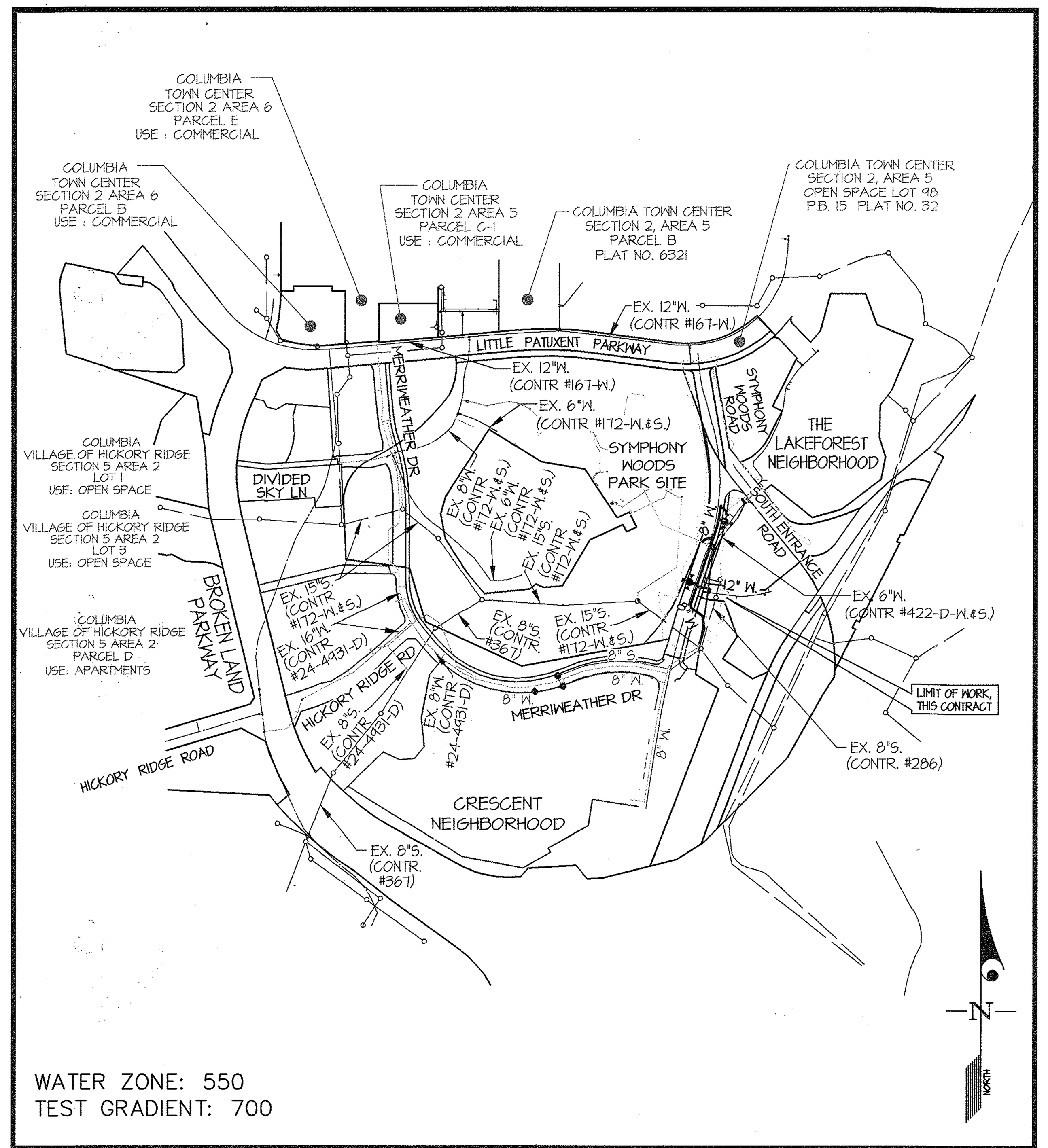
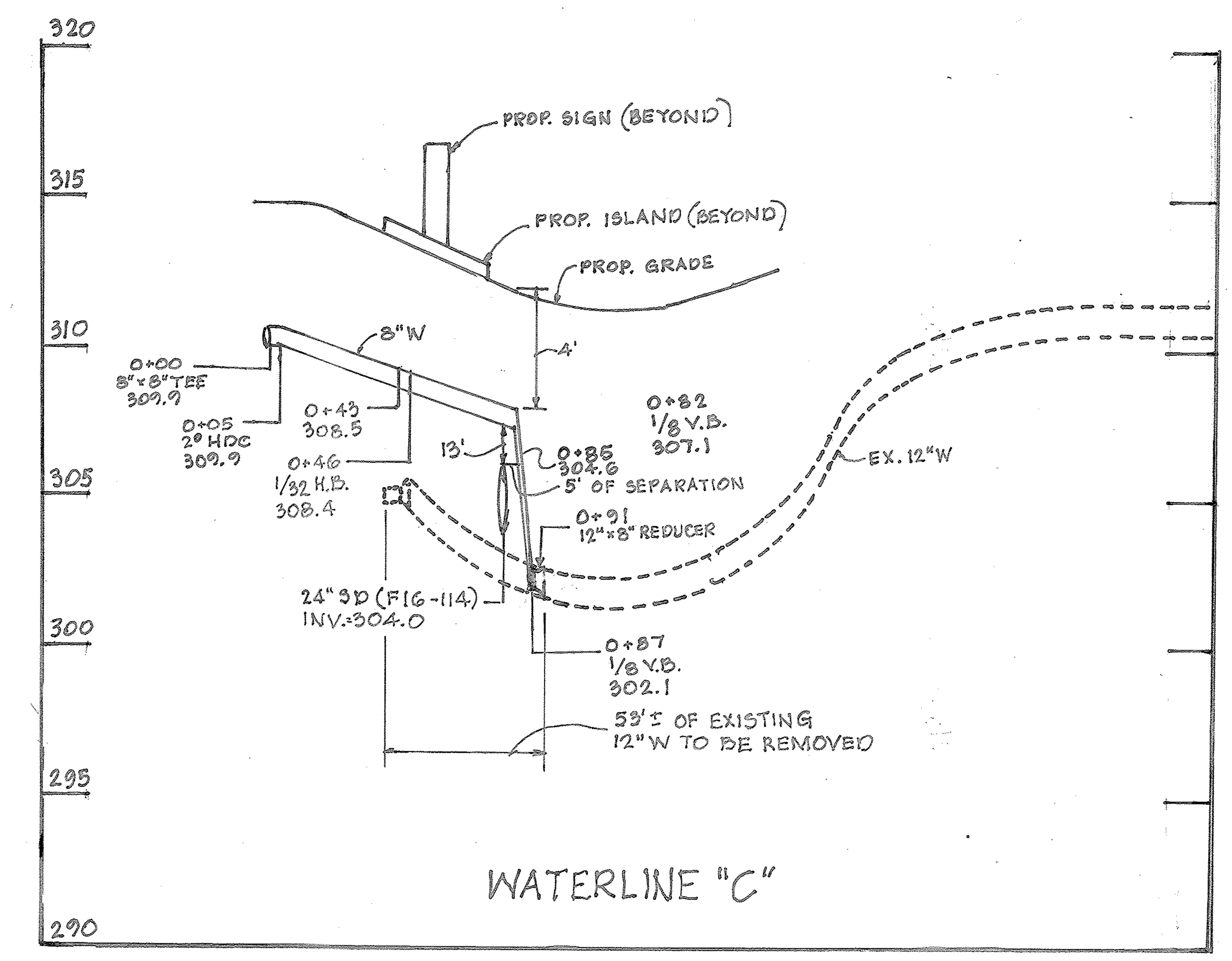
QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/ SUPPLIER
6" WATER MAIN (F.H.)	63 LF	63 L.F.	PVC DR 18	NORTH AMERICAN PIPE CO.
8" WATER MAIN (C900 PVC)	878 LF	878 L.F.	PVC DR 18	NORTH AMERICAN PIPE CO.
12" WATER MAIN (C900 PVC)	27 LF	27 L.F.	PVC DR 18	NORTH AMERICAN PIPE CO.
~~8" TAPPING SLEEVE & VALVE~~	~~2 EA.~~ TEE	NA		
~~12" TAPPING SLEEVE & VALVE~~	~~1 EA.~~ TEE	NA		
8"x 6" F.H.T.	2 EA.	2 EA.	D.I.P.	STAR PIPE PRODUCTS
8"x 8" T.	5 ~~X~~ EA.	5 EA.	D.I.P.	STAR PIPE PRODUCTS
8" V.	5 ~~X~~ EA.	5 EA.	GATE VALVE	MUELLER
6" V.	2 EA.	2 EA.	GATE VALVE	MUELLER
8" 1/8 H.B.	4 ~~X~~ EA.	4 EA.	EPOXY	STAR PIPE PRODUCTS
8" 1/16 H.B.	2 EA.	2 EA.	EPOXY	STAR PIPE PRODUCTS
8" 1/32 H.B.	2 EA.	2 EA.	EPOXY	STAR PIPE PRODUCTS
FIRE HYDRANT	2 EA.	2 EA.	FIRE HYDRANT	MUELLER
8" 1/32 V.B.	14 EA.	14 EA.	EPOXY	STAR PIPE PRODUCTS
8" 1/16 V.B.	2 EA.	2 EA.	EPOXY	STAR PIPE PRODUCTS
8" 1/8 V.B.	4 EA.	4 EA.	EPOXY	STAR PIPE PRODUCTS
12" 1/32 V.B.	1 EA.	1 EA.	EPOXY	STAR PIPE PRODUCTS
12" 1/8 H.B.	2 EA.	2 EA.	EPOXY	STAR PIPE PRODUCTS
12"x8" REDUCER	1 EA.	1 EA.	EPOXY	STAR PIPE PRODUCTS
△1 4' MANHOLE	2 EA.	1 EA	PRECAST	CONTRACTORS PRECAST CORP
△1 18" SEWER (DIP)	224 LF	216 L.F.	D.I.P.	US PIPE
24" STEEL CASING	43 LF	43 L.F.	STEEL	BWM COMPANY
36" STEEL CASING	216 LF	216 L.F.	STEEL	BWM COMPANY
12"x8" TEE	1 EA.	1 EA.	D.I.P.	STAR PIPE PRODUCTS
2' HDC	1 EA.	1 EA.	PVC	NORTH AMERICAN PIPE CO.
△1 CONCRETE FLAT TOP	1 EA			

NAME OF UTILITY CONTRACTOR: W.F. WILSON

SURVEY AND DRAFTING DIV. CHECKBOX:
AS-BUILT DATE:

