

# HAVEN VIEW

## AS BUILT

OWNER:

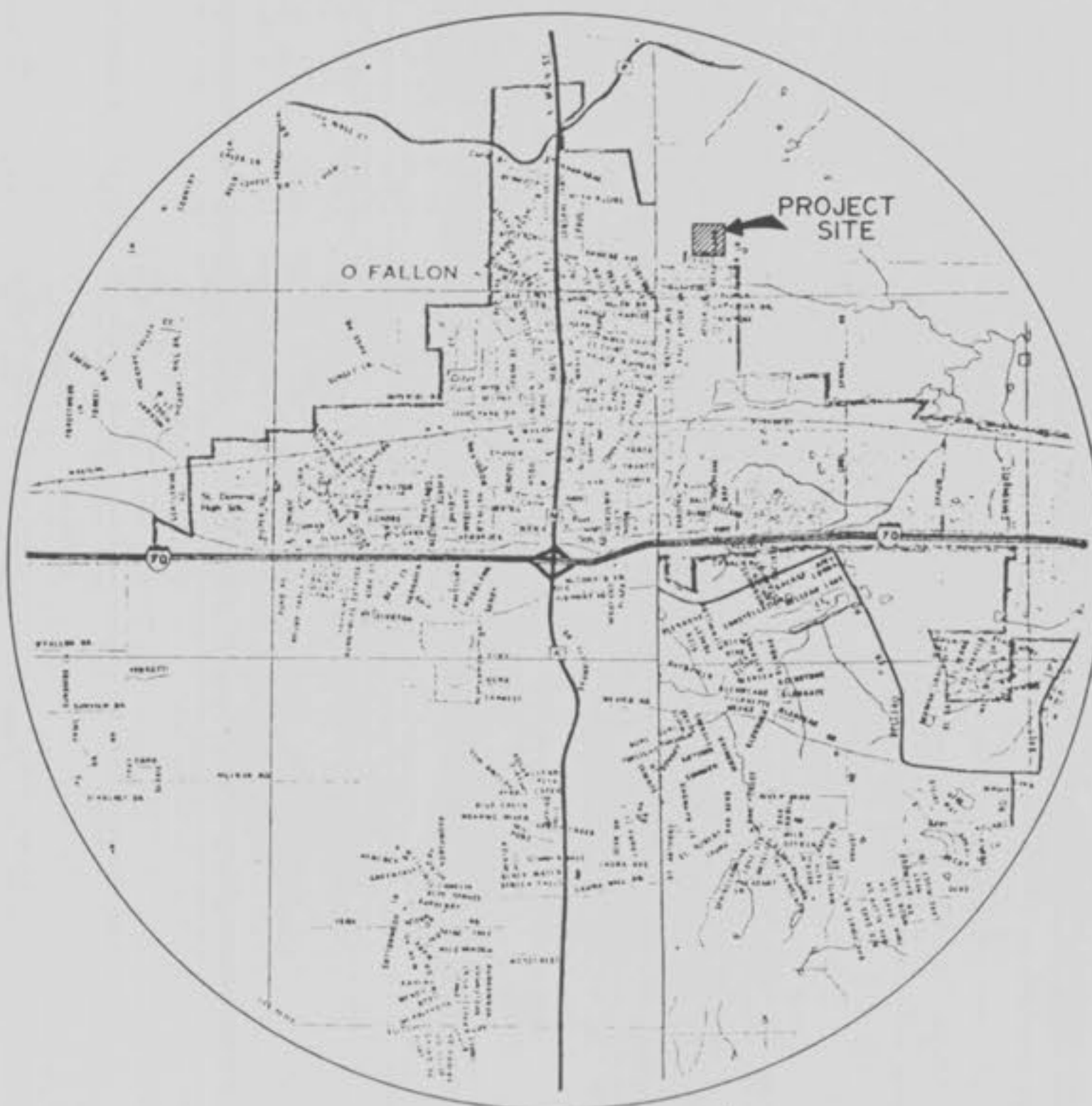
D & D DEVELOPEMENT INC.  
2726 DROSTE  
ST. CHARLES, MO. 63301

