



WATERLINE AND WATER HOUSE CONNECTIONS

BILL OF MATERIALS		
NO.	DESCRIPTION	SIZE
182'	D.I.P. CLASS 54	8"
5'	D.I.P. CLASS 54	6"
1	CAP BC861.01	8"
1	BLOW & VAULT BC857.01	1'
80'	COPPER PIPE BC839.01	1 1/2"
4	SINGLE HOUSE CONNECTIONS*	1 1/2"
1	VALVE BC833.01	6"
1	SMALL CONCRETE VAULT BC870.01	-
1	FIRE HYDRANT (5'-6" BURIAL) BC833.01	6"

STATION	FST. OR	EX. OR	CUT
4+00	447.5	448.0	4.8
4+50	446.6	448.0	4.5
5+00	445.7	448.0	5.0
5+50	445.2	444.8	5.0
5+85	445.0	444.0	5.0

LOT NO.	STATION
1	3+96.19
2	4+65.73
3	5+06.00
4	5+68.88

* WITH 1" METERS BC830.01
 DUCTILE IRON PIPE
 8" CLASS 54 THICKNESS 0.37"
 6" CLASS 54 THICKNESS 0.30"
 SHALL MEET LATEST AWWA C150/A21.50/TABLE 15 OR LATEST
 DUCTILE IRON FITTINGS
 SHALL MEET LATEST AWWA C110/A21.10 AND
 C153/A21.53 (PRESSURE RATING SHALL BE 350 PSI)

NOTE:
 ALL JOINTS SHALL BE RESTRAINED

RIGHT-OF-WAY CERTIFICATION
 IN MY PROFESSIONAL OPINION, THIS PLAN IS SEALED AND CERTIFIED THAT THE RIGHT OF WAY SHOWN HEREON CONFORMS IN ALL MATERIAL RESPECTS TO THE RIGHT OF WAY SHOWN ON A RECORDED PLAN RECORDED IN PLAT BOOK 6 FOLIO 1109 AND IN ACCORDANCE WITH A ROAD OPENING GRANTED BY CASE NUMBER RC 2021-003 AND THIS DRAWING WAS PREPARED IN COMPLIANCE WITH BALTIMORE COUNTY, DEPARTMENT OF PERMITS, APPROVALS AND INSPECTIONS, REAL ESTATE COMPLIANCE, DRAFTING SECTION, MANUAL DATED JANUARY, 1997.

BALTIMORE CITY APPROVAL IS FOR WATER MAIN AND SERVICES ONLY

NORMAL OPERATING PRESSURE: 46.2 PSI
 TEST PRESSURE: 80.0 PSI (STATIC)
 WATER PLAT: CC 1200-12
 ZONE: WESTERN THIRD
 OVERFLOW ELEVATION: 562.4

