
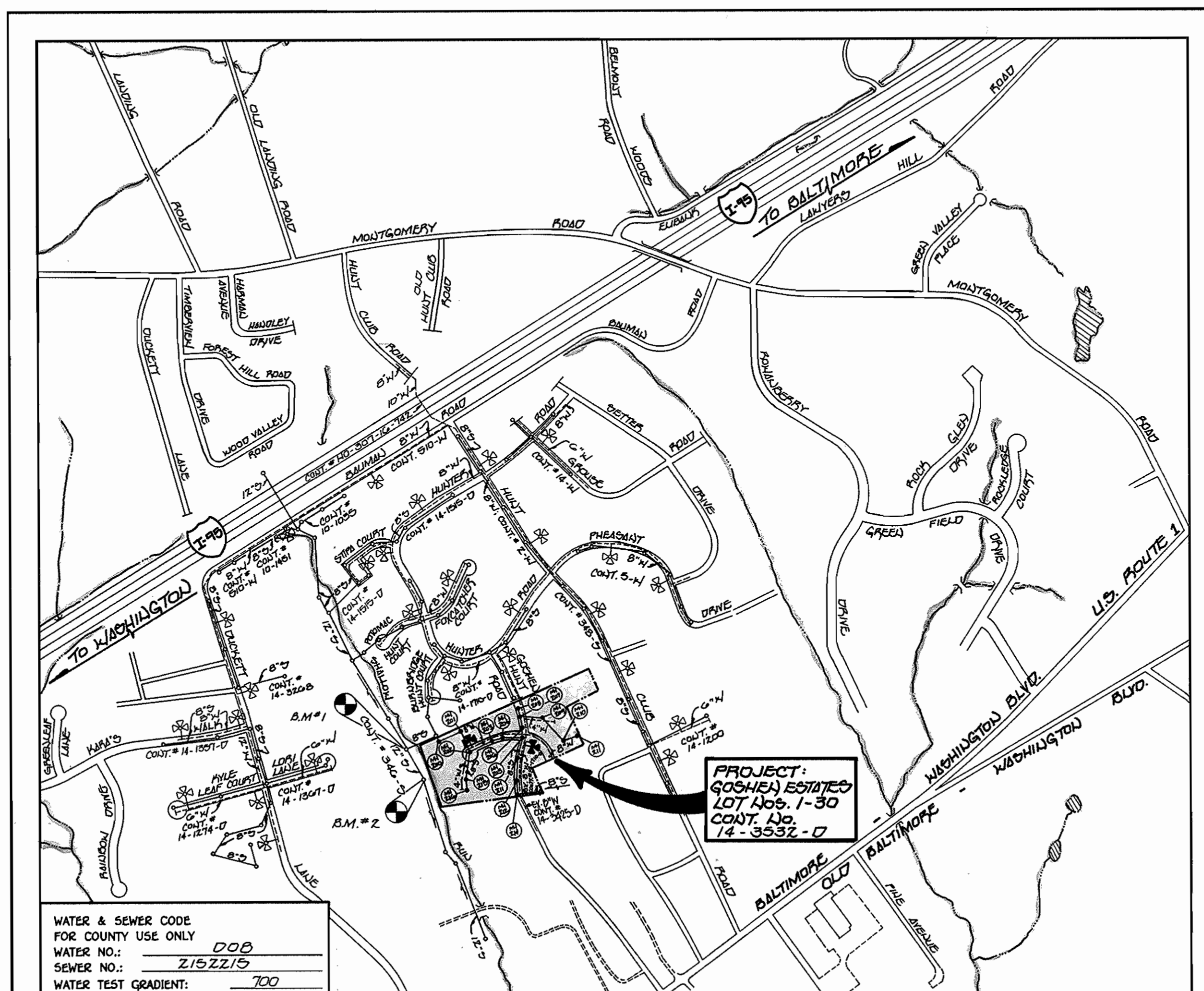


GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 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 (1991 AMENDMENTS) 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 LOCATION OF THE TEST PIT. 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- 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.
- 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.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" 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 THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W1.11 AND W2.13). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, @ (410) 313-2450 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 10.114(a) OF THE HOWARD COUNTY CODE.

| QUANTITIES | | | | |
|--------------------|------------|------------|--------------|-------------------------|
| ITEM | ESTIMATED | AS-BUILT | | SUPPLIER |
| | | QUANTITIES | TYPE | |
| 6" DENVER | 1,708 L.F. | 1,704 L.F. | SDR 35 PVC | U.S. Filter / M. Manard |
| 8" DENVER (D.I.P.) | 220 L.F. | 218 L.F. | CL-52 D.I.P. | Griffin Pipe |
| MANHOLES | 17 EACH | 17 EA. | Precast | Atlantic Conc. |
| 4" DENVER | 651 L.F. | 764 L.F. | SDR 35 PVC | U.S. Filter / M. Manard |
| 6" WATER | 586 L.F. | 584 L.F. | CL-52 D.I.P. | Griffin Pipe |
| 8" WATER | 10 L.F. | 16 L.F. | CL-52 D.I.P. | Griffin Pipe |
| 4" WATER | 408 L.F. | 406 L.F. | CL-52 D.I.P. | Griffin Pipe |
| FIRE HYDRANTS | 2 EACH | 2 EA. | Centurion | U.S. Filter / Mueller |
| 1" KHC | 100 L.F. | 111 L.F. | K. Copper | U.S. Filter / Reading |
| 3/4" KHC | 589 L.F. | 474 L.F. | K. Copper | U.S. Filter / Reading |
| 8" x 4" TEE | 1 EACH | 1 EA. | | U.S. Filter / Foundry |
| 8" x 4" TEE | 1 EACH | 1 EA. | | U.S. Filter / Foundry |
| 6" 1/2" HD | 2 EACH | 2 EA. | | U.S. Filter / Foundry |
| 6" FLUG & BUTTRESS | 2 EACH | 2 EA. | | U.S. Filter / Foundry |
| 4" VALVE | 1 EACH | 1 EA. | Gate | U.S. Filter / Mueller |
| 4" 1/2" HD | 1 EACH | 1 EA. | | U.S. Filter / Foundry |
| 4" 1/2" HD | 1 EACH | 1 EA. | | U.S. Filter / Foundry |
| 4" FLUG & BUTTRESS | 2 EACH | 2 EA. | | U.S. Filter / Foundry |
| 6" VALVE | 1 EACH | 1 EA. | Gate | U.S. Filter / Mueller |

NAME OF UTILITY CONTRACTOR: Utilities Unlimited Inc.
 SURVEY & DRAFTING DIVISION AS-BUILT DATE:



WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: 008
 SEWER NO.: 2152215
 WATER TEST GRADIENT: 100

VICINITY MAP

SCALE: 1"=600'

