

GENERAL NOTES

PART I

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON MARCH 1998 BY POTOMAC AERIAL.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM MAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 4389 AND 4392. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 4382 (N 551,654.993/E 1,378,176.951) BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
GEODETIC SURVEY CONTROL 4386 (N 550,601.597/E 1,376,866.072) BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON SITE DURING CONSTRUCTION.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTES OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:
AT&T 1-800-252-1133
BGE (CONTRACTOR SERVICE) 410-637-8713
BGE (EMERGENCY) 410-685-0123
BUREAU OF UTILITIES 410-313-4900
COLONIAL PIPELINE CO. 410-795-1390
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 THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.

PART II - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAIL. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL. FOR USE, THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE REST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON. FOR FIRE SPRINKLER SYSTEM, ALL SINGLE FAMILY DWELLINGS WILL HAVE A MINIMUM OF A 1-1/2" WHIC WITH A 1" OUTSIDE METER SETTING.

PART III - SEWER

- 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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS. STANDARD DETAIL 05.52 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 THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-11-040.

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

John R. Robertson 2/2/12
SOIL CONSERVATION DISTRICT DATE

FINAL WATER AND SEWER CONSTRUCTION PLAN

DORSET GARDENS

BLUE STREAM

BUILDABLE BULK PARCELS J-2 AND K

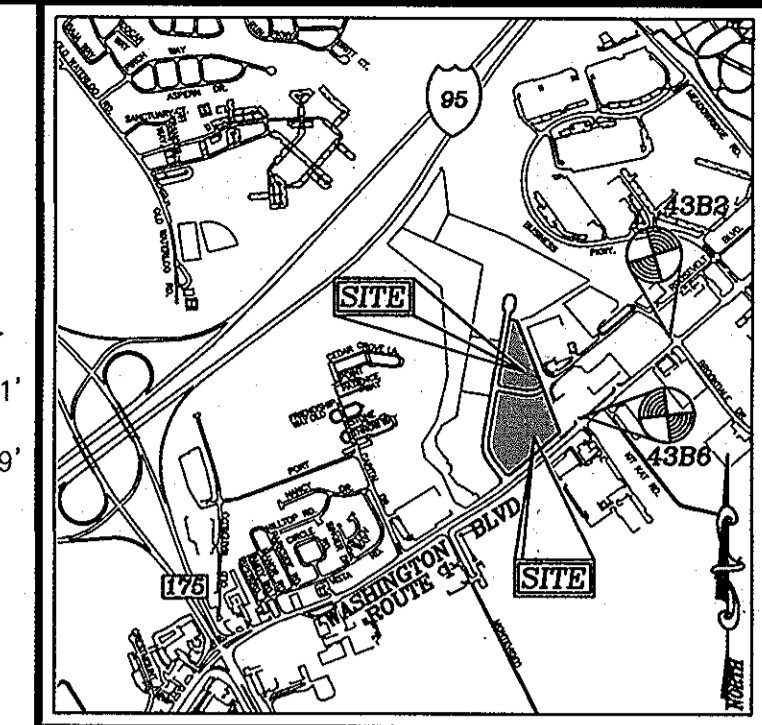
TOWNHOMES

CONTRACT 14-4706-D

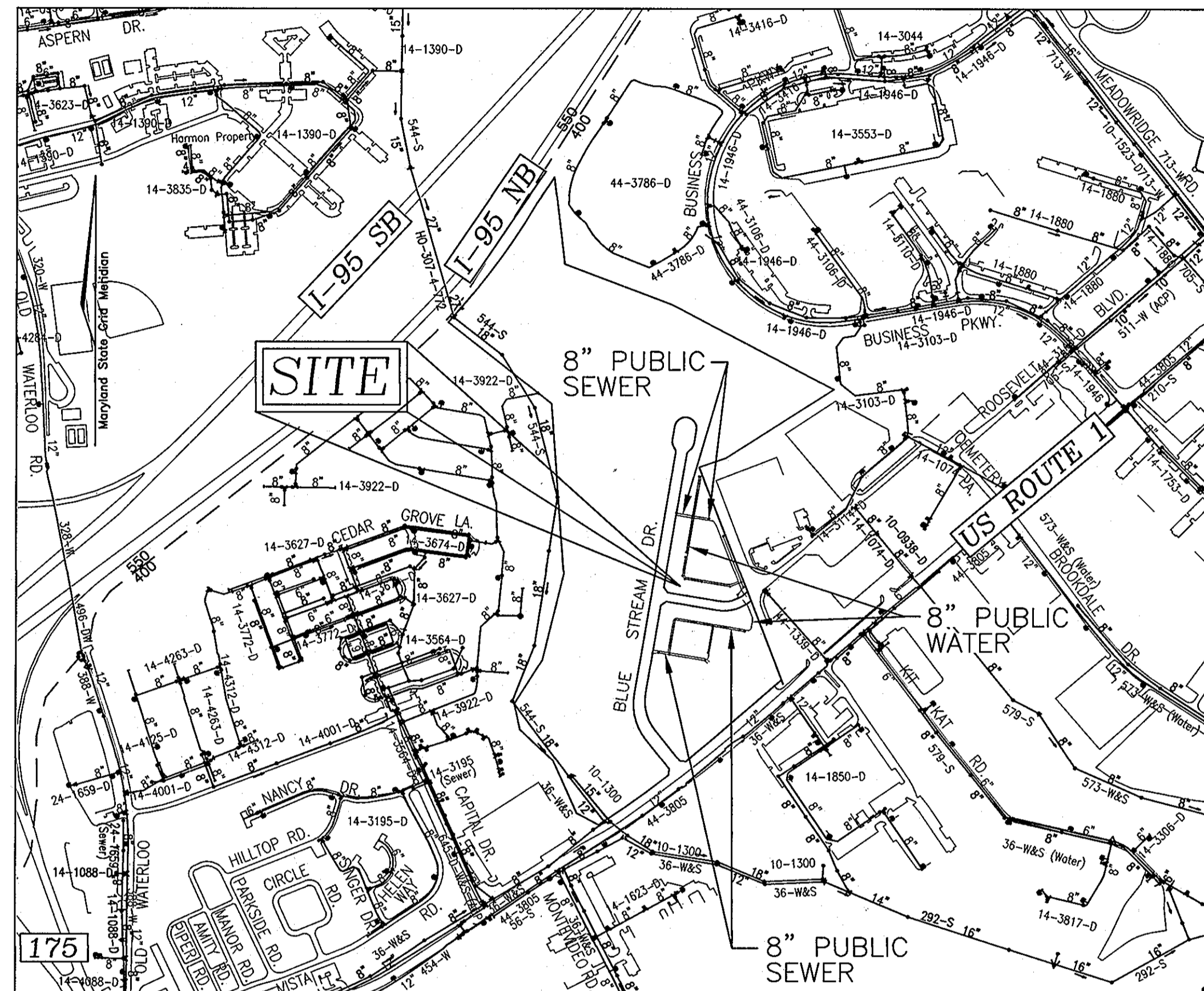
HOWARD COUNTY, MARYLAND

BENCHMARKS

HOWARD COUNTY BENCHMARK 4382
N 551,654.993 E 1,378,176.951 ELEV.: 209.601'
HOWARD COUNTY BENCHMARK 4386
N 550,601.597 E 1,376,866.072 ELEV.: 210.559'



VICINITY MAP
SCALE: 1"=2000'
ADC MAP COORDINATES: 5054/G2



VICINITY MAP
SCALE: 1"=600'

WATER ZONE: 550
TEST GRADIENT: 700

TYPE OF BUILDING :	RESIDENTIAL (TOWNHOMES)
NO. OF LOTS/PARCELS :	125
NO. OF SINGLE WATER HOUSE CONNECTIONS :	35
NO. OF TWIN WATER HOUSE CONNECTIONS :	45
NO. OF SINGLE SEWER HOUSE CONNECTIONS :	33
NO. OF TWIN SEWER HOUSE CONNECTIONS :	46
SEWER SHED :	PATAPSCO
TREATMENT PLANT :	PATAPSCO RIVER

LEGEND

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

QUANTITIES

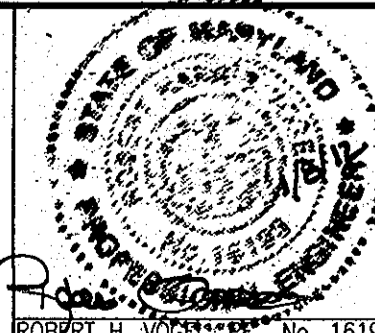
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		MANUFACTURER/SUPPLIER
		QUANTITIES	TYPE	
WATER				
8" WATER (PVC C-900)	2778 LF	2778 LF	DR-18211	JM EAGLE / L.B. W/S INC.
6" WATER (PVC C-900)	117 LF	117 LF	DR-0154	AMERICAN FLOW / L.B. W/S INC.
8" x 8" TEE	4 EA	4 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
8" x 8" CROSS	1 EA	1 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
8" x 6" TEE	5 EA	5 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
8" VALVE	16 EA	16 EA	G/V	AMERICAN FLOW / L.B. W/S INC.
8" CAP	2 EA	2 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
6" FIRE HYDRANT	5 EA	5 EA	G/H	AMERICAN FLOW / L.B. W/S INC.
8" - 1/8" BEND	7 EA	7 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
8" - 1/16" BEND	3 EA	3 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
8" - 1/32" BEND	8 EA	8 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
1" OUTSIDE VAULT	80 EA	80 EA	CONC.	PRISM PRECAST / L.B. W/S INC.
1 1/2" RMC	1345 LF	1345 LF	CORR.	CAMBRIDGE LEG / L.B. W/S INC.
8" COUPLING	17 EA	17 EA	O.T.P.	TYLER PIPE / L.B. W/S INC.
8" S' SWEEP	2 EA	N/A		
SEWER				
MANHOLE	22 EA	22 EA	PRE-CAST	CONTR PRECAST / CONTR PRECAST
8" SEWER	2444 LF	2444 LF	PRE-CAST	JM EAGLE / L.B. W/S INC.
4" SMC	1335 LF	1335 LF	PRE-CAST	JM EAGLE / L.B. W/S INC.
CLEANOUT	79 EA	79 EA	PRE-CAST	HORNE CONC / HORNE CONC.

