

# GENERAL NOTES

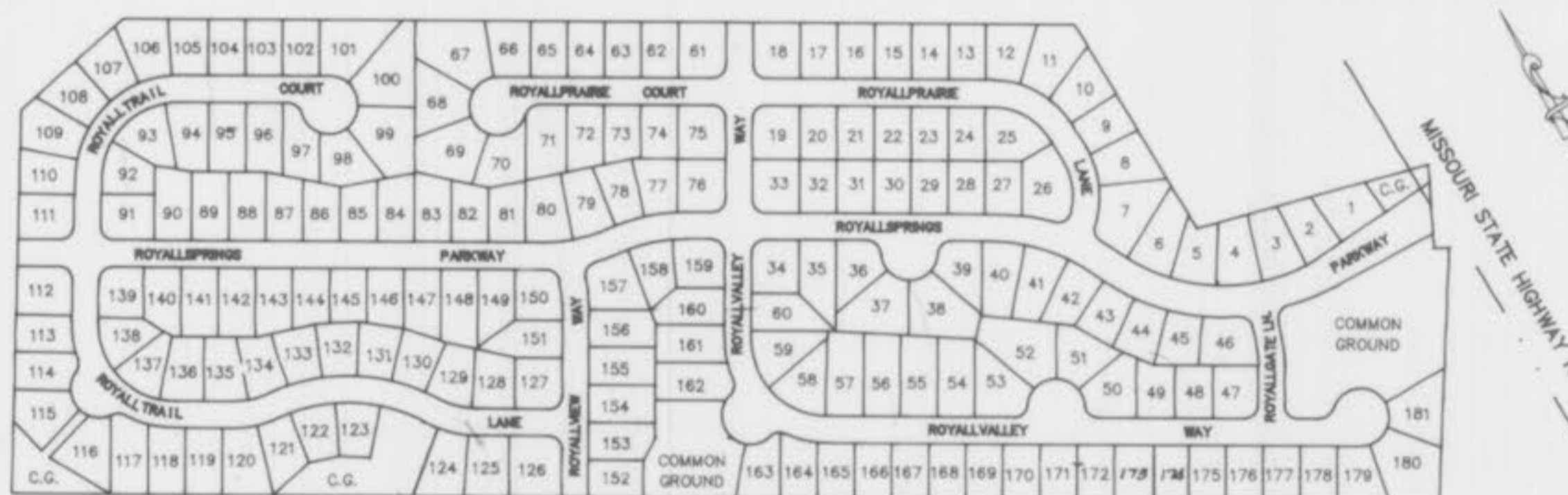
- Underground utilities have been plotted from available information and therefore their locations shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans shall be the responsibility of the contractor, and shall be located prior to any grading or construction of the improvements.
- All manhole and inlet tops built without elevations furnished by the Engineer will be the responsibility of the Sewer Contractor.
- All standard curb inlets to have front of inlet 2' (foot) behind curb.
- Storm sewers 18" diameter and smaller shall be A.S.T.M. C-14 unless otherwise shown on the plans.
- Storm sewers 21" diameter and larger shall be A.S.T.M. C-76, Class II minimum, unless otherwise shown on the plans.
- All storm pipe in the right-of-way shall be reinforced concrete pipe (A.S.T.M. C-76 Class III minimum).
- 8" P.V.C. sanitary sewer pipe shall meet the following standards. A.S.T.M.-D-3034 SDR-35, with wall thickness compression joint A.S.T.M.-D-3212. An appropriate rubber seal waterstop as approved by the sewer district shall be installed between P.V.C. pipe and masonry structures.
- All filled places, including trench backfills, under buildings, proposed storm and sanitary sewer lines and/or paved areas, shall be compacted to 90% maximum density as determined by the "Modified AASHTO T-180 Compaction Test," (A.S.T.M.-D-1557). All filled places within public roadways shall be compacted to 95% of maximum density as determined by the "Standard Proctor Test AASHTO T-99, Method C" (A.S.T.M. D-698).
- All trench backfills within the public right-of-way shall be granular backfill. Granular backfill shall be water jetted to attain proper compaction. Trench backfills under paved areas, outside of public right-of-way may be granular backfill in lieu of the earth backfill compacted to 90% of the Modified AASHTO Compaction Test. *All trench backfills to be jetted.*
- No area shall be cleared without the permission of the Project Engineer.
- All grades shall be within 0.2 feet of those shown on the grading plan.
- No slope shall be steeper than 3:1. All slopes shall be sodded or seeded and mulched.
- All construction and materials used shall conform to current City of O'Fallon, East-Central Missouri Water and Sewer Authority, Duckett Creek Sewer District and Missouri Highway and Transportation Commission Standards.
- All PVC sanitary pipe to have crushed stone bedding uniformly graded between 1" and 1/2" size. This bedding shall extend from 8" below sewer pipe to 6" above pipe. See "Pipe Bedding Details" detail, sheet 25 of 26.*
- All soils tests shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.
- A 20' building line shall be established along all public rights-of-way.
- 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.
- 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 line 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.
- All P.V.C. water pipe shall have a minimum pressure rating of PR-200 or SDR-21.
- 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 fitting 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.
- The minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding house connections shall not be less than the diameter of the sanitary sewer plus a vertical distance of not less than 2 1/2 feet.
- The City of O'Fallon and Duckett Creek Sewer District shall be notified 48 hours prior to start of construction of sanitary sewers for coordination and inspection.
- 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.
- Brick will not be used in the construction of sanitary sewer manholes.*
- Sanitary sewer manholes to be waterproofed on the exterior in accordance with M.O.D.N.A. Spec. 100SR-B.180(1)(a).*

