

QUANTITIES

| ITEMS | QUANTITIES ESTIMATED | AS-BUILT | | |
|-----------------------|----------------------|------------|--------------|-----------------|
| | | QUANTITIES | TYPE | MANUF./SUPPLIER |
| 8" DIP CLASS 54 WATER | 393 LF | 404 * | DIP CLASS 54 | US PIPE |
| 6" FIRE HYDRANT | 1 EA | 1 EA | MUELLER | |
| 6" WHC | 10 LF | 90 LF | DIP CLASS 54 | US PIPE |

* TIE IN TO EXISTING WHC HAS NOT BEEN MADE. COMCAST NEED TO MOVE 10.0' +/- L.F./6" DIP REMAINS LINE HAS NOT BEEN CHLORINATED 5/7/18 MARK HANSON

NAME OF UTILITY CONTRACTOR: DIVERSIFIED
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

| WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE | | | |
|--|------------------|----------------------|----------------------|
| LOT | ADDRESS | LOCATION DIMENSION 1 | LOCATION DIMENSION 2 |
| E-4 | 9000 MAIER PLACE | | |

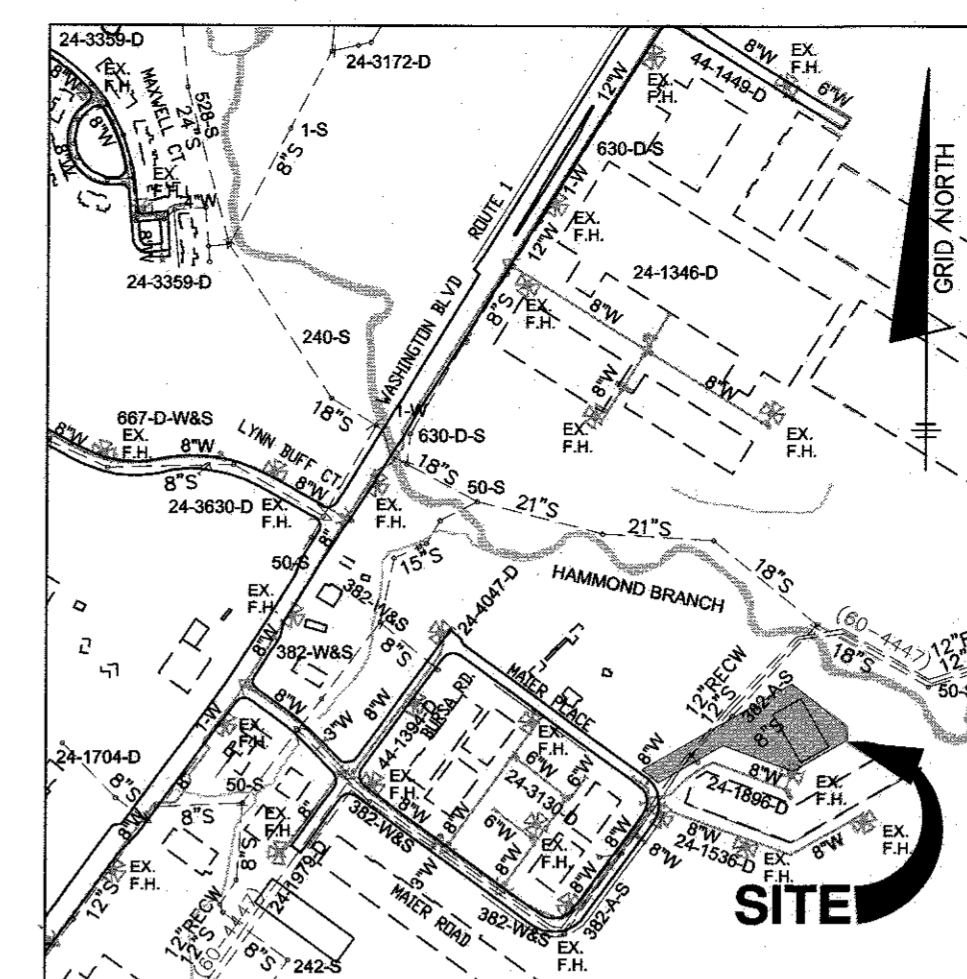
| WATER APPURTENANCE SCHEDULE | | | | |
|-----------------------------|----------------------------------|-------------------|-------------|--------------|
| POINT | APPURTENANCE | WATERLINE STATION | NORTHING | EASTING |
| A | 1/16 HORIZONTAL BEND | 0+28 | 529551.4206 | 1362830.4387 |
| B | 1/8 HORIZONTAL BEND | 2+28.88 | 529646.0781 | 1363007.6152 |
| C | 8" X 6" FHT | 3+80.38 | 529593.2080 | 1363149.5885 |
| D | 3" PLUG AND BUTTRESS 6" X 6" TEE | 3+92.84 | 529588.8996 | 1363161.2652 |
| E | 8" PLUG AND BUTTRESS | 4+04 | | |

