

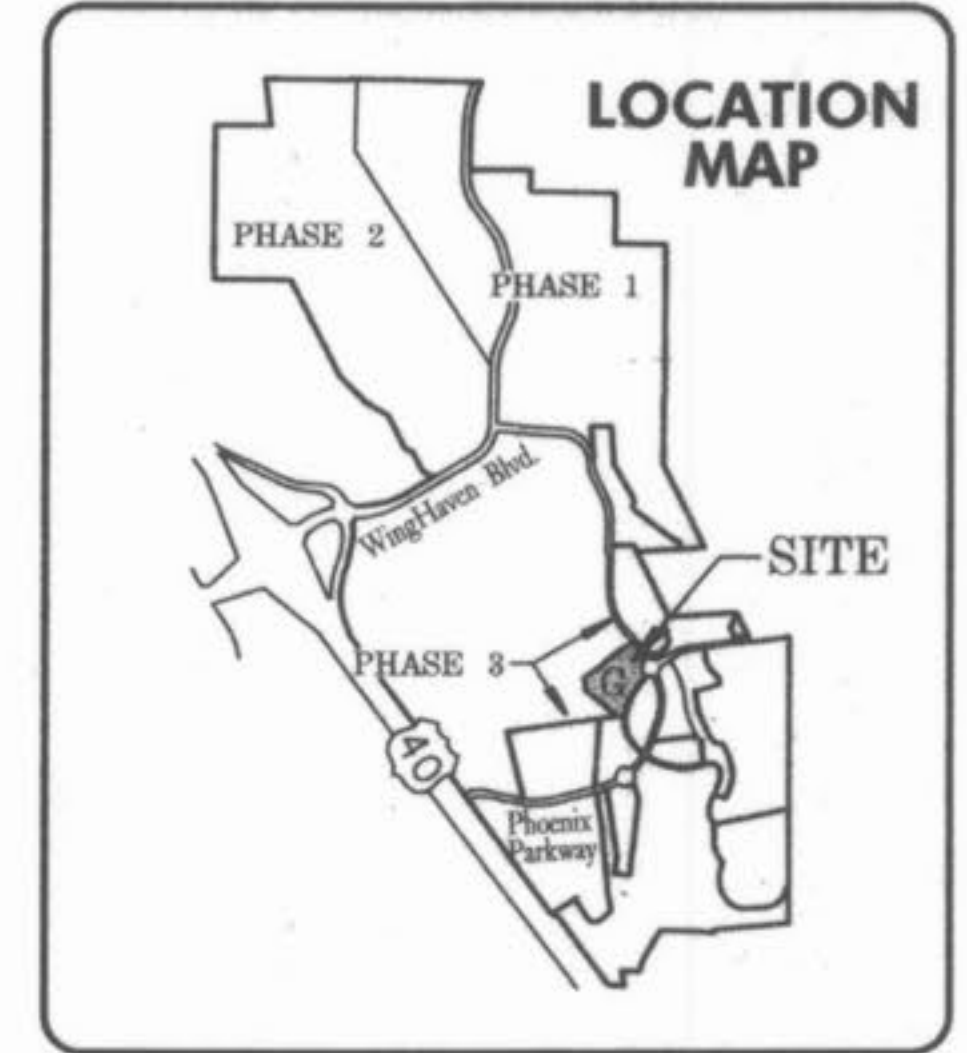
# WINGHAVEN

## PHASE 3

### SUMMER STONE VILLAGE

### AS-BUILT PLANS

## WINGHAVEN RESIDENTIAL L.L.C.



**B.M. LOOP NOTES**

U.S.G.S. DATUM BENCHMARK  
 (Provided by the Missouri Department of Transportation)

ELEVATION 616.50 at Dardenne Prairie, T. 46N., R. 2E., near approximate corner sections 1, 2, 11 & 12, 31' N. and 20' W. of Crossroads, the intersection of State Highway "N" with Post Road and Hanley Road, 49' S. of S.E. Corner of Catholic Church, 2.0' N. of sidewalk, and in concrete post, standard tablet stamped "TT 60 C 1936 616."

The existing sewer lengths, sizes, flowlines, depths of structures and sewers and locations with respect to existing or proposed easements have been measured. The results of those measurements are shown on this set of Final Measurement Plans. Since the wye locations have been plotted from information provided by the sewer contractor or other sources, I disclaim any responsibility for that specific information.

All public sewers are located within designated existing or proposed easements except as shown in this drawing.

The results of those measurements are shown on this drawing by lining out the planned number and indicating the measured number adjacent to the planned number. All other numbers shown have not been measured or verified.

The location of the sewers were determined by locating the manholes and traversing in a straight line between them.

No hydraulic computations have been done on the measured lines to verify or confirm the capacity, freeboard or design requirements of the sewers.

