

## SECTION 304 - AGGREGATE BASE COURSE

**304.01 Description.** This work includes furnishing and placing one (1) or more courses of aggregate base on a prepared surface according to the contract. \*|  
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\*|

**304.02 Materials.** Materials shall conform to the following: \*

Aggregate 703.06

Water 712.01

**304.03 Construction Requirements.**

**(A) Placing.** The Contractor shall place the base material on the prepared surface without segregation. The Contractor shall remix the segregated materials until the Contractor gets a uniform distribution. The Contractor shall not dump the material in piles on the prepared surface. \*|  
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\*|

Depositing and spreading shall commence at that part of the work farthest from the point of loading the material and shall progress continuously without breaks. \*

If the required compacted depth of the base course exceeds six (6) inches, the Contractor shall construct the base in two (2) or more layers of approximately equal thickness. The maximum compacted thickness of one (1) layer shall not exceed six (6) inches. \*|  
\*|  
\*|  
\*|

If the Contractor uses a vibratory roller weighing nine (9) tons or more, the Contractor may increase lift thickness to seven (7) inches. \*|  
\*|

The Engineer will not permit the spreading of binder material over the surface of the compacted base. The Contractor shall incorporate the additional material, if required, uniformly throughout the thickness of the compacted material by scarifying and blading. The combined material shall meet quality requirements as specified. \*|  
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\*|  
\*|

**(B) Shaping and Compacting.** The Contractor shall do such shaping work as necessary. The finished base shall conform to the required grade and cross-section. The finished base where not controlled by adjacent structures or features shall not vary more than 0.04 foot above or below the theoretical grade. \*|  
\*|

The Contractor shall continue the compaction of each layer until the Contractor gets a density of not less than ninety-five (95) percent of the maximum density according to Subsection 106.09 - Special Test Methods. The Engineer will make field density determination according to Hawaii Test Method HWY-TC 1. The Contractor shall maintain the surface of each layer during the compaction operations so that the aggregates \*|  
\*|  
\*|  
\*|  
\*|

produce a uniform texture and firmly keyed. The Contractor shall apply \*|  
the water uniformly over the base materials during compaction in the \*|  
quantity necessary for proper consolidation.

If high or low spots develop during rolling operations, the \*|  
Contractor shall smooth out such spots by blading with a self-propelled \*|  
and pneumatic-tired motor grader. The grader shall have a wheel base not \*|  
less than fifteen (15) feet long and a blade not less than ten (10) feet \*|  
long. \*

The Contractor shall compact each layer initially by rolling with \*|  
three (3) wheel rollers followed by intermediate rolling with pneumatic- \*|  
tired rollers. The Contractor shall do the final rolling with three (3) \*|  
wheel rollers. The Contractor may submit alternate methods or equipment \*|  
for compacting the aggregate base course acceptable by the Engineer. \*

(C) **Equipment.** Three (3) wheel rollers and pneumatic-tired rollers \*|  
shall conform to Subsection 401.03(B)(4) - Rollers. \*

**304.04 Method of Measurement.** The Engineer will measure the aggregate base \*|  
course by cubic yard or square yard as specified in the proposal according to \*|  
the dimensions shown in the contract or ordered by the Engineer. The Engineer \*|  
may measure the aggregate base course by the ton as specified in the proposal. \*

The Engineer will convert the quantity of aggregate base course material, \*|  
if measured by the ton, to tonnage based on a bulk (dry) specific gravity of \*|  
2.8 for payment purposes. The Engineer will do this by correcting the specific \*|  
gravity using the following formula: |

$$\frac{2.8}{\text{Actual Specific Gravity}} \times \text{Weighed Tonnage} = \text{Payment Tonnage} \quad |$$

(Corrected for Moisture)

The Engineer will determine the bulk specific gravity according to AASHTO \*|  
T 85. The Engineer will carry the specific gravity value used in the \*|  
computation to the nearest tenth. The Engineer will deduct the moisture, at \*|  
the time of weighing for payment, over five (5) percent, based on dry weight \*|  
of aggregate, from the weighed tonnage. |

**304.05 Basis of Payment.** The Engineer will pay for the accepted quantities \*|  
of aggregate base of the size and type specified, at the contract unit price \*|  
per ton, per cubic yard or per square yard.

The unit price paid shall be full compensation for preparing the base \*|  
course, adding water for compaction, furnishing labor, material, tools, \*|  
equipment, and incidentals necessary to complete the work. \*

The Engineer will make payment under:

\*)

Pay Item	Pay Unit
Aggregate Base	Ton
Aggregate Base	Cubic Yard
Aggregate Base	Square Yard

When not specified in the proposal, the Engineer will consider aggregate base course incidental to the various items of the contract. The Engineer will not pay for the aggregate base separately.

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