BILL NO. 20-197 **ORDINANCE NO. 8992**

AN ORDINANCE APPROVING A REZONING FROM AG (AGRICULTURAL) TO DISTRICT R-1 AND PRELIMINARY DEVELOPMENT PLAN FOR APPROXIMATELY 20 ACRES LOCATED AT 2501 AND 2601 NE COLBERN RD, PROPOSED WOODLAND OAKS, LOTS 1-42 AND TRACTS A-C, IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 33, THE UNIFIED DEVELOPMENT ORDINANCE OF LEE'S SUMMIT CODE OF ORDINANCES, FOR THE CITY OF LEE'S SUMMIT, MISSOURI.

WHEREAS, Application #PL2019-330 submitted by Engineering Solutions, LLC, requesting approval of a rezoning from AG (Agricultural) to R-1 (Single-Family Residential) and preliminary development plan on land located at 2501 and 2601 NE Colbern Rd was referred to the Planning Commission to hold a public hearing; and,

WHEREAS, the Unified Development Ordinance provides for the approval of a rezoning and preliminary development plan by the City following public hearings by the Planning Commission and City Council; and,

WHEREAS, after due public notice in the manner prescribed by law, the Planning Commission held public hearings for the consideration of the rezoning and preliminary development plan on September 10, 2020, and September 24, 2020, and rendered a report to the City Council recommending that the rezoning and preliminary development plan be approved; and,

WHEREAS, after due public notice in the manner prescribed by law, the City Council held a public hearing on October 20, 2020, and rendered a decision to approve the rezoning and preliminary development plan for said property.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LEE'S SUMMIT, MISSOURI, as follows:

SECTION 1. That a rezoning and preliminary development plan is hereby approved on the following described property:

Legal Description of Rezoning and Preliminary Development Plan
The Land is described as follows:

Tract I: A tract of land in the East 1 /2 of the Southeast 1 /4 of Section 27 Township 48, Range 31, in Lee's Summit, Jackson County, Missouri, described as follows: Beginning at the Northeast corner of said Southeast 1/4, thence South 2 Degrees 02 Minutes 34 Seconds West 678.77 feet, along0020 the East line of said Southeast 1/4, thence North 87 Degrees 42 Minutes 02 Seconds West 692.44 feet, thence North 2 degrees 02 Minutes 34 Seconds East 680.72 feet, parallel with the East line of said Southeast 1/4, to a point on the North line of said Southeast 1/4, thence South 87 Degrees 32 Minutes 23 Seconds East 692.45 feet, along the North line of said Southeast 1/4, to the point of beginning.

Tract II: A tract of land in the East 1/2 of the Southeast 1/4 of Section 27, Township 48, Range 31, in Lee's Summit, Jackson County, Missouri, described as follows: Beginning at a point that is North 87 Degrees 32' 23" West 682.45 feet of the Northeast corner of

said Southeast 1 /4 and on the North line of said Southeast 1 /4 thence South 2 Degrees 02' 34" West, 680.69 feet, parallel with the East line of said Southeast 1/4; thence North 87 Degrees 42' 02" West, 648.46 feet to a point on the West line of said East 1/2; thence North 1 Degrees 56' 24" East, 682.53 feet along the West line of said East 1/2, to Northwest corner of said East 1/2; thence South 87 Degrees 32' 23" East, 649.69 feet along the North line of said Southeast 1/4 to the point of beginning, EXCEPT that part in Colbern Road.

SECTION 2. That the following conditions of approval apply:

1. A modification to the 10% maximum allowance of cul-de-sac lots in a subdivision shall be granted, to allow 79% cul-de-sac lots.
2. The architectural style and building materials shall be consistent with the building elevations date issued February 5, 2019, and September 20, 2019.

SECTION 3. Nonseverability. All provisions of this ordinance are so essentially and inseparably connected with, and so dependent upon, each other that no such provision would be enacted without all others. If a court of competent jurisdiction enters a final judgment on the merits that is not subject to appeal and that declares any provision or part of this ordinance void, unconstitutional, or unenforceable, then this ordinance, in its collective entirety, is invalid and shall have no legal effect as of the date of such judgment.

SECTION 4. That failure to comply with all of the provisions contained in this ordinance shall constitute violations of both this ordinance and Chapter 33, the City's Unified Development Ordinance, of the Code of Ordinances for the City of Lee's Summit.

SECTION 5. That this ordinance shall be in full force and effect from and after the date of its passage and adoption, and approval by the Mayor.

PASSED by the City Council of the City of Lee's Summit, Missouri, this 27th day of October, 2020.

Mayor William A. Baird

ATTEST:

City Clerk *Trisha Fowler Arcuri*

BILL NO. 20-197 **ORDINANCE NO. 8992**

APPROVED by the Mayor of said city this 27th day of October, 2020.

Mayor William A. Baird

ATTEST:

City Clerk *Trisha Fowler Arcuri*

APPROVED AS TO FORM:

City Attorney *Brian Head*

Preliminary Development Plan
Lots 1 thru 42 & Tracts A-B
WOODLAND OAKS
Part of the Southeast 1/4
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

PLAT BOUNDARY DESCRIPTION

The Land is described as follows:

Tract I: A tract of land in the East 1/2 of the Southeast 1/4 of Section 27 Township 48, Range 31, in Lees Summit, Jackson County, Missouri, described as follows: Beginning at the Northeast corner of said Southeast 1/4; thence South 2 Degrees 02 Minutes 24 Seconds West, 974.77 feet along the East line of said Southeast 1/4; thence North 87 Degrees 49 Minutes 52 Seconds West 662.44 feet; thence North 2 degrees 02 Minutes 54 Seconds East 983.70 feet, parallel with the East line of said Southeast 1/4, to a point on the North line of said Southeast 1/4; thence South 87 Degrees 33 Minutes 23 Seconds East 659.45 feet, along the North line of said Southeast 1/4, to the point of beginning.

Tract II: A tract of land in the East 1/2 of the Southeast 1/4 of Section 27, Township 48, Range 31, in Lees Summit, Jackson County, Missouri, described as follows: Beginning at a point that is from 87 Degrees 33' 23" West 662.43 feet of the Northeast corner of said Southeast 1/4 and on the North line of said Southeast 1/4; thence South 2 Degrees 02' 24" West, 653.63 feet, parallel with the East line of said Southeast 1/4, thence North 87 Degrees 49' 36" West, 648.48 feet to a point on the West line of said East 1/2; thence North 1 Degrees 58' 24" East, 652.51 feet, along the West line of said East 1/2 Southwest corner of the East 1/2, thence South 87 Degrees 33' 23" East, 644.85 feet along the North line of said Southeast 1/4 to the point of beginning, EXCEPT that part in Colbern Road.

LEGEND

These standard symbols will be found in the drawing

- Set 1/2" Rebar & Cap
- Found Survey Monument (As Noted)
- Excavation Document Location
- Existing Fence Line – Chain Link
- Existing Water Line
- Existing Sanitary Sewer Main
- Existing Storm Sewer
- Existing Gas Line
- Existing Underground Telecomm
- Existing Underground Electric
- Proposed Storm Sewer
- Proposed Sanitary Sewer
- Proposed 8" D.I.P. Water
- Water Easement

Site Data Table :

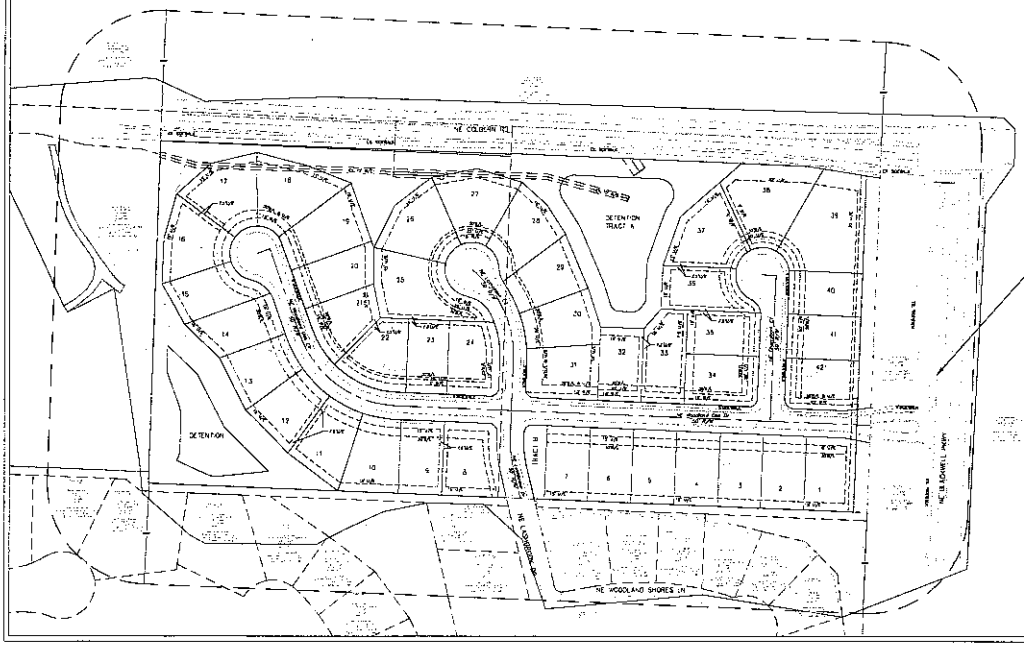
Lot Area	926,358.17 sf (15.51 Acres)
Lots	42
Density	2.27 Lots/Acre
Common Tract Area	169,771.85 sf (3.90 Acres)
Current Zoning:	AG
Proposed Zoning:	R-1

Sanitary Sewer Service
Sanitary Sewer service will be connected to the main line being in the south of the development.

Water Service
Water Service will be extended to the lots from the existing 8"DIP pipe along the east side of NE Blackwell Pkwy.

Storm Sewer
Storm Detention is will be required per storm sewer study

LOCATION MAP
SECTION 27-T48N-R31W
Not to Scale



Traffic Count Bases on ITE 10th Edition

Single Family Detached Housing

Ave Daily Intensity	9.44 Vpd per dwelling unit (50% Entering, 50% Exiting)
Ave Peak Intensity	0.99 Vpd per dwelling unit (63% Entering, 37% Exiting)

Woodland Oaks
42 Lots — 39 Trips Ave AM (10 Entering, 29 Exiting)
— 42 Trips Ave PM (27 Entering, 15 Exiting)

Woodland Shores 3rd Plat
30 Lots (North of NE Colbern Rd)
— 28 Trips Ave AM (8 Entering, 19 Exiting)
— 30 Trips Ave PM (18 Entering, 11 Exiting)

Distribution of Trips
NOB From North
NOB From South

Southbound Right Turn
— 32 Trips Ave AM (9 Entering, 24 Exiting)
— 34 Trips Ave PM (20 Entering, 14 Exiting)

Traffic Demand does not reach a peak of 30 and does not require a Right Turn Lane per City of Lee's Summit Access Management Code 16.24

SURVEY AND PLAT NOTES:

THE SUBJECT PROPERTY SURVEYED LIES WITHIN A FLOOD ZONE DESIGNATED ZONE (S), AREAS LOCATED OUTSIDE THE 100 YEAR FLOOD PLAIN, PER F.E.M.A. MAP, COMMUNITY PANEL NO. 29095C0038 G EFFECTIVE DATE: JANUARY 20, 2017

SURVEYOR'S GENERAL NOTES:

1) This survey is based upon the following information provided by the client or developer by the Surveyor:
(A) Final Plat of the Estates of Gold-Colbern 2nd Plat
(B) Final Plat of Summit Farms 1st Plat
2) This survey meets or exceeds the minimum standards of a (3) SURVEY) Property Boundary Survey as set forth by the Missouri Standards for Property Boundary Surveys.
3) No Title Reports were furnished.
4) Bearings shown hereon are based upon bearings described in the legal description.
5) The surveyor assumes no responsibility in the location of existing Utilities within the subject premises. This is an above-ground survey. The underground utilities, if shown, are based on information provided by the various utility companies and make no guarantee as to their completeness or correctness. There may be additional underground utilities not known to the surveying. See Note Tracts #1 (5071) 253-1900 (1171), (800) 1-811.
7) Subsurface and environmental conditions were not examined or considered as a part of this Survey. No evidence or assumption is made concerning the existence of underground or overhead containers, containers or trashes that may affect the use or development of this property. No attempt has been made to obtain or show data concerning existence, size, depth, composition, capacity or location of any dump site or sanitary landfill on the property, whether observable, improved or public record.

