

GENERAL NOTES

PART I

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON NOVEMBER 2007 AND FEBRUARY 2012 BY ROBERT H. VOGEL ENGINEERING, INC.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:**
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83 / 91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 3542 AND 0044. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 3542 (N 564,154.81 E 1,331,201.09) BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
GEODETIC SURVEY CONTROL 0044 (N 562,176.48 E 1,329,641.84) BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- 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 DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR 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 DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTES 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 LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:
AT&T _____ 1-800-252-1133
BGE (CONTRACTOR SERVICE) _____ 410-637-8713
BGE (EMERGENCY) _____ 410-685-0123
BUREAU OF UTILITIES _____ 410-313-4900
COLONIAL PIPELINE CO _____ 410-795-1390
MSS UTILITY _____ 1-800-257-7777
STATE HIGHWAY ADMINISTRATION _____ 410-531-5533
VERIZON _____ 1-800-743-0033
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG 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 ANY 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 18.114(a) OF THE HOWARD COUNTY CODE.

PART II - WATER

- ALL WATER MAINS TO BE D.I.P UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" 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 ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAIL. THE 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.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED 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 REST 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 HARNESSSES. 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. FOR FIRE SPRINKLER SYSTEM, ALL SINGLE FAMILY DWELLINGS WILL HAVE A MINIMUM OF A 1-1/2" WHC WITH A 1" OUTSIDE METER SETTING.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-12-049.

