

DIVISION 5 ROADS AND PAVEMENTS

2.1 SURVEY AND LAYOUT

2.1.1 GENERAL

1. Division 1, "General Requirements" of these Specifications and shall apply to this Section whether herein referred to or not.
2. Applicable requirements under Section 2.3, "Surveys, Soundings, Soil Investigations and Installation of Markers" and Section 4.1 "Survey and Layout" for building works shall apply to this section.

2.1.2 SCOPE OF WORK

This Section covers survey and layout work.

2.1.3 SURVEY AND SETTING OUT OF WORKS

1. The Contractor shall carry out the survey by means of transversing and leveling connected to the approved established reference points.
2. The stations shall be established in accordance with Sub-section 2.3.6.
3. The Contractor shall establish at least three (3) permanent monuments and three (3) benchmarks in the port area on locations approved by the Engineer that can serve conveniently as reference points of future construction.

5.3 DEMOLITION/BREAKING OF EXISTING PAVEMENT AND DISPOSAL OF MATERIALS

5.3.1 GENERAL

Division 1, "General Requirements" contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

5.3.1.1 DESCRIPTION

This work shall consist of the breaking of existing pavement and disposal of unsuitable or excess materials including the removal of all superficial obstructions on the site in the way of or otherwise affected by the works as shown on the drawings.

The Contractor shall clear each part of the site at times and to the extent required or approved by the Engineer.

The Contractor shall submit his proposed method of breaking of existing pavement and disposal of materials including materials, equipment, and all related works for the approval of the Engineer.

5.3.2 DEMOLITION AND CLEARING

1. Demolition

Where shown on the drawings or directed by the Engineer, dilapidated pavement and structures, or part of structures, masonry, and like material within the roadway and sidewalk shall be demolished by the Contractor. Where only a part of a structure has to be demolished, the Contractor shall take all possible care to ensure that only such part is demolished and shall make good at his own expense any damage beyond that part. During demolition, the Contractor shall take every precaution to protect the unaffected roadway, structure, embankment and all other existing works from damage and likewise ensure the safety of his workmen and the general public.

When the area on which an embankment is to be placed has been cleared, the Engineer may order the surface of the existing ground to be scarified so that the filling material will bind into the original ground. The cost of such work, if so required, shall be included in other items of work and shall not be paid for separately.

2. Disposal of Materials

- a. All demolished materials shall be removed or deposited off the site in dumps to be provided by the Contractor in a manner approved by the Engineer. If however, in the opinion of the Engineer, the demolished material is suitable for filling, the Engineer will direct that the material be used. The Contractor may, with the written approval of the Engineer, use for the purposes of the works any cleared materials which are at his disposal.

5.3.3 MEASUREMENT AND PAYMENT

1. Demolition/breaking of existing pavement to be paid for shall be measured by square meters of the pavement in its original position for material actually demolished and disposed.
2. The quantities determined will be paid for at the contract

unit prices for the pay items as shown in the Bill of Quantities which prices and payment shall be the full compensation for the demolition and disposal of all materials inclusive of all labor, equipment, tools and incidentals necessary to complete the items and as certified by the Engineer.

1 EXCAVATION AND DISPOSAL OF UNSUITABLE MATERIALS

5.4.1 GENERAL

Division 1 "General Requirements" contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

5.4.2 CLEARING AND GRUBBING

Prior to the start of excavation and grading operations, all superficial obstructions including trees, shrubs and the like on the Site in the way of or otherwise affected by the Work shall be removed as shown on the drawings. The Contractor shall clear each part of the Site at times and to the extent required or approved by the Engineer.

All combustible materials from clearing operation shall be completely burned or removed from site of work or otherwise disposed of as directed by the Engineer.

Stumps shall be removed entirely. Roots and matted roots shall be grubbed out to at least 450 mm below the existing surface and shall be backfilled with suitable material and compacted to the required density.

5.4.3 STRIPPING

The areas from which stripping of top soil may be required shall be indicated on the drawings. The Contractor shall remove top soil from such portions of these areas and to such depth as the Engineer may require. No stripping of top soil of any designated area shall be less than 150 mm in depth. The top soil removed shall be transported, deposited in stock piles at locations approved by the Engineer and/or spread and compacted with a light roller where indicated on the drawings or where directed by the Engineer.

The top soil shall be kept separate from other excavated materials and shall be completely removed to the required depth from any designated area prior to the beginning of

regular excavation or embankment work in the area. No payment will be made for top soil removed from places other than those ordered.

