

BILL OF MATERIALS				
ITEM	ESTIMATED QUANTITY	AS-BUILT		
		QUANTITY	MATERIALS	MANUFACTURER
8" WATER	974	950 LF		
6" WATER	208	170 LF		
2-1/2" WATER	72	80 LF		
2" WATER		290 LF		
1" WATER	268	245 LF		
6"x6" TAPPING SLEEVE AND VALVE		1 EA		
6"x8" REDUCER		1 EA		
2" X 1" REDUCER		1 EA		
8" 45° BEND	8	8 EA		
2-1/2" 45° BEND		2 EA		
1" 45° BEND	5	2 EA		
1" 90° BEND	1	2 EA		
8"x6" TEE		2 EA		
6"x4" TEE 6" 45° BEND		1 EA		
6"x6" TEE	2	4 EA		
2-1/2" X 2" TEE		1 EA		
1"x1" TEE	3	4 EA		
2 1/2" X 1" TEE		1 EA		
8"x2" 2-1/2" SADDLE		1 EA		
6" X 1" SADDLE		1 EA		
8" VALVE	2	4 EA		
6" VALVE	4	3 EA		
1" CURB STOP	5	3 EA		
AIR RELEASE VALVE AND MANHOLE		1 EA		
2" METER VAULT		1 EA		
3/4" METER VAULT		1 EA		
FIRE HYDRANT		2 EA		
WATER FOUNTAIN		3 EA		
GROUND HYDRANT		2 EA		
8" CAP AND BUTTRESS		1 EA		
6" CAP AND BUTTRESS		2 EA		
8" SEWER		1640 LF		
4" SEWER		202 LF		
MANHOLES		7 EA		
CLEANOUTS		1 EA		

NAME OF UTILITY CONTRACTOR:
 SEDIMENT CONTROL MEASURES FOR THIS CONTRACT SHALL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON DRAWING 9, 10, 11 & 12 OF SITE DEVELOPMENT PLAN, SDP 10-007.

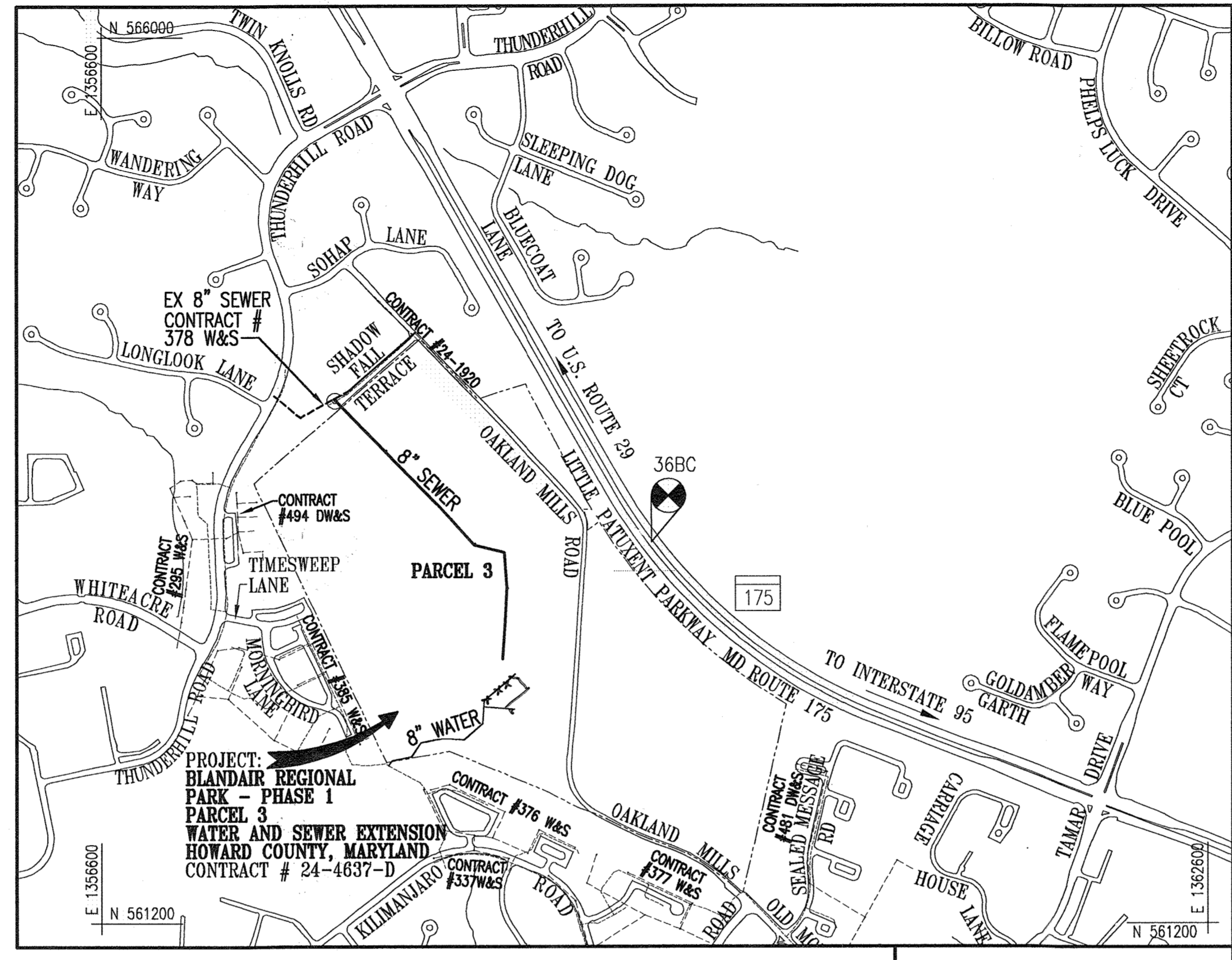
ENGINEER'S CERTIFICATION
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Anthony Ullian 10/30/09
 SIGNATURE OF ENGINEER AUTHORIZED TO DESIGN DATE
 (PRINT NAME BELOW SIGNATURE)

DEVELOPER'S CERTIFICATION
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A 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 SOIL CONSERVATION DISTRICT.

