

TRAVERSE ADJUSTMENT REPORT

PROJECT **Al Khor Expressway**
SURVEYOR **Asjad Mehmood**
INSTRUMENT **Leica TS16 2"**

LOCATION **Al Khor, Qatar**
CHECKED BY **Senior Surveyor**
DATE **2026-10-11**

1. Traverse details

Traverse type **Closed (checked on a known point)**
Adjustment method **Bowditch (Compass rule)**
Station point **CP-01 E 228450.312 N 441203.845**
Backsight point **CP-02 E 228912.640 N 441655.118**
Reference bearing **CP-01 -> CP-02 045°41'36" (646.061 m)**
Closing point **CP-03 E 229265.871 N 441392.006**
Traverse legs **5 (total length 931.579 m)**

2. Closure check

ACCEPTED - within the required precision

Misclosure dE = 12.0 mm dN = -9.0 mm Linear = 15.0 mm

Precision achieved 1 : 62,105 Required 1 : 10,000 Total length 931.579 m

Misclosure = measured closing coordinates - known closing coordinates. Corrections are the opposite sign.

3. Input coordinates (as measured on site)

Point	Easting (m)	Northing (m)	Remark
CP-01	228450.312	441203.845	Station (known)
TP-01	228610.458	441118.300	Steel pin
TP-02	228795.123	441090.770	Steel pin
TP-03	228968.548	441162.410	Steel pin
TP-04	229120.243	441281.652	Steel pin
CP-03	229265.883	441391.997	Closing point as measured

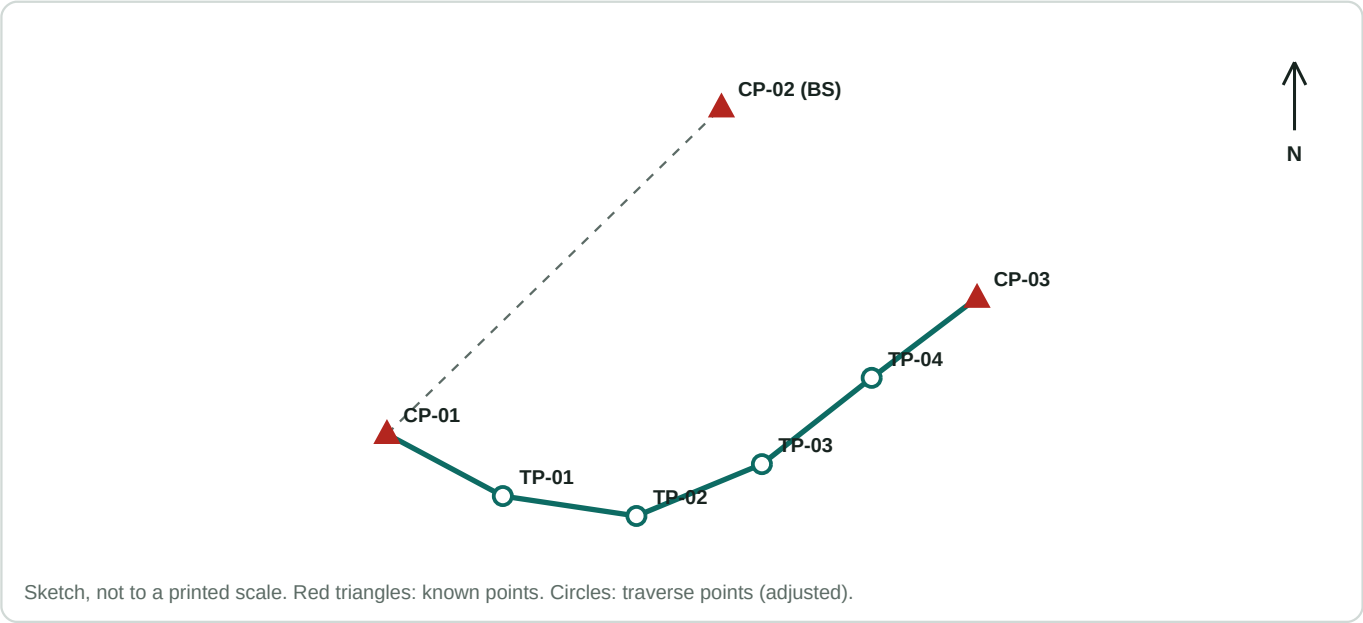
4. Output coordinates (adjusted)

Point	Corr. dE (mm)	Corr. dN (mm)	Adjusted Easting (m)	Adjusted Northing (m)
CP-01	0.0	0.0	228450.312	441203.845
TP-01	-2.3	1.8	228610.456	441118.302
TP-02	-4.7	3.6	228795.118	441090.774
TP-03	-7.2	5.4	228968.541	441162.415
TP-04	-9.6	7.2	229120.233	441281.659
CP-03	-12.0	9.0	229265.871	441392.006

5. Bearings and distances (from output coordinates)

From	To	Bearing (WCB)	Distance (m)
CP-01	TP-01	118°06'35"	181.559
TP-01	TP-02	098°28'44"	186.703
TP-02	TP-03	067°33'15"	187.638
TP-03	TP-04	051°49'46"	192.950
TP-04	CP-03	052°50'58"	182.720

6. Sketch



SURVEYED BY
Asjad Mehmood

Signature / Date

CHECKED BY
Senior Surveyor

Signature / Date

APPROVED BY

Signature / Date