



**" විශිෂ්ට රාජ්‍ය සේවාවක් සඳහා ඇප කැපවෙමු "**  
**ප්‍රධාන ලේකම් කාර්යාලය - බස්නාහිර පළාත**  
**பிரதான செயலாளர் அலுவலகம் - மேல் மாகாணம்**  
**OFFICE OF THE CHIEF SECRETARY - WESTERN PROVINCE**



204, ඩෙන්සිල් කොබ්බෑකඩුව මාවත, බත්තරමුල්ල.  
 204, டென்சில் கொப்பேகடுவ மாவத்தை. பத்தரமுல்ல.  
 204, Denzil Kobbekaduwa Mawatha, Battaramulla.

ප්‍රධාන ලේකම් பிரதான செயலாளர் Chief Secretary	}	දුරකථන / தொலைபேசி / Telephone - 011 - 2092599	}	පොදු දුරකථන தொலைபேசி இலக்கம் General Telephone	} 011 - 2093000
		ෆැක්ස් / பெக்ஸ் / Fax - 011 - 2092601			
		ඊ-මේල් / மின்னஞ்சல் / E-mail - chiefsecretary@wpc.gov.lk			

මගේ අංකය  
எனது இலக்கம்  
My No.

CSWP/ENG-CON/5-2/FI/1(B)

ඔබේ අංකය  
உமது இலக்கம்  
Your No.

දිනය  
நிகதி  
Date

2022.02.10

පළාත් ගොඩනැගිලි අධ්‍යක්ෂ/ පළාත් වාරිමාර්ග අධ්‍යක්ෂ,  
 සභාපති, පළාත් බදු මාර්ග සංවර්ධන අධිකාරිය(බ.ප.),  
 පළාත් පාලන කොමසාරිස් සහ සියලුම පළාත් පාලන ආයතන ලේකම්වරුන්,  
 බස්නාහිර පළාතේ සියලුම ප්‍රාදේශීය ලේකම්වරුන්,  
 සියලුම ප්‍රාදේශීය ඉංජිනේරුවරුන්,

**මාර්ග ගාස්තු උපලේඛණය -2022**

2022.02.10 දින සිට නැවත දැනුම් දෙන තුරු වලංගු ඉදිකිරීම් ඇස්තමේන්තු පිළියෙල කර ගැනීමට උපයෝගී කරගත යුතු මාර්ග ගාස්තු උපලේඛනය නිකුත් කර ඇත. මෙම ලේඛණය බස්නාහිර පළාත් සභාවේ පළාත් ඉංජිනේරු කාර්යාංශයේ වෙබ් අඩවියෙන් (eng.chiefsec.wp.gov.lk) බාගත හැක.

02. මෙම රේට් මිල ගණන් පිළියෙල කිරීමේදී එකතු කළ අගය මත බදු ( VAT ), රේට් මිල ගණන් වලට අඩංගු කර නැත. ඇස්තමේන්තු පිළියෙල කිරීමේදී එකතු කළ අගය මත බදු, ප්‍රමාණ බිල්පතේ මුළු එකතුවට අමතර මුදලක් වශයෙන් එකතු කළ යුතුය.

03. ලේඛනයේ සඳහන් රේට් මිල ගණන් සකසා ඇත්තේ බස්නාහිර පළාතේ දිස්ත්‍රික් තුනම ආවරණය වන පරිදි හා විවෘත වෙළඳපලේ පවතින මූලික ද්‍රව්‍ය මිල ගණන් වල සාමාන්‍ය අගයන් පදනම් කර ගැනීමෙනි. කෙසේ වුවද, මෙහි සඳහන් ද්‍රව්‍ය වල මිල හා ඔබගේ බල ප්‍රදේශය තුල පවතින මිල ගණන් අතර සැලකිය යුතු වෙනස්කම් තිබේනම්, ඒ පිළිබඳව මා වෙත දැන්වීමට පියවර ගන්න. එවැනි විශේෂ අවස්ථාවකදී යම් බල ප්‍රදේශයකට පමණක් සීමාවන පරිදි මිල ගණන් සංශෝධනය කිරීමට පියවර ගත හැක.

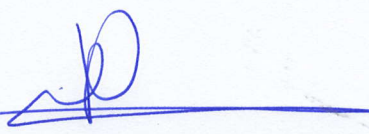
04. ඇස්තමේන්තු පිළියෙල කිරීමේදී භාවිතා කිරීම සඳහා මෙම ලේඛනයේ පිටපත් අදාළ කාර්මික නිලධාරීන් වෙත කරුණාකර නිකුත් කරන්න.

අමාත්‍ය ප්‍රධාන ලේකම් Deputy Chief Secretary	පාලන நிர்வாகம் Administration	පරිස්සා සුලුකිරීම ஆளணி மற்றும் பயிற்சி Personnel & Training	මුදල් நிதி Finance	සැලසුම් திட்டமிடல் Planning	ඉංජිනේරු பொறியியல் Engineering	ප්‍රධාන අභ්‍යන්තර විමර්ශන பிரதான உள்ளகக் கண்காணிப்பு Chief Internal Auditor	
	Tel : 0112092606 Fax : 0112092609 dsadmin@cs.wpc.gov.lk	Tel : 0112092631 Fax : 0112092647 dsrpt@cs.wpc.gov.lk	Tel : 0112092640 Fax : 0112092636 dcsfinance@cs.wpc.gov.lk	Tel : 0112092532 Fax : 0112092533 dsplan@cs.wpc.gov.lk	Tel : 0112092501 Fax : 0112092505 dcs@eng.wpc.gov.lk	Tel : 0112092628 Fax : 0112092625 cia@cs.wpc.gov.lk	



05. රසායනාගාර පරීක්ෂණ සඳහා සඳහන් කර ඇති රේඛා මිල ගණන් ඇස්තමේන්තු සැකසීමේදී පිරිවිතරයේ සඳහන් පරීක්ෂණ වලට අමතරව අවශ්‍ය වන්නේ නම් ිෂමණක් ප්‍රමාණ බිල්පතට ඇතුළු කිරීමට සනිටුහන් කර ගත යුතුය. කිසිදු හේතුවක් නිසා පිරිවිතරයේ සඳහන් අවම වශයෙන් සිදු කළ යුතු රසායනාගාර පරීක්ෂණ වෙනුවෙන් ගෙවීම් කිරීම සිදු නොකළ යුතු වේ.

06. මෙම රේඛා මිල ගණන් පිළියෙල කර ඇත්තේ මාර්ග ද්‍රව්‍ය වල ගුණාත්මක බව (material quality ) සහ ඉදිකිරීම් නිමාව (Workmanship) ශ්‍රී ලංකා (SLS) ,බ්‍රිතාන්‍ය (BS) සහ (A.S.T.M) ප්‍රමිතීන්ට අනුකූලව සහ ICTAD පිරිවිතර SCA/3/1,SCA/3/2,SCA/3/3, SCA/4(VOL-I ),SCA/4(VOL - II), SCA/5,SCA/8 යන ප්‍රකාශනවල සඳහන් ගුණාංගයන් සපුරාලන බව උපකල්පනය කරමිනි. ඒ අනුව මෙම මිල ගණන් උපයෝගී කර ගැනීමේදී ඉහත ප්‍රකාශනවල අඩංගු ප්‍රමිතීන්ට අනුකූලව ඉදිකිරීම් සිදුවිය යුතු බව අවධාරණය කරනු කැමැත්තෙමි.



ජී. ඩබ්. පී. පෙරේරා  
 නියෝජ්‍ය ප්‍රධාන ලේකම් (ඉංජිනේරු) (වැ.බ)  
 ප්‍රධාන ලේකම් කාර්යාලය (බ.ප)  
 පස්වන මහල, අංක 204,  
 බණ්ඩර් කොඩිබෑකඩුව මාවත,  
 බත්තරමුල්ල.

ජී. ඩබ්. පී. පෙරේරා,  
 නියෝජ්‍ය ප්‍රධාන ලේකම් (ඉංජිනේරු) - වැ.බ  
 බස්නාහිර පළාත.

පිටපත්:

- |  |   |
|--|---|
| 1. ප්‍රධාන ලේකම් (බ.ප.)                        | : කරු.දැ.ස.   |
| 2. දිස්ත්‍රික් ලේකම්වරුන් (කොළඹ/ ගම්පහ/ කළුතර) | :   |
|  | දිස්ත්‍රික් ලේකම් කාර්යාලයේ<br>ඉංජිනේරුවරුන්ගේ දැනගැනීම සඳහා<br>යොමුකරන්න |
| 3. බස්නාහිර පළාතේ සියලුම අමාත්‍යාංශ ලේකම්වරුන් | : කරු.දැ.ස.   |
| 4. නියෝජ්‍ය ප්‍රධාන ලේකම් (මූල්‍ය/ සැලසුම්)    | : කරු.දැ.ස.   |
| 5. අධ්‍යක්ෂ (අභ්‍යන්තර විගණන)                  | : කරු.දැ.ස.   |
| 6. විගණන අධිකාරී                               | : කරු.දැ.ස.   |

# **HIGH WAY SCHEDULE OF RATES -2022**

***ALL RATES ARE COMMON TO***  
**COLOMBO, GAMPAHA & KALUTARA DISTRICTS**  
**(Rates effective from 10.02.2022 until further notice)**



**PROVINCIAL ENGINEERING ORGANIZATION**  
**WESTERN PROVINCE - PROVINCIAL COUNCIL**

**PROVINCIAL ROAD DEVELOPMENT AUTHORITY – HSR ANALYSIS (METRIC)**  
**GENERAL NOTES**

1. This **Highway Schedule of Rates (HSR)** becomes operative from **10.02.2022**. HSR has given the maximum rates adoptable in the estimation of projects. In case, the resources are available at lesser rates depending on area and locality, the Engineer shall use such rates in the BOQ for the preparation of Estimates.
2. Basic prices of materials used to derive the rates in this schedule are considered **without the Value Added Tax (VAT)**.
3. The rates are included with overheads and profits component.
4. Work has to be carried out as per (i) **Standard Specifications for Construction & Maintenance of Roads and Bridges (S.S.C.M.)** issued by the CIDA and (ii) **Road Maintenance Manual** issued by the RDA.
5. The description of all items in the bills shall briefly conform to that in the relevant items appearing in this schedule so as to avoid any ambiguity. Control of works, Control of material and measuring & paying shall be carried out as per S.S.C.M 104 to 106.6 However, Where provision for control of traffic and safety measures for the road users are not included under such items, rate shall be provided separately and paid under the relevant HSR BO-704/BO-705 or on approved S.S.R.R. or on closely monitored work.
6. The basic labour rates given in this schedule are inclusive of 12% E.P.F., 3% E.T.F., and the special allowances ordered by the Government.
7. **For works under Force Account, in exceptional cases, Sk "A" labour at higher rates than that given in this schedule may be engaged on adhoc basis with the GM/PRDA' s prior approval only. See Annex –V for net daily wages payable to labour.**
8. For items where cement and/or steel are used, the transport of same is included in the basic price. The rate of Emulsion per liter given in the HSR is exclusive of transport and shall be paid separately.
9. All Cement to be used for concrete, Structural and Masonry/Rendering work shall be of approved Quality and shall conform to the SLS.
10. Materials from approved manufacturers only shall be used in all works (S.S.C.M.1700). The borrow materials such as soil, aggregate and materials such as Bitumen binder etc. shall be subjected for quality assurance by sample checks during the construction as per S.S.C.M.1602

11. **S.S.R.R. and day works items** shall be approved by the DGM on the CE's recommendation, subjected to the following conditions:

- (a) Any S.S.R. where the amount of respective B.O.Q. item does not exceed **Rs. 100,000/-**, irrespective of whether the S.S.R. is based on HSR, or not.
  - (b) All the **S.S.R.R.** and day work items, which are based on HSR, irrespective of the amount of B.O.Q. item, or as per directives issued by the Chief Secretary during the year.
12. Concrete mixers should be used for mixing of all reinforced concrete or concrete specified by their Grade and in other concrete mixing exceeding 3cu.m, unless otherwise directed. Weigh batch mixers shall be used for all concrete specified on Grade 30 and above.
13. In respect of all works involving improvements to existing roads, contractor shall control traffic as per S.S.C.M. 103.
14. Plant hire charges not included in the HSR could be obtained from PRDA schedule of hire charges for Machinery & Equipment given as annex-1 (Board approved rates). Otherwise procurement procedure as in General Notes Clause No. 18 should be followed. Hire charges given in this schedule are exclusive of overhead and profit component and taxes.
15. In the case of building construction works, rates in BSR-2022 prices prepared by the Chief Secretaries Office, shall be adopted.
16. S.S.R.R. approved with rates/prices applicable for a particular year, may be adopted for subsequent year/s where necessary, provided that only rates/prices are revised as applicable to the relevant year.

17. **Materials available/recovered during execution of works:**

All suitable earth, rock, steel or precast material and components available or recovered from road way excavations or demolition works shall be utilized in construction work with the approval of the Engineer and surplus disposed as directed. In the case of bridge re-construction works all bridge components such as steel girders, deck plates, and reinforcements etc., Which are dismantled, shall be recovered and repaired for re-use. These items should be taken to an inventory by the Engineer and kept in stock under good care for reuse. **Separate items shall be included in the Estimates for reuse of such materials at recovery cost.**

18. **Procurement:**

In cases where the resources have to be procured by tender procedure, the **Tender Committee shall take decisions** to make such awards according to the guide lines given in “**Procurement Manual/Procurement Guide Lines 2006 – Goods & Works**” and its subsequent amendments, issued by the National Procurement Agency, Sri Lanka.

**19. Payments under provisional sums:**

“Provisional sum” means a sum included in the bill of quantities for the construction management services, execution of work, supply of goods/materials/services or contingencies where the work items cannot be quantified accurately. The provisional sum amounts shall be included in the BOQ, by the **EE/CE** as per relevant assumptions on the matter and should be reasonable and justifiable respect to the site conditions and design requirements. This shall be executed in whole or in part or not at all at the direction and discretion of the Executive Engineer/Chief Engineer. In case the provisional sum provided is not sufficient, funds allocated for contingencies item in the estimate shall be utilized to cover additional cost subject to the approval of the DGM.

All such works, supplies, services or sub-contracts carried out by order of **Executive Engineer/Chief Engineer** shall be valued at the relevant rates in the approved B.O.Q. or HSR if available. If the B.O.Q. or HSR does not contain any rates, then suitable S.S.RR or day works shall be agreed upon between Chief Engineer/DGM/GM and the contractor shall carry out work according to such approved S.S.RR.

**20. Royalty/ rental for materials mined**

Royalty/rental for approved borrow earth and aggregate materials mined from state land/private land shall be reimbursed **without overheads** to the contractor, on confirmation of the payment of royalty/rental by the Chief Engineer of the relevant area where the mining is being executed. Royalty/rental rate shall not be more than the rate approved by the Government Agent/Divisional secretary of the relevant area. In case the materials cannot be mined from state lands, government procurement procedure shall be followed as given in the General notes **Clause No.18**.

**21.** Prior to preparation of the BOQ, suitable borrow pits shall be identified at locations as close as possible for economical transport and to the required quality, by the Executive Engineer and transport distance shall be included accordingly in the BOQ and Estimates.

**22.a.** For any price variations other than works carried out on works orders, use the **ICTAD** formula guidelines and indices. **December 2019** shall be considered as the **base month** for computation of fluctuations. **However for contracts/ work below Rs. 2.0 million, payment on price variations shall not be considered.** Clause **22 b**, applies for works carried out on work orders.

**22. b.** If there is a change of ex-factory/manufacture's or ware-house price of different brands of cements, considered in the build-up of **basic price of cement** in the HSR, DGM/GM shall amend the basic price of cement after verification and pay on approved SSR. Similar procedure to be followed in case of **price changes in reinforcement steel & Bitumen**.

### 23. **Transport**

**Note:**

1. The rates for “transport” include all modes of transport up to a maximum distance of the stipulated range.
2. The most economical mode of transport shall be always adopted. In transporting materials (soil, sand, aggregate and rubble,) If the average output of the transport vehicles cannot be achieved due to unavoidable delays or any other reason justifiable and acceptable to the **Chief Engineer/DGM/GM**. The rate of payment for transport shall be made under any relevant item selected from codes **T1-001 to T1-003b** irrespective of the type of vehicles to be used. However in case the quantity involved is more than 200 cu.m. per kilometer run and in situations other than stipulated in para above, the rate of payment for transport shall be selected from item coded **T1-006 or T1-007 or T1-007a** in the schedule whichever is relevant, For transport of plant made Premix, rate shall be as per item **T1-009**.
3. Transport of aggregate, soil, Emulsion and premix materials **shall always be paid separately** unless otherwise directed.
4. Rate for rubble transport up to 3 km may be selected from item codes **T1-002 to T1-003b** supported with justifiable reasons.

### 24. **Excavation** (S.S.C.M.301-303)

**Note:**

**1. a. Manual rates:**

The rates given in this schedule if not otherwise stated are intended for manual excavation.

**b. Bulk rate:**

In the case of borrow earth supply supply where the estimated quantity **exceeds 200 cu.m** (for the whole project,) the rates given under **BO-201, BO-202 or item codes EW1-013 & EW1-014** shall be adopted. Similarly for Roadway **Excavations with quantities more than 200cu.m.** rates given under item codes **E1-027, E1-028 and E1-029** shall be adopted. When deviation from above rates is necessary, payment shall be made on approved S.S.RR Based on actual site records (machine hours) or on work-studies carried out under close supervision by the Engineer, after obtaining approval of the GM under recommendation of CE/DGM.

2. The rates include for excavation and loading or depositing up to 25meters. Transport of excavated material more than 25meters shall be paid separately unless otherwise directed. In case of foundation excavation for structures, backfilling and compaction to be considered separately unless otherwise specified.
3. Additional excavation required for working space shall be decided by the Engineer and shall be paid at the same rate applicable to the item.

4. Soils are generally classified as in the Standard Specifications.(S.S.C.M. 301.2)
  5. Construction of cofferdams that are necessary shall be paid separately. (S.S.C.M. 302(6)). Rates under items **ST1-018, ST1-019 & ST1-020 are not applicable for bridge construction work.** For bridge works, it shall be payable on S.S.R.R based on closely monitored work-studies or on day works at HSR/machine hours, depending on the site conditions.
  6. De-watering necessary for cofferdams shall be paid separately. (S.S.C.M. 302(6)).
  7. Rates under items **E1-011 to E1-019** are not applicable for the excavation for **foundations of bridge structures.** Payment for such excavations shall be made on approved S.S.R.R. based on closely monitored work-studies or on day works at HSR/machine hours, depending on the site conditions.
  8. Trench excavation for utility services and reinstatement shall be according to S.S.C.M. 305 and shall be read in conjunction with the procedures to be followed by agencies when trenching highways. Under no circumstances pedestrians and traffic using the road shall be allowed to suffer or inconvenienced due to trenching work, adequate notice have to be given to the public and necessary safety precautions have to be taken in advance.
25. **Aggregate/rubble (including loading & piling )**
- Note:**
1. Except where otherwise stated, the rates include preparing depots, loading and piling.
  2. The rates for items B0-302 to B0-313 include the cost of blasting materials.
  3. In exceptional cases such as limestone, “dug out” aggregate, special rates for items B0-302 to B0-313 shall be approved by the DGM, followed by the CE’s recommendation.
  4. Transport of aggregate and rubble included in the rates.
  5. Blasting operations shall be carried out as recommended in S.S.C.M. 306 and all works in blasting operations shall conform to the guidelines given in the National Environmental Act No. 47 of 1980 and any subsequent amendments.
  6. Prior approval shall be obtained from the CE/DGM for the use of 19 mm hand broken aggregate.



26. **Earth filling & compaction** (S.S.C.M. 304, 400 & 600)**Note:**

1. Approved soil that is piled shall be spread, watered and well compacted by rolling as per Standard Specifications.
2. The rates for earth compaction include the cost of watering.
3. In the case of force account works, where the royalty or similar payments has to be paid for gravel, earth, clay, turf, etc., a claim shall be prepared separately for approval of the GM, subject to the conditions given under the **Clause 20 of the General Notes**. In case of works awarded on tender rates, the royalty is deemed to be included into the rates.
4. Rates given for the items EW1-003, EW1-004, EW1-005, EW1-006, EW1-007, EW1-008, EW1-009 on loose volume are for the work where the % density is not specified. If the rates are to be decided on compacted volume basis, the rate for loose volume shall be adjusted by multiplying the specified factor corresponding to the required % density by the factor given in table below.

<b>% Density</b>	<b>Factor</b>
1. For standard density not less than <b>95%</b>	<b>1.35</b>
2. For standard density not less than <b>100%</b>	<b>1.42</b>

for rates on other densities, S.S.RR. should be approved by the DGM.

5. Transport of water beyond 25 Meters shall be paid separately.
6. (i) The normal out put of earth compaction per day will be 66 Cubic Meters using 8-10 ton Road Roller.  
(ii) For earthworks in widening of existing roads where the average width is less than 1.5meters, the output of earth compaction using 8-10ton Roller shall be considered as 50 cubic meters per day.
7. Use of small compaction equipment shall be allowed only if the space is restricted for operating 10- ton Road Rollers or equivalent.

27. **Rubble paving** (rip rap protection – S.S.C.M.804)

1. P1-001 to P1-004 does not include the cost of rubble, which shall be paid for separately. The coverage rates of paving are as follows:
  - (1) for pitch paving 225 mm thick 0.26 cu. m. of rubble per square Meter.
  - (11) for pitch paving 150 mm thick 0.17 cu. m. of rubble per square Meter.
  - (111) for flat paving 225 mm thick 0.21 cu. m. rubble per square Meter.
  - (1V) for flat paving 150 mm thick 0.15 cu. m. rubble per square Meter.

2. Rubble/rip rap paving shall be carried out to avoid damages by watercourses, slips, and slides to road embankments. Action shall be taken to include this item to routine/periodic maintenance flood damage items.

28. **Aggregate Compaction** (S.S.C.M. 403 – 408)

1. The normal coverage areas shall be as follows:

- (1) For paved roads scarified for full width and for strip metaling 14.5 to 19.7 sq.m. shall be compacted with 1 cu.m. of new 50 mm aggregate.

(11) For construction of new bases and for edge correction 100sq.m. shall be compacted with 8.5 – 10.0cu.m. of new 50mm aggregate spread in two layers to 100mm loose thickness.

2. Edge correction shall be 0.6 m (approx.) in width and edge strengthening shall be 1.2m (approx.) in width, using 100, 50 & 19mm aggregate conforming to S.S.C.M. 1103.

3. Strip metaling shall be considered only when the surface sections to be metaled are in narrow strips less than 1.2m in width.

