

WATER AND SEWER EXTENSIONS VILLAGE OF RIVER HILL

SECTION 2 AREA 5 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-3336-D

| SHEET INDEX | |
|-------------|--|
| NO. | DESCRIPTION |
| 1 | TITLE SHEET |
| 2 | PLAN AND PROFILE OF WATER AND SEWER MAIN |
| 3 | PLAN AND PROFILE OF WATER AND SEWER MAIN |

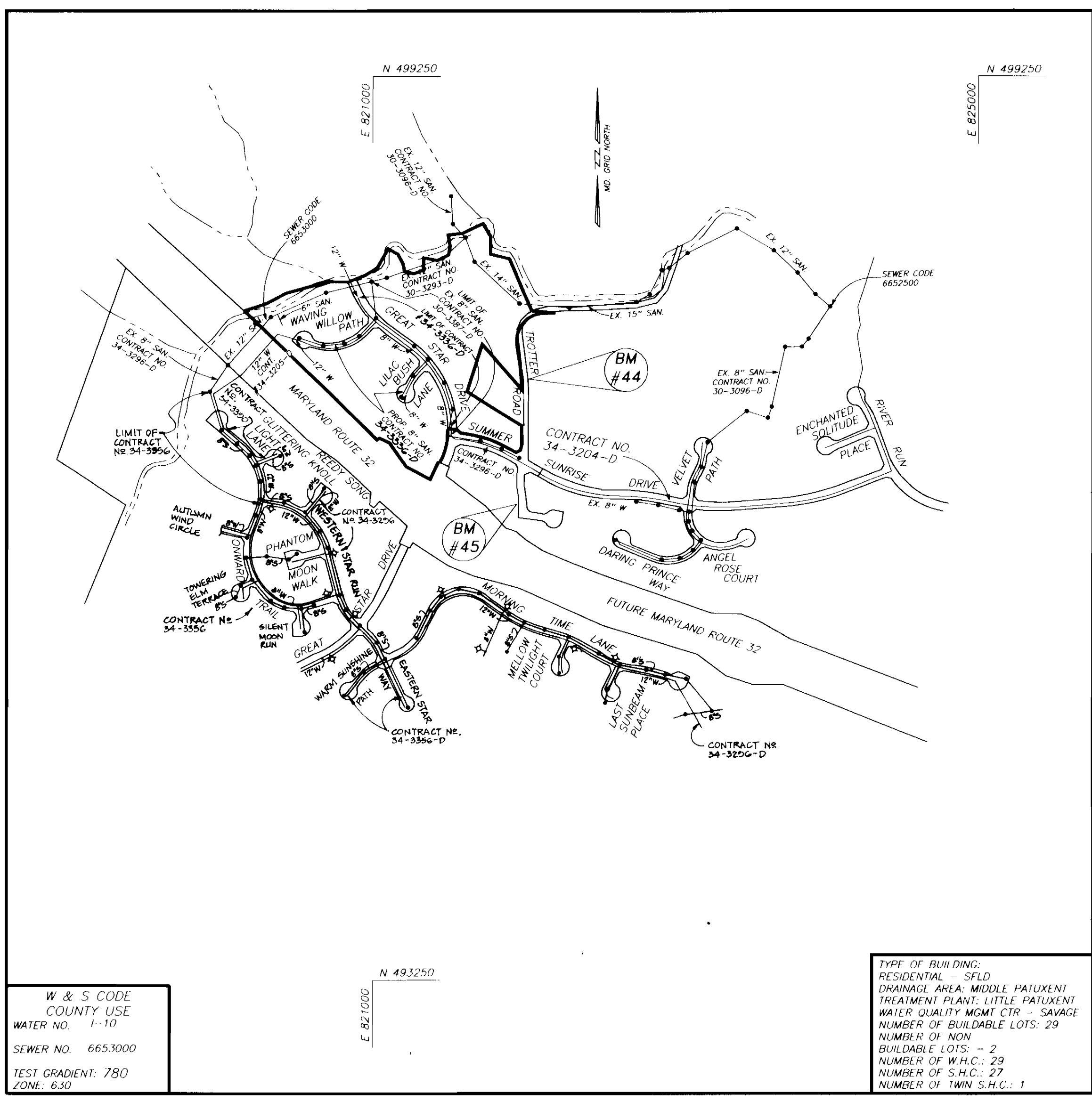
| ITEMS | QUANTITIES ESTIMATED | AS-BUILT | |
|--------------------------|----------------------|------------|--------------------------|
| | | QUANTITIES | TYPE |
| 12" WATER | 888 LF | 888 ± | CL 92 D.I.P. |
| 8" WATER | 1203 LF | 1203 ± | " " " |
| 6" WATER | 36 LF | 36 ± | " " " |
| 1" WHC | 84 LF | 97 LF | TYPE "K" COPPER |
| 3/4" WHC | 900 LF | 900 LF | " " " |
| 8" SEWLR | 874 LF | 884.12' | P.V.C. |
| 6" SHC | 73 LF | 56 LF | " |
| 4" SHC | 971 LF | 785 LF | " |
| FIRE HYDRANTS | 3 FA. | 3 | CENTURIAN TYPE 200 |
| 12" VALVES | 2 | 2 | 12" RESILIENT GATE VALVE |
| 8" VALVES | 2 | 2 | 8" RESILIENT GATE VALVE |
| 6" VALVES | 3 | 3 | 6" RESILIENT GATE VALVE |
| MANHOLES | 6 | 6 | PRECAST CONCRETE |
| 3" BLOWOFF | 1 | 1 | " |
| AIR RELEASE MANHOLE | 2 | 2 | 2" COMB NIP RELEASE |
| STD. 45° BDL. WYL. CONN. | 1 | 1 | P.V.C. |
| 8" SEWER D.I.P. | 140 LF | 140 LF | CL 92 D.I.P. |
| 4" " " | 20 | 20 LF | " " " |

