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No.	Description
1	Title Sheet
2	Plan & Profile Sheet

BENCHMARKS:

1. Howard County Control Station 46FA Elevation = 403.65' NAD 83 Coordinates: N535140.866, E1346462.690.

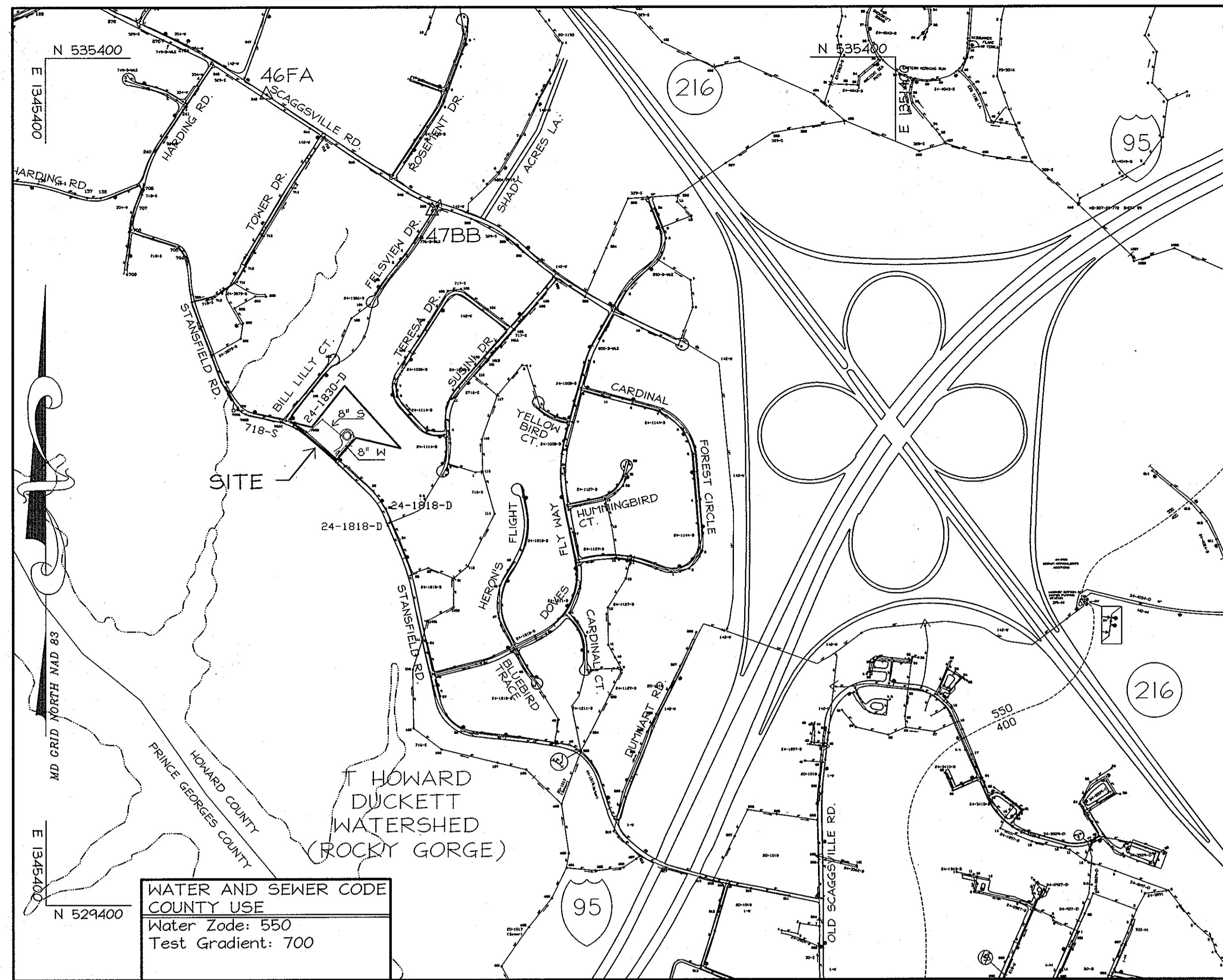
Standard stamped disc set on a 3' deep column of concrete located on the Northeast side of Scaggsville Road, 5.2' off edge of paving, 30.5' from G4E Pole #640720 and 33.5' from a gate corner. Pole and gate located on the Northeast side of Scaggsville Road.

