

SHEET INDEX	
1	TITLE SHEET
2	PLAN VIEW & PROFILES OF WATER MAINS

WATER EXTENSIONS

COLUMBIA TOWN CENTER

SECTION 7, AREA 6


PARCEL C-1, PART 2

5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 44-4150-D

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 service. 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, NAD 83/91.
- All vertical controls are based on NAVD 88.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires 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.
- 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.
- The contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:

AT&T	1-800-252-1133
BGE (Contractor Services)	410-850-4620
BGE (Underground Damage Control)	410-787-9068
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 / 410-224-9210
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- 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.
- 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(g) of the Howard County Code.

WATER NOTES

- All water mains shall be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains shall have a minimum of 3'-6" of 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 installed in accordance with Standard Details. 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.

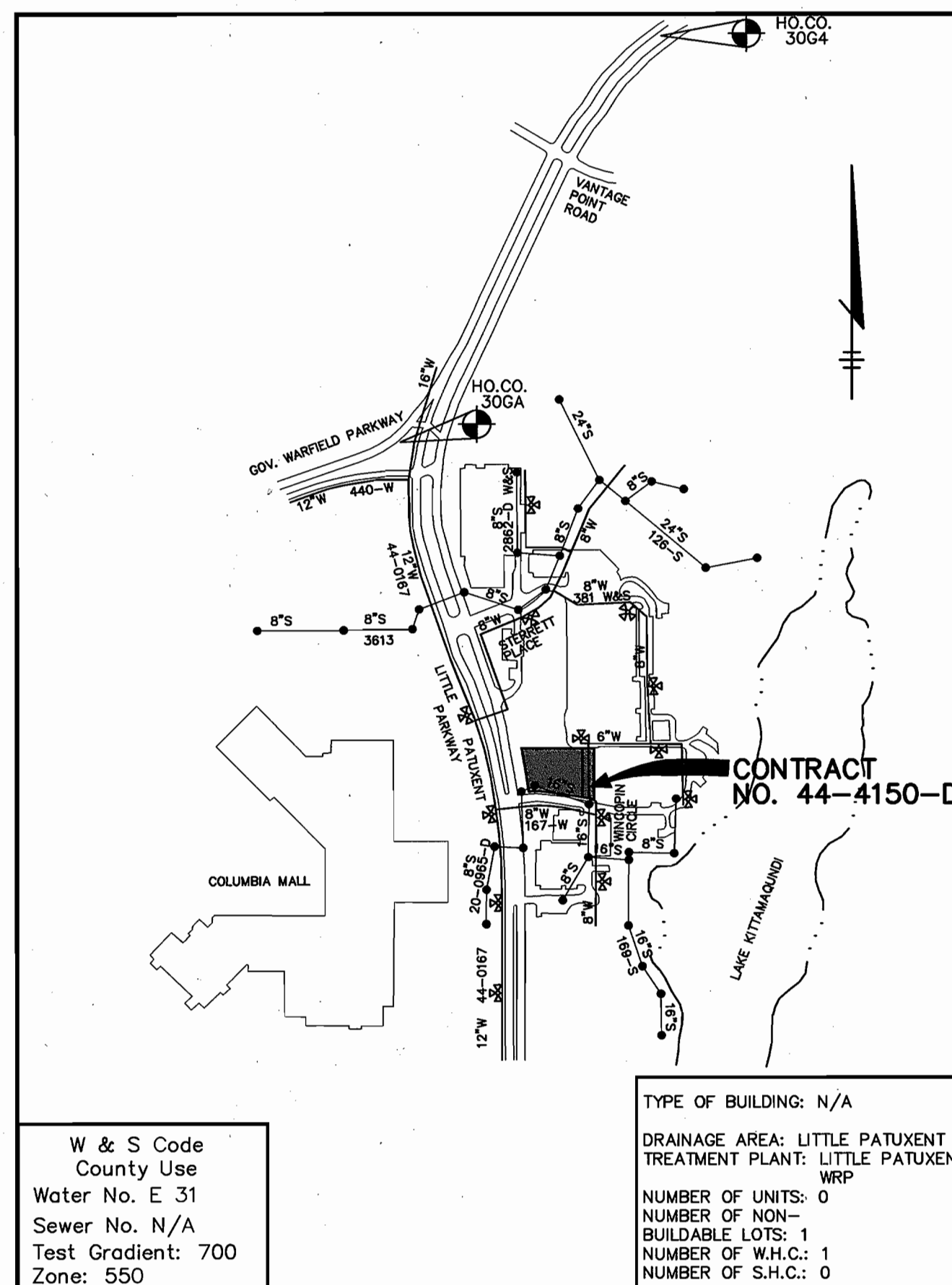
BENCH MARK

CONTROL STATION 30GA
ELEVATION 340.608
N 566,053.579
E 1,352,177.629

CONTROL STATION 30G4
ELEVATION 360.979
N 567,815.206
E 1,353,271.285

SEQUENCE OF CONSTRUCTION

- OBTAIN PLUMBING PERMIT.
- REPAIR OR REPLACE ANY SEDIMENT CONTROL DEVICE (SUPER SILT FENCE) INSTALLED UNDER SDP-03-136. (1/2 DAY)
- INSTALL WATER MAIN (4 DAYS)
- UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)



W & S Code
County Use
Water No. E 31
Sewer No. N/A
Test Gradient: 700
Zone: 550

TYPE OF BUILDING: N/A
DRAINAGE AREA: LITTLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT WRP
NUMBER OF UNITS: 0
NUMBER OF NON-BUILDABLE LOTS: 1
NUMBER OF W.H.C.: 1
NUMBER OF S.H.C.: 0

VICINITY MAP
SCALE: 1"=600'

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
6" WATER	10 LF			
6" V	1 EA			
6" PLUG & BUTTRESS	1 EA			
8"X6" T	1 EA			
8" WATER	268 LF			
8" 1/BHB	4 EA			
8" 1/BVB	2 EA			

NAME OF UTILITY CONTRACTOR:

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-03-136

CHECKBOX
AS-BUILT DATE
SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.

Jim Meyer 7/17/03
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John K. Robertson 7/17/03
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
PHRA
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282



DES: C.J.R.

