

RANGER

ENGINEERING CONSULTING

2023 SERVICES PACKET

Ranger Engineering is the industry leading engineering firm in top tier GPS construction layout and machine control models. This Services Packet will detail new project submittals, typical turnaround time, standard deliverables, optional deliverables, major GPS file types, delivery of files, standard pricing for models, and vendor setup and payment.

As an engineering firm, we ensure that all models are clear, complete, and correct. Each model is reviewed by the model builder, the Engineer of Record (Ben Crysler P.E.), and the President of Ranger Engineering (Chad Cooper). This system of review combined with the signed/sealed Machine Control Model Design Report (MCMDR) sets us apart from all other model builders, and creates the standard of excellence in the model building industry.

NEW PROJECT SUBMITTALS - All project submittals should be emailed to pm@rangerengineer.com and chad@rangerengineer.com. Each submittal needs the current construction plans (PDF format, including any revisions), all CAD files provided by the design engineer (any format of AutoCAD, Civil3D, or Microstation), and project scope beyond the Standard Deliverables.

TYPICAL TURNAROUND TIME – We work to schedule GPS model completion based on your needs. Ranger employees a large staff of model builders. We strive to move quickly and efficiently to complete models in a timely manner.

STANDARD DELIVERABLES – GPS Models will have the following standard deliverables:

- FINISH GRADE surface and it's 3D linework of the proposed site improvements
- Background 2D linework from the engineer's CAD files
- Background 2D utility linework from the engineer's CAD files
- Centerline alignments (HAL and VAL) for all proposed roadways
- Layout points from the surface and 3D linework upon request
- Signed/sealed MCMDR detailing the major conflicts, minor conflicts, and typos

OPTIONAL DELIVERABLES – GPS Models can have the following deliverables added to the scope:

1. Surface and 3D linework: Subgrade to top of Dirt (DIRT)
2. Surface and 3D linework: Subgrade to top of Subballast or Aggbase (SUBL or AGGB)

3. Surface and 3D linework: Utility Network to invert of Pipe (STM, WTR, SAN, GAS, and/or ELEC)
4. Surface and 3D linework: Temporary Erosion Control (ESC)
5. Surface and 3D linework: Temporary Rough Mass Grade (MASS)
6. Surface and 3D linework: Building Foundation to top or bottom of Footing (FNDN)
7. Surface and 3D linework: Retaining Wall to top or bottom of Footing (WALL)
8. Surface and 3D linework: Bridge Deck (BRDG)
9. Surface and 3D linework: Bridge Deflection (DEFL)
10. Construction Layout: Building Foundation and Footing linework
11. Construction Layout: Utility Pipe and Structure elevated linework and points
12. Construction Layout: Curb machine alignment files
13. Construction Layout: Paving machine alignment files
14. Takeoff Quantities: Surface to surface takeoff of completed model with cut/fill color map
15. Special Requests: All other special scope needs can be requested with the project manager

MAJOR GPS FILE TYPES - Following are the major GPS file types that we provided:

- TOPCON: Standard deliverable is a TOPCON project (.tp3) file. Linework (.ln3), surface (.tn3), control (.gc3), and/or point (.pt3) files are available upon request.
- TRIMBLE: Standard deliverables are the TRIMBLE SCS900 linework (.dxf), SCS900 surface (.ttm), GCS900 linework (.svl), GCS900 surface (.svd), and the Business Center (.vce) file.
- LEICA: Standard deliverables are the LEICA linework (.dxf), surface (.xml), and alignment (.xml) files.
- OTHER: Any other file types can be requested with the project manager.

DELIVERY OF FILES - Files are delivered normally via email. Upon request, we can create a company Dropbox folder where all files will be uploaded and organized by project.

STANDARD PRICING FOR MODELS – GPS Model pricing range is based on size and complexity. We are happy to provide either a ROM estimate or a detailed quote upfront before the model is built. Following are some of our standard price ranges:

- Commercial Sites: For a small single pad site, standard pricing would be between \$750 and \$1,250. For larger commercial site, standard pricing would be between \$1,000 and \$7,000.
- Subdivisions: For a 100 lot subdivision, standard pricing would be between \$1,500 and \$4,000.
- Major Roadways: Highly dependent on level of detail, number of lane miles, and scope of work. Standard pricing would be between \$7,500 and \$75,000.
- Utility Network and/or Layout: For 5,000ft of pressure pipe, standard pricing would be between \$750 and \$2,000. For 100 structure layout of gravity pipe, standard pricing would be between \$1,200 and \$2,000.
- All other projects: Contact our project manager for a ROM estimate or a specific quote.

VENDOR SETUP AND PAYMENT - Upon completion of the GPS Model, new customers will receive a Vendor Setup email from the project manager. The invoice for the model will be sent by email and/or a hard copy in the mail. Payment is by check, or by request: credit card, debit card, or bank transfer.