ENGINEERING SOLUTIONS

Professional Registration
Missouri
Engineering A2005021962
Surveying 2002027AD
Kansas
Engineering E-2008
Surveying LS-2008
Oklahoma
Engineering 28591
Surveying 2438LS

Part of the Southeast 1/4
Section 27, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Date
Engineer-in-Charge
Drawn By
Checked By

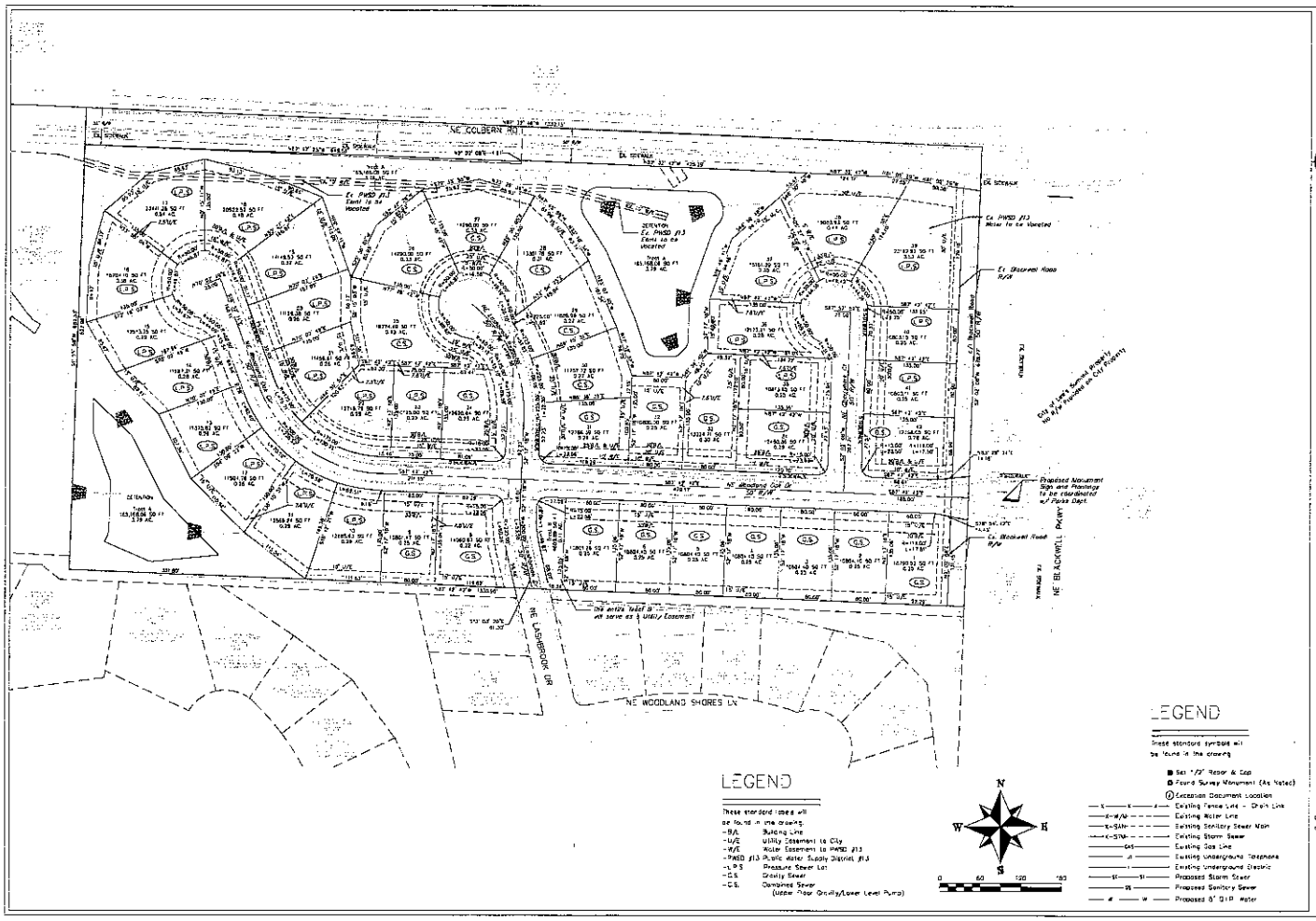
OVERALL SITE PLAN
Preliminary Development Plans for:
Lots 1 thru 42
WOODLAND OAKS
Lee's Summit, Jackson County, Missouri

Missouri Department of Natural Resources

Volumetric & Sensory
MO No. 2006-0175A
Fax: (816) 524-8887
Ph: (816) 524-4646
M: (816) 524-1234

REVISIONS
City Comments 3-24-20
City Comments 2-3-20

C.100



ENGINEERING SOLUTIONS

DEVELOPMENT SITE PLAN
Preliminary Development Plans for
WOODLAND OAKS
Lake Summit, Jackson County, Missouri

Plat of the Southeast 1/4 Section 27, Township 48 North, Range 31 West (Lake Summit, Jackson County, Missouri)

City Comments 2-24-20
City Comments 3-31-20

C101

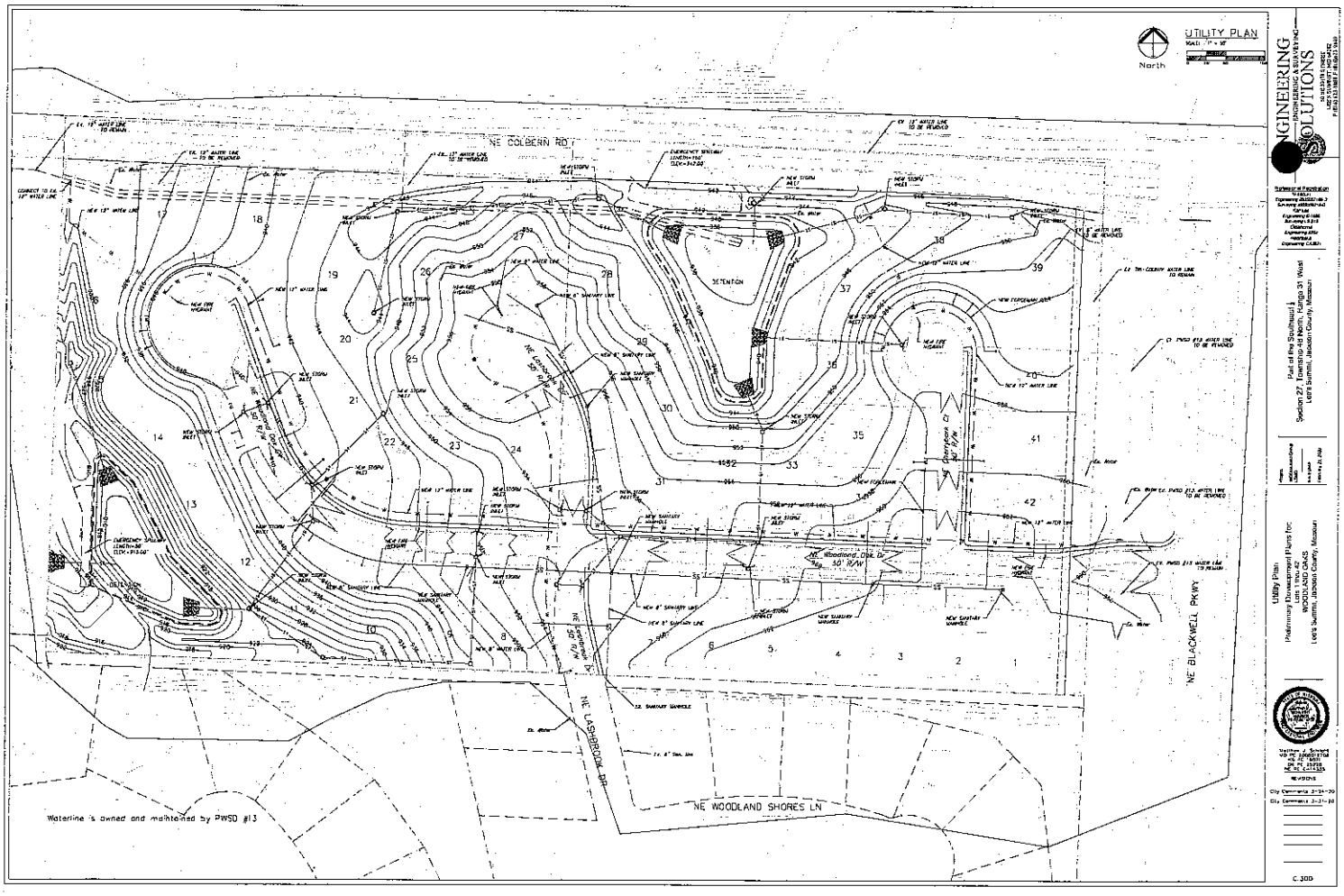
GINEERING SOLUTIONS

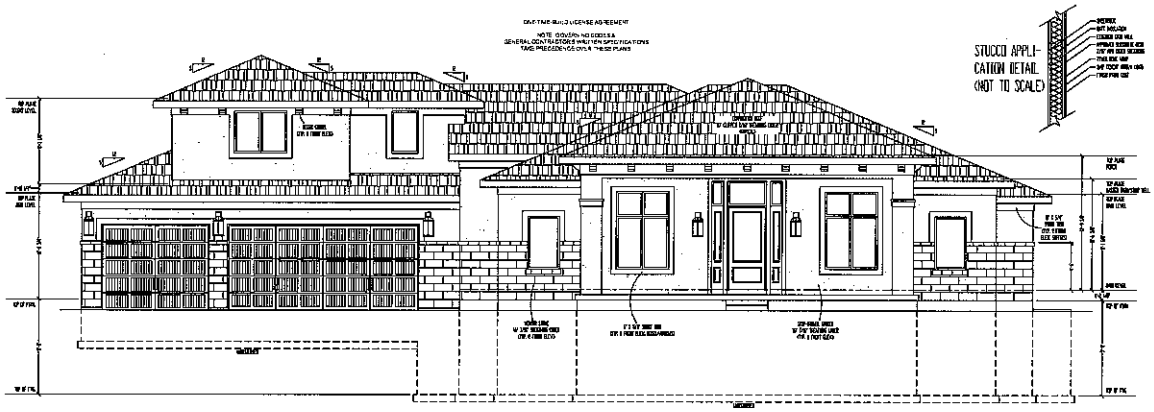
Part of the Southeast 1/4 of Section 27, Township 48 North, Range 31 West of the 5th P.M. Lee's Summit, Jackson County, Missouri

Grading Plan
Preliminary Development Plans for:
VOLKS ADDITION
Lee's Summit, Jackson County, Missouri

Revisions
City Comments 3-31-20
City Comments 2-21-20

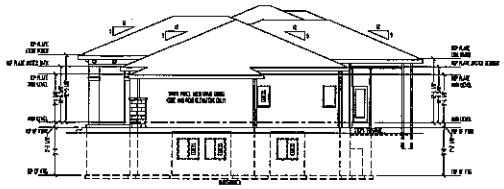
C-200


UTILITY PLAN
North
NE COLBERN RD
NE BLACKWELL PKWY
NE WOODLAND SHORES LN
NE LASHBROOK DR
DETENTION
Waterline is owned and maintained by PWSD #13

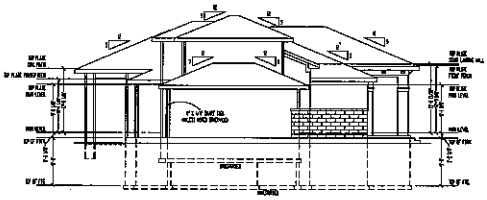


STUCCO APPLI-
CATION DETAIL
(NOT TO SCALE)

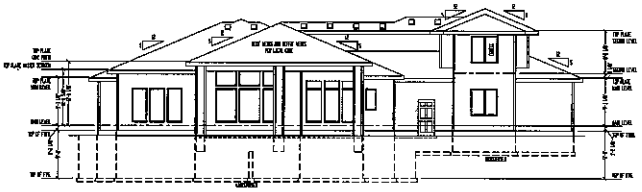
FRONT ELEVATION
SCALE: 1/4" = 1'-0"



RIGHT ELEVATION
SCALE: 1/8" = 1'-0"



LEFT ELEVATION
SCALE: 1/8" = 1'-0"



REAR ELEVATION
SCALE: 1/8" = 1'-0"

VIEWPOINT RESIDENTIAL DESIGN LLC

Owners:
Lot 993, Rainbow Lake Estates

Project Address:
953 SW Raintree Dr.
Lee's Summit, Missouri 64082

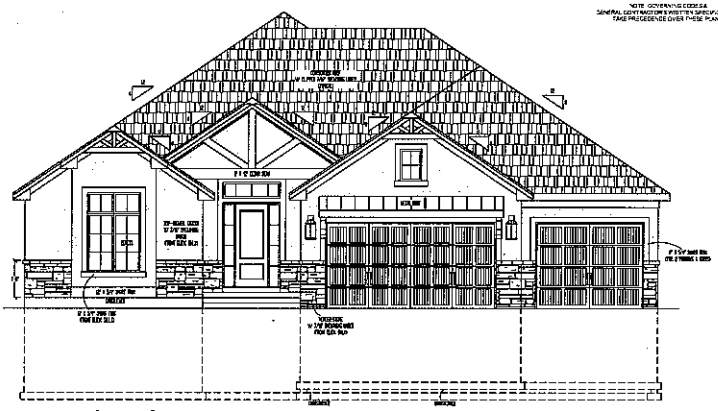
Designed:
Gary & Kim STARR

General Contractor:
Kevin Higdon Construction, Inc.

