NATIONAL HIGHWAY AUTHORITY
MINISTRY OF COMMUNICATIONS
GOVERNMENT OF PAKISTAN
ISLAMABAD

COMPOSITE SCHEDULE OF RATES

MARCH 2008

(SIND)

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1. INTRODUCTION:

a. The revision of CSR had become imperative because of substantial increase in the prices of certain basic input items such as fuel, steel, bitumen, labour, cement etc.

   CSR is a very crucial and fundamental document for the preparation of tentative costs of any project and it is extensively used by NHA, Contractors and Consultants. It also facilitates the Engineers and decision makers, in taking lucid and speedy conclusions on the following matters:

   i. To prepare Project Cost Estimate and PC-1

   ii. To Evaluate Tenders / Bids

   iii. To decide on Claims and Variation Orders

   iv. To Conduct Arbitration matters

b. In order to prepare an authentic Composite Schedule of Rates and to keep it effective, the basic requirements are as under:

   i. Collection of first hand, prudent and legitimate information for inputs (Manpower, Material & Equipment) in the rate analysis

   ii. Merging the above information in proper proportion according to Design Specifications and Constructional requirements to create the rate of a work item

   iii. Updating the data inputs every year or from time to time, to revalidate the item rates

2. GENERAL METHODOLOGY:

a. Composite Schedule of Rates was originally published in the year 1991 and subsequent revisions were carried out in 1995, 2000, 2005 and 2006. There are total of 91 Districts and are given numbers in Alphabetical order and their Province wise breakdown as under:

Province	No of Districts
Punjab	34
Sind	16
NWFP	21
Balochistan	20

Specifications and Methodology for Construction items have been adopted as given in General Specification of National Highway Authority (1998). Items of

work for construction have been given the same numbers as appearing in the General Specifications of National Highway Authority.

b. These rates are based on the existing formulae and efficiency levels used in the preparation of CSR 2005 and 2006 with some modifications.

c. The rates analysis of individual items of CSR 2008 consists of four basic inputs, which have been assigned the same code numbers as in the previous CSR.

   i. Manpower code starting from 1001 onwards

   ii. Material code starting from 2001 onwards

   iii. Equipment code starting from 3001 onwards

   iv. Overheads & Profits

d. For the preparation of rates following documents have been referred:

   i. General Specifications 1998

   ii. NHA Composite Schedule of Rates 2005 & 2006 and its basic data

   iii. Statistical Bulletins by Federal Bureau of Statistics

   iv. Current Market rates study

   Code list of Manpower, Material and equipment appear at the end of the chapter for the convenience of the users.

2.1 MANPOWER:

a. **Allocation of Code Numbers:**

   Cost of manpower engaged on plant and Equipment have been included in rental charges of plant and Equipment and only site supervisory staff have been considered under the heading of Manpower. Code numbers are allocated accordingly to such manpower that is directly charged to the items of work. Manpower cost for top supervision, administration and other non-productive works of support services have been considered under overhead charges.

b. **Formulation of Rates:**

   Manpower basic rates collected from districts have been first scrutinized, to eliminate irrational information and, following overheads are applied to include fringe benefits and other charges:

   i. Social security payment

   ii. E.O.I.B Payment

iii. Education Cess Payment

iv. Yearly leave salary (Earned, casual and sick)

v. Bonus (Compulsory)

vi. Provident fund (Contribution of Employer) or gratuity

vii. Mess Expenses (Site Staff)

viii. Entertainment Allowance (Provisional)

ix. Group life Insurance

x. Site Staff Accommodation

After including above overheads, manpower rates for each of the 91 district have been calculated and separate records developed for use by the Computer Program.

2.2 CONSTRUCTION MATERIAL:

a. **Allocation of Code Numbers to Materials:**

List of materials required for road construction has been first prepared from the construction items appearing in the General Specifications of National Highway Authority. After arranging the construction material list in order, code numbers have been allocated.

b. **Formulation of Rates:**

Considering the location of each district, Engineers decided the most appropriate source of construction materials for all the code numbers. The cost of material at source has been established from field data, and transportation rates calculated, to arrive at the landed cost of material at the district headquarters.

c. **Cost of Material**

In order to arrive at a “Material at sources” rate, following considerations have been made.

i. Material royalty at quarry (actual or estimated)

ii. Cost of Preparation of material

iii. Unauthorized local charges in the province of Balochistan and Sind

iv. Loading of material in truck / trailer etc

d. **Cost of Transportation**

Transportation charges have been taken as actual, where local transporters are available. However, in some districts where local transporters rates are not quoted, transportation charges graphs have been used.

In case of quarry materials, the source of materials for embankment, Sub-Base or Base Course can be more than one; however, the most appropriate source from the point of view of quality and economy has been used for preparing the Composite Schedule of Rates – 2008.

2.3 PLANT AND EQUIPMENT

a. **Allocation of Code Numbers**

The list of plant and equipment includes major equipment whereas small equipment, tools and attachments are ignored, as these have been charged under the item of overhead. After arranging the list in order, code numbers have been allocated starting from 3001 (onwards).

b. **Power, Performance and Maintenance of Plant & Equipment**

To arrive at the decision for choosing the right horse power, appropriate performance level and reasonable maintenance charges, the recommendation of well known suppliers have been considered. In order to decide the price level of any equipment, average cost has been used, which includes C&F price, plus duties and taxes etc.

c. **Formulation of Rates of Plant and Equipment**

The owning and operating costs are similar for all the districts, unlike manpower and materials where rates may differ for each district.

The owning and operating costs are developed by using a standard format. The duties and taxes have been calculated as per the latest Excise and Land Customs Tariff for calculating total cost of equipment.

Fuel consumption, working efficiency and maintenance costs have been fixed after consulting the recommendation of the manufacturers. Equipment economical life and tire life have been fixed after consulting several organizations using heavy and light equipment in the present indigenous conditions.

The owning and operating costs for 84 types of equipment is provided at the end of this chapter.

2.4 FORMULAE FOR CONSTRUCTION ITEMS

All the basic inputs have been updated in the individual rates analysis. These formulae have been created by appropriate quantitative inputs of the following items.

Manpower	Hour and Number
Material	Weight, Volume, Length and Unit
Plant Equipment	Hour and Number
Overheads & profit	15 percent and 10 percent respectively

Overheads include following items:-

i. Cost of Manpower not charged to the items directly, such as, Project Office Staff, Security Staff, Lab. Staff, Survey Staff, Camp Staff, Account, Store and Admin. Staff

ii. Expenses on Laboratory, Camp, Workshop, Office and allied equipments and fixtures

iii. Small equipment, tools and attachments

iv. Advance tax deductible at source

2.5 VARIABLES EFFECTING THE RATE ANALYSIS

Rate analysis in CSR have been prepared based on policy explained here above. However, there are certain factors required to be considered while deciding about more realistic rates in special situations.

2.6 Price Escalation

General and Special escalation has been considered as published by Government Agencies. However, care is to be exercised to consider Government Legislation, which may create condition of Special Escalation.

2.7 Double Taxation

In International tenders, a factor is to be considered which may handicap the contractors from such countries, whose governments have no agreement with the Government of Pakistan to avoid double taxation. Effect of this item will be equal to the limit of tax level in such a country.

2.8 Service Roads

No provision has been made in this rate analysis for road diversion cost or service road, which the contractor has to construct or maintain as a non-BOQ item.

2.9 Extra Overhead for Expatriate Staff

International tenders will require a factor to employ expatriate staff on the project. Effect of this will be equal to the actual expenses on such item.

2.10 Other Factors

Some of the items mentioned in above text included as overhead Cost in Estimates of CSR, may appear as a B.O.Q item in a tender, the cost of such items are to be adjusted from the total estimate of the project.

LIST OF MANPOWER CODES

Man power Code	Description
1001	SITE ENGINEER
1002	ASPHALT PLANT ENGINEER
1003	CONCRETE PLANT ENGINEER
1011	FOREMAN ASPHALT
1012	FOREMAN EARTHWORK
1013	FOREMAN CONCRETE
1014	GENERAL FOREMAN
1021	SUPERVISOR
1022	SURVEYOR
1023	ASSISTANT SURVEYOR
1031	MASON
1032	CARPENTER
1033	PAINTER
1034	STEEL BINDER/CUTTER
1040	HIGHLY SKILLED LABOUR
1041	HELPER
1042	WELDER
1051	LABOUR

Note:

Cost of following Manpower has been included elsewhere as under:

1. Senior Engineers and above included in overhead and profits

2. All indirect Manpower such as Clerk, Typist, Accountant, Lab staff, Workshop staff, Store staff, Security staff etc. is included under overhead.

3. All operators of Light and Heavy Duty Equipment and Plant Included in the hourly rate of the equipment

LIST OF MATERIAL CODES

Material Code	Description	Unit
2001	ROCK	CM
2002	SOIL CLASS-A1	CM
2004	SOIL CLASS-A2	CM
2008	SOIL CLASS-A3	CM
2009	SOIL CLASS-A4	CM
2010	SOIL CLASS-A5	CM
2014	CRUSHED AGGREGATE BASE A	CM
2015	CRUSHED AGGREGATE BASE B	CM
2016	CRUSHED AGGREGATE BASE B1	CM
2017	GRANULAR SUB-BASE A	CM
2018	GRANULAR SUB-BASE B	CM
2019	SAND CLASS C	CM
2021	COARSE SAND	CM
2022	FINE SAND	CM
2023	AGGREGATE 2"-1.1/2"	CM
2024	AGGREGATE 1.1/2"-3/4"	CM
2025	AGGREGATE 3/4"-3/8"	CM
2026	AGGREGATE 3/8"-EACH 4	CM
2027	AGGREGATE EACH4-EACH200	CM
2028	FILLER MATERIAL	CM
2029	BRICK CLASS A	EACH
2030	STONE RANDOM CLASS-A	CM
2031	STONE RANDOM CLASS-B	CM
2032	STONE RANDOM CLASS-C	CM
2033	STONE RANDOM CLASS-D	CM
2034	STONE DRESSED	CM
2035	HAND BROKEN STONE 2.1/2"-1/2"	CM
2041	ASPHALT GRADE 60/70	TON
2042	ASPHALT GRADE 80/100	TON
2043	ASPHALT M.C. 70	TON
2044	ASPHALT M.C. 250	TON
2045	ASPHALT M.C. 800	TON
2046	ASPHALT R.C. 70	TON
2047	ASPHALT R.C. 250	TON
2048	ASPHALT R.C. 800	TON
2049	ASPHALT S.S. 1	TON
2050	ASPHALT S.S. 1H	TON
2051	ASPHALT R.S. 1	TON
2052	ASPHALT R.S. 2	TON
2053	CEMENT TYPE-I (OPC)	BAG
2054	CEMENT TYPE-II (LOW S.R)	BAG
2057	CEMENT TYPE-V (HIGH S.R)	BAG
2058	ACCELERATOR	LIT
2059	RETARDER	LIT
2060	CURING COMPOUND	LIT
2061	STEEL GRADE. 40	TON
2062	STEEL GRADE. 60	TON

LIST OF MATERIAL CODES

Material Code	Description	Unit
2063	PRE-STRESSING STRAND, 3/8", 1/2"	TON
2064	STEEL WIRE MESH, 4" x 4"	KG
2065	WATER	1000 LIT
2067	STEEL WIRE FABRIC AASHTO M-55	TON
2068	STEEL EXPANSION JOINT	KG
2070	COLD STEEL WIRE AASHTO M-32	TON
2072	STRUCTURES SHAPES ASTM A-36	TON
2073	ELASTOMERIC BEARING PAD M-183	c.cm
2077	RCC PIPE CLASS-II 310 MM (AASHTO M-170)	M
2078	RCC PIPE CLASS-II 380 MM (AASHTO M-170)	M
2079	RCC PIPE CLASS-II 460 MM (AASHTO M-170)	M
2080	RCC PIPE CLASS-II 610 MM (AASHTO M-170)	M
2081	RCC PIPE CLASS-II 760 MM (AASHTO M-170)	M
2082	RCC PIPE CLASS-II 910 MM (AASHTO M-170)	M
2083	RCC PIPE CLASS-II 1070 MM (AASHTO M-170)	M
2084	RCC PIPE CLASS-II 1220 MM (AASHTO M-170)	M
2085	RCC PIPE CLASS-II 1520 MM (AASHTO M-170)	M
2091	CAT EYE SINGLE (RAISED PROFILE)	EACH
2092	CAT EYE DOUBLE (RAISED PROFILE)	EACH
2093	STEEL/METAL BEARING DEVICES	KG
2095	BITUMEN IMPREGNATED FIBRE BOARD	SM
2096	NEOPRENE RUBBER JOINT FELT	SM
2097	ASPHALT FELT (3-PLY)	SM
2098	PVC/NEOPRENE WATER STOPS (6")	M
2099	BENTONITE POWDER	KG
2100	JOINT SEALANT FILLER	KG
2101	TRAFFIC SIGN CAT 1	EACH
2102	TRAFFIC SIGN CAT 2	EACH
2103	TRAFFIC SIGN CAT 3 (A, B, C)	SM
2104	PAVEMENT MARKING NON-REFLECTING (CR)	LIT
2105	PAVEMENT MARKING REFLECTING (CR)	LIT
2108	TUNGSTEN CARBIDE BITS	SET
2109	RED OXIDE PAINT	LIT
2110	QUICK LIME	KG
2111	DIESEL	LIT
2112	SUPER	LIT
2113	REGULAR	LIT
2114	OILS (ALL TYPES)	LIT
2115	LUBRICANTS (GREASE)	KG
2116	FURNACE OIL	LIT
2117	BLASTING MATERIAL	KG
2118	ELECTRIC CHARGES COMMERCIAL	KWH
2119	MASTIC WATER PROOF PAINT	KG
2120	SYNTHETIC ENAMEL PAINT	LIT
2121	SHUTTERING (401) A	LS
2122	SHUTTERING (401) B	LS
2123	SHUTTERING (401) C	LS
2124	SHUTTERING (401) D	LS

LIST OF MATERIAL CODES

Material Code	Material Code	Material Code
2125	SHUTTERING (401) E	LS
2126	SHUTTERING (401) F	LS
2127	SHUTTERING (401) G	LS
2128	SHUTTERING (401) H	LS
2129	SHUTTERING (410)	LS
2131	G.M.S BARBED WIRE	KG
2133	ANGLE IRONS DIFFERENT SIZES	KG
2134	STEEL CHANNELS	KG
2135	SHEATHS (3/8", 1/2")	M
2136	LIVE ANCHORAGES (3/8" - 1/2")	EACH
2137	G.I. PIPE 3" DIA	M
2140	G.M.S SCREW, NUTS, BOLTS AND WASHERS	KG
2142	PLANTATION TREES	EACH
2143	MOBILIZATION OF PILING EQUIPMENT	LS
2144	RCC PIPE CLS-IV 310 MM (AASHTO M-170)	M
2145	RCC PIPE CLS-IV 380 MM (AASHTO M-170)	M
2146	RCC PIPE CLS-IV 460 MM (AASHTO M-170)	M
2147	RCC PIPE CLS-IV 610 MM (AASHTO M-170)	M
2148	RCC PIPE CLS-IV 760 MM (AASHTO M-170)	M
2149	RCC PIPE CLS-IV 910 MM (AASHTO M-170)	M
2150	RCC PIPE CLS-IV 1070 MM (AASHTO M-170)	M
2151	RCC PIPE CLS-IV 1220 MM (AASHTO M-170)	M
2152	RCC PIPE CLS-IV 1520 MM (AASHTO M-170)	M
2153	PAVEMENT MARKING NON REFLECTING (TP)	KG
2154	PAVEMENT MARKING REFLECTING (TP)	KG
2155	GALVANIZED FLAT STEEL FASTENERS & WASHERS	KG
2156	GALVANIZED U-BOLT CLAMP WITH 2 NUTS & TIE BOLTS	KG
2157	GALVANIZED SUPPORTING HOOKS CAST IN PRECAST POSTS	EACH
2158	GALVANIZED CHAIN LINK WIRE MESH FABRIC	SM
2159	GALVANIZED WIRE 3.76MM Ø TENSION, 3MM Ø STIRRUP	KG
2160	PRE-CAST CONCRETE TUFF KERB STONE(K-5)	EACH
2161	LIFTING DEVICE ANCHORS	EACH
2162	MS SHEET	KG
2163	FABRICATION	KG
2164	GALVANIZATION	KG

LIST OF EQUIPMENT CODES

Equipment Code	Description
3001	Bull - Dozer. 200 H.P
3002	Bull - Dozer. 120 H.P
3003	Bull - Dozer. 90 H.P
3004	Front End Loader 3.00 Cum
3005	Front End Loader 2.50 Cum
3006	Front End Loader 1.50 Cum
3007	Grader. 165 H.P.
3008	Grader. 140 H.P.
3011	Tandem Vibratory Roller 10-12 T
3012	Tandem Vibratory Roller 8 T
3013	Tandem Vibratory Roller. 6 T
3014	Tandem Vibratory Roller 1.50 T
3015	Combination Roller 18 T
3016	Combination Roller 10 - 12 T
3017	Combination Roller 8 T
3018	P.T.R. (9 - Wheeler) 21 T
3019	P.T.R. (9 - Wheeler) 18 T
3020	Static Tandem Roller 12 T
3021	Static Tandem Roller 8 T
3022	Tractor. 80 H.P.
3023	Tractor. 50 H.P.
3024	Water tank Bowser Type 12000 ltr.
3025	Water tank Tow Type 4000 ltr.
3031	Motor Scraper 400 HP
3032	Dumper. 18 T
3033	Dumper. 10 T
3034	Flat Body Truck. 8 T
3047	Excavator. (Track Type) 100 H.P.
3048	Power Broom
3051	Bitumen Dist. Tow Type 2000 Ltr
3052	Bitumen Sprayer (manual) 250 Ltr
3053	Aggregate Spreader. 4 M Wide
3054	Asphalt Plant 120 T
3055	Asphalt Plant 80 T
3056	Asphalt Plant 40 T
3057	Asphalt Plant 20 T
3058	Paver 4 M Wide
3059	Paver 2.5 M Wide
3061	Compressor. 300 CFM

LIST OF EQUIPMENT CODES

Equipment Code	Description
3062	Rock Driller
3071	Concrete Batching Plant 30 Cum / H
3072	Concrete Static Mixer. 1 Cuy
3073	Concrete Static Mixer. ¼ Cuy
3074	Concrete Transit Mixer 6 Cum
3075	Concrete Transit Mixer 4 Cum
3081	Trailer Low Bed 30 T
3082	Crane. 45 T
3083	Crane. 20 T
3084	Cold Milling Machine. 1 M Wide
3085	Road Marking Machine
3086	Pump 4 " Delivery (Diesel)
3087	Pug mill 40 Tons per Hour
3088	Chipping Spreader 3 M Wide
3089	Sand Blasting Machine
3120	Stressing Equipment
3121	Asphalt Cutter
3122	Concrete Cutter
3123	Electric Saw
3195	Truck (3 Axel)
3196	Tractor Trolley
3197	Trailer 30 T
3198	Welding Plant
3199	Generator Diesel (150KVA)
3200	Generator Diesel (250KVA)
3202	Rock Crushing and Screening (200T/H)
3205	Secondary Crusher
3206	Diesel Tanker
3208	Jack Hammer
3209	Piling Rig.
3210	Vibrator (Poker 1.5 ")
3211	Percussion Boring Rig (Diesel)
3212	Forgoing /Shape Machine
3214	Concrete Pump
3215	Plate Compactor
3217	Girder Launcher
3218	Tripod and Chain Pulley (20 Tons)
3219	Electric Generator (50KVA)
3220	Asphalt Recycling Machine
3221	Road Marking Machine (TP)

Quantities of Material for Bituminous Surface Treatments

Surface Treatment		Aggregate		Bituminous Material	
Type	Application	Size No.	Quantity Kg/ Sq.M	Quantity Litres/ Sq.M	Type
Single	Single	2	12.5	1.19 1.63	(a) (b)
Double	First	1	24	1.9 2.14	(a) (b)
	Second	3	12.5	1.19 1.63	(a) (b)
Triple	First	1	24	1.9 2.14	(a) (b)
	Second	2	12.5	1.19 1.63	(a) (b)
	Third	3	6.5	0.68	(c)
Seal Coat / Pad Coat with Aggregate		4	4	0.5	(c)
Prime Coat	Over Sub grade, Sub base , WBM or Aggregate base			0.65 ~ 1.75	(b)
	Over Bridge, wearing surface. Concrete pavement			0.15 ~ 0.4	(b)
Tack Coat	Over Previously laid asphaltic layer			0.2 ~ 0.4	Cut-back
	Over Previously laid asphaltic layer			0.3 ~ 0.6	Emulsified asphalt
Asphaltic Base	Over prime or tack coated surface	As per NHA / Project Spec's		3% (Min.)	Grade 40/50, 60/70, 80/100
Asphaltic Wearing Coarse	Over tack coated surface	As per NHA / Project Spec's		3.5% (Min.)	Grade 40/50, 60/70, 80/100

Note:

(i) Bituminous material types are (a) asphalt cement, (b) cut-back or emulsified and (c) asphalt cement, cut-back and emulsified

Portland Cement Concrete Requirements

Class of Concrete	Min. Cement Kg/ Cubic Meter	Max. Size of Coarse Aggregate (mm)	28 Days Compressive Strength (Min) (Cylinder)		Consistency (Range in Slump)	Maximum Permissible Water - Cement Ratio
			(Kg/Sq. Cm)	(Psi)	Vibrated (mm)	
A_1	300	20	210	3000	25 - 75	0.58
A_2	350	25	245	3500	100 - 150	0.58
A_3	400	38	280	4000	100 - 150	0.58
B	250	51	170	2450	25 - 75	0.65
C	275	38	210	3000	25 - 75	0.58
D_1	450	25	350	5000	50 - 100	0.40
D_2	500	25	425	6000	50 - 100	0.40
D_3	550	25	500	7100	50 - 100	0.40
Y	400	13	210	3000	25 - 75	0.58
Lean Concrete	175	51	100	1420	–	–

Cement Bags per Unit Quantity

Sr. No	Description	Unit	Qty of Cement in Bag of 50 Kg
1	Burnt brickwork in Cement Mortar (1:6)	CM	2.10
2	Burnt brickwork in Cement Mortar (1:3)	CM	2.79
3	Pointing brickwork (flush) in Cement Mortar (1:3)	SM	0.018
4	Pointing brickwork (flush) in Cement Mortar (1:4)	SM	0.013
5	Pointing brickwork (flush) in Cement Mortar (1:6)	SM	0.009
7	Random rubble masonry in Cement Mortar (1:4)	CM	1.960
8	Pointing in Cement Mortar (1:3) flush to stone masonry	SM	0.063
9	Pointing in Cement Mortar (1:4) flush to stone masonry	SM	0.050
10	13 mm thick cement plaster (1:4)	SM	0.14
11	13 mm thick cement plaster (1:3)	SM	0.20
12	19 mm thick cement plaster (1:6)	SM	0.13
13	19 mm thick cement plaster (1:4)	SM	0.20

CONVERSION FACTORS

To Convert	Into	Multiply By
Length		
Inch	Millimetre	25.4
Millimetre	Inch	0.03937
Foot	Metre	0.30480
Metre	Foot	3.28084
Yard	Metre	0.91440
Metre	Yard	1.09361
Mile	Kilometre	1.60934
Kilometre	Mile	0.62137
Mass. Weight		
Pound	Kilogram	0.45359237
Kilogram	Pound	2.20462
Ounce	Gram	28.3495
Gram	Ounce	0.03527
Quintal	Kilogram	100
Grain	Milligram	64.7989
Hundred Weight	Kilogram	50.8023
Tonne	Hundred Weight	19.6841
Tonne	Kilogram	1000
Ton	Kilogram	1016.0469
Ton	Pound	2240
Ton	Tonne	1.0160469
Tonne	Ton	0.9842065
Seer	Kilogram	0.9331
Maund	Kilogram	37.324
Tola	Gram	11.664
Capacity Volume		
Pint (UK)	Litre	0.568261
Gallon (Imperial)	Litre	4.54609
Cubic foot	Litre	28.3168
Cubic metre	Litre	1000
Litre	Cubic foot	0.0353147
Fluid ounce	Millilitre	28.413
Litre	Gallon (Imperial)	0.219969
Cubic inch	Cubic millimetre	16387.1
Cubic foot	Cubic metre	0.0283168
Cubic metre	Cubic foot	35.3147
Cubic yard	Cubic metre	0.764555
Cubic metre	Cubic yard	1.30795
Acre foot	Hectare metre	0.12334

Weights & Standard Sizes of Sheets

Birmingham Gauge	Thickness in mm	Kg Per Sqm
28	0.40	3.15
26	0.50	3.90
24	0.63	4.95
22	0.80	6.30
20	1.00	7.85
18	1.25	9.80
16	1.60	12.75
14	2.00	15.70
12	2.50	19.60
10	3.15	24.75
8	4.00	31.40

To Convert	Into	Multiply
Area		
Square inch	Square millimetre	645.16
Square millimetre	Square inch	0.00155
Square foot	Square metre	0.0929
Square metre	Square foot	10.7639
Square yard	Square metre	0.836127
Square metre	Square yard	1.19599
Acre	Square metre	4046.8564
Acre	Hectare	0.40468564
Hectare	Acre	2.47105
Hectare	Square metre	10000
Square mile	Square kilometre	2.58999
Square kilometre	Square mile	0.386102
Square mile	Hectare	258.999
Hectare	Square mile	0.00386102
Mass Per Unit Area		
Ton per square mile	Kilogram per square kilometre	392.298
Pound per square foot	Kilogram per square metre	4.88243
Kilogram per square metre	Pound per square foot	0.204816
Mass Per Unit Volume		
Ton per cubic foot	Kilogram per cubic metre	16.0185
Pound per cubic foot	Grams per litre	16.0185
Kilogram per cubic metre	Pound per cubic foot	0.062428
Grams per litre	Pound per cubic foot	0.062428

The weight of Mild Steel and Ribbed Tor Steel bars

Dia in Millimetre	Sectional area in Square Centimetre	Weight in Kilogram Per Metre
6	0.283	0.222
8	0.502	0.395
10	0.785	0.617
12	1.131	0.888
16	2.011	1.578
18	2.545	2.000
22	3.801	2.980
25	4.909	3.854
28	6.157	4.830
32	8.042	6.313
35	10.179	7.990
40	12.566	9.864
50	19.635	15.410

PLANT AND EQUIPMENT OWNING OPERATING COST SUMMARY REPORT

Equipment Code	Description	T – Owning Cost	T- Operating Cost	T – Hourly O.W. & Operating Cost
3001	Bull-Dozer. 200 H.P	1,503.78	1,623.34	**3,127.12**
3002	Bull-Dozer. 120 H.P	973.02	803.44	**1,776.46**
3003	Bull-Dozer. 90 H.P	796.11	539.13	**1,335.24**
3004	Front End Loader. 3.00 Cu.M	1,457.39	1,277.32	**2,734.71**
3005	Front End Loader. 2.50 Cu.M	942.30	1,026.68	**1,968.98**
3006	Front End Loader. 1.50 Cu.M	854.12	851.87	**1,705.99**
3007	Grader. 165 H.P	1,210.40	1,132.26	**2,342.66**
3008	Grader. 140 H.P	857.12	901.06	**1,758.18**
3011	Tandem Vibratory Roller. 10-12 Ton	751.89	695.90	**1,447.79**
3012	Tandem Vibratory Roller. 8 Ton	692.91	610.45	**1,303.36**
3013	Tandem Vibratory Roller. 6 Ton	339.09	419.40	**758.49**
3014	Tandem Vibratory Roller. 1.5 Ton	240.30	230.28	**470.58**
3015	Combination Roller. 18 T	844.61	961.49	**1,806.10**
3016	Combination Roller 10 - 12 T	669.88	863.82	**1,533.70**
3017	Combination Roller 8 T	479.07	561.05	**1,040.12**
3018	P.T.R (9 - Wheeler) 21 T	405.57	764.32	**1,169.89**
3019	P.T.R (9 - Wheeler) 18 T	369.27	640.63	**1,009.90**
3020	Static Tandem Roller 12 T	140.07	386.48	**526.55**
3021	Static Tandem Roller 8T	117.93	385.18	**503.11**
3022	Tractor 80 H. P	62.95	467.94	**530.89**
3023	Tractor 50 H. P	37.56	300.25	**337.81**
3024	Water Tank Bowser Type 12000 Litre	240.49	492.28	**732.77**
3025	Water Tank Tow Type 4000 Litre	52.16	305.73	**357.89**
3031	Motor Scraper 400 H. P	1,449.78	4,110.34	**5,560.12**
3032	Dumper 18 T	288.03	874.63	**1,162.66**
3033	Dumper 10 T	230.44	566.81	**797.25**
3034	Flat Body Truck 8 T	177.69	413.23	**590.92**
3047	Excavator, (Track Type) 100 H. P	825.60	581.86	**1,407.46**
3048	Power Broom	92.93	415.39	**508.32**
3051	Bitumen Distributor Tow Type 2000 Litre	155.67	335.03	**490.70**
3052	Bitumen Sprayer (Manual) 250 Litre	11.93	46.84	**58.77**
3053	Aggregate Spreader 4 M Wide	729.78	413.32	**1,143.10**
3054	Asphalt Plant 120 T	7,983.72	6,932.45	**14,916.17**
3055	Asphalt Plant 80 T	5,655.13	5,903.54	**11,558.67**
3056	Asphalt Plant. 40 Ton	4,657.19	3,323.53	**7,980.72**

PLANT AND EQUIPMENT OWNING OPERATING COST SUMMARY REPORT

Equipment Code	Description	T – Owning Cost	T- Operating Cost	T – Hourly O.W. & Operating Cost
3057	Asphalt Plant. 20 Ton	3,326.57	2,571.04	**5,897.61**
3058	Paver 4 M Wide	729.78	879.40	**1,609.18**
3059	Paver 2.5 M Wide	501.27	785.80	**1,287.07**
3061	Compressor. 300 CFM	168.72	710.59	**879.31**
3062	Rock Driller	204.48	71.90	**276.38**
3071	Concrete Batching Plant. 30 CUM/H	554.97	1,983.13	**2,538.10**
3072	Concrete Static Mixer 1 Cu.Y	110.76	265.65	**376.41**
3073	Concrete Static Mixer 1/4 Cu.Y	25.56	179.33	**204.89**
3074	Concrete Transit Mixer 6 Cu.M	807.29	840.66	**1,647.95**
3075	Concrete Transit Mixer 4 Cu.M	754.19	598.20	**1,352.39**
3081	Trailer Low Bed 30 T.	506.66	802.23	**1,308.89**
3082	Crane. 45 T.	651.30	843.51	**1,494.81**
3083	Crane. 20 T.	564.69	689.73	**1,254.42**
3084	Cold Milling Machine. 1 M Width	1,765.58	1,051.01	**2,816.59**
3085	Road Marking Machine.	135.32	282.05	**417.37**
3086	Pump 4 " Delivery (Diesel)	43.50	209.79	**253.29**
3087	Pug mill 40 Tons per Hour.	746.27	1,876.95	**2,623.22**
3088	Chipping Spreader 3 Meter Wide	70.03	302.08	**372.11**
3089	Sand Blasting Machine	73.71	1,296.22	**1,369.93**
3120	Stressing Equipment	112.01	1,274.79	**1,386.80**
3121	Asphalt Cutter	47.14	257.60	**304.74**
3122	Concrete Cutter	47.14	257.60	**304.74**
3123	Electric Saw	21.30	634.60	**655.90**
3195	Truck (3-Axle)	248.42	542.58	**791.00**
3196	Tractor Trolley	94.15	362.67	**456.82**
3197	Trailer (30 Ton)	445.63	802.23	**1,247.86**
3198	Welding Plant	55.99	638.40	**694.39**
3199	Generator (Diesel) 150 KVA	214.62	1,063.31	**1,277.93**
3200	Generator (Diesel) 250 KVA	355.54	1,674.28	**2,029.82**
3202	Rock Crushing & Screening (200 T/H)	1,233.96	6,513.32	**7,747.28**
3205	Secondary Crusher	59.64	2,425.91	**2,485.55**
3206	Diesel Tanker	215.24	415.80	**631.04**
3208	Jack Hammer	33.60	241.85	**275.45**
3209	Pilling Rig	417.40	538.71	**956.11**

PLANT AND EQUIPMENT OWNING OPERATING COST SUMMARY REPORT

Equipment Code	Description	T – Owning Cost	T- Operating Cost	T – Hourly O.W. & Operating Cost
3210	Vibrator (Poker 1.5 ")	571.50	983.26	**1,554.76**
3211	Percussion Boring Rig	17.40	240.65	**258.05**
3212	Forgoing / Shape Machine	119.28	214.59	**333.87**
3214	Concrete Pump	67.20	1,215.29	**1,282.49**
3215	Plate Compactor	621.60	954.83	**1,576.43**
3217	Girder Launcher	43.50	243.35	**286.85**
3218	Tripod & Chain Pulley (20 Ton)	1,464.46	828.77	**2,293.23**
3219	Electric Generator 50 KVA	11.21	115.80	**127.01**
3220	Asphalt Recycling Machine	81.79	3,507.14	**3,588.93**
3221	Road Marking Machine (TP)	7,154.11	3,277.14	**10,431.25**

