

SHEET INDEX	
1	TITLE SHEET
2	PLAN OF WATER AND SEWER EXTENSIONS
3	PLAN OF WATER AND SEWER EXTENSIONS
4	PLAN OF WATER AND SEWER EXTENSIONS
5	PROFILES OF WATER AND SEWER EXTENSIONS
6	PROFILES OF WATER AND SEWER EXTENSIONS
7	PROFILES OF WATER AND SEWER EXTENSIONS

WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA ONE 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-3832-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

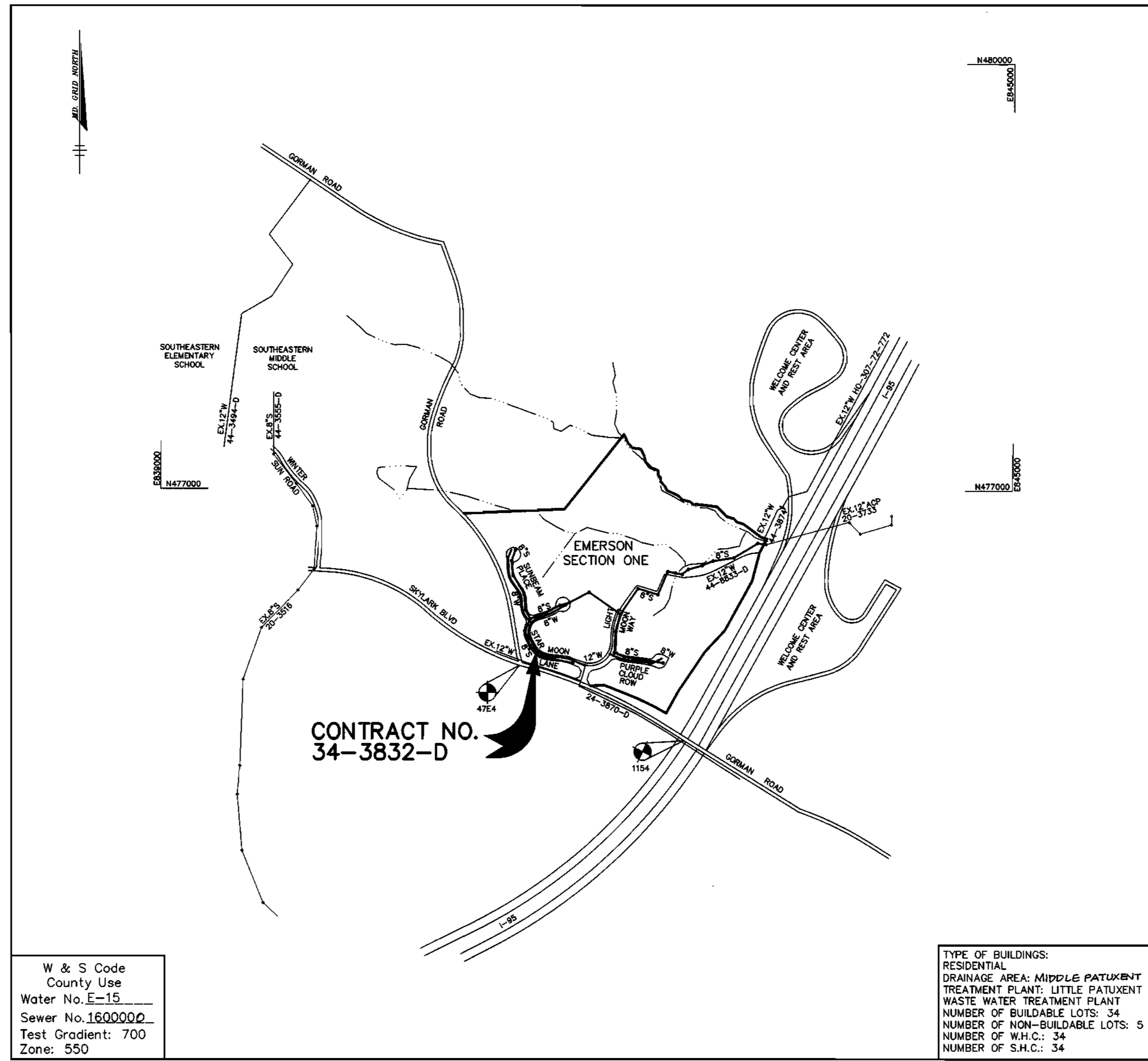
GENERAL NOTES

- 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.G.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
BGE Contractor Services	410-850-4620
BGE Underground Damage Control	410-291-4807
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 C5.52. 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.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	1145 LF			
6" WATER	708 LF			
1" WHC	1000 LF			
8" VALVES	3 EA			
6" VALVES	3 EA			
FIRE HYDRANTS	3 EA			
8" SEWER	2258 LF			
8" DIP CL 52	1494 LF			
MANHOLES	35 EA			
4" SHC	951 LF			
DROP MANHOLES TYPE B	5 EA			



CONTRACT NO.
34-3832-D

VICINITY MAP
SCALE: 1"=600'

W & S Code
County Use
Water No. E-15
Sewer No. 1600000
Test Gradient: 700
Zone: 550

TYPE OF BUILDINGS:
RESIDENTIAL
DRAINAGE AREA: MIDDLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT
WASTE WATER TREATMENT PLANT
NUMBER OF BUILDABLE LOTS: 34
NUMBER OF NON-BUILDABLE LOTS: 5
NUMBER OF W.H.C.: 34
NUMBER OF S.H.C.: 34

NAME OF UTILITY CONTRACTOR:

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications F-01-140.

Review for Howard Soil Conservation District and meets technical requirements.

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

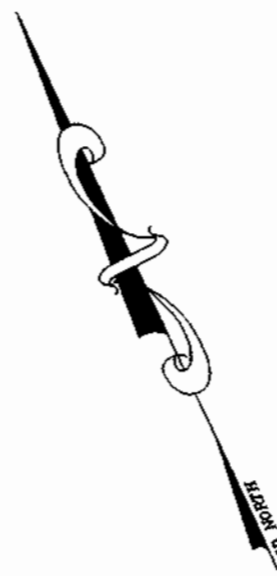
Jim Meyer 6/22/01
NATURAL RESOURCES CONSERVATION SERVICE DATE

John L. Roberts 6/22/01
HOWARD SOIL CONSERVATION DISTRICT DATE

CHECKBOX
AS-BUILT DATE
SURVEY AND DRAFTING DIVISION

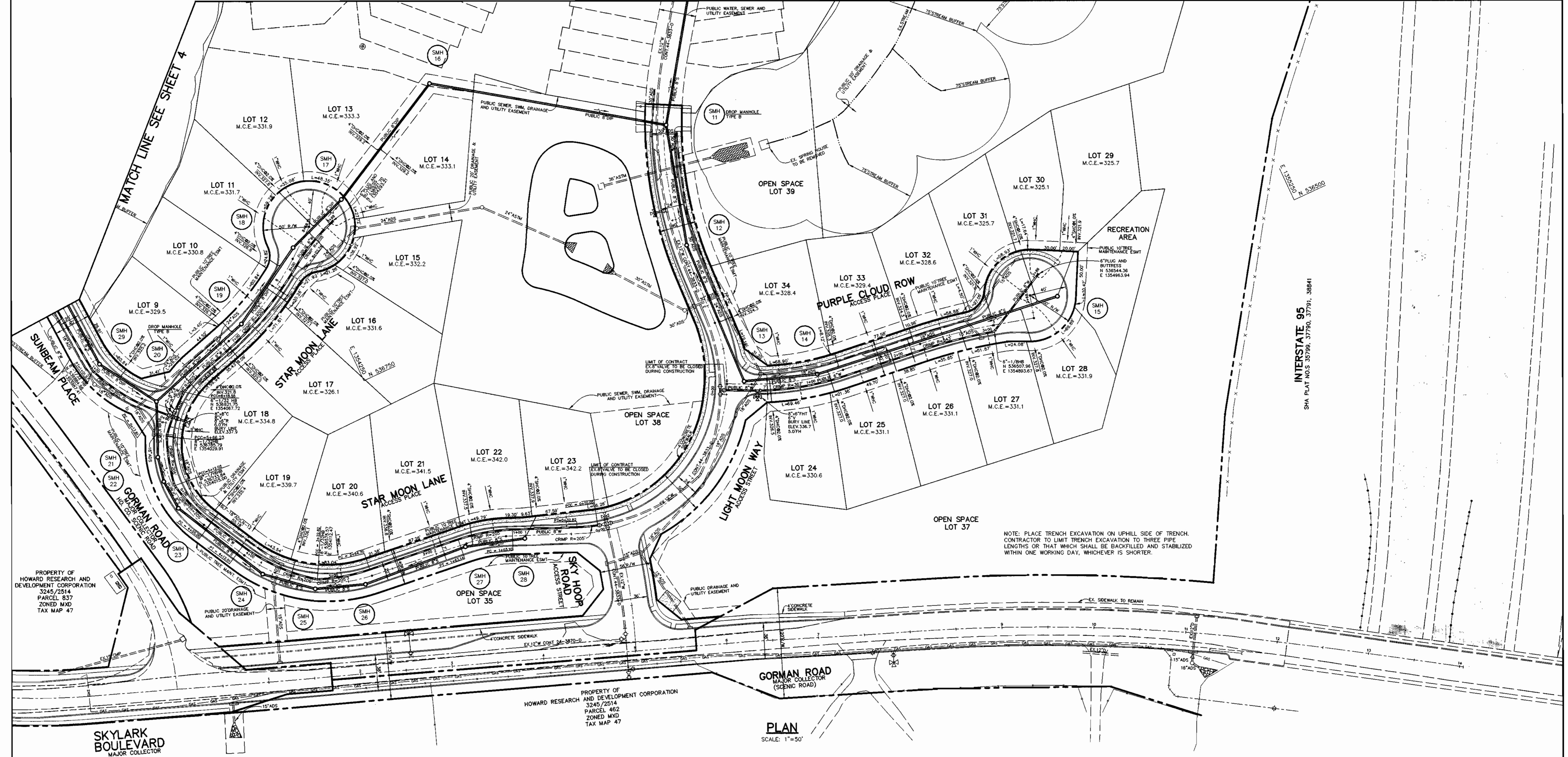
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND	RIEMER MUEGGE LANDSCAPE ARCHITECTS & ASSOCIATES, PC ENGINEERS & SURVEYORS & PLANNERS 6819 Centre Point Drive, Columbia, MD 21046 99212/FINALS.WSI.DWG	DES: C.J.R. DRN: DAM CHK: C.J.R. DATE: 6/13/01	BY NO. REVISION DATE	TITLE SHEET	600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9	WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA ONE LOTS 1-39 & PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3832-D	SCALE AS SHOWN SHEET 1 OF 7
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MATCH LINE SEE SHEET 3

E. 1352500 N. 536750



NOTE: PLACE TRENCH EXCAVATION ON UPHILL SIDE OF TRENCH. CONTRACTOR TO LIMIT TRENCH EXCAVATION TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PLAN
SCALE: 1"=50'

INTERSTATE 95
SMT PLAT NOS 35799, 37790, 37791, 38841

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Melvin A. B... 6-18-01
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Arthur E. Muegge
CHIEF, DEVELOPMENT ENGINEERING DIVISION

RIEMER MUEGGE
Patton Harris Rust & Associates, pc
ENGINEERS & SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS & ENVIRONMENTAL SPECIALISTS
8218 Centre Park Drive, Columbia, MD 21046
99212/FINALS WS2.DWG



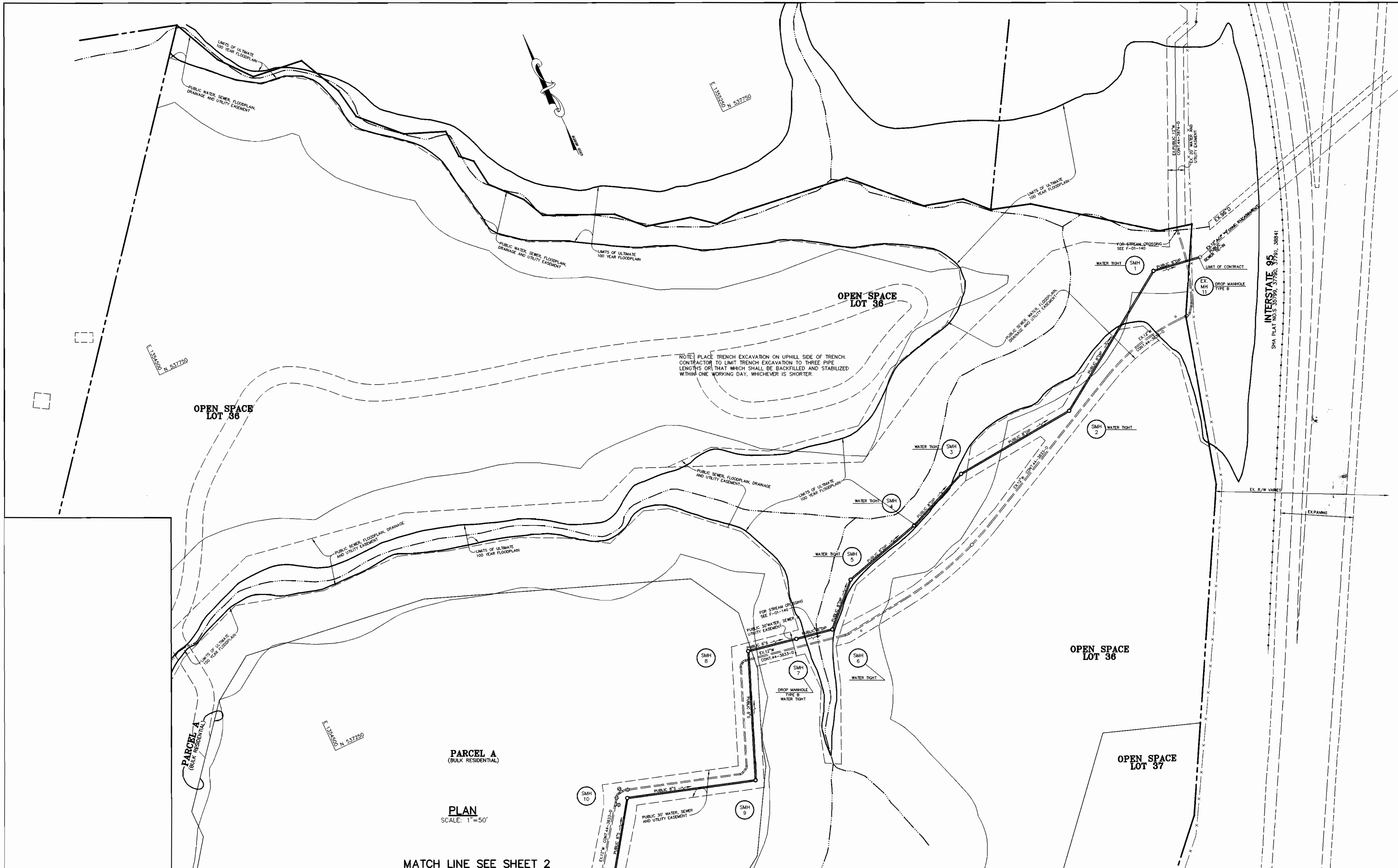
DES:	C.J.R.	BY	NO.	REVISION	DATE
DRN:	DAM				
CHK:	C.J.R.				
DATE:	6/13/01				

PLAN OF
WATER AND SEWER EXTENSIONS
600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA ONE
LOTS 1-39 & PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3832-D
SCALE AS SHOWN
SHEET 2 OF 7