OWNER/DEVELOPER

BLUE STREAM LLC
P.O. BOX 416
ELLCOTT CT, MD 21041
C/O: ARNOLD SAGNER
410-465-2020

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Steve Cline</i> 1/22/12 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Chad Chaska</i> 2/14/12 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
--	--

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



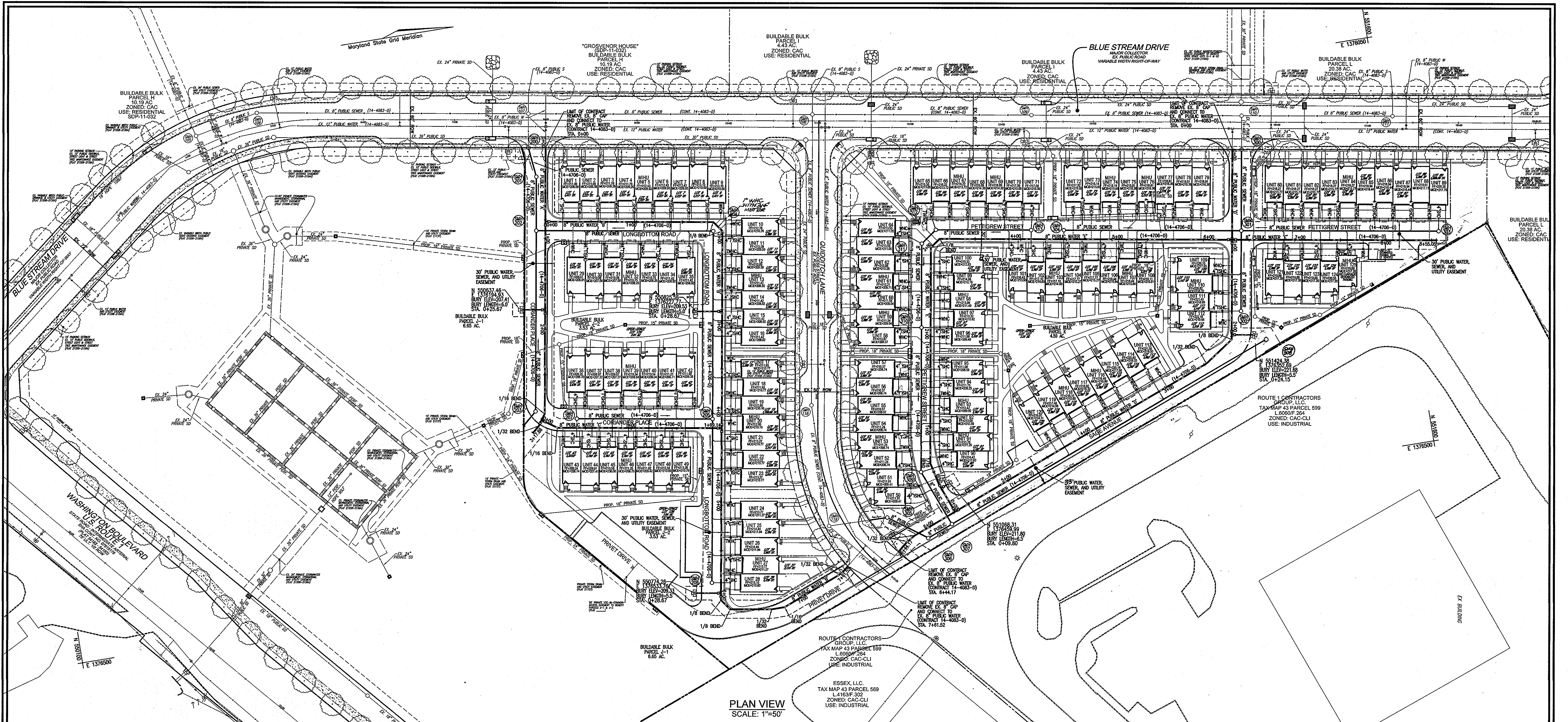
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 16193 EXPIRATION DATE: 09-27-2015
DRN: DZ/KG DES: DZ
CHK: RHV
DATE: JANUARY 2012

BY NO.	AS-QUALITY
REVISION	
DATE	10/31/12

FINAL WATER AND SEWER CONSTRUCTION PLAN
CONTRACT 14-4706-D
COVER SHEET
600' SCALE MAP NO. 43 BLOCK NO. 4 AND 5
TAX MAP 43 GRID 4 AND 5 1ST ELECTION DISTRICT

DORSET GARDENS
BLUE STREAM
BUILDABLE BULK PARCELS J-2 AND K
TOWNHOMES
PARCEL 14
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 5



PLAN VIEW
SCALE: 1"=50'

NOTES:
 1. ALL TOWNHOUSE WATER CONNECTIONS SHALL BE 1-1/2" WITH 1" OUTSIDE METER SETTINGS, UNLESS OTHERWISE NOTED. REFER TO HOWARD COUNTY DETAILS W-3.28 AND W-3.32 FOR SINGLE AND TWIN OUTSIDE METER SETTINGS.
 2. A WATER CONNECTION HAS BEEN PROVIDED BETWEEN UNITS 9 & 10 FOR IRRIGATION OF AMENITY AREA. THIS CONNECTION SHALL BE 1" WITH AN 3/4" OUTSIDE METER SETTING. REFER TO HOWARD COUNTY DETAIL W-3.33.

OWNER/DEVELOPER
 BLUE STREAM LLC.
 P.O. BOX 416
 ELLICOTT CITY, MD 21041
 C/O: ARNOLD SAGNER
 410-465-2020

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

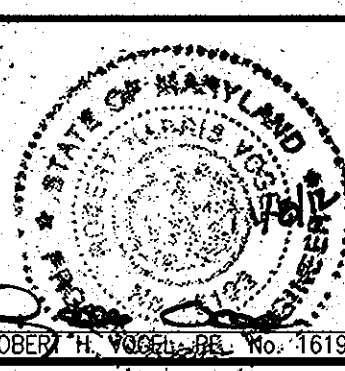
DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

Steve C. Lee
 CHIEF, BUREAU OF UTILITIES

Chad Edwards
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 2-14-12

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



PROFESSIONAL CERTIFICATE	REVISION	DATE
DRN: DZ/KG DES: DZ	1	9/19/12
CHK: RHV		
DATE: JANUARY 2012		

REVISIONS:
 1. REVISE SHC TO STANDARD SHC EXCEPT FOR UNITS 72-76, RELOCATE SMH-100; REVISE METER AT UNITS 68, ADD 1" WHC FOR IRRIGATION OF AMENITY AREA

