

VALLEY MEDE SECTION 13 AREA 2 WATER MAIN RELOCATION CAPITAL PROJECT NO. D-1175/W8602 CONTRACT NO. 24-1412-D-ADD 1 HOWARD COUNTY, MARYLAND

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS FOR CAPITAL PROJECT NO. D-1175, MICHAELS WAY DRAINAGE IMPROVEMENTS, WERE PERFORMED ON 01/27/2020 BY KCI TECHNOLOGIES, 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 POINTS 24B5, 0066 AND 17GB. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
- 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 REQUIRED. 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.
- ALL EXISTING UTILITIES SHALL BE TEST PITTED / LOCATED AS NECESSARY AND IN ADVANCE OF THE PROPOSED CONSTRUCTION. IN ORDER TO PROPERLY MAKE ALL REQUIRED UTILITY CROSSINGS AND / OR CONNECTIONS. ANY DISCREPANCIES OR UTILITY CONFLICTS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT SHOWN ON DRAINAGE DESIGN PLANS (CAPITAL PROJECT NO. D-1175). A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS OR IN THE SPECIFICATIONS. LOCATIONS OF OTHER EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN NOTED SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- 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 |
| BG&E (CONSTRUCTION SERVICES)..... | 410-637-8713 |
| BG&E (EMERGENCY)..... | 410-985-0123 |
| BUREAU OF UTILITIES (DPW)..... | 410-313-4900 |
| COLONIAL PIPELINE CO..... | 410-795-1390 |
| MISS UTILITY..... | 1-800-257-7777 |
| STATE HIGHWAY ADMINISTRATION..... | 410-531-5533 |
| VERIZON..... | 1-800-743-0033 / 410-224-9210 |
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE ONSTRUCTION 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 ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

WATER NOTES

- 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 WIRES AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER BYPASS AS REQUIRED TO PERFORM THE WORK.
- REFER TO DRAINAGE DESIGN DRAWINGS (CAPITAL PROJECT NO. D-1175) FOR TRAFFIC CONTROL.
- THE CONTRACTOR SHALL NOTIFY ALL IMPACTED CUSTOMERS A MINIMUM OF 48 HOURS IN ADVANCE OF THE SCHEDULED SHUTDOWN PER HOWARD COUNTY STANDARD SPECIFICATION 1002.06 (c).



VICINITY MAP

SCALE: 1" = 600'

DRAINAGE AREA: LITTLE PATUXENT

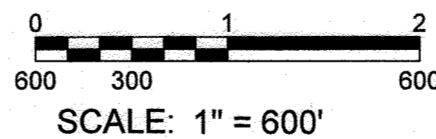
PRESSURE ZONE: 630
WATER TEST GRADIENT: 522 ft
WATER TEST PRESSURE: 227 psi

CONTROL NOTE

THE HORIZONTAL AND VERTICAL DATUM SHOWN HEREON ARE BASED ON THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS

| | | |
|-------------------------|-------------------|-------------------|
| NAD83/1991 (HORIZONTAL) | | |
| NAVD 88 (VERTICAL) | | |
| 24B5 N 586956.251 | 0066 N 587380.489 | 17GB N 592656.774 |
| E 1356570.850 | E 1352603.505 | E 1353019.981 |
| ELEV. 390.173 | ELEV. 386.512 | ELEV. 441.515 |

GRAPHIC SCALE



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. 45808, Expiration Date 06/03/2024.

| INDEX OF SHEETS | |
|-----------------|------------------------------|
| SHEET NO. | DESCRIPTION |
| 1 | TITLE SHEET |
| 2 | PLAN WATER & SEWER MAINS |
| 3 | PROFILES WATER & SEWER MAINS |

BILL OF MATERIALS

| ITEM | UNIT | ESTIMATE | AS-BUILT | MANUFACTURER |
|-----------------------------------------------------------------|---------------|----------|----------|--------------|
| NAME OF UTILITY CONTRACTOR: <u>W.F. WILSON & SONS, INC.</u> | | | | |
| 8" CL 54 DIP PIPE | L.F. | 56 | 56 | U.S. PIPE |
| 8" DIP SOLID SLEEVE | EA. | 2 | 2 | STAR PIPE |
| IN-LINE THRUST BLOCK | EA. | 2 | 2 | W.F. WILSON |
| | CHECKBOX | | | 10/12/2023 |
| | AS-BUILT DATE | | | |
| SURVEY AND DRAFTING DIVISION | | | | |



