



BAUGHMAN COMPANY, P.A.

ENGINEERING, SURVEYING & PLANNING

316/262-7271 • FAX 316/262-0149 • 315 ELLIS • WICHITA, KANSAS 67211

July 16, 2002

Mike Lindebak, P.E.
City Hall - 7th Floor
455 N. Main
Wichita, KS 67202

**RE: Southern Ridge Addition
Sanitary Sewer Analysis**

Mr. Lindebak:

The purpose of this letter is to confirm the ability of the existing 8" sanitary sewer main located in the Wilderness in the Park Addition, to sufficiently serve the existing lots and the proposed Southern Ridge Addition.

In calculating the capacity of the 8" PVC with a grade of 0.40%, I used Manning's Formula (See the enclosed calculations). The discharge for this pipe is 0.78 cfs for a pipe flowing 2/3 full. The following calculations show the capacity required serving the existing homes and the future Southern Ridge Addition.

Average Flow Per Capita (per person) = 100 gal/day

Peak Flow (Maximum Design Flow) = 3.0 x Average Flow

Single Family Residential = 3 people/lot

400 lots (total number of lots to be served) x 3 = 1,200 people

Average Flow per day: 1,200 people x 100 gal/day = 120,000 gal/day

Average Flow: 120,000 gal/day divided by 1440 min./day = 83.33 gal/min

Peak Flow: 83.33 gal/min x 3 = 250 gal/min = 0.56 cfs

Although this number does not include any inflow and infiltration, it does indicate there is sufficient capacity.

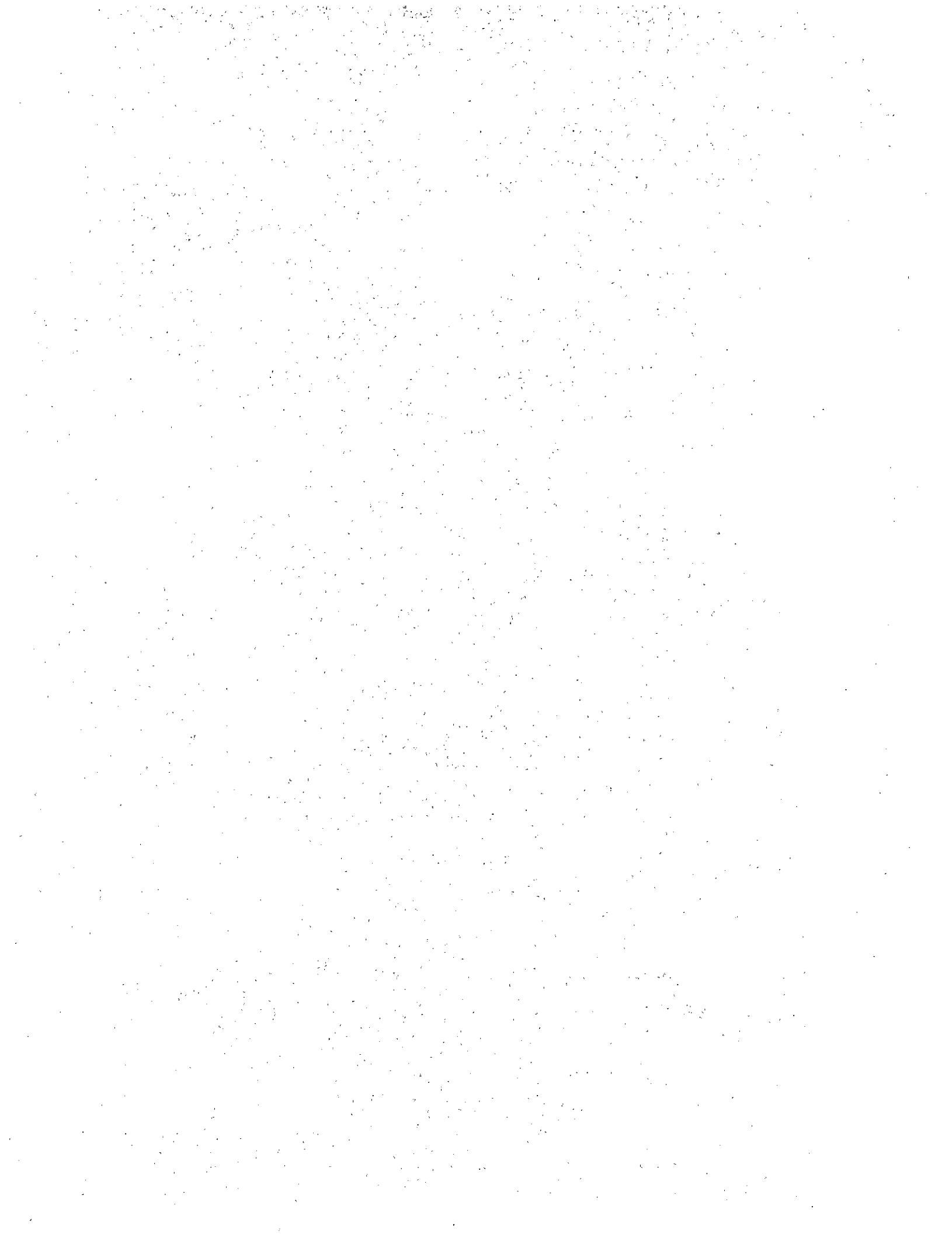
Please feel free to call our office if you have any questions.