**GENERAL NOTES**

1. THE UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM READILY AVAILABLE RECORDS, BUT THE ACCURACY AND COMPLETENESS OF SUCH IS NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXISTENCE AND LOCATION OF ANY UTILITIES NOT SHOWN, AND TO PROTECT SUCH UTILITY DURING CONSTRUCTION. THE OWNER WILL NOT BE RESPONSIBLE FOR THE COST OF PROTECTION, REPAIR OR REPLACEMENT OF ANY STRUCTURE, PIPE LINE, CONDUIT, SERVICE CONNECTION, ETC., ABOVE AND BELOW GROUND WHICH MAY BE BROKEN OR DAMAGED.
2. TRENCHES SHALL BE EXCAVATED TO THE DEPTHS SHOWN ON THE PLANS AND TO STANDARD PAYLINE WIDTHS. THE SIDES OF THE TRENCH SHALL BE VERTICAL.
3. SOFT OR SPONGY EARTH, MUCK, MUD, UNCONSOLIDATED EARTH FILL, UNSUITABLE FILL SUCH AS DECAYED VEGETABLE OR ORGANIC MATTER, OR SOFT, FRIABLE, UNCONSOLIDATED MATERIALS SUCH AS ASHES OR RUSTED CANS, OR ANY OTHER MATERIALS UNSUITABLE AS A FIRM BASE FOR THE PIPE OR SEWER OR STRUCTURE SHALL BE REMOVED AND REPLACED WITH COMPACTED CRUSHED LIMESTONE.
4. GRADES SHOWN ON THIS DRAWING ARE FINISH GRADES. PAVEMENT THICKNESS DESIGN USED WHEN COMPUTING ROUGH GRADING ELEVATIONS SHALL BE:
  - A. ROADS - 6" CONCRETE
  - 8" ASPHALT
5. ALL FILL UNDER PROPOSED STORM AND SANITARY SEWER LINES AND/OR PAVED AREAS INCLUDING TRENCH BACKFILLS WITHIN AND OFF THE ROAD RIGHT-OF-WAY SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY THE "MODIFIED AASHTO T-100 COMPACTION TEST" (ASTM D-1557).
6. ALL OTHER EMBANKMENT TO BE COMPACTED TO A MINIMUM OF 90% (STANDARD PROCTOR).
7. MAXIMUM SLOPE = 3 UNITS HORIZONTAL / 1 UNIT VERTICAL.
8. GRANULAR BACKFILL SHALL BE PLACED AT LOCATIONS INDICATED ON THE PLANS FROM THE LEVEL SIX INCHES ABOVE THE TOP OF THE PIPE TO THE SUBGRADE ELEVATION OF THE PAVEMENT. ALL GRANULAR BACKFILL MATERIALS SHALL BE COMPACTED BY WATER JETTING. ALSO ALL P.V.C. SEWER TRUNKS SHALL HAVE CRUSHED STONE THAT SHALL EXTEND TO A POINT NOT LESS THAN 12" ABOVE THE TOP OF THE PIPE BELL.
9. BACKFILLING IN TRENCHES WHERE GRANULAR BACKFILL IS NOT SPECIFIED SHALL CONSIST OF JOB-EXCAVATED EARTH THOROUGHLY COMPACTED TO THE DENSITY OF THE ADJACENT UNDISTURBED EARTH. SAID MATERIAL SHALL BE FREE OF DEBRIS, ORGANIC MATTER, PERISHABLE COMPRESSIBLE MATERIALS, AND SHALL CONTAIN NO STONES OR LUMPS OR ROCK FRAGMENTS LARGER THAN SIX INCHES IN DIMENSION. CARE SHALL BE TAKEN THAT STONES AND LUMPS ARE KEPT SEPARATED AND WELL DISTRIBUTED, AND THAT VOIDS ARE COMPLETELY FILLED WITH FINE MATERIALS. THE BACKFILL MATERIALS SHALL BE PLACED IN LAYERS NOT EXCEEDING NINE INCHES BEFORE COMPACTION.
10. P.V.C. PIPE SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. D-3034 STANDARD SPECIFICATIONS FOR THE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS SDR 35. JOINTS SHALL BE ELASTOMERIC GASKETS PROVIDING A WATER TIGHT SEAL PER ASTM C-3212.
11. ALL MANHOLE TOPS TO BE SET 0.2' ABOVE EXISTING GROUND ELEVATION, EXCEPT WHEN IN PAVED AREAS WHERE THEY SHALL BE SET TO THE PROPOSED FINISHED GRADE.
12. IF PRECAST MANHOLES ARE USED THEY SHALL CONFORM TO ASTM C-478 AND SHALL HAVE 31 MILS OF ASPHALT OR COAL TAR PITCH WATERPROOF COATING TO THE OUTSIDE OF SANITARY SEWER MANHOLES AND SHALL BE 48" MINIMUM INSIDE DIAMETER.
13. ALL LATERALS TO BE 6" DIAMETER AND ENDS OF LATERALS TO BE STAKED AND TAILSTAKE ELEVATIONS GIVEN. ALL LATERALS TO BE CONSTRUCTED AT A MINIMUM 2 PERCENT SLOPE.
14. ALL WYES AND ENDS OF LATERALS TO BE CAPPED TO PREVENT INFILTRATION.
15. TEST BORINGS HAVE NOT BEEN PERFORMED TO DETERMINE THE DEPTH OF ROCK.
16. ALL PRIVATE FENCES DAMAGED OR MISPLACED DURING CONSTRUCTION MUST BE REPAIRED AND REPLACED.
17. STAKED STRAW BAILS FOR SEDIMENT CONTROL ARE TO BE PLACED AS SHOWN ON PLANS, ADDITIONAL STAKED STRAW BAILS MAY BE REQUIRED DURING CONSTRUCTION AS DIRECTED BY THE CITY OF O'FALLON. STRAW BAILS ARE TO REMAIN IN PLACE AND BE MAINTAINED UNTIL STORM SEWERS HAVE BEEN COMPLETED AND SITE HAS BEEN SEEDED.
18. SEEDING TO BE DONE BY OTHERS.
19. WATER MAIN AND SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE CITY OF O'FALLON, ORDINANCE NO. 615, BILL NO. 617, STATING THE CITY'S STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION. FIRE HYDRANTS SHALL BE 3-WAY TYPE WITH INDIVIDUAL VALVES AND MEET O'FALLON SPECIFICATIONS.
20. FOR MANHOLE FRAME AND COVER USE CLAY AND BAILEY NO. 2008 OR NEENAH R1736 OR APPROVED EQUAL.

