TO: Chris Carrier

FROM: CITY MANAGER

CHERCHES

From:	CHERCHES
Sent:	Wednesday, October 13, 1999 3:22 PM
To:	LACKEY_S
Cc:	CARRIER_C; LINDEBAK_M; SCHROEDER_K; HOLDEMAN_C
Subject:	Cambridge homeowners assoc.
Sensitivity:	Private

I am sending you copy of letter from Shawn Spruill, President of the C/Lexington HOA about a drainage problem. Can we help them out? Can you have someone investigate and make contact....? Keep me posted. thanks

RECEIVED
OCT 18 1999

CAMBRIDGE/LEXINGTON HOMEOWNER'S ASSOCIATION

P.O. Box 49486
Wichita, KS 67201

October 12, 1999

Mr. Chris Cherches,
City Manager
455 North Main Street
Wichita, KS 67201

Dear Mr. Cherches:

Several residents in the Lexington Subdivision have been experiencing drainage runoff in their backyards. As a result of these runoff problems, they have developed a mosquito problem as well as losing many of their plants and lawns.

The Cambridge/Lexington HOA Board of Directors hired landscape architect, David Foster of Jones, Rice and Foster, to assess the problems and to come up with solutions. Mr. Foster recommends that a 2% grade be used in this area. As you will see in the enclosed report, several of the homes have less than a 1% slope which does not meet the recent revisions to the City's subdivision regulations requiring a 1% minimum slope. The report further indicates that proper grading was not carried out by the builder Greystone Construction in the initial grading which as led to the subsequent drainage problems.

Greystone Construction has been contacted regarding this problem and provided with a copy of the report. It is their position that planting lawns and periods of rain have changed the grading and therefore, is not a problem they might have caused.

We are, therefore, looking to you to help us get this matter solved.

Sincerely,

Shawn Spruill, President
Cambridge/Lexington HOA

Enc.

Landscape Architects Planners

JONES
RICE
FOSTER
Professional Association

J. Michael Rice, APA, AIA
Planner and Architect
David W. Foster, ASLA
Landscape Architect
Jack R. Jones, AIA
Architect
Debra J. Foster, Associate AIA
Planner
Lori Shellhammer
Cheryl Carmichael

August 9, 1999

Lexington Addition Homeowner's Association
Attn: Richard Baker
10621 Hayden
Wichita, KS 67209

Dear Richard and the Association,

This report notes background information, existing conditions, provides an analysis and makes recommendations concerning drainage patterns for two areas in the Lexington Addition. These two areas show conditions of poor drainage due to slow runoff and ponding of drainage water. In effect, these conditions have created tension among impacted neighbors and "finger pointing" as to who is responsible for the situation.

Background

One problem area(Area A) exists along the north property lines of lots 5 thru 9, Block 3. The problem then continues north along the east property lines of lots 10 thru 12. A second problem area(Area B) exists along the south property lines of lots 36 thru 40 and lots 43 thru 49, Block 1.

The plat and drainage plans for the Addition were prepared by Poe & Associates, Civil Engineers of Wichita. For Area A, the drainage plan exhibits a high point between lots 8 and 9. From the northwest corner of lot 8, drainage is designed to flow east at a 1% slope to an area drain at the rear of lot 32. Running northwesterly then north from the high point the drainage is designed to flow at a 1% slope to an area drain at the southwest corner of lot 18. For Area B, the drainage plan exhibits a high point between lots 40 and 41. Drainage flows east and west in a swale along the easement line north of the south property line. A 1% slope is designed for lots 36 thru 46 and lots 47 and 48 are slightly less at 0.85% and .84% respectively. At the time of original development, the drainage plan was designed to meet current City regulations. Recent revisions to the City's subdivision regulations require a 1% minimum slope for drainage runoff. Figure A shows the planned pattern of the drainage plan for these two areas.

