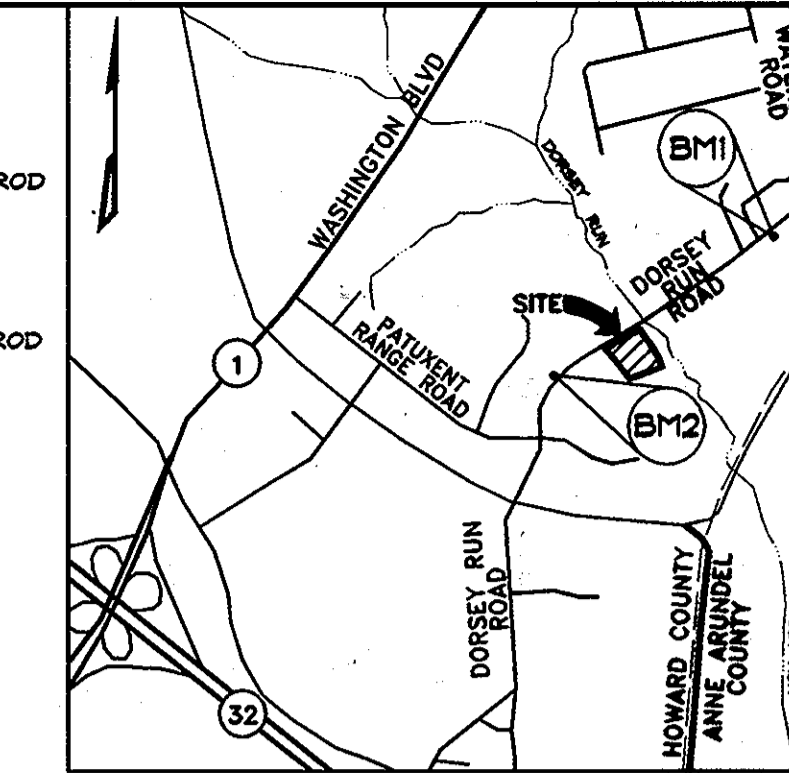
Cosentino Inc. WL/S

FINAL WATER AND SEWER CONSTRUCTION PLANS for **AMERIGAS** DORSEY WOODS PARCEL B CONTRACT NUMBER 24-4768-D 6TH ELECTION DISTRICT HOWARD COUNTY, MD

BENCHMARK

BENCHMARK #1
N. 540761.715
E. 1973937.338
B.M. 48A - 3/4" IRON ROD
ELEV. 68.340

BENCHMARK #2
N. 539314.908
E. 1971991.256
B.M. 48B - 3/4" IRON ROD
ELEV. 73.183



VICINITY MAP

SCALE: 1"=2000'
ARC MAP COORDINATES
TWP 5054 07
N 39°24'00", E 76°47'30"

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.
 - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON JULY, 2012 BY PROFESSIONAL SURVEYS, LLC.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/94 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 48A NO. 48AA. ALL VERTICAL CONTROLS ARE BASED ON NAVD 83. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE BASED ON HOWARD COUNTY CONTROL STATION 3/4" IRON RODS.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
 - 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 THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE BRACING OF THE POLES.
 - 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.
 - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL \odot 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:

