

SINDH COAL AUTHORITY

**Various New Roads Links , Bypasses and Improvement /Widening /Rehabilitation of Existing Roads in
Districts Tharparkar and Mirpurkhas**

**CONTRACT PACKAGE A : Construction of road Naukot , Jhuddo & Tando Jan Muhammad Bypasses
(20.0kms)**

Construction of Jhuddo Bypass (7 kms)

BILL OF QUANTITIES

SUMMARY

BILL No.	DESCRIPTION	AMOUNT (PKR)
1	Earthworks	
2	Sub base and Base Courses	
3	Surface Courses	
4	Culverts	
4a	Bridge structures	
5	Drainage And Protection Works	
6	Ancillary Works	
7	Engineer's Facilities	
A	Sub Total of Bills	
B	Day Work	
C	Bid Price (A+B) Carried Forward to Form of Bid	

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Bill 1 - EARTHWORKS						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
1.1	101	Clearing and Grubbing	SM	154,000		
1.2	104	Compaction of Natural Ground	SM	154,000		
1.3	106a & 106 (c)	Excavate unsuitable/ surplus Common Material	CM	42,525		
1.4	108c	Formation of Embankment From Borrow Excavation in Common Material	CM	175,124		
1.5	109a	Subgrade preparation in Earth Cut	SM	11,000		
TOTAL FOR BILL 1 CARRIED FORWARD TO SUMMARY :						

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Bill 2 - SUBBASE AND BASE COURSES						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
2.1	201	Granular Subbase (Grading A)	CM	29,253		
2.2	202	Aggregate Base (Grading A)	CM	20,683		
2.3	203b	Asphalt Base Course Plant Mix (Class "B")	CM	4,860		
2.4	209a	Breaking of Existing Road Pavement	CM	1,000		
2.5	209b	Scarification of Existing Road pavement	SM	14,438		
2.6	SS-3	Removal and reuse of existing water bound macadam and bringing it to the require specification	CM	1,000		
TOTAL FOR BILL 2 CARRIED FORWARD TO SUMMARY :						

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Bill 3 - SURFACE COURSES						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
3.1	302	Bituminous Prime Coat (MC-70)	SM	54,652		
3.2	303	Bituminous Tack Coat (Emulsified Asphalt)	SM	53,354		
3.3	304b	Double Surface Treatment	SM	23,100		
3.4	305b	Asphalt Concrete for Wearing Course Class-B	CM	2,650		
TOTAL FOR BILL 3 CARRIED FORWARD TO SUMMARY :						

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Bill 4 - CULVERTS						
Sr. No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
4.1	107a	Structural excavation in common material	CM	109		
4.2	401f	Lean Concrete	CM	78		
4.3	401a	Concrete Class A3 in culvert, apron, wing wall etc	CM	350		
4.4	404b	Reinforcement steel as per AASHTO M31 grade 60	TON	35		
4.5	107b	Granular back filling	CM	641		
4.6	410	Brick masonry	CM	1,020		
4.7	412a	Stone masonry dressed coursed with mortar	CM	29		
4.8	509d	Grouted Rip rap Class A	CM	180		
4.9	SP-2	Plaster work	SM	677		
4.10	510	Dismantling of structure and obstructions	CM	180		
4.11	509b	Rip Rap Class B	CM	294		
TOTAL FOR BILL 4 CARRIED FORWARD TO SUMMARY :						

