

SHEET INDEX

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3	PROFILES OF WATER AND SEWER EXTENSIONS

WATER AND SEWER EXTENSION

EMERSON

SECTION ONE AREA TWO

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 34-3971-D

BENCHMARKS

TRAVERSE POINT 102
ELEVATION 346.19
N 536,499.165
E 1,353,974.017
LOCATED NEAR THE
INTERSECTION OF GORMAN
ROAD AND SKYLARK BLVD.

TRAVERSE POINT 1154
ELEVATION 347.45
N 536,018.069
E 1,355,129.333
LOCATED NEAR THE
I-95 BRIDGE ALONG
GORMAN ROAD

HOWARD COUNTY
CONTROL STATION 47E4
ELEVATION 339.00
N 535,846.16
E 1,355,431.23
LOCATED NEAR THE
I-95 BRIDGE ALONG
GORMAN ROAD

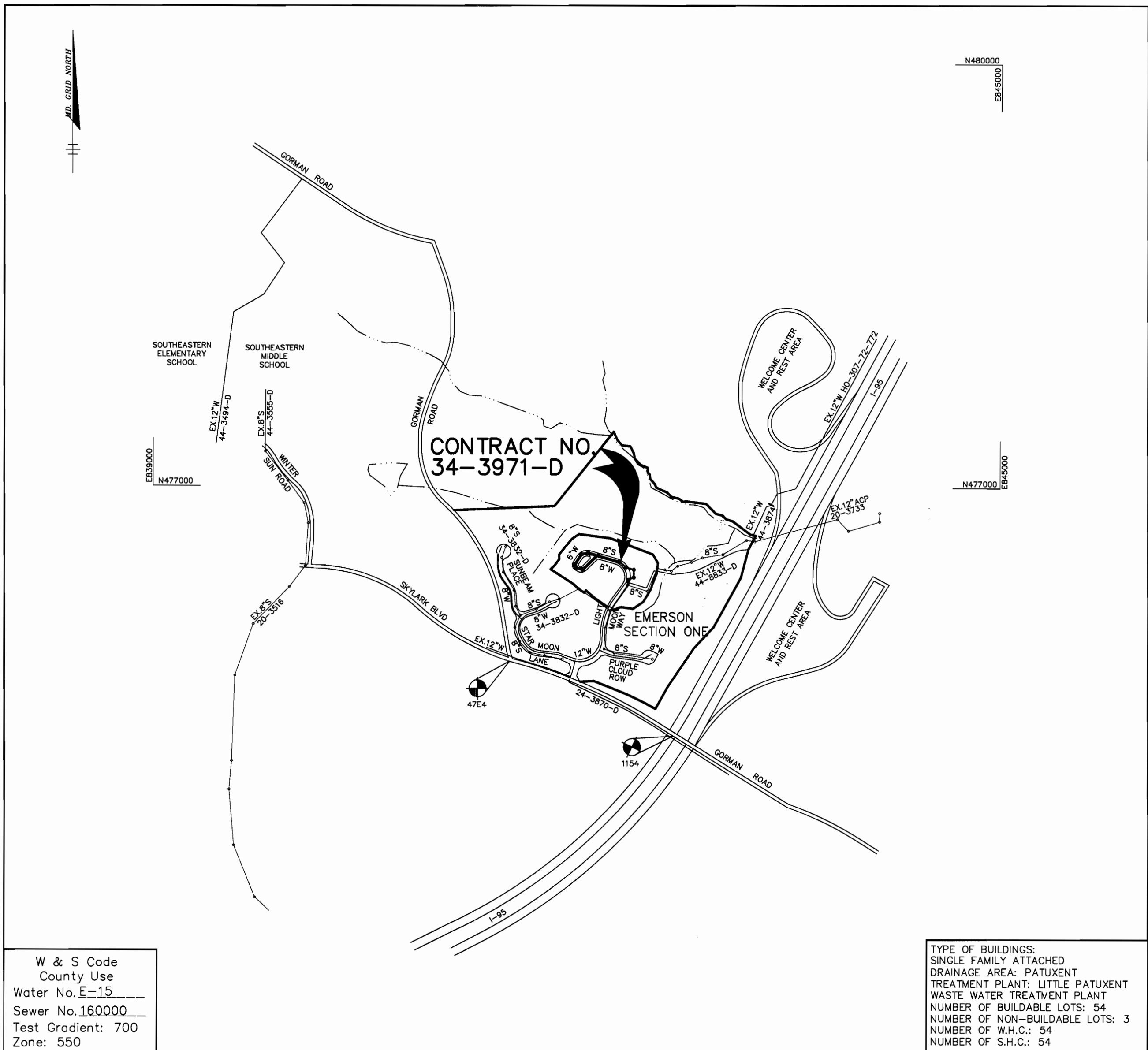
GENERAL NOTES

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on U.S.C.S. data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. 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 bracing of additional poles or damages shall be deducted from money 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 Detail for Construction, (Latest Edition). The contractor shall have a copy of Volume IV on the job.
- Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. 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.
- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:

State Highway Administration	410-531-5533
BCE Contractor Services	410-850-4620
BCE Underground Damage Control	410-291-4607
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	410-549-4120
Bureau of Utilities, Howard County Department of Public Works	410-313-4900
Bell Atlantic	1-800-446-5266
- Trees and shrubs are to be protected from damage to 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 line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3'-1/2' 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 Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- All sewer mains shall be D.I.P. and P.V.C. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight manhole 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.
- Manholes can be either brick or precast concrete structures.
- Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- The fire hydrant shall be installed as per standard detail W.1.11.
- Fire hydrants will be located 3' FROM BACK OF CURB unless otherwise noted.
- For sprinkler systems, all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.
- The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-7450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads 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.
- Howard County DPW is hereby granted permission to access private lots shown on these plans in order to maintain public water and sewer house connections at the curb stops and/or cleanouts.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	367 LF			
6" WATER	349 LF			
1" WHC	173 LF			
1 1/2" WHC	702 LF			
8" VALVES	1 EA			
6" VALVES	1 EA			
FIRE HYDRANTS	2 EA			
8" SEWER	787 LF			
MANHOLES	11 EA			
4" SHC	943 LF			



VICINITY MAP
SCALE : 1"=600'

W & S Code
County Use
Water No. E-15
Sewer No. 160000
Test Gradient: 700
Zone: 550

TYPE OF BUILDINGS:
SINGLE FAMILY ATTACHED
DRAINAGE AREA: PATUXENT
TREATMENT PLANT: LITTLE PATUXENT
WASTE WATER TREATMENT PLANT
NUMBER OF BUILDABLE LOTS: 54
NUMBER OF NON-BUILDABLE LOTS: 3
NUMBER OF W.H.C.: 54
NUMBER OF S.H.C.: 54

NAME OF UTILITY CONTRACTOR :

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications F-02-15.

CHECKBOX
AS-BUILT DATE
SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.

