

< Bridge Erection VR simulation data >

FORUM8 Co., Ltd
 2-1-1 Nakameguro GT Tower 15F
 KamiMeguro Meguro-ku Tokyo
 TEL.:03-5773-1888 FAX:03-5720-5688

UC - win / Road Cost Estimation - Breakdown

Summary of work

The data express the bridge erection steps of 560m of road across mountains and a ravine. All erection steps can be seen for the setting of movable models. Synchronizing truss erection with crane action provides the clear erection images and setting of road alignment provides driving images after construction complete.

| Estimated distance | Par section | Correction Coefficient | Quantity | Estimated distance |
|----------------------------------|--|------------------------|----------|--------------------|
| The total extended distance (km) | | 1.0 | 0.380 | 0.380 |
| | sectional change | 1.5 | 0.000 | 0.000 |
| | Crossing | 2.0 | 0.000 | 0.000 |
| | I·JCT | 1.7 | 0.000 | 0.000 |
| | Tunnel part | 1.0 | 0.000 | 0.000 |
| | Bridge part | 1.5 | 0.560 | 0.840 |
| | General section | 1.3 | 0.000 | 0.000 |
| | Others | 0.5 | 0.000 | 0.000 |
| A | Subtotal(A) Estimated extension distance | 1.00 | 0.940 | 1.220 |

| Item classification | Item Breakdown | Correction Coefficient | Standard work unit | Man-day input | Estimated Man-Day |
|--|--|------------------------|--------------------|---------------|-------------------|
| Geographical feature (Man day) | Standard 50m mesh use | 1.0 | (0.15-0.4) | 0.150 | 0.150 |
| | Par geographical feature edit | 1.0 | (0.1-1.5) | 0.300 | 0.300 |
| | Space base use | 1.0 | 0.2 | 0.000 | 0.000 |
| | Aerial photograph use | 1.0 | (0.2-0.3) | 0.000 | 0.000 |
| | DXF conversion | 0.5 | (1.0-3.0) | 0.000 | 0.000 |
| | XML | 1.0 | (1.0-2.0) | 0.000 | 0.000 |
| | Subtotal | 0.5 | | | |
| Alignment definition (Man day) | P calculation work | 1.0 | 0.3 | 0.300 | 0.300 |
| | P input | 1.0 | 0.15 | 0.150 | 0.150 |
| | VC input | 1.0 | 0.2 | 0.200 | 0.200 |
| | Classification Setup | 1.0 | 0.2 | 0.200 | 0.200 |
| | Subtotal | 0.9 | | | |
| A cross-sectional definition (Man day) | Cross-sectional definition | 1.0 | 0.8 | 0.800 | 0.800 |
| | Cross-sectional texture setup | 1.0 | 0.3 | 0.300 | 0.300 |
| | Subtotal | 1.1 | | | |
| 3D Model · Texture (Man day) | Accuracy-Draft | 1.0 | 1.0 | 0.000 | 0.000 |
| | Accuracy-Average | 1.0 | 2.0 | 2.000 | 2.000 |
| | Accuracy-High Precision | 1.0 | 3.0 | 0.000 | 0.000 |
| | Accuracy-Excellent Precision | 1.0 | (3.0-5.0) | 0.000 | 0.000 |
| | Subtotal | 2.0 | | | |
| B | Subtotal(B) The work in Man-day per km | | | | 4.400 |

| Optional Item Classification | Item Breakdown | Correction Coefficient | Standard work unit | Man-day input | Estimated Man-Day |
|--------------------------------------|--|---------------------------|--------------------|---------------|-------------------|
| 3DModel・Texture | 3DModel | 70 Elements | 1.0 | 3.500 | 3.500 |
| | MD3Model | 1Body | 1.0 | 0.000 | 0.000 |
| | 3DTrees | 2 Kinds | 0.8 | 0.000 | 0.000 |
| | (Man day) Texture | 5 Textures | 0.5 | 0.700 | 0.700 |
| Subtotal | | 4.2 | | | |
| Simulation various setup, adjustment | Traffic setup | Ten roads | 0.5 | 0.000 | 0.000 |
| | Signal control setup | One crossing | 0.5 | 0.000 | 0.000 |
| | (Man day) A model of operation and a | WAY-P setup | 1.2 | 5.000 | 5.000 |
| | Flight path setup | 20PT | 0.3 | 0.000 | 0.000 |
| | Default/Before/After setup | BFR/AFT | 0.5 | 0.000 | 0.000 |
| | Lake setup | 50PT | 0.5 | 0.000 | 0.000 |
| | Stream setup | 10 Sections | 0.5 | 0.000 | 0.000 |
| | Script setup | | 1.0 | 0.000 | 0.000 |
| | Data adjustment | | 1.0 | 1.000 | 1.000 |
| Subtotal | | 6.0 | | | |
| Output | Screen output | A41 sheet | 0.07 | 0.000 | 0.000 |
| | | (Man day) A31 sheet | 0.1 | 0.000 | 0.000 |
| | AVI output (1 minute) | Rough | 1.0 | 0.000 | 0.000 |
| | | Normal | 2.0 | 0.000 | 0.000 |
| | | Excellent | 4.0 | 0.000 | 0.000 |
| | Sound | Sound Setup | 別途見積 | 0.000 | 0.000 |
| | | Audio input | 別途見積 | 0.000 | 0.000 |
| | | BGM | 別途見積 | 0.000 | 0.000 |
| | | Guide | 別途見積 | 0.000 | 0.000 |
| | AVI composition | Normal | 別途見積 | 0.000 | 0.000 |
| | | Excellent | 別途見積 | 0.000 | 0.000 |
| | | Perspective view creation | Rough | 別途見積 | 0.000 |
| | | Normal | 別途見積 | 0.000 | 0.000 |
| | Excellent | 別途見積 | 0.000 | 0.000 | |
| Subtotal | | 0.0 | | | |
| C | Subtotal(C) Option work classification | | | | 10.200 |

| Engineer's standardized work breakdown list | | | | |
|---|-------------------------------|-----|--------|--------|
| Man day unit price of an Engineer | EngineerA | 10% | 3,830 | 38,300 |
| | EngineerB | 30% | 9,150 | 30,500 |
| | EngineerC | 40% | 10,400 | 26,000 |
| | Engineer | 20% | 4,420 | 22,100 |
| D | Man day unit price(D) 27,740円 | | 27,800 | |

| Direct personnel expenses | | | | |
|---------------------------|-------------------------|--|--|----------|
| E | Sum total E = (AxB+C)xD | | | ¥432,790 |

| Administrative expenses | | | | |
|----------------------------|----------------------------------|-----|--|---------|
| F | 20% of direct personnel expenses | 20% | | ¥86,558 |
| Administrative expenses(F) | | | | |

| Cost | | | | |
|----------|---|--|--|---------|
| | Technical cost(Field survey expense etc.) | | | |
| | Express charges(25% Premium overtime work etc.) | | | |
| | Software & hardware purchase expenses | | | |
| | Satellite photography expenses | | | |
| | Apparatus rental and transportation | | | |
| | Transportation-expenses cost price | | | |
| | Work management expenses | | | |
| | Others | | | |
| G | Subtotal of costs (G) | | | ¥-9,348 |

| | | | | |
|------------------|--------------------------------|--|--|----------|
| Summation | Estimated Grand Total(E+ F+ G) | | | ¥510,000 |
|------------------|--------------------------------|--|--|----------|

This excludes the cost of any local taxes that may be levied upon the project.