

QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
0" PVC 90° ELBOW	1,983 L.F.	1,983 L.F.	PVC SDR-35	NORTH AMER. PIPE
0" PVC 45° W.P.	253 L.F.	252 L.F.	DR CL-52	AMER. CAST IRON PIPE
0" PVC 90° W.P.	691 L.F.	691 L.F.	PVC SDR-35	NORTH AMER. PIPE
MANHOLES	15 EACH	15 EA.	PRECAST CONC.	CONT. PRECAST CO.
8" PVC 90° W.P. DE-18	1,400 L.F.	1,412 L.F.	C-900 PVC DR-18	NORTH AMER. PIPE
8" PVC 90° W.P. DE-18	54 L.F.	54 L.F.	C-900 PVC DR-18	NORTH AMER. PIPE
1-1/2" W.C.	683 L.F.	680 L.F.	TYPE 'K' COPPER	MUELLER INDUST.
3" DEFLECTION COUPLING	7 EACH	7 EA.	PVC EPOXY	TYLER/UNION
1/16" H.B.	2 EACH	2 EA.	D.I.P.	TYLER/UNION
1/32" H.B.	7 EACH	7 EA.	D.I.P.	TYLER/UNION
8" X 6" F.H. TEE	3 EACH	3 EA.	D.I.P.	TYLER/UNION
8" VALVE	4 EACH	4 EA.	M.J. GATE VALVE	AMER. FLOW CONT.
6" VALVE	3 EACH	3 EA.	M.J. GATE VALVE	AMER. FLOW CONT.
FIRE HYDRANT	3 EACH	3 EA.	B 62 B	AMER. FLOW CONT.
8" PLUG & BUTTRESS	2 EACH	2 EA.	D.I.P.	TYLER/UNION
8" X 8" TEE	1 EACH	1 EA.	D.I.P.	TYLER/UNION
CONTINUITY TEST STATION	3 EACH	3 EA.		
SINGLE OUTSIDE METER SETTING	25 EACH	25 EA.	1 1/2" SINGLE METER SETTING	A.T. McDONALD
1-1/2" DRAIN	1 EACH	1 EA.	1 1/2" COPPER 'K'	MUELLER INDUST.
TYPE 'B' DROP MANHOLE	1 EACH	1 EA.	PRECAST CONC.	CONT. PRECAST CO.

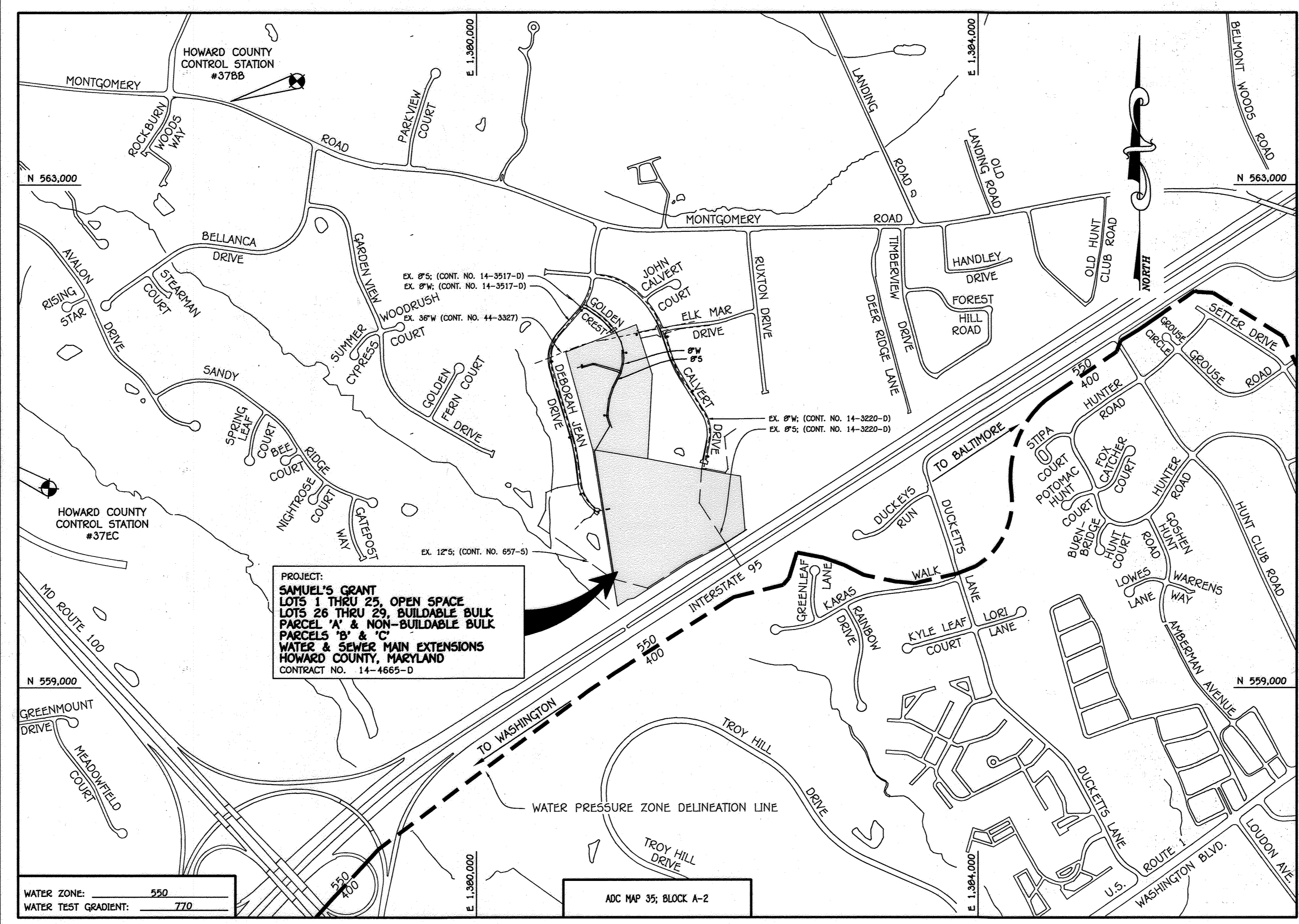
NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED
SURVEY & DRAFTING DIVISION AS-BUILT DATE:

* EXTRA PIPE AT TIE-IN AT GOLDEN CREST

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION #37EC - HORIZONTAL - NAD '83 (LOCATED ALONG THE SOUTH SIDE OF MARSHALLEE ROAD, JUST SOUTH OF KINDER CARE CENTER)
N 561,099.8280
E 1,375,580.4112
ELEVATION = 346.153 - VERTICAL - (NAVD '86)