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

John R. Rhoton 4/14/17
SOIL CONSERVATION DISTRICT DATE

FINAL WATER PLAN

NEW CAR DEALERSHIP ANTWERPEN TOYOTA

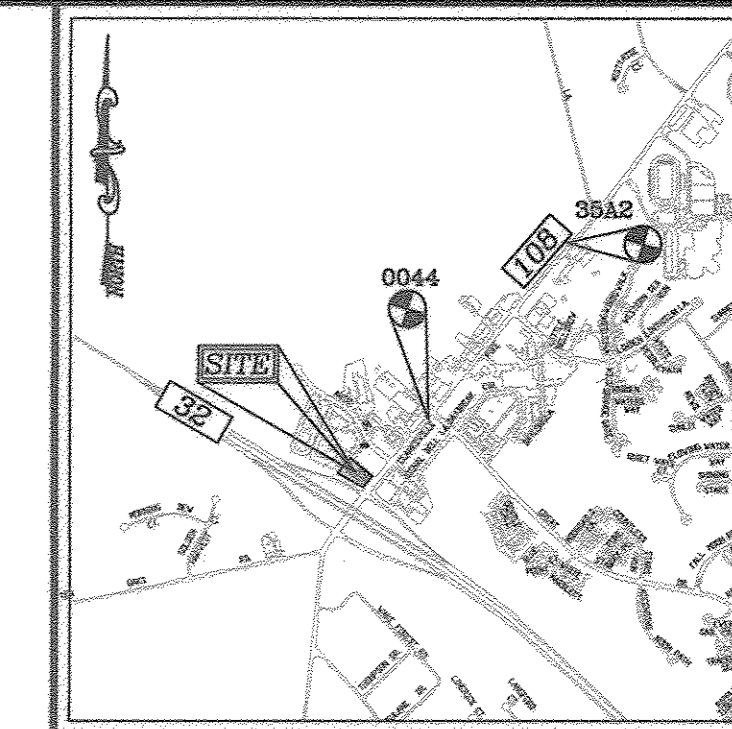
12410 AUTO DRIVE

PARCEL 365 (L. 04960 / F. 00136)
PLAT NO. 11178

CONTRACT 24-4753-D

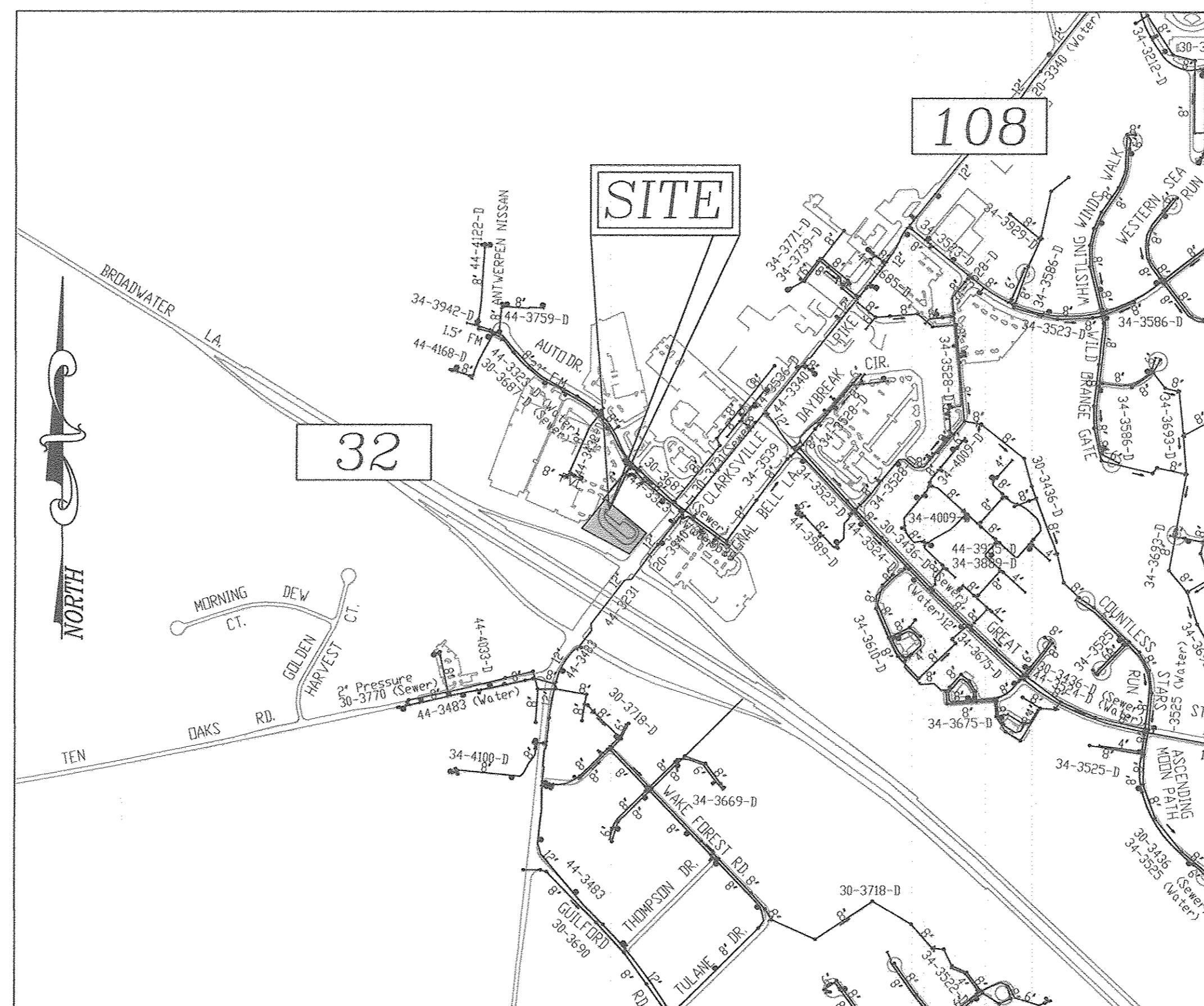
BENCHMARKS

HOWARD COUNTY BENCHMARK 3542
N 564,154.81 E 1,331,201.09 ELEV. 487.90
HOWARD COUNTY BENCHMARK 0044
N 562,176.48 E 1,329,641.84 ELEV. 484.47



VICINITY MAP

SCALE: 1"=2,000'
ADC MAP COORDINATE: PG. 493.3 / K-7



VICINITY MAP

SCALE: 1"=600'