FINAL WATER AND SEWER CONSTRUCTION PLAN
CONTRACT 14-4706-D
LAYOUT PLAN

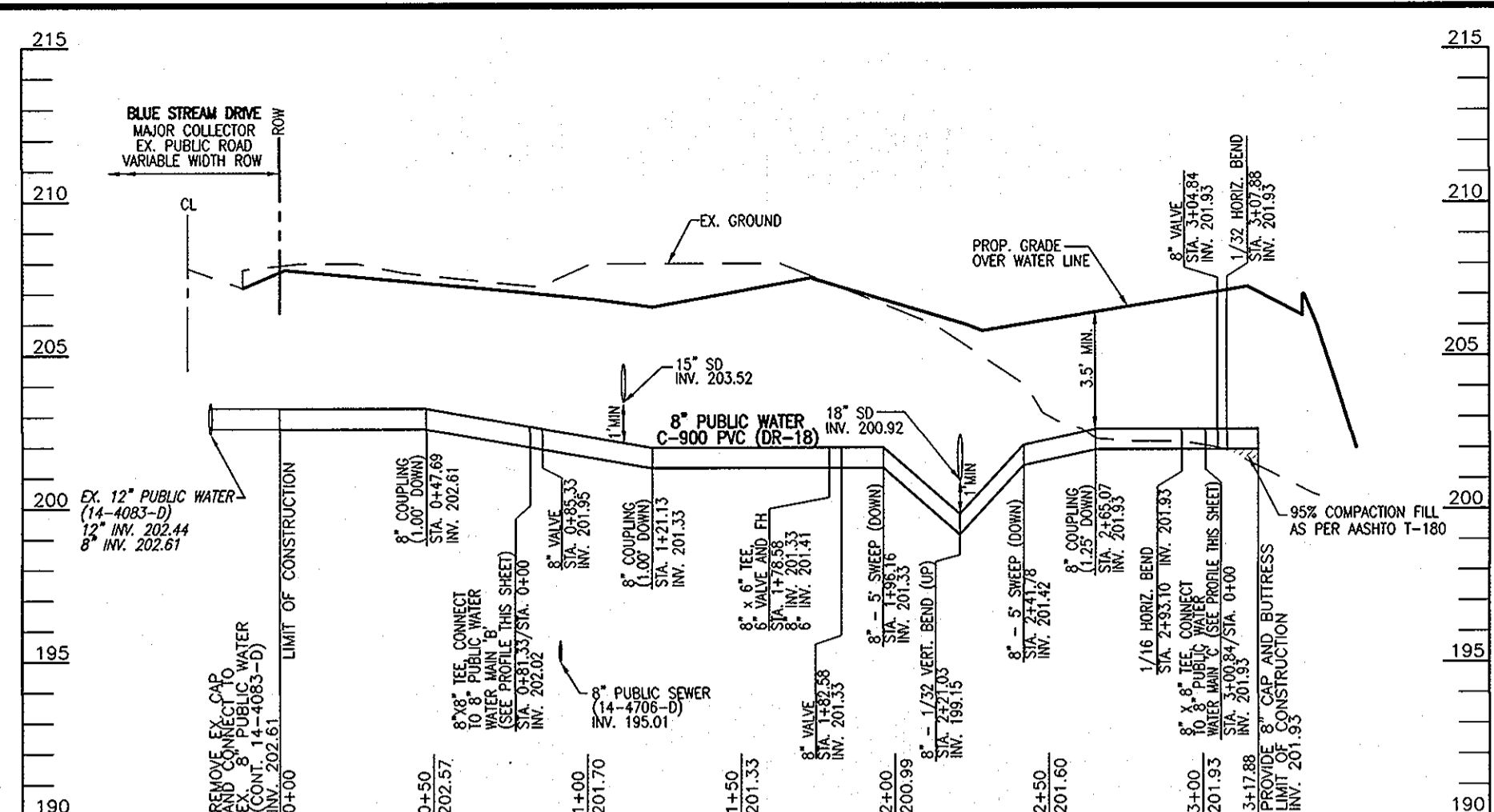
DORSET GARDENS
 BLUE STREAM BUILDABLE BULK PARCELS J-2 AND K TOWNHOMES

TAX MAP 43 GRID 4 AND 5
 1ST ELECTION DISTRICT

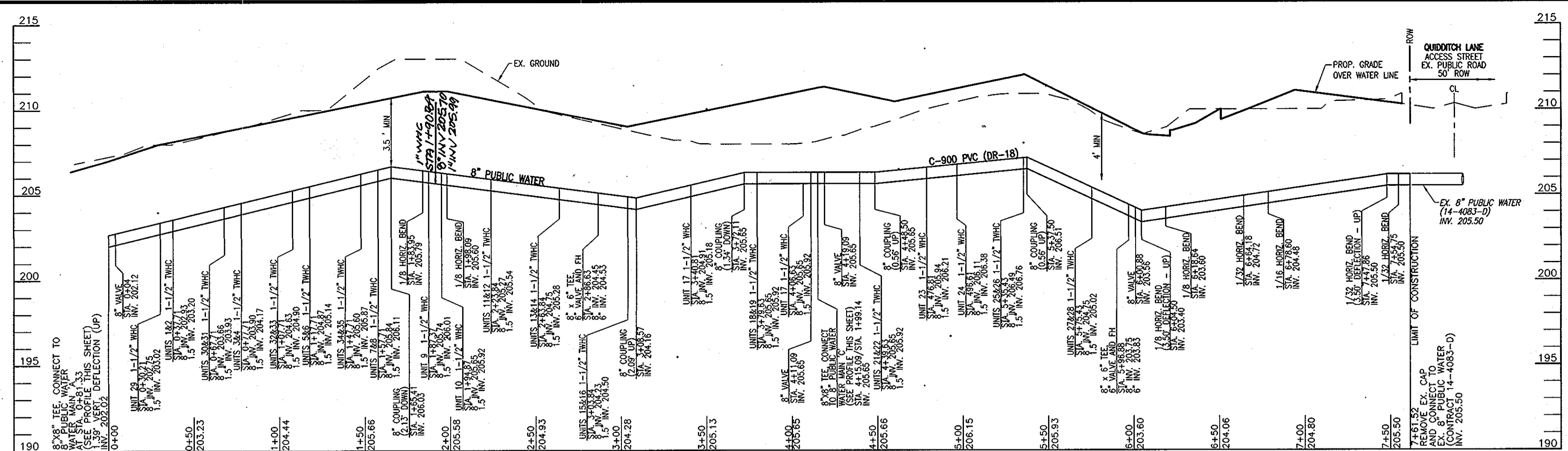
PARCEL 14

SCALE AS SHOWN

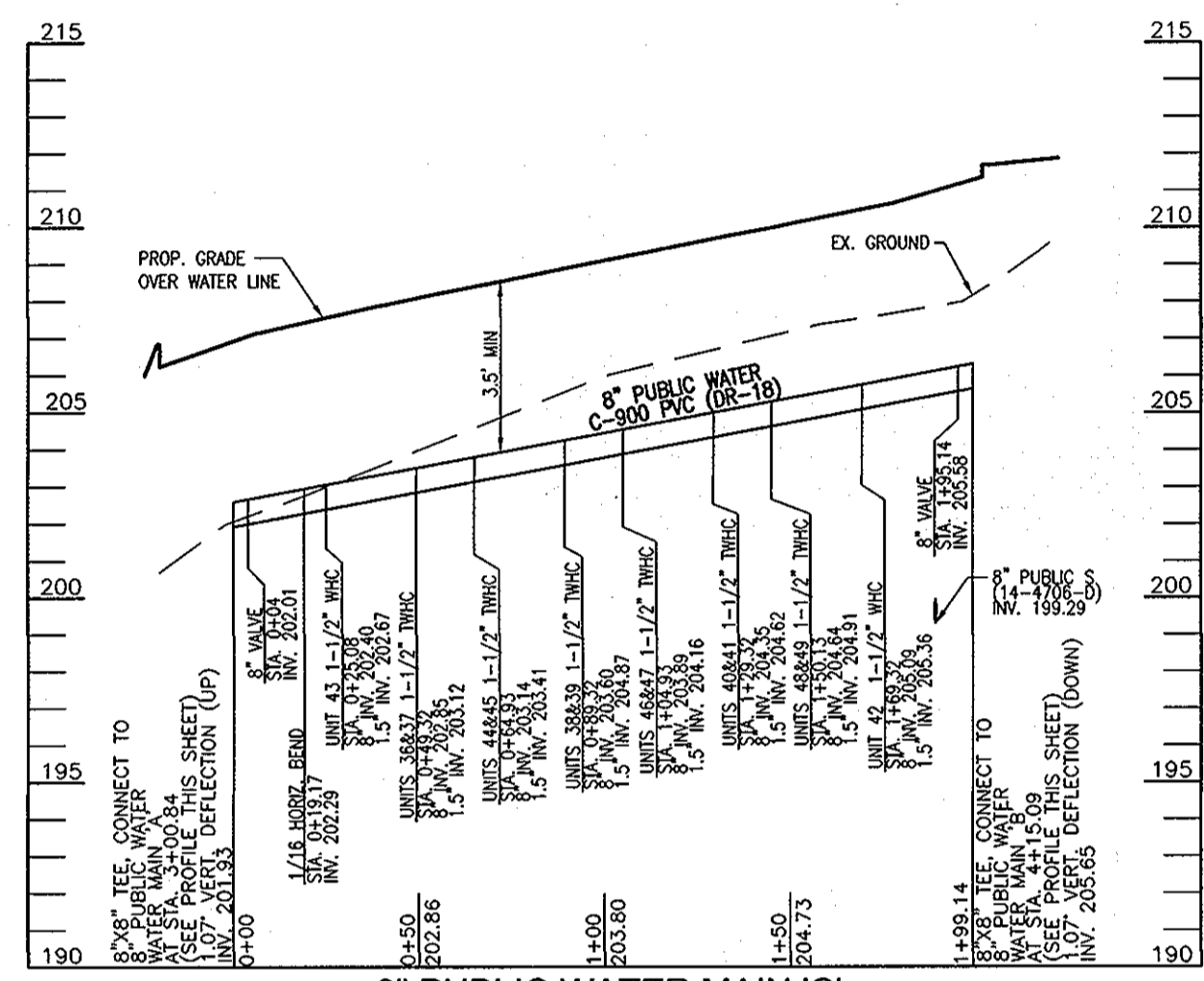
SHEET 2 OF 5



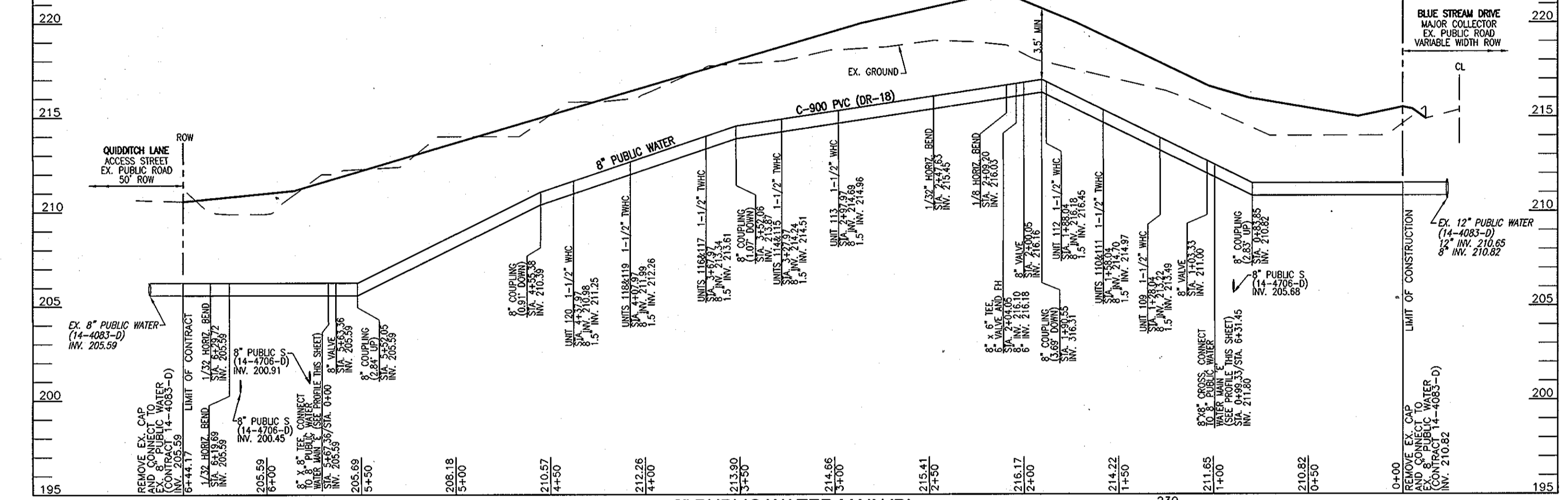
8" PUBLIC WATER MAIN 'A'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



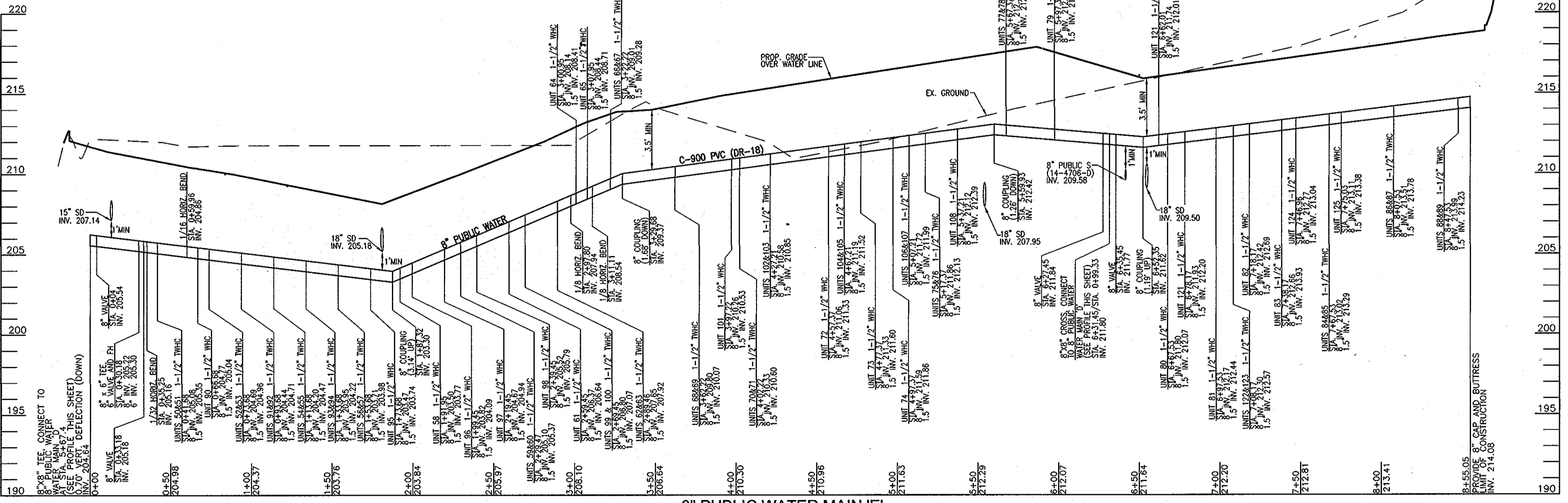
8" PUBLIC WATER MAIN 'B'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



