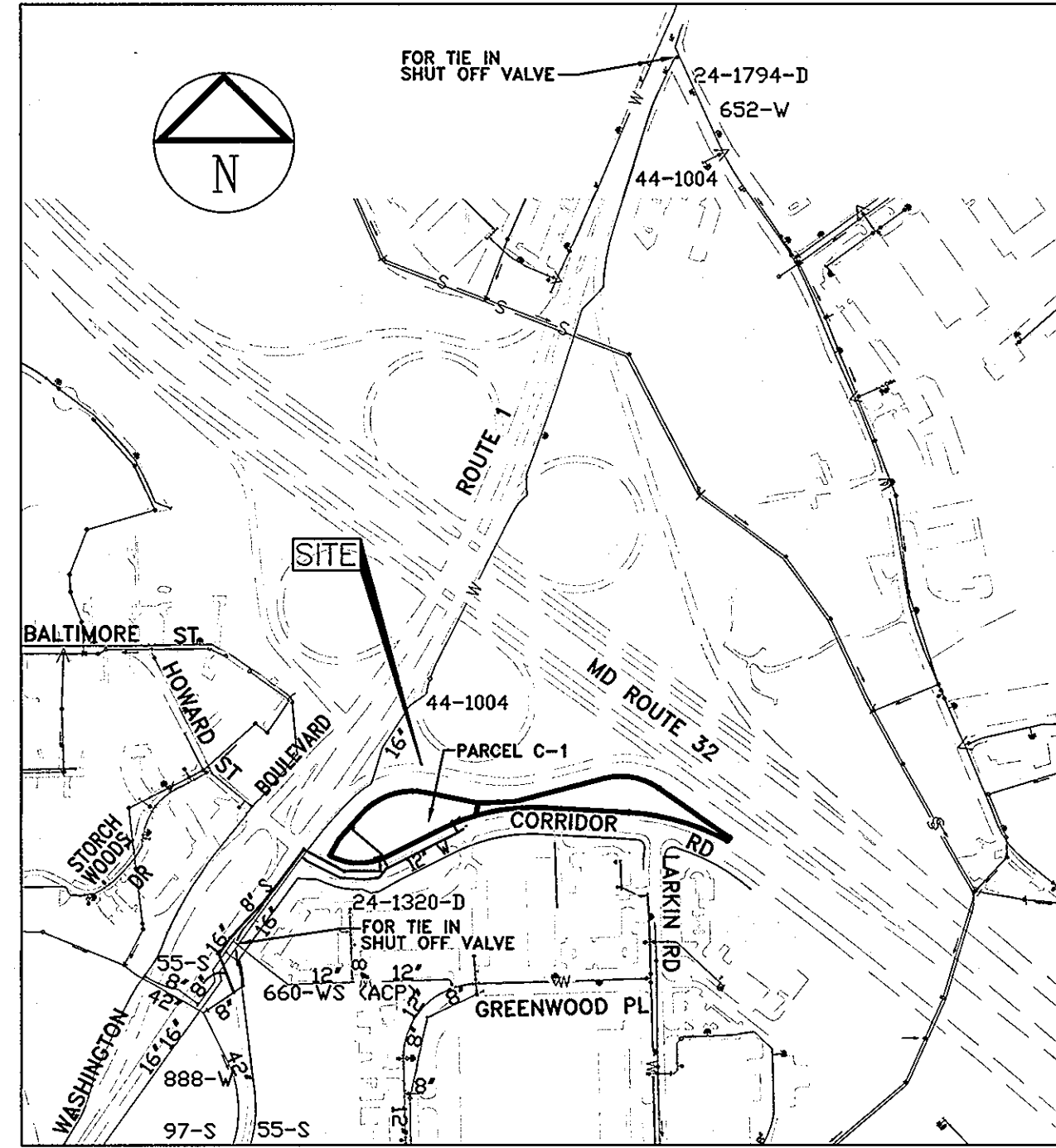


Contract No. 24-4668D



LOCATION MAP

SCALE : 1"=600'

TYPE OF BUILDING: FIRE SUBSTATION
 NO. OF LOTS / PARCELS: 1
 NO. OF WATER HOUSE CONNECTIONS: 1
 NO. OF SEWER HOUSE CONNECTIONS: 1
 DRAINAGE AREA: LITTLE PATUXENT
 TREATMENT PLANT: LITTLE PATUXENT WATER RECLAMATION PLANT
 SAVAGE, HOWARD COUNTY
 WATER ZONE : 400
 TEST GRADIENT: 550

INSIDE WATER METERS TO BE USED

GENERAL NOTES

- Approximate location 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 and Boundary surveys were performed on September 18, 2007 Shanberger & Lane.
- 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. 47FC and No. 47FD.
- All vertical controls are based on NAVD '88. Vertical controls provided on the drawings are based on Howard County Geodetic Control Stations No. 47FC and No. 47FD.
- 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 the monies owed by 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 the work shown on these plans:

AT&T	1-800-252-1133
BGE(Construction Services)	410-637-8713
BGE (Emergency)	410-685-0123
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.
- 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 DPW requirements per section 18.114(a) of the Howard County Code.
- 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 harnesses. 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.

QUANTITIES				
ITEMS	ESTIMATED QUANTITIES	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
12"x 8" T	2 EA.			
8"x 6" T	3 EA.			
12" WATER	675 LF		PVC	
8" WATER	243 LF		PVC	
6" WATER	65 LF		DIP	
FIRE HYDRANT	3 EA.			
12" 1/2 H. BND	2 EA.		PVC	
12" 1/2 V. BND	2 EA.		PVC	
12" 3/4 H. BND	1 EA.		PVC	
8" 1/2 H. BND	1 EA.		PVC	
12" VALVE	3 EA.			
8" VALVE	4 EA.			
6" VALVE	3 EA.			
8" SEWER	935 LF		PVC	
6" SEWER	44 LF		PVC	
4" MH	7 EA.			
8" CAP & BUTRESS	2 EA.		PVC	
12" CAP & BUTRESS	1 EA.		PVC	

NAME OF UTILITY CONTRACTOR:
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

Water House Connection As-built Location Table			
Lot Number	Address	Location Dimension 1	Location Dimension 2
PARCEL	8521 CORRIDOR RD.		