**VOLZ**

*Roger G. Allen*  
 Roger G. Allen  
 Mo. Reg. L.S. 2185



STRUCTURES	UPPER	LOWER	LENGTH	SIZE	FLOWLINE		UPPER STRUCTURE		HYDRAULIC		FRICTION LOSS	VELOCITY		TURN ANGLE LOSS	AREA	PI	QUANTITY		***	CAPACITIES									
					UPPER	LOWER	GRADE	ELEVATION	FRREBOARD	UPPER		LOWER	GRADE				PPS	HEAD GAIN		INCR	TOTAL	PIPE	INLET	OUTTER	BYPASS				
LINK 9 2 STRUCTURES																													
CI	O30	CI	O5	291.0	15	521.51	506.76	.051	525.97	2.21	522.76	508.01*	.0015	.55	2.29	.08	.00	0	.00	.64	3.85	2.81	2.81	3.23	14.54	1.50	5.24	4.38	1.31
LINK 10 2 STRUCTURES																													
CI	C24	CI	Q20	253.4	15	516.94	513.64	.013	525.58	7.39	518.19	514.89*	.0014	.36	1.98	.06	.00	0	.00	.63	3.85	2.43	2.43	LOW	7.37	4.00	2.00	5.38	
LINK 11 7 STRUCTURES																													
CI	Q20	CI	Q19	44.2	15	513.64	513.09	.012	521.73	6.84	514.89	514.34*	.0022	.10	2.45	.09	.00	0	.00	.22	2.64	.56	3.01	5.04	7.21	.85	6.68	5.53	
INCOMING LINE 10																													
CI	Q19	DOI	Q18	137.0	15	513.09	511.46	.012	521.51	7.17	513.22	512.71	.0038	.51	3.22	.16	.12	90	.07	.36	2.64	.95	3.96	1.54	7.05	2.11	3.66	5.95	
DOI	Q18	DOI	Q17	113.6	18	511.46	510.06	.012	521.94	9.23	511.90	511.66*	.0030	.34	3.27	.17	.07	15	.03	.69	2.64	1.82	5.78	.50'	11.66	5.40	2.00	6.52	
DOI	Q17	DOI	Q16	113.0	18	510.06	508.09	.017	519.07	7.51	510.16	509.59*	.0050	.57	4.21	.28	.20	90	.32	.63	2.64	1.66	7.44	.50'	13.87	5.40	2.00	9.91	
DOI	Q16	DOI	Q15	122.0	18	508.09	504.71	.028	514.53	4.94	507.13	506.21*	.0074	.91	5.12	.43	.24	5	.01	.61	2.64	1.61	9.05	.50'	17.88	5.40	2.00	10.92	
DOI	Q15	CI	Q11	107.3	21	504.71	503.66	.010	509.76	3.55	506.15	505.68	.0046	.49	4.44	.31	.00	5	.01	.62	2.64	1.64	10.69	.50'	15.67	5.40	2.00	9.91	

\*\*\* Afe # of sides open & depth of sill  
 Cia street grade at inlet  
 G1a depth over grate

\* lower hydraulic elevation when flowing less than full  
 C curve loss in pipe  
 R radius of curve  
 MW entrance control elevation  
 pv partial flow velocity

AS-BUILT

STRUCTURES	UPPER	LOWER	LENGTH	SIZE	FLOWLINE		UPPER STRUCTURE		HYDRAULIC		FRICTION LOSS	VELOCITY		TURN ANGLE LOSS	AREA	PI	QUANTITY		***	CAPACITIES									
					UPPER	LOWER	GRADE	ELEVATION	FRREBOARD	UPPER		LOWER	GRADE				PPS	HEAD GAIN		INCR	TOTAL	PIPE	INLET	OUTTER	BYPASS				
LINK 1 6 STRUCTURES																													
CI	O6	CI	O5	34.5	15	507.49	505.76	.021	513.23	4.49	508.74	508.01*	.0003	.01	.90	.01	.00	0	.00	.42	2.64	1.11	1.11	4.04	9.40	1.21	5.97	5.13	
CI	O5	DCI	O4	228.9	18	506.76	500.98	.025	513.16	5.15	505.38	503.41	.0086	1.97	5.51	.47	.60	0	.00	.17	2.64	5.83	9.74	4.04	16.69	1.21	5.97	9.94	4.62
INCOMING LINE 9																													
DCI	O4	DCI	O3	34.6	24	500.98	500.24	.021	507.02	3.61	502.72	502.24*	.0137	.48	8.44	1.11	.37	80	.32	.60	2.64	1.58	26.51	LOW	33.08	10.00	2.00	11.46	
INCOMING LINE 5																													
DCI	O3	MW	O2	112.8	24	500.24	494.34	.052	506.97	4.73	498.05	496.34*	.0152	1.71	8.87	1.22	.22	80	.73	.51	2.64	1.35	27.85	LOW	51.74	10.00	2.00	10.75	
MW	O2	PK	O1	220.7	36	494.34	492.90	.007	501.00	4.66	494.00	492.90	.0050	1.10	6.65	.69	.00	30	.43					47.02	53.88				6.59pv
INCOMING LINE 2																													
19.16																													
LINK 2 9 STRUCTURES																													
CI	O14	CI	O13	93.0	15	512.56	511.75	.009	516.75	2.94	513.81	513.00*	.0001	.01	.62	.01	.00	0	.00	.29	2.64	.77	.77	3.98	6.03	1.61	5.09	3.41	
CI	O13	CI	O12	161.4	15	511.75	505.49	.039	517.75	4.75	506.80	506.74*	.0004	.06	1.05	.02	.02	0	.00	.20	2.64	.53	1.29	3.58	12.72	1.39	5.59	6.48	
CI	O12	CI	O11	48.5	24	505.49	503.66	.038	510.08	3.34	505.66	505.66*	.0001	.00	.55	.00	.00	80	.01	.17	2.64	.45	1.74	3.04	43.96	1.67	5.18	6.52	
CI	O11	CI	O10	35.1	24	503.66	503.21	.013	508.84	3.18	505.33	505.23*	.0034	.32	4.21	.28	.04	45	.00	.30	2.64	.79	13.22	LOW	25.62	4.00	2.00	8.26	
INCOMING LINE 11																													
CI	O10	DOI	O9	137.5	24	503.21	500.92	.017	508.89	3.68	503.59	502.92*	.0049	.67	8.02	.39	.21	50	.14	.96	2.64	2.53	15.76	LOW	29.19	4.00	2.00	9.59	
DOI	O9	DOI	O8	146.7	24	500.92	499.07	.013	505.51	2.59	502.00	501.07*	.0063	.93	5.73	.51	.29	0	.00	.85	2.64	2.34	18.00	.50'	25.40	5.40	2.00	8.98	
DOI	O8	MW	O7	68.2	24	499.07	495.72	.049	506.57	5.50	498.21	497.72*	.0072	.49	6.10	.58	.13	80	.34	.44	2.64	1.16	19.16	.50'	50.14	5.40	2.00	14.88	
MW	O7	MW	O2	53.7	24	495.72	494.38	.025	504.82	7.10	496.77	496.38*	.0072	.39	6.10	.58	.00	5	.02					19.16	35.74				11.53
LINK 3 2 STRUCTURES																													
DOI	Q22	PK	Q21	50.6	12	500.88	500.45	.008	507.32	5.44	501.88	.00	.0005	.03	1.04	.02	.00	0	.00	.31	2.64	.82	.82	.50'	3.28	5.40	2.00	3.40	
LINK 4 5 STRUCTURES																													
AI	Q22	DOI	Q26	124.2	15	502.67	501.17	.012	511.51	7.59	503.92	502.42*	.0007	.08	1.38	.03	.00	0	.00	.24	2.64	.63	1.69	1 SIGNS 6"	7.10	3.65		9.83	
INCOMING LINE 6																													
DOI	Q26	DOI	Q25	124.4	18	501.17	499.88	.010	508.47	6.05	501.45	501.38*	.0006	.07	1.43	.03	.02	20	.01	.32	2.64	.84	2.53	.50'	10.70	5.40	2.00	4.98	
DOI	Q25	MW	Q24	145.4	18	499.88	498.26	.011	506.91	5.53	500.04	499.76*	.0019	.28	2.60	.10	.12	15	.01	.78	2.64	2.06	4.59	.50'	11.09	5.40	2.00	6.95	
MW	Q24	PK	Q23	57.3	18	498.26	497.44	.014	504.63	4.85	.11	.00	.0019	.11	2.60	.10	.00	0	.00					4.59	12.57				6.56pv
LINK 5 2 STRUCTURES																													
DAI	Q31	DCI	Q4	27.9	16	502.03	500.98	.038	506.91	2.92	503.99	503.41	.0209	.58	8.59	1.15	.00	0	.00	4.60	3.30	15.38	15.18	6 CURES 6"	20.38	21.85		11.44	
LINK 6 2 STRUCTURES																													
DOI	Q27	AI	Q22	11.8	12	502.91	502.47	.003	510.79	6.66	503.93	503.92	.0005	.01	1.34	.03	.00	0	.00	.40	2.64	1.06	1.06	.50'	2.07	5.40	2.00	1.54	
LINK 7 2 STRUCTURES																													
DOI	Q28	AI	Q23	12.1	12	508.30	508.02	.023	514.60	5.30	509.30	.00	.0007	.01	1.21	.02	.00	0	.00	.36	2.64	.95	.95	.50'	5.41	5.40	2.00	5.18	
LINK 8 2 STRUCTURES																													
DOI	Q29	AI	Q24	11.9	12	512.60	512.49	.011	518.18	4.56	513.62	.00	.0006	.01	1.11	.02	.00	0	.00	.33	2.64	.87	.87	.50'	3.73	5.40	2.00		

