

151ST STREET – QUIVIRA ROAD TO ANTIOCH ROAD

QUIVIRA ROAD – 151ST STREET TO 159TH STREET

SWITZER ROAD – 151ST STREET TO 159TH STREET

PRELIMINARY DESIGN STUDY

Prepared For



March 2001

GBA

GEORGE BUTLER ASSOCIATES, INC.
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SUMMARY

This preliminary design study presents the results of the preliminary engineering analysis to establish a horizontal and vertical alignment for 151st Street from Quivira Road to Antioch Road, Quivira Road from 151st Street to 159th Street and Switzer Road from 151st Street to 159th Street. The purpose of this study was to determine preliminary alignments that minimized impacts to developments and existing infrastructure along each route.

More specifically, the major objectives of this study were as follows:

- To establish design guidelines, typical roadway sections and right-of-way widths for 151st Street, Quivira Road and Switzer Road.
- To develop preliminary horizontal and vertical alignments for 151st Street, Quivira Road and Switzer Road.
- To determine what major storm drainage improvements are needed.
- To determine the impacts to the existing developments and infrastructure.
- To estimate the total project cost including construction, utility relocation, right-of-way acquisition and administration, legal and engineering costs.

The comprehensive solution to meet the objectives set forth is summarized in subsequent pages in this report.

Other miscellaneous design issues were addressed within the body of the report including the placement of retaining walls, traffic control, construction sequencing and drainage structures. These issues will require further coordination with the City of Overland Park, Olathe and Johnson County as the design of the project moves forward.

INTRODUCTION

The studies presented herein were authorized in an agreement between the City of Overland Park and George Butler Associates, Inc. on June 21, 1999. The agreement calls for the preparation of a preliminary design study and report together with appropriate preliminary scaled plans and drawings.

The study will establish a recommended horizontal and vertical alignment for 151st Street from Quivira Road to Antioch Road, Quivira Road from 151st Street to 159th Street and Switzer Road from 151st Street to 159th Street.

Specifically, the study will include the following:

- Recommended typical sections.
- Required right-of-way widths.
- Plan sheets showing existing right-of-way, property ownership, utilities, and topographic features, proposed roadway alignments, storm sewer, locations for retaining walls, construction limits, and locations of major drainage crossings.
- Reviews of the roadway cross-sections.
- Preliminary Opinions of Probable Cost.

Each of these items is discussed in the following sections. In addition, plan and profile drawings are included in the Appendix to this report and illustrate the recommended roadway improvements.

This Preliminary Engineering Study has been prepared by George Butler Associates, Inc. at the direction of the Public Works Department and represents the best information available to the City Engineer.

BASIC INFORMATION AND PROCEDURES

In the development of the preliminary design studies, the following information and procedures were utilized:

- Topographic information along the 151st Street, Quivira Road and Switzer Road corridors was obtained from AIMS maps in English units and was regenerated and incorporated into 1:500 Plan and Profile Sheets. The City of Overland Park supplied the AIMS maps.
- The City of Overland Park provided ownership and plat maps that were utilized to determine property owners and to plot existing R/W and property lines.
- Utility companies were contacted to determine the location of utility lines and easements in the corridor area. The utility information shown in the plan sheets was taken from utility plan sheets supplied to GBA by each of the utility companies.
- Current and future development plans for the corridor area were obtained from the City of Overland Park and were considered in the layout of the proposed roadways.
- Design criteria is in accordance with current ordinances for the City of Overland Park, the Kansas Department of Transportation, and the American Association of State Highway and Transportation Officials' publication, "A Policy on Geometric Design of Highways and Streets".
- Opinions of Probable Costs are based on 2000 construction dollar values.
- Field surveys were performed to establish flowlines of existing major drainage facilities and to assist in the validation of the elevations shown on the AIMS maps. Additional survey information was gathered in the town of Morse, Kansas to verify the location of the buildings adjacent to Quivira Road.

EXISTING CONDITIONS

Roadways

151st Street is an east/west arterial and both Quivira Road and Switzer Road are north/south arterials serving central Johnson County. 151st Street is bordered on the south entirely by Overland Park. Portions of the north side of 151st Street are located in both Overland Park and Olathe. Quivira Road is located entirely in Overland Park except for the southeast quadrant of the 159th Street intersection, which is outside of the Overland Park City Limits. Switzer Road is located entirely in Overland Park except for the south half of the 159th Street intersection, which is outside of the Overland Park City Limits.

There are eight side streets connecting to 151st Street between Quivira and Switzer (Quivira, Harmony (W), Harmony (E), Melrose St., Melrose Dr., Stearns Pl., Stearns St. and Switzer). 151st Street between Switzer and Antioch has three intersecting side streets (England, future Carter and future Benson). Quivira Road between 151st and 159th has eight potential intersections (151st, 153rd, Church Street, 154th, Railroad Avenue, 155th, 156th and 159th). Switzer Road between 151st and 159th has five intersections (151st, 154th, 156th, 157th and 159th). These streets are an integral part of the platted subdivisions in the area. All of the existing roadways are two-lane paved roadways with no shoulders and open ditches. 151st Street has a wider typical section than the normal 3.7 m (12') lanes. The intersection of 151st Street and Antioch Road on the projects east end has recently been improved to match the City's standard thoroughfare street section.

Traffic Counts

1998 Traffic counts indicate 11,900 Average Daily Traffic (ADT) along 151st Street from Quivira to Switzer and 15,500 ADT along 151st Street from Switzer to Antioch. Quivira Road from 151st to 159th has an ADT of 2000 and Switzer Road from 151st to 159th has an ADT of 1200. Projected counts of 19,500 ADT, 22,600 ADT, 9000 ADT and 9100 ADT respectively are anticipated for the year 2020. The roadways are currently signed for 70 kph (45 mph).

Land Use

The properties adjacent to the three roadways are a mixture of small subdivisions, as well as a mix of small and large tracts of land. The current planned zoning for the majority of the area is for residential use. There is also zoning for agricultural use. There is no active farming in this area. This information was obtained from the City's Future Development Plan dated August 1998 and the City's Zoning map dated May 1999. The larger tracts of land are possible locations for future development.

Existing Vertical Alignments

There is limited sight distance along the section of 151st Street between Quivira Road to just east of Switzer Road. Based on current design criteria, the existing vertical alignment for this section of roadway has a design speed of between 50 kph (30 mph) to 70 kph (45 mph). The section of 151st Street between Switzer Road and Antioch Road has a design speed of

80 kph (50 mph). The intersection at 151st and Switzer has a design speed of 60 kph (40 mph) on 151st Street. Quivira Road and Switzer Road also have areas of limited sight distance. The crest vertical curves along both Quivira and Switzer have stopping sight distances that meet the 60 kph (40 mph) design speed. The sag vertical curves along both Quivira and Switzer meet or exceed the 80 kph (50 mph) design speed. The existing profiles for the three roadways are shown on the profile drawings located in the Appendix.

Existing Right-of-Way

The existing right-of-way is generally 6.096 m (20') to 12.192 m (40') on either side of the section lines through undeveloped tracts of land and 18.288 m (60') either side of the section line where subdivisions have been platted. The existing right-of-way is shown on the plan drawings in the Appendix.

Existing Utilities

There are a number of existing utilities located along all three roadways. These utilities include telephone, overhead power lines, fiber optic lines, water mains and gas. These utility lines are shown on the plan drawings in the Appendix and are described as follows:

Southwestern Bell Telephone

Southwestern Bell Telephone has fiber optic and standard telephone lines running along the entire length of 151st Street, Switzer Road and Quivira Road. The fiber optic phone lines are located on both the north and south sides of 151st Street beginning west of Quivira Road and ending at Antioch Road. The lines run parallel to the existing right-of-way. Fiber optic lines are present along the east side of Quivira Road north of 151st Street. The fiber optic lines turn south at 151st Street and Switzer Road and are located along both the west and east sides of Switzer. The line on the west side extends south to 159th Street while the line on the east side extends approximately 110 meters (360') south of 151st Street.

An underground telephone line is located along the north side of 151st Street between Quivira and Antioch Roads. At the intersection with Quivira, an underground telephone line extends north from the intersection on both the west and east sides of Quivira. An underground telephone line begins at the intersection of 153rd and Quivira and parallels the existing right-of-way on the east side of Quivira and continues to the south past 159th Street. At the intersection with 159th Street, an underground telephone line extends west from the intersection on the north side of 159th Street. Another line extends east from the intersection on the south side of 159th Street. Approximately 200 meters (656') west of Switzer Road an additional phone line runs on the south side of 151st Street. The lines continue to the north on the east side of Switzer and to the south on the west side of Switzer along the existing right-of-way. The two lines on the west side of Switzer continue south to approximately 100 meters (328') north of 156th Street where one cable crosses the road to the east while the other continues south to 159th Street. An underground line is located on the north side of 159th and extends in a westerly direction. The phone line continues on the north side of 151st Street east of Switzer Road and ends at the intersection with Antioch Road.

Water District Number One of Johnson County

The water district has an 8-inch ductile iron line along the south side of 151st Street beginning west of Quivira Road. Approximately 100 meters (328') to the east of the intersection of Quivira, the 8-inch line becomes a 12-inch ductile iron line. The 12-inch waterline extends approximately 790 meters (2592') where it reduces to an 8-inch ductile iron line. There are combinations of various sizes and types of waterlines along both sides of Quivira Road. There is also a 36-inch pre-stressed concrete water transmission line along the west side of Quivira Road. Due to the cost of relocating a line of this size, this line should be avoided during construction. There are a number of water valves located in the southwest quadrant of the Quivira Road and 159th Street intersection. There is an 8-inch ductile iron waterline that is located along the west side of Switzer Road between 151st Street and 159th Street. There are several smaller waterlines providing service for the subdivisions along 151st Street, Switzer Road, Quivira Road and 159th Street.

Kansas City Power and Light

KCP&L has overhead facilities located along the north side of 151st Street. On the east side of the intersection with Switzer Road the power lines cross 151st Street and continues along the south side of 151st Street to Antioch Road. An overhead power line is located on the east side of Quivira both north of 151st Street. Overhead power continues to the south along the east side of Quivira until 155th Street Terrace where it crosses to the west side of Quivira then continues south. KCP&L has overhead facilities along the west side of Switzer Road north and south of 151st Street. Overhead power lines continue south and cross Switzer just north of 156th Street. The power is then taken underground along the east side of Switzer for approximately 300 meters (984'). The power line then goes overhead through the intersection of 159th Street. KCP&L also has overhead lines located along the north side of 159th Street.

Greeley Gas Company

Greeley Gas Company has a 4-inch plastic gas line that parallels the south side of 151st Street beginning at Quivira Road and ending just west of Antioch. There is a 3-inch plastic gas line extending north and south of 151st Street on the east side of Quivira. The 3-inch line runs along the east side of Quivira until approximately 100 meters (305') north of 159th Street where the line crosses to the west side before continuing south past 159th Street. There are a number of gas valves located in the southwest quadrant of the Quivira Road and 159th Street intersection. A plastic gas line is located along the east side of Switzer Road north of 151st Street while south of 151st Street the line is located on the west side. Approximately one-half mile south of 151st Street the gas line crosses to the east side of Switzer and continues to 159th Street. There are gas lines along both the north and south sides of 159th Street. Several service lines are located throughout the project. These lines vary in size from one to two inches.

Kansas Gas Service

Kansas Gas Service has a 2-inch poly-ethylene gas line west of Antioch on the north side of 151st Street. Approximately 175 meters (574') west of Antioch the line crosses to the south and then turns west for another 100 meters (328').

Johnson County Wastewater

Sanitary sewer crossings are found mainly along 151st Street. The sewer crossings are located at Melrose, east of Stearns, and just east of Switzer. These crossings consist of 8-inch, 12-inch, and 15-inch PVC pipe. Additional sanitary sewers crossings are planned at different locations along these roadways. The exact locations of the proposed sewers will need to be investigated during design.

