



**NATIONAL HIGHWAY AUTHORITY**  
MINISTRY OF COMMUNICATIONS  
GOVERNMENT OF PAKISTAN  
ISLAMABAD



## **COMPOSITE SCHEDULE OF RATES**

**APRIL 2014**

**(PUNJAB)**

**WORK SPONSORED BY:**

**PLANNING WING**

**OF**

**NATIONAL HIGHWAY AUTHORITY  
ISLAMABAD**

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# FOREWORD

Following the increases in prices of materials and labour in the years 2012-13, the revision / updation of CSR has been carried out. In the years 2012-13 we have seen the prices of steel / diesel / bitumen go up considerably. Analysts are still uncertain with the prices in the year 2014. For the years 2012-13, we have carried out a general revision of all prices up to April 2014 in consultation with leading manufacturers, supplier, and specialist contractors.

These rates have been developed using NHA Rate Analysis formulae developed for previous CSRs with slight improvements wherever necessary. The variation in the proposed rates is anticipated in certain cases, which may be due to varying degrees / levels of productivity and price differences of various inputs at the regional level.

The rates, prices and outputs included in the resources and unit cost calculations, including allowances for wastage, normal productivity and efficiency are based on roadwork and bridge projects being carried out by NHA. The unit rates are average unit rates for a particular district and not project specific. The market can change very rapidly, which would obviously have an impact on the unit rates.

It must be understood that main objective of the CSR is to provide a realistic reference base for preparing Cost Estimates / PC-I and Evaluation of Bids, for NHA projects.

Our gratitude is to The Chairman NHA, Member (Planning), Member (Finance), Member (Operations), Member (Construction) and Member (Motorway) without whose support it would have been difficult to develop this Document.

In the end, my appreciation is for my team, for all the technical and professional efforts to produce Revised Composite Schedule of Rates 2014.

It is hoped that the CSR 2014, would serve as a Basic Engineer's Estimate reference document for National Highway Authority, various Government Departments and the construction industry in general.

Whilst all efforts are made to ensure the accuracy of the data and information used in updating the CSR, neither NHA nor M/s Sampak International (Pvt.) Ltd. can in any way accept liability for loss of any kind resulting from the use of CSR, made by any person, institution, company, department etc.

S. M. A. Shirazi  
Managing Director  
SAMPAK International (Pvt.) Ltd

## 1. GENERAL

For many years National Highway Authority has been compiling / updating the Composite Schedule of Rates for use in the Civil Engineering Industry. The Civil Engineering Industry uses this Schedule of Rates for pricing work by the application of unit rates to the quantities measured from the designer's drawings. The main objective of the CSR is to provide a realistic reference base for cost estimates. One has to understand no two projects are the same, there are variables which effect the price of the project i.e., the volume of work below ground, embankment height, cut & fill, increased exposure to weather, and the tremendous variety of the projects, in terms of type, complexity and scale makes the straight forward use of unit rates less reliable. This uncertainty is compounded by the lower number of bill of items generated in Civil Engineering Projects as compared to Building Works so that the precise nature of work is less apparent from bill descriptions and the statistical effect of 'swings and roundabout' has less scope to average out extremes of pricing.

To prepare a price for a Civil Engineering project, then, it is necessary to have regard to the method to be adopted in executing the work, draw up a detailed programme and then cost out the resources necessary to execute the chosen method. The first part of this process is the field of construction planner, there has been a tendency to postpone detailed estimating until the tendering stage itself, with the employer relying, up to that point, upon an estimate prepared on a 'Thumb Rule' basis.

There is increasing growing pressure on the part of project sponsors for an improvement to budgetary advice, so that a decision to commit expenditure to a particular project is taken on firmer grounds. The absence of detailed price method during the pre-contract phase also inhibits the accurate costing of alternative designs and regular cost checking to ensure that the design is being developed within the employer's budget. The CSR gives unit rates for use when quantities can be taken from available drawings. To take some note of the range of unit rates that might apply to an item, the rates themselves are in some cases related to working method – for example by identifying the different types of equipment that would suit varying circumstances. Nonetheless, it would be a folly to propose that all types of Civil Engineering work could be covered by the use of CSR. While developing these unit rates, we had in mind the type and scale of work to be commissioned by NHA.

The CSR does embrace the great majority of work undertaken by NHA. Although almost all projects will have individual features that require careful attention in pricing, there will be some projects that are so specialist that they will not conform to standard pricing information at all. But for most projects, within the range of work covered, this CSR should provide a firm foundation for:

- Preparing Project Cost Estimate and PC-1
- Evaluating Tender / Bids
- Evaluating Claims and Variation Order
- Arbitration Matters

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

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

- Merging the above information in proper proportion according to Design Specifications and Constructional requirements to create the rate of a work item.
- 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, 2006, 2008, 2009 and 2011. There are total of 109 Districts considered and are given numbers in Alphabetical order and their Province wise breakdown as under:

<b>PROVINCE</b>	<b>No. of Districts</b>
Punjab	36
Sind	20
Khyber Pakhtunkhwa	24
Baluchistan	29

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. Some items have been added in CSR-2014, which were necessary but are not covered under General Specifications 1998. Hence, it has become imperative to revise and update the Specifications.

- b. These rates are based on the existing formulae and equipment efficiency levels used in the preparation of previous CSR 2011 with some modifications.
- c. The rates analysis of individual items of CSR 2014 consists of four basic inputs, which have been assigned the same code numbers as in the previous Composite Schedule of Rates.
- i. Manpower code starting from 1001 onwards
  - ii. Material code starting from 2001 onwards
  - iii. Equipment code starting from 3001 onwards
  - iv. Overheads, Profits, Preliminaries & Taxes
- d. For the preparation of rates following documents have been referred:
- i. General Specifications 1998
  - ii. NHA Composite Schedule of Rates 2011
  - 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:**

Costs of manpower engaged on Plant & Equipment have been included in rental charges of Plant & Equipment and only site supervisory staff has 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.B.I. 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 109 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. 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 from 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 – 2014.

**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 85 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 rate 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, preliminaries and Taxes	25 percent

## 2.5 OVERHEADS, PROFIT & PRELIMINARIES

### a. Profit

The level of profit is governed by the degree of competition applicable to the job which is in turn a function of the industry's current work load. The appropriate addition is highly variable.

### b. Head Office Overheads

An addition to the estimate needs to be made to the net estimate to cover all costs incurred in operating the central services provided by head office. Apart from general management and accountancy, this will normally include the departments dealing with:

- Tendering / Estimating
- Planning & design
- Wages and bonus

Finance Cost: Some companies would include finance costs with head office overheads, but this will vary from contractor to contractor.

The appropriate addition varies with the extent of services provided centrally and company to company, rather than on site, and with size of organization.

### c. Preliminaries

Preliminaries cost in Civil Engineering works are indirectly related to the actual quantity of work being carried out. It comprises a definition of method related charges, a checklist of items to be accounted for on typical Civil Engineering Contract.

Generally contract document gives detailed requirements for the facilities and equipment to be provided for the employer and the Engineer's Representative given in the Bill of Quantities. Thus General Items given in the BOQ are excluded from the check list of preliminaries.

The following checklist is representative but not exhaustive which is not covered in the BOQ or General items section. The list describes the major preliminaries which are included, implicitly or explicitly, in a typically Civil Engineering Contract.

- ***Contractor's site on costs***
- ***Temporary works (other than those included in unit cost)***
- ***General purpose plant (other than those included in unit cost)***
- ***Other services, charges and fees***
- ***Site Staff Salaries***

All non-productive supervisory staff on site i.e., agents, clerks, computer operators, security guards, store men, drivers for staff vehicles, cleaners, general labour for general clearance etc.
- ***Plant Maintenance***

Fitters, electricians and assistants engaged on general plant maintenance on site (excludes drivers who are provided in the unit costs)
- ***Site Transport for Staff and General Use***

Vehicles / buses provided for use of staff and others including O & M costs etc.
- ***Contractor's offices rental / construction / site huts and associated running costs.***
- ***Canteen, welfare / medical***
- ***General office expenditure***
- ***Provision of postage, stationary and other consumables for general office use.***
- ***Mobilization and demobilization of resources.***
- ***Telecommunications***
- ***Furniture and equipment***
- ***Small tools***
- ***Traffic Control, traffic diversion and signs***
- ***Fencing***
- ***Protective clothing***
- ***Health and safety***
- ***Road lighting***
- ***Cleaning roads etc***

- ***Progress photographs***
- ***Water Supply***
- ***Electric connection***
- ***Notice boards and signs***
- ***Insurances / bonds / bank guarantees / Employees liabilities insurance etc.***

There will be many other items of preliminaries which may have to be considered, which probably will be project and site specific. Preliminaries percentage can vary from project to project.

d. **Tax**

Tax has been included as per Government rules.

In the CSR, 25% is added on the estimated unit cost of the items which includes over heads, taxes, preliminaries and profit, however this will vary from project to project and contractor to contractor.

## 2.6 **VARIABLES AFFECTING THE RATE ANALYSIS**

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

a. **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.

b. **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.

c. **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 per the specified scope of works.

d. **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.

e. **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.

**CSR-2014**  
**LIST OF MANPOWER CODES**

<b>S. No.</b>	<b>CODE</b>	<b>DESCRIPTION</b>
1	1001	SITE ENGINEER
2	1002	ASPHALT PLANT ENGINEER
3	1003	CONCRETE PLANT ENGINEER
4	1011	FOREMAN ASPHALT
5	1012	FOREMAN EARTHWORK
6	1013	FOREMAN CONCRETE
7	1014	GENERAL FOREMAN
8	1021	SUPERVISOR
9	1022	SURVEYOR
10	1023	ASSISTANT SURVEYOR
11	1031	MASON
12	1032	CARPENTER
13	1033	PAINTER
14	1034	STEEL BINDER/CUTTER
15	1040	HIGHLY SKILLED LABOUR
16	1041	HELPER
17	1042	WELDER
18	1051	LABOUR

**Notes:**

Cost of following Manpower has been included elsewhere as under:

1. Top Management and Senior Engineers etc. included in overhead of the Project.
2. All indirect Manpower such as Clerk, Typist, Accountant, Lab Staff, Workshop Staff, Store Staff, Security Staff etc. are included under overhead.
3. All Operator of Light and Heavy Duty equipment and plant included in the hourly rate of the equipment.

**CSR-2014**  
**LIST OF MATERIAL CODES**

<b>Material Code No.</b>	<b>Description</b>	<b>Unit</b>
2001	ROCK	CM
2002	SOIL CLASS-A1 (A)	CM
2003	SOIL CLASS-A1 (B)	CM
2004	SOIL CLASS-A2 (4)	CM
2005	SOIL CLASS-A2 (5)	CM
2006	SOIL CLASS-A2 (6)	CM
2007	SOIL CLASS-A2 (7)	CM
2008	SOIL CLASS-A3	CM
2009	SOIL CLASS-A4	CM
2010	SOIL CLASS-A5	CM
2011	SOIL CLASS-A6	CM
2012	SOIL CLASS-A7-5	CM
2013	SOIL CLASS-A7-6	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
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"-No.4	CM
2027	AGGREGATE NO.4 - NO.200	CM
2028	FILLER MATERIAL	CM
2029	BRICK CLASS A	NO.
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

**CSR-2014**  
**LIST OF MATERIAL CODES**

Material Code No.	Description	Unit
2052	ASPHALT R.S. 2	TON
2053	CEMENT TYPE-I (OPC)	BAG
2054	CEMENT TYPE-II (LOW S.R)	BAG
2055	CEMENT TYPE-III (QUICK SETTING)	BAG
2056	CEMENT TYPE-IV (LOW HEAT STRENGTH)	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
2063	PRE-STRESSING STRAND, 3/8", 1/2"	TON
2064	STEEL WIRE MESH, 4" x 4"	KG
2065	WATER	1000 LIT
2066	EPOXY ADHESIVE (2 PART) FOR CATEYES	LIT
2068	STEEL EXPANSION JOINT (LOCAL)	KG
2070	COLD STEEL WIRE AASHTO M-32	TON
2072	STRUCTURES STEEL SHAPES ASTM A-36	TON
2073	ELASTOMERIC BEARING PAD M-183	CCM
2077	RCC PIPE CLASS II 310 MM (AASHTO M-170)	LM
2078	RCC PIPE CLASS II 380 MM (AASHTO M-170)	LM
2079	RCC PIPE CLASS II 460 MM (AASHTO M-170)	LM
2080	RCC PIPE CLASS II 610 MM (AASHTO M-170)	LM
2081	RCC PIPE CLASS II 760 MM (AASHTO M-170)	LM
2082	RCC PIPE CLASS II 910 MM (AASHTO M-170)	LM
2083	RCC PIPE CLASS II 1070 MM (AASHTO M-170)	LM
2084	RCC PIPE CLASS II 1220 MM (AASHTO M-170)	LM
2085	RCC PIPE CLASS II 1520 MM (AASHTO M-70)	LM
2089	CAT EYE SINGLE (RAISED PROFILE) - PLASTIC	NO.
2090	CAT EYE DOUBLE (RAISED PROFILE) - PLASTIC	NO.
2091	CAT EYE SINGLE (RAISED PROFILE) - ALUMINIUM	NO.
2092	CAT EYE DOUBLE (RAISED PROFILE) - ALUMINIUM	NO.
2093	STEEL/MATAL BEARING DEVICES	KG
2095	BITUMEN IMPREGINATED FIBER BOARD	SM
2096	NEOPRENE RUBBER JOINT FELT	SM
2097	ASPHALT FELT (3 - PLY)	SM
2099	BENTONITE POWDER	KG
2100	JOINT SEALENT FILLER	KG
2101	TRAFFIC SIGN CAT 1	NO.
2102	TRAFFIC SIGN CAT 2	NO.
2103	TRAFFIC SIGN CAT 3 (A, B, C)	SM
2104	PAVEMENT MARKING NON-REFLECTING (CR)	LIT
2105	PAVEMENT MARKING REFLECTING (CR)	LIT

**CSR-2014**  
**LIST OF MATERIAL CODES**

Material Code No.	Description	Unit
2106	CATS-EYE SINGLE (FLUSH SURFACE)	NO.
2107	CATS-EYE DOUBLE (FLUSH SURFACE)	NO.
2108	TUNGSTON CARBIDE BITS	SET
2109	RED OXIDE PAINT	LIT
2110	QUICK LIME	KG
2111	DIESEL	LIT
2112	SUPER – GASOLINE	LIT
2113	REGULAR – GASOLINE	LIT
2114	OILS (ALL TYPES)	LIT
2115	LUBRICANTS (GREASE)	KG.
2116	FURNACE OIL	LIT
2117	BLASTING MATERIAL	CM
2118	ELECTRIC CHARGES COMMERCIAL	KWH
2119	MASTIC WATER PROOF PAINT	KG
2120	SYNTHETIC ENEMAL PAINT	LIT
2121	SHUTTERING (107 b)	CM
2122	SHUTTERING (a)	CM
2123	SHUTTERING (b)	CM
2124	SHUTTERING (c)	CM
2125	SHUTTERING (d)	CM
2126	SHUTTERING (407 h)	LS
2127	SHUTTERING (407 i)	LS
2128	SHUTTERING (407 j)	LS
2129	SCAFFOLDING (A)	CM
2130	SCAFFOLDING (B)	SM
2131	G.M.S BARBED WIRE	KG
2133	ANGLE IRONS DIFFERENT SIZES	KG
2134	STEEL CHANNELS	KG
2135	SHEATHS ( 2" DIA)	LM
2136	LIVE ANCHORAGES (3/8" - 1/2")	NO.
2137	G.I. PIPE 3" DIA	LM
2138	STEEL SHEATH CASING	M
2139	MOBILIZATION OF PILING EQUIPMENT (UPTO 1.0 m DIA)	M
2140	G.M.S SCREW, NUTS, BOLTS AND WASHERS	KG
2142	PLANTATION TREES	NO.
2143	MOBILIZATION OF PILING EQUIPMENT (UPTO 1.0 m DIA)	M
2144	RCC PIPE CLASS IV 310 MM (AASHTO M-170)	LM
2145	RCC PIPE CLASS IV 380 MM (AASHTO M-170)	LM
2146	RCC PIPE CLASS IV 460 MM (AASHTO M-170)	LM
2147	RCC PIPE CLASS IV 610 MM (AASHTO M-170)	LM
2148	RCC PIPE CLASS IV 760 MM (AASHTO M-170)	LM
2149	RCC PIPE CLASS IV 910 MM (AASHTO M-170)	LM
2150	RCC PIPE CLASS IV 1070 MM (AASHTO M-170)	LM

**CSR-2014**  
**LIST OF MATERIAL CODES**

<b>Material Code No.</b>	<b>Description</b>	<b>Unit</b>
2151	RCC PIPE CLASS IV 1220 MM (AASHTO M-170)	LM
2152	RCC PIPE CLASS IV 1520 MM (AASHTO M-170)	LM
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
2162	MS SHEET	KG
2164	GALVANIZATION	KG
2165	BRIDGE EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS (50 MM MOVEMENT)-IMPORTED	LM
2166	BRIDGE EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH (110 mm MOVEMENT)-IMPORTED	LM
2167	BRIDGE EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH (300 mm MOVEMENT) – IMPORTED	LM
2168	CEMENTITIOUS GROUT (HIGH STRENGTH)	CM
2169	PVC WATER STOP (8")	LM
2170	STEEL BLOCK C150x100x5 (LENGTH = 350mm)	EACH
2171	STEEL POST C150x100x5 (LENGTH = 1830mm)	EACH
2172	W6x15 STEEL POST (LENGTH = 1800mm)	EACH
2175	STEEL BACKING PLATE 318x270x12 mm	EACH
2176	METAL BEAM RAIL 310mm WIDE	LM
2177	METAL RAIL END PIECES	EACH
2178	P.C.C (1:2:4) FOR FENCE POST	CM
2179	PRECAST PRESTRESSED FENCE POST	EACH
2180	PRECAST R.C.C FENCE POST	EACH
2181	GALVANIZED WIRE MESH FENCE 10 SWG (50mm x 50mm)	SM
2182	STEEL CASING FOR PILES	TON
2183	BRIDGE EXPANSION JOINT MONOBLOC TYPE (56 mm MOVEMENT)-IMPORTED	LM
2184	ELASTOMERIC BEARING PAD M-183 (IMPORTED)	CCM
2185	WELDING RODS	EACH
2186	SHUTTERING (407k)	L.S.
2187	SHUTTERING (407l)	L.S.



**CSR-2014**  
**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 1.5 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(INCL TRACTOR)
3031	MOTOR SCRAPER 400 H.P.
3032	DUMPER 18 T.
3033	DUMPER 10 T.
3034	FLAT BODY TRUCK 8 T.
3041	SEDAN CAR 1300 CC.
3042	SEDAN CAR 1000 CC.
3043	PICKUP 2800 CC. 4x4
3044	PICKUP 2200 CC. 4x2
3045	PICKUP 800 CC. 4 x 2
3046	JEEP 1300 CC. 4x4
3047	EXCAVATOR. (TRACK TYPE) 100 H.P.
3048	POWER BROOM.
3051	BITUMEN DIST. TOW TYPE 2000 LTR.

**CSR-2014**  
**LIST OF EQUIPMENT CODES**

Equipment Code	Description
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.
3062	ROCK DRILLER.
3071	CONCRETE BATCHING PLANT 30 CUM/H.
3072	CONCRETE STATIC MIXER 1 CUY.
3073	CONCRETE STATIC MIXER. 1/4 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. WIDTH
3085	ROAD MARKING MACHINE.
3086	PUMP 4" DELIVERY (DIESEL)
3087	PUGMILL 40 TONS PER HOUR
3088	CHIPPING SPREADER 3 METER WIDE
3089	SAND BLASTING MACHINE
3120	STRESSING EQUIPMENT
3121	ASPHALT CUTTER
3122	CONCRETE CUTTER
3123	ELECTRIC SAW
3195	TRUCK (3-AXLE).
3196	TRACTER TROLLEY
3198	WELDING PLANT
3199	GENERATOR (DIESEL) 150 KVA.
3200	GENERATOR (DIESEL) 250 KVA.
3202	ROCK CRUSHING & SCREENING (200 T / H
3205	SECONDARY CRUSHER
3206	DIESEL TANKER
3208	JACK HAMME
3209	PILING RIG (Dia. 1m to 2m)

**CSR-2014**  
**LIST OF EQUIPMENT CODES**

<b>Equipment Code</b>	<b>Description</b>
3210	VIBRATOR (POCKER 1.5")
3211	PERCUSSION BORING RIG
3212	FORGOING/SHAPE MACHINE
3214	CONCRETE PUMP
3215	PLATE COMPACTOR
3217	GIRDER LAUNCHER
3218	TRIPOD & CHAIN PULLY (20 TON)
3219	ELECTRIC GENERATOR 50 KVA.
3220	ASPHALT RECYCLING MACHINE
3221	ROAD MARKING MACHINE (TP)
3222	PILING RIG (Dia. up to 1m)

**PERFORMA FOR ESTIMATED OWNING AND OPERATING COSTS**

Machine & Model: \_\_\_\_\_

Code No: \_\_\_\_\_

Attachments: \_\_\_\_\_

A. Delivered price (including Duties & Taxes in Pakistan).

Front Tire Price: \_\_\_\_\_ Rear Tire Price: \_\_\_\_\_  
Total Tire Price:           B          

C. Delivered Price less Tire:           A – B          

D. Trade-in Value or resale Value (Optional) \_\_\_\_\_

E. Net Depreciation Value:           C – D          

**OWNING COSTS:**

F. Depreciation Cost:

Depreciation period:           Y           Years  
Approx. Annual Use:           h           Hours

$$F = \frac{\text{Net Depreciation Value}}{\text{Depreciation period in hours}} = \frac{E}{(Y \times h)}$$

G. Interest, Insurance, Taxes:

Annual Rates (AR): Int. \_\_\_\_\_% + Ins. \_\_\_\_\_% + Taxes \_\_\_\_\_%

$$G = \frac{\text{Delivered Price} \times \text{Annual Rates}}{\text{Annual Use in Hours} \times 100} = \frac{A \times AR}{h \times 100}$$

H. Total Owing Costs: =           F + G          

**OPERATING COSTS:**

J. Fuel Cost: Hourly Consumption x Unit Fuel Cost = \_\_\_\_\_

K. Maintenance in Percentage = \_\_\_\_\_%

$$L. \text{ Maintenance Cost} = \frac{\text{Maint. \%age} \times \text{Delivered Price Less Tire Price}}{\text{Depreciation Period in Hours} \times 100} = \frac{K \times C}{(Y \times h) \times 100}$$

M. Tire Cost:

$$\frac{\text{Tire Price}}{\text{Estimated Tire Life}} = \frac{B}{N}$$

N. Operators Hourly Wages: \_\_\_\_\_

P. Total Operating Cost:           J + L + M + N          

**TOTAL HOURLY OWNING AND OPERATING COST:**           P + H

**Client:**  
National Highway Authority  
Islamabad.

**Consultant :**  
Sampak International (Pvt.) Ltd.  
Lahore.

**PLANT & EQUIPMENT OWNING OPERATING COST CSR-2014**  
**(NEW EQUIPMENT - USA / EU / JAPAN / PAKISTAN MAKE)**

<b>Code No.</b>	<b>Description</b>	<b>T-Owning Cost</b>	<b>T-Operating Cost</b>	<b>T-Hourly O.W. &amp; Opr. Cost</b>
3001	BULL-DOZER. 200 H.P.	2,560.17	3,598.99	6,159.16
3002	BULL-DOZER. 120 H.P.	2,194.43	1,763.03	3,957.46
3003	BULL-DOZER. 90 H.P.	1,920.13	1,315.23	3,235.35
3004	FRONT END LOADER. 3.00 CUM.	2,618.91	2,766.81	5,385.73
3005	FRONT END LOADER. 2.50 CUM.	1,991.17	2,425.03	4,416.20
3006	FRONT END LOADER. 1.50 CUM.	1,576.76	1,965.45	3,542.21
3007	GRADER. 165 H.P.	2,024.46	2,739.54	4,764.00
3008	GRADER. 140 H.P.	1,913.58	2,169.80	4,083.38
3011	TANDEM VIBRATORY ROLLER. 10-12 T.	1,356.96	1,677.47	3,034.43
3012	TANDEM VIBRATORY ROLLER. 8 T.	1,206.19	1,454.11	2,660.30
3013	TANDEM VIBRATORY ROLLER. 6 T.	980.03	1,012.88	1,992.91
3014	TANDEM VIBRATORY ROLLER. 1.5 T	372.50	335.12	707.62
3015	COMBINATION ROLLER. 18 T.	1,122.57	2,273.39	3,395.96
3016	COMBINATION ROLLER. 10-12 T.	1,056.06	1,736.95	2,793.00
3017	COMBINATION ROLLER. 8 T.	976.09	1,259.02	2,235.11
3018	P.T.R. (9- WHEELER) 21 T.	979.82	1,752.65	2,732.47
3019	P.T.R. (9- WHEELER) 18 T.	913.30	1,429.23	2,342.53
3020	STATIC TANDEM ROLLER. 12 T.	356.09	941.81	1,297.89
3021	STATIC TANDEM ROLLER. 8 T.	291.34	938.66	1,230.01
3022	TRACTOR. 80 H.P.	253.72	1,203.23	1,456.95
3023	TRACTOR. 50 H.P.	105.99	736.44	842.43
3024	WATER TANK BOWSER TYPE 12000 LTR.	714.59	1,205.14	1,919.73
3025	WATER TANK TOW TYPE 4000 LTR. (INCL. TRACTOR)	196.11	738.73	934.84
3031	MOTOR SCRAPER. 400 H.P.	2,589.07	9,507.55	12,096.62
3032	DUMPER. 18 T.	778.77	2,063.29	2,842.06
3033	DUMPER. 10 T.	605.35	1,336.69	1,942.04
3034	FLAT BODY TRUCK. 8 T	515.52	999.23	1,514.75

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**PLANT & EQUIPMENT OWNING OPERATING COST CSR-2014**  
**(NEW EQUIPMENT - USA / EU / JAPAN / PAKISTAN MAKE)**

<b>Code No.</b>	<b>Description</b>	<b>T-Owning Cost</b>	<b>T-Operating Cost</b>	<b>T-Hourly O.W. &amp; Opr. Cost</b>
3041	Sedan Car 1300 CC	321.72	674.20	995.93
3042	Sedan Car 1000 CC	203.29	566.17	769.45
3043	Pickup 2800 CC. 4x4	576.88	743.42	1,320.31
3044	Pickup 2200 CC. 4x2	353.66	732.26	1,085.92
3045	Pickup 800 CC. 4x2	123.69	465.41	589.09
3046	Jeep 1300 CC. 4x4	422.42	582.46	1,004.88
3047	EXCAVATOR. (TRACK TYPE) 100 H.P.	1,347.83	1,341.23	2,689.06
3048	POWER BROOM.	194.03	1,034.98	1,229.00
3051	BITUMEN DIST. TOW TYPE 2000 LTR	774.52	115.34	889.86
3052	BITUMEN SPRAYER (MANUAL). 250 LTR.	155.09	73.12	228.21
3053	AGGREGATE SPREADER. 4 M WIDE	2,237.31	981.24	3,218.55
3054	ASPHALT PLANT. 120 T.	14,104.35	6,487.48	20,591.83
3055	ASPHALT PLANT. 80 T.	12,537.20	5,641.60	18,178.80
3056	ASPHALT PLANT. 40 T.	10,419.50	3,399.75	13,819.25
3057	ASPHALT PLANT. 20 T.	7,442.50	2,696.05	10,138.55
3058	PAVER 4 M WIDE.	2,700.84	1,029.44	3,730.28
3059	PAVER 2.5 M WIDE.	2,025.63	784.28	2,809.91
3061	COMPRESSOR. 300 CFM	223.78	1,789.76	2,013.54
3062	ROCK DRILLER.	261.80	90.40	352.20
3071	CONCRETE BATCHING PLANT. 30 CUM/H	2,742.51	1,940.28	4,682.79
3072	CONCRETE STATIC MIXER 1 CUY	149.60	614.75	764.35
3073	CONCRETE STATIC MIXER. 1/4 CUY	8.50	394.07	402.57
3074	CONCRETE TRANSIT MIXER. 6 CUM.	3,662.95	2,061.82	5,724.76
3075	CONCRETE TRANSIT MIXER. 4 CUM	3,481.63	1,612.36	5,093.98
3081	TRAILER LOW BED 30 T.	1,740.49	1,864.65	3,605.14
3082	CRANE. 45 T.	1,856.97	1,878.39	3,735.36
3083	CRANE. 20 T.	1,486.31	1,533.52	3,019.82

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Lahore.

**PLANT & EQUIPMENT OWNING OPERATING COST CSR-2014**  
**(NEW EQUIPMENT - USA / EU / JAPAN / PAKISTAN MAKE)**

<b>Code No.</b>	<b>Description</b>	<b>T-Owning Cost</b>	<b>T-Operating Cost</b>	<b>T-Hourly O.W. &amp; Opr. Cost</b>
3084	COLD MILLING MACHINE. 1 M WIDTH.	6,205.23	2,591.66	8,796.89
3085	ROAD MARKING MACHINE.	291.19	294.82	586.01
3086	PUMP 4" DELIVERY (DIESEL)	127.60	497.56	625.16
3087	PUGMILL 40 TONS PER HOUR	2,232.75	1,782.68	4,015.43
3088	CHIPPING SPREADER 3 METER WIDE	161.86	82.86	244.71
3089	SAND BLASTING MACHINE.	194.23	1,180.14	1,374.37
3120	STRESSING EQUIPMENT	383.58	1,159.90	1,543.48
3121	ASPHALT CUTTER	118.38	281.89	400.26
3122	CONCRETE CUTTER	118.38	300.71	419.08
3123	ELECTRIC SAW	76.50	569.60	646.10
3195	TRUCK (3-AXLE)	958.12	1,181.88	2,140.00
3196	TRACTOR TROLLEY	235.71	817.89	1,053.60
3198	WELDING PLANT	127.86	575.54	703.40
3199	GENERATOR (DIESEL) 150 KVA	510.00	2,748.75	3,258.75
3200	GENERATOR (DIESEL) 250 KVA	595.00	4,346.60	4,941.60
3202	ROCK CRUSHING & SCREENING (200 T/H)	3,538.05	6,075.38	9,613.43
3205	SECONDARY CRUSHER	136.26	2,465.83	2,602.09
3206	DIESEL TANKER	869.00	1,017.22	1,886.22
3208	JACK HAMMER	39.08	260.48	299.56
3209	PILING RIG (Dia. 1m to 2m)	6,308.87	2,239.15	8,548.02
3210	VIBRATOR (POCKER 1.5")	24.65	259.69	284.34
3211	PERCUSSION BORING RIG	272.51	515.79	788.30
3212	FORGOING/SHAPE MACHINE	179.00	1,070.36	1,249.36
3214	CONCRETE PUMP	3,987.78	2,197.11	6,184.89
3215	PLATE COMPACTOR	116.00	267.56	383.56
3217	GIRDER LAUNCHER	2,525.63	1,927.05	4,452.68
3218	TRIPOD & CHAIN PULLY (20 TON)	38.36	157.29	195.65

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**PLANT & EQUIPMENT OWNING OPERATING COST CSR-2014**  
**(NEW EQUIPMENT - USA / EU / JAPAN / PAKISTAN MAKE)**

<b>Code No.</b>	<b>Description</b>	<b>T-Owning Cost</b>	<b>T-Operating Cost</b>	<b>T-Hourly O.W. &amp; Opr. Cost</b>
3219	ELECTRIC GENERATOR 50 KVA	306.00	3,028.00	3,334.00
3220	ASPHALT RECYCLING MACHINE	19,416.67	7,629.83	27,046.50
3221	ROAD MARKING MACHINE (TP)	651.70	359.13	1,010.83
3222	PILING RIG (Dia. up to 1m)	3,503.87	1,460.70	4,964.57



**NAME OF PROVINCE: PUNJAB**

<b>Serial No.</b>	<b>Name of District</b>	<b>District Code</b>
1.	ATTOCK	02
2.	BAHAWAL NAGAR	04
3.	BAHAWALPUR	05
4.	BHAKKAR	07
5.	CHAKWAL	09
6.	CHANIOT	09A
7.	D.G. KHAN	11
8.	FAISALABAD	16
9.	GUJRANWALA	17
10.	GUJRAT	18
11.	HAFIZABAD	20A
12.	JHANG	22
13.	JHELUM	23
14.	KASUR	28
15.	KHANEWAL	30
16.	KHUSHAB	32
17.	LAHORE	37
18.	LAYYAH	40
19.	LODHRAN	41A
20.	MIANWALI	45
21.	MULTAN	46
22.	MUZAFFARGARH	47
23.	MANDI BAHA-UD-DIN	47A
24.	NANKANA SAHIB	47E
25.	NAROWAL	49A
26.	OKARA	50
27.	PAKPATTAN	53A
28.	RAHIM YAR KHAN	55
29.	RAJAN PUR	56
30.	RAWALPINDI	57
31.	SAHIWAL	58
32.	SARGODHA	60
33.	SHEIKHUPURA	61
34.	SIALKOT	63
35.	TOBA TEK SINGH	69
36.	VEHARI	71

**NAME OF PROVINCE: BALUCHISTAN**

<b>Serial No.</b>	<b>Name of District</b>	<b>District Code</b>
1.	AWARAN	02A
2.	BARKHAN	06A
3.	BOLAN	07A
4.	CHAGAI	08
5.	DERA BUGTI	14
6.	GWADAR	19
7.	JAFFARABAD	21A
8.	JHAL MAGSI	21C
9.	KACHHI	24
10.	KALAT	25
11.	KHARAN	31
12.	KHUZDAR	33
13.	KOHLU	36
14.	LASBELA	39
15.	LORALAI	41
16.	MASTUNG	47B
17.	MUSAKHEL	47C
18.	MUSLIM BAGH	47D
19.	NASIRABAD	48
20.	NUSHKI	49D
21.	PANJGUR	51
22.	PISHIN	53
23.	QUETTA	54
24.	QILLA SAIFULLAH	54A
25.	QILLA ABDULLAH	54B
26.	SIBI	64
27.	TURBAT (KECH)	70
28.	ZHOB	72
29.	ZIARAT	72A

**NAME OF PROVINCE: KHYBER PAKHTUNKHWA**

<b>Serial No.</b>	<b>Name of District</b>	<b>District Code</b>
1.	ABBOTTABAD	01
2.	BANNU	06
3.	BATAGRAM	06B
4.	BUNER	07B
5.	CHITRAL	10
6.	CHARSADDA	10A
7.	D.I. KHAN	12
8.	DIR (LOWER)	15
9.	DIR (UPPER)	15A
10.	HANGU	20B
11.	HARIPUR	20C
12.	KARAK	27
13.	KOHAT	34
14.	KOHISTAN	35
15.	LAKKI MARWAT	37A
16.	MALAKAND	42
17.	MANSEHRA	43
18.	MARDAN	44
19.	NOWSHERA	49C
20.	PESHAWAR	52
21.	SHANGLA	60A
22.	SWAT	66
23.	SWABI	66A
24.	TANK	70A

**NAME OF PROVINCE: SINDH**

<b>Serial No.</b>	<b>Name of District</b>	<b>District Code</b>
1.	BADIN	03
2.	DADU	13
3.	GHOTKI	16A
4.	HYDERABAD	20
5.	JACOBABAD	21
6.	JAMSHORO	21B
7.	KARACHI	26
8.	KASHMORE	27A
9.	KHAIRPUR	29
10.	LARKANA	38
11.	MIRPURKHAS	45A
12.	NAWABSHAH	49
13.	NAUSHAHRO FEROZE	49B
14.	QAMBAR	53B
15.	SANGHAR	59
16.	SHIKARPUR	62
17.	SUKKUR	65
18.	THARPARKAR	67
19.	THATTA	68
20.	UMARKOT	70B

**COMPOSITE SCHEDULE OF RATES CSR 2014  
LIST OF QUARRIES - PROVINCE OF PUNJAB**

DISTRICT CODE	DISTRICT NAME	QUARRY CODE	QUARRY NAME	MATERIAL NO.
2	ATTOCK	104	Block 2+3 (Qabila Bandi)	2021 & 2022
		105	Block 4 (Qabila Bandi)	2021 & 2022
		106	Block 4 (Qabila Bandi)	2021 & 2022
		107	Faqirabad Quarry	2021 & 2022
		108	Faqirabad Quarry	2021 & 2022
		112	Block 1 (Qabila Bandi)	2021 & 2022
		113	Sanjwal Quarry	2001, 2014, 2015, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
		114	Sanjwal Quarry	2001, 2008, 2014, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
		115	Mirza Town Quarry	2001,2014,2023,2024,2025, 2026,2027,2030,2031,2032, 2033,2034&2035
		117	Jhang Chowk Quarry	2001, 2014, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
4	BAHAWALN AGAR	200	Borrow Area Near Bahawal Nagar	2008 & 2022
5	BAHAWALP UR	197	Cholistan Desert Quarry	2008 & 2022
		326	Borrow Area Near Hasil Pur	2008
		327	Borrow Area Near Head Islam	2008
9	CHAKWAL	139	Kallar Kahar Quarry	2025
11	D.G.KHAN	460	SakhiSarwar Nullah Quarry	2015, 2017 & 2018

DISTRICT CODE	DISTRICT NAME	QUARRY CODE	QUARRY NAME	MATERIAL NO.
		461	SakhiSarwar Nullah Quarry	2001, 2014, 2015, 2018, 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2031, 2032, 2033, 2034 & 2035
		462	SakhiSarwar Nullah Quarry	2014, 2018, 2023, 2024, 2025, 2026 & 2027
		463	SakhiSarwar Nullah Quarry	2014, 2018, 2023, 2024, 2025, 2026, 2027 & 2028
		467	Mitha Koh Nullah Quarry	2021
		476	Notic Wala Para Nullah Quarry	2008 & 2022
		477	Sangar Nullah	2022
		480	Kora Nullah Quarry	2022
17	GUJRANWALA	149	Chenab River Bank Quarry	2008, 2021 & 2022
18	GUJRAT	146	Bhimber Nullah Quarry	2008
22	JHANG	209	Rasulpur	2008
		210	Trimmu Head	2022
		211	Jhelum/ Chenab at Trimmu Quarry	2022
23	JHELUM	131	Bura Jangle Quarry	2014, 2015, 2017, 2018, 2023, 2024, 2025, 2026, 2027 & 2028
		132	Margala Crusher No. 3	2025
			Qilla Rohtas Quarry	2015, 2025 & 2027
		133	Nacki Quarry	2015, 2018, 2024, 2025 & 2027
		134	Pandori Quarry	2014, 2015, 2017, 2018, 2023, 2024, 2025, 2026, 2027 & 2028
		135	Daulat Chak Quarry	2017, 2021, 2022, 2023, 2024, 2025, 2026 & 2027
		136	Jalal Pur Sharif Quarry	2008
		147	Jhelum River Quarry	2008, 2021 & 2022

DISTRICT CODE	DISTRICT NAME	QUARRY CODE	QUARRY NAME	MATERIAL NO.
		702	Asif Brothers Crusher Maloot	2015, 2018, 2023, 2024, 2025, 2026, 2027 & 2028
28	KASUR	484	Kisar Garh Quarry	2008
30	KHANEWAL	198	River Ravi Quarry	2022
32	KHUSHAB	353	Noor Pur Thal	2008 & 2022
		356	Katta Nullah Quarry	2025, 2026 & 2027
		358	Pakka Kararwala	2008
		360	Duhk Hills	2001, 2014, 2015, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
37	LAHORE	486	Chohing Quarry	2008
		487	Ravi River Sand Quarry	2008 & 2022
		488	Ravi River Sand Quarry	2008
40	LAYYAH	451	Chak No. 431 Sand Quarry	2008
		452	Chak Godara Sand Quarry	2008
45	MIANWALI	361	Moon Crusher	2001, 2014, 2015, 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2031, 2032, 2033, 2034 & 2035
		363	Chachali Nullah	2008 & 2022
		703	Alhamdulillah Stone Crushing Plant	2015, 2023, 2024, 2025, 2026 & 2027
		704	Jalokhel Crushing Plant	2014, 2023, 2024, 2025, 2026 & 2027
47	MUZAFFAR GARH	453	Indus River Bed Quarry	2022
		457	Chenab River Bed	2008 & 2022
50	OKARA	494	Dipal Pur 40 D	2008 & 2022
55	RAHIM YAR KHAN	195	Ahmad Pur East	2008
57	RAWALPIND I	101	Margala/ Kazmi Crushing Plant	2001, 2015, 2018, 2023, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035

DISTRICT CODE	DISTRICT NAME	QUARRY CODE	QUARRY NAME	MATERIAL NO.
		102	Margala Crusher No. 1	2001, 2014, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
			Margala/ Kazmi Crushing Plant	2025 & 2026
		103	Margala Crusher No. 1	2025
			Margala Crusher No.3	2001, 2014, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
		125	UC Sahala Sohan River	2008 & 2018
		126	Sohan River - Malik Bari	2008, 2014, 2017, 2018, 2023, 2024, 2025, 2026, 2027 & 2028
		701	Margala Crusher No.10	2025
60	SARGODHA	202	Kariana Hills	2001, 2014, 2015, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
		204	Chak 47 Hill Quarry	2015, 2017, 2018, 2023, 2024, 2025 & 2026
		205	Chak 47 Hill Quarry	2025, 2026, 2027 & 2028
		206	Chak 126	2014, 2015, 2017, 2018, 2023, 2024, 2025, 2026 & 2027
		207	Chak 16	2001, 2015, 2023, 2024, 2025, 2026, 2027, 2030, 2031, 2032, 2033, 2034 & 2035
63	SIALKOT	141	Sahianwala	2008
		142	Chenab River Quarry	2022
		143	Tawwi River Quarry	2008 & 2022
69	TOBA TEK SINGH	220	Chak-284 Soil Quarry	2008



<b>DISTRICT CODE</b>	<b>DISTRICT NAME</b>	<b>QUARRY CODE</b>	<b>QUARRY NAME</b>	<b>MATERIAL NO.</b>
09A	CHANIOT	216	Chenab River Bed	2008 & 2022
53A	PAKPATTAN	199	Borrow Area Near Pakpattan	2008 & 2022

## CONVERSION FACTORS

TO CONVERT	INTO	MULTIPLY BY
<b><u>LENGTH</u></b>		
Inch	Millimeter	25.4
Millimeter	Inch	0.03937
Foot	Metre	0.30480
Metre	Foot	3.28084
Yard	Metre	0.91440
Metre	Yard	1.09361
Mile	Kilometre	1.60934
Mile	Yard	1760
Kilometre	Mile	0.62137
Nautical Mile	Kilometre	1.852
inch	mil	1000

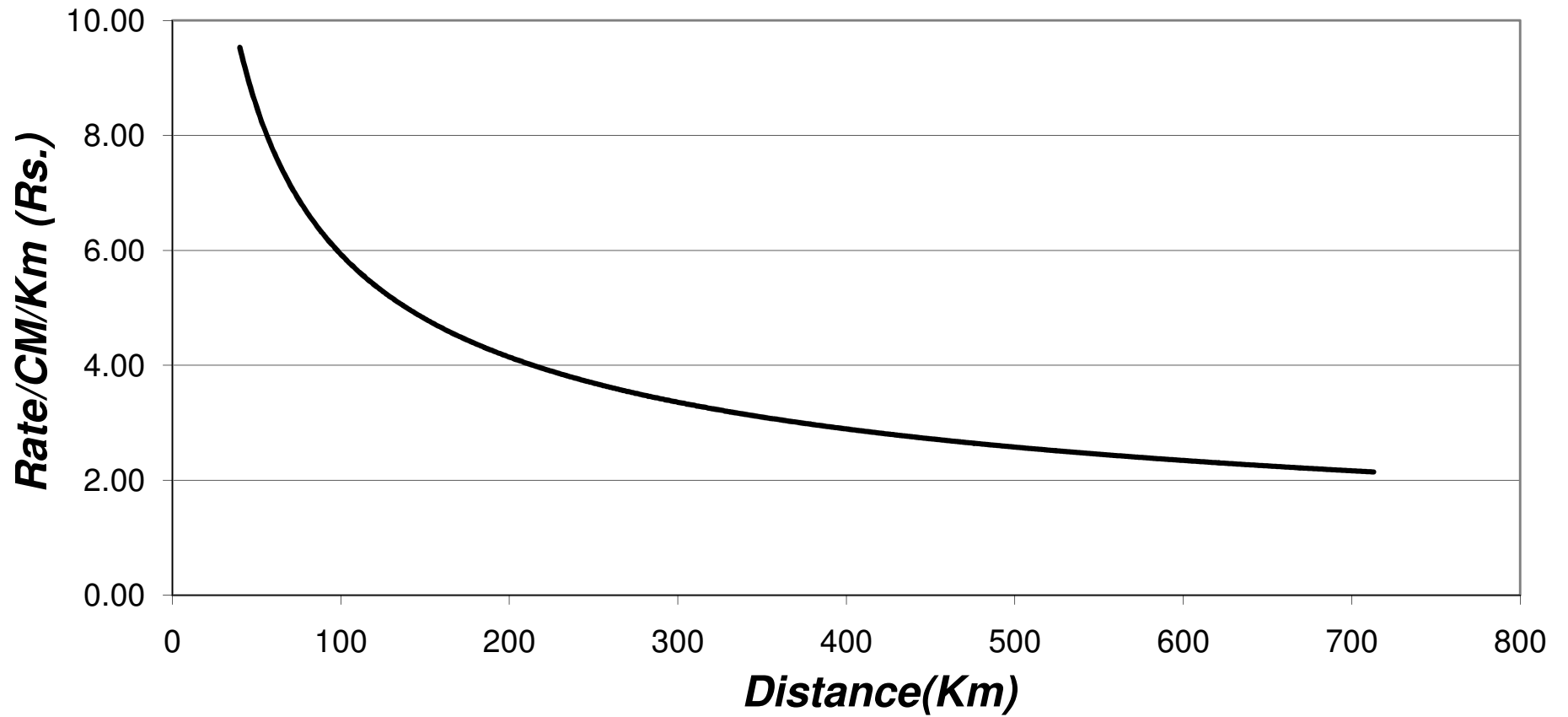
<b>TO CONVERT</b>	<b>INTO</b>	<b>MULTIPLY BY</b>
<b><u>MASS, WEIGHT</u></b>		
Pound	Kilogram	0.45359237
Kilogram	Pound	2.20462
Ounce	Gram	28.3495
Gram	Ounce	0.03527
Quintal	Kilogram	100
Grain	Milligram	64.7989
Hundred Weight	Kilogram	50.8023
Tonne	Hundred Weight	19.6841
Tonne	Kilogram	1000
Ton (Long)	Kilogram	1016.0469
Ton (Long)	Pound	2240
Ton (Long)	Tonne	1.0160469
Tonne	Ton (Long)	0.9842065
Seer	Kilogram	0.9331
Maund	Kilogram	37.324
Tola	Gram	11.664
Ton (Long)	Ton (Short)	1.12

<b>TO CONVERT</b>	<b>INTO</b>	<b>MULTIPLY BY</b>
<b><u>CAPACITY VOLUME</u></b>		
Pint (UK)	Litre	0.568261
Gallon (Imperial)	Litre	4.54609
Gallon (US)	Litre	3.78541
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 milliliter	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
Barrel (Oil)	Litre	158.98729

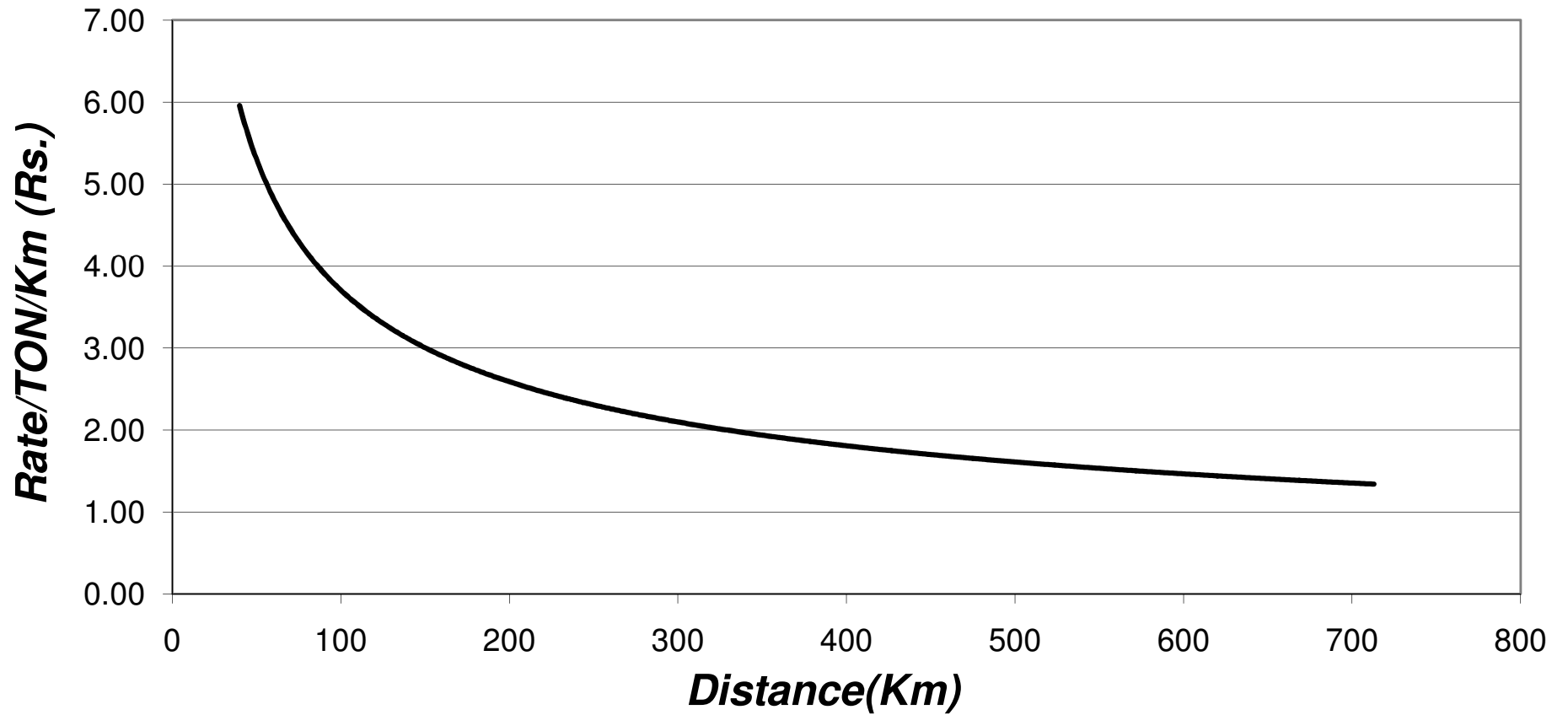
<b>TO CONVERT</b>	<b>INTO</b>	<b>MULTIPLY BY</b>
<b><u>AREA</u></b>		
Square inch	Square millimetre	645.16
Square millimeter	Square inch	0.00155
Square foot	Square metre	0.0929
Square metre	Square foot	10.7639
Square yard	Square metre	0.836127
Square metre	Square yard	1.19599
Acre	Square metre	4046.8564
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	258.99
Hectare	Square mile	0.00386102
<b><u>Mass Per Unit Area</u></b>		
Ton per square mile	Kilogram per square kilometer	392.298
Pound per Square foot	Kilogram per square metre	4.88243
Kilogram per square metre	Pound per square foot	0.204816
<b><u>Mass Per Unit Volume</u></b>		
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

<b>TO CONVERT</b>	<b>INTO</b>	<b>MULTIPLY BY</b>
<b><u>POWER</u></b>		
Kilo Watt	BTU per Hour	3412.1416
Kilo Watt	Ton (Refrigeration)	0.28434514
Kilo Watt	Kilo calorie per hour	859.84523
HP (British)	Watt	745.69987
Ton (Refrigeration)	BTU per Hour	12000
<b><u>PRESSURE</u></b>		
Atmosphere	Kilo Pascal	101.325
Atmosphere	Foot H <sub>2</sub> O	33.898538
Atmosphere	Pound per sq. inch	14.695949
Atmosphere	mm Hg (Torr)	760.0021
Pound per sq. inch	Kilo Pascal	6.8947573
Pound per sq. inch	Pound per sq. foot	144
Kilogram per sq.cm	Pound per sq. inch	14.223343
Pound per sq. inch	Kilogram per sq.cm	0.07030696
Bar	Kilo Pascal	100

**CSR-2014**  
***DISTANCE V/S RATE/CM/KM CHART (PUNJAB)***



**CSR-2014**  
**DISTANCE V/S RATE/TON/KM CHART (PUNJAB)**





**NATIONAL HIGHWAY AUTHORITY  
COMPOSITE SCHEDULE OF RATES**

**2014**

**PUNJAB**



**SAMPAC INTERNATIONAL**

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**ATTOCK**  
**(02)**



**SAMPAC INTERNATIONAL**

CLIENT:

CSR - 2014

CONSULTANT:

NATIONAL HIGHWAY AUTHORITY  
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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 02 ATTOCK

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.10	19.27	0.00	5.09	25.46
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.95	321.21	2.18	83.59	417.93
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	31.64	774.41	4.91	202.74	1,013.70
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	126.55	3,097.64	19.65	810.96	4,054.80
103	STRIPPING	CM	3.75	188.78	0.00	48.13	240.66
104	COMPACTION OF NATURAL GROUND	SM	0.53	18.62	3.00	5.54	27.68
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.45	283.06	0.00	72.38	361.89
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	161.51	453.99	137.50	188.25	941.25
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.91	672.56	0.00	174.37	871.84
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.54	524.99	0.00	135.38	676.91
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.28	254.24	0.00	64.88	324.40
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	161.51	453.99	137.50	188.25	941.25
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	28.33	610.97	0.00	159.82	799.12
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.24	524.99	0.00	134.81	674.03
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.78	278.09	0.00	72.22	361.08
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	95.74	838.57	90.35	256.17	1,280.83
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	157.39	504.43	137.50	199.83	999.15
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	141.65	553.11	0.00	173.69	868.45
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	80.94	397.27	0.00	119.55	597.76
107d	GRANULAR BACKFILL	CM	50.83	241.40	878.52	292.69	1,463.44
107e	COMMON BACKFILL	CM	43.46	139.11	20.00	50.64	253.21
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.15	288.79	20.00	79.74	398.68
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	29.57	726.17	159.33	228.77	1,143.85

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	22.18	792.41	9.50	206.02	1,030.11
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.71	714.13	8.89	185.68	928.42
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.70	123.20	223.08	89.50	447.49
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.02	150.63	20.00	44.91	224.56
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	21.58	348.12	11.89	95.40	476.99
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.05	53.73	5.72	15.37	76.87
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.48	36.66	3.03	10.29	51.47
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.92	233.49	439.33	171.94	859.69
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.24	29.22	3.11	8.39	41.97
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.89	32.97	3.11	9.49	47.45
201	GRANULAR SUB-BASE	CM	11.90	288.11	1,171.20	367.80	1,839.00
202	AGGREGATE BASE	CM	13.87	350.20	1,365.25	432.33	2,161.65
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	120.46	2,856.48	11,660.14	3,659.27	18,296.34
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	120.46	2,856.48	11,884.19	3,715.28	18,576.41
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	129.15	2,983.43	11,649.67	3,690.56	18,452.81
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	129.15	2,983.43	11,899.57	3,753.04	18,765.20
204b	CEMENT STABILIZED BASE	CM	42.73	915.90	1,294.08	563.18	2,815.88
204c	CEMENT CONTENT	TON	175.00	0.00	8,820.00	2,248.75	11,243.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	361.58	2,422.77	82,507.80	21,323.04	106,615.18
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	361.58	2,422.77	82,507.80	21,323.04	106,615.18
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	146.41	233.81	1,014.33	348.64	1,743.18

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	230.77	4,464.04	9,407.23	3,525.51	17,627.56
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	161.69	262.54	1,220.15	411.09	2,055.47
207a	DEEP PATCHING (0-15 cm)	SM	2.48	80.37	18.10	25.24	126.18
207b	DEEP PATCHING (15-30 cm)	SM	2.48	80.37	18.10	25.24	126.18
208	REINSTATEMENT OF ROAD SURFACE	SM	2.67	130.32	2.20	33.80	168.99
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.68	466.94	13.33	121.74	608.69
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.34	50.29	2.67	13.57	67.87
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.45	2.83	93.06	24.08	120.41
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	80.89	21.04	105.19
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	37.38	9.65	48.23
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	32.34	8.39	41.94
304a	SINGLE SURFACE TREATMENT	SM	1.17	14.01	166.10	45.32	226.60
304b	DOUBLE SURFACE TREATMENT	SM	1.71	26.92	339.65	92.07	460.35
304c	TRIPLE SURFACE TREATMENT	SM	2.87	37.83	400.08	110.19	550.97
304d	SEAL COAT	SM	1.08	7.81	46.43	13.83	69.15
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	106.50	2,815.00	12,475.05	3,849.14	19,245.68
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	106.50	2,694.06	13,279.94	4,020.12	20,100.62
307a	DENSE GRADED HOT BIT-MAC	CM	296.40	863.75	9,996.70	2,789.21	13,946.05
307b	OPEN GRADED HOT BIT-MAC	CM	296.40	863.75	9,728.02	2,722.04	13,610.21
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	45.16	1,236.12	4,884.74	1,541.51	7,707.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	319.45	2,013.10	84,774.24	21,776.70	108,883.49
309a	COLD MILLING, 0-30 mm	SM	1.46	61.27	25.40	22.03	110.16
309b	COLD MILLING, 0-50 mm	SM	2.43	102.12	42.33	36.72	183.61

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.65	153.18	63.50	55.08	275.41
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	780.73	2,690.11	4,489.49	1,990.08	9,950.42
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	780.73	2,690.11	5,177.62	2,162.11	10,810.57
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	780.73	2,690.11	5,533.18	2,251.00	11,255.02
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	780.73	2,690.11	4,817.52	2,072.09	10,360.46
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	780.73	2,690.11	5,505.56	2,244.10	11,220.51
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	780.73	2,690.11	5,861.02	2,332.97	11,664.83
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	780.73	2,690.11	5,133.31	2,151.04	10,755.19
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	780.73	2,690.11	5,821.35	2,323.05	11,615.24
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	780.73	2,690.11	6,159.56	2,407.60	12,038.00
401b	CONCRETE CLASS B	CM	1,016.62	1,419.30	3,767.63	1,550.89	7,754.44
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	773.13	2,690.11	4,281.75	1,936.25	9,681.24
401cii	CONCRETE CLASS C (ON GROUND)	CM	773.13	2,690.11	4,969.79	2,108.26	10,541.29
401ciii	CONCRETE CLASS C (ELEVATED)	CM	773.13	2,690.11	5,325.35	2,197.15	10,985.74
401d	CONCRETE CLASS D1	CM	1,212.52	3,326.20	7,272.81	2,952.88	14,764.41
401e	CONCRETE CLASS Y	CM	1,693.81	898.44	5,790.61	2,095.71	10,478.57
401f	LEAN CONCRETE	CM	665.19	969.12	3,165.83	1,200.04	6,000.18
401gi	PRECAST CONCRETE, CLASS A1	CM	2,600.88	1,879.78	5,139.27	2,404.98	12,024.91
401gii	PRECAST CONCRETE CLASS A3	CM	2,600.88	1,879.78	5,834.64	2,578.82	12,894.12
401giii	PRECAST CONCRETE, CLASS B	CM	2,600.88	1,879.78	4,462.64	2,235.82	11,179.12
401giv	PRECAST CONCRETE CLASS D1	CM	2,600.88	1,879.78	7,280.14	2,940.20	14,701.00
401gv	PRECAST CONCRETE CLASS D2	CM	2,600.88	1,879.78	8,126.53	3,151.80	15,758.98
401gvi	PRECAST CONCRETE CLASS D3	CM	2,600.88	1,879.78	8,974.38	3,363.76	16,818.80
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,133.29	1,419.30	3,003.96	1,389.14	6,945.68
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,508.86	0.00	86,342.07	22,212.73	111,063.66

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 02 ATTOCK

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,508.86	0.00	90,542.07	23,262.73	116,313.66
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,899.93	4,249.86	106,704.00	28,213.45	141,067.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,136.51	44,884.67	224,423.33
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	169.13	0.00	2,186.07	588.80	2,943.99
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	169.13	0.00	1,021.69	297.70	1,488.52
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.80	21.32	170.26	51.34	256.72
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	563.82	0.00	46,668.73	11,808.14	59,040.68
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	585.70	0.00	116,671.81	29,314.38	146,571.88
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	651.32	0.00	388,509.26	97,290.15	486,450.73
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	563.82	0.00	42,347.80	10,727.91	53,639.53
406dii	PVC WATER STOP 8" SIZE	M	146.67	0.00	399.81	136.62	683.09
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	58.61	0.00	324.73	95.83	479.17
406g	STEEL OR METAL BEARING DEVICES	KG	28.89	56.27	178.60	65.94	329.70
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	346.48	3,542.17	578.05	1,116.67	5,583.37
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	526.65	5,384.10	789.26	1,675.00	8,375.01
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	526.65	8,250.86	954.21	2,432.93	12,164.64
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	877.75	13,751.43	1,380.28	4,002.36	20,011.82

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	731.46	11,459.52	1,202.75	3,348.43	16,742.16
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,316.62	20,627.14	1,912.86	5,964.16	29,820.78
407h	PILE LOAD TEST UPTO 120 TON	EACH	35,665.86	105,999.36	95,946.60	59,402.96	297,014.78
407i	PILE LOAD TEST UPTO 240 TON	EACH	35,665.86	105,999.36	207,110.39	87,193.90	435,969.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	98,665.86	117,448.00	277,569.11	123,420.74	617,103.71
407k	PILE LOAD TEST UPTO 550 TON	EACH	145,915.86	146,810.00	441,586.68	183,578.14	917,890.68
407l	PILE LOAD TEST UPTO 800 TON	EACH	215,998.80	176,172.00	716,411.43	277,145.56	1,385,727.79
407m	CONFIRMATORY BORING (NX SIZE)	M	270.13	3,272.30	25.00	891.86	4,459.29
407n	PERMANENT PILE CASING FOR PILES	Ton	354.61	4,885.57	105,647.45	27,721.91	138,609.54
410	BRICK WORK	CM	489.67	577.25	4,125.37	1,298.07	6,490.35
411a	STONE MASONRY RANDOM DRY	CM	518.33	210.72	1,408.23	534.32	2,671.60
411b	STONE MASONRY RANDOM WITH MORTAR	CM	618.33	335.46	2,603.45	889.31	4,446.56
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	713.33	210.72	1,757.79	670.46	3,352.30
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	808.33	335.46	2,885.70	1,007.37	5,036.87
411g	ROLL POINTING	SM	103.67	24.95	98.15	56.69	283.45
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,073.33	534.31	2,885.70	1,123.34	5,616.68
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	350.42	689.50	1,164.22	551.03	2,755.16
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	350.42	766.21	1,474.33	647.74	3,238.69
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	328.05	1,356.07	1,766.63	862.69	4,313.44
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	345.95	1,702.67	2,546.17	1,148.70	5,743.49
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	400.75	2,255.64	4,360.58	1,754.24	8,771.21
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	495.19	2,781.29	6,597.82	2,468.57	12,342.87



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	640.83	2,692.05	8,148.72	2,870.40	14,352.00
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	756.72	3,268.92	10,024.43	3,512.52	17,562.59
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	893.26	3,813.74	19,327.96	6,008.74	30,043.69
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	350.42	689.50	1,620.41	665.08	3,325.40
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	342.08	766.21	2,030.88	784.79	3,923.96
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	328.05	1,356.07	2,405.29	1,022.35	5,111.76
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	345.95	1,702.67	3,440.30	1,372.23	6,861.16
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	400.75	2,255.64	5,463.97	2,030.09	10,150.44
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	495.19	2,781.29	9,261.18	3,134.41	15,672.07
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	640.83	2,692.05	10,051.12	3,346.00	16,730.00
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	756.72	3,268.92	12,901.13	4,231.69	21,158.47
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	893.26	3,813.74	22,373.82	6,770.21	33,851.03
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	137.50	198.35	902.95	309.70	1,548.50
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,150.27	1,081.84	3,860.97	1,523.27	7,616.35
507a	STEEL WIRE MESH FOR GABIONS	KG	8.03	0.00	124.56	33.15	165.74
507b	ROCK FILL IN GABIONS	CM	149.72	0.00	1,003.17	288.22	1,441.11
508a	BRICK PAVING (SINGLE COURSE)	SM	165.72	47.96	322.46	134.03	670.17
508b	BRICK PAVING (DOUBLE COURSE)	SM	295.72	47.96	639.71	245.85	1,229.24
509a	RIPRAP, CLASS A	CM	712.22	0.00	1,063.30	443.88	2,219.40
509b	RIPRAP, CLASS B	CM	505.78	233.11	1,108.40	461.82	2,309.11
509c	RIPRAP, CLASS C	CM	493.15	242.83	1,160.95	474.23	2,371.15
509c1	RIPRAP, CLASS D	CM	493.15	291.39	1,209.20	498.43	2,492.17

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	872.36	218.23	3,059.29	1,037.47	5,187.34
509e	GROUTED RIPRAP, CLASS B	CM	657.89	407.69	2,900.38	991.49	4,957.44
509f	GROUTED RIPRAP, CLASS C	CM	631.57	388.31	2,965.44	996.33	4,981.66
509f1	GROUTED RIPRAP, CLASS D	CM	631.57	436.87	3,205.61	1,068.51	5,342.57
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,199.52	615.08	4,512.54	1,581.78	7,908.92
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	75.59	344.31	874.06	323.49	1,617.46
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	147.78	1,135.96	0.00	320.94	1,604.68
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	225.52	131.70	172.79	132.50	662.51
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	288.67	168.58	221.17	169.60	848.01
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	364.67	368.16	687.87	355.17	1,775.87
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	455.83	460.20	859.84	443.97	2,219.84
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	364.67	368.16	376.50	277.33	1,386.66
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	455.83	460.20	470.62	346.66	1,733.32
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	516.42	1,431.68	6,612.62	2,140.18	10,700.89
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,485.10	1,000.42	6,592.21	2,269.43	11,347.17
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	39.67	84.29	726.85	212.70	1,063.51
603	BRICK EDGING	M	13.29	0.00	50.88	16.04	80.21
604a	METAL GUARD RAIL	M	98.52	70.24	3,142.97	827.93	4,139.66
604b	METAL GUARD RAIL END PIECES	EACH	131.11	688.14	3,542.03	1,090.32	5,451.61
604d	STEEL POST FOR METAL GUARD RAIL	EACH	147.76	688.14	3,137.02	993.23	4,966.16
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,766.66	1,447.50	14,690.78	4,726.23	23,631.16
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,766.66	1,026.28	13,677.32	4,367.57	21,837.83

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### Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	347.58	500.96	11,462.52	3,077.76	15,388.82
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	106.25	751.44	14,168.74	3,756.61	18,783.03
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	347.58	1,073.66	22,080.68	5,875.48	29,377.40
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,176.36	1,172.88	40,811.02	10,790.07	53,950.33
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	235.27	282.47	19,095.11	4,903.21	24,516.06
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	404.16	0.00	2,768.40	793.14	3,965.70
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	404.16	0.00	4,152.60	1,139.19	5,695.95
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.37	7.03	23.74	8.79	43.94
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.46	4.04	64.62	17.53	87.65
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.37	7.03	31.68	10.77	53.86
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.46	4.04	86.18	22.92	114.60
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	110.67	35.16	229.41	93.81	469.04
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	110.67	60.65	814.26	246.39	1,231.97
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.47	8.79	34.74	12.25	61.25
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.47	15.16	111.83	33.11	165.57
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.47	8.79	46.32	15.15	75.73
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.47	15.16	149.10	42.43	212.16
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	110.67	35.16	335.44	120.32	601.58
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	110.67	60.65	1,410.06	395.34	1,976.72
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	92.67	35.16	152.94	70.19	350.96
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	92.67	60.65	543.66	174.24	871.22

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	92.67	35.16	223.62	87.86	439.31
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	92.67	60.65	941.46	273.69	1,368.47
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.06	141.94	398.16	138.54	692.71
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.06	0.00	206.16	55.06	275.28
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.06	141.94	449.16	151.29	756.46
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.06	0.00	262.26	69.08	345.40
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	27.50	140.48	801.45	242.36	1,211.78
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	165.00	842.88	2,083.04	772.73	3,863.65
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	330.00	1,685.76	5,732.50	1,937.07	9,685.33
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	199.34	84.29	1,247.91	382.88	1,914.42
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	174.10	1,050.30	2.20	306.65	1,533.26

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**BAHAWAL NAGAR**  
**(04)**



**SAMPAK INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 04 BAHAWAL NAGAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	1,187.79	369.01	1,845.03
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	556.03	200.88	1,004.40
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	1,631.34	482.68	2,413.40
202	AGGREGATE BASE	CM	13.30	350.20	1,822.64	546.53	2,732.67
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	12,550.04	3,878.98	19,394.92
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	12,846.95	3,953.21	19,766.06
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	12,539.35	3,910.10	19,550.51
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	12,862.73	3,990.95	19,954.73
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	2,039.74	749.02	3,745.08
204c	CEMENT CONTENT	TON	150.00	0.00	8,715.00	2,216.25	11,081.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	84,746.28	21,878.49	109,392.45
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	84,746.28	21,878.49	109,392.45
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	1,670.13	508.07	2,540.36

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 04 BAHAWAL NAGAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	10,141.48	3,704.57	18,522.87
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,772.14	543.99	2,719.96
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	21.91	26.16	130.79
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	21.91	26.16	130.79
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	95.29	24.64	123.19
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	83.13	21.59	107.97
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.27	9.87	49.34
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.24	8.61	43.05
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	173.11	47.06	235.31
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	356.24	96.20	481.00
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	419.72	115.08	575.39
304d	SEAL COAT	SM	1.04	7.81	48.98	14.46	72.29
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	13,455.85	4,092.07	20,460.37
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	14,273.94	4,266.36	21,331.82
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	10,790.85	2,980.25	14,901.24
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	10,458.47	2,897.16	14,485.78
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	87,012.72	22,332.15	111,660.76
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	5,381.47	2,203.53	11,017.64
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	6,069.67	2,375.58	11,877.90
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	6,425.23	2,464.47	12,322.35
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	5,638.55	2,267.80	11,339.00
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	6,326.59	2,439.81	12,199.05
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	6,681.98	2,528.66	12,643.29
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,940.59	2,343.31	11,716.55
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	6,628.63	2,515.32	12,576.60
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,950.81	2,595.86	12,979.32
401b	CONCRETE CLASS B	CM	955.51	1,419.30	4,684.99	1,764.95	8,824.75
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	5,005.32	2,104.99	10,524.94
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	5,693.36	2,277.00	11,384.99
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	6,048.92	2,365.89	11,829.44
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	8,110.91	3,147.65	15,738.25
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	6,709.20	2,302.79	11,513.96
401f	LEAN CONCRETE	CM	602.00	969.12	4,136.48	1,426.90	7,134.49
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	6,035.54	2,581.13	12,905.67
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	6,625.10	2,728.52	13,642.61
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	5,411.58	2,425.14	12,125.72
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	8,119.75	3,102.18	15,510.92
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,897.94	3,296.73	16,483.67
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,677.31	3,491.57	17,457.87
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	3,830.93	1,576.43	7,882.17
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,129.96	22,129.70	110,648.52

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	90,204.49	23,148.34	115,741.68
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,129.49	44,882.91	224,414.56
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,188.51	586.63	2,933.15
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,023.67	295.42	1,477.11
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	326.93	95.76	478.79
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	106,668.52	60,958.44	304,792.18
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	228,554.23	91,429.86	457,149.31
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	309,734.87	128,087.18	640,435.91
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	493,977.88	191,613.44	958,067.18
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	800,481.03	290,662.96	1,453,314.79
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	4,753.35	1,447.32	7,236.59
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,894.12	647.04	3,235.21
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	3,578.38	1,121.79	5,608.97
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	2,285.56	789.90	3,949.51
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	3,778.00	1,216.70	6,083.50
411g	ROLL POINTING	SM	97.67	24.95	106.24	57.21	286.07
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	3,778.00	1,326.41	6,632.05
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,157.40	539.64	2,698.20
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,455.92	633.45	3,167.24
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,733.04	846.17	4,230.83
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	2,497.62	1,127.47	5,637.34
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,205.38	1,705.21	8,526.07
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	6,359.66	2,397.10	11,985.51