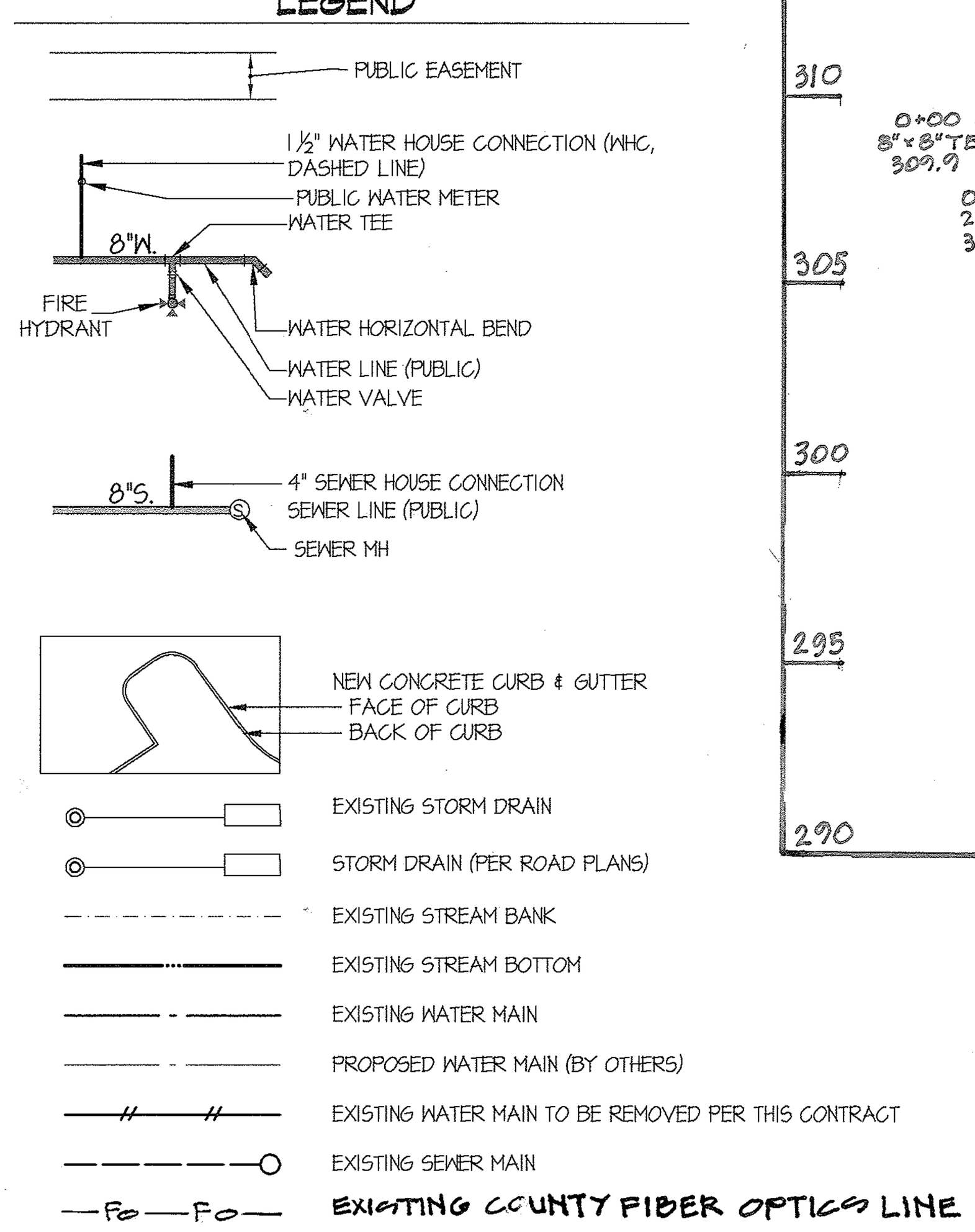


LOCATION MAP SCALE: 1" = 600'



PROFILE
HORIZ. 1"= 50'
VERT. 1"= 5'

LEGEND

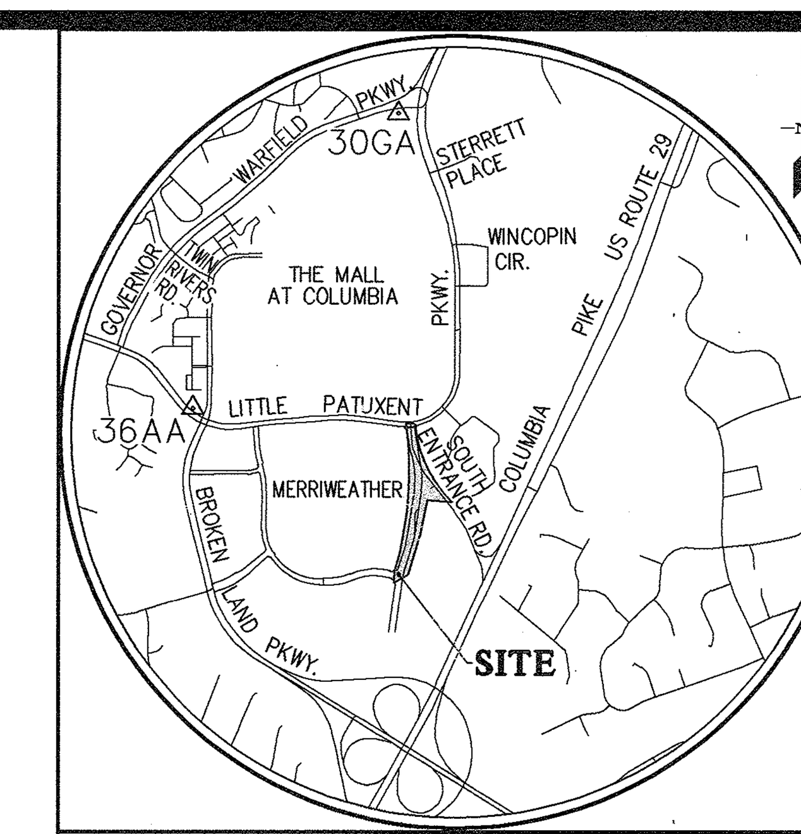


SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH THE ROAD DRAWINGS, F 16-114, FOR SEDIMENT AND EROSION CONTROL.

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

APPROVED: [signature] 2/20/18
HOWARD S.C.D. Date

TYPE OF BUILDING	COMMERCIAL
NUMBER OF LOTS	0
NUMBER OF S.H.C.'s	0
NUMBER OF W.H.C.'s	0
LIMIT OF DISTURBANCE (LOD)	5.5 ACRES
SEWER SHED	MIDDLE PATUXENT
PUMPING STATION	LITTLE PATUXENT RECLAMATION PLANT



VICINITY MAP
SCALE: 1" = 2,000'

HOWARD COUNTY CONTROL STATIONS

30GA	36AA
NORTHING: 566,053.5979	NORTHING: 562,804.8537
EASTING: 1,352,177.5307	EASTING: 1,349,906.1701
ELEVATION: 339.878	ELEVATION: 359.151
(LATEST ADJ. NOV. 2008)	(LATEST ADJ. NOV. 2008)

CONTRACT No. 24-5008-D
DOWNTOWN COLUMBIA
CRESCENT NEIGHBORHOOD -PHASE 2B
SYMPHONY WOODS ROAD

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

GENERAL NOTES
Revised - October 2013

Part I
1. 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.
2. Topographic AIR surveys were performed on DECEMBER, 2008 by MCKENZIE SNYDER.
3. 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. 47DC, and No. 47EB.
   All vertical controls are based on NAVD '88. Vertical controls provided on the drawings are STANDARD DISCS ON CONCRETE MONUMENTS.
4. All pipe elevations shown are invert elevations unless otherwise noted on the plans.
5. Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires the bracing of additional poles, any cost incurred by the owner for the bracing of additional poles or damages shall be deducted from monies owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
6. For details not shown on the drawing, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
7. Where test pits have been made on existing utilities, they are noted by the symbol ⊕ at the locations of the test pits. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
8. The contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
   - AT&T.......... 1-800-252-1133
   - BGE (Construction Services).......... 410-637-8713
   - 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
9. 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.
10. The contractor shall remove trees, stumps and roots along the line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
11. The contractor shall notify the Bureau of Highways, Howard County, at (410)-313-7450 at least five working days before open cutting or boring/jacking of any County road for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114(a) of the Howard County Code.

Part II WATER
1. All water mains shall be D.I.P. Class 54 unless otherwise noted.
2. Tops of all water mains shall have a minimum of 3'-6" of cover unless otherwise noted.
3. Valves adjacent to tees shall be strapped to tees.
4. All fittings shall be buttressed or anchored with concrete in accordance with Standard Details unless otherwise provided for on the drawings.
5. 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.
6. The contractor shall not operate any water main valves on the existing water system.
7. Tracer wires and continuity test stations shall be installed on all DIP and PVC water mains in accordance with the Howard County Design Manual.
8. 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 test records received.
9. Unless otherwise noted on the plans or in the specifications 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. Seventeen (17) pound Magnesium anodes shall be installed on all valves and ductile iron fittings including restraints and harnesses. Twelve (12) pound 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.
10. 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. 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 over insert or over home the spigot into the bell of PVC pipe.
11. All changes in horizontal or vertical direction of PVC water pipe shall be made with standard bends, 5-degree sweeps or high deflection (HD) couplings. No bending of the pipe or deflecting of PVC pipe joints is permitted. Where high defection 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. The contractor shall use a vibratory plate compactor or other approved means to thoroughly compact the #57 stone on both sides of the high defection 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 defection of 3-degrees (1½-degree on either end of the coupling), shall be rated for a minimum 200 psi meeting the requirements of AWWA C900, shall have a minimum lay length of 9-inches and shall have center stops. PVC High deflection couplings shall be CertainTeed PVC High Deflection (HD) Stop Couplings or equal. Five degree sweeps shall be bell by spigot, rated for a minimum 225 psi, DR18 meeting the requirements of AWWA C900 and shall be Multi Fittings (Ipex) Blue Brute DR18 or equal.
12. When PVC high defection couplings or PVC 5-degree sweeps are used to facilitate changes in horizontal or vertical alignments of AWWA C-900 PVC pipelines, the contractor shall install devices for the prevention of over-insertion of the PVC pipe spigots or plain ends into the push on bell joint on both sides of the high defection 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 Series 5000 Mega-Stop, as manufactured by EBAA Iron, Inc. or approved equal.

Part III SEWER
1. All sewer mains shall be D.I.P. or P.V.C. unless otherwise noted.
2. All manholes shall be 4'-0" inside diameter unless otherwise noted.
3. Force mains shall be D.I.P. only.
4. Manholes shown with 12" and 16" walls are for brick manholes only.
5. Manholes designated W.T. in plan and profile shall have watertight frame and cover, Standard Detail G5.52. Where watertight manhole frames and covers are used, set top of frame 1'-6^" above finished grade unless otherwise noted on the drawings.
6. House(s) with the symbol "C.N.S." indicates that the cellar cannot be served.