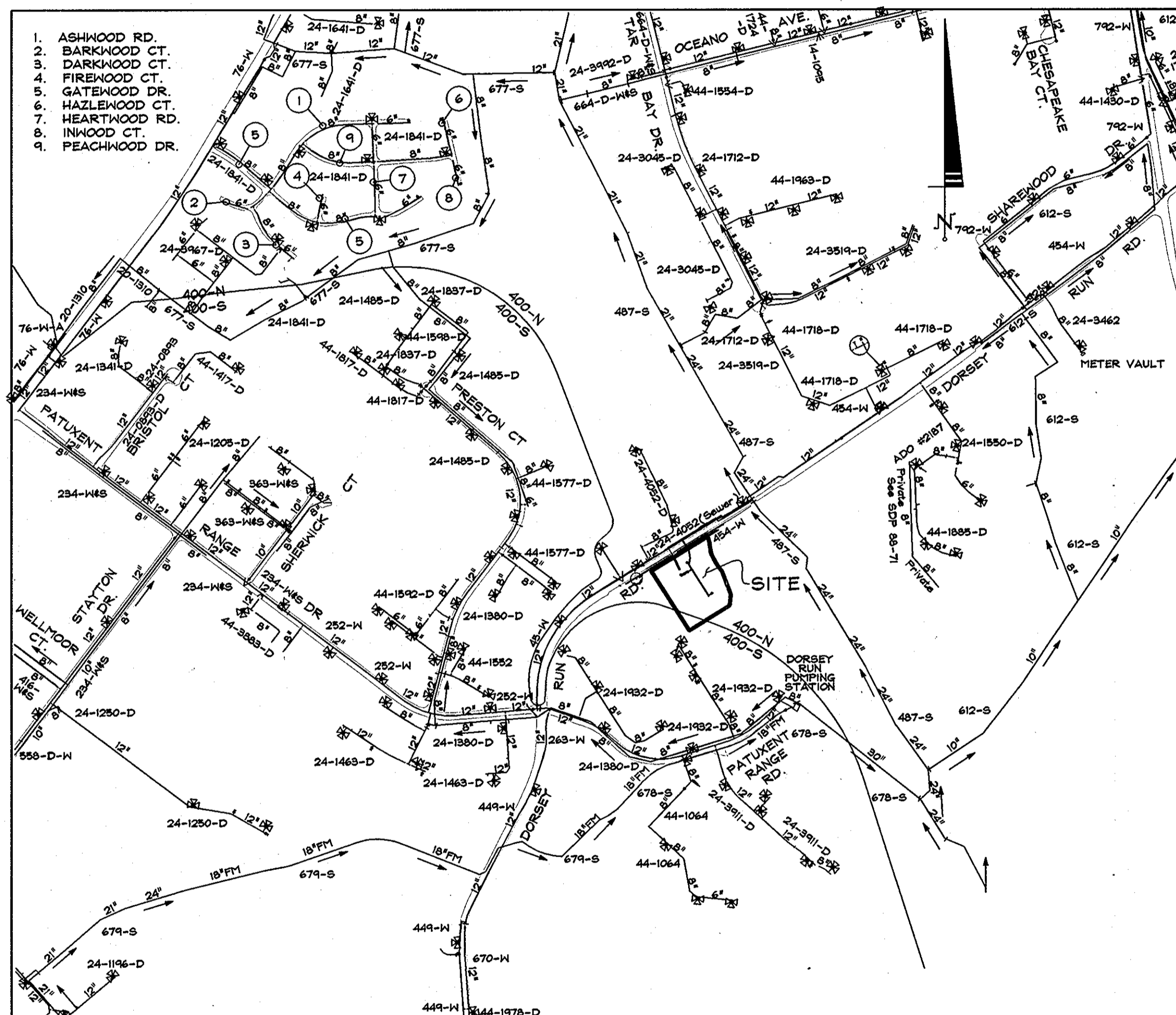
- | | |
|------------------------------|-------------------------------|
| AT&T | 1-800-252-1833 |
| BGE (CONTRACTOR SERVICES) | 410-637-8713 |
| BGE (EMERGENCY) | 410-685-0123 |
| BUREAU OF UTILITIES | 410-313-4900 |
| COLONIAL PIPELINE CO. | 410-785-1990 |
| MISS UTILITY | 1-800-257-7777 |
| STATE HIGHWAY ADMINISTRATION | 410-531-5533 |
| VERIZON | 1-800-743-0095 / 410-224-9210 |
- 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.
 - THE 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 SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPH REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.

PART II WATER

- ALL WATER MAINS SHALL BE D.I.P. CLASS 54 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 BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH 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.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.11 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL STEEL USED WITH PVC MAINS SHALL BE DUCTILE IRON.

PART III SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL 65.92. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL \odot C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.