WATER ZONE: 630W
TEST GRADIENT: 780

TYPE OF BUILDING :	COMMERCIAL
NO. OF LOTS/PARCELS :	1
NO. OF SINGLE WATER HOUSE CONNECTIONS :	1
NO. OF SEWER HOUSE CONNECTIONS :	N/A
SEWER SHED :	N/A
TREATMENT PLANT :	N/A

LEGEND

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED TEE
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING SEWER
- SEWER MANHOLE
- PRIVATE WATER HOUSE CONNECTION
- PRIVATE SEWER HOUSE CONNECTION
- PROPOSED SIGN
- PROPOSED LIGHT

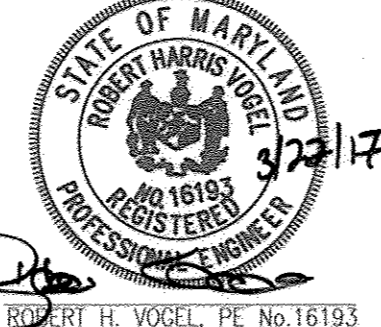
QUANTITIES

NAME OF UTILITY CONTRACTOR : CALVERT UTILITIES				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
WATER				
8" WATER DIP	254 LF	254	CL 54	GRIFFIN PIPE / BRS.
6" WATER DIP	46 LF	30	"	"
8" VALVE	2 EA	2	RSOR	MUELLER CO. / "
6" VALVE	2 EA	2	RSOR	" / "
6" FIRE HYDRANT	2 EA	1	"	" / "
8"x6" TEE	1 EA	1	DIP	STAR PIPE / "
8"x4" TAPPING SLEEVE	1 EA	1	S.S.	ROMAC INDUS. / BRS
8"x6" TEE	1 EA	1	DIP	STAR PIPE / "
8" - 1/32 HORIZ. BEND	1 EA	1	"	" / "
4" CAP AND BUTTRESS	1 EA	1	"	" / "
2" TAPPING TEE	1 EA	1	S.S.	ROMAC INDUS. / BRS
2" WATER	10 LF	10	K COPPER	MUELLER CO. / "
2" CURB STOP BALL VALVE	1 EA	1	H 15000 NL	BRS
6"x8" EXPANDER	1 EA	1	DIP	STAR PIPE / "
6"x8" REDUCER	1 EA	1	DIP	" / "
8" - 90° BEND	1 EA	1	DIP	STAR PIPE / "
4"x8" EXPANDER	1 EA	1	"	" / "
4" VALVE	1 EA	1	RSOR	MUELLER CO. / "
4" DIP	6 LF	6	CL 54	GRIFFIN PIPE / "

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
John C. Chen 5/14/17
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Chad Johnson 4/7/17
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8961



PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE 09-27-2018.
DRN: KG DES: RHV
CHK: RHV
DATE: MARCH 2017

BY	NO.	REVISION	DATE
RVE	1	REVISED PLAN TO SHOW NEW PROP. BLDG AND WATER HOUSE CONNECTION.	04/22/13
RVE	2	REVISED PLAN TO SHOW REVISED CONNECTION TO EXISTING MAIN.	09/04/13
RVE	3	RELOCATE ONSITE FIRE HYDRANT AND UPDATE SITE INFORMATION.	02/06/14
		AS-BUILT	5/11/17