3: \pvt\p1\199212\FINALS.WS2.DWG Wed Jun 13 10:47:53 2001 RIEMER MUEGGE A DIVISION OF PHRA

D:\projects\99212\FINALS\WS3.DWG: 180 Jun 13 12:14:22 2001 RIEMER MUEGGE A DIVISION OF PHRGA



MATCH LINE SEE SHEET 2

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Michael B. ...
CHIEF, BUREAU OF UTILITIES

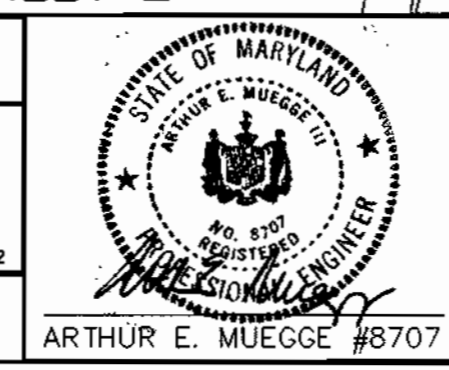
6-18-01
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Arthur E. Muegge
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE

RIEMER MUEGGE
A DIVISION OF
Patton Harris Rust & Associates, pc
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
2818 Centre Park Drive, Columbia, MD 21046 • Tel: 410.297.2800 Fax: 410.297.2822
99212/FINALS WS3.DWG



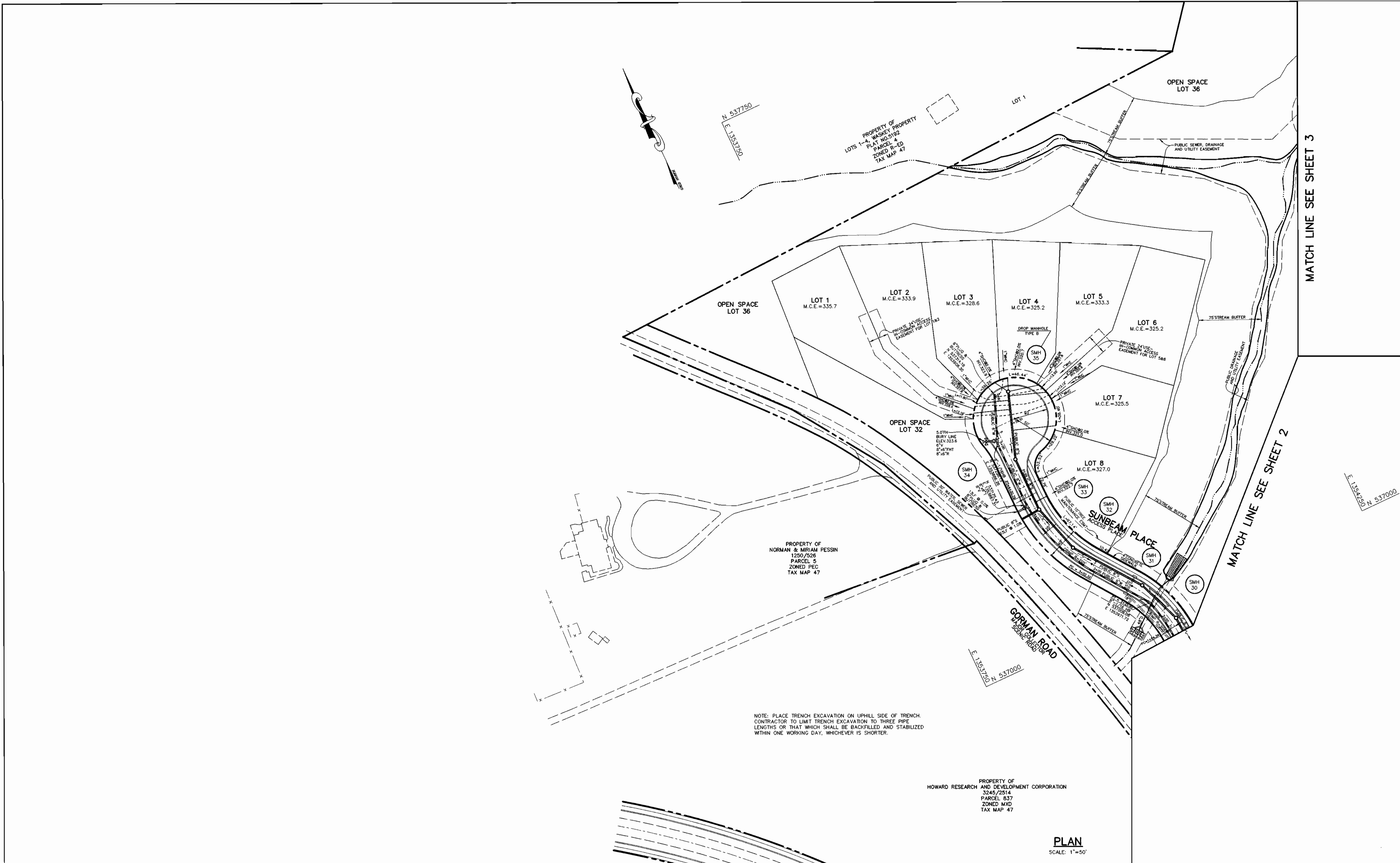
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DRN:	DAM				
CHK:	C.J.R.				
DATE:	6/13/01				
BY:	NO.	REVISION	DATE		

**PLAN OF
WATER AND SEWER EXTENSIONS**

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

**WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA ONE
LOTS 1-39 & PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3832-D**




SCALE AS SHOWN
SHEET 3 OF 7

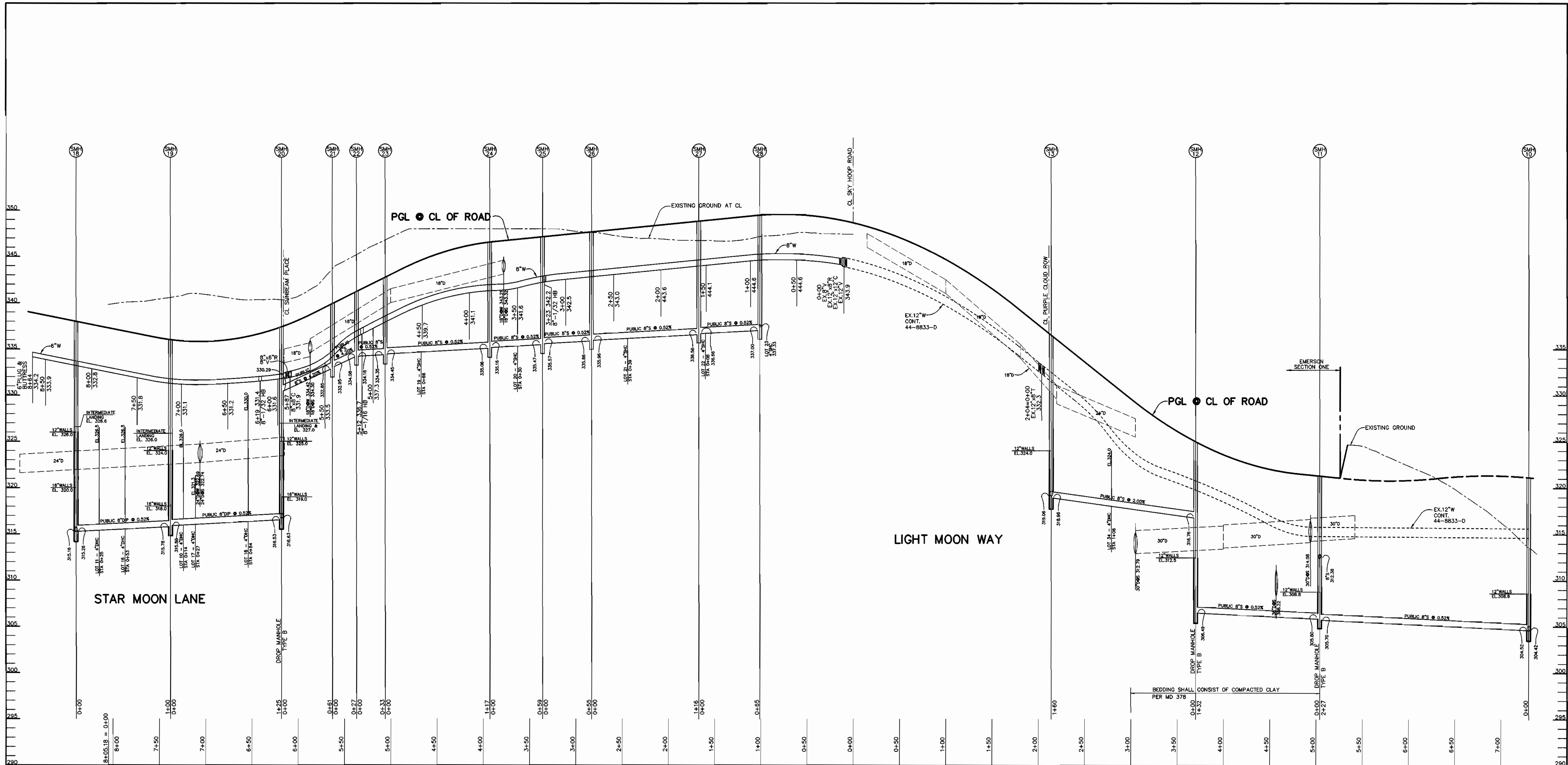


NOTE: PLACE TRENCH EXCAVATION ON UPHILL SIDE OF TRENCH. CONTRACTOR TO LIMIT TRENCH EXCAVATION TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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	RIEMER MUEGGE A Division of Patton Harris Rust & Associates, pc ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS 3818 Carle Park Drive, Columbia, MD 21046 • Tel 410.267.2800 Fax 410.267.2852 99212/FINALS WS4.DWG	 ARTHUR E. MUEGGE #8707	DES: C.J.R. DRN: DAM CHK: C.J.R. DATE: 6/13/01 BY NO. REVISION DATE	600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9	WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA ONE LOTS 1-39 & PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3832-D	SCALE AS SHOWN SHEET 4 OF 7
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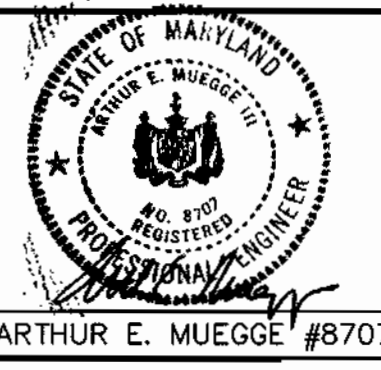
PROFILE
 SCALE:
 HOR. - 1" = 50'
 VERT. - 1" = 5'

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 DATE

RIEMER MUEGGE
 Petton Harris Rust & Associates, pc
 ENGINEERS • SURVEYORS • PLANNERS
 LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
 8810 Centre Pike, Owings, MD 21128 • Tel: 410.387.8600 Fax: 410.387.8602
 99212/FINALS WSS.DWG