2. Howard County Control Station 47BB Elevation = 398.56' NAD 83 Coordinates: N534316.917, E1348131.250.

Standard stamped disc set on a 3' deep column of concrete located on the West side of Felsview Drive, 3' from end of curb and 22.5' from a Gas Meter. Curb and meter located on the West side of Felsview Drive.

LEGEND

- s — s — EX SANITARY SEWER
- s — s — EX SEWER HOUSE CONNECTION
- ⊙ EX SANITARY SEWER MANHOLE
- w — w — EX WATER MAIN
- w — w — EX WATER HOUSE CONNECTION
- ⊗ EX WATER VALVE
- ▬▬▬ PROPOSED WATER LINE
- ▬▬▬ PROPOSED SEWER LINE
- ▬▬▬ PROPOSED WATER LINE VALVES
- ▬▬▬ PROPOSED WATER LINE TEES
- ⊗ PROPOSED FIRE HYDRANTS
- ▬▬▬ PROPOSED WATER LINE BEND



WATER AND SEWER CODE COUNTY USE
 Water Zone: 550
 Test Gradient: 700

Type of Building: Single Family Detached
 Number of Lots/Parcels: 7 (6 RESIDENTIAL/1 OPEN SPACE)
 Number of W.H.C.'S: 6
 Number of S.H.C.'S: 1
 Drainage Area: Patuxent River - Rocky Gorge
 Treatment Plant: Patuxent WRP

VICINITY MAP
 1" = 600'

GENERAL NOTES

PART I: GENERAL

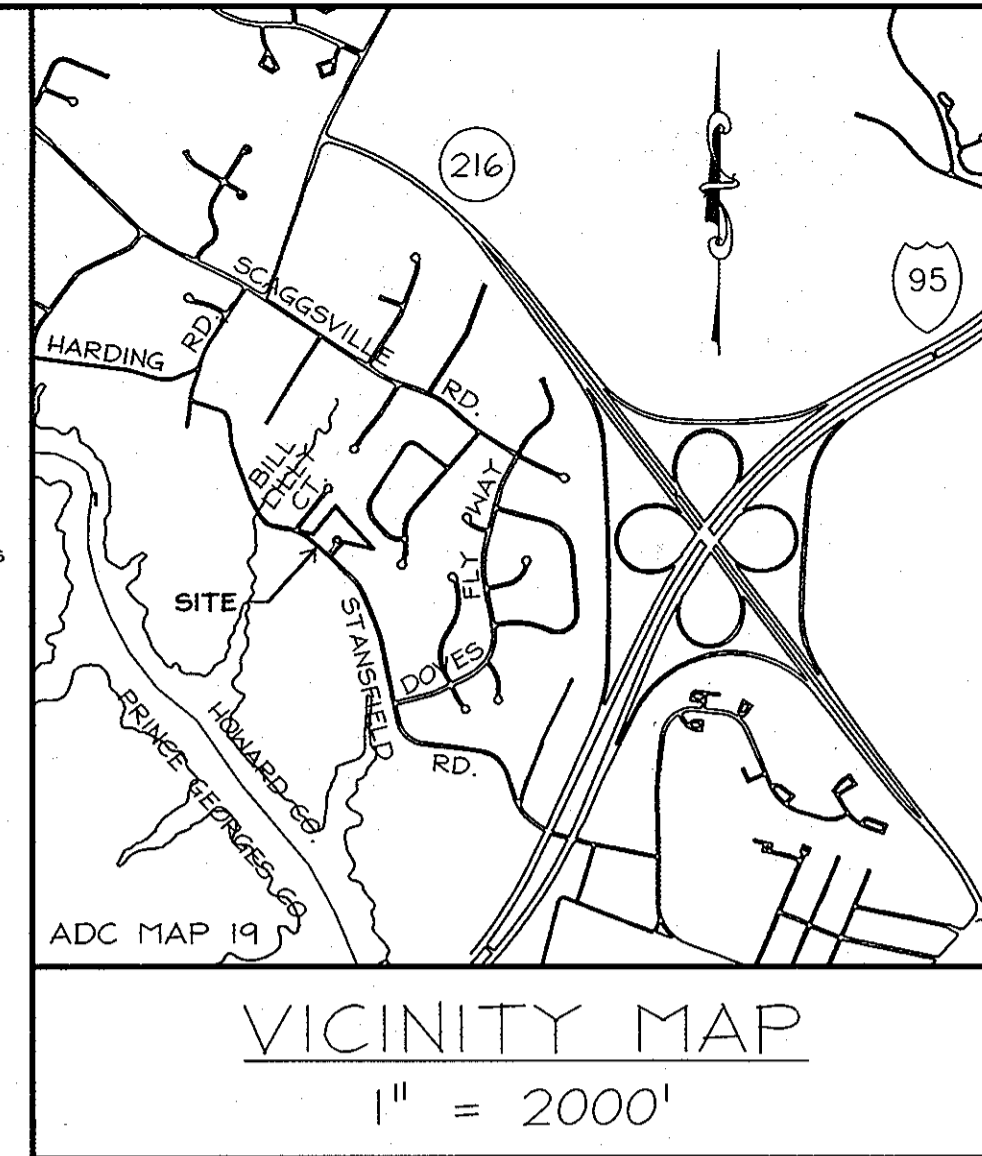
- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- Topographic field surveys were performed on September, 2006 by LDE, Inc.
- The coordinates shown on the drawings are based on Maryland State Reference System, NAD 83/91 projected by Howard County Geodetic Control Stations No. 46FA & and No. 47BB.
- All vertical controls are based on NAVD 88. Vertical controls provided on the drawings are per Howard County Geodetic Control Stations No. 46FA & and No. 47BB.
- 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 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, if required.
- 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 site at all times.
- Where test pits are required on existing utilities, they are noted by the symbol ⊗ at the location of the test pit. 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 (5) working days before starting work shown on these plans:
 - a. AT&T: 1-800-252-1133
 - b. BGE (Contractor Services): (410) 850-4620
 - c. BGE (Underground Damage Control): (410)-787-9068
 - d. Howard County Department of Public Works Bureau of Utilities: (410) 313-4900
 - e. Colonial Pipeline Co.: (410) 795-1390
 - f. Pitsa Utility: 1-800-257-7777
 - g. State Highway Administration: (410) 531-5533
 - h. Verizon: 1-800-743-0033 / 410-224-9210
- 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.
- The 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.
- The contractor shall notify the Bureau of Highways, Howard County, at 410-313-7450 at least five (5) 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

