



CONSULTING ENGINEERS
STRUCTURAL • CIVIL • BUILDING DESIGN

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23 December, 2010

Mr Phillip McMurray
Gundagai Shire Council
255 Sheridan Street
GUNDAGAI NSW 2722

RE: MAIN STREET UPGRADE - ESTIMATE OF COST

Dear Phil,

Please find attached estimate of cost for the upgrade of the main street from Otway to Virgil Street.

Please note that the following items were not included in this estimate:

- The relocation of Telstra, gas and water. The design indicates that no adjustment should be required.
- State Government charges
- Any Council application fees
- Legal costs.

It is also noted that several items such as street lighting, furniture, electrical supply and tree selection had not been determined at the time of estimating and allowances were made using market rates. A contingency item of 10% has been included in the estimate to cover the cost of any additional charges resulting from these assumptions and any unforeseen costs that may arise during construction.

Please contact me if you have any enquiries in relation to this matter.

Yours sincerely,
MJM SOLUTIONS

Richard Lasek
MANAGER CIVIL WORKS
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Schedule of Estimated Costs for Proposed Upgrade to Main Street, Gundagai from Otway to Virgil Street

		Units	Qty	Rate	Amount
1.1	GEOTECHNICAL INVESTIGATION	Item			8,000
1.2	SITE ESTABLISHMENT	Item			5,000
1.3	EARTHWORKS				
1.3.1	Excavation by cut in all classes of material and remove from site for the formation of road subgrade in areas where new pavements needs to be constructed due to significant level change.	Item			245,000
1.4	STORMWATER DRAINAGE				
1.4.1	Construct drainage pipes and pits, including connection of roofwater outlets to the new kerb and gutter				295,000
1.5	KERB AND GUTTER				
1.5.1	Remove existing kerbs and construct new kerb and gutter, driveways and pram ramps	Item			335,000
1.6	ROAD PAVEMENTS				
1.6.1	Tyne, moisture condition and compact subgrade to 98% standard	Item			30,000
1.6.2	Traffic control	Item			100,000
1.6.3	Construct 300mm pavement to Council's required compaction densities.	Item			350,000
1.6.4	Testing - Compaction	Item			5,000
1.6.5	Proof Rolling (Deflection testing)	Item			2,500
1.6.6	Primer Seal	Item			55,000
1.6.7	35mm asphaltic concrete				465,000
1.7	FOOTPATH WORKS				
1.7.1	Excavation and reshaping of footpath	Item			70,000
1.7.2	Asphalt paving 35mm nominal thickness	Item			320,000
1.7.3	Sawcut and lay terracotta pavers	Item			65,000
1.7.4	Construct retaining wall, ramps and steps	Item			315,000
1.7.5	Modify verandah posts where necessary	Item			25,000
1.8	LANDSCAPING				
1.8.1	Supply and plant trees and shrubs	Item			65,000
1.8.2	Install irrigation system	Item			80,000
1.9	FURNITURE				
1.9.1	Supply and install benches, table settings, waste bins and bollards	Item			175,000
1.10	STREET LIGHTING				
1.10.1	Supply and install lighting to Council requirements	Item			180,000
1.11	ELECTRICAL SUPPLY				
1.11.1	Supply and install underground power supply	Item			325,000
1.12	SEWER				
1.12.1	Modify sewer manholes to suit new pavement levels	Item			15,000
1.13	CONTINGENCY 10%				350,000