MANUFACTURER/SUPPLIER:
 J.M. MANUF./BEL AIR RD SUPPLY
 J.M. MANUF./BEL AIR RD SUPPLY
 J.M. MANUF./BEL AIR RD SUPPLY
 HOWELL/METAL/RES.
 J.M. MANUF./BEL AIR RD SUPPLY
 J.M. MANUF./BEL AIR RD SUPPLY
 J.M. MANUF./BEL AIR RD SUPPLY
 CENTURIAN TYPE 200
 MUELLER CO./B.R.S.
 MUELLER CO./BEL AIR RD SUPPLY
 MUELLER CO./BEL AIR RD SUPPLY
 MUELLER CO./BEL AIR RD SUPPLY
 ATLANTIC ZONE PRODUCTS
 JOHN KUPFFERLE/BEL AIR RD SUPPLY
 J.M. MANUF./BEL AIR RD SUPPLY
 GRIFFIN PIPE

NAME OF UTILITY CONTRACTOR: _____
 SURVEY & DRAFTING DIVISION AS-BUILT DATE: _____

- ### 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 (NAD 27).
 - All vertical controls are based on U.S.G.S. data.
 - All pipe elevations shown are invert elevations (Unless otherwise noted).
 - 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 | 531-5533 |
| Baltimore Gas & Electric Co. Contractor Services | 850-4620 |
| Baltimore Gas & Electric Co. Underground Damage Control | 787-9068 |
| Miss Utility | 1-800-257-7777 |
| Colonial Pipeline Co. | 795-1390 |
| Bureau of Utilities, Howard County Department of Public Works | 313-4900 |
 - 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 sewer mains shall be D.I.P. and PVC unless otherwise noted.
 - All manholes shall be 4'-0" inside diameter unless otherwise noted.
 - Force mains shall be D.I.P. only.
 - Manhole must be precast concrete structures. (See note #25)
 - 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.
 - Valves adjacent to tees shall be strapped to tees.
 - 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.
 - 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 notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five 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.
 - 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.
 - Manholes shown with 12" and 16" walls are for brick manholes only.



VICINITY MAP
SCALE: 1" = 600'

VRH, 2/5
WS/1
3336

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AS SHOWN ON F-95-48.

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Patricia Cahn
 U.S. SOIL CONSERVATION SERVICE
 DATE: 8/30/95

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Roberts
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: 8/30/95

