Trimble Business Center Checklist

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| --- | --- | --- | --- |
| Offer Number: |  | Survey Project: |  |
| Computer File Number: |  | DMS Number: |  |
| Field Book Number: |  | | |

| Surveyor | N/A | Preparation of Survey Products | | | | | | | | | Supervisor |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **1** | **Project Setup** | | | | | | | |  |
|  |  | 1.1 | | Create a new project with required template | | | | | |  | |
|  |  | 1.2 | | Project Settings | | | | | |  | |
|  |  | 1.2.1 | | | | General Information | | | |  | |
|  |  | 1.2.1.1 | | | | | Company Information | | |  | |
|  |  | 1.2.1.2 | | | | | User Information | | |  | |
|  |  | 1.2.2 | | | | Baseline Processing | | | |  | |
|  |  | 1.2.2.1 | | | | | Ephemeris Type | | |  | |
|  |  | 1.2.2.2 | | | | | Processing interval | | |  | |
|  |  | 1.2.2.3 | | | | | Satellites and elevation mask | | |  | |
|  |  | 1.2.3 | | | | Computations | | | |  | |
|  |  | 1.2.3.1 | | | | | Point tolerances | | |  | |
|  |  | 1.2.3.2 | | | | | GNSS Vector tolerances | | |  | |
|  |  | 1.2.4 | | | | Network Adjustment | | | |  | |
|  |  | 1.2.4.1 | | | | | Covariance settings | | |  | |
|  |  | 1.2.5 | | | | Default Standard errors | | | |  | |
|  |  | 1.2.5.1 | | | | | GNSS Source for standard errors | | |  | |
|  |  | 1.2.5.2 | | | | | GNSS default precision errors | | |  | |
|  |  | 1.2.5.3 | | | | | Precision Confidence Level | | |  | |
|  |  | 1.2.6 | | | | View | | | |  | |
|  |  | 1.2.6.1 | | | | | Vector spreadsheet settings | | |  | |
|  |  | **2** | **Create Network Diagram** | | | | | | |  | |
|  |  | 2.1 | | Create Network diagram | | | | | |  | |
|  |  | **3** | **Import Data** | | | | | | |  | |
|  |  | 3.1 | | Import Data | | | | | |  | |
|  |  | 3.1.1 | | | | Import GNSS data files | | | |  | |
|  |  | 3.1.2 | | | | View 'Antenna' tab to ensure all data is correctly read in | | | |  | |
|  |  | 3.1.3 | | | | Download and import ephemeris data | | | |  | |
|  |  | **4** | **Baseline Processing** | | | | | | |  | |
|  |  | 4.1 | | Seed Coordinate for one known mark | | | | | |  | |
|  |  | 4.1.1 | | | | Current Reg 13 certificate – if applicable | | | |  | |
|  |  | 4.1.2 | | | | Current Form 6 ANJ values – if applicable | | | |  | |
|  |  | 4.1.3 | | | | Add seed coordinates | | | |  | |
|  |  | 4.2 | | Disable dependent baselines | | | | | |  | |
|  |  | 4.2.1 | | | | Identify and disable dependent baselines | | | |  | |
|  |  | 4.3 | | Assess session overlap | | | | | |  | |
|  |  | 4.3.1 | | | | Assess session overlap in time-based view | | | |  | |
|  |  | 4.4 | | Process baselines | | | | | |  | |
|  |  | 4.4.1 | | | | Baseline processing report | | | |  | |
|  |  | 4.4.2 | | | | Fix all excessive errors and mistakes | | | |  | |
|  |  | 4.4.3 | | | | GNSS loop closure report | | | |  | |
|  |  | **5** | **Minimally Constrained Adjustment** | | | | | | |  | |
|  |  | 5.1 | | Enter all known coordinate values | | | | | |  | |
|  |  | 5.1.1 | | | | Add known coordinate values | | | |  | |
|  |  | 5.1.2 | | | | Input known CORS coordinates | | | |  | |
|  |  | 5.1.3 | | | | Assign to survey mark and set quality | | | |  | |
|  |  | 5.1.4 | | | | Input known PM coordinates | | | |  | |
|  |  | 5.2 | | Perform the adjustment | | | | | |  | |
|  |  | 5.2.1 | | | | Adjust the network | | | |  | |
|  |  | 5.2.2 | | | | Ensure Chi square test passes or apply scalar if value is below 2.0 | | | |  | |
|  |  | 5.2.3 | | | | Find and fix issues | | | |  | |
|  |  | 5.2.3.1 | | | | | Identify and fix any unacceptable flags | | |  | |
|  |  | 5.2.4 | | | | View network adjustment report | | | |  | |
|  |  | 5.2.4.1 | | | | | Check local outlier test – standardised residual outliers | | |  | |
|  |  | 5.2.4.2 | | | | | Check local outlier test – 3D Precision (PPM) outliers | | |  | |
|  |  | 5.2.5 | | | | Point derivation report on identified outliers | | | |  | |
|  |  | 5.2.5.1 | | | | | Disable any baselines that have outliers | | |  | |