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Bill 4a BRIDGE STRUCTURE						
Sr. No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
4.1	107a	Structural excavation in common material	cm	220		
4.2	107d	Granular Backfill	cm	70		
4.3	107e	Common Backfill	cm	24000		
4.4	401d	Concrete Class D1 (4000 psi)	cm	700		
4.5	401f	Lean Concrete (Foundation and /or Girder Casting Bed)	cm	30		
4.6	401h	Extra over Class A1 with SR Cement	cm	10		
4.7	404a	Reinforcement steel as per AASHTO M31 grade 40	Tons	2		
4.8	404b	Reinforcement steel as per AASHTO M31 grade 60	Tons	112		
4.9	404c	Galvanized Mild Steel	Tons	0.6		
4.1	405a	Pre cast Pre-stressed Concrete Members i) Span 20m	Each	8		
4.11	406ai	Premoulded Joint Filler with Bitumastic joint seal	sm	14		
4.12	406e	Elastomeric Bearing Pads (According to size and thickness)	cm	528000		
4.13	407d1	Cast in place Concrete Pile Dia (dia 1000mm)	M	240		
4.14	407i	Pile Load test upto 240 TON	Each	2		
4.15	509e	Grouted Rip rap Class B	cm	2,000		
4.16	509c	Rip Rap Class C	cm	400		
4.17	SP	PVC sleeve pipes with CAP of dia and wall thickness as shown on drawings	M	60		
4.18	SP	Permanent Steel casing including all fixtures (wall thickness as per drawings)	Tons	20		
4.19	SP	Bridge Expansion Joint	M	40		
4.2	SP	Exploratory / Confirmatory boring and testing in	M	100		
4.21	SP	Providing and fixing drainage pipe in bridge Deck	M	120		
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Bill 5 - DRAINAGE AND PROTECTION WORKS						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
5.1	511b	Grouted stone Pitching (20cm thick)	SM	400		
5.2	509h	Filter Layer of Granular Material	CM	73		
5.3	509d	Grouted Rip Rap Class "A"	CM	2,448		
5.4	401b	Concrete Class "B"	CM	2,203		
5.5	401f	Lean Concrete	CM			
Utility Crossing Ducts and Inspection Chambers						
5.6	107a	Structural Excavation in Common Material	CM	80		
5.7	107e	Common backfilling	CM	42		
5.8	401a	Concrete Class A3 i) Underground 1. Arch, box, slab culvert	CM	11		
5.9	401g	Precase Concrete Class "A3"	CM	1		
5.10	404b	Reinforcement as per AASHTO M 31 grade 60	Ton	2		
5.11	404h	Reinforcement (Structural Shapes) as per ASTM-A36	Ton	0.20		
5.12	501a	Reinforced Concrete Pipe AASHTO M 170 Class II dia	M	32		
5.13	401b	Concrete Class "B"	CM	9		
5.14	401f	Lean Concrete	CM	2		
TOTAL FOR BILL 5 CARRIED FORWARD TO SUMMARY :						

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Bill 6 - ANCILLARY WORKS						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
6.1	605a	Concrete Beam Guard Rail	M	750		
6.2	605c	Concrete Post for Guard Rail and Guard Rail End Pieces	Each	188		
6.3	607a	Traffic Road Signs Category 1, size 900mm	Each	17		
6.4	607b	Traffic Road Signs Category 2, size 900mm	Each	21		
6.6	607d	Traffic Road Signs Category 3 (b)	Each	8		
6.7	607e	Traffic Road Signs Category 3 (c)	SM	5		
6.8	608h	Pavement marking in reflective TP paint for Line	M	4,571		
6.9	608i	Pavement marking in reflective TP paint for Line	M	16000		
6.10	609d	Reflectorized pavement Studs (raised profile type double)	Each	1229		
6.11	610c	Kilometer Post	Each	8		
6.12	612a	* Furnishing and Planting of trees including maintenance period of 1.5 - 2 years	Each	1,402		
TOTAL FOR BILL 6 CARRIED FORWARD TO SUMMARY :						

* All the sapling shall be either of i) Neem ii) Gul muhr iii) Tali iv) Sirus or as directed by the Engineer . The trees / sapling shall be of minimum 1.5m height at the time of planting and maintain for 1.5 - 2 years

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Bill 7 - Engineer's Facilities						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
7.1	SS-9.2.1(a)	Provide Resident engineer's Office (Rental)				
7.2	SS-9.2.1(b)	Provide equipment and furniture for Resident Engineer's Office				
7.3	SS-9.2.1(c)	Maintain Resident Engineer's Office				
7.4	SS-9.2.2(a)	Provide Residential Engineer;s Housing (Rental)				
7.5	SS-9.2.2(b)	Provide equipment and furnutre for Resident Engineer's Housing				
7.6	SS-9.2.2(c)	Maintain Resident Engineer's Housing				
7.7	SS-9.2.3(a)	Provide Engineer's Base Laboratory (Rental)				
7.8	SS-9.2.3(b)	Provide Equipment and furniture For Engineer's				
7.9	SS-9.2.3(c)	Maintain Engineer's Base Laboratory				
7.10	SS-9.2.4(a)	Provide Engineer's Vehicle 1.Toyota Corolla (XLI) CNG or equivalent, NO 4				
7.11	SS-9.2.4(b)	Maintenace of Engineer's Vehicle 1.Toyota Corolla (XLI) CNG or equivalent, NO 4				
7.12	SS-9.3.1(a)	Provide, equip and furnish Field accomodation		Not Payable		
7.13	SS-9.3.1(b)	Maintain Field Accommodation		Not Payable		
7.14	SS-9.3.2(a)	Provide equip and furnish Engineer's Field Laboratory		Not payable		
7.15	SS-9.3.2(b)	Maintain Engineer's Field Laboratory		Not Payable		
7.16	SS-9.3.3(a)	Provide Vehicle For Engineer's field Staff		Not Payable		
7.17	SS-9.3.3(b)	Maintain Vehicle for Engineer's field Staff		Not Payable		
7.18	SS-9.3.4(a)	Provide Survey Equipment		Not Payable		
7.19	SS-9.3.4(b)	Maintain Survey Equipment		Not Payable		
TOTAL FOR BILL 7						