Sincerely,
Baughman Company, P.A.


Brian Peltier, P.E.

Encl.: 2

cc: file



Southern Ridge
Worksheet for Circular Channel

| | |
|---------------------|-------------------|
| Project Description | |
| Project File | untitled.fm2 |
| Worksheet | Southern Ridge |
| Flow Element | Circular Channel |
| Method | Manning's Formula |
| Solve For | Discharge |

| | | |
|----------------------|----------|-------|
| Input Data | | |
| Mannings Coefficient | 0.010 | |
| Channel Slope | 0.004000 | ft/ft |
| Depth | 0.44 | ft |
| Diameter | 8.00 | in |

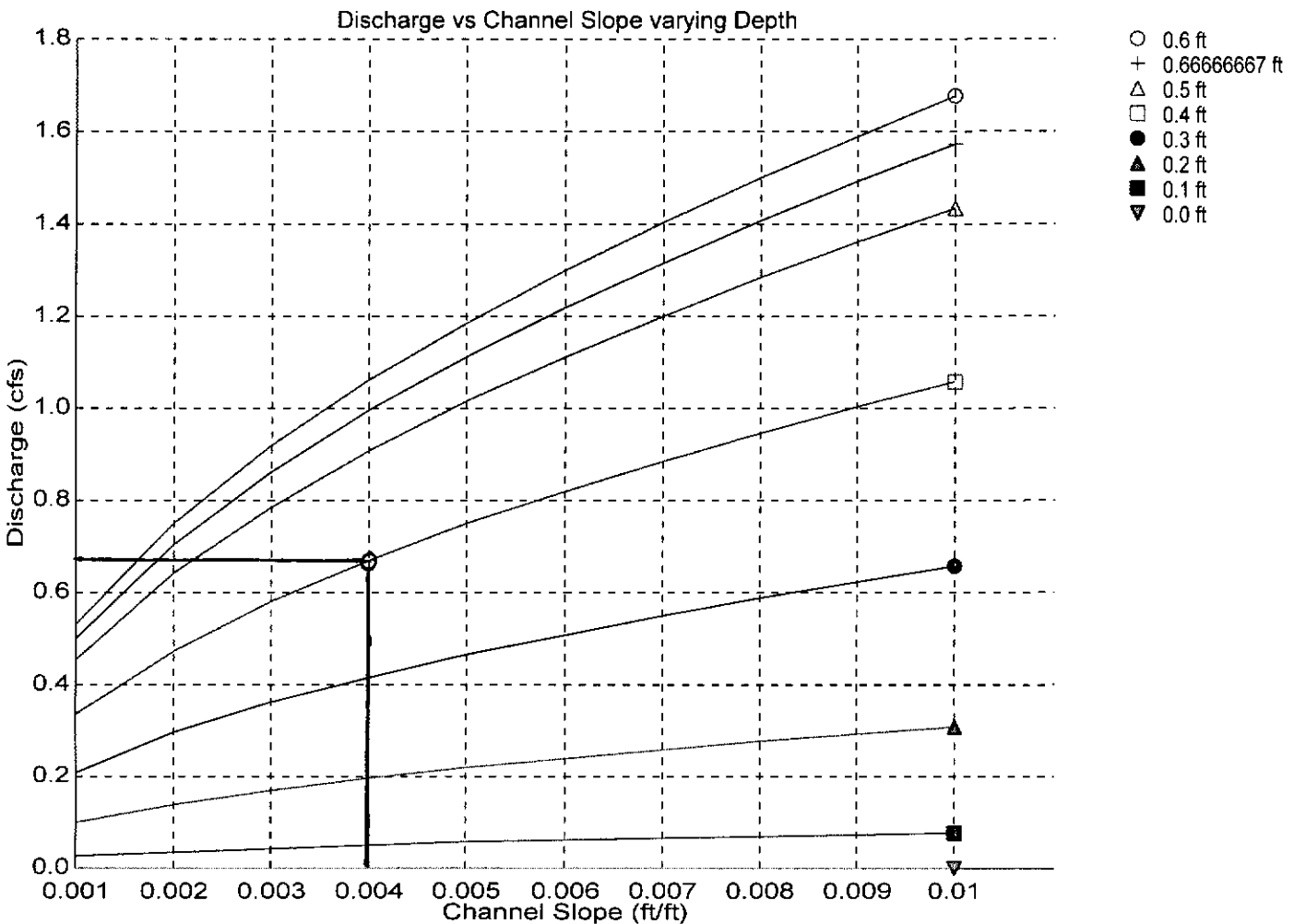
| | | |
|----------------------|----------|-----------------|
| Results | | |
| Discharge | 0.78 | cfs |
| Flow Area | 0.25 | ft ² |
| Wetted Perimeter | 1.27 | ft |
| Top Width | 0.63 | ft |
| Critical Depth | 0.42 | ft |
| Percent Full | 66.60 | |
| Critical Slope | 0.004788 | ft/ft |
| Velocity | 3.15 | ft/s |
| Velocity Head | 0.15 | ft |
| Specific Energy | 0.60 | ft |
| Froude Number | 0.89 | |
| Maximum Discharge | 1.07 | cfs |
| Full Flow Capacity | 0.99 | cfs |
| Full Flow Slope | 0.002451 | ft/ft |
| Flow is subcritical. | | |