Time Warner Cable

Time Warner Cable (formerly TCI) has multiple crossings throughout the project. The majority of their lines are located on KCP&L's power poles.

MEDIAN BREAKS AND TURNING LANE STORAGE REQUIREMENTS

The City provided the following recommendations for proposed median break locations and full-width turn lane storage requirements (excluding tapers):

<u>Location along 151st</u>	<u>Northbound</u>	<u>Southbound</u>	<u>Eastbound</u>	<u>Westbound</u>
Quivira	300 feet	300 feet	300 feet	300 feet
Harmony (west)			150 feet	250 feet
Harmony (east)			150 feet	200 feet
Melrose St.			200 feet	
Switzer	300 feet	300 feet	300 feet	300 feet
Church (Sta. 11+885)			150 feet	150 feet
Carter (future)			200 feet	200 feet
England			250 feet	200 feet
Benson (future)			200 feet	200 feet
Antioch (Reconstruct)			300 feet	

<u>Location along Quivira</u>	<u>Northbound</u>	<u>Southbound</u>	<u>Eastbound</u>	<u>Westbound</u>
153 rd Street	150 feet			
154 th Street	150 feet			
156 th Terrace	200 feet	200 feet		
159 th Street	300 feet	300 feet	300 feet	300 feet

<u>Location along Switzer</u>	<u>Northbound</u>	<u>Southbound</u>	<u>Eastbound</u>	<u>Westbound</u>
154 th Street	150 feet	150 feet		
156 th Street	200 feet	200 feet		
157 th Terrace	150 feet	100 feet		
159 th Street	300 feet	300 feet	300 feet	300 feet

PRELIMINARY DESIGN

Design Criteria

CROSS SECTIONS

Lane Width	3.7 meters (12 ft. – inside lane) 4.0 meters (13 ft. – outside lane) 3.7 meters (12 ft. – left turn bays at all locations)
Median Width	3.95 m to 7.3 m
Parking Lane	None
Shoulder	
Inside	Curb (Type D)
Outside	Curb (Type B)
Normal Crown	2%

SIDE SLOPES

Maximum	1:4
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GEOMETRICS

Design Speed	80 km/h
Posted Speed	70 km/h
Vertical Alignment	
Maximum Grade	6%
Minimum Grade	1%
Stopping Sight Distance	113 m (370') to 139 m (456')
K Value	25-32 for sag curves and 32-49 for crest curves

DRAINAGE

Storm Sewer	5 yr. Return with $T_c=10$ min.
Ditches	5 yr. Return (2% Minimum Grade)
Drainage Structures (Culverts)	25 yr. Return (Drainage basin crossings at sag vertical curves)
Drainage Structures (Culverts)	100 Yr. Return (7" roadway overtopping maximum)

Typical Sections

The typical sections for the proposed roadway are shown on Exhibit 1. All thoroughfare sections have 255 mm (10") thick asphaltic concrete pavement.

Exhibit No. 1 shows the standard four-lane divided thoroughfare section recommended for 151st Street (Quivira to Antioch), for Quivira Road (151st to 159th) and for Switzer Road (151st to 159th). This section has a 7.3 meter (24') raised median to accommodate a 3.7 meter (12') single left turn and a 1.5 meter (5') sidewalk located 300 mm (1') inside the right-of-way line. Roadway lane widths will be the standard 4.0 meter (13') outside lane and 3.7 meter (12') inside lane. 151st Street, between Quivira and Antioch, and Quivira Road, south of 151st Street, have been designated as "Type 2 Linkages" on the City's Greenway Linkage Plan dated August 1998. Because of this designation, the proposed sidewalk located on the north side of 151st Street, on the east side of Quivira Road north of 156th Terrace and on the west side of Quivira Road south of 156th Terrace will be changed to a 3.0 meter (10') asphalt concrete pavement bike/pedestrian trail.

Right-of-Way

Right-of-Way requirements are shown on the plan drawings in the Appendix and on Exhibit No. 1. All of the thoroughfare sections will require a standard 36.576 meter (120') right-of-way corridor. Permanent Drainage Easements will be required as necessary at the outlet locations of the storm sewers and on both ends of the crossroad drainage structures. Temporary construction easements will be required as necessary and will be needed for most properties adjacent to construction. Permanent Utility Easements are present in most of the sub-divided properties. There are however, locations where utility easements may be needed to accommodate utility relocations. The exact locations of the proposed utility easements should be determined during the project design phase when more accurate utility information can be obtained.

Proposed Horizontal Alignments

A standard thoroughfare section, centered on the section line, is recommended for 151st Street. The Switzer Road alignment will also be centered on the section line with an exception at 151st Street. The Quivira Road alignment will also be centered on the section line with an exception for the area through the town of Morse, which is located approximately 800 meters (2640') south of 151st Street. The alignment of Quivira Road, from a point just south of the 155th Terrace intersection, has been shifted approximately 7.62 meters (25') west of the section line. The alignment transitions back onto the section line approximately 135 meters (440') north of the 153rd Street intersection. The realignment of Quivira Road is necessary to reduce the impacts, both with proposed construction and right-of-way acquisitions, on the adjacent homes and businesses on the east side of Quivira Road. The alignment of Switzer Road, from a point south of the 151st Street intersection, has been shifted approximately 6.0 meters (19.69') west of the section line. The realignment of Switzer road is necessary to reduce the impacts on the adjacent homes both north and south of 151st Street.

Proposed Vertical Alignments

The City of Overland Park Municipal Code and the current edition of "A Policy on Geometric Design of Highways and Streets" published by the American Association of State Highway and Transportation Officials provide the minimum design criteria for thoroughfare type roadways. The two main design issues when developing the vertical alignments for these roadways are Stopping Sight Distance (S.S.D.) of a crest vertical curve and the "K" value of a sag vertical curve. The requirements for this project are shown in the Design Criteria section of this report.

Historical Considerations

There are no known archaeological sites (Native American or early historic period) within the project area, although the Santa Fe Trail does pass through the town of Morse. Therefore, prior to beginning construction on Quivira Road, a site visit will be necessary to determine if there are traces of the old trail. Since Quivira Road crosses through the trail location, it is most likely that any evidence of the trail has been destroyed. In the event that traces are found, the state may request documentation before construction can begin.

The Johnson County Museum of History was contacted to determine whether or not there were any structures along Quivira that may be considered for historical significance. Currently, there are no structures listed on the National or State Registers of Historic Places and there are no structures in the area that have made application for listing. There are however, two structures in the area that could be considered significant: a farmhouse at 15550 Quivira Road, which dates to the 1880's and the Morse Methodist Church at 154th and Quivira. There are also a number of houses that date back prior to 1950 making them potentially eligible for the National Register, but were not considered significant.

In the case of the farmhouse, the church and the houses, if the project requires that these structures be removed, it will be necessary to research their history, photograph them, and submit the information to the Historic Preservation Office to request a "determination of eligibility" before they can be demolished.

Drainage

The existing crossroad pipes located along 151st Street are all constructed from corrugated metal. These structures will be replaced with concrete pipes or reinforced concrete boxes. Temporary interceptor ditches will be necessary in many locations. Interceptor ditches are necessary due to the grading restrictions and the need to keep large areas of off-site drainage from draining onto the roadway.

The existing (2) 2.1 m x 1.8 m RCB ((2) 7' x 6' RCB) located just east of Melrose Street will be removed and replaced with a larger. The replacement of the existing structure is necessary due to the widening of 151st Street and also to improve the flow characteristics through the structure. To assist in maintenance, the proposed RCB's are all 2.1 m (7') in height. This will allow the City to use a small loader to remove any debris or silting that may occur.

The data used in analyzing the storm drainage, flowing from the adjacent drainage areas, is shown in the table below:

Structure Location	Size in (mm)	Area Acres	C Value	Time of Concentration Min	i_{25} in/hr	i_{100} in/hr	Q_{25} cfs	Q_{100} cfs
Sta. 10+175	36 (900)	12.5	.55	14.5	6.3	7.5	48	65
Sta. 10+475	60 (1500)	42	.55	15.6	5.9	7.3	150	211
Sta. 10+915	Trpl. 9'x7' (2700x2100)	345	.55	22.1	5.2	6.4	1085	1518
Sta. 11+340	Dbl. 7'x7' (2100x2100)	145	.55	18.5	5.5	6.8	482	678
Sta. 11+815	10'x7' (3000x2100)	132	.55	17.5	5.7	7.0	455	635
Sta. 4+600 Quivira Road	Dbl. 5'x7' (1500x2100)	56	.55	17.5	5.7	7.0	193	315

The proposed roadway grade along 151st Street has been adjusted in the area of the crossroad pipe at Sta. 10+475. The sag and crest vertical curves in this location have been modified to improve the proposed sight distances. The proposed sag vertical curve does not have the same depth as the existing sag curve. This may cause a portion of the 100-yr overtopping of the storm water runoff to flow into a downstream watershed that may not have been designed to handle the extra flow. To eliminate the possibility of flooding the downstream watershed, the drainage structure at Sta. 10+475 was designed to carry the 100-yr flow. The routing of the storm water exiting this structure will not change and will be maintained in its current location.

Retaining Walls

As part of this study, a number of locations required evaluation to determine whether or not it was practical to use retaining walls instead of extending the roadway sideslopes and adversely impacting adjacent landowners. The recommended retaining wall locations are shown on the plans in the Appendix. Further investigation may be needed during the preliminary project design to determine the practicality of using the retaining walls shown on the preliminary plans.

Existing Lakes and Ponds

There are a number of small man-made ponds adjacent to the existing roadways that could be affected by the wider roadway section of a thoroughfare. With some of the ponds being close to the existing roadway, there are some problems that could arise during the construction of the proposed roadway. One problem is where the proposed roadway sideslopes intersect the existing ground. Depending on the location of the pond, the sideslopes could encroach into the pond's embankment or into the pond itself. This is the case with the pond located on the east side of Quivira just south of the town of Morse.

Each pond was investigated, during this study to determine what impact the thoroughfare design would have and what steps could be taken to reduce the impacts to each pond. Further investigation will be needed during the preliminary project design to determine whether the measures used in this study are practical or if there are other alternatives.

Permitting

Permits will be required before beginning construction activities on this project. Due to the continually changing nature of permitting requirements, it is recommended the engineer analyze permitting requirements during the preliminary project design. The following permits will be required or should be investigated:

404 Permit

DWR Permit

Kansas Water Pollution Control Permit

Other

Due to the current unknowns of the corridor, other environmental investigations might dictate other permits. For example, an asbestos determination will have to be done for the two buildings being displaced.

Construction

This report has been set up to show eight (8) separate sections of roadway. Each of the eight sections is identified under the Project Costs Summary heading. The intersection and roadway quantities have been figured separately. This is to assist the City in determining which sections of roadway to construct first. For example, the City can decide to construct the 151st Street/Switzer Road intersection with either the section of 151st Street roadway west of Switzer or the section to the east depending on which portion is built first.

The project costs are also divided proportionally between Overland Park, Olathe and Johnson County. For instance, the north half of the 151st Street/Quivira Road intersection is located within the city limits of Olathe and the south half is located within the city limits of Overland Park. Therefore the project costs were divided equally between Overland Park and Olathe. The actual amount that each entity will be responsible for will be determined during the design phase.

Once the City determines the order of construction for the various sections of roadway, construction phasing will need to be established so that the sub-divisions that have only one access point or homes adjacent to the roadway can continue to have access during construction. With the magnitude of fills and cuts on the section of 151st Street west of Switzer the construction phasing will be important for that section of roadway.

Recommendations for construction phasing and maintenance of traffic during construction will need to be evaluated during each preliminary project design. It is important to note that access to the churches, school and residential homes will remain open at all times. Temporary surfacing will be necessary to accomplish this work item.