## PLANS FOR CONSTRUCTION OF SANITARY SEWERS, STORM SEWERS, GRADING, PAVING AND WATER MAINS FOR

# ROYALLSPRINGS

A TRACT OF LAND BEING PART OF  
U.S. SURVEY 3180 AND PART OF U.S. SURVEY 67  
TOWNSHIP 46 NORTH, RANGE 3 EAST  
ST. CHARLES COUNTY, MISSOURI

## STORM AND SANITARY SEWER AS-BUILTS



## KEY MAP

NOT TO SCALE



## LOCATION MAP

## DEVELOPMENT NOTES

- Gross Acreage of Property: 50.00 acres
- Present Zoning Classification: R-4 P.U.D. (City of O'Fallon)
- Proposed Use: Single Family Residential Subdivision
- This property will be served by the following utilities:  
WATER: St. Charles County Water District No. 2  
SANITARY SEWER: Duckett Creek Sewer District  
ELECTRIC: Union Electric Company and St. Charles Gas Company  
GAS: St. Charles Gas Company  
TELEPHONE: GTE Telephone Company  
CABLE TV: TCI Cablevision of Missouri
- This property is located in the following service areas:  
Fort Zumwalt School District  
O'Fallon Fire Protection District
- The proposed Height and Lot Area Requirements are as follows:  
**RESIDENTIAL TRACT:**  
Minimum Front Yard: 20 feet  
Minimum Rear Yard: 25 feet  
Minimum Side Yard: 6 feet  
Maximum Height of Building: 8'-0" Single Family Residential Zoning District  
Minimum Lot Area: 7000 square feet
- This plan contains the approximate division of gross acreage as follows:  
Gross Acreage: 50.00 acres  
Acreage to be dedicated to M.H.D. for road widening: 0.03 acres  
Acreage in street right-of-way: 10.68 acres  
Net Acreage: 39.29 acres  
Acreage of Common Ground: 3.23 acres  
Acreage in SFR Lots: 36.06 acres  
Average Area Per SFR Lot:  
Net Acreage 39.29 Acres = 0.22 acres  
Number of Lots = 181 Lots = Lot = 9,456 sq.ft. per lot
- This property is proposed to be platted in four plats. Plat One, 42 lots; Plat Two, 44 lots; Plat Three, 48 lots; Plat Four, 47 lots.

