

Independence Station Road Multi-Use Path

Kenton County

DESIGN ENGINEERING AND RELATED SERVICES

PROPOSED PRODUCTION HOURS AND FEE

Submitted by:

Integrated Engineering, Operating as PRIME AE Group, LLC

7430 US 42, Suite 214

Florence, Kentucky 41042

859-912-1920



September 1, 2021



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF PROFESSIONAL SERVICES
ENGINEERING AND RELATED SERVICES FEE PROPOSAL

TC 40-2
 Rev. 12/2017
 Page 1 of 1

SECTION 1: PROJECT INFORMATION

| | | | | | |
|-----------------|--|----------------|--------|----------------|--|
| DATE: | Sep 1, 2021 | COUNTY: | Kenton | ITEM #: | |
| PROJECT: | Independence Station Road Multi-Use Path | | | | |
| DESC: | New Multi-Use Path from Fox Run Park to Lincoln Ridge Park | | | | |

SECTION 2: BUDGET INFORMATION

| FEE CONSIDERATIONS | PROPOSED MAN HOURS | NEGOTIATED MAN HOURS | AVERAGE RATE | ESTIMATED COST |
|---|--------------------|----------------------|--------------|---------------------|
| Survey | | 131 | \$ 166.50 | \$ 21,811.50 |
| Line and Grade | | 115 | \$ 133.50 | \$ 15,352.50 |
| Utility Coordination | | 36 | \$ 136.00 | \$ 4,896.00 |
| Right of Way Plans | | 42 | \$ 120.00 | \$ 5,040.00 |
| Final Plans | | 296 | \$ 132.00 | \$ 39,072.00 |
| Meetings | | 20 | \$ 135.00 | \$ 2,700.00 |
| Public Involvement | | 36 | \$ 135.00 | \$ 4,860.00 |
| QA/QC | | 16 | \$ 143.00 | \$ 2,288.00 |
| | | | | \$ - |
| | | | | \$ - |
| TOTAL PRODUCTION HOURS & PAYROLL | | 692 | \$ 138.76 | \$ 96,020.00 |

| | |
|--------------------------------|------|
| OVERHEAD (0.00 %) | \$ - |
| PROFIT (0.00 %) | \$ - |
| COST OF MONEY (0.00 %) | \$ - |



| DIRECT COSTS | AMOUNT |
|---------------------------|--------|
| Mileage and Meals | |
| Lodging | |
| Survey Travel Time | |
| Miscellaneous | |
| Printing | |
| TOTAL DIRECT COSTS | \$ - |

| SUBCONSULTANTS | AMOUNT |
|-----------------------------|--------|
| | |
| | |
| | |
| | |
| TOTAL SUBCONSULTANTS | \$ - |

| | |
|------------------|------------------|
| TOTAL FEE | \$ 96,020 |
|------------------|------------------|

*Rounded to the nearest dollar

SECTION 3: SIGNATURE

| | | |
|---|-------------------|-------------|
| FIRM NAME: | SIGNED BY: | |
|  | Vice President | 9/1/2021 |
| CONSULTANT SIGNATURE | TITLE | DATE |
|  | | |
| PROFESSIONAL SERVICES SIGNATURE | TITLE | DATE |