DRN: DRH

CHK: DAM

DATE: 7/3/03

BY NO. REVISION DATE

TITLE SHEET

600' SCALE MAP NO. 36 BLOCK NO. 2

COLUMBIA TOWN CENTER
SECTION 7 AREA 6
PARCEL C-1, PART 2
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-4150-D

SCALE AS SHOWN

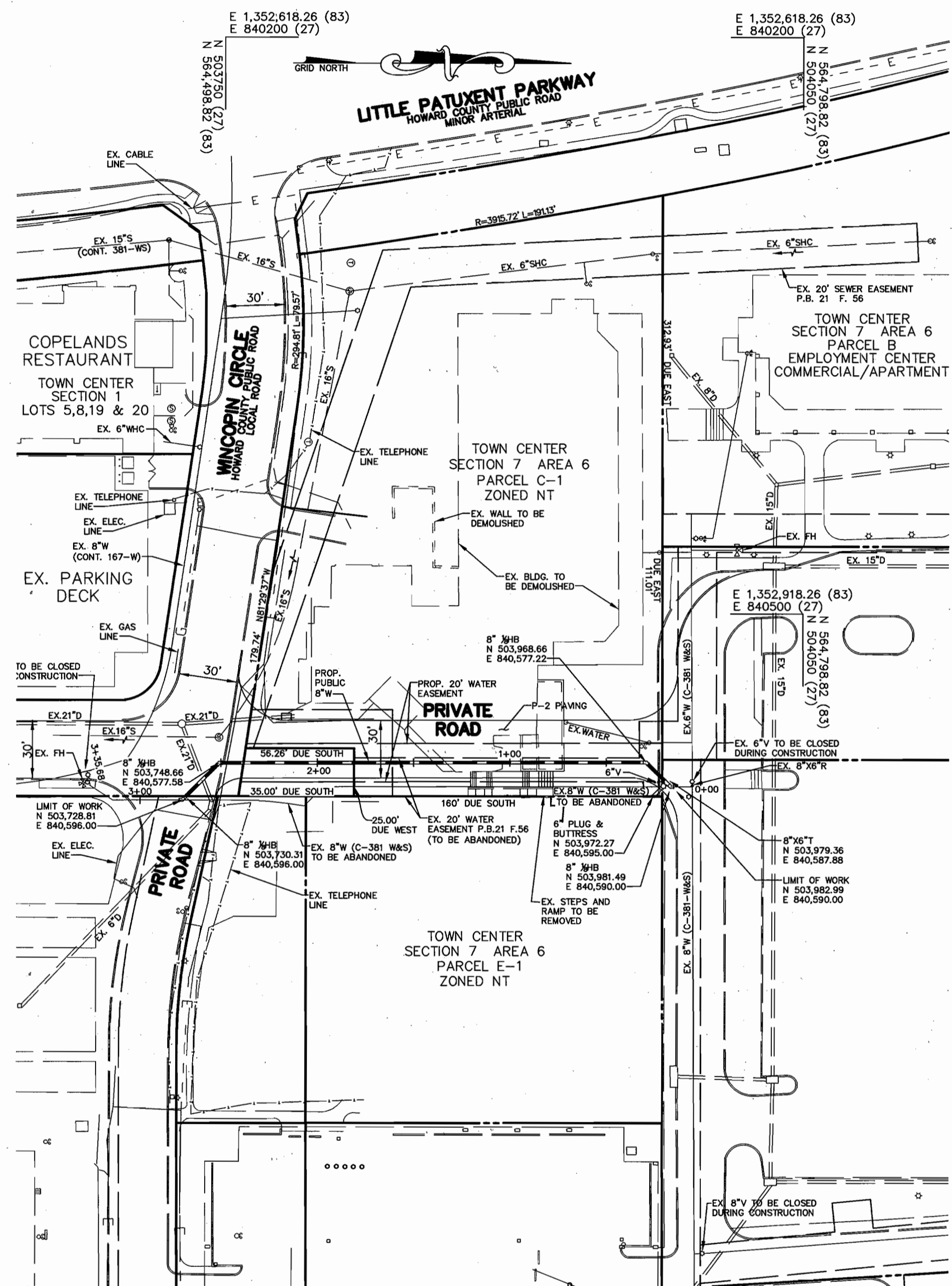
SHEET 1 OF 2

R.H. Bunn 7-10-03
CHIEF, BUREAU OF UTILITIES DATE

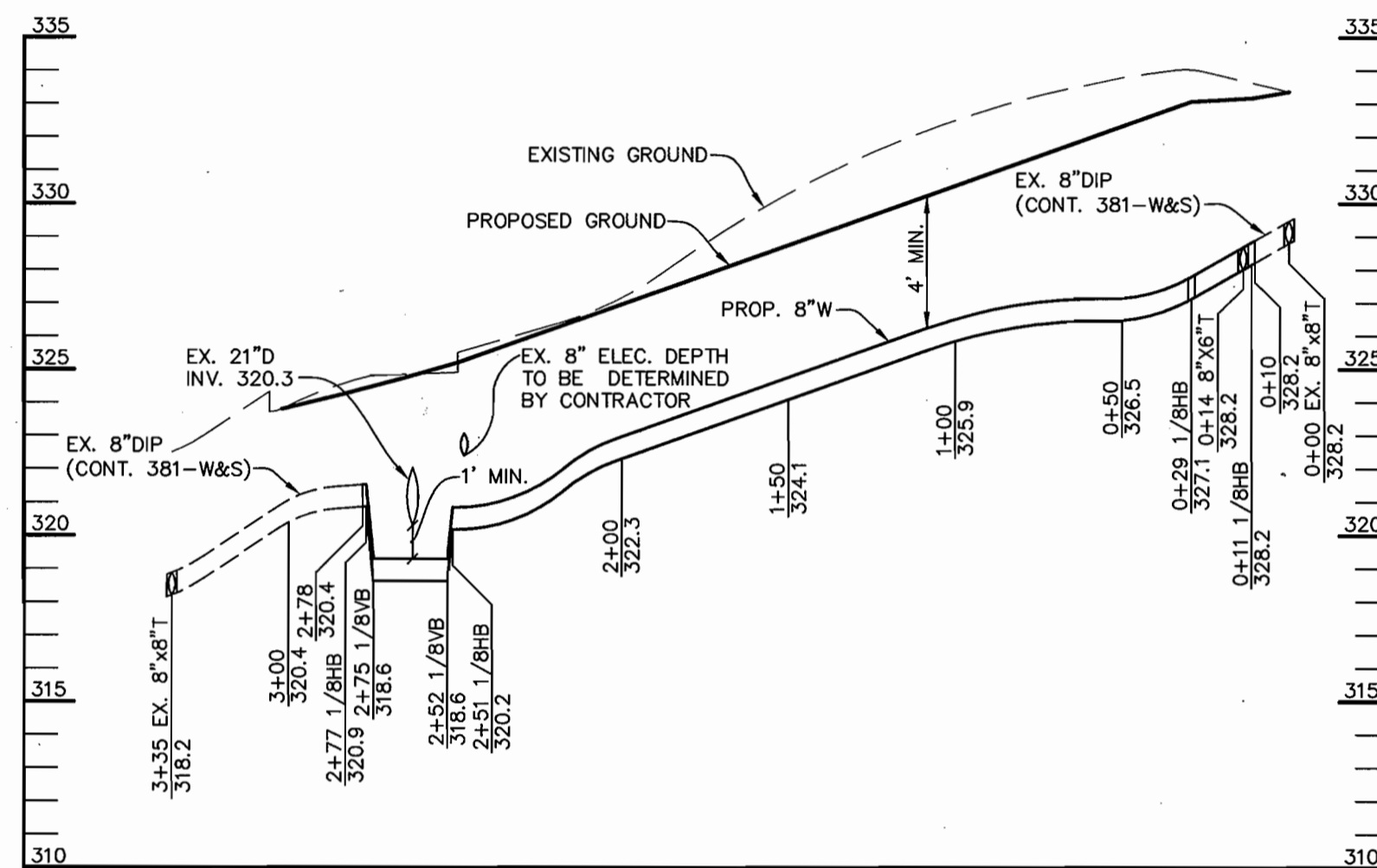
Chris Dammer 7/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHRISTOPHER J. REID #19949

NAD 83 COORDINATES ARE PROVIDED FOR BUREAU OF UTILITIES USE ONLY, NOT FOR CONSTRUCTION.



PLAN
SCALE: 1"=50'



WATER PROFILE

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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
PHRA
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282



DES: C.J.R.

DRN: DRH

CHK: DAM

DATE: 7/3/03

BY NO. REVISION DATE

PLAN VIEW AND PROFILES
OF WATER MAINS

600' SCALE MAP NO. 36 BLOCK NO. 2

COLUMBIA TOWN CENTER
SECTION 7 AREA 6
PARCEL C-1, PART 2
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-4150-D

SCALE
AS
SHOWN

SHEET
2 OF 2

Robert B... 7-10-03
CHIEF, BUREAU OF UTILITIES DATE

Christopher J. Reid 7/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SHEET INDEX	
1	TITLE SHEET
2	PLAN VIEW & PROFILES OF WATER MAINS

SEWER AND WATER EXTENSIONS

COLUMBIA TOWN CENTER

SECTION 7, AREA 6


PARCEL C-1, PART 2

5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-4150-D

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 service. 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, NAD 83/91.
- All vertical controls are based on NAVD 88.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires 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.
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BGE (Underground Damage Control)	410-787-9068
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Colonial Pipeline Co.	410-795-1390
Miss Utility	1-800-257-7777
State Highway Administration	410-531-5533
Verizon	1-800-743-0033 / 410-224-9210
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- 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.
- The contractor shall notify the Bureau of Highways, Howard County, at 410-313-7450 at least five working days before open cutting or boring/packing 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(c) of the Howard County Code.

WATER NOTES

- All water mains shall be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains shall have a minimum of 3'-6" of 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 installed in accordance with Standard Details. 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.

SEWER NOTES

- 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 10" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frames and covers, standard Detail 03-02. Where watertight manhole frames and covers are used, set top of frame 1'-0" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates that cellar cannot be served.