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	7,910.29	2,795.35	13,976.76
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	9,781.85	3,433.12	17,165.61
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	18,268.27	5,722.46	28,612.32
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,613.59	653.69	3,268.44
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	2,012.47	770.50	3,852.51
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,371.70	1,005.83	5,029.15
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	3,391.75	1,351.00	6,755.01
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,308.77	1,981.06	9,905.31
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	9,023.02	3,062.94	15,314.71
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	9,812.69	3,270.95	16,354.76
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	12,658.55	4,152.30	20,761.49
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	21,314.14	6,483.93	32,419.65
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	1,223.36	386.26	1,931.30
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	4,777.22	1,734.97	8,674.85
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	125.43	33.26	166.29
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	1,456.42	397.16	1,985.80
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	396.35	149.26	746.29
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	786.28	276.74	1,383.70
509a	RIPRAP, CLASS A	CM	660.97	0.00	1,549.19	552.54	2,762.70
509b	RIPRAP, CLASS B	CM	480.78	233.11	1,581.47	573.84	2,869.20
509c	RIPRAP, CLASS C	CM	470.65	242.83	1,639.26	588.18	2,940.92
509c1	RIPRAP, CLASS D	CM	470.65	291.39	1,684.29	611.58	3,057.91

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	3,832.35	1,214.80	6,073.98
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	3,630.74	1,165.33	5,826.65
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	3,713.02	1,175.10	5,875.50
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,989.33	1,256.32	6,281.59
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	5,364.42	1,769.76	8,848.78
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	1,180.75	398.08	1,990.39
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	251.74	147.94	739.72
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	322.23	189.37	946.84
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	844.54	387.84	1,939.21
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	1,055.68	484.80	2,424.02
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	519.42	306.56	1,532.81
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	649.28	383.20	1,916.02
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	7,072.99	2,249.12	11,245.62
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	7,054.83	2,358.52	11,792.60
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	796.98	229.48	1,147.42
603	BRICK EDGING	M	12.17	0.00	62.40	18.64	93.21
604a	METAL GUARD RAIL	M	91.85	70.24	3,136.21	824.58	4,122.88
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,534.71	1,085.99	5,429.96
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,130.22	989.03	4,945.15
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	15,618.91	4,889.52	24,447.58
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	14,607.99	4,531.48	22,657.41

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,512.21	3,083.10	15,415.52
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,243.27	3,773.05	18,865.26
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,468.27	5,965.29	29,826.46
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	41,430.85	10,913.15	54,565.74
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,265.22	4,939.36	24,696.82
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,782.24	793.48	3,967.38
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,173.36	1,141.26	5,706.28
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	864.66	257.53	1,287.67
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,242.03	808.73	4,043.64
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	6,073.54	2,014.83	10,074.13
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,329.92	398.89	1,994.44
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**BAHAWALPUR**  
**(05)**



**SAMPAC INTERNATIONAL**



CLIENT:

CSR - 2014

CONSULTANT:

NATIONAL HIGHWAY AUTHORITY  
ISLAMABADSAMPAK INTERNATIONAL (Pvt.) LTD  
LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 05 BAHAWALPUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.95	19.27	0.00	5.05	25.27
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.46	321.21	2.18	83.21	416.06
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	27.28	774.41	4.91	201.65	1,008.25
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	109.11	3,097.64	19.65	806.60	4,033.00
103	STRIPPING	CM	3.25	188.78	0.00	48.01	240.03
104	COMPACTION OF NATURAL GROUND	SM	0.46	18.62	3.00	5.52	27.60
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.64	283.06	0.00	72.17	360.87
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	140.38	453.99	137.50	182.97	914.83
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	21.61	672.56	0.00	173.54	867.71
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	14.36	524.99	0.00	134.84	674.19
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.61	254.24	0.00	64.71	323.57
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	140.38	453.99	137.50	182.97	914.83
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	24.63	610.97	0.00	158.90	794.50
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	12.35	524.99	0.00	134.33	671.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.40	278.09	0.00	71.87	359.36
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	83.15	838.57	90.35	253.02	1,265.09
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	136.85	504.43	137.50	194.69	973.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	123.16	553.11	0.00	169.07	845.34
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	70.38	397.27	0.00	116.91	584.55
107d	GRANULAR BACKFILL	CM	43.98	241.40	1,173.59	364.74	1,823.71
107e	COMMON BACKFILL	CM	37.47	139.11	20.00	49.15	245.73
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	8.82	288.79	20.00	79.40	397.02
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	25.65	726.17	159.33	227.79	1,138.94

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	19.23	792.41	9.50	205.29	1,026.43
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	17.10	714.13	8.89	185.03	925.15
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.16	123.20	223.08	89.11	445.55
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.84	150.63	20.00	44.62	223.08
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	18.69	348.12	11.89	94.68	473.38
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.78	53.73	5.72	15.31	76.54
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.28	36.66	3.03	10.25	51.23
110	IMPROVED SUB-GARDE (CBR>20%)	CM	12.94	233.49	502.16	187.15	935.75
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.08	29.22	3.11	8.35	41.76
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.64	32.97	3.11	9.43	47.14
201	GRANULAR SUB-BASE	CM	10.33	288.11	1,446.52	436.24	2,181.20
202	AGGREGATE BASE	CM	12.07	350.20	1,626.66	497.23	2,486.15
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	104.02	2,856.48	12,359.14	3,829.91	19,149.55
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	104.02	2,856.48	12,665.25	3,906.44	19,532.19
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	111.56	2,983.43	12,348.46	3,860.86	19,304.32
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	111.56	2,983.43	12,681.11	3,944.03	19,720.14
204b	CEMENT STABILIZED BASE	CM	37.10	915.90	1,853.30	701.57	3,507.87
204c	CEMENT CONTENT	TON	150.00	0.00	9,030.00	2,295.00	11,475.00
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	314.29	2,422.77	85,054.41	21,947.87	109,739.34
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	314.29	2,422.77	85,054.41	21,947.87	109,739.34
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	125.85	233.81	1,489.49	462.29	2,311.43

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## Rate Analysis Summary (Construction)

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Dcode 05 BAHAWALPUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	199.68	4,464.04	9,930.77	3,648.62	18,243.11
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	138.93	262.54	1,626.78	507.06	2,535.30
207a	DEEP PATCHING (0-15 cm)	SM	2.15	80.37	24.99	26.88	134.39
207b	DEEP PATCHING (15-30 cm)	SM	2.15	80.37	24.99	26.88	134.39
208	REINSTATEMENT OF ROAD SURFACE	SM	2.32	130.32	2.20	33.71	168.56
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	5.83	466.94	13.33	121.53	607.63
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.17	50.29	2.67	13.53	67.66
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.39	2.83	95.60	24.70	123.52
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.38	2.83	83.44	21.66	108.30
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.16	1.03	38.40	9.89	49.47
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.16	1.03	33.36	8.64	43.18
304a	SINGLE SURFACE TREATMENT	SM	1.02	14.01	172.40	46.86	234.28
304b	DOUBLE SURFACE TREATMENT	SM	1.48	26.92	353.49	95.48	477.38
304c	TRIPLE SURFACE TREATMENT	SM	2.50	37.83	416.60	114.23	571.16
304d	SEAL COAT	SM	0.94	7.81	48.89	14.41	72.06
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	92.06	2,815.00	13,281.32	4,047.09	20,235.46
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	92.06	2,694.06	14,108.40	4,223.63	21,118.15
307a	DENSE GRADED HOT BIT-MAC	CM	255.60	863.75	10,670.45	2,947.45	14,737.24
307b	OPEN GRADED HOT BIT-MAC	CM	255.60	863.75	10,309.80	2,857.29	14,286.43
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	39.02	1,236.12	4,884.74	1,539.97	7,699.85
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	277.43	2,013.10	87,320.85	22,402.85	112,014.23
309a	COLD MILLING, 0-30 mm	SM	1.27	61.27	25.40	21.98	109.92
309b	COLD MILLING, 0-50 mm	SM	2.11	102.12	42.33	36.64	183.21

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.17	153.18	63.50	54.96	274.81
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	678.38	2,690.11	5,110.28	2,119.69	10,598.47
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	678.38	2,690.11	5,798.47	2,291.74	11,458.71
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	678.38	2,690.11	6,154.03	2,380.63	11,903.16
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	678.38	2,690.11	5,366.79	2,183.82	10,919.10
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	678.38	2,690.11	6,054.83	2,355.83	11,779.15
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	678.38	2,690.11	6,410.23	2,444.68	12,223.41
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	678.38	2,690.11	5,692.47	2,265.24	11,326.21
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	678.38	2,690.11	6,380.51	2,437.25	12,186.26
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	678.38	2,690.11	6,705.06	2,518.39	12,591.94
401b	CONCRETE CLASS B	CM	881.92	1,419.30	4,327.61	1,657.21	8,286.03
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	670.43	2,690.11	4,799.21	2,039.94	10,199.69
401cii	CONCRETE CLASS C (ON GROUND)	CM	670.43	2,690.11	5,487.25	2,211.95	11,059.74
401ciii	CONCRETE CLASS C (ELEVATED)	CM	670.43	2,690.11	5,842.81	2,300.84	11,504.19
401d	CONCRETE CLASS D1	CM	1,053.62	3,326.20	7,903.10	3,070.73	15,353.64
401e	CONCRETE CLASS Y	CM	1,470.86	898.44	6,470.42	2,209.93	11,049.65
401f	LEAN CONCRETE	CM	574.15	969.12	3,734.82	1,319.52	6,597.61
401gi	PRECAST CONCRETE, CLASS A1	CM	2,251.87	1,879.78	5,764.64	2,474.07	12,370.36
401gii	PRECAST CONCRETE CLASS A3	CM	2,251.87	1,879.78	6,380.37	2,628.00	13,140.02
401giii	PRECAST CONCRETE, CLASS B	CM	2,251.87	1,879.78	5,047.76	2,294.85	11,474.26
401giv	PRECAST CONCRETE CLASS D1	CM	2,251.87	1,879.78	7,911.08	3,010.68	15,053.40
401gv	PRECAST CONCRETE CLASS D2	CM	2,251.87	1,879.78	8,744.60	3,219.06	16,095.31
401gvi	PRECAST CONCRETE CLASS D3	CM	2,251.87	1,879.78	9,580.07	3,427.93	17,139.64
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	981.92	1,419.30	3,523.59	1,481.20	7,406.00
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,180.32	0.00	86,577.68	22,189.50	110,947.50

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,180.32	0.00	90,777.68	23,239.50	116,197.50
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,652.50	4,249.86	106,704.00	28,151.59	140,757.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,071.82	13,891.32	162,171.41	44,783.64	223,918.19
405b	LAUNCHING OF GIRDER	TON	71.50	967.47	0.00	259.74	1,298.72
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	146.60	0.00	2,188.84	583.86	2,919.30
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	146.60	0.00	1,024.01	292.65	1,463.26
406ci	STEEL EXPANSION JOINTS (Local)	KG	11.98	21.32	170.26	50.89	254.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	490.20	0.00	46,668.73	11,789.73	58,948.66
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	508.95	0.00	116,671.81	29,295.19	146,475.95
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	565.20	0.00	388,509.26	97,268.62	486,343.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	490.20	0.00	42,347.80	10,709.50	53,547.50
406dii	PVC WATER STOP 8" SIZE	M	127.09	0.00	399.81	131.72	658.62
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.90
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	50.97	0.00	327.23	94.55	472.75
406g	STEEL OR METAL BEARING DEVICES	KG	25.03	56.27	178.60	64.97	324.87
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	302.99	3,542.17	578.05	1,105.80	5,529.01
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	460.54	5,384.10	789.26	1,658.47	8,292.37
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	460.54	8,250.86	954.21	2,416.40	12,082.01
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	767.56	13,751.43	1,380.28	3,974.82	19,874.08

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	639.64	11,459.52	1,202.75	3,325.48	16,627.38
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,151.34	20,627.14	1,912.86	5,922.84	29,614.18
407h	PILE LOAD TEST UPTO 120 TON	EACH	30,644.94	105,999.36	115,311.88	62,989.05	314,945.23
407i	PILE LOAD TEST UPTO 240 TON	EACH	30,644.94	105,999.36	245,840.95	95,621.31	478,106.56
407j	PILE LOAD TEST UPTO 360 TON	EACH	84,644.94	117,448.00	335,664.95	134,439.47	672,197.36
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,144.94	146,810.00	536,212.48	202,041.86	1,010,209.28
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,248.68	176,172.00	868,252.83	307,418.38	1,537,091.89
407m	CONFIRMATORY BORING (NX SIZE)	M	234.01	3,272.30	25.00	882.83	4,414.14
407n	PERMANENT PILE CASING FOR PILES	Ton	307.15	4,885.57	105,647.45	27,710.04	138,550.22
410	BRICK WORK	CM	424.60	577.25	3,767.78	1,192.41	5,962.04
411a	STONE MASONRY RANDOM DRY	CM	449.18	210.72	1,797.27	614.29	3,071.46
411b	STONE MASONRY RANDOM WITH MORTAR	CM	535.43	335.46	3,247.50	1,029.60	5,148.00
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	617.94	210.72	2,175.71	751.09	3,755.45
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	700.44	335.46	3,499.38	1,133.82	5,669.11
411g	ROLL POINTING	SM	89.96	24.95	102.62	54.38	271.91
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	929.20	534.31	3,499.38	1,240.72	6,203.61
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	301.77	689.50	1,296.68	571.99	2,859.93
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	301.77	766.21	1,643.71	677.92	3,389.62
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	282.98	1,356.07	2,043.77	920.70	4,603.52
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	298.16	1,702.67	3,240.48	1,310.33	6,551.63
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	345.54	2,255.64	4,555.12	1,789.07	8,945.37
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	427.32	2,781.29	6,493.68	2,425.57	12,127.86

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	553.01	2,692.05	8,435.79	2,920.21	14,601.07
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	652.76	3,268.92	11,064.74	3,746.60	18,733.02
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	770.93	3,813.74	20,531.56	6,279.06	31,395.29
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	301.77	689.50	1,296.68	571.99	2,859.93
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	294.48	766.21	1,702.71	690.85	3,454.25
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	282.98	1,356.07	2,315.77	988.70	4,943.52
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	298.16	1,702.67	4,255.48	1,564.08	7,820.38
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	345.54	2,255.64	5,798.12	2,099.82	10,499.12
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	427.32	2,781.29	8,715.68	2,981.07	14,905.36
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	553.01	2,692.05	10,950.79	3,548.96	17,744.82
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	652.76	3,268.92	14,993.18	4,728.71	23,643.57
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	770.93	3,813.74	27,940.04	8,131.18	40,655.89
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	118.54	198.35	1,197.68	378.64	1,893.21
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	997.82	1,081.84	4,423.17	1,625.71	8,128.54
507a	STEEL WIRE MESH FOR GABIONS	KG	6.97	0.00	125.68	33.16	165.81
507b	ROCK FILL IN GABIONS	CM	128.82	0.00	1,355.52	371.08	1,855.42
508a	BRICK PAVING (SINGLE COURSE)	SM	143.39	47.96	282.61	118.49	592.44
508b	BRICK PAVING (DOUBLE COURSE)	SM	255.89	47.96	557.82	215.42	1,077.08
509a	RIPRAP, CLASS A	CM	616.81	0.00	1,452.34	517.29	2,586.43
509b	RIPRAP, CLASS B	CM	439.45	233.11	1,484.52	539.27	2,696.34
509c	RIPRAP, CLASS C	CM	428.71	242.83	1,540.64	553.04	2,765.22
509c1	RIPRAP, CLASS D	CM	428.71	291.39	1,584.79	576.22	2,881.11

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 05 BAHAWALPUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	755.37	218.23	3,733.84	1,176.86	5,884.29
509e	GROUTED RIPRAP, CLASS B	CM	571.30	407.69	3,532.64	1,127.91	5,639.54
509f	GROUTED RIPRAP, CLASS C	CM	548.59	388.31	3,597.26	1,133.54	5,667.69
509f1	GROUTED RIPRAP, CLASS D	CM	548.59	436.87	3,864.44	1,212.47	6,062.37
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,037.10	615.08	5,060.85	1,678.26	8,391.29
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	65.10	344.31	1,169.94	394.84	1,974.19
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	128.05	1,135.96	0.00	316.00	1,580.02
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	195.19	131.70	236.01	140.72	703.61
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	249.84	168.58	302.09	180.13	900.63
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	315.84	368.16	802.49	371.62	1,858.12
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	394.80	460.20	1,003.12	464.53	2,322.65
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	315.84	368.16	471.57	288.89	1,444.47
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	394.80	460.20	589.47	361.12	1,805.59
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	448.80	1,431.68	6,953.07	2,208.39	11,041.94
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,286.21	1,000.42	6,935.07	2,305.43	11,527.13
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	34.33	84.29	756.99	218.90	1,094.51
603	BRICK EDGING	M	11.49	0.00	42.24	13.43	67.16
604a	METAL GUARD RAIL	M	85.37	70.24	3,132.20	821.95	4,109.76
604b	METAL GUARD RAIL END PIECES	EACH	113.47	688.14	3,530.38	1,083.00	5,414.99
604d	STEEL POST FOR METAL GUARD RAIL	EACH	128.04	688.14	3,126.18	985.59	4,927.96
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,386.49	1,447.50	15,412.80	4,811.70	24,058.48
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,386.49	1,026.28	14,396.54	4,452.33	22,261.64



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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 05 BAHAWALPUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	300.59	500.96	11,455.57	3,064.28	15,321.40
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	91.88	751.44	14,173.36	3,754.17	18,770.84
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	300.59	1,073.66	22,288.14	5,915.60	29,577.99
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,013.39	1,172.88	41,122.21	10,827.12	54,135.60
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	202.68	282.47	19,157.35	4,910.62	24,553.12
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	352.08	0.00	2,768.40	780.12	3,900.60
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	352.08	0.00	4,152.60	1,126.17	5,630.85
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.78	7.03	23.74	8.64	43.19
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.26	4.04	64.62	17.48	87.40
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.78	7.03	31.68	10.62	53.12
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.26	4.04	86.18	22.87	114.36
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	96.40	35.16	229.41	90.24	451.21
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	96.40	60.65	814.26	242.83	1,214.14
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.73	8.79	34.74	12.06	60.32
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.73	15.16	111.83	32.93	164.64
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	4.73	8.79	46.32	14.96	74.80
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	4.73	15.16	149.10	42.25	211.24
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	96.40	35.16	335.44	116.75	583.75
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	96.40	60.65	1,410.06	391.78	1,958.89
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	80.65	35.16	152.94	67.19	335.94
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	80.65	60.65	543.66	171.24	856.20

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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 05 BAHAWALPUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	80.65	35.16	223.62	84.86	424.29
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	80.65	60.65	941.46	270.69	1,353.45
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.19	141.94	398.16	138.07	690.36
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.19	0.00	206.16	54.59	272.94
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.19	141.94	449.16	150.82	754.11
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.19	0.00	262.26	68.61	343.06
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	23.75	140.48	829.16	248.35	1,241.73
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	142.50	842.88	2,155.52	785.23	3,926.13
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	285.01	1,685.76	5,852.85	1,955.90	9,779.52
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	172.16	84.29	1,385.59	410.51	2,052.56
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	150.66	1,050.30	2.20	300.79	1,503.95

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**BHAKKAR**  
**(07)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 07 BHAKKAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	1,269.25	389.37	1,946.85
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 07 BHAKKAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	539.10	196.65	983.23
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	1,564.57	465.99	2,329.94
202	AGGREGATE BASE	CM	13.30	350.20	1,597.34	490.21	2,451.06
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	12,280.13	3,811.51	19,057.54
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	12,566.73	3,883.16	19,415.79
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	12,269.50	3,842.64	19,213.19
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	12,582.43	3,920.87	19,604.36
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	1,810.63	691.74	3,458.69
204c	CEMENT CONTENT	TON	150.00	0.00	8,820.00	2,242.50	11,212.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	84,308.08	21,768.94	108,844.69
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	84,308.08	21,768.94	108,844.69
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	1,444.14	451.57	2,257.87

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 07 BHAKKAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	9,891.40	3,642.05	18,210.27
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,517.69	480.38	2,401.89
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	26.66	27.34	136.71
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	26.66	27.34	136.71
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	94.86	24.53	122.64
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	82.69	21.48	107.42
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.10	9.82	49.12
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.06	8.57	42.83
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	171.19	46.58	232.90
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	351.29	94.96	474.81
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	413.93	113.63	568.15
304d	SEAL COAT	SM	1.04	7.81	48.38	14.31	71.55
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	13,176.23	4,022.17	20,110.86
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	13,988.46	4,194.99	20,974.97
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	10,575.28	2,926.36	14,631.78
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	10,241.06	2,842.80	14,214.01
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	86,574.52	22,222.60	111,113.00
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 07 BHAKKAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	4,982.27	2,103.73	10,518.65
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	5,670.45	2,275.77	11,378.87
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	6,026.01	2,364.66	11,823.32
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	5,253.06	2,171.43	10,857.13
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	5,941.10	2,343.44	11,717.18
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	6,296.51	2,432.29	12,161.44
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,578.31	2,252.74	11,263.69
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	6,266.35	2,424.75	12,123.74
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,592.49	2,506.28	12,531.42
401b	CONCRETE CLASS B	CM	955.51	1,419.30	4,244.08	1,654.72	8,273.61
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	4,704.63	2,029.82	10,149.08
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	5,392.67	2,201.83	11,009.13
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	5,748.23	2,290.72	11,453.58
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	7,734.57	3,053.57	15,267.83
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	6,317.97	2,204.98	11,024.92
401f	LEAN CONCRETE	CM	602.00	969.12	3,665.70	1,309.20	6,546.02
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	5,636.40	2,481.35	12,406.74
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	6,267.29	2,639.07	13,195.36
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	4,966.42	2,313.85	11,569.26
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	7,742.56	3,007.89	15,039.45
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,558.15	3,211.79	16,058.93
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,375.60	3,416.15	17,080.74
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	3,419.27	1,473.52	7,367.60
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,256.33	22,161.30	110,806.48

CLIENT:

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 07 BHAKKAR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	90,456.33	23,211.30	116,056.48
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,148.80	44,887.74	224,438.69
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,188.03	586.51	2,932.56
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,023.65	295.42	1,477.08
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	326.50	95.65	478.26
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65



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## Rate Analysis Summary (Construction)

Province PUNJAB

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	119,983.80	64,287.26	321,436.28
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	255,184.79	98,087.50	490,437.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	349,680.71	138,073.64	690,368.21
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	559,041.18	207,879.26	1,039,396.30
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	904,884.93	316,763.93	1,583,819.66
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	4,812.77	1,462.17	7,310.86
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,604.69	574.69	2,873.43
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	3,011.11	979.98	4,899.88
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	1,997.29	717.84	3,589.18
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	3,283.60	1,093.10	5,465.49
411g	ROLL POINTING	SM	97.67	24.95	101.69	56.08	280.38
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	3,283.60	1,202.81	6,014.05
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,274.05	568.80	2,844.01
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,606.83	671.17	3,355.87
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,989.25	910.22	4,551.09
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	3,150.72	1,290.75	6,453.73
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,377.88	1,748.34	8,741.70
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	6,228.74	2,364.37	11,821.86

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	8,170.64	2,860.44	14,302.20
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	10,787.47	3,684.53	18,422.64
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	19,468.40	6,022.50	30,112.48
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,274.05	568.80	2,844.01
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	1,665.83	683.84	3,419.21
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,261.25	978.22	4,891.09
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	4,165.72	1,544.50	7,722.48
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,620.88	2,059.09	10,295.45
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	8,450.74	2,919.87	14,599.36
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	10,685.64	3,489.19	17,445.95
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	14,715.91	4,666.64	23,333.20
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	26,876.88	7,874.62	39,373.08
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	1,295.16	404.21	2,021.05
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	4,337.41	1,625.02	8,125.10
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	124.56	33.04	165.20
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	1,188.15	330.09	1,650.46
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	403.91	151.15	755.75
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	799.89	280.14	1,400.72
509a	RIPRAP, CLASS A	CM	660.97	0.00	1,259.76	480.18	2,400.92
509b	RIPRAP, CLASS B	CM	480.78	233.11	1,294.36	502.06	2,510.31
509c	RIPRAP, CLASS C	CM	470.65	242.83	1,349.83	515.82	2,579.12
509c1	RIPRAP, CLASS D	CM	470.65	291.39	1,417.38	544.85	2,724.26

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	3,387.75	1,103.65	5,518.23
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	3,204.61	1,058.80	5,293.98
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	3,277.51	1,066.22	5,331.12
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,554.58	1,147.63	5,738.16
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	4,955.34	1,667.49	8,337.43
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	1,265.29	419.21	2,096.07
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	204.71	136.19	680.93
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	262.03	174.32	871.59
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	767.30	368.53	1,842.66
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	959.13	460.67	2,303.33
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	436.47	285.82	1,429.12
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	545.59	357.28	1,786.40
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	6,871.25	2,198.69	10,993.45
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	6,853.13	2,308.10	11,540.48
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	758.26	219.80	1,099.02
603	BRICK EDGING	M	12.17	0.00	62.40	18.64	93.21
604a	METAL GUARD RAIL	M	91.85	70.24	3,142.97	826.26	4,131.32
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,542.03	1,087.82	5,439.11
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,137.02	990.73	4,953.66
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	15,237.27	4,794.11	23,970.53
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	14,224.84	4,435.69	22,178.47

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,497.19	3,079.35	15,396.74
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,220.73	3,767.42	18,837.09
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,324.15	5,929.26	29,646.32
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	41,214.68	10,859.10	54,295.52
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,221.98	4,928.56	24,642.78
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,782.24	793.48	3,967.38
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,173.36	1,141.26	5,706.28
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	829.77	248.81	1,244.06
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,155.03	786.98	3,934.89
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	5,875.44	1,965.30	9,826.50
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,297.78	390.85	1,954.25
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**CHAKWAL**  
**(09)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 09 CHAKWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.27	19.27	0.00	5.13	25.67
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.61	321.21	2.18	84.00	420.00
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	36.37	774.41	4.91	203.92	1,019.61
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	145.47	3,097.64	19.65	815.69	4,078.46
103	STRIPPING	CM	4.33	188.78	0.00	48.28	241.38
104	COMPACTION OF NATURAL GROUND	SM	0.61	18.62	3.00	5.56	27.79
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	7.52	283.06	0.00	72.64	363.22
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	28.82	672.56	0.00	175.34	876.72
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	19.15	524.99	0.00	136.03	680.17
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.15	254.24	0.00	65.10	325.49
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	32.84	610.97	0.00	160.95	804.76
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	16.47	524.99	0.00	135.36	676.82
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	12.53	278.09	0.00	72.65	363.27
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	110.86	838.57	90.35	259.95	1,299.73
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	182.46	504.43	137.50	206.10	1,030.49
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	164.21	553.11	0.00	179.33	896.66
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	93.84	397.27	0.00	122.78	613.88
107d	GRANULAR BACKFILL	CM	58.63	241.40	1,054.30	338.58	1,692.92
107e	COMMON BACKFILL	CM	49.96	139.11	20.00	52.27	261.34
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.76	288.79	20.00	80.14	400.70
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	34.19	726.17	159.33	229.93	1,149.63

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	25.65	792.41	9.50	206.89	1,034.44
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	22.80	714.13	8.89	186.45	932.27
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	13.54	123.20	223.08	89.96	449.78
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.45	150.63	20.00	45.27	226.35
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	24.92	348.12	11.89	96.23	481.17
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.37	53.73	5.72	15.46	77.28
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.71	36.66	3.03	10.35	51.76
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.26	233.49	424.13	168.72	843.60
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.44	29.22	3.11	8.44	42.21
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.18	32.97	3.11	9.56	47.82
201	GRANULAR SUB-BASE	CM	13.78	288.11	1,111.25	353.28	1,766.42
202	AGGREGATE BASE	CM	16.09	350.20	1,298.16	416.11	2,080.56
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	138.70	2,856.48	11,917.08	3,728.07	18,640.33
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	138.70	2,856.48	12,207.18	3,800.59	19,002.94
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	148.75	2,983.43	11,906.54	3,759.68	18,798.41
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	148.75	2,983.43	12,222.72	3,838.73	19,193.63
204b	CEMENT STABILIZED BASE	CM	49.47	915.90	1,534.66	625.01	3,125.03
204c	CEMENT CONTENT	TON	200.00	0.00	8,820.00	2,255.00	11,275.00
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	419.05	2,422.77	83,463.17	21,576.25	107,881.23
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	419.05	2,422.77	83,463.17	21,576.25	107,881.23
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	167.80	233.81	1,203.94	401.39	2,006.94



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	266.23	4,464.04	9,580.85	3,577.78	17,888.91
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	185.23	262.54	1,238.22	421.50	2,107.49
207a	DEEP PATCHING (0-15 cm)	SM	2.87	80.37	26.66	27.47	137.37
207b	DEEP PATCHING (15-30 cm)	SM	2.87	80.37	26.66	27.47	137.37
208	REINSTATEMENT OF ROAD SURFACE	SM	3.10	130.32	2.20	33.90	169.52
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.77	466.94	13.33	122.01	610.05
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.55	50.29	2.67	13.63	68.14
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.52	2.83	94.01	24.34	121.70
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.50	2.83	81.85	21.29	106.47
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	37.76	9.75	48.74
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	32.73	8.49	42.45
304a	SINGLE SURFACE TREATMENT	SM	1.36	14.01	168.28	45.91	229.56
304b	DOUBLE SURFACE TREATMENT	SM	1.98	26.92	344.21	93.28	466.39
304c	TRIPLE SURFACE TREATMENT	SM	3.33	37.83	405.59	111.69	558.44
304d	SEAL COAT	SM	1.26	7.81	47.48	14.14	70.69
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	122.74	2,815.00	12,804.69	3,935.61	19,678.03
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	122.74	2,694.06	13,613.11	4,107.48	20,537.38
307a	DENSE GRADED HOT BIT-MAC	CM	340.79	863.75	10,279.95	2,871.12	14,355.62
307b	OPEN GRADED HOT BIT-MAC	CM	340.79	863.75	9,949.88	2,788.61	13,943.03
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	52.02	1,236.12	4,884.74	1,543.22	7,716.11
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	369.90	2,013.10	85,729.61	22,028.15	110,140.77
309a	COLD MILLING, 0-30 mm	SM	1.69	61.27	25.40	22.09	110.45
309b	COLD MILLING, 0-50 mm	SM	2.81	102.12	42.33	36.82	184.09

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309c	COLD MILLING, 0-70 mm	SM	4.22	153.18	63.50	55.23	276.13
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	904.48	2,690.11	4,732.40	2,081.75	10,408.74
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	904.48	2,690.11	5,420.56	2,253.79	11,268.94
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	904.48	2,690.11	5,776.12	2,342.68	11,713.39
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	904.48	2,690.11	5,011.43	2,151.51	10,757.53
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	904.48	2,690.11	5,699.47	2,323.52	11,617.58
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	904.48	2,690.11	6,054.91	2,412.38	12,061.88
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	904.48	2,690.11	5,328.19	2,230.70	11,153.48
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	904.48	2,690.11	6,016.23	2,402.71	12,013.53
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	904.48	2,690.11	6,347.68	2,485.57	12,427.84
401b	CONCRETE CLASS B	CM	1,175.86	1,419.30	3,968.67	1,640.96	8,204.79
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	893.88	2,690.11	4,464.95	2,012.24	10,061.19
401cii	CONCRETE CLASS C (ON GROUND)	CM	893.88	2,690.11	5,152.99	2,184.25	10,921.24
401ciii	CONCRETE CLASS C (ELEVATED)	CM	893.88	2,690.11	5,508.55	2,273.14	11,365.69
401d	CONCRETE CLASS D1	CM	1,404.77	3,326.20	7,502.95	3,058.48	15,292.40
401e	CONCRETE CLASS Y	CM	1,961.06	898.44	6,068.38	2,231.97	11,159.84
401f	LEAN CONCRETE	CM	765.52	969.12	3,376.20	1,277.71	6,388.54
401gi	PRECAST CONCRETE, CLASS A1	CM	3,002.40	1,879.78	5,386.46	2,567.16	12,835.79
401gii	PRECAST CONCRETE CLASS A3	CM	3,002.40	1,879.78	6,022.54	2,726.18	13,630.90
401giii	PRECAST CONCRETE, CLASS B	CM	3,002.40	1,879.78	4,685.83	2,392.00	11,960.01
401giv	PRECAST CONCRETE CLASS D1	CM	3,002.40	1,879.78	7,510.52	3,098.17	15,490.87
401gv	PRECAST CONCRETE CLASS D2	CM	3,002.40	1,879.78	8,342.10	3,306.07	16,530.35
401gvi	PRECAST CONCRETE CLASS D3	CM	3,002.40	1,879.78	9,175.35	3,514.38	17,571.91
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,309.20	1,419.30	3,150.90	1,469.85	7,349.24
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,906.98	0.00	86,225.62	22,283.15	111,415.74

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404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,906.98	0.00	90,425.62	23,333.15	116,665.74
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,203.25	4,249.86	106,704.00	28,289.28	141,446.38
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,095.70	13,891.32	162,148.80	45,033.95	225,169.77
405b	LAUNCHING OF GIRDER	TON	95.34	967.47	0.00	265.70	1,328.51
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	2,187.11	595.64	2,978.21
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	1,022.73	304.55	1,522.74
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.98	21.32	170.26	51.89	259.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	46,668.73	11,830.58	59,152.91
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	678.60	0.00	116,671.81	29,337.60	146,688.02
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	753.60	0.00	388,509.26	97,315.72	486,578.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	42,347.80	10,750.35	53,751.75
406dii	PVC WATER STOP 8" SIZE	M	169.44	0.00	399.81	142.31	711.56
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	67.96	0.00	325.67	98.41	492.03
406g	STEEL OR METAL BEARING DEVICES	KG	33.37	56.27	178.60	67.06	335.30
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	403.97	3,542.17	578.05	1,131.05	5,655.24
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	614.03	5,384.10	789.26	1,696.85	8,484.24
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	614.03	8,250.86	954.21	2,454.78	12,273.88
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,023.39	13,751.43	1,380.28	4,038.77	20,193.87

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	852.82	11,459.52	1,202.75	3,378.77	16,893.87
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,535.08	20,627.14	1,912.86	6,018.77	30,093.86
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,859.94	105,999.36	119,983.80	66,710.78	333,553.88
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,859.94	105,999.36	255,184.79	100,511.02	502,555.11
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,859.94	117,448.00	349,680.71	144,997.16	724,985.81
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,859.94	146,810.00	559,041.18	218,177.78	1,090,888.90
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,998.28	176,172.00	904,884.93	332,013.80	1,660,069.01
407m	CONFIRMATORY BORING (NX SIZE)	M	312.01	3,272.30	25.00	902.33	4,511.64
407n	PERMANENT PILE CASING FOR PILES	Ton	409.53	4,885.57	105,647.45	27,735.64	138,678.20
410	BRICK WORK	CM	566.11	577.25	3,812.77	1,239.03	6,195.16
411a	STONE MASONRY RANDOM DRY	CM	598.88	210.72	1,374.72	546.08	2,730.40
411b	STONE MASONRY RANDOM WITH MORTAR	CM	713.88	335.46	2,679.20	932.14	4,660.68
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	823.88	210.72	1,748.92	695.88	3,479.40
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	933.88	335.46	2,958.78	1,057.03	5,285.16
411g	ROLL POINTING	SM	119.94	24.95	99.98	61.22	306.09
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,238.88	534.31	2,958.78	1,182.99	5,914.96
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	402.36	689.50	1,152.14	561.00	2,804.99
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	402.36	766.21	1,452.60	655.29	3,276.46
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	377.30	1,356.07	1,732.69	866.52	4,332.58
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	397.55	1,702.67	2,487.22	1,146.86	5,734.30
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	460.72	2,255.64	4,237.72	1,738.52	8,692.59
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	569.76	2,781.29	6,412.28	2,440.83	12,204.16

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	737.34	2,692.05	7,963.14	2,848.13	14,240.66
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	870.34	3,268.92	9,832.28	3,492.88	17,464.42
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,027.90	3,813.74	18,554.58	5,849.05	29,245.27
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	402.36	689.50	1,608.33	675.05	3,375.23
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	392.63	766.21	2,009.15	792.00	3,960.00
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	377.30	1,356.07	2,371.35	1,026.18	5,130.90
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	397.55	1,702.67	3,381.35	1,370.39	6,851.96
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	460.72	2,255.64	5,341.11	2,014.37	10,071.83
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	569.76	2,781.29	9,075.64	3,106.67	15,533.36
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	737.34	2,692.05	9,865.54	3,323.73	16,618.66
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	870.34	3,268.92	12,708.98	4,212.06	21,060.30
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,027.90	3,813.74	21,600.45	6,610.52	33,052.60
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	158.05	198.35	1,063.52	354.98	1,774.90
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,330.40	1,081.84	4,062.00	1,618.56	8,092.80
507a	STEEL WIRE MESH FOR GABIONS	KG	9.29	0.00	122.34	32.91	164.54
507b	ROCK FILL IN GABIONS	CM	171.76	0.00	973.50	286.31	1,431.57
508a	BRICK PAVING (SINGLE COURSE)	SM	191.17	47.96	290.91	132.51	662.56
508b	BRICK PAVING (DOUBLE COURSE)	SM	341.17	47.96	573.89	240.76	1,203.79
509a	RIPRAP, CLASS A	CM	822.38	0.00	1,029.79	463.04	2,315.21
509b	RIPRAP, CLASS B	CM	585.90	233.11	1,066.23	471.31	2,356.55
509c	RIPRAP, CLASS C	CM	571.59	242.83	1,119.85	483.57	2,417.83
509c1	RIPRAP, CLASS D	CM	571.59	291.39	1,187.40	512.59	2,562.97

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509d	GROUTED RIPRAP, CLASS A	CM	1,007.12	218.23	3,094.07	1,079.85	5,399.27
509e	GROUTED RIPRAP, CLASS B	CM	761.70	407.69	2,919.39	1,022.20	5,110.98
509f	GROUTED RIPRAP, CLASS C	CM	731.41	388.31	2,988.08	1,026.95	5,134.75
509f1	GROUTED RIPRAP, CLASS D	CM	731.41	436.87	3,256.65	1,106.23	5,531.17
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,382.77	615.08	4,705.50	1,675.84	8,379.19
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	86.80	344.31	1,054.82	371.48	1,857.41
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	170.73	1,135.96	0.00	326.67	1,633.37
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	260.24	131.70	167.34	139.82	699.10
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	333.11	168.58	214.20	178.97	894.85
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	421.11	368.16	715.91	376.30	1,881.48
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	526.38	460.20	894.89	470.37	2,351.85
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	421.11	368.16	388.06	294.33	1,471.67
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	526.38	460.20	485.08	367.92	1,839.58
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	598.39	1,431.68	6,736.95	2,191.75	10,958.77
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,714.90	1,000.42	6,718.81	2,358.53	11,792.65
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	45.78	84.29	775.79	226.46	1,132.31
603	BRICK EDGING	M	15.32	0.00	43.20	14.63	73.15
604a	METAL GUARD RAIL	M	113.82	70.24	3,136.21	830.07	4,150.34
604b	METAL GUARD RAIL END PIECES	EACH	151.29	688.14	3,534.71	1,093.54	5,467.68
604d	STEEL POST FOR METAL GUARD RAIL	EACH	170.72	688.14	3,130.22	997.27	4,986.35
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,447.50	14,966.60	4,899.00	24,495.02
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,026.28	13,954.54	4,540.68	22,703.42

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607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	400.78	500.96	11,421.30	3,080.76	15,403.80
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	122.50	751.44	14,121.94	3,748.97	18,744.85
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	400.78	1,073.66	22,153.22	5,906.92	29,534.58
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,351.17	1,172.88	40,919.83	10,860.97	54,304.85
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	270.23	282.47	19,116.87	4,917.39	24,586.97
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	469.42	0.00	2,768.40	809.46	4,047.28
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	469.42	0.00	4,152.60	1,155.51	5,777.53
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.04	7.03	23.74	8.95	44.77
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.68	4.04	64.62	17.58	87.92
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.04	7.03	31.68	10.94	54.69
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.68	4.04	86.18	22.98	114.88
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	229.41	98.27	491.37
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	814.26	250.86	1,254.30
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.30	8.79	34.74	12.46	62.29
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.30	15.16	111.83	33.32	166.61
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.30	8.79	46.32	15.35	76.77
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.30	15.16	149.10	42.64	213.21
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	335.44	124.78	623.91
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	1,410.06	399.81	1,999.05
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	152.94	73.91	369.53
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	543.66	177.96	889.80

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	223.62	91.58	457.89
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	941.46	277.41	1,387.05
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	141.94	398.16	139.09	695.44
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	0.00	206.16	55.60	278.01
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	141.94	449.16	151.84	759.19
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	0.00	262.26	69.63	348.14
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	31.67	140.48	848.71	255.21	1,276.07
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	190.00	842.88	2,178.88	802.94	4,014.70
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	380.00	1,685.76	6,025.37	2,022.78	10,113.91
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	229.55	84.29	1,205.48	379.83	1,899.14
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	200.88	1,050.30	2.20	313.35	1,566.73



**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**CHANIOT**  
**(09A)**



**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.13	19.27	0.00	5.10	25.49
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	11.28	321.21	2.18	83.67	418.34
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	32.38	774.41	4.91	202.93	1,014.63
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	129.51	3,097.64	19.65	811.70	4,058.51
103	STRIPPING	CM	3.90	188.78	0.00	48.17	240.85
104	COMPACTION OF NATURAL GROUND	SM	0.55	18.62	3.00	5.54	27.71
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.96	283.06	0.00	72.50	362.52
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	170.59	453.99	137.50	190.52	952.59
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	26.11	672.56	0.00	174.67	873.34
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	17.42	524.99	0.00	135.60	678.00
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.69	254.24	0.00	64.98	324.92
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	170.59	453.99	137.50	190.52	952.59
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	29.96	610.97	0.00	160.23	801.16
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.92	524.99	0.00	134.98	674.89
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.53	278.09	0.00	72.40	362.02
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	100.80	838.57	90.35	257.43	1,287.15
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	166.45	504.43	137.50	202.10	1,010.48
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	149.81	553.11	0.00	175.73	878.65
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	85.60	397.27	0.00	120.72	603.59
107d	GRANULAR BACKFILL	CM	52.73	241.40	830.70	281.21	1,406.04
107e	COMMON BACKFILL	CM	44.48	139.11	20.00	50.90	254.50
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.73	288.79	20.00	79.88	399.41
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	30.97	726.17	159.33	229.12	1,145.59

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	23.22	792.41	9.50	206.28	1,031.42
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	20.64	714.13	8.89	185.92	929.58
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.29	123.20	223.08	89.64	448.22
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.52	150.63	20.00	45.04	225.18
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	22.51	348.12	11.89	95.63	478.15
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.16	53.73	5.72	15.40	77.01
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.56	36.66	3.03	10.31	51.57
110	IMPROVED SUB-GARDE (CBR>20%)	CM	15.62	233.49	403.21	163.08	815.41
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.30	29.22	3.11	8.41	42.04
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.98	32.97	3.11	9.51	47.57
201	GRANULAR SUB-BASE	CM	12.52	288.11	1,028.78	332.35	1,661.76
202	AGGREGATE BASE	CM	14.69	350.20	1,431.35	449.06	2,245.31
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	124.06	2,856.48	11,680.60	3,665.28	18,326.42
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	124.06	2,856.48	11,999.92	3,745.12	18,725.58
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	133.19	2,983.43	11,670.06	3,696.67	18,483.34
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	133.19	2,983.43	12,015.56	3,783.05	18,915.23
204b	CEMENT STABILIZED BASE	CM	44.94	915.90	1,298.39	564.81	2,824.04
204c	CEMENT CONTENT	TON	175.00	0.00	8,820.00	2,248.75	11,243.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	381.98	2,422.77	83,742.29	21,636.76	108,183.78
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	381.98	2,422.77	83,742.29	21,636.76	108,183.78
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	148.08	233.81	1,085.11	366.75	1,833.74

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	239.50	4,464.04	9,379.74	3,520.82	17,604.11
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	163.26	262.54	1,231.71	414.38	2,071.88
207a	DEEP PATCHING (0-15 cm)	SM	2.61	80.37	18.92	25.47	127.37
207b	DEEP PATCHING (15-30 cm)	SM	2.61	80.37	18.92	25.47	127.37
208	REINSTATEMENT OF ROAD SURFACE	SM	2.82	130.32	2.20	33.84	169.18
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.16	466.94	13.33	121.86	609.29
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.43	50.29	2.67	13.60	67.99
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.47	2.83	94.29	24.40	121.99
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.46	2.83	82.13	21.35	106.77
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.19	1.03	37.87	9.77	48.86
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.19	1.03	32.84	8.51	42.57
304a	SINGLE SURFACE TREATMENT	SM	1.24	14.01	167.48	45.68	228.42
304b	DOUBLE SURFACE TREATMENT	SM	1.81	26.92	341.56	92.57	462.87
304c	TRIPLE SURFACE TREATMENT	SM	3.04	37.83	402.48	110.84	554.19
304d	SEAL COAT	SM	1.15	7.81	47.17	14.03	70.17
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	110.10	2,815.00	12,590.01	3,878.78	19,393.88
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	110.10	2,694.06	13,430.12	4,058.57	20,292.84
307a	DENSE GRADED HOT BIT-MAC	CM	303.59	863.75	10,108.48	2,818.96	14,094.78
307b	OPEN GRADED HOT BIT-MAC	CM	303.59	863.75	9,779.22	2,736.64	13,683.20
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	46.59	1,236.12	4,884.74	1,541.86	7,709.32
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	336.34	2,013.10	86,008.73	22,089.54	110,447.71
309a	COLD MILLING, 0-30 mm	SM	1.54	61.27	25.40	22.05	110.26
309b	COLD MILLING, 0-50 mm	SM	2.56	102.12	42.33	36.75	183.77

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.84	153.18	63.50	55.13	275.65
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	823.50	2,690.11	4,814.12	2,081.93	10,409.67
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	823.50	2,690.11	5,502.25	2,253.97	11,269.83
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	823.50	2,690.11	5,857.81	2,342.86	11,714.28
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	823.50	2,690.11	5,093.05	2,151.67	10,758.33
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	823.50	2,690.11	5,781.09	2,323.68	11,618.38
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	823.50	2,690.11	6,136.54	2,412.54	12,062.69
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	823.50	2,690.11	5,366.06	2,219.92	11,099.60
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	823.50	2,690.11	6,054.10	2,391.93	11,959.65
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	823.50	2,690.11	6,390.88	2,476.12	12,380.62
401b	CONCRETE CLASS B	CM	1,065.68	1,419.30	4,033.00	1,629.49	8,147.47
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	809.20	2,690.11	4,434.04	1,983.34	9,916.69
401cii	CONCRETE CLASS C (ON GROUND)	CM	809.20	2,690.11	5,122.08	2,155.35	10,776.74
401ciii	CONCRETE CLASS C (ELEVATED)	CM	809.20	2,690.11	5,477.64	2,244.24	11,221.19
401d	CONCRETE CLASS D1	CM	1,279.12	3,326.20	7,620.36	3,056.42	15,282.10
401e	CONCRETE CLASS Y	CM	1,782.29	898.44	6,147.52	2,207.06	11,035.31
401f	LEAN CONCRETE	CM	683.76	969.12	3,440.64	1,273.38	6,366.90
401gi	PRECAST CONCRETE, CLASS A1	CM	2,705.80	1,879.78	5,466.49	2,513.02	12,565.09
401gii	PRECAST CONCRETE CLASS A3	CM	2,705.80	1,879.78	6,065.59	2,662.79	13,313.96
401giii	PRECAST CONCRETE, CLASS B	CM	2,705.80	1,879.78	4,739.24	2,331.20	11,656.02
401giv	PRECAST CONCRETE CLASS D1	CM	2,705.80	1,879.78	7,628.13	3,053.43	15,267.13
401gv	PRECAST CONCRETE CLASS D2	CM	2,705.80	1,879.78	8,455.68	3,260.32	16,301.58
401gvi	PRECAST CONCRETE CLASS D3	CM	2,705.80	1,879.78	9,283.77	3,467.34	17,336.68
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,182.35	1,419.30	3,206.29	1,451.98	7,259.92
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,647.91	0.00	85,589.72	22,059.41	110,297.03

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,647.91	0.00	89,789.72	23,109.41	115,547.03
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,011.58	4,249.86	106,704.00	28,241.36	141,206.79
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,803.34	13,891.32	161,868.89	44,890.89	224,454.44
405b	LAUNCHING OF GIRDER	TON	88.53	967.47	0.00	264.00	1,320.01
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	176.74	0.00	2,187.41	591.04	2,955.19
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	176.74	0.00	1,030.26	301.75	1,508.75
406ci	STEEL EXPANSION JOINTS (Local)	KG	14.51	21.32	170.26	51.52	257.60
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	596.20	0.00	46,668.73	11,816.23	59,081.16
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	618.08	0.00	116,671.81	29,322.47	146,612.36
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	683.70	0.00	388,509.26	97,298.24	486,491.20
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	596.20	0.00	42,347.80	10,736.00	53,680.00
406dii	PVC WATER STOP 8" SIZE	M	153.05	0.00	399.81	138.22	691.08
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	62.03	0.00	325.94	96.99	484.97
406g	STEEL OR METAL BEARING DEVICES	KG	30.13	56.27	178.60	66.25	331.25
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	374.58	3,542.17	578.05	1,123.70	5,618.50
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	569.36	5,384.10	789.26	1,685.68	8,428.39
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	569.36	8,250.86	954.21	2,443.61	12,218.03
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	948.93	13,751.43	1,380.28	4,020.16	20,100.80

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	790.78	11,459.52	1,202.75	3,363.26	16,816.31
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,423.40	20,627.14	1,912.86	5,990.85	29,954.25
407h	PILE LOAD TEST UPTO 120 TON	EACH	36,012.78	105,999.36	98,266.28	60,069.61	300,348.03
407i	PILE LOAD TEST UPTO 240 TON	EACH	36,012.78	105,999.36	211,749.75	88,440.47	442,202.36
407j	PILE LOAD TEST UPTO 360 TON	EACH	99,012.78	117,448.00	284,528.15	125,247.23	626,236.16
407k	PILE LOAD TEST UPTO 550 TON	EACH	146,262.78	146,810.00	452,921.48	186,498.57	932,492.83
407l	PILE LOAD TEST UPTO 800 TON	EACH	216,498.36	176,172.00	734,599.83	281,817.55	1,409,087.74
407m	CONFIRMATORY BORING (NX SIZE)	M	281.70	3,272.30	25.00	894.75	4,473.75
407n	PERMANENT PILE CASING FOR PILES	Ton	369.57	4,885.57	105,647.45	27,725.65	138,628.24
410	BRICK WORK	CM	512.39	577.25	4,483.80	1,393.36	6,966.80
411a	STONE MASONRY RANDOM DRY	CM	541.11	210.72	1,402.19	538.51	2,692.53
411b	STONE MASONRY RANDOM WITH MORTAR	CM	643.61	335.46	2,874.56	963.41	4,817.04
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	743.61	210.72	1,729.95	671.07	3,355.35
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	843.61	335.46	3,065.73	1,061.20	5,305.99
411g	ROLL POINTING	SM	108.81	24.95	102.79	59.14	295.68
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,116.11	534.31	3,065.73	1,179.03	5,895.17
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	357.01	689.50	1,216.56	565.77	2,828.83
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	357.01	766.21	1,510.06	658.32	3,291.60
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	336.42	1,356.07	1,843.28	883.94	4,419.71
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	353.57	1,702.67	2,906.00	1,240.56	6,202.79
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	410.28	2,255.64	3,885.43	1,637.84	8,189.18
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	508.61	2,781.29	5,489.31	2,194.80	10,974.01

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 09A CHANIOT

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	658.20	2,692.05	7,431.19	2,695.36	13,476.81
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	776.03	3,268.92	10,017.16	3,515.53	17,577.63
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	917.87	3,813.74	16,458.38	5,297.50	26,487.48
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	357.01	689.50	1,216.56	565.77	2,828.83
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	347.98	766.21	1,569.06	670.81	3,354.06
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	336.42	1,356.07	2,115.28	951.94	4,759.71
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	353.57	1,702.67	3,921.00	1,494.31	7,471.54
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	410.28	2,255.64	5,128.43	1,948.59	9,742.93
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	508.61	2,781.29	7,711.31	2,750.30	13,751.51
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	658.20	2,692.05	9,946.19	3,324.11	16,620.56
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	776.03	3,268.92	13,945.60	4,497.64	22,488.19
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	917.87	3,813.74	23,866.86	7,149.62	35,748.08
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	140.69	198.35	848.63	296.92	1,484.59
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,205.61	1,081.84	4,126.33	1,603.44	8,017.22
507a	STEEL WIRE MESH FOR GABIONS	KG	8.45	0.00	124.56	33.25	166.26
507b	ROCK FILL IN GABIONS	CM	151.99	0.00	996.67	287.17	1,435.83
508a	BRICK PAVING (SINGLE COURSE)	SM	171.95	47.96	363.32	145.81	729.04
508b	BRICK PAVING (DOUBLE COURSE)	SM	306.95	47.96	721.18	269.02	1,345.12
509a	RIPRAP, CLASS A	CM	741.67	0.00	1,057.26	449.73	2,248.67
509b	RIPRAP, CLASS B	CM	533.34	233.11	1,093.48	464.98	2,324.92
509c	RIPRAP, CLASS C	CM	521.12	242.83	1,124.81	472.19	2,360.94
509c1	RIPRAP, CLASS D	CM	521.12	291.39	1,169.85	495.59	2,477.94



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	907.86	218.23	3,226.47	1,088.14	5,440.70
509e	GROUTED RIPRAP, CLASS B	CM	692.29	407.69	3,040.66	1,035.16	5,175.80
509f	GROUTED RIPRAP, CLASS C	CM	665.24	388.31	3,090.97	1,036.13	5,180.66
509f1	GROUTED RIPRAP, CLASS D	CM	665.24	436.87	3,351.02	1,113.28	5,566.42
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,241.14	615.08	4,799.86	1,664.02	8,320.10
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	77.03	344.31	828.07	312.35	1,561.76
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	154.26	1,135.96	0.00	322.56	1,612.78
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	234.29	131.70	171.81	134.45	672.24
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	299.89	168.58	219.91	172.09	860.47
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	379.89	368.16	734.19	370.56	1,852.80
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	474.86	460.20	917.74	463.20	2,316.00
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	379.89	368.16	417.20	291.31	1,456.56
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	474.86	460.20	521.50	364.14	1,820.70
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	545.10	1,431.68	6,753.34	2,182.53	10,912.65
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,546.86	1,000.42	6,734.31	2,320.40	11,601.99
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	41.22	84.29	761.42	221.73	1,108.66
603	BRICK EDGING	M	13.74	0.00	57.60	17.84	89.18
604a	METAL GUARD RAIL	M	102.84	70.24	3,130.55	825.91	4,129.54
604b	METAL GUARD RAIL END PIECES	EACH	136.21	688.14	3,526.82	1,087.79	5,438.96
604d	STEEL POST FOR METAL GUARD RAIL	EACH	154.24	688.14	3,125.72	992.03	4,960.13
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,836.79	1,447.50	14,946.71	4,807.75	24,038.75
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,836.79	1,026.28	13,942.22	4,451.32	22,256.61

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Province PUNJAB

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	360.01	500.96	11,406.11	3,066.77	15,333.85
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	110.00	751.44	14,099.16	3,740.15	18,700.75
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	360.01	1,073.66	22,180.24	5,903.48	29,517.39
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,200.01	1,172.88	40,960.36	10,833.31	54,166.56
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	240.00	282.47	19,124.98	4,911.86	24,559.31
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	430.54	0.00	2,768.40	799.74	3,998.68
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	430.54	0.00	4,152.60	1,145.79	5,728.93
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.52	7.03	23.74	8.82	44.12
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.51	4.04	64.62	17.54	87.71
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.52	7.03	31.68	10.81	54.04
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.51	4.04	86.18	22.93	114.67
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	117.85	35.16	229.41	95.60	478.02
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	117.85	60.65	814.26	248.19	1,240.95
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.65	8.79	34.74	12.30	61.48
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.65	15.16	111.83	33.16	165.80
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.65	8.79	46.32	15.19	75.95
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.65	15.16	149.10	42.48	212.39
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	117.85	35.16	335.44	122.11	610.56
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	117.85	60.65	1,410.06	397.14	1,985.70
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	98.35	35.16	152.94	71.61	358.06
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	98.35	60.65	543.66	175.66	878.32

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	98.35	35.16	223.62	89.28	446.42
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	98.35	60.65	941.46	275.11	1,375.57
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.69	141.94	398.16	138.70	693.49
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.69	0.00	206.16	55.21	276.06
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.69	141.94	449.16	151.45	757.24
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.69	0.00	262.26	69.24	346.18
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	28.33	140.48	834.00	250.70	1,253.51
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	170.00	842.88	2,147.65	790.13	3,950.66
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	340.00	1,685.76	5,905.29	1,982.76	9,913.82
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	205.45	84.29	1,246.28	384.00	1,920.02
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	180.80	1,050.30	2.20	308.32	1,541.62

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**D.G. KHAN**  
**(11)**



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**Rate Analysis Summary (Construction)**

Province PUNJAB

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.97	19.27	0.00	5.06	25.30
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.79	321.21	2.18	83.29	416.47
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.02	774.41	4.91	201.83	1,009.17
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	112.07	3,097.64	19.65	807.34	4,036.70
103	STRIPPING	CM	3.40	188.78	0.00	48.04	240.22
104	COMPACTION OF NATURAL GROUND	SM	0.48	18.62	3.00	5.52	27.62
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.14	283.06	0.00	72.30	361.50
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	149.46	453.99	137.50	185.24	926.19
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	22.81	672.56	0.00	173.84	869.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.24	524.99	0.00	135.06	675.29
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.02	254.24	0.00	64.82	324.09
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	149.46	453.99	137.50	185.24	926.19
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	26.26	610.97	0.00	159.31	796.54
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.04	524.99	0.00	134.51	672.53
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.15	278.09	0.00	72.06	360.30
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	88.21	838.57	90.35	254.28	1,271.41
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	145.91	504.43	137.50	196.96	984.80
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	131.32	553.11	0.00	171.11	855.54
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	75.04	397.27	0.00	118.08	590.38
107d	GRANULAR BACKFILL	CM	45.88	241.40	922.36	302.41	1,512.05
107e	COMMON BACKFILL	CM	38.50	139.11	20.00	49.40	247.01
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.41	288.79	20.00	79.55	397.75
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.04	726.17	159.33	228.14	1,140.68

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.28	792.41	9.50	205.55	1,027.74
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.03	714.13	8.89	185.26	926.31
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.74	123.20	223.08	89.26	446.29
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.33	150.63	20.00	44.74	223.70
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	19.62	348.12	11.89	94.91	474.55
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.89	53.73	5.72	15.33	76.67
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.37	36.66	3.03	10.27	51.33
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.64	233.49	351.46	149.65	748.24
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.13	29.22	3.11	8.37	41.83
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.73	32.97	3.11	9.45	47.26
201	GRANULAR SUB-BASE	CM	10.96	288.11	941.74	310.20	1,551.01
202	AGGREGATE BASE	CM	12.89	350.20	1,158.36	380.36	1,901.81
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	107.62	2,856.48	11,773.09	3,684.30	18,421.49
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	107.62	2,856.48	12,092.80	3,764.23	18,821.13
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	115.60	2,983.43	11,762.46	3,715.37	18,576.87
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	115.60	2,983.43	12,108.75	3,801.95	19,009.73
204b	CEMENT STABILIZED BASE	CM	39.31	915.90	1,245.33	550.14	2,750.68
204c	CEMENT CONTENT	TON	150.00	0.00	8,925.00	2,268.75	11,343.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	334.70	2,422.77	85,115.43	21,968.22	109,841.12
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	334.70	2,422.77	85,115.43	21,968.22	109,841.12
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	127.52	233.81	978.69	335.00	1,675.02

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	208.41	4,464.04	9,435.37	3,526.96	17,634.78
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	140.50	262.54	1,081.53	371.14	1,855.71
207a	DEEP PATCHING (0-15 cm)	SM	2.28	80.37	24.49	26.79	133.93
207b	DEEP PATCHING (15-30 cm)	SM	2.28	80.37	24.49	26.79	133.93
208	REINSTATEMENT OF ROAD SURFACE	SM	2.47	130.32	2.20	33.75	168.74
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.31	466.94	13.33	121.64	608.22
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.26	50.29	2.67	13.56	67.78
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	95.66	24.73	123.63
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.40	2.83	83.50	21.68	108.41
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.42	9.90	49.52
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.39	8.64	43.22
304a	SINGLE SURFACE TREATMENT	SM	1.09	14.01	169.79	46.22	231.12
304b	DOUBLE SURFACE TREATMENT	SM	1.59	26.92	346.12	93.66	468.29
304c	TRIPLE SURFACE TREATMENT	SM	2.67	37.83	407.88	112.09	560.47
304d	SEAL COAT	SM	1.01	7.81	47.76	14.15	70.73
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	95.66	2,815.00	12,689.78	3,900.11	19,500.54
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	95.66	2,694.06	13,523.35	4,078.26	20,391.32
307a	DENSE GRADED HOT BIT-MAC	CM	262.80	863.75	10,196.03	2,830.64	14,153.22
307b	OPEN GRADED HOT BIT-MAC	CM	262.80	863.75	9,859.81	2,746.59	13,732.94
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	40.45	1,236.12	4,884.74	1,540.33	7,701.64
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	294.33	2,013.10	87,381.87	22,422.32	112,111.62
309a	COLD MILLING, 0-30 mm	SM	1.34	61.27	25.40	22.00	110.02
309b	COLD MILLING, 0-50 mm	SM	2.24	102.12	42.33	36.67	183.37

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.36	153.18	63.50	55.01	275.05
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	721.16	2,690.11	4,612.34	2,005.90	10,029.52
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	721.16	2,690.11	5,300.47	2,177.94	10,889.68
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	721.16	2,690.11	5,656.03	2,266.83	11,334.13
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	721.16	2,690.11	4,902.11	2,078.35	10,391.73
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	721.16	2,690.11	5,590.15	2,250.36	11,251.78
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	721.16	2,690.11	5,945.61	2,339.22	11,696.11
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	721.16	2,690.11	5,197.75	2,152.26	10,761.28
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	721.16	2,690.11	5,885.79	2,324.27	11,621.33
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	721.16	2,690.11	6,223.26	2,408.63	12,043.17
401b	CONCRETE CLASS B	CM	930.98	1,419.30	3,823.10	1,543.34	7,716.72
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	706.50	2,690.11	4,316.38	1,928.25	9,641.24
401cii	CONCRETE CLASS C (ON GROUND)	CM	706.50	2,690.11	5,004.42	2,100.26	10,501.29
401ciii	CONCRETE CLASS C (ELEVATED)	CM	706.50	2,690.11	5,359.98	2,189.15	10,945.74
401d	CONCRETE CLASS D1	CM	1,120.23	3,326.20	7,429.39	2,968.95	14,844.77
401e	CONCRETE CLASS Y	CM	1,559.34	898.44	5,950.61	2,102.10	10,510.49
401f	LEAN CONCRETE	CM	592.71	969.12	3,213.73	1,193.89	5,969.46
401gi	PRECAST CONCRETE, CLASS A1	CM	2,356.80	1,879.78	5,264.89	2,375.37	11,876.84
401gii	PRECAST CONCRETE CLASS A3	CM	2,356.80	1,879.78	5,898.41	2,533.75	12,668.73
401giii	PRECAST CONCRETE, CLASS B	CM	2,356.80	1,879.78	4,534.96	2,192.88	10,964.42
401giv	PRECAST CONCRETE CLASS D1	CM	2,356.80	1,879.78	7,436.72	2,918.32	14,591.62
401gv	PRECAST CONCRETE CLASS D2	CM	2,356.80	1,879.78	8,289.34	3,131.48	15,657.40
401gvi	PRECAST CONCRETE CLASS D3	CM	2,356.80	1,879.78	9,143.07	3,344.91	16,724.56
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,030.98	1,419.30	3,001.35	1,362.91	6,814.54
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,319.38	0.00	86,573.28	22,223.17	111,115.83



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,319.38	0.00	90,773.28	23,273.17	116,365.83
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,764.16	4,249.86	106,704.00	28,179.50	140,897.52
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,364.41	13,891.32	162,158.20	44,853.48	224,267.41
405b	LAUNCHING OF GIRDER	TON	78.31	967.47	0.00	261.45	1,307.24
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	154.22	0.00	2,198.60	588.20	2,941.01
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	154.22	0.00	1,028.43	295.66	1,478.31
406ci	STEEL EXPANSION JOINTS (Local)	KG	12.69	21.32	170.26	51.07	255.33
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	522.60	0.00	46,668.73	11,797.83	58,989.16
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	541.35	0.00	116,671.81	29,303.29	146,516.45
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	597.60	0.00	388,509.26	97,276.72	486,383.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	522.60	0.00	42,347.80	10,717.60	53,588.00
406dii	PVC WATER STOP 8" SIZE	M	133.47	0.00	399.81	133.32	666.60
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.90
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	54.40	0.00	327.29	95.42	477.11
406g	STEEL OR METAL BEARING DEVICES	KG	26.27	56.27	178.60	65.28	326.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	331.09	3,542.17	578.05	1,112.83	5,564.14
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	503.26	5,384.10	789.26	1,669.15	8,345.77
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	503.26	8,250.86	954.21	2,427.08	12,135.41
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	838.76	13,751.43	1,380.28	3,992.62	19,963.08

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	698.97	11,459.52	1,202.75	3,340.31	16,701.55
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,258.14	20,627.14	1,912.86	5,949.54	29,747.68
407h	PILE LOAD TEST UPTO 120 TON	EACH	30,992.10	105,999.36	113,913.56	62,726.26	313,631.28
407i	PILE LOAD TEST UPTO 240 TON	EACH	30,992.10	105,999.36	243,044.31	95,008.94	475,044.71
407j	PILE LOAD TEST UPTO 360 TON	EACH	84,992.10	117,448.00	331,469.99	133,477.52	667,387.61
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,492.10	146,810.00	529,379.78	200,420.47	1,002,102.35
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,748.60	176,172.00	857,288.73	304,802.33	1,524,011.66
407m	CONFIRMATORY BORING (NX SIZE)	M	245.59	3,272.30	25.00	885.72	4,428.61
407n	PERMANENT PILE CASING FOR PILES	Ton	322.12	4,885.57	105,648.48	27,714.04	138,570.22
410	BRICK WORK	CM	447.32	577.25	3,801.70	1,206.57	6,032.84
411a	STONE MASONRY RANDOM DRY	CM	471.96	210.72	1,232.11	478.70	2,393.48
411b	STONE MASONRY RANDOM WITH MORTAR	CM	560.71	335.46	2,530.18	856.59	4,282.94
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	648.21	210.72	1,570.58	607.38	3,036.89
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	735.72	335.46	2,777.89	962.27	4,811.33
411g	ROLL POINTING	SM	95.10	24.95	99.97	55.00	275.02
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	971.97	534.31	2,777.89	1,071.04	5,355.21
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	308.37	689.50	1,289.59	571.86	2,859.32
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	308.37	766.21	1,634.22	677.20	3,385.99
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	291.36	1,356.07	2,031.57	919.75	4,598.74
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	305.78	1,702.67	3,223.52	1,307.99	6,539.96
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	355.07	2,255.64	4,528.27	1,784.74	8,923.72
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	440.75	2,781.29	6,455.33	2,419.34	12,096.71

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	570.38	2,692.05	8,397.39	2,914.95	14,574.77
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	672.07	3,268.92	11,022.67	3,740.91	18,704.57
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	795.54	3,813.74	20,406.93	6,254.05	31,270.26
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	308.37	689.50	1,289.59	571.86	2,859.32
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	300.38	766.21	1,693.22	689.95	3,449.76
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	291.36	1,356.07	2,303.57	987.75	4,938.74
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	305.78	1,702.67	4,238.52	1,561.74	7,808.71
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	355.07	2,255.64	5,771.27	2,095.49	10,477.47
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	440.75	2,781.29	8,677.33	2,974.84	14,874.21
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	570.38	2,692.05	10,912.39	3,543.70	17,718.52
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	672.07	3,268.92	14,951.11	4,723.02	23,615.12
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	795.54	3,813.74	27,815.41	8,106.17	40,530.86
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	121.73	198.35	928.62	312.18	1,560.88
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,053.17	1,081.84	3,917.54	1,513.14	7,565.68
507a	STEEL WIRE MESH FOR GABIONS	KG	7.39	0.00	126.79	33.54	167.72
507b	ROCK FILL IN GABIONS	CM	131.09	0.00	838.54	242.41	1,212.03
508a	BRICK PAVING (SINGLE COURSE)	SM	149.61	47.96	287.46	121.26	606.30
508b	BRICK PAVING (DOUBLE COURSE)	SM	267.12	47.96	567.69	220.69	1,103.45
509a	RIPRAP, CLASS A	CM	646.26	0.00	887.18	383.36	1,916.79
509b	RIPRAP, CLASS B	CM	467.01	233.11	924.75	406.22	2,031.10
509c	RIPRAP, CLASS C	CM	456.68	242.83	977.25	419.19	2,095.94
509c1	RIPRAP, CLASS D	CM	456.68	291.39	1,022.28	442.59	2,212.93

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	790.87	218.23	2,950.70	989.95	4,949.75
509e	GROUTED RIPRAP, CLASS B	CM	605.70	407.69	2,777.21	947.65	4,738.26
509f	GROUTED RIPRAP, CLASS C	CM	582.26	388.31	2,845.57	954.04	4,770.18
509f1	GROUTED RIPRAP, CLASS D	CM	582.26	436.87	3,091.25	1,027.60	5,137.98
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,078.73	615.08	4,594.06	1,571.97	7,859.84
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	66.54	344.31	923.44	333.57	1,667.87
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	134.53	1,135.96	0.00	317.62	1,588.12
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	203.95	131.70	144.17	119.95	599.77
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	261.06	168.58	184.53	153.54	767.71
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	331.06	368.16	697.34	349.14	1,745.70
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	413.83	460.20	871.67	436.43	2,182.13
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	331.06	368.16	366.96	266.55	1,332.74
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	413.83	460.20	458.71	333.18	1,665.92
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	477.49	1,431.68	6,687.85	2,149.26	10,746.28
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,347.98	1,000.42	6,668.92	2,254.33	11,271.65
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	35.89	84.29	718.07	209.56	1,047.81
603	BRICK EDGING	M	11.94	0.00	43.20	13.79	68.93
604a	METAL GUARD RAIL	M	89.69	70.24	3,142.97	825.72	4,128.62
604b	METAL GUARD RAIL END PIECES	EACH	118.56	688.14	3,542.03	1,087.18	5,435.92
604d	STEEL POST FOR METAL GUARD RAIL	EACH	134.52	688.14	3,137.02	989.92	4,949.60
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,456.62	1,447.50	14,854.82	4,689.73	23,448.67
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,456.62	1,026.28	13,838.62	4,330.38	21,651.89

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	313.03	500.96	11,457.56	3,067.89	15,339.43
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	95.63	751.44	14,161.29	3,752.09	18,760.44
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	313.03	1,073.66	22,183.80	5,892.62	29,463.11
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,037.05	1,172.88	41,004.15	10,803.52	54,017.59
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	207.41	282.47	19,179.88	4,917.44	24,587.19
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	378.46	0.00	2,782.24	790.18	3,950.88
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	378.46	0.00	4,173.36	1,137.96	5,689.78
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.93	7.03	23.74	8.68	43.38
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.31	4.04	64.62	17.49	87.46
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.93	7.03	31.68	10.66	53.30
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.31	4.04	86.18	22.88	114.42
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	103.58	35.16	229.41	92.04	460.19
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	103.58	60.65	814.26	244.62	1,223.11
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.91	8.79	34.74	12.11	60.55
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.91	15.16	111.83	32.97	164.87
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	4.91	8.79	46.32	15.01	75.03
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	4.91	15.16	149.10	42.29	211.46
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	103.58	35.16	335.44	118.54	592.72
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	103.58	60.65	1,410.06	393.57	1,967.86
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	86.33	35.16	152.94	68.61	343.04
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	86.33	60.65	543.66	172.66	863.30