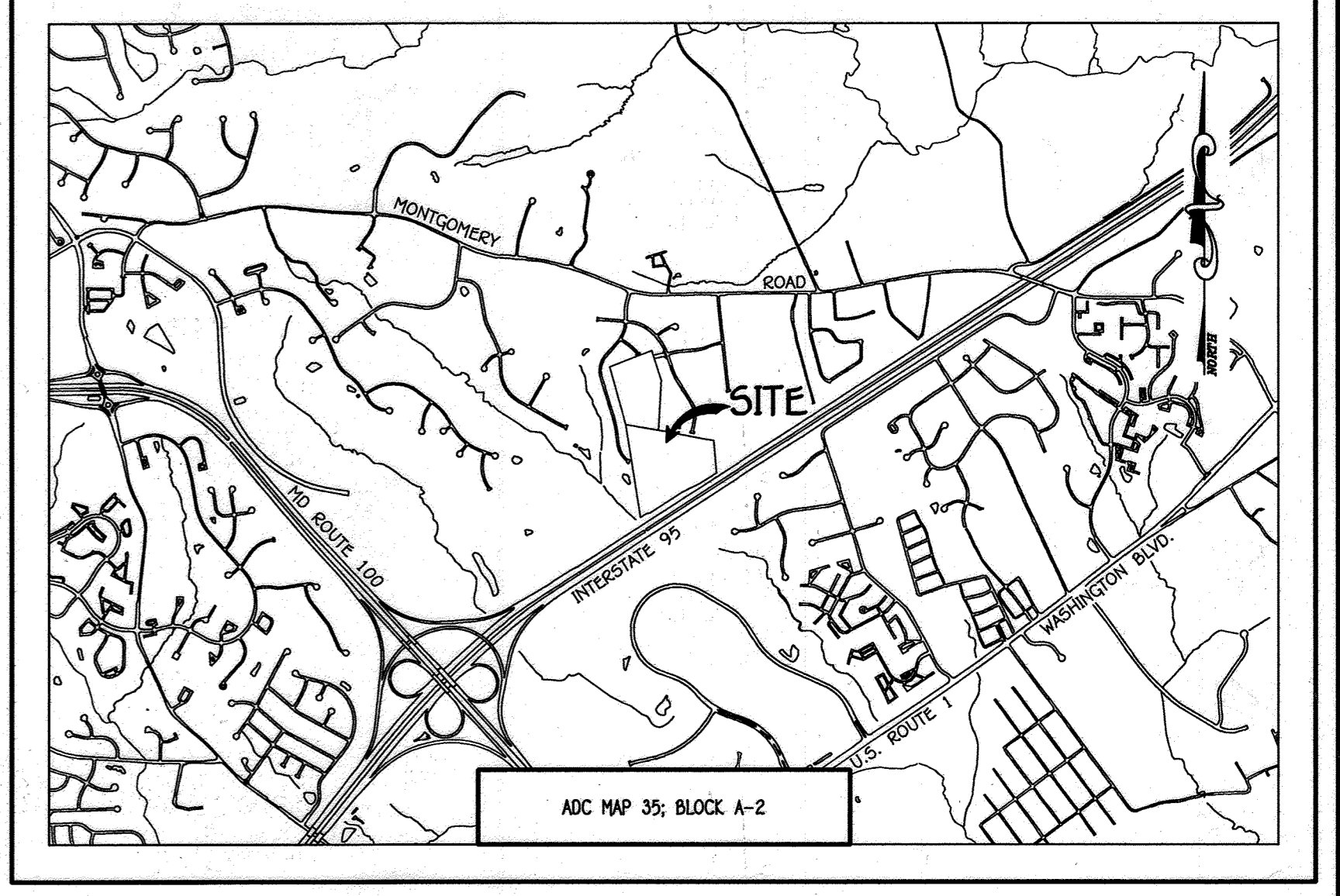
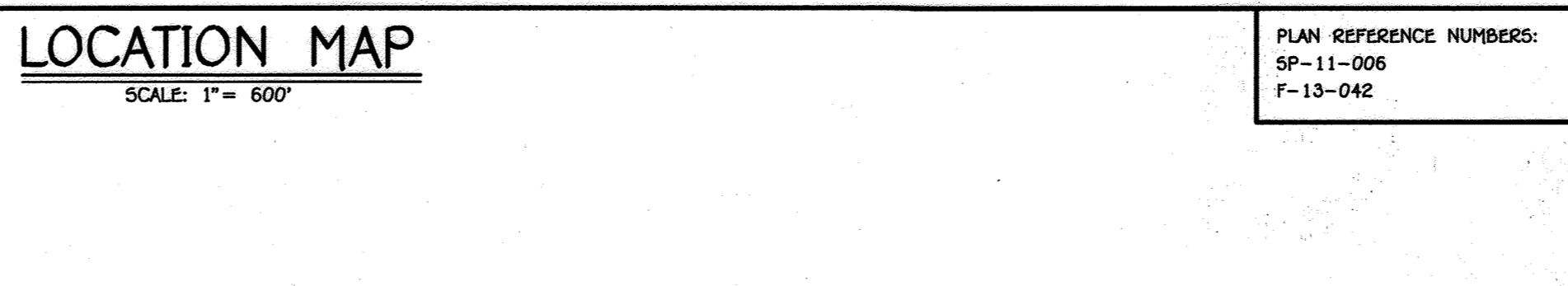
B.M.#2 - HOWARD COUNTY CONTROL STATION #37BB - HORIZONTAL - NAD '83 (LOCATED ALONG MONTGOMERY ROAD, IN FRONT OF ROCKBURN ELEMENTARY SCHOOL)
N 563,663.4480
E 1,378,040.5099
ELEVATION = 373.014 - VERTICAL - (NAVD '86)



PRIVATE WELL & PRIVATE SEPTIC SYSTEM CHART

PARCEL NO.	ADDRESS	OWNER	ABANDON WELL	ABANDON SEPTIC
104	8424 MONTGOMERY ROAD	DOBNEY FAMILY HOME, INC.	NO	YES
104	8999 MONTGOMERY ROAD	DOBNEY FAMILY HOME, INC.	NO	YES

NOTE: WATER METERS WILL NOT BE RECOVERED BY HOWARD COUNTY TO ANY NEW BUILDING UNTIL THE EXISTING WELL AND SEPTIC SYSTEMS HAVE BEEN ABANDONED IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REGULATIONS AND THE EXISTING BUILDINGS WHICH ARE TO REMAIN ARE CONNECTED TO THE PUBLIC SEWER AND WATER MAINS.



VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES

- 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 MARCH, 2009 BY FISHER, COLLINS & CARTER, 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. 37BB & NO. 37EC.
 - ALL VERTICAL CONTROLS ARE AS INDICATED IN THE BENCHMARK INFORMATION. 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 @ AT THE LOCATIONS OF THE TEST PITS. NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROJECT 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 (CONSTRUCTION SERVICES) 410-637-8713
 - BGE (EMERGENCY) 410-695-0123
 - BUREAU OF UTILITIES 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
 - 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.
 - 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 THE 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 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 18.11.4(a) OF THE HOWARD COUNTY CODE.

- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE ANWVA C900 PVC, DR-18.
 - 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 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 ANWVA 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 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 "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
 - TO ACCOMMODATE A SPRINKLER SYSTEM, ALL SINGLE FAMILY RESIDENTIAL DWELLING UNITS SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE METER SETTING, STD. DET. W-3.22.

- PART C: SEWER MAIN GENERAL NOTES**
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. AS SPECIFIED ON PLANS.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - 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 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 OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

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 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.

Paul W. Keidel, FOR: **CARMAN ASSOCIATES** DATE: 06/17/13

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 CONSERVATION DISTRICT.