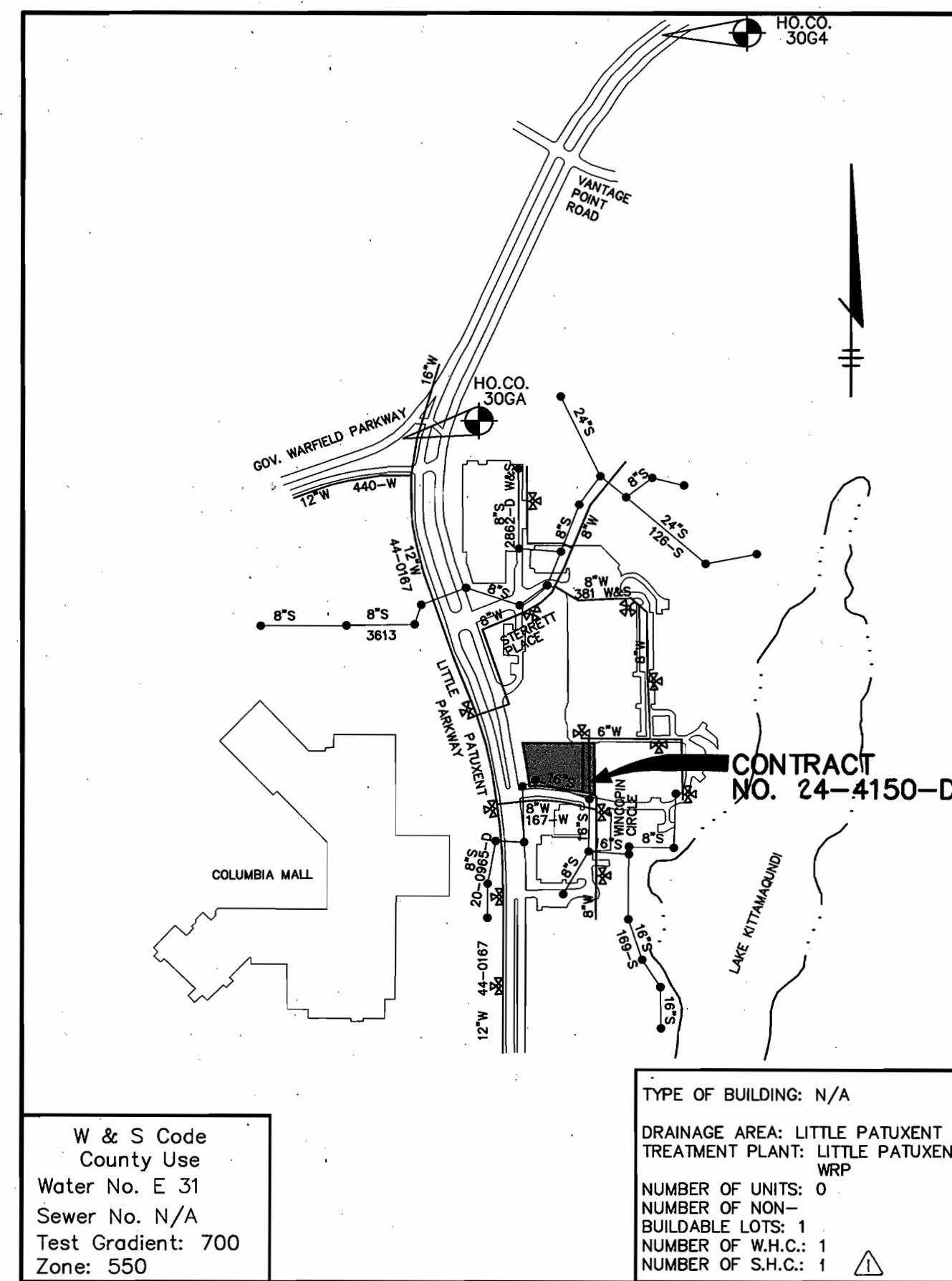
BENCH MARK

CONTROL STATION 306A
ELEVATION 340.608
N 566,053.579
E 1,352,177.629

CONTROL STATION 3064
ELEVATION 360.979
N 567,815.206
E 1,353,271.285

SEQUENCE OF CONSTRUCTION

- OBTAIN PLUMBING PERMIT.
- REPAIR OR REPLACE ANY SEDIMENT CONTROL DEVICE (SUPER SILT FENCE) INSTALLED UNDER SDP-03-136. (½ DAY)
- INSTALL WATER MAIN (4 DAYS)
- UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)



W & S Code
County Use
Water No. E 31
Sewer No. N/A
Test Gradient: 700
Zone: 550

TYPE OF BUILDING: N/A
DRAINAGE AREA: LITTLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT
WRP

NUMBER OF UNITS: 0
NUMBER OF NON-BUILDABLE LOTS: 1
NUMBER OF W.H.C.: 1
NUMBER OF S.H.C.: 1

VICINITY MAP
SCALE: 1"=600'

4'-0" DIA. MANHOLE	1 EA			
8" SEWER	22 LF			
8" V	1 EA			
QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
6" WATER	10 LF			
6" V	1 EA			
6" PLUG & BUTTRESS	1 EA			
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8" WATER	268 LF			
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NAME OF UTILITY CONTRACTOR:

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-03-136

CHECKBOX

AS-BUILT DATE

SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.

Jim Mearns 7/17/03
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John K. Robertson 7/17/03
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

R. H. B... 7-10-03
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

... 7/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.

