BENCHMARK INFORMATION

B.M. #1 HOWARD COUNTY GEODETIC SURVEY CONTROL 36BA - HORIZONTAL - (NAD '83) LOCATED 1.5' SOUTH OF THE ASPHALT WALKWAY, NORTH OF BASEBALL BACKSTOP AT OAKLAND MILLS HIGH SCHOOL NORTHING 562 135 536 EASTING 1,357,571.674

ELEVATION = 416.772 - VERTICAL - (NAVD '88)

HOWARD COUNTY GEODETIC SURVEY CONTROL 36BB - HORIZONTAL - (NAD '83) LOCATED 4.5' WEST OF SANTIAGO ROAD, BETWEEN OAKLAND MILLS INTERFAITH CENTER AND OAKLAND MILLS HIGH SCHOOL ATHLETIC FIELDS. NORTHING 561,504.228 EASTING 1.356.203.715

ELEVATION = 409.248 - VERTICAL - (NAVD '88)

565,300 N 565,300 WINDSTREAM TALBOTT SPRINGS ELEMENTARY SCHOOL VILLAGE OF OAKLAND MILLS WATER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND CONTRACT NO. 44-5111-D CORNSILK CT. TIMESWEEP LA. - RIVERARK RD. PATUXENT READER LA. HOWARD COUNTY CONTROL STATION #36BA 561,300 ¥ 561.300 HOWARD COUNTY CONTROL STATION #36BB WATER ZONE: WATER TEST GRADIENT: WATER TEST PRESSURE: 106 psi ADC MAP: 33 BLOCK: C1 NEW ELEMENTARY SCHOOL LOCATION MAP TYPE OF BUILDING: PLAN REFERENCE NUMBERS: NUMBER OF PARCELS: NO. OF WATER HOUSE CONNECTIONS: _ SDP-20-051 & SDP-00-011 SEWER SHED: __ LITTLE PATUXENT RECLAMATION PLANT TREATMENT PLANT: SAVAGE, MARYLAND

DEVELOPER'S CERTIFICATION

" I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

5.27.2020

ENGINEER'S CERTIFICATION

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

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV: STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE SITE DEVELOPMENT PLAN,

5DP-96-18 (REDLINE).

5.27.2020

5DP-00-011 (REDLINE)

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

LEGEND SYMBOL DESCRIPTION EX. WATER MAIN EX. SEWER MAIN EX. SEWER MANHOLE EX. SEWER, WATER & UTILITY EASEMENT EX. FIRE HYDRANT DXQ EX. VALVE 0 PROP. WATER MAIN PROP. SEWER MAIN PROP. SEWER MANHOLE PROP. SEWER, WATER & UTILITY EASEMENT ---- PROP. WHO PROP. 5HC PROP. FIRE HYDRAN PROP. VALVE

CONTRACT NO. 44-5111-D TALBOTT SPRINGS ELEMENTARY SCHOOL

WATER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

OWNER / DEVELOPER HOWARD COUNTY PUBLIC SCHOOL SYSTEM 9020 MENDENHALL COURT

COLUMBIA, MARYLAND 21045 410-313-6805

Affn: MR. DAN LUBELEY

ACTING DIRECTOR, SCHOOL

PLANNING & CONSTRUCTION

WATER MAIN EXTENSIONS TITLE SHEET

600' SCALE MAP NO. ___36____ BLOCK NO. ___3_ F.C.C. WORK ORDER NO. 03007-5001 WATER MAIN EXTENSION PLAN FILE NAME

1. 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.

. HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '03/91' AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 36BA & NO. 36BB. ALL VERTICAL CONTROLS ARE BASED ON NAVD '86. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS

TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT APRIL, 2010 BY FISHER, COLLINS & CARTER, INC

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 BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF THE 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

6. 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 SITE.

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 JTILITIES 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. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE

> . .410-795-1390

9 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. 10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL

11. 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 10.114(a) OF THE HOWARD

STARTING WORK SHOWN ON THESE PLANS:

PART B: WATER MAIN GENERAL NOTES

1. ALL WATER MAINS SHALL BE AWWA C900 PVC; DR-18. 2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.

3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.

4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH 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 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 D.I.P. AND PVC WATER MAINS IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL.

8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 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 HE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.