PURPOSE STATEMENT:

THE PURPOSE OF THIS PROJECT IS TO RELOCATE THE EXISTING 8" WATER MAIN ALONG MICHAELS WAY TO RESOLVE CONFLICTS WITH THE STORM DRAINS IN THE MICHAELS WAY DRAINAGE IMPROVEMENTS PROJECT.

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications. JORDAN RANG, PE LICENSE NO. 45808 10/12/2023

OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO THE BEGINNING OF THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Jordan Rang 6/21/2022
OWNERS / DEVELOPERS SIGNATURE DATE

Jordan Rang 6-8-2022
DESIGNERS SIGNATURE DATE

Santay Kulkarni, Project Manager
PRINTED NAME & TITLE

AS-BUILT
DATE 10/12/2023

NOTE:

SOIL EROSION AND SEDIMENT CONTROL WORK FOR WATER RELOCATIONS TO BE INCLUDED IN THE DRAINAGE COVERED UNDER HOWARD SOIL CONSERVATION DISTRICT PERMIT NUMBER EP-20-16

KCI TECHNOLOGIES PROJECT NO.: 17105999.062

MD 07/07/2023 10:25:00 User: jordanrang.mde Registration: 17105999.062 11/10/23 04:01 Title: dwg

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 6-23-22
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 6-24-22
CHIEF, BUREAU OF UTILITIES DATE

[Signature] 6-23-22
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 6-21-22
CHIEF, UTILITY DESIGN DIVISION DATE

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

KCI
TECHNOLOGIES

936 Rotenbark Road
Suite 201
Spartanburg, MD 21152
Phone: (410) 316-7800
Fax: (410) 316-7817
www.kci.com



| | | | |
|---------------------|-----|-----------|----------|
| DES: KJ | KFJ | AS-BUILTS | 10/12/23 |
| DRN: KJ | | | |
| CHK: KL | | | |
| DATE: Jun. 07, 2022 | BY | NO. | REVISION |

| | |
|------------------------------|---------------------|
| TITLE SHEET | |
| 600' SCALE MAP NO. <u>17</u> | BLOCK NO. <u>21</u> |

VALLEY MEDE
SECTION 13 AREA 2
CAPITAL PROJECT No. D-1175/W8602
CONTRACT No. 24-1412-D-ADD 1

ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 3

BENCH MARKS

B.M. #100 (P.U.) ELEV 331.27
 DIM OF EXISTING SAND M# 3400

△ SUGGESTED SEQUENCE OF CONSTRUCTION:

1. PROVIDE TEMPORARY WATER ALONG MICHAELS WAY FROM THE INTERSECTION OF LARCHMEDE COURT AND MICHAELS WAY TO THE INTERSECTION OF LONGVIEW DRIVE AND MICHAELS WAY.
2. CLOSE 8" VALVE (EAST) LOCATED AT INTERSECTION OF LONGVIEW DRIVE AND MICHAELS WAY. CLOSE 8" VALVE LOCATED AT THE INTERSECTION OF LARCHMEDE COURT AND MICHAELS WAY (WEST).
3. INSTALL NEW THRUST BLOCK ON EXISTING MAIN ALONG MICHAELS WAY AS SHOWN ON THIS SHEET.
4. REPLACE EXISTING 8" WATER MAIN AND INSTALL NEW THRUST BLOCK ON NEW WATER MAIN AS SHOWN ON THIS SHEET.
5. OPEN VALVES AND RESTORE AREA.

△ CATHODIC PROTECTION NOTES:

1. THE CONTRACTOR SHALL INSTALL (1) 20lb PREPACKAGED HIGH POTENTIAL MAGNESIUM ANODE ON EACH FITTING PER HOWARD COUNTY STANDARD DETAIL C-5.04.
2. EACH FITTING SHALL BE BONDED TO THE NEW DUCTILE IRON PIPE. SEE HOWARD COUNTY STANDARD DETAIL C-3.01.

