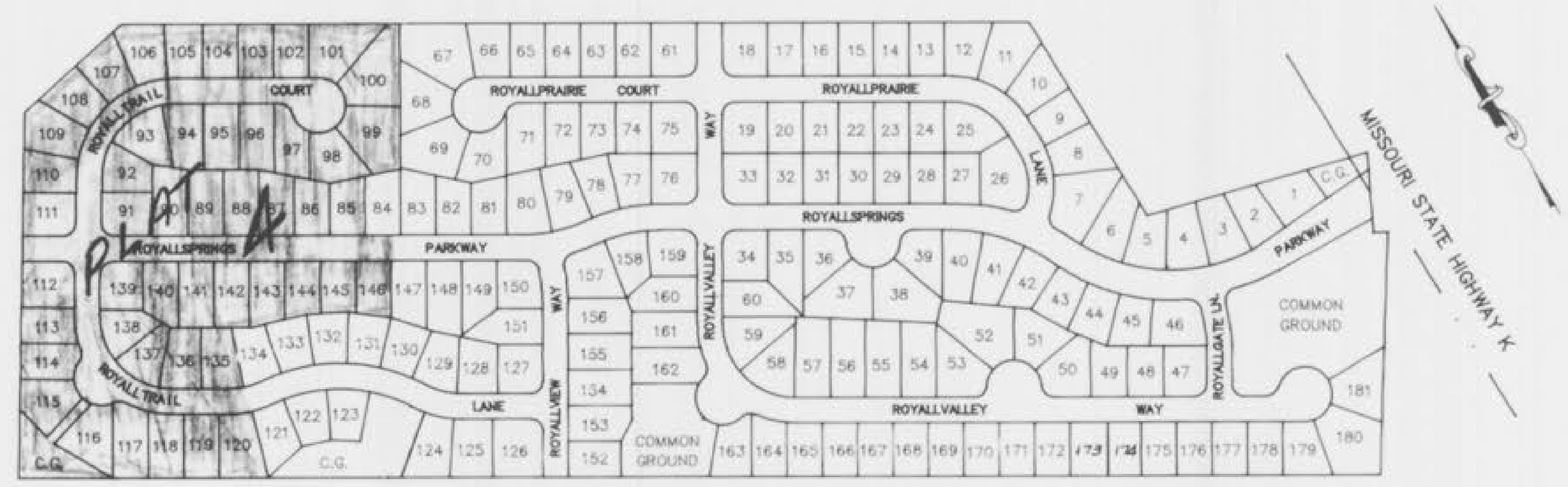
~~PLANS FOR CONSTRUCTION OF~~ SANITARY ~~SEWERS, STORM~~ SEWERS, ~~GRADING~~, PAVING AND WATER ~~MAINS~~ FOR

ROYALLSPRINGS

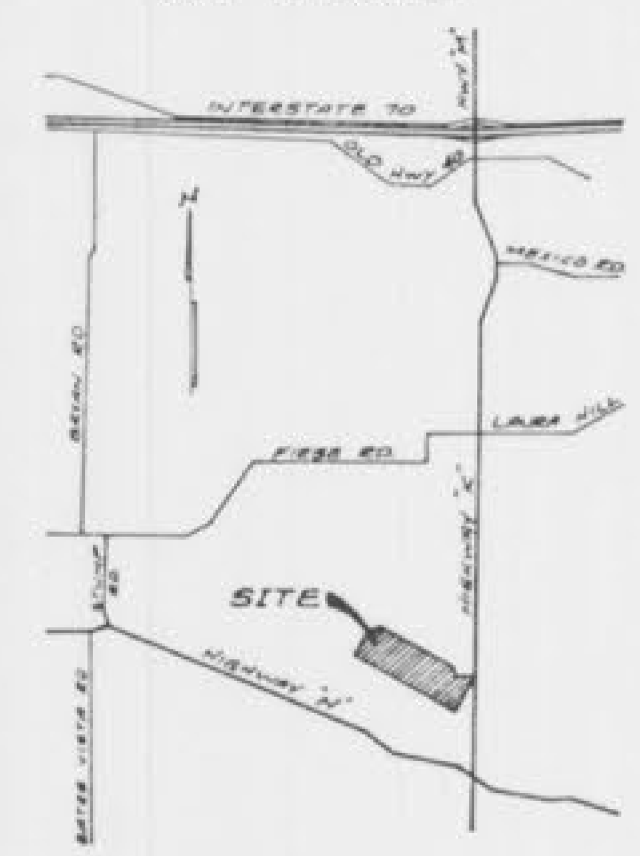
A TRACT OF LAND BEING PART OF U.S. SURVEY 3180 AND PART OF U.S. SURVEY 67 TOWNSHIP 46 NORTH, RANGE 3 EAST ST. CHARLES COUNTY, MISSOURI