Sewer House Connection As-built Location Table			
Lot Number	Address	Location Dimension 1	Location Dimension 2
PARCEL	8521 CORRIDOR RD.		

WATER MAIN GENERAL NOTES

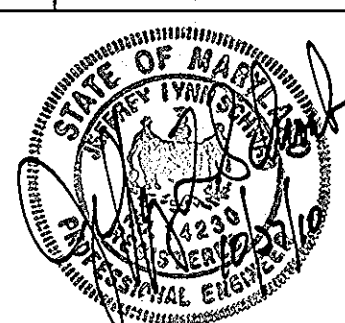
- EXCEPT AS INDICATED ON THE PLANS, ALL PUBLIC WATER MAINS SHALL BE POLYVINYLCHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF AWWA C900 DR18, PRESSURE CLASS 150 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND ALL SUBSEQUENT AMENDMENTS THERETO.
- TOPS OF 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 BUTRESSED 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 RESTRAINED AND BUTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. 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.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- ALL DUCTILE IRON PIPE (DIP) TO BE USED ON THE PUBLIC WATER SYSTEM SHALL BE CLASS 54. DUCTILE IRON FITTINGS SHALL MEET THE REQUIREMENTS OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- FIRE HYDRANTS ARE D.I.P. ONLY.
- VALVES ARE TO BE ATTACHED WITH IRON FITTINGS OR CONCRETE ANCHORS.
- THE DIMENSION RATIO FOR THE PVC MAIN SHALL BE DR 18.
- WATER MAIN CONSTRUCTION SHALL CONSIST OF PVC MAIN WITH EPOXY COATED DIP FITTINGS OR PVC MAIN WITH PVC FITTINGS.

SEWER MAIN GENERAL NOTES

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED. PRECAST MANHOLE HO. CO. STD. NO. 65.12 TO BE USED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALL ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL 65.52. WHERE WATERTIGHT FRAME AND COVER IS 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.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF SPECIFICATIONS AND WITH THIS PLAN, SDP-10-84

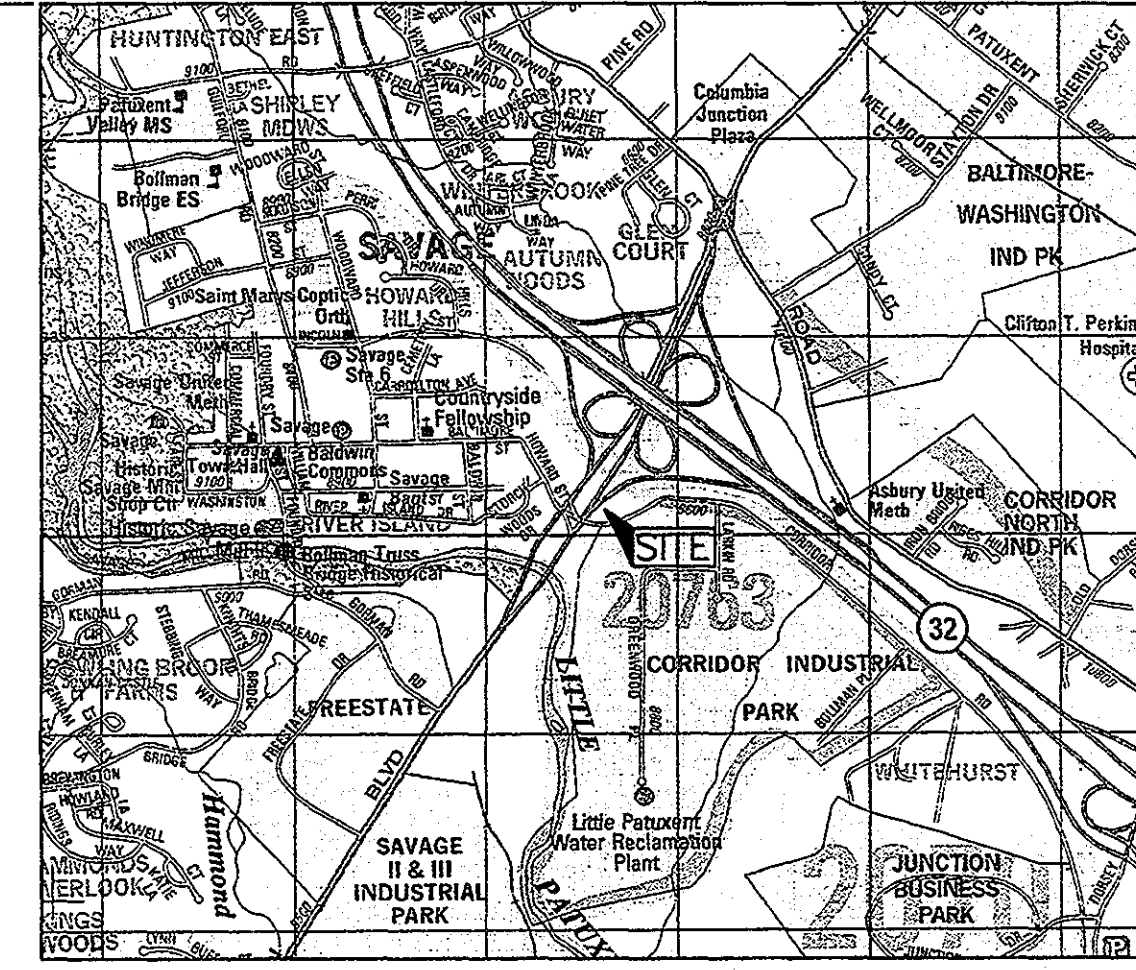
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 14230, Expiration Date: 12/09/10.



DESIGN BY:	JLS
DRAWN BY:	MAS
CHECKED BY:	JLS
DATE:	10/25/10

COVER SHEET

600 SCALE MAP NO. 1943 BLOCK NO. B2



VICINITY MAP
 SCALE : 1"=2,000' ADC MAP 20 D-7

BENCHMARK DESCRIPTIONS

The courses and coordinates shown hereon are based on the following Howard County monuments:

Point	Northing	Easting	Elevation
47FC	N 532305.0496	E 1362985.1299	Elev. 186.433
47FD	N 535277.4137	E 1365059.7235	Elev. 201.251

SHEET INDEX

SHEET NO.	TITLE
1	Cover Sheet
2	Water and Sewer Plan
3	Sewer Profiles
4	Water Profiles
5	Sediment & Erosion Control Plan

OWNER/DEVELOPER:
 HOWARD COUNTY, MARYLAND
 9250 BENDIX ROAD
 COLUMBIA, MARYLAND 21045
 CONTACT: DAVID LOUDERMILK 410-313-6139

Note: No improvements shall be constructed or placed within the Public Water, Sewer and Utility Easements, which will impede or hinder access to the public water and sewer mains. Improvements such as air-conditioning units, fireplace chimneys, decks, fencing, foundation plantings and trees shall not be placed within the easement.