Curve Plotted Curves for Circular Channel

| Project Description | |
|---------------------|-------------------|
| Project File | untitled.fm2 |
| Worksheet | Southern Ridge |
| Flow Element | Circular Channel |
| Method | Manning's Formula |
| Solve For | Discharge |

| Constant Data | |
|----------------------|---------|
| Mannings Coefficient | 0.010 |
| Diameter | 8.00 in |

| Input Data | | | |
|---------------|----------|----------|----------------|
| | Minimum | Maximum | Increment |
| Channel Slope | 0.001000 | 0.010000 | 0.001000 ft/ft |
| Depth | 0.00 | 0.67 | 0.10 ft |



Southern Ridge Sewer Analysis

1. Only evaluated Southern Ridge.
2. Used $n = 0.010$, which is fine for brand new pipe. Should use $0.011 - 0.012$.
3. Needs to evaluate the 12" outfall line (0.2% grade and has a double barrel siphon). 12" would serve $2.5 \frac{1}{4}$ sections.
4. Needs to check on previous wet weather surcharges records w/ Sewer Maintenance.

STAFF REPORT
(Preliminary Plat)

CASE NUMBER: SUB 2002-55 -- SOUTHERN RIDGE ADDITION

OWNER/APPLICANT: Lamp Farms, LLC, Attn: Ross L. Lamp, 1421 Lieunett, Wichita, KS 67203-2961; (Contract purchaser) Jay Russell, 12602 W. 13th, Wichita, KS 67235

AGENT: Randy Johnson, 2740 Beacon Hill Ct., Wichita, KS 67220

SURVEYOR/ENGINEER: Baughman Company, P.A., Attn: Phil Meyer, 315 Ellis, Wichita, KS 67211

