SUPPLEMENTAL SPECIFICATION
SECTION 106 – CONTROL OF MATERIAL, QC/QA CONCRETE

106.03B QC/QA CONCRETE SAMPLES AND TESTS. All materials will be inspected, sampled, tested or accepted by the Engineer as incorporated into the work unless otherwise specified in the Special Provisions. The Contractor shall not rely on the results of Agency testing being available for Process Quality Control. Any work in which untested and/or unaccepted materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Such work may be considered as unacceptable and unauthorized and will not be paid for. Unless otherwise specified, all testing will conform to the most recent cited standard methods of AASHTO or ASTM, including AASHTO Interim Specifications or the ASTM Tentative Specifications that are current on the date of the advertisement for bids. In the case of conflict between the ASTM and the AASHTO methods of sampling and testing, the AASHTO method shall govern. When modified AASHTO or ASTM test methods or Vermont Agency of Transportation test methods are designated, the test method will be available at the office of the Agency's Materials and Research Section. Tests for compliance with specification requirements will be made by and at the expense of the Agency.

Samples will be taken by authorized representatives of the Agency in accordance with the requirements of the Contract Documents. The Contractor shall provide such facilities, as specified in these Specifications, or as the Engineer may require, for collecting and/or forwarding samples. In all cases, the Contractor shall furnish the required samples without charge.

All materials used are subject to inspection, testing, and possible rejection at any time during the Contract period. Materials contaminated by the Contractor's operations shall be removed. No work or materials shall be deemed approved until acceptance by the Engineer. Copies of all test results will be furnished to the Contractor's representative upon request.

In lieu of testing, the Agency may approve the use of certain materials based upon the receipt of a certification from the manufacturer stating that such material is in compliance with these Specifications. The requirements for such certifications are specified in Subsection 700.02.

The Contractor may observe the Agency's sampling and testing. If a deviation from the prescribed sampling or testing procedure is observed, the Contractor shall describe such deviation to the Engineer immediately and document it in writing within 24 hours.

Pay items designated for acceptance under the Quality Control/Quality Acceptance provisions of Subsection 501.08B will be randomly sampled and tested in accordance with the recommended acceptance guidelines specified for those items. Acceptance tests will govern in all cases for determination of pay factors without regard to quality control tests.

(a) The Contractor shall provide process quality control so as to produce work of acceptable quality. The Contractor shall conduct process quality control sampling, testing, and inspection during all phases of the work at such frequency to insure that the work conforms to the contract specifications for the item.

The Engineer will not sample or test for process control, or help to control production operations. The Contractor shall provide personnel and testing equipment capable of producing a product conforming to specifications. Continued production of non-conforming work with a reduction in price, in lieu of adjustments to bring work into conformance shall not be allowed.

1. The Contractor shall provide and administer a Process Quality Control Plan, hereafter called the "Plan." See Subsection 501.08B for further details and requirements of the Plan.

   The Plan shall identify all personnel, equipment, supplies, and facilities required for sampling and testing. The intent of the Plan is to enable the Contractor to control the quality of the product in order to comply with the specifications.

   The Contractor shall not begin work on the items involved until the Plan has been approved. No payment will be made for work subject to quality control without an approved Plan. Approval of the Plan may include, but not be limited to, inspection of production and testing facilities and equipment, and sampling and testing demonstrations by the Contractor's technician(s) to ensure acceptable levels of performance.

2. All testing conducted by the Contractor under the Plan shall be performed by qualified technicians in laboratories approved by the Agency's Materials and Research Section. Technician qualifications shall be as described in the specifications for the item being tested under the Quality Control/Quality Acceptance provisions, Subsection 501.08B.

   The Contractor shall assure that the laboratory is clean and maintained and that all equipment is in proper working order. The Engineer shall be allowed unrestricted access to inspect and review the Contractor's laboratory. The Contractor shall be advised in writing of any deficiencies regarding the laboratory, equipment, supplies, or of testing personnel and procedures. The Engineer may order an immediate stop of the work until the deficiencies are corrected.

3. The Plan shall be administered by an individual whose qualifications shall be described in the specifications for the item being accepted under Quality Control/Quality Acceptance provisions. This individual may be a full-time employee of the Contractor, or a consultant hired by the Contractor. The Plan Administrator shall have full authority to institute any and all actions necessary for the Plan to be successful.