## LEGEND

EXISTING	PROPOSED
400	Contours
±451	Spot Elevation
---	Building Line
---	Property Line
---	Center Line
---	Structure
---	Tree or Bush
---	Fence
---	Storm Sewer
---	Sanitary Sewer
---	Lock or Area Catch Basin
---	Revised Inlet
---	Manhole
---	Flared End Section
---	Cleanout
---	Utility or Power Pole
---	Fire Hydrant
---	Salt Berling
---	Railroad
---	Gas Main
---	Water Main
---	Telephone
---	Electric
---	Use in Place
---	To Be Removed
---	To Be Removed & Replaced
---	Scale
---	Light Standard
---	Handicapped

## INDEX

SHEET NO.	DESCRIPTION
SHEET 1	COVER SHEET
SHEETS 2,	FLAT PLAN
<del>SHEETS 4, 5</del>	<del>GRADING PLAN</del>
<del>SHEETS</del>	<del>WATER PLAN</del>
<del>SHEETS 8-10</del>	<del>STREET PROFILES</del>
<del>SHEETS</del>	<del>SANITARY SEWER PROFILES</del>
<del>SHEETS 18, 19</del>	<del>STORM SEWER PROFILES</del>
<del>SHEETS 20-25</del>	<del>DRAINAGE AREA MAP</del>
	<del>CONSTRUCTION DETAILS</del>

## BENCH MARKS:

U.S.G.S. Benchmark: Elevation = 558.84  
"0" in open fire hydrant at the intersection of Chapperal Drive and Stillwater Drive.

Site Benchmark: Elevation 507.05  
Set iron pipe on south line of Royallsprings development. N = 925.027, E = 3766.859  
Pipe located North 58 degrees 41 minutes 00 seconds West, 624.53 feet from southeast boundary corner.

