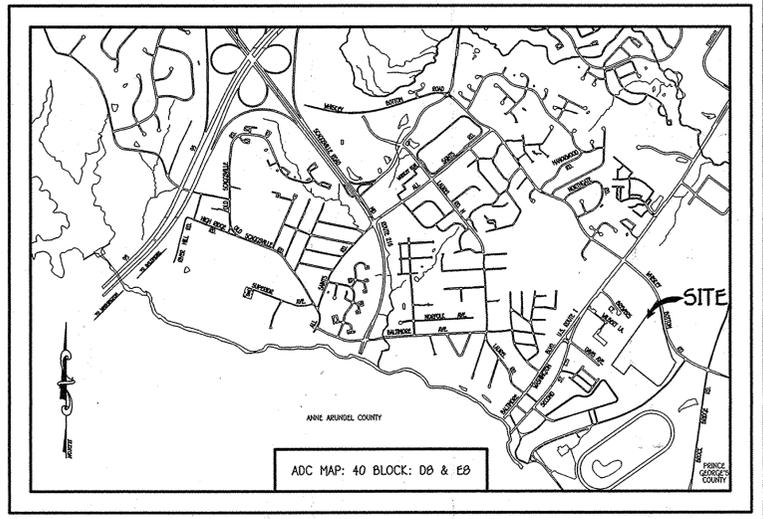
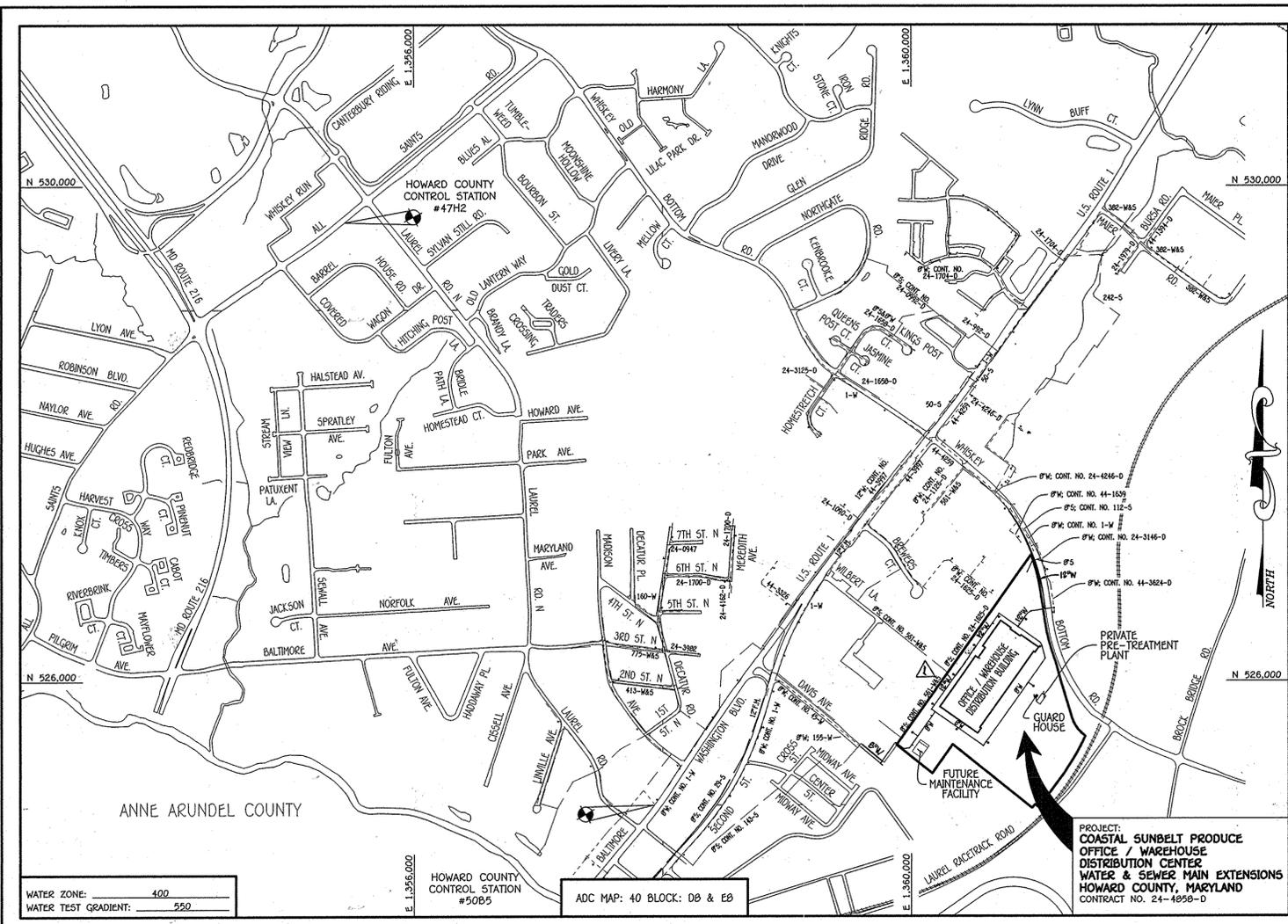


QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
8" PVC SDR-35	175 L.F.	175 L.F.	SDR-35	National Pipe
4" PVC SDR-35	10 L.F.	10 L.F.	SDR-35	National Pipe
MANHOLES	3 EACH	4		Cont. Pvc Corp.
CLEAN-OUT	1 EACH	1		Horne
6" PVC DR-18	2,045 L.F.	2,055 L.F.	DR-18	National Pipe
6" PVC DR-18	251 L.F.	251 L.F.	DR-18	National Pipe
6" PVC DR-18	10 L.F.	10 L.F.	DR-18	National Pipe
1-1/2" W/C	10 L.F.	10 L.F.	Type K	Mueller
8" TAPPING SLAVE	1 EACH	1	# 663	Smith-Blair
8" TEE	3 EACH	3	C-153	Tyler
8" TEE	3 EACH	3	C-153	Tyler
8" TEE	1 EACH	1	C-153	Tyler
8" TAPPING VALVE	1 EACH	1	T236019	Mueller
8" VALVE	10 EACH	10	A236023	Mueller
6" VALVE	10 EACH	10	A236023	Mueller
4" VALVE	1 EACH	1	MJA 236023	Mueller
8" PLUG & BUTTRESS	2 EACH	3	MJC 153	Tyler
10" PLUG & BUTTRESS	1 EACH	1	MJC 153	Tyler
4" PLUG & BUTTRESS	1 EACH	1	MJC 153	Tyler
FIRE HYDRANT	10 EACH	10	A423	Mueller
CONTINITY TEST STATION	10 EACH	10		Vestal Manufacturing
1/8 H.B.	9 EACH	7	Epoxy B	Tyler
1/16 H.B.	5 EACH	2-8" / G-12"	Epoxy	Tyler
1/32 H.B.	5 EACH	8-8" / B-12"	Epoxy	Tyler
4" H.D.C.	1 EACH	1	P.V.C.	North American Pipe
OUTSIDE METER SETTING	1 EACH	1		Horne
10" VALVE	1 EACH	1	MJA 236023	Mueller
10" VALVE	1 EACH	1	DR-18	National Pipe
10" VALVE	1 EACH	1	C-153	Tyler
10" VALVE	1 EACH	1	C-153	Tyler
NAME OF UTILITY CONTRACTOR:	C.C.S.			
SUBJECT: DEPARTMENTAL AS-BUILT DATE:				



GENERAL NOTES

VICINITY MAP
SCALE: 1" = 2000'

- PART A:**
- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND HAZARD 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 DECEMBER, 2013 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. 47H2 & NO. 50B5.
 - ALL VERTICAL CONTROLS ARE BASED ON NAVD '83 VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
 - THE 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 \odot AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST FIT OR FITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST FITS HAVE NOT BEEN MADE 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 (CONTRACTOR SERVICES) 410-537-9713
 - BGE (EMERGENCY) 410-695-0123
 - BUREAU OF UTILITIES 410-313-4500
 - COLONIAL PIPELINE CO 410-795-1590
 - MISS UTILITY 1-800-257-7777
 - STATE HIGHWAY ADMINISTRATION 410-511-5533
 - VERTE 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 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 10.114(b) OF THE HOWARD COUNTY CODE.
- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE AWMA 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 STAPPED 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.
 - TRACE WIRE AND CONTRIBUTY 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 AWMA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL. CERTIFICATIONS OR SHOP DRAWINGS FOR 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 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 HARNESSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SAOULDS USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
 - PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE. THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
 - ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20 FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.
 - PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL OF 3-DEGREES (1 1/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWMA C900. SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
 - FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR-18 MEETING THE REQUIREMENTS OF AWMA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR-18 OR EQUAL.
 - WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWMA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSERT DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR BUSH ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SHOWN AS MANUFACTURED BY BELL IRON, INC. OR APPROVED EQUAL.
 - TO ACCOMMODATE A SPRINKLER SYSTEM, ALL RESIDENTIAL DWELLING UNITS SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE METER SETTING. STD. DET. W-3.28.
- PART C: 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.
 - 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 WATER-TIGHT W.P. FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATER-TIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSES WITH THE SYMBOL "C.S." INDICATES THAT CELLAR CANNOT BE SERVED.