| | A | B | C | D | E | F | G |
|----|---|--|-----------------------|----------------------|--------|----------|------------|
| 1 | PRODUCTION-HOUR WORKSHEET | | | | | | |
| 2 | COUNTY : | Kenton | | | | | |
| 3 | PROJECT : | Independence Station Multi-Use Path | PROJECT TYPE : | | | | |
| 4 | UPN : | | CONSULTANT : | | | | |
| 5 | FED.NO : | | PREPARED BY | Mike Yeager, PE, MPA | | | |
| 6 | ITEM NO : | | DATE : | 9/1/2021 | | | |
| 7 | SURVEY | | | | | | |
| 8 | No. | ITEM | CREW | UNIT | AMOUNT | HRS/UNIT | HOURS |
| 9 | RECONNAISSANCE | | | | | | |
| 10 | 1 | Control - (existing) | 1 | Mile | 0.5 | 4 | 2 |
| 11 | 2 | Utilities - (data gathering, identification & contact) | 1 | No. | 4 | 2 | 8 |
| 12 | 3 | Drainage - (sink holes, streams, pipes, etc.) | 1 | Mile | 0.5 | 4 | 2 |
| 13 | CONTROL | | | | | | |
| 14 | 4 | Horizontal | 1 | Mile | 0.5 | 4 | 2 |
| 15 | 5 | Vertical | 1 | Mile | 0.5 | 4 | 2 |
| 16 | 6 | Process data | 1 | Mile | | | |
| 17 | PLANIMETRIC SURVEY | | | | | | |
| 18 | 7 | Planimetric location <i>(specify complete, pickup or update)</i> | 1 | Mile | 0.5 | 50 | 25 |
| 19 | 8 | Subsurface Utility Engineering, Quality Levels C & D | 1 | Mile | 0.5 | 24 | 12 |
| 20 | 9 | Subsurface Utility Engineering, Quality Level B | 1 | LS | | | |
| 21 | 10 | Subsurface Utility Engineering, Quality Level A | 1 | LS | | | |
| 22 | 11 | Process data | 1 | Mile | | | |
| 23 | TERRAIN SURVEY | | | | | | |
| 24 | 12 | DTM data collection | 1 | Acre | 6 | 2 | 12 |
| 25 | 13 | Verify terrain model accuracy | 1 | Mile | 0.5 | 8 | 4 |
| 26 | 14 | Tie-ins | 2 | No. | | | |
| 27 | 15 | Drainage situations survey (Bridge) | 2 | No. | | | |
| 28 | 16 | Drainage situations survey (Culvert) | 2 | No. | | | |
| 29 | 17 | Drainage pipe section (non-situation size) | 2 | No. | | | |
| 30 | 18 | Flood plain data | 2 | No. | | | |
| 31 | 19 | Railroad Surveys | 2 | No. | | | |
| 32 | 20 | Additional necessary DTM data <i>(specify pickup or update)</i> | 2 | Acre | | | |
| 33 | 21 | Process data | 1 | Mile | 0.5 | 32 | 16 |
| 34 | ESTABLISH PROPERTY LINES & OWNERSHIP | | | | | | |
| 35 | 22 | Contact & Interview Property Owners | 1 | Parcel | | | |
| 36 | 23 | Field tie property lines/corners | 1 | Parcel | 14 | 3 | 42 |
| 37 | STAKING | | | | | | |
| 38 | 24 | Stake centerlines, approaches, detours | 2 | Mile | | | |
| 39 | 25 | Stake core holes - structures <i>(unit is per structure)</i> | 2 | No. | | | |
| 40 | 26 | Stake core holes - roadway <i>(unit is per core hole)</i> | 2 | No. | | | |
| 41 | SURVEY MISCELLANEOUS | | | | | | |
| 42 | 27 | Determine roadway elevations (Crown and EP) | 1 | Mile | 0.5 | 8 | 4 |
| 43 | 28 | Environmental areas | 2 | No. | | | |
| 44 | 29 | | | | | | |
| 45 | | | | | | | |
| 46 | | | | | | | |
| 47 | | | | | | | |
| 48 | | | | | | | |
| 49 | | | | | | | |
| 50 | | | | | | | |
| 51 | SURVEY TOTAL | | | | | | 131 |

| | A | B | C | D | E | F | G |
|----|---|---|--------------|--------|----------|-------|------------|
| 52 | PRELIMINARY LINE AND GRADE | | | | | | |
| 53 | No. | ITEM | UNIT | AMOUNT | HRS/UNIT | HOURS | |
| 54 | 30 | Computer setup | LS | 1 | 6 | 6 | |
| 55 | 31 | Prepare existing manuscripts | Mile | 0 | 50 | 0 | |
| 56 | 32 | Establish approximate property lines and ownership | Parcel | 14 | 0.5 | 7 | |
| 57 | 33 | Study and develop typical sections | No. | 1 | 4 | 4 | |
| 58 | 34 | Study and develop horizontal alignments | Mile | 0.5 | 20 | 10 | |
| 59 | 35 | Study and develop vertical alignments | Mile | 0.5 | 15 | 8 | |
| 60 | 36 | Create and evaluate proposed path models | Mile | 0.5 | 40 | 20 | |
| 61 | 37 | Design driveway connections | No. | 12 | 0.5 | 6 | |
| 62 | 38 | Pre-size pipes (all alternates) | No. | | | | |
| 63 | 39 | Pre-size culverts (all alternates) | No. | 1 | 8 | 8 | |
| 64 | 40 | Pre-size bridges (all alternates) | No. | | | | |
| 65 | 41a | Conduct Traffic Engineering Analysis (Basic; Highway Capacity Manual) | Intersection | | | | |
| 66 | 41b | Conduct Traffic Engineering Analysis (Advanced; Micro-simulation) | Intersection | | | | |
| 67 | 42 | Study and development of interchange | No. | | | | |
| 68 | 43 | Study and development of intersection (Meadow Glen) | No. | 1 | 24 | 24 | |
| 69 | 44 | Study and develop maintenance of traffic plan | LS | 1 | 8 | 8 | |
| 70 | 45 | Plot/print copies of plans for team meeting and inspections | LS | | | | |
| 71 | 46 | Calculate preliminary quantities and develop cost estimates | Alt. | 1 | 10 | 10 | |
| 72 | 47 | Revise plans and estimates | LS | 1 | 4 | 4 | |
| 73 | 48 | Preliminary Right of Way with taking areas | Parcel | | | | |
| 74 | 49 | Prepare Design Executive Summary | LS | | | | |
| 75 | 50 | Develop/document "Avoidance Alternatives to Water Related Impacts" | LS | | | | |
| 76 | PRELIMINARY LINE & GRADE MISCELLANEOUS | | | | | | |
| 77 | 51 | | | | | | |
| 78 | 52 | | | | | | |
| 79 | 53 | | | | | | |
| 80 | 54 | | | | | | |
| 81 | 55 | | | | | | |
| 82 | | | | | | | |
| 83 | | | | | | | |
| 84 | | | | | | | |
| 85 | PRELIMINARY LINE AND GRADE TOTAL | | | | | | 115 |