VICINITY MAP

SCALE: 1" = 600'

| | |
|-------------------------|-----------------|
| TYPE OF BUILDING: | COMMERCIAL |
| TYPE OF BUILDING: | WAREHOUSE |
| NUMBER OF LOTS/PARCELS: | 1 |
| NUMBER OF WHC: | 1 |
| NUMBER OF SHC: | 1 |
| DRAINAGE AREA: | DORSEY |
| TREATMENT PLANT: | LITTLE PATUXENT |

DRAWING LEGEND

| | |
|--|---------------------------------------|
| | BOUNDARY LINE |
| | EXISTING PROPERTY BOUNDARY |
| | EX. ROAD / EDGE OF PAVING |
| | EX. SEWER LINE & MANHOLES, CLEAN-OUTS |
| | EX. OVERHEAD ELECTRIC & UTILITY POLES |
| | PROP. CURB & GUTTER |
| | PROPOSED ROAD CENTERLINE |
| | PROPOSED WATER LINE |
| | PROPOSED SEWER AND MANHOLES |

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND AS SHOWN ON SDP 13-018.

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

BY THE DEVELOPER:

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

ENGINEER

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Blanton 2/28/13
HOWARD SOIL CONSERVATION DISTRICT DATE

Paul G. Cavanaugh 1/29/13
DEVELOPER DATE

Paul G. Cavanaugh 1/29/13
ENGINEER DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Steve C. Carr 2/28/13
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Paul G. Cavanaugh 3/1/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Development Design Consultants
Planners Surveyors Engineers Landscape Architects
192 East Main Street
Westminster, MD 21157
410.386.0560
410.386.0564 (Fax)
DDC@DDCinc.us
www.DDCinc.us
Paul G. Cavanaugh
PROFESSIONAL ENGINEER 122020

Professional Certification
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland.
License No. 27020, Expiration Date: 1-25-14
Paul G. Cavanaugh
PROFESSIONAL ENGINEER 122020