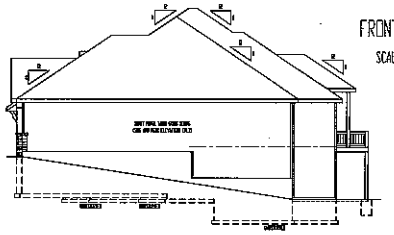
Date: 2-15-AD 2018
Rev 1: 4-13-AD 2018
Rev 2:
Rev 3:

Sheet Title
ELEVATIONS

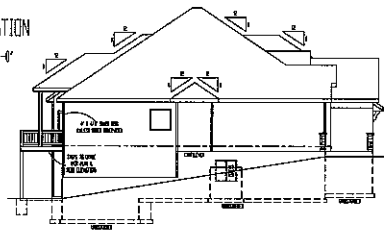
Sheet No.
A-1



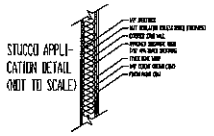
FRONT ELEVATION
SCALE: 1/4" = 1'-0"



RIGHT ELEVATION
SCALE: 1/8" = 1'-0"



LEFT ELEVATION
SCALE: 1/8" = 1'-0"



STUCCO APPLI-
CATION DETAIL
(NOT TO SCALE)

REAR ELEVATION
SCALE: 1/8" = 1'-0"

DESIGN BUILD LICENSE AGREEMENT

NOTE: GOVERNING CODES &
GENERAL CONTRACTOR'S WRITTEN SPECIFICATIONS
TAKE PRECEDENCE OVER THESE PLANS

VIEWPOINT
RESIDENTIAL DESIGN LLC

Owners
Larry & Cara SMITH

General Contractor
Kevin Higdon Construction, LLC

Project Address
Lot 180, Woodland Trails

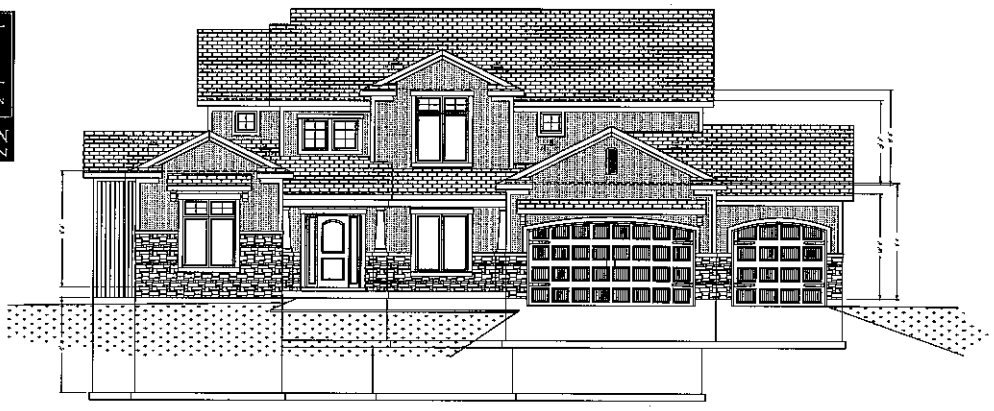
916 Old Hickory Rd.
Grotevant, Missouri

Date: 1-22-18 9:18

Sheet Title
ELEVATIONS

Sheet No.
A-1

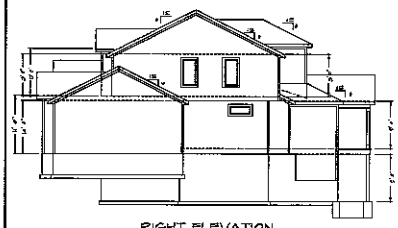
KH CONSTRUCTION
KEVIN HIGDON CONSTRUCTION



FRONT ELEVATION
1/4" = 1'-0"

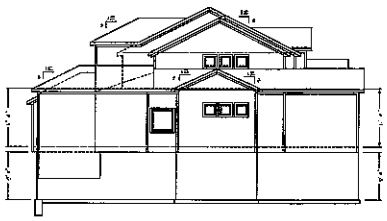
BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY BETWEEN FLOORS, FOUNDATION, AND ELEVATIONS. ALSO VERIFY ALL BEAM, HEADER/STAIR LOCATIONS, AND COLUMN SIZES.

NOTE:



RIGHT ELEVATION
1/4" = 1'-0"

REAR ELEVATION
1/4" = 1'-0"



LEFT ELEVATION
1/4" = 1'-0"

SQUARE FOOTAGE

LIVING AREA
FIRST FLOOR - 2574
SECOND FLOOR - 1369
3943 TOTAL - 3.9

UNFINISHED AREA
GARAGE - 1154
STORAGE BASEMENT - 647

25-5131

SHEET NO.
APPROX. SQ.FT.
PLAN NO. 55-464
FILE NAME 25-5131
DATE DRAWN:
DATE REVISED:
DESIGNER:
PHONE:
PHONE:
LOT NO.
HOME BUYER:
BUILDER:
SUBD. DIVISION:

BUILDER/CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO MD2 IMMEDIATELY. MD2 ASSUMES NO RESPONSIBILITY FOR ANY CONSTRUCTION PERFORMED FROM THESE PLANS WHICH HAS NOT BEEN REVIEWED AND APPROVED BY MD2. THESE PLANS ARE THE EXCLUSIVE PROPERTY OF MD2 AND SHALL NOT BE REPRODUCED, ALTERED OR COPIED IN ANY FORM OR MANNER WHATSOEVER NOR HAVE ANY RIGHT OR LICENSE TO USE, OR PERMIT THE USE BY ANY THIRD PARTY, WITHOUT THE EXPRESS WRITTEN CONSENT OF MD2. VISUAL CONTACT WITH THESE PLANS SHALL CONSTITUTE PRIMA FACIE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS. ANY UNAUTHORIZED USE OF THESE PLANS WILL BE PROSECUTED TO THE FULLEST EXTENT OF THE LAW.

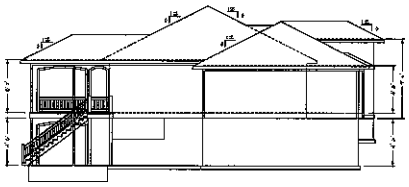
KH CONSTRUCTION
KEVIN HIGDON CONSTRUCTION

MD² Quality By Design

FRONT ELEVATION
1/4" = 1'-0"

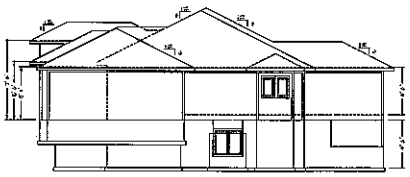
BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY BETWEEN FLOORS, FOUNDATION, AND ELEVATIONS. ALSO VERIFY ALL BEAM, HEADERS, PAD LOCATIONS, AND COLUMN SIZES.

NOTES:



LEFT ELEVATION
1/4" = 1'-0"

REAR ELEVATION
1/4" = 1'-0"



RIGHT ELEVATION
1/4" = 1'-0"

SQUARE FOOTAGE

LIVING AREA
FIRST FLOOR = 1883
GARAGE = 1015
2ND FLOOR = 999
PORCH = 84
TOTAL = 3981

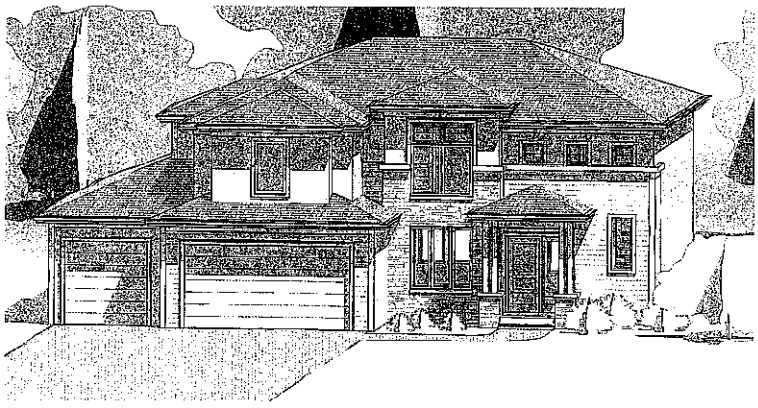
UNFINISHED AREA
STORAGE CABINET = 199
LOCK & LEAVE = 254
GARAGE = 258

SHEET NO: 1
PLAN NO: 6464
PLAN NAME: 6C FRONT
ELEVATION SCHEME:

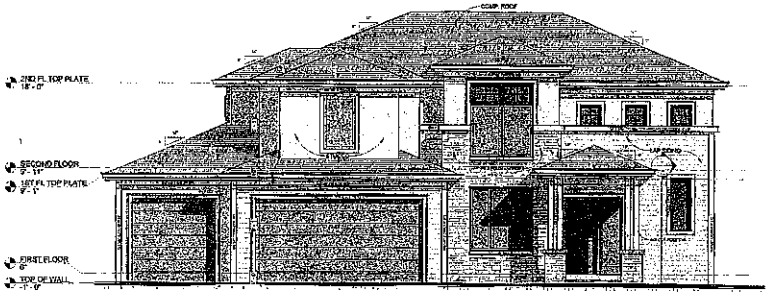
DATE PREPARED:
DATE REVISED:
DESIGNER:

PROPERTY: KEVIN & TANYA RYAN
PROJECT: 1926 BLACKSTONE PL.
LOT NO: 150
SUBDIVISION: NAPA VALLEY

KH-6101 (RYAN-LOT 150)



1 3D VIEW



2 FRONT ELEVATION
1/4" = 1'-0"

HD ENGINEERING
& DESIGN, INC.