**BENCHMARK:**

R/R SPIKE NORTH FACE UTILITY POLE LOCATED ON THE SOUTH SIDE OF TOM GINNEVER AVENUE 190' WEST OF ST. MATTHEW AVENUE.  
ELEVATION 523.61



LOCATION MAP  
SCALE: 1" = 880'

ENGINEER:

COLTON / LESTER CORPORATION  
1560 WOODLAKE DRIVE  
CHESTERFIELD, MO. 63017  
314 - 878 - 7007



*Eugene A. Frabis*  
EUGENE ALVIN FRABIS E-17109

LEGEND OF SYMBOLS		
DESCRIPTION	EXIST.	PROP.
RIGHT OF WAY	---	---
POWER POLE	⊕	⊕
STORM SEWER MANHOLE AND LINE	⊕---⊕	⊕---⊕
SANITARY SEWER MANHOLE AND LINE	⊕---⊕	⊕---⊕
TELEPHONE MANHOLE	⊕	⊕
WATER MANHOLE	⊕	⊕
ELECTRIC MANHOLE	⊕	⊕
WATER VALVE OR METER SERVICE	⊕	⊕
GAS VALVE, DRIP OR SERVICE	⊕	⊕
CONTOUR LINES	---	---
SEWER VENT OR LAMP HOLE	⊕	⊕
FIRE HYDRANT	⊕	⊕
LIGHT STANDARD	⊕	⊕
STREET SIGN	⊕	⊕
FENCE	---	---
GAS MAIN AND SIZE	---	---
WATER MAIN AND SIZE	---	---
TELEPHONE CONDUIT UNDERGROUND	---	---
FLARED END SECTION	---	---
ELECTRICAL CONDUIT OVERHEAD	---	---
ELECTRICAL CONDUIT UNDERGROUND	---	---
STORM SINGLE CURB INLET	⊕	⊕
STORM GRATED INLET	⊕	⊕

ABBREVIATIONS		
TO BE ABANDONED IN PLACE		(T.B.A.)
USE IN PLACE		(U.I.P.)
ADJUST TO GRADE		(A.T.G.)
CURB INLET		(C.I.)
GRATED INLET		(G.I.)
AREA INLET		(A.I.)
MANHOLE		(M.H.)
TO BE REMOVED		(T.B.R.)

