



## Reporting of Geometric Details

**Responsibility:**  
Designer Manager, Designer

**Scope:**  
To provide an example of the Geometric report and the Cross section report.

**Content:**

<b>Reporting of Geometric Details .....</b>	<b>1</b>
1. Geometric Details.....	2
2. Cross Section.....	2

## 1. Geometric Details

The geometric details must be reported for each Road Design project.

The geometric details document should contain the following information.

- Contents
- Amendments sheet and details
- Summary of Survey Stations
- Index of Main Reference strings
- Index of Design strings
- Reference string report
- Design string report

Survey stations shall be reported as follows:

- If surveyors provide a control traverse, only those stations should be reported.
- If no control traverse is supplied then all stations except those labelled S8?? and S9?? Shall be reported.

## 2. Cross Section

A cross section report shall be provided for each control Master Control string.

The cross section report should contain the following information.

- Contents
- Amendments sheet and details
- Index of section strings
- Cross section reports

The section report shall contain the following information:

- Reference string label
- Chainage
- Point number
- Easting coordinate (X)
- Northing coordinate (Y)
- Level (Z)
- Offset
- String name cut

The file "CROSS1.TXT" is output when creating the cross section drawings using the draw macro DTEI-XS1. The file is used by DTEIDOTREP in MS WORD (the files should be renamed to CROSS1.TXT, CROSS2.TXT or CROSS3.TXT where required)

**ROAD No. 2000**

**TEST ROAD**

**FIRST AVE – SECOND ST**

**GEOMETRIC DETAILS DOCUMENT**



**Government  
of South Australia**

Department for Transport,  
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**CONTENTS**

**UPDATE TABLE OF  
CONTENTS**

**CONTENTS**-----2

**AMENDMENTS**-----3

**NOTES**-----4

**SURVEY STATIONS SUMMARY**-----5

**6D STRING REPORTS**-----6

    REPORT OF STRING MCA0.....6

    REPORT OF STRING MCB1.....6

**3D STRING REPORTS**-----8

    REPORT OF STRING BAM1 .....8

    REPORT OF STRING BAM2 .....8

    REPORT OF STRING BD00.....8

    REPORT OF STRING BD01.....8

    REPORT OF STRING BD02.....8



## NOTES

1. The Geometric Design consists of a number of “STRINGS” of data.
2. All Strings are identified by a four character “LABEL”.
3. A STRING IS COMPOSED OF ANY NUMBER OF ‘POINTS’.
4. A string can consist of either “THREE DIMENSIONS” or “SIX DIMENSIONS”.
5. A “THREE DIMENSIONAL STRING POINT” consists of :
  - R.L. (reduced level)
  - Easting Co-ordinates
  - Northing Co-ordinates
6. A “SIX DIMENSIONAL STRING POINT’ consists of :
  - Chainage
  - R.L. (reduced level)
  - Easting co-ordinates
  - Northing Co-ordinates
  - Bearing - in degrees
  - Radius
7. To locate the data for any string point:
  - First locate the point number / chainage required, then Determine the relevant string label (e.g. MN41).
  - Refer to the string index to locate the string (strings are in alphanumerical order).
  - Go to the relevant page, locate the string and the required point number / chainage.
8. Level Datum is Australian Height Datum
9. Co-ordinate base is Local.

### SURVEY STATIONS SUMMARY

STATION	R.L.	EASTING	NORTHING
S142	45.808	22139.295	27921.358
S857	42.032	22219.496	28073.077
S009	47.929	22240.930	27875.827
S143	40.560	22041.806	28037.137
S145	37.045	22032.055	28102.011
S146	38.196	22061.718	28138.833
S131	45.004	22777.451	28034.171
S135	60.498	22279.842	27496.444
S133	56.287	22267.630	27621.564
S134	52.402	22269.368	27742.936
S132	45.084	22229.312	27970.400
S128	37.849	22495.979	28381.697
S310	47.755	22263.742	27881.034
S139	55.323	22156.380	28577.385
S138	50.664	22170.238	28492.476
S309	40.206	22498.644	28252.628
S141	74.469	22063.356	28883.819
S140	69.817	22099.398	28816.425
S860	35.003	22505.059	28376.476
S156	65.252	22129.794	28745.437
S137	65.340	22319.545	27122.237
S136	65.987	22323.057	27243.209
S010	64.261	22309.658	27370.153
S127	38.947	22500.787	28302.755