LOCATION: South side of Pawnee, West side of Maize Road

SITE SIZE: 154.61 Acres

NUMBER OF LOTS

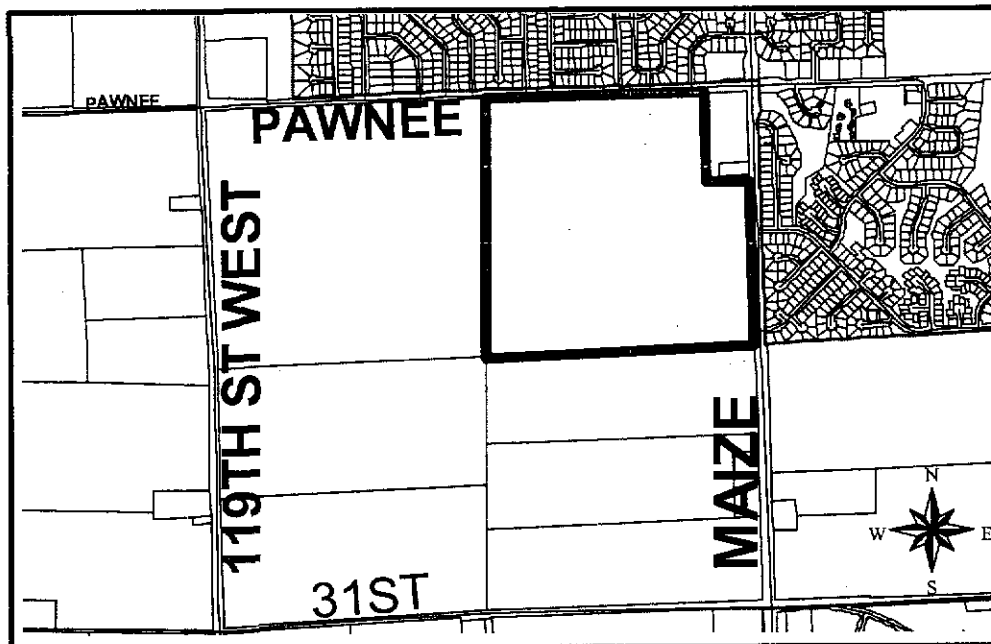
| | |
|--------------|------------|
| Residential: | 424 |
| Office: | |
| Commercial: | 1 |
| Industrial: | |
| Total: | <u>425</u> |

MINIMUM LOT AREA: 2 Acres

CURRENT ZONING: SF-20, Single-Family Residential; LC, Limited Commercial

PROPOSED ZONING: SF-5, Single-Family Residential; LC, Limited Commercial

VICINITY MAP



NOTE: This unplatted site is located in the County adjoining Wichita's city limits and annexation is required. The applicant will be requesting a zone change from LC, Limited Commercial to SF-5, Single-Family Residential for a portion of the plat.

Planning Staff recommends approval of the plat.

STAFF COMMENTS:

- A. Prior to this plat being scheduled for City Council review, annexation of the property will need to be completed. Upon annexation, the property will be zoned SF-5, Single-Family Residential and allow for the lot sizes being platted.
- B. This plat will be subject to approval of the associated zone change and any related conditions of such a change. Prior to this plat being considered by MAPC, the zone change will need to be approved.
- C. The applicant shall guarantee the extension of sanitary sewer and City water to serve the lots being platted. **City Engineering** needs to comment on the need for other guarantees or easements.
- D. If improvements are guaranteed by petition, a notarized certificate listing the petitions shall be submitted to the Planning Department for recording.
- E. **City Engineering** needs to comment on the status of the applicant's drainage concept.
- F. **Traffic Engineering** needs to comment on the need for any improvements to perimeter streets. **Left turn lanes at Pawnee and Maize are needed.**
- G. **Traffic Engineering** needs to comment on the access controls. The plat proposes complete access control along the plat's frontage to the arterial streets, with the exception of one opening along each arterial for the commercial corner. The final plat shall reference the dedication of access controls in the plat's text. **Traffic Engineering has required 350 feet of complete access control along Pawnee from the intersection and 400 feet of complete access control along Maize Road from the intersection.**
- H. **Traffic Engineering** has requested that Yosemite be extended to the east property line and be in alignment with Yosemite across Maize Road.
- I. **Traffic Engineering** needs to comment on the need for additional right-of-way along Pawnee. The proposed Access Management Policy requires a 60-ft right-of-way width along urban arterials. **Traffic Engineering has required a 10-ft sidewalk and utility easement.**
- J. **Traffic Engineering** has required that the "Y" intersection of Lark Lane and Maxwell at the Pawnee entrance be replaced with a "T" intersection to create a minimum offset of 150 feet from Pawnee.
- K. **Traffic Engineering** has requested that the "Y" intersections of Prescott/Savannah and Prescott/Glacier be replaced with "T" intersections.

