

**BASE DOCUMENT - DB 165
VERSION 1**

MAY 25, 2007

DB Section 165 - Quality of Materials

DB165.00 General - Design-Builder shall incorporate into the Project only Materials conforming to all Contract requirements. Design-Builder shall incorporate into the Project only manufactured products made of new Materials unless otherwise specified in the Contract.

Materials not meeting Contract Specifications at the time they are to be used are unacceptable and must be removed immediately from the Project Site, unless otherwise directed in writing by the Agency.

DB165.01 Rejected Materials - Design-Builder or the Agency may reject any Materials that appear to be defective. Design-Builder may reject damaged or non-Specification Materials regardless of the Materials Conformance Documents furnished. Design-Builder shall not incorporate any rejected Materials into the Project. Rejected Materials whose defects have been corrected may not be incorporated into the Project until Design-Builder and the Agency have approved their use. Either Design-Builder or the Agency may order the removal and replacement of defective materials by Design-Builder, at Design-Builder's expense.

DB165.02 Materials Conformance and Quality Compliance Documents - For purposes of this Section, "Materials Conformance Documents" means Design-Builder's Quality Control (QC) test results and identity of the testing facility. "Quality Compliance Documents" means those documents specified in the ODOT *Nonfield-Tested Materials Acceptance Guide* (NFTMAG), unless otherwise specified in the Contract.

DB165.03 Testing by Agency - When testing Materials, the Agency will conduct the tests in its central laboratory, field laboratories, or other laboratories designated by the Agency, even though certain AASHTO, ASTM, and other Materials specifications may require testing at the place of manufacture. Results of the Agency's tests will be made available to Design-Builder.

DB165.04 Costs of Testing - When the Contract requires that the Agency performs the testing, the testing will be at the Agency's expense. The Agency will pay the cost of Design-Builder-requested source-review tests on unprocessed Aggregates from no more than two sources, and on no more than three unprocessed samples from each source. Additional source-review tests performed at Design-Builder's request shall be at Design-Builder's expense.

Unless otherwise provided in the Contract, all testing required to be performed by Design-Builder will be at Design-Builder's expense.

DB165.10 Materials Acceptance Guides - Unless otherwise specified elsewhere in the Contract Documents, Materials will be Accepted according to the following guides:

DB165.10(a)

(a) Field-Tested Materials - Field-tested Materials will be Accepted according to the ODOT *Manual of Field Test Procedures (MFTP)*. The *MFTP* is available at the ODOT Contractor Plans office, 455 Airport Road, S.E., Bldg. K, Salem, Oregon (phone (503) 986-6936).

(b) Non-Field-Tested Materials - Nonfield-tested Materials will be Accepted according to the NFTMAG, unless otherwise specified in the Contract. The NFTMAG is available electronically on the ODOT website at:

<http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/docs/NFTMAG.pdf>

DB165.20 Materials Specifications and Test Method References - References to Materials Specifications and test methods of ODOT, WAQTC, AASHTO, ASTM, and other Authorities, or other recognized organizations, mean those officially adopted and in current use by the Authority or organization on the date the Proposal is due.

(a) If there are conflicting references to Materials Specifications or test methods, Materials must meet the Materials Specifications or test methods required by the first applicable of the following Authorities and organizations:

- (1) ODOT;
- (2) WAQTC;
- (3) AASHTO;
- (4) ASTM;
- (5) Other recognized national organizations, such as ANSI, AWPA, IMSA, and UL; and
- (6) Industry standards in the location where the Work is being performed.

(b) If there are conflicting references in the Contract to required sampling and testing frequencies, Design-Builder shall sample and test the Materials according to the first applicable of the following:

- (1) Applicable **DB Special Provisions**;
- (2) *MFTP*; and
- (3) Applicable **DB Standard Specifications**.

DB165.30 Field-Tested Materials

(a) Types of Tests - The types of tests and testing methods generally required by the Agency are described in the *MFTP*.

(b) Acceptance of Field-Tested Materials - Design-Builder's test results for field-tested Materials will be verified by the Agency according to the Quality Assurance Program outlined in the *MFTP*. If the Agency's QA test results verify Design-Builder's results, the

Materials will be analyzed for Design-Builder's acceptance according to one of the following methods before incorporation into the Work:

- (1) Statistically, according to Subsection 165.40, to determine "Pay Factors" for produced Aggregate.
- (2) Statistically, according to Subsection 165.40, to determine "Composite Pay Factors" for mixtures.
- (3) Other methods determined by Design-Builder and authorized by the Agency.