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	86.33	35.16	223.62	86.28	431.39
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	86.33	60.65	941.46	272.11	1,360.55
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.81	141.94	398.16	138.23	691.15
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.81	0.00	206.16	54.74	273.72
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.81	141.94	449.16	150.98	754.90
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.81	0.00	262.26	68.77	343.84
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	24.58	140.48	793.73	239.70	1,198.49
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	147.50	842.88	2,066.92	764.33	3,821.63
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	295.01	1,685.76	5,664.74	1,911.38	9,556.89
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	178.27	84.29	1,182.57	361.28	1,806.42
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	157.36	1,050.30	2.20	302.46	1,512.32

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**FAISALABAD**  
**(16)**



**SAMPAC INTERNATIONAL**

CLIENT:

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CONSULTANT:

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 16 FAISALABAD

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.13	19.27	0.00	5.10	25.49
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	11.28	321.21	2.18	83.67	418.34
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	32.38	774.41	4.91	202.93	1,014.63
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	129.51	3,097.64	19.65	811.70	4,058.51
103	STRIPPING	CM	3.90	188.78	0.00	48.17	240.85
104	COMPACTION OF NATURAL GROUND	SM	0.55	18.62	3.00	5.54	27.71
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.96	283.06	0.00	72.50	362.52
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	170.59	453.99	137.50	190.52	952.59
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	26.11	672.56	0.00	174.67	873.34
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	17.42	524.99	0.00	135.60	678.00
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.69	254.24	0.00	64.98	324.92
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	170.59	453.99	137.50	190.52	952.59
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	29.96	610.97	0.00	160.23	801.16
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.92	524.99	0.00	134.98	674.89
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.53	278.09	0.00	72.40	362.02
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	100.80	838.57	90.35	257.43	1,287.15
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	166.45	504.43	137.50	202.10	1,010.48
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	149.81	553.11	0.00	175.73	878.65
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	85.60	397.27	0.00	120.72	603.59
107d	GRANULAR BACKFILL	CM	52.73	241.40	915.00	302.28	1,511.42
107e	COMMON BACKFILL	CM	44.48	139.11	20.00	50.90	254.50
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.73	288.79	20.00	79.88	399.41
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	30.97	726.17	159.33	229.12	1,145.59



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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	23.22	792.41	9.50	206.28	1,031.42
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	20.64	714.13	8.89	185.92	929.58
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.29	123.20	223.08	89.64	448.22
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.52	150.63	20.00	45.04	225.18
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	22.51	348.12	11.89	95.63	478.15
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.16	53.73	5.72	15.40	77.01
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.56	36.66	3.03	10.31	51.57
110	IMPROVED SUB-GARDE (CBR>20%)	CM	15.62	233.49	392.81	160.48	802.41
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.30	29.22	3.11	8.41	42.04
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.98	32.97	3.11	9.51	47.57
201	GRANULAR SUB-BASE	CM	12.52	288.11	987.75	322.09	1,610.47
202	AGGREGATE BASE	CM	14.69	350.20	1,391.83	439.18	2,195.90
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	124.06	2,856.48	11,695.47	3,669.00	18,345.01
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	124.06	2,856.48	12,018.94	3,749.87	18,749.35
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	133.19	2,983.43	11,684.89	3,700.38	18,501.88
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	133.19	2,983.43	12,034.75	3,787.84	18,939.21
204b	CEMENT STABILIZED BASE	CM	44.94	915.90	1,251.12	552.99	2,764.96
204c	CEMENT CONTENT	TON	175.00	0.00	8,652.00	2,206.75	11,033.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	381.98	2,422.77	84,303.02	21,776.94	108,884.70
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	381.98	2,422.77	84,303.02	21,776.94	108,884.70
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	148.08	233.81	1,043.97	356.46	1,782.31

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205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	239.50	4,464.04	9,382.04	3,521.40	17,606.98
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	163.26	262.54	1,190.62	404.10	2,020.52
207a	DEEP PATCHING (0-15 cm)	SM	2.61	80.37	23.27	26.56	132.81
207b	DEEP PATCHING (15-30 cm)	SM	2.61	80.37	23.27	26.56	132.81
208	REINSTATEMENT OF ROAD SURFACE	SM	2.82	130.32	2.20	33.84	169.18
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.16	466.94	13.33	121.86	609.29
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.43	50.29	2.67	13.60	67.99
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.47	2.83	94.85	24.54	122.69
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.46	2.83	82.69	21.49	107.47
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.19	1.03	38.10	9.83	49.14
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.19	1.03	33.06	8.57	42.85
304a	SINGLE SURFACE TREATMENT	SM	1.24	14.01	168.40	45.91	229.56
304b	DOUBLE SURFACE TREATMENT	SM	1.81	26.92	343.30	93.01	465.04
304c	TRIPLE SURFACE TREATMENT	SM	3.04	37.83	404.56	111.36	556.80
304d	SEAL COAT	SM	1.15	7.81	47.37	14.08	70.41
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	110.10	2,815.00	12,612.15	3,884.31	19,421.55
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	110.10	2,694.06	13,460.28	4,066.11	20,330.54
307a	DENSE GRADED HOT BIT-MAC	CM	303.59	863.75	10,129.63	2,824.24	14,121.22
307b	OPEN GRADED HOT BIT-MAC	CM	303.59	863.75	9,797.34	2,741.17	13,705.85
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	46.59	1,236.12	4,884.74	1,541.86	7,709.32
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	336.34	2,013.10	86,691.35	22,260.20	111,300.99
309a	COLD MILLING, 0-30 mm	SM	1.54	61.27	25.40	22.05	110.26
309b	COLD MILLING, 0-50 mm	SM	2.56	102.12	42.33	36.75	183.77

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309c	COLD MILLING, 0-70 mm	SM	3.84	153.18	63.50	55.13	275.65
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	823.50	2,690.11	5,015.09	2,132.18	10,660.88
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	823.50	2,690.11	5,703.21	2,304.21	11,521.04
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	823.50	2,690.11	6,058.77	2,393.10	11,965.49
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	823.50	2,690.11	5,281.54	2,198.79	10,993.95
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	823.50	2,690.11	5,969.58	2,370.80	11,854.00
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	823.50	2,690.11	6,325.03	2,459.66	12,298.31
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	823.50	2,690.11	5,512.71	2,256.58	11,282.90
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	823.50	2,690.11	6,200.75	2,428.59	12,142.95
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	823.50	2,690.11	6,538.43	2,513.01	12,565.06
401b	CONCRETE CLASS B	CM	1,065.68	1,419.30	4,239.26	1,681.06	8,405.30
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	809.20	2,690.11	4,503.97	2,000.82	10,004.10
401cii	CONCRETE CLASS C (ON GROUND)	CM	809.20	2,690.11	5,192.01	2,172.83	10,864.15
401ciii	CONCRETE CLASS C (ELEVATED)	CM	809.20	2,690.11	5,547.57	2,261.72	11,308.60
401d	CONCRETE CLASS D1	CM	1,279.12	3,326.20	7,804.92	3,102.56	15,512.80
401e	CONCRETE CLASS Y	CM	1,782.29	898.44	6,340.75	2,255.37	11,276.85
401f	LEAN CONCRETE	CM	683.76	969.12	3,669.67	1,330.64	6,653.19
401gi	PRECAST CONCRETE, CLASS A1	CM	2,705.80	1,879.78	5,668.49	2,563.52	12,817.58
401gii	PRECAST CONCRETE CLASS A3	CM	2,705.80	1,879.78	6,212.41	2,699.50	13,497.49
401giii	PRECAST CONCRETE, CLASS B	CM	2,705.80	1,879.78	4,944.23	2,382.45	11,912.26
401giv	PRECAST CONCRETE CLASS D1	CM	2,705.80	1,879.78	7,813.28	3,099.71	15,498.57
401gv	PRECAST CONCRETE CLASS D2	CM	2,705.80	1,879.78	8,608.92	3,298.62	16,493.12
401gvi	PRECAST CONCRETE CLASS D3	CM	2,705.80	1,879.78	9,403.91	3,497.37	17,486.87
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,182.35	1,419.30	3,358.30	1,489.99	7,449.93
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,647.91	0.00	85,854.16	22,125.52	110,627.59

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404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,647.91	0.00	90,054.16	23,175.52	115,877.59
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,011.58	4,249.86	106,704.00	28,241.36	141,206.79
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,803.34	13,891.32	161,855.14	44,887.45	224,437.24
405b	LAUNCHING OF GIRDER	TON	88.53	967.47	0.00	264.00	1,320.01
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	176.74	0.00	2,188.02	591.19	2,955.95
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	176.74	0.00	1,030.87	301.90	1,509.51
406ci	STEEL EXPANSION JOINTS (Local)	KG	14.51	21.32	170.26	51.52	257.60
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	596.20	0.00	46,668.73	11,816.23	59,081.16
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	618.08	0.00	116,671.81	29,322.47	146,612.36
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	683.70	0.00	388,509.26	97,298.24	486,491.20
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	596.20	0.00	42,347.80	10,736.00	53,680.00
406dii	PVC WATER STOP 8" SIZE	M	153.05	0.00	399.81	138.22	691.08
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	62.03	0.00	326.49	97.13	485.66
406g	STEEL OR METAL BEARING DEVICES	KG	30.13	56.27	178.60	66.25	331.25
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	374.58	3,542.17	578.05	1,123.70	5,618.50
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	569.36	5,384.10	789.26	1,685.68	8,428.39
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	569.36	8,250.86	954.21	2,443.61	12,218.03
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	948.93	13,751.43	1,380.28	4,020.16	20,100.80

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	790.78	11,459.52	1,202.75	3,363.26	16,816.31
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,423.40	20,627.14	1,912.86	5,990.85	29,954.25
407h	PILE LOAD TEST UPTO 120 TON	EACH	36,012.78	105,999.36	110,479.80	63,122.99	315,614.93
407i	PILE LOAD TEST UPTO 240 TON	EACH	36,012.78	105,999.36	236,176.79	94,547.23	472,736.16
407j	PILE LOAD TEST UPTO 360 TON	EACH	99,012.78	117,448.00	321,168.71	134,407.37	672,036.86
407k	PILE LOAD TEST UPTO 550 TON	EACH	146,262.78	146,810.00	512,601.18	201,418.49	1,007,092.45
407l	PILE LOAD TEST UPTO 800 TON	EACH	216,498.36	176,172.00	830,364.93	305,758.82	1,528,794.11
407m	CONFIRMATORY BORING (NX SIZE)	M	281.70	3,272.30	25.00	894.75	4,473.75
407n	PERMANENT PILE CASING FOR PILES	Ton	369.57	4,885.57	105,647.45	27,725.65	138,628.24
410	BRICK WORK	CM	512.39	577.25	4,510.61	1,400.06	7,000.31
411a	STONE MASONRY RANDOM DRY	CM	541.11	210.72	1,362.81	528.66	2,643.29
411b	STONE MASONRY RANDOM WITH MORTAR	CM	643.61	335.46	3,071.17	1,012.56	5,062.79
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	743.61	210.72	1,687.41	660.43	3,302.17
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	843.61	335.46	3,196.58	1,093.91	5,469.56
411g	ROLL POINTING	SM	108.81	24.95	106.59	60.08	300.42
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,116.11	534.31	3,196.58	1,211.75	6,058.74
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	357.01	689.50	1,179.05	556.39	2,781.95
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	357.01	766.21	1,444.26	641.87	3,209.35
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	336.42	1,356.07	1,741.84	858.58	4,292.92
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	353.57	1,702.67	2,731.92	1,197.04	5,985.20
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	410.28	2,255.64	3,526.77	1,548.17	7,740.85
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	508.61	2,781.29	4,948.96	2,059.71	10,298.57

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	658.20	2,692.05	6,890.59	2,560.21	12,801.04
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	776.03	3,268.92	9,456.20	3,375.29	16,876.43
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	917.87	3,813.74	14,223.86	4,738.87	23,694.33
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	357.01	689.50	1,179.05	556.39	2,781.95
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	347.98	766.21	1,503.26	654.36	3,271.81
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	336.42	1,356.07	2,013.84	926.58	4,632.92
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	353.57	1,702.67	3,746.92	1,450.79	7,253.95
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	410.28	2,255.64	4,769.77	1,858.92	9,294.60
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	508.61	2,781.29	7,170.96	2,615.21	13,076.07
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	658.20	2,692.05	9,405.59	3,188.96	15,944.79
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	776.03	3,268.92	13,384.64	4,357.40	21,786.98
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	917.87	3,813.74	21,632.34	6,590.99	32,954.93
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	140.69	198.35	924.82	315.96	1,579.82
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,205.61	1,081.84	4,330.81	1,654.57	8,272.83
507a	STEEL WIRE MESH FOR GABIONS	KG	8.45	0.00	124.40	33.21	166.06
507b	ROCK FILL IN GABIONS	CM	151.99	0.00	959.91	277.97	1,389.87
508a	BRICK PAVING (SINGLE COURSE)	SM	171.95	47.96	370.26	147.54	737.72
508b	BRICK PAVING (DOUBLE COURSE)	SM	306.95	47.96	733.67	272.15	1,360.73
509a	RIPRAP, CLASS A	CM	741.67	0.00	1,017.88	439.89	2,199.44
509b	RIPRAP, CLASS B	CM	533.34	233.11	1,054.41	455.22	2,276.08
509c	RIPRAP, CLASS C	CM	521.12	242.83	1,085.43	462.34	2,311.71
509c1	RIPRAP, CLASS D	CM	521.12	291.39	1,130.46	485.74	2,428.71

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	907.86	218.23	3,329.38	1,113.87	5,569.33
509e	GROUTED RIPRAP, CLASS B	CM	692.29	407.69	3,129.13	1,057.28	5,286.40
509f	GROUTED RIPRAP, CLASS C	CM	665.24	388.31	3,183.12	1,059.17	5,295.83
509f1	GROUTED RIPRAP, CLASS D	CM	665.24	436.87	3,462.56	1,141.17	5,705.85
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,241.14	615.08	5,001.87	1,714.52	8,572.62
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	77.03	344.31	915.00	334.09	1,670.43
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	154.26	1,135.96	0.00	322.56	1,612.78
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	234.29	131.70	165.40	132.85	664.24
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	299.89	168.58	211.72	170.05	850.23
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	379.89	368.16	771.92	379.99	1,899.96
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	474.86	460.20	964.90	474.99	2,374.95
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	379.89	368.16	446.29	298.58	1,492.92
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	474.86	460.20	557.86	373.23	1,866.15
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	545.10	1,431.68	6,871.56	2,212.08	11,060.42
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,546.86	1,000.42	6,853.08	2,350.09	11,750.45
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	41.22	84.29	780.50	226.50	1,132.51
603	BRICK EDGING	M	13.74	0.00	57.60	17.84	89.18
604a	METAL GUARD RAIL	M	102.84	70.24	3,130.55	825.91	4,129.54
604b	METAL GUARD RAIL END PIECES	EACH	136.21	688.14	3,526.82	1,087.79	5,438.96
604d	STEEL POST FOR METAL GUARD RAIL	EACH	154.24	688.14	3,125.72	992.03	4,960.13
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,836.79	1,447.50	15,148.16	4,858.11	24,290.56
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,836.79	1,026.28	14,140.52	4,500.90	22,504.48

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	360.01	500.96	11,446.89	3,076.96	15,384.82
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	110.00	751.44	14,145.28	3,751.68	18,758.40
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	360.01	1,073.66	22,319.28	5,938.24	29,691.19
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,200.01	1,172.88	41,207.37	10,895.07	54,475.33
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	240.00	282.47	19,220.52	4,935.75	24,678.74
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	430.54	0.00	2,782.24	803.20	4,015.98
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	430.54	0.00	4,173.36	1,150.98	5,754.88
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.52	7.03	23.74	8.82	44.12
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.51	4.04	64.62	17.54	87.71
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.52	7.03	31.68	10.81	54.04
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.51	4.04	86.18	22.93	114.67
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	117.85	35.16	229.41	95.60	478.02
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	117.85	60.65	814.26	248.19	1,240.95
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.65	8.79	34.74	12.30	61.48
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.65	15.16	111.83	33.16	165.80
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.65	8.79	46.32	15.19	75.95
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.65	15.16	149.10	42.48	212.39
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	117.85	35.16	335.44	122.11	610.56
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	117.85	60.65	1,410.06	397.14	1,985.70
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	98.35	35.16	152.94	71.61	358.06
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	98.35	60.65	543.66	175.66	878.32



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	98.35	35.16	223.62	89.28	446.42
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	98.35	60.65	941.46	275.11	1,375.57
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.69	141.94	398.16	138.70	693.49
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.69	0.00	206.16	55.21	276.06
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.69	141.94	449.16	151.45	757.24
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.69	0.00	262.26	69.24	346.18
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	28.33	140.48	851.83	255.16	1,275.80
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	170.00	842.88	2,192.25	801.28	4,006.42
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	340.00	1,685.76	6,004.88	2,007.66	10,038.31
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	205.45	84.29	1,241.51	382.81	1,914.06
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	180.80	1,050.30	2.20	308.32	1,541.62

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**GUJRANWALA**  
**(17)**



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**Rate Analysis Summary (Construction)**

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.29	19.27	0.00	5.14	25.69
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.94	321.21	2.18	84.08	420.41
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	37.11	774.41	4.91	204.11	1,020.54
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	148.44	3,097.64	19.65	816.43	4,082.16
103	STRIPPING	CM	4.48	188.78	0.00	48.31	241.57
104	COMPACTION OF NATURAL GROUND	SM	0.64	18.62	3.00	5.56	27.82
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	8.02	283.06	0.00	72.77	363.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	196.26	453.99	126.25	194.12	970.62
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	30.02	672.56	0.00	175.64	878.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	20.03	524.99	0.00	136.25	681.27
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.56	254.24	0.00	65.20	326.01
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	196.26	453.99	126.25	194.12	970.62
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	34.47	610.97	0.00	161.36	806.80
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	17.15	524.99	0.00	135.53	677.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	13.28	278.09	0.00	72.84	364.21
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	115.92	838.57	90.35	261.21	1,306.06
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	191.52	504.43	126.25	205.55	1,027.75
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	172.37	553.11	0.00	181.37	906.86
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	98.50	397.27	0.00	123.94	619.71
107d	GRANULAR BACKFILL	CM	60.54	241.40	861.71	290.91	1,454.56
107e	COMMON BACKFILL	CM	50.98	139.11	20.00	52.52	262.62
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	12.35	288.79	20.00	80.29	401.43
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	35.59	726.17	147.33	227.27	1,136.37

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	26.69	792.41	9.50	207.15	1,035.75
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	23.73	714.13	8.89	186.69	933.43
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	14.13	123.20	223.08	90.10	450.52
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.95	150.63	20.00	45.39	226.97
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	25.85	348.12	11.89	96.47	482.34
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.48	53.73	5.72	15.48	77.41
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.79	36.66	3.03	10.37	51.86
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.96	233.49	420.34	167.95	839.74
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.49	29.22	3.11	8.46	42.28
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.27	32.97	3.11	9.59	47.94
201	GRANULAR SUB-BASE	CM	14.40	288.11	1,096.30	349.70	1,748.51
202	AGGREGATE BASE	CM	16.91	350.20	1,271.57	409.67	2,048.35
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	142.30	2,856.48	11,781.95	3,695.18	18,475.91
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	142.30	2,856.48	12,037.12	3,758.97	18,794.87
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	152.79	2,983.43	11,771.38	3,726.90	18,634.51
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	152.79	2,983.43	12,052.88	3,797.28	18,986.38
204b	CEMENT STABILIZED BASE	CM	51.68	915.90	1,340.83	577.10	2,885.51
204c	CEMENT CONTENT	TON	200.00	0.00	9,240.00	2,360.00	11,800.00
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	439.46	2,422.77	84,100.41	21,740.66	108,703.30
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	439.46	2,422.77	84,100.41	21,740.66	108,703.30
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	169.47	233.81	1,167.80	392.77	1,963.84

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	274.97	4,464.04	9,432.26	3,542.82	17,714.08
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	186.81	262.54	1,476.32	481.42	2,407.08
207a	DEEP PATCHING (0-15 cm)	SM	3.00	80.37	18.88	25.56	127.81
207b	DEEP PATCHING (15-30 cm)	SM	3.00	80.37	18.88	25.56	127.81
208	REINSTATEMENT OF ROAD SURFACE	SM	3.24	130.32	2.20	33.94	169.71
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	8.25	466.94	13.33	122.13	610.65
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.65	50.29	2.67	13.65	68.26
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.55	2.83	94.65	24.51	122.53
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.53	2.83	82.48	21.46	107.30
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	38.01	9.81	49.07
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	32.98	8.56	42.78
304a	SINGLE SURFACE TREATMENT	SM	1.43	14.01	168.56	46.00	229.99
304b	DOUBLE SURFACE TREATMENT	SM	2.08	26.92	343.91	93.23	466.15
304c	TRIPLE SURFACE TREATMENT	SM	3.50	37.83	405.27	111.65	558.26
304d	SEAL COAT	SM	1.32	7.81	47.43	14.14	70.71
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	126.34	2,815.00	12,669.34	3,902.67	19,513.34
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	126.34	2,694.06	13,539.13	4,089.88	20,449.41
307a	DENSE GRADED HOT BIT-MAC	CM	347.99	863.75	10,180.54	2,848.07	14,240.35
307b	OPEN GRADED HOT BIT-MAC	CM	347.99	863.75	9,861.85	2,768.40	13,841.99
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	53.45	1,236.12	4,884.74	1,543.58	7,717.89
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	386.81	2,013.10	86,366.85	22,191.69	110,958.44
309a	COLD MILLING, 0-30 mm	SM	1.77	61.27	25.40	22.11	110.55
309b	COLD MILLING, 0-50 mm	SM	2.94	102.12	42.33	36.85	184.25

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	4.42	153.18	63.50	55.27	276.37
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	947.26	2,690.11	4,709.73	2,086.77	10,433.87
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	947.26	2,690.11	5,397.86	2,258.81	11,294.04
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	947.26	2,690.11	5,753.42	2,347.70	11,738.49
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	947.26	2,690.11	5,014.01	2,162.85	10,814.23
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	947.26	2,690.11	5,702.05	2,334.86	11,674.28
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	947.26	2,690.11	6,057.49	2,423.72	12,118.58
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	947.26	2,690.11	5,334.32	2,242.92	11,214.62
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	947.26	2,690.11	6,022.36	2,414.93	12,074.67
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	947.26	2,690.11	6,358.38	2,498.94	12,494.68
401b	CONCRETE CLASS B	CM	1,224.93	1,419.30	3,859.82	1,626.01	8,130.06
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	929.95	2,690.11	4,433.46	2,013.38	10,066.90
401cii	CONCRETE CLASS C (ON GROUND)	CM	929.95	2,690.11	5,121.50	2,185.39	10,926.95
401ciii	CONCRETE CLASS C (ELEVATED)	CM	929.95	2,690.11	5,477.06	2,274.28	11,371.40
401d	CONCRETE CLASS D1	CM	1,471.37	3,326.20	7,580.48	3,094.51	15,472.56
401e	CONCRETE CLASS Y	CM	2,049.55	898.44	6,056.13	2,251.03	11,255.14
401f	LEAN CONCRETE	CM	784.09	969.12	3,223.31	1,244.13	6,220.65
401gi	PRECAST CONCRETE, CLASS A1	CM	3,107.33	1,879.78	5,358.43	2,586.38	12,931.92
401gii	PRECAST CONCRETE CLASS A3	CM	3,107.33	1,879.78	6,034.56	2,755.42	13,777.10
401giii	PRECAST CONCRETE, CLASS B	CM	3,107.33	1,879.78	4,548.17	2,383.82	11,919.10
401giv	PRECAST CONCRETE CLASS D1	CM	3,107.33	1,879.78	7,587.66	3,143.69	15,718.47
401gv	PRECAST CONCRETE CLASS D2	CM	3,107.33	1,879.78	8,471.74	3,364.71	16,823.57
401gvi	PRECAST CONCRETE CLASS D3	CM	3,107.33	1,879.78	9,357.61	3,586.18	17,930.90
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,358.27	1,419.30	3,136.42	1,478.50	7,392.48
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	3,046.06	0.00	85,458.62	22,126.17	110,630.86

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	3,046.06	0.00	89,658.62	23,176.17	115,880.86
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,314.90	4,249.86	106,704.00	28,317.19	141,585.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,388.20	13,891.32	162,187.63	45,116.79	225,583.94
405b	LAUNCHING OF GIRDER	TON	102.15	967.47	0.00	267.41	1,337.03
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	2,187.80	597.72	2,988.60
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	1,022.97	306.51	1,532.55
406ci	STEEL EXPANSION JOINTS (Local)	KG	16.69	21.32	170.26	52.06	260.32
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	46,668.73	11,838.68	59,193.41
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	711.00	0.00	116,671.81	29,345.70	146,728.52
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	786.00	0.00	388,509.26	97,323.82	486,619.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	42,347.80	10,758.45	53,792.25
406dii	PVC WATER STOP 8" SIZE	M	175.83	0.00	399.81	143.91	719.55
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	71.38	0.00	326.29	99.42	497.10
406g	STEEL OR METAL BEARING DEVICES	KG	34.61	56.27	178.60	67.37	336.85
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	432.07	3,542.17	578.05	1,138.07	5,690.37
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	656.75	5,384.10	789.26	1,707.53	8,537.64
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	656.75	8,250.86	954.21	2,465.45	12,327.27
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,094.59	13,751.43	1,380.28	4,056.57	20,282.86

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	912.16	11,459.52	1,202.75	3,393.61	16,968.03
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,641.88	20,627.14	1,912.86	6,045.47	30,227.35
407h	PILE LOAD TEST UPTO 120 TON	EACH	41,207.04	105,999.36	98,147.48	61,338.47	306,692.35
407i	PILE LOAD TEST UPTO 240 TON	EACH	41,207.04	105,999.36	211,512.15	89,679.64	448,398.19
407j	PILE LOAD TEST UPTO 360 TON	EACH	113,207.04	117,448.00	284,171.75	128,706.70	643,533.49
407k	PILE LOAD TEST UPTO 550 TON	EACH	167,207.04	146,810.00	452,340.98	191,589.51	957,947.53
407l	PILE LOAD TEST UPTO 800 TON	EACH	247,498.08	176,172.00	733,668.33	289,334.60	1,446,673.01
407m	CONFIRMATORY BORING (NX SIZE)	M	323.58	3,272.30	25.00	905.22	4,526.10
407n	PERMANENT PILE CASING FOR PILES	Ton	424.50	4,885.57	105,647.45	27,739.38	138,696.90
410	BRICK WORK	CM	588.83	577.25	4,277.37	1,360.86	6,804.31
411a	STONE MASONRY RANDOM DRY	CM	621.66	210.72	1,692.04	631.11	3,155.53
411b	STONE MASONRY RANDOM WITH MORTAR	CM	739.16	335.46	2,945.27	1,004.97	5,024.87
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	854.16	210.72	2,042.99	776.97	3,884.84
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	969.16	335.46	3,223.41	1,132.01	5,660.04
411g	ROLL POINTING	SM	125.08	24.95	99.52	62.39	311.93
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,281.66	534.31	3,223.41	1,259.84	6,299.22
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	408.96	689.50	1,093.62	548.02	2,740.09
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	408.96	766.21	1,356.16	632.83	3,164.16
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	385.68	1,356.07	1,588.13	832.47	4,162.35
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	405.17	1,702.67	2,247.09	1,088.73	5,443.66
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	470.25	2,255.64	3,759.25	1,621.28	8,106.42
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	583.19	2,781.29	5,694.33	2,264.70	11,323.51



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	754.71	2,692.05	7,245.65	2,673.10	13,365.52
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	889.65	3,268.92	9,083.80	3,310.59	16,552.96
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,052.51	3,813.74	15,650.08	5,129.08	25,645.40
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	408.96	689.50	1,549.81	662.07	3,310.33
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	398.54	766.21	1,912.71	769.36	3,846.82
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	385.68	1,356.07	2,226.79	992.14	4,960.68
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	405.17	1,702.67	3,141.22	1,312.26	6,561.32
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	470.25	2,255.64	4,862.64	1,897.13	9,485.65
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	583.19	2,781.29	8,357.69	2,930.54	14,652.71
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	754.71	2,692.05	9,148.05	3,148.70	15,743.52
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	889.65	3,268.92	11,960.50	4,029.77	20,148.84
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,052.51	3,813.74	18,695.94	5,890.55	29,452.74
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	161.25	198.35	882.19	310.45	1,552.23
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,385.75	1,081.84	3,957.60	1,606.30	8,031.48
507a	STEEL WIRE MESH FOR GABIONS	KG	9.71	0.00	124.40	33.53	167.64
507b	ROCK FILL IN GABIONS	CM	174.03	0.00	1,267.20	360.31	1,801.53
508a	BRICK PAVING (SINGLE COURSE)	SM	197.40	47.96	335.01	145.09	725.46
508b	BRICK PAVING (DOUBLE COURSE)	SM	352.40	47.96	664.56	266.23	1,331.16
509a	RIPRAP, CLASS A	CM	851.84	0.00	1,347.11	549.74	2,748.69
509b	RIPRAP, CLASS B	CM	613.47	233.11	1,381.01	556.90	2,784.49
509c	RIPRAP, CLASS C	CM	599.56	242.83	1,414.66	564.26	2,821.31
509c1	RIPRAP, CLASS D	CM	599.56	291.39	1,459.70	587.66	2,938.31

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	1,042.63	218.23	3,312.97	1,143.46	5,717.28
509e	GROUTED RIPRAP, CLASS B	CM	796.11	407.69	3,145.60	1,087.35	5,436.75
509f	GROUTED RIPRAP, CLASS C	CM	765.09	388.31	3,204.82	1,089.55	5,447.77
509f1	GROUTED RIPRAP, CLASS D	CM	765.09	436.87	3,440.94	1,160.73	5,803.63
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,424.40	615.08	4,690.81	1,682.57	8,412.86
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	88.24	344.31	858.39	322.73	1,613.67
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	177.22	1,135.96	0.00	328.29	1,641.47
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	269.01	131.70	218.91	154.90	774.52
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	344.33	168.58	280.20	198.28	991.38
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	436.33	368.16	745.86	387.59	1,937.94
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	545.41	460.20	932.32	484.49	2,422.43
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	436.33	368.16	427.67	308.04	1,540.20
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	545.41	460.20	534.59	385.05	1,925.25
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	627.08	1,431.68	6,692.20	2,187.74	10,938.69
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,776.67	1,000.42	6,671.21	2,362.07	11,810.37
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	47.33	84.29	775.41	226.76	1,133.78
603	BRICK EDGING	M	15.77	0.00	52.80	17.14	85.71
604a	METAL GUARD RAIL	M	118.14	70.24	3,129.20	829.40	4,146.98
604b	METAL GUARD RAIL END PIECES	EACH	156.38	688.14	3,527.13	1,092.91	5,464.56
604d	STEEL POST FOR METAL GUARD RAIL	EACH	177.20	688.14	3,123.16	997.13	4,985.63
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,447.50	14,849.61	4,887.29	24,436.47
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,026.28	13,846.67	4,531.26	22,656.28

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	413.21	500.96	11,488.45	3,100.66	15,503.28
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	126.25	751.44	14,207.63	3,771.33	18,856.65
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	413.21	1,073.66	22,236.18	5,930.76	29,653.81
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,374.82	1,172.88	41,082.71	10,907.60	54,538.02
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	274.96	282.47	19,195.59	4,938.26	24,691.28
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	495.82	0.00	2,782.24	819.52	4,097.58
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	495.82	0.00	4,173.36	1,167.30	5,836.48
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.19	7.03	23.74	8.99	44.95
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.73	4.04	64.62	17.60	87.99
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.19	7.03	31.68	10.97	54.87
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.73	4.04	86.18	22.99	114.94
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	229.41	100.07	500.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	814.26	252.65	1,263.27
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.48	8.79	34.74	12.50	62.52
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.48	15.16	111.83	33.37	166.84
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.48	8.79	46.32	15.40	77.00
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.48	15.16	149.10	42.69	213.43
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	335.44	126.58	632.88
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	1,410.06	401.60	2,008.02
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	152.94	75.33	376.63
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	543.66	179.38	896.90

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 17 GUJRANWALA

<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	223.62	93.00	464.99
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	941.46	278.83	1,394.15
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	141.94	398.16	139.24	696.22
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	0.00	206.16	55.76	278.79
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	141.94	449.16	151.99	759.97
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	0.00	262.26	69.78	348.92
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	32.50	140.48	849.88	255.72	1,278.58
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	195.00	842.88	2,163.33	800.30	4,001.51
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	390.00	1,685.76	6,014.07	2,022.46	10,112.29
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	235.66	84.29	1,255.22	393.79	1,968.97
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	207.58	1,050.30	2.20	315.02	1,575.10

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**GUJRAT**  
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**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.29	19.27	0.00	5.14	25.69
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.94	321.21	2.18	84.08	420.41
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	37.11	774.41	4.91	204.11	1,020.54
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	148.44	3,097.64	19.65	816.43	4,082.16
103	STRIPPING	CM	4.48	188.78	0.00	48.31	241.57
104	COMPACTION OF NATURAL GROUND	SM	0.64	18.62	3.00	5.56	27.82
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	8.02	283.06	0.00	72.77	363.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	196.26	453.99	137.50	196.94	984.68
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	30.02	672.56	0.00	175.64	878.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	20.03	524.99	0.00	136.25	681.27
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.56	254.24	0.00	65.20	326.01
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	196.26	453.99	137.50	196.94	984.68
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	34.47	610.97	0.00	161.36	806.80
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	17.15	524.99	0.00	135.53	677.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	13.28	278.09	0.00	72.84	364.21
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	115.92	838.57	90.35	261.21	1,306.06
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	191.52	504.43	137.50	208.36	1,041.82
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	172.37	553.11	0.00	181.37	906.86
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	98.50	397.27	0.00	123.94	619.71
107d	GRANULAR BACKFILL	CM	60.54	241.40	858.98	290.23	1,451.15
107e	COMMON BACKFILL	CM	50.98	139.11	20.00	52.52	262.62
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	12.35	288.79	20.00	80.29	401.43
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	35.59	726.17	159.33	230.27	1,151.37

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	26.69	792.41	9.50	207.15	1,035.75
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	23.73	714.13	8.89	186.69	933.43
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	14.13	123.20	223.08	90.10	450.52
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.95	150.63	20.00	45.39	226.97
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	25.85	348.12	11.89	96.47	482.34
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.48	53.73	5.72	15.48	77.41
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.79	36.66	3.03	10.37	51.86
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.96	233.49	375.57	156.75	783.77
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.49	29.22	3.11	8.46	42.28
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.27	32.97	3.11	9.59	47.94
201	GRANULAR SUB-BASE	CM	14.40	288.11	919.78	305.57	1,527.86
202	AGGREGATE BASE	CM	16.91	350.20	1,101.53	367.16	1,835.79
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	142.30	2,856.48	11,553.61	3,638.10	18,190.48
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	142.30	2,856.48	11,813.53	3,703.08	18,515.38
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	152.79	2,983.43	11,543.07	3,669.82	18,349.12
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	152.79	2,983.43	11,829.23	3,741.36	18,706.81
204b	CEMENT STABILIZED BASE	CM	51.68	915.90	1,137.47	526.26	2,631.32
204c	CEMENT CONTENT	TON	200.00	0.00	9,240.00	2,360.00	11,800.00
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	439.46	2,422.77	83,823.49	21,671.43	108,357.15
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	439.46	2,422.77	83,823.49	21,671.43	108,357.15
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	169.47	233.81	990.81	348.52	1,742.60

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	274.97	4,464.04	9,226.60	3,491.40	17,457.01
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	186.81	262.54	1,601.13	512.62	2,563.10
207a	DEEP PATCHING (0-15 cm)	SM	3.00	80.37	22.27	26.41	132.05
207b	DEEP PATCHING (15-30 cm)	SM	3.00	80.37	22.27	26.41	132.05
208	REINSTATEMENT OF ROAD SURFACE	SM	3.24	130.32	2.20	33.94	169.71
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	8.25	466.94	13.33	122.13	610.65
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.65	50.29	2.67	13.65	68.26
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.55	2.83	94.37	24.44	122.18
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.53	2.83	82.21	21.39	106.95
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	37.90	9.79	48.94
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	32.87	8.53	42.64
304a	SINGLE SURFACE TREATMENT	SM	1.43	14.01	167.04	45.62	228.10
304b	DOUBLE SURFACE TREATMENT	SM	2.08	26.92	339.96	92.24	461.21
304c	TRIPLE SURFACE TREATMENT	SM	3.50	37.83	400.63	110.49	552.45
304d	SEAL COAT	SM	1.32	7.81	46.94	14.02	70.09
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	126.34	2,815.00	12,443.96	3,846.32	19,231.62
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	126.34	2,694.06	13,311.77	4,033.04	20,165.21
307a	DENSE GRADED HOT BIT-MAC	CM	347.99	863.75	10,004.88	2,804.16	14,020.78
307b	OPEN GRADED HOT BIT-MAC	CM	347.99	863.75	9,684.69	2,724.11	13,620.54
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	53.45	1,236.12	4,884.74	1,543.58	7,717.89
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	386.81	2,013.10	86,089.93	22,122.46	110,612.29
309a	COLD MILLING, 0-30 mm	SM	1.77	61.27	25.40	22.11	110.55
309b	COLD MILLING, 0-50 mm	SM	2.94	102.12	42.33	36.85	184.25



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309c	COLD MILLING, 0-70 mm	SM	4.42	153.18	63.50	55.27	276.37
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	947.26	2,690.11	4,660.32	2,074.42	10,372.12
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	947.26	2,690.11	5,348.44	2,246.45	11,232.26
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	947.26	2,690.11	5,704.00	2,335.34	11,676.71
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	947.26	2,690.11	4,966.24	2,150.90	10,754.52
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	947.26	2,690.11	5,654.28	2,322.91	11,614.57
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	947.26	2,690.11	6,009.74	2,411.78	12,058.89
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	947.26	2,690.11	5,263.14	2,225.13	11,125.64
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	947.26	2,690.11	5,951.18	2,397.14	11,985.69
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	947.26	2,690.11	6,291.11	2,482.12	12,410.61
401b	CONCRETE CLASS B	CM	1,224.93	1,419.30	3,787.81	1,608.01	8,040.05
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	929.95	2,690.11	4,330.70	1,987.69	9,938.46
401cii	CONCRETE CLASS C (ON GROUND)	CM	929.95	2,690.11	5,018.74	2,159.70	10,798.51
401ciii	CONCRETE CLASS C (ELEVATED)	CM	929.95	2,690.11	5,374.30	2,248.59	11,242.96
401d	CONCRETE CLASS D1	CM	1,471.37	3,326.20	7,550.16	3,086.93	15,434.66
401e	CONCRETE CLASS Y	CM	2,049.55	898.44	6,006.93	2,238.73	11,193.65
401f	LEAN CONCRETE	CM	784.09	969.12	3,146.84	1,225.01	6,125.06
401gi	PRECAST CONCRETE, CLASS A1	CM	3,107.33	1,879.78	5,308.97	2,574.02	12,870.10
401gii	PRECAST CONCRETE CLASS A3	CM	3,107.33	1,879.78	5,967.22	2,738.58	13,692.92
401giii	PRECAST CONCRETE, CLASS B	CM	3,107.33	1,879.78	4,472.19	2,364.82	11,824.12
401giv	PRECAST CONCRETE CLASS D1	CM	3,107.33	1,879.78	7,557.32	3,136.11	15,680.54
401gv	PRECAST CONCRETE CLASS D2	CM	3,107.33	1,879.78	8,445.28	3,358.10	16,790.50
401gvi	PRECAST CONCRETE CLASS D3	CM	3,107.33	1,879.78	9,334.41	3,580.38	17,901.90
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,358.27	1,419.30	3,125.32	1,475.72	7,378.61
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	3,046.06	0.00	85,851.10	22,224.29	111,121.46

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	3,046.06	0.00	90,051.10	23,274.29	116,371.46
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,314.90	4,249.86	106,704.00	28,317.19	141,585.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,388.20	13,891.32	162,192.51	45,118.01	225,590.03
405b	LAUNCHING OF GIRDER	TON	102.15	967.47	0.00	267.41	1,337.03
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	2,187.50	597.64	2,988.22
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	1,022.67	306.44	1,532.18
406ci	STEEL EXPANSION JOINTS (Local)	KG	16.69	21.32	170.26	52.06	260.32
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	46,668.73	11,838.68	59,193.41
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	711.00	0.00	116,671.81	29,345.70	146,728.52
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	786.00	0.00	388,509.26	97,323.82	486,619.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	42,347.80	10,758.45	53,792.25
406dii	PVC WATER STOP 8" SIZE	M	175.83	0.00	399.81	143.91	719.55
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	71.38	0.00	326.02	99.35	496.76
406g	STEEL OR METAL BEARING DEVICES	KG	34.61	56.27	178.60	67.37	336.85
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	432.07	3,542.17	578.05	1,138.07	5,690.37
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	656.75	5,384.10	789.26	1,707.53	8,537.64
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	656.75	8,250.86	954.21	2,465.45	12,327.27
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,094.59	13,751.43	1,380.28	4,056.57	20,282.86

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	912.16	11,459.52	1,202.75	3,393.61	16,968.03
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,641.88	20,627.14	1,912.86	6,045.47	30,227.35
407h	PILE LOAD TEST UPTO 120 TON	EACH	41,207.04	105,999.36	107,678.76	63,721.29	318,606.45
407i	PILE LOAD TEST UPTO 240 TON	EACH	41,207.04	105,999.36	230,574.71	94,445.28	472,226.39
407j	PILE LOAD TEST UPTO 360 TON	EACH	113,207.04	117,448.00	312,765.59	135,855.16	679,275.79
407k	PILE LOAD TEST UPTO 550 TON	EACH	167,207.04	146,810.00	498,914.28	203,232.83	1,016,164.15
407l	PILE LOAD TEST UPTO 800 TON	EACH	247,498.08	176,172.00	808,402.23	308,018.08	1,540,090.39
407m	CONFIRMATORY BORING (NX SIZE)	M	323.58	3,272.30	25.00	905.22	4,526.10
407n	PERMANENT PILE CASING FOR PILES	Ton	424.50	4,885.57	105,647.45	27,739.38	138,696.90
410	BRICK WORK	CM	588.83	577.25	4,812.03	1,494.53	7,472.64
411a	STONE MASONRY RANDOM DRY	CM	621.66	210.72	1,871.78	676.04	3,380.21
411b	STONE MASONRY RANDOM WITH MORTAR	CM	739.16	335.46	3,168.33	1,060.74	5,303.70
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	854.16	210.72	2,261.42	831.58	4,157.88
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	969.16	335.46	3,474.33	1,194.74	5,973.70
411g	ROLL POINTING	SM	125.08	24.95	100.24	62.57	312.84
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,281.66	534.31	3,474.33	1,322.58	6,612.88
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	408.96	689.50	1,125.14	555.90	2,779.48
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	408.96	766.21	1,407.33	645.62	3,228.11
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	385.68	1,356.07	1,664.35	851.52	4,257.62
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	405.17	1,702.67	2,373.17	1,120.25	5,601.25
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	470.25	2,255.64	4,009.43	1,683.83	8,419.14
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	583.19	2,781.29	6,069.12	2,358.40	11,791.99

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	754.71	2,692.05	7,620.43	2,766.80	13,833.99
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	889.65	3,268.92	9,475.19	3,408.44	17,042.19
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,052.51	3,813.74	17,160.77	5,506.75	27,533.77
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	408.96	689.50	1,581.33	669.94	3,349.72
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	398.54	766.21	1,963.88	782.16	3,910.78
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	385.68	1,356.07	2,303.01	1,011.19	5,055.95
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	405.17	1,702.67	3,267.30	1,343.78	6,718.91
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	470.25	2,255.64	5,112.82	1,959.68	9,798.38
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	583.19	2,781.29	8,732.48	3,024.24	15,121.19
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	754.71	2,692.05	9,522.83	3,242.40	16,211.99
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	889.65	3,268.92	12,351.89	4,127.61	20,638.07
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,052.51	3,813.74	20,206.63	6,268.22	31,341.10
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	161.25	198.35	867.81	306.85	1,534.25
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,385.75	1,081.84	3,885.59	1,588.29	7,941.47
507a	STEEL WIRE MESH FOR GABIONS	KG	9.71	0.00	124.56	33.57	167.85
507b	ROCK FILL IN GABIONS	CM	174.03	0.00	1,436.18	402.55	2,012.76
508a	BRICK PAVING (SINGLE COURSE)	SM	197.40	47.96	396.92	160.57	802.86
508b	BRICK PAVING (DOUBLE COURSE)	SM	352.40	47.96	787.31	296.92	1,484.59
509a	RIPRAP, CLASS A	CM	851.84	0.00	1,526.85	594.67	2,973.36
509b	RIPRAP, CLASS B	CM	613.47	233.11	1,559.30	601.47	3,007.35
509c	RIPRAP, CLASS C	CM	599.56	242.83	1,616.91	614.82	3,074.12
509c1	RIPRAP, CLASS D	CM	599.56	291.39	1,661.94	638.22	3,191.11

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509d	GROUTED RIPRAP, CLASS A	CM	1,042.63	218.23	3,599.17	1,215.01	6,075.04
509e	GROUTED RIPRAP, CLASS B	CM	796.11	407.69	3,419.54	1,155.84	5,779.18
509f	GROUTED RIPRAP, CLASS C	CM	765.09	388.31	3,495.85	1,162.31	5,811.56
509f1	GROUTED RIPRAP, CLASS D	CM	765.09	436.87	3,741.90	1,235.97	6,179.83
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,424.40	615.08	4,641.43	1,670.23	8,351.13
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	88.24	344.31	859.14	322.92	1,614.61
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	177.22	1,135.96	0.00	328.29	1,641.47
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	269.01	131.70	248.11	162.21	811.03
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	344.33	168.58	317.58	207.62	1,038.12
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	436.33	368.16	782.46	396.74	1,983.70
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	545.41	460.20	978.08	495.92	2,479.62
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	436.33	368.16	460.05	316.14	1,580.68
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	545.41	460.20	575.06	395.17	1,975.85
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	627.08	1,431.68	6,682.62	2,185.34	10,926.71
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,776.67	1,000.42	6,661.61	2,359.67	11,798.37
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	47.33	84.29	769.83	225.36	1,126.81
603	BRICK EDGING	M	15.77	0.00	62.40	19.54	97.71
604a	METAL GUARD RAIL	M	118.14	70.24	3,132.20	830.15	4,150.73
604b	METAL GUARD RAIL END PIECES	EACH	156.38	688.14	3,530.38	1,093.73	5,468.63
604d	STEEL POST FOR METAL GUARD RAIL	EACH	177.20	688.14	3,126.18	997.88	4,989.41
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,447.50	14,817.02	4,879.15	24,395.73
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,026.28	13,809.41	4,521.94	22,609.70

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607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	413.21	500.96	11,418.53	3,083.18	15,415.88
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	126.25	751.44	14,117.80	3,748.87	18,744.36
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	413.21	1,073.66	22,134.40	5,905.32	29,526.59
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,374.82	1,172.88	40,891.60	10,859.82	54,299.12
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	274.96	282.47	19,111.23	4,917.16	24,585.82
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	495.82	0.00	2,768.40	816.06	4,080.28
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	495.82	0.00	4,152.60	1,162.11	5,810.53
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.19	7.03	23.74	8.99	44.95
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.73	4.04	64.62	17.60	87.99
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.19	7.03	31.68	10.97	54.87
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.73	4.04	86.18	22.99	114.94
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	229.41	100.07	500.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	814.26	252.65	1,263.27
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.48	8.79	34.74	12.50	62.52
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.48	15.16	111.83	33.37	166.84
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.48	8.79	46.32	15.40	77.00
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.48	15.16	149.10	42.69	213.43
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	335.44	126.58	632.88
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	1,410.06	401.60	2,008.02
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	152.94	75.33	376.63
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	543.66	179.38	896.90

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	223.62	93.00	464.99
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	941.46	278.83	1,394.15
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	141.94	398.16	139.24	696.22
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	0.00	206.16	55.76	278.79
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	141.94	449.16	151.99	759.97
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	0.00	262.26	69.78	348.92
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	32.50	140.48	845.60	254.64	1,273.22
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	195.00	842.88	2,152.66	797.64	3,988.18
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	390.00	1,685.76	5,989.53	2,016.32	10,081.61
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	235.66	84.29	1,244.19	391.04	1,955.18
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	207.58	1,050.30	2.20	315.02	1,575.10

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**HAFIZABAD**  
**(20A)**



**SAMPAC INTERNATIONAL**



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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.29	19.27	0.00	5.14	25.69
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.94	321.21	2.18	84.08	420.41
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	37.11	774.41	4.91	204.11	1,020.54
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	148.44	3,097.64	19.65	816.43	4,082.16
103	STRIPPING	CM	4.48	188.78	0.00	48.31	241.57
104	COMPACTION OF NATURAL GROUND	SM	0.64	18.62	3.00	5.56	27.82
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	8.02	283.06	0.00	72.77	363.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	196.26	453.99	137.50	196.94	984.68
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	30.02	672.56	0.00	175.64	878.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	20.03	524.99	0.00	136.25	681.27
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.56	254.24	0.00	65.20	326.01
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	196.26	453.99	137.50	196.94	984.68
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	34.47	610.97	0.00	161.36	806.80
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	17.15	524.99	0.00	135.53	677.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	13.28	278.09	0.00	72.84	364.21
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	115.92	838.57	90.35	261.21	1,306.06
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	191.52	504.43	137.50	208.36	1,041.82
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	172.37	553.11	0.00	181.37	906.86
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	98.50	397.27	0.00	123.94	619.71
107d	GRANULAR BACKFILL	CM	60.54	241.40	900.80	300.69	1,503.43
107e	COMMON BACKFILL	CM	50.98	139.11	20.00	52.52	262.62
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	12.35	288.79	20.00	80.29	401.43
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	35.59	726.17	159.33	230.27	1,151.37

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	26.69	792.41	9.50	207.15	1,035.75
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	23.73	714.13	8.89	186.69	933.43
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	14.13	123.20	223.08	90.10	450.52
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.95	150.63	20.00	45.39	226.97
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	25.85	348.12	11.89	96.47	482.34
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.48	53.73	5.72	15.48	77.41
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.79	36.66	3.03	10.37	51.86
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.96	233.49	426.53	169.49	847.47
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.49	29.22	3.11	8.46	42.28
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.27	32.97	3.11	9.59	47.94
201	GRANULAR SUB-BASE	CM	14.40	288.11	1,120.72	355.81	1,779.03
202	AGGREGATE BASE	CM	16.91	350.20	1,295.09	415.55	2,077.75
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	142.30	2,856.48	11,828.60	3,706.84	18,534.22
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	142.30	2,856.48	12,084.22	3,770.75	18,853.74
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	152.79	2,983.43	11,818.02	3,738.56	18,692.80
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	152.79	2,983.43	12,099.99	3,809.05	19,045.26
204b	CEMENT STABILIZED BASE	CM	51.68	915.90	1,368.95	584.13	2,920.67
204c	CEMENT CONTENT	TON	200.00	0.00	9,240.00	2,360.00	11,800.00
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	439.46	2,422.77	84,218.21	21,770.11	108,850.55
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	439.46	2,422.77	84,218.21	21,770.11	108,850.55
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	169.47	233.81	1,192.28	398.89	1,994.44

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	274.97	4,464.04	9,466.03	3,551.26	17,756.30
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	186.81	262.54	1,443.14	473.12	2,365.60
207a	DEEP PATCHING (0-15 cm)	SM	3.00	80.37	20.03	25.85	129.25
207b	DEEP PATCHING (15-30 cm)	SM	3.00	80.37	20.03	25.85	129.25
208	REINSTATEMENT OF ROAD SURFACE	SM	3.24	130.32	2.20	33.94	169.71
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	8.25	466.94	13.33	122.13	610.65
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.65	50.29	2.67	13.65	68.26
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.55	2.83	94.77	24.53	122.67
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.53	2.83	82.60	21.49	107.45
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	38.06	9.83	49.13
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	33.03	8.57	42.84
304a	SINGLE SURFACE TREATMENT	SM	1.43	14.01	168.91	46.09	230.44
304b	DOUBLE SURFACE TREATMENT	SM	2.08	26.92	344.75	93.44	467.20
304c	TRIPLE SURFACE TREATMENT	SM	3.50	37.83	406.26	111.90	559.49
304d	SEAL COAT	SM	1.32	7.81	47.54	14.17	70.84
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	126.34	2,815.00	12,722.54	3,915.97	19,579.85
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	126.34	2,694.06	13,590.38	4,102.69	20,513.47
307a	DENSE GRADED HOT BIT-MAC	CM	347.99	863.75	10,224.89	2,859.16	14,295.79
307b	OPEN GRADED HOT BIT-MAC	CM	347.99	863.75	9,902.77	2,778.63	13,893.13
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	53.45	1,236.12	4,884.74	1,543.58	7,717.89
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	386.81	2,013.10	86,484.65	22,221.14	111,105.69
309a	COLD MILLING, 0-30 mm	SM	1.77	61.27	25.40	22.11	110.55
309b	COLD MILLING, 0-50 mm	SM	2.94	102.12	42.33	36.85	184.25

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	4.42	153.18	63.50	55.27	276.37
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	947.26	2,690.11	4,740.12	2,094.37	10,471.87
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	947.26	2,690.11	5,428.26	2,266.41	11,332.04
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	947.26	2,690.11	5,783.82	2,355.30	11,776.49
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	947.26	2,690.11	5,043.41	2,170.19	10,850.97
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	947.26	2,690.11	5,731.45	2,342.20	11,711.02
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	947.26	2,690.11	6,086.88	2,431.06	12,155.32
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	947.26	2,690.11	5,363.95	2,250.33	11,251.66
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	947.26	2,690.11	6,051.99	2,422.34	12,111.71
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	947.26	2,690.11	6,387.47	2,506.21	12,531.05
401b	CONCRETE CLASS B	CM	1,224.93	1,419.30	3,892.68	1,634.23	8,171.14
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	929.95	2,690.11	4,460.59	2,020.16	10,100.81
401cii	CONCRETE CLASS C (ON GROUND)	CM	929.95	2,690.11	5,148.63	2,192.17	10,960.86
401ciii	CONCRETE CLASS C (ELEVATED)	CM	929.95	2,690.11	5,504.19	2,281.06	11,405.31
401d	CONCRETE CLASS D1	CM	1,471.37	3,326.20	7,609.22	3,101.70	15,508.49
401e	CONCRETE CLASS Y	CM	2,049.55	898.44	6,086.50	2,258.62	11,293.10
401f	LEAN CONCRETE	CM	784.09	969.12	3,257.82	1,252.76	6,263.79
401gi	PRECAST CONCRETE, CLASS A1	CM	3,107.33	1,879.78	5,388.83	2,593.99	12,969.93
401gii	PRECAST CONCRETE CLASS A3	CM	3,107.33	1,879.78	6,063.65	2,762.69	13,813.45
401giii	PRECAST CONCRETE, CLASS B	CM	3,107.33	1,879.78	4,581.55	2,392.17	11,960.83
401giv	PRECAST CONCRETE CLASS D1	CM	3,107.33	1,879.78	7,616.46	3,150.89	15,754.46
401gv	PRECAST CONCRETE CLASS D2	CM	3,107.33	1,879.78	8,498.62	3,371.43	16,857.16
401gvi	PRECAST CONCRETE CLASS D3	CM	3,107.33	1,879.78	9,382.57	3,592.42	17,962.10
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,358.27	1,419.30	3,144.26	1,480.46	7,402.28
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	3,046.06	0.00	85,688.67	22,183.68	110,918.42

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	3,046.06	0.00	89,888.67	23,233.68	116,168.42
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,314.90	4,249.86	106,704.00	28,317.19	141,585.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,388.20	13,891.32	162,189.29	45,117.20	225,586.01
405b	LAUNCHING OF GIRDER	TON	102.15	967.47	0.00	267.41	1,337.03
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	2,187.93	597.75	2,988.76
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	1,023.10	306.54	1,532.72
406ci	STEEL EXPANSION JOINTS (Local)	KG	16.69	21.32	170.26	52.06	260.32
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	46,668.73	11,838.68	59,193.41
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	711.00	0.00	116,671.81	29,345.70	146,728.52
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	786.00	0.00	388,509.26	97,323.82	486,619.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	42,347.80	10,758.45	53,792.25
406dii	PVC WATER STOP 8" SIZE	M	175.83	0.00	399.81	143.91	719.55
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	71.38	0.00	326.41	99.45	497.24
406g	STEEL OR METAL BEARING DEVICES	KG	34.61	56.27	178.60	67.37	336.85
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	432.07	3,542.17	578.05	1,138.07	5,690.37
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	656.75	5,384.10	789.26	1,707.53	8,537.64
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	656.75	8,250.86	954.21	2,465.45	12,327.27
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,094.59	13,751.43	1,380.28	4,056.57	20,282.86

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	912.16	11,459.52	1,202.75	3,393.61	16,968.03
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,641.88	20,627.14	1,912.86	6,045.47	30,227.35
407h	PILE LOAD TEST UPTO 120 TON	EACH	41,207.04	105,999.36	101,386.76	62,148.29	310,741.45
407i	PILE LOAD TEST UPTO 240 TON	EACH	41,207.04	105,999.36	217,990.71	91,299.28	456,496.39
407j	PILE LOAD TEST UPTO 360 TON	EACH	113,207.04	117,448.00	293,889.59	131,136.16	655,680.79
407k	PILE LOAD TEST UPTO 550 TON	EACH	167,207.04	146,810.00	468,169.28	195,546.58	977,732.90
407l	PILE LOAD TEST UPTO 800 TON	EACH	247,498.08	176,172.00	759,067.23	295,684.33	1,478,421.64
407m	CONFIRMATORY BORING (NX SIZE)	M	323.58	3,272.30	25.00	905.22	4,526.10
407n	PERMANENT PILE CASING FOR PILES	Ton	424.50	4,885.57	105,647.45	27,739.38	138,696.90
410	BRICK WORK	CM	588.83	577.25	4,289.15	1,363.81	6,819.04
411a	STONE MASONRY RANDOM DRY	CM	621.66	210.72	1,643.44	618.96	3,094.78
411b	STONE MASONRY RANDOM WITH MORTAR	CM	739.16	335.46	2,911.39	996.51	4,982.53
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	854.16	210.72	1,990.50	763.85	3,819.23
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	969.16	335.46	3,181.96	1,121.65	5,608.24
411g	ROLL POINTING	SM	125.08	24.95	99.76	62.45	312.24
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,281.66	534.31	3,181.96	1,249.48	6,247.42
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	408.96	689.50	1,111.95	552.60	2,763.00
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	408.96	766.21	1,385.77	640.23	3,201.17
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	385.68	1,356.07	1,632.38	843.53	4,217.66
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	405.17	1,702.67	2,320.49	1,107.08	5,535.41
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	470.25	2,255.64	3,905.39	1,657.82	8,289.10
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	583.19	2,781.29	5,913.38	2,319.46	11,597.32

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 20A HAFIZABAD

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	754.71	2,692.05	7,464.70	2,727.86	13,639.32
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	889.65	3,268.92	9,312.42	3,367.75	16,838.73
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,052.51	3,813.74	16,535.08	5,350.33	26,751.66
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	408.96	689.50	1,568.14	666.65	3,333.24
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	398.54	766.21	1,942.32	776.77	3,883.84
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	385.68	1,356.07	2,271.04	1,003.20	5,015.98
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	405.17	1,702.67	3,214.62	1,330.61	6,653.07
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	470.25	2,255.64	5,008.78	1,933.67	9,668.34
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	583.19	2,781.29	8,576.74	2,985.30	14,926.52
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	754.71	2,692.05	9,367.10	3,203.46	16,017.32
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	889.65	3,268.92	12,189.12	4,086.92	20,434.61
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,052.51	3,813.74	19,580.95	6,111.80	30,559.00
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	161.25	198.35	920.43	320.01	1,600.03
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,385.75	1,081.84	3,990.46	1,614.51	8,072.55
507a	STEEL WIRE MESH FOR GABIONS	KG	9.71	0.00	124.40	33.53	167.64
507b	ROCK FILL IN GABIONS	CM	174.03	0.00	1,200.84	343.72	1,718.58
508a	BRICK PAVING (SINGLE COURSE)	SM	197.40	47.96	336.85	145.55	727.76
508b	BRICK PAVING (DOUBLE COURSE)	SM	352.40	47.96	667.87	267.06	1,335.30
509a	RIPRAP, CLASS A	CM	851.84	0.00	1,298.51	537.59	2,687.94
509b	RIPRAP, CLASS B	CM	613.47	233.11	1,332.80	544.85	2,724.23
509c	RIPRAP, CLASS C	CM	599.56	242.83	1,366.06	552.11	2,760.56
509c1	RIPRAP, CLASS D	CM	599.56	291.39	1,411.10	575.51	2,877.56

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 20A HAFIZABAD

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	1,042.63	218.23	3,352.96	1,153.45	5,767.27
509e	GROUTED RIPRAP, CLASS B	CM	796.11	407.69	3,177.03	1,095.21	5,476.03
509f	GROUTED RIPRAP, CLASS C	CM	765.09	388.31	3,228.31	1,095.43	5,477.14
509f1	GROUTED RIPRAP, CLASS D	CM	765.09	436.87	3,471.99	1,168.49	5,842.45
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,424.40	615.08	4,721.21	1,690.17	8,450.85
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	88.24	344.31	897.83	332.60	1,662.98
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	177.22	1,135.96	0.00	328.29	1,641.47
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	269.01	131.70	211.01	152.93	764.65
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	344.33	168.58	270.09	195.75	978.75
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	436.33	368.16	743.25	386.94	1,934.68
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	545.41	460.20	929.07	483.67	2,418.35
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	436.33	368.16	422.88	306.84	1,534.22
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	545.41	460.20	528.60	383.55	1,917.77
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	627.08	1,431.68	6,718.18	2,194.23	10,971.16
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,776.67	1,000.42	6,697.19	2,368.57	11,842.85
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	47.33	84.29	778.31	227.48	1,137.41
603	BRICK EDGING	M	15.77	0.00	52.80	17.14	85.71
604a	METAL GUARD RAIL	M	118.14	70.24	3,142.97	832.84	4,164.19
604b	METAL GUARD RAIL END PIECES	EACH	156.38	688.14	3,542.03	1,096.64	5,483.19
604d	STEEL POST FOR METAL GUARD RAIL	EACH	177.20	688.14	3,137.02	1,000.59	5,002.95
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,447.50	14,906.49	4,901.51	24,507.57
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,026.28	13,900.82	4,544.79	22,723.96



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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 20A HAFIZABAD

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	413.21	500.96	11,490.77	3,101.24	15,506.18
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	126.25	751.44	14,211.10	3,772.20	18,860.99
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	413.21	1,073.66	22,247.38	5,933.56	29,667.82
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,374.82	1,172.88	41,099.53	10,911.81	54,559.03
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	274.96	282.47	19,198.95	4,939.10	24,695.48
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	495.82	0.00	2,782.24	819.52	4,097.58
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	495.82	0.00	4,173.36	1,167.30	5,836.48
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.19	7.03	23.74	8.99	44.95
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.73	4.04	64.62	17.60	87.99
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.19	7.03	31.68	10.97	54.87
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.73	4.04	86.18	22.99	114.94
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	229.41	100.07	500.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	814.26	252.65	1,263.27
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.48	8.79	34.74	12.50	62.52
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.48	15.16	111.83	33.37	166.84
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.48	8.79	46.32	15.40	77.00
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.48	15.16	149.10	42.69	213.43
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	335.44	126.58	632.88
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	1,410.06	401.60	2,008.02
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	152.94	75.33	376.63
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	543.66	179.38	896.90

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 20A HAFIZABAD

<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	223.62	93.00	464.99
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	941.46	278.83	1,394.15
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	141.94	398.16	139.24	696.22
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	0.00	206.16	55.76	278.79
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	141.94	449.16	151.99	759.97
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	0.00	262.26	69.78	348.92
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	32.50	140.48	852.78	256.44	1,282.20
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	195.00	842.88	2,171.63	802.38	4,011.89
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	390.00	1,685.76	6,033.11	2,027.22	10,136.08
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	235.66	84.29	1,249.01	392.24	1,961.20
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	207.58	1,050.30	2.20	315.02	1,575.10

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**JHANG**  
**(22)**



**SAMPAK INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 22 JHANG

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	952.76	310.25	1,551.24
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	430.32	169.45	847.26
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	1,135.66	358.76	1,793.80
202	AGGREGATE BASE	CM	13.30	350.20	1,271.17	408.67	2,043.33
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	11,864.60	3,707.63	18,538.13
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	12,183.40	3,787.33	18,936.63
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	11,854.01	3,738.77	18,693.83
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	12,199.17	3,825.06	19,125.28
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	1,421.52	594.46	2,972.30
204c	CEMENT CONTENT	TON	150.00	0.00	8,925.00	2,268.75	11,343.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	84,353.49	21,780.29	108,901.46
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	84,353.49	21,780.29	108,901.46
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	1,192.28	388.61	1,943.05

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	9,534.02	3,552.71	17,763.54
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,338.75	435.64	2,178.22
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	21.91	26.16	130.79
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	21.91	26.16	130.79
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	94.90	24.54	122.70
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	82.74	21.50	107.48
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.12	9.83	49.14
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.08	8.57	42.85
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	169.20	46.08	230.42
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	345.58	93.54	467.68
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	407.22	111.95	559.76
304d	SEAL COAT	SM	1.04	7.81	47.69	14.14	70.68
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	12,780.45	3,923.22	19,616.12
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	13,624.63	4,104.04	20,520.18
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	10,260.92	2,847.77	14,238.84
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	9,928.66	2,764.70	13,823.51
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	86,619.93	22,233.95	111,169.77
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	4,859.01	2,072.91	10,364.57
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	5,547.15	2,244.95	11,224.75
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	5,902.71	2,333.84	11,669.20
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	5,140.11	2,143.19	10,715.95
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	5,828.15	2,315.20	11,576.00
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	6,183.59	2,404.06	12,020.30
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,431.25	2,215.97	11,079.87
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	6,119.29	2,387.98	11,939.92
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,453.69	2,471.58	12,357.92
401b	CONCRETE CLASS B	CM	955.51	1,419.30	4,080.83	1,613.91	8,069.55
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	4,518.64	1,983.32	9,916.59
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	5,206.68	2,155.33	10,776.64
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	5,562.24	2,244.22	11,221.09
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	7,672.90	3,038.15	15,190.73
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	6,197.15	2,174.78	10,873.90
401f	LEAN CONCRETE	CM	602.00	969.12	3,482.79	1,263.48	6,317.38
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	5,510.76	2,449.94	12,249.69
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	6,128.76	2,604.44	13,022.19
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	4,789.51	2,269.63	11,348.13
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	7,680.63	2,992.40	14,962.02
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,517.68	3,201.67	16,008.34
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,355.74	3,411.18	17,055.92
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	3,266.38	1,435.30	7,176.49
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,053.26	22,110.53	110,552.65

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	90,253.26	23,160.53	115,802.65
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,154.49	44,889.16	224,445.81
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,188.08	586.52	2,932.62
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,023.70	295.43	1,477.15
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	326.54	95.66	478.31
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	106,668.52	60,958.44	304,792.18
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	228,554.23	91,429.86	457,149.31
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	309,734.87	128,087.18	640,435.91
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	493,977.88	191,613.44	958,067.18
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	800,481.03	290,662.96	1,453,314.79
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	4,725.35	1,440.32	7,201.59
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,504.81	549.71	2,748.57
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	2,939.63	962.11	4,810.53
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	1,938.04	703.02	3,515.11
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	3,247.91	1,084.18	5,420.88
411g	ROLL POINTING	SM	97.67	24.95	102.26	56.22	281.09
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	3,247.91	1,193.89	5,969.43
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,234.88	559.01	2,795.05
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,541.03	654.73	3,273.63
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,890.08	885.42	4,427.12
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	2,984.73	1,249.25	6,246.24
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,010.41	1,656.47	8,282.36
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	5,728.07	2,239.21	11,196.03

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	7,670.08	2,735.30	13,676.50
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	10,265.91	3,554.14	17,770.70
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	17,432.44	5,513.51	27,567.53
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,234.88	559.01	2,795.05
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	1,600.03	667.39	3,336.96
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,162.08	953.42	4,767.12
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	3,999.73	1,503.00	7,514.99
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,253.41	1,967.22	9,836.11
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	7,950.07	2,794.71	13,973.53
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	10,185.08	3,364.05	16,820.25
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	14,194.36	4,536.25	22,681.25
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	24,840.92	7,365.63	36,828.13
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	970.08	322.94	1,614.70
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	4,175.28	1,584.49	7,922.43
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	122.34	32.48	162.42
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	1,092.44	306.17	1,530.83
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	390.70	147.85	739.23
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	774.98	273.91	1,369.57
509a	RIPRAP, CLASS A	CM	660.97	0.00	1,159.88	455.21	2,276.06
509b	RIPRAP, CLASS B	CM	480.78	233.11	1,195.27	477.29	2,386.45
509c	RIPRAP, CLASS C	CM	470.65	242.83	1,227.43	485.22	2,426.12
509c1	RIPRAP, CLASS D	CM	470.65	291.39	1,272.46	508.62	2,543.12

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	3,308.87	1,083.93	5,419.63
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	3,124.31	1,038.72	5,193.61
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	3,175.52	1,040.73	5,203.63
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,432.61	1,117.14	5,585.69
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	4,844.08	1,639.67	8,198.35
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	950.61	340.54	1,702.72
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	188.48	132.13	660.64
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	241.25	169.12	845.62
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	750.48	364.33	1,821.63
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	938.10	455.41	2,277.04
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	426.75	283.39	1,416.97
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	533.43	354.24	1,771.21
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	6,796.98	2,180.12	10,900.61
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	6,777.62	2,289.22	11,446.09
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	744.62	216.39	1,081.97
603	BRICK EDGING	M	12.17	0.00	61.44	18.40	92.01
604a	METAL GUARD RAIL	M	91.85	70.24	3,156.73	829.71	4,148.54
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,556.94	1,091.55	5,457.74
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,150.88	994.20	4,970.98
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	15,057.60	4,749.19	23,745.95
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	14,047.59	4,391.38	21,956.91

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,421.57	3,060.44	15,302.21
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,122.35	3,742.82	18,714.11
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,201.56	5,898.62	29,493.08
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	40,992.34	10,803.52	54,017.61
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,131.37	4,905.90	24,529.52
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,768.40	790.02	3,950.08
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,152.60	1,136.07	5,680.33
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	817.78	245.82	1,229.08
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,120.69	778.39	3,891.96
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	5,797.52	1,945.82	9,729.10
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,246.01	377.91	1,889.54
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**JHELUM**  
**(23)**



**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

Province PUNJAB

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.10	19.27	0.00	5.09	25.46
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.95	321.21	2.18	83.59	417.93
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	31.64	774.41	4.91	202.74	1,013.70
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	126.55	3,097.64	19.65	810.96	4,054.80
103	STRIPPING	CM	3.75	188.78	0.00	48.13	240.66
104	COMPACTION OF NATURAL GROUND	SM	0.53	18.62	3.00	5.54	27.68
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.45	283.06	0.00	72.38	361.89
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	161.51	453.99	137.50	188.25	941.25
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.91	672.56	0.00	174.37	871.84
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.54	524.99	0.00	135.38	676.91
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.28	254.24	0.00	64.88	324.40
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	161.51	453.99	137.50	188.25	941.25
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	28.33	610.97	0.00	159.82	799.12
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.24	524.99	0.00	134.81	674.03
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.78	278.09	0.00	72.22	361.08
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	95.74	838.57	90.35	256.17	1,280.83
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	157.39	504.43	137.50	199.83	999.15
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	141.65	553.11	0.00	173.69	868.45
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	80.94	397.27	0.00	119.55	597.76
107d	GRANULAR BACKFILL	CM	50.83	241.40	703.62	248.96	1,244.81
107e	COMMON BACKFILL	CM	43.46	139.11	20.00	50.64	253.21
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.15	288.79	20.00	79.74	398.68
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	29.57	726.17	159.33	228.77	1,143.85