Jan Nye / 65 10/15/01
NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

John A. ... 10/15/01
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert M. ...</i> 10-8-01 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Christopher J. Reid</i> 10/15/01 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
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Patton Harris Rust & Associates, pc ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS 8818 Centre Park Drive, Columbia, MD 21045 • tel 410.997.8800 fax 410.997.9282 01058/WS1.DWG Christopher J. Reid #19949
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DES: C.J.R.				
DRN: DAM				
CHK: C.J.R.				
DATE: 10/3/01	BY NO.	REVISION	DATE	

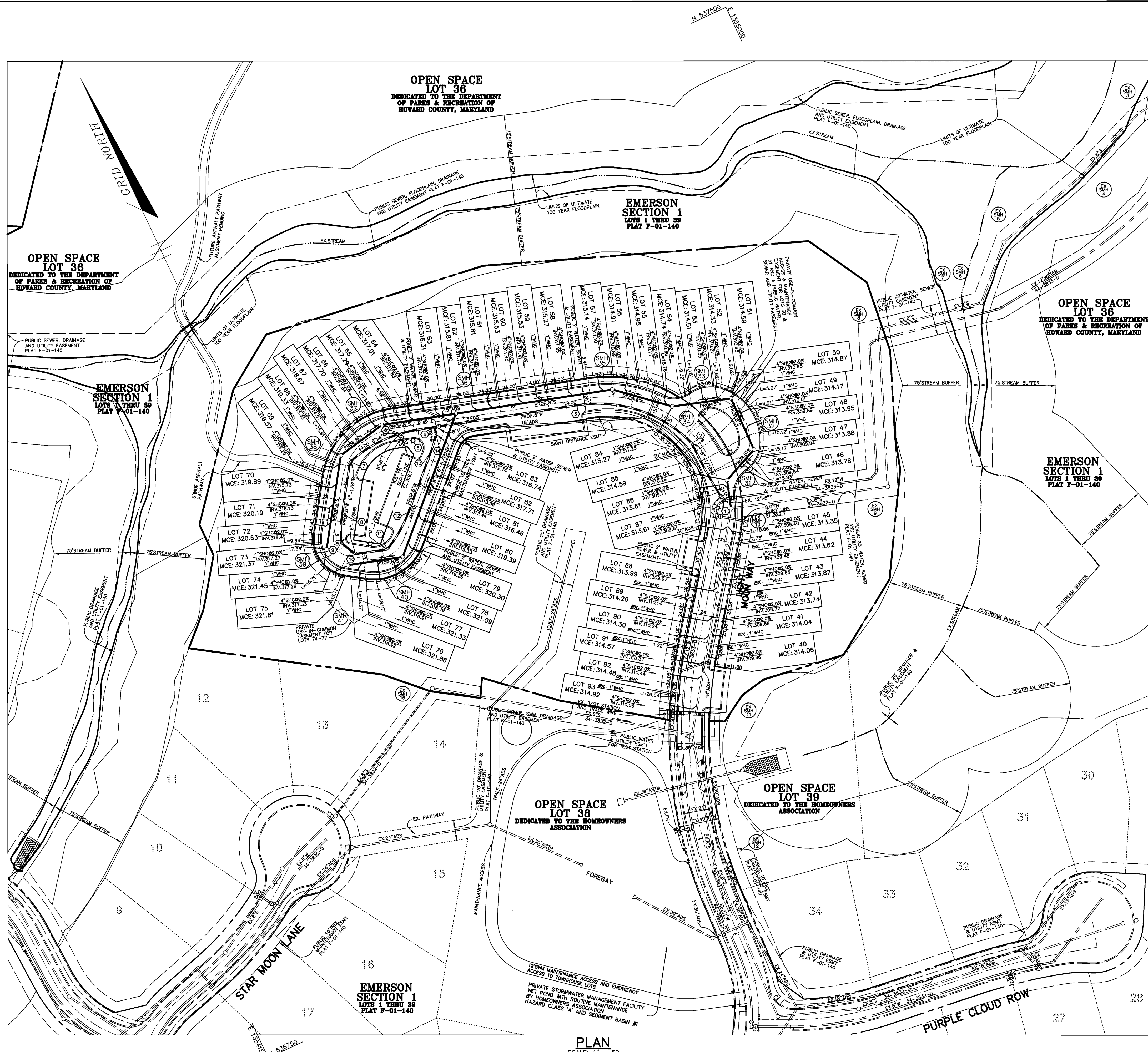
TITLE SHEET

600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA TWO
LOTS 40-96
A RESUBDIVISION OF PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3971-D

SCALE AS SHOWN
SHEET 1 OF 3

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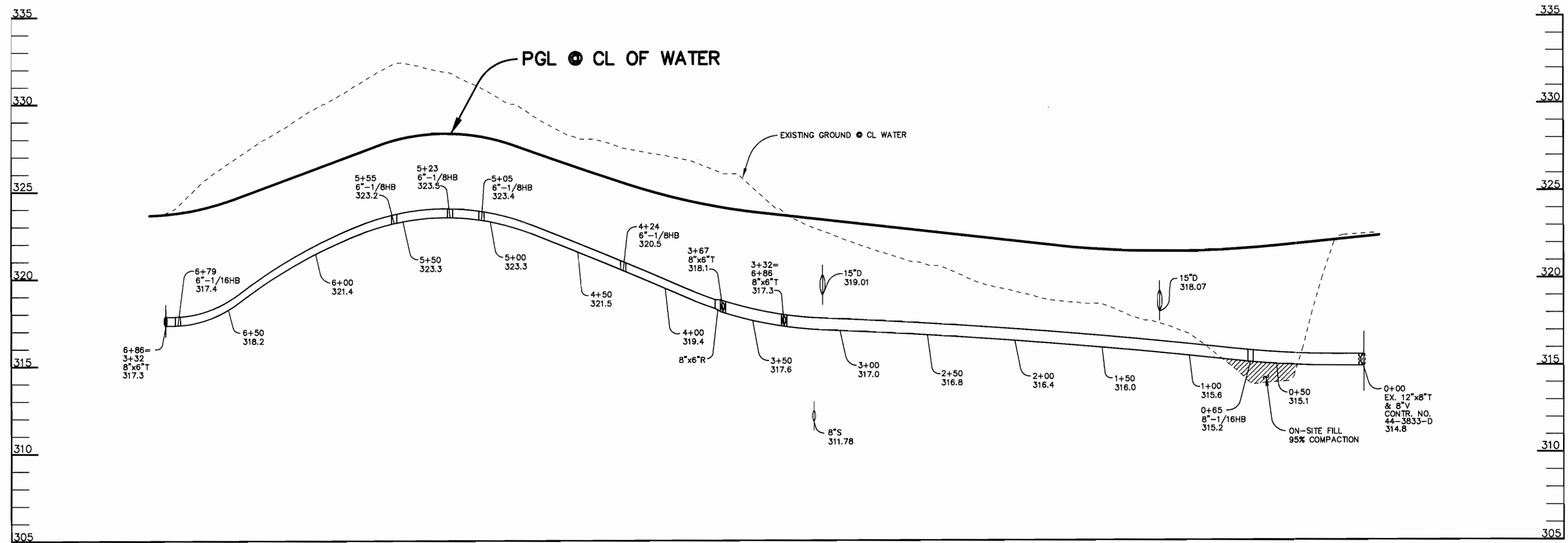
WATERLINE DATA				
No.	STATION	DESCRIPTION	NORTHING	EASTING
1	0+00 PC	EX. 12"x8" T	537058.73	1354791.48
2	0+65 PRC	8"-1/16HB	537123.67	1354787.03
3	1+88.60 PT	-	537205.48	1354700.79
4	3+32	8"x6" T	537245.59	1354563.40
5	3+48.64 PC	-	537250.33	1354547.16
6	3+67	8"x6" T	537254.14	1354529.80
7	4+24 PT	6"-1/8HB	537249.89	1354472.79
8	4+76.01 PC	-	537206.64	1354444.02
9	5+05 PT	6"-1/8HB	537181.33	1354430.92
10	5+23	6"-1/8HB	537165.22	1354438.55
11	5+55 PC	6"-1/8HB	537155.73	1354469.28
12	5+97.46 PT	-	537180.34	1354504.21
13	6+61 PC	-	537224.97	1354549.43
14	6+79 PT	6"-1/16HB	537238.44	1354561.31

