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ENGINEERING DIVISION

Professional Services Agreement Amendment No. 1-Engineering Services

LEMMON AVENUE RECONSTRUCTION
COLLEGE AVENUE TO MONROE STREET
RAPID CITY, SD
PROJECT #ST02-1068

This shall serve as Professional Services Agreement Amendment No.1 to the referenced project. The amendment is for additional Engineering Services for the following items:

1. Geotechnical Services per Proposal Letter Dated January 14, 2004 attached hereto.


Terms and conditions of the Contract dated June 5, 2002 shall remain the same.

Fees for the additional services are \$3,162.00 as shown on the proposal letter dated January 14, 2004 attached hereto. The revised Final contract amount will be \$86,492.00 as tabulated below.

Original Contract Amount =	\$83,330.00
Contract Amendment #1 =	\$3,162.00
Revised Final Contract Amount =	<u>\$86,492.00</u>

CLIENT
CITY OF RAPID CITY

CONSULTANT
FMG, INC.



Project Manager

Date: 1/22/04



Allen D. Foster P.E.

Date: 1/20/04

Mayor Date: _____

ATTEST:

Date: _____



FMG. INC. 3700 Sturgis Road, Rapid City, South Dakota 57702-0317 605/342-4105
FAX 605/342-4222

January 14, 2004

Mr. Joe Jagodzinski
City of Rapid City
300 6th Street
Rapid City, SD 57701

Re: Lemmon Avenue – Geotechnical
City of Rapid City

Dear Mr. Jagodzinski:

As requested we have prepared this proposal for the geotechnical evaluation of the Lemmon Avenue reconstruction project. A total length of approximately 1800 feet will be reconstructed and utility reconstruction will occur as part of the project. The proposed evaluation will include a determination of general subsurface conditions, a pavement thickness design, and recommendations for construction of the box culvert and utilities. Recommendations for subgrade stabilization and general construction considerations that we consider applicable will also be provided.

A total of five borings are planned (at rough intervals of approximately 400 feet) along the route. Field testing will be performed, and samples will be extracted for further laboratory analysis. Select soil samples will be tested in our laboratory to determine their general classification.

Upon completion of the field and laboratory testing, and our analysis, a report will be prepared that transmits the testing results. In general our report will provide the boring logs, a general discussion of conditions encountered, and the California Bearing Ratio (CBR) test results. A pavement thickness design will be prepared and construction recommendations for the pavement subgrade preparation will be included as well as recommendations as it relates to the utility construction.

The estimated costs for the services described are outlined on the following page. We will not exceed the cost estimate without justification, and prior approval. We are available to begin this work approximately 1 week from notice to proceed. If you have any questions, or desire any additional information, please call us at your earliest convenience. *Thank you for the opportunity to be of service.*

Sincerely,

FMG Inc.,

R. Rick Baker
R. Rick Baker, PE *by [signature]*

c: FMG File # January 2004 proposal file
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Geotechnical Cost Estimate

PROJECT INFORMATION

PROJECT NAME: Lemmon Avenue Geotech
PROJECT LOCATION: Rapid City SD
PROJECT TYPE: Geotechnical Evaluation

CLIENT INFORMATION

NAME: City of Rapid City
ADDRESS: 300 6th Street
ADDRESS: Rapid City, SD

Task/Item/Materials	Quantity	Units	@	Rate	per Unit	Sub-Total
FIELD SERVICES						
Rig Mobilization	20	miles	@	\$1.35	per mile	\$27.00
Pickup Mobilization	100	miles	@	\$0.40	per mile	\$40.00
Crew Travel - 2 men		hours	@	\$75.00	per hour	\$0.00
Crew Expenses		man days	@	\$60.00	/man day	\$0.00
Drill Rig Operation	5	hours	@	\$45.00	per hour	\$225.00
Drill Rig Operator	8	hours	@	\$30.00	per hour	\$240.00
Field Technician		hours	@	\$35.00	per hour	\$0.00
Senior Field Technician		hours	@	\$40.00	per hour	\$0.00
Field Geologist	10	hours	@	\$50.00	per hour	\$500.00
Environmental Scientist		hours	@	\$65.00	per hour	\$0.00
Geotechnical Engineer or Materials Specialist		hours	@	\$85.00	per hour	\$0.00
Well materials, etc.		feet	@	\$8.00	per foot	\$0.00
Wellheads with locks		heads	@	\$85.00	per head	\$0.00
HNu (Photoionization Device)		days	@	\$50.00	per day	\$0.00
Rental of Traffic Sign Equipment	1	days	@	\$85.00	per day	\$85.00
Rental of Backhoe Equipment		hours	@	\$100.00	per hour	\$0.00
Sub-Totals						\$1,117.00

PHYSICAL LABORATORY						
Moisture Content/Density	4	tests	@	\$15.00	each	\$60.00
Atterberg Limits	2	tests	@	\$65.00	each	\$130.00
Standard Sieve Analysis		tests	@	\$50.00	each	\$0.00
Hydrometer Grain Analysis		tests	@	\$90.00	each	\$0.00
Unconfined Compression		tests	@	\$50.00	each	\$0.00
Consolidation/Swell		tests	@	\$275.00	each	\$0.00
Permeability		tests	@	\$150.00	each	\$0.00
MD Curve (AASHTO T-99)		tests	@	\$110.00	each	\$0.00
MD Curve (AASHTO T-180)	1	tests	@	\$110.00	each	\$110.00
California Bearing Ratio	1	tests	@	\$250.00	each	\$250.00
Direct Shear Test (2 Points)		tests	@	\$200.00	each	\$0.00
Triaxial Shear Test		tests	@	\$800.00	each	\$0.00
Sample Preparation		hours	@	\$35.00	per hour	\$0.00
Sub-Totals						\$550.00

ENVIRONMENTAL TESTING						
TPH+BTEX (Gas in Soil & Water)		tests	@	\$85.00	each	\$0.00
TPH & Naphtha (Diesel in Water & Soil)		tests	@	\$105.00	each	\$0.00
Soils - TCLP Lead		tests	@	\$75.00	each	\$0.00
Soils - VOC's		tests	@	\$150.00	each	\$0.00
Sampling Materials (Bailers, Gloves, Etc)		materials	@	\$10.00	per borehole	\$0.00
Sub-Totals						\$0.00

OFFICE SERVICES						
Clerical	1	hours	@	\$25.00	per hour	\$25.00
Drafting (CAD)	2	hours	@	\$45.00	per hour	\$90.00
Senior Environmental Scientist (CPRR)		hours	@	\$65.00	per hour	\$0.00
Senior Field Geologist		hours	@	\$50.00	per hour	\$0.00
Geological Engineer	12	hours	@	\$55.00	per hour	\$660.00
Registered Professional Engineer		hours	@	\$70.00	per hour	\$0.00
Senior Professional Engineer/Project Managr	8	hours	@	\$90.00	per hour	\$720.00
Senior Project Manager (Officer)		hours	@	\$90.00	lump sum	\$0.00
Sub-Totals						\$1,495.00

Sales Taxes at 6%	\$3,162.00	All Sub-Totals	@	0.0%	percent	\$0.00
Grand Total Estimate (plus any applicable taxes)						\$3,162.00