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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	22.18	792.41	9.50	206.02	1,030.11
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.71	714.13	8.89	185.68	928.42
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.70	123.20	223.08	89.50	447.49
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.02	150.63	20.00	44.91	224.56
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	21.58	348.12	11.89	95.40	476.99
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.05	53.73	5.72	15.37	76.87
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.48	36.66	3.03	10.29	51.47
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.92	233.49	302.01	137.61	688.03
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.24	29.22	3.11	8.39	41.97
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.89	32.97	3.11	9.49	47.45
201	GRANULAR SUB-BASE	CM	11.90	288.11	629.71	232.43	1,162.15
202	AGGREGATE BASE	CM	13.87	350.20	800.15	291.05	1,455.27
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	120.46	2,856.48	11,195.60	3,543.14	17,715.68
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	120.46	2,856.48	11,466.31	3,610.81	18,054.06
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	129.15	2,983.43	11,185.11	3,574.42	17,872.11
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	129.15	2,983.43	11,482.04	3,648.66	18,243.28
204b	CEMENT STABILIZED BASE	CM	42.73	915.90	790.52	437.29	2,186.44
204c	CEMENT CONTENT	TON	175.00	0.00	9,030.00	2,301.25	11,506.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	361.58	2,422.77	83,783.59	21,641.98	108,209.91
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	361.58	2,422.77	83,783.59	21,641.98	108,209.91
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	146.41	233.81	699.97	270.05	1,350.23



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205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	230.77	4,464.04	8,913.70	3,402.13	17,010.64
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	161.69	262.54	1,248.56	418.20	2,090.98
207a	DEEP PATCHING (0-15 cm)	SM	2.48	80.37	21.53	26.09	130.47
207b	DEEP PATCHING (15-30 cm)	SM	2.48	80.37	21.53	26.09	130.47
208	REINSTATEMENT OF ROAD SURFACE	SM	2.67	130.32	2.20	33.80	168.99
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.68	466.94	13.33	121.74	608.69
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.34	50.29	2.67	13.57	67.87
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.45	2.83	94.33	24.40	122.01
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	82.17	21.36	106.79
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	37.89	9.77	48.87
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	32.85	8.52	42.58
304a	SINGLE SURFACE TREATMENT	SM	1.17	14.01	165.27	45.11	225.56
304b	DOUBLE SURFACE TREATMENT	SM	1.71	26.92	334.97	90.90	454.50
304c	TRIPLE SURFACE TREATMENT	SM	2.87	37.83	394.76	108.86	544.32
304d	SEAL COAT	SM	1.08	7.81	46.29	13.80	68.98
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	106.50	2,815.00	12,086.83	3,752.08	18,760.41
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	106.50	2,694.06	12,962.13	3,940.67	19,703.36
307a	DENSE GRADED HOT BIT-MAC	CM	296.40	863.75	9,722.90	2,720.76	13,603.81
307b	OPEN GRADED HOT BIT-MAC	CM	296.40	863.75	9,407.32	2,641.87	13,209.33
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	45.16	1,236.12	4,884.74	1,541.51	7,707.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	319.45	2,013.10	86,050.03	22,095.64	110,478.22
309a	COLD MILLING, 0-30 mm	SM	1.46	61.27	25.40	22.03	110.16
309b	COLD MILLING, 0-50 mm	SM	2.43	102.12	42.33	36.72	183.61

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309c	COLD MILLING, 0-70 mm	SM	3.65	153.18	63.50	55.08	275.41
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	780.73	2,690.11	4,403.63	1,968.62	9,843.10
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	780.73	2,690.11	5,091.72	2,140.64	10,703.20
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	780.73	2,690.11	5,447.28	2,229.53	11,147.65
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	780.73	2,690.11	4,714.15	2,046.25	10,231.24
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	780.73	2,690.11	5,402.19	2,218.26	11,091.29
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	780.73	2,690.11	5,757.68	2,307.13	11,535.65
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	780.73	2,690.11	4,981.67	2,113.13	10,565.65
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	780.73	2,690.11	5,669.71	2,285.14	11,425.70
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	780.73	2,690.11	6,016.59	2,371.86	11,859.29
401b	CONCRETE CLASS B	CM	1,016.62	1,419.30	3,525.32	1,490.31	7,451.55
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	773.13	2,690.11	4,038.52	1,875.44	9,377.21
401cii	CONCRETE CLASS C (ON GROUND)	CM	773.13	2,690.11	4,726.56	2,047.45	10,237.26
401ciii	CONCRETE CLASS C (ELEVATED)	CM	773.13	2,690.11	5,082.12	2,136.34	10,681.71
401d	CONCRETE CLASS D1	CM	1,212.52	3,326.20	7,282.43	2,955.29	14,776.43
401e	CONCRETE CLASS Y	CM	1,693.81	898.44	5,737.85	2,082.52	10,412.62
401f	LEAN CONCRETE	CM	665.19	969.12	2,887.65	1,130.49	5,652.45
401gi	PRECAST CONCRETE, CLASS A1	CM	2,600.88	1,879.78	5,052.98	2,383.41	11,917.04
401gii	PRECAST CONCRETE CLASS A3	CM	2,600.88	1,879.78	5,692.08	2,543.19	12,715.93
401giii	PRECAST CONCRETE, CLASS B	CM	2,600.88	1,879.78	4,203.26	2,170.98	10,854.90
401giv	PRECAST CONCRETE CLASS D1	CM	2,600.88	1,879.78	7,289.35	2,942.50	14,712.52
401gv	PRECAST CONCRETE CLASS D2	CM	2,600.88	1,879.78	8,168.51	3,162.29	15,811.46
401gvi	PRECAST CONCRETE CLASS D3	CM	2,600.88	1,879.78	9,048.08	3,382.18	16,910.92
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,133.29	1,419.30	2,852.13	1,351.18	6,755.90
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,508.86	0.00	85,897.64	22,101.62	110,508.12

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,508.86	0.00	90,097.64	23,151.62	115,758.12
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,899.93	4,249.86	106,704.00	28,213.45	141,067.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,166.43	44,892.15	224,460.74
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	169.13	0.00	2,187.46	589.15	2,945.73
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	169.13	0.00	1,023.08	298.05	1,490.26
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.80	21.32	170.26	51.34	256.72
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	563.82	0.00	46,668.73	11,808.14	59,040.68
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	585.70	0.00	116,671.81	29,314.38	146,571.88
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	651.32	0.00	388,509.26	97,290.15	486,450.73
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	563.82	0.00	42,347.80	10,727.91	53,639.53
406dii	PVC WATER STOP 8" SIZE	M	146.67	0.00	399.81	136.62	683.09
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	58.61	0.00	325.98	96.15	480.74
406g	STEEL OR METAL BEARING DEVICES	KG	28.89	56.27	178.60	65.94	329.70
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	346.48	3,542.17	578.05	1,116.67	5,583.37
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	526.65	5,384.10	789.26	1,675.00	8,375.01
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	526.65	8,250.86	954.21	2,432.93	12,164.64
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	877.75	13,751.43	1,380.28	4,002.36	20,011.82

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	731.46	11,459.52	1,202.75	3,348.43	16,742.16
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,316.62	20,627.14	1,912.86	5,964.16	29,820.78
407h	PILE LOAD TEST UPTO 120 TON	EACH	35,665.86	105,999.36	105,580.84	61,811.52	309,057.58
407i	PILE LOAD TEST UPTO 240 TON	EACH	35,665.86	105,999.36	226,378.87	92,011.02	460,055.11
407j	PILE LOAD TEST UPTO 360 TON	EACH	98,665.86	117,448.00	306,471.83	130,646.42	653,232.11
407k	PILE LOAD TEST UPTO 550 TON	EACH	145,915.86	146,810.00	488,663.08	195,347.24	976,736.18
407l	PILE LOAD TEST UPTO 800 TON	EACH	215,998.80	176,172.00	791,952.63	296,030.86	1,480,154.29
407m	CONFIRMATORY BORING (NX SIZE)	M	270.13	3,272.30	25.00	891.86	4,459.29
407n	PERMANENT PILE CASING FOR PILES	Ton	354.61	4,885.57	105,647.45	27,721.91	138,609.54
410	BRICK WORK	CM	489.67	577.25	4,732.40	1,449.83	7,249.14
411a	STONE MASONRY RANDOM DRY	CM	518.33	210.72	1,564.59	573.41	2,867.06
411b	STONE MASONRY RANDOM WITH MORTAR	CM	618.33	335.46	2,832.20	946.50	4,732.49
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	713.33	210.72	1,905.34	707.35	3,536.74
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	808.33	335.46	3,092.05	1,058.96	5,294.80
411g	ROLL POINTING	SM	103.67	24.95	99.56	57.04	285.22
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,073.33	534.31	3,092.05	1,174.92	5,874.61
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	350.42	689.50	1,127.36	541.82	2,709.09
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	350.42	766.21	1,411.66	632.07	3,160.35
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	328.05	1,356.07	1,671.46	838.89	4,194.47
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	345.95	1,702.67	2,385.82	1,108.61	5,543.05
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	400.75	2,255.64	4,036.31	1,673.17	8,365.87
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	495.19	2,781.29	6,110.18	2,346.66	11,733.32

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	640.83	2,692.05	7,661.27	2,748.54	13,742.70
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	756.72	3,268.92	9,517.21	3,385.71	16,928.57
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	893.26	3,813.74	17,335.05	5,510.51	27,552.56
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	350.42	689.50	1,583.55	655.87	3,279.33
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	342.08	766.21	1,968.21	769.12	3,845.62
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	328.05	1,356.07	2,310.12	998.56	4,992.80
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	345.95	1,702.67	3,279.95	1,332.14	6,660.71
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	400.75	2,255.64	5,139.70	1,949.02	9,745.11
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	495.19	2,781.29	8,773.54	3,012.50	15,062.52
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	640.83	2,692.05	9,563.67	3,224.14	16,120.70
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	756.72	3,268.92	12,393.92	4,104.89	20,524.45
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	893.26	3,813.74	20,380.92	6,271.98	31,359.89
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	137.50	198.35	702.90	259.69	1,298.44
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,150.27	1,081.84	3,620.87	1,463.25	7,316.23
507a	STEEL WIRE MESH FOR GABIONS	KG	8.03	0.00	122.34	32.59	162.96
507b	ROCK FILL IN GABIONS	CM	149.72	0.00	1,150.72	325.11	1,625.55
508a	BRICK PAVING (SINGLE COURSE)	SM	165.72	47.96	390.08	150.94	754.70
508b	BRICK PAVING (DOUBLE COURSE)	SM	295.72	47.96	773.86	279.39	1,396.93
509a	RIPRAP, CLASS A	CM	712.22	0.00	1,219.66	482.97	2,414.85
509b	RIPRAP, CLASS B	CM	505.78	233.11	1,232.25	492.78	2,463.92
509c	RIPRAP, CLASS C	CM	493.15	242.83	1,287.21	505.80	2,528.98
509c1	RIPRAP, CLASS D	CM	493.15	291.39	1,332.25	529.20	2,645.98

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509d	GROUTED RIPRAP, CLASS A	CM	872.36	218.23	3,267.39	1,089.49	5,447.47
509e	GROUTED RIPRAP, CLASS B	CM	657.89	407.69	3,070.52	1,034.03	5,170.13
509f	GROUTED RIPRAP, CLASS C	CM	631.57	388.31	3,141.60	1,040.37	5,201.85
509f1	GROUTED RIPRAP, CLASS D	CM	631.57	436.87	3,384.92	1,113.34	5,566.70
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,199.52	615.08	4,392.01	1,551.65	7,758.26
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	75.59	344.31	706.26	281.54	1,407.70
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	147.78	1,135.96	0.00	320.94	1,604.68
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	225.52	131.70	198.20	138.85	694.27
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	288.67	168.58	253.69	177.73	888.66
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	364.67	368.16	731.80	366.16	1,830.79
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	455.83	460.20	914.75	457.70	2,288.48
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	364.67	368.16	410.67	285.88	1,429.38
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	455.83	460.20	513.34	357.34	1,786.72
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	516.42	1,431.68	6,547.97	2,124.02	10,620.08
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,485.10	1,000.42	6,527.36	2,253.22	11,266.10
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	39.67	84.29	711.42	208.84	1,044.22
603	BRICK EDGING	M	13.29	0.00	61.44	18.68	93.41
604a	METAL GUARD RAIL	M	98.52	70.24	3,163.74	833.13	4,165.63
604b	METAL GUARD RAIL END PIECES	EACH	131.11	688.14	3,564.52	1,095.94	5,479.72
604d	STEEL POST FOR METAL GUARD RAIL	EACH	147.76	688.14	3,157.94	998.46	4,992.30
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,766.66	1,447.50	14,534.91	4,687.27	23,436.33
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,766.66	1,026.28	13,526.75	4,329.92	21,649.61

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 23 JHELUM

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	347.58	500.96	11,380.39	3,057.23	15,286.16
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	106.25	751.44	14,060.59	3,729.57	18,647.85
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	347.58	1,073.66	22,034.97	5,864.05	29,320.26
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,176.36	1,172.88	40,742.46	10,772.92	53,864.62
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	235.27	282.47	19,081.40	4,899.78	24,498.92
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	404.16	0.00	2,768.40	793.14	3,965.70
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	404.16	0.00	4,152.60	1,139.19	5,695.95
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.37	7.03	23.74	8.79	43.94
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.46	4.04	64.62	17.53	87.65
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.37	7.03	31.68	10.77	53.86
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.46	4.04	86.18	22.92	114.60
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	110.67	35.16	229.41	93.81	469.04
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	110.67	60.65	814.26	246.39	1,231.97
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.47	8.79	34.74	12.25	61.25
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.47	15.16	111.83	33.11	165.57
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.47	8.79	46.32	15.15	75.73
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.47	15.16	149.10	42.43	212.16
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	110.67	35.16	335.44	120.32	601.58
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	110.67	60.65	1,410.06	395.34	1,976.72
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	92.67	35.16	152.94	70.19	350.96
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	92.67	60.65	543.66	174.24	871.22

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Province PUNJAB

Dcode 23 JHELUM

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	92.67	35.16	223.62	87.86	439.31
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	92.67	60.65	941.46	273.69	1,368.47
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.06	141.94	398.16	138.54	692.71
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.06	0.00	206.16	55.06	275.28
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.06	141.94	449.16	151.29	756.46
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.06	0.00	262.26	69.08	345.40
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	27.50	140.48	789.68	239.41	1,197.07
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	165.00	842.88	2,035.95	760.96	3,804.79
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	330.00	1,685.76	5,631.02	1,911.69	9,558.47
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	199.34	84.29	1,217.40	375.26	1,876.28
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	174.10	1,050.30	2.20	306.65	1,533.26



**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**KASUR**  
**(28)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 28 KASUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.24	19.27	0.00	5.13	25.63
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.21	321.21	2.18	83.90	419.50
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	35.47	774.41	4.91	203.70	1,018.49
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	141.88	3,097.64	19.65	814.79	4,073.96
103	STRIPPING	CM	4.15	188.78	0.00	48.23	241.16
104	COMPACTION OF NATURAL GROUND	SM	0.59	18.62	3.00	5.55	27.75
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.90	283.06	0.00	72.49	362.45
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	27.36	672.56	0.00	174.98	874.90
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	18.08	524.99	0.00	135.77	678.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.65	254.24	0.00	64.97	324.86
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	30.86	610.97	0.00	160.46	802.29
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	15.63	524.99	0.00	135.16	675.78
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.62	278.09	0.00	72.43	362.13
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	104.71	838.57	90.35	258.41	1,292.05
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	171.45	504.43	137.50	203.35	1,016.73
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	154.31	553.11	0.00	176.86	884.28
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	88.18	397.27	0.00	121.36	606.80
107d	GRANULAR BACKFILL	CM	56.32	241.40	1,135.90	358.41	1,792.03
107e	COMMON BACKFILL	CM	48.71	139.11	20.00	51.96	259.78
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.05	288.79	20.00	79.96	399.81
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	32.50	726.17	159.33	229.50	1,147.51

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	24.38	792.41	9.50	206.57	1,032.85
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	21.67	714.13	8.89	186.17	930.86
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.83	123.20	223.08	89.78	448.89
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.86	150.63	20.00	45.12	225.60
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	23.79	348.12	11.89	95.95	479.76
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.24	53.73	5.72	15.42	77.11
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.61	36.66	3.03	10.33	51.64
110	IMPROVED SUB-GARDE (CBR>20%)	CM	16.41	233.49	502.97	188.22	941.09
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.37	29.22	3.11	8.43	42.13
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.07	32.97	3.11	9.54	47.68
201	GRANULAR SUB-BASE	CM	13.01	288.11	1,422.12	430.81	2,154.05
202	AGGREGATE BASE	CM	15.09	350.20	1,585.43	487.68	2,438.40
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	134.33	2,856.48	12,237.01	3,806.95	19,034.77
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	134.33	2,856.48	12,474.34	3,866.29	19,331.43
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	143.85	2,983.43	12,226.37	3,838.41	19,192.07
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	143.85	2,983.43	12,490.09	3,904.34	19,521.71
204b	CEMENT STABILIZED BASE	CM	46.78	915.90	1,755.56	679.56	3,397.80
204c	CEMENT CONTENT	TON	200.00	0.00	8,925.00	2,281.25	11,406.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	394.27	2,422.77	84,365.07	21,795.53	108,977.63
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	394.27	2,422.77	84,365.07	21,795.53	108,977.63
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	165.78	233.81	1,506.76	476.59	2,382.93

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**Rate Analysis Summary (Construction)**

Province PUNJAB

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	255.63	4,464.04	9,810.47	3,632.54	18,162.68
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	183.32	262.54	1,652.86	524.68	2,623.40
207a	DEEP PATCHING (0-15 cm)	SM	2.72	80.37	23.90	26.74	133.72
207b	DEEP PATCHING (15-30 cm)	SM	2.72	80.37	23.90	26.74	133.72
208	REINSTATEMENT OF ROAD SURFACE	SM	2.92	130.32	2.20	33.86	169.30
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.19	466.94	13.33	121.87	609.33
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.44	50.29	2.67	13.60	68.00
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.49	2.83	94.91	24.56	122.79
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.47	2.83	82.75	21.51	107.56
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	38.12	9.84	49.18
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	33.09	8.58	42.89
304a	SINGLE SURFACE TREATMENT	SM	1.27	14.01	171.03	46.58	232.90
304b	DOUBLE SURFACE TREATMENT	SM	1.85	26.92	350.53	94.83	474.14
304c	TRIPLE SURFACE TREATMENT	SM	3.11	37.83	413.08	113.50	567.52
304d	SEAL COAT	SM	1.17	7.81	48.33	14.33	71.65
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	118.37	2,815.00	13,129.86	4,015.81	20,079.03
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	118.37	2,694.06	13,989.75	4,200.54	21,002.71
307a	DENSE GRADED HOT BIT-MAC	CM	332.05	863.75	10,551.00	2,936.70	14,683.50
307b	OPEN GRADED HOT BIT-MAC	CM	332.05	863.75	10,218.68	2,853.62	14,268.10
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	50.28	1,236.12	4,884.74	1,542.79	7,713.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	349.38	2,013.10	86,631.51	22,248.50	111,242.49
309a	COLD MILLING, 0-30 mm	SM	1.59	61.27	25.40	22.07	110.33
309b	COLD MILLING, 0-50 mm	SM	2.66	102.12	42.33	36.78	183.89

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.99	153.18	63.50	55.17	275.84
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	852.53	2,690.11	5,135.08	2,169.43	10,847.15
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	852.53	2,690.11	5,823.25	2,341.47	11,707.37
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	852.53	2,690.11	6,178.81	2,430.36	12,151.82
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	852.53	2,690.11	5,405.96	2,237.15	11,185.75
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	852.53	2,690.11	6,094.00	2,409.16	12,045.80
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	852.53	2,690.11	6,449.40	2,498.01	12,490.06
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	852.53	2,690.11	5,710.75	2,313.35	11,566.74
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	852.53	2,690.11	6,398.79	2,485.36	12,426.79
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	852.53	2,690.11	6,726.23	2,567.22	12,836.09
401b	CONCRETE CLASS B	CM	1,116.28	1,419.30	4,335.14	1,717.68	8,588.39
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	850.08	2,690.11	4,763.64	2,075.96	10,379.79
401cii	CONCRETE CLASS C (ON GROUND)	CM	850.08	2,690.11	5,451.68	2,247.97	11,239.84
401ciii	CONCRETE CLASS C (ELEVATED)	CM	850.08	2,690.11	5,807.24	2,336.86	11,684.29
401d	CONCRETE CLASS D1	CM	1,323.88	3,326.20	7,919.91	3,142.50	15,712.48
401e	CONCRETE CLASS Y	CM	1,853.60	898.44	6,473.96	2,306.50	11,532.50
401f	LEAN CONCRETE	CM	742.97	969.12	3,749.15	1,365.31	6,826.55
401gi	PRECAST CONCRETE, CLASS A1	CM	2,874.97	1,879.78	5,786.48	2,635.31	13,176.54
401gii	PRECAST CONCRETE CLASS A3	CM	2,874.97	1,879.78	6,401.16	2,788.98	13,944.89
401giii	PRECAST CONCRETE, CLASS B	CM	2,874.97	1,879.78	5,029.25	2,446.00	12,230.00
401giv	PRECAST CONCRETE CLASS D1	CM	2,874.97	1,879.78	7,927.98	3,170.68	15,853.42
401gv	PRECAST CONCRETE CLASS D2	CM	2,874.97	1,879.78	8,746.39	3,375.29	16,876.43
401gvi	PRECAST CONCRETE CLASS D3	CM	2,874.97	1,879.78	9,566.23	3,580.25	17,901.23
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,249.61	1,419.30	3,535.69	1,551.15	7,755.74
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,738.10	0.00	85,381.68	22,029.94	110,149.72

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,738.10	0.00	89,581.68	23,079.94	115,399.72
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,067.65	4,249.86	106,179.00	28,124.13	140,620.63
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,740.48	13,891.32	161,833.89	44,866.42	224,332.11
405b	LAUNCHING OF GIRDER	TON	87.07	967.47	0.00	263.64	1,318.18
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	2,178.41	591.16	2,955.79
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	1,019.37	301.40	1,506.98
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.12	21.32	170.26	51.67	258.36
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	46,622.50	11,809.19	59,045.95
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	639.26	0.00	116,556.25	29,298.88	146,494.39
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	714.26	0.00	388,301.25	97,253.88	486,269.39
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	42,322.38	10,734.16	53,670.79
406dii	PVC WATER STOP 8" SIZE	M	161.68	0.00	395.85	139.38	696.92
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	63.80	0.00	324.14	96.98	484.92
406g	STEEL OR METAL BEARING DEVICES	KG	31.86	56.27	178.60	66.68	333.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	369.85	3,542.17	578.05	1,122.52	5,612.58
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	562.17	5,384.10	789.26	1,683.88	8,419.41
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	562.17	8,250.86	954.21	2,441.81	12,209.05
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	936.95	13,751.43	1,380.28	4,017.16	20,085.82

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	780.79	11,459.52	1,202.75	3,360.77	16,803.83
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,405.42	20,627.14	1,912.86	5,986.36	29,931.78
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,438.44	105,999.36	112,237.16	64,668.74	323,343.70
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,438.44	105,999.36	239,691.51	96,532.33	482,661.64
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,438.44	117,448.00	326,440.79	139,081.81	695,409.04
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,438.44	146,810.00	521,188.28	208,609.18	1,043,045.90
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,391.32	176,172.00	844,144.23	316,676.89	1,583,384.44
407m	CONFIRMATORY BORING (NX SIZE)	M	297.96	3,272.30	25.00	898.82	4,494.08
407n	PERMANENT PILE CASING FOR PILES	Ton	391.36	4,885.57	105,122.45	27,599.85	137,999.23
410	BRICK WORK	CM	538.51	577.25	4,695.60	1,452.84	7,264.21
411a	STONE MASONRY RANDOM DRY	CM	571.22	210.72	1,805.91	646.96	3,234.81
411b	STONE MASONRY RANDOM WITH MORTAR	CM	683.19	335.46	3,331.24	1,087.47	5,437.36
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	787.12	210.72	2,165.96	790.95	3,954.74
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	891.04	335.46	3,543.71	1,192.55	5,962.77
411g	ROLL POINTING	SM	113.70	24.95	103.78	60.61	303.04
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,186.94	534.31	3,543.71	1,316.24	6,581.19
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	394.35	689.50	1,097.00	545.21	2,726.06
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	394.35	766.21	1,357.38	629.48	3,147.42
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	367.13	1,356.07	1,586.97	827.54	4,137.71
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	388.30	1,702.67	2,236.46	1,081.86	5,409.28
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	449.14	2,255.64	3,732.02	1,609.20	8,046.00
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	553.46	2,781.29	5,651.03	2,246.44	11,232.22

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	716.24	2,692.05	7,201.93	2,652.56	13,262.78
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	846.89	3,268.92	9,041.33	3,289.28	16,446.42
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	998.01	3,813.74	15,424.73	5,059.12	25,295.60
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	394.35	689.50	1,553.19	659.26	3,296.30
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	385.47	766.21	1,913.93	766.40	3,832.01
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	367.13	1,356.07	2,225.63	987.21	4,936.03
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	388.30	1,702.67	3,130.59	1,305.39	6,526.95
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	449.14	2,255.64	4,835.41	1,885.05	9,425.24
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	553.46	2,781.29	8,314.39	2,912.28	14,561.42
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	716.24	2,692.05	9,104.33	3,128.16	15,640.78
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	846.89	3,268.92	11,918.03	4,008.46	20,042.30
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	998.01	3,813.74	18,470.60	5,820.59	29,102.94
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	154.17	198.35	1,160.75	378.32	1,891.59
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,263.19	1,081.84	4,429.58	1,693.65	8,468.26
507a	STEEL WIRE MESH FOR GABIONS	KG	8.78	0.00	124.56	33.34	166.68
507b	ROCK FILL IN GABIONS	CM	169.00	0.00	1,373.47	385.62	1,928.09
508a	BRICK PAVING (SINGLE COURSE)	SM	183.61	47.96	388.21	154.95	774.73
508b	BRICK PAVING (DOUBLE COURSE)	SM	327.54	47.96	769.37	286.22	1,431.09
509a	RIPRAP, CLASS A	CM	786.61	0.00	1,460.98	561.90	2,809.48
509b	RIPRAP, CLASS B	CM	552.43	233.11	1,493.96	569.88	2,849.38
509c	RIPRAP, CLASS C	CM	537.62	242.83	1,528.53	577.24	2,886.21
509c1	RIPRAP, CLASS D	CM	537.62	291.39	1,573.56	600.64	3,003.21



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	964.00	218.23	3,666.53	1,212.19	6,060.95
509e	GROUTED RIPRAP, CLASS B	CM	719.91	407.69	3,473.68	1,150.32	5,751.61
509f	GROUTED RIPRAP, CLASS C	CM	690.52	388.31	3,529.42	1,152.06	5,760.31
509f1	GROUTED RIPRAP, CLASS D	CM	690.52	436.87	3,794.04	1,230.36	6,151.80
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,332.22	615.08	5,105.72	1,763.26	8,816.28
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	85.05	344.31	1,131.93	390.32	1,951.62
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	162.86	1,135.96	0.00	324.71	1,623.53
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	249.59	131.70	237.41	154.68	773.38
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	319.48	168.58	303.88	197.98	989.92
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	402.62	368.16	810.49	395.32	1,976.59
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	503.28	460.20	1,013.11	494.15	2,470.74
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	402.62	368.16	483.68	313.62	1,568.08
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	503.28	460.20	604.60	392.02	1,960.10
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	563.54	1,431.68	6,915.31	2,227.63	11,138.17
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,639.89	1,000.42	6,895.74	2,384.01	11,920.06
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	43.89	84.29	801.90	232.52	1,162.59
603	BRICK EDGING	M	14.77	0.00	60.48	18.81	94.06
604a	METAL GUARD RAIL	M	108.58	70.24	3,103.01	820.46	4,102.29
604b	METAL GUARD RAIL END PIECES	EACH	145.11	688.14	3,497.01	1,082.56	5,412.82
604d	STEEL POST FOR METAL GUARD RAIL	EACH	162.85	688.14	3,098.00	987.25	4,936.24
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,447.50	15,289.06	4,958.33	24,791.63
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,026.28	14,286.90	4,602.48	23,012.41

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	385.68	500.96	11,447.56	3,083.55	15,417.75
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	117.95	751.44	14,161.34	3,757.68	18,788.41
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	385.68	1,073.66	22,209.53	5,917.22	29,586.08
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,322.45	1,172.88	41,004.29	10,874.90	54,374.52
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	264.49	282.47	19,100.34	4,911.82	24,559.12
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	437.38	0.00	2,768.40	801.45	4,007.23
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	437.38	0.00	4,152.60	1,147.50	5,737.48
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.86	7.03	23.28	8.79	43.97
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.62	4.04	63.04	17.18	85.88
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.86	7.03	31.06	10.74	53.69
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.62	4.04	84.08	22.44	112.18
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	224.91	94.97	474.85
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	794.40	243.71	1,218.57
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.08	8.79	34.06	12.23	61.16
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.08	15.16	110.25	32.87	164.37
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.08	8.79	45.41	15.07	75.36
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.08	15.16	147.00	42.06	210.30
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	328.86	120.96	604.78
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	1,390.20	392.66	1,963.32
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	149.94	71.43	357.16
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	530.40	172.92	864.60

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	219.24	88.76	443.79
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	928.20	272.37	1,361.85
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	141.94	398.16	138.90	694.49
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	0.00	206.16	55.41	277.06
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	141.94	449.16	151.65	758.24
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	0.00	262.26	69.44	347.19
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	30.65	140.48	872.32	260.86	1,304.32
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	183.93	842.88	2,230.46	814.32	4,071.58
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	367.86	1,685.76	6,120.59	2,043.55	10,217.76
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	222.13	84.29	1,287.62	398.51	1,992.55
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	192.75	1,050.30	2.20	311.31	1,556.57

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**KHANEWAL**  
**(30)**



**SAMPAC INTERNATIONAL**

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 30 KHANEWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.09	19.27	0.00	5.09	25.44
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	11.11	321.21	2.18	83.63	418.13
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	31.50	774.41	4.91	202.70	1,013.52
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	125.98	3,097.64	19.65	810.82	4,054.10
103	STRIPPING	CM	3.91	188.78	0.00	48.17	240.86
104	COMPACTION OF NATURAL GROUND	SM	0.56	18.62	3.00	5.54	27.72
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	7.43	283.06	0.00	72.62	363.11
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	175.93	453.99	137.50	191.85	959.27
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	26.57	672.56	0.00	174.78	873.91
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	17.87	524.99	0.00	135.71	678.57
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.08	254.24	0.00	65.08	325.41
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	175.93	453.99	137.50	191.85	959.27
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	30.97	610.97	0.00	160.48	802.42
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	15.18	524.99	0.00	135.04	675.21
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	12.16	278.09	0.00	72.56	362.80
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	103.36	838.57	90.35	258.07	1,290.36
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	172.05	504.43	137.50	203.49	1,017.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	154.84	553.11	0.00	176.99	884.94
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	88.48	397.27	0.00	121.44	607.19
107d	GRANULAR BACKFILL	CM	52.64	241.40	1,092.12	346.54	1,732.70
107e	COMMON BACKFILL	CM	43.29	139.11	20.00	50.60	253.01
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.10	288.79	20.00	79.97	399.86
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	31.45	726.17	159.33	229.24	1,146.19

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	23.58	792.41	9.50	206.37	1,031.87
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	20.96	714.13	8.89	186.00	929.98
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.54	123.20	223.08	89.71	448.54
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.79	150.63	20.00	45.10	225.52
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	22.69	348.12	11.89	95.68	478.39
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.21	53.73	5.72	15.42	77.08
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.61	36.66	3.03	10.33	51.63
110	IMPROVED SUB-GARDE (CBR>20%)	CM	15.86	233.49	487.54	184.22	921.12
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.31	29.22	3.11	8.41	42.06
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.01	32.97	3.11	9.52	47.62
201	GRANULAR SUB-BASE	CM	12.84	288.11	1,361.29	415.56	2,077.79
202	AGGREGATE BASE	CM	15.23	350.20	1,562.50	481.98	2,409.91
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	122.15	2,856.48	12,286.73	3,816.34	19,081.70
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	122.15	2,856.48	12,582.74	3,890.34	19,451.71
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	131.47	2,983.43	12,276.07	3,847.74	19,238.72
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	131.47	2,983.43	12,598.56	3,928.37	19,641.83
204b	CEMENT STABILIZED BASE	CM	46.01	915.90	1,782.85	686.19	3,430.95
204c	CEMENT CONTENT	TON	162.52	0.00	8,820.00	2,245.63	11,228.15
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	394.06	2,422.77	84,850.73	21,916.89	109,584.45
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	394.06	2,422.77	84,850.73	21,916.89	109,584.45
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	140.73	233.81	1,399.35	443.47	2,217.36

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 30 KHANEWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	239.25	4,464.04	9,874.14	3,644.36	18,221.79
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	154.65	262.54	1,514.75	482.98	2,414.92
207a	DEEP PATCHING (0-15 cm)	SM	2.67	80.37	23.27	26.58	132.89
207b	DEEP PATCHING (15-30 cm)	SM	2.67	80.37	23.27	26.58	132.89
208	REINSTATEMENT OF ROAD SURFACE	SM	2.90	130.32	2.20	33.85	169.27
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.57	466.94	13.33	121.96	609.80
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.51	50.29	2.67	13.62	68.09
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.49	2.83	95.40	24.68	123.39
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.48	2.83	83.23	21.63	108.17
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	38.31	9.88	49.42
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	33.28	8.63	43.13
304a	SINGLE SURFACE TREATMENT	SM	1.29	14.01	171.83	46.78	233.91
304b	DOUBLE SURFACE TREATMENT	SM	1.88	26.92	352.22	95.26	476.28
304c	TRIPLE SURFACE TREATMENT	SM	3.17	37.83	415.09	114.02	570.10
304d	SEAL COAT	SM	1.20	7.81	48.65	14.41	72.07
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	109.18	2,815.00	13,194.92	4,029.78	20,148.88
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	109.18	2,694.06	14,010.06	4,203.33	21,016.63
307a	DENSE GRADED HOT BIT-MAC	CM	295.82	863.75	10,599.38	2,939.74	14,698.68
307b	OPEN GRADED HOT BIT-MAC	CM	295.82	863.75	10,247.55	2,851.78	14,258.89
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	46.02	1,236.12	4,884.74	1,541.72	7,708.61
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	344.91	2,013.10	87,117.17	22,368.80	111,843.98
309a	COLD MILLING, 0-30 mm	SM	1.58	61.27	25.40	22.06	110.31
309b	COLD MILLING, 0-50 mm	SM	2.63	102.12	42.33	36.77	183.85

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309c	COLD MILLING, 0-70 mm	SM	3.94	153.18	63.50	55.16	275.78
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	847.22	2,690.11	5,119.56	2,164.22	10,821.12
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	847.22	2,690.11	5,807.74	2,336.27	11,681.34
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	847.22	2,690.11	6,163.30	2,425.16	12,125.79
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	847.22	2,690.11	5,374.36	2,227.92	11,139.62
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	847.22	2,690.11	6,062.40	2,399.93	11,999.67
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	847.22	2,690.11	6,417.82	2,488.79	12,443.94
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	847.22	2,690.11	5,676.72	2,303.51	11,517.56
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	847.22	2,690.11	6,364.76	2,475.52	12,377.61
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	847.22	2,690.11	6,690.78	2,557.03	12,785.14
401b	CONCRETE CLASS B	CM	1,084.24	1,419.30	4,358.97	1,715.63	8,578.15
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	821.00	2,690.11	4,755.00	2,066.53	10,332.65
401cii	CONCRETE CLASS C (ON GROUND)	CM	821.00	2,690.11	5,443.04	2,238.54	11,192.70
401ciii	CONCRETE CLASS C (ELEVATED)	CM	821.00	2,690.11	5,798.60	2,327.43	11,637.15
401d	CONCRETE CLASS D1	CM	1,316.27	3,326.20	7,880.09	3,130.64	15,653.20
401e	CONCRETE CLASS Y	CM	1,825.71	898.44	6,465.20	2,297.34	11,486.69
401f	LEAN CONCRETE	CM	670.78	969.12	3,785.29	1,356.30	6,781.48
401gi	PRECAST CONCRETE, CLASS A1	CM	2,715.05	1,879.78	5,775.07	2,592.48	12,962.38
401gii	PRECAST CONCRETE CLASS A3	CM	2,715.05	1,879.78	6,365.39	2,740.06	13,700.28
401giii	PRECAST CONCRETE, CLASS B	CM	2,715.05	1,879.78	5,079.79	2,418.66	12,093.28
401giv	PRECAST CONCRETE CLASS D1	CM	2,715.05	1,879.78	7,888.35	3,120.79	15,603.97
401gv	PRECAST CONCRETE CLASS D2	CM	2,715.05	1,879.78	8,696.26	3,322.77	16,613.86
401gvi	PRECAST CONCRETE CLASS D3	CM	2,715.05	1,879.78	9,505.42	3,525.06	17,625.32
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,192.59	1,419.30	3,514.48	1,531.59	7,657.96
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,727.07	0.00	86,179.58	22,226.66	111,133.31



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,727.07	0.00	90,379.58	23,276.66	116,383.31
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,083.31	4,249.86	106,704.00	28,259.29	141,296.46
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,095.70	13,891.32	162,143.94	45,032.74	225,163.69
405b	LAUNCHING OF GIRDER	TON	95.34	967.47	0.00	265.70	1,328.51
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	178.81	0.00	2,198.31	594.28	2,971.39
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	178.81	0.00	1,028.14	301.74	1,508.68
406ci	STEEL EXPANSION JOINTS (Local)	KG	14.84	21.32	170.26	51.60	258.02
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	616.12	0.00	46,668.73	11,821.21	59,106.06
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	636.44	0.00	116,671.81	29,327.06	146,635.31
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	697.38	0.00	388,509.26	97,301.66	486,508.30
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	616.12	0.00	42,347.80	10,740.98	53,704.90
406dii	PVC WATER STOP 8" SIZE	M	154.45	0.00	399.81	138.56	692.82
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	64.21	0.00	327.03	97.81	489.05
406g	STEEL OR METAL BEARING DEVICES	KG	30.37	56.27	178.60	66.31	331.55
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	402.00	3,542.17	578.05	1,130.55	5,652.77
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	611.04	5,384.10	789.26	1,696.10	8,480.49
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	611.04	8,250.86	954.21	2,454.03	12,270.13
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,018.39	13,751.43	1,380.28	4,037.52	20,187.62

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	848.66	11,459.52	1,202.75	3,377.73	16,888.66
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,527.59	20,627.14	1,912.86	6,016.90	30,084.49
407h	PILE LOAD TEST UPTO 120 TON	EACH	34,113.54	105,999.36	110,479.80	62,648.18	313,240.88
407i	PILE LOAD TEST UPTO 240 TON	EACH	34,113.54	105,999.36	236,176.79	94,072.42	470,362.11
407j	PILE LOAD TEST UPTO 360 TON	EACH	92,620.74	117,448.00	321,168.71	132,809.36	664,046.81
407k	PILE LOAD TEST UPTO 550 TON	EACH	136,501.14	146,810.00	512,601.18	198,978.08	994,890.40
407l	PILE LOAD TEST UPTO 800 TON	EACH	202,022.28	176,172.00	830,364.93	302,139.80	1,510,699.01
407m	CONFIRMATORY BORING (NX SIZE)	M	283.90	3,272.30	25.00	895.30	4,476.50
407n	PERMANENT PILE CASING FOR PILES	Ton	372.05	4,885.57	105,648.48	27,726.53	138,632.64
410	BRICK WORK	CM	519.63	577.25	4,778.21	1,468.77	7,343.87
411a	STONE MASONRY RANDOM DRY	CM	546.41	210.72	1,634.87	598.00	2,990.00
411b	STONE MASONRY RANDOM WITH MORTAR	CM	646.42	335.46	3,175.02	1,039.23	5,196.13
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	748.92	210.72	2,005.57	741.30	3,706.51
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	851.43	335.46	3,392.18	1,144.77	5,723.84
411g	ROLL POINTING	SM	110.95	24.95	103.93	59.96	299.78
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,118.95	534.31	3,392.18	1,261.36	6,306.80
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	344.26	689.50	1,271.45	576.30	2,881.51
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	344.26	766.21	1,600.55	677.76	3,388.78
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	328.58	1,356.07	1,978.17	915.71	4,578.53
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	343.03	1,702.67	3,129.34	1,293.76	6,468.80
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	399.39	2,255.64	4,329.03	1,746.01	8,730.07
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	498.21	2,781.29	6,153.94	2,358.36	11,791.79

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	644.74	2,692.05	8,095.80	2,858.15	14,290.74
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	757.90	3,268.92	10,711.10	3,684.48	18,422.40
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	899.84	3,813.74	19,139.13	5,963.18	29,815.88
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	344.26	689.50	1,271.45	576.30	2,881.51
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	334.54	766.21	1,659.55	690.08	3,450.38
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	328.58	1,356.07	2,250.17	983.71	4,918.53
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	343.03	1,702.67	4,144.34	1,547.51	7,737.55
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	399.39	2,255.64	5,572.03	2,056.76	10,283.82
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	498.21	2,781.29	8,375.94	2,913.86	14,569.29
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	644.74	2,692.05	10,610.80	3,486.90	17,434.49
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	757.90	3,268.92	14,639.55	4,666.59	23,332.96
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	899.84	3,813.74	26,547.61	7,815.30	39,076.48
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	136.81	198.35	1,115.69	362.71	1,813.56
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,226.29	1,081.84	4,452.31	1,690.11	8,450.54
507a	STEEL WIRE MESH FOR GABIONS	KG	8.65	0.00	126.79	33.86	169.30
507b	ROCK FILL IN GABIONS	CM	145.52	0.00	1,214.45	339.99	1,699.97
508a	BRICK PAVING (SINGLE COURSE)	SM	171.68	47.96	398.51	154.54	772.70
508b	BRICK PAVING (DOUBLE COURSE)	SM	306.69	47.96	790.17	286.21	1,431.04
509a	RIPRAP, CLASS A	CM	745.54	0.00	1,289.94	508.87	2,544.35
509b	RIPRAP, CLASS B	CM	548.42	233.11	1,324.30	526.46	2,632.29
509c	RIPRAP, CLASS C	CM	537.85	242.83	1,380.01	540.17	2,700.86
509c1	RIPRAP, CLASS D	CM	537.85	291.39	1,425.04	563.57	2,817.85

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509d	GROUTED RIPRAP, CLASS A	CM	911.55	218.23	3,501.51	1,157.82	5,789.11
509e	GROUTED RIPRAP, CLASS B	CM	709.23	407.69	3,309.43	1,106.59	5,532.94
509f	GROUTED RIPRAP, CLASS C	CM	682.69	388.31	3,385.72	1,114.18	5,570.90
509f1	GROUTED RIPRAP, CLASS D	CM	682.69	436.87	3,651.40	1,192.74	5,963.71
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,232.85	615.08	5,076.74	1,731.17	8,655.84
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	74.30	344.31	1,088.44	376.76	1,883.82
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	155.74	1,135.96	0.00	322.93	1,614.63
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	234.47	131.70	209.62	143.95	719.73
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	300.12	168.58	268.31	184.25	921.26
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	382.13	368.16	788.44	384.68	1,923.41
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	477.66	460.20	985.55	480.85	2,404.27
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	382.13	368.16	460.87	302.79	1,513.96
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	477.66	460.20	576.09	378.49	1,892.45
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	561.53	1,431.68	6,941.05	2,233.56	11,167.81
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,555.58	1,000.42	6,923.66	2,369.92	11,849.58
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	41.28	84.29	790.99	229.14	1,145.69
603	BRICK EDGING	M	13.63	0.00	62.40	19.01	95.04
604a	METAL GUARD RAIL	M	103.83	70.24	3,163.74	834.45	4,172.26
604b	METAL GUARD RAIL END PIECES	EACH	136.30	688.14	3,564.52	1,097.24	5,486.20
604d	STEEL POST FOR METAL GUARD RAIL	EACH	155.73	688.14	3,157.94	1,000.45	5,002.26
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,769.64	1,447.50	15,355.02	4,893.04	24,465.19
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,769.64	1,026.28	14,343.50	4,534.85	22,674.27

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607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	358.30	500.96	11,438.77	3,074.51	15,372.54
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	109.38	751.44	14,148.15	3,752.24	18,761.21
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	358.30	1,073.66	22,284.92	5,929.22	29,646.10
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,160.02	1,172.88	41,117.38	10,862.57	54,312.85
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	232.00	282.47	19,156.38	4,917.71	24,588.57
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	450.68	0.00	2,768.40	804.77	4,023.85
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	450.68	0.00	4,152.60	1,150.82	5,754.10
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.48	7.03	23.74	8.81	44.07
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.49	4.04	64.62	17.54	87.69
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.48	7.03	31.68	10.80	53.99
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.49	4.04	86.18	22.93	114.65
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	123.28	35.16	229.41	96.96	484.81
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	123.28	60.65	814.26	249.55	1,247.74
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.60	8.79	34.74	12.28	61.41
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.60	15.16	111.83	33.15	165.73
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.60	8.79	46.32	15.18	75.89
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.60	15.16	149.10	42.47	212.33
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	123.28	35.16	335.44	123.47	617.35
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	123.28	60.65	1,410.06	398.50	1,992.49
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	102.28	35.16	152.94	72.59	362.97
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	102.28	60.65	543.66	176.65	883.24

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	102.28	35.16	223.62	90.27	451.33
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	102.28	60.65	941.46	276.10	1,380.49
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.84	141.94	398.16	138.74	693.68
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.84	0.00	206.16	55.25	276.26
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.84	141.94	449.16	151.49	757.43
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.84	0.00	262.26	69.28	346.38
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	27.92	140.48	861.64	257.51	1,287.55
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	167.51	842.88	2,218.04	807.11	4,035.54
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	335.02	1,685.76	6,073.43	2,023.55	10,117.76
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	202.56	84.29	1,276.34	390.80	1,953.99
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	180.80	1,050.30	2.20	308.33	1,541.63

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**KHUSHAB**  
**(32)**



**SAMPAC INTERNATIONAL**

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.04	19.27	0.00	5.08	25.39
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.45	321.21	2.18	83.46	417.31
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	30.02	774.41	4.91	202.33	1,011.67
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	120.06	3,097.64	19.65	809.34	4,046.69
103	STRIPPING	CM	3.61	188.78	0.00	48.10	240.49
104	COMPACTION OF NATURAL GROUND	SM	0.51	18.62	3.00	5.53	27.66
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.42	283.06	0.00	72.37	361.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	157.77	453.99	137.50	187.31	936.57
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.17	672.56	0.00	174.18	870.91
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.11	524.99	0.00	135.27	676.37
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.25	254.24	0.00	64.87	324.37
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	157.77	453.99	137.50	187.31	936.57
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.71	610.97	0.00	159.67	798.34
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.81	524.99	0.00	134.70	673.49
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.65	278.09	0.00	72.18	360.92
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	93.24	838.57	90.35	255.54	1,277.71
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	153.92	504.43	137.50	198.96	994.82
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	138.53	553.11	0.00	172.91	864.55
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	79.16	397.27	0.00	119.11	595.53
107d	GRANULAR BACKFILL	CM	48.83	241.40	914.89	301.28	1,506.40
107e	COMMON BACKFILL	CM	41.24	139.11	20.00	50.09	250.44
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.93	288.79	20.00	79.68	398.40
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	28.66	726.17	159.33	228.54	1,142.70



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	21.49	792.41	9.50	205.85	1,029.25
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.10	714.13	8.89	185.53	927.66
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.37	123.20	223.08	89.41	447.07
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.80	150.63	20.00	44.86	224.29
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.83	348.12	11.89	95.21	476.06
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.99	53.73	5.72	15.36	76.81
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.44	36.66	3.03	10.28	51.42
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.46	233.49	340.33	147.07	735.35
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.20	29.22	3.11	8.38	41.92
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.83	32.97	3.11	9.48	47.38
201	GRANULAR SUB-BASE	CM	11.59	288.11	780.82	270.13	1,350.64
202	AGGREGATE BASE	CM	13.59	350.20	1,156.99	380.19	1,900.97
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	114.95	2,856.48	11,416.08	3,596.88	17,984.38
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	114.95	2,856.48	11,744.20	3,678.91	18,394.54
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	123.39	2,983.43	11,405.55	3,628.09	18,140.47
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	123.39	2,983.43	11,759.95	3,716.69	18,583.47
204b	CEMENT STABILIZED BASE	CM	41.58	915.90	1,012.74	492.55	2,462.77
204c	CEMENT CONTENT	TON	162.52	0.00	8,820.00	2,245.63	11,228.15
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	353.26	2,422.77	84,051.00	21,706.76	108,533.78
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	353.26	2,422.77	84,051.00	21,706.76	108,533.78
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	137.40	233.81	836.49	301.92	1,509.61

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	221.79	4,464.04	9,137.65	3,455.87	17,279.35
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	151.50	262.54	983.39	349.36	1,746.78
207a	DEEP PATCHING (0-15 cm)	SM	2.41	80.37	27.38	27.54	137.70
207b	DEEP PATCHING (15-30 cm)	SM	2.41	80.37	27.38	27.54	137.70
208	REINSTATEMENT OF ROAD SURFACE	SM	2.61	130.32	2.20	33.78	168.91
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.61	466.94	13.33	121.72	608.61
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.32	50.29	2.67	13.57	67.85
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.44	2.83	94.60	24.47	122.33
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	82.43	21.42	107.11
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	37.99	9.80	49.00
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	32.96	8.54	42.70
304a	SINGLE SURFACE TREATMENT	SM	1.14	14.01	166.61	45.44	227.21
304b	DOUBLE SURFACE TREATMENT	SM	1.67	26.92	338.57	91.79	458.95
304c	TRIPLE SURFACE TREATMENT	SM	2.81	37.83	398.99	109.91	549.54
304d	SEAL COAT	SM	1.06	7.81	46.82	13.92	69.62
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	101.98	2,815.00	12,330.02	3,811.75	19,058.75
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	101.98	2,694.06	13,178.16	3,993.55	19,967.75
307a	DENSE GRADED HOT BIT-MAC	CM	281.42	863.75	9,907.21	2,763.09	13,815.47
307b	OPEN GRADED HOT BIT-MAC	CM	281.42	863.75	9,576.43	2,680.40	13,402.00
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	43.16	1,236.12	4,884.74	1,541.01	7,705.03
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	311.13	2,013.10	86,317.44	22,160.42	110,802.09
309a	COLD MILLING, 0-30 mm	SM	1.42	61.27	25.40	22.02	110.12
309b	COLD MILLING, 0-50 mm	SM	2.37	102.12	42.33	36.71	183.53

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.55	153.18	63.50	55.06	275.29
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	761.66	2,690.11	4,536.86	1,997.16	9,985.79
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	761.66	2,690.11	5,224.96	2,169.18	10,845.92
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	761.66	2,690.11	5,580.52	2,258.07	11,290.37
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	761.66	2,690.11	4,824.94	2,069.18	10,345.89
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	761.66	2,690.11	5,512.98	2,241.19	11,205.94
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	761.66	2,690.11	5,868.45	2,330.06	11,650.28
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	761.66	2,690.11	5,091.53	2,135.83	10,679.13
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	761.66	2,690.11	5,779.57	2,307.84	11,539.18
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	761.66	2,690.11	6,121.84	2,393.40	11,967.02
401b	CONCRETE CLASS B	CM	986.12	1,419.30	3,729.82	1,533.81	7,669.05
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	748.87	2,690.11	4,175.75	1,903.68	9,518.41
401cii	CONCRETE CLASS C (ON GROUND)	CM	748.87	2,690.11	4,863.79	2,075.69	10,378.46
401ciii	CONCRETE CLASS C (ELEVATED)	CM	748.87	2,690.11	5,219.35	2,164.58	10,822.91
401d	CONCRETE CLASS D1	CM	1,183.05	3,326.20	7,361.21	2,967.61	14,838.07
401e	CONCRETE CLASS Y	CM	1,648.74	898.44	5,870.55	2,104.43	10,522.16
401f	LEAN CONCRETE	CM	633.64	969.12	3,122.06	1,181.21	5,906.03
401gi	PRECAST CONCRETE, CLASS A1	CM	2,505.20	1,879.78	5,189.15	2,393.53	11,967.66
401gii	PRECAST CONCRETE CLASS A3	CM	2,505.20	1,879.78	5,796.63	2,545.40	12,727.01
401giii	PRECAST CONCRETE, CLASS B	CM	2,505.20	1,879.78	4,430.73	2,203.93	11,019.64
401giv	PRECAST CONCRETE CLASS D1	CM	2,505.20	1,879.78	7,368.50	2,938.37	14,691.85
401gv	PRECAST CONCRETE CLASS D2	CM	2,505.20	1,879.78	8,213.70	3,149.67	15,748.35
401gvi	PRECAST CONCRETE CLASS D3	CM	2,505.20	1,879.78	9,059.30	3,361.07	16,805.35
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,094.46	1,419.30	2,914.59	1,357.09	6,785.43
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,448.95	0.00	86,068.83	22,129.45	110,647.23

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,448.95	0.00	90,268.83	23,179.45	115,897.23
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,859.99	4,249.86	106,704.00	28,203.46	141,017.31
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,149.84	44,888.00	224,439.99
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	163.58	0.00	2,187.75	587.83	2,939.16
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	163.58	0.00	1,023.37	296.74	1,483.69
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.43	21.32	170.26	51.25	256.25
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	551.34	0.00	46,668.73	11,805.02	59,025.08
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	571.66	0.00	116,671.81	29,310.87	146,554.33
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	632.60	0.00	388,509.26	97,285.47	486,427.33
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	551.34	0.00	42,347.80	10,724.79	53,623.93
406dii	PVC WATER STOP 8" SIZE	M	141.67	0.00	399.81	135.37	676.85
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	57.36	0.00	326.24	95.90	479.51
406g	STEEL OR METAL BEARING DEVICES	KG	27.89	56.27	178.60	65.69	328.45
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.82	3,542.17	578.05	1,116.51	5,582.55
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	525.65	5,384.10	789.26	1,674.75	8,373.76
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	525.65	8,250.86	954.21	2,432.68	12,163.40
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	876.08	13,751.43	1,380.28	4,001.95	20,009.74

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	730.07	11,459.52	1,202.75	3,348.09	16,740.43
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,314.13	20,627.14	1,912.86	5,963.53	29,817.66
407h	PILE LOAD TEST UPTO 120 TON	EACH	33,419.46	105,999.36	122,015.72	65,358.64	326,793.18
407i	PILE LOAD TEST UPTO 240 TON	EACH	33,419.46	105,999.36	259,248.63	99,666.86	498,334.31
407j	PILE LOAD TEST UPTO 360 TON	EACH	91,926.66	117,448.00	355,776.47	141,287.78	706,438.91
407k	PILE LOAD TEST UPTO 550 TON	EACH	135,807.06	146,810.00	568,969.88	212,896.74	1,064,483.68
407l	PILE LOAD TEST UPTO 800 TON	EACH	201,022.80	176,172.00	920,817.03	324,502.96	1,622,514.79
407m	CONFIRMATORY BORING (NX SIZE)	M	260.77	3,272.30	25.00	889.52	4,447.59
407n	PERMANENT PILE CASING FOR PILES	Ton	342.13	4,885.57	105,647.45	27,718.79	138,593.94
410	BRICK WORK	CM	474.19	577.25	4,820.16	1,467.90	7,339.50
411a	STONE MASONRY RANDOM DRY	CM	500.86	210.72	1,164.16	468.93	2,344.67
411b	STONE MASONRY RANDOM WITH MORTAR	CM	595.87	335.46	2,514.64	861.49	4,307.46
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	688.37	210.72	1,472.87	592.99	2,964.95
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	780.88	335.46	2,717.23	958.39	4,791.96
411g	ROLL POINTING	SM	100.67	24.95	100.75	56.59	282.96
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,033.40	534.31	2,717.23	1,071.23	5,356.17
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	331.07	689.50	1,274.89	573.86	2,869.32
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	331.07	766.21	1,609.33	676.65	3,383.26
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	311.82	1,356.07	1,993.72	915.40	4,577.01
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	327.80	1,702.67	3,159.37	1,297.46	6,487.30
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	380.33	2,255.64	4,397.72	1,758.42	8,792.11
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	471.36	2,781.29	6,259.09	2,377.93	11,889.67

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	610.00	2,692.05	8,201.01	2,875.77	14,378.83
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	719.28	3,268.92	10,818.44	3,701.66	18,508.30
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	850.62	3,813.74	19,602.55	6,066.73	30,333.64
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	331.07	689.50	1,274.89	573.86	2,869.32
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	322.74	766.21	1,668.33	689.32	3,446.59
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	311.82	1,356.07	2,265.72	983.40	4,917.01
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	327.80	1,702.67	4,174.37	1,551.21	7,756.05
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	380.33	2,255.64	5,640.72	2,069.17	10,345.86
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	471.36	2,781.29	8,481.09	2,933.43	14,667.17
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	610.00	2,692.05	10,716.01	3,504.52	17,522.58
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	719.28	3,268.92	14,746.88	4,683.77	23,418.85
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	850.62	3,813.74	27,011.03	7,918.85	39,594.24
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	130.43	198.35	910.84	309.91	1,549.53
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,115.60	1,081.84	3,823.16	1,505.15	7,525.75
507a	STEEL WIRE MESH FOR GABIONS	KG	7.81	0.00	124.56	33.09	165.47
507b	ROCK FILL IN GABIONS	CM	140.99	0.00	774.50	228.87	1,144.36
508a	BRICK PAVING (SINGLE COURSE)	SM	159.23	47.96	405.07	153.07	765.33
508b	BRICK PAVING (DOUBLE COURSE)	SM	284.24	47.96	801.97	283.54	1,417.72
509a	RIPRAP, CLASS A	CM	686.64	0.00	819.23	376.47	1,882.33
509b	RIPRAP, CLASS B	CM	493.30	233.11	857.35	395.94	1,979.69
509c	RIPRAP, CLASS C	CM	481.91	242.83	886.78	402.88	2,014.39
509c1	RIPRAP, CLASS D	CM	481.91	291.39	931.81	426.28	2,131.40

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 32 KHUSHAB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	840.53	218.23	2,912.25	992.75	4,963.76
509e	GROUTED RIPRAP, CLASS B	CM	640.41	407.69	2,736.27	946.09	4,730.47
509f	GROUTED RIPRAP, CLASS C	CM	615.35	388.31	2,781.84	946.37	4,731.87
509f1	GROUTED RIPRAP, CLASS D	CM	615.35	436.87	3,031.73	1,020.99	5,104.94
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,149.60	615.08	4,522.63	1,571.83	7,859.13
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	71.43	344.31	919.04	333.69	1,668.47
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	142.79	1,135.96	0.00	319.69	1,598.44
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	216.94	131.70	133.12	120.44	602.21
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	277.68	168.58	170.40	154.16	770.82
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	351.69	368.16	695.68	353.88	1,769.41
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	439.61	460.20	869.60	442.35	2,211.76
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	351.69	368.16	364.64	271.12	1,355.61
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	439.61	460.20	455.80	338.90	1,694.52
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	504.14	1,431.68	6,626.18	2,140.50	10,702.49
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,432.05	1,000.42	6,607.12	2,259.90	11,299.49
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	38.17	84.29	720.82	210.82	1,054.09
603	BRICK EDGING	M	12.73	0.00	62.40	18.78	93.91
604a	METAL GUARD RAIL	M	95.19	70.24	3,170.50	833.98	4,169.92
604b	METAL GUARD RAIL END PIECES	EACH	126.12	688.14	3,571.84	1,096.53	5,482.63
604d	STEEL POST FOR METAL GUARD RAIL	EACH	142.77	688.14	3,164.74	998.91	4,994.57
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,629.38	1,447.50	14,705.73	4,695.65	23,478.25
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,629.38	1,026.28	13,695.53	4,337.80	21,688.98

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 32 KHUSHAB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	333.43	500.96	11,382.62	3,054.25	15,271.27
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	101.88	751.44	14,063.93	3,729.31	18,646.57
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	333.43	1,073.66	22,076.77	5,870.97	29,354.83
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,112.72	1,172.88	40,805.15	10,772.69	53,863.44
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	222.54	282.47	19,093.94	4,899.74	24,498.69
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	397.92	0.00	2,768.40	791.58	3,957.90
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	397.92	0.00	4,152.60	1,137.63	5,688.15
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.19	7.03	23.74	8.74	43.70
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.40	4.04	64.62	17.51	87.57
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.19	7.03	31.68	10.73	53.63
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.40	4.04	86.18	22.91	114.53
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	108.92	35.16	229.41	93.37	466.86
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	108.92	60.65	814.26	245.96	1,229.79
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.23	8.79	34.74	12.19	60.96
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.23	15.16	111.83	33.06	165.28
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.23	8.79	46.32	15.09	75.43
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.23	15.16	149.10	42.37	211.87
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	108.92	35.16	335.44	119.88	599.40
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	108.92	60.65	1,410.06	394.91	1,974.54
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	90.92	35.16	152.94	69.75	348.77
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	90.92	60.65	543.66	173.81	869.04



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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 32 KHUSHAB

<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	90.92	35.16	223.62	87.43	437.13
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	90.92	60.65	941.46	273.26	1,366.29
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.59	141.94	398.16	138.42	692.12
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.59	0.00	206.16	54.94	274.69
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.59	141.94	449.16	151.17	755.87
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.59	0.00	262.26	68.96	344.82
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	26.25	140.48	796.68	240.85	1,204.26
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	157.51	842.88	2,064.81	766.30	3,831.51
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	315.02	1,685.76	5,681.12	1,920.48	9,602.38
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	190.35	84.29	1,232.35	376.75	1,883.73
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	167.42	1,050.30	2.20	304.98	1,524.90

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**LAHORE**  
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**SAMPAC INTERNATIONAL**

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 37 LAHORE

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.24	19.27	0.00	5.13	25.63
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.21	321.21	2.18	83.90	419.50
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	35.47	774.41	4.91	203.70	1,018.49
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	141.88	3,097.64	19.65	814.79	4,073.96
103	STRIPPING	CM	4.15	188.78	0.00	48.23	241.16
104	COMPACTION OF NATURAL GROUND	SM	0.59	18.62	3.00	5.55	27.75
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.90	283.06	0.00	72.49	362.45
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	27.36	672.56	0.00	174.98	874.90
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	18.08	524.99	0.00	135.77	678.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.65	254.24	0.00	64.97	324.86
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	30.86	610.97	0.00	160.46	802.29
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	15.63	524.99	0.00	135.16	675.78
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.62	278.09	0.00	72.43	362.13
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	104.71	838.57	90.35	258.41	1,292.05
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	171.45	504.43	137.50	203.35	1,016.73
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	154.31	553.11	0.00	176.86	884.28
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	88.18	397.27	0.00	121.36	606.80
107d	GRANULAR BACKFILL	CM	56.32	241.40	1,046.89	336.15	1,680.77
107e	COMMON BACKFILL	CM	48.71	139.11	20.00	51.96	259.78
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.05	288.79	20.00	79.96	399.81
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	32.50	726.17	159.33	229.50	1,147.51

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 37 LAHORE

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	24.38	792.41	9.50	206.57	1,032.85
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	21.67	714.13	8.89	186.17	930.86
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.83	123.20	223.08	89.78	448.89
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.86	150.63	20.00	45.12	225.60
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	23.79	348.12	11.89	95.95	479.76
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.24	53.73	5.72	15.42	77.11
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.61	36.66	3.03	10.33	51.64
110	IMPROVED SUB-GARDE (CBR>20%)	CM	16.41	233.49	511.58	190.37	951.85
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.37	29.22	3.11	8.43	42.13
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.07	32.97	3.11	9.54	47.68
201	GRANULAR SUB-BASE	CM	13.01	288.11	1,456.07	439.30	2,196.49
202	AGGREGATE BASE	CM	15.09	350.20	1,618.13	495.85	2,479.27
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	134.33	2,856.48	12,126.98	3,779.45	18,897.23
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	134.33	2,856.48	12,407.21	3,849.50	19,247.52
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	143.85	2,983.43	12,116.37	3,810.91	19,054.57
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	143.85	2,983.43	12,422.90	3,887.55	19,437.73
204b	CEMENT STABILIZED BASE	CM	46.78	915.90	1,687.14	662.45	3,312.27
204c	CEMENT CONTENT	TON	200.00	0.00	8,925.00	2,281.25	11,406.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	394.27	2,422.77	84,115.59	21,733.15	108,665.77
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	394.27	2,422.77	84,115.59	21,733.15	108,665.77
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	165.78	233.81	1,433.44	458.26	2,291.28

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 37 LAHORE

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	255.63	4,464.04	9,749.13	3,617.20	18,086.00
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	183.32	262.54	1,579.63	506.37	2,531.86
207a	DEEP PATCHING (0-15 cm)	SM	2.72	80.37	19.49	25.64	128.22
207b	DEEP PATCHING (15-30 cm)	SM	2.72	80.37	19.49	25.64	128.22
208	REINSTATEMENT OF ROAD SURFACE	SM	2.92	130.32	2.20	33.86	169.30
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.19	466.94	13.33	121.87	609.33
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.44	50.29	2.67	13.60	68.00
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.49	2.83	94.66	24.50	122.48
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.47	2.83	82.50	21.45	107.25
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	38.02	9.81	49.05
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	32.99	8.55	42.76
304a	SINGLE SURFACE TREATMENT	SM	1.27	14.01	170.16	46.36	231.81
304b	DOUBLE SURFACE TREATMENT	SM	1.85	26.92	348.58	94.34	471.69
304c	TRIPLE SURFACE TREATMENT	SM	3.11	37.83	410.75	112.92	564.61
304d	SEAL COAT	SM	1.17	7.81	48.06	14.26	71.31
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	118.37	2,815.00	13,029.96	3,990.83	19,954.16
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	118.37	2,694.06	13,876.14	4,172.14	20,860.71
307a	DENSE GRADED HOT BIT-MAC	CM	332.05	863.75	10,461.59	2,914.35	14,571.74
307b	OPEN GRADED HOT BIT-MAC	CM	332.05	863.75	10,130.50	2,831.57	14,157.87
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	50.28	1,236.12	4,884.74	1,542.79	7,713.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	349.38	2,013.10	86,382.03	22,186.13	110,930.64
309a	COLD MILLING, 0-30 mm	SM	1.59	61.27	25.40	22.07	110.33
309b	COLD MILLING, 0-50 mm	SM	2.66	102.12	42.33	36.78	183.89

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.99	153.18	63.50	55.17	275.84
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	852.53	2,690.11	5,020.38	2,140.75	10,703.77
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	852.53	2,690.11	5,708.54	2,312.80	11,563.98
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	852.53	2,690.11	6,064.10	2,401.69	12,008.43
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	852.53	2,690.11	5,295.04	2,209.42	11,047.11
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	852.53	2,690.11	5,983.08	2,381.43	11,907.16
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	852.53	2,690.11	6,338.49	2,470.28	12,351.42
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	852.53	2,690.11	5,602.13	2,286.19	11,430.97
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	852.53	2,690.11	6,290.17	2,458.20	12,291.02
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	852.53	2,690.11	6,619.24	2,540.47	12,702.35
401b	CONCRETE CLASS B	CM	1,116.28	1,419.30	4,247.16	1,695.68	8,478.42
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	850.08	2,690.11	4,692.96	2,058.29	10,291.44
401cii	CONCRETE CLASS C (ON GROUND)	CM	850.08	2,690.11	5,381.00	2,230.30	11,151.49
401ciii	CONCRETE CLASS C (ELEVATED)	CM	850.08	2,690.11	5,736.56	2,319.19	11,595.94
401d	CONCRETE CLASS D1	CM	1,323.88	3,326.20	7,809.17	3,114.81	15,574.06
401e	CONCRETE CLASS Y	CM	1,853.60	898.44	6,359.35	2,277.85	11,389.23
401f	LEAN CONCRETE	CM	742.97	969.12	3,658.29	1,342.59	6,712.97
401gi	PRECAST CONCRETE, CLASS A1	CM	2,874.97	1,879.78	5,671.76	2,606.63	13,033.14
401gii	PRECAST CONCRETE CLASS A3	CM	2,874.97	1,879.78	6,294.21	2,762.24	13,811.21
401giii	PRECAST CONCRETE, CLASS B	CM	2,874.97	1,879.78	4,952.21	2,426.74	12,133.70
401giv	PRECAST CONCRETE CLASS D1	CM	2,874.97	1,879.78	7,817.03	3,142.95	15,714.73
401gv	PRECAST CONCRETE CLASS D2	CM	2,874.97	1,879.78	8,642.58	3,349.33	16,746.66
401gvi	PRECAST CONCRETE CLASS D3	CM	2,874.97	1,879.78	9,469.64	3,556.10	17,780.49
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,249.61	1,419.30	3,450.82	1,529.93	7,649.65
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,738.10	0.00	84,675.00	21,853.27	109,266.37

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,738.10	0.00	88,875.00	22,903.27	114,516.37
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,067.65	4,249.86	106,179.00	28,124.13	140,620.63
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,740.48	13,891.32	161,882.21	44,878.50	224,392.51
405b	LAUNCHING OF GIRDER	TON	87.07	967.47	0.00	263.64	1,318.18
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	2,178.14	591.09	2,955.45
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	1,019.10	301.33	1,506.65
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.12	21.32	170.26	51.67	258.36
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	46,622.50	11,809.19	59,045.95
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	639.26	0.00	116,556.25	29,298.88	146,494.39
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	714.26	0.00	388,301.25	97,253.88	486,269.39
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	42,322.38	10,734.16	53,670.79
406dii	PVC WATER STOP 8" SIZE	M	161.68	0.00	395.85	139.38	696.92
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	63.80	0.00	323.89	96.92	484.61
406g	STEEL OR METAL BEARING DEVICES	KG	31.86	56.27	178.60	66.68	333.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	369.85	3,542.17	578.05	1,122.52	5,612.58
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	562.17	5,384.10	789.26	1,683.88	8,419.41
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	562.17	8,250.86	954.21	2,441.81	12,209.05
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	936.95	13,751.43	1,380.28	4,017.16	20,085.82

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	780.79	11,459.52	1,202.75	3,360.77	16,803.83
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,405.42	20,627.14	1,912.86	5,986.36	29,931.78
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,438.44	105,999.36	99,865.24	61,575.76	307,878.80
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,438.44	105,999.36	214,947.67	90,346.37	451,731.84
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,438.44	117,448.00	289,325.03	129,802.87	649,014.34
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,438.44	146,810.00	460,734.58	193,495.76	967,478.78
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,391.32	176,172.00	747,137.13	292,425.11	1,462,125.56
407m	CONFIRMATORY BORING (NX SIZE)	M	297.96	3,272.30	25.00	898.82	4,494.08
407n	PERMANENT PILE CASING FOR PILES	Ton	391.36	4,885.57	105,122.45	27,599.85	137,999.23
410	BRICK WORK	CM	538.51	577.25	5,250.61	1,591.60	7,957.98
411a	STONE MASONRY RANDOM DRY	CM	571.22	210.72	1,735.71	629.41	3,147.06
411b	STONE MASONRY RANDOM WITH MORTAR	CM	683.19	335.46	3,196.14	1,053.70	5,268.49
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	787.12	210.72	2,090.14	771.99	3,859.97
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	891.04	335.46	3,419.22	1,161.43	5,807.16
411g	ROLL POINTING	SM	113.70	24.95	102.69	60.34	301.68
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,186.94	534.31	3,419.22	1,285.12	6,425.58
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	394.35	689.50	1,041.03	531.22	2,656.09
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	394.35	766.21	1,265.04	606.40	3,031.99
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	367.13	1,356.07	1,449.26	793.11	3,965.57
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	388.30	1,702.67	2,011.36	1,025.58	5,127.91
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	449.14	2,255.64	3,278.78	1,495.89	7,479.44
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	553.46	2,781.29	4,971.88	2,076.66	10,383.29