WATERLINE CURVE DATA	
No.	CRIMP RADIUS
1-2	500'
2-3	130'
5-7	130'
8-9	130'
11-12	130'
13-14	130'

NOTE:
 1" WHCG ARE CONSTRUCTED UNDER
 CONT. 44-3888-D FOR LOTS 40-45
 AND LOTS 88-93.

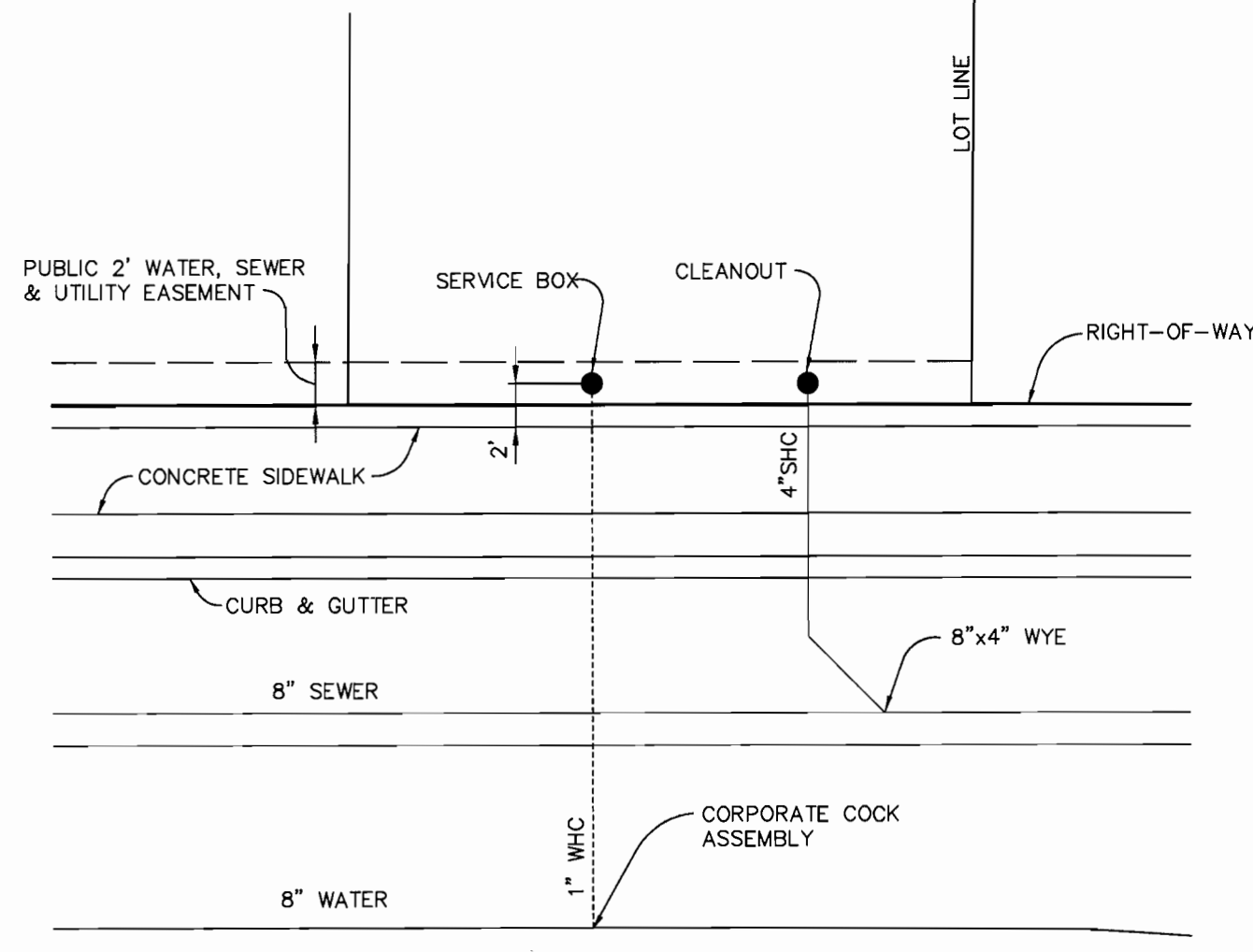
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert M. Berman</i> CHIEF, BUREAU OF UTILITIES DATE 10-8-01	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Christopher J. Reid</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/10/01	Patton Harris Rust & Associates, pc ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS 8818 Centre Park Drive, Columbia, MD 21046 • Tel: 410.997.9800 Fax: 410.997.9282 <i>Christopher J. Reid</i> CHRISTOPHER J. REID #19949	DES: C.J.R. DRN: DAM CHK: C.J.R. DATE: 10/3/01	PLAN OF WATER AND SEWER EXTENSIONS 600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9	WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA TWO LOTS 40-96 A RESUBDIVISION OF PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3971-D SCALE AS SHOWN SHEET 2 OF 3
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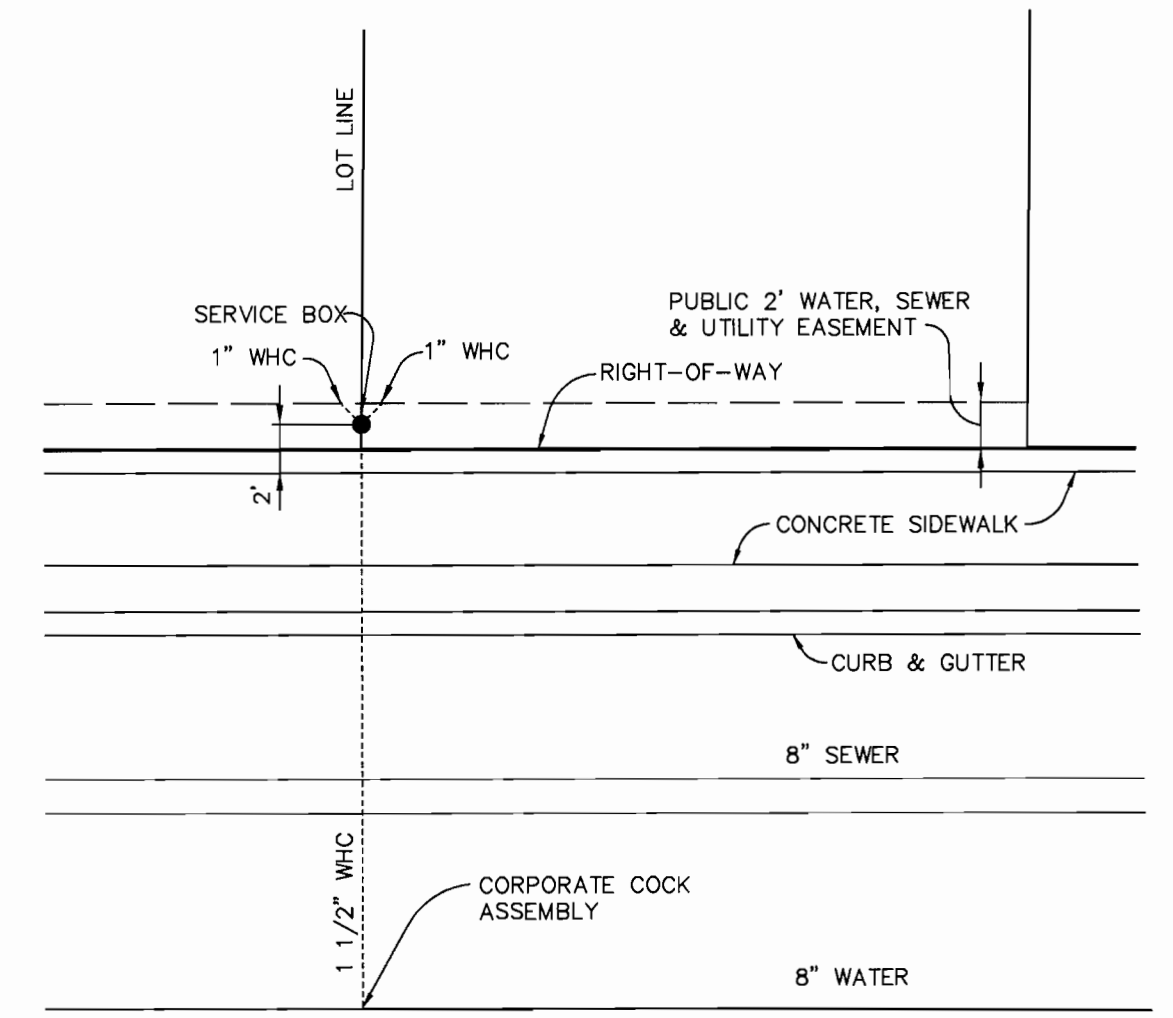


