

STORM & SANITARY SEWER AS-BUILTS
 PLANS FOR CONSTRUCTION OF
 SANITARY SEWERS, STORM SEWERS,
 GRADING, PAVING, AND WATER MAINS
 FOR

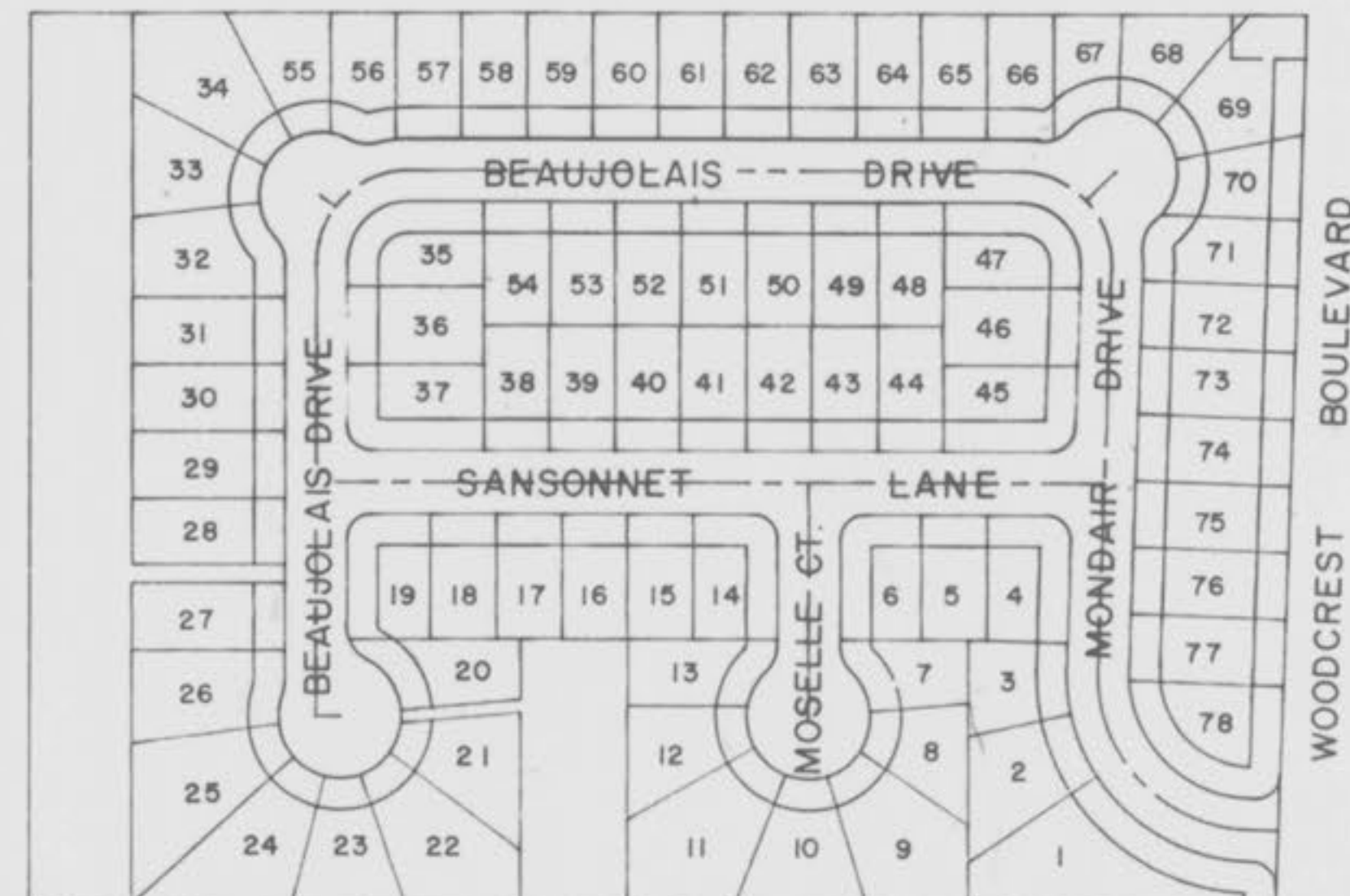
BRANDYWINE ESTATES

A TRACT OF LAND IN FRACTIONAL SECTION 5
 T. 46 N., R. 3 E.
 ST. CHARLES COUNTY, MISSOURI

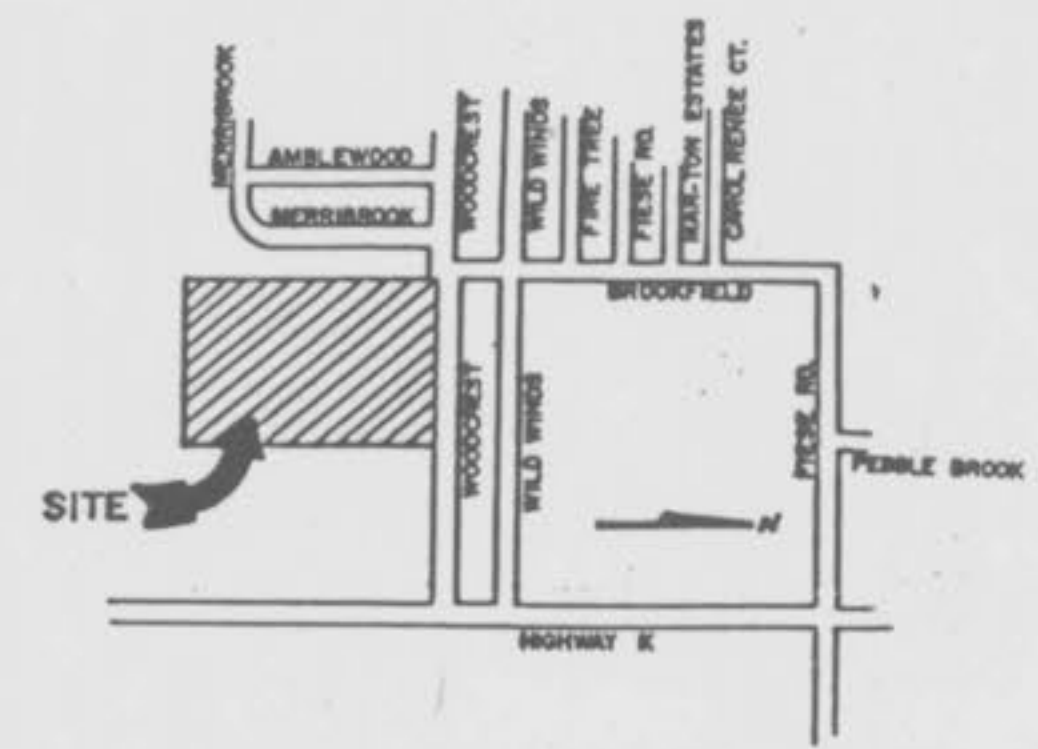
GENERAL NOTES

- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing and proposed sanitary and storm sewers including house laterals.
- The existing underground utilities shown herein were plotted from available information and do not necessarily reflect the actual existence, nonexistence, size, type, number, or location of these or other utilities. The general contractor shall be responsible for verifying the actual location of all underground utilities, shown or not shown, and shall be located in the field prior to any grading, excavation, or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.
- All filled places in public right-of-way (State, County or City roads) shall be compacted to 90% of maximum density as determined by the "Standard Proctor Test A.A.S.H.T.O. T-99", Method C (A.S.T.M. D-698) unless otherwise specified by local governing authority specifications, or by soils report for this project. All test shall be verified by the inspecting soils engineer.
- All filled places under buildings, proposed storm and sanitary sewer lines and/or paved areas including trench backfills shall be compacted to 90% of maximum density as determined by the "Modified A.A.S.H.T.O. T-180 Compaction Test" (A.S.T.M. D-1557) unless otherwise specified by local governing authority specifications, or by soils report for this project. All tests shall be verified by the inspecting soils engineer.
- All trench backfills under paved areas shall be granular backfill, and shall be compacted to 90% of maximum density as determined by the "Modified A.A.S.H.T.O. T-180 compaction test," (A.S.T.M. D-1557. All trench backfills may be earth material free of large clods or stones) and will be water jetted.
- No area shall be cleared without permission of the developer.
- All grades shall be within 0.2 feet more or less of those shown on the grading plan.
- No slope shall be greater than 3:1 and shall be either sodded or seeded and mulched.