NOTES

- THE CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE ANY EXISTING SEDIMENT CONTROL DEVICES ENCOUNTERED AND DISTURBED DURING THE COURSE OF CONSTRUCTION UNDER THIS CONTRACT, AND AS SHOWN ON THE APPROVED SEDIMENT CONTROL PLAN AS PART OF THE CONTRACT DOCUMENTS. AT THE END OF EACH DAY, ALL SUCH DISTURBED DEVICES SHALL BE REPAIRED OR REPLACED BEFORE LEAVING THE WORK SITE. THE COST OF PERFORMING THE WORK, INCLUDING MATERIALS, SHALL BE PAID FOR BY A LUMP SUM BID FOR MAINTENANCE AND REPAIR OF SEDIMENT CONTROL DEVICES.
- ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH BALTIMORE COUNTY SOIL CONSERVATION DISTRICT PERMIT NUMBER 157 - COUNTY - 22.
- ALL CONSTRUCTION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH BALTIMORE COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (FEBRUARY 2000, AS AMENDED) AND BALTIMORE CITY STANDARD DETAILS WHERE NOTED.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT (800) 257-7777 AT LEAST 72 HOURS PRIOR TO STARTING EXCAVATION.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
- THE CONTRACTOR SHALL USE EXTREME CAUTION DURING EXCAVATION AND/OR INSTALLATION OF ALL WORK SHOWN ON THESE PLANS. ALL UTILITIES SHALL BE FULLY PROTECTED FROM DAMAGE OR INTERRUPTION.
- WHERE TWO (2) FEET OF CLEARANCE CANNOT BE OBTAINED BETWEEN RIGS AND STRUCTURES, SAND BACKFILL SHALL BE PLACED AS DIRECTED BY THE ENGINEER IN THE FIELD.
- UNLESS OTHERWISE NOTED, THE BID LINE FOR EXCAVATION SHALL BE SUB-GRADE UNDER PROPOSED ROADS, ESTABLISHED GRADE UNDER TURF AREAS, AND EXISTING GRADE ALONG EXISTING PAVEMENT.
- FULL TRENCH COMPACTION IS REQUIRED FOR A MINIMUM DISTANCE OF 20 FEET ON EACH SIDE OF ALL CROSSINGS, WITHIN ALL EXISTING ROAD RIGHTS-OF-WAY, AND WHERE SHOWN ON THE PLANS.
- THE DEVELOPER SHALL PLACE ROADS TO SUB-GRADE FOR THE FULL WIDTH OF THE RIGHTS-OF-WAY BEFORE INSTALLATION OF UTILITIES.
- THE DEVELOPER SHALL ACCOMPLISH ALL GRADING WITHIN EASEMENT AREAS WHERE UTILITIES ARE TO BE INSTALLED BEFORE THE NOTICE TO PROCEED WILL BE ISSUED.
- ONLY BALTIMORE CITY PERSONNEL SHALL OPERATE EXISTING VALVES OR NEW VALVES AFTER THEY ARE PLACED IN SERVICE. THE CONTRACTOR SHALL NOTIFY THE BALTIMORE COUNTY INSPECTOR TO ARRANGE A SHUTDOWN WITH THE CITY AT LEAST TEN (10) DAYS PRIOR TO THE PROPOSED SHUTDOWN. IF THE INSPECTOR IN THE FIELD IS UNAVAILABLE, CALL THE BALTIMORE COUNTY AREA ENGINEER AT (410) 887-3531.
- MAIN IS TO HAVE FOUR (4) FEET OF COVER BASED ON THE ESTABLISHED GRADE UNLESS OTHERWISE NOTED.
- ALL METER SETTINGS SHALL BE PLACED AT LEAST FOUR (4) FEET BEHIND THE FLOWLINE OF THE CURB, OR PREFERABLY, PLACED IN THE CENTER OF THE SIDEWALK, IF MORE THAN FOUR (4) FEET.
- FIRE HYDRANTS SHALL BE PLACED TWO (2) FEET BEHIND THE FACE OF STANDARD CURB.
- THE CONTRACTOR SHALL EXTEND ALL HOUSE CONNECTIONS FIVE (5) FEET INSIDE OF THE PROPERTY LINE OR THE PUBLIC SIDEWALK AND DRAINAGE AND UTILITY EASEMENT LINE.
- THE CONTRACTOR FOR THE MAIN EXTENSION AND/OR METER INSTALLATION SHALL NOTIFY BALTIMORE CITY, BUREAU OF WATER AND WASTEWATER, (410) 396-1663, 72 HOURS BEFORE STARTING WORK.
- THE CONTRACTOR SHALL DISCHARGE THE CHLORINATED FLUSH WATER INTO A SANITARY SEWER. CONTACT THE BALTIMORE COUNTY DPWT, SEWER SECTION AT 410-887-3781 FOR THE DISCHARGE RATE.
- FEDERAL REGULATION REQUIRES DOCUMENTATION OF ANY DISCHARGE FROM THE SANITARY SEWER COLLECTION SYSTEM AND THE CAUSE OF THE DISCHARGE. TO MEET THESE REQUIREMENTS, THE DATE, RATE AND DURATION OF THE CHLORINATED WATER DISCHARGE SHALL BE DOCUMENTED BY THE CONTRACTOR AND/OR INSPECTOR. DOCUMENTATION WILL BE SUBMITTED TO THE SEWER DESIGN SECTION FOLLOWING THE COMPLETION OF ALL CHLORINATED WATER DISCHARGES.
- ALL DISCHARGES WILL BE RESTRICTED TO DRY WEATHER AND NOT LESS THAN 24 HOURS AFTER ANY RAIN EVENT.

