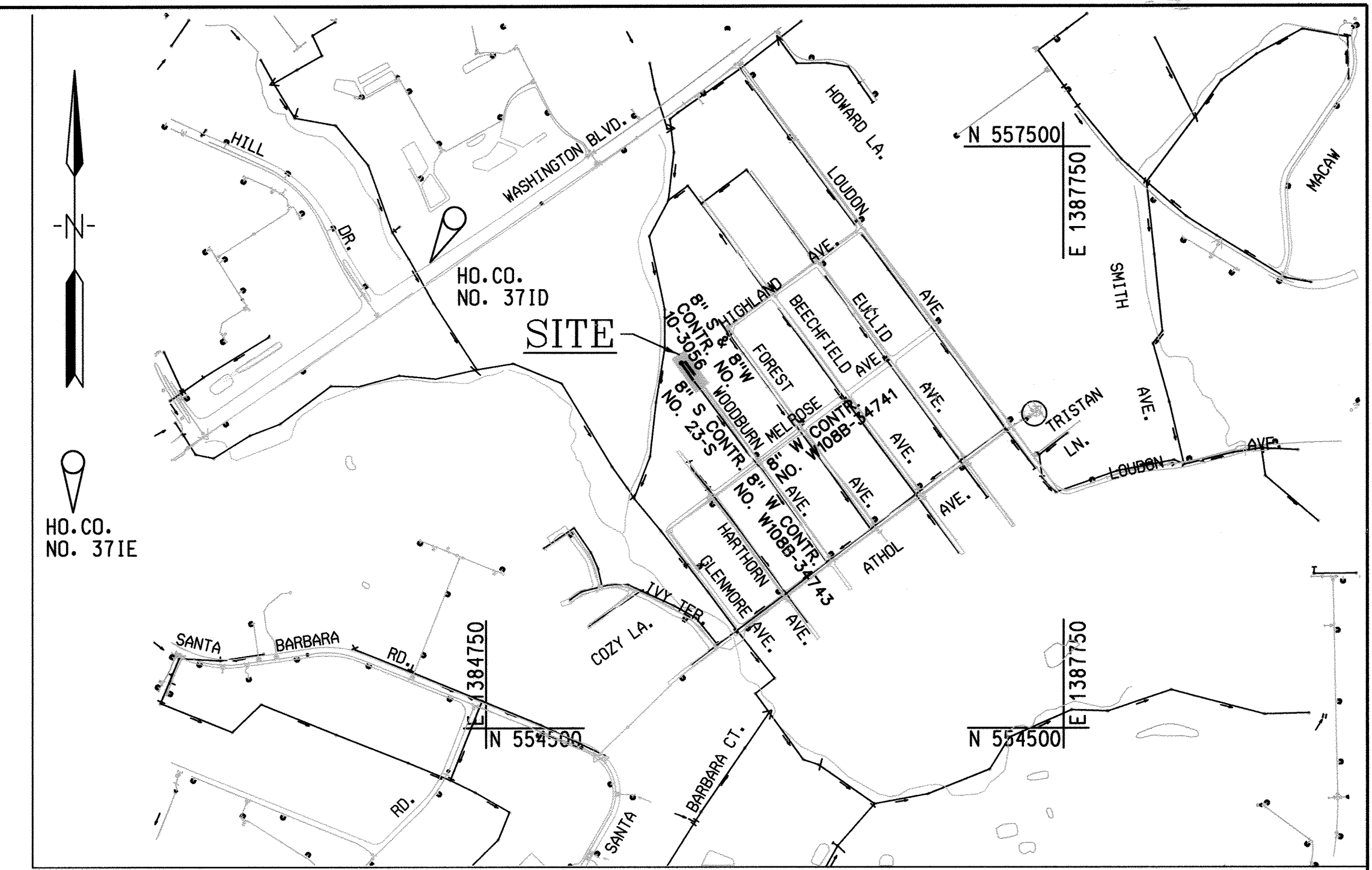


TRAVERSE COORDINATE SCHEDULE			
NUMBER	NORTHING	EASTING	ELEVATION
TRAV.#2	556174.00	1385929.08	128.81
TRAV.#3	556341.66	1385802.30	119.88
TRAV.#7	556322.46	1385829.42	121.0