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	716.24	2,692.05	6,522.81	2,482.77	12,413.87
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	846.89	3,268.92	8,332.28	3,112.02	15,560.12
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	998.01	3,813.74	12,684.62	4,374.09	21,870.46
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	394.35	689.50	1,497.22	645.26	3,226.32
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	385.47	766.21	1,821.59	743.32	3,716.58
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	367.13	1,356.07	2,087.92	952.78	4,763.90
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	388.30	1,702.67	2,905.49	1,249.11	6,245.57
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	449.14	2,255.64	4,382.17	1,771.74	8,858.68
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	553.46	2,781.29	7,635.24	2,742.50	13,712.49
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	716.24	2,692.05	8,425.21	2,958.37	14,791.87
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	846.89	3,268.92	11,208.98	3,831.20	19,155.99
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	998.01	3,813.74	15,730.49	5,135.56	25,677.79
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	154.17	198.35	1,079.68	358.05	1,790.26
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,263.19	1,081.84	4,341.61	1,671.66	8,358.29
507a	STEEL WIRE MESH FOR GABIONS	KG	8.78	0.00	124.40	33.30	166.48
507b	ROCK FILL IN GABIONS	CM	169.00	0.00	1,307.95	369.24	1,846.19
508a	BRICK PAVING (SINGLE COURSE)	SM	183.61	47.96	448.98	170.14	850.70
508b	BRICK PAVING (DOUBLE COURSE)	SM	327.54	47.96	892.32	316.96	1,584.78
509a	RIPRAP, CLASS A	CM	786.61	0.00	1,390.78	544.35	2,721.73
509b	RIPRAP, CLASS B	CM	552.43	233.11	1,424.33	552.47	2,762.33
509c	RIPRAP, CLASS C	CM	537.62	242.83	1,458.33	559.69	2,798.46
509c1	RIPRAP, CLASS D	CM	537.62	291.39	1,503.36	583.09	2,915.46

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	964.00	218.23	3,555.77	1,184.50	5,922.50
509e	GROUTED RIPRAP, CLASS B	CM	719.91	407.69	3,367.70	1,123.83	5,619.14
509f	GROUTED RIPRAP, CLASS C	CM	690.52	388.31	3,421.36	1,125.05	5,625.24
509f1	GROUTED RIPRAP, CLASS D	CM	690.52	436.87	3,680.58	1,201.99	6,009.97
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,332.22	615.08	5,000.10	1,736.85	8,684.25
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	85.05	344.31	1,040.33	367.42	1,837.12
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	162.86	1,135.96	0.00	324.71	1,623.53
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	249.59	131.70	226.00	151.82	759.12
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	319.48	168.58	289.28	194.33	971.67
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	402.62	368.16	783.02	388.45	1,942.26
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	503.28	460.20	978.77	485.56	2,427.82
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	402.62	368.16	463.84	308.66	1,543.28
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	503.28	460.20	579.80	385.82	1,929.10
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	563.54	1,431.68	6,824.16	2,204.85	11,024.23
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,639.89	1,000.42	6,804.59	2,361.22	11,806.11
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	43.89	84.29	792.67	230.21	1,151.06
603	BRICK EDGING	M	14.77	0.00	72.00	21.69	108.46
604a	METAL GUARD RAIL	M	108.58	70.24	3,103.01	820.46	4,102.29
604b	METAL GUARD RAIL END PIECES	EACH	145.11	688.14	3,497.01	1,082.56	5,412.82
604d	STEEL POST FOR METAL GUARD RAIL	EACH	162.85	688.14	3,098.00	987.25	4,936.24
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,447.50	15,095.44	4,909.92	24,549.61
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,026.28	14,101.69	4,556.18	22,780.90

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### Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	385.68	500.96	11,440.63	3,081.82	15,409.09
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	117.95	751.44	14,150.95	3,755.08	18,775.42
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	385.68	1,073.66	22,168.16	5,906.87	29,534.37
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,322.45	1,172.88	40,942.24	10,859.39	54,296.95
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	264.49	282.47	19,087.93	4,908.72	24,543.61
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	437.38	0.00	2,768.40	801.45	4,007.23
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	437.38	0.00	4,152.60	1,147.50	5,737.48
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.86	7.03	23.28	8.79	43.97
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.62	4.04	63.04	17.18	85.88
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.86	7.03	31.06	10.74	53.69
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.62	4.04	84.08	22.44	112.18
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	224.91	94.97	474.85
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	794.40	243.71	1,218.57
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.08	8.79	34.06	12.23	61.16
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.08	15.16	110.25	32.87	164.37
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.08	8.79	45.41	15.07	75.36
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.08	15.16	147.00	42.06	210.30
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	328.86	120.96	604.78
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	1,390.20	392.66	1,963.32
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	149.94	71.43	357.16
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	530.40	172.92	864.60

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Dcode 37 LAHORE

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	219.24	88.76	443.79
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	928.20	272.37	1,361.85
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	141.94	398.16	138.90	694.49
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	0.00	206.16	55.41	277.06
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	141.94	449.16	151.65	758.24
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	0.00	262.26	69.44	347.19
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	30.65	140.48	862.40	258.38	1,291.92
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	183.93	842.88	2,206.54	808.34	4,041.69
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	367.86	1,685.76	6,066.69	2,030.08	10,150.39
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	222.13	84.29	1,255.47	390.47	1,952.36
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	192.75	1,050.30	2.20	311.31	1,556.57

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**LAYYAH**  
**(40)**



**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 40 LAYYAH

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	1,140.33	357.14	1,785.70
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	470.14	179.41	897.03
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	1,292.67	398.01	1,990.06
202	AGGREGATE BASE	CM	13.30	350.20	1,496.40	464.97	2,324.87
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	12,149.40	3,778.83	18,894.13
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	12,444.86	3,852.69	19,263.45
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	12,138.80	3,809.96	19,049.81
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	12,460.55	3,890.40	19,452.01
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	1,703.80	665.03	3,325.15
204c	CEMENT CONTENT	TON	150.00	0.00	8,652.00	2,200.50	11,002.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	84,254.17	21,755.46	108,777.31
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	84,254.17	21,755.46	108,777.31
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	1,330.55	423.18	2,115.89

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205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	9,761.41	3,609.56	18,047.78
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,665.36	517.30	2,586.48
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	26.66	27.34	136.71
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	26.66	27.34	136.71
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	94.80	24.51	122.57
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	82.64	21.47	107.35
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.08	9.82	49.09
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.04	8.56	42.80
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	170.36	46.37	231.87
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	348.90	94.36	471.82
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	411.16	112.94	564.69
304d	SEAL COAT	SM	1.04	7.81	48.22	14.27	71.34
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	13,051.17	3,990.91	19,954.53
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	13,861.63	4,163.29	20,816.43
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	10,483.50	2,903.41	14,517.06
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	10,134.59	2,816.18	14,080.92
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	86,520.61	22,209.12	111,045.62
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45



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309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	4,757.19	2,047.46	10,237.30
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	5,445.37	2,219.50	11,097.52
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	5,800.93	2,308.39	11,541.97
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	5,018.09	2,112.68	10,563.42
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	5,706.13	2,284.69	11,423.47
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	6,061.55	2,373.55	11,867.75
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,345.66	2,194.58	10,972.89
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	6,033.70	2,366.59	11,832.94
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,361.25	2,448.47	12,242.37
401b	CONCRETE CLASS B	CM	955.51	1,419.30	4,013.97	1,597.19	7,985.97
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	4,504.26	1,979.72	9,898.62
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	5,192.30	2,151.73	10,758.67
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	5,547.86	2,240.62	11,203.12
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	7,481.06	2,990.19	14,950.94
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	6,095.13	2,149.27	10,746.37
401f	LEAN CONCRETE	CM	602.00	969.12	3,437.94	1,252.26	6,261.32
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	5,413.73	2,425.68	12,128.40
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	6,035.62	2,581.15	12,905.77
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	4,733.57	2,255.64	11,278.21
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	7,488.71	2,944.43	14,722.13
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,297.88	3,146.72	15,733.59
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,109.07	3,349.52	16,747.58
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	3,303.66	1,444.62	7,223.09
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,656.00	22,261.21	111,306.07

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	90,856.00	23,311.21	116,556.07
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,128.80	44,882.74	224,413.69
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,187.97	586.50	2,932.48
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,023.59	295.40	1,477.01
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	326.44	95.64	478.19
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	119,983.80	64,287.26	321,436.28
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	255,184.79	98,087.50	490,437.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	349,680.71	138,073.64	690,368.21
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	559,041.18	207,879.26	1,039,396.30
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	904,884.93	316,763.93	1,583,819.66
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	4,845.17	1,470.27	7,351.36
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,844.92	634.74	3,173.71
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	3,139.39	1,012.04	5,060.22
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	2,208.09	770.54	3,852.68
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	3,406.84	1,123.91	5,619.55
411g	ROLL POINTING	SM	97.67	24.95	99.65	55.57	277.83
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	3,406.84	1,233.62	6,168.10
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,274.29	568.86	2,844.31
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,609.02	671.72	3,358.61
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,994.16	911.44	4,557.21
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	3,161.46	1,293.43	6,467.14
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,404.65	1,755.03	8,775.16
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	6,270.48	2,374.81	11,874.04

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	8,212.25	2,870.84	14,354.21
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	10,829.29	3,694.98	18,474.92
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	19,661.27	6,070.71	30,353.56
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,274.29	568.86	2,844.31
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	1,668.02	684.39	3,421.95
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,266.16	979.44	4,897.21
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	4,176.46	1,547.18	7,735.89
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,647.65	2,065.78	10,328.91
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	8,492.48	2,930.31	14,651.54
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	10,727.25	3,499.59	17,497.96
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	14,757.73	4,677.09	23,385.47
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	27,069.75	7,922.83	39,614.16
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	1,156.22	369.48	1,847.38
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	4,105.52	1,567.05	7,835.24
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	124.56	33.04	165.20
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	1,409.88	385.53	1,927.63
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	409.56	152.56	762.81
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	811.19	282.97	1,414.85
509a	RIPRAP, CLASS A	CM	660.97	0.00	1,499.99	540.24	2,701.20
509b	RIPRAP, CLASS B	CM	480.78	233.11	1,532.66	561.64	2,808.19
509c	RIPRAP, CLASS C	CM	470.65	242.83	1,567.54	570.25	2,851.26
509c1	RIPRAP, CLASS D	CM	470.65	291.39	1,612.58	593.65	2,968.26

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509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	3,552.81	1,144.91	5,724.55
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	3,375.61	1,101.55	5,507.74
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	3,423.79	1,102.79	5,513.96
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,668.75	1,176.17	5,880.87
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	4,715.42	1,607.51	8,037.53
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	1,139.05	387.65	1,938.27
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	243.75	145.95	729.73
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	312.00	186.81	934.05
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	784.27	372.78	1,863.88
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	980.34	465.97	2,329.85
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	453.63	290.11	1,450.57
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	567.04	362.64	1,813.21
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	6,768.49	2,173.00	10,864.99
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	6,751.65	2,282.73	11,413.63
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	737.83	214.70	1,073.48
603	BRICK EDGING	M	12.17	0.00	63.36	18.88	94.41
604a	METAL GUARD RAIL	M	91.85	70.24	3,170.50	833.15	4,165.75
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,571.84	1,095.27	5,476.37
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,164.74	997.66	4,988.31
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	15,067.21	4,751.59	23,757.95
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	14,050.02	4,391.99	21,959.94

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 40 LAYYAH

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,476.93	3,074.28	15,371.42
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,190.35	3,759.82	18,799.11
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,160.00	5,888.23	29,441.13
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	40,930.00	10,787.93	53,939.67
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,118.91	4,902.79	24,513.93
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,768.40	790.02	3,950.08
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,152.60	1,136.07	5,680.33
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 40 LAYYAH

<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	811.40	244.22	1,221.10
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,112.98	776.47	3,882.33
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	5,775.38	1,940.28	9,701.42
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,303.13	392.19	1,960.95
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**LODHRAN**  
**(41A)**



**SAMPAC INTERNATIONAL**



CLIENT:

CSR - 2014

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.95	19.27	0.00	5.05	25.27
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.46	321.21	2.18	83.21	416.06
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	27.28	774.41	4.91	201.65	1,008.25
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	109.11	3,097.64	19.65	806.60	4,033.00
103	STRIPPING	CM	3.25	188.78	0.00	48.01	240.03
104	COMPACTION OF NATURAL GROUND	SM	0.46	18.62	3.00	5.52	27.60
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.64	283.06	0.00	72.17	360.87
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	140.38	453.99	137.50	182.97	914.83
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	21.61	672.56	0.00	173.54	867.71
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	14.36	524.99	0.00	134.84	674.19
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.61	254.24	0.00	64.71	323.57
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	140.38	453.99	137.50	182.97	914.83
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	24.63	610.97	0.00	158.90	794.50
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	12.35	524.99	0.00	134.33	671.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.40	278.09	0.00	71.87	359.36
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	83.15	838.57	90.35	253.02	1,265.09
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	136.85	504.43	137.50	194.69	973.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	123.16	553.11	0.00	169.07	845.34
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	70.38	397.27	0.00	116.91	584.55
107d	GRANULAR BACKFILL	CM	43.98	241.40	1,121.62	351.75	1,758.74
107e	COMMON BACKFILL	CM	37.47	139.11	20.00	49.15	245.73
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	8.82	288.79	20.00	79.40	397.02
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	25.65	726.17	159.33	227.79	1,138.94

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	19.23	792.41	9.50	205.29	1,026.43
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	17.10	714.13	8.89	185.03	925.15
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.16	123.20	223.08	89.11	445.55
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.84	150.63	20.00	44.62	223.08
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	18.69	348.12	11.89	94.68	473.38
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.78	53.73	5.72	15.31	76.54
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.28	36.66	3.03	10.25	51.23
110	IMPROVED SUB-GARDE (CBR>20%)	CM	12.94	233.49	469.31	178.94	894.69
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.08	29.22	3.11	8.35	41.76
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.64	32.97	3.11	9.43	47.14
201	GRANULAR SUB-BASE	CM	10.33	288.11	1,289.41	396.96	1,984.82
202	AGGREGATE BASE	CM	12.07	350.20	1,493.26	463.88	2,319.41
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	104.02	2,856.48	12,222.13	3,795.66	18,978.29
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	104.02	2,856.48	12,521.25	3,870.44	19,352.19
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	111.56	2,983.43	12,211.46	3,826.62	19,133.08
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	111.56	2,983.43	12,537.13	3,908.03	19,540.16
204b	CEMENT STABILIZED BASE	CM	37.10	915.90	1,700.05	663.26	3,316.31
204c	CEMENT CONTENT	TON	150.00	0.00	8,925.00	2,268.75	11,343.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	314.29	2,422.77	85,068.63	21,951.42	109,757.11
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	314.29	2,422.77	85,068.63	21,951.42	109,757.11
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	125.85	233.81	1,327.29	421.74	2,108.68

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	199.68	4,464.04	9,812.58	3,619.07	18,095.37
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	138.93	262.54	1,437.73	459.80	2,298.99
207a	DEEP PATCHING (0-15 cm)	SM	2.15	80.37	25.94	27.11	135.57
207b	DEEP PATCHING (15-30 cm)	SM	2.15	80.37	25.94	27.11	135.57
208	REINSTATEMENT OF ROAD SURFACE	SM	2.32	130.32	2.20	33.71	168.56
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	5.83	466.94	13.33	121.53	607.63
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.17	50.29	2.67	13.53	67.66
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.39	2.83	95.62	24.71	123.54
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.38	2.83	83.45	21.66	108.32
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.16	1.03	38.40	9.90	49.48
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.16	1.03	33.37	8.64	43.19
304a	SINGLE SURFACE TREATMENT	SM	1.02	14.01	171.81	46.71	233.55
304b	DOUBLE SURFACE TREATMENT	SM	1.48	26.92	351.83	95.06	475.29
304c	TRIPLE SURFACE TREATMENT	SM	2.50	37.83	414.63	113.74	568.69
304d	SEAL COAT	SM	0.94	7.81	48.61	14.34	71.70
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	92.06	2,815.00	13,133.08	4,010.03	20,050.17
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	92.06	2,694.06	13,951.85	4,184.49	20,922.45
307a	DENSE GRADED HOT BIT-MAC	CM	255.60	863.75	10,552.37	2,917.93	14,589.64
307b	OPEN GRADED HOT BIT-MAC	CM	255.60	863.75	10,199.46	2,829.70	14,148.51
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	39.02	1,236.12	4,884.74	1,539.97	7,699.85
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	277.43	2,013.10	87,335.07	22,406.40	112,032.01
309a	COLD MILLING, 0-30 mm	SM	1.27	61.27	25.40	21.98	109.92
309b	COLD MILLING, 0-50 mm	SM	2.11	102.12	42.33	36.64	183.21

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.17	153.18	63.50	54.96	274.81
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	678.38	2,690.11	5,349.40	2,179.47	10,897.37
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	678.38	2,690.11	6,037.57	2,351.52	11,757.59
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	678.38	2,690.11	6,393.13	2,440.41	12,202.04
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	678.38	2,690.11	5,600.28	2,242.19	11,210.97
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	678.38	2,690.11	6,288.32	2,414.20	12,071.02
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	678.38	2,690.11	6,643.74	2,503.06	12,515.30
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	678.38	2,690.11	5,867.14	2,308.91	11,544.55
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	678.38	2,690.11	6,555.18	2,480.92	12,404.60
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	678.38	2,690.11	6,882.80	2,562.82	12,814.12
401b	CONCRETE CLASS B	CM	881.92	1,419.30	4,562.27	1,715.87	8,579.35
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	670.43	2,690.11	4,864.36	2,056.23	10,281.13
401cii	CONCRETE CLASS C (ON GROUND)	CM	670.43	2,690.11	5,552.40	2,228.24	11,141.18
401ciii	CONCRETE CLASS C (ELEVATED)	CM	670.43	2,690.11	5,907.96	2,317.13	11,585.63
401d	CONCRETE CLASS D1	CM	1,053.62	3,326.20	8,146.73	3,131.64	15,658.18
401e	CONCRETE CLASS Y	CM	1,470.86	898.44	6,699.98	2,267.32	11,336.60
401f	LEAN CONCRETE	CM	574.15	969.12	3,988.71	1,382.99	6,914.97
401gi	PRECAST CONCRETE, CLASS A1	CM	2,251.87	1,879.78	6,004.23	2,533.97	12,669.85
401gii	PRECAST CONCRETE CLASS A3	CM	2,251.87	1,879.78	6,557.47	2,672.28	13,361.40
401giii	PRECAST CONCRETE, CLASS B	CM	2,251.87	1,879.78	5,281.21	2,353.21	11,766.07
401giv	PRECAST CONCRETE CLASS D1	CM	2,251.87	1,879.78	8,155.42	3,071.77	15,358.83
401gv	PRECAST CONCRETE CLASS D2	CM	2,251.87	1,879.78	8,963.00	3,273.66	16,368.30
401gvi	PRECAST CONCRETE CLASS D3	CM	2,251.87	1,879.78	9,770.81	3,475.61	17,378.07
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	981.92	1,419.30	3,650.29	1,512.88	7,564.38
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,180.32	0.00	86,506.11	22,171.61	110,858.04

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,180.32	0.00	90,706.11	23,221.61	116,108.04
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,652.50	4,249.86	106,704.00	28,151.59	140,757.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,071.82	13,891.32	162,160.27	44,780.85	223,904.26
405b	LAUNCHING OF GIRDER	TON	71.50	967.47	0.00	259.74	1,298.72
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	146.60	0.00	2,198.55	586.29	2,931.43
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	146.60	0.00	1,028.38	293.75	1,468.73
406ci	STEEL EXPANSION JOINTS (Local)	KG	11.98	21.32	170.26	50.89	254.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	490.20	0.00	46,668.73	11,789.73	58,948.66
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	508.95	0.00	116,671.81	29,295.19	146,475.95
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	565.20	0.00	388,509.26	97,268.62	486,343.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	490.20	0.00	42,347.80	10,709.50	53,547.50
406dii	PVC WATER STOP 8" SIZE	M	127.09	0.00	399.81	131.72	658.62
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.90
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	50.97	0.00	327.24	94.55	472.77
406g	STEEL OR METAL BEARING DEVICES	KG	25.03	56.27	178.60	64.97	324.87
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	302.99	3,542.17	578.05	1,105.80	5,529.01
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	460.54	5,384.10	789.26	1,658.47	8,292.37
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	460.54	8,250.86	954.21	2,416.40	12,082.01
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	767.56	13,751.43	1,380.28	3,974.82	19,874.08

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	639.64	11,459.52	1,202.75	3,325.48	16,627.38
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,151.34	20,627.14	1,912.86	5,922.84	29,614.18
407h	PILE LOAD TEST UPTO 120 TON	EACH	30,644.94	105,999.36	117,963.32	63,651.91	318,259.53
407i	PILE LOAD TEST UPTO 240 TON	EACH	30,644.94	105,999.36	251,143.83	96,947.03	484,735.16
407j	PILE LOAD TEST UPTO 360 TON	EACH	84,644.94	117,448.00	343,619.27	136,428.05	682,140.26
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,144.94	146,810.00	549,168.38	205,280.83	1,026,404.15
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,248.68	176,172.00	889,042.53	312,615.80	1,563,079.01
407m	CONFIRMATORY BORING (NX SIZE)	M	234.01	3,272.30	25.00	882.83	4,414.14
407n	PERMANENT PILE CASING FOR PILES	Ton	307.15	4,885.57	105,648.48	27,710.30	138,551.51
410	BRICK WORK	CM	424.60	577.25	4,816.43	1,454.57	7,272.84
411a	STONE MASONRY RANDOM DRY	CM	449.18	210.72	1,559.57	554.87	2,774.33
411b	STONE MASONRY RANDOM WITH MORTAR	CM	535.43	335.46	3,312.63	1,045.88	5,229.41
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	617.94	210.72	1,924.24	688.22	3,441.12
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	700.44	335.46	3,472.79	1,127.17	5,635.86
411g	ROLL POINTING	SM	89.96	24.95	107.59	55.63	278.13
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	929.20	534.31	3,472.79	1,234.07	6,170.36
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	301.77	689.50	1,307.65	574.73	2,873.65
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	301.77	766.21	1,657.85	681.46	3,407.29
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	282.98	1,356.07	2,061.09	925.04	4,625.18
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	298.16	1,702.67	3,262.28	1,315.78	6,578.88
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	345.54	2,255.64	4,586.16	1,796.83	8,984.17
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	427.32	2,781.29	6,537.00	2,436.40	12,182.02

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	553.01	2,692.05	8,478.90	2,930.99	14,654.95
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	652.76	3,268.92	11,113.41	3,758.77	18,793.86
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	770.93	3,813.74	20,649.14	6,308.45	31,542.26
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	301.77	689.50	1,307.65	574.73	2,873.65
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	294.48	766.21	1,716.85	694.39	3,471.93
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	282.98	1,356.07	2,333.09	993.04	4,965.18
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	298.16	1,702.67	4,277.28	1,569.53	7,847.63
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	345.54	2,255.64	5,829.16	2,107.58	10,537.92
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	427.32	2,781.29	8,759.00	2,991.90	14,959.52
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	553.01	2,692.05	10,993.90	3,559.74	17,798.70
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	652.76	3,268.92	15,041.85	4,740.88	23,704.41
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	770.93	3,813.74	28,057.62	8,160.57	40,802.86
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	118.54	198.35	1,138.49	363.84	1,819.22
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	997.82	1,081.84	4,656.71	1,684.09	8,420.47
507a	STEEL WIRE MESH FOR GABIONS	KG	6.97	0.00	126.79	33.44	167.20
507b	ROCK FILL IN GABIONS	CM	128.82	0.00	1,144.17	318.25	1,591.24
508a	BRICK PAVING (SINGLE COURSE)	SM	143.39	47.96	402.77	148.53	742.64
508b	BRICK PAVING (DOUBLE COURSE)	SM	255.89	47.96	797.83	275.42	1,377.10
509a	RIPRAP, CLASS A	CM	616.81	0.00	1,214.64	457.86	2,289.30
509b	RIPRAP, CLASS B	CM	439.45	233.11	1,249.60	480.54	2,402.70
509c	RIPRAP, CLASS C	CM	428.71	242.83	1,304.71	494.06	2,470.31
509c1	RIPRAP, CLASS D	CM	428.71	291.39	1,349.74	517.46	2,587.30

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	755.37	218.23	3,562.53	1,134.03	5,670.15
509e	GROUTED RIPRAP, CLASS B	CM	571.30	407.69	3,356.85	1,083.96	5,419.80
509f	GROUTED RIPRAP, CLASS C	CM	548.59	388.31	3,438.45	1,093.84	5,469.18
509f1	GROUTED RIPRAP, CLASS D	CM	548.59	436.87	3,722.04	1,176.88	5,884.38
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,037.10	615.08	5,305.93	1,739.53	8,697.64
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	65.10	344.31	1,120.01	382.35	1,911.77
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	128.05	1,135.96	0.00	316.00	1,580.02
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	195.19	131.70	197.38	131.07	655.33
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	249.84	168.58	252.64	167.76	838.82
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	315.84	368.16	814.78	374.70	1,873.49
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	394.80	460.20	1,018.48	468.37	2,341.86
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	315.84	368.16	482.37	291.59	1,457.97
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	394.80	460.20	602.96	364.49	1,822.46
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	448.80	1,431.68	7,077.28	2,239.44	11,197.19
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,286.21	1,000.42	7,059.53	2,336.54	11,682.71
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	34.33	84.29	778.99	224.40	1,122.01
603	BRICK EDGING	M	11.49	0.00	62.40	18.47	92.36
604a	METAL GUARD RAIL	M	85.37	70.24	3,170.50	831.53	4,157.64
604b	METAL GUARD RAIL END PIECES	EACH	113.47	688.14	3,571.84	1,093.36	5,466.81
604d	STEEL POST FOR METAL GUARD RAIL	EACH	128.04	688.14	3,164.74	995.23	4,976.15
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,386.49	1,447.50	15,586.11	4,855.02	24,275.12
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,386.49	1,026.28	14,570.70	4,495.87	22,479.34



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## Rate Analysis Summary (Construction)

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Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	300.59	500.96	11,437.29	3,059.71	15,298.55
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	91.88	751.44	14,145.94	3,747.31	18,736.57
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	300.59	1,073.66	22,358.51	5,933.19	29,665.95
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,013.39	1,172.88	41,227.77	10,853.51	54,267.55
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	202.68	282.47	19,178.46	4,915.90	24,579.51
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	352.08	0.00	2,768.40	780.12	3,900.60
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	352.08	0.00	4,152.60	1,126.17	5,630.85
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.78	7.03	23.74	8.64	43.19
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.26	4.04	64.62	17.48	87.40
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.78	7.03	31.68	10.62	53.12
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.26	4.04	86.18	22.87	114.36
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	96.40	35.16	229.41	90.24	451.21
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	96.40	60.65	814.26	242.83	1,214.14
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.73	8.79	34.74	12.06	60.32
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.73	15.16	111.83	32.93	164.64
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	4.73	8.79	46.32	14.96	74.80
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	4.73	15.16	149.10	42.25	211.24
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	96.40	35.16	335.44	116.75	583.75
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	96.40	60.65	1,410.06	391.78	1,958.89
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	80.65	35.16	152.94	67.19	335.94
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	80.65	60.65	543.66	171.24	856.20

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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 41A LODHRAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	80.65	35.16	223.62	84.86	424.29
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	80.65	60.65	941.46	270.69	1,353.45
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.19	141.94	398.16	138.07	690.36
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.19	0.00	206.16	54.59	272.94
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.19	141.94	449.16	150.82	754.11
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.19	0.00	262.26	68.61	343.06
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	23.75	140.48	849.50	253.43	1,267.17
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	142.50	842.88	2,203.37	797.19	3,985.94
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	285.01	1,685.76	5,961.37	1,983.03	9,915.17
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	172.16	84.29	1,356.12	403.14	2,015.72
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	150.66	1,050.30	2.20	300.79	1,503.95

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**MANDI BAHA-UD-DIN**  
**(47A)**



**SAMPAC INTERNATIONAL**

CLIENT:

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CONSULTANT:

NATIONAL HIGHWAY AUTHORITY  
ISLAMABADSAMPAK INTERNATIONAL (Pvt.) LTD  
LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 47A MANDI BAHA-UD-DIN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.29	19.27	0.00	5.14	25.69
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.94	321.21	2.18	84.08	420.41
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	37.11	774.41	4.91	204.11	1,020.54
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	148.44	3,097.64	19.65	816.43	4,082.16
103	STRIPPING	CM	4.48	188.78	0.00	48.31	241.57
104	COMPACTION OF NATURAL GROUND	SM	0.64	18.62	3.00	5.56	27.82
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	8.02	283.06	0.00	72.77	363.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	196.26	453.99	137.50	196.94	984.68
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	30.02	672.56	0.00	175.64	878.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	20.03	524.99	0.00	136.25	681.27
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.56	254.24	0.00	65.20	326.01
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	196.26	453.99	137.50	196.94	984.68
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	34.47	610.97	0.00	161.36	806.80
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	17.15	524.99	0.00	135.53	677.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	13.28	278.09	0.00	72.84	364.21
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	115.92	838.57	90.35	261.21	1,306.06
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	191.52	504.43	137.50	208.36	1,041.82
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	172.37	553.11	0.00	181.37	906.86
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	98.50	397.27	0.00	123.94	619.71
107d	GRANULAR BACKFILL	CM	60.54	241.40	990.87	323.20	1,616.01
107e	COMMON BACKFILL	CM	50.98	139.11	20.00	52.52	262.62
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	12.35	288.79	20.00	80.29	401.43
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	35.59	726.17	159.33	230.27	1,151.37

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47A MANDI BAHA-UD-DIN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	26.69	792.41	9.50	207.15	1,035.75
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	23.73	714.13	8.89	186.69	933.43
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	14.13	123.20	223.08	90.10	450.52
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.95	150.63	20.00	45.39	226.97
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	25.85	348.12	11.89	96.47	482.34
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.48	53.73	5.72	15.48	77.41
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.79	36.66	3.03	10.37	51.86
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.96	233.49	358.51	152.49	762.45
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.49	29.22	3.11	8.46	42.28
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.27	32.97	3.11	9.59	47.94
201	GRANULAR SUB-BASE	CM	14.40	288.11	969.56	318.02	1,590.08
202	AGGREGATE BASE	CM	16.91	350.20	1,024.35	347.86	1,739.32
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	142.30	2,856.48	11,621.97	3,655.19	18,275.93
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	142.30	2,856.48	11,880.84	3,719.90	18,599.52
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	152.79	2,983.43	11,611.43	3,686.91	18,434.56
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	152.79	2,983.43	11,896.56	3,758.19	18,790.97
204b	CEMENT STABILIZED BASE	CM	51.68	915.90	1,194.82	540.60	2,703.00
204c	CEMENT CONTENT	TON	200.00	0.00	8,925.00	2,281.25	11,406.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	439.46	2,422.77	83,923.83	21,696.51	108,482.57
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	439.46	2,422.77	83,923.83	21,696.51	108,482.57
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	169.47	233.81	1,040.72	361.00	1,804.99

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47A MANDI BAHA-UD-DIN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	274.97	4,464.04	9,286.09	3,506.27	17,531.37
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	186.81	262.54	1,513.87	490.80	2,454.01
207a	DEEP PATCHING (0-15 cm)	SM	3.00	80.37	26.81	27.55	137.73
207b	DEEP PATCHING (15-30 cm)	SM	3.00	80.37	26.81	27.55	137.73
208	REINSTATEMENT OF ROAD SURFACE	SM	3.24	130.32	2.20	33.94	169.71
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	8.25	466.94	13.33	122.13	610.65
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.65	50.29	2.67	13.65	68.26
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.55	2.83	94.47	24.46	122.31
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.53	2.83	82.31	21.42	107.08
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	37.94	9.80	48.99
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.22	1.03	32.91	8.54	42.69
304a	SINGLE SURFACE TREATMENT	SM	1.43	14.01	167.51	45.74	228.68
304b	DOUBLE SURFACE TREATMENT	SM	2.08	26.92	341.16	92.54	462.71
304c	TRIPLE SURFACE TREATMENT	SM	3.50	37.83	402.04	110.84	554.21
304d	SEAL COAT	SM	1.32	7.81	47.09	14.06	70.28
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	126.34	2,815.00	12,513.24	3,863.64	19,318.22
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	126.34	2,694.06	13,381.08	4,050.37	20,251.85
307a	DENSE GRADED HOT BIT-MAC	CM	347.99	863.75	10,059.61	2,817.84	14,089.19
307b	OPEN GRADED HOT BIT-MAC	CM	347.99	863.75	9,738.93	2,737.67	13,688.33
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	53.45	1,236.12	4,884.74	1,543.58	7,717.89
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	386.81	2,013.10	86,190.27	22,147.54	110,737.71
309a	COLD MILLING, 0-30 mm	SM	1.77	61.27	25.40	22.11	110.55
309b	COLD MILLING, 0-50 mm	SM	2.94	102.12	42.33	36.85	184.25

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	4.42	153.18	63.50	55.27	276.37
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	947.26	2,690.11	4,629.60	2,066.74	10,333.72
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	947.26	2,690.11	5,317.72	2,238.77	11,193.87
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	947.26	2,690.11	5,673.28	2,327.66	11,638.32
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	947.26	2,690.11	4,925.56	2,140.73	10,703.67
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	947.26	2,690.11	5,613.60	2,312.74	11,563.72
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	947.26	2,690.11	5,969.06	2,401.61	12,008.03
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	947.26	2,690.11	5,217.19	2,213.64	11,068.20
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	947.26	2,690.11	5,905.23	2,385.65	11,928.25
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	947.26	2,690.11	6,244.06	2,470.36	12,351.78
401b	CONCRETE CLASS B	CM	1,224.93	1,419.30	3,795.68	1,609.98	8,049.89
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	929.95	2,690.11	4,292.70	1,978.19	9,890.96
401cii	CONCRETE CLASS C (ON GROUND)	CM	929.95	2,690.11	4,980.74	2,150.20	10,751.01
401ciii	CONCRETE CLASS C (ELEVATED)	CM	929.95	2,690.11	5,336.30	2,239.09	11,195.46
401d	CONCRETE CLASS D1	CM	1,471.37	3,326.20	7,456.45	3,063.51	15,317.53
401e	CONCRETE CLASS Y	CM	2,049.55	898.44	5,961.56	2,227.39	11,136.93
401f	LEAN CONCRETE	CM	784.09	969.12	3,181.14	1,233.59	6,167.94
401gi	PRECAST CONCRETE, CLASS A1	CM	3,107.33	1,879.78	5,280.22	2,566.83	12,834.16
401gii	PRECAST CONCRETE CLASS A3	CM	3,107.33	1,879.78	5,919.25	2,726.59	13,632.96
401giii	PRECAST CONCRETE, CLASS B	CM	3,107.33	1,879.78	4,481.08	2,367.05	11,835.24
401giv	PRECAST CONCRETE CLASS D1	CM	3,107.33	1,879.78	7,463.78	3,112.72	15,563.62
401gv	PRECAST CONCRETE CLASS D2	CM	3,107.33	1,879.78	8,315.08	3,325.55	16,627.74
401gvi	PRECAST CONCRETE CLASS D3	CM	3,107.33	1,879.78	9,167.42	3,538.63	17,693.16
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,358.27	1,419.30	3,137.28	1,478.71	7,393.55
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	3,046.06	0.00	85,861.78	22,226.96	111,134.81

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404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	3,046.06	0.00	90,061.78	23,276.96	116,384.81
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,314.90	4,249.86	106,704.00	28,317.19	141,585.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,388.20	13,891.32	162,161.53	45,110.26	225,551.31
405b	LAUNCHING OF GIRDER	TON	102.15	967.47	0.00	267.41	1,337.03
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	2,187.61	597.67	2,988.36
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	203.08	0.00	1,022.78	306.46	1,532.31
406ci	STEEL EXPANSION JOINTS (Local)	KG	16.69	21.32	170.26	52.06	260.32
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	46,668.73	11,838.68	59,193.41
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	711.00	0.00	116,671.81	29,345.70	146,728.52
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	786.00	0.00	388,509.26	97,323.82	486,619.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	686.00	0.00	42,347.80	10,758.45	53,792.25
406dii	PVC WATER STOP 8" SIZE	M	175.83	0.00	399.81	143.91	719.55
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	71.38	0.00	326.12	99.38	496.88
406g	STEEL OR METAL BEARING DEVICES	KG	34.61	56.27	178.60	67.37	336.85
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	432.07	3,542.17	578.05	1,138.07	5,690.37
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	656.75	5,384.10	789.26	1,707.53	8,537.64
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	656.75	8,250.86	954.21	2,465.45	12,327.27
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,094.59	13,751.43	1,380.28	4,056.57	20,282.86



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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	912.16	11,459.52	1,202.75	3,393.61	16,968.03
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,641.88	20,627.14	1,912.86	6,045.47	30,227.35
407h	PILE LOAD TEST UPTO 120 TON	EACH	41,207.04	105,999.36	120,425.56	66,907.99	334,539.95
407i	PILE LOAD TEST UPTO 240 TON	EACH	41,207.04	105,999.36	256,068.31	100,818.68	504,093.39
407j	PILE LOAD TEST UPTO 360 TON	EACH	113,207.04	117,448.00	351,005.99	145,415.26	727,076.29
407k	PILE LOAD TEST UPTO 550 TON	EACH	167,207.04	146,810.00	561,199.78	218,804.21	1,094,021.03
407l	PILE LOAD TEST UPTO 800 TON	EACH	247,498.08	176,172.00	908,348.73	333,004.70	1,665,023.51
407m	CONFIRMATORY BORING (NX SIZE)	M	323.58	3,272.30	25.00	905.22	4,526.10
407n	PERMANENT PILE CASING FOR PILES	Ton	424.50	4,885.57	105,647.45	27,739.38	138,696.90
410	BRICK WORK	CM	588.83	577.25	4,575.38	1,435.37	7,176.83
411a	STONE MASONRY RANDOM DRY	CM	621.66	210.72	1,457.14	572.38	2,861.91
411b	STONE MASONRY RANDOM WITH MORTAR	CM	739.16	335.46	2,775.63	962.57	4,812.83
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	854.16	210.72	2,176.07	810.24	4,051.19
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	969.16	335.46	3,398.69	1,175.83	5,879.14
411g	ROLL POINTING	SM	125.08	24.95	100.31	62.59	312.93
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,281.66	534.31	3,398.69	1,303.66	6,518.32
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	408.96	689.50	1,126.05	556.13	2,780.63
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	408.96	766.21	1,408.82	646.00	3,229.98
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	385.68	1,356.07	1,666.70	852.11	4,260.56
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	405.17	1,702.67	2,376.85	1,121.17	5,605.86
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	470.25	2,255.64	4,016.22	1,685.53	8,427.63
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	583.19	2,781.29	6,079.66	2,361.03	11,805.17

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	754.71	2,692.05	7,630.63	2,769.35	13,846.74
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	889.65	3,268.92	9,485.79	3,411.09	17,055.45
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,052.51	3,813.74	17,202.52	5,517.19	27,585.96
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	408.96	689.50	1,582.24	670.17	3,350.87
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	398.54	766.21	1,965.37	782.53	3,912.64
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	385.68	1,356.07	2,305.36	1,011.78	5,058.89
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	405.17	1,702.67	3,270.98	1,344.70	6,723.52
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	470.25	2,255.64	5,119.61	1,961.37	9,806.87
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	583.19	2,781.29	8,743.02	3,026.87	15,134.37
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	754.71	2,692.05	9,533.03	3,244.95	16,224.74
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	889.65	3,268.92	12,362.50	4,130.27	20,651.33
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,052.51	3,813.74	20,248.39	6,278.66	31,393.30
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	161.25	198.35	994.64	338.56	1,692.79
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,385.75	1,081.84	3,890.12	1,589.43	7,947.14
507a	STEEL WIRE MESH FOR GABIONS	KG	9.71	0.00	124.56	33.57	167.85
507b	ROCK FILL IN GABIONS	CM	174.03	0.00	1,436.18	402.55	2,012.76
508a	BRICK PAVING (SINGLE COURSE)	SM	197.40	47.96	375.91	155.32	776.60
508b	BRICK PAVING (DOUBLE COURSE)	SM	352.40	47.96	743.85	286.05	1,430.26
509a	RIPRAP, CLASS A	CM	851.84	0.00	1,112.21	491.01	2,455.06
509b	RIPRAP, CLASS B	CM	613.47	233.11	1,514.64	590.30	2,951.52
509c	RIPRAP, CLASS C	CM	599.56	242.83	1,549.36	597.94	2,989.68
509c1	RIPRAP, CLASS D	CM	599.56	291.39	1,594.40	621.34	3,106.68

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509d	GROUTED RIPRAP, CLASS A	CM	1,042.63	218.23	3,188.50	1,112.34	5,561.69
509e	GROUTED RIPRAP, CLASS B	CM	796.11	407.69	3,378.52	1,145.58	5,727.90
509f	GROUTED RIPRAP, CLASS C	CM	765.09	388.31	3,429.60	1,145.75	5,728.74
509f1	GROUTED RIPRAP, CLASS D	CM	765.09	436.87	3,676.99	1,219.74	6,098.69
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,424.40	615.08	4,612.66	1,663.03	8,315.17
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	88.24	344.31	992.87	356.35	1,781.77
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	177.22	1,135.96	0.00	328.29	1,641.47
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	269.01	131.70	180.73	145.36	726.80
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	344.33	168.58	231.34	186.06	930.31
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	436.33	368.16	732.15	384.16	1,920.81
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	545.41	460.20	915.19	480.20	2,401.01
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	436.33	368.16	402.43	301.73	1,508.66
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	545.41	460.20	503.04	377.16	1,885.82
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	627.08	1,431.68	6,666.72	2,181.37	10,906.85
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,776.67	1,000.42	6,646.76	2,355.96	11,779.81
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	47.33	84.29	769.48	225.28	1,126.38
603	BRICK EDGING	M	15.77	0.00	57.60	18.34	91.71
604a	METAL GUARD RAIL	M	118.14	70.24	3,142.97	832.84	4,164.19
604b	METAL GUARD RAIL END PIECES	EACH	156.38	688.14	3,542.03	1,096.64	5,483.19
604d	STEEL POST FOR METAL GUARD RAIL	EACH	177.20	688.14	3,137.02	1,000.59	5,002.95
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,447.50	14,796.66	4,874.06	24,370.28
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,252.07	1,026.28	13,788.93	4,516.82	22,584.10

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607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	413.21	500.96	11,407.25	3,080.36	15,401.78
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	126.25	751.44	14,100.87	3,744.64	18,723.20
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	413.21	1,073.66	22,122.72	5,902.40	29,512.00
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,374.82	1,172.88	40,874.08	10,855.45	54,277.23
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	274.96	282.47	19,107.72	4,916.29	24,581.45
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	495.82	0.00	2,768.40	816.06	4,080.28
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	495.82	0.00	4,152.60	1,162.11	5,810.53
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.19	7.03	23.74	8.99	44.95
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.73	4.04	64.62	17.60	87.99
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.19	7.03	31.68	10.97	54.87
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.73	4.04	86.18	22.99	114.94
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	229.41	100.07	500.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	814.26	252.65	1,263.27
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.48	8.79	34.74	12.50	62.52
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.48	15.16	111.83	33.37	166.84
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.48	8.79	46.32	15.40	77.00
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.48	15.16	149.10	42.69	213.43
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	135.71	35.16	335.44	126.58	632.88
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	135.71	60.65	1,410.06	401.60	2,008.02
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	152.94	75.33	376.63
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	543.66	179.38	896.90

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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 47A MANDI BAHA-UD-DIN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	113.21	35.16	223.62	93.00	464.99
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	113.21	60.65	941.46	278.83	1,394.15
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	141.94	398.16	139.24	696.22
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.88	0.00	206.16	55.76	278.79
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	141.94	449.16	151.99	759.97
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.88	0.00	262.26	69.78	348.92
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	32.50	140.48	844.52	254.37	1,271.87
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	195.00	842.88	2,154.76	798.16	3,990.80
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	390.00	1,685.76	5,987.98	2,015.94	10,079.68
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	235.66	84.29	1,241.83	390.44	1,952.22
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	207.58	1,050.30	2.20	315.02	1,575.10

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**MIANWALI**  
**(45)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 45 MIANWALI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	765.39	263.41	1,317.03
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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Dcode 45 MIANWALI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	367.15	153.66	768.30
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	886.59	296.49	1,482.46
202	AGGREGATE BASE	CM	13.30	350.20	1,140.47	375.99	1,879.96
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	11,519.30	3,621.30	18,106.51
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	11,843.23	3,702.28	18,511.41
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	11,508.78	3,652.46	18,262.29
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	11,858.90	3,739.99	18,699.95
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	1,134.59	522.73	2,613.63
204c	CEMENT CONTENT	TON	150.00	0.00	8,820.00	2,242.50	11,212.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	83,817.13	21,646.20	108,231.01
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	83,817.13	21,646.20	108,231.01
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	942.54	326.17	1,630.87



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## Rate Analysis Summary (Construction)

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Dcode 45 MIANWALI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	9,234.07	3,477.72	17,388.61
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,021.34	356.29	1,781.46
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	19.01	25.43	127.16
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	19.01	25.43	127.16
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	94.36	24.41	122.03
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	82.20	21.36	106.80
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	37.90	9.77	48.87
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	32.87	8.52	42.58
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	166.79	45.48	227.41
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	339.47	92.01	460.04
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	400.03	110.16	550.78
304d	SEAL COAT	SM	1.04	7.81	46.92	13.94	69.72
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	12,430.16	3,835.65	19,178.27
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	13,273.84	4,016.34	20,081.69
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	9,984.05	2,778.55	13,892.74
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	9,654.42	2,696.14	13,480.70
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	86,083.57	22,099.86	110,499.32
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	4,595.99	2,007.16	10,035.79
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	5,284.10	2,179.19	10,895.94
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	5,639.66	2,268.08	11,340.39
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	4,882.11	2,078.69	10,393.45
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	5,570.15	2,250.70	11,253.50
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	5,925.62	2,339.57	11,697.83
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,158.97	2,147.90	10,739.52
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	5,847.01	2,319.91	11,599.57
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,186.94	2,404.90	12,024.48
401b	CONCRETE CLASS B	CM	955.51	1,419.30	3,801.67	1,544.12	7,720.60
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	4,253.51	1,917.03	9,585.17
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	4,941.55	2,089.04	10,445.22
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	5,297.11	2,177.93	10,889.67
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	7,410.14	2,972.46	14,862.29
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	5,929.56	2,107.88	10,539.41
401f	LEAN CONCRETE	CM	602.00	969.12	3,197.88	1,192.25	5,961.24
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	5,248.31	2,384.33	11,921.63
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	5,861.75	2,537.69	12,688.43
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	4,504.92	2,198.48	10,992.39
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	7,417.51	2,926.62	14,633.12
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,258.65	3,136.91	15,684.55
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,100.46	3,347.36	16,736.82
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	2,966.94	1,360.44	6,802.18
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,363.65	22,188.13	110,940.63

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## Rate Analysis Summary (Construction)

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Dcode 45 MIANWALI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	90,563.65	23,238.13	116,190.63
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,137.82	44,885.00	224,424.98
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,187.49	586.38	2,931.89
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,023.12	295.28	1,476.42
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	326.02	95.53	477.65
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	98,515.32	58,920.14	294,600.68
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	212,247.83	87,353.26	436,766.31
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	285,275.27	121,972.28	609,861.41
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	454,138.38	181,653.56	908,267.80
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	736,552.53	274,680.83	1,373,404.16
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	4,734.71	1,442.66	7,213.28
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,149.38	460.86	2,304.29
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	2,499.86	852.16	4,260.82
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	1,505.55	594.90	2,974.51
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	2,749.92	959.68	4,798.39
411g	ROLL POINTING	SM	97.67	24.95	100.75	55.84	279.21
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	2,749.92	1,069.39	5,346.94
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,163.88	541.26	2,706.30
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,471.50	637.34	3,186.72
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,760.46	853.02	4,265.09
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	2,532.48	1,136.19	5,680.93
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,326.16	1,735.41	8,677.05
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	6,544.42	2,443.29	12,216.46

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	8,095.26	2,841.60	14,207.98
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	9,970.64	3,480.32	17,401.61
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	19,081.20	5,925.70	29,628.48
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,620.07	655.31	3,276.54
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	2,028.05	774.40	3,871.99
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,399.12	1,012.68	5,063.41
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	3,426.61	1,359.72	6,798.59
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,429.55	2,011.26	10,056.29
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	9,207.78	3,109.13	15,545.66
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	9,997.66	3,317.20	16,585.98
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	12,847.34	4,199.50	20,997.48
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	22,127.07	6,687.16	33,435.81
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	777.95	274.91	1,374.55
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	3,895.00	1,514.42	7,572.08
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	124.56	33.04	165.20
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	763.19	223.85	1,119.26
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	391.72	148.10	740.50
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	777.94	274.66	1,373.28
509a	RIPRAP, CLASS A	CM	660.97	0.00	804.45	366.35	1,831.77
509b	RIPRAP, CLASS B	CM	480.78	233.11	842.69	389.14	1,945.72
509c	RIPRAP, CLASS C	CM	470.65	242.83	894.51	402.00	2,009.98
509c1	RIPRAP, CLASS D	CM	470.65	291.39	962.06	431.02	2,155.12

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 45 MIANWALI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	2,897.48	981.08	4,905.39
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	2,721.61	938.05	4,690.24
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	2,789.58	944.24	4,721.19
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,061.98	1,024.48	5,122.41
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	4,581.74	1,574.09	7,870.43
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	764.21	293.95	1,469.73
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	130.72	117.69	588.44
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	167.33	150.64	753.21
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	679.90	346.68	1,733.42
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	849.88	433.35	2,166.77
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	362.51	267.34	1,336.68
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	453.14	334.17	1,670.85
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	6,670.21	2,148.43	10,742.14
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	6,651.16	2,257.60	11,288.02
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	719.95	210.23	1,051.13
603	BRICK EDGING	M	12.17	0.00	62.40	18.64	93.21
604a	METAL GUARD RAIL	M	91.85	70.24	3,136.21	824.58	4,122.88
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,534.71	1,085.99	5,429.96
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,130.22	989.03	4,945.15
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	14,809.90	4,687.26	23,436.32
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	13,796.19	4,328.53	21,642.67

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,392.64	3,053.21	15,266.05
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,078.96	3,731.97	18,659.87
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,101.41	5,873.58	29,367.89
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	40,842.11	10,765.96	53,829.82
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,101.33	4,898.39	24,491.96
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,768.40	790.02	3,950.08
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,152.60	1,136.07	5,680.33
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	795.61	240.27	1,201.37
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,067.87	765.19	3,825.94
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	5,673.68	1,914.86	9,574.30
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,182.57	362.05	1,810.25
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51



**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**MULTAN**  
**(46)**



**SAMPAC INTERNATIONAL**

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 46 MULTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.09	19.27	0.00	5.09	25.44
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	11.11	321.21	2.18	83.63	418.13
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	31.50	774.41	4.91	202.70	1,013.52
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	125.98	3,097.64	19.65	810.82	4,054.10
103	STRIPPING	CM	3.91	188.78	0.00	48.17	240.86
104	COMPACTION OF NATURAL GROUND	SM	0.56	18.62	3.00	5.54	27.72
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	7.43	283.06	0.00	72.62	363.11
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	175.93	453.99	137.50	191.85	959.27
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	26.57	672.56	0.00	174.78	873.91
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	17.87	524.99	0.00	135.71	678.57
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.08	254.24	0.00	65.08	325.41
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	175.93	453.99	137.50	191.85	959.27
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	30.97	610.97	0.00	160.48	802.42
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	15.18	524.99	0.00	135.04	675.21
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	12.16	278.09	0.00	72.56	362.80
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	103.36	838.57	90.35	258.07	1,290.36
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	172.05	504.43	137.50	203.49	1,017.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	154.84	553.11	0.00	176.99	884.94
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	88.48	397.27	0.00	121.44	607.19
107d	GRANULAR BACKFILL	CM	52.64	241.40	931.25	306.32	1,531.61
107e	COMMON BACKFILL	CM	43.29	139.11	20.00	50.60	253.01
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.10	288.79	20.00	79.97	399.86
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	31.45	726.17	159.33	229.24	1,146.19

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Dcode 46 MULTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	23.58	792.41	9.50	206.37	1,031.87
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	20.96	714.13	8.89	186.00	929.98
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.54	123.20	223.08	89.71	448.54
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.79	150.63	20.00	45.10	225.52
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	22.69	348.12	11.89	95.68	478.39
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.21	53.73	5.72	15.42	77.08
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.61	36.66	3.03	10.33	51.63
110	IMPROVED SUB-GARDE (CBR>20%)	CM	15.86	233.49	459.13	177.12	885.60
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.31	29.22	3.11	8.41	42.06
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.01	32.97	3.11	9.52	47.62
201	GRANULAR SUB-BASE	CM	12.84	288.11	1,249.26	387.55	1,937.75
202	AGGREGATE BASE	CM	15.23	350.20	1,454.58	455.00	2,275.02
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	122.15	2,856.48	12,017.33	3,748.99	18,744.95
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	122.15	2,856.48	12,348.15	3,831.70	19,158.48
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	131.47	2,983.43	12,006.68	3,780.39	18,901.97
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	131.47	2,983.43	12,364.10	3,869.75	19,348.75
204b	CEMENT STABILIZED BASE	CM	46.01	915.90	1,477.63	609.88	3,049.42
204c	CEMENT CONTENT	TON	162.52	0.00	8,925.00	2,271.88	11,359.40
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	394.06	2,422.77	85,005.96	21,955.70	109,778.49
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	394.06	2,422.77	85,005.96	21,955.70	109,778.49
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	140.73	233.81	1,287.02	415.39	2,076.95

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Dcode 46 MULTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	239.25	4,464.04	9,727.25	3,607.63	18,038.17
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	154.65	262.54	1,360.13	444.33	2,221.64
207a	DEEP PATCHING (0-15 cm)	SM	2.67	80.37	18.76	25.45	127.24
207b	DEEP PATCHING (15-30 cm)	SM	2.67	80.37	18.76	25.45	127.24
208	REINSTATEMENT OF ROAD SURFACE	SM	2.90	130.32	2.20	33.85	169.27
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.57	466.94	13.33	121.96	609.80
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.51	50.29	2.67	13.62	68.09
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.49	2.83	95.55	24.72	123.59
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.48	2.83	83.39	21.67	108.37
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	38.38	9.90	49.50
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	33.34	8.64	43.21
304a	SINGLE SURFACE TREATMENT	SM	1.29	14.01	171.16	46.61	233.07
304b	DOUBLE SURFACE TREATMENT	SM	1.88	26.92	350.62	94.86	474.28
304c	TRIPLE SURFACE TREATMENT	SM	3.17	37.83	413.01	113.50	567.51
304d	SEAL COAT	SM	1.20	7.81	47.95	14.24	71.20
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	109.18	2,815.00	12,927.56	3,962.93	19,814.67
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	109.18	2,694.06	13,776.87	4,145.03	20,725.14
307a	DENSE GRADED HOT BIT-MAC	CM	295.82	863.75	10,353.21	2,878.19	14,390.97
307b	OPEN GRADED HOT BIT-MAC	CM	295.82	863.75	10,062.19	2,805.44	14,027.19
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	46.02	1,236.12	4,884.74	1,541.72	7,708.61
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	344.91	2,013.10	87,272.40	22,407.60	112,038.02
309a	COLD MILLING, 0-30 mm	SM	1.58	61.27	25.40	22.06	110.31
309b	COLD MILLING, 0-50 mm	SM	2.63	102.12	42.33	36.77	183.85

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.94	153.18	63.50	55.16	275.78
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	847.22	2,690.11	4,747.06	2,071.10	10,355.49
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	847.22	2,690.11	5,435.19	2,243.13	11,215.66
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	847.22	2,690.11	5,790.75	2,332.02	11,660.11
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	847.22	2,690.11	5,065.19	2,150.63	10,753.15
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	847.22	2,690.11	5,753.23	2,322.64	11,613.20
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	847.22	2,690.11	6,108.66	2,411.50	12,057.49
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	847.22	2,690.11	5,380.65	2,229.50	11,147.48
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	847.22	2,690.11	6,068.69	2,401.51	12,007.53
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	847.22	2,690.11	6,404.16	2,485.37	12,426.87
401b	CONCRETE CLASS B	CM	1,084.24	1,419.30	4,050.82	1,638.59	8,192.95
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	821.00	2,690.11	4,533.60	2,011.18	10,055.90
401cii	CONCRETE CLASS C (ON GROUND)	CM	821.00	2,690.11	5,221.64	2,183.19	10,915.95
401ciii	CONCRETE CLASS C (ELEVATED)	CM	821.00	2,690.11	5,577.20	2,272.08	11,360.40
401d	CONCRETE CLASS D1	CM	1,316.27	3,326.20	7,552.91	3,048.84	15,244.22
401e	CONCRETE CLASS Y	CM	1,825.71	898.44	6,056.34	2,195.12	10,975.61
401f	LEAN CONCRETE	CM	670.78	969.12	3,453.85	1,273.44	6,367.18
401gi	PRECAST CONCRETE, CLASS A1	CM	2,715.05	1,879.78	5,394.82	2,497.41	12,487.06
401gii	PRECAST CONCRETE CLASS A3	CM	2,715.05	1,879.78	6,079.52	2,668.59	13,342.94
401giii	PRECAST CONCRETE, CLASS B	CM	2,715.05	1,879.78	4,769.47	2,341.08	11,705.38
401giv	PRECAST CONCRETE CLASS D1	CM	2,715.05	1,879.78	7,560.50	3,038.83	15,194.17
401gv	PRECAST CONCRETE CLASS D2	CM	2,715.05	1,879.78	8,403.24	3,249.52	16,247.59
401gvi	PRECAST CONCRETE CLASS D3	CM	2,715.05	1,879.78	9,247.53	3,460.59	17,302.95
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,192.59	1,419.30	3,249.12	1,465.25	7,326.26
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,727.07	0.00	86,355.29	22,270.59	111,352.95

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,727.07	0.00	90,555.29	23,320.59	116,602.95
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,083.31	4,249.86	106,704.00	28,259.29	141,296.46
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,095.70	13,891.32	162,149.95	45,034.24	225,171.21
405b	LAUNCHING OF GIRDER	TON	95.34	967.47	0.00	265.70	1,328.51
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	178.81	0.00	2,198.48	594.32	2,971.60
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	178.81	0.00	1,028.31	301.78	1,508.90
406ci	STEEL EXPANSION JOINTS (Local)	KG	14.84	21.32	170.26	51.60	258.02
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	616.12	0.00	46,668.73	11,821.21	59,106.06
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	636.44	0.00	116,671.81	29,327.06	146,635.31
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	697.38	0.00	388,509.26	97,301.66	486,508.30
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	616.12	0.00	42,347.80	10,740.98	53,704.90
406dii	PVC WATER STOP 8" SIZE	M	154.45	0.00	399.81	138.56	692.82
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	64.21	0.00	327.18	97.85	489.24
406g	STEEL OR METAL BEARING DEVICES	KG	30.37	56.27	178.60	66.31	331.55
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	402.00	3,542.17	578.05	1,130.55	5,652.77
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	611.04	5,384.10	789.26	1,696.10	8,480.49
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	611.04	8,250.86	954.21	2,454.03	12,270.13
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,018.39	13,751.43	1,380.28	4,037.52	20,187.62

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	848.66	11,459.52	1,202.75	3,377.73	16,888.66
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,527.59	20,627.14	1,912.86	6,016.90	30,084.49
407h	PILE LOAD TEST UPTO 120 TON	EACH	34,113.54	105,999.36	97,796.36	59,477.32	297,386.58
407i	PILE LOAD TEST UPTO 240 TON	EACH	34,113.54	105,999.36	210,809.91	87,730.70	438,653.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	92,620.74	117,448.00	283,118.39	123,296.78	616,483.91
407k	PILE LOAD TEST UPTO 550 TON	EACH	136,501.14	146,810.00	450,625.28	183,484.11	917,420.53
407l	PILE LOAD TEST UPTO 800 TON	EACH	202,022.28	176,172.00	730,915.23	277,277.38	1,386,386.89
407m	CONFIRMATORY BORING (NX SIZE)	M	283.90	3,272.30	25.00	895.30	4,476.50
407n	PERMANENT PILE CASING FOR PILES	Ton	372.05	4,885.57	105,648.48	27,726.53	138,632.64
410	BRICK WORK	CM	519.63	577.25	4,743.09	1,459.99	7,299.97
411a	STONE MASONRY RANDOM DRY	CM	546.41	210.72	1,527.32	571.11	2,855.56
411b	STONE MASONRY RANDOM WITH MORTAR	CM	646.42	335.46	2,842.43	956.08	4,780.39
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	748.92	210.72	1,889.41	712.26	3,561.32
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	851.43	335.46	3,109.50	1,074.10	5,370.49
411g	ROLL POINTING	SM	110.95	24.95	100.26	59.04	295.19
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,118.95	534.31	3,109.50	1,190.69	5,953.44
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	344.26	689.50	1,286.19	579.99	2,899.93
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	344.26	766.21	1,603.97	678.61	3,393.05
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	328.58	1,356.07	1,985.97	917.66	4,588.28
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	343.03	1,702.67	3,147.17	1,298.22	6,491.09
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	399.39	2,255.64	4,374.79	1,757.45	8,787.26
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	498.21	2,781.29	6,224.92	2,376.10	11,880.52

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	644.74	2,692.05	8,166.97	2,875.94	14,379.70
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	757.90	3,268.92	10,782.59	3,702.35	18,511.76
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	899.84	3,813.74	19,469.67	6,045.81	30,229.06
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	344.26	689.50	1,286.19	579.99	2,899.93
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	334.54	766.21	1,662.97	690.93	3,454.65
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	328.58	1,356.07	2,257.97	985.66	4,928.28
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	343.03	1,702.67	4,162.17	1,551.97	7,759.84
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	399.39	2,255.64	5,617.79	2,068.20	10,341.01
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	498.21	2,781.29	8,446.92	2,931.60	14,658.02
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	644.74	2,692.05	10,681.97	3,504.69	17,523.45
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	757.90	3,268.92	14,711.03	4,684.46	23,422.31
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	899.84	3,813.74	26,878.15	7,897.93	39,489.66
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	136.81	198.35	957.55	323.18	1,615.89
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,226.29	1,081.84	4,145.26	1,613.35	8,066.73
507a	STEEL WIRE MESH FOR GABIONS	KG	8.65	0.00	126.79	33.86	169.30
507b	ROCK FILL IN GABIONS	CM	145.52	0.00	1,114.07	314.90	1,574.49
508a	BRICK PAVING (SINGLE COURSE)	SM	171.68	47.96	391.31	152.74	763.69
508b	BRICK PAVING (DOUBLE COURSE)	SM	306.69	47.96	777.20	282.96	1,414.82
509a	RIPRAP, CLASS A	CM	745.54	0.00	1,182.39	481.98	2,409.91
509b	RIPRAP, CLASS B	CM	548.42	233.11	1,217.61	499.79	2,498.93
509c	RIPRAP, CLASS C	CM	537.85	242.83	1,272.46	513.29	2,566.43
509c1	RIPRAP, CLASS D	CM	537.85	291.39	1,317.49	536.68	2,683.41



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	911.55	218.23	3,256.56	1,096.58	5,482.92
509e	GROUTED RIPRAP, CLASS B	CM	709.23	407.69	3,079.60	1,049.13	5,245.65
509f	GROUTED RIPRAP, CLASS C	CM	682.69	388.31	3,150.73	1,055.43	5,277.16
509f1	GROUTED RIPRAP, CLASS D	CM	682.69	436.87	3,397.83	1,129.35	5,646.74
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,232.85	615.08	4,785.32	1,658.31	8,291.56
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	74.30	344.31	926.36	336.24	1,681.22
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	155.74	1,135.96	0.00	322.93	1,614.63
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	234.47	131.70	192.14	139.58	697.89
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	300.12	168.58	245.94	178.66	893.30
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	382.13	368.16	733.23	370.88	1,854.40
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	477.66	460.20	916.53	463.60	2,318.00
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	382.13	368.16	412.03	290.58	1,452.90
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	477.66	460.20	515.04	363.23	1,816.13
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	561.53	1,431.68	6,750.26	2,185.87	10,929.33
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,555.58	1,000.42	6,728.78	2,321.20	11,605.98
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	41.28	84.29	758.85	221.10	1,105.52
603	BRICK EDGING	M	13.63	0.00	62.40	19.01	95.04
604a	METAL GUARD RAIL	M	103.83	70.24	3,129.20	825.82	4,129.08
604b	METAL GUARD RAIL END PIECES	EACH	136.30	688.14	3,527.13	1,087.89	5,439.46
604d	STEEL POST FOR METAL GUARD RAIL	EACH	155.73	688.14	3,123.16	991.76	4,958.79
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,769.64	1,447.50	14,976.49	4,798.41	23,992.03
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,769.64	1,026.28	13,962.88	4,439.70	22,198.49

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	358.30	500.96	11,433.49	3,073.19	15,365.94
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	109.38	751.44	14,140.23	3,750.26	18,751.31
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	358.30	1,073.66	22,184.93	5,904.22	29,521.11
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,160.02	1,172.88	40,967.39	10,825.07	54,125.37
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	232.00	282.47	19,126.38	4,910.21	24,551.07
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	450.68	0.00	2,768.40	804.77	4,023.85
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	450.68	0.00	4,152.60	1,150.82	5,754.10
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.48	7.03	23.74	8.81	44.07
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.49	4.04	64.62	17.54	87.69
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.48	7.03	31.68	10.80	53.99
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.49	4.04	86.18	22.93	114.65
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	123.28	35.16	229.41	96.96	484.81
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	123.28	60.65	814.26	249.55	1,247.74
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.60	8.79	34.74	12.28	61.41
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.60	15.16	111.83	33.15	165.73
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.60	8.79	46.32	15.18	75.89
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.60	15.16	149.10	42.47	212.33
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	123.28	35.16	335.44	123.47	617.35
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	123.28	60.65	1,410.06	398.50	1,992.49
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	102.28	35.16	152.94	72.59	362.97
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	102.28	60.65	543.66	176.65	883.24

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	102.28	35.16	223.62	90.27	451.33
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	102.28	60.65	941.46	276.10	1,380.49
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.84	141.94	398.16	138.74	693.68
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.84	0.00	206.16	55.25	276.26
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.84	141.94	449.16	151.49	757.43
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.84	0.00	262.26	69.28	346.38
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	27.92	140.48	830.92	249.83	1,249.15
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	167.51	842.88	2,152.26	790.66	3,953.32
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	335.02	1,685.76	5,920.92	1,985.43	9,927.13
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	202.56	84.29	1,281.70	392.14	1,960.69
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	180.80	1,050.30	2.20	308.33	1,541.63

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**MUZAFFARGARH**  
**(47)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.97	19.27	0.00	5.06	25.30
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.79	321.21	2.18	83.29	416.47
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.02	774.41	4.91	201.83	1,009.17
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	112.07	3,097.64	19.65	807.34	4,036.70
103	STRIPPING	CM	3.40	188.78	0.00	48.04	240.22
104	COMPACTION OF NATURAL GROUND	SM	0.48	18.62	3.00	5.52	27.62
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.14	283.06	0.00	72.30	361.50
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	149.46	453.99	137.50	185.24	926.19
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	22.81	672.56	0.00	173.84	869.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.24	524.99	0.00	135.06	675.29
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.02	254.24	0.00	64.82	324.09
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	149.46	453.99	137.50	185.24	926.19
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	26.26	610.97	0.00	159.31	796.54
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.04	524.99	0.00	134.51	672.53
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.15	278.09	0.00	72.06	360.30
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	88.21	838.57	90.35	254.28	1,271.41
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	145.91	504.43	137.50	196.96	984.80
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	131.32	553.11	0.00	171.11	855.54
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	75.04	397.27	0.00	118.08	590.38
107d	GRANULAR BACKFILL	CM	45.88	241.40	898.03	296.33	1,481.64
107e	COMMON BACKFILL	CM	38.50	139.11	20.00	49.40	247.01
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.41	288.79	20.00	79.55	397.75
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.04	726.17	159.33	228.14	1,140.68

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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.28	792.41	9.50	205.55	1,027.74
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.03	714.13	8.89	185.26	926.31
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.74	123.20	223.08	89.26	446.29
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.33	150.63	20.00	44.74	223.70
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	19.62	348.12	11.89	94.91	474.55
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.89	53.73	5.72	15.33	76.67
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.37	36.66	3.03	10.27	51.33
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.64	233.49	420.79	166.98	834.91
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.13	29.22	3.11	8.37	41.83
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.73	32.97	3.11	9.45	47.26
201	GRANULAR SUB-BASE	CM	10.96	288.11	1,098.10	349.29	1,746.45
202	AGGREGATE BASE	CM	12.89	350.20	1,308.97	418.01	2,090.07
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	107.62	2,856.48	11,942.73	3,726.71	18,633.54
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	107.62	2,856.48	12,256.77	3,805.22	19,026.09
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	115.60	2,983.43	11,932.09	3,757.78	18,788.91
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	115.60	2,983.43	12,272.69	3,842.93	19,214.65
204b	CEMENT STABILIZED BASE	CM	39.31	915.90	1,425.45	595.17	2,975.83
204c	CEMENT CONTENT	TON	150.00	0.00	8,820.00	2,242.50	11,212.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	334.70	2,422.77	85,001.33	21,939.70	109,698.50
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	334.70	2,422.77	85,001.33	21,939.70	109,698.50
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	127.52	233.81	1,135.46	374.20	1,870.98

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205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	208.41	4,464.04	9,593.43	3,566.47	17,832.35
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	140.50	262.54	1,238.11	410.29	2,051.44
207a	DEEP PATCHING (0-15 cm)	SM	2.28	80.37	20.37	25.75	128.77
207b	DEEP PATCHING (15-30 cm)	SM	2.28	80.37	20.37	25.75	128.77
208	REINSTATEMENT OF ROAD SURFACE	SM	2.47	130.32	2.20	33.75	168.74
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.31	466.94	13.33	121.64	608.22
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.26	50.29	2.67	13.56	67.78
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	95.55	24.70	123.49
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.40	2.83	83.38	21.65	108.27
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.37	9.89	49.46
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.34	8.63	43.17
304a	SINGLE SURFACE TREATMENT	SM	1.09	14.01	170.49	46.40	231.99
304b	DOUBLE SURFACE TREATMENT	SM	1.59	26.92	348.30	94.20	471.02
304c	TRIPLE SURFACE TREATMENT	SM	2.67	37.83	410.43	112.73	563.67
304d	SEAL COAT	SM	1.01	7.81	48.02	14.21	71.05
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	95.66	2,815.00	12,853.68	3,941.08	19,705.41
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	95.66	2,694.06	13,684.90	4,118.65	20,593.26
307a	DENSE GRADED HOT BIT-MAC	CM	262.80	863.75	10,321.92	2,862.12	14,310.58
307b	OPEN GRADED HOT BIT-MAC	CM	262.80	863.75	9,988.29	2,778.71	13,893.55
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	40.45	1,236.12	4,884.74	1,540.33	7,701.64
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	294.33	2,013.10	87,267.77	22,393.80	111,969.00
309a	COLD MILLING, 0-30 mm	SM	1.34	61.27	25.40	22.00	110.02
309b	COLD MILLING, 0-50 mm	SM	2.24	102.12	42.33	36.67	183.37