PLAN REFERENCE NUMBERS:
 098-03
 F-97-23

CONTRACT No. 14-3532-D

GOSHEN ESTATES

LOT NOS. 1-30

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

BENCHMARKS
 B.M. #1 ELEV. 164.65
 8" DI. MANHOLE No. 101 CONSTRUCTED UNDER CONTRACT No. 14-1710-D
 4599, 700, 207694 E, 1,384, 03, 625703
 B.M. #2 ELEV. 163.13
 8" DI. MANHOLE No. 6112 CONSTRUCTED UNDER CONTRACT No. 346-5
 4599, 454, 670776 E, 1,384, 909, 60445

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 Cheryl K. Simmons 01-22-97
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

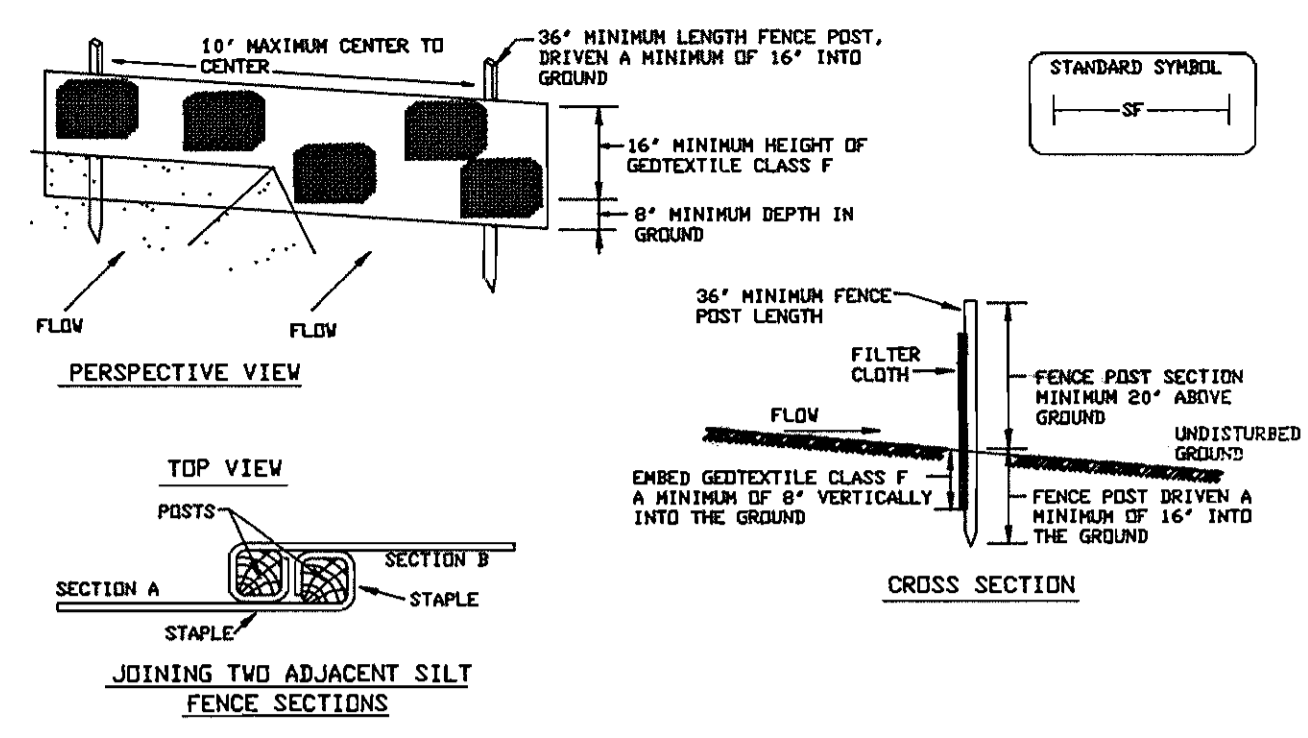
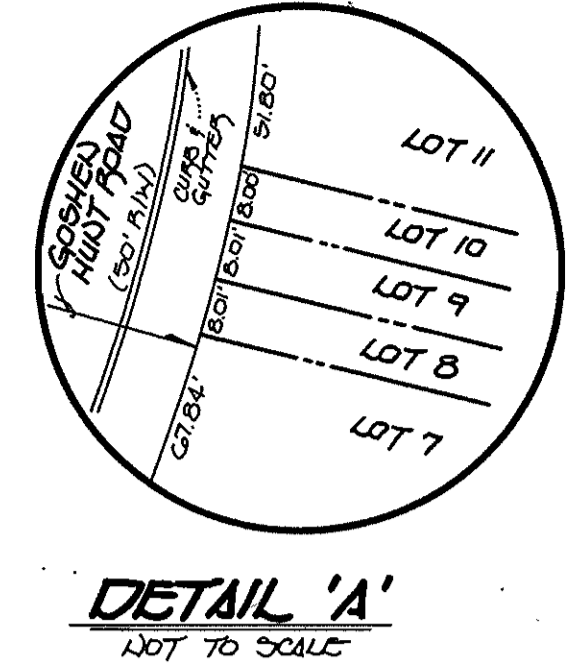
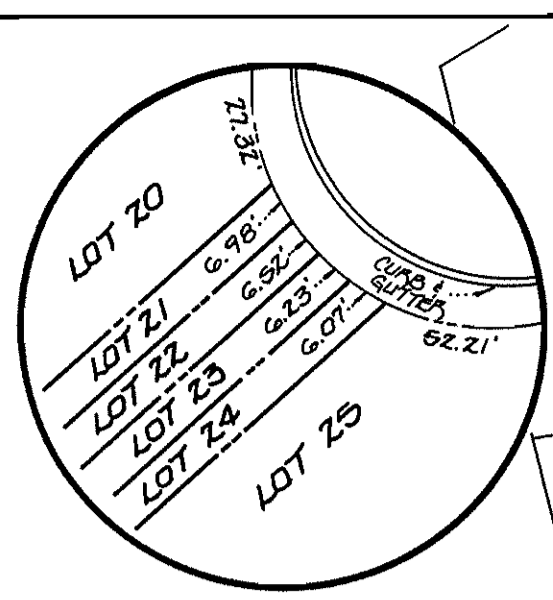
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: [Signature] 1/22/97
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS AND
 SIGNATURE OF DEVELOPER: [Signature] 7/21/96
 SERVICES, INC. DATE

CONTRACT NO. 14-3532-D
 GOSHEN ESTATES
 LOT NOS. 1-30
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

Water & Sewer As-Built

| | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Signature] 1-17-97 CHIEF, BUREAU OF UTILITIES DATE | DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND [Signature] 1/21/97 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE | Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike Ellicott City, Maryland 21042 (410) 461-2866 | #9757 STATE OF MARYLAND TERRILL A. FISHER REGISTERED PROFESSIONAL ENGINEER [Signature] | DES: M.J.M. DEWN: J.M.M. CHK: P.W.K. DATE: | TITLE SHEET 600' SCALE MAP NO. 38 BLOCK NO. 7 | GOSHEN ESTATES LOT NOS. 1-30 CONTRACT NO. 14-3532-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND | SCALE AS SHOWN SHEET 1 OF 3 |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------|



Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

| | | |
|----------------------|----------------------------------------|---------------|
| Tensile Strength | 50 lbs/in (min.) | Test: HMT 309 |
| Tensile Modulus | 0.3 lbs/in (min.) | Test: HMT 309 |
| Flow Rate | 0.3 gal/ft ² /minute (max.) | Test: HMT 322 |
| Filtering Efficiency | 75% (min.) | Test: HMT 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SILT FENCE
NOT TO SCALE

NOTE: SILT FENCE SHOWN ON THIS CONTRACT ARE PROVIDED IN ADDITION TO SEDIMENT & EROSION CONTROL MEASURES SHOWN UNDER F47-23

Water As-Built Pulls

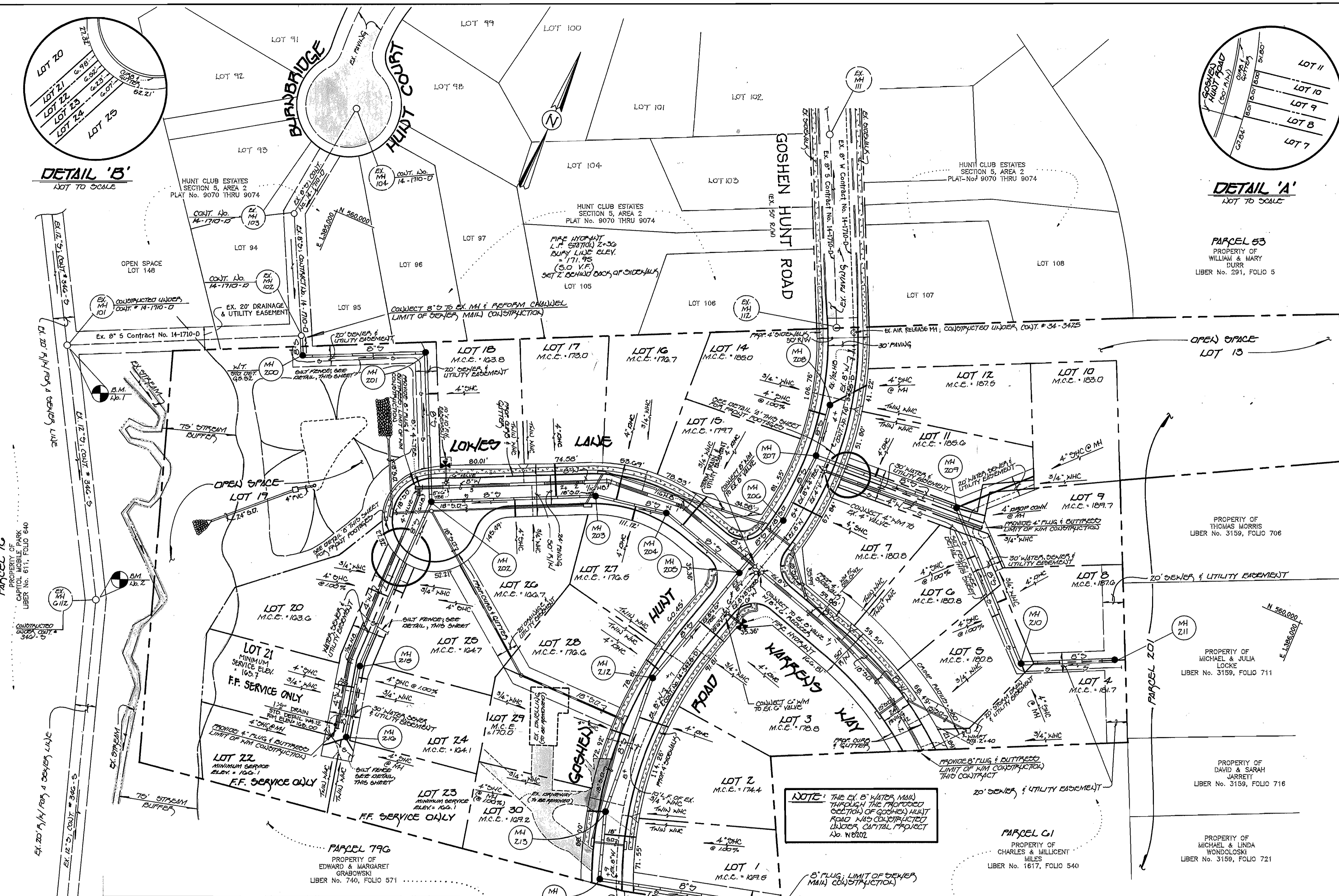
| From | To | Dist. |
|------------|--------|-------|
| MH 214 | Lot 1 | 63' |
| MH 214 | Lot 2 | 68' |
| MH 214 | Lot 50 | 71' |
| S.D. MH | Lot 7 | 51' |
| S.D. MH | Lot 6 | 56' |
| S.D. Inlet | Lot 4 | 57' |
| S.D. Inlet | Lot 7 | 62' |
| S.D. Inlet | Lot 5 | 54' |
| S.D. Inlet | Lot 4 | 85' |
| S.D. Inlet | Lot 4 | 27' |
| S.D. Inlet | Lot 5 | 37' |

SHC INVERT @ PROPERTY LINE CHART

| STATION | LOT | ELEVATION |
|------------------|----------------------|-----------|
| MH 201 TO MH 202 | | |
| 0+40 LT. | 18 | 159.00 |
| MH 202 TO MH 203 | | |
| 0+80 FT. | 20 | 161.58 |
| 1+20 LT. | 17 (CHC) | 167.64 |
| MH 203 TO MH 204 | | |
| 0+20 LT. | 16 (CHC) | 171.70 |
| 0+40 FT. | 27 (CHC) | 171.30 |
| MH 204 TO MH 205 | | |
| 0+20 LT. | 19 (CHC) | 173.70 |
| 0+20 FT. | 7 | 175.85 |
| MH 207 TO MH 208 | | |
| 0+40 LT. | 14 (@ 1.00%) | 181.28 |
| @ MH 208 FT. | 12 (SHC @ MH) | 182.15 |
| MH 207 TO MH 209 | | |
| 0+60 LT. | 11 (CHC) | 181.20 |
| @ MH 209 LT. | 10 (SHC @ MH) | 177.93 |
| @ MH 209 CTR. | 9 (CHC @ MH) | 184.58 |
| MH 209 TO MH 210 | | |
| 0+50 FT. | 6 (@ 1.00%) | 176.52 |
| 1+00 LT. | 8 (CHC) | 183.20 |
| 1+10 FT. | 5 (@ 1.00%) | 176.82 |
| @ MH 210 CTR. | 4 (SHC @ MH) | 177.34 |
| MH 205 TO MH 212 | | |
| 0+60 LT. | 3 (CHC) | 173.64 |
| 1+20 FT. | 28 (CHC) | 171.82 |
| MH 212 TO MH 213 | | |
| 0+40 LT. | 2 (CHC) | 169.62 |
| 0+60 FT. | 29 | 163.21 |
| @ MH 213 FT. | 30 (@ 1.00%) | 163.50 |
| MH 213 TO MH 214 | | |
| 0+20 LT. | 1 (@ 1.00%) | 163.63 |
| MH 202 TO MH 205 | | |
| 0+90 LT. | 20 | 159.97 |
| 1+00 FT. | 20 (@ 1.00%) | 160.02 |
| MH 205 TO MH 216 | | |
| 0+10 LT. | 24 (@ 1.00%) | 160.35 |
| 0+20 FT. | 21 (FF SERVICE ONLY) | 160.72 |
| @ MH 216 FT. | 22 (FF SERVICE ONLY) | 161.30 |
| @ MH 216 LT. | 23 (FF SERVICE ONLY) | 161.14 |