Paul W. Keidel DATE: 06-17-13

F-13-042

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 506 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE ROAD CONSTRUCTION PLANS, F-13-042. THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: John L. Robertson DATE: 7/16/13
HOWARD SOIL CONSERVATION DISTRICT

CONTRACT NO. 14-4665-D

SAMUEL'S GRANT

LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29,

BUILDABLE BULK PARCEL 'A' &

NON-BUILDABLE BULK PARCELS 'B' & 'C'

WATER & SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

AS-BUILT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Silvia Chen DATE: 7/16/13
CHIEF, BUREAU OF UTILITIES

John S. M... DATE: 7/16/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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
CONTONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2822

Paul W. Keidel
PAUL W. KEIDEL

DESIGNED BY: FC REVISE PUBLIC FOREST CONSERVATION EASEMENT NO. 2A IN OPEN SPACE LOT 27 DATE: 9/20/12

DRAWN BY: FC ADD 10' PUBLIC SEWER AND UTILITY EASEMENT IN OPEN SPACE LOT 27 DATE: 9/20/12

CHECKED BY: FC ADD WATER METER NOTE, REMOVE & ADD ADDRESS TO CHART DATE: 9/20/12

DATE: 6/26/13

BY NO. FC REVISION

WATER & SEWER MAIN EXTENSIONS TITLE SHEET

600' SCALE MAP NO. 37 BLOCK NO. 5, 11 & 12

F.C.C. WORK ORDER NO. 05100

FILE NAME: WATER & SEWER MAIN EXTENSIONS TITLE SHEET

SAMUEL'S GRANT

LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29, BUILDABLE BULK PARCEL 'A' & NON-BUILDABLE BULK PARCELS 'B' & 'C' WATER & SEWER MAIN EXTENSIONS

CONTRACT NO. 14-4665-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 of 5

NOTE: THE EX. 3/4" WHC FOR EXISTING HOUSE #6464 SHALL BE REMOVED IN ITS ENTIRETY. A PLUG SHALL BE INSERTED AT THE 6" FIRE HYDRANT LEAD & THE METER RETURNED TO THE BUREAU OF UTILITIES.

NOTES
 F.H. TO 6" F.H.V. = 8.0'
 F.H. TO CONDUCTIVITY VAULT = 2.5'
 6" F.H. VALVE TO VAULT = 8.8'
 F.H. TO MH 515 = 42.5'
 6" F.H. VALVE TO MH 515 = 40.3'

NOTE: SEE SHEET 3 FOR FRONT FOOTAGE ENLARGEMENT DETAIL: LOTS 19 THRU 23
 NOTE: PRIOR TO BEGINNING INSTALLATION OF THE 8" WATER MAIN IN GOLDEN CREST, THE CONTRACTOR SHALL TEST PIT BOTH THE EX. 8" W (CONT. NO. 14-3517-D) & THE EX. 36" W (CONT. NO. 44-3327) TO DETERMINE THE "AS-BUILT" ELEVATIONS.

AS-BUILT
 PLAN
 SCALE: 1" = 50'

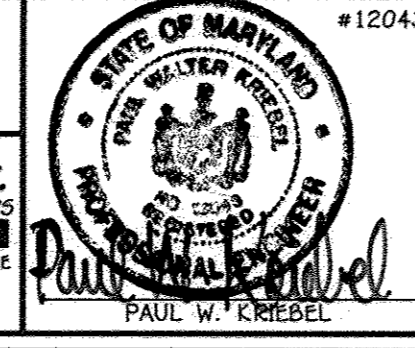
NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 2 OF 5 SUPERSEDES THE WATER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON JULY 26, 2013.

CONTRACT NO. 14-4665-D
 SAMUEL'S GRANT
 LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29, BUILDABLE BULK PARCEL 'A' & NON-BUILDABLE BULK PARCELS 'B' & 'C'
 WATER & SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 BUREAU OF UTILITIES
 9/4/15

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 9.14.15

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 7/16/16.
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDOR NATIONAL PARK ELLICOTT CITY, MARYLAND 21142 (410) 461-2995



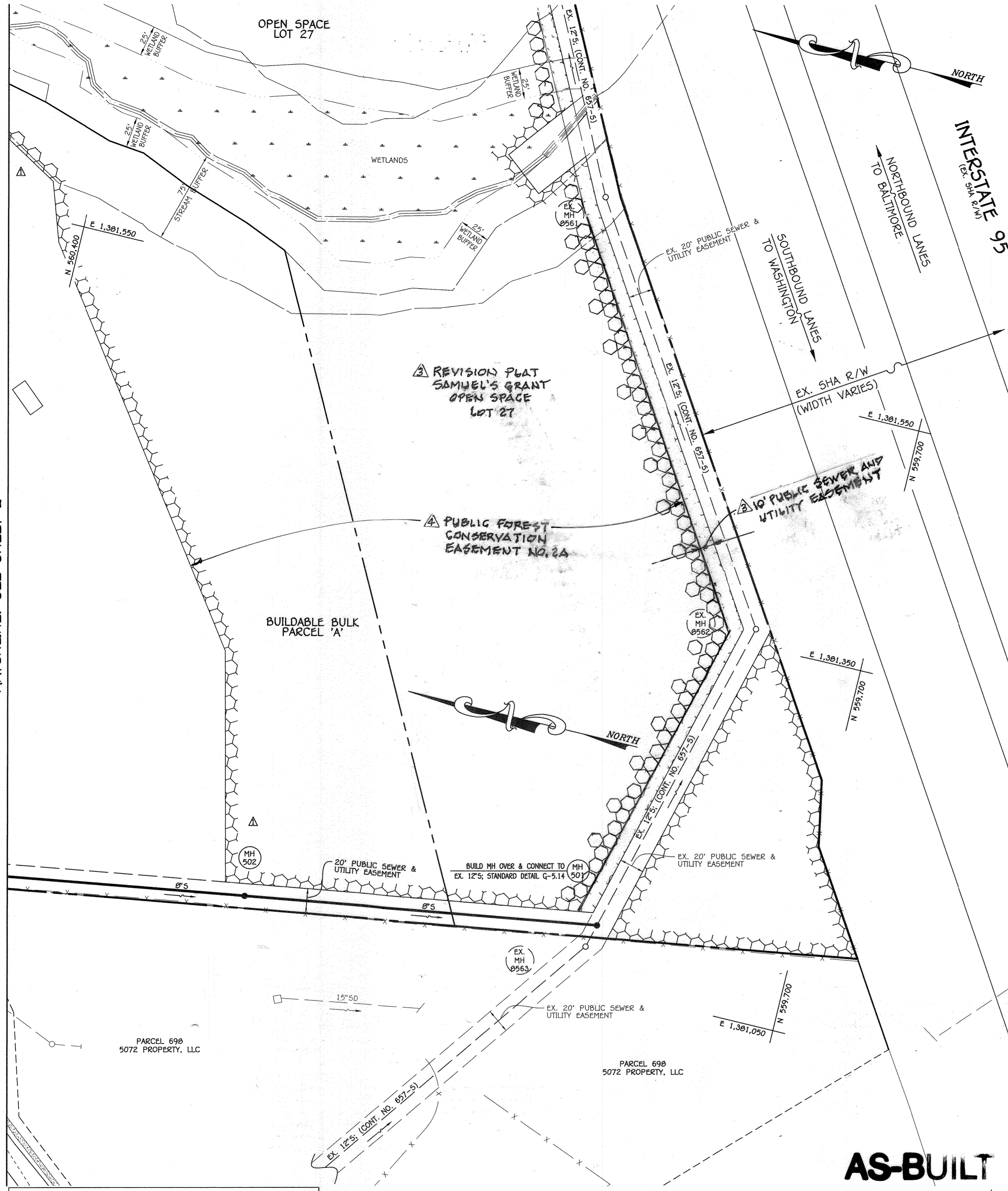
DESIGNED BY:	B.C.R.	7-21-15
DRAWN BY:	B.C.R.	7-21-15
CHECKED BY:	P.W.K.	7-21-15
DATE:	SEPTEMBER, 2015	
REVISIONS:		
1	REVISE / CORRECT FRONT FOOTAGES FOR SEVERAL LOTS	7-21-15
2	INDICATE DR-18 AT WM'S; INDICATE EX. UTILITIES; RELOCATE MH 503	7-21-15