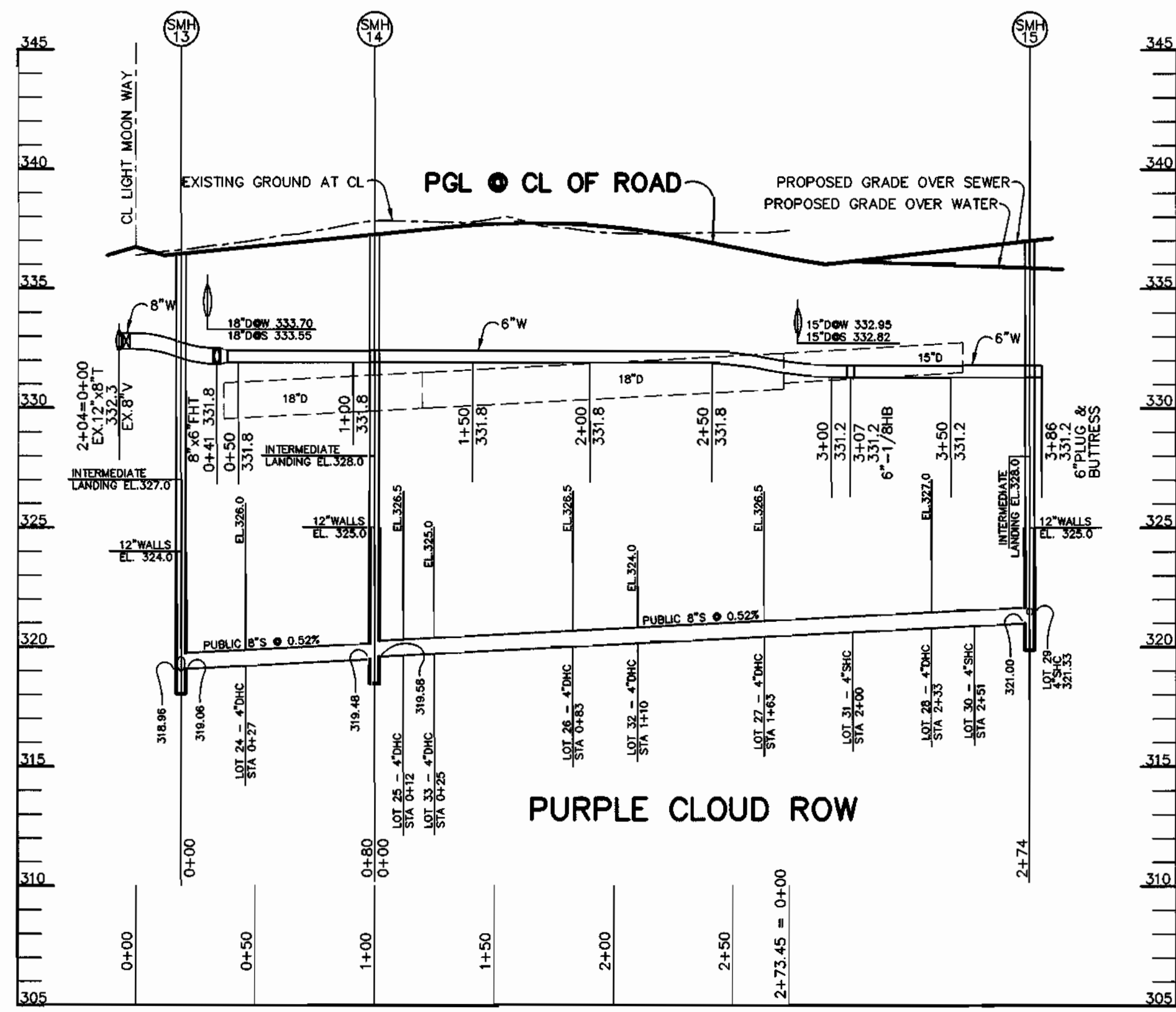


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DRN:	DAM				
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DATE:	6/13/01				
BY:	NO.	REVISION	DATE		

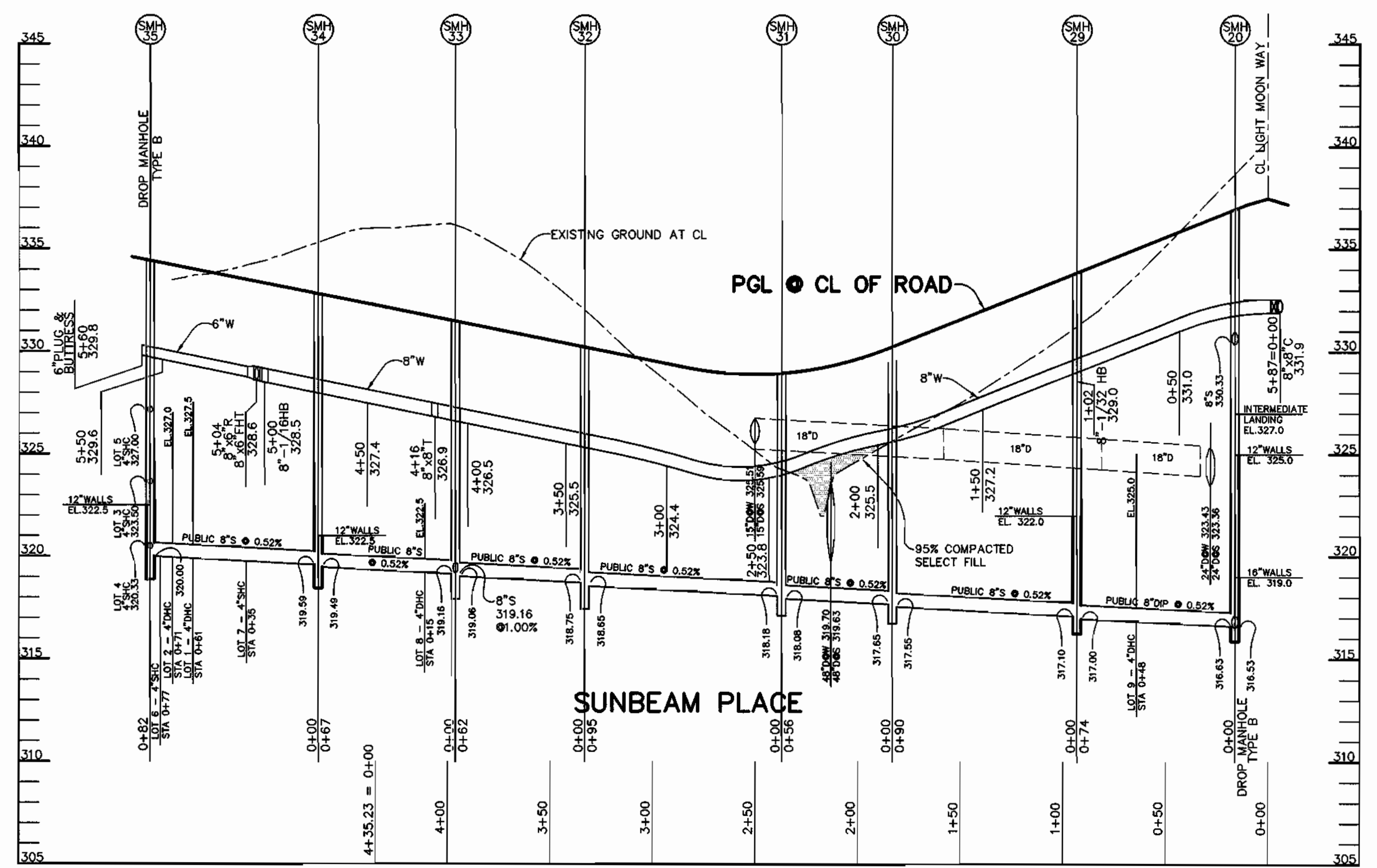
**PROFILES OF
 WATER AND SEWER EXTENSIONS**
 600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

**WATER AND SEWER EXTENSION
 EMERSON
 SECTION ONE AREA ONE
 LOTS 1-39 & PARCEL A
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 34-3832-D**

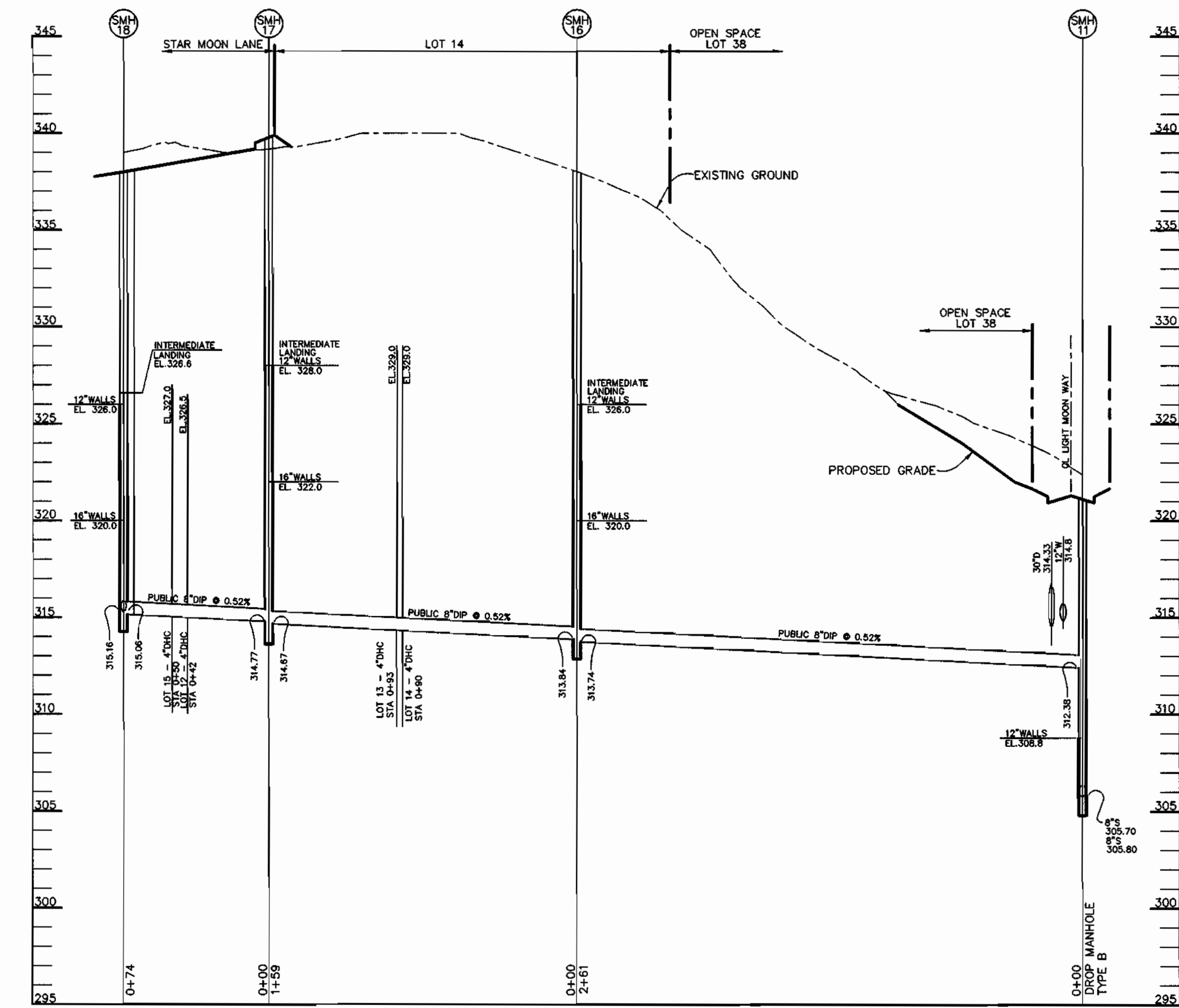
SCALE
 AS
 SHOWN
 SHEET
 5 OF 7



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



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



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

STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	TOP	REMARKS
SMH 1	4'-0" DIA. MANHOLE	N 537,356 E 1,355,639	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 2	4'-0" DIA. MANHOLE	N 537,246 E 1,355,475	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 3	4'-0" DIA. MANHOLE	N 537,232 E 1,355,325	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 4	4'-0" DIA. MANHOLE	N 537,200 E 1,355,247	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 5	4'-0" DIA. MANHOLE	N 537,173 E 1,355,150	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 6	4'-0" DIA. MANHOLE	N 537,128 E 1,355,105	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 7	4'-0" DIA. MANHOLE	N 537,136 E 1,355,061	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12 & S 1.32
SMH 8	4'-0" DIA. MANHOLE	N 537,148 E 1,355,002	290.0 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 9	4'-0" DIA. MANHOLE	N 537,002 E 1,354,944	299.0 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 10	4'-0" DIA. MANHOLE	N 537,049 E 1,354,795	320.8 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 11	4'-0" DIA. MANHOLE	3' RT OF CL STA 5+04 LIGHT MOON WAY	321.2 SLOPE 1.0%	HOCO STD. DETAIL G 5.12 & S 1.32
SMH 12	4'-0" DIA. MANHOLE	4' RT OF CL STA 3+70 LIGHT MOON WAY	324.90 SLOPE 5.6%	HOCO STD. DETAIL G 5.12 & S 1.32
SMH 13	4'-0" DIA. MANHOLE	3' LT OF CL STA 0+19 PURPLE CLOUD ROW	333.3 SLOPE 8.0%	HOCO STD. DETAIL G 5.12
SMH 14	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+00 PURPLE CLOUD ROW	337.16 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 15	4'-0" DIA. MANHOLE	10' RT OF CL STA 1+68 PURPLE CLOUD ROW	337.00 SLOPE 8.0%	HOCO STD. DETAIL G 5.12
SMH 16	4'-0" DIA. MANHOLE	N 537,013 E 1,354,452	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12
SMH 17	4'-0" DIA. MANHOLE	6' LT OF LP STA 1+50 STAR MOON LANE	339.70 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 18	4'-0" DIA. MANHOLE	5' LT OF CL STA 8+40 STAR MOON LANE	338.00 SLOPE 2.0%	HOCO STD. DETAIL G 5.12
SMH 19	4'-0" DIA. MANHOLE	4' LT OF CL STA 7+38 STAR MOON LANE	335.90 SLOPE 1.3%	HOCO STD. DETAIL G 5.12
SMH 20	4'-0" DIA. MANHOLE	16' LT OF CL STA 6+18 STAR MOON LANE	336.90 SLOPE 4.5%	HOCO STD. DETAIL G 5.12 & S 1.32
SMH 21	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+63 STAR MOON LANE	338.69 SLOPE 5.0%	HOCO STD. DETAIL G 5.12
SMH 22	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+37 STAR MOON LANE	341.00 SLOPE 5.0%	HOCO STD. DETAIL G 5.12
SMH 23	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+06 STAR MOON LANE	342.54 SLOPE 5.0%	HOCO STD. DETAIL G 5.12
SMH 24	4'-0" DIA. MANHOLE	7' LT OF CL STA 3+93 STAR MOON LANE	346.35 SLOPE 1.2%	HOCO STD. DETAIL G 5.12
SMH 25	4'-0" DIA. MANHOLE	7' LT OF CL STA 3+36 STAR MOON LANE	348.93 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 26	4'-0" DIA. MANHOLE	7' LT OF CL STA 2+83 STAR MOON LANE	347.40 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 27	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+67 STAR MOON LANE	348.74 SLOPE 1.0%	HOCO STD. DETAIL G 5.12
SMH 28	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+01 STAR MOON LANE	349.39 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 29	4'-0" DIA. MANHOLE	4' RT OF CL STA 0+93 SUNBEAM PLACE	333.73 SLOPE 4.0%	HOCO STD. DETAIL G 5.12
SMH 30	4'-0" DIA. MANHOLE	7' RT OF CL STA 1+83 SUNBEAM PLACE	330.04 SLOPE 4.0%	HOCO STD. DETAIL G 5.12
SMH 31	4'-0" DIA. MANHOLE	7' RT OF CL STA 0+37 SUNBEAM PLACE	329.79 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 32	4'-0" DIA. MANHOLE	4' RT OF CL STA 3+33 SUNBEAM PLACE	330.11 SLOPE 2.0%	HOCO STD. DETAIL G 5.12
SMH 33	4'-0" DIA. MANHOLE	4' RT OF CL STA 3+96 SUNBEAM PLACE	331.37 SLOPE 2.0%	HOCO STD. DETAIL G 5.12
SMH 34	4'-0" DIA. MANHOLE	5' RT OF CL STA 4+63 SUNBEAM PLACE	334.40 SLOPE 0.0%	HOCO STD. DETAIL G 5.12
SMH 35	4'-0" DIA. MANHOLE	6' RT OF LP STA 1+44 SUNBEAM PLACE	334.40 SLOPE 0.0%	HOCO STD. DETAIL G 5.12

