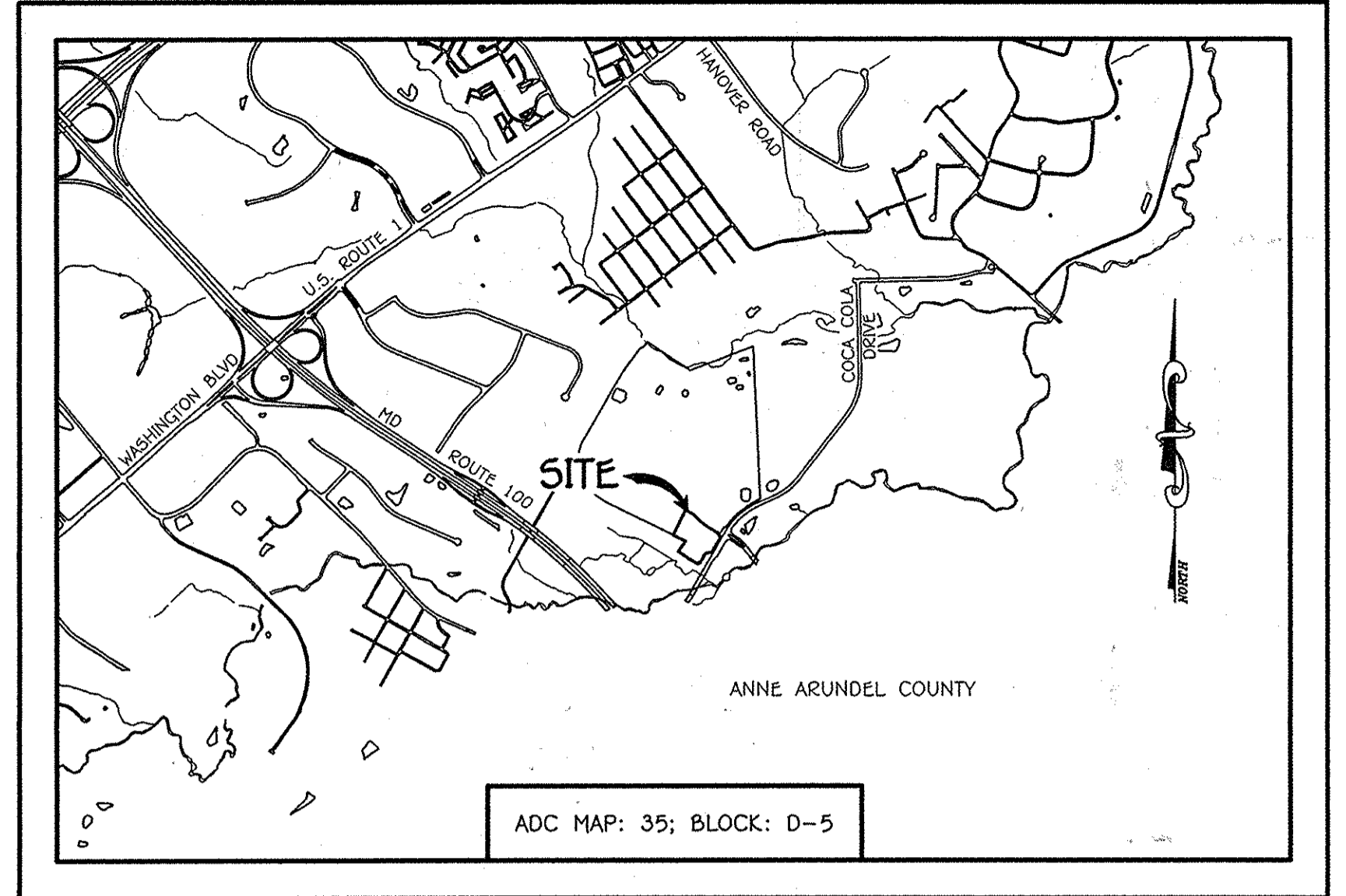
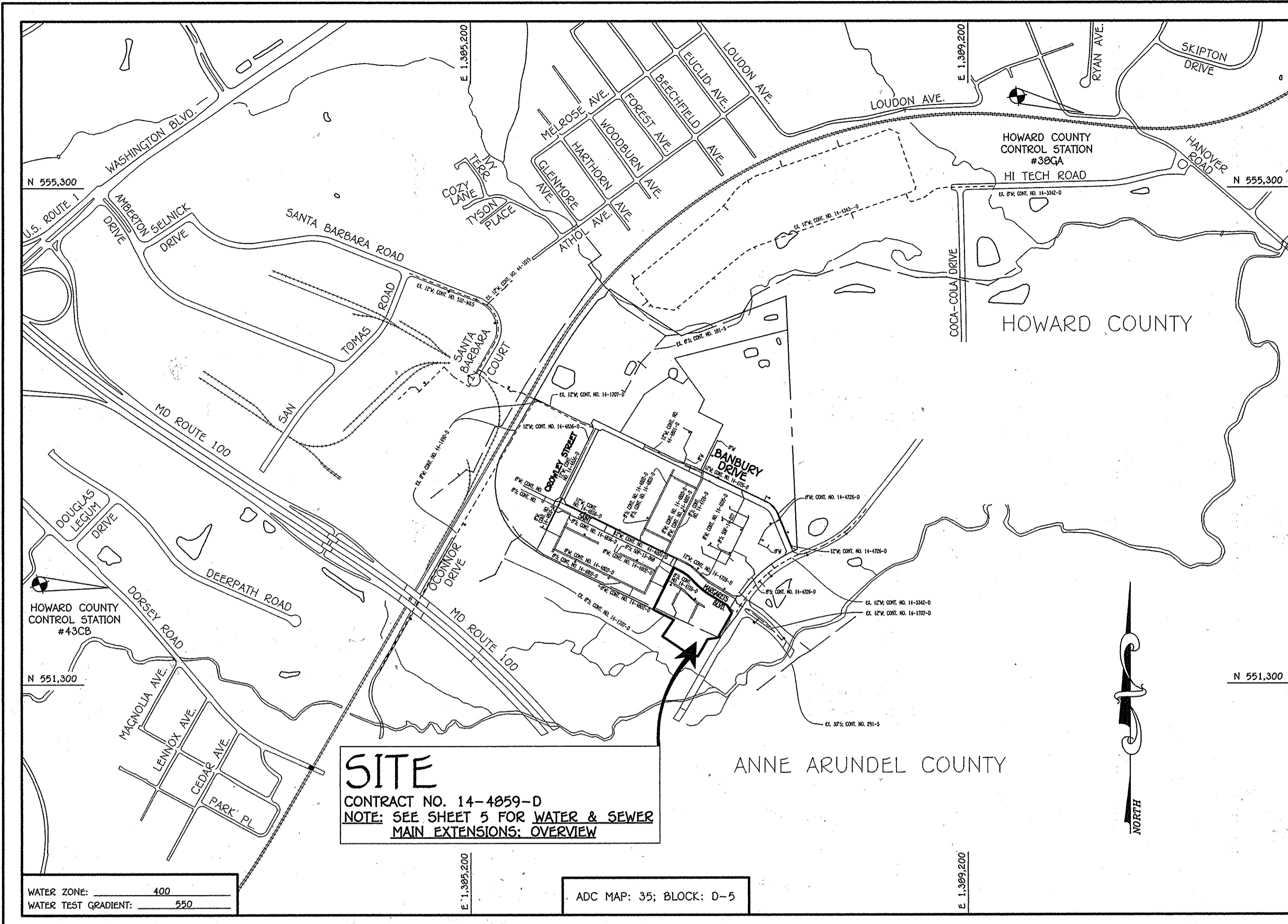


QUANTITIES				
ITEM	ESTIMATED	AS-BUILT	QUANTITIES	SUPPLIER
8" PVC, SDR-35	678 L.F.	678 L.F.	PLASTIC	National Pipe & Plastic
6" PVC, SDR-35	151 L.F.	151 L.F.	PLASTIC	National Pipe & Plastic
4" PVC, SDR-35	503 L.F.	492 L.F.	PLASTIC	National Pipe & Plastic
CLEAN-OUTS	42 EACH	42 EA.	CONCRETE	Prisma Precast
MANHOLES	10 EACH	10 EA.	CONCRETE	Atlantic Precast
6" W. C900 PVC, DR-18	692 L.F.	692 L.F.	PLASTIC	National Pipe & Plastic
6" W. C900 PVC, DR-18	47 L.F.	45 L.F.	PLASTIC	National Pipe & Plastic
1-1/2" VHC	100 L.F.	100 L.F.	COPPER	Houwell Metal Co.
2" H.D.C.	1 EACH	1 EA.	STEEL	Ay McDonald
4" H.D.C.	1 EACH	1 EA.	STEEL	Ay McDonald
1/32" H.B.	4 EACH	6 EA.	DUCTILE	SIR Pipe Products
8" X 8" TEE	2 EACH	2 EA.	DUCTILE	Mueller Company
8" X 6" F.H. TEE	2 EACH	2 EA.	DUCTILE	Mueller Company
8" VALVE	2 EACH	2 EA.	DUCTILE	Mueller Company
6" VALVE	2 EACH	2 EA.	DUCTILE	Mueller Company
8" PLUG & BUTTRESS	3 EACH	3 EA.	DUCTILE	Mueller Company
FIRE HYDRANT	2 EACH	2 EA.	DUCTILE	Mueller Company
CONTINUITY TEST STATION	2 EACH	2 EA.	CONCRETE	Home Concrete
SINGLE OUTSIDE METER SETTING	2 EACH	2 EA.	CONCRETE	Ay McDonald
TWIN OUTSIDE METER SETTING	17 EACH	17 EA.	CONCRETE	Ay McDonald
4" W. C900 PVC, DR-18	90 L.F.	90 L.F.	PLASTIC	National Pipe & Plastic
8" X 4" TEE	9 EACH	9 EA.	DUCTILE	Mueller Company
4" VALVE	9 EACH	9 EA.	DUCTILE	Mueller Company
1" VHC	80 L.F.	80 L.F.	COPPER	Houwell Metal Co.
3" H.D.C.	6 EA.	6 EA.	STEEL	Ay McDonald
8" EXPOSED SLEEVES	2 EA.	2 EA.	STEEL	Mueller Co.