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309c	COLD MILLING, 0-70 mm	SM	3.36	153.18	63.50	55.01	275.05
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	721.16	2,690.11	4,689.65	2,025.23	10,126.16
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	721.16	2,690.11	5,377.79	2,197.27	10,986.33
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	721.16	2,690.11	5,733.35	2,286.16	11,430.78
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	721.16	2,690.11	4,973.21	2,096.12	10,480.61
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	721.16	2,690.11	5,661.25	2,268.13	11,340.66
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	721.16	2,690.11	6,016.69	2,356.99	11,784.96
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	721.16	2,690.11	5,279.46	2,172.68	10,863.41
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	721.16	2,690.11	5,967.50	2,344.69	11,723.46
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	721.16	2,690.11	6,301.50	2,428.19	12,140.97
401b	CONCRETE CLASS B	CM	930.98	1,419.30	3,929.81	1,570.02	7,850.11
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	706.50	2,690.11	4,411.62	1,952.06	9,760.30
401cii	CONCRETE CLASS C (ON GROUND)	CM	706.50	2,690.11	5,099.66	2,124.07	10,620.35
401ciii	CONCRETE CLASS C (ELEVATED)	CM	706.50	2,690.11	5,455.22	2,212.96	11,064.80
401d	CONCRETE CLASS D1	CM	1,120.23	3,326.20	7,472.62	2,979.76	14,898.81
401e	CONCRETE CLASS Y	CM	1,559.34	898.44	6,022.87	2,120.16	10,600.81
401f	LEAN CONCRETE	CM	592.71	969.12	3,334.91	1,224.19	6,120.94
401gi	PRECAST CONCRETE, CLASS A1	CM	2,356.80	1,879.78	5,342.90	2,394.87	11,974.35
401gii	PRECAST CONCRETE CLASS A3	CM	2,356.80	1,879.78	5,976.36	2,553.24	12,766.18
401giii	PRECAST CONCRETE, CLASS B	CM	2,356.80	1,879.78	4,645.09	2,220.42	11,102.09
401giv	PRECAST CONCRETE CLASS D1	CM	2,356.80	1,879.78	7,480.13	2,929.18	14,645.89
401gv	PRECAST CONCRETE CLASS D2	CM	2,356.80	1,879.78	8,314.61	3,137.80	15,688.98
401gvi	PRECAST CONCRETE CLASS D3	CM	2,356.80	1,879.78	9,150.48	3,346.77	16,733.83
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,030.98	1,419.30	3,122.31	1,393.15	6,965.73
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,319.38	0.00	86,409.38	22,182.19	110,910.94



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404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,319.38	0.00	90,609.38	23,232.19	116,160.94
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,764.16	4,249.86	106,704.00	28,179.50	140,897.52
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,364.41	13,891.32	162,139.77	44,848.87	224,244.37
405b	LAUNCHING OF GIRDER	TON	78.31	967.47	0.00	261.45	1,307.24
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	154.22	0.00	2,198.47	588.17	2,940.86
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	154.22	0.00	1,028.31	295.63	1,478.15
406ci	STEEL EXPANSION JOINTS (Local)	KG	12.69	21.32	170.26	51.07	255.33
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	522.60	0.00	46,668.73	11,797.83	58,989.16
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	541.35	0.00	116,671.81	29,303.29	146,516.45
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	597.60	0.00	388,509.26	97,276.72	486,383.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	522.60	0.00	42,347.80	10,717.60	53,588.00
406dii	PVC WATER STOP 8" SIZE	M	133.47	0.00	399.81	133.32	666.60
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.90
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	54.40	0.00	327.18	95.39	476.97
406g	STEEL OR METAL BEARING DEVICES	KG	26.27	56.27	178.60	65.28	326.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	331.09	3,542.17	578.05	1,112.83	5,564.14
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	503.26	5,384.10	789.26	1,669.15	8,345.77
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	503.26	8,250.86	954.21	2,427.08	12,135.41
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	838.76	13,751.43	1,380.28	3,992.62	19,963.08

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	698.97	11,459.52	1,202.75	3,340.31	16,701.55
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,258.14	20,627.14	1,912.86	5,949.54	29,747.68
407h	PILE LOAD TEST UPTO 120 TON	EACH	30,992.10	105,999.36	102,323.08	59,828.64	299,143.18
407i	PILE LOAD TEST UPTO 240 TON	EACH	30,992.10	105,999.36	219,863.35	89,213.70	446,068.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	84,992.10	117,448.00	296,698.55	124,784.66	623,923.31
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,492.10	146,810.00	472,744.48	186,261.65	931,308.23
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,748.60	176,172.00	766,408.83	282,082.36	1,410,411.79
407m	CONFIRMATORY BORING (NX SIZE)	M	245.59	3,272.30	25.00	885.72	4,428.61
407n	PERMANENT PILE CASING FOR PILES	Ton	322.12	4,885.57	105,648.48	27,714.04	138,570.22
410	BRICK WORK	CM	447.32	577.25	3,748.55	1,193.28	5,966.40
411a	STONE MASONRY RANDOM DRY	CM	471.96	210.72	1,382.21	516.22	2,581.10
411b	STONE MASONRY RANDOM WITH MORTAR	CM	560.71	335.46	2,695.87	898.01	4,490.05
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	648.21	210.72	1,732.69	647.91	3,239.53
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	735.72	335.46	2,949.44	1,005.15	5,025.77
411g	ROLL POINTING	SM	95.10	24.95	100.13	55.05	275.23
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	971.97	534.31	2,949.44	1,113.93	5,569.65
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	308.37	689.50	1,289.68	571.89	2,859.43
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	308.37	766.21	1,634.24	677.20	3,386.01
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	291.36	1,356.07	2,031.54	919.74	4,598.70
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	305.78	1,702.67	3,223.21	1,307.91	6,539.57
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	355.07	2,255.64	4,527.07	1,784.45	8,922.23
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	440.75	2,781.29	6,453.56	2,418.90	12,094.49

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	570.38	2,692.05	8,395.50	2,914.48	14,572.41
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	672.07	3,268.92	11,020.79	3,740.44	18,702.22
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	795.54	3,813.74	20,397.81	6,251.77	31,258.86
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	308.37	689.50	1,289.68	571.89	2,859.43
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	300.38	766.21	1,693.24	689.96	3,449.78
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	291.36	1,356.07	2,303.54	987.74	4,938.70
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	305.78	1,702.67	4,238.21	1,561.66	7,808.32
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	355.07	2,255.64	5,770.07	2,095.20	10,475.98
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	440.75	2,781.29	8,675.56	2,974.40	14,871.99
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	570.38	2,692.05	10,910.50	3,543.23	17,716.16
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	672.07	3,268.92	14,949.23	4,722.55	23,612.77
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	795.54	3,813.74	27,806.29	8,103.89	40,519.46
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	121.73	198.35	916.32	309.10	1,545.50
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,053.17	1,081.84	4,023.14	1,539.54	7,697.68
507a	STEEL WIRE MESH FOR GABIONS	KG	7.39	0.00	126.79	33.54	167.72
507b	ROCK FILL IN GABIONS	CM	131.09	0.00	978.64	277.43	1,387.15
508a	BRICK PAVING (SINGLE COURSE)	SM	149.61	47.96	280.88	119.61	598.07
508b	BRICK PAVING (DOUBLE COURSE)	SM	267.12	47.96	555.83	217.73	1,088.64
509a	RIPRAP, CLASS A	CM	646.26	0.00	1,037.28	420.88	2,104.42
509b	RIPRAP, CLASS B	CM	467.01	233.11	1,073.65	443.44	2,217.22
509c	RIPRAP, CLASS C	CM	456.68	242.83	1,127.35	456.71	2,283.57
509c1	RIPRAP, CLASS D	CM	456.68	291.39	1,172.38	480.11	2,400.56

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509d	GROUTED RIPRAP, CLASS A	CM	790.87	218.23	3,107.29	1,029.10	5,145.49
509e	GROUTED RIPRAP, CLASS B	CM	605.70	407.69	2,931.96	986.34	4,931.70
509f	GROUTED RIPRAP, CLASS C	CM	582.26	388.31	3,000.94	992.88	4,964.38
509f1	GROUTED RIPRAP, CLASS D	CM	582.26	436.87	3,247.75	1,066.72	5,333.60
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,078.73	615.08	4,672.00	1,591.45	7,957.27
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	66.54	344.31	895.46	326.58	1,632.89
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	134.53	1,135.96	0.00	317.62	1,588.12
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	203.95	131.70	168.56	126.05	630.26
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	261.06	168.58	215.75	161.35	806.74
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	331.06	368.16	714.17	353.35	1,766.74
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	413.83	460.20	892.71	441.68	2,208.42
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	331.06	368.16	390.52	272.44	1,362.18
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	413.83	460.20	488.15	340.54	1,702.72
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	477.49	1,431.68	6,722.02	2,157.80	10,788.99
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,347.98	1,000.42	6,703.45	2,262.96	11,314.82
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	35.89	84.29	726.76	211.73	1,058.66
603	BRICK EDGING	M	11.94	0.00	43.20	13.79	68.93
604a	METAL GUARD RAIL	M	89.69	70.24	3,142.97	825.72	4,128.62
604b	METAL GUARD RAIL END PIECES	EACH	118.56	688.14	3,542.03	1,087.18	5,435.92
604d	STEEL POST FOR METAL GUARD RAIL	EACH	134.52	688.14	3,137.02	989.92	4,949.60
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,456.62	1,447.50	14,933.17	4,709.32	23,546.61
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,456.62	1,026.28	13,918.92	4,350.45	21,752.27

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47 MUZAFFARGARH

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	313.03	500.96	11,413.84	3,056.96	15,284.78
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	95.63	751.44	14,110.75	3,739.46	18,697.28
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	313.03	1,073.66	22,138.67	5,881.34	29,406.70
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,037.05	1,172.88	40,898.01	10,776.98	53,884.92
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	207.41	282.47	19,112.51	4,900.60	24,502.98
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	378.46	0.00	2,768.40	786.72	3,933.58
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	378.46	0.00	4,152.60	1,132.77	5,663.83
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.93	7.03	23.74	8.68	43.38
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.31	4.04	64.62	17.49	87.46
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.93	7.03	31.68	10.66	53.30
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.31	4.04	86.18	22.88	114.42
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	103.58	35.16	229.41	92.04	460.19
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	103.58	60.65	814.26	244.62	1,223.11
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.91	8.79	34.74	12.11	60.55
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.91	15.16	111.83	32.97	164.87
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	4.91	8.79	46.32	15.01	75.03
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	4.91	15.16	149.10	42.29	211.46
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	103.58	35.16	335.44	118.54	592.72
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	103.58	60.65	1,410.06	393.57	1,967.86
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	86.33	35.16	152.94	68.61	343.04
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	86.33	60.65	543.66	172.66	863.30

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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 47 MUZAFFARGARH

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	86.33	35.16	223.62	86.28	431.39
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	86.33	60.65	941.46	272.11	1,360.55
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.81	141.94	398.16	138.23	691.15
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.81	0.00	206.16	54.74	273.72
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.81	141.94	449.16	150.98	754.90
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.81	0.00	262.26	68.77	343.84
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	24.58	140.48	801.00	241.52	1,207.58
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	147.50	842.88	2,086.73	769.28	3,846.40
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	295.01	1,685.76	5,708.24	1,922.25	9,611.27
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	178.27	84.29	1,273.37	383.98	1,919.91
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	157.36	1,050.30	2.20	302.46	1,512.32

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**NANKANA SAHIB**  
**(47E)**



**SAMPAC INTERNATIONAL**

CLIENT:

CSR - 2014

CONSULTANT:

NATIONAL HIGHWAY AUTHORITY  
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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.24	19.27	0.00	5.13	25.63
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.21	321.21	2.18	83.90	419.50
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	35.47	774.41	4.91	203.70	1,018.49
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	141.88	3,097.64	19.65	814.79	4,073.96
103	STRIPPING	CM	4.15	188.78	0.00	48.23	241.16
104	COMPACTION OF NATURAL GROUND	SM	0.59	18.62	3.00	5.55	27.75
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.90	283.06	0.00	72.49	362.45
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	27.36	672.56	0.00	174.98	874.90
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	18.08	524.99	0.00	135.77	678.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.65	254.24	0.00	64.97	324.86
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	30.86	610.97	0.00	160.46	802.29
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	15.63	524.99	0.00	135.16	675.78
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.62	278.09	0.00	72.43	362.13
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	104.71	838.57	90.35	258.41	1,292.05
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	171.45	504.43	137.50	203.35	1,016.73
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	154.31	553.11	0.00	176.86	884.28
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	88.18	397.27	0.00	121.36	606.80
107d	GRANULAR BACKFILL	CM	56.32	241.40	1,092.97	347.67	1,738.36
107e	COMMON BACKFILL	CM	48.71	139.11	20.00	51.96	259.78
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.05	288.79	20.00	79.96	399.81
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	32.50	726.17	159.33	229.50	1,147.51



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Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	24.38	792.41	9.50	206.57	1,032.85
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	21.67	714.13	8.89	186.17	930.86
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.83	123.20	223.08	89.78	448.89
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.86	150.63	20.00	45.12	225.60
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	23.79	348.12	11.89	95.95	479.76
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.24	53.73	5.72	15.42	77.11
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.61	36.66	3.03	10.33	51.64
110	IMPROVED SUB-GARDE (CBR>20%)	CM	16.41	233.49	449.41	174.83	874.14
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.37	29.22	3.11	8.43	42.13
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.07	32.97	3.11	9.54	47.68
201	GRANULAR SUB-BASE	CM	13.01	288.11	1,210.95	378.02	1,890.09
202	AGGREGATE BASE	CM	15.09	350.20	1,606.84	493.03	2,465.16
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	134.33	2,856.48	11,939.18	3,732.50	18,662.48
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	134.33	2,856.48	12,255.04	3,811.46	19,057.30
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	143.85	2,983.43	11,928.59	3,763.97	18,819.84
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	143.85	2,983.43	12,270.76	3,849.51	19,247.55
204b	CEMENT STABILIZED BASE	CM	46.78	915.90	1,508.25	617.73	3,088.66
204c	CEMENT CONTENT	TON	200.00	0.00	8,925.00	2,281.25	11,406.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	394.27	2,422.77	84,198.73	21,753.94	108,769.70
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	394.27	2,422.77	84,198.73	21,753.94	108,769.70
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	165.78	233.81	1,267.77	416.84	2,084.18

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	255.63	4,464.04	9,603.43	3,580.78	17,903.88
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	183.32	262.54	1,416.55	465.60	2,328.01
207a	DEEP PATCHING (0-15 cm)	SM	2.72	80.37	26.29	27.34	136.72
207b	DEEP PATCHING (15-30 cm)	SM	2.72	80.37	26.29	27.34	136.72
208	REINSTATEMENT OF ROAD SURFACE	SM	2.92	130.32	2.20	33.86	169.30
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.19	466.94	13.33	121.87	609.33
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.44	50.29	2.67	13.60	68.00
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.49	2.83	94.75	24.52	122.58
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.47	2.83	82.58	21.47	107.35
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	38.05	9.82	49.10
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	33.02	8.56	42.80
304a	SINGLE SURFACE TREATMENT	SM	1.27	14.01	169.36	46.16	230.80
304b	DOUBLE SURFACE TREATMENT	SM	1.85	26.92	346.26	93.76	468.80
304c	TRIPLE SURFACE TREATMENT	SM	3.11	37.83	408.01	112.24	561.19
304d	SEAL COAT	SM	1.17	7.81	47.77	14.19	70.94
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	118.37	2,815.00	12,852.96	3,946.58	19,732.91
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	118.37	2,694.06	13,694.09	4,126.63	20,633.14
307a	DENSE GRADED HOT BIT-MAC	CM	332.05	863.75	10,316.65	2,878.11	14,390.56
307b	OPEN GRADED HOT BIT-MAC	CM	332.05	863.75	9,985.15	2,795.24	13,976.18
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	50.28	1,236.12	4,884.74	1,542.79	7,713.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	349.38	2,013.10	86,465.17	22,206.91	111,034.56
309a	COLD MILLING, 0-30 mm	SM	1.59	61.27	25.40	22.07	110.33
309b	COLD MILLING, 0-50 mm	SM	2.66	102.12	42.33	36.78	183.89

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.99	153.18	63.50	55.17	275.84
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	852.53	2,690.11	4,761.24	2,075.97	10,379.85
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	852.53	2,690.11	5,449.39	2,248.01	11,240.04
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	852.53	2,690.11	5,804.95	2,336.90	11,684.49
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	852.53	2,690.11	5,045.56	2,147.05	10,735.26
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	852.53	2,690.11	5,733.60	2,319.06	11,595.31
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	852.53	2,690.11	6,089.03	2,407.92	12,039.60
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	852.53	2,690.11	5,361.81	2,226.11	11,130.56
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	852.53	2,690.11	6,049.85	2,398.12	11,990.61
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	852.53	2,690.11	6,382.58	2,481.31	12,406.53
401b	CONCRETE CLASS B	CM	1,116.28	1,419.30	3,996.04	1,632.90	8,164.52
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	850.08	2,690.11	4,497.31	2,009.37	10,046.87
401cii	CONCRETE CLASS C (ON GROUND)	CM	850.08	2,690.11	5,185.35	2,181.38	10,906.92
401ciii	CONCRETE CLASS C (ELEVATED)	CM	850.08	2,690.11	5,540.91	2,270.27	11,351.37
401d	CONCRETE CLASS D1	CM	1,323.88	3,326.20	7,562.02	3,053.02	15,265.11
401e	CONCRETE CLASS Y	CM	1,853.60	898.44	6,099.29	2,212.83	11,064.16
401f	LEAN CONCRETE	CM	742.97	969.12	3,394.68	1,276.69	6,383.46
401gi	PRECAST CONCRETE, CLASS A1	CM	2,874.97	1,879.78	5,413.01	2,541.94	12,709.71
401gii	PRECAST CONCRETE CLASS A3	CM	2,874.97	1,879.78	6,057.80	2,703.14	13,515.69
401giii	PRECAST CONCRETE, CLASS B	CM	2,874.97	1,879.78	4,706.56	2,365.33	11,826.64
401giv	PRECAST CONCRETE CLASS D1	CM	2,874.97	1,879.78	7,569.51	3,081.06	15,405.32
401gv	PRECAST CONCRETE CLASS D2	CM	2,874.97	1,879.78	8,411.87	3,291.66	16,458.28
401gvi	PRECAST CONCRETE CLASS D3	CM	2,874.97	1,879.78	9,255.94	3,502.67	17,513.36
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,249.61	1,419.30	3,219.72	1,472.16	7,360.78
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,738.10	0.00	85,561.02	22,074.78	110,373.90

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,738.10	0.00	89,761.02	23,124.78	115,623.90
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,067.65	4,249.86	106,704.00	28,255.38	141,276.88
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,740.48	13,891.32	161,837.33	44,867.28	224,336.41
405b	LAUNCHING OF GIRDER	TON	87.07	967.47	0.00	263.64	1,318.18
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	2,178.23	591.11	2,955.56
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	1,019.19	301.35	1,506.76
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.12	21.32	170.26	51.67	258.36
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	46,668.73	11,820.75	59,103.73
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	639.26	0.00	116,671.81	29,327.77	146,638.84
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	714.26	0.00	388,509.26	97,305.88	486,529.40
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	42,347.80	10,740.52	53,702.58
406dii	PVC WATER STOP 8" SIZE	M	161.68	0.00	399.81	140.37	701.87
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	63.80	0.00	326.39	97.55	487.74
406g	STEEL OR METAL BEARING DEVICES	KG	31.86	56.27	178.60	66.68	333.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	369.85	3,542.17	578.05	1,122.52	5,612.58
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	562.17	5,384.10	789.26	1,683.88	8,419.41
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	562.17	8,250.86	954.21	2,441.81	12,209.05
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	936.95	13,751.43	1,380.28	4,017.16	20,085.82

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	780.79	11,459.52	1,202.75	3,360.77	16,803.83
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,405.42	20,627.14	1,912.86	5,986.36	29,931.78
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,438.44	105,999.36	118,970.04	66,351.96	331,759.80
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,438.44	105,999.36	253,157.27	99,898.77	499,493.84
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,438.44	117,448.00	346,639.43	144,131.47	720,657.34
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,438.44	146,810.00	554,087.58	216,834.01	1,084,170.03
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,391.32	176,172.00	896,936.13	329,874.86	1,649,374.31
407m	CONFIRMATORY BORING (NX SIZE)	M	297.96	3,272.30	25.00	898.82	4,494.08
407n	PERMANENT PILE CASING FOR PILES	Ton	391.36	4,885.57	105,647.45	27,731.10	138,655.48
410	BRICK WORK	CM	538.51	577.25	4,570.09	1,421.46	7,107.32
411a	STONE MASONRY RANDOM DRY	CM	571.22	210.72	1,580.08	590.51	2,952.53
411b	STONE MASONRY RANDOM WITH MORTAR	CM	683.19	335.46	2,891.96	977.65	4,888.26
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	787.12	210.72	1,922.07	729.98	3,649.88
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	891.04	335.46	3,139.72	1,091.56	5,457.79
411g	ROLL POINTING	SM	113.70	24.95	100.20	59.71	298.57
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,186.94	534.31	3,139.72	1,215.24	6,076.21
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	394.35	689.50	1,102.93	546.69	2,733.47
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	394.35	766.21	1,370.38	632.73	3,163.67
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	367.13	1,356.07	1,609.13	833.08	4,165.41
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	388.30	1,702.67	2,281.04	1,093.00	5,465.01
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	449.14	2,255.64	3,824.91	1,632.42	8,162.11
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	553.46	2,781.29	5,792.76	2,281.88	11,409.39

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Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	716.24	2,692.05	7,343.73	2,688.01	13,440.03
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	846.89	3,268.92	9,186.52	3,325.58	16,627.91
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	998.01	3,813.74	16,040.92	5,213.17	26,065.83
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	394.35	689.50	1,559.12	660.74	3,303.71
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	385.47	766.21	1,926.93	769.65	3,848.25
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	367.13	1,356.07	2,247.79	992.75	4,963.74
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	388.30	1,702.67	3,175.17	1,316.54	6,582.68
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	449.14	2,255.64	4,928.30	1,908.27	9,541.34
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	553.46	2,781.29	8,456.12	2,947.72	14,738.59
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	716.24	2,692.05	9,246.13	3,163.61	15,818.03
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	846.89	3,268.92	12,063.22	4,044.76	20,223.79
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	998.01	3,813.74	19,086.79	5,974.63	29,873.17
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	154.17	198.35	1,106.40	364.73	1,823.66
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,263.19	1,081.84	4,090.49	1,608.88	8,044.39
507a	STEEL WIRE MESH FOR GABIONS	KG	8.78	0.00	124.56	33.34	166.68
507b	ROCK FILL IN GABIONS	CM	169.00	0.00	1,162.70	332.93	1,664.63
508a	BRICK PAVING (SINGLE COURSE)	SM	183.61	47.96	375.09	151.67	758.33
508b	BRICK PAVING (DOUBLE COURSE)	SM	327.54	47.96	742.36	279.46	1,397.32
509a	RIPRAP, CLASS A	CM	786.61	0.00	1,235.15	505.44	2,527.20
509b	RIPRAP, CLASS B	CM	552.43	233.11	1,269.95	513.87	2,569.36
509c	RIPRAP, CLASS C	CM	537.62	242.83	1,302.70	520.79	2,603.93
509c1	RIPRAP, CLASS D	CM	537.62	291.39	1,347.74	544.19	2,720.93

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	964.00	218.23	3,307.30	1,122.38	5,611.91
509e	GROUTED RIPRAP, CLASS B	CM	719.91	407.69	3,130.13	1,064.43	5,322.17
509f	GROUTED RIPRAP, CLASS C	CM	690.52	388.31	3,179.07	1,064.48	5,322.38
509f1	GROUTED RIPRAP, CLASS D	CM	690.52	436.87	3,425.92	1,138.33	5,691.64
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,332.22	615.08	4,746.31	1,673.40	8,367.01
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	85.05	344.31	1,092.31	380.42	1,902.10
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	162.86	1,135.96	0.00	324.71	1,623.53
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	249.59	131.70	200.71	145.50	727.51
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	319.48	168.58	256.91	186.24	931.21
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	402.62	368.16	749.04	379.96	1,899.78
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	503.28	460.20	936.30	474.95	2,374.73
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	402.62	368.16	419.14	297.48	1,487.41
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	503.28	460.20	523.93	371.85	1,859.26
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	563.54	1,431.68	6,723.98	2,179.80	10,899.01
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,639.89	1,000.42	6,704.62	2,336.23	11,681.16
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	43.89	84.29	769.29	224.37	1,121.83
603	BRICK EDGING	M	14.77	0.00	57.60	18.09	90.46
604a	METAL GUARD RAIL	M	108.58	70.24	3,103.01	820.46	4,102.29
604b	METAL GUARD RAIL END PIECES	EACH	145.11	688.14	3,497.01	1,082.56	5,412.82
604d	STEEL POST FOR METAL GUARD RAIL	EACH	162.85	688.14	3,098.00	987.25	4,936.24
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,447.50	14,928.84	4,868.27	24,341.35
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,026.28	13,924.68	4,511.93	22,559.64

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## Rate Analysis Summary (Construction)

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Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	385.68	500.96	11,428.70	3,078.83	15,394.17
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	117.95	751.44	14,133.05	3,750.61	18,753.04
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	385.68	1,073.66	22,172.99	5,908.08	29,540.42
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,322.45	1,172.88	40,949.49	10,861.20	54,306.02
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	264.49	282.47	19,122.80	4,917.44	24,587.20
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	437.38	0.00	2,768.40	801.45	4,007.23
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	437.38	0.00	4,152.60	1,147.50	5,737.48
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.86	7.03	23.74	8.91	44.55
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.62	4.04	64.62	17.57	87.85
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.86	7.03	31.68	10.89	54.47
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.62	4.04	86.18	22.96	114.81
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	229.41	96.09	480.47
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	814.26	248.68	1,243.40
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.08	8.79	34.74	12.40	62.02
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.08	15.16	111.83	33.27	166.34
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.08	8.79	46.32	15.30	76.49
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.08	15.16	149.10	42.59	212.93
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	335.44	122.60	613.01
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	1,410.06	397.63	1,988.15
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	152.94	72.18	360.91
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	543.66	176.23	881.17



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Province PUNJAB

Dcode 47E NANKANA SAHIB

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	223.62	89.85	449.27
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	941.46	275.68	1,378.42
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	141.94	398.16	138.90	694.49
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	0.00	206.16	55.41	277.06
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	141.94	449.16	151.65	758.24
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	0.00	262.26	69.44	347.19
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	30.65	140.48	841.53	253.17	1,265.83
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	183.93	842.88	2,162.24	797.26	3,986.31
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	367.86	1,685.76	5,965.16	2,004.70	10,023.48
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	222.13	84.29	1,287.67	398.52	1,992.61
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	192.75	1,050.30	2.20	311.31	1,556.57

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**NAROWAL**  
**(49A)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 49A NAROWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.27	19.27	0.00	5.13	25.67
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.61	321.21	2.18	84.00	420.00
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	36.37	774.41	4.91	203.92	1,019.61
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	145.47	3,097.64	19.65	815.69	4,078.46
103	STRIPPING	CM	4.33	188.78	0.00	48.28	241.38
104	COMPACTION OF NATURAL GROUND	SM	0.61	18.62	3.00	5.56	27.79
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	7.52	283.06	0.00	72.64	363.22
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	28.82	672.56	0.00	175.34	876.72
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	19.15	524.99	0.00	136.03	680.17
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.15	254.24	0.00	65.10	325.49
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	32.84	610.97	0.00	160.95	804.76
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	16.47	524.99	0.00	135.36	676.82
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	12.53	278.09	0.00	72.65	363.27
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	110.86	838.57	90.35	259.95	1,299.73
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	182.46	504.43	137.50	206.10	1,030.49
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	164.21	553.11	0.00	179.33	896.66
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	93.84	397.27	0.00	122.78	613.88
107d	GRANULAR BACKFILL	CM	58.63	241.40	1,334.85	408.72	2,043.61
107e	COMMON BACKFILL	CM	49.96	139.11	20.00	52.27	261.34
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.76	288.79	20.00	80.14	400.70
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	34.19	726.17	159.33	229.93	1,149.63

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	25.65	792.41	9.50	206.89	1,034.44
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	22.80	714.13	8.89	186.45	932.27
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	13.54	123.20	223.08	89.96	449.78
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.45	150.63	20.00	45.27	226.35
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	24.92	348.12	11.89	96.23	481.17
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.37	53.73	5.72	15.46	77.28
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.71	36.66	3.03	10.35	51.76
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.26	233.49	561.74	203.12	1,015.61
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.44	29.22	3.11	8.44	42.21
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.18	32.97	3.11	9.56	47.82
201	GRANULAR SUB-BASE	CM	13.78	288.11	1,653.85	488.93	2,444.67
202	AGGREGATE BASE	CM	16.09	350.20	1,423.80	447.52	2,237.61
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	138.70	2,856.48	12,305.46	3,825.16	19,125.79
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	138.70	2,856.48	12,576.52	3,892.92	19,464.61
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	148.75	2,983.43	12,294.83	3,856.75	19,283.77
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	148.75	2,983.43	12,592.21	3,931.10	19,655.50
204b	CEMENT STABILIZED BASE	CM	49.47	915.90	1,838.68	701.01	3,505.05
204c	CEMENT CONTENT	TON	200.00	0.00	8,925.00	2,281.25	11,406.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	419.05	2,422.77	84,287.16	21,782.24	108,911.22
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	419.05	2,422.77	84,287.16	21,782.24	108,911.22
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	167.80	233.81	1,453.72	463.83	2,319.16

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 49A NAROWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	266.23	4,464.04	9,895.95	3,656.56	18,282.78
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	185.23	262.54	1,699.33	536.78	2,683.88
207a	DEEP PATCHING (0-15 cm)	SM	2.87	80.37	27.63	27.72	138.59
207b	DEEP PATCHING (15-30 cm)	SM	2.87	80.37	27.63	27.72	138.59
208	REINSTATEMENT OF ROAD SURFACE	SM	3.10	130.32	2.20	33.90	169.52
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.77	466.94	13.33	122.01	610.05
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.55	50.29	2.67	13.63	68.14
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.52	2.83	94.83	24.55	122.73
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.50	2.83	82.67	21.50	107.50
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	38.09	9.83	49.16
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	33.05	8.57	42.86
304a	SINGLE SURFACE TREATMENT	SM	1.36	14.01	171.24	46.65	233.26
304b	DOUBLE SURFACE TREATMENT	SM	1.98	26.92	351.36	95.07	475.33
304c	TRIPLE SURFACE TREATMENT	SM	3.33	37.83	414.04	113.80	569.00
304d	SEAL COAT	SM	1.26	7.81	48.46	14.38	71.91
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	122.74	2,815.00	13,196.08	4,033.45	20,167.27
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	122.74	2,694.06	14,008.54	4,206.34	21,031.68
307a	DENSE GRADED HOT BIT-MAC	CM	340.79	863.75	10,597.20	2,950.44	14,752.18
307b	OPEN GRADED HOT BIT-MAC	CM	340.79	863.75	10,256.64	2,865.30	14,326.48
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	52.02	1,236.12	4,884.74	1,543.22	7,716.11
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	369.90	2,013.10	86,553.60	22,234.15	111,170.75
309a	COLD MILLING, 0-30 mm	SM	1.69	61.27	25.40	22.09	110.45
309b	COLD MILLING, 0-50 mm	SM	2.81	102.12	42.33	36.82	184.09

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## Rate Analysis Summary (Construction)

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Dcode 49A NAROWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	4.22	153.18	63.50	55.23	276.13
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	904.48	2,690.11	4,980.57	2,143.79	10,718.96
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	904.48	2,690.11	5,668.76	2,315.84	11,579.19
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	904.48	2,690.11	6,024.32	2,404.73	12,023.64
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	904.48	2,690.11	5,249.34	2,210.98	11,054.92
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	904.48	2,690.11	5,937.38	2,382.99	11,914.97
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	904.48	2,690.11	6,292.79	2,471.85	12,359.24
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	904.48	2,690.11	5,584.85	2,294.86	11,474.30
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	904.48	2,690.11	6,272.89	2,466.87	12,334.35
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	904.48	2,690.11	6,597.97	2,548.14	12,740.71
401b	CONCRETE CLASS B	CM	1,175.86	1,419.30	4,214.83	1,702.50	8,512.49
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	893.88	2,690.11	4,713.62	2,074.40	10,372.02
401cii	CONCRETE CLASS C (ON GROUND)	CM	893.88	2,690.11	5,401.66	2,246.41	11,232.07
401ciii	CONCRETE CLASS C (ELEVATED)	CM	893.88	2,690.11	5,757.22	2,335.30	11,676.52
401d	CONCRETE CLASS D1	CM	1,404.77	3,326.20	7,746.75	3,119.43	15,597.14
401e	CONCRETE CLASS Y	CM	1,961.06	898.44	6,326.12	2,296.40	11,482.02
401f	LEAN CONCRETE	CM	765.52	969.12	3,626.19	1,340.21	6,701.03
401gi	PRECAST CONCRETE, CLASS A1	CM	3,002.40	1,879.78	5,634.91	2,629.27	13,146.36
401gii	PRECAST CONCRETE CLASS A3	CM	3,002.40	1,879.78	6,273.09	2,788.82	13,944.09
401giii	PRECAST CONCRETE, CLASS B	CM	3,002.40	1,879.78	4,934.10	2,454.07	12,270.35
401giv	PRECAST CONCRETE CLASS D1	CM	3,002.40	1,879.78	7,754.62	3,159.20	15,796.00
401gv	PRECAST CONCRETE CLASS D2	CM	3,002.40	1,879.78	8,583.03	3,366.30	16,831.51
401gvi	PRECAST CONCRETE CLASS D3	CM	3,002.40	1,879.78	9,413.59	3,573.94	17,869.71
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,309.20	1,419.30	3,455.31	1,545.95	7,729.76
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,906.98	0.00	85,697.65	22,151.16	110,755.78

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,906.98	0.00	89,897.65	23,201.16	116,005.78
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,203.25	4,249.86	106,704.00	28,289.28	141,446.38
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,095.70	13,891.32	162,162.70	45,037.43	225,187.14
405b	LAUNCHING OF GIRDER	TON	95.34	967.47	0.00	265.70	1,328.51
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	2,188.01	595.87	2,979.34
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	1,023.17	304.66	1,523.30
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.98	21.32	170.26	51.89	259.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	46,668.73	11,830.58	59,152.91
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	678.60	0.00	116,671.81	29,337.60	146,688.02
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	753.60	0.00	388,509.26	97,315.72	486,578.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	42,347.80	10,750.35	53,751.75
406dii	PVC WATER STOP 8" SIZE	M	169.44	0.00	399.81	142.31	711.56
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	67.96	0.00	326.48	98.61	493.04
406g	STEEL OR METAL BEARING DEVICES	KG	33.37	56.27	178.60	67.06	335.30
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	403.97	3,542.17	578.05	1,131.05	5,655.24
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	614.03	5,384.10	789.26	1,696.85	8,484.24
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	614.03	8,250.86	954.21	2,454.78	12,273.88
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,023.39	13,751.43	1,380.28	4,038.77	20,193.87

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	852.82	11,459.52	1,202.75	3,378.77	16,893.87
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,535.08	20,627.14	1,912.86	6,018.77	30,093.86
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,859.94	105,999.36	122,722.36	67,395.42	336,977.08
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,859.94	105,999.36	260,661.91	101,880.30	509,401.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,859.94	117,448.00	357,896.39	147,051.08	735,255.41
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,859.94	146,810.00	572,422.78	221,523.18	1,107,615.90
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,998.28	176,172.00	926,357.73	337,382.00	1,686,910.01
407m	CONFIRMATORY BORING (NX SIZE)	M	312.01	3,272.30	25.00	902.33	4,511.64
407n	PERMANENT PILE CASING FOR PILES	Ton	409.53	4,885.57	105,647.45	27,735.64	138,678.20
410	BRICK WORK	CM	566.11	577.25	4,383.73	1,381.77	6,908.86
411a	STONE MASONRY RANDOM DRY	CM	598.88	210.72	1,853.89	665.87	3,329.37
411b	STONE MASONRY RANDOM WITH MORTAR	CM	713.88	335.46	3,220.97	1,067.58	5,337.89
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	823.88	210.72	2,217.79	813.10	4,065.49
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	933.88	335.46	3,476.84	1,186.55	5,932.74
411g	ROLL POINTING	SM	119.94	24.95	101.13	61.50	307.52
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,238.88	534.31	3,476.84	1,312.51	6,562.54
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	402.36	689.50	1,115.10	551.74	2,758.69
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	402.36	766.21	1,389.86	639.61	3,198.03
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	377.30	1,356.07	1,637.66	842.76	4,213.78
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	397.55	1,702.67	2,327.39	1,106.90	5,534.50
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	460.72	2,255.64	3,915.06	1,657.85	8,289.27
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	569.76	2,781.29	5,927.38	2,319.61	11,598.04



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	737.34	2,692.05	7,478.33	2,726.93	13,634.65
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	870.34	3,268.92	9,327.58	3,366.71	16,833.55
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,027.90	3,813.74	16,575.76	5,354.35	26,771.74
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	402.36	689.50	1,571.29	665.79	3,328.93
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	392.63	766.21	1,946.41	776.31	3,881.56
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	377.30	1,356.07	2,276.32	1,002.42	5,012.11
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	397.55	1,702.67	3,221.52	1,330.43	6,652.17
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	460.72	2,255.64	5,018.45	1,933.70	9,668.51
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	569.76	2,781.29	8,590.74	2,985.45	14,927.24
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	737.34	2,692.05	9,380.73	3,202.53	16,012.65
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	870.34	3,268.92	12,204.28	4,085.89	20,429.43
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,027.90	3,813.74	19,621.63	6,115.82	30,579.08
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	158.05	198.35	1,362.56	429.74	2,148.71
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,330.40	1,081.84	4,309.28	1,680.38	8,401.89
507a	STEEL WIRE MESH FOR GABIONS	KG	9.29	0.00	124.56	33.46	167.32
507b	ROCK FILL IN GABIONS	CM	171.76	0.00	1,418.26	397.50	1,987.52
508a	BRICK PAVING (SINGLE COURSE)	SM	191.17	47.96	354.62	148.44	742.19
508b	BRICK PAVING (DOUBLE COURSE)	SM	341.17	47.96	700.99	272.53	1,362.66
509a	RIPRAP, CLASS A	CM	822.38	0.00	1,508.96	582.84	2,914.18
509b	RIPRAP, CLASS B	CM	585.90	233.11	1,541.57	590.15	2,950.73
509c	RIPRAP, CLASS C	CM	571.59	242.83	1,576.51	597.73	2,988.65
509c1	RIPRAP, CLASS D	CM	571.59	291.39	1,621.55	621.13	3,105.66

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 49A NAROWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	1,007.12	218.23	3,615.61	1,210.24	6,051.20
509e	GROUTED RIPRAP, CLASS B	CM	761.70	407.69	3,432.66	1,150.51	5,752.57
509f	GROUTED RIPRAP, CLASS C	CM	731.41	388.31	3,485.09	1,151.20	5,756.01
509f1	GROUTED RIPRAP, CLASS D	CM	731.41	436.87	3,736.53	1,226.20	6,131.02
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,382.77	615.08	4,940.68	1,734.63	8,673.16
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	86.80	344.31	1,330.51	440.41	2,202.03
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	170.73	1,135.96	0.00	326.67	1,633.37
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	260.24	131.70	245.21	159.29	796.43
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	333.11	168.58	313.86	203.89	1,019.43
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	421.11	368.16	799.11	397.09	1,985.47
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	526.38	460.20	998.88	496.37	2,481.84
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	421.11	368.16	466.85	314.03	1,570.15
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	526.38	460.20	583.57	392.54	1,962.69
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	598.39	1,431.68	6,846.55	2,219.15	11,095.77
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,714.90	1,000.42	6,828.54	2,385.96	11,929.82
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	45.78	84.29	798.31	232.09	1,160.47
603	BRICK EDGING	M	15.32	0.00	53.76	17.27	86.35
604a	METAL GUARD RAIL	M	113.82	70.24	3,142.97	831.76	4,158.78
604b	METAL GUARD RAIL END PIECES	EACH	151.29	688.14	3,542.03	1,095.37	5,476.83
604d	STEEL POST FOR METAL GUARD RAIL	EACH	170.72	688.14	3,137.02	998.97	4,994.85
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,447.50	15,182.33	4,952.94	24,764.68
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,026.28	14,176.55	4,596.19	22,980.94

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### Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	400.78	500.96	11,450.22	3,087.99	15,439.96
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	122.50	751.44	14,165.34	3,759.82	18,799.09
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	400.78	1,073.66	22,245.22	5,929.92	29,649.58
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,351.17	1,172.88	41,057.84	10,895.47	54,477.36
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	270.23	282.47	19,144.47	4,924.29	24,621.47
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	469.42	0.00	2,768.40	809.46	4,047.28
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	469.42	0.00	4,152.60	1,155.51	5,777.53
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.04	7.03	23.74	8.95	44.77
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.68	4.04	64.62	17.58	87.92
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.04	7.03	31.68	10.94	54.69
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.68	4.04	86.18	22.98	114.88
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	229.41	98.27	491.37
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	814.26	250.86	1,254.30
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.30	8.79	34.74	12.46	62.29
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.30	15.16	111.83	33.32	166.61
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.30	8.79	46.32	15.35	76.77
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.30	15.16	149.10	42.64	213.21
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	335.44	124.78	623.91
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	1,410.06	399.81	1,999.05
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	152.94	73.91	369.53
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	543.66	177.96	889.80

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	223.62	91.58	457.89
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	941.46	277.41	1,387.05
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	141.94	398.16	139.09	695.44
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	0.00	206.16	55.60	278.01
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	141.94	449.16	151.84	759.19
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	0.00	262.26	69.63	348.14
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	31.67	140.48	869.03	260.29	1,301.47
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	190.00	842.88	2,224.18	814.26	4,071.32
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	380.00	1,685.76	6,132.04	2,049.45	10,247.25
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	229.55	84.29	1,389.18	425.75	2,128.77
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	200.88	1,050.30	2.20	313.35	1,566.73

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**OKARA**  
**(50)**



**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.05	19.27	0.00	5.08	25.40
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.62	321.21	2.18	83.50	417.51
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	30.39	774.41	4.91	202.43	1,012.14
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	121.54	3,097.64	19.65	809.71	4,048.54
103	STRIPPING	CM	3.69	188.78	0.00	48.12	240.58
104	COMPACTION OF NATURAL GROUND	SM	0.52	18.62	3.00	5.54	27.68
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.67	283.06	0.00	72.43	362.17
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	162.30	453.99	137.50	188.45	942.24
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.77	672.56	0.00	174.33	871.66
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.55	524.99	0.00	135.38	676.92
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.46	254.24	0.00	64.93	324.63
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	162.30	453.99	137.50	188.45	942.24
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	28.52	610.97	0.00	159.87	799.36
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.15	524.99	0.00	134.78	673.92
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.03	278.09	0.00	72.28	361.39
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	95.77	838.57	90.35	256.17	1,280.87
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	158.45	504.43	137.50	200.10	1,000.48
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	142.61	553.11	0.00	173.93	869.65
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	81.49	397.27	0.00	119.69	598.44
107d	GRANULAR BACKFILL	CM	49.78	241.40	1,231.45	380.66	1,903.30
107e	COMMON BACKFILL	CM	41.75	139.11	20.00	50.22	251.08
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.22	288.79	20.00	79.75	398.77
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	29.35	726.17	159.33	228.72	1,143.58

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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	22.02	792.41	9.50	205.98	1,029.90
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.57	714.13	8.89	185.65	928.24
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.66	123.20	223.08	89.49	447.44
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.05	150.63	20.00	44.92	224.59
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	21.30	348.12	11.89	95.33	476.64
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.05	53.73	5.72	15.38	76.88
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.48	36.66	3.03	10.30	51.48
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.81	233.49	479.09	181.85	909.24
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.23	29.22	3.11	8.39	41.95
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.88	32.97	3.11	9.49	47.44
201	GRANULAR SUB-BASE	CM	11.90	288.11	1,327.96	406.99	2,034.95
202	AGGREGATE BASE	CM	14.00	350.20	1,719.55	520.94	2,604.68
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	116.75	2,856.48	12,109.19	3,770.60	18,853.02
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	116.75	2,856.48	12,423.00	3,849.06	19,245.28
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	125.41	2,983.43	12,098.56	3,801.85	19,009.25
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	125.41	2,983.43	12,438.78	3,886.91	19,434.54
204b	CEMENT STABILIZED BASE	CM	42.68	915.90	1,643.04	650.41	3,252.03
204c	CEMENT CONTENT	TON	162.52	0.00	8,925.00	2,271.88	11,359.40
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	363.46	2,422.77	84,533.60	21,829.96	109,149.78
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	363.46	2,422.77	84,533.60	21,829.96	109,149.78
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	138.23	233.81	1,385.08	439.28	2,196.40

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	226.15	4,464.04	9,749.89	3,610.02	18,050.11
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	152.29	262.54	1,676.29	522.78	2,613.89
207a	DEEP PATCHING (0-15 cm)	SM	2.48	80.37	29.77	28.15	140.77
207b	DEEP PATCHING (15-30 cm)	SM	2.48	80.37	29.77	28.15	140.77
208	REINSTATEMENT OF ROAD SURFACE	SM	2.68	130.32	2.20	33.80	169.00
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.85	466.94	13.33	121.78	608.91
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.37	50.29	2.67	13.58	67.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.45	2.83	95.08	24.59	122.95
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.44	2.83	82.92	21.55	107.73
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	38.19	9.85	49.24
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	33.15	8.59	42.95
304a	SINGLE SURFACE TREATMENT	SM	1.18	14.01	170.64	46.46	232.29
304b	DOUBLE SURFACE TREATMENT	SM	1.72	26.92	349.44	94.52	472.60
304c	TRIPLE SURFACE TREATMENT	SM	2.90	37.83	411.75	113.12	565.60
304d	SEAL COAT	SM	1.09	7.81	48.17	14.27	71.34
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	103.78	2,815.00	13,026.24	3,986.26	19,931.28
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	103.78	2,694.06	13,868.44	4,166.57	20,832.85
307a	DENSE GRADED HOT BIT-MAC	CM	285.01	863.75	10,454.03	2,900.70	14,503.49
307b	OPEN GRADED HOT BIT-MAC	CM	285.01	863.75	10,120.88	2,817.41	14,087.06
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	43.88	1,236.12	4,884.74	1,541.19	7,705.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	319.58	2,013.10	86,800.04	22,283.18	111,415.90
309a	COLD MILLING, 0-30 mm	SM	1.46	61.27	25.40	22.03	110.17
309b	COLD MILLING, 0-50 mm	SM	2.43	102.12	42.33	36.72	183.61



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.65	153.18	63.50	55.08	275.41
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	783.07	2,690.11	5,076.41	2,137.40	10,686.99
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	783.07	2,690.11	5,764.57	2,309.44	11,547.20
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	783.07	2,690.11	6,120.13	2,398.33	11,991.65
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	783.07	2,690.11	5,350.34	2,205.88	11,029.41
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	783.07	2,690.11	6,038.38	2,377.89	11,889.46
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	783.07	2,690.11	6,393.80	2,466.75	12,333.73
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	783.07	2,690.11	5,646.15	2,279.83	11,399.17
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	783.07	2,690.11	6,334.19	2,451.84	12,259.22
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	783.07	2,690.11	6,664.33	2,534.38	12,671.89
401b	CONCRETE CLASS B	CM	1,010.66	1,419.30	4,318.27	1,687.06	8,435.28
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	766.92	2,690.11	4,720.25	2,044.32	10,221.60
401cii	CONCRETE CLASS C (ON GROUND)	CM	766.92	2,690.11	5,408.29	2,216.33	11,081.65
401ciii	CONCRETE CLASS C (ELEVATED)	CM	766.92	2,690.11	5,763.85	2,305.22	11,526.10
401d	CONCRETE CLASS D1	CM	1,216.40	3,326.20	7,876.35	3,104.74	15,523.68
401e	CONCRETE CLASS Y	CM	1,693.04	898.44	6,414.33	2,251.45	11,257.26
401f	LEAN CONCRETE	CM	642.93	969.12	3,732.27	1,336.08	6,680.41
401gi	PRECAST CONCRETE, CLASS A1	CM	2,557.72	1,879.78	5,728.23	2,541.43	12,707.16
401gii	PRECAST CONCRETE CLASS A3	CM	2,557.72	1,879.78	6,339.34	2,694.21	13,471.05
401giii	PRECAST CONCRETE, CLASS B	CM	2,557.72	1,879.78	5,031.08	2,367.14	11,835.72
401giv	PRECAST CONCRETE CLASS D1	CM	2,557.72	1,879.78	7,884.46	3,080.49	15,402.45
401gv	PRECAST CONCRETE CLASS D2	CM	2,557.72	1,879.78	8,707.69	3,286.30	16,431.49
401gvi	PRECAST CONCRETE CLASS D3	CM	2,557.72	1,879.78	9,532.02	3,492.38	17,461.90
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,119.00	1,419.30	3,526.38	1,516.17	7,580.86
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,518.56	0.00	85,771.50	22,072.52	110,362.58

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,518.56	0.00	89,971.50	23,122.52	115,612.58
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,915.87	4,249.86	106,704.00	28,217.43	141,087.16
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,656.91	13,891.32	161,842.33	44,847.64	224,238.19
405b	LAUNCHING OF GIRDER	TON	85.12	967.47	0.00	263.15	1,315.75
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	167.39	0.00	2,178.60	586.50	2,932.48
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	167.39	0.00	1,019.55	296.74	1,483.68
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.78	21.32	170.26	51.34	256.69
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	567.52	0.00	46,668.73	11,809.06	59,045.31
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	587.84	0.00	116,671.81	29,314.91	146,574.56
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	648.78	0.00	388,509.26	97,289.51	486,447.55
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	567.52	0.00	42,347.80	10,728.83	53,644.15
406dii	PVC WATER STOP 8" SIZE	M	144.87	0.00	399.81	136.17	680.85
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	59.07	0.00	326.72	96.45	482.24
406g	STEEL OR METAL BEARING DEVICES	KG	28.51	56.27	178.60	65.85	329.23
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	359.85	3,542.17	578.05	1,120.02	5,600.09
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	546.98	5,384.10	789.26	1,680.08	8,400.42
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	546.98	8,250.86	954.21	2,438.01	12,190.06
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	911.63	13,751.43	1,380.28	4,010.83	20,054.17

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	759.69	11,459.52	1,202.75	3,355.49	16,777.45
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,367.44	20,627.14	1,912.86	5,976.86	29,884.31
407h	PILE LOAD TEST UPTO 120 TON	EACH	33,592.80	105,999.36	128,740.68	67,083.21	335,416.05
407i	PILE LOAD TEST UPTO 240 TON	EACH	33,592.80	105,999.36	272,698.55	103,072.68	515,363.39
407j	PILE LOAD TEST UPTO 360 TON	EACH	92,100.00	117,448.00	375,951.35	146,374.84	731,874.19
407k	PILE LOAD TEST UPTO 550 TON	EACH	135,980.40	146,810.00	601,830.48	221,155.22	1,105,776.10
407l	PILE LOAD TEST UPTO 800 TON	EACH	201,272.40	176,172.00	973,546.83	337,747.81	1,688,739.04
407m	CONFIRMATORY BORING (NX SIZE)	M	266.55	3,272.30	25.00	890.96	4,454.81
407n	PERMANENT PILE CASING FOR PILES	Ton	349.61	4,885.57	105,647.45	27,720.66	138,603.29
410	BRICK WORK	CM	485.57	577.25	3,755.62	1,204.61	6,023.04
411a	STONE MASONRY RANDOM DRY	CM	512.26	210.72	1,819.84	635.71	3,178.53
411b	STONE MASONRY RANDOM WITH MORTAR	CM	608.52	335.46	3,351.29	1,073.82	5,369.10
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	703.53	210.72	2,181.01	773.82	3,869.08
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	798.54	335.46	3,563.35	1,174.34	5,871.69
411g	ROLL POINTING	SM	103.24	24.95	103.88	58.02	290.09
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,054.82	534.31	3,563.35	1,288.12	6,440.59
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	334.37	689.50	1,125.83	537.42	2,687.12
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	334.37	766.21	1,405.34	626.48	3,132.40
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	316.01	1,356.07	1,658.83	832.73	4,163.64
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	331.61	1,702.67	2,359.09	1,098.34	5,491.71
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	385.09	2,255.64	3,971.00	1,652.93	8,264.66
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	478.07	2,781.29	6,009.42	2,317.20	11,585.98

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	618.68	2,692.05	7,560.32	2,717.76	13,588.82
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	728.94	3,268.92	9,415.15	3,353.25	16,766.26
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	862.93	3,813.74	16,876.23	5,388.22	26,941.12
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	334.37	689.50	1,582.02	651.47	3,257.35
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	325.69	766.21	1,961.89	763.45	3,817.24
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	316.01	1,356.07	2,297.49	992.39	4,961.96
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	331.61	1,702.67	3,253.22	1,321.88	6,609.38
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	385.09	2,255.64	5,074.39	1,928.78	9,643.90
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	478.07	2,781.29	8,672.78	2,983.04	14,915.18
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	618.68	2,692.05	9,462.72	3,193.36	15,966.82
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	728.94	3,268.92	12,291.85	4,072.43	20,362.14
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	862.93	3,813.74	19,922.10	6,149.69	30,748.46
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	132.02	198.35	1,243.91	393.57	1,967.86
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,143.29	1,081.84	4,412.71	1,659.46	8,297.30
507a	STEEL WIRE MESH FOR GABIONS	KG	8.02	0.00	124.56	33.15	165.73
507b	ROCK FILL IN GABIONS	CM	142.12	0.00	1,386.48	382.15	1,910.75
508a	BRICK PAVING (SINGLE COURSE)	SM	162.35	47.96	284.59	123.72	618.62
508b	BRICK PAVING (DOUBLE COURSE)	SM	289.86	47.96	560.25	224.52	1,122.59
509a	RIPRAP, CLASS A	CM	701.38	0.00	1,474.91	544.07	2,720.37
509b	RIPRAP, CLASS B	CM	507.10	233.11	1,507.79	562.00	2,810.00
509c	RIPRAP, CLASS C	CM	495.92	242.83	1,542.46	570.30	2,851.51
509c1	RIPRAP, CLASS D	CM	495.92	291.39	1,587.50	593.70	2,968.51

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 50 OKARA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	858.31	218.23	3,684.29	1,190.21	5,951.04
509e	GROUTED RIPRAP, CLASS B	CM	657.64	407.69	3,490.93	1,139.07	5,695.33
509f	GROUTED RIPRAP, CLASS C	CM	632.21	388.31	3,546.92	1,141.86	5,709.30
509f1	GROUTED RIPRAP, CLASS D	CM	632.21	436.87	3,812.06	1,220.29	6,101.43
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,170.44	615.08	5,061.47	1,711.75	8,558.73
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	72.15	344.31	1,231.42	411.97	2,059.85
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	146.02	1,135.96	0.00	320.50	1,602.48
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	221.33	131.70	239.67	148.18	740.88
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	283.30	168.58	306.78	189.66	948.32
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	359.31	368.16	823.01	387.62	1,938.10
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	449.13	460.20	1,028.76	484.53	2,422.63
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	359.31	368.16	486.60	303.52	1,517.59
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	449.13	460.20	608.26	379.40	1,896.99
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	518.50	1,431.68	6,900.69	2,212.72	11,063.59
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,462.97	1,000.42	6,881.35	2,336.18	11,680.92
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	38.95	84.29	775.94	224.79	1,123.96
603	BRICK EDGING	M	12.96	0.00	41.28	13.56	67.79
604a	METAL GUARD RAIL	M	97.35	70.24	3,116.78	821.09	4,105.46
604b	METAL GUARD RAIL END PIECES	EACH	128.66	688.14	3,511.92	1,082.18	5,410.90
604d	STEEL POST FOR METAL GUARD RAIL	EACH	146.01	688.14	3,111.86	986.50	4,932.51
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,664.49	1,447.50	15,256.48	4,842.12	24,210.58
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,664.49	1,026.28	14,249.82	4,485.15	22,425.73

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 50 OKARA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	339.65	500.96	11,439.78	3,070.10	15,350.49
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	103.76	751.44	14,149.67	3,751.22	18,756.09
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	339.65	1,073.66	22,282.59	5,923.98	29,619.88
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,124.55	1,172.88	41,113.89	10,852.83	54,264.14
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	224.91	282.47	19,155.68	4,915.77	24,578.83
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	411.12	0.00	2,768.40	794.88	3,974.40
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	411.12	0.00	4,152.60	1,140.93	5,704.65
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.26	7.03	23.74	8.76	43.79
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.42	4.04	64.62	17.52	87.60
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.26	7.03	31.68	10.74	53.72
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.42	4.04	86.18	22.91	114.56
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	112.51	35.16	229.41	94.27	471.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	112.51	60.65	814.26	246.86	1,234.28
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.33	8.79	34.74	12.21	61.07
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.33	15.16	111.83	33.08	165.39
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.33	8.79	46.32	15.11	75.55
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.33	15.16	149.10	42.40	211.99
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	112.51	35.16	335.44	120.78	603.89
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	112.51	60.65	1,410.06	395.81	1,979.03
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	93.76	35.16	152.94	70.47	352.33
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	93.76	60.65	543.66	174.52	872.59

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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 50 OKARA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	93.76	35.16	223.62	88.14	440.69
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	93.76	60.65	941.46	273.97	1,369.84
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.91	141.94	398.16	138.50	692.51
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.91	0.00	206.16	55.02	275.08
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.91	141.94	449.16	151.25	756.26
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.91	0.00	262.26	69.04	345.21
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	26.67	140.48	846.63	253.44	1,267.22
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	160.02	842.88	2,185.51	797.10	3,985.50
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	320.03	1,685.76	5,970.71	1,994.12	9,970.62
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	193.40	84.29	1,329.92	401.90	2,009.52
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	170.76	1,050.30	2.20	305.82	1,529.08

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**PAKPATTAN**  
**(53A)**



**SAMPAK INTERNATIONAL**



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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 53A PAKPATTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.05	19.27	0.00	5.08	25.40
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.62	321.21	2.18	83.50	417.51
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	30.39	774.41	4.91	202.43	1,012.14
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	121.54	3,097.64	19.65	809.71	4,048.54
103	STRIPPING	CM	3.69	188.78	0.00	48.12	240.58
104	COMPACTION OF NATURAL GROUND	SM	0.52	18.62	3.00	5.54	27.68
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.67	283.06	0.00	72.43	362.17
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	162.30	453.99	137.50	188.45	942.24
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.77	672.56	0.00	174.33	871.66
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.55	524.99	0.00	135.38	676.92
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.46	254.24	0.00	64.93	324.63
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	162.30	453.99	137.50	188.45	942.24
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	28.52	610.97	0.00	159.87	799.36
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.15	524.99	0.00	134.78	673.92
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.03	278.09	0.00	72.28	361.39
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	95.77	838.57	90.35	256.17	1,280.87
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	158.45	504.43	137.50	200.10	1,000.48
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	142.61	553.11	0.00	173.93	869.65
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	81.49	397.27	0.00	119.69	598.44
107d	GRANULAR BACKFILL	CM	49.78	241.40	1,029.42	330.15	1,650.75
107e	COMMON BACKFILL	CM	41.75	139.11	20.00	50.22	251.08
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.22	288.79	20.00	79.75	398.77
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	29.35	726.17	159.33	228.72	1,143.58

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 53A PAKPATTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	22.02	792.41	9.50	205.98	1,029.90
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.57	714.13	8.89	185.65	928.24
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.66	123.20	223.08	89.49	447.44
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.05	150.63	20.00	44.92	224.59
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	21.30	348.12	11.89	95.33	476.64
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.05	53.73	5.72	15.38	76.88
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.48	36.66	3.03	10.30	51.48
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.81	233.49	510.48	189.70	948.48
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.23	29.22	3.11	8.39	41.95
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.88	32.97	3.11	9.49	47.44
201	GRANULAR SUB-BASE	CM	11.90	288.11	1,451.74	437.94	2,189.69
202	AGGREGATE BASE	CM	14.00	350.20	1,838.79	550.75	2,753.74
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	116.75	2,856.48	12,281.38	3,813.65	19,068.26
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	116.75	2,856.48	12,593.04	3,891.57	19,457.83
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	125.41	2,983.43	12,270.72	3,844.89	19,224.46
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	125.41	2,983.43	12,608.83	3,929.42	19,647.10
204b	CEMENT STABILIZED BASE	CM	42.68	915.90	1,785.65	686.06	3,430.29
204c	CEMENT CONTENT	TON	162.52	0.00	8,925.00	2,271.88	11,359.40
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	363.46	2,422.77	84,732.92	21,879.79	109,398.93
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	363.46	2,422.77	84,732.92	21,879.79	109,398.93
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	138.23	233.81	1,509.20	470.31	2,351.55

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 53A PAKPATTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	226.15	4,464.04	9,894.45	3,646.16	18,230.81
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	152.29	262.54	1,783.39	549.55	2,747.77
207a	DEEP PATCHING (0-15 cm)	SM	2.48	80.37	18.85	25.42	127.11
207b	DEEP PATCHING (15-30 cm)	SM	2.48	80.37	18.85	25.42	127.11
208	REINSTATEMENT OF ROAD SURFACE	SM	2.68	130.32	2.20	33.80	169.00
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.85	466.94	13.33	121.78	608.91
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.37	50.29	2.67	13.58	67.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.45	2.83	95.28	24.64	123.20
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.44	2.83	83.12	21.60	107.98
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	38.27	9.87	49.34
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	33.23	8.61	43.05
304a	SINGLE SURFACE TREATMENT	SM	1.18	14.01	171.71	46.73	233.63
304b	DOUBLE SURFACE TREATMENT	SM	1.72	26.92	352.23	95.22	476.09
304c	TRIPLE SURFACE TREATMENT	SM	2.90	37.83	415.02	113.94	569.69
304d	SEAL COAT	SM	1.09	7.81	48.52	14.36	71.78
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	103.78	2,815.00	13,205.68	4,031.11	20,155.57
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	103.78	2,694.06	14,044.69	4,210.63	21,053.16
307a	DENSE GRADED HOT BIT-MAC	CM	285.01	863.75	10,597.57	2,936.58	14,682.92
307b	OPEN GRADED HOT BIT-MAC	CM	285.01	863.75	10,260.48	2,852.31	14,261.56
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	43.88	1,236.12	4,884.74	1,541.19	7,705.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	319.58	2,013.10	86,999.36	22,333.01	111,665.05
309a	COLD MILLING, 0-30 mm	SM	1.46	61.27	25.40	22.03	110.17
309b	COLD MILLING, 0-50 mm	SM	2.43	102.12	42.33	36.72	183.61

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.65	153.18	63.50	55.08	275.41
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	783.07	2,690.11	5,244.82	2,179.50	10,897.51
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	783.07	2,690.11	5,933.00	2,351.55	11,757.73
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	783.07	2,690.11	6,288.56	2,440.44	12,202.18
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	783.07	2,690.11	5,513.20	2,246.60	11,232.98
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	783.07	2,690.11	6,201.24	2,418.61	12,093.03
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	783.07	2,690.11	6,556.65	2,507.46	12,537.28
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	783.07	2,690.11	5,808.40	2,320.39	11,601.97
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	783.07	2,690.11	6,496.44	2,492.40	12,462.02
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	783.07	2,690.11	6,823.83	2,574.25	12,871.26
401b	CONCRETE CLASS B	CM	1,010.66	1,419.30	4,498.77	1,732.18	8,660.91
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	766.92	2,690.11	4,865.64	2,080.67	10,403.34
401cii	CONCRETE CLASS C (ON GROUND)	CM	766.92	2,690.11	5,553.68	2,252.68	11,263.39
401ciii	CONCRETE CLASS C (ELEVATED)	CM	766.92	2,690.11	5,909.24	2,341.57	11,707.84
401d	CONCRETE CLASS D1	CM	1,216.40	3,326.20	8,036.98	3,144.89	15,724.46
401e	CONCRETE CLASS Y	CM	1,693.04	898.44	6,582.59	2,293.52	11,467.59
401f	LEAN CONCRETE	CM	642.93	969.12	3,921.79	1,383.46	6,917.30
401gi	PRECAST CONCRETE, CLASS A1	CM	2,557.72	1,879.78	5,896.68	2,583.54	12,917.72
401gii	PRECAST CONCRETE CLASS A3	CM	2,557.72	1,879.78	6,498.78	2,734.07	13,670.34
401giii	PRECAST CONCRETE, CLASS B	CM	2,557.72	1,879.78	5,214.21	2,412.93	12,064.64
401giv	PRECAST CONCRETE CLASS D1	CM	2,557.72	1,879.78	8,045.39	3,120.72	15,603.61
401gv	PRECAST CONCRETE CLASS D2	CM	2,557.72	1,879.78	8,858.05	3,323.89	16,619.44
401gvi	PRECAST CONCRETE CLASS D3	CM	2,557.72	1,879.78	9,671.76	3,527.32	17,636.58
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,119.00	1,419.30	3,701.70	1,560.00	7,800.01
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,518.56	0.00	86,108.91	22,156.87	110,784.34

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,518.56	0.00	90,308.91	23,206.87	116,034.34
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,915.87	4,249.86	106,704.00	28,217.43	141,087.16
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,656.91	13,891.32	161,881.28	44,857.38	224,286.89
405b	LAUNCHING OF GIRDER	TON	85.12	967.47	0.00	263.15	1,315.75
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	167.39	0.00	2,188.49	588.97	2,944.85
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	167.39	0.00	1,031.34	299.68	1,498.41
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.78	21.32	170.26	51.34	256.69
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	567.52	0.00	46,668.73	11,809.06	59,045.31
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	587.84	0.00	116,671.81	29,314.91	146,574.56
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	648.78	0.00	388,509.26	97,289.51	486,447.55
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	567.52	0.00	42,347.80	10,728.83	53,644.15
406dii	PVC WATER STOP 8" SIZE	M	144.87	0.00	399.81	136.17	680.85
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	59.07	0.00	326.91	96.50	482.48
406g	STEEL OR METAL BEARING DEVICES	KG	28.51	56.27	178.60	65.85	329.23
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	359.85	3,542.17	578.05	1,120.02	5,600.09
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	546.98	5,384.10	789.26	1,680.08	8,400.42
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	546.98	8,250.86	954.21	2,438.01	12,190.06
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	911.63	13,751.43	1,380.28	4,010.83	20,054.17

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## Rate Analysis Summary (Construction)

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Dcode 53A PAKPATTAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	759.69	11,459.52	1,202.75	3,355.49	16,777.45
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,367.44	20,627.14	1,912.86	5,976.86	29,884.31
407h	PILE LOAD TEST UPTO 120 TON	EACH	33,592.80	105,999.36	98,049.80	59,410.49	297,052.45
407i	PILE LOAD TEST UPTO 240 TON	EACH	33,592.80	105,999.36	211,316.79	87,727.24	438,636.19
407j	PILE LOAD TEST UPTO 360 TON	EACH	92,100.00	117,448.00	283,878.71	123,356.68	616,783.39
407k	PILE LOAD TEST UPTO 550 TON	EACH	135,980.40	146,810.00	451,863.68	183,663.52	918,317.60
407l	PILE LOAD TEST UPTO 800 TON	EACH	201,272.40	176,172.00	732,902.43	277,586.71	1,387,933.54
407m	CONFIRMATORY BORING (NX SIZE)	M	266.55	3,272.30	25.00	890.96	4,454.81
407n	PERMANENT PILE CASING FOR PILES	Ton	349.61	4,885.57	105,647.45	27,720.66	138,603.29
410	BRICK WORK	CM	485.57	577.25	4,744.01	1,451.71	7,258.54
411a	STONE MASONRY RANDOM DRY	CM	512.26	210.72	1,968.36	672.83	3,364.17
411b	STONE MASONRY RANDOM WITH MORTAR	CM	608.52	335.46	3,587.02	1,132.75	5,663.76
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	703.53	210.72	2,341.40	813.91	4,069.57
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	798.54	335.46	3,789.15	1,230.79	6,153.94
411g	ROLL POINTING	SM	103.24	24.95	105.34	58.38	291.92
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,054.82	534.31	3,789.15	1,344.57	6,722.84
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	334.37	689.50	1,267.05	572.73	2,863.65
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	334.37	766.21	1,591.98	673.14	3,365.70
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	316.01	1,356.07	1,964.20	909.07	4,545.36
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	331.61	1,702.67	3,104.27	1,284.64	6,423.19
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	385.09	2,255.64	4,275.20	1,728.98	8,644.91
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	478.07	2,781.29	6,072.09	2,332.86	11,664.32

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	618.68	2,692.05	8,014.04	2,831.19	14,155.97
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	728.94	3,268.92	10,626.93	3,656.20	18,280.98
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	862.93	3,813.74	18,790.93	5,866.90	29,334.50
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	334.37	689.50	1,267.05	572.73	2,863.65
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	325.69	766.21	1,650.98	685.72	3,428.60
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	316.01	1,356.07	2,236.20	977.07	4,885.36
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	331.61	1,702.67	4,119.27	1,538.39	7,691.94
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	385.09	2,255.64	5,518.20	2,039.73	10,198.66
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	478.07	2,781.29	8,294.09	2,888.36	14,441.82
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	618.68	2,692.05	10,529.04	3,459.94	17,299.72
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	728.94	3,268.92	14,555.37	4,638.31	23,191.54
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	862.93	3,813.74	26,199.41	7,719.02	38,595.10
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	132.02	198.35	1,063.03	348.35	1,741.76
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,143.29	1,081.84	4,593.22	1,704.59	8,522.94
507a	STEEL WIRE MESH FOR GABIONS	KG	8.02	0.00	124.56	33.15	165.73
507b	ROCK FILL IN GABIONS	CM	142.12	0.00	1,525.09	416.80	2,084.01
508a	BRICK PAVING (SINGLE COURSE)	SM	162.35	47.96	391.45	150.44	752.20
508b	BRICK PAVING (DOUBLE COURSE)	SM	289.86	47.96	777.46	278.82	1,394.11
509a	RIPRAP, CLASS A	CM	701.38	0.00	1,623.43	581.20	2,906.01
509b	RIPRAP, CLASS B	CM	507.10	233.11	1,655.11	598.83	2,994.15
509c	RIPRAP, CLASS C	CM	495.92	242.83	1,690.98	607.43	3,037.15
509c1	RIPRAP, CLASS D	CM	495.92	291.39	1,736.01	630.83	3,154.15

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	858.31	218.23	3,887.32	1,240.96	6,204.82
509e	GROUTED RIPRAP, CLASS B	CM	657.64	407.69	3,687.10	1,188.11	5,940.54
509f	GROUTED RIPRAP, CLASS C	CM	632.21	388.31	3,746.31	1,191.71	5,958.53
509f1	GROUTED RIPRAP, CLASS D	CM	632.21	436.87	4,018.72	1,271.95	6,359.75
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,170.44	615.08	5,229.87	1,753.85	8,769.23
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	72.15	344.31	1,022.57	359.76	1,798.79
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	146.02	1,135.96	0.00	320.50	1,602.48
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	221.33	131.70	263.81	154.21	771.04
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	283.30	168.58	337.67	197.39	986.94
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	359.31	368.16	841.44	392.23	1,961.14
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	449.13	460.20	1,051.80	490.29	2,451.43
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	359.31	368.16	521.07	312.14	1,560.68
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	449.13	460.20	651.34	390.17	1,950.85
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	518.50	1,431.68	7,004.70	2,238.72	11,193.60
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,462.97	1,000.42	6,985.37	2,362.19	11,810.95
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	38.95	84.29	791.96	228.80	1,144.00
603	BRICK EDGING	M	12.96	0.00	62.40	18.84	94.19
604a	METAL GUARD RAIL	M	97.35	70.24	3,116.78	821.09	4,105.46
604b	METAL GUARD RAIL END PIECES	EACH	128.66	688.14	3,511.92	1,082.18	5,410.90
604d	STEEL POST FOR METAL GUARD RAIL	EACH	146.01	688.14	3,111.86	986.50	4,932.51
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,664.49	1,447.50	15,466.96	4,894.74	24,473.68
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,664.49	1,026.28	14,456.29	4,536.76	22,683.82