4. The Plan shall provide a sampling system which assures all material has an equal chance of being tested. The Engineer shall be allowed to witness all sampling.

If so directed by the Engineer, the Contractor shall sample and test material that appears inconsistent with similar material being sampled, unless the Contractor voluntarily removes, replaces, or makes corrections to the material. The Engineer may require the Contractor to test such replacement and corrected material as well. All sampling shall be performed in accordance with the applicable Agency, AASHTO, or ASTM procedures.

5. All testing shall be performed in accordance with the acceptance test procedures applicable to the specified Contract items, or in accordance with other methods so designated in the Plan. When requested by the Engineer the Contractor shall provide copies of all test results on forms approved for use by the Engineer.

6. The Contractor shall maintain complete records of all process quality control tests and inspections. The Engineer shall be allowed access to these records.

   Acceptable control charts shall be maintained and kept current at a location satisfactory to the Engineer. The control charts will identify the project name and number, pay item, test number, test parameters, and Contractor's test results. The Contractor shall utilize the control charts as part of the process quality control system for identifying production and equipment problems, and for identifying potential pay factor reductions.

(b) Items specified to be sampled and tested on a Quality Acceptance (QA) basis will be evaluated for acceptance in accordance with the guidelines specified for those items. All acceptance test results for a lot, as defined in the specification, will be analyzed collectively and statistically by the Quality Level Analysis - "Percent Within Limits" Method using the procedures listed to determine the total estimated percent of the lot that is within specification limits. Quality Level Analysis– "Percent Within Limits" is a statistical procedure for estimating the percent compliance with a specification, and is affected by shifts in the arithmetic mean ($\bar{x}$) of the test results and by the sample standard deviation (s).

Quality Acceptance criteria for sublot size, number of sublots, number of tests, pay factor determintation and rejection levels/procedures are outlined in Subsection 501.08B.

1. The Engineer may reject material which appears defective based on visual inspection. Rejected material shall not be incorporated into the work.

2. Quality Level Analysis – “Percent Within Limits” procedures are defined as follows:

a. Compute the upper quality index (Q_u):

$$Q_u = \frac{USL - \bar{x}}{s}$$

Where USL = upper specification limit

b. Compute the lower quality index (Q_L):

$$Q_L = \frac{\bar{x} - LSL}{s}$$

Where LSL = lower specification limit

c. Determine PWL_U (percent within the upper specification limit which corresponds to a given Q_U) from references available through the Engineer.

Note: If a USL is not specified, PWL_U will be 100.

d. Determine PWL_L (percent within the lower specification limit which corresponds to a given Q_L) from references available through the Engineer.

Note: If a LSL is not specified, PWL_L will be 100.

e. Determine the PWL (total percent within specification limits).

$$\mathbf{PWL = PWL_U + PWL_L - 100}$$

f. Determine the Pay Factor (PF) for the lot from the process or equation applicable to the specific contract item.

Note: Numbers used in the above calculations shall be carried to significant figures and rounded according to AASHTO Standard Recommended Practice R-11.

