

FINE AGGREGATE GRADATIONS											
Grad No.	Sieve Size and Percent Passing										
	3/8	No. 4	No. 8 ^{4/}	No. 10	No. 16	No. 30 ^{5/}	No. 40	No. 50	No. 80	No. 100	No. 200 ^{1/}
FA 1	100	97±3			65±20			16±13		5±5	
FA 2	100	97±3			65±20			20±10		5±5	
FA 3	100	97±3		80±15			50±20		25±15		3±3
FA 4 ^{7/}	100				5±5						
FA 5	100	92±8								20±20	15±15
FA 6		92±8 ^{2/}								20±20	6±6
FA 7		100		97±3			75±15		35±10		3±3
FA 8			100				60±20			3±3	2±2
FA 9			100					30±15		5±5	
FA 10				100			90±10		60±30		7±7
FA 20	100	97±3	80±20		50±15			19±11		10±7	4±4
FA 21 ^{3/}	100	97±3	80±20		57±18			30±10		20±10	9±9
FA 22	100	^{6/}	^{6/}		8±8						2±2

- 1/ Subject to maximum percent allowed in Fine Aggregate Quality Table.
- 2/ 100 percent shall pass the 1 in. (25 mm) sieve, except that for bedding material 100 percent shall pass the 3/8 in. (9.5 mm) sieve. If 100 percent passes the 1/2 in. (12.5 mm) sieve, the No. 4 (4.75 mm) sieve may be 75 ± 25.
- 3/ For all HMA mixtures. When used, either singly or in combination with other sands, the amount of material passing the No. 200 (75 µm) sieve (washed basis) in the total sand fraction for mix design shall not exceed ten percent.
- 4/ For each gradation used in HMA, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ±15 percent. The midpoint shall not be changed without Department approval.
- 5/ For each gradation used in HMA, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ±13 percent. The midpoint shall not be changed without Department approval.
- 6/ For the fine aggregate gradation FA 22, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ± ten percent. The midpoint shall not be changed without Department approval.
- 7/ When used as backfill for pipe underdrains, Type 3, the fine aggregate shall meet one of the modified FA 4 gradations shown in the following table.

FA 4 Modified		
Sieve Size	Percent Passing	
	Option 1	Option 2
3/8 in. (9.5 mm)	100	100
No. 4 (4.75 mm)		97 ± 3
No. 8 (2.36 mm)		5 ± 5
No. 10 (2 mm)	10 ± 10	
No. 16 (1.18 mm)	5 ± 5	2 ± 2
No. 200 (75 µm)	1 ± 1	1 ± 1

COARSE AGGREGATE GRADATIONS													
Grad No.	Sieve Size and Percent Passing												
	3 in.	2 1/2 in.	2 in.	1 1/2 in.	1 in.	3/4 in.	1/2 in.	3/8 in.	No. 4	No. 8	No. 16	No. 50	No. 200 ^{1/}
CA 1	100	95±5	60±15	15±15	3±3								
CA 2		100	95±5		75±15		50±15		30±10		20±15		8±4
CA 3		100	93±7	55±20	8±8		3±3						
CA 4			100	95±5	85±10		60±15		40±10		20±15		8±4
CA 5				97±3 ^{2/}	40±25		5±5		3±3				
CA 6				100	95±5		75±15		43±13		25±15		8±4
CA 7				100	95±5		45±15 ^{7/}		5±5				
CA 8				100	97±3	85±10	55±10		10±5		3±3 ^{3/}		
CA 9				100	97±3		60±15		30±15		10±10		6±6
CA 10					100	95±5	80±15		50±10		30±15		9±4
CA 11					100	92±8	45±15 ^{4/7/}		6±6		3±3 ^{3/5/}		
CA 12						100	95±5	85±10	60±10		35±10		9±4
CA 13						100	97±3	80±10	30±15		3±3 ^{3/}		
CA 14							90±10 ^{6/}	45±20	3±3				
CA 15							100	75±15	7±7		2±2		
CA 16							100	97±3	30±15		2±2 ^{3/}		
CA 17	100								65±20		45±20	20±10	10±5
CA 18	100				95±5				75±25		55±25	10±10	2±2
CA 19	100				95±5				60±15		40±15	20±10	10±5
CA 20							100	92±8	20±10	5±5	3±3		

- 1/ Subject to maximum percent allowed in Coarse Aggregate Quality table.
- 2/ Shall be 100 percent passing the 1 3/4 in. (45 mm) sieve.
- 3/ When used in HMA (High and Low ESAL) mixtures, the percent passing the No. 16 (1.18 mm) sieve for gradations CA 8, CA 11, CA 13, or CA 16 shall be 4±4 percent.
- 4/ When using gradation CA 11 for IL-19.0 and IL-19.0L binder, the percent passing the 1/2 in. (12.5 mm) sieve may also be 15±10.
- 5/ The No. 16 (1.18 mm) requirement will be waived when CA 11 is used in the manufacture of portland cement concrete.
- 6/ Shall be 100 percent passing the 5/8 in. (16 mm) sieve.
- 7/ When Class BS concrete is to be pumped, the coarse aggregate gradation shall have a minimum of 45 percent passing the 1/2 in. (12.5 mm) sieve. The Contractor may combine two or more coarse aggregate sizes, consisting of CA 7, CA 11, CA 13, CA 14, and CA 16, provided a CA 7 or CA 11 is included in the blend.

Note: When CA 7, CA 8, CA 11, CA 13, CA 14, CA 15, or CA 16 are used under paved median, Notes 3, 4, 5, and 6 shall apply.

BEDDING MATERIAL GRADATIONS					
Grad. No.	Percent Passing Sieves				
	4 in.	3 in.	2 in.	1 1/2 in.	No. 4
RR 1		100		53±23	8±8
RR 2	100		53±23		8±8

EROSION PROTECTION AND SEDIMENT CONTROL GRADATIONS														
Grad. No.	Percent Passing Rock Size (lb)													
	1000 ^{1/}	600 ^{1/}	400 ^{1/}	300	170	150 ^{1/}	90	50 ^{1/}	40	12	10	6	3	1
RR 3								100			50±20			8±8
RR 4						100			50±20					8±8
RR 5			100				50±20						8±8	
RR 6		100			50±20							8±8		
RR 7	100			50±20						8±8				

1/ A maximum of 15 percent of the total test sample by weight may be oversize material. Each oversize piece shall not exceed the maximum size of the gradation by more than 20 percent.

Stone for Rockfill. The material may be shot rock, primary crusher run, or other specified gradations approved by the Department.