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### Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	339.65	500.96	11,451.51	3,073.03	15,365.15
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	103.76	751.44	14,167.26	3,755.61	18,778.07
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	339.65	1,073.66	22,344.14	5,939.36	29,696.81
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,124.55	1,172.88	41,206.20	10,875.91	54,379.54
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	224.91	282.47	19,174.15	4,920.38	24,601.91
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	411.12	0.00	2,768.40	794.88	3,974.40
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	411.12	0.00	4,152.60	1,140.93	5,704.65
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.26	7.03	23.74	8.76	43.79
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.42	4.04	64.62	17.52	87.60
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.26	7.03	31.68	10.74	53.72
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.42	4.04	86.18	22.91	114.56
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	112.51	35.16	229.41	94.27	471.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	112.51	60.65	814.26	246.86	1,234.28
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.33	8.79	34.74	12.21	61.07
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.33	15.16	111.83	33.08	165.39
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.33	8.79	46.32	15.11	75.55
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.33	15.16	149.10	42.40	211.99
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	112.51	35.16	335.44	120.78	603.89
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	112.51	60.65	1,410.06	395.81	1,979.03
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	93.76	35.16	152.94	70.47	352.33
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	93.76	60.65	543.66	174.52	872.59

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	93.76	35.16	223.62	88.14	440.69
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	93.76	60.65	941.46	273.97	1,369.84
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.91	141.94	398.16	138.50	692.51
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.91	0.00	206.16	55.02	275.08
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.91	141.94	449.16	151.25	756.26
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.91	0.00	262.26	69.04	345.21
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	26.67	140.48	861.59	257.19	1,285.93
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	160.02	842.88	2,224.12	806.75	4,033.77
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	320.03	1,685.76	6,059.54	2,016.33	10,081.66
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	193.40	84.29	1,410.30	422.00	2,109.99
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	170.76	1,050.30	2.20	305.82	1,529.08

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**RAHIM YAR KHAN**  
**(55)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 55 RAHIM YAR KHAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	1,431.59	429.96	2,149.78
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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## Rate Analysis Summary (Construction)

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Dcode 55 RAHIM YAR KHAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	532.43	194.98	974.89
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	1,538.27	459.41	2,297.06
202	AGGREGATE BASE	CM	13.30	350.20	1,732.98	524.12	2,620.60
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	12,447.77	3,853.42	19,267.10
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	12,747.85	3,928.44	19,642.19
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	12,437.10	3,884.54	19,422.69
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	12,763.67	3,966.18	19,830.90
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	1,932.52	722.21	3,611.05
204c	CEMENT CONTENT	TON	150.00	0.00	8,820.00	2,242.50	11,212.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	84,830.54	21,899.55	109,497.77
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	84,830.54	21,899.55	109,497.77
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	1,576.80	484.74	2,423.71

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	10,048.49	3,681.33	18,406.63
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,678.93	520.69	2,603.44
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	33.98	29.17	145.87
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	33.98	29.17	145.87
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	95.38	24.66	123.29
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	83.21	21.61	108.07
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.31	9.88	49.38
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.27	8.62	43.09
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	172.72	46.96	234.82
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	355.00	95.89	479.45
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	418.27	114.72	573.58
304d	SEAL COAT	SM	1.04	7.81	48.83	14.42	72.10
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	13,354.93	4,066.85	20,334.23
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	14,175.71	4,241.81	21,209.03
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	10,712.51	2,960.66	14,803.32
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	10,379.72	2,877.47	14,387.33
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	87,096.98	22,353.22	111,766.08
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45

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309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	5,070.34	2,125.75	10,628.73
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	5,758.53	2,297.79	11,488.97
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	6,114.09	2,386.68	11,933.42
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	5,341.34	2,193.50	10,967.48
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	6,029.38	2,365.51	11,827.53
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	6,384.78	2,454.36	12,271.78
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,673.17	2,276.46	11,382.28
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	6,361.21	2,448.47	12,242.33
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,685.45	2,529.53	12,647.63
401b	CONCRETE CLASS B	CM	955.51	1,419.30	4,359.63	1,683.61	8,418.05
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	4,809.01	2,055.91	10,279.56
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	5,497.05	2,227.92	11,139.61
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	5,852.61	2,316.81	11,584.06
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	7,816.50	3,074.05	15,370.23
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	6,403.04	2,226.25	11,131.26
401f	LEAN CONCRETE	CM	602.00	969.12	3,787.18	1,339.57	6,697.87
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	5,723.73	2,503.18	12,515.90
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	6,360.29	2,662.32	13,311.60
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	5,084.52	2,343.38	11,716.89
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	7,824.62	3,028.40	15,142.02
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,634.31	3,230.82	16,154.12
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,446.02	3,433.75	17,168.77
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	3,556.82	1,507.91	7,539.53
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,858.60	22,311.86	111,559.32

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	91,058.60	23,361.86	116,809.32
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,159.32	44,890.37	224,451.85
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,188.60	586.65	2,933.27
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,023.76	295.45	1,477.23
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	327.01	95.78	478.90
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	140,560.84	69,431.52	347,157.58
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	296,338.87	108,376.02	541,880.11
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	411,411.83	153,506.42	767,532.11
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	659,588.08	233,015.99	1,165,079.93
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	1,066,227.63	357,099.61	1,785,498.04
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	3,887.60	1,230.88	6,154.39
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,804.77	624.70	3,123.52
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	3,236.78	1,036.39	5,181.97
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	2,189.06	765.78	3,828.89
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	3,494.57	1,145.84	5,729.20
411g	ROLL POINTING	SM	97.67	24.95	102.11	56.18	280.91
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	3,494.57	1,255.55	6,277.76
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,202.25	550.85	2,754.26
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,536.23	653.52	3,267.62
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,856.53	877.04	4,385.19
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	2,684.92	1,174.30	5,871.48
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,609.58	1,806.26	9,031.31
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	6,959.73	2,547.12	12,735.60

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	8,510.55	2,945.42	14,727.08
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	10,404.75	3,588.85	17,944.25
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	20,646.67	6,317.06	31,585.31
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,658.44	664.90	3,324.50
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	2,092.78	790.58	3,952.90
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,495.19	1,036.70	5,183.51
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	3,579.05	1,397.83	6,989.14
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,712.97	2,082.11	10,410.55
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	9,623.09	3,212.96	16,064.80
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	10,412.95	3,421.02	17,105.08
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	13,281.46	4,308.02	21,540.12
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	23,692.54	7,078.53	35,392.65
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	1,445.40	441.77	2,208.85
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	4,452.96	1,653.91	8,269.53
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	125.68	33.32	166.59
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	1,373.03	376.31	1,881.56
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	302.60	125.82	629.11
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	594.94	228.91	1,144.53
509a	RIPRAP, CLASS A	CM	660.97	0.00	1,459.84	530.20	2,651.01
509b	RIPRAP, CLASS B	CM	480.78	233.11	1,492.84	551.68	2,758.40
509c	RIPRAP, CLASS C	CM	470.65	242.83	1,549.91	565.85	2,829.23
509c1	RIPRAP, CLASS D	CM	470.65	291.39	1,594.94	589.24	2,946.22

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	3,723.45	1,187.57	5,937.85
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	3,524.99	1,138.89	5,694.47
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	3,588.23	1,143.90	5,719.52
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,854.44	1,222.60	6,112.98
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	5,052.65	1,691.81	8,459.06
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	1,431.64	460.80	2,304.01
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	237.22	144.31	721.57
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	303.65	184.72	923.61
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	813.02	379.96	1,899.81
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	1,016.28	474.95	2,374.77
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	469.12	293.99	1,469.93
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	586.40	367.48	1,837.42
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	6,943.79	2,216.82	11,084.11
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	6,925.27	2,326.13	11,630.65
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	767.52	222.12	1,110.59
603	BRICK EDGING	M	12.17	0.00	43.20	13.84	69.21
604a	METAL GUARD RAIL	M	91.85	70.24	3,132.20	823.57	4,117.87
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,530.38	1,084.91	5,424.54
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,126.18	988.02	4,940.11
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	15,402.85	4,835.50	24,177.50
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	14,383.25	4,475.30	22,376.48

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### Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 55 RAHIM YAR KHAN

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,455.53	3,068.93	15,344.66
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,173.29	3,755.56	18,777.79
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,285.59	5,919.62	29,598.12
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	41,118.39	10,835.03	54,175.16
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,156.58	4,912.21	24,561.03
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,768.40	790.02	3,950.08
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,152.60	1,136.07	5,680.33
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	838.49	250.99	1,254.96
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,181.65	793.63	3,968.16
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	5,936.00	1,980.44	9,902.20
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,340.05	401.42	2,007.09
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**RAJAN PUR**  
**(56)**



**SAMPAC INTERNATIONAL**

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 56 RAJAN PUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.97	19.27	0.00	5.06	25.30
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.79	321.21	2.18	83.29	416.47
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.02	774.41	4.91	201.83	1,009.17
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	112.07	3,097.64	19.65	807.34	4,036.70
103	STRIPPING	CM	3.40	188.78	0.00	48.04	240.22
104	COMPACTION OF NATURAL GROUND	SM	0.48	18.62	3.00	5.52	27.62
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.14	283.06	0.00	72.30	361.50
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	149.46	453.99	137.50	185.24	926.19
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	22.81	672.56	0.00	173.84	869.22
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.24	524.99	0.00	135.06	675.29
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.02	254.24	0.00	64.82	324.09
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	149.46	453.99	137.50	185.24	926.19
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	26.26	610.97	0.00	159.31	796.54
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.04	524.99	0.00	134.51	672.53
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.15	278.09	0.00	72.06	360.30
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	88.21	838.57	90.35	254.28	1,271.41
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	145.91	504.43	137.50	196.96	984.80
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	131.32	553.11	0.00	171.11	855.54
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	75.04	397.27	0.00	118.08	590.38
107d	GRANULAR BACKFILL	CM	45.88	241.40	1,428.24	428.88	2,144.40
107e	COMMON BACKFILL	CM	38.50	139.11	20.00	49.40	247.01
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.41	288.79	20.00	79.55	397.75
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.04	726.17	159.33	228.14	1,140.68

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.28	792.41	9.50	205.55	1,027.74
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.03	714.13	8.89	185.26	926.31
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.74	123.20	223.08	89.26	446.29
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.33	150.63	20.00	44.74	223.70
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	19.62	348.12	11.89	94.91	474.55
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.89	53.73	5.72	15.33	76.67
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.37	36.66	3.03	10.27	51.33
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.64	233.49	558.17	201.33	1,006.64
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.13	29.22	3.11	8.37	41.83
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.73	32.97	3.11	9.45	47.26
201	GRANULAR SUB-BASE	CM	10.96	288.11	1,639.79	484.71	2,423.57
202	AGGREGATE BASE	CM	12.89	350.20	1,799.76	540.71	2,703.56
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	107.62	2,856.48	12,525.66	3,872.44	19,362.20
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	107.62	2,856.48	12,818.34	3,945.61	19,728.05
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	115.60	2,983.43	12,515.00	3,903.51	19,517.54
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	115.60	2,983.43	12,834.03	3,983.27	19,916.33
204b	CEMENT STABILIZED BASE	CM	39.31	915.90	2,049.01	751.06	3,755.28
204c	CEMENT CONTENT	TON	150.00	0.00	8,820.00	2,242.50	11,212.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	334.70	2,422.77	84,391.87	21,787.33	108,936.67
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	334.70	2,422.77	84,391.87	21,787.33	108,936.67
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	127.52	233.81	1,662.46	505.95	2,529.73



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## Rate Analysis Summary (Construction)

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Dcode 56 RAJAN PUR

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	208.41	4,464.04	10,113.57	3,696.50	18,482.52
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	140.50	262.54	1,459.79	465.71	2,328.53
207a	DEEP PATCHING (0-15 cm)	SM	2.28	80.37	31.82	28.62	143.09
207b	DEEP PATCHING (15-30 cm)	SM	2.28	80.37	31.82	28.62	143.09
208	REINSTATEMENT OF ROAD SURFACE	SM	2.47	130.32	2.20	33.75	168.74
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.31	466.94	13.33	121.64	608.22
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.26	50.29	2.67	13.56	67.78
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	94.94	24.55	122.73
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.40	2.83	82.78	21.50	107.51
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.13	9.83	49.16
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.10	8.57	42.86
304a	SINGLE SURFACE TREATMENT	SM	1.09	14.01	172.46	46.89	234.45
304b	DOUBLE SURFACE TREATMENT	SM	1.59	26.92	354.84	95.84	479.19
304c	TRIPLE SURFACE TREATMENT	SM	2.67	37.83	418.10	114.65	573.25
304d	SEAL COAT	SM	1.01	7.81	48.84	14.42	72.08
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	95.66	2,815.00	13,429.50	4,085.04	20,425.19
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	95.66	2,694.06	14,240.06	4,257.44	21,287.21
307a	DENSE GRADED HOT BIT-MAC	CM	262.80	863.75	10,772.84	2,974.85	14,874.23
307b	OPEN GRADED HOT BIT-MAC	CM	262.80	863.75	10,434.83	2,890.34	14,451.72
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	40.45	1,236.12	4,884.74	1,540.33	7,701.64
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	294.33	2,013.10	86,658.31	22,241.44	111,207.18
309a	COLD MILLING, 0-30 mm	SM	1.34	61.27	25.40	22.00	110.02
309b	COLD MILLING, 0-50 mm	SM	2.24	102.12	42.33	36.67	183.37

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.36	153.18	63.50	55.01	275.05
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	721.16	2,690.11	5,066.92	2,119.55	10,597.74
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	721.16	2,690.11	5,755.12	2,291.60	11,458.00
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	721.16	2,690.11	6,110.68	2,380.49	11,902.45
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	721.16	2,690.11	5,333.17	2,186.11	10,930.56
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	721.16	2,690.11	6,021.21	2,358.12	11,790.61
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	721.16	2,690.11	6,376.60	2,446.97	12,234.84
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	721.16	2,690.11	5,682.00	2,273.32	11,366.59
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	721.16	2,690.11	6,370.04	2,445.33	12,226.64
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	721.16	2,690.11	6,691.67	2,525.74	12,628.68
401b	CONCRETE CLASS B	CM	930.98	1,419.30	4,359.77	1,677.51	8,387.56
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	706.50	2,690.11	4,842.05	2,059.67	10,298.33
401cii	CONCRETE CLASS C (ON GROUND)	CM	706.50	2,690.11	5,530.09	2,231.68	11,158.38
401ciii	CONCRETE CLASS C (ELEVATED)	CM	706.50	2,690.11	5,885.65	2,320.57	11,602.83
401d	CONCRETE CLASS D1	CM	1,120.23	3,326.20	7,799.74	3,061.54	15,307.70
401e	CONCRETE CLASS Y	CM	1,559.34	898.44	6,403.76	2,215.39	11,076.93
401f	LEAN CONCRETE	CM	592.71	969.12	3,787.91	1,337.44	6,687.18
401gi	PRECAST CONCRETE, CLASS A1	CM	2,356.80	1,879.78	5,721.07	2,489.41	12,447.06
401gii	PRECAST CONCRETE CLASS A3	CM	2,356.80	1,879.78	6,366.55	2,650.78	13,253.91
401giii	PRECAST CONCRETE, CLASS B	CM	2,356.80	1,879.78	5,086.63	2,330.80	11,654.01
401giv	PRECAST CONCRETE CLASS D1	CM	2,356.80	1,879.78	7,807.80	3,011.09	15,055.47
401gv	PRECAST CONCRETE CLASS D2	CM	2,356.80	1,879.78	8,617.24	3,213.46	16,067.28
401gvi	PRECAST CONCRETE CLASS D3	CM	2,356.80	1,879.78	9,429.19	3,416.44	17,082.22
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,030.98	1,419.30	3,482.34	1,483.16	7,415.78
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,319.38	0.00	86,819.04	22,284.60	111,423.02

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,319.38	0.00	91,019.04	23,334.60	116,673.02
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,764.16	4,249.86	106,704.00	28,179.50	140,897.52
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,364.41	13,891.32	162,156.22	44,852.99	224,264.94
405b	LAUNCHING OF GIRDER	TON	78.31	967.47	0.00	261.45	1,307.24
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	154.22	0.00	2,197.81	588.01	2,940.03
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	154.22	0.00	1,027.64	295.46	1,477.32
406ci	STEEL EXPANSION JOINTS (Local)	KG	12.69	21.32	170.26	51.07	255.33
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	522.60	0.00	46,668.73	11,797.83	58,989.16
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	541.35	0.00	116,671.81	29,303.29	146,516.45
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	597.60	0.00	388,509.26	97,276.72	486,383.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	522.60	0.00	42,347.80	10,717.60	53,588.00
406dii	PVC WATER STOP 8" SIZE	M	133.47	0.00	399.81	133.32	666.60
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.90
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	54.40	0.00	326.58	95.24	476.22
406g	STEEL OR METAL BEARING DEVICES	KG	26.27	56.27	178.60	65.28	326.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	331.09	3,542.17	578.05	1,112.83	5,564.14
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	503.26	5,384.10	789.26	1,669.15	8,345.77
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	503.26	8,250.86	954.21	2,427.08	12,135.41
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	838.76	13,751.43	1,380.28	3,992.62	19,963.08

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	698.97	11,459.52	1,202.75	3,340.31	16,701.55
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,258.14	20,627.14	1,912.86	5,949.54	29,747.68
407h	PILE LOAD TEST UPTO 120 TON	EACH	30,992.10	105,999.36	134,500.28	67,872.94	339,364.68
407i	PILE LOAD TEST UPTO 240 TON	EACH	30,992.10	105,999.36	284,217.75	105,302.30	526,511.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	84,992.10	117,448.00	393,230.15	148,917.56	744,587.81
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,492.10	146,810.00	629,973.98	225,569.02	1,127,845.10
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,748.60	176,172.00	1,018,707.33	345,156.98	1,725,784.91
407m	CONFIRMATORY BORING (NX SIZE)	M	245.59	3,272.30	25.00	885.72	4,428.61
407n	PERMANENT PILE CASING FOR PILES	Ton	322.12	4,885.57	105,648.48	27,714.04	138,570.22
410	BRICK WORK	CM	447.32	577.25	4,865.56	1,472.53	7,362.66
411a	STONE MASONRY RANDOM DRY	CM	471.96	210.72	1,500.47	545.79	2,728.93
411b	STONE MASONRY RANDOM WITH MORTAR	CM	560.71	335.46	2,880.12	944.07	4,720.36
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	648.21	210.72	1,860.41	679.84	3,399.18
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	735.72	335.46	3,126.65	1,049.46	5,247.29
411g	ROLL POINTING	SM	95.10	24.95	101.24	55.32	276.61
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	971.97	534.31	3,126.65	1,158.23	5,791.16
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	308.37	689.50	1,317.11	578.74	2,893.72
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	308.37	766.21	1,681.64	689.05	3,445.27
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	291.36	1,356.07	2,097.84	936.32	4,681.59
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	305.78	1,702.67	3,332.27	1,335.18	6,675.90
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	355.07	2,255.64	4,742.21	1,838.23	9,191.15
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	440.75	2,781.29	6,775.52	2,499.39	12,496.95

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	570.38	2,692.05	8,717.44	2,994.97	14,974.84
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	672.07	3,268.92	11,357.36	3,824.59	19,122.93
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	795.54	3,813.74	21,689.93	6,574.80	32,874.01
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	308.37	689.50	1,317.11	578.74	2,893.72
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	300.38	766.21	1,740.64	701.81	3,509.04
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	291.36	1,356.07	2,369.84	1,004.32	5,021.59
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	305.78	1,702.67	4,347.27	1,588.93	7,944.65
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	355.07	2,255.64	5,985.21	2,148.98	10,744.90
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	440.75	2,781.29	8,997.52	3,054.89	15,274.45
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	570.38	2,692.05	11,232.44	3,623.72	18,118.59
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	672.07	3,268.92	15,285.80	4,806.70	24,033.49
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	795.54	3,813.74	29,098.41	8,426.92	42,134.61
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	121.73	198.35	1,449.07	442.29	2,211.44
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,053.17	1,081.84	4,453.10	1,647.03	8,235.14
507a	STEEL WIRE MESH FOR GABIONS	KG	7.39	0.00	126.79	33.54	167.72
507b	ROCK FILL IN GABIONS	CM	131.09	0.00	1,089.01	305.02	1,525.12
508a	BRICK PAVING (SINGLE COURSE)	SM	149.61	47.96	412.16	152.43	762.17
508b	BRICK PAVING (DOUBLE COURSE)	SM	267.12	47.96	814.74	282.45	1,412.27
509a	RIPRAP, CLASS A	CM	646.26	0.00	1,155.54	450.45	2,252.25
509b	RIPRAP, CLASS B	CM	467.01	233.11	1,190.97	472.77	2,363.87
509c	RIPRAP, CLASS C	CM	456.68	242.83	1,245.61	486.28	2,431.40
509c1	RIPRAP, CLASS D	CM	456.68	291.39	1,290.64	509.68	2,548.38

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	790.87	218.23	3,266.80	1,068.97	5,344.87
509e	GROUTED RIPRAP, CLASS B	CM	605.70	407.69	3,086.23	1,024.91	5,124.53
509f	GROUTED RIPRAP, CLASS C	CM	582.26	388.31	3,157.69	1,032.06	5,160.32
509f1	GROUTED RIPRAP, CLASS D	CM	582.26	436.87	3,410.00	1,107.28	5,536.41
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,078.73	615.08	5,040.84	1,683.66	8,418.31
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	66.54	344.31	1,426.18	459.26	2,296.29
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	134.53	1,135.96	0.00	317.62	1,588.12
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	203.95	131.70	187.78	130.86	654.28
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	261.06	168.58	240.35	167.50	837.48
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	331.06	368.16	756.49	363.93	1,819.65
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	413.83	460.20	945.62	454.91	2,274.56
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	331.06	368.16	417.45	279.17	1,395.84
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	413.83	460.20	521.81	348.96	1,744.80
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	477.49	1,431.68	6,940.29	2,212.36	11,061.82
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,347.98	1,000.42	6,922.16	2,317.64	11,588.21
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	35.89	84.29	763.90	221.02	1,105.09
603	BRICK EDGING	M	11.94	0.00	62.40	18.59	92.93
604a	METAL GUARD RAIL	M	89.69	70.24	3,170.50	832.61	4,163.04
604b	METAL GUARD RAIL END PIECES	EACH	118.56	688.14	3,571.84	1,094.64	5,473.18
604d	STEEL POST FOR METAL GUARD RAIL	EACH	134.52	688.14	3,164.74	996.85	4,984.25
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,456.62	1,447.50	15,414.91	4,829.76	24,148.78
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,456.62	1,026.28	14,395.78	4,469.67	22,348.34

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	313.03	500.96	11,463.62	3,069.40	15,347.01
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	95.63	751.44	14,185.43	3,758.12	18,790.62
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	313.03	1,073.66	22,285.86	5,918.14	29,590.68
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,037.05	1,172.88	41,118.79	10,832.18	54,160.89
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	207.41	282.47	19,156.66	4,911.64	24,558.18
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	378.46	0.00	2,768.40	786.72	3,933.58
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	378.46	0.00	4,152.60	1,132.77	5,663.83
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.93	7.03	23.74	8.68	43.38
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.31	4.04	64.62	17.49	87.46
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.93	7.03	31.68	10.66	53.30
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.31	4.04	86.18	22.88	114.42
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	103.58	35.16	229.41	92.04	460.19
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	103.58	60.65	814.26	244.62	1,223.11
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.91	8.79	34.74	12.11	60.55
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.91	15.16	111.83	32.97	164.87
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	4.91	8.79	46.32	15.01	75.03
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	4.91	15.16	149.10	42.29	211.46
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	103.58	35.16	335.44	118.54	592.72
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	103.58	60.65	1,410.06	393.57	1,967.86
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	86.33	35.16	152.94	68.61	343.04
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	86.33	60.65	543.66	172.66	863.30

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	86.33	35.16	223.62	86.28	431.39
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	86.33	60.65	941.46	272.11	1,360.55
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.81	141.94	398.16	138.23	691.15
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.81	0.00	206.16	54.74	273.72
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.81	141.94	449.16	150.98	754.90
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.81	0.00	262.26	68.77	343.84
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	24.58	140.48	834.80	249.96	1,249.82
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	147.50	842.88	2,174.89	791.32	3,956.59
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	295.01	1,685.76	5,911.14	1,972.98	9,864.88
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	178.27	84.29	1,307.29	392.46	1,962.31
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	157.36	1,050.30	2.20	302.46	1,512.32



**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**RAWALPINDI**  
**(57)**



**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.27	19.27	0.00	5.13	25.67
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.61	321.21	2.18	84.00	420.00
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	36.37	774.41	4.91	203.92	1,019.61
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	145.47	3,097.64	19.65	815.69	4,078.46
103	STRIPPING	CM	4.33	188.78	0.00	48.28	241.38
104	COMPACTION OF NATURAL GROUND	SM	0.61	18.62	3.00	5.56	27.79
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	7.52	283.06	0.00	72.64	363.22
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	28.82	672.56	0.00	175.34	876.72
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	19.15	524.99	0.00	136.03	680.17
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.15	254.24	0.00	65.10	325.49
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	32.84	610.97	0.00	160.95	804.76
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	16.47	524.99	0.00	135.36	676.82
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	12.53	278.09	0.00	72.65	363.27
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	110.86	838.57	90.35	259.95	1,299.73
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	182.46	504.43	137.50	206.10	1,030.49
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	164.21	553.11	0.00	179.33	896.66
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	93.84	397.27	0.00	122.78	613.88
107d	GRANULAR BACKFILL	CM	58.63	241.40	1,057.99	339.51	1,697.53
107e	COMMON BACKFILL	CM	49.96	139.11	20.00	52.27	261.34
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.76	288.79	20.00	80.14	400.70
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	34.19	726.17	159.33	229.93	1,149.63

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	25.65	792.41	9.50	206.89	1,034.44
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	22.80	714.13	8.89	186.45	932.27
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	13.54	123.20	223.08	89.96	449.78
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.45	150.63	20.00	45.27	226.35
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	24.92	348.12	11.89	96.23	481.17
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.37	53.73	5.72	15.46	77.28
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.71	36.66	3.03	10.35	51.76
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.26	233.49	426.10	169.21	846.06
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.44	29.22	3.11	8.44	42.21
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.18	32.97	3.11	9.56	47.82
201	GRANULAR SUB-BASE	CM	13.78	288.11	1,119.02	355.23	1,776.13
202	AGGREGATE BASE	CM	16.09	350.20	1,335.55	425.46	2,127.30
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	138.70	2,856.48	11,721.26	3,679.11	18,395.54
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	138.70	2,856.48	11,953.44	3,737.15	18,685.77
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	148.75	2,983.43	11,710.73	3,710.73	18,553.64
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	148.75	2,983.43	11,969.03	3,775.30	18,876.52
204b	CEMENT STABILIZED BASE	CM	49.47	915.90	1,284.78	562.54	2,812.68
204c	CEMENT CONTENT	TON	200.00	0.00	8,820.00	2,255.00	11,275.00
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	419.05	2,422.77	83,380.81	21,555.66	107,778.28
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	419.05	2,422.77	83,380.81	21,555.66	107,778.28
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	167.80	233.81	1,033.98	358.90	1,794.48

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	266.23	4,464.04	9,438.07	3,542.09	17,710.43
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	185.23	262.54	1,239.55	421.83	2,109.16
207a	DEEP PATCHING (0-15 cm)	SM	2.87	80.37	26.66	27.47	137.37
207b	DEEP PATCHING (15-30 cm)	SM	2.87	80.37	26.66	27.47	137.37
208	REINSTATEMENT OF ROAD SURFACE	SM	3.10	130.32	2.20	33.90	169.52
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.77	466.94	13.33	122.01	610.05
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.55	50.29	2.67	13.63	68.14
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.52	2.83	93.93	24.32	121.60
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.50	2.83	81.76	21.27	106.37
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	37.73	9.74	48.70
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	32.69	8.48	42.41
304a	SINGLE SURFACE TREATMENT	SM	1.36	14.01	167.51	45.72	228.60
304b	DOUBLE SURFACE TREATMENT	SM	1.98	26.92	342.34	92.81	464.05
304c	TRIPLE SURFACE TREATMENT	SM	3.33	37.83	403.29	111.11	555.55
304d	SEAL COAT	SM	1.26	7.81	46.86	13.98	69.90
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	122.74	2,815.00	12,555.89	3,873.41	19,367.03
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	122.74	2,694.06	13,380.21	4,049.25	20,246.26
307a	DENSE GRADED HOT BIT-MAC	CM	340.79	863.75	10,068.51	2,818.26	14,091.32
307b	OPEN GRADED HOT BIT-MAC	CM	340.79	863.75	9,788.93	2,748.37	13,741.84
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	52.02	1,236.12	4,884.74	1,543.22	7,716.11
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	369.90	2,013.10	85,647.25	22,007.56	110,037.81
309a	COLD MILLING, 0-30 mm	SM	1.69	61.27	25.40	22.09	110.45
309b	COLD MILLING, 0-50 mm	SM	2.81	102.12	42.33	36.82	184.09

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	4.22	153.18	63.50	55.23	276.13
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	904.48	2,690.11	4,612.97	2,051.89	10,259.45
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	904.48	2,690.11	5,301.09	2,223.92	11,119.60
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	904.48	2,690.11	5,656.65	2,312.81	11,564.05
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	904.48	2,690.11	4,932.58	2,131.79	10,658.96
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	904.48	2,690.11	5,620.62	2,303.80	11,519.01
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	904.48	2,690.11	5,976.07	2,392.67	11,963.34
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	904.48	2,690.11	5,231.78	2,206.59	11,032.96
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	904.48	2,690.11	5,919.82	2,378.60	11,893.01
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	904.48	2,690.11	6,258.11	2,463.18	12,315.88
401b	CONCRETE CLASS B	CM	1,175.86	1,419.30	3,875.18	1,617.59	8,087.93
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	893.88	2,690.11	4,340.24	1,981.06	9,905.29
401cii	CONCRETE CLASS C (ON GROUND)	CM	893.88	2,690.11	5,028.28	2,153.07	10,765.34
401ciii	CONCRETE CLASS C (ELEVATED)	CM	893.88	2,690.11	5,383.84	2,241.96	11,209.79
401d	CONCRETE CLASS D1	CM	1,404.77	3,326.20	7,404.69	3,033.91	15,169.56
401e	CONCRETE CLASS Y	CM	1,961.06	898.44	5,917.63	2,194.28	10,971.40
401f	LEAN CONCRETE	CM	765.52	969.12	3,277.21	1,252.96	6,264.81
401gi	PRECAST CONCRETE, CLASS A1	CM	3,002.40	1,879.78	5,262.77	2,536.24	12,681.18
401gii	PRECAST CONCRETE CLASS A3	CM	3,002.40	1,879.78	5,933.08	2,703.81	13,519.07
401giii	PRECAST CONCRETE, CLASS B	CM	3,002.40	1,879.78	4,566.45	2,362.16	11,810.79
401giv	PRECAST CONCRETE CLASS D1	CM	3,002.40	1,879.78	7,412.24	3,073.61	15,368.03
401gv	PRECAST CONCRETE CLASS D2	CM	3,002.40	1,879.78	8,251.38	3,283.39	16,416.94
401gvi	PRECAST CONCRETE CLASS D3	CM	3,002.40	1,879.78	9,091.55	3,493.43	17,467.16
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,309.20	1,419.30	3,097.25	1,456.43	7,282.17
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,906.98	0.00	86,230.73	22,284.43	111,422.13

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,906.98	0.00	90,430.73	23,334.43	116,672.13
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,203.25	4,249.86	106,704.00	28,289.28	141,446.38
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,095.70	13,891.32	162,148.80	45,033.95	225,169.77
405b	LAUNCHING OF GIRDER	TON	95.34	967.47	0.00	265.70	1,328.51
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	2,187.02	595.62	2,978.10
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	1,022.64	304.53	1,522.63
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.98	21.32	170.26	51.89	259.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	46,668.73	11,830.58	59,152.91
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	678.60	0.00	116,671.81	29,337.60	146,688.02
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	753.60	0.00	388,509.26	97,315.72	486,578.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	41,567.80	10,555.35	52,776.75
406dii	PVC WATER STOP 8" SIZE	M	169.44	0.00	399.81	142.31	711.56
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	67.96	0.00	325.59	98.39	491.93
406g	STEEL OR METAL BEARING DEVICES	KG	33.37	56.27	178.60	67.06	335.30
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	403.97	3,542.17	578.05	1,131.05	5,655.24
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	614.03	5,384.10	789.26	1,696.85	8,484.24
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	614.03	8,250.86	954.21	2,454.78	12,273.88
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,023.39	13,751.43	1,380.28	4,038.77	20,193.87

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	852.82	11,459.52	1,202.75	3,378.77	16,893.87
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,535.08	20,627.14	1,912.86	6,018.77	30,093.86
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,859.94	105,999.36	119,983.80	66,710.78	333,553.88
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,859.94	105,999.36	255,184.79	100,511.02	502,555.11
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,859.94	117,448.00	349,680.71	144,997.16	724,985.81
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,859.94	146,810.00	559,041.18	218,177.78	1,090,888.90
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,998.28	176,172.00	904,884.93	332,013.80	1,660,069.01
407m	CONFIRMATORY BORING (NX SIZE)	M	312.01	3,272.30	25.00	902.33	4,511.64
407n	PERMANENT PILE CASING FOR PILES	Ton	409.53	4,885.57	105,647.45	27,735.64	138,678.20
410	BRICK WORK	CM	566.11	577.25	5,562.77	1,676.53	8,382.66
411a	STONE MASONRY RANDOM DRY	CM	598.88	210.72	1,449.76	564.84	2,824.20
411b	STONE MASONRY RANDOM WITH MORTAR	CM	713.88	335.46	2,754.24	950.90	4,754.48
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	823.88	210.72	1,781.32	703.98	3,519.90
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	933.88	335.46	2,991.18	1,065.13	5,325.66
411g	ROLL POINTING	SM	119.94	24.95	99.98	61.22	306.09
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,238.88	534.31	2,991.18	1,191.09	5,955.46
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	402.36	689.50	1,167.63	564.87	2,824.36
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	402.36	766.21	1,478.42	661.75	3,308.73
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	377.30	1,356.07	1,771.41	876.20	4,380.98
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	397.55	1,702.67	2,551.76	1,162.99	5,814.97
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	460.72	2,255.64	4,366.79	1,770.79	8,853.93
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	569.76	2,781.29	6,605.89	2,489.23	12,446.17

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	737.34	2,692.05	8,156.75	2,896.53	14,482.67
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	870.34	3,268.92	10,034.19	3,543.36	17,716.81
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,027.90	3,813.74	19,339.34	6,045.24	30,226.21
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	402.36	689.50	1,623.82	678.92	3,394.59
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	392.63	766.21	2,034.97	798.45	3,992.27
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	377.30	1,356.07	2,410.07	1,035.86	5,179.30
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	397.55	1,702.67	3,445.89	1,386.53	6,932.63
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	460.72	2,255.64	5,470.18	2,046.63	10,233.17
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	569.76	2,781.29	9,269.25	3,155.07	15,775.37
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	737.34	2,692.05	10,059.15	3,372.13	16,860.67
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	870.34	3,268.92	12,910.89	4,262.54	21,312.68
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,027.90	3,813.74	22,385.20	6,806.71	34,033.55
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	158.05	198.35	1,067.50	355.97	1,779.87
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,330.40	1,081.84	3,968.52	1,595.19	7,975.94
507a	STEEL WIRE MESH FOR GABIONS	KG	9.29	0.00	122.34	32.91	164.54
507b	ROCK FILL IN GABIONS	CM	171.76	0.00	1,043.54	303.82	1,519.12
508a	BRICK PAVING (SINGLE COURSE)	SM	191.17	47.96	488.66	181.95	909.75
508b	BRICK PAVING (DOUBLE COURSE)	SM	341.17	47.96	969.39	339.63	1,698.16
509a	RIPRAP, CLASS A	CM	822.38	0.00	1,104.83	481.80	2,409.00
509b	RIPRAP, CLASS B	CM	585.90	233.11	1,118.33	484.34	2,421.68
509c	RIPRAP, CLASS C	CM	571.59	242.83	1,194.89	502.32	2,511.62
509c1	RIPRAP, CLASS D	CM	571.59	291.39	1,217.41	520.10	2,600.49



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	1,007.12	218.23	3,169.10	1,098.61	5,493.06
509e	GROUTED RIPRAP, CLASS B	CM	761.70	407.69	2,971.49	1,035.22	5,176.11
509f	GROUTED RIPRAP, CLASS C	CM	731.41	388.31	3,063.12	1,045.71	5,228.55
509f1	GROUTED RIPRAP, CLASS D	CM	731.41	436.87	3,286.66	1,113.74	5,568.69
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,382.77	615.08	4,631.38	1,657.31	8,286.53
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	86.80	344.31	1,058.43	372.38	1,861.92
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	170.73	1,135.96	0.00	326.67	1,633.37
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	260.24	131.70	179.53	142.87	714.34
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	333.11	168.58	229.80	182.87	914.36
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	421.11	368.16	726.43	378.92	1,894.62
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	526.38	460.20	908.04	473.66	2,368.28
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	421.11	368.16	398.87	297.03	1,485.17
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	526.38	460.20	498.58	371.29	1,856.47
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	598.39	1,431.68	6,673.59	2,175.91	10,879.56
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,714.90	1,000.42	6,653.20	2,342.13	11,710.64
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	45.78	84.29	765.34	223.85	1,119.25
603	BRICK EDGING	M	15.32	0.00	76.80	23.03	115.15
604a	METAL GUARD RAIL	M	113.82	70.24	3,142.97	831.76	4,158.78
604b	METAL GUARD RAIL END PIECES	EACH	151.29	688.14	3,542.03	1,095.37	5,476.83
604d	STEEL POST FOR METAL GUARD RAIL	EACH	170.72	688.14	3,137.02	998.97	4,994.85
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,447.50	14,796.93	4,856.59	24,282.93
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,026.28	13,784.80	4,498.25	22,491.25

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	400.78	500.96	11,408.81	3,077.64	15,388.18
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	122.50	751.44	14,103.21	3,744.29	18,721.43
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	400.78	1,073.66	22,111.55	5,896.50	29,482.49
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,351.17	1,172.88	40,857.32	10,845.34	54,226.72
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	270.23	282.47	19,100.82	4,913.38	24,566.91
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	469.42	0.00	2,768.40	809.46	4,047.28
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	469.42	0.00	4,152.60	1,155.51	5,777.53
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.04	7.03	23.74	8.95	44.77
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.68	4.04	64.62	17.58	87.92
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.04	7.03	31.68	10.94	54.69
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.68	4.04	86.18	22.98	114.88
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	229.41	98.27	491.37
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	814.26	250.86	1,254.30
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.30	8.79	34.74	12.46	62.29
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.30	15.16	111.83	33.32	166.61
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.30	8.79	46.32	15.35	76.77
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.30	15.16	149.10	42.64	213.21
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	335.44	124.78	623.91
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	1,410.06	399.81	1,999.05
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	152.94	73.91	369.53
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	543.66	177.96	889.80

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608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	223.62	91.58	457.89
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	941.46	277.41	1,387.05
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	141.94	398.16	139.09	695.44
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	0.00	206.16	55.60	278.01
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	141.94	449.16	151.84	759.19
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	0.00	262.26	69.63	348.14
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	31.67	140.48	838.85	252.75	1,263.74
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	190.00	842.88	2,156.88	797.44	3,987.20
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	380.00	1,685.76	5,969.15	2,008.73	10,043.64
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	229.55	84.29	1,201.33	378.79	1,893.95
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	200.88	1,050.30	2.20	313.35	1,566.73

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**SAHIWAL**  
**(58)**



**SAMPAC INTERNATIONAL**

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CONSULTANT:

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**Rate Analysis Summary (Construction)**

Province PUNJAB

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.05	19.27	0.00	5.08	25.40
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.62	321.21	2.18	83.50	417.51
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	30.39	774.41	4.91	202.43	1,012.14
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	121.54	3,097.64	19.65	809.71	4,048.54
103	STRIPPING	CM	3.69	188.78	0.00	48.12	240.58
104	COMPACTION OF NATURAL GROUND	SM	0.52	18.62	3.00	5.54	27.68
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.67	283.06	0.00	72.43	362.17
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	162.30	453.99	137.50	188.45	942.24
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.77	672.56	0.00	174.33	871.66
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.55	524.99	0.00	135.38	676.92
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.46	254.24	0.00	64.93	324.63
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	162.30	453.99	137.50	188.45	942.24
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	28.52	610.97	0.00	159.87	799.36
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	14.15	524.99	0.00	134.78	673.92
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.03	278.09	0.00	72.28	361.39
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	95.77	838.57	90.35	256.17	1,280.87
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	158.45	504.43	137.50	200.10	1,000.48
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	142.61	553.11	0.00	173.93	869.65
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	81.49	397.27	0.00	119.69	598.44
107d	GRANULAR BACKFILL	CM	49.78	241.40	1,085.05	344.06	1,720.29
107e	COMMON BACKFILL	CM	41.75	139.11	20.00	50.22	251.08
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.22	288.79	20.00	79.75	398.77
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	29.35	726.17	159.33	228.72	1,143.58

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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	22.02	792.41	9.50	205.98	1,029.90
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.57	714.13	8.89	185.65	928.24
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.66	123.20	223.08	89.49	447.44
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.05	150.63	20.00	44.92	224.59
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	21.30	348.12	11.89	95.33	476.64
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.05	53.73	5.72	15.38	76.88
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.48	36.66	3.03	10.30	51.48
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.81	233.49	508.63	189.23	946.16
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.23	29.22	3.11	8.39	41.95
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.88	32.97	3.11	9.49	47.44
201	GRANULAR SUB-BASE	CM	11.90	288.11	1,444.43	436.11	2,180.54
202	AGGREGATE BASE	CM	14.00	350.20	1,831.75	548.99	2,744.93
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	116.75	2,856.48	12,260.15	3,808.34	19,041.72
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	116.75	2,856.48	12,571.44	3,886.17	19,430.83
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	125.41	2,983.43	12,249.50	3,839.59	19,197.93
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	125.41	2,983.43	12,587.20	3,924.01	19,620.06
204b	CEMENT STABILIZED BASE	CM	42.68	915.90	1,777.22	683.95	3,419.75
204c	CEMENT CONTENT	TON	162.52	0.00	8,715.00	2,219.38	11,096.90
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	363.46	2,422.77	84,599.22	21,846.36	109,231.80
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	363.46	2,422.77	84,599.22	21,846.36	109,231.80
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	138.23	233.81	1,501.87	468.48	2,342.38

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	226.15	4,464.04	9,877.73	3,641.98	18,209.91
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	152.29	262.54	1,566.92	495.44	2,477.18
207a	DEEP PATCHING (0-15 cm)	SM	2.48	80.37	21.32	26.04	130.21
207b	DEEP PATCHING (15-30 cm)	SM	2.48	80.37	21.32	26.04	130.21
208	REINSTATEMENT OF ROAD SURFACE	SM	2.68	130.32	2.20	33.80	169.00
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.85	466.94	13.33	121.78	608.91
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.37	50.29	2.67	13.58	67.91
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.45	2.83	95.15	24.61	123.03
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.44	2.83	82.98	21.56	107.81
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	38.21	9.86	49.28
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	33.18	8.60	42.98
304a	SINGLE SURFACE TREATMENT	SM	1.18	14.01	171.43	46.66	233.28
304b	DOUBLE SURFACE TREATMENT	SM	1.72	26.92	351.61	95.07	475.33
304c	TRIPLE SURFACE TREATMENT	SM	2.90	37.83	414.30	113.76	568.79
304d	SEAL COAT	SM	1.09	7.81	48.44	14.34	71.68
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	103.78	2,815.00	13,182.97	4,025.44	20,127.19
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	103.78	2,694.06	14,020.77	4,204.65	21,023.26
307a	DENSE GRADED HOT BIT-MAC	CM	285.01	863.75	10,579.03	2,931.95	14,659.74
307b	OPEN GRADED HOT BIT-MAC	CM	285.01	863.75	10,242.59	2,847.84	14,239.20
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	43.88	1,236.12	4,884.74	1,541.19	7,705.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	319.58	2,013.10	86,865.66	22,299.58	111,497.92
309a	COLD MILLING, 0-30 mm	SM	1.46	61.27	25.40	22.03	110.17
309b	COLD MILLING, 0-50 mm	SM	2.43	102.12	42.33	36.72	183.61

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.65	153.18	63.50	55.08	275.41
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	783.07	2,690.11	5,098.24	2,142.86	10,714.28
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	783.07	2,690.11	5,786.42	2,314.90	11,574.50
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	783.07	2,690.11	6,141.98	2,403.79	12,018.95
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	783.07	2,690.11	5,364.14	2,209.33	11,046.65
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	783.07	2,690.11	6,052.18	2,381.34	11,906.70
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	783.07	2,690.11	6,407.58	2,470.19	12,350.96
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	783.07	2,690.11	5,665.06	2,284.56	11,422.80
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	783.07	2,690.11	6,353.10	2,456.57	12,282.85
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	783.07	2,690.11	6,680.65	2,538.46	12,692.29
401b	CONCRETE CLASS B	CM	1,010.66	1,419.30	4,375.96	1,701.48	8,507.39
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	766.92	2,690.11	4,753.82	2,052.71	10,263.56
401cii	CONCRETE CLASS C (ON GROUND)	CM	766.92	2,690.11	5,441.86	2,224.72	11,123.61
401ciii	CONCRETE CLASS C (ELEVATED)	CM	766.92	2,690.11	5,797.42	2,313.61	11,568.06
401d	CONCRETE CLASS D1	CM	1,216.40	3,326.20	7,847.99	3,097.64	15,488.22
401e	CONCRETE CLASS Y	CM	1,693.04	898.44	6,426.29	2,254.44	11,272.22
401f	LEAN CONCRETE	CM	642.93	969.12	3,810.52	1,355.64	6,778.22
401gi	PRECAST CONCRETE, CLASS A1	CM	2,557.72	1,879.78	5,751.40	2,547.22	12,736.12
401gii	PRECAST CONCRETE CLASS A3	CM	2,557.72	1,879.78	6,355.08	2,698.14	13,490.72
401giii	PRECAST CONCRETE, CLASS B	CM	2,557.72	1,879.78	5,091.30	2,382.20	11,911.00
401giv	PRECAST CONCRETE CLASS D1	CM	2,557.72	1,879.78	7,856.27	3,073.44	15,367.21
401gv	PRECAST CONCRETE CLASS D2	CM	2,557.72	1,879.78	8,652.10	3,272.40	16,362.00
401gvi	PRECAST CONCRETE CLASS D3	CM	2,557.72	1,879.78	9,449.18	3,471.67	17,358.34
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,119.00	1,419.30	3,545.32	1,520.91	7,604.53
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,518.56	0.00	85,890.27	22,102.21	110,511.04



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,518.56	0.00	90,090.27	23,152.21	115,761.04
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,915.87	4,249.86	106,704.00	28,217.43	141,087.16
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,656.91	13,891.32	161,859.84	44,852.02	224,260.09
405b	LAUNCHING OF GIRDER	TON	85.12	967.47	0.00	263.15	1,315.75
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	167.39	0.00	2,188.35	588.93	2,944.67
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	167.39	0.00	1,031.19	299.65	1,498.23
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.78	21.32	170.26	51.34	256.69
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	567.52	0.00	46,668.73	11,809.06	59,045.31
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	587.84	0.00	116,671.81	29,314.91	146,574.56
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	648.78	0.00	388,509.26	97,289.51	486,447.55
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	567.52	0.00	42,347.80	10,728.83	53,644.15
406dii	PVC WATER STOP 8" SIZE	M	144.87	0.00	399.81	136.17	680.85
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	59.07	0.00	326.78	96.46	482.32
406g	STEEL OR METAL BEARING DEVICES	KG	28.51	56.27	178.60	65.85	329.23
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	359.85	3,542.17	578.05	1,120.02	5,600.09
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	546.98	5,384.10	789.26	1,680.08	8,400.42
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	546.98	8,250.86	954.21	2,438.01	12,190.06
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	911.63	13,751.43	1,380.28	4,010.83	20,054.17

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	759.69	11,459.52	1,202.75	3,355.49	16,777.45
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,367.44	20,627.14	1,912.86	5,976.86	29,884.31
407h	PILE LOAD TEST UPTO 120 TON	EACH	33,592.80	105,999.36	105,007.08	61,149.81	305,749.05
407i	PILE LOAD TEST UPTO 240 TON	EACH	33,592.80	105,999.36	225,231.35	91,205.88	456,029.39
407j	PILE LOAD TEST UPTO 360 TON	EACH	92,100.00	117,448.00	304,750.55	128,574.64	642,873.19
407k	PILE LOAD TEST UPTO 550 TON	EACH	135,980.40	146,810.00	485,859.48	192,162.47	960,812.35
407l	PILE LOAD TEST UPTO 800 TON	EACH	201,272.40	176,172.00	787,453.83	291,224.56	1,456,122.79
407m	CONFIRMATORY BORING (NX SIZE)	M	266.55	3,272.30	25.00	890.96	4,454.81
407n	PERMANENT PILE CASING FOR PILES	Ton	349.61	4,885.57	105,647.45	27,720.66	138,603.29
410	BRICK WORK	CM	485.57	577.25	4,747.31	1,452.53	7,262.66
411a	STONE MASONRY RANDOM DRY	CM	512.26	210.72	1,699.91	605.72	3,028.61
411b	STONE MASONRY RANDOM WITH MORTAR	CM	608.52	335.46	3,242.25	1,046.56	5,232.79
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	703.53	210.72	2,051.48	741.43	3,707.16
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	798.54	335.46	3,437.48	1,142.87	5,714.36
411g	ROLL POINTING	SM	103.24	24.95	103.86	58.01	290.07
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,054.82	534.31	3,437.48	1,256.65	6,283.26
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	334.37	689.50	1,242.40	566.57	2,832.83
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	334.37	766.21	1,552.19	663.19	3,315.96
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	316.01	1,356.07	1,905.74	894.45	4,472.27
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	331.61	1,702.67	3,008.64	1,260.73	6,303.65
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	385.09	2,255.64	4,087.68	1,682.10	8,410.51
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	478.07	2,781.29	5,792.08	2,262.86	11,314.30

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	618.68	2,692.05	7,733.83	2,761.14	13,805.71
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	728.94	3,268.92	10,333.55	3,582.85	17,914.26
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	862.93	3,813.74	17,673.07	5,587.43	27,937.17
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	334.37	689.50	1,242.40	566.57	2,832.83
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	325.69	766.21	1,611.19	675.77	3,378.86
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	316.01	1,356.07	2,177.74	962.45	4,812.27
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	331.61	1,702.67	4,023.64	1,514.48	7,572.40
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	385.09	2,255.64	5,330.68	1,992.85	9,964.26
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	478.07	2,781.29	8,014.08	2,818.36	14,091.80
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	618.68	2,692.05	10,248.83	3,389.89	16,949.46
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	728.94	3,268.92	14,261.99	4,564.96	22,824.81
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	862.93	3,813.74	25,081.55	7,439.55	37,197.77
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	132.02	198.35	1,114.64	361.25	1,806.26
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,143.29	1,081.84	4,468.18	1,673.33	8,366.64
507a	STEEL WIRE MESH FOR GABIONS	KG	8.02	0.00	124.56	33.15	165.73
507b	ROCK FILL IN GABIONS	CM	142.12	0.00	1,274.54	354.16	1,770.82
508a	BRICK PAVING (SINGLE COURSE)	SM	162.35	47.96	395.40	151.43	757.14
508b	BRICK PAVING (DOUBLE COURSE)	SM	289.86	47.96	784.58	280.60	1,403.00
509a	RIPRAP, CLASS A	CM	701.38	0.00	1,354.98	514.09	2,570.45
509b	RIPRAP, CLASS B	CM	507.10	233.11	1,388.81	532.26	2,661.28
509c	RIPRAP, CLASS C	CM	495.92	242.83	1,422.53	540.32	2,701.59
509c1	RIPRAP, CLASS D	CM	495.92	291.39	1,467.56	563.72	2,818.59

CLIENT:

CSR - 2014

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 58 SAHIWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	858.31	218.23	3,564.66	1,160.30	5,801.50
509e	GROUTED RIPRAP, CLASS B	CM	657.64	407.69	3,372.29	1,109.41	5,547.04
509f	GROUTED RIPRAP, CLASS C	CM	632.21	388.31	3,425.67	1,111.55	5,557.73
509f1	GROUTED RIPRAP, CLASS D	CM	632.21	436.87	3,691.38	1,190.12	5,950.58
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,170.44	615.08	5,084.59	1,717.53	8,587.63
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	72.15	344.31	1,079.55	374.00	1,870.01
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	146.02	1,135.96	0.00	320.50	1,602.48
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	221.33	131.70	220.18	143.30	716.52
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	283.30	168.58	281.83	183.43	917.14
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	359.31	368.16	793.86	380.33	1,901.66
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	449.13	460.20	992.33	475.42	2,377.08
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	359.31	368.16	470.17	299.41	1,497.05
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	449.13	460.20	587.71	374.26	1,871.31
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	518.50	1,431.68	6,917.38	2,216.89	11,084.45
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,462.97	1,000.42	6,898.74	2,340.53	11,702.66
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	38.95	84.29	780.06	225.82	1,129.12
603	BRICK EDGING	M	12.96	0.00	62.40	18.84	94.19
604a	METAL GUARD RAIL	M	97.35	70.24	3,116.78	821.09	4,105.46
604b	METAL GUARD RAIL END PIECES	EACH	128.66	688.14	3,511.92	1,082.18	5,410.90
604d	STEEL POST FOR METAL GUARD RAIL	EACH	146.01	688.14	3,111.86	986.50	4,932.51
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,664.49	1,447.50	15,307.91	4,854.97	24,274.87
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,664.49	1,026.28	14,299.84	4,497.65	22,488.26

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### Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 58 SAHIWAL

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	339.65	500.96	11,440.15	3,070.19	15,350.95
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	103.76	751.44	14,150.22	3,751.35	18,756.77
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	339.65	1,073.66	22,292.81	5,926.53	29,632.65
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,124.55	1,172.88	41,129.21	10,856.66	54,283.30
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	224.91	282.47	19,158.75	4,916.53	24,582.66
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	411.12	0.00	2,768.40	794.88	3,974.40
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	411.12	0.00	4,152.60	1,140.93	5,704.65
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.26	7.03	23.74	8.76	43.79
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.42	4.04	64.62	17.52	87.60
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.26	7.03	31.68	10.74	53.72
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.42	4.04	86.18	22.91	114.56
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	112.51	35.16	229.41	94.27	471.35
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	112.51	60.65	814.26	246.86	1,234.28
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.33	8.79	34.74	12.21	61.07
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.33	15.16	111.83	33.08	165.39
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.33	8.79	46.32	15.11	75.55
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.33	15.16	149.10	42.40	211.99
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	112.51	35.16	335.44	120.78	603.89
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	112.51	60.65	1,410.06	395.81	1,979.03
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	93.76	35.16	152.94	70.47	352.33
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	93.76	60.65	543.66	174.52	872.59

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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 58 SAHIWAL

<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	93.76	35.16	223.62	88.14	440.69
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	93.76	60.65	941.46	273.97	1,369.84
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.91	141.94	398.16	138.50	692.51
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.91	0.00	206.16	55.02	275.08
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.91	141.94	449.16	151.25	756.26
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.91	0.00	262.26	69.04	345.21
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	26.67	140.48	849.86	254.25	1,271.26
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	160.02	842.88	2,197.96	800.21	4,001.07
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	320.03	1,685.76	5,995.02	2,000.20	10,001.02
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	193.40	84.29	1,313.85	397.88	1,989.42
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	170.76	1,050.30	2.20	305.82	1,529.08

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**SARGODHA**  
**(60)**



**SAMPAC INTERNATIONAL**

CLIENT:

CSR - 2014

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.04	19.27	0.00	5.08	25.39
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	10.45	321.21	2.18	83.46	417.31
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	30.02	774.41	4.91	202.33	1,011.67
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	120.06	3,097.64	19.65	809.34	4,046.69
103	STRIPPING	CM	3.61	188.78	0.00	48.10	240.49
104	COMPACTION OF NATURAL GROUND	SM	0.51	18.62	3.00	5.53	27.66
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.42	283.06	0.00	72.37	361.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	157.77	453.99	137.50	187.31	936.57
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	24.17	672.56	0.00	174.18	870.91
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.11	524.99	0.00	135.27	676.37
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.25	254.24	0.00	64.87	324.37
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	157.77	453.99	137.50	187.31	936.57
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.71	610.97	0.00	159.67	798.34
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.81	524.99	0.00	134.70	673.49
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.65	278.09	0.00	72.18	360.92
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	93.24	838.57	90.35	255.54	1,277.71
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	153.92	504.43	137.50	198.96	994.82
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	138.53	553.11	0.00	172.91	864.55
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	79.16	397.27	0.00	119.11	595.53
107d	GRANULAR BACKFILL	CM	48.83	241.40	741.51	257.94	1,289.68
107e	COMMON BACKFILL	CM	41.24	139.11	20.00	50.09	250.44
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.93	288.79	20.00	79.68	398.40
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	28.66	726.17	159.33	228.54	1,142.70



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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	21.49	792.41	9.50	205.85	1,029.25
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	19.10	714.13	8.89	185.53	927.66
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.37	123.20	223.08	89.41	447.07
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.80	150.63	20.00	44.86	224.29
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.83	348.12	11.89	95.21	476.06
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.99	53.73	5.72	15.36	76.81
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.44	36.66	3.03	10.28	51.42
110	IMPROVED SUB-GARDE (CBR>20%)	CM	14.46	233.49	300.02	136.99	684.96
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.20	29.22	3.11	8.38	41.92
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.83	32.97	3.11	9.48	47.38
201	GRANULAR SUB-BASE	CM	11.59	288.11	621.86	230.39	1,151.94
202	AGGREGATE BASE	CM	13.59	350.20	1,039.38	350.79	1,753.95
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	114.95	2,856.48	11,238.77	3,552.55	17,762.75
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	114.95	2,856.48	11,572.17	3,635.90	18,179.50
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	123.39	2,983.43	11,228.25	3,583.77	17,918.84
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	123.39	2,983.43	11,587.96	3,673.70	18,368.49
204b	CEMENT STABILIZED BASE	CM	41.58	915.90	829.62	446.77	2,233.87
204c	CEMENT CONTENT	TON	162.52	0.00	8,820.00	2,245.63	11,228.15
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	353.26	2,422.77	84,166.66	21,735.67	108,678.35
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	353.26	2,422.77	84,166.66	21,735.67	108,678.35
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	137.40	233.81	677.11	262.08	1,310.39

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	221.79	4,464.04	8,976.94	3,415.69	17,078.46
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	151.50	262.54	824.20	309.56	1,547.79
207a	DEEP PATCHING (0-15 cm)	SM	2.41	80.37	23.27	26.51	132.57
207b	DEEP PATCHING (15-30 cm)	SM	2.41	80.37	23.27	26.51	132.57
208	REINSTATEMENT OF ROAD SURFACE	SM	2.61	130.32	2.20	33.78	168.91
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.61	466.94	13.33	121.72	608.61
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.32	50.29	2.67	13.57	67.85
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.44	2.83	94.71	24.50	122.48
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	82.55	21.45	107.25
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	38.04	9.81	49.05
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.18	1.03	33.01	8.55	42.76
304a	SINGLE SURFACE TREATMENT	SM	1.14	14.01	165.90	45.26	226.32
304b	DOUBLE SURFACE TREATMENT	SM	1.67	26.92	336.35	91.24	456.18
304c	TRIPLE SURFACE TREATMENT	SM	2.81	37.83	396.39	109.26	546.29
304d	SEAL COAT	SM	1.06	7.81	46.56	13.86	69.29
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	101.98	2,815.00	12,154.69	3,767.92	18,839.58
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	101.98	2,694.06	13,007.14	3,950.79	19,753.97
307a	DENSE GRADED HOT BIT-MAC	CM	281.42	863.75	9,770.92	2,729.02	13,645.11
307b	OPEN GRADED HOT BIT-MAC	CM	281.42	863.75	9,439.57	2,646.19	13,230.93
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	43.16	1,236.12	4,884.74	1,541.01	7,705.03
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	311.13	2,013.10	86,433.10	22,189.33	110,946.66
309a	COLD MILLING, 0-30 mm	SM	1.42	61.27	25.40	22.02	110.12
309b	COLD MILLING, 0-50 mm	SM	2.37	102.12	42.33	36.71	183.53

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## Rate Analysis Summary (Construction)

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Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.55	153.18	63.50	55.06	275.29
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	761.66	2,690.11	4,470.73	1,980.63	9,903.13
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	761.66	2,690.11	5,158.81	2,152.65	10,763.24
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	761.66	2,690.11	5,514.37	2,241.54	11,207.69
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	761.66	2,690.11	4,760.99	2,053.19	10,265.95
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	761.66	2,690.11	5,449.03	2,225.20	11,126.00
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	761.66	2,690.11	5,804.52	2,314.07	11,570.37
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	761.66	2,690.11	5,009.26	2,115.26	10,576.29
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	761.66	2,690.11	5,697.30	2,287.27	11,436.34
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	761.66	2,690.11	6,043.10	2,373.72	11,868.59
401b	CONCRETE CLASS B	CM	986.12	1,419.30	3,643.94	1,512.34	7,561.70
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	748.87	2,690.11	4,071.35	1,877.58	9,387.92
401cii	CONCRETE CLASS C (ON GROUND)	CM	748.87	2,690.11	4,759.39	2,049.59	10,247.97
401ciii	CONCRETE CLASS C (ELEVATED)	CM	748.87	2,690.11	5,114.95	2,138.48	10,692.42
401d	CONCRETE CLASS D1	CM	1,183.05	3,326.20	7,311.35	2,955.15	14,775.76
401e	CONCRETE CLASS Y	CM	1,648.74	898.44	5,804.61	2,087.95	10,439.73
401f	LEAN CONCRETE	CM	633.64	969.12	3,031.21	1,158.49	5,792.47
401gi	PRECAST CONCRETE, CLASS A1	CM	2,505.20	1,879.78	5,122.97	2,376.99	11,884.93
401gii	PRECAST CONCRETE CLASS A3	CM	2,505.20	1,879.78	5,717.83	2,525.70	12,628.51
401giii	PRECAST CONCRETE, CLASS B	CM	2,505.20	1,879.78	4,341.30	2,181.57	10,907.85
401giv	PRECAST CONCRETE CLASS D1	CM	2,505.20	1,879.78	7,318.57	2,925.89	14,629.44
401gv	PRECAST CONCRETE CLASS D2	CM	2,505.20	1,879.78	8,168.55	3,138.38	15,691.91
401gvi	PRECAST CONCRETE CLASS D3	CM	2,505.20	1,879.78	9,018.43	3,350.85	16,754.27
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,094.46	1,419.30	2,810.99	1,331.19	6,655.93
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,448.95	0.00	85,858.58	22,076.88	110,384.42

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,448.95	0.00	90,058.58	23,126.88	115,634.42
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,859.99	4,249.86	106,704.00	28,203.46	141,017.31
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	162,143.94	44,886.52	224,432.62
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	163.58	0.00	2,187.87	587.86	2,939.32
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	163.58	0.00	1,023.50	296.77	1,483.85
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.43	21.32	170.26	51.25	256.25
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	551.34	0.00	46,668.73	11,805.02	59,025.08
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	571.66	0.00	116,671.81	29,310.87	146,554.33
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	632.60	0.00	388,509.26	97,285.47	486,427.33
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	551.34	0.00	42,347.80	10,724.79	53,623.93
406dii	PVC WATER STOP 8" SIZE	M	141.67	0.00	399.81	135.37	676.85
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	57.36	0.00	326.36	95.93	479.65
406g	STEEL OR METAL BEARING DEVICES	KG	27.89	56.27	178.60	65.69	328.45
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.82	3,542.17	578.05	1,116.51	5,582.55
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	525.65	5,384.10	789.26	1,674.75	8,373.76
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	525.65	8,250.86	954.21	2,432.68	12,163.40
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	876.08	13,751.43	1,380.28	4,001.95	20,009.74

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## Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	730.07	11,459.52	1,202.75	3,348.09	16,740.43
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,314.13	20,627.14	1,912.86	5,963.53	29,817.66
407h	PILE LOAD TEST UPTO 120 TON	EACH	33,419.46	105,999.36	110,479.80	62,474.66	312,373.28
407i	PILE LOAD TEST UPTO 240 TON	EACH	33,419.46	105,999.36	236,176.79	93,898.90	469,494.51
407j	PILE LOAD TEST UPTO 360 TON	EACH	91,926.66	117,448.00	321,168.71	132,635.84	663,179.21
407k	PILE LOAD TEST UPTO 550 TON	EACH	135,807.06	146,810.00	512,601.18	198,804.56	994,022.80
407l	PILE LOAD TEST UPTO 800 TON	EACH	201,022.80	176,172.00	830,364.93	301,889.93	1,509,449.66
407m	CONFIRMATORY BORING (NX SIZE)	M	260.77	3,272.30	25.00	889.52	4,447.59
407n	PERMANENT PILE CASING FOR PILES	Ton	342.13	4,885.57	105,647.45	27,718.79	138,593.94
410	BRICK WORK	CM	474.19	577.25	4,728.21	1,444.91	7,224.57
411a	STONE MASONRY RANDOM DRY	CM	500.86	210.72	1,011.56	430.78	2,153.92
411b	STONE MASONRY RANDOM WITH MORTAR	CM	595.87	335.46	2,382.02	828.34	4,141.69
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	688.37	210.72	1,308.06	551.79	2,758.94
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	780.88	335.46	2,567.41	920.94	4,604.69
411g	ROLL POINTING	SM	100.67	24.95	101.08	56.68	283.38
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,033.40	534.31	2,567.41	1,033.78	5,168.89
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	331.07	689.50	1,130.44	537.75	2,688.77
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	331.07	766.21	1,415.48	628.19	3,140.95
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	311.82	1,356.07	1,676.18	836.02	4,180.09
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	327.80	1,702.67	2,391.60	1,105.52	5,527.58
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	380.33	2,255.64	4,043.46	1,669.86	8,349.28
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	471.36	2,781.29	6,120.14	2,343.20	11,715.99

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Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	610.00	2,692.05	7,670.98	2,743.26	13,716.29
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	719.28	3,268.92	9,528.43	3,379.16	16,895.79
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	850.62	3,813.74	17,357.55	5,505.48	27,527.39
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	331.07	689.50	1,586.63	651.80	3,259.00
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	322.74	766.21	1,972.03	765.24	3,826.22
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	311.82	1,356.07	2,314.84	995.68	4,978.42
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	327.80	1,702.67	3,285.73	1,329.05	6,645.24
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	380.33	2,255.64	5,146.85	1,945.70	9,728.51
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	471.36	2,781.29	8,783.50	3,009.04	15,045.19
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	610.00	2,692.05	9,573.38	3,218.86	16,094.29
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	719.28	3,268.92	12,405.13	4,098.33	20,491.67
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	850.62	3,813.74	20,403.42	6,266.95	31,334.73
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	130.43	198.35	737.86	266.66	1,333.29
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,115.60	1,081.84	3,737.28	1,483.68	7,418.40
507a	STEEL WIRE MESH FOR GABIONS	KG	7.81	0.00	122.34	32.54	162.69
507b	ROCK FILL IN GABIONS	CM	140.99	0.00	632.08	193.27	966.33
508a	BRICK PAVING (SINGLE COURSE)	SM	159.23	47.96	392.86	150.01	750.07
508b	BRICK PAVING (DOUBLE COURSE)	SM	284.24	47.96	778.87	277.77	1,388.84
509a	RIPRAP, CLASS A	CM	686.64	0.00	666.63	338.32	1,691.58
509b	RIPRAP, CLASS B	CM	493.30	233.11	705.97	358.09	1,790.47
509c	RIPRAP, CLASS C	CM	481.91	242.83	734.18	364.73	1,823.64
509c1	RIPRAP, CLASS D	CM	481.91	291.39	779.21	388.13	1,940.65

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## Rate Analysis Summary (Construction)

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Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	840.53	218.23	2,772.14	957.73	4,788.63
509e	GROUTED RIPRAP, CLASS B	CM	640.41	407.69	2,596.08	911.05	4,555.24
509f	GROUTED RIPRAP, CLASS C	CM	615.35	388.31	2,640.89	911.14	4,555.69
509f1	GROUTED RIPRAP, CLASS D	CM	615.35	436.87	2,892.45	986.17	4,930.84
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,149.60	615.08	4,456.51	1,555.30	7,776.49
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	71.43	344.31	745.13	290.22	1,451.09
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	142.79	1,135.96	0.00	319.69	1,598.44
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	216.94	131.70	108.33	114.24	571.21
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	277.68	168.58	138.66	146.23	731.15
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	351.69	368.16	670.82	347.67	1,738.33
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	439.61	460.20	838.52	434.58	2,172.91
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	351.69	368.16	345.66	266.38	1,331.89
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	439.61	460.20	432.08	332.97	1,664.87
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	504.14	1,431.68	6,582.01	2,129.46	10,647.29
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,432.05	1,000.42	6,562.94	2,248.85	11,244.27
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	38.17	84.29	713.84	209.07	1,045.37
603	BRICK EDGING	M	12.73	0.00	61.44	18.54	92.71
604a	METAL GUARD RAIL	M	95.19	70.24	3,142.97	827.10	4,135.50
604b	METAL GUARD RAIL END PIECES	EACH	126.12	688.14	3,542.03	1,089.07	5,445.37
604d	STEEL POST FOR METAL GUARD RAIL	EACH	142.77	688.14	3,137.02	991.98	4,959.92
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,629.38	1,447.50	14,595.14	4,668.00	23,340.02
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,629.38	1,026.28	13,587.44	4,310.78	21,553.88

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## Rate Analysis Summary (Construction)

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Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	333.43	500.96	11,367.57	3,050.49	15,252.45
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	101.88	751.44	14,041.35	3,723.67	18,618.34
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	333.43	1,073.66	22,047.23	5,863.58	29,317.91
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,112.72	1,172.88	40,760.85	10,761.61	53,808.05
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	222.54	282.47	19,085.08	4,897.52	24,487.61
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	397.92	0.00	2,768.40	791.58	3,957.90
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	397.92	0.00	4,152.60	1,137.63	5,688.15
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.19	7.03	23.74	8.74	43.70
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.40	4.04	64.62	17.51	87.57
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.19	7.03	31.68	10.73	53.63
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.40	4.04	86.18	22.91	114.53
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	108.92	35.16	229.41	93.37	466.86
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	108.92	60.65	814.26	245.96	1,229.79
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.23	8.79	34.74	12.19	60.96
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.23	15.16	111.83	33.06	165.28
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.23	8.79	46.32	15.09	75.43
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.23	15.16	149.10	42.37	211.87
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	108.92	35.16	335.44	119.88	599.40
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	108.92	60.65	1,410.06	394.91	1,974.54
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	90.92	35.16	152.94	69.75	348.77
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	90.92	60.65	543.66	173.81	869.04



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Dcode 60 SARGODHA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	90.92	35.16	223.62	87.43	437.13
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	90.92	60.65	941.46	273.26	1,366.29
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.59	141.94	398.16	138.42	692.12
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.59	0.00	206.16	54.94	274.69
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.59	141.94	449.16	151.17	755.87
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.59	0.00	262.26	68.96	344.82
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	26.25	140.48	790.37	239.27	1,196.37
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	157.51	842.88	2,046.63	761.76	3,808.78
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	315.02	1,685.76	5,639.47	1,910.06	9,550.32
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	190.35	84.29	1,186.59	365.31	1,826.54
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	167.42	1,050.30	2.20	304.98	1,524.90