WATER STAKEOUT COORDINATE TABLE			
STATION	FITTING	NORTHING	EASTING
0+00	TIE-IN	556333.66	1385831.81
0+30	1 1/2" DRAIN	556357.90	1385814.13
0+32	CAP & BUTTRESS	556359.51	1385812.95

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" WATER	L.F.	32		
8" SEWER	L.F.	74		
LAMPHOLE	EA	1		
4" S.H.C.	L.F.	40		
3/4" W.H.C.	L.F.	40		

NAME OF UTILITY CONTRACTOR: _____
AS-BUILT DATE: _____

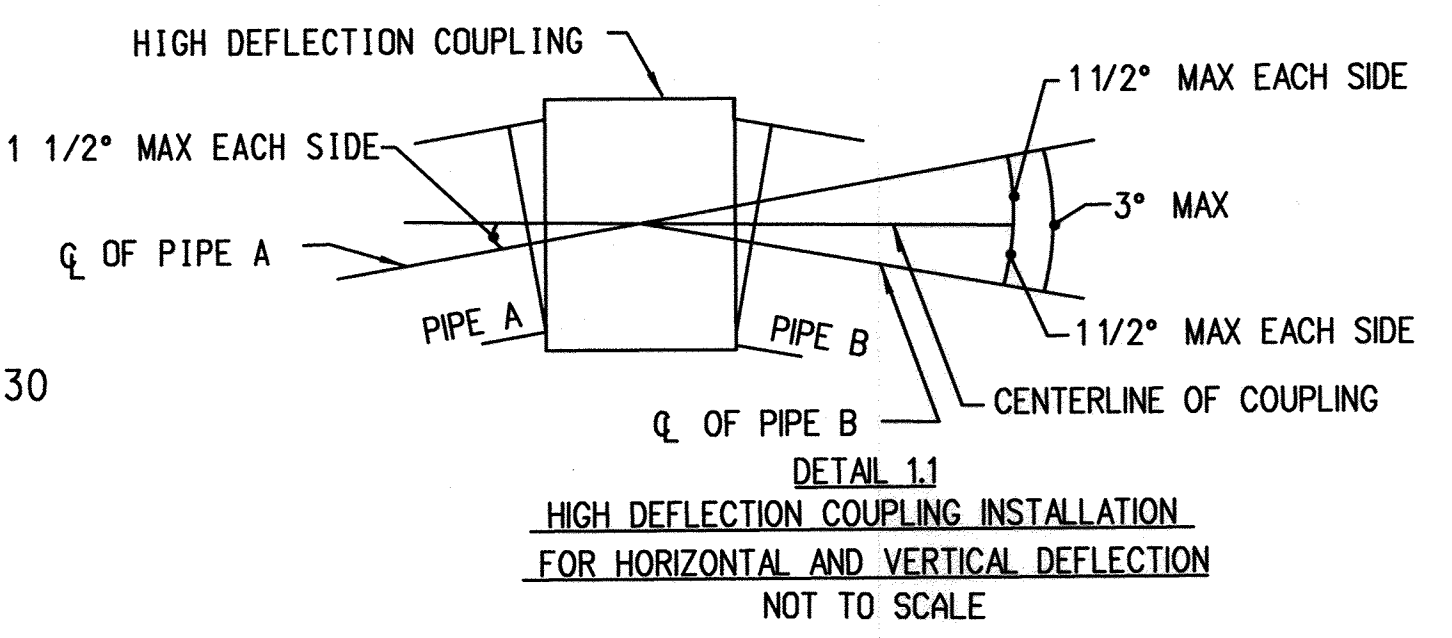


RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
WOODBURN AVE.	105'	SEED & MULCH

TYPE OF BUILDING:		RESIDENTIAL
NUMBER OF PARCELS:		2
NUMBER OF SEWER HOUSE CONNECTIONS		2
NUMBER OF WATER HOUSE CONNECTIONS		2
DRAINAGE AREA:		PATAPSCO