1415 East Second Street ◦ Wichita, Kansas 67214 ◦ (316) 262-4525 ◦ FAX (316) 262-7316

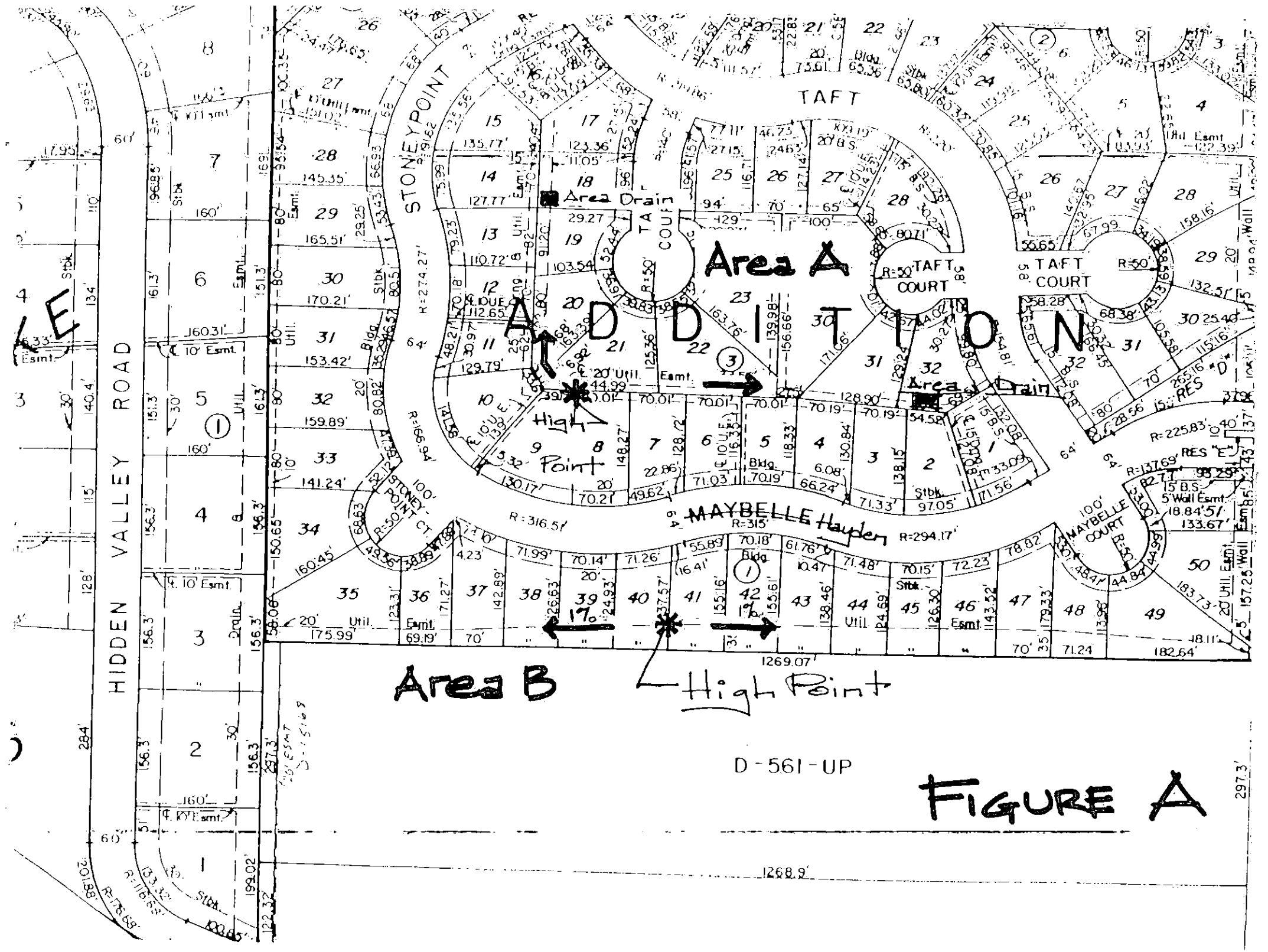

Area A
ADDITION
Area B
High Point
HIDDEN VALLEY ROAD
STONEYPOINT
TAFT
TAFT COURT
MAYBELLE
Area Drain
D-561-UP

FIGURE A

Existing Conditions

Grade elevations were taken July 12, 1999 to record existing elevations in the problem areas. The chart below summarizes this survey information.

Lot / Location	Direction of Flow	% Slope
Area A		
NE Corner Lot 12 to Area Drain Lot 18	North	1.85
Lot 12 NE Corner	None	0.00
Note: Grade is flat for about 10' in this area.		
Lot 12	North	0.63
Lot 11	North	1.21
Lot 10	Northwest	0.74
Note: Manhole on lot is 2.69' above area drain at lot 18. No rim elevation for area drain was recorded on City records.		
Lot 9	East	0.68
Lot 8 NW Corner to middle of lot	East	0.36
Lot 8 middle of lot to NE Corner	East	0.83
Lot 7 NW Corner to middle of lot	East	0.59
Lot 7 middle of lot to NE Corner	East	0.00
Lot 6	East	0.89
Lot 5 NW Corner to SE Corner Lot 22	East	0.93
Lot 5 SE Corner Lot 22 to NE Corner	East	1.30
Note: Soil silted and dammed up against fence blocks drainage. Lot is in process of irrigation and lawn installation.		

Area B

Lot 36	West	1.02
Note: There is a small area at the SE Corner which ponds water.		
Lot 37	West	0.42
Lot 38	West	1.13
Lot 39	West	1.60
Lot 40	East	0.54
Note: Drainage was planned to flow west from high point at SE corner.		
Lot 41 thru 43		
Note: Grade elevations not taken on these lots. At the SW corner of Lot 41 is the planned high point. This lot is fenced. The property corner pin was located 6 " below the soil grade. Lot 43 is reported to have a drainage problem.		
Lot 44 SW Corner to Manhole about middle of yard	East	1.43±
Lot 44 Manhole to SE Corner	None	0.00
Note: Grade is flat here and ponding occurs. City records show a 141.5 elevation at manhole.		
Lot 45	East	0.71
Lot 46 SW Corner to about middle of yard	East	0.83
Lot 46 from about middle of yard to SE Corner	East	2.02
Lot 47	East	1.28
Note: Grade slows in the SE corner with only 1 1/4" fall into lot 48. Some ponding occurs.		
Lot 48	East	0.83
Lot 49		
Note: A 0.625' fall occurs across lot. No length was measured to calculate slope, however, the lot has been regraded to improve drainage and new grass installed.		