FINAL WATER PLAN
CONTRACT 24-4753-D

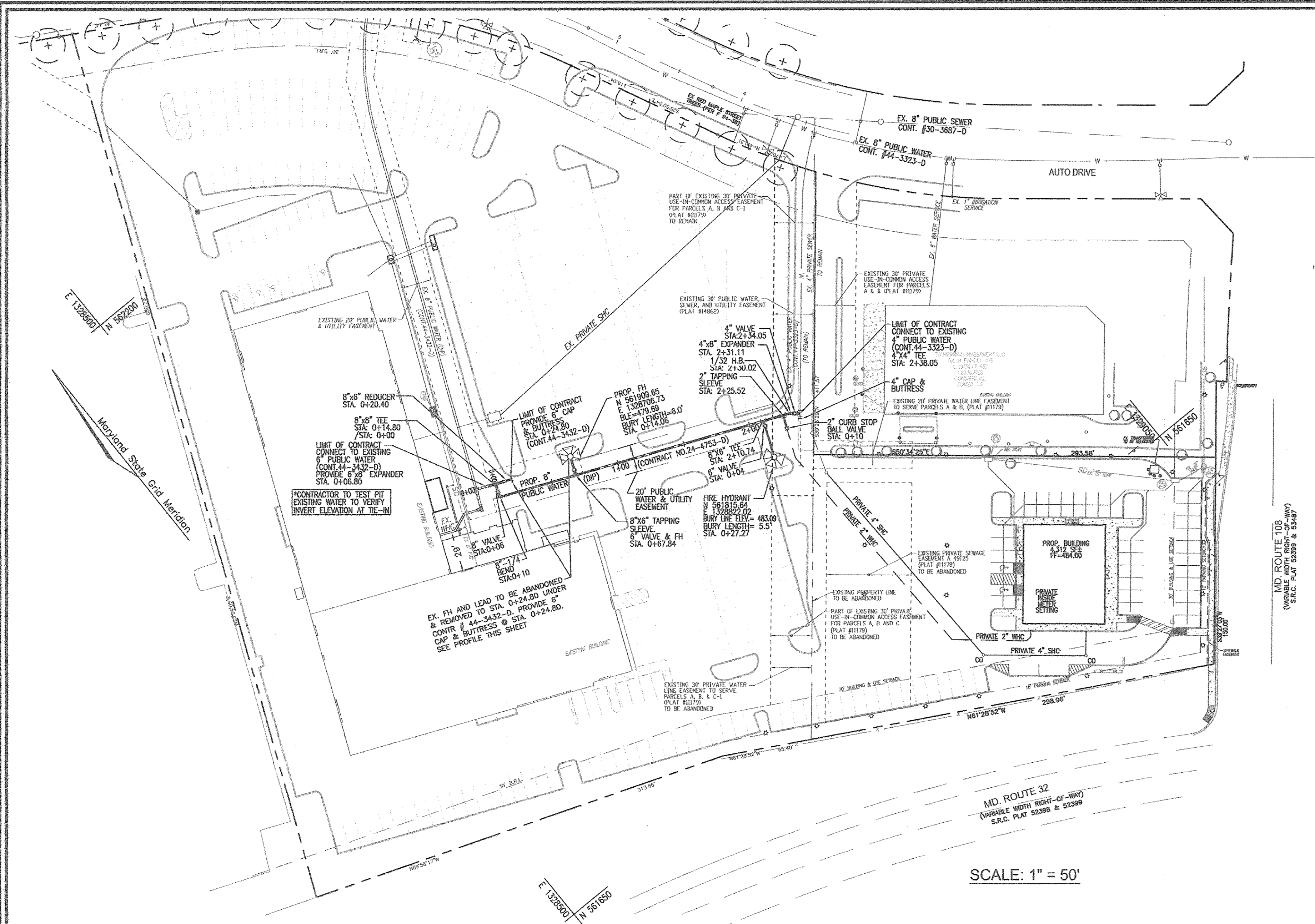
OWNER
ANTOY LLC
12420 AUTO DRIVE
CLARKSVILLE, MD 21029
(410) 531-5700