8" PUBLIC WATER MAIN 'C'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

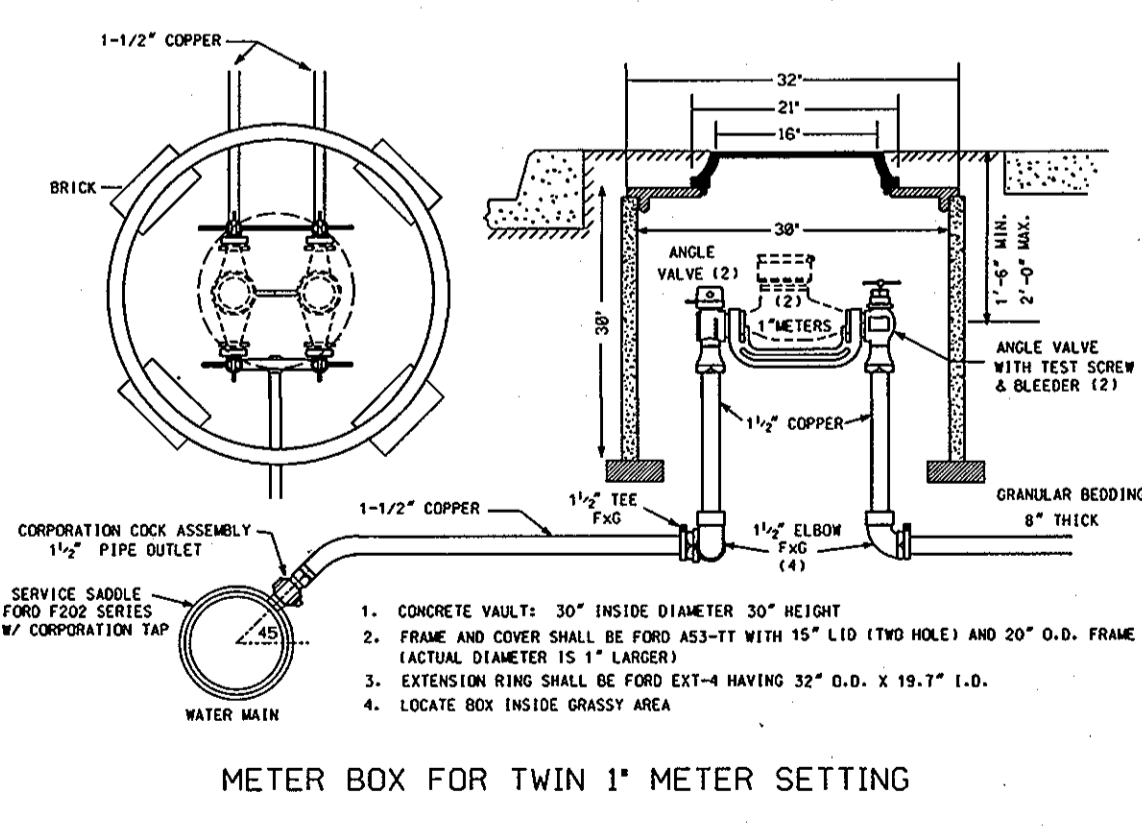


8" PUBLIC WATER MAIN 'D'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



8" PUBLIC WATER MAIN 'E'
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

WL STA.	APPURTENANCE
PROFILE 'A'	
WL STA. 0+00	CONNECT TO EX. 8" PUBLIC WATER
WL STA. 0+47.89	8" COUPLING (1.00' DOWN)
WL STA. 0+81.33	8" VALVE
WL STA. 0+85.33	8" VALVE
WL STA. 1+21.13	8" COUPLING (1.00' DOWN)
WL STA. 1+78.58	8" x 6" TEE, 6" VALVE & FH
WL STA. 1+82.58	8" VALVE
WL STA. 1+96.16	8" - 5" SWEEP (DOWN)
WL STA. 2+21.03	8" - 1/2" VERT. BEND (UP)
WL STA. 2+41.78	8" - 5" SWEEP (DOWN)
WL STA. 2+65.07	8" COUPLING (1.25' DOWN)
WL STA. 2+55.10	1/16" HB
WL STA. 3+00.84	8" x 6" TEE
WL STA. 3+04.84	8" VALVE
WL STA. 3+07.88	1/32" HB
WL STA. 3+17.88	8" CAP AND BUTTRESS
PROFILE 'B'	
WL STA. 0+00	8" x 8" TEE 1.39" VERT. DEFLECTION (UP)
WL STA. 0+04	8" VALVE
WL STA. 1+65.41	8" COUPLING (2.13' DOWN)
WL STA. 1+43.85	1/16" HB
WL STA. 1+98.09	1/16" HB
WL STA. 2+86.63	8" x 6" TEE, 6" VALVE & FH
WL STA. 3+08.57	8" COUPLING (2.09' UP)
WL STA. 3+17.11	8" COUPLING (1.34' DOWN)
WL STA. 4+11.09	8" VALVE
WL STA. 4+15.09	8" x 8" TEE
WL STA. 4+19.09	8" VALVE
WL STA. 4+48.50	8" COUPLING (0.56' UP)
WL STA. 5+37.50	8" COUPLING (0.56' UP)
WL STA. 5+96.88	8" x 6" TEE, 6" VALVE & FH
WL STA. 6+00.88	8" VALVE
WL STA. 6+04.50	1/16" HB
WL STA. 6+18.64	1/16" HB
WL STA. 6+64.18	1/32" HB
WL STA. 6+78.60	1/16" HB
WL STA. 7+47.86	1/32" HB
WL STA. 7+54.75	1/32" HB
WL STA. 7+61.52	CONNECT TO EX. 8" PUBLIC WATER
PROFILE 'C'	
WL STA. 0+00	8" x 8" TEE 1.07" VERT. DEFLECTION (UP)
WL STA. 0+03	8" VALVE
WL STA. 0+19.2	1/16" HB
WL STA. 1+96.1	8" VALVE
WL STA. 1+99.14	8" x 8" TEE 1.07" VERT. DEFLECTION (DOWN)
PROFILE 'D'	
WL STA. 0+00	CONNECT TO EX. 8" PUBLIC WATER
WL STA. 0+83.85	8" COUPLING (2.83' UP)
WL STA. 0+99.33	8" x 8" CROSSING
WL STA. 1+03.33	8" VALVE
WL STA. 1+90.55	8" COUPLING (3.89' DOWN)
WL STA. 2+00.05	8" VALVE
WL STA. 2+04.05	8" x 6" TEE, 6" VALVE & FH
WL STA. 2+09.20	1/16" HB
WL STA. 2+47.63	1/32" HB
WL STA. 3+52.06	8" COUPLING (1.07' DOWN)
WL STA. 4+55.38	8" COUPLING (0.91' DOWN)
WL STA. 5+52.05	8" COUPLING (2.84' UP)
WL STA. 5+63.36	8" VALVE
WL STA. 5+67.36	8" x 8" TEE
WL STA. 6+19.69	1/32" HB
WL STA. 6+29.72	1/32" HB
WL STA. 6+44.17	CONNECT TO EX. 8" PUBLIC WATER
PROFILE 'E'	
WL STA. 0+00	8" x 8" TEE 0.70" VERT. DEFLECTION (DOWN)
WL STA. 0+04	8" VALVE
WL STA. 0+30.18	8" x 6" TEE, 6" VALVE & FH
WL STA. 0+33.18	8" VALVE
WL STA. 0+35.25	1/32" HB
WL STA. 0+59.96	1/16" HB
WL STA. 1+87.32	8" COUPLING (3.14' UP)
WL STA. 2+97.20	1/16" HB
WL STA. 3+11.11	1/16" HB
WL STA. 3+29.68	8" COUPLING (1.68' DOWN)
WL STA. 5+59.93	8" COUPLING (1.26' DOWN)
WL STA. 6+27.45	8" VALVE
WL STA. 6+31.45	8" x 8" CROSSING
WL STA. 6+35.45	8" VALVE
WL STA. 6+52.35	8" COUPLING (1.19' UP)
WL STA. 8+55.05	8" CAP AND BUTTRESS

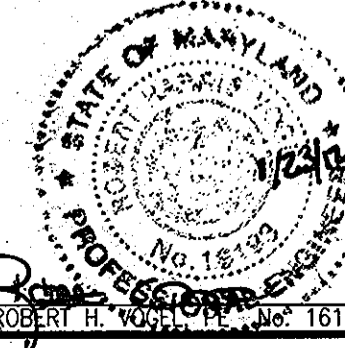


METER BOX FOR TWIN 1" METER SETTING

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043 TEL: 410.481.7666
FAX: 410.481.5931



PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A duly licensed PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
EXPIRATION DATE: 09-27-2012