9. 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 HARNESSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH

PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.

10. PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL

THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.

11. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION(HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20 FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL OF 3-DEGREES (1 1-DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWAY C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTEED PVC HIGH DEFLECTION (HD)

FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR-10 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR-10 OR EQUAL.

12. WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSERT DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

TALBOTT SPRINGS

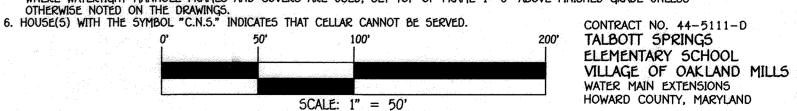
ELEMENTARY SCHOOL

13. TO ACCOMMODATE A SPRINKLER SYSTEM, ALL RESIDENTIAL DWELLING UNITS SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE METER SETTING; STD. DET. W-3.28.

PART C: SEWER MAIN GENERAL NOTES

1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED. 2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.

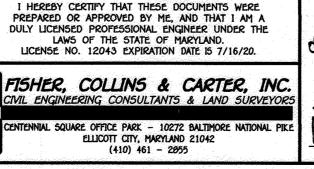
3. FORCE MAINS SHALL BE D.I.P. ONLY.
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52.
WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS

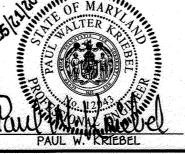


DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G.





DESIGNED BY J.N.G. DRAWN BY J.N.G. CHECKED BY P.W.K. WRA AS BUILT "QUANTITIES"

REVISION

VILLAGE OF OAKLAND MILLS WATER MAIN EXTENSIONS CONTRACT NO. 44-5111-D SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE A5 SHOWN

SHEET 1 of 5

I:\2003\03007\Engineering\Dwgs\Sewer & Water Contract No 14-5111-D\Finals\03007 final sewer & water contract plan.dwg, Final Layout Plan Sheet 2, 1:1

8" WATER MAIN #1

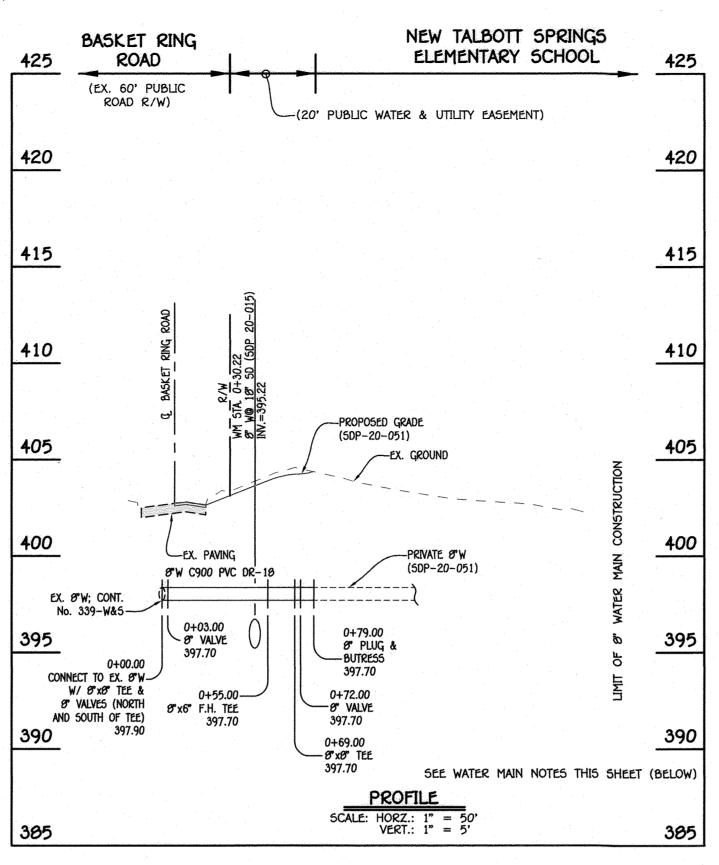
| WATER MAIN TABULATION CHART | | | | | | |
|-----------------------------|-------------------------------------|-------------------------|--------------|--|--|--|
| W.M. STA. | APPURTENANCE | NORTHING | EASTING | | | |
| 8" WATER MAIN #1 | | | | | | |
| 0+00.00 | 12" x 8" TAPPING SLEEVE | 562,991.33 | 1,356,481.46 | | | |
| 0+03.00 | 8" TAPPING VALVE | 562,994.33 | 1,356,481.46 | | | |
| 0+12.90 | 3° DEFLECTION COUPLING (VERT. DOWN) | 563,004.24 | 1,356,481.42 | | | |
| 0+22.90 | 8" x 6" F.H. TEE | 563,014.23 | 1,356,401.37 | | | |
| 1+57.05 | 3° DEFLECTION COUPLING (VERT. UP) | 563,149.18 | 1,356,480.83 | | | |
| 2+97.53 | 1/8 H.B. | 563,288.86 | 1,356,480.26 | | | |
| 3+10.02 | 3° DEFLECTION COUPLING (VERT. UP) | 563,297.32 | 1,356,489.46 | | | |
| 3+13.02 | 8" x 6" F.H. TEE | 563,302.06 | 1,356,494.61 | | | |
| 3+19.02 | 8" VALVE | 563,306.13 1,356,499.03 | | | | |
| 3+23.02 | 8" CAP & BUTTESS | 563,308.84 | 1,356,501.97 | | | |

