

SURVEY REPORT

Project Designation (CRS): SUM-77/277/224-VARIOUS

PID #: 106002

State Job #: 442107

Survey Report Prepared For:

GPD GROUP
520 South Main Street, Suite 2531
Akron, Ohio 44311

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Section 1: Project Description

The project is located in the State of Ohio, County of Summit, Coventry Township. The purpose of the survey was to establish Horizontal and Vertical Control to be used for Aerial Survey Mapping and Supplemental Topographic Mapping as well as to Resolve the Alignment along Interstate 77 and the Interstate 77/277 Interchange. The information has been compiled and generated for GPD Group to support the roadway project along Interstate 77 and the Interstate 77/277 Interchange.

Section 2: Control Survey

Fishbeck, formerly Northwest Consultants, Inc. (NCI), survey crews set a total of eight (8) Type A Concrete Monuments throughout the project corridor. GPS survey equipment was used to establish the horizontal coordinates for the eight (8) Type A Concrete monuments. Additional supplemental control points were set utilizing 3/4" rebar with yellow caps marked "NCI Traverse" or Mag Nails. A traverse was done between the pairs of concrete monuments using a total station. An adjustment of the traverse took place that meets second order accuracy. The Vertical Control was established through bench runs using a SOKKIA SDL30 or Trimble Dini Digital Level originating from CP02 monument, which has an elevation of 1072.643.

Horizontal Control

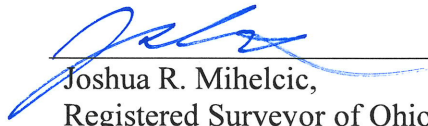
The SUM-77/277/224-Various project is based on the Ohio State Plane Coordinate System, North Zone, NAD 83(2011) as observed on the Type A concrete monuments set, CP01-CP08. Observed Grid coordinate values were converted to ground, utilizing the ODOT provided scale factor of 1.00010526226. A minimum of 3, 4-hour static observations were conducted at each of the Type A concrete Monuments and a Static GNSS Project Coordinate Analysis was performed to determine the final coordinate values at each of the Type A concrete monuments. Additional supplemental control point coordinates were established utilizing a base station and rover, with the base station set on the Type A concrete monuments or utilizing conventional survey methods with a total station.

See Appendix A for the horizontal primary control point information.

Vertical Control

The SUM-77/277/224-Various project used CP02 Static GNSS Project Coordinate Analysis results, which has an elevation of 1072.643, as the basis for establishing elevations for the control points as well as benchmarks. Bench runs, originating from CP02, were conducted. The majority of the bench marks and control points were adjusted using the STAR*LEV program and passed the Chi-Square Test at 5% level**. See Appendix B for a printout from STAR*LEV for the major bench runs. Small bench runs were conducted as additional bench marks and elevations were needed. See Appendix A for elevations for the control point information.

I, Joshua R. Mihelcic do hereby certify that the survey for the SUM-77/277/224-Various project, that was performed under the direction and supervision of Matthew J. Puhl, Registered Surveyor 8363 of the State of Ohio under his direct supervision, has been reviewed and the results of that survey are contained herein.


Joshua R. Mihelcic,
Registered Surveyor of Ohio: No. S-008453
Fishbeck



12-21-2020

Appendix A – Horizontal Control Points

PID 106002				SUM-77/277/224						11/30/2017	
Point	Point Description	Monument Type	Positioning Method	Grid Northing(m)	Grid Easting(m)	Grid Northing(ft)	Grid Easting(ft)	Ground Northing(ft)	Ground Easting(ft)	Scale Factor Grid to Ground	Orthometric Height (ft)
CP01	Azimuth	Type A	Static GNSS	146970.777	684815.158	482186.623	2246764.399	482237.379	2247000.898	1.000105262	1065.994
CP02	Control	Type A	Static GNSS	147167.753	684674.520	482832.869	2246302.988	482883.693	2246539.439	1.000105262	1072.643
CP03	Control	Type A	Static GNSS	147985.433	684612.596	485515.543	2246099.824	485566.649	2246336.254	1.000105262	1117.765
CP04	Azimuth	Type A	Static GNSS	148226.600	684608.835	486306.769	2246087.487	486357.959	2246323.916	1.000105262	1121.633
CP05	Control	Type A	Static GNSS	150523.696	684324.481	493843.159	2245154.568	493895.142	2245390.898	1.000105262	1073.528
CP06	Azimuth	Type A	Static GNSS	150527.299	684129.272	493854.980	2244514.119	493906.964	2244750.381	1.000105262	1090.456
CP07	Control	Type A	Static GNSS	151921.617	683638.602	498429.504	2242904.314	498481.970	2243140.408	1.000105262	1064.386
CP08	Azimuth	Type A	Static GNSS	152101.050	683675.856	499018.194	2243026.538	499070.722	2243262.644	1.000105262	1076.404

CP01 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP01							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/16	16:24	20:28	146,970.772	684,815.168	324.907	0.00467	-0.00967	0.01267	<input checked="" type="checkbox"/>
2	2017/11/17	17:21	21:23	146,970.778	684,815.157	324.912	-0.00133	0.00133	0.00767	<input checked="" type="checkbox"/>
3	2017/11/21	21:33	1:36	146,970.780	684,815.150	324.940	-0.00333	0.00833	-0.02033	<input checked="" type="checkbox"/>
4							0.00000	0.00000	0.00000	<input type="checkbox"/>
Average				146,970.777	684,815.158	324.920	RMSE:	RMSE:	RMSE:	
							RMSE IN METRIC:	0.0034	0.0074	0.0145
							RMSE IN US SURVEY FEET:	0.0112	0.0243	0.0476
							Pass	Pass	Fail	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	146,970.777	684,815.158	324.920
US SURVEY FEET (GRID)	482,186.623	2,246,764.399	1,066.007
US SURVEY FEET (GROUND)	482,237.379	2,247,000.898	1,066.007
			*1065.994

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP02 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP02							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/17	17:30	21:16	147,167.749	684,674.513	326.929	0.00367	0.00700	0.01333	<input checked="" type="checkbox"/>
2	2017/11/16	16:14	20:17	147,167.756	684,674.526	326.950	-0.00333	-0.00600	-0.00767	<input checked="" type="checkbox"/>
3	2017/11/21	21:28	1:26	147,167.753	684,674.521	326.948	-0.00033	-0.00100	-0.00567	<input checked="" type="checkbox"/>
4							0.00000	0.00000	0.00000	<input type="checkbox"/>
Average				147,167.753	684,674.520	326.942	RMSE:	RMSE:	RMSE:	
							RMSE IN METRIC:	0.0029	0.0054	0.0095
							RMSE IN US SURVEY FEET:	0.0094	0.0176	0.0310
							Pass	Pass	Pass	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	147,167.753	684,674.520	326.942
US SURVEY FEET (GRID)	482,832.869	2,246,302.988	1,072.643
US SURVEY FEET (GROUND)	482,883.693	2,246,539.439	1,072.643

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP03 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP03							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/16	11:59	16:02	147,985.431	684,612.590	340.669	0.00233	0.00567	0.01367	<input checked="" type="checkbox"/>
2	2017/11/17	13:04	17:05	147,985.433	684,612.595	340.700	0.00033	0.00067	-0.01733	<input checked="" type="checkbox"/>
3*	2017/11/21	16:46	20:52	147,985.436	684,612.602	340.679	-0.00267	-0.00633	0.00367	<input checked="" type="checkbox"/>
4							0.00000	0.00000	0.00000	<input type="checkbox"/>
Average				147,985.433	684,612.596	340.683	RMSE:	RMSE:	RMSE:	
							RMSE IN METRIC:	0.0021	0.0049	0.0129
							RMSE IN US SURVEY FEET:	0.0067	0.0161	0.0424
							Pass	Pass	Fail	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	147,985.433	684,612.596	340.683
US SURVEY FEET (GRID)	485,515.543	2,246,099.824	1,117.723
US SURVEY FEET (GROUND)	485,566.649	2,246,336.254	1,117.723
			*1117.765

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP04 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP04							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/17	12:56	17:00	148,226.602	684,608.831	341.843	-0.00233	0.00433	0.01700	<input checked="" type="checkbox"/>
2	2017/11/16	11:50	16:00	148,226.600	684,608.831	341.859	-0.00033	0.00433	0.00100	<input checked="" type="checkbox"/>
3*	2017/11/21	16:41	20:42	148,226.597	684,608.844	341.878	0.00267	-0.00867	-0.01800	<input checked="" type="checkbox"/>
4							0.00000	0.00000	0.00000	<input type="checkbox"/>
Average				148,226.600	684,608.835	341.860	RMSE:	RMSE:	RMSE:	
RMSE IN METRIC:							0.0021	0.0061	0.0143	
RMSE IN US SURVEY FEET:							0.0067	0.0201	0.0469	
							Pass	Pass	Fail	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	148,226.600	684,608.835	341.860
US SURVEY FEET (GRID)	486,306.769	2,246,087.487	1,121.586
US SURVEY FEET (GROUND)	486,357.959	2,246,323.916	1,121.586
			*1121.633

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP05 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP05							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/16	21:04	1:05	150,523.690	684,324.479	327.282	0.00600	0.00200	-0.02067	<input checked="" type="checkbox"/>
2	2017/11/20	14:38	18:52	150,523.700	684,324.483	327.247	-0.00400	-0.00200	0.01433	<input checked="" type="checkbox"/>
3	2017/11/22	1:49	5:50	150,523.698	684,324.481	327.255	-0.00200	0.00000	0.00633	<input checked="" type="checkbox"/>
4							0.00000	0.00000	0.00000	<input type="checkbox"/>
Average				150,523.696	684,324.481	327.261	RMSE:	RMSE:	RMSE:	
							RMSE IN METRIC:	0.0043	0.0016	0.0150
							RMSE IN US SURVEY FEET:	0.0142	0.0054	0.0491
							Pass	Pass	Fail	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	150,523.696	684,324.481	327.261
US SURVEY FEET (GRID)	493,843.159	2,245,154.568	1,073.690
US SURVEY FEET (GROUND)	493,895.142	2,245,390.898	1,073.690
			*1073.528

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP06 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP06							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/16	20:57	1:00	150,527.295	684,129.269	332.438	0.00400	0.00267	-0.01600	<input checked="" type="checkbox"/>
2	2017/11/20	14:32	18:50	150,527.293	684,129.280	332.415	0.00600	-0.00833	0.00700	<input checked="" type="checkbox"/>
3	2017/11/22	1:51	5:54	150,527.303	684,129.277	334.098	-0.00499	-0.00533	-1.67699	<input type="checkbox"/>
4	2017/11/22	16:59	21:00	150,527.309	684,129.266	332.413	-0.01000	0.00567	0.00900	<input checked="" type="checkbox"/>
Average				150,527.299	684,129.272	332.422	RMSE:	RMSE:	RMSE:	
RMSE IN METRIC:							0.0071	0.0060	0.0113	
RMSE IN US SURVEY FEET:							0.0234	0.0197	0.0372	
							Pass	Pass	Pass	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	150,527.299	684,129.272	332.422
US SURVEY FEET (GRID)	493,854.980	2,244,514.119	1,090.621
US SURVEY FEET (GROUND)	493,906.964	2,244,750.381	1,090.456

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP07 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP07							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/20	19:29	23:31	151,921.627	683,638.603	324.417	-0.01033	-0.00067	0.02033	<input checked="" type="checkbox"/>
2	2017/11/21	12:23	16:30	151,921.605	683,638.601	324.452	0.01167	0.00133	-0.01467	<input checked="" type="checkbox"/>
3*	2017/11/22	12:45	16:45	151,921.595	683,638.611	324.435	0.02167	-0.00867	-0.00223	<input type="checkbox"/>
4	2017/11/28	17:19	21:21	151,921.618	683,638.603	324.443	-0.00133	-0.00067	-0.00567	<input checked="" type="checkbox"/>
Average				151,921.617	683,638.602	324.437	RMSE:	RMSE:	RMSE:	
							RMSE IN METRIC:	0.0090	0.0009	0.0148
							RMSE IN US SURVEY FEET:	0.0296	0.0031	0.0487
							Pass	Pass	Fail	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	151,921.617	683,638.602	324.437
US SURVEY FEET (GRID)	498,429.504	2,242,904.314	1,064.425
US SURVEY FEET (GROUND)	498,481.970	2,243,140.408	1,064.425
			*1064.386