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

SIND

Q. S. & Estimation Specialist

CSR - March 2008

National Highway Authority
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NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

BADIN
(03)

Q. S. & Estimation Specialist

CSR - March 2008

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.73	8.97	-	2.43	12.13
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.26	150.86	1.06	39.80	198.98
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	20.98	391.92	2.39	103.82	519.11
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	83.92	1,567.67	9.55	415.29	2,076.43
103	STRIPPING	CM	2.50	81.82	-	21.08	105.40
104	COMPACTION OF NATURAL GROUND	SM	0.35	8.55	0.75	2.41	12.07
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.11	118.44	-	30.64	153.19
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	120.65	272.97	46.20	109.95	549.77
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.02	294.98	-	78.00	390.01
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.05	228.89	-	59.98	299.92
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.37	105.42	-	27.20	135.98
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	120.65	272.97	46.20	109.95	549.77
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.13	275.34	-	73.62	368.09
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.60	229.91	-	59.63	298.14
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.91	120.24	0.37	31.88	159.41
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	59.95	245.80	64.37	92.53	462.65
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	106.29	367.50	30.80	126.15	630.74
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	90.21	257.01	-	86.81	434.03
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	54.66	211.67	-	66.58	332.92
107d	GRANULAR BACK FILL	CM	33.37	119.94	469.66	155.74	778.71
107e	COMMON BACK FILL	CM	25.54	55.41	4.99	21.49	107.43
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.68	152.01	4.99	40.92	204.61
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	19.79	418.69	49.36	121.96	609.80
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.84	364.32	2.37	95.38	476.91
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.19	323.09	-	84.07	420.34
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.71	154.80	7.84	42.59	212.95

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.06	66.06	4.99	19.28	96.38
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.29	97.15	2.97	28.60	143.02
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.35	23.75	1.43	6.63	33.15
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.98	15.94	0.76	4.42	22.10
110	IMPROVED SUB-GRADE	CM	9.89	104.23	55.20	42.33	211.65
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.84	13.24	0.78	3.72	18.58
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.25	13.62	0.88	3.94	19.68
201	GRANULAR SUB-BASE	CM	7.78	224.59	454.28	171.66	858.31
202	AGGREGATE BASE	CM	9.05	287.87	788.61	271.38	1,356.90
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	72.77	1,311.60	5,361.98	1,686.59	8,432.94
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	74.99	1,311.60	5,772.86	1,789.86	8,949.31
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	80.11	1,369.89	5,353.31	1,700.83	8,504.14
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	80.11	1,365.01	5,896.69	1,835.45	9,177.27
204b	CEMENT STABILIZED BASE	CM	27.94	480.68	925.05	358.42	1,792.08
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	228.83	772.74	49,349.61	12,587.80	62,938.98
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	228.83	772.74	47,813.40	12,203.74	61,018.72
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	97.33	92.96	934.53	281.21	1,406.03
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	146.87	2,134.12	5,083.74	1,841.18	9,205.91
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	107.39	105.48	751.36	241.06	1,205.29
207a	DEEP PATCHING (0-15 cm)	SM	1.71	39.69	1.23	10.66	53.29
207b	DEEP PATCHING (16-30 cm)	SM	1.71	34.94	1.23	9.47	47.35
208	REINSTATEMENT OF ROAD SURFACE	SM	1.81	49.93	0.55	13.07	65.36
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.01	96.89	0.67	24.89	124.45
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.40	19.38	0.13	4.98	24.89
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	35.03	9.16	45.79
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	39.10	10.17	50.86

National Highway Authority
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Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.66	3.81	19.07
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.10	4.43	22.13
304a	SINGLE SURFACE TREATMENT	SM	0.73	6.52	69.57	19.20	96.02
304b	DOUBLE SURFACE TREATMENT	SM	1.07	12.21	135.09	37.09	185.45
304c	TRIPLE SURFACE TREATMENT	SM	1.80	17.13	154.06	43.25	216.24
304d	SEAL COAT	SM	0.67	3.54	48.96	13.29	66.47
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	67.75	1,294.58	6,335.85	1,924.54	9,622.72
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	67.75	1,251.29	6,848.58	2,041.90	10,209.52
307a	DENSE GRADED HOT BIT-MAC	CM	169.97	316.05	5,353.56	1,459.89	7,299.46
307b	OPEN GRADED HOT BIT-MAC	CM	169.97	316.05	5,239.16	1,431.29	7,156.47
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	29.60	543.36	1,798.58	592.89	2,964.43
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	25.04	560.93	41,585.44	10,542.85	52,714.26
309a	COLD MILLING, 0 - 30 mm	SM	0.93	22.13	7.55	7.65	38.26
309b	COLD MILLING, 0 - 50 mm	SM	1.55	36.88	12.58	12.75	63.77
309c	COLD MILLING, 0 - 70 mm	SM	2.32	55.33	18.87	19.13	95.65
401a1i	CONCRETE CLASS "A1" (Underground)	CM	500.46	923.86	3,254.86	1,169.79	5,848.97
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	500.46	923.86	3,507.11	1,232.86	6,164.28
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	500.46	923.86	4,011.60	1,358.98	6,794.90
401a2i	CONCRETE CLASS "A2" (Underground)	CM	500.46	923.86	3,533.11	1,239.36	6,196.78
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	500.46	923.86	3,785.36	1,302.42	6,512.09
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	500.46	923.86	4,289.85	1,428.54	7,142.71
401a3i	CONCRETE CLASS "A3" (Underground)	CM	500.46	923.86	3,811.36	1,308.92	6,544.59
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	500.46	923.86	4,063.61	1,371.98	6,859.90
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	500.46	923.86	4,568.10	1,498.10	7,490.52
401b	CONCRETE CLASS "B"	CM	659.18	672.22	2,686.83	1,004.56	5,022.78
401ci	CONCRETE CLASS "C" (Underground)	CM	500.62	419.49	2,927.84	961.99	4,809.94

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	500.62	419.49	3,035.43	988.88	4,944.42
401ciii	CONCRETE CLASS "C" (Elevated)	CM	500.62	419.49	3,250.59	1,042.68	5,213.38
401d	CONCRETE CLASS "D1"	CM	769.74	1,106.97	4,284.14	1,540.21	7,701.06
401e	CONCRETE CLASS "Y"	CM	1,062.96	419.49	3,803.33	1,321.44	6,607.22
401f	LEAN CONCRETE	CM	443.09	424.53	2,116.95	746.14	3,730.72
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,698.11	790.24	4,160.16	1,662.13	8,310.64
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,698.11	790.24	4,716.66	1,801.25	9,006.26
401gii	PRECAST CONCRETE CLASS "B"	CM	1,698.11	790.24	4,089.21	1,644.39	8,221.96
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,698.11	790.24	4,994.91	1,870.82	9,354.08
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,698.11	790.24	5,273.16	1,940.38	9,701.89
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,698.11	790.24	5,551.41	2,009.94	10,049.70
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,482.36	669.81	67,838.00	17,497.54	87,487.71
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,482.36	669.81	77,288.00	19,860.04	99,300.21
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,231.95	4,274.04	63,745.40	17,312.85	86,564.25
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,542.09	12,481.24	115,646.69	32,667.50	163,337.51
405b	LAUNCHING OF GIRDER	TON	59.87	486.64	-	136.63	683.13
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	110.35	-	270.49	95.21	476.05
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	110.35	-	270.18	95.13	475.66
406c	STEEL EXPANSION JOINTS	KG	9.10	21.04	102.06	33.05	165.25
406d	WATER STOPS 6" SIZE	M	97.34	-	878.20	243.88	1,219.42
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	38.36	-	2,799.17	709.38	3,546.91
406g	STEEL OR METAL BEARING DEVICES	KG	19.96	55.55	123.32	49.71	248.54
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	328.98	1,439.50	824.31	648.20	3,240.99
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	493.47	2,159.25	1,236.46	972.30	4,861.48
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	493.47	2,159.25	916.57	892.32	4,461.62

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	822.45	3,598.75	1,083.95	1,376.29	6,881.44
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	704.96	4,253.63	1,255.33	1,553.48	7,767.41
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,233.68	6,025.34	1,376.36	2,158.85	10,794.23
407h	PILE LOAD TEST UP TO 120 TON	EACH	23,880.36	40,036.45	102,192.96	41,527.44	207,637.21
407i	PILE LOAD TEST UP TO 240 TON	EACH	44,837.04	40,036.45	204,385.92	72,314.85	361,574.26
407j	PILE LOAD TEST UP TO 360 TON	EACH	65,793.72	43,882.72	306,578.88	104,063.83	520,319.15
407k	CONFIRMATORY BORING (NX SIZE)	M	197.64	1,323.15	6.24	381.76	1,908.79
410	BRICK WORK	CM	315.15	236.06	2,405.88	739.27	3,696.35
411a	STONE MASONRY RANDOM DRY	CM	276.33	91.36	611.20	244.72	1,223.62
411b	STONE MASONRY RANDOM WITH MORTAR	CM	294.96	139.82	1,444.64	469.85	2,349.26
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	360.15	91.36	676.58	282.02	1,410.12
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	420.69	139.82	1,517.71	519.55	2,597.77
411g	ROLL POINTING	SM	66.28	9.69	36.90	28.22	141.09
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	569.70	221.29	1,431.52	555.63	2,778.14
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	231.75	366.20	555.44	288.35	1,441.74
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	226.31	480.94	717.26	356.13	1,780.63
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	218.81	791.50	966.05	494.09	2,470.45
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	230.67	972.63	1,445.01	662.08	3,310.39
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	264.49	949.38	2,081.05	823.73	4,118.64
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	324.71	1,171.86	3,213.77	1,177.58	5,887.92
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	420.21	1,313.30	4,028.44	1,440.49	7,202.43
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	496.95	1,594.72	5,134.11	1,806.44	9,032.22
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	584.21	1,860.51	7,933.90	2,594.65	12,973.26
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	231.75	423.57	573.14	307.12	1,535.58
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	226.31	480.94	671.32	344.64	1,723.20
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	212.16	791.50	918.23	480.47	2,402.37

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	230.67	972.63	1,480.63	670.98	3,354.91
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	264.49	949.38	2,863.44	1,019.32	5,096.62
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	324.71	1,171.86	3,950.30	1,361.72	6,808.58
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	420.21	1,313.30	5,340.66	1,768.54	8,842.71
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	496.95	1,594.72	7,242.90	2,333.64	11,668.21
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	584.21	1,860.51	10,188.85	3,158.39	15,791.95
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	91.39	103.49	536.65	182.88	914.41
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	747.54	511.20	2,944.47	1,050.80	5,254.01
507a	STEEL WIRE MESH FOR GABIONS	KG	4.92	-	120.49	31.35	156.76
507b	ROCK FILL IN GABIONS	CM	99.64	-	480.12	144.94	724.70
508a	BRICK PAVING (SINGLE COURSE)	SM	107.10	26.90	201.19	83.80	418.99
508b	BRICK PAVING (DOUBLE COURSE)	SM	190.92	26.90	397.70	153.88	769.41
509a	RIP RAP CLASS "A"	CM	459.10	-	525.01	246.03	1,230.14
509b	RIP RAP CLASS "B"	CM	443.65	-	520.81	241.12	1,205.58
509c	RIP RAP CLASS "C"	CM	445.77	-	525.01	242.70	1,213.48
509d	GROUTED RIP RAP CLASS "A"	CM	561.52	84.24	1,668.24	578.50	2,892.49
509e	GROUTED RIP RAP CLASS "B"	CM	540.49	67.39	1,545.69	538.39	2,691.96
509f	GROUTED RIP RAP CLASS "C"	CM	534.23	56.16	1,575.53	541.48	2,707.40
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	792.11	295.88	3,331.30	1,104.82	5,524.11
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	49.61	167.47	470.62	171.93	859.63
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	105.62	322.32	-	106.98	534.92
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	147.01	57.10	85.31	72.36	361.78
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	188.17	73.09	109.20	92.62	463.08
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	236.60	150.62	341.67	182.22	911.11
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	295.75	188.27	427.09	227.78	1,138.89
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	265.40	498.72	1,836.47	650.15	3,250.75

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	929.99	567.97	3,851.93	1,337.47	6,687.36
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	135.48	75.65	360.81	142.99	714.93
603	BRICK EDGING	M	8.73	-	30.34	9.77	48.84
604a	METAL GUARD RAIL	M	17.84	59.95	1,492.92	392.68	1,963.39
604b	METAL GUARD RAIL END PIECES	EACH	24.37	-	1,138.10	290.62	1,453.09
604d	STEEL POST OF METAL GUARD RAIL	EACH	81.59	805.79	3,566.86	1,113.56	5,567.79
605a	CONCRETE BEAM GUARD RAIL	M	74.24	25.40	578.95	169.65	848.24
605c	CONCRETE POST FOR GUARD RAIL	M	91.15	22.64	580.50	173.57	867.86
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	229.34	213.74	6,383.90	1,706.75	8,533.74
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	71.88	320.61	8,453.26	2,211.44	11,057.19
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	229.34	453.76	11,146.78	2,957.47	14,787.35
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	773.10	503.34	19,299.66	5,144.02	25,720.12
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	154.62	100.67	8,421.73	2,169.25	10,846.27
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	250.27	-	1,134.54	346.20	1,731.01
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	250.27	-	1,701.81	488.02	2,440.10
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.83	5.03	15.40	5.81	29.07
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.94	3.40	37.13	10.37	51.84
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.83	5.03	20.55	7.10	35.51
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.94	3.40	49.52	13.47	67.33
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	65.77	4.26	148.80	54.71	273.54
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	65.77	8.15	467.84	135.44	677.20
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.54	7.44	21.41	8.10	40.49
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.54	8.29	63.09	18.73	93.65
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.54	5.98	28.55	9.52	47.59
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.54	8.29	84.12	23.99	119.94
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	65.77	3.04	206.76	68.89	344.47

Rate Analysis Summary (Construction)

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	65.77	6.45	795.53	216.94	1,084.69
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	55.80	3.04	99.20	39.51	197.56
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	55.80	6.45	312.36	93.65	468.27
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	55.80	3.04	137.84	49.17	245.86
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	55.80	6.45	531.15	148.35	741.76
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.61	69.34	184.80	65.94	329.69
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.61	69.34	223.39	75.59	377.94
610b	RIGHT OF WAY MARKER	EACH	106.26	101.77	268.26	119.07	595.37
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	606.17	811.70	1,907.93	831.45	4,157.25
610d	TEN KILOMETRE POST	EACH	1,171.06	1,623.40	4,062.64	1,714.28	8,571.38
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	131.43	76.10	903.02	277.64	1,388.19

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

DADU
(13)

Q. S. & Estimation Specialist

CSR - March 2008

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.74	8.97	-	2.43	12.14
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.34	150.86	1.06	39.82	199.08
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	21.16	391.92	2.39	103.87	519.33
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	84.65	1,567.67	9.55	415.47	2,077.34
103	STRIPPING	CM	2.55	81.82	-	21.09	105.46
104	COMPACTION OF NATURAL GROUND	SM	0.36	8.55	0.75	2.42	12.08
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.21	118.44	-	30.66	153.30
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	120.04	272.97	46.20	109.80	549.01
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	16.68	294.98	-	77.92	389.58
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.79	228.89	-	59.92	299.60
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.44	105.42	-	27.22	136.08
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	120.04	272.97	46.20	109.80	549.01
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.01	275.34	-	73.59	367.94
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.42	229.91	-	59.58	297.91
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.98	120.24	0.37	31.90	159.50
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	59.58	245.80	64.37	92.44	462.19
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	105.61	367.50	30.80	125.98	629.89
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	89.31	257.01	-	86.58	432.90
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	54.31	211.67	-	66.50	332.48
107d	GRANULAR BACK FILL	CM	33.47	119.94	375.23	132.16	660.81
107e	COMMON BACK FILL	CM	25.80	55.41	4.99	21.55	107.75
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.58	152.01	4.99	40.90	204.48
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	19.64	418.69	49.36	121.92	609.62
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.73	364.32	2.37	95.35	476.77
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.09	323.09	-	84.05	420.23
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.62	154.80	7.84	42.56	212.82

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.01	66.06	4.99	19.27	96.33
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.24	97.15	2.97	28.59	142.96
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.34	23.75	1.43	6.63	33.14
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.98	15.94	0.76	4.42	22.11
110	IMPROVED SUB-GRADE	CM	9.82	104.23	53.13	41.80	208.99
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.85	13.24	0.78	3.72	18.59
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.24	13.62	0.88	3.94	19.68
201	GRANULAR SUB-BASE	CM	7.67	224.59	424.86	164.28	821.40
202	AGGREGATE BASE	CM	8.85	287.87	678.43	243.79	1,218.94
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	71.86	1,311.60	5,282.14	1,666.40	8,332.00
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	73.89	1,311.60	5,697.42	1,770.73	8,853.63
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	78.99	1,369.89	5,273.11	1,680.50	8,402.48
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	78.99	1,365.01	5,822.33	1,816.58	9,082.90
204b	CEMENT STABILIZED BASE	CM	27.41	480.68	809.31	329.35	1,646.74
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	230.32	772.74	49,785.93	12,697.25	63,486.25
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	230.32	772.74	48,249.72	12,313.20	61,565.98
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	97.44	92.96	814.19	251.15	1,255.74
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	144.50	2,134.12	4,976.74	1,813.84	9,069.20
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	107.22	105.48	588.93	200.41	1,002.04
207a	DEEP PATCHING (0-15 cm)	SM	1.71	39.69	1.23	10.66	53.30
207b	DEEP PATCHING (16-30 cm)	SM	1.71	34.94	1.23	9.47	47.36
208	REINSTATEMENT OF ROAD SURFACE	SM	1.80	49.93	0.55	13.07	65.35
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.08	96.89	0.67	24.91	124.53
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.42	19.38	0.13	4.98	24.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	35.33	9.23	46.17
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	39.44	10.26	51.29

National Highway Authority
Islamabad

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Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.79	3.85	19.24
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.25	4.46	22.32
304a	SINGLE SURFACE TREATMENT	SM	0.73	6.52	69.64	19.22	96.10
304b	DOUBLE SURFACE TREATMENT	SM	1.06	12.21	134.57	36.96	184.79
304c	TRIPLE SURFACE TREATMENT	SM	1.78	17.13	153.42	43.09	215.43
304d	SEAL COAT	SM	0.67	3.54	49.20	13.35	66.77
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	66.57	1,294.58	6,264.83	1,906.50	9,532.48
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	66.57	1,251.29	6,778.99	2,024.21	10,121.07
307a	DENSE GRADED HOT BIT-MAC	CM	167.54	316.05	5,297.58	1,445.29	7,226.45
307b	OPEN GRADED HOT BIT-MAC	CM	167.54	316.05	5,171.12	1,413.68	7,068.38
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	29.05	543.36	1,786.07	589.62	2,948.09
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	25.69	560.93	42,034.72	10,655.33	53,276.67
309a	COLD MILLING, 0 - 30 mm	SM	0.92	22.13	7.55	7.65	38.25
309b	COLD MILLING, 0 - 50 mm	SM	1.54	36.88	12.58	12.75	63.75
309c	COLD MILLING, 0 - 70 mm	SM	2.30	55.33	18.87	19.13	95.63
401a1i	CONCRETE CLASS "A1" (Underground)	CM	493.44	923.86	3,179.57	1,149.22	5,746.09
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	493.44	923.86	3,431.82	1,212.28	6,061.40
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	493.44	923.86	3,936.31	1,338.40	6,692.02
401a2i	CONCRETE CLASS "A2" (Underground)	CM	493.44	923.86	3,457.82	1,218.78	6,093.90
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	493.44	923.86	3,710.07	1,281.84	6,409.21
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	493.44	923.86	4,214.56	1,407.97	7,039.83
401a3i	CONCRETE CLASS "A3" (Underground)	CM	493.44	923.86	3,736.07	1,288.34	6,441.72
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	493.44	923.86	3,988.32	1,351.41	6,757.03
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	493.44	923.86	4,492.81	1,477.53	7,387.65
401b	CONCRETE CLASS "B"	CM	653.69	672.22	2,589.15	978.76	4,893.82
401ci	CONCRETE CLASS "C" (Underground)	CM	496.65	419.49	2,821.20	934.33	4,671.67

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	496.65	419.49	2,928.78	961.23	4,806.15
401ciii	CONCRETE CLASS "C" (Elevated)	CM	496.65	419.49	3,143.95	1,015.02	5,075.11
401d	CONCRETE CLASS "D1"	CM	760.98	1,106.97	4,212.53	1,520.12	7,600.59
401e	CONCRETE CLASS "Y"	CM	1,054.05	419.49	3,739.80	1,303.34	6,516.68
401f	LEAN CONCRETE	CM	443.80	424.53	2,019.18	721.88	3,609.38
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,689.47	790.24	4,079.45	1,639.79	8,198.95
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,689.47	790.24	4,635.95	1,778.91	8,894.57
401gii	PRECAST CONCRETE CLASS "B"	CM	1,689.47	790.24	3,981.72	1,615.36	8,076.79
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,689.47	790.24	4,914.20	1,848.48	9,242.39
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,689.47	790.24	5,192.45	1,918.04	9,590.20
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,689.47	790.24	5,470.70	1,987.60	9,938.01
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,472.82	669.81	68,368.00	17,627.66	88,138.28
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,472.82	669.81	77,818.00	19,990.16	99,950.78
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,191.84	4,274.04	64,215.40	17,420.32	87,101.61
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,449.52	12,481.24	115,647.45	32,644.55	163,222.77
405b	LAUNCHING OF GIRDER	TON	57.80	486.64	-	136.11	680.55
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	109.12	-	272.70	95.46	477.28
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	109.12	-	272.27	95.35	476.73
406c	STEEL EXPANSION JOINTS	KG	8.83	21.04	102.85	33.18	165.90
406d	WATER STOPS 6" SIZE	M	97.44	-	404.19	125.41	627.04
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	37.78	-	2,796.76	708.64	3,543.18
406g	STEEL OR METAL BEARING DEVICES	KG	19.21	55.55	124.05	49.70	248.51
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	322.67	1,439.50	731.45	623.40	3,117.02
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	484.00	2,159.25	1,097.18	935.11	4,675.53
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	484.00	2,159.25	818.92	865.54	4,327.71

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	806.67	3,598.75	976.65	1,345.52	6,727.58
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	691.43	4,253.63	1,130.51	1,518.89	7,594.46
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,210.00	6,025.34	1,246.60	2,120.48	10,602.42
407h	PILE LOAD TEST UP TO 120 TON	EACH	23,857.48	40,036.45	92,446.08	39,085.00	195,425.01
407i	PILE LOAD TEST UP TO 240 TON	EACH	44,814.16	40,036.45	184,892.16	67,435.69	337,178.46
407j	PILE LOAD TEST UP TO 360 TON	EACH	65,770.84	43,882.72	277,338.24	96,747.95	483,739.75
407k	CONFIRMATORY BORING (NX SIZE)	M	195.07	1,323.15	6.24	381.12	1,905.58
410	BRICK WORK	CM	313.99	236.06	2,435.88	746.48	3,732.40
411a	STONE MASONRY RANDOM DRY	CM	276.39	91.36	472.69	210.11	1,050.56
411b	STONE MASONRY RANDOM WITH MORTAR	CM	294.75	139.82	1,306.13	435.17	2,175.87
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	359.68	91.36	527.00	244.51	1,222.56
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	419.68	139.82	1,368.13	481.91	2,409.54
411g	ROLL POINTING	SM	65.81	9.69	36.90	28.10	140.50
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	567.90	221.29	1,281.94	517.78	2,588.91
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	233.00	366.20	555.44	288.66	1,443.30
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	227.26	480.94	717.26	356.36	1,781.82
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	219.20	791.50	966.05	494.19	2,470.94
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	231.03	972.63	1,445.01	662.17	3,310.83
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	263.78	949.38	2,081.05	823.55	4,117.77
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	322.54	1,171.86	3,213.77	1,177.04	5,885.22
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	417.41	1,313.30	4,028.44	1,439.79	7,198.93
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	493.74	1,594.72	5,134.11	1,805.64	9,028.21
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	580.25	1,860.51	7,933.90	2,593.66	12,968.31
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	233.00	423.57	573.14	307.43	1,537.14
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	227.26	480.94	671.32	344.88	1,724.40
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	212.55	791.50	918.23	480.57	2,402.85

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	231.03	972.63	1,480.63	671.07	3,355.35
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	263.78	949.38	2,863.44	1,019.15	5,095.75
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	322.54	1,171.86	3,950.30	1,361.18	6,805.88
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	417.41	1,313.30	5,340.66	1,767.84	8,839.21
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	493.74	1,594.72	7,242.90	2,332.84	11,664.20
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	580.25	1,860.51	10,188.85	3,157.40	15,787.00
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	92.59	103.49	439.63	158.93	794.63
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	741.85	511.20	2,846.79	1,024.96	5,124.79
507a	STEEL WIRE MESH FOR GABIONS	KG	4.89	-	121.03	31.48	157.41
507b	ROCK FILL IN GABIONS	CM	100.46	-	411.26	127.93	639.65
508a	BRICK PAVING (SINGLE COURSE)	SM	106.59	26.90	199.04	83.13	415.67
508b	BRICK PAVING (DOUBLE COURSE)	SM	189.88	26.90	394.51	152.82	764.12
509a	RIP RAP CLASS "A"	CM	457.07	-	386.50	210.89	1,054.47
509b	RIP RAP CLASS "B"	CM	441.60	-	383.41	206.25	1,031.26
509c	RIP RAP CLASS "C"	CM	443.53	-	386.50	207.51	1,037.54
509d	GROUTED RIP RAP CLASS "A"	CM	558.38	84.24	1,529.72	543.09	2,715.43
509e	GROUTED RIP RAP CLASS "B"	CM	537.33	67.39	1,408.29	503.25	2,516.27
509f	GROUTED RIP RAP CLASS "C"	CM	531.07	56.16	1,437.02	506.06	2,530.31
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	787.42	295.88	3,238.75	1,080.51	5,402.56
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	49.47	167.47	375.84	148.20	740.98
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	106.25	322.32	-	107.14	535.70
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	147.14	57.10	62.81	66.76	333.81
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	188.34	73.09	80.39	85.46	427.28
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	236.34	150.62	317.45	176.10	880.51
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	295.43	188.27	396.81	220.13	1,100.63
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	261.70	498.72	1,797.35	639.44	3,197.22

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	925.16	567.97	3,820.99	1,328.53	6,642.64
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	134.81	75.65	352.04	140.63	703.13
603	BRICK EDGING	M	8.77	-	30.91	9.92	49.60
604a	METAL GUARD RAIL	M	17.77	59.95	1,492.92	392.66	1,963.31
604b	METAL GUARD RAIL END PIECES	EACH	24.49	-	1,138.10	290.65	1,453.24
604d	STEEL POST OF METAL GUARD RAIL	EACH	82.07	805.79	3,566.86	1,113.68	5,568.39
605a	CONCRETE BEAM GUARD RAIL	M	74.24	25.40	578.44	169.52	847.61
605c	CONCRETE POST FOR GUARD RAIL	M	91.16	22.64	579.61	173.35	866.76
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	227.08	213.74	6,373.32	1,703.53	8,517.67
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	71.73	320.61	8,437.21	2,207.39	11,036.95
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	227.08	453.76	11,120.52	2,950.34	14,751.70
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	769.22	503.34	19,262.29	5,133.71	25,668.56
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	153.84	100.67	8,416.67	2,167.80	10,838.98
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	254.88	-	1,135.26	347.54	1,737.68
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	254.88	-	1,702.90	489.44	2,447.22
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.87	5.03	15.40	5.82	29.12
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.96	3.40	37.17	10.38	51.91
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.87	5.03	20.55	7.11	35.56
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.96	3.40	49.58	13.48	67.42
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	65.40	4.26	148.84	54.62	273.12
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	65.40	8.15	468.43	135.50	677.48
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.59	7.44	21.42	8.11	40.55
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.59	8.29	63.09	18.74	93.70
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.59	5.98	28.56	9.53	47.65
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.59	8.29	84.12	24.00	119.99
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	65.40	3.04	206.80	68.81	344.05

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	65.40	6.45	795.53	216.84	1,084.21
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	55.57	3.04	99.23	39.46	197.30
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	55.57	6.45	312.76	93.70	468.48
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	55.57	3.04	137.87	49.12	245.60
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	55.57	6.45	531.15	148.29	741.47
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.61	69.34	184.80	65.94	329.69
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.61	69.34	223.39	75.59	377.93
610b	RIGHT OF WAY MARKER	EACH	106.49	101.77	265.82	118.52	592.61
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	605.87	811.70	1,890.36	826.98	4,134.91
610d	TEN KILOMETRE POST	EACH	1,171.06	1,623.40	4,027.31	1,705.44	8,527.21
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	131.31	76.10	898.93	276.58	1,382.92

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

HYDERABAD
(20)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.74	8.97	-	2.43	12.14
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.42	150.86	1.06	39.84	199.18
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	21.35	391.92	2.39	103.91	519.57
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	85.41	1,567.67	9.55	415.66	2,078.28
103	STRIPPING	CM	2.59	81.82	-	21.10	105.51
104	COMPACTION OF NATURAL GROUND	SM	0.37	8.55	0.75	2.42	12.08
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.36	118.44	-	30.70	153.50
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	123.97	272.97	46.20	110.78	553.92
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.25	294.98	-	78.06	390.30
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.22	228.89	-	60.03	300.14
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.57	105.42	-	27.25	136.24
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	123.97	272.97	46.20	110.78	553.92
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.66	275.34	-	73.75	368.74
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.72	229.91	-	59.66	298.29
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.25	120.24	0.37	31.97	159.84
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	61.92	245.80	64.37	93.02	465.11
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	109.20	367.50	30.80	126.88	634.38
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	92.39	257.01	-	87.35	436.75
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	56.16	211.67	-	66.96	334.79
107d	GRANULAR BACK FILL	CM	34.16	119.94	369.81	130.98	654.88
107e	COMMON BACK FILL	CM	25.93	55.41	4.99	21.58	107.92
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.85	152.01	4.99	40.96	204.82
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.23	418.69	49.36	122.07	610.35
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.17	364.32	2.37	95.46	477.32
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.48	323.09	-	84.14	420.71
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.88	154.80	7.84	42.63	213.16

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.22	66.06	4.99	19.32	96.58
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.62	97.15	2.97	28.69	143.43
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.39	23.75	1.43	6.64	33.20
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.01	15.94	0.76	4.43	22.14
110	IMPROVED SUB-GRADE	CM	10.11	104.23	55.20	42.38	211.92
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.87	13.24	0.78	3.72	18.61
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.28	13.62	0.88	3.94	19.72
201	GRANULAR SUB-BASE	CM	7.95	224.59	451.28	170.96	854.78
202	AGGREGATE BASE	CM	9.22	287.87	650.89	236.99	1,184.96
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	73.36	1,311.60	5,268.35	1,663.33	8,316.64
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	75.61	1,311.60	5,663.20	1,762.60	8,813.01
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	80.87	1,369.89	5,259.36	1,677.53	8,387.65
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	80.87	1,365.01	5,787.24	1,808.28	9,041.40
204b	CEMENT STABILIZED BASE	CM	28.40	480.68	855.24	341.08	1,705.39
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	237.35	772.74	49,304.16	12,578.56	62,892.82
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	237.35	772.74	47,767.95	12,194.51	60,972.56
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	98.05	92.96	790.20	245.30	1,226.51
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	148.69	2,134.12	4,932.90	1,803.93	9,019.64
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	107.87	105.48	669.25	220.65	1,103.25
207a	DEEP PATCHING (0-15 cm)	SM	1.76	39.69	1.23	10.67	53.35
207b	DEEP PATCHING (16-30 cm)	SM	1.76	34.94	1.23	9.48	47.41
208	REINSTATEMENT OF ROAD SURFACE	SM	1.85	49.93	0.55	13.08	65.41
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.13	96.89	0.67	24.92	124.61
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.43	19.38	0.13	4.98	24.92
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.29	1.32	34.99	9.15	45.76
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	39.06	10.17	50.83