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

RIEMER MUEGGE
Patton Harris Rust & Associates, pc
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
6810 Centre Park Drive, Columbia, MD 21046 • Tel: 410.997.9800 Fax: 410.997.9828
99212/FINALS WS5.DWG



DES: C.J.R.
DRN: DAM
CHK: C.J.R.
DATE: 6/13/01

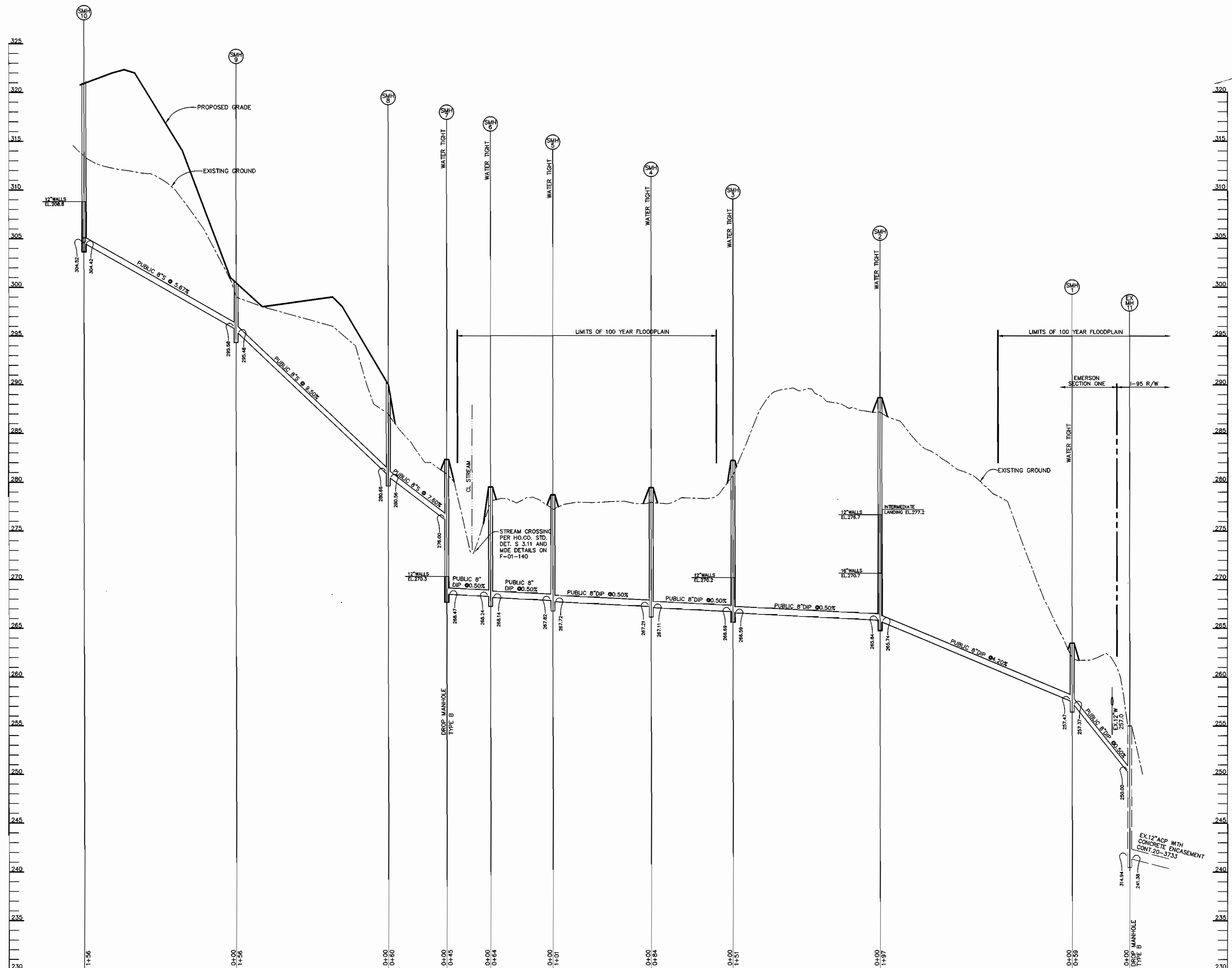
**PROFILES OF
WATER AND SEWER EXTENSIONS**

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

**WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA ONE
LOTS 1-39 & PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3832-D**

SCALE
AS
SHOWN

SHEET
6 OF 7



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

P:\projects\99212\FINAL\5\WS7.dwg Wed Jun 13 11:53:19 2001 RIEMER MUEGGE A DIVISION OF PHRGA

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 DATE: 6-18-01

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 DATE: 6/20/01

RIEMER MUEGGE
 Patton Harris Rust & Associates, pc
 ENGINEERS & SURVEYORS & PLANNERS
 LANDSCAPE ARCHITECTS & ENVIRONMENTAL SPECIALISTS
 8819 Carver Park Drive, Columbia, MD 21045
 99212/FINALS WS7.DWG



DES:	C.J.R.				
DRN:	DAM				
CHK:	C.J.R.				
DATE:	6/13/01				
BY:	NO.	REVISION	DATE		

PROFILES OF WATER AND SEWER EXTENSIONS
 600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA ONE LOTS 1-39 & PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3832-D

SCALE AS SHOWN
 SHEET 7 OF 7

WATER AND SEWER EXTENSION

EMERSON

SECTION ONE AREA ONE

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 34-3832-D

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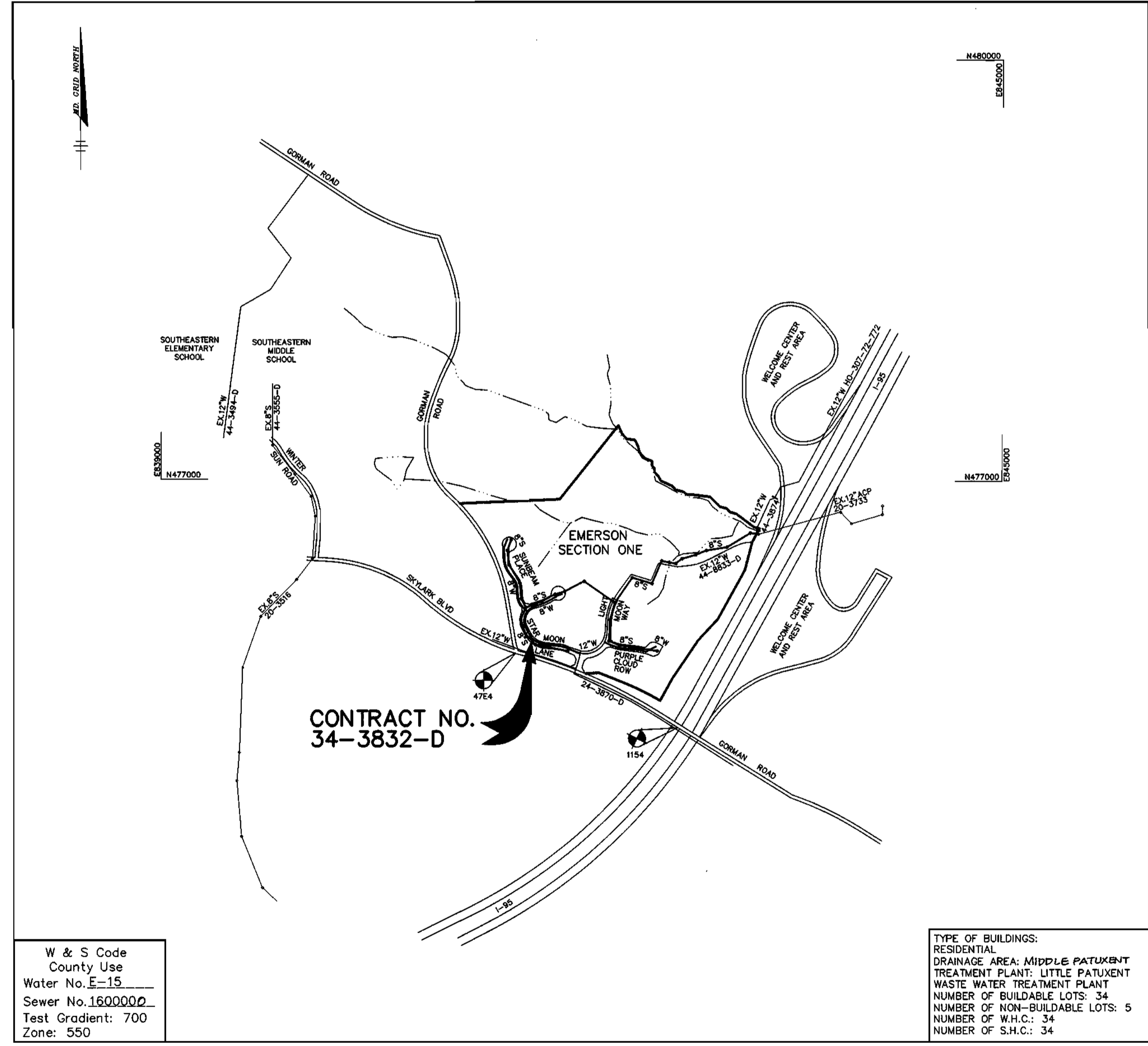
BENCHMARKS

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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

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	1145 LF			
6" WATER	708 LF			
1" WHC	1000 LF			
8" VALVES	3 EA			
6" VALVES	3 EA			
FIRE HYDRANTS	3 EA			
8" SEWER	2258 LF			
8"DIP CL 52	1494 LF			
MANHOLES	35 EA			
4" SHC	951 LF			
DROP MANHOLES TYPE B	3 EA			



- 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.G.S. data.
 - All pipe elevations shown \curvearrowright 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 \square 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
 - BGE Contractor Services 410-850-4820
 - BGE 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.

NAME OF UTILITY CONTRACTOR :

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications F-01-140.

Review for Howard Soil Conservation District and meets technical requirements.

Jim Meyers 6/22/01
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John K. Roberts 6/22/01
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

RIEMER MUEGGE
Patton Harris Rust & Associates, pc
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
8616 Centre Point Drive, Columbia, MD 21046 • Tel: (410) 871-2922

ARTHUR E. MUEGGE #8707

DES: C.J.R.

DRN: DAM

CHK: C.J.R.

DATE: 6/13/01

BY	NO.	REVISION	DATE
C.J.R.		REVISED QUANTITIES	8-28-01

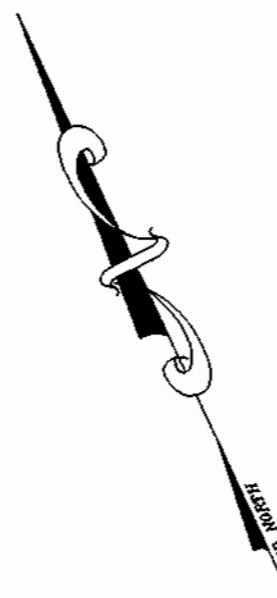
TITLE SHEET

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

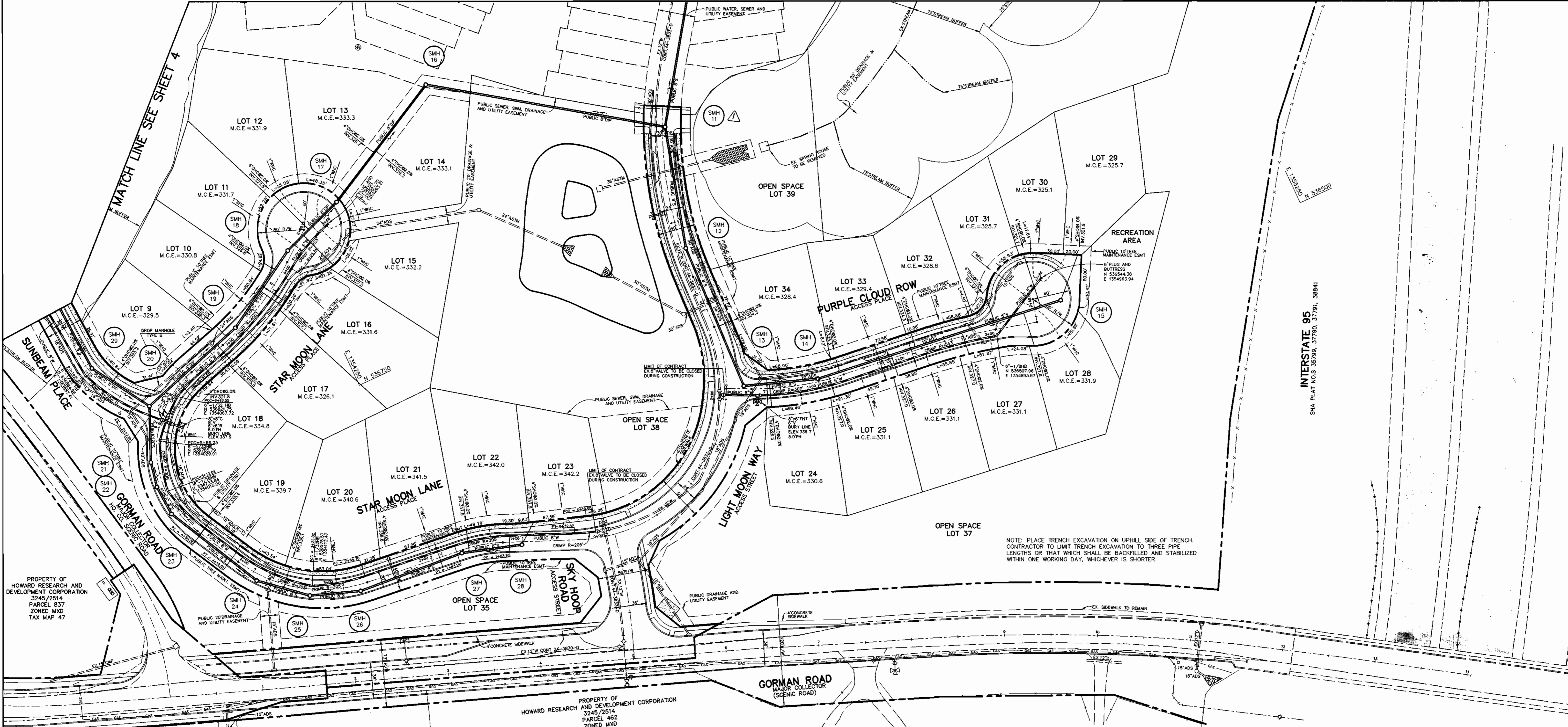
WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA ONE
LOTS 1-39 & PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3832-D