KS. COA. #E1312
MO. COA. #2005021-1818-F

FIRST CHOICE CUSTOM HOMES
MADISON PLUS
OVERLAND PARK, KS

REVISION TABLE

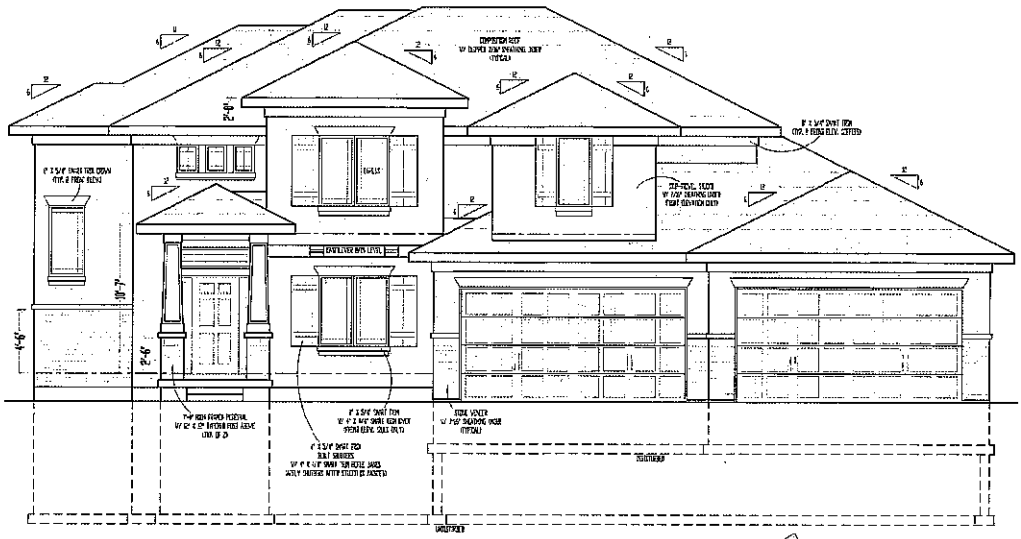
Date: 4/18/19
HD #:
Drawn By: PJH
Reviewed By: CLS

FRONT ELEVATION
SHEET NUMBER
1

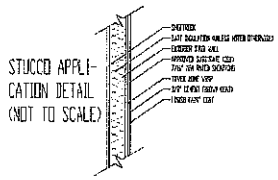
DESIGNED EXCLUSIVELY FOR

KEVIN HIGDON CONSTRUCTION

ONE-TIME-BUILD LICENSE AGREEMENT



STUCCO APPLI-CATION DETAIL (NOT TO SCALE)



FRONT ELEVATION

SCALE: 1/4" = 1'-0"

REVIEW SHEET ONLY
NOT FOR CONSTRUCTION

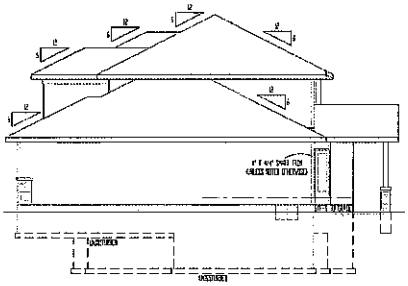
"But God has heard me; he has given heed to the voice of my prayer. Blessed be God, because he has not rejected my prayer or removed his steadfast love from me." Psalm 66:19-20

VIEWPOINT
RESIDENTIAL DESIGN LLC

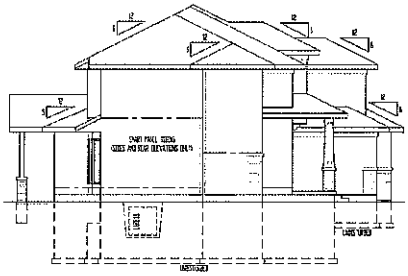
11230 LW 43RD ST., SUITE 230-A
LEE'S SUMMIT, MO 64063-3013
TOLL FREE: 1-877-VIEWPNT
LIC#: 816-554-0459
FAX: 816-554-0445
mail@viewpointdesign.net
www.ViewpointDesign.net

PLAN TITLE:
TIMBERHILLS II

SHEET TITLE:	SHEET NO: 1 OF 5
FRONT ELEVATION	DATED: 03/14/2013

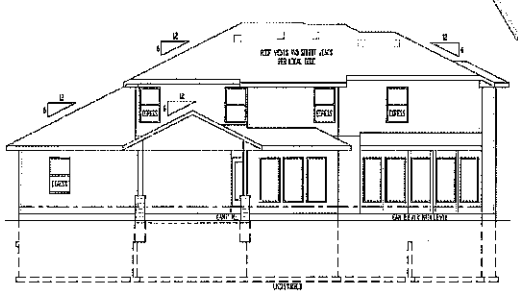


RIGHT ELEVATION
SCALE: 1/8" = 1'-0"



LEFT ELEVATION
SCALE: 1/8" = 1'-0"

REVIEW SHEET ONLY
NOT FOR CONSTRUCTION



REAR ELEVATION
SCALE: 1/8" = 1'-0"

ELEVATIONS
- SMART PANEL SIDING OVER FOAM ON SIDE AND REAR ELEVATIONS
- COMPOSITION ROOF SHINGLES
- LEGACY FLUE PIPE COPPER VENTS PER CODE
- REMOVE FOUNDATION TO GRADE

OPTIONAL ITEMS
- NEW CONFIGURATION TO COMPLY WITH MANUFACTURER'S RESIDENTIAL DECK STANDARDS
- 4" X 12" X 16'-0" DECK BEAM
- 6" X 6" DECK POSTS
- 2" X 8" DECK JOISTS
- 2" X 12" DECK STRINGERS
- 2" X 6" DECK TOP RAIL
- RESIDENCE OPTIONAL STAIRS ON SITE

"For God sent not his Son into the world to condemn the world; but that the world through him might be saved."
John 3:17

VIEWPOINT RESIDENTIAL DESIGN LLC
1500 SW MAPLE ST., SUITE 200-A
LEE'S SUMMIT, MO 64081-3113
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LEAH: 816-554-0409
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PLAN TITLE:
TIMBERHILLS II

SHEET TITLE:
SIDE AND REAR ELEVATIONS

SHEET NO: 2 of 6
DATE: 03/04/2013

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING

Woodland Oaks
May 20, 2020
Single-Family Development
Lee's Summit, MO

Introduction

This letter report is to serve as the Final Sanitary Study for the Development of 11.04 serviceable acres at the southwest corner of Colbern Road and Blackwell Road. The proposed development will provide 42 single family residential units on the subject property. The downstream sanitary sewer system is contained wholly within Woodland Shores where sewerage is collected by a pump station and conveyed via a forcemain further downstream. The proposed development will connect directly to City Manhole 26-274, which connects to an 8 inch sanitary main. Design flows for the proposed development along with the existing development area will be calculated per Section 6500 of the City of Lee's Summit Design and Construction Manual.

Background

The following Figures from the Wastewater Master Plan were utilized to identify any known issues within the area.

Figure 7-3 High Inflow Areas in Existing System Plan
Figure 8-1 2015 Condition of Conveyance/Collection System Bottlenecks
Figure 8-2 2015 Condition Recommended Improvements

Figure 7-3 does not identify the subject watershed as having I&I issues. Figure 8-1 does identify sections of both the north and east interceptors just upstream of the pump station as having potential future capacity issues based upon capacity analysis methodology proposed in the Wastewater Master Plan and subsequently adopted by the City. Figure 8-2 recommended new sections of gravity interceptor where it was anticipated through age and growth that the system may begin experiencing capacity issues. The current system has not had any issues to date regarding conveyance to the pump station. Pump station data provided by the City was reviewed during this study, see attached. No capacity issues were evident with the pump station based upon pump start and cycle times.

Ultimate Buildout

The sanitary sewer analysis was terminated at the Woodland Shores pump station wetwell labeled 62-002PS, see Sanitary Sewer Map attached for both the existing sanitary sewer system layout along with proposed development location and tie-in point. There are 86.28 +/- acres tributary to wetwell 62-002PS, see Sanitary Sewer Area Exhibit attached form CES. The serviceable area outlined by CES appears to be reasonable and has been utilized for this analysis. The proposed development will utilize the north branch of the sewer system to convey flow. All tributary area has been accounted for to wetwell 62-002PS as stipulated by the City's design criteria. The proposed development consists of 11.04 acres of tributary area. The proposed development may be served by the existing downstream sewer system with little to no surcharging as outlined in the attached sanitary sewer analysis.

Conclusions

The sanitary sewer analysis shows there is excess capacity in the system both pre and post development of the Woodland Oaks single-family housing project. The analysis anticipates minimal surcharging in the system at ultimate buildout flows. The surcharging would be minimal with no sewerage overflowing and leaving the system. No improvements are necessary due to the development of this site. The existing system will continue to convey sanitary sewage without problem.

Matthew J Schlicht, PE 2006019708

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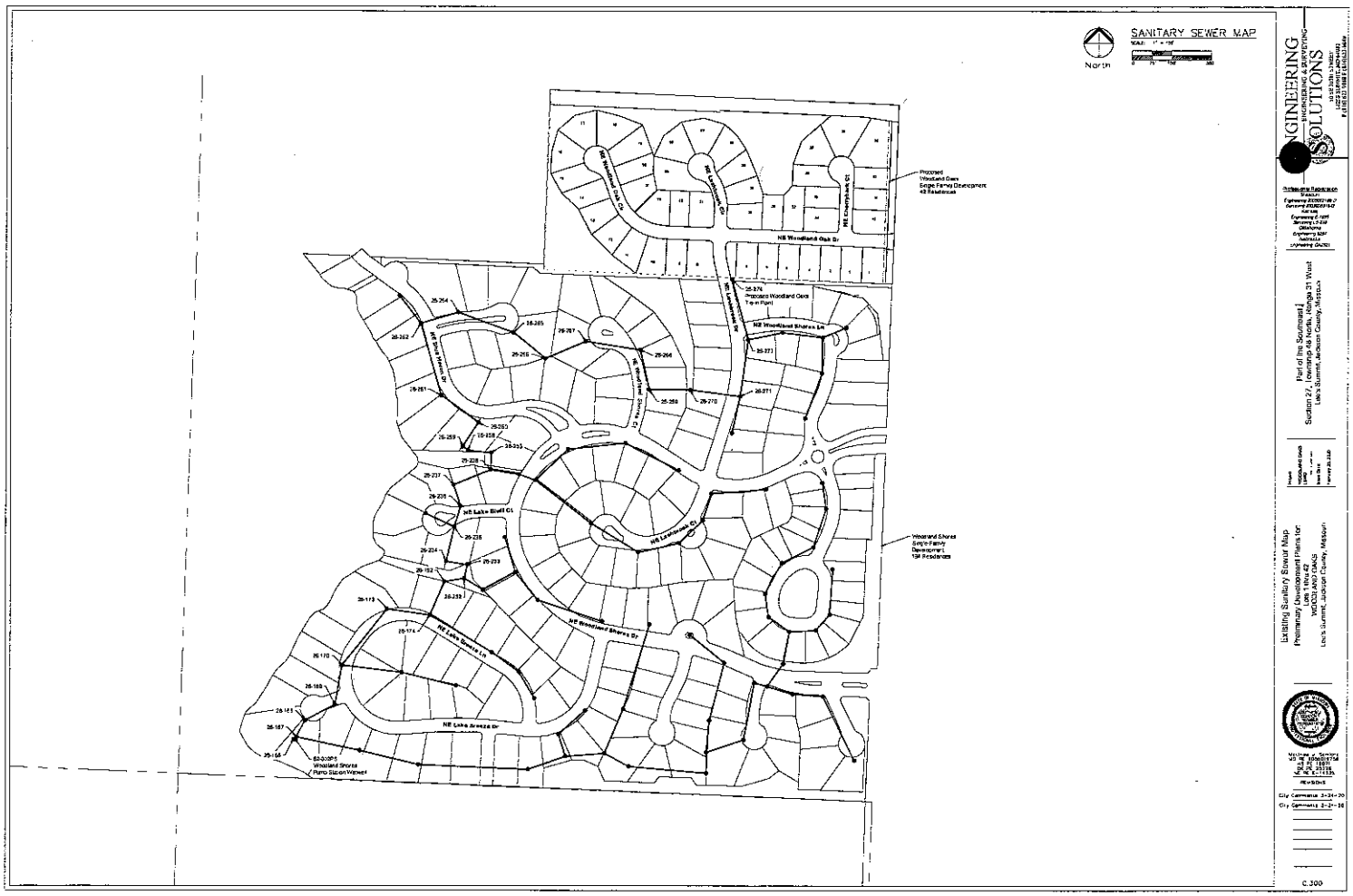

ENGINEERING SOLUTIONS

Part of the Southeast 1/4 Section 27, Township 48 North, Range 31 West Lee's Summit, Jackson County, Missouri

Existing Sanitary Sewer Map
Preliminary Development Plans for
Lots 1 thru 48
Woodland Oaks
Lee's Summit, Jackson County, Missouri

Revisions
City Comments 3-24-20
City Comments 5-2-20

C-300

Woodland Oaks Sanitary Sewer Capacity Analysis: City of Lee's Summit Criteria at Ultimate Buildout

