

Job Demand Analysis	
Placement/Job Title:	Survey Engineer
Division/Branch:	Infrastructure/ Infrastructure Strategy and Design
Date of Assessment:	18 September 2012
Assessment Completed By:	Human Resources Advisor 4 GPS Field Technician
Standard Hours:	7.00am – 3.00 pm
Variable Hours:	<input checked="" type="checkbox"/> Overtime <input type="checkbox"/> On Call <input type="checkbox"/> Call Outs
Breaks / Rest Periods:	1 hour lunch

Environmental/Psychosocial Factors

The Survey Engineer is required to:

- Approximately 30% of work tasks are performed within an office environment.
- Approximately 70% of tasks are performed on site. This may include surveys of roads, buildings and quarries along with field surveys of job sites, open fields, sewerage systems and roads.
- Exposure to a variety of weather conditions may be experienced when performing on site tasks.
- Provide day to day survey/GPS requirements for substantial projects and programmes within specified guidelines.
- Dealing with field staff enquiries and issues.
- Provide training and application support to Council staff in the application of GPS technology.
- Build and maintain good working relationships with internal and external clients, and equipment suppliers.

Job Descriptions

Survey Engineer provides the day to day support requirements in order to optimise GPS use in delivering the works programme. This includes:

- Knowledge of the works programmes primarily those applicable GPS projects.
- Manipulation of design data, and transferring this data to field staff and machinery.
- Liaison with Works Services coordination team and field staff to provide support, training and assistance.

See Position Description for further information.

Physical Demands	Rarely 1-5%	Occasional 6-33%	Frequent 34-66%	Continuous 67-100%	Comments
Standing			X		Required when attending site inspections.

Physical Demands	Rarely 1-5%	Occasional 6-33%	Frequent 34-66%	Continuous 67-100%	Comments
Walking			X		Required within the office environment and when performing field surveys/site inspections. A variety of terrain is traversed on site, including even, uneven, sloped and inclined surfaces.
Sitting			X		An adjustable ergonomic chair is available for use within the office environment. Sitting in the vehicle is also required when driving to/from site.
Climbing		X			May be required to access areas on site, to allow survey and/or inspection tasks to occur. This may include climbing hills and banks on site.
Bending / Stooping			X		May be required to access areas on site such as sewer pits and under bridges, to survey and/or inspection tasks to occur. Also required on an occasional basis when using the dumpy level.
Squatting / Crouching			X		May be required to access areas on site, to allow survey and/or inspection tasks to occur.
Kneeling			X		Needed when accessing areas on site, to allow survey and/or inspection tasks to occur.
Reaching overhead	X				Needed when accessing areas on site, to allow survey and/or inspection tasks to occur. Also required when hammering in pegs at times.
Reaching at waist level or below.			X		Required when driving vehicles, moving equipment to/from site and when performing survey and/or inspection tasks. Also required when performing computer based data entry and drafting tasks.
Crawling	X				Rarely required, but may be needed when accessing areas on site, to allow survey and/or inspection tasks to occur.
Trunk Rotation	X				Rarely required, but may be needed when lifting/carrying equipment, using equipment and accessing areas on site,

Physical Demands	Rarely 1-5%	Occasional 6-33%	Frequent 34-66%	Continuous 67-100%	Comments
					to allow survey and/or inspection tasks to occur.
Repetitive Forearm, hand and finger movement				X	Bilateral fine motor actions are required for computer based data entry and drafting tasks, when using survey instruments, with manual writing and when driving. Also required when performing survey and/or inspections on site.
Manual dexterity and handling			X		Carrying of equipment may be required to/from site.

Manual Handling			
	Weight:	Frequency:	Comments:
Lifting	5-25 kg	Occasionally	Lifting of equipment is required to/from the vehicle and on site.
Carrying	5-20 kg	Occasionally	Carrying of equipment is required to/from the vehicle and on site.
Pushing/Pulling	Not required	Not applicable	Not applicable.

Tools Used		
Tool:	Weight:	Comments:
Theodolite	30 kg	The theodolite is lifted/carried to and from the vehicle and around the site as required.
Sign bases	15 kg	May be lifted/carried around the site as required.
Tripod	5 kg	The tripod is lifted/carried to and from the vehicle and around the site as required.
Pegs	5 kg	4-6 pegs (total weight 5 kg) may be carried at any one time.
Crowbar	5 kg	Use to move objects and may be lifted/carried around the site as required.
Signs	5 kg	May be lifted/carried around the site as required.
Dumpy level	5 kg	May be lifted/carried around the site as required.
Hand tools	<1kg	A variety of hand tools may be used such as claw hammers, spirit levels and tape measures as required on site.

Balance		
	Exposure to:	Comments:
Level ground	Yes	Within the office area and when performing site visits.
Uneven ground	Yes	When performing site inspections and survey tasks.
Unprotected heights or high levels	Yes	Climbing to heights may be required when surveying and/or inspecting bridges and the edges of culverts. A co-worker is taken on site when inspecting water towers.

Environmental Conditions		
	Exposure to:	Comments:
Inside work	Yes	When performing office based tasks.
Outside work	Yes	When performing site visits.
Night Work	No	Not applicable.
Extreme heat	Yes	Workers may be exposed to heat and hot bitumen when performing survey and/or inspection duties on site.
Extreme cold	Yes	Workers may be exposed to cold when performing survey and/or inspection duties on site.
Humid or wet	Yes	Workers may be exposed to humid/wet conditions when performing survey and/or inspection duties on site.
Noise	Yes	Workers may be exposed to noise of equipment when performing site visits. They may also be exposed to general traffic and plant noise when on site.
Vibration	Yes	Workers may be exposed to vibration if rollers and/or plant are operating nearby.
Mechanical hazards	Yes	The worker may be exposed to traffic, plant machinery and equipment/machinery when performing site visits.
Electrical hazards	Yes	The worker may be exposed to electrical hazards when performing site visits.
Risk of burns	No	Not applicable.
Radiant energy	Yes	When performing site inspections/visits in outside areas. Sun protection is worn.
Poor ventilation	No	Not applicable.
Moving objects	Yes	The worker may be exposed to traffic, plant machinery when performing site visits.
Sharp tools	No	Not applicable.
Cluttered or slippery floors	Yes	The worker may be exposed to muddy and/or slippery work environments when performing site inspections.
Elevated surfaces	Yes	The worker may be exposed to elevated surfaces when performing survey and/or inspection tasks on bridges.
Lighting	No	Not applicable.
Exposure to fumes/odours/ dusts/mists/ gases	Yes	Exposure to dust/odours may occur at site visits.
Exposure to biological hazards	Yes	Exposure may occur at site visits such as the saleyards, landfill and sewerage areas.

Sensory/Communication		
	Required:	Comments:
Vision	Yes	Vision is required when performing computer based and administrative duties. Vision is also required when driving to/from site, when performing survey/site inspections and when taking readings.
Hearing	Yes	General liaison with other workers and members of the public is required and the worker also needs to be

		aware of surrounding traffic, plant and equipment when on site.
Speech	Yes	General liaison with other workers and members of the public is required.
Reading	Yes	Completion of paperwork as required.
Writing	Yes	Completion of paperwork as required.
Numerical ability	Yes	When calculating readings (a calculator is used) and for reporting purposes.

This Job Demand Analysis has been assessed and approved by the relevant Supervisor and corresponding Manager within Dubbo Regional Council. This Job Demand Analysis will be implemented on 8 April 2013.