5.4.4 EXCAVATION

5.4.4.1 ROADWAY EXCAVATION

The Contractor shall carry out all excavation required along the roadway and sidewalk regardless of the type of soil or obstructions thereat. All excavation shall be carried out to lengths, widths, depths and profiles necessary of the construction of the roads shown on the drawings or to such other dimensions as may be approved in writing by the Engineer.

Excavation shall be carried out in such a way as to avoid disturbance to the surrounding ground and other existing works.

Particular care shall be taken to maintain stability when excavating in close proximity to existing structures, and for underground utilities. The Contractor shall comply with all instructions of the Engineer regarding the supporting of the sides of excavation and shall be entirely responsible for the sufficiency of all temporary timbering and supports to the excavation. Any unsound formation areas or underground utility uncovered as a result of the excavation shall be reported to the Engineer immediately for his instructions.

5.4.4.2 EXCESS EXCAVATION

If for any cause whatsoever excavations are carried out beyond their true line and level, other than at the direction of the Engineer, the Contractor shall at his own cost make good to the required line and level with appropriate grade of filling or by other approved material and in such manner as the Engineer may direct.

5.4.4.3 DISPOSAL OF UNSUITABLE AND EXCESS MATERIALS

If in the opinion of the Engineer, the excavated material is unsuitable for backfill, the Engineer will direct that the material be removed from the site and disposed of in an approved location. All excess materials shall also be disposed of where directed by the Engineer.

1 MEASUREMENT AND PAYMENT

4. The quantity to be paid shall be the area in square meters

of the clearing and grubbing works completed in accordance with these specifications.

5. The quantity to be paid shall be the area in square meter of the stripping works completed in accordance with these Specifications.

Payment shall be per unit of quantity listed in the Bill of Quantities, price of which includes payment for labor, materials, tools and equipment necessary to complete the work.

6. The cost of excavation of material which is incorporated in the works in embankments or in other areas of fill shall be deemed to be included in the items relating to the parts of the work where the material is used. Measurement of unsuitable or surplus material shall be the net volume in its original position, in cubic meters.

For measurement purposes, surplus suitable material shall be calculated as the difference between the net volume of suitable material required to be placed in fill and the net volume of suitable material arising from any excavation, in cubic meters.

The Contractor shall be deemed to have included in the contract unit prices all costs for the disposal of unsuitable or surplus material.

4. The quantities determined as provided above shall be paid for at the appropriate contract unit price for each of the particular pay-items shown in the Bill of Quantities which prices and payment shall constitute full compensation for all the costs of obtaining and preparing as required by the particular item.

5.5 FILLING

5.5.1 GENERAL

Division 1 "General Requirements" contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

5.5.1.1 DESCRIPTION

This work shall consist of the construction of embankments and other areas of fill not specified elsewhere by furnishing, placing, compacting and shaping suitable material of

acceptable quality obtained from approved sources in accordance with the specifications and to the lines, level, grades, dimensions and cross section shown on the drawings and as required by the Engineer. Unless otherwise stated, the term "embankment" shall include all areas of fill.

The Contractor shall submit his proposed method of filling including materials, equipment, and all related works for the approval of the Engineer.

5.5.2 MATERIAL REQUIREMENTS

Material requirements of Sub-section 3.8.2 are applicable.

5.5.3 EXECUTION

The specification of Sub-section 3.8.3 are applicable.

5.5.4 MEASUREMENT AND PAYMENT

See Sub-section 3.8.5.

5.6 SUBGRADE PREPARATION

5.6.1 GENERAL

Division 1 "General Requirements" contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

5.6.1.1 DESCRIPTION

The subgrade preparation shall be the part of the work which is the preparation for the support of the subbase or, if there is no subbase, the surfacing of the pavement structure. It shall extend to the full width of the road including the shoulders as shown in the drawings or as specified herein. Unless otherwise agreed by the Engineer subgrade preparation of a section of road shall not commence unless the Contractor is able, after the completion and acceptance of the work, to commence immediately pavement construction.