SCALE AS SHOWN

SHEET 1 OF 7



MATCH LINE SEE SHEET 3



NOTE: PLACE TRENCH EXCAVATION ON UPHILL SIDE OF TRENCH. CONTRACTOR TO LIMIT TRENCH EXCAVATION TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PLAN
SCALE: 1"=50'

PROPERTY OF HOWARD RESEARCH AND DEVELOPMENT CORPORATION
3245/2514
PARCEL 837
ZONED MWD
TAX MAP 47

PROPERTY OF HOWARD RESEARCH AND DEVELOPMENT CORPORATION
3245/2514
PARCEL 462
ZONED MWD
TAX MAP 47

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

RIEMER MUEGGE
a division of
Patton Harris Russ & Associates, pc
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
2878 Carver Park Drive, Columbia, MD 21046 • Tel 410.997.6000 Fax 410.997.2282
99212/FINALS WS2.DWG

ARTHUR E. MUEGGE #8707

DES:	C.J.R.				
DRN:	DAM				
CHK:	C.J.R.				
DATE:	6/13/01				
CJR	△	REVISED SMH II		8-28-01	
BY	NO.	REVISION		DATE	

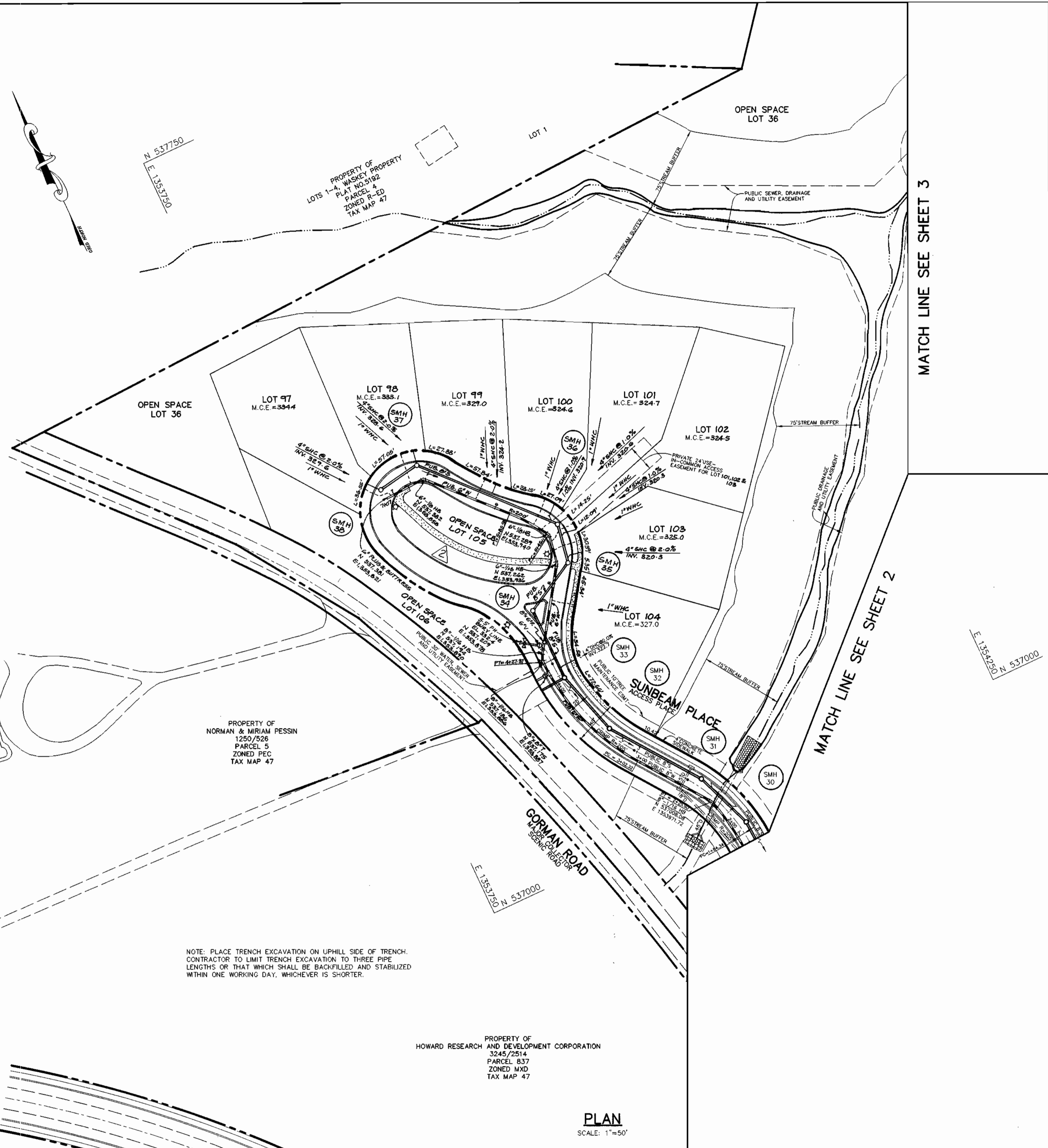
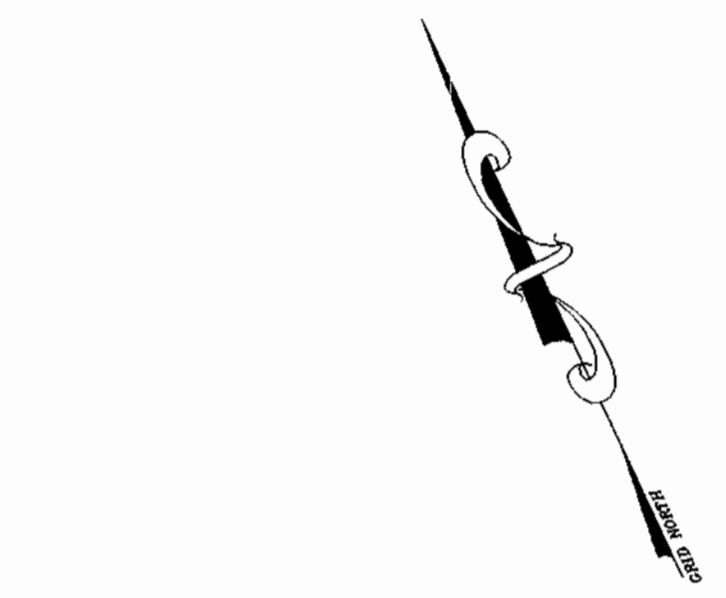
**PLAN OF
WATER AND SEWER EXTENSIONS**

**WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA ONE
LOTS 1-39 & PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3832-D**

SCALE
AS
SHOWN

SHEET
2 OF 7

P:\PROJECT\990212\FINALS\WS2.DWG Wed Jun 13 10:47:53 2001 RIEMER MUEGGE A DIVISION OF PHRA



NOTE: PLACE TRENCH EXCAVATION ON UPHILL SIDE OF TRENCH. CONTRACTOR TO LIMIT TRENCH EXCAVATION TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PROPERTY OF HOWARD RESEARCH AND DEVELOPMENT CORPORATION
3245/2514
PARCEL 837
ZONED MXD
TAX MAP 47

PLAN
SCALE: 1"=50'

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

RIEMER MUEGGE
a division of
Patton Harris Rust & Associates, pc
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
8812 Centre Park Drive, Columbia, MD 21046 • Tel: 410.997.9800 Fax: 410.997.9802
99212/FINALS WS4.DWG

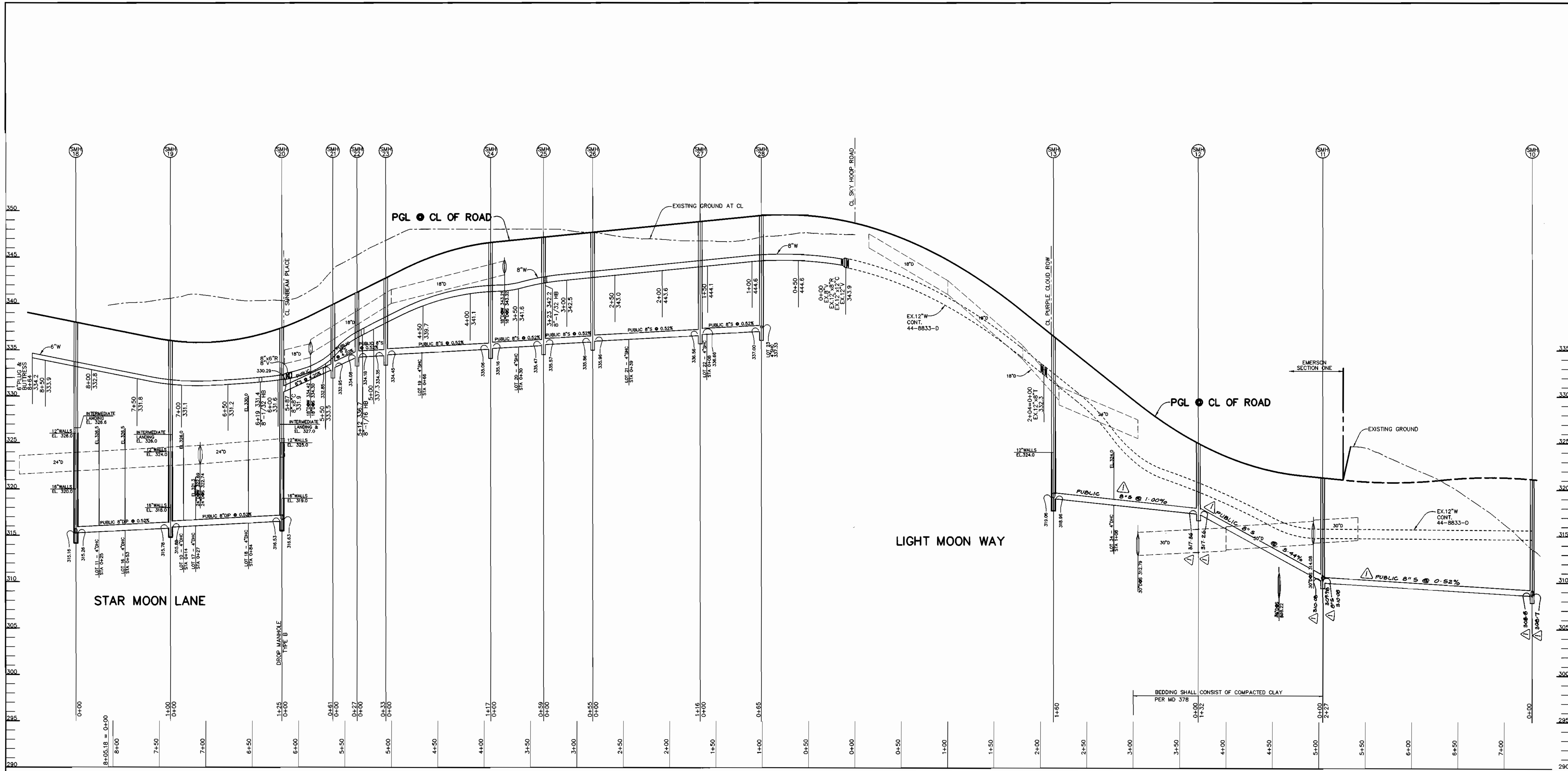


DES:	C.J.R.				
DRN:	DAM				
CHK:	C.J.R.				
DATE:	6/13/01				
BY:	CJR	NO.	Δ	MODIFIED SUNBEAM PLACE CUL-DE-SAC 01-04-02	
				REVISION	DATE

PLAN OF
WATER AND SEWER EXTENSIONS
600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

WATER AND SEWER EXTENSION
EMERSON
SECTION ONE AREA ONE
LOTS 1-39 & PARCEL A
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 34-3832-D

SCALE
AS
SHOWN
SHEET
4 OF 7



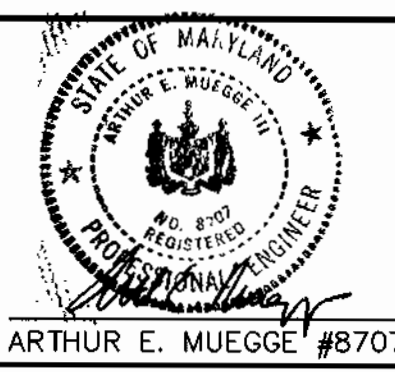
PROFILE
 SCALE:
 HOR. - 1"=50'
 VERT. - 1"=5'

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Richard S. ... 6-18-01
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