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

John K. Robertson 11/15/10
 SIGNATURE DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

CHIEF - BUREAU OF UTILITIES - DATE

Deanna E. Butler 11/22/10
 CHIEF - DEVELOPMENT ENGINEERING DIVISION, DATE

Ray 11/17/10
 DIRECTOR OF PUBLIC WORKS DATE

Robert J. Seaton 11/17/10
 CHIEF, BUREAU OF ENGINEERING DATE

Shelley Clum 11/15/10
 CHIEF, BUREAU OF UTILITIES DATE

Chad D. Linn 11/17/10
 CHIEF, UTILITY DESIGN DIVISION DATE

SITE ADDRESS: 8501 CORRIDOR ROAD
 Corridor Industrial Park, Section #1, Parcel C-1
 Savage Volunteer Fire Station
 Contract No. 24-4668D
 6th ELECTION DISTRICT-Howard County, Maryland
 PARCEL 1, ZONING M-2

SCALE
 As Shown
 SHEET
 1 OF 5

SEWER MANHOLE SCHEDULE:

STRUCTURE	TOP ELEV.	NORTHING	EASTING	STD. DETAIL
M-1	162.00±	534600.46	1364703.12	6 5/4
M-2*	160.00±	534649.65	1364740.95	6 5/2
M-3*	162.00±	534771.14	1364800.07	6 5/2
M-4*	173.00±	534749.91	1364764.16	6 5/2
M-5*	193.00±	535103.46	1364944.06	6 5/2
M-6*	140.00±	535021.70	1365141.51	6 5/2
M-7*	144.00±	535022.17	1365281.82	6 5/2

* SET ALL SMH WITH EXISTING / PROPOSED PAVING SLOPE TO MATCH EXISTING PAVING SLOPE

WATER MAIN SCHEDULE:

STRUCTURE	DIST. FROM C	NORTHING	EASTING	STA.
1/32 HB	16' RT.	535061.10	1365004.59	10+91.17
1/16 HB	14' RT.	534941.25	1365130.91	11+56.64
1/32 HB	12' RT.	534941.54	1365222.24	12+03.10
1/8 HB	15' RT.	534949.44	1365270.03	13+36.82
1/16 HB	0' LT.	535024.81	1365302.42	13+64.92
12" x 8" TEE	0' LT.	535024.31	1365311.61	13+74.95
12" V	0' LT.	535026.49	1365315.33	13+83.95
12" x 8" TEE	12' LT.	535167.49	1365574.30	16+74.00
12" V	12' LT.	535169.84	1365576.46	16+78.00
12" CAP & BUTTRESS	13' LT.	535170.62	1365596.33	17+18.41
8" CAP & BUTTRESS	17' LT.	535183.19	1365713.50	17+38.57
1/16 HB	60' LT.	535007.67	1365284.44	13+74.64
8" x 6" TEE	17' LT.	535181.41	1365714.93	17+44.51
8" V	66' LT.	535089.61	1365285.69	13+75.19
6" V	17' LT.	535183.44	1365717.1	17+47.64

SHUTDOWN SEQUENCE:

- 1) NOTIFY ALL AFFECTED PROPERTY OWNER 7 DAYS IN ADVANCE OF SHUTDOWN.
- 2) CLOSE EXISTING VALVES SHOWN ON LOCATION MAP.
- 3) EXCAVATE AND REMOVE EXISTING 12" PLUG AND INSTALL 12" VALVE. (KEEP 12" VALVE CLOSED)
- 4) OPEN VALVES CLOSED TO PERFORM SHUTDOWN.

UTILITY NOTE:

- A) CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE OF) THE TRENCH.
- B) PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- C) ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

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. 14230, Expiration Date: 12/09/10.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF SPECIFICATIONS AND WITH THIS PLAN

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Thomas E. Ruttle 11/25/10
CHIEF - DEVELOPMENT ENGINEERING DIVISION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF - BUREAU OF UTILITIES - DATE

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

John R. Poliet
SIGNATURE

11/15/10
DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

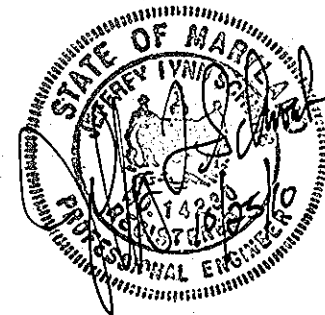
Jaime 11/17/10
DIRECTOR OF PUBLIC WORKS

Robert J. Sorenson 11/17/10
CHIEF, BUREAU OF ENGINEERING

Salva C. Luna 11/30/10
CHIEF, BUREAU OF UTILITIES

D. DeLeon 11/17/10
CHIEF, UTILITY DESIGN DIVISION

Tesseract
Tesseract Sites, Inc.
401 Washington Ave. Suite 303
Towson, Maryland, 21284