## PREPARED BY:

**BAT** ENGINEERING

ENGINEERING

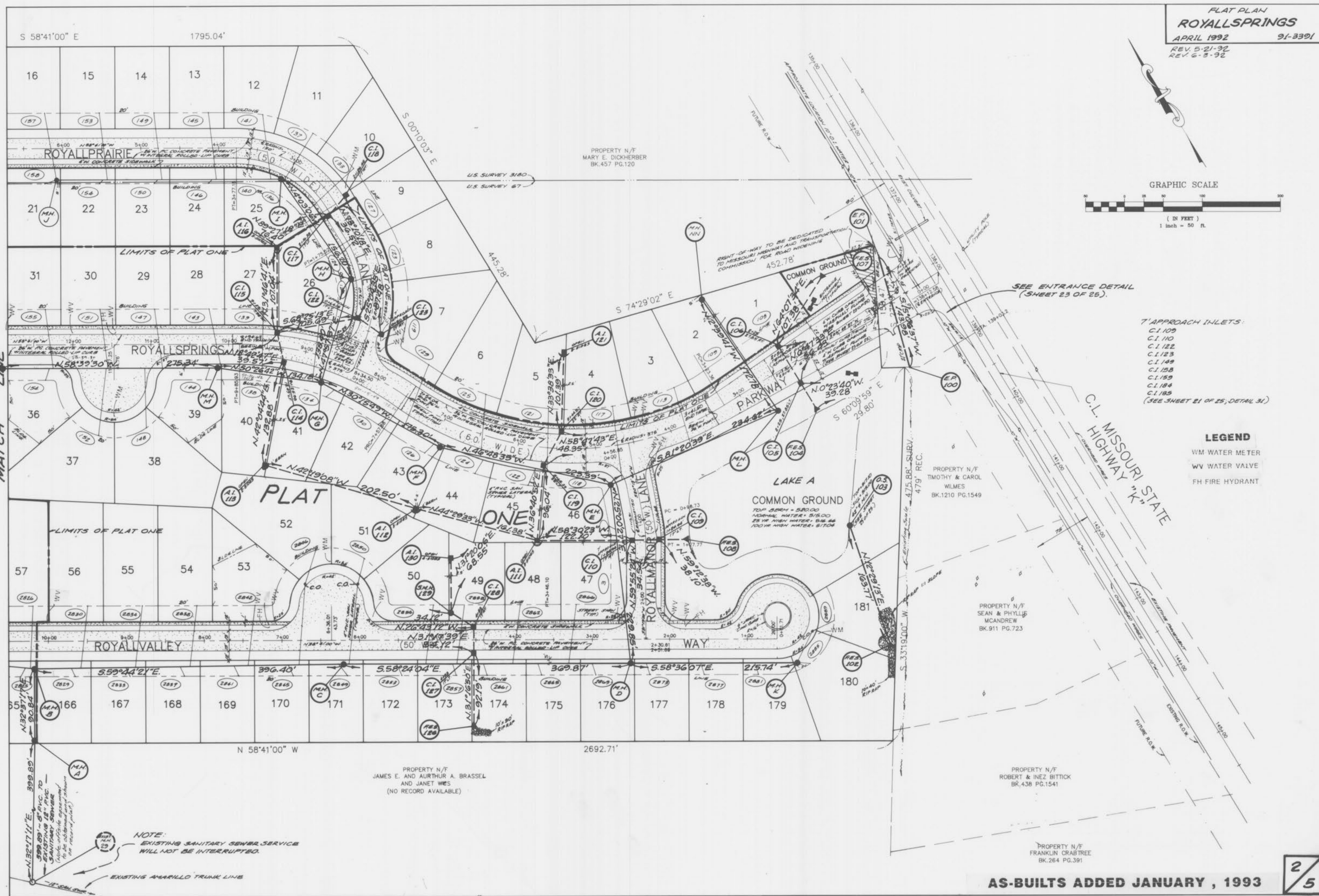
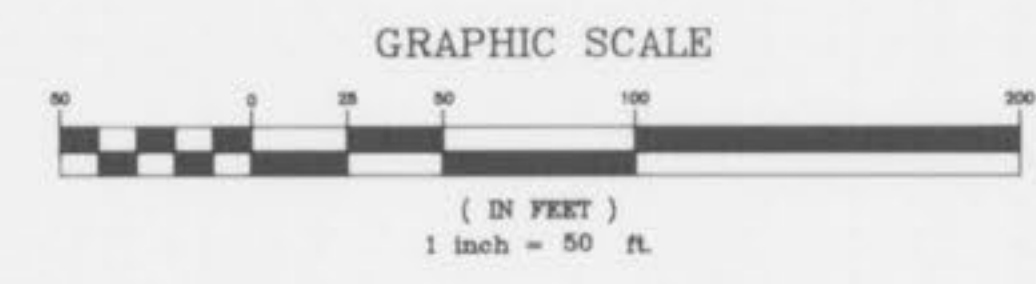
ENGINEERING

221 Point West Boulevard  
St. Charles, MO. 63301  
314-646-6588  
314-724-3330

PREPARED FOR:  
M.L.S. INVESTMENTS CO.  
11443 ST. CHARLES ROCK ROAD  
BRIDGETON, MO. 63044-2789  
PHONE: (314) 739-2110

APRIL 1992 5-21-92  
DATE REVISIONS  
91-3391 6-9-92  
PROJECT NUMBER  
1 5  
SHEET OF

AS-BUILTS ADDED JANUARY, 1993



- 7' APPROACH INLETS:
- C.I. 109
  - C.I. 110
  - C.I. 122
  - C.I. 123
  - C.I. 149
  - C.I. 158
  - C.I. 159
  - C.I. 184
  - C.I. 185
- (SEE SHEET 21 OF 25, DETAIL 31)