SUB 2002-55 -- Preliminary Plat of SOUTHERN RIDGE ADDITION
August 15, 2002 - Page 3

- L. Two street stubs should be shown to the west (extending west from Savannah and Glacier) and an additional stub to the south (extending south from Leecrest Ct.) for increased mobility when development occurs in these locations.
- M. The plattor's text shall note the dedication of the streets to and for the use of the public.
- N. The Applicant shall guarantee the paving of the proposed streets. The guarantee shall also provide for sidewalks on at least one side of all through, non cul-de-sac streets.
- O. The Applicant is requested to meet with the Parks and Recreation Department to discuss possible expansion of Reserve C and dedication of land for a neighborhood park.
- P. It is recommended that Reserve C be extended to the street by access easements or by narrow strips of Reserve between the lots to increase its accessibility and usefulness for all homeowners in the Addition.
- Q. The parking areas in Reserve B need to be included as parking easements. The easements need to be at least 20-feet deep and no wider than 50 feet. The parking easements shall be referenced in the plattor's text specifying that the easements are granted for residential parking only and that no obstructions shall be constructed or placed within the easements.
- R. The final plat shall state in the plattor's text the purposes of the proposed reserves as well as the ownership and maintenance responsibilities.
- S. Provisions shall be made for ownership and maintenance of the proposed reserves. The applicant shall either form a lot owners' association prior to recording the plat or shall submit a covenant stating when the association will be formed, when the reserves will be deeded to the association and who is to own and maintain the reserves prior to the association taking over those responsibilities.
- T. For those reserves being platted for drainage purposes, the required covenant which provides for ownership and maintenance of the reserves shall grant, to the City, the authority to maintain the drainage reserves in the event the owner(s) fail to do so. The covenant shall provide for the cost of such maintenance to be charged back to the owner(s) by the governing body.
- U. City Fire Department needs to comment on the street length of Prescott Court (850 feet) in Block E, Yosemite Court (730 feet) in Block B and Leecrest Ct. (800 feet) in Block G. The Subdivision Regulations limit cul-de-sacs to 600 feet in length. MAPD and Traffic Engineering recommend that Prescott Ct and Lark Lane Ct at the southwestern corner of the plat be connected and be platted as 64-ft streets; and that Leecrest Ct. and Greenfield Cir. at the southeastern corner of the plat be connected and be platted as 64-ft streets.
- V. The applicant shall submit a covenant which provides for four (4) off-street parking spaces per dwelling unit on each lot which abuts a 58-foot street. The covenant shall inventory the affected lots by lot and block number and shall state that the covenant runs with the land and is binding on future owners and assigns.
- W. The wall easement shall be referenced in the plattor's text.
- X. The City Fire Department/GIS needs to comment on the plat's street names. Revised street names are needed.

SUB 2002-55 -- Preliminary Plat of SOUTHERN RIDGE ADDITION
August 15, 2002 - Page 4

- Y. The Applicant is reminded that a platting binder is required with the final plat. Approval of this plat will be subject to submittal of this binder and any relevant conditions found by such a review.
- Z. For any lots with existing tree rows that may be impacted by the installation of utilities, it is recommended that 30-ft utility easements be platted in order to allow for the installation of the utilities without damage to such tree rows.
- AA. The platting text shall include language that a drainage plan has been developed for the plat and that all drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.
- BB. The applicant shall install or guarantee the installation of all utilities and facilities which are applicable and described in Article 8 of the MAPC Subdivision Regulations. (Water service and fire hydrants required by Article 8 for fire protection shall be as per the direction and approval of the Chief of the Fire Department.)
- CC. The applicant's engineer is advised that the Register of Deeds is requiring the name(s) of the notary public, who acknowledges the signatures on this plat, to be printed beneath the notary's signature.
- DD. To receive mail delivery without delay, and to avoid unnecessary expense, the applicant is advised of the necessity to meet with the U.S. Postal Service Growth Management Coordinator (Phone 316-946-4556) prior to development of the plat so that the type of delivery, and the tentative mailbox locations can be determined.
- EE. The applicant is advised that various State and Federal requirements (specifically but not limited to the Army Corps of Engineers, Kanopolis Project Office, Rt. 1, Box 317, Valley Center, KS 67147) for the control of soil and wind erosion and the protection of wetlands may impact how this site can be developed. It is the applicant's responsibility to contact all appropriate agencies to determine any such requirements.
- FF. The owner of the subdivision should be aware of the fact that the development of any subdivision greater than five (5) acres in size may require an NPDES Storm Water Discharge Permit from the Kansas Department of Health and Environment in Topeka. Further, on all construction sites, the City of Wichita requires that best management practices be used to reduce pollutant loadings in storm water runoffs.
- GG. Perimeter closure computations shall be submitted with the final plat tracing.
- HH. Recording of the plat within thirty (30) days after approval by the City Council and/or County Commission.
- II. The representatives from the utility companies should be prepared to comment on the need for any additional utility easements to be platted on this property.
- JJ. The applicant is reminded that a disk shall be submitted with the final plat tracing to the Planning Department detailing this plat in digital format in AutoCAD. This will be used by the City and County GIS Department.