Analysis

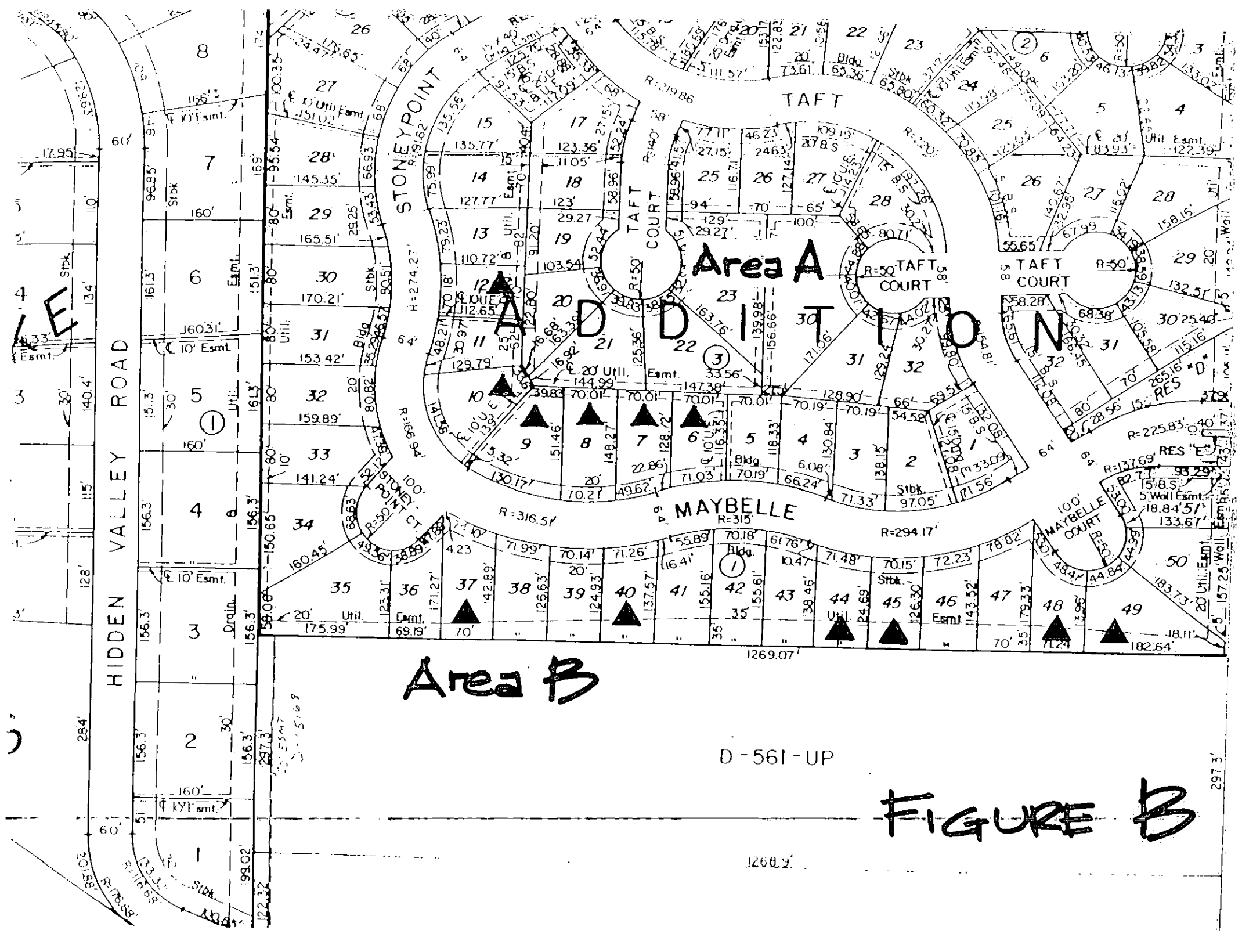
The varied slopes shown in the existing conditions indicates there are drainage problems. Most slopes less than 1.0 % and several flat areas will cause slow drainage and ponding. If the slopes are studied between existing conditions and the planned drainage it is possible to examine the problem more broadly. For area A, from the high point northward to the area drain on lot 18 there would be a 0.93 % if existing conditions in between were not considered. This is close to the planned drainage. Going east from the high point the drainage is only at 0.62% to the northeast corner of lot 5. Note that the grade shot there was taken at the general low point along the fence which would be the drainage flow once the soil is removed from the bottom of the fence. Further grade shots would need to be taken to relate to the area drain to the east.

For area B, from the high point west to the southwest corner of lot 37 the slope is 0.67%. If the slope is taken from the existing elevation at the southwest corner of lot 40 west to the same corner of lot 37 the slope increases to 1.05%. From the southwest corner of lot 44 to the southeast corner of lot 47 the slope is 1.02%. Further analysis such as this along with the sequence of grading work for lots could be done to understand why 1.0% grades were not achieved uniformly as planned. This would not be practical now because improvements exist which limit the possibility of going back and regrading the subdivision throughout all of these problem areas.

Recommendations

While it would be ideal to regrade the problem areas to conform to the drainage plan it is not practical due to the improvements along rear lot lines made by homeowners. These improvements include grass, irrigation systems, swimming pools, fences and ornamental landscaping. It is important to note that all of these improvements were made by homeowners following grading and drainage work established by the builder. Due to the improvements in place, it is recommended that a system of area drains and French drains be implemented to solve the drainage problems of all lots which stand water after rains or irrigation use and have slope gradients of less than 1%. Figure B exhibits these lots. This work will require minor regrading and repairs to irrigation systems, lawn areas and perhaps damaged utility lines. To avoid adverse impact to adjacent lots by dumping drainage water from effected lots, it is recommended that underground drain pipes be extended to the area drains in place. Slopes of 2% minimum are recommended for regrading to new area drains and French drains on lots.

An estimate of cost to install drain lines would be $700 to $1050 per lot. Typical costs for installation run $10 to $15 per lineal foot. There would be additional cost for repair work, extending lines across neighbors' lots and engineering fees.


Area A
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TAFT COURT
MAYBELLE
D-561-UP

FIGURE B

To provide for cost savings, it is recommended that the project be bid as a complete solution rather than on a lot by lot basis. An estimate of the range of total cost for the project would be $18,000 to $25,000.

In area A lot 5 should be completed as soon as possible to control sediment runoff. If drain lines are installed this may affect the scheduling of this work. In area B, for lots 44 thru 47 regrading would achieve a 1.02% slope, however, this is not recommended.

Inquiries to the City of Wichita's Engineering and Office of Central Inspection indicate that the house builder and developer are responsible to see that the drainage plan is followed. It is the builder who is responsible to see that their individual lots meet the Plan while the developer is responsible to see that the Plan is followed throughout a subdivision. At this time there is no certification or mechanism at the City level to ensure that the drainage plan is being followed. In effect the builder and developer play a self policing role.

A phone conversation with Doug Mosier of the City's law department yielded good advice on this issue. He recommends bringing this issue to the attention of the Wichita Area Builder's Association. This is not an isolated problem and is something that they should address if they wish to continue self policing this part of their business. Although not desirable, as a last resort, a civil lawsuit could be brought against the builder and/or developer to seek restitution.

I recommend further contact with the Office of Central Inspection so that they are made aware of this situation and it's resolution. Much of our work for residential clients is either initiated by a drainage problem or involves solving one in conjunction with other improvements. It has been our experience that a 1% minimum slope now required by the City is only adequate for loamy or sandy soils. For soils with clay content we recommend a minimum of 2%. A 1% slope within subdivisions does not allow for typical improvements to properties, fails if the grading contractor makes an error of even 1", stands water during rains and after use of irrigation plus fails even with normal thatch build-up in lawns.