SEWER HOUSE CONNECTION INVERT ELEVATIONS AT PROPERTY LINE

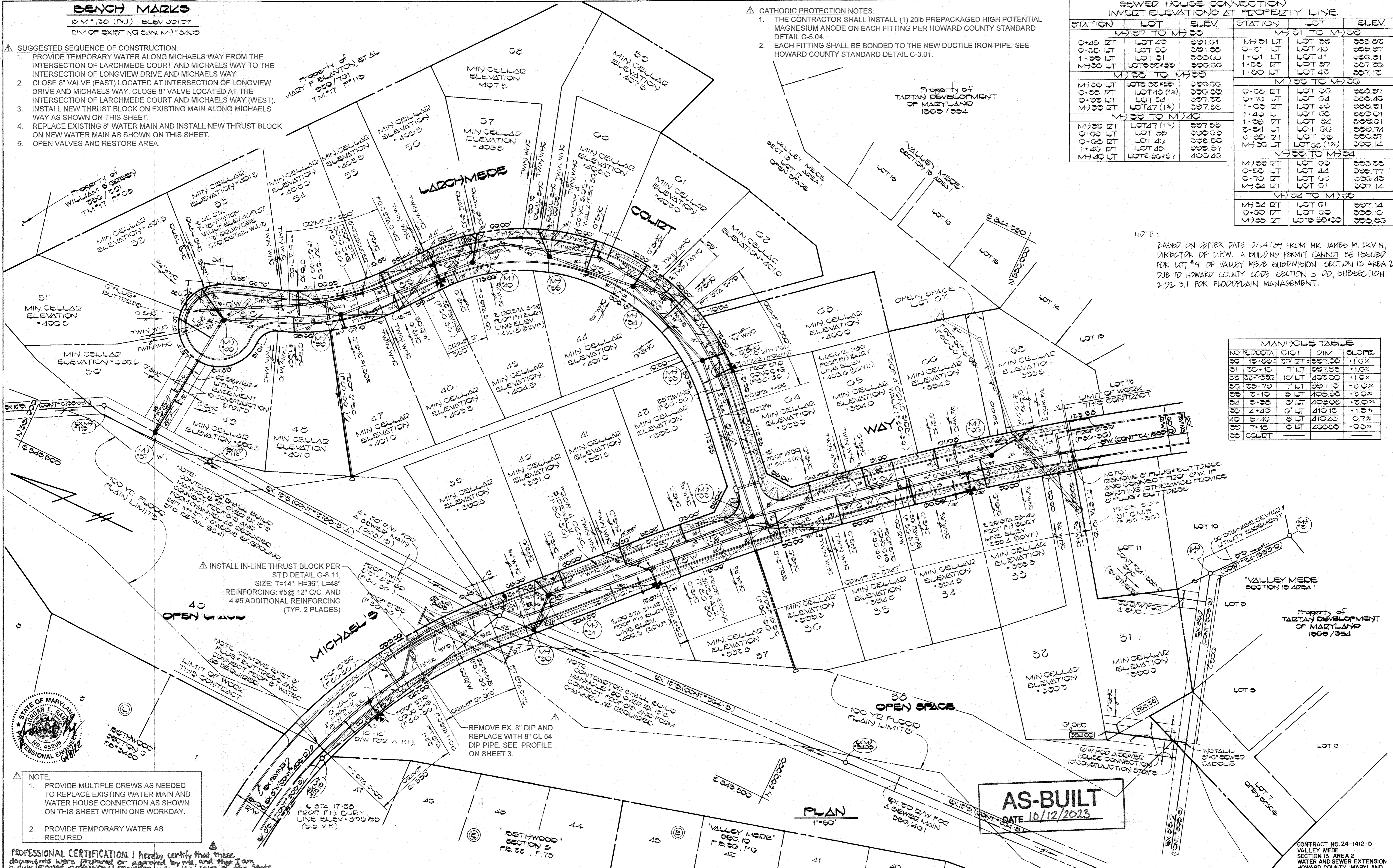
| STATION | LOT | ELEV. | STATION | LOT | ELEV. |
|----------------|-------------|--------|----------------|--------|--------|
| M# 37 TO M# 38 | | | | | |
| 0+45 LT | LOT 49 | 331.61 | M# 31 LT | LOT 39 | 335.00 |
| 0+55 LT | LOT 50 | 331.30 | 0+21 LT | LOT 41 | 335.07 |
| 1+00 LT | LOT 51 | 330.00 | 1+01 LT | LOT 40 | 335.31 |
| M# 38 LT | LOTS 33-35 | 330.00 | 1+00 LT | LOT 37 | 337.30 |
| M# 38 TO M# 39 | | | | | |
| M# 38 LT | LOTS 33-35 | 330.00 | M# 36 TO M# 37 | | |
| 0+00 LT | LOT 40 (1%) | 330.00 | 0+00 LT | LOT 35 | 335.37 |
| 0+00 LT | LOT 54 | 330.75 | 0+70 LT | LOT 34 | 335.40 |
| M# 39 LT | LOT 47 (1%) | 330.75 | 1+00 LT | LOT 36 | 335.01 |
| M# 39 TO M# 40 | | | | | |
| M# 39 LT | LOT 47 (1%) | 330.75 | 1+40 LT | LOT 35 | 335.01 |
| 0+00 LT | LOT 46 | 330.50 | 2+00 LT | LOT 34 | 335.01 |
| 1+40 LT | LOT 45 | 330.57 | 2+00 LT | LOT 33 | 335.74 |
| M# 40 LT | LOT 33-37 | 400.40 | M# 36 LT | LOT 33 | 335.07 |
| M# 36 TO M# 34 | | | | | |
| M# 36 LT | LOT 35 | 335.30 | 0+00 LT | LOT 44 | 335.77 |
| 0+00 LT | LOT 44 | 335.77 | 0+70 LT | LOT 35 | 335.43 |
| 0+70 LT | LOT 35 | 335.43 | M# 34 LT | LOT 31 | 337.14 |
| M# 34 LT | LOT 31 | 337.14 | M# 34 TO M# 33 | | |
| 0+00 LT | LOT 31 | 337.14 | M# 34 LT | LOT 31 | 337.14 |
| M# 33 LT | LOTS 33-35 | 330.00 | | | |