Donald J. Ryan 10/30/09
 SIGNATURE OF DEVELOPER DATE
 (PRINT NAME BELOW SIGNATURE)

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
John K. Robertson 11/10/09
 HOWARD SOIL CONSERVATION DISTRICT DATE



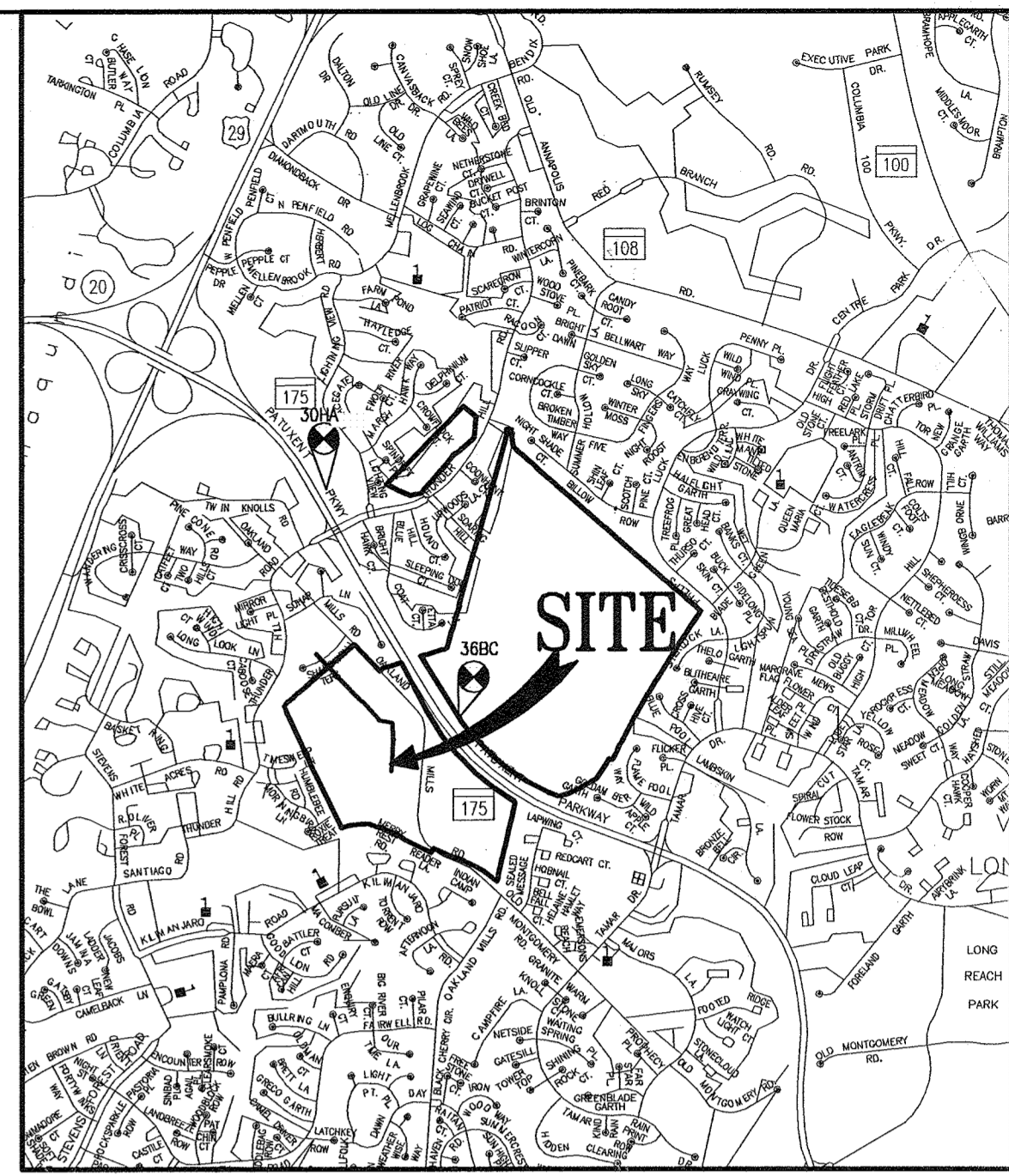
LOCATION MAP
 1" = 600'
 TYPE OF BUILDING: COMFORT STATION
 NUMBER OF PARCELS: 1
 WATER HOUSE CONNECTIONS: 2
 SEWER HOUSE CONNECTIONS: 1
 DRAINAGE AREA: LITTLE PATUXENT
 TREATMENT PLANT: LITTLE PATUXENT WASTEWATER RECLAMATION PLANT

BENCHMARK DATA

30HA: N 566030.6258, E 1357989.5444, ELEV. 386.983
 36BC: N 563264.1261, E 1359585.7197, ELEV. 409.981

LIST OF DRAWINGS

- WSO.1 COVER SHEET
- WSO.2 WATER AND SEWER PLAN
- WSO.3 SEWER PLAN AND PROFILE
- WSO.4 WATER AND SEWER PROFILES



ADC MAP: 16
 GRID: A6,A7
VICINITY MAP
 1" = 2000'

GENERAL NOTES

- 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 MARCH 2008 BY WHITMAN, REQUARDT & ASSOCIATES, LLP.
- 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. 30HA AND NO. 36BC. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE REBAR AND CAP.
- 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 THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE 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 LOCATIONS OF THE TEST PITS. 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.
- 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) 410-850-4620
 BGE (UNDERGROUND DAMAGE CONTROL) 410-787-9068
 BUREAU OF UTILITIES 410-313-4900
 COLONIAL PIPELINE 410-795-1390
 MISS UTILITY 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 TREE PROTECTION AREAS 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 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 DW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.

- PART II: WATER**
- ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
 - 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 1005 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. COORDINATE WITH COUNTY.
- PART III: SEWER**
- ALL SEWER MAINS SHALL BE DIP OR P.V.C. UNLESS OTHERWISE NOTED.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - FORCE MAINS SHALL BE D.I.P. ONLY.
 - 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 COVERS, STANDARD DETAIL G5.52.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

BLANDAIR REGIONAL PARK PHASE 1 WATER AND SEWER EXTENSION CONTRACT NO. #24-4637-D HOWARD COUNTY, MARYLAND

"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. 19376, EXPIRATION DATE: 9/22/2011."

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE: 11/30/09

DEPARTMENT OF ZONING
 PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 DATE: 11/10/09