FINAL WATER CONSTRUCTION PLAN

EMILIA'S ACROBATICS & CHEERLEADING

PROPOSED GYM/SCHOOL

9000 MAIER PLACE
LAUREL, MD 27023
HOWARD COUNTY
MAIER INDUSTRIAL PARK, PARCEL E-4
PLAT 8439
CONTRACT 44-4986-D



ADC MAP: 40, GRID: F7
SCALE: 1" = 600'

| TYPE OF BUILDING: | IND. |
|-------------------|---------------------|
| NUMBER OF WHC'S: | 1 |
| NUMBER OF SHC'S: | 1 |
| DRAINAGE AREA: | DORSEY RUN |
| TREATMENT PLANT: | LITTLE PATUXENT WRP |
| WATER ZONE: | 400 |
| TEST GRADE: | 550 |

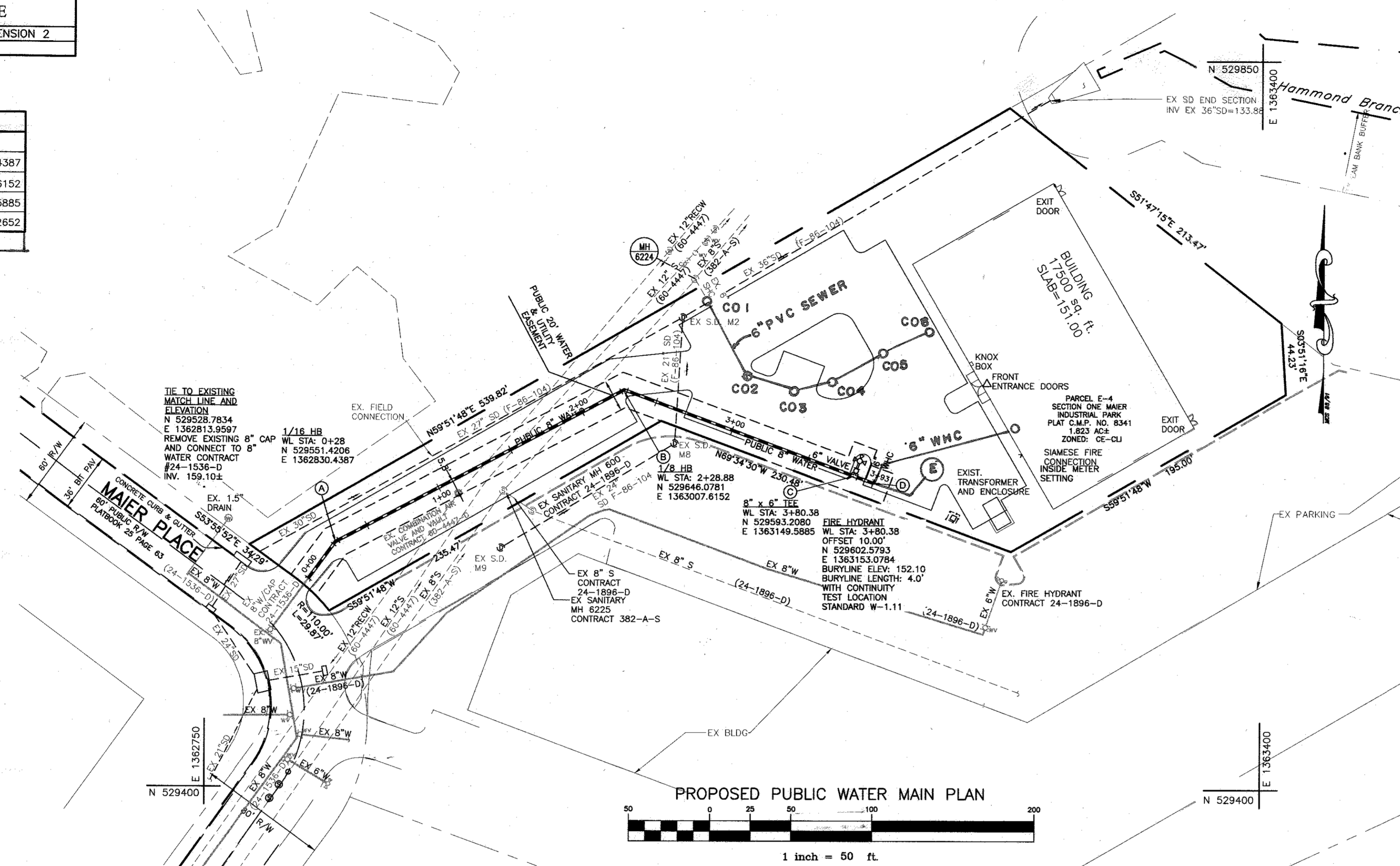
FILE REFERENCES: ECP-15-045, SDP-15-059

GENERAL NOTES

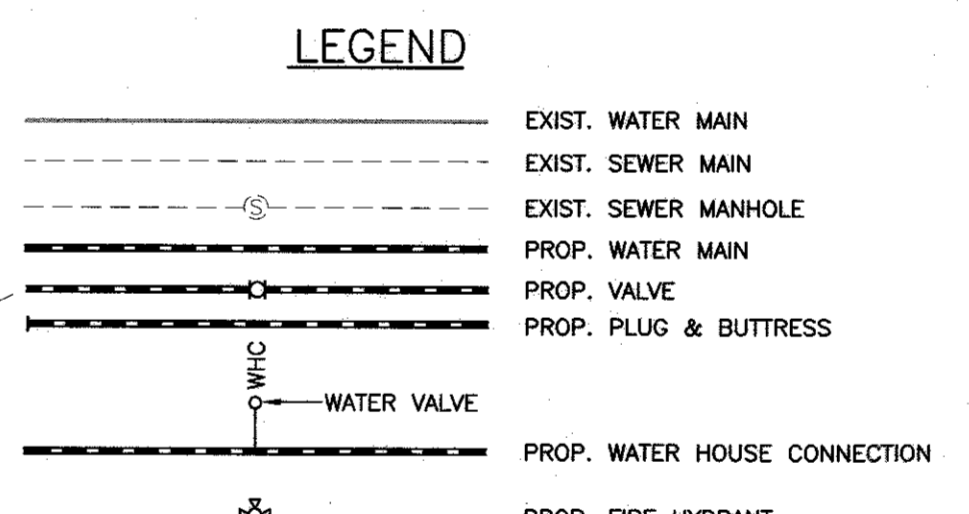
- PART I**
- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN SEPTEMBER, 2015 BY BENCHMARK ENGINEERING, INC.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 43EB AND NO. 43EC.
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 43EC AND 43EB.
 - 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 TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE 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 AT THE LOCATIONS OF THE TEST PITS. A NOTE ON UTILITIES 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 MADE 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).....410-637-8713
BGE (EMERGENCY).....410-637-8713
BUREAU OF UTILITIES.....410-313-4900
COLUMBIA PIPELINE CO.....410-789-1390
MISS UTILITY.....1-800-257-7777
STATE HIGHWAY ADMINISTRATION.....410-531-5533
VERIZON.....1-800-743-0033