- All water mains to be D.I.P. Class 54 unless otherwise noted.
- Tops of all water mains to have a minimum of 3'-6" cover unless otherwise noted.
- Valves adjacent to the tees shall be strapped to the tees.
- All fittings shall be buttressed or anchored with concrete in accordance with 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.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.

PART III: SEWER

- All sewer mains to be DIP or P.V.C. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated "WT" 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 serviced.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.



Lot Number	Address	Location Dimension 1	Location Dimension 2
1		FH 85.6'	MH3 90.1'
2		FH 39.6'	MH3 45.0'
4		FH 26.0'	MH3 36.4'
5		FH 29.0'	MH2 16.3'
6		FH 49.0'	MH3 34.0'
7		FH 86.5'	MH3 71.1'
		FHV - MH3 11.5'	FHV - FH 5.0'

Lot Number	Address	Location Dimension 1	Location Dimension 2
1		FH 86.0'	MH3 90.0'
2		FH 36.0'	MH3 45.0'
4		FH 29.0'	MH3 35.0'
5		FH 32.0'	MH3 20.0'
6		FH 171.0'	MH2 103.0'
7		FH 107.0'	MH2 19.0'

FINAL WATER & SEWER PLAN
WATKINS' CHOICE

△ PHASE 1 - LOTS 1, 2, OPEN SPACE LOT 3 AND NON BUILDABLE BULK PARCEL "A"
 ; PHASE 2 - LOTS 4, 5, 6 AND 7
 A RESUBDIVISION OF WATKINS' CHOICE -
 PHASE 1 - NON BUILDABLE BULK PARCEL "A"

TAX MAP NO. 46 - GRID NO. 18 - PARCEL 215
 6th ELECTION DISTRICT - HOWARD COUNTY, MD
 Contract No. 24-4492-D

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRES 6/30/09.
 SIGNED: *Bruce D. Burton* DATE: 12/16/08
 BRUCE D. BURTON
 PROFESSIONAL ENGINEER

ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" x 8" TEE	1 EA.	1 EA.	MS C153	TYLER UNION
8" WATER - D.I.P.	665 L.F.	664'	C-900 PVC	NORTH AMERICAN PIPE CO.
8" VALVE	2 EA.	2 EA.	2500 MS GATE	AMERICAN FLOW CONTROL
8" - 1/8" BEND	4 EA.	4 EA.	C-900 45 BEND	MULTI FITTINGS
1" WMC	229 L.F.	300'	TYPE K	MUELLER INDUSTRIES
FIRE HYDRANT	1 EA.	1 EA.		MUELLER INDUSTRIES
8" CAP & BUTTRESS	1 EA.	1 EA.	MS C153 PLUG	TYLER UNION
8" x 6" FHT	1 EA.	1 EA.	MS C153 SHOVEL TEE	TYLER UNION
6" WATER - D.I.P.	6 L.F.	20'	C-900 PVC	NORTH AMERICAN PIPE CO.
4" SEWER MANHOLE	4 EA.	4 EA.		
4" SHC	231 L.F.	191'	SDR-35 C-900	NORTH AMERICAN PIPE CO.
8" SEWER	418 L.F.	411'	SDR-35 C-900	NORTH AMERICAN PIPE CO.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
JMM

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John F. Edwards 1/12/09
 CHIEF-BUREAU OF UTILITIES DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED FINAL PLAN, F 08-179 F 09-088

DEPARTMENT OF PUBLIC WORKS
 DEPARTMENT OF PLANNING & ZONING
Shah C. Green 12/16/08
 CHIEF-BUREAU OF UTILITIES DATE

LDE Inc.
 Engineers, Surveyors, Planners
 9230 Ramsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-0540

DESIGNED EDS			
DRAWN STB			
CHECKED BDB	KCE	AS-BUILT	10/2013
DATE	LDE	REVISE WMC/SWC AS BUILT LOCATION TABLE, UPDATE TITLES	4/2008
BY NO.		UPDATE QUANTITIES, UPDATE # OF LOTS/WMC/SWC IN BLOCK	
REVISION			
DATE			

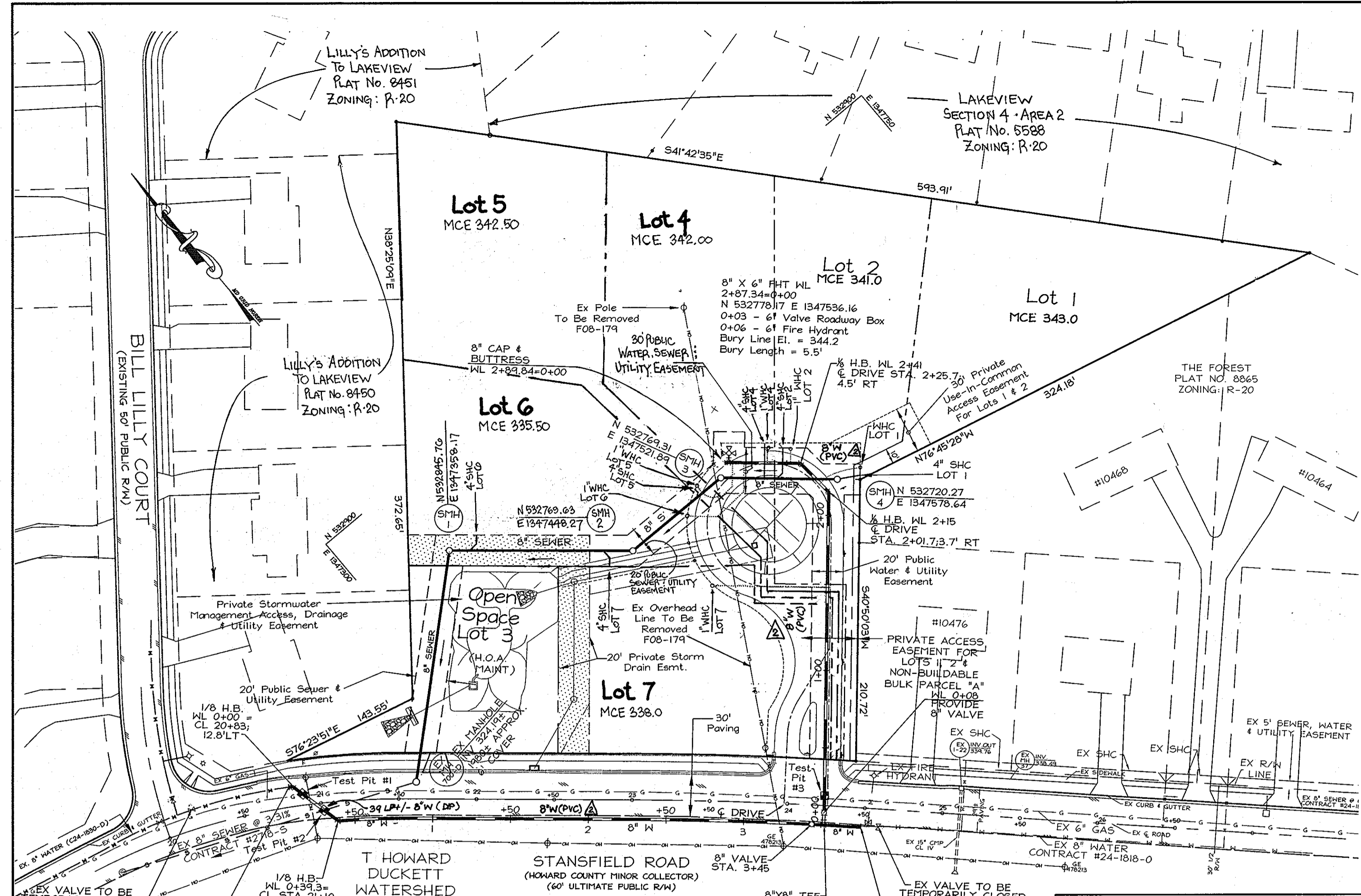
OWNER/DEVELOPER
 WATKINS' CHOICE LLC
 11208 Ridemark Row
 Columbia, Md. 21044
 410-964-9815