WATER PROFILE
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'

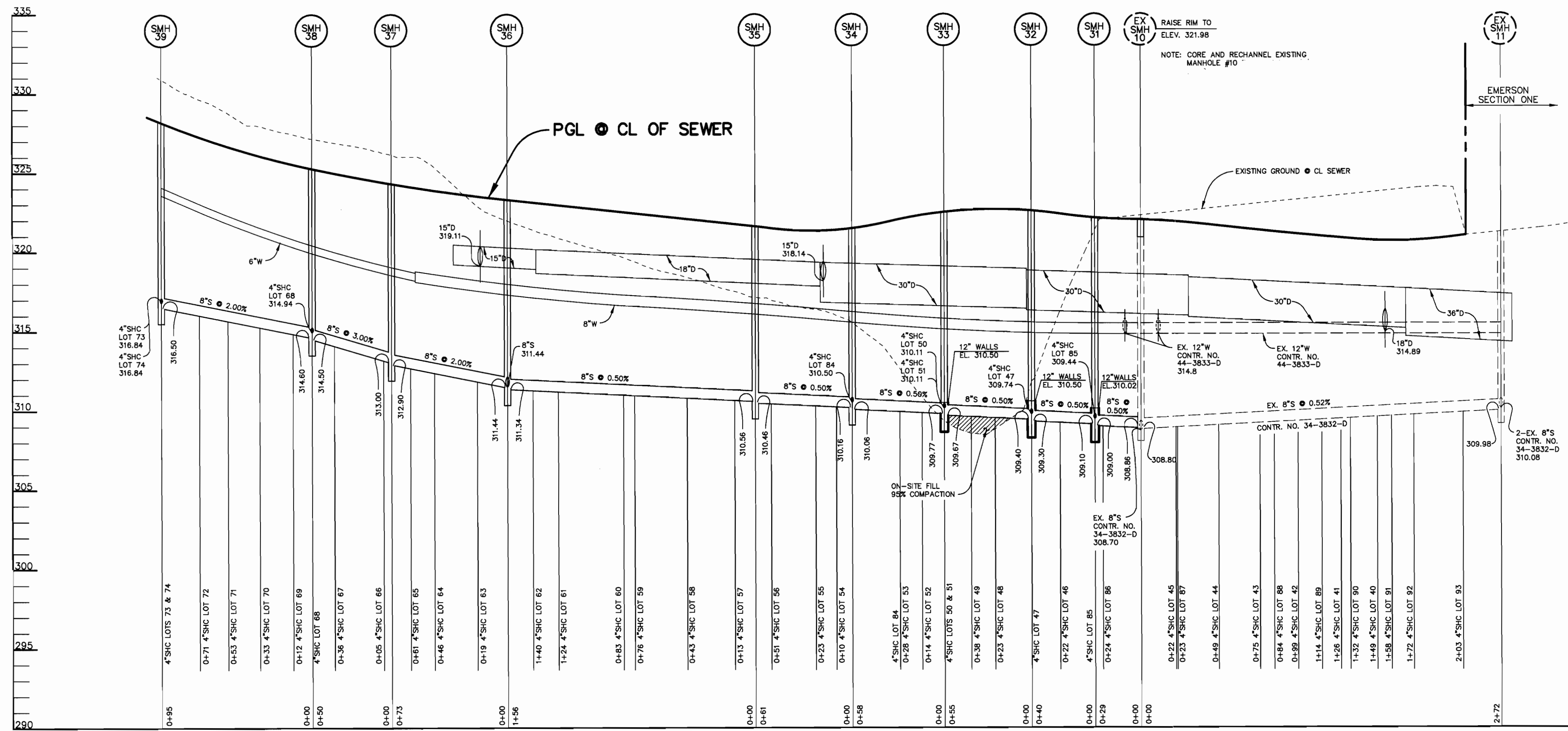
STRUCTURE SCHEDULE				
STRUCTURE	TYPE	LOCATION	TOP	REMARKS
SMH 31	4'-0" DIA. MANHOLE	N 537076 E 1354803	322.02 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 32	4'-0" DIA. MANHOLE	N 537092 E 1354840	322.50 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 33	4'-0" DIA. MANHOLE	N 537148 E 1354841	322.50 SLOPE 1.6%	HOCO STD. DETAIL G 5.12
SMH 34	4'-0" DIA. MANHOLE	N 537165 E 1354785	321.50 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 35	4'-0" DIA. MANHOLE	N 537205 E 1354738	321.67 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 36	4'-0" DIA. MANHOLE	N 537249 E 1354588	323.27 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 37	4'-0" DIA. MANHOLE	N 537270 E 1354517	324.26 SLOPE 2.0%	HOCO STD. DETAIL G 5.12
SMH 38	4'-0" DIA. MANHOLE	N 537280 E 1354467	325.36 SLOPE 3.5%	HOCO STD. DETAIL G 5.12
SMH 39	4'-0" DIA. MANHOLE	N 537181 E 1354415	328.20 SLOPE 1.1%	HOCO STD. DETAIL G 5.12
SMH 40	4'-0" DIA. MANHOLE	N 537143 E 1354480	327.65 SLOPE 3.5%	HOCO STD. DETAIL G 5.12
SMH 41	4'-0" DIA. MANHOLE	N 537158 E 1354428	328.34 SLOPE 0.0%	HOCO STD. DETAIL G 5.12