Table 1
Estimated Percent of Work Within Specification Limits

Estimated Percent Within Specification Limits (P_U or P_L)	Upper Quality Index Q_U or Lower Quality Index Q_L								
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14
100	1.16	1.49	1.72	1.88	1.99	2.07	2.13	2.20	2.28
99	-	1.46	1.64	1.75	1.82	1.88	1.91	1.96	2.01
98	1.15	1.43	1.58	1.66	1.72	1.75	1.78	1.81	1.84
97	-	1.40	1.52	1.59	1.63	1.66	1.68	1.71	1.73
96	-	1.37	1.47	1.52	1.56	1.58	1.60	1.62	1.64
95	1.14	1.34	1.42	1.47	1.49	1.51	1.52	1.54	1.55
94	-	1.31	1.38	1.41	1.43	1.45	1.46	1.47	1.48
93	1.13	1.28	1.33	1.36	1.38	1.39	1.40	1.41	1.41
92	1.12	1.25	1.29	1.31	1.33	1.33	1.34	1.35	1.35
91	1.11	1.22	1.25	1.27	1.28	1.28	1.29	1.29	1.30
90	1.10	1.19	1.21	1.23	1.23	1.24	1.24	1.24	1.25
89	1.09	1.16	1.18	1.18	1.19	1.19	1.19	1.19	1.20
88	1.07	1.13	1.14	1.14	1.15	1.15	1.15	1.15	1.15
87	1.06	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.11
86	1.04	1.07	1.07	1.07	1.07	1.06	1.06	1.06	1.06
85	1.03	1.04	1.03	1.03	1.03	1.03	1.02	1.02	1.02
84	1.01	1.01	1.00	0.99	0.99	0.99	0.99	0.98	0.98
83	0.99	0.98	0.97	0.96	0.95	0.95	0.95	0.95	0.94
82	0.97	0.95	0.93	0.92	0.92	0.92	0.91	0.91	0.91
81	0.95	0.92	0.90	0.89	0.88	0.88	0.88	0.87	0.87
80	0.93	0.89	0.87	0.86	0.85	0.85	0.84	0.84	0.84
79	0.91	0.86	0.84	0.82	0.82	0.81	0.81	0.81	0.80
78	0.88	0.83	0.81	0.79	0.79	0.78	0.78	0.77	0.77
77	0.86	0.80	0.77	0.76	0.75	0.75	0.74	0.74	0.74
76	0.83	0.77	0.74	0.73	0.72	0.72	0.71	0.71	0.70
75	0.81	0.74	0.71	0.70	0.69	0.69	0.68	0.68	0.67
74	0.78	0.71	0.68	0.67	0.67	0.65	0.65	0.65	0.64
73	0.75	0.68	0.65	0.64	0.63	0.62	0.62	0.62	0.61
72	0.73	0.65	0.62	0.61	0.60	0.59	0.59	0.59	0.58
71	0.70	0.62	0.59	0.58	0.57	0.57	0.56	0.56	0.55
70	0.67	0.59	0.56	0.55	0.54	0.54	0.53	0.53	0.52
69	0.64	0.56	0.53	0.52	0.51	0.51	0.50	0.50	0.50
68	0.61	0.53	0.50	0.49	0.48	0.48	0.48	0.47	0.47
67	0.58	0.50	0.47	0.46	0.45	0.45	0.45	0.44	0.44
66	0.55	0.47	0.45	0.43	0.43	0.42	0.42	0.42	0.41
65	0.51	0.44	0.42	0.40	0.40	0.39	0.39	0.39	0.38
64	0.48	0.41	0.39	0.38	0.37	0.37	0.36	0.36	0.36
63	0.45	0.38	0.36	0.35	0.34	0.34	0.34	0.33	0.33
62	0.41	0.35	0.33	0.32	0.32	0.31	0.31	0.31	0.30
61	0.38	0.30	0.30	0.30	0.29	0.28	0.28	0.28	0.28
60	0.34	0.28	0.28	0.25	0.25	0.25	0.25	0.25	0.25
59	0.31	0.27	0.25	0.23	0.23	0.23	0.23	0.23	0.23
58	0.30	0.25	0.23	0.20	0.20	0.20	0.20	0.20	0.20
57	0.25	0.20	0.18	0.18	0.18	0.18	0.18	0.18	0.18
56	0.20	0.18	0.16	0.15	0.15	0.15	0.15	0.15	0.15
55	0.18	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13
54	0.15	0.13	0.10	0.10	0.10	0.10	0.10	0.10	0.10
53	0.10	0.10	0.08	0.08	0.08	0.08	0.08	0.08	0.08
52	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
51	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: If the value of Q_U or Q_L does not correspond to a value in the table, use the next lower Q value. If Q_U or Q_L are negative values, P_U or P_L is equal to 100 minus the table value for P_U or P_L.

(continued)