TITLE SHEET

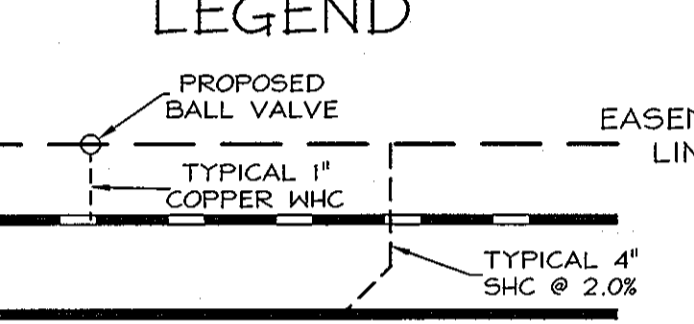
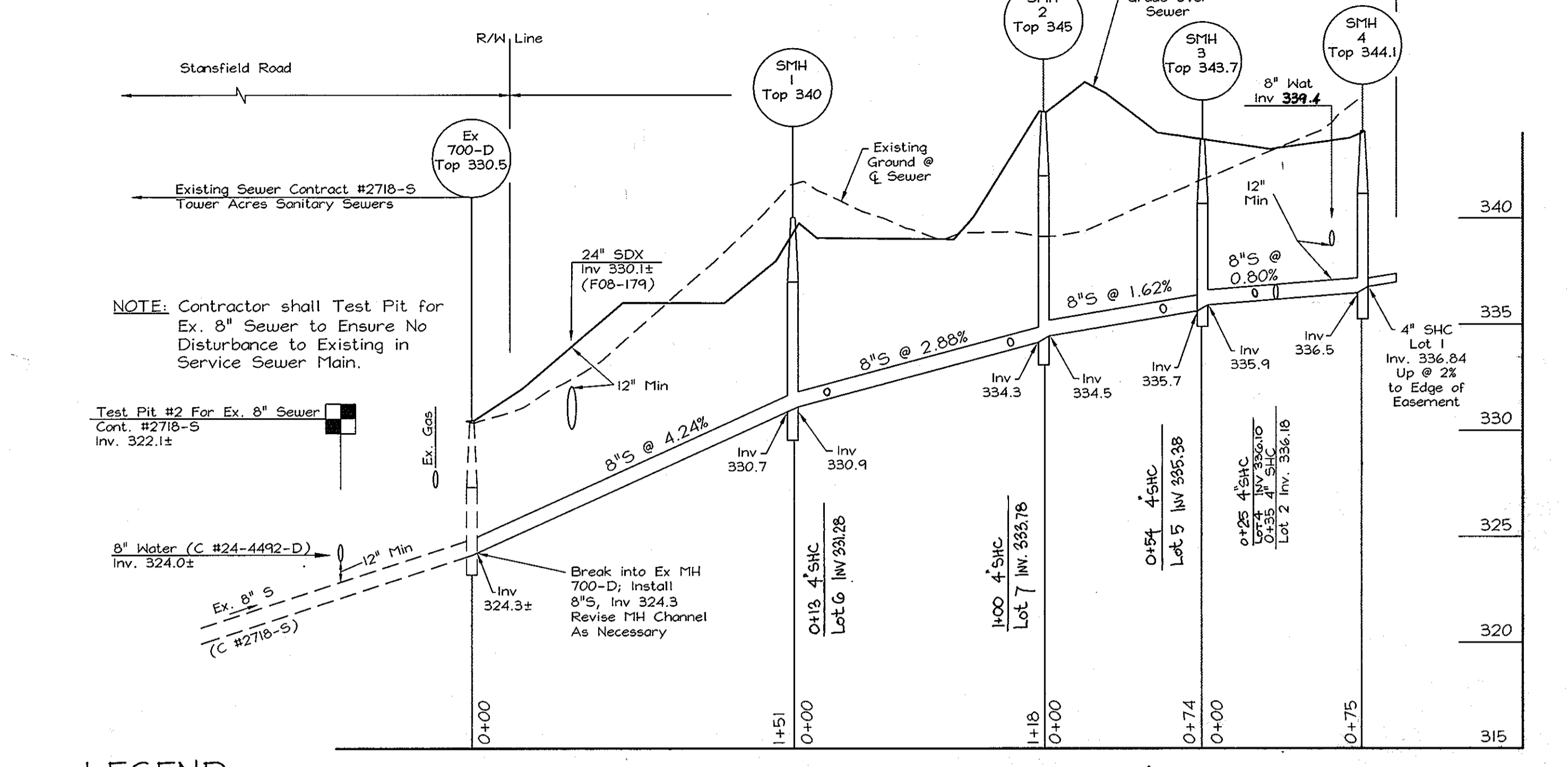
600 SCALE MAP NO. 46 BLOCK 18