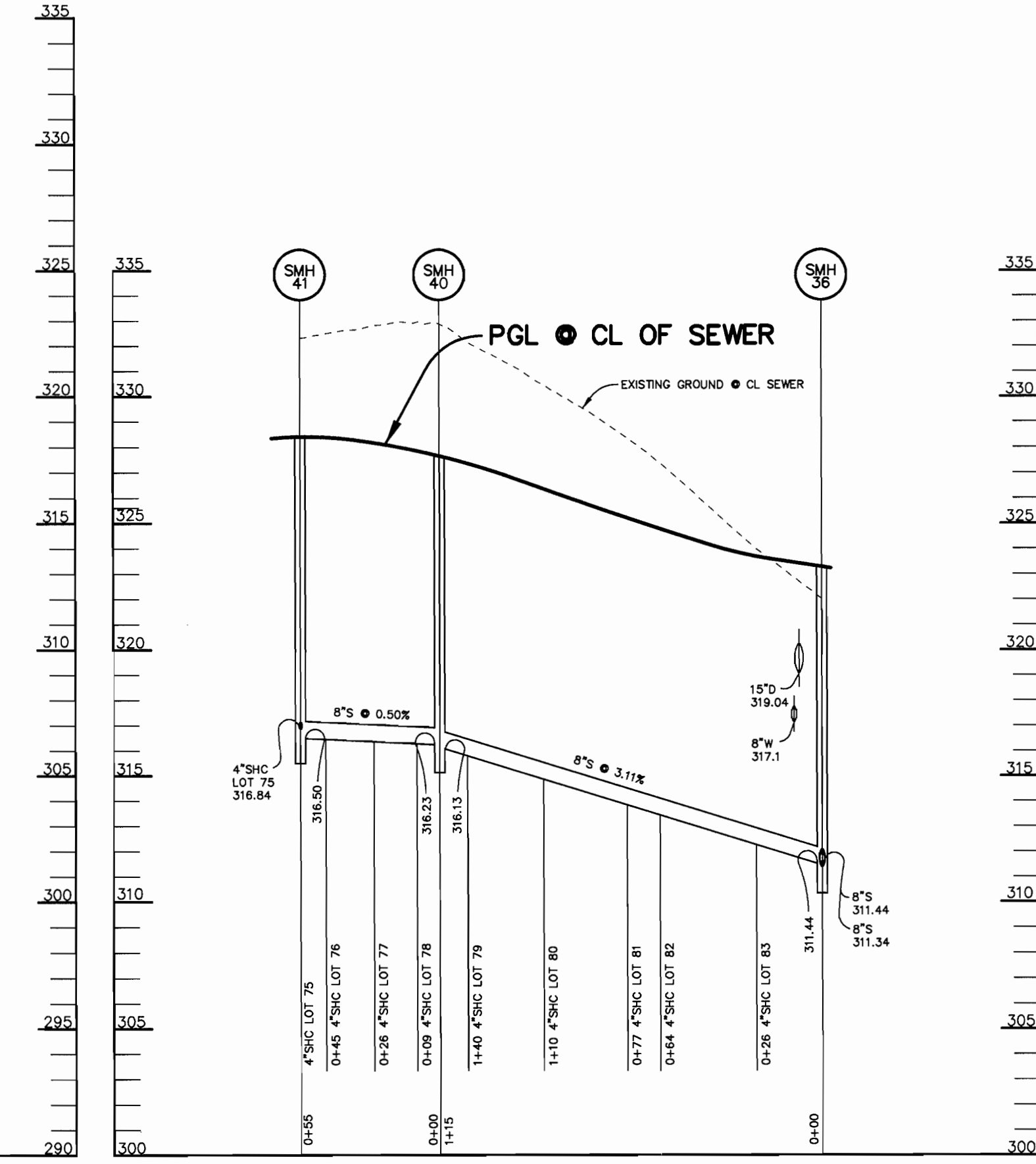
TYPICAL SINGLE WHC AND SHC SERVICE
NO SCALE



TYPICAL TWIN WHC SERVICE
NO SCALE



SEWER PROFILE
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'



SEWER PROFILE
SCALE:
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P:\project\101058\WS3.dwg Wed Oct 03 11:01:49 2001 Riemer Muegge, a division of PH&G

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Robert Muegge 10-8-01
CHIEF, BUREAU OF UTILITIES

DATE

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ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
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01058/WS3.DWG

Christopher J. Reid #19949

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DRN:	DAM
CHK:	C.J.R.
DATE:	10/3/01
BY:	NO.
REVISION:	DATE