**SHEET INDEX**

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9	SEWER DETAILS
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**APPROVED**  
G.A. GRH  
6/25/85

GEORGE BUTLER ASSOCIATES, INC.  
SUITE 4 - 114 EAST ELM ST.  
O'FALLON, MISSOURI 63366

RECEIVED JUN 18 1985

PROPERTY OF  
CITY OF O'FALLON  
BUILDING DEPARTMENT

*HavenView - South Submit*

Havenview



REACH FROM TO	STATION	W/E ELEV.	W/E LENGTH	TAIL STAKE ELEV.	FIN. FLOOR	LOT NO.	
B	C	0+47	499.16	10'	499.36	515.00	56
		0+58	499.17	10'	499.31	515.00	58
C	D	0+73	499.81	20'	500.51	515.00	54
		1+45	500.27	11'	500.57	515.00	83
D	E	0+40	500.76	10'	500.96	517.00	52
E	F	1+42	502.17	10'	502.37	517.00	39
F	G	0+90	503.06	10'	503.26	515.00	37
G	H	1+00	504.45	15'	504.75	517.00	28
		1+08	504.48	20'	504.88	517.00	29
H	I	1+10	505.42	15'	505.72	517.00	27
		2+00	506.87	15'	506.17	519.00	26
I	J	0+35	506.71	15'	507.01	519.00	25
		1+20	507.55	15'	507.85	521.00	24

REACH FROM TO	STATION	W/E ELEV.	W/E LENGTH	TAIL STAKE ELEV.	FIN. FLOOR	LOT NO.
17	0+20	506.83	80'	507.83	519.00	35
18	0+50	507.21	15'	507.88	521.00	41
19	0+85	507.88	15'	508.18	521.00	34
20	0+60	504.74	30'	508.34	519.00	51
21	0+78	505.99	15'	508.29	519.00	58
22	1+05	501.58	50'	502.58	517.00	49
23	1+15	501.55	15'	501.85	517.00	57
24	1+80	502.69	50'	503.69	518.00	48
25	2+05	503.15	18'	503.33	517.00	46
26	2+95	504.70	10'	504.90	519.00	59
27	0+00	505.50	70'	506.90	519.00	1
28	0+55	505.91	55'	507.01	521.00	2
29	0+25	506.57	10'	506.77	519.00	47
30	0+45	506.77	50'	507.77	521.00	3
31	0+95	507.27	10'	507.47	519.00	46
32	1+25	507.57	50'	508.57	521.00	4
33	1+75	508.07	10'	508.27	519.00	45
34	2+20	508.52	50'	509.52	521.00	5
35	2+55	508.87	10'	509.07	520.00	6
36	3+10	509.42	50'	510.42	521.00	8
37	3+50	509.82	10'	510.02	521.00	9
38	3+60	509.82	50'	510.82	523.00	7



EXIST. WATER MAIN  
ALTHOUGH NOT SHOWN PROBABLY MUST BE CHECKED UNDER ST. MATTHEW

EXIST. WATER MAIN  
EXIST. SEWER MAIN  
EXIST. GAS MAIN  
EXIST. CABLE TV MAIN  
EXIST. FIBER OPTIC MAIN  
EXIST. AIR CONDITIONING MAIN  
EXIST. RAINWATER MAIN  
EXIST. IRRIGATION MAIN  
EXIST. LANDSCAPE IRRIGATION MAIN  
EXIST. SWAMP IRRIGATION MAIN  
EXIST. FLOOD CONTROL MAIN  
EXIST. DRAINAGE MAIN  
EXIST. STORM SEWER MAIN  
EXIST. SANITARY SEWER MAIN  
EXIST. WATER MAIN  
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EXIST. STORM SEWER MAIN  
EXIST. SANITARY SEWER MAIN

REVISED BY LINDAN CORPORATION 6/2/88 TO SHOW AS-BUILT CONDITIONS.