SHEET INDEX

AS-BUILT
[signature] Date 6/26/19

PREPARED FOR:
THE HOWARD HUGHES CORP.
10480 LITTLE PATUXENT PARKWAY
SUITE 400
COLUMBIA, MARYLAND 21044
ATTN: BILL ROWE
410-964-4987

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[signature] 2-7-18
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[signature] 2.28.18
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\11071\PLANS BY GLW\W&S FINAL\PHASE-2A & 2B\PHASE 2B\11071 WS1-CS.dwg | DES. JH | DRN. JH | CHK. DEV

DATE JAN., 2018
G.L.W. No. 11071

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975 EXP. DATE: MAY 26, 2018
1/25/18 [signature]

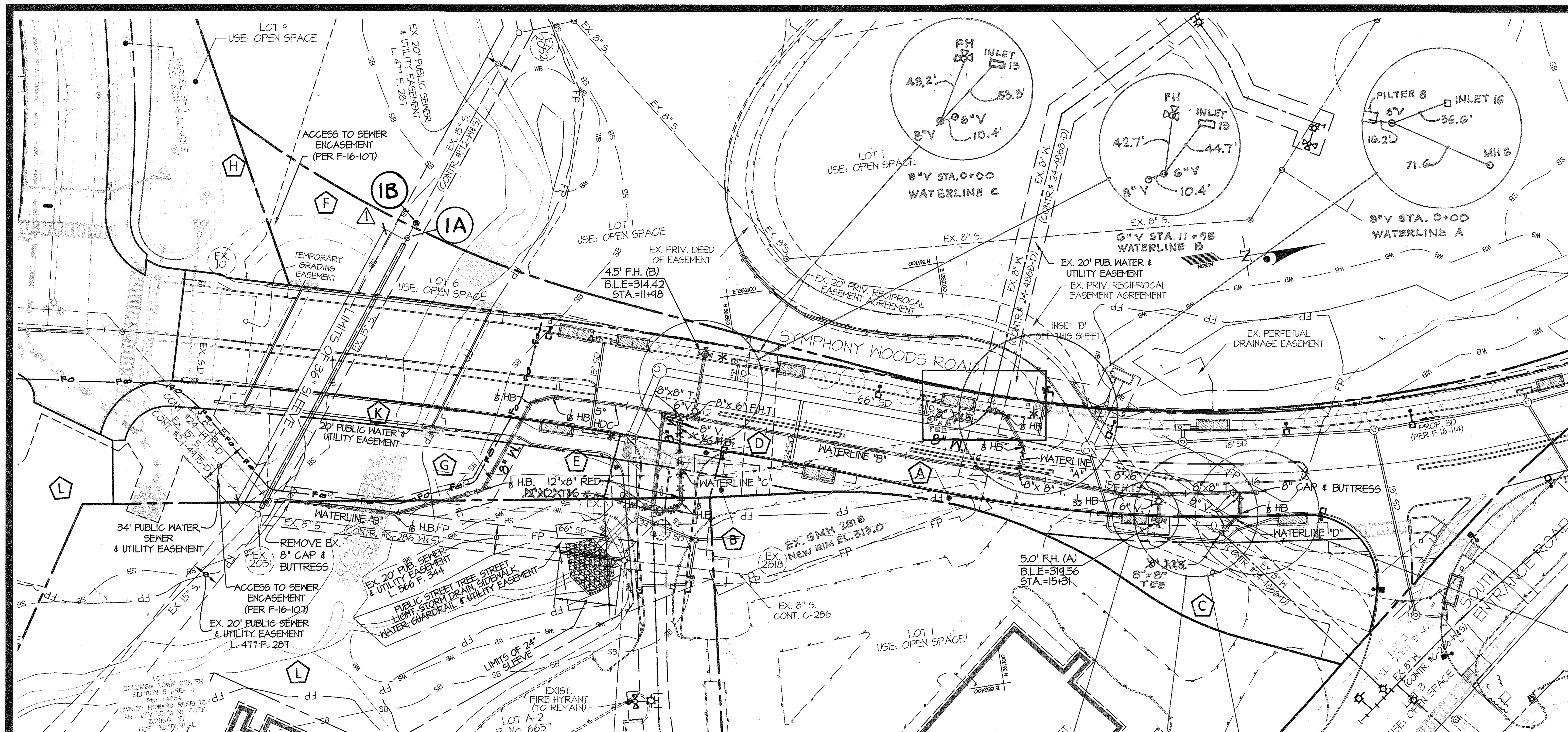
STATE OF MARYLAND CARLTON KENNETH GUTSCHICK NO. 12975 PROFESSIONAL ENGINEER

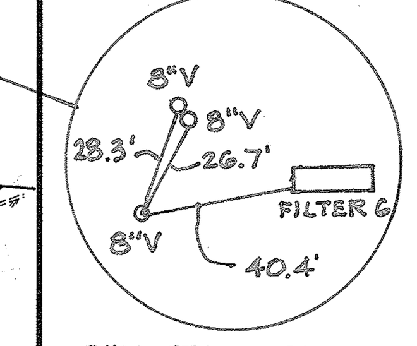
BY	NO	REVISION	DATE
gt	△1	Revised Quantities (As-Built Info.)	11-21-19

COVER SHEET
600' SCALE MAP NO. 36 & 39 BLOCK NO. 01

DOWNTOWN COLUMBIA
CRESCENT NEIGHBORHOOD - PHASE 2B
CONTRACT No. 24-5008-D
SYMPHONY WOODS ROAD
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 5

SCALE AS SHOWN

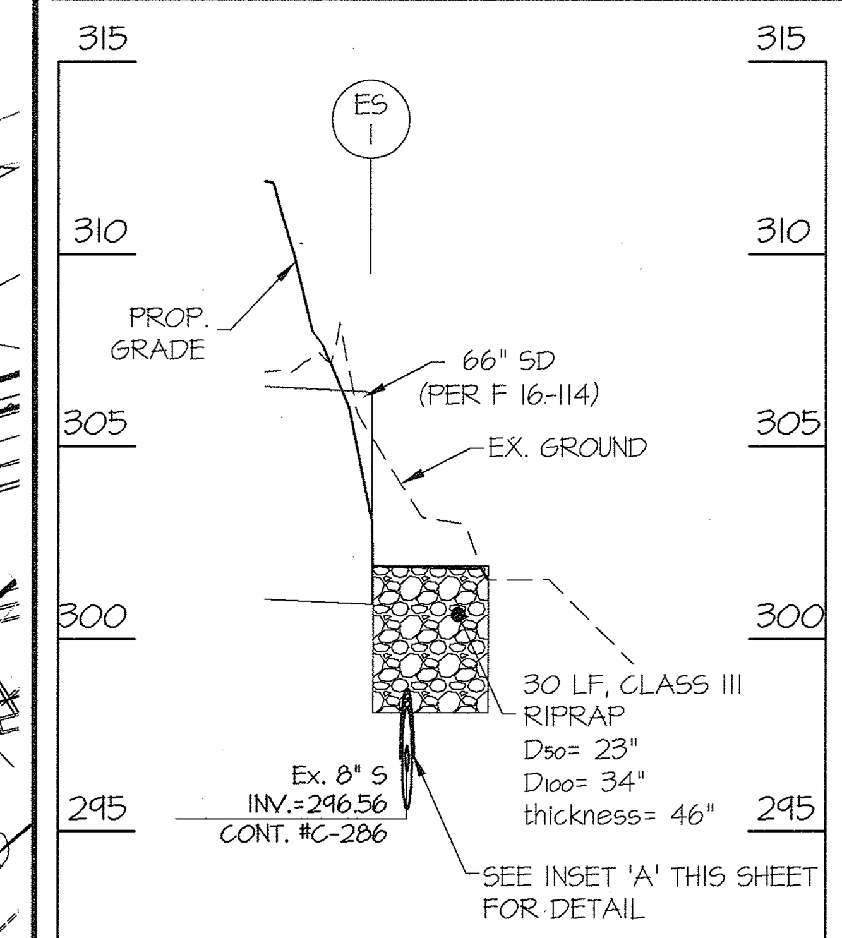




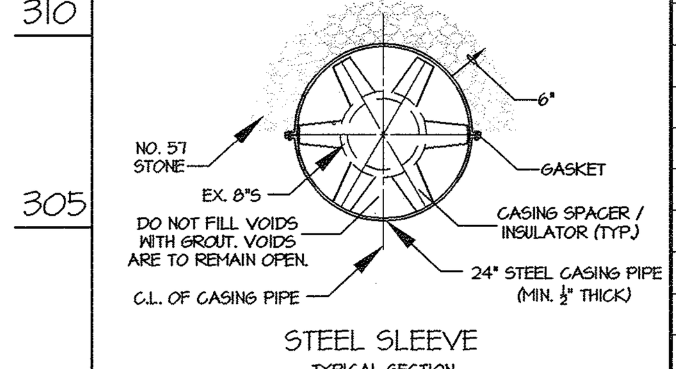
8"V STA. 0+91 WATERLINE D

PLAN VIEW
SCALE: 1"=50'

PROPERTY IDENTIFICATION	PARCEL/LOT	NEIGHBORHOOD	OWNER	ZONING	LAND USE	PLAT NUMBER
A	PARCEL R	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT	NON-BUILDABLE	24003
B	PARCEL G	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT		24003
C	PARCEL H	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT		24003
D	PARCEL Q	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT	NON-BUILDABLE	24000
E	PARCEL F	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT	NON-BUILDABLE	24000
F	LOT 6	CRESCENT	COLUMBIA ASSOCIATION INC	NT	OPEN SPACE	24000
G	LOT 7	CRESCENT	COLUMBIA ASSOCIATION INC	NT	OPEN SPACE	24000
H	LOT 5	CRESCENT	COLUMBIA ASSOCIATION INC	NT	OPEN SPACE	24000
K	PARCEL P	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT	NON-BUILDABLE	24000
L	LOT 1	CRESCENT	HOWARD RESEARCH AND DEVELOPMENT CORPORATION	NT	RESIDENTIAL	14054



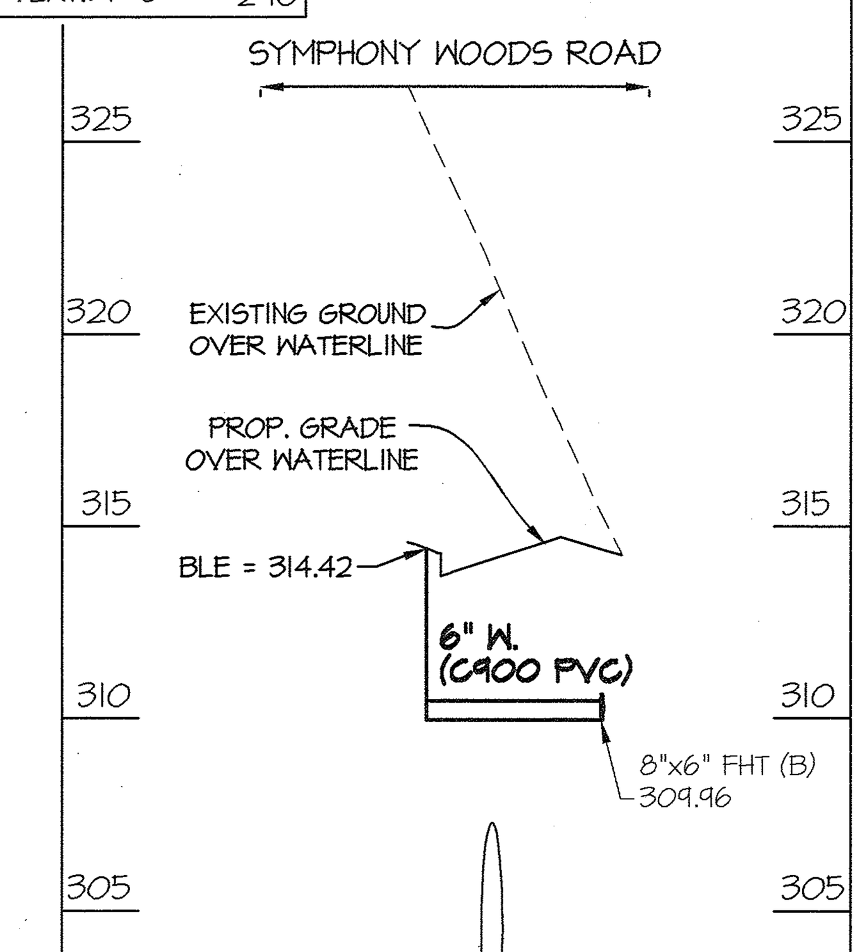
EX. SEWER AT CULVERT OUTFALL
SCALE: HORZ.: 1"=50' VERT.: 1"=5'



