

**Project: SPTC Forni Road to Missouri Flat Road Segment - Engineering Design Cost Proposal**

**Cunningham Engineering Design Team**

Last Revised: June 6, 2007 By: S. Greenfield

Assumes 1"=50' Plan sheets and Initial Authorization for Tasks A & B only



**PHASE 1 - PRELIMINARY DESIGN/EVALUATION & 30% PS&E**

2007 Hourly Rates:

|  | CUNNINGHAM ENGINEERING CORPORATION |          |        |          |         |           |  |         |                 |       |                |                | CBC SURVEYS           |         |          |          |                | QUINCY ENGINEERING INCORPORATED |                |            |            |                  |         |            | GEOCON CONSULTANTS INCORPORATED |                |               |                |            |                         |         |                |      |         |
|--|------------------------------------|----------|--------|----------|---------|-----------|--|---------|-----------------|-------|----------------|----------------|-----------------------|---------|----------|----------|----------------|---------------------------------|----------------|------------|------------|------------------|---------|------------|---------------------------------|----------------|---------------|----------------|------------|-------------------------|---------|----------------|------|---------|
|  | CWC                                | SG       | ML     | CK       | JB, LE  | DW LR DLV | CG                                     | GC      | MN RB DS LW EDT | CS    | CEC            | Totals by Task | Survey                | Proj.   | Survey   | 2 Person | 2 Person       | CBC                             | Totals by Task | SM/WAG     | TO         | LM               | DM      | PW         | QEI                             | Totals by Task | GCI           |                |            |                         |         |                |      |         |
|  | Princ                              | PM II    | Sr Eng | Staff II | CAD IV  | CAD I     | PC II                                  | Ops Mgr | Clerical        | LSA   | Totals by Task | PM             | Surveyor              | Tech    | Crew     | Crew OT  | Totals by Task | Princ                           | Proj Mgr       | Assoc Engr | Assoc Engr | Bridge Inspector | CADD    | QA/QC Engr | Totals by Task                  | Sr Engr        | Sr. Proj Engr | Sr. Staff Engr | Staff Engr | Drafting                | Admin   | Totals by Task |      |         |
| 1 General Project Management                                     | 4                                  | 24       |        | 4        |         |           |  | 4       | 6               |       | \$6,306        |                |                       |         |          |          |                | \$0                             | 2              | 14         |            |                  |         |            |                                 | \$2,670        |               |                |            |                         |         |                |      | \$0     |
| 1.a Kickoff Meeting  | 0                                  | 6        | 0      | 6        | 0       | 0         | 0                                      | 6       | 0               | 0     | \$2,214        |                |                       |         |          |          |                | \$0                             |                | 6          |            |                  |         |            |                                 | \$966          | 4             |                |            |                         |         |                |      | \$560   |
| 1.b Monthly Progress Reports (5)                                 |                                    | 3        |        | 7        |         |           |  | 7       |                 |       | \$1,879        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.c CPM Schedule Monthly Updates (5)                             |                                    | 2        |        | 7        |         |           |  | 3       |                 |       | \$1,363        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.d Funding Document List  |                                    | 2        |        | 6        |         |           |  | 6       |                 |       | \$862          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.e Coordination with Adjacent Projects                          |                                    | 1        |        | 3        | 2       |           |  |         |                 |       | \$722          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.f Permit Coordination  |                                    | 0        |        | 2        |         |           |  | 8       |                 |       | \$896          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.g Progress Meetings (5 mtgs @ 6 hrs/mtg incl prep & minutes)   |                                    | 30       |        | 30       |         |           |  | 30      |                 |       | \$11,070       |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.h Gather Background Information                                |                                    | 2        |        | 4        |         |           |  | 6       |                 |       | \$1,294        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2 Surveying & Base Mapping                                       |                                    |          |        |          |         |           |  |         |                 |       | \$568          |                |                       |         |          |          |                | \$970                           |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2.a Survey Data Gathering/Project Coordination                   |                                    | 2        |        | 2        |         |           |  |         |                 |       | \$438          | 1              | 8                     |         |          |          |                | \$13,855                        |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2.b Control Survey   |                                    |          |        | 2        | 2       |           |  |         |                 |       | \$0            | 4              | 8                     |         | 40       | 15       |                | \$7,332                         |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2.c Preliminary R/W Engineering                                  |                                    |          |        |          |         |           |  |         |                 |       | \$0            | 4              | 8                     | 16      | 16       | 4        |                | \$8,560                         |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2.d Photogrammetric Mapping Aerial Flight                        |                                    |          |        |          |         |           |  |         |                 |       | \$0            |                |                       |         |          |          |                | \$15,144                        |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2.e Supplemental Topo Surveys & Basemapping Compilation          |                                    |          |        | 16       |         |           |  |         |                 |       | \$1,728        | 4              | 40                    | 16      | 32       | 8        |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 3 Geotechnical Engineering Investigation                         |                                    |          | 2      | 2        |         |           |  |         |                 |       | \$568          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            | 2             | 4              | 10         | 19                      | 4       | 3              |      | \$4,110 |