STORM AND SANITARY SEWER AS-BUILTS



KEY MAP

NOT TO SCALE



LOCATION MAP

GENERAL NOTES

1) 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.

2) All manhole and inlet tops built without elevations furnished by the Engineer will be the responsibility of the Sewer Contractor.

3) All standard curb inlets to have front of inlet 2' (foot) behind curb.

4) Storm sewers 18" diameter and smaller shall be A.S.T.M. C-14 unless otherwise shown on the plans.

5) Storm sewers 21" diameter and larger shall be A.S.T.M. C-76, Class II minimum, unless otherwise shown on the plans.

6) All storm pipe in the right-of-way shall be reinforced concrete pipe (A.S.T.M. C-76 Class III minimum).

7) 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.

8) 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).

9) 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.*

10) No area shall be cleared without the permission of the Project Engineer.

11) All grades shall be within 0.2 feet of those shown on the grading plan.

12) No slope shall be steeper than 3:1. All slopes shall be sodded or seeded and mulched.

13) 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.

14) All PVC sanitary pipe to have crushed stone bedding uniformly graded between 1" and ¾" size. This bedding shall extend from 4" minimum below pipe to 6" above pipe. See "Pipe Bedding Class "C"" detail, sheet 25 of 26.

15) All soils tests shall be verified by a Soils Engineer concurrent with the grading and backfilling operations.

16) A 20' building line shall be established along all public rights-of-way.

17) 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.

18) 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.

19) All P.V.C. water pipe shall have a minimum pressure rating of PR-200 or SDR-21.

20) Water lines, valves, sleeves, meters and etc. shall meet all specifications and installation requirements of the local governing authority.

21) 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.

22) All water hydrants and valves shall be ductile iron and installed in accordance with plans and details.

23) 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.

24) 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.

25) 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.

26) Brick will not be used in the construction of sanitary sewer manholes.

27) Sanitary sewer manholes to be waterproofed on the exterior in accordance with M.O.D.N.R. Spec 10CSR-8.120(7)(E).

28) The Duckett Creek Sewer District shall be notified 48 hours prior to construction of sanitary sewers for coordination and inspection.

29) All pipes shall have positive drainage through manholes. No flat base structures are allowed.

30) All sanitary sewer manholes to be 48" minimum inside diameter in accordance to Missouri Department of Natural Resources specification 10 CSR 20-8.

PLAT 4 AS-BUILTS ADDED OCTOBER, 1994.

DEVELOPMENT NOTES

1. Gross Acreage of Property: 50.00 acres
2. Present Zoning Classification: R-4 P.U.D. (City of O'Fallon)
3. Proposed Use: Single Family Residential Subdivision
4. 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
GAS:	St. Charles Gas Company
TELEPHONE:	GTE Telephone Company
CABLE TV	TCI Cablevision of Missouri

5. This property is located in the following service areas:

   Fort Zumwalt School District
   O'Fallon Fire Protection District

6. 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:	*Per "R1" Single Family Residential Zoning District*
Minimum Lot Area:	7000 square feet

7. This plan contains the approximate division of gross acreage as follows:

Gross Acreage:	50.00 acres
Acreage to be dedicated to M.H.T.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:	

$\frac{\text{Net Acreage}}{\text{Number of Lots}} = \frac{39.29\text{ Acres}}{181\text{ Lots}} = \frac{0.22\text{ acres}}{\text{Lot}}$ = 9,456 sq.ft. per lot

8. 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.