RIEMER MUEGGE
 Patton Harris Rust & Associates, pc
 LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
 8119 Centre Park Drive, Columbia, MD 21046 • tel: 410.297.2800 fax: 410.297.2802
 99212/FINALS WSS.DWG

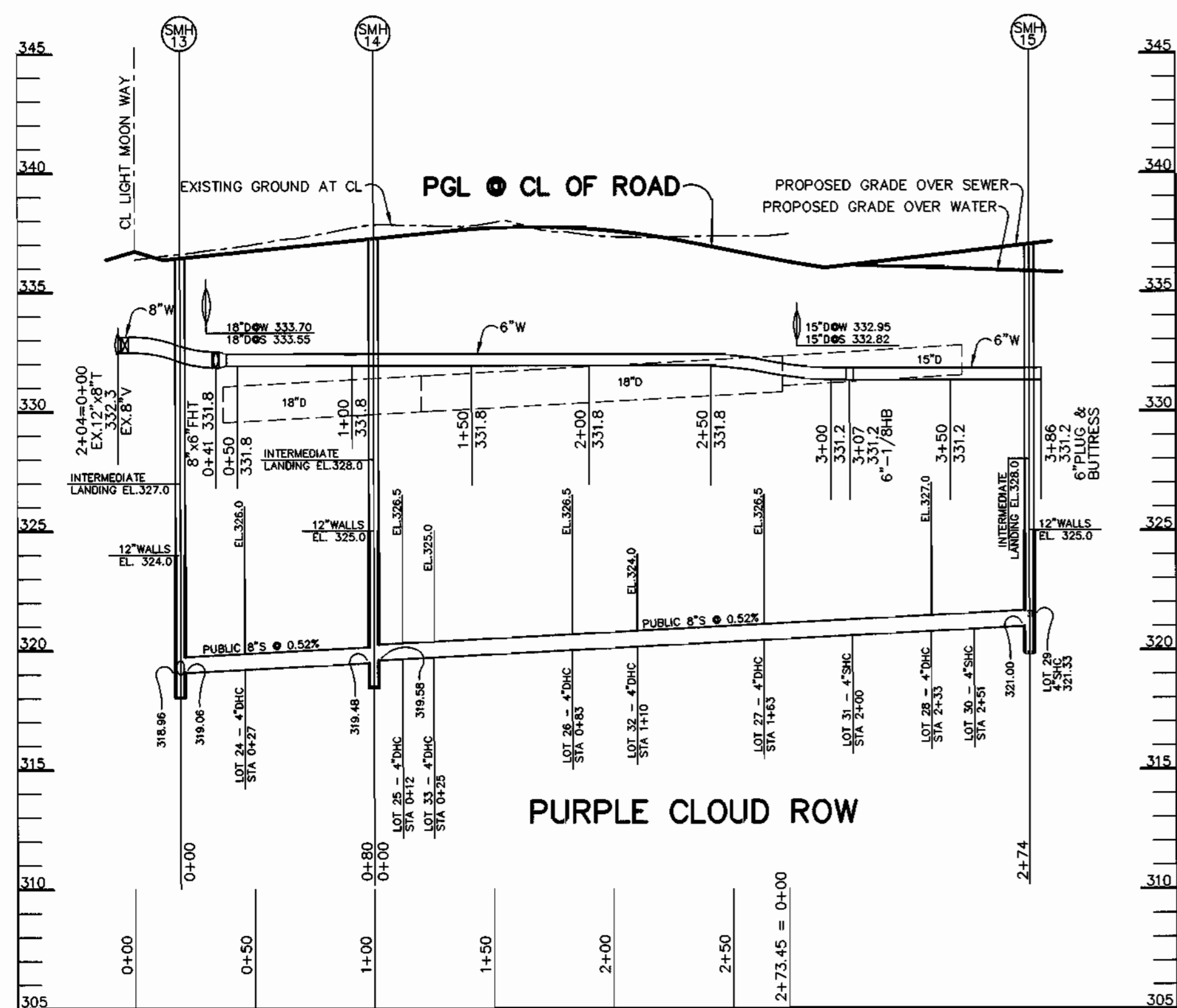


DES:	C.J.R.		
DRN:	DAM		
CHK:	C.J.R.		
DATE:	6/13/01		
CJR	Δ	REVISED SMH 13 TO SMH 10.	6-28-01
BY	NO.	REVISION	DATE

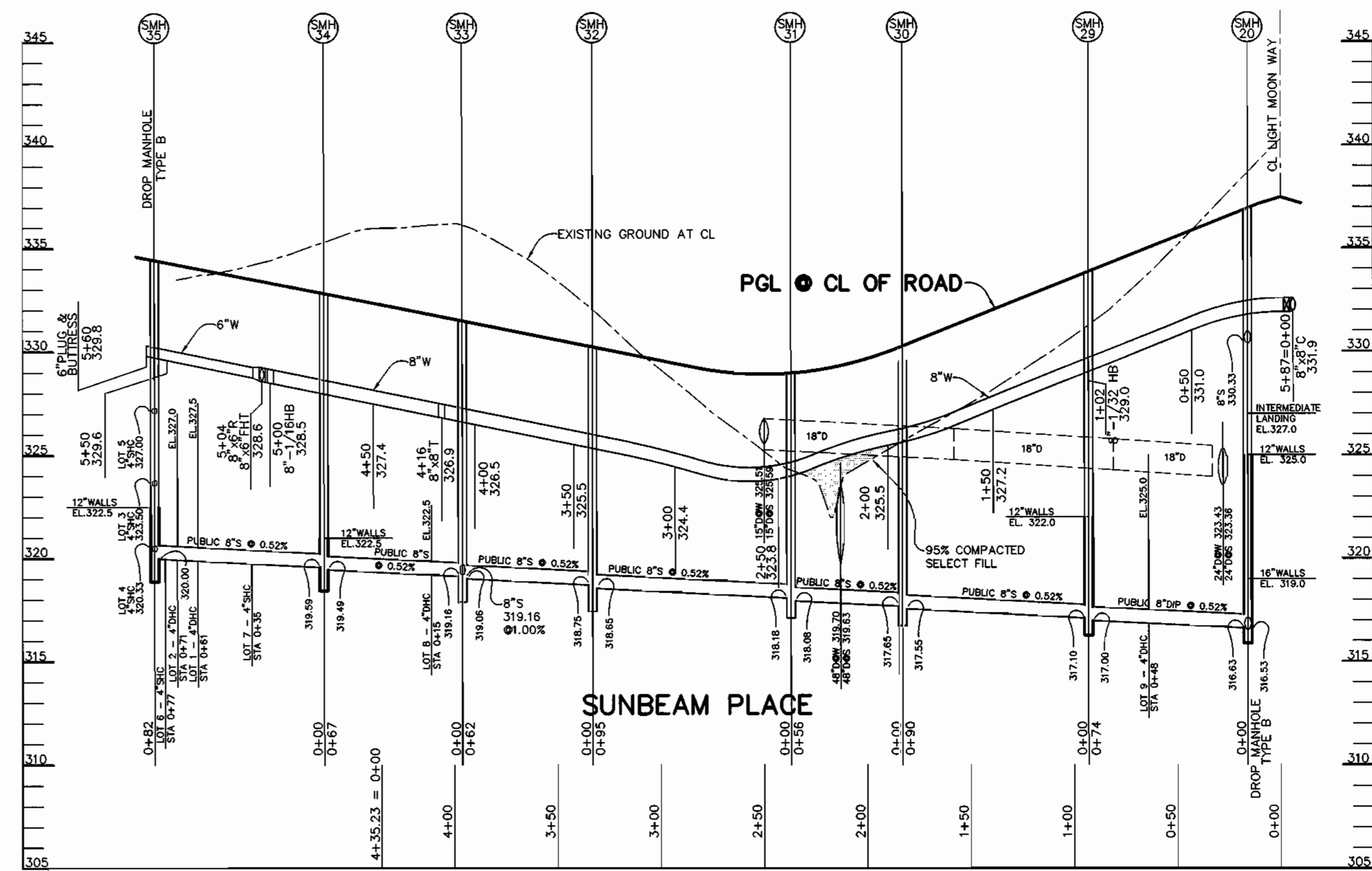
**PROFILES OF
 WATER AND SEWER EXTENSIONS**
 600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

**WATER AND SEWER EXTENSION
 EMERSON
 SECTION ONE AREA ONE
 LOTS 1-39 & PARCEL A
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 34-3832-D**