5.6.2 MATERIAL REQUIREMENTS

Unless otherwise stated in the Contract and except when the subgrade is in rock cut, all materials below subgrade level to a depth of 150 mm or to such greater depth as may be specified shall meet the requirements of selected borrow for topping, e.g., soil of such gradation that all particles will pass a sieve with 75 mm (3 inches) square openings and not more than 15 percent will pass the 0.075 mm (No. 200) sieve, as determined

by AASHTO T 11. The material shall have a plasticity index of not more than 6 as determined by AASHTO T 90 and liquid limit of not more than 30 as determined by AASHTO T89.

5.6.3 EXECUTION

1. Prior Works

Prior to commencing the preparation of the subgrade all culverts, ditches, drains and drainage outlets shall be completed. No work shall be started on the preparation of the subgrade before the prior works are herein approved by the Engineer.

2. Where the new pavement is to be constructed immediately over an existing gravel surfaced pavement and if so specified in the Contract the pavement shall be scarified, thoroughly loosened, reshaped and recompactd in accordance with item 3 below.

3. Unless otherwise ordered by the Engineer a variable load pneumatic tired roller shall be used to proof roll the subgrade. The roller shall have a load variable within the range of at least from 15 to 45 tons, on an overall width not greater than 3.2 m and shall have tires whose pressures are variable up to not less than 620 KN/sq.m. The wheels shall be in row and shall be capable of considerable vertical movement relative to each other without appreciable variation in loading either by each supporting a separate ballast unit, or by virtue of an efficient interconnecting suspension system. The ballast shall be in a form which permits rapid adjustment of loads. The total loaded weight and tire pressure used at any time shall be as directed by the Engineer.

The pneumatic tired roller shall not be towed over completed sub-bases or surfacings without the prior approval of the Engineer on each occasion. The proof rolling shall consist of one pass of the roller along the center of each lane of the traveled way.

The subgrade shall be compacted to a depth of 150 mm to the requirements of **Table 5.6.1**. This work shall comply with all the specified requirements for compaction of earthwork.

Table 5.6.1
Compaction Requirements

Soil Type Classification According to AASHTO M 145	Test Method for Determining Moisture Density Relations	Minimum Relative Density Field Dry Density as % of Maximum Dry Density as Determined by the Specified Test Method
A - 1 A - 2 - 4 A - 2 - 5 A - 3	AASHTO T 180 (4.54 kg rammer) Method D	90%
A - 2 - 6 A - 2 - 7 A - 4 A - 5 A - 6 A - 7	AASHTO T 99 (4.54 kg rammer) Method D	95%

4. Protection of Completed Work

Any part of the subgrade that has been completed shall be protected and any damage resulting from default of the Contractor shall be repaired as directed by the Engineer without additional payment.

The Contractor shall be responsible for all the consequences of traffic being admitted to the subgrade. He shall repair any ruts or ridges occasioned by his own traffic or that of others by reshaping and recompacting. He shall limit the amount of subgrade preparation to an area that can be maintained with the equipment available. He shall arrange for subgrade preparation and subbase or base placing to follow each other closely. The subgrade, when prepared too soon in relation to the laying of the sub base, is liable to deteriorate, and in such case the Contractor shall, without additional payment, repair, reroll, or recompact the subgrade as may be necessary restore it to the state specified herein.

5. Tolerances

The finished compacted surface of the subgrade shall conform to the allowable tolerances as specified below:

Permitted variation from design level of surface

Permitted surface irregularity measured by 3 m straightedge

Permitted variation from design crossfall or camber

Permitted variation from design longitudinal grade over 25 in length
+20 mm

-30 mm

30 mm

±0.5%

±0.1%

5.6.4 MEASUREMENT AND PAYMENT

1. The quantity of subgrade preparation to be paid shall be measured by the area in square meters, compacted and accepted by the Engineer.
2. Payment of subgrade preparation shall be based on the number of square meters, as provided above, which price and payment shall constitute full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the item and accepted by the Engineer.

5.8 AGGREGATE BASE COURSE

5.8.1 GENERAL

5.8.1.1 DESCRIPTION

This Section shall consist of furnishing, placing and compacting aggregate base course on a prepared subgrade in accordance with this Specification and the lines, grades, thickness and typical cross sections shown on the Plans, or as established by the Engineer.

5.8.2 PRODUCTS

5.8.2.1 MATERIAL REQUIREMENTS

Aggregate for base course shall consist of hard, durable particles or fragments of crushed slag or crushed or natural gravel and filler of natural or crushed sand or other finely divided mineral matter. The composite material shall be free from vegetable matter and lumps or balls of clay, and shall be of such nature that it can be compacted readily to form a firm, stable base.