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION #47H2 - HORIZONTAL - (NAD '83)
LOCATED ALONG ALL SAINTS ROAD, 1/4 MILE EAST OF ROUTE 216. APPROX. 3' OFF EDGE OF PAVING, 29' EAST OF TRAFFIC SIGN & 5' FROM ELECTRIC BOX
N 923,706.423
E 1,355,445.341
ELEVATION = 256.093 - VERTICAL - (NAVD '88)

B.M.#2 - HOWARD COUNTY CONTROL STATION #50B5 - HORIZONTAL - (NAD '83)
LOCATED ALONG ROUTE 1 SOUTH BOUND LANE, APPROX. 3' OFF EDGE OF PAVING, 50.2' SOUTH OF FIRE HYDRANT & 73.9' EAST FROM CORNER OF BENNER ANIMAL HOSPITAL #10100
N 923,706.423
E 1,357,925.656
ELEVATION = 177.424 - VERTICAL - (NAVD '88)

QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
10" VALVE	2,362 L.F.	2,362	DR-18	North American Pipe
12" VALVE	10 EACH	10	A236023	Mueller
10" PLUG & BUTTRESS	2 EACH	2	C-153	Tyler
12" x 10" OR-999	1 EACH	1	C-153	Tyler
12" x 8" TEE	9 EACH	1	C-153	Tyler
10" x 8" REDUCER	1 EACH	1	C-153	Tyler
10" x 6" FIT. TEE	5 EACH	5	C-153	Tyler
8" FIT. TEE	1 EACH	1	C-153	North American Pipe

TYPE OF BUILDING: WAREHOUSE DISTRIBUTION CENTER / MAINTENANCE FACILITY

NUMBER OF PARCELS: 1

NO. OF WATER HOUSE CONNECTIONS: 2

NO. OF SEWER HOUSE CONNECTIONS: 2

SEWER SHED: LITTLE PATUXENT

TREATMENT PLANT: LITTLE PATUXENT WATER RECLAMATION PLANT SAVAGE, MARYLAND

LOCATION MAP
SCALE: 1" = 600'

PLAN REFERENCE NUMBERS:
SDP-14-080
F-15-074 (RECORD PLAN)

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 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Paul W. Keibel, FOR:
WHISKEY SPEAR, LLC
SIGNATURE OF DEVELOPER
04/21/15
DATE

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. Keibel, FOR:
WHISKEY SPEAR, LLC
SIGNATURE OF DEVELOPER
04/21/2015
DATE

COASTAL SUNBELT PRODUCE				
Item	Location 1	Measurement	Location 2	Measurement
WHC Guard House	MH 505	53'	MH 105	26'
SHC Maintenance Facility	EX-SMH 178	13'	PH	83'

NAME OF UTILITY CONTRACTOR: C.C.S.

CONTRACT NO. 24-4858-D

COASTAL SUNBELT PRODUCE

OFFICE / WAREHOUSE

DISTRIBUTION CENTER

WATER & SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

SEDDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 309 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE SITE DEVELOPMENT PLAN, SDP-14-080.

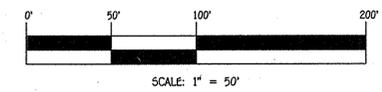
Paul W. Keibel, FOR:
WHISKEY SPEAR, LLC
SIGNATURE OF DEVELOPER
SDP-14-080
DATE

APPROVED:
John C. [Signature]
HOWARD SOIL CONSERVATION DISTRICT
5/15/15
DATE

LEGEND	
SYMBOL	DESCRIPTION
---	EX. WATER MAIN
---	EX. SEWER MAIN
o	EX. SEWER MANHOLE
---	EX. WATER, SEWER & UTILITY EASEMENT
o	EX. FIRE HYDRANT
o	EX. VALVE
---	PROP. WATER MAIN
---	PROP. SEWER MAIN
o	PROP. SEWER MANHOLE
---	PROP. WATER, SEWER & UTILITY EASEMENT
o	PROP. W/C
o	PROP. SHC
o	PROP. FIRE HYDRANT
o	PROP. VALVE

DEVELOPER
WHISKEY SPEAR, LLC
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-6414
PHONE - 410-296-3800

OWNER
9001 WBR, LLC
1029 HARRISON DRIVE
LAUREL, MARYLAND 20707-3827
PH# 410-423-0460



CONTRACT NO. 24-4858-D
COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

5.12.15
DATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A ONLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12043 EXPIRATION DATE IS 7/15/16.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
ELKTON, MD 21921
PHONE (410) 461-2255

DESIGNED BY: B.C.R.

DRAWN BY: B.C.R.

CHECKED BY: P.W.K.

DATE: APRIL 2015

BY NO. REVISION

WATER & SEWER MAIN EXTENSIONS
TITLE SHEET

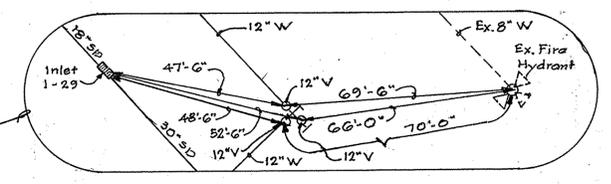
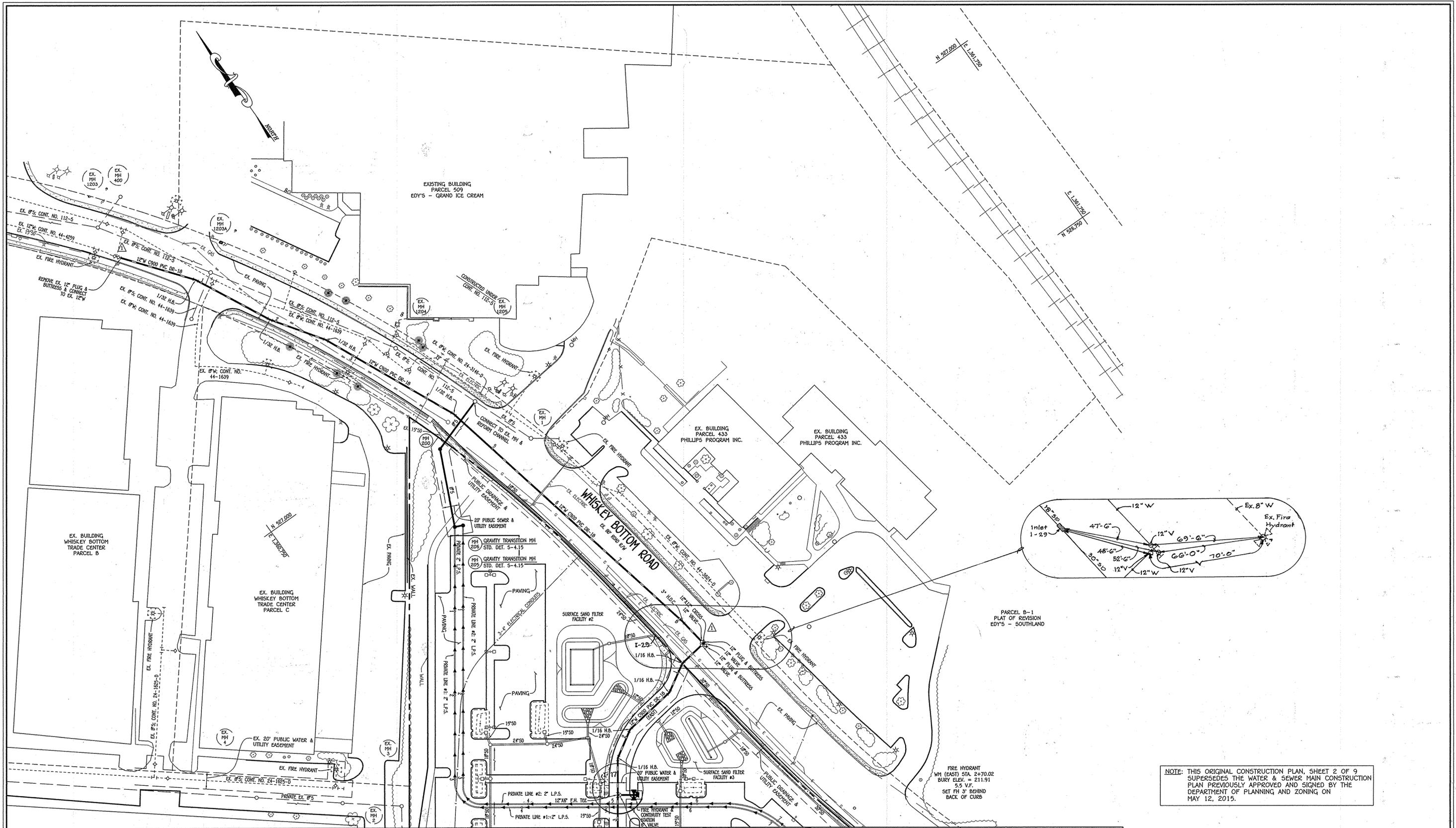
600' SCALE MAP NO. 50 BLOCK NO. 4.5.10.11
F.C.C. WORK ORDER NO. 13033-3001
FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-4858-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

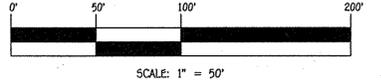
SCALE AS SHOWN

SHEET 1 OF 9

1:2013.03033.Engineering\03033-3001 Water and Sewer Contract Planning, 7/28/2015 10:01:24 AM



NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 2 OF 9 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON MAY 12, 2015.