4. For construction of new bases, where aggregate compaction of the 19mm and 50mm is required 1.0cu.m of 19mm aggregate is adequate for compacting with 10cu.m. of 50mm.

5. The normal quantities of aggregate that shall be compacted per day are as follows:

(i) For full width of paved road including scarifying and/or hand picking the surface will be, 12.75 cu.m. of new aggregate per day.

(ii) For construction of new bases, 23.5 cu.m. of new aggregate per day.

(iii) For strip or edge correction including loading scarifying and/or handpicking the surface, 9.9cu.m per day.

6. The average rate of travelling of Oil/Diesel Roller is 20km per day.

7. The rates for items M1-001,M1-004 & M1-007 to M1-013 include the necessary re-transport of aggregate and no further re-transport costs shall be paid.

8. The actual scarified area (which is not necessarily the Bitumen surfaced area) shall be paid for in items M1-002 & M1-003. Normally 0.3m width (Approx.) shall be reckoned as requiring scarifying for edge correction.

9. Tempering and sharpening of scarifier tines are included in the rates for item M1-003 and shall not be paid for separately.

10. The rates for aggregate compaction include the cost of watering.

11. Transport of water beyond 25meters shall be paid separately.

**29. Road surface treatment** (S.S.C.M. 501 – 507)

1. The various grades of Bitumen generally used for road works shall be as stipulated in the standard specifications.
2. The rates for Bitumen in surfacing include cost of Bitumen firewood/fuel and blinding materials. Transport of blinding materials exceeding 16km shall be paid for separately. One cu.m. of binding material is allowable for 125sq.m of Bitumen surfacing.
3. The rates include the cost of internal transport of Bitumen up to 16km from contractors yard.
4. Approved sand shall be used for blinding.
5. The aggregate quantities and binder required per sqr.meter of **D.B.S.T** or **S.B.S.T** work shall be as per the **tables 505-1 or 505-3 of the S.S.C.M.** depending on the method adopted. The application rates specified shall always be included in the description of the BOQ item for **D.B.S.T** or **S.B.S.T**.
6. In case of force account works, the Officer in-Charge shall study the average consumption per sq.m. obtained by dividing the actual quantity of Bitumen used, in liters, by the area treated in sq.m. for first/subsequent coat Bitumen surfacing. The Engineer approving the item shall, after satisfying himself that the quantities claimed are reasonable and within the limits specified in the HSR, approve the quantities accounted for. If the quantities are outside the specified limits, the approval of the GM should be obtained.
7. Cost of Binder and cover aggregate for seal coat treatment work shall be paid separately **only if specified**.
8. The basic rates for the Asphalt Concrete items **BO-361A, BO-362 and BO-362A** have been worked out taking 60/70 Penetration grade bitumen as the binder. For item **BO-365**, it is worked out with Cut-Back of 60/70 penetration grade Bitumen and for item **BO-366**, it is Bitumen Emulsion CSS-1. % Binder content used for different types of Asphalt Concrete is based on generally accepted mix designs specific to the plant.  
  
Different Bitumen penetration grades and or different binder contents may be specified for the asphalt concrete mixers for special cases. Then approved binder type and the content as a % shall be included in the description of the item in such variations.
- 9.(i) **Densities of Asphalt Premix in compacted state** for general estimation purposes shall be as follows.  

<b>a. Wearing Course</b>	<b>2.450m.t.per cu.m.</b>
<b>b. Binder Course</b>	<b>2.430m.t.per cu.m.</b>

  
for actual payments, design densities shall be adopted.
- (ii). Average density of Asphalt Premix in loose state shall be assumed as **1.48m.ton per cu.m.**
10. The quantity of aggregate necessary for the production of 1 metric ton of Asphalt Premix (average for all six types considered in the HSR) by plant shall be taken as **0.6270 cubic meters**.
11. The transport of aggregate for the production of Premix shall be paid separately and shall be decided according to the location of the mixing plant.

12. The transport of Emulsion CSS-1 for the production of cold mix by plant shall be added to the rate per metric ton and shall be decided according to the location of the mixing plant. 59.17liters of Emulsion CSS-1 are required for each metric ton of cold mix.

**30. Patch sealing:** (S.S.C.M. 1104)

Where the road surface shows signs of deficiency of Bitumen and pitted with numerous potholes, patch sealing shall be adopted.

**31. Road side and drainage systems** (S.S.C.M. 701 – 707, 1302)

1. The rates exclude the cost of loading, unloading and transporting but include spreading suitably in the vicinity unless otherwise directed.
2. Culvert inlets and outlets should be cleaned before and after the rains.
3. For cleaning choked culverts (item DR1-012) with head room/diameter less than 1meter, day works rates shall be adopted.
4. Drains should be cleared before commencing any types of surfacing (S.S.C.M. 501 – 507).

**32. Bridges, culverts, retaining walls, etc. (S.S.C.M. 1001 – 1010)**

**Note :**

**1. Concrete Work**

- I. The cost of shuttering is not included in the rates, and shall be paid separately.
  - II. The cost of hire charge for concrete mixer is included in the rates for concrete 'using mixers'.
  - III. Construction of necessary cofferdams, shoring, forming islands and de-watering shall be paid separately.
  - IV. For all concrete with 19mm aggregate, crusher plant materials shall be used unless otherwise directed.
2. Only sand of approved quality shall be used for cement mixers, mortars & concretes.
  3. The rates include the cost of transport up to 25meters on level ground in the relevant items. Any vertical transport required in excess of first 1.5meters upwards or down wards shall be separately considered.
  4. Transport of water beyond 25 meters shall be paid separately.
  5. Extra payment for scaffolding/staging where necessary is allowable if not included in the rate.
  6. To obtain the nominal mix of cement concrete 1:2:4 (19mm); batching of materials in the field under average conditions will be in the proportions 1:2½:4 by volume. Cement concrete 1:3:6 (37.5mm) and cement concrete 1:4:8 (50mm) may continue to be batched by volume in the specified nominal proportions; cement should be by bags of 50kg. and bags shall deem to be 0.035 cu.m. in volume.
  7. The quantities of the various materials for cement concrete and cement mortars required to yield an average workable mix shall be as follows.



Description	Proportion (Normal Mix) or Grade	Yield Unit	Cement in 50Kg	Sand (Cu.m)	Aggregate /Rubble (Cu.m)
1. Cement Concrete	G 40 (19mm)	Cu.m	9.87*	0.6*	0.91*
2. Cement Concrete	G 30(19mm)	Cu.m	8.17*	0.6*	0.9*
3. Cement Concrete	G 25(19mm)	Cu.m	6.35*	0.6*	0.9*
4. Cement Concrete	G25(37.5mm+19mm) 70% 30%	Cu.m	5.86*	0.6*	37.5=0.54* 19.0=0.24*
5. Cement Concrete	G20(19mm)	Cu.m	6.04*	0.53*	0.79*
6. Cement Concrete	1:1 ½:3 (19mm)	Cu.m	8.12	0.60	0.91
7. Cement Concrete	1:2:4 (19mm)	Cu.m	5.65	0.60	0.90
8. Cement Concrete	1:2:4 (37.5mm)	Cu.m	5.65	0.60	1.00
9. Cement Concrete	1:3:6 (19mm)	Cu.m	4.38	0.60	0.91
10. Cement Concrete	1:3:6 (37.5mm)	Cu.m	4.38	0.60	1.00
11. Cement Concrete	1:4:8 (50mm)	Cu.m	3.18	0.60	1.00
12. 12.5mm Cement Render	1:2 mix	Sq.m	0.15#	0.013	-
13. 19.0mm Cement Render	1:2 mix	Sq.m	0.23#	0.020	-
14. 12.5mm Cement Render	1:3 mix	Sq.m	0.12#	0.016	-
15. 19.0mm Cement Render	1:3 mix	Sq.m	0.19#	0.024	-
16. Random Rubble masonry in cement/sand mortar	1:6 mix	Cu.m	1.77	0.40	1.10

# In items 12 – 15 the cement quantity is exclusive of that required for smoothing where necessary.

\* The above mix proportions for Grade concrete are given for estimation purposes. The actual proportions for Grade concrete shall be decided by mix designs at site and the rates shall be adjusted with the approval of the CE/DGM.

### 8. Ready mixed Concrete:

Ready mix concrete shall be used only on the written approval of the GM/DGM and for the procurement of the material government tender procedure as given under **General Notes Clause No. 18** to be followed. The contractor for ready mix concrete shall be a copious supplier having minimum of one year experience of supplying ready mix concrete to projects acceptable to the tender board and shall have sufficient transport & pumping facilities, laboratory facilities for quality control and a qualified staff.

9. Wedge stones shall mean stones that are wedged and squared on one face and roughly dressed on the other five faces to enable them to be laid in courses.

### 10. Wearing surface for R.C.C/P.C.C decking (S.S.C.M. 1403)

Generally for 74.5 sq.m of **50mm. thick compacted wearing surface**, the quantities of material required will be 3.5cu.m. 19mm to 3.2mm. Graded aggregate, 2.3cu.m. sand and 381 liters Bitumen and 91liters of kerosene. If Emulsion is used, the quantity of material required is 500 liters of Emulsion and 273 liters of water.

**11. Concrete pipe culverts** (S.S.C.M. 1403)

- i. The diameter of pipes indicated refers to the internal diameter.
- ii. The rates included the cost of pipe, collars, rolling up to a distance of 25m & lowering to bed up to 1.8 meter depth, aligning and fixing.
- iii. Excavation and backfilling of trench is not included in the rates unless otherwise mentioned.

**34. Labour, plant and materials**

1. All labour, plant, equipment and materials have to be provided by the contractor.
2. The Engineer should maintain performance records of all types of machinery for future reference.

**35. Day Works**

1. **Day works shall be defined and adopted by the Engineer under exceptional circumstances.**
2. Labour rates fixed under **section xiv of the HSR (Surveying, Leveling and Day works)** shall be used in pricing day works. **In cases of very special labour**, such as skin divers etc., procurement of same shall be as per **General Notes clause 18**.
3. Rate for materials in day works shall be the **purchase price subject to the condition that procurement of same is done as per General Notes Clause No. 18**.
4. It is necessary that **appropriate plant is used and works are programmed to minimize the costs to the satisfaction of the Engineer**.

**36. Maintenance of road signs and markings:** (S.S.C.M. 1501 – 1502)

All traffic signs, kerbs, parapets, guardrails, barricading and km posts should be painted at least once a year unless otherwise directed by the Engineer.

**37. Quality Control Work:** (S.S.C.M. 1600)

- a. **The Engineer is responsible for carrying out tests on all works before recommending for payments and maintenance of records. In case of dispute, it may be referred to SE(Mat.)/DGM(Const.) for a final decision. (S.S.C.M. 1602)**
- b. **Special attention should be made to control the alignment, thickness and surface regularities of pavement layers as per section 1601 of the S.S.C.M. using geodetic levels, camber boards and 3 meter straight edges.**

**38. Piece rates and allowances:**

The amounts allowed for the items under “piece rates and allowances” are the anticipated basic costs to cover the expenses to be incurred, during the execution of the work.

### **39. Labour Inputs**

The labour inputs shown against the work items in this schedule do not include the Plant and Equipment Operator costs which are deemed to have been covered under the hire charges of the Plant and Equipment.

**40. HSR Analysis is for internal use only. It Cannot be produced in Court of Law as reference/authority and thus is a privilege document.**

HSR 2022

**Highway Schedule of Rates - 2022****Basic Rates**

Item No	Description	Unit	Rates
	<b><u>LABOUR RATES (BASIC)</u></b>		
B0-001	Labour Skilled A (SK 'A')	Day(8Hrs)	3,350.00
B0-002	Labour Skilled B (SK 'B')	Day(8Hrs)	3,000.00
B0-003	Labour Semi Skilled (S/SK)	Day(8Hrs)	2,400.00
B0-004	Labour Unskilled (U/SK)	Day(8Hrs)	2,200.00
	<b><u>HIRE CHARGES (WET LEASE BASIS INCLUDING OPERATOR UNLESS OTHERWISE)</u></b>		
B0-101	Tar Boiler (Heating with firewood) (Less Operator)	Day(8Hrs)	100.00
B0-102	Concrete / Asphalt mixer (400 liters)	Day(8Hrs)	7,356.32
B0-103	Bitumen Sprayer (Less Operator)	Day(8Hrs)	110.00
B0-104	Water tank+50mm pump (Less Operator)	Day(8Hrs)	1,272.04
B0-105	Welding plant engine driven with welder	Day(8Hrs)	15,157.73
B0-106	Porker vibrator (Less Operator)	Day(8Hrs)	2,318.71
B0-107	Plate Compactor( 90 kg) (Less Operator)	Day(8Hrs)	4,397.44
B0-108	Vibrating Rammer (60kg)(Less Operator)	Day(8Hrs)	3,999.94
B0-109	Vibrating Roller (1/2-1 ton)	Day(8Hrs)	7,016.73
B0-110	Vibrating Roller (Smooth-10 tons)	Day(8Hrs)	33,843.83
B0-111	Smooth/Road roller (8-10 tons) Static	Day(8Hrs)	12,635.84
B0-112	Pneumatic Road Roller (8-10 tons)	Hour	4,742.29
B0-113	Motor Grader (65 HP)	Day(8Hrs)	26,193.73
B0-114	Motor Grader (120-140 HP)	Day(8Hrs)	43,828.83
B0-115	Backhoe Loader (JCB)	Day(8Hrs)	25,006.78
B0-116	Wheel Loader (1.4 cu.m)	Day(8Hrs)	25,408.52
B0-116A	Wheel Loader (1.7 cu.m)	Day(8Hrs)	31,052.03
B0-117	Tractor & Tractor (3 Ton)	Day(8Hrs)	6,432.98
B0-118	Material Transport by Lorry /Tipper/ Dump truck (Exceeding 10 km Distance)	KM/CU.M.	26.96
B0-118A	Do-by hired Lorry /Tipper/ Dump truck (Exceeding 10 Distance km)	KM/CU.M.	25.19
B0-119	Do-by Lorry /Tipper/ Dump truck (for more than 3Km less than 10Km Distances)	KM/CU.M.	30.53
B0-119A	Do-by hired by Lorry /Tipper/ Dump truck (for more than 3Km less than 10Km Distances)	KM/CU.M.	28.63
B0-120	Transport of Premix by Dump Truck	KM/MT	19.42
B0-120A	Do- Emulsion per 100 Liters per 1Km	KM /100LTRS	3.79
B0-120B	Do- Premix by Hired Dump Truck	KM/MT	18.18
B0-121	Sand/Chip Spreader-Propelled	Day(8Hrs)	39,002.17
B0-121A	Sand/Chip Spreader-Towed	Day(8Hrs)	2,536.44



Item No	Description	Unit	Rates
B0-122	Farm tractor & broom	Day(8Hrs)	11,791.38
B0-123	Emulsion sprayer self prop.(4000 liters)	Day(8Hrs)	26,739.12
B0-124	Wheel loader (2.7-3.1 cu.m)	Day(8Hrs)	40,785.09
B0-124A	Wheel loader (2.0-2.3 cu.m)	Day(8Hrs)	36,399.61
B0-125	Lorry 3 ton (2.5cu.m)*	KM	44.28
B0-126	Lorry 5 ton (3.5 cu.m)*	KM	55.53
B0-127	Lorry 7 ton (4.5 cu.m)*	KM	64.34
B0-128	Water bowser (6000 liters)	Day(8Hrs)	10,400.00
B0-129	Asphalt paver (crawler)	Hour	7,903.97
B0-129A	Asphalt paver (Wheel)	Hour	8,692.41
B0-130	Tanker only (20000 liters)	Hour	322.28
B0-130A	Low Bed Trailer 30 ton*	KM	59.97
B0-131	Prime mover old (for 20000 L tanker)	Hour	3,846.95
B0-131A	Prime mover new (for 30 T trailer)Time Basis	Hour	6,174.88
B0-131B	Prime mover new (for 30 T trailer) Distance basis*	KM	280.68
B0-132	Baby dumper .75 cu.m (Less Operator)	Hour	1,287.13
B0-133	Water pump 4"	Hour	1,191.58
B0-133A	Water pump 2" (Less Operator)	Hour	274.01
B0-134	Sludge pump 4"	Hour	1,600.56
B0-135	Vibrating Roller (6-7 tons) Tandem	Hour	2,691.30
B0-136	Concrete mixer with Load Cell weigh batcher 14/10 *	Day(8Hrs)	12,341.34
B0-137	Trolley Emulsion (Less Operator)	Hour	115.05
B0-138	Sprayer Emulsion Hand Cart	Hour	912.94
B0-139	Road Marker Hand Cart Gas Heater	Hour	1,700.00
B0-140	Bitumen Distributor 750 Lliters	Hour	1,701.31
B0-141	Tank Truck Bitumen 10000 Ltr	Hour	4,582.45
B0-142	Crusher Stone 40T/H	Hour	11,785.28
B0-143	Track Drill Crawler	Hour	1,847.13
B0-144	Compressor Air 750 CFM	Hour	6,872.41
B0-145	Slurry Sealing Machine	Hour	13,494.67
B0-146	Mobile Crane 25 tons	Hour	8,578.29
B0-146A	Mobile Crane 30 tons	Hour	10,870.65
B0-147	Asphalt Plant 60T/H Hot Mix	Hour	17,615.07
B0-147A	Cold Mix Plant 30T/H	Hour	10,513.66
B0-148	Lorry 10 Ton*	KM	101.62
B0-149	Pick Up Truck 2 WD*	KM	42.62
B0-150	Farm Tractor with Water Bowser	Hour	804.45
B0-151	Lorry 17 ton Self Loading, with 10T Crane- Boom Truck (wet)*	KM	179.16
B0-152	Tractor with Emulsion Bowser	Hour	815.15
B0-153	Emulsion Tank Truck (8000Litres)*	KM	138.23

Item No	Description	Unit	Rates
B0-154	Dozer (Crawler Tractor)D-4 D-41(80-100HP)	Hour	4,770.05
B0-155	Excavator Mobile	Hour	7,289.45
B0-155A	Excavator Mobile 0.46Cu.m	Hour	
B0-156	Air Compressor 250 CFM	Hour	2,662.37
B0-157	Hand held Breaker (Demolisher) (less operator)	Day	621.26
B0-158	Rock Drill Hand Held (Less Drill Steel)	Hour	294.17
B0-159	Truck Snooper 750kg(Sky Lift)	Hour	2,461.71
	<b>* Cost Return trip not considered under this rate</b>		
	<b><u>SUPPLY OF SOIL FROM BORROW PITS INCLUDING LOADING AND 16 km TRANSPORT. (FOR QUANTITIES MORE THAN 200CU.M.)</u></b>		
	<b><u>*SEE GENERAL NOTES FOR FURTHER DETAILS ON USING THIS RATE, ROYALTY IS INCLUDED</u></b>		
B0-201	Approved Soil Type I & II for Bases & Shoulders	Cu.m	2,029.75
B0-202	Approved Soil type I & II for Embankments	Cu.m	1,494.96
	<b><u>AGGREGATE &amp; RUBBLE (EX-QUARRY-BASIC) INCLUDING BLASTING,PILING, LOADING AND INCLUDING 16 km TRANSPORT</u></b>		
NOTE*	<b><u>(ROYALTY/RENTAL TO BE ADDED SEPARATELY IN THE BOQ WITHOUT ADDING OVERHEADS,IF REQUIRED TO BE REIMBURSED)</u></b>		
B0-301	(150mm-225mm) rubble- (vehicle measurement excluding piling)	Cu.m	2,488.65
B0-302	(150mm -225mm) rubble piled	Cu.m	2,296.30
	<b><u>MANUAL PRODUCTION</u></b>		
B0-303	Manually Production (100mm) Aggregate	Cu.m	1,448.76
B0-304	Manually Production (75mm) Aggregate	Cu.m	1,510.60
B0-305	Manually Production (50mm) Aggregate	Cu.m	1,572.44
B0-306	Manually Production (37.5mm) Aggregate	Cu.m	
	<b><u>PLANT PRODUCTION</u></b>		
B0-308A	Crusher Production (19mm) Aggregate	Cu.m	3,106.40
B0-309	Crusher Production (12.5mm) Aggregate	Cu.m	3,018.15
B0-309-A	Crusher Production (9.5mm) Aggregate	Cu.m	
B0-310	Crusher Production (37.5mm)-do-(S.S.C.M.TB:1701-1/1701.4)	Cu.m	3,018.15
B0-311	Crusher Production (50MM)-do-(S.S.C.M.TB:1701.4)	Cu.m	2,929.90
B0-312	Crusher fines (6.3mm DownWards)	Cu.m	3,353.50
B0-313	Crusher Produced (37.5mm)graded (table 1701.5 for ABC)	Cu.m	2,400.00

Item No	Description	Unit	Rates
	<b><u>AGGREGATE FOR SEAL COAT TREATMENTS (GRADING AS PER SSCM TABLE 1701.8)</u></b>		
B0-314	Aggregate for Seal Coat 19mm (SSCM Table 1701-8)	Cu.m	2,367.49
B0-315	Aggregate for Seal Coat 12.5mm (SSCM Table 1701-8)	Cu.m	1,943.46
B0-316	Aggregate for Seal Coat 9.5 mm (SSCM Table 1701-8)	Cu.m	1,943.46
	<b><u>SAND (RATE TO INCLUDE TRANSPORT UP TO 16KM) ADDITIONAL TRANSPORT TO BE PAID SEPARATELY)</u></b>		
B0-331	River Sand for Road Surface (SSCM Table 1701-9)	Cu.m	5,418.55
B0-332	River Sand for Concrete and Masonry Work (SSCM Table 1701-2)	Cu.m	5,418.55
	<b><u>BRICKS (WITHOUT TRANSPORT)</u></b>		
B0-340	Common Burnt Clay Building Bricks (SLS 39:1978)	1000Nos.	14,000.00
	<b><u>BITUMEN &amp; EMULSION - (TRANSPORT TO BE ADDED SEPARATELY)</u></b>		
B0-351	Bitumen 80/100*[ Drums] (Purchase> 25drums)	Liter	86.00
B0-351A	Bitumen 60/70 (Drums)(Purchase> 25drums)	Liter	86.00
B0-352	Emulsion -C.S.S.1*(Excluding Transp.)	Liter	93.35
B0-353	Emulsion -C.R.S.1*(Excluding transp.)	Liter	94.18
B0-354	Emulsion -C.R.S.2* (Excluding transp.)	Liter	100.00
B0-355	Bitumen 80/100* [bulk] (with De-cant cost)	KG	88.00
B0-355A	Bitumen 60/70 (Bulk) (with De-cant cost)	KG	124.00
B0-355B	Bitumen 80/100*[Bulk]	KG	89.50
B0-355C	Bitumen 60/70[Bulk]	Kg	122.00
B0-356	Cut Back Bitumen -MC 30	Liter	120.00
B0-357	Polymer Modified Bitumen(PG76-10)	Liter	137.52
B0-358	Polymer Modified Bitumen Emulsion	Liter	98.00
B0-359	Slow Setting Emulsion used for Prime Coat	Liter	88.00
	<b><u>PREMIXED BITUMINOUS MATERIALS (PRICE INCLUSIVE OF ALL RAW MATERIAL TRANSPORT AND ROYALTY ON AGGREGATE)</u></b>		
	*Asphalt Cold Mixing Plants are not available within the Province. Use the Ex.Plant Basic Prices Selected from the Table given on <b>Page 172</b> , Relevant to the Mixing Plant Closest to the Site, Depending on the Availability of the Required Type and the most Economical Rate with Transport.		