| 4 Programming, Constraints & Opportunities Assessment            | 1                                  | 2        |        | 4        |         |           |  | 1       |                 |       | \$1,069        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 5 Programming Technical Memo                                     |                                    | 1        |        | 3        |         |           |  | 2       |                 |       | \$798          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 6 Preliminary Horizontal Alignment/GAD                           |                                    | 4        |        | 8        | 24      | 12        |  |         | 2               | 1     | \$5,100        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 7 Weber Creek Trestle Insp & Limited As-Built Bridge Plans       |                                    | 1        |        | 1        |         |           |  |         |                 |       | \$284          |                |                       |         |          |          |                | \$0                             |                | 20         | 8          |                  |         | 20         | 8                               | \$8,112        |               |                |            |                         |         |                |      | \$0     |
| 8 Utility Identification   |                                    |          |        | 2        | 4       |           |  | 4       |                 |       | \$1,000        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 9 Utility Potholing (See below - reimb for subcontractor allow.) |                                    |          |        | 4        | 2       |           |  | 2       |                 |       | \$824          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| <b>ESTIMATED HOURS</b>   | 5                                  | 82       | 0      | 107      | 34      | 12        | 77                                     | 8       | 3               | 0     |                | 13             | 64                    | 32      | 88       | 27       |                |                                 | 2              | 40         | 8          | 0                | 20      | 8          | 0                               |                | 6             | 4              | 10         | 19                      | 4       | 3              |      |         |
| <b>LABOR BUDGET</b>  | \$1,000                            | \$14,432 | \$0    | \$11,556 | \$3,774 | \$804     | \$6,545                                | \$680   | \$192           | \$0   | \$38,983       | \$1,690        | \$6,720               | \$3,040 | \$18,480 | \$7,371  |                | \$37,301                        | \$416          | \$6,440    | \$1,080    | \$0              | \$3,100 | \$712      | \$0                             | \$11,748       | \$840         | \$500          | \$1,050    | \$1,805                 | \$280   | \$195          |      | \$4,670 |
| <b>REIMBURSABLES</b>   |                                    |          |        |          |         |           | mileage, plots, copies, etc.           | \$500   | 115%            |       | \$575          |                | Aerial photogrammetry | \$8,560 | 100%     |          |                | \$8,560                         |                |            |            |                  |         |            |                                 | \$0            |               |                |            | mileage                 | \$144   | 100%           |      | \$144   |
| <b>REIMBURSABLES</b>   |                                    |          |        |          |         |           | Utility potholing contractor allowance | \$8,500 | 115%            |       | \$9,775        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            | Trenching Subcontractor | \$1,000 | 115%           |      | \$1,150 |
| <b>REIMBURSABLES</b>   |                                    |          |        |          |         |           |  |         |                 |       | \$0            |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            | Laboratory Testing      | \$1,420 | 100%           |      | \$1,420 |
| <b>TIME AND EXPENSES BUDGET SUBTOTAL</b>                         |                                    |          |        |          |         |           |  |         |                 |       | \$49,333       |                |                       |         |          |          |                | \$45,861                        |                |            |            |                  |         |            |                                 | \$11,748       |               |                |            |                         |         |                |      | \$7,384 |
| <b>SUBCONSULTANT MARKUP 15%</b>                                  |                                    |          |        |          |         |           |  |         |                 |       | \$0            |                |                       |         |          |          |                | \$6,879                         |                |            |            |                  |         |            |                                 | \$1,762        |               |                |            |                         |         |                | 15%  | \$1,108 |
| <b>SUBTOTAL TASK A</b>   |                                    |          |        |          |         |           |  |         |                 |       | \$49,333       |                |                       |         |          |          |                | \$52,740                        |                |            |            |                  |         |            |                                 | \$13,510       |               |                |            |                         |         |                |      | \$8,492 |