WATKINS' CHOICE
 △ PHASE 1 - LOTS 1, 2, OPEN SPACE LOT 3 AND NON BUILDABLE BULK PARCEL "A"
 ; PHASE 2 - LOTS 4, 5, 6 AND 7; A RESUBDIVISION OF WATKINS' CHOICE - PHASE 1 - NON BUILDABLE BULK PARCEL "A"
 TAX MAP 46 - GRID NO. 18 - PARCEL 215
 6TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
 CONTRACT NO. 24 4492-D

SCALE AS SHOWN
 SHEET 1 OF 2

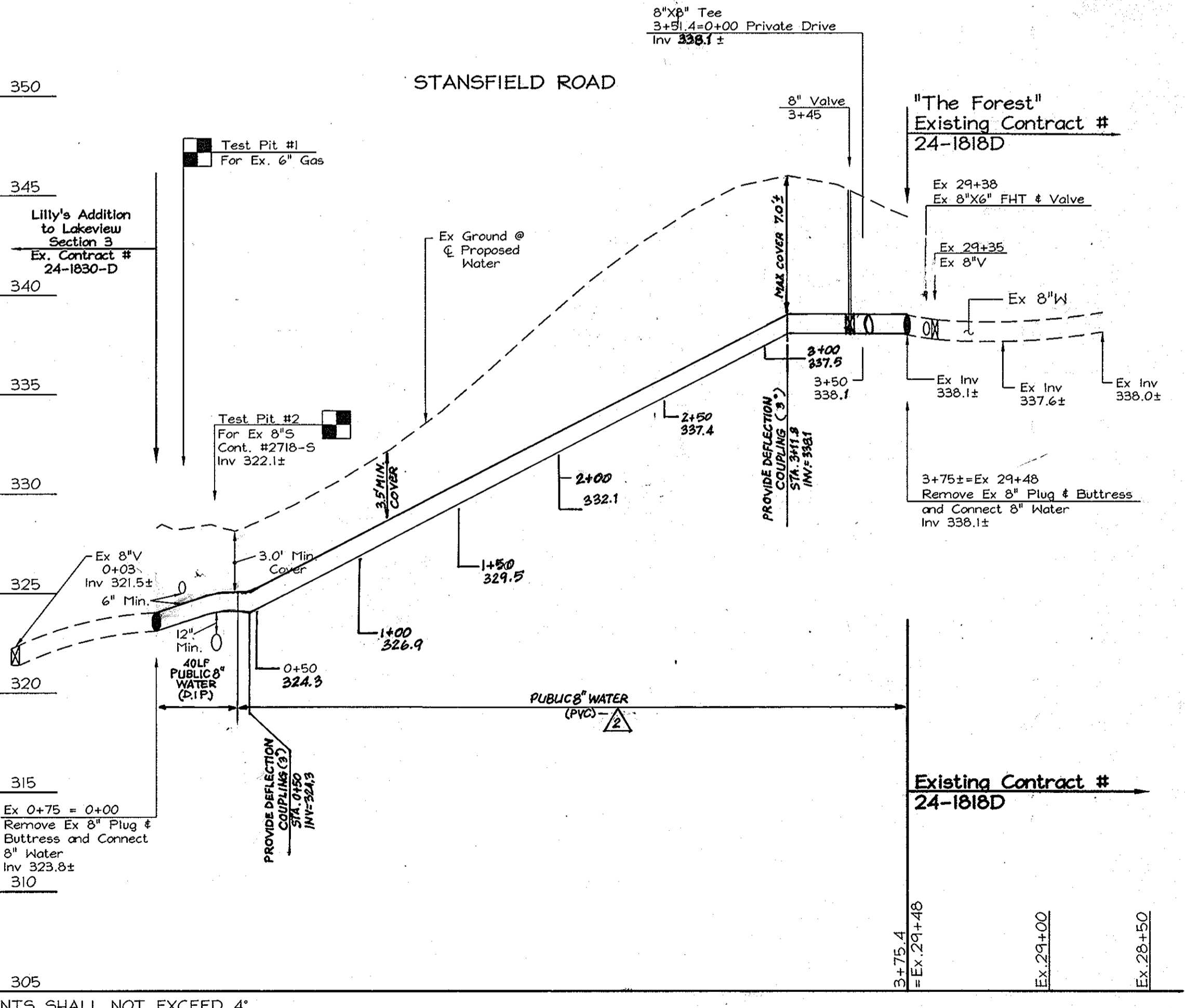


SEWER NOTES
 1. CENTERLINE SEWER MANHOLE CHANNEL RADII ARE NOT LESS THAN 2.5 TIMES THE PIPE DIAMETER.