D.S. Str.	U.S. Str.	U.S. Str. Area	Branch Area	Cum. Area	PBF	Pr	Peak Inflow	Tc	Rainfall Intensity	Tc less	Tc more	iph less	iph more	x	Peak Flow	Cum. Peak Flow	FL IN	FL OUT	Length	Slope	Dia	n	Capacity	Segment Condition	HGL	Rim El.	Surcharge Depth	U.S. Str.
26-273	26-274	1.78	11.04	12.82	0.029	0.010	0.468	21.468	6.078	15	30	5.91	4.98	0.006	0.307	0.307	941.13	945	236.58	0.0163	0.67	0.014	1.836	GRAVITY	945.57	956.92	0.00	26-274
26-271	26-273	2.19	5.2	7.39	0.017	0.005	0.263	22.621	5.929	15	30	5.91	4.98	0.006	0.286	0.793	939.63	940.95	218.3	0.0060	0.67	0.014	1.119	GRAVITY	941.62	952.87	0.00	26-273
26-270	26-271	1.61	1.34	2.95	0.007	0.002	0.109	20.931	6.147	15	30	5.91	4.98	0.005	0.118	0.910	937.97	939.13	192.27	0.0060	0.67	0.014	1.118	GRAVITY	939.80	956.52	0.00	26-271
26-269	26-270	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	0.911	938.76	937.7	157.4	0.0060	0.67	0.014	1.112	GRAVITY	938.37	944.26	0.00	26-270
26-268	26-269	0.84		0.84	0.002	0.001	0.033	17.761	6.535	15	30	5.91	4.98	0.005	0.016	0.947	935.33	936.25	154.98	0.0060	0.67	0.014	1.115	GRAVITY	938.93	953.2	0.00	26-269
26-167	26-268	0.97		0.97	0.002	0.001	0.038	18.418	6.470	15	30	5.91	4.98	0.006	0.041	0.987	930.6	934.83	210.85	0.0201	0.67	0.014	2.030	GRAVITY	935.56	950.1	0.00	26-268
26-266	26-267	1.34		1.34	0.003	0.001	0.050	19.983	6.269	15	30	5.91	4.98	0.005	0.055	1.042	929.4	930.4	167.33	0.0060	0.67	0.014	1.112	GRAVITY	931.07	942.61	0.00	26-267
26-265	26-266	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	1.042	928.26	929.2	156.8	0.0060	0.67	0.014	1.114	GRAVITY	929.87	937.07	0.00	26-266
26-264	26-265	1.82		1.82	0.004	0.001	0.065	21.588	6.062	15	30	5.91	4.98	0.006	0.072	1.114	926.7	928.06	225.48	0.0060	0.67	0.014	1.118	GRAVITY	928.73	943.3	0.00	26-265
26-262	26-264	1.7		1.7	0.004	0.001	0.062	21.220	6.110	15	30	5.91	4.98	0.005	0.068	1.182	922.08	924.86	147.9	0.0188	0.67	0.014	1.973	GRAVITY	925.53	935.4	0.00	26-264
26-261	26-262	1.43	0.81	2.24	0.005	0.002	0.084	20.314	6.225	15	30	5.91	4.98	0.006	0.091	1.272	919.94	921.08	284.53	0.0040	0.67	0.014	0.911	SURCHARGE	922.70	929.81	0.95	26-262
26-260	26-261	1.25		1.25	0.003	0.001	0.047	19.635	6.314	15	30	5.91	4.98	0.006	0.051	1.323	919.03	919.74	177.8	0.0040	0.67	0.014	0.909	SURCHARGE	920.85	930.3	0.44	26-261
26-259	26-260	1.75		1.75	0.004	0.001	0.064	21.376	6.090	15	30	6.91	4.98	0.006	0.069	1.393	918.08	918.53	109.7	0.0041	0.67	0.014	0.922	SURCHARGE	919.57	935.74	0.37	26-260
26-258	26-259	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	1.393	917.48	917.58	25.56	0.0030	0.67	0.014	0.800	SURCHARGE	918.84	922.57	0.59	26-259
26-253	26-258	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	1.394	916.92	917.28	89.24	0.0040	0.67	0.014	0.914	SURCHARGE	918.68	921.75	0.73	26-258
26-238	26-253	0.37		0.37	0.001	0.000	0.016	14.441	7.023	10	15	7.94	6.91	0.005	0.017	1.411	916.17	916.42	64.2	0.0039	0.57	0.014	0.898	SURCHARGE	918.10	925.37	1.01	26-253
26-237	26-238	1.77	12.19	13.96	0.032	0.011	0.509	21.437	6.082	15	30	6.91	4.98	0.006	0.552	1.963	915.06	915.82	153.59	0.0049	0.83	0.014	1.793	SURCHARGE	917.85	923.27	1.20	26-238
26-236	26-237	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	1.964	914.4	914.76	84.68	0.0043	0.83	0.014	1.562	SURCHARGE	916.62	924.26	1.03	26-237
26-235	26-236	1.47		1.47	0.003	0.001	0.045	19.310	6.355	15	30	6.91	4.98	0.006	0.048	2.012	914	914.25	82.11	0.0030	0.83	0.014	1.407	SURCHARGE	916.03	926.02	0.95	26-236
26-234	26-235	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	2.012	913.27	913.8	134.43	0.0039	0.83	0.014	1.501	SURCHARGE	915.63	932.6	1.00	26-235
26-233	26-234	1.82		1.82	0.004	0.001	0.060	20.963	6.143	15	30	6.91	4.98	0.006	0.063	2.077	912.42	912.87	82.84	0.0054	0.83	0.014	1.879	SURCHARGE	914.77	924.09	1.07	26-234
25-232	26-233	1.77		1.77	0.004	0.001	0.065	21.437	6.082	15	30	6.91	4.98	0.005	0.070	2.147	911.71	911.91	52.9	0.0038	0.83	0.014	1.568	SURCHARGE	914.04	927.24	1.30	25-233
26-192	26-232	0.01	3.36	3.37	0.008	0.003	0.184	5.805	9.098	5	10	9.32	7.94	0.006	0.194	2.341	910.8	911.35	75.95	0.0072	0.83	0.014	2.170	SURCHARGE	913.71	920.61	1.53	26-232
25-174	26-192	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.005	0.001	2.342	910.39	910.72	138.65	0.0024	0.67	0.014	0.702	SURCHARGE	912.86	920.5	1.27	26-192
26-173	26-174	1.31	1.51	2.82	0.006	0.002	0.105	19.869	6.284	15	30	5.91	4.98	0.005	0.115	2.457	909.88	910.29	164.5	0.0025	0.67	0.014	0.719	SURCHARGE	912.12	933.94	1.16	26-174
26-170	26-173	0.9		0.9	0.002	0.001	0.035	18.073	6.515	15	30	5.91	4.98	0.006	0.038	2.495	907.29	908.78	273.56	0.0054	0.67	0.014	1.062	SURCHARGE	911.46	924.38	2.01	26-173
26-169	26-170	2.17	1.64	3.81	0.009	0.003	0.135	22.568	5.936	15	30	5.91	4.98	0.005	0.147	2.642	906.27	907.09	151.9	0.0054	0.67	0.014	1.057	SURCHARGE	909.04	923.04	1.28	26-170
26-168	26-169	0.95		0.95	0.002	0.001	0.037	18.370	6.476	15	30	5.91	4.98	0.006	0.040	2.682	905.37	906.12	129.13	0.0058	0.67	0.014	1.097	SUACHARGE	907.71	923.32	0.92	26-169
26-167	26-168	0.72		0.72	0.002	0.001	0.029	17.083	6.642	15	30	6.91	4.98	0.005	0.031	2.713	904.12	905.17	71.13	0.0148	0.67	0.014	1.749	SUACHARGE	906.49	921.47	0.65	26-168
26-166	26-167	0.01	19.65	19.66	0.043	0.013	1.073	5.805	9.098	5	10	9.32	7.94	0.006	1.134	3.847	903	903.96	14.7	0.0553	0.67	0.014	3.678	SUACHARGE	905.23	918.68	0.60	26-167
26-002PS	26-166	0.01		0.01	0.000	0.000	0.001	5.805	9.098	5	10	9.32	7.94	0.006	0.001	3.848	902	902.9	7.37	0.1221	0.67	0.014	5.029	GRAVITY	903.57	916.07	0.00	26-166

Exhibit A

Sanitary Sewer Area

Woodland Oaks

MACRO STORM WATER DRAINAGE STUDY

WOODLAND OAKS

SW Corner Colbern & Blackwell

Site Acreage: 20.81 Acres

Lee's Summit, MO

PREPARED BY:

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Submittal Date: March 3, 2020

Matthew J. Schlicht, PE

Revision

Date	Comment	By
3-24-20	Revised Per City Comments	AEP
4-6-20	Revised Per City Comments Dated 3-31-20	AEP
5-26-20	Revised Per City Comments Dated 4-15-20	AEP

TABLE OF CONTENTS

3. GENERAL INFORMATION

This storm study has been prepared to evaluate potential impacts of the proposed single family residential subdivision, Woodland Oaks. The proposed development shall consist of 42 single family residential lots. The site is located at the southwest corner of Colbern Road and Blackwell Road. The site contains 20.81 acres. The existing site consists mainly of grass meadow with some wooded areas. There are currently no water bodies nor storm sewer systems on site. The property is bound by Colbern Road to the north, Blackwell Road to the east, Woodland Shores single family residential subdivision to the south and a large acre single family tract to the west. Woodland Oaks is tributary to Lake Jacomo which is located to the northwest just across Colbern Road. The site is a tract of land located in SE ¼ of Section 27, Township 48 North, and Range 31 West. See Exhibit A for an aerial view of the site along with the surrounding area.

3.1 FEMA FLOODPLAIN DETERMINATION

The property is located in an Area of Minimal Flood Hazard, Zone X, according to FEMA Firm Map Number 29095C0430G, effective January 20, 2017.

See Exhibit B for a FIRMette which includes the proposed project area.

3.2 NRCS SOIL CLASSIFICATION

Soil classifications published by the United States Department of Agriculture/National Resources Conservation Service (USDA/NRCS) website for Jackson County, Missouri, Version 20, September 16, 2019. The existing site contains six major soil types:

10117	Sampsel Silty Clay Loam, 5 to 9 Percent Slopes Hydrologic Soils Group (HSG): Type C/D
10122	Sharpsburg Silt Loam, 5 to 9 Percent Slopes (HSG): Type C
10128	Sharpsburg-Urban Land Complex, 2 to 5 Percent Slopes (HSG): Type D
10141	Snead-Rock Outcrop Complex, 14 to 30 Percent Slopes (HSG): Type D
10179	Udarents-Urban Land Osaka-Complex, 5 to 9 Percent Slopes (HSG): Type D
60025	Urban Land Harvester-Complex, 2 to 9 Percent Slopes (HSG): Type C

See Exhibit C for a detailed soils report of the proposed project site.

4. METHODOLOGY

This Macro Storm Drainage Study has been prepared to evaluate potential hydrologic impacts from the proposed development and recommend improvements to eliminate potential negative impacts. The study utilized existing city contours to create the Pre-Development Drainage Area Map. The study conforms to the requirements of the City of Lee's Summit, Missouri "Design and Construction Manual" and all applicable codes and criteria referred to therein.

Using the above criteria, the proposed site was evaluated using SCS Methods to calculate storm runoff volumes, peak rates of discharge, pre and post developed hydrographs and required storage volumes for detention facilities. The analysis contains results for the 2, 10 and 100-year design storms.

5. EXISTING CONDITIONS ANALYSIS

The site has five (5) drainage subareas all consisting of meadow/wooded land that drain offsite along with two (2) offsite drainage subareas that drain through the site from Woodland Shores. Following are brief descriptions of each drainage subarea.

- Subarea A, 1.36 acres, consists primarily of Colbern Road right-of-way. The subarea drains to the Northwest along Colbern Road where it is collected by a curb inlet on Colbern. Subarea A will be evaluated at the curb inlet on Colbern, Point of Interest A

-Subarea B, 0.75 acres, is located along the north edge of the property and consists primarily of Colbern Road right-of-way. The subarea drains via sheet and gutter flow to a sump curb inlet for further conveyance north to Lake Jacomo.

-Subarea C, 1.10 acres, is located along the eastern edge of the property and consists primarily of Colbern and Blackwell Road right-of-way's. Runoff drains to the northeast where it is collected by an enclosed storm sewer system located at the intersection of Colbern and Blackwell Roads. Subarea C will be evaluated at the offsite curb inlet located on Colbern Road, Point of Interest C.

