

PROJECT DESCRIPTION**Flemon Rd. Drainage Improvements****OPTION/ ALTERNATE DESCRIPTIONS****Alternative 1: Improvements of Driveway Culverts & Channel**

Description of Costs	Estimated High	Estimated Low	Estimated Average
Site Preparation	\$10,000.00	\$8,000.00	\$9,000.00
Earth Work	\$43,750.00	\$35,000.00	\$39,375.00
Structure & Culverts	\$116,250.00	\$93,000.00	\$104,625.00
Paving and Base	\$25,000.00	\$20,000.00	\$22,500.00
Others	\$5,000.00	\$5,000.00	\$5,000.00
SUB-TOTAL (CONSTRUCTION COSTS)			\$180,500.00
Preliminary Engineering			\$3,800.00
Surveying			\$10,000.00
ROW and Easements	4.00%		\$7,220.00
Utility Adjustments	2.00%		\$3,610.00
Permits	3.50%		\$6,317.50
Engineering Design	8.00%		\$14,440.00
Construction Inspection	6.00%		\$10,830.00
Other	12.00%		\$21,660.00
SUB-TOTAL (ENGR, ROW, UTILITIES, ETC)			\$77,077.50
TOTAL ESTIMATED COSTS			\$258,577.50

Notes:

Estimated rates of construction costs are based on "RS Means Cost Works" for Jonesboro region

Prepared By: ETC ENGINEERS INC

Date: August 01, 2006

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STANDARD FEE SCHEDULE FOR ENGINEERING SERVICES

Project Manager	\$135.00
Senior Engineer	\$105.00
Design Engineer	\$90.00
Senior Technician	\$75.00
Technician/CADD/GIS	\$65.00
Field Survey Party	
Two Man Crew	\$90.00
Three Man Crew	\$95.00
Four Man Crew	\$110.00
GPS	\$135.00
Administrative	\$35.00

Attachment "1 " Engineering Cost Estimate

General Requirements for Plans For Drainage Improvements.

- (1) Plans of drainage locations and widths, rights-of-way required and special treatment, such as open ditch, underground facilities, street crossings and side drainage, to an appropriate scale;
 - (2) Topographic- information as related to above, such as existing drainage works, utilities, trees, driveways, drainpipes and culverts with sizes, side ditches, street crossings, property lines, any adjacent facilities, fences and other structures as may be needed for appropriate design;
 - (3) Centerline and side profiles of existing drainage and planned centerline profile for the new drainage, to a suitable vertical scale, on same sheets with plans;
 - (4) Cross-sections of the proposed drainage improvements.
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In accomplishing items 1 through 4 above, the ENGINEER shall:

- (1) Make supplemental field and location surveys and obtain vertical topography as necessary for design, and as necessary for determining to the extent possible from existing utility company (water, gas, power, telephone, wastewater) records and normal field observations, the locations of all utilities where critical to the design or construction of the improvements, and plot locations on plan and profile sheets accurately.
- (2) Perform instrument work in connection with the establishment of permanent markers for horizontal and vertical control, establish such markers and indicate locations and pertinent information therefore on the drawings as may be necessary for the construction contractor to lay out the proposed improvements.
- (3) Upon completion of the Plans, provide the City with a complete set of hydrologic & hydraulic computations, including watershed analysis used to arrive at grades, sizes, and locations of the drainage improvements.