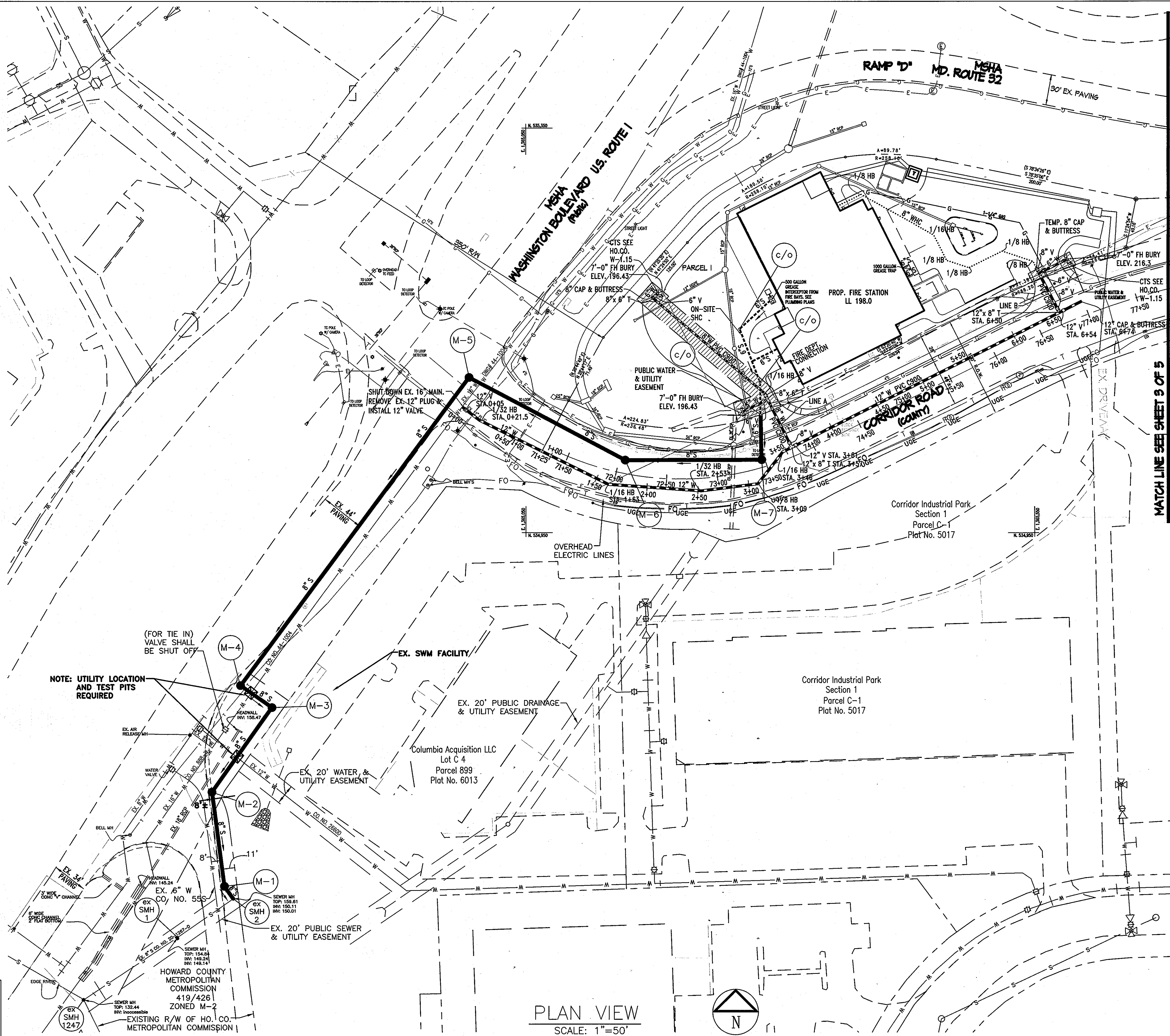


DESIGN BY: JLS
DRAWN BY: MAS
CHECKED BY: JLS
DATE: 10/25/10

WATER & SEWER PLAN

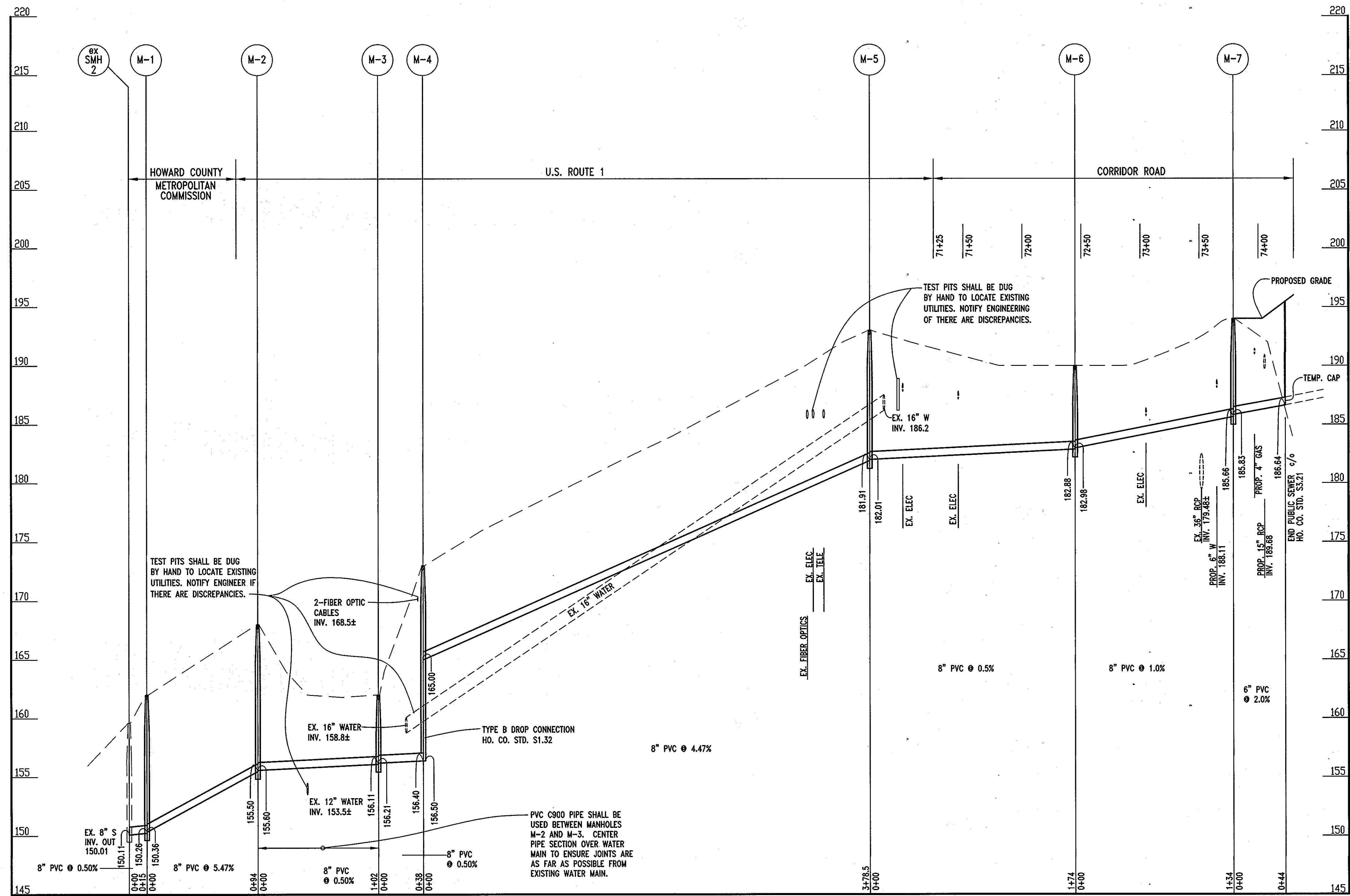
Corridor Industrial Park, Section 1, Parcel C-1
Savage Volunteer Fire Station
Contract No. 24-4668D
6th ELECTION DISTRICT-Howard County, Maryland
PARCEL 1 ZONING M-2