NEW CAR DEALERSHIP
ANTWERPEN TOYOTA
12410 AUTO DRIVE
PARCEL 365 (L. 04960 / F. 00136)
PLAT NO. 11178

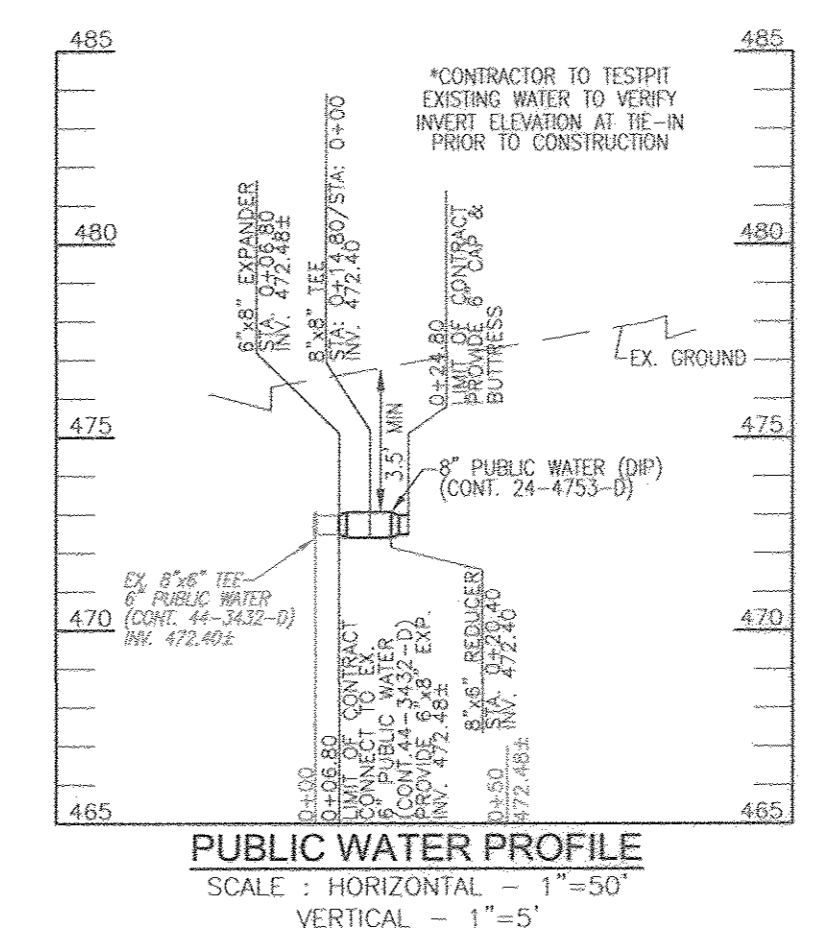
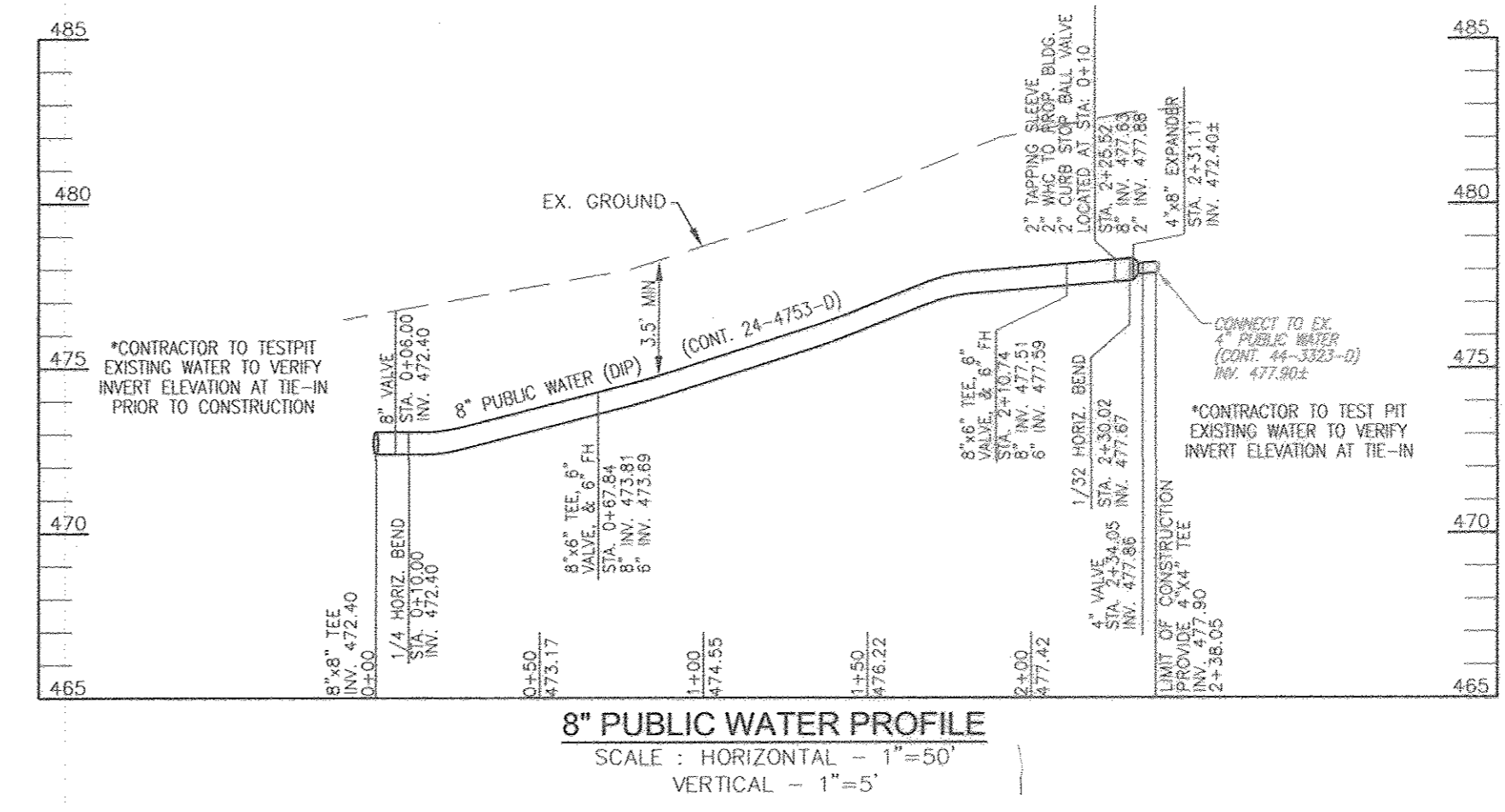
TAX MAP 34 BLOCK 06
5th ELECTION DISTRICT