Table 1 (continued)
Estimated Percent of Work Within Specification Limits

Estimated Percent Within Specification Limits (P_U or P_L)	Upper Quality Index Q_U or Lower Quality Index Q_L					
	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to ∞
100	2.34	2.39	2.44	2.48	2.51	2.56
99	2.04	2.07	2.09	2.12	2.14	2.16
98	1.87	1.89	1.91	1.93	1.94	1.95
97	1.75	1.76	1.78	1.79	1.80	1.81
96	1.65	1.66	1.67	1.68	1.69	1.70
95	1.56	1.57	1.58	1.59	1.59	1.60
94	1.49	1.50	1.50	1.51	1.51	1.52
93	1.42	1.43	1.43	1.44	1.44	1.44
92	1.36	1.36	1.37	1.37	1.37	1.38
91	1.30	1.30	1.31	1.31	1.31	1.31
90	1.25	1.25	1.25	1.25	1.26	1.26
89	1.20	1.20	1.20	1.20	1.20	1.20
88	1.15	1.15	1.15	1.15	1.15	1.15
87	1.11	1.11	1.11	1.11	1.11	1.11
86	1.06	1.06	1.06	1.06	1.06	1.06
85	1.02	1.02	1.02	1.02	1.02	1.02
84	0.98	0.98	0.98	0.98	0.98	0.98
83	0.94	0.94	0.94	0.94	0.94	0.94
82	0.91	0.90	0.90	0.90	0.90	0.90
81	0.87	0.87	0.87	0.87	0.87	0.87
80	0.83	0.83	0.83	0.83	0.83	0.83
79	0.80	0.80	0.80	0.80	0.80	0.79
78	0.77	0.76	0.76	0.76	0.76	0.76
77	0.73	0.73	0.73	0.73	0.73	0.73
76	0.70	0.70	0.70	0.70	0.70	0.70
75	0.67	0.67	0.67	0.67	0.67	0.66
74	0.64	0.64	0.64	0.64	0.64	0.63
73	0.61	0.61	0.61	0.61	0.61	0.60
72	0.58	0.58	0.58	0.58	0.58	0.57
71	0.55	0.55	0.55	0.55	0.55	0.54
70	0.52	0.52	0.52	0.52	0.52	0.52
69	0.49	0.49	0.49	0.49	0.49	0.49
68	0.47	0.46	0.46	0.46	0.46	0.46
67	0.44	0.44	0.43	0.43	0.43	0.43
66	0.41	0.41	0.41	0.41	0.41	0.40
65	0.38	0.38	0.38	0.38	0.38	0.38
64	0.36	0.35	0.35	0.35	0.35	0.35
63	0.33	0.33	0.33	0.33	0.33	0.32
62	0.30	0.30	0.30	0.30	0.30	0.30
61	0.28	0.28	0.28	0.28	0.28	0.28
60	0.25	0.25	0.25	0.25	0.25	0.25
59	0.23	0.23	0.23	0.23	0.23	0.23
58	0.20	0.20	0.20	0.20	0.20	0.20
57	0.18	0.18	0.18	0.18	0.18	0.18
56	0.15	0.15	0.15	0.15	0.15	0.15
55	0.13	0.13	0.13	0.13	0.13	0.13
54	0.10	0.10	0.10	0.10	0.10	0.10
53	0.08	0.08	0.08	0.08	0.08	0.08
52	0.05	0.05	0.05	0.05	0.05	0.05
51	0.03	0.03	0.03	0.03	0.03	0.03
50	0.00	0.00	0.00	0.00	0.00	0.00

Note: If the value of Q_U or Q_L does not correspond to a value in the table, use the next lower Q value. If Q_U or Q_L are negative values, P_U or P_L is equal to 100 minus the table value for P_U or P_L.

Table 2 - Pay Factors

PAY FACTOR	Minimum Required Percent of Work Within Specification Limits for a Given Pay Factor $(P_U + P_L) - 100$														
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to 400
1.05						100	100	100	100	100	100	100	100	100	100
1.04					100	99	97	95	96	96	96	97	97	97	97
1.03				100	98	96	94	92	93	93	94	95	95	96	96
1.02				99	97	94	91	89	90	91	92	93	93	94	94
1.01	100	100	100	98	95	92	89	87	88	89	90	91	92	92	93
1.00	69	75	78	80	82	83	84	85	86	87	88	89	90	91	92
0.99	66	72	76	78	80	81	82	83	84	85	86	87	89	90	91
0.98	64	70	74	76	78	79	80	81	82	84	85	86	87	88	90
0.97	63	68	72	74	76	77	78	79	81	82	83	84	86	87	88
0.96	61	67	70	72	74	75	76	78	79	81	82	83	84	86	87
0.95	59	65	68	71	72	74	75	76	78	79	80	82	83	84	86
0.94	58	63	67	69	71	72	73	75	76	78	79	80	82	83	85
0.93	57	62	65	67	69	71	72	73	75	76	78	79	80	82	84
0.92	55	60	63	66	68	69	70	72	73	75	76	78	79	81	82
0.91	54	59	62	64	66	68	69	70	72	74	75	76	78	79	81
0.90	53	57	61	63	65	66	67	69	71	72	74	75	77	78	80
0.89	51	56	59	62	63	65	66	68	69	71	72	74	75	77	79
0.88	50	55	58	60	62	64	65	66	68	70	71	73	74	76	78
0.87	49	53	57	59	61	62	63	65	67	68	70	71	73	75	77
0.86	48	52	55	58	59	61	62	64	66	67	69	70	72	74	76