If there is additional information or clarification needed please call.

Submitted By:
JONES RICE FOSTER, PA

David W. Foster

David W. Foster, ASLA
Registered Landscape Architect

KROUT_M

walkdown to Steve Lackey from Krout 10-18-99

From: KROUT_M
Sent: Monday, October 18, 1999 7:50 AM
To: LACKEY_S
Cc: LINDEBAK_M; CARRIER_C
Subject: Cabridge/Lexington drainage problems

Sensitivity: Private

I am sending down a letter to you that Mayor Knight sent to me for response -- I think the letter would best come from you, or from Law. The HOA for this area hired David Foster to assess the drainage problems, and his report is attached. Foster reports having spoken to people in your department as well as OCI and Law. The HOA letter indicates that the developer has some responsibility here and requests the City's help to remediate theproblem.

CITY OF WICHITA

INTERDEPARTMENT ROUTING SLIP

MAIL STATION

1. Marvin Krout 1-101
2. _____
3. _____

( ) YOUR INFORMATION (X) NECESSARY ACTION

( ) INVESTIGATE AND REPORT ( ) FOR YOUR FILES

( ) YOUR RECOMMENDATIONS OR COMMENTS ( ) FOR YOUR SIGNATURE

( ) RETURN TO _____

REMARKS: _____

RECEIVED
OCT 15 1999
METROPOLITAN PLANNING
ROUTE

SIGNED: Sharon Collins CC/m
DEPT.

DATE 10-14-99

CAMBRIDGE/LEXINGTON HOMEOWNER'S ASSOCIATION

P.O. Box 49486
Wichita, KS 67201

Refer to Marvin Krout for response on my behalf - BK

MAYOR'S OFFICE
RECEIVED
OCT 13 1999

October 12, 1999

Mayor Bob Knight
455 North Main Street
Wichita, KS 67201

Dear Mayor Knight:

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The Cambridge/Lexington HOA Board of Directors hired landscape architect, David Foster of Jones, Rice and Foster, to assess the problems and to come up with solutions. Mr. Foster recommends that a 2% grade be used in this area. As you will see in the enclosed report, several of the homes have less than a 1% slope which does not meet the recent revisions to the City's subdivision regulations requiring a 1% minimum slope. The report further indicates that proper grading was not carried out by the builder Greystone Construction in the initial grading which as led to the subsequent drainage problems.

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Shawn Spruill, President
Cambridge/Lexington HOA

Enc.

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Debra J. Foster, Associate AIA
Planner
Lori Shellhammer
Cheryl Carmichael

August 9, 1999

Lexington Addition Homeowner's Association
Attn: Richard Baker
10621 Hayden
Wichita, KS 67209

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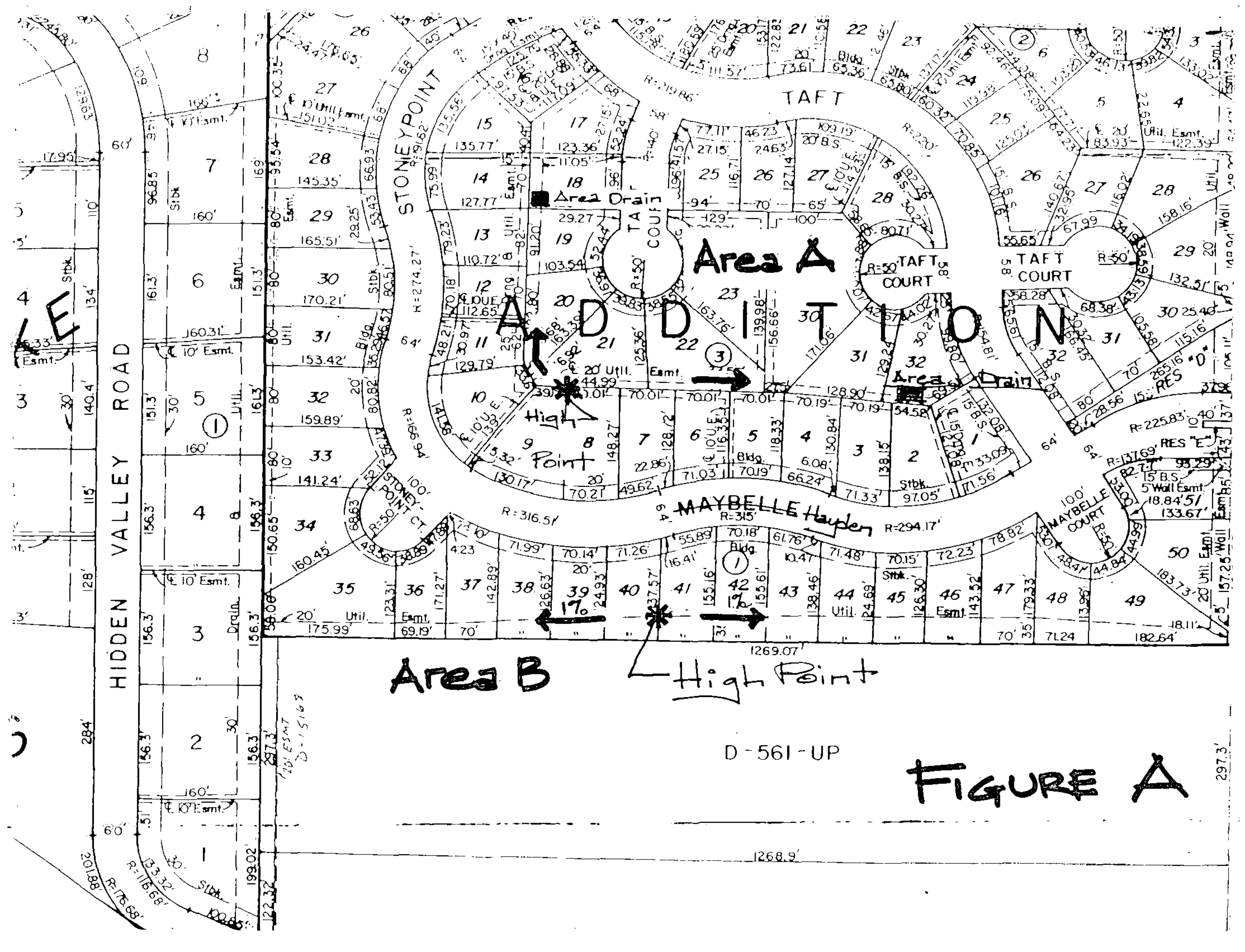
TAFT
TAFT COURT
TAFT COURT
TAFT COURT
STONEYPOINT
STONEY POINT CT.
HIDDEN VALLEY ROAD
MAYBELLE Hayden
MAYBELLE COURT
Area A
ADDITION
Area Drain
Area Drain
High Point
High Point
1%
1%
RES "D"
RES "E"
Area B
1269.07'
D-561-UP
1268.9'