WATER & SEWER MAIN EXTENSIONS PLAN	
60' SCALE MAP NO. 37	BLOCK NO. 5, 11 & 12
F.C.C. WORK ORDER NO. 06100	
FILE NAME:	WATER & SEWER MAIN EXTENSIONS

SAMUEL'S GRANT
 LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29, BUILDABLE BULK PARCEL 'A' & NON-BUILDABLE BULK PARCELS 'B' & 'C'
 WATER & SEWER MAIN EXTENSIONS
 CONTRACT NO. 14-4665-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 2 OF 5

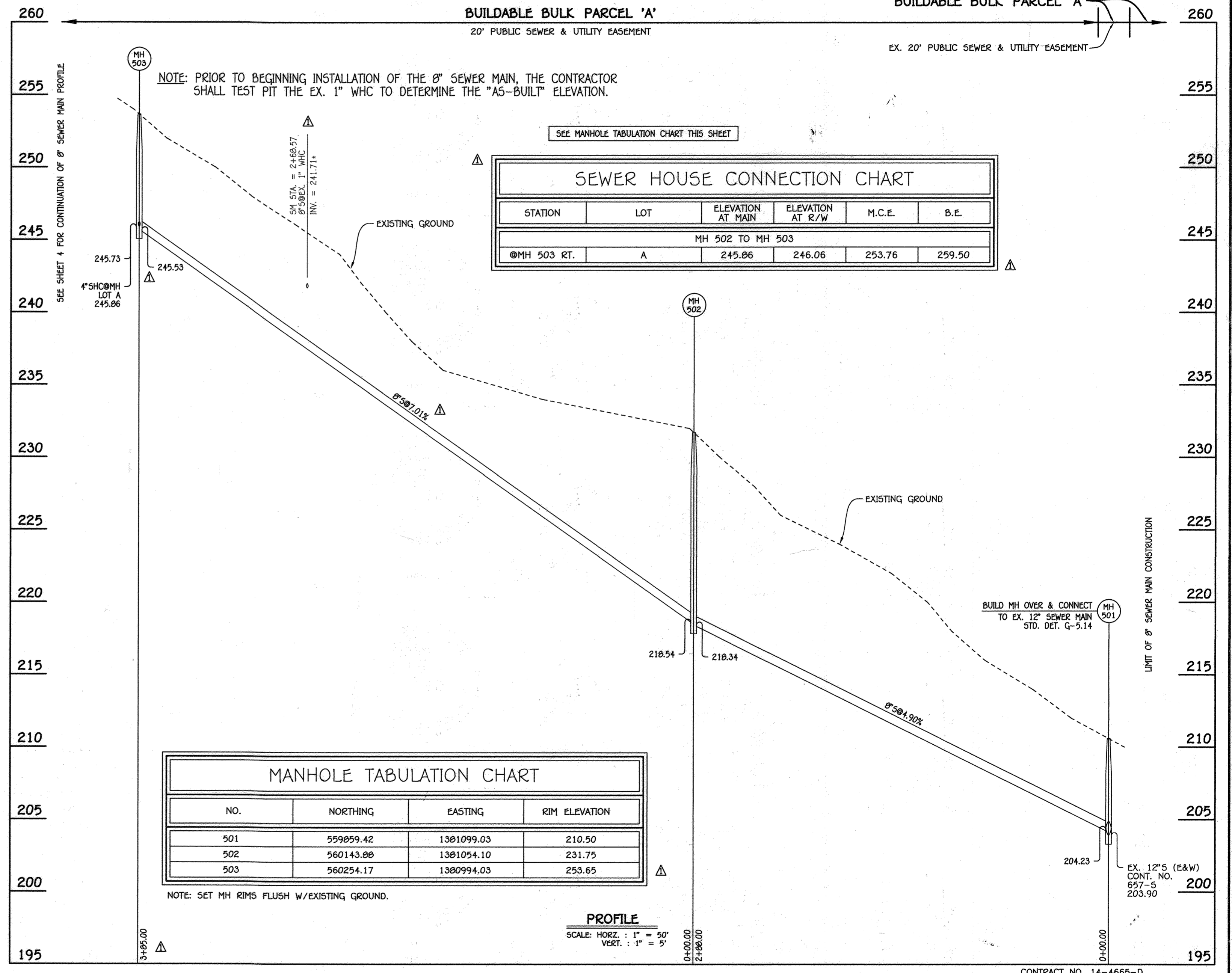
MATCHLINE: SEE SHEET 3

MATCHLINE: SEE SHEET 2



FRONT FOOTAGE ENLARGEMENT DETAIL: LOTS 19 THRU 23

SCALE: 1" = 30'