BENCHMARK

#44 PIN & CAP SET EAST TROTTER ROAD
 N 497138.9755 ELEV. = 366.949
 E 822029.4968

#45 PIN & CAP SET EAST TROTTER ROAD
 N 496320.2206 ELEV. = 421.479
 E 822000.9112

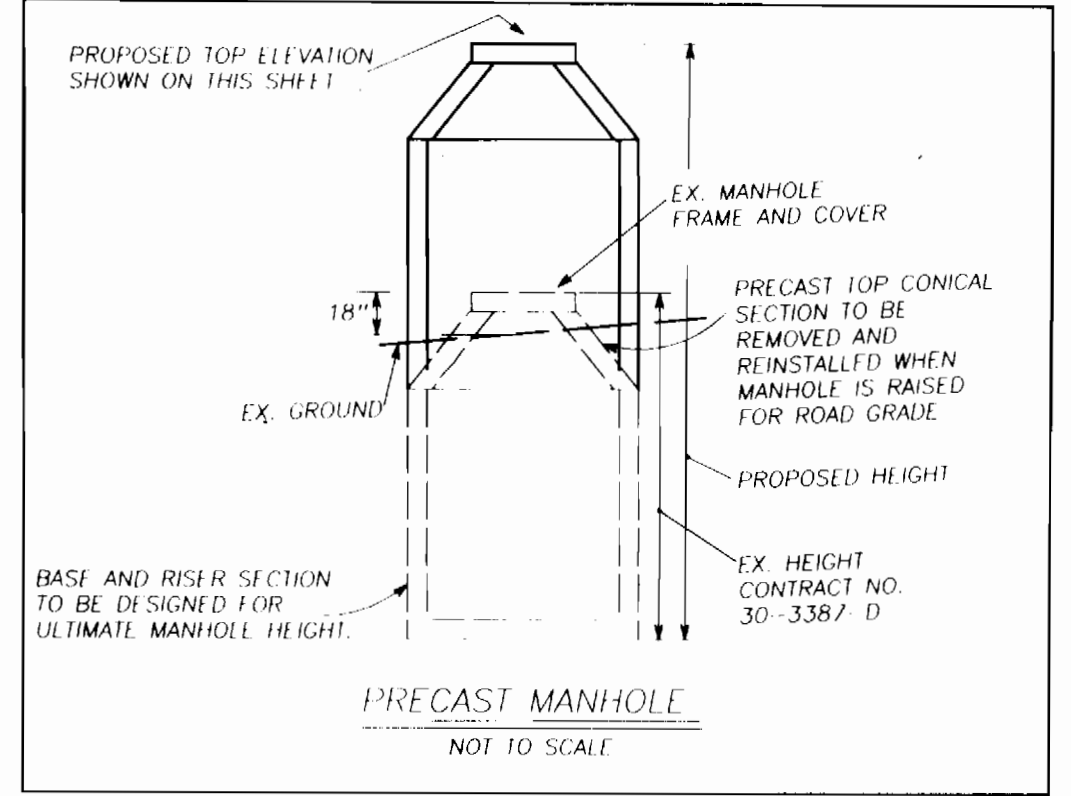
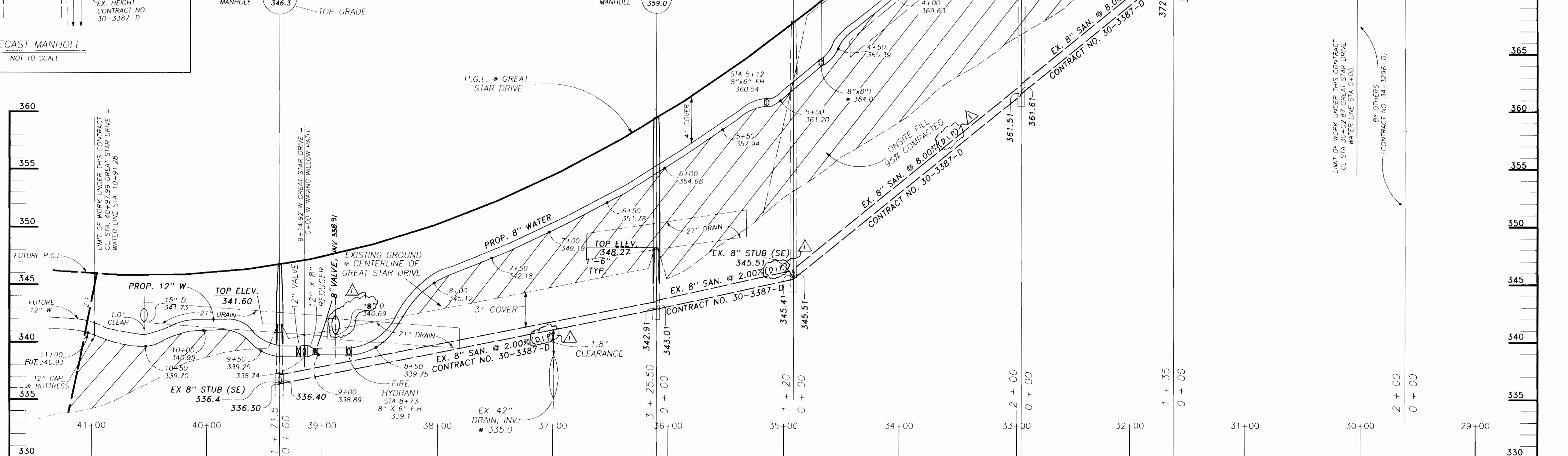
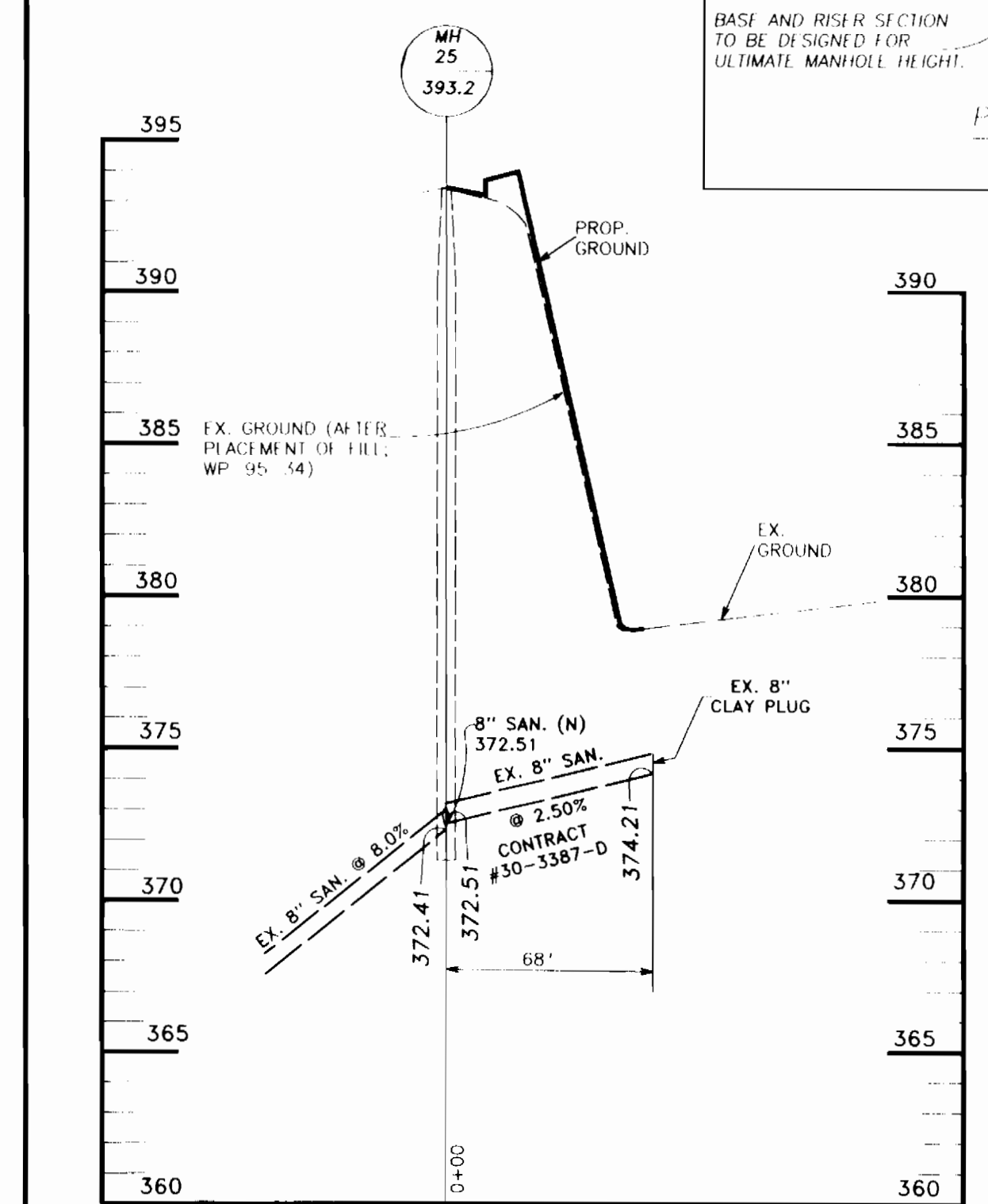
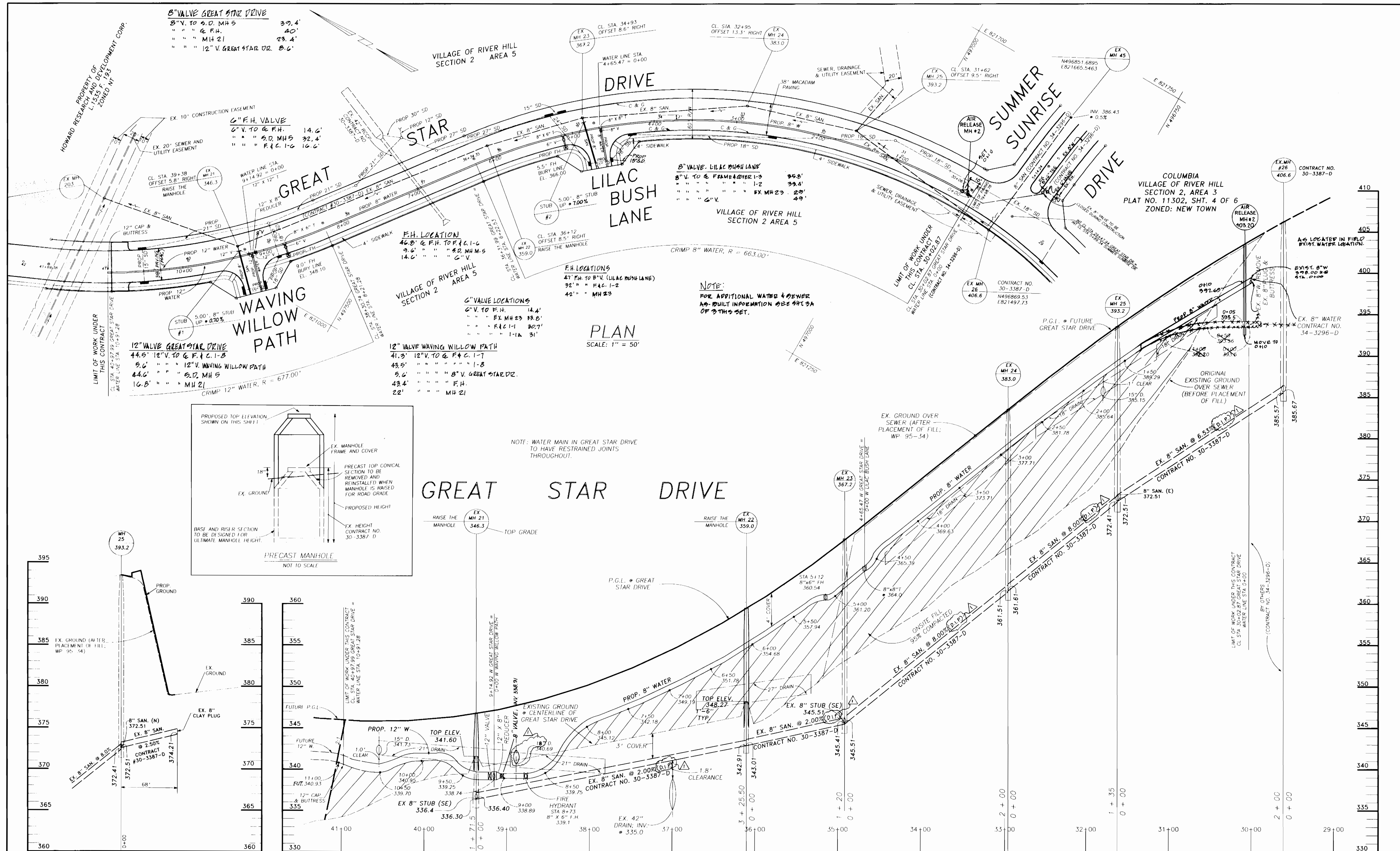
W & S CODE
 COUNTY USE
 WATER NO. 1-10
 SEWER NO. 665.000
 TEST GRADIENT: 780
 ZONE: 630