| From | To | Dist. |
|--------------|--------|-------|
| Fire Hydrant | Lot 27 | 80' |
| Fire Hydrant | Lot 28 | 84' |
| MH 212 | Lot 28 | 31' |
| MH 212 | Lot 27 | 25' |

CONTRACT NO. 14-5532-D
GOSHEN ESTATES
LOT NOS. 1-30
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND



NOTE: THE EX. 8" WATER MAIN TYPICAL TO THE PROPOSED LOCATIONS OF GOSHEN HUNT ROAD WAS CONSTRUCTED UNDER CAPITAL PROJECT NO. W0202

NOTE: THE EX. 8" WATER MAIN TYPICAL TO THE PROPOSED LOCATIONS OF GOSHEN HUNT ROAD WAS CONSTRUCTED UNDER CAPITAL PROJECT NO. W0202

NOTE: SEE PROFILE (SHEET 3) FOR MH ELEVATIONS & RIM ELEVATIONS

Note: For Sewer As-Built Pulls refer to sheet 3 of 3.

Water As-Built Pulls

| From | To | Dist. | From | To | Dist. | From | To | Dist. | From | To | Dist. | From | To | Dist. |
|--------|--------|-------|--------------|---------------|-------|--------|--------------|-------|--------------|-------------|-------|--------|--------------|-------------|
| MH 205 | Lot 15 | 81' | MH 202 | 6" F.H. Valve | 20' | MH 215 | Lot 25 | 82' | MH 216 | Lot 24 | 44' | MH 208 | Lot 14 | 19' |
| MH 204 | Lot 15 | 36' | MH 202 | Fire Hydrant | 32' | MH 215 | Lot 24 | 33' | MH 210 | Lot 8 | 92' | MH 208 | Lot 12 | 33' |
| MH 204 | Lot 16 | 42' | MH 202 | 4" Valve | 15' | MH 215 | Lot 21 | 44' | MH 210 | Lot 9 | 127' | MH 208 | Lot 11 | 53' |
| MH 203 | Lot 16 | 57' | MH 202 | End 8" Main | 18' | MH 215 | 1 1/2" Drain | 69' | MH 209 | Lot 9 | 40' | MH 207 | Lot 11 | 58' |
| MH 203 | Lot 26 | 61' | Fire Hydrant | 6" F.H. Valve | 14' | MH 215 | Lot 22 | 98' | MH 209 | Lot 8 | 72' | MH 207 | Lot 12 | 62' |
| MH 203 | Lot 17 | 67' | Fire Hydrant | 4" Valve | 30' | MH 215 | Lot 23 | 97' | MH 209 | Lot 10 | 75' | MH 207 | 4" Valve | 14' |
| MH 203 | Lot 18 | 72' | Fire Hydrant | End 8" Main | 29' | MH 216 | Lot 23 | 20' | SHC Lot 10 | Lot 10 | 10' | MH 206 | 4" Valve | 60' |
| MH 202 | Lot 26 | 97' | MH 202 | Lot 25 | 83' | MH 216 | Lot 22 | 22' | Ex. 8" Valve | Lower Lane | 57' | MH 206 | Ex. 8" Valve | Warrens Way |
| MH 202 | Lot 18 | 93' | MH 202 | Lot 20 | 90' | MH 216 | 1 1/2" Drain | 23' | Ex. 8" Valve | Warrens Way | 58' | MH 206 | Ex. 8" Valve | Warrens Way |
| MH 202 | Lot 17 | 97' | MH 215 | Lot 20 | 79' | MH 216 | Lot 21 | 44' | MH 206 | | | MH 206 | | |

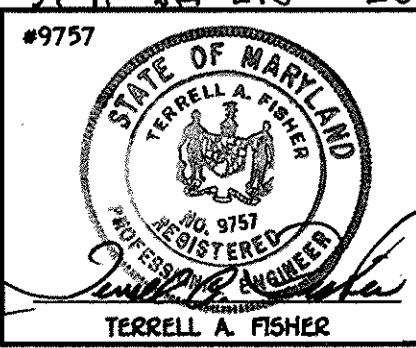
WATER MAIN TABULATION CHART

| APPURTENANCE | LOCATION | DESCRIPTION |
|--------------------|--------------------------|------------------------------------|
| 4" PLUG & BUTTRESS | LOT Nos. 8-10 | N 539, 963, 205, E1, 385, 688/17 |
| 8" PLUG & BUTTRESS | WARRENS WAY | E. R.D. STA. 2+35, 2' LEFT |
| 8" - 1/16 H.D. | LOWES LANE | E. R.P. STA. 0+00, 8' RIGHT |
| 8" - 1/16 H.D. | LOWES LANE | E. R.P. STA. 1+39, 7' RIGHT |
| 8" x 6" TEE | L.P. STA. 2+36, 8' RIGHT | |
| 6" VALVE | LOWES LANE | L.P. STA. 2+36, 5' RIGHT |
| 8" x 4" TEE | LOWES LANE | L.P. STA. 2+00, 5' RIGHT |
| 8" PLUG & BUTTRESS | LOWES LANE | L.P. STA. 2+05, 4' RIGHT |
| 4" VALVE | LOWES LANE | L.P. STA. 2+07, 0' RIGHT |
| 4" - 1/16 H.D. | LOWES LANE | L.P. STA. 2+05, 11' RIGHT |
| 4" - 1/32 H.D. | LOT Nos. 20-25 | N 539, 963, 907, E1, 385, 100, 566 |
| 4" PLUG & BUTTRESS | LOT Nos. 20-25 | N 539, 940, 411, E1, 385, 184, 674 |

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Michael J. ...
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