NOTE:

BASED ON LETTER DATE 3/14/24 FROM MR. JAMES M. IKVIN, DIRECTOR OF DPW. A BUILDING PERMIT CANNOT BE ISSUED FOR LOT #9 OF VALLEY MEDE SUBDIVISION SECTION 13 AREA 2 DUE TO HOWARD COUNTY CODE SECTION 5.100, SUBSECTION 502.2.1 FOR FLOODPLAIN MANAGEMENT.

MANHOLE TABLE

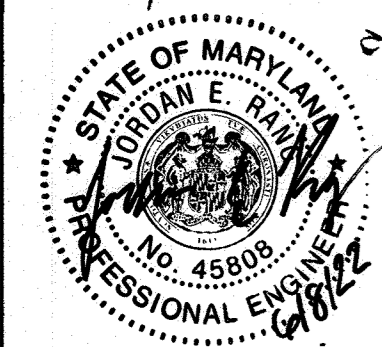
| NO. | ELEV. | DIST. | DIM. | SLOPE |
|-----|-------|--------|-----------|-------|
| 30 | 19+00 | 20' LT | 30" x 30" | +1.0% |
| 31 | 30+15 | 7' LT | 30" x 30" | +1.0% |
| 32 | 32+30 | 10' LT | 48" x 60" | +1.0% |
| 33 | 35+70 | 7' LT | 30" x 30" | +2.0% |
| 34 | 3+10 | 3' LT | 48" x 60" | +2.0% |
| 34 | 3+30 | 5' LT | 48" x 60" | +2.0% |
| 35 | 4+40 | 0' LT | 41" x 15" | +1.5% |
| 40 | 6+40 | 0' LT | 41" x 15" | +0.7% |
| 39 | 7+10 | 0' LT | 48" x 60" | +0.5% |
| 30 | COURT | | | |



△ INSTALL IN-LINE THRUST BLOCK PER STD DETAIL G-8.11, SIZE: T=14", H=36", L=48" REINFORCING: #5@12" C/C AND 4 #5 ADDITIONAL REINFORCING (TYP. 2 PLACES)

REMOVE EX. 8" DIP AND REPLACE WITH 8" CL 54 DIP PIPE. SEE PROFILE ON SHEET 3.