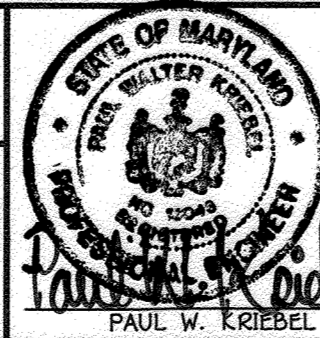


DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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 8/7/16/16.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
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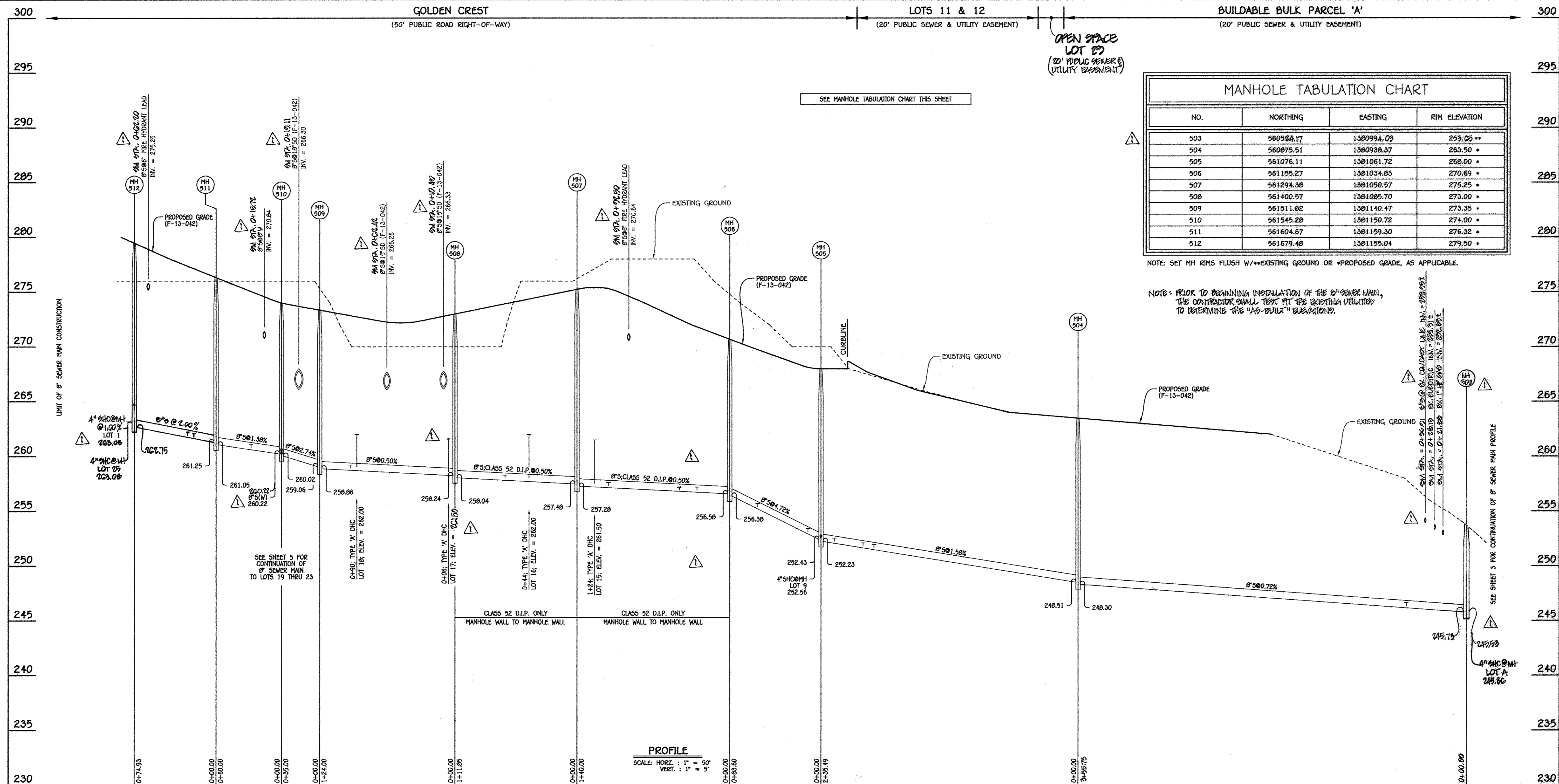


DESIGNED BY: B.C.R.	FCG	REVISE PUBLIC FOREST CONSERVATION EASEMENT NO. 2A IN OPEN SPACE LOT 27	7/26/15
DRAWN BY: B.C.R.	FCC	ADD 10' PUBLIC SEWER AND UTILITY EASEMENT IN OPEN SPACE LOT 27	9/29/15
CHECKED BY: P.W.K.	FCC	ADD SEWER HOUSE CONNECTION CHART; REVISE FOREST CON OUTLINE	7-21-15
DATE: SEPTEMBER, 2015	FCC	REVISE LOCATION OF MH 503; REVISE SLOPE; ADD EX. 1" WHC	7-21-15

SEWER MAIN EXTENSION PLAN, PROFILE & CHART FRONT FOOTAGE ENLARGEMENT DETAIL	
600' SCALE MAP NO. 37	BLOCK NO. 5, 11 & 12
F.C.C. WORK ORDER NO. 06100	
FILE NAME: WATER & SEWER MAIN EXTENSIONS	

SAMUEL'S GRANT
LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29, BUILDABLE BULK PARCEL 'A' & NON-BUILDABLE BULK PARCELS 'B' & 'C' WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4665-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 5



NO.	NORTHING	EASTING	RIM ELEVATION
503	560524.17	1380934.09	259.05 **
504	560875.51	1380938.37	263.50 *
505	561076.11	1381081.72	268.00 *
506	561155.27	1381034.83	270.69 *
507	561294.38	1381050.57	275.25 *
508	561400.57	1381085.70	273.00 *
509	561511.82	1381140.47	273.35 *
510	561545.28	1381150.72	274.00 *
511	561604.67	1381159.30	276.32 *
512	561679.48	1381155.04	279.50 *

NOTE: SET MH RIMS FLUSH W/EXISTING GROUND OR PROPOSED GRADE, AS APPLICABLE.

NOTE: PRIOR TO BEGINNING INSTALLATION OF THE 8" SEWER MAIN, THE CONTRACTOR SHALL TEST AT THE EXISTING UTILITIES TO DETERMINE THE "AS-BUILT" DIMENSIONS.

8" SEWER MAIN: GOLDEN CREST & OUTFALL

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1		TO MH 512 - 48.5'	TO 6" F.H. VALVE - 38.5'
2		TO MH 511 - 41.0'	TO 6" F.H. VALVE - 42.5'
3		TO 5" V (TO 30" EST) - 28.6'	
4		TO MH 509 - 39.6'	TO S.B. MH M-1 - 26.6'
5		TO S.D. MH M-5 - 38.0'	TO MH 508 - 61.0'
6		TO 6" F.H. VALVE - 28.0'	TO MH 507 - 45.7'
7		TO MH 506 - 47.4'	TO 6" F.H. VALVE - 65.5'
8		TO MH 505 - 77.4'	TO MH 506 - 104.7'
9		TO MH 505 - 57.5'	TO 8" V (IN EASEMENT) - 38.2'
10		TO MH 505 - 44.0'	TO 8" V (IN EASEMENT) - 12.0'
11		TO MH 505 - 50.8'	TO 8" V (IN EASEMENT) - 34.0'
12		TO MH 505 - 43.2'	TO 8" V (IN EASEMENT) - 45.0'
13		TO MH 505 - 44.2'	TO MH 506 - 36.0'
14		TO MH 506 - 51.0'	TO F.H. & - 46.5'
15		TO MH 507 - 25.5'	TO F.H. & - 34.0'

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
16		TO MH 507 - 49.8'	TO MH 508 - 70'
17		TO MH 508 - 19.8'	TO 14" MH - 13.5'
18		TO 14" INLET I-14 MH - 26.6'	TO MH 509 - 36.4'
19		TO 6" F.H. VALVE - 48.5'	TO MH 514 - 76'
20		TO 6" F.H. VALVE - 46'	TO MH 515 - 13'
21		TO MH 515 - 21.5'	TO 6" F.H. VALVE - 39'
22		TO MH 514 - 86.5'	TO 6" F.H. - 50'
23		TO MH 514 - 27.3'	TO WHC LOT 23 - 8.9'
24		TO MH 511 - 24.4'	TO 6" F.H. - 42.0'
25		TO MH 512 - 17.8'	TO 6" F.H. - 18.5'
A		TO MH 503 - 10'	