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	14.64	3.81	19.06
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	17.09	4.42	22.11
304a	SINGLE SURFACE TREATMENT	SM	0.75	6.52	68.90	19.04	95.21
304b	DOUBLE SURFACE TREATMENT	SM	1.09	12.21	132.93	36.56	182.79
304c	TRIPLE SURFACE TREATMENT	SM	1.85	17.13	151.58	42.64	213.20
304d	SEAL COAT	SM	0.69	3.54	48.94	13.29	66.46
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	68.40	1,294.58	6,233.72	1,899.17	9,495.86
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	68.40	1,251.29	6,747.74	2,016.86	10,084.28
307a	DENSE GRADED HOT BIT-MAC	CM	170.69	316.05	5,281.05	1,441.95	7,209.73
307b	OPEN GRADED HOT BIT-MAC	CM	170.69	316.05	5,132.03	1,404.69	7,023.46
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	29.81	543.36	1,770.04	585.80	2,929.01
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	26.02	560.93	41,538.64	10,531.40	52,656.98
309a	COLD MILLING, 0 - 30 mm	SM	0.95	22.13	7.55	7.66	38.29
309b	COLD MILLING, 0 - 50 mm	SM	1.59	36.88	12.58	12.76	63.82
309c	COLD MILLING, 0 - 70 mm	SM	2.38	55.33	18.87	19.15	95.73
401a1i	CONCRETE CLASS "A1" (Underground)	CM	515.60	923.86	3,185.95	1,156.36	5,781.78
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	515.60	923.86	3,438.20	1,219.42	6,097.08
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	515.60	923.86	3,942.70	1,345.54	6,727.70
401a2i	CONCRETE CLASS "A2" (Underground)	CM	515.60	923.86	3,464.20	1,225.92	6,129.59
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	515.60	923.86	3,716.45	1,288.98	6,444.90
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	515.60	923.86	4,220.95	1,415.10	7,075.52
401a3i	CONCRETE CLASS "A3" (Underground)	CM	515.60	923.86	3,742.45	1,295.48	6,477.40
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	515.60	923.86	3,994.70	1,358.54	6,792.71
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	515.60	923.86	4,499.20	1,484.67	7,423.33
401b	CONCRETE CLASS "B"	CM	676.91	672.22	2,547.13	974.07	4,870.33
401ci	CONCRETE CLASS "C" (Underground)	CM	515.03	419.49	2,800.94	933.87	4,669.33

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	515.03	419.49	2,908.53	960.76	4,803.81
401ciii	CONCRETE CLASS "C" (Elevated)	CM	515.03	419.49	3,123.69	1,014.55	5,072.77
401d	CONCRETE CLASS "D1"	CM	795.45	1,106.97	4,212.39	1,528.70	7,643.51
401e	CONCRETE CLASS "Y"	CM	1,099.48	419.49	3,761.47	1,320.11	6,600.54
401f	LEAN CONCRETE	CM	451.82	424.53	1,977.46	713.45	3,567.26
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,742.81	790.24	4,090.75	1,655.95	8,279.75
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,742.81	790.24	4,647.25	1,795.08	8,975.38
401gii	PRECAST CONCRETE CLASS "B"	CM	1,742.81	790.24	3,937.29	1,617.59	8,087.93
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,742.81	790.24	4,925.50	1,864.64	9,323.19
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,742.81	790.24	5,203.75	1,934.20	9,671.00
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,742.81	790.24	5,482.00	2,003.76	10,018.81
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,540.71	669.81	67,838.00	17,512.13	87,560.65
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,540.71	669.81	77,288.00	19,874.63	99,373.15
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,260.04	4,274.04	63,682.95	17,304.26	86,521.30
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,641.31	12,481.24	115,630.60	32,688.29	163,441.44
405b	LAUNCHING OF GIRDER	TON	62.38	486.64	-	137.25	686.27
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	112.98	-	267.49	95.12	475.58
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	112.98	-	267.43	95.10	475.51
406c	STEEL EXPANSION JOINTS	KG	9.27	21.04	102.38	33.17	165.86
406d	WATER STOPS 6" SIZE	M	100.35	-	403.57	125.98	629.90
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	39.68	-	2,795.23	708.73	3,543.63
406g	STEEL OR METAL BEARING DEVICES	KG	20.03	55.55	123.57	49.79	248.93
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	345.13	1,439.50	588.91	593.39	2,966.93
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	517.70	2,159.25	883.37	890.08	4,450.40
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	517.70	2,159.25	687.79	841.18	4,205.92

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	862.83	3,598.75	868.50	1,332.52	6,662.61
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	739.57	4,253.63	1,064.26	1,514.37	7,571.84
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,294.25	6,025.34	1,146.49	2,116.52	10,582.59
407h	PILE LOAD TEST UP TO 120 TON	EACH	23,987.35	40,036.45	92,446.08	39,117.47	195,587.35
407i	PILE LOAD TEST UP TO 240 TON	EACH	44,944.03	40,036.45	184,892.16	67,468.16	337,340.80
407j	PILE LOAD TEST UP TO 360 TON	EACH	65,900.71	43,882.72	277,338.24	96,780.42	483,902.09
407k	CONFIRMATORY BORING (NX SIZE)	M	202.71	1,323.15	6.24	383.02	1,915.12
410	BRICK WORK	CM	326.36	236.06	2,421.70	746.03	3,730.14
411a	STONE MASONRY RANDOM DRY	CM	285.25	91.36	448.14	206.19	1,030.94
411b	STONE MASONRY RANDOM WITH MORTAR	CM	305.07	139.82	1,263.85	427.19	2,135.93
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	371.46	91.36	500.48	240.83	1,204.13
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	434.39	139.82	1,328.31	475.63	2,378.14
411g	ROLL POINTING	SM	68.76	9.69	36.61	28.76	143.82
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	587.00	221.29	1,242.12	512.60	2,563.00
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	235.44	366.20	554.89	289.13	1,445.66
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	229.55	480.94	716.59	356.77	1,783.86
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	222.59	791.50	965.28	494.84	2,474.21
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	234.11	972.63	1,444.11	662.71	3,313.55
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	268.10	949.38	2,080.15	824.41	4,122.03
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	329.15	1,171.86	3,212.46	1,178.37	5,891.84
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	425.96	1,313.30	4,027.14	1,441.60	7,208.00
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	503.08	1,594.72	5,132.53	1,807.58	9,037.91
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	592.36	1,860.51	7,932.05	2,596.23	12,981.15
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	235.44	423.57	572.04	307.76	1,538.81
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	229.55	480.94	670.65	345.29	1,726.43
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	215.94	791.50	917.46	481.22	2,406.12

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	234.11	972.63	1,479.93	671.66	3,358.32
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	268.10	949.38	2,862.43	1,019.98	5,099.88
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	329.15	1,171.86	3,948.99	1,362.50	6,812.51
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	425.96	1,313.30	5,339.36	1,769.65	8,848.27
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	503.08	1,594.72	7,241.32	2,334.78	11,673.90
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	592.36	1,860.51	10,187.00	3,159.97	15,799.84
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	93.34	103.49	415.70	153.13	765.66
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	768.47	511.20	2,804.77	1,021.11	5,105.55
507a	STEEL WIRE MESH FOR GABIONS	KG	5.09	-	120.64	31.43	157.16
507b	ROCK FILL IN GABIONS	CM	101.01	-	361.36	115.59	577.97
508a	BRICK PAVING (SINGLE COURSE)	SM	110.00	26.90	199.04	83.99	419.94
508b	BRICK PAVING (DOUBLE COURSE)	SM	196.22	26.90	394.51	154.41	772.04
509a	RIP RAP CLASS "A"	CM	473.21	-	361.95	208.79	1,043.95
509b	RIP RAP CLASS "B"	CM	456.86	-	359.05	203.98	1,019.89
509c	RIP RAP CLASS "C"	CM	459.16	-	361.95	205.28	1,026.39
509d	GROUTED RIP RAP CLASS "A"	CM	578.12	84.24	2,348.87	752.81	3,764.05
509e	GROUTED RIP RAP CLASS "B"	CM	556.64	67.39	2,142.71	691.69	3,458.44
509f	GROUTED RIP RAP CLASS "C"	CM	550.08	56.16	2,085.95	673.05	3,365.24
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	809.75	295.88	3,199.05	1,076.17	5,380.85
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	50.12	167.47	370.45	147.01	735.04
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	109.77	322.32	-	108.02	540.10
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	151.47	57.10	58.82	66.85	334.23
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	193.88	73.09	75.29	85.56	427.82
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	244.22	150.62	310.11	176.24	881.18
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	305.27	188.27	387.63	220.29	1,101.47
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	273.41	498.72	1,800.49	643.16	3,215.78

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	955.07	567.97	3,815.84	1,334.72	6,673.60
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	139.07	75.65	351.56	141.57	707.84
603	BRICK EDGING	M	8.97	-	30.91	9.97	49.85
604a	METAL GUARD RAIL	M	18.58	59.95	1,492.92	392.86	1,964.32
604b	METAL GUARD RAIL END PIECES	EACH	25.55	-	1,138.10	290.91	1,454.57
604d	STEEL POST OF METAL GUARD RAIL	EACH	85.52	805.79	3,566.86	1,114.54	5,572.70
605a	CONCRETE BEAM GUARD RAIL	M	75.64	25.40	576.73	169.44	847.22
605c	CONCRETE POST FOR GUARD RAIL	M	92.88	22.64	577.84	173.34	866.69
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	233.38	213.74	6,366.10	1,703.30	8,516.51
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	73.67	320.61	8,422.98	2,204.31	11,021.57
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	233.38	453.76	11,097.06	2,946.05	14,730.25
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	781.28	503.34	19,221.72	5,126.58	25,632.92
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	156.26	100.67	8,402.09	2,164.75	10,823.77
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	264.39	-	1,133.33	349.43	1,747.14
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	264.39	-	1,699.99	491.09	2,455.47
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.91	5.03	15.39	5.83	29.15
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.97	3.40	37.05	10.36	51.78
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.91	5.03	20.54	7.12	35.59
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.97	3.40	49.42	13.45	67.24
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	68.96	4.26	148.72	55.48	277.42
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	68.96	8.15	466.91	136.01	680.03
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.63	7.44	21.41	8.12	40.59
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.63	8.29	63.09	18.75	93.76
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.63	5.98	28.54	9.54	47.69
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.63	8.29	84.12	24.01	120.05
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	68.96	3.04	206.68	69.67	348.35

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	68.96	6.45	795.53	217.73	1,088.67
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	58.35	3.04	99.15	40.13	200.67
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	58.35	6.45	311.74	94.14	470.68
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	58.35	3.04	137.79	49.79	248.97
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	58.35	6.45	531.15	148.99	744.94
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.91	69.34	184.78	66.01	330.04
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.91	69.34	223.37	75.66	378.28
610b	RIGHT OF WAY MARKER	EACH	107.65	101.77	265.95	118.84	594.22
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	622.53	811.70	1,888.57	830.70	4,153.50
610d	TEN KILOMETRE POST	EACH	1,201.14	1,623.40	4,024.79	1,712.33	8,561.66
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	135.51	76.10	897.66	277.32	1,386.58

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

JACOBABAD
(21)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.70	8.97	-	2.42	12.09
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.20	150.86	1.06	39.78	198.91
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	20.34	391.92	2.39	103.66	518.30
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	81.35	1,567.67	9.55	414.64	2,073.21
103	STRIPPING	CM	2.56	81.82	-	21.10	105.48
104	COMPACTION OF NATURAL GROUND	SM	0.37	8.55	0.75	2.42	12.08
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.72	118.44	-	30.79	153.95
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	117.74	272.97	46.20	109.23	546.14
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	15.78	294.98	-	77.69	388.46
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.41	228.89	-	59.83	299.13
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.86	105.42	-	27.32	136.61
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	117.74	272.97	46.20	109.23	546.14
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	18.69	275.34	-	73.51	367.54
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.02	229.91	-	59.48	297.42
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.63	120.24	0.37	32.06	160.32
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	59.98	245.80	64.37	92.54	462.69
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	103.83	367.50	30.80	125.53	627.66
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	86.99	257.01	-	86.00	430.01
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	53.40	211.67	-	66.27	331.33
107d	GRANULAR BACK FILL	CM	33.41	119.94	372.02	131.34	656.70
107e	COMMON BACK FILL	CM	24.14	55.41	4.99	21.13	105.67
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.66	152.01	4.99	40.92	204.58
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	19.23	418.69	49.36	121.82	609.11
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.42	364.32	2.37	95.28	476.39
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.82	323.09	-	83.98	419.88
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.58	154.80	7.84	42.56	212.78

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.99	66.06	4.99	19.26	96.30
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.07	97.15	2.97	28.55	142.74
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.35	23.75	1.43	6.63	33.16
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.01	15.94	0.76	4.43	22.14
110	IMPROVED SUB-GRADE	CM	9.89	104.23	55.20	42.33	211.65
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.85	13.24	0.78	3.72	18.58
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.26	13.62	0.88	3.94	19.70
201	GRANULAR SUB-BASE	CM	7.70	224.59	453.06	171.34	856.69
202	AGGREGATE BASE	CM	9.14	287.87	788.61	271.40	1,357.01
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	69.55	1,311.60	5,430.81	1,702.99	8,514.94
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	71.95	1,311.60	5,850.50	1,808.51	9,042.56
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	76.96	1,369.89	5,421.87	1,717.18	8,585.90
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	76.96	1,365.01	5,976.12	1,854.52	9,272.61
204b	CEMENT STABILIZED BASE	CM	28.85	480.68	909.10	354.66	1,773.28
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	238.00	772.74	50,376.78	12,846.88	64,234.41
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	238.00	772.74	48,840.57	12,462.83	62,314.14
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	89.36	92.96	910.45	273.19	1,365.96
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	144.49	2,134.12	5,127.67	1,851.57	9,257.85
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	97.47	105.48	696.77	224.93	1,124.64
207a	DEEP PATCHING (0-15 cm)	SM	1.78	39.69	1.23	10.68	53.38
207b	DEEP PATCHING (16-30 cm)	SM	1.78	34.94	1.23	9.49	47.44
208	REINSTATEMENT OF ROAD SURFACE	SM	1.82	49.93	0.55	13.07	65.37
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.23	96.89	0.67	24.94	124.72
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.45	19.38	0.13	4.99	24.94
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.32	35.75	9.34	46.71
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.29	1.32	39.91	10.38	51.90

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	14.96	3.89	19.46
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	17.46	4.52	22.58
304a	SINGLE SURFACE TREATMENT	SM	0.77	6.52	70.99	19.57	97.85
304b	DOUBLE SURFACE TREATMENT	SM	1.12	12.21	137.70	37.76	188.79
304c	TRIPLE SURFACE TREATMENT	SM	1.90	17.13	157.05	44.02	220.10
304d	SEAL COAT	SM	0.71	3.54	49.97	13.56	67.78
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	65.83	1,294.58	6,428.60	1,947.25	9,736.26
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	65.83	1,251.29	6,953.62	2,067.68	10,338.42
307a	DENSE GRADED HOT BIT-MAC	CM	163.69	316.05	5,446.67	1,481.60	7,408.00
307b	OPEN GRADED HOT BIT-MAC	CM	163.69	316.05	5,322.82	1,450.64	7,253.19
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	29.32	543.36	1,818.41	597.77	2,988.87
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	25.84	560.93	42,643.12	10,807.47	54,037.36
309a	COLD MILLING, 0 - 30 mm	SM	0.97	22.13	7.55	7.66	38.32
309b	COLD MILLING, 0 - 50 mm	SM	1.62	36.88	12.58	12.77	63.86
309c	COLD MILLING, 0 - 70 mm	SM	2.43	55.33	18.87	19.16	95.79
401a1i	CONCRETE CLASS "A1" (Underground)	CM	499.54	923.86	3,184.36	1,151.94	5,759.71
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	499.54	923.86	3,436.61	1,215.00	6,075.02
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	499.54	923.86	3,941.10	1,341.13	6,705.64
401a2i	CONCRETE CLASS "A2" (Underground)	CM	499.54	923.86	3,462.61	1,221.50	6,107.52
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	499.54	923.86	3,714.86	1,284.57	6,422.83
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	499.54	923.86	4,219.35	1,410.69	7,053.45
401a3i	CONCRETE CLASS "A3" (Underground)	CM	499.54	923.86	3,740.86	1,291.07	6,455.33
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	499.54	923.86	3,993.11	1,354.13	6,770.64
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	499.54	923.86	4,497.60	1,480.25	7,401.26
401b	CONCRETE CLASS "B"	CM	661.85	672.22	2,601.30	983.84	4,919.21
401ci	CONCRETE CLASS "C" (Underground)	CM	491.72	419.49	2,846.65	939.46	4,697.32

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	491.72	419.49	2,954.24	966.36	4,831.80
401ciii	CONCRETE CLASS "C" (Elevated)	CM	491.72	419.49	3,169.40	1,020.15	5,100.76
401d	CONCRETE CLASS "D1"	CM	756.79	1,106.97	4,219.26	1,520.75	7,603.76
401e	CONCRETE CLASS "Y"	CM	1,025.15	419.49	3,741.24	1,296.47	6,482.35
401f	LEAN CONCRETE	CM	425.61	424.53	2,030.94	720.27	3,601.36
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,637.12	790.24	4,083.90	1,627.82	8,139.08
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,637.12	790.24	4,640.40	1,766.94	8,834.71
401gii	PRECAST CONCRETE CLASS "B"	CM	1,637.12	790.24	4,002.36	1,607.43	8,037.16
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,637.12	790.24	4,918.65	1,836.50	9,182.52
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,637.12	790.24	5,196.90	1,906.07	9,530.33
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,637.12	790.24	5,475.15	1,975.63	9,878.15
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,477.79	669.81	68,368.00	17,628.90	88,144.50
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,477.79	669.81	77,818.00	19,991.40	99,957.00
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,198.20	4,274.04	64,329.11	17,450.34	87,251.70
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,509.32	12,481.24	115,629.81	32,655.09	163,275.45
405b	LAUNCHING OF GIRDER	TON	58.41	486.64	-	136.26	681.32
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	106.42	-	278.74	96.29	481.45
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	106.42	-	277.88	96.07	480.37
406c	STEEL EXPANSION JOINTS	KG	8.59	21.04	102.68	33.08	165.40
406d	WATER STOPS 6" SIZE	M	96.93	-	404.86	125.45	627.24
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	38.09	-	2,810.60	712.17	3,560.87
406g	STEEL OR METAL BEARING DEVICES	KG	18.82	55.55	123.93	49.58	247.88
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	321.41	1,439.50	744.12	626.26	3,131.29
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	482.11	2,159.25	1,116.19	939.39	4,696.94
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	482.11	2,159.25	838.22	869.90	4,349.48

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	803.52	3,598.75	1,008.81	1,352.77	6,763.86
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	688.74	4,253.63	1,183.58	1,531.49	7,657.43
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,205.29	6,025.34	1,294.85	2,131.37	10,656.84
407h	PILE LOAD TEST UP TO 120 TON	EACH	21,896.18	40,036.45	90,496.88	38,107.38	190,536.88
407i	PILE LOAD TEST UP TO 240 TON	EACH	40,526.18	40,036.45	180,993.76	65,389.10	326,945.48
407j	PILE LOAD TEST UP TO 360 TON	EACH	59,156.18	43,882.72	271,490.64	93,632.38	468,161.92
407k	CONFIRMATORY BORING (NX SIZE)	M	183.55	1,323.15	6.24	378.23	1,891.17
410	BRICK WORK	CM	305.67	236.06	2,363.35	726.27	3,631.34
411a	STONE MASONRY RANDOM DRY	CM	269.29	91.36	505.86	216.63	1,083.14
411b	STONE MASONRY RANDOM WITH MORTAR	CM	288.26	139.82	1,286.14	428.55	2,142.77
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	348.64	91.36	562.82	250.71	1,253.53
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	407.29	139.82	1,364.07	477.79	2,388.97
411g	ROLL POINTING	SM	64.08	9.69	36.01	27.45	137.23
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	547.01	221.29	1,277.88	511.55	2,557.73
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	217.77	366.20	553.78	284.44	1,422.19
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	211.32	480.94	715.26	351.88	1,759.40
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	209.08	791.50	963.73	491.08	2,455.38
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	218.30	972.63	1,442.29	658.30	3,291.52
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	250.81	949.38	2,078.33	819.63	4,098.15
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	309.33	1,171.86	3,209.84	1,172.76	5,863.80
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	400.31	1,313.30	4,024.53	1,434.53	7,172.67
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	472.54	1,594.72	5,129.36	1,799.16	8,995.78
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	556.07	1,860.51	7,928.36	2,586.23	12,931.17
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	217.77	423.57	569.82	302.79	1,513.95
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	211.32	480.94	669.32	340.39	1,701.97
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	202.46	791.50	915.91	477.46	2,387.32

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	218.30	972.63	1,478.52	667.36	3,336.80
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	250.81	949.38	2,860.41	1,015.15	5,075.76
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	309.33	1,171.86	3,946.37	1,356.89	6,784.46
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	400.31	1,313.30	5,336.75	1,762.59	8,812.95
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	472.54	1,594.72	7,238.15	2,326.35	11,631.77
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	556.07	1,860.51	10,183.31	3,149.97	15,749.86
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	88.53	103.49	353.23	136.31	681.57
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	747.66	511.20	2,858.94	1,029.45	5,147.25
507a	STEEL WIRE MESH FOR GABIONS	KG	4.82	-	120.46	31.32	156.61
507b	ROCK FILL IN GABIONS	CM	93.73	-	324.19	104.48	522.40
508a	BRICK PAVING (SINGLE COURSE)	SM	102.39	26.90	194.55	80.96	404.79
508b	BRICK PAVING (DOUBLE COURSE)	SM	181.74	26.90	385.74	148.59	742.97
509a	RIP RAP CLASS "A"	CM	441.37	-	419.68	215.26	1,076.31
509b	RIP RAP CLASS "B"	CM	424.86	-	416.32	210.29	1,051.47
509c	RIP RAP CLASS "C"	CM	426.50	-	419.68	211.54	1,057.72
509d	GROUTED RIP RAP CLASS "A"	CM	538.61	84.24	1,529.67	538.13	2,690.65
509e	GROUTED RIP RAP CLASS "B"	CM	517.82	67.39	1,411.42	499.16	2,495.80
509f	GROUTED RIP RAP CLASS "C"	CM	510.87	56.16	1,439.18	501.55	2,507.77
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	765.18	295.88	3,250.42	1,077.87	5,389.35
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	46.67	167.47	372.47	146.65	733.27
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	100.33	322.32	-	105.66	528.30
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	142.35	57.10	68.20	66.91	334.57
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	182.21	73.09	87.29	85.65	428.24
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	229.13	150.62	314.59	173.58	867.92
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	286.41	188.27	393.24	216.98	1,084.90
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	264.79	498.72	1,800.05	640.89	3,204.47

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	897.71	567.97	3,823.31	1,322.25	6,611.23
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	130.93	75.65	352.61	139.80	699.00
603	BRICK EDGING	M	8.46	-	30.34	9.70	48.49
604a	METAL GUARD RAIL	M	17.76	59.95	1,492.92	392.66	1,963.29
604b	METAL GUARD RAIL END PIECES	EACH	23.27	-	1,138.10	290.34	1,451.72
604d	STEEL POST OF METAL GUARD RAIL	EACH	83.78	805.79	3,566.86	1,114.11	5,570.54
605a	CONCRETE BEAM GUARD RAIL	M	69.29	25.40	578.75	168.36	841.80
605c	CONCRETE POST FOR GUARD RAIL	M	85.08	22.64	579.94	171.92	859.58
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	218.20	213.74	6,388.69	1,705.16	8,525.78
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	70.29	320.61	8,448.59	2,209.87	11,049.37
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	218.20	453.76	11,137.04	2,952.25	14,761.25
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	710.25	503.34	19,293.19	5,126.70	25,633.48
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	142.05	100.67	8,430.19	2,168.23	10,841.14
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	258.45	-	1,137.47	348.98	1,744.90
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	258.45	-	1,706.20	491.16	2,455.82
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.81	5.03	15.42	5.81	29.07
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.94	3.40	37.32	10.41	52.07
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.81	5.03	20.57	7.10	35.51
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.94	3.40	49.78	13.53	67.64
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.68	4.26	148.99	53.98	269.92
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.68	8.15	470.28	135.28	676.41
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.51	7.44	21.43	8.09	40.47
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.51	8.29	63.09	18.72	93.61
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.51	5.98	28.58	9.52	47.58
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.51	8.29	84.12	23.98	119.90
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.68	3.04	206.95	68.17	340.85

Rate Analysis Summary (Construction)

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.68	6.45	795.53	216.17	1,080.83
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	53.37	3.04	99.33	38.93	194.67
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	53.37	6.45	314.00	93.45	467.27
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	53.37	3.04	137.97	48.59	242.97
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	53.37	6.45	531.15	147.74	738.71
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.66	69.34	184.74	65.94	329.68
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.66	69.34	223.33	75.58	377.92
610b	RIGHT OF WAY MARKER	EACH	98.71	101.77	266.06	116.64	583.18
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	569.26	811.70	1,890.72	817.92	4,089.59
610d	TEN KILOMETRE POST	EACH	1,093.66	1,623.40	4,031.13	1,687.05	8,435.24
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	127.34	76.10	899.36	275.70	1,378.49

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

KARACHI
(26)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	1.02	8.97	-	2.50	12.49
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	10.17	150.86	1.06	40.52	202.62
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	29.23	391.92	2.39	105.88	529.42
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	116.91	1,567.67	9.55	423.53	2,117.67
103	STRIPPING	CM	3.54	81.82	-	21.34	106.70
104	COMPACTION OF NATURAL GROUND	SM	0.50	8.55	0.75	2.45	12.26
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.01	118.44	-	31.11	155.56
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	165.66	272.97	46.20	121.21	606.04
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	22.67	294.98	-	79.41	397.07
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	14.67	228.89	-	60.89	304.45
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.92	105.42	-	27.59	137.93
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	165.66	272.97	46.20	121.21	606.04
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	26.26	275.34	-	75.40	377.00
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	11.44	229.91	-	60.34	301.69
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.81	120.24	0.37	32.61	163.04
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	84.24	245.80	64.37	98.60	493.02
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	145.90	367.50	30.80	136.05	680.26
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	123.03	257.01	-	95.01	475.06
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	75.04	211.67	-	71.68	358.38
107d	GRANULAR BACK FILL	CM	46.49	119.94	402.26	142.17	710.86
107e	COMMON BACK FILL	CM	35.57	55.41	4.99	23.99	119.97
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.07	152.01	4.99	41.52	207.59
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	26.99	418.69	49.36	123.76	618.81
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.24	364.32	2.37	96.73	483.66
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	17.99	323.09	-	85.27	426.35
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.48	154.80	7.84	43.28	216.40

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108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.26	66.06	4.99	19.83	99.13
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	19.60	97.15	2.97	29.93	149.66
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.85	23.75	1.43	6.76	33.79
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.36	15.94	0.76	4.52	22.58
110	IMPROVED SUB-GRADE	CM	13.55	104.23	55.20	43.25	216.23
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.17	13.24	0.78	3.80	19.00
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.71	13.62	0.88	4.05	20.26
201	GRANULAR SUB-BASE	CM	10.54	224.59	458.92	173.51	867.56
202	AGGREGATE BASE	CM	12.26	287.87	738.10	259.56	1,297.79
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	98.65	1,311.60	5,280.40	1,672.66	8,363.31
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	101.54	1,311.60	5,694.15	1,776.82	8,884.11
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	108.38	1,369.89	5,271.70	1,687.49	8,437.45
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	108.38	1,365.01	5,817.33	1,822.68	9,113.39
204b	CEMENT STABILIZED BASE	CM	37.90	480.68	886.51	351.27	1,756.35
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	318.47	772.74	48,937.53	12,507.19	62,535.93
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	318.47	772.74	47,401.32	12,123.13	60,615.67
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	133.28	92.96	927.96	288.55	1,442.75
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	198.74	2,134.12	5,001.22	1,833.52	9,167.60
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	146.46	105.48	676.15	232.02	1,160.10
207a	DEEP PATCHING (0-15 cm)	SM	2.35	39.69	1.23	10.82	54.09
207b	DEEP PATCHING (16-30 cm)	SM	2.35	34.94	1.23	9.63	48.15
208	REINSTATEMENT OF ROAD SURFACE	SM	2.49	49.93	0.55	13.24	66.21
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.89	96.89	0.67	25.11	125.56
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.58	19.38	0.13	5.02	25.11
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.39	1.32	34.73	9.11	45.56
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.38	1.32	38.77	10.12	50.58

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.16	0.49	14.54	3.79	18.97
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.16	0.49	16.96	4.40	22.00
304a	SINGLE SURFACE TREATMENT	SM	1.01	6.52	68.72	19.06	95.30
304b	DOUBLE SURFACE TREATMENT	SM	1.46	12.21	133.19	36.71	183.57
304c	TRIPLE SURFACE TREATMENT	SM	2.46	17.13	151.88	42.87	214.34
304d	SEAL COAT	SM	0.93	3.54	48.49	13.24	66.20
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	91.60	1,294.58	6,253.43	1,909.90	9,549.51
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	91.60	1,251.29	6,767.02	2,027.48	10,137.38
307a	DENSE GRADED HOT BIT-MAC	CM	229.23	316.05	5,278.46	1,455.93	7,279.67
307b	OPEN GRADED HOT BIT-MAC	CM	229.23	316.05	5,161.25	1,426.63	7,133.16
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	40.16	543.36	1,779.64	590.79	2,953.94
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	36.03	560.93	41,161.12	10,439.52	52,197.60
309a	COLD MILLING, 0 - 30 mm	SM	1.28	22.13	7.55	7.74	38.70
309b	COLD MILLING, 0 - 50 mm	SM	2.14	36.88	12.58	12.90	64.51
309c	COLD MILLING, 0 - 70 mm	SM	3.21	55.33	18.87	19.35	96.76
401a1i	CONCRETE CLASS "A1" (Underground)	CM	705.73	923.86	3,213.27	1,210.72	6,053.58
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	705.73	923.86	3,465.52	1,273.78	6,368.89
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	705.73	923.86	3,970.01	1,399.90	6,999.51
401a2i	CONCRETE CLASS "A2" (Underground)	CM	705.73	923.86	3,491.52	1,280.28	6,401.39
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	705.73	923.86	3,743.77	1,343.34	6,716.70
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	705.73	923.86	4,248.26	1,469.46	7,347.32
401a3i	CONCRETE CLASS "A3" (Underground)	CM	705.73	923.86	3,769.77	1,349.84	6,749.20
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	705.73	923.86	4,022.02	1,412.90	7,064.51
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	705.73	923.86	4,526.51	1,539.03	7,695.13
401b	CONCRETE CLASS "B"	CM	916.74	672.22	2,630.03	1,054.75	5,273.73
401ci	CONCRETE CLASS "C" (Underground)	CM	704.60	419.49	2,876.96	1,000.26	5,001.31

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	704.60	419.49	2,984.54	1,027.16	5,135.79
401ciii	CONCRETE CLASS "C" (Elevated)	CM	704.60	419.49	3,199.71	1,080.95	5,404.75
401d	CONCRETE CLASS "D1"	CM	1,103.62	1,106.97	4,249.91	1,615.12	8,075.62
401e	CONCRETE CLASS "Y"	CM	1,529.37	419.49	3,767.15	1,429.00	7,145.01
401f	LEAN CONCRETE	CM	616.01	424.53	2,060.62	775.29	3,876.45
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	2,384.12	790.24	4,114.96	1,822.33	9,111.65
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	2,384.12	790.24	4,671.46	1,961.45	9,807.27
401gii	PRECAST CONCRETE CLASS "B"	CM	2,384.12	790.24	4,029.01	1,800.84	9,004.21
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	2,384.12	790.24	4,949.71	2,031.02	10,155.09
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	2,384.12	790.24	5,227.96	2,100.58	10,502.90
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	2,384.12	790.24	5,506.21	2,170.14	10,850.71
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,164.51	669.81	67,838.00	17,668.08	88,340.39
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,164.51	669.81	77,288.00	20,030.58	100,152.89
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,717.59	4,274.04	63,601.19	17,398.21	86,991.04
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	3,363.35	12,481.24	115,807.40	32,913.00	164,564.98
405b	LAUNCHING OF GIRDER	TON	79.34	486.64	-	141.49	707.47
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	156.20	-	263.32	104.88	524.39
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	156.20	-	263.54	104.93	524.67
406c	STEEL EXPANSION JOINTS	KG	12.58	21.04	102.51	34.03	170.17
406d	WATER STOPS 6" SIZE	M	141.05	-	403.10	136.04	680.19
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.24
406f	ASPHALT FELT (3 PLY)	SM	51.90	-	2,800.88	713.20	3,565.98
406g	STEEL OR METAL BEARING DEVICES	KG	26.24	55.55	123.67	51.36	256.82
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	444.10	1,439.50	582.50	616.53	3,082.63
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	666.15	2,159.25	873.75	924.79	4,623.94
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	666.15	2,159.25	678.46	875.97	4,379.83