The base course material shall conform to **Table 5.8.2.1**,

Table 5.8.2.1
Grading Requirements

Sieve Designation		Mass Percent Passing	
Standard mm	Alternate US Standard	Grading A	Grading B
50.0	2"	100	
37.5	1 1/2"	-	100
25.0	1"	60-85	
19.0	3/4"	-	60-85
12.5	1/2"	36-65	-
4.75	No. 4	20-50	30-55
0.425	No. 40	5-20	8-25
0.075	No. 200	0-12	2-14

The fraction passing the 0.075 mm (No.200) sieve shall not be greater than 0.66 (two thirds) of the fraction passing the 0.425 mm (No. 40) sieve.

The fraction passing the 0.425 mm (No.40) sieve shall have a liquid limit not greater than 25 and plasticity index not greater than 6 as determined by AASHTO T 89 and T 90, respectively.

5.8.3 EXECUTION

5.8.3.1 PREPARATION OF EXISTING SURFACE

The existing surface shall be graded and finished as provided under Section 5.6, "Subgrade Preparation", before placing the base material.

5.8.3.2 PLACING

The aggregate base material shall be placed as a uniform mixture on a prepared subgrade in a quality which will provide the required compacted thickness. When more than one layer is required, each layer shall be shaped and compacted before the succeeding layer is placed.

The placing of materials shall begin at the point designated by the Engineer. Placing shall be from vehicles especially equipped to distribute the material in a continuous uniform layer or windrow. The layer or windrow shall be of such size that when spread and compacted the finished layer shall be in reasonably close conformity to the nominal thickness shown on the Plans.

When hauling is done over previously placed material, hauling

equipment shall be dispersed uniformly over the entire surface of the previously constructed layer, to minimize rutting or uneven compaction.

5.8.3.3 SPREADING AND COMPACTING

When uniformly mixed, the mixture shall be spread to the plan thickness, for compaction. Where the required thickness is 150 mm or less, the material may be spread and compacted in one layer. Where the required thickness is more than 150 mm, the aggregate base shall be spread and compacted in two or more layers of approximately equal thickness, and the maximum compacted thickness of any one layer shall not exceed 150 mm.

All subsequent layers shall be spread and compacted in a similar manner.

The moisture content of base material shall, if necessary, be adjusted prior to compaction by watering with approved sprinkler mounted on trucks or by drying out, as required in order to obtain the required compaction.

Immediately following final spreading and smoothing, each layer shall be compacted to the full width by means of approved compaction equipment.

Rolling shall progress gradually from the sides to the center, parallel to the centerline of the road, and shall continue until the whole surface has been rolled. Any irregularities or depressions that develop shall be corrected by loosening the material at these places and adding or removing material until the surface is smooth and uniform. Along curbs, headers, and walls, and at all places not accessible to the roller, the base material shall be compacted thoroughly with approved tampers or compactors.

If the layer of base materials, or part thereof, does not conform to the required finish, the Contractor shall, at his own expense, make the necessary corrections.

The field density required of each layer is not less than 98 percent of the maximum dry density determined in accordance with AASHTO T 180 (ASTM D1557).

5.8.4 MEASUREMENT AND PAYMENT

1. Measurement

Aggregate base course will be measured by the cubic meter (m^3). The quantity to be paid for shall be the design

volume compacted in-place as shown on the drawings, and accepted in the completed course. No allowance shall be given for materials placed outside the design limits shown on the cross sections. Trial sections shall not be measured separately but shall be included in the quantity of aggregate base course.

2. Payment

The accepted quantities, measured shall be paid for at the contract unit price for aggregate base course which price and payment shall be full compensation for furnishing and placing all materials, including all labor, equipment, tools and incidentals necessary to complete the work prescribed in this Section.

5.10 CEMENT TREATED BASE COURSE

5.10.1 GENERAL

Division 1, "General Requirements" contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

5.10.1.1 DESCRIPTION

The Work include the furnishing of labor, materials and equipment required for cement treated base course for port roads, storage and parking areas in accordance with the lines and grades shown on the Drawings and in conformity with these specifications.

5.10.2 MATERIAL REQUIREMENTS

5.10.2.1 CEMENT

Portland cement shall conform with the requirements of AASHTO M 85 (ASTM C-150). Only type I cement shall be used.