If acceptance testing reveals that Design-Builder's data is incorrect, the Agency will perform additional testing to determine whether the Materials meet Contract Specifications. If the Materials do not meet Contract Specifications, Design-Builder shall reimburse the Agency for the cost of the additional testing, which may be deducted from monies due or to become due Design-Builder under the Contract.

DB165.35 Non-Field-Tested Materials - Quality compliance documents for non-field-tested Materials shall be in one of the following forms:

(a) Test Results Certificate - The certificate from the manufacturer shall:

- (1) Verify that the Material furnished has been sampled and tested, and that it meets Contract Specifications;
- (2) Include, or be accompanied by, a copy of the specified test results (ODOT, AASHTO, ASTM, UL, or other);
- (3) Identify the testing agency and the representative responsible for the test results;
- (4) Permit positive determination that Material delivered to the Project Site is the same Material covered by the test results certificate; and
- (5) Be delivered to Design-Builder with the shipment of the Material.

(b) Quality Compliance Certificate - The certificate from the manufacturer shall:

- (1) Verify that the Material meets all Contract requirements, and identify by number the specified test methods used (ODOT, AASHTO, ASTM, UL, or other);
- (2) Permit positive determination that Material delivered to the Project Site is the same Material covered by the certificate; and
- (3) Be delivered to Design-Builder with the shipment of the Material, or be an identification plate or mark, decal, sticker, label, or tag attached to the container or Material.

(c) Equipment List and Drawings - These shall consist of lists and documentation such as the following:

DB165.35(c)(1)

- (1) Shop drawings;
- (2) Material lists;
- (3) Equipment lists;
- (4) Equipment and Materials warranty documentation;
- (5) Equipment and Materials catalog description sheets; or
- (6) Equipment and Materials manufacturer's brochures.

(d) Certificate of Origin of Steel Materials - Design-Builder shall obtain ODOT Form 734-2126 for federal-aid projects.

DB165.40 Statistical Analysis - When Subsection 165.30(c) or 165.50 applies, Design-Builder shall divide the Materials into lots and sublots, randomly sample and test them as required, and analyze the results statistically to determine whether the Materials conform to Contract Specifications.

All acceptance test results of lots and sublots shall be analyzed collectively using the Quality Level Analysis procedure set out in this Subsection. This procedure shall not be used for a lot with less than three (3) sublots. Sampling of Material for a lot that contains two (2) or fewer sublots shall be increased to obtain at least three (3) sublots. Both Design-Builder and the Agency have discretion to either accept or reject lots originating with two (2) or fewer sublots, even after sampling is increased.

(a) Lot - A lot is the quantity of Materials produced by a single process or JMF that is sampled, tested, and statistically evaluated as specified in this Subsection.

(b) Sublot - A sublot is a portion of a lot for which a sample test value may be normally obtained.

(c) Quality Level Analysis - Quality Level Analysis is a statistical procedure to determine, for each lot:

- (1) The percentage of each constituent of the Materials meeting Specifications;
- (2) The Pay Factor for each constituent; and
- (3) The Composite Pay Factor, when specified.

(d) Pay Factor and Composite Pay Factor Computation - Procedures for determining the percent meeting Specifications, Pay Factors, and Composite Pay Factor for a lot of Materials are as follows:

- (1) Compute lot arithmetic mean (\bar{X}) for each constituent:

$$\bar{X} = \frac{\sum X}{n}$$

Where ΣX = summation of sample test values
 n = total number of samples

(2) Compute standard deviation (sd) for each constituent:

$$sd = \sqrt{\frac{\Sigma X^2 - n\bar{X}^2}{n-1}}$$

Where ΣX^2 = summation of the squares of each sample test value
 \bar{X}^2 = square of the lot arithmetic mean

(3) Compute the upper quality index (Q_U) for each constituent:

$$Q_U = \frac{USL - \bar{X}}{sd}$$

Where USL (upper Specification limit) is the target value plus allowable tolerance

(4) Compute the lower quality index (Q_L) for each constituent:

$$Q_L = \frac{\bar{X} - LSL}{sd}$$

Where LSL (lower Specification limit) is the target value minus allowable tolerance.

(5) From Table DB165-1, for each constituent, determine the percent within the upper Specification limit (P_U) which corresponds to a given Q_U . If USL is 100% or is not specified, P_U will be 100.

(6) From Table DB165-1, for each constituent, determine the percent within the lower Specification limit (P_L) which corresponds to a given Q_L . If LSL is 0 or not specified, P_L will be 100.