P-H-R-A

8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

PROFESSIONAL ENGINEER

CHRISTOPHER J. REID #19949

DES: C.J.R.					
DRN: DRH					
CHK: DAM					
DATE: 7/3/03					
BY: WAD					
NO. 1	ADDED SEWER				
REVISION					
DATE					

TITLE SHEET

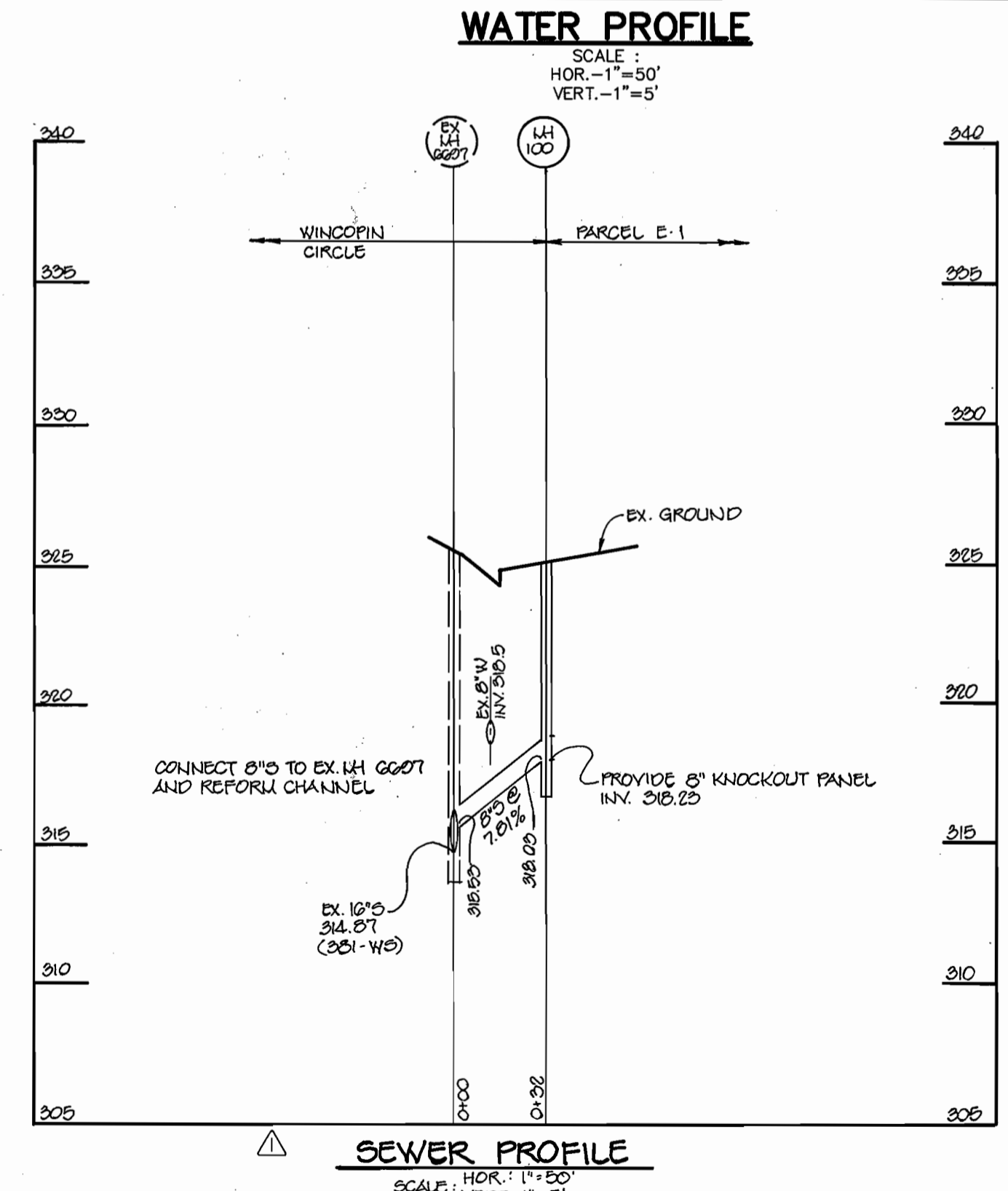
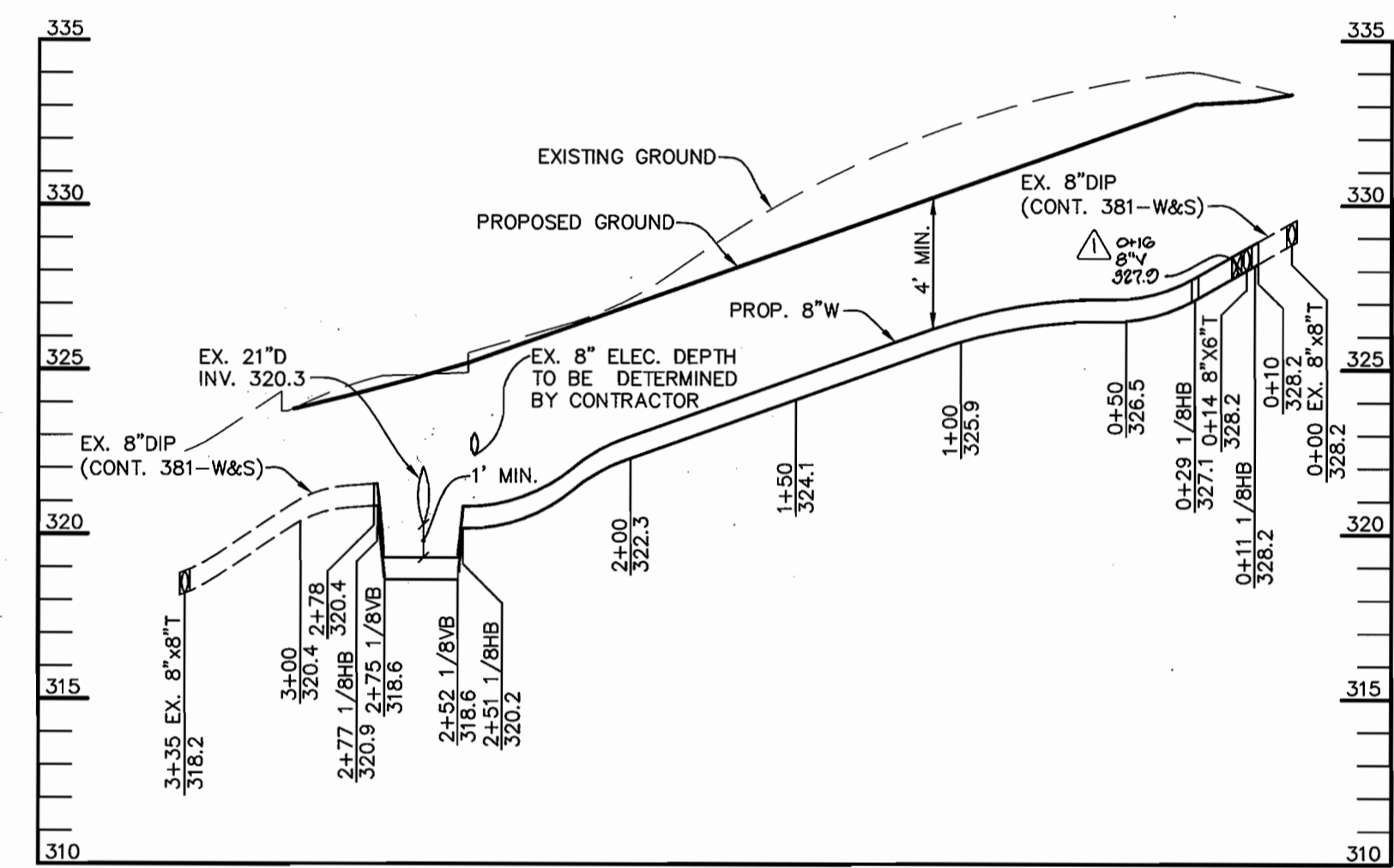
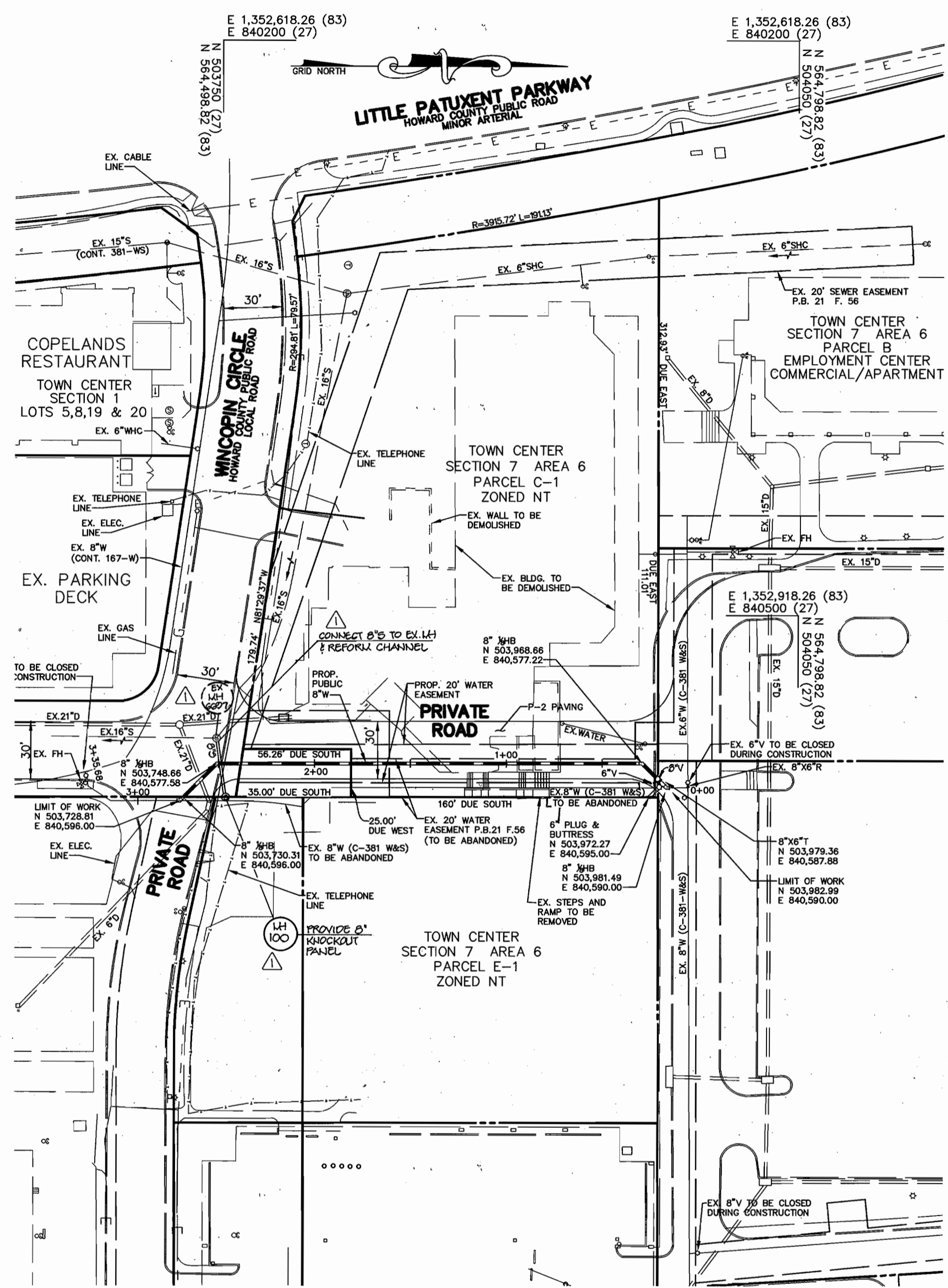
600' SCALE MAP NO. 36 BLOCK NO. 2

COLUMBIA TOWN CENTER
SECTION 7 AREA 6
PARCEL C-1, PART 2
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 24-4150-D

SCALE AS SHOWN

SHEET 1 OF 2

NAD 83 COORDINATES ARE PROVIDED FOR BUREAU OF UTILITIES USE ONLY, NOT FOR CONSTRUCTION.