PROJECT COST SUMMARY

Section No. 1 : Intersection at 151st Street and Quivira Road

Share of Project	Project Totals	Overland Park 50.00%	Olathe 50.00%
1. Construction Cost*	\$1,367,548	\$683,774	\$683,774
2. Est. Change Orders	95,730	47,865	47,865
3. Engineering			
Final Design	164,110	82,055	82,055
Consultant EDC	13,680	6,840	6,840
4. Material Testing	13,680	6,840	6,840
5. Legal Publications, Blueprinting, Misc.	13,680	6,840	6,840
6. Ownership Certificates	6,840	3,420	3,420
7. Appraisers Fees	12,310	6,155	6,155
8. Negotiation Fees	10,940	5,470	5,470
9. Utility Relocations**	536,100	268,050	268,050
10. City Inspection	68,380	34,190	34,190
11. Project Administration	41,030	20,515	20,515
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$2,344,028	\$1,172,014	\$1,172,014
R/W & Easement Acq.***	\$277,610	\$138,805	\$138,805
Total Project Cost *	\$2,621,638	\$1,310,819	\$1,310,819

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 2 : 151st Street from Quivira Road to Switzer Road

Share of Project	Project Totals	Overland Park	Olathe
		75.00%	25.00%
1. Construction Cost*	\$5,822,051	\$4,366,538	\$1,455,513
2. Est. Change Orders	407,540	305,655	101,885
3. Engineering			
Final Design	582,210	436,657	145,553
Consultant EDC	58,220	43,665	14,555
4. Material Testing	58,220	43,665	14,555
5. Legal Publications, Blueprinting, Misc.	58,220	43,665	14,555
6. Ownership Certificates	29,110	21,832	7,278
7. Appraisers Fees	52,400	39,300	13,100
8. Negotiation Fees	46,580	34,935	11,645
9. Utility Relocations**	793,550	595,163	198,387
10. City Inspection	291,100	218,325	72,775
11. Project Administration	174,660	130,995	43,665
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$8,373,861	\$6,280,395	\$2,093,466
R/W & Easement Acq.***	\$503,970	\$377,978	\$125,992
Total Project Cost *	\$8,877,831	\$6,658,373	\$2,219,458

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 3 : Intersection at 151st Street and Switzer Road

Share of Project	Project Totals	Overland Park 100.00%
1. Construction Cost*	\$1,196,117	\$1, 196,117
2. Est. Change Orders	83,730	83,730
3. Engineering		
Final Design	143,530	143,530
Consultant EDC	11,960	11,960
4. Material Testing	11,960	11,960
5. Legal Publications, Blueprinting, Misc.	11,960	11,960
6. Ownership Certificates	5,980	5,980
7. Appraisers Fees	10,770	10,770
8. Negotiation Fees	9,570	9,570
9. Utility Relocations**	180,195	180,195
10. City Inspection	59,810	59,810
11. Project Administration	35,880	35,880
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$1,761,462	\$1,761,462
R/W & Easement Acq.***	\$274,080	\$274,080
Total Project Cost *	\$2,035,542	\$2,035,542

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 4 : 151st Street from Switzer Road to Antioch Road

Share of Project	Project Totals	Overland Park 100.00%
	=====	=====
1. Construction Cost*	\$3,623,195	\$3,623,195
2. Est. Change Orders	253,620	253,620
3. Engineering		
Final Design	362,320	362,320
Consultant EDC	36,230	36,230
4. Material Testing	36,230	36,230
5. Legal Publications, Blueprinting, Misc.	36,230	36,230
6. Ownership Certificates	18,120	18,120
7. Appraisers Fees	32,610	32,610
8. Negotiation Fees	28,990	28,990
9. Utility Relocations**	952,700	952,700
10. City Inspection	181,160	181,160
11. Project Administration	108,700	108,700
	-----	-----
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$5,670,105	\$5,670,105
R/W & Easement Acq.***	\$479,835	\$479,835
	-----	-----
Total Project Cost *	\$6,149,940	\$6,149,940

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 5 : Quivira Road from 151st Street to 159th Street

Share of Project	Project Totals	Overland Park 100.00%
1. Construction Cost*	\$3,632,840	\$3, 632,840
2. Est. Change Orders	254,300	254,300
3. Engineering		
Final Design	363,280	363,280
Consultant EDC	36,330	36,330
4. Material Testing	36,330	36,330
5. Legal Publications, Blueprinting, Misc.	36,330	36,330
6. Ownership Certificates	18,160	18,160
7. Appraisers Fees	32,700	32,700
8. Negotiation Fees	29,060	29,060
9. Utility Relocations**	917,600	917,600
10. City Inspection	181,640	181,640
11. Project Administration	108,990	108,990
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$5,647,560	\$5,647,560
R/W & Easement Acq.***	\$662,110	\$662,110
Total Project Cost *	\$6,309,670	\$6,309,670

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 6 : Intersection at Quivira Road and 159th Street

Share of Project	Project Totals	Overland Park 75.00%	Johnson Co. 25.00%
1. Construction Cost*	\$1,676,260	\$1,257,195	\$419,065
2. Est. Change Orders	117,340	88,005	29,335
3. Engineering			
Final Design	201,150	150,863	50,287
Consultant EDC	16,760	12,570	4,190
4. Material Testing	16,760	12,570	4,190
5. Legal Publications, Blueprinting, Misc.	16,760	12,570	4,190
6. Ownership Certificates	8,380	6,285	2,095
7. Appraisers Fees	15,090	11,317	3,773
8. Negotiation Fees	13,410	10,058	3,352
9. Utility Relocations**	242,400	181,800	60,600
10. City Inspection	83,810	62,857	20,953
11. Project Administration	50,290	37,718	12,572
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$2,458,410	\$1,843,808	\$614,602
R/W & Easement Acq.***	\$423,375	\$317,531	\$105,844
Total Project Cost *	\$2,881,785	\$2,161,339	\$720,446

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 7 : Switzer Road from 151st Street to 159th Street

Share of Project	Project Totals	Overland Park 100.00%
	<hr/> <hr/>	
1. Construction Cost*	\$3,810,358	\$3, 810,358
2. Est. Change Orders	266,730	266,730
3. Engineering		
Final Design	381,040	381,040
Consultant EDC	38,100	38,100
4. Material Testing	38,100	38,100
5. Legal Publications, Blueprinting, Misc.	38,100	38,100
6. Ownership Certificates	19,050	19,050
7. Appraisers Fees	34,290	34,290
8. Negotiation Fees	30,480	30,480
9. Utility Relocations**	598,125	598,125
10. City Inspection	190,520	190,520
11. Project Administration	114,310	114,310
	<hr/>	
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$5,559,203	\$5,559,203
R/W & Easement Acq.***	\$675,490	\$675,490
	<hr/>	
Total Project Cost *	\$6,234,693	\$6,234,693

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

PROJECT COST SUMMARY

Section No. 8 : Intersection at Switzer Road and 159th Street

Share of Project	Project Totals	Overland Park 50.00%	Johnson Co. 50.00%
1. Construction Cost*	\$1,408,765	\$704,382	\$704,383
2. Est. Change Orders	98,610	49,305	49,305
3. Engineering			
Final Design	169,050	84,525	84,525
Consultant EDC	14,090	7,045	7,045
4. Material Testing	14,090	7,045	7,045
5. Legal Publications, Blueprinting, Misc.	14,090	7,045	7,045
6. Ownership Certificates	7,040	3,520	3,520
7. Appraisers Fees	12,680	6,340	6,340
8. Negotiation Fees	11,270	5,635	5,635
9. Utility Relocations**	291,425	145,713	145,712
10. City Inspection	70,440	35,220	35,220
11. Project Administration	42,260	21,130	21,130
Total Project Costs (Excl. R/W & Esmt. Acq.)	\$2,153,810	\$1,076,905	\$1,076,905
R/W & Easement Acq.***	\$399,970	\$199,985	\$199,985
Total Project Cost *	\$2,553,780	\$1,276,890	\$1,276,890

* Based on 2000 dollar values

** See "Utility Relocation Costs"

*** See "Right of Way & Acquisition Costs"

Funding Sources

Possible funding sources for these projects are:

- Johnson County Funds
- Kansas Department of Transportation
- Federal Funds – TEA21
- Other City Funding (Olathe)
- Pay-As-You-Go Funds
- General Obligation Bonds
- Excise Tax

Utility Relocation Costs

Based on preliminary information, it appears several of the existing utilities will need to be relocated. No subsurface investigations of existing facilities were performed during this study. Therefore, during final design additional information should be obtained to evaluate more accurately the possibility of avoiding some of the facilities that were assumed to need relocation in this study. The following tables provide a summary of potential utility relocations and opinions of relocation costs.

Section No. 1: Intersection at 151st Street and Quivira Road				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	36" Transmission Line	365	\$650.00	\$237,250.00
Water District No. 1	12" Waterline	65	\$265.00	\$17,225.00
Water District No. 1	8" Waterline	160	\$125.00	\$20,000.00
Water District No. 1	2" Waterline	215	\$75.00	\$16,125.00
Southwestern Bell Telephone	Fiber Optic Line	1110	\$100.00	\$111,000.00
Kansas City Power and Light	Overhead Power	870	\$150.00	\$130,500.00
Greeley Gas Company	4" Gas Line	50	\$80.00	\$4,000.00
			Sub-Total=	\$536,100.00

Section No. 2: 151st Street from Quivira Road to Switzer Road				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	12" Waterline	780	\$50.00	\$39,000.00
Water District No. 1	8" Waterline	790	\$125.00	\$98,750.00
Water District No. 1	6" Waterline	32	\$125.00	\$4,000.00
Water District No. 1	4" Waterline	40	\$100.00	\$4,000.00
Southwestern Bell Telephone	Fiber Optic Line	3000	\$100.00	\$300,000.00
Kansas City Power and Light	Overhead Power	1500	\$150.00	\$225,000.00
Greeley Gas Company	4" Gas Line	1500	\$80.00	\$120,000.00
Greeley Gas Company	1.25" Gas Line	70	\$40.00	\$2,800.00
			Sub-Total=	\$793,550.00

Section No. 3: Intersection at 151st Street and Switzer Road				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	8" Waterline	385	\$125.00	\$48,125.00
Water District No. 1	4" Waterline	24	\$100.00	\$2,400.00
Water District No. 1	3" Waterline	140	\$100.00	\$14,000.00
Southwestern Bell Telephone	Fiber Optic Line	370	\$100.00	\$37,000.00
Kansas City Power and Light	Overhead Power	425	\$150.00	\$63,750.00
Greeley Gas Company	4" Gas Line	124	\$80.00	\$9,920.00
Greeley Gas Company	2" Gas Line	50	\$60.00	\$3,000.00
Greeley Gas Company	1" Gas Line	50	\$40.00	\$2,000.00
			Sub-Total=	\$180,195.00

Section No. 4: 151st Street from Switzer Road to Antioch Road				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	8" Waterline	1395	\$125.00	\$174,375.00
Water District No. 1	6" Waterline	40	\$125.00	\$5,000.00
Water District No. 1	2" Waterline	35	\$75.00	\$2,625.00
Kansas Gas Service	2" Gas Line	140	\$60.00	\$8,400.00
Southwestern Bell Telephone	Fiber Optic Line	4499	\$100.00	\$449,900.00
Kansas City Power and Light	Overhead Power	1400	\$150.00	\$210,000.00
Greeley Gas Company	4" Gas Line	1280	\$80.00	\$102,400.00
			Sub-Total=	\$952,700.00

Section No. 5: Quivira Road from 151st Street to 159th Street				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	2" Waterline	2820	\$75.00	\$211,500.00
Water District No. 1	8" Waterline	1860	\$125.00	\$232,500.00
Southwestern Bell Telephone	Fiber Optic Line	1480	\$100.00	\$148,000.00
Kansas City Power and Light	Overhead Power	1480	\$150.00	\$222,000.00
Greeley Gas Company	3" Gas Line	1480	\$70.00	\$103,600.00
			Sub-Total=	\$917,600.00

Section No. 6: Intersection at Quivira Road and 151st Street				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	2" Waterline	100	\$75.00	\$7,500.00
Southwestern Bell Telephone	Fiber Optic Line	600	\$100.00	\$60,000.00
Kansas City Power and Light	Overhead Power	870	\$150.00	\$130,500.00
Greeley Gas Company	2" Gas Line	740	\$60.00	\$44,400.00
			Sub-Total=	\$242,400.00

Section No. 7: Switzer Road from 151st Street to 159th Street				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	8" Waterline	1463	\$125.00	\$182,875.00
Water District No. 1	6" Waterline	330	\$125.00	\$41,250.00
Southwestern Bell Telephone	Fiber Optic Line	1520	\$100.00	\$152,000.00
Kansas City Power and Light	Overhead Power	1480	\$150.00	\$222,000.00
			Sub-Total=	\$598,125.00

Section No. 8: Intersection at Switzer Road and 159th Street				
Utility Company	Description	Length (m)	Cost/m	Relocation Cost
Water District No. 1	8" Waterline	445	\$125.00	\$55,625.00
Water District No. 1	6" Waterline	55	\$125.00	\$6,875.00
Water District No. 1	1.5" Waterline	215	\$75.00	\$16,125.00
Kansas Gas Service	2" Gas Line	140	\$60.00	\$8,400.00
Southwestern Bell Telephone	Fiber Optic Line	295	\$100.00	\$29,500.00
Kansas City Power and Light	Overhead Power	870	\$150.00	\$130,500.00
Greeley Gas Company	2" Gas Line	740	\$60.00	\$44,400.00
			Sub-Total=	\$291,425.00

Right-of-Way Costs

Additional right-of-way and easements will be required for these projects as listed on the following pages. All right-of-way costs are based on information obtained from the City of Overland Park. Costs include right-of-way, drainage, retaining wall, and temporary construction easements.