Item No	Description	Unit	Rates
B0-361	Asphalt concrete surfacing material binder 80/100 6% Mix-dense [19mm] - Ex-plant	M.ton	
	<b><u>(FOR PROJECT USE)</u></b>		
B0-361A	Asphalt Concrete Surfacing Material binder 60/70 bitumen @ 4.7% Mix	M.ton	9,865.00
B0-362	Asphalt concrete bound base material binder 60/70 bitumen @ 3.50% MIX	M.ton	8,602.00
B0-362A	Asphalt concrete binder course material: binder 60/70 bitumen @ 4.1% mix	M.ton	9,380.00
	<b><u>(FOR PROJECTS &amp; MAINTENANCE)</u></b>		
B0-365	Cut Back Asphalt - aggregate cold mix with 15% cut back 60/70 @ 5.5% of Mix (19mm)	M.ton	10,993.00
B0-365A	Cut Back Asphalt - aggregate cold mix with 16% cut back 60/70 @ 5.5% of Mix (12.5mm)	M.ton	10,977.00
B0-366	Cold mixed asphalt with emulsion CSS-1 (6.67% by weight of agg.) & 19mm Aggregate Ex-plant	M.ton	Item Deleted*
NOTE:	1. ABOVE RATES INCLUDE TRANSPORT COST FOR: AGGREGATES - 50KM; DEISEL-25KM; KOIL-25KM; BINDER-10KM		
	2. ROYALTY ON AGGREGATE MATERIALS : NIL		
	3. FOR DIFFERENT PERCENTAGES OF BINDER, % CUTBACK SEE GENERAL NOTES: SECTION 29		
	4. TRANSPORT COST FROM PLANT TO THE LAYING SITE TO BE PAID SEPARATELY.		
	<b><u>READY - MIX CONCRETE (EXCLUDING HANDLING COST)</u></b>		
B0-380	GRADE 15 /20/120mm	Cu.m	15,275.00
B0-381	GRADE 20//20/120mm	Cu.m	15,850.00
B0-382	GRADE 25 /20/120mm	Cu.m	16,575.00
B0-383	GRADE 30 /20/120mm	Cu.m	17,400.00
B0-384	GRADE 35 /20/120mm	Cu.m	18,100.00
NOTE:	1. ABOVE RATES ARE CONSIDERED WITHIN 20KM FOR 120MM SLUMP AT SITE		
	2. NOMINAL AGGREGATE SIZE 20MM		
	<b><u>TIMBER &amp; FIREWOOD (INCLUDING TRANSPORT COST)</u></b>		
B0-391	Sawn Timber Class 1 (Local)	Cu.Deci.M	138.50
B0-392	Sawn Timber Class 2 (Local)	Cu.Deci.M	101.20
B0-393	Timber Round Jungle-100mm( minimum) to 150 mm Diameter	Metre	32.00
B0-394	Timber Round Jungle-150mm minimum to 200 mm Diameter	Metre	50.00
B0-395	Firewood	Cu.m.	1,502.65



Item No	Description	Unit	Rates
B0-396	Plywood (MR) for Formwork-15 mm Thick	Sq.m	1,722.24
B0-397	Bamboo Tree Length Greater than 8 Meters	No.	377.00
	<b><u>CEMENT (INCLUDING TRANSPORT COST)</u></b>		
B0-401	Portland Cement(50kg)	Bag (50kg)	1,525.00
	<b><u>STEEL AND STEEL ITEMS (INCLUDING TRANSPORT COST)</u></b>		
B0-411	Mild Steel	KG	237.00
B0-411A	Tor Steel	KG	237.00
B0-431	Binding Wire	KG	236.30
B0-432	Wire Nails M.S.Bolts & Nuts	KG	195.95
B0-433	Stainless Steel 20 mm dia.(for Dowels)	Metre	821.70
B0-434	GI Pipes 50mm Dia.Heavy Duty Type	Metre	1,973.30
B0-435	M.S. Plate 2mm Thick	Sq.m	2,683.25
	<b><u>PRECAST CONCRETE ITEMS EX-FACTORY:BASIC PRICE REINFORCED CONCRETE PIPES &amp; COLLARS</u></b>		
B0-441	Reinforce concrete Pipe dia.(153mm)length(2438 mm)	Nr.	3,800.00
B0-441B	Reinforce concrete Collar dia.(153mm)	Nr.	400.00
B0-442	Reinforce concrete Pipe dia.(229mm)length(2438 mm)	Nr.	6,000.00
B0-442B	Reinforce concrete Collar dia.(229mm)	Nr.	575.00
B0-443	Reinforce concrete Pipe dia.(305mm)length(2438 mm)	Nr.	5,950.00
B0-443B	Reinforce concrete Collar dia.(305mm)	Nr.	785.00
B0-444	Reinforce concrete Pipe dia.(450mm)length(2438 mm)	Nr.	8,950.00
B0-444B	Reinforce concrete Collar dia.(450mm)	Nr.	1,072.50
B0-445	Reinforce concrete Pipe dia.(610mm)length(2438 mm)	Nr.	13,233.35
B0-445B	Reinforce concrete Collar dia.(610mm)	Nr.	1,227.50
B0-446	Reinforce concrete Pipe dia.(914mm)length(1219 mm)	Nr.	10,175.00
B0-446A	Reinforce concrete Pipe dia.(914mm)length(2438 mm)	Nr.	20,233.35
B0-446B	Reinforce concrete Collar dia.(914mm)	Nr.	1,620.00
B0-447	Reinforce concrete Pipe dia.(1219mm)length(1219 mm)	Nr.	15,750.00
B0-447A	Reinforce concrete Pipe dia.(1219mm)length(2438 mm)	Nr.	30,800.00
B0-447B	Reinforce concrete Collar dia.(1219mm)	Nr.	2,400.00

Item No	Description	Unit	Rates
	<b><u>PRECAST CONCRETE ITEMS</u></b>		
B0-448	Standard road kerb 125x250x900 G25 concrete	Nr.	800.00
B0-449	Paving slab 450x450x50mm G20 concrete with R/f conc.	Nr.	495.00
B0-449A	Paving slab 450x450x50mm G20 concrete	Nr.	336.65
B0-450	Bridge kerb 915	Nr.	1,800.00
B0-451	Standard uprights for bridges (new design)	Nr.	2,333.35
B0-452	Standard Hand rails for bridges (new design)	Nr.	2,133.35
B0-453	Coupling pairs for hand rails	Pair	633.35
B0-454	Rain water channels 609 mm long	Nr.	215.00
B0-455	Cement sand Hollow block 16"x8"x4"	Nr.	52.75
B0-456	Facia Slab 4'x2'	Nr.	3,000.00
B0-457	Guard stones (Standard)	Nr.	3,458.35
B0-458	Kilometer Post ( Standard)	Nr.	5,633.35
B0-459	Boundary Marker(Standard)	Nr.	2,100.00
B0-460	G25 Concrete Paving Block(220mmx110mmx80mm)	Nr.	39.00
B0-461	G40 Concrete Paving Block(220mmx110mmx80mm)	Nr.	44.00
	<b><u>BLASTING MATERIAL (INCLUDING TRANSPORT COST)</u></b>		
B0-501	Blasting powder	kg	593.50
B0-502	Fuse wire	L.m	388.00
B0-503	Steel Jumper	kg	264.35
B0-504	Electric detonators	Nr.	95.90
B0-505	Dyna cord	L.m	70.30
B0-506	Gelignite/(Water Gel)	kg	855.80
B0-507	Ammonium nitrate	kg	190.90
B0-508	Ordinary Detonator	Nr.	12.00
	<b><u>PAINTS (INCLUDING TRANSPORT COST)</u></b>		
B0-531	Bituminous emulsion paint (CRS-2)	Liter	100.00
B0-534	Glue	KG	328.00
B0-537	Lime - Boiled	KG	23.95
B0-541	Enamel Paint	Liter	755.20
B0-542	Paint-Anti Corrosive	Liter	642.35
B0-544	Paint-Emulsion	Liter	754.00
B0-545	Rust Remover	Liter	508.75
B0-546	Emulsion for Exterior use (Weather Shield)	Liter	930.99
B0-547	Road Marking Paints (Yellow)	Liter	1,027.78
B0-548	Road Marking Paints (White)	Liter	910.59

Item No	Description	Unit	Rates
	<b><u>FUEL,OILS &amp; LUBRICANTS</u></b>		
B0-601	Industrial Kerosene Oil (Colombo)	Liter	110.00
B0-602	Mould oil (used engine oil)	Liter	43.00
B0-611	Lubricant (Oil)	Liter	472.59
B0-612	Auto Diesel (Colombo)	Liter	104.00
B0-613	Petrol (Colombo)	Liter	137.00
B0-614	Furnace oil for burners	Liter	96.00
B0-615	LP Gas	KG	119.65
B0-616	Lubricant (Grease)	KG	634.22
	<b><u>MISCELLANEOUS MATERIALS</u></b>		
B0-631	Baskets (with t'port)	Nr.	260.00
B0-632	Gunny bags (large) (with t'port)	Nr.	55.10
B0-632A	Poly sacs (65 kg capacity) (with t'port)	Nr.	41.00
B0-633	Cotton waste (with t'port)	KG	59.05
B0-634	Salt (with t'port)	KG	75.00
B0-635	Empty tar barrels (140 liters) (with t'port)	Nr.	90.55
B0-636	P.V.C.Pipe 110 mm dia type 250 PE (with trans.)	L.m	370.65
B0-636B	P.V.C.Pipe 110 mm dia type 400 PE (with trans.)	L.m	623.70
B0-637	P.V.C.Pipe 50 mm dia type 400 PE (with trans.)	L.m	195.85
B0-637A	P.V.C.Pipe 25 mm dia type 1000 PE (with trans.)	L.m	123.25
B0-637B	P.V.C.Pipe 90 mm dia type 400 PE (with trans.)	L.m	578.50
B0-637C	P.V.C.Pipe 90 mm dia type 600 PE (with trans.)	L.m	897.15
B0-637D	P.V.C.Pipe 160 mm dia type 250 PE (with trans.)	L.m	1,306.30
B0-637E	P.V.C.Pipe 160 mm dia type 400 PE (with trans.)	L.m	1,873.25
B0-637F	P.V.C.Pipe 160 mm dia type 600 PE (with trans.)	L.m	2,436.75
B0-637G	P.V.C.Pipe 160 mm dia type 1000 PE (with trans.)	L.m	3,763.70
B0-638	Hard rubber 12 mm thick x 75 mm wide (with t'port)	L.m	1,331.05
B0-639	Polythene 325 mm dia gauge 300(Approx. 14.0meters/kg) (Tubular flat width App. 505mm with trans.)	KG	328.00
B0-639A	Polythene 230 mm dia gauge 300 (Approx. 19.5meters/kg)(Tubular flat width App. 355mm, with trans.)	KG	328.00
B0-639B	Polythene 150 mm dia gauge 300 (Approx.28.0meters/kg)(Tubular flat width app.241mm, with trans.)	KG	328.00
B0-640	Aluminium sheet 24 SWG (with t'port)	Sq.m	1,094.50
B0-641	Angle Iron 50x50x6mm (with t'port)	L.m	677.05
B0-642	M.S. Plate 12mm thick (with t'port)	Sq.m	16,240.90

Item No	Description	Unit	Rates
B0-643	Adhesive (water resistant)	KG	1,358.15
B0-644	Emulsifier-stabrium MS-03(CSS/CRS)	KG	500.00
B0-645	Early Strength Admixer (Usage 300ml per 50kg Cement bag)	Ltr	136.59
B0-646	Traffic cones	Nr.	1,604.00
B0-647	75mm x8 mm Dia Nuts & Bolts	Nr.	9.65
B0-648	Saw dust (Loose)	Cu.m.	127.55
B0-649	Drill Steel	Lm	113.68
	<b><u>PIECE RATES &amp; ALLOWANCES</u></b>		
	<b>ALLOW FOR:</b>		
B0-704	Barricading (small work items )	Item	48.20
B0-705	Barricading, Lighting, Signaling etc for 100m(Stationary operations)	Day	1,963.65
B0-711	Cement sand & water for jointing hume pipes 152 mm diameter	Joint	25.35
B0-712	Cement sand & water for jointing hume pipes 229 to 610 mm diameter	Joint	105.25
B0-713	Cement sand & water for jointing hume pipes 915 mm diameter	Joint	276.10
B0-714	Cement sand & water for jointing hume pipes 1220 mm diameter	Joint	493.45
B0-715	Coir rope (for scaffolding 93 sq.m area)	Item	68.75
B0-716	Coir string for cutting side drains (per 2.83 cu.m)	Item	27.55
B0-717	Coir string for for fixing scaffolding (per 93 square meters)	Item	171.75
B0-718	Minor repairs of parapets with cement sand and water (per 9.29 sq. meters)	Item	112.25
B0-720	Fuel(for loosening road surface for manual breaking, 50mm depth x 307 sq.m)	Item	38.90
B0-723	Fuel Forge etc.(per 2.83 Cu.M. blasting)	Item	48.90
B0-732	Ladders (per 93 square meters)	Item	152.00
B0-741	Paint (for lettering and numbering items)	Item	123.55
B0-746	Pegs (for turfing in 19 sq m area)	Item	45.70
B0-751	Sand paper and Cotton waste (per 9.29 sq meters)	Item	147.05
B0-752	Sharpening Scarifier Tines ( for 307 sq. meters)	Item	50.15
B0-761	Timber planks & Bamboos (for 93 sqm)	Item	1,028.40
B0-762	Timber posts horizontal etc (for barricading work in 4 linear meters)	Item	411.90
	<b><u>WATER FOR CONCRETING</u></b>		
B0-781	Allow for water for mixing by machine	Cu.m.	29.60
B0-782	Allow for water for mixing concrete manually	Cu.m.	23.65

Item No	Description	Unit	Rates
	<b><u>WATER FOR COMPACTION &amp; GENERAL USE</u></b>		
B0-784	Allow Water for Gravel Compaction	Cu.m.	17.75
B0-785	Allow Water for Aggregate Compaction	Cu.m.	23.65
B0-786	Allow Water for Moistening Road Surface	Item	71.10
B0-787	Allow for Moistening Road Surface(by Bucket & Coir Rope)	Item	29.60
B0-788	Water for General Purposes	Liter	1.25
	<b><u>WHITE WASHING FOR BARRICADING</u></b>		
B0-791	White washing empty barrels (Bitumen)	Nr.	51.05
B0-792	White washing timber posts horizontals ETC. (in 4 l.m barricading)	Item	19.10
	<b>FOLLOWING MATERIAL PRICES ARE FOR ESTIMATION ONLY (payments should be based on approved tender prices)</b>		
	<b><u>THERMOPLASTIC ROAD MARKING MATERIALS (EXCLUDING TRANSPORT &amp; VAT)</u></b>		
B0-800	Thermo Plastic Road Marking Material (White)	KG	148.86
B0-801	Thermo Plastic Road Marking Material (Yellow)	KG	149.02
B0-802	Glass Beads	KG	156.28
B0-803	Cats Eye (Aluminium Rd Stud, Double Sided)	Nr.	2,250.00
B0-806	Zebra Barricading Tape (Polythene)	Lm	38.56
	<b><u>P.C.C. BEAMS (Wires) EXCLUDING TRANSPORT &amp; VAT</u></b>		
	<b>NOTE:</b> Specification of th beams should be in compliance to the national highways. RN indicates Rates are to be negotiated and decide		
B0-810	P.C.C Beam 3.35m( 11 ft)	Per Beam	19,500.00
B0-811	P.C.C Beam 4.26m( 14 ft)	Per Beam	25,500.00
B0-812	P.C.C Beam 5.18m( 17 ft)	Per Beam	33,500.00
B0-813	P.C.C Beam 6.09m( 20ft)	Per Beam	45,000.00
B0-814	P.C.C Beam 7.01m( 23ft)	Per Beam	53,000.00
B0-815	P.C.C Beam 9.5m	Per Beam	RN
B0-816	P.C.C Beam 11.5m( 38ft)	Per Beam	RN
B0-818	P.C.C Beam 13.5m( 45ft)	Per Beam	RN
B0-819	P.C.C Beam 16.5m( 55ft)	Per Beam	RN
	<b><u>P.C.C. BEAMS (Standards) EXCLUDING TRANSPORT &amp; VAT</u></b>		
	<b>NOTE:</b> Specification of th beams should be in compliance to the national highways.		
B0-830	P.C.C Beam 9.5m( 31.16ft)	Per Beam	62,500.00
B0-831	P.C.C Beam 11.5m( 37.72ft)	Per Beam	86,500.00

Item No	Description	Unit	Rates
B0-832	P.C.C Beam 13.5m( 44.28ft)	Per Beam	105,000.00
B0-833	P.C.C Beam 14.5m( 47.56ft)	Per Beam	113,500.00
B0-834	P.C.C Beam 15.5m( 50.84ft)	Per Beam	134,500.00
B0-835	P.C.C Beam 16.5m( 54.12ft)	Per Beam	143,500.00
	<b><u>GABION MESH *(Zinc Coated Gabion Boxes )</u></b> <b><u>EXCLUDING TRANSPORT &amp; VAT</u></b>		
B0-850	1 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	3,600.00
B0-851	2 x 1 x .5 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	4,500.00
B0-852	1.5 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	4,750.00
B0-853	2 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	6,100.00
B0-854	3 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	9,400.00
	<b><u>GABION MESH *(PVC COATED BOXES)</u></b> <b><u>EXCLUDING TRANSPORT &amp; VAT</u></b>		
B0-850A	1 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	4,500.00
B0-851A	2 x 1 x .5 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	5,900.00
B0-852A	1.5 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	5,900.00
B0-853A	2 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	7,402.50
B0-854A	3 x 1 x 1 m Gabions inclusive of Coated tie wire @ 5% of gabion weight	Per Box	10,900.00
	<b><u>GEOTEXTILES * EXCLUDING TRANSPORT &amp; VAT</u></b>		
B0-860	Geotextiles	Sq.m	191.67

**Price List of Precast Concrete Products - 2022**

S/No	Type	Code No.	Price Rs.	Weight Kg
1	"U" Drain - 900 x 900 x 750 (Internal - 600 x 600 )	BD/HD/ L -1	18,600.00	680
2	Cover Slab - (900 x 500 x 150)	CS/HD/ L -2	6,300.00	180
3	"U" Drain - 1000 x 750 x 600 (Internal - 450 x 450 )	BD/HD/ S -3	15,300.00	590
4	Cover Slab - (750 x 450 x 150)	CS/HD/ S -4	5,100.00	130
5	"U" Drain - 1000 x 700 x 575 (Internal - 450 x 450 )	BD/LD/ S -5	12,100.00	480
6	Cover Slab - (700 x 450 x 125)	CS/LD/ S -6	4,300.00	90
7	Cover Slab (Light Duty) - (800 x 500 x 150)mm	CS/LD/ S -8	4,850.00	150
8	"U" Drain (1200 x 500 x 550) mm	S - 9	11,600.00	420
9	Cover Slab - (500 x 450 x 100) mm	S - 10	2,750.00	66
10	"U" Drain (1000 x 650 x 550) mm	S - 11	9,900.00	395
11	Cover Slab - (650 x 450 x 125) mm	S - 12	3,250.00	89
12	"U" Drain (900 x 1200 x 1050) mm	S - 13	23,550.00	996
13	Cover Slab - (1200 x 500 x 150) mm	S - 14	8,500.00	245
14	Dish Drain - (500 x 700 x 200 ) mm		3,000.00	126
15	Pre Cast Box Culvert - (1000 x 1200 ) mm		91,200.00	2989
16	Pre Cast Box Culvert - (1000 x 1000 ) mm		85,800.00	2793
17	Road Kerb - (900 x 125 x 255) mm	K - 1	1,150.00	60
18	Lower Kerb - (Dropped Kerb) - (900 x 150 x 125) mm	K - 2	880.00	35
19	Inlet Kerb - (900 x 125 x 255) mm		1,100.00	40
20	Dropper Kerb - (900 x 125 x 255) mm	K - 3 / K - 4	1,050.00	50
21	Nail Kerb - (900 x 170 x 150)mm		1,000.00	30
22	Edged Kerb - (900 x 150 x 50 ) mm		450.00	18
23	Mini Kerb (500 x 80 x 180)mm		340.00	17
24	Guard Stone (Fixing on Soil)	GS / 20	1,900.00	120
25	Guard Stone (Fixing on M / Walls)	GS / 21	1,350.00	70
26	Paving Slab - (300 x 300 x 50) mm		155.00	11
27	Boundry Marker Post	PBM / 22	1,950.00	98
28	Half Round Hume pipe (1000 x 500 x 200) mm		2,100.00	90
29	Coping Stone (900 x 600 x 100) mm		1,800.00	142
30	Assemble Type Boundry Wall Post (3050x225x250)mm		10,900.00	374
31	Assemble Type Concrete Pannel -(1500 x 300 x 50 )mm		2,800.00	58
32	Pre Cast Compost Bin		10,100.00	336.9

**Transport Charges for Above Concrete Products**

Item	Description	Loading & Unloading Charges		Laying	Transport
		Labour	Machine (Boom Truck)		
1	Loading, Unloading and Transporting	4,860.00	3,000.00		210.00 Per Km
2	Additional charges for laying Drains & Slabs			3,000.00	