NAME OF UTILITY CONTRACTOR: GAINES & COMPANY, INC.  
SIZES & MATERIALS DIVISION AS-BUILT DATA: 3/16/15



**BENCHMARK INFORMATION**

B.M.#1 - HOWARD COUNTY CONTROL STATION #38CA - HORIZONTAL - NAD '83  
(LOCATED ALONG RAILROAD AVENUE, JUST SOUTH OF RYAN AVENUE. APPROX. 22.6' NORTH FROM THE CENTER LINE OF RAILROAD AVENUE.)  
N 552,897.373  
E 1,390,132.0933  
ELEVATION = 80.783 - VERTICAL - (NAVD '88)

B.M.#2 - HOWARD COUNTY CONTROL STATION #43CB - HORIZONTAL - (NAD '83)  
(LOCATED ALONG THE SOUTHWEST CORNER OF DORSEY ROAD, APPROX. 2.2' OFF THE EDGE OF PAVING.)  
APPROX. 45.7' EAST OF POWER POLE NO. 19)  
N 552,084.246  
E 1,382,282.419  
ELEVATION = 144.391 - VERTICAL - (NAVD '88)

**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 COUNTY CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*Paul W. Kriebel*, FOR:  
U.S. HOME CORPORATION, DBA LENNAR 02-24-15  
SIGNATURE OF DEVELOPER DATE

**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 COUNTY CONSERVATION DISTRICT.

*Paul W. Kriebel*, FOR:  
U.S. HOME CORPORATION, DBA LENNAR 02-24-15  
SIGNATURE OF ENGINEER DATE

SDP-14-071

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

*John R. Robertson* 3/16/15  
HOWARD COUNTY CONSERVATION DISTRICT DATE

**LOCATION MAP**  
SCALE: 1" = 60'

TYPE OF BUILDING:	RESIDENTIAL: TOWNHOUSES / CONDOS
NUMBER OF PARCELS:	1
NO. OF WATER HOUSE CONNECTIONS:	42
NO. OF SEWER HOUSE CONNECTIONS:	42
SEWER SHED:	PATAPSCO
TREATMENT PLANT:	PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

**PLAN REFERENCE NUMBERS:**  
F-15-021 (RECORD PLAT)  
SDP-14-071

# CONTRACT NO. 14-4859-D

## OXFORD SQUARE

### LOTS 224 THRU 241, OPEN SPACE LOTS 242-243 & CONDO BLDG. NOS. 1, 2 & 3

### WATER & SEWER MAIN EXTENSIONS

### HOWARD COUNTY, MARYLAND

**LEGEND**

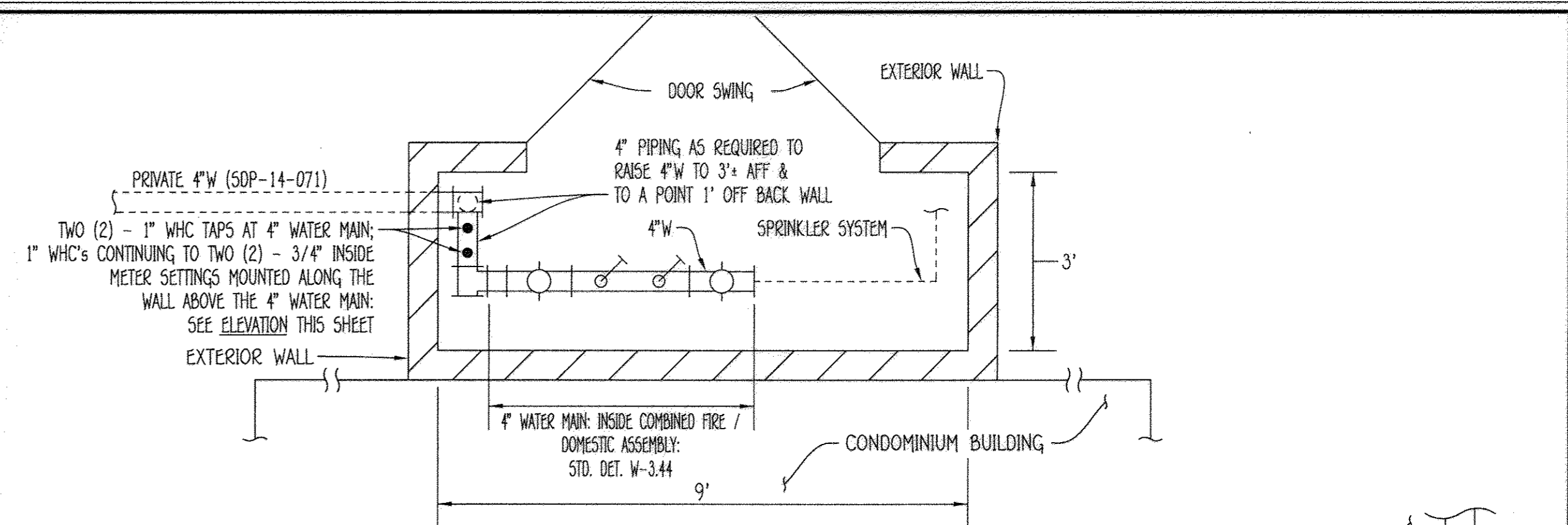
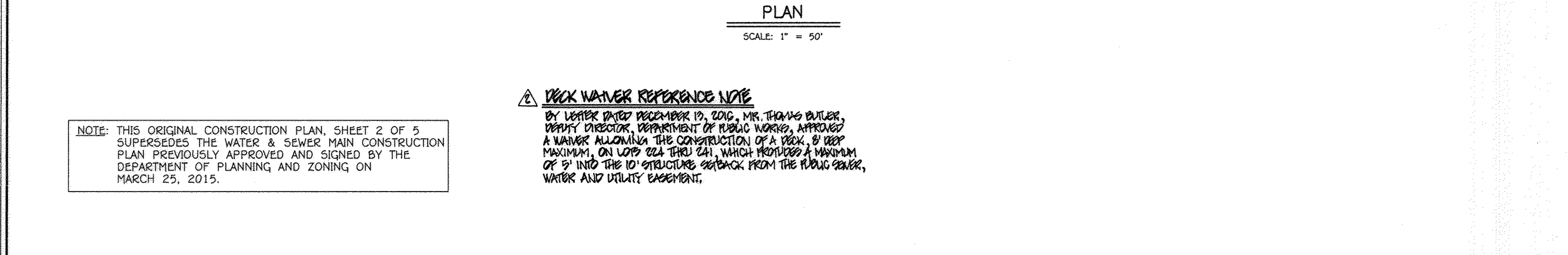
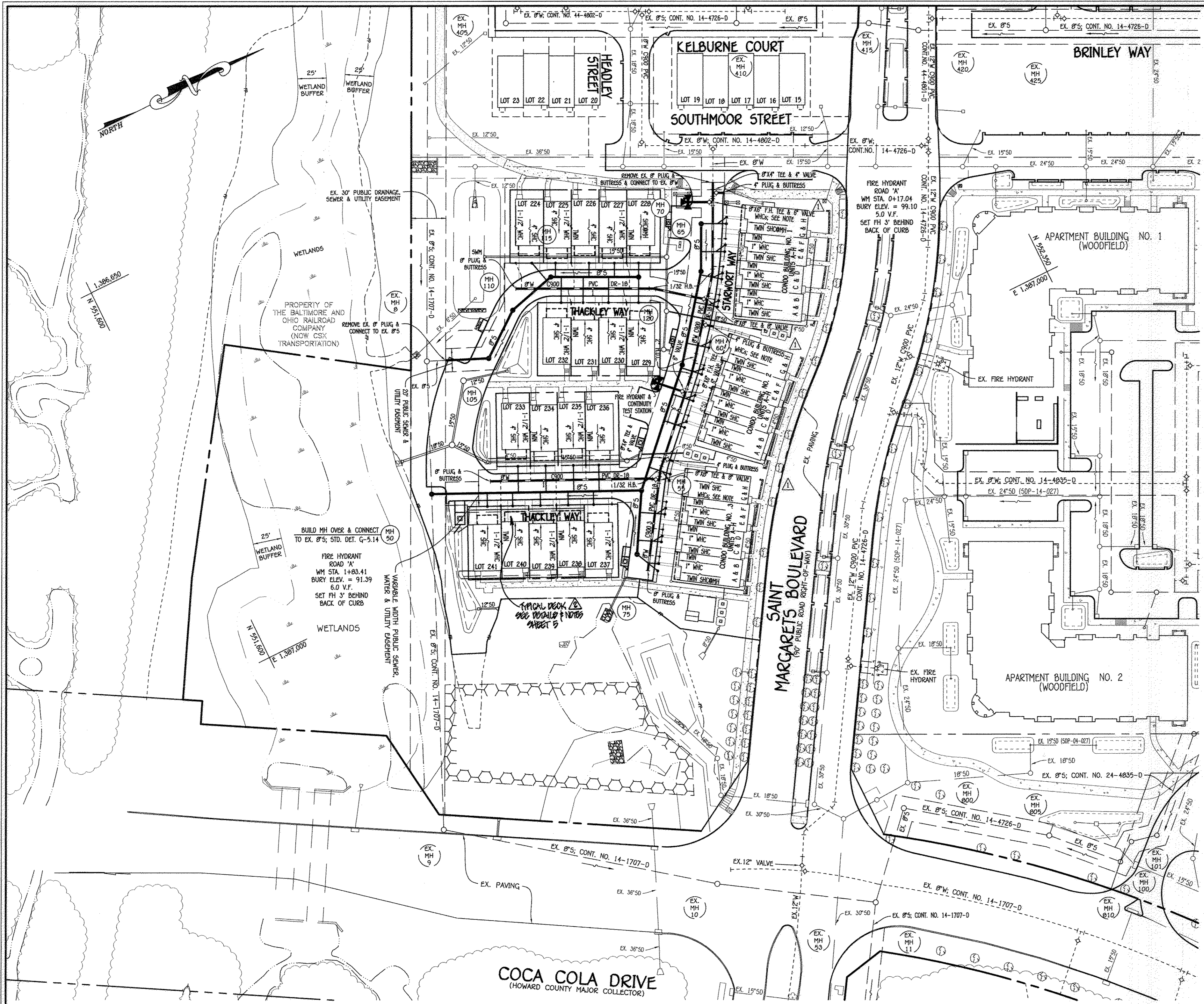
SYMBOL	DESCRIPTION
---	EX. WATER MAIN
---	EX. SEWER MAIN
○	EX. SEWER MANHOLE
---	EX. WATER, SEWER & UTILITY EASEMENT
○	EX. FIRE HYDRANT
○	EX. VALVE
---	PROP. WATER MAIN
---	PROP. SEWER MAIN
○	PROP. SEWER MANHOLE
---	PROP. WATER, SEWER & UTILITY EASEMENT
---	PROP. VHC
---	PROP. SHC
○	PROP. FIRE HYDRANT
○	PROP. VALVE

- GENERAL NOTES VICINITY MAP**  
SCALE: 1" = 200'
- PART A**
- 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 ON OR ABOUT MAY, 2010 BY FISHER, COLLINS & CARTER, INC.
  - HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 38CA & NO. 43CB.
  - ALL VERTICAL CONTROLS ARE BASED ON NAVD83 VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
  - 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 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 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 SITE.
  - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL (S) AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST FIT OR FITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES 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.
  - 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)	410-695-0123
BUREAU OF UTILITIES	410-315-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-501-5533
VERIZON	1-800-743-0033 / 410-224-9210
- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE AWMA C900 PVC, DR-18.
  - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
  - VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
  - 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 1009 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.
  - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWMA STANDARD C900 FOR PVC 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 THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
  - 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 HANGERS. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TIEPS" 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 INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHOULD 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 OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION 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 1/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWMA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTAIN PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
  - FIVE DEGREE SWEEPS SHALL BE FIT BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR-18 MEETING THE REQUIREMENTS OF AWMA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR-18 OR EQUAL.
  - WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWMA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSERT DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLUN 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 SHIP SHOCK AS MANUFACTURED BY GEA IRON, INC. APPROVED EQUAL.
  - TO ACCOMMODATE A FIVE DEGREE SWEEP, RESIDENTIAL LOTS 224 THRU 241 SHALL HAVE A 1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE WATER STOPPING 5' TO 6' FROM THE 1" MAIN WATER HOUSE CONNECTION. THE 1" WATER MAIN SHALL PROVIDE FIVE PROTECTION. THE CONNECTION AND LINES TO THE 1" MAIN WATER HOUSE CONNECTION SHALL BE MANUFACTURED BY GEA IRON, INC. APPROVED EQUAL. "SPIT" FROM THE 1" MAIN WATER HOUSE CONNECTION SHALL BE MANUFACTURED BY GEA IRON, INC. APPROVED EQUAL. UNITS SHALL HAVE A 1" MAIN WATER HOUSE CONNECTION WITH A 3/4" OUTSIDE WATER STOPPING 5' TO 6' FROM THE 1" MAIN WATER HOUSE CONNECTION.
- PART C: SEWER MAIN GENERAL NOTES**
- FORCE MAINS SHALL BE D.I.P. ONLY.
  - MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
  - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER TIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATER TIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - HOUSES WITH THE SYMBOL "C.S." INDICATES THAT CELLAR CANNOT BE SERVED.
  - ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
  - ALL MANHOLES SHALL BE 4'-0" IN DIAMETER UNLESS OTHERWISE NOTED.