PARCEL 'B'
HOWARD COUNTY, MARYLAND

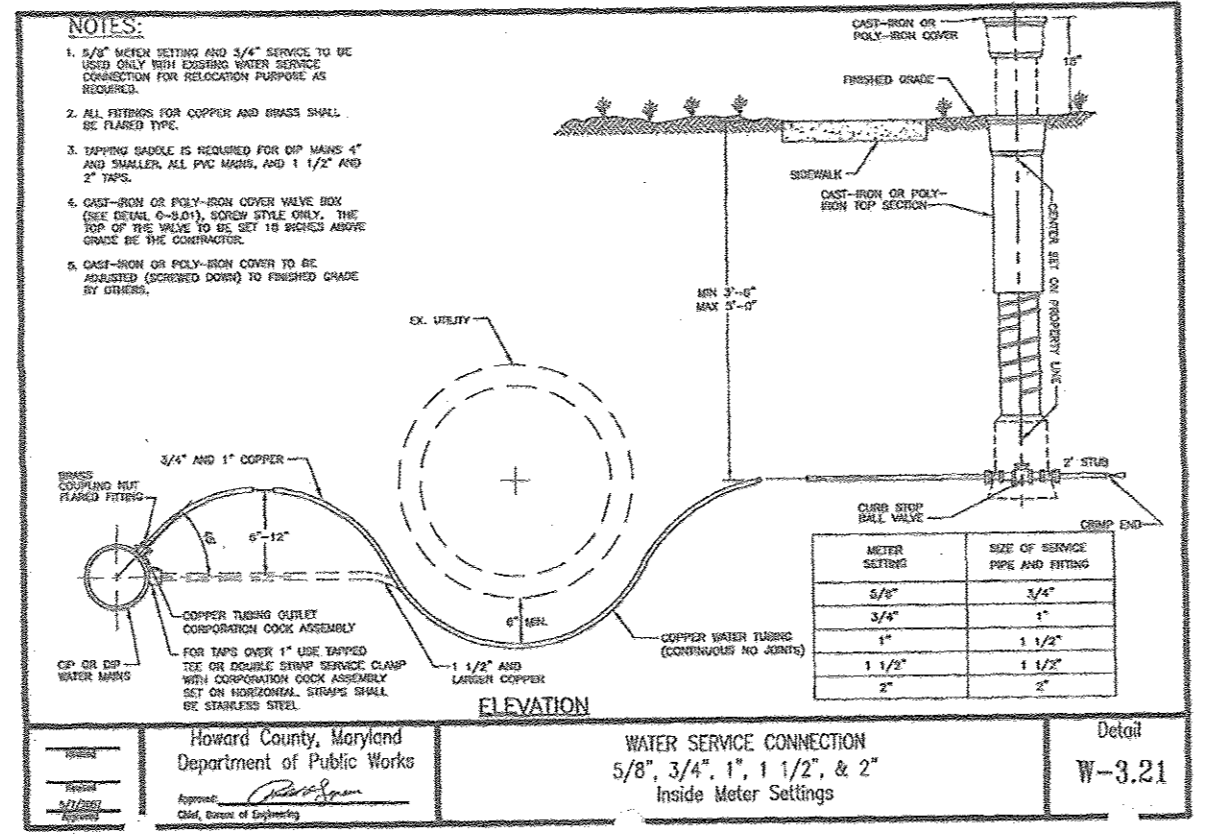
SCALE AS SHOWN
SHEET 1 OF 2



WL STA.	APPURTENANCE
WL STA. 0+00.00	8" x 8" TEE
WL STA. 0+06.00	8" VALVE
WL STA. 0+10.00	8" - 1/4" HORIZONTAL BEND
WL STA. 0+67.84	8" x 6" TEE, 6" VALVE & FH
WL STA. 2+10.74	8" x 6" TEE, 6" VALVE & FH
WL STA. 2+25.52	2" TAPPING SLEEVE, 2" WHC, 2" CURB STOP BALL VALVE
WL STA. 2+30.02	8" - 1/32" HORIZONTAL BEND
WL STA. 2+31.11	4" x 8" EXPANDER
WL STA. 2+34.05	4" VALVE
WL STA. 2+38.05	4" x 4" TEE



NOTES:
 THE WATER CONNECTION FOR THE PROPOSED BUILDING SHALL BE 2", WITH INSIDE METER SETTINGS. REFER TO HOWARD COUNTY DETAILS W-3.21.

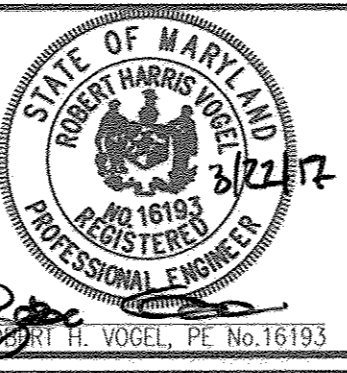


ITEM	TO	TO
FIRE HYDRANT 0+07.84	13.5' - 6" F.H. VALVE	3.0' - TEST STATION
8" VALVE 0+06	59' - 6" F.H. V.	59' - F.H. 0+67
FIRE HYDRANT 2+10	34.5' - 4" V. 2+34	25' - 6" F.H. V.
2" WHC 2+25	14' - 4" V. 2+34	20.7' - F.H. 2+10

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division

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SCALE AS SHOWN
 SHEET 2 OF 2

AS-BUILT 5/11/2017