**Notes: Taxes not included in the rates.**

**Excavation, base construction & grouting if necessary, not included in the rates**

**Highway Schedule of Rates - 2022****Summary**

Item No.	Description	Unit	Rates
	<b><u>SECTION - I</u></b>		
	<b><u>TRANSPORT</u></b>		
	* SEE SECTION 23 OF GENERAL NOTES FOR SELECTION OF MODE OF TRANSPORT		
T1-001	Transport of soil 25m to 100 m by any means(including loading and unloading)	Cu.m	<b>744.00</b>
T1-002	Transport 100m to 0.5km by any means(Excluding loading)	Cu.m	<b>309.00</b>
T1-003	Transport 0.5km to 1.0km by any means (Excluding loading)	Cu.m	<b>331.00</b>
T1-003A	Transport of each subsequent 1km from 1km - 8 km. By any means (Excluding loading)	Cu.m	<b>51.00</b>
T1-003B	Transport of each subsequent 1km beyond 8km by any means (Excluding loading)	Cu.m	<b>35.00</b>
T1-006	Transport of material in bulk excluding loading (for distance less than or equal 3 kilometers)	Cu.m	<b>110.00</b>
T1-007	Transport of material in bulk excluding loading (from 3km upto 10km Distance )	Cu.mkm	<b>37.00</b>
T1-007A	Transport of material in bulk excluding loading ( for distance more than 10 km Distance )	Cu.mkm	<b>32.00</b>
T1-009	Transport of premix in bulk, excluding loading other than at mixing plant	M.TonKm	<b>23.00</b>
T1-010	Transport of barrels of bitumen for first 1.0km of transport (Excluding loading and unloading)	Nr.	<b>50.00</b>
T1-010A	Transport of barrels of bitumen for each subsequent 1.0km, from 1.0 - 8.0km, (Excluding loading and unloading)	Nr.	<b>14.00</b>
T1-010B	Transport of barrels of bitumen for each subsequent 1.0km beyond 8.0km (Excluding loading and unloading)	Nr.	<b>9.00</b>
T1-013	Loading barrels of bitumen inclusive of rolling upto 25m	Nr.	<b>46.00</b>
T1-014	Unloading barrels of bitumen inclusive of Rolling and stacking	Nr.	<b>20.00</b>
T1-015	Transport of hume pipes 152mm diameter for 1st 1.0km of transport(Excluding loading and unloading)	L.m	<b>38.00</b>
T1-015A	Transport of hume pipes 152mm diameter for each subsequent 1.0km, from 1.0 - 8.0km of transport(Excluding loading and unloading)	L.m	<b>12.00</b>
T1-015B	Transport of hume pipes 152mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>8.00</b>
T1-018	Transport of hume pipes 229 mm diameter for first 1.0km of transport(Excluding loading and unloading)	L.m	<b>43.00</b>
T1-018A	Transport of hume pipes 229mm diameter for each subsequent 1.0km from 1.0 - 8.0 km of transport(Excluding loading and unloading)	L.m	<b>13.00</b>
T1-018B	Transport of hume pipes 229mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>9.00</b>
T1-021	Transport of hume pipes 305mm diameter for first 1.0km of transport(Excluding loading and unloading)	L.m	<b>57.00</b>
T1-021A	Transport of hume pipes 305mm diameter for each subsequent 1.0km, from 1.0 - 8.0 km of Transport(Excluding loading and unloading)	L.m	<b>17.00</b>



Item No.	Description	Unit	Rates
T1-021B	Transport of hume pipes 305mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>13.00</b>
T1-024	Transport of hume pipes 457mm diameter for first 1.0km of transport(Excluding loading and unloading)	L.m	<b>86.00</b>
T1-024A	Transport of hume pipes 457mm diameter for each subsequent 1.0km from 1.0 - 8.0km of transport(Excluding loading and unloading)	L.m	<b>26.00</b>
T1-024B	Transport of hume pipes 457mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>19.00</b>
T1-027	Transport of hume pipes 610mm for first 1.0km of transport(Excluding loading and unloading)	L.m	<b>115.00</b>
T1-027A	Transport of hume pipes 610mm diameter for each subsequent 1.0km from 1.0 - 8.0km of transport(Excluding loading and unloading)	L.m	<b>35.00</b>
T1-027B	Transport of hume pipes 610mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>25.00</b>
T1-030	Transport of hume pipes 915mm diameter for first 1.0km of transport(Excluding loading and unloading)	L.m	<b>172.00</b>
T1-030A	Transport of hume pipes 915mm diameter for each subsequent 1.0km, from 1.0 - 8.0km of transport(Excluding loading and unloading)	L.m	<b>52.00</b>
T1-030B	Transport of hume pipes 915mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>38.00</b>
T1-033	Transport of hume pipes 1220mm diameter for first 1.0km of transport(Excluding loading and unloading)	L.m	<b>404.00</b>
T1-033A	Transport of hume pipes 1220mm diameter for each subsequent 1.0km, from 1.0 - 8.0km of transport(Excluding loading and unloading)	L.m	<b>163.00</b>
T1-033B	Transport of hume pipes 1220mm diameter for each subsequent 1.0km beyond 8.0km of transport(Excluding loading and unloading)	L.m	<b>120.00</b>
T1-036	Loading and unloading 152mm diameter 2.44m long hume pipes	Nr.	<b>143.00</b>
T1-037	Loading and unloading 229mm diameter 2.44m long hume pipes	Nr.	<b>166.00</b>
T1-038	Loading and unloading 305mm diameter 2.44m long hume pipes	Nr.	<b>330.00</b>
T1-039	Loading and unloading 457mm diameter 2.44m long hume pipes	Nr.	<b>549.00</b>
T1-040	Loading and unloading 610mm diameter 2.44m long hume pipes	Nr.	<b>715.00</b>
T1-041	Loading and unloading 915mm diameter 1.22m long hume pipes	Nr.	<b>1,320.00</b>
T1-042	Loading and unloading 1220mm diameter 1.22m long hume pipes	Nr.	<b>2,640.00</b>
T1-043	Transport of precast kerb stones (All types) for road works, including loading and unloading	L.mKm	<b>2.00</b>
T1-044	Transport of precast kerb stones for bridge works, including loading and unloading	L.mKm	<b>3.00</b>
T1-045	Transport of precast concrete hand rails, up rights and joints for bridge works, including loading and unloading	L.mKm	<b>4.00</b>
T1-046	Transport of precast concrete slabs 450x450x50 mm for foot walks, including loading and unloading	SqmKm	<b>5.00</b>

Item No.	Description	Unit	Rates
T1-047	Transport of precast concrete standard boundary markers including unloading only*	NrKm	2.00
	*Supply rate include loading at yard.		
T1-048	Transport of emulsion (Rate for 100Liters per Kilometers)	100ltr km	4.00
T1-049	Transport of gabion mesh 4x1x1 meters size	Nr km	1.00
	<b><u>SECTION - II</u></b>		
	<b><u>ROADWAY AND FOUNDATION / TRENCH EXCAVATION</u></b>		
	<b>(INCLUDING LOADING , UNLOADING AND TRANSPORTING WITHIN 25 METRES DISTANCE UNLESS OTHERWISE SPECIFIED)</b>		
NOTE	<b>FOR ROADWAY EXCAVATIONS INVOLVING MORE THAN 200CU.M. , MACHINE RATES SHOULD BE ADOPTED.</b>		
E1-001	Excavation in Loose soil(Dry)[SSCM 301.2(iv)]	Cu.m	993.00
E1-002	Excavation in Loose soil (Wet) in slips [SSCM 301.3(0)]	Cu.m	1,232.00
E1-003	Excavation in ordinary soil (Cutting measurement)[SSCM 301.2(v)]	Cu.m	1,471.00
E1-004	Excavation in ordinary soil[Vehicle measurement][SSCM 301.2(v)]	Cu.m	1,324.00
E1-005	Excavation in medium soil (Cutting measurement)[SSCM 301.2(vi)]	Cu.m	1,949.00
E1-006	Excavation in medium soil (Vehicle measurement) [SSCM 301.2(vii)]	Cu.m	1,657.00
E1-007	Excavation in hard soil (Cutting measurement)[SSCM 301.2(vii)]	Cu.m	2,905.00
E1-008	Excavation in hard soil (Vehicle measurement) [SSCM 301.2(vii)]	Cu.m	2,470.00
E1-009	Excavation in unclassified soil(Cutting measurement)[SSCM 301.2 (vii)]	Cu.m	2,108.00
NOTE	<b>SEE CODE NOS.FROM E1-027 FOR ROADWAY EXCAVATION USING MACHINERY</b>		
E1-010	Excavation in soft rock (Cutting measurement)[SSCM 301.2(vii)]	Cu.m	3,144.00
E1-010A	Excavation in mud\marshy material (Cutting measurement) [SSCM 301.2(vii)]	Cu.m	2,427.00
E1-011	Excavation pit\trench for foundation in ordinary soil not Exceeding 1.5m deep, including Levelling and ramming bottom, Excavated material Deposited within 25m or as Directed.* (Shoring dewatering if necessary shall be paid sepearely) [SSCM 302.1-.3]	Cu.m	1,949.00
*NOTE	<b>SEE GENERAL NOTES 24(2) FOR DETAILS REGARDING ADDITIONAL EXCAVATION REQUIRED FOR WORKING SPACE.</b>		
E1-012	Excavation pit\trench in foundation in medium soil not exceeding 1.5m deep, including levelling and ramming bottom, exc.material Deposited within 25m or as Directed. (Shoring, Dewatering if necessary shall be paid)[SSCM 302.1-.3]	Cu.m	2,427.00

Item No.	Description	Unit	Rates
E1-013	Excavation pit\trench in foundation in hard soil not exceeding 1.5m deep, including levelling and ramming bottom, exc.material Deposited within 25m or as Directed. (Shoring, Dewatering if necessary shall be paid)[SSCM 302.1-.3]	Cu.m	3,383.00
E1-014	Excavation pit\trench in foundation in unclassified soil not exceeding 1.5m deep, including Levelling and ramming bottom, exc.material Deposited within 25m or as Directed. (Shoring, Dewatering if necessary shall be paid)[SSCM 302.1-.3]	Cu.m	2,587.00
E1-015	Excavation pit\trench in foundation in mud/marsh not Exceeding 1.5m deep, including Levelling and ramming bottom, Exc.material Deposited within 25m or as Directed. (Shoring, Dewatering if necessary shall be paid) [SSCM 302.1-.3]	Cu.m	2,905.00
E1-019	Excavation soft rock not exceeding 1.5m depth[SSCM 301.2(ii)]	Cu.m	3,861.00
<b>NOTE</b>	<b>EXCAVATING ROCK FOR FOUNDATION TO BE PAID ON S.S.R.</b>		
E1-021	Piling available soil	Cu.m	239.00
E1-022	Loading available soil to a tractor or equivalent	Cu.m	316.00
E1-023	Excavating rock requiring blasting, for roadway and at Quarry for boulders,(bank measurement) excluding Dozing away[SSCM 301.2(iii) & 306.1-306.4]	Cu.m	1,249.00
E1-024	Boulders, sledging piling etc	Cu.m	4,694.00
E1-025	Rock requiring blasting (Bank measurement)	Cu.m	4,722.00
E1-026	Rock requiring blasting and piling (Bank measurement)	Cu.m	6,026.00
E1-027	Roadway excavation in unclassified soil using machinery excluding loading and piling (Cutting measurement)	Cu.m	276.00
E1-028	Loading materials by machinery in roadway excavations (Cutting measurement)	Cu.m	130.00
E1-029	Trimming / cambering by motor grader (Cutting measuremet)	Cu.m	51.00
E1-029A	Trimming / cambering by motor grader (Cutting measurement) Rate per 1 Sqm	Sq.m	10.00
	<b><u>SECTION - III</u></b>		
	<b><u>AGGREGATE / RUBBLE PILING (INCLUDING LOADING)</u></b>		
A1-001	Sledging available rock 150-225mm rubble including piling and loading	Cu.m	3,781.00
A1-002	Blasting etc and piling 150-225mm rubble including loading	Cu.m	5,896.00
A1-002A	Blasting sledging etc. and piling 150-225mm rubble using compressor and hand held drills including loading	Cu.m	2,977.00
A1-003	Blasting etc. and piling 100mm aggregate including loading	Cu.m	1,739.00
A1-004	Blasting etc and piling 75mm aggregate including loading	Cu.m	1,813.00
A1-005	Blasting etc and piling 50mm aggregate including loading	Cu.m	1,887.00
A1-009	50 mm aggregate, single size crusher production including piling,loading and 16km Transport [SSCM 404.1-406.1 : table 1701-4	Cu.m	3,516.00

Item No.	Description	Unit	Rates
A1-010	37.5 mm aggregate, single size crusher production including piling,loading and 16km Transport [SSCM 404.1-406.1 : table 1701-4	Cu.m	3,622.00
A1-011	19 mm aggregate, single size crusher production including piling,loading and 16km Transport[SSCM 404.1-406.1 ]	Cu.m	3,728.00
A1-012	12.5 mm aggregate, single size crusher production including piling,loading and 16km Transport for 1.0 Cu.m	Cu.m	3,622.00
	<b>PLANT PRODUCED AGGREGATE DENSE GRADED AGGREGATE BASE COURSE</b>		
A1-013	Aggregate 37.5 mm Down graded (SSCM-table 1701.5 ) including piling,loading and 16km Transport	Cu.m	2,880.00
A1-014	Crusher fines 6.3 mm down, including piling,loading and 16km Transport for 1.0 cu.m	Cu.m	4,024.00
A1-015	Aggregate 19 mm for seal coat treatments as per SSCM table 1701-8, including piling and loading	Cu.m	2,841.00
A1-016	Aggregate 12.5 mm for seal coat treatments as per SSCM table 1701-8, including piling and loading	Cu.m	2,332.00
A1-017	Blended aggregate for rectification overlay, with 37.5 mm single size aggregate and 19mm & 12.5 mm crushed aggregated mixed in the volume ratio of 7:2:1: including mix.,loading and 16km Transport(piling to pay separatly)	Cu.m	3,740.00
A1-018	Piling available aggregate	Cu.m	261.00
A1-019	Piling available rubble	Cu.m	522.00
A1-020	Loading available aggregate / rubble	Cu.m	478.00
	<b><u>SECTION - IV</u></b>		
	<b><u>APPROVED EARTH FILLING &amp; COMPACTION</u></b>		
*NOTE	RATES FOR BORROW EARTH SUPPLY GIVEN UNDER ITEM CODES <b>EW1-001 &amp; EW1-011</b> IN THIS SHEDULE IS BASED ON MANUAL EXCAVATION AND INTENDED FOR SMALL WORKS INVOLVING LESS THAN 200 CU.M. IN THE CASE OF BORROW EARTH SUPPLY EXCEEDS 200 CU.M. (FOR THE WHOLE PROJECT), RATES BASED ON MACHINE EXCAVATION AS PER BO-201,BO-202,EW1-013 OR EW1-014 SHALL BE ADOPTED. FOR ANY DEVIATIONS THE PROCUREMENT PROCEDURE GIVEN IN "GENERAL NOTES" , SHALL BE FOLLOWED.		
EW1-001	Approved soil (Type i & ii materials) excavation for bases & shoulder construction including loading and piling (Loose volume)[SSCM 601.1 to 601.4]	Cu.m	2,803.00
EW1-002	Spreading piled approved soil (Loose volume)	Cu.m	330.00
EW1-003	*Approved soil spread & rolled including roller hire charges, fuel & watering (loose volume) [SSCM 601.1 - 4] (including roller hire)	Cu.m	579.00
	*SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.		
*NOTE	<b>THE ITEMS EW1-003 OR EW1-004 ON MANUAL SPREADING SHOULD BE ADOPTED FOR SMALL WORKS ONLY. WHEN MACHINERY IS USED FOR SPEADING AND COMPACTION, EW1-003A SHALL BE ADOPTED.</b>		
EW1-003A	Approved soil spread & rolled using machinery including motor grader & roller hire charges, fuel & watering (Loose volume)[SSCM 601.1 - 4] (including roller hire )	Cu.m	293.00
	<b>SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.</b>		

Item No.	Description	Unit	Rates
EW1-004	Approved soil spread & rolled in strips where average width is less than 1.2 metres for road widening including roller hire charges, fuel & watering (Loose volume)[SSCM 601.1 - 4] (including roller hire )	Cu.m	<b>672.00</b>
	<b>SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.</b>		
EW1-006	Approved soil spread & compacted in places behind abutments and structures, shoulders above sub bases level and service line trenches,using 1/2 to 1 ton vibrating roller including watering (Loose volume)[SSCM 601.1 - 4]	Cu.m	<b>742.00</b>
	<b>SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.</b>		
EW1-007	Approved soil spread & compacted in 150 to 225 mm thick layers using machine rammer at narrow places (Loose volume)	Cu.m	<b>781.00</b>
EW1-008	Spreading , levelling and compacting manually using standard cast iron stamper or equivalent and filling in 150-225 mm thick layers (Loose volume)	Cu.m	<b>1,076.00</b>
EW1-009	Trimming , levelling and compaction of original ground/subgrade to 100 % STD Density [SSCM 304.3(c)] (including roller hire)	Sq.m	<b>103.00</b>
EW1-010	Trimming , levelling and compaction of original ground/subgrade to 95 % STD Density [SSCM 304.3(c)] (including roller hire)	Sq.m	<b>93.00</b>
EW1-011	Approved soil excavation for embankment filling including loading and piling (Loose volume)[SSCM 601.1 to 601.4]	Cu.m	<b>1,991.00</b>
EW1-013	Approved soil (Type i & ii materials) excavation using machinery for bases & shoulder construction including loading, piling, and transport 16Km(Loose volume)[SSCM 601.1 - 4]	Cu.m	<b>2,675.00</b>
EW1-014	Approved soil (Type i & ii ) excavation using machinery for embankment filling including loading, piling, and transport 16Km(Loose volume)[SSCM 601.1 - 4]	Cu.m	<b>2,033.00</b>
EW1-015	Grading and spreading by motor grader	Cu.m	<b>94.00</b>
	<b><u>SECTION - V</u></b>		
	<b><u>RUBBLE PITCHING / PAVING (RUBBLE TO BE PAID SEPERATELY)</u></b>		
P1-001	Pitched paving 225 mm thick	Sq.m	<b>636.00</b>
P1-002	Pitched paving 150 mm thick	Sq.m	<b>477.00</b>
P1-003	Flat paving 225 mm thick	Sq.m	<b>423.00</b>
P1-004	Flat paving 150 mm thick	Sq.m	<b>318.00</b>
	<b><u>SECTION - VI</u></b>		
	<b><u>AGGREGATE SPREADING AND COMPACTION</u></b>		
	<b>COST OF WATERING TO BE DEDUCT FROM RATE IF NOT CARRIED OUT UNDER THE RELEVANT ITEMS</b>		
<b>*NOTE</b>	COST OF AGGREGATE SUPPLY AND TRANSPORT, NOT INCLUDED IN THE RATES FOR ITEMS: M1-001, M1-004, M1-007, M1-008 AND M1-009		
M1-001	Spreading , watering & rolling 100 mm aggregate including hire charges of roller(Loose volume) [SSCM 304.3(d),(e)]	Cu.m	<b>1,297.00</b>

Item No.	Description	Unit	Rates
M1-002	Breaking road surface to 50 mm Depth by hand , screen & replace old aggregate	Sq.m	176.00
M1-003	Scarifying road surface to 50 mm Depth by roller, screen, & replace old aggregate. (including roller hire)	Sq.m	119.00
M1-004	Spreading & compaction 50-19 mm new aggregate by roller including watering hire, etc. (loose volume) [SSCM 403.3(c)] (Including roller hire)	Cu.m	2,032.00
M1-005	Breaking 50 mm additional Depth by hand screening & replacing old aggregate	Sq.m	105.00
M1-006	Scarifying 50 mm additional Depth with roller, Screening & replacing old aggregate (including hire charges)	Sq.m	93.00
M1-007	Spreading watering & compacting 50-19 mm aggregate in edge correction using roller including hire, etc. (loose volume ) [SSCM 1103.3] (including hire charges)	Cu.m	2,353.00
M1-008	Spreading watering & compacting 50-19 mm aggregate in strip correction using roller including hire ,etc (loose volume) [SSCM 1103.3] (including hire charges)	Cu.m	1,963.00
M1-009	Spreading & compacting 50-19 mm aggregate by 8-10 ton roller after applying track coat in overlay (loose volume) (Tack coat paid separately) (including hire charges)	Cu.m	1,800.00
M1-010	Water bound macadam spreading water & comp 50-25 mm aggregate & filling the voids to refusal with crusher fines by watering & rolling to form a water bound macadam base .(loose volume (SSCM 404.1) (including hire charges)including transport for aggregate and fines.	Cu.m	7,699.00
M1-011	Dry bound macadam spread, water & comp. 50-25 mm aggregate & filling voids to refusal with crusher fines by rolling with vibrating roller to form a Dry bound macadam base (Loose volume) [404] (including hire charges)including transport for aggregate and fines	Cu.m	7,428.00
M1-012A	Dense graded agg. base (Agg. base course) supplying.pilling, loading, spreading water and comp. graded 37.5 mm agg to form a Dense agg. base using machinery including motor grader & roller hire charges. (Loose volume)(SSCM 405.1)(Including Transport of agg.)	Cu.m	3,404.00
	<b>*FOR THE RATE ON COMPACTED VOLUME , INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PROJECT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.</b>		
	<b>*FOR THE RATE ON COMPACTED VOLUME , INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PROJECT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.</b>		
M1-013	Dense graded agg.base [ABC],supplying.pilling, loading, spreading water and comp spreading watering and Compacting graded 37.5mm aggregate to form a Dense aggregate base in strips, avg width not exceeding 1.2m for road widening (Loose volume)[SSCM 405.1(including hire charges)(IncludingTransport of agg. )	Cu.m	4,824.00