STEEL SLEEVE
TYPICAL SECTION

INSET 'A'

FITTING CHART		
STATION	FITTING	NAD '83/'91 COORDINATES
WATER MAIN 'A'		
0+00	8" TAP & SLEEVE	N 561,720 E 1,352,208
0+10	8" 1/8 H.B.	N 561,730 E 1,352,212
0+17	8" 1/8 V.B.	N 561,732 E 1,352,218
0+18	8" 1/8 V.B.	N 561,733 E 1,352,219
0+38	8" 1/8 H.B.	N 561,740 E 1,352,238
0+59	8"x8" T.	N 561,734 E 1,352,257
WATER MAIN 'B'		
8+77	8" 1/32 V.B.	N 561,227 E 1,352,196
9+08	8" 1/32 V.B.	N 561,257 E 1,352,205
9+46	8" 1/16 H.B.	N 561,293 E 1,352,215
9+54	8" 1/32 V.B.	N 561,302 E 1,352,214
10+04	8" 1/32 V.B.	N 561,351 E 1,352,209
10+11	8" 1/8 H.B.	N 561,358 E 1,352,208
10+36	8" 1/16 V.B.	N 561,373 E 1,352,188
10+51	8" 1/16 V.B.	N 561,383 E 1,352,176
10+81	8" 1/8 H.B.	N 561,402 E 1,352,153
10+97	8" 1/16 H.B.	N 561,417 E 1,352,151
11+43	8" 5° HDC	N 561,462 E 1,352,163
11+89	8"x8" T.	N 561,505 E 1,352,178
11+98	8"x6" F.H.T. (B)	N 561,514 E 1,352,181
14+31	8"x8" T.	N 561,734 E 1,352,257
14+80	8" 1/32 V.B.	N 561,780 E 1,352,273
14+89	8" 1/32 V.B.	N 561,789 E 1,352,276
15+09	8" 1/32 H.B.	N 561,807 E 1,352,283
15+31	8"x6" F.H.T. (A)	N 561,829 E 1,352,286
15+69	8" 1/32 V.B.	N 561,867 E 1,352,291
15+81	8" 1/32 V.B.	N 561,879 E 1,352,292
15+88	8"x8" T.	N 561,886 E 1,352,293
16+00	8" CAP & BUTTRESS	N 561,898 E 1,352,295
WATER MAIN 'C'		
0+00	8"x8" T.	N 561,505 E 1,352,178
0+08	8" 1/32 H.B.	N 561,502 E 1,352,186
0+26	8" 1/32 V.B.	N 561,500 E 1,352,203
0+57	12"x8" REDUCER	N 561,496 E 1,352,234
0+62	12" 1/8 H.B.	N 561,495 E 1,352,239
0+63	12" 1/32 V.B.	N 561,494 E 1,352,240
0+69	12" 1/8 H.B.	N 561,490 E 1,352,243
0+84	12" TAP & SLEEVE	N 561,475 E 1,352,241
WATER MAIN 'D'		
0+00	8" TAP & SLEEVE	N 561,869 E 1,352,319
0+05	8" 1/8 V.B.	N 561,873 E 1,352,316
0+09	8" 1/8 V.B.	N 561,876 E 1,352,314
0+19	8" 1/8 H.B.	N 561,884 E 1,352,308
0+34	8"x8" T.	N 561,886 E 1,352,293



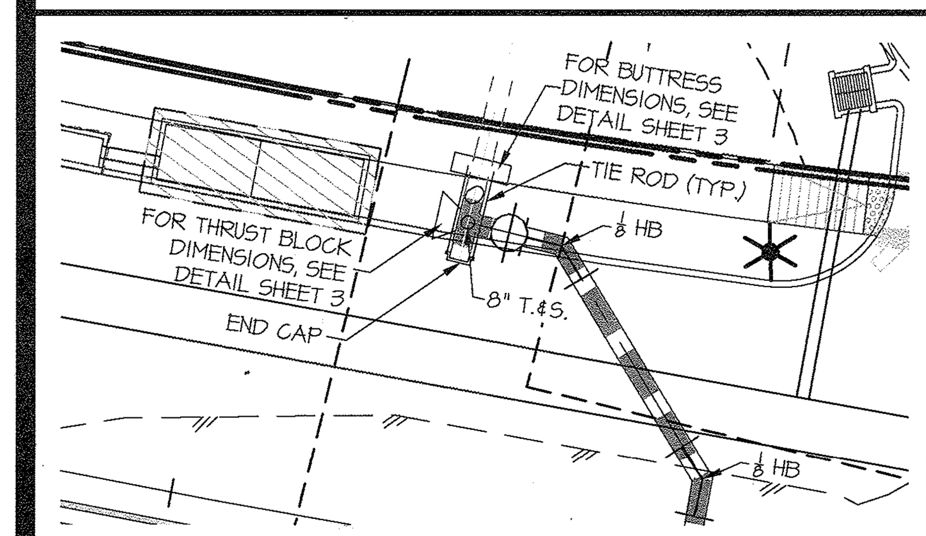
FIRE HYDRANT (B)
SCALE: HORZ.: 1"=50' VERT.: 1"=5'

NOTES TO CONTRACTOR:
1. SEE SHEET 3 FOR ABANDONMENT PLAN.
2. SEE SHEET 3 FOR PLAN, PROFILE AND DETAILS FOR STEEL CASING.
3. PROPOSED STORM DRAIN PER F-16-114.

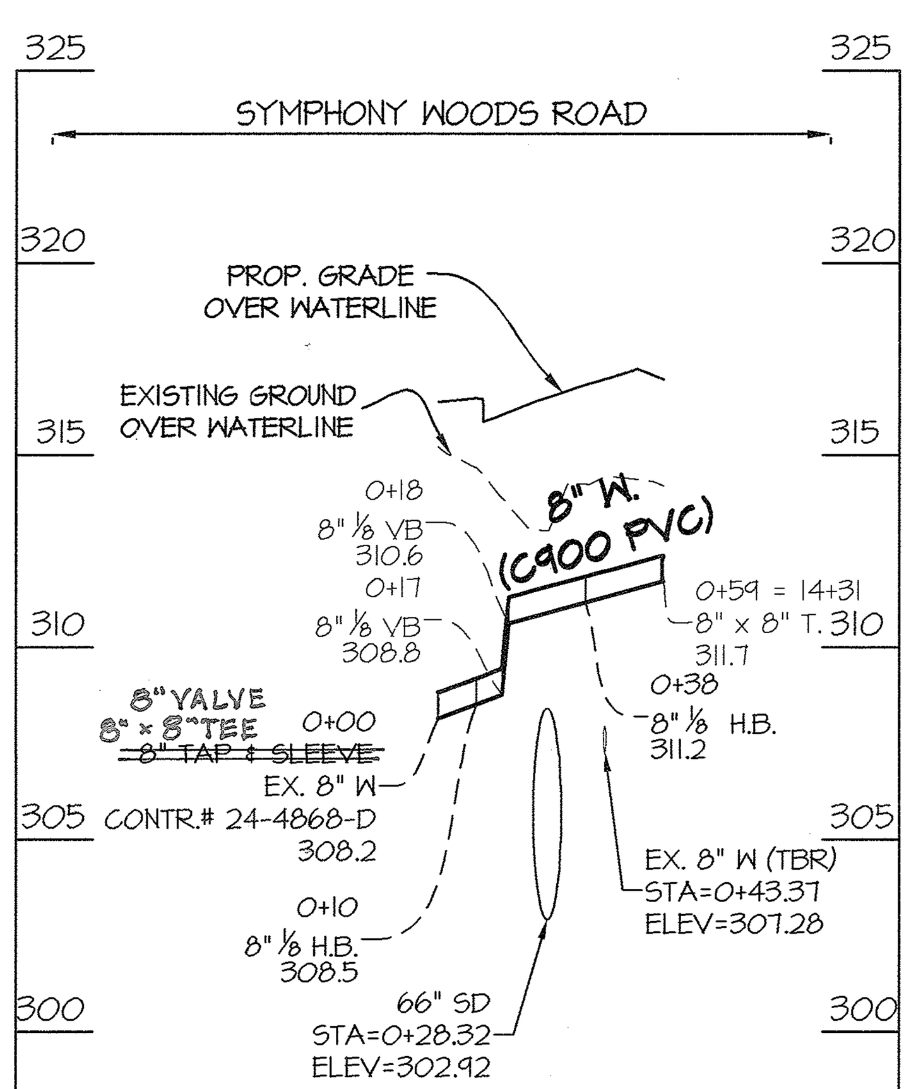
FIRE HYDRANT CHART	
FH	NAD '83/'91 COORDINATES
A	N 561,827 E 1,352,304
B	N 561,528 E 1,352,138

SEWER MANHOLE CHART	
MH	NAD '83/'91 COORDINATES
1A	N 561,334 E 1,352,024
1B	N 561,338 E 1,352,019 (1)