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.
MH 504 TO MH 505					
1+87 RT.	11	251.63	251.83	256.63	258.50
1+97 LT.	12	251.79	251.99	257.29	259.00
2+23 RT.	10	252.20	253.08	258.78 *	256.50 *
@MH 505 RT.	9	252.56	253.88	260.98 **	247.50 **
MH 505 TO MH 506					
0+12 RT.	8	253.17	254.65	259.57 *	258.50 *
0+58 LT.	13	255.34	255.88	260.64	265.50
MH 506 TO MH 507					
0+30 RT.	7	256.90	257.56	263.06	263.50
0+46 LT.	14	256.96	257.40	262.14	269.50
1+11 RT.	6	257.31	257.95	262.45	267.50
1+24 LT.	15 (DHC)	261.50	261.92	267.32	271.00

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.
MH 507 TO MH 508					
0+44 LT.	16 (DHC)	262.00	262.42	267.52	271.50
0+66 RT.	5	257.98	258.76	263.54	265.50
MH 508 TO MH 509					
0+06 LT.	17 (DHC)	261.80	262.80	267.00	
0+90 LT.	18 (DHC)	262.00	262.34	267.24	270.00
0+96 RT.	4 (@ 1.00%)	258.89	259.89	263.10	265.50
MH 510 TO MH 511					
0+28 RT.	3	260.78	261.50	266.24	269.50
MH 511 TO MH 512					
0+20 LT.	24	261.82	262.14	267.04	270.50
0+26 RT.	2	261.04	262.04	267.98	270.50
@MH 512 LT.	25	263.08	263.46	268.88	270.00
@MH 512 RT.	1	263.08	263.46	268.84	272.50

AS-BUILT

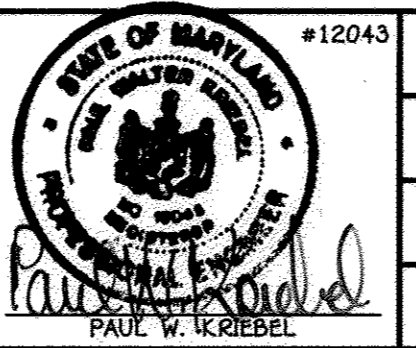
* DENOTES MINIMUM SEWER SERVICE ELEVATION; FIRST FLOOR GRAVITY SEWER SERVICE ONLY
 ** NO GRAVITY SEWER SERVICE; SERVICE PROVIDED BY ON-SITE GRINDER PUMP

CONTRACT NO. 14-4665-0
 SAMUEL'S GRANT
 LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29,
 BUILDABLE BULK PARCEL 'A' &
 NON-BUILDABLE BULK PARCELS 'B' & 'C'
 WATER & SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 Date: 7/10

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 Date: 7/10

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 5/7/19/19.
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL PkE
 ELIOTT CITY, MARYLAND 21042
 (410) 461-2895



DESIGNED BY: B.C.R.
 DRAWN BY: B.C.R.
 CHECKED BY: P.W.K.
 DATE: JUNE 2013
 NO. 7/22/16
 7/22/16
 REVISION

WATER & SEWER MAIN EXTENSIONS
 PROFILE, CHARTS & TABLES
 800' SCALE MAP NO. 37 BLOCK NO. 5, 11 & 12
 F.C.C. WORK ORDER NO. 06100
 FILE NAME: WATER & SEWER MAIN EXTENSIONS

SAMUEL'S GRANT
 LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29,
 BUILDABLE BULK PARCEL 'A' &
 NON-BUILDABLE BULK PARCELS 'B' & 'C'
 WATER & SEWER MAIN EXTENSIONS
 CONTRACT NO. 14-4665-0
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 4 of 5

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: GOLDEN CREST			
0+00.00	EX. 8" PLUG & BUTTRISS	561821.29	1381111.53
0+06.00	8" VALVE	561815.90	1381114.16
0+22.00	3" DEFLECTION COUPLING	561801.53	1381121.19
0+94.00	1/32 H.B.	561738.30	1381155.64
1+46.00	1/32 H.B.	561688.43	1381170.36
1+66.47	8" X6" F.H. TEE	561668.01	1381171.82
2+21.00	1/32 H.B.	561613.62	1381175.70
2+71.00	1/32 H.B.	561563.90	1381170.40
2+78.63	8" X6" TEE	561556.55	1381168.34
2+84.63	8" VALVE	561550.77	1381166.73
3+41.00	1/32 H.B.	561496.48	1381151.56
4+75.00	3" DEFLECTION COUPLING	561376.46	1381091.97
4+87.00	3" DEFLECTION COUPLING	561365.44	1381087.22
5+57.00	1/32 H.B.	561299.77	1381062.99
6+11.65	8" X6" F.H. TEE	561245.73	1381054.81
6+41.00	3" DEFLECTION COUPLING	561216.72	1381050.41
6+53.00	3" DEFLECTION COUPLING	561204.79	1381049.26
7+07.00	1/16 H.B.	561150.84	1381046.98
7+78.00	1/32 H.B.	561083.77	1381070.26
8+22.59	8" VALVE	561039.59	1381076.40
10+20.00	1-1/2" DRAIN	560842.08	1381103.90
10+22.00	8" PLUG & BUTTRISS	560844.06	1381103.63

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LOTS 19 THRU 23			
0+00.00	8" X6" TEE	561556.55	1381168.34
0+03.00	8" VALVE	561557.36	1381165.45
0+17.49	3" DEFLECTION COUPLING	561561.25	1381151.90
0+27.47	3" DEFLECTION COUPLING	561563.42	1381141.75
2+03.19	1/16 H.B.	561592.22	1380968.41
3+20.49	8" X6" F.H. TEE	561560.75	1380855.42
3+77.22	8" PLUG & BUTTRISS	561545.52	1380800.76

LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1		TO MH 512 - 40'	TO 6" F.H. VALVE - 38.5'
2		TO MH 511 - 50.4'	TO 6" F.H. VALVE - 32.5'
3		TO MH 511 - 39.7'	TO 8" V (TO 30' EASEMENT) - 32.4'
4		TO MH 509 - 36.4'	TO S.D. MH-1 - 18.0'
5		TO MH 508 - 75'	TO S.D. MH-5 - 20.8'
6		TO MH 507 - 36'	TO 6" F.H. VALVE - 37'
7		TO 6" F.H. VALVE - 58.5'	TO MH 506 - 51.8'
8		TO MH 506 - 97'	TO MH 505 - 77'
9		TO MH 505 - 60.8'	TO WHC LOT 10 - 19'
10		TO 8" VALVE (EASEMENT) - 92'	TO MH 505 - 51.8'
11		TO 8" VALVE (EASEMENT) - 18.5'	TO MH 505 - 36.2'
12		TO MH 505 - 30'	TO 8" VALVE (EASEMENT) - 55.2'
13		TO MH 506 - 27.5'	TO MH 505 - 72.5'
14		TO 6" F.H. - 36.5'	TO MH 506 - 60'
15		TO MH 507 - 20'	TO 6" F.H. - 40'
16		TO MH 508 - 60'	TO MH 507 - 58.5'
17		TO 6" F.H. - 12'	TO SHC LOT 17 - 11.5'
18		TO MH 509 - 30'	TO 6" INLET MH - 35.7'
19		TO MH 514 - 65'	TO 6" F.H. VALVE - 61'
20		TO MH 515 - 17'	TO 6" F.H. VALVE - 32.5'
21		TO 6" F.H. VALVE - 37.5'	TO MH 515 - 18.5'
22		TO MH 514 - 75'	TO 6" F.H. - 49.5'
23		TO 6" F.H. - 20.3'	TO MH LOT 19 - 63'
24		TO 6" F.H. - 31.5'	TO MH 511 - 34.4'
25		TO MH 512 - 29'	TO 6" F.H. - 32'