TYPE OF BUILDING:
 RESIDENTIAL - SFLD
 DRAINAGE AREA: MIDDLE PATUXENT TREATMENT PLANT; LITTLE PATUXENT WATER QUALITY MGM1 CTR - SAVAGE
 NUMBER OF BUILDABLE LOTS: 29
 NUMBER OF NON-BUILDABLE LOTS: 2
 NUMBER OF W.H.C.: 29
 NUMBER OF S.H.C.: 27
 NUMBER OF TWIN S.H.C.: 1

| | | | | | | | | |
|--|---|---|--|---|--------------------------|---|--|---|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert Berman</i> CHIEF, BUREAU OF UTILITIES DATE: 8-28-95 | DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>John R. Roberts</i> CHIEF DEVELOPMENT ENGINEERING DIVISION DATE: 8/30/95 | GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS 658 KENILWORTH DRIVE, SUITE 100 TOWSON, MARYLAND 21204 (410) 825-8120 | | DES BY: J.Z./R.F. DRN BY: J.D.T. CHK BY: J.Z. DATE: MAY 17, 95 | REVISIONS BY NO. DATE | <h2 style="margin: 0;">TITLE SHEET</h2> | VILLAGE OF RIVER HILL SECTION 2 AREA 5 LOTS 1 THROUGH 31 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-3336-D | SCALE: AS SHOWN SHEET 1 OF 3 |
|--|---|---|--|---|--------------------------|---|--|---|