 - 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 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/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(c) OF THE HOWARD COUNTY CODE.

PART II WATER

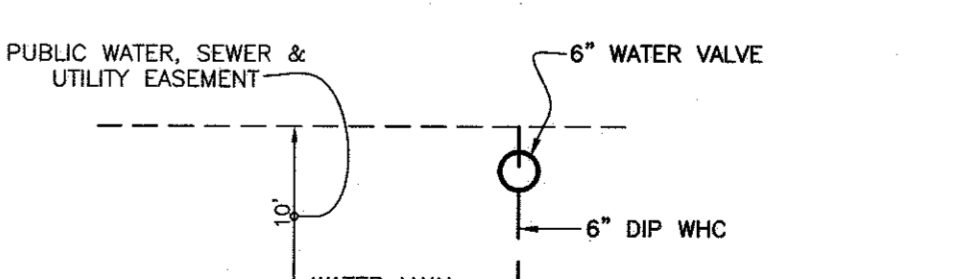
- ALL WATER MAINS TO BE CLASS 54 DIP UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS 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 THE 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 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED TO THE ENGINEER 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 SUPPLIES TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS 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, SEVENTEEN (17) INCLUDING RESTRAINTS AND HARNESSES, TWELVE (12) POUND 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.
- 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 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.
- ALL CHANGES IN HORIZONTAL AND 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 DEFLECTED PVC PIPE JOINTS IS PERMITTED, WHEN 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. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTATION EQUIPMENT DIRECTLY OVER THE FITTING.
- PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2 DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900. ALL SHALL HAVE A MINIMUM LENGTH OF 3-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
- 5-DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (PEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SHIMS OR PLUG 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.