SANITARY SEWER STAKEOUT COORDINATES SCHEDULE		
NAME	NORTHING	EASTING
LH #1	556350.41	1385789.07

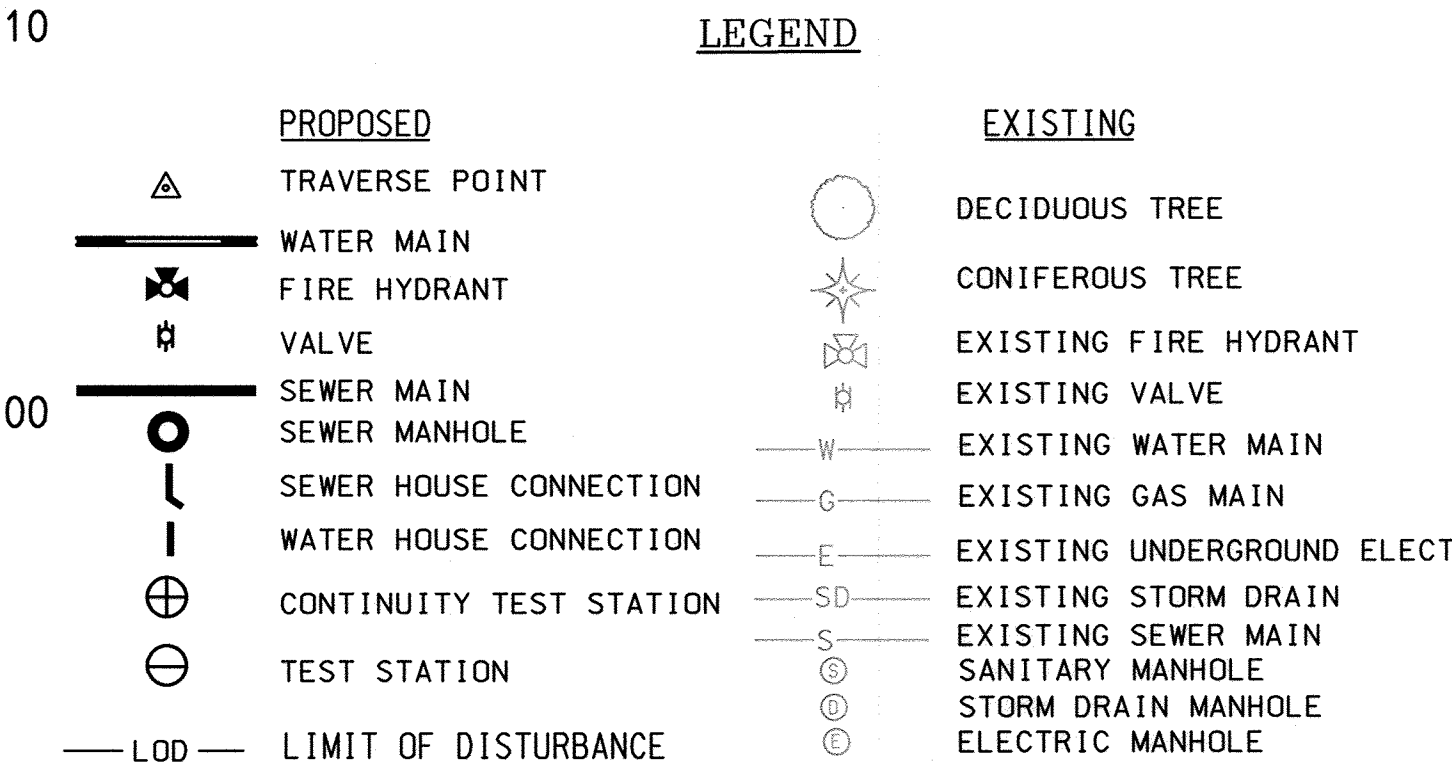
PLAN SCALE: 1" = 50'



NOTE: THE MAXIMUM ALLOWED DEFLECTION AT THE HIGH DEFLECTION COUPLING IS 3° WITH 1.5° ON EACH SIDE

HOWARD COUNTY GEODETIC SURVEY CONTROL
THE HORIZONTAL AND VERTICAL DATUM BASED ON NAD83/2007 (HORIZONTAL) NAVD 88 (VERTICAL)