WATER MAIN NOTES:

1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18. 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE

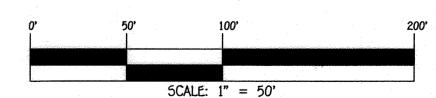
INSTALLATION. 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.

4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.



8" WATER MAIN #2

| WATER MAIN TABULATION CHART | | | | | | |
|-----------------------------|-----------------------|------------|--------------|--|--|--|
| W.M. STA. | APPURTENANCE NORTHING | | easting | | | |
| 8" WATER MAIN #2 | | | | | | |
| 0+00.00 | 8" x8" TEE | 563,030.78 | 1,356,097.47 | | | |
| 0+00.00 O/5 3' LT | 8" VALVE | 563,033.60 | 1,356,096.67 | | | |
| 0+00.00 O/5 3' RT | 8" VALVE | 563,027.96 | 1,356,098.49 | | | |
| 0+03.00 | 8" VALVE | 563,031.68 | 1,356,100.33 | | | |
| 0+55.00 | 8"x6" F.H. TEE | 563,047.34 | 1,356,149.92 | | | |
| 0+69.00 8" x8" TEE | | 563,051.55 | 1,356,163.27 | | | |
| 0+72.00 8° VALVE | | 563,054.41 | 1,356,162.36 | | | |
| 0+79.00 | 8" PLUG & BUTTRESS | 563.061.09 | 1.356.160.26 | | | |



CONTRACT NO. 44-5111-D TALBOTT SPRINGS ELEMENTARY SCHOOL VILLAGE OF OAKLAND MILLS WATER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

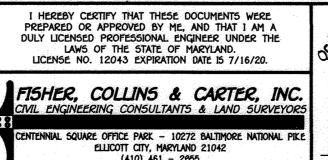
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

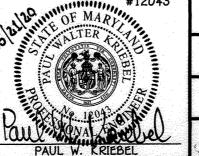
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION N.G.

6. 8. 20





| DESIGNED BY : | | | | | |
|----------------------|----|-----|----------|------|---------------------------------------|
| J.N.G. | | | | | WATER MAIN EXTENSIONS |
| DRAWN BY : J.N.G. | | | | | PROFILES, CHARTS & NOTES |
| CHECKED BY : | | | | | |
| P.W.K. | | | | | 600° SCALE MAP NO36 BLOCK NO3 |
| DATE : | | | | | F.C.C. WORK ORDER NO. 03007-5001 |
| MAY, 2020 | BY | NO. | REVISION | DATE | FILE NAME : WATER MAIN EXTENSION PLAN |

TALBOTT SPRINGS ELEMENTARY SCHOOL VILLAGE OF OAKLAND MILLS WATER MAIN EXTENSIONS CONTRACT NO. 44-5111-D SIXTH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE SHOWN SHEET

3 of 5

\2003\03007\Engineering\Dwgs\Sewer & Water Contract No 14-5111-D\Finals\03007 final sewer & water contract plan.dwg, Ex. Conditions Sheet 4, 1∷