FIGURE A

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Grade elevations were taken July 12, 1999 to record existing elevations in the problem areas. The chart below summarizes this survey information.

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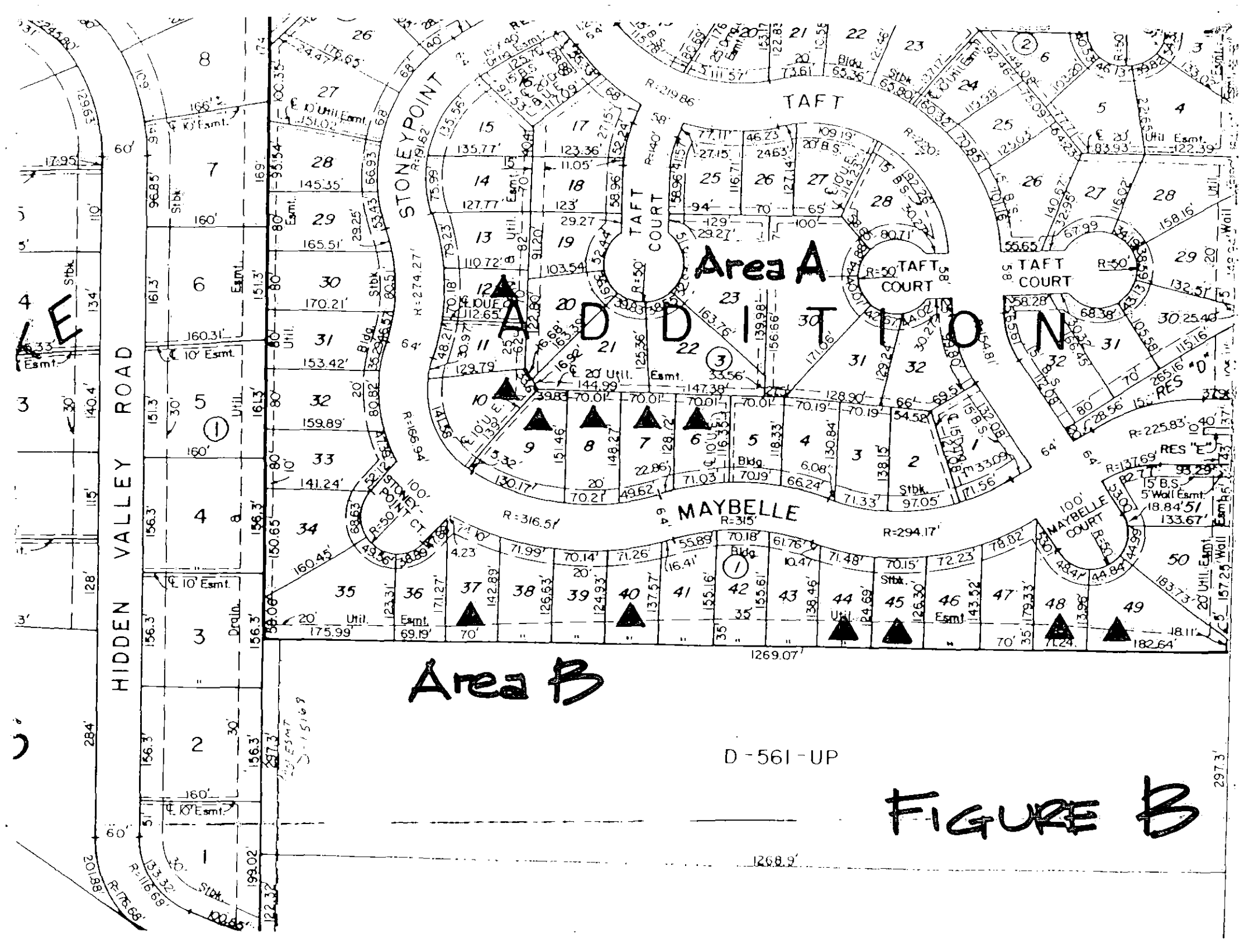
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FIGURE B

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If there is additional information or clarification needed please call.

Submitted By:
JONES RICE FOSTER, PA

David W. Foster

David W. Foster, ASLA
Registered Landscape Architect

CITY OF
WICHITA

Department of Public Works

November 9, 1999

RECEIVED
NOV 0 9 1999

Shawn Spruill, President
Cambridge/Lexington HOA
P. O. Box 49486
Wichita, Kansas 67201

Dear Mr. Spruill:

Councilmember Martz asked that the Department of Public Works respond to your letter dated October 12, 1999 regarding rear lot drainage problems in the areas referenced by your map attached to your letter.

Chris Carrier, Storm Water Utility Engineer, and myself have reviewed the plat files of your subdivision and the history of the drainage plans submitted at the time of platting. The plans showed street drainage systems and it showed a small amount of piping and inlet structures, west of Taft and south of Taft Ct., in rear lot areas. Also shown were elevations at the lot corners.