\*\*\* Afe # of sides open & depth of sill  
 Cia street grade at inlet  
 G1a depth over grate

\* lower hydraulic elevation when flowing less than full  
 C curve loss in pipe  
 R radius of curve

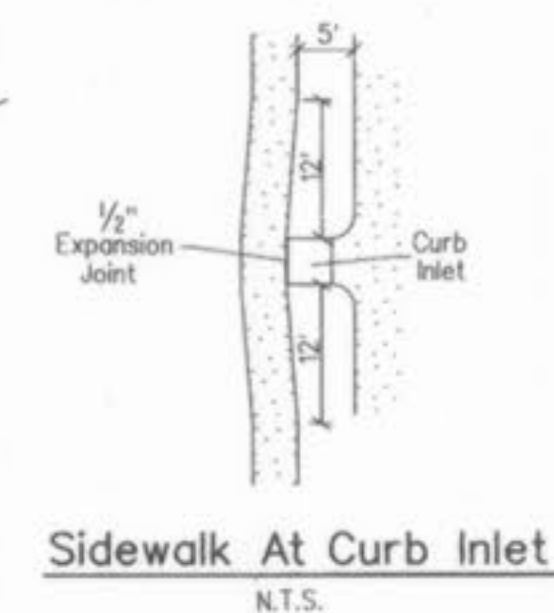


PHASE 3 RESIDENTIAL

TOTAL VILLAGE ACREAGE	R.O.W. ACREAGE	COMMON GROUND	NET VILLAGE ACREAGE	TOTAL NUMBER OF UNITS	MINIMUM LOT SIZE (SQ FT)	FRONT SETBACK	SIDE SETBACK	REAR SETBACK	STREET FRONTAGE (LINEAR)	NUMBER OF STREET TREES
9.840	.32	1.79	7.73	33	6,000	15'	5'	5'	2,069	

**CAUTION !!!**  
Contractor To Locate All Underground Utilities Prior To Construction

**NOTE**  
Winghaven - Heritage Commons Village will be part of Winghaven Residential Owners Association, Inc., which includes all of the Winghaven Development, Phases 1, 2, and 3. The alleys in Winghaven Phase 3 are private and will remain private forever and never to be maintained or accepted by the City of O'Fallon.



**NOTE**  
All new utilities installed within this subdivision to be located underground.

**NOTE**  
No access to the Alley from Spyglass Subdivision will be permitted

The underground utilities shown herein were plotted from available information and do not necessarily reflect the actual existence, or 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 in the field, shown or not shown, 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.

COMMON GROUND AND EASEMENT

Roger G. Allen  
Mo. P.L.S. No. 2185



**NOTE**  
Village "G" Improvement Plans do not include the Roundabout for Phoenix Parkway. Separate plans for the design to be approved by the City of O'Fallon.