STATE OF MISSOURI — NEAL JOHN NIEWALD — NUMBER LS-2112 — REGISTERED LAND SURVEYOR

AS-BUILTS ADDED FEBRUARY 1994

LEGEND:

EXISTING		PROPOSED
400	Contours	(400)
451	Spot Elevation	(456)
	Building Line	
	Property Line	
	Center Line	
	Structures	
Bush / 8" Tree	Tree or Bush	
Chain Link	Fence	Chain Link
12" RCP	Storm Sewer	
8" VCP	Sanitary Sewer	
	Curb or Area Catch Basin	
	Grated Inlet	
	Manhole	
	Flared End Section	
C.O.	Cleanout	C.O.
UP PP	Utility or Power Pole	UP PP
FH	Fire Hydrant	FH
	Soil Boring	
	Railroad	
2"G	Gas Main	(2"G)
6"W	Water Main	(6"W)
T	Telephone	(T)
E	Electric	(E)
	Use in Place	(U.I.P.)
	To Be Removed	(T.B.R)
	To Be Removed & Relocated	(T.B.R.&R.)
	Swale	
LS LS	Light Standard	
H	Handicapped	(H)

INDEX

BENCH MARKS:

U.S.G.S. Benchmark: Elevation = 558.84
"O" in open fire hydrant at the intersection of Chapparal 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 :

BA ENGINEERING
221 Point West Boulevard
St. Charles, MO. 63301
FAX 947-9182
314-946-6588
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 (DATE)	*5-21-92* (REVISIONS)
91-3391 (PROJECT NUMBER)	*6-3-92*
SHEET 1 OF 7	*3-17-93*

As Builts: Royal Springs - plat 4 Storm Sewers

FLAT PLAN
ROYALLSPRINGS
APRIL 1992 91-3391

REV. 5-21-92
REV. 6-3-92
REV 3.17.93

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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

S 58°41'00" E 1795.04'

ROYALL TRAIL COURT (50' WIDE)
ROYALL PRAIRIE COURT (50' WIDE)
ROYALL VALLEY WAY (50' WIDE)
ROYALLSPRINGS PARKWAY (50' WIDE)
ROYALL GLEN LANE
ROYALL GLEN SIDE

LIMITS OF PLAT THREE
LIMITS OF PLAT FOUR
LIMITS OF PLAT TWO
MATCH LINE — LIMITS OF PLAT ONE

BASIN C
BASIN D
BASIN B
COMMON GROUND

PROPERTY N/F
RAYMOND A. DICKERBER
BK 1362 PG 967

JAMES E. AND ARTHUR A. HRASTEL
AND JANET VIEL
(NO RECORD AVAILABLE)

EXISTING AMARILLO TRUNK LINE
EXIST. 8" SANITARY SEWER

Off-site easement has been obtained.

NOTE:
EXISTING 4" FORCE MAIN (SANITARY SEWER) WILL NOT BE INTERRUPTED DURING CONSTRUCTION OPERATIONS. EXISTING FORCE MAIN WILL BE REMOVED OR RELOCATED UPON CONSTRUCTION OF THIS PLAT.

STATE OF MISSOURI
NEAL JOHN NIEWALD
NUMBER 2001
REGISTERED LAND SURVEYOR

AS-BUILTS ADDED FEBRUARY 1994

2/7

As Built: Royal Springs Plat 4 Storm Sewers

NOTE:
EXISTING SANITARY SEWER SERVICE WILL NOT BE INTERRUPTED.