ONE (1) BUSINESS DAY PRIOR TO DISCHARGE OF ANY CHLORINATED WATER TO THE SANITARY SEWER, THE CONTRACTOR SHALL NOTIFY THE SEWER DESIGN SECTION AT 410-887-3781 AND THE BUREAU OF UTILITIES AT 410-887-7415 OF THE EXACT LOCATION OF THE PLANNED DISCHARGE. THIS WILL ALLOW THE REMOVAL AT THEIR DISCRETION, OF ANY FLOW MONITORING EQUIPMENT LOCATED WITHIN THE SANITARY SEWER SYSTEM AND GIVE NOTICE IN THE EVENT OF ANY SEWER BACKUPS OR OVERFLOWS CAUSED BY SUCH DISCHARGES.

THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF THE EXISTING MAIN BEFORE LAYING ANY PIPE. THE METER SHALL BE SUPPLIED BY THE BALTIMORE CITY DEPARTMENT OF PUBLIC WORKS. THE METER MUST BE PREPAID AT THE BALTIMORE COUNTY DEPARTMENT OF PERMITS AND DEVELOPMENT MANAGEMENT PRIOR TO METER PICKUP. CALL 410-396-0170 FOR METER PICKUP, DELIVERY AND INSTALLATION. THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THE METER WILL BE PAID BY THE OWNER.

METERS DESIGNATED TO A SPECIFIC LOCATION OR ADDRESS SHALL NOT BE RELOCATED WITHOUT PERMISSION FROM THE BUREAU OF WATER AND WASTEWATER.

ALL TOPS OF MANHOLES, INLETS AND VALVES LOCATED WITHIN THE ROAD METAL SHALL BE BUILT TO AN ELEVATION 0.2' LOWER THAN PROPOSED FINAL GRADE. THE INTERM GRADE WILL BE ADJUSTED TO FINAL GRADE UNDER THE ROAD CURB.

CONTRACTOR SHALL ENSURE THAT THE EXISTING VALVE IS TIED BACK BEFORE REMOVING ANY PART OF AN EXISTING WATER LINE OR BUTTRESS.

THE CONTRACTOR SHALL INSTALL NON-DETECTABLE TAPE ON ALL RESTRAINED JOINT PIPE AND MARK THE RESTRAINED JOINTS MEETING THE FOLLOWING SPECIFICATIONS:

- 1) MATERIAL: NON-DETECTABLE TYPE, LOW DENSITY, VIRGIN GRADE POLYETHYLENE, ACID AND ALKALI RESISTANT.
- 2) MINIMUM TENSILE STRENGTH: 35 DYNES/CM, ASTM D2578
- 3) PRINTING: TWO LINES WITH MINIMUM 1 INCH HEIGHT IN LETTERS WITH "NO-DIG" SYMBOL FOLLOWING EACH CYCLE OF TEXT.
- 4) FOLLOWING REPEATED EVERY 20 TO 24 INCHES: CAUTION-RESTRAINED JOINT PIPE
- 5) COLORS:
 - a) TAPE: APWA RED
 - b) LETTERING: PERMANENT BLACK
 - c) ACCEPTABLE MANUFACTURERS:
 - i. EMPIRE MANUFACTURING CORPORATION, UTILITY PRODUCTS DIVISION, SHIELDED UNDERGROUND WARNING TAPE
 - ii. BLACKBURN MANUFACTURING CO., INC., NON-DETECTABLE UNDERGROUND UTILITY WARNING TAPE
 - iii. REEF INDUSTRIES, INC. TERRA TAPE STANDARD NON-DETECTABLE
 - iv. MUTUAL INDUSTRIES, NON-DETECTABLE UNDERGROUND MARKING TAPE
 - v. PRO-LINE SAFETY PRODUCTS (A DIVISION OF PRO-PAK IND., INC.) STANDARD NON-DETECTABLE, VI. OR EQUAL.