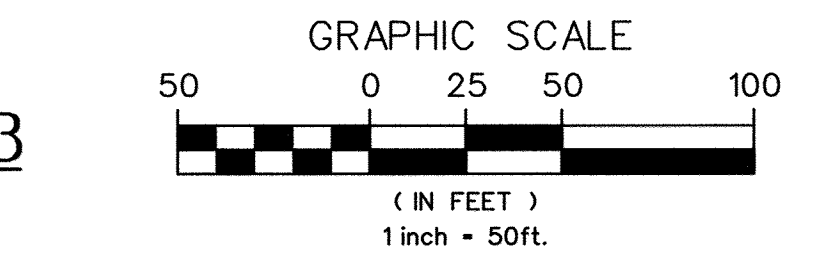
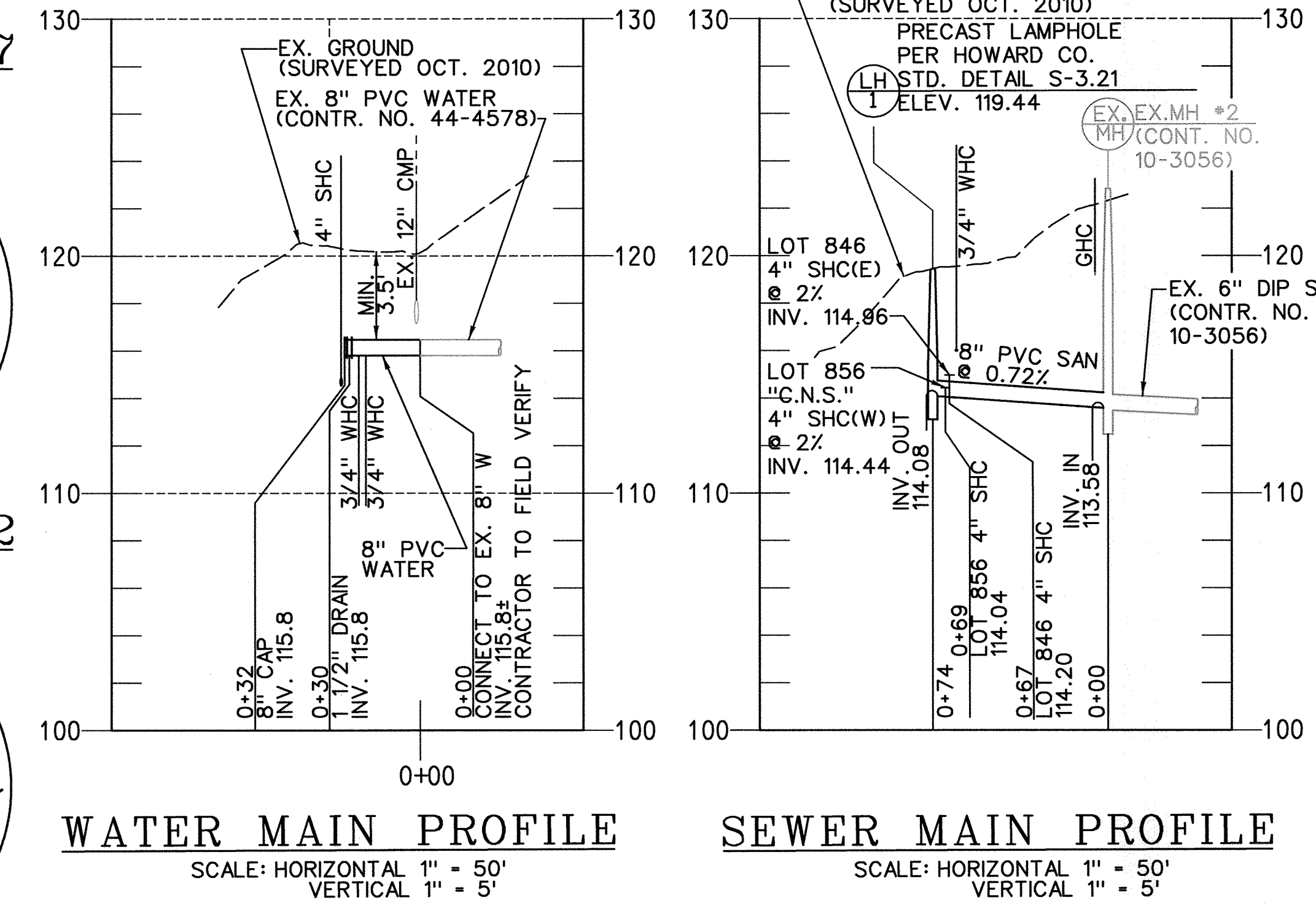
37ID	N 556907.42	37IE	N 555617.80
	E 1384460.99		E 1382606.14
	ELEV.157.31		ELEV.143.59