SCALE AS SHOWN
SHEET 2 OF 5



PLAN VIEW
SCALE: 1"=50'

MATCH LINE SEE SHEET 3 OF 5



SANITARY PROFILE

SCALE: HORIZONTAL 1' = 50'
VERTICAL 1' = 5'

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

APPROVED: *John R. Butler* 11/15/10
SIGNATURE DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
CHIEF - BUREAU OF UTILITIES - DATE: *11/21/10*
CHIEF - DEVELOPMENT ENGINEERING DIVISION DATE: *11/21/10*

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF SPECIFICATIONS AND WITH THIS PLAN

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. 14230, Expiration Date: 12/09/10.

NOTE: CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT ALL CROSSINGS AND ADJUST AS NECESSARY.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS DATE: *11/17/10*
CHIEF, BUREAU OF ENGINEERING DATE: *11/17/10*
CHIEF, BUREAU OF UTILITIES DATE: *11/17/10*
CHIEF, UTILITY DESIGN DIVISION DATE: *11/17/10*

Tesseract
Tesseract Sites, Inc.
401 Washington Ave. Suite 303 Towson, Maryland, 21284 P. 410.321.7600 F. 410.321.7601

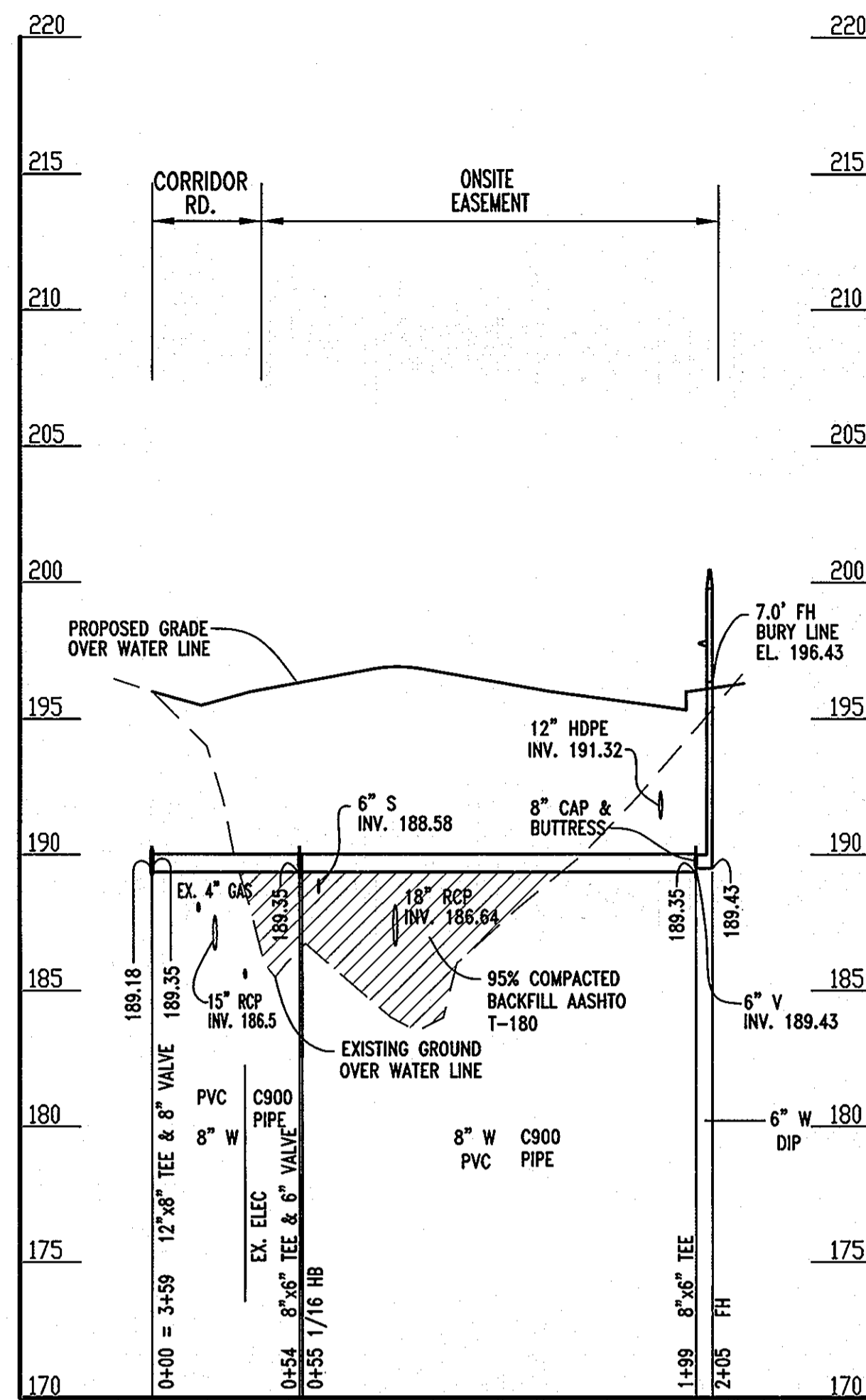


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DRAWN BY:	MAS			
CHECKED BY:	JLS			
DATE:	10/25/10	BY	NO.	