TEST ROAD  
FIRST AVE – SECOND ST

POINT CHAINAGE LEVEL EASTING NORTHING BEARING RADIUS

**6D STRING REPORTS**

**REPORT OF STRING MCA0**

1	0.000	41.766	22574.585	28149.819	302.50	999999.900
2	10.000	41.767	22566.150	28155.191	302.50	999999.900
3	10.210	41.767	22565.973	28155.304	302.50	-100.000
4	15.105	41.768	22561.782	28157.831	299.69	-100.000
5	20.000	41.769	22557.472	28160.151	296.89	-100.000
6	24.605	41.769	22553.318	28162.138	294.25	-100.000
7	25.000	41.769	22552.958	28162.300	294.02	-100.000
8	30.000	41.780	22548.342	28164.220	291.16	-100.000
9	35.000	41.807	22543.636	28165.907	288.29	-100.000
10	40.000	41.850	22538.851	28167.357	285.43	-100.000
11	45.000	41.911	22534.000	28168.566	282.56	-100.000
12	50.000	41.988	22529.094	28169.532	279.70	-100.000
13	55.000	42.081	22524.147	28170.250	276.83	-100.000
14	60.000	42.192	22519.170	28170.721	273.97	-100.000
15	65.000	42.319	22514.175	28170.942	271.10	-100.000
16	65.715	42.338	22513.460	28170.953	270.69	-100.000
17	70.000	42.456	22509.176	28170.913	268.24	-100.000
18	70.881	42.480	22508.295	28170.882	267.73	-100.000
19	75.000	42.588	22504.184	28170.635	265.37	-100.000
20	80.000	42.704	22499.212	28170.107	262.51	-100.000
21	80.120	42.706	22499.093	28170.091	262.44	999999.900
22	90.000	42.885	22489.299	28168.791	262.44	999999.900
23	100.000	43.000	22479.386	28167.476	262.44	999999.900
24	108.113	43.044	22471.343	28166.408	262.44	999999.900
25	110.000	43.049	22469.473	28166.160	262.44	999999.900
26	120.000	43.076	22459.560	28164.844	262.44	999999.900
27	130.000	43.103	22449.647	28163.529	262.44	999999.900
28	140.000	43.130	22439.734	28162.213	262.44	999999.900
29	150.000	43.157	22429.821	28160.897	262.44	999999.900
30	155.000	43.171	22424.864	28160.239	262.44	999999.900

**REPORT OF STRING MCB1**

1	0.000	37.558	22241.378	28256.051	164.65	999999.900
2	3.890	37.799	22242.408	28252.300	164.65	-30.000
3	6.945	37.989	22243.365	28249.400	158.81	-30.000
4	10.000	38.179	22244.612	28246.613	152.98	-30.000
5	13.253	38.380	22246.244	28243.801	146.77	-30.000
6	13.333	38.386	22246.289	28243.733	146.61	-30.000
7	16.667	38.585	22248.274	28241.058	140.24	-30.000
8	20.000	38.771	22250.543	28238.619	133.88	-30.000
9	23.333	38.944	22253.069	28236.446	127.51	-30.000
10	26.667	39.102	22255.821	28234.568	121.15	-30.000
11	30.000	39.247	22258.763	28233.005	114.78	-30.000
12	33.333	39.379	22261.861	28231.779	108.41	-30.000
13	36.667	39.497	22265.076	28230.904	102.05	-30.000
14	39.358	39.582	22267.730	28230.461	96.91	-30.000
15	40.000	39.601	22268.367	28230.390	95.68	-30.000
16	43.750	39.713	22272.112	28230.253	88.52	999999.900



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TEST ROAD  
FIRST AVE – SECOND ST

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POINT	CHAINAGE	LEVEL	EASTING	NORTHING	BEARING	RADIUS
17	50.000	39.901	22278.360	28230.415	88.52	999999.900
18	55.990	40.080	22284.348	28230.569	88.52	999999.900
19	60.000	40.144	22288.357	28230.673	88.52	999999.900
20	70.000	40.305	22298.354	28230.931	88.52	999999.900
21	80.000	40.466	22308.350	28231.189	88.52	999999.900
22	90.000	40.627	22318.347	28231.448	88.52	999999.900
23	100.000	40.787	22328.344	28231.706	88.52	999999.900
24	110.000	40.948	22338.340	28231.964	88.52	999999.900
25	120.000	41.109	22348.337	28232.222	88.52	999999.900
26	130.000	41.269	22358.334	28232.481	88.52	999999.900
27	140.000	41.430	22368.330	28232.739	88.52	999999.900
28	150.000	41.591	22378.327	28232.997	88.52	999999.900
29	158.435	41.726	22386.759	28233.215	88.52	999999.900
30	160.000	41.750	22388.324	28233.255	88.52	999999.900
31	170.000	41.855	22398.320	28233.514	88.52	999999.900
32	176.167	41.878	22404.486	28233.673	88.52	999999.900
33	180.000	41.882	22408.317	28233.772	88.52	999999.900
34	187.627	41.890	22415.941	28233.969	88.52	999999.900

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TEST ROAD  
FIRST AVE – SECOND ST

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POINT            LEVEL            EASTING            NORTHING