Daniel J. Conoyer  
Daniel J. Conoyer LS 2182



SITE PLAN

REVISION

PREPARED FOR:  
**D & D DEVELOPEMENT INC.**  
2726 DROSTE  
ST. CHARLES, MISSOURI

PROJECT:  
CORPORATION

DESIGNED BY:  
George & Alma Knoke

DRAWN BY:  
SGH

CHECKED BY:  
AWB

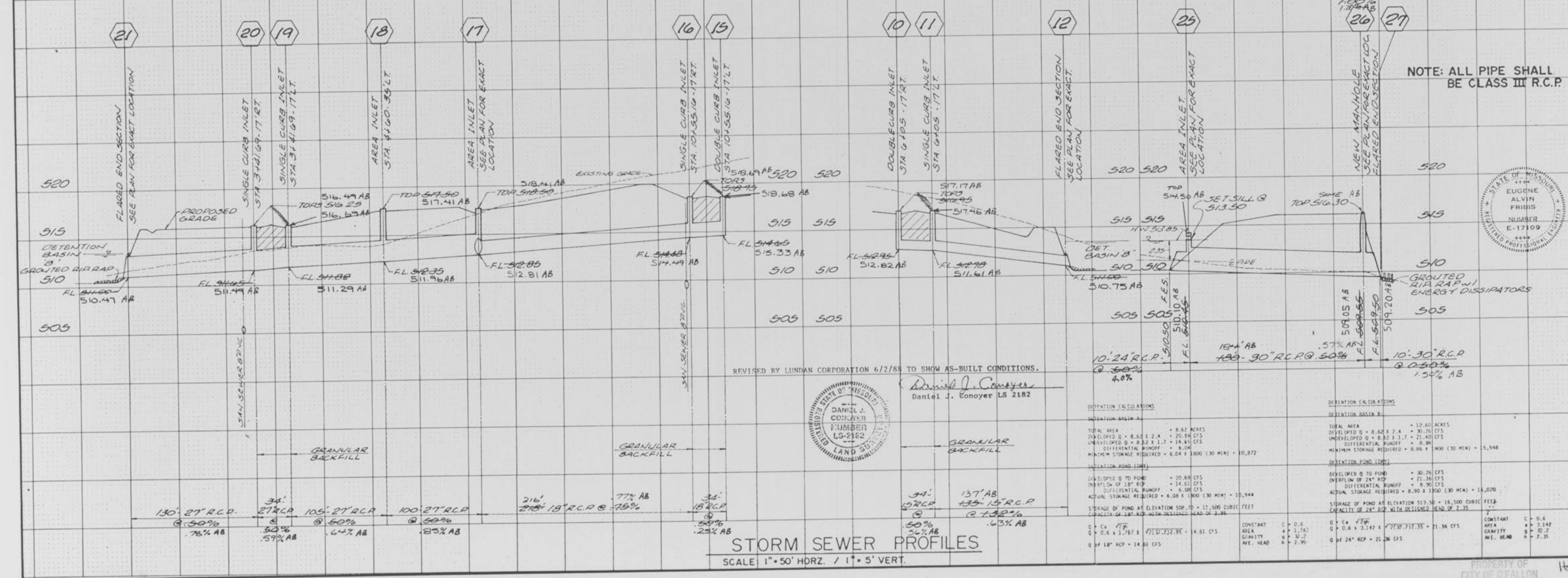
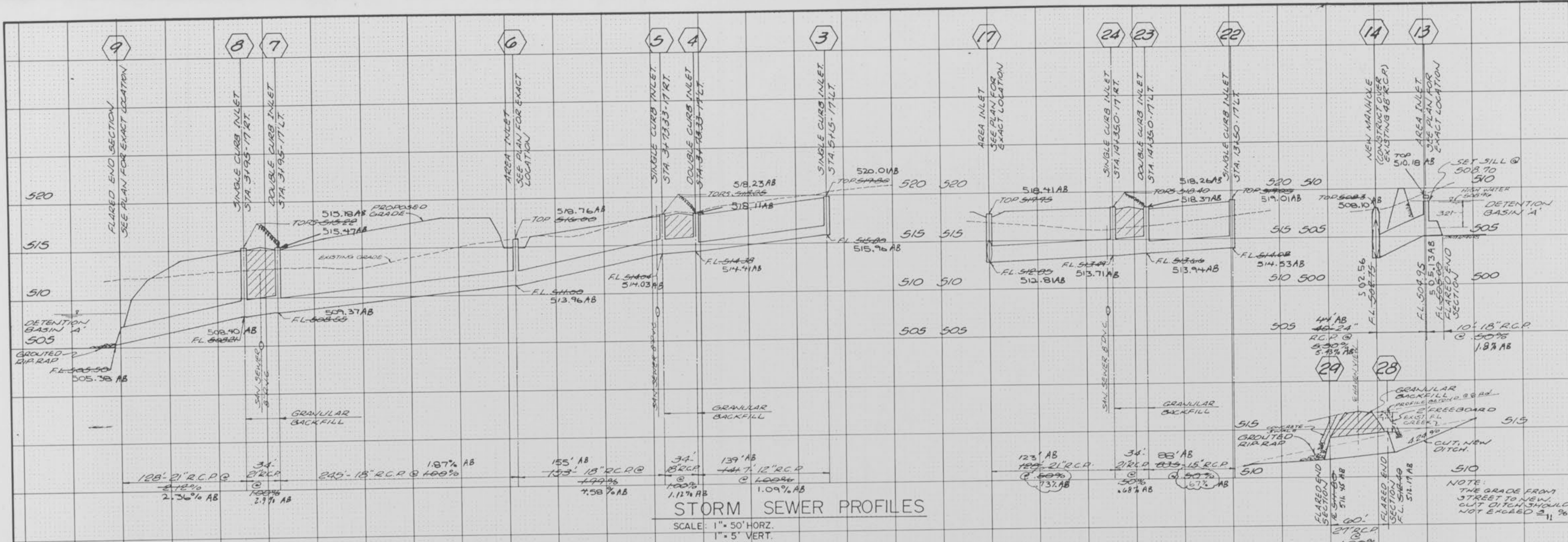
DATE:  
MAY 11, 1985