5.10.2.2 AGGREGATES

Aggregates for cement treated base shall consist of any combination of gravel, sand and stone fragments, and shall be lean, free from organic matter, lumps of clay and other deleterious substance, conforming to the following grading and quality requirements:

1. The aggregates shall have a grading curve within the limits for Class C given in the **Table 5.10.3**.

Table 5.10.3
Cement Treated Base Aggregate Grading

Sieve Designation		Percent Passing By Weight
Standard MM	Alternative US Standard	Class C
19	3/4	80-100
4.75	No.4	40-100
0.425	No. 40	10-100
0.075	No. 200	3-15

The aggregates shall be uniform mixture of coarse and fine aggregates prior to adding cement.

- the coarse aggregates retained on a 4.75 mm (No.4) sieve shall have a percentage of wear by the Los Angeles Abrasion Test (AASHTO T 96) of not more than 50;
- the material shall have loss of less than 12% when subject to five cycles of the Sodium Sulfate Soundness test according to AASHTO T 104; and
- The sand equivalent determined according to AASHTO T 176 shall not be less than 20.

5.10.2.3 WATER

Water shall be free oil, acid, alkali or other deleterious substances, the quality of which shall be subject to the approval of the Engineer. Sufficient supply of water shall be made available throughout the work.

5.10.2.4 JOINT FILLER

Expansion joint filler shall be preformed conforming to the requirements.

5.10.3 EXECUTION

5.10.3.1 MIXTURE

Cement treated base shall have a cement content not less than 10% of the weight of the aggregate in the mixture.

5.10.3.2 EQUIPMENT

Before commencing the work, the equipment necessary for the work shall be on the site in good working condition, and shall be subject to the approval of the Engineer both as to the type and condition. The Contractor shall provide sufficient equipment with corresponding experienced operators to ensure efficient progress of the work.

5.10.3.3 PROPORTIONING AND MIXING

Cement treated base shall be mixed in-situ by either batch type mixing using revolving blade or rotary drum mixer, at the option of the Contractor. The aggregate and cement shall be proportioned by weight.

The water shall be proportioned by weight and there shall be means by which the Engineer may readily verify the amount of water per batch. The time of addition of water or the points at which it is introduced into the mixer shall be as approved by the Engineer.

The moisture content of the completed mixture during placing shall not be higher than the optimum moisture content and not lower than 3% below the optimum moisture content.

Cement shall be added in such a manner that is uniformly distributed throughout the aggregate during the mixing operation. Safe, convenient facilities shall be provided for sampling cement in the supply line.

The charge in batch mixer, shall not exceed that which will permit complete mixing of all the material. Dead areas in the mixer, in which the materials does not move or is not sufficiently agitated, shall be corrected.

The cement content of the completed mixture of cement treated base, after it has been spread on the subgrade and prior to initial compaction shall not be lower than the specified cement content shall only be made with the approval of the Engineer.

The aggregate and cement for cement treated base shall be brought to the site of the work before the addition of water. The equipment used and the method adopted shall be such that the material is crushed uniformly to the full depth of the layer to produce a homogenous material. Details of the equipment and method which the Contractor proposes to use for the work shall be subject to the approval of the Engineer.

5.10.3.4 SPREADING

Immediately prior to depositing cement treated base, the area to be covered shall be moistened and kept moist, but not excessively wet.

Segregation shall be prevented and the mixtures shall be free from pockets of coarse or fine material.

The mixed material shall be spread in widths acceptable to the Engineer.

Except when placed as a leveling course, the maximum compacted thickness of any layer shall not exceed 250 mm and the minimum thickness shall not be less than 80 mm. When cement treated base is placed in more than one layer, the surface of the lower layer of compacted material shall be kept moist until covered with the next layer of cement treated base on surface is placed.

The treated mixture may be spread by such equipment which will consistently finish the base within the tolerance specified and which does not result in segregation. Cement treated base placed on areas inaccessible to mechanical spreading equipment may be spread in one layer by methods approved by the Engineer.

The use of motor graders may be permitted during spreading and compacting operations and to trim the edges and surfaces of the cement treated base after compaction in order to finish the base within the tolerances specified.

5.10.3.5 COMPACTING

After spreading, the materials shall be thoroughly compacted to the required lines, grades, and cross section by means of pneumatic tampers, or with other compacting equipment which consistently obtains the degree of compaction required.