PLAT ONE

PROPOSED GRADE
EXISTING GROUND

214.84'~8" P.V.C.@ 0.025'/ft.

PLAT ONE

GRANULAR FILL (TYPICAL)

235.11'~8" P.V.C.@ 0.01'/ft.

173.41'~8" P.V.C.@ 0.01'/ft.

PLAT ONE

PROPOSED GRADE
EXISTING GROUND

134.64'~8" P.V.C. @ 0.038'/ft.

275.67'~8" P.V.C.@ 0.0176'/ft.

SEWER PROFILES
ROYALLSPRINGS
APRIL 1992 91-3391
REV. 5-21-92
REV. 3-17-93

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

PLAT TWO

PLAT THREE

PLAT FOUR

EXISTING GROUND

PROPOSED GRADE

143.80'~8" P.V.C. @ 0.01'/ft.

79.82'~8" P.V.C. @ 0.02'/ft.

275.85'~8" PIPE @ 0.008'/ft.

74.00' 8" P.V.C. @ 0.01'/ft.

236.97'~8" P.V.C. @ 0.01'/ft.

174.89'~8" P.V.C. @ 0.01'/ft.

180.75'~8" P.V.C. @ 0.009'/ft.

267.52'~8" P.V.C. @ 0.01'/ft.

PLATE 3 FULL CROSS SECTION

3/7

AS-BUILTS ADDED FEBRUARY 1994

As Builts: Royal Springs Plat 4
Storm Sewers

FINAL SURVEY

SEWER PROFILES
ROYALLSPRINGS

APRIL 1992 — 91-3391

REV. 5-21-92 — REV. 3-17-93

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

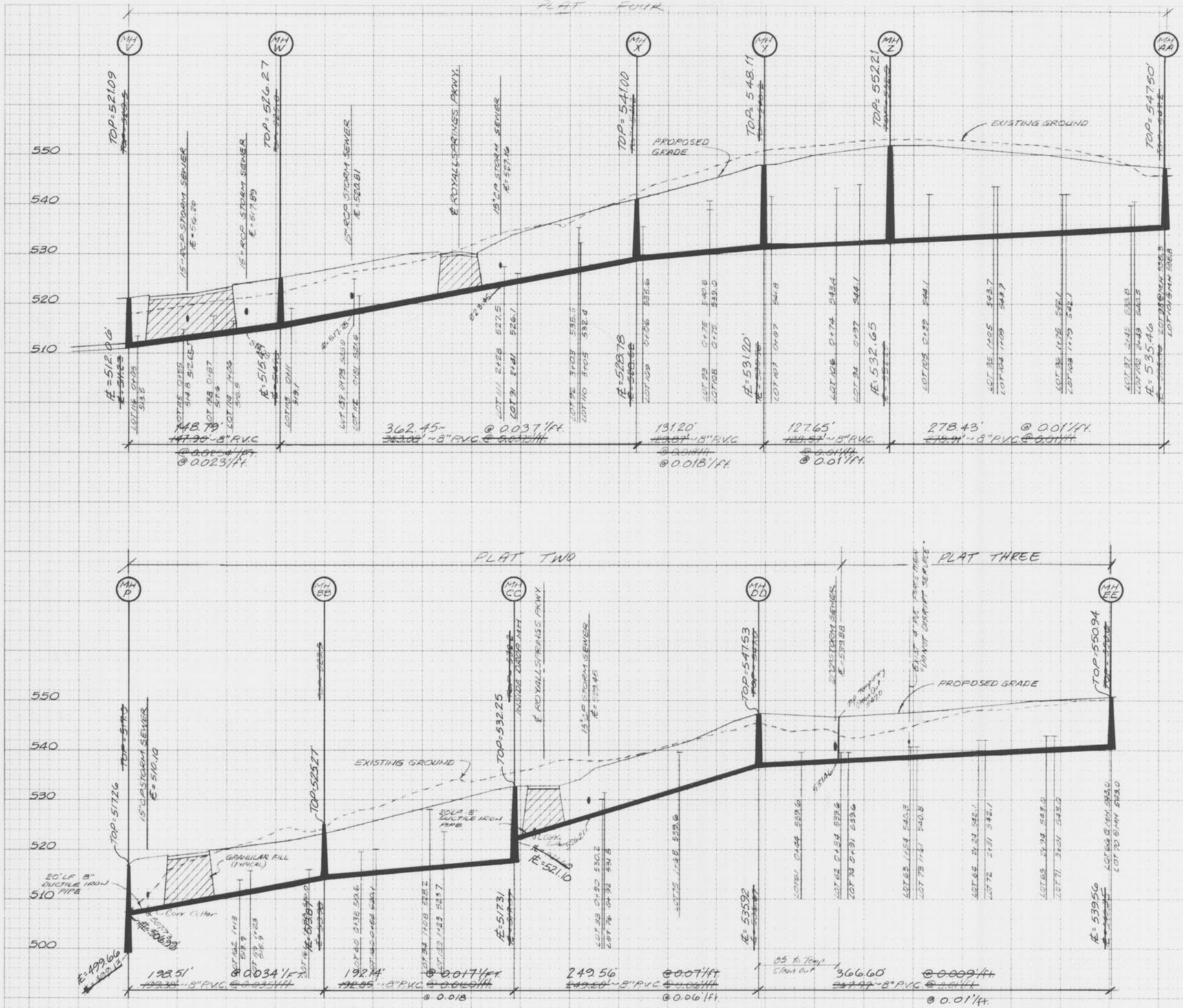


PLATE 3 FULL CROSS SECTION

AS-BUILTS ADDED FEBRUARY 1994

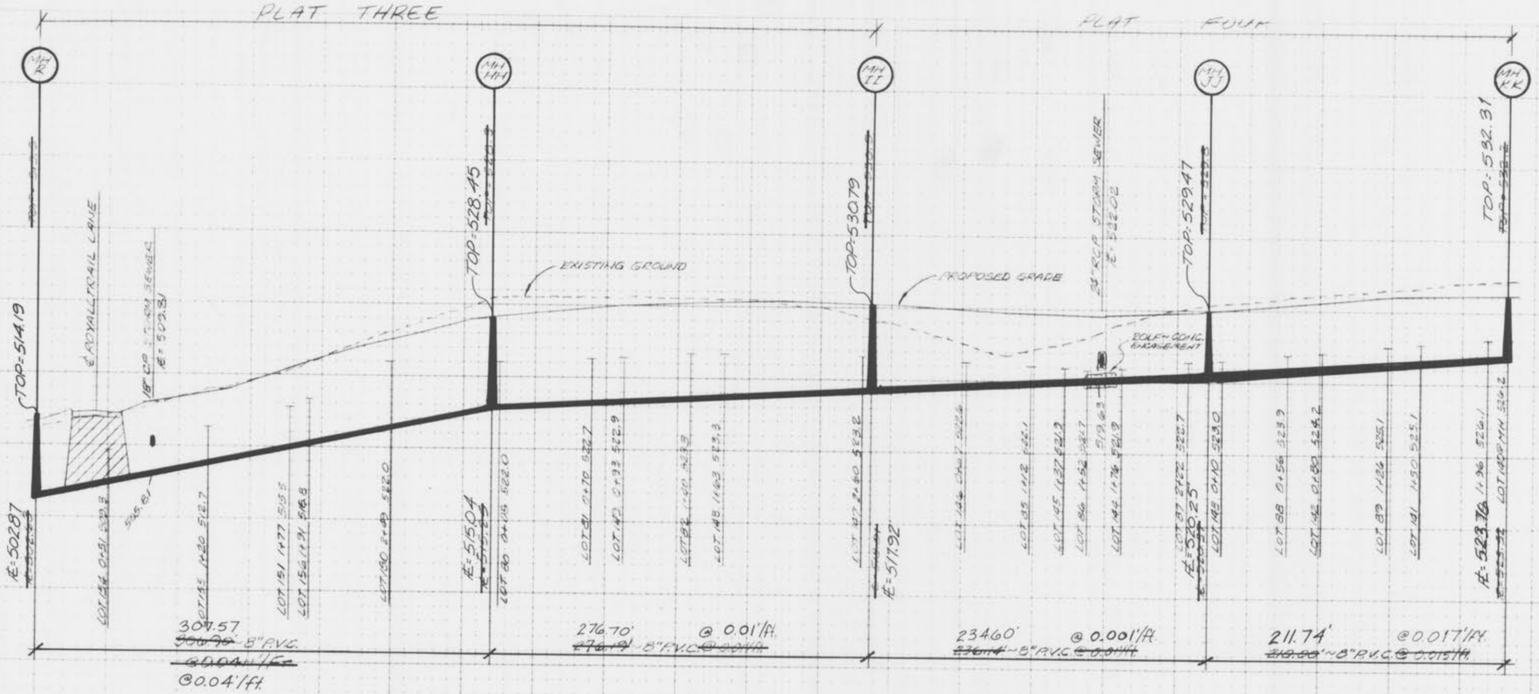
As Built: Royal Springs (Plat 4) Storm Sewers