STAFF REPORT

(Final Portion of Overall Preliminary and Revised Preliminary, Preliminary Plat Approved 8/15/02)

CASE NUMBER: SUB 2002-55 -- SOUTHERN RIDGE ADDITION

OWNER/APPLICANT: Lamp Farms, LLC, Attn: Ross L. Lamp, 1421 Lieunett, Wichita, KS 67203-2961; (Contract purchaser) Jay Russell, 12602 W. 13th, Wichita, KS 67235

AGENT: Randy Johnson, 2740 Beacon Hill Ct., Wichita, KS 67220

SURVEYOR/ENGINEER: Baughman Company, P.A., Attn: Phil Meyer, 315 Ellis, Wichita, KS 67211

LOCATION: South side of Pawnee, West side of Maize Road

SITE SIZE: 145.86 acres (Preliminary), 45.42 (Final)

NUMBER OF LOTS

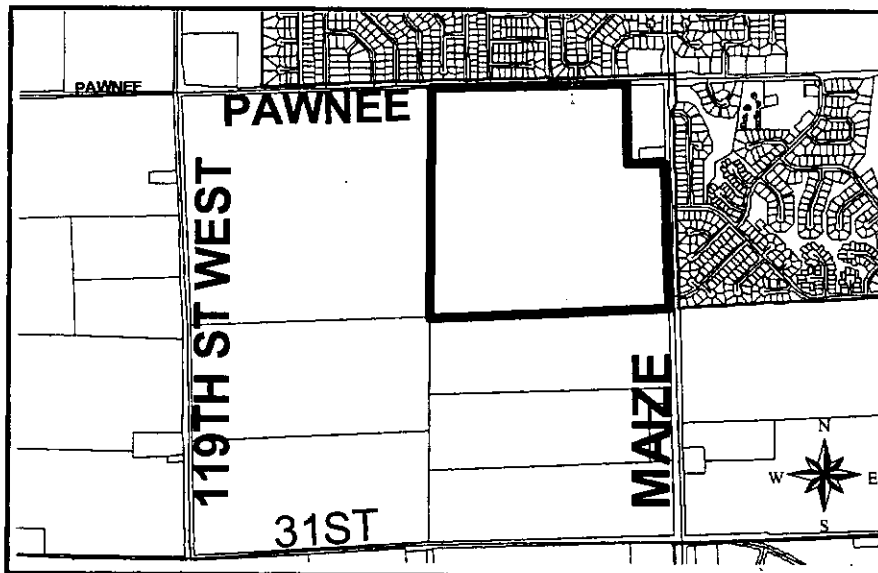
| | |
|--------------|---------------------------------------|
| Residential: | 474 |
| Office: | |
| Commercial: | |
| Industrial: | |
| Total: | <u>474 (Preliminary), 137 (Final)</u> |

MINIMUM LOT AREA: 8,880 sq. ft.

CURRENT ZONING: SF-20, Single-Family Residential; LC, Limited Commercial

PROPOSED ZONING: SF-5, Single-Family Residential; LC, Limited Commercial

VICINITY MAP



NOTE: This unplatted site is located in the County adjoining Wichita's city limits and annexation is required. The final plat is a portion of the overall preliminary plat.

Planning Staff recommends approval of the plat.