CONTRACT NO. 24-4858-D
COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

MATCHLINE: SEE SHEET 3

MATCHLINE: SEE SHEET 4



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
8/13/15

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
8/13/15

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 IS 7/16/16.
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2225

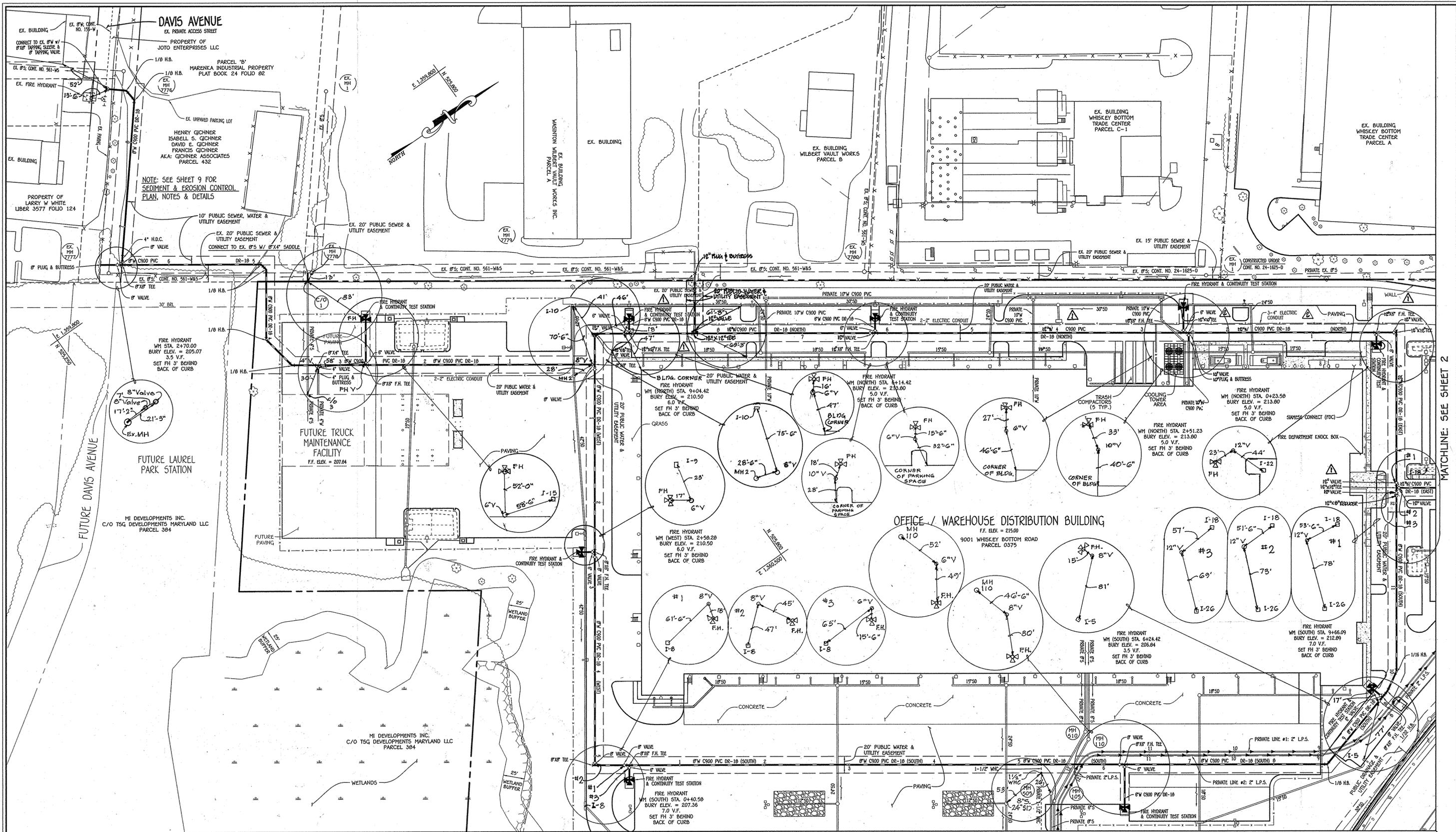


DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	
DATE:	JULY, 2015
FCC BY NO.	ADD 12" W IN WHISKEY BOTTOM ROAD AND REVISE 8" W TO 12" W THRU SITE (NORTH)
REVISION	
DATE	8/24/15

WATER & SEWER MAIN EXTENSIONS PLAN	
600' SCALE MAP NO.	50
BLOCK NO.	4.5.10.11
F.C.C. WORK ORDER NO.	13033-3001
FILE NAME	WATER & SEWER MAIN EXTENSION PLAN

COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-4858-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

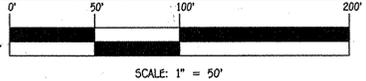
SCALE AS SHOWN
SHEET 2 OF 9



MATCHLINE: SEE SHEET 4

PLAN

SCALE: 1" = 50'



SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

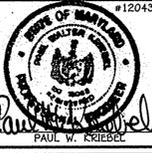
Steve C. Lewis
4/22/15
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Paul E. Edman
M.G.
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
CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2895



DESIGNED BY:	B.C.R.	
DRAWN BY:	B.C.R.	
CHECKED BY:	P.M.K.	7/20/15
DATE:	APRIL, 2015	
BY NO.		
REVISION		

WATER & SEWER MAIN EXTENSIONS PLAN

60' SCALE MAP NO. 50 BLOCK NO. 5.5.10.11
F.C.C. WORK ORDER NO. 13033-3001
FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

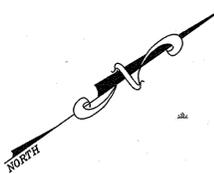
COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-4950-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 9

I:\2013\13033\Engineering\0495\Water and Sewer Contract Plans\0495-3001 Water and Sewer Contract Plans.dwg, 4/21/2015 04:43:30 AM

MATCHLINE: SEE SHEET 3

MATCHLINE: SEE SHEET 2



MI DEVELOPMENT INC.
C/O TSG DEVELOPMENTS MARYLAND LLC
PARCEL 304

9001 WHISKEY BOTTOM ROAD
PARCEL C375

GUARD HOUSE

PRIVATE PRE-TREATMENT PLANT

PARCEL B-1
PLAT OF REVISION
EDY'S - SOUTHLAND

WHISKEY BOTTOM ROAD

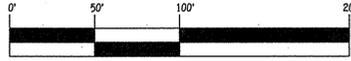
CSX RAILROAD

THE BALTIMORE AND OHIO
RAILROAD COMPANY
(AKA: CSX RAILROAD)

CSX RAILROAD

PLAN

SCALE: 1" = 50'



SCALE: 1" = 50'

CONTRACT NO. 24-4858-D
COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

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
FULLY 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
CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2825

DESIGNED BY :	B.C.R.	DATE :	APRIL 2015
DRAWN BY :	B.C.R.	BY :	NO.
CHECKED BY :	P.W.K.	REVISION	
DATE :	7/22/15	REVISION	

WATER & SEWER MAIN EXTENSIONS
PLAN

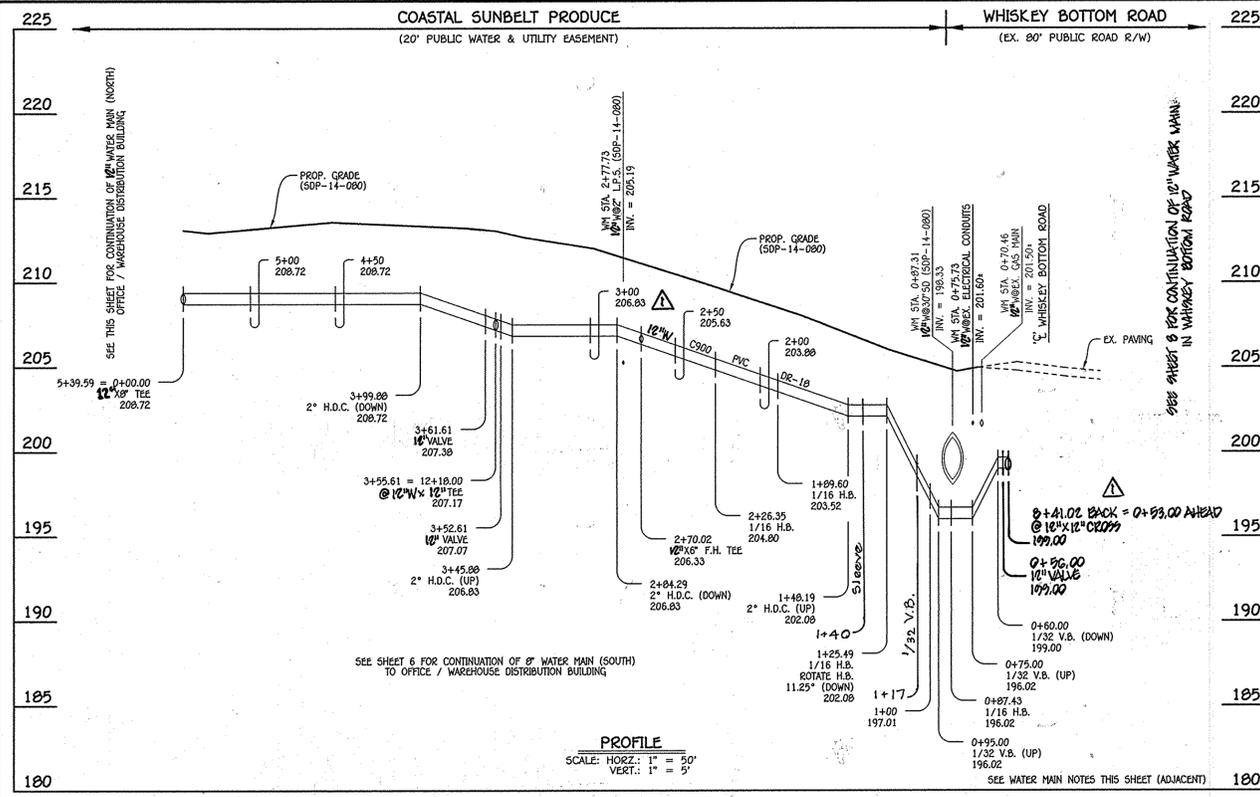
600' SCALE MAP NO. 50 BLOCK NO. 4.5.10.11
F.C.C. WORK ORDER NO. 13033-3001
FILE NAME : WATER & SEWER MAIN EXTENSION PLAN

COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-4858-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

SHEET
4 of 9

11/2013 130333 Engineering\Ougs\Water and Sewer Contract Plans\4858-D\Final\13033-3001 Water and Sewer Contract Plans.dwg, 4/21/2015 8:44:05 AM



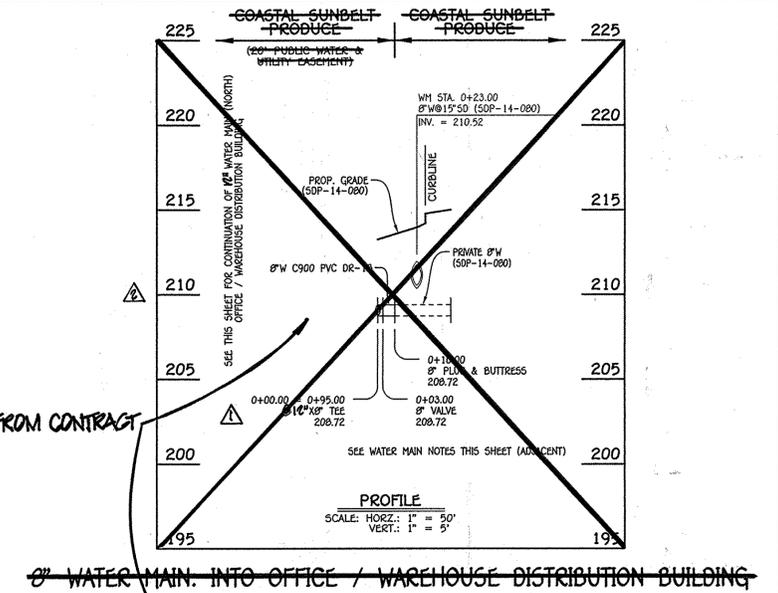
WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
12" WATER MAIN (EAST): OFFICE / WAREHOUSE DISTRIBUTION BUILDING			
0+00.00	12" VALVE	526594.76	1361020.75
0+07.43	1/16 H.B.	526590.67	1361057.11
1+25.49	1/16 H.B.	526571.22	1361024.40
1+09.60	1/16 H.B.	526562.04	1360960.95
2+26.35	1/16 H.B.	526542.84	1360925.62
2+70.02	12" X 6" F.H. TEE	526507.16	1360904.43
3+52.61	12" VALVE	526439.70	1360855.00
3+55.61 = 12+18.00	12" X 6" TEE	526437.25	1360855.07
3+61.61	12" VALVE	526440.71	1360850.07
5+39.59 = 0+00.00	12" X 6" TEE	526543.33	1360704.74

- WATER MAIN NOTES:**
- ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
 - ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 - DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 - ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

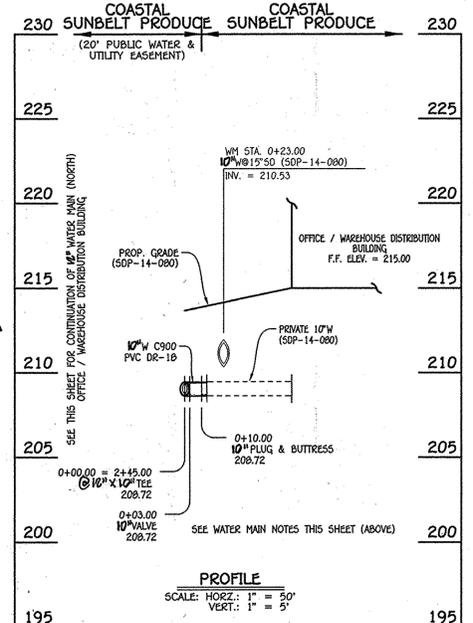
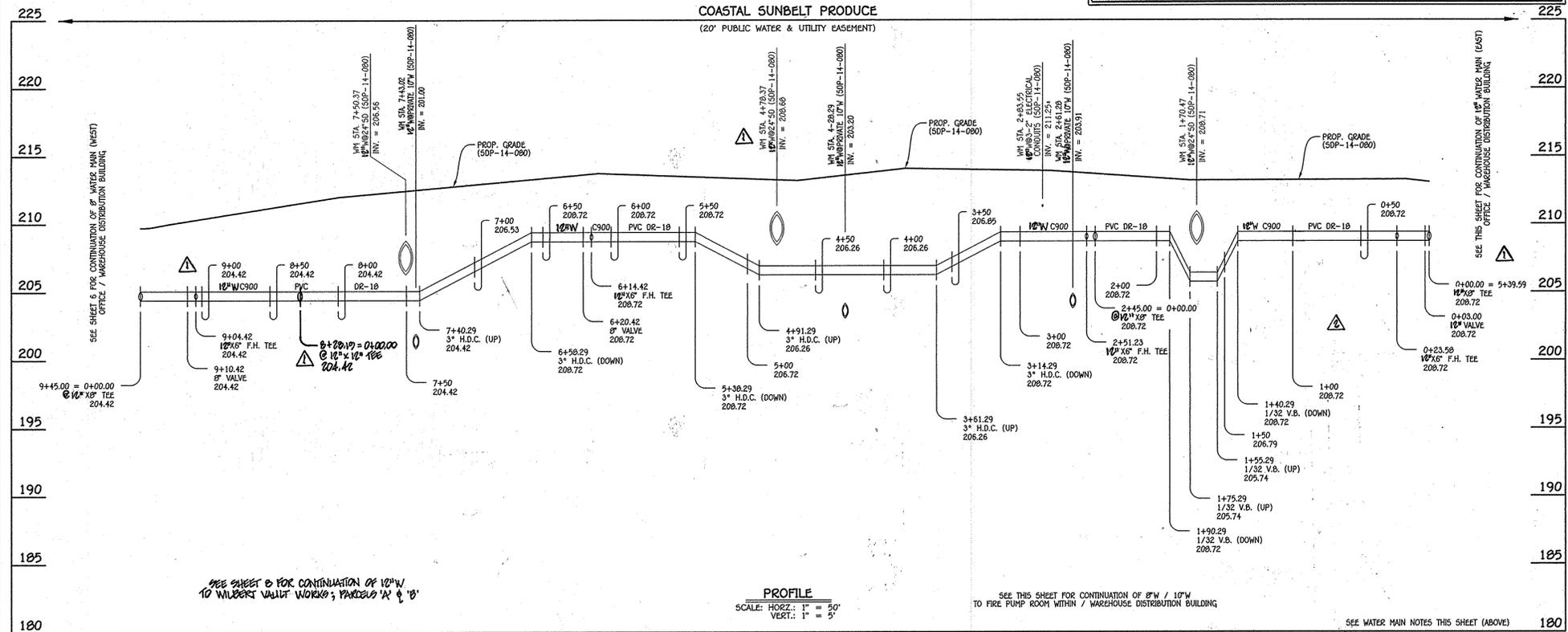
WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
WATER MAIN (NORTH): OFFICE / WAREHOUSE DISTRIBUTION BUILDING			
0+00.00 = 5+39.59	12" X 6" TEE	526543.33	1360704.74
0+03.00	12" VALVE	526540.88	1360703.01
0+23.58	12" X 6" F.H. TEE	526524.06	1360691.15
2+45.00 = 0+00.00	12" X 6" TEE	526449.71	1360619.96
2+51.23	12" X 6" F.H. TEE	526338.05	1360599.89
6+14.42	12" X 6" F.H. TEE	526041.32	1360350.48
6+20.42	12" VALVE	526036.41	1360347.03
9+04.42	12" X 6" F.H. TEE	525804.37	1360183.28
9+10.42	12" VALVE	525799.47	1360179.82
9+45.00 = 0+00.00	12" X 6" TEE	525771.22	1360159.88
9+20.19 = 0+00.00	12" X 12" TEE	525866.66	1360221.89



WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: INTO OFFICE / WAREHOUSE DISTRIBUTION BUILDING			
0+00.00 = 0+95.00	10" X 6" TEE	526465.71	1360649.96
0+03.00	8" VALVE	526463.98	1360652.42
0+10.00	8" PLUG & BUTTRISS	526459.94	1360638.14



WATER MAIN TABULATION CHART

W.M. STA.	APPURTENANCE	NORTHING	EASTING
10" WATER MAIN: TO FIRE PUMP ROOM WITHIN / WAREHOUSE DISTRIBUTION BUILDING			
0+00.00 = 2+45.00	10" X 10" TEE	526343.15	1360563.48
0+03.00	10" VALVE	526341.42	1360565.93
0+10.00	10" PLUG & BUTTRISS	526337.39	1360571.65

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12043 EXPIRATION DATE IS 7/31/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2255

DESIGNED BY: B.C.R.