Note: If the value of $(P_U + P_L) - 100$ does not correspond to a $(P_U + P_L) - 100$ value in this table, use the next smaller $(P_U + P_L) - 100$ value.

(continued)

Table 2 - Pay Factors (continued)

PAY FACTOR	Minimum Required Percent of Work Within Specification Limits for a Given Pay Factor $(P_U + P_L) - 100$														
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10 to n=11	n=12 to n=14	n=15 to n=17	n=18 to n=22	n=23 to n=29	n=30 to n=42	n=43 to n=66	n=67 to 400
0.85	46	51	54	56	58	60	61	62	64	66	67	69	71	72	75
0.84	45	49	53	55	57	58	60	61	63	65	66	68	70	71	73
0.83	44	48	51	54	56	57	58	60	62	64	65	67	69	70	72
0.82	43	47	50	53	54	56	57	59	61	62	64	66	67	69	71
0.81	41	46	49	51	53	55	56	58	59	61	63	64	66	68	70
0.80	40	44	48	50	52	54	55	56	58	60	62	63	65	67	69
0.79	39	43	46	49	51	52	54	55	57	59	61	62	64	66	68
0.78	38	42	45	48	50	51	52	54	56	58	59	61	63	65	67
0.77	36	41	44	46	48	50	51	53	55	57	58	60	62	64	66
0.76	35	39	43	45	47	49	50	52	54	56	57	59	61	63	65
0.75	33	38	42	44	46	48	49	51	53	54	56	58	60	62	64
REJECT	Values Less Than Those Shown Above														

Note: If the value of $(P_U + P_L) - 100$ does not correspond to a $(P_U + P_L) - 100$ value in this table, use the next smaller $(P_U + P_L) - 100$ value.