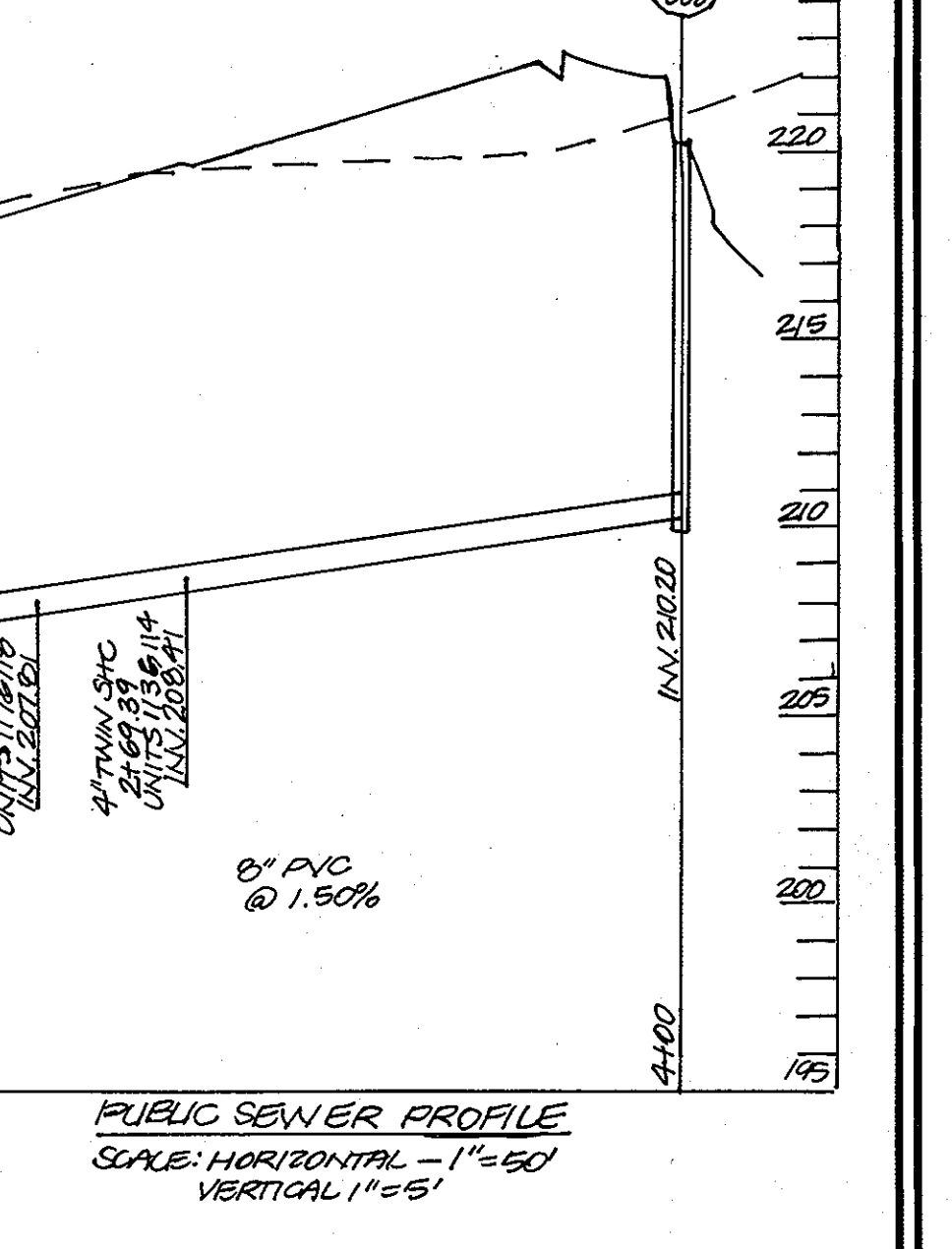
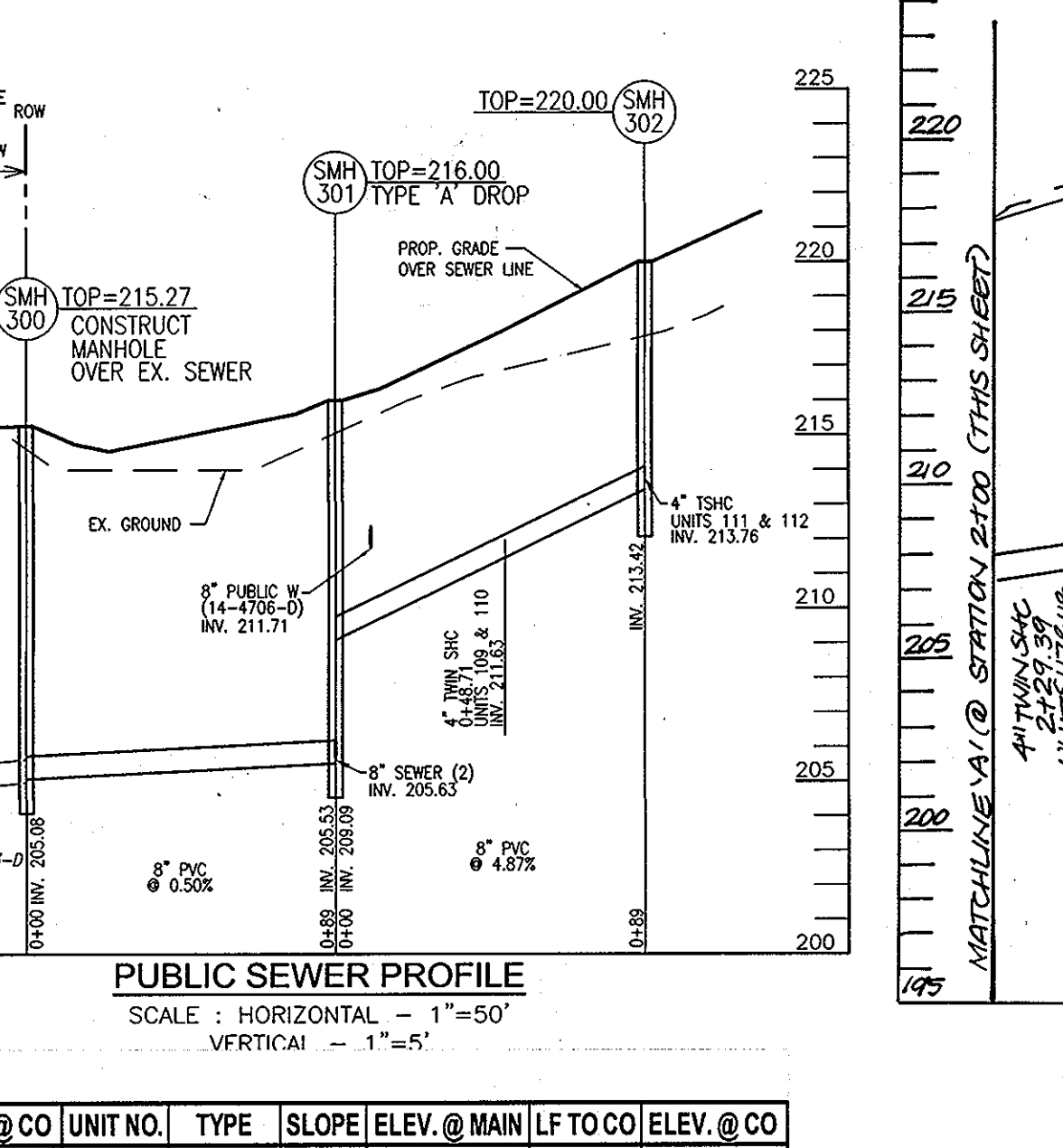
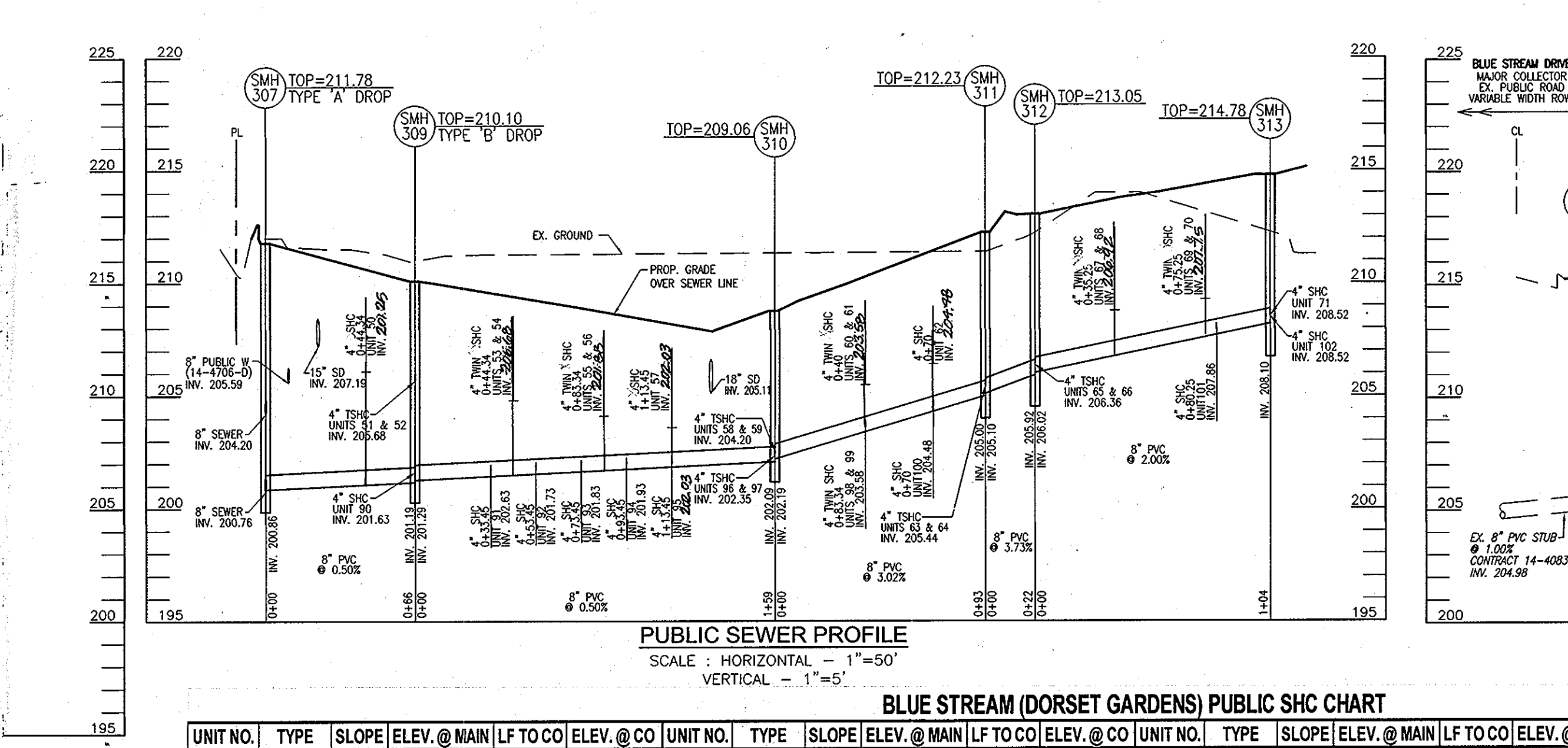
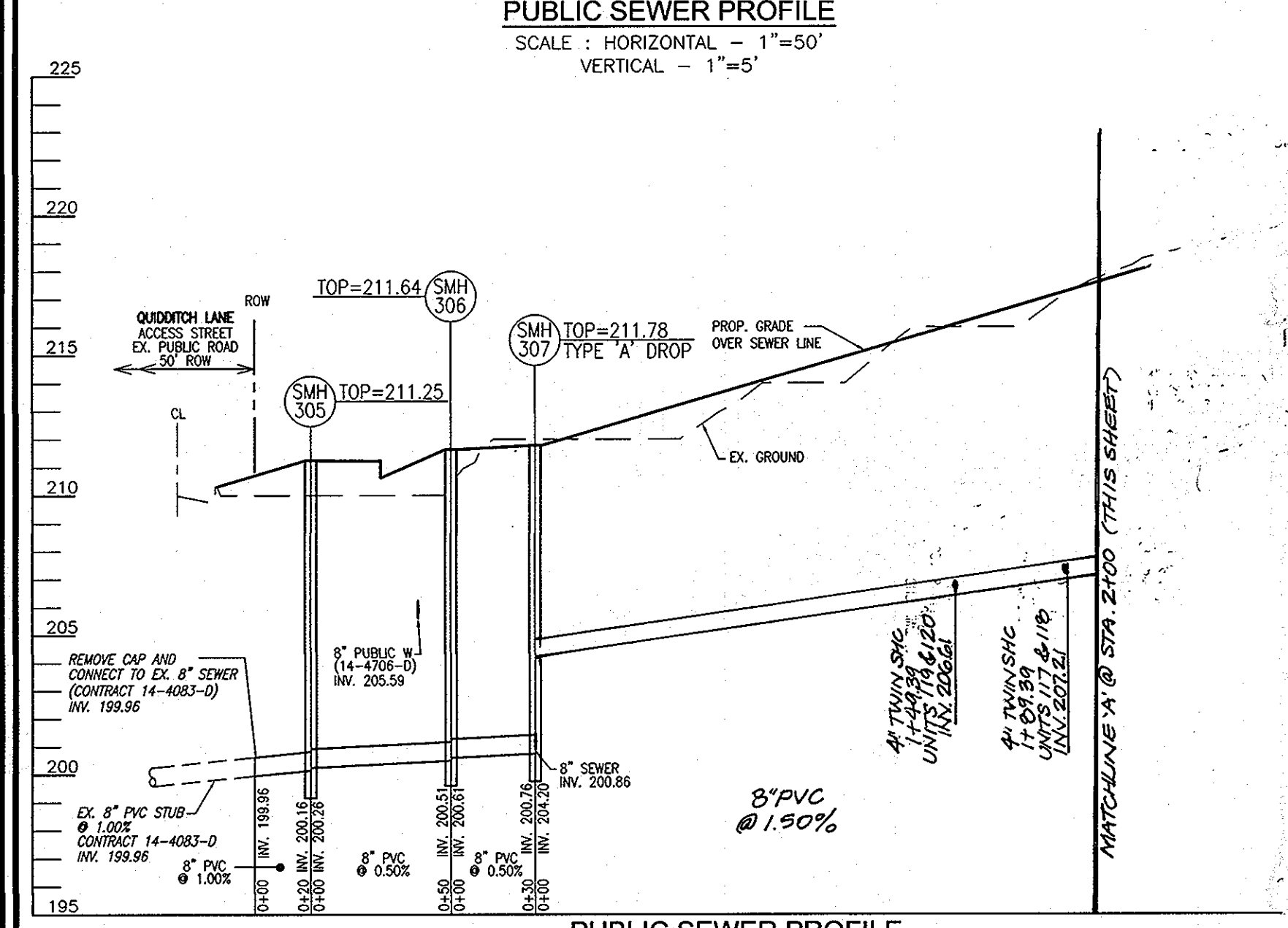
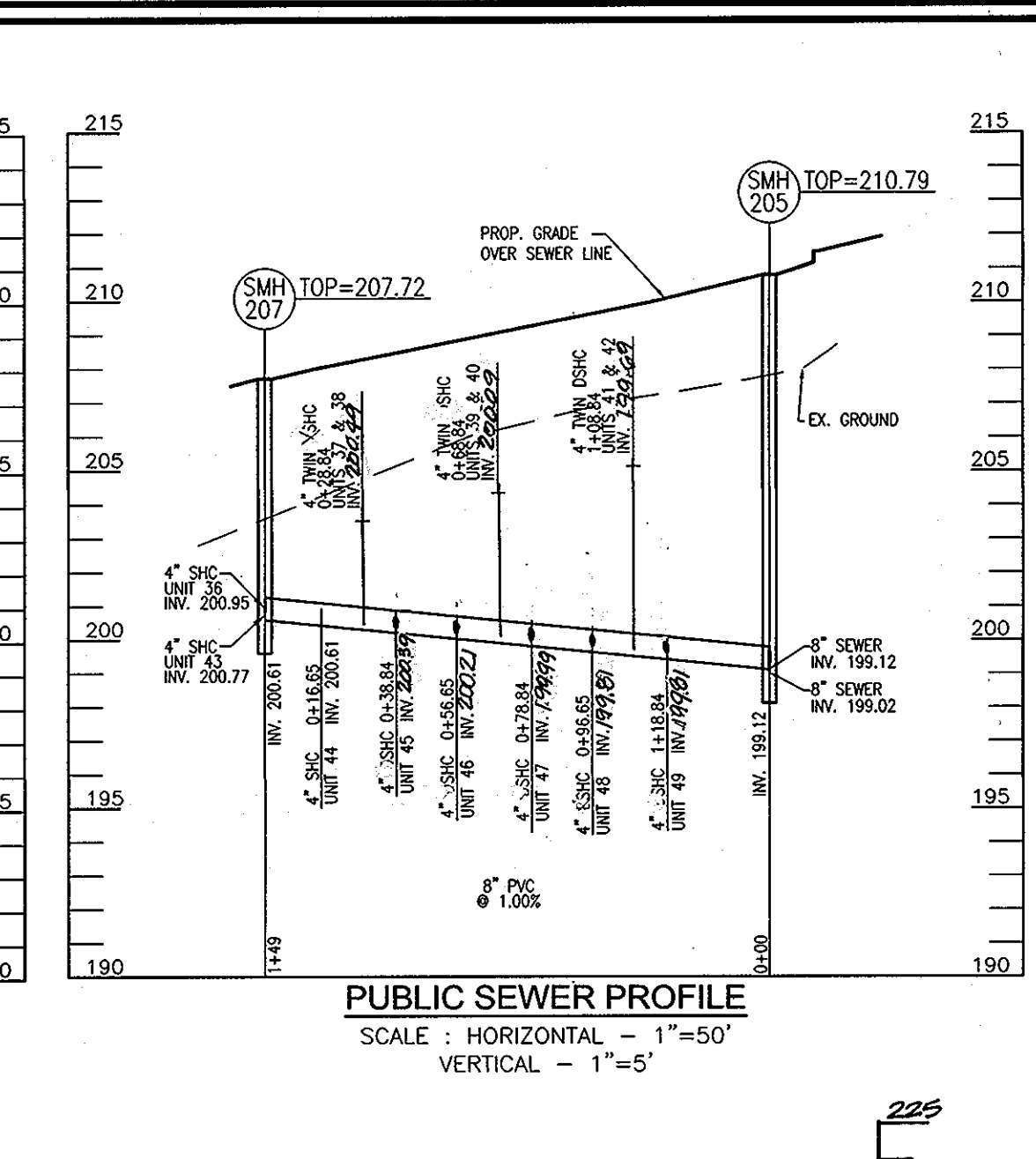
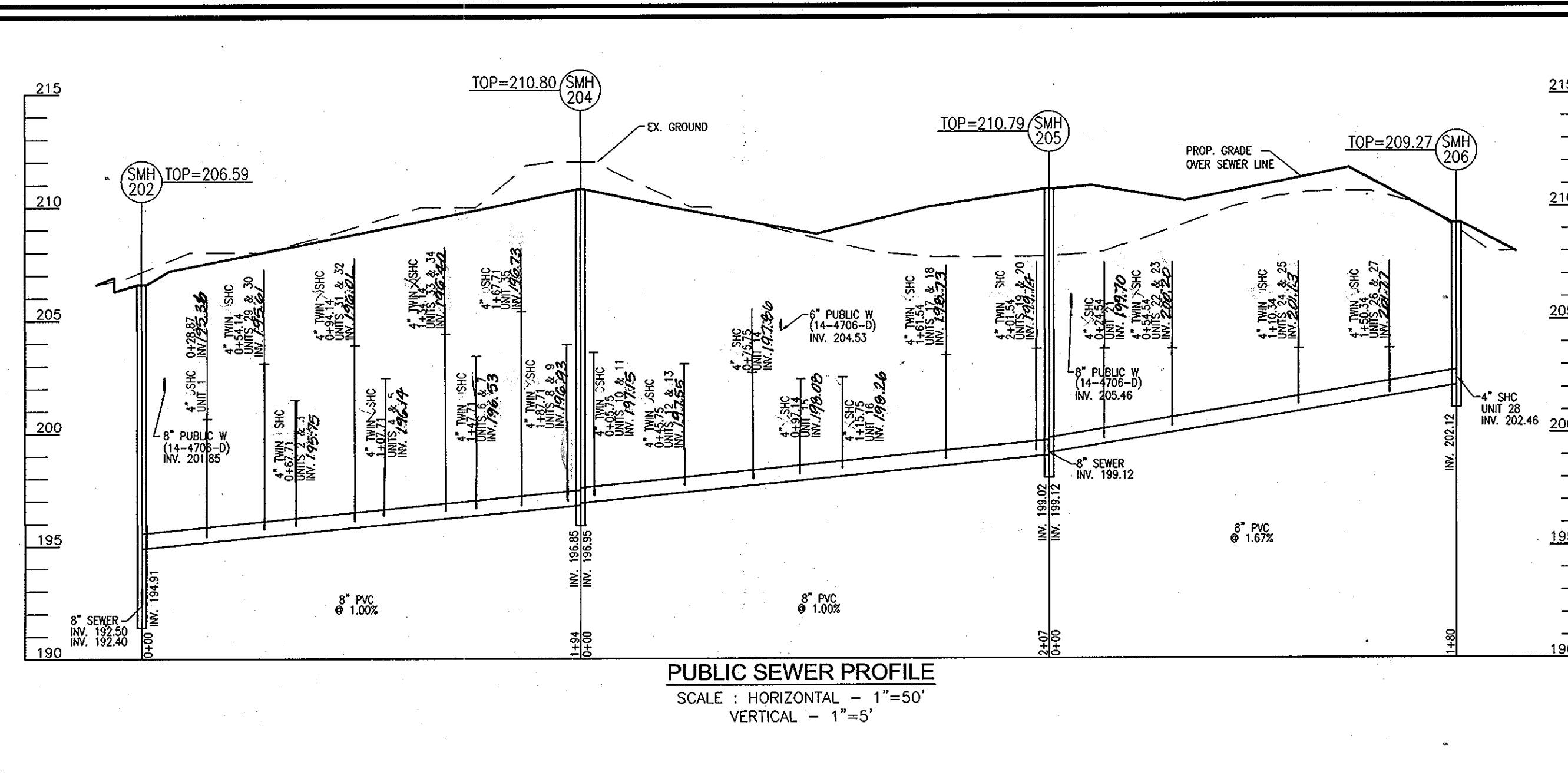