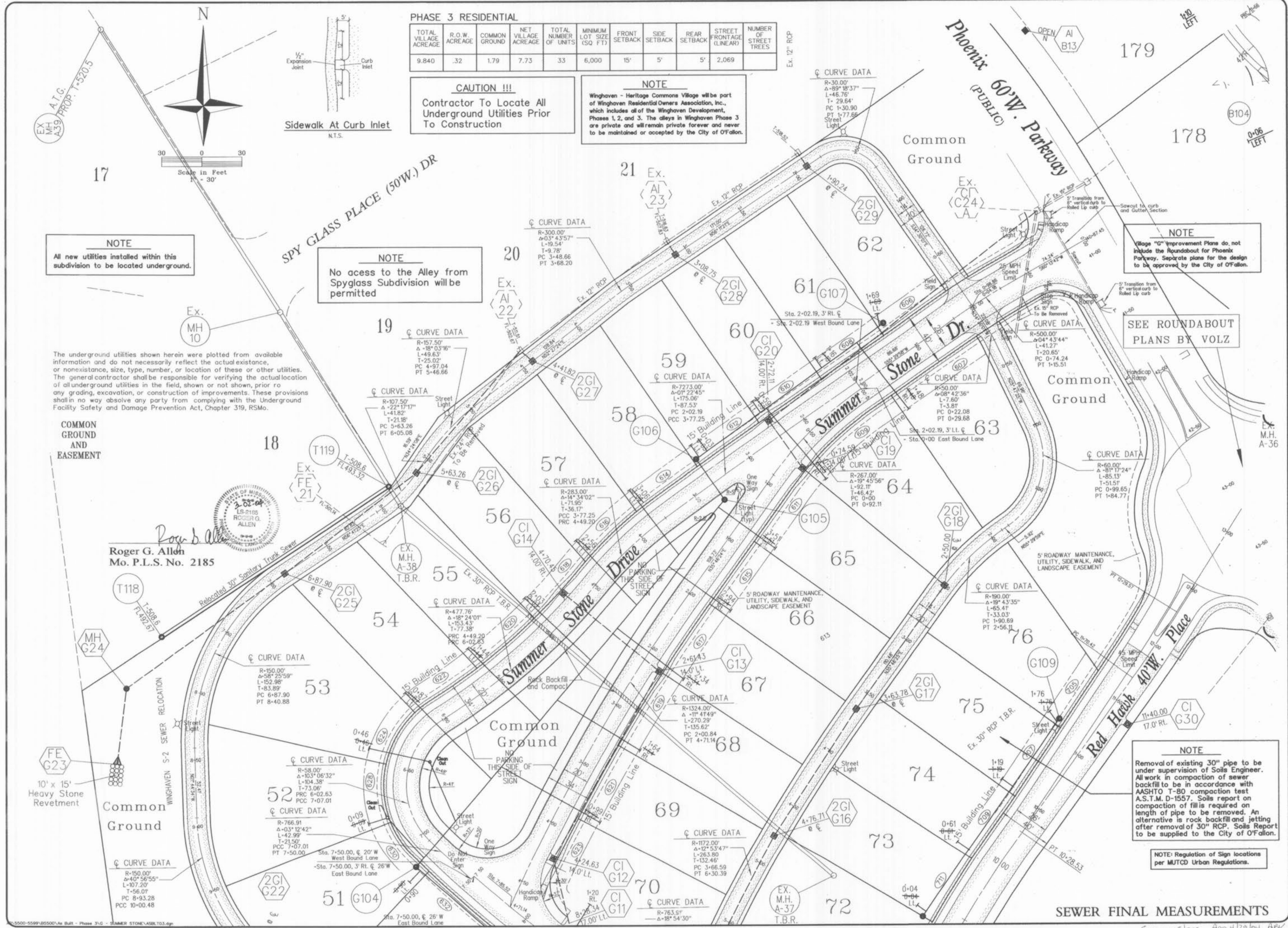
SEE ROUNDABOUT PLANS BY VOLZ

**NOTE**  
Removal of existing 30" pipe to be under supervision of Soils Engineer. All work in compaction of sewer backfill to be in accordance with AASHTO T-80 compaction test A.S.T.M. D-1557. Soils report on compaction of fill is required on length of pipe to be removed. An alternative is rock backfill and jetting after removal of 30" RCP. Soils Report to be supplied to the City of O'Fallon.

**NOTE:** Regulation of Sign locations per MUTCD Urban Regulations.

SEWER FINAL MEASUREMENTS

Summer Stone Apr 4/29/04 ARK







**NOTE**  
 Winghaven - Heritage Commons Village will be part of Winghaven Residential Owners Association, Inc., which includes all of the Winghaven Development, Phases 1, 2, and 3. The alleys in Winghaven Phase 3 are private and will remain private forever and never to be maintained or accepted by the City of O'Fallon.

Storm Sewers Within The Private Alleys Will Be Maintained By Winghaven Residential Owners Association, Inc. The alleys in Winghaven Phase 3 are private and will remain private forever and never to be maintained or accepted by the City of O'Fallon.

Storm Sewers Within Common Ground And Public Right Of Way To Be Accepted And Maintained By The City of O'Fallon.

COMMON GROUND AND EASEMENT

**52**  
 CURVE DATA  
 R=766.91  
 Δ=03°12'42"  
 L=42.96'  
 T=21.50'  
 PCC 7+07.01  
 PT 7+50.00

SEE ROUNDABOUT PLANS BY VOLZ

WINGHAVEN RESIDENTIAL L.L.C.  
 \*1 MCBROE & SON  
 CORPORATE CENTER DRIVE  
 ST. LOUIS, MISSOURI 63005  
 PHONE (314) 537-2000

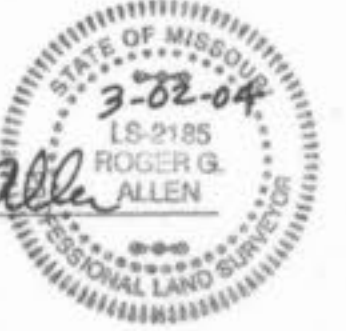
**VOLZ**

**WINGHAVEN**  
 SUMMER STONE VILLAGE AS-BUILT PLANS

STORM SEWER MAINTENANCE

Design By: E.D.K.
Drawn By: D.M.L.
Checked By: E.A.K.