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**SHEIKHUPURA**  
**(61)**



**SAMPAC INTERNATIONAL**

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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 61 SHEIKHUPURA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.24	19.27	0.00	5.13	25.63
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.21	321.21	2.18	83.90	419.50
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	35.47	774.41	4.91	203.70	1,018.49
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	141.88	3,097.64	19.65	814.79	4,073.96
103	STRIPPING	CM	4.15	188.78	0.00	48.23	241.16
104	COMPACTION OF NATURAL GROUND	SM	0.59	18.62	3.00	5.55	27.75
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.90	283.06	0.00	72.49	362.45
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	27.36	672.56	0.00	174.98	874.90
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	18.08	524.99	0.00	135.77	678.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.65	254.24	0.00	64.97	324.86
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	176.14	453.99	137.50	191.91	959.54
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	30.86	610.97	0.00	160.46	802.29
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	15.63	524.99	0.00	135.16	675.78
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	11.62	278.09	0.00	72.43	362.13
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	104.71	838.57	90.35	258.41	1,292.05
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	171.45	504.43	137.50	203.35	1,016.73
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	154.31	553.11	0.00	176.86	884.28
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	88.18	397.27	0.00	121.36	606.80
107d	GRANULAR BACKFILL	CM	56.32	241.40	942.92	310.16	1,550.80
107e	COMMON BACKFILL	CM	48.71	139.11	20.00	51.96	259.78
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.05	288.79	20.00	79.96	399.81
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	32.50	726.17	159.33	229.50	1,147.51

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	24.38	792.41	9.50	206.57	1,032.85
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	21.67	714.13	8.89	186.17	930.86
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	12.83	123.20	223.08	89.78	448.89
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.86	150.63	20.00	45.12	225.60
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	23.79	348.12	11.89	95.95	479.76
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.24	53.73	5.72	15.42	77.11
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.61	36.66	3.03	10.33	51.64
110	IMPROVED SUB-GARDE (CBR>20%)	CM	16.41	233.49	423.23	168.28	841.41
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.37	29.22	3.11	8.43	42.13
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.07	32.97	3.11	9.54	47.68
201	GRANULAR SUB-BASE	CM	13.01	288.11	1,107.70	352.20	1,761.02
202	AGGREGATE BASE	CM	15.09	350.20	1,507.37	468.17	2,340.83
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	134.33	2,856.48	11,807.49	3,699.57	18,497.87
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	134.33	2,856.48	12,126.00	3,779.20	18,896.01
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	143.85	2,983.43	11,796.92	3,731.05	18,655.25
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	143.85	2,983.43	12,141.72	3,817.25	19,086.25
204b	CEMENT STABILIZED BASE	CM	46.78	915.90	1,389.30	587.99	2,939.97
204c	CEMENT CONTENT	TON	200.00	0.00	8,925.00	2,281.25	11,406.25
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	394.27	2,422.77	84,098.18	21,728.80	108,644.02
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	394.27	2,422.77	84,098.18	21,728.80	108,644.02
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	165.78	233.81	1,164.24	390.95	1,954.77

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	255.63	4,464.04	9,487.25	3,551.73	17,758.66
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	183.32	262.54	1,310.74	439.15	2,195.75
207a	DEEP PATCHING (0-15 cm)	SM	2.72	80.37	22.06	26.29	131.43
207b	DEEP PATCHING (15-30 cm)	SM	2.72	80.37	22.06	26.29	131.43
208	REINSTATEMENT OF ROAD SURFACE	SM	2.92	130.32	2.20	33.86	169.30
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.19	466.94	13.33	121.87	609.33
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.44	50.29	2.67	13.60	68.00
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.49	2.83	94.65	24.49	122.45
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.47	2.83	82.48	21.45	107.23
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	38.01	9.81	49.05
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.20	1.03	32.98	8.55	42.75
304a	SINGLE SURFACE TREATMENT	SM	1.27	14.01	168.58	45.97	229.83
304b	DOUBLE SURFACE TREATMENT	SM	1.85	26.92	344.18	93.24	466.19
304c	TRIPLE SURFACE TREATMENT	SM	3.11	37.83	405.56	111.63	558.13
304d	SEAL COAT	SM	1.17	7.81	47.51	14.12	70.62
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	118.37	2,815.00	12,720.57	3,913.48	19,567.42
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	118.37	2,694.06	13,562.73	4,093.79	20,468.94
307a	DENSE GRADED HOT BIT-MAC	CM	332.05	863.75	10,212.62	2,852.10	14,260.52
307b	OPEN GRADED HOT BIT-MAC	CM	332.05	863.75	9,881.61	2,769.35	13,846.76
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	50.28	1,236.12	4,884.74	1,542.79	7,713.93
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	349.38	2,013.10	86,364.62	22,181.78	110,908.88
309a	COLD MILLING, 0-30 mm	SM	1.59	61.27	25.40	22.07	110.33
309b	COLD MILLING, 0-50 mm	SM	2.66	102.12	42.33	36.78	183.89

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309c	COLD MILLING, 0-70 mm	SM	3.99	153.18	63.50	55.17	275.84
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	852.53	2,690.11	4,651.14	2,048.45	10,242.23
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	852.53	2,690.11	5,339.28	2,220.48	11,102.40
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	852.53	2,690.11	5,694.84	2,309.37	11,546.85
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	852.53	2,690.11	4,939.10	2,120.44	10,602.18
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	852.53	2,690.11	5,627.14	2,292.45	11,462.23
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	852.53	2,690.11	5,982.58	2,381.31	11,906.53
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	852.53	2,690.11	5,251.99	2,198.66	10,993.29
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	852.53	2,690.11	5,940.03	2,370.67	11,853.34
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	852.53	2,690.11	6,275.05	2,454.42	12,272.11
401b	CONCRETE CLASS B	CM	1,116.28	1,419.30	3,875.00	1,602.64	8,013.22
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	850.08	2,690.11	4,392.69	1,983.22	9,916.10
401cii	CONCRETE CLASS C (ON GROUND)	CM	850.08	2,690.11	5,080.73	2,155.23	10,776.15
401ciii	CONCRETE CLASS C (ELEVATED)	CM	850.08	2,690.11	5,436.29	2,244.12	11,220.60
401d	CONCRETE CLASS D1	CM	1,323.88	3,326.20	7,459.69	3,027.44	15,137.20
401e	CONCRETE CLASS Y	CM	1,853.60	898.44	5,989.31	2,185.34	10,926.69
401f	LEAN CONCRETE	CM	742.97	969.12	3,267.46	1,244.89	6,224.43
401gi	PRECAST CONCRETE, CLASS A1	CM	2,874.97	1,879.78	5,302.88	2,514.41	12,572.04
401gii	PRECAST CONCRETE CLASS A3	CM	2,874.97	1,879.78	5,950.29	2,676.26	13,381.30
401giii	PRECAST CONCRETE, CLASS B	CM	2,874.97	1,879.78	4,583.29	2,334.51	11,672.56
401giv	PRECAST CONCRETE CLASS D1	CM	2,874.97	1,879.78	7,466.98	3,055.43	15,277.17
401gv	PRECAST CONCRETE CLASS D2	CM	2,874.97	1,879.78	8,316.38	3,267.78	16,338.91
401gvi	PRECAST CONCRETE CLASS D3	CM	2,874.97	1,879.78	9,167.41	3,480.54	17,402.71
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,249.61	1,419.30	3,101.52	1,442.61	7,213.03
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,738.10	0.00	85,401.49	22,034.90	110,174.49

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404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,738.10	0.00	89,601.49	23,084.90	115,424.49
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,067.65	4,249.86	106,704.00	28,255.38	141,276.88
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,740.48	13,891.32	161,831.25	44,865.76	224,328.81
405b	LAUNCHING OF GIRDER	TON	87.07	967.47	0.00	263.64	1,318.18
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	2,178.12	591.09	2,955.43
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	186.22	0.00	1,019.08	301.32	1,506.62
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.12	21.32	170.26	51.67	258.36
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	46,668.73	11,820.75	59,103.73
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	639.26	0.00	116,671.81	29,327.77	146,638.84
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	714.26	0.00	388,509.26	97,305.88	486,529.40
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	614.26	0.00	42,347.80	10,740.52	53,702.58
406dii	PVC WATER STOP 8" SIZE	M	161.68	0.00	399.81	140.37	701.87
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	63.80	0.00	326.29	97.52	487.61
406g	STEEL OR METAL BEARING DEVICES	KG	31.86	56.27	178.60	66.68	333.42
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	369.85	3,542.17	578.05	1,122.52	5,612.58
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	562.17	5,384.10	789.26	1,683.88	8,419.41
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	562.17	8,250.86	954.21	2,441.81	12,209.05
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	936.95	13,751.43	1,380.28	4,017.16	20,085.82

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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	780.79	11,459.52	1,202.75	3,360.77	16,803.83
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,405.42	20,627.14	1,912.86	5,986.36	29,931.78
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,438.44	105,999.36	107,070.68	63,377.12	316,885.60
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,438.44	105,999.36	229,358.55	93,949.09	469,745.44
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,438.44	117,448.00	310,941.35	135,206.95	676,034.74
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,438.44	146,810.00	495,942.98	202,297.86	1,011,489.28
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,391.32	176,172.00	803,634.33	306,549.41	1,532,747.06
407m	CONFIRMATORY BORING (NX SIZE)	M	297.96	3,272.30	25.00	898.82	4,494.08
407n	PERMANENT PILE CASING FOR PILES	Ton	391.36	4,885.57	105,647.45	27,731.10	138,655.48
410	BRICK WORK	CM	538.51	577.25	4,526.82	1,410.65	7,053.23
411a	STONE MASONRY RANDOM DRY	CM	571.22	210.72	1,477.96	564.97	2,824.87
411b	STONE MASONRY RANDOM WITH MORTAR	CM	683.19	335.46	2,743.79	940.61	4,703.05
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	787.12	210.72	1,811.77	702.40	3,512.01
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	891.04	335.46	2,994.90	1,055.35	5,276.75
411g	ROLL POINTING	SM	113.70	24.95	99.43	59.52	297.60
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,186.94	534.31	2,994.90	1,179.03	5,895.17
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	394.35	689.50	1,089.37	543.30	2,716.51
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	394.35	766.21	1,348.44	627.25	3,136.24
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	367.13	1,356.07	1,576.80	825.00	4,124.99
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	388.30	1,702.67	2,228.15	1,079.78	5,398.90
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	449.14	2,255.64	3,721.21	1,606.50	8,032.48
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	553.46	2,781.29	5,637.74	2,243.12	11,215.61



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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	716.24	2,692.05	7,188.73	2,649.25	13,246.27
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	846.89	3,268.92	9,024.29	3,285.03	16,425.13
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	998.01	3,813.74	15,421.56	5,058.33	25,291.63
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	394.35	689.50	1,545.56	657.35	3,286.75
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	385.47	766.21	1,904.99	764.17	3,820.83
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	367.13	1,356.07	2,215.46	984.66	4,923.32
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	388.30	1,702.67	3,122.28	1,303.31	6,516.56
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	449.14	2,255.64	4,824.60	1,882.34	9,411.72
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	553.46	2,781.29	8,301.10	2,908.96	14,544.81
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	716.24	2,692.05	9,091.13	3,124.85	15,624.27
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	846.89	3,268.92	11,900.99	4,004.20	20,021.00
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	998.01	3,813.74	18,467.42	5,819.79	29,098.96
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	154.17	198.35	958.99	327.88	1,639.39
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,263.19	1,081.84	3,969.45	1,578.62	7,893.09
507a	STEEL WIRE MESH FOR GABIONS	KG	8.78	0.00	124.56	33.34	166.68
507b	ROCK FILL IN GABIONS	CM	169.00	0.00	1,067.38	309.10	1,545.48
508a	BRICK PAVING (SINGLE COURSE)	SM	183.61	47.96	368.33	149.98	749.88
508b	BRICK PAVING (DOUBLE COURSE)	SM	327.54	47.96	730.19	276.42	1,382.11
509a	RIPRAP, CLASS A	CM	786.61	0.00	1,133.03	479.91	2,399.54
509b	RIPRAP, CLASS B	CM	552.43	233.11	1,168.64	488.54	2,442.72
509c	RIPRAP, CLASS C	CM	537.62	242.83	1,200.58	495.25	2,476.27
509c1	RIPRAP, CLASS D	CM	537.62	291.39	1,245.61	518.66	2,593.28

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509d	GROUTED RIPRAP, CLASS A	CM	964.00	218.23	3,176.40	1,089.66	5,448.28
509e	GROUTED RIPRAP, CLASS B	CM	719.91	407.69	3,003.04	1,032.66	5,163.30
509f	GROUTED RIPRAP, CLASS C	CM	690.52	388.31	3,050.09	1,032.23	5,161.15
509f1	GROUTED RIPRAP, CLASS D	CM	690.52	436.87	3,293.09	1,105.12	5,525.61
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,332.22	615.08	4,636.22	1,645.88	8,229.40
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	85.05	344.31	941.11	342.62	1,713.10
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	162.86	1,135.96	0.00	324.71	1,623.53
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	249.59	131.70	184.12	141.35	706.76
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	319.48	168.58	235.67	180.93	904.66
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	402.62	368.16	720.58	372.84	1,864.21
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	503.28	460.20	900.73	466.05	2,330.26
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	402.62	368.16	397.53	292.08	1,460.40
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	503.28	460.20	496.91	365.10	1,825.49
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	563.54	1,431.68	6,658.59	2,163.45	10,817.26
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,639.89	1,000.42	6,639.22	2,319.88	11,599.40
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	43.89	84.29	758.68	221.71	1,108.56
603	BRICK EDGING	M	14.77	0.00	57.60	18.09	90.46
604a	METAL GUARD RAIL	M	108.58	70.24	3,103.01	820.46	4,102.29
604b	METAL GUARD RAIL END PIECES	EACH	145.11	688.14	3,497.01	1,082.56	5,412.82
604d	STEEL POST FOR METAL GUARD RAIL	EACH	162.85	688.14	3,098.00	987.25	4,936.24
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,447.50	14,793.99	4,834.56	24,172.79
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,096.75	1,026.28	13,791.73	4,478.69	22,393.45

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607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	385.68	500.96	11,418.92	3,076.39	15,381.94
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	117.95	751.44	14,118.38	3,746.94	18,734.70
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	385.68	1,073.66	22,131.67	5,897.75	29,488.77
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,322.45	1,172.88	40,887.51	10,845.71	54,228.54
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	264.49	282.47	19,110.41	4,914.34	24,571.71
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	437.38	0.00	2,768.40	801.45	4,007.23
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	437.38	0.00	4,152.60	1,147.50	5,737.48
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.86	7.03	23.74	8.91	44.55
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.62	4.04	64.62	17.57	87.85
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.86	7.03	31.68	10.89	54.47
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.62	4.04	86.18	22.96	114.81
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	229.41	96.09	480.47
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	814.26	248.68	1,243.40
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.08	8.79	34.74	12.40	62.02
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.08	15.16	111.83	33.27	166.34
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.08	8.79	46.32	15.30	76.49
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.08	15.16	149.10	42.59	212.93
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	119.81	35.16	335.44	122.60	613.01
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	119.81	60.65	1,410.06	397.63	1,988.15
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	152.94	72.18	360.91
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	543.66	176.23	881.17

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LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 61 SHEIKHUPURA

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	100.63	35.16	223.62	89.85	449.27
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	100.63	60.65	941.46	275.68	1,378.42
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	141.94	398.16	138.90	694.49
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	15.49	0.00	206.16	55.41	277.06
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	141.94	449.16	151.65	758.24
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	15.49	0.00	262.26	69.44	347.19
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	30.65	140.48	831.75	250.72	1,253.60
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	183.93	842.88	2,136.97	790.94	3,954.72
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	367.86	1,685.76	5,907.04	1,990.16	9,950.82
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	222.13	84.29	1,287.67	398.52	1,992.61
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	192.75	1,050.30	2.20	311.31	1,556.57

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

**2014**

**SIALKOT**  
**(63)**



**SAMPAC INTERNATIONAL**

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Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 63 SIALKOT

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	1.27	19.27	0.00	5.13	25.67
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	12.61	321.21	2.18	84.00	420.00
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	36.37	774.41	4.91	203.92	1,019.61
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	145.47	3,097.64	19.65	815.69	4,078.46
103	STRIPPING	CM	4.33	188.78	0.00	48.28	241.38
104	COMPACTION OF NATURAL GROUND	SM	0.61	18.62	3.00	5.56	27.79
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	7.52	283.06	0.00	72.64	363.22
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	28.82	672.56	0.00	175.34	876.72
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	19.15	524.99	0.00	136.03	680.17
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	6.15	254.24	0.00	65.10	325.49
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	187.17	453.99	137.50	194.66	973.32
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	32.84	610.97	0.00	160.95	804.76
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	16.47	524.99	0.00	135.36	676.82
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	12.53	278.09	0.00	72.65	363.27
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	110.86	838.57	90.35	259.95	1,299.73
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	182.46	504.43	137.50	206.10	1,030.49
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	164.21	553.11	0.00	179.33	896.66
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	93.84	397.27	0.00	122.78	613.88
107d	GRANULAR BACKFILL	CM	58.63	241.40	919.98	305.00	1,525.01
107e	COMMON BACKFILL	CM	49.96	139.11	20.00	52.27	261.34
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	11.76	288.79	20.00	80.14	400.70
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	34.19	726.17	159.33	229.93	1,149.63

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	25.65	792.41	9.50	206.89	1,034.44
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	22.80	714.13	8.89	186.45	932.27
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	13.54	123.20	223.08	89.96	449.78
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.45	150.63	20.00	45.27	226.35
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	24.92	348.12	11.89	96.23	481.17
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	2.37	53.73	5.72	15.46	77.28
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.71	36.66	3.03	10.35	51.76
110	IMPROVED SUB-GARDE (CBR>20%)	CM	17.26	233.49	432.53	170.82	854.10
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.44	29.22	3.11	8.44	42.21
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	2.18	32.97	3.11	9.56	47.82
201	GRANULAR SUB-BASE	CM	13.78	288.11	1,144.38	361.56	1,807.82
202	AGGREGATE BASE	CM	16.09	350.20	1,317.88	421.04	2,105.21
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	138.70	2,856.48	11,834.25	3,707.36	18,536.79
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	138.70	2,856.48	12,088.12	3,770.82	18,854.12
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	148.75	2,983.43	11,823.68	3,738.97	18,694.83
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	148.75	2,983.43	12,103.83	3,809.00	19,045.02
204b	CEMENT STABILIZED BASE	CM	49.47	915.90	1,396.21	590.39	2,951.97
204c	CEMENT CONTENT	TON	200.00	0.00	9,030.00	2,307.50	11,537.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	419.05	2,422.77	83,980.44	21,705.56	108,527.81
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	419.05	2,422.77	83,980.44	21,705.56	108,527.81
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	167.80	233.81	1,216.00	404.40	2,022.01

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## Rate Analysis Summary (Construction)

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Dcode 63 SIALKOT

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	266.23	4,464.04	9,475.16	3,551.36	17,756.80
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	185.23	262.54	1,595.30	510.77	2,553.84
207a	DEEP PATCHING (0-15 cm)	SM	2.87	80.37	20.37	25.90	129.51
207b	DEEP PATCHING (15-30 cm)	SM	2.87	80.37	20.37	25.90	129.51
208	REINSTATEMENT OF ROAD SURFACE	SM	3.10	130.32	2.20	33.90	169.52
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	7.77	466.94	13.33	122.01	610.05
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.55	50.29	2.67	13.63	68.14
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.52	2.83	94.53	24.47	122.35
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.50	2.83	82.36	21.42	107.12
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	37.97	9.80	49.00
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.21	1.03	32.93	8.54	42.71
304a	SINGLE SURFACE TREATMENT	SM	1.36	14.01	168.62	46.00	229.98
304b	DOUBLE SURFACE TREATMENT	SM	1.98	26.92	344.27	93.29	466.47
304c	TRIPLE SURFACE TREATMENT	SM	3.33	37.83	405.69	111.71	558.56
304d	SEAL COAT	SM	1.26	7.81	47.47	14.13	70.67
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	122.74	2,815.00	12,725.42	3,915.79	19,578.94
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	122.74	2,694.06	13,590.38	4,101.79	20,508.97
307a	DENSE GRADED HOT BIT-MAC	CM	340.79	863.75	10,225.72	2,857.57	14,287.83
307b	OPEN GRADED HOT BIT-MAC	CM	340.79	863.75	9,904.76	2,777.32	13,886.62
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	52.02	1,236.12	4,884.74	1,543.22	7,716.11
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	369.90	2,013.10	86,246.88	22,157.47	110,787.34
309a	COLD MILLING, 0-30 mm	SM	1.69	61.27	25.40	22.09	110.45
309b	COLD MILLING, 0-50 mm	SM	2.81	102.12	42.33	36.82	184.09



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## Rate Analysis Summary (Construction)

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Dcode 63 SIALKOT

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	4.22	153.18	63.50	55.23	276.13
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	904.48	2,690.11	4,740.37	2,083.74	10,418.71
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	904.48	2,690.11	5,428.51	2,255.78	11,278.88
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	904.48	2,690.11	5,784.07	2,344.67	11,723.33
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	904.48	2,690.11	5,036.33	2,157.73	10,788.66
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	904.48	2,690.11	5,724.37	2,329.74	11,648.71
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	904.48	2,690.11	6,079.81	2,418.60	12,093.00
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	904.48	2,690.11	5,349.12	2,235.93	11,179.64
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	904.48	2,690.11	6,037.16	2,407.94	12,039.69
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	904.48	2,690.11	6,372.11	2,491.68	12,458.38
401b	CONCRETE CLASS B	CM	1,175.86	1,419.30	3,916.78	1,627.98	8,139.92
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	893.88	2,690.11	4,442.53	2,006.63	10,033.16
401cii	CONCRETE CLASS C (ON GROUND)	CM	893.88	2,690.11	5,130.57	2,178.64	10,893.21
401ciii	CONCRETE CLASS C (ELEVATED)	CM	893.88	2,690.11	5,486.13	2,267.53	11,337.66
401d	CONCRETE CLASS D1	CM	1,404.77	3,326.20	7,569.49	3,075.11	15,375.56
401e	CONCRETE CLASS Y	CM	1,961.06	898.44	6,076.99	2,234.12	11,170.60
401f	LEAN CONCRETE	CM	765.52	969.12	3,300.33	1,258.74	6,293.71
401gi	PRECAST CONCRETE, CLASS A1	CM	3,002.40	1,879.78	5,390.39	2,568.14	12,840.71
401gii	PRECAST CONCRETE CLASS A3	CM	3,002.40	1,879.78	6,047.66	2,732.46	13,662.30
401giii	PRECAST CONCRETE, CLASS B	CM	3,002.40	1,879.78	4,606.09	2,372.07	11,860.34
401giv	PRECAST CONCRETE CLASS D1	CM	3,002.40	1,879.78	7,576.89	3,114.77	15,573.84
401gv	PRECAST CONCRETE CLASS D2	CM	3,002.40	1,879.78	8,433.44	3,328.91	16,644.53
401gvi	PRECAST CONCRETE CLASS D3	CM	3,002.40	1,879.78	9,291.58	3,543.44	17,717.20
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,309.20	1,419.30	3,217.21	1,486.42	7,432.12
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,906.98	0.00	85,791.17	22,174.54	110,872.68

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,906.98	0.00	89,991.17	23,224.54	116,122.68
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	2,203.25	4,249.86	106,704.00	28,289.28	141,446.38
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	4,095.70	13,891.32	162,164.77	45,037.95	225,189.73
405b	LAUNCHING OF GIRDER	TON	95.34	967.47	0.00	265.70	1,328.51
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	2,187.67	595.78	2,978.92
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	195.46	0.00	1,022.84	304.58	1,522.88
406ci	STEEL EXPANSION JOINTS (Local)	KG	15.98	21.32	170.26	51.89	259.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	46,668.73	11,830.58	59,152.91
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	678.60	0.00	116,671.81	29,337.60	146,688.02
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	753.60	0.00	388,509.26	97,315.72	486,578.58
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	653.60	0.00	42,347.80	10,750.35	53,751.75
406dii	PVC WATER STOP 8" SIZE	M	169.44	0.00	399.81	142.31	711.56
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.03	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.03	0.00	5.25	1.32	6.60
406f	ASPHALT FELT (3 PLY)	SM	67.96	0.00	326.18	98.53	492.67
406g	STEEL OR METAL BEARING DEVICES	KG	33.37	56.27	178.60	67.06	335.30
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	403.97	3,542.17	578.05	1,131.05	5,655.24
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	614.03	5,384.10	789.26	1,696.85	8,484.24
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	614.03	8,250.86	954.21	2,454.78	12,273.88
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,023.39	13,751.43	1,380.28	4,038.77	20,193.87

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	852.82	11,459.52	1,202.75	3,378.77	16,893.87
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,535.08	20,627.14	1,912.86	6,018.77	30,093.86
407h	PILE LOAD TEST UPTO 120 TON	EACH	40,859.94	105,999.36	102,323.08	62,295.60	311,477.98
407i	PILE LOAD TEST UPTO 240 TON	EACH	40,859.94	105,999.36	219,863.35	91,680.66	458,403.31
407j	PILE LOAD TEST UPTO 360 TON	EACH	112,859.94	117,448.00	296,698.55	131,751.62	658,758.11
407k	PILE LOAD TEST UPTO 550 TON	EACH	166,859.94	146,810.00	472,744.48	196,603.61	983,018.03
407l	PILE LOAD TEST UPTO 800 TON	EACH	246,998.28	176,172.00	766,408.83	297,394.78	1,486,973.89
407m	CONFIRMATORY BORING (NX SIZE)	M	312.01	3,272.30	25.00	902.33	4,511.64
407n	PERMANENT PILE CASING FOR PILES	Ton	409.53	4,885.57	105,647.45	27,735.64	138,678.20
410	BRICK WORK	CM	566.11	577.25	4,270.55	1,353.48	6,767.39
411a	STONE MASONRY RANDOM DRY	CM	598.88	210.72	1,826.74	659.09	3,295.43
411b	STONE MASONRY RANDOM WITH MORTAR	CM	713.88	335.46	3,132.23	1,045.39	5,226.97
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	823.88	210.72	2,188.46	805.77	4,028.83
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	933.88	335.46	3,403.58	1,168.23	5,841.15
411g	ROLL POINTING	SM	119.94	24.95	100.19	61.27	306.36
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	1,238.88	534.31	3,403.58	1,294.19	6,470.96
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	402.36	689.50	1,120.45	553.08	2,765.38
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	402.36	766.21	1,399.58	642.03	3,210.17
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	377.30	1,356.07	1,652.88	846.56	4,232.81
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	397.55	1,702.67	2,354.01	1,113.56	5,567.79
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	460.72	2,255.64	3,970.98	1,671.83	8,359.16
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	569.76	2,781.29	6,011.75	2,340.70	11,703.50

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Dcode 63 SIALKOT

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	737.34	2,692.05	7,562.83	2,748.05	13,740.27
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	870.34	3,268.92	9,415.03	3,388.57	16,942.86
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	1,027.90	3,813.74	16,928.66	5,442.57	27,212.86
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	402.36	689.50	1,576.64	667.12	3,335.62
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	392.63	766.21	1,956.13	778.74	3,893.71
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	377.30	1,356.07	2,291.54	1,006.23	5,031.13
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	397.55	1,702.67	3,248.14	1,337.09	6,685.45
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	460.72	2,255.64	5,074.37	1,947.68	9,738.40
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	569.76	2,781.29	8,675.11	3,006.54	15,032.70
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	737.34	2,692.05	9,465.23	3,223.65	16,118.27
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	870.34	3,268.92	12,291.73	4,107.75	20,538.73
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	1,027.90	3,813.74	19,974.52	6,204.04	31,020.20
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	158.05	198.35	939.97	324.09	1,620.46
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,330.40	1,081.84	4,012.33	1,606.14	8,030.71
507a	STEEL WIRE MESH FOR GABIONS	KG	9.29	0.00	124.56	33.46	167.32
507b	ROCK FILL IN GABIONS	CM	171.76	0.00	1,392.92	391.17	1,955.84
508a	BRICK PAVING (SINGLE COURSE)	SM	191.17	47.96	337.38	144.13	720.64
508b	BRICK PAVING (DOUBLE COURSE)	SM	341.17	47.96	668.83	264.49	1,322.46
509a	RIPRAP, CLASS A	CM	822.38	0.00	1,481.81	576.05	2,880.24
509b	RIPRAP, CLASS B	CM	585.90	233.11	1,514.64	583.41	2,917.06
509c	RIPRAP, CLASS C	CM	571.59	242.83	1,549.36	590.94	2,954.72
509c1	RIPRAP, CLASS D	CM	571.59	291.39	1,594.40	614.34	3,071.72

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	1,007.12	218.23	3,553.22	1,194.64	5,973.20
509e	GROUTED RIPRAP, CLASS B	CM	761.70	407.69	3,374.12	1,135.88	5,679.39
509f	GROUTED RIPRAP, CLASS C	CM	731.41	388.31	3,425.84	1,136.39	5,681.96
509f1	GROUTED RIPRAP, CLASS D	CM	731.41	436.87	3,672.32	1,210.15	6,050.76
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,382.77	615.08	4,722.76	1,680.15	8,400.76
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	86.80	344.31	916.94	337.01	1,685.07
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	170.73	1,135.96	0.00	326.67	1,633.37
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	260.24	131.70	240.79	158.18	790.92
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	333.11	168.58	308.22	202.48	1,012.38
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	421.11	368.16	774.15	390.85	1,954.27
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	526.38	460.20	967.69	488.57	2,442.84
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	421.11	368.16	454.10	310.84	1,554.22
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	526.38	460.20	567.63	388.55	1,942.77
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	598.39	1,431.68	6,722.68	2,188.18	10,940.92
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,714.90	1,000.42	6,702.39	2,354.43	11,772.13
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	45.78	84.29	772.82	225.72	1,128.60
603	BRICK EDGING	M	15.32	0.00	52.80	17.03	85.15
604a	METAL GUARD RAIL	M	113.82	70.24	3,136.21	830.07	4,150.34
604b	METAL GUARD RAIL END PIECES	EACH	151.29	688.14	3,534.71	1,093.54	5,467.68
604d	STEEL POST FOR METAL GUARD RAIL	EACH	170.72	688.14	3,130.22	997.27	4,986.35
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,447.50	14,920.37	4,887.45	24,437.23
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	3,181.92	1,026.28	13,913.47	4,530.42	22,652.09

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	400.78	500.96	11,429.14	3,082.72	15,413.60
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	122.50	751.44	14,133.71	3,751.91	18,759.56
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	400.78	1,073.66	22,169.07	5,910.88	29,554.39
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,351.17	1,172.88	40,943.61	10,866.91	54,334.57
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	270.23	282.47	19,121.63	4,918.58	24,592.91
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	469.42	0.00	2,768.40	809.46	4,047.28
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	469.42	0.00	4,152.60	1,155.51	5,777.53
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.04	7.03	23.74	8.95	44.77
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.68	4.04	64.62	17.58	87.92
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.04	7.03	31.68	10.94	54.69
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.68	4.04	86.18	22.98	114.88
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	229.41	98.27	491.37
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	814.26	250.86	1,254.30
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	6.30	8.79	34.74	12.46	62.29
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	6.30	15.16	111.83	33.32	166.61
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	6.30	8.79	46.32	15.35	76.77
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	6.30	15.16	149.10	42.64	213.21
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	128.53	35.16	335.44	124.78	623.91
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	128.53	60.65	1,410.06	399.81	1,999.05
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	152.94	73.91	369.53
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	543.66	177.96	889.80

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<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	107.53	35.16	223.62	91.58	457.89
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	107.53	60.65	941.46	277.41	1,387.05
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	141.94	398.16	139.09	695.44
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	16.25	0.00	206.16	55.60	278.01
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	141.94	449.16	151.84	759.19
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	16.25	0.00	262.26	69.63	348.14
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	31.67	140.48	846.88	254.76	1,273.79
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	190.00	842.88	2,164.65	799.38	3,996.91
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	380.00	1,685.76	5,993.81	2,014.89	10,074.47
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	229.55	84.29	1,313.31	406.79	2,033.94
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	200.88	1,050.30	2.20	313.35	1,566.73

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**TOBA TEK SINGH**  
**(69)**



**SAMPAK INTERNATIONAL**



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**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 69 TOBA TEK SINGH

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
101	CLEARING AND GRUBBING	SM	0.98	19.27	0.00	5.06	25.31
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.95	321.21	2.18	83.34	416.68
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	28.39	774.41	4.91	201.93	1,009.64
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	113.55	3,097.64	19.65	807.71	4,038.55
103	STRIPPING	CM	3.47	188.78	0.00	48.06	240.31
104	COMPACTION OF NATURAL GROUND	SM	0.50	18.62	3.00	5.53	27.64
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.39	283.06	0.00	72.36	361.82
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	23.41	672.56	0.00	173.99	869.97
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	15.68	524.99	0.00	135.17	675.84
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.23	254.24	0.00	64.87	324.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	154.01	453.99	137.50	186.37	931.87
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	27.08	610.97	0.00	159.51	797.56
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	13.38	524.99	0.00	134.59	672.96
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.53	278.09	0.00	72.15	360.77
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	90.74	838.57	90.35	254.92	1,274.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	150.45	504.43	137.50	198.09	990.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	135.40	553.11	0.00	172.13	860.64
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	77.37	397.27	0.00	118.66	593.30
107d	GRANULAR BACKFILL	CM	46.83	241.40	1,007.30	323.88	1,619.42
107e	COMMON BACKFILL	CM	39.01	139.11	20.00	49.53	247.66
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	9.70	288.79	20.00	79.62	398.12
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	27.74	726.17	159.33	228.31	1,141.56

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	20.80	792.41	9.50	205.68	1,028.39
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	18.49	714.13	8.89	185.38	926.89
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.04	123.20	223.08	89.33	446.65
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.58	150.63	20.00	44.80	224.01
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	20.09	348.12	11.89	95.03	475.13
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.94	53.73	5.72	15.35	76.74
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.41	36.66	3.03	10.28	51.38
110	IMPROVED SUB-GARDE (CBR>20%)	CM	13.99	233.49	459.49	176.74	883.72
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.16	29.22	3.11	8.37	41.87
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.77	32.97	3.11	9.46	47.31
201	GRANULAR SUB-BASE	CM	11.27	288.11	1,250.69	387.52	1,937.59
202	AGGREGATE BASE	CM	13.30	350.20	1,645.12	502.16	2,510.78
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	109.42	2,856.48	12,016.14	3,745.51	18,727.56
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	109.42	2,856.48	12,332.20	3,824.53	19,122.63
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	117.62	2,983.43	12,005.53	3,776.64	18,883.22
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	117.62	2,983.43	12,347.99	3,862.26	19,311.31
204b	CEMENT STABILIZED BASE	CM	40.42	915.90	1,554.03	627.59	3,137.94
204c	CEMENT CONTENT	TON	150.00	0.00	8,925.00	2,268.75	11,343.75
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	344.91	2,422.77	84,516.91	21,821.15	109,105.73
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	344.91	2,422.77	84,516.91	21,821.15	109,105.73
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	128.35	233.81	1,307.61	417.44	2,087.21

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## Rate Analysis Summary (Construction)

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	212.77	4,464.04	9,666.88	3,585.92	17,929.62
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	141.29	262.54	1,453.95	464.44	2,322.22
207a	DEEP PATCHING (0-15 cm)	SM	2.35	80.37	21.91	26.16	130.79
207b	DEEP PATCHING (15-30 cm)	SM	2.35	80.37	21.91	26.16	130.79
208	REINSTATEMENT OF ROAD SURFACE	SM	2.54	130.32	2.20	33.77	168.83
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	6.55	466.94	13.33	121.70	608.52
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.31	50.29	2.67	13.57	67.84
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.43	2.83	95.06	24.58	122.90
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	2.83	82.90	21.54	107.68
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	38.18	9.84	49.22
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.17	1.03	33.15	8.59	42.93
304a	SINGLE SURFACE TREATMENT	SM	1.12	14.01	170.16	46.32	231.62
304b	DOUBLE SURFACE TREATMENT	SM	1.64	26.92	348.09	94.16	470.82
304c	TRIPLE SURFACE TREATMENT	SM	2.76	37.83	410.17	112.69	563.44
304d	SEAL COAT	SM	1.04	7.81	48.00	14.21	71.07
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	97.46	2,815.00	12,933.34	3,961.45	19,807.24
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	97.46	2,694.06	13,776.90	4,142.10	20,710.52
307a	DENSE GRADED HOT BIT-MAC	CM	266.40	863.75	10,381.35	2,877.87	14,389.37
307b	OPEN GRADED HOT BIT-MAC	CM	266.40	863.75	10,048.29	2,794.61	13,973.04
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	41.16	1,236.12	4,884.74	1,540.51	7,702.53
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	302.78	2,013.10	86,783.35	22,274.81	111,374.04
309a	COLD MILLING, 0-30 mm	SM	1.38	61.27	25.40	22.01	110.07
309b	COLD MILLING, 0-50 mm	SM	2.31	102.12	42.33	36.69	183.45

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SAMPAK INTERNATIONAL (Pvt.) LTD  
LAHORE

**Rate Analysis Summary (Construction)**

**Province** PUNJAB

**Dcode** 69 TOBA TEK SINGH

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
309c	COLD MILLING, 0-70 mm	SM	3.46	153.18	63.50	55.04	275.18
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	742.53	2,690.11	4,966.13	2,099.70	10,498.48
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	742.53	2,690.11	5,654.29	2,271.73	11,358.67
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	742.53	2,690.11	6,009.85	2,360.62	11,803.12
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	742.53	2,690.11	5,243.70	2,169.09	10,845.44
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	742.53	2,690.11	5,931.74	2,341.10	11,705.49
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	742.53	2,690.11	6,287.17	2,429.95	12,149.77
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	742.53	2,690.11	5,540.55	2,243.30	11,216.50
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	742.53	2,690.11	6,228.59	2,415.31	12,076.55
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	742.53	2,690.11	6,560.44	2,498.27	12,491.36
401b	CONCRETE CLASS B	CM	955.51	1,419.30	4,200.58	1,643.85	8,219.24
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	724.52	2,690.11	4,626.67	2,010.33	10,051.63
401cii	CONCRETE CLASS C (ON GROUND)	CM	724.52	2,690.11	5,314.71	2,182.34	10,911.68
401ciii	CONCRETE CLASS C (ELEVATED)	CM	724.52	2,690.11	5,670.27	2,271.23	11,356.13
401d	CONCRETE CLASS D1	CM	1,153.49	3,326.20	7,770.72	3,062.60	15,313.01
401e	CONCRETE CLASS Y	CM	1,603.53	898.44	6,304.14	2,201.53	11,007.63
401f	LEAN CONCRETE	CM	602.00	969.12	3,608.74	1,294.96	6,474.82
401gi	PRECAST CONCRETE, CLASS A1	CM	2,409.21	1,879.78	5,617.92	2,476.73	12,383.64
401gii	PRECAST CONCRETE CLASS A3	CM	2,409.21	1,879.78	6,235.50	2,631.12	13,155.61
401giii	PRECAST CONCRETE, CLASS B	CM	2,409.21	1,879.78	4,911.76	2,300.19	11,500.94
401giv	PRECAST CONCRETE CLASS D1	CM	2,409.21	1,879.78	7,778.63	3,016.91	15,084.53
401gv	PRECAST CONCRETE CLASS D2	CM	2,409.21	1,879.78	8,608.76	3,224.44	16,122.19
401gvi	PRECAST CONCRETE CLASS D3	CM	2,409.21	1,879.78	9,440.03	3,432.26	17,161.28
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	1,055.51	1,419.30	3,385.64	1,465.11	7,325.56
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,388.86	0.00	86,185.73	22,143.65	110,718.23

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,388.86	0.00	90,385.73	23,193.65	115,968.23
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,819.93	4,249.86	106,704.00	28,193.45	140,967.23
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,510.84	13,891.32	161,885.69	44,821.96	224,109.81
405b	LAUNCHING OF GIRDER	TON	81.72	967.47	0.00	262.30	1,311.50
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	2,188.26	586.57	2,932.84
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	158.02	0.00	1,031.10	297.28	1,486.40
406ci	STEEL EXPANSION JOINTS (Local)	KG	13.05	21.32	170.26	51.15	255.77
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	46,668.73	11,801.89	59,009.43
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	557.57	0.00	116,671.81	29,307.35	146,536.73
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	613.82	0.00	388,509.26	97,280.77	486,403.85
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	538.82	0.00	42,347.80	10,721.66	53,608.28
406dii	PVC WATER STOP 8" SIZE	M	136.67	0.00	399.81	134.12	670.59
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.91
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	56.11	0.00	326.70	95.70	478.51
406g	STEEL OR METAL BEARING DEVICES	KG	26.89	56.27	178.60	65.44	327.20
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	345.16	3,542.17	578.05	1,116.35	5,581.73
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	524.65	5,384.10	789.26	1,674.50	8,372.51
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	524.65	8,250.86	954.21	2,432.43	12,162.14
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	874.41	13,751.43	1,380.28	4,001.53	20,007.65

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	728.68	11,459.52	1,202.75	3,347.74	16,738.69
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,311.62	20,627.14	1,912.86	5,962.91	29,814.53
407h	PILE LOAD TEST UPTO 120 TON	EACH	31,165.86	105,999.36	106,668.52	60,958.44	304,792.18
407i	PILE LOAD TEST UPTO 240 TON	EACH	31,165.86	105,999.36	228,554.23	91,429.86	457,149.31
407j	PILE LOAD TEST UPTO 360 TON	EACH	85,165.86	117,448.00	309,734.87	128,087.18	640,435.91
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,665.86	146,810.00	493,977.88	191,613.44	958,067.18
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,998.80	176,172.00	800,481.03	290,662.96	1,453,314.79
407m	CONFIRMATORY BORING (NX SIZE)	M	251.38	3,272.30	25.00	887.17	4,435.85
407n	PERMANENT PILE CASING FOR PILES	Ton	329.61	4,885.57	105,647.45	27,715.66	138,578.29
410	BRICK WORK	CM	458.67	577.25	4,775.35	1,452.82	7,264.09
411a	STONE MASONRY RANDOM DRY	CM	483.33	210.72	1,615.23	577.32	2,886.60
411b	STONE MASONRY RANDOM WITH MORTAR	CM	573.33	335.46	3,087.70	999.12	4,995.62
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	663.33	210.72	1,960.03	708.52	3,542.60
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	753.33	335.46	3,298.13	1,096.73	5,483.66
411g	ROLL POINTING	SM	97.67	24.95	102.89	56.38	281.88
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	993.33	534.31	3,298.13	1,206.44	6,032.21
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	311.67	689.50	1,238.75	559.98	2,799.89
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	311.67	766.21	1,546.94	656.20	3,281.02
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	295.55	1,356.07	1,898.48	887.52	4,437.62
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	309.59	1,702.67	2,997.91	1,252.54	6,262.71
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	359.84	2,255.64	4,069.12	1,671.15	8,355.74
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	447.46	2,781.29	5,764.62	2,248.34	11,241.72

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	579.07	2,692.05	7,706.62	2,744.43	13,722.17
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	681.72	3,268.92	10,304.49	3,563.78	17,818.92
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	807.84	3,813.74	17,573.23	5,548.70	27,743.52
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	311.67	689.50	1,226.30	556.87	2,784.33
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	303.33	766.21	1,585.20	663.69	3,318.43
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	295.55	1,356.07	2,139.37	947.75	4,738.73
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	309.59	1,702.67	3,961.07	1,493.33	7,466.66
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	359.84	2,255.64	5,208.42	1,955.97	9,779.87
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	447.46	2,781.29	7,831.08	2,764.96	13,824.79
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	579.07	2,692.05	10,066.08	3,334.30	16,671.50
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	681.72	3,268.92	14,070.73	4,505.34	22,526.72
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	807.84	3,813.74	24,351.24	7,243.21	36,216.03
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	123.33	198.35	1,028.86	337.63	1,688.17
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,080.83	1,081.84	4,295.03	1,614.42	8,072.12
507a	STEEL WIRE MESH FOR GABIONS	KG	7.60	0.00	124.40	33.00	165.00
507b	ROCK FILL IN GABIONS	CM	132.22	0.00	1,195.51	331.93	1,659.66
508a	BRICK PAVING (SINGLE COURSE)	SM	152.72	47.96	396.35	149.26	746.29
508b	BRICK PAVING (DOUBLE COURSE)	SM	272.72	47.96	786.28	276.74	1,383.70
509a	RIPRAP, CLASS A	CM	660.97	0.00	1,270.30	482.82	2,414.09
509b	RIPRAP, CLASS B	CM	480.78	233.11	1,304.81	504.68	2,523.38
509c	RIPRAP, CLASS C	CM	470.65	242.83	1,337.85	512.83	2,564.15
509c1	RIPRAP, CLASS D	CM	470.65	291.39	1,382.89	536.23	2,681.16

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	808.61	218.23	3,442.82	1,117.41	5,587.07
509e	GROUTED RIPRAP, CLASS B	CM	622.89	407.69	3,254.93	1,071.38	5,356.89
509f	GROUTED RIPRAP, CLASS C	CM	599.07	388.31	3,307.91	1,073.82	5,369.11
509f1	GROUTED RIPRAP, CLASS D	CM	599.07	436.87	3,568.13	1,151.02	5,755.09
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,099.52	615.08	4,951.20	1,666.45	8,332.24
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	67.25	344.31	1,004.01	353.90	1,769.48
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	137.78	1,135.96	0.00	318.44	1,592.18
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	208.33	131.70	206.42	136.61	683.07
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	266.67	168.58	264.22	174.87	874.33
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	338.67	368.16	772.60	369.86	1,849.29
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	423.33	460.20	965.75	462.32	2,311.61
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	338.67	368.16	448.29	288.78	1,443.90
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	423.33	460.20	560.37	360.98	1,804.88
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	491.83	1,431.68	6,859.65	2,195.79	10,978.94
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,378.84	1,000.42	6,840.29	2,304.89	11,524.43
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	36.67	84.29	755.04	219.00	1,094.99
603	BRICK EDGING	M	12.17	0.00	62.40	18.64	93.21
604a	METAL GUARD RAIL	M	91.85	70.24	3,130.55	823.16	4,115.80
604b	METAL GUARD RAIL END PIECES	EACH	121.11	688.14	3,526.82	1,084.02	5,420.09
604d	STEEL POST FOR METAL GUARD RAIL	EACH	137.76	688.14	3,125.72	987.91	4,939.53
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,447.50	15,188.88	4,782.01	23,910.04
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,491.66	1,026.28	14,177.29	4,423.81	22,119.03



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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	319.24	500.96	11,485.66	3,076.47	15,382.33
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	97.50	751.44	14,203.44	3,763.10	18,815.48
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	319.24	1,073.66	22,319.38	5,928.07	29,640.35
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,048.86	1,172.88	41,207.51	10,857.31	54,286.57
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	209.77	282.47	19,220.55	4,928.20	24,640.99
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	391.66	0.00	2,782.24	793.48	3,967.38
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	391.66	0.00	4,173.36	1,141.26	5,706.28
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.00	7.03	23.74	8.69	43.47
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.33	4.04	64.62	17.50	87.49
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.00	7.03	31.68	10.68	53.39
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.33	4.04	86.18	22.89	114.45
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	229.41	92.93	464.67
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	814.26	245.52	1,227.60
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.00	8.79	34.74	12.13	60.66
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.00	15.16	111.83	33.00	164.98
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	5.00	8.79	46.32	15.03	75.14
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	5.00	15.16	149.10	42.32	211.58
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	107.17	35.16	335.44	119.44	597.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	107.17	60.65	1,410.06	394.47	1,972.35
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	152.94	69.32	346.58
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	543.66	173.37	866.85

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	89.17	35.16	223.62	86.99	434.94
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	89.17	60.65	941.46	272.82	1,364.10
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	141.94	398.16	138.31	691.54
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	13.13	0.00	206.16	54.82	274.11
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	141.94	449.16	151.06	755.29
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	13.13	0.00	262.26	68.85	344.23
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	25.00	140.48	827.33	248.20	1,241.01
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	150.00	842.88	2,145.42	784.58	3,922.88
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	300.00	1,685.76	5,854.41	1,960.04	9,800.21
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	181.34	84.29	1,251.43	379.26	1,896.31
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	160.71	1,050.30	2.20	303.30	1,516.51

**NATIONAL HIGHWAY AUTHORITY**  
**COMPOSITE SCHEDULE OF RATES**

2014

**VEHARI**  
**(71)**



**SAMPAC INTERNATIONAL**

**CLIENT:****CSR - 2014****CONSULTANT:**NATIONAL HIGHWAY AUTHORITY  
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LAHORE**Rate Analysis Summary (Construction)****Province** PUNJAB**Dcode** 71 VEHARI

<b>Code</b>	<b>Description</b>	<b>Unit</b>	<b>Manpower</b>	<b>Equipment</b>	<b>Material</b>	<b>OH-Profit</b>	<b>Rate</b>
101	CLEARING AND GRUBBING	SM	0.95	19.27	0.00	5.05	25.27
102a	REMOVAL OF TREES 150-300 mm GIRTH	EACH	9.46	321.21	2.18	83.21	416.06
102b	REMOVAL OF TREES 301-600 mm GIRTH	EACH	27.28	774.41	4.91	201.65	1,008.25
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	109.11	3,097.64	19.65	806.60	4,033.00
103	STRIPPING	CM	3.25	188.78	0.00	48.01	240.03
104	COMPACTION OF NATURAL GROUND	SM	0.46	18.62	3.00	5.52	27.60
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.64	283.06	0.00	72.17	360.87
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	140.38	453.99	137.50	182.97	914.83
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	21.61	672.56	0.00	173.54	867.71
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	14.36	524.99	0.00	134.84	674.19
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.61	254.24	0.00	64.71	323.57
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	140.38	453.99	137.50	182.97	914.83
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	24.63	610.97	0.00	158.90	794.50
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	12.35	524.99	0.00	134.33	671.67
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.40	278.09	0.00	71.87	359.36
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	83.15	838.57	90.35	253.02	1,265.09
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	136.85	504.43	137.50	194.69	973.47
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	123.16	553.11	0.00	169.07	845.34
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	70.38	397.27	0.00	116.91	584.55
107d	GRANULAR BACKFILL	CM	43.98	241.40	1,208.73	373.53	1,867.63
107e	COMMON BACKFILL	CM	37.47	139.11	20.00	49.15	245.73
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	8.82	288.79	20.00	79.40	397.02
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	25.65	726.17	159.33	227.79	1,138.94

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108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	19.23	792.41	9.50	205.29	1,026.43
108biii	FORMAITON OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	17.10	714.13	8.89	185.03	925.15
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	10.16	123.20	223.08	89.11	445.55
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.84	150.63	20.00	44.62	223.08
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	18.69	348.12	11.89	94.68	473.38
109a	SUBGRADE PREPARATION IN EARTH CUT	SM	1.78	53.73	5.72	15.31	76.54
109bi	SUBGRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.28	36.66	3.03	10.25	51.23
110	IMPROVED SUB-GARDE (CBR>20%)	CM	12.94	233.49	494.28	185.18	925.90
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.08	29.22	3.11	8.35	41.76
114b	DRESSING OF BERM WITH EXTRA MATERIAL	SM	1.64	32.97	3.11	9.43	47.14
201	GRANULAR SUB-BASE	CM	10.33	288.11	1,387.86	421.58	2,107.88
202	AGGREGATE BASE	CM	12.07	350.20	1,588.10	487.59	2,437.96
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS A)	CM	104.02	2,856.48	12,311.40	3,817.97	19,089.87
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS B)	CM	104.02	2,856.48	12,626.02	3,896.63	19,483.15
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS A)	CM	111.56	2,983.43	12,300.74	3,848.93	19,244.67
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS B)	CM	111.56	2,983.43	12,641.82	3,934.20	19,671.02
204b	CEMENT STABILIZED BASE	CM	37.10	915.90	1,833.84	696.71	3,483.55
204c	CEMENT CONTENT	TON	150.00	0.00	8,820.00	2,242.50	11,212.50
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	314.29	2,422.77	84,778.44	21,878.88	109,394.38
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	314.29	2,422.77	84,778.44	21,878.88	109,394.38
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	125.85	233.81	1,530.24	472.47	2,362.37

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205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK RELIEF LAYER	CM	199.68	4,464.04	9,897.46	3,640.29	18,201.47
206b	WATER BOUND MACADAM BASE WITH COARSE AGG: CLASS B	CM	138.93	262.54	1,552.66	488.53	2,442.66
207a	DEEP PATCHING (0-15 cm)	SM	2.15	80.37	27.63	27.54	137.69
207b	DEEP PATCHING (15-30 cm)	SM	2.15	80.37	27.63	27.54	137.69
208	REINSTATEMENT OF ROAD SURFACE	SM	2.32	130.32	2.20	33.71	168.56
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	5.83	466.94	13.33	121.53	607.63
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	1.17	50.29	2.67	13.53	67.66
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.39	2.83	95.33	24.64	123.18
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.38	2.83	83.16	21.59	107.96
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.16	1.03	38.29	9.87	49.34
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT.	SM	0.16	1.03	33.25	8.61	43.04
304a	SINGLE SURFACE TREATMENT	SM	1.02	14.01	171.86	46.72	233.61
304b	DOUBLE SURFACE TREATMENT	SM	1.48	26.92	352.40	95.20	476.01
304c	TRIPLE SURFACE TREATMENT	SM	2.50	37.83	415.29	113.90	569.52
304d	SEAL COAT	SM	0.94	7.81	48.70	14.36	71.82
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS A)	CM	92.06	2,815.00	13,245.79	4,038.21	20,191.05
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS B)	CM	92.06	2,694.06	14,085.02	4,217.78	21,088.91
307a	DENSE GRADED HOT BIT-MAC	CM	255.60	863.75	10,638.69	2,939.51	14,697.54
307b	OPEN GRADED HOT BIT-MAC	CM	255.60	863.75	10,285.09	2,851.11	14,255.54
308a	RECYCLING OF ASPHALT CONCRETE (0-60 mm THICK)	CM	39.02	1,236.12	4,884.74	1,539.97	7,699.85
308b	BITUMEN BINDER GRADE (40-50, 60-70, 80-100)	TON	277.43	2,013.10	87,044.88	22,333.85	111,669.27
309a	COLD MILLING, 0-30 mm	SM	1.27	61.27	25.40	21.98	109.92
309b	COLD MILLING, 0-50 mm	SM	2.11	102.12	42.33	36.64	183.21

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309c	COLD MILLING, 0-70 mm	SM	3.17	153.18	63.50	54.96	274.81
401a1i	CONCRETE CLASS A1 (UNDERGROUND)	CM	678.38	2,690.11	4,993.59	2,090.52	10,452.61
401a1ii	CONCRETE CLASS A1 (ON GROUND)	CM	678.38	2,690.11	5,681.78	2,262.57	11,312.84
401a1iii	CONCRETE CLASS A1 (ELEVATED)	CM	678.38	2,690.11	6,037.34	2,351.46	11,757.29
401a2i	CONCRETAE CLASS A2 (UNDERGROUND)	CM	678.38	2,690.11	5,252.53	2,155.26	10,776.28
401a2ii	CONCRETAE CLASS A2 (ON GROUND)	CM	678.38	2,690.11	5,940.57	2,327.27	11,636.33
401a2iii	CONCRETAE CLASS A2 (ELEVATED)	CM	678.38	2,690.11	6,295.97	2,416.12	12,080.58
401a3i	CONCRETAE CLASS A3 (UNDERGROUND)	CM	678.38	2,690.11	5,580.65	2,237.29	11,186.43
401a3ii	CONCRETE CLASS A3 (ON GROUND)	CM	678.38	2,690.11	6,268.69	2,409.30	12,046.48
401a3iii	CONCRETAE CLASS A3 (ELEVATED)	CM	678.38	2,690.11	6,594.12	2,490.65	12,453.27
401b	CONCRETE CLASS B	CM	881.92	1,419.30	4,231.88	1,633.27	8,166.36
401ci	CONCRETE CLASS C (UNDERGROUND)	CM	670.43	2,690.11	4,709.75	2,017.57	10,087.87
401cii	CONCRETE CLASS C (ON GROUND)	CM	670.43	2,690.11	5,397.79	2,189.58	10,947.92
401ciii	CONCRETE CLASS C (ELEVATED)	CM	670.43	2,690.11	5,753.35	2,278.47	11,392.37
401d	CONCRETE CLASS D1	CM	1,053.62	3,326.20	7,749.69	3,032.38	15,161.88
401e	CONCRETE CLASS Y	CM	1,470.86	898.44	6,338.63	2,176.98	10,884.91
401f	LEAN CONCRETE	CM	574.15	969.12	3,651.16	1,298.61	6,493.03
401gi	PRECAST CONCRETE, CLASS A1	CM	2,251.87	1,879.78	5,647.89	2,444.88	12,224.41
401gii	PRECAST CONCRETE CLASS A3	CM	2,251.87	1,879.78	6,268.95	2,600.15	13,000.74
401giii	PRECAST CONCRETE, CLASS B	CM	2,251.87	1,879.78	4,954.46	2,271.53	11,357.63
401giv	PRECAST CONCRETE CLASS D1	CM	2,251.87	1,879.78	7,757.59	2,972.31	14,861.54
401gv	PRECAST CONCRETE CLASS D2	CM	2,251.87	1,879.78	8,572.27	3,175.98	15,879.89
401gvi	PRECAST CONCRETE CLASS D3	CM	2,251.87	1,879.78	9,389.00	3,380.16	16,900.80
401h	PLUM (CYCLOPEAN / RUBBLE) CONCRETE (2:1 CONC. STONE RATIO)	CM	981.92	1,419.30	3,423.09	1,456.07	7,280.37
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,180.32	0.00	86,275.59	22,113.98	110,569.89

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404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,180.32	0.00	90,475.59	23,163.98	115,819.89
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,652.50	4,249.86	106,704.00	28,151.59	140,757.94
405a	PRE-STRESSING WIRE STRAND 3/8"-1/2" DIA COMPLETE IN ALL RESPECT.	TON	3,071.82	13,891.32	162,150.20	44,778.33	223,891.67
405b	LAUNCHING OF GIRDER	TON	71.50	967.47	0.00	259.74	1,298.72
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	146.60	0.00	2,198.23	586.21	2,931.04
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	146.60	0.00	1,028.06	293.67	1,468.33
406ci	STEEL EXPANSION JOINTS (Local)	KG	11.98	21.32	170.26	50.89	254.44
406cii	EXPANSION JOINT WITH TWO EXTRUDED ALUMINIUM ALLOY SECTIONS FOR 50mm MOVEMENT (USA/EU MAKE)	M	490.20	0.00	46,668.73	11,789.73	58,948.66
406ciii	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY TRIANGULAR TEETH FOR 110mm MOVEMENT (USA/EU MAKE)	M	508.95	0.00	116,671.81	29,295.19	146,475.95
406civ	EXPANSION JOINT WITH CAST ALUMINIUM ALLOY CANTILEVER TEETH FOR 300mm MOVEMENT (USA/EU MAKE)	M	565.20	0.00	388,509.26	97,268.62	486,343.08
406cv	EXPANSION JOINT MONOBLOC TYPE FOR 65mm MOVEMENT (USA/EU MAKE)	M	490.20	0.00	42,347.80	10,709.50	53,547.50
406dii	PVC WATER STOP 8" SIZE	M	127.09	0.00	399.81	131.72	658.62
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - LOCAL	c.cm	0.02	0.00	1.50	0.38	1.90
406ei	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS) - USA/EU MAKE	c.cm	0.02	0.00	5.25	1.32	6.59
406f	ASPHALT FELT (3 PLY)	SM	50.97	0.00	326.96	94.48	472.41
406g	STEEL OR METAL BEARING DEVICES	KG	25.03	56.27	178.60	64.97	324.87
407d1	CAST IN PLACE PILES UPTO 1.00 M DIA IN NORMAL SOIL (BORING ONLY)	M	302.99	3,542.17	578.05	1,105.80	5,529.01
407d2	CAST IN PLACE PILES UPTO 1.00 M DIA IN GRAVEL STRATA (BORING ONLY)	M	460.54	5,384.10	789.26	1,658.47	8,292.37
407d3	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN NORMAL SOIL (BORING ONLY)	M	460.54	8,250.86	954.21	2,416.40	12,082.01
407d4	CAST IN PLACE PILES 1.1 - 1.5 M DIA IN GRAVEL STRATA (BORING ONLY)	M	767.56	13,751.43	1,380.28	3,974.82	19,874.08



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407d5	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN NORMAL SOIL (BORING ONLY)	M	639.64	11,459.52	1,202.75	3,325.48	16,627.38
407d6	CAST IN PLACE PILES 1.6 - 2.0 M DIA IN GRAVEL STRATA (BORING ONLY)	M	1,151.34	20,627.14	1,912.86	5,922.84	29,614.18
407h	PILE LOAD TEST UPTO 120 TON	EACH	30,644.94	105,999.36	122,722.36	64,841.67	324,208.33
407i	PILE LOAD TEST UPTO 240 TON	EACH	30,644.94	105,999.36	260,661.91	99,326.55	496,632.76
407j	PILE LOAD TEST UPTO 360 TON	EACH	84,644.94	117,448.00	357,896.39	139,997.33	699,986.66
407k	PILE LOAD TEST UPTO 550 TON	EACH	125,144.94	146,810.00	572,422.78	211,094.43	1,055,472.15
407l	PILE LOAD TEST UPTO 800 TON	EACH	185,248.68	176,172.00	926,357.73	321,944.60	1,609,723.01
407m	CONFIRMATORY BORING (NX SIZE)	M	234.01	3,272.30	25.00	882.83	4,414.14
407n	PERMANENT PILE CASING FOR PILES	Ton	307.15	4,885.57	105,648.48	27,710.30	138,551.51
410	BRICK WORK	CM	424.60	577.25	4,822.73	1,456.15	7,280.73
411a	STONE MASONRY RANDOM DRY	CM	449.18	210.72	1,660.38	580.07	2,900.35
411b	STONE MASONRY RANDOM WITH MORTAR	CM	535.43	335.46	3,059.48	982.59	4,912.97
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	617.94	210.72	2,033.12	715.44	3,577.22
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	700.44	335.46	3,313.95	1,087.46	5,437.31
411g	ROLL POINTING	SM	89.96	24.95	101.56	54.12	270.59
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	929.20	534.31	3,313.95	1,194.36	5,971.81
501a	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	301.77	689.50	1,284.86	569.03	2,845.16
501b	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	301.77	766.21	1,624.95	673.23	3,366.16
501c	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	282.98	1,356.07	2,016.54	913.90	4,569.49
501d	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	298.16	1,702.67	3,187.37	1,297.05	6,485.25
501e	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	345.54	2,255.64	4,469.50	1,767.67	8,838.34
501f	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	427.32	2,781.29	6,366.24	2,393.71	11,968.56

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501g	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	553.01	2,692.05	8,308.15	2,888.30	14,441.51
501h	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	652.76	3,268.92	10,930.77	3,713.11	18,565.57
501i	R.C.C. PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	770.93	3,813.74	20,027.19	6,152.97	30,764.83
501j	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	301.77	689.50	1,284.86	569.03	2,845.16
501k	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	294.48	766.21	1,683.95	686.16	3,430.80
501l	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	282.98	1,356.07	2,288.54	981.90	4,909.49
501m	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	298.16	1,702.67	4,202.37	1,550.80	7,754.00
501n	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	345.54	2,255.64	5,712.50	2,078.42	10,392.09
501o	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	427.32	2,781.29	8,588.24	2,949.21	14,746.06
501p	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	553.01	2,692.05	10,823.15	3,517.05	17,585.26
501q	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	652.76	3,268.92	14,859.22	4,695.22	23,476.12
501r	R.C.C. PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	770.93	3,813.74	27,435.67	8,005.09	40,025.43
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	118.54	198.35	1,226.65	385.88	1,929.42
502b	CONCRETE CLASS B IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	997.82	1,081.84	4,325.21	1,601.22	8,006.09
507a	STEEL WIRE MESH FOR GABIONS	KG	6.97	0.00	126.79	33.44	167.20
507b	ROCK FILL IN GABIONS	CM	128.82	0.00	1,238.27	341.77	1,708.85
508a	BRICK PAVING (SINGLE COURSE)	SM	143.39	47.96	405.47	149.20	746.02
508b	BRICK PAVING (DOUBLE COURSE)	SM	255.89	47.96	802.69	276.64	1,383.18
509a	RIPRAP, CLASS A	CM	616.81	0.00	1,315.45	483.06	2,415.32
509b	RIPRAP, CLASS B	CM	439.45	233.11	1,349.60	505.54	2,527.70
509c	RIPRAP, CLASS C	CM	428.71	242.83	1,405.53	519.27	2,596.33
509c1	RIPRAP, CLASS D	CM	428.71	291.39	1,450.55	542.66	2,713.31

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Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
509d	GROUTED RIPRAP, CLASS A	CM	755.37	218.23	3,350.78	1,081.09	5,405.46
509e	GROUTED RIPRAP, CLASS B	CM	571.30	407.69	3,176.54	1,038.88	5,194.41
509f	GROUTED RIPRAP, CLASS C	CM	548.59	388.31	3,258.48	1,048.84	5,244.22
509f1	GROUTED RIPRAP, CLASS D	CM	548.59	436.87	3,505.39	1,122.71	5,613.56
509g	REINFORCED CONCRETE SLOPE PROTECTION 20 cm THICK EXCLUDING REINFORCEMENT	CM	1,037.10	615.08	4,956.46	1,652.16	8,260.80
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	65.10	344.31	1,207.01	404.11	2,020.53
510	DISMANTLING OF STRUCTURES AND OBSTRUCTIONS	CM	128.05	1,135.96	0.00	316.00	1,580.02
511a1	DRY STONE PITCHING (15-20 cm THICK)	SM	195.19	131.70	213.76	135.16	675.81
511a2	DRY STONE PITCHING (20-25 cm THICK)	SM	249.84	168.58	273.61	173.01	865.04
511b1	GROUTED STONE PITCHING (15-20 cm THICK) WITH BITUMEN JOINTS	SM	315.84	368.16	777.38	365.35	1,826.73
511b2	GROUTED STONE PITCHING (20-25 cm THICK) WITH BITUMEN JOINTS	SM	394.80	460.20	971.72	456.68	2,283.41
511b3	GROUTED STONE PITCHING (15-20 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	315.84	368.16	443.39	281.85	1,409.24
511b4	GROUTED STONE PITCHING (20-25 cm THICK) WITHIN PCC BANDS (PAID SEPERATELY) W/O BITUMEN JOINTS	SM	394.80	460.20	554.24	352.31	1,761.56
601ai	RCC NEW JERSY BARRIER (IN-SITU) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	448.80	1,431.68	6,878.10	2,189.65	10,948.23
601di	RCC NEW JERSY BARRIER (PRECAST) FOR MEDIAN DOUBLE FACE (INCL. REINFORCEMENT)	M	1,286.21	1,000.42	6,860.07	2,286.68	11,433.38
601dii	PRECAST CURB IN CONCRETE CLASS A-1 OF SIZE 450X150 mm INCL. BEDDING & HAUNCHING	M	34.33	84.29	747.65	216.57	1,082.84
603	BRICK EDGING	M	11.49	0.00	62.40	18.47	92.36
604a	METAL GUARD RAIL	M	85.37	70.24	3,160.99	829.15	4,145.75
604b	METAL GUARD RAIL END PIECES	EACH	113.47	688.14	3,561.54	1,090.79	5,453.94
604d	STEEL POST FOR METAL GUARD RAIL	EACH	128.04	688.14	3,155.16	992.84	4,964.18
605a	CONCRETE BEAM GUARDRAIL (INCL. REINFORCEMENT)	CM	2,386.49	1,447.50	15,274.34	4,777.08	23,885.40
605c	CONCRETE POST FOR GUARDRAIL (INCL. REINFORCEMENT)	CM	2,386.49	1,026.28	14,261.67	4,418.61	22,093.05

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### Rate Analysis Summary (Construction)

Province PUNJAB

Dcode 71 VEHARI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
607a	TRAFFIC ROAD SIGNS CATEGORY 1	EACH	300.59	500.96	11,447.17	3,062.18	15,310.90
607b	TRAFFIC ROAD SIGNS CATEGORY 2	EACH	91.88	751.44	14,160.75	3,751.02	18,755.09
607c	TRAFFIC ROAD SIGNS CATEGORY 3 (a)	EACH	300.59	1,073.66	22,254.11	5,907.09	29,535.45
607d	TRAFFIC ROAD SIGNS CATEGORY 3 (b)	EACH	1,013.39	1,172.88	41,071.16	10,814.36	54,071.79
607e	TRAFFIC ROAD SIGNS CATEGORY 3 (c)	SM	202.68	282.47	19,147.14	4,908.07	24,540.36
607f	ADDITIONAL PANEL SIZE 60 cm x 30 cm.	EACH	352.08	0.00	2,768.40	780.12	3,900.60
607g	ADDITIONAL PANEL SIZE 90 cm x 30 cm.	EACH	352.08	0.00	4,152.60	1,126.17	5,630.85
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.78	7.03	23.74	8.64	43.19
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.26	4.04	64.62	17.48	87.40
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.78	7.03	31.68	10.62	53.12
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.26	4.04	86.18	22.87	114.36
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	96.40	35.16	229.41	90.24	451.21
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	96.40	60.65	814.26	242.83	1,214.14
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.73	8.79	34.74	12.06	60.32
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.73	15.16	111.83	32.93	164.64
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT OF 20 cm WIDTH	M	4.73	8.79	46.32	14.96	74.80
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT OF 20 cm WIDTH	M	4.73	15.16	149.10	42.25	211.24
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	96.40	35.16	335.44	116.75	583.75
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	96.40	60.65	1,410.06	391.78	1,958.89
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	80.65	35.16	152.94	67.19	335.94
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	80.65	60.65	543.66	171.24	856.20

CLIENT:

CSR - 2014

CONSULTANT:

NATIONAL HIGHWAY AUTHORITY  
ISLAMABADSAMPAK INTERNATIONAL (Pvt.) LTD  
LAHORE**Rate Analysis Summary (Construction)**

Province PUNJAB

Dcode 71 VEHARI

Code	Description	Unit	Manpower	Equipment	Material	OH-Profit	Rate
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	80.65	35.16	223.62	84.86	424.29
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	80.65	60.65	941.46	270.69	1,353.45
609c	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.19	141.94	398.16	138.07	690.36
609ci	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.19	0.00	206.16	54.59	272.94
609d	REFLECTORISED ALUMINIUM PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.19	141.94	449.16	150.82	754.11
609di	REFLECTORISED PLASTIC PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.19	0.00	262.26	68.61	343.06
610b	RIGHT OF WAY MARKER (NHA STANDARD DRAWINGS P-150)	EACH	23.75	140.48	819.71	245.98	1,229.92
610c	KILOMETER POST (NHA STANDARD DRAWINGS P-152)	EACH	142.50	842.88	2,134.35	779.93	3,899.66
610d	TEN KILOMETER POST (NHA STANDARD DRAWINGS P-153)	EACH	285.01	1,685.76	5,800.53	1,942.82	9,714.12
611a	GALVANIZED WIRE MESH FENCE 1500 mm HIGH INCL. PRESTRESSED & RCC POSTS COMPLETE IN ALL RESPECTS AS PER M-2 STANDARD	M	172.16	84.29	1,374.70	407.79	2,038.94
612a	FURNISHING AND PLANTING OF TREES INCLUDING MAINTENANCE FOR 2 YEARS	EACH	150.66	1,050.30	2.20	300.79	1,503.95

# **PATRONAGE (NHA – Client)**

Senior Executives of National Highway Authority, whose patronage and support contributed towards successful accomplishment of the assignment:

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**Director (QS)**

**Engr. Atta-ul-Mohsin**  
**Deputy Director (QS)**

# **SERVICES (Sampak International)**

**Sampak Team Members, whose dedicated services contributed towards successful accomplishment of the assignment:**

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**Engr. S. Hasan A. Shirazi**

**Project Incharge**

**Mr. Mubashar Hussain**

**I. T. Expert**

**Engr. Malik Sarmad Riaz**

**Field / Cost Engineer**

**Engr. Asad Ali**

**Field / Cost Engineer**

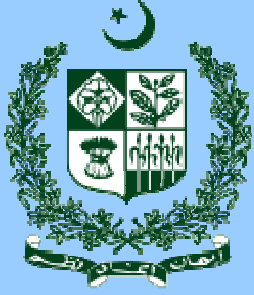
**Mr. Rana Afzaal Ahmad**

**Field Work Supervisor**

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