- LEGEND**
- WM WATER METER
  - WV WATER VALVE
  - FH FIRE HYDRANT

PROPERTY N/F  
 MARY E. DICKHERBER  
 BK.457 PG.120

PROPERTY N/F  
 TIMOTHY & CAROL  
 WILMES  
 BK.1210 PG.1549

PROPERTY N/F  
 SEAN & PHYLLIS  
 MCANDREW  
 BK.911 PG.723

PROPERTY N/F  
 ROBERT & INEZ BITTICK  
 BK.438 PG.1541

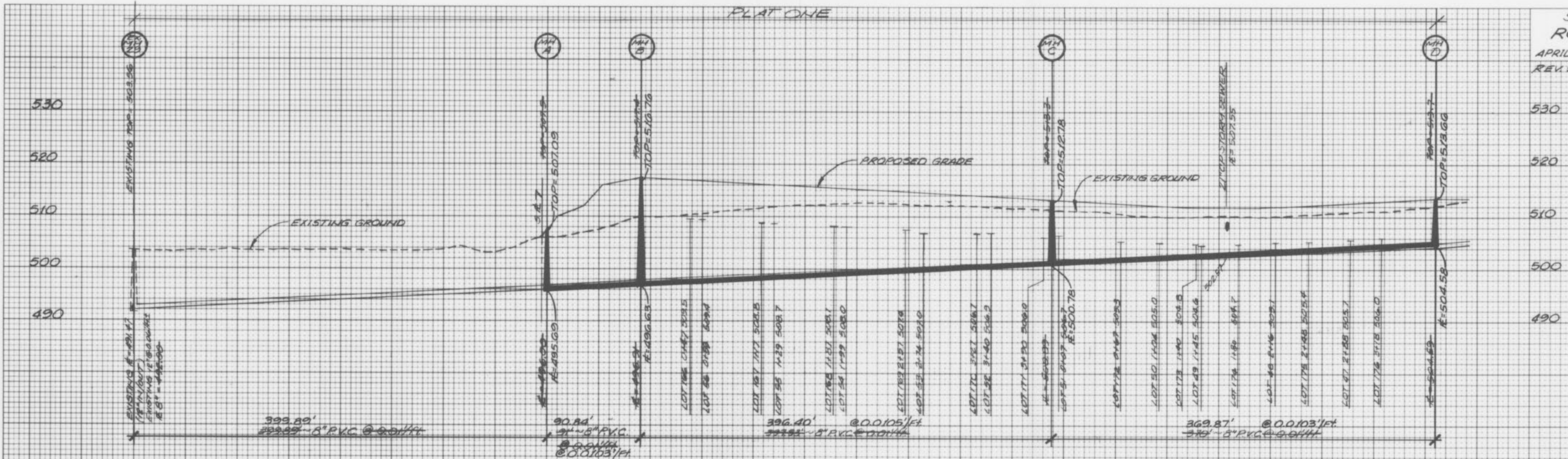
PROPERTY N/F  
 FRANKLIN CRABTREE  
 BK.264 PG.391