8-5000

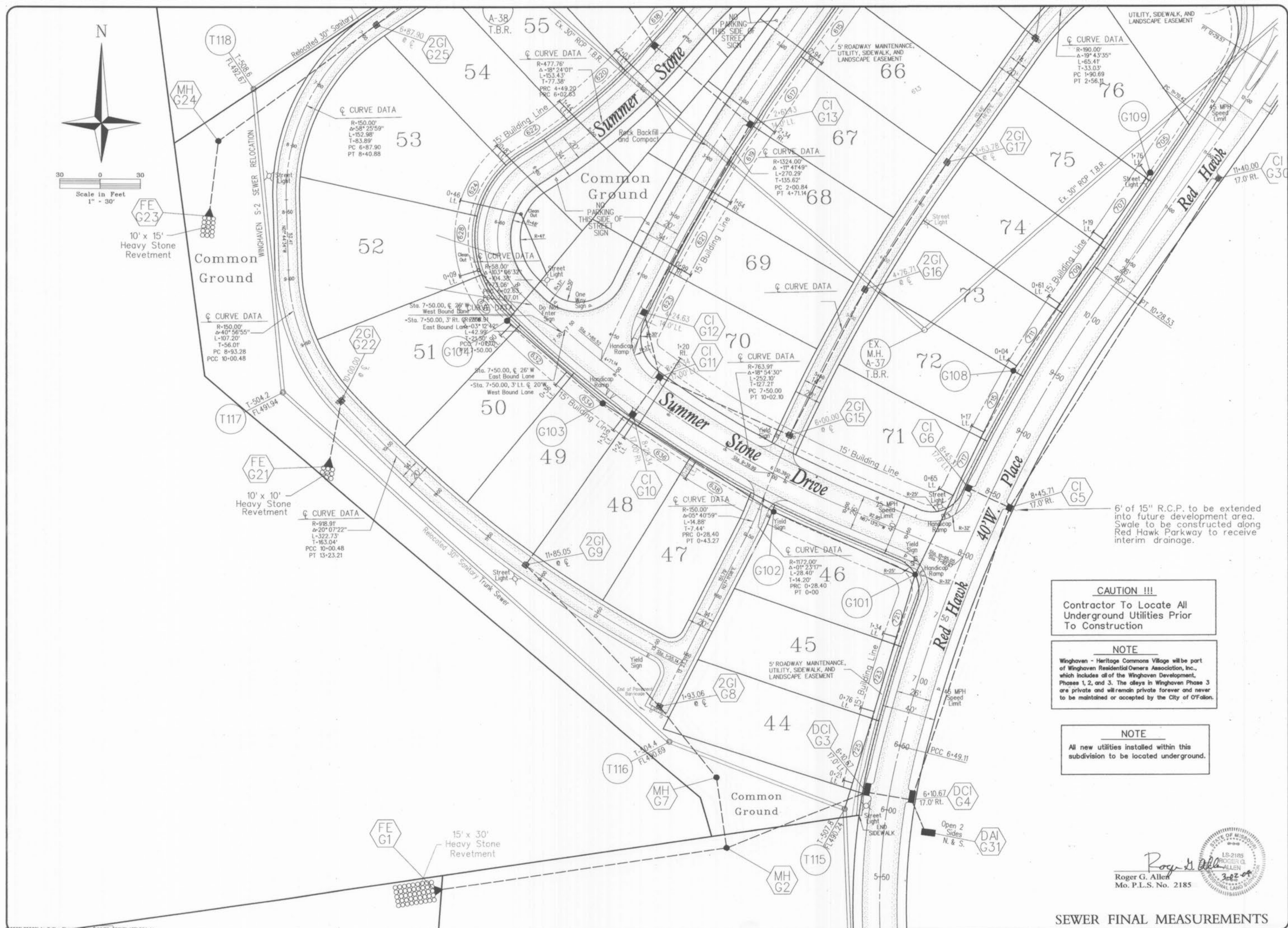


Roger G. Allen  
 Mo. P.L.S. No. 2185

SEWER FINAL MEASUREMENTS

04-23-01  
**3A**





**CAUTION !!!**  
Contractor To Locate All  
Underground Utilities Prior  
To Construction

**NOTE**  
Winghaven - Heritage Commons Village will be part  
of Winghaven Residential Owners Association, Inc.,  
which includes all of the Winghaven Development,  
Phases 1, 2, and 3. The alleys in Winghaven Phase 3  
are private and will remain private forever and never  
to be maintained or accepted by the City of O'Fallon.

**NOTE**  
All new utilities installed within this  
subdivision to be located underground.

*Roger G. Allen*  
Roger G. Allen  
Mo. P.L.S. No. 2185

SEWER FINAL MEASUREMENTS

WINGHAVEN  
RESIDENTIAL L.L.C.  
11 MCGIBRE & SON  
CORPORATE CENTER DRIVE  
ST. LOUIS, MISSOURI 63005  
PHONE (314) 537-2000



**WINGHAVEN**  
SUMMER STONE VILLAGE AS-BUILT PLANS

SITE PLAN  
AS BUILTS

Design By: E.D.K.  
Drawn By: D.K.L.  
Checked By: E.A.K.

P-5800

04-23-01

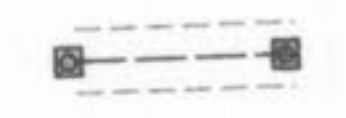




52  
 CURVE DATA  
 R=766.91  
 Δ=03°12'42"  
 L=42.99'  
 T=21.50'  
 PCC 7+07.01  
 PT 7+50.00

Storm Sewers Within The Private Alleys Will Be Maintained By Winghaven Residential Owners Association, Inc. The alleys in Winghaven Phase 3 are private and will remain private forever and never to be maintained or accepted by the City of O'Fallon.

Storm Sewers Within Common Ground And Public Right Of Way To Be Accepted And Maintained By The City of O'Fallon.



**CAUTION !!!**  
 Contractor To Locate All Underground Utilities Prior To Construction

**NOTE**  
 Winghaven - Heritage Commons Village will be part of Winghaven Residential Owners Association, Inc., which includes all of the Winghaven Development, Phases 1, 2, and 3. The alleys in Winghaven Phase 3 are private and will remain private forever and never to be maintained or accepted by the City of O'Fallon.

**NOTE**  
 All new utilities installed within this subdivision to be located underground.

Roger G. Allen  
 Mo. P.L.S. No. 2185

SEWER FINAL MEASUREMENTS

**WINGHAVEN**  
 RESIDENTIAL L.L.C.  
 \*1 MGRBDE & SON  
 CORPORATE CENTER DRIVE  
 ST. LOUIS, MISSOURI 63105  
 PHONE (314) 537-2000

**VOLZ**



**WINGHAVEN**  
 SUMMER STONE VILLAGE AS-BUILT PLANS

**STORM SEWER MAINTENANCE**

Design By: E.A.K.	Drawn By: D.K.L.	Checked By: E.A.K.
B-8600		
04-25-11		
<b>AA</b>		