TOTAL ESTIMATED COST = \$3,880,500

Civilworks Schedule of Works for Proposed Subdivision
Bourkelands Stage B

		Units	Qty	Amount
1	<u>CONTRACT</u>			
1.1	<u>ROADWORKS</u>			
1.1.1	<u>CLEARING & STRIPPING</u>			
1.1.1.1	Rubbish etc - remove and dispose of as per Council requirements	Item		
1.1.1.2	Topsoil - strip with grass to a depth of approximately 100mm from road reserve and stockpile.	m ²	1,800	
1.1.1.3	Tree Removal	No		
1.1.2	<u>EARTHWORKS</u>			
1.1.2.1	<u>General (carpark and Sediment pond)</u>			
1.1.2.1.1	Excavation by cut in all classes of material for the formation of road reserves in preparation for pavement & kerb & gutter construction and topsoiling and the formation of batters within allotments in preparation for topsoiling.	m ³ (solid)		
1.1.2.1.2	Place and compact suitable onsite excavated material to form the road reserve in preparation for pavement & kerb & gutter construction and topsoiling and the formation of batters within allotments in preparation for topsoiling.	m ³ (solid)		
	Remove excess spoil from site	item		
1.1.3	<u>PAVEMENTS</u>			
1.1.3.1	Trim and compact subgrade in preparation for placement of pavement materials.	m ²	905	
1.1.3.2	Import, place and compact approved pavement materials:-			
1.1.3.2.1	120 mm compacted thickness base course (Thickness subjected to be checked with Geotechnical report)	m ²	724	
1.1.3.2.2	180 mm compacted thickness sub-base (Thickness subjected to be checked with Geotechnical report)	m ²	905	
1.1.3.3	Construct 18m diameter turning area at the end of dead end roads. Overlay subgrade with 150mm of DGS20 (255sqm each). Ensure pavement is drained and water from surrounding area is re-directed.	No.	1	
1.1.3.4	Testing:-			
1.1.3.4.1	Density testing at 50m intervals	No.	6	
1.1.3.4.2	Proof Rolling (Deflection testing)	Item		
1.1.4	<u>BITUMINOUS SURFACING</u>			
1.1.4.1	30mm Asphalt (AC14)	m ²	724	
1.1.5	<u>KERB & GUTTER</u>			
1.1.5.1	Construct barrier kerb and gutter & stamp service locations.	m	181	
1.1.7	<u>SUBSOIL DRAINAGE</u>			
1.1.7.1	Supply & Install subsoil drainage lines.	m		
1.1.7.2	Supply & install subsoil drainage flushing points and outlets	No.		
1.1.8	<u>FURNITURE</u>			
1.1.8.1	Erect uni-directional chevron signs	No.	1	
1.1.9.1	<u>REINSTATEMENTS</u>			
1.1.9.1	Trim and compact nature reserve and allotment batters with particular attention given to service trenches after services have been installed.	m ²	2,400	
1.1.9.2	Spread & lightly (machine) compact 100 mm thickness of moist topsoil on all disturbed surfaces and seed.	m ²	2,400	
1.1.10	Construct Concrete path 2.5 wide	m ²	90	
1.2	<u>STORMWATER DRAINAGE</u>			
1.2.1	<u>ROAD STORMWATER DRAINAGE PIPES & PITS:-</u>			
1.2.1.1	<u>PIPELINES BEHIND K&G - Excavate trench. Supply, deliver, lay & join pipes. Sand bed & backfill to top of subgrade. Backfill with compacted select material Note-Depths shown are excavation depth below N/S:-</u>			