-Subarea D, 9.34 acres, is generally located on the west side of the property and drains to the west via sheet and shallow concentrated flow. Runoff is collected by two ponds on the neighbor's property. Excess flow from the downstream pond is conveyed to the north via a culvert under Colbern Road for eventual conveyance to Lake Jacomo. Subarea D will be evaluated at the west property line, Point of Interest D.

-Subarea E, 8.26 acres, is generally located on the east side of the property and drains to the north via sheet and shallow concentrated flow. Runoff is collected and conveyed by a culvert connected to an enclosed storm sewer system running along Colbern Road. Subarea E will be evaluated at the culvert entrance, Point of Interest, E.

-Offsite Undetained, 3.90 acres, is located adjacent to the southwest corner of the property and drains through the southwest corner of the property, Subarea D, via sheet and shallow concentrated flow. The subarea was evaluated at the south property line.

-Offsite Detained, 14.21 acres, is located adjacent to Subarea D just east of the Offsite Undetained Subarea. Runoff from this subarea is detained in an earthen reservoir where it is attenuated then released via a culvert to the southwest corner of Woodland Oaks. Both offsite subareas will be conveyed via a bypass channel around the proposed southwest detention basin, Basin D1. Woodland Shores 3rd Plat Offsite Detained Subarea data has been modeled in Hydraflow to determine peak discharge rates. Offsite Detained and Offsite Undetained Subarea data has been combined in Hydraflow as Offsite Bypass, to size the bypass channel. Storm sewer data from Woodland Shores 3rd Plat may be found in Exhibit D along with capacity calculations for the proposed bypass channel. Woodland Shores 3rd Plat detention system structures and piping have been field verified and shot. Elevations and data are in-line with recorded as-built information. Attenuation from offsite detention was not accounted for in the sizing of the bypass channel.

An Existing Drainage Map may be found in Exhibit E. Hydraflow Hydrograph software was utilized to calculate SCS Method peak discharge rates. A complete breakdown of Existing and Proposed hydrographs may be found in Exhibit F. The following tables summarize the results of the Existing Conditions analysis.

Table 5.1 Existing Conditions Subarea

Subarea	Area (ac.)	Curve Number	Tc (min)
A	1.36	82	9.5

B	0.75	82	7.5
C	1.10	82	6.0
D	9.34	74	11.6
E	8.26	74	11.6
Offsite Undetained	3.90	82	8.6
Offsite Detained	14.21	82	14.5

Table 5.2 Existing Conditions Runoff Data: Peak Discharge Rates

Subarea	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
A	3.89	7.01	11.71
B	2.24	4.02	6.70
C	3.63	6.49	10.80
D	17.43	36.03	65.98
E	15.42	31.86	58.35
Ex B Combined	17.43	35.62	64.55
Offsite Bypass*	11.15	20.11	33.57

Ex B Combined = (B + E)

*The Offsite Bypass Subarea shows results for the Woodland Shores hydrograph detailed in the Hydraflow Report in Exhibit F representing the combination of Offsite Undetained and Offsite Detained Subareas. Attenuation of offsite runoff was not accounted for in an effort to be conservative in the sizing of the bypass channel. The "Ex B Combined" hydrograph will be used in Section 6.0 for comparative analysis.

Per APWA Section 5608.4 and City of Lee's Summit criteria, the performance criteria for detention is to provide detention to limit peak flow rates at downstream points of interest to maximum release rates:

- 50% storm peak rate less than or equal to 0.5 cfs per site acre
- 10% storm peak rate less than or equal to 2.0 cfs per site acre
- 1% storm peak rate less than or equal to 3.0 cfs per site acre

Due to the nature of the drainage areas onsite and the surrounding infrastructure the onsite subarea limits were tied to the property boundaries.

Table 5.3 Existing Conditions APWA Allowable Peak Discharge Release Rates

Subarea	Onsite Area (ac.)	Offsite Area (ac.)	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
A	1.36	N/A	0.68	2.72	4.08
B	0.75	N/A	0.38	1.50	2.25
C	1.10	N/A	0.55	2.20	3.30
D	9.34	N/A	4.67	18.68	28.02
E	8.26	N/A	4.13	16.52	24.78

Subareas A, B and C are peripheral (free release) areas on the site consisting mainly of existing right-of-way. These areas are not being negatively impacted by the proposed improvements. Subareas D and E contain the majority of the area onsite along with the actual hard infrastructure improvements. Subareas D and E will be the focus of this report.

6. PROPOSED CONDITIONS ANALYSIS

The difference between Existing and Proposed Conditions is a direct result of the new single family residential development. Subareas A and C have been reduced significantly due to redirection of their tributary areas with proposed grading. Subarea B has increased slightly due to the creation of a detention basin to detain runoff from Subarea E. The additional land area will be turf lined and consist of the backside of the earthen dam. New detention systems shall be used to attenuate post development runoff from Subareas D1 and E. Subarea D shall continue to drain to the westerly neighbor via sheet and shallow concentrated flow. A Proposed Drainage Map may be found in Exhibit G.

Proposed Flow Rates

The proposed flow rates were calculated with the use of composite curve numbers as applicable. Subareas D, D1 and E utilize composite curve numbers due to the amount of turf area associated with proposed detention in each area. The curve numbers were determined based on APWA Table 5602-3 for residential lots. A curve of 82 was used for single family areas and a curve number of 74 was used for turf areas.

Table 6.1 Proposed Conditions Subarea Data

Subarea	Area (ac.)	Composite CN	Tc (min)
A	1.03	82	6.8
B	0.89	82	7.4
C	0.55	82	8.7
D	1.34	79	9.7
D1	6.00	82	9.6
E	11.00	81	11.8

Table 6.2 Proposed Conditions Runoff Data: Sub-Area Peak Discharge Rates

Subarea	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
A	3.07	5.52	9.20
B	2.65	4.77	7.95
C	1.57	2.84	4.73
D	3.37	6.36	10.96
D1	17.16	30.94	51.64
E	27.74	50.20	83.98

As shown in Table 6.2 above Subareas D and E will require detention to attenuate storm runoff at or below regulatory levels. Subarea B has increased slightly due to the geometry of the detention basin configuration however Subareas E and B are tributary to the same enclosed storm sewer system crossing Colbern. Peak discharge rates from these combined subareas will be below Allowable Release Rates as detailed in Table 5.3. Existing Subarea D has been divided into subareas D and D1. Subarea D will continue to free release to the west while subarea D1 will be captured and routed through the new southwest detention basin for attenuation.

6.1. DETENTION

A new single stage earthen detention basin E is being proposed in Sub-basin E to attenuate proposed peak discharge rates. Following are a list of design parameters for the detention system.

Designation: Detention Basin E
Type: Earthen Basin
Side Slopes: 3:1 Max.
Bottom Slope: 2% Min., Turf Lined
Basin Bottom Elevation: 934.6 @ Influent Pipe
Basin Top Berm Elevation: 944.00
Basin Volume: 200,503 cf @ 944.00
Control Structure: 5'x5' Precast Concrete Box with Interior 6" Baffle/Weir Wall
Baffle Wall Orifices: (8) 1" Diameter on 4" Centers, FL=934.00 (Bottom Orifice)
(1) 15" Diameter, FL=937.50
Baffle Wall Crest Elevation: 942
Control Structure Top Elevation: 944.00
Control Structure Overflow Weir Openings: N/A – NO Field Inlet Openings
Control Structure Influent Pipe: 30" HDPE, FL (In) = 934.60, FL (Out) = 934.20, L=51', S= 0.78%
Control Structure Effluent Pipe: 36" RCP, FL (In) = 932.78, FL (Out) = 924.42, L=47', S=17.64%
Emergency Spillway: Earthen Broad Crested Weir, Crest Elevation=942.00, Crest Length=160'
Consecutive 100-YR Q=83.98 cfs, Emergency Spillway HGL=942.34', Freeboard=1.66'

The Detention Basin Plan for the Development may be found in Exhibit H. Basin E emergency spillway calculations may be found in Exhibit I. See Table 6.3 for a summary of detention basin data.

Table 6.3 Proposed Conditions Detention Basin E Data

	Peak Q In (cfs)	Tp In (min.)	Peak Q Out (cfs)	Tp Out (min)	Peak W.S.E.	Max. Storage Vol. (cf)
Basin E						
2-Year	27.74	721	3.03	754	938.30	35,284
10-Year	50.20	721	7.99	738	939.66	63,060
100-Year	83.98	721	11.86	741	941.49	111,524

As shown in the table above all proposed peak discharge rates have been attenuated below both Existing and Allowable. See Table 6.4 below for a summary of proposed peak discharge rates at point of interest B which consists of combined subareas B and post detained E.

Table 6.4 Proposed Conditions Post Detention Point of Interest Peak Discharge Rates

Point of Interest	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
B	3.26	8.99	16.53

As shown in the above table all peak discharge rates attributable to Proposed Subareas B & E have been attenuated below both Existing and Allowable Peak Discharge rates as outlined in Tables 5.2 and 5.3, respectively.

A new single stage earthen detention basin D1 is being proposed in Sub-basin D1 to attenuate proposed peak discharge rates. As discussed previously the goal shall be to attenuate post development peak discharge rates at or below pre development rates. Following are a list of design parameters for the proposed detention system.

Designation: Detention Basin D1
Type: Earthen Basin
Side Slopes: 3:1 Max.
Bottom Slope: 2% Min., Turf Lined
Basin Bottom Elevation: 908.40 @ Influent Pipe
Basin Top Berm Elevation: 918.00
Basin Volume: 114,055 cf @ 918.00
Control Structure: 5'x4' Precast Concrete Box with Interior 6" Baffle/Weir Wall
Baffle Wall Orifices: (6) 1" Diameter on 4" Centers, FL=908.20 (Bottom Orifice)
(1) 12" Diameter, FL=913.00
Baffle Wall Crest Elevation: N/A
Control Structure Top Elevation: 916.10
Control Structure Overflow Weir Openings: None
Control Structure Influent Pipe: 24" HDPE, FL (In) = 908.40, FL (Out) = 908.30, L=25.47', S= 0.39%
Control Structure Effluent Pipe: 24" HDPE, FL (In) = 908.10, FL (Out) = 908.00, L=25.47', S= 0.39%
Emergency Spillway: Earthen Broad Crested Weir, Crest Elevation=916.10, Crest Length=128'
Consecutive 100-YR Q=51.64 cfs, Emergency Spillway HGL=916.39, Freeboard=1.61'

Basin D1 emergency spillway calculations may also be found in Exhibit I. See Table 6.5 for a summary of detention basin data.

Table 6.5 Proposed Conditions Detention Basin D1 Data

	Peak Q In (cfs)	Tp In (min.)	Peak Q Out (cfs)	Tp Out (min)	Peak W.S.E.	Max. Storage Vol. (cf)
Basin D1						
2-Year	17.16	719	0.47	926	912.31	24,502
10-Year	30.94	719	1.35	811	913.89	43,577
100-Year	51.64	719	5.29	747	915.40	66,564

As shown in the table above all proposed peak flowrates have been attenuated below both Existing and Allowable. See Table 6.6 below for a summary of proposed peak discharge rates at point of interest D which consists of combined subareas D and routed Subarea D1.

Table 6.6 Proposed Conditions Post Detention Point of Interest Peak Discharge Rates

Point of Interest	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
D	3.62	6.83	13.59

As shown in the above table all peak discharge rates attributable to Proposed Subareas D and D1 have been attenuated below both Existing and Allowable Peak Discharge Rates as outlined in Table 5.2.

Table 6.7 below provides a comparison of runoff data between Proposed, Existing and Allowable Conditions for the Proposed Development.