STAFF COMMENTS:

- A. Prior to this plat being scheduled for City Council review, annexation of the property will need to be completed. Upon annexation, the property will be zoned SF-5, Single-Family Residential and allow for the lot sizes being platted.
- B. The applicant shall guarantee the extension of sanitary sewer and City water to serve the lots being platted. **City Water and Sewer Department has concerns regarding sewer capacity.**
- C. If improvements are guaranteed by petition, a notarized certificate listing the petitions shall be submitted to the Planning Department for recording.
- D. **City/County Engineering** needs to comment on the status of the applicant's drainage plan. **An off-site drainage easement is needed. County Engineering has concerns regarding the amount of right-of-way in Pawnee that may be needed to pass the drainage past the plat from the west.**
- E. **Traffic Engineering** needs to comment on the need for any improvements to perimeter streets. **Left turn lanes at Pawnee and Maize are needed.**
- F. **Traffic Engineering** has requested an additional street opening along Pawnee west of Lark Lane or along Maize.
- Two additional street openings along Maize have been platted. Traffic Engineering has required a 400' distance separation from the Yosemite intersection on the other side of Maize. Maize Ct will need to be relocated northward and Lamp will need to be relocated southward.**
- G. The proposed Access Management Policy requires a 60-ft right-of-way width along urban arterials. **The applicant will dedicate an additional 10-ft street right-of-way along Pawnee.**
- The additional right-of-way has been platted as requested.
- H. **Traffic Engineering** has required a modification to the "Y" intersection of Lark Lane and Maxwell at the Pawnee entrance to increase the throat length.
- The throat length has been increased as requested.
- I. A street stub should be shown to the west, extending west from Savannah.
- This stub has been platted as requested.
- J. The Applicant shall guarantee the paving of the proposed streets. The guarantee shall also provide for sidewalks on at least one side of all through, non cul-de-sac streets.

SUB 2002-55 -- Final Portion of Overall Preliminary and Revised Preliminary Plat of SOUTHERN RIDGE ADDITION
October 17, 2002 - Page 3

- K. It is recommended that Reserve C be extended to the street by access easements or by narrow strips of Reserve between the lots to increase its accessibility and usefulness for all homeowners in the Addition.

Reserves D and E have been platted for additional access to Reserve C.

- L. Since Reserves D and E include a swimming pool, a site plan shall be submitted with the final plat tracing, for review and approval by the Planning Director. The site plan shall include the information indicated in the Subdivision Regulations. Otherwise a conditional use and public hearing will be needed in the future.
- M. Provisions shall be made for ownership and maintenance of the proposed reserves. The applicant shall either form a lot owners' association prior to recording the plat or shall submit a covenant stating when the association will be formed, when the reserves will be deeded to the association and who is to own and maintain the reserves prior to the association taking over those responsibilities.
- N. For those reserves being platted for drainage purposes, the required covenant which provides for ownership and maintenance of the reserves shall grant, to the City, the authority to maintain the drainage reserves in the event the owner(s) fail to do so. The covenant shall provide for the cost of such maintenance to be charged back to the owner(s) by the governing body.
- O. The applicant shall submit a covenant which provides for four (4) off-street parking spaces per dwelling unit on each lot which abuts a 58-foot street. The covenant shall inventory the affected lots by lot and block number and shall state that the covenant runs with the land and is binding on future owners and assigns.
- P. The applicant shall guarantee the paving of the private street (Maize Ct) to a public street pavement standard. As private improvements, such guarantee shall not be provided through the use of a petition.
- Q. A covenant shall be submitted regarding the private street, which sets forth ownership and maintenance responsibilities. The platting text shall reference the platting of the reserve for private street purposes and shall state which specific lots are to be accessed by the reserve.
- R. The reserve being platted as private street shall be labeled as "private street".
- S. The wall easement shall be referenced in the platting text.
- T. The City Fire Department/GIS needs to comment on the plat's street names. **Revised street names are needed.**
- U. The Applicant is reminded that a platting binder is required with the final plat. Approval of this plat will be subject to submittal of this binder and any relevant conditions found by such a review.
- V. For any lots with existing tree rows that may be impacted by the installation of utilities, it is recommended that 30-ft utility easements be platted in order to allow for the installation of the utilities without damage to such tree rows.

SUB 2002-55 -- Final Portion of Overall Preliminary and Revised Preliminary Plat of SOUTHERN RIDGE ADDITION
October 17, 2002 - Page 4