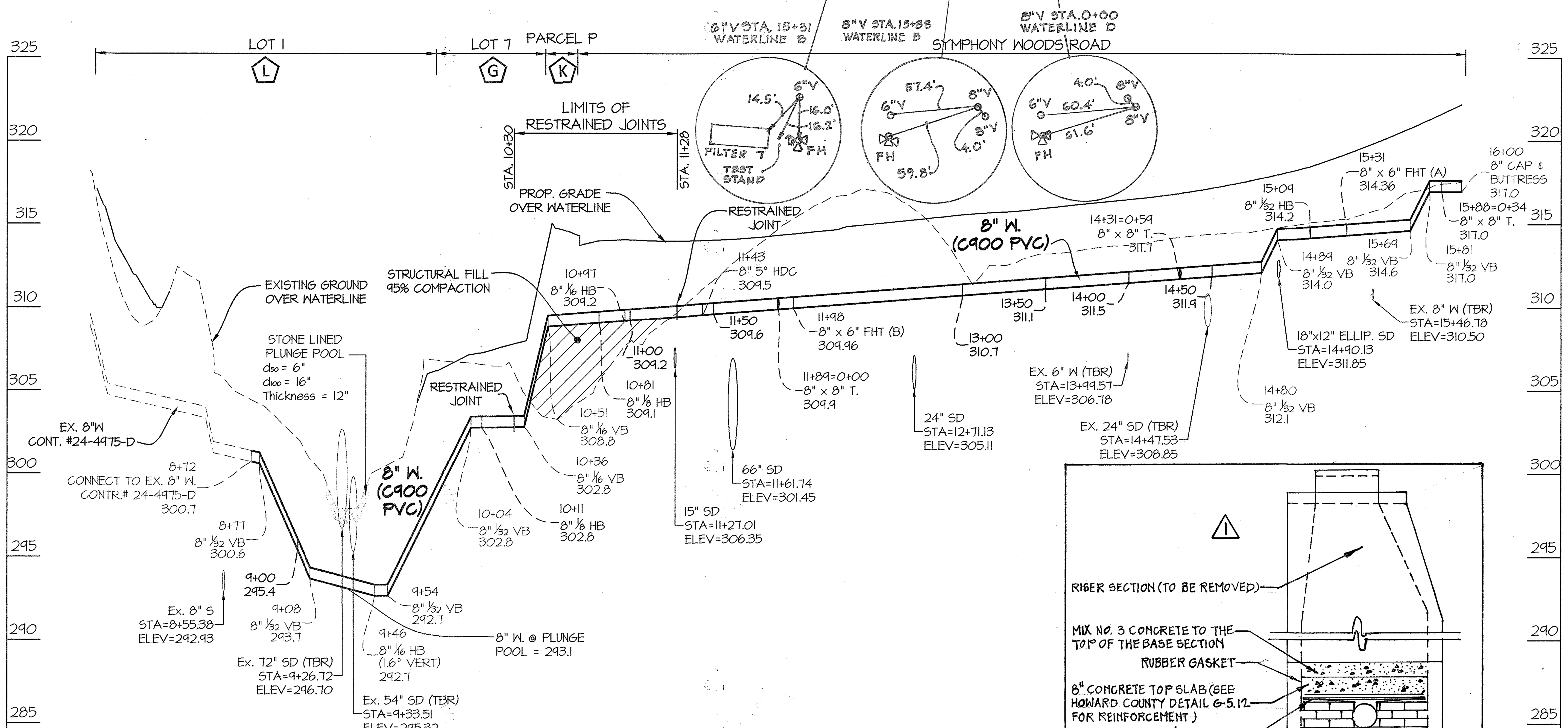
AS-BUILT
[signature] Date 6/26/19



INSET 'B'
SCALE: 1"=20'



WATERLINE "A"
WATERMAIN STATIONS - 0+00 TO 0+59
SCALE: HORZ.: 1"=50' VERT.: 1"=5'

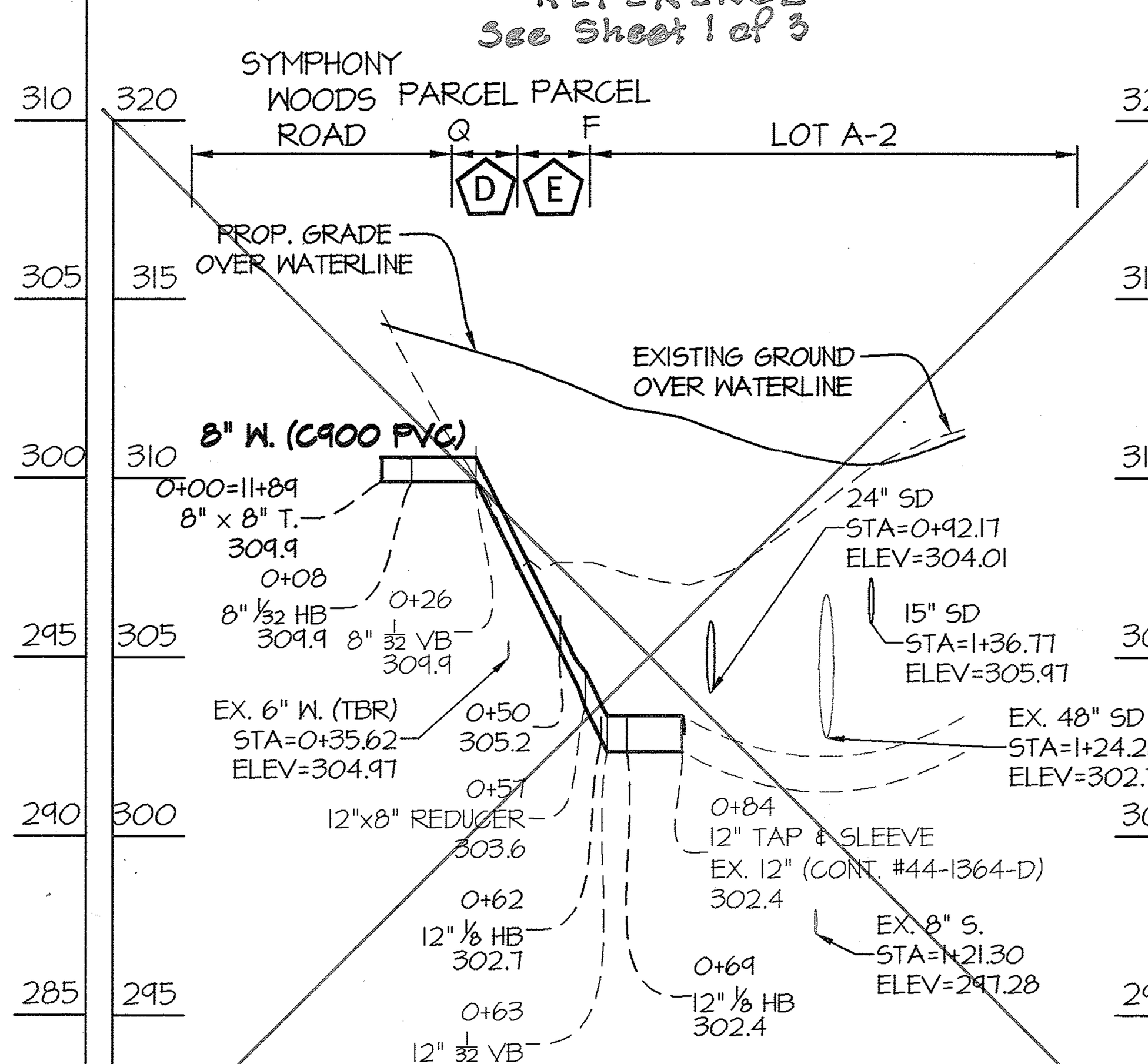


WATERLINE "B"
WATERMAIN STATIONS - 8+72 TO 16+00
SCALE: HORZ.: 1"=50'
VERT.: 1"=5'

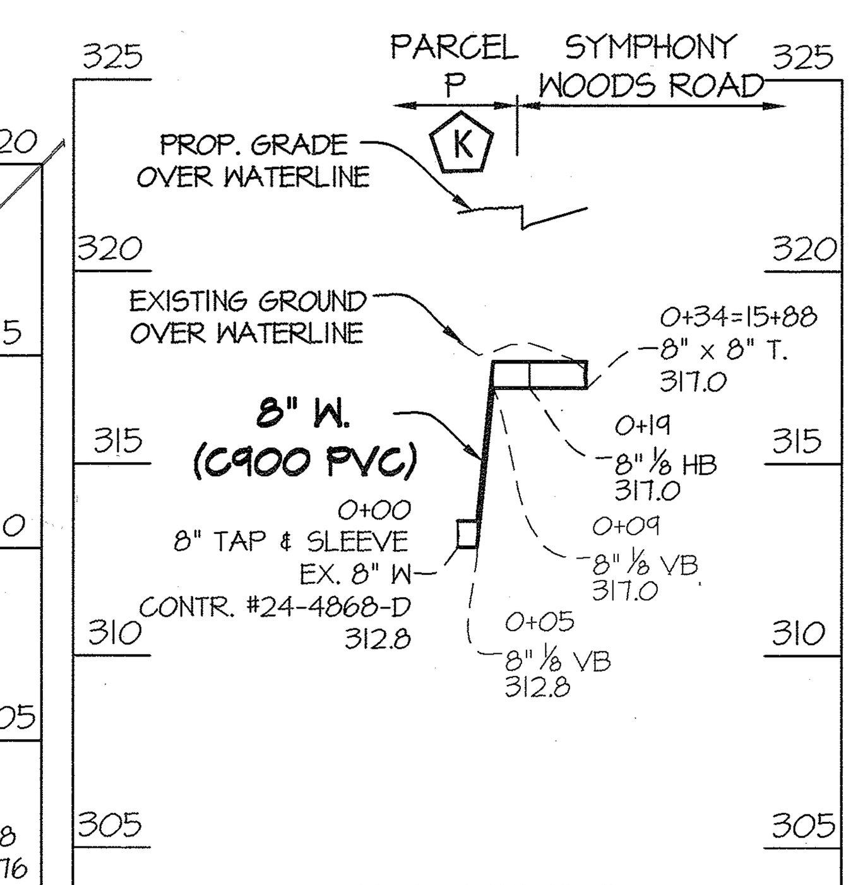
RISER SECTION (TO BE REMOVED)
MIX NO. 3 CONCRETE TO THE TOP OF THE BASE SECTION
RUBBER GASKET
8" CONCRETE TOP SLAB (SEE HOWARD COUNTY DETAIL G-5.12 FOR REINFORCEMENT)
1/2" PLYWOOD

CONCRETE FLAT TOP WITH GASKET DETAIL

REFERENCE
See Sheet 1 of 3



WATERLINE "C"
WATERMAIN STATIONS - 0+00 TO 0+84
SCALE: HORZ.: 1"=50' VERT.: 1"=5'



WATERLINE "D"
WATERMAIN STATIONS - 0+00 TO 0+34
SCALE: HORZ.: 1"=50'
VERT.: 1"=5'

PREPARED FOR:
THE HOWARD HUGHES CORP.
10480 LITTLE PATUXENT PARKWAY
SUITE 400
COLUMBIA, MARYLAND 21044
ATTN: BILL ROWE
410-964-4987

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[signature] 2-7-18
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[signature] 2.28.18
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\11071\PLANS BY GLW\W&S FINAL\PHASE-2A & 2B\PHASE 2B\11071-WS2-PLAN-PROF.dwg | DES. WsJ | DRN. WsJ | CHK. MJT

DATE JAN., 2018
G.L.W. No. 11071

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXP. DATE: MAY 26, 2018
1/25/18 [signature]
STATE OF MARYLAND CARLTON KENNETH GUTSCHICK NO. 12975 PROFESSIONAL ENGINEER