600' SCALE MAP NO. 35 BLOCK NO. 14

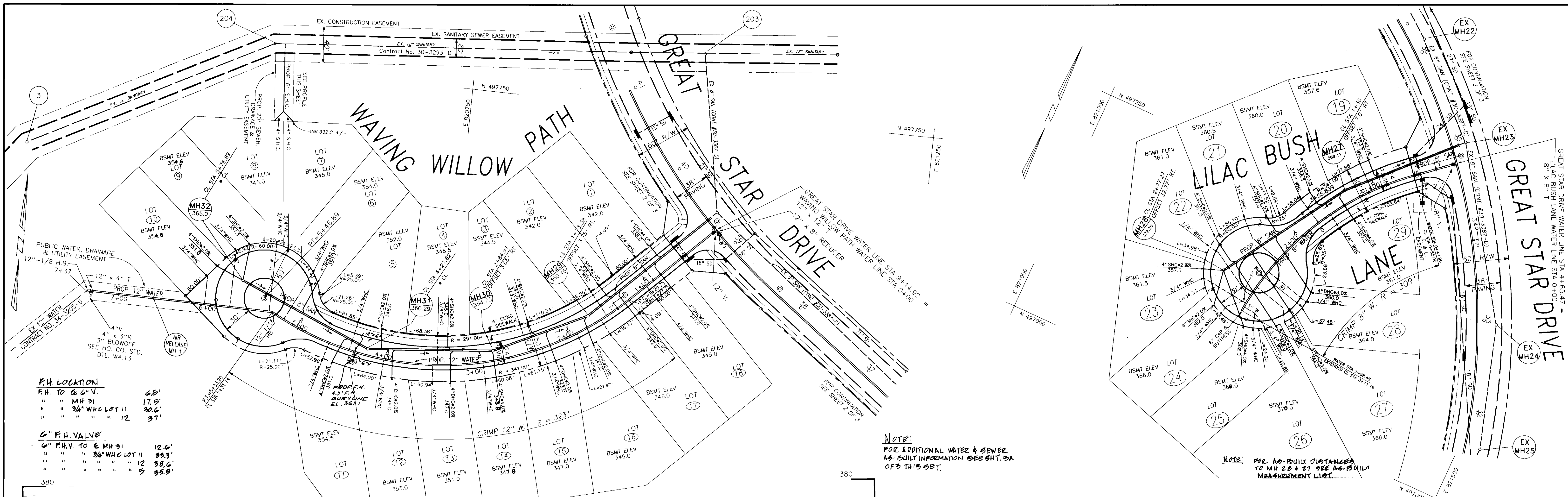
3336 ws/2 VRRH, 2/5



PROFILES
SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

| | | | | | | |
|---|---|---|--|--|---|---|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert J. ... CHIEF, BUREAU OF UTILITIES DATE: 8-28-95 | DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND ... CHIEF DEVELOPMENT ENGINEERING DIVISION DATE: 2/1/95 | GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS 658 KENILWORTH DRIVE, SUITE 100 TOWSON, MARYLAND 21284 (410) 825-8120 | DES. BY: I. Z. & R.F. GWS DRN. BY: M.B.B. & J.D.T. CHK. BY: I. Z. DATE: MAY 17, 95 | REVISIONS CORRECTED TYPE OF EX. SAN. FORM DRAIN DATE: 10-11-95 | PLAN AND PROFILE OF WATER AND SEWER MAIN 600' SCALE MAP NO. 35 BLOCK NO. 14 | VILLAGE OF RIVER HILL SECTION 2 AREA 5 LOTS 1 THROUGH 31 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-3336-D SCALE: AS SHOWN SHEET 2 OF 3 |
|---|---|---|--|--|---|---|

3336 ws/3 VRH, 2/5



F.H. LOCATION

| | |
|---------------------|-------|
| F.H. TO G.O.V. | 68' |
| " " MH 31 | 17.5' |
| " " 3/4" W/4 LOT II | 30.2' |
| " " " " " 12 | 31' |