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 7-10-03 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND 7/21/03 CHIEF, DEVELOPMENT ENGINEERING DIVISION	Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. PHRA 8818 Centra Park Drive Columbia, MD 21045 T 410.997.9900 F 410.997.9282	DES: C.J.R. DRN: DRH CHK: DAM DATE: 7/3/03 CHRISTOPHER J. REID #19949	DESIGNED BY: C.J.R. DRAWN BY: DRH CHECKED BY: DAM DATE: 7/3/03	600' SCALE MAP NO. 36 BLOCK NO. 2	COLUMBIA TOWN CENTER SECTION 7 AREA 6 PARCEL C-1, PART 2 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 24-4150-D	SCALE AS SHOWN SHEET 2 OF 2
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SEWER AND WATER EXTENSIONS

COLUMBIA TOWN CENTER

SECTION 7, AREA 6


PARCEL C-1, PART 2

5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-4150-D

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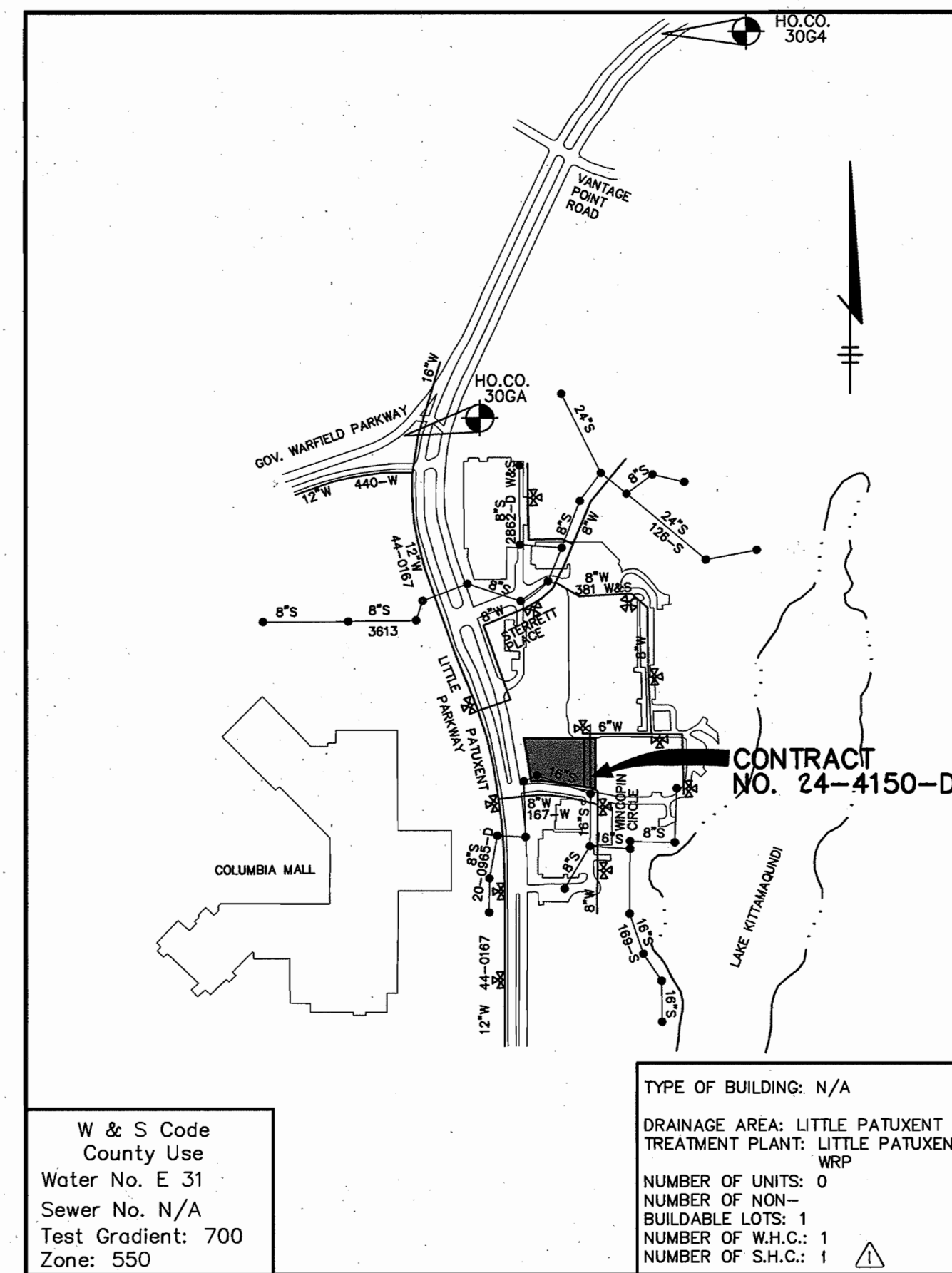
BENCH MARK

CONTROL STATION 306A
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E 1,352,177.629

CONTROL STATION 3064
ELEVATION 360.979
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E 1,353,271.285

SEQUENCE OF CONSTRUCTION

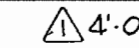


- OBTAIN PLUMBING PERMIT.
- REPAIR OR REPLACE ANY SEDIMENT CONTROL DEVICE (SUPER SILT FENCE) INSTALLED UNDER SDP-03-136. (1/2 DAY)
- INSTALL WATER MAIN (4 DAYS)
- UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)



W & S Code
County Use
Water No. E 31
Sewer No. N/A
Test Gradient: 700
Zone: 550

TYPE OF BUILDING: N/A
DRAINAGE AREA: LITTLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT
WRP
NUMBER OF UNITS: 0
NUMBER OF NON-BUILDABLE LOTS: 1
NUMBER OF W.H.C.: 1
NUMBER OF S.H.C.: 1

VICINITY MAP
SCALE: 1"=600'

	1 EA	1 EACH	PRECAST CONCRETE	ATLANTIC CONC. PRODUCTS
	22 LF			DIAMOND/HUGHES PLASTIC
	1 EA			KENNEDY/HUGHES
QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
6" WATER	10 LF		D. I. P.	GRIFFIN PIPE PROD.
6" V	1 EA	2 EACH	D. I. P.	KENNEDY/HUGHES
6" PLUG & BUTTRESS	1 EA	1 EACH		
8"x6" T	1 EA	1 EACH		TYLER/HUGHES
8" WATER	268 LF		D. I. P.	GRIFFIN PIPE PROD.
8" 1/BHB	4 EA	2 EACH	D. I. P.	
8" 1/BVB	2 EA	ELIMINATED		

NAME OF UTILITY CONTRACTOR: H. T. I.

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-03-136

CHECKBOX	
AS-BUILT DATE	MAY '04
SURVEY AND DRAFTING DIVISION	

Review for Howard Soil Conservation District and meets technical requirements.