DRAWN BY: B.C.R.

CHECKED BY: P.W.K.

DATE: APRIL, 2015

REVISIONS:

1	REMOVE 8" W MAIN PROFILE TO WAREHOUSE DISTRIBUTION BUILDING	9/10/13
2	ADD 10" W MAIN TO WILBERT VAULT WORKS; PARCELS 'A' & 'B'	7/28/15
3	CHANGE PIPE SIZE FROM 8" W TO 10" W (NORTH SIDE & EAST OF EAST SIDE)	7/28/15

WATER MAIN EXTENSIONS
PROFILES & CHARTS

60' SCALE MAP NO. 50 BLOCK NO. 4.5.10.11

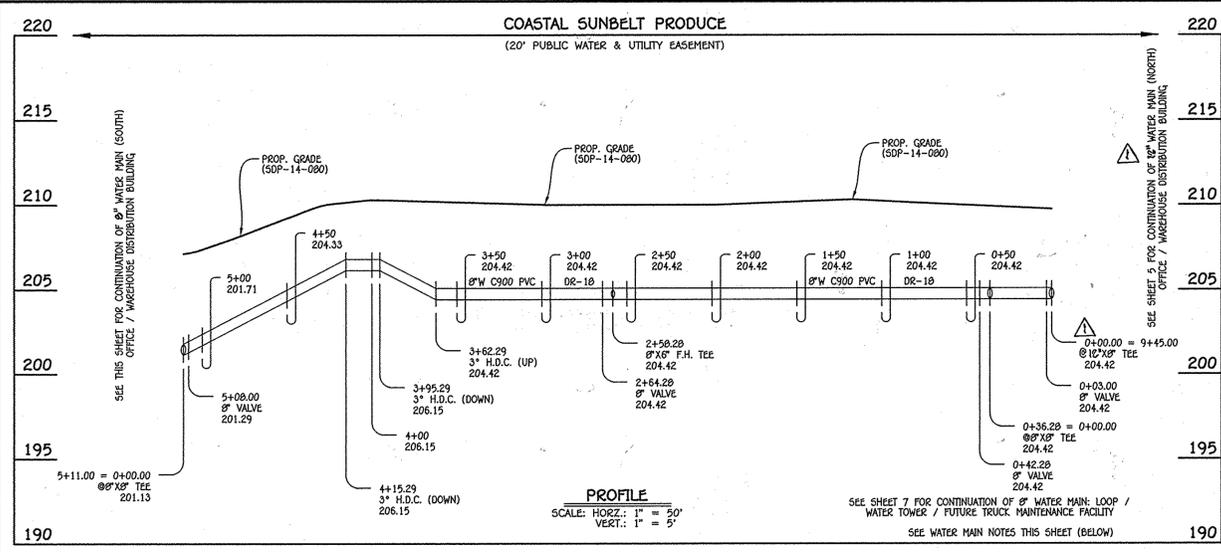
F.C.C. WORK ORDER NO. 13033-3001

FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

CONTRACT NO. 24-4858-D
COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

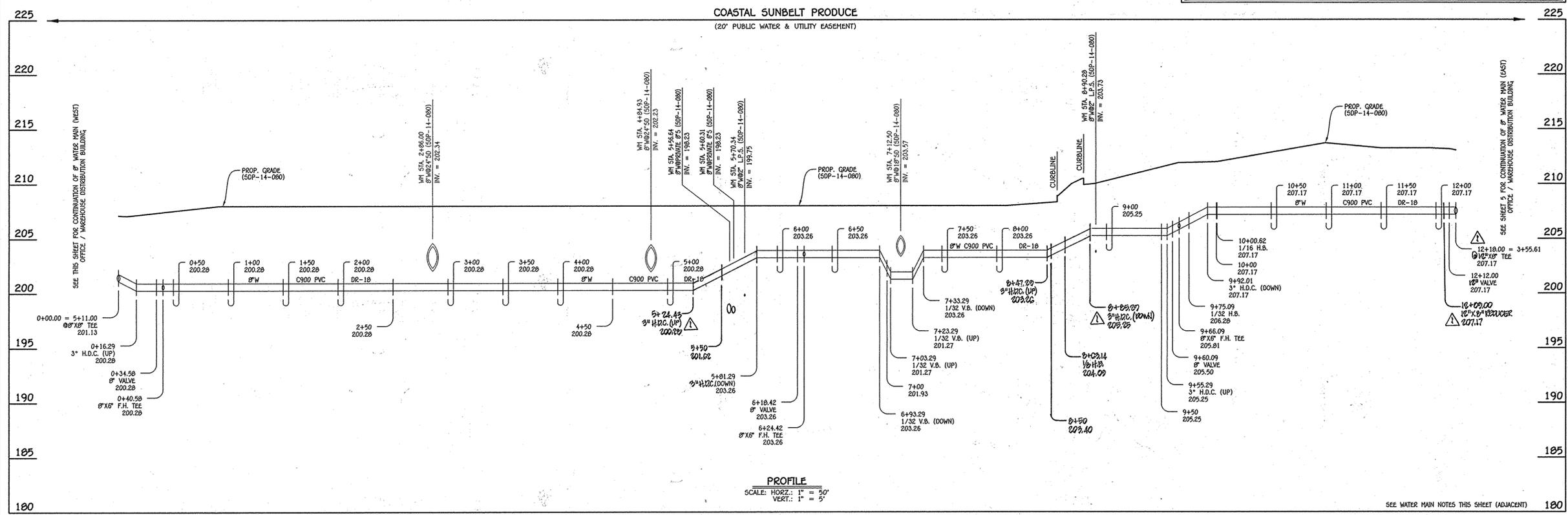
SHEET 5 OF 9



W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN (WEST): OFFICE / WAREHOUSE DISTRIBUTION BUILDING			
0+00.00 = 9+45.00	12" X 8" TEE	525771.22	1360159.80
0+03.00	8" VALVE	525769.49	1360162.34
0+36.28 = 0+00.00	8" X 8" TEE	525750.30	1360189.53
0+42.28	8" VALVE	525746.84	1360194.43
2+58.28	8" X 6" F.H. TEE	525622.30	1360370.92
2+64.28	8" VALVE	525618.84	1360375.82
5+08.00	8" VALVE	525478.32	1360574.95
5+11.00 = 0+00.00	8" X 8" TEE	525476.99	1360577.40

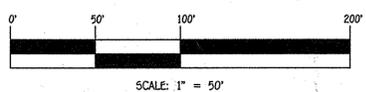
8" WATER MAIN (WEST): OFFICE / WAREHOUSE DISTRIBUTION BUILDING

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" TO 8" WATER MAIN (SOUTH): OFFICE / WAREHOUSE DISTRIBUTION BUILDING			
0+00.00 = 5+11.00	8" X 8" TEE	525476.99	1360577.40
0+34.58	8" VALVE	525504.85	1360597.33
0+40.58	8" X 6" F.H. TEE	525509.75	1360600.80
6+18.42	8" VALVE	525981.87	1360933.95
6+24.42	8" X 6" F.H. TEE	525986.77	1360937.42
8+63.14	1/8" H.B.	526181.82	1361075.05
9+60.09	8" VALVE	526275.30	1361049.33
9+66.09	8" X 6" F.H. TEE	526281.08	1361047.74
9+75.09	1/32" H.B.	526289.76	1361045.35
10+00.62	1/16" H.B.	526311.92	1361032.67
12+12.00	12" VALVE	526433.79	1360859.96
12+18.00 = 3+55.61	12" X 8" TEE	526437.25	1360855.07
12+18.00	12" X 8" REDUCER	526438.06	1360862.42