- Siltation control devices shall be as shown on plans, and approved by the local governing authority. Additional siltation control, if required, will be placed at the direction of the soils engineer on site and the local governing authority prior to placement.
- Grading operations on this project shall comply with the soils report by Geotechnology, Inc.
- All grading on City or County right-of-way shall be seeded and mulched and all disturbed right-of-way markers shall be reset at the completion of grading.
- Polyvinyl chloride (PVC) sanitary sewer pipe shall meet the following requirements: A.S.T.M. D-3034 SDR-35, with well thickness compression joint A.S.T.M. D-3212. An appropriate watertap as approved by the City of O'Fallon shall be installed between PVC pipe and structure.
- The minimum vertical distance from the low point of the basement or slab floor to the flowline of a sanitary sewer at the corresponding house or building connection shall not be less than the diameter of the main line sanitary sewer plus a vertical distance not less than two and one half feet (2-1/2").
- All P.V.C sanitary sewer pipe to have crushed stone bedding uniformly graded between 1" and 1/4" size. This bedding shall extend from 4" below the pipe to 1/4 of the pipe diameter above the bottom of the pipe.
- All sanitary sewer service shall be a minimum of 4" diameter for single-family developments.
- Storm sewers 18" diameter or smaller shall be A.S.T.M. C-14, unless otherwise shown on plans.
- Storm sewers 21" diameter or larger shall be A.S.T.M. C-76, Class II, unless otherwise shown on plans.
- All storm sewer pipe under pavement, regardless of size, shall be reinforced concrete pipe (A.S.T.M. C-76, Class III) unless noted otherwise on the plans.
- Corrugated metal pipe shall conform to the standard specifications for corrugated culvert pipe M36, A.A.S.H.T.O. See plans for gauge.
- All manhole and inlet tops shall be built to the elevations shown on these plans. If no top elevation is shown, it will be the responsibility of the contractor to contact the engineer for such information prior to construction. At the time of construction stake-out of the sewer lines, all curb and grate inlets will be face staked. If normal face stakes fall in line with sewer construction the Engineer will set these stakes on a double offset. It shall be the responsibility of the sewer contractor to preserve all face stakes from destruction.