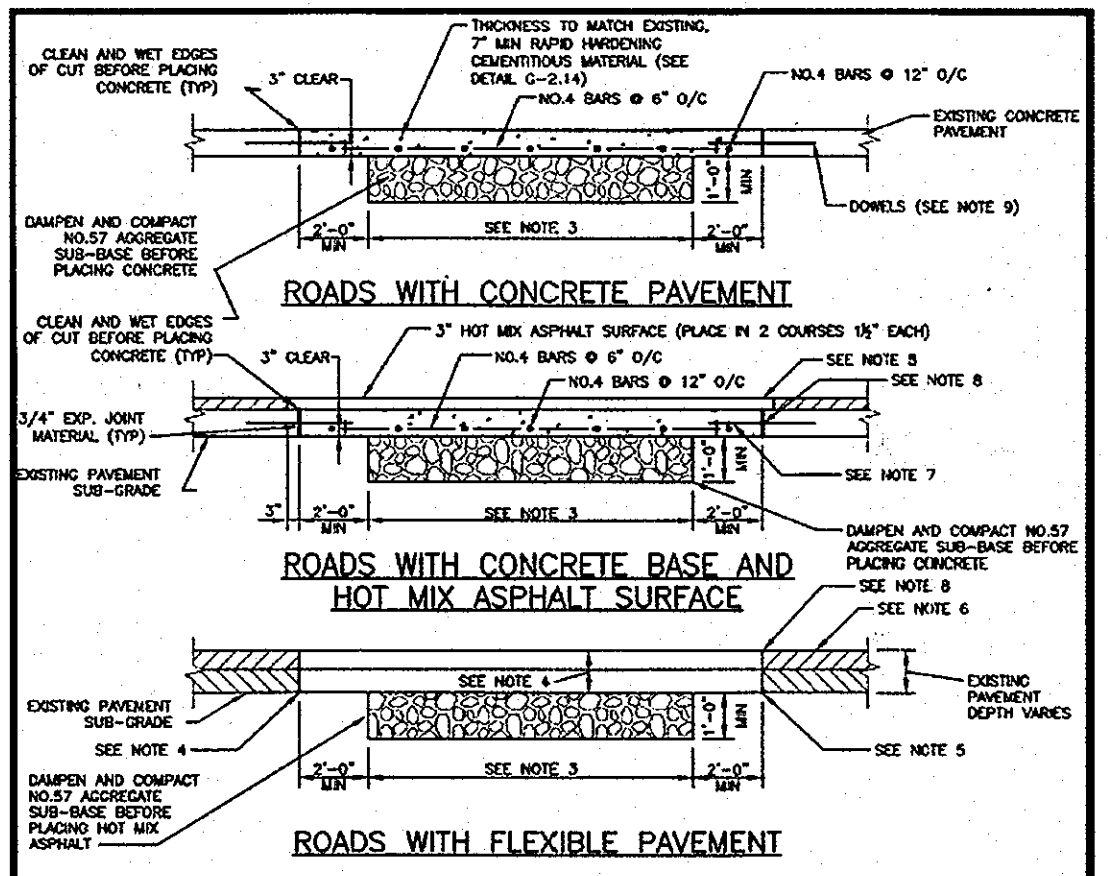
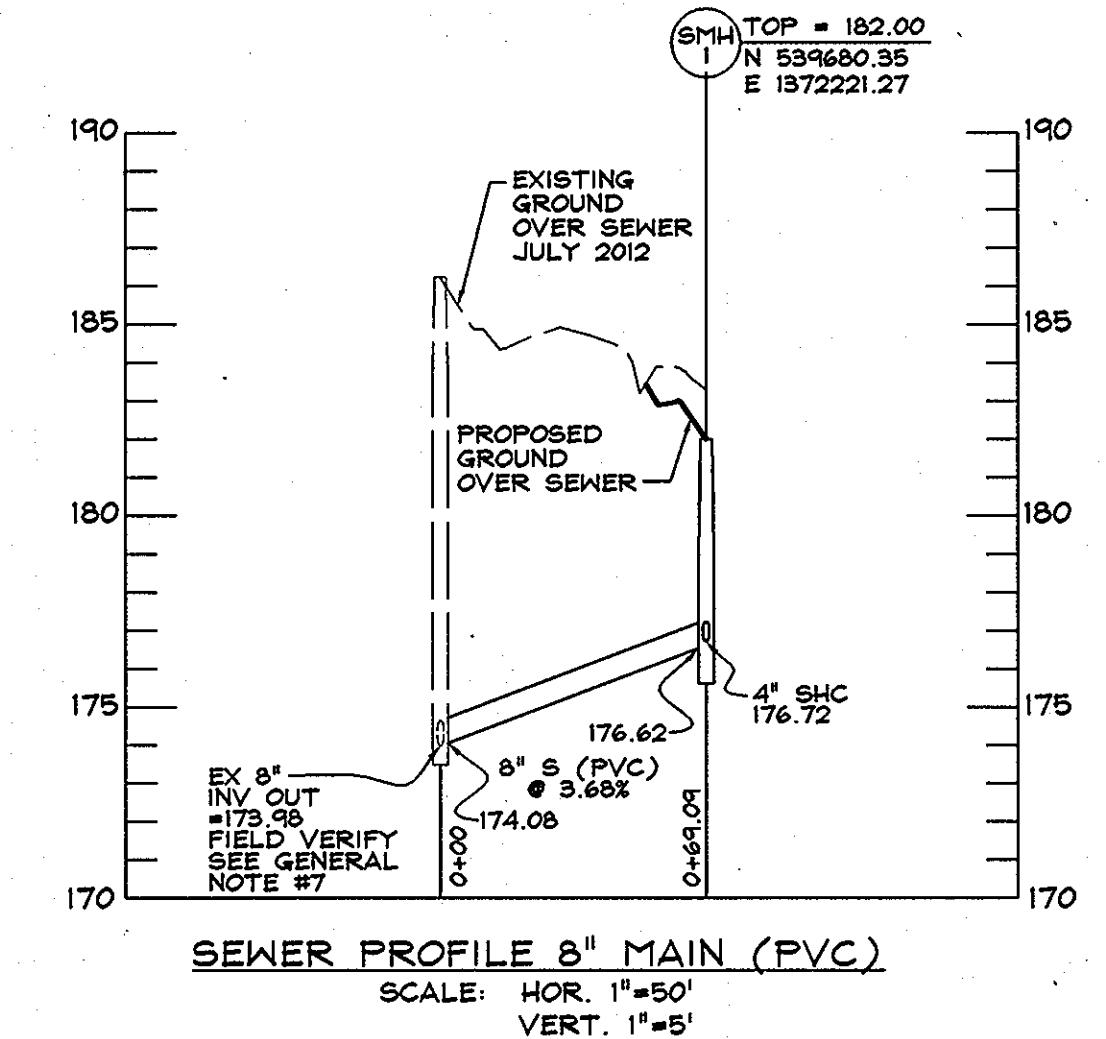
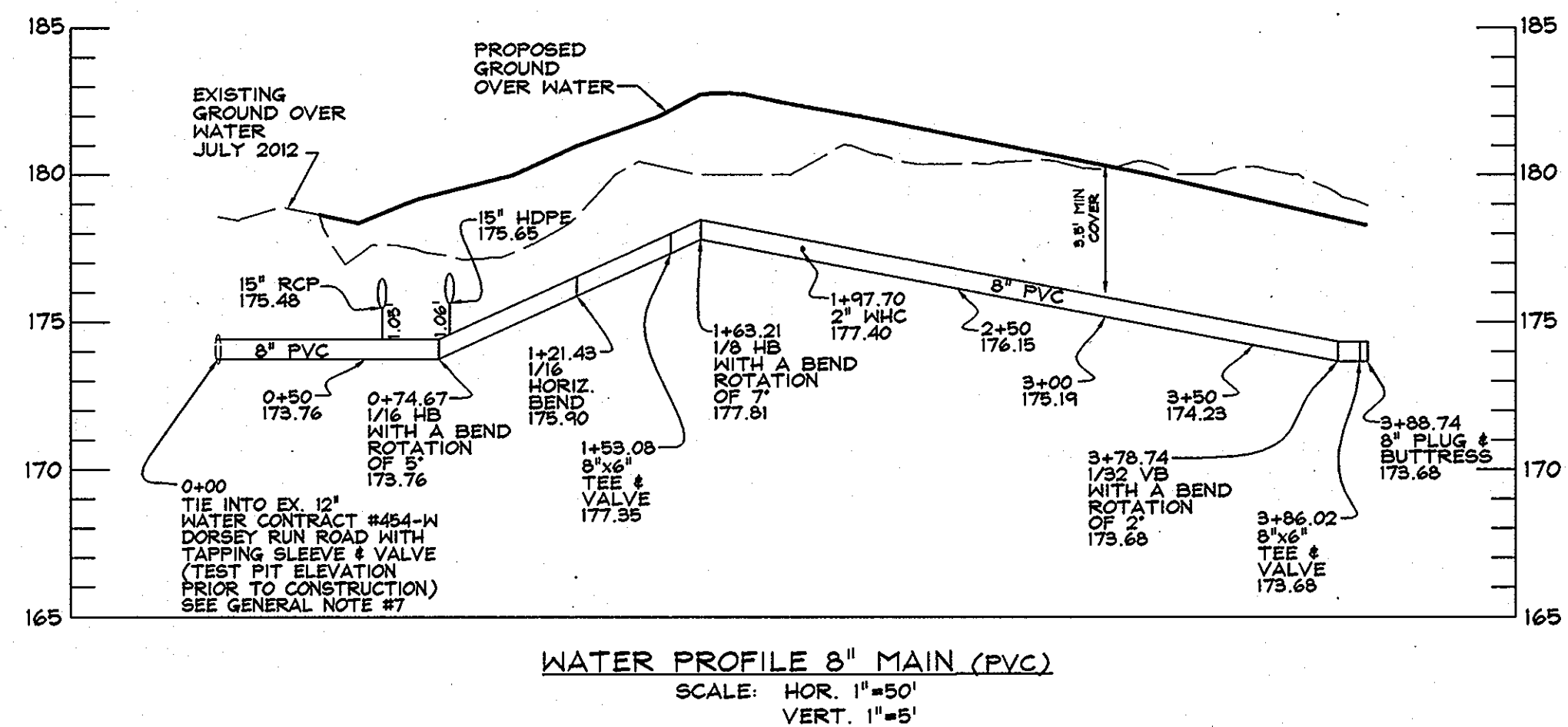