The following unit costs were used to develop the proposed Right-of-Way costs for the different sections:

Temporary Construction Easement.....	\$4.84 per square meter
Permanent Drainage Easement.....	\$6.46 per square meter
Permanent Retaining Wall Easement.....	\$13.45 per square meter
Right-of-Way.....	\$16.15 per square meter

As part of the City's right-of-way acquisition procedures, when right-of-way is acquired from a property adjacent to a proposed thoroughfare roadway, the building setback line extends a distance of 9.144 m (30') beyond the proposed right-of-way. Due to the close proximity of some of the existing houses, some of the houses fall within the proposed building setback line. As part of this study, the houses that fall within the proposed building setback line will be designated as being removed.

The tracts of land that have structures, which will potentially need to be removed, are:

Tract no.'s 22, 29, 37, 65 and 134

The costs associated with the potential structure removals have been added into the right-of-way costs. An additional cost of \$100,000 was added to the right-of-way costs for each tract that has a house, which could potentially be removed. The actual value of each house will be determined during the appraisal process. This is to assist the City in determining the potential costs for right-of-way acquisition for each section.

Section No. 1: Intersection at 151st Street and Quivira Road:

OWNER (TRACT NO.)	EASEMENT TYPE	APPROX. AREA (S.M.)	APPROX. COST
Donna L. Gentile (59)	Temporary Construction	289	\$1400
	Right of Way	1222	\$19730
Daryl E. Schraad (57)	Temporary Construction	664	\$3215
	Right of Way	1120	\$18080
Daryl E. Schraad (3)	Temporary Construction	2643	\$12800
	Right of Way	2015	\$32535
Donald E. Eberling (1)	Temporary Construction	413	\$2000
Timothy P. Getzlaff (2)	Temporary Construction	377	\$1825
John W. Meyers (4)	Temporary Construction	3334	\$16150
	Right of Way	2231	\$36020
Unified School Dist. #229 (139)	Temporary Construction	1026	\$4970
Busch Voights Farms (6)	Temporary Construction	2278	\$11025
	Right of Way	2598	\$41960
Advent Lutheran Church (5)	Temporary Construction	856	\$4145
	Right of Way	846	\$13665
John R. Martin (58)	Temporary Construction	675	\$3270
	Right of Way	915	\$14775
Thomas M. Scofield (93)	Temporary Construction	675	\$3270
	Right of Way	915	\$14775
RIGHT-OF-WAY AND EASEMENT COSTS =			\$255,610
ACQUISITION COSTS =			<u>\$22,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$277,610</u>

Right-of-Way Costs (Cont'd.)

Section No. 2: 151st Street from Quivira Road to Switzer Road:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Advent Lutheran Church (5)	Temporary Construction	1195	\$5785
	Drainage	134	\$865
	Right of Way	1158	\$18700
Harmony View Acres (7-12)	Temporary Construction	5503	\$26635
	Drainage	349	\$2255
	Right of Way	3089	\$49890
Switzer Lake Estates (13, 15, 16, 18, 21, 23)	Temporary Construction	8268	\$40015
	Drainage	4011	\$25910
	Right of Way	1557	\$25145
	Retaining Wall	1155	\$15535
Busch Voights Farms (6)	Temporary Construction	6606	\$31975
	Drainage	838	\$5410
	Right of Way	4545	\$73385
Oxford Court (14, 17, 19, 20)	Temporary Construction	6022	\$29145
	Drainage	585	\$3780
	Right of Way	3134	\$50615
James R. Stark (22)	Temporary Construction	5031	\$24350
	Drainage	442	\$2855
	Right of Way	2088	\$33720
RIGHT-OF-WAY AND EASEMENT COSTS =			\$465,970
ACQUISITION COSTS =			<u>\$38,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$503,970</u>

Right-of-Way Costs (Cont'd.)

Section No. 3: Intersection at 151st Street and Switzer Road:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Switzer Lake Estates (24, 25, 60)	Temporary Construction Right of Way	2679 3460	\$12965 \$55880
James R. Stark (22)	Temporary Construction Right of Way	1145 856	\$5540 \$28825*
Doris J. Weatherford (29)	Temporary Construction Right of Way	1708 394	\$8265 \$106365*
Lloyd H. Doty, Jr. (28)	Temporary Construction Right of Way	756 343	\$3660 \$5540
James L. Deffke (27)	Temporary Construction Right of Way	367 335	\$1775 \$5410
William E. Garrett (26)	Temporary Construction Right of Way	364 794	\$1760 \$12820
Hilltop Acres (61)	Temporary Construction	677	\$3275
RIGHT-OF-WAY AND EASEMENT COSTS =			\$252,080
ACQUISITION COSTS =			<u>\$22,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$274,080</u>

*** Includes cost for acquiring houses and buildings**

Right-of-Way Costs (Cont'd.)

Section No. 4: 151st Street from Switzer Road to Antioch Road:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Lloyd H. Doty, Jr. (28)	Temporary Construction	770	\$3725
	Right of Way	263	\$4250
Hilltop Acres (32, 33)	Temporary Construction	2327	\$11260
	Drainage	469	\$3030
	Right of Way	658	\$10625
D. W. Bell (35)	Temporary Construction	915	\$4430
	Right of Way	615	\$9930
Orville R. Olson (38)	Temporary Construction	3066	\$14850
	Drainage	67	\$430
	Right of Way	2470	\$39880
Carriage Hills of Wellington Park (41-44, 46-48)	Temporary Construction	1293	\$6265
South Overland Park City Hall Annex (49)	Temporary Construction	1718	\$8315
Johnson Co. Library (55)	Temporary Construction	150	\$725
Highwoods Reality (56)	Temporary Construction	1189	\$5755
	Right of Way	742	\$11985
Edwin Weatherford (31)	Temporary Construction	1252	\$6060
	Drainage	583	\$3765
	Right of Way	836	\$13500
John E. Weatherford (34)	Temporary Construction	161	\$780
	Drainage	1751	\$11310
	Right of Way	836	\$13500
Jerald F. Davis (36)	Temporary Construction	56	\$270
	Right of Way	66	\$1065
Jerald F. Davis (37)	Temporary Construction	2249	\$10885
	Right of Way	350	\$105650

Right-of-Way Costs (Cont'd.)

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Victor L. Regnier (39)	Temporary Construction Right of Way	3383 2443	\$16390 \$39445
Frederick J. Scudiero (40)	Temporary Construction Right of Way	725 608	\$3510 \$9815
Galen E. Lowman (45)	Temporary Construction Right of Way	593 589	\$2870 \$9510
Deborah K. Guthrie (50)	Temporary Construction Right of Way	919 474	\$4450 \$7655
Oxford Ranch (51, 52, 53)	Temporary Construction Right of Way	1348 1213	\$6530 \$19585
Blue Valley Baptist Church (54)	Temporary Construction	1206	\$5835
RIGHT-OF-WAY AND EASEMENT COSTS =			\$427,835
ACQUISITION COSTS =			<u>\$52,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$479,835</u>

*** Includes cost for acquiring houses and buildings**

Right-of-Way Costs (Cont'd.)

Section No. 5: Quivira Road from 159th Street to 151st Street:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Walter M. Copp (97)	Temporary Construction	1840	\$8905
Miller Family Trust (98)	Temporary Construction Right of Way	260 422	\$1260 \$6815
Gloria F. Fields (99)	Temporary Construction Right of Way	624 1078	\$3020 \$17410
Donald M. Ward (100)	Temporary Construction	2090	\$10115
Dorothy R. Joergens (101)	Temporary Construction Right of Way	383 534	\$1855 \$8625
Diane Harris Trust (102)	Temporary Construction Right of Way	500 534	\$2420 \$8625
Kathryn O. K. Markovich (103)	Temporary Construction Right of Way	1983 1075	\$9600 \$17360
John R. Fifield (104)	Temporary Construction Right of Way	3756 3321	\$18180 \$53635
Harmony South (105, 106, 109, 110)	Temporary Construction Right of Way	2560 1357	\$12390 \$21915
John R. Fifield (111)	Temporary Construction	183	\$885
Charlyn R. Fifield (107)	Temporary Construction Right of Way	547 558	\$2650 \$9010
John R. Fifield (108)	Temporary Construction Right of Way	1872 2731	\$9060 \$44105
Robert S. Ball (112)	Temporary Construction Right of Way	153 534	\$740 \$8625
Robert W. Shumate (115)	Temporary Construction Right of Way	477 535	\$2310 \$108340*
John R. Fifield (113)	Temporary Construction	19	\$90

Right-of-Way Costs (Cont'd.)

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Richard F. Moore (114)	Temporary Construction	82	\$395
Richard F. Moore (116)	Temporary Construction	45	\$220
Richard F. Moore (117)	Temporary Construction	49	\$240
Janet I. Benton (118)	Temporary Construction	181	\$875
	Right of Way	535	\$8640
Janet I. Benton (119)	Temporary Construction	199	\$965
	Right of Way	370	\$5975
Morse Village (123, 126, 129, 132, 134)	Temporary Construction	1751	\$8475
	Drainage	329	\$2125
	Right of Way	4261	\$68815
John R. Fifield (120)	Temporary Construction	87	\$420
Richard F. Moore (121)	Temporary Construction	87	\$420
Leland Brown Investments (122)	Temporary Construction	174	\$840
Overland Park Historical Society (124)	Temporary Construction	174	\$840
Glennis M. Hughes (125)	Temporary Construction	192	\$930
Robert A. Rex (127)	Temporary Construction	174	\$840
Howard L. Biven (128)	Temporary Construction	174	\$840
Thomas R. Hinson (130)	Temporary Construction	207	\$1000
Rick Pribyl (131)	Temporary Construction	400	\$1935
	Right of Way	133	\$2150
Bush Voigts Farms (6)	Temporary Construction	2661	\$12880
	Drainage	146	\$945
	Right of Way	3694	\$59660
Unified School Dist. #229 (139)	Temporary Construction	1855	\$8980

Right-of-Way Costs (Cont'd.)

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
John W. Meyers Trust (4)	Temporary Construction	406	\$1965
	Right of Way	297	\$4795
<hr/>			
RIGHT-OF-WAY AND EASEMENT COSTS =			\$584,110
ACQUISITION COSTS =			<u>\$78,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$662,110</u>

*** Includes cost for acquiring houses and buildings**

Right-of-Way Costs (Cont'd.)