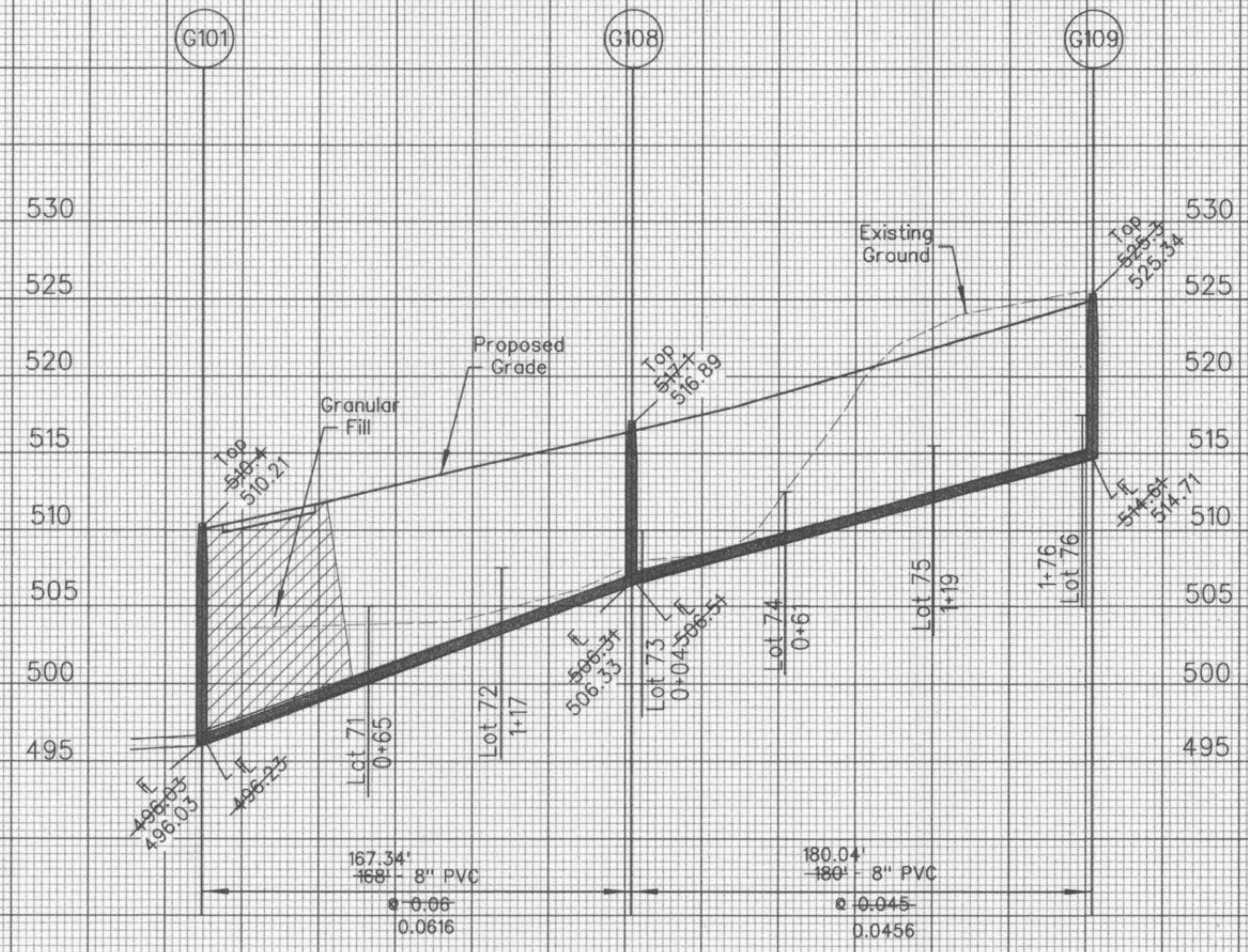
# WINGHAVEN

SUMMER STONE VILLAGE AS-BUILT PLANS

SANITARY PROFILES

Base Map No. XX-XX  
Design By: E.D.K.  
Drawn By: D.K.L.  
Checked By: E.A.K.  
B-6000

SCALE:  
1" = 5' VERT.  
1" = 30' HORIZ.