Upon reviewing the plans and visiting the site, it is quite apparent that due to the flatness of the rear lot grades, fences, and other obstructions, the rear lots identified do not drain properly and there is evidence of standing water, which at the time of my visit was irrigation

Office of the Director
City Hall • Eighth Floor • 455 North Main • Wichita, Kansas 67202-1685
T 316.268.4422 **F** 316.337.9027

THE CITY OF WICHITA

RE: Backyard Drainage Runoff
November 9, 1999

water. The fact is that so many obstructions exist in the rear lots and the water cannot drain properly; standing water results and over time the situation gets worse as the ground becomes saturated and further settles. The obstructions are not the only problems, but clearing the easements in the rear of the lots would be a big benefit in allowing the water to drain. Further, if the fences and other landscaping is to remain then alternative infrastructure needs to be constructed. Those systems might include "french drains", laying of drain tile to street or inlets, constructing additional storm drainage pipe and inlets, and cutting holes in fences to allow water to drain through.

All of the above systems would need to be constructed and paid for by the HOA. Other HOAs in Wichita either hire a consulting engineer to design solutions or design systems themselves in order to resolve drainage problems in their respective neighborhoods. The City of Wichita would be glad to meet with you and/or your representative(s) to assist you in brainstorming solutions, but the ultimate design and construction would be the responsibility of the HOA since all of the drainage problems exist on private property.

If you have further questions, please call Chris Carrier, Storm Water Utility Engineer at 268-4626.

Sincerely,

Steve Lackey
Director of Public Works

SL:sab

c: Bob Martz, Councilmember
Chris Cherches, City Manager
Chris Carrier, Storm Water Utility Engineer

Hidden Lakes

CAMBRIDGE/LEXINGTON HOMEOWNER'S ASSOCIATION

P.O. Box 49486
Wichita, KS 67201

October 12, 1999

Councilman Bob Martz
455 North Main Street
1st Floor
Wichita, KS 67202

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August 9, 1999

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Background

One problem area(Area A) exists along the north property lines of lots 5 thru 9, Block 3. The problem then continues north along the east property lines of lots 10 thru 12. A second problem area(Area B) exists along the south property lines of lots 36 thru 40 and lots 43 thru 49, Block 1.

The plat and drainage plans for the Addition were prepared by Poe & Associates, Civil Engineers of Wichita. For Area A, the drainage plan exhibits a high point between lots 8 and 9. From the northwest corner of lot 8, drainage is designed to flow east at a 1% slope to an area drain at the rear of lot 32. Running northwesterly then north from the high point the drainage is designed to flow at a 1% slope to an area drain at the southwest corner of lot 18. For Area B, the drainage plan exhibits a high point between lots 40 and 41. Drainage flows east and west in a swale along the easement line north of the south property line. A 1% slope is designed for lots 36 thru 46 and lots 47 and 48 are slightly less at 0.85% and .84% respectively. At the time of original development, the drainage plan was designed to meet current City regulations. Recent revisions to the City's subdivision regulations require a 1% minimum slope for drainage runoff. Figure A shows the planned pattern of the drainage plan for these two areas.

1415 East Second Street ○ Wichita, Kansas 67214 ○ (316) 262-4525 ○ FAX (316) 262-7316

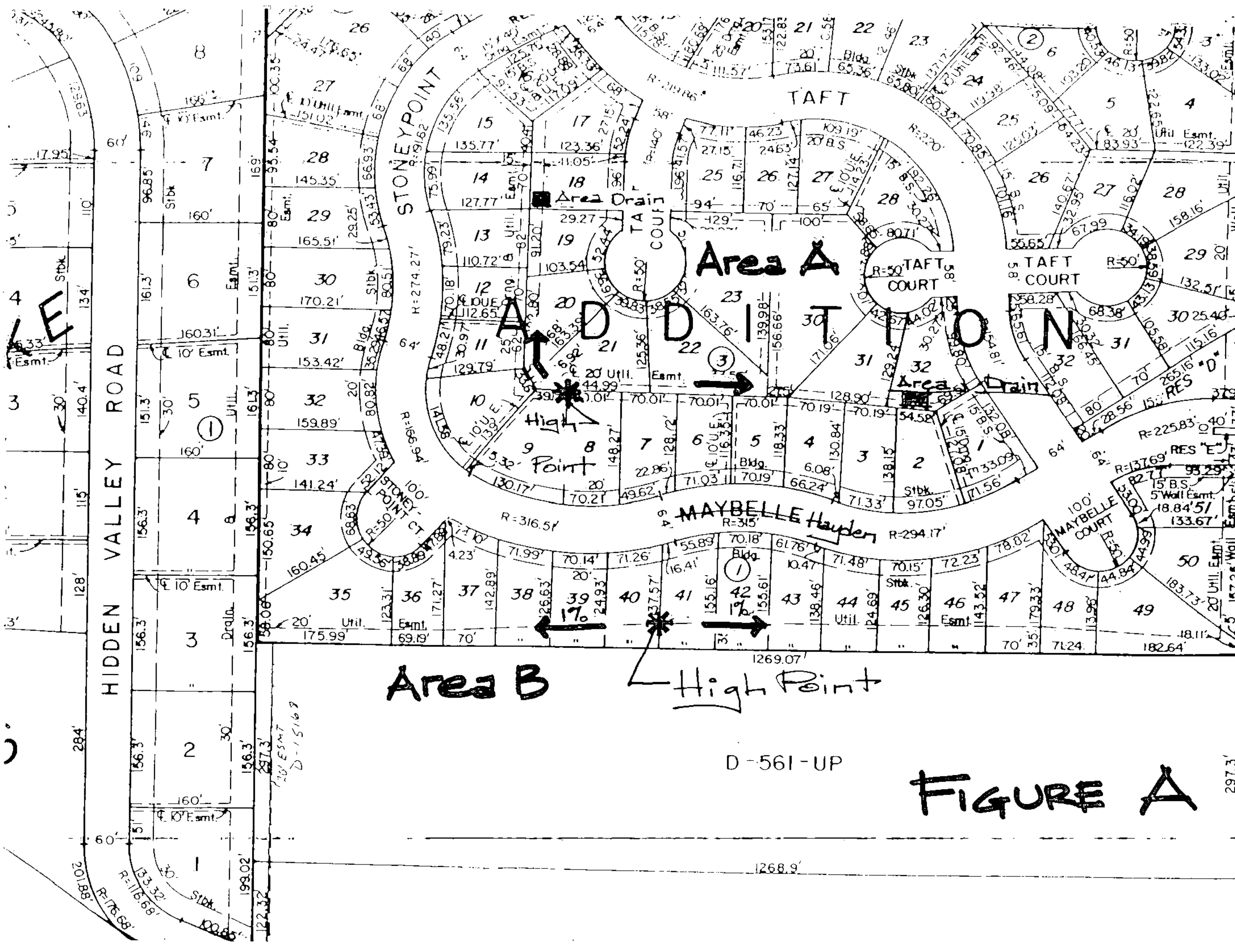
TAFT
TAFT COURT
TAFT COURT
TA COURT
STONEYPOINT
STONEY POINT CT
HIDDEN VALLEY ROAD
MAYBELLE Hayden
MAYBELLE COURT
ADDITION
Area A
Area B
Area Drain
Area Drain
High Point
High Point
1%
1%
RES "D"
RES "E"
D-561-UP
1269.07'
1268.9'