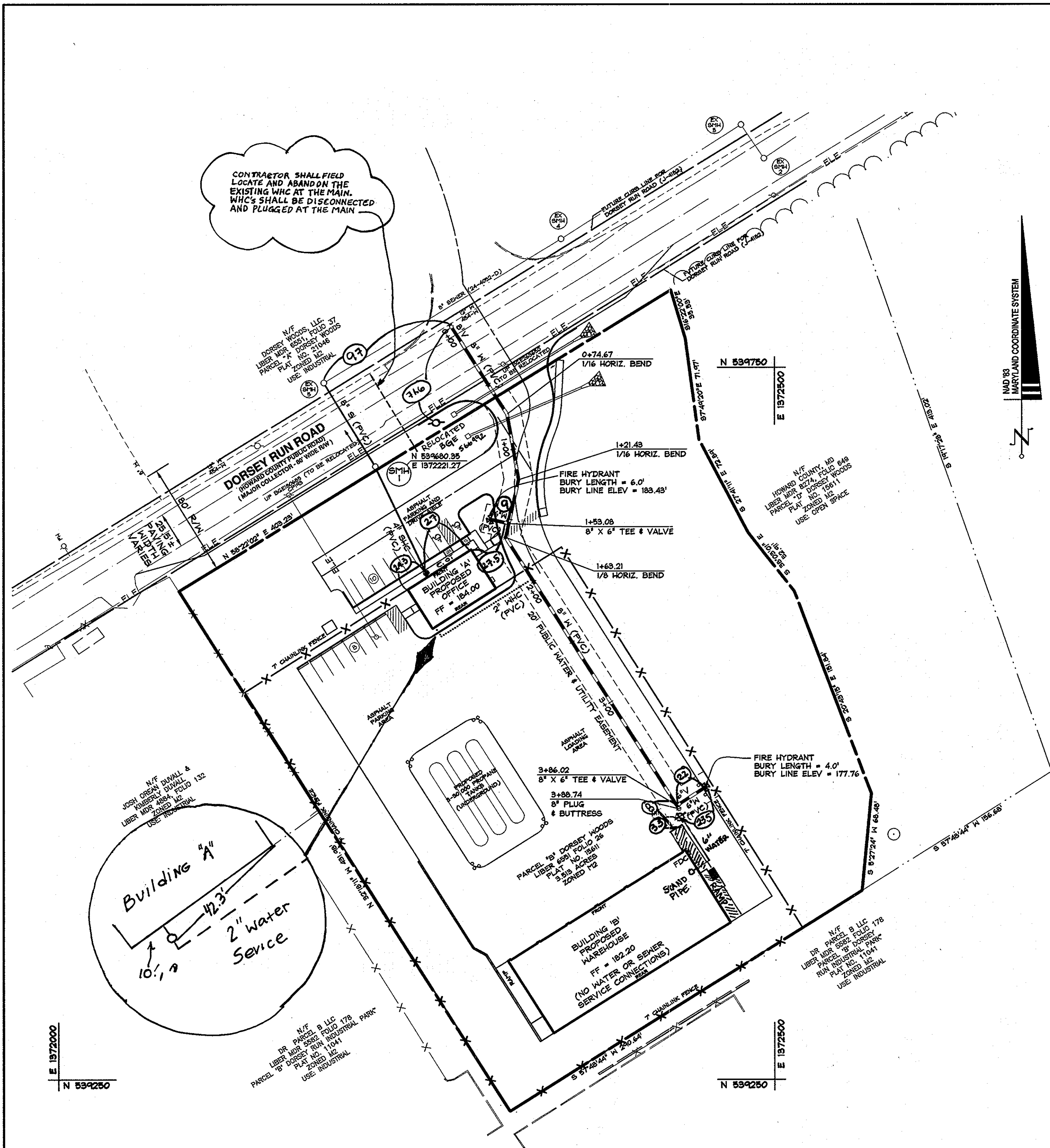
| | |
|-----------|---------|
| DES. BY: | BKC |
| DRN. BY: | CTS/LJC |
| CHK. BY: | PGC |
| DATE: | 1/29/13 |
| NO. | 1 |
| AS BUILT | RC1 |
| REVISIONS | 1/7/13 |
| DRN. | DATE |