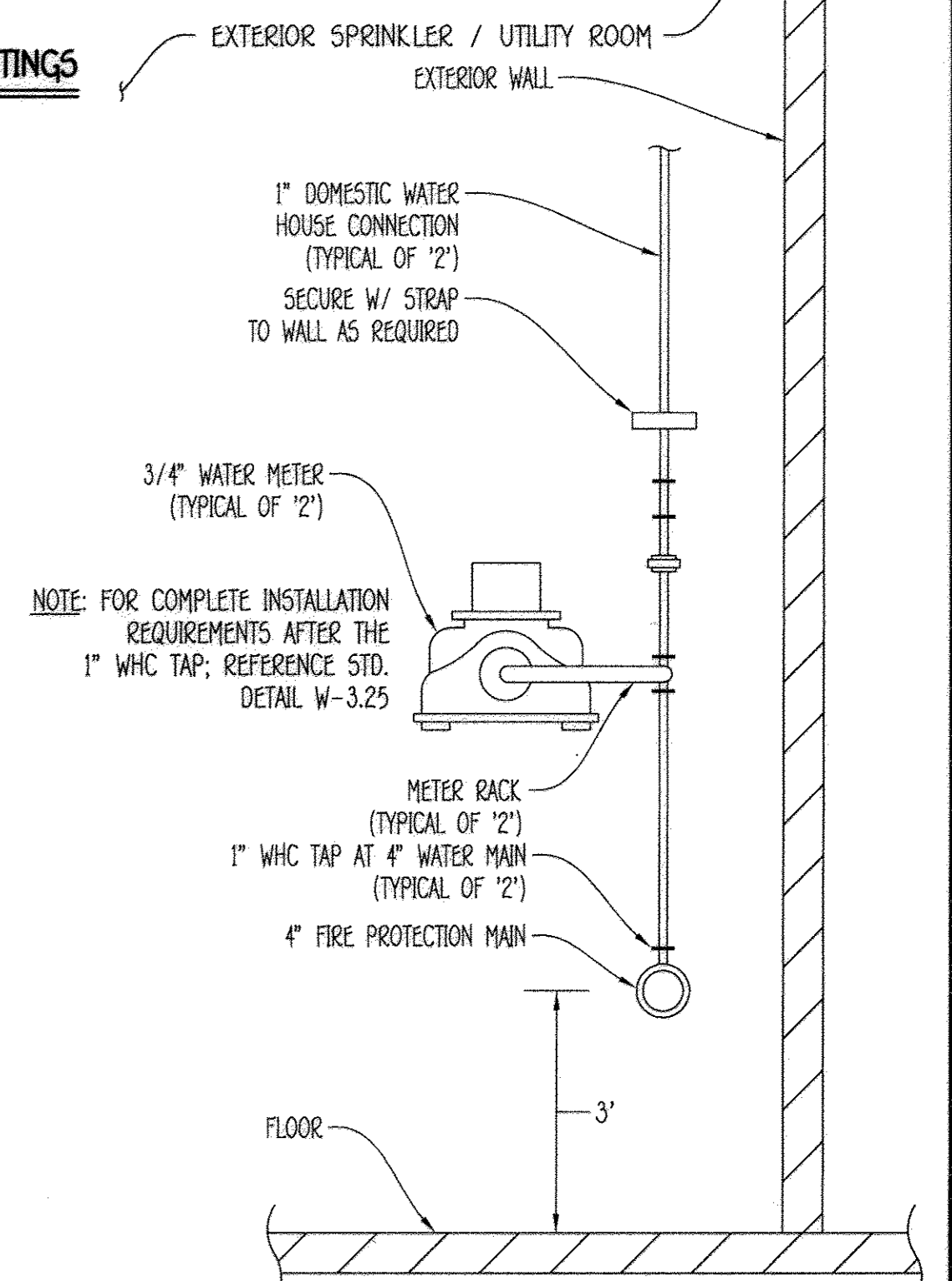
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>John C. Gen</i> 3/16/15 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>Paul W. Kriebel</i> 3-25-15 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A ONLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12043 EXPIRATION DATE IS 7/15/16. <b>FISHER, COLLINS &amp; CARTER, INC.</b> CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLSWORTH CITY, MARYLAND 21042 (410) 461-2295 <i>Paul W. Kriebel</i> #12043 DESIGNED BY: B.C.R. DRAWN BY: B.C.R. CHECKED BY: P.W.K. DATE: FEBRUARY, 2015	WATER & SEWER MAIN EXTENSIONS TITLE SHEET 600' SCALE MAP NO. 38 BLOCK NO. 19 & 20 F.C.C. WORK ORDER NO. 09014-3009 FILE NAME: WATER & SEWER MAIN EXTENSION PLAN	<b>OXFORD SQUARE</b> LOTS 224 THRU 241, OPEN SPACE LOTS 242-243 & CONDO BLDG. NOS. 1, 2 & 3 WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 14-4859-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 1 OF 5
--	--	---	---	---

I:\2009\09014\09014.dwg\Water & Sewer Contract 3009 - Contract No. 14-4859-D (SDP-14-071) (P-15-021)\Final\09014-3009 Water & Sewer Contract Plan.dwg, 2/24/2015 10:52:20 AM



**ENLARGEMENT: EXTERIOR SPRINKLER / UTILITY ROOM W/ 4" FIRE PROTECTION MAIN & TWO (2) INSIDE DOMESTIC METER SETTINGS**

**WHC NOTE:** THE DOMESTIC WATER HOUSE CONNECTIONS FOR UNITS 'G' & 'H' OF CONDO BUILDINGS NOS. 1, 2 & 3 SHALL BE "SPLIT" FROM THE 4" INSIDE COMBINED FIRE / DOMESTIC WATER MAIN WITHIN THE INTERIOR OF THE SPRINKLER / UTILITY ROOM & SHALL HAVE 3/4" INSIDE METER SETTINGS.



**NOTE:** FOR COMPLETE INSTALLATION REQUIREMENTS AFTER THE 1" WHC TAP; REFERENCE STD. DETAIL W-3.25

**NOTE:** THIS ORIGINAL CONSTRUCTION PLAN, SHEET 2 OF 5 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON MARCH 25, 2015.

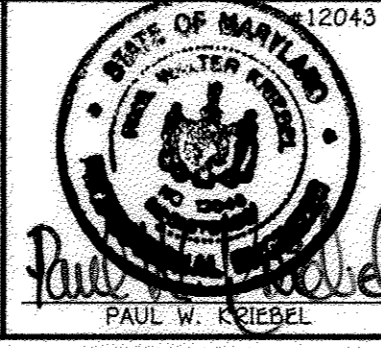
**DECK WAIVER REFERENCE NOTE**  
BY LETTER DATED DECEMBER 10, 2015, MR. THOMAS BUTLER, PROPERTY DIRECTOR, DEPARTMENT OF PUBLIC WORKS, APPROVED A WAIVER ALLOWING THE CONSTRUCTION OF A DECK, 8' DEEP MAXIMUM, ON LOTS 224 THRU 241, WHICH PROVIDES A MAXIMUM OF 5' INTO THE 10' STRUCTURE SETBACK FROM THE PLUMB SEWER, WATER AND UTILITY EASEMENT.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

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. 12043 EXPIRATION DATE IS 7/16/16.

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2899



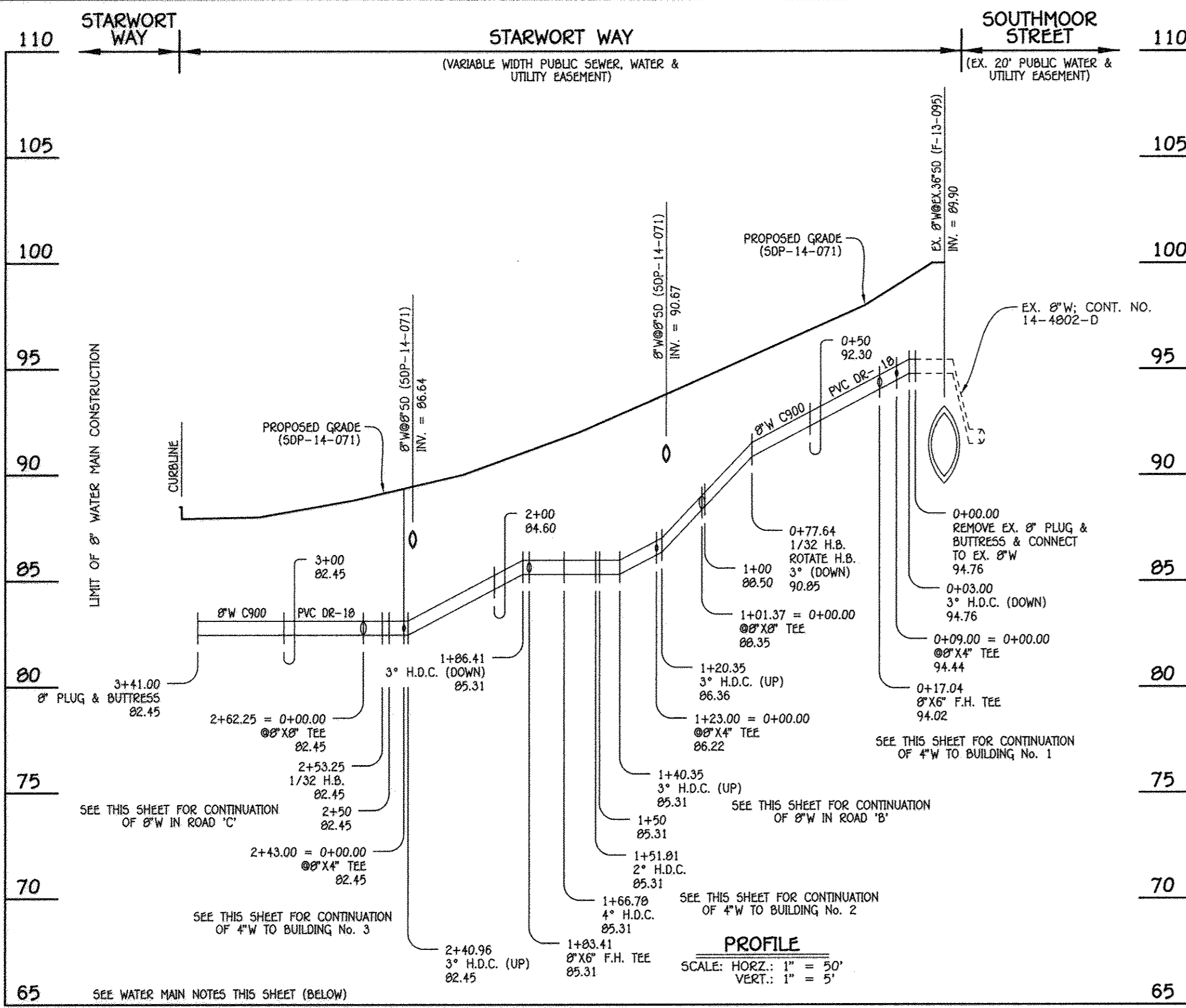
DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.K.
DATE:	NOVEMBER, 2015
BY:	NO.
REVISION:	