G" F.H. VALVE

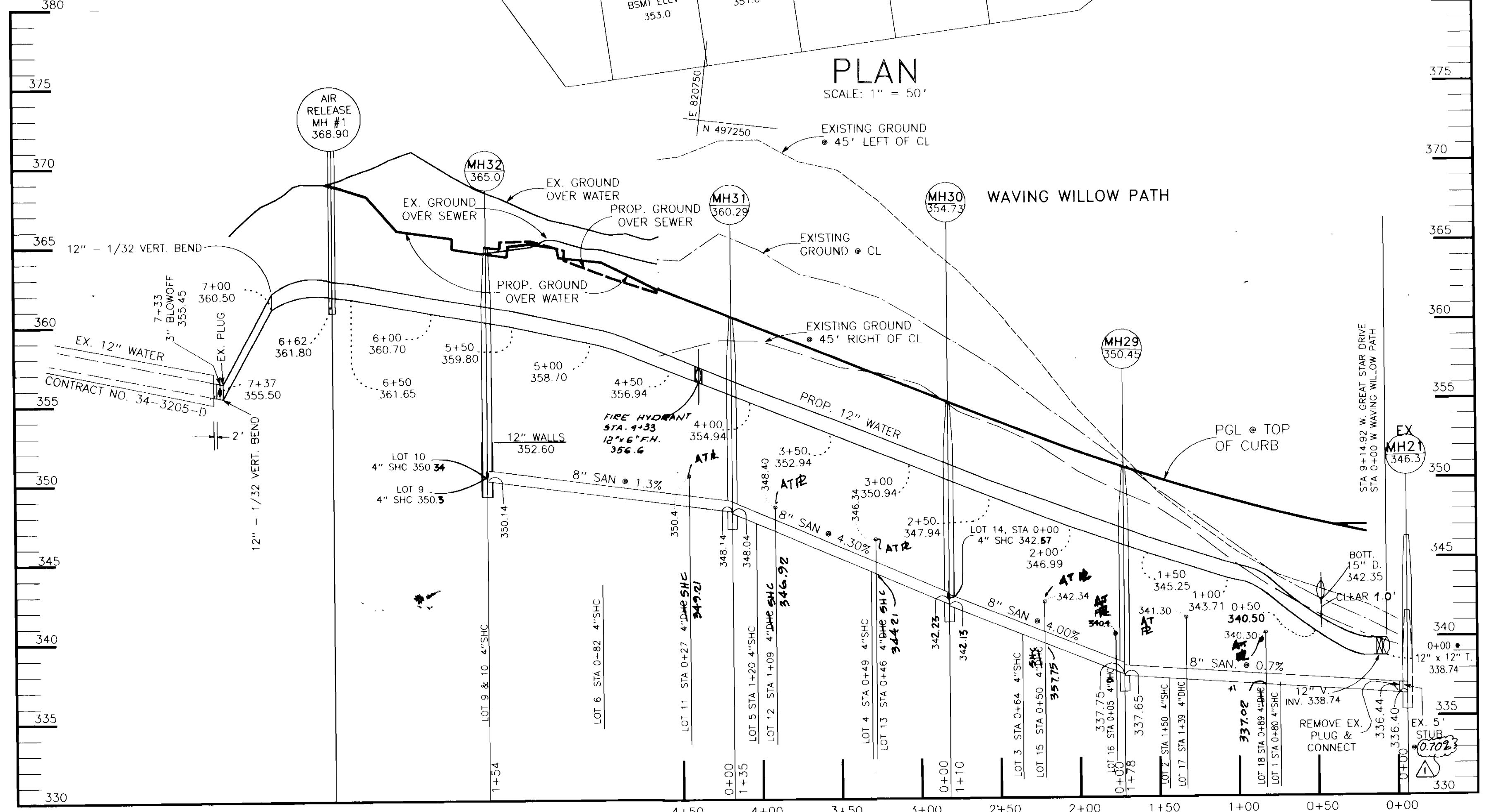
| | |
|---------------------------|-------|
| G" F.H.V. TO E MH 31 | 12.6' |
| " " " " " 3/4" W/4 LOT II | 33.3' |
| " " " " " 12 | 38.6' |
| " " " " " 5 | 35.9' |

NOTE:
FOR ADDITIONAL WATER & SEWER AS BUILT INFORMATION SEE SHT. 3A OF 3 THIS SET.

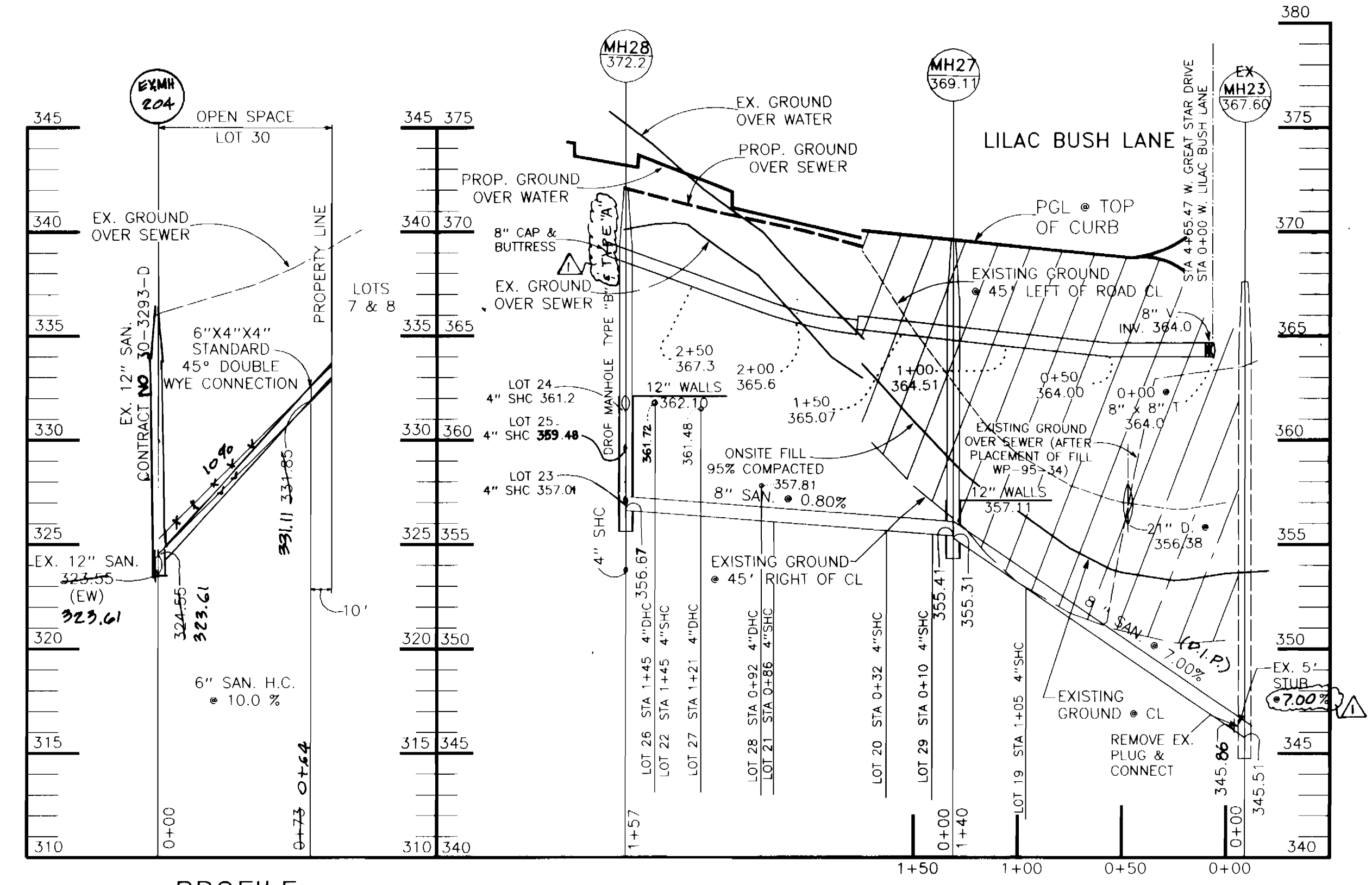
NOTE:
FOR AS-BUILT DISTANCES TO MH 28 & 27 SEE AS-BUILT MEASUREMENT LIST.