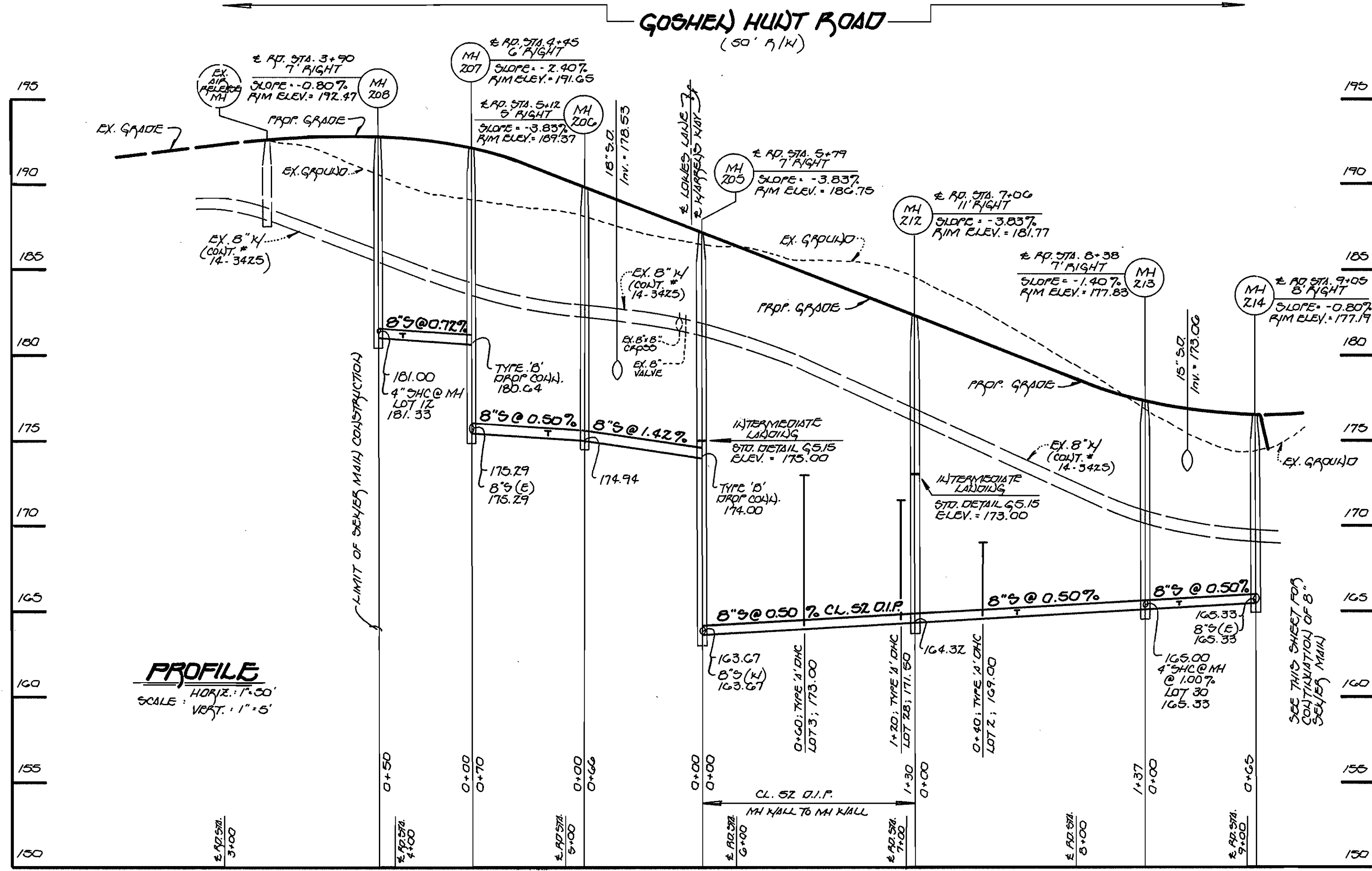
Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Belted, City, Maryland 21042
(410) 481-2855



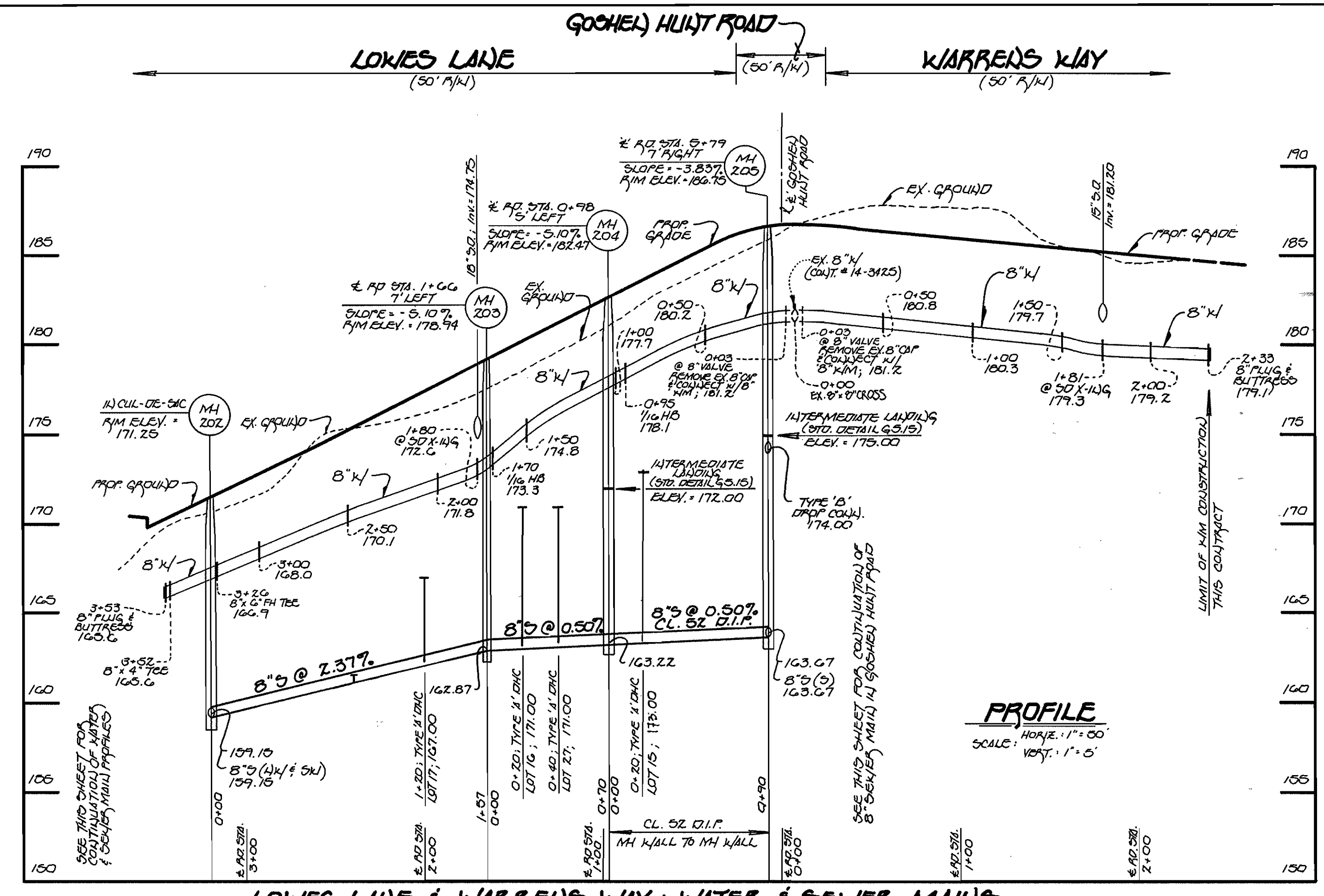
DES: M.J.M.
DRAWN: J.M.M.
CHK: P.W.K.
DATE: ...