FIGURE A

Existing Conditions

Grade elevations were taken July 12, 1999 to record existing elevations in the problem areas. The chart below summarizes this survey information.

Lot / Location	Direction of Flow	% Slope
Area A		
NE Corner Lot 12 to Area Drain Lot 18	North	1.85
Lot 12 NE Corner	None	0.00
Note: Grade is flat for about 10' in this area.		
Lot 12	North	0.63
Lot 11	North	1.21
Lot 10	Northwest	0.74
Note: Manhole on lot is 2.69' above area drain at lot 18. No rim elevation for area drain was recorded on City records.		
Lot 9	East	0.68
Lot 8 NW Corner to middle of lot	East	0.36
Lot 8 middle of lot to NE Corner	East	0.83
Lot 7 NW Corner to middle of lot	East	0.59
Lot 7 middle of lot to NE Corner	East	0.00
Lot 6	East	0.89
Lot 5 NW Corner to SE Corner Lot 22	East	0.93
Lot 5 SE Corner Lot 22 to NE Corner	East	1.30
Note: Soil silted and dammed up against fence blocks drainage. Lot is in process of irrigation and lawn installation.		

Area B

Lot 36	West	1.02
Note: There is a small area at the SE Corner which ponds water.		
Lot 37	West	0.42
Lot 38	West	1.13
Lot 39	West	1.60
Lot 40	East	0.54
Note: Drainage was planned to flow west from high point at SE corner.		
Lot 41 thru 43		
Note: Grade elevations not taken on these lots. At the SW corner of Lot 41 is the planned high point. This lot is fenced. The property corner pin was located 6 " below the soil grade. Lot 43 is reported to have a drainage problem.		
Lot 44 SW Corner to Manhole about middle of yard	East	1.43±
Lot 44 Manhole to SE Corner	None	0.00
Note: Grade is flat here and ponding occurs. City records show a 141.5 elevation at manhole.		
Lot 45	East	0.71
Lot 46 SW Corner to about middle of yard	East	0.83
Lot 46 from about middle of yard to SE Corner	East	2.02
Lot 47	East	1.28
Note: Grade slows in the SE corner with only 1 1/4" fall into lot 48. Some ponding occurs.		
Lot 48	East	0.83
Lot 49		
Note: A 0.625' fall occurs across lot. No length was measured to calculate slope, however, the lot has been regraded to improve drainage and new grass installed.		

Analysis

The varied slopes shown in the existing conditions indicates there are drainage problems. Most slopes less than 1.0 % and several flat areas will cause slow drainage and ponding. If the slopes are studied between existing conditions and the planned drainage it is possible to examine the problem more broadly. For area A, from the high point northward to the area drain on lot 18 there would be a 0.93 % if existing conditions in between were not considered. This is close to the planned drainage. Going east from the high point the drainage is only at 0.62% to the northeast corner of lot 5. Note that the grade shot there was taken at the general low point along the fence which would be the drainage flow once the soil is removed from the bottom of the fence. Further grade shots would need to be taken to relate to the area drain to the east.

For area B, from the high point west to the southwest corner of lot 37 the slope is 0.67%. If the slope is taken from the existing elevation at the southwest corner of lot 40 west to the same corner of lot 37 the slope increases to 1.05%. From the southwest corner of lot 44 to the southeast corner of lot 47 the slope is 1.02%. Further analysis such as this along with the sequence of grading work for lots could be done to understand why 1.0% grades were not achieved uniformly as planned. This would not be practical now because improvements exist which limit the possibility of going back and regrading the subdivision throughout all of these problem areas.

Recommendations

While it would be ideal to regrade the problem areas to conform to the drainage plan it is not practical due to the improvements along rear lot lines made by homeowners. These improvements include grass, irrigation systems, swimming pools, fences and ornamental landscaping. It is important to note that all of these improvements were made by homeowners following grading and drainage work established by the builder. Due to the improvements in place, it is recommended that a system of area drains and French drains be implemented to solve the drainage problems of all lots which stand water after rains or irrigation use and have slope gradients of less than 1%. Figure B exhibits these lots. This work will require minor regrading and repairs to irrigation systems, lawn areas and perhaps damaged utility lines. To avoid adverse impact to adjacent lots by dumping drainage water from effected lots, it is recommended that underground drain pipes be extended to the area drains in place. Slopes of 2% minimum are recommended for regrading to new area drains and French drains on lots.

An estimate of cost to install drain lines would be $700 to $1050 per lot. Typical costs for installation run $10 to $15 per lineal foot. There would be additional cost for repair work, extending lines across neighbors' lots and engineering fees.