Section No. 6: Intersection at Quivira Road and 159th Street:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Lloyd O. Moore (133)	Temporary Construction	667	\$3230
	Right of Way	854	\$13790
William L. Ward (95)	Temporary Construction	3570	\$17280
	Right of Way	4620	\$74615
Dale F. Jenkins (96)	Temporary Construction	2245	\$10865
	Right of Way	6773	\$109385
Walter M. Copp (97)	Temporary Construction	2633	\$12745
	Drainage	167	\$1080
Miller Family Trust (98)	Temporary Construction	1224	\$5925
	Right of Way	1885	\$30445
W. S. Franz (134)	Temporary Construction	868	\$4200
	Right of Way	968	\$115635*
Edward J. McDevitt (135)	Right of Way	598	\$9660
Edward J. McDevitt (136)	Drainage	80	\$520
RIGHT-OF-WAY AND EASEMENT COSTS =			\$409,375
ACQUISITION COSTS =			<u>\$14,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$423,375</u>

*** Includes cost for acquiring houses and buildings**

Right-of-Way Costs (Cont'd.)

Section No. 7: Switzer Road from 159th Street to 151st Street:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Tu Lakes (70, 74, 77)	Temporary Construction Right of Way	2265 1881	\$10970 \$30380
Dale F. Jenkins (80)	Temporary Construction Right of Way	1589 1746	\$7695 \$28190
James R. Miller (83)	Temporary Construction Right of Way	143 158	\$690 \$2550
Dale F. Jenkins (84)	Temporary Construction Right of Way	1724 3378	\$8350 \$54540
Sharonlane Inc. (87)	Temporary Construction Right of Way	3378 2669	\$16360 \$43095
Bernard A. Bianchino (89)	Temporary Construction Right of Way	1243 1624	\$6020 \$26220
Bernard A. Bianchino (90)	Temporary Construction Right of Way	512 983	\$2480 \$15870
James R. Stark (22)	Temporary Construction Right of Way	5492 5303	\$26580 \$85645
Douglas R. Dexheimer (71)	Temporary Construction Right of Way	262 472	\$1270 \$7625
Edgar M. Meacham (73)	Temporary Construction Right of Way	573 1023	\$2775 \$16520
Richard G. Chapman (75)	Temporary Construction Right of Way	571 1028	\$2765 \$16600
Ronald L. Highland (78)	Temporary Construction	421	\$2040
Michael H. Jaben (79)	Temporary Construction Right of Way	459 783	\$2225 \$12640
Pleasant Valley Farms (81, 82, 85, 86)	Temporary Construction Right of Way	3201 1910	\$15505 \$30840

Right-of-Way Costs (Cont'd.)

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Town and Country Manor (88)	Temporary Construction	3447	\$16695
	Right of Way	4265	\$68860
	Drainage	15	\$100
Edwin Weatherford (91)	Temporary Construction	384	\$1860
	Right of Way	667	\$10770
Elizabeth A. Miller (92)	Temporary Construction	123	\$595
	Right of Way	214	\$3455
David D. Casey (93)	Temporary Construction	386	\$1870
	Right of Way	677	\$10930
Arvin R. Lindner (94)	Temporary Construction	697	\$3375
	Drainage	72	\$465
	Right of Way	702	\$11340
John E. Weatherford (34)	Temporary Construction	670	\$3245
	Right of Way	385	\$6220
W. R. Doolittle (30)	Temporary Construction	628	\$3040
	Right of Way	386	\$6230
RIGHT-OF-WAY AND EASEMENT COSTS =			\$625,490
ACQUISITION COSTS =			<u>\$50,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$675,490</u>

Right-of-Way Costs (Cont'd.)

Section No. 8: Intersection at Switzer Road and 159th Street:

<u>OWNER (TRACT NO.)</u>	<u>EASEMENT TYPE</u>	<u>APPROX. AREA (S.M.)</u>	<u>APPROX. COST</u>
Tu Lakes (69, 70)	Temporary Construction Right of Way	2083 1504	\$10080 \$24290
Seested Estates (64, 67, 68)	Temporary Construction Right of Way	2358 775	\$11420 \$12515
Karl T. Seested (62)	Temporary Construction Right of Way	1415 1176	\$6850 \$18990
James L. Young (63)	Temporary Construction Right of Way	496 1164	\$2400 \$18800
Ernest H. Pottle (65)	Temporary Construction Right of Way	1477 2915	\$7150 \$147,065*
Mary L. Mozier (66)	Temporary Construction Right of Way	978 1484	\$4735 \$23970
Daniel L. Lorimer (137)	Right of Way	631	\$10190
Joseph A. Battaglia (138)	Right of Way	1035	\$16715
Edward J. Grogan (72)	Temporary Construction Right of Way	765 1359	\$3705 \$21940
Douglas R. Dexheimer (71)	Temporary Construction Right of Way	778 1696	\$3765 \$27390
RIGHT-OF-WAY AND EASEMENT COSTS =			\$371,970
ACQUISITION COSTS =			<u>\$28,000</u>
TOTAL RIGHT-OF-WAY AND EASEMENT COSTS =			<u>\$399,970</u>

*** Includes cost for acquiring house**

Construction Costs

Detailed “Preliminary Opinions of Probable Cost” are shown in Tables 1 – 8. Preliminary quantities and construction costs are divided between Overland Park, Olathe and Johnson County. Separate quantities and construction costs have been figured for each of the following:

- Table 1: Section No. 1: Intersection at 151st Street and Quivira Road
- Table 2: Section No. 2: 151st Street from Quivira Road to Switzer Road
- Table 3: Section No. 3: Intersection at 151st Street and Switzer Road
- Table 4: Section No. 4: 151st Street from Switzer Road to Antioch Road
- Table 5: Section No. 5: Quivira Road from 151st Street to 159th Street
- Table 6: Section No. 6: Intersection at Quivira Road and 159th Street
- Table 7: Section No. 7: Switzer Road from 151st Street to 159th Street
- Table 8: Section No. 8: Intersection at Switzer Road and 159th Street

QUANTITIES / CONSTRUCTION COST*									
Section No. 1: Intersection at 151st Street and Quivira Road			Overland Park		Olathe		TOTAL		
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$20,000.00	Lump Sum	\$10,000.00	Lump Sum	\$10,000.00	Lump Sum	\$20,000.00
2	Removal of Existing Structures	Lump Sum	\$20,000.00	Lump Sum	\$10,000.00	Lump Sum	\$10,000.00	Lump Sum	\$20,000.00
3	Force Account (Set)	Lump Sum	\$20,000.00	Lump Sum	\$10,000.00	Lump Sum	\$10,000.00	Lump Sum	\$20,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	8123.5	\$81,235.00	8123.5	\$81,235.00	16247	\$162,470.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	1147.5	\$2,295.00	1147.5	\$2,295.00	2295	\$4,590.00
6	Asphaltic Concrete Surface Course	Megagram	\$45.00	582.5	\$26,212.50	582.5	\$26,212.50	1165	\$52,425.00
7	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	3235	\$129,400.00	3235	\$129,400.00	6470	\$258,800.00
8	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	6968.5	\$17,421.25	6968.5	\$17,421.25	13937	\$34,842.50
9	Fly Ash	Megagram	\$35.00	392.5	\$13,737.50	392.5	\$13,737.50	785	\$27,475.00
10	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	7031	\$45,701.50	7031	\$45,701.50	14062	\$91,403.00
11	Temporary Surfacing (Asphalt)	Megagram	\$49.00	691	\$33,859.00	691	\$33,859.00	1382	\$67,718.00
12	Driveway Replacement (Asphalt)	Megagram	\$49.00	59.5	\$2,915.50	59.5	\$2,915.50	119	\$5,831.00
13	Combined Curb and Gutter	Lin. Meter	\$40.00	419	\$16,760.00	419	\$16,760.00	838	\$33,520.00
14	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	412.5	\$12,375.00	412.5	\$12,375.00	825	\$24,750.00
15	Concrete Median Nose	Each	\$1,070.00	2	\$2,140.00	2	\$2,140.00	4	\$4,280.00
16	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	40	\$2,080.00	40	\$2,080.00	80	\$4,160.00
17	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	651	\$19,530.00	651	\$19,530.00	1302	\$39,060.00
18	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	12	\$720.00	12	\$720.00	24	\$1,440.00
19	Bike Path	Megagram	\$89.00	50.5	\$4,494.50	50.5	\$4,494.50	101	\$8,989.00
20	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	113	\$14,690.00	113	\$14,690.00	226	\$29,380.00
21	450 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$165.00	11.5	\$1,897.50	11.5	\$1,897.50	23	\$3,795.00
22	600 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$180.00	56.5	\$10,170.00	56.5	\$10,170.00	113	\$20,340.00
23	600 mm End Section (R.C. Class III)	Each	\$375.00	1	\$375.00	1	\$375.00	2	\$750.00
24	Inlet (Curb) (Complete)	Each	\$2,900.00	6	\$17,400.00	6	\$17,400.00	12	\$34,800.00
25	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	419	\$15,503.00	419	\$15,503.00	838	\$31,006.00
26	Traffic Signal Installations (Quivira Road)	Lump Sum	\$120,000.00	Lump Sum	\$60,000.00	Lump Sum	\$60,000.00	Lump Sum	\$120,000.00
27	Traffic Control	Lump Sum	\$30,000.00	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00	Lump Sum	\$30,000.00
28	Permanent Pavement Marking and Signing	Lump Sum	\$12,500.00	Lump Sum	\$6,250.00	Lump Sum	\$6,250.00	Lump Sum	\$12,500.00
29	Fencing	Lin. Meter	\$30.00	23	\$690.00	23	\$690.00	46	\$1,380.00
30	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	95.5	\$286.50	95.5	\$286.50	191	\$573.00
31	Fescue Seed Mix	Ha	\$1,000.00	0.38	\$375.00	0.38	\$375.00	0.75	\$750.00
32	Buffalo Grass Seed	Ha	\$6,500.00	0.07	\$422.50	0.07	\$422.50	0.13	\$845.00
33	Temporary Water Pollution Control	Lump Sum	\$2,000.00	Lump Sum	\$1,000.00	Lump Sum	\$1,000.00	Lump Sum	\$2,000.00
34	Project Sign	Each	\$500.00	0.5	\$250.00	0.5	\$250.00	1	\$500.00
35	Land Corner Monument Box	Each	\$800.00	0.5	\$400.00	0.5	\$400.00	1	\$800.00
36	Contractor Construction Staking	Lump Sum	\$18,000.00	Lump Sum	\$9,000.00	Lump Sum	\$9,000.00	Lump Sum	\$18,000.00
	Sub-Total				\$594,586.25		\$594,586.25		\$1,189,172.50
	Contingency (15%)				\$89,187.94		\$89,187.94		\$178,375.88
	GRAND TOTAL				\$683,774.19		\$683,774.19		\$1,367,548.38
	Percentage Share of Total Construction cost				50.00%		50.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 1
Preliminary Opinions of Probable Cost