**NOTE:**  
 EXISTING SANITARY SEWER SERVICE  
 WILL NOT BE INTERRUPTED.

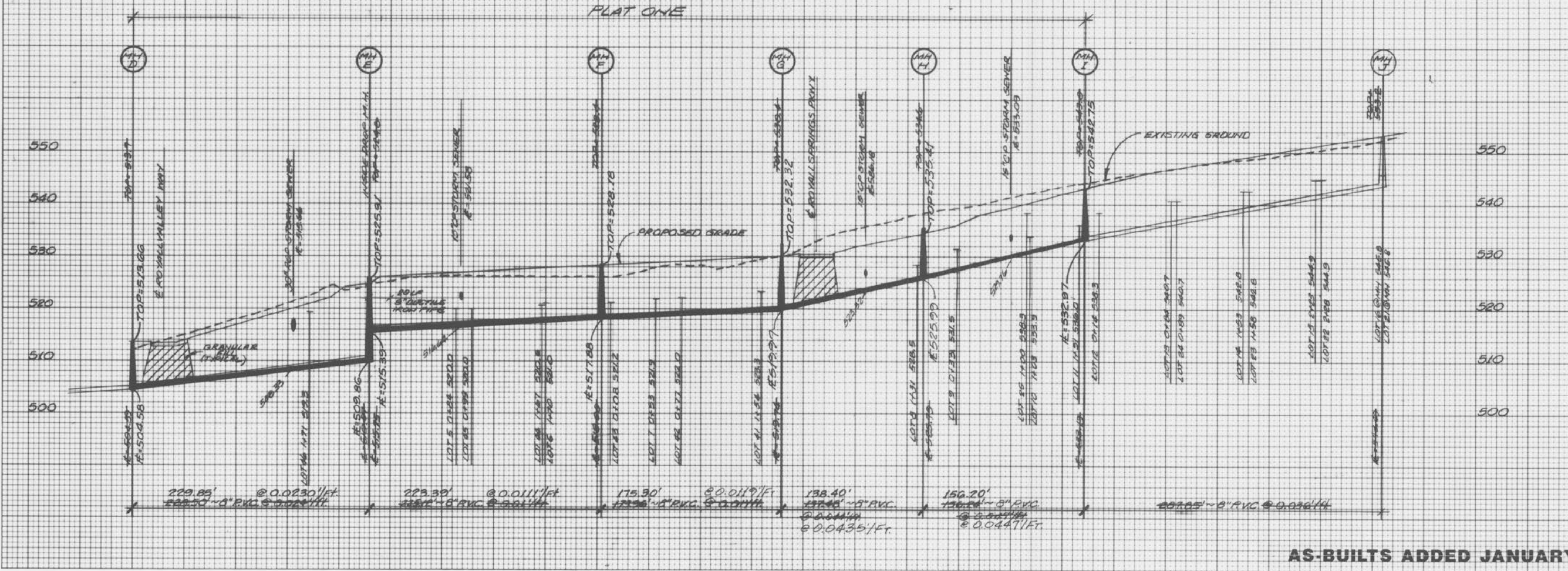
**AS-BUILTS ADDED JANUARY, 1993**

SCALE:  
 1" = 50' HORIZ  
 1" = 10' VERT.

FINAL SURVEY  
 BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PLANNED PROJECT: \_\_\_\_\_  
 NOTE BOOK NO.: \_\_\_\_\_  
 AREA CHECKED: \_\_\_\_\_



ORIGINAL SURVEY  
 BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PLANNED PROJECT: \_\_\_\_\_  
 NOTE BOOK NO.: \_\_\_\_\_  
 AREA CHECKED: \_\_\_\_\_