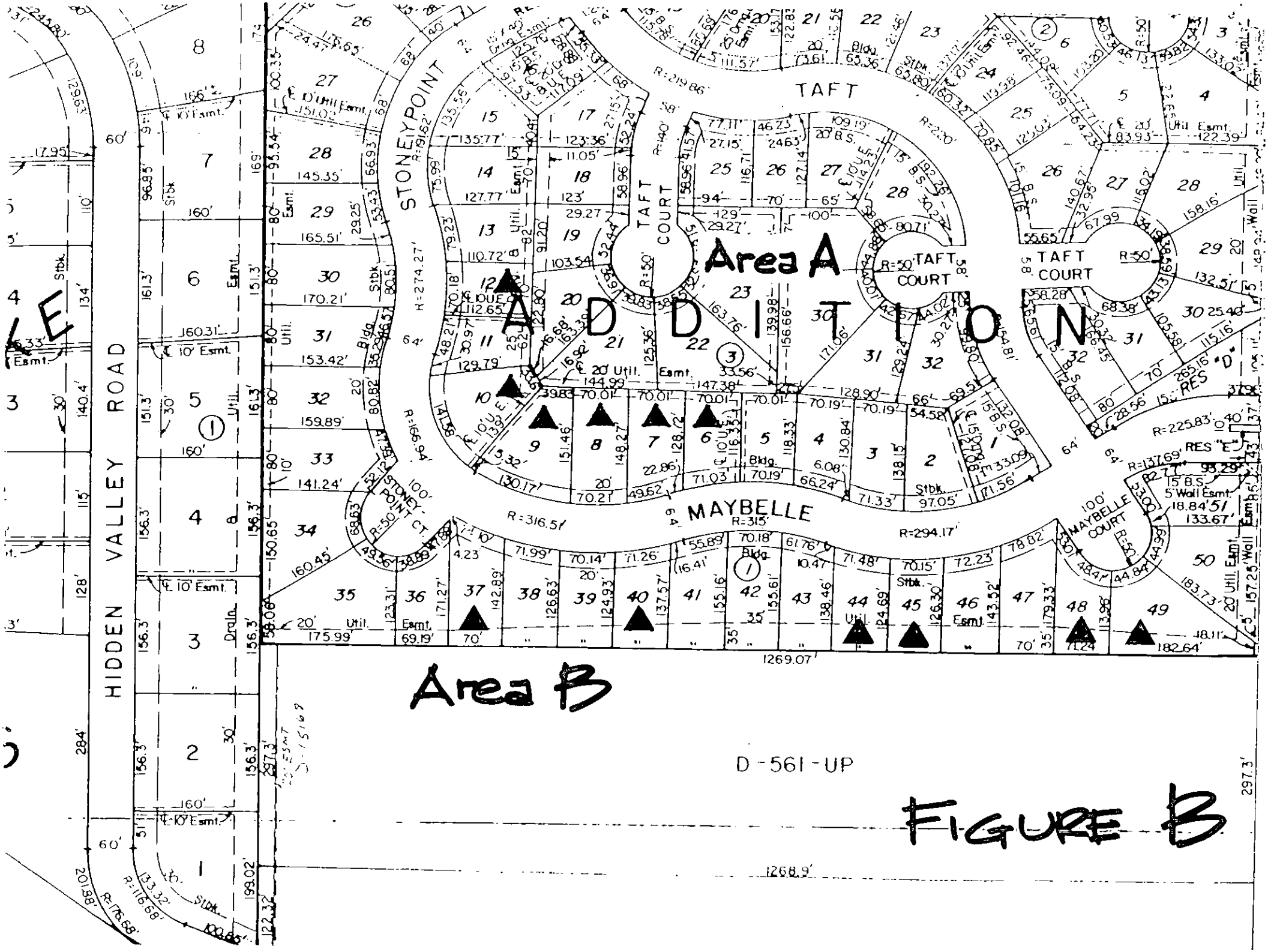
Area A
ADDITION
Area B
HIDDEN VALLEY ROAD
STONEYPOINT
TAFT
TAFT COURT
MAYBELLE
MAYBELLE COURT
D-561-UP

FIGURE B

To provide for cost savings, it is recommended that the project be bid as a complete solution rather than on a lot by lot basis. An estimate of the range of total cost for the project would be $18,000 to $25,000.

In area A lot 5 should be completed as soon as possible to control sediment runoff. If drain lines are installed this may affect the scheduling of this work. In area B, for lots 44 thru 47 regrading would achieve a 1.02% slope, however, this is not recommended.

Inquiries to the City of Wichita's Engineering and Office of Central Inspection indicate that the house builder and developer are responsible to see that the drainage plan is followed. It is the builder who is responsible to see that their individual lots meet the Plan while the developer is responsible to see that the Plan is followed throughout a subdivision. At this time there is no certification or mechanism at the City level to ensure that the drainage plan is being followed. In effect the builder and developer play a self policing role.

A phone conversation with Doug Mosier of the City's law department yielded good advice on this issue. He recommends bringing this issue to the attention of the Wichita Area Builder's Association. This is not an isolated problem and is something that they should address if they wish to continue self policing this part of their business. Although not desirable, as a last resort, a civil lawsuit could be brought against the builder and/or developer to seek restitution.

I recommend further contact with the Office of Central Inspection so that they are made aware of this situation and it's resolution. Much of our work for residential clients is either initiated by a drainage problem or involves solving one in conjunction with other improvements. It has been our experience that a 1% minimum slope now required by the City is only adequate for loamy or sandy soils. For soils with clay content we recommend a minimum of 2%. A 1% slope within subdivisions does not allow for typical improvements to properties, fails if the grading contractor makes an error of even 1", stands water during rains and after use of irrigation plus fails even with normal thatch build-up in lawns.

If there is additional information or clarification needed please call.

Submitted By:
JONES RICE FOSTER, PA

David W. Foster

David W. Foster, ASLA
Registered Landscape Architect

Lexington Addition Lot grading plan
Prepared by Poe & Asso. in 1992