<b>WATER &amp; SEWER MAIN EXTENSIONS PLAN</b>	
600' SCALE MAP NO. 38	BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO. 09014-3009	
DATE:	4/5/15
FILE NAME:	WATER & SEWER MAIN EXTENSION PLAN

**OXFORD SQUARE**  
LOTS 224 THRU 241, OPEN SPACE LOTS 242-243 & CONDO BLDG. NOS. 1, 2 & 3  
WATER & SEWER MAIN EXTENSIONS  
CONTRACT NO. 14-4859-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

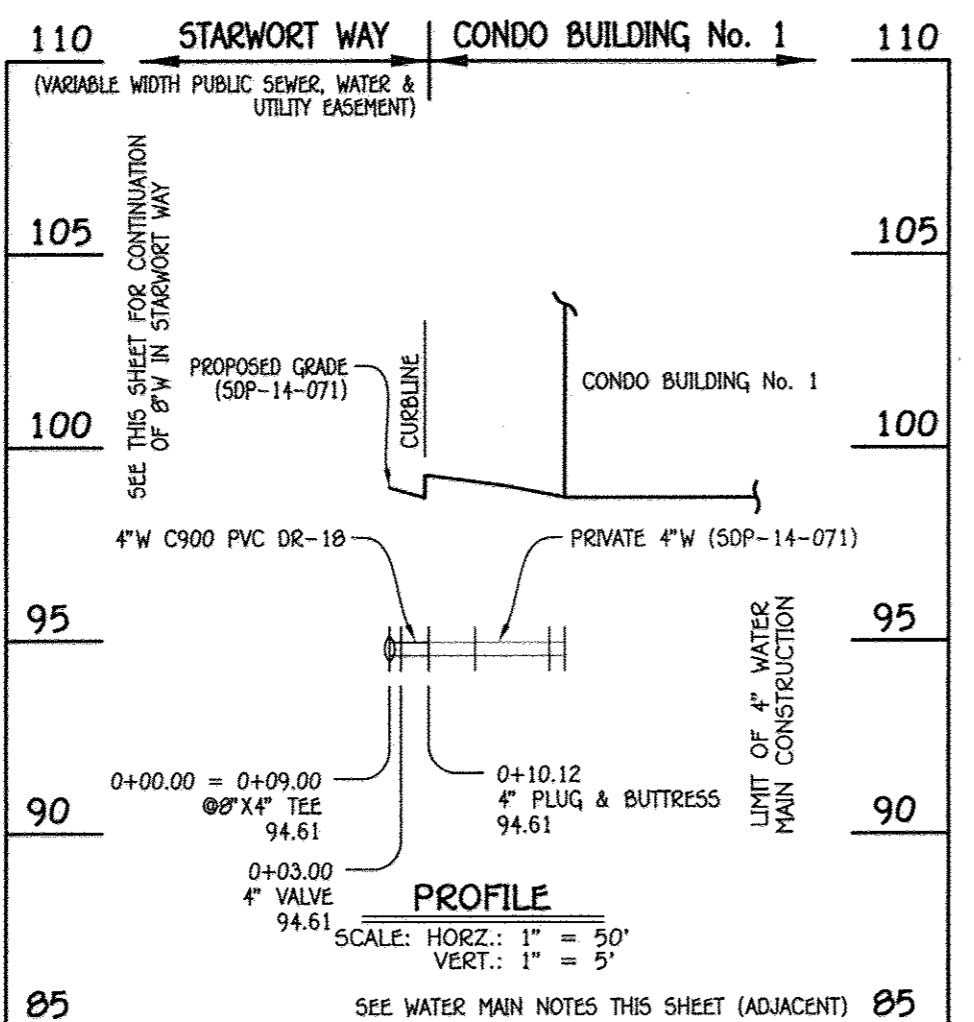
SCALE AS SHOWN  
SHEET 2 OF 5

E:\2009\09014\043\Water & Sewer\Contract\3009 - Contract No. 14-4859-d (SOP-14-071)\_14-15-02\15\Final\Scale at Rev. 2015\09014-3009 Water & Sewer Contract Plan.dwg, 11/27/2015 3:09:03 PM



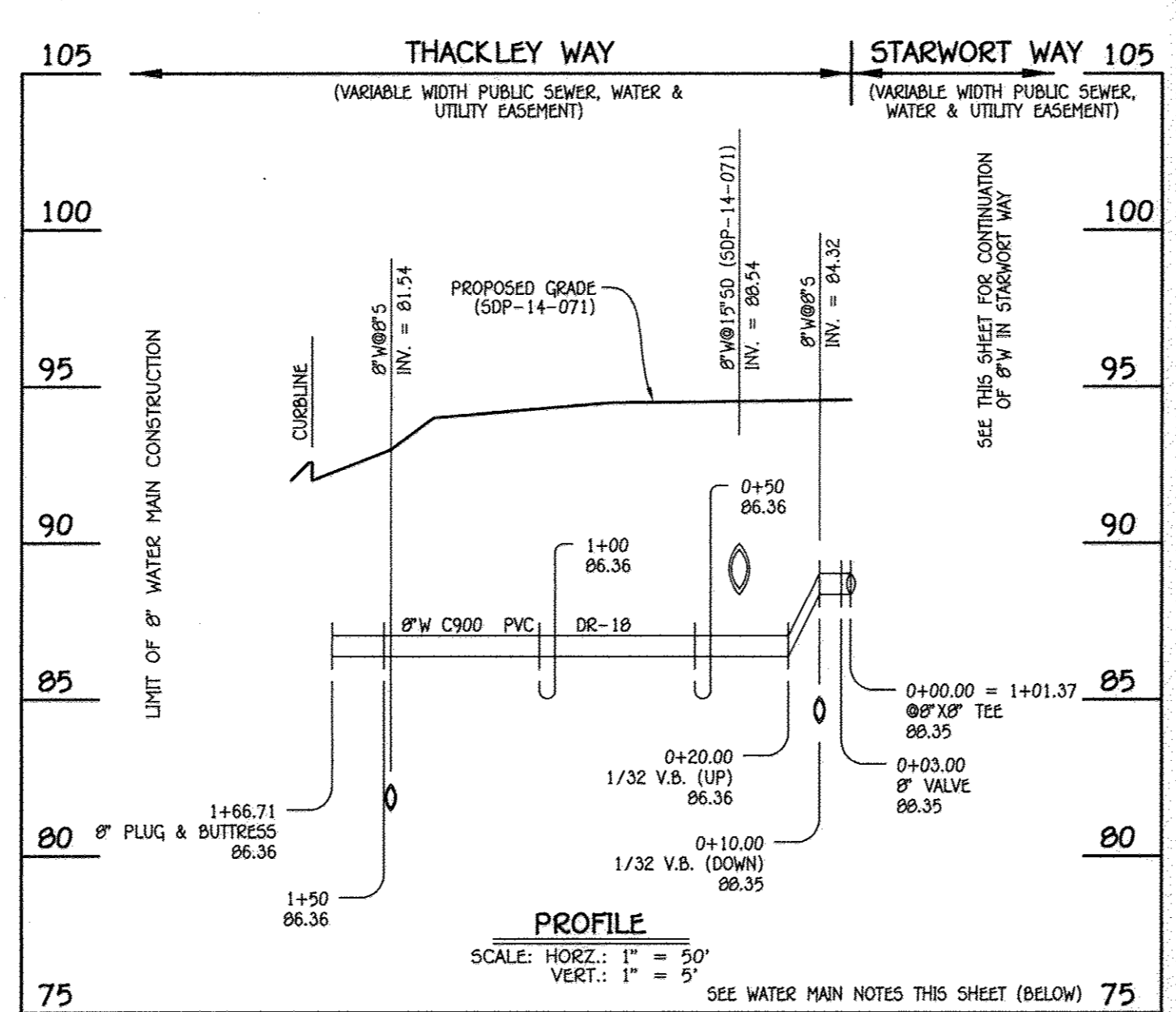
W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00	EX. 8" PLUG & BUTTRESS	552124.36	1366803.05
0+09.00	8" X 4" TEE	552120.40	1366811.12
0+17.04	8" F.H. TEE	552116.83	1366818.33
0+77.64	1/32 H.B.	552090.00	1366872.66
1+01.37 = 0+00.00	8" X 8" TEE	552075.51	1366891.45
1+23.00	8" X 4" TEE	552062.29	1366908.50
1+51.81	2" H.D.C.	552044.70	1366931.30
1+66.78	4" H.D.C.	552035.10	1366942.00
1+83.41	8" X 6" F.H. TEE	552023.50	1366954.80
2+43.00	8" X 4" TEE	551981.94	1366997.50
2+53.25 = 0+00.00	1/32 H.B.	551974.79	1367004.84
2+62.25	8" X 8" TEE	551969.84	1367012.36
3+41.00	8" PLUG & BUTTRESS	551926.57	1367078.15

8" WATER MAIN: STARWORT WAY



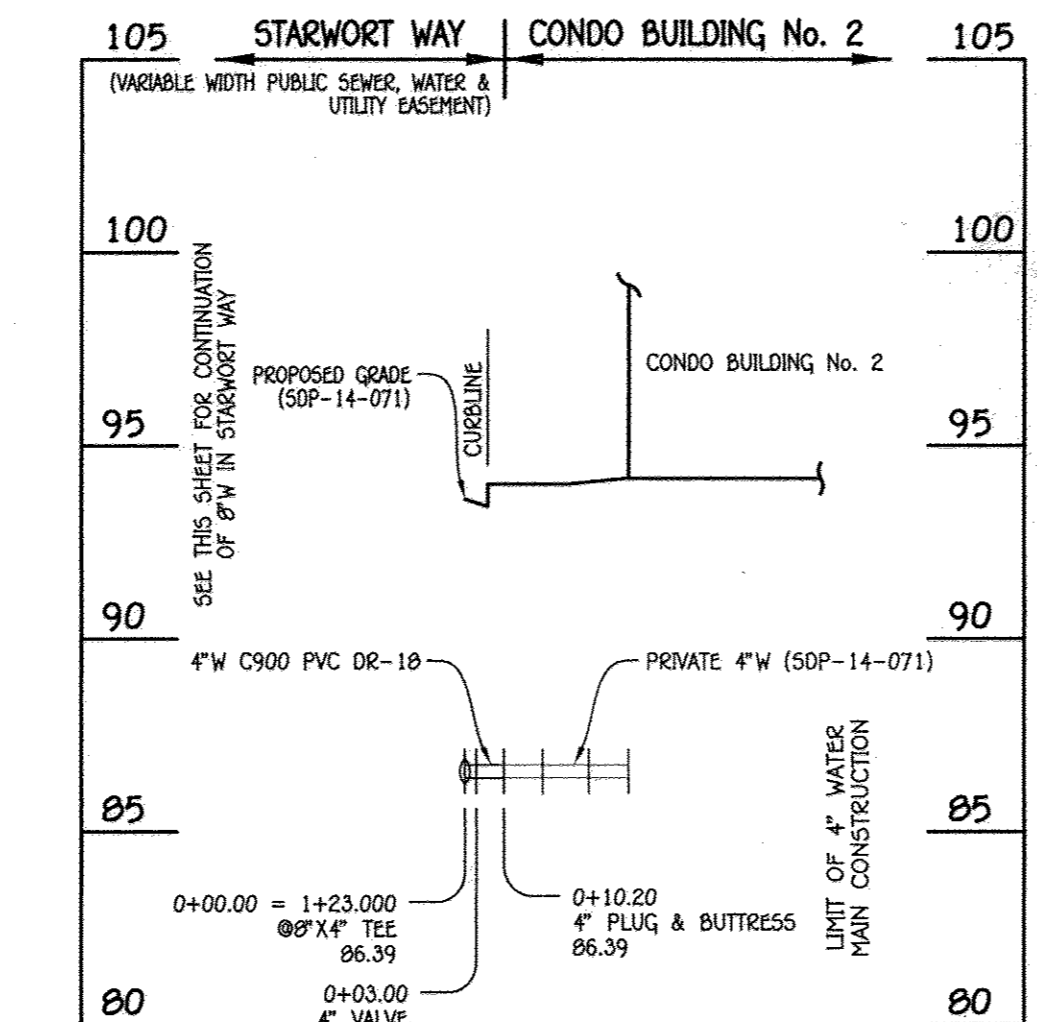
4" WATER MAIN: CONDO BUILDING No. 1

W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00	8" X 4" TEE	552120.40	1366811.12
0+03.00	4" VALVE	552123.09	1366812.45
0+10.12	4" PLUG & BUTTRESS	552129.47	1366815.60