Section No. 2: 151st Street from Quivira Road to Switzer Road									
QUANTITIES / CONSTRUCTION COST*									
				Overland Park		Olathe		TOTAL	
Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total	Approx. Quantity	Total	
1	Clearing and Grubbing	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$20,000.00	Lump Sum	\$80,000.00
2	Removal of Existing Structures	Lump Sum	\$135,000.00	Lump Sum	\$101,250.00	Lump Sum	\$33,750.00	Lump Sum	\$135,000.00
3	Force Account (Set)	Lump Sum	\$50,000.00	Lump Sum	\$37,500.00	Lump Sum	\$12,500.00	Lump Sum	\$50,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	13328	\$133,280.00	4443	\$44,430.00	17772	\$177,720.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	56985	\$113,970.00	18995	\$37,990.00	75980	\$151,960.00
6	Embankment (Contractor Furnished)	Cu. Meter	\$11.00	54415.5	\$598,570.50	18138.5	\$199,523.50	72554	\$798,094.00
7	Asphaltic Concrete Surface Course	Megagram	\$45.00	2033.25	\$91,496.25	677.75	\$30,498.75	2711	\$121,995.00
8	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	11461.5	\$458,460.00	3820.5	\$152,820.00	15282	\$611,280.00
9	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	25659.75	\$64,149.38	8553.25	\$21,383.13	34213	\$85,532.50
10	Fly Ash	Megagram	\$35.00	1446	\$50,610.00	482	\$16,870.00	1926	\$67,480.00
11	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	26013.75	\$169,089.38	8871.25	\$57,663.13	34685	\$225,452.50
12	Temporary Surfacing (Asphalt)	Megagram	\$49.00	1450.5	\$71,074.50	483.5	\$23,691.50	1934	\$94,766.00
13	Driveway Replacement (Asphalt)	Megagram	\$49.00	67.75	\$4,299.75	29.25	\$1,433.25	117	\$5,733.00
14	Integral Sidewalk Retaining Wall	Lin. Meter	\$400.00	208.6	\$83,400.00	69.6	\$27,800.00	278	\$111,200.00
15	Class AAA Concrete (AE) (Form Liner Wall)	Cu. Meter	\$650.00	440.25	\$286,162.50	146.75	\$95,387.50	567	\$381,550.00
16	Masonry Surface Treatment	Sq. Meter	\$70.00	1053	\$73,710.00	351	\$24,570.00	1404	\$98,280.00
17	Class AAA Concrete (AE) (RCB)	Cu. Meter	\$650.00	396	\$257,400.00	132	\$85,800.00	528	\$343,200.00
18	Combined Curb and Gutter	Lin. Meter	\$40.00	2355.75	\$94,230.00	785.25	\$31,410.00	3141	\$125,640.00
19	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	2100	\$63,000.00	700	\$21,000.00	2800	\$84,000.00
20	Concrete Median Nose	Each	\$1,070.00	4.5	\$4,815.00	1.5	\$1,605.00	6	\$6,420.00
21	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	255	\$13,260.00	85	\$4,420.00	340	\$17,680.00
22	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	1661.25	\$49,837.50	553.75	\$16,612.50	2215	\$66,450.00
23	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	101.25	\$6,075.00	33.75	\$2,025.00	135	\$8,100.00
24	Bike Path	Megagram	\$89.00	581.25	\$51,731.25	193.75	\$17,243.75	775	\$68,975.00
25	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	495	\$64,350.00	165	\$21,450.00	660	\$85,800.00
26	450 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$165.00	118.5	\$19,552.50	39.5	\$6,517.50	158	\$26,070.00
27	600 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$180.00	117.75	\$21,195.00	39.25	\$7,065.00	157	\$28,260.00
28	750 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$200.00	205.25	\$41,250.00	68.75	\$13,750.00	275	\$55,000.00
29	900 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$225.00	72.75	\$16,368.75	24.25	\$5,456.25	97	\$21,825.00
30	1075 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$350.00	36	\$12,600.00	12	\$4,200.00	48	\$16,800.00
31	1500 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$450.00	44.25	\$19,912.50	14.75	\$6,637.50	59	\$26,550.00
32	800 mm End Section (R.C. Class III)	Each	\$375.00	1.5	\$562.50	0.5	\$187.50	2	\$750.00
33	900 mm End Section (R.C. Class III)	Each	\$670.00	0.75	\$502.50	0.25	\$167.50	1	\$670.00
34	1500 mm End Section (R.C. Class III)	Each	\$1,000.00	1.5	\$1,500.00	0.5	\$500.00	2	\$2,000.00
35	Inlet (Curb) (Complete)	Each	\$2,900.00	31.5	\$91,350.00	10.5	\$30,450.00	42	\$121,800.00
36	Inlet (Area) (Complete)	Each	\$2,900.00	2.25	\$6,525.00	0.75	\$2,175.00	3	\$8,700.00
37	Stone Riprap (1/4 Ton)	Sq. Meter	\$32.00	231.75	\$7,416.00	77.25	\$2,472.00	309	\$9,888.00
38	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	2355.75	\$87,162.75	785.25	\$29,054.25	3141	\$116,217.00
39	Adjustment of Sanitary Manhole	Each	\$1,100.00	3	\$3,300.00	1	\$1,100.00	4	\$4,400.00
40	Electric Lighting System	Lump Sum	\$180,000.00	Lump Sum	\$135,000.00	Lump Sum	\$45,000.00	Lump Sum	\$180,000.00
41	Fiber Optic Conduit	Lump Sum	\$80,000.00	Lump Sum	\$60,000.00	Lump Sum	\$20,000.00	Lump Sum	\$80,000.00
42	Traffic Control	Lump Sum	\$200,000.00	Lump Sum	\$150,000.00	Lump Sum	\$50,000.00	Lump Sum	\$200,000.00
43	Permanent Pavement Marking and Signing	Lump Sum	\$25,000.00	Lump Sum	\$18,750.00	Lump Sum	\$6,250.00	Lump Sum	\$25,000.00
44	Fencing	Lin. Meter	\$30.00	716.25	\$21,487.50	238.75	\$7,162.50	955	\$28,650.00
45	Lawn Sprinkler System	Lump Sum	\$15,000.00	Lump Sum	\$11,250.00	Lump Sum	\$3,750.00	Lump Sum	\$15,000.00
46	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	1050	\$3,150.00	350	\$1,050.00	1400	\$4,200.00
47	Fescue Seed Mix	Ha	\$1,000.00	2.25	\$2,250.00	0.75	\$750.00	3	\$3,000.00
48	Buffalo Grass Seed	Ha	\$8,500.00	0.61	\$5,185.00	0.2	\$1,700.00	0.81	\$6,885.00
49	Temporary Water Pollution Control	Lump Sum	\$4,000.00	Lump Sum	\$3,000.00	Lump Sum	\$1,000.00	Lump Sum	\$4,000.00
50	Project Sign	Each	\$500.00	0.75	\$375.00	0.25	\$125.00	1	\$500.00
51	Land Corner Monument Box	Each	\$800.00	0.75	\$600.00	0.25	\$200.00	1	\$800.00
52	Contractor Construction Staking	Lump Sum	\$75,000.00	Lump Sum	\$56,250.00	Lump Sum	\$18,750.00	Lump Sum	\$75,000.00
Sub-Total					\$3,796,989.76		\$1,255,663.25		\$5,052,653.00
Contingency (15%)					\$569,548.46		\$189,849.49		\$759,397.95
GRAND TOTAL					\$4,366,538.22		\$1,445,512.75		\$5,812,050.95
Percentage Share of Total Construction cost					75.00%		25.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 2
Preliminary Opinions of Probable Cost

QUANTITIES / CONSTRUCTION COST*							
Section No. 3: Intersection at 151st Street and Switzer Road			Overland Park			TOTAL	
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$20,000.00	Lump Sum	\$20,000.00	Lump Sum	\$20,000.00
2	Removal of Existing Structures	Lump Sum	\$20,000.00	Lump Sum	\$20,000.00	Lump Sum	\$20,000.00
3	Force Account (Set)	Lump Sum	\$20,000.00	Lump Sum	\$20,000.00	Lump Sum	\$20,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	17684	\$176,840.00	17684	\$176,840.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	253	\$506.00	253	\$506.00
6	Asphaltic Concrete Surface Course	Megagram	\$45.00	881	\$39,645.00	881	\$39,645.00
7	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	4981	\$199,240.00	4981	\$199,240.00
8	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	10719	\$26,797.50	10719	\$26,797.50
9	Fly Ash	Megagram	\$35.00	604	\$21,140.00	604	\$21,140.00
10	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	10804	\$70,226.00	10804	\$70,226.00
11	Temporary Surfacing (Asphalt)	Megagram	\$49.00	1382	\$67,718.00	1382	\$67,718.00
12	Driveway Replacement (Asphalt)	Megagram	\$49.00	87	\$4,263.00	87	\$4,263.00
13	Integral Sidewalk Retaining Wall	Lin. Meter	\$400.00	56	\$22,400.00	56	\$22,400.00
14	Combined Curb and Gutter	Lin. Meter	\$40.00	568	\$22,720.00	568	\$22,720.00
15	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	971	\$29,130.00	971	\$29,130.00
16	Concrete Median Nose	Each	\$1,070.00	4	\$4,280.00	4	\$4,280.00
17	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	200	\$10,400.00	200	\$10,400.00
18	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	669	\$20,070.00	669	\$20,070.00
19	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	18	\$1,080.00	18	\$1,080.00
20	Bike Path	Megagram	\$89.00	50	\$4,450.00	50	\$4,450.00
21	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	25	\$3,250.00	25	\$3,250.00
22	600 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$180.00	25	\$4,500.00	25	\$4,500.00
23	900 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$225.00	97	\$21,825.00	97	\$21,825.00
24	600 mm End Sections (R.C. Class III)	Each	\$375.00	2	\$750.00	2	\$750.00
25	Inlet (Curb) (Complete)	Each	\$2,900.00	3	\$8,700.00	3	\$8,700.00
26	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	568	\$21,016.00	568	\$21,016.00
27	Traffic Signal Installations (Switzer Road)	Lump Sum	\$120,000.00	Lump Sum	\$120,000.00	Lump Sum	\$120,000.00
28	Traffic Control	Lump Sum	\$30,000.00	Lump Sum	\$30,000.00	Lump Sum	\$30,000.00
29	Permanent Pavement Marking and Signing	Lump Sum	\$6,500.00	Lump Sum	\$6,500.00	Lump Sum	\$6,500.00
30	Lawn Sprinkler System	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00
31	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	1285	\$3,855.00	1285	\$3,855.00
32	Fescue Seed Mix	Ha	\$1,000.00	0.3	\$300.00	0.3	\$300.00
33	Buffalo Grass Seed	Ha	\$6,500.00	0.8	\$5,200.00	0.8	\$5,200.00
34	Temporary Water Pollution Control	Lump Sum	\$2,000.00	Lump Sum	\$2,000.00	Lump Sum	\$2,000.00
35	Project Sign	Each	\$500.00	1	\$500.00	1	\$500.00
36	Land Corner Monument Box	Each	\$800.00	1	\$800.00	1	\$800.00
37	Contractor Construction Staking	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00
	Sub-Total				\$1,040,101.50		\$1,040,101.50
	Contingency (15%)				\$156,015.23		\$156,015.23
	GRAND TOTAL				\$1,196,116.73		\$1,196,116.73
	Percentage Share of Total Construction cost				100.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 3
Preliminary Opinions of Probable Cost