AS-BUILT
DATE 10/12/2023

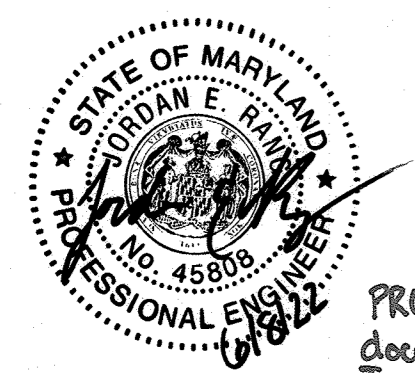
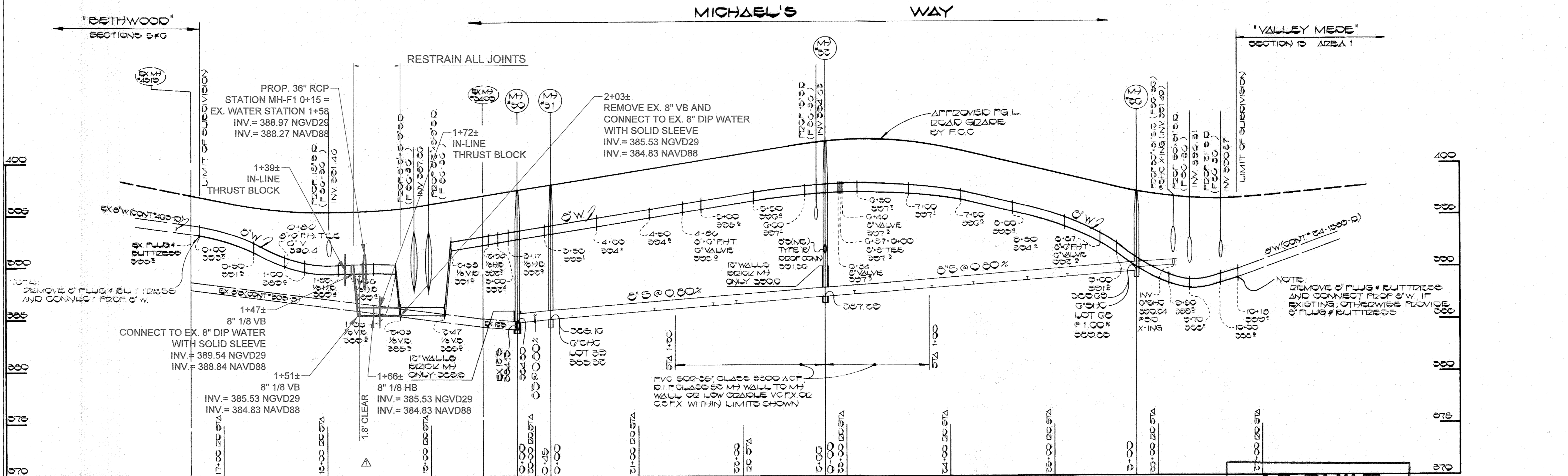
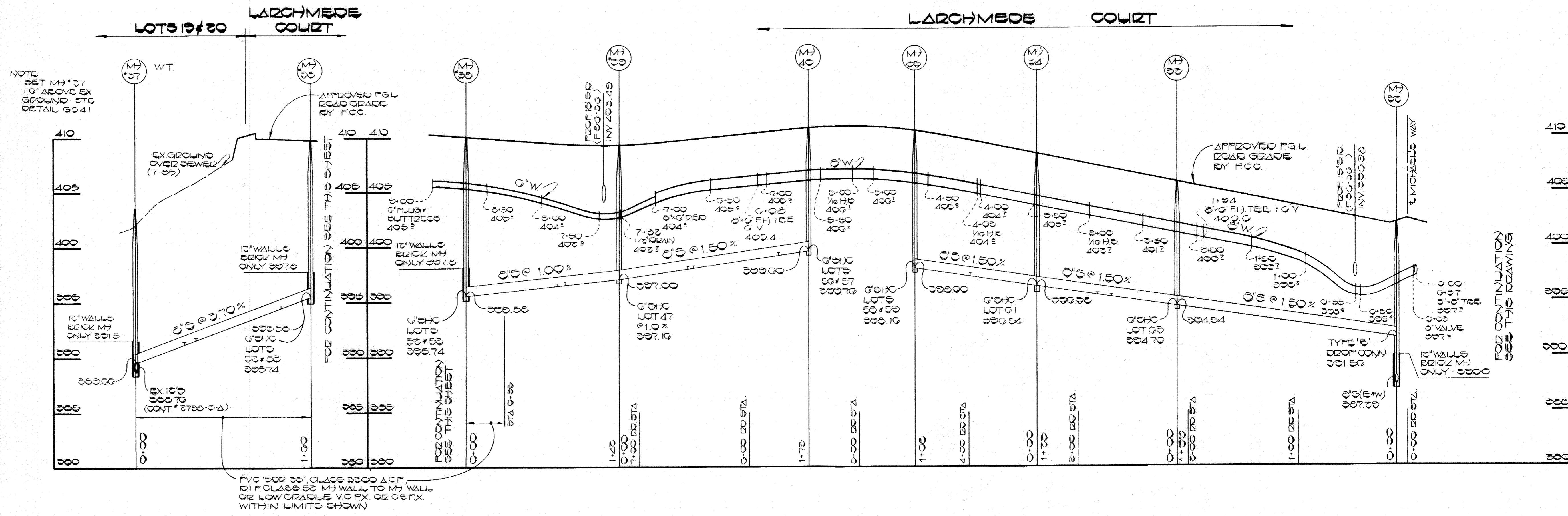