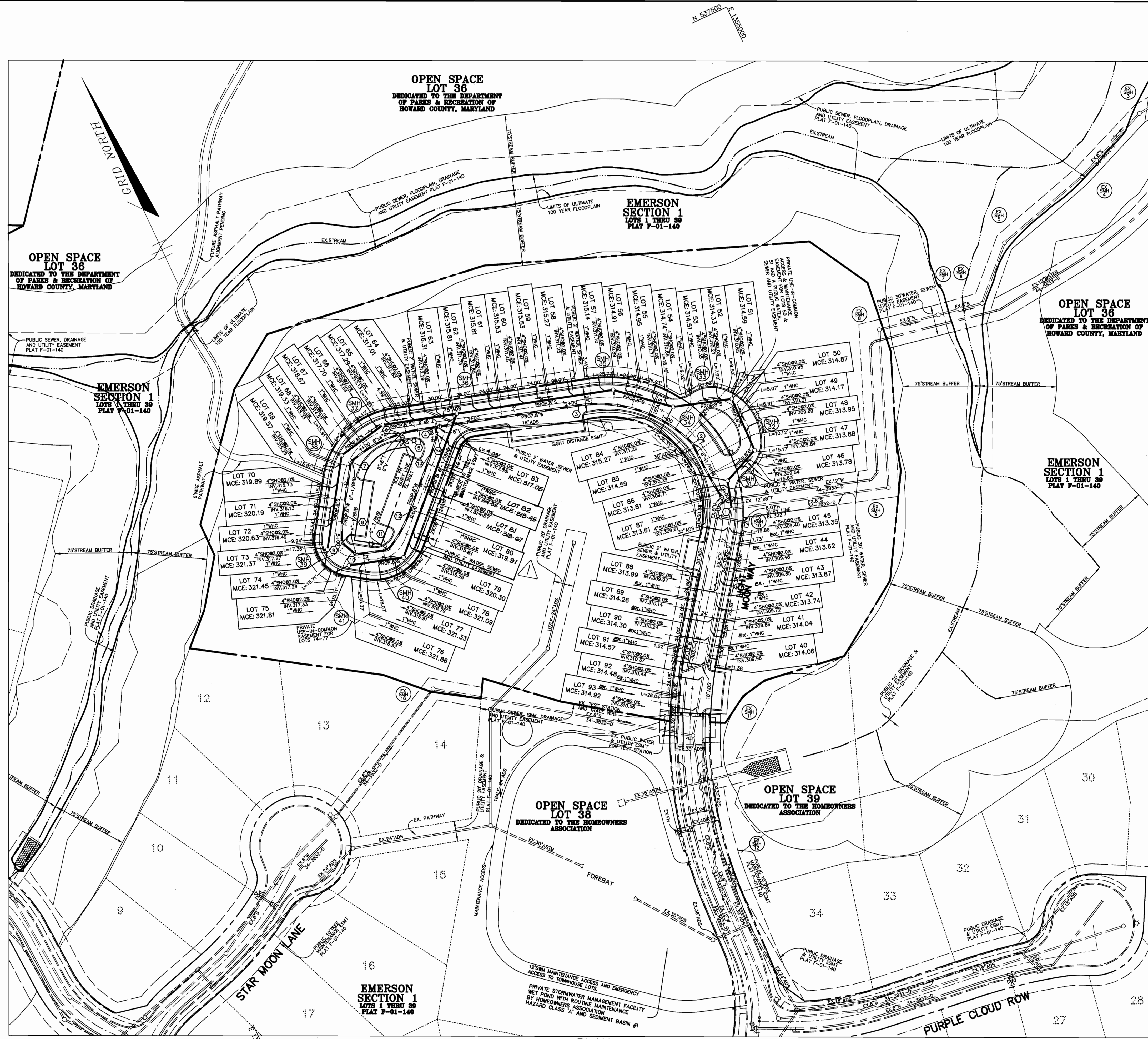
PROFILES OF WATER AND SEWER EXTENSIONS

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HOWARD COUNTY, MARYLAND
CONTRACT 34-3971-D

SCALE AS SHOWN

SHEET 3 OF 3





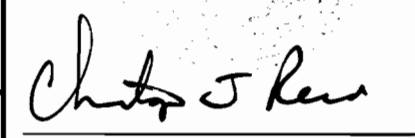
WATERLINE DATA				
No.	STATION	DESCRIPTION	NORTHING	EASTING
1	0+00 PC	EX. 12" x 8" T	537058.73	1354791.48
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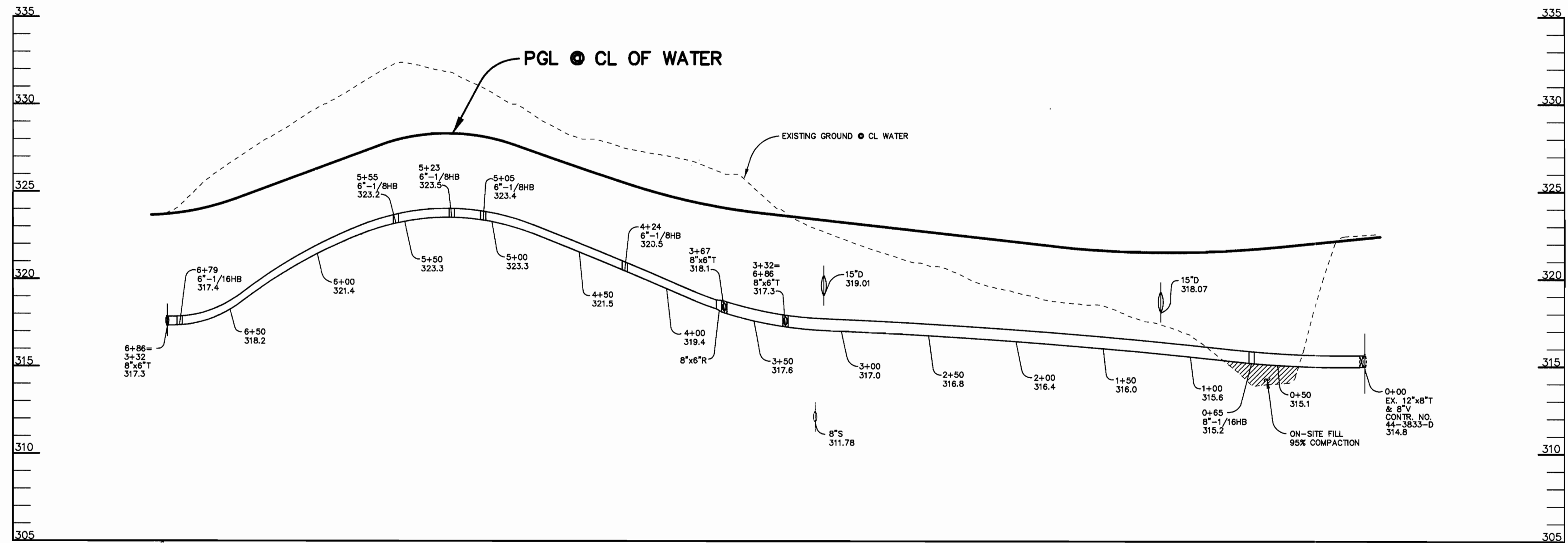
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PLAN
 SCALE: 1" = 50'