PLAN
SCALE: 1" = 50'

PLAN
SCALE: 1" = 50'



PROFILE
SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



PROFILE
SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

PROFILE
SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'

| | | | | | | |
|--|--|--|--|---|---|---|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert M. Brimmer</i> 8-28-95 CHIEF, BUREAU OF UTILITIES DATE | DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>John P. Brimmer</i> 8/3/95 CHIEF DEVELOPMENT ENGINEERING DIVISION I DATE | GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC. CIVIL ENGINEERS & LAND SURVEYORS 658 KENILWORTH DRIVE, SUITE 100 TOWSON, MARYLAND 21204 (410) 825-8120 | DES BY: I. Z. / R. F. BY: GWS NO: DRN BY: M. B. B. CHK BY: I. Z. DATE: MAY 17, 95 | REVISIONS MH 28 CHANGED TO TYPE A TYPE B SLOPE OF EX. SIZES CORRECTED DATE: 10-18-95 | PLAN AND PROFILE OF WATER AND SEWER MAIN 600' SCALE MAP NO. 35 BLOCK NO. 14 | SCALE: AS SHOWN SHEET 3 OF 3 |
|--|--|--|--|---|---|---|

A-BUILT SEWER HOUSE

CONNECTION LOCATIONS

| LOT# | FROM | TO | DIST. |
|------|--------|---------------|-------|
| 1 | 4" SHC | EX. MH 21 | 01' |
| " | " | E INLET | 40' |
| 2 | " | MH 29 | 37' |
| " | " | 4" SHC LOT 1 | 71' |
| 3 | " | MH 29 | 05' |
| " | " | " 30 | 36.5' |
| 4 | " | " 30 | 47.7' |
| " | " | 4" SHC LOTS | 70.5' |
| 5 | " | MH 30 | 28.5' |
| " | " | 3/4" WHC LOTS | 25' |
| 6 | " | MH 31 | 04' |
| " | " | " 32 | 81.5' |
| 7 | " | EX. MH 204 | 85' |
| " | " | 4" SHC LOT 0 | 19' |
| 8 | " | EX. MH 204 | 87' |
| 9 | " | MH 32 | 44' |
| 10 | " | 4" SHC LOT 9 | 48' |
| " | " | MH 32 | 99' |
| 11 | " | " 31 | 37' |
| 12 | " | " 31 | 44' |
| " | " | 4" SHC LOT 13 | 59' |
| 13 | " | MH 30 | 93.5' |
| " | " | 4" SHC LOT 12 | 90' |
| 14 | " | MH 30 | 28.5' |
| " | " | 4" SHC LOT 19 | 69' |
| 15 | " | MH 29 | 99' |
| " | " | " 30 | 73' |
| " | " | 4" SHC LOT 16 | 48' |
| 16 | " | MH 29 | 28' |
| " | " | 4" SHC LOT 11 | 54' |
| 17 | " | MH 29 | 99' |
| " | " | 4" SHC LOT 18 | 90' |
| 18 | " | MH 21 | 93.5' |
| " | " | " 29 | 95' |
| " | " | E F&C 1-7 | 34.5' |
| 19 | " | MH 27 | 45' |
| " | " | E F&C 1-2 | 78' |
| " | " | SHC LOT 20 | 78' |
| 20 | " | MH 27 | 99' |
| " | " | SHC LOT 21 | 54' |
| 21 | " | MH 28 | 74' |
| 22 | " | " 21 | 41' |
| " | " | SHC LOT 21 | 58' |
| 23 | " | MH 28 | 22' |
| " | " | SHC LOT 22 | 40' |
| 24 | " | MH 28 | 38' |
| " | " | SHC LOT 23 | 41' |
| 25 | " | MH 28 | 62' |
| " | " | SHC LOT 24 | 38' |
| 26 | " | MH 28 | 89' |
| " | " | 4" SHC LOT 29 | 36' |
| 27 | " | MH 28 | 93.5' |
| " | " | 4" SHC LOT 26 | 28' |
| 28 | " | MH 28 | 99' |
| " | " | SHC LOT 27 | 93' |
| 29 | " | MH 27 | 36' |
| " | " | SHC | |