- All standard street curb inlets to have front of inlet 2 feet behind curb.
- All sanitary and storm sewers shall meet all specifications and installation requirements of the local governing authority.
- Easements shall be provided for storm sewers, sanitary sewers and all utilities on the record plat. See record plat for location and size of easements. This does not apply to house laterals.
- All P.V.C. water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
- All water lines shall be laid at least 10 feet horizontally, from any sanitary sewer, storm sewer, or manhole. Whenever water lines must cross sanitary sewers, laterals or storm drains the water lines shall be laid at such an elevation that the bottom of the water line is 18 inches above the top of the drain or sewer. A full length of water pipe shall be centered over the sewer line to be crossed so that the joints will be equally distant from the sewer and as remote therefrom as possible. This vertical separation shall be maintained for that portion of the water line located within 10 feet, horizontally, of any sewer or drain it crosses.
- Water lines, valves, sleeves, meters and etc. shall meet all specifications and installation requirements of the local governing authority.
- All ductile iron pipe for water mains shall conform to A.W.W.A. specifications C-106 and/or C-108. The ductile iron fittings shall conform to A.W.W.A. specification C-110. All rubber gasket joints for water ductile iron pressure pipe and fittings shall conform to A.W.W.A. specification C-111.
- All water hydrants and valves shall be ductile iron and installed in accordance with plans and details.
- All streets within the public right-of-way must meet specifications and installation requirements of the City of O'Fallon.
- Hazard markers will consist of three (3) Standard Specifications, "Manual on Uniform Traffic Control Devices", and of roadway markers mounted on two (2) pound "U" channel sign post. Each marker shall consist of an eighteen (18) inch diamond reflectorized red panel. The bottom of each panel shall be mounted a minimum of four (4) feet above the elevation of the pavement surface.
- The City of O'Fallon, shall be notified at least 48 hours prior to construction of sanitary sewers for coordination and inspection.