PLAN VIEW
WATER AND SEWER MAINS
600' SCALE MAP NO. 38 BLOCK NO. 7

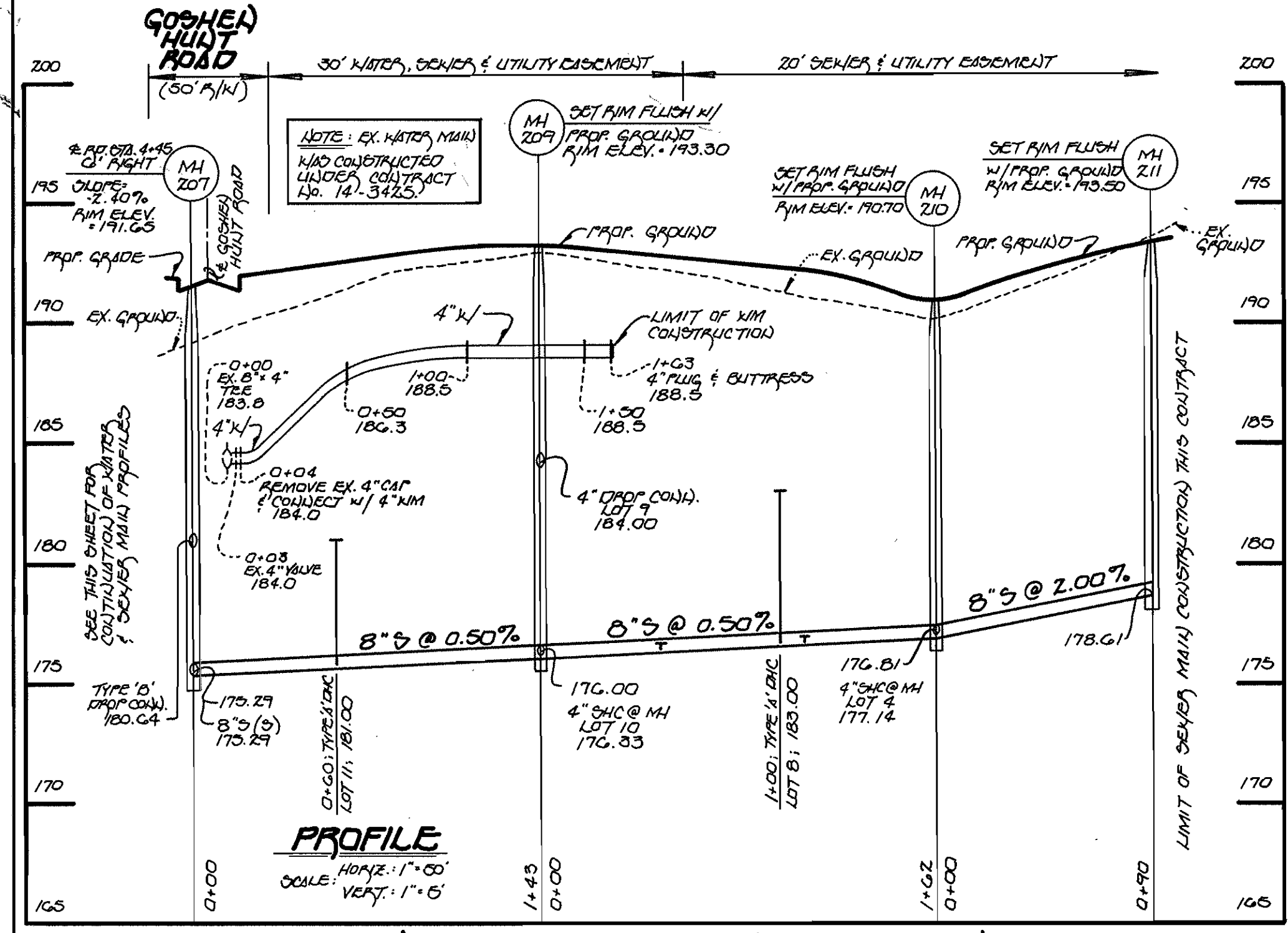
GOSHEN ESTATES
LOT NOS. 1-30
CONTRACT NO. 14-3532-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 2 OF 3