NO.	NORTHING	EASTING	RIM ELEVATION
510	561545.28	1381150.72	274.00
513	561556.42	1381135.06	274.77
514	561583.26	1380973.51	281.35
515	561540.70	1380820.70	282.71

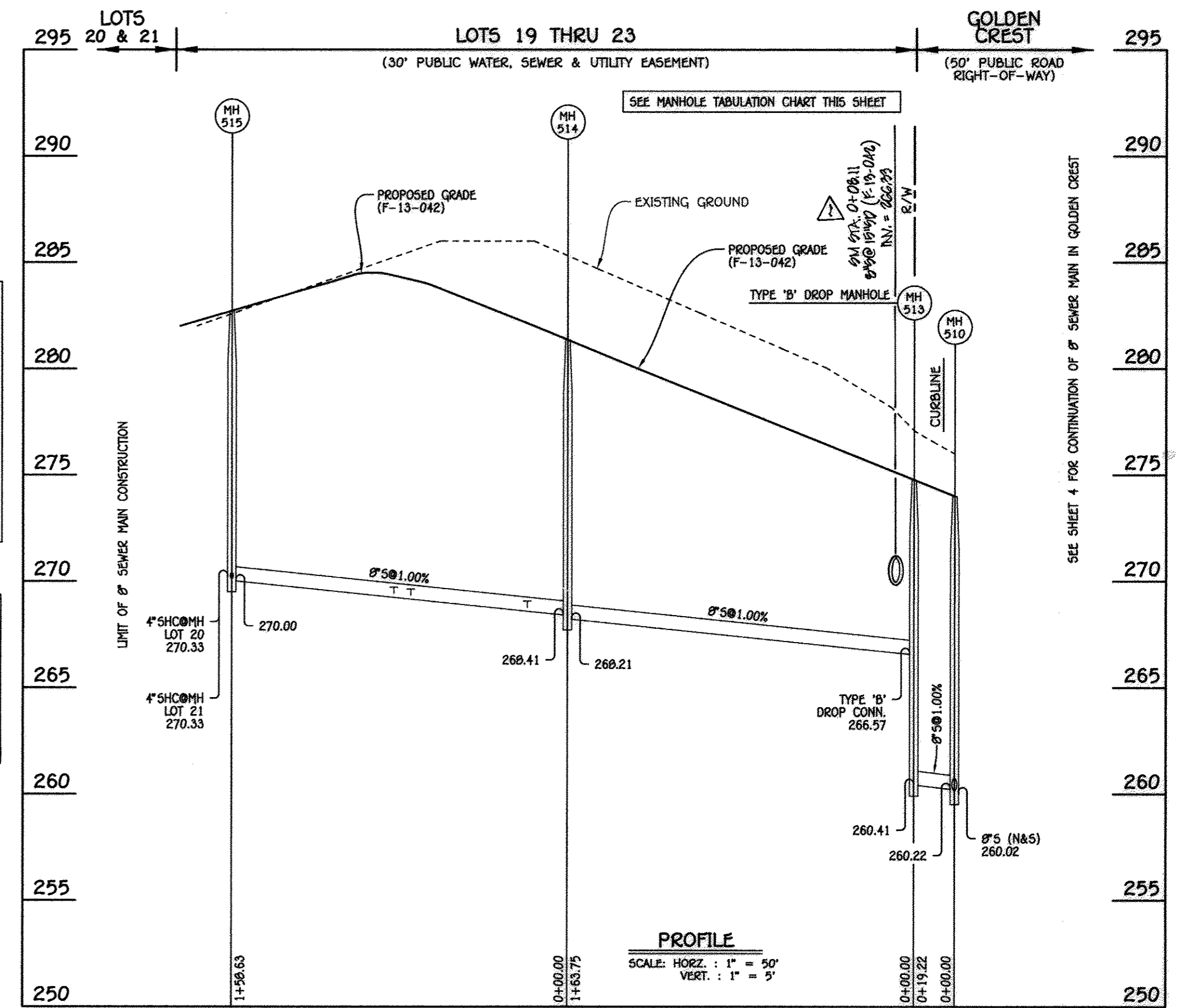
NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.
MH 514 TO MH 515					
0+19 RT.	23	268.77	269.17	274.01	276.50
0+74 LT.	19	269.32	269.52	273.98	276.50
0+82 RT.	22	269.40	269.80	274.26	276.50
0+MH 515 RT.	21	270.33	270.73	275.05	277.50
0+MH 515 LT.	20	270.33	270.55	274.97	277.50