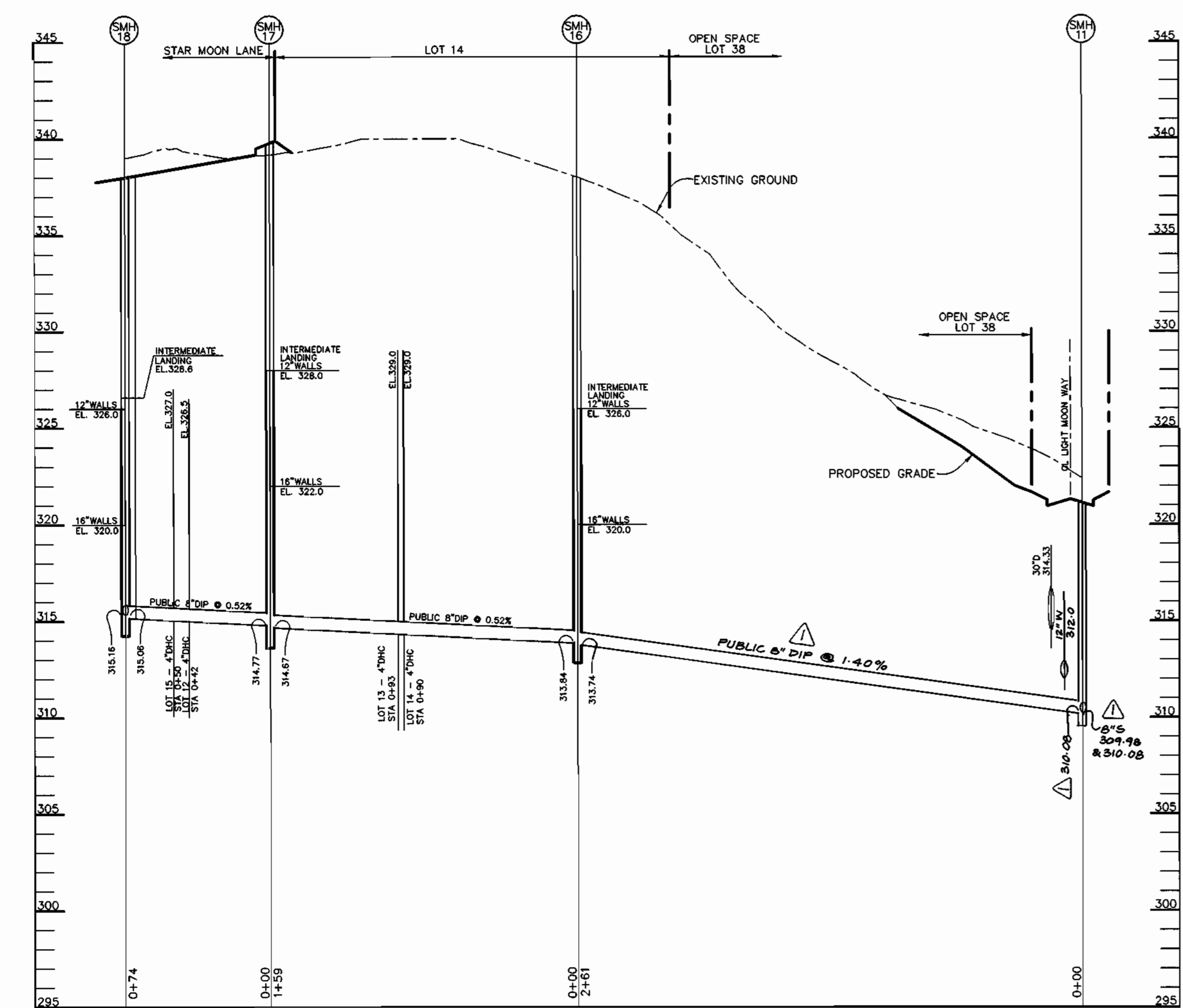
SCALE
 AS
 SHOWN
 SHEET
 5 OF 7



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



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



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

STRUCTURE SCHEDULE					
STRUCTURE	TYPE	LOCATION	TOP	REMARKS	
SMH 1	4'-0" DIA. MANHOLE	N 537,356 E 1,355,639	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 2	4'-0" DIA. MANHOLE	N 537,246 E 1,355,475	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 3	4'-0" DIA. MANHOLE	N 537,232 E 1,355,325	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 4	4'-0" DIA. MANHOLE	N 537,200 E 1,355,247	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 5	4'-0" DIA. MANHOLE	N 537,173 E 1,355,150	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 6	4'-0" DIA. MANHOLE	N 537,128 E 1,355,105	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 7	4'-0" DIA. TYPE B MANHOLE	N 537,136 E 1,355,061	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12 & S 1.32	
SMH 8	4'-0" DIA. MANHOLE	N 537,148 E 1,355,002	290.0 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	
SMH 9	4'-0" DIA. MANHOLE	N 537,002 E 1,354,944	299.0 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	
SMH 10	4'-0" DIA. MANHOLE	N 537,049 E 1,354,795	320.87 SLOPE 1.0%	HOCO STD. DETAIL G 5.12	
SMH 11	4'-0" DIA.	3' RT OF CL STA 5+04 LIGHT MOON WAY	321.21 SLOPE 1.0%	HOCO STD. DETAIL G 5.12	
SMH 12	4'-0" DIA.	4' RT OF CL STA 3+70 LIGHT MOON WAY	324.80 SLOPE 5.6%	HOCO STD. DETAIL G 5.12	
SMH 13	4'-0" DIA. MANHOLE	3' LT OF CL STA 0+19 PURPLE CLOUD ROW	336.30 SLOPE 6.0%	HOCO STD. DETAIL G 5.12	
SMH 14	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+00 PURPLE CLOUD ROW	337.16 SLOPE 1.0%	HOCO STD. DETAIL G 5.12	
SMH 15	4'-0" DIA. MANHOLE	10' RT OF CL STA 1+58 PURPLE CLOUD ROW	337.00 SLOPE 6.0%	HOCO STD. DETAIL G 5.12	
SMH 16	4'-0" DIA. MANHOLE	N 537,013 E 1,354,452	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	
SMH 17	4'-0" DIA. MANHOLE	6' LT OF LP STA 1+50 STAR MOON LANE	339.70 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	
SMH 18	4'-0" DIA. MANHOLE	5' LT OF CL STA 8+40 STAR MOON LANE	338.00 SLOPE 2.0%	HOCO STD. DETAIL G 5.12	
SMH 19	4'-0" DIA. MANHOLE	4' LT OF CL STA 7+38 STAR MOON LANE	335.90 SLOPE 1.3%	HOCO STD. DETAIL G 5.12	
SMH 20	4'-0" DIA. TYPE B MANHOLE	16' LT OF CL STA 6+18 STAR MOON LANE	336.90 SLOPE 4.5%	HOCO STD. DETAIL G 5.12 & S 1.32	
SMH 21	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+63 STAR MOON LANE	339.69 SLOPE 5.0%	HOCO STD. DETAIL G 5.12	
SMH 22	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+37 STAR MOON LANE	341.00 SLOPE 5.0%	HOCO STD. DETAIL G 5.12	
SMH 23	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+06 STAR MOON LANE	342.54 SLOPE 5.0%	HOCO STD. DETAIL G 5.12	
SMH 24	4'-0" DIA. MANHOLE	7' LT OF CL STA 3+93 STAR MOON LANE	346.35 SLOPE 1.2%	HOCO STD. DETAIL G 5.12	
SMH 25	4'-0" DIA. MANHOLE	7' LT OF CL STA 3+36 STAR MOON LANE	346.83 SLOPE 1.0%	HOCO STD. DETAIL G 5.12	
SMH 26	4'-0" DIA. MANHOLE	7' LT OF CL STA 2+83 STAR MOON LANE	347.46 SLOPE 1.0%	HOCO STD. DETAIL G 5.12	
SMH 27	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+67 STAR MOON LANE	348.74 SLOPE 1.0%	HOCO STD. DETAIL G 5.12	
SMH 28	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+01 STAR MOON LANE	349.39 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	
SMH 29	4'-0" DIA. MANHOLE	4' RT OF CL STA 0+93 SUNBEAM PLACE	333.73 SLOPE 4.0%	HOCO STD. DETAIL G 5.12	
SMH 30	4'-0" DIA. MANHOLE	7' RT OF CL STA 1+83 SUNBEAM PLACE	338.04 SLOPE 4.0%	HOCO STD. DETAIL G 5.12	
SMH 31	4'-0" DIA. MANHOLE	7' RT OF CL STA 2+37 SUNBEAM PLACE	328.79 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	
SMH 32	4'-0" DIA. MANHOLE	4' RT OF CL STA 3+33 SUNBEAM PLACE	330.11 SLOPE 2.0%	HOCO STD. DETAIL G 5.12	
SMH 33	4'-0" DIA. MANHOLE	4' RT OF CL STA 3+96 SUNBEAM PLACE	331.37 SLOPE 2.0%	HOCO STD. DETAIL G 5.12	
SMH 34	4'-0" DIA. MANHOLE	5' RT OF CL STA 4+63 SUNBEAM PLACE	334.40 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	
SMH 35	4'-0" DIA. MANHOLE	6' RT OF LP STA 1+44 SUNBEAM PLACE	334.40 SLOPE 0.0%	HOCO STD. DETAIL G 5.12	

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

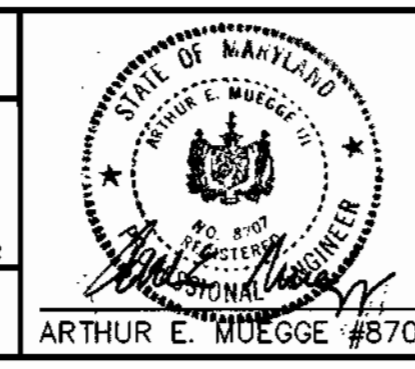
Richard J. ...
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

Arthur E. Muegge
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

RIEMER MUEGGE
 Patton Harris Rust & Associates, pc
 ENGINEERS • SURVEYORS • PLANNERS
 LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS
 8818 Center Park Drive, Columbia, MD 21046 • 410.327.2000 • 410.327.2222

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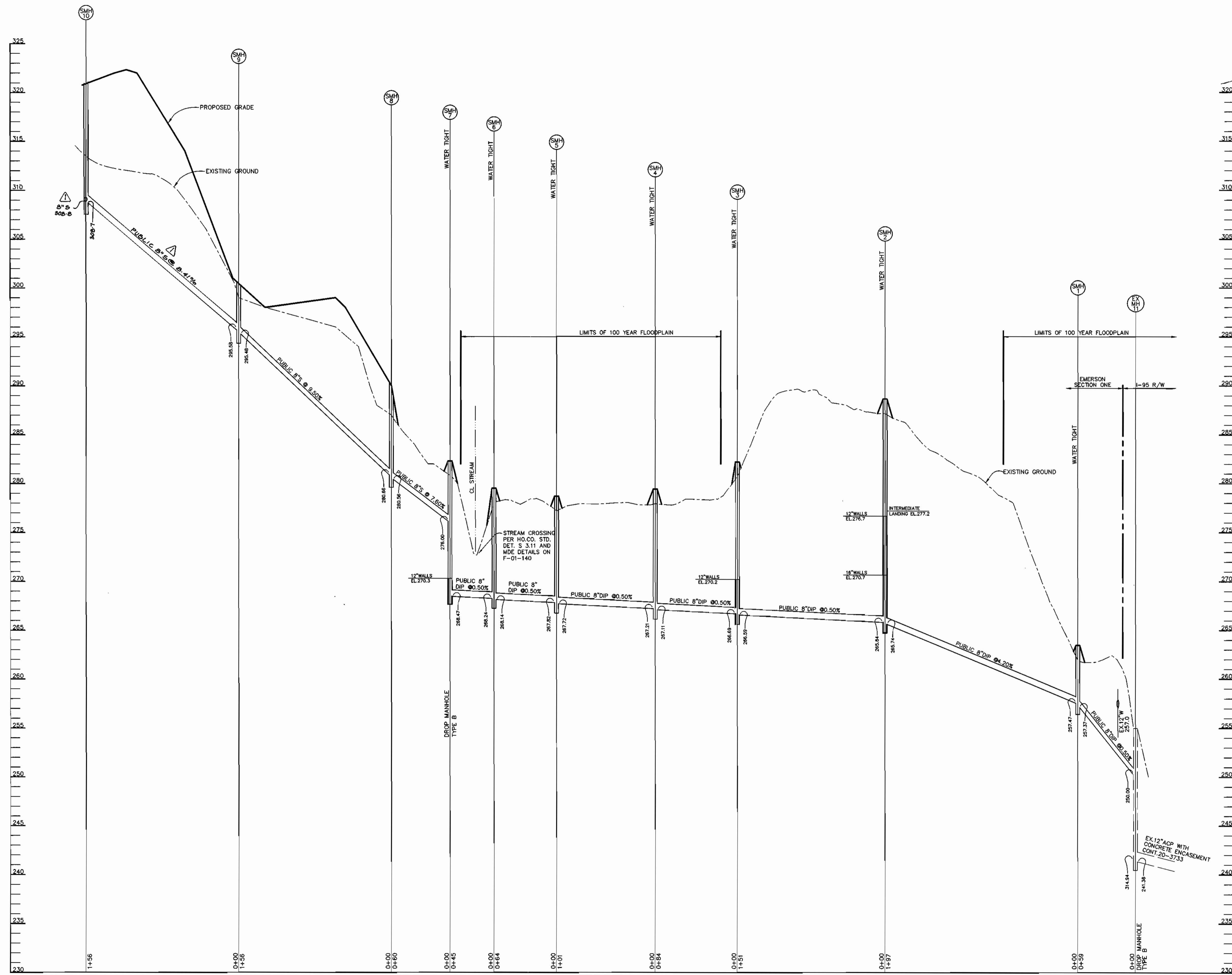
DES: C.J.R.					
DRN: DAM					
CHK: C.J.R.					
DATE: 6/13/01					
CJR	△	REVISED SMH 16 - SMH 11 & SCHEDULE B: 28-01			
BY: NO.		REVISION	DATE		

**PROFILES OF
 WATER AND SEWER EXTENSIONS**

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

**WATER AND SEWER EXTENSION
 EMERSON
 SECTION ONE AREA ONE
 LOTS 1-39 & PARCEL A
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 34-3832-D**