| | A | B | C | D | E | F | G |
|-----|-------------------------------|---|-------|--------|----------|-------|---|
| 116 | FINAL PLAN PREPARATION | | | | | | |
| 117 | No. | ITEM | UNIT | AMOUNT | HRS/UNIT | HOURS | |
| 118 | 80 | Computer setup | LS | | | | |
| 119 | 81 | Update existing topography and terrain model | Mile | 0.5 | 12 | 6 | |
| 120 | 82 | Refine alignments (horizontal & vertical) | Mile | 0.5 | 15 | 8 | |
| 121 | 83 | Develop path design | No. | 1 | 2 | 2 | |
| 122 | 84 | Finalize templates & transitions | No. | 1 | 2 | 2 | |
| 123 | 85 | Develop final pathway model | Mile | 0.5 | 50 | 25 | |
| 124 | 86 | Develop proposed design | Mile | 0.5 | 80 | 40 | |
| 125 | 87 | Generate plan sheets (scale 1" = 20') | Sheet | 4 | 6 | 24 | |
| 126 | 88 | Generate profile sheets (scale 1" = 20') | Sheet | 4 | 6 | 24 | |
| 127 | 89 | Detail cross sections (scale 1" = 5') | No. | 16 | 0.5 | 8 | |
| 128 | 90 | Design entrances | No. | 16 | 0.75 | 12 | |
| 129 | 91 | Revise roadway plans from soils report | Mile | | | | |
| 130 | DRAINAGE | | | | | | |
| 131 | 92 | Develop pipe sections (< 54") | No. | | | | |
| 132 | 93 | Develop drainage system map | Mile | | | | |
| 133 | 94 | Develop drainage situation (bridge) | No. | | | | |
| 134 | 95 | Develop drainage situation (culvert) | No. | 1 | 4 | 4 | |
| 135 | 96 | Develop blue line stream channel change (=> 200') | No. | | | | 0 |
| 136 | 97 | Drainage analysis (entrance pipes) | No. | 12 | 0.5 | 6 | |
| 137 | 98 | Drainage analysis (A < = 200 acres) | No. | 1 | 4 | 4 | |
| 138 | 99 | Drainage analysis (200 acres < A < 1.0 sq. mile) | No. | | | | |
| 139 | 100 | Drainage analysis (A = > 1.0 sq. mile) level 1 analysis | No. | | | | |
| 140 | 101 | Drainage analysis (A = > 1.0 sq. mile) level 2 analysis | No. | | | | |
| 141 | 102 | Drainage analysis (A = > 1.0 sq. mile) level 3 analysis | No. | | | | |
| 142 | 103 | Special drainage studies | No. | | | | |
| 143 | 104 | Roadway ditches and channels | Mile | 0.5 | 16 | 8 | |
| 144 | 105 | Develop Erosion Control Plan | Mile | 0.5 | 12 | 6 | |
| 145 | 106 | Inlet spacing calculations | No. | | | | |
| 146 | 107 | Storm sewers calculations | No. | | | | |
| 147 | 108 | Perform scour analysis | No. | | | | |
| 148 | 109 | Assemble preliminary and final drainage folders | LS | | | | |
| 149 | 110 | Prepare advanced situation folder - bridge | No. | | | | |
| 150 | 111 | Prepare advanced situation folder - culvert | No. | | | | |
| 151 | DRAINAGE MISCELLANEOUS | | | | | | |
| 152 | 112 | | | | | | |
| 153 | 113 | | | | | | |
| 154 | 114 | | | | | | |
| 155 | 115 | | | | | | |
| 156 | | | | | | | |
| 157 | | | | | | | |