600 SCALE MAP NO.: 48 BLOCK NO.: 2

WATER & SEWER CONSTRUCTION PLANS
AMERIGAS
DORSEY WOODS PARCEL 'B'
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-4768-D
SCALE: 1" = 50'
SHEET 1 OF 2

OWNER
SMITH DORSEY RUN ROAD, LLC
601 UNIVERSITY BLVD., SUITE 350
ELLCOTT CITY, MD 21043
(443) 540-4275

DEVELOPER
MEADWOOD DORSEY-RUN, LLC
1202 SHADY CREEK ROAD
MARRIOTTVILLE, MD 21044
(410) 489-5080



- NOTES:**
- WHENEVER A TRENCH CROSSES A CONCRETE ROADWAY THAT HAS JOINT INSTALLATIONS THE ENTIRE JOINT BETWEEN THE EDGE OF THE TRENCH AND THE NEAREST JOINT SHALL BE REPAVED TO THE DISTANCE IS LESS THAN 10 FEET.
 - CLEAN AND WET EDGES OF CUT AND SUBGRADE BEFORE PLACING CONCRETE.
 - ACCURATE SUB-BASE WIDTH SHALL BE 6 FT MINIMUM OR ACTUAL TRENCH WIDTH, WHICHEVER IS GREATER.
 - HOT MIX ASPHALT PAVEMENT PATCH THICKNESS SHALL BE EQUAL TO THE EXISTING PAVING SECTION OR AS APPROVED BY SPW. THE MINIMUM PAVING PATCH SHALL CONSIST OF 2" MIN. SURFACE COURSE OVER 4" MIN. BASE COURSE. GRADED AGGREGATE BASE SHALL BE PLACED AND COMPACTED IN 4" MAXIMUM COMPACTED THICKNESS LAYERS.
 - CLEAN EXPOSED VERTICAL SURFACE OF ADJACENT PAVEMENT AND PLACE TACK COAT ON ALL VERTICAL SURFACES PRIOR TO PLACING PAV.
 - IF THE REMAINING EXISTING PAVEMENT IS LESS THAN 4" WIDE, THE RESIDUAL PAVEMENT SHALL BE REMOVED BY ITS ENTIRETY AND REPLACED.
 - CONCRETE REPLACEMENT SHALL BE 10" MINIMUM MAX NO. 8.
 - SAW OUT FULL DEPTH ALL JOINTS OF EXISTING CONCRETE, BITUMINOUS, AND BASE PAVEMENTS.
 - REPAIRMENT OF CONCRETE PAVING SHALL BE ACCOMPLISHED BY DOWELING. DOWELS SHALL BE CENTERED IN PAVEMENT THICKNESS. NEW REPAIRMENT SHALL BE TIED TO DOWELS.
 - TOTAL REPAIR WIDTH SHALL BE EQUAL TO THE LANE WIDTH IN ACCORDANCE WITH THE SPECIFICATIONS.