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

CP08 OPUS STATIC RESULTS

Static GNSS Project Control Monument Coordinate Analysis

PROJECT: SUM-77							REPORT DATE: 2017/11/21			
PID: 106002							PREPARED BY: MJP			
MONUMENT NUMBER: CP08							CHECK BY: JIS			
SESSION #	Observation Date	Start Time (GMT)	End Time (GMT)	Northing (m)	Easting (m)	Height(m)	Δ Northing(m)	Δ Easting(m)	Δ Height(m)	Include in Solution? (Y/N)
1	2017/11/20	19:20	23:36	152,101.046	683,675.857	328.103	0.00367	-0.00100	-0.00767	<input checked="" type="checkbox"/>
2	2017/11/21	12:09	16:23	152,101.054	683,675.853	328.079	-0.00433	0.00300	0.01633	<input checked="" type="checkbox"/>
3*	2017/11/22	12:36	16:36	152,101.049	683,675.858	328.104	0.00067	-0.00200	-0.00867	<input checked="" type="checkbox"/>
4							0.00000	0.00000	0.00000	<input type="checkbox"/>
Average				152,101.050	683,675.856	328.095	RMSE:	RMSE:	RMSE:	
RMSE IN METRIC:							0.0033	0.0022	0.0116	
RMSE IN US SURVEY FEET:							0.0108	0.0071	0.0379	
							Pass	Pass	Pass	

FINAL MONUMENT COORDINATES			
MONUMENT COORDINATES	NORTHING	EASTING	ORTHO HEIGHT
METERS (GRID)	152,101.050	683,675.856	328.095
US SURVEY FEET (GRID)	499,018.194	2,243,026.538	1,076.426
US SURVEY FEET (GROUND)	499,070.722	2,243,262.644	1,076.426
			*1076.404

METRIC TO ENGLISH CONVERSION 3.280833333
 GRID TO GROUND MULTIPLIER (SCALE FACTOR) 1.000105262

Notes:

These observations used NAD_83(2011)(EPOCH2010) and NAVD88 GEOID12B *The elevation of CP02 was held and a level circuit was run through the other points to determine elevations. The Grid to Ground Scale Factor of 1.00010526226 was used based on previous ODOT projects.	CORS BASE STATIONS USED FOR OPUS:		
	GUST	ZOB1	OHCD
	MASK ANGLE: 13°		

Δ North, Δ East, and Δ Ht. are the difference between the average northing, easting, and height and the OPUS solution for each session

Appendix B – STAR*NET Vertical Control

STAR*NET-PRO Version 6.0.33
Copyright 1988-2005 Starplus Software, Inc.
Licensed for Use by Northwest Consultants, Inc.
Run Date: Wed Nov 22 2017 16:28:43

Summary of Files Used and Option Settings

=====

Project Folder and Data Files

Project Name 106002_SUM-77
Project Folder \\DAYTON-FS2\D\...\SURVEY\ENGDATA\VERTICAL CONTROL
Data File List 1. 106002_SUM-77 Week1 Igor.txt
2. 106002_SUM-77 Week1 Owen Monday.txt
3. 106002_SUM-77 Week1 Owen Thurs.txt
4. 106002_SUM-77 Week1 Owen Fri.txt
5. 106002_SUM-77 Week2 Owen Monday.txt
6. 106002_SUM-77 Week2 Owen Tuesday-A.txt
7. 106002_SUM-77 Week2 Owen Tuesday-B.txt
8. 106002_SUM-77 Week2 Owen Wednesday-A.txt
9. 106002_SUM-77 Week2 Owen Wednesday-B.txt
10. 106002_SUM-77 Week3 Owen Mon.txt
11. 106002_SUM-77 Week3 Owen Tues.txt
12. 106002_SUM-77 Week3 Owen Wed.txt
13. 106002_SUM-77 Week3 Owen Thurs.txt

Project Option Settings

STAR*NET Run Mode : Adjust with Error Propagation
Type of Adjustment : Lev
Project Units : FeetUS
Input/Output Coordinate Order : North-East
Create Coordinate File : Yes

Instrument Standard Error Settings

Project Default Instrument
Differential Levels : 0.017500 FeetUS / Mile

Summary of Unadjusted Input Observations

=====

Number of Entered Stations (FeetUS) = 1

Fixed Stations	Elev	Description
CP02	1072.6430	

Number of Differential Level Observations (FeetUS) = 462

From	To	Elev Diff	StdErr	Length
BM304	T731961142	7.8540	0.0033	187
T731961142	T731961143	8.8280	0.0033	183
T731961143	T731961144	8.5510	0.0032	179
T731961144	T731961145	8.5400	0.0032	181
T731961145	T731961146	6.6280	0.0032	179
T731961146	T731961147	2.2100	0.0032	176
T731961147	T731961148	-0.3760	0.0029	141
T731961148	T731961149	3.7740	0.0023	94
T731961149	T731961150	8.6630	0.0025	107
T731961150	T731961151	8.0570	0.0027	123
T731961151	T731961152	2.9660	0.0020	71
T731961152	T731961153	3.6020	0.0024	97
T731961153	T731961154	7.6240	0.0030	157
T731961154	T731961155	-15.5470	0.0028	136
T731961155	T731961156	-9.3670	0.0019	64
T731961156	T731961157	-12.5030	0.0022	85
T731961157	T731961158	-7.2500	0.0022	83
T731961158	AT1002	-0.3820	0.0020	71
AT1002	T731961159	10.6990	0.0021	78
T731961159	T731961160	12.0810	0.0024	96
T731961160	T731961161	13.8900	0.0020	69
T731961161	T731961162	9.6910	0.0027	129
T731961162	T731961163	-0.2990	0.0024	98
T731961163	T731961164	-8.5350	0.0025	109
T731961164	T731961152	-3.7090	0.0022	85
T731961164	T731961165	-6.3020	0.0023	92
T731961165	T731961166	-8.2470	0.0025	108
T731961166	T731961167	-4.1280	0.0016	45
T731961167	T731961168	-5.5270	0.0023	88
T731961168	T731961169	-7.3200	0.0032	178
T731961169	T731961170	-9.6280	0.0032	172
T731961170	T731961171	-7.8240	0.0030	157
T731961171	T731961172	-0.6880	0.0032	175
T731961172	T731961173	4.2730	0.0030	158
T731961173	T731961174	6.4970	0.0030	160
T731961174	AT1003	1.9140	0.0016	42
AT1003	T731961175	-6.2730	0.0029	144

T731961175	T731961176	-6.7440	0.0033	186
T731961176	T731961177	4.4310	0.0033	185
T731961177	T731961178	6.5670	0.0030	150
T731961178	T731961179	4.0630	0.0031	166
T731961179	T731961180	6.5630	0.0029	145
T731961180	T731961181	7.0380	0.0028	139
T731961181	T731961167	2.6580	0.0025	108
T731961181	T731961182	-0.1520	0.0027	129
T731961182	T731961183	-3.4250	0.0033	193
T731961183	T731961184	-2.0710	0.0033	188
T731961184	T731961185	-1.8770	0.0033	185
T731961185	T731961186	-6.0930	0.0031	168
T731961186	T731961187	-6.5930	0.0029	141
T731961187	T731961188	-8.3500	0.0032	175
T731961188	T731961189	-9.2480	0.0033	186
T731961189	BM305	-3.8700	0.0018	55
AT1007	T731761001	-7.9870	0.0028	137
T731761001	T731761002	-8.6540	0.0021	78
T731761002	T731761003	-11.9980	0.0021	74
T731761003	T731761004	-11.0910	0.0020	70
T731761004	T731761005	-10.3540	0.0022	84
T731761005	T731761006	-10.3160	0.0025	106
T731761006	T731761007	-7.4210	0.0024	103
T731761007	T731761008	-8.7060	0.0025	108
T731761008	T731761009	-9.2610	0.0023	89
T731761009	T731761010	-8.9790	0.0023	87
T731761010	L303	-4.9190	0.0025	112
L303	T731761011	0.6090	0.0034	201
T731761011	T731761012	-3.8870	0.0026	113
T731761012	T731761013	-3.2620	0.0033	184
T731761013	T731761014	3.3060	0.0034	194
T731761014	T731761015	2.4000	0.0034	195
T731761015	T731761016	3.1980	0.0028	131
T731761016	T731761017	2.4380	0.0034	196
T731761017	T731761018	0.0960	0.0032	182
T731761018	T731761019	5.4680	0.0031	161
T731761019	T731761020	3.0920	0.0025	106
T731761020	T731761021	-6.2870	0.0032	182
T731761021	T731761022	-2.6740	0.0035	205
T731761022	T731761023	5.9410	0.0034	196
T731761023	T731761024	-2.5870	0.0033	193
T731761024	T731761025	-10.5860	0.0024	103
T731761025	T731761026	-10.1320	0.0020	66
T731761026	T731761027	-8.7490	0.0020	72
T731761027	T731761028	-5.7710	0.0025	108
T731761028	T731761029	-8.3760	0.0031	171
T731761029	T731761030	-9.3430	0.0026	120
T731761030	T731761031	-4.5250	0.0029	142

T731761031	T731761032	-1.2040	0.0023	92
T731761032	T731761033	-6.2910	0.0032	172
T731761033	AT1000	-2.2260	0.0029	141
AT1000	T713861035	2.6210	0.0031	162
T713861035	T713861036	5.2680	0.0031	170
T713861036	T713861037	0.5730	0.0030	160
T713861037	T713861038	6.4820	0.0027	124
T713861038	T713861039	9.8090	0.0027	130
T713861039	T713861040	8.5000	0.0023	92
T713861040	T713861041	6.8930	0.0024	97
T713861041	T713861042	3.8110	0.0033	193
T713861042	T713861043	-5.0330	0.0031	167
T713861043	T713861044	-12.5320	0.0028	134
T713861044	AT1001	-6.7420	0.0015	39
AT1001	T713861045	14.6360	0.0030	154
T713861045	T713861046	14.0730	0.0024	98
T713861046	T713861047	3.9490	0.0031	167
T713861047	T713861048	1.0570	0.0032	177
T713861048	T713861049	-1.9460	0.0032	177
T713861049	T713861050	0.2310	0.0032	176
T713861050	T713861051	3.3900	0.0032	181
T713861051	T713861052	1.2970	0.0024	100
T713861051	T713861053	-1.4960	0.0032	181
T713861053	T713861054	-12.3850	0.0032	178
T713861054	T713861055	-8.6430	0.0027	128
T713861055	T713861056	-0.3520	0.0030	159
T713861056	T713861057	0.1430	0.0031	162
T713861057	T713861058	5.9130	0.0034	196
T713861058	T713861059	6.3660	0.0032	178
T713861059	T713861060	7.5230	0.0031	170
T713861060	T713861061	9.0480	0.0026	113
T713861061	T713861062	-4.5990	0.0027	127
T713861062	T713861063	3.1490	0.0031	163
T713861063	T713861064	4.7120	0.0033	183
T713861064	T713861065	3.6490	0.0032	178
T713861065	T713861066	-0.9520	0.0033	193
T713861066	T713861067	0.0220	0.0032	175
T713861067	AT1006	1.8710	0.0026	117
AT1006	T713861068	-1.5510	0.0032	174
T713861068	T713861069	-1.8290	0.0032	180
T713861069	T713861070	3.0740	0.0033	187
T713861070	T713861071	5.8340	0.0028	132
T713861071	T713861072	5.2900	0.0025	104
T713861072	T713861073	0.7410	0.0021	74
T713861073	T713861074	-1.3580	0.0033	185
T713861074	T713861075	11.8650	0.0029	144
T713861075	T713861076	10.7410	0.0027	130
T713861076	T713861077	10.3470	0.0029	149

T713861077	T713861078	11.1890	0.0028	133
BM302	T731861080	-4.8650	0.0031	170
T731861080	T731861081	-3.0700	0.0032	182
T731861081	T731861082	1.3620	0.0032	171
T731861082	AT1008	-2.3740	0.0020	67
AT1008	T731861083	-0.2160	0.0033	183
T731861083	T731861084	0.2280	0.0032	181
T731861084	T731861085	1.9510	0.0029	143
T731861085	T731861086	3.8710	0.0033	185
T731861086	T731861087	-4.0420	0.0030	155
T731861087	T731861088	6.3890	0.0030	154
T731861088	T731861089	5.3170	0.0032	179
T731861089	T731861090	3.2660	0.0032	174
T731861090	T731861091	-0.6230	0.0030	158
T731861090	T731861092	-2.5100	0.0033	193
T731861092	T731861093	-1.1420	0.0032	182
T731861093	AT1005	0.7480	0.0029	149
AT1005	T731861094	-2.6630	0.0032	178
T731861094	T731861091	4.9510	0.0032	172
T731861091	T731861095	10.8020	0.0024	98
T731861095	T731861096	14.7350	0.0022	84
T731861096	T731861097	12.2460	0.0020	69
T731861097	T731861098	10.9340	0.0019	62
T731861098	T731861099	12.4720	0.0020	69
T731861099	T731861100	13.0070	0.0021	74
T731861100	T731861101	10.4720	0.0020	67
T731861101	T731861102	9.3520	0.0028	135
T731861102	T731861104	2.8520	0.0031	168
T731861104	T731861105	-1.0380	0.0034	194
T731861105	T731861106	-9.8720	0.0024	102
T731861106	T731861107	5.3460	0.0030	160
T731861107	AT1004	4.0650	0.0031	164
AT1004	T731861108	4.4310	0.0032	172
T731861108	T731861109	-1.2610	0.0032	179
T731861109	T731861110	-1.7870	0.0033	191
T731861110	T731861111	-1.7830	0.0034	194
T731861111	T731861112	-4.3880	0.0033	191
T731861112	T731861113	-3.3600	0.0029	144
T731861113	T731861114	-5.8770	0.0032	179
T731861114	T731861115	-6.7950	0.0032	177
T731861115	T731861116	-9.4040	0.0029	149
T731861116	AT1007	-4.4580	0.0020	72
T731861078	CP06	-2.4360	0.0016	44
CP06	BM303	-0.9170	0.0030	154
BM303	T713961117	-7.1570	0.0022	86
T713961117	CP05	-8.8540	0.0023	91
CP05	T713961118	-6.7400	0.0035	207
T713961118	BM302	-5.9730	0.0022	86