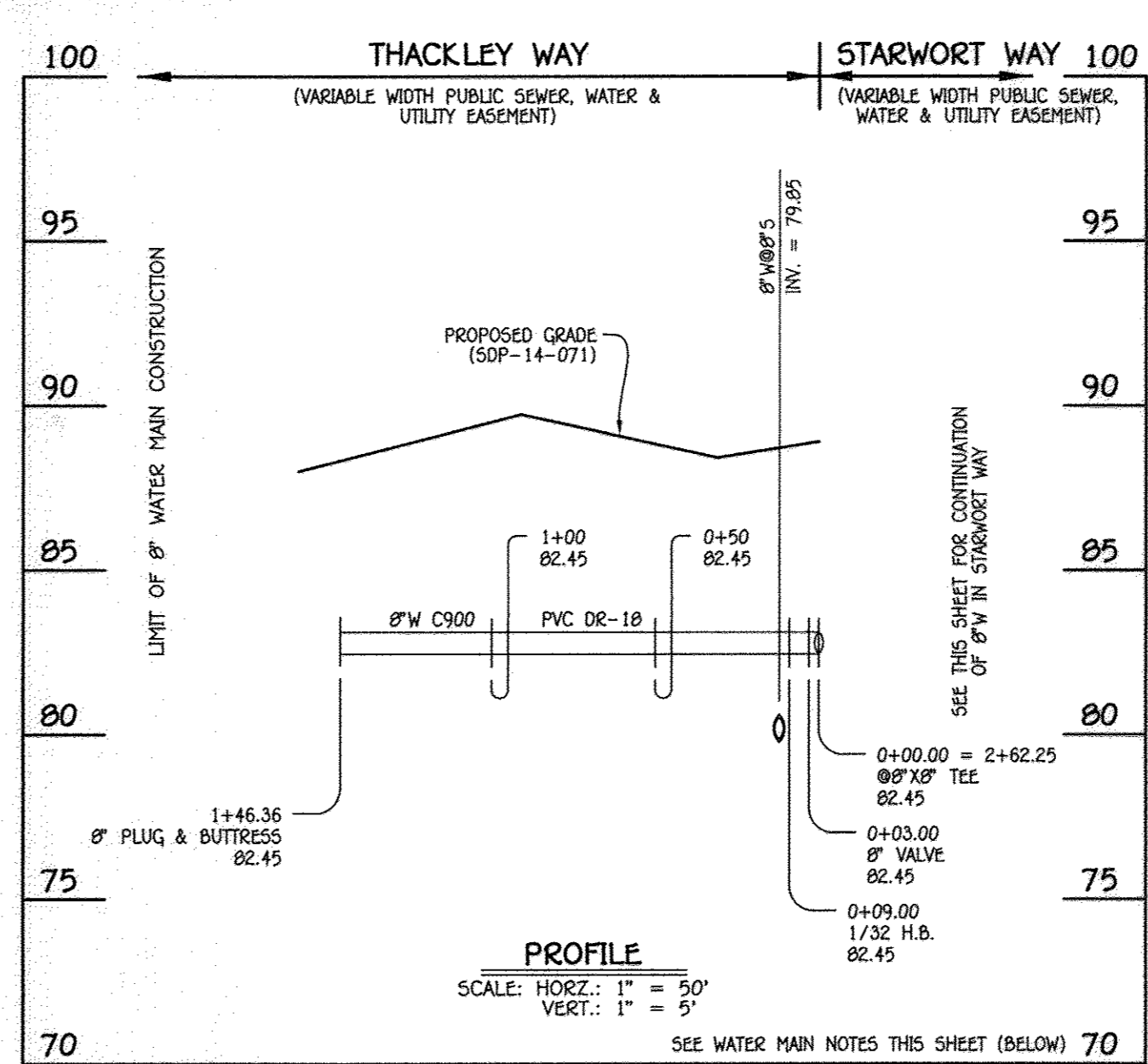
8" WATER MAIN: THACKLEY WAY

W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00 = 1+01.37	8" X 8" TEE	552075.51	1366891.45
0+03.00	8" VALVE	552073.13	1366899.62
0+48.21	1/32 H.B.	552037.34	1366862.00
1+66.71	8" PLUG & BUTTRESS	551931.09	1366809.53



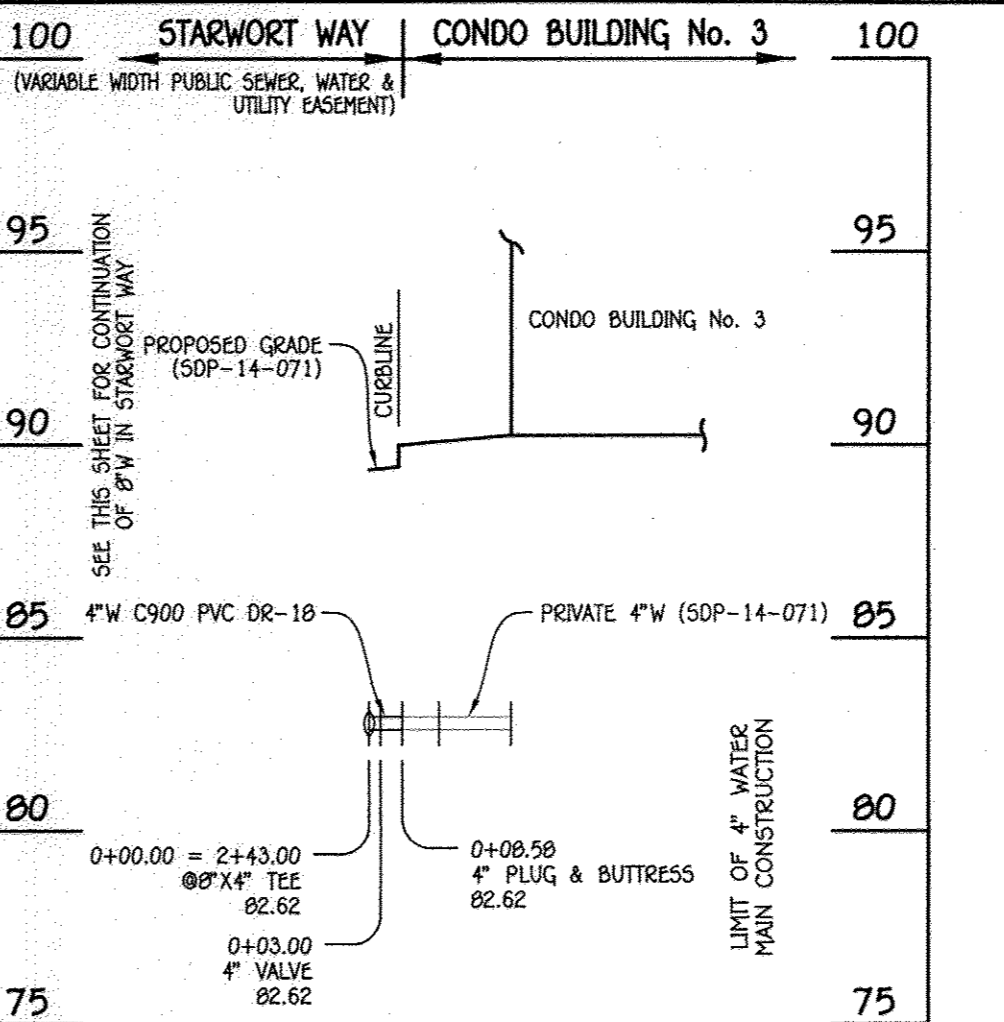
4" WATER MAIN: CONDO BUILDING No. 2

W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00	8" X 4" TEE	552062.29	1366908.50
0+03.00	4" VALVE	552064.67	1366910.41
0+10.20	4" PLUG & BUTTRESS	552070.37	1366914.80



8" WATER MAIN: THACKLEY WAY

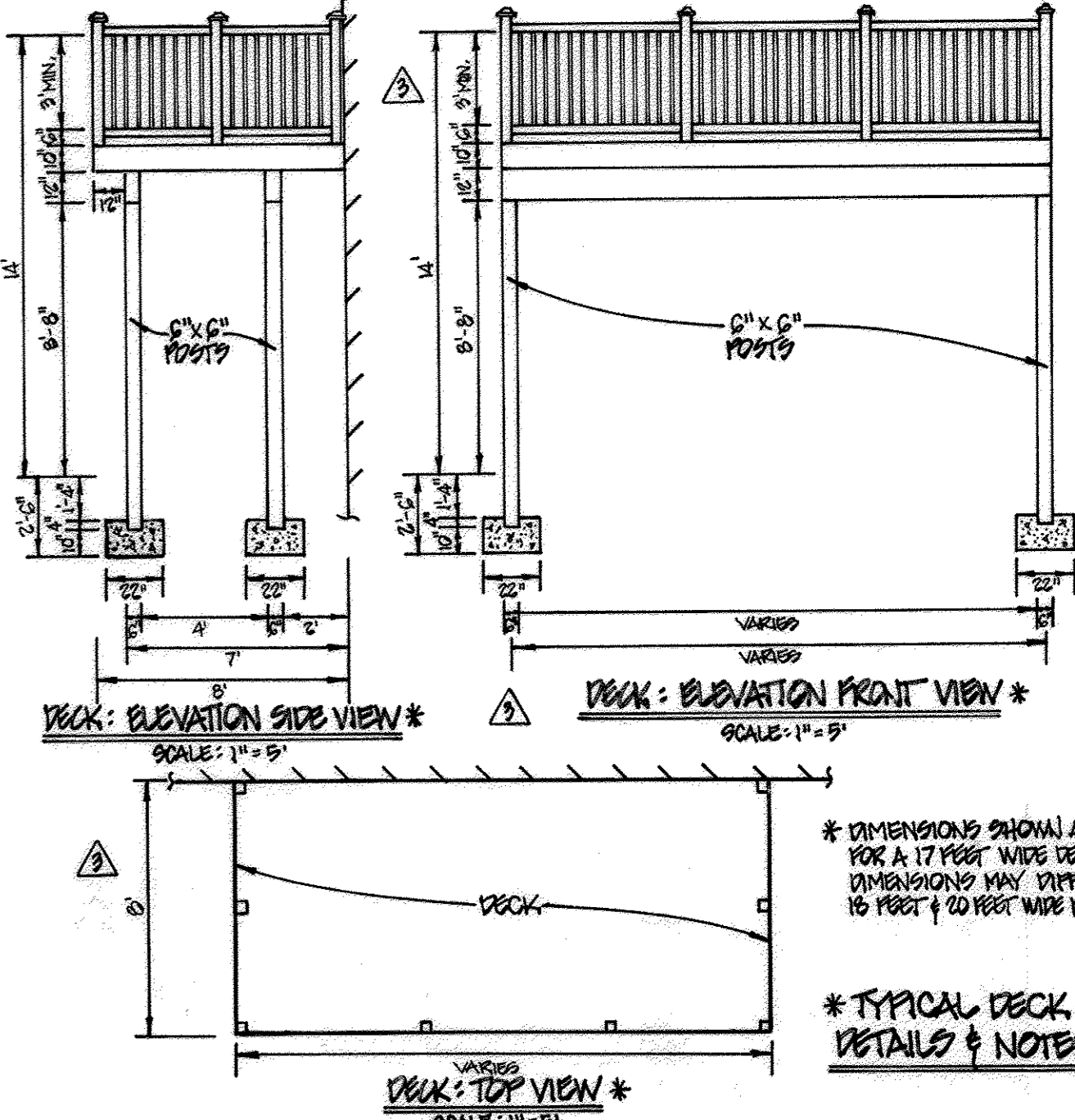
W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00 = 2+62.25	8" X 8" TEE	551969.84	1367012.36
0+03.00	8" VALVE	551967.34	1367010.71
0+09.00	1/32 H.B.	551962.32	1367007.41
1+46.36	8" PLUG & BUTTRESS	551836.17	1366948.64