Table 106-3 (a) Table of Random Numbers

	0	1	2	3	4	5	6	7	8	9
0	0.272	0.519	0.098	0.459	1.000	0.554	0.250	0.246	0.736	0.432
1	0.994	0.978	0.693	0.593	0.690	0.028	0.831	0.319	0.073	0.268
2	0.039	0.449	0.737	0.501	0.960	0.254	0.239	0.474	0.031	0.720
3	0.144	0.695	0.339	0.621	0.128	0.032	0.413	0.617	0.764	0.257
4	0.312	0.138	0.670	0.894	0.682	0.061	0.832	0.765	0.226	0.745
5	0.871	0.838	0.595	0.576	0.096	0.581	0.245	0.786	0.412	0.867
6	0.783	0.874	0.795	0.430	0.265	0.059	0.260	0.563	0.632	0.394
7	0.358	0.424	0.684	0.074	0.109	0.345	0.618	0.176	0.352	0.748
8	0.494	0.839	0.337	0.325	0.699	0.083	0.043	0.809	0.981	0.499
9	0.642	0.514	0.297	0.869	0.744	0.824	0.524	0.656	0.608	0.408
10	0.485	0.240	0.292	0.335	0.088	0.589	0.127	0.396	0.401	0.407
11	0.728	0.819	0.557	0.050	0.152	0.816	0.404	0.079	0.703	0.493
12	0.029	0.262	0.558	0.159	0.767	0.175	0.979	0.521	0.781	0.843
13	0.918	0.348	0.311	0.232	0.797	0.921	0.995	0.225	0.397	0.356
14	0.641	0.013	0.780	0.478	0.529	0.520	0.093	0.426	0.323	0.504
15	0.208	0.468	0.045	0.798	0.065	0.315	0.318	0.742	0.597	0.080
16	0.346	0.429	0.537	0.469	0.697	0.124	0.541	0.525	0.281	0.962
17	0.900	0.206	0.539	0.308	0.480	0.293	0.448	0.010	0.836	0.233
18	0.228	0.369	0.513	0.762	0.952	0.856	0.574	0.158	0.689	0.579
19	0.746	0.170	0.974	0.306	0.145	0.139	0.417	0.195	0.338	0.901
20	0.363	0.103	0.931	0.389	0.199	0.488	0.915	0.067	0.878	0.640
21	0.663	0.942	0.278	0.785	0.638	0.002	0.989	0.462	0.927	0.186
22	0.545	0.185	0.054	0.198	0.717	0.247	0.913	0.975	0.555	0.559
23	0.360	0.349	0.569	0.910	0.420	0.492	0.947	0.115	0.884	0.452
24	0.789	0.815	0.464	0.484	0.020	0.007	0.547	0.941	0.363	0.261
25	0.279	0.609	0.086	0.852	0.890	0.108	0.076	0.089	0.662	0.607
26	0.680	0.235	0.706	0.827	0.572	0.769	0.310	0.036	0.329	0.477
27	0.078	0.444	0.178	0.651	0.423	0.672	0.517	0.660	0.657	0.972
28	0.676	0.830	0.531	0.888	0.305	0.421	0.307	0.502	0.112	0.808
29	0.861	0.899	0.643	0.771	0.037	0.241	0.582	0.578	0.634	0.077
30	0.111	0.364	0.970	0.669	0.548	0.687	0.639	0.510	0.105	0.549
31	0.289	0.857	0.948	0.980	0.132	0.094	0.298	0.870	0.309	0.441
32	0.961	0.893	0.392	0.377	0.864	0.472	0.009	0.946	0.766	0.287
33	0.637	0.986	0.753	0.566	0.213	0.807	0.017	0.460	0.515	0.630
34	0.834	0.121	0.255	0.453	0.376	0.583	0.422	0.371	0.399	0.366
35	0.284	0.490	0.402	0.151	0.044	0.436	0.747	0.694	0.136	0.585
36	0.038	0.814	0.594	0.911	0.324	0.322	0.898	0.411	0.160	0.367
37	0.351	0.283	0.027	0.220	0.685	0.527	0.943	0.556	0.853	0.612
38	0.143	0.384	0.645	0.479	0.489	0.052	0.187	0.990	0.912	0.750
39	0.512	0.056	0.018	0.122	0.303	0.803	0.553	0.729	0.205	0.925
40	0.296	0.705	0.156	0.616	0.534	0.168	0.564	0.866	0.739	0.850
41	0.451	0.536	0.768	0.518	0.481	0.880	0.835	0.734	0.427	0.847
42	0.837	0.405	0.591	0.370	0.104	0.848	0.004	0.414	0.354	0.707
43	0.724	0.153	0.841	0.829	0.470	0.391	0.388	0.163	0.817	0.790
44	0.665	0.825	0.671	0.623	0.770	0.400	0.068	0.440	0.019	0.944
45	0.573	0.716	0.266	0.456	0.434	0.467	0.603	0.169	0.721	0.779
46	0.332	0.702	0.300	0.570	0.945	0.968	0.649	0.097	0.118	0.242
47	0.755	0.951	0.937	0.550	0.879	0.162	0.791	0.810	0.625	0.674
48	0.439	0.491	0.855	0.446	0.773	0.542	0.416	0.350	0.957	0.419
49	0.700	0.877	0.442	0.286	0.526	0.071	0.154	0.988	0.333	0.626