Table 6.7 Point of Interest Discharge Comparison

		Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
Point A	Proposed	3.07	5.52	9.20
	Existing	3.89	7.01	11.71
	Difference	-0.82	-1.49	-2.51
	Allowable	0.68	2.72	4.08

	Difference	2.39	2.80	5.12
Combined Point B	Proposed	3.26	8.99	16.53
	Existing	17.43	35.62	64.55
	Difference	-14.17	-26.63	-48.02
	Allowable	4.51	18.02	27.03
	Difference	-1.25	-9.03	-10.50
Point C	Proposed	1.57	2.84	4.73
	Existing	3.63	6.49	10.80
	Difference	-2.06	-3.65	-6.07
	Allowable	0.55	2.20	3.30
	Difference	1.02	0.64	1.00
Combined Point D	Proposed	3.62	6.83	13.59
	Existing	17.43	36.03	65.98
	Difference	-13.81	-29.20	-52.39
	Allowable	4.67	18.68	28.02
	Difference	-1.05	-11.85	-14.43

Point A is a peripheral (free release) area made up primarily of right-of-way. No additional improvements are being proposed in this area. All proposed peak discharge rates will be below existing. Allowable release rates will not be met however the minimal area and associated runoff will not create adverse impacts to existing storm water infrastructure.

Combined Point B is a combination of Subarea B and post detained Subarea E. The runoff from this area utilizes the same storm sewer infrastructure to cross Colbern Road for further conveyance downstream to Lake Jacomo. This Subarea reduces peak discharge rates below both Existing and Allowable for all regulatory design storms.

Point C is a peripheral (free release) area made up primarily of right-of-way. No additional improvements are being proposed in this area. All proposed peak discharge rates will be below existing. Allowable release rates will not be met however the minimal area and associated runoff will not create adverse impacts to existing storm water infrastructure.

Combined Point D is a combination of Subarea D and D1. All subarea runoff will continue to be conveyed to a series of ponds located on the west neighbor. The proposed detention basin D1 will attenuate peak discharge rates below Existing and Allowable for all regulatory design storms.

7. 40 HOUR EXTENDED DETENTION

In addition to mitigation of peak flow rates, APWA Section 5608.4 also requires 40 hour extended detention of runoff from the local 90% mean annual event (1.37"/24-hour rainfall). The proposed detention facilities will release the water quality event over a period of 40-72 hours. See Exhibit J for 40 hour extended detention calculations for each basin.

8. CONCLUSIONS & RECOMMENDATIONS

Runoff from the Development will be reduced below existing for all Subareas. A detention basin is being proposed in Subarea D1 to attenuate peak discharge rates. Detention Basin D1 will attenuate all proposed peak discharge rates below both Existing and Allowable. A detention basin will also be provided in Subarea E to attenuate peak discharge rates. Detention Basin E will attenuate all proposed peak discharge rates below both Existing and Allowable. No negative impacts are anticipated downstream of the Development. Subareas A, B, and C are peripheral areas of the Development and contain mainly established right-of-way. No improvements

are being proposed in these areas. Peak discharge rates from Subareas A, B and C will be reduced below Existing for all regulatory design storms. Allowable release rates which are peak discharge rate goals will not be met for the 2-yr storm for each subarea in addition to the 10-yr and 100-yr storms for Subareas A and C. See proposed Waivers for Allowable Peak Discharge Rates below. The study is in conformance with all applicable codes and regulations.

Waiver Requests:
Subarea A: Allowable (2-Yr), (10-Yr) & (100-Yr), Peripheral Area, Mainly Right-of-Way
Subarea B: Allowable (2-Yr), Peripheral Area, Mainly Right-of-Way
Subarea C: Allowable (2-Yr), (10-Yr) & (100-Yr), Peripheral Area, Mainly Right-of-Way

9. EXHIBITS

- **Exhibit A**
  - **Aerial View of Site**
  - **Aerial View of Site & Surrounding Area**
- **Exhibit B**
  - **FEMA FIRMette**
- **Exhibit C**
  - **NRCS Soils Report**
- **Exhibit D**
  - **Woodland Shores 3rd Plat – Storm Sewer Data**
  - **Proposed Bypass Channel Capacity Calculations**
- **Exhibit E**
  - **Existing Drainage Area Map**
- **Exhibit F**
  - **Hydraflow Hydrograph Report**
- **Exhibit G**
  - **Proposed Drainage Area Map**
- **Exhibit H**
  - **Detention Plan**
- **Exhibit I**
  - **Emergency Spillway Calculations**
- **Exhibit J**
  - **40 Hour Extended Detention Calculations**

LEE'S SUMMIT
MISSOURI

DEVELOPMENT REVIEW FORM
TRANSPORTATION IMPACT

DATE:	September 3, 2020	**CONDUCTED BY:**	Michael Park, City Traffic Engineer
SUBMITTAL DATE:	March 4, 2020	**PHONE:**	816.969.1800
APPLICATION #:	PL2019330	**EMAIL:**	Michael.Park@cityofls.net
PROJECT NAME:	WOODLAND OAKS	**PROJECT TYPE:**	Prel Dev Plan (PDP)

SURROUNDING ENVIRONMENT *(Streets, Developments)*

The proposed single family residential subdivision is located along the west side of Blackwell Parkway, south of Colbern Road. The existing undeveloped property is bordered by residential to the south, Legacy Park to the east, Prairie Lee Lake (and residential) to the west and Lake Jacomo to the north.

ALLOWABLE ACCESS

The proposed development will be accessed from a new residential street along Blackwell Parkway and the existing dead end neighborhood street, Lashbrook Drive, which was planned for extension in the abutting Woodland Shores subdivision. The proposed right-in/right-out intersection along Blackwell Parkway is approximately 500 feet south of Colbern Road and approximately 680 feet north of Woodland Shores Drive. There is a median opening along Blackwell Parkway without any intersecting streets approximately 100 feet south of the proposed intersection.

EXISTING STREET CHARACTERISTICS *(Lanes, Speed limits, Sight Distance, Medians)*

Blackwell Parkway is a four lane, median divided, arterial with a 40 mph speed limit. The area of proposed access is median controlled to right-in/right-out traffic. Colbern Road is a four-lane, undivided, arterial with a 45 mph speed limit. The intersection of Blackwell Parkway and Colbern Road is traffic signal controlled with various turn lanes. Lashbrook Drive is a 25 mph residential street. There are no sight distance issues at existing or proposed street intersections associated with this development.

ACCESS MANAGEMENT CODE COMPLIANCE? YES ☒ NO ☐

All criteria in the Access Management Code criteria have been met.

TRIP GENERATION

Time Period	Total	In	Out
Weekday	472	236	236
A.M. Peak Hour	32	8	24
P.M. Peak Hour	42	27	15

TRANSPORTATION IMPACT STUDY REQUIRED? YES ☐ NO ☒

The proposed development will not likely generate more than 100 vehicle trips to the surrounding street system during a peak hour; the minimum condition for traffic impact study requirements.

An assessment of generated trip distribution was completed by the applicant that indicates a 60%/40% assignment north/south upon the surrounding street network. Staff reasonably concurs with the assessment given regional destinations, proximity to highway access and existing traffic volumes on Blackwell Parkway and Colbern Road. Assumptions were also provided regarding existing trip diversion from existing patterns by existing Woodland Shores residents considering proposed street connections and available alternate travel routes. The assumed peak hour(s) impact of use from 30 existing lots is likely overly conservative. However, these diverted trips in combination with trips generated by the proposed development were evaluated for necessary turn lanes in compliance with the Access Management Code; so a conservative approach is better than under estimation. No turn lanes are required given the total projected volume of right turns is less than 30 per hour, a minimum threshold, along Blackwell Road at the new intersection. The new intersection along Blackwell Parkway is limited to right-in/right-out by existing raised median. Therefore, no left-turn lane is required. U-turns can be safely accommodated just south of the new intersection and alternate routes to full access at Woodland Shores Drive along Blackwell Parkway are available for trips generated by the proposed development.

LIVABLE STREETS *(Resolution 10-17)* **COMPLIANT** ☒ **EXCEPTIONS** ☐

The proposed development plan includes all Livable Streets elements identified in the City's adopted Comprehensive Plan, associated Greenway Master Plan and Bicycle Transportation Plan attachments, and elements otherwise required by ordinances and standards, including but not limited to sidewalk, landscaping, parking, and accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 have been proposed.

RECOMMENDATION: **APPROVAL** ☒ **DENIAL** ☐ **N/A** ☐ **STIPULATIONS** ☐
Recommendations for Approval refer only to the transportation impact and do not constitute an endorsement from City Staff.

Staff recommends approval of the proposed preliminary development plan.

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The **Public Comment for a Project** online form from cityofls.net was submitted.
Name: Roger Alexander
Address:
1632 NE Woodland Shores Circle
LEES SUMMIT, Missouri 64086
Home Phone: 8166685484
Cell Phone:
Email: 112254.roger@gmail.com
Application Number: PL2019330
Comments: Dear Mr. Johnson and other members of the City Council as appropriate

I am requesting your support in opposition of the development of Woodland Oaks (Application Number PL2019330). The developer of the proposed Woodland Oaks neighborhood, Mr. Charles Huff, has not (to date) made provisions for a separate entrance into the new neighborhood of 41 lots. This means that all traffic in and out of the new neighborhood will have access only through the entrances of Woodland Shores (primarily through the north entrance) which is of great concern to many of us in the Woodland Shores community. The amount of increased traffic related to a new neighborhood was never entertained in the planning for Woodland Shores. We question if this also represents a safety threat for fire and ambulance service to the new neighborhood as well as safety issues for the residents of Woodland Shores.

I hope that the appeal of more tax dollars for the City does not sway Council Members to ignore the very real concerns posed by Woodland Shores residents. The developer does not seem to have the best interest of the new residents or Woodland Shores residents in mind with this current proposal.
Please support the concerned residents of Woodland Shores.
Roger Alexander

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The **Public Comment for a Project** online form from cityofls.net was submitted.
Name: Erin Wade
Address:
1720 ne lashbrook dr
Lee's summit , Missouri 64086
Home Phone:
Cell Phone: 8162257466
Email: Phlips16@yahoo.com
Application Number: PL2019330

Comments: As a homeowner who will be significantly impacted by the proposed Woodland Oaks subdivision, I am not necessarily opposed to the landowner wanting to move his land from agricultural to residential provided that he can come up with a plan that is reasonable for all people involved.What I am opposed to is using Lashbrook as the sole entrance into the neighborhood. No reasonable person could have guessed that the sole entryway into a different community of over 40 homes would be though their community. For the people on Lashbrook, and to a lesser extent, Woodland Shores Lane, there is no way that a person buying could have reasonably expected that amount of traffic to be going down their street. The strongest argument against what the landowner is proposing and what the city is green lighting is when it comes to child safety. As a resident who is towards the end of lashbrook, this will increase the traffic in front of my property by 95%. I think that a reasonable person understands that will impact the safety of my children. . So, I think you can see why we are so frustrated. This is not a case of a bunch of angry home owners not wanting someone to develop their land as they see fit. It is a case where we are being exploited and do not feel like the city is backing us up. I propose there be access points on Colben, Blackwell, or both, leaving Lashbrook i touched. There is absolutely no reason why Woodland Shores should be an entryway, let alone, the sole entry, into an entirely different community.

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The **Public Comment for a Project** online form from cityofls.net was submitted.
Name: Shanna Hanson
Address:
1659 NE Lashbrook Ct
Lees Summit, Missouri 64086
Home Phone: 8165254131
Cell Phone: 8163059816
Email: hanson.shanna@gmail.com
Application Number: PL2019330

Comments: I am excited to see this land rezoned from commercial. I do believe residential is the best use of the land. My concern is with the proposed entry pattern into and out of the subdivision. The residents of Woodland Oaks and Woodland Shores would be best served if the entrance into the Woodland Oaks subdivision was off Blackwell and not through Woodland Shores and Lashbrook. Here are my reasons:
1. The Woodland Shores entry onto and from Blackwell is already dangerous. It is difficult to see cars going South on Blackwell as you are turning into Woodland Shores and difficult to see cars coming North on Blackwell as you are leaving Woodland Shores. The extra traffic (approximately 41 homes x 2 cars each = 82 more vehicles) coming in and out.
2. There are a TON of kids that play outside at the houses on the corners of Woodland Shores and Blackwell. The additional traffic makes this extremely dangerous for them. If even one kid is injured it is not worth it.
3. There are a TON of kids that get on and off several different buses at the intersection of Woodland Shores and Lashbrook, the very entry/exit you are proposing for Woodland Oaks. This number could easily be quantified by the City.
4. In the morning, leaving Woodland Shores, and in the evening, entering Woodland Shores, the sun is INTENSE! This makes it extremely difficult to see other cars and particularly children, bike riders and walkers. Any extra traffic raises the possibility of pedestrian injury, let alone 82 more vehicles twice a day. Add this to points number 2 and 3 above.
Again, I do support the rezoning and the housing development, but oppose the entry to and from through Woodland Shores and particularly Lashbrook. At least drive the area and experience the situations I outlined above before you make a decision. I am happy to be reached for comment. Thank you for listening.