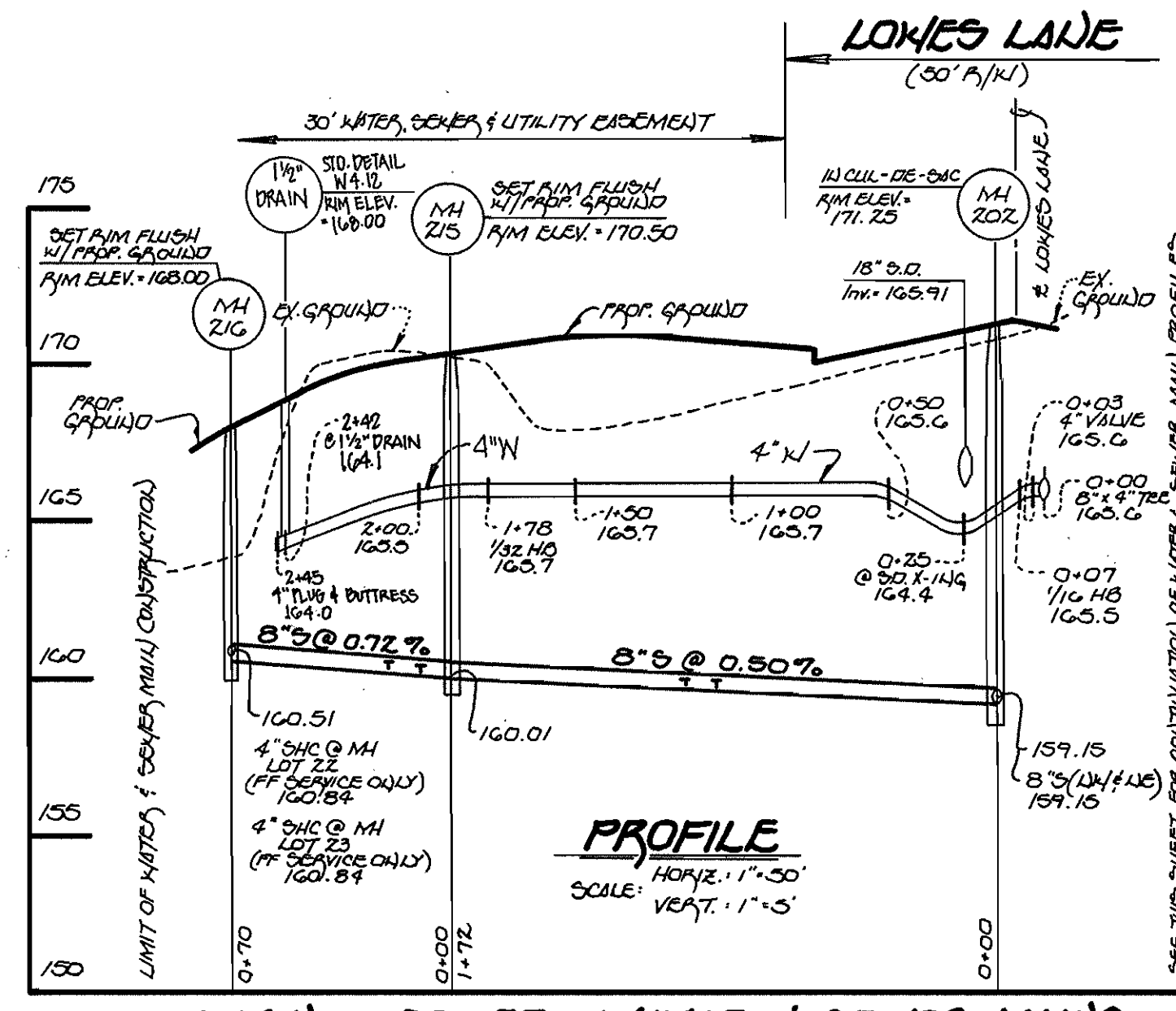
GOSHEN HUNT ROAD: WATER & SEWER MAINS



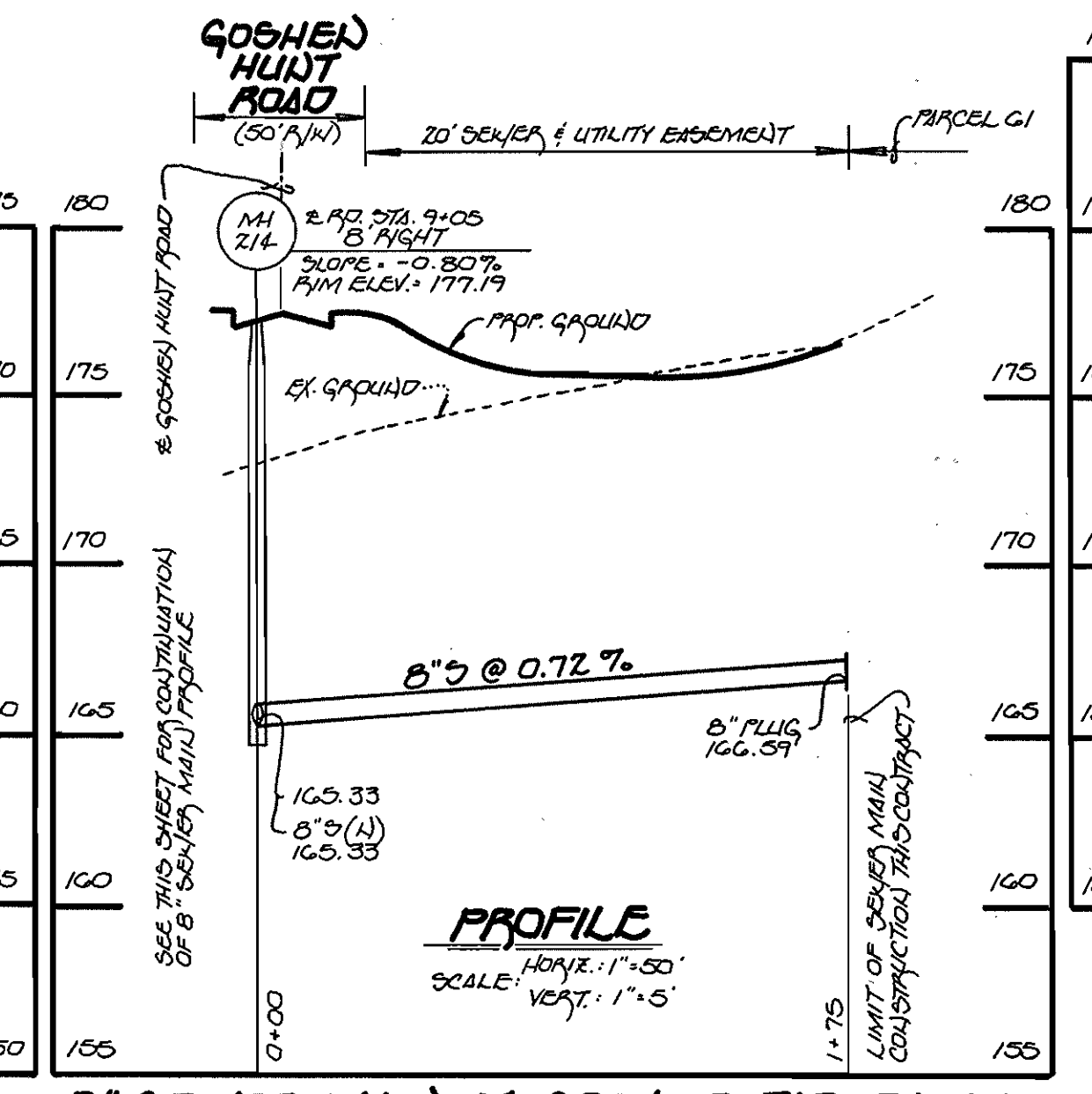
LOWIES LANE & KIARRENS WAY: WATER & SEWER MAINS



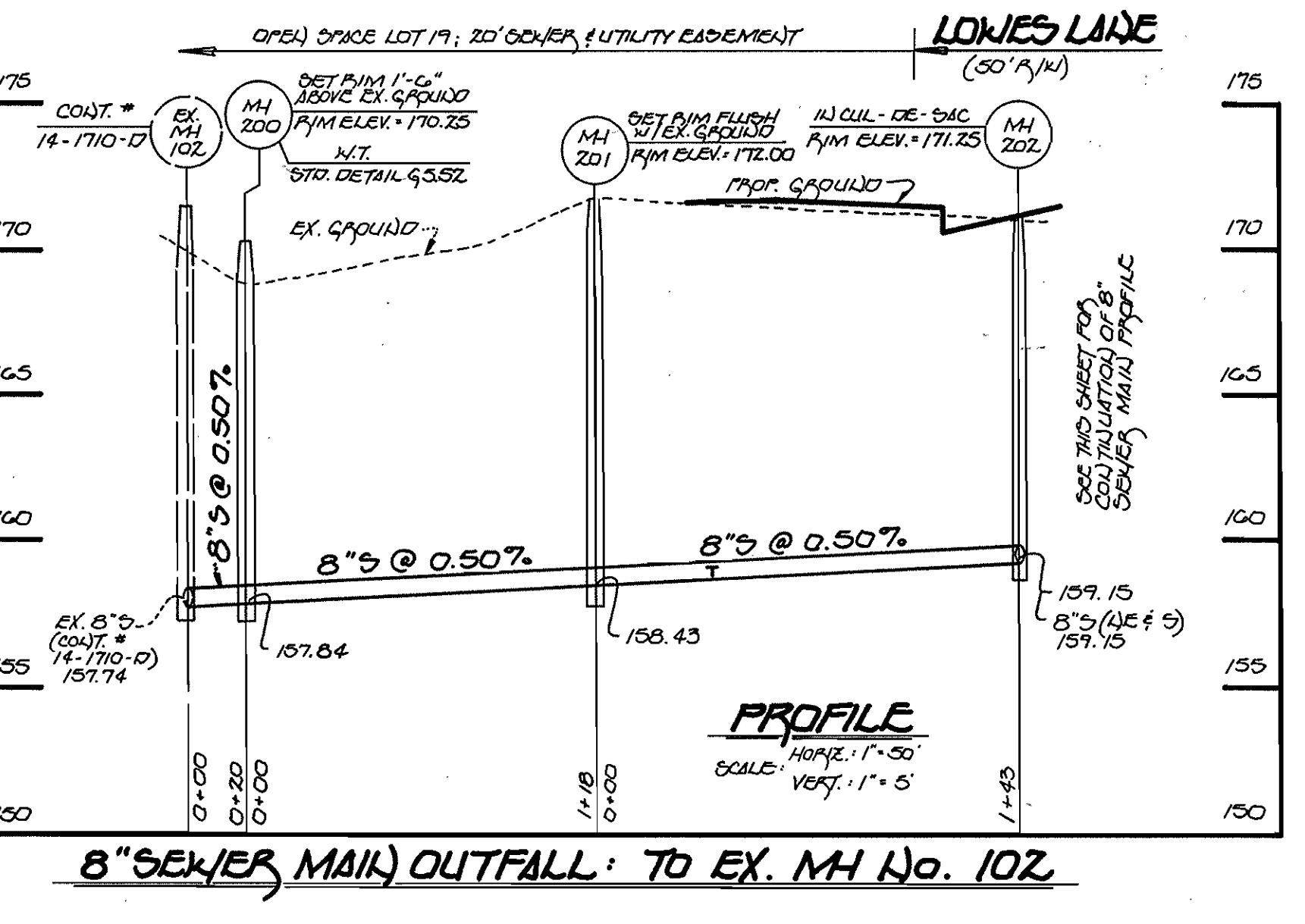
LOT NOS. 4-11: WATER & SEWER MAINS



LOT NOS. 20-25: WATER & SEWER MAINS



8" SEWER MAIN: TO SERVICE PARCEL G1



8" SEWER MAIN OUTFALL: TO EX. MH No. 102

| MH No. | LOCATION | NORTHING | EASTING |
|--------|-------------------|---------------|-----------------|
| 200 | OPEN SPACE LOT 19 | 559, 859, 417 | 1,385, 024, 249 |
| 201 | OPEN SPACE LOT 19 | 559, 909, 080 | 1,385, 131, 420 |
| 207 | LOT 10b, 8-10 | 559, 971, 774 | 1,385, 656, 459 |
| 210 | LOT 10b, 3-8 | 559, 860, 342 | 1,385, 772, 089 |
| 211 | LOT 10b, 4-8 | 559, 898, 203 | 1,385, 851, 721 |
| 215 | LOT 10b, 21-24 | 559, 614, 974 | 1,385, 170, 366 |
| 216 | LOT 10b, 21-24 | 559, 540, 678 | 1,385, 206, 569 |
| 217 | LOT 1 | 559, 557, 549 | 1,385, 650, 600 |

* SEE THIS SHEET FOR MANHOLE INFORMATION OF THE STRUCTURES LOCATED IN THE PROPOSED RIGHT-OF-WAY.

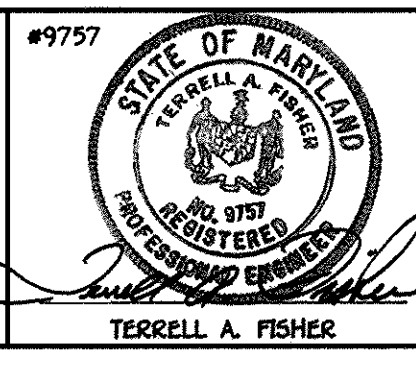
| From | To | Dist. | From | To | Dist. | From | To | Dist. |
|--------|--------|-------|------------|--------|-------|-----------|--------|-------|
| MH 204 | Lot 16 | 58' | MH 212 | Lot 3 | 29' | MH 209 | Lot 10 | 81' |