CP05	T739161130	-2.5760	0.0030	154
T739161130	T739161131	-0.3780	0.0033	185
T739161131	T739161132	-12.3820	0.0026	115
T739161132	AT1009	-6.5570	0.0014	35
AT1009	T739161133	-5.6030	0.0018	58
T739161133	BMXXX	-3.1570	0.0022	85
CP101	TP1000	3.7090	0.0031	165
TP1000	BM306	7.6760	0.0030	155
BM306	TP1001	7.8510	0.0030	158
TP1001	CP102	4.0190	0.0030	154
CP102	TP1002	-4.7550	0.0032	174
TP1002	TP1003	-7.4410	0.0029	150
TP1003	TP1004	-7.5790	0.0029	149
TP1004	CP101	-3.4730	0.0030	160
CP102	BM307	2.7430	0.0026	117
BM307	TP1005	5.6170	0.0032	174
TP1005	BM308	3.0790	0.0014	32
BM308	TP1006	-5.6810	0.0031	169
TP1006	TP1007	-2.1940	0.0032	173
TP1007	TP1008	-4.9350	0.0033	183
TP1008	BM309	-0.1910	0.0019	60
BM309	TP1009	3.6080	0.0032	171
TP1009	BM301	0.1010	0.0014	34
BM301	TP1010	3.3190	0.0032	178
TP1010	TP1011	0.2970	0.0032	180
TP1011	TP1012	-2.1440	0.0032	178
TP1012	CP102	-3.6210	0.0031	170
BM309	T73201001	-6.8440	0.0025	109
T73201001	T73201002	-7.9460	0.0031	162
T73201002	T73201003	-8.0450	0.0030	160
T73201003	CP104	-8.8380	0.0030	157
CP104	T73201004	9.0270	0.0032	182
T73201004	BM310	3.0040	0.0016	42
BM310	T73201005	8.1510	0.0032	182
T73201005	CP103	3.8660	0.0020	66
CP103	BM309	7.6300	0.0026	118
CP104	T73201007	-6.1060	0.0028	138
T73201007	BM311	-6.5540	0.0027	127
BM311	T73201008	-9.6080	0.0031	168
T73201008	CP105	-3.9540	0.0022	85
CP105	T73201009	-7.1130	0.0030	159
T73201009	T73201010	-7.5760	0.0029	146
T73201010	T73201012	-8.3910	0.0031	167
T73201012	BM313	-3.8850	0.0020	72
BM313	T73201013	8.7880	0.0031	166
T73201013	BM312	6.4060	0.0027	130
BM312	T73201014	8.1480	0.0030	155
T73201014	T73201015	6.7850	0.0030	157

T73201015	T73201016	8.2700	0.0031	167
T73201016	T73201017	8.5650	0.0031	163
T73201017	CP104	6.2010	0.0027	123
BM313	BM314	-4.1000	0.0028	132
BM314	T73201019	-1.3550	0.0032	174
T73201019	T73201020	2.1980	0.0031	169
T73201020	BM315	4.2270	0.0032	181
BM315	T73201021	3.6190	0.0032	180
T73201021	CP106	2.6040	0.0029	146
CP106	T73201022	1.3330	0.0026	114
T73201022	BM860	-7.2900	0.0034	195
BM860	T73201023	-3.5260	0.0033	192
T73201023	CP209	-1.9110	0.0020	69
CP209	T73201024	-1.3290	0.0031	165
T73201024	BM359	0.0980	0.0020	66
BM359	T73201025	4.0150	0.0032	178
T73201025	CP208	2.2130	0.0020	72
CP208	BM313	-0.7820	0.0022	84
CP106	BM316	4.8410	0.0033	187
BM316	T73211001	3.2960	0.0033	191
T73211001	CP107	-0.6170	0.0010	16
CP107	T73211002	4.7430	0.0032	175
T73211002	BM317	3.2150	0.0025	108
BM317	T73211003	3.9740	0.0033	184
T73211003	CP108	-0.3890	0.0016	45
CP108	T73211004	-2.2560	0.0022	87
T73211004	T73211005	-2.8840	0.0032	174
T73211005	BM361	-1.0720	0.0020	66
BM361	T73211006	-3.3500	0.0032	179
T73211006	T73211007	-3.4820	0.0032	178
T73211007	BM360	-3.1920	0.0029	148
BM360	CP106	-2.8270	0.0032	178
CP108	T73241001	2.7410	0.0029	150
T73241001	T73241002	4.4070	0.0021	77
T73241002	BM318	-0.5840	0.0011	22
BM318	T73241003	-1.7880	0.0029	147
T73241003	CP109	-0.0120	0.0025	112
CP109	BM319	0.7670	0.0032	174
BM319	T73241004	-0.3910	0.0032	171
T73241004	BM320	-2.4880	0.0030	156
BM320	BM321	-3.2540	0.0033	187
BM321	T73241005	-0.9280	0.0032	175
T73241005	CP110	-1.9580	0.0030	160
CP110	BM322	-0.3380	0.0033	183
BM322	T73241006	-3.9570	0.0020	71
T73241006	T73241007	-1.9720	0.0023	89
T73241007	CP215	-3.3980	0.0016	47
CP215	T73241008	2.3890	0.0032	171

T73241008	BM365	1.4790	0.0019	63
BM365	T73241009	3.9570	0.0030	155
T73241009	CP214	2.0870	0.0024	101
CP214	BM364	4.4270	0.0031	167
BM364	T73241010	2.7560	0.0033	183
T73241010	CP213	-0.7170	0.0022	83
CP213	T73241011	-0.7190	0.0032	182
T73241011	BM363	-1.7930	0.0032	178
BM363	CP108	-0.6920	0.0029	148
CP215	T73241013	0.4390	0.0031	166
T73241013	BM366	1.0350	0.0024	97
BM366	T73241014	3.9560	0.0033	189
T73241014	CP216	3.2590	0.0032	179
CP216	CP217	2.9030	0.0032	176
CP217	T73241015	0.2420	0.0032	179
T73241015	BM367	3.3440	0.0031	162
BM367	T73261016	-3.5090	0.0032	179
T73241016	T73241017	-0.1080	0.0032	181
T73241017	T73241018	-3.0180	0.0033	186
T73241018	T73241019	-3.9260	0.0033	184
T73241019	T73241020	-3.4360	0.0032	180
T73241020	T73241021	-0.7760	0.0030	154
T73241021	CP215	-0.3950	0.0022	83
BM367	BM368	4.6590	0.0031	168
BM368	BM367	-4.6430	0.0031	168
CP101	T73251002	-5.3590	0.0030	160
T73251002	CP02	-5.5450	0.0024	102
CP02	T73251003	6.7710	0.0029	140
T73251003	CP101	4.1310	0.0027	122
CP02	T73251005	-7.2740	0.0021	76
T73251005	T73251006	-6.0910	0.0017	51
T73251006	BM300	-1.5550	0.0028	133
BM300	T73251007	2.7950	0.0030	152
T73251007	CP01	5.4740	0.0017	51
CP01	T73251008	-3.9070	0.0032	174
T73251008	T73251009	-0.6840	0.0031	168
T73251009	CP02	11.2380	0.0024	100
BM313	T73261001	-3.0290	0.0027	130
T73261001	T73261002	-5.8560	0.0022	87
T73261002	T73261003	-5.8750	0.0019	62
T73261003	T73261004	8.2580	0.0019	65
T73261004	T73261005	6.8060	0.0024	98
T73261005	BM313	-0.3180	0.0028	136
T73261003	T73261006	-1.1200	0.0031	170
T73261006	T73261007	2.3130	0.0032	173
T73261007	AT1010	4.2630	0.0028	131
AT1010	T73261009	-5.4340	0.0031	169
T73261009	T73261010	-1.4680	0.0032	174

T73261010	T73261003	1.4550	0.0028	131
CP150	T73261020	-4.7040	0.0023	94
T73261020	T73261021	-8.7910	0.0029	147
T73261021	AT1011	-0.1150	0.0011	22
AT1011	T73261023	5.5870	0.0025	110
T73261023	T73261024	6.1850	0.0026	115
T73261024	CP150	1.8400	0.0014	36
CP150	T73261026	0.2850	0.0030	157
T73261026	T73261027	-6.7570	0.0032	180
T73261027	T73261028	-7.1570	0.0025	111
T73261028	TBM73261029	-1.7950	0.0028	136
TBM73261029	T73261030	3.0150	0.0031	161
T73261030	T73261031	8.1190	0.0031	163
T73261031	T73261032	4.7740	0.0025	108
T73261032	CP150	-0.4700	0.0029	144
TBM73261029	T73261035	-3.8560	0.0032	178
T73261035	T73261036	-7.3500	0.0022	82
T73261036	T73261037	-7.2840	0.0019	65
T73261037	T73261038	-9.7340	0.0024	102
T73261038	T73261039	-8.6810	0.0027	125
T73261039	T73261040	-6.4780	0.0032	181
T73261040	AT1012	-2.9470	0.0015	38
AT1012	T73261042	5.7990	0.0028	137
T73261042	T73261043	5.8340	0.0026	115
T73261043	T73261044	10.5150	0.0027	127
T73261044	T73261045	11.7830	0.0024	99
T73261045	T73261046	10.1070	0.0026	114
T73261046	TBM73261029	2.2830	0.0028	136
CP01	T73311001	6.8950	0.0030	153
T73311001	T73311002	9.8960	0.0023	95
T73311002	T73311003	10.0350	0.0023	94
T73311003	T73311004	9.1700	0.0024	99
T73311004	T73311005	10.0380	0.0021	77
T73311005	T73311006	7.4880	0.0021	79
T73311006	T73311007	6.7990	0.0021	77
T73311007	T73311008	5.5570	0.0026	116
T73311008	T73311009	1.5720	0.0031	169
T73311009	T73311010	-4.9800	0.0026	115
T73311010	T73311011	-5.5520	0.0027	124
T73311011	T73311012	-5.1680	0.0027	123
T73311012	T73311013	-8.2210	0.0026	116
T73311013	AT1014	-9.6620	0.0022	84
AT1014	T73311015	9.6500	0.0022	84
T73311015	T73311016	9.7160	0.0029	142
T73311016	T73311017	6.1930	0.0030	159
T73311017	T73311018	7.2460	0.0030	156
T73311018	T73311019	0.4310	0.0032	176
T73311019	T73311020	-10.7890	0.0032	178

T73311020	T73311021	-8.7600	0.0023	92
T73311021	T73311022	-8.2510	0.0021	76
T73311022	T73311023	-9.6410	0.0026	114
T73311023	T73311024	-11.5310	0.0025	106
T73311024	T73311025	-9.1760	0.0022	81
T73311025	T7331126	-9.2850	0.0022	84
T7331126	CP01	0.3160	0.0020	66
CP01	T73311030	-5.7410	0.0027	128
T73311030	T73311031	-3.8440	0.0031	168
T73311031	T73311032	4.8250	0.0032	179
T73311032	T73311033	7.5780	0.0031	167
T73311033	TBM73311033	7.5850	0.0030	154
TBM73311033	TBM73311034	-4.6270	0.0018	53
TBM73311034	TBM73311036	-0.9130	0.0031	162
TBM73311036	TBM73311037	-5.2110	0.0026	116
TBM73311037	T73321001	-7.0910	0.0028	133
T73321001	T73321002	-2.3280	0.0030	150
T73321002	T73321003	5.2730	0.0030	150
T73321003	CP01	4.4860	0.0029	146
TBM73311034	AT1013	-4.2440	0.0023	91
AT1013	TBM73311034	4.2490	0.0023	89
AT1014	T73321018	6.0690	0.0022	85
T73321018	T73321019	5.5970	0.0030	157
T73321019	T73321020	5.4510	0.0030	159
T73321020	T73321021	0.8390	0.0032	175
T73321021	T73321022	-6.5030	0.0028	132
T73321022	T73321023	-7.0010	0.0023	90
T73321023	T73321024	0.0050	0.0032	180
T73321024	T73321025	-2.0080	0.0033	184
T73321025	T73321026	1.5560	0.0032	176
T73321026	TBM73321027	2.0550	0.0027	127
TBM73321027	T73321028	-1.9210	0.0030	160
T73321028	T73321029	0.7310	0.0030	159
T73321029	T73321030	-1.2380	0.0031	167
T73321030	T73321031	-1.1770	0.0029	146
T73321031	T73321032	7.5970	0.0024	96
T73321032	T73321033	7.4790	0.0026	114
T73321033	T73321034	0.0270	0.0032	179
T73321034	T73321035	-4.2640	0.0025	110
T73321035	T73321036	-4.7250	0.0030	155
T73321036	T73321037	0.3350	0.0018	53
T73321037	AT1014	-8.8920	0.0023	88
TBM73321027	T733210339	5.1240	0.0032	174
T733210339	T73321040	4.7120	0.0032	175
T73321040	TBM73321041	3.9710	0.0033	193
TBM73321041	T73321042	-3.7600	0.0033	188
T73321042	T73321043	-4.6830	0.0032	172
T73321043	TBM73321027	-5.3570	0.0033	185