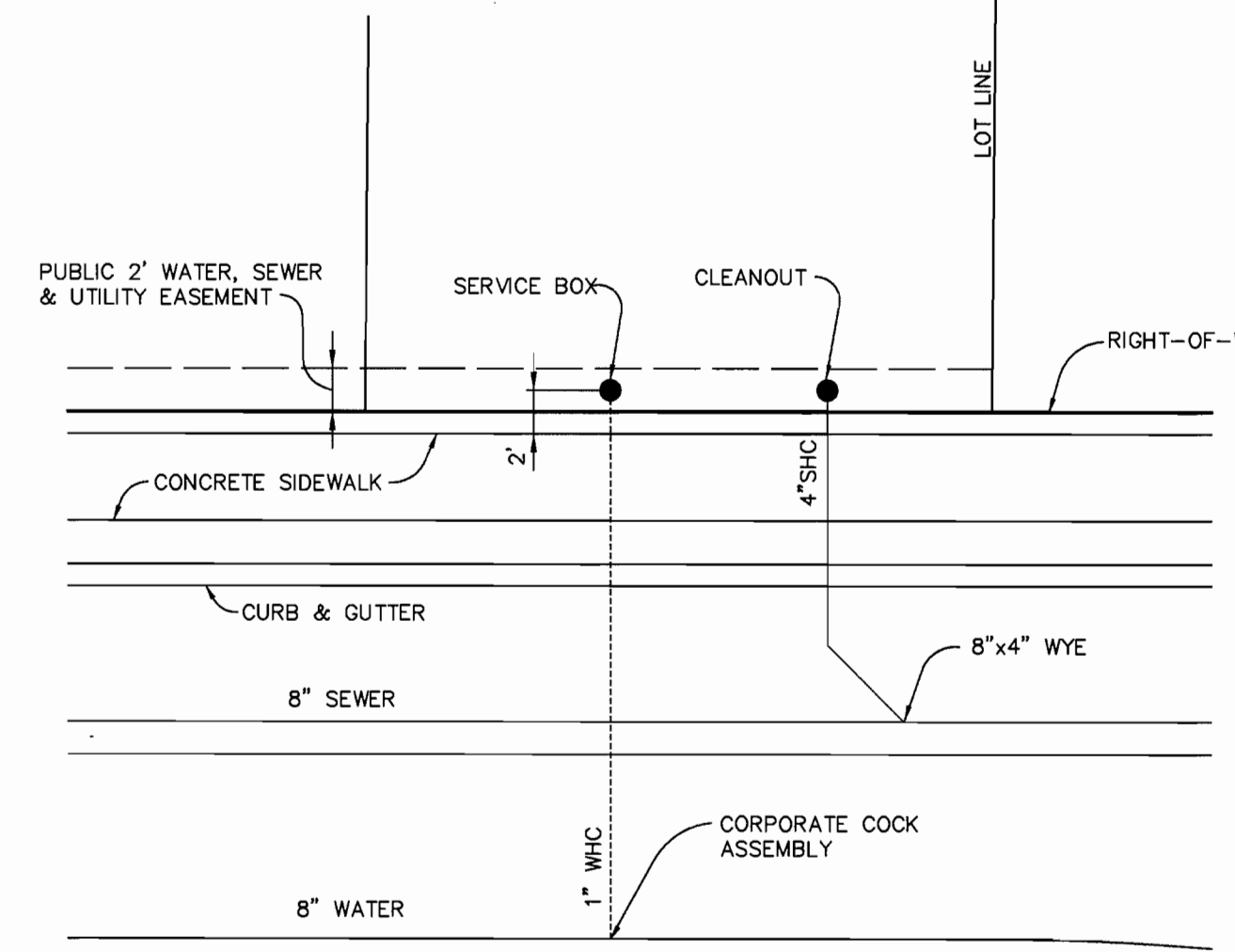
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND  CHIEF, DEVELOPMENT ENGINEERING DIVISION	Patton Harris Rust & Associates, pc ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS 8818 Centre Park Drive, Columbia, MD 21045 • Tel 410.987.8800 Fax 410.987.9292  CHRISTOPHER J. REID #19949	DES: C.J.R. DRN: DAM CHK: C.J.R. DATE: 10/3/01	BY: C.J.R. NO. 1 REVISION: REVISED LOTS 80-83 DATE: 01-25-02	PLAN OF WATER AND SEWER EXTENSIONS 600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9	WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA TWO LOTS 40-96 A RESUBDIVISION OF PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3971-D SCALE AS SHOWN SHEET 2 OF 3
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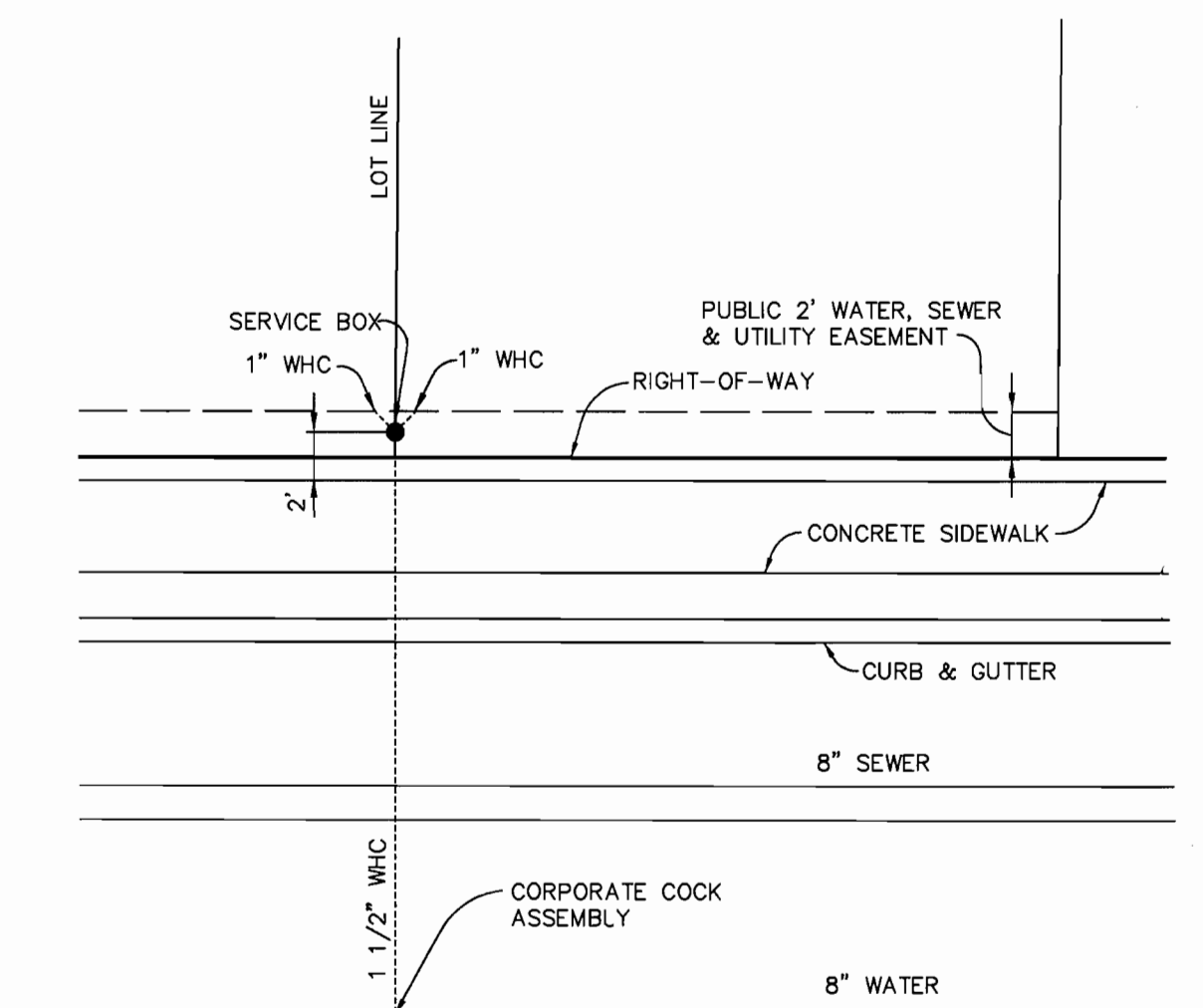