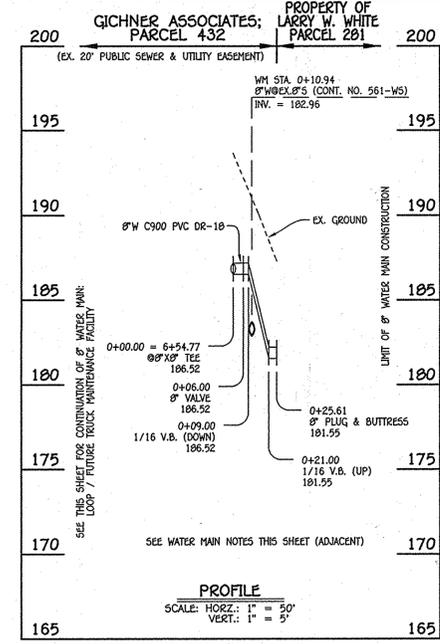
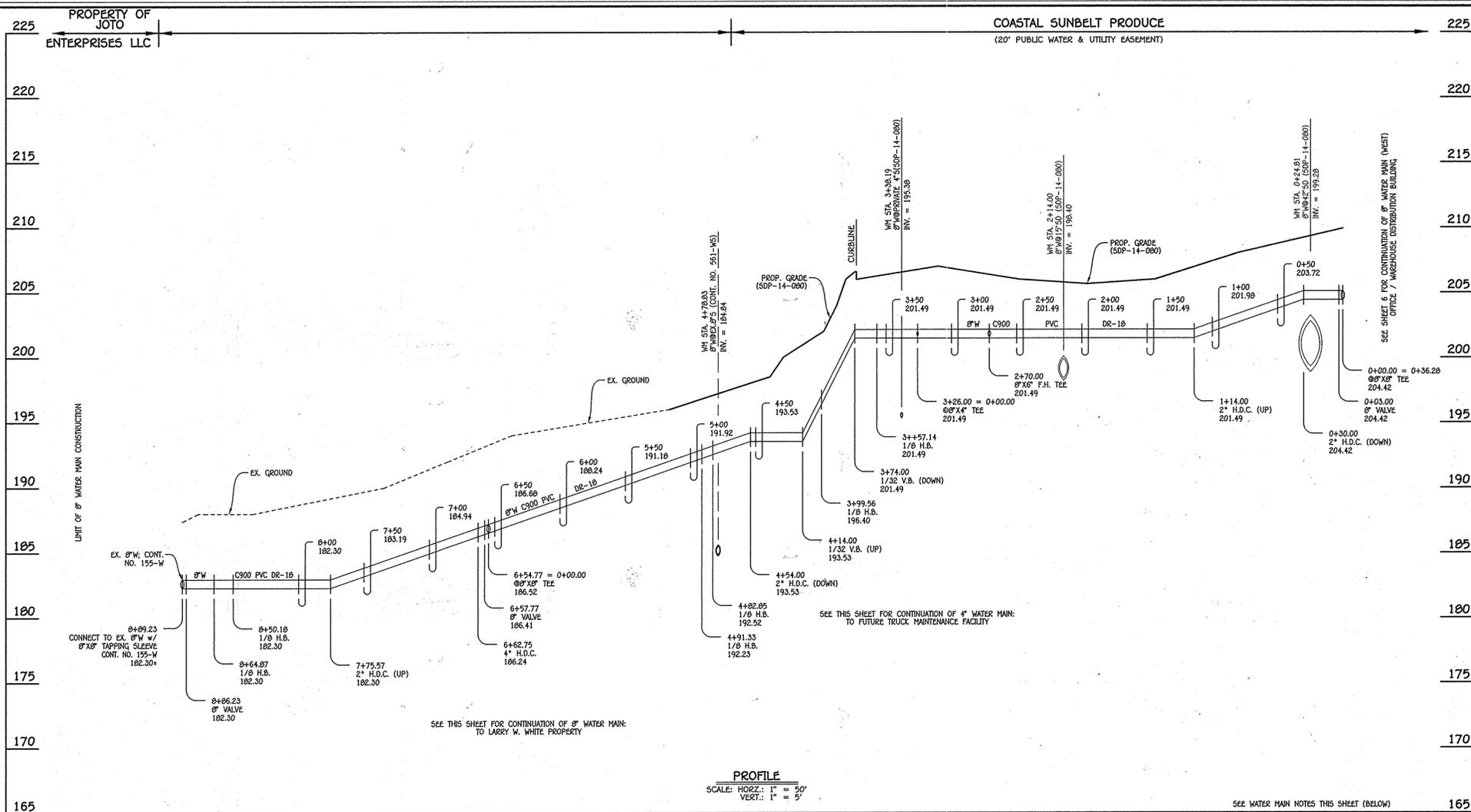
8" WATER MAIN (SOUTH): OFFICE / WAREHOUSE DISTRIBUTION BUILDING

- WATER MAIN NOTES:**
1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF, BUREAU OF UTILITIES DATE: 4/21/15	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5-12-15	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 IS 7/16/16. FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELICOTT CITY, MARYLAND 21042 (410) 461-2855	#12043 DESIGNED BY: B.C.R. DRAWN BY: B.C.R. CHECKED BY: P.W.K. DATE: APRIL 2015 BY NO. REVISION DATE	WATER MAIN EXTENSIONS PROFILES & CHARTS 600' SCALE MAP NO. 50 BLOCK NO. 5.5.10.11 F.C.C. WORK ORDER NO. 13033-3001 FILE NAME: WATER & SEWER MAIN EXTENSION PLAN	COASTAL SUNBELT PRODUCE OFFICE / WAREHOUSE DISTRIBUTION CENTER WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 24-4958-D SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
						SHEET 6 OF 9

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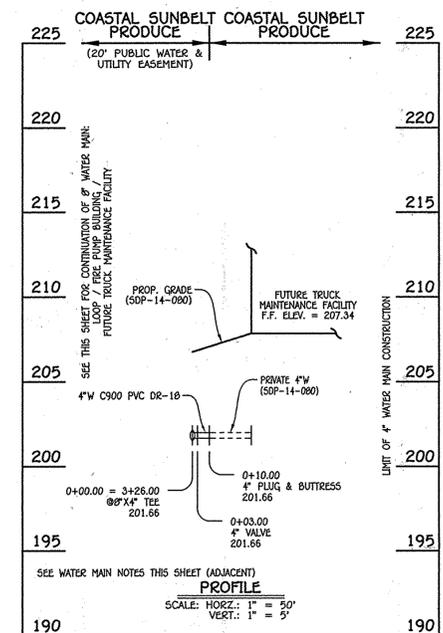
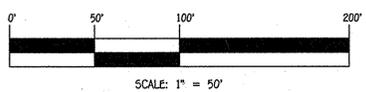
8" WATER MAIN: LOOP / TRUCK MAINTENANCE FACILITY

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LOOP / FUTURE TRUCK MAINTENANCE FACILITY			
0+00.00 = 0+36.28	8" X 8" TEE	525750.30	1360189.53
0+03.00	8" VALVE	525747.84	1360187.80
0+43.30 = 0+00.00	8" X 6" TEE	525714.92	1360164.57
2+70.00	8" X 6" F.H. TEE	525529.69	1360033.86
3+26.00 = 0+00.00	8" X 6" TEE	525483.94	1360001.57
3+57.14	1/8" H.B.	525458.49	1359983.62
3+99.56	1/8" H.B.	525451.28	1359941.81
4+82.85	1/8" H.B.	525499.30	1359873.76
4+91.33	1/8" H.B.	525497.86	1359865.40
6+54.77 = 0+00.00	8" X 8" TEE	525364.32	1359771.17
6+57.77	8" VALVE	525366.05	1359768.72
6+62.75	4" H.D.C.	525368.92	1359764.65
8+50.18	1/8" H.B.	525488.25	1359620.11
8+64.87	1/8" H.B.	525486.93	1359605.48
8+86.23	8" TAPPING VALVE	525470.62	1359591.68
8+89.23	8" X 8" TAPPING SLEEVE	525468.33	1359589.74

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: TO LARRY W. WHITE PROPERTY			
0+00.00 = 6+54.77	8" X 8" TEE	525364.32	1359771.17
0+06.00	8" VALVE	525359.43	1359767.71
0+25.61	8" PLUG & BUTTRESS	525343.39	1359756.40

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
4" WATER MAIN: TO FUTURE TRUCK MAINTENANCE FACILITY			
0+00.00 = 3+26.00	8" X 4" TEE	525483.94	1360001.57
0+03.00	4" VALVE	525482.21	1360004.02
0+10.00	4" PLUG & BUTTRESS	525478.17	1360009.74

- WATER MAIN NOTES:**
- ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
 - ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 - DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 - ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.