JOB NO.  
05-49

SCALE:  
20' = 1"

1560 WOODLAKE DR. WEST, LOUISIANA, MO 63017  
AREA CODE 314 878-7007  
CONSULTING ENGINEERS





REVISED BY LINNAN CORPORATION 6/2/88 TO SHOW AS-BUILT CONDITIONS.  
 Daniel J. Conoyer LS 2182



DEFLECTION CALCULATIONS		DEFLECTION CALCULATIONS	
DEFLECTION BASIN A		DEFLECTION BASIN B	
TOTAL AREA	• 8.82 ACRES	TOTAL AREA	• 12.60 ACRES
DEVELOPED Q	• 8.82 x 2.4 = 21.17 CFS	DEVELOPED Q	• 8.82 x 2.4 = 21.17 CFS
UNDEVELOPED Q	• 8.82 x 1.7 = 14.99 CFS	UNDEVELOPED Q	• 8.82 x 1.7 = 14.99 CFS
DIFFERENTIAL RUNOFF	• 8.82	DIFFERENTIAL RUNOFF	• 8.82
MINIMUM STORAGE REQUIRED	• 6.04 x 1800 (30 MIN) = 10,872	MINIMUM STORAGE REQUIRED	• 8.82 x 1800 (30 MIN) = 15,876
DEFLECTION POND (10%)		DEFLECTION POND (10%)	
DEVELOPED Q TO POND	• 20.88 CFS	DEVELOPED Q TO POND	• 30.76 CFS
OVERTLOW OF 18" RCP	• 14.61 CFS	OVERTLOW OF 24" RCP	• 21.36 CFS
DIFFERENTIAL RUNOFF	• 6.04 CFS	DIFFERENTIAL RUNOFF	• 8.82 CFS
ACTUAL STORAGE REQUIRED	• 8.08 x 1800 (30 MIN) = 14,544	ACTUAL STORAGE REQUIRED	• 8.90 x 1800 (30 MIN) = 16,020
STORAGE OF POND AT ELEVATION 508.70 = 13,500 CUBIC FEET		STORAGE OF POND AT ELEVATION 513.50 = 16,500 CUBIC FEET	
CAPACITY OF 18" RCP WITH DESIGN HEAD OF 2'-8"		CAPACITY OF 24" RCP WITH DESIGN HEAD OF 2'-3"	
Q @ 4' H <sub>2</sub> O	• 14.61 CFS	CONSTANT C	• 0.6
Q @ 6' H <sub>2</sub> O	• 22.92 CFS	AREA A	• 1.787
Q @ 8' H <sub>2</sub> O	• 34.37 CFS	GRAVITY	• 30.2
Q @ 10' H <sub>2</sub> O	• 48.91 CFS	AVE. HEAD	• 7.95
Q @ 12' H <sub>2</sub> O	• 66.54 CFS	Q @ 24" RCP	• 21.36 CFS
Q @ 14' H <sub>2</sub> O	• 87.27 CFS	CONSTANT C	• 0.6
Q @ 16' H <sub>2</sub> O	• 111.10 CFS	AREA A	• 1.787
Q @ 18' H <sub>2</sub> O	• 138.03 CFS	GRAVITY	• 30.2
Q @ 20' H <sub>2</sub> O	• 168.06 CFS	AVE. HEAD	• 7.35