RESTRAINED JOINTS:

- 1) MARK RESTRAINED JOINTS AT CROWN WITH 2'-FOOT BY 4-INCH WIDE ORANGE PAINT STRIPE PERPENDICULAR TO AND CENTER ON JOINT.
- 2) INSTALL RESTRAINED JOINTS ON PIPE FOLLOWING BALTIMORE CITY STANDARD DETAILS AND MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
 - a) PLACE "RESTRAINED JOINT PIPE" TAPE DIRECTLY ON TOP OF PIPE WITH RESTRAINED JOINTS BEFORE BACKFILL OPERATIONS HAVE REACHED TOP OF PIPE. TAPE SHALL BE PROPERLY SECURED TO THE MAIN AND RUN ALONG COMPLETE LENGTH OF RESTRAINED SEGMENTS, EXTENDING A MINIMUM OF 12-INCHES ON EITHER SIDE.
 - b) SECURE "RESTRAINED JOINT PIPE" TAPE TO TOP OF PIPE EVERY 4'-FEET ALONG THE PIPE, AND ON EACH SIDE OF EACH FITTING, WRAPPING FULL CIRCUMFERENCE OF PIPE.
 - c) CONTINUE BACKFILL OPERATIONS FOLLOWING SPECIFICATIONS AND AVOID DISPLACEMENT OF WARNING TAPE.

PRESSURE REDUCING VALVE IF NEEDED, IS REQUIRED TO BE INSTALLED ON THE CUSTOMER SIDE OF THE WATER MAIN SERVICE.

THIS DESIGN AND DRAWING ARE BASED ON THE MARYLAND COORDINATE SYSTEM, HORIZONTAL: NAD 83/2011, VERTICAL: NAVD 83

REFERENCE DRAWINGS

- EX WATER - DWG. NO. 25-973
- EX SANITARY - DWG. NO. 25-095
- EX SANITARY - DWG. NO. 2014-2728
- EX DRAIN - DWG. NO. 25-220
- EX ROAD - DWG. NO. 25-044
- PROP. SEWER - DWG. NO. 2023-2766
- DA & FLOW TABULATION - DWG. NO. 2016-3238
- PROP. STORM DRAIN - DWG. NO. 2016-3239
- PROP. ROAD - DWG. NO. 2016-3240

CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only):	

SHEET DESIGNATION	CONTRACT NUMBER
WATER	23030-JAO
	JOB ORDER NUMBER
	210-203-5945
	SHEET 1 OF 1
	DRAWING NUMBER
	2016-3237
	FILE NO.: 3

CITY OF BALTIMORE		REVISION - CITY OF BALTIMORE	
CHIEF, UTILITIES ENGINEERING SECTION	DATE	CHIEF, OFFICE OF ENGINEERING AND CONSTRUCTION	DATE
DEPARTMENT OF PUBLIC WORKS	DATE	CHIEF, UTILITIES ENGINEERING SECTION	DATE
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. 14033, EXPIRATION DATE 2028		REVISION BY: <u>Wishnukebetari</u> DATE: <u>9/25/24</u> P.W.A. NO.: <u>ERM</u> KEY SHEET POSITION: <u>1 OF 22</u> DRAWING SCALE: <u>1" = 20'</u> DPW AND TRANSPORTATION APPROVED BY: <u>[Signature]</u> DATE: <u>9-25-2024</u>	
CONTRACT COMPLETION BOX DESIGN BY: <u>ERM</u> DRAWN BY: <u>KW</u> CHECKED BY: <u>ERM</u> REVIEWED BY: <u>[Signature]</u> DATE REVIEWED: <u>9/25/24</u>		DRAWING SCALE PLAN SCALE: <u>1" = 20'</u> PROFILE SCALE: <u>VERT 1" = 5'</u> <u>HOR 1" = 20'</u>	
ENGINEER ROBERT WESLEY BOWLING kwb@delaware.com AS-BUILT PER RECORD PRINT DATE: <u>8/28/24</u>		CONTRACT COMPLETION BOX BUREAU OF ENGINEERING AND CONSTRUCTION HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER	

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

WATER

6" & 8" WATER AND WATER HOUSE CONNECTIONS

380'± NORTHWEST OF DORCHESTER AVE., TO 560'± NORTHWESTERLY

SUBDIVISION: CATONSVILLE MANOR, BLOCK G, LOTS 13 - 24

ELECTION DIST. NO.: 1C1