NOTES:
 - MAX WHC DEPTH = 6.0'
 - MINIMUM DISTANCE BETWEEN TWO (2) WHC = 7.5'

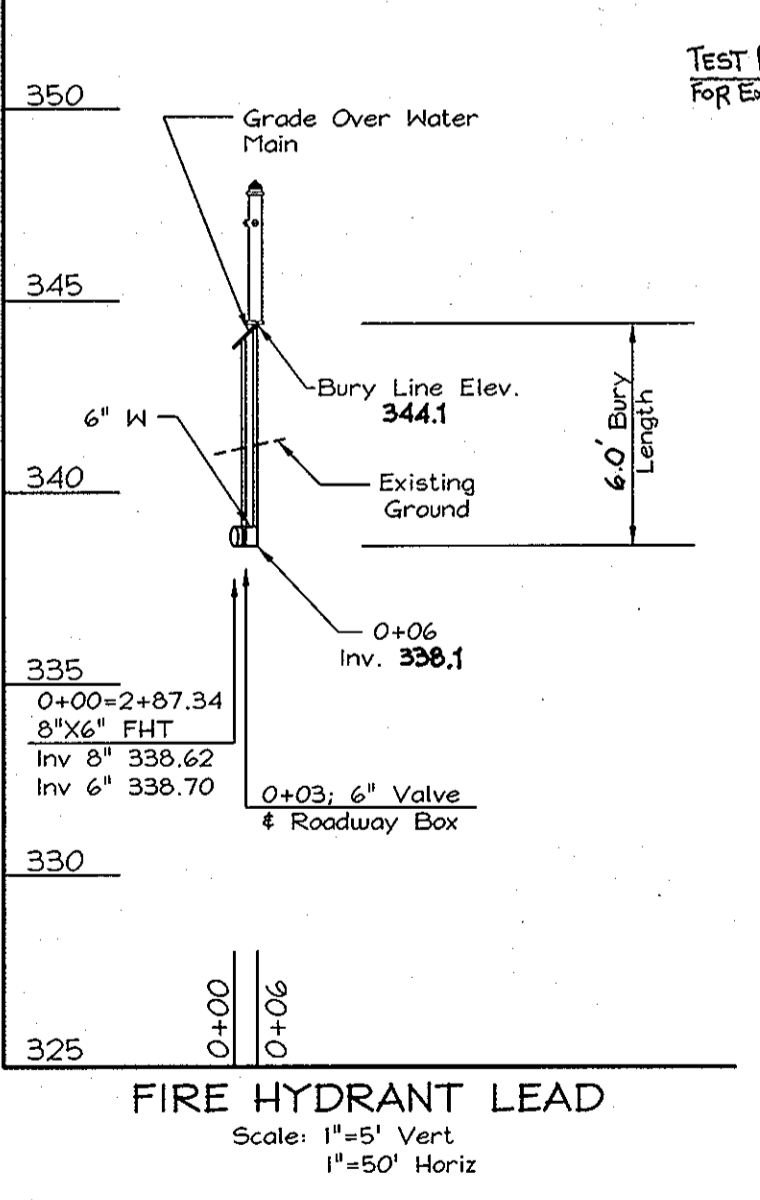
Lot No.	Invert El. @ Sewer Main	4" SHC Slope	Invert El. @ Easement	Minimum Cellar El.	Basement Floor El.	First Floor El.
1	336.84	2.0%	337.14	343.0	349.5	358.5
2	336.18	2.0%	336.64	341.0	349.0	358.0
4	336.10	2.0%	336.50	342.0	348.0	357.0
5	335.38	2.0%	335.62	342.5	351.0	360.0
6	331.28	2.0%	331.52	335.5	345.0	354.0
7	333.78	2.0%	334.02	338.0	340.0	349.0