BY	NO	REVISION	DATE
9+.	1	ADDED SEWER MANHOLE 1B AND DETAIL (As-Built Info.)	11-21-19

WATER PLAN & PROFILES

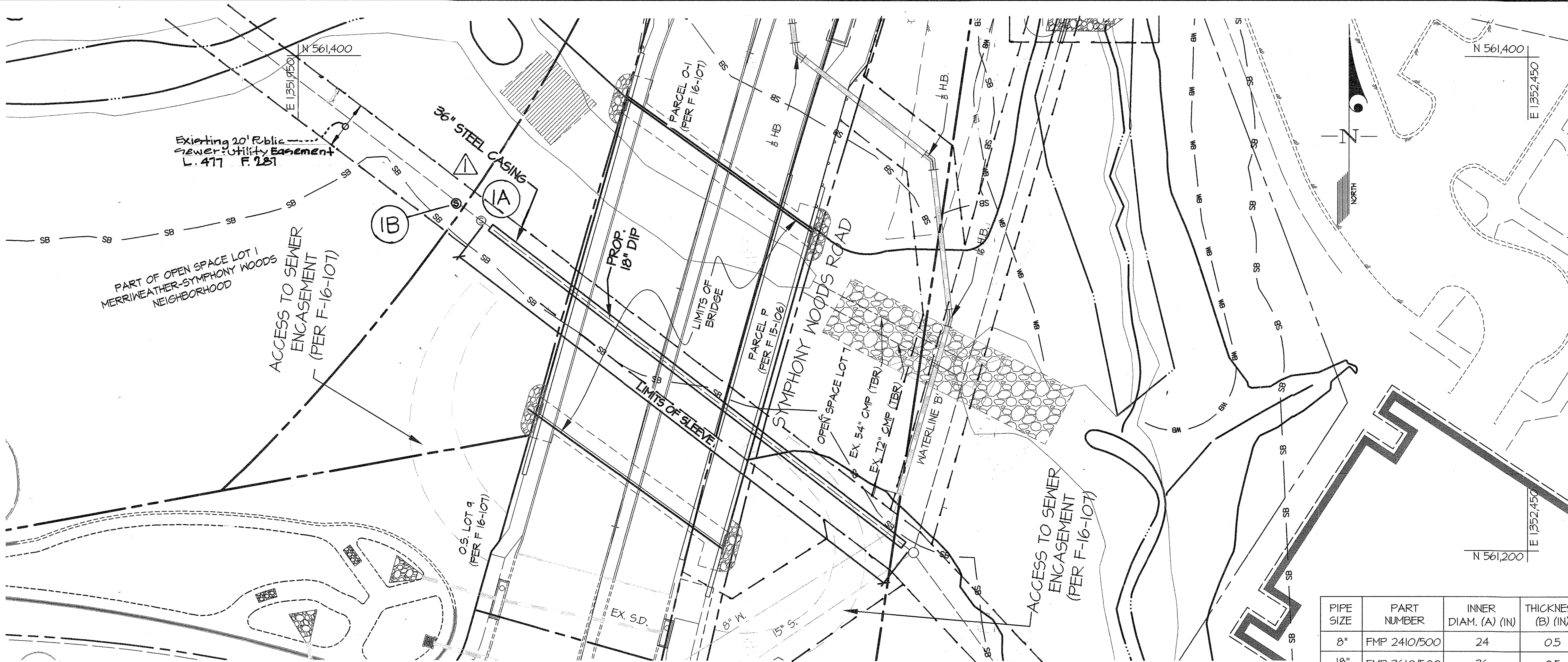
600' SCALE MAP NO. 36 & 39 BLOCK NO. 01

DOWNTOWN COLUMBIA
CRESCENT NEIGHBORHOOD - PHASE 2B
CONTRACT No. 24-5008-D
SYMPHONY WOODS ROAD

HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 5

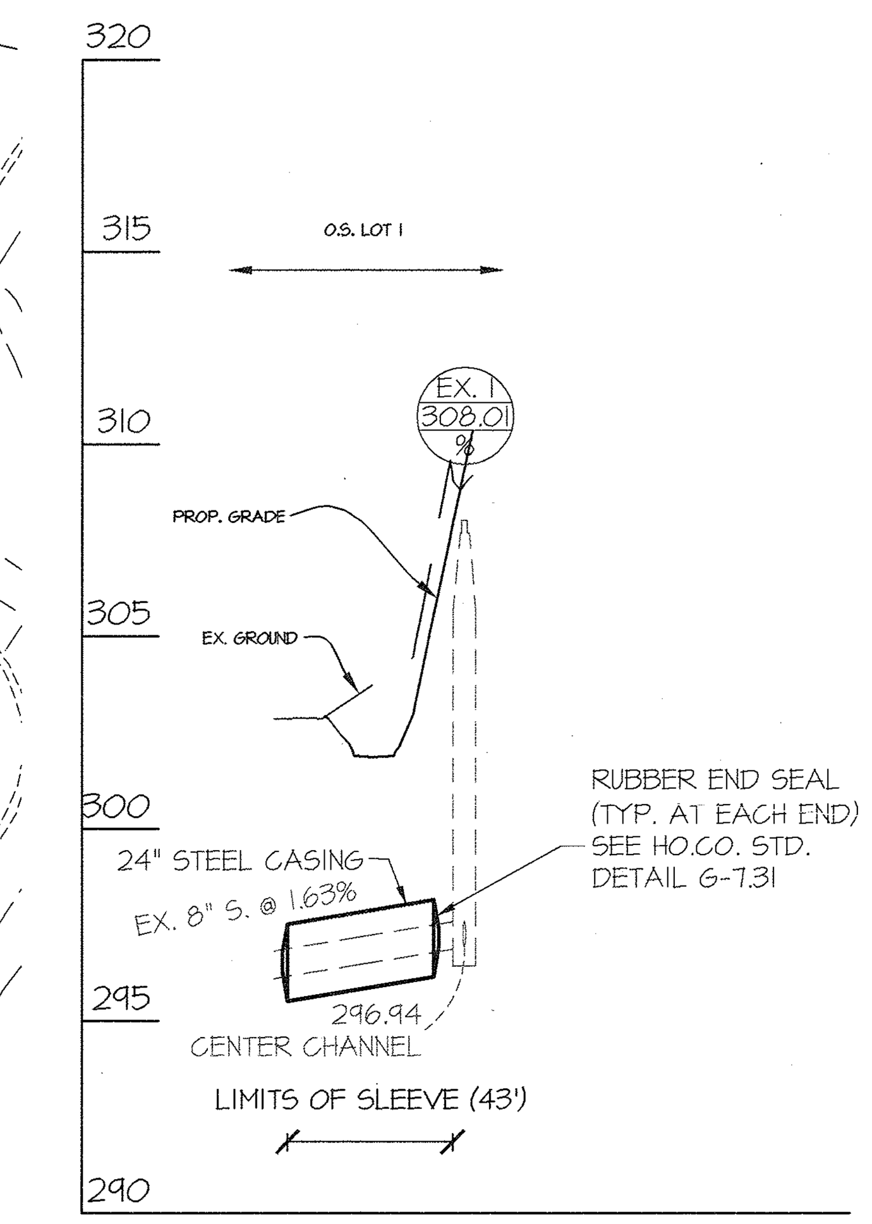
SCALE AS SHOWN

SHEET 2 OF 3

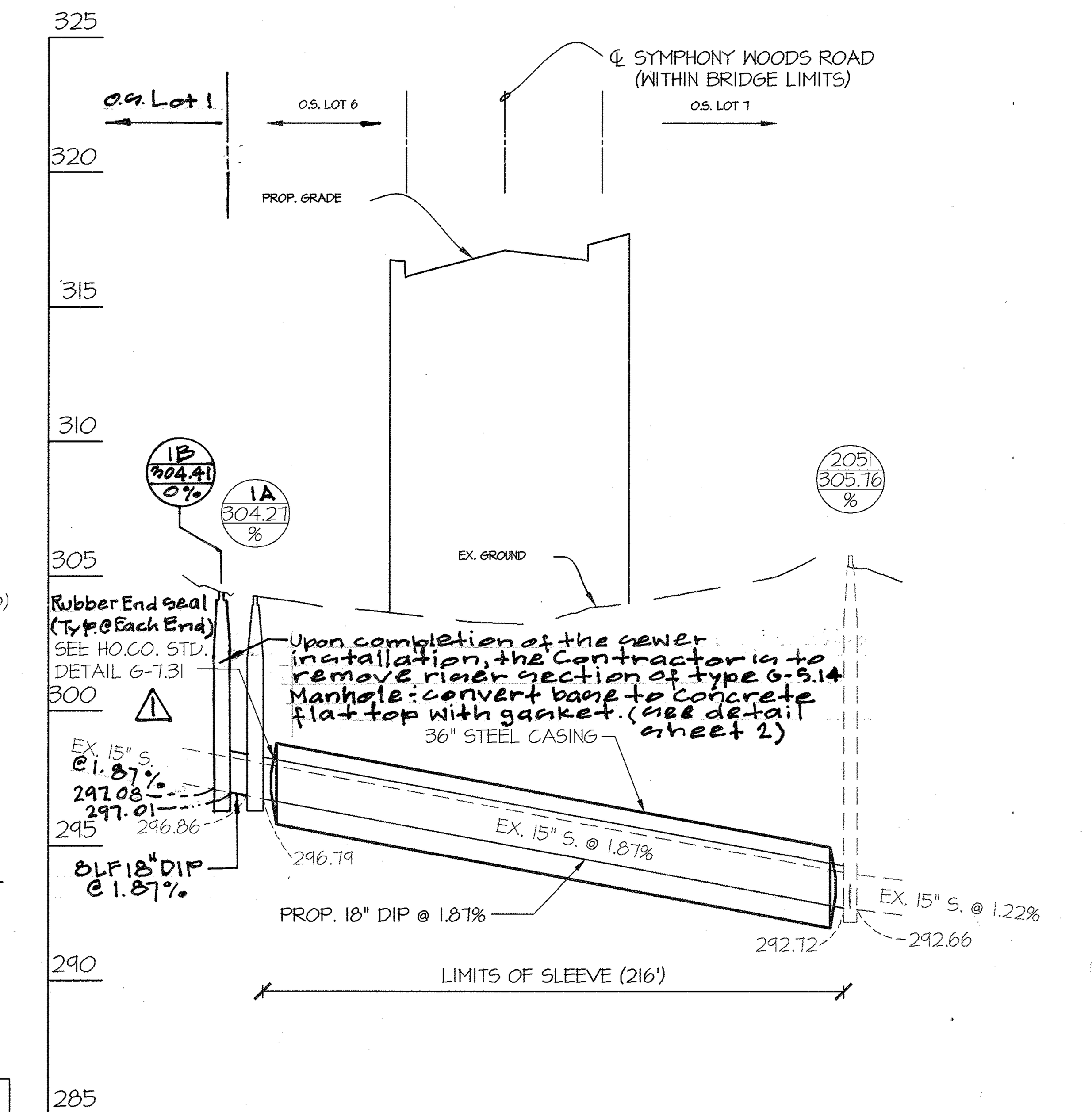


SEWER MAIN CASING PLAN
SCALE: 1'=30'