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The **Public Comment for a Project** online form from cityofls.net was submitted.

Name: Victoria Alexander
Address:
1632 NE Woodland Shores Circle
Lee's Summit, Missouri 64086
Home Phone: 8163040382
Cell Phone:
Email: vickyalex56@gmail.com
Application Number: PL2019330
Comments: Attention Bob Johnson,

I would like to request your support and that of other Lee's Summit City Council members in opposing the proposed development of Woodland Oaks to be located at Colburn Rd and Blackwell. As currently outlined, the new community would not have a separate entrance to their neighborhood from either Colburn Rd or Blackwell. I find it very disconcerting for a developer to plan such a project without at least one dedicated entrance. This lack of foresight will be a detriment to the Woodland Shores community as well as of the proposed Woodland Oaks neighborhood. If this neighborhood is truly envisioned to be of the scale and price range as proposed, i.e., lots priced from $85K to $125, with homes in the $400K to $700K market, the developer is not providing basic amenities that potential homeowners would expect and want. This poor planning jeopardizes the success of the whole project. I question the motives of the developer in his quest for making a profit at the expense of our lovely community here in Woodland Shores.

Also, as I understand it, this acreage is classified as agricultural. I do not understand how that can be changed without due process from the surrounding community and homeowners. Please support your constituents here in Woodland Shores to oppose this project.

Thank you,
Victoria L. Alexander

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The **Public Comment for a Project** online form from cityofls.net was submitted.

Name: Shelly Poppen
Address:
1704 NE Woodland Shores Lane
Lee's Summit, Missouri 64086
Home Phone: 6058684256
Cell Phone: 6058684256
Email: shellypoppen@gmail.com

Application Number: PL2019330.

Comments: Under no circumstances should the city of Lee's Summit allow for a new development to go in right next to another development that is established, Woodland Shores, and use the entrances of the already established development. We have homeowners dues that pay for our entrance, we have a certain amount of traffic entering and leaving and we should not allow an increase in that traffic. More traffic puts families and children at risk. We as homeowners in woodland shores take pride in our community and live in our community for a reason. Please put yourself in our shoes and see how it would feel to have more traffic going by your house, or having your house depreciate in value. Please consider this. There is no reason why a new development should be able to use an entrance to another development. This should not be an option at any point. There is no reason why an entrance can't be created for a new development. If there isn't an option for their own entrance off of colbern or blackwell, then the development should not exist. My family lives on woodland shores lane which is where the traffic to the new development would flow. Already people tend to take the entrance onto our street way too fast and not pay attention to the fact that they are in a residential area. This would only escalate with more residents coming in and out of the development. Thank you for your time with this matter.

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The **Public Comment for a Project** online form from cityofls.net was submitted.

Name: Deb and Jeff Meisenheimer

Address:

1737 NE Woodland Shores Lane

Lee's Summit, Missouri 64086

Home Phone: 8162605887

Cell Phone:

Email: dsmeis@yahoo.com

Application Number: PL2019330

Comments: We wanted to publicly express our concern with the proposed subdivision, Woodland Oaks, southwest of the intersection of Blackwell and Colbern Road. When we purchased our lot in 2012, we were aware that the land behind us was zoned light commercial and could possibly be rezoned. While we understand Carl Huff can choose to do anything he likes with this land, we are not in favor of a 41 lot subdivision. When we contacted the city in 2013, the planners told us they never expected any development to be on the 10 acres due to the topography of the land. In looking at the proposed plat map, lots 3-4 will be directly behind our home with no berm or treeline to separate the two subdivisions. We ask the developer to consider a green space between Woodland Shores and Woodland Oaks. The proposal also appears to have one entrance using Lashbrook Drive. The increased traffic, along with the construction traffic poses a concern so we'd also like a second entrance off of Colbern to alleviate the construction traffic and traffic associated with people who would live in Woodland Oaks. One of the main reasons we moved to Woodland Shores was because of the city's assumed commitment to green space with the many parks and trees. We believe that adding another subdivision will certainly affect the beauty of the landscape and the safety of the children who live on our street. Thank you- Deb and Jeff Meisenheimer

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FYI

Michael Park, P.E., PTOE | City Traffic Engineer
220 SE Green St.| Lee's Summit, MO 64063
816.969.1800 |lspw.net | PublicWorks@cityofls.net
LEE'S SUMMIT MISSOURI

From: CityworksServer@cityofls.net <CityworksServer@cityofls.net>
Sent: Monday, November 4, 2019 10:27 AM
Subject: Request # 132391

PHONE MESSAGE Service Request

Request#:	**132391**	*Status*	**OPEN**
Problem Address:		*Intitiated By:*	**GILMAN, JULIE**
Problem Description:	**Phone Message**	*Initiated Date:*	**11/4/2019 10:27:05 AM**
Project Completion Date:	**11/6/2019 10:27:05 AM**	*Service Priority:*	**Low**
Submitted To:	**PARK, MICHAEL**	*WO Number:*	
Incident Location:			

Incident Details: **Several residents worried about coming development want Woodland Shores to become a gated community which she thinks probably cannot happen. There is a neighborhood meeting tonight. Can you give her any information that could squelch their efforts. She knows they've been emailing you. She is trying to help you. Please call.**

Caller Information

Name		*Home Address*	*Home Phone*	*Other Phone*	*Cell Phone*
KELLIE	TOHILL		816-550-8300		

Problem Details
Several residents worried about coming development want Woodland Shores to become a gated community which she thinks probably cannot happen. There is a neighborhood meeting tonight. Can you give her any information that could squelch their efforts. She knows they've been emailing you. She is trying to help you. Please call.

Investigation

Employee	*Start Date/Time*	*Finish Date/Time*	*Hours*

Additional Information *(if applicable)*	

Comments:

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The **Public Comment for a Project** online form from cityofls.net was submitted.

Name: David Kuhlmann
Address:
1733 NE Woodland Shores Lane
Lee's Summit, Missouri 64086
Home Phone: 8168961470
Cell Phone:
Email: sleepdoc1@gmail.com

Application Number: PL2019330

Comments: As a homeowner directly behind the proposed Woodland Oaks subdivision, I am not necessarily opposed to the landowner wanting to move his land from agricultural to residential provided that he can come up with a plan that is reasonable for all people involved. Initially he proposed 21 homes. Then he abruptly moved it to 41 homes with his most recent application. I am somewhat opposed to the idea of going from 21 homes to over 40 homes, but once again, this is his land. What myself, and many of the members of Woodland Shores are opposed to is the proposed access. No reasonable person could have guessed that the sole entryway into a different community of over 40 homes would be though their community. This would be the first time in Lees Summit history where the sole entryway into a community of 40+ would be though another community. There are several examples, almost all on lakes where a road can't go through, where there is only one feeder to 40 or more homes. The difference between those cases and this case is that the people who bought lots next to lakes knew in advance what they were getting themselves into. For the people on Lashbrook, and to a lesser extent, Woodland Shores Lane, there is no way that a person buying could have reasonably expected that amount of traffic to be going down their street. The person in charge of traffic for the city admitted that a second access point would be preferred, but is not currently forcing the landowner to change his plans, because there are less than 50 homes (?). He does not take property value into consideration. The strongest argument against what the landowner is proposing and what the city is green lighting is when it comes to child safety. At this time, the city is making the untenable argument that the increased traffic does not pose any increased risk to child safety. I think that a reasonable person understands that this could not possibly be the case. So, I think you can see why we are so frustrated. This is not a case of a bunch of angry home owners not wanting someone to develop their land as they see fit. It is a case where we are being exploited and do not feel like the city is backing us up. There could easily be access points on Colben, Blackwell, or both. There is absolutely no reason why Woodland Shores should be an entryway, let alone, the sole entry, into an entirely different community.

From Page URL: https://cityofls.net/development-services/design/development-process/development-project-list/submit-public-comment-for-a-project/fbclid/iwar0xyl8uc-73ygpxmyqon5env3mtu6ejz-0-kpohcvme5mdj5beakjwa65i
Submission Date: 2019-11-02_17:47:50
User IP: 136.32.79.7
See User IP Information: https://whatismyipaddress.com/ip/136.32.79.7
Development Project List - CityofLS.net

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The **Public Comment for a Project** online form from cityofls.net was submitted.

Name: Heather Colbert
Address:
1745 NE Woodland Shores Ln
Lee's Summit , Missouri 64086
Home Phone: 8163011576
Cell Phone:
Email: Heathercolbert25@gmail.com
Application Number: PL2019330
Comments: We are very concerned with the development going in behind our home. The new development is planning to use our entrance for 41 new homes which will add a lot of traffic right in front of our home with lots of small children in the area. We would prefer they add a separate entrance to help with the traffic flow in our neighborhood. Also we would like something in the plans to separate the back of our homes to the other homes. In the plans there is nothing between the houses that are being built to prevent us from looking directly into the homes. There should also be a minimum square footage that is comparable to our homes so it doesn't bring the value of our homes down. We also would like a separate entrance for construction traffic so they are not going through the neighborhood for the safety of the kids. Thank you for your consideration.

From Page URL: https://cityofls.net/development-services/design/development-process/development-project-list/submit-public-comment-for-a-project
Submission Date: 2019-11-02_15:50:18
User IP: 136.32.76.87
See User IP Information: https://whatismyipaddress.com/ip/136.32.76.87
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ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING

Woodland Oak
September 8, 2020
Neighborhood Meeting Minutes
Lee's Summit, MO

Project	Woodland Oak Neighborhood Zoom Call
Date	September 3, 2020
Zoom Meeting	5:00 pm

Attendees

David Kuhlmann
David Bain
Jeff Meisenheimer

The meeting began by Mr. Schlicht providing an overview of the project plan, changes since the previous meeting and submitted plan and the next steps for the project. Following the initial presentation, the following questions and responses were provided:

The 2nd entrance described in the presentation as being new is not new the previous Engineer provided that plan.

-Mr. Schlicht explained the plan that was submitted to City staff did not have the 2nd entrance and Engineering Solutions worked with staff to get that approved.

There is an existing median cut on Blackwell south of the 2nd entrance and residents will use it as a turn around to go north bound on Blackwell. It was Mr. Kuhlmann's opinion that this was dangerous.

-Mr. Schlicht explained the median cut is existing and there is not anything preventing someone from doing that and if it became a problem City staff would evaluate however this development was not doing any changes to the existing condition.

This development will create an increased traffic through Woodland Oak

-The existing public road is designed to handle the traffic from the two developments and any additional questions could be direct to the City Traffic Engineer.

The width of the existing road is not sufficient for the new development

-The existing road is capable of the additional traffic.

Will there be sidewalks on the roads

-Yes

What will the lots cost?

-The lots are expected to be $75,000 to $100,000

What is the process to completed and when will the construction begin?

-PDP will go to Planning Commission and Council. Engineering plans will following and lots should be ready by early summer 2021

What is Tract B for?

-Trac B will be landscaping and entry monument into site

How long will construction take?

-around 6 months

Have you done a geotechnical report?

-No

ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING

Woodland Oak
September 8, 2020
Neighborhood Meeting Minutes
Lee's Summit, MO

Due to my error the Zoom time limit expired, and the meeting abruptly ended. David Kuhlmann emailed the following questions and the responses were provided.

Where does construction traffic enter the site?

Construction traffic will enter from Blackwell through the new entrance

What time does construction begin?

The construction will be limited to what is allowed by city ordinance and I think that is 7 am

Have you seen the attached plan because you said you had not?
(The attached plan was a sketch of a connection to Blackwell, prepared by CES)

The plan attached I have seen but like I said they plan was not submitted for review by staff so the plan we prepared was based on comments provided by the city and the developer. The plan you have has numerous lots that would not be adequate to build a similar house to what is existing in Woodland Shores and we have drastically increased the green space in our plan

50 SE 30th Street Lee's Summit, MO 64082
P: (816) 623-9888 F: (816) 623-9849 www.engineeringsolutionskc.com

PL2019-330 Rezoning and Preliminary Development Plan

2601 NE Colbern Road

Woodland Oaks