- NOTE:**
1. PROVIDE MULTIPLE CREWS AS NEEDED TO REPLACE EXISTING WATER MAIN AND WATER HOUSE CONNECTION AS SHOWN ON THIS SHEET WITHIN ONE WORKDAY.
 2. PROVIDE TEMPORARY WATER AS REQUIRED.

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. 45808, Exp. Date 06/03/2024.

| | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS DATE: 10/12/23 CHIEF, BUREAU OF UTILITIES | FISHER, COLLINS AND CARTER, INC. CIVIL ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 461-2855 | DES: D.B.S. DRN: D.B.S. CHK: T.A.F. DATE: 10/12/23 | WATER RELOCATION AS-BUILTS 8/7/22 10/12/23 | PLAN WATER & SEWER MAINS 600' SCALE MAP NO. 17 BLOCK NO. | VALLEY MEDE SECTION 13 AREA 2 CONTRACT NO. 24-1412-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND | SCALE AS SHOWN SHEET 2 OF 3 |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------|

AS-BUILT 11-14-26



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. 45808, Exp. Date 06/03/2024.

AS-BUILT
DATE 10/12/2023

CONTRACT NO. 24-1412-D
VALLEY MEDE
SECTION 13 AREA 2
WATER AND SEWER EXTENSION
HOWARD COUNTY, MARYLAND

| | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------|-------------------------------|--------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS Robert Wood /for RMB 2/28/26 CHIEF, BUREAU OF UTILITIES | FISHER, COLLINS AND CARTER, INC. CIVIL ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 461-2855 | DES: D.B.S. DRN: D.B.S. CHK: T.A.F. | K.F.J. C.K. | WATER RELOCATION AS-BUILTS | 6/7/22 10/12/23 | PROFILES WATER & SEWER MAINS | VALLEY MEDE SECTION 13 AREA 2 CONTRACT NO. 24-1412-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND | SCALE AS SHOWN |
| | | DATE: _____ BY: NO. _____ REVISION _____ DATE: _____ | DATE: _____ 600' SCALE MAP NO. 17 BLOCK NO. 01 | SHEET 3 OF 3 | | | | |