4" WATER MAIN: CONDO BUILDING No. 3

W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00	8" X 4" TEE	551981.94	1366997.50
0+03.00	4" VALVE	551984.09	1366999.59
0+08.58	4" PLUG & BUTTRESS	551988.09	1367003.48

W.M. STA.	APPURTENANCE	NORTHING	EASTING
0+00.00 = 2+62.25	8" X 8" TEE	551969.84	1367012.36
0+03.00	8" VALVE	551967.34	1367010.71
0+09.00	1/32 H.B.	551962.32	1367007.41
1+46.36	8" PLUG & BUTTRESS	551836.17	1366948.64



WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
224	6974 SOUTHMOOR STREET	SMH 115 28'	SMH 110 42'
225	6976 SOUTHMOOR STREET	SMH 115 20'	SMH 110 59'
226	6978 SOUTHMOOR STREET	SMH 115 20'	SMH 110 59'
227	6980 SOUTHMOOR STREET	SMH 115 66'	SMH 110 17'
228	6982 SOUTHMOOR STREET	SMH 115 66'	SMH 110 17'
229	7227 THACKLEY WAY	SMH 115 20'	SMH 110 25'
230	7225 THACKLEY WAY	SMH 115 20'	SMH 110 25'
231	7223 THACKLEY WAY	SMH 115 29'	SMH 110 60'
232	7221 THACKLEY WAY	SMH 115 29'	SMH 110 60'
233	7208 THACKLEY WAY	SMH 55 99'	SMH 50 89'
234	7206 THACKLEY WAY	SMH 55 99'	SMH 50 89'
235	7204 THACKLEY WAY	SMH 55 99'	SMH 50 183'
236	7202 THACKLEY WAY	SMH 55 84'	SMH 50 183'
237	7201 THACKLEY WAY	SMH 55 84'	SMH 50 183'
238	7203 THACKLEY WAY	SMH 55 78'	SMH 50 169'
239	7205 THACKLEY WAY	SMH 55 78'	SMH 50 169'
240	7207 THACKLEY WAY	SMH 55 122'	SMH 50 156'
241	7209 THACKLEY WAY	SMH 55 122'	SMH 50 156'
1-A	7335 A SAINT MARGARETS BOULEVARD	SMH 60 68'	SMH 65 22'
1-B	7335 A SAINT MARGARETS BOULEVARD	SMH 60 68'	SMH 65 22'
1-C	7337 A SAINT MARGARETS BOULEVARD	SMH 30 41'	SMH 65 20'
1-D	7337 B SAINT MARGARETS BOULEVARD	SMH 30 41'	SMH 65 20'
1-E	7339 A SAINT MARGARETS BOULEVARD	SMH 30 25'	SMH 65 28'
1-F	7339 B SAINT MARGARETS BOULEVARD	SMH 30 25'	SMH 65 28'
1-G	7341 A (WITHIN SPRINKLER ROOM)	Supplied by 4" water line	
1-H	7341 B (WITHIN SPRINKLER ROOM)	Supplied by 4" water line	
2-A	7325 A SAINT MARGARETS BOULEVARD	SMH 60 45'	SMH 55 78'
2-B	7325 B SAINT MARGARETS BOULEVARD	SMH 60 45'	SMH 55 78'
2-C	7327 A SAINT MARGARETS BOULEVARD	SMH 60 24'	SMH 55 102'
2-D	7327 B SAINT MARGARETS BOULEVARD	SMH 60 24'	SMH 55 102'
2-E	7329 A SAINT MARGARETS BOULEVARD	SMH 60 13'	SMH 65 77'
2-F	7329 B SAINT MARGARETS BOULEVARD	SMH 60 13'	SMH 65 77'
2-G	7331 A (WITHIN SPRINKLER ROOM)	Supplied by 4" water line	
2-H	7331 B (WITHIN SPRINKLER ROOM)	Supplied by 4" water line	
3-A	7315 A SAINT MARGARETS BOULEVARD	SMH 35 20'	SMH 55 58'
3-B	7315 B SAINT MARGARETS BOULEVARD	SMH 35 20'	SMH 55 58'
3-C	7317 A SAINT MARGARETS BOULEVARD	SMH 35 26'	SMH 55 89'
3-D	7317 B SAINT MARGARETS BOULEVARD	SMH 35 26'	SMH 55 89'
3-E	7319 A SAINT MARGARETS BOULEVARD	SMH 35 58'	SMH 55 25'
3-F	7319 B SAINT MARGARETS BOULEVARD	SMH 35 58'	SMH 55 25'
3-G	7321 A (WITHIN SPRINKLER ROOM)	Supplied by 4" water line	
3-H	7321 B (WITHIN SPRINKLER ROOM)	Supplied by 4" water line	

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 3 OF 5 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON MARCH 25, 2015.

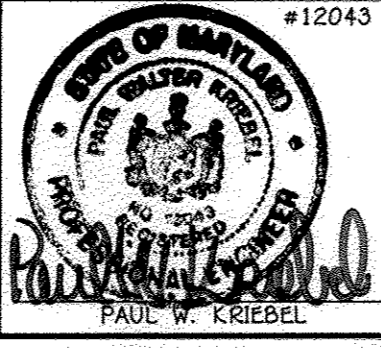
- WATER MAIN NOTES:
1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE, DR-18.
  2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
  3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
  4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

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. 12043 EXPIRATION DATE IS 7/16/16.

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALDORNE NATIONAL PARK  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461 - 2899