Excess material may be placed as aggregate for shoulder construction subject to the following conditions:

1. Hardened lumps of trimmed materials shall be removed or reduced to the maximum size specified for shoulder aggregate prior to spreading additional shoulder aggregates.
2. The amount of trimmed material incorporated in the shoulder shall not exceed 25% of the designed volume of shoulder aggregate. When trimmings exceed this limit, the excess shall be removed.

3. The excess material shall be uniformly distributed in the shoulder area prior to spreading additional shoulder aggregate.
4. Following such trimming, the finished surface shall be thoroughly compacted so that the entire layer of cement treated base conforms to the compaction requirements hereinafter specified. Final compaction shall be accomplished in such a manner that no loose material remain on the surface and all tire marks are eliminated.

5.10.3.6 COMPACTION REQUIREMENTS

The relative compaction of cement treated base shall not be less than 100% of the maximum dry density determined according to AASHTO T134, Method B.

5.10.4 MEASUREMENT AND PAYMENT

5.10.4.1 GENERAL

Measurement and Payment shall be made in accordance with the item of work listed in the Bill of Quantities.

Each item listed shall be paid for in the appropriate unit price per quantity measured and accepted. Payment shall constitute full compensation for all labor, materials and equipment and all incidentals necessary to complete the work.

Cost for trial sections and all the necessary test to be performed in this sections shall be included in the unit price for the item listed in the Bill of Quantities.

5.10.4.2 CEMENT TREATED BASE COURSE

The quantity of cement treated base course to be paid for shall be measured by volume in cubic meter of materials placed and compacted as shown on the Drawings, accepted and certified by the Engineer.

5.13 INTERLOCKING CONCRETE BLOCK PAVEMENT

5.13.1 GENERAL

5.13.1.1 SCOPE OF WORK

This specification covers the construction of interlocking concrete block pavement on a prepared base courses and the laying of leveling course sand bedding all in accordance with the Specifications and Drawings.

5.13.1.2 SUBMITTALS

Before materials for the fabrication of the interlocking concrete blocks are ordered, the Contractor shall submit to the Engineer for his approval certified test report of the equipment and materials to be used for the fabrication of the interlocking concrete blocks.

Twenty eight (28) days before the shipment and installation of the fabrication, the Contractor shall submit his method of fabrication of the interlocking locks and a lists of equipment to be used in the fabrication.

No materials for the fabrication of the concrete blocks shall be delivered at the site unless fabrication equipment of adequate capacity and in good working order is ready at the site and approved by the Engineer.

5.13.2 MATERIAL REQUIREMENTS

5.13.2.1 INTERLOCKING CONCRETE BLOCKS

1. Class of Concrete

Concrete for the interlocking concrete block shall be 41.4 Mpa. (6,000 psi.), Mixing and casting shall be in accordance with Section 3.2

“Reinforced Concrete” and the form and dimension shall be as shown on the Drawings.

Additional requirements shall be as follows:

Minimum 28 day compressive strength	-	41.4 Mpa
Minimum aggregate	-	19 mm
Minimum water-cement ratio	-	0.47
Minimum cement content	-	470 kg/m ³

5.13.2.2 SAND LEVELLING COURSE (SAND CUSHION)

Materials for sand cushion shall consist of sand with uncoated grains, free from injurious amount of dust, lumps of clay, soft or flaky particles, shale, alkali, organic matter, loam or other deleterious substances. Beach shall not be allowed for use.

5.13.3 EXECUTION

5.13.3.1 LAYING OF INTERLOCKING CONCRETE BLOCKS

Concrete blocks shall be laid dry and shall have attained the minimum 28 day compressive strength of 41.4 Mpa. (6,000 psi). No block with chipped surface, cracks or fabricated not to the dimension and truly square as shown on the drawings shall be used in the block work.

Block work shall be done with care and in uniform manner such that the lines along the length or across the length formed by the edges of the blocks shall remain parallel all throughout the length and width of the pavement and the corners of the pavement forced by the lines of the edge of the surface of the blocks shall be kept true and square. Clearance between blocks for all sides shall be 4 mm. The tops of blocks forming the surface of the pavement shall be kept to the line, grade, slope and elevation as shown on the drawings.

5.13.4 MEASUREMENT AND PAYMENT

The quantity of leveling sand bedding to be paid for shall be measured by the area for each thickness in square meters placed and compacted complete and accepted by the Engineer.

The quantity of interlocking concrete block to be paid for shall be measured by the area in square meters for each thickness of blocks laid complete and accepted by the Engineer.