TBM73321041	T73321046	-2.4160	0.0031	162
T73321046	T73321047	-2.8010	0.0010	19
T73321047	T73321048	1.0130	0.0028	135
T73321048	T73321049	6.4760	0.0029	140
T73321049	T73321050	-0.1470	0.0019	64
T73321050	AT1015	-1.5890	0.0021	79
AT1015	T73321052	3.3670	0.0022	85
T73321052	T73321053	-4.3510	0.0021	75
T73321053	T73321054	-3.3820	0.0026	116
T73321054	T73321055	1.8730	0.0022	87
T73321055	T73321056	-1.8980	0.0021	76
T73321056	TBM73321041	3.8530	0.0030	151
BM368	T73321009	4.9880	0.0025	110
T73321009	BM369	4.4160	0.0023	91
BM369	T73321010	5.6750	0.0024	103
T73321010	T73321011	7.7730	0.0027	129
T73321011	CP08	0.2560	0.0017	52
CP08	BM305	-0.4210	0.0013	28
BM305	T73321012	-2.9700	0.0022	87
T73321012	T73321013	-6.0410	0.0024	100
T73321013	T73321014	-5.3610	0.0024	99
T73321014	T73321015	-5.2910	0.0025	112
T73321015	BM368	-3.0170	0.0020	66
BM309	T73321058	7.8840	0.0023	89
T73321058	CP04	8.5120	0.0015	41
CP04	T73321059	-6.6740	0.0016	47
T73321059	BM309	-9.7220	0.0018	57
BM308	CP03	-0.4720	0.0028	139
CP03	BM308	0.4720	0.0028	139
BM369	BM304	6.9010	0.0024	101
BM304	CP07	-5.2150	0.0026	115
CP07	T73341001	-15.1090	0.0025	110
T73341001	T6341002	-5.7600	0.0017	50
T6341002	T73341003	-10.0610	0.0021	79
T73341003	T731761012	-7.7160	0.0025	107
T731761012	T73341005	9.0390	0.0028	135
T73341005	T73341006	14.6080	0.0023	93
T73341006	T73341007	9.7860	0.0024	102
T73341007	BM369	3.5350	0.0023	90
CP150	CP04	-1.2880	0.0021	78
CP04	CP150	1.2870	0.0021	78

Adjustment Statistical Summary

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Number of Stations = 433

Number of Observations = 462

Number of Unknowns = 432

Number of Redundant Obs = 30

Observation	Count	Sum Squares of StdRes	Error Factor
Level Data	462	43.929	1.210
Total	462	43.929	1.210

The Chi-Square Test at 5.00% Level Passed
Lower/Upper Bounds (0.748/1.251)

Adjusted Elevations and Error Propagation (FeetUS)

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Station	Elev	StdDev	95%	Description
BM304	1069.6018	0.017075	0.033466	
T731961142	1077.4554	0.017348	0.034002	
T731961143	1086.2830	0.017582	0.034459	
T731961144	1094.8335	0.017780	0.034848	
T731961145	1103.3731	0.017950	0.035181	
T731961146	1110.0007	0.018089	0.035454	
T731961147	1112.2102	0.018198	0.035668	
T731961148	1111.8339	0.018267	0.035802	
T731961149	1115.6077	0.018303	0.035873	
T731961150	1124.2704	0.018335	0.035936	
T731961151	1132.3271	0.018360	0.035985	
T731961152	1135.2929	0.018369	0.036002	
T731961153	1138.8953	0.018501	0.036262	
T731961154	1146.5198	0.018668	0.036589	
T731961155	1130.9733	0.018766	0.036781	
T731961156	1121.6065	0.018798	0.036843	
T731961157	1109.1038	0.018825	0.036896	
T731961158	1101.8541	0.018836	0.036917	
AT1002	1101.4724	0.018833	0.036911	
T731961159	1112.1717	0.018816	0.036878	
T731961160	1124.2530	0.018776	0.036801	
T731961161	1138.1432	0.018735	0.036719	
T731961162	1147.8347	0.018628	0.036510	
T731961163	1147.5360	0.018520	0.036298	
T731961164	1139.0014	0.018373	0.036011	
T731961165	1132.6992	0.018372	0.036009	
T731961166	1124.4519	0.018362	0.035989	
T731961167	1120.3238	0.018355	0.035975	
T731961168	1114.7968	0.018481	0.036222	
T731961169	1107.4768	0.018702	0.036656	
T731961170	1097.8488	0.018875	0.036994	
T731961171	1090.0248	0.018997	0.037234	
T731961172	1089.3368	0.019095	0.037426	
T731961173	1093.6097	0.019149	0.037532	
T731961174	1100.1067	0.019171	0.037575	
AT1003	1102.0207	0.019172	0.037576	
T731961175	1095.7477	0.019156	0.037545	
T731961176	1089.0037	0.019095	0.037426	
T731961177	1093.4347	0.018990	0.037221	
T731961178	1100.0016	0.018872	0.036988	
T731961179	1104.0646	0.018706	0.036663	
T731961180	1110.6276	0.018529	0.036316	
T731961181	1117.6656	0.018332	0.035930	
T731961182	1117.5133	0.018290	0.035848	

T731961183	1114.0878	0.018202	0.035676
T731961184	1112.0164	0.018086	0.035447
T731961185	1110.1389	0.017940	0.035163
T731961186	1104.0455	0.017782	0.034852
T731961187	1097.4522	0.017629	0.034552
T731961188	1089.1017	0.017412	0.034127
T731961189	1079.8533	0.017149	0.033612
BM305	1075.9832	0.017065	0.033446
AT1007	1128.7012	0.019481	0.038182
T731761001	1120.7142	0.019275	0.037779
T731761002	1112.0602	0.019158	0.037549
T731761003	1100.0622	0.019045	0.037328
T731761004	1088.9712	0.018938	0.037118
T731761005	1078.6172	0.018809	0.036865
T731761006	1068.3012	0.018644	0.036542
T731761007	1060.8802	0.018483	0.036227
T731761008	1052.1742	0.018314	0.035894
T731761009	1042.9132	0.018172	0.035617
T731761010	1033.9342	0.018032	0.035343
L303	1029.0152	0.017852	0.034989
T731761011	1029.6242	0.017522	0.034343
T731761012	1025.7372	0.017333	0.033973
T731761013	1022.4752	0.017639	0.034571
T731761014	1025.7812	0.017954	0.035190
T731761015	1028.1812	0.018267	0.035802
T731761016	1031.3792	0.018473	0.036206
T731761017	1033.8172	0.018778	0.036805
T731761018	1033.9132	0.019057	0.037351
T731761019	1039.3812	0.019300	0.037828
T731761020	1042.4732	0.019460	0.038140
T731761021	1036.1862	0.019728	0.038667
T731761022	1033.5122	0.020028	0.039254
T731761023	1039.4532	0.020309	0.039806
T731761024	1036.8662	0.020583	0.040342
T731761025	1026.2802	0.020728	0.040626
T731761026	1016.1482	0.020820	0.040806
T731761027	1007.3992	0.020920	0.041002
T731761028	1001.6282	0.021068	0.041293
T731761029	993.2522	0.021302	0.041751
T731761030	983.9092	0.021465	0.042071
T731761031	979.3842	0.021656	0.042445
T731761032	978.1802	0.021779	0.042685
T731761033	971.8892	0.022006	0.043131
AT1000	969.6632	0.022191	0.043494
T713861035	972.2842	0.022402	0.043907
T713861036	977.5522	0.022621	0.044336
T713861037	978.1252	0.022826	0.044737
T713861038	984.6072	0.022983	0.045046

T713861039	994.4162	0.023146	0.045366
T713861040	1002.9162	0.023261	0.045590
T713861041	1009.8092	0.023381	0.045826
T713861042	1013.6202	0.023619	0.046293
T713861043	1008.5872	0.023823	0.046693
T713861044	996.0552	0.023986	0.047011
AT1001	989.3132	0.024033	0.047103
T713861045	1003.9492	0.024218	0.047467
T713861046	1018.0222	0.024336	0.047697
T713861047	1021.9712	0.024534	0.048086
T713861048	1023.0282	0.024743	0.048495
T713861049	1021.0822	0.024950	0.048901
T713861050	1021.3132	0.025154	0.049301
T713861051	1024.7032	0.025362	0.049708
T713861052	1026.0002	0.025476	0.049932
T713861053	1023.2072	0.025568	0.050112
T713861054	1010.8222	0.025769	0.050506
T713861055	1002.1792	0.025913	0.050788
T713861056	1001.8272	0.026090	0.051135
T713861057	1001.9702	0.026269	0.051487
T713861058	1007.8832	0.026484	0.051909
T713861059	1014.2492	0.026678	0.052288
T713861060	1021.7722	0.026862	0.052648
T713861061	1030.8202	0.026984	0.052887
T713861062	1026.2212	0.027120	0.053155
T713861063	1029.3702	0.027294	0.053495
T713861064	1034.0822	0.027487	0.053874
T713861065	1037.7312	0.027674	0.054241
T713861066	1036.7792	0.027875	0.054635
T713861067	1036.8012	0.028056	0.054990
AT1006	1038.6722	0.028177	0.055225
T713861068	1037.1212	0.028355	0.055574
T713861069	1035.2922	0.028538	0.055933
T713861070	1038.3662	0.028727	0.056304
T713861071	1044.2002	0.028860	0.056564
T713861072	1049.4902	0.028964	0.056769
T713861073	1050.2312	0.029038	0.056913
T713861074	1048.8732	0.029222	0.057275
T713861075	1060.7382	0.029364	0.057553
T713861076	1071.4792	0.029492	0.057803
T713861077	1081.8262	0.029638	0.058090
T713861078	1093.0152	0.029768	0.058345
BM302	1060.8151	0.026069	0.051094
T731861080	1055.9501	0.025880	0.050723
T731861081	1052.8801	0.025675	0.050322
T731861082	1054.2421	0.025480	0.049941
AT1008	1051.8681	0.025404	0.049791
T731861083	1051.6521	0.025195	0.049381

T731861084	1051.8801	0.024986	0.048971
T731861085	1053.8311	0.024818	0.048643
T731861086	1057.7021	0.024601	0.048218
T731861087	1053.6601	0.024418	0.047858
T731861088	1060.0491	0.024234	0.047499
T731861089	1065.3661	0.024019	0.047076
T731861090	1068.6321	0.023807	0.046662
T731861091	1068.0102	0.023644	0.046341
T731861092	1066.1208	0.023926	0.046895
T731861093	1064.9776	0.023958	0.046957
AT1005	1065.7246	0.023926	0.046894
T731861094	1063.0604	0.023819	0.046685
T731861095	1078.8122	0.023523	0.046104
T731861096	1093.5472	0.023420	0.045902
T731861097	1105.7932	0.023335	0.045735
T731861098	1116.7272	0.023257	0.045583
T731861099	1129.1992	0.023170	0.045413
T731861100	1142.2062	0.023078	0.045231
T731861101	1152.6782	0.022993	0.045066
T731861102	1162.0302	0.022822	0.044730
T731861104	1164.8822	0.022608	0.044311
T731861105	1163.8442	0.022357	0.043820
T731861106	1153.9722	0.022224	0.043559
T731861107	1159.3182	0.022014	0.043147
AT1004	1163.3832	0.021797	0.042721
T731861108	1167.8142	0.021567	0.042270
T731861109	1166.5532	0.021324	0.041794
T731861110	1164.7662	0.021063	0.041282
T731861111	1162.9832	0.020794	0.040755
T731861112	1158.5952	0.020526	0.040230
T731861113	1155.2352	0.020322	0.039831
T731861114	1149.3582	0.020065	0.039326
T731861115	1142.5632	0.019807	0.038820
T731861116	1133.1592	0.019587	0.038391
T731861078	1092.8921	0.026802	0.052532
CP06	1090.4561	0.026754	0.052438
BM303	1089.5391	0.026587	0.052109
T713961117	1082.3821	0.026493	0.051925
CP05	1073.5281	0.026393	0.051729
T713961118	1066.7881	0.026165	0.051282
T739161130	1070.9521	0.026561	0.052059
T739161131	1070.5741	0.026763	0.052454
T739161132	1058.1921	0.026887	0.052698
AT1009	1051.6351	0.026925	0.052772
T739161133	1046.0321	0.026987	0.052894
BMXXX	1042.8751	0.027078	0.053073
CP101	1083.5460	0.002759	0.005407
TP1000	1087.2541	0.003991	0.007822