4" WATER MAIN: TO FUTURE TRUCK MAINTENANCE FACILITY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Shawn C. Green
CHIEF, BUREAU OF UTILITIES

4/22/15 DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Phil Clark
CHIEF, DEVELOPMENT ENGINEERING DIVISION

5.12.15 DATE

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 7/16/18.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTRAL SQUARE OFFICE PARK - 10725 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2825



DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: APRIL, 2015

WATER MAIN EXTENSIONS PROFILES & CHARTS

60' SCALE MAP NO. 50 BLOCK NO. 4.5.10.11
F.C.C. WORK ORDER NO. 13033-3001
FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

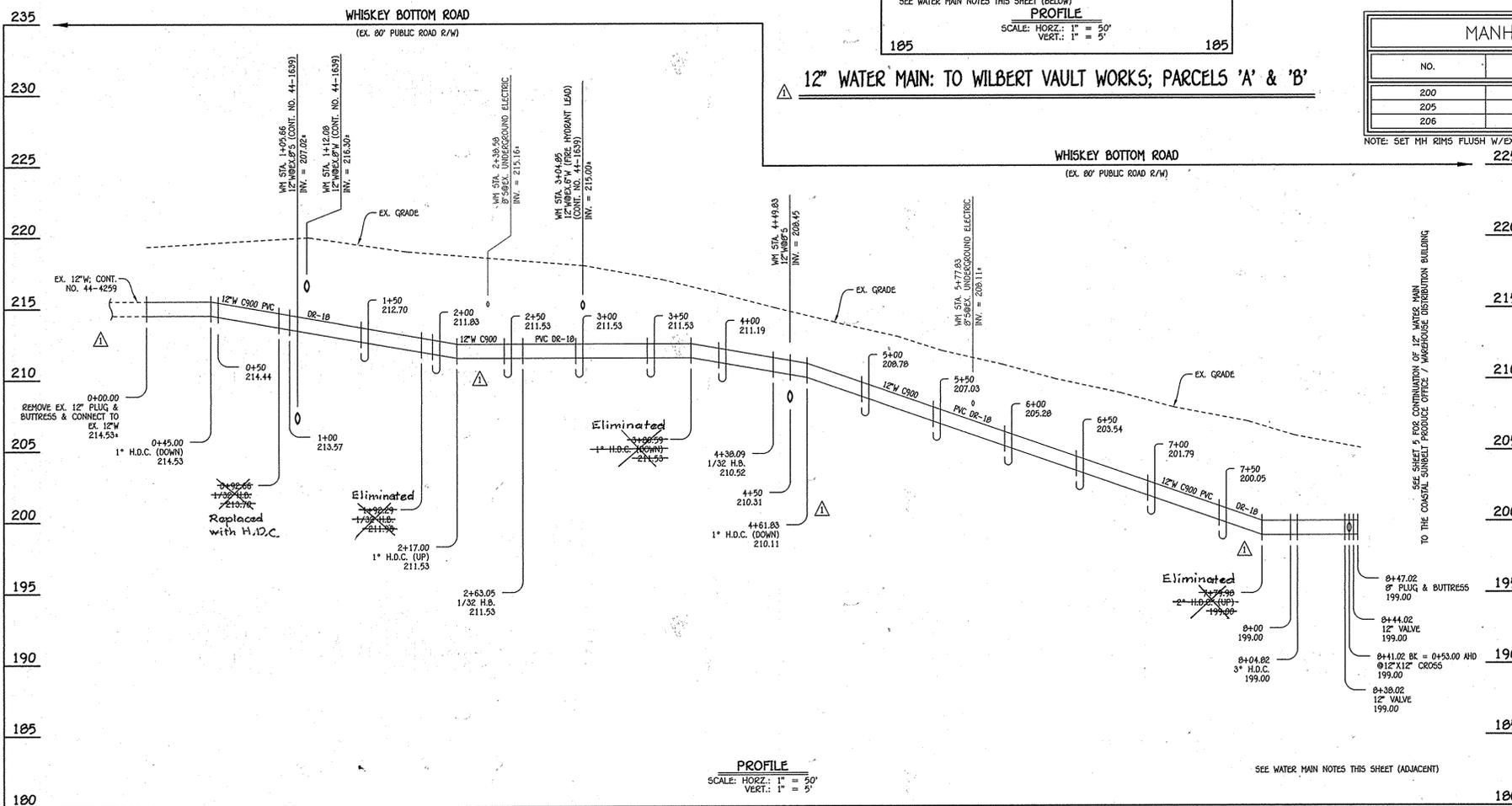
COASTAL SUNBELT PRODUCE OFFICE / WAREHOUSE DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-4958-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 7 of 9

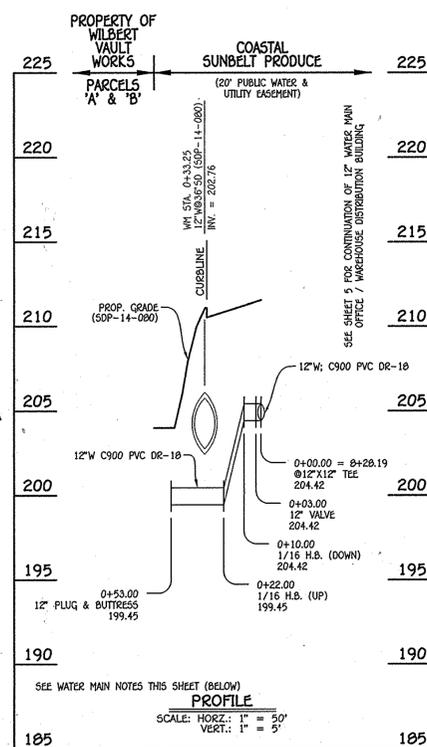
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WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
12" WATER MAIN: TO WILBERT VAULT WORKS; PARCELS 'A' & 'B'			
0+00.00 = 0+20.19	12" X12" TEE	525866.66	1360227.23
0+03.00	12" VALVE	525868.40	1360224.79
0+53.00	12" PLUG & BUTTRESS	525897.45	1360184.09

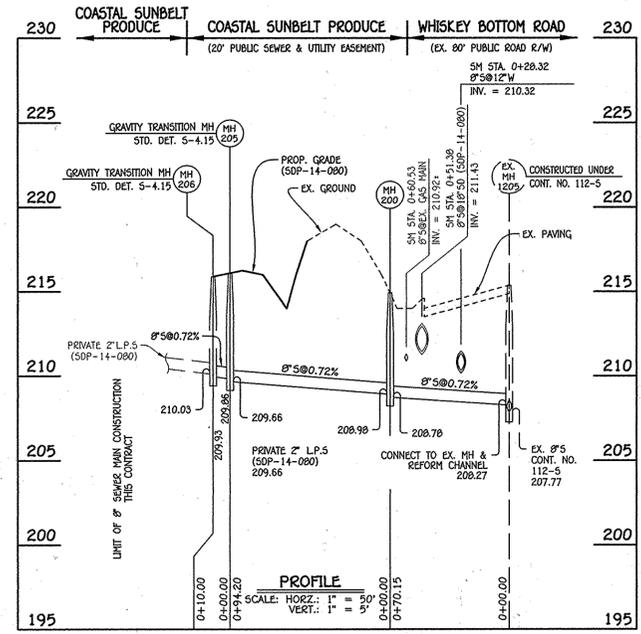
WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
12" WATER MAIN: WHISKEY BOTTOM ROAD			
0+00.00	EX. 12" PLUG & BUTTRESS	527360.96	1360792.29
0+92.66	1/32 H.B.	527296.32	1360849.81
1+92.29	1/32 H.B.	527207.10	1360894.32
2+63.05	1/32 H.B.	527140.89	1360934.44
4+30.09	1/32 H.B.	526989.50	1361006.96
0+04.82	3" H.D.C.	526631.47	1361025.96
0+30.02	12" VALVE	526590.61	1361090.75
0+41.02 BK = 0+53.00 AHD	12" X12" CROSS	526595.64	1361091.19
0+44.02	12" VALVE	526592.67	1361091.62
0+47.02	12" PLUG & BUTTRESS	526589.70	1361092.05



12" WATER MAIN: WHISKEY BOTTOM ROAD



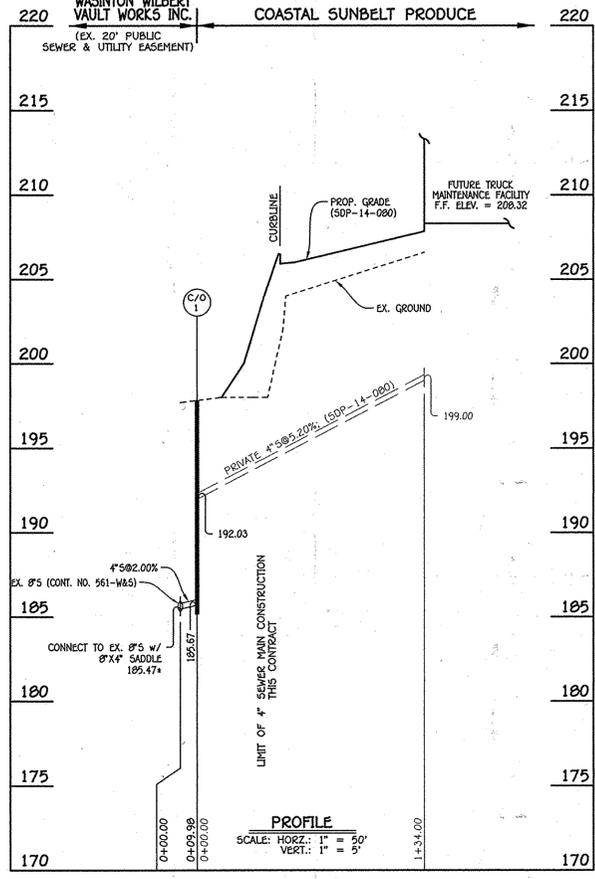
12" WATER MAIN: TO WILBERT VAULT WORKS; PARCELS 'A' & 'B'



8" SEWER MAIN

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
200	526964.79	1360969.75	214.92
205	526879.00	1360930.65	216.24
206	526874.93	1360939.75	215.80

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



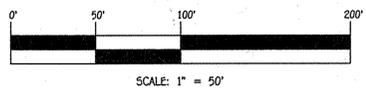
4" SEWER MAIN: FUTURE TRUCK MAINTENANCE FACILITY

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
08"X4" SADDLE	525537.01	1359905.20	---
C/O 1	525531.25	1359913.44	197.82

NOTE: SET C/O RIM FLUSH W/PROPOSED GRADE.