PREPARED BY:
 WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, MD 21231

DES:	RBC
DRN:	CYH
CHK:	AUO
DATE:	10/29/09
CYH	1
BY	NO.
REVISION	
DATE	11/10

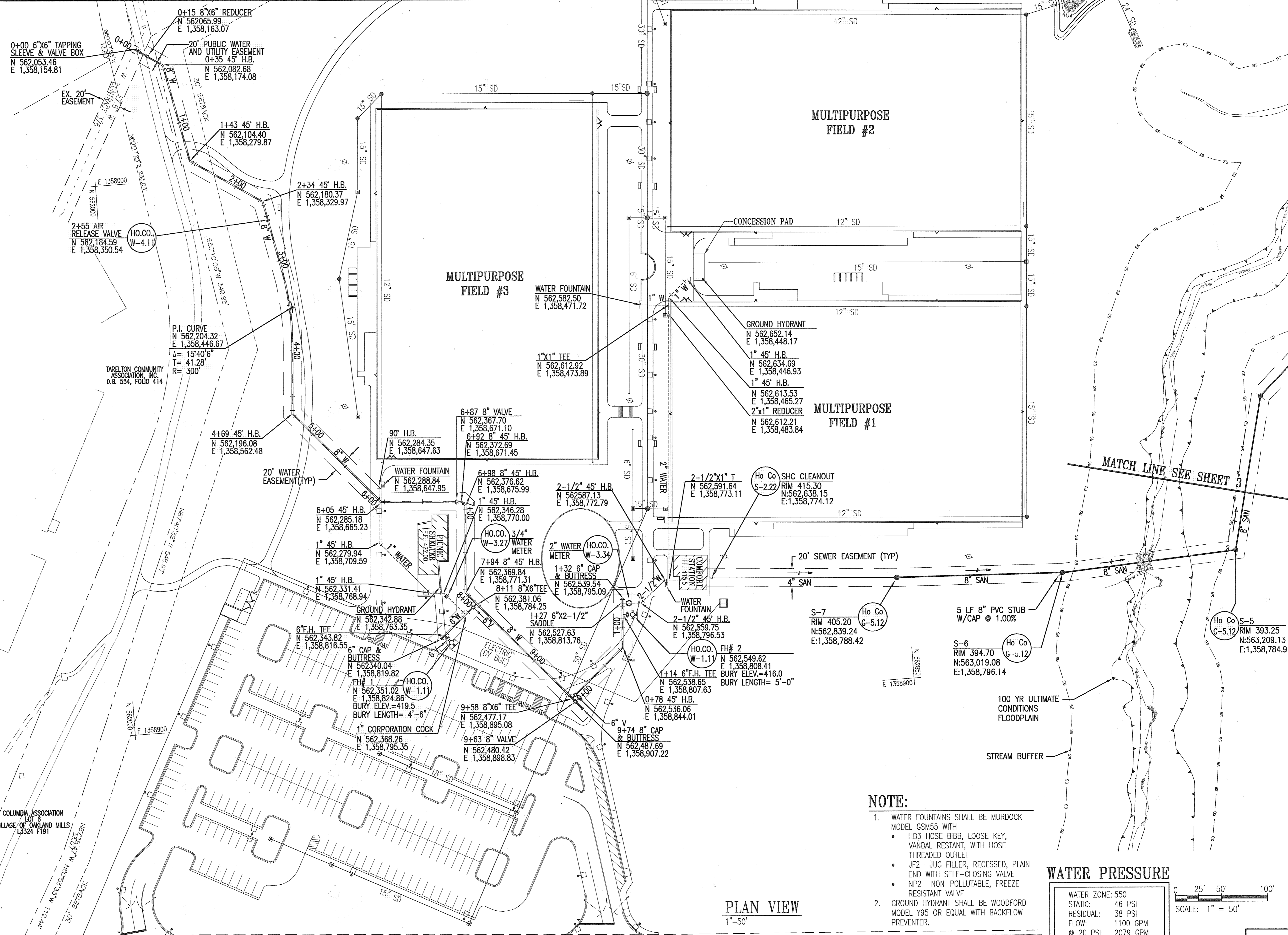
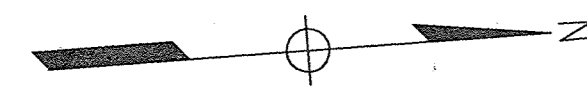
VICINITY MAP, TITLE,
 BILL OF MATERIALS, SHEET INDEX

600' SCALE MAP NO. 36 BLOCK NO. 5

BLANDAIR REGIONAL PARK - PHASE 1
 WATER AND SEWER EXTENSION
 CONTRACT NO. 24-4637-D

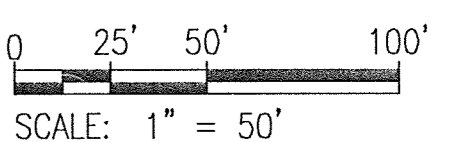
ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. WSO.1
 SCALE AS SHOWN
 SHEET 1 OF 4



- NOTE:**
1. WATER FOUNTAINS SHALL BE MURDOCK MODEL GSM55 WITH
 - HB3 HOSE BIBB, LOOSE KEY, VANDAL RESISTANT, WITH HOSE THREADED OUTLET
 - JF2- JUG FILLER, RECESSED, PLAIN END WITH SELF-CLOSING VALVE
 - NP2- NON-POLLUTABLE, FREEZE RESISTANT VALVE
 2. GROUND HYDRANT SHALL BE WOODFORD MODEL Y95 OR EQUAL WITH BACKFLOW PREVENTER.

WATER PRESSURE	
WATER ZONE: 550	
STATIC: 46 PSI	
RESIDUAL: 38 PSI	
FLOW: 1100 GPM	
@ 20 PSI: 2079 GPM	



PLAN VIEW
1"=50'

"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. 19376, EXPIRATION DATE: 9/22/2011."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

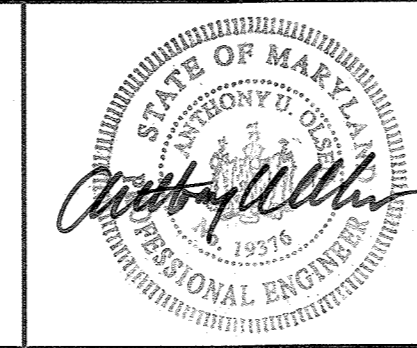
Allen C. Lee 4/12/10
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Whitman, Requardt & Associates, LLP 4/12/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231

WR&A



DES: RBC			
DRN: CYH			
CHK: AJO			
DATE: 10/29/09			
BY: NO.	REVISION	DATE	
	△ REVISE WATER LINE FOR PLAYGROUND RELOCATION	3/31/10	

WATER AND SEWER PLAN

600' SCALE MAP NO. 36 BLOCK NO. 5

BLANDAIR REGIONAL PARK - PHASE 1
WATER AND SEWER EXTENSION
CONTRACT NO. 24-4637-D

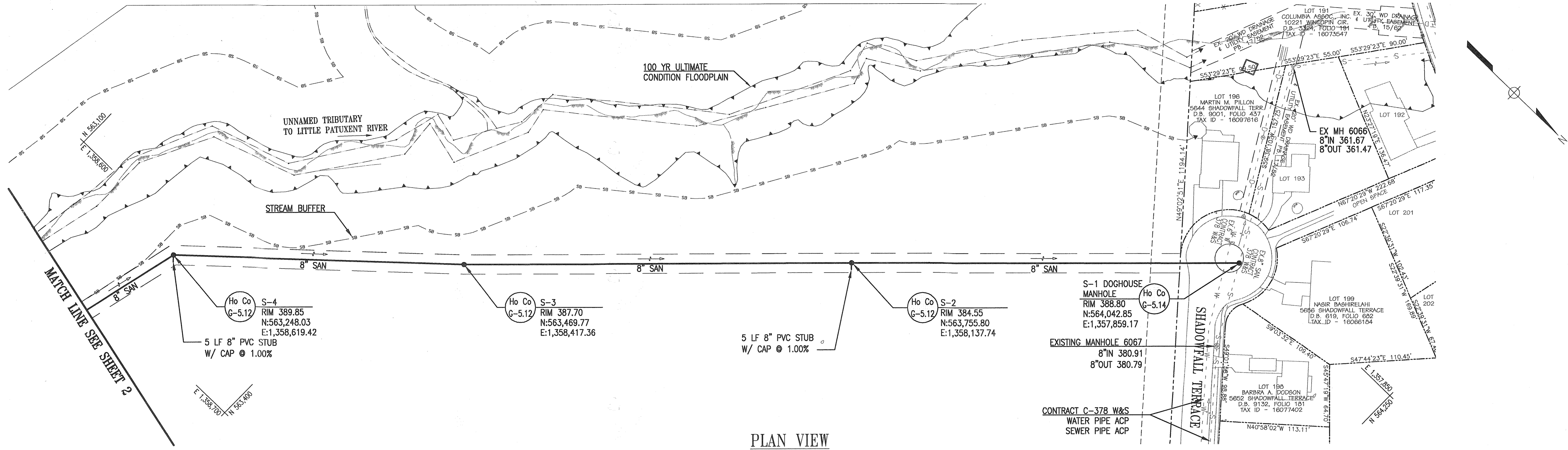
ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. **WS0.2**