BM306	1094.9292	0.004634	0.009082
TP1001	1102.7794	0.004986	0.009772
CP102	1106.7975	0.005094	0.009984
TP1002	1102.0415	0.004957	0.009715
TP1003	1094.5997	0.004600	0.009015
TP1004	1087.0199	0.003966	0.007774
BM307	1109.5406	0.005685	0.011143
TP1005	1115.1578	0.006335	0.012417
BM308	1118.2369	0.006431	0.012605
TP1006	1112.5560	0.006838	0.013402
TP1007	1110.3622	0.007100	0.013916
TP1008	1105.4274	0.007225	0.014161
BM309	1105.2365	0.007234	0.014178
TP1009	1108.8447	0.007170	0.014053
BM301	1108.9457	0.007142	0.013998
TP1010	1112.2649	0.006905	0.013533
TP1011	1112.5621	0.006502	0.012744
TP1012	1110.4183	0.005906	0.011575
T73201001	1098.3920	0.007621	0.014936
T73201002	1090.4453	0.008028	0.015734
T73201003	1082.3997	0.008257	0.016184
CP104	1073.5610	0.008331	0.016328
T73201004	1082.5872	0.008233	0.016136
BM310	1085.5911	0.008182	0.016037
T73201005	1093.7413	0.007831	0.015348
CP103	1097.6070	0.007646	0.014986
T73201007	1067.4566	0.008769	0.017187
BM311	1060.9040	0.009102	0.017840
T73201008	1051.2979	0.009455	0.018532
CP105	1047.3449	0.009598	0.018811
T73201009	1040.2337	0.009806	0.019219
T73201010	1032.6593	0.009932	0.019467
T73201012	1024.2702	0.010003	0.019606
BM313	1020.3860	0.010010	0.019620
T73201013	1029.1759	0.009972	0.019545
BM312	1035.5833	0.009890	0.019383
T73201014	1043.7331	0.009729	0.019068
T73201015	1050.5199	0.009492	0.018604
T73201016	1058.7918	0.009153	0.017941
T73201017	1067.3586	0.008726	0.017102
BM314	1016.2851	0.010362	0.020309
T73201019	1014.9290	0.010741	0.021052
T73201020	1017.1259	0.011025	0.021608
BM315	1021.3517	0.011244	0.022038
T73201021	1024.9695	0.011381	0.022305
CP106	1027.5725	0.011433	0.022409
T73201022	1028.9048	0.011438	0.022419
BM860	1021.6135	0.011375	0.022295

T73201023	1018.0862	0.011222	0.021996
CP209	1016.1747	0.011145	0.021844
T73201024	1014.8446	0.010908	0.021380
BM359	1014.9422	0.010794	0.021155
T73201025	1018.9560	0.010419	0.020420
CP208	1021.1686	0.010240	0.020070
BM316	1032.4135	0.011853	0.023231
T73211001	1035.7095	0.012178	0.023869
CP107	1035.0925	0.012200	0.023912
T73211002	1039.8355	0.012406	0.024315
BM317	1043.0505	0.012494	0.024488
T73211003	1047.0245	0.012578	0.024653
CP108	1046.6355	0.012586	0.024668
T73211004	1044.3795	0.012588	0.024672
T73211005	1041.4955	0.012537	0.024572
BM361	1040.4235	0.012498	0.024495
T73211006	1037.0735	0.012339	0.024184
T73211007	1033.5915	0.012099	0.023714
BM360	1030.3995	0.011835	0.023197
T73241001	1049.3756	0.012911	0.025306
T73241002	1053.7821	0.013064	0.025605
BM318	1053.1979	0.013106	0.025688
T73241003	1051.4090	0.013367	0.026199
CP109	1051.3963	0.013543	0.026544
BM319	1052.1622	0.013781	0.027011
T73241004	1051.7702	0.013975	0.027391
BM320	1049.2812	0.014118	0.027671
BM321	1046.0260	0.014249	0.027928
T73241005	1045.0969	0.014332	0.028091
CP110	1043.1379	0.014375	0.028175
BM322	1042.7988	0.014387	0.028198
T73241006	1038.8413	0.014381	0.028186
T73241007	1036.8688	0.014365	0.028154
CP215	1033.4705	0.014352	0.028130
T73241008	1035.8584	0.014284	0.027996
BM365	1037.3370	0.014250	0.027929
T73241009	1041.2930	0.014144	0.027722
CP214	1043.3794	0.014060	0.027556
BM364	1047.8054	0.013890	0.027224
T73241010	1050.5602	0.013662	0.026777
CP213	1049.8427	0.013543	0.026543
T73241011	1049.1225	0.013246	0.025963
BM363	1047.3284	0.012908	0.025300
T73241013	1033.9095	0.014683	0.028779
BM366	1034.9445	0.014873	0.029151
T73241014	1038.9005	0.015238	0.029865
CP216	1042.1595	0.015575	0.030527
CP217	1045.0625	0.015900	0.031163

T73241015	1045.3045	0.016222	0.031795
BM367	1048.6485	0.016509	0.032357
T73261016	1045.1395	0.016820	0.032966
T73241016	1045.1295	0.016190	0.031732
T73241017	1045.0215	0.015863	0.031091
T73241018	1042.0035	0.015519	0.030417
T73241019	1038.0775	0.015171	0.029736
T73241020	1034.6415	0.014823	0.029053
T73241021	1033.8655	0.014520	0.028458
BM368	1053.2995	0.016656	0.032645
CP02	1072.6430	0.000000	0.000001
T73251002	1078.1876	0.002186	0.004284
T73251003	1079.4145	0.002442	0.004787
T73251005	1065.3693	0.002014	0.003947
T73251006	1059.2786	0.002521	0.004942
BM300	1057.7242	0.003282	0.006432
T73251007	1060.5198	0.003610	0.007075
CP01	1065.9940	0.003624	0.007102
T73251008	1062.0878	0.003310	0.006487
T73251009	1061.4046	0.002273	0.004455
T73261001	1017.3601	0.010298	0.020183
T73261002	1011.5062	0.010395	0.020374
T73261003	1005.6327	0.010420	0.020423
T73261004	1013.8923	0.010406	0.020396
T73261005	1020.7007	0.010308	0.020203
T73261006	1004.5111	0.010801	0.021170
T73261007	1006.8225	0.011012	0.021583
AT1010	1011.0842	0.011060	0.021676
T73261009	1005.6486	0.010980	0.021520
T73261010	1004.1790	0.010729	0.021028
CP150	1122.9200	0.007611	0.014917
T73261020	1118.2156	0.007898	0.015480
T73261021	1109.4241	0.008090	0.015857
AT1011	1109.3090	0.008093	0.015863
T73261023	1114.8956	0.008009	0.015697
T73261024	1121.0801	0.007737	0.015163
T73261026	1123.2031	0.008112	0.015899
T73261027	1116.4439	0.008472	0.016606
T73261028	1109.2856	0.008594	0.016845
TBM73261029	1107.4890	0.008645	0.016944
T73261030	1110.5020	0.008566	0.016790
T73261031	1118.6190	0.008329	0.016324
T73261032	1123.3917	0.008078	0.015833
T73261035	1103.6340	0.009155	0.017943
T73261036	1096.2845	0.009336	0.018299
T73261037	1089.0009	0.009458	0.018538
T73261038	1079.2675	0.009612	0.018840
T73261039	1070.5873	0.009743	0.019095

T73261040	1064.1104	0.009820	0.019246
AT1012	1061.1636	0.009819	0.019246
T73261042	1066.9634	0.009771	0.019151
T73261043	1072.7981	0.009672	0.018957
T73261044	1083.3139	0.009499	0.018617
T73261045	1095.0975	0.009316	0.018258
T73261046	1105.2051	0.009049	0.017736
T73311001	1072.8897	0.004642	0.009098
T73311002	1082.7862	0.005132	0.010059
T73311003	1092.8216	0.005543	0.010864
T73311004	1101.9921	0.005916	0.011595
T73311005	1112.0304	0.006170	0.012093
T73311006	1119.5188	0.006401	0.012546
T73311007	1126.3182	0.006600	0.012937
T73311008	1131.8757	0.006860	0.013445
T73311009	1133.4485	0.007157	0.014027
T73311010	1128.4690	0.007309	0.014325
T73311011	1122.9176	0.007432	0.014566
T73311012	1117.7501	0.007513	0.014726
T73311013	1109.5297	0.007554	0.014806
AT1014	1099.8681	0.007562	0.014821
T73311015	1109.5185	0.007552	0.014802
T73311016	1119.2351	0.007495	0.014689
T73311017	1125.4288	0.007368	0.014441
T73311018	1132.6756	0.007177	0.014066
T73311019	1133.1074	0.006873	0.013471
T73311020	1122.3192	0.006459	0.012659
T73311021	1113.5596	0.006196	0.012144
T73311022	1105.3090	0.005949	0.011659
T73311023	1095.6685	0.005522	0.010822
T73311024	1084.1380	0.005050	0.009898
T73311025	1074.9624	0.004628	0.009070
T7331126	1065.6777	0.004110	0.008056
T73311030	1060.2536	0.004471	0.008763
T73311031	1056.4104	0.005226	0.010243
T73311032	1061.2363	0.005745	0.011259
T73311033	1068.8151	0.006029	0.011816
TBM73311033	1076.4008	0.006144	0.012043
TBM73311034	1071.7740	0.006154	0.012061
TBM73311036	1070.8618	0.006085	0.011926
TBM73311037	1065.6513	0.005943	0.011648
T73321001	1058.5610	0.005679	0.011130
T73321002	1056.2337	0.005228	0.010247
T73321003	1061.5074	0.004568	0.008954
AT1013	1067.5275	0.006362	0.012470
T73321018	1105.9367	0.007873	0.015430
T73321019	1111.5331	0.008371	0.016407
T73321020	1116.9834	0.008788	0.017225

T73321021	1117.8217	0.009162	0.017958
T73321022	1111.3181	0.009392	0.018408
T73321023	1104.3168	0.009524	0.018666
T73321024	1104.3210	0.009733	0.019076
T73321025	1102.3122	0.009875	0.019354
T73321026	1103.8675	0.009944	0.019491
TBM73321027	1105.9220	0.009956	0.019513
T73321028	1104.0003	0.009924	0.019450
T73321029	1104.7307	0.009840	0.019287
T73321030	1103.4920	0.009695	0.019003
T73321031	1102.3144	0.009520	0.018658
T73321032	1109.9110	0.009378	0.018380
T73321033	1117.3895	0.009180	0.017992
T73321034	1117.4158	0.008801	0.017251
T73321035	1113.1513	0.008522	0.016702
T73321036	1108.4256	0.008061	0.015799
T73321037	1108.7604	0.007882	0.015449
T733210339	1111.0449	0.010373	0.020331
T73321040	1115.7557	0.010623	0.020821
TBM73321041	1119.7255	0.010717	0.021005
T73321042	1115.9643	0.010630	0.020834
T73321043	1111.2802	0.010392	0.020369
T73321046	1117.3098	0.011090	0.021736
T73321047	1114.5088	0.011125	0.021804
T73321048	1115.5220	0.011328	0.022203
T73321049	1121.9983	0.011453	0.022448
T73321050	1121.8514	0.011482	0.022504
AT1015	1120.2625	0.011494	0.022527
T73321052	1123.6296	0.011477	0.022494
T73321053	1119.2788	0.011436	0.022415
T73321054	1115.8970	0.011325	0.022197
T73321055	1117.7701	0.011204	0.021959
T73321056	1115.8722	0.011068	0.021694
T73321009	1058.2866	0.016825	0.032976
BM369	1062.7019	0.016930	0.033181
T73321010	1068.3763	0.017016	0.033352
T73321011	1076.1486	0.017066	0.033449
CP08	1076.4043	0.017068	0.033453
T73321012	1073.0125	0.017047	0.033412
T73321013	1066.9707	0.016994	0.033308
T73321014	1061.6089	0.016906	0.033134
T73321015	1056.3170	0.016762	0.032853
T73321058	1113.1205	0.007451	0.014604
CP04	1121.6325	0.007461	0.014623
T73321059	1114.9585	0.007404	0.014512
CP03	1117.7649	0.006737	0.013204
CP07	1064.3859	0.017208	0.033727
T73341001	1049.2761	0.017292	0.033892