Item No.	Description	Unit	Rates
	<b>*FOR THE RATE ON COMPACTED VOLUME , INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PROJECT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.</b>		
	<b>*FOR THE RATE ON COMPACTED VOLUME , INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PROJECT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.</b>		
<b>**NOTE</b>	<b>THIS ITEM M1-013 ON MANUAL LABOUR SHOULD BE ADOPTED FOR SMALL WORKS ONLY. WHEN MACHINERY IS USE FOR SREADING AND COMPACTION, M1-012A / M1-013A SHALL BE ADOPTED DEPENDING ON SITE SITUATION.</b>		
M1-013A	Graded 37.5 ABC material supplying.pilling, loading, spreading water and comp spread and rolled in strips, average width not exceeding 1.2m using machinery incl motor graders and roller hire charges fuel and watering(Loose vol)[SSCM 405.1] (including hire charges) <b>(IncludingTransport of agg. )</b>	Cu.m	<b>3,548.00</b>
	<b>*FOR THE RATE ON COMPACTED VOLUME , INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PROJECT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.</b>		
	<b><u>SECTION - VII</u></b>		
	<b><u>ROAD SURFACE TREATMENT</u></b>		
	<b>(SAND TRANSPORT UP TO 16 KM INCLUDED IN THE RATES) TRANSPORT OF BITUMEN TO BE PAID SEPERATELY</b>		
S1-001	Bitumen (80/100)surface 1st coat using 2ltr/sq.m including blinding with sand @ the rate of 125 sq.m/cu.m[SSCM 503.1] (including cost of bitumen)	Sq.m	<b>336.00</b>
S1-002	Bitumen (80/100) surfacing 1st coat using 2ltr/sq.m including blinding with gravel where sand is not available <b>within 16km.</b> (including cost of bitumen)	Sq.m	<b>315.00</b>
S1-003	Double bituminous surface treatment with hot bitumen(Manual) including internal transport(Binder and aggregate paid separately)[SSCM 505.1-.5 and table 505.1] including roller hire)	Sq.m	<b>313.00</b>
S1-004	Single bituminous Surface treatment with hot bitumen (Manual, including internal transport)(binder and aggregate paid separately)[SSCM 505.1-.5 and table 505.1] (including roller hire))	Sq.m	<b>165.00</b>
S1-005	Double bituminous surface treatment with emulsion (CRS-2) (Manual including internal transport)(Binder and aggregate paid separately) (including roller hire))	Sq.m	<b>310.00</b>
S1-006	Single bituminous surface treatment with emulsion (CRS-2) (manual including internal transport)(Binder and aggregate paid separately) (including roller hire)	Sq.m	<b>162.00</b>
S1-007	Bitumen (80/100) surfacing subsequent coat using 0.75ltr/sq.m including blinding with sand @ 125 sq.m/cu.m [SSCM 503.1(b)] (including cost of bitumen)	Sq.m	<b>179.00</b>
S1-008	Bitumen (80/100) surfacing 1st/subsequent coat using 1.0ltr/sq.m including blinding with sand @ rate of 125 sq.m/cu.m (New work) [SSCM 503.1(b)] (including cost of bitumen)	Sq.m	<b>204.00</b>

Item No.	Description	Unit	Rates
S1-009	Bitumen (80/100) surfacing subsequent coat using 0.75ltr/sq.m including blinding with gravel free of clay where sand is not available [SSCM 503.1(b)] (including cost of bitumen)	Sq.m	<b>158.00</b>
S1-010	Bitumen (80/100) surfacing 1st/subsequent coat using 1.0ltr/sq.m including blinding with gravel free of clay where sand is not available (New work) [SSCM 503.4(c)] (including cost of bitumen)	Sq.m	<b>184.00</b>
S1-011	Emulsion/cold bitumen(CRS-1) surface treatment 1 st coat with 3.5 ltr/sq.m including blinding with sand, @ 125 sq.m/cu.m (manual)(incl cost of emulsion)	Sq.m	<b>491.00</b>
S1-012	Emulsion/cold bitumen(CRS-1) surface treatment 1st coat with 3.5 ltr/sq.m(using trolley,emulsion) including blinding with sand, @ 125 sq.m/cu.m(incl cost of emulsion)	Sq.m	<b>468.00</b>
S1-013	Emulsion/cold bitumen(CRS-1) surface treatment subsequent Coat with .75 ltr/sq.m including blinding with sand, @ 125 sq.m/Cu.m (Manual)(incl cost of emulsion)	Sq.m	<b>157.00</b>
S1-014	Emulsion/Cold bitumen(CRS-1) surface treatment subsequent coat with .75 ltr/sq.m (using trolley, emulsion) including blinding with sand, @ 125 sq.m/cu.m(incl cost of emulsion)	Sq.m	<b>148.00</b>
S1-015	Tack coat using emulsion (CRS-1) @ the rate of 0.5 ltr/Sq.m inclusive of brushing, cleaning road surface and cost of emulsion (manual) [SSCM 502.3]	Sq.m	<b>81.00</b>
S1-015A	Tack coat using emulsion (CRS-1) @ the rate of 0.5 ltr/sq.m(incl cost of emulsion)	Sq.m	<b>72.00</b>
S1-015B	Brushing and cleaning road surface for tack coat	Sq.m	<b>7.00</b>
S1-016	Tack coat using emulsion (CRS-1) @ the rate of 0.5 ltr/sq.m inclusive of brushing, cleaning road surface and cost of emulsion (Manual) [SSCM 502.3]	Ltr	<b>162.00</b>
S1-017	Tack coat using emulsion (CRS-1) @ the rate of 0.75 ltr/sq.m inclusive of brushing, cleaning road surface and cost of emulsion (Manual) [SSCM 502.1-503.3] (including cost of emulsion)	Sq.m	<b>109.00</b>
S1-018	Tack coat with 30% cut back bitumen using 0.5 ltr/sq.m including brushing and cleaning road surface (Manual) )(including cost of bitumen)	Sq.m	<b>106.00</b>
S1-018A	Tack coat with 30% cut back bitumen using 0.5 ltr/sq.m Excluding brushing and cleaning road surface (Manual) data for 372 sq.m tack coat (part1) (Excluding cost of bitumen)	Sq.m	<b>61.00</b>
S1-019	Tack coat with 30% cut back bitumen(80/100) using 0.5 ltr/sq.m including brushing and cleaning road surface (Manual) (Excluding cost of bitumen)	Ltr	<b>212.00</b>
S1-020	Tack coat with 30% cut back bitumen using 0.75 ltr/sq.m including brushing and cleaning road surface (Manual) [SSCM 502.4(d)](including cost of bitumen)	Sq.m	<b>135.00</b>
S1-021	Rolling over blinding material spread over subsequent bitumen surfacing using diesel roller (8-10 Tones) [SSCM 502.4]	Sq.m	<b>14.00</b>
S1-022	Prime coat with emulsion/cold bitumen(CSS-1) using 1 ltr/sq.m including blinding with sand at the rate of 250 sq.m/cu.m and brushing cleaning and moistening road surface : (including cost of emulsion)	Sq.m	<b>167.00</b>



Item No.	Description	Unit	Rates
S1-022A	Prime coat with emulsion/cold bitumen(CSS-1) using 1 ltr/sq.m including blinding with sand at the rate of 250 sq.m/cu.m(including cost of emulsion)	Sq.m	158.00
S1-022B	Brushing, cleaning and moistening road surface(Manual)	Sq.m	9.00
S1-023	Prime coat with emulsion/cold bitumen(CSS-1) using 1 ltr/sq.m without blinding, but inclusive of brushing, cleaning and moistning road surface(including cost of emulsion)	Sq.m	137.00
S1-024	Prime coat with cut back bitumen (MC 30) using 1 ltr/ sq.m including blinding with sand at the rate of 250 sq.m/cu.m and brushing, cleaning and mostening road surface (including cost of bitumen)	Sq.m	194.00
S1-025	Prime coat with cut back bitumen(MC 30) using 1 ltr/ sq.m without blinding but inclusive brushing, cleaning and mostening road surface (including cost of bitumen)	Sq.m	163.00
S1-026	Sweeping over tarred surface to arrest bleeding.	Sq.m	7.00
S1-027	Application of asphalt emulsion for surface treatment using CRS-1 (using plant) "rate per litre"(including cost of emulsion)	litre	128.00
S1-028	Blinding the bitumen surfacing with sand at the rate of 125 sq.m1 cu.m using material from stock pile	Sq.m	61.00
S1-029	Single bituminous surface treatment with emulsion (CRS2) using plant.(Binder and aggregate paid separately) (Rate to include transport cost of aggregate up to 16kms) [SSCM 505.3(d).	Sq.m	91.00
S1-030	Double bituminous surface treatment with emulsion(CRS-2) using plant.(Binder and aggregate paid separately) (Rate of including transport cost of aggregate up to 16 kms) [SSCM 505.3(e)]	Sq.m	186.00
S1-030A	Double bituminous surface treatment with hot bitumen(80/100) using 19mm and 12.5mm single size selected aggregates on existing bituminous surface using plant. Rate to include all labour, material, plant and transport cost of aggregate up to 16Km.(Transport of Binder and Additional transport of aggregate to be paid separately)[SSCM505.5(e)]:	Sq.m	449.00
S1-030B	Double bituminous surface treatment with hot bitumen(80/100) using 19mm and 9.5mm single size selected aggregates on existing bituminous surface using plant. Rate to include all labour, material, plant and transport cost of aggregate up to 16Km.(Transport of Binder and Additional transport of aggregate to be paid separately)[SSCM505.5(e)]:	Sq.m	435.00
NOTE	QUANTITIES OF AGGREGATE AND BINDER(PEN GRADED BITUMEN)FOR DBST(SSCM 505.5)	AGGREGATE	
		CU.M/100M <sup>2</sup>	
	1ST SEAL 19MM AGGREGATE - BINDER PENGRADE BITUMEN	1.3 - 1.7	
	2ND SEAL 12.5MM AGGREGATE - BINDER PENETRATION GRADE BITUMEN	0.7 - 1.0	
	1ST SEAL 12.5MM AGGREGATE - BINDER PENGRADE BITUMEN	1.0 - 1.3	
	2ND SEAL 9.5MM AGGREGATE - BINDER PENETRATION GRADE BITUMEN	0.55 - 0.75	

Item No.	Description	Unit	Rates
S1-031	Supply, lay & compact asphalt concrete (19mm, binder(60/70) 4.7% **mix) -Dense( <b>Plant made</b> ) in wearing surface of small worksuch as bridge Decking, reinstatement of trenches etc.( <b>transport of premix to be paid separately</b> )[SSCM 506] (including roller hire)	M.ton	<b>15,299.00</b>
<b>NOTE**</b>	(FOR BINDER CONTENTS SEE GENERAL NOTES SECTION 29.8		
	*AVERAGE 0.6270CUM OF AGGREGATE IS REQUIRED FOR 1.0M.TON OF PREMIX.		
S1-032	Supply,lay, comp. asp. bound premix(37.5mm, binder(60/70) 3.53% **mix - Dense base mat( <b>Plant made</b> ) in small works( bridge Decking, reinstatement of trenches )(Tra. of premix to be paid separately)[SSCM 506](including roller hire)	M.ton	<b>13,783.00</b>
<b>NOTE**</b>	(FOR BINDER CONTENTS SEE GENERAL NOTES SECTION 29.8		
	*AVERAGE 0.6270CUM OF AGGREGATE IS REQUIRED FOR 1.0M.TON OF PREMIX.		
S1-033	Supply, lay & compt. aspltd conc. cold mix MC 30(19mm 15% cutback with binder( 60/70)5.5% mix**) dense <b>plant made</b> in small wrks. suc. as brdg. decking reinst. of treches( <b>Transpt.of premix to be paid separately</b> )(SSCM 506)(including roller hire)	M.ton	<b>16,652.00</b>
<b>NOTE**</b>	(FOR BINDER CONTENTS SEE GENERAL NOTES SECTION 29.8		
	*AVERAGE 0.6270CUM OF AGGREGATE IS REQUIRED FOR 1.0M.TON OF PREMIX.		
S1-033A	Lay & compt. aspltd contrt. cold mixwith emul CSS.1(6.67% wt of agg. 19mm dense plant made) in small wrks. suc. as brdg. decking reinstatement of trenches etc( <b>Supply and Trnspt.of premix to be paid separately</b> ).(SSCM 506)(including roller hire)	M.ton	<b>3,461.00</b>
<b>NOTE**</b>	(FOR BINDER CONTENTS SEE GENERAL NOTES SECTION 29.8		
	*AVERAGE 0.6270CUM OF AGGREGATE IS REQUIRED FOR 1.0M.TON OF PREMIX.		
S1-034	Lay and compact asphalt concrete using paver (Cost of premix and premix transport to site paid separately)	M.ton	<b>1,684.00</b>
S1-034A	Lay and compact asphalt concrete manually (Cost of premix and premix transport to site paid separately)	M.ton	<b>1,760.00</b>
S1-035	Bitumen surfacing (Sand sealing -manl) using emulsion (CRS 1) @ 1 ltr./sq.m including preparing surface, blinding with sand @ 4 cu.m/500 sq.m & pressing with hand rollers.(patching pot holes if necsry & external transport to paid separately.(including cost of emulsion)	Sq.m	<b>190.00</b>
S1-035A	Patching minor pot holes using sand emulsion mix 1:8 where necessary, prior to sand sealing. Incld cost of emulsion	Sq.m	<b>28.00</b>
S1-036*	Sand sealing with emulsion CRS-1 at the rate of 1ltr,sq.m using plant.incd.brushing,cleaing, blinding. with sand@ 125 sq.m and rolling. with pneumatic roller & internal transport.[SSCM 504](patching pot holes if necessary and external transport to pay separately.)	Sq.m	<b>208.00</b>
S1-036A*	Chip Sealing with Bitumen Emulsion CRS -1 at the rate of 1.25Ltr/Sqm Using plant including Brushing, cleaning, blinding (Patching pot holes if necessary & external transport to pay separately)	Sq.m	<b>218.00</b>
S1-036B*	Fog sealing with Bitumen emulsion CRS-1 at the rate of 1.5ltr,sq.m using plant.incd.brushing,cleaing, blinding. With patching pot holes if necessary & external transport to pay separately	Sq.m	<b>272.00</b>

Item No.	Description	Unit	Rates
S1-036C*	Crack Sealing with Bitumen emulsion CRS -1 at the rate of 1.25ltr/sqm using plant including brushing, cleaning, blinding (patching pot holes if necessary & external transport to pay separately)	Sq.m	240.00
NOTE*	<b>THE ABOVE RATES IS APPLICABLE FOR PAYMENT ONLY IF CHIP SPREADER (SELF PROPELLED) AND PNEUMATIC ROLLER ARE USED FOR THE CONSTRUCTION. OTHERWISE APPROVED SSR SHOULD BE ADOPTED.</b>		
S1-037	Reconstruct base with penetration macadam using nominal size 50mm aggregate and 19mm key aggregate from stock piles, to accomplish 75mm on existing pavements[SSCM 406] (Binder, aggregate, transport to be paid separately)	Sq.m	227.00
S1-038	Reconstruct base with penetration macadam using nominal size 37.5 mm aggregate and 12.5 mm key aggregate from stock piles , to a compacted thickness of 55mm on existing pavements [SSCM 406] cost of aggregate including transport to be paid separately	Sq.m	160.00
S1-039	Correction of Corrugations, Depressions and Cambering road surfaces using asphalt Concrete compacted by vibrating roller including internal transport (application of tack coat and supply of asphalt concrete to be paid separately)	M.ton	3,212.00
S1-040*	Sand sealing with emul CRS-2 at the rate of .8 ltr/sq.m using plant ,& blinding with sand at rate 125sq.m/cu.m on D.B.S.T./S.B.S.T. (Triple seal) incl. internal trport (SSCM 504) binder trnport to site shall be paid separately (including cost of emulsion & roller hire)	Sq.m	211.00
NOTE*	<b>THIS ITEM SHOULD BE USED ONLY FOR SAND SEALING ON ROAD SURFACE AFTER D.B.S.T./S.B.S.T. WORK AND USE OF PNEUMATIC ROLLER IS ESSENTIAL. IF EMULSION AND/OR THE RATE OF APPLICATION OR THE METHOD OF SAND SPREADING TO BE CHANGED , S.S.R. SHALL BE PREPARED AND APPROVED.</b>		
S1-041	Slurry sealing to a thickness of 6mm using machinery with modified emulsion (using CSS -1) as the binder (Including cost of emulsion, Including transport of aggregate )	Sq.m	183.00
S1-042	Slurry sealing to a thickness of 6mm using concrete mixture manual with emulsion using CSS - 1 as the binder (Including transport of aggregate )	Sq.m	633.00
	<b><u>SECTION - VIII</u></b>		
	<b><u>ROAD SURFACE MAINTENANCE</u></b>		
	<b>INTERNAL TRANSPORT OF HOT BITUMEN UP TO 16 KM AND SAND TRANSPORT UP TO 16 KM INCLUDING IN THE RATES</b>		
MN1-001	Patching with hot bitumen(80/100) using 14 litres per 1/2 km(SSCM 1102.1-3)	1/2 K.m	4,247.00
MN1-002	Patching with hot bitumen using 21 ltrs. per 1/2 k.m.	1/2 K.m	6,371.00
MN1-003	Patching with hot bitumen using 28 ltrs. per 1/2 k.m.	1/2 K.m	8,494.00
MN1-004	Patching with hot bitumen using 35 ltrs. per 1/2 k.m.	1/2 K.m	10,618.00
MN1-005	Patching with hot bitumen using 42 ltrs. per 1/2 k.m.	1/2 K.m	12,742.00
MN1-006	Patching with hot bitumen using 49 ltrs. per 1/2 k.m.	1/2 K.m	14,865.00

Item No.	Description	Unit	Rates
MN1-007	Patching with hot bitumen using 56 ltrs. per 1/2 k.m.	1/2 K.m	16,989.00
MN1-008	Extensive Patching for every additional 7 ltrs. hot bitumen	1/2 K.m	2,124.00
MN1-009	Patching with cold bitumen (CRS-1) using 14 ltrs per 1/2 k.m.	1/2 K.m	3,261.00
MN1-010	Patching with cold bitumen (CRS-1) using 21 ltrs. per 1/2 k.m.	1/2 K.m	4,892.00
MN1-011	Patching with cold bitumen (CRS-1) using 28 ltrs. per 1/2 k.m.	1/2 K.m	6,522.00
MN1-012	Patching with cold bitumen (CRS-1) using 35 ltrs. per 1/2 k.m.	1/2 K.m	8,153.00
MN1-013	Patching with cold bitumen (CRS-1) using 42 ltrs. per 1/2 k.m.	1/2 K.m	9,783.00
MN1-014	Patching with cold bitumen (CRS-1) using 49 ltrs. per 1/2 k.m.	1/2 K.m	11,414.00
MN1-015	Patching with cold bitumen (CRS-1) using 56 ltrs. per 1/2 k.m.	1/2 K.m	13,044.00
MN1-016	Extensive patching for every additional 7 ltrs. cold bitumen, CRS-1:	1/2 K.m	1,631.00
MN1-017	50 mm-19mm aggregate roller patching(including roller hire)	Cu.m	6,133.00
MN1-018	50 mm - 19mm aggregate stamped patching	Cu.m	8,199.00
	<b><u>SECTION - IX</u></b>		
	<b><u>ROAD SIDE AND DRAINAGE SYSTEM(SSCM 701.3)</u></b>		
	<b>*(RATE TO INCLUDE SPREADING THE RESULTING MATERIALS SUITABLY IN THE VICINITY UNLESS OTHERWISE DIRECTED.)</b>		
DR1-001	Cutting new side Drains in ord. soil*	Cu.m	1,330.00
DR1-002	Cutting new side Drains in Med. Soil*	Cu.m	1,852.00
DR1-003	Cutting new side Drains in hard soil*	Cu.m	2,373.00
DR1-004	Cutting new side Drains in soft soil*	Cu.m	2,634.00
DR1-005	Cutting new side Drains in unclassified soil*	Cu.m	1,852.00
DR1-005A	Cutting side drains of std. Dimensions in unclassified soil using machine (Back hoe J.C.B) including shipping trimming and levelling bottom manually	Cu.m	831.00
DR1-006	Cutting new side Drains in rock*	Cu.m	5,610.00
DR1-007	Turfing (Excluding royalty, transport and watering maintenance) [SSCM 802.3 (a)]	Sq.m	291.00
DR1-008	Watering and maintaining turf for Three months including transport of water	Sq.m	338.00
DR1-009	Levelling & trimming earth*	Sq.m	38.00
DR1-010	Clearing silt etc. from kerbs & channels (SSCM 12053)*	L.m	23.00
DR1-011	Cutting scupper Drains on any soil other than rock to and average width of 0.75 m with proper gradient and ave. Depth of 100 mm (SSCM 1304.3)*	L.m	167.00
DR1-012	Clearing and Desilting of culverts (SSCM 1303.3)*	No	468.00
DR1-013	Clearing choked culverts (With head room > 1m**.)*	Cu.m	1,949.00
	<b>** IF THE CULVERT HEAD ROOM IS LESS THAN 1METER, WORK SHALL BE CARRIED OUT ON DAY WORKS BASIS.</b>		

Item No.	Description	Unit	Rates
DR1-014	Cleaning desilting existing side drains and lead up drains to proper shape and gradient and transport of excavated materials from road side up to 100m*	L.m	58.00
DR1-015	Clearing inlets and outlets of culverts*	No	422.00
	<b><u>SECTION -X</u></b>		
	<b><u>BRIDGES, CULVERTS AND RETAINING WALLS ETC.,</u></b>		
ST1-001	Demolishing Dry coursed masonry including stacking or loading ,(SSCM 202.2)	Cu.m	5,824.00
ST1-002	Demolishing coursed masonry in cement mortar including stacking or loading	Cu.m	6,780.00
ST1-003	Demolishing random rubble masonry in cement mortar including stacking or loading	Cu.m	3,042.00
ST1-004	Random rubble masonry, 150-225 mm rubble in approved cement & sand mortar 1:6 ( <b>Including</b> transport of rubble & piling) [SSCM 1006.3]	Cu.m	18,492.00
ST1-005	Random rubble masonry, 150-225 mm rubble in approved cement & sand mortar 1:5 ( <b>Including</b> transport of rubble) [SSCM 1006.3]	Cu.m	19,142.00
ST1-006	Random rubble masonry, in approved cement & sand mortar 1:6 with available rubble 150-225mm	Cu.m	16,037.00
ST1-007	Random rubble masonry in approved cement & sand mortar 1:5 with available rubble 150-225 mm.	Cu.m	16,687.00
ST1-008	Dry masonry with available heavy rubble or boulders(SSCM 1006.3)	Cu.m	8,856.00
ST1-009	Dry masonry with rubble 150-225 mm ( <b>Excluding</b> transport of rubble & piling)	Cu.m	9,318.00
ST1-010	Dry masonry with available rubble 150-225mm	Cu.m	7,084.00
ST1-011	Packing available rubble and aggregate filter layers behind masonry walls.	Cu.m	1,710.00
ST1-012	Clay puddled & laid behind masonry walls(Excluding transport of clay) [SSCM 705.3]	Cu.m	3,462.00
ST1-013	Grouting coursed stone masonry joints with approved cement & sand mortar 1:3 (SSCM 804.2(C))	Sq.m	723.00
ST1-014	Grouting rubble paving with concrete class C, 1:2:4(19 mm) ( <b>Including</b> transport of aggr. for concrete)	Cu.m	3,464.00
ST1-015	Grouting rubble paving with approved cement & sand mortar (1:3)	Sq.m	1,182.00
ST1-016	Forming weep holes in masonry construction (Labour only)[SSCM 706.3]	Nr.	687.00
ST1-017	Forming weep holes using PVC pipes of internal diameter. not less than 100mm complete with Drip ledge and surround finish smooth.	L.m	855.00
ST1-018	Shoring with 37.5 mm thick class II timber planks up to 3 m Depth	Sq.m	1,515.00
ST1-019	Supplying & fixing class II timber struts etc. for shoring up to 3m Depth	Cu.dm	128.00
ST1-020	Supplying and fixing class II timber in shoring up to 3m Depth (Rate per area basis)	Sq.m	1,833.00
ST1-021	Lifting soil for every 1.5 m beyond the initial 1.5m	Cu.m lift	956.00

Item No.	Description	Unit	Rates
ST1-022	Lifting wedge stones for every 1.5 m beyond the initial 1.5m	Cu.m lift	<b>2,869.00</b>
ST1-023	Lifting rubble or concrete every 1.5 m beyond the initial 1.5m	Cu.m lift	<b>1,434.00</b>
ST1-024	Lowering wedged stones every 1.5m beyond the initial 1.5 m beyond the initial 1.5 m	Cu.m lwr	<b>1,912.00</b>
ST1-025	Lowering rubble or concrete every 1.5m beyond the initial 1.5 m	Cu.m lwr	<b>956.00</b>
ST1-026	Rendering 12.5 mm thick in cement sand mortar 1:2 mix (Rough)	Sq.m	<b>1,174.00</b>
ST1-027	Rendering 12.5 mm thick in cement sand mortar 1:2 mix (Smooth finish)	Sq.m	<b>1,360.00</b>
ST1-028	Rendering 19 mm thick in cement sand mortar 1:2 mix (Rough)	Sq.m	<b>1,638.00</b>
ST1-029	Rendering 19 mm thick in cement sand mortar 1:2 mix (Smooth finish)	Sq.m	<b>1,824.00</b>
ST1-030	Rendering 12.5 mm thick in cement sand mortar 1:3 mix (Rough)	Sq.m	<b>1,137.00</b>
ST1-031	Rendering 12.5mm thick in cement sand mortar 1:3 mix (Smooth finish)	Sq.m	<b>1,341.00</b>
ST1-032	Rendering 19 mm thick in cement sand mortar 1:3 mix (Rough)	Sq.m	<b>1,589.00</b>
ST1-033	Rendering 19mm thick in cement sand mortar 1:3 mix (Smooth finish)	Sq.m	<b>1,775.00</b>
ST1-034*	Mixing & laying manually, cement concrete 1:4:8 (50 mm) (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & Ex. piling) [SSCM 1001.4]	Cu.m	<b>20,433.00</b>
ST1-035*	Mixing & laying using concrete mixer, cement concrete 1:4:8 (50 mm) (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & Ex. piling) (SSCM 1001.8 - 9)	Cu.m	<b>19,833.00</b>
ST1-036*	Mixing & laying manually cement concrete 1:4:8 (50 mm) with 20% plums (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & Ex. piling)	Cu.m	<b>19,236.00</b>
ST1-037*	Mixing & laying using concrete mixer, cement concrete 1:4:8 (50 mm) with 20% plums (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & Ex. piling)	Cu.m	<b>17,701.00</b>
ST1-038*	Mixing & laying manually cement concrete 1:3:6 (37.5 mm) with 20% plums (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & Ex. piling)	Cu.m	<b>20,484.00</b>
ST1-039*	Mixing & laying using concrete mixer, cement concrete 1:3:6 (37.5 mm) with 20% plums (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & piling)	Cu.m	<b>18,926.00</b>
ST1-040*	Mixing & laying manually cement concrete 1:3:6 (37.5 mm) (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & piling)[SSCM 1001.4]	Cu.m	<b>23,694.00</b>
ST1-041*	Mixing & laying using concrete mixer, cement concrete 1:3:6 (37.5 mm) (Volume batching) using crusher run aggregate ( <b>Incl.</b> transport of aggregate & Ex. piling)	Cu.m	<b>22,141.00</b>

Item No.	Description	Unit	Rates
NOTE*	<b>WHEN HAND BROKEN AGGREGATE (50MM OR 37.5MM) ARE USED INPLACE OF CRUSHER RUN AGGREGATE , ON APPROVAL BY GM/CE SSRR TO BE PREPARED BASED ON THE SAME NORMS</b>		
ST1-042	Mixing & laying manually cement concrete 1:3:6 (19 mm) (Volume batching) using crusher run aggregate (Incl. transport of aggregate & Ex. piling)	Cu.m	<b>23,641.00</b>
ST1-043	Mixing & laying using concrete mixer, cement concrete 1:3:6 (19 mm) (Volume batching) using crusher run aggregate (Incl.. transport of aggregate & Ex. piling)	Cu.m	<b>21,937.00</b>
ST1-044*	Mixing & laying manually cement concrete 1:2:4 (37.5 mm) (Volume batching) using crusher run aggregate (Incl.. transport of aggregate & Ex. piling)	Cu.m	<b>26,022.00</b>
ST1-045*	Mixing & laying using concrete mixer, cement concrete 1:2:4 (37.5 mm) (Volume batching) using crusher run aggregate (Incl. transport of aggregate & Ex. piling)**	Cu.m	<b>24,787.00</b>
	<b>** (RATE INCLUDES VIBRATOR COST)</b>		
NOTE*	<b>WHEN HAND BROKEN AGGREGATE (50MM OR 37.5MM) ARE USED INPLACE OF CRUSHER RUN AGGREGATE , ON APPROVAL BY GM/CE SSRR TO BE PREPARED BASED ON THE SAME NORMS</b>		
ST1-046	Mixing & laying manually cement concrete 1:2:4 (19 mm) (Volume batching) using crusher run aggregate (Incl.. transport of aggregate & Ex. piling)	Cu.m	<b>25,785.00</b>
ST1-047	Mixing & laying using concrete mixer, cement concrete 1:2:4 (19 mm) (Volume batching) using crusher run aggregate (Incl.. transport of aggregate & Ex. piling)**	Cu.m	<b>24,538.00</b>
	<b>** (RATE INCLUDES VIBRATOR COST)</b>		
ST1-048	Mixing & laying using concrete mixer(w/batching), cement concrete for Grade 25 (19 mm) using crusher run aggregate in foundation and floors. (Incl. transport of aggregate & Ex. piling)	Cu.m	<b>26,534.00</b>
	<b>*SEE GENERAL NOTES SECTION 33.7</b>		
ST1-048A	Mixing & laying using concrete mixer(w/batching), cement concrete for Grade 25 (70% 37.5 + 30% 19 mm) using crusher run aggregate (Incl.. transport of aggregate & Ex. piling)	Cu.m	<b>25,162.00</b>
	<b>*SEE GENERAL NOTES SECTION 33.7</b>		
ST1-049	Mixing & laying using concrete mixer(w/batching), cement concrete for Grade 30 (19 mm) with crusher run aggregate (Incl. transport of aggregate & Ex. piling)	Cu.m	<b>29,786.00</b>
	<b>*SEE GENERAL NOTES SECTION 33.7</b>		
ST1-050	Mixing & laying using concrete mixer(w/batching), cement concrete for Grade 40 (19 mm) with crusher run aggregate (Incl.. transport of aggregate & Ex. piling)	Cu.m	<b>33,013.00</b>
	<b>*SEE GENERAL NOTES SECTION 33.7</b>		
ST1-051	Mixing & laying using concrete by hand	Cu.m	<b>8,409.00</b>
ST1-052	Mixing & laying using concrete by power Driven concrete mixer V/batching	Cu.m	<b>6,863.00</b>
ST1-053	Curing of concrete Decks, slabs , beams, walls etc. [SSCM 1011.11]	Sq.m/day	<b>39.00</b>

Item No.	Description	Unit	Rates
ST1-054	Fabricate & lay M.S bars as reinforcement (Including transport & wastage)	Kg	485.00
ST1-055	Fabricate & lay tor steel as reinforcement (Including transport& wastage)	Kg	485.00
ST1-056	Cutting & laying reinforcement fabric (Excluding cost of reinforcement fabric)	Sq.m	384.00
ST1-057	Supplying & fixing 25 mm thick planks of class II timber as shuttering, including removing [1008.3(b)]	Sq.m	1,865.00
ST1-057A	Supplying & fixing 25 mm thick planks of class II timber as shuttering for concrete road and kerb for interlocking block paving road including removing(SSCM1006.3(b))	Sq.m	972.00
ST1-058	Supplying & fixing class ii timber bearers, joists , Etc. including Dismantling in shuttering (SSCM 1008.3 (a))	Cu.dm	99.00
ST1-059	100-150 mm Dia. round jungle timber supplied & fixed as props	L.m	148.00
ST1-060	150-200 mm Dia. round jungle timber supplied & fixed as props	L.m	153.00
ST1-061	Formwork smooth finish with class II timber for bridge beams, bridge deck under sides and sides including Dismantling (SSCM 1008.3(b))	Sq.m	4,474.00
ST1-062	Formwork smooth finish with class II timber for bridge column shafts including dismantling (SSCM 1008.3(b))	Sq.m	4,081.00
ST1-063	Formwork smooth finish, using plywood(Shutter 15 mm) and class ii timber bearers, joists and jungle timber props for bridge abutments, wing walls etc.	Sq.m	4,497.00
ST1-064	Supplying & fixing 25mm thick planks and struts of class ii timber as formwork rough finish, in foundation etc. including removing (SSCM 1008.3(b))	Sq.m	2,107.00
ST1-065	Formwork smooth finish for general purposes, using 25mm thick planks & struts of class ii timber and round jungle timber props 100 - 150 mm Dia. including Dismantling	Sq.m	2,879.00
ST1-066	Laying & jointing 152mm Dia. concrete pipes (transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	3,145.00
ST1-067	Laying & jointing 229mm Dia. concrete pipes (transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	4,352.00
ST1-068	Laying & jointing 305mm Dia. concrete pipes (Transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	4,497.00
ST1-069	Laying & jointing 457mm Dia. concrete pipes (Transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	6,067.00
ST1-070	Laying & jointing 610mm Dia. concrete pipes (Transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	9,503.00
ST1-071	Laying & jointing 915mm Dia. concrete pipes (Transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	15,656.00
ST1-072	Laying & jointing 1220mm Dia. concrete pipes (Transport and bedding material paid separately) [SSCM 707.3 - 4]	L.m	23,606.00
ST1-073	Laying & jointing 152 mm Dia. available concrete pipes and collars	L.m	1,145.00
ST1-074	Laying & jointing 229 mm Dia. available concrete pipes and collars	L.m	1,213.00



Item No.	Description	Unit	Rates
ST1-075	Laying & jointing 305-450 mm Dia. available concrete pipes and collars	L.m	1,314.00
ST1-076	Laying & jointing 610 mm Dia. available concrete pipes and collars	L.m	2,593.00
ST1-077	Laying & jointing 915 mm Dia. available concrete pipes and collars	L.m	4,320.00
ST1-078	Laying & jointing 1220 mm Dia. available concrete pipes and collars	L.m	6,147.00
ST1-079	Fixing new bridge planks runners and stacking old planks (Available) [SSCM 1402.2(a)]	Nr.	1,589.00
ST1-080	Removing & re-setting old bridge planks	Nr.	993.00
ST1-081	Supplying & fixing new bridge planks of class I timber	Cu.dm	195.00
ST1-082	Supplying & fixing 31 mm thick Deck planks of class I timber	Sq.m	8,186.00
ST1-083	Fixing new chequered or M.S. plates on timber - decked bridge [SSCM 1402.2(d)]	L.m	2,344.00
ST1-084	Removing & refixing chequered M.S. plates on timber-decked bridge	L.m	3,125.00
ST1-085	Tightening bolts & nuts of chequered of M.S. plates	L.m	464.00
ST1-086	Removing & refixing "U" clips. [SSCM 1402.2(b)]	Nr.	341.00
ST1-087	Cleaning, wire brushing & painting steelwork, one coat enamel paint	Sq.m	371.00
ST1-088	Cleaning, wire brushing & applying tar on steelwork, one coat	Sq.m	312.00
ST1-089	Cleaning, with cotton waste and painting steel work with enamel paint, one coat	Sq.m	211.00
ST1-090	Chipping to bare metal etc. & painting with anticorrosive paint, one coat	Sq.m	1,383.00
ST1-091	Painting with one coat of enamel paint after cleaning, de-rusting & application of one coat anticorrosive paint[SSCM 1401.3(C)]	Sq.m	920.00
ST1-092	Painting with two coats of enamel paint, after cleaning, de-rusting & application of one coat anticorrosive paint	Sq.m	1,126.00
ST1-093	Oiling steel cables on suspension bridges [SSCM 1405.3]	Sq.m	1,048.00
ST1-094	Cleaning booms of steel bridges including scaffolding where necessary [SSCM 1401.3]	L.m	110.00
ST1-095	Demolishing unreinforced cement concrete including cleaning of Debris in foundation and superstructure in dry condition excluding under water structures [SSCM 202.2]	Cu.m	5,239.00
ST1-096	Demolishing reinforced concrete and debris cleared	Cu.m	7,499.00
ST1-097	Demolishing reinforced concrete in very heavy structures build up of grade 30 above concrete in work such as bridge beams & deck slabs, including collecting and removing	Cu.m	15,397.00
ST-098	Supplying and fixing M.S. dowels spliced and dove tailed with wedge at one end, 16mm dia, and 1m long, boring holes to 0.3m depth in fixing	Nr.	1,357.00
ST1-099	Supplying and fixing M.S. dowels, spliced and dove tailed with wedge at one end, 20mm dia, and 1m long, boring holes to 0.3m depth in fixing.	Nr.	1,721.00

Item No.	Description	Unit	Rates
ST1-100	Supplying & fixing M.S.dowels, spliced and Dove tailed with wedge at one end, 25mm dia, and 1m long. boring holes to 0.3m depth in fixing.	Nr.	2,336.00
ST1-101	Lay standard type road kerbs(125mmX900mm) set on19mm thick 1:3 cement mortar layer on 150mm X 275mm 1:2:4(19) concrete foundation with av. 157mm X 150mm wide backing with same concrete including excavation and shuttering (cost of kerb stones including transport to pay separately)	L.m	3,844.00
	*QUANTITY OF AGGREGATE REQUIRED FOR CONCRETING IN 1METER LENGTH IS EQUAL TO :0.06CUM		
ST1-102	Lay standard precast bridge kerbs [Type Drawing No T/B/106-rev 1 of RDA](Cost of precast kerbs & transport paid separately)	L.m	864.00
ST1-103	Constructing 150 X 50 mm thick insitu lower kerb in grade 20 (14 mm) concrete for bridges: ( <b>Incl.</b> Aggregate transport)	L.m	446.00
ST1-104	Laying 450 X 450 X 50 mm precast concrete slabs on foot walks including av. 40mm thick 1:3 cement Mortar bedding (Cost of sabs & transport paid separately)	Sq.m	2,781.00
ST1-105	Laying 450 x 450 x 50 mm precast concrete slabs on foot walks including av.40mm thick sand bedding (Cost of precast slabs and transport to be paid separately)	Sq.m	1,800.00
ST1-106	Fixing precast hand railing and uprights using grade 25(19) concrete including formworks for pockets (Cost of precast items & transport paid separately)[Type Dwg No T/B/102/B]( <b>incl.</b> aggregate transport)	L.m	2,386.00
	*QUANTITY OF AGGREGATE REQUIRED FOR CONCRETING IN 1METER LENGTH IS EQUAL TO :0.017CUM		
ST1-107	Construction of RCC grade 25(19mm) end pillaster, type 1( <b>Incl.</b> Agg. transport) [Type Dwg No T/B/106-Rev 1]	Nr.	74,837.00
	*AGGREGATE QTY, REQUIRED PER PILLASTER		
	37.5MM - 0.08CUM		
	19MM - 0.95CUM		
ST1-108	Construction of RCC Grade 25(19mm) end pillaster, type ii ( <b>Incl.</b> Agg. transport) [type Dwg No T/B/106-Rev 1]	Nr.	82,955.00
	*AGGREGATE QTY, REQUIRED PER PILLASTER		
	37.5MM - 0.09CUM		
	19MM - 1.16CUM		
ST1-109	Construction of RCC grade 25(19mm) end pillaster, type iii ( <b>Incl.</b> Agg. transport) [Type Dwg No T/B/106-Rev 1]	Nr.	48,192.00
	*AGGREGATE QTY, REQUIRED PER PILLASTER		
	19MM - 0.70CUM		
ST1-110	Construction of RCC grade 25(19mm) end pillaster, type iv ( <b>Incl.</b> Agg. transport) [Type Dwg No T/B/106-Rev 1]	Nr.	51,960.00
	*AGGREGATE QTY, REQUIRED PER PILLASTER		
	19MM - 0.70CUM		
ST1-111	Laying of grade 20 concrete precast pin kerbs in grade 20(19) concrete foundation as edging ( <b>Incl.</b> Agg. transport)	L.m	1,286.00
ST1-112	Supplying and fixing 25mm thick tong and grooved planks with 50x50mm struts of Class 1 timber in panels as smooth shuttering for concrete Drains (12Uses)	Sq.m	1,955.00

Item No.	Description	Unit	Rates
ST-112A	Supplying and fixing 25mm thick tong and grooved planks with 50x50mm struts of class 1 timber in panels as smooth shuttering for concrete Drains(for 13.38 sq.m )	Use	<b>10,849.00</b>
ST1-113	Supply and packing 50-200 mm Dry stone lining behind abutments and wind walls ( <b>Excl.</b> Aggregate transport)	Cu.m	<b>3,672.00</b>
ST1-114	Laying geotextile on prepared surface supply and transport to pay separately	Sq.m	<b>104.00</b>
ST1-115	Construction of gabion wall using 4x1x1m mesh including lacing wire on prepared ground.(supply and transport of gabion mesh to be paid separately);	Cu.m	<b>9,992.00</b>
ST1-116	Construction of gabion wall using 4x1x0.5 m mesh including lacing wire on prepared ground (Supply and transport of gabion mesh to be paid separately)	Cu.m	<b>10,707.00</b>
ST1-117	Construction of kerb inlet as per Drawing type - k1/t1 with cover slabs. <b>Incl</b> transport of aggre.(rate per 1kerb inlet pit with 1.2m length)	No	<b>17,371.00</b>
NOTE*	<b>EARTH EXCAVATION TO BE CONSIDERED BY THE ENGINEER AS PER SITE CONDITION AND ADD SEPERATELY IF REQUIRED.</b>		
	<b>ITEM RESERVED FOR BRIDGE WORKS ONLY</b>		
	THE RATES IN THE FOLLOWING ITEMS FROM ST1-118 TO ST1-120 SHOULD BE ADDED TO THE CONCRETE RATE SELECTED FROM ITEM CODES ST1-038 TO ST1-050 , DEPENDING ON THE STRUCTURAL LOCATION.		
ST1-118	Additional labour for pouring, compacting and levelling concrete in screed under foundation slabs	Cu.m	<b>1,462.00</b>
ST1-119	Additional labour for pouring, compacting concrete in abutments , wing walls, capping beams of piers and foot walks of bridges	Cu.m	<b>473.00</b>
ST1-120	Additional labour for pouring, compacting and levelling infiller concrete between bridge beams including screed of bridge Decks.	Cu.m	<b>2,198.00</b>
ST1-121	Laying ready mixed grade concrete including vibration * (suppl;y of concrete to be paid seperately )	Cu.m	<b>2,975.00</b>
ST1-122	Supplying and laying approved hard Rubber bearing pads 75mm x 12mm over capping beams and under the approach slabs	L.m	<b>1,771.00</b>
ST1-123	Bitumenous sealing material supplied and laid under beam ends to prevent grout leak on to capping beam. transport of emulsion not included. (including cost of emulsion )	L.m	<b>219.00</b>
ST1-124	230mm Dia. polythene Displacers supplied and filled with saw Dust or similar light material in Deck. transport of saw Dust to be paid separately	L.m	<b>60.00</b>
ST1-125	230mm Dia. polythene Displacers supplied and filled with saw Dust or similar light material in Deck. transport of saw Dust to be paid separately	L.m	<b>105.00</b>
ST1-126	325mm Dia. polythene Displacers supplied and filled with saw Dust or similar light material in Deck. transport of saw Dust to be paid separately	L.m	<b>166.00</b>
ST1-127	PCC beams 16.15m long launched into position	Nr.	<b>21,883.00</b>
ST1-128	PCC beams 13.41m and 12.19m long launched into position	Nr.	<b>14,913.00</b>

Item No.	Description	Unit	Rates
ST1-129	PCC beams 10.67m, 9.75m and 8.23m long launched into position	Nr.	11,585.00
ST1-130	PCC beams 7.01m, 6.09m, 5.18m and 4.26m long launched into position	Nr.	8,850.00
ST1-131	M.S. angle iron and hard rubber expnsion joints as per Drawing No T/B/107 Rev. 1	L.m	11,341.00
ST1-132	Transport of 355 X 355 X 9144 mm R.C. sheet piles to the site excluding unloading and stacking	Nr/km	102.00
ST1-133	Stacking of 355 X 355 X 9144 mm R.C. sheet piles	Nr.	6,500.00
ST1-134	Transport of 305 X 200 X 6100 mm R.C. sheet piles to the site excluding unloading and stacking	Nr/km	27.00
ST1-135	Stacking of 305 X 355 X 6100 mm R.C. sheet piles	Nr.	3,190.00
ST1-136	Driving 305 X 200 X 6100 mm R.C. sheet piles using hand monkey	L.m	12,520.00
ST1-137	Saturated sand filling	Cu.m	7,150.00
ST1-138	Stacking of P.S.C. beam 16.15m (53 inch) long	Nr.	13,000.00
ST1-139	Transport of PSC Beams 16.15m(53inch)long to the site	per beam/km	204.00
ST1-140	Stacking of P.S.C. beam 13.41m (44 inch) and 12.19m (40 inch) long	Nr.	9,569.00
ST1-141	Transport of PSC Beams 13.41m(44inch) or 12.19m (40inch)long to the site	per beam/km	136.00
ST1-142	Stacking of P.S.C. beam 10.63m (35 inch) and 9.75m (32 inch) or 8.23m (27 inch) long	Nr.	7,176.00
ST1-143	Transport of PSC Beams 10.63m(35inch) or 9.75m (32inch)or 8.23m(27inch)long to the site	per beam/km	102.00
ST1-144	Stacking of P.S.C. beam 7.01m (23 inch) long	Nr.	4,784.00
ST1-145	Transport of PSC Beams 7.01m(23inch) long to the site	per beam/km	68.00
ST1-146	50mm thick cover slabs for service ducts in grade 25(20) concrete inclusive of light reinforcement	Sq.m	3,134.00
ST1-147	100mm 0 type 400 PVC service duct supplying and fixing in Deck	L.m	1,090.00
ST1-148	110mm 0 type 250 PVC rain water outlets supplying and fixed through deck	L.m	1,079.00
ST1-149	50mm 0 type 400 PVC Drain pipes supplying and fixed through deck	L.m	659.00
ST1-150	25mm 0 type 1000 PVC Drain pipes supplying and fixed through deck	L.m	465.00
	<b><u>SECTION - XI</u></b>		
	<b><u>KILOMETER POSTS AND GUARD STONES</u></b>		
RF1-001	White washing, Two coats to guide / guard stones	Nr.	108.00
RF1-002	Whitewashing Two coats k.m. stones inc. numbering & Tar skirting.	Nr.	1,162.00
RF1-003	Painting white back ground on parapets etc. & stencilling nos.	Nr.	423.00

Item No.	Description	Unit	Rates
RF1-004	Fixing guard stones in any soil	Nr.	338.00
RF1-005	Casting STD k.m. stones with R.C.C. [1:2:4(19 mm) & cement 282.5 kg/cu.m ] including curing, for "A" and "B" class roads	Nr.	9,817.00
RF1-006	Casting STD k.m. stones with R.C.C. [1:2:4(19 mm) & cement 282.5 kg/cu.m ] including curing, for "C" and "D" class roads	Nr.	6,569.00
RF1-007	Fixing standard type k.m. stones in any soil	Nr.	2,518.00
RF1-008	Fixing new or refixing type guard stones in cement concrete [1:3:6(37.5mm) and cement 219 kg/cu.m ] with min. cover 75mmx 300 mm Depth	Nr.	1,298.00
RF1-009	Casting standard type guard stones in concrete [1:2:4(19mm) & cement 282.5 kg / cu.m]	Nr.	3,314.00
RF1-009A	Casting standard type guard stones in concrete grade 20(19) as per drawing no. T/B/100-REV.1 for bridges and culverts	Nr.	4,683.00
NOTE*	19MM AGGREGATE PER BOUNDARY MARKER IS 0.039 CU.M.		
RF1-010	Route numbering with reflective paint on 2 sides	Nr.	1,060.00
RF1-011	Casting standard boundary markers in reinforced concrete [1:2:4(19mm)] with admixtures, including 14 days curing and loading to vehicle at yard(Incl; Agg. transport )	Nr.	3,376.00
NOTE	19MM AGGREGATE PER BOUNDARY MARKER IS 0.039 CU.M.		
	<b><u>SECTION - XII</u></b>		
	<b><u>NOTICE BOARDS AND SIGN BOARDS</u></b>		
	<b>(SSCM 810.2 AND 1501.3) (ALL PAINTS SHOULD CONFORM TO THE REQUIREMENTS OF S.L.S. AS GIVEN IN SSCM 1707)</b>		
RS1-001	Notice and traffic signs boards etc. fixed in concrete [1:3:6] 37.5mm and cement 219 kg/cu.m ( <b>Excluding</b> transport of aggregate)	Nr.	2,442.00
RS1-001A	Warning and Regulatory traffic signs etc. fixed in place using concrete [1:3:6] 37.5mm and cement 219 kg/cu.m. Complete including all labour, materials and plant.	Nr.	6,140.00
RS1-002	Cleaning and White washing 2coat town name boards(inc Tar Skirt)	Nr.	591.00
RS1-003	Cleaning, painting one coat & relettering etc.traffic sign boards inc. paint post in B/W	Nr.	3,553.00
RS1-004	Cleaning and painting 1 coat on notice board	Nr.	473.00
RS1-005	lettering & numbering below 50 mm	Nr.	89.00
RS1-006	Lettering and numbering 50mm-75mm	Nr.	107.00
RS1-007	lettering & numbering 75 mm - 150 mm	Nr.	133.00
RS1-008	lettering & numbering 150 mm - 225 mm	Nr.	178.00
RS1-009	Painting 2 coats continuous centre line,100 mm wide with enamel paint	L.m	209.00
RS1-010	Painting 1 coats continuous centre line,100 mm wide with road marking paint (White)	L.m	221.00

Item No.	Description	Unit	Rates
RS1-011	Painting 2 coats broken centre line,100 mm wide with enamel paint	L.m	202.00
RS1-012	Painting 1 coats continuous centre line (Without reflective studs),100 mm wide, at 3 metre intervals with road marking paint (White)	L.m	212.00
RS1-013	Barricading with empty (Hot tar) barrels including white washing, transporting and cost of barrels	Nr.	368.00
RS1-014	Revetment to banks etc. with empty barrels in horizontal tiers with vertical batter(1:8) including transport of barrels	Nr.	964.00
RS1-015	Road marking continuous centre line 100 mm width, using thermoplastic paint (White) , inclusive barricading.(Paint materials & reflective glass beads to pay separately)	Sq.m	416.00
NOTE*	<b>1 KG OF THERMO PLASTIC PAINT COVERS 0.14 SQ.M. AREA AT 3.0MM THICKNESS 25KG OF GLASS BEADS WILL COVER 100 SQ.M. AREA</b>		
RS1-016	Road marking standard pedestrian crossing, using thermoplastic paint (White) , inclusive barricading.(Paint materials & reflective glass beads to pay separately)	L.m	382.00
NOTE*	<b>1 KG OF THERMO PLASTIC PAINT COVERS 0.14 SQ.M. AREA AT 3.0MM THICKNESS 25KG OF GLASS BEADS WILL COVER 100 SQ.M. AREA</b>		
	<b><u>SECTION - XIII</u></b>		
	<b><u>MISCELLANEOUS</u></b>		
MS1-001	Preparing stock piling premix using pen, Grade bitumen ( <b>Incl.</b> transport of aggregate)(Site made) (including cost of bitumen)	Cu.m	21,815.00
MS1-002	Patching shallow pot holes. Depth less 20mm using hot bitumen 1.2ltr/sq.m & 12.5mm chips single size @ 13.75 cu.deci m/sq.m include. hand tamping rat. including cost of bitumen & <b>including</b> cost of materials(Including transpt. of aggregate and Excl.Bitumen )	Sq.m	329.00
MS1-003	Patching shallow potholes, Depth less than 20mm using 10-20% cutback 80/100bitumen 1.2ltr/sq.m and 12.5mm chips, single size at the rate of 13.75 cuDeci m/sq.m including hand tamping(rate includes cost of bitumen and materials & <b>Incl.</b> transport of aggregate and Excl. transport of bitumen	Sq.m	351.00
MS1-004	Patching shallow pot holes,depth less than 20mm using emulsion (crs1) @the rate of 1.2ltr/sq.m & 12.5mm chips single size at the rate of 13.75 cu.deci m/sqm includig hand tamping transport of emulsion to site etc. rate includes cost of emulsion and incl other materials)( <b>Incl.</b> transprt of aggregate)	Sq.m	339.00
MS1-005	Patching potholes, of medium Depth 20-75mm with premix material ( <b>site made</b> ) using cut back 80/100 bitumen 10-20% @ the rate of 83.5lit per cu.m of <b>19mm</b> and down gauge stone aggregate, including preparation of surface tack coat with emulsion(CSS1) at .75ltr/Sqm,trimming sides,laying premix and tamping.(rate inclusive of premix made at site & tack coat)( <b>Incl.</b> transport of aggregate)	Sq.m	2,541.00
MS1-006	Patching potholes using <b>plant made bitumen</b> boundbase (with 60/70 binder) including sealing the patching with emulsion (CRS-1) painting @ 7.3 ltr/m.ton cover with sand (Rate is inclusive of premix and includingTransport )	M.ton	17,603.00

Item No.	Description	Unit	Rates
MS1-007	Patching potholes of medium Depth 20-75mm using graded aggregate 19-12.5mm using hot bitumen (80/100)@ 2.0 ltr/sq.m covered with blotted material at the rate of 1 cu.m/125 sq.m including preparation of surface, tack coat with (CSS-1)at 0.75ltr/sqm, trimming sides, laying aggregate, tamping etc.,complete. (Rate inclusive of aggregate and tack coat but Incl. transport of aggregate & Excl. Bitumen)	Sq.m	<b>1,585.00</b>
MS1-008	Patching Deep pot holes deeper than 75 mm with premix material ( <b>site made</b> ) to a depth of 37.5 mm(over the already prepared surface with aggregate and gravel paid separately) using 10-20% cut back bitumen at the rate of 83.5 ltr/cu.m of 19 mm and down graded aggregate including preparation of surface, tack coat with emulsion(CSS-1) 0.75ltr/sqm, trimming sides, laying premix, tamping etc.,complete(Rate inclusive of premix made at site and tack coat)(Incl. transport of aggregate and Excl.Bitumen)	Sq.m	<b>1,453.00</b>
MS1-009	Patching pot hols more then 75mm deep with water bound gravel material using 50mm or 12.5 mm single size aggregate along with useable old aggregate obtain from picking and preparation of surface inc. laying watering spreading gravel of approved quality and tamping as directed.(Incl.aggregate and gravel )	Sq.m	<b>93.00</b>
MS1-010	Patching ruts and Depressions upto 75mm Depth using <b>site made cold mix(Cut back)</b> material with the surface and edge prepared as per specifications and application of tack coat with emulsion (CSS-1)0.75ltr/sqm (Including transport of aggregate)	Sq.m	<b>2,274.00</b>
MS1-011	Patching ruts and Depressions upto 75mm Depth using <b>plant made</b> cold mix(60/70cut back) material with the surface and edge prepared as per specification and application of tack coat with emulsion (CSS-1)@0.75ltr/sq.m (Rate is inclusive of cold mix inclu.transport )	Sq.m	<b>2,038.00</b>
MS1-012	Patching ruts and Depressions deeper than 75mm the surface and edges prepared as per specification tack coat with emulsiong (CSS-1) @ .75ltr/sq.m , Trimming sides, 50mm down gauge aggregated laid and compacted and the top 40mm laid and compacted with site made cold mix (cut back) material (aggregate 50mm down gauge and incl. transport)	Sq.m	<b>1,971.00</b>
MS1-013	Patching ruts and Depressions upto 75mm Depth the surface and edges prepared as per specificatiaon and application of tack coat with emulsion (CSS-1)@0.75ltr/sqm 50mm down gauge aggregated laid and compacted, using hot bitumen (80/100)@2ltr/sqm covered with blotton material (Sand) at the rage of 1cum/125sqm(Aggragate will be paid separately)	Sq.m	<b>1,491.00</b>
MS1-014	Patching ruts and Depressions Deeper than 75mm depth the surface and deges prepared as per specification and application of tack coat with emulsion(CSS-1)@0.75ltr/sq.m 50mm Down gauge aggregated laidand compacted, using hot bitumen (80/100)@2ltr/sqm covered with blotten material(sand),at the rage of 1cum/125sqm(Aggragate will be paid separately)	Sq.m	<b>1,699.00</b>

Item No.	Description	Unit	Rates
MS1-015	Correcting and strengthening the edges of the road with <b>site made cold mix</b> 40mm thick prepared using cut back bitumen 10-20% at the rate of 83.5ltr/cum of 19mm and down gauge aggregate over a tack coat using emulsion at 0.75 ltr/sqm laid over 50mm and down gauge aggregate laid on position. watered and compacted including earth work excavation to a width of 225mm and depth of 125mm (cost of aggregate and transport to be paid separately)	Sq.m	<b>2,427.00</b>
MS1-016	Correcting & strengthening edges of road with site made cold mix 40mm thick prepared using cutback bitumen (10-20%) at the rate of 83.5ltr/cu.m 19mm Down gauge aggregate over a tack coat with emulsion at .75ltr/sq.m laid over 50mm and down gauge aggregate laid, on position watered and compacted with a bottom layer of 100mm aggregate closely packed, including earth work excavation to width of 225mm and depth of 225mm (aggregate 100mm, 50mm down gauge and transport will be paid separately)	Sq.m	<b>2,841.00</b>
MS1-017	Patch sealing with emulsion painting the surface by spray of CRS-1 @ .75ltr/sq.m squeegee the emulsion and spreading the blotting material (Sand) at the rate of 1 cu.m/125 sq.m . (including cost of emulsion)	Sq.m	<b>193.00</b>
MS1-018	Patch sealing with hot bitumen painting the surface by using .75ltr/sq.m squeegee the bitumen and spreading the blotting material (Sand) at the rate of 1 cu.m/125 sq.m (Transport of bitumen paid separately) (including cost of bitumen)	Sq.m	<b>188.00</b>
MS1-019	Patch sealing of pitted surface, using hot sand bitumen mix 104 ltr/cu.m of sand spread and tamped including brushing and cleaning of surface. (including cost of bitumen)	Sq.m	<b>447.00</b>
MS1-020	Patch sealing of pitted surface with a emulsion sand slurry using CRS 1 or 2 at the rate of 136.5ltr/cum of sand mix properly laid, levelled and squeegee including brushing and cleaning the surface before application.	Sq.m	<b>487.00</b>
MS1-021	General upkeep of road sides including maintaining the right of way in a neat condition by trimming, weeding & clearing of the road sides, Drains, Drainage structures, scupper Drains & cleaning minor slips	Sq.m	<b>46.00</b>
MS1-022	Cleaning ordinary jungle including removing high growing plants and trees of girth < 300 mm other than those designated to remain by uprooting or by cutting and then uprooting the stumps or by cutting only as Directed (SSCM 1203.2)	Sq.m	<b>6.00</b>
MS1-023	Cleaning medium jungle including removing high growing plants and trees of girth < 300 mm other than those designated to remain by uprooting or by cutting and then uprooting the stumps or by cutting only as Directed	Sq.m	<b>8.00</b>
MS1-024	Cleaning heavy jungle including removing all high growing plants and trees of girth < 300 mm other than those designated to remain by uprooting or by cutting and then uprooting the stumps or by cutting only as Directed	Sq.m	<b>10.00</b>
MS1-025	Repairs to Damage of shoulders verges & embankments slopes incl making good depressions, ruts, holes & erosion path with approved gravelly soil & compact same with roller (8-10 ton) as Directed (gravel soil paid separately if brought outside (including roller hire)	Cu.m	<b>764.00</b>



Item No.	Description	Unit	Rates
MS1-026	Regrade & regravelling of shoulders with gravel of approved quality , duly compacted with roller (8-10 ton) as directed for repairing high sides caused by heavings deposits and construction debries, to required levels by using motor grader (120-140hp).	Cu.m	<b>349.00</b>
MS1-027	Regrade and regravell of shoulders with gravel of approved quality , duly compacted with roller (8-10 ton) as directed for repairing high side caused by heavng deposit & constructon debrie, to required level manually gravel(loose volume).	Cu.m	<b>856.00</b>
MS1-028	Replacing Damaged crack concrete slabs with precast/cast insitu cement concrete 1:2:4 (19 mm) using 19 mm & down guage stone minimum thickness 50 mm including fixing laying with cement mortar 1:3 joints over compacted bed etc.[SSCM 1204.3]	Sq.m	<b>3,596.00</b>
MS1-029	Cutting and removing fallen trees upto 600 mm girth including cutting into required number of pieces including Disposal as Directed. minimum piece shall not be less than 2m(SSCM 1203.2)	Nr.	<b>1,184.00</b>
MS1-030	Cutting and removing fallen trees 600 - 900 mm girth including cutting into required number of pieces including Disposal as Directed. minimum piece shall not be less than 2m(SSCM 1203.2)	Nr.	<b>1,691.00</b>
MS1-031	Weeding masonry culverts small bridges and retaining walls (SSCM 1303.3)	Nr.	<b>301.00</b>
MS1-032	Masonry random rubble with boulders including collect (SSCM 1006.3(b))	Cu.m	<b>2,338.00</b>
MS1-033	Fixing cats eyes in tar macadam including breaking road surface, barricade etc.[SSCM 810-.3(c)]	Nr.	<b>648.00</b>
MS1-034	Reducing high sides in ordinary soil [SSCM 301.3/1201.3(c)]	Cu.m	<b>1,011.00</b>
MS1-035	Reducing high sides in medium soil	Cu.m	<b>1,489.00</b>
MS1-036	Reducing high sides in hard soil	Cu.m	<b>1,967.00</b>
MS1-037	Reducing high sides in soft rock	Cu.m	<b>2,446.00</b>
MS1-038	Reducing high sides in rock requiring blasting	Cu.m	<b>5,146.00</b>
MS1-039	White washing 1 coat to parapets of bridges and culverts (SSCM 1403.3e)	Sqm	<b>69.00</b>
MS1-040	White washing 2 coat to parapets of bridges and culverts	Sq.m	<b>119.00</b>
MS1-041	White washing 1 coat to parapets of bridges and culverts after cleaning attending to minor repairs	Sq.m	<b>92.00</b>
MS1-042	White washing 2 coat to parapets of bridges and culverts after cleaning attending to minor repairs	Sq.m	<b>148.00</b>
MS1-043	Painting with emulsion 1 coat to parapets of bridges and culverts, guard stones and km posts after cleaning and attending to minor repairs [ SSCM 1501.3(a)-(v)]	Sq.m	<b>281.00</b>
MS1-044	Painting with enamel 1 coat to parapets of bridges and culverts, guard stones and km posts after cleaning and attending to minor repairs [ SSCM 1501.3(a)-(v)]	Sq.m	<b>283.00</b>
MS1-045	Painting with enamel 2 coats to parapets of bridges and culverts, guard stones and km posts after cleaning and attending to minor repairs [ SSCM 1501.3(a)-(v)]	Sq.m	<b>488.00</b>

Item No.	Description	Unit	Rates
MS1-046	Painting with emulsion 2 coat to parapets of bridges and culverts, guard stones and km posts after cleaning and attending to minor repairs [ SSCM 1501.3(a)-(v)]	Sq.m	<b>496.00</b>
MS1-047	Painting with emulsion 1 coat to parapets of bridges and culverts, guard stones and km posts including preparing surface of old work [ SSCM 1501.3(b)-(v)]	Sq.m	<b>267.00</b>
MS1-048	Painting sub coat emulsion to parapets of bridges and culverts, guard stones and km posts including preparing surface [SCM 1501.3(b)-(v)]	Sq.m	<b>233.00</b>
MS1-049	Painting 1 coat emulsion paint to parapets of bridges and culverts, guard stones and km posts including preparing surface of new work [ SSCM 1501.3(b)-(v)]	Sq.m	<b>243.00</b>
MS1-050	Cleaning & painting 100 mm wide stripe for skirting to guard stones.(SSCM 1501.3(b)(v)) :	L.m	<b>140.00</b>
MS1-051	Painting 2 coats standard pedestrian crossing for carriageway [SSCM 810.2(c)]	L.m	<b>2,982.00</b>
MS1-052	Painting 1 coat standard pedestrian crossing for carriageway using road marking paints [SSCM 810.2(c)]	L.m	<b>3,319.00</b>
MS1-053	Erecting, barricading in jungle timber 75-100 mm Dia, vertical posts at .9m centres and 1.2 above ground including white washing. [SSCM 1709]	L.m	<b>499.00</b>
MS1-054	Temporary scaffolding for painting or tarring bridges and for weeding on bridges or retaining wall including Dismantling after work. [SSCM 1008.3(a)]	Sq.m	<b>207.00</b>
MS1-055	Roughening existing Smooth tarred metalled carriageway by hand for bonding , collecting Disposal of all loose materials [SSCM 03.3(b)]	Sq.m	<b>32.00</b>
MS1-056	Supply of Diesel for machineries	litre	<b>125.00</b>
MS1-057	Patching road with premix(Loose volume) after prep, surface with emulsion (CSS-1) at .75 ltr/sq.m at tack coat including internal transport and hand stamping. (Supply of premix (Loose volume) paid separately) [SSCM 1102.3(b)] ( including cost of emulsion)	Cu.m	<b>9,252.00</b>
MS1-058	Patching road with premix after preparing surface with emulsion (CSS-1) at .75 ltr/sq.m as tack coat, including internal transport and stamping with machine (Supply of premix paid separately) [SSCM 1102.3(b)(i)] (including cost of emulsion)	M.ton	<b>9,235.00</b>
MS1-059	Painting two coats enamel paint on kerbs, after cleaning and preparing surface	Sq.m	<b>556.00</b>
MS1-060	Preparing and stock piling premix at site using 12.5 mm aggregate and emulsion (CSS-1) (Including transport of aggregate) :( including cost of emulsion)	Cu.m	<b>20,030.00</b>
MS1-061	Breaking manually asphalt layer 2"-3" thick on the carriageway for kerb laying	L.m	<b>781.00</b>
MS1-062	Supplying and fixing of 1/2" thick regiform sheets as directed by Engineer	Sq.m	<b>325.00</b>
MS1-063	Supplying and fixing of gauge 300 Polythene laid under drains and roads	Sq.m	<b>35.00</b>
MS1-064	Curing of Concrete for Road Surfaces	Sq.m/day	<b>5.00</b>

Item No.	Description	Unit	Rates
SSR	Asphalt Concrete wearing course binder 60/70 bitumen 4.7% Mix-Dense (19mm) Ex-plant	M.ton	11,838.00
SSR	Asphalt concrete binder course binder bitumen 4.1% MIX-dense [19mm] - Ex-plant	M.ton	11,256.00
SSR	Asphalt Concrete Cut Back (19 mm)	M.ton	13,192.00
	<b><u>Paving Blocks</u></b>		
	<b>Natural Colour Blocks Item No. MS1-068 - MS1-075</b>		
MS1-068	Supply & paving <b>80mm thick Rectangular (Approx. size 200mm x 100mm)</b> natural colour precast interlocking paving blocks of 40 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	4,721.00
MS1-069	Supply & paving <b>80mm thick Rectangular (Approx. size 200mm x 100mm)</b> natural colour precast interlocking paving blocks of 30 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	4,090.00
MS1-070	Supply & paving <b>80mm thick Rectangular (Approx. size 200mm x 100mm)</b> natural colour precast interlocking paving blocks of 25 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	3,999.00
MS1-071	Supply & paving <b>60mm thick Rectangular (Approx. size 200mm x 100mm)</b> natural colour precast interlocking paving blocks of 15 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the low volume traffic areas or pedestrian areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	3,831.00
MS1-072	Supply & paving <b>80mm thick Non Rectangular (Approx. size 220mm x 110mm)</b> natural coloured precast interlocking paving blocks of 40 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	4,583.00

Item No.	Description	Unit	Rates
MS1-073	Supply & paving <b>80mm thick Non Rectangular (Approx. size 220mm x 110mm)</b> natural coloured precast interlocking paving blocks of 30 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	<b>3,895.00</b>
MS1-074	Supply & paving <b>80mm thick Non-Rectangular (Approx. size 220mm x 110mm)</b> natural coloured precast interlocking paving blocks of 25 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	<b>3,742.00</b>
MS1-075	Supply & paving <b>60mm thick Non-Rectangular (Approx. size 220mm x 110mm)</b> natural coloured precast interlocking paving blocks of 15 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the low volume traffic areas or pedestrian areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	<b>3,276.00</b>
<b>Coloured Blocks - Item No. MS1-076 - MS1-083</b>			
MS1-076	Supply & paving <b>80mm thick Rectangular (Approx. size 200mm x 100mm)</b> coloured precast interlocking paving blocks of 40 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	<b>5,508.00</b>
MS1-077	Supply & paving <b>80mm thick Rectangular (Approx. size 200mm x 100mm)</b> coloured precast interlocking paving blocks of 30 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	<b>4,685.00</b>
MS1-078	Supply & paving <b>80mm thick Rectangular (Approx. size 200mm x 100mm)</b> coloured precast interlocking paving blocks of 25 N/mm <sup>2</sup> compressive strength, on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	<b>4,530.00</b>

Item No.	Description	Unit	Rates
MS1-079	Supply & paving 60mm thick Rectangular (Approx. size 200mm x 100mm ) coloured precast interlocking paving blocks of 15 N/mm <sup>2</sup> compressive strength , on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the low volume traffic areas or pedestrian areas Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	3,798.00
MS1-080	Supply & paving 80mm thick Non Rectangular (Approx. size 220mm x 110mm ) coloured precast interlocking paving blocks of 40 N/mm <sup>2</sup> compressive strength , on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	6,065.00
MS1-081	Supply & paving 80mm thick Non Rectangular (Approx. size 220mm x 110mm ) coloured precast interlocking paving blocks of 30 N/mm <sup>2</sup> compressive strength , on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	4,474.00
MS1-082	Supply & paving 80mm thick Non Rectangular (Approx. size 220mm x 110mm ) coloured precast interlocking paving blocks of 25N/mm <sup>2</sup> compressive strength , on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the high volume traffic areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	4,175.00
MS1-083	Supply & paving 60mm thick Non Rectangular (Approx. size 220mm x 110mm ) coloured precast interlocking paving blocks of 15N/mm <sup>2</sup> compressive strength , on 2" thick compacted Quarry dust laid on top of a levelled and well compacted earth sub base for the low volume traffic areas or pedestrian areas. Paving blocks should confirming to S.L.S 1425 : Part I & II and subject to the approval of the quality & colour including transport and laying. Rate shall include hire charges of 1/2 - 1 ton vibrating roller.	Sq.m	4,083.00
	<b><u>SECTION - XIV</u></b>		
	<b><u>SURVEYING</u></b>		
SV1-001	Supply of unskilled labour	Days	2,640.00
SV1-002	Supply of semiskilled labour	Days	2,880.00
SV1-003	Supply of skilled "A" Grade labour	Days	4,020.00
SV1-004	Supply of skilled "B" Grade labour	Days	3,600.00
SV1-005	Clearing jungle (Light) to a width of 1.22 metres for survey work	km	10,084.00
SV1-006	Clearing jungle (Medium) to a width of 1.22 metres for survey work	km	13,446.00
SV1-007	Clearing jungle (Heavy) to a width of 1.22 metres for survey work	km	20,169.00

Item No.	Description	Unit	Rates
SV1-008	Supply of labour for chaining and cutting Pages and Pegging	km	2,750.00
SV1-009	Levelling Chaining and Pegging and establish bench marks on Concrete rock or pegs and Checking back levels	km	5,501.00
SV1-010	Surveying includign fixing pickets & taking angles	km	5,501.00
SV1-011	Changing traverse lines and taking off-sets	km	7,334.00
SSR	Asphalt Concrete wearing course binder 60/70 bitumen 4.7% Mix-Dense (19mm) Ex-plant	M.ton	11,838.00
SSR	Asphalt concrete binder course binder 60/70 bitumen 4.1% MIX-dense [19mm] - Ex-plant	M.ton	11,256.00
SSR	Asphalt Concrete Cut Back (19mm)	M.ton	13,192.00
	<b><u>SECTION - XV</u></b>		
	NOTE ON LABORATORY TESTING OF ROAD CONSTRUCTION WORK		
	THE FOLLOWING LABORATORY TEST RATES ARE APPLICABLE WHEN IT IS NECESSARY TO DIRECT ADDITIONAL TESTING OVER AND ABOVE THE MINIMUM TESTING SPECIFIED IN THE SPECIFICATIONS.		
	PLEASE NOTE THAT NO PAYMENT SHOULD BE MADE FOR TESTING MENTIONED IN SPECIFICATION.		
	WHEN TESTS ARE CARRIED OUT IN THE FIELD, TRANSPORT CHARGES SHALL BE ADDED IN ADDITION TO THE TESTING CHARGES.		
	<b>TESTING OF BITUMINOUS MATERIALS</b>		
SSR	Penetration Test (ASTM D-5-97)	Item	2,900.00
SSR	Extraction and gradation test for Asphalt Mixes (ASTM D - 2172.05)	Item	5,103.00
SSR	Marshall Stability and Flow test (ASTM D - 1559-89)	Item	3,451.00
SSR	Marshall Density Test (3 Mould)	Item	2,785.00
SSR	Specific gravity of Bitumen (ASTM D - 70)	Item	2,020.00
SSR	Insitu Density of Asphalt Concrete (ASTM D - 2726-96)	Item	1,248.00
SSR	Cutting of Asphalt Concrete cores - 100mm	Item	3,500.00
SSR	Tray Test	Item	1,296.00
SSR	Softening Point Test (ASTM D -36-95)	Item	2,544.00
SSR	Distillation of Cut Back Bitumen/ Emulsion Test (ASTM D-402-91/D24499)	Item	3,856.00
SSR	Density of Asphaltic Concrete up to 3Nos.	Item	1,269.00
SSR	Extraction Test	Item	5,103.00
SSR	Ductility Test	Item	2,992.00
SSR	Flash point/ Fire point Test	Item	2,706.00
SSR	Kinematic Viscosity	Item	4,315.00
SSR	Loss on Heating	Item	3,683.00

Item No.	Description	Unit	Rates
SSR	Solubility Test	Item	2,830.00
SSR	Asphalt concrete Mix design	Item	89,122.00
	<b>TESTING OF ROAD MARKING</b>		
SSR	Road marking for 1 sample	Item	204.00
	<b>TESTING OF CONCRETE</b>		
SSR	Slump test of Concrete	Item	843.00
SSR	Casting of Concrete Cubes (3Cubes)	Item	1,960.00
SSR	Compressive Strength of Concrete Cubes	Item	810.00
SSR	Cutting Concrete Cores (100mm)	Item	4,065.00
SSR	Rental for casting mould (1mould)	Item	268.00
SSR	<b>Cutting &amp; Capping of Concrete Cores</b>	Item	
SSR	Cost for Cutting 100mm dia. Core - Single Side	Item	934.00
SSR	Cost for Cutting 100mm dia. Core - Both Side	Item	1,438.00
SSR	Cost for Capping 100mm dia. Core - Both Side	Item	1,124.00
SSR	Rebound Hammer Test (Per Unit)	Item	1,280.00
SSR	Compressive Strength of Concrete Core	Item	832.00
SSR	Cutting Concrete Cores (150mm)	Item	4,256.00
SSR	End Preparation of Cores 50mm dia. Core both side	Item	677.00
SSR	Concrete Core Capping both side 50mm	Item	719.00
SSR	End Preparation of Cores 50mm dia. Core Single side	Item	362.00
SSR	End Preparation of Cores 100mm dia. Core both side	Item	719.00
SSR	End Preparation of Cores 100mm dia. Core Single side	Item	362.00
SSR	End Preparation of Cores 150mm dia. Core both side	Item	719.00
SSR	End Preparation of Cores 150mm dia. Core single side	Item	362.00
SSR	Concrete Core Capping both side 100mm	Item	978.00
SSR	Concrete Core Capping both side 150mm	Item	978.00
SSR	Concrete Mix Design	Item	67,414.00
	<b>TESTING OF CONCRETE PAVING BLOCK</b>		
SSR	Compressive Strength of Concrete Paving Block	Item	772.00
	<b>TESTING OF AGGREGATE</b>		
SSR	Paricle Size Distribution ( Sieve Analysis)	Item	2,268.00
SSR	Field Density	Item	2,804.00

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rates</b>
SSR	Modified Compaction Test	Item	<b>5,880.00</b>
SSR	Standard Compaction Test	Item	<b>5,619.00</b>
SSR	Aggregate Impact Value (AIV)	Item	<b>3,408.00</b>
SSR	Los Angeles Abrasion Value Test (LAAV)	Item	<b>5,217.00</b>
SSR	Flakiness Index Test for Aggregate (FI)(Including Sieve Analysis Test)	Item	<b>3,996.00</b>
SSR	Elongation Index Test for Aggregate (Excluding Sieve Analysis Test)	Item	<b>1,731.00</b>
SSR	Relative Density & Water Absorption in Aggregate	Item	<b>4,146.00</b>
SSR	Bulk Density of Aggregate	Item	<b>1,766.00</b>
	<b>TESTING OF SOIL</b>		
SSR	Particle Size Distribution (Sieve Analysis)	Item	<b>2,274.00</b>
SSR	Consistency Limit Test	Item	<b>3,456.00</b>
SSR	Field Density	Item	<b>2,063.00</b>
SSR	California Bearing Ratio (CBR)	Item	<b>4,731.00</b>
SSR	Modified Compaction Test	Item	<b>4,461.00</b>
SSR	Standard Compaction Test	Item	<b>4,229.00</b>
SSR	Dynamic Cone Penetration Test (DCP)	Item	<b>2,879.00</b>
SSR	Hand Auguring for 1st 1.0m	Item	<b>1,308.00</b>
SSR	Hand Auguring for 2nd 1.0m	Item	<b>1,960.00</b>
SSR	Hand Auguring for 3rd 1.0m	Item	<b>2,614.00</b>
SSR	Each Subsequent 1.0m from 3.0m	Item	<b>1,308.00</b>



ANNEXTURE - II

**SPECIFICATION RELATED TO THE HSR ITEMS**

1. **EARTH WORK**

- A). EMBANKMENT CONSTRUCTION: SSCM SECTION 304:  
TYPE I MATERIAL MDD $\geq$ 1600KG/M<sup>3</sup>  
TYPE II MATERIAL MDD $\geq$ 1500KG/ M<sup>3</sup>  
HSR ITEMS: EW1-011, EW1-014
- B). SOIL FOR ROAD SHOULDERS AND GRAVEL SURFACING - SSCM SECTION 409 & 601.  
TABLE 1708-1

SIEVE SIZE (MM)	PERCENTAGE PASSING
37.5	100
20.0	77-100
5	41-100
2.36	30-80
0.6	18-50
0.075	05-25

TABLE 1708-2 - CONSISTENCY LIMITS FOR ROAD SHOULDER MATERIALS AND GRAVEL SURFACINGS

CLIMATIC ZONE	LL	PI
WET ZONE	<55	4-25
DRY ZONE	<55	6-25

- C) SUB BASE :
- CBR $\geq$ 20%  
LL $\leq$ 40  
PL $\leq$ 15  
HSR ITEMS: EW1-001, EW1-013

ANNEXTURE - II

2. AGGREGATES :

A) SINGLE SIZE AGGREGATE BASES : 50, 37.5, 19 & 12.5 MM - SSCM SECTION 403 :

TABLE 1701-4

SIEVE SIZE MM	PERCENTAGE PASSING			
	NOMINAL SIZE IN MM			
	50	37.5	19	12.5
63	100	-	-	-
50	85-100	100	-	-
37.5	0-30	85-100	-	-
28	0-7	0-30	100	-
20	0-2	0-7	85-100	100
14	-	0-2	0-35	85-100
10	-	-	0-7	0-35
5	-	-	-	0-5
2.36	-	-	0-2	0-2

AIV<=30%

FL<=35%

HSR ITEMS: M1-004, M1-007, M1-008, M1-009, A1-005 TO A1-012

B). WATER BOUND MACADAM AND DRY BOUND MACADAM - SSCMSECTION 404 :  
(50 OR 63 MM AND CRUSHER FINES)

TABLE 1701-6

SIEVE SIZE MM	PERCENTAGE PASSING		
	NOMINAL MAX SIZE OF AGG IN MM		CRUSHER FINES
	63	50	
75	100	-	-
63	90-100	100.0	-
50	30-70	90-100	-
37.5	0-15	30-70	-
28	-	0-15	-
20	0-5	-	-
14	-	0-5	-
10	-	-	100.0
5	-	-	85-100
0.150	-	-	10-30

AIV<=30%

FL<=35%

HSR ITEMS: M1-010, M1-011

**ANNEXTURE - II**

C). PENETRATION MACADAM BASE - SSCM SECTION 406:

TABLE 1701-7

SIEVE SIZE MM	PERCENTAGE PASSING NOMINAL SIZE IN MM			
	50	37.5	20	14
63	100	-	-	-
50	-	100	-	-
37.5	50-73	-	-	-
28	-	46-72	100	-
20	7.26	-	52-68	100
14		7-27	-	63-88
10		-	7-25	-
5		-	-	6-35
2.36	0-3	0-3	0-3	0-3
1.18			-	-

AIV<=30%

FL<=35%

HSR Items: S1-037, S1-038

D) DENSE GRADED AGGREGATE BASES: SSCM Section 405  
(ABC CONSTRUCTION)

TABLE 1701-5

SIEVE SIZE MM	PERCENTAGE PASSING NOMINAL SIZE IN MM		
	37.5	28	20
50	100	-	-
37.5	95-100	100	-
28	-	-	100
20	60-80	70-85	90-100
10	40-60	50-65	60-75
5	25-40	35-55	40-60
2.36	15-30	25-40	30-45
0.425	7-19	12-24	13-27
0.75	5-12	5-12	5-12

AIV<=30%

FL<=35%

CBR>=80%

HSR ITEMS: M1-012, M1-013

**ANNEXTURE - II**

E)        AGGREGATE GRADING, BINDER CONTENT AND THICKNESS REQUIREMENTS:  
SSCM SECTION 407:

TABLE 407-1

MIX CLASSIFICATION NO.	1	2	3	4
NOMINAL MAXIMUM SIZE OF AGGREGATE IN MM	37.5	37.5	19	19
COURSE	DENSE GRAD ED	OPEN GRAD ED	DENSE GRADE D	OPEN GRADED
THICKNESS MM - MAX - MIN	100	100	50	40
	60	60	30	30
SIEVE SIZE MM	TOTAL % BY WEIGHT PASSING			
50	100	100	-	-
37.5	95-100	95-100	-	-
28	80-95	53-75	100	100
20	-	-	80-98	96-100
14	62-77	10-27	-	50-75
10	-	-	49-67	22-42
5	-	-	29-44	-
2.36	30-45	0-10	18-30	5-20
1.18	-	-	13-24	0-2
0.300	-	-	5-14	-
PERCENT BINDER CONTENT BY TOTAL WEIGHT OF MIX	3.0-4.0	2.5-3.5	3.5-4.5	3.0-4.0

AIV<=30%

FL<=35%

HSR ITEMS:     B0-362, S1-032

ANNEXTURE - II

3. SURFACING :

A) ASPHALT CONCRETE: SSCM SECTION 506:

TABLE 506-1

MIX CLASSIFICATION NO. COURSE	BIND ER COUR SE	WEARING COURSE TYPE-1	WEARING COURSE TYPE-2
THICKNESS MM - MAX - MIN	75 35	75 35	75 35
SIEVE SIZE MM	TOTAL % BY WEIGHT PASSING INCLUDING FILLER IF USED		
28	100	100	-
20	90-100	85-100	100
14	-	-	82-92
10	56-82	66-94	61-81
5	36-58	46-74	41-66
2.36	21-38	35-58	27-48
1.18	15-33	26-48	20-40
0.600	10-26	18-38	15-35
0.300	06-20	11-28	10-25
0.150	03-13	07-20	07-17
0.075	01-07	03-12	05-09
PERCENTAGE BINDER CONTENT BY TOTAL WEIGHT OF MIX	3.5-4.5	4.0-6.5	4.0-6.0

AIV<=30%

FL<=35%

LAAV<=40%

HSR Items: B0-361, S1-031, B0-362A

B) SEAL COAT TREATMENTS (SURFACE DRESSING) SSCM SECTION 506:

TABLE 1701-8

SEIVE SIZE MM	PERCENTAGE PASSING NOMINAL SIZE IN MM			
	19	12.5	9.5	6.3
25	100	-	-	-
19	85-100	100	-	-
12.5	0-25	85-100	100	-
9.5	0-7	0-25	85-100	100
6.3	-	-	0-25	85-100
4.75	-	0-7	0-10	-
2.36	0-2	0-2	0-2	0-10
0.075	0-0.5	0-0.5	0-0.5	0-0.5

AIV<=30%

FL<=35%

LAAV<=40%

HSR Items: S1-003, S1-004, S1-005, S1-006, S1-029, S1-030

**ANNEXTURE – II**

C) COLD MIX SURFACINGS: SSCM SECTION 507:  
TABLE 507/1

GRADING TYPE NOMINAL MAX SIZE OF AGGREGATE	DENSE GRADED		OPEN GRADED	
	19MM	12.5MM	19MM	12.5MM
SIEVE SIZE MM	TOTAL PERCENTAGE PASSING BY WEIGHT			
25	100	-	100	-
19	90-100	100	90-100	100
12.5	-	90-100	60-80	85-100
9.5	56-80	-	-	-
4.75	35-65	44-74	18-35	35-50
2.36	23-49	28-56	-	15-30
0.300	05-20	05-22	-	-
0.075	0-05	0-08	0-03	0-03
PERCENT BINDER AS % OF WGT OF AGGREGATE				
(A).CUTBACK BITUMEN	4.5-5.5	5.0-6.0	4.5-5.0	4.5-5.0
(B).EMULSION	5.0-6.0	5.5-6.5	4.5-5.5	5.0-6.0

AIV<=30%

FL<=35%

LAAV<=40%

HSR ITEMS: BO-365, BO-366, S1-033, S1-033A

**ANNEXTURE – II****4. BINDER FOR SURFACE APPLICATIONS**

- a). Prime coat – CSS-1 emulsion – SSCM section 1702.3: Shall conform to ASTM D2397-98  
Cutback bitumen (20-45%) or MC -30, MC-70 or MC-250 or MC-800 :  
SSCM section 1702.2

HSR items : BO-352, S1-022, S1-023, S1-024, S1-025

- b). Sand Seal – CRS-1 emulsion – SSCM section 1702.3: Shall conform to ASTM D2397-98  
Cutback bitumen (8-12%) : SSCM section 1702.2

Bitumen 80-100 penetration grade bitumen : SSCM section 1702.1

HSR items : BO-353, S1-011, S1-012, S1-013, S1-014, S1-027, S1-035, S1-036

- c). Surface dressing – CRS-2 emulsion – SSCM section 1702.3: Shall conform to ASTM D2397-98

Residue on distillation minimum 65%

Viscosity min. 100 Saybolt furol seconds

HSR items : BO-354, S1-029, S1-030

## Provincial Road Development Authority (W/P)

**Machine Hire Rates 2022**

S.No.	Machine	Capacity	Unit	Wet Rate with 20% Rs.	Dry Rate with 20% Rs.
1	Asphalt Paver	2.6 - 4.5 m Wheel 2.6 - 4.5 m Crawler	Per Hour	10,430.00	9,300.00
2	Pneumatic Tyre Roller	8-10 Ton	Per Hour	5,690.00	4,940.00
3	Static Roller Chinese	8-10 Ton	Per Hour	3,680.00	3,180.00
4	Air Compressor	250 CFM	Per Hour	4,670.00	3,170.00
5	Emulsion Sprayer	200 L	Per Hour	2,020.00	1,760.00
6	Vibrating Roller	8-10 Ton	Per Hour	5,080.00	3,830.00
7	Hydraulic Excavator	215 Hp	Per Hour	4,350.00	3,000.00
8	Hydraulic Excavator	135 Hp	Per Hour	3,440.00	2,500.00
9	Prime mover with Low Bed Trailer	30 Ton	Per Km	350.00	270.00
10	Prime mover with Low Bed Trailer	40 Ton	Per Km	420.00	300.00
11	Motor Grader	10 or 12 Ft Blade	Per Hour	6,575.00	5,075.00
12	Backhoe Loader	2WD or 4WD	Per Hour	3,750.00	2,875.00
13	Wheel Loader	1.7 m <sup>3</sup> Capacity	Per Hour	4,660.00	3,410.00
14	Bulldozer D4 Class	(80 - 85 Hp)	Per Hour	3,800.00	2,400.00
15	Bulldozer D3 Class	(60 - 65 Hp)	Per Hour	3,500.00	2,300.00
16	Vibrating Roller	1 Ton	Per Day	7,250.00	6,250.00
17	Tipplers	1.5 Cubes	Per Km	150.00	115.00
18	Trucks	1.5 Cubes	Per Km	135.00	100.00
19	Plate Compactor	90/60 Kg	Per Hour	660.00	500.00
20	Tractor & Trailer		Per Day	7,720.00	6,220.00
21	Skid Steer Loader		Per Hour	2,300.00	1,800.00
	Broom Attachment		Per Hour	2,900.00	-
22	Motor Grader	10 Ft Blade (60-80 Hp) Champion	Per Hour	3,930.00	3,180.00
23	Bitumen Distributor	6000 L	Per Hour	5,840.00	4,090.00
	Truck		Per Km	180.00	140.00
24	Asphalt Tanker	Capacity 10,000 liters	Per Km	275.00	225.00
	Heating		Per Hour	3,240.00	
25	Diesel Tanker	Capacity 8,000 liters	Per Km	175.00	140.00
26	Crane Truck	10 Ton, travelling	Per Km	180.00	145.00
	Boom Attachment	3 Ton	Per Hour	2,000.00	-
27	Crane Truck	10 Ton, travelling	Per Km	230.00	165.00
	Boom Attachment	5 Ton	Per Hour	2,000.00	-
28	Tipplers	3 Cubes	Per Km	185.00	145.00
29	Street Sweeper Truck		Per hour	7,450.00	6,000.00
			Per Km	150.00	115.00
30	Concrete Paver		Per Hour	11,600.00	10,250.00
31	Water Bowser	10000 ltrs	Per Day	16,750.00	12,650.00
32	Amphibious Excavator		Per Hour	6,650.00	5,500.00

\* Rates without taxes

\* minimum 4 hours per day will be charged