WATER NOTES
 1. MAX DEFLECTION IN D.I.P. JOINTS SHALL NOT EXCEED 4".
 2. NO JOINT DEFLECTIONS ALLOWED AT ANY FITTING.
 3. DWELLING UNITS SHALL HAVE INSIDE METERS.
 4. NO TREES WITHIN 5.0' OF WHC.
 5. MINIMUM SEPARATION BETWEEN PUBLIC WATER & SEWER HOUSE CONNECTIONS SHALL BE PER DETAIL (SECTION 5.4.C).
 6. EX GAS MAIN LOCATION IS APPROX. 3.5' BELOW SURFACE.

PLAN
 1"=50'

MINIMUM HOUSE CONNECTION CLEARANCE
 DETAIL - SECTION 5.4.C.
 SCALE: 1"=10'



PROFILE 8" WATER
 USE-IN-COMMON DRIVEWAY
 Scale: 1"=5' Vert
 1"=50' Horiz

PROFILE 8" WATER - STANSFIELD ROAD
 Scale: 1"=5' Vert
 1"=50' Horiz

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

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

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED FINAL PLAN, F 08-179 F 09-035

DEPARTMENT OF PUBLIC WORKS CHIEF-BUREAU OF UTILITIES DATE: 1/16/09	DEPARTMENT OF PLANNING & ZONING CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE: 1/16/09	LDE Inc. Engineers, Surveyors, Planners 9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045 (410)715-1070 - (301)596-3424 - FAX (410)715-9340	DESIGNED EDS DRAWN STB CHECKED BDB DATE 12/20/08 BY NO.	REVISIONS 1. REVISE PLAN VIEWWARD PROFILE TO REPLACE PROPOSED 8" OP WATER MAIN WITH 8" PVC WATER MAIN 2. REVISE PLAN VIEWWARD SEWER SERVICE ELEV. TABLE, ADD DETAIL... 3. REVISE PROFILE DATE 7/20/12 DATE 4/20/09	PLAN & PROFILE SHEET 600 SCALE MAP NO. 46 BLOCK 18	WATKINS' CHOICE PHASE 1 - LOTS 1, 2, OPEN SPACE LOT 3 AND NON-BUILDABLE BULK PARCEL "A" & PHASE 2 - LOTS 4, 5, 6 AND 7; A RESUBDIVISION OF WATKINS' CHOICE - PHASE 1 NON-BUILDABLE BULK PARCEL "A" TAX MAP 46 - GRID NO. 18 - PARCEL 215 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24 4492-D	SCALE 1"=50' SHEET 2 OF 2
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