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	1,110.25	3,598.75	853.47	1,390.62	6,953.10
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	951.65	4,253.63	1,039.77	1,561.26	7,806.31
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,665.38	6,025.34	1,124.23	2,203.74	11,018.69
407h	PILE LOAD TEST UP TO 120 TON	EACH	32,590.14	40,036.45	94,395.28	41,755.47	208,777.34
407i	PILE LOAD TEST UP TO 240 TON	EACH	61,156.14	40,036.45	188,790.56	72,495.79	362,478.94
407j	PILE LOAD TEST UP TO 360 TON	EACH	89,722.14	43,882.72	283,185.84	104,197.68	520,988.38
407k	CONFIRMATORY BORING (NX SIZE)	M	265.57	1,323.15	6.24	398.74	1,993.69
410	BRICK WORK	CM	432.86	236.06	2,366.70	758.90	3,794.51
411a	STONE MASONRY RANDOM DRY	CM	379.82	91.36	476.00	236.79	1,183.97
411b	STONE MASONRY RANDOM WITH MORTAR	CM	405.29	139.82	1,291.72	459.21	2,296.03
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	494.25	91.36	530.58	279.05	1,395.24
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	576.93	139.82	1,358.41	518.79	2,593.96
411g	ROLL POINTING	SM	90.69	9.69	36.61	34.25	171.24
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	780.32	221.29	1,272.23	568.46	2,842.29
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	320.08	366.20	554.89	310.29	1,551.46
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.80	480.94	716.59	377.33	1,886.66
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	300.46	791.50	965.28	514.31	2,571.54
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	316.43	972.63	1,444.11	683.29	3,416.45
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	361.77	949.38	2,080.15	847.82	4,239.12
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	442.72	1,171.86	3,212.46	1,206.76	6,033.81
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	572.94	1,313.30	4,027.14	1,478.34	7,391.71
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	677.51	1,594.72	5,132.53	1,851.19	9,255.94
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	796.34	1,860.51	7,932.05	2,647.22	13,236.11
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	320.08	423.57	572.04	328.92	1,644.61
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	311.80	480.94	670.65	365.85	1,829.24
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	291.27	791.50	917.46	500.06	2,500.28

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501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	316.43	972.63	1,479.93	692.24	3,461.22
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	361.77	949.38	2,862.43	1,043.39	5,216.97
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	442.72	1,171.86	3,948.99	1,390.89	6,954.47
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	572.94	1,313.30	5,339.36	1,806.40	9,031.99
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	677.51	1,594.72	7,241.32	2,378.39	11,891.94
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	796.34	1,860.51	10,187.00	3,210.96	16,054.80
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	127.86	103.49	454.25	171.40	857.00
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,052.20	511.20	2,887.66	1,112.76	5,563.82
507a	STEEL WIRE MESH FOR GABIONS	KG	7.05	-	120.64	31.92	159.61
507b	ROCK FILL IN GABIONS	CM	137.98	-	391.32	132.33	661.63
508a	BRICK PAVING (SINGLE COURSE)	SM	146.61	26.90	193.94	91.86	459.31
508b	BRICK PAVING (DOUBLE COURSE)	SM	261.04	26.90	384.08	168.01	840.03
509a	RIP RAP CLASS "A"	CM	629.49	-	389.81	254.83	1,274.13
509b	RIP RAP CLASS "B"	CM	607.83	-	386.69	248.63	1,243.16
509c	RIP RAP CLASS "C"	CM	610.38	-	389.81	250.05	1,250.24
509d	GROUTED RIP RAP CLASS "A"	CM	768.86	84.24	1,521.96	593.77	2,968.83
509e	GROUTED RIP RAP CLASS "B"	CM	739.71	67.39	1,401.65	552.19	2,760.94
509f	GROUTED RIP RAP CLASS "C"	CM	730.85	56.16	1,430.00	554.25	2,771.26
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	1,090.22	295.88	3,286.23	1,168.09	5,840.43
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.79	167.47	402.89	159.54	797.69
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	146.60	322.32	-	117.23	586.15
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	202.52	57.10	63.34	80.74	403.71
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	259.22	73.09	81.08	103.35	516.74
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	325.38	150.62	314.31	197.58	987.88
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	406.72	188.27	392.89	246.97	1,234.85
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	374.25	498.72	1,814.57	671.89	3,359.43

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,306.82	567.97	3,828.43	1,425.80	7,129.02
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	189.82	75.65	355.75	155.31	776.53
603	BRICK EDGING	M	12.07	-	29.86	10.48	52.40
604a	METAL GUARD RAIL	M	24.49	59.95	1,492.92	394.34	1,971.71
604b	METAL GUARD RAIL END PIECES	EACH	33.82	-	1,138.10	292.98	1,464.91
604d	STEEL POST OF METAL GUARD RAIL	EACH	114.02	805.79	3,566.86	1,121.67	5,608.33
605a	CONCRETE BEAM GUARD RAIL	M	103.49	25.40	577.63	176.63	883.16
605c	CONCRETE POST FOR GUARD RAIL	M	127.07	22.64	578.88	182.15	910.74
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	313.73	213.74	6,374.62	1,725.52	8,627.61
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	97.98	320.61	8,436.03	2,213.66	11,068.28
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	313.73	453.76	11,119.23	2,971.68	14,858.40
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	1,061.12	503.34	19,250.63	5,203.77	26,018.86
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	212.22	100.67	8,402.67	2,178.89	10,894.45
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	372.32	-	1,131.76	376.02	1,880.10
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	372.32	-	1,697.64	517.49	2,587.45
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.93	5.03	15.38	6.08	30.42
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.31	3.40	36.96	10.42	52.09
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.93	5.03	20.53	7.37	36.85
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.31	3.40	49.29	13.50	67.51
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	97.78	4.26	148.63	62.67	313.33
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	97.78	8.15	465.72	142.91	714.56
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.91	7.44	21.40	8.44	42.18
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.91	8.29	63.09	19.07	95.36
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.91	5.98	28.53	9.86	49.28
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	4.91	8.29	84.12	24.33	121.65
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	97.78	3.04	206.59	76.85	384.26

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	97.78	6.45	795.53	224.94	1,124.69
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	82.49	3.04	99.09	46.16	230.78
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	82.49	6.45	310.95	99.97	499.86
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	82.49	3.04	137.73	55.82	279.08
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	82.49	6.45	531.15	155.02	775.12
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.06	69.34	184.78	66.80	333.98
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.06	69.34	223.37	76.44	382.22
610b	RIGHT OF WAY MARKER	EACH	147.07	101.77	266.85	128.92	644.62
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	852.87	811.70	1,896.11	890.17	4,450.85
610d	TEN KILOMETRE POST	EACH	1,654.79	1,623.40	4,039.55	1,829.44	9,147.18
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	181.94	76.10	900.54	289.65	1,448.23

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

KHAIRPUR
(29)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.58	8.97	-	2.39	11.94
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.13	150.86	1.06	39.51	197.57
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	17.10	391.92	2.39	102.85	514.25
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	68.39	1,567.67	9.55	411.40	2,057.01
103	STRIPPING	CM	2.21	81.82	-	21.01	105.03
104	COMPACTION OF NATURAL GROUND	SM	0.32	8.55	0.75	2.40	12.02
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.37	118.44	-	30.70	153.50
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	117.63	272.97	46.20	109.20	546.00
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	15.93	294.98	-	77.73	388.64
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.52	228.89	-	59.85	299.27
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.57	105.42	-	27.25	136.24
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	117.63	272.97	46.20	109.20	546.00
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	18.74	275.34	-	73.52	367.60
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.11	229.91	-	59.50	297.52
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.98	120.24	0.37	31.90	159.50
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	55.29	245.80	64.37	91.37	456.83
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	104.10	367.50	30.80	125.60	628.00
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	87.77	257.01	-	86.20	430.98
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	53.54	211.67	-	66.30	331.51
107d	GRANULAR BACK FILL	CM	29.36	119.94	365.88	128.79	643.97
107e	COMMON BACK FILL	CM	19.98	55.41	4.99	20.10	100.48
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.45	152.01	4.99	40.86	204.32
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	18.27	418.69	49.36	121.58	607.91
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.70	364.32	2.37	95.10	475.49
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.18	323.09	-	83.82	419.08
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.19	154.80	7.84	42.46	212.29

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.78	66.06	4.99	19.21	96.04
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	12.85	97.15	2.97	28.24	141.22
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.28	23.75	1.43	6.61	33.07
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.94	15.94	0.76	4.41	22.05
110	IMPROVED SUB-GRADE	CM	9.07	104.23	55.19	42.12	210.62
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.76	13.24	0.78	3.70	18.48
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.14	13.62	0.88	3.91	19.55
201	GRANULAR SUB-BASE	CM	7.36	224.59	400.39	158.08	790.42
202	AGGREGATE BASE	CM	8.87	287.87	678.43	243.79	1,218.96
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	59.95	1,311.60	5,304.97	1,669.13	8,345.64
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	62.35	1,311.60	5,722.64	1,774.15	8,870.73
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	67.03	1,369.89	5,295.88	1,683.20	8,416.00
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	67.03	1,365.01	5,848.01	1,820.01	9,100.05
204b	CEMENT STABILIZED BASE	CM	26.42	480.68	808.93	329.01	1,645.04
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	219.76	772.74	50,055.60	12,762.03	63,810.14
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	219.76	772.74	48,519.39	12,377.97	61,889.87
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	74.04	92.96	812.16	244.79	1,223.95
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	127.77	2,134.12	4,995.00	1,814.22	9,071.11
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	81.06	105.48	589.67	194.05	970.26
207a	DEEP PATCHING (0-15 cm)	SM	1.61	39.69	1.23	10.63	53.17
207b	DEEP PATCHING (16-30 cm)	SM	1.61	34.94	1.23	9.45	47.23
208	REINSTATEMENT OF ROAD SURFACE	SM	1.75	49.93	0.55	13.06	65.28
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.04	96.89	0.67	24.90	124.49
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.41	19.38	0.13	4.98	24.90
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	35.53	9.28	46.40
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.26	1.32	39.66	10.31	51.55

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.87	3.87	19.33
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.35	4.49	22.43
304a	SINGLE SURFACE TREATMENT	SM	0.72	6.52	70.04	19.32	96.59
304b	DOUBLE SURFACE TREATMENT	SM	1.05	12.21	135.35	37.15	185.76
304c	TRIPLE SURFACE TREATMENT	SM	1.78	17.13	154.31	43.31	216.53
304d	SEAL COAT	SM	0.67	3.54	49.47	13.42	67.10
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	57.71	1,294.58	6,293.70	1,911.50	9,557.48
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	57.71	1,251.29	6,810.75	2,029.94	10,149.68
307a	DENSE GRADED HOT BIT-MAC	CM	141.08	316.05	5,325.45	1,445.64	7,228.22
307b	OPEN GRADED HOT BIT-MAC	CM	141.08	316.05	5,197.70	1,413.71	7,068.53
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	24.81	543.36	1,792.48	590.16	2,950.81
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	22.35	560.93	42,312.40	10,723.92	53,619.60
309a	COLD MILLING, 0 - 30 mm	SM	0.88	22.13	7.55	7.64	38.20
309b	COLD MILLING, 0 - 50 mm	SM	1.47	36.88	12.58	12.73	63.67
309c	COLD MILLING, 0 - 70 mm	SM	2.20	55.33	18.87	19.10	95.50
401a1i	CONCRETE CLASS "A1" (Underground)	CM	465.33	923.86	3,118.94	1,127.04	5,635.18
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	465.33	923.86	3,371.19	1,190.10	5,950.49
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	465.33	923.86	3,875.69	1,316.22	6,581.10
401a2i	CONCRETE CLASS "A2" (Underground)	CM	465.33	923.86	3,397.19	1,196.60	5,982.99
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	465.33	923.86	3,649.44	1,259.66	6,298.30
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	465.33	923.86	4,153.94	1,385.78	6,928.92
401a3i	CONCRETE CLASS "A3" (Underground)	CM	465.33	923.86	3,675.44	1,266.16	6,330.80
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	465.33	923.86	3,927.69	1,329.22	6,646.11
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	465.33	923.86	4,432.19	1,455.35	7,276.73
401b	CONCRETE CLASS "B"	CM	602.07	672.22	2,522.82	949.27	4,746.37
401ci	CONCRETE CLASS "C" (Underground)	CM	448.82	419.49	2,758.25	906.64	4,533.20

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	448.82	419.49	2,865.83	933.54	4,667.68
401ciii	CONCRETE CLASS "C" (Elevated)	CM	448.82	419.49	3,081.00	987.33	4,936.64
401d	CONCRETE CLASS "D1"	CM	708.32	1,106.97	4,157.51	1,493.20	7,465.99
401e	CONCRETE CLASS "Y"	CM	964.06	419.49	3,684.39	1,266.99	6,334.93
401f	LEAN CONCRETE	CM	367.07	424.53	1,952.47	686.02	3,430.10
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,487.21	790.24	4,013.37	1,572.71	7,863.53
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,487.21	790.24	4,569.87	1,711.83	8,559.15
401gii	PRECAST CONCRETE CLASS "B"	CM	1,487.21	790.24	3,915.84	1,548.32	7,741.61
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,487.21	790.24	4,848.12	1,781.39	8,906.96
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,487.21	790.24	5,126.37	1,850.96	9,254.78
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,487.21	790.24	5,404.62	1,920.52	9,602.59
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,378.44	669.81	68,368.00	17,604.06	88,020.31
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,378.44	669.81	77,818.00	19,966.56	99,832.81
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,131.33	4,274.04	64,319.50	17,431.22	87,156.10
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,313.06	12,481.24	115,667.95	32,615.56	163,077.81
405b	LAUNCHING OF GIRDER	TON	53.06	486.64	-	134.93	674.63
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	97.92	-	277.97	93.97	469.86
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	97.92	-	272.33	92.56	462.82
406c	STEEL EXPANSION JOINTS	KG	8.09	21.04	102.73	32.96	164.82
406d	WATER STOPS 6" SIZE	M	84.19	-	404.82	122.25	611.26
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	38.05	-	2,808.88	711.73	3,558.67
406g	STEEL OR METAL BEARING DEVICES	KG	17.60	55.55	123.98	49.28	246.42
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	284.89	1,439.50	656.96	595.34	2,976.68
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	427.33	2,159.25	985.44	893.00	4,465.02
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	427.33	2,159.25	748.93	833.88	4,169.38

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	712.21	3,598.75	915.46	1,306.61	6,533.03
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	610.47	4,253.63	1,083.92	1,487.01	7,435.03
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,068.32	6,025.34	1,186.01	2,069.92	10,349.59
407h	PILE LOAD TEST UP TO 120 TON	EACH	18,146.79	40,036.45	92,446.96	37,657.55	188,287.74
407i	PILE LOAD TEST UP TO 240 TON	EACH	33,050.79	40,036.45	184,893.92	64,495.29	322,476.44
407j	PILE LOAD TEST UP TO 360 TON	EACH	47,954.79	43,882.72	277,340.88	92,294.60	461,472.98
407k	CONFIRMATORY BORING (NX SIZE)	M	157.12	1,323.15	6.24	371.63	1,858.14
410	BRICK WORK	CM	291.61	236.06	2,363.35	722.75	3,613.76
411a	STONE MASONRY RANDOM DRY	CM	248.50	91.36	374.94	178.70	893.50
411b	STONE MASONRY RANDOM WITH MORTAR	CM	269.20	139.82	1,155.21	391.06	1,955.28
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	323.02	91.36	421.43	208.95	1,044.76
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	380.98	139.82	1,222.69	435.87	2,179.35
411g	ROLL POINTING	SM	62.46	9.69	36.01	27.04	135.20
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	509.32	221.29	1,136.50	466.78	2,333.88
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	184.13	366.20	553.78	276.03	1,380.13
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	178.21	480.94	715.26	343.60	1,718.01
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	181.14	791.50	963.73	484.09	2,420.46
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	187.26	972.63	1,442.29	650.54	3,252.72
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	216.01	949.38	2,078.33	810.93	4,054.65
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	269.94	1,171.86	3,209.84	1,162.91	5,814.56
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	349.34	1,313.30	4,024.53	1,421.79	7,108.95
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	409.41	1,594.72	5,129.36	1,783.37	8,916.86
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	487.01	1,860.51	7,928.36	2,568.97	12,844.84
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	184.13	423.57	569.82	294.38	1,471.90
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	178.21	480.94	669.32	332.12	1,660.59
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	176.41	791.50	915.91	470.95	2,354.77

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	187.26	972.63	1,478.52	659.60	3,298.00
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	216.01	949.38	2,860.41	1,006.45	5,032.25
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	269.94	1,171.86	3,946.37	1,347.04	6,735.22
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	349.34	1,313.30	5,336.75	1,749.85	8,749.23
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	409.41	1,594.72	7,238.15	2,310.57	11,552.85
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	487.01	1,860.51	10,183.31	3,132.71	15,663.53
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	74.26	103.49	367.86	136.40	682.01
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	674.77	511.20	2,780.45	991.61	4,958.03
507a	STEEL WIRE MESH FOR GABIONS	KG	4.53	-	120.75	31.32	156.60
507b	ROCK FILL IN GABIONS	CM	77.40	-	324.15	100.39	501.94
508a	BRICK PAVING (SINGLE COURSE)	SM	94.40	26.90	195.65	79.24	396.20
508b	BRICK PAVING (DOUBLE COURSE)	SM	168.92	26.90	387.74	145.89	729.45
509a	RIP RAP CLASS "A"	CM	413.44	-	288.75	175.55	877.74
509b	RIP RAP CLASS "B"	CM	396.99	-	286.44	170.86	854.29
509c	RIP RAP CLASS "C"	CM	399.83	-	288.75	172.14	860.72
509d	GROUTED RIP RAP CLASS "A"	CM	503.77	84.24	1,398.75	496.69	2,483.45
509e	GROUTED RIP RAP CLASS "B"	CM	485.82	67.39	1,281.55	458.69	2,293.45
509f	GROUTED RIP RAP CLASS "C"	CM	479.37	56.16	1,308.26	460.95	2,304.74
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	681.67	295.88	3,175.65	1,038.30	5,191.50
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	39.08	167.47	366.54	143.27	716.36
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	83.28	322.32	-	101.40	507.00
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	130.34	57.10	46.92	58.59	292.95
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	166.83	73.09	60.06	75.00	374.98
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	213.20	150.62	296.04	164.96	824.81
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	266.50	188.27	370.05	206.20	1,031.02
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	246.63	498.72	1,765.97	627.83	3,139.15

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	817.46	567.97	3,786.63	1,293.01	6,465.07
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	118.95	75.65	345.59	135.05	675.24
603	BRICK EDGING	M	7.53	-	30.34	9.47	47.33
604a	METAL GUARD RAIL	M	15.80	59.95	1,492.92	392.17	1,960.84
604b	METAL GUARD RAIL END PIECES	EACH	19.37	-	1,138.10	289.37	1,446.84
604d	STEEL POST OF METAL GUARD RAIL	EACH	75.00	805.79	3,566.86	1,111.91	5,559.56
605a	CONCRETE BEAM GUARD RAIL	M	60.36	25.40	576.19	165.49	827.44
605c	CONCRETE POST FOR GUARD RAIL	M	74.11	22.64	576.85	168.40	842.00
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	200.14	213.74	6,378.20	1,698.02	8,490.10
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	61.84	320.61	8,432.88	2,203.83	11,019.17
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	200.14	453.76	11,111.65	2,941.39	14,706.94
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	616.23	503.34	19,254.68	5,093.56	25,467.82
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	123.25	100.67	8,421.98	2,161.47	10,807.37
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	246.04	-	1,137.31	345.84	1,729.19
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	246.04	-	1,705.97	488.00	2,440.01
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.38	5.03	15.42	5.71	28.53
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.79	3.40	37.31	10.38	51.89
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.38	5.03	20.57	7.00	34.98
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.79	3.40	49.77	13.49	67.46
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.87	4.26	148.98	54.03	270.13
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.87	8.15	470.22	135.31	676.55
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.98	7.44	21.43	7.96	39.81
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	2.98	8.29	63.09	18.59	92.94
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.98	5.98	28.58	9.38	46.92
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	2.98	8.29	84.12	23.85	119.23
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.87	3.04	206.94	68.21	341.06

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.87	6.45	795.53	216.21	1,081.05
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	52.52	3.04	99.32	38.72	193.60
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	52.52	6.45	313.95	93.23	466.15
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	52.52	3.04	137.96	48.38	241.90
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	52.52	6.45	531.15	147.53	737.65
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.58	69.34	184.74	65.67	328.33
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.58	69.34	223.33	75.31	376.57
610b	RIGHT OF WAY MARKER	EACH	82.87	101.77	263.38	112.00	560.02
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	518.56	811.70	1,868.97	799.81	3,999.04
610d	TEN KILOMETRE POST	EACH	988.83	1,623.40	3,987.37	1,649.90	8,249.51
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	112.10	76.10	895.73	270.98	1,354.90

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

LARKANA
(38)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.59	8.97	-	2.39	11.95
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.18	150.86	1.06	39.53	197.63
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	17.22	391.92	2.39	102.88	514.40
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	68.87	1,567.67	9.55	411.52	2,057.61
103	STRIPPING	CM	2.25	81.82	-	21.02	105.08
104	COMPACTION OF NATURAL GROUND	SM	0.32	8.55	0.75	2.41	12.03
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.39	118.44	-	30.71	153.54
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	118.77	272.97	46.20	109.49	547.43
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	16.22	294.98	-	77.80	389.01
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.71	228.89	-	59.90	299.50
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.60	105.42	-	27.25	136.27
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	118.77	272.97	46.20	109.49	547.43
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	18.89	275.34	-	73.56	367.79
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.28	229.91	-	59.55	297.73
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.13	120.24	0.37	31.94	159.69
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	56.25	245.80	64.37	91.61	458.03
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	104.95	367.50	30.80	125.81	629.07
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	88.53	257.01	-	86.39	431.93
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	53.98	211.67	-	66.41	332.06
107d	GRANULAR BACK FILL	CM	29.37	119.94	374.74	131.01	655.07
107e	COMMON BACK FILL	CM	19.99	55.41	4.99	20.10	100.49
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.58	152.01	4.99	40.90	204.48
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	18.56	418.69	49.36	121.65	608.27
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.92	364.32	2.37	95.15	475.76
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.38	323.09	-	83.87	419.33
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.32	154.80	7.84	42.49	212.45

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.91	66.06	4.99	19.24	96.20
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.09	97.15	2.97	28.30	141.51
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.30	23.75	1.43	6.62	33.09
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.96	15.94	0.76	4.41	22.07
110	IMPROVED SUB-GRADE	CM	9.27	104.23	55.20	42.17	210.87
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.78	13.24	0.78	3.70	18.50
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.18	13.62	0.88	3.92	19.59
201	GRANULAR SUB-BASE	CM	7.48	224.59	494.51	181.64	908.22
202	AGGREGATE BASE	CM	9.00	287.87	761.06	264.48	1,322.41
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	60.44	1,311.60	5,553.58	1,731.40	8,657.02
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	62.84	1,311.60	5,940.10	1,828.64	9,143.18
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	67.59	1,369.89	5,544.76	1,745.56	8,727.81
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	67.59	1,365.01	6,065.10	1,874.42	9,372.12
204b	CEMENT STABILIZED BASE	CM	26.78	480.68	1,082.07	397.38	1,986.92
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	220.84	772.74	50,219.22	12,803.20	64,016.01
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	220.84	772.74	48,683.01	12,419.15	62,095.75
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	74.44	92.96	944.20	277.90	1,389.51
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	129.39	2,134.12	5,190.31	1,863.46	9,317.28
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	81.30	105.48	681.88	217.16	1,085.82
207a	DEEP PATCHING (0-15 cm)	SM	1.65	39.69	1.23	10.64	53.22
207b	DEEP PATCHING (16-30 cm)	SM	1.65	34.94	1.23	9.46	47.28
208	REINSTATEMENT OF ROAD SURFACE	SM	1.78	49.93	0.55	13.06	65.32
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.08	96.89	0.67	24.91	124.55
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.42	19.38	0.13	4.98	24.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	35.64	9.31	46.55
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	39.79	10.34	51.71

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.92	3.88	19.39
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.40	4.50	22.50
304a	SINGLE SURFACE TREATMENT	SM	0.73	6.52	71.14	19.59	97.97
304b	DOUBLE SURFACE TREATMENT	SM	1.06	12.21	137.99	37.81	189.07
304c	TRIPLE SURFACE TREATMENT	SM	1.79	17.13	157.47	44.10	220.49
304d	SEAL COAT	SM	0.67	3.54	50.37	13.65	68.23
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	58.26	1,294.58	6,536.78	1,972.41	9,862.03
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	58.26	1,251.29	7,073.54	2,095.77	10,478.86
307a	DENSE GRADED HOT BIT-MAC	CM	143.38	316.05	5,569.33	1,507.19	7,535.94
307b	OPEN GRADED HOT BIT-MAC	CM	143.38	316.05	5,403.19	1,465.65	7,328.26
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	25.62	543.36	1,821.53	597.63	2,988.14
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	22.37	560.93	42,480.88	10,766.04	53,830.22
309a	COLD MILLING, 0 - 30 mm	SM	0.89	22.13	7.55	7.64	38.21
309b	COLD MILLING, 0 - 50 mm	SM	1.49	36.88	12.58	12.74	63.69
309c	COLD MILLING, 0 - 70 mm	SM	2.23	55.33	18.87	19.11	95.54
401a1i	CONCRETE CLASS "A1" (Underground)	CM	479.95	923.86	3,312.03	1,178.96	5,894.80
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	479.95	923.86	3,564.27	1,242.02	6,210.11
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	479.95	923.86	4,068.77	1,368.15	6,840.73
401a2i	CONCRETE CLASS "A2" (Underground)	CM	479.95	923.86	3,590.28	1,248.52	6,242.62
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	479.95	923.86	3,842.52	1,311.59	6,557.93
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	479.95	923.86	4,347.02	1,437.71	7,188.54
401a3i	CONCRETE CLASS "A3" (Underground)	CM	479.95	923.86	3,868.53	1,318.09	6,590.43
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	479.95	923.86	4,120.77	1,381.15	6,905.74
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	479.95	923.86	4,625.27	1,507.27	7,536.36
401b	CONCRETE CLASS "B"	CM	615.44	672.22	2,652.34	985.00	4,924.99
401ci	CONCRETE CLASS "C" (Underground)	CM	461.77	419.49	2,943.57	956.21	4,781.04

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	461.77	419.49	3,051.15	983.10	4,915.52
401ciii	CONCRETE CLASS "C" (Elevated)	CM	461.77	419.49	3,266.32	1,036.90	5,184.48
401d	CONCRETE CLASS "D1"	CM	732.37	1,106.97	4,325.40	1,541.18	7,705.92
401e	CONCRETE CLASS "Y"	CM	989.92	419.49	3,884.85	1,323.57	6,617.83
401f	LEAN CONCRETE	CM	374.06	424.53	2,082.15	720.19	3,600.93
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,517.58	790.24	4,230.43	1,634.56	8,172.81
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,517.58	790.24	4,786.93	1,773.69	8,868.43
401gii	PRECAST CONCRETE CLASS "B"	CM	1,517.58	790.24	4,056.08	1,590.98	7,954.88
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,517.58	790.24	5,065.18	1,843.25	9,216.25
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,517.58	790.24	5,343.43	1,912.81	9,564.06
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,517.58	790.24	5,621.68	1,982.37	9,911.87
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,423.89	669.81	68,368.00	17,615.42	88,077.12
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,423.89	669.81	77,818.00	19,977.92	99,889.62
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,163.30	4,274.04	64,281.38	17,429.68	87,148.41
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,313.82	12,481.24	115,661.01	32,614.02	163,070.08
405b	LAUNCHING OF GIRDER	TON	53.08	486.64	-	134.93	674.65
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	100.45	-	276.32	94.19	470.97
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	100.45	-	270.83	92.82	464.11
406c	STEEL EXPANSION JOINTS	KG	8.22	21.04	102.78	33.01	165.05
406d	WATER STOPS 6" SIZE	M	88.73	-	404.59	123.33	616.64
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	38.06	-	2,808.99	711.76	3,558.82
406g	STEEL OR METAL BEARING DEVICES	KG	17.50	55.55	124.00	49.26	246.31
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	285.56	1,439.50	666.04	597.78	2,988.88
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	428.34	2,159.25	999.07	896.66	4,483.32
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	428.34	2,159.25	762.50	837.52	4,187.62

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	713.90	3,598.75	938.08	1,312.68	6,563.42
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	611.92	4,253.63	1,123.10	1,497.16	7,485.82
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,070.86	6,025.34	1,219.95	2,079.04	10,395.18
407h	PILE LOAD TEST UP TO 120 TON	EACH	18,149.85	40,036.45	90,496.88	37,170.79	185,853.97
407i	PILE LOAD TEST UP TO 240 TON	EACH	33,053.85	40,036.45	180,993.76	63,521.01	317,605.07
407j	PILE LOAD TEST UP TO 360 TON	EACH	47,957.85	43,882.72	271,490.64	90,832.80	454,164.01
407k	CONFIRMATORY BORING (NX SIZE)	M	157.17	1,323.15	6.24	371.64	1,858.19
410	BRICK WORK	CM	292.19	236.06	2,352.52	720.19	3,600.96
411a	STONE MASONRY RANDOM DRY	CM	251.37	91.36	462.58	201.33	1,006.63
411b	STONE MASONRY RANDOM WITH MORTAR	CM	272.07	139.82	1,260.57	418.11	2,090.57
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	325.89	91.36	516.07	233.33	1,166.65
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	383.85	139.82	1,330.61	463.57	2,317.85
411g	ROLL POINTING	SM	62.46	9.69	36.31	27.11	135.57
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	512.19	221.29	1,244.42	494.47	2,472.37
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	184.87	366.20	554.33	276.35	1,381.75
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	178.94	480.94	715.93	343.95	1,719.76
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	182.61	791.50	964.50	484.65	2,423.26
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	188.59	972.63	1,443.20	651.10	3,255.52
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	217.34	949.38	2,079.24	811.49	4,057.45
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	271.28	1,171.86	3,211.15	1,163.57	5,817.87
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	351.07	1,313.30	4,025.83	1,422.55	7,112.75
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	411.51	1,594.72	5,130.94	1,784.29	8,921.47
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	488.52	1,860.51	7,930.20	2,569.81	12,849.04
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	184.87	423.57	570.93	294.84	1,474.21
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	178.94	480.94	669.99	332.47	1,662.34
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	177.31	791.50	916.68	471.37	2,356.86

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	188.59	972.63	1,479.22	660.11	3,300.54
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	217.34	949.38	2,861.42	1,007.03	5,035.17
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	271.28	1,171.86	3,947.68	1,347.71	6,738.53
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	351.07	1,313.30	5,338.05	1,750.60	8,753.02
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	411.51	1,594.72	7,239.74	2,311.49	11,557.46
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	488.52	1,860.51	10,185.15	3,133.54	15,667.72
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	74.76	103.49	401.09	144.83	724.17
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	695.67	511.20	2,909.98	1,029.21	5,146.06
507a	STEEL WIRE MESH FOR GABIONS	KG	4.53	-	120.46	31.25	156.24
507b	ROCK FILL IN GABIONS	CM	77.90	-	373.82	112.93	564.65
508a	BRICK PAVING (SINGLE COURSE)	SM	94.69	26.90	191.72	78.33	391.64
508b	BRICK PAVING (DOUBLE COURSE)	SM	169.21	26.90	380.09	144.05	720.25
509a	RIP RAP CLASS "A"	CM	414.18	-	376.39	197.64	988.20
509b	RIP RAP CLASS "B"	CM	397.58	-	373.38	192.74	963.70
509c	RIP RAP CLASS "C"	CM	400.32	-	376.39	194.18	970.88
509d	GROUTED RIP RAP CLASS "A"	CM	504.51	84.24	1,497.46	521.55	2,607.76
509e	GROUTED RIP RAP CLASS "B"	CM	486.41	67.39	1,378.41	483.05	2,415.26
509f	GROUTED RIP RAP CLASS "C"	CM	479.86	56.16	1,406.23	485.56	2,427.82
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	695.88	295.88	3,298.23	1,072.50	5,362.49
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	39.52	167.47	375.18	145.54	727.71
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	83.31	322.32	-	101.41	507.03
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	131.24	57.10	61.16	62.38	311.88
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	167.99	73.09	78.29	79.84	399.21
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	214.36	150.62	310.64	168.90	844.51
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	267.94	188.27	388.30	211.13	1,055.64
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	254.35	498.72	1,866.44	654.88	3,274.39