| <b>TOTAL TASK A (all disciplines) =</b>                          | <b>\$124,075</b>                   |          |        |          |         |           |  |         |                 |       |                |                |                       |         |          |          |                |                                 |                |            |            |                  |         |            |                                 |                |               |                |            |                         |         |                |      |         |
| 1 Civil Improvement Plans  |                                    |          |        |          |         |           |  |         |                 |       | \$552          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.a Title Sheet  |                                    |          |        | 1        | 4       |           |  |         |                 |       | \$620          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.b Survey Control   |                                    | 1        |        | 4        |         |           |  |         |                 |       | \$12,156       |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.c Preliminary Plan/Profile (12 sheets @ 1"=50')                | 2                                  | 3        |        | 36       | 60      |           |  |         | 3               | 4     | \$1,242        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.d Typical Sections   |                                    |          |        | 2        | 2       | 12        |  |         |                 |       | \$3,172        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 1.e Schematic Drainage Improvements                              |                                    |          | 4      | 12       | 4       | 12        |  |         |                 |       | \$0            |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 2 Weber Creek Bridge Trestle Modification Alts                   |                                    | 2        |        |          |         |           |  |         |                 |       | \$1,652        |                |                       |         |          |          |                | \$0                             |                | 20         | 56         | 24               |         | 12         |                                 | \$14,344       |               |                |            |                         |         |                |      | \$0     |
| 3 Preliminary Construction Cost Opinion                          |                                    | 2        |        | 4        |         | 12        |  |         | 1               |       | \$1,652        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 4 Progress Meetings (1 mtg @ 6 hrs/mtg incl prep & minutes)      |                                    | 6        |        | 6        |         |           |  | 6       |                 |       | \$2,214        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| 5 Funding & Environmental Assistance                             |                                    | 4        |        |          |         |           |  | 4       |                 |       | \$1,044        |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| <b>ESTIMATED HOURS</b>   | 2                                  | 18       | 4      | 61       | 74      | 36        | 10                                     | 0       | 4               | 4     |                | 0              | 0                     | 0       | 0        | 0        |                |                                 | 0              | 20         | 56         | 24               | 0       | 12         | 0                               |                | 0             | 0              | 0          | 0                       | 0       | 0              |      |         |
| <b>LABOR BUDGET</b>  | \$400                              | \$3,168  | \$628  | \$6,588  | \$8,214 | \$2,412   | \$850                                  | \$0     | \$256           | \$488 | \$23,004       | \$0            | \$0                   | \$0     | \$0      | \$0      |                | \$0                             | \$0            | \$3,220    | \$7,560    | \$2,496          | \$0     | \$1,068    | \$0                             | \$14,344       | \$0           | \$0            | \$0        | \$0                     | \$0     | \$0            |      | \$0     |
| <b>REIMBURSABLES</b>   |                                    |          |        |          |         |           | mileage, plots, copies, etc.           | \$800   | 115%            |       | \$920          |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                | 115% | \$0     |
| <b>TIME AND EXPENSES BUDGET SUBTOTAL</b>                         |                                    |          |        |          |         |           |  |         |                 |       | \$23,924       |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$14,344       |               |                |            |                         |         |                |      | \$0     |
| <b>SUBCONSULTANT MARKUP 15%</b>                                  |                                    |          |        |          |         |           |  |         |                 |       | \$0            |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$0            |               |                |            |                         |         |                |      | \$0     |
| <b>SUBTOTAL TASK B</b>   |                                    |          |        |          |         |           |  |         |                 |       | \$23,924       |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$14,344       |               |                |            |                         |         |                |      | \$0     |
| <b>TOTAL TASK B (all disciplines) =</b>                          | <b>\$40,420</b>                    |          |        |          |         |           |  |         |                 |       |                |                |                       |         |          |          |                | \$0                             |                |            |            |                  |         |            |                                 | \$18,496       |               |                |            |                         |         |                |      | \$0     |
| <b>TOTAL TASKS A &amp; B (all disciplines) =</b>                 | <b>\$164,495</b>                   |          |        |          |         |           |  |         |                 |       |                |                |                       |         |          |          |                |                                 |                |            |            |                  |         |            |                                 |                |               |                |            |                         |         |                |      |         |