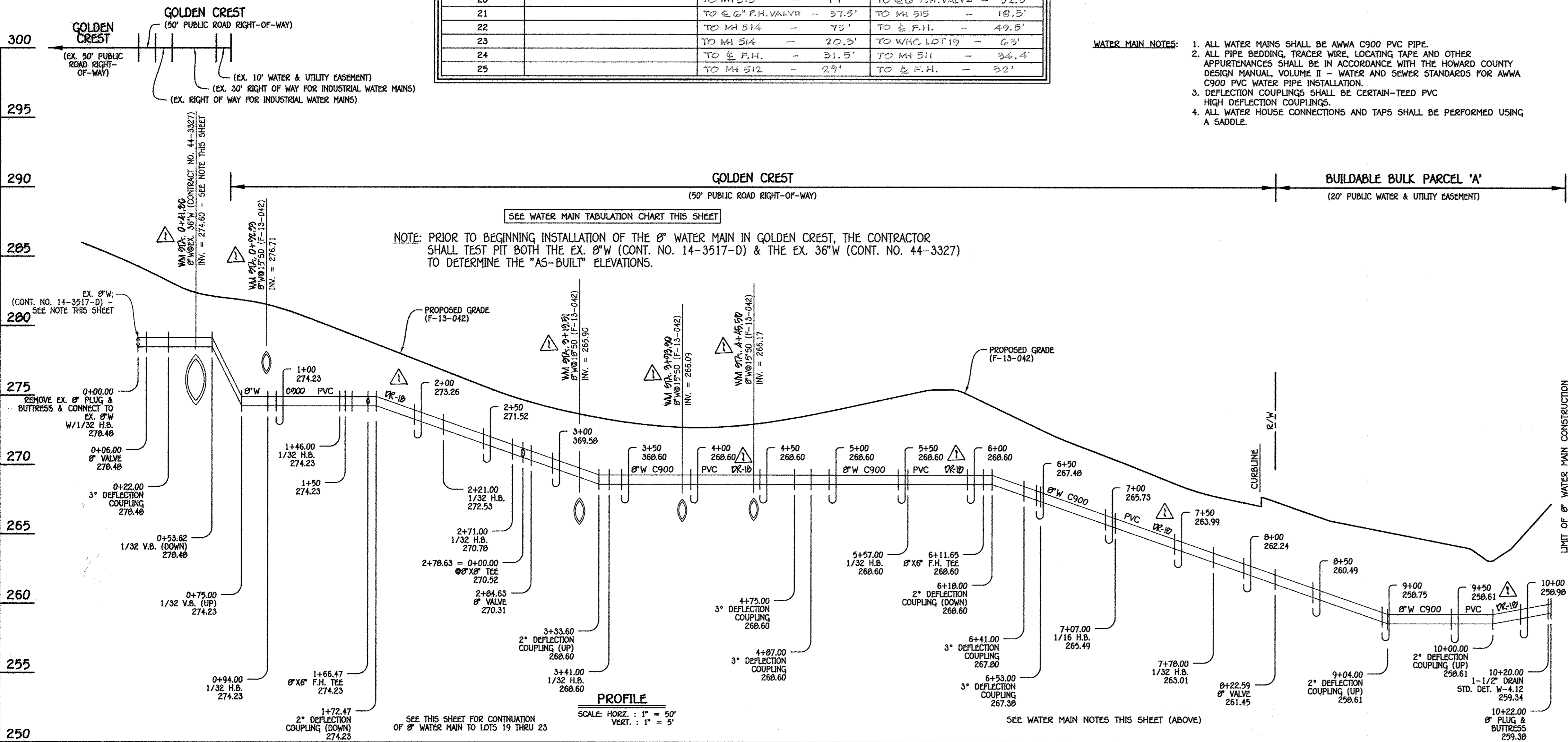
* DENOTES MINIMUM SEWER SERVICE ELEVATION: FIRST FLOOR ONLY

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT R/W	M.C.E.	B.E.
MH 513 TO MH 514					
1+40 RT.	25	268.14	269.66	279.06	

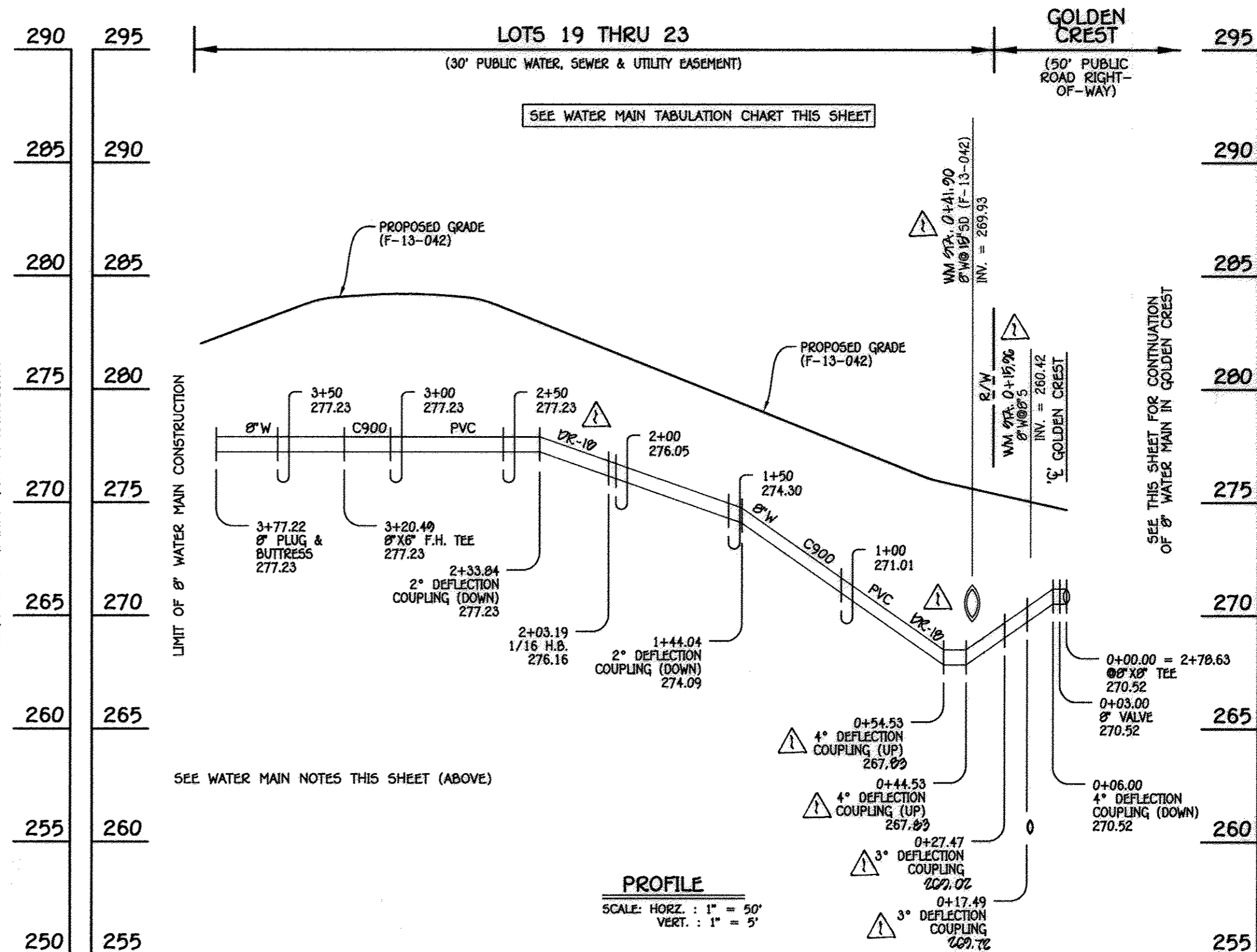
- WATER MAIN NOTES:
1. ALL WATER MAINS SHALL BE AMWA C900 PVC PIPE.
 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II - WATER AND SEWER STANDARDS FOR AMWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS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



8" SEWER MAIN: LOTS 19 THRU 23



8" WATER MAIN: GOLDEN CREST



8" WATER MAIN: LOTS 19 THRU 23

AS-BUILT

Date: 6/26/16

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

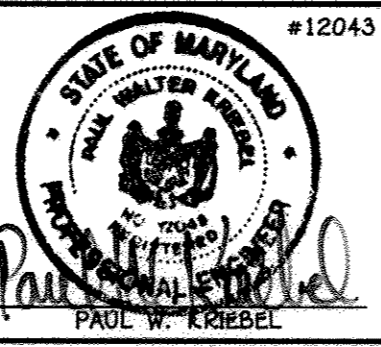
Chief, Bureau of Utilities: *John C. ...*

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Chief, Development Engineering Division: *M.G. ...*

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CENTRAL SERVICE OFFICE PARK - 18275 BALTIMORE NATIONAL Pkwy
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2895



DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.K.
DATE:	JUNE, 2013
BY NO.	
REVISION	
DATE	

WATER & SEWER MAIN EXTENSIONS
PROFILES, CHARTS & TABLE

600' SCALE MAP NO. 37 BLOCK NO. 5, 11 & 12
F.C.C. WORK ORDER NO. 06100
FILE NAME: WATER & SEWER MAIN EXTENSIONS

SAMUEL'S GRANT
LOTS 1 THRU 25, OPEN SPACE LOTS 26 THRU 29,
BUILDABLE BULK PARCEL 'A' &
NON-BUILDABLE BULK PARCELS 'B' & 'C'
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4665-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 5