**3D STRING REPORTS**

**REPORT OF STRING BAM1**

1	-999.000	22181.589	28154.803
2	-999.000	22186.660	28155.812
3	-999.000	22185.528	28167.414
4	-999.000	22180.242	28166.363

**REPORT OF STRING BAM2**

1	-999.000	22266.774	28171.751
2	-999.000	22261.512	28170.704
3	-999.000	22260.380	28182.306
4	-999.000	22265.427	28183.310

**REPORT OF STRING BD00**

1	-999.000	22514.325	28310.596
2	-999.000	22532.450	28290.363
3	-999.000	22584.105	28257.613
4	-999.000	22590.346	28186.961
5	-999.000	22617.924	28161.989

**REPORT OF STRING BD01**

1	-999.000	22423.998	28155.585
2	-999.000	22476.934	28162.611
3	-999.000	22516.010	28162.807
4	-999.000	22552.270	28157.808
5	-999.000	22588.113	28134.977
6	-999.000	22597.332	28152.373

**REPORT OF STRING BD02**

1	-999.000	22285.892	27894.939
2	-999.000	22273.924	28025.468
3	-999.000	22288.418	28095.034
4	-999.000	22335.306	28151.410
5	-999.000	22413.515	28180.388
6	-999.000	22441.760	28189.097

**ROAD No. 2000**

**TEST ROAD**

**FIRST AVE – SECOND ST**

**CROSS SECTION REPORT**



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Department for Transport,  
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TEST ROAD  
FIRST AVE – SECOND ST

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**CONTENTS**

**UPDATE TABLE OF  
CONTENTS**

**CONTENTS**----- **3**  
**AMENDMENTS**----- **4**  
**-NOARLUNGA - VICTOR HARBOR ROAD CROSS SECTIONS**----- **5**

REFERENCE STRING MCV0	CHAINAGE	220.000...5
REFERENCE STRING MCV0	CHAINAGE	230.000..5
REFERENCE STRING MCV0	CHAINAGE	240.000..5
REFERENCE STRING MCV0	CHAINAGE	250.000..6
REFERENCE STRING MCV0	CHAINAGE	260.000..6
REFERENCE STRING MCV0	CHAINAGE	270.000..6
REFERENCE STRING MCV0	CHAINAGE	280.000..6

**AMENDMENTS**

NO	DESCRIPTION	BY	DATE	APPROVED

Filename - H:\projdata\\_2010\20100920\Design\MX\Output files\CROSS1\DTEI-Cross.doc  
 Project Number - 16760  
 PATCHS Number - 20100920

This document is to be read in conjunction with drawing number 1-3255

PREPARED BY:  
 N.STONE  
 Planning and Design Section  
 DTEI - Transport Services Division

APPROVED : \_\_\_\_\_  
 FOR THE EXECUTIVE DIRECTOR  
 DATE :       /     /

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TEST ROAD  
FIRST AVE – SECOND ST

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**-NOARLUNGA - VICTOR HARBOR ROAD CROSS SECTIONS-**

**REFERENCE STRING MCV0 CHAINAGE 220.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME CUT-
1	22228.906	28262.202	37.810	-17.905	IAMM
2	22225.768	28261.877	39.386	-14.751	EHML
3	22224.263	28261.721	39.435	-13.238	CEMJ
4	22223.762	28261.669	39.451	-12.733	BRMJ
5	22221.658	28261.451	39.518	-10.618	MCM3
6	22211.097	28260.356	39.669	0.000	MCV0
7	22205.139	28259.739	39.516	5.989	NJ0J
8	22202.940	28259.511	39.450	8.200	BR00
9	22201.150	28259.325	39.396	10.000	CEVI
10	22200.155	28259.222	39.366	11.000	EHVI

**REFERENCE STRING MCV0 CHAINAGE 230.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME CUT-
1	22243.860	28253.699	37.705	-31.903	IAB1
2	22243.527	28253.664	37.756	-31.568	CEB1
3	22242.075	28253.514	37.721	-30.108	MCB1
4	22240.543	28253.355	37.657	-28.568	CEBJ
5	22235.580	28252.841	36.572	-23.578	MKM3
6	22229.343	28252.194	39.149	-17.308	EHML
7	22227.757	28252.030	39.207	-15.713	CEMJ
8	22227.229	28251.975	39.227	-15.182	BRMJ
9	22225.114	28251.756	39.303	-13.056	MCM3
10	22219.828	28251.208	39.490	-7.742	CEM4
11	22219.781	28251.203	39.526	-7.695	CEV3
12	22212.128	28250.410	39.538	0.000	MCV0
13	22206.151	28249.790	39.375	6.008	NJ0J
14	22203.794	28249.546	39.304	8.378	BR00
15	22202.181	28249.379	39.255	10.000	CEVI
16	22201.186	28249.275	39.225	11.000	EHVI
17	22200.889	28249.245	38.927	11.299	IABI