DESIGNED BY: B.C.R.  
DRAWN BY: POC  
CHECKED BY: P.W.K.  
DATE: November, 2015

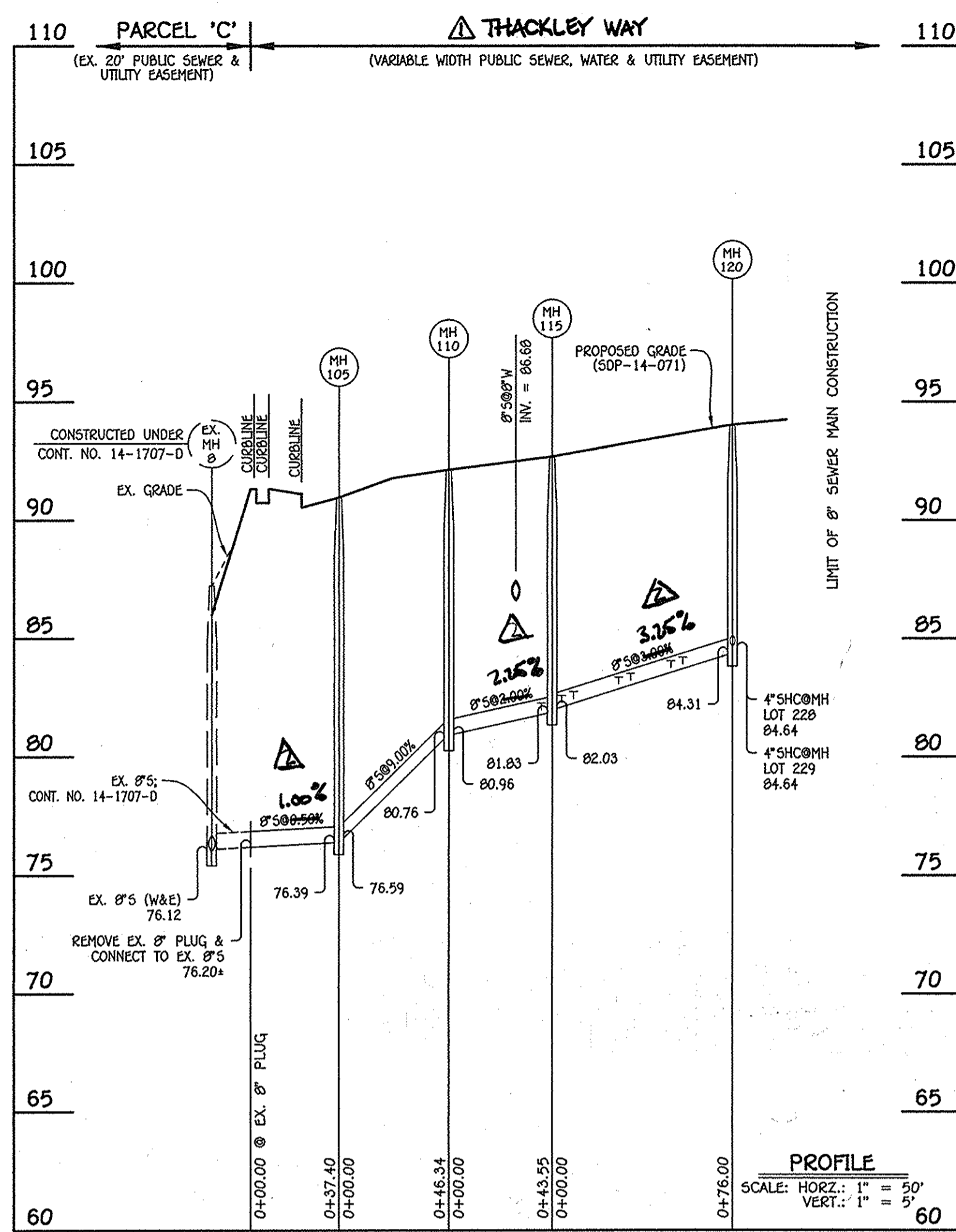
WATER MAIN EXTENSIONS  
PROFILES, CHARTS, NOTES & TABLE

600' SCALE MAP NO. 38 BLOCK NO. 19 & 20  
F.C.C. WORK ORDER NO. 09014-3009

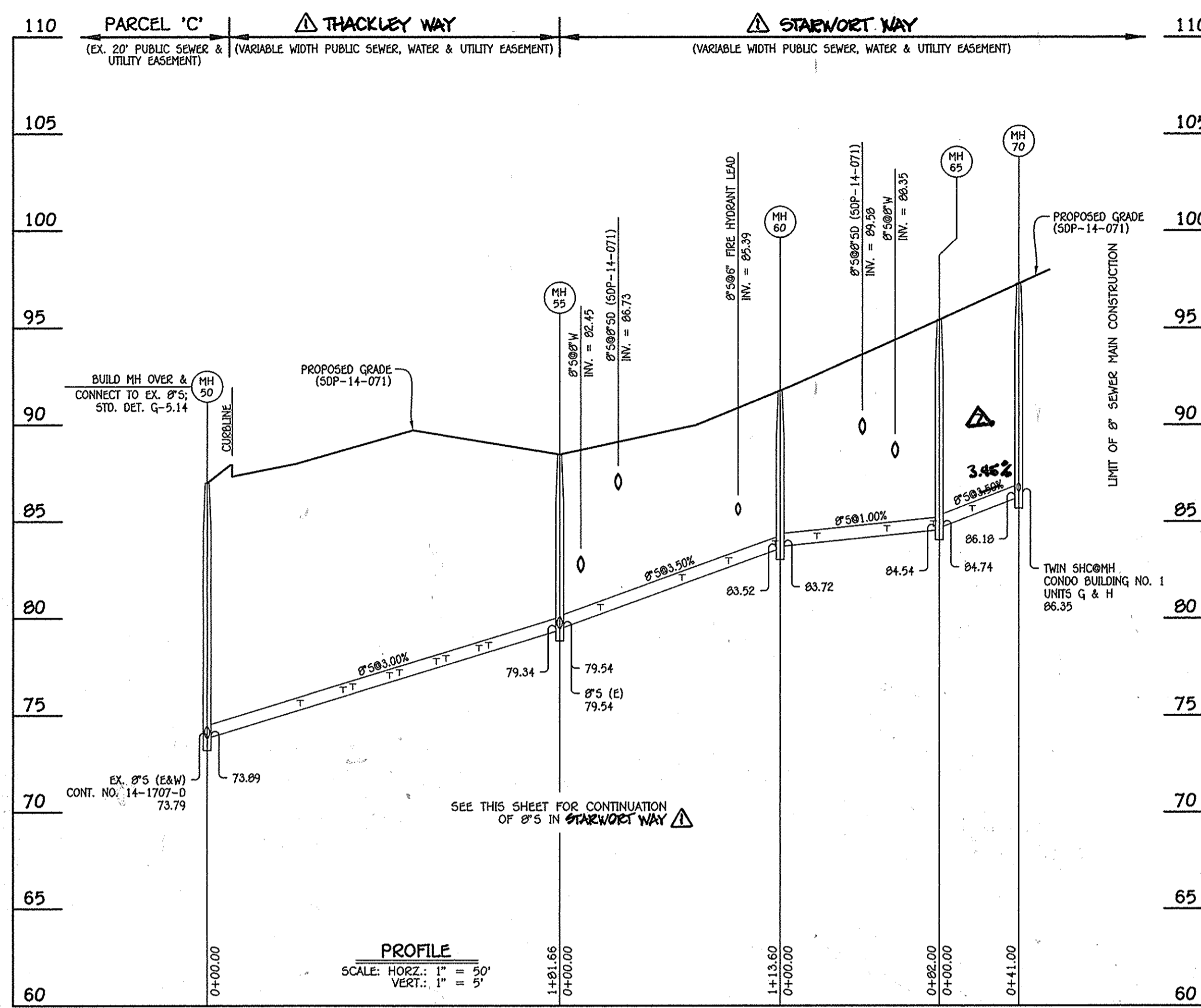
FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

OXFORD SQUARE  
LOTS 224 THRU 241, OPEN SPACE  
242-243 & CONDO BLDG. NOS. 1, 2 & 3  
WATER & SEWER MAIN EXTENSIONS  
CONTRACT NO. 14-4859-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

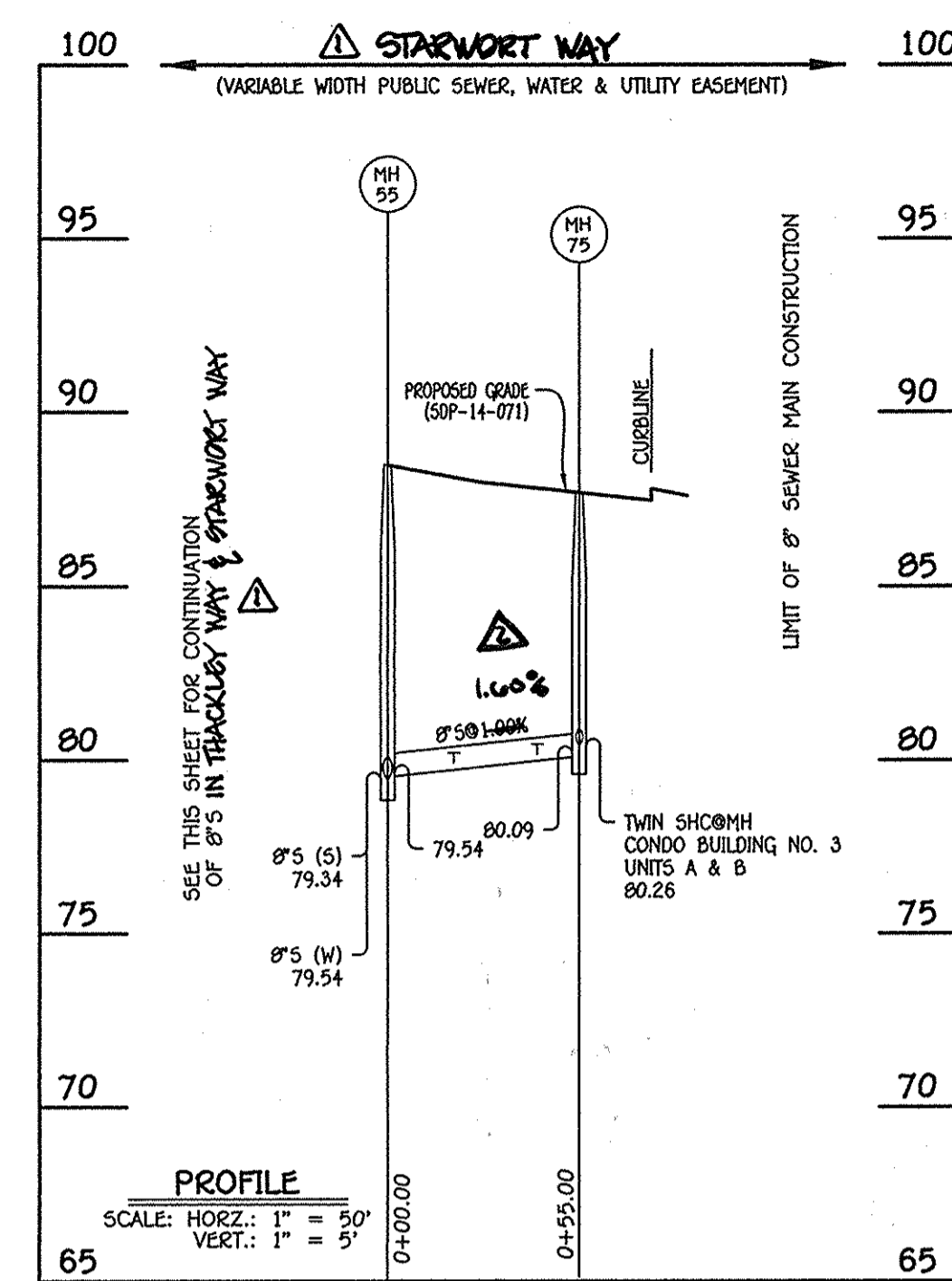
SCALE AS SHOWN  
SHEET 3 OF 5



8" SEWER MAIN: THACKLEY WAY



8" SEWER MAIN: THACKLEY WAY & STARWORT WAY



8" SEWER MAIN: STARWORT WAY

NO.	NORTHING	EASTING	RIM ELEVATION
75	551924.47	1387061.19	87.69

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 55 TO MH 75					
0+19 LT.	3-F	79.81	80.29	84.59	90.29
0+19 LT.	3-E	79.81	80.25	84.55	90.29
0+43 LT.	3-D	80.05	80.53	84.83	89.82
0+43 LT.	3-C	80.05	80.49	84.79	89.82
①MH 75 LT.	3-B	80.26	80.70	85.00	88.95
②MH 75 LT.	3-A	80.26	80.76	85.06	88.95

NO.	NORTHING	EASTING	RIM ELEVATION
EX. 8" PLUG	551849.49	1386838.02	---
105	551883.73	1386853.06	90.97
110	551920.62	1386825.01	92.14
115	551962.76	1386814.02	92.89
120	552030.91	1386847.67	94.02

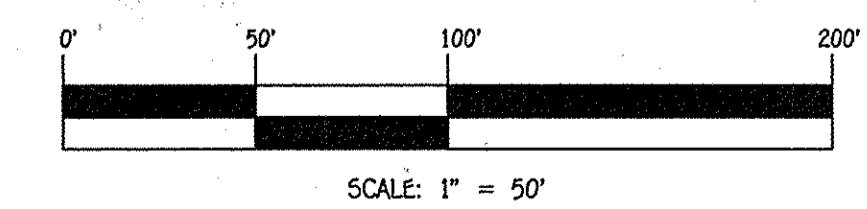
NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

NO.	NORTHING	EASTING	RIM ELEVATION
50	551787.96	1386935.94	87.00
55	551952.15	1387013.66	88.47
60	552031.39	1386932.26	91.76
65	552081.48	1386867.34	95.42
70	552099.61	1386830.57	97.28

NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EASEMENT	M.C.E.	SLAB
MH 50 TO MH 55					
0+48 RT.	241	75.50	75.74	79.64	90.48
0+70 RT.	240	76.16	76.40	80.30	91.15
0+75 LT.	233	76.31	76.77	80.67	91.96
0+94 RT.	239	76.88	77.12	81.02	91.15
0+99 LT.	234	77.03	77.49	81.39	91.96
1+18 RT.	238	77.60	77.84	81.74	91.15
1+23 LT.	235	77.75	78.21	82.11	91.96
1+40 RT.	237	78.26	78.50	82.40	91.15
1+45 LT.	236	78.41	78.87	82.77	91.96
MH 55 TO MH 60					
0+21 RT.	3-G	80.36	80.80	85.10	90.96
0+21 RT.	3-H	80.36	80.76	85.06	90.96
0+63 RT.	2-A	81.83	82.23	86.53	92.35
0+63 RT.	2-B	81.83	82.27	86.57	92.35
0+87 RT.	2-C	82.67	83.07	87.37	93.02
0+87 RT.	2-D	82.67	83.11	87.41	93.02
1+11 RT.	2-E	83.51	83.91	88.21	93.69
1+11 RT.	2-F	83.51	83.95	88.25	93.69
MH 60 TO MH 65					
0+19 RT.	2-G	83.99	84.39	88.69	94.36
0+19 RT.	2-H	83.99	84.43	88.73	94.36
0+55 RT.	1-A	84.35	84.75	89.05	96.89
0+55 RT.	1-B	84.35	84.79	89.09	96.89
0+79 RT.	1-C	84.59	84.99	89.29	97.56
0+79 RT.	1-D	84.59	85.03	89.33	97.56
MH 65 TO MH 70					
0+17 RT.	1-E	85.42	85.82	90.12	98.23
0+17 RT.	1-F	85.42	85.86	90.16	98.23
①MH 70 RT.	1-G	86.35	86.75	91.05	98.90
②MH 70 RT.	1-H	86.35	86.79	91.09	98.90