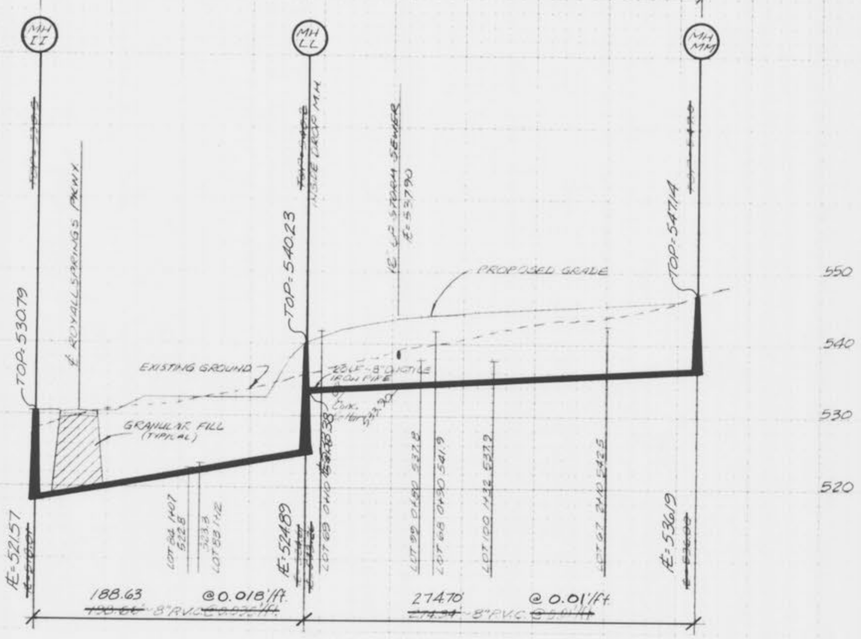
SEWER PROFILES
ROYALLSPRINGS

APRIL 1992 91-3391

REV. 5-21-92

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





5/7

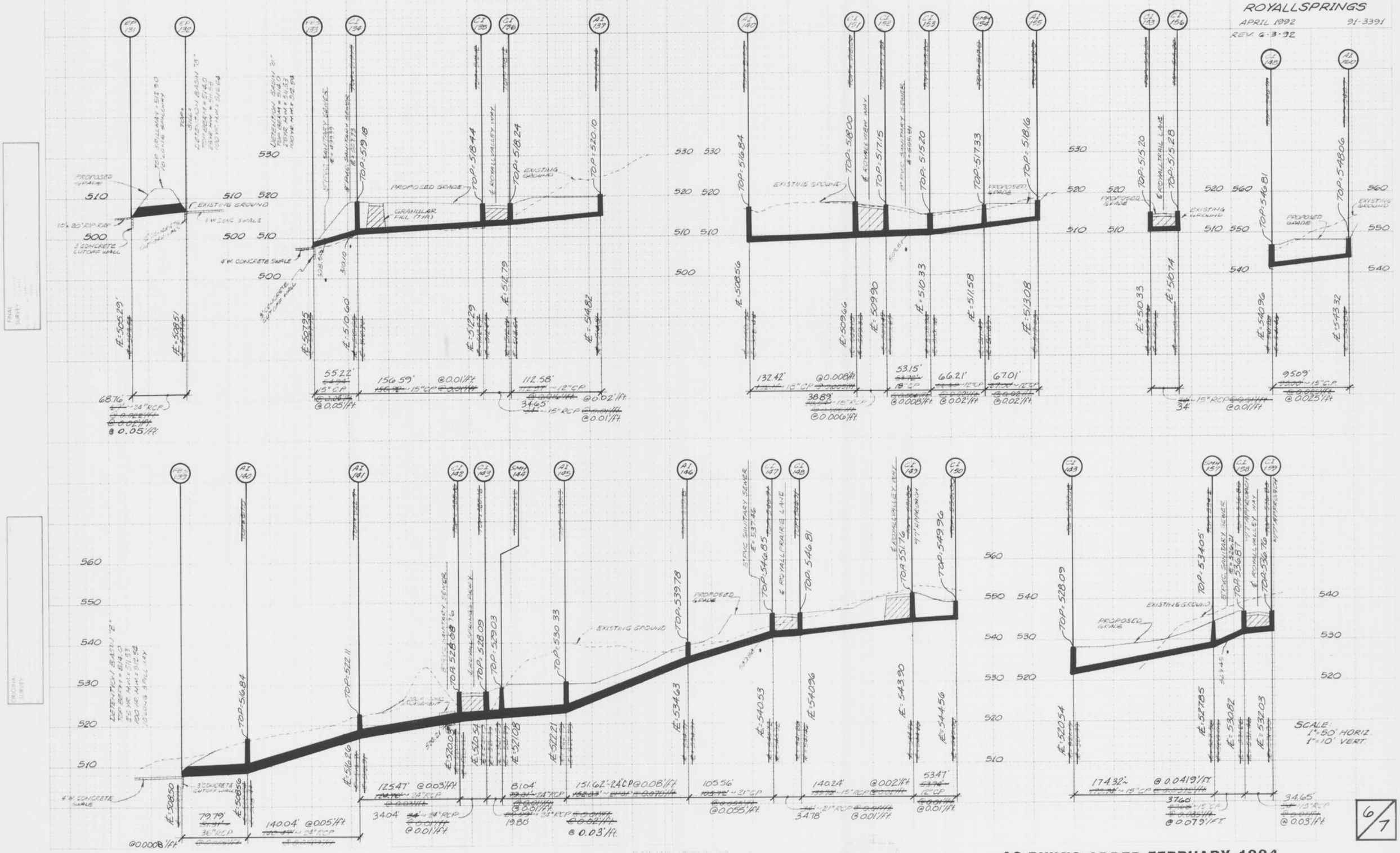
AS-BUILTS ADDED FEBRUARY 1994