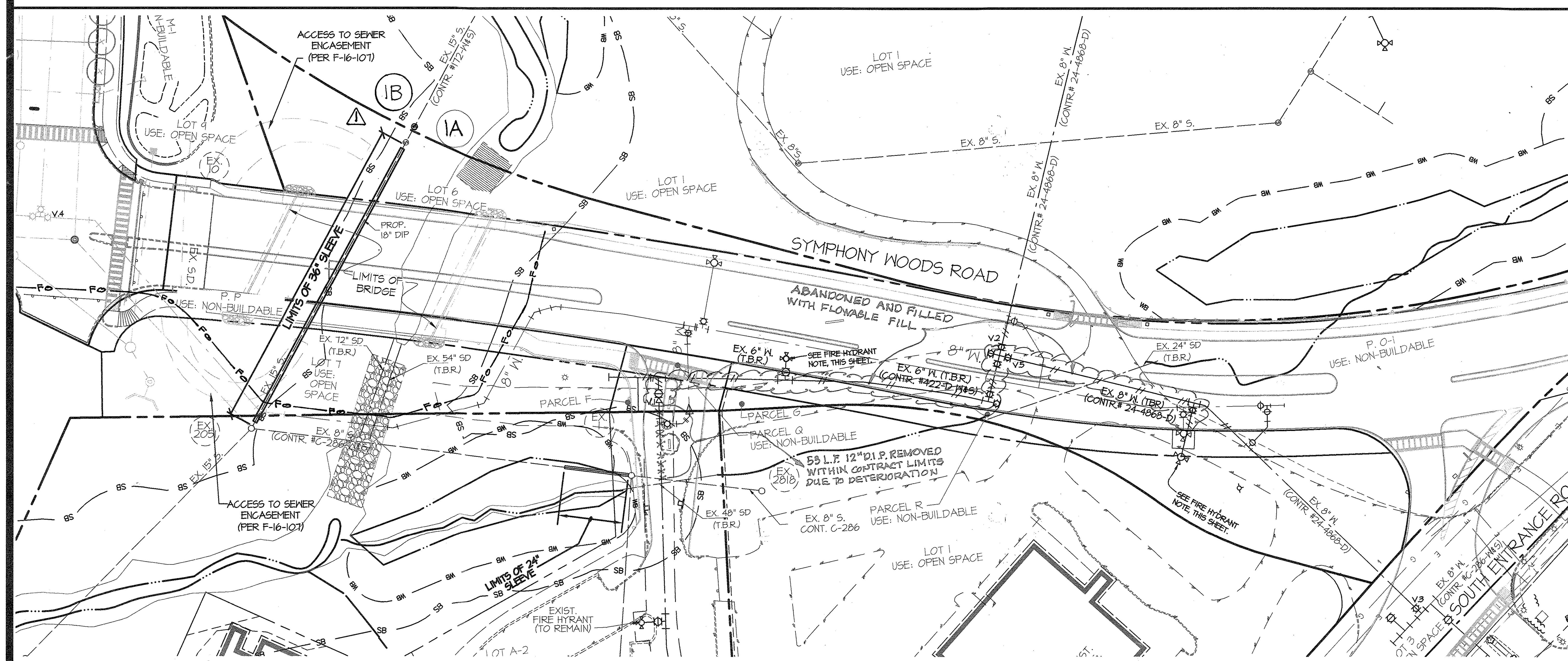
PIPE SIZE	PART NUMBER	INNER DIAM. (A) (IN)	THICKNESS (B) (IN)	FLANGE WIDTH (C) (IN)	WEIGHT (LB/FT)	MAX INSTALL TORQUE (FT-LBS)	TRENCH WIDTH (D) (IN)
8"	FMP 2410/500	24	0.5	2.313	144.6	57	48"
18"	FMP 3610/500	36	0.5	2.313	288.8	57	66"



SEWER MAIN CASING
SCALE: 1"=50 (H)
1"=5' (V)

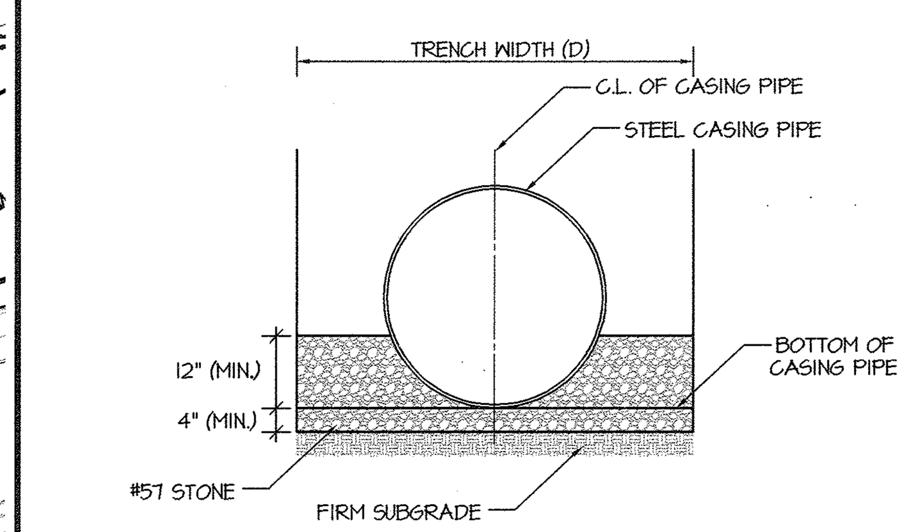


SEWER MAIN CASING
SCALE: 1"=50 (H)
1"=5' (V)

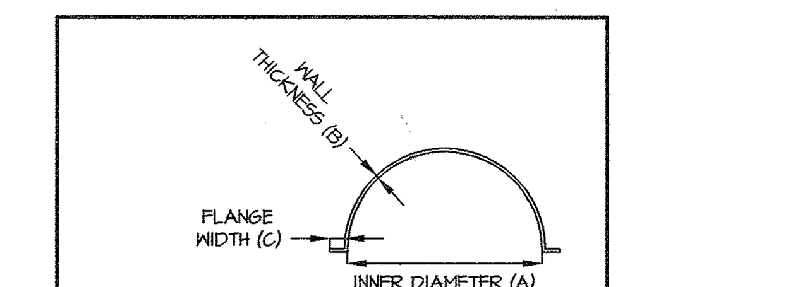


UTILITY ABANDONMENT / REMOVAL PLAN
SCALE: 1'=50'

NOTES:
1. THE STEEL CASING CAN BE GASKETED CASING OR WELDED SPLIT CASING (FMP 3610/500 BY IRONHED), OR AN APPROVED EQUAL.
2. IF A FIRM SUBGRADE CAN NOT BE ESTABLISHED, FLOWABLE FILL MAY BE NEEDED. THE CONTRACTOR IS TO CONTACT THE GEOTECHNICAL ENGINEER FOR METHOD OF ESTABLISHING A SUITABLE SUBGRADE.
3. THE CONTRACTOR MAY NOT HAVE MORE THAN TWO LENGTHS OF PIPE EXPOSED AT ANY GIVEN TIME, AND CAN ONLY EXPOSE WHAT CAN BE BACKFILLED IN A WORKING DAY.
4. THE CONTRACTOR MUST SUPPORT THE EXPOSED PIPE AT ALL TIMES.
5. A PRE AND POST CCTV OF THE EXISTING SEWER MAIN IS TO BE PERFORMED TO EVALUATE THE CONDITION OF THE MAIN PRIOR TO CONSTRUCTION AND TO ENSURE THE MAIN IS NOT DAMAGED DURING
6. ALL FINES, DAMAGES, LIABILITY, AND CLEAN UP FROM FEDERAL, STATE, OR COUNTY AGENCIES AS A RESULT OF DAMAGED PIPES DURING CONSTRUCTION WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER.



CASING NOTES AND DETAILS
NOT TO SCALE

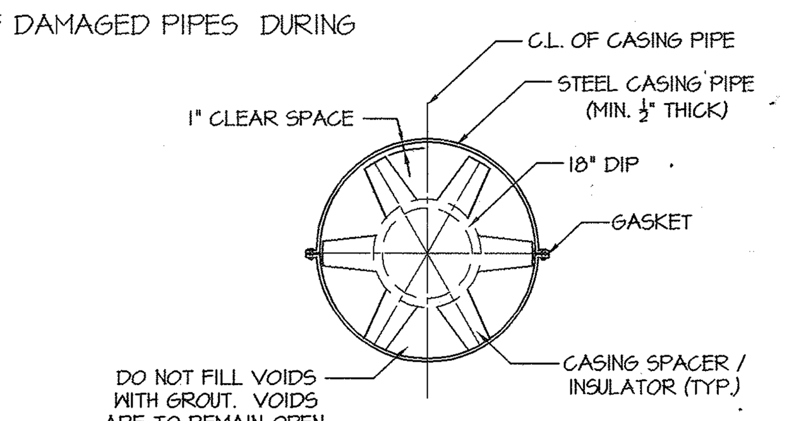


IRONHED FMP 3610/500 CASING & FMP 2410/500 CASING

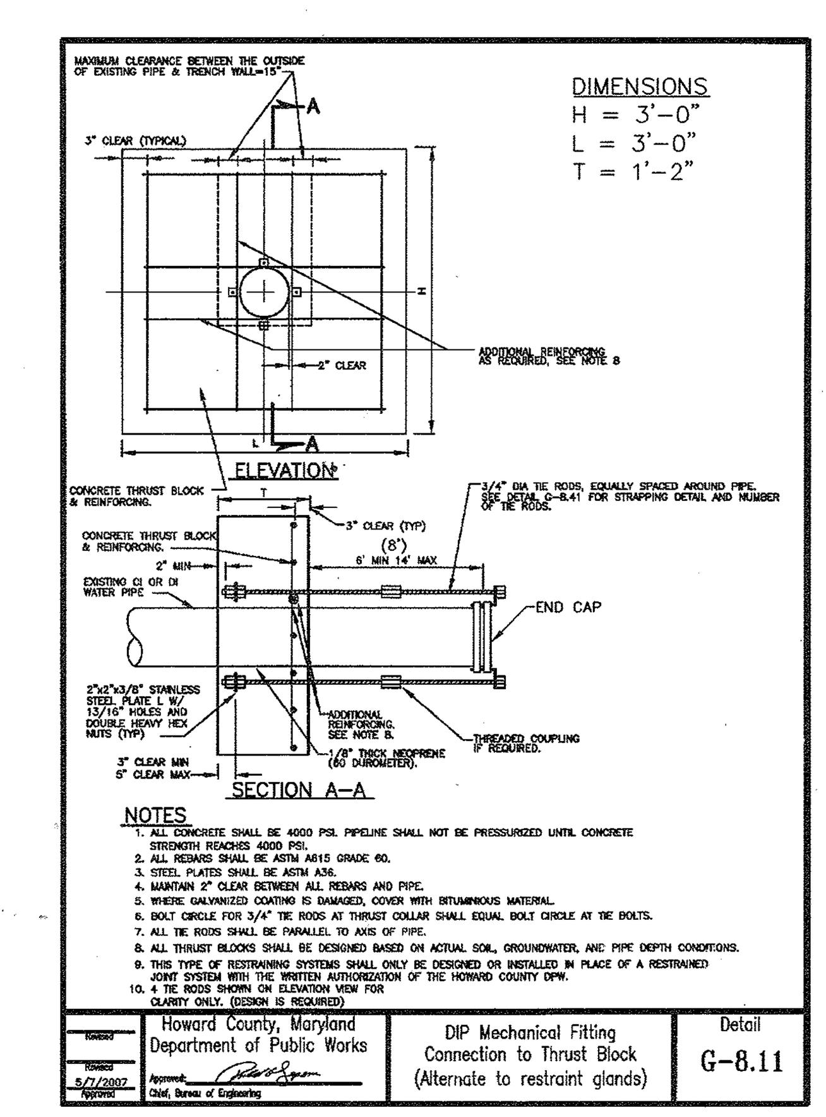
PRODUCT SPECIFICATIONS (FMP 3610/500):