**REFERENCE STRING MCV0 CHAINAGE 240.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME CUT-
1	22248.051	28244.080	38.371	-35.080	IAB1
2	22247.908	28244.065	38.387	-34.935	CEB1
3	22246.194	28243.887	38.374	-33.213	MCB1
4	22244.561	28243.718	38.367	-31.570	CEBJ
5	22240.612	28243.309	37.406	-27.601	MKM3
6	22235.369	28242.765	38.983	-22.329	EHML
7	22233.600	28242.582	39.029	-20.551	CEMJ
8	22233.013	28242.521	39.044	-19.961	BRMJ
9	22230.702	28242.281	39.106	-17.637	MCM3
10	22224.993	28241.690	39.261	-11.898	CEM4
11	22220.818	28241.257	39.382	-7.700	CEV3
12	22213.159	28240.463	39.439	0.000	MCV0
13	22207.221	28239.847	39.261	5.970	NJ0J
14	22204.383	28239.553	39.175	8.822	BR00
15	22203.212	28239.432	39.140	10.000	CEVI
16	22202.217	28239.329	39.110	11.000	EHVI
17	22201.749	28239.280	38.639	11.470	IABI

TEST ROAD  
FIRST AVE – SECOND ST

**REFERENCE STRING MCV0      CHAINAGE      250.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME	CUT-
1	22253.179	28234.558	39.037	-39.199	CEBJ	
2	22249.593	28234.186	38.296	-35.593	IFBJ	
3	22244.958	28233.706	39.022	-30.934	EHML	
4	22242.813	28233.483	39.058	-28.776	CEMJ	
5	22242.097	28233.409	39.070	-28.057	BRMJ	
6	22239.236	28233.112	39.120	-25.181	MCM3	
7	22232.650	28232.430	39.258	-18.559	CEM4	
8	22231.337	28232.294	39.286	-17.239	EHM4	
9	22227.253	28231.870	39.184	-13.133	NJ01	
10	22221.849	28231.310	39.371	-7.700	CEV3	
11	22214.190	28230.516	39.389	0.000	MCV0	
12	22208.274	28229.903	39.190	5.948	NJ0J	
13	22204.840	28229.547	39.087	9.400	BR00	
14	22204.243	28229.485	39.069	10.000	CEVI	
15	22203.248	28229.382	39.039	11.000	EHVI	
16	22202.677	28229.323	38.464	11.575	IAVI	

**REFERENCE STRING MCV0      CHAINAGE      260.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME	CUT-
1	22232.926	28222.405	39.088	-17.800	EHV2	
2	22231.135	28222.219	39.129	-16.000	CEV9	
3	22222.880	28221.363	39.317	-7.700	CEV3	
4	22215.221	28220.569	39.342	0.000	MCV0	
5	22209.326	28219.958	39.164	5.927	NJ0J	
6	22205.296	28219.541	39.043	9.978	BR00	
7	22205.274	28219.538	39.042	10.000	CEVI	
8	22203.782	28219.384	38.997	11.500	EHVI	
9	22202.730	28219.275	37.939	12.558	IAVI	

**REFERENCE STRING MCV0      CHAINAGE      270.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME	CUT-
1	22233.957	28212.458	39.062	-17.800	EHV2	
2	22232.166	28212.272	39.101	-16.000	CEV9	
3	22232.166	28212.272	39.187	-16.000	NJ01	
4	22223.911	28211.417	39.280	-7.700	CEV3	
5	22216.252	28210.623	39.346	0.000	MCV0	
6	22210.391	28210.015	39.161	5.892	NJ0J	
7	22206.305	28209.592	39.038	10.000	CEVI	
8	22205.885	28209.548	39.025	10.422	BR00	
9	22204.316	28209.386	38.978	12.000	EHVI	
10	22203.191	28209.269	37.847	13.130	IAVI	

**REFERENCE STRING MCV0      CHAINAGE      280.000**

POINT	-----X-----	-----Y-----	-----Z-----	---OFFSET---	-NAME	CUT-
1	22234.988	28202.511	39.075	-17.800	EHV2	
2	22233.198	28202.326	39.114	-16.000	CEV9	
3	22233.198	28202.326	39.157	-16.000	NJ01	
4	22224.942	28201.470	39.295	-7.700	CEV3	
5	22217.283	28200.676	39.334	0.000	MCV0	
6	22211.421	28200.068	39.149	5.893	NJ0J	
7	22207.336	28199.645	39.026	10.000	CEVI	
8	22206.739	28199.583	39.008	10.600	BR00	
9	22205.347	28199.439	38.966	12.000	EHVI	
10	22204.799	28199.382	38.415	12.551	IAVI	