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
224	047A SOUTHMOOR STREET	SMH 110	46'
225	047B SOUTHMOOR STREET	SMH 120	72'
226	047C SOUTHMOOR STREET	SMH 120	43'
227	048D SOUTHMOOR STREET	SMH 120	78'
228	048E SOUTHMOOR STREET	SMH 120	16'
229	7827 THACKLEY WAY	SMH 120	21'
230	7828 THACKLEY WAY	SMH 120	32'
231	7829 THACKLEY WAY	SMH 120	50'
232	7828 THACKLEY WAY	SMH 120	68'
233	7828 THACKLEY WAY	SMH 50	79.5'
234	7828 THACKLEY WAY	SMH 50	101.5'
235	7828 THACKLEY WAY	SMH 50	124.5'
236	7828 THACKLEY WAY	SMH 50	147'
237	7828 THACKLEY WAY	SMH 50	142'
238	7828 THACKLEY WAY	SMH 50	120'
239	7828 THACKLEY WAY	SMH 50	95.5'
240	7827 THACKLEY WAY	SMH 50	32'
241	7828 THACKLEY WAY	SMH 50	51'
1-A	7895A SAINT MARGARET BLDG.	SMH 60	59'
1-B	7895B SAINT MARGARET BLDG.	SMH 60	64'
1-C	7897A SAINT MARGARET BLDG.	SMH 70	50'
1-D	7897B SAINT MARGARET BLDG.	SMH 70	44'
1-E	7899A SAINT MARGARET BLDG.	SMH 70	31'
1-F	7899B SAINT MARGARET BLDG.	SMH 70	29'
1-G	7841A SAINT MARGARET BLDG.	SMH 70	25'
1-H	7841B SAINT MARGARET BLDG.	SMH 70	25'
2-A	7825A SAINT MARGARET BLDG.	SMH 60	54'
2-B	7825B SAINT MARGARET BLDG.	SMH 60	51'
2-C	7827A SAINT MARGARET BLDG.	SMH 60	34'
2-D	7827B SAINT MARGARET BLDG.	SMH 60	30'
2-E	7829A SAINT MARGARET BLDG.	SMH 60	19'
2-F	7829B SAINT MARGARET BLDG.	SMH 60	18'
2-G	7831A SAINT MARGARET BLDG.	SMH 60	26'
2-H	7831B SAINT MARGARET BLDG.	SMH 60	36'
3-A	7815A SAINT MARGARET BLDG.	SMH 55	71'
3-B	7815B SAINT MARGARET BLDG.	SMH 55	65'
3-C	7817A SAINT MARGARET BLDG.	SMH 55	48'
3-D	7817B SAINT MARGARET BLDG.	SMH 55	44'
3-E	7819A SAINT MARGARET BLDG.	SMH 55	29.5'
3-F	7819B SAINT MARGARET BLDG.	SMH 55	26.5'
3-G	7821A SAINT MARGARET BLDG.	SMH 55	28'
3-H	7821B SAINT MARGARET BLDG.	SMH 55	32'



CONTRACT NO. 14-4899-D  
OXFORD SQUARE  
LOTS 242 - 243 & CONDO  
BLDG. NOS. 1, 2 & 3  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

1. 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. 12043 EXPIRATION DATE IS 7/15/16.

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE BLDG. - 10722 BAITORRE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21036  
(410) 461-2255

DESIGNED BY: B.C.R.  
DRAWN BY: B.C.R.  
CHECKED BY: E.C.  
DATE: FEBRUARY, 2015

SCALE: 1" = 50'

SEWER MAIN EXTENSIONS  
PROFILES, CHARTS & TABLE

60" SCALE MAP NO. 38 BLOCK NO. 19 & 20  
F.C.C. WORK ORDER NO. 09014-3009  
FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

OXFORD SQUARE  
LOTS 224 THRU 241, OPEN SPACE LOTS  
242-243 & CONDO BLDG. NOS. 1, 2 & 3  
WATER & SEWER MAIN EXTENSIONS  
CONTRACT NO. 14-4899-D  
FIRST ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 5

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

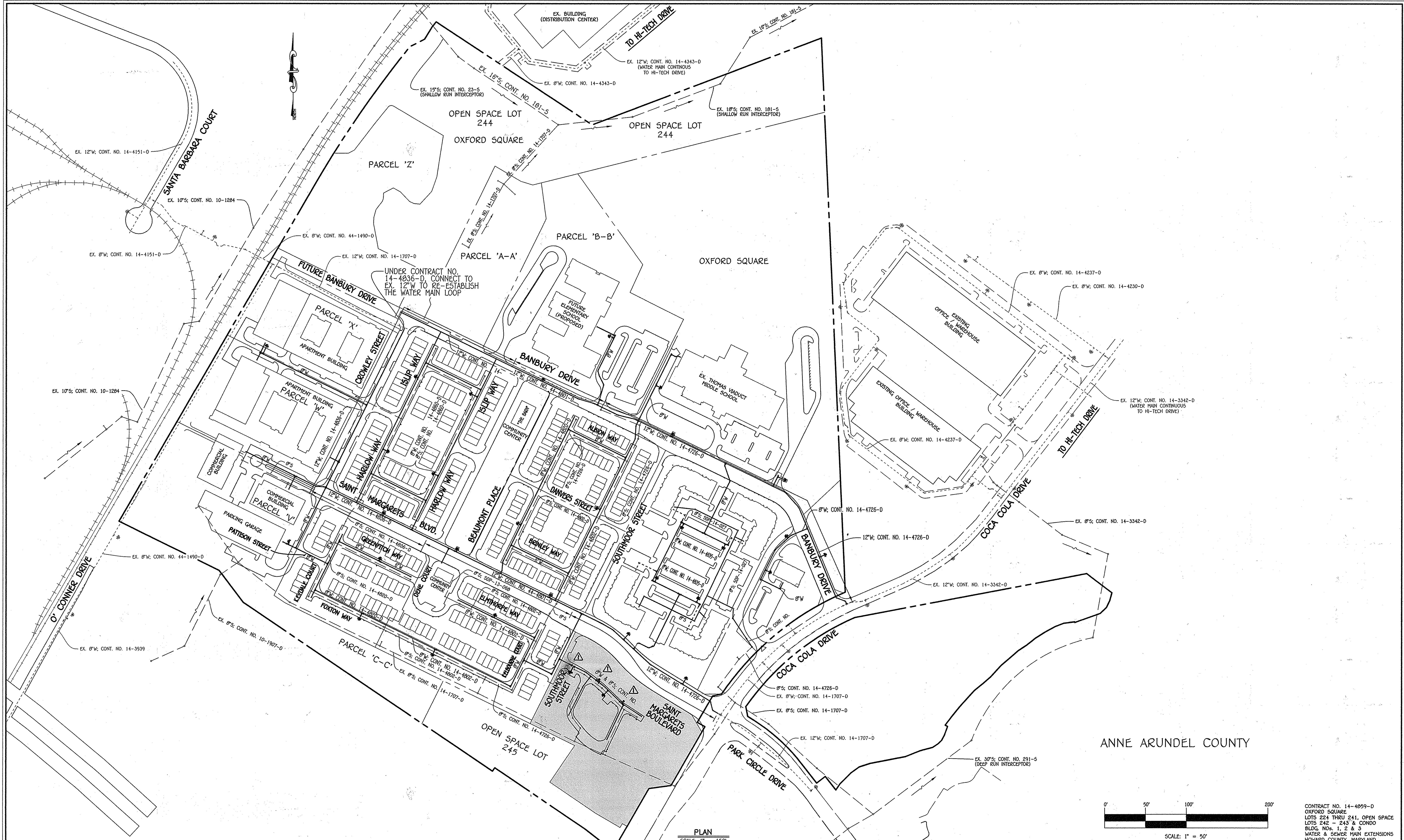
DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

1. 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. 12043 EXPIRATION DATE IS 7/15/16.

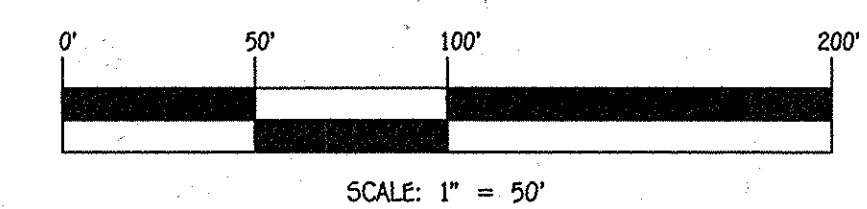
**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE BLDG. - 10722 BAITORRE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21036  
(410) 461-2255

DESIGNED BY: B.C.R.  
DRAWN BY: B.C.R.  
CHECKED BY: E.C.  
DATE: FEBRUARY, 2015

SCALE: 1" = 50'



ANNE ARUNDEL COUNTY



CONTRACT NO. 14-4859-D  
 OXFORD SQUARE  
 LOTS 224 THRU 241, OPEN SPACE  
 LOTS 242 - 243 & CONDO  
 BLDG. NOS. 1, 2 & 3  
 WATER & SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

PLAN  
SCALE: 1" = 150'

<p>DEPARTMENT OF PUBLIC WORKS          HOWARD COUNTY, MARYLAND</p> <p><i>Steve C. Green</i>          CHIEF, BUREAU OF UTILITIES</p>	<p>DEPARTMENT OF PLANNING AND ZONING          HOWARD COUNTY, MARYLAND</p> <p><i>Michael</i>          CHIEF, DEVELOPMENT ENGINEERING DIVISION</p>	<p>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. 12043 EXPIRATION DATE: 5/15/16.</p> <p><b>FISHER, COLLINS &amp; CARTER, INC.</b>          CIVIL ENGINEERING CONSULTANTS &amp; LAND SURVEYORS</p> <p>CENTENNIAL SQUARE OFFICE PARK - 10225 BALTIMORE NATIONAL PIKE          ELLSWORTH CITY, MARYLAND 21042          (410) 481 - 2255</p>	<p>#12043</p>	<p>DESIGNED BY :          B.C.R.</p> <p>DRAWN BY :          B.C.R.</p> <p>CHECKED BY :          P.W.K.</p> <p>DATE :          FEBRUARY, 2015</p>	<p>WATER &amp; SEWER MAIN EXTENSIONS OVERVIEW</p> <p>600' SCALE MAP NO. 38 BLOCK NO. 19 &amp; 20          F.C.C. WORK ORDER NO. 09014-3003</p> <p>FILE NAME : WATER &amp; SEWER MAIN EXTENSION PLAN</p>	<p>OXFORD SQUARE          LOTS 224 THRU 241, OPEN SPACE LOTS          242-243 &amp; CONDO BLDG. NOS. 1, 2 &amp; 3          WATER &amp; SEWER MAIN EXTENSIONS          CONTRACT NO. 14-4859-D          FIRST ELECTION DISTRICT          HOWARD COUNTY, MARYLAND</p> <p>SCALE AS SHOWN</p> <p>SHEET 5 OF 5</p>
---	--	--	---------------	--	---	--