|  |  | 5.2.6 | | | | Reconfigure network (if required) | | | |  | |
|  |  | 5.2.6.1 | | | | | Reconfigure network by enabling different baselines (if required) | | |  | |
|  |  | 5.2.6.2 | | | | | Amend network diagram (if required) | | |  | |
|  |  | 5.2.7 | | | | Apply a weighting strategy | | | |  | |
|  |  | 5.2.7.1 | | | | | Apply scalar if required | | |  | |
|  |  | 5.2.8 | | | | Review the network adjustment report | | | |  | |
|  |  | 5.2.8.1 | | | | | Review Control coordinate comparisons | | |  | |
|  |  | 5.2.8.2 | | | | | Check Control point constraint | | |  | |
|  |  | 5.2.8.3 | | | | | Check error ellipse components meet nominated SU values | | |  | |
|  |  | 5.2.9 | | | | Save the network adjustment report | | | |  | |
|  |  | 5.2.9.1 | | | | | Save as Web archive format | | |  | |
|  |  | 5.2.9.2 | | | | | Convert and print to pdf | | |  | |
|  |  | 5.2.10 | | | | Export minimally constrained adjustment results | | | |  | |
|  |  | 5.2.10.1 | | | | | Ensure *Fixed in adjustment* and *Adjusted* is selected | | |  | |
|  |  | 5.2.10.2 | | | | | Ensure \_*TMR Export Minimal constrained adj* is selected | | |  | |
|  |  | **6** | **Constrained Adjustment** | | | | | | |  | |
|  |  | 6.1 | | Run the constrained adjustment | | | | | |  | |
|  |  | 6.1.1 | | | | Clear the adjustment results if scalar weight was applied in minimal adj | | | |  | |
|  |  | 6.1.2 | | | | Weight datum marks | | | |  | |
|  |  | 6.1.3 | | | | Constrain horizontal component | | | |  | |
|  |  | 6.1.3.1 | | | | | Adjust the network | | |  | |
|  |  | 6.1.3.2 | | | | | Ensure Chi square test passes or apply scalar if value is below 2.0 | | |  | |
|  |  | 6.1.3.3 | | | | | Check if fixed marks Control coordinate comparisons are acceptable | | |  | |
|  |  | 6.1.4 | | | | Constrain vertical component | | | |  | |
|  |  | 6.1.4.1 | | | | | Select fixed vertical marks | | |  | |
|  |  | 6.1.4.2 | | | | | Adjust the network | | |  | |
|  |  | 6.1.4.3 | | | | | Ensure Chi square test passes or apply scalar if value is below 2.0 | | |  | |
|  |  | 6.1.5 | | | | Review the network adjustment report | | | |  | |
|  |  | 6.1.5.1 | | | | | Review the Control coordinate comparisons | | |  | |
|  |  | 6.1.5.2 | | | | | Check the Control coordinate constraints | | |  | |
|  |  | 6.1.5.3 | | | | | Check the adjusted grid coordinate error values | | |  | |
|  |  | 6.1.5.4 | | | | | Check that error ellipse values are acceptable | | |  | |
|  |  | 6.1.6 | | | | Save the network adjustment report | | | |  | |
|  |  | 6.1.6.1 | | | | | Save as Web archive format | | |  | |
|  |  | 6.1.6.2 | | | | | Convert and print to pdf | | |  | |
|  |  | 6.1.7 | | | | Export constrained adjustment results | | | |  | |
|  |  | 6.1.7.1 | | | | | Ensure *Fixed in adjustment* and *Adjusted* is selected | | |  | |
|  |  | 6.1.7.2 | | | | | Ensure \_*TMR Export Constrained adj* is selected | | |  | |
|  |  | **7** | **Additional export and reports** | | | | | | |  | |
|  |  | 7.1 | | ASCII output | | | | | |  | |
|  |  | 7.1.1 | | | | Create .csv file for Control stations | | | |  | |
|  |  | 7.1.2 | | | | Create Point list report | | | |  | |
|  |  | **8** | **Output of network for DoR** | | | | | | |  | |
|  |  | 8.1 | | Export in RINEX format | | | | | |  | |
|  |  | 8.1.1 | | | | Ensure observation files have correct heights and station identifiers | | | |  | |
|  |  | 8.2 | | Export in TDEF format | | | | | |  | |
|  |  | 8.2.1 | | | | Ensure *Trimble Data Exchange Format (TDEF) exporter* is selected | | | |  | |
|  |  | 8.3 | | Submit to DoR | | | | | |  | |
|  |  | 8.3.1 | | | | Zip all relevant files | | | |  | |
|  |  | **9** | **Project Archival** | | | | | | |  | |
|  |  | 9.1 | | Archive project | | | | | |  | |
|  |  | 9.1.1 | | | | Archive project files | | | |  | |
|  |  | **Checked:** | | |  | | | **(Surveyor)** | **Date: \_\_ / \_\_ / \_\_** | |  |
|  |  | **Checked:** | | |  | | | **(Supervisor)** | **Date: \_\_ / \_\_ / \_\_** | |  |