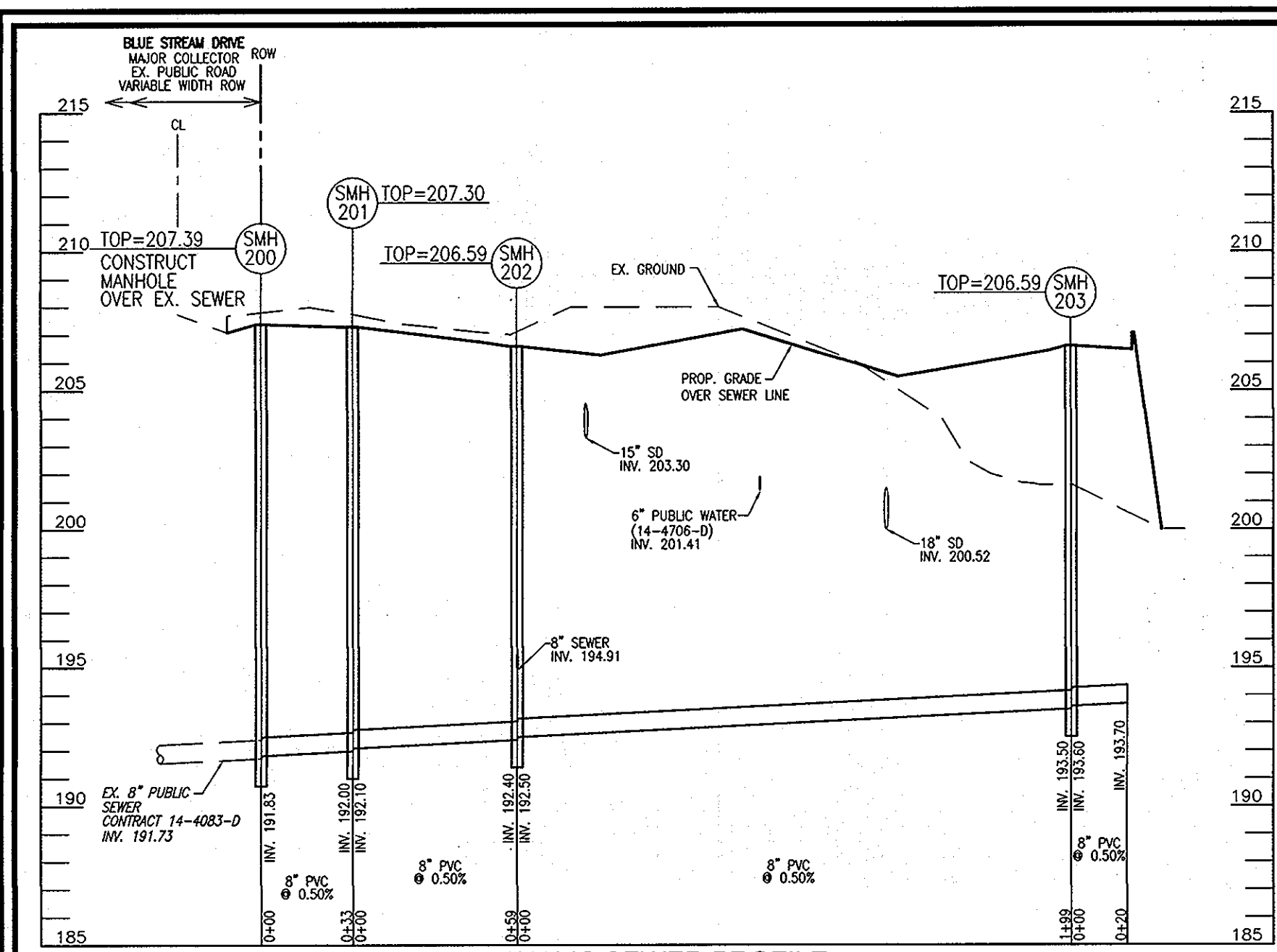
NO.	REVISION	DATE
1	REVISE SHG TO STANDARD SHG - EXCEPT FOR UNITS 72-76, RELOCATE SWH-100, REVISE METER AT UNIT 65, ADD 1" VHC FOR IRRIGATION OF AMENITY AREA	9/14/12