- WATER MAIN NOTES:**
1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-18.
 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TIED PVC HIGH DEFLECTION COUPLINGS.
 4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

NOTE: THIS ORIGINAL CONSTRUCTION PLAN, SHEET 0 OF 9 SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON MAY 12, 2015.



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND CHIEF, BUREAU OF UTILITIES DATE: 8/13/15	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 8/13/15	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 IS 7/16/16. FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SERVICE OFFICE: 10722 BALTIMORE NATIONAL PIKE, ELICOTT CITY, MARYLAND 21042 (410) 461-2255	#12043 DESIGNED BY: B.C.R. DRAWN BY: B.C.R. CHECKED BY: P.W.K. DATE: JULY, 2015	SEWER MAIN EXTENSIONS PROFILES & CHARTS 600' SCALE MAP NO. 50 BLOCK NO. 4.5,10,11 F.C.C. WORK ORDER NO. 13033-3001 FILE NAME: WATER & SEWER MAIN EXTENSION PLAN	CONTRACT NO. 24-4050-D COASTAL SUNBELT PRODUCE OFFICE / WAREHOUSE DISTRIBUTION CENTER WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
						SHEET 0 OF 9

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. SOIL PREPARATION

- TEMPORARY STABILIZATION
 - SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR DISKS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- PERMANENT STABILIZATION
 - A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOIL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOESSGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. MAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND STABILIZE THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRAGILE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
- TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH. B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS. C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

- TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
 - TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CONCRETES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.
 - TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

- TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- TOPSOIL APPLICATION
 - EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
 - UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

- SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
- FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
- LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSODIUM) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
- LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
- SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

PERMANENT SEEDING NOTES (B-4-5)

A. SEED MIXTURES

- GENERAL USE
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 - FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
- TURFGRASS MIXTURES
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

- KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE. FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
- TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE. FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
- KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

- NOTES:
SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY HANDBOOK #77, "TURFGRASS CULTURE RECOMMENDATIONS FOR MARYLAND"
- CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

- IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A) CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
- TALL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES. LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

- IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3):		Fertilizer Rate (10-20-20)		Lime Rate
Seed Mixture (from Table B.1):				
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths
1	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.
				45 lb/a (2 lb / 1000 sf)
				90 lb/ac (2 lb / 1000 sf)
				90 lb/ac (2 lb / 1000 sf)
				2 tons/ac (50 lb / 1000 sf)

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION
A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE
TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS. CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREA ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

- CRITERIA**
- THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
 - THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
 - RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
 - ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
 - CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
 - WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
 - STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
 - IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE
THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

TEMPORARY SEEDING NOTES (B-4-4)

DEFINITION
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
PURPOSE
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

- CRITERIA**
- SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
 - FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
 - WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3):		Fertilizer Rate (10-20-20)		Lime Rate
Seed Mixture (from Table B.1):				
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	
BARLEY	96	3/1 - 5/15	1"	456 lb/ac (10 lb / 1000 sf)
OATS	72	8/15 - 10/15	1"	150 lb / 1000 sf
RYE	112		1"	

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

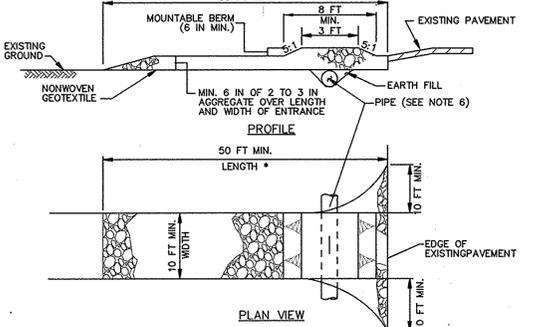
TOTAL AREA OF SITE	3,360 ACRES (OFF-SITE ONLY)
AREA TO BE ROOFED OR PAVED	0.2000 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.0000 ACRES
TOTAL CUT	0 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A
- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

SEQUENCE OF CONSTRUCTION*

- OBTAIN GRADING PERMIT. (7 DAYS)
- NOTIFY "MISS UTILITY" AT 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 48 HOURS BEFORE STARTING WORK.
- REQUEST FOR A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY. (1 DAY)
- CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF THE WATER MAIN. (1 DAY)
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS REQUIRED TO CONSTRUCT THE CLEAN WATER DIVERSION DIKE. THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON A DAILY BASIS AND IMMEDIATELY AFTER A RAINFALL. (7 DAY)
- INSTALL REMAINING PERIMETER CONTROL MEASURES AND INSTALL TEMPORARY SEEDING AS REQUIRED. (1 DAY)
- CONSTRUCT WATER MAIN. (1 WEEKS)
- APPROVAL OF THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO REMOVAL OF SEDIMENT CONTROLS. (1 DAYS)
- REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS. (7 DAYS)

* ON-SITE INSTALLATION OF THE WATER & SEWER MAINS IS COVERED BY THE EROSION & SEDIMENT CONTROL MEASURES SHOWN & INCLUDED ON THE SITE DEVELOPMENT PLAN, (SDP-14-020).

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATIONS

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 6:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SHEEPING. WASHING WATER TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ENGINEER'S CERTIFICATION

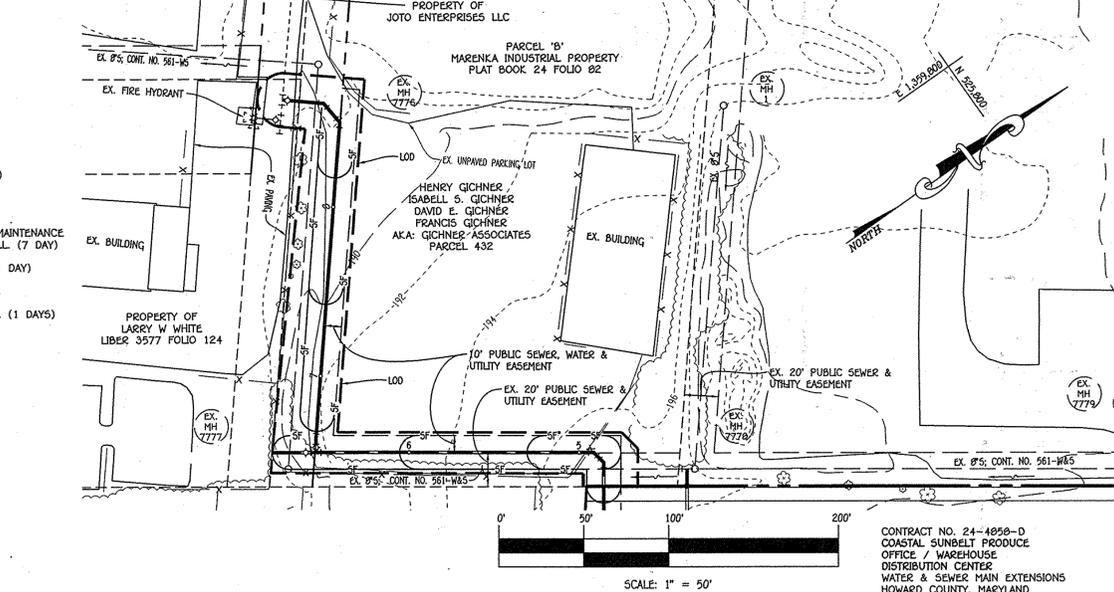
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Paul W. Kriebel
SIGNATURE OF ENGINEER
04/21/15
DATE

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 A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SOIL 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. Kriebel FOR: WHEATLEY SPEAR, LLC
SIGNATURE OF DEVELOPER
04-21-15
DATE



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Steve C. Coen
CHIEF, BUREAU OF UTILITIES
DATE: 4/21/15

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Paul W. Kriebel
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5.12.15

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED 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

CENTRAL SQUARE OFFICE PARK - 10275 BALDOWNE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461 - 2255

#12043

Paul W. Kriebel
PAUL W. KRIEBEL

DESIGNED BY:	B.C.R.	DATE:	APRIL, 2015
DRAWN BY:	B.C.R.	BY:	NO.
CHECKED BY:	P.W.K.	REVISION:	
DATE:	APRIL, 2015	DATE:	

WATER & SEWER MAIN EXTENSIONS
SEDIMENT CONTROL PLAN,
NOTES & DETAILS

600' SCALE MAP NO. 50 BLOCK NO. 5.3.10.11
F.C.C. WORK ORDER NO. 13033-3001
FILE NAME: WATER & SEWER MAIN EXTENSION PLAN

COASTAL SUNBELT PRODUCE
OFFICE / WAREHOUSE
DISTRIBUTION CENTER
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 24-4858-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 9 OF 9