EXISTING		PROPOSED	
---+00---	Contours	---+00---	Contours
---+51---	Spot Elevation	---+51---	Spot Elevation
---	Building Line	---	Building Line
---	Property Line	---	Property Line
---	Center Line	---	Center Line
---	Structure	---	Structure
---	Tree or Bush	---	Tree or Bush
---	Fence	---	Fence
---	Storm Sewer	---	Storm Sewer
---	Sanitary Sewer	---	Sanitary Sewer
---	Curb or Area Catch Basin	---	Curb or Area Catch Basin
---	Grated Inlet	---	Grated Inlet
---	Manhole	---	Manhole
---	Flared End Section	---	Flared End Section
---	Cleanout	---	Cleanout
---	Utility or Power Pole	---	Utility or Power Pole
---	Fire Hydrant	---	Fire Hydrant
---	Soil Boring	---	Soil Boring
---	Railroad	---	Railroad
---	Gas Main	---	Gas Main
---	Water Main	---	Water Main
---	Telephone	---	Telephone
---	Electric	---	Electric
---	Use in Place	---	Use in Place
---	To Be Removed & Replaced	---	To Be Removed & Replaced
---	Seals	---	Seals
---	Light Standard	---	Light Standard
---	Handicapped	---	Handicapped



KEY MAP
N.T.S.



LOCATION MAP
N.T.S.

DEVELOPMENT NOTES

- GROSS AREA OF TRACT = 16.629 Acres
 Single Family Area = 11.602 Acres
 Common Ground Area = 1.828 Acres
 Street R/W = 3.199 Acres
- Present Zoning: R-3 Garden Apartment District
- Total Lots Proposed = 78 Lots
 Average square feet per lot = $\frac{13.43 \times 3560}{78 \text{ Lots}} = 7500 \text{ Sq. Ft./Lot}$
- Site is located in or served by the following:
 Fort Zumwalt School District
 Continental Telephone Company
 City of O'Fallon Sewers
 Water District No. 2
 Union Electric Company
 St. Charles Gas Company
 O'Fallon Fire Protection District
- Proposed Height and Lot Area Requirements:
 Min. Front Yards: 25 feet
 Min. Side Yards: 6 feet
 Min. Rear Yard: 25 feet, which may be reduced to 15 feet on corner lots
 Max. Height of SFR Bldg: 2 1/2 stories or 35 feet

This is to certify that the following as-built locations were located in the field and are correctly shown herein.