Tom Murray 7/17/03
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John K. Robertson 7/17/03
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

R. H. B... 7-10-03
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

... 7/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Patton Harris Rust & Associates, PC
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PHRA
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

STATE OF MARYLAND
PROFESSIONAL ENGINEER
CHRISTOPHER J. REID #19949

DES: C.J.R.					
DRN: DRH					
CHK: DAM					
DATE: 7/3/03					
BY: WAD	NO.	ADDED SEWER			11-6-03
NO.		REVISION			

TITLE SHEET

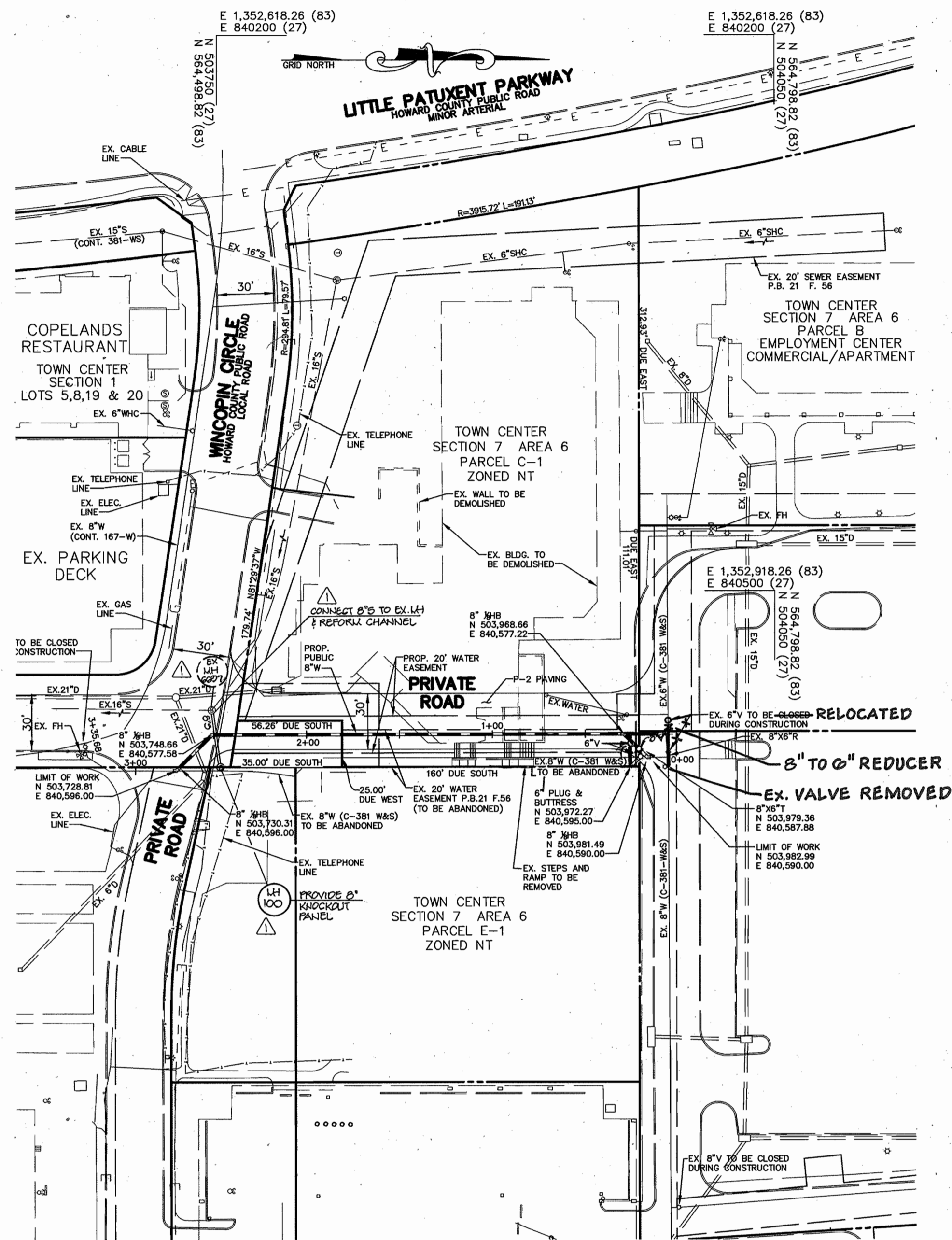
600' SCALE MAP NO. 36 BLOCK NO. 2

AS BUILT
DATE: MAY 2004

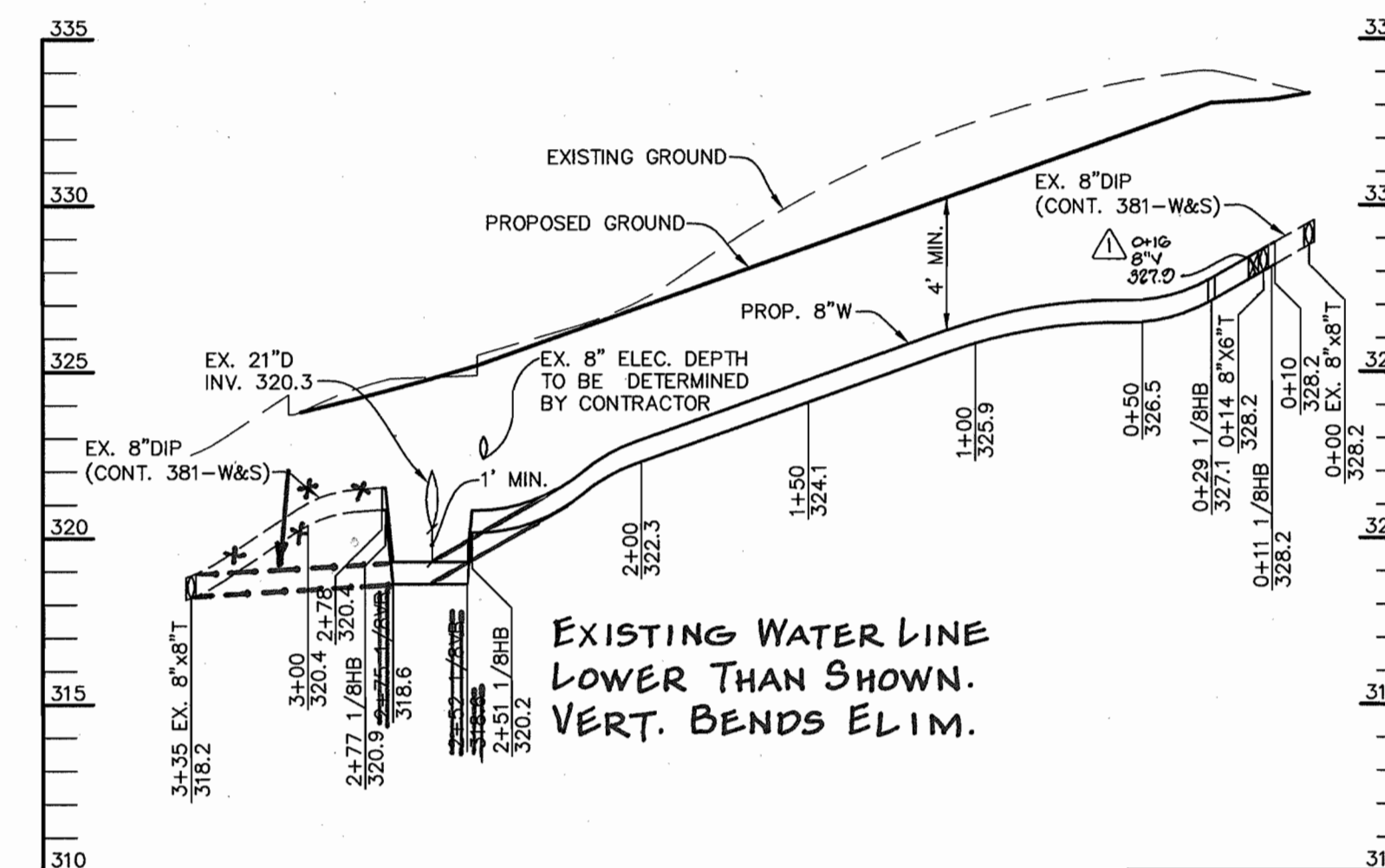
COLUMBIA TOWN CENTER
SECTION 7 AREA 6
PARCEL C-1, PART 2
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 24-4150-D

SCALE AS SHOWN
SHEET 1 OF 2

NAD 83 COORDINATES ARE PROVIDED FOR BUREAU OF UTILITIES USE ONLY, NOT FOR CONSTRUCTION.