| MH 204 | Lot 15 | 47' | MH 205 | Lot 3 | 69' | MH 209 | Lot 6 | 53' |
| MH 205 | Lot 15 | 73' | MH 205 | Lot 28 | 117' | MH 209 | Lot 8 | 101' |
| MH 214 | Lot 1 | 50' | MH 206 | Lot 7 | 40' | MH 209 | Lot 5 | 110' |
| MH 214 | Lot 30 | 62' | MH 207 | Lot 7 | 59' | SHC Lot 9 | Lot 10 | 63' |
| MH 215 | Lot 30 | 21' | MH 207 | Lot 14 | 47' | MH 211 | Lot 4 | 84' |
| MH 213 | Lot 1 | 40' | MH 208 | Lot 14 | 22' | MH 210 | Lot 4 | 14' |
| MH 213 | Lot 29 | 76' | MH 208 | Lot 12 | 41' | MH 210 | Lot 5 | 53' |
| MH 213 | Lot 2 | 98' | Ex. MH 112 | Lot 12 | 66' | MH 210 | Lot 8 | 62' |
| MH 212 | Lot 2 | 49' | MH 207 | Lot 11 | 60' | MH 210 | Lot 6 | 111' |
| MH 212 | Lot 29 | 64' | MH 209 | Lot 11 | 86' | | | |
| MH 212 | Lot 28 | 19' | MH 209 | Lot 9 | 29' | | | |

Note: For water As-Built pulls refer to sheet 2 of 3.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Michael A. ... 1-17-97
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
... 1/24/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481-2855



DES: M.J.M.
DRAWN: J.M.M.
CHK: P.W.K.
DATE: _____
BY NO. _____ REVISION _____ DATE _____

PROFILES
WATER AND SEWER MAINS
600' SCALE MAP NO. 30 BLOCK NO. 7

GOSHEN ESTATES
LOT NOS. 1-30
CONTRACT NO. 14-3532-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 3 OF 3