AS-BUILT



NOTE:
ALL WATER HOUSE CONNECTIONS ARE TO BE 6" WITH AN INSIDE METER SETTING.
ALL SEWER HOUSE CONNECTIONS SHALL BE 6" PVC.
BUILDING HAS NO CELLAR.



NOTE:
SEE HO. CO. STD. DETAIL W-3.28 FOR SINGLE OUTSIDE METER SETTING

OWNER/DEVELOPER:
EMILIA ACROBATICS & CHEERLEADING
TRAINING CENTER, INC.
2721 MOORE'S VALLEY DR.
BALTIMORE, MD 21209
PHONE: 410-381-7565

| Lot Frontage Chart | |
|--------------------|-----------------|
| Lot Number | Distance (feet) |
| E-4 | 64.16 |

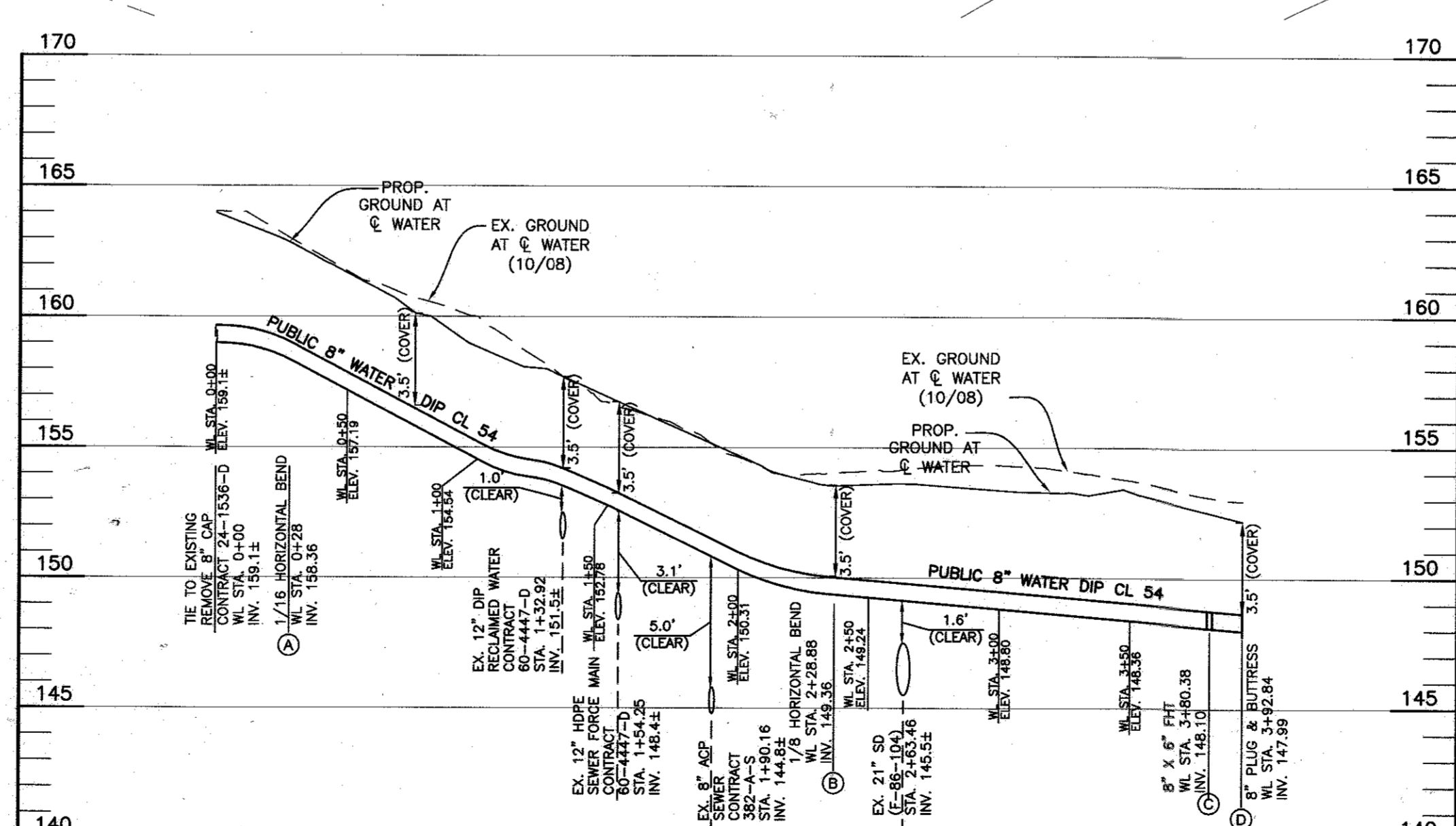
NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