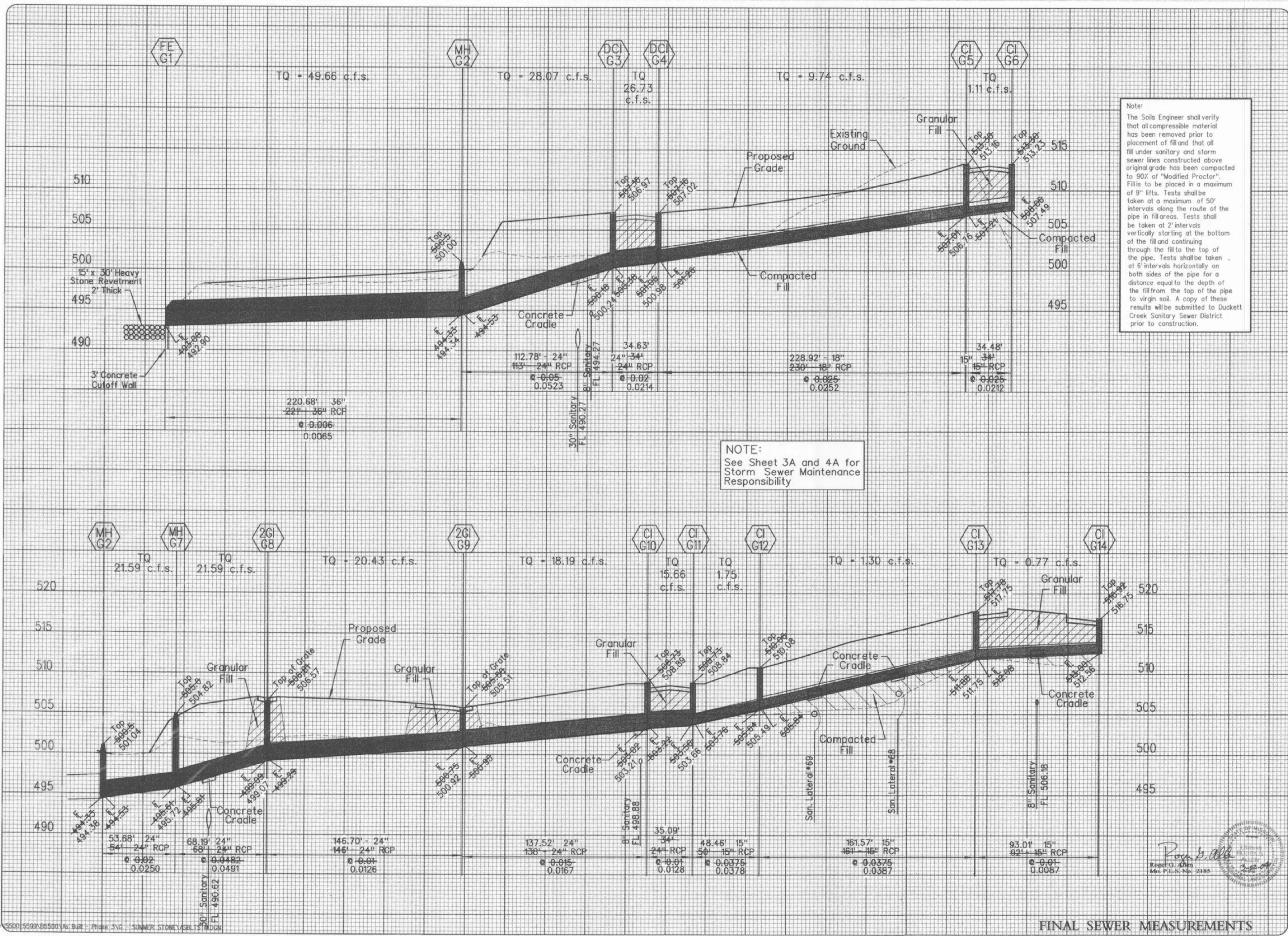


Roger G. Allen  
Mo. P.L.S. No. 2185  
*Roger G. Allen*  
3-02-09

FINAL SEWER MEASUREMENTS

Summer Stone App. 4/20/04 AAK

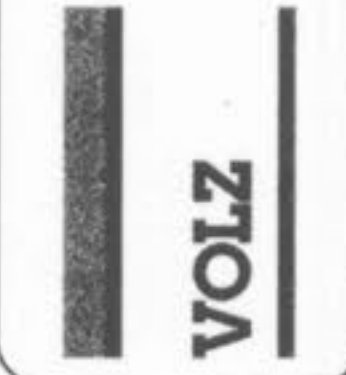




Note:  
 The Soils Engineer shall verify that all compressible material has been removed prior to placement of fill and that all fill under sanitary and storm sewer lines constructed above original grade has been compacted to 90% of "Modified Proctor". Fill is to be placed in a maximum of 9" lifts. Tests shall be taken at a maximum of 50' intervals along the route of the pipe in fill areas. Tests shall be taken at 2' intervals vertically starting at the bottom of the fill and continuing through the fill to the top of the pipe. Tests shall be taken at 6' intervals horizontally on both sides of the pipe for a distance equal to the depth of the fill from the top of the pipe to virgin soil. A copy of these results will be submitted to Duckett Creek Sanitary Sewer District prior to construction.

NOTE:  
 See Sheet 3A and 4A for Storm Sewer Maintenance Responsibility

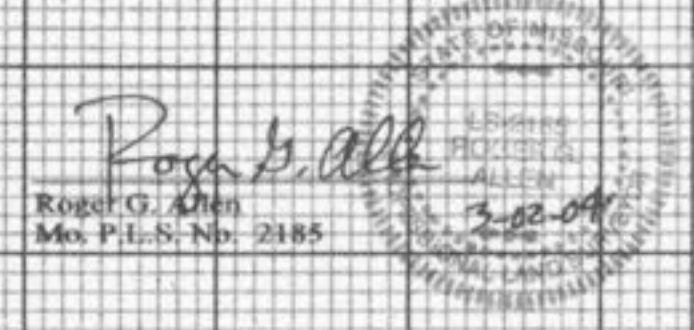
WINGHAVEN  
 RESIDENTIAL L.L.C.  
 #1 LUCASPOLE & SON  
 CORPORATE CENTER DRIVE  
 ST. LOUIS, MISSOURI 63005  
 PHONE (636) 537-2000



# WINGHAVEN

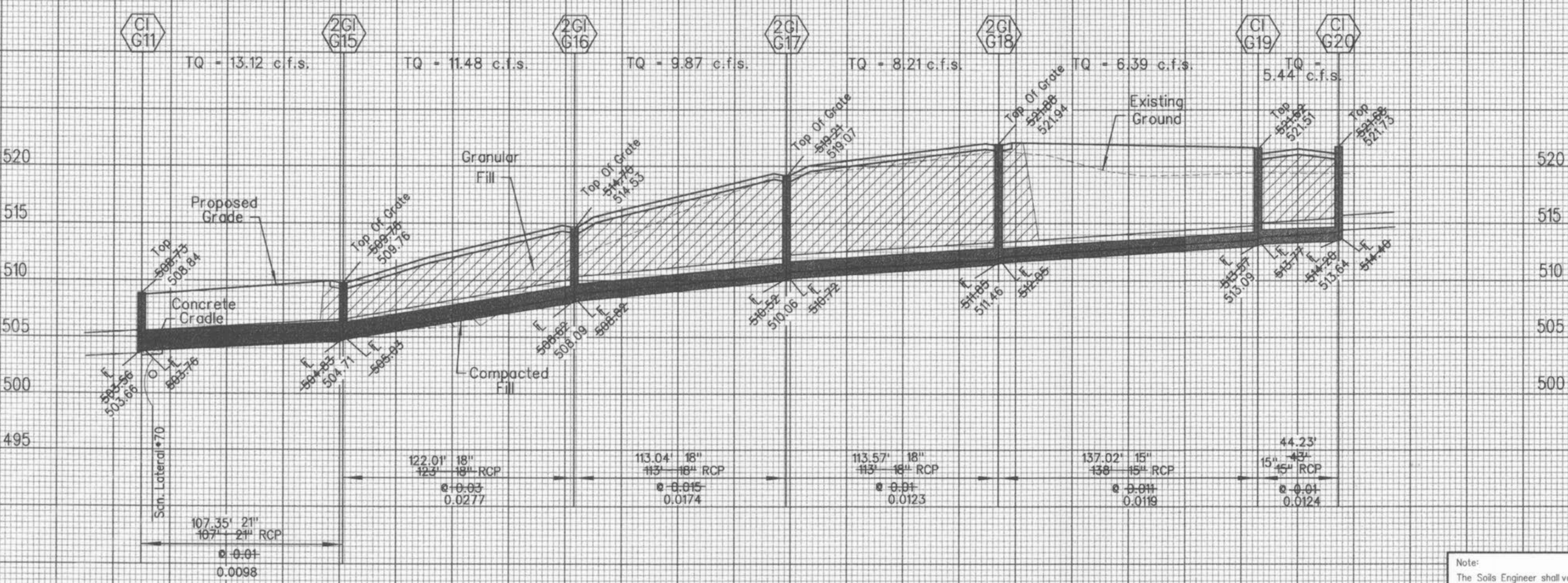
SUMMER STONE VILLAGE

STORM PROFILES  
 Design By: E.D.K.  
 Drawn By: D.K.L.  
 Checked By: E.A.K.  
 B-5500