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 ST. CHARLES, MISSOURI

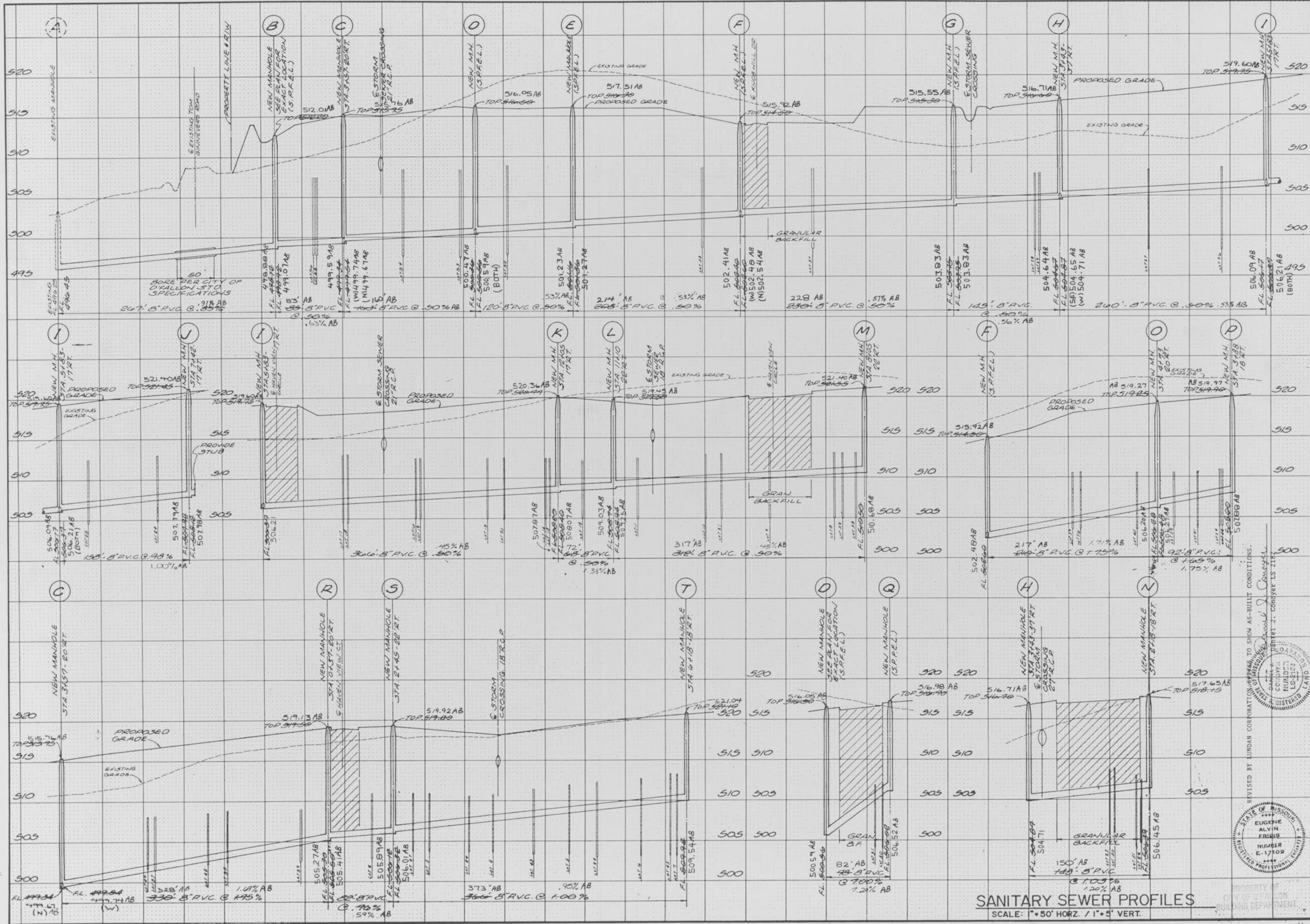
COLTON / LESTER CORPORATION  
 CONSULTING ENGINEERS  
 1560 WOODLAKE DR. - 4<sup>TH</sup> FLOOR, MO. 63017  
 AREA CODE 314 878-7007