T6341002	1043.5157	0.017317	0.033941
T73341003	1033.4540	0.017339	0.033983
T73341005	1034.7751	0.017271	0.033850
T73341006	1049.3824	0.017191	0.033694
T73341007	1059.1676	0.017069	0.033454

Adjusted Observations and Residuals

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Adjusted Differential Level Observations (FeetUS)

From	To	Elev Diff	Residual	StdErr	StdRes	File:Line
BM304	T731961142	7.8535	-0.0005	0.0033	0.1	1:4
T731961142	T731961143	8.8276	-0.0004	0.0033	0.1	1:5
T731961143	T731961144	8.5506	-0.0004	0.0032	0.1	1:6
T731961144	T731961145	8.5396	-0.0004	0.0032	0.1	1:7
T731961145	T731961146	6.6276	-0.0004	0.0032	0.1	1:8
T731961146	T731961147	2.2096	-0.0004	0.0032	0.1	1:9
T731961147	T731961148	-0.3763	-0.0003	0.0029	0.1	1:10
T731961148	T731961149	3.7738	-0.0002	0.0023	0.1	1:11
T731961149	T731961150	8.6627	-0.0003	0.0025	0.1	1:12
T731961150	T731961151	8.0567	-0.0003	0.0027	0.1	1:13
T731961151	T731961152	2.9658	-0.0002	0.0020	0.1	1:14
T731961152	T731961153	3.6023	0.0003	0.0024	0.1	1:15
T731961153	T731961154	7.6246	0.0006	0.0030	0.2	1:16
T731961154	T731961155	-15.5465	0.0005	0.0028	0.2	1:17
T731961155	T731961156	-9.3668	0.0002	0.0019	0.1	1:18
T731961156	T731961157	-12.5027	0.0003	0.0022	0.1	1:19
T731961157	T731961158	-7.2497	0.0003	0.0022	0.1	1:20
T731961158	AT1002	-0.3817	0.0003	0.0020	0.1	1:21
AT1002	T731961159	10.6993	0.0003	0.0021	0.1	1:22
T731961159	T731961160	12.0813	0.0003	0.0024	0.1	1:23
T731961160	T731961161	13.8902	0.0002	0.0020	0.1	1:24
T731961161	T731961162	9.6915	0.0005	0.0027	0.2	1:25
T731961162	T731961163	-0.2987	0.0003	0.0024	0.1	1:26
T731961163	T731961164	-8.5346	0.0004	0.0025	0.2	1:27
T731961164	T731961152	-3.7085	0.0005	0.0022	0.2	1:28
T731961164	T731961165	-6.3022	-0.0002	0.0023	0.1	1:29
T731961165	T731961166	-8.2473	-0.0003	0.0025	0.1	1:30
T731961166	T731961167	-4.1281	-0.0001	0.0016	0.1	1:31
T731961167	T731961168	-5.5270	-0.0000	0.0023	0.0	1:32
T731961168	T731961169	-7.3200	-0.0000	0.0032	0.0	1:33
T731961169	T731961170	-9.6280	-0.0000	0.0032	0.0	1:34
T731961170	T731961171	-7.8240	-0.0000	0.0030	0.0	1:35
T731961171	T731961172	-0.6880	-0.0000	0.0032	0.0	1:36
T731961172	T731961173	4.2730	-0.0000	0.0030	0.0	1:37
T731961173	T731961174	6.4970	-0.0000	0.0030	0.0	1:38
T731961174	AT1003	1.9140	-0.0000	0.0016	0.0	1:39
AT1003	T731961175	-6.2730	-0.0000	0.0029	0.0	1:40
T731961175	T731961176	-6.7440	-0.0000	0.0033	0.0	1:41
T731961176	T731961177	4.4310	-0.0000	0.0033	0.0	1:42
T731961177	T731961178	6.5670	-0.0000	0.0030	0.0	1:43
T731961178	T731961179	4.0630	-0.0000	0.0031	0.0	1:44
T731961179	T731961180	6.5630	-0.0000	0.0029	0.0	1:45

T731961180	T731961181	7.0380	-0.0000	0.0028	0.0	1:46
T731961181	T731961167	2.6582	0.0002	0.0025	0.1	1:47
T731961181	T731961182	-0.1523	-0.0003	0.0027	0.1	1:48
T731961182	T731961183	-3.4255	-0.0005	0.0033	0.1	1:49
T731961183	T731961184	-2.0715	-0.0005	0.0033	0.1	1:50
T731961184	T731961185	-1.8774	-0.0004	0.0033	0.1	1:51
T731961185	T731961186	-6.0934	-0.0004	0.0031	0.1	1:52
T731961186	T731961187	-6.5933	-0.0003	0.0029	0.1	1:53
T731961187	T731961188	-8.3504	-0.0004	0.0032	0.1	1:54
T731961188	T731961189	-9.2484	-0.0004	0.0033	0.1	1:55
T731961189	BM305	-3.8701	-0.0001	0.0018	0.1	1:56
AT1007	T731761001	-7.9870	0.0000	0.0028	0.0	1:57
T731761001	T731761002	-8.6540	0.0000	0.0021	0.0	1:58
T731761002	T731761003	-11.9980	-0.0000	0.0021	0.0	1:59
T731761003	T731761004	-11.0910	-0.0000	0.0020	0.0	1:60
T731761004	T731761005	-10.3540	0.0000	0.0022	0.0	1:61
T731761005	T731761006	-10.3160	-0.0000	0.0025	0.0	1:62
T731761006	T731761007	-7.4210	-0.0000	0.0024	0.0	1:63
T731761007	T731761008	-8.7060	-0.0000	0.0025	0.0	1:64
T731761008	T731761009	-9.2610	0.0000	0.0023	0.0	1:65
T731761009	T731761010	-8.9790	0.0000	0.0023	0.0	1:66
T731761010	L303	-4.9190	-0.0000	0.0025	0.0	1:67
L303	T731761011	0.6090	-0.0000	0.0034	0.0	1:68
T731761011	T731761012	-3.8870	0.0000	0.0026	0.0	1:69
T731761012	T731761013	-3.2620	0.0000	0.0033	0.0	1:70
T731761013	T731761014	3.3060	0.0000	0.0034	0.0	1:71
T731761014	T731761015	2.4000	-0.0000	0.0034	0.0	1:72
T731761015	T731761016	3.1980	0.0000	0.0028	0.0	1:73
T731761016	T731761017	2.4380	-0.0000	0.0034	0.0	1:74
T731761017	T731761018	0.0960	0.0000	0.0032	0.0	1:75
T731761018	T731761019	5.4680	0.0000	0.0031	0.0	1:76
T731761019	T731761020	3.0920	0.0000	0.0025	0.0	1:77
T731761020	T731761021	-6.2870	-0.0000	0.0032	0.0	1:78
T731761021	T731761022	-2.6740	0.0000	0.0035	0.0	1:79
T731761022	T731761023	5.9410	0.0000	0.0034	0.0	1:80
T731761023	T731761024	-2.5870	-0.0000	0.0033	0.0	1:81
T731761024	T731761025	-10.5860	0.0000	0.0024	0.0	1:82
T731761025	T731761026	-10.1320	-0.0000	0.0020	0.0	1:83
T731761026	T731761027	-8.7490	-0.0000	0.0020	0.0	1:84
T731761027	T731761028	-5.7710	-0.0000	0.0025	0.0	1:85
T731761028	T731761029	-8.3760	0.0000	0.0031	0.0	1:86
T731761029	T731761030	-9.3430	0.0000	0.0026	0.0	1:87
T731761030	T731761031	-4.5250	0.0000	0.0029	0.0	1:88
T731761031	T731761032	-1.2040	-0.0000	0.0023	0.0	1:89
T731761032	T731761033	-6.2910	0.0000	0.0032	0.0	1:90
T731761033	AT1000	-2.2260	0.0000	0.0029	0.0	1:91
AT1000	T713861035	2.6210	-0.0000	0.0031	0.0	1:92
T713861035	T713861036	5.2680	0.0000	0.0031	0.0	1:93

T713861036	T713861037	0.5730	-0.0000	0.0030	0.0	1:94
T713861037	T713861038	6.4820	-0.0000	0.0027	0.0	1:95
T713861038	T713861039	9.8090	-0.0000	0.0027	0.0	1:96
T713861039	T713861040	8.5000	0.0000	0.0023	0.0	1:97
T713861040	T713861041	6.8930	0.0000	0.0024	0.0	1:98
T713861041	T713861042	3.8110	0.0000	0.0033	0.0	1:99
T713861042	T713861043	-5.0330	-0.0000	0.0031	0.0	1:100
T713861043	T713861044	-12.5320	-0.0000	0.0028	0.0	1:101
T713861044	AT1001	-6.7420	0.0000	0.0015	0.0	1:102
AT1001	T713861045	14.6360	-0.0000	0.0030	0.0	1:103
T713861045	T713861046	14.0730	-0.0000	0.0024	0.0	1:104
T713861046	T713861047	3.9490	0.0000	0.0031	0.0	1:105
T713861047	T713861048	1.0570	0.0000	0.0032	0.0	1:106
T713861048	T713861049	-1.9460	-0.0000	0.0032	0.0	1:107
T713861049	T713861050	0.2310	-0.0000	0.0032	0.0	1:108
T713861050	T713861051	3.3900	0.0000	0.0032	0.0	1:109
T713861051	T713861052	1.2970	-0.0000	0.0024	0.0	1:110
T713861051	T713861053	-1.4960	-0.0000	0.0032	0.0	1:111
T713861053	T713861054	-12.3850	0.0000	0.0032	0.0	1:112
T713861054	T713861055	-8.6430	-0.0000	0.0027	0.0	1:113
T713861055	T713861056	-0.3520	0.0000	0.0030	0.0	1:114
T713861056	T713861057	0.1430	0.0000	0.0031	0.0	1:115
T713861057	T713861058	5.9130	-0.0000	0.0034	0.0	1:116
T713861058	T713861059	6.3660	0.0000	0.0032	0.0	1:117
T713861059	T713861060	7.5230	-0.0000	0.0031	0.0	1:118
T713861060	T713861061	9.0480	0.0000	0.0026	0.0	1:119
T713861061	T713861062	-4.5990	-0.0000	0.0027	0.0	1:120
T713861062	T713861063	3.1490	0.0000	0.0031	0.0	1:121
T713861063	T713861064	4.7120	-0.0000	0.0033	0.0	1:122
T713861064	T713861065	3.6490	-0.0000	0.0032	0.0	1:123
T713861065	T713861066	-0.9520	0.0000	0.0033	0.0	1:124
T713861066	T713861067	0.0220	0.0000	0.0032	0.0	1:125
T713861067	AT1006	1.8710	-0.0000	0.0026	0.0	1:126
AT1006	T713861068	-1.5510	0.0000	0.0032	0.0	1:127
T713861068	T713861069	-1.8290	0.0000	0.0032	0.0	1:128
T713861069	T713861070	3.0740	-0.0000	0.0033	0.0	1:129
T713861070	T713861071	5.8340	0.0000	0.0028	0.0	1:130
T713861071	T713861072	5.2900	-0.0000	0.0025	0.0	1:131
T713861072	T713861073	0.7410	-0.0000	0.0021	0.0	1:132
T713861073	T713861074	-1.3580	0.0000	0.0033	0.0	1:133
T713861074	T713861075	11.8650	0.0000	0.0029	0.0	1:134
T713861075	T713861076	10.7410	-0.0000	0.0027	0.0	1:135
T713861076	T713861077	10.3470	-0.0000	0.0029	0.0	1:136
T713861077	T713861078	11.1890	0.0000	0.0028	0.0	1:137
BM302	T731861080	-4.8650	-0.0000	0.0031	0.0	1:138
T731861080	T731861081	-3.0700	0.0000	0.0032	0.0	1:139
T731861081	T731861082	1.3620	0.0000	0.0032	0.0	1:140
T731861082	AT1008	-2.3740	-0.0000	0.0020	0.0	1:141