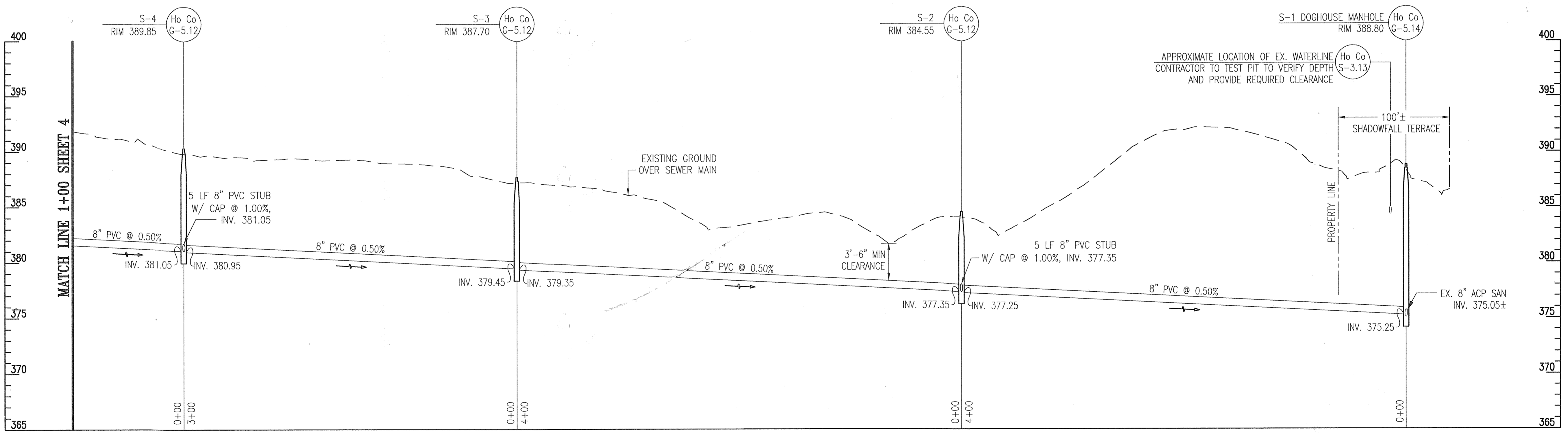
SCALE AS SHOWN

SHEET 2 OF 4

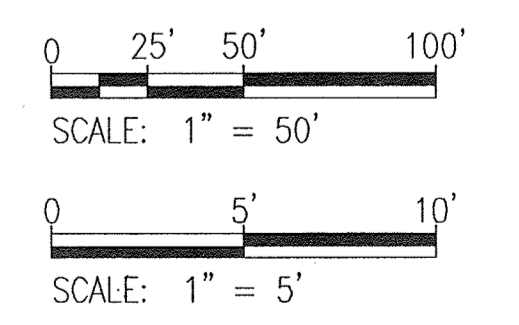
FILENAME: N:\2008-001\CADD\2008001\WS02.DWG
PLOT DATE: 3/31/2010 1:44:40 PM PAGE SETUP: SET: (24638) PLOT STYLE: WPL_2008.DCTB PAPER SIZE: ARCH D (36.00 X 24.00 INCHES)



PLAN VIEW
SCALE: 1" = 50'



PROFILE 8" SANITARY SEWER
SCALE: 1" = 50' HORIZ
1" = 5' VERT



"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. 19376, EXPIRATION DATE: 9/22/2011."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Slade C. Lewis
CHIEF, BUREAU OF UTILITIES