HAVEN VIEW  
 O'FALLON, MISSOURI

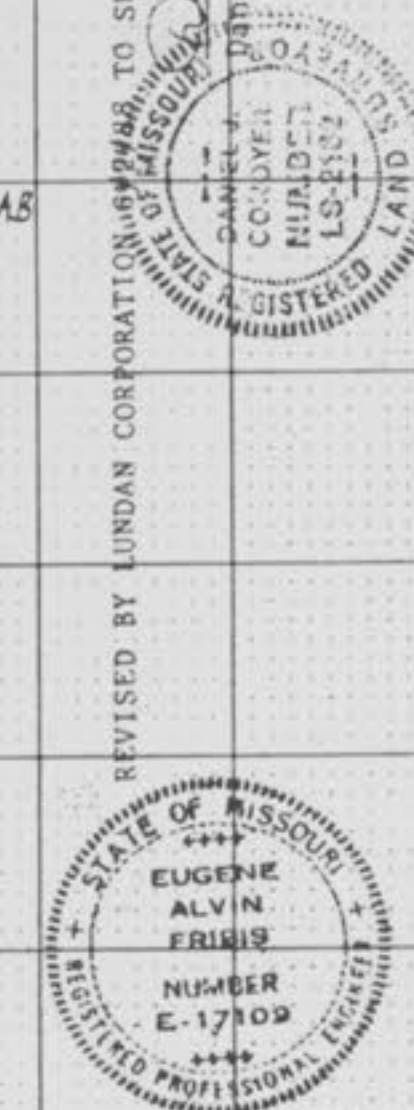
DRAWN BY: SGH  
 CHECKED BY: O.W.B.  
 DATE: MAY 17, 85  
 JOB NO.: 85-49  
 SHEET: 5 of 11

PROPERTY OF  
 CITY OF O'FALLON  
 BUILDING DEPARTMENT





**SANITARY SEWER PROFILES**  
SCALE: 1" = 5' VERT. / 1" = 50' HORIZ.



PROJECT: HAVEN VIEW O'FALLON, MISSOURI  
 DRAWN BY: J.G.H.  
 CHECKED BY: D.W.B.  
 DATE: MAY 17, 85  
 JOB NO.: 85-49  
 SHEET: 0 of 11

REVISIONS BY LUNDAN CORPORATION TO SHOW AS-BUILT CONDITIONS.  
 REVISION 1: PORTLET J. CONYER LS 2/85  
 REVISION 2: PORTLET J. CONYER LS 2/85

ENGINEER: HAVEN VIEW CORPORATION  
 CONSULTING ENGINEERS  
 1560 WOODLAKE DR./ST. LOUIS, MO 63017  
 AREA CODE 314 878-7007

PREPARED FOR: D & D DEVELOPEMENT INC.  
 2726 DROSTE ST. CHARLES, MISSOURI