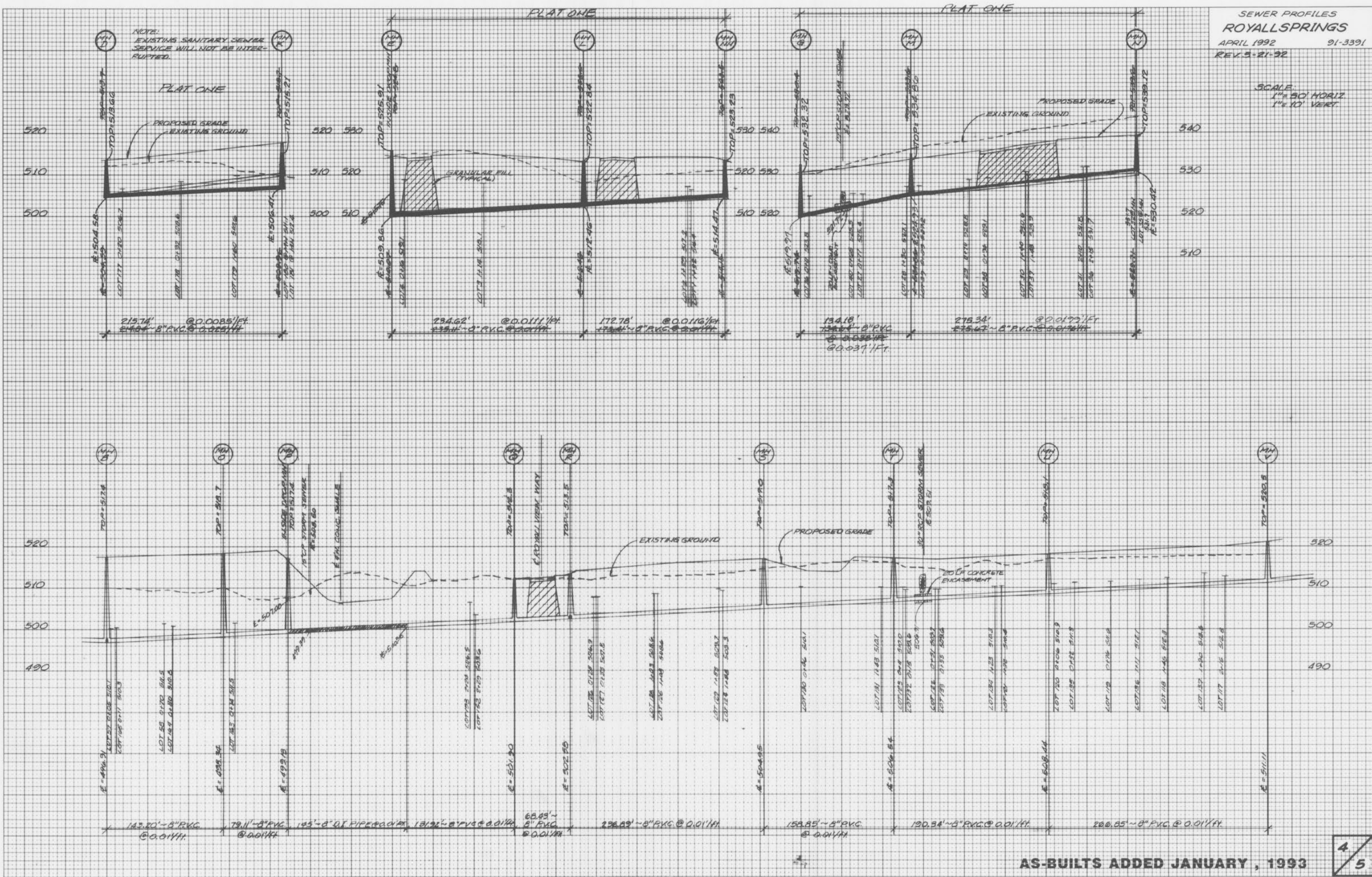
AS-BUILTS ADDED JANUARY, 1993

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SCALE:  
 1" = 50' HORIZ.  
 1" = 10' VERT.

FINAL SURVEY  
 SURVEYED  
 PLOTTED  
 NOTE BOOK  
 AREA  
 NO.  
 AREAS CHECKED

ORIGINAL SURVEY  
 SURVEYED  
 PLOTTED  
 NOTE BOOK  
 AREA  
 NO.  
 AREAS CHECKED



AS-BUILTS ADDED JANUARY, 1993

DATE \_\_\_\_\_  
BY \_\_\_\_\_  
FINAL SURVEY  
DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
NO. \_\_\_\_\_

DATE \_\_\_\_\_  
BY \_\_\_\_\_  
ORIGINAL SURVEY  
DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
NO. \_\_\_\_\_