PLAN SCALE: 1"=50'

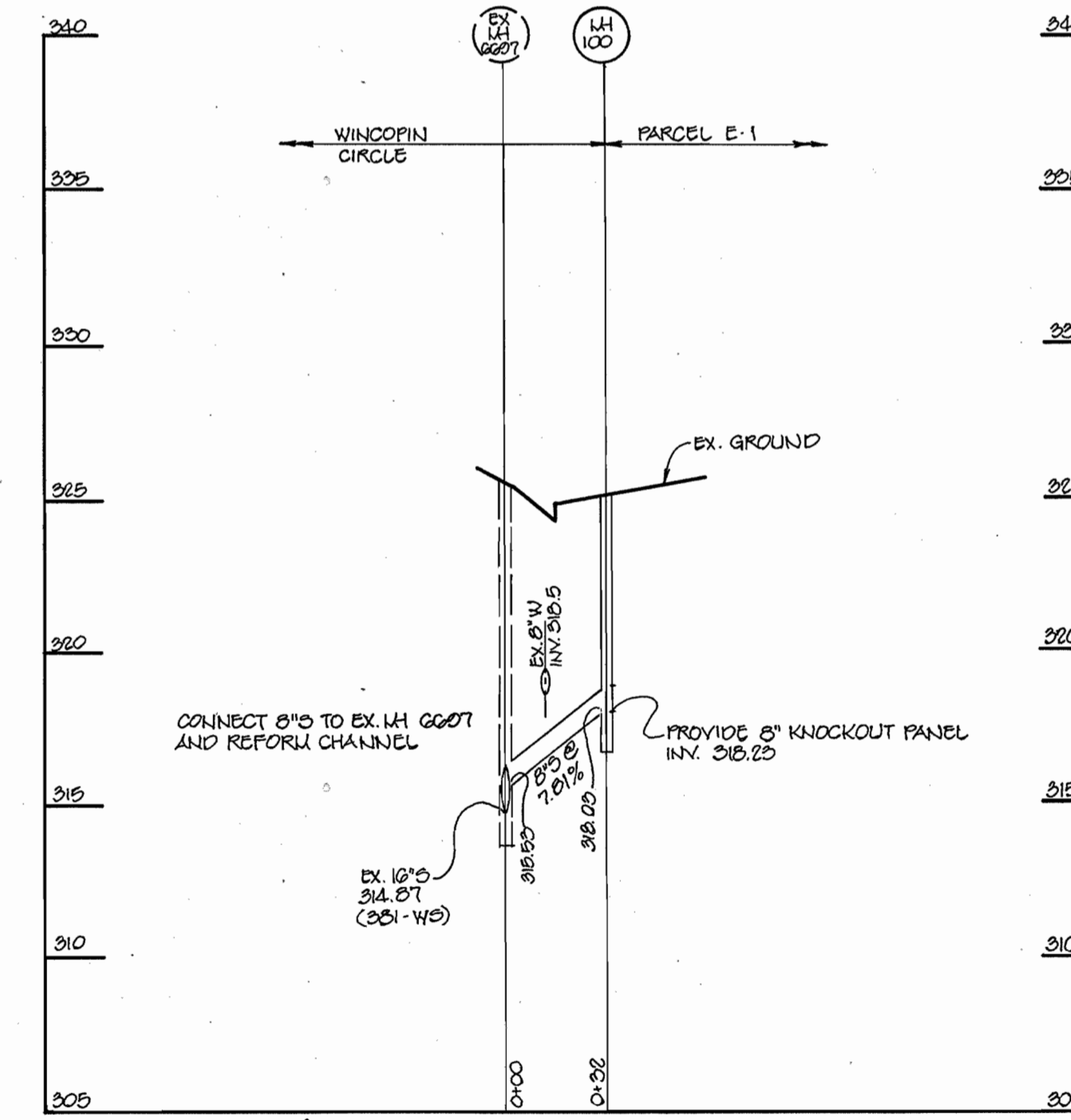


WATERLINE BUILDING CONN. ASBUILTS

Ex. F.H. To W.B.C. 138'
 8" VALVE To W.B.C. 20.5'
 6" VALVE To W.B.C. 25.5'
 6" W.B.C. VALVE To W.B.C. 14'

WATER PROFILE

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



NEW SANITARY MH ASBUILTS

Ex. F.H. To SMH-100 73.5'
 Ex. S.D. MH To SMH-100 42.5'
 Ex. SAN. MH No. 0007 To SMH-100 29.3'

AS BUILT

DATE: MAY 2004

SEWER PROFILE

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

PLAN VIEW AND PROFILES OF WATER AND SEWER MAINS

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 PHRA
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282



DES: C.J.R.

DRN: DRH

CHK: DAM

DATE: 7/3/03

Robert B... 7-10-03
 CHIEF, BUREAU OF UTILITIES DATE

Christopher J. Reid 7/2/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHRISTOPHER J. REID #19949

BY	NO.	REVISION	DATE
WAD	1	ADDED SEWER TO PARCEL E-1, SEWER PROFILE & 8" V	11-6-00

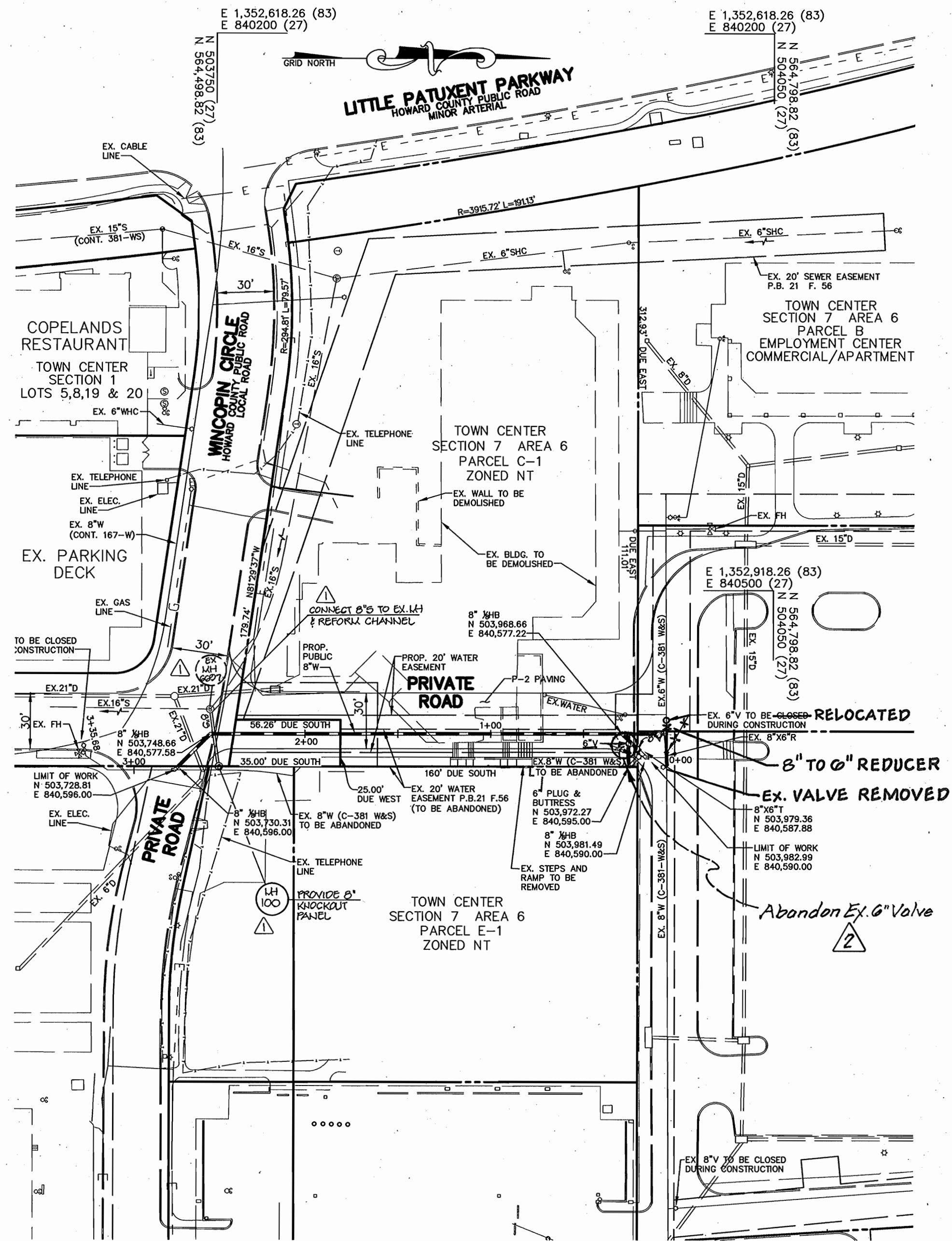
600' SCALE MAP NO. 36 BLOCK NO. 2

COLUMBIA TOWN CENTER
 SECTION 7 AREA 6
 PARCEL C-1, PART 2
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT 24-4150-D