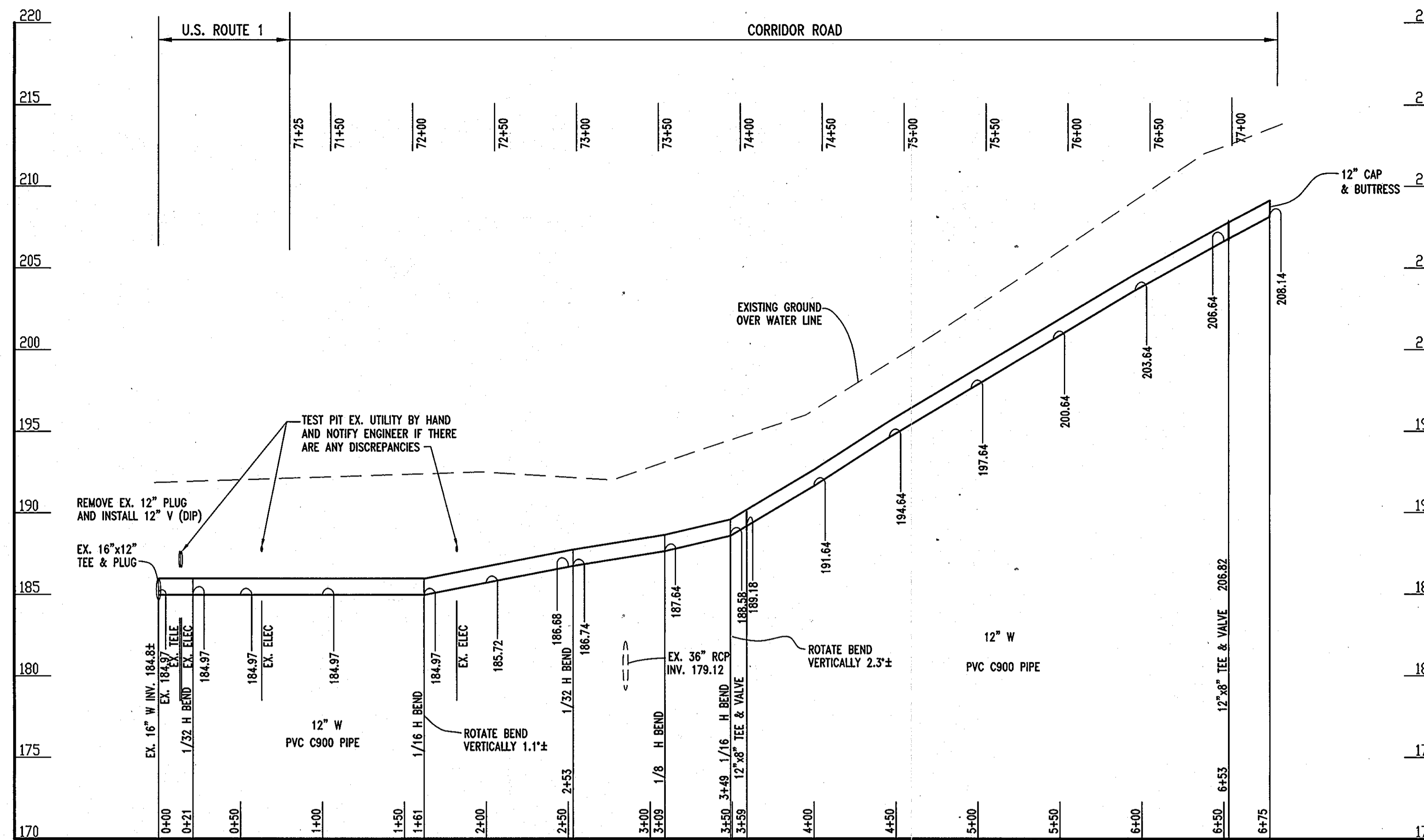
WATER & SEWER PROFILES
DATE: 600 SCALE MAP NO. 1943 BLOCK NO. B2

Corridor Industrial Park, Section 1, Parcel C-1
Savage Volunteer Fire Station
Contract No. 24-4668D
6th ELECTION DISTRICT-Howard County, Maryland
PARCEL 1 ZONING M-2