FINAL WATER AND SEWER CONSTRUCTION PLAN
CONTRACT 14-4706-D
WATER PROFILES

DORSET GARDENS BLUE STREAM BUILDABLE BULK PARCELS J-2 AND K TOWNHOMES

SCALE AS SHOWN
SHEET 3 OF 5

TAX MAP 43 GRID 4 AND 5
1ST ELECTION DISTRICT
PARCEL 14
HOWARD COUNTY, MARYLAND



BLUE STREAM (DORSET GARDENS) PUBLIC SHC CHART

UNIT NO.	TYPE	SLOPE	ELEV. @ MAIN	LF TO CO	ELEV. @ CO	UNIT NO.	TYPE	SLOPE	ELEV. @ MAIN	LF TO CO	ELEV. @ CO	UNIT NO.	TYPE	SLOPE	ELEV. @ MAIN	LF TO CO	ELEV. @ CO
1	TWIN SHC	2%	195.36	20	195.76	37	TWIN SHC	2%	208.99	14	209.77	74	TWIN DSHC	2%	210.88	18.7	211.21
2	TWIN SHC	2%	195.75	20	196.15	38	TWIN SHC	2%	209.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
3	TWIN SHC	2%	196.14	20	196.54	39	TWIN SHC	2%	209.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
4	TWIN SHC	2%	196.53	20	196.93	40	TWIN SHC	2%	208.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
5	TWIN SHC	2%	196.92	20	197.32	41	TWIN SHC	2%	208.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
6	TWIN SHC	2%	197.31	20	197.71	42	TWIN SHC	2%	207.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
7	TWIN SHC	2%	197.70	20	198.10	43	TWIN SHC	2%	207.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
8	TWIN SHC	2%	198.09	20	198.49	44	TWIN SHC	2%	207.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
9	TWIN SHC	2%	198.48	20	198.88	45	TWIN SHC	2%	206.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
10	TWIN SHC	2%	198.87	20	199.27	46	TWIN SHC	2%	206.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
11	TWIN SHC	2%	199.26	20	199.66	47	TWIN SHC	2%	205.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
12	TWIN SHC	2%	199.65	20	200.05	48	TWIN SHC	2%	205.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
13	TWIN SHC	2%	200.04	20	200.44	49	TWIN SHC	2%	205.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
14	TWIN SHC	2%	200.43	20	200.83	50	TWIN SHC	2%	204.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
15	TWIN SHC	2%	200.82	20	201.22	51	TWIN SHC	2%	204.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
16	TWIN SHC	2%	201.21	20	201.61	52	TWIN SHC	2%	203.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
17	TWIN SHC	2%	201.60	20	202.00	53	TWIN SHC	2%	203.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
18	TWIN SHC	2%	201.99	20	202.39	54	TWIN SHC	2%	203.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
19	TWIN SHC	2%	202.38	20	202.78	55	TWIN SHC	2%	202.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
20	TWIN SHC	2%	202.77	20	203.17	56	TWIN SHC	2%	202.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
21	TWIN SHC	2%	203.16	20	203.56	57	TWIN SHC	2%	201.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
22	TWIN SHC	2%	203.55	20	203.95	58	TWIN SHC	2%	201.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
23	TWIN SHC	2%	203.94	20	204.34	59	TWIN SHC	2%	201.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
24	TWIN SHC	2%	204.33	20	204.73	60	TWIN SHC	2%	200.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
25	TWIN SHC	2%	204.72	20	205.12	61	TWIN SHC	2%	200.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
26	TWIN SHC	2%	205.11	20	205.51	62	TWIN SHC	2%	199.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
27	TWIN SHC	2%	205.50	20	205.90	63	TWIN SHC	2%	199.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
28	TWIN SHC	2%	205.89	20	206.29	64	TWIN SHC	2%	199.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
29	TWIN SHC	2%	206.28	20	206.68	65	TWIN SHC	2%	198.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
30	TWIN SHC	2%	206.67	20	207.07	66	TWIN SHC	2%	198.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
31	TWIN SHC	2%	207.06	20	207.46	67	TWIN SHC	2%	197.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
32	TWIN SHC	2%	207.45	20	207.85	68	TWIN SHC	2%	197.49	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
33	TWIN SHC	2%	207.84	20	208.24	69	TWIN SHC	2%	197.09	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
34	TWIN SHC	2%	208.23	20	208.63	70	TWIN SHC	2%	196.69	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
35	TWIN SHC	2%	208.62	20	209.02	71	TWIN SHC	2%	196.29	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87
36	TWIN SHC	2%	209.01	20	209.41	72	TWIN SHC	2%	195.89	14	209.77	74	TWIN DSHC	2%	211.51	17.8	211.87

MANHOLE LOCATION CHART

MH No.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
SMH 200	STD. PRECAST MANHOLE (G 5.12)	N 550673.56 E 1376019.94	207.39	191.83	212.03
SMH 201	STD. PRECAST MANHOLE (G 5.12)	N 550677.15 E 1376052.96	207.30	192.10	192.00
SMH 202	STD. PRECAST MANHOLE (G 5.12)	N 550667.34 E 1376111.47	206.59	192.58	192.40
SMH 203	STD. PRECAST MANHOLE (G 5.12)	N 550634.42 E 1376307.82	206.59	193.60	193.50
SMH 204	STD. PRECAST MANHOLE (G 5.12)	N 550858.62 E 1376143.54	210.80	196.95	196.85
SMH 205	STD. PRECAST MANHOLE (G 5.12)	N 550824.39 E 1376347.69	210.79	198.12	198.02
SMH 206	STD. PRECAST MANHOLE (G 5.12)	N 550794.57 E 1376525.55	209.27	202.46	202.12
SMH 207	STD. PRECAST MANHOLE (G 5.12)	N 550677.77 E 1376323.11	207.72	200.95	200.61
SMH 300	STD. PRECAST MANHOLE (G 5.12)	N 551444.16 E 1376149.11	215.27	205.08	EX. 204.98
SMH 301	STD. PRECAST MANHOLE (G 5.12)	N 551429.39 E 1376237.21	216.00	205.83	205.53
SMH 302	STD. PRECAST MANHOLE (G 5.12)	N 551414.72 E 1376324.70	220.00	-	213.42
SMH 303	STD. PRECAST MANHOLE (G 5.12)	N 551642.50 E 1376272.94	218.48	213.59	213.25
SMH 304	STD. PRECAST MANHOLE (G 5.12)	N 551237.83 E 1376205.11	215.42	209.00	206.60
SMH 305	STD. PRECAST MANHOLE (G 5.12)	N 550995.78 E 1376485.91	211.25	200.26	200.16
SMH 306	STD. PRECAST MANHOLE (G 5.12)	N 551036.27 E 1376515.60	211.78	200.61	200.51
SMH 307	STD. PRECAST MANHOLE (G 5.12)	N 551064.45 E 1376504.61	211.78	200.88	200.76
SMH 308	STD. PRECAST MANHOLE (G 5.12)	N 551315.44 E 1376408.77	219.66	212.61	212.27
SMH 309	STD. PRECAST MANHOLE (G 5.12)	N 551040.31 E 1376442.69	210.10	205.25	201.19
SMH 310	STD. PRECAST MANHOLE (G 5.12)	N 551237.83 E 1376285.66	209.06	202.35	202.09
SMH 311	STD. PRECAST MANHOLE (G 5.12)	N 551081.93 E 1376194.44	212.23	206.10	205.00
SMH 312	STD. PRECAST MANHOLE (G 5.12)	N 551099.52 E 1376181.90	213.05	206.10	205.54
SMH 313	STD. PRECAST MANHOLE (G 5.12)	N 551202.49 E 1376199.17	214.78	206.32	208.10

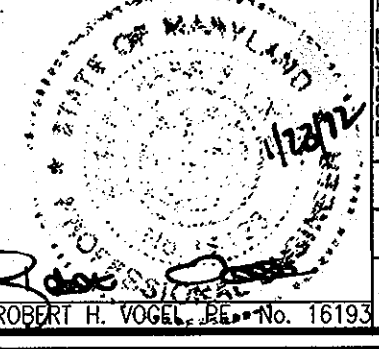
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Silva Clem
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Chad Chubb
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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



PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME OR THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

EXPIRATION DATE: 09-27-2012

DRN: DZ/KG DES: DZ
CHK: RHV
DATE: JANUARY 2012

REVISION: 1/ REVISE SHC TO STANDARD SHC EXCEPT FOR UNITS 72-76 RELOCATE SMH-100, REVISE METER AT UNIT 66, ADD 1" PWC FOR IRRIGATION OF AMENITY AREA

FINAL WATER AND SEWER CONSTRUCTION PLAN
CONTRACT 14-4706-D
SEWER PROFILES

600' SCALE MAP NO. 43 BLOCK NO. 4 AND 5

DORSET GARDENS
BLUE STREAM
BUILDABLE BULK PARCELS J-2 AND K
TOWNHOMES

SCALE AS SHOWN
SHEET 4 OF 5

TAX MAP 43 GRID 4 AND 5
1ST ELECTION DISTRICT

PARCEL 14
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
BLUE STREAM LLC
P.O. BOX 416
ELLICOTT CITY, MD 21041
C/O: ARNOLD SAGNER
410-465-2020