| | A | B | C | D | E | F | G |
|-----|---|--|-------|--------|----------|-------|------------|
| 158 | FINAL PLAN PREPARATION (Continued) | | | | | | |
| 159 | No. | ITEM | UNIT | AMOUNT | HRS/UNIT | HOURS | |
| 160 | 116 | Prepare layout sheet | LS | 1 | 5 | 5 | |
| 161 | 117 | Prepare typical sections | No. | 1 | 3 | 3 | |
| 162 | 118 | Prepare Interchange geometric approval | No. | | | | |
| 163 | 119 | Prepare intersection geometric approval | No. | | | | |
| 164 | 120 | Prepare coordinate control sheet | Mile | 0.5 | 8 | 4 | |
| 165 | 121 | Prepare elevation developments | No. | | | | |
| 166 | 122 | Prepare striping plan | No. | | | | |
| 167 | 123 | Calculate final quantities | Mile | 0.5 | 24 | 12 | |
| 168 | 124 | Complete general summary | LS | 1 | 8 | 8 | |
| 169 | 125 | Complete paving summary | LS | 1 | 6 | 6 | |
| 170 | 126 | Complete drainage summary | LS | 1 | 4 | 4 | |
| 171 | 127 | Complete pavement under-drain summary | LS | | | | |
| 172 | 128 | Prepare cost estimate | LS | 1 | 8 | 8 | |
| 173 | 129 | Plot/print copies of plans | LS | 1 | 2 | 2 | |
| 174 | 130 | Plan revisions | Mile | 0.5 | 30 | 15 | |
| 175 | 131 | Prepare final construction plans submittal | LS | 1 | 40 | 40 | |
| 176 | MAINTENANCE OF TRAFFIC | | | | | | |
| 177 | 132 | Write maintenance of traffic notes (TCP) | LS | 1 | 10 | 10 | |
| 178 | 133 | Prepare construction phasing plans | Mile | | | | |
| 179 | 134 | Develop diversion plan sheets | Sheet | | | | |
| 180 | 135 | Develop diversion profile sheets | Sheet | | | | |
| 181 | 136 | Develop diversion cross sections | No. | | | | |
| 182 | 137 | Develop temporary drainage | No. | | | | |
| 183 | FINAL PLANS MISCELLANEOUS | | | | | | |
| 184 | 138 | Document available rock quantities | LS | | | | |
| 185 | 139 | LPA Coordination | LS | | | | |
| 186 | 140 | SD1 Coordination | LS | | | | |
| 187 | 141 | | | | | | |
| 188 | 142 | | | | | | |
| 189 | 143 | | | | | | |
| 190 | | | | | | | |
| 191 | | | | | | | |
| 192 | FINAL PLANS TOTAL | | | | | | 296 |