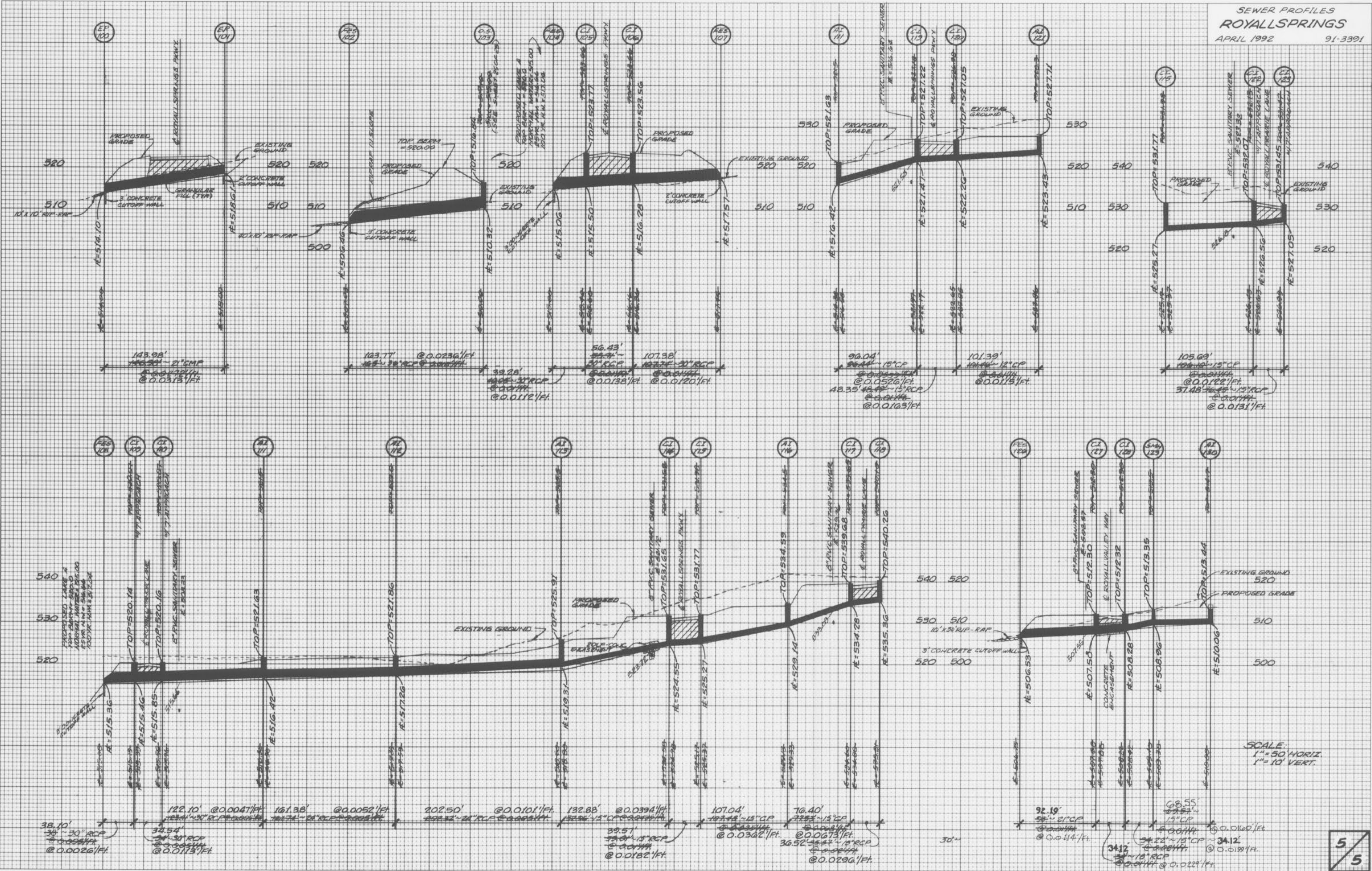


PLATE 3-FULL CROSS SECTION-FULL LINE  
PRINTED IN U.S.A.

AS-BUILTS ADDED JANUARY, 1993

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