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

John A. Blanton 1/31/17
HOWARD SOIL CONSERVATION DISTRICT

SEDITION CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 508 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER SDP-15-059.

| EMILIA'S 44-4986-D | | | | |
|-----------------------|----------|----------|----------|---------|
| LOT NO. | FROM | TO | DISTANCE | REMARKS |
| 6" FHV | NEW FH | 6" VALVE | 8.0' | FHV |
| EX. BGE TRANS | 6" VALVE | 65.8' | FHV | |
| 6" WHC-V | NEW FH | 6" VALVE | 13.5' | WHC V |
| EX. BGE TRANS | 6" VALVE | 53.5' | WHC V | |
| 6" WHC | EX. FH | STUB UP | 96.0' | 6" WHC |
| NEW FH | STUB UP | 96.0' | 6" WHC | |
| SHC CO 1 | MH6224 | CO1 | 9.5' | 6" SHC |
| EX. SD MH-M2 | CO1 | 20.5' | 6" SHC | |
| EX. SD MH-M2 | CO2 | 86.5' | 6" SHC | |
| NEW FH | CO2 | 62.0' | 6" SHC | |
| SHC CO3 | NEW FH | CO3 | 31.0' | 6" SHC |
| NEW FH | CO3 | 35.0' | 6" SHC | |
| SHC CO4 | NEW FH | CO4 | 29.0' | 6" SHC |
| NEW FH | CO4 | 35.5' | 6" SHC | |
| SHC CO5 | NEW FH | CO5 | 38.5' | 6" SHC |
| WHC-VALVE | CO5 | 66.5' | 6" SHC | |
| NEW FH | CO6 | 92.5' | 6" SHC | |
| WHC-VALVE | CO6 | 96.5' | 6" SHC | |



PROFILE
SCALE: 1"=50' HORIZ., 1"=5' VERT.

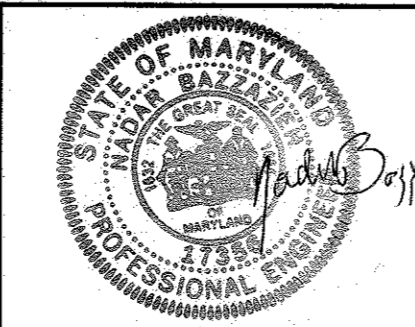
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John A. Blanton 1/31/17
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

John A. Blanton 1/31/17
CHIEF, DEVELOPMENT ENGINEERING DIVISION

ENVIRODESIGN, INC
Civil-Environmental Engineering Services
5228 Pine Bark Ct, Columbia, MD 21045
Phone: 301-509-3803
www.civil-environmental.com



| DES: | NB | DATE: | 10/2016 |
|------------|----|-------|---------|
| DRAFT: | | BY: | |
| CHK: | NB | NO. | |
| REVISIONS: | | DATE: | |

FINAL WATER CONSTRUCTION PLAN
COVER SHEET, PROFILE AND PLAN

600 SCALE MAP #22
BLOCK: 067

EMILIA'S ACROBATICS & CHEERLEADING
PROPOSED GYM/SCHOOL
MAIER INDUSTRIAL PARK, PARCEL E-4
TAX MAP: 47 - GRID: 23 - PARCEL: 873 - ZONED: CE-CU - ELECTION DISTRICT 6
CONTRACT NO. 44-4986-D

SCALE: AS SHOWN
SHEET NO. 1 OF 1