A-BUILT WATER HOUSE

CONNECTION LOCATIONS

| LOT# | FROM | TO | DIST. |
|------|----------|------------------|--------|
| 1 | 3/4" WHC | 4" SHC LOT 1 | 20.6' |
| " | " | E F&C 1-8 | 48' |
| " | " | 4" SHC LOT 2 | 90.4' |
| " | " | E F&C 1-7 | 88.4' |
| 2 | " | 4" SHC LOT 2 | 10.5' |
| " | " | E MH 29 | 92.4' |
| " | " | 4" SHC LOT 3 | 74' |
| 3 | " | " " " | 10.4' |
| " | " | E MH 30 | 73' |
| " | " | " " 29 | 47' |
| " | " | 4" SHC LOT 4 | 81' |
| 4 | " | " " " | 9.6' |
| " | " | E MH 30 | 56.9' |
| " | " | " " 31 | 81.5' |
| " | " | 4" SHC LOTS | 61.5' |
| 5 | " | " " " | 25' |
| " | " | E MH 31 | 29.2' |
| " | " | 4" SHC LOT 6 | 69' |
| " | " | E FIRE HYDRANT | 41.8' |
| 6 | " | 4" SHC LOT 6 | 6' |
| " | " | 3/4" WHC LOT 7 | 37' |
| " | " | E MH 32 | 78' |
| " | " | E FIRE HYDRANT | 106.2' |
| 7 | " | 3/4" WHC LOT 8 | 11.6' |
| " | " | E MH 32 | 62' |
| 8 | " | 4" SHC LOT 9 | 57.6' |
| " | " | E MH 32 | 90' |
| 9 | " | 4" SHC LOT 9 | 19.6' |
| " | " | " " 10 | 29' |
| " | " | E MH 32 | 38.6' |
| 10 | " | 4" SHC LOT 10 | 17' |
| " | " | E AIR RELEASE MH | 60' |
| " | " | " MH 32 | 39' |
| 11 | " | 4" SHC LOT 11 | 10' |
| " | " | E MH 31 | 44.8' |
| " | " | E F.H. | 32.2' |
| 12 | " | 4" SHC LOT 11 | 58.5' |
| " | " | E F.H. | 37' |
| " | " | 4" SHC LOT 12 | 15' |
| " | " | E MH 31 | 39' |
| 13 | " | 4" SHC LOT 12 | 41' |
| " | " | " " 13 | 18.5' |
| " | " | E MH 30 | 61.5' |
| 14 | " | 4" SHC LOT 13 | 39' |
| " | " | " " 14 | 10.9' |
| " | " | E MH 30 | 29' |
| 15 | " | 4" SHC LOT 14 | 98.5' |
| " | " | " " 15 | 11.4' |
| " | " | MH 30 | 68' |
| " | " | " 29 | 66.5' |
| 16 | " | 4" SHC LOT 15 | 35' |
| " | " | " " 16 | 11.4' |
| " | " | MH 29 | 31.6' |
| 17 | " | 4" SHC LOT 16 | 28.6' |
| " | " | " " 17 | 34.2' |
| " | " | MH 29 | 28.4' |
| 18 | " | 4" SHC LOT 18 | 20.6' |
| " | " | " " 17 | 30.6' |
| 19 | " | MH 27 E | 39' |
| " | " | 4" SHC LOT 19 | 19' |
| " | " | " " 20 | 60.4' |
| 20 | " | MH 27 E | 44.8' |
| " | " | 4" SHC LOT 20 | 11.8' |
| " | " | " " 21 | 42' |
| 21 | " | MH 28 E | 68' |
| " | " | 4" SHC LOT 21 | 18' |
| " | " | " " 22 | 40.2' |
| 22 | " | MH 28 E | 28' |
| " | " | 4" SHC LOT 22 | 17.8' |
| " | " | " " 23 | 22.6' |
| 23 | " | MH 28 E | 28.6' |
| " | " | 4" SHC LOT 23 | 13.5' |
| " | " | " " 24 | 28' |
| 24 | " | MH 28 E | 49.6' |
| " | " | 4" SHC LOT 24 | 17.4' |
| " | " | " " 25 | 22.2' |
| 25 | " | MH 28 E | 69.4' |
| " | " | 4" SHC LOT 25 | 10.5' |
| " | " | " " 26 | 18.2' |
| 26 | " | MH 28 E | 77.2' |
| " | " | 4" SHC LOT 26 | 11' |
| 27 | " | MH 28 E | 87' |
| " | " | 4" SHC LOT 26 | 10' |
| " | " | " " 27 | 12' |
| 28 | " | MH 28 E | 39.6' |
| " | " | 4" SHC LOT 27 | 23.2' |
| " | " | " " 28 | 10' |
| 29 | " | MH 27 E | 41' |
| " | " | 4" SHC LOT 29 | 18' |
| 30 | " | E F&C 1-7 | 53.6' |
| " | " | MH 29 | 78' |

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____
CHIEF, BUREAU OF ENGINEERING _____ DATE _____

| | | | |
|-------|----|-----|----------|
| DES: | | | |
| DRN: | | | |
| CHK: | | | |
| DATE: | BY | NO. | REVISION |

A-BUILT WATER & SEWER ADDITIONAL
INFORMATION

600' SCALE MAP NO. _____ BLOCK NO. _____

VILLAGE OF RIVER HILL
SECTION 2 AREA 5
LOTS 1 THROUGH 31
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 34-3336-D

SCALE AS SHOWN
SHEET 2A OF 3

JAY WHITE MARSH, MD.