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	834.21	567.97	3,899.50	1,325.42	6,627.10
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	121.28	75.65	364.04	140.24	701.22
603	BRICK EDGING	M	7.60	-	29.86	9.36	46.82
604a	METAL GUARD RAIL	M	15.81	59.95	1,492.92	392.17	1,960.85
604b	METAL GUARD RAIL END PIECES	EACH	19.38	-	1,138.10	289.37	1,446.85
604d	STEEL POST OF METAL GUARD RAIL	EACH	75.05	805.79	3,566.86	1,111.92	5,559.62
605a	CONCRETE BEAM GUARD RAIL	M	60.83	25.40	584.36	167.65	838.23
605c	CONCRETE POST FOR GUARD RAIL	M	74.69	22.64	586.82	171.04	855.18
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	201.14	213.74	6,389.94	1,701.21	8,506.03
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	64.40	320.61	8,454.42	2,209.86	11,049.29
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	201.14	453.76	11,147.34	2,950.56	14,752.81
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	617.73	503.34	19,306.12	5,106.80	25,533.99
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	123.55	100.67	8,429.75	2,163.49	10,817.45
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	246.15	-	1,136.56	345.68	1,728.39
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	246.15	-	1,704.84	487.75	2,438.74
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.45	5.03	15.41	5.72	28.62
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.82	3.40	37.26	10.37	51.85
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.45	5.03	20.57	7.01	35.06
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.82	3.40	49.70	13.48	67.40
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	63.58	4.26	148.93	54.19	270.96
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	63.58	8.15	469.56	135.32	676.61
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.07	7.44	21.43	7.98	39.91
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.07	8.29	63.09	18.61	93.06
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.07	5.98	28.57	9.40	47.02
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.07	8.29	84.12	23.87	119.34
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	63.58	3.04	206.89	68.38	341.88

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	63.58	6.45	795.53	216.39	1,081.94
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	53.23	3.04	99.28	38.89	194.45
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	53.23	6.45	313.51	93.30	466.49
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	53.23	3.04	137.92	48.55	242.75
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	53.23	6.45	531.15	147.71	738.54
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.08	69.34	184.76	65.80	328.98
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.08	69.34	223.35	75.44	377.22
610b	RIGHT OF WAY MARKER	EACH	83.65	101.77	272.05	114.37	571.84
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	520.04	811.70	1,939.60	817.84	4,089.18
610d	TEN KILOMETRE POST	EACH	991.77	1,623.40	4,128.81	1,686.00	8,429.98
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	114.26	76.10	903.74	273.53	1,367.63

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

MIR PUR KHAS
(45-A)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.65	8.97	-	2.40	12.02
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.70	150.86	1.06	39.66	198.29
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	18.88	391.92	2.39	103.30	516.48
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	75.52	1,567.67	9.55	413.18	2,065.92
103	STRIPPING	CM	2.36	81.82	-	21.05	105.23
104	COMPACTION OF NATURAL GROUND	SM	0.34	8.55	0.75	2.41	12.05
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.55	118.44	-	30.75	153.73
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	124.58	272.97	46.20	110.94	554.69
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.00	294.98	-	78.00	389.98
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.17	228.89	-	60.02	300.08
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.72	105.42	-	27.29	136.43
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	124.58	272.97	46.20	110.94	554.69
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.86	275.34	-	73.80	368.99
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.63	229.91	-	59.64	298.18
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.29	120.24	0.37	31.98	159.88
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	58.54	245.80	64.37	92.18	460.89
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	110.31	367.50	30.80	127.15	635.76
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	93.19	257.01	-	87.55	437.75
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	56.73	211.67	-	67.10	335.50
107d	GRANULAR BACK FILL	CM	31.94	119.94	356.17	127.01	635.06
107e	COMMON BACK FILL	CM	22.28	55.41	4.99	20.67	103.35
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.84	152.01	4.99	40.96	204.80
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	19.54	418.69	49.36	121.90	609.49
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.65	364.32	2.37	95.33	476.67
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.02	323.09	-	84.03	420.14
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.68	154.80	7.84	42.58	212.90

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.12	66.06	4.99	19.29	96.45
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.80	97.15	2.97	28.48	142.40
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.36	23.75	1.43	6.63	33.17
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.99	15.94	0.76	4.42	22.11
110	IMPROVED SUB-GRADE	CM	9.74	104.23	55.20	42.29	211.46
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.81	13.24	0.78	3.71	18.54
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.21	13.62	0.88	3.93	19.64
201	GRANULAR SUB-BASE	CM	7.84	224.59	423.56	164.00	820.00
202	AGGREGATE BASE	CM	9.49	287.87	678.43	243.95	1,219.73
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	66.42	1,311.60	5,313.01	1,672.76	8,363.79
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	69.01	1,311.60	5,724.87	1,776.37	8,881.85
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	73.89	1,369.89	5,304.22	1,687.00	8,435.01
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	73.89	1,365.01	5,848.89	1,821.95	9,109.73
204b	CEMENT STABILIZED BASE	CM	28.46	480.68	873.14	345.57	1,727.85
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	231.33	772.74	49,367.79	12,592.97	62,964.83
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	231.33	772.74	47,831.58	12,208.91	61,044.57
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	83.13	92.96	884.22	265.08	1,325.39
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	139.60	2,134.12	5,029.14	1,825.71	9,128.57
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	91.40	105.48	618.21	203.77	1,018.85
207a	DEEP PATCHING (0-15 cm)	SM	1.70	39.69	1.23	10.66	53.28
207b	DEEP PATCHING (16-30 cm)	SM	1.70	34.94	1.23	9.47	47.34
208	REINSTATEMENT OF ROAD SURFACE	SM	1.86	49.93	0.55	13.08	65.42
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.08	96.89	0.67	24.91	124.54
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.42	19.38	0.13	4.98	24.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.29	1.32	35.04	9.16	45.81
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	39.11	10.18	50.89

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	14.66	3.82	19.08
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	17.11	4.43	22.14
304a	SINGLE SURFACE TREATMENT	SM	0.76	6.52	69.35	19.16	95.79
304b	DOUBLE SURFACE TREATMENT	SM	1.11	12.21	134.42	36.94	184.68
304c	TRIPLE SURFACE TREATMENT	SM	1.88	17.13	153.28	43.07	215.37
304d	SEAL COAT	SM	0.71	3.54	48.88	13.28	66.42
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	63.54	1,294.58	6,286.52	1,911.16	9,555.80
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	63.54	1,251.29	6,797.07	2,027.97	10,139.87
307a	DENSE GRADED HOT BIT-MAC	CM	156.19	316.05	5,310.19	1,445.61	7,228.03
307b	OPEN GRADED HOT BIT-MAC	CM	156.19	316.05	5,193.52	1,416.44	7,082.20
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	27.52	543.36	1,789.86	590.18	2,950.92
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	24.06	560.93	41,604.16	10,547.29	52,736.44
309a	COLD MILLING, 0 - 30 mm	SM	0.94	22.13	7.55	7.66	38.28
309b	COLD MILLING, 0 - 50 mm	SM	1.57	36.88	12.58	12.76	63.80
309c	COLD MILLING, 0 - 70 mm	SM	2.36	55.33	18.87	19.14	95.70
401a1i	CONCRETE CLASS "A1" (Underground)	CM	483.40	923.86	3,139.21	1,136.62	5,683.08
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	483.40	923.86	3,391.45	1,199.68	5,998.39
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	483.40	923.86	3,895.95	1,325.80	6,629.01
401a2i	CONCRETE CLASS "A2" (Underground)	CM	483.40	923.86	3,417.46	1,206.18	6,030.90
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	483.40	923.86	3,669.70	1,269.24	6,346.21
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	483.40	923.86	4,174.20	1,395.36	6,976.82
401a3i	CONCRETE CLASS "A3" (Underground)	CM	483.40	923.86	3,695.71	1,275.74	6,378.71
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	483.40	923.86	3,947.95	1,338.80	6,694.02
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	483.40	923.86	4,452.45	1,464.93	7,324.64
401b	CONCRETE CLASS "B"	CM	631.28	672.22	2,558.78	965.57	4,827.84
401ci	CONCRETE CLASS "C" (Underground)	CM	466.02	419.49	2,798.97	921.12	4,605.59

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	466.02	419.49	2,906.55	948.01	4,740.07
401ciii	CONCRETE CLASS "C" (Elevated)	CM	466.02	419.49	3,121.72	1,001.81	5,009.03
401d	CONCRETE CLASS "D1"	CM	737.23	1,106.97	4,178.03	1,505.56	7,527.79
401e	CONCRETE CLASS "Y"	CM	1,003.10	419.49	3,699.52	1,280.53	6,402.64
401f	LEAN CONCRETE	CM	393.50	424.53	1,988.98	701.75	3,508.76
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,545.65	790.24	4,034.63	1,592.63	7,963.15
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,545.65	790.24	4,591.13	1,731.75	8,658.77
401gii	PRECAST CONCRETE CLASS "B"	CM	1,545.65	790.24	3,957.01	1,573.22	7,866.12
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,545.65	790.24	4,869.38	1,801.32	9,006.59
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,545.65	790.24	5,147.63	1,870.88	9,354.40
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,545.65	790.24	5,425.88	1,940.44	9,702.21
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,448.17	669.81	67,838.00	17,489.00	87,444.98
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,448.17	669.81	77,288.00	19,851.50	99,257.48
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,192.91	4,274.04	63,722.42	17,297.34	86,486.72
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,486.92	12,481.24	115,635.66	32,650.95	163,254.77
405b	LAUNCHING OF GIRDER	TON	57.23	486.64	-	135.97	679.84
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	104.50	-	269.40	93.48	467.38
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	104.50	-	264.42	92.23	461.15
406c	STEEL EXPANSION JOINTS	KG	8.56	21.04	102.33	32.98	164.91
406d	WATER STOPS 6" SIZE	M	90.04	-	403.82	123.46	617.32
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	36.18	-	2,788.28	706.12	3,530.58
406g	STEEL OR METAL BEARING DEVICES	KG	18.92	55.55	123.57	49.51	247.56
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	306.13	1,439.50	662.50	602.03	3,010.17
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	459.20	2,159.25	993.76	903.05	4,515.25
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	459.20	2,159.25	757.03	843.87	4,219.34

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	765.33	3,598.75	928.96	1,323.26	6,616.29
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	655.99	4,253.63	1,108.64	1,504.57	7,522.83
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,147.99	6,025.34	1,206.26	2,094.90	10,474.48
407h	PILE LOAD TEST UP TO 120 TON	EACH	20,443.16	40,036.45	90,496.88	37,744.12	188,720.61
407i	PILE LOAD TEST UP TO 240 TON	EACH	37,524.80	40,036.45	180,993.76	64,638.75	323,193.76
407j	PILE LOAD TEST UP TO 360 TON	EACH	54,606.44	43,882.72	271,490.64	92,494.95	462,474.75
407k	CONFIRMATORY BORING (NX SIZE)	M	173.28	1,323.15	6.24	375.67	1,878.33
410	BRICK WORK	CM	279.41	236.06	2,349.17	716.16	3,580.78
411a	STONE MASONRY RANDOM DRY	CM	245.78	91.36	567.05	226.05	1,130.24
411b	STONE MASONRY RANDOM WITH MORTAR	CM	263.03	139.82	1,329.60	433.11	2,165.56
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	318.24	91.36	630.17	259.94	1,299.72
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	371.72	139.82	1,418.13	482.42	2,412.08
411g	ROLL POINTING	SM	58.49	9.69	35.71	25.97	129.87
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	499.39	221.29	1,331.94	513.15	2,565.77
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	200.09	366.20	553.23	279.88	1,399.40
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	194.01	480.94	714.60	347.39	1,736.93
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	194.50	791.50	962.95	487.24	2,436.18
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	202.70	972.63	1,441.39	654.18	3,270.89
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	234.70	949.38	2,077.43	815.38	4,076.88
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	291.76	1,171.86	3,208.53	1,168.04	5,840.19
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	377.57	1,313.30	4,023.23	1,428.52	7,142.62
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	446.16	1,594.72	5,127.78	1,792.16	8,960.82
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	525.86	1,860.51	7,926.51	2,578.22	12,891.09
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	200.09	423.57	568.71	298.09	1,490.47
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	194.01	480.94	668.66	335.90	1,679.51
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	189.08	791.50	915.13	473.93	2,369.63

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	202.70	972.63	1,477.81	663.28	3,316.42
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	234.70	949.38	2,859.41	1,010.87	5,054.36
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	291.76	1,171.86	3,945.06	1,352.17	6,760.85
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	377.57	1,313.30	5,335.45	1,756.58	8,782.89
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	446.16	1,594.72	7,236.57	2,319.36	11,596.81
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	525.86	1,860.51	10,181.46	3,141.96	15,709.78
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	81.66	103.49	377.16	140.58	702.89
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	712.31	511.20	2,816.42	1,009.98	5,049.91
507a	STEEL WIRE MESH FOR GABIONS	KG	4.81	-	120.49	31.33	156.63
507b	ROCK FILL IN GABIONS	CM	86.21	-	392.68	119.72	598.60
508a	BRICK PAVING (SINGLE COURSE)	SM	94.09	26.90	194.55	78.88	394.42
508b	BRICK PAVING (DOUBLE COURSE)	SM	166.55	26.90	385.74	144.80	723.99
509a	RIP RAP CLASS "A"	CM	404.82	-	480.86	221.42	1,107.10
509b	RIP RAP CLASS "B"	CM	389.41	-	477.02	216.61	1,083.04
509c	RIP RAP CLASS "C"	CM	390.64	-	480.86	217.88	1,089.38
509d	GROUTED RIP RAP CLASS "A"	CM	494.88	84.24	1,579.78	539.73	2,698.63
509e	GROUTED RIP RAP CLASS "B"	CM	475.26	67.39	1,462.20	501.21	2,506.07
509f	GROUTED RIP RAP CLASS "C"	CM	468.51	56.16	1,490.03	503.68	2,518.38
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	700.92	295.88	3,209.79	1,051.65	5,258.24
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	43.47	167.47	356.71	141.91	709.55
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	91.57	322.32	-	103.47	517.36
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	130.24	57.10	78.14	66.37	331.85
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	166.71	73.09	100.02	84.95	424.77
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	209.49	150.62	318.34	169.61	848.06
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	261.86	188.27	397.93	212.02	1,060.08
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	256.32	498.72	1,776.22	632.82	3,164.09

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	848.24	567.97	3,786.66	1,300.72	6,503.59
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	123.37	75.65	348.03	136.76	683.81
603	BRICK EDGING	M	7.75	-	30.34	9.52	47.60
604a	METAL GUARD RAIL	M	16.96	59.95	1,492.92	392.46	1,962.29
604b	METAL GUARD RAIL END PIECES	EACH	21.16	-	1,138.10	289.82	1,449.08
604d	STEEL POST OF METAL GUARD RAIL	EACH	79.84	805.79	3,566.86	1,113.12	5,565.60
605a	CONCRETE BEAM GUARD RAIL	M	64.63	25.40	574.61	166.16	830.80
605c	CONCRETE POST FOR GUARD RAIL	M	79.35	22.64	575.19	169.30	846.48
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	211.02	213.74	6,377.73	1,700.62	8,503.12
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	62.47	320.61	8,429.01	2,203.02	11,015.12
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	211.02	453.76	11,105.24	2,942.50	14,712.52
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	673.68	503.34	19,236.10	5,103.28	25,516.41
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	134.74	100.67	8,407.52	2,160.73	10,803.66
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	255.38	-	1,134.09	347.37	1,736.83
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	255.38	-	1,701.14	489.13	2,445.64
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.56	5.03	15.40	5.75	28.73
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.85	3.40	37.11	10.34	51.71
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.56	5.03	20.54	7.03	35.17
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.85	3.40	49.50	13.44	67.19
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	64.74	4.26	148.77	54.44	272.22
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	64.74	8.15	467.64	135.13	675.67
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.21	7.44	21.41	8.01	40.07
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.21	8.29	63.09	18.65	93.23
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.21	5.98	28.55	9.43	47.16
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.21	8.29	84.12	23.90	119.52
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	64.74	3.04	206.73	68.63	343.14

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	64.74	6.45	795.53	216.68	1,083.40
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	54.39	3.04	99.18	39.15	195.77
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	54.39	6.45	312.23	93.27	466.34
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	54.39	3.04	137.82	48.81	244.07
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	54.39	6.45	531.15	148.00	740.00
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.55	69.34	184.72	65.65	328.26
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.55	69.34	223.31	75.30	376.49
610b	RIGHT OF WAY MARKER	EACH	90.88	101.77	263.60	114.06	570.31
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	543.26	811.70	1,868.12	805.77	4,028.86
610d	TEN KILOMETRE POST	EACH	1,052.03	1,623.40	3,986.39	1,665.46	8,327.28
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	117.80	76.10	896.87	272.69	1,363.46

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

NAWABSHAH
(49)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.60	8.97	-	2.39	11.96
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.37	150.86	1.06	39.57	197.87
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	17.64	391.92	2.39	102.99	514.93
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	70.56	1,567.67	9.55	411.95	2,059.73
103	STRIPPING	CM	2.34	81.82	-	21.04	105.19
104	COMPACTION OF NATURAL GROUND	SM	0.34	8.55	0.75	2.41	12.05
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.70	118.44	-	30.78	153.92
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	119.83	272.97	46.20	109.75	548.74
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	15.89	294.98	-	77.72	388.59
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.49	228.89	-	59.85	299.23
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.84	105.42	-	27.32	136.58
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	119.83	272.97	46.20	109.75	548.74
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.07	275.34	-	73.60	368.01
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.11	229.91	-	59.50	297.52
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.44	120.24	0.37	32.01	160.07
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	56.95	245.80	64.37	91.78	458.91
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	105.93	367.50	30.80	126.06	630.29
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	88.83	257.01	-	86.46	432.30
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	54.48	211.67	-	66.54	332.68
107d	GRANULAR BACK FILL	CM	30.18	119.94	380.41	132.63	663.17
107e	COMMON BACK FILL	CM	20.50	55.41	4.99	20.23	101.13
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.59	152.01	4.99	40.90	204.50
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	18.63	418.69	49.36	121.67	608.36
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.97	364.32	2.37	95.17	475.83
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.42	323.09	-	83.88	419.38
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.33	154.80	7.84	42.49	212.47

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.92	66.06	4.99	19.24	96.21
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.21	97.15	2.97	28.33	141.66
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.32	23.75	1.43	6.62	33.12
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.98	15.94	0.76	4.42	22.10
110	IMPROVED SUB-GRADE	CM	9.34	104.23	43.16	39.18	195.91
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.80	13.24	0.78	3.70	18.52
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.19	13.62	0.88	3.92	19.61
201	GRANULAR SUB-BASE	CM	7.47	224.59	411.59	160.91	804.56
202	AGGREGATE BASE	CM	9.02	287.87	788.61	271.37	1,356.86
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	60.42	1,311.60	5,461.40	1,708.36	8,541.78
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	62.83	1,311.60	5,841.05	1,803.87	9,019.34
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	67.49	1,369.89	5,452.63	1,722.50	8,612.51
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	67.49	1,365.01	5,965.01	1,849.37	9,246.87
204b	CEMENT STABILIZED BASE	CM	26.82	480.68	1,047.41	388.73	1,943.64
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	225.88	772.74	49,543.53	12,635.54	63,177.69
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	225.88	772.74	48,007.32	12,251.49	61,257.43
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	74.89	92.96	908.19	269.01	1,345.06
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	129.33	2,134.12	5,103.60	1,841.76	9,208.80
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	81.41	105.48	729.11	229.00	1,145.00
207a	DEEP PATCHING (0-15 cm)	SM	1.66	39.69	1.23	10.65	53.24
207b	DEEP PATCHING (16-30 cm)	SM	1.66	34.94	1.23	9.46	47.30
208	REINSTATEMENT OF ROAD SURFACE	SM	1.79	49.93	0.55	13.07	65.33
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.19	96.89	0.67	24.93	124.67
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.44	19.38	0.13	4.99	24.93
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	35.16	9.19	45.95
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	39.25	10.21	51.05

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.72	3.83	19.14
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.17	4.44	22.21
304a	SINGLE SURFACE TREATMENT	SM	0.73	6.52	69.96	19.30	96.50
304b	DOUBLE SURFACE TREATMENT	SM	1.07	12.21	135.51	37.20	185.98
304c	TRIPLE SURFACE TREATMENT	SM	1.81	17.13	154.62	43.39	216.95
304d	SEAL COAT	SM	0.68	3.54	49.65	13.47	67.33
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	58.23	1,294.58	6,427.77	1,945.14	9,725.71
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	58.23	1,251.29	6,955.24	2,066.19	10,330.95
307a	DENSE GRADED HOT BIT-MAC	CM	142.02	316.05	5,467.94	1,481.50	7,407.51
307b	OPEN GRADED HOT BIT-MAC	CM	142.02	316.05	5,302.15	1,440.06	7,200.28
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	25.68	543.36	1,798.61	591.91	2,959.56
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	23.66	560.93	41,785.12	10,592.43	52,962.13
309a	COLD MILLING, 0 - 30 mm	SM	0.91	22.13	7.55	7.65	38.23
309b	COLD MILLING, 0 - 50 mm	SM	1.51	36.88	12.58	12.74	63.72
309c	COLD MILLING, 0 - 70 mm	SM	2.27	55.33	18.87	19.12	95.59
401a1i	CONCRETE CLASS "A1" (Underground)	CM	473.01	923.86	3,309.07	1,176.48	5,882.42
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	473.01	923.86	3,561.32	1,239.55	6,197.73
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	473.01	923.86	4,065.81	1,365.67	6,828.35
401a2i	CONCRETE CLASS "A2" (Underground)	CM	473.01	923.86	3,587.32	1,246.05	6,230.24
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	473.01	923.86	3,839.57	1,309.11	6,545.55
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	473.01	923.86	4,344.06	1,435.23	7,176.17
401a3i	CONCRETE CLASS "A3" (Underground)	CM	473.01	923.86	3,865.57	1,315.61	6,578.05
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	473.01	923.86	4,117.82	1,378.67	6,893.36
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	473.01	923.86	4,622.31	1,504.80	7,523.98
401b	CONCRETE CLASS "B"	CM	609.15	672.22	2,644.90	981.57	4,907.83
401ci	CONCRETE CLASS "C" (Underground)	CM	452.41	419.49	2,932.17	951.02	4,755.08

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	452.41	419.49	3,039.75	977.91	4,889.56
401ciii	CONCRETE CLASS "C" (Elevated)	CM	452.41	419.49	3,254.92	1,031.70	5,158.52
401d	CONCRETE CLASS "D1"	CM	726.22	1,106.97	4,321.58	1,538.69	7,693.46
401e	CONCRETE CLASS "Y"	CM	980.81	419.49	3,884.01	1,321.08	6,605.38
401f	LEAN CONCRETE	CM	371.20	424.53	2,074.98	717.68	3,588.39
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,477.74	790.24	4,227.71	1,623.92	8,119.62
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,477.74	790.24	4,784.21	1,763.05	8,815.24
401gii	PRECAST CONCRETE CLASS "B"	CM	1,477.74	790.24	4,045.29	1,578.32	7,891.59
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,477.74	790.24	5,062.46	1,832.61	9,163.06
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,477.74	790.24	5,340.71	1,902.17	9,510.87
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,477.74	790.24	5,618.96	1,971.74	9,858.68
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,446.35	669.81	68,368.00	17,621.04	88,105.19
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,446.35	669.81	77,818.00	19,983.54	99,917.69
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,168.79	4,274.04	64,191.87	17,408.68	87,043.38
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,285.76	12,481.24	115,643.46	32,602.61	163,013.06
405b	LAUNCHING OF GIRDER	TON	52.52	486.64	-	134.79	673.96
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	99.98	-	271.36	92.83	464.17
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	99.98	-	266.22	91.55	457.74
406c	STEEL EXPANSION JOINTS	KG	8.25	21.04	102.94	33.06	165.29
406d	WATER STOPS 6" SIZE	M	90.27	-	404.03	123.58	617.88
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	34.30	-	2,793.60	706.97	3,534.87
406g	STEEL OR METAL BEARING DEVICES	KG	17.44	55.55	124.11	49.27	246.37
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	287.39	1,439.50	657.42	596.08	2,980.39
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	431.09	2,159.25	986.13	894.12	4,470.58
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	431.09	2,159.25	749.45	834.95	4,174.73

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	718.48	3,598.75	916.33	1,308.39	6,541.95
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	615.84	4,253.63	1,086.64	1,489.03	7,445.14
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,077.72	6,025.34	1,187.32	2,072.59	10,362.97
407h	PILE LOAD TEST UP TO 120 TON	EACH	18,179.62	40,036.45	90,496.88	37,178.24	185,891.18
407i	PILE LOAD TEST UP TO 240 TON	EACH	33,083.62	40,036.45	180,993.76	63,528.46	317,642.28
407j	PILE LOAD TEST UP TO 360 TON	EACH	47,987.62	43,882.72	271,490.64	90,840.24	454,201.22
407k	CONFIRMATORY BORING (NX SIZE)	M	155.61	1,323.15	6.24	371.25	1,856.24
410	BRICK WORK	CM	266.30	236.06	2,391.70	723.51	3,617.56
411a	STONE MASONRY RANDOM DRY	CM	235.66	91.36	618.04	236.26	1,181.32
411b	STONE MASONRY RANDOM WITH MORTAR	CM	252.91	139.82	1,433.75	456.62	2,283.09
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	303.28	91.36	683.98	269.65	1,348.27
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	354.34	139.82	1,511.81	501.49	2,507.46
411g	ROLL POINTING	SM	55.67	9.69	36.61	25.49	127.46
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	472.33	221.29	1,425.63	529.81	2,649.05
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	184.13	366.20	554.89	276.30	1,381.52
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	177.62	480.94	716.59	343.79	1,718.94
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	180.46	791.50	965.28	484.31	2,421.55
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	186.64	972.63	1,444.11	650.84	3,254.21
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	215.39	949.38	2,080.15	811.23	4,056.14
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	267.48	1,171.86	3,212.46	1,162.95	5,814.75
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	346.15	1,313.30	4,027.14	1,421.65	7,108.23
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	408.01	1,594.72	5,132.53	1,783.81	8,919.06
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	481.47	1,860.51	7,932.05	2,568.51	12,842.53
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	184.13	423.57	572.04	294.93	1,474.67
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	177.62	480.94	670.65	332.30	1,661.51
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	175.12	791.50	917.46	471.02	2,355.09

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	186.64	972.63	1,479.93	659.80	3,298.99
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	215.39	949.38	2,862.43	1,006.80	5,033.99
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	267.48	1,171.86	3,948.99	1,347.08	6,735.42
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	346.15	1,313.30	5,339.36	1,749.70	8,748.51
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	408.01	1,594.72	7,241.32	2,311.01	11,555.05
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	481.47	1,860.51	10,187.00	3,132.24	15,661.22
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	76.95	103.49	413.05	148.37	741.86
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	694.43	511.20	2,902.54	1,027.04	5,135.20
507a	STEEL WIRE MESH FOR GABIONS	KG	4.63	-	121.03	31.41	157.07
507b	ROCK FILL IN GABIONS	CM	79.31	-	433.76	128.27	641.34
508a	BRICK PAVING (SINGLE COURSE)	SM	88.18	26.90	194.55	77.41	387.03
508b	BRICK PAVING (DOUBLE COURSE)	SM	155.80	26.90	385.74	142.11	710.55
509a	RIP RAP CLASS "A"	CM	381.80	-	531.85	228.41	1,142.07
509b	RIP RAP CLASS "B"	CM	366.16	-	527.60	223.44	1,117.20
509c	RIP RAP CLASS "C"	CM	367.24	-	531.85	224.77	1,123.86
509d	GROUTED RIP RAP CLASS "A"	CM	465.24	84.24	1,664.00	553.37	2,766.84
509e	GROUTED RIP RAP CLASS "B"	CM	446.71	67.39	1,542.55	514.16	2,570.81
509f	GROUTED RIP RAP CLASS "C"	CM	439.88	56.16	1,572.03	517.02	2,585.09
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	663.62	295.88	3,291.16	1,062.67	5,313.33
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	39.75	167.47	380.82	147.01	735.05
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	85.63	322.32	-	101.99	509.93
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	123.82	57.10	86.43	66.84	334.19
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	158.49	73.09	110.62	85.55	427.76
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	199.34	150.62	334.08	171.01	855.04
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	249.18	188.27	417.60	213.76	1,068.80
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	250.73	498.72	1,864.73	653.55	3,267.73

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	812.26	567.97	3,898.09	1,319.58	6,597.89
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	117.93	75.65	363.64	139.30	696.52
603	BRICK EDGING	M	7.35	-	30.34	9.42	47.11
604a	METAL GUARD RAIL	M	16.02	59.95	1,492.92	392.22	1,961.12
604b	METAL GUARD RAIL END PIECES	EACH	19.96	-	1,138.10	289.52	1,447.58
604d	STEEL POST OF METAL GUARD RAIL	EACH	77.32	805.79	3,566.86	1,112.49	5,562.46
605a	CONCRETE BEAM GUARD RAIL	M	59.92	25.40	584.22	167.39	836.93
605c	CONCRETE POST FOR GUARD RAIL	M	73.58	22.64	586.66	170.72	853.60
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	194.61	213.74	6,381.95	1,697.58	8,487.88
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	60.65	320.61	8,446.50	2,206.94	11,034.71
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	194.61	453.76	11,135.18	2,945.89	14,729.45
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	607.94	503.34	19,283.01	5,098.57	25,492.86
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	121.59	100.67	8,419.28	2,160.38	10,801.92
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	257.78	-	1,134.80	348.15	1,740.73
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	257.78	-	1,702.21	490.00	2,449.98
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.49	5.03	15.40	5.73	28.65
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.83	3.40	37.15	10.35	51.73
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.49	5.03	20.55	7.02	35.09
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.83	3.40	49.55	13.45	67.23
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	64.05	4.26	148.81	54.28	271.41
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	64.05	8.15	468.17	135.09	675.47
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.12	7.44	21.42	7.99	39.96
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.12	8.29	63.09	18.62	93.12
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.12	5.98	28.55	9.41	47.06
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.12	8.29	84.12	23.88	119.40
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	64.05	3.04	206.77	68.47	342.34

Rate Analysis Summary (Construction)

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	64.05	6.45	795.53	216.51	1,082.54
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	53.70	3.04	99.21	38.99	194.94
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	53.70	6.45	312.58	93.18	465.92
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	53.70	3.04	137.85	48.65	243.24
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	53.70	6.45	531.15	147.83	739.13
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.57	69.34	184.78	65.67	328.36
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.57	69.34	223.37	75.32	376.60
610b	RIGHT OF WAY MARKER	EACH	83.30	101.77	271.93	114.25	571.26
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	510.49	811.70	1,939.24	815.36	4,076.78
610d	TEN KILOMETRE POST	EACH	986.48	1,623.40	4,126.96	1,684.21	8,421.06
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	112.54	76.10	903.47	273.03	1,365.14

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

NAUSHERO FEROZ
(49-B)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.60	8.97	-	2.39	11.96
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.35	150.86	1.06	39.57	197.85
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	17.60	391.92	2.39	102.98	514.88
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	70.41	1,567.67	9.55	411.91	2,059.54
103	STRIPPING	CM	2.30	81.82	-	21.03	105.14
104	COMPACTION OF NATURAL GROUND	SM	0.34	8.55	0.75	2.41	12.05
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.72	118.44	-	30.79	153.95
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	118.77	272.97	46.20	109.49	547.43
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	15.47	294.98	-	77.61	388.07
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.20	228.89	-	59.77	298.86
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.87	105.42	-	27.32	136.61
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	118.77	272.97	46.20	109.49	547.43
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	18.94	275.34	-	73.57	367.85
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	7.87	229.91	-	59.44	297.22
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.29	120.24	0.37	31.98	159.89
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	54.49	245.80	64.37	91.17	455.83
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	105.23	367.50	30.80	125.88	629.42
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	88.10	257.01	-	86.28	431.38
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	54.12	211.67	-	66.45	332.23
107d	GRANULAR BACK FILL	CM	30.35	119.94	326.10	119.10	595.48
107e	COMMON BACK FILL	CM	20.60	55.41	4.99	20.25	101.25
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.43	152.01	4.99	40.86	204.29
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	18.26	418.69	49.36	121.58	607.90
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.70	364.32	2.37	95.10	475.48
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.18	323.09	-	83.82	419.08
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.16	154.80	7.84	42.45	212.26

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.76	66.06	4.99	19.20	96.00
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	12.91	97.15	2.97	28.26	141.29
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.29	23.75	1.43	6.62	33.09
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.95	15.94	0.76	4.41	22.07
110	IMPROVED SUB-GRADE	CM	9.12	104.23	55.20	42.14	210.69
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.78	13.24	0.78	3.70	18.50
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.15	13.62	0.88	3.91	19.55
201	GRANULAR SUB-BASE	CM	7.31	224.59	442.82	168.68	843.40
202	AGGREGATE BASE	CM	8.90	287.87	678.43	243.80	1,219.00
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	59.86	1,311.60	5,433.16	1,701.15	8,505.77
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	62.26	1,311.60	5,819.70	1,798.39	8,991.95
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	66.72	1,369.89	5,424.31	1,715.23	8,576.15
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	66.72	1,365.01	5,944.02	1,843.94	9,219.69
204b	CEMENT STABILIZED BASE	CM	26.51	480.68	1,000.33	376.88	1,884.39
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	224.36	772.74	49,692.00	12,672.28	63,361.38
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	224.36	772.74	48,155.79	12,288.22	61,441.11
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	74.43	92.96	884.18	262.89	1,314.46
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	127.32	2,134.12	5,080.75	1,835.55	9,177.74
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	81.14	105.48	678.89	216.38	1,081.90
207a	DEEP PATCHING (0-15 cm)	SM	1.61	39.69	1.23	10.63	53.17
207b	DEEP PATCHING (16-30 cm)	SM	1.61	34.94	1.23	9.45	47.23
208	REINSTATEMENT OF ROAD SURFACE	SM	1.76	49.93	0.55	13.06	65.30
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.13	96.89	0.67	24.92	124.60
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.43	19.38	0.13	4.98	24.92
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	35.27	9.22	46.08
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.32	39.37	10.24	51.20