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

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231
WR&A

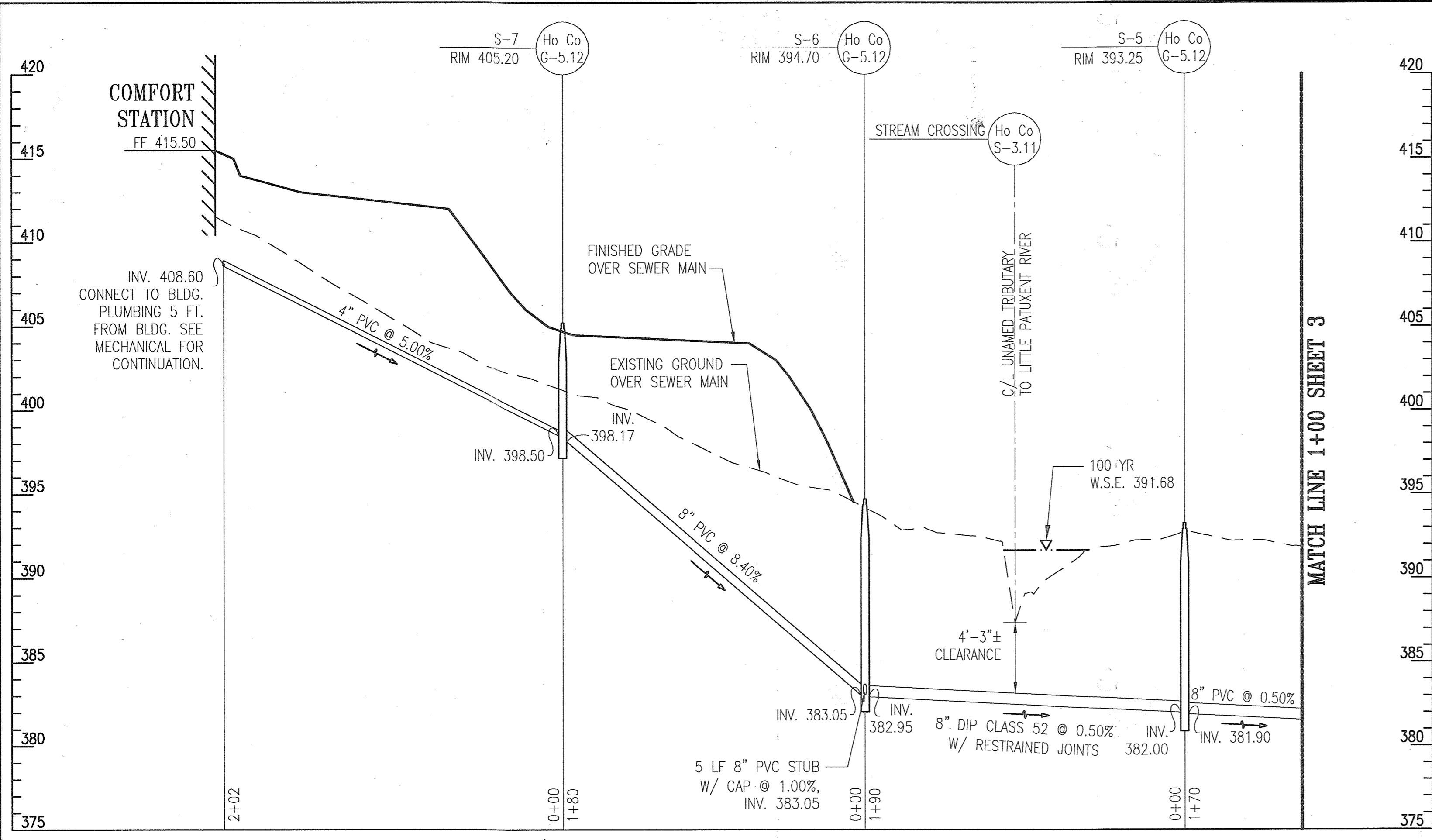


DES:	RBC	BY	NO.	NO.	NO.	NO.	NO.	NO.	NO.
DRN:	CYH	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
CHK:	AUO	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
DATE:	10/29/09	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.

SEWER PLAN AND PROFILE
600' SCALE MAP NO. 36 BLOCK NO. 5

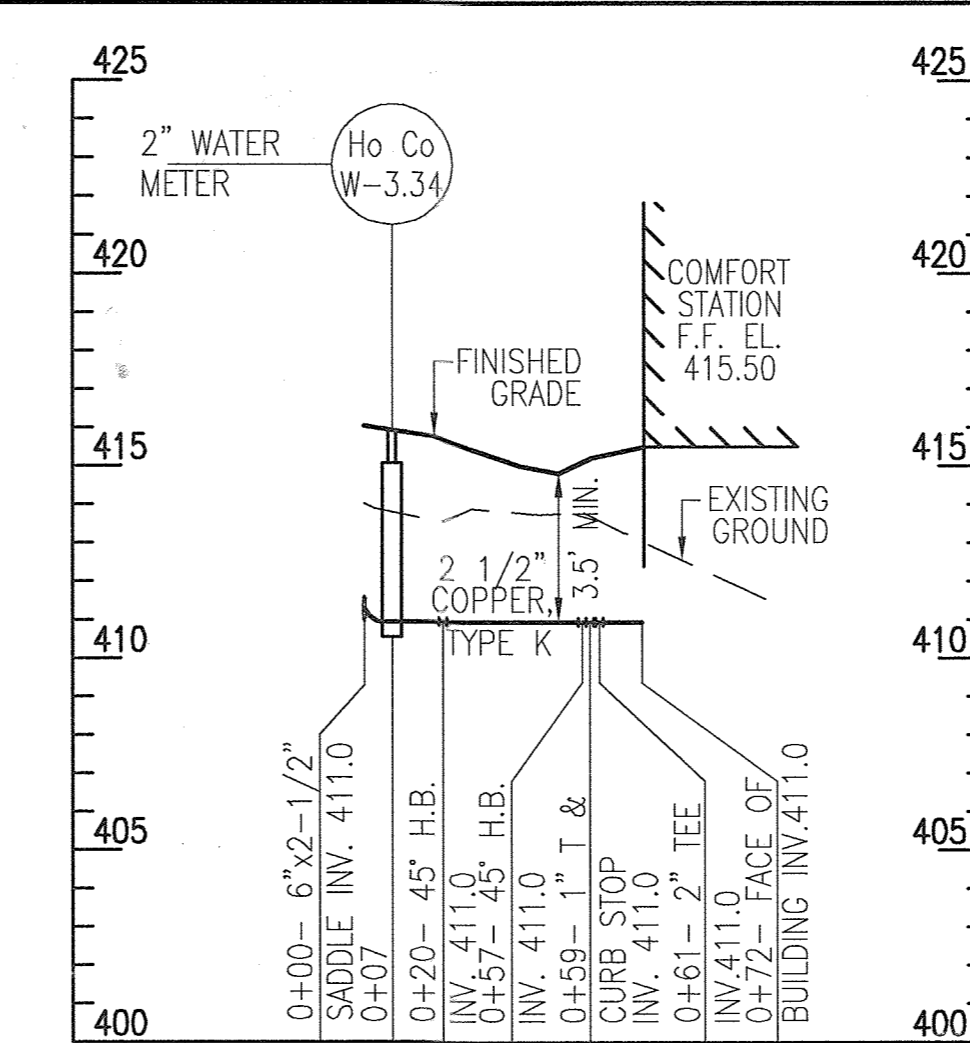
BLANDAIR REGIONAL PARK - PHASE 1
WATER AND SEWER EXTENSION
CONTRACT NO. 24-4637-D
ELECTION DISTRICT 3/7 HOWARD COUNTY, MARYLAND