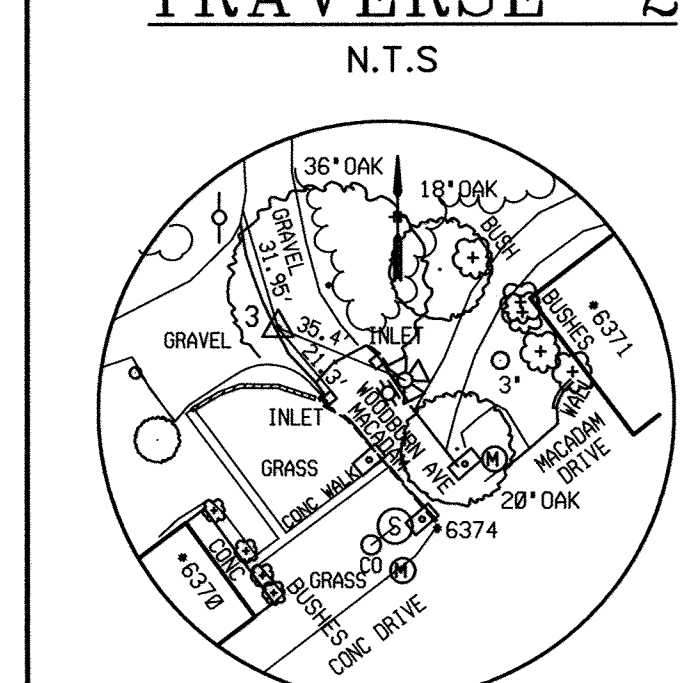
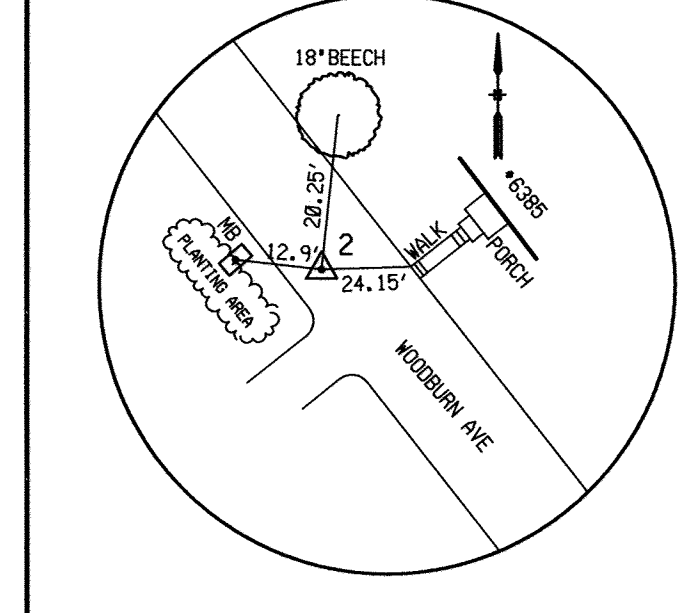
- ### GENERAL NOTES
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
 - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN OCTOBER 2010 BY KCI TECHNOLOGIES, INC.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/2007 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 37ID & 37IE. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE REBAR & CAP AND NAILS.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
 - CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED. IN THE EVENT THE CONTRACTOR'S WORK REQUIRED THE BRACING OF ADDITIONAL POLES AS SHOWN ON THE DRAWINGS, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO THE CONTRACTOR.
 - 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 AND THE LATEST EDITION OF THE SIA STANDARDS AND SPECIFICATIONS FOR CONSTRUCTION & MATERIALS 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 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 LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

ATAI (CONSTRUCTION SERVICES)	1-800-252-1133
BGAEE (EMERGENCY)	410-685-1400
BUREAU OF UTILITIES (OPW)	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY ADMINISTRATION	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033 / 410-224-9210
 - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
 - CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.
 - THE CONTRACTOR SHALL PROVIDE SURVEY STAKEOUT FOR ALL NECESSARY LINES, GRADES AND ELEVATION OF THE PROPOSED FACILITIES.
 - THE CONTRACTOR SHALL PROVIDE STAGING/STORAGE AREA. THE WORK SHALL BE CONDUCTED UNDER STRICT ADHERENCE TO SECTION 308 - EROSION AND SEDIMENT CONTROL OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV.