Thomas E. Smith
 Mo. Reg. L.S. #1462

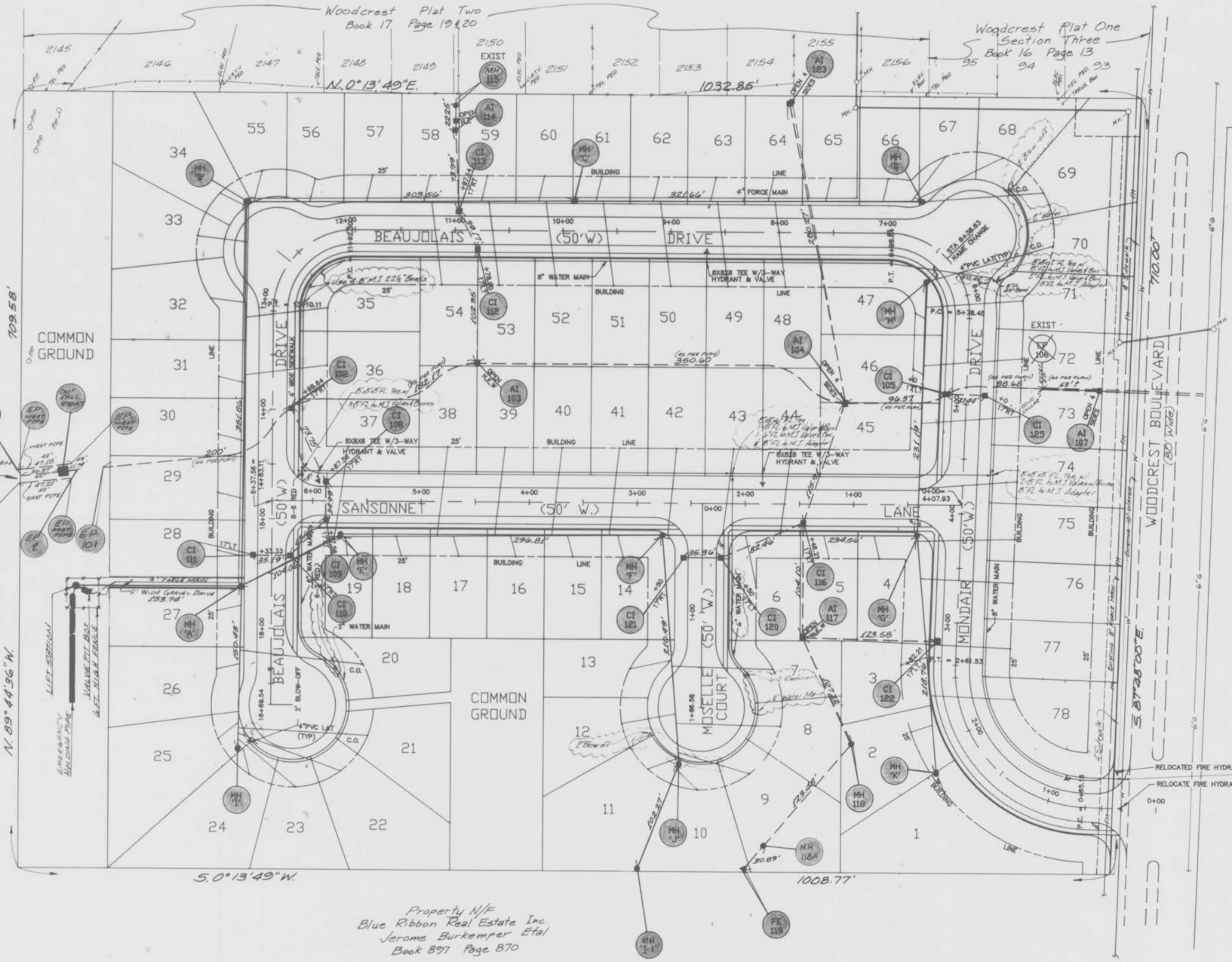


INDEX	
SHEET NO.	DESCRIPTION
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2	FLAT PLAN
3	GRADING PLAN
4	STREET PROFILES
5,6	SANITARY SEWER / FORCE MAIN PROFILES
7	STORM SEWER PROFILES
8	DRAINAGE AREA MAP
9-13	CONSTRUCTION DETAILS
14	LIFT STATION DETAILS

BENCH MARKS:
 BENCH MARK - RM 68 - ELEVATION: 509.47 "L" chiseled on South end of West headwall of State Highway K bridge over Bellevue Creek.
 SITE BENCH MARK - ELEVATION: 578.57 "0" in open on fire hydrant located at Northeast property corner.

	BAX ENGINEERING CO., INC. 221 Point West Blvd. St. Charles, Missouri 63301 946-6588 724-3330
	DEVELOPER: TRAVIS SHANE CORP. 33910 Old Hwy 94 South Suite 114 St. Charles, MO 63303 928-8108
DATE <u>Oct. 1988</u>	ORDER NO. <u>88-2897</u> SHEET <u>1</u> OF <u>5</u>
ENGINEER: HAROLD J. BAX, P.E.	1 5

AS-BUILTS ADDED FEBRUARY, 1989



NOTE: SEE SHEET 3 OF 5 FOR THE STORM SEWER PROFILES OF THE WEST & EAST PIPES.

Property N/F
Fort Zumwalt School District
Book 1087 Page 1038

N. 89° 44' 36" W.

S. 0° 13' 49" W.

Property N/F
Blue Ribbon Real Estate Inc.
Jerome Burkemper Etal
Book 897 Page 870

RELOCATED FIRE HYDRANT
RELOCATE FIRE HYDRANT AND VALVES
Install 8" tapping sleeve Tee with M.J. Tapping Valve & Box

PROPERTY OF
CITY OF O'FALLON
BUILDING DEPARTMENT

AS-BUILTS ADDED FEBRUARY, 1989

SCALE: 1" = 50' H.
1" = 10' V.