Table 106-3 (b) Table of Random Numbers

	0	1	2	3	4	5	6	7	8	9
50	0.523	0.613	0.752	0.733	0.585	0.072	0.820	0.929	0.777	0.461
51	0.905	0.182	0.567	0.249	0.227	0.229	0.604	0.304	0.217	0.142
52	0.373	0.120	0.602	0.793	0.692	0.863	0.954	0.873	0.107	0.675
53	0.057	0.953	0.041	0.090	0.223	0.508	0.806	0.438	0.203	0.586
54	0.967	0.040	0.708	0.271	0.189	0.342	0.740	0.801	0.985	0.263
55	0.917	0.715	0.758	0.005	0.666	0.599	0.934	0.100	0.987	0.085
56	0.131	0.646	0.659	0.047	0.051	0.562	0.435	0.731	0.362	0.317
57	0.326	0.605	0.443	0.601	0.386	0.560	0.378	0.172	0.445	0.636
58	0.299	0.106	0.237	0.732	0.796	0.476	0.099	0.804	0.735	0.950
59	0.101	0.055	0.776	0.686	0.171	0.533	0.936	0.095	0.982	0.211
60	0.267	0.598	0.754	0.658	0.274	0.215	0.177	0.218	0.330	0.628
61	0.471	0.102	0.454	0.568	0.963	0.357	0.882	0.507	0.157	0.580
62	0.535	0.881	0.014	0.966	0.958	0.190	0.180	0.759	0.433	0.355
63	0.277	0.458	0.295	0.196	0.772	0.148	0.466	0.291	0.688	0.046
64	0.719	0.167	0.181	0.653	0.328	0.070	0.015	0.155	0.631	0.063
65	0.385	0.858	0.713	0.883	0.916	0.084	0.561	0.999	0.379	0.668
66	0.862	0.928	0.822	0.812	0.977	0.395	0.788	0.920	0.673	0.698
67	0.486	0.938	0.757	0.749	0.991	0.219	0.264	0.932	0.898	0.006
68	0.091	0.872	0.959	0.922	0.727	0.811	0.075	0.374	0.133	0.730
69	0.146	0.482	0.930	0.611	0.179	0.011	0.248	0.886	0.344	0.926
70	0.709	0.184	0.390	0.409	0.191	0.117	0.860	0.135	0.406	0.134
71	0.996	0.896	0.760	0.347	0.053	0.372	0.193	0.756	0.565	0.914
72	0.971	0.859	0.147	0.114	0.418	0.889	0.792	0.064	0.652	0.288
73	0.202	0.538	0.026	0.949	0.696	0.008	0.846	0.259	0.415	0.425
74	0.212	0.321	0.778	0.940	0.496	0.231	0.664	0.903	0.473	0.909
75	0.207	0.799	0.487	0.022	0.813	0.891	0.500	0.368	0.725	0.437
76	0.818	0.503	0.906	0.224	0.904	0.892	0.455	0.343	0.924	0.197
77	0.701	0.984	0.174	0.141	0.704	0.908	0.048	0.828	0.997	0.058
78	0.035	0.380	0.001	0.381	0.251	0.497	0.214	0.794	0.552	0.588
79	0.221	0.200	0.587	0.353	0.584	0.270	0.885	0.110	0.956	0.711
80	0.647	0.403	0.530	0.738	0.280	0.457	0.650	0.276	0.661	0.973
81	0.667	0.722	0.327	0.723	0.410	0.635	0.012	0.907	0.316	0.677
82	0.644	0.590	0.021	0.269	0.042	0.062	0.387	0.183	0.964	0.544
83	0.302	0.123	0.116	0.282	0.851	0.256	0.648	0.845	0.782	0.993
84	0.633	0.933	0.331	0.546	0.842	0.016	0.236	0.164	0.923	0.976
85	0.060	0.681	0.683	0.775	0.624	0.955	0.126	0.655	0.919	0.113
86	0.165	0.532	0.431	0.341	0.092	0.244	0.222	0.336	0.034	0.216
87	0.875	0.691	0.383	0.382	0.596	0.301	0.275	0.188	0.868	0.805
88	0.726	0.902	0.252	0.130	0.238	0.398	0.763	0.463	0.615	0.140
89	0.273	0.393	0.285	0.161	0.619	0.865	0.551	0.030	0.571	0.258
90	0.253	0.821	0.600	0.023	0.606	0.849	0.610	0.577	0.082	0.774
91	0.340	0.654	0.173	0.495	0.498	0.992	0.192	0.506	0.751	0.129
92	0.194	0.290	0.592	0.983	0.509	0.998	0.522	0.627	0.741	0.540
93	0.166	0.450	0.210	0.204	0.840	0.826	0.833	0.516	0.965	0.375
94	0.712	0.314	0.033	0.823	0.629	0.939	0.887	0.066	0.743	0.081
95	0.622	0.800	0.710	0.575	0.678	0.465	0.802	0.969	0.150	0.784
96	0.313	0.294	0.897	0.718	0.614	0.876	0.025	0.049	0.620	0.125
97	0.137	0.087	0.003	0.483	0.201	0.209	0.320	0.935	0.447	0.787
98	0.243	0.679	0.844	0.069	0.024	0.543	0.714	0.234	0.505	0.428
99	0.361	0.359	0.230	0.761	0.334	0.149	0.511	0.475	0.854	0.119