As Builts: Royal Springs (Plat 4)
Storm Sewers

SEWER PROFILES
ROYALLSPRINGS

APRIL 1992 91-3391

REV. 6-3-92



FINAL SURVEY

ORIGINAL SURVEY

6/7

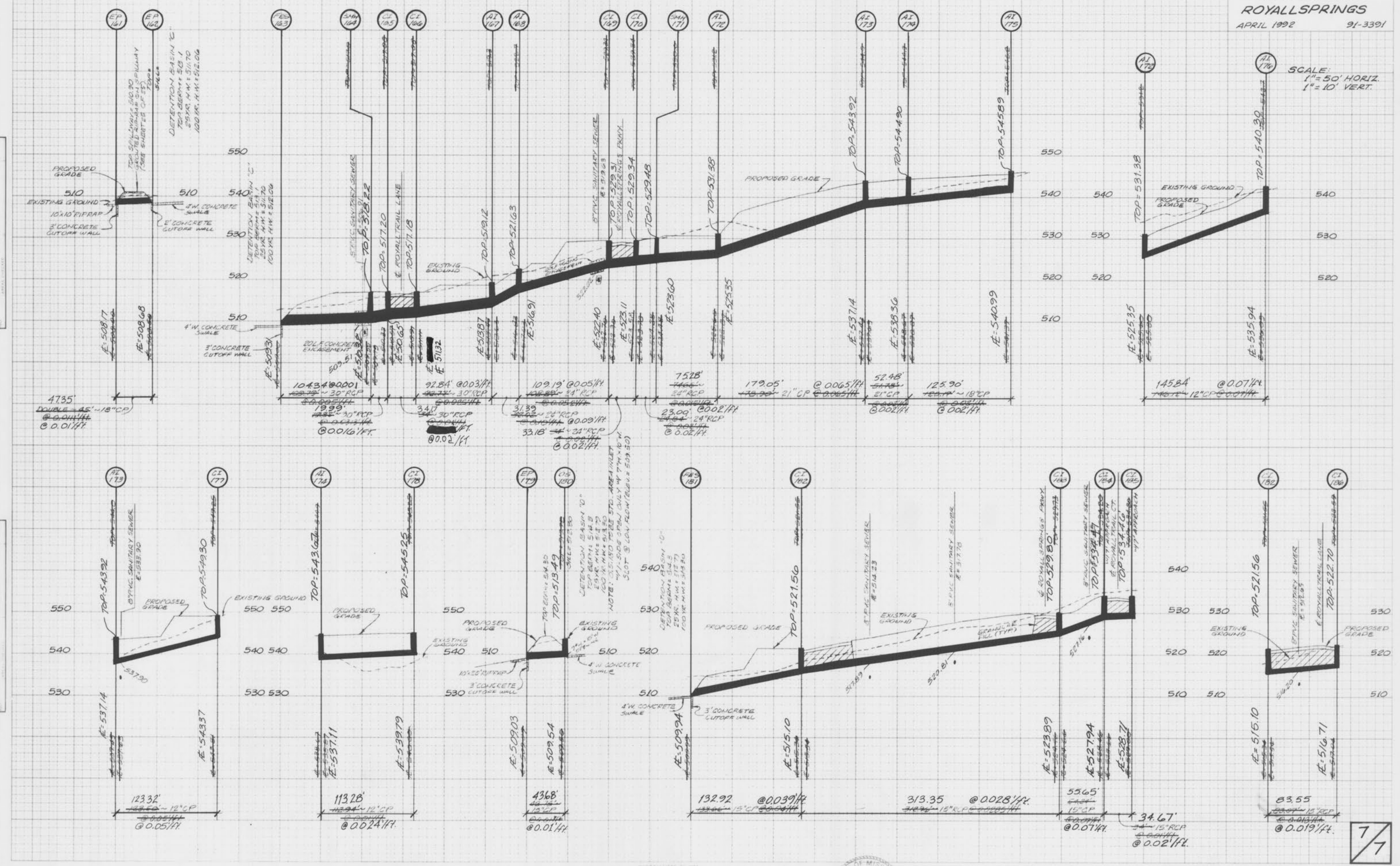
AS-BUILTS ADDED FEBRUARY 1994

As Builts: Royal Springs Storm Sewers

SEWER PROFILES
ROYALLSPRINGS

APRIL 1992 91-3391

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



7/7

AS-BUILTS ADDED FEBRUARY 1994

PLATE 3 FULL CROSS SECTION

As Builts: Royal Springs Unit 4 Storm Sewers