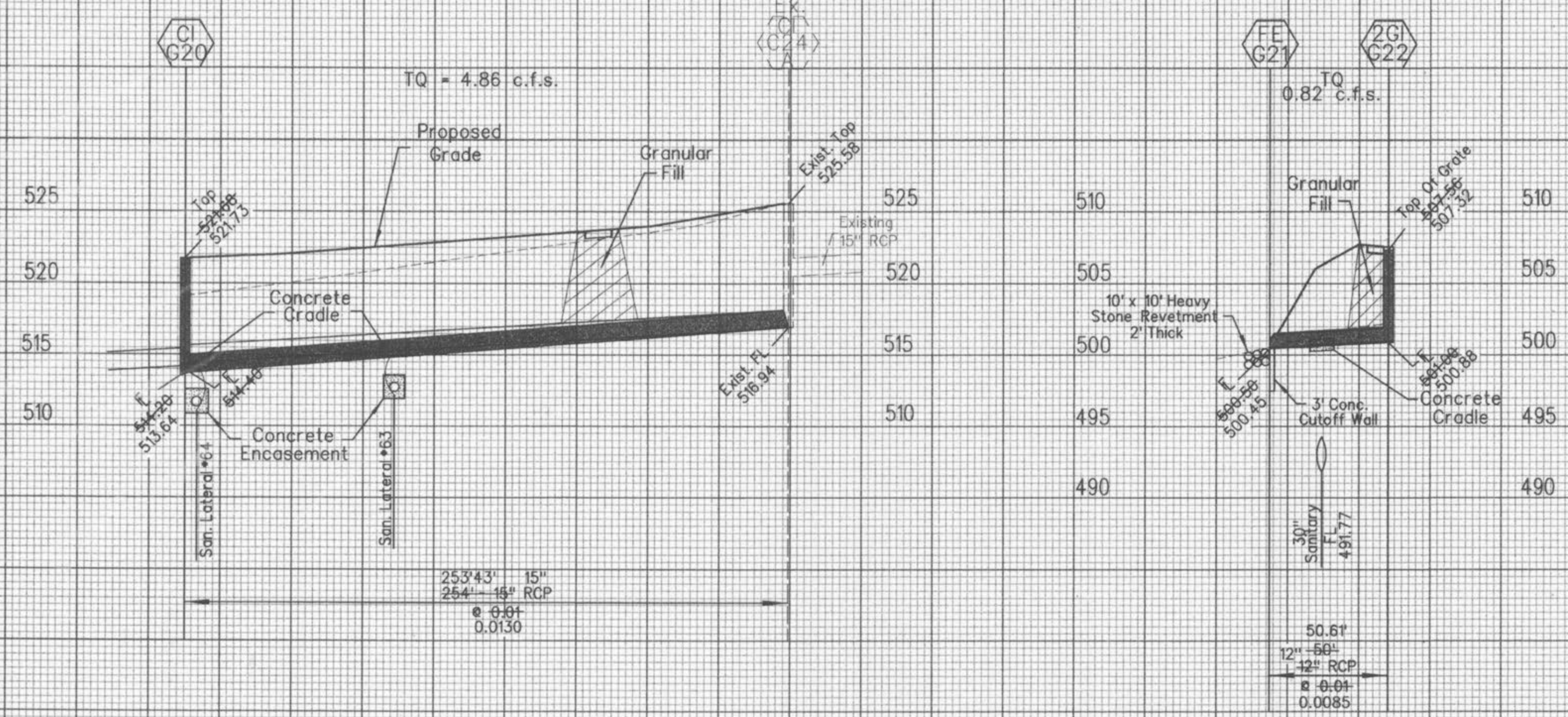
FINAL SEWER MEASUREMENTS





**NOTE:**  
See Sheet 3A and 4A for Storm Sewer Maintenance Responsibility

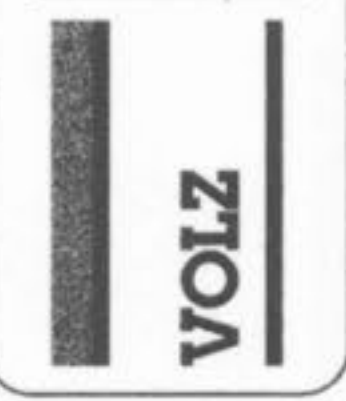
**Note:**  
The Soils Engineer shall verify that all compressible material has been removed prior to placement of fill and that all fill under sanitary and storm sewer lines constructed above original grade has been compacted to 90% of "Modified Proctor". Fill is to be placed in a maximum of 9" lifts. Tests shall be taken at a maximum of 50' intervals along the route of the pipe in fill areas. Tests shall be taken at 2' intervals vertically starting at the bottom of the fill and continuing through the fill to the top of the pipe. Tests shall be taken at 6' intervals horizontally on both sides of the pipe for a distance equal to the depth of the fill from the top of the pipe to virgin soil. A copy of these results will be submitted to Duckett Creek Sanitary Sewer District prior to construction.



*Roger C. Allen*  
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Mo. P.L.S. No. 2185

FINAL SEWER MEASUREMENTS

WINGHAVEN  
RESIDENTIAL L.L.C.  
11 MCBRIDE & SON  
CORPORATE CENTER DRIVE  
ST. LOUIS, MISSOURI 63005  
PHONE (636) 937-2000



# WINGH AVENUE

SUMMER STONE VILLAGE

STORM PROFILES

Design By: E.D.K.  
Drawn By: D.K.L.  
Checked By: E.A.K.  
Base Map No. 00-000  
P. 00000-00  
E-5000

05-16-01  
15