AS BUILTS DORSEY GARDENS 14-4706-D				
LOT #	FROM	TO	DISTANCE	REMARKS
1/2	INLET	NHC	41.2'	THNC
	NHC LOT# 24	NHC	56.0'	
5/4	INLET	NHC	67.5'	THNC
	NHC LOT# 50/51	NHC	57.5'	
5/6	INLET	NHC	100.6'	THNC
	NHC LOT# 52/55	NHC	56.4'	
7/8	SMH-204	NHC	52.5'	THNC
	NHC LOT# 54/55	NHC	55.0'	
9	SMH-204	NHC	19.4'	
	NHC LOT# 10	NHC	20.4'	
10	SMH-204	NHC	20.5'	
	NHC LOT# 9	NHC	20.4'	
11/2	SMH-204	NHC	54.4'	THNC
	FM	NHC	74.5'	
15/14	SMH-204	NHC	71.5'	THNC
	FM	NHC	44.5'	
20	NHC LOT# 42	NHC	42.7'	
	NHC LOT# 21/22	NHC	27.5'	
21/22	NHC LOT# 20	NHC	27.5'	THNC
	8" VALVE	NHC	11.0'	
25	8" VALVE	NHC	22.4'	
	INLET	NHC	40.5'	
24	INLET	NHC	57.5'	
	SDMH	NHC	45.7'	
25/26	SDMH	NHC	54.5'	THNC
	NHC LOT# 27/28	NHC	42.4'	
27/28	SMH-206	NHC	22.2'	THNC
	NHC LOT# 25/26	NHC	42.4'	
50/51	INLET	NHC	42.1'	THNC
	NHC LOT# 5/4	NHC	57.5'	
52/55	INLET	NHC	81.5'	THNC
	NHC LOT# 5/6	NHC	56.4'	
29	INLET	NHC	4.2'	
	NHC LOT# 1/2	NHC	56.0'	
54/55	SMH-204	NHC	44.7'	THNC
	NHC LOT# 7/8	NHC	55.0'	
42	NHC LOT# 15/14	NHC	42.7'	
	NHC LOT# 20	NHC	44.5'	
45	MH-207	NHC	25.0'	
	INLET	NHC	55.1'	
44/45	MH-207	NHC	50.5'	THNC
	NHC LOT# 45	NHC	54.5'	
46/47	MH-207	NHC	66.4'	THNC
	MH-205	NHC	56.5'	
48/44	MH-207	NHC	105.4'	THNC
	MH-205	NHC	44.5'	
40/41	MH-205	NHC	61.1'	THNC
	NHC LOT# 55/54	NHC	54.5'	
55/54	MH-207	NHC	44.4'	THNC
	INLET	NHC	65.0'	
56/57	MH-207	NHC	15.5'	THNC
	INLET	NHC	25.5'	
15/14	MH-205	NHC	32.2'	THNC
	NHC LOT# 17	NHC	54.0'	
17	MH-205	NHC	67.2'	
	NHC LOT# 15/14	NHC	54.0'	
15/16	INLET	NHC	55.4'	THNC
	FM	NHC	42.5'	

AS BUILTS W.H.C.				
LOT #	FROM	TO	DISTANCE	
45	NM 45	SMH 504	150'	
45	NM 45	NM 50-51	145'	
45-44	NM 45-44	SMH 504	80'	
45-44	NM 45-44	NM 50-51	104'	
41-42	NM 41-42	SMH 504	55'	
42-42	NM 42-42	NM 50-51	67'	
90	NM 90	SMH 504	50'	
90	NM 90	NM 50-51	45'	
46	NM 46	SMH 510	26'	
46	NM 46	NM 47	20'	
47	NM 47	SMH 510	27'	
47	NM 47	NM 46	20'	
48	NM 48	SMH 510	40'	
48	NM 48	NM 49-100	26'	
49-100	NM 49-100	SMH 510	65'	
49-100	NM 49-100	NM 49	26'	
55	NM 55	SMH 510	15'	
55	NM 55	NM 54-60	25'	
54-60	NM 54-60	NM 55	25'	
54-60	NM 54-60	SMH 510	27'	
61	NM 61	SMH 510	55'	
61	NM 61	NM 54-60	25'	
62-65	NM 62-65	SMH 510	82'	
62-65	NM 62-65	SMH 511	14'	
64	NM 64	SMH 511	22'	
64	NM 64	SMH 510	115'	
65	NM 65	SMH 511	55'	
65	NM 65	NM 64	20'	
66-67	NM 66-67	SMH 511	47'	
66-67	NM 66-67	NM 65	25'	
68-64	NM 68-64	NM 66-67	52'	
68-64	NM 68-64	SMH 511	74'	
70-71	NM 70-71	NM 68-64	55'	
70-71	NM 70-71	SMH 511	115'	
101	NM 101	NM 70-71	52'	
101	NM 101	SMH 511	105'	
102-105	NM 102-105	SMH 511	140'	
102-105	NM 102-105	NM 101	26'	
88-84	NM 88-84	SMH 505	21'	
88-84	NM 88-84	C/O 84	7'	
86-87	NM 86-87	SMH 505	54'	
86-87	NM 86-87	C/O 84	53'	
84-85	NM 84-85	SMH 505	44'	
84-85	NM 84-85	C/O 84	45'	
85	NM 85	SMH 505	122'	
85	NM 85	SMH 501	100'	
82	NM 82	SMH 505	142'	
82	NM 82	SMH 501	74'	
81	NM 81	SMH 505	162'	
81	NM 81	SMH 501	60'	
80	NM 80	SMH 501	51'	
80	NM 80	SMH 505	192'	
121	NM 121	SMH 505	152'	
121	NM 121	C/O 84	154'	
122-123	NM 122-123	SMH 505	155'	
122-123	NM 122-123	C/O 84	156'	
124	NM 124	SMH 505	115'	
124	NM 124	C/O 84	118'	
125	NM 125	SMH 505	81'	
125	NM 125	C/O 84	41'	
104	NM 104	SMH 502	47'	
104	NM 104	SMH 501	57'	
110-111	NM 110-111	SMH 502	75'	
110-111	NM 110-111	SMH 501	50'	
112	NM 112	SMH 501	104'	
112	NM 112	SMH 502	24'	
74	NM 74	SMH 501	50'	
74	NM 74	NM 104	61'	
50-51	NM 50-51	SMH 504	17'	
50-51	NM 50-51	NM 40	45'	
52-55	NM 52-55	SMH 504	24'	
52-55	NM 52-55	NM 50-51	45'	
54-55	NM 54-55	SMH 504	65'	
54-55	NM 54-55	NM 50-51	82'	
56-57	NM 56-57	SMH 504	104'	
56-57	NM 56-57	NM 50-51	125'	
72	LOT 72	SMH 504	14'	
72	LOT 72	C/O 54	34'	
73	LOT 73	SMH 504	56'	
73	LOT 73	C/O 45	65'	
74	LOT 74	SMH 504	55'	
74	LOT 74	SMH 515	51'	
75-76	LOT 75-76	SMH 504	84'	
75-76	LOT 75-76	C/O 76	10'	
77-78	LOT 77-78	SMH 504	120'	
77-78	LOT 77-78	C/O	10'	
104-105	LOT 104-105	SMH 504	25'	
104-105	LOT 104-105	SMH 515	60'	
106-107	LOT 106-107	SMH 504	65'	
106-107	LOT 106-107	SMH 515	95'	
108	LOT 108	SMH 504	45'	
108	LOT 108	SMH 515	125'	

AS BUILTS SAN SEWER HOUSE CONN.'S				
LOT #	FROM	TO	DISTANCE	
104	104	SAN MH 501	51'	
104	104	SAN MH 502	47'	
110	110	SAN MH 501	57'	
110	110	SAN MH 502	45'	
111	111	C/O 110	56'	
111	111	SAN MH 502	25'	
112	112	SAN MH 502	25'	
112	112	C/O 110	41'	
80	80	SAN MH 501	41'	
80	80	C/O 121	40'	
121	121	C/O 80	40'	
121	121	SAN MH 501	50'	
122	122	C/O 121	41'	
122	122	SAN MH 501	55'	
81	81	C/O 122	54'	
81	81	SAN MH 501	65'	
82	82	C/O 122	40'	
82	82	SAN MH 501	71'	
125	125	C/O 81	42'	
125	125	C/O 122	56'	
124	124	C/O 81	45'	
124	124	C/O 22	41'	
123	123	C/O 124	50'	
123	123	C/O 85	54'	
83	83	C/O 125	54'	
83	83	C/O 82	55'	
84	84	C/O 125	54'	
84	84	C/O 82	45'	
85	85	C/O 84	57'	
85	85	C/O 125	45'	
86	86	C/O 125	44'	
86	86	C/O 84	42'	
87	87	C/O 84	55'	
87	87	SAN MH 505	54'	
88	88	C/O 84	50'	
88	88	SAN MH 505	52'	
84	84	C/O 85	50'	
84	84	SAN MH 505	16'	
75	75	SAN MH 501	55'	
75	75	C/O 74	7'	
74	74	SAN MH 501	61'	
74	74	C/O 75	7'	
77	77	SAN MH 501	87'	
77	77	C/O 74	55'	
107	107	SAN MH 501	121'	
107	107	C/O 77	50'	
108	108	SAN MH 501	117'	
108	108	C/O 77	47'	
106	106	SAN MH 504	51'	
106	106	C/O 105	5'	
105	105	SAN MH 504	45'	
105	105	C/O 106	5'	
104	104	SAN MH 504	25'	
104	104	C/O 106	44'	
103	103	SAN MH 504	26'	
103	103	C/O 106	44'	
50	50	SAN MH 501	45'	
50	50	SAN MH 504	21'	
52	52	SAN MH 504	87'	
52	52	C/O 90	54'	
51	51	SAN MH 504	12'	
51	51	C/O 90	55'	
40	40	C/O 52	54'	
40	40	SAN MH 504	26'	
41	41	SAN MH 504	44'	
41	41	C/O 90	50'	
42	42	SAN MH 504	61'	
42	42	C/O 54	55'	
43	43	SAN MH 504	75'	
43	43	C/O 54	57'	
44	44	SAN MH 504	45'	
44	44	C/O 54	65'	
53	53	SAN MH 504	47'	
53	53	C/O 42	55'	
54	54	SAN MH 504	52'	
54	54	C/O 55	54'	
55	55	SAN MH 504	55'	
55	55	C/O 54	54'	
56	56	SAN MH 504	90'	
56	56	C/O 45	56'	
57	57	SAN MH 510	50'	
57	57	C/O 94	45'	
58	58	C/O 64	77'	
58	58	SAN MH 510	16'	
59	59	C/O 94	80'	
59	59	SAN MH 510	16'	
46	46	C/O 94	71'	
46	46	SAN MH 510	25'	
49	49	SAN MH 510	44'	
49	49	SAN MH		