SCALE AS SHOWN
 SHEET 6 OF 7

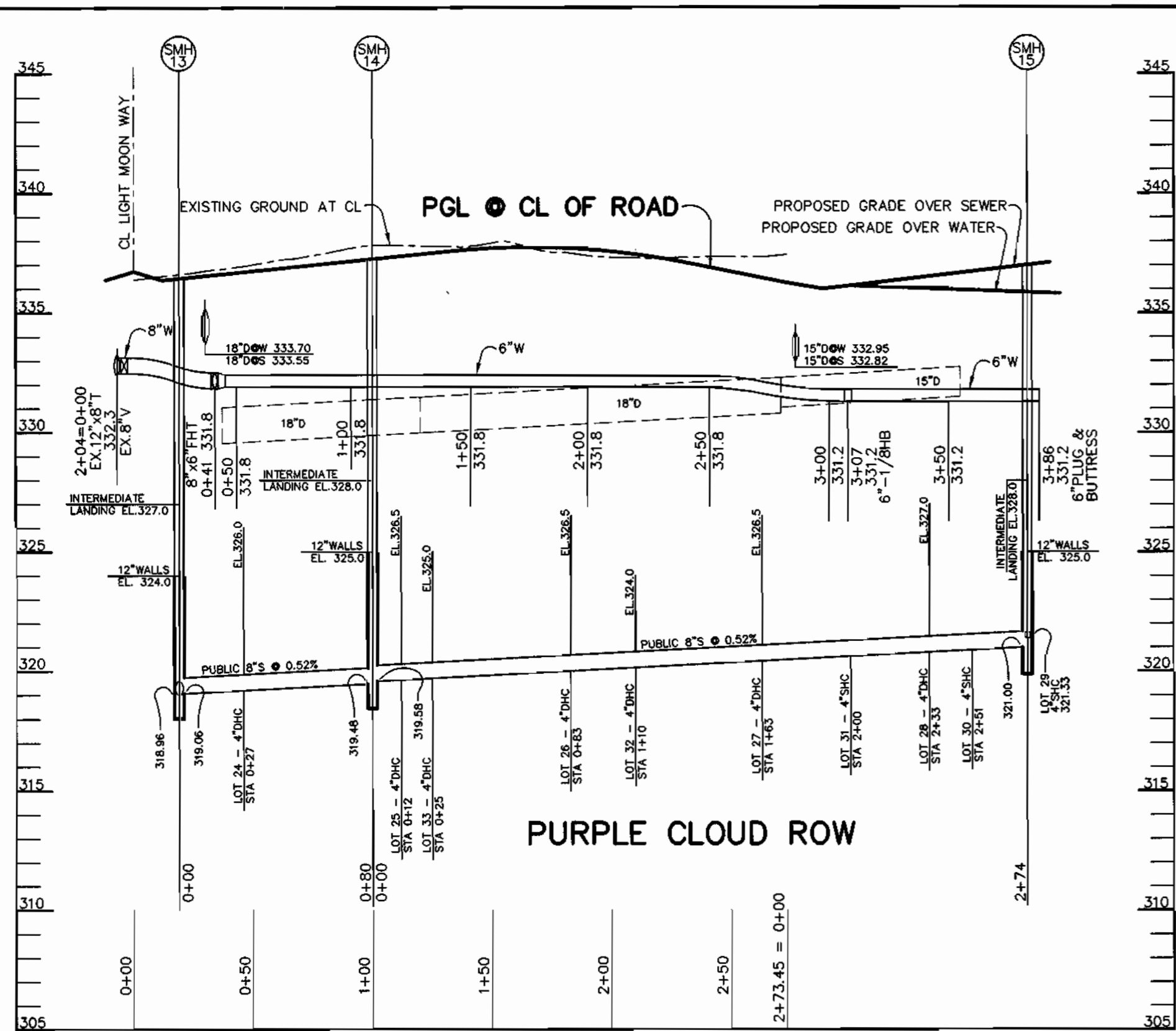


PROFILE

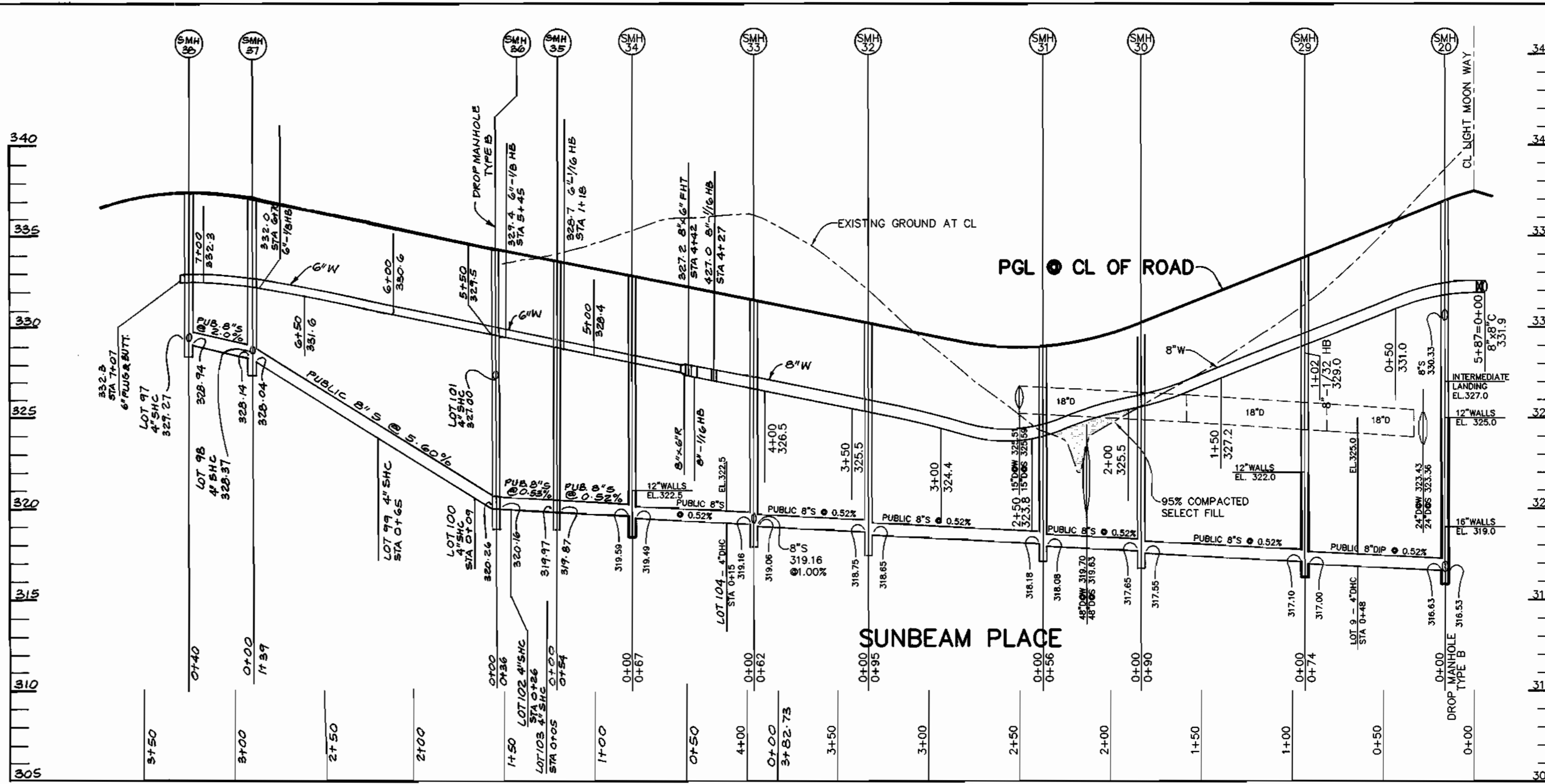
SCALE:
 HOR. - 1" = 50'
 VERT. - 1" = 5'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Michael D. ...</i> CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Arthur E. Muegge</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	 RIEMER MUEGGE a division of Patton Harris Rust & Associates, pc ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS 8818 Centre Park Drive, Columbia, MD 21046 • tel 410.997.8800 fax 410.997.8882 99212/FINALS WS7.DWG	 STATE OF MARYLAND ARTHUR E. MUEGGE #8707	DES: C.J.R. DRN: DAM CHK: C.J.R. DATE: 6/13/01 C.J.R. REVISED SMH 10 - SMH 9 8-28-01 BY NO. REVISION DATE	<p align="center">PROFILES OF WATER AND SEWER EXTENSIONS</p>	<p align="center">WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA ONE LOTS 1-39 & PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3832-D</p>	SCALE AS SHOWN SHEET 7 OF 7
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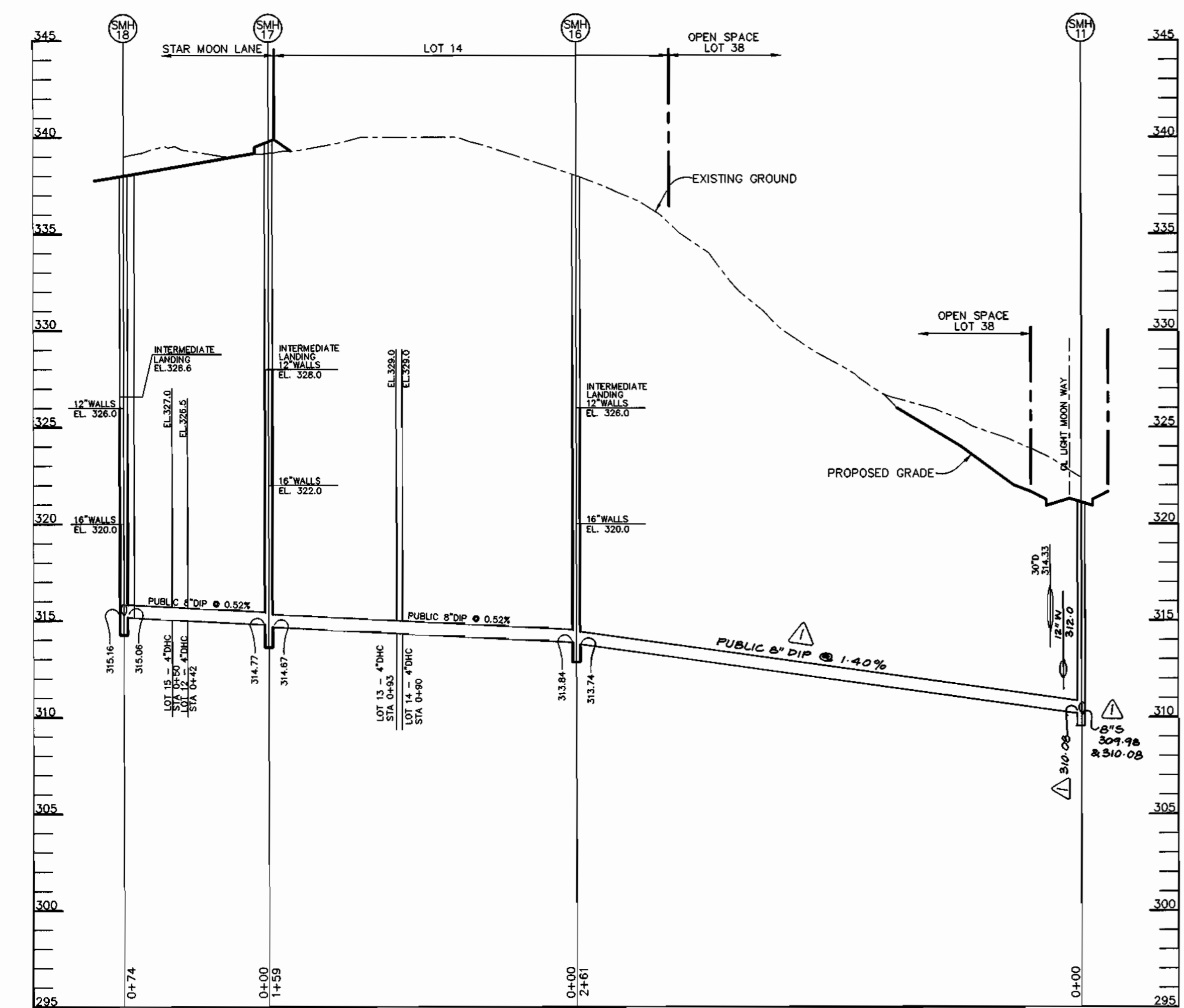
P:\projects\99212\FINALS\WS7.dwg Mod Jun 13 11:53:19 2001 RIEMER MUEGGE A DIVISION OF PHRISA



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



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



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

STRUCTURE SCHEDULE						STRUCTURE SCHEDULE			
STRUCTURE	TYPE	LOCATION	TOP	REMARKS	STRUCTURE	TYPE	LOCATION	TOP	REMARKS
SMH 1	4'-0" DIA. MANHOLE	N 537,356 E 1,355,639	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	SMH 36	4'-0" DIA. MANHOLE	6' RT OF LP STA 1+54 SUNBEAM PLACE	334.1	HOCO STD. DETAIL G 5.12
SMH 2	4'-0" DIA. MANHOLE	N 537,246 E 1,355,475	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	SMH 37	4'-0" DIA. MANHOLE	6' RT OF LP STA 2+89 SUNBEAM PLACE	336.8	HOCO STD. DETAIL G 5.12
SMH 3	4'-0" DIA. MANHOLE	N 537,232 E 1,355,325	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12	SMH 38	4'-0" DIA. MANHOLE	5' RT OF LP STA 3+25 SUNBEAM PLACE	337.1	HOCO STD. DETAIL G 5.12
SMH 4	4'-0" DIA. MANHOLE	N 537,200 E 1,355,247	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12					
SMH 5	4'-0" DIA. MANHOLE	N 537,173 E 1,355,150	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12					
SMH 6	4'-0" DIA. MANHOLE	N 537,128 E 1,355,105	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12					
SMH 7	4'-0" DIA. TYPE 'B' MANHOLE	N 537,136 E 1,355,061	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12 & S 1.32					
SMH 8	4'-0" DIA. MANHOLE	N 537,148 E 1,355,002	290.0	HOCO STD. DETAIL G 5.12					
SMH 9	4'-0" DIA. MANHOLE	N 537,002 E 1,354,944	299.0	HOCO STD. DETAIL G 5.12					
SMH 10	4'-0" DIA. MANHOLE	N 537,049 E 1,354,795	320.87	HOCO STD. DETAIL G 5.12					
SMH 11	4'-0" DIA.		321.21	HOCO STD. DETAIL G 5.12					
SMH 12	4'-0" DIA.	4' RT OF CL STA 3+70 LIGHT MOON WAY	324.90	HOCO STD. DETAIL G 5.12					
SMH 13	4'-0" DIA. MANHOLE	3' LT OF CL STA 0+19 PURPLE CLOUD ROW	336.30	HOCO STD. DETAIL G 5.12					
SMH 14	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+00 PURPLE CLOUD ROW	337.16	HOCO STD. DETAIL G 5.12					
SMH 15	4'-0" DIA. MANHOLE	10' RT OF CL STA 1+68 PURPLE CLOUD ROW	337.00	HOCO STD. DETAIL G 5.12					
SMH 16	4'-0" DIA. MANHOLE	N 537,013 E 1,354,452	18" ABOVE EX. GR.	HOCO STD. DETAIL G 5.12					
SMH 17	4'-0" DIA. MANHOLE	6' LT OF LP STA 1+50 STAR MOON LANE	339.70	HOCO STD. DETAIL G 5.12					
SMH 18	4'-0" DIA. MANHOLE	5' LT OF CL STA 8+40 STAR MOON LANE	338.00	HOCO STD. DETAIL G 5.12					
SMH 19	4'-0" DIA. MANHOLE	4' LT OF CL STA 7+38 STAR MOON LANE	335.90	HOCO STD. DETAIL G 5.12					
SMH 20	4'-0" DIA. TYPE 'B' MANHOLE	16' RT OF CL STA 8+18 STAR MOON LANE	338.90	HOCO STD. DETAIL G 5.12 & S 1.32					
SMH 21	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+63 STAR MOON LANE	339.69	HOCO STD. DETAIL G 5.12					
SMH 22	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+37 STAR MOON LANE	341.00	HOCO STD. DETAIL G 5.12					
SMH 23	4'-0" DIA. MANHOLE	7' LT OF CL STA 5+06 STAR MOON LANE	342.54	HOCO STD. DETAIL G 5.12					
SMH 24	4'-0" DIA. MANHOLE	7' LT OF CL STA 3+93 STAR MOON LANE	346.35	HOCO STD. DETAIL G 5.12					
SMH 25	4'-0" DIA. MANHOLE	7' RT OF CL STA 3+36 STAR MOON LANE	348.53	HOCO STD. DETAIL G 5.12					
SMH 26	4'-0" DIA. MANHOLE	7' LT OF CL STA 2+83 STAR MOON LANE	347.46	HOCO STD. DETAIL G 5.12					
SMH 27	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+67 STAR MOON LANE	348.74	HOCO STD. DETAIL G 5.12					
SMH 28	4'-0" DIA. MANHOLE	3' LT OF CL STA 1+01 STAR MOON LANE	349.39	HOCO STD. DETAIL G 5.12					
SMH 29	4'-0" DIA. MANHOLE	4' RT OF CL STA 0+93 SUNBEAM PLACE	333.73	HOCO STD. DETAIL G 5.12					
SMH 30	4'-0" DIA. MANHOLE	7' RT OF CL STA 1+83 SUNBEAM PLACE	330.04	HOCO STD. DETAIL G 5.12					
SMH 31	4'-0" DIA. MANHOLE	7' RT OF CL STA 2+37 SUNBEAM PLACE	328.79	HOCO STD. DETAIL G 5.12					
SMH 32	4'-0" DIA. MANHOLE	4' RT OF CL STA 3+33 SUNBEAM PLACE	330.11	HOCO STD. DETAIL G 5.12					
SMH 33	4'-0" DIA. MANHOLE	4' RT OF LP STA 0+15 SUNBEAM PLACE	331.37	HOCO STD. DETAIL G 5.12					
SMH 34	4'-0" DIA. MANHOLE	18' LT OF LP STA 0+74 SUNBEAM PLACE	334.1	HOCO STD. DETAIL G 5.12					
SMH 35	4'-0" DIA. MANHOLE	6' RT OF LP STA 1+22 SUNBEAM PLACE	335.8	HOCO STD. DETAIL G 5.12					

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Michael J. ... CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Arthur E. Muegge #8707 CHIEF, DEVELOPMENT ENGINEERING DIVISION	RIEMER MUEGGE Patton Harris Rust & Associates, pc ENGINEERS • SURVEYORS • PLANNERS LANDSCAPE ARCHITECTS • ENVIRONMENTAL SPECIALISTS 8818 Centre Park Circle, Columbia, MD 21046 • 410.997.2800 • FAX 410.997.8832 99212/FINALS WS6.DWG	DES: C.J.R. DRN: DAM CHK: C.J.R. DATE: 6/13/01	REVISIONS 01.04.02 REVISED SUNBEAM PLACE PROFILE 01.04.02 REVISED SMH 16 - SMH 11 & SCHEDULE B: 28-01	PROFILES OF WATER AND SEWER EXTENSIONS 600' SCALE MAP NO. 47 BLOCK NO. 3, B & 9	WATER AND SEWER EXTENSION EMERSON SECTION ONE AREA ONE LOTS 1-39 & PARCEL A 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 34-3832-D	SCALE AS SHOWN SHEET 6 OF 7
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