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.76	3.84	19.20
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.22	4.45	22.27
304a	SINGLE SURFACE TREATMENT	SM	0.73	6.52	70.02	19.32	96.59
304b	DOUBLE SURFACE TREATMENT	SM	1.06	12.21	135.54	37.20	186.02
304c	TRIPLE SURFACE TREATMENT	SM	1.79	17.13	154.64	43.39	216.96
304d	SEAL COAT	SM	0.68	3.54	49.67	13.47	67.37
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	57.57	1,294.58	6,404.64	1,939.20	9,695.99
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	57.57	1,251.29	6,930.92	2,059.95	10,299.73
307a	DENSE GRADED HOT BIT-MAC	CM	139.57	316.05	5,444.33	1,474.99	7,374.93
307b	OPEN GRADED HOT BIT-MAC	CM	139.57	316.05	5,283.79	1,434.85	7,174.25
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	24.82	543.36	1,797.56	591.44	2,957.18
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	23.89	560.93	41,938.00	10,630.71	53,153.53
309a	COLD MILLING, 0 - 30 mm	SM	0.90	22.13	7.55	7.64	38.22
309b	COLD MILLING, 0 - 50 mm	SM	1.50	36.88	12.58	12.74	63.71
309c	COLD MILLING, 0 - 70 mm	SM	2.25	55.33	18.87	19.11	95.56
401a1i	CONCRETE CLASS "A1" (Underground)	CM	444.11	923.86	3,289.73	1,164.43	5,822.13
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	444.11	923.86	3,541.98	1,227.49	6,137.44
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	444.11	923.86	4,046.47	1,353.61	6,768.06
401a2i	CONCRETE CLASS "A2" (Underground)	CM	444.11	923.86	3,567.98	1,233.99	6,169.95
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	444.11	923.86	3,820.23	1,297.05	6,485.26
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	444.11	923.86	4,324.72	1,423.18	7,115.88
401a3i	CONCRETE CLASS "A3" (Underground)	CM	444.11	923.86	3,846.23	1,303.55	6,517.76
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	444.11	923.86	4,098.48	1,366.61	6,833.07
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	444.11	923.86	4,602.97	1,492.74	7,463.69
401b	CONCRETE CLASS "B"	CM	590.86	672.22	2,636.56	974.91	4,874.54
401ci	CONCRETE CLASS "C" (Underground)	CM	430.04	419.49	2,913.71	940.81	4,704.05

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	430.04	419.49	3,021.30	967.71	4,838.53
401ciii	CONCRETE CLASS "C" (Elevated)	CM	430.04	419.49	3,236.47	1,021.50	5,107.49
401d	CONCRETE CLASS "D1"	CM	668.60	1,106.97	4,305.20	1,520.19	7,600.96
401e	CONCRETE CLASS "Y"	CM	906.82	419.49	3,862.25	1,297.14	6,485.70
401f	LEAN CONCRETE	CM	362.68	424.53	2,066.50	713.43	3,567.14
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,425.86	790.24	4,205.50	1,605.40	8,027.01
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,425.86	790.24	4,762.00	1,744.53	8,722.64
401gii	PRECAST CONCRETE CLASS "B"	CM	1,425.86	790.24	4,035.16	1,562.82	7,814.09
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,425.86	790.24	5,040.25	1,814.09	9,070.45
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,425.86	790.24	5,318.50	1,883.65	9,418.26
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,425.86	790.24	5,596.75	1,953.21	9,766.07
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,326.65	669.81	68,368.00	17,591.12	87,955.58
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,326.65	669.81	77,818.00	19,953.62	99,768.08
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,066.56	4,274.04	64,238.03	17,394.66	86,973.30
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,190.12	12,481.24	115,649.37	32,580.18	162,900.90
405b	LAUNCHING OF GIRDER	TON	50.01	486.64	-	134.16	670.81
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	93.14	-	273.68	91.70	458.52
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	93.14	-	268.37	90.38	451.88
406c	STEEL EXPANSION JOINTS	KG	7.61	21.04	102.83	32.87	164.36
406d	WATER STOPS 6" SIZE	M	81.88	-	404.30	121.54	607.72
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	35.53	-	2,797.47	708.25	3,541.25
406g	STEEL OR METAL BEARING DEVICES	KG	16.97	55.55	124.03	49.14	245.69
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	272.34	1,439.50	662.22	593.51	2,967.57
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	408.51	2,159.25	993.33	890.27	4,451.36
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	408.51	2,159.25	756.70	831.12	4,155.58

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	680.85	3,598.75	928.41	1,302.00	6,510.02
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	583.59	4,253.63	1,106.96	1,486.05	7,430.23
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,021.28	6,025.34	1,205.45	2,063.02	10,315.08
407h	PILE LOAD TEST UP TO 120 TON	EACH	18,198.75	40,036.45	84,648.40	35,720.90	178,604.50
407i	PILE LOAD TEST UP TO 240 TON	EACH	33,102.75	40,036.45	169,296.80	60,609.00	303,045.00
407j	PILE LOAD TEST UP TO 360 TON	EACH	48,006.75	43,882.72	253,945.20	86,458.67	432,293.34
407k	CONFIRMATORY BORING (NX SIZE)	M	150.29	1,323.15	6.24	369.92	1,849.60
410	BRICK WORK	CM	275.65	236.06	2,373.79	721.37	3,606.87
411a	STONE MASONRY RANDOM DRY	CM	238.02	91.36	577.25	226.66	1,133.30
411b	STONE MASONRY RANDOM WITH MORTAR	CM	256.51	139.82	1,401.83	449.54	2,247.69
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	308.11	91.36	639.92	259.85	1,299.24
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	361.64	139.82	1,474.39	493.96	2,469.81
411g	ROLL POINTING	SM	58.16	9.69	36.75	26.15	130.76
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	483.32	221.29	1,388.21	523.20	2,616.02
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	184.84	366.20	555.16	276.55	1,382.75
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	178.22	480.94	716.92	344.02	1,720.11
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	180.01	791.50	965.67	484.29	2,421.47
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	186.23	972.63	1,444.56	650.85	3,254.27
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	214.98	949.38	2,080.60	811.24	4,056.20
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	267.63	1,171.86	3,213.12	1,163.15	5,815.76
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	346.34	1,313.30	4,027.79	1,421.86	7,109.29
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	407.36	1,594.72	5,133.32	1,783.85	8,919.24
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	482.77	1,860.51	7,932.97	2,569.06	12,845.31
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	184.84	423.57	572.59	295.25	1,476.24
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	178.22	480.94	670.98	332.54	1,662.68
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	175.28	791.50	917.85	471.16	2,355.78

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	186.23	972.63	1,480.28	659.78	3,298.92
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	214.98	949.38	2,862.93	1,006.82	5,034.11
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	267.63	1,171.86	3,949.65	1,347.28	6,736.42
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	346.34	1,313.30	5,340.01	1,749.91	8,749.56
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	407.36	1,594.72	7,242.11	2,311.05	11,555.23
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	482.77	1,860.51	10,187.92	3,132.80	15,664.00
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	76.67	103.49	417.03	149.30	746.49
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	658.35	511.20	2,894.20	1,015.94	5,079.69
507a	STEEL WIRE MESH FOR GABIONS	KG	4.49	-	121.47	31.49	157.44
507b	ROCK FILL IN GABIONS	CM	78.89	-	400.44	119.83	599.16
508a	BRICK PAVING (SINGLE COURSE)	SM	90.30	26.90	188.40	76.40	382.01
508b	BRICK PAVING (DOUBLE COURSE)	SM	160.39	26.90	374.11	140.35	701.75
509a	RIP RAP CLASS "A"	CM	393.50	-	491.06	221.14	1,105.71
509b	RIP RAP CLASS "B"	CM	377.49	-	487.13	216.16	1,080.78
509c	RIP RAP CLASS "C"	CM	379.14	-	491.06	217.55	1,087.76
509d	GROUTED RIP RAP CLASS "A"	CM	479.40	84.24	1,628.75	548.10	2,740.48
509e	GROUTED RIP RAP CLASS "B"	CM	461.00	67.39	1,507.05	508.86	2,544.30
509f	GROUTED RIP RAP CLASS "C"	CM	454.25	56.16	1,536.41	511.71	2,558.53
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	656.32	295.88	3,283.23	1,058.86	5,294.29
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	39.17	167.47	326.28	133.23	666.16
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	83.22	322.32	-	101.38	506.92
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	125.85	57.10	79.80	65.69	328.44
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	161.09	73.09	102.14	84.08	420.40
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	203.91	150.62	326.70	170.31	851.53
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	254.89	188.27	408.37	212.88	1,064.41
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	235.43	498.72	1,854.74	647.22	3,236.12

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	783.39	567.97	3,886.54	1,309.47	6,547.37
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	114.26	75.65	361.64	137.89	689.45
603	BRICK EDGING	M	7.39	-	29.86	9.31	46.56
604a	METAL GUARD RAIL	M	15.63	59.95	1,492.92	392.13	1,960.63
604b	METAL GUARD RAIL END PIECES	EACH	19.18	-	1,138.10	289.32	1,446.60
604d	STEEL POST OF METAL GUARD RAIL	EACH	76.08	805.79	3,566.86	1,112.18	5,560.91
605a	CONCRETE BEAM GUARD RAIL	M	59.06	25.40	583.33	166.95	834.74
605c	CONCRETE POST FOR GUARD RAIL	M	72.52	22.64	585.58	170.18	850.92
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	192.38	213.74	6,381.69	1,696.95	8,484.77
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	58.54	320.61	8,447.82	2,206.74	11,033.72
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	192.38	453.76	11,137.46	2,945.90	14,729.50
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	600.90	503.34	19,288.92	5,098.29	25,491.45
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	120.18	100.67	8,423.47	2,161.08	10,805.39
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	250.66	-	1,135.70	346.59	1,732.95
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	250.66	-	1,703.56	488.55	2,442.77
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.40	5.03	15.41	5.71	28.54
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.80	3.40	37.20	10.35	51.76
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.40	5.03	20.56	7.00	34.98
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.80	3.40	49.62	13.46	67.28
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	58.51	4.26	148.87	52.91	264.54
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	58.51	8.15	468.83	133.87	669.36
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.00	7.44	21.42	7.96	39.82
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.00	8.29	63.09	18.59	92.97
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.00	5.98	28.56	9.38	46.92
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.00	8.29	84.12	23.85	119.26
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	58.51	3.04	206.83	67.09	335.47

Rate Analysis Summary (Construction)

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	58.51	6.45	795.53	215.12	1,075.60
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	49.26	3.04	99.25	37.89	189.44
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	49.26	6.45	313.02	92.18	460.92
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	49.26	3.04	137.89	47.55	237.74
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	49.26	6.45	531.15	146.72	733.58
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.04	69.34	184.79	65.54	327.71
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.04	69.34	223.38	75.19	375.95
610b	RIGHT OF WAY MARKER	EACH	82.35	101.77	271.00	113.78	568.90
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	501.22	811.70	1,931.91	811.21	4,056.04
610d	TEN KILOMETRE POST	EACH	959.31	1,623.40	4,111.77	1,673.62	8,368.09
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	108.73	76.10	902.79	271.90	1,359.52

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

OMAR KOT
(50-A)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.61	8.97	-	2.40	11.98
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.18	150.86	1.06	39.53	197.63
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	17.70	391.92	2.39	103.00	515.01
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	70.81	1,567.67	9.55	412.01	2,060.04
103	STRIPPING	CM	2.14	81.82	-	20.99	104.94
104	COMPACTION OF NATURAL GROUND	SM	0.30	8.55	0.75	2.40	12.01
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	3.76	118.44	-	30.55	152.74
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	106.04	272.97	46.20	106.30	531.51
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	14.66	294.98	-	77.41	387.06
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	9.53	228.89	-	59.61	298.03
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.07	105.42	-	27.12	135.62
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	106.04	272.97	46.20	106.30	531.51
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	16.86	275.34	-	73.05	365.24
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	7.41	229.91	-	59.33	296.65
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.12	120.24	0.37	31.68	158.42
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	51.35	245.80	64.37	90.38	451.90
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	93.64	367.50	30.80	122.99	614.93
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	79.25	257.01	-	84.07	420.33
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	48.16	211.67	-	64.96	324.78
107d	GRANULAR BACK FILL	CM	28.74	119.94	496.32	161.25	806.26
107e	COMMON BACK FILL	CM	21.34	55.41	4.99	20.44	102.18
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	5.81	152.01	4.99	40.71	203.53
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	17.06	418.69	49.36	121.28	606.39
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	12.79	364.32	2.37	94.87	474.35
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	11.37	323.09	-	83.61	418.07
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	6.66	154.80	7.84	42.33	211.63

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108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.25	66.06	4.99	19.07	95.37
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	12.23	97.15	2.97	28.09	140.43
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.17	23.75	1.43	6.59	32.93
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.85	15.94	0.76	4.39	21.94
110	IMPROVED SUB-GRADE	CM	8.53	104.23	55.20	41.99	209.96
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.72	13.24	0.78	3.69	18.43
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.06	13.62	0.88	3.89	19.45
201	GRANULAR SUB-BASE	CM	6.75	224.59	552.28	195.90	979.52
202	AGGREGATE BASE	CM	8.01	287.87	843.70	284.89	1,424.47
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	61.34	1,311.60	5,583.63	1,739.14	8,695.71
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	63.37	1,311.60	5,960.20	1,833.79	9,168.96
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	67.64	1,369.89	5,575.10	1,753.16	8,765.79
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	67.64	1,365.01	6,083.92	1,879.14	9,395.70
204b	CEMENT STABILIZED BASE	CM	24.48	480.68	1,168.03	418.30	2,091.48
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	199.14	772.74	49,604.13	12,644.00	63,220.02
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	199.14	772.74	48,067.92	12,259.95	61,299.75
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	80.40	92.96	1,016.27	297.41	1,487.04
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	125.23	2,134.12	5,234.46	1,873.45	9,367.25
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	88.63	105.48	826.69	255.20	1,276.00
207a	DEEP PATCHING (0-15 cm)	SM	1.47	39.69	1.23	10.60	53.00
207b	DEEP PATCHING (16-30 cm)	SM	1.47	34.94	1.23	9.41	47.06
208	REINSTATEMENT OF ROAD SURFACE	SM	1.60	49.93	0.55	13.02	65.09
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	1.76	96.89	0.67	24.83	124.14
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.35	19.38	0.13	4.97	24.83
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.25	1.32	35.21	9.19	45.97
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.24	1.32	39.30	10.21	51.07

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.10	0.49	14.73	3.83	19.15
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.10	0.49	17.19	4.44	22.22
304a	SINGLE SURFACE TREATMENT	SM	0.65	6.52	70.59	19.44	97.20
304b	DOUBLE SURFACE TREATMENT	SM	0.94	12.21	137.30	37.61	188.07
304c	TRIPLE SURFACE TREATMENT	SM	1.59	17.13	156.73	43.86	219.31
304d	SEAL COAT	SM	0.60	3.54	49.94	13.52	67.60
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	57.58	1,294.58	6,551.69	1,975.96	9,879.80
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	57.58	1,251.29	7,084.83	2,098.42	10,492.12
307a	DENSE GRADED HOT BIT-MAC	CM	143.75	316.05	5,578.82	1,509.66	7,548.28
307b	OPEN GRADED HOT BIT-MAC	CM	143.75	316.05	5,416.18	1,468.99	7,344.97
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	25.14	543.36	1,820.65	597.29	2,986.43
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	21.71	560.93	41,847.52	10,607.54	53,037.70
309a	COLD MILLING, 0 - 30 mm	SM	0.82	22.13	7.55	7.62	38.12
309b	COLD MILLING, 0 - 50 mm	SM	1.36	36.88	12.58	12.71	63.53
309c	COLD MILLING, 0 - 70 mm	SM	2.04	55.33	18.87	19.06	95.30
401a1i	CONCRETE CLASS "A1" (Underground)	CM	424.86	923.86	3,418.08	1,191.70	5,958.50
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	424.86	923.86	3,670.33	1,254.76	6,273.81
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	424.86	923.86	4,174.82	1,380.89	6,904.43
401a2i	CONCRETE CLASS "A2" (Underground)	CM	424.86	923.86	3,696.33	1,261.26	6,306.31
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	424.86	923.86	3,948.58	1,324.32	6,621.62
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	424.86	923.86	4,453.07	1,450.45	7,252.24
401a3i	CONCRETE CLASS "A3" (Underground)	CM	424.86	923.86	3,974.58	1,330.83	6,654.13
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	424.86	923.86	4,226.83	1,393.89	6,969.43
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	424.86	923.86	4,731.32	1,520.01	7,600.05
401b	CONCRETE CLASS "B"	CM	559.39	672.22	2,766.25	999.47	4,997.33
401ci	CONCRETE CLASS "C" (Underground)	CM	419.01	419.49	3,065.08	975.90	4,879.48

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	419.01	419.49	3,172.66	1,002.79	5,013.96
401ciii	CONCRETE CLASS "C" (Elevated)	CM	419.01	419.49	3,387.83	1,056.58	5,282.92
401d	CONCRETE CLASS "D1"	CM	652.52	1,106.97	4,422.27	1,545.44	7,727.20
401e	CONCRETE CLASS "Y"	CM	895.99	419.49	3,981.73	1,324.30	6,621.52
401f	LEAN CONCRETE	CM	367.77	424.53	2,196.20	747.13	3,735.63
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,410.85	790.24	4,346.07	1,636.79	8,183.95
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,410.85	790.24	4,902.57	1,775.91	8,879.57
401gii	PRECAST CONCRETE CLASS "B"	CM	1,410.85	790.24	4,175.78	1,594.22	7,971.10
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,410.85	790.24	5,180.82	1,845.48	9,227.39
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,410.85	790.24	5,459.07	1,915.04	9,575.20
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,410.85	790.24	5,737.32	1,984.60	9,923.01
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,274.05	669.81	68,368.00	17,577.96	87,889.82
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,274.05	669.81	77,818.00	19,940.46	99,702.32
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,046.52	4,274.04	64,233.55	17,388.53	86,942.65
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,004.83	12,481.24	115,658.78	32,536.21	162,681.07
405b	LAUNCHING OF GIRDER	TON	46.31	486.64	-	133.24	666.18
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	93.76	-	273.37	91.78	458.91
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	93.76	-	268.07	90.46	452.29
406c	STEEL EXPANSION JOINTS	KG	7.65	21.04	102.82	32.88	164.39
406d	WATER STOPS 6" SIZE	M	82.30	-	403.56	121.46	607.32
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.01	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	31.35	-	2,797.97	707.33	3,536.65
406g	STEEL OR METAL BEARING DEVICES	KG	16.84	55.55	124.03	49.10	245.52
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	251.81	1,439.50	750.16	610.37	3,051.84
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	377.72	2,159.25	1,125.24	915.55	4,577.76
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	377.72	2,159.25	847.02	846.00	4,229.98

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407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	629.53	3,598.75	1,023.48	1,312.94	6,564.70
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	539.60	4,253.63	1,210.51	1,500.93	7,504.67
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	944.30	6,025.34	1,316.85	2,071.62	10,358.10
407h	PILE LOAD TEST UP TO 120 TON	EACH	19,766.75	40,036.45	104,142.16	40,986.34	204,931.70
407i	PILE LOAD TEST UP TO 240 TON	EACH	36,848.39	40,036.45	208,284.32	71,292.29	356,461.45
407j	PILE LOAD TEST UP TO 360 TON	EACH	53,930.03	43,882.72	312,426.48	102,559.81	512,799.04
407k	CONFIRMATORY BORING (NX SIZE)	M	154.22	1,323.15	6.24	370.90	1,854.51
410	BRICK WORK	CM	252.79	236.06	2,387.96	719.20	3,596.01
411a	STONE MASONRY RANDOM DRY	CM	223.78	91.36	707.00	255.54	1,277.68
411b	STONE MASONRY RANDOM WITH MORTAR	CM	238.22	139.82	1,549.30	481.83	2,409.17
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	290.62	91.36	780.06	290.51	1,452.55
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	338.48	139.82	1,627.83	526.53	2,632.65
411g	ROLL POINTING	SM	52.66	9.69	37.05	24.85	124.25
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	457.71	221.29	1,541.64	555.16	2,775.80
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	191.06	366.20	555.72	278.24	1,391.22
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	186.03	480.94	717.59	346.14	1,730.70
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	181.55	791.50	966.44	484.87	2,424.36
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	190.92	972.63	1,445.47	652.25	3,261.27
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	219.77	949.38	2,081.51	812.66	4,063.31
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	270.55	1,171.86	3,214.42	1,164.21	5,821.04
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	350.12	1,313.30	4,029.09	1,423.13	7,115.63
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	414.83	1,594.72	5,134.90	1,786.11	8,930.56
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	486.97	1,860.51	7,934.82	2,570.57	12,852.86
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	191.06	423.57	573.70	297.08	1,485.41
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	186.03	480.94	671.65	334.66	1,673.28
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	176.13	791.50	918.62	471.56	2,357.81

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501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	190.92	972.63	1,480.98	661.13	3,305.67
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	219.77	949.38	2,863.94	1,008.27	5,041.36
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	270.55	1,171.86	3,950.95	1,348.34	6,741.70
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	350.12	1,313.30	5,341.31	1,751.18	8,755.91
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	414.83	1,594.72	7,243.69	2,313.31	11,566.55
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	486.97	1,860.51	10,189.77	3,134.31	15,671.55
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	76.81	103.49	563.23	185.88	929.41
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	634.72	511.20	3,023.89	1,042.45	5,212.27
507a	STEEL WIRE MESH FOR GABIONS	KG	4.24	-	121.32	31.39	156.95
507b	ROCK FILL IN GABIONS	CM	82.76	-	472.94	138.93	694.63
508a	BRICK PAVING (SINGLE COURSE)	SM	86.56	26.90	199.47	78.23	391.16
508b	BRICK PAVING (DOUBLE COURSE)	SM	153.39	26.90	394.05	143.59	717.93
509a	RIP RAP CLASS "A"	CM	369.81	-	620.81	247.66	1,238.28
509b	RIP RAP CLASS "B"	CM	356.91	-	615.85	243.19	1,215.95
509c	RIP RAP CLASS "C"	CM	357.94	-	620.81	244.69	1,223.44
509d	GROUTED RIP RAP CLASS "A"	CM	452.51	84.24	1,769.57	576.58	2,882.91
509e	GROUTED RIP RAP CLASS "B"	CM	434.62	67.39	1,645.69	536.93	2,684.63
509f	GROUTED RIP RAP CLASS "C"	CM	429.02	56.16	1,676.50	540.42	2,702.11
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	647.67	295.88	3,405.97	1,087.38	5,436.90
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	41.21	167.47	497.31	176.50	882.48
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	82.57	322.32	-	101.22	506.10
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	119.40	57.10	100.88	69.35	346.74
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	152.84	73.09	129.13	88.76	443.82
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	191.12	150.62	358.46	175.05	875.26
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	238.91	188.27	448.08	218.81	1,094.07
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	225.33	498.72	1,921.56	661.40	3,307.02

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	772.98	567.97	3,959.63	1,325.14	6,625.72
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	112.49	75.65	375.82	140.99	704.96
603	BRICK EDGING	M	7.16	-	29.86	9.25	46.27
604a	METAL GUARD RAIL	M	14.40	59.95	1,492.92	391.82	1,959.09
604b	METAL GUARD RAIL END PIECES	EACH	18.62	-	1,138.10	289.18	1,445.90
604d	STEEL POST OF METAL GUARD RAIL	EACH	67.43	805.79	3,566.86	1,110.02	5,550.10
605a	CONCRETE BEAM GUARD RAIL	M	61.15	25.40	588.43	168.74	843.72
605c	CONCRETE POST FOR GUARD RAIL	M	75.08	22.64	591.79	172.38	861.89
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	191.49	213.74	6,395.07	1,700.08	8,500.38
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	57.81	320.61	8,471.68	2,212.53	11,062.63
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	191.49	453.76	11,176.87	2,955.53	14,777.66
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	638.77	503.34	19,347.80	5,122.48	25,612.39
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	127.75	100.67	8,434.95	2,165.84	10,829.21
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	220.15	-	1,135.62	338.94	1,694.70
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	220.15	-	1,703.42	480.89	2,404.46
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.37	5.03	15.41	5.70	28.50
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.79	3.40	37.20	10.35	51.74
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.37	5.03	20.56	6.99	34.94
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.79	3.40	49.61	13.45	67.26
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	56.40	4.26	148.87	52.38	261.92
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	56.40	8.15	468.76	133.33	666.65
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.96	7.44	21.42	7.95	39.77
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	2.96	8.29	63.09	18.58	92.92
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.96	5.98	28.56	9.37	46.87
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	2.96	8.29	84.12	23.84	119.21
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	56.40	3.04	206.83	66.57	332.85

Rate Analysis Summary (Construction)

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	56.40	6.45	795.53	214.60	1,072.98
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	47.74	3.04	99.25	37.51	187.54
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	47.74	6.45	312.98	91.79	458.96
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	47.74	3.04	137.89	47.17	235.84
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	47.74	6.45	531.15	146.34	731.68
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	7.73	69.34	184.81	65.47	327.35
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	7.73	69.34	223.40	75.12	375.60
610b	RIGHT OF WAY MARKER	EACH	87.44	101.77	276.40	116.40	582.01
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	502.02	811.70	1,976.17	822.47	4,112.36
610d	TEN KILOMETRE POST	EACH	975.16	1,623.40	4,199.90	1,699.62	8,498.08
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	106.59	76.10	909.29	273.00	1,364.98

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

SANGHAR
(59)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.57	8.97	-	2.39	11.93
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	5.96	150.86	1.06	39.47	197.35
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	16.71	391.92	2.39	102.75	513.77
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	66.86	1,567.67	9.55	411.02	2,055.09
103	STRIPPING	CM	2.12	81.82	-	20.99	104.93
104	COMPACTION OF NATURAL GROUND	SM	0.31	8.55	0.75	2.40	12.01
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.13	118.44	-	30.64	153.21
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	113.57	272.97	46.20	108.18	540.92
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	15.56	294.98	-	77.64	388.18
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.28	228.89	-	59.79	298.96
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.38	105.42	-	27.20	136.00
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	113.57	272.97	46.20	108.18	540.92
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	18.10	275.34	-	73.36	366.80
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	7.92	229.91	-	59.46	297.29
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.67	120.24	0.37	31.82	159.11
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	54.19	245.80	64.37	91.09	455.45
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	100.55	367.50	30.80	124.71	623.57
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	85.00	257.01	-	85.50	427.51
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	51.71	211.67	-	65.85	329.23
107d	GRANULAR BACK FILL	CM	28.57	119.94	467.30	153.95	769.77
107e	COMMON BACK FILL	CM	19.61	55.41	4.99	20.00	100.02
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.27	152.01	4.99	40.82	204.10
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	17.77	418.69	49.36	121.46	607.28
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.32	364.32	2.37	95.00	475.01
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	11.84	323.09	-	83.73	418.66
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.01	154.80	7.84	42.41	212.06

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.60	66.06	4.99	19.16	95.81
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	12.51	97.15	2.97	28.16	140.79
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.24	23.75	1.43	6.60	33.02
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.90	15.94	0.76	4.40	22.00
110	IMPROVED SUB-GRADE	CM	8.83	104.23	55.20	42.06	210.32
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.73	13.24	0.78	3.69	18.44
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.11	13.62	0.88	3.90	19.51
201	GRANULAR SUB-BASE	CM	7.16	224.59	526.79	189.64	948.18
202	AGGREGATE BASE	CM	8.65	287.87	683.02	244.88	1,224.42
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	59.35	1,311.60	5,540.73	1,727.92	8,639.60
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	61.76	1,311.60	5,923.30	1,824.16	9,120.82
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	66.29	1,369.89	5,532.19	1,742.09	8,710.46
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	66.29	1,365.01	6,046.95	1,869.56	9,347.81
204b	CEMENT STABILIZED BASE	CM	25.83	480.68	1,125.22	407.93	2,039.65
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	211.11	772.74	49,504.14	12,622.00	63,109.99
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	211.11	772.74	47,967.93	12,237.94	61,189.72
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	73.32	92.96	1,004.27	292.64	1,463.19
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	125.91	2,134.12	5,206.75	1,866.70	9,333.48
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	80.51	105.48	700.30	221.57	1,107.86
207a	DEEP PATCHING (0-15 cm)	SM	1.55	39.69	1.23	10.62	53.10
207b	DEEP PATCHING (16-30 cm)	SM	1.55	34.94	1.23	9.43	47.16
208	REINSTATEMENT OF ROAD SURFACE	SM	1.69	49.93	0.55	13.04	65.21
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	1.92	96.89	0.67	24.87	124.33
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.38	19.38	0.13	4.97	24.87
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.26	1.32	35.14	9.18	45.90
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.26	1.32	39.22	10.20	50.99

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.70	3.82	19.12
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.15	4.44	22.18
304a	SINGLE SURFACE TREATMENT	SM	0.70	6.52	70.34	19.39	96.94
304b	DOUBLE SURFACE TREATMENT	SM	1.01	12.21	136.79	37.50	187.52
304c	TRIPLE SURFACE TREATMENT	SM	1.72	17.13	156.12	43.74	218.71
304d	SEAL COAT	SM	0.65	3.54	49.71	13.47	67.37
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	57.08	1,294.58	6,508.62	1,965.07	9,825.35
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	57.08	1,251.29	7,037.27	2,086.41	10,432.05
307a	DENSE GRADED HOT BIT-MAC	CM	139.57	316.05	5,533.57	1,497.29	7,486.47
307b	OPEN GRADED HOT BIT-MAC	CM	139.57	316.05	5,380.81	1,459.11	7,295.53
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	24.62	543.36	1,815.99	595.99	2,979.96
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	21.43	560.93	41,744.56	10,581.73	52,908.64
309a	COLD MILLING, 0 - 30 mm	SM	0.85	22.13	7.55	7.63	38.17
309b	COLD MILLING, 0 - 50 mm	SM	1.42	36.88	12.58	12.72	63.61
309c	COLD MILLING, 0 - 70 mm	SM	2.14	55.33	18.87	19.08	95.42
401a1i	CONCRETE CLASS "A1" (Underground)	CM	453.73	923.86	3,411.28	1,197.22	5,986.09
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	453.73	923.86	3,663.53	1,260.28	6,301.40
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	453.73	923.86	4,168.02	1,386.40	6,932.02
401a2i	CONCRETE CLASS "A2" (Underground)	CM	453.73	923.86	3,689.53	1,266.78	6,333.90
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	453.73	923.86	3,941.78	1,329.84	6,649.21
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	453.73	923.86	4,446.27	1,455.97	7,279.83
401a3i	CONCRETE CLASS "A3" (Underground)	CM	453.73	923.86	3,967.78	1,336.34	6,681.72
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	453.73	923.86	4,220.03	1,399.41	6,997.03
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	453.73	923.86	4,724.52	1,525.53	7,627.64
401b	CONCRETE CLASS "B"	CM	581.19	672.22	2,778.51	1,007.98	5,039.90
401ci	CONCRETE CLASS "C" (Underground)	CM	433.84	419.49	3,065.06	979.60	4,897.98