- ### WATER AND SEWER NOTES
- ALL WATER MAINS SHALL BE POLYVINYLCHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF AWWA C900 DR18, PRESSURE CLASS 150 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND ALL SUBSEQUENT AMENDMENTS THERETO.
 - TOPS OF WATER MAIN 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 THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - THE FOLLOWING NOTE IS ADDED TO HOWARD COUNTY STANDARD DETAIL W 2-22. BUTTRESS AND ANCHORAGE FOR VERTICAL BENDS, WHEN ANCHORING PVC PIPE, THE STRAPPING IN CONTACT WITH PIPE SURFACE SHALL BE 1/4-INCH WIDE BY 1/4-INCH THICK STEEL. THE REMAINING PORTION OF THE STRAP SHALL BE REINFORCING BAR SIZED IN ACCORDANCE WITH THE PERTINENT CHART SHOWN ON THE DETAIL.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF UTILITIES HOWARD COUNTY, 15 DAYS PRIOR TO WATER MAIN SHUT DOWNS.
 - CONTINUITY TEST STATION SHALL BE PLACED ADJACENT TO EACH FIRE HYDRANT OR AT THE LOCATION SHOWN ON THE DRAWINGS. CONTINUITY TEST STATIONS SHALL CONFORM TO DETAIL PLATES W-1, 15 AND G-8, 21.
 - WATER MAINS SHALL BE FILLED WITH WATER AND BROUGHT TO 150 PSI HYDROSTATIC TEST PRESSURE AT THE LOW POINT FOR 2 HOURS.
 - ALL SEWER MAINS SHALL BE D.I.P. OR PVC UNLESS OTHERWISE NOTED.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - MANHOLES SHOWN WITH 12" AND 16" 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 DRAWINGS.
 - HOUSE (S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
 - THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINES, GRADES AND ELEVATION OF THE PROPOSED FACILITIES.



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 31363, EXPIRATION DATE: 1/16/2012.

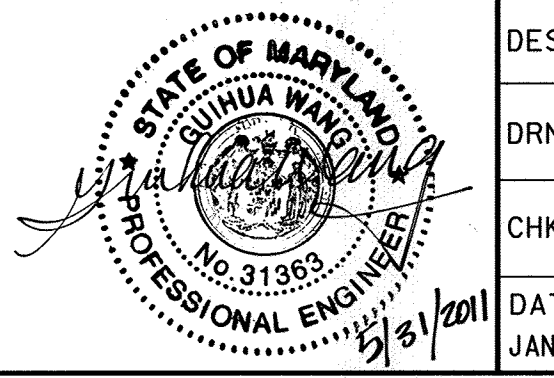


DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: _____ DATE: _____
Chief, Bureau of Engineering: _____ DATE: 6/7/11
Chief, Bureau of Utilities: _____ DATE: 6/7/11
Chief, Utility Design Division: _____ DATE: 6/7/11

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

KCI TECHNOLOGIES
936 RIDGEBROOK ROAD
SHARPS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818
www.kci.com



DES: GW					
DRN: KJ					
CHK: TW					
DATE: JAN 2011					
BY NO.		REVISION		DATE	

WATER AND SEWER
PLAN AND PROFILE

600' SCALE MAP NO. 38 BLOCK NO. 13

WOODBURN AVENUE
WATER AND SEWER EXTENSION
CAPITAL PROJECT No. S-6247
CONTRACT No. 14-4708
ELECTION DISTRICT NO. 1 HOWARD COUNTY, MD

SCALE AS SHOWN
SHEET 1 OF 1

PLOTTED: 11/10 AM '11, Tuesday, May 31, 2011
BY: Calhoun, Wanda, Division: P042, W:\Vw-Solid Waste CMA Emap
FILE: M:\2007\01071378.28.dwg, dwg, 0107137828_0-C01.dgn