**Civilworks Schedule of Works for Proposed Subdivision
Bourkelands Stage B**

		Units	Qty	Amount
1.2.1.1.14	450 Diameter RRJ Class2 RCPC up to 1.5 metres deep	m	17.5	
1.2.1.1.16	375 Diameter RRJ Class2 RCPC up to 1.5 metres deep	m	72.9	
1.2.1.2	PIPELINES WITHIN ROAD PAVEMENT - Excavate trench. Supply, deliver, lay & join pipes. Sand bed. Backfill with 4% cement stabilised sand to top of subgrade Note-Depths shown are excavation depth below N/S:-			
1.2.1.2.16	375 Diameter RRJ Class2 RCPC up to 1.5 metres deep	m	20.0	
1.2.1.3	PITS / HEADWALLS ETC - Excavate, backfill & construct concrete drainage structures including subsoil drainage stubs for subsoil drainage behind kerbs and subsoil drainage/ within road pavement in pipe trenches:-			
1.2.1.3.1	Side Entry Pits (900x750 1.8m lintel)			
1.2.1.3.1.1	Over 1.5 metres deep with haunching & reinforced	No		
1.2.1.3.1.2	Upto 1.5 metres deep with haunching & reinforced	No	4	
1.3	SEWER RETICULATION			
1.3.1	PIPELINES NOT UNDER ROAD PAVEMENTS - Excavate trench. Supply, deliver, lay & join pipes. Sand bed & cover pipe. Backfill with compacted select material Note-Depths shown are excavation depth below N/S:-			
1.3.1.4	150 Dia uPVC upto 1.5m deep	m	90.5	
1.3.3	MANHOLES & FITTINGS - Excavate, backfill & construct concrete manholes (manhole surrounds to be set at slope of design surface):-			
1.3.3.1	Standard Type "A" manhole or Plastic Pit in accordance with Council requirement :-			
1.3.3.1.1	Up to 1.5m deep	No.	1	
1.3.3.1.2	over 1.5m deep	No.		
1.3.3.2	Standard Type "B" manhole or Plastic Pit in accordance with Council requirement :-			
1.3.3.2.1	Up to 1.5m deep	No.		
1.3.3.2.2	over 1.5m deep	No.		
1.3.3.3	Junctions including spur, riser & marker tape			
1.3.3.3.1	Upto 1.5 m deep	No.	4	
1.3.3.3.2	Over 1.5 m deep	No.		
1.3.3.4	Spur from Manhole			
1.3.3.4.1	Upto 1.5 m deep	No.	1	
1.3.3.4.2	Over 1.5 m deep	No.		
1.3.4	AnchorBlocks	No.		
1.4	MISCELLANEOUS			
1.4.1	SERVICE AUTHORITY TRENCHES - Excavate trench. Backfill & compact trench. Including marker tape:-			
1.4.1.1	Parallel to Boundaries for Reticulation Mains :-			
1.4.1.1.1	Telstra & Electricity	m	181	
1.4.1.1.2	Water & Gas	m	181	
1.4.1.2	Road Crossing Conduits:-			
1.4.1.2.1	ELECTRICAL & TELSTRA- road crossings. All conduits 100mm. Under road pavements 4% stabilised sand to 0.7m behind k&g. Electrical & TELSTRA to finish 0.6m from title boundary.	m		
1.4.1.2.2	WATER & GAS- road crossings. All conduits 100mm. Under road pavements 4% stabilised sand to 0.7m behind k&g. Water & Gas to finish 0.7m behind k&g.	m		
1.5	PROVISIONAL ITEMS			
1.5.1	ROADS & GENERAL EARTHWORKS			

Civilworks Schedule of Works for Proposed Subdivision
Bourkelands Stage B

		Units	Qty	Amount
1.5.1.1	DRY and compact subgrade material to a nominal depth of 300 mm	m ²		
1.5.1.2	REMOVE excess topsoil from site (solid) allow to complete	Item		
1.5.1.3	ROCK EXCAVATION (Soft) - by machine mounted ripper. (Sewer Drainage trenches)	m ³ (solid)		
1.5.1.4	ROCK EXCAVATION (Hard) - by hydraulic machine mounted jack hammer (Sewer Drainage trenches)	m ³ (solid)		
1.5.1.5	PAVEMENT STABILIZATION - 200 mm deep with 3% lime	m ²		
1.5.2	<i>SEDIMENTATION & EROSION CONTROL</i>			
	DEFLECTION BANK - Construct 300 mm high with 4:1 batter	m	91	
1.5.2.2	HAY BALES - Supply and install for erosion control	m	16	
1.5.2.3	SILT FENCE - Construct	m	144	
1.5.2.4	ROCK LINED SILT TRAP - as shown in DWG No -E1	No	1	
1.5.3	<i>PLANT HIRE</i>			
1.5.3.1	130 G grader	hrs		
1.5.3.2	Front end loader	hrs		
1.5.3.3	Pneumatic tired & smooth drum roller	hrs		
1.5.3.4	Excavator	hrs		
1.5.3.5	Backhoe	hrs		
1.5.3.6	Tip truck	hrs		
1.5.3.7	Labourer	hrs		
1.5.3.8	Scraper 613C	hrs		
1.5.3.9	Water Truck	hrs		
1.5.3.10	Pad foot roller	hrs		
1.5.3.11	Bobcat	hrs		