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	433.84	419.49	3,172.64	1,006.49	5,032.46
401ciii	CONCRETE CLASS "C" (Elevated)	CM	433.84	419.49	3,387.81	1,060.28	5,301.42
401d	CONCRETE CLASS "D1"	CM	696.71	1,106.97	4,418.02	1,555.43	7,777.13
401e	CONCRETE CLASS "Y"	CM	948.13	419.49	3,969.67	1,334.32	6,671.61
401f	LEAN CONCRETE	CM	355.76	424.53	2,208.59	747.22	3,736.11
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,431.59	790.24	4,337.05	1,639.72	8,198.60
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,431.59	790.24	4,893.55	1,778.84	8,894.22
401gii	PRECAST CONCRETE CLASS "B"	CM	1,431.59	790.24	4,186.86	1,602.17	8,010.87
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,431.59	790.24	5,171.80	1,848.41	9,242.03
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,431.59	790.24	5,450.05	1,917.97	9,589.85
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,431.59	790.24	5,728.30	1,987.53	9,937.66
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,365.06	669.81	68,368.00	17,600.72	88,003.58
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,365.06	669.81	77,818.00	19,963.22	99,816.08
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,142.96	4,274.04	64,194.93	17,402.98	87,014.91
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,285.76	12,481.24	115,650.73	32,604.43	163,022.16
405b	LAUNCHING OF GIRDER	TON	52.52	486.64	-	134.79	673.96
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	97.25	-	271.43	92.17	460.84
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	97.25	-	266.27	90.88	454.40
406c	STEEL EXPANSION JOINTS	KG	8.20	21.04	102.91	33.04	165.18
406d	WATER STOPS 6" SIZE	M	83.35	-	404.06	121.85	609.27
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.01	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	34.30	-	2,791.33	706.41	3,532.04
406g	STEEL OR METAL BEARING DEVICES	KG	17.77	55.55	124.10	49.36	246.78
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	280.43	1,439.50	748.08	617.00	3,085.01
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	420.65	2,159.25	1,122.12	925.50	4,627.52
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	420.65	2,159.25	843.84	855.94	4,279.68

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	701.08	3,598.75	1,018.19	1,329.51	6,647.53
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	600.93	4,253.63	1,201.83	1,514.10	7,570.49
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,051.63	6,025.34	1,308.91	2,096.47	10,482.34
407h	PILE LOAD TEST UP TO 120 TON	EACH	17,998.71	40,036.45	104,143.04	40,544.55	202,722.75
407i	PILE LOAD TEST UP TO 240 TON	EACH	32,902.71	40,036.45	208,286.08	70,306.31	351,531.55
407j	PILE LOAD TEST UP TO 360 TON	EACH	47,806.71	43,882.72	312,429.12	101,029.64	505,148.19
407k	CONFIRMATORY BORING (NX SIZE)	M	155.61	1,323.15	6.24	371.25	1,856.24
410	BRICK WORK	CM	262.42	236.06	2,427.14	731.41	3,657.03
411a	STONE MASONRY RANDOM DRY	CM	228.35	91.36	689.48	252.30	1,261.49
411b	STONE MASONRY RANDOM WITH MORTAR	CM	245.60	139.82	1,549.50	483.73	2,418.65
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	295.97	91.36	760.01	286.84	1,434.19
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	347.03	139.82	1,621.08	526.98	2,634.91
411g	ROLL POINTING	SM	55.47	9.69	37.35	25.63	128.14
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	465.02	221.29	1,534.89	555.30	2,776.50
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	178.28	366.20	556.27	275.19	1,375.94
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	172.78	480.94	718.25	342.99	1,714.97
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	174.80	791.50	967.22	483.38	2,416.89
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	181.49	972.63	1,446.37	650.12	3,250.61
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	210.24	949.38	2,082.41	810.51	4,052.54
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	262.33	1,171.86	3,215.73	1,162.48	5,812.41
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	339.49	1,313.30	4,030.39	1,420.80	7,103.98
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	399.92	1,594.72	5,136.48	1,782.78	8,913.90
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	473.06	1,860.51	7,936.67	2,567.56	12,837.79
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	178.28	423.57	574.80	294.16	1,470.82
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	172.78	480.94	672.31	331.51	1,657.54
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	170.07	791.50	919.40	470.24	2,351.21

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	181.49	972.63	1,481.69	658.95	3,294.76
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	210.24	949.38	2,864.95	1,006.14	5,030.71
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	262.33	1,171.86	3,952.26	1,346.61	6,733.07
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	339.49	1,313.30	5,342.61	1,748.85	8,744.25
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	399.92	1,594.72	7,245.27	2,309.98	11,549.89
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	473.06	1,860.51	10,191.62	3,131.30	15,656.48
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	72.38	103.49	563.24	184.78	923.89
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	658.28	511.20	3,036.15	1,051.41	5,257.03
507a	STEEL WIRE MESH FOR GABIONS	KG	4.45	-	121.03	31.37	156.86
507b	ROCK FILL IN GABIONS	CM	76.09	-	480.08	139.04	695.21
508a	BRICK PAVING (SINGLE COURSE)	SM	87.04	26.90	202.30	79.06	395.31
508b	BRICK PAVING (DOUBLE COURSE)	SM	154.66	26.90	399.70	145.32	726.58
509a	RIP RAP CLASS "A"	CM	376.96	-	603.29	245.06	1,225.31
509b	RIP RAP CLASS "B"	CM	362.29	-	598.46	240.19	1,200.94
509c	RIP RAP CLASS "C"	CM	364.01	-	603.29	241.82	1,209.12
509d	GROUTED RIP RAP CLASS "A"	CM	460.40	84.24	1,763.13	576.94	2,884.71
509e	GROUTED RIP RAP CLASS "B"	CM	442.84	67.39	1,638.23	537.11	2,685.57
509f	GROUTED RIP RAP CLASS "C"	CM	436.65	56.16	1,669.32	540.53	2,702.66
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	643.68	295.88	3,417.53	1,089.27	5,446.37
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	38.64	167.47	468.45	168.64	843.20
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	81.61	322.32	-	100.98	504.91
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	120.28	57.10	98.03	68.86	344.28
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	153.96	73.09	125.48	88.13	440.67
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	194.81	150.62	358.36	175.95	879.74
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	243.51	188.27	447.95	219.93	1,099.67
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	240.54	498.72	1,917.95	664.30	3,321.51

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	786.51	567.97	3,954.94	1,327.35	6,636.77
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	114.18	75.65	375.58	141.35	706.76
603	BRICK EDGING	M	7.07	-	30.34	9.35	46.76
604a	METAL GUARD RAIL	M	15.36	59.95	1,492.92	392.06	1,960.30
604b	METAL GUARD RAIL END PIECES	EACH	18.95	-	1,138.10	289.26	1,446.32
604d	STEEL POST OF METAL GUARD RAIL	EACH	72.29	805.79	3,566.86	1,111.23	5,556.17
605a	CONCRETE BEAM GUARD RAIL	M	58.59	25.40	587.97	167.99	839.95
605c	CONCRETE POST FOR GUARD RAIL	M	71.94	22.64	591.23	171.45	857.26
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	193.52	213.74	6,391.99	1,699.81	8,499.07
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	57.78	320.61	8,470.97	2,212.34	11,061.70
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	193.52	453.76	11,177.03	2,956.08	14,780.38
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	606.30	503.34	19,346.30	5,113.98	25,569.92
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	121.26	100.67	8,432.57	2,163.62	10,818.12
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	237.68	-	1,134.99	343.17	1,715.84
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	237.68	-	1,702.49	485.04	2,425.21
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.31	5.03	15.40	5.68	28.42
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.77	3.40	37.15	10.33	51.66
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.31	5.03	20.55	6.97	34.86
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.77	3.40	49.55	13.43	67.16
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.47	4.26	148.82	53.89	269.44
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.47	8.15	468.17	134.70	673.49
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.89	7.44	21.42	7.94	39.68
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	2.89	8.29	63.09	18.57	92.83
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.89	5.98	28.56	9.36	46.78
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	2.89	8.29	84.12	23.82	119.12
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.47	3.04	206.78	68.07	340.37

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.47	6.45	795.53	216.11	1,080.56
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	52.12	3.04	99.21	38.59	192.97
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	52.12	6.45	312.58	92.79	463.94
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	52.12	3.04	137.85	48.25	241.27
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	52.12	6.45	531.15	147.43	737.15
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.00	69.34	184.84	65.55	327.73
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.00	69.34	223.43	75.19	375.96
610b	RIGHT OF WAY MARKER	EACH	81.11	101.77	275.93	114.70	573.51
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	500.81	811.70	1,972.92	821.36	4,106.79
610d	TEN KILOMETRE POST	EACH	967.12	1,623.40	4,192.24	1,695.69	8,478.45
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	107.83	76.10	909.46	273.35	1,366.73

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

SHIKARPUR
(62)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.66	8.97	-	2.41	12.04
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.55	150.86	1.06	39.62	198.10
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	18.88	391.92	2.39	103.30	516.49
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	75.54	1,567.67	9.55	413.19	2,065.95
103	STRIPPING	CM	2.25	81.82	-	21.02	105.08
104	COMPACTION OF NATURAL GROUND	SM	0.32	8.55	0.75	2.40	12.02
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	3.82	118.44	-	30.56	152.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	113.18	272.97	46.20	108.09	540.43
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	16.04	294.98	-	77.76	388.78
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.43	228.89	-	59.83	299.16
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.12	105.42	-	27.14	135.68
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	113.18	272.97	46.20	108.09	540.43
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	17.98	275.34	-	73.33	366.65
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.11	229.91	-	59.50	297.52
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.38	120.24	0.37	31.75	158.74
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	54.00	245.80	64.37	91.04	455.21
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	99.91	367.50	30.80	124.55	622.76
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	84.97	257.01	-	85.49	427.47
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	51.38	211.67	-	65.76	328.81
107d	GRANULAR BACK FILL	CM	30.50	119.94	349.07	124.88	624.40
107e	COMMON BACK FILL	CM	22.80	55.41	4.99	20.80	104.01
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.27	152.01	4.99	40.82	204.09
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	18.36	418.69	49.36	121.60	608.02
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.77	364.32	2.37	95.12	475.58
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.24	323.09	-	83.83	419.16
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.19	154.80	7.84	42.46	212.29

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.65	66.06	4.99	19.17	95.87
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.14	97.15	2.97	28.32	141.58
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.25	23.75	1.43	6.61	33.03
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.90	15.94	0.76	4.40	22.00
110	IMPROVED SUB-GRADE	CM	9.17	104.23	55.20	42.15	210.75
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.76	13.24	0.78	3.70	18.48
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.14	13.62	0.88	3.91	19.55
201	GRANULAR SUB-BASE	CM	7.29	224.59	393.08	156.24	781.20
202	AGGREGATE BASE	CM	8.62	287.87	623.34	229.96	1,149.78
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	66.64	1,311.60	5,421.18	1,699.86	8,499.28
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	68.86	1,311.60	5,824.89	1,801.34	9,006.68
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	73.54	1,369.89	5,412.16	1,713.90	8,569.50
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	73.54	1,365.01	5,950.33	1,847.22	9,236.10
204b	CEMENT STABILIZED BASE	CM	26.38	480.68	926.66	358.43	1,792.14
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	210.71	772.74	50,261.64	12,811.27	64,056.37
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	210.71	772.74	48,725.43	12,427.22	62,136.11
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	87.15	92.96	860.18	260.08	1,300.38
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	135.86	2,134.12	5,080.24	1,837.55	9,187.77
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	96.36	105.48	707.72	227.39	1,136.95
207a	DEEP PATCHING (0-15 cm)	SM	1.58	39.69	1.23	10.63	53.13
207b	DEEP PATCHING (16-30 cm)	SM	1.58	34.94	1.23	9.44	47.19
208	REINSTATEMENT OF ROAD SURFACE	SM	1.71	49.93	0.55	13.05	65.23
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	1.82	96.89	0.67	24.84	124.21
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.36	19.38	0.13	4.97	24.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.26	1.32	35.67	9.31	46.57
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.25	1.32	39.82	10.35	51.74

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	14.93	3.88	19.40
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.49	17.42	4.50	22.51
304a	SINGLE SURFACE TREATMENT	SM	0.69	6.52	70.68	19.47	97.36
304b	DOUBLE SURFACE TREATMENT	SM	1.00	12.21	136.76	37.49	187.46
304c	TRIPLE SURFACE TREATMENT	SM	1.69	17.13	155.98	43.70	218.51
304d	SEAL COAT	SM	0.64	3.54	50.01	13.55	67.74
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	62.55	1,294.58	6,410.02	1,941.79	9,708.93
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	62.55	1,251.29	6,937.72	2,062.89	10,314.44
307a	DENSE GRADED HOT BIT-MAC	CM	156.67	316.05	5,444.00	1,479.18	7,395.90
307b	OPEN GRADED HOT BIT-MAC	CM	156.67	316.05	5,295.44	1,442.04	7,210.20
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	27.31	543.36	1,806.52	594.30	2,971.49
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	22.50	560.93	42,524.56	10,777.00	53,884.99
309a	COLD MILLING, 0 - 30 mm	SM	0.87	22.13	7.55	7.64	38.19
309b	COLD MILLING, 0 - 50 mm	SM	1.45	36.88	12.58	12.73	63.64
309c	COLD MILLING, 0 - 70 mm	SM	2.17	55.33	18.87	19.09	95.47
401a1i	CONCRETE CLASS "A1" (Underground)	CM	448.85	923.86	3,190.96	1,140.92	5,704.59
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	448.85	923.86	3,443.20	1,203.98	6,019.90
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	448.85	923.86	3,947.70	1,330.10	6,650.51
401a2i	CONCRETE CLASS "A2" (Underground)	CM	448.85	923.86	3,469.21	1,210.48	6,052.40
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	448.85	923.86	3,721.45	1,273.54	6,367.71
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	448.85	923.86	4,225.95	1,399.67	6,998.33
401a3i	CONCRETE CLASS "A3" (Underground)	CM	448.85	923.86	3,747.46	1,280.04	6,400.21
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	448.85	923.86	3,999.70	1,343.10	6,715.52
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	448.85	923.86	4,504.20	1,469.23	7,346.14
401b	CONCRETE CLASS "B"	CM	599.13	672.22	2,561.06	958.10	4,790.51
401ci	CONCRETE CLASS "C" (Underground)	CM	446.29	419.49	2,822.98	922.19	4,610.95

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	446.29	419.49	2,930.56	949.09	4,745.43
401ciii	CONCRETE CLASS "C" (Elevated)	CM	446.29	419.49	3,145.73	1,002.88	5,014.39
401d	CONCRETE CLASS "D1"	CM	678.28	1,106.97	4,218.44	1,500.92	7,504.61
401e	CONCRETE CLASS "Y"	CM	928.98	419.49	3,763.92	1,278.10	6,390.49
401f	LEAN CONCRETE	CM	395.88	424.53	1,992.07	703.12	3,515.60
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,509.92	790.24	4,095.71	1,598.97	7,994.84
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,509.92	790.24	4,652.21	1,738.09	8,690.46
401gii	PRECAST CONCRETE CLASS "B"	CM	1,509.92	790.24	3,956.85	1,564.25	7,821.26
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,509.92	790.24	4,930.46	1,807.66	9,038.28
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,509.92	790.24	5,208.71	1,877.22	9,386.09
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,509.92	790.24	5,486.96	1,946.78	9,733.90
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,297.16	669.81	68,368.00	17,583.74	87,918.70
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,297.16	669.81	77,818.00	19,946.24	99,731.20
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,077.51	4,274.04	64,208.10	17,389.91	86,949.56
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,282.82	12,481.24	115,714.56	32,619.65	163,098.26
405b	LAUNCHING OF GIRDER	TON	53.04	486.64	-	134.92	674.60
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	98.07	-	265.61	90.92	454.60
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	98.07	-	265.79	90.96	454.82
406c	STEEL EXPANSION JOINTS	KG	7.88	21.04	103.39	33.08	165.39
406d	WATER STOPS 6" SIZE	M	84.93	-	408.88	123.45	617.26
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	35.39	-	2,801.03	709.10	3,545.52
406g	STEEL OR METAL BEARING DEVICES	KG	17.90	55.55	124.46	49.48	247.39
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	284.56	1,439.50	656.40	595.11	2,975.57
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	426.84	2,159.25	984.60	892.67	4,463.36
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	426.84	2,159.25	747.73	833.45	4,167.27

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	711.40	3,598.75	913.46	1,305.90	6,529.50
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	609.77	4,253.63	1,083.07	1,486.62	7,433.09
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,067.10	6,025.34	1,183.01	2,068.86	10,344.30
407h	PILE LOAD TEST UP TO 120 TON	EACH	21,464.12	40,036.45	90,496.88	37,999.36	189,996.81
407i	PILE LOAD TEST UP TO 240 TON	EACH	40,094.12	40,036.45	180,993.76	65,281.08	326,405.41
407j	PILE LOAD TEST UP TO 360 TON	EACH	58,724.12	43,882.72	271,490.64	93,524.37	467,621.85
407k	CONFIRMATORY BORING (NX SIZE)	M	173.54	1,323.15	6.24	375.73	1,878.66
410	BRICK WORK	CM	283.64	236.06	2,393.35	728.26	3,641.30
411a	STONE MASONRY RANDOM DRY	CM	248.32	91.36	584.38	231.01	1,155.07
411b	STONE MASONRY RANDOM WITH MORTAR	CM	265.26	139.82	1,364.65	442.43	2,212.16
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	323.60	91.36	647.61	265.64	1,328.22
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	378.19	139.82	1,448.86	491.72	2,458.59
411g	ROLL POINTING	SM	59.71	9.69	36.01	26.35	131.77
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	511.81	221.29	1,362.68	523.94	2,619.72
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	207.02	366.20	553.78	281.75	1,408.76
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	202.07	480.94	715.26	349.57	1,747.85
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	197.29	791.50	963.73	488.13	2,440.64
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	207.58	972.63	1,442.29	655.63	3,278.13
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	239.04	949.38	2,078.33	816.69	4,083.44
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	294.97	1,171.86	3,209.84	1,169.17	5,845.85
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	381.73	1,313.30	4,024.53	1,429.89	7,149.45
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	451.43	1,594.72	5,129.36	1,793.88	8,969.39
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	530.93	1,860.51	7,928.36	2,579.95	12,899.74
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	207.02	423.57	569.82	300.10	1,500.52
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	202.07	480.94	669.32	338.08	1,690.42
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	191.38	791.50	915.91	474.70	2,373.48

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	207.58	972.63	1,478.52	664.68	3,323.41
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	239.04	949.38	2,860.41	1,012.21	5,061.04
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	294.97	1,171.86	3,946.37	1,353.30	6,766.51
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	381.73	1,313.30	5,336.75	1,757.94	8,789.72
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	451.43	1,594.72	7,238.15	2,321.08	11,605.38
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	530.93	1,860.51	10,183.31	3,143.69	15,718.43
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	81.72	103.49	401.09	146.57	732.87
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	671.58	511.20	2,818.70	1,000.37	5,001.85
507a	STEEL WIRE MESH FOR GABIONS	KG	4.38	-	120.46	31.21	156.05
507b	ROCK FILL IN GABIONS	CM	88.92	-	359.56	112.12	560.60
508a	BRICK PAVING (SINGLE COURSE)	SM	96.41	26.90	197.94	80.31	401.56
508b	BRICK PAVING (DOUBLE COURSE)	SM	171.69	26.90	392.52	147.78	738.89
509a	RIP RAP CLASS "A"	CM	413.25	-	498.19	227.86	1,139.30
509b	RIP RAP CLASS "B"	CM	399.11	-	494.20	223.33	1,116.64
509c	RIP RAP CLASS "C"	CM	400.97	-	498.19	224.79	1,123.95
509d	GROUTED RIP RAP CLASS "A"	CM	505.84	84.24	1,608.18	549.57	2,747.83
509e	GROUTED RIP RAP CLASS "B"	CM	486.73	67.39	1,489.31	510.86	2,554.29
509f	GROUTED RIP RAP CLASS "C"	CM	480.89	56.16	1,517.70	513.69	2,568.44
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	712.03	295.88	3,211.91	1,054.96	5,274.78
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	44.69	167.47	349.66	140.45	702.26
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	90.77	322.32	-	103.27	516.36
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	132.02	57.10	80.96	67.52	337.59
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	168.98	73.09	103.62	86.42	432.12
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	212.65	150.62	325.62	172.22	861.11
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	265.81	188.27	407.03	215.28	1,076.38
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	238.03	498.72	1,803.03	634.95	3,174.74

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	826.72	567.97	3,829.45	1,306.03	6,530.16
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	120.71	75.65	352.24	137.15	685.75
603	BRICK EDGING	M	7.83	-	30.91	9.69	48.43
604a	METAL GUARD RAIL	M	15.83	59.95	1,492.92	392.18	1,960.88
604b	METAL GUARD RAIL END PIECES	EACH	20.66	-	1,138.10	289.69	1,448.45
604d	STEEL POST OF METAL GUARD RAIL	EACH	72.68	805.79	3,566.86	1,111.33	5,556.66
605a	CONCRETE BEAM GUARD RAIL	M	65.77	25.40	579.36	167.63	838.17
605c	CONCRETE POST FOR GUARD RAIL	M	80.76	22.64	580.72	171.03	855.14
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	208.08	213.74	6,370.41	1,698.06	8,490.29
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	64.45	320.61	8,422.12	2,201.79	11,008.97
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	208.08	453.76	11,094.60	2,939.11	14,695.55
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	691.74	503.34	19,214.54	5,102.40	25,512.02
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	138.35	100.67	8,396.47	2,158.87	10,794.36
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	220.08	-	1,132.07	338.04	1,690.18
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	220.08	-	1,698.10	479.54	2,397.72
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.54	5.03	15.38	5.74	28.68
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.85	3.40	36.94	10.30	51.48
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.54	5.03	20.52	7.02	35.11
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.85	3.40	49.26	13.38	66.89
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	56.21	4.26	148.60	52.27	261.34
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	56.21	8.15	465.45	132.45	662.27
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.17	7.44	21.39	8.00	40.00
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.17	8.29	63.09	18.64	93.19
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.17	5.98	28.53	9.42	47.09
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.17	8.29	84.12	23.89	119.47
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	56.21	3.04	206.56	66.45	332.27

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	56.21	6.45	795.53	214.55	1,072.73
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	47.89	3.04	99.07	37.50	187.50
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	47.89	6.45	310.77	91.28	456.39
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	47.89	3.04	137.71	47.16	235.80
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	47.89	6.45	531.15	146.37	731.86
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.63	69.34	184.74	65.68	328.39
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.63	69.34	223.33	75.33	376.63
610b	RIGHT OF WAY MARKER	EACH	94.45	101.77	266.75	115.74	578.71
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	535.05	811.70	1,896.40	810.79	4,053.94
610d	TEN KILOMETRE POST	EACH	1,030.05	1,623.40	4,042.23	1,673.92	8,369.61
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	116.26	76.10	898.47	272.71	1,363.53

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

SUKKUR
(65)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.68	8.97	-	2.41	12.07
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.96	150.86	1.06	39.72	198.61
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.80	391.92	2.39	103.53	517.63
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	79.19	1,567.67	9.55	414.10	2,070.51
103	STRIPPING	CM	2.50	81.82	-	21.08	105.40
104	COMPACTION OF NATURAL GROUND	SM	0.35	8.55	0.75	2.41	12.06
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.22	118.44	-	30.66	153.32
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	124.20	272.97	46.20	110.84	554.21
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	18.03	294.98	-	78.25	391.27
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.75	228.89	-	60.16	300.80
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.45	105.42	-	27.22	136.09
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	124.20	272.97	46.20	110.84	554.21
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.64	275.34	-	73.74	368.72
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.21	229.91	-	59.78	298.90
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.41	120.24	0.37	32.01	160.04
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	61.03	245.80	64.37	92.80	464.00
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	109.09	367.50	30.80	126.85	634.24
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	92.82	257.01	-	87.46	437.29
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	56.11	211.67	-	66.94	334.72
107d	GRANULAR BACK FILL	CM	31.66	119.94	330.62	120.56	602.78
107e	COMMON BACK FILL	CM	23.17	55.41	4.99	20.89	104.46
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.16	152.01	4.99	41.04	205.20
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.43	418.69	49.36	122.12	610.61
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.33	364.32	2.37	95.50	477.52
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.62	323.09	-	84.18	420.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.08	154.80	7.84	42.68	213.40

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.49	66.06	4.99	19.38	96.92
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.67	97.15	2.97	28.70	143.49
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.40	23.75	1.43	6.64	33.22
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.03	15.94	0.76	4.43	22.17
110	IMPROVED SUB-GRADE	CM	10.39	104.23	55.20	42.46	212.28
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.86	13.24	0.78	3.72	18.61
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.33	13.62	0.88	3.96	19.78
201	GRANULAR SUB-BASE	CM	8.17	224.59	419.12	162.97	814.85
202	AGGREGATE BASE	CM	9.66	287.87	637.11	233.66	1,168.29
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	70.38	1,311.60	5,362.01	1,686.00	8,429.99
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	72.79	1,311.60	5,754.68	1,784.77	8,923.83
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	78.02	1,369.89	5,352.82	1,700.18	8,500.92
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	78.02	1,365.01	5,880.09	1,830.78	9,153.91
204b	CEMENT STABILIZED BASE	CM	29.20	480.68	889.65	349.88	1,749.40
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	226.74	772.74	50,149.53	12,787.25	63,936.27
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	226.74	772.74	48,613.32	12,403.20	62,016.00
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	89.82	92.96	776.14	239.73	1,198.65
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	147.51	2,134.12	4,987.31	1,817.23	9,086.16
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	98.29	105.48	802.78	251.64	1,258.19
207a	DEEP PATCHING (0-15 cm)	SM	1.82	39.69	1.23	10.69	53.43
207b	DEEP PATCHING (16-30 cm)	SM	1.82	34.94	1.23	9.50	47.49
208	REINSTATEMENT OF ROAD SURFACE	SM	1.92	49.93	0.55	13.10	65.50
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.13	96.89	0.67	24.92	124.61
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.43	19.38	0.13	4.98	24.92
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.29	1.32	35.59	9.30	46.50
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.32	39.73	10.33	51.66

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	14.90	3.87	19.37
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.49	17.38	4.50	22.48
304a	SINGLE SURFACE TREATMENT	SM	0.75	6.52	70.17	19.36	96.79
304b	DOUBLE SURFACE TREATMENT	SM	1.10	12.21	135.26	37.14	185.70
304c	TRIPLE SURFACE TREATMENT	SM	1.86	17.13	154.26	43.31	216.57
304d	SEAL COAT	SM	0.68	3.54	49.92	13.54	67.68
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	66.87	1,294.58	6,343.57	1,926.25	9,631.26
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	66.87	1,251.29	6,871.36	2,047.38	10,236.89
307a	DENSE GRADED HOT BIT-MAC	CM	170.31	316.05	5,395.65	1,470.50	7,352.52
307b	OPEN GRADED HOT BIT-MAC	CM	170.31	316.05	5,226.10	1,428.11	7,140.57
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	31.48	543.36	1,787.84	590.67	2,953.35
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	23.42	560.93	42,409.12	10,748.37	53,741.83
309a	COLD MILLING, 0 - 30 mm	SM	0.96	22.13	7.55	7.66	38.30
309b	COLD MILLING, 0 - 50 mm	SM	1.60	36.88	12.58	12.77	63.84
309c	COLD MILLING, 0 - 70 mm	SM	2.40	55.33	18.87	19.15	95.76
401a1i	CONCRETE CLASS "A1" (Underground)	CM	538.67	923.86	3,146.76	1,152.32	5,761.62
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	538.67	923.86	3,399.01	1,215.39	6,076.93
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	538.67	923.86	3,903.50	1,341.51	6,707.55
401a2i	CONCRETE CLASS "A2" (Underground)	CM	538.67	923.86	3,425.01	1,221.89	6,109.43
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	538.67	923.86	3,677.26	1,284.95	6,424.74
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	538.67	923.86	4,181.75	1,411.07	7,055.36
401a3i	CONCRETE CLASS "A3" (Underground)	CM	538.67	923.86	3,703.26	1,291.45	6,457.24
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	538.67	923.86	3,955.51	1,354.51	6,772.55
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	538.67	923.86	4,460.00	1,480.63	7,403.17
401b	CONCRETE CLASS "B"	CM	686.30	672.22	2,471.16	957.42	4,787.09
401ci	CONCRETE CLASS "C" (Underground)	CM	524.76	419.49	2,742.50	921.69	4,608.44

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	524.76	419.49	2,850.08	948.58	4,742.92
401ciii	CONCRETE CLASS "C" (Elevated)	CM	524.76	419.49	3,065.25	1,002.37	5,011.87
401d	CONCRETE CLASS "D1"	CM	823.52	1,106.97	4,173.10	1,525.90	7,629.48
401e	CONCRETE CLASS "Y"	CM	1,096.09	419.49	3,735.49	1,312.77	6,563.84
401f	LEAN CONCRETE	CM	437.54	424.53	1,900.98	690.76	3,453.82
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,710.91	790.24	4,050.68	1,637.96	8,189.79
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,710.91	790.24	4,607.18	1,777.08	8,885.41
401gii	PRECAST CONCRETE CLASS "B"	CM	1,710.91	790.24	3,860.96	1,590.53	7,952.65
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,710.91	790.24	4,885.43	1,846.65	9,233.23
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,710.91	790.24	5,163.68	1,916.21	9,581.04
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,710.91	790.24	5,441.93	1,985.77	9,928.85
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,575.39	669.81	68,368.00	17,653.30	88,266.49
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,575.39	669.81	77,818.00	20,015.80	100,078.99
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,290.79	4,274.04	64,274.27	17,459.77	87,298.87
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,509.32	12,481.24	115,657.01	32,661.89	163,309.45
405b	LAUNCHING OF GIRDER	TON	58.41	486.64	-	136.26	681.32
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	113.78	-	275.90	97.42	487.09
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	113.78	-	270.44	96.05	480.27
406c	STEEL EXPANSION JOINTS	KG	8.97	21.04	102.77	33.19	165.97
406d	WATER STOPS 6" SIZE	M	108.00	-	404.53	128.13	640.67
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	38.09	-	2,804.84	710.73	3,553.66
406g	STEEL OR METAL BEARING DEVICES	KG	18.48	55.55	124.00	49.51	247.55
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	315.79	1,439.50	657.87	603.29	3,016.45
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	473.69	2,159.25	986.80	904.93	4,524.67
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	473.69	2,159.25	750.23	845.79	4,228.96

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	789.48	3,598.75	917.62	1,326.46	6,632.32
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	676.70	4,253.63	1,088.10	1,504.61	7,523.04
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,184.22	6,025.34	1,189.26	2,099.70	10,498.52
407h	PILE LOAD TEST UP TO 120 TON	EACH	21,699.96	40,036.45	88,547.68	37,571.02	187,855.12
407i	PILE LOAD TEST UP TO 240 TON	EACH	40,329.96	40,036.45	177,095.36	64,365.44	321,827.22
407j	PILE LOAD TEST UP TO 360 TON	EACH	58,959.96	43,882.72	265,643.04	92,121.43	460,607.16
407k	CONFIRMATORY BORING (NX SIZE)	M	183.55	1,323.15	6.24	378.23	1,891.17
410	BRICK WORK	CM	303.90	236.06	2,379.17	729.78	3,648.90
411a	STONE MASONRY RANDOM DRY	CM	273.52	91.36	404.99	192.47	962.33
411b	STONE MASONRY RANDOM WITH MORTAR	CM	292.49	139.82	1,167.54	399.96	1,999.81
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	352.87	91.36	453.89	224.53	1,122.65
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	411.52	139.82	1,241.85	448.29	2,241.47
411g	ROLL POINTING	SM	63.86	9.69	35.71	27.32	136.59
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	551.24	221.29	1,155.66	482.05	2,410.23
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	214.47	366.20	553.23	283.47	1,417.36
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	209.10	480.94	714.60	351.16	1,755.80
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	209.01	791.50	962.95	490.86	2,454.32
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	218.24	972.63	1,441.39	658.06	3,290.31
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	250.75	949.38	2,077.43	819.39	4,096.95
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	309.27	1,171.86	3,208.53	1,172.42	5,862.08
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	400.23	1,313.30	4,023.23	1,434.19	7,170.95
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	472.44	1,594.72	5,127.78	1,798.74	8,993.68
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	553.20	1,860.51	7,926.51	2,585.05	12,925.27
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	214.47	423.57	568.71	301.69	1,508.44
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	209.10	480.94	668.66	339.67	1,698.37
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	200.73	791.50	915.13	476.84	2,384.20

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	218.24	972.63	1,477.81	667.17	3,335.84
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	250.75	949.38	2,859.41	1,014.88	5,074.42
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	309.27	1,171.86	3,945.06	1,356.55	6,782.75
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	400.23	1,313.30	5,335.45	1,762.24	8,811.22
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	472.44	1,594.72	7,236.57	2,325.93	11,629.67
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	553.20	1,860.51	10,181.46	3,148.79	15,743.96
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	85.60	103.49	338.62	131.93	659.64
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	794.19	511.20	2,728.80	1,008.55	5,042.73
507a	STEEL WIRE MESH FOR GABIONS	KG	4.64	-	120.75	31.35	156.73
507b	ROCK FILL IN GABIONS	CM	92.25	-	335.58	106.96	534.79
508a	BRICK PAVING (SINGLE COURSE)	SM	102.37	26.90	196.83	81.53	407.63
508b	BRICK PAVING (DOUBLE COURSE)	SM	181.72	26.90	390.53	149.79	748.94
509a	RIP RAP CLASS "A"	CM	439.16	-	318.80	189.49	947.45
509b	RIP RAP CLASS "B"	CM	423.09	-	316.25	184.83	924.17
509c	RIP RAP CLASS "C"	CM	425.02	-	318.80	185.96	929.78
509d	GROUTED RIP RAP CLASS "A"	CM	536.39	84.24	1,417.72	509.59	2,547.94
509e	GROUTED RIP RAP CLASS "B"	CM	516.05	67.39	1,301.43	471.22	2,356.10
509f	GROUTED RIP RAP CLASS "C"	CM	509.40	56.16	1,327.97	473.38	2,366.91
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	801.91	295.88	3,126.81	1,056.15	5,280.75
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	47.31	167.47	331.13	136.48	682.39
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	95.97	322.32	-	104.57	522.85
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	142.31	57.10	51.81	62.80	314.02
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	182.16	73.09	66.31	80.39	401.95
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	229.08	150.62	295.80	168.87	844.37
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	286.35	188.27	369.75	211.09	1,055.46
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	285.46	498.72	1,780.38	641.14	3,205.70