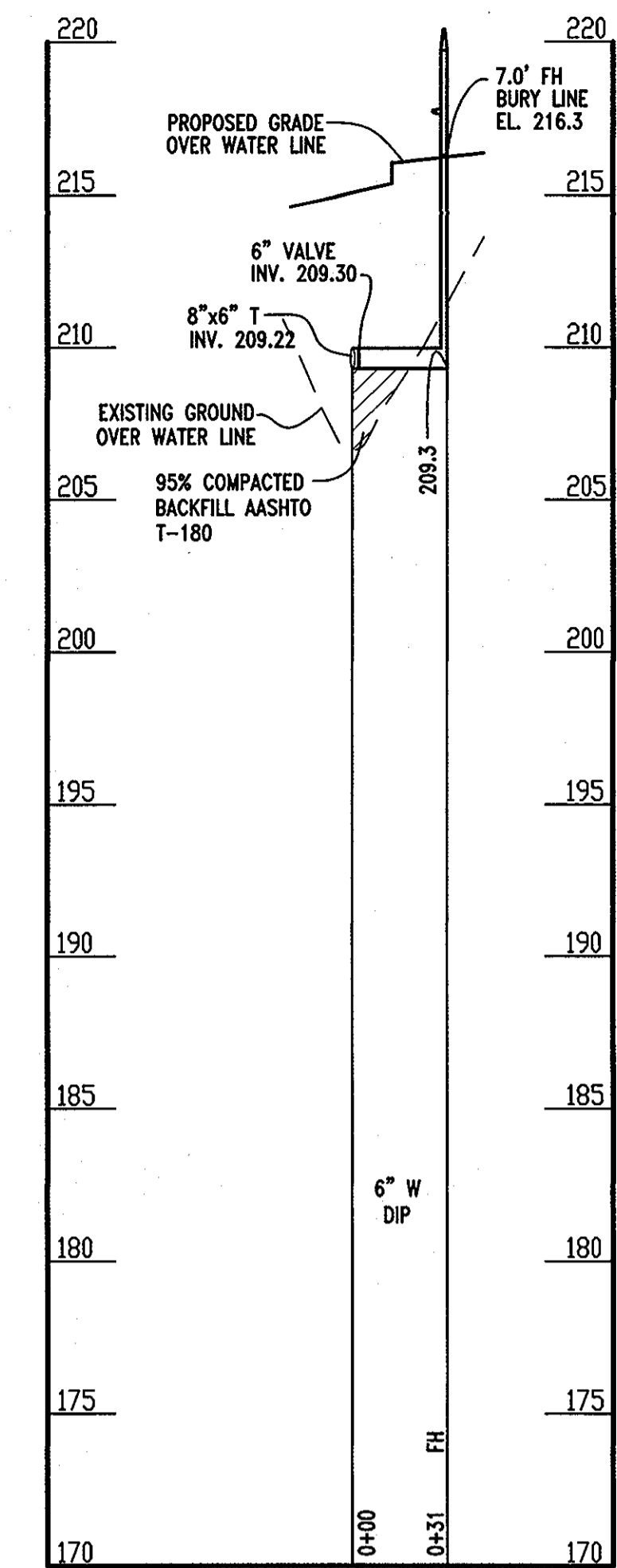
SCALE 1"=50'
SHEET 3 OF 5



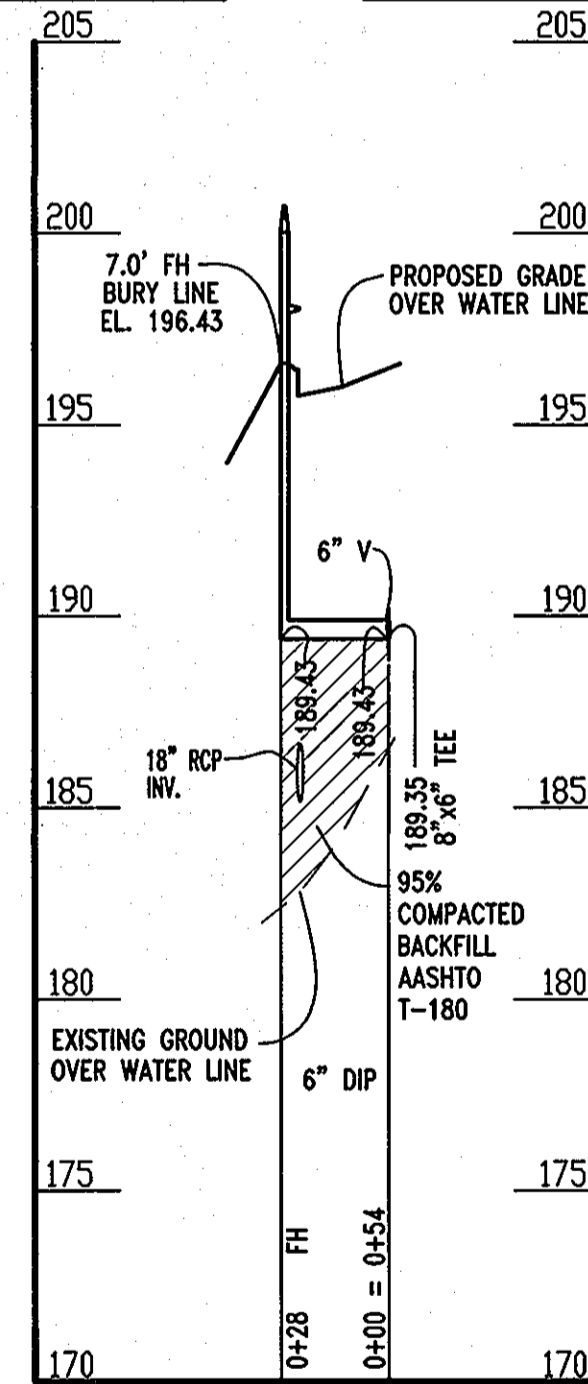
WATER PROFILE-LINE A
 SCALE: HORIZONTAL 1' = 50'
 VERTICAL 1' = 5'