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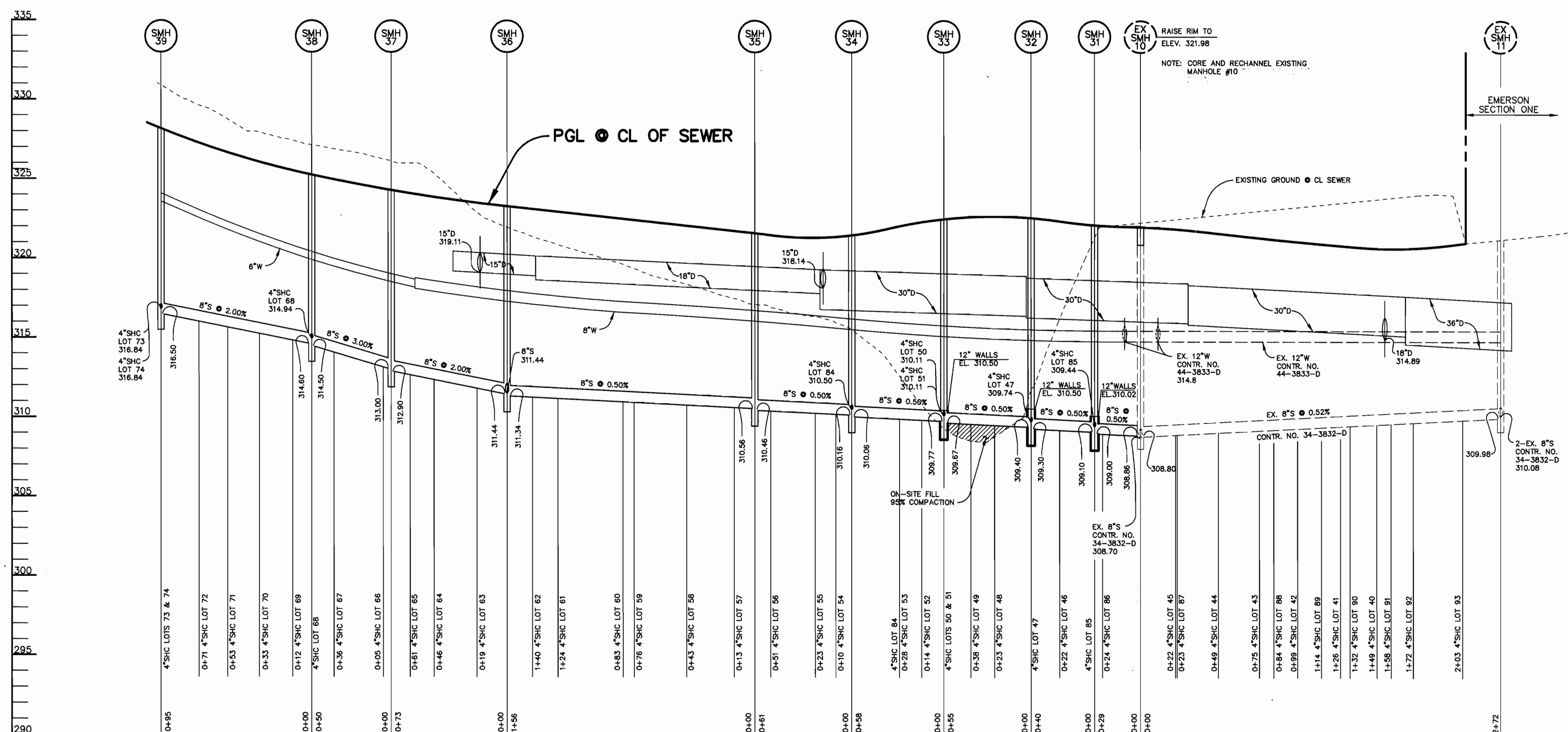
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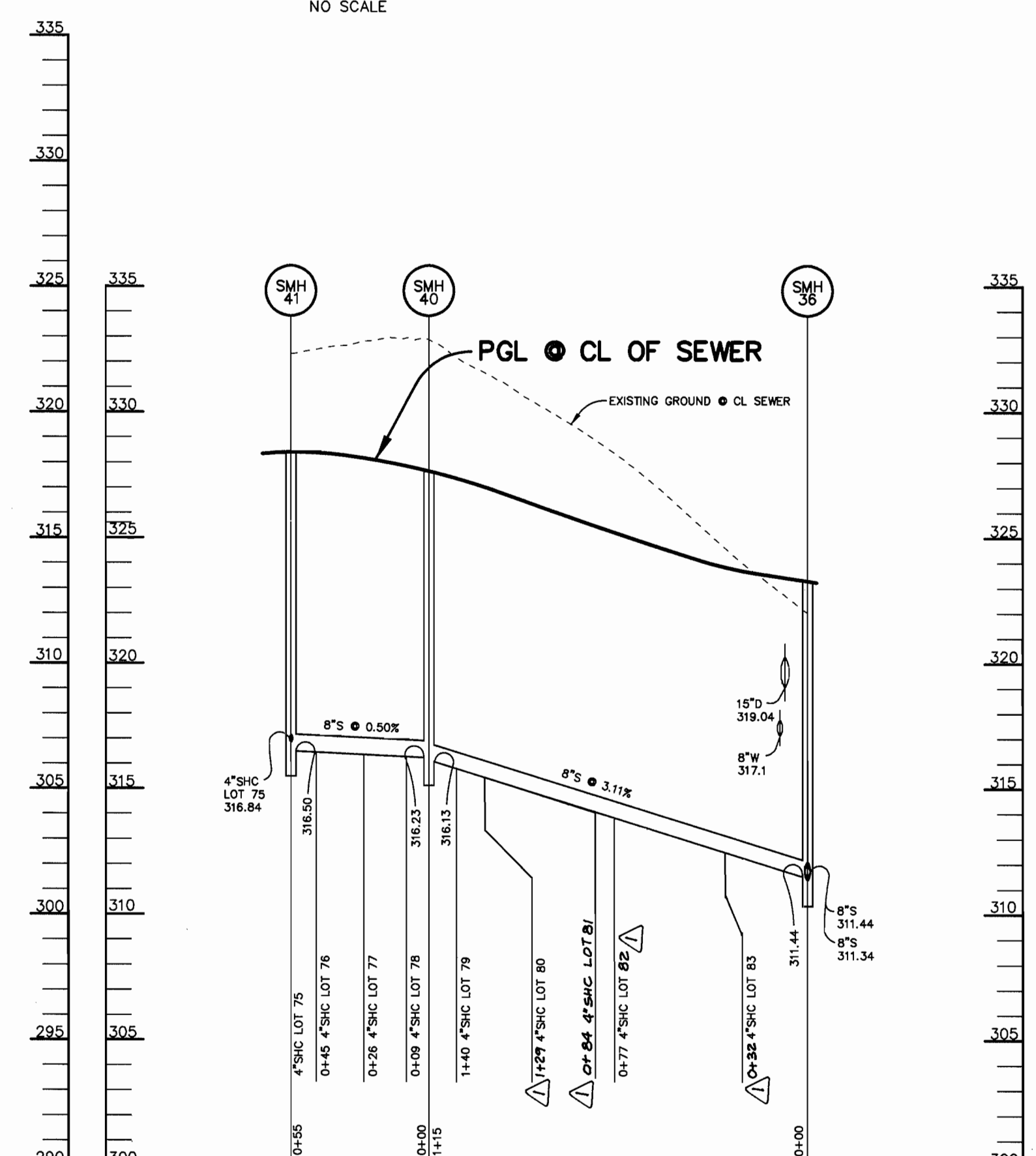
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TYPICAL TWIN WHC SERVICE
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3 OF 3