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	938.15	567.97	3,806.03	1,328.04	6,640.18
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	136.38	75.65	346.41	139.61	698.06
603	BRICK EDGING	M	8.45	-	30.91	9.84	49.21
604a	METAL GUARD RAIL	M	17.04	59.95	1,492.92	392.48	1,962.39
604b	METAL GUARD RAIL END PIECES	EACH	22.18	-	1,138.10	290.07	1,450.35
604d	STEEL POST OF METAL GUARD RAIL	EACH	78.33	805.79	3,566.86	1,112.74	5,563.72
605a	CONCRETE BEAM GUARD RAIL	M	69.76	25.40	577.93	168.27	841.37
605c	CONCRETE POST FOR GUARD RAIL	M	85.65	22.64	579.00	171.82	859.11
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	221.06	213.74	6,372.31	1,701.78	8,508.89
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	77.90	320.61	8,420.43	2,204.74	11,023.68
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	221.06	453.76	11,090.96	2,941.45	14,707.23
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	714.54	503.34	19,221.17	5,109.76	25,548.81
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	142.91	100.67	8,412.30	2,163.97	10,819.84
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	236.65	-	1,136.42	343.27	1,716.34
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	236.65	-	1,704.63	485.32	2,426.60
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.91	5.03	15.41	5.84	29.19
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.97	3.40	37.25	10.41	52.03
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.91	5.03	20.57	7.13	35.63
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.97	3.40	49.68	13.51	67.57
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	63.90	4.26	148.92	54.27	271.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	63.90	8.15	469.42	135.37	676.85
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.64	7.44	21.43	8.13	40.63
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.64	8.29	63.09	18.75	93.77
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.64	5.98	28.57	9.55	47.74
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.64	8.29	84.12	24.01	120.06
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	63.90	3.04	206.88	68.46	342.28

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	63.90	6.45	795.53	216.47	1,082.34
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	54.58	3.04	99.28	39.23	196.13
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	54.58	6.45	313.42	93.61	468.07
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	54.58	3.04	137.92	48.89	244.43
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	54.58	6.45	531.15	148.05	740.23
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	11.15	69.34	184.72	66.30	331.51
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	11.15	69.34	223.31	75.95	379.75
610b	RIGHT OF WAY MARKER	EACH	99.55	101.77	265.24	116.64	583.20
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	564.83	811.70	1,883.39	814.98	4,074.90
610d	TEN KILOMETRE POST	EACH	1,084.81	1,623.40	4,017.61	1,681.46	8,407.28
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	131.25	76.10	895.00	275.59	1,377.93

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

THARPARKAR
(67)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.61	8.97	-	2.40	11.98
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.18	150.86	1.06	39.53	197.63
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	17.70	391.92	2.39	103.00	515.01
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	70.80	1,567.67	9.55	412.00	2,060.02
103	STRIPPING	CM	2.13	81.82	-	20.99	104.94
104	COMPACTION OF NATURAL GROUND	SM	0.30	8.55	0.75	2.40	12.00
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	3.76	118.44	-	30.55	152.74
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	109.86	272.97	46.20	107.26	536.28
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	15.47	294.98	-	77.61	388.07
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.10	228.89	-	59.75	298.75
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.07	105.42	-	27.12	135.62
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	109.86	272.97	46.20	107.26	536.28
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	17.47	275.34	-	73.20	366.02
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	7.84	229.91	-	59.44	297.18
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.23	120.24	0.37	31.71	158.56
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	52.39	245.80	64.37	90.64	453.20
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	97.08	367.50	30.80	123.84	619.22
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	82.49	257.01	-	84.87	424.37
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	49.93	211.67	-	65.40	326.99
107d	GRANULAR BACK FILL	CM	29.02	119.94	455.07	151.01	755.04
107e	COMMON BACK FILL	CM	21.21	55.41	4.99	20.40	102.02
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.08	152.01	4.99	40.77	203.86
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	17.65	418.69	49.36	121.43	607.13
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	13.23	364.32	2.37	94.98	474.90
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	11.76	323.09	-	83.71	418.56
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	6.92	154.80	7.84	42.39	211.96

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.46	66.06	4.99	19.13	95.64
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	12.56	97.15	2.97	28.17	140.85
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.21	23.75	1.43	6.60	32.98
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.87	15.94	0.76	4.39	21.96
110	IMPROVED SUB-GRADE	CM	8.80	104.23	55.17	42.05	210.25
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.73	13.24	0.78	3.69	18.44
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.10	13.62	0.88	3.90	19.49
201	GRANULAR SUB-BASE	CM	7.04	224.59	549.57	195.30	976.50
202	AGGREGATE BASE	CM	8.39	287.87	857.47	288.43	1,442.16
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	62.79	1,311.60	5,573.60	1,737.00	8,684.98
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	65.00	1,311.60	5,956.43	1,833.26	9,166.29
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	69.49	1,369.89	5,565.10	1,751.12	8,755.60
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	69.49	1,365.01	6,080.15	1,878.66	9,393.30
204b	CEMENT STABILIZED BASE	CM	25.51	480.68	1,151.22	414.35	2,071.76
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	203.66	772.74	49,592.01	12,642.10	63,210.52
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	203.66	772.74	48,055.80	12,258.05	61,290.25
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	80.80	92.96	1,028.29	300.51	1,502.57
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	129.31	2,134.12	5,240.68	1,876.03	9,380.13
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	89.26	105.48	808.77	250.88	1,254.39
207a	DEEP PATCHING (0-15 cm)	SM	1.52	39.69	1.23	10.61	53.05
207b	DEEP PATCHING (16-30 cm)	SM	1.52	34.94	1.23	9.42	47.11
208	REINSTATEMENT OF ROAD SURFACE	SM	1.65	49.93	0.55	13.03	65.16
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	1.77	96.89	0.67	24.83	124.15
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.35	19.38	0.13	4.97	24.83
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.26	1.32	35.20	9.19	45.97
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.25	1.32	39.29	10.21	51.07

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.10	0.49	14.73	3.83	19.15
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.10	0.49	17.19	4.44	22.22
304a	SINGLE SURFACE TREATMENT	SM	0.67	6.52	70.59	19.44	97.22
304b	DOUBLE SURFACE TREATMENT	SM	0.98	12.21	137.40	37.65	188.24
304c	TRIPLE SURFACE TREATMENT	SM	1.65	17.13	156.83	43.90	219.51
304d	SEAL COAT	SM	0.62	3.54	49.84	13.50	67.51
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	59.32	1,294.58	6,543.74	1,974.41	9,872.04
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	59.32	1,251.29	7,074.47	2,096.27	10,481.35
307a	DENSE GRADED HOT BIT-MAC	CM	147.82	316.05	5,565.39	1,507.31	7,536.57
307b	OPEN GRADED HOT BIT-MAC	CM	147.82	316.05	5,413.23	1,469.27	7,346.37
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	25.84	543.36	1,822.65	597.96	2,989.81
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	21.40	560.93	41,835.04	10,604.34	53,021.70
309a	COLD MILLING, 0 - 30 mm	SM	0.84	22.13	7.55	7.63	38.15
309b	COLD MILLING, 0 - 50 mm	SM	1.40	36.88	12.58	12.72	63.58
309c	COLD MILLING, 0 - 70 mm	SM	2.10	55.33	18.87	19.07	95.37
401a1i	CONCRETE CLASS "A1" (Underground)	CM	433.03	923.86	3,397.99	1,188.72	5,943.60
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	433.03	923.86	3,650.24	1,251.78	6,258.91
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	433.03	923.86	4,154.74	1,377.91	6,889.53
401a2i	CONCRETE CLASS "A2" (Underground)	CM	433.03	923.86	3,676.24	1,258.28	6,291.42
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	433.03	923.86	3,928.49	1,321.35	6,606.73
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	433.03	923.86	4,432.99	1,447.47	7,237.34
401a3i	CONCRETE CLASS "A3" (Underground)	CM	433.03	923.86	3,954.49	1,327.85	6,639.23
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	433.03	923.86	4,206.74	1,390.91	6,954.54
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	433.03	923.86	4,711.24	1,517.03	7,585.16
401b	CONCRETE CLASS "B"	CM	569.78	672.22	2,764.98	1,001.75	5,008.73
401ci	CONCRETE CLASS "C" (Underground)	CM	423.27	419.49	3,056.13	974.72	4,873.61

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	423.27	419.49	3,163.72	1,001.62	5,008.09
401ciii	CONCRETE CLASS "C" (Elevated)	CM	423.27	419.49	3,378.88	1,055.41	5,277.05
401d	CONCRETE CLASS "D1"	CM	660.05	1,106.97	4,406.52	1,543.38	7,716.91
401e	CONCRETE CLASS "Y"	CM	901.70	419.49	3,957.05	1,319.56	6,597.80
401f	LEAN CONCRETE	CM	369.01	424.53	2,194.91	747.11	3,735.56
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,417.98	790.24	4,322.45	1,632.67	8,163.34
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,417.98	790.24	4,878.95	1,771.79	8,858.97
401gii	PRECAST CONCRETE CLASS "B"	CM	1,417.98	790.24	4,175.54	1,595.94	7,979.70
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,417.98	790.24	5,157.20	1,841.36	9,206.78
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,417.98	790.24	5,435.45	1,910.92	9,554.59
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,417.98	790.24	5,713.70	1,980.48	9,902.40
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,278.79	669.81	68,368.00	17,579.15	87,895.74
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,278.79	669.81	77,818.00	19,941.65	99,708.24
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,073.90	4,274.04	64,243.13	17,397.77	86,988.84
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,112.04	12,481.24	115,657.09	32,562.59	162,812.97
405b	LAUNCHING OF GIRDER	TON	48.54	486.64	-	133.79	668.97
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	95.26	-	273.81	92.27	461.34
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	95.26	-	268.48	90.93	454.67
406c	STEEL EXPANSION JOINTS	KG	7.82	21.04	102.82	32.92	164.60
406d	WATER STOPS 6" SIZE	M	82.01	-	404.36	121.59	607.96
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.01	-	1.77	0.45	2.23
406f	ASPHALT FELT (3 PLY)	SM	32.02	-	2,786.11	704.53	3,522.66
406g	STEEL OR METAL BEARING DEVICES	KG	17.56	55.55	124.03	49.29	246.43
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	258.73	1,439.50	916.56	653.70	3,268.49
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	388.10	2,159.25	1,374.84	980.55	4,902.73
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	388.10	2,159.25	1,013.44	890.20	4,450.98

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	646.83	3,598.75	1,189.93	1,358.88	6,794.39
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	554.43	4,253.63	1,376.98	1,546.26	7,731.30
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	970.24	6,025.34	1,504.14	2,124.93	10,624.65
407h	PILE LOAD TEST UP TO 120 TON	EACH	19,903.51	40,036.45	98,294.56	39,558.63	197,793.15
407i	PILE LOAD TEST UP TO 240 TON	EACH	36,985.15	40,036.45	196,589.12	68,402.68	342,013.40
407j	PILE LOAD TEST UP TO 360 TON	EACH	54,066.79	43,882.72	294,883.68	98,208.30	491,041.49
407k	CONFIRMATORY BORING (NX SIZE)	M	157.60	1,323.15	6.24	371.75	1,858.74
410	BRICK WORK	CM	252.64	236.06	2,405.88	723.64	3,618.21
411a	STONE MASONRY RANDOM DRY	CM	224.72	91.36	599.08	228.79	1,143.95
411b	STONE MASONRY RANDOM WITH MORTAR	CM	239.16	139.82	1,432.52	452.87	2,264.36
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	291.56	91.36	663.49	261.60	1,308.01
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	339.42	139.82	1,504.61	495.96	2,479.81
411g	ROLL POINTING	SM	52.63	9.69	36.90	24.81	124.03
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	458.65	221.29	1,418.43	524.59	2,622.96
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	190.73	366.20	555.44	278.09	1,390.46
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	185.84	480.94	717.26	346.01	1,730.05
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	183.09	791.50	966.05	485.16	2,425.80
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	192.32	972.63	1,445.01	652.49	3,262.45
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	222.22	949.38	2,081.05	813.16	4,065.81
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	274.67	1,171.86	3,213.77	1,165.07	5,825.37
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	355.45	1,313.30	4,028.44	1,424.30	7,121.49
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	421.31	1,594.72	5,134.11	1,787.53	8,937.67
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	494.52	1,860.51	7,933.90	2,572.23	12,861.15
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	190.73	423.57	573.14	296.86	1,484.30
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	185.84	480.94	671.32	334.52	1,672.62
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	177.67	791.50	918.23	471.85	2,359.24

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	192.32	972.63	1,480.63	661.40	3,306.98
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	222.22	949.38	2,863.44	1,008.76	5,043.79
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	274.67	1,171.86	3,950.30	1,349.21	6,746.04
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	355.45	1,313.30	5,340.66	1,752.35	8,761.76
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	421.31	1,594.72	7,242.90	2,314.73	11,573.66
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	494.52	1,860.51	10,188.85	3,135.97	15,679.84
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	76.49	103.49	507.42	171.85	859.25
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	643.89	511.20	3,022.62	1,044.43	5,222.14
507a	STEEL WIRE MESH FOR GABIONS	KG	4.27	-	121.32	31.40	156.98
507b	ROCK FILL IN GABIONS	CM	82.64	-	492.14	143.69	718.46
508a	BRICK PAVING (SINGLE COURSE)	SM	86.82	26.90	198.98	78.18	390.88
508b	BRICK PAVING (DOUBLE COURSE)	SM	153.66	26.90	393.72	143.57	717.85
509a	RIP RAP CLASS "A"	CM	370.20	-	512.89	220.77	1,103.86
509b	RIP RAP CLASS "B"	CM	357.22	-	508.78	216.50	1,082.51
509c	RIP RAP CLASS "C"	CM	358.20	-	512.89	217.77	1,088.85
509d	GROUTED RIP RAP CLASS "A"	CM	453.48	84.24	1,656.11	548.46	2,742.29
509e	GROUTED RIP RAP CLASS "B"	CM	435.40	67.39	1,533.66	509.11	2,545.57
509f	GROUTED RIP RAP CLASS "C"	CM	429.67	56.16	1,563.41	512.31	2,561.55
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	651.93	295.88	3,404.79	1,088.15	5,440.75
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	41.70	167.47	455.77	166.23	831.17
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	82.00	322.32	-	101.08	505.40
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	119.52	57.10	83.34	64.99	324.96
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	152.99	73.09	106.68	83.19	415.95
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	191.27	150.62	338.38	170.07	850.33
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	239.09	188.27	422.97	212.58	1,062.91
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	229.67	498.72	1,911.12	659.88	3,299.38

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	776.81	567.97	3,947.35	1,323.03	6,615.16
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	113.11	75.65	373.94	140.68	703.38
603	BRICK EDGING	M	7.17	-	30.34	9.38	46.88
604a	METAL GUARD RAIL	M	14.67	59.95	1,492.92	391.89	1,959.43
604b	METAL GUARD RAIL END PIECES	EACH	18.47	-	1,138.10	289.14	1,445.72
604d	STEEL POST OF METAL GUARD RAIL	EACH	68.10	805.79	3,566.86	1,110.19	5,550.94
605a	CONCRETE BEAM GUARD RAIL	M	61.03	25.40	587.52	168.49	842.44
605c	CONCRETE POST FOR GUARD RAIL	M	74.93	22.64	590.67	172.06	860.30
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	195.60	213.74	6,396.77	1,701.53	8,507.64
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	58.56	320.61	8,472.31	2,212.87	11,064.35
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	195.60	453.76	11,177.64	2,956.75	14,783.75
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	644.93	503.34	19,349.47	5,124.44	25,622.18
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	128.99	100.67	8,435.92	2,166.39	10,831.97
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	217.31	-	1,135.81	338.28	1,691.40
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	217.31	-	1,703.71	480.26	2,401.28
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.39	5.03	15.41	5.71	28.53
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.80	3.40	37.21	10.35	51.76
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.39	5.03	20.56	6.99	34.97
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.80	3.40	49.63	13.46	67.28
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	56.37	4.26	148.88	52.38	261.88
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	56.37	8.15	468.89	133.35	666.77
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.99	7.44	21.42	7.96	39.81
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	2.99	8.29	63.09	18.59	92.96
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.99	5.98	28.56	9.38	46.91
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	2.99	8.29	84.12	23.85	119.24
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	56.37	3.04	206.84	66.56	332.81

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	56.37	6.45	795.53	214.59	1,072.93
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	47.70	3.04	99.25	37.50	187.49
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	47.70	6.45	313.07	91.81	459.03
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	47.70	3.04	137.89	47.16	235.79
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	47.70	6.45	531.15	146.33	731.63
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	7.92	69.34	184.80	65.52	327.58
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	7.92	69.34	223.39	75.16	375.82
610b	RIGHT OF WAY MARKER	EACH	87.31	101.77	275.41	116.12	580.62
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	501.64	811.70	1,967.97	820.33	4,101.64
610d	TEN KILOMETRE POST	EACH	974.40	1,623.40	4,183.83	1,695.41	8,477.04
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	107.44	76.10	908.78	273.08	1,365.40

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
March - 2008

THATTA
(68)

Q. S. & Estimation Specialist

Rate Analysis Summary (Construction)

District: Thatta **District Code: 68**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.82	8.97	-	2.45	12.25
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	8.12	150.86	1.06	40.01	200.06
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	23.57	391.92	2.39	104.47	522.34
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	94.26	1,567.67	9.55	417.87	2,089.35
103	STRIPPING	CM	2.71	81.82	-	21.13	105.66
104	COMPACTION OF NATURAL GROUND	SM	0.38	8.55	0.75	2.42	12.10
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.49	118.44	-	30.73	153.66
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	138.64	272.97	46.20	114.45	572.26
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	19.92	294.98	-	78.73	393.63
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	12.88	228.89	-	60.44	302.22
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.68	105.42	-	27.27	136.37
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	138.64	272.97	46.20	114.45	572.26
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	22.05	275.34	-	74.35	371.74
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	10.05	229.91	-	59.99	299.95
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.53	120.24	0.37	32.04	160.19
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	67.26	245.80	64.37	94.36	471.79
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	122.50	367.50	30.80	130.20	651.00
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	104.59	257.01	-	90.40	452.00
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	63.00	211.67	-	68.67	343.34
107d	GRANULAR BACK FILL	CM	37.75	119.94	319.62	119.33	596.63
107e	COMMON BACK FILL	CM	28.55	55.41	4.99	22.24	111.19
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.66	152.01	4.99	41.17	205.83
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	22.58	418.69	49.36	122.66	613.30
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	16.94	364.32	2.37	95.91	479.53
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	15.06	323.09	-	84.54	422.68
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.83	154.80	7.84	42.87	214.35

Rate Analysis Summary (Construction)

District: Thatta **District Code: 68**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.88	66.06	4.99	19.48	97.41
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	16.12	97.15	2.97	29.06	145.31
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.53	23.75	1.43	6.68	33.38
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.08	15.94	0.76	4.45	22.23
110	IMPROVED SUB-GRADE	CM	11.30	104.23	67.00	45.63	228.17
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.92	13.24	0.78	3.74	18.68
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.38	13.62	0.88	3.97	19.85
201	GRANULAR SUB-BASE	CM	8.97	224.59	288.16	130.43	652.15
202	AGGREGATE BASE	CM	10.72	287.87	678.43	244.25	1,221.27
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	84.02	1,311.60	5,292.68	1,672.08	8,360.38
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	86.80	1,311.60	5,680.39	1,769.70	8,848.48
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	92.38	1,369.89	5,283.78	1,686.51	8,432.56
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	92.38	1,365.01	5,804.02	1,815.35	9,076.76
204b	CEMENT STABILIZED BASE	CM	32.93	480.68	900.08	353.42	1,767.11
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	253.12	772.74	49,125.39	12,537.81	62,689.07
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	253.12	772.74	47,589.18	12,153.76	60,768.80
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	110.05	92.96	812.15	253.79	1,268.95
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	169.89	2,134.12	4,953.26	1,814.32	9,071.58
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	122.25	105.48	611.99	209.93	1,049.65
207a	DEEP PATCHING (0-15 cm)	SM	1.91	39.69	1.23	10.71	53.54
207b	DEEP PATCHING (16-30 cm)	SM	1.91	34.94	1.23	9.52	47.60
208	REINSTATEMENT OF ROAD SURFACE	SM	2.11	49.93	0.55	13.15	65.74
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.08	96.89	0.67	24.91	124.54
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.42	19.38	0.13	4.98	24.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.32	1.32	34.87	9.13	45.64
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.32	38.92	10.14	50.69

Rate Analysis Summary (Construction)

District: Thatta **District Code: 68**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.49	14.59	3.80	19.01
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.49	17.02	4.41	22.05
304a	SINGLE SURFACE TREATMENT	SM	0.85	6.52	68.79	19.04	95.18
304b	DOUBLE SURFACE TREATMENT	SM	1.23	12.21	132.80	36.56	182.80
304c	TRIPLE SURFACE TREATMENT	SM	2.07	17.13	151.45	42.67	213.33
304d	SEAL COAT	SM	0.78	3.54	48.88	13.30	66.50
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	78.64	1,294.58	6,251.85	1,906.27	9,531.35
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	78.64	1,251.29	6,766.17	2,024.03	10,120.13
307a	DENSE GRADED HOT BIT-MAC	CM	198.84	316.05	5,299.58	1,453.62	7,268.08
307b	OPEN GRADED HOT BIT-MAC	CM	198.84	316.05	5,146.13	1,415.26	7,076.28
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	34.54	543.36	1,770.37	587.07	2,935.34
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	27.28	560.93	41,354.56	10,485.69	52,428.45
309a	COLD MILLING, 0 - 30 mm	SM	1.07	22.13	7.55	7.69	38.44
309b	COLD MILLING, 0 - 50 mm	SM	1.79	36.88	12.58	12.81	64.07
309c	COLD MILLING, 0 - 70 mm	SM	2.68	55.33	18.87	19.22	96.11
401a1i	CONCRETE CLASS "A1" (Underground)	CM	570.43	923.86	3,152.82	1,161.78	5,808.89
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	570.43	923.86	3,405.07	1,224.84	6,124.20
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	570.43	923.86	3,909.56	1,350.96	6,754.82
401a2i	CONCRETE CLASS "A2" (Underground)	CM	570.43	923.86	3,431.07	1,231.34	6,156.71
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	570.43	923.86	3,683.32	1,294.40	6,472.01
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	570.43	923.86	4,187.81	1,420.53	7,102.63
401a3i	CONCRETE CLASS "A3" (Underground)	CM	570.43	923.86	3,709.32	1,300.90	6,504.52
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	570.43	923.86	3,961.57	1,363.97	6,819.83
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	570.43	923.86	4,466.06	1,490.09	7,450.45
401b	CONCRETE CLASS "B"	CM	745.60	672.22	2,499.89	979.43	4,897.13
401ci	CONCRETE CLASS "C" (Underground)	CM	563.07	419.49	2,765.89	937.11	4,685.56

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401cii	CONCRETE CLASS "C" (On ground)	CM	563.07	419.49	2,873.47	964.01	4,820.04
401ciii	CONCRETE CLASS "C" (Elevated)	CM	563.07	419.49	3,088.64	1,017.80	5,089.00
401d	CONCRETE CLASS "D1"	CM	875.98	1,106.97	4,181.11	1,541.02	7,705.08
401e	CONCRETE CLASS "Y"	CM	1,202.02	419.49	3,735.29	1,339.20	6,696.00
401f	LEAN CONCRETE	CM	495.36	424.53	1,930.31	712.55	3,562.76
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,905.75	790.24	4,055.81	1,687.95	8,439.75
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,905.75	790.24	4,612.31	1,827.08	9,135.38
401gii	PRECAST CONCRETE CLASS "B"	CM	1,905.75	790.24	3,891.84	1,646.96	8,234.79
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,905.75	790.24	4,890.56	1,896.64	9,483.19
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,905.75	790.24	5,168.81	1,966.20	9,831.00
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,905.75	790.24	5,447.06	2,035.76	10,178.82
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,681.79	669.81	67,838.00	17,547.40	87,737.00
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,681.79	669.81	77,288.00	19,909.90	99,549.50
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,448.75	4,274.04	63,654.06	17,344.22	86,721.08
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,983.37	12,481.24	115,619.97	32,771.14	163,855.72
405b	LAUNCHING OF GIRDER	TON	69.72	486.64	-	139.09	695.45
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	127.53	-	265.96	98.37	491.86
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	127.53	-	261.23	97.19	485.94
406c	STEEL EXPANSION JOINTS	KG	10.68	21.04	102.25	33.49	167.47
406d	WATER STOPS 6" SIZE	M	109.63	-	403.43	128.27	641.33
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	1.77	0.45	2.24
406f	ASPHALT FELT (3 PLY)	SM	42.27	-	2,778.45	705.18	3,525.91
406g	STEEL OR METAL BEARING DEVICES	KG	23.93	55.55	123.47	50.74	253.68
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	373.84	1,439.50	788.99	650.58	3,252.91
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	560.76	2,159.25	1,183.49	975.87	4,879.37
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	560.76	2,159.25	905.07	906.27	4,531.34

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	934.60	3,598.75	1,120.23	1,413.39	7,066.97
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	801.08	4,253.63	1,377.79	1,608.13	8,040.64
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,401.90	6,025.34	1,461.97	2,222.30	11,111.51
407h	PILE LOAD TEST UP TO 120 TON	EACH	27,260.44	40,036.45	84,648.40	37,986.32	189,931.61
407i	PILE LOAD TEST UP TO 240 TON	EACH	51,073.72	40,036.45	169,296.80	65,101.74	325,508.71
407j	PILE LOAD TEST UP TO 360 TON	EACH	74,887.00	43,882.72	253,945.20	93,178.73	465,893.65
407k	CONFIRMATORY BORING (NX SIZE)	M	226.33	1,323.15	6.24	388.93	1,944.65
410	BRICK WORK	CM	337.85	236.06	2,349.17	730.77	3,653.84
411a	STONE MASONRY RANDOM DRY	CM	297.51	91.36	402.20	197.77	988.84
411b	STONE MASONRY RANDOM WITH MORTAR	CM	316.43	139.82	1,164.75	405.25	2,026.25
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	388.28	91.36	450.86	232.63	1,163.13
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	452.58	139.82	1,238.82	457.81	2,289.03
411g	ROLL POINTING	SM	70.73	9.69	35.71	29.03	145.17
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	615.19	221.29	1,152.64	497.28	2,486.39
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	257.66	366.20	553.23	294.27	1,471.35
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	252.00	480.94	714.60	361.88	1,809.42
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	244.53	791.50	962.95	499.75	2,498.73
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	258.38	972.63	1,441.39	668.10	3,340.49
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	298.24	949.38	2,077.43	831.26	4,156.31
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	367.92	1,171.86	3,208.53	1,187.08	5,935.40
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	476.14	1,313.30	4,023.23	1,453.17	7,265.83
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	564.65	1,594.72	5,127.78	1,821.79	9,108.93
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	661.93	1,860.51	7,926.51	2,612.24	13,061.19
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	257.66	423.57	568.71	312.48	1,562.42
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	252.00	480.94	668.66	350.40	1,751.99
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	236.97	791.50	915.13	485.90	2,429.50

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District: Thatta **District Code: 68**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	258.38	972.63	1,477.81	677.20	3,386.02
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	298.24	949.38	2,859.41	1,026.76	5,133.78
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	367.92	1,171.86	3,945.06	1,371.21	6,856.06
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	476.14	1,313.30	5,335.45	1,781.22	8,906.10
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	564.65	1,594.72	7,236.57	2,348.98	11,744.92
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	661.93	1,860.51	10,181.46	3,175.97	15,879.87
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	101.19	103.49	333.30	134.49	672.47
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	847.02	511.20	2,757.53	1,028.93	5,144.67
507a	STEEL WIRE MESH FOR GABIONS	KG	5.57	-	120.64	31.55	157.76
507b	ROCK FILL IN GABIONS	CM	111.28	-	331.63	110.73	553.63
508a	BRICK PAVING (SINGLE COURSE)	SM	116.80	26.90	191.22	83.73	418.65
508b	BRICK PAVING (DOUBLE COURSE)	SM	207.56	26.90	379.76	153.56	767.78
509a	RIP RAP CLASS "A"	CM	497.16	-	316.01	203.29	1,016.46
509b	RIP RAP CLASS "B"	CM	480.92	-	313.48	198.60	993.01
509c	RIP RAP CLASS "C"	CM	482.72	-	316.01	199.68	998.41
509d	GROUTED RIP RAP CLASS "A"	CM	609.84	84.24	2,269.71	740.95	3,704.74
509e	GROUTED RIP RAP CLASS "B"	CM	586.21	67.39	2,067.37	680.24	3,401.22
509f	GROUTED RIP RAP CLASS "C"	CM	579.28	56.16	2,009.00	661.11	3,305.55
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	879.16	295.88	3,154.05	1,082.27	5,411.37
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	56.05	167.47	319.84	135.84	679.20
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	116.37	322.32	-	109.67	548.36
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	159.13	57.10	51.35	66.90	334.48
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	203.69	73.09	65.73	85.63	428.14
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	255.13	150.62	290.84	174.15	870.74
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	318.92	188.27	363.55	217.68	1,088.42
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	302.56	498.72	1,783.19	646.12	3,230.60

Rate Analysis Summary (Construction)

District: Thatta **District Code: 68**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,043.19	567.97	3,797.67	1,352.21	6,761.03
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	151.76	75.65	347.46	143.72	718.59
603	BRICK EDGING	M	9.52	-	30.34	9.96	49.81
604a	METAL GUARD RAIL	M	20.16	59.95	1,492.92	393.26	1,966.30
604b	METAL GUARD RAIL END PIECES	EACH	26.68	-	1,138.10	291.20	1,455.98
604d	STEEL POST OF METAL GUARD RAIL	EACH	90.98	805.79	3,566.86	1,115.91	5,579.53
605a	CONCRETE BEAM GUARD RAIL	M	83.02	25.40	575.67	171.02	855.11
605c	CONCRETE POST FOR GUARD RAIL	M	101.93	22.64	576.52	175.27	876.36
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	261.53	213.74	6,367.10	1,710.59	8,552.96
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	77.86	320.61	8,413.27	2,202.93	11,014.67
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	261.53	453.76	11,079.75	2,948.76	14,743.80
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	879.95	503.34	19,194.21	5,144.37	25,721.87
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	175.99	100.67	8,394.74	2,167.85	10,839.24
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	273.97	-	1,132.77	351.69	1,758.43
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	273.97	-	1,699.15	493.28	2,466.41
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.09	5.03	15.39	5.88	29.38
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.03	3.40	37.02	10.36	51.82
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.09	5.03	20.53	7.16	35.81
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.03	3.40	49.38	13.45	67.26
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	74.27	4.26	148.69	56.80	284.02
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	74.27	8.15	466.51	137.23	686.17
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.86	7.44	21.40	8.17	40.87
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.86	8.29	63.09	18.81	94.05
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.86	5.98	28.54	9.59	47.97
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.86	8.29	84.12	24.07	120.33
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	74.27	3.04	206.65	70.99	354.95

National Highway Authority
Islamabad

Quantity Surveying &
Estimation Specialist

Rate Analysis Summary (Construction)

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	74.27	6.45	795.53	219.06	1,095.31
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	62.92	3.04	99.12	41.27	206.35
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	62.92	6.45	311.48	95.21	476.05
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	62.92	3.04	137.76	50.93	254.65
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	62.92	6.45	531.15	150.13	750.65
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	10.25	69.34	184.72	66.08	330.39
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	10.25	69.34	223.31	75.72	378.62
610b	RIGHT OF WAY MARKER	EACH	119.18	101.77	264.77	121.43	607.14
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	674.31	811.70	1,877.46	840.87	4,204.34
610d	TEN KILOMETRE POST	EACH	1,310.78	1,623.40	4,005.37	1,734.89	8,674.43
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM LENGTH WITH PRECAST PRESTRESSED R.C.C. POST	LM	145.17	76.10	895.61	279.22	1,396.10