DWG. **WS0.3**
SCALE AS SHOWN
SHEET **3** OF **4**



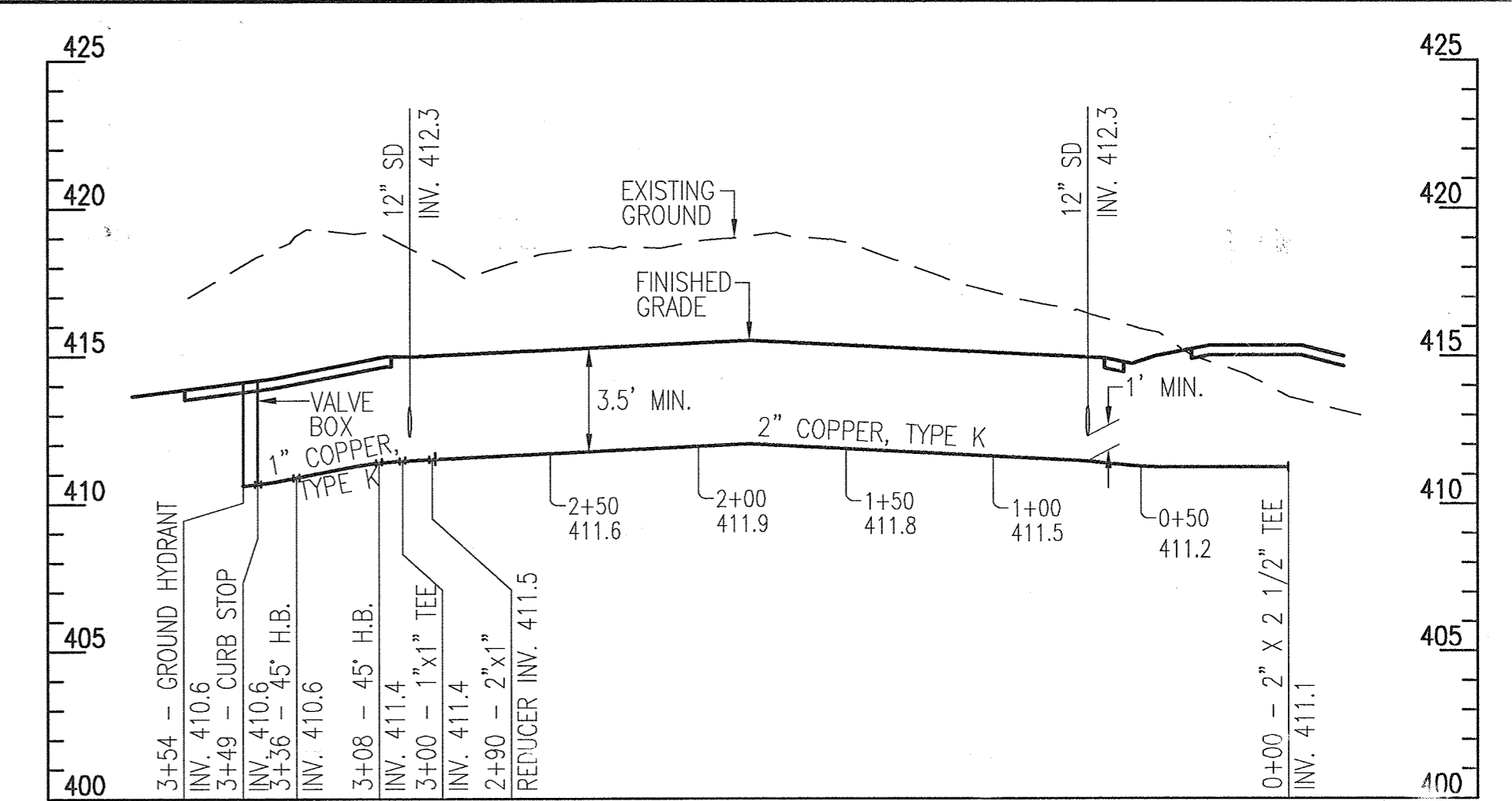
PROFILE 8" SANITARY SEWER

SCALE: 1" = 50' HORIZ
1" = 5' VERT



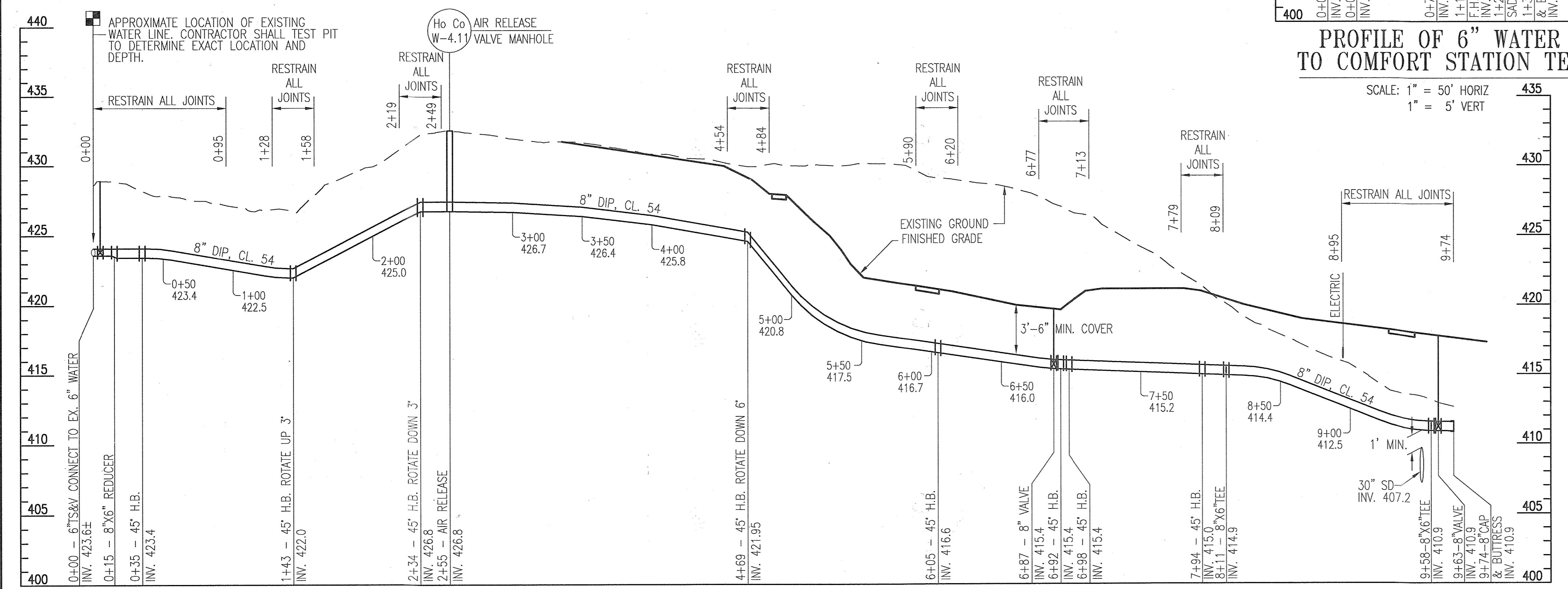
PROFILE OF 2-1/2" WATER TO COMFORT STATION