AT1008	T731861083	-0.2160	-0.0000	0.0033	0.0	1:142
T731861083	T731861084	0.2280	0.0000	0.0032	0.0	1:143
T731861084	T731861085	1.9510	0.0000	0.0029	0.0	1:144
T731861085	T731861086	3.8710	0.0000	0.0033	0.0	1:145
T731861086	T731861087	-4.0420	-0.0000	0.0030	0.0	1:146
T731861087	T731861088	6.3890	0.0000	0.0030	0.0	1:147
T731861088	T731861089	5.3170	0.0000	0.0032	0.0	1:148
T731861089	T731861090	3.2660	-0.0000	0.0032	0.0	1:149
T731861090	T731861091	-0.6219	0.0011	0.0030	0.4	1:150
T731861090	T731861092	-2.5113	-0.0013	0.0033	0.4	1:151
T731861092	T731861093	-1.1432	-0.0012	0.0032	0.4	1:152
T731861093	AT1005	0.7470	-0.0010	0.0029	0.3	1:153
AT1005	T731861094	-2.6642	-0.0012	0.0032	0.4	1:154
T731861094	T731861091	4.9498	-0.0012	0.0032	0.4	1:155
T731861091	T731861095	10.8020	0.0000	0.0024	0.0	1:156
T731861095	T731861096	14.7350	-0.0000	0.0022	0.0	1:157
T731861096	T731861097	12.2460	0.0000	0.0020	0.0	1:158
T731861097	T731861098	10.9340	-0.0000	0.0019	0.0	1:159
T731861098	T731861099	12.4720	-0.0000	0.0020	0.0	1:160
T731861099	T731861100	13.0070	0.0000	0.0021	0.0	1:161
T731861100	T731861101	10.4720	-0.0000	0.0020	0.0	1:162
T731861101	T731861102	9.3520	0.0000	0.0028	0.0	1:163
T731861102	T731861104	2.8520	-0.0000	0.0031	0.0	1:164
T731861104	T731861105	-1.0380	-0.0000	0.0034	0.0	1:165
T731861105	T731861106	-9.8720	-0.0000	0.0024	0.0	1:166
T731861106	T731861107	5.3460	0.0000	0.0030	0.0	1:167
T731861107	AT1004	4.0650	0.0000	0.0031	0.0	1:168
AT1004	T731861108	4.4310	0.0000	0.0032	0.0	1:169
T731861108	T731861109	-1.2610	0.0000	0.0032	0.0	1:170
T731861109	T731861110	-1.7870	-0.0000	0.0033	0.0	1:171
T731861110	T731861111	-1.7830	0.0000	0.0034	0.0	1:172
T731861111	T731861112	-4.3880	-0.0000	0.0033	0.0	1:173
T731861112	T731861113	-3.3600	0.0000	0.0029	0.0	1:174
T731861113	T731861114	-5.8770	0.0000	0.0032	0.0	1:175
T731861114	T731861115	-6.7950	-0.0000	0.0032	0.0	1:176
T731861115	T731861116	-9.4040	0.0000	0.0029	0.0	1:177
T731861116	AT1007	-4.4580	-0.0000	0.0020	0.0	1:178
T731861078	CP06	-2.4360	0.0000	0.0016	0.0	1:179
CP06	BM303	-0.9170	0.0000	0.0030	0.0	1:180
BM303	T713961117	-7.1570	-0.0000	0.0022	0.0	1:181
T713961117	CP05	-8.8540	-0.0000	0.0023	0.0	1:182
CP05	T713961118	-6.7400	-0.0000	0.0035	0.0	1:183
T713961118	BM302	-5.9730	0.0000	0.0022	0.0	1:184
CP05	T739161130	-2.5760	0.0000	0.0030	0.0	1:185
T739161130	T739161131	-0.3780	-0.0000	0.0033	0.0	1:186
T739161131	T739161132	-12.3820	-0.0000	0.0026	0.0	1:187
T739161132	AT1009	-6.5570	0.0000	0.0014	0.0	1:188
AT1009	T739161133	-5.6030	-0.0000	0.0018	0.0	1:189

T739161133	BMXXX	-3.1570	0.0000	0.0022	0.0	1:190
CP101	TP1000	3.7081	-0.0009	0.0031	0.3	2:2
TP1000	BM306	7.6751	-0.0009	0.0030	0.3	2:3
BM306	TP1001	7.8501	-0.0009	0.0030	0.3	2:4
TP1001	CP102	4.0181	-0.0009	0.0030	0.3	2:5
CP102	TP1002	-4.7560	-0.0010	0.0032	0.3	2:6
TP1002	TP1003	-7.4418	-0.0008	0.0029	0.3	2:7
TP1003	TP1004	-7.5798	-0.0008	0.0029	0.3	2:8
TP1004	CP101	-3.4739	-0.0009	0.0030	0.3	2:9
CP102	BM307	2.7431	0.0001	0.0026	0.0	2:10
BM307	TP1005	5.6172	0.0002	0.0032	0.1	2:11
TP1005	BM308	3.0790	0.0000	0.0014	0.0	2:12
BM308	TP1006	-5.6808	0.0002	0.0031	0.1	2:13
TP1006	TP1007	-2.1938	0.0002	0.0032	0.1	2:14
TP1007	TP1008	-4.9348	0.0002	0.0033	0.1	2:15
TP1008	BM309	-0.1909	0.0001	0.0019	0.0	2:16
BM309	TP1009	3.6082	0.0002	0.0032	0.1	2:17
TP1009	BM301	0.1010	0.0000	0.0014	0.0	2:18
BM301	TP1010	3.3192	0.0002	0.0032	0.1	2:19
TP1010	TP1011	0.2972	0.0002	0.0032	0.1	2:20
TP1011	TP1012	-2.1438	0.0002	0.0032	0.1	2:21
TP1012	CP102	-3.6208	0.0002	0.0031	0.1	2:22
BM309	T73201001	-6.8445	-0.0005	0.0025	0.2	3:2
T73201001	T73201002	-7.9467	-0.0007	0.0031	0.2	3:3
T73201002	T73201003	-8.0457	-0.0007	0.0030	0.2	3:4
T73201003	CP104	-8.8387	-0.0007	0.0030	0.2	3:5
CP104	T73201004	9.0262	-0.0008	0.0032	0.2	3:6
T73201004	BM310	3.0038	-0.0002	0.0016	0.1	3:7
BM310	T73201005	8.1502	-0.0008	0.0032	0.2	3:8
T73201005	CP103	3.8657	-0.0003	0.0020	0.1	3:9
CP103	BM309	7.6295	-0.0005	0.0026	0.2	3:10
CP104	T73201007	-6.1044	0.0016	0.0028	0.6	3:11
T73201007	BM311	-6.5526	0.0014	0.0027	0.5	3:12
BM311	T73201008	-9.6061	0.0019	0.0031	0.6	3:13
T73201008	CP105	-3.9530	0.0010	0.0022	0.4	3:14
CP105	T73201009	-7.1112	0.0018	0.0030	0.6	3:15
T73201009	T73201010	-7.5743	0.0017	0.0029	0.6	3:16
T73201010	T73201012	-8.3891	0.0019	0.0031	0.6	3:17
T73201012	BM313	-3.8842	0.0008	0.0020	0.4	3:18
BM313	T73201013	8.7899	0.0019	0.0031	0.6	3:19
T73201013	BM312	6.4075	0.0015	0.0027	0.5	3:20
BM312	T73201014	8.1497	0.0017	0.0030	0.6	3:21
T73201014	T73201015	6.7868	0.0018	0.0030	0.6	3:22
T73201015	T73201016	8.2719	0.0019	0.0031	0.6	3:23
T73201016	T73201017	8.5668	0.0018	0.0031	0.6	3:24
T73201017	CP104	6.2024	0.0014	0.0027	0.5	3:25
BM313	BM314	-4.1009	-0.0009	0.0028	0.3	3:26
BM314	T73201019	-1.3561	-0.0011	0.0032	0.4	3:27

T73201019	T73201020	2.1969	-0.0011	0.0031	0.4	3:28
T73201020	BM315	4.2258	-0.0012	0.0032	0.4	3:29
BM315	T73201021	3.6178	-0.0012	0.0032	0.4	3:30
T73201021	CP106	2.6030	-0.0010	0.0029	0.3	3:31
CP106	T73201022	1.3322	-0.0008	0.0026	0.3	3:32
T73201022	BM860	-7.2913	-0.0013	0.0034	0.4	3:33
BM860	T73201023	-3.5273	-0.0013	0.0033	0.4	3:34
T73201023	CP209	-1.9115	-0.0005	0.0020	0.2	3:35
CP209	T73201024	-1.3301	-0.0011	0.0031	0.4	3:36
T73201024	BM359	0.0976	-0.0004	0.0020	0.2	3:37
BM359	T73201025	4.0138	-0.0012	0.0032	0.4	3:38
T73201025	CP208	2.2125	-0.0005	0.0020	0.2	3:39
CP208	BM313	-0.7826	-0.0006	0.0022	0.3	3:40
CP106	BM316	4.8410	-0.0000	0.0033	0.0	4:2
BM316	T73211001	3.2960	0.0000	0.0033	0.0	4:3
T73211001	CP107	-0.6170	0.0000	0.0010	0.0	4:4
CP107	T73211002	4.7430	-0.0000	0.0032	0.0	4:5
T73211002	BM317	3.2150	-0.0000	0.0025	0.0	4:6
BM317	T73211003	3.9740	0.0000	0.0033	0.0	4:7
T73211003	CP108	-0.3890	-0.0000	0.0016	0.0	4:8
CP108	T73211004	-2.2560	0.0000	0.0022	0.0	4:9
T73211004	T73211005	-2.8840	-0.0000	0.0032	0.0	4:10
T73211005	BM361	-1.0720	-0.0000	0.0020	0.0	4:11
BM361	T73211006	-3.3500	0.0000	0.0032	0.0	4:12
T73211006	T73211007	-3.4820	0.0000	0.0032	0.0	4:13
T73211007	BM360	-3.1920	-0.0000	0.0029	0.0	4:14
BM360	CP106	-2.8270	0.0000	0.0032	0.0	4:15
CP108	T73241001	2.7401	-0.0009	0.0029	0.3	5:2
T73241001	T73241002	4.4065	-0.0005	0.0021	0.2	5:3
T73241002	BM318	-0.5841	-0.0001	0.0011	0.1	5:4
BM318	T73241003	-1.7889	-0.0009	0.0029	0.3	5:5
T73241003	CP109	-0.0127	-0.0007	0.0025	0.3	5:6
CP109	BM319	0.7659	-0.0011	0.0032	0.3	5:7
BM319	T73241004	-0.3921	-0.0011	0.0032	0.3	5:8
T73241004	BM320	-2.4890	-0.0010	0.0030	0.3	5:9
BM320	BM321	-3.2552	-0.0012	0.0033	0.4	5:10
BM321	T73241005	-0.9291	-0.0011	0.0032	0.3	5:11
T73241005	CP110	-1.9590	-0.0010	0.0030	0.3	5:12
CP110	BM322	-0.3391	-0.0011	0.0033	0.4	5:13
BM322	T73241006	-3.9574	-0.0004	0.0020	0.2	5:14
T73241006	T73241007	-1.9726	-0.0006	0.0023	0.2	5:15
T73241007	CP215	-3.3983	-0.0003	0.0016	0.2	5:16
CP215	T73241008	2.3879	-0.0011	0.0032	0.3	5:17
T73241008	BM365	1.4786	-0.0004	0.0019	0.2	5:18
BM365	T73241009	3.9560	-0.0010	0.0030	0.3	5:19
T73241009	CP214	2.0864	-0.0006	0.0024	0.3	5:20
CP214	BM364	4.4260	-0.0010	0.0031	0.3	5:21
BM364	T73241010	2.7549	-0.0011	0.0033	0.4	5:22

T73241010	CP213	-0.7175	-0.0005	0.0022	0.2	5:23
CP213	T73241011	-0.7201	-0.0011	0.0032	0.4	5:24
T73241011	BM363	-1.7941	-0.0011	0.0032	0.3	5:25
BM363	CP108	-0.6929	-0.0009	0.0029	0.3	5:26
CP215	T73241013	0.4390	0.0000	0.0031	0.0	5:27
T73241013	BM366	1.0350	-0.0000	0.0024	0.0	5:28
BM366	T73241014	3.9560	0.0000	0.0033	0.0	5:29
T73241014	CP216	3.2590	0.0000	0.0032	0.0	5:30
CP216	CP217	2.9030	0.0000	0.0032	0.0	5:31
CP217	T73241015	0.2420	-0.0000	0.0032	0.0	5:32
T73241015	BM367	3.3440	-0.0000	0.0031	0.0	5:33
BM367	T73261016	-3.5090	0.0000	0.0032	0.0	5:34
T73241016	T73241017	-0.1080	-0.0000	0.0032	0.0	5:35
T73241017	T73241018	-3.0180	-0.0000	0.0033	0.0	5:36
T73241018	T73241019	-3.9260	0.0000	0.0033	0.0	5:37
T73241019	T73241020	-3.4360	0.0000	0.0032	0.0	5:38
T73241020	T73241021	-0.7760	-0.0000	0.0030	0.0	5:39
T73241021	CP215	-0.3950	0.0000	0.0022	0.0	5:40
BM367	BM368	4.6510	-0.0080	0.0031	2.6	5:41
BM368	BM367	-4.6510	-0.0080	0.0031	2.6	5:42
CP101	T73251002	-5.3584	0.0006	0.0030	0.2	6:3
T73251002	CP02	-5.5446	0.0004	0.0024	0.2	6:4
CP02	T73251003	6.7715	0.0005	0.0029	0.2	6:5
T73251003	CP101	4.1315	0.0005	0.0027	0.2	6:6
CP02	T73251005	-7.2737	0.0003	0.0021	0.2	6:7
T73251005	T73251006	-6.0908	0.0002	0.0017	0.1	6:8
T73251006	BM300	-1.5544	0.0006	0.0028	0.2	6:9
BM300	T73251007	2.7957	0.0007	0.0030	0.2	6:10
T73251007	CP01	5.4742	0.0002	0.0017	0.1	6:11
CP01	T73251008	-3.9062	0.0008	0.0032	0.2	6:12
T73251008	T73251009	-0.6833	0.0007	0.0031	0.2	6:13
T73251009	CP02	11.2384	0.0004	0.0024	0.2	6:14
BM313	T73261001	-3.0259	0.0031	0.0027	1.1	8:2
T73261001	T73261002	-5.8539	0.0021	0.0022	0.9	8:3
T73261002	T73261003	-5.8735	0.0015	0.0019	0.8	8:4
T73261003	T73261004	8.2596	0.0016	0.0019	0.8	8:5
T73261004	T73261005	6.8084	0.0024	0.0024	1.0	8:6
T73261005	BM313	-0.3147	0.0033	0.0028	1.2	8:7
T73261003	T73261006	-1.1216	-0.0016	0.0031	0.5	8:8
T73261006	T73261007	2.3114	-0.0016	0.0032	0.5	8:9
T73261007	AT1010	4.2618	-0.0012	0.0028	0.5	8:10
AT1010	T73261009	-5.4356	-0.0016	0.0031	0.5	8:11
T73261009	T73261010	-1.4697	-0.0017	0.0032	0.5	8:12
T73261010	T73261003	1.4538	-0.0012	0.0028	0.5	8:13
CP150	T73261020	-4.7044	-0.0004	0.0023	0.2	9:7
T73261020	T73261021	-8.7916	-0.0006	0.0029	0.2	9:8
T73261021	AT1011	-0.1151	-0.0001	0.0011	0.1	9:9
AT1011	T73261023	5.5866	-0.0004	0.0025	0.2	9:10