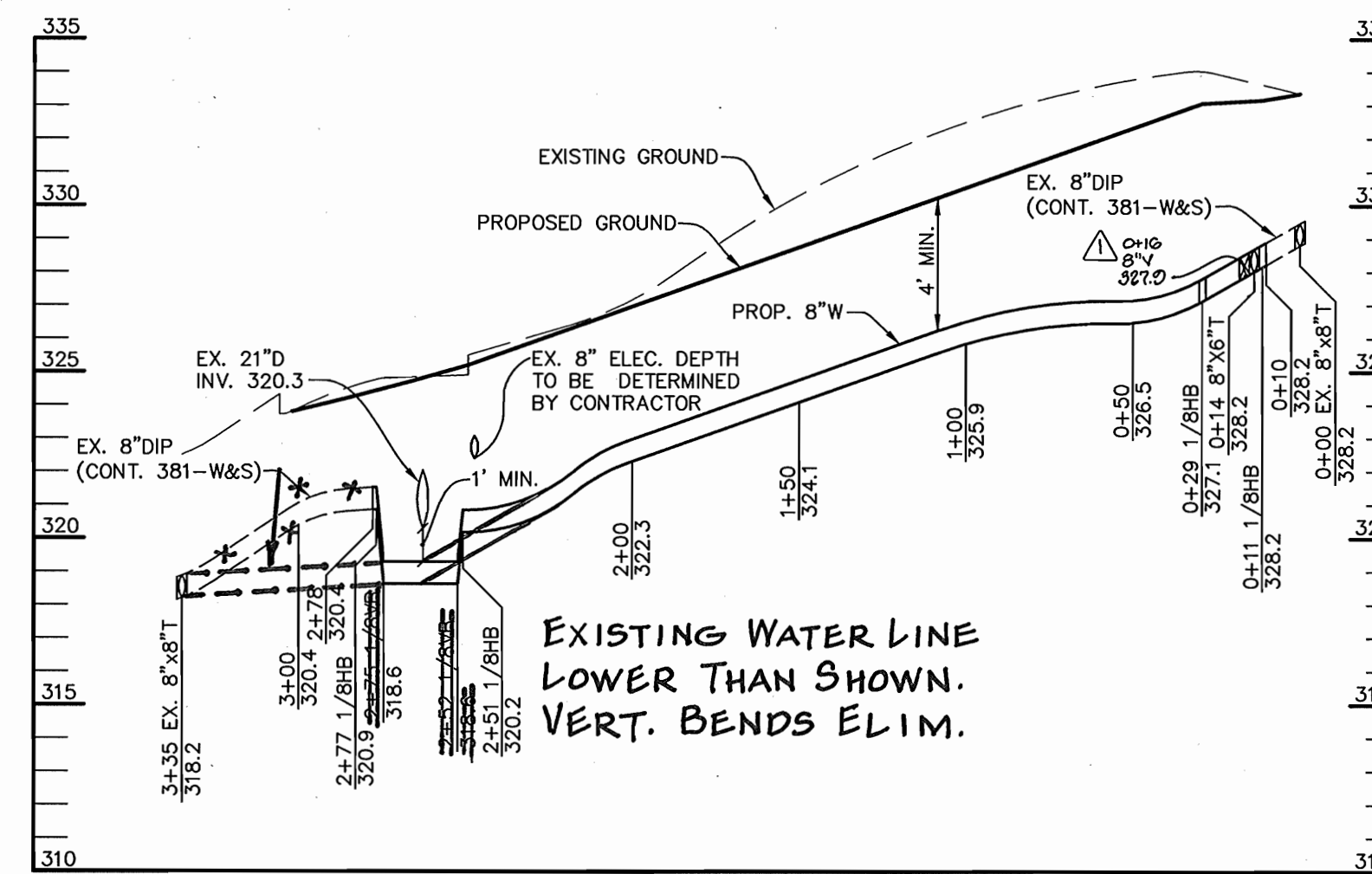
SCALE AS SHOWN

SHEET 2 OF 2

NAD 83 COORDINATES ARE PROVIDED FOR BUREAU OF UTILITIES USE ONLY, NOT FOR CONSTRUCTION.



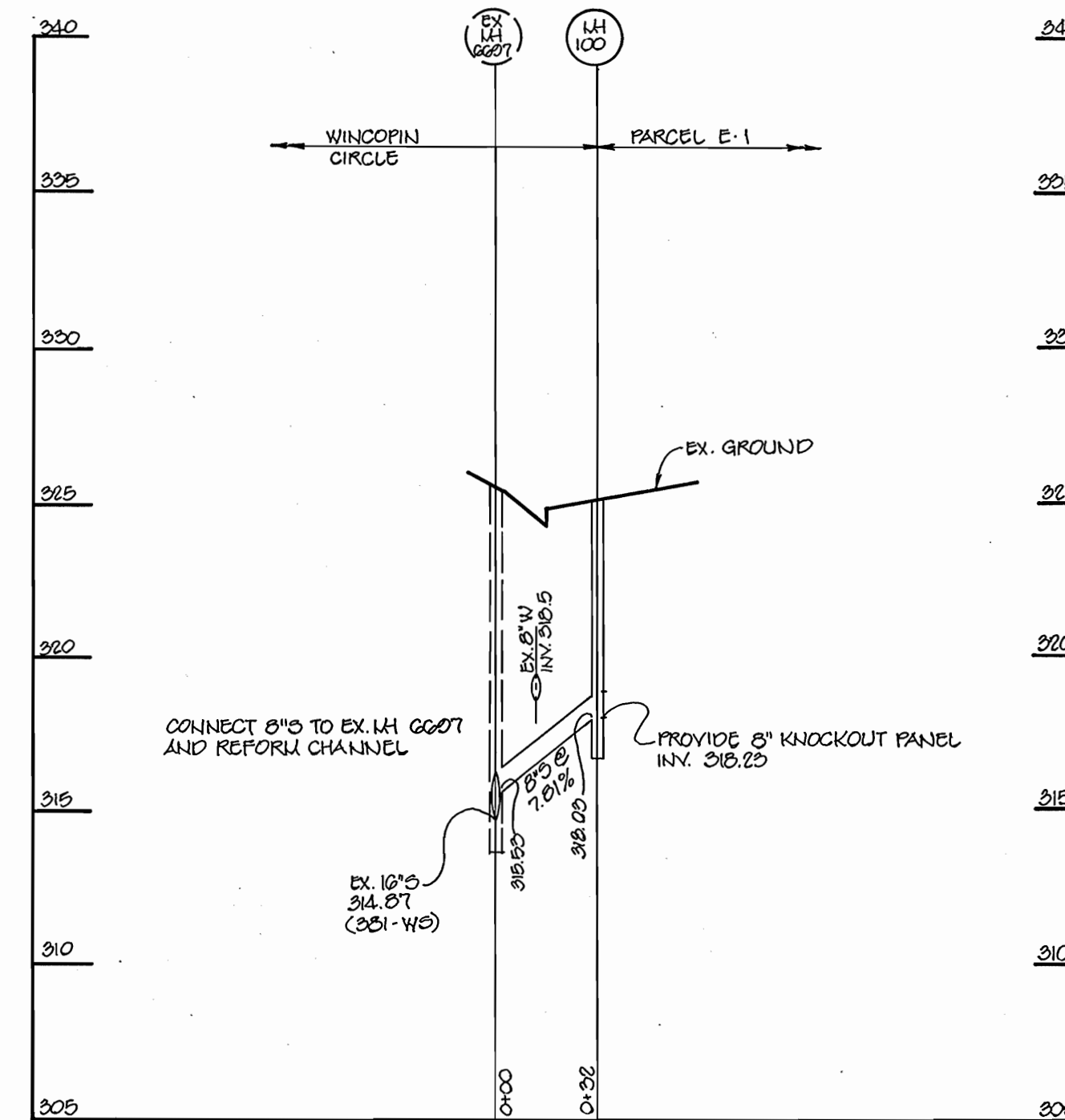
PLAN SCALE: 1"=50'



WATER PROFILE

WATERLINE BUILDING CONN. ASBUILTS

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AS BUILT

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DES: C.J.R.

DRN: DRH

CHK: DAM

DATE: 7/3/03

BY: GVC Z

NO. 2

REVISION: Abandoned Ex. 6" V

DATE: 11-6-03

PLAN VIEW AND PROFILES
OF WATER AND SEWER MAINS

600' SCALE MAP NO. 36 BLOCK NO. 2

COLUMBIA TOWN CENTER
SECTION 7 AREA 6
PARCEL C-1, PART 2
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 24-4150-D

SCALE AS SHOWN

SHEET 2 OF 2

Robert B. ... 7-10-03
CHIEF, BUREAU OF UTILITIES

Christopher J. Reid 7/21/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION