TECHNICAL SPECIFICATION FOR GSB & VDF Work

13.16 WEAR RESISTANCE FLOORING BY USE OF VACCUM, DEWATERING METHOD AND POWER TROWELLING METHOD WITH A SKIM FLOATER:

1. Concrete shall be laid between the steel forms and a precast concrete rail acting, as a stop end and also 'rail to be used for surface vibration.

2. The concrete thus laid shall be vibrated with poker vibrator. During poker vibration, proper compaction of coarse aggregates, fine aggregates and cement shall be obtained. The surface will be then finished in level with the help of surface vibrator to give a dense level surface of concrete.

3. Vacuum dewatering method will be used to remove excess water from the laid concrete and filler pad and suction mat shall be laid on the freshly laid concrete which will not allow cement paste to flow out, and the suction pump are then started immediately to remove the excess water. The suction time normally is 20 to 30 minutes. This vacuum process will enable to remove 15 to 25% of water content and making the surface hard enough to enable to carry the floating operations.

4. The top surface after removal of mat shall be floated with a mechanical skim floater with trowelling blade to enable the top surface to grind and give a uniform water resistance surface on top. Under no circumstances neat Cement be sprinkled directly on concrete surface to absorb bleed water as surface scaling may occur later. Similarly water should not be applied between trowelling operation as it may cause surface weakness. Minimum two passes shall be carried out. The surface shall then be watered and cured as per clause.

The vacuum dewatering process consists of leveling, compacting and vacuum dewatering the concrete flooring by using vibrating screed, vacuum pumps, suction mats, filter pads, accessories etc. The sequence of operation shall be placing of concrete, vibration, vacuum treatment and floating and the operation shall follow immediately behind each other.

The contractor shall have persons well experienced in the vacuum dewatering process, and in the operation of all related equipments. All process equipment to be used shall be in good working condition and shall be subject to the approval of the Engineer.

The work should be planned well in advance with a view to determine areas to be concreted daily, the required number of equipment, size of vacuum mats, length of vacuum hoses, arrangement of rails, screeds etc.

The area to be concreted shall be thoroughly cleaned, reinforced checked and got approved by the Engineer. Then the specified grade of concrete shall be placed in position without any segregation and properly vibrated.

Immediately after placement of concrete, the vibrating screed, fixed at the proper position to achieve the required specified finished level, shall be allowed to run over the concrete on a true surface to level the concrete. For better consolidation proper surcharge of concrete should be maintained in front of the leading edge of the screed and the vibrating screed shall be allowed to move forward rapidly. The concrete surface shall be screeded high by 2 of the slab's thickness to compensate for the compaction caused by the vacuum dewatering process. (Slabs which have an aggregate hardener shall have compensation made to maintain elevation.)

Immediately after leveling the concrete shall be covered with filter pads and suction mats in strict accordance with the recommendation of the, Manufacturer to have the slab fully dewatered. The suction mat shall extend 100 mm beyond the edge of the filter pad on all sides. The pads shall extend to within 100 mm of the edges of concrete slab, and the mats shall cover entire slab. Before connecting the hose on the suction mat to the vacuum pump, the edges of the mat shall be smoothed to enable, an airtight seal to be created. A vacuum shall then be applied to the mat. After a minute the gauge on the vacuum pump should indicate a minimum vacuum of 0.70 atmospheres (24.0 in Hg) and if not, the mat must be checked for leakage. For concrete that dewateris readily the vacuum should then be maintained at 0.70-0.80 atmosphere (24.0-25.5 in Hg). For concrete which dewater less efficiently (eg. Air-entrained concrete) the vacuum shall then be reduced to 0.50-0.60 atmospheres (15.0-18.0 in Hg). After
approximately 10 minutes the vacuum can then be increased to 0.80 atmospheres.

The vacuum shall be maintained for at least 3 minutes per 25 mm of concrete thickness at 0.80 atmospheres. (Where aggregate hardeners are specified, sufficient moisture shall be maintained to meet Manufacturer's requirements). The suction mats and filter pads shall then be removed and move to the next section in a leapfrog manner. The vacuum dewatering can be stopped when light footprints only are left in the concrete when stepped upon. A suitable suction time can also be checked with a Proctor-apparatus, which should show 1.5-2 Kg / sq cm. Upon removal of the suction mats and filter pads the concrete shall be power floated with out delay until all imprints from the vacuum process are removed. If crusting occurs, the floating operation must be delayed till the concrete carries the machine.

The higher speed is recommended for the floating operation. The passes with the floating disc should be made in the junction of two mats in order to avoid risk of cracking.

The waiting time after the floating operation depends on concrete temperature and humidity and varies from 10 minutes to 2 hours.

The trowelling operation cannot take place before the concrete has hardened enough to carry the machine i.e., the trowelling blades will not leave any marks on the concrete. Repeated trowelling, with intervals between the passes, which are adapted to the setting of the concrete, greatly improves the surface characteristics. The surface will be more wear resistant and less dusty.

Atleast two passes are recommended for floors, which are not to be covered.

Vacuum dewatered concrete should be cured like any quality concrete in order to achieve a good final result. Use curing compounds, plastic sheets or wet burlap.

The contractor has the responsibility for achieving the quality of concrete specified by controlling the concrete mixes, placing, vacuum process, finishing and curing. The concrete technician in charge must be present at the site when work is in progress.

The contractor shall be responsible for mix adjustments, performing necessary tests, correcting deficiencies and trouble shooting in general.

The contractor shall be required to maintain control charts showing individual test results for aggregate graduation, slump, air content and compressive strength.

### Joints in Concrete floor (using sealing compound)

#### General

Joints shall be of the types and dimensions as indicated and shall be located as indicated.

#### Dummy Joints

The dummy joints shall be 5 mm wide and shall extend vertically from the surface of the slab to a depth equal to 1/3 to 1/4 of the thickness of the slab. The joint may be formed by depressing into the soft but compacted concrete a high tensile mild steel. 'Tee' or flat bar of depth not less than the required depth of the joint plus 25 mm. The bar used for forming the groove shall be coated with soft seal or other suitable lubricant and have built in handles rigidly fixed to facilitate its removal without spalling or crumbling the edges. When the steel bar is removed, joints shall be nearly reformed immediately with proper tools and with mortar/fine material from the slab itself. No additional cement mortar shall be used. Alternatively the slot may be formed by sawing the concrete with a joint cutting machine (diamond cutter) of approved design within 6 hours of placing under moderate climatic conditions and when the concrete has sufficiently hardened. Under extreme cold conditions, this period may be suitably increased based on experience. In all cases, except where cutting is done with saw, the joint edges shall be bull nosed. Care shall be taken that the edges of the joints are not damaged. The edge shall not stand proud of the
Concrete slabs.

Construction Joints

The construction joints shall be 10mm wide and straight and vertical though the full thickness of the slab. The vertical edge of the concrete on the side of the joint shall be treated with a coat of lime, wash or bituminous paint before the adjacent bay is concreted. A groove 2.5 cm deep and 1 cm wide shall be formed at the top surface of the joint to receive the sealing compound. The groove shall be formed in the same manner as that for a dummy joint. The edges of the groove shall be bull-nosed and not stand proud of the concrete surface.

Expansion Joints

The expansion joints shall be straight and shall extend through the full thickness of the slab and shall be of the shape and dimensions shown on the drawings. The slab edges adjacent to the joint shall be formed truly vertical. The joints shall be filled with a 2 cm thick filler board. Cold applied joint sealant (polysulphide or polyurethane) of approved make with minimum ten years of performance guarantee will be used as joint sealant. The guarantee should be taken in writing from the contractor before the approval of joint sealants. The technical specifications of the cold applied joint sealants (irrespective of whether polysulphide or polyurethane) should meet the requirements mentioned in BS-5212, BS4254 and EN-141875-2003 (for hydrolysis/water resistance test). In addition, the Movement Accommodation Factor (MAF) of the sealant should be minimum ± 30%.

The groove to receive the sealing compound may be formed by cutting the extra filler board to the required depth.

Sealing of Joints

All joints shall be sealed as soon as practicable after 28 days of placing of the slabs. The joints shall be finished flush with the finished concrete surface if the sealing of joints is done in summer and 3mm below the finished concrete surface, if the sealing of joints is done in winter. After the sealing compound has hardened, the excess sealing compound, if any, adhering to the slab outside the joints shall be removed by scraping or otherwise and the surface left clean. The pavement shall be opened to traffic only after the completion of joint sealing over the entire pavement.

Cleaning of Joints

All foreign materials in the joints shall be removed with pneumatic blower. The joints shall, thereafter, be cleaned with a coir brush. Fine particles clinging to the concrete faces shall be removed with the help of an air compressor only to avoid damage to the edges. The joints shall be cleaned and surface dried before the application of primer.

Application of Primer

The cleaned joint shall be primed with a 20-25mm side painter's brush, while painting, light pressure shall be applied so that the primer penetrates into the pores of concrete. The primer shall be applied twice on one side (i.e. by forward and reverse movement of brush). The primer shall be applied in the thinnest possible complete film and then left for some till the primer feels "tacky" soon after the primer is applied, the joint is covered with 10-15cm wide paper strips so that no dust is deposited on the primer.

Sealant Joints

Only cold applied Polysulphide or Polyurethane joint sealant of approved make will be used in rigid pavements. The criteria for selection of the joint sealant will depend on the minimum performance guarantee of ten years offered by the firm. This performance-based selection would accrue better cost effective results rather than using a joint sealant without any guarantee. The technical specifications of the cold applied joint sealants
(irrespective of whether polysulphide or polyurethane) should meet all the requirements mentioned in BS 5212, BS 4254 and EN-141875-2003 (for hydrolysis/water resistance test). In addition, the movement accommodation factor (MAF) of the sealant should be minimum ± 30%.

While the joints shall be sealed flush with the adjacent pavement surface in summer, in winter they shall be filled to a depth of 3-4mm below the surface. This procedure will reduce the possibility of ingress of grit and other foreign matter into the sealing compound as well as displodging of the hardened sealing compound under traffic.

**Joints in pavement concrete, (using polysulphide/polyurethane material)**

**General**

Joint shall be of the types and dimensions specified and be located in all as directed by Gamson Engineer. The edges of the groove/joints shall be bull nosed & not stand proud of the concrete surface.

**Dummy Joints**

The size of joints shall be as indicated/specifyed.

The joint shall be formed using mechanical equipment (diamond cutter) within 6 hour of placing of concrete under moderate climatic conditions and when the concrete has sufficiently hardened. Cutting or sawing by a sawing mounted at movable frame and driven mechanically will also be permitted as a method for making the joint. Care shall be taken that the edge of the joints are not damaged.

In case of sudden rain or storm, the work can be concluded at the dummy joint but the latter will then be formed into a construction joint.

**Construction Joints**

Construction joints shall also be provided at places where concreting is stopped due to unforeseen circumstances. The size of joints shall be as specified and as shown on drawings.

Construction joints shall be straight and vertical through the full thickness of the slab. The vertical edge of the concrete of the side of the joint shall be treated with a coat of lime wash or bituminous paint before the adjacent bay is concreted. A groove of dimension as specified in the contract shall be formed. The groove shall be formed in the same manner as that for a dummy joint.

**Expansion Joints**

The expansion joints shall consist of a joint filler board as detailed in the drawing. The depth of the non-extruding filler pad (joint filler board) shall be cut by 25mm from top to prepare the joint.

Joints shall be straight and shall extend through the full thickness of the slab and shall be of the shape and dimensions shown on the drawings. The slab edge adjacent to the joint shall be formed truly vertical. The joints shall be filled with approved joint filler as per clause 20.B.7.10.4.

Before the provision of expansion joint, the face of the already laid concrete slab shall be painted with the approved primer at the rate of 2.6 liters per 10 square metres. The expansion pad shall be properly cut to shape. Bond breaker tape shall be applied on the top face of the pad before inserting the dosed cell backup rod. It shall then be placed in position abutting the painted face of the already laid concrete slab. The adjacent slab shall then be concreted. The faces of the pad against which the new concrete slab is to be laid shall also be painted with the approved primer before laying the concrete. While concreting a neat groove as per drawing shall be formed on top
of the pad taking care that the edges are absolutely straight and that the groove so made does not get filled with any material like concrete, mortar and other rubbish.

The groove to receive the sealant may be formed by cutting the excess filler board material to the required depth.

Expansion joints shall be provided both longitudinally and transverse direction at spacing as shown on drawing or as directed by Engineer-in-Charge.

**Procedure Of Joint Filling With Polysulphide / Polyurethane Sealant**

The technical specifications of the cold applied joint sealants (irrespective of whether polysulphide or polyurethane) should meet all the requirements mentioned in BS-5212, BS 4254 and EN-141875-2003 (for hydrolysis/water resistance test). In addition, the Movement Accommodation Factor (MAF) of the sealant should be minimum: $f: 30\%$. The criteria for selection of the joint sealant of approved make will be a minimum performance guarantee of ten years offered by the firm. This performance-based selection would accrue better cost effective results rather than using a joint sealant without any guarantee. Contractor shall not procure the materials required for joint filling unless the samples are approved by the GE and a ten years of guarantee is given in writing by the contractor. The primer and sealant shall got tested by GE from a reputed testing laboratory who has the NABL accreditations like Indian Rubber Manufacturer's Research Association's Laboratory / CRRI / IIT / NIT / SEMT Wing, CME Pune before approval. The test certificate shall be obtained for every 5MT of material incorporated in the work.

**Joint Preparation**

Before commencing joint sealing operations, the following shall be ensured:-

(a) The groove extends fully across the bay between consecutive longitudinal joints in the case of transverse joints and is continuous in the case of longitudinal-joints.

(b) No concrete and foreign matter shall be left in the groove.

(c) In case of expansion joint, the filled material is exposed to the full length of the joint and expansion joint filler is tightly packed.

(d) Joint surface must be dry, free from dust, coaling, bituminous mastics, concrete curing agencies, mould release agents, oil, grease and loose particles.

(e) All joints shall be thoroughly cleaned out by compressed air and sanding with emery paper or other approved means and shall be approved by Engineer-in-Charge before they are sealed.

(f) The cleaned and prepared joints shall be primed on the sides of the joints up to the depth where sealing component is to be provided and filled with approved sealant.

(g) Wipe out oil and grease by solvent soaked cloth (such as Xylene, Toluene or Acetone or Gardoclean).

(h) Before sealing, insert a bond breaker tape and bond breaker (closed cell polyethylene frame rod) caulked tightly into the base of the sealing groove to prevent the sealant from adhering to the base of slot. Width of bond breaker (backup rod) shall be 20 to 25% more than the joint so that there is no seepage of sealant through joints edges.

**Fixing/Masking Tape**

Fix masking tape to prevent edges of joints becoming dirty due to spillage of sealant at the time of pouring.

**Application Of Primer**

(i) Suitable primer shall be first applied to the vertical faces of the concrete joint before pouring cold applied sealant confirming to specifications given at clause 20.B.7.11.5.1, in order to improve the adhesive qualities of the product. Primer as specified by manufactures shall be applied to the joint vertical surfaces and allowed to dry for 30 minutes to 2 hours depending on the climatic condition. The surfaces shall be primed twice @0.075litre (minimum) primer per square metre.

(ii) If the primer film has become completely tack free, the surface must be re-primed before applying the sealant.

(iii) If the primed areas are left unsealed overnight the primer film must be removed by grit blasting or grinding and the joints interfaces shall be re-primed.
Mixing
Mixing and application of sealant will be through mechanical means to avoid any human error. The mixed product shall be used immediately as per manufacturer's instructions within its pot life i.e. within 30 minute. The mixed sealant should be kept for a few minutes to allow air to escape before commencement of jointing filling.

Application or Pouring of Sealant
Mixed sealant shall be applied by mechanical means (machine application) based on the manufacturer's instructions and shall be executed by his approved and trained applicator. Application temperature of sealant should be in between 5 to 45 degree Celsius (or as per manufacturer's instructions). It should be filled to a level 2 to 3mm below the top of the pavement leaving a recess to protect the sealant from damage. To prevent accidental spillage of sealant on the top surface and to give a neat finish masking tape should be applied on front edges of joint in such a manner that the material will not be spilled on the exposed surface of the concrete. Any excess filler on the surface of the pavement shall be removed immediately and the pavement surface cleaned. All necessary precautions as per the manufacturer's recommendations shall be taken. The sealant should be immediately tooled either with stainless steel or wooden spatula of the size of the joint to give a smooth finish before it begins to set. Masking tape shall be removed immediately after the sealant has been tooled. The sealant should be allowed to cure as per manufacturer's instructions during which period no traffic should be allowed on the pavement. The test certificate shall be obtained for every 5 MT of material incorporated in the work.

Some Miscellaneous Aspects
(i) The sealant are sensitive to temperature while in storage as well as during mixing. Temperatures for all phase of handling of the sealing compounds viz mixing, placing and curing conditions must be in accordance with manufacturer's recommendations.
(ii) All safety precautions during handing and application of these sealants as prescribed by the manufacturers shall also be strictly adhered to.

Precautions
(a) Some people are sensitive to resins, hardeners, vapour etc. Therefore it is advisable to use hand gloves/ goggles and suitable protective clothing.
(b) Avoid application below 10DC temperature.
(c) Avoid application on damp or Moist surfaces.
(d) Do not expose primer to naked flames or other sources of ignition.
(e) Materials to be kept in no smoking area.
(f) Containers should be tightly sealed when not in use.
(g) In the event of fire, extinguish with carbon dioxide or foam.
(h) Should accident skin contact occurs, remove immediately with a resin removing cream, followed by soap and water. Do not use solvent.
(i) In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advise.
(j) Use only in well ventilated areas.
(k) All consumables (masking tape, empty cartridges etc) should be removed and disposed off safely.

13.22 GRANULAR SUB-BASE
13.22.1 SCOPE
This work shall consist of laying and compacting well-graded material on prepared subgrade in accordance with the requirements of Specifications. The material shall be laid in one or more layers as sub-base or lower sub-base and upper sub-base (termed as sub base hereinafter) as necessary according to lines, grades and cross sections shown on the drawings or as directed by the Engineer.
13.22.2 MATERIALS

13.22.2.1 The material to be used for the work shall be natural sand, gravel, crushed stone, or combinations thereof depending upon the grading required. The material shall be free from organic or other deleterious constituents and conform to gradings (given below).

While the gradings in Table -1 are in respect of close-graded granular sub-base materials, one each for maximum particle size of 75 mm, 53 mm and 26.5 mm, the corresponding gradings for the coarse-graded materials for each of the three maximum particle sizes are given at Table -2. The grading to be adopted for a project shall be as specified in the Contract.

13.22.2.2 Physical requirements

The material shall have a 10 per cent fines value of 50 kN or more (for sample in soaked condition) when tested in compliance with BS : 812 (Part 111). The water absorption value of the coarse aggregate shall be determined as per IS :2386 (Part 3); if this value is greater than 2 per cent, the soundness test shall be carried out on the material delivered to site as per IS : 383. For Grading II and III materials, the CBR shall be determined at the density and moisture content likely to be developed in equilibrium conditions which shall be taken as being the density relating to a uniform air voids content of 5 per cent.

**Table -1. Grading for Close-graded Granular Sub-Base Materials**

<table>
<thead>
<tr>
<th>IS Sieve</th>
<th>Per cent by weight passing the IS Sieve</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Grading I</td>
</tr>
<tr>
<td>75.0 mm</td>
<td>100</td>
</tr>
<tr>
<td>53.0 mm</td>
<td>80-100</td>
</tr>
<tr>
<td>26.5 mm</td>
<td>55-90</td>
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<tr>
<td>9.50 mm</td>
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<tr>
<td>4.75 mm</td>
<td>25-55</td>
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<tr>
<td>2.36 mm</td>
<td>20-40</td>
</tr>
<tr>
<td>0.425 mm</td>
<td>10-25</td>
</tr>
<tr>
<td>0.075 mm</td>
<td>3-10</td>
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<tr>
<td>CBR Value (Min.)</td>
<td>30</td>
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</tbody>
</table>
### Table 2. Grading for Coarse Graded Granular Sub-Base Materials

<table>
<thead>
<tr>
<th>IS Sieve</th>
<th>Grading I</th>
<th>Grading II</th>
<th>Grading III</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.0 mm</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53.0 mm</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>26.5 mm</td>
<td>55-75</td>
<td>50-80</td>
<td>100</td>
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<tr>
<td>9.50 mm</td>
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<tr>
<td>4.75 mm</td>
<td>10-30</td>
<td>15-35</td>
<td>25-45</td>
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<tr>
<td>2.36 mm</td>
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<tr>
<td>0.425 mm</td>
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<tr>
<td>0.075 mm</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

CBR Value (Min.) 30 25 20

**Note:** The material passing 425 micron (0.425 mm) sieve for all the three gradings when tested according to IS : 2720 (Part -5) shall have liquid limit and plasticity index not more than 25 per cent and 6 per cent respectively.

### 13.22.3 STRENGTH OF SUBBASE

**13.22.3.1** It shall be ensured prior to actual execution that the material to be used in the sub-base satisfies the requirements of CBR and other physical requirements when compacted and finished.

**13.22.3.2** When directed by the Engineer, this shall be verified by performing CBR tests in the laboratory as required on specimens remoulded at field dry density and moisture content and any other tests for the “quality” of materials, as may be necessary.

### 13.22.4 CONSTRUCTION OPERATIONS

**13.22.4.1** Preparation of sub grade

Immediately prior to the laying of sub-base, the subgrade already finished as applicable shall be prepared by removing all vegetation and other extraneous matter, lightly sprinkled with water if necessary and rolled with two passes of 8 -10 Ton smooth wheeled roller.

**13.22.4.2** Spreading and compacting

The sub-base material of grading specified in the Contract shall be spread on the prepared sub grade with the help of a motor grader of adequate capacity, its blade having hydraulic controls suitable for initial adjustment and for maintaining the required slope and grade during the operation or other means as approved by the Engineer.

When the sub-base material consists of combination of materials mentioned above, mixing shall be done mechanically by the mix-in-place method.

Manual mixing shall be permitted only where the width of laying is not adequate for mechanical operations. The equipment used for mix-in-place construction shall be a rotator or similar approved equipment capable of mixing the material to the desired degree. If so desired by the Engineer, trial runs with the equipment shall be carried out
to establish its suitability for the work. Moisture content of the loose material shall be checked in accordance with IS : 2720 (Part II) and suitably adjusted by sprinkling additional water from a truck mounted or trailer mounted water tank and suitable for applying water uniformly and at controlled quantities to variable widths of surface or other means approved by the Engineer so that, at the time of compaction it is from 1 per cent above to 2 per cent below the optimum moisture content corresponding to IS : 2720 (Part VIII). While adding water, due allowance shall be made for evaporation losses. After water, has been added, the material shall be processed by mechanical or other approved means like disc hrowers, rotators until the layer is uniformly wet.

Immediately thereafter, rolling shall start. If the thickness of the compacted layer does not exceed 100 mm, a smooth wheeled roller of 8 to 10 Ton weight may be used. For a compacted single layer upto 225 mm the compaction shall be done with the help of a vibratory roller of minimum 8 to 10 Ton static weight with plain drum or pad footdrum or heavy pneumatic tyred roller of minimum 200 to 300 kN weight having a minimum tyre pressure of 0.7 MN/m$^2$ or equivalent capacity roller capable of achieving the required compaction. Rolling shall commence at the lower edge and proceed towards the upper edge longitudinally for portions having unidirectional crossfall and super elevation and shall commence at the edges and progress towards the centre for portions having crossfall on the both sides.

Each pass of the roller shall uniformly overlap not less than one third of the track made in the preceding pass. During rolling, the grade and camber shall be checked and any high spots or depressions which become apparent corrected by removing or adding fresh material. The speed of the roller shall not exceed 5 km per hour.

Rolling shall be continued till the density achieved is at least 98% of the maximum dry density for the material determined as per IS : 2720 (Part 7). The surface of any layer of material on completion of compaction shall be well closed, free from movement under compaction equipment and from compaction planes, ridges, cracks or loose material. All loose, segregated or otherwise defective areas shall be made good to the full thickness of layer and re-compacted.

13.22.4.3 Surface Finish and quality Control of Work

The finished surface shall be checked for lines, levels and regularity. The surface evenness of completed surface in longitudinal and transverse direction shall be within the tolerances specified.

13.22.5 MODE OF MEASUREMENTS: The finished area will be measured. Deduction for openings etc. will be made as applicable to flooring as per IS 1200.

The surface finish of construction shall conform to the requirements.

Granular sub-base shall be measured as finished work in position in cubic metres.

The protection of edges of granular sub-base extended over the full formation as shown in the drawing shall be considered incidental to the work providing granular sub-base and as such no extra payment shall be made for the same.