QUANTITIES / CONSTRUCTION COST*							
Section No. 4: 151st Street from Switzer Road to Antioch Road				Overland Park		TOTAL	
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00
2	Removal of Existing Structures	Lump Sum	\$135,000.00	Lump Sum	\$135,000.00	Lump Sum	\$135,000.00
3	Force Account (Set)	Lump Sum	\$50,000.00	Lump Sum	\$50,000.00	Lump Sum	\$50,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	22065	\$220,650.00	22065	\$220,650.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	18181	\$36,362.00	18181	\$36,362.00
6	Embankment (Contractor Furnished)	Cu. Meter	\$11.00	630	\$6,930.00	630	\$6,930.00
7	Asphaltic Concrete Surface Course	Megagram	\$45.00	2297	\$103,365.00	2297	\$103,365.00
8	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	13196	\$527,840.00	13196	\$527,840.00
9	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	29679	\$74,197.50	29679	\$74,197.50
10	Fly Ash	Megagram	\$35.00	1672	\$58,520.00	1672	\$58,520.00
11	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	29681	\$192,926.50	29681	\$192,926.50
12	Temporary Surfacing (Asphalt)	Megagram	\$49.00	1934	\$94,766.00	1934	\$94,766.00
13	Driveway Replacement (Asphalt)	Megagram	\$49.00	83	\$4,067.00	83	\$4,067.00
14	Integral Sidewalk Retaining Wall	Lin. Meter	\$400.00	60	\$24,000.00	60	\$24,000.00
15	Combined Curb and Gutter	Lin. Meter	\$40.00	2808	\$112,320.00	2808	\$112,320.00
16	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	2719	\$81,570.00	2719	\$81,570.00
17	Concrete Median Nose	Each	\$1,070.00	8	\$8,560.00	8	\$8,560.00
18	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	140	\$7,280.00	140	\$7,280.00
19	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	2060	\$61,800.00	2060	\$61,800.00
20	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	130	\$7,800.00	130	\$7,800.00
21	Bike Path	Megagram	\$89.00	903	\$80,367.00	903	\$80,367.00
22	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	494	\$64,220.00	494	\$64,220.00
23	450 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$165.00	121	\$19,965.00	121	\$19,965.00
24	600 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$180.00	376	\$67,680.00	376	\$67,680.00
25	750 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$200.00	123	\$24,600.00	123	\$24,600.00
26	900 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$225.00	316	\$71,100.00	316	\$71,100.00
27	1075 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$350.00	63	\$22,050.00	63	\$22,050.00
28	Inlet (Curb) (Complete)	Each	\$2,900.00	31	\$89,900.00	31	\$89,900.00
29	Inlet (Area) (Complete)	Each	\$2,900.00	1	\$2,900.00	1	\$2,900.00
30	Class AAA Concrete (AE) (RCB)	Cu. Meter	\$650.00	198	\$128,700.00	198	\$128,700.00
31	Stone Riprap (1/4 Ton)	Sq. Meter	\$32.00	448	\$14,336.00	448	\$14,336.00
32	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	2808	\$103,896.00	2808	\$103,896.00
33	Adjustment of Sanitary Manhole	Each	\$1,100.00	1	\$1,100.00	1	\$1,100.00
34	Electric Lighting System	Lump Sum	\$180,000.00	Lump Sum	\$180,000.00	Lump Sum	\$180,000.00
35	Fiber Optic Conduit	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00
36	Traffic Control	Lump Sum	\$160,000.00	Lump Sum	\$160,000.00	Lump Sum	\$160,000.00
37	Permanent Pavement Marking and Signing	Lump Sum	\$25,000.00	Lump Sum	\$25,000.00	Lump Sum	\$25,000.00
38	Fencing	Lin. Meter	\$30.00	1453	\$43,590.00	1453	\$43,590.00
39	Lawn Sprinkler System	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00
40	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	3157	\$9,471.00	3157	\$9,471.00
41	Fescue Seed Mix	Ha	\$1,000.00	1.6	\$1,600.00	1.6	\$1,600.00
42	Buffalo Grass Seed	Ha	\$6,500.00	0.75	\$4,875.00	0.75	\$4,875.00
43	Temporary Water Pollution Control	Lump Sum	\$4,000.00	Lump Sum	\$4,000.00	Lump Sum	\$4,000.00
44	Project Sign	Each	\$500.00	1	\$500.00	1	\$500.00
45	Land Corner Monument Box	Each	\$800.00	1	\$800.00	1	\$800.00
46	Contractor Construction Staking	Lump Sum	\$47,000.00	Lump Sum	\$47,000.00	Lump Sum	\$47,000.00
	Sub-Total				\$3,150,604.00		\$3,150,604.00
	Contingency (15%)				\$472,590.60		\$472,590.60
	GRAND TOTAL				\$3,623,194.60		\$3,623,194.60
	Percentage Share of Total Construction cost				100.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 4
Preliminary Opinions of Probable Cost

QUANTITIES / CONSTRUCTION COST*							
Section No. 5: Quivira Road from 151st Street to 159th Street				Overland Park		TOTAL	
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00
2	Removal of Existing Structures	Lump Sum	\$135,000.00	Lump Sum	\$135,000.00	Lump Sum	\$135,000.00
3	Force Account (Set)	Lump Sum	\$50,000.00	Lump Sum	\$50,000.00	Lump Sum	\$50,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	38706	\$387,060.00	38706	\$387,060.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	7306	\$14,612.00	7306	\$14,612.00
6	Asphaltic Concrete Surface Course	Megagram	\$45.00	2404	\$108,180.00	2404	\$108,180.00
7	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	13567	\$542,680.00	13567	\$542,680.00
8	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	29910	\$74,775.00	29910	\$74,775.00
9	Fly Ash	Megagram	\$35.00	1888	\$59,010.00	1888	\$59,010.00
10	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	30728	\$199,732.00	30728	\$199,732.00
11	Temporary Surfacing (Asphalt)	Megagram	\$49.00	1934	\$94,766.00	1934	\$94,766.00
12	Driveway Replacement (Asphalt)	Megagram	\$49.00	93	\$4,557.00	93	\$4,557.00
12	Class AAA Concrete (AE) (RCB)	Cu. Meter	\$650.00	123	\$79,950.00	123	\$79,950.00
13	Combined Curb and Gutter	Lin. Meter	\$40.00	2976	\$119,040.00	2976	\$119,040.00
14	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	2727	\$81,810.00	2727	\$81,810.00
15	Concrete Median Nose	Each	\$1,070.00	4	\$4,280.00	4	\$4,280.00
16	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	547	\$28,444.00	547	\$28,444.00
17	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	2164	\$64,920.00	2164	\$64,920.00
18	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	352	\$21,120.00	352	\$21,120.00
17	Bike Path	Megagram	\$89.00	987	\$87,843.00	987	\$87,843.00
19	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	469	\$60,970.00	469	\$60,970.00
20	450 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$165.00	83	\$13,695.00	83	\$13,695.00
21	600 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$180.00	783	\$140,940.00	783	\$140,940.00
22	750 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$200.00	16	\$3,200.00	16	\$3,200.00
23	Inlet (Curb) (Complete)	Each	\$2,900.00	24	\$69,600.00	24	\$69,600.00
24	Junction Box (Complete)	Each	\$2,900.00	1	\$2,900.00	1	\$2,900.00
25	Stone Riprap (1/4 Ton)	Sq. Meter	\$32.00	95	\$3,040.00	95	\$3,040.00
26	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	2976	\$110,112.00	2976	\$110,112.00
27	Electric Lighting System	Lump Sum	\$180,000.00	Lump Sum	\$180,000.00	Lump Sum	\$180,000.00
28	Fiber Optic Conduit	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00
29	Traffic Control	Lump Sum	\$160,000.00	Lump Sum	\$160,000.00	Lump Sum	\$160,000.00
30	Permanent Pavement Marking and Signing	Lump Sum	\$25,000.00	Lump Sum	\$25,000.00	Lump Sum	\$25,000.00
31	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	3950	\$11,850.00	3950	\$11,850.00
32	Fescue Seed Mix	Ha	\$1,000.00	2.08	\$2,080.00	2.08	\$2,080.00
33	Buffalo Grass Seed	Ha	\$6,500.00	0.85	\$5,525.00	0.85	\$5,525.00
34	Temporary Water Pollution Control	Lump Sum	\$4,000.00	Lump Sum	\$4,000.00	Lump Sum	\$4,000.00
35	Project Sign	Each	\$500.00	1	\$500.00	1	\$500.00
36	Land Corner Monument Box	Each	\$800.00	1	\$800.00	1	\$800.00
37	Contractor Construction Staking	Lump Sum	\$47,000.00	Lump Sum	\$47,000.00	Lump Sum	\$47,000.00
	Sub-Total				\$3,158,991.00		\$3,158,991.00
	Contingency (15%)				\$473,848.65		\$473,848.65
	GRAND TOTAL				\$3,632,839.65		\$3,632,839.65
	Percentage Share of Total Construction cost				100.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 5
Preliminary Opinions of Probable Cost

QUANTITIES / CONSTRUCTION COST*									
Section No. 6: Intersection at Quivira Road and 159th Street			Overland Park		Johnson County		TOTAL		
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$20,000.00	Lump Sum	\$15,000.00	Lump Sum	\$5,000.00	Lump Sum	\$20,000.00
2	Removal of Existing Structures	Lump Sum	\$20,000.00	Lump Sum	\$15,000.00	Lump Sum	\$5,000.00	Lump Sum	\$20,000.00
3	Force Account (Set)	Lump Sum	\$20,000.00	Lump Sum	\$15,000.00	Lump Sum	\$5,000.00	Lump Sum	\$20,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	22878	\$228,780.00	7626	\$76,260.00	30504	\$305,040.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	5519.25	\$11,038.50	1839.75	\$3,679.50	7359	\$14,718.00
6	Asphaltic Concrete Surface Course	Megagram	\$45.00	1000.5	\$45,022.50	333.5	\$15,007.50	1334	\$60,030.00
7	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	5530.5	\$221,220.00	1843.5	\$73,740.00	7374	\$294,960.00
8	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	11778.75	\$29,446.88	3926.25	\$9,815.63	15705	\$39,262.50
9	Fly Ash	Megagram	\$35.00	664.5	\$23,257.50	221.5	\$7,752.50	886	\$31,010.00
10	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	11958.75	\$77,731.88	3986.25	\$25,910.63	15945	\$103,642.50
11	Temporary Surfacing (Asphalt)	Megagram	\$49.00	1036.5	\$50,788.50	345.5	\$16,929.50	1382	\$67,718.00
12	Driveway Replacement (Asphalt)	Megagram	\$49.00	29.25	\$1,433.25	9.75	\$477.75	39	\$1,911.00
13	Combined Curb and Gutter	Lin. Meter	\$40.00	653.25	\$26,130.00	217.75	\$8,710.00	871	\$34,840.00
14	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	644.25	\$19,327.50	214.75	\$6,442.50	859	\$25,770.00
15	Concrete Median Nose	Each	\$1,070.00	3	\$3,210.00	1	\$1,070.00	4	\$4,280.00
16	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	129.75	\$6,747.00	43.25	\$2,249.00	173	\$8,996.00
17	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	755.25	\$22,657.50	251.75	\$7,552.50	1007	\$30,210.00
18	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$80.00	49.5	\$2,970.00	16.5	\$990.00	66	\$3,960.00
19	Bike Path	Megagram	\$89.00	121.5	\$10,813.50	40.5	\$3,604.50	162	\$14,418.00
20	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	187.5	\$24,375.00	62.5	\$8,125.00	250	\$32,500.00
21	750 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$200.00	45	\$9,000.00	15	\$3,000.00	60	\$12,000.00
22	900 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$225.00	162.75	\$36,618.75	54.25	\$12,206.25	217	\$48,825.00
23	900 mm End Section (R.C.P. Class III)	Each	\$670.00	0.75	\$502.50	0.25	\$167.50	1	\$670.00
24	Inlet (Curb) (Complete)	Each	\$2,500.00	9	\$22,500.00	3	\$7,500.00	12	\$30,000.00
25	Inlet (Area) (Complete)	Each	\$2,900.00	0.75	\$2,175.00	0.25	\$725.00	1	\$2,900.00
26	Junction Box (Complete)	Each	\$2,900.00	0.75	\$2,175.00	0.25	\$725.00	1	\$2,900.00
27	Stone Riprap (1/4 Ton)	Sq. Meter	\$32.00	24	\$768.00	8	\$256.00	32	\$1,024.00
28	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	653.25	\$24,170.25	217.75	\$8,056.75	871	\$32,227.00
29	Traffic Signal Installations (159th Street)	Lump Sum	\$120,000.00	Lump Sum	\$90,000.00	Lump Sum	\$30,000.00	Lump Sum	\$120,000.00
30	Traffic Control	Lump Sum	\$30,000.00	Lump Sum	\$22,500.00	Lump Sum	\$7,500.00	Lump Sum	\$30,000.00
31	Permanent Pavement Marking and Signing	Lump Sum	\$12,500.00	Lump Sum	\$9,375.00	Lump Sum	\$3,125.00	Lump Sum	\$12,500.00
32	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	975	\$2,925.00	325	\$975.00	1300	\$3,900.00
33	Fescue Seed Mix	Ha	\$1,000.00	0.93	\$930.00	0.31	\$310.00	1.24	\$1,240.00
34	Buffalo Grass Seed	Ha	\$6,500.00	0.16	\$1,023.75	0.05	\$341.25	0.21	\$1,365.00
35	Temporary Water Pollution Control	Lump Sum	\$2,000.00	Lump Sum	\$1,500.00	Lump Sum	\$500.00	Lump Sum	\$2,000.00
36	Project Sign	Each	\$500.00	0.75	\$375.00	0.25	\$125.00	1	\$500.00
37	Land Corner Monument Box	Each	\$800.00	0.75	\$600.00	0.25	\$200.00	1	\$800.00
38	Contractor Construction Staking	Lump Sum	\$21,500.00	Lump Sum	\$16,125.00	Lump Sum	\$5,375.00	Lump Sum	\$21,500.00
	Sub-Total				\$1,093,212.76		\$364,404.26		\$1,457,617.00
	Contingency (15%)				\$163,981.91		\$54,660.64		\$218,642.55
	GRAND TOTAL				\$1,257,194.67		\$419,064.90		\$1,676,259.55
	Percentage Share of Total Construction cost				75.00%		25.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 6
Preliminary Opinions of Probable Cost