SCALE: 1" = 50' HORIZ
1" = 5' VERT



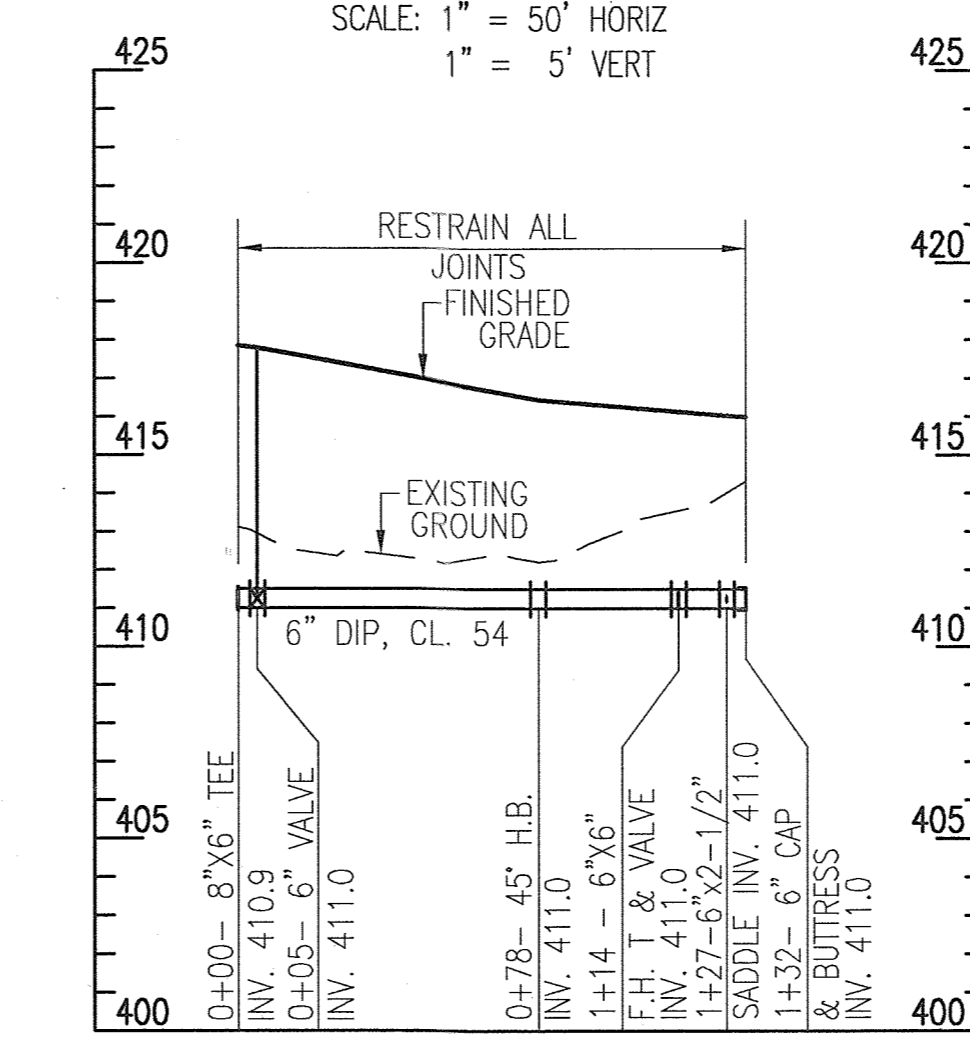
PROFILE OF 2" WATER TO CONCESSION PAD

SCALE: 1" = 50' HORIZ
1" = 5' VERT



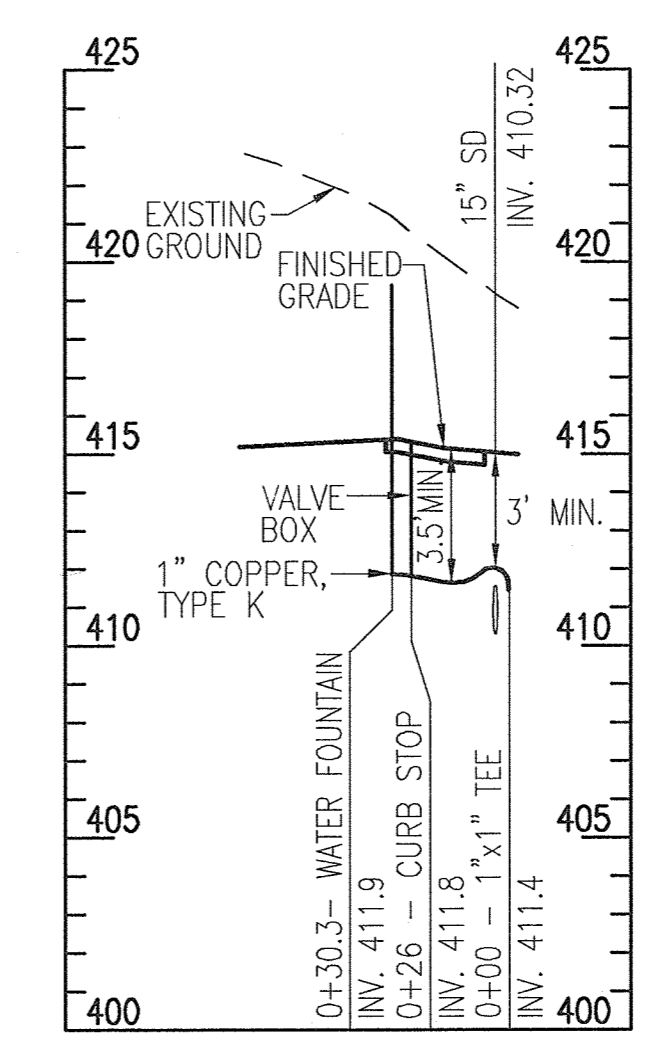
PROFILE 8" WATER

SCALE: 1" = 50' HORIZ
1" = 5' VERT



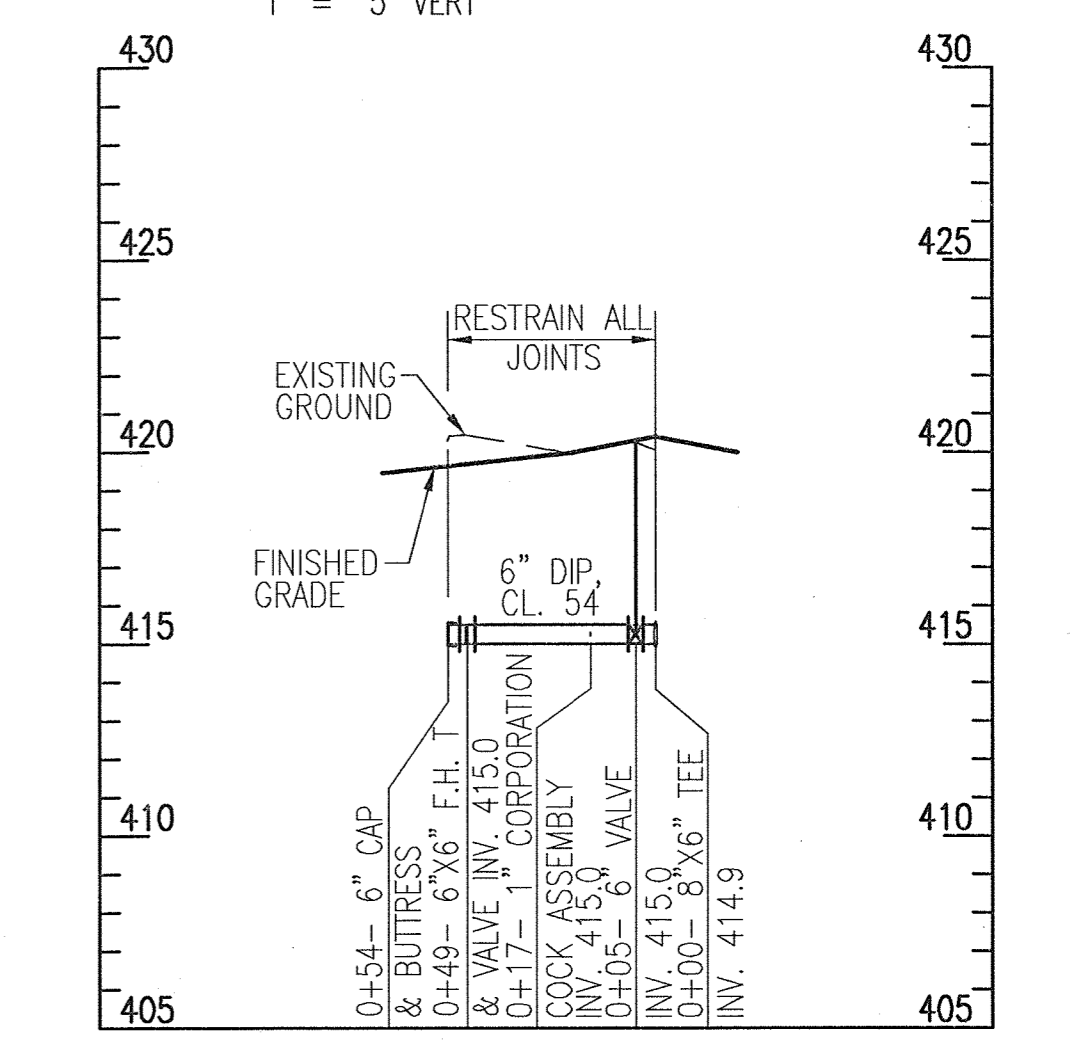
PROFILE OF 6" WATER TO COMFORT STATION TEE

SCALE: 1" = 50' HORIZ
1" = 5' VERT



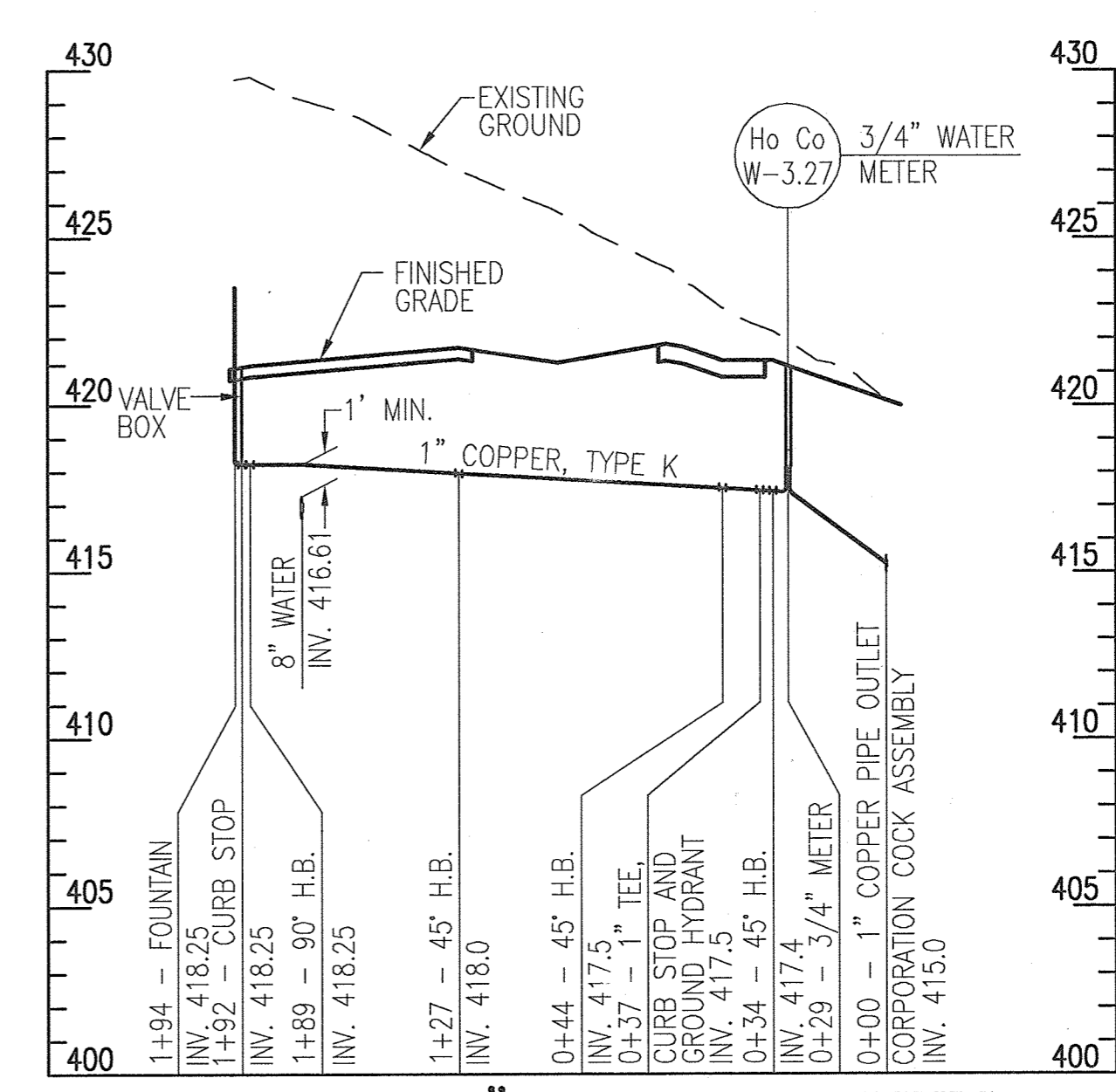
PROFILE OF 1" WATER TO PLAZA FOUNTAIN

SCALE: 1" = 50' HORIZ
1" = 5' VERT



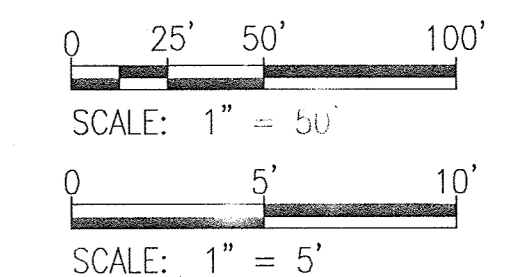
PROFILE OF 6" WATER TO FH# 1

SCALE: 1" = 50' HORIZ
1" = 5' VERT



PROFILE OF 1" WATER TO PICNIC SHELTER WATER FOUNTAIN

SCALE: 1" = 50' HORIZ
1" = 5' VERT

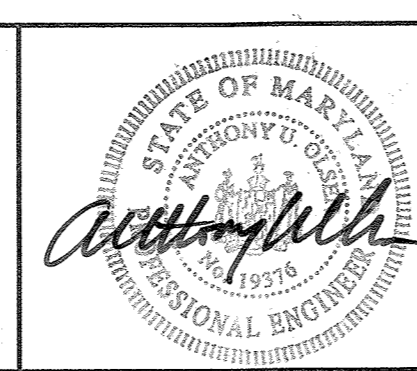


"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19376, EXPIRATION DATE: 9/22/2011."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Silvia C. Green
4/10/10
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF ZONING
PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
William J. ...
4/10/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION

PREPARED BY:
WHITMAN, REQUARDT & ASSOCIATES, LLP
801 South Caroline Street, Baltimore, MD 21231
WR&A



DES:	RBC
DRN:	CYH
CHK:	AUO
DATE:	10/29/09
BY:	CYH
NO.:	1
REVISION:	REVISE WATER LINE FOR PLAYGROUND RELOCATION
DATE:	3/31/10

WATER AND SEWER PROFILES
600' SCALE MAP NO. 36 BLOCK NO. 5
ELECTION DISTRICT 3/7

BLANDAIR REGIONAL PARK - PHASE 1
WATER AND SEWER EXTENSION
CONTRACT NO. 24-4637-D
HOWARD COUNTY, MARYLAND

DWG.
WS0.4
SCALE AS SHOWN
SHEET
4 OF 4