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

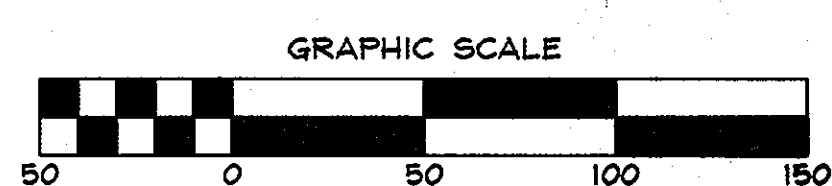
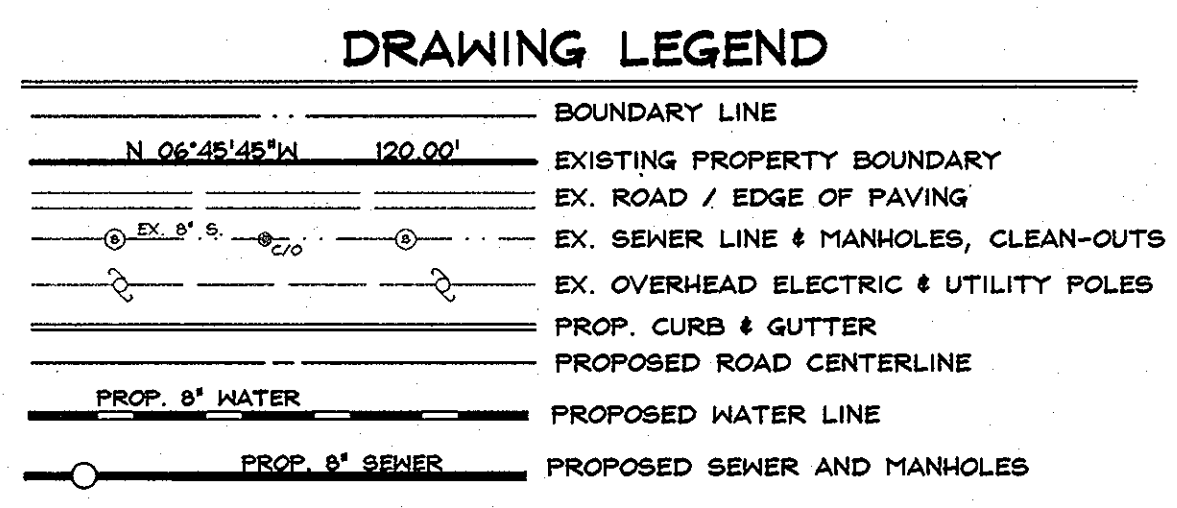
| LOT # | ADDRESS | LOCATION DIMENSION 1 | LOCATION DIMENSION 2 |
|-----------|--------------------|----------------------|----------------------|
| PARCEL B1 | 8101 DORSEY RUN RD | | |

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

| LOT # | ADDRESS | LOCATION DIMENSION 1 | LOCATION DIMENSION 2 |
|-----------|--------------------|----------------------|----------------------|
| PARCEL B1 | 8101 DORSEY RUN RD | | |

STRUCTURE SCHEDULE

| STRUCTURE | TYPE | DETAIL | INV. IN | INV. OUT | RIM ELEV. | LOCATION |
|-----------|------------|--------|-----------------|----------|-----------|--------------------------|
| SMH 1 | 4" MANHOLE | G-5.12 | 176.72 (6" SHC) | 176.62 | 182.00 | N 534680.35 E 1372221.27 |



BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL 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 SOIL CONSERVATION DISTRICT.

Steve C. Conn 1/29/13
DEVELOPER DATE

ENGINEER:
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Paul G. Cavanaugh 1/29/13
ENGINEER DATE

| | | | | | | | |
|---|---|---|--|---|---|--|--|
| <p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Steve C. Conn</i> 1/29/13 CHIEF, BUREAU OF UTILITIES DATE</p> | <p>DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND</p> <p><i>Paul G. Cavanaugh</i> 1/29/13 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE</p> | <p>Development Design Consultants Planners Surveyors Engineers Landscape Architects</p> <p>192 East Main Street Westminster, MD 21157</p> <p>410.386.0560 410.386.0564 (Fax)</p> <p>DDC@DDCinc.us www.DDCinc.us</p> <p><i>Paul G. Cavanaugh</i> PROFESSIONAL ENGINEER #27020</p> | <p>DES. BY: BKC DRN. BY: CTS/LJC CHK. BY: PGC</p> <p>DATE: 1/29/13</p> | <p>FINAL WATER AND SEWER PLAN & PROFILE</p> <p>1 AS BUILT</p> <p>NO. REVISIONS DRN. DATE</p> | <p>600 SCALE MAP NO.: 48 BLOCK NO.: 2</p> | <p>WATER & SEWER CONSTRUCTION PLANS</p> <p>AMERIGAS DORSEY WOODS PARCEL 'B'</p> <p>6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4768-D</p> | <p>SCALE: 1" = 50'</p> <p>SHEET 2 OF 2</p> |
|---|---|---|--|---|---|--|--|