T73261023	T73261024	6.1846	-0.0004	0.0026	0.2	9:11
T73261024	CP150	1.8399	-0.0001	0.0014	0.1	9:12
CP150	T73261026	0.2831	-0.0019	0.0030	0.6	9:13
T73261026	T73261027	-6.7592	-0.0022	0.0032	0.7	9:14
T73261027	T73261028	-7.1583	-0.0013	0.0025	0.5	9:15
T73261028	TBM73261029	-1.7966	-0.0016	0.0028	0.6	9:16
TBM73261029	T73261030	3.0131	-0.0019	0.0031	0.6	9:17
T73261030	T73261031	8.1170	-0.0020	0.0031	0.6	9:18
T73261031	T73261032	4.7727	-0.0013	0.0025	0.5	9:19
T73261032	CP150	-0.4717	-0.0017	0.0029	0.6	9:20
TBM73261029	T73261035	-3.8549	0.0011	0.0032	0.3	9:21
T73261035	T73261036	-7.3495	0.0005	0.0022	0.2	9:22
T73261036	T73261037	-7.2836	0.0004	0.0019	0.2	9:23
T73261037	T73261038	-9.7334	0.0006	0.0024	0.3	9:24
T73261038	T73261039	-8.6802	0.0008	0.0027	0.3	9:25
T73261039	T73261040	-6.4769	0.0011	0.0032	0.3	9:26
T73261040	AT1012	-2.9468	0.0002	0.0015	0.2	9:27
AT1012	T73261042	5.7998	0.0008	0.0028	0.3	9:28
T73261042	T73261043	5.8347	0.0007	0.0026	0.3	9:29
T73261043	T73261044	10.5158	0.0008	0.0027	0.3	9:30
T73261044	T73261045	11.7836	0.0006	0.0024	0.2	9:31
T73261045	T73261046	10.1077	0.0007	0.0026	0.3	9:32
T73261046	TBM73261029	2.2838	0.0008	0.0028	0.3	9:33
CP01	T73311001	6.8957	0.0007	0.0030	0.2	10:2
T73311001	T73311002	9.8964	0.0004	0.0023	0.2	10:3
T73311002	T73311003	10.0354	0.0004	0.0023	0.2	10:4
T73311003	T73311004	9.1705	0.0005	0.0024	0.2	10:5
T73311004	T73311005	10.0384	0.0004	0.0021	0.2	10:6
T73311005	T73311006	7.4884	0.0004	0.0021	0.2	10:7
T73311006	T73311007	6.7994	0.0004	0.0021	0.2	10:8
T73311007	T73311008	5.5575	0.0005	0.0026	0.2	10:9
T73311008	T73311009	1.5728	0.0008	0.0031	0.2	10:10
T73311009	T73311010	-4.9795	0.0005	0.0026	0.2	10:11
T73311010	T73311011	-5.5514	0.0006	0.0027	0.2	10:12
T73311011	T73311012	-5.1674	0.0006	0.0027	0.2	10:13
T73311012	T73311013	-8.2205	0.0005	0.0026	0.2	10:14
T73311013	AT1014	-9.6616	0.0004	0.0022	0.2	10:15
AT1014	T73311015	9.6504	0.0004	0.0022	0.2	10:16
T73311015	T73311016	9.7167	0.0007	0.0029	0.2	10:17
T73311016	T73311017	6.1937	0.0007	0.0030	0.2	10:18
T73311017	T73311018	7.2467	0.0007	0.0030	0.2	10:19
T73311018	T73311019	0.4318	0.0008	0.0032	0.3	10:20
T73311019	T73311020	-10.7882	0.0008	0.0032	0.3	10:21
T73311020	T73311021	-8.7596	0.0004	0.0023	0.2	10:22
T73311021	T73311022	-8.2506	0.0004	0.0021	0.2	10:23
T73311022	T73311023	-9.6405	0.0005	0.0026	0.2	10:24
T73311023	T73311024	-11.5305	0.0005	0.0025	0.2	10:25
T73311024	T73311025	-9.1756	0.0004	0.0022	0.2	10:26

T73311025	T7331126	-9.2846	0.0004	0.0022	0.2	10:27
T7331126	CP01	0.3163	0.0003	0.0020	0.2	10:28
CP01	T73311030	-5.7404	0.0006	0.0027	0.2	10:29
T73311030	T73311031	-3.8432	0.0008	0.0031	0.3	10:30
T73311031	T73311032	4.8258	0.0008	0.0032	0.3	10:31
T73311032	T73311033	7.5788	0.0008	0.0031	0.3	10:32
T73311033	TBM73311033	7.5857	0.0007	0.0030	0.2	10:33
TBM73311033	TBM73311034	-4.6268	0.0002	0.0018	0.1	10:34
TBM73311034	TBM73311036	-0.9122	0.0008	0.0031	0.2	10:35
TBM73311036	TBM73311037	-5.2105	0.0005	0.0026	0.2	10:36
TBM73311037	T73321001	-7.0904	0.0006	0.0028	0.2	10:37
T73321001	T73321002	-2.3273	0.0007	0.0030	0.2	10:38
T73321002	T73321003	5.2737	0.0007	0.0030	0.2	10:39
T73321003	CP01	4.4867	0.0007	0.0029	0.2	10:40
TBM73311034	AT1013	-4.2465	-0.0025	0.0023	1.1	10:41
AT1013	TBM73311034	4.2465	-0.0025	0.0023	1.1	10:42
AT1014	T73321018	6.0686	-0.0004	0.0022	0.2	10:43
T73321018	T73321019	5.5963	-0.0007	0.0030	0.2	10:44
T73321019	T73321020	5.4503	-0.0007	0.0030	0.2	10:45
T73321020	T73321021	0.8383	-0.0007	0.0032	0.2	10:46
T73321021	T73321022	-6.5035	-0.0005	0.0028	0.2	10:47
T73321022	T73321023	-7.0014	-0.0004	0.0023	0.2	10:48
T73321023	T73321024	0.0043	-0.0007	0.0032	0.2	10:49
T73321024	T73321025	-2.0088	-0.0008	0.0033	0.2	10:50
T73321025	T73321026	1.5553	-0.0007	0.0032	0.2	10:51
T73321026	TBM73321027	2.0545	-0.0005	0.0027	0.2	10:52
TBM73321027	T73321028	-1.9217	-0.0007	0.0030	0.2	10:53
T73321028	T73321029	0.7303	-0.0007	0.0030	0.2	10:54
T73321029	T73321030	-1.2387	-0.0007	0.0031	0.2	10:55
T73321030	T73321031	-1.1776	-0.0006	0.0029	0.2	10:56
T73321031	T73321032	7.5966	-0.0004	0.0024	0.2	10:57
T73321032	T73321033	7.4785	-0.0005	0.0026	0.2	10:58
T73321033	T73321034	0.0263	-0.0007	0.0032	0.2	10:59
T73321034	T73321035	-4.2645	-0.0005	0.0025	0.2	10:60
T73321035	T73321036	-4.7256	-0.0006	0.0030	0.2	10:61
T73321036	T73321037	0.3348	-0.0002	0.0018	0.1	10:62
T73321037	AT1014	-8.8924	-0.0004	0.0023	0.2	10:63
TBM73321027	T733210339	5.1229	-0.0011	0.0032	0.4	10:64
T733210339	T73321040	4.7109	-0.0011	0.0032	0.4	10:65
T73321040	TBM73321041	3.9698	-0.0012	0.0033	0.4	10:66
TBM73321041	T73321042	-3.7612	-0.0012	0.0033	0.4	10:67
T73321042	T73321043	-4.6841	-0.0011	0.0032	0.4	10:68
T73321043	TBM73321027	-5.3582	-0.0012	0.0033	0.4	10:69
TBM73321041	T73321046	-2.4157	0.0003	0.0031	0.1	10:70
T73321046	T73321047	-2.8010	0.0000	0.0010	0.0	10:71
T73321047	T73321048	1.0132	0.0002	0.0028	0.1	10:72
T73321048	T73321049	6.4762	0.0002	0.0029	0.1	10:73
T73321049	T73321050	-0.1469	0.0001	0.0019	0.1	10:74

T73321050	AT1015	-1.5889	0.0001	0.0021	0.1	10:75
AT1015	T73321052	3.3671	0.0001	0.0022	0.1	10:76
T73321052	T73321053	-4.3509	0.0001	0.0021	0.1	10:77
T73321053	T73321054	-3.3818	0.0002	0.0026	0.1	10:78
T73321054	T73321055	1.8731	0.0001	0.0022	0.1	10:79
T73321055	T73321056	-1.8979	0.0001	0.0021	0.1	10:80
T73321056	TBM73321041	3.8533	0.0003	0.0030	0.1	10:81
BM368	T73321009	4.9871	-0.0009	0.0025	0.3	11:2
T73321009	BM369	4.4153	-0.0007	0.0023	0.3	11:3
BM369	T73321010	5.6744	-0.0006	0.0024	0.2	11:4
T73321010	T73321011	7.7723	-0.0007	0.0027	0.3	11:5
T73321011	CP08	0.2557	-0.0003	0.0017	0.2	11:6
CP08	BM305	-0.4212	-0.0002	0.0013	0.1	11:7
BM305	T73321012	-2.9707	-0.0007	0.0022	0.3	11:8
T73321012	T73321013	-6.0418	-0.0008	0.0024	0.3	11:9
T73321013	T73321014	-5.3618	-0.0008	0.0024	0.3	11:10
T73321014	T73321015	-5.2919	-0.0009	0.0025	0.3	11:11
T73321015	BM368	-3.0175	-0.0005	0.0020	0.3	11:12
BM309	T73321058	7.8840	0.0000	0.0023	0.0	12:3
T73321058	CP04	8.5120	-0.0000	0.0015	0.0	12:4
CP04	T73321059	-6.6740	0.0000	0.0016	0.0	12:5
T73321059	BM309	-9.7220	0.0000	0.0018	0.0	12:6
BM308	CP03	-0.4720	0.0000	0.0028	0.0	12:7
CP03	BM308	0.4720	-0.0000	0.0028	0.0	12:8
BM369	BM304	6.9000	-0.0010	0.0024	0.4	13:2
BM304	CP07	-5.2159	-0.0009	0.0026	0.4	13:3
CP07	T73341001	-15.1099	-0.0009	0.0025	0.3	13:4
T73341001	T6341002	-5.7604	-0.0004	0.0017	0.2	13:5
T6341002	T73341003	-10.0616	-0.0006	0.0021	0.3	13:6
T73341003	T731761012	-7.7168	-0.0008	0.0025	0.3	13:7
T731761012	T73341005	9.0379	-0.0011	0.0028	0.4	13:8
T73341005	T73341006	14.6073	-0.0007	0.0023	0.3	13:9
T73341006	T73341007	9.7852	-0.0008	0.0024	0.3	13:10
T73341007	BM369	3.5343	-0.0007	0.0023	0.3	13:11
CP150	CP04	-1.2875	0.0005	0.0021	0.2	13:12
CP04	CP150	1.2875	0.0005	0.0021	0.2	13:13