| | A | B | C | D | E | F | G |
|-----|---|--|---------|------|--------|----------|-----------|
| 193 | MEETINGS | | | | | | |
| 194 | No. | ITEM | PERSONS | UNIT | AMOUNT | HRS/UNIT | HOURS |
| 195 | 150 | Prelim. line and grade inspection | 2 | No. | 1 | 4 | 8 |
| 196 | 151 | Drainage inspection | 2 | No. | | | |
| 197 | 152 | Final inspection | 2 | No. | | | |
| 198 | 153 | Misc. project coordination meetings | 1 | No. | | | |
| 199 | 154 | Project team meetings | 2 | No. | 2 | 3 | 12 |
| 200 | MEETINGS MISCELLANEOUS | | | | | | |
| 201 | 155 | Value Engineering Study | | LS | | | |
| 202 | 156 | Constructability Review | | LS | | | |
| 203 | | | | | | | |
| 204 | | | | | | | |
| 205 | | | | | | | |
| 206 | | | | | | | |
| 207 | MEETINGS TOTAL | | | | | | 20 |
| 208 | | | | | | | |
| 209 | PUBLIC INVOLVEMENT | | | | | | |
| 210 | No. | ITEM | PERSONS | UNIT | AMOUNT | HRS/UNIT | HOURS |
| 211 | 160 | Develop and Maintain Mailing List | 1 | LS | 1 | 8 | 8 |
| 212 | 161 | Prepare for Advisory Committee/Officials Meeting | | No. | | | |
| 213 | 162 | Attend Advisory Committee/Officials Meeting | | No. | | | |
| 214 | 163 | Prepare for Public Meetings/Hearings | | No. | | | |
| 215 | 164 | Attend Public Meetings/Hearings | | No. | | | |
| 216 | 165 | Prepare and Distribute Newsletter | | No. | | | |
| 217 | 166 | Property owner coordination | 1 | No. | 14 | 2 | 28 |
| 218 | PUBLIC INVOLVEMENT MISCELLANEOUS | | | | | | |
| 219 | 167 | | | | | | 0 |
| 220 | 168 | | | | | | 0 |
| 221 | 169 | | | | | | |
| 222 | | | | | | | |
| 223 | PUBLIC INVOLVEMENT TOTAL | | | | | | 36 |
| 224 | | | | | | | |
| 225 | QA/QC | | | | | | |
| 226 | No. | ITEM | | UNIT | AMOUNT | HRS/UNIT | HOURS |
| 227 | 180 | Plan review | | No. | 1 | 16 | 16 |
| 228 | 181 | Structure review | | | | | 0 |
| 229 | QA/QC TOTAL | | | | | | 16 |
| 230 | | | | | | | |

| | A | B | C | D | E | F | G |
|-----|-----------------------------------|---|---|---|---|---|------------|
| 231 | PRODUCTION-HOUR SUMMARY | | | | | | |
| 232 | SURVEY TOTAL | | | | | | 131 |
| 233 | LINE AND GRADE TOTAL | | | | | | 115 |
| 234 | UTILITY COORDINATION TOTAL | | | | | | 36 |
| 235 | RIGHT OF WAY PLANS TOTAL | | | | | | 42 |
| 236 | FINAL PLANS TOTAL | | | | | | 296 |
| 237 | MEETINGS TOTAL | | | | | | 20 |
| 238 | PUBLIC INVOLVEMENT TOTAL | | | | | | 36 |
| 239 | QA/QC TOTAL | | | | | | 16 |
| 240 | GRAND TOTAL | | | | | | 692 |

CLASSIFICATIONS AND PERCENTAGES FOR DESIGN

Escalation:

Estimated Notice to Proceed:

Estimated End of Project:

midpoint:

rate = 0.00%

period = 0

factor = 0.00000

| DESCRIPTION | AVERAGE RATE | CLASSIFICATIONS, CERTIFIED / AUDITED RATES, AND PERCENTAGES | | | | | | | | | | TOTAL PERCENT |
|-----------------------------|--------------|---|-----------------|------------------|----------------------|-----------|---------------|--|---------------------|--------|--------|---------------|
| | | Principal | Project Manager | Project Engineer | Engineer-in-Training | CADD Tech | Land Surveyor | 2 Person Field Crew (Party Chief & Instrument Person) | Structural Engineer | | | |
| | | \$170.00 | \$140.00 | \$130.00 | \$100.00 | \$95.00 | \$120.00 | \$175.00 | \$165.00 | \$0.00 | \$0.00 | |
| | | \$170.00 | \$140.00 | \$130.00 | \$100.00 | \$95.00 | \$120.00 | \$175.00 | \$165.00 | \$0.00 | \$0.00 | |
| Survey | \$166.50 | 0% | 5% | 15% | 0% | 0% | 0% | 80% | 0% | | | 100% |
| Line and Grade | \$133.50 | 5% | 15% | 80% | | | | | | | | 100% |
| Utility Coordination | \$136.00 | 5% | 40% | 55% | | | | | | | | 100% |
| Right of Way Plans | \$120.00 | 0% | 0% | 0% | | | 100% | | | | | 100% |
| Final Plans | \$132.00 | 0% | 20% | 80% | | | | | | | | 100% |
| Meetings | \$135.00 | 0% | 50% | 50% | | | | | | | | 100% |
| Public Involvement | \$135.00 | 0% | 50% | 50% | | | | | | | | 100% |
| QA/QC | \$143.00 | 40% | 40% | 0% | | 20% | | | | | | 100% |
| | | | | | | | | | | | | 0% |