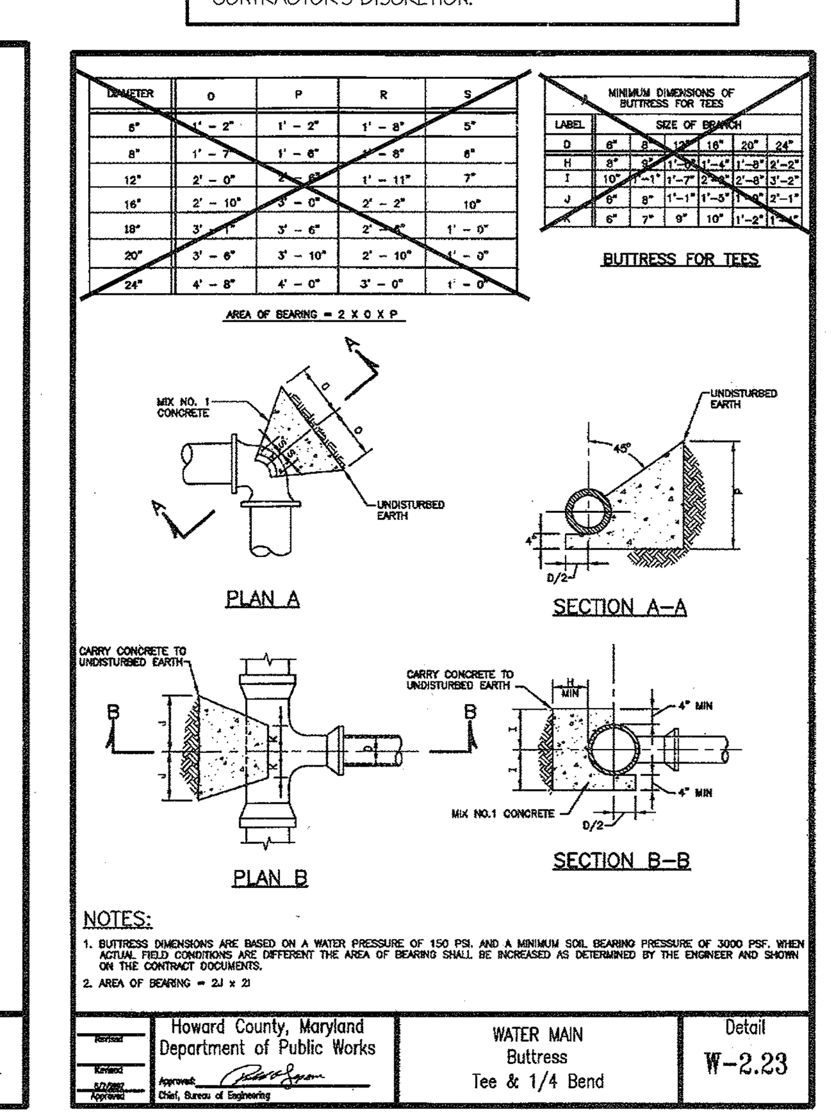
PRODUCT TO BE PRODUCED FROM ASTM A36 COMPLIANT TYPE-1 CARBON STEEL PLATE WITH MIN. 36,000 PSI YIELD STRENGTH AND 58,000-80,000 PSI TENSILE STRENGTH

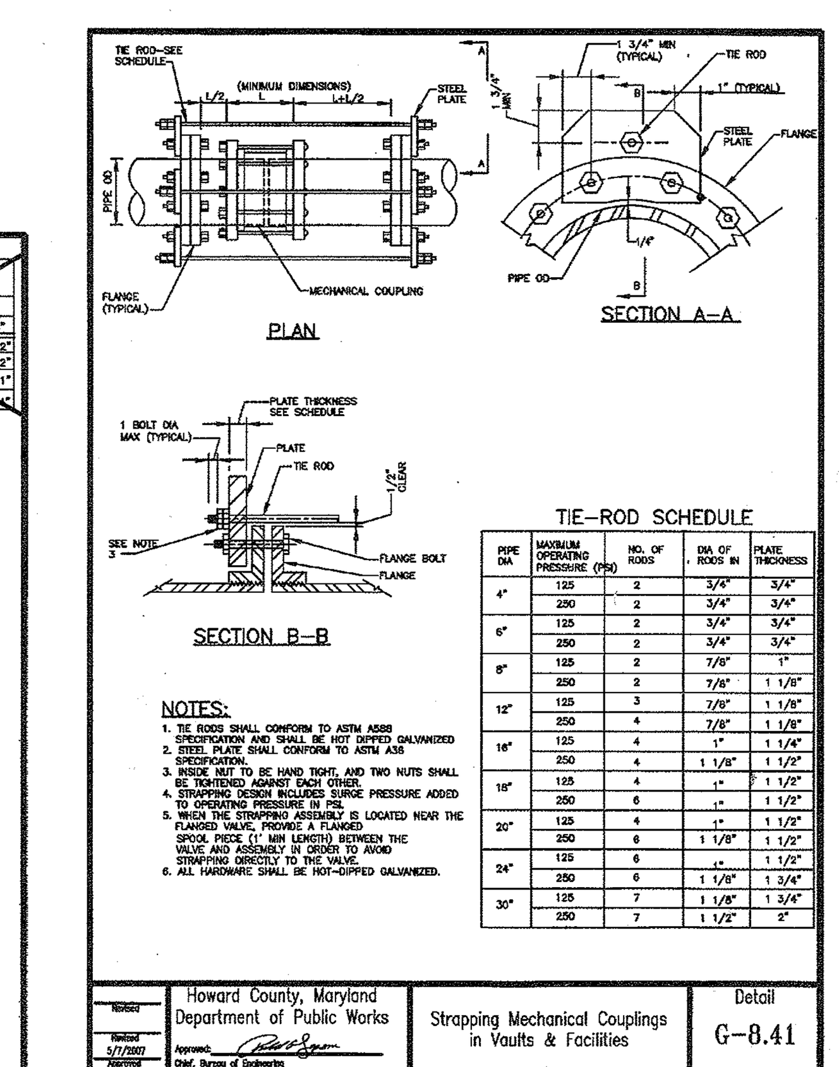
AN APPROVED EQUIVALENT PRODUCT MAY BE USED. 5 FT AND 10 FT SECTIONS ARE AVAILABLE AND EITHER MAY BE USED AT THE CONTRACTOR'S DISCRETION.



STEEL CASING
TYPICAL SECTION







WATER MAIN BLOCKING DETAILS FOR TERMINUS OF EX. WATER MAIN
SCALE: NTS

DIMENSIONS FOR DETAIL W-2.23

D = 8"
Hmin = 9"
I = 1'-3"
J = 1'-6"
Kmin = 7"

SEQUENCE OF CONSTRUCTION FOR THE IMPROVEMENTS SHOWN ON THESE PLANS.
1. ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE COUNTY INSPECTOR.
2. CONSTRUCT MH1B OVER THE EXISTING 15" SEWER.
3. INSTALL THE PUMP AROUND FROM THE NEWLY CONSTRUCTED MANHOLE TO EXISTING MH 2051.
4. Construct MH 1A and Install 18" DIP Between MH 1A and MH 1B
5. REMOVE THE EXISTING 15" SEWER AND REPLACE IT WITH THE 18" DIP AND 36" STEEL CASING SHOWN ON THESE PLANS.
6. INSTALL THE 24" STEEL CASING IN THE AREA OF THE RIP RAP OUTFALL FOR THE 66" STORM DRAIN BEING CONSTRUCTED UNDER F 16-114.

NOTE: IN THE EVENT THERE IS A SPILL, THE CONTRACTOR MUST IMPLEMENT ANY LOCAL, STATE AND FEDERAL GUIDELINES IN THE CONTAINMENT AND CLEAN UP OF THE SPILL.

7. ARRANGE FOR HOWARD COUNTY DPW TO CLOSE VALVE #4.
8. INSTALL WATERLINES 'A', 'B' AND 'C'. THE CONTRACTOR IS TO LEAVE THE NEWLY INSTALLED VALVE ASSOCIATED WITH THE TAPPING SLEEVES AT THE BEGINNING OF WATERLINES 'A' AND 'C' IN THE CLOSED POSITION AS WELL AS THE VALVE JUST BEFORE THE 8"x8" TEE AT STATION 15+88 ALONG WATERLINE 'B'.

NOTE: CONTRACTOR IS TO INSTALL A VALVE ANCHOR AT EACH OF THE TAPPING SLEEVE AND VALVES PER HOWARD COUNTY DETAIL W-5.01.

9. ARRANGE FOR HOWARD COUNTY DPW TO CLOSE VALVE #3.
10. INSTALL WATERLINE 'D'. AGAIN, INSTALL VALVE ANCHOR PER DETAIL W-5.01.
11. ARRANGE FOR HOWARD COUNTY DPW TO CLOSE VALVE #5 AND DE-WATER THE EXISTING MAIN BETWEEN VALVE #5 AND THE TAPPING SLEEVE AND VALVE CONSTRUCTED UNDER ITEM 9.
12. INSTALL END CAP AND THRUST BLOCK PER THE DETAILS SHOWN ON THESE PLANS.
13. ARRANGE FOR HOWARD COUNTY DPW TO OPEN VALVE #3 AND CLOSE VALVES #1 AND #2.
14. DE-WATER THE REMAINING PIPES AND REMOVE EXISTING 6", 8", OR 12" MAINS AS SHOWN.
15. INSTALL END CAPS AND THRUST BLOCK IN THE AREAS WHERE EXISTING WATERLINES ARE BEING TERMINATED PER THE DETAILS SHOWN ON SHEET 3.
16. ARRANGE FOR HOWARD COUNTY DPW TO OPEN VALVE #4.

FIRE HYDRANT NOTE :
CONTRACTOR TO REMOVE EX. F.H. VALVE & TEE AND RETURN TO BUREAU OF UTILITIES

AS-BUILT
Date 4/26/19

PREPARED FOR:
THE HOWARD HUGHES CORP.
10480 LITTLE PATUXENT PARKWAY
SUITE 400
COLUMBIA, MARYLAND 21044
ATTN: BILL ROWE
410-964-4987

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
2-7-19
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
2-28-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CADD\DRAWINGS\11071\PLANS BY GLW\W&S FINAL\PHASE-2A & 2B\PHASE 2B\11071-WS3-CASING.dwg | DES. JH | DRN. JH | CHK. DEV

DATE: JAN., 2018
G.L.W. No. 11071

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXP. DATE: MAY 26, 2018
1/25/18

BY	NO	REVISION	DATE
GT	1	Added Sewer MH 1B and rev. Sequencing (As-Built info.)	11-21-19

SEWER ENCASEMENT PLAN & PROFILE

600' SCALE MAP NO. 36 & 39 BLOCK NO. 01

DOWNTOWN COLUMBIA
CRESCENT NEIGHBORHOOD - PHASE 2B
CONTRACT No. 24-5008-D
SYMPHONY WOODS ROAD

HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 5

SCALE: AS SHOWN

SHEET 3 OF 3