FINAL SURVEY
DATE: _____
BY: _____
REVISIONS:
NO. DATE BY AREA CHECKED

ORIGINAL SURVEY
DATE: _____
BY: _____
REVISIONS:
NO. DATE BY AREA CHECKED



NOTE: SEE OTHER SHEETS FOR LOCATION OF WEST & EAST PIPES

STORM SEWER PROFILES FOR WEST & EAST PIPES

PLATE 3-FULL CROSS SECTION FULL LINE
PRINTED IN U.S.A.

AS-BUILTS ADDED FEBRUARY, 1989

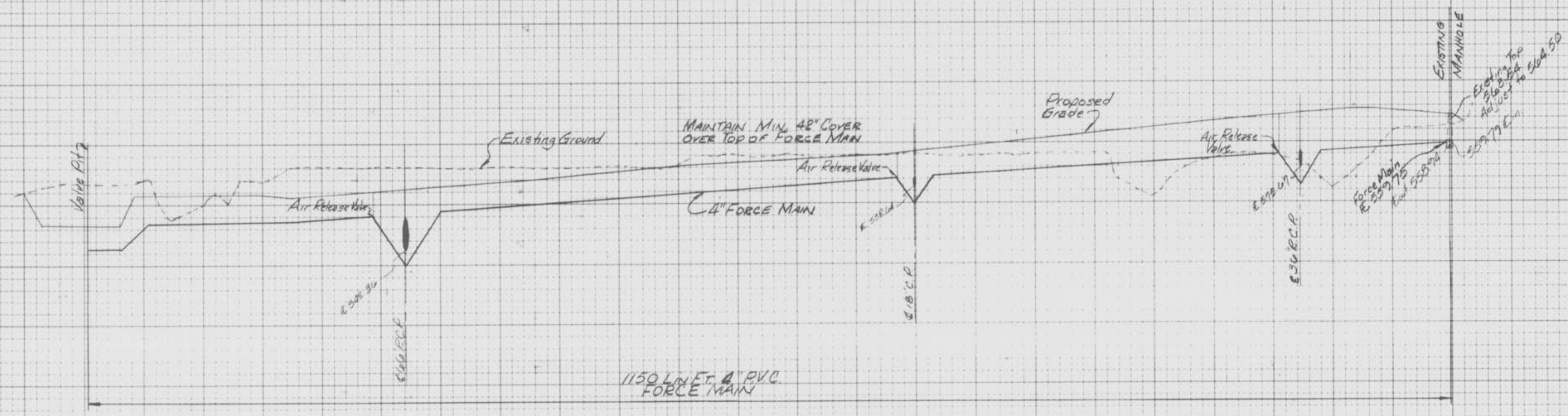
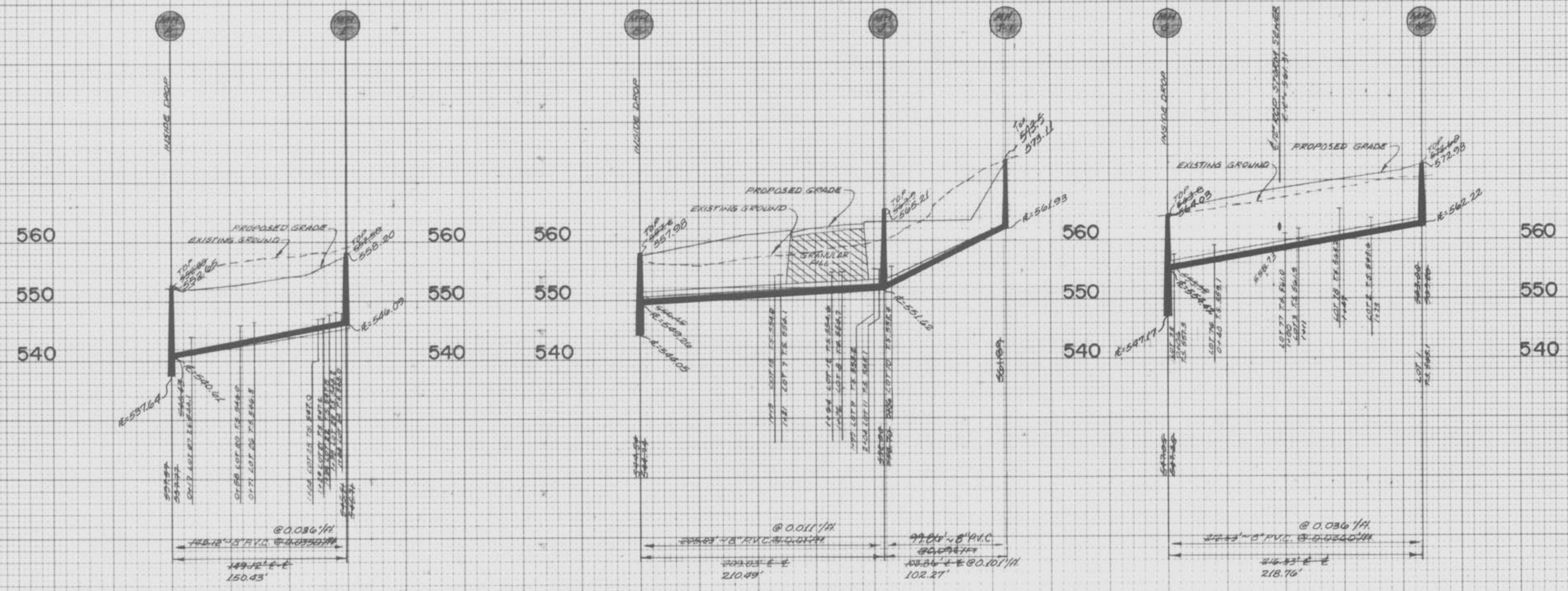
PROPERTY OF
CITY OF FALLON
BUILDING DEPARTMENT