- W. The platlor's text shall include language that a drainage plan has been developed for the plat and that all drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.
- X. The applicant shall install or guarantee the installation of all utilities and facilities which are applicable and described in Article 8 of the MAPC Subdivision Regulations. (Water service and fire hydrants required by Article 8 for fire protection shall be as per the direction and approval of the Chief of the Fire Department.)
- Y. The applicant's engineer is advised that the Register of Deeds is requiring the name(s) of the notary public, who acknowledges the signatures on this plat, to be printed beneath the notary's signature.
- Z. To receive mail delivery without delay, and to avoid unnecessary expense, the applicant is advised of the necessity to meet with the U.S. Postal Service Growth Management Coordinator (Phone 316-946-4556) prior to development of the plat so that the type of delivery, and the tentative mailbox locations can be determined.
- AA. The applicant is advised that various State and Federal requirements (specifically but not limited to the Army Corps of Engineers, Kanopolis Project Office, Rt. 1, Box 317, Valley Center, KS 67147) for the control of soil and wind erosion and the protection of wetlands may impact how this site can be developed. It is the applicant's responsibility to contact all appropriate agencies to determine any such requirements.
- BB. The owner of the subdivision should be aware of the fact that the development of any subdivision greater than five (5) acres in size may require an NPDES Storm Water Discharge Permit from the Kansas Department of Health and Environment in Topeka. Further, on all construction sites, the City of Wichita requires that best management practices be used to reduce pollutant loadings in storm water runoffs.
- CC. Perimeter closure computations shall be submitted with the final plat tracing.
- DD. Recording of the plat within thirty (30) days after approval by the City Council and/or County Commission.
- EE. The representatives from the utility companies should be prepared to comment on the need for any additional utility easements to be platted on this property.
- FF. The applicant is reminded that a disk shall be submitted with the final plat tracing to the Planning Department detailing this plat in digital format in AutoCAD. This will be used by the City and County GIS Department.

CLOSURE - SOUTHERN RIDGE ADDITION

PT 01 North: 10607.8765 East : 26720.2903
 Line Course: S 00-18-18 E Length: 1011.0100
 PT 02 North: 9596.8809 East : 26725.6721
 Line Course: S 89-41-42 W Length: 819.5600
 PT 03 North: 9592.5181 East : 25906.1237
 Line Course: N 45-02-04 W Length: 686.3100
 PT 04 North: 10077.5208 East : 25420.5376
 Line Course: N 44-28-08 W Length: 196.9600
 PT 05 North: 10218.0775 East : 25282.5628
 Line Course: N 00-02-04 W Length: 146.1100
 PT 06 North: 10364.1875 East : 25282.4750
 Line Course: N 03-05-23 W Length: 64.0000
 PT 07 North: 10428.0945 East : 25279.0254
 Curve Length: 37.5036 Radius: 68.0000
 Delta: 31-36-00 Tangent: 19.2420
 Chord: 37.0300 Course: N 71-06-41 E
 Course In: N 03-05-19 W Course Out: S 34-41-19 E
 RP North: 10495.9957 East : 25275.3615
 PT 08 End North: 10440.0822 East : 25314.0614
 Line Course: N 34-41-14 W Length: 141.8600
 PT 09 North: 10556.7296 East : 25233.3295
 Line Course: N 42-24-57 E Length: 243.3600
 PT 10 North: 10736.3947 East : 25397.4773
 Line Course: N 00-02-04 W Length: 569.6700
 PT 11 North: 11306.0646 East : 25397.1349
 Line Course: S 89-57-56 W Length: 107.6300
 PT 12 North: 11305.9999 East : 25289.5049
 Line Course: N 37-32-26 W Length: 64.0000
 PT 13 North: 11356.7469 East : 25250.5082
 Line Course: N 52-27-34 E Length: 88.1600
 PT 14 North: 11410.4648 East : 25320.4123
 Curve Length: 62.6195 Radius: 68.0000
 Delta: 52-45-44 Tangent: 33.7274
 Chord: 60.4300 Course: N 26-04-38 E
 Course In: N 37-32-30 W Course Out: N 89-41-46 E
 RP North: 11464.3827 East : 25278.9773
 PT 15 End North: 11464.7434 East : 25346.9763
 Line Course: N 00-18-18 W Length: 85.2900
 PT 16 North: 11550.0322 East : 25346.5223

Srclose

| | | | |
|-------|----------------------|------------------|-------------------|
| Line | Course: N 89-57-56 E | Length: 893.7500 | |
| PT 17 | North: 11550.5695 | | East : 26240.2721 |
| Line | Course: S 00-18-18 E | Length: 943.0000 | |
| PT 18 | North: 10607.5828 | | East : 26245.2919 |
| Line | Course: N 89-57-56 E | Length: 475.0000 | |
| PT 01 | North: 10607.8684 | | East : 26720.2918 |