QUANTITIES / CONSTRUCTION COST*							
Section No. 7: Switzer Road from 151st Street to 159th Street				Overland Park		TOTAL	
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00
2	Removal of Existing Structures	Lump Sum	\$135,000.00	Lump Sum	\$135,000.00	Lump Sum	\$135,000.00
3	Force Account (Set)	Lump Sum	\$50,000.00	Lump Sum	\$50,000.00	Lump Sum	\$50,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	40986	\$409,860.00	40986	\$409,860.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	16914	\$33,828.00	16914	\$33,828.00
6	Asphaltic Concrete Surface Course	Megagram	\$45.00	2497	\$112,365.00	2497	\$112,365.00
7	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	14126	\$565,040.00	14126	\$565,040.00
8	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	31895	\$79,737.50	31895	\$79,737.50
9	Fly Ash	Megagram	\$35.00	1797	\$62,895.00	1797	\$62,895.00
10	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	32367	\$210,385.50	32367	\$210,385.50
11	Temporary Surfacing (Asphalt)	Megagram	\$49.00	1934	\$94,766.00	1934	\$94,766.00
12	Driveway Replacement (Asphalt)	Megagram	\$49.00	104	\$5,096.00	104	\$5,096.00
13	Integral Sidewalk Retaining Wall	Lin. Meter	\$400.00	43	\$17,200.00	43	\$17,200.00
14	Combined Curb and Gutter	Lin. Meter	\$40.00	3145	\$125,800.00	3145	\$125,800.00
15	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	2773	\$83,190.00	2773	\$83,190.00
16	Concrete Median Nose	Each	\$1,070.00	6	\$6,420.00	6	\$6,420.00
17	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	577	\$30,004.00	577	\$30,004.00
18	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	4298	\$128,940.00	4298	\$128,940.00
19	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	130	\$7,800.00	130	\$7,800.00
20	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	555	\$72,150.00	555	\$72,150.00
21	450 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$165.00	159	\$26,235.00	159	\$26,235.00
22	600 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$180.00	590	\$106,200.00	590	\$106,200.00
23	750 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$200.00	359	\$71,800.00	359	\$71,800.00
24	900 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$225.00	49	\$11,025.00	49	\$11,025.00
25	Inlet (Curb) (Complete)	Each	\$2,900.00	37	\$107,300.00	37	\$107,300.00
26	Inlet (Area) (Complete)	Each	\$2,900.00	1	\$2,900.00	1	\$2,900.00
27	Junction Box (Complete)	Each	\$2,900.00	2	\$5,800.00	2	\$5,800.00
28	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	3145	\$116,365.00	3145	\$116,365.00
29	Electric Lighting System	Lump Sum	\$180,000.00	Lump Sum	\$180,000.00	Lump Sum	\$180,000.00
30	Fiber Optic Conduit	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00	Lump Sum	\$80,000.00
31	Traffic Control	Lump Sum	\$160,000.00	Lump Sum	\$160,000.00	Lump Sum	\$160,000.00
32	Permanent Pavement Marking and Signing	Lump Sum	\$25,000.00	Lump Sum	\$25,000.00	Lump Sum	\$25,000.00
33	Fencing	Lin. Meter	\$30.00	1000	\$30,000.00	1000	\$30,000.00
34	Lawn Sprinkler System	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00
35	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	1186	\$3,558.00	1186	\$3,558.00
36	Fescue Seed Mix	Ha	\$1,000.00	1.87	\$1,870.00	1.87	\$1,870.00
37	Buffalo Grass Seed	Ha	\$6,500.00	0.85	\$5,525.00	0.85	\$5,525.00
38	Temporary Water Pollution Control	Lump Sum	\$4,000.00	Lump Sum	\$4,000.00	Lump Sum	\$4,000.00
39	Project Sign	Each	\$500.00	1	\$500.00	1	\$500.00
40	Land Corner Monument Box	Each	\$800.00	1	\$800.00	1	\$800.00
41	Contractor Construction Staking	Lump Sum	\$49,000.00	Lump Sum	\$49,000.00	Lump Sum	\$49,000.00
	Sub-Total				\$3,313,355.00		\$3,313,355.00
	Contingency (15%)				\$497,003.25		\$497,003.25
	GRAND TOTAL				\$3,810,358.25		\$3,810,358.25
	Percentage Share of Total Construction cost				100.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 7
Preliminary Opinions of Probable Cost

QUANTITIES / CONSTRUCTION COST*									
Section No. 8: Intersection at Switzer Road and 159th Street			Overland Park		Johnson County		TOTAL		
	Item Description	Unit	Unit Price	Approx. Quantity	Total	Approx. Quantity	Total	Approx. Quantity	Total
1	Clearing and Grubbing	Lump Sum	\$20,000.00	Lump Sum	\$10,000.00	Lump Sum	\$10,000.00	Lump Sum	\$20,000.00
2	Removal of Existing Structures	Lump Sum	\$20,000.00	Lump Sum	\$10,000.00	Lump Sum	\$10,000.00	Lump Sum	\$20,000.00
3	Force Account (Set)	Lump Sum	\$20,000.00	Lump Sum	\$10,000.00	Lump Sum	\$10,000.00	Lump Sum	\$20,000.00
4	Unclassified Excavation	Cu. Meter	\$10.00	6095	\$60,950.00	6095	\$60,950.00	12190	\$121,900.00
5	Earthwork Compaction (All Types)	Cu. Meter	\$2.00	1460	\$2,920.00	1460	\$2,920.00	2920	\$5,840.00
6	Asphaltic Concrete Surface Course	Megagram	\$45.00	669.5	\$30,127.50	669.5	\$30,127.50	1339	\$60,255.00
7	Asphaltic Concrete Intermediate Course	Megagram	\$40.00	3630.5	\$145,220.00	3630.5	\$145,220.00	7261	\$290,440.00
8	Manipulation for Fly Ash Treated Subgrade (200 mm)	Sq. Meter	\$2.50	7317.5	\$18,293.75	7317.5	\$18,293.75	14635	\$36,587.50
9	Fly Ash	Megagram	\$35.00	412.5	\$14,437.50	412.5	\$14,437.50	825	\$28,875.00
10	Aggregate Base Course (OP Special) (150 mm)	Sq. Meter	\$6.50	7398.5	\$48,090.25	7398.5	\$48,090.25	14797	\$96,180.50
11	Temporary Surfacing (Asphalt)	Megagram	\$49.00	691	\$33,859.00	691	\$33,859.00	1382	\$67,718.00
12	Driveway Replacement (Asphalt)	Megagram	\$49.00	16	\$784.00	16	\$784.00	32	\$1,568.00
13	Combined Curb and Gutter	Lin. Meter	\$40.00	433	\$17,320.00	433	\$17,320.00	866	\$34,640.00
14	Curb (Type D) (Doweled)	Lin. Meter	\$30.00	425	\$12,750.00	425	\$12,750.00	850	\$25,500.00
15	Concrete Median Nose	Each	\$1,070.00	2	\$2,140.00	2	\$2,140.00	4	\$4,280.00
16	Concrete Entrance Pavement (150 mm)	Sq. Meter	\$52.00	143	\$7,436.00	143	\$7,436.00	286	\$14,872.00
17	Sidewalk Construction (AE) (100 mm)	Sq. Meter	\$30.00	882.5	\$26,475.00	882.5	\$26,475.00	1765	\$52,950.00
18	Sidewalk Construction (AE) (150 mm)	Sq. Meter	\$60.00	20	\$1,200.00	20	\$1,200.00	40	\$2,400.00
19	375 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$130.00	36.5	\$4,745.00	36.5	\$4,745.00	73	\$9,490.00
20	750 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$200.00	16	\$3,200.00	16	\$3,200.00	32	\$6,400.00
21	900 mm Storm Sewer (R.C.P. Class III) (C-443)	Lin. Meter	\$225.00	112	\$25,200.00	112	\$25,200.00	224	\$50,400.00
22	900 mm End Section (R.C.P. Class III)	Each	\$670.00	0.5	\$335.00	0.5	\$335.00	1	\$670.00
23	Inlet (Curb) (Complete)	Each	\$2,900.00	3	\$8,700.00	3	\$8,700.00	6	\$17,400.00
24	Stone Riprap (1/4 Ton)	Sq. Meter	\$32.00	6.5	\$208.00	6.5	\$208.00	13	\$416.00
25	150 mm Pipe Underdrain (Type H)	Lin. Meter	\$37.00	433	\$16,021.00	433	\$16,021.00	866	\$32,042.00
26	Traffic Signal Installations (159th Street)	Lump Sum	\$120,000.00	Lump Sum	\$60,000.00	Lump Sum	\$60,000.00	Lump Sum	\$120,000.00
27	Traffic Control	Lump Sum	\$30,000.00	Lump Sum	\$15,000.00	Lump Sum	\$15,000.00	Lump Sum	\$30,000.00
28	Permanent Pavement Marking and Signing	Lump Sum	\$12,500.00	Lump Sum	\$6,250.00	Lump Sum	\$6,250.00	Lump Sum	\$12,500.00
29	Lawn Sprinkler System	Lump Sum	\$15,000.00	Lump Sum	\$7,500.00	Lump Sum	\$7,500.00	Lump Sum	\$15,000.00
30	Kentucky Bluegrass Sod	Sq. Meter	\$3.00	714	\$2,142.00	714	\$2,142.00	1428	\$4,284.00
31	Fescue Seed Mix	Ha	\$1,000.00	0.13	\$130.00	0.13	\$130.00	0.26	\$260.00
32	Buffalo Grass Seed	Ha	\$6,500.00	0.07	\$422.50	0.07	\$422.50	0.13	\$845.00
33	Temporary Water Pollution Control	Lump Sum	\$2,000.00	Lump Sum	\$1,000.00	Lump Sum	\$1,000.00	Lump Sum	\$2,000.00
34	Project Sign	Each	\$500.00	0.5	\$250.00	0.5	\$250.00	1	\$500.00
35	Land Corner Monument Box	Each	\$800.00	0.5	\$400.00	0.5	\$400.00	1	\$800.00
36	Contractor Construction Staking	Lump Sum	\$18,000.00	Lump Sum	\$9,000.00	Lump Sum	\$9,000.00	Lump Sum	\$18,000.00
	Sub-Total				\$612,506.50		\$612,506.50		\$1,225,013.00
	Contingency (15%)				\$91,875.98		\$91,875.98		\$183,751.95
	GRAND TOTAL				\$704,382.48		\$704,382.48		\$1,408,764.95
	Percentage Share of Total Construction cost				50.00%		50.00%		100.00%

*This estimate is based on 2000 Construction costs

TABLE 8
Preliminary Opinions of Probable Cost

APPENDIX A

Preliminary Plans – 151st Street, Quivira Road and Switzer Road