Feb 11-2-88

SCALE: 1" = 50' H.
 1" = 10' V

FINAL SURVEY PLOTTED
 DATE: _____ BY: _____
 NOTE BOOK TEMPLATE NO. AREA CHECKED: _____

ORIGINAL SURVEY PLOTTED
 DATE: _____ BY: _____
 NOTE BOOK AREA NO. AREA CHECKED: _____

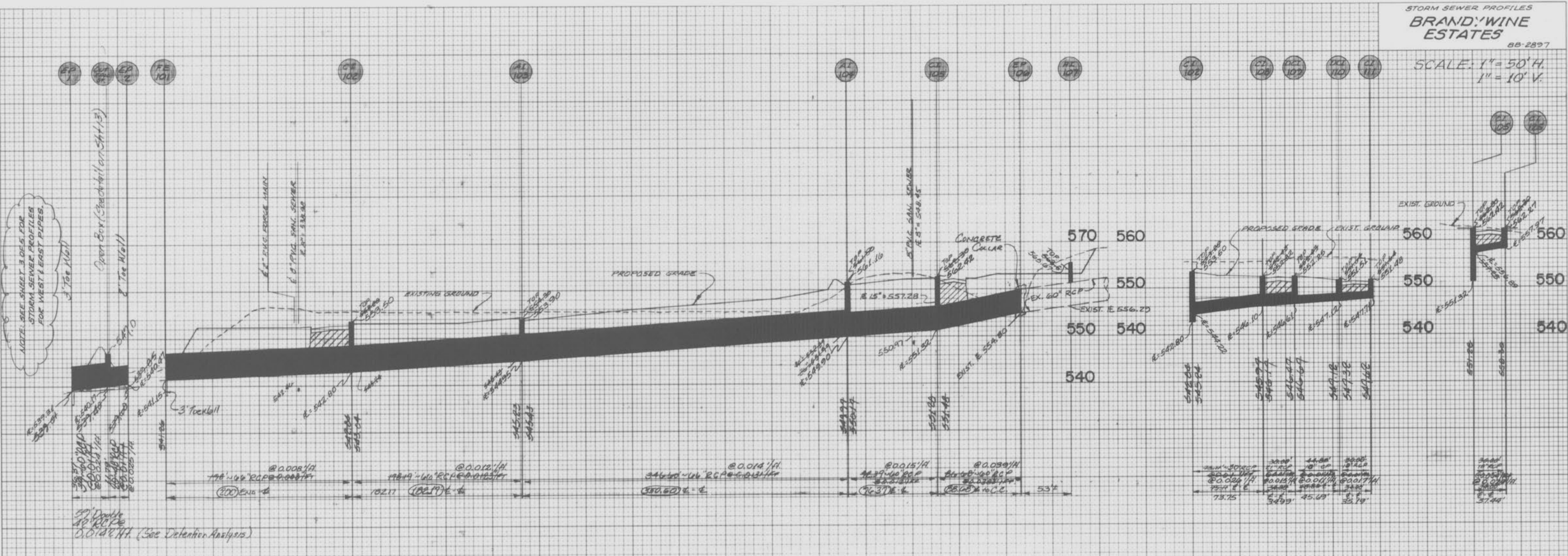


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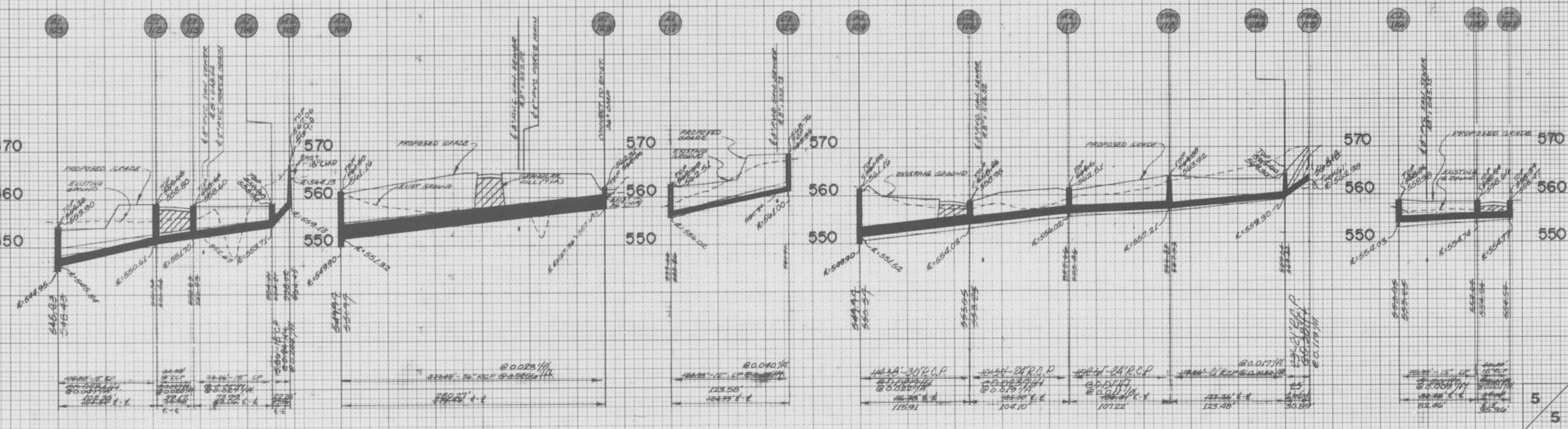
PLATE 3 FULL CROSS SECTION FULL LINE

STORM SEWER PROFILES
BRANDWINE ESTATES

88-2897
SCALE: 1" = 50' H.
1" = 10' V.



DATE _____ BY _____
FINAL SURVEY PLOTTED TEMPLATE NO. _____ AREA CHECKED _____



DATE _____ BY _____
ORIGINAL SURVEY PLOTTED TEMPLATE NO. _____ AREA CHECKED _____

AS-BUILTS ADDED FEBRUARY, 1989

REV 11-2-88

PROPERTY OF
CITY OF FALLON
BUILDING DEPARTMENT

DESIGN: FEDERAL ROAD
PLATE 3-FULL CROSS SECTION FULL LINE
TELETYPE
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