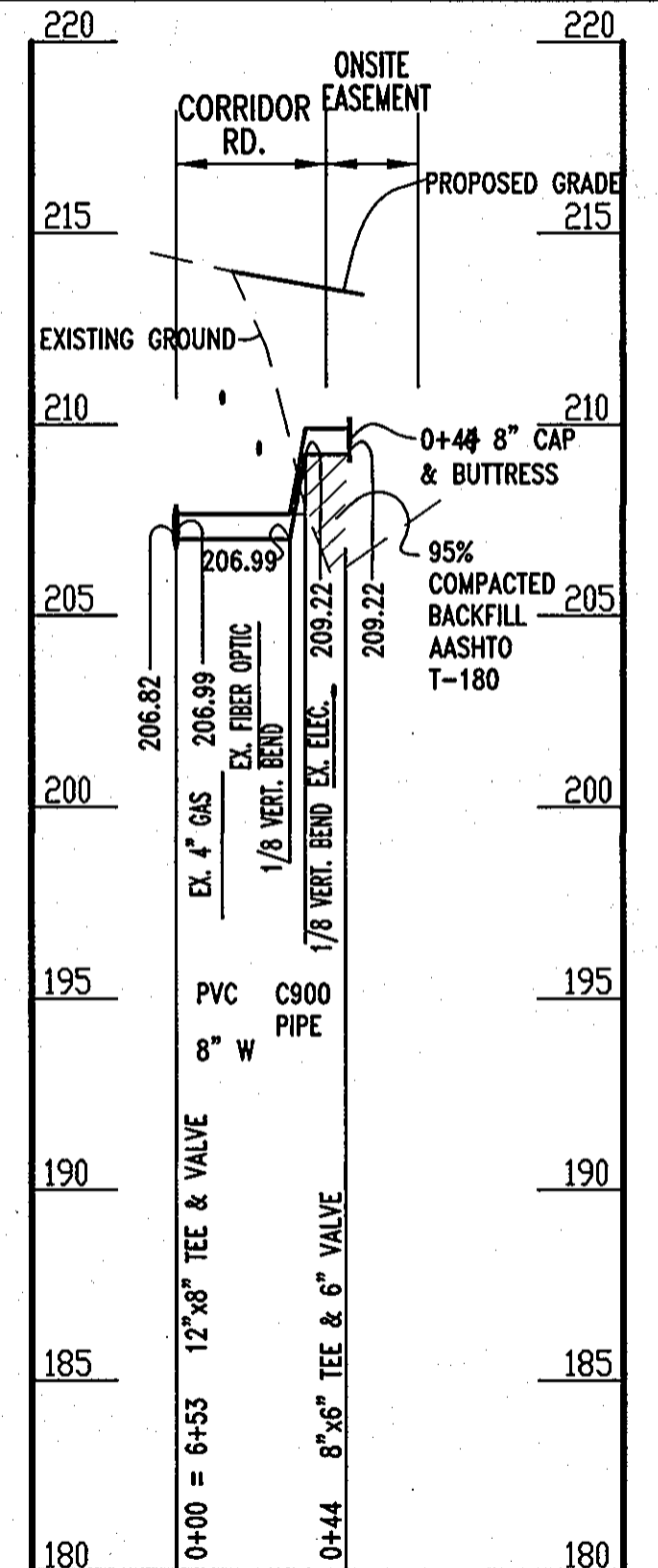
WATER PROFILE
 SCALE: HORIZONTAL 1' = 50'
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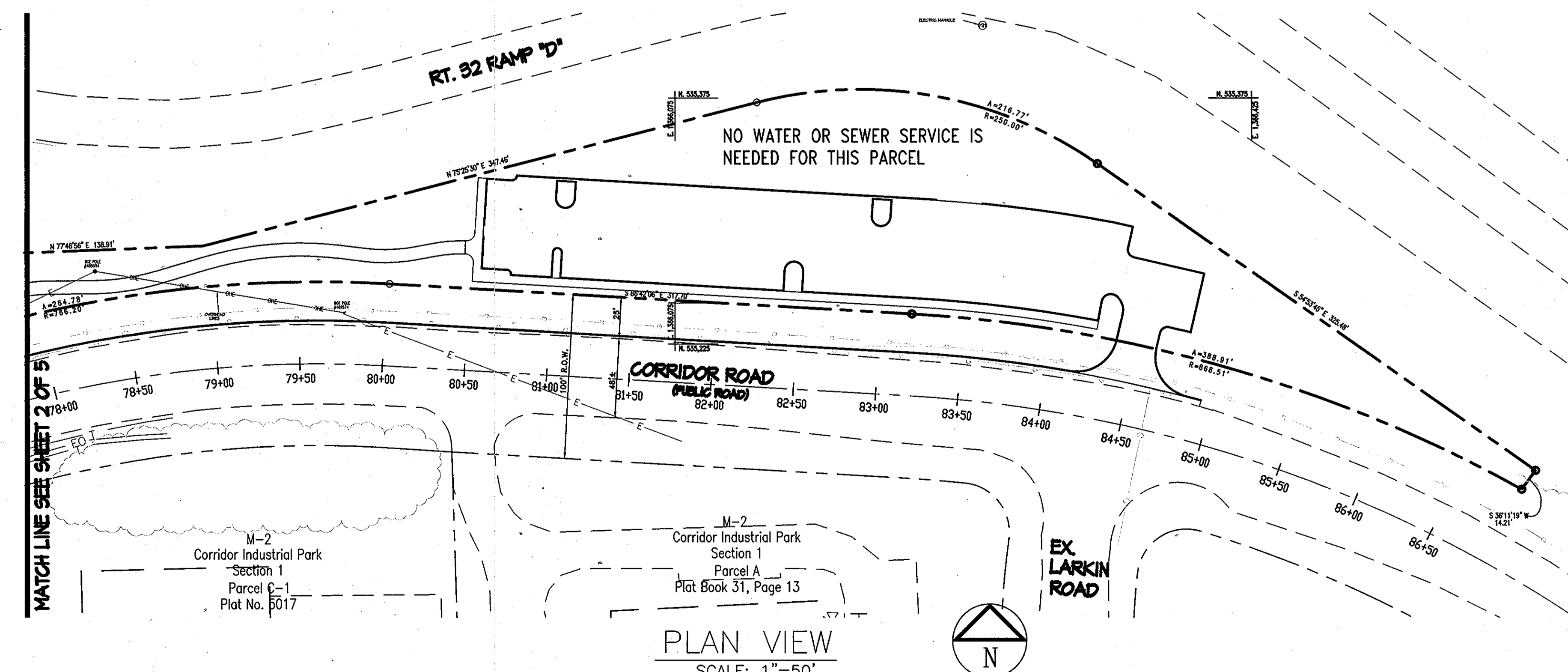
WATER PROFILE
 SCALE: HORIZONTAL 1' = 50'
 VERTICAL 1' = 5'



WATER PROFILE
 SCALE: HORIZONTAL 1' = 50'
 VERTICAL 1' = 5'



WATER PROFILE-LINE B
 SCALE: HORIZONTAL 1' = 50'
 VERTICAL 1' = 5'



PLAN VIEW
 SCALE: 1"=50'

NOTE: CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT ALL CROSSINGS AND ADJUST AS NECESSARY.

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. 14230, Expiration Date: 12/09/10.

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

SIGNATURE: *[Signature]* DATE: 11/23/10
 DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PLANNING & ZONING, HOWARD COUNTY, MARYLAND
 CHIEF - BUREAU OF UTILITIES - DATE: *[Signature]* 11/23/10
 CHIEF - DEVELOPMENT ENGINEERING DIVISION - DATE: *[Signature]* 11/23/10

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF SPECIFICATIONS AND WITH THIS PLAN

DEPARTMENT OF PUBLIC WORKS, HOWARD COUNTY, MARYLAND
 DIRECTOR OF PUBLIC WORKS: *[Signature]* DATE: 11/17/10
 CHIEF, BUREAU OF UTILITIES: *[Signature]* DATE: 11/17/10
 CHIEF, UTILITY DESIGN DIVISION: *[Signature]* DATE: 11/17/10



DESIGN BY:	JLS
DRAWN BY:	MAS
CHECKED BY:	JLS
DATE:	10/25/10

WATER & SEWER PROFILES
 600 SCALE MAP NO. 1943 BLOCK NO. B2

Corridor Industrial Park, Section 1, Parcel C-1
 Savage Volunteer Fire Station
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 6th ELECTION DISTRICT-Howard County, Maryland
 PARCEL 1 ZONING M-2
 SCALE 1"=50'
 SHEET 4 OF 5