(7) Compute the quality level, or total percent within Specification limits (P_T), for each constituent:

$$P_T = (P_U + P_L) - 100$$

(8) Using the P_T from Step 7, determine the Pay Factor (PF) from Table DB165-2 for each constituent tested. A minimum PF of 1.00 will be used when all subplot test values are within the upper and lower Specification limits, regardless of the calculated PF.

(9) Compute the Weighted Pay Factor (WPF) for each constituent:

$$WPF = (PF) \times (f_i)$$

Where f_i = weighting factor listed in the Specifications for each constituent tested.

DB165.40(d)(10)

(10) Compute the Composite Pay Factor (CPF) for the lot and report the results to three decimal places.

$$CPF = \frac{\sum WPF}{\sum f_i}$$

Where $\sum WPF$ = sum of the weighted pay factors for each constituent
 $\sum f_i$ = sum of the weighting factors listed in the Specifications.

Table DB165-1

QUALITY LEVEL ANALYSIS BY THE STANDARD DEVIATION METHOD								
P _U or P _L PERCENT WITHIN LIMITS FOR POSITIVE VALUES OF Q _U or Q _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
100	1.16	1.50	1.79	2.03	2.23	2.39	2.53	2.65
99	-	1.47	1.67	1.80	1.89	1.95	2.00	2.04
98	1.15	1.44	1.60	1.70	1.76	1.81	1.84	1.86
97	-	1.41	1.54	1.62	1.67	1.70	1.72	1.74
96	1.14	1.38	1.49	1.55	1.59	1.61	1.63	1.65
95	-	1.35	1.44	1.49	1.52	1.54	1.55	1.56
94	1.13	1.32	1.39	1.43	1.46	1.47	1.48	1.49
93	-	1.29	1.35	1.38	1.40	1.41	1.42	1.43
92	1.12	1.26	1.31	1.33	1.35	1.36	1.36	1.37
91	1.11	1.23	1.27	1.29	1.30	1.30	1.31	1.31
90	1.10	1.20	1.23	1.24	1.25	1.25	1.26	1.26
89	1.09	1.17	1.19	1.20	1.20	1.21	1.21	1.21
88	1.07	1.14	1.15	1.16	1.16	1.16	1.16	1.17
87	1.06	1.11	1.12	1.12	1.12	1.12	1.12	1.12
86	1.04	1.08	1.08	1.08	1.08	1.08	1.08	1.08
85	1.03	1.05	1.05	1.04	1.04	1.04	1.04	1.04
84	1.01	1.02	1.01	1.01	1.00	1.00	1.00	1.00
83	1.00	0.99	0.98	0.97	0.97	0.96	0.96	0.96
82	0.97	0.96	0.95	0.94	0.93	0.93	0.93	0.92
81	0.96	0.93	0.91	0.90	0.90	0.89	0.89	0.89
80	0.93	0.90	0.88	0.87	0.86	0.86	0.86	0.85
79	0.91	0.87	0.85	0.84	0.83	0.82	0.82	0.82
78	0.89	0.84	0.82	0.80	0.80	0.79	0.79	0.79
77	0.87	0.81	0.78	0.77	0.76	0.76	0.76	0.75
76	0.84	0.78	0.75	0.74	0.73	0.73	0.72	0.72
75	0.82	0.75	0.72	0.71	0.70	0.70	0.69	0.69
74	0.79	0.72	0.69	0.68	0.67	0.66	0.66	0.66
73	0.76	0.69	0.66	0.65	0.64	0.63	0.63	0.62
72	0.74	0.66	0.63	0.62	0.61	0.60	0.60	0.59
71	0.71	0.63	0.60	0.59	0.58	0.57	0.57	0.57

Table DB165-1

QUALITY LEVEL ANALYSIS BY THE STANDARD DEVIATION METHOD								
P _U or P _L PERCENT WITHIN LIMITS FOR POSITIVE VALUES OF Q _U or Q _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 = 11
70	0.68	0.60	0.57	0.56	0.55	0.55	0.54	0.54
69	0.65	0.57	0.54	0.53	0.52	0.52	0.51	0.51
68	0.62	0.54	0.51	0.50	0.49	0.49	0.48	0.48
67	0.59	0.51	0.47	0.47	0.46	0.46	0.46	0.45
66	0.56	0.48	0.45	0.44	0.44	0.43	0.43	0.43
65	0.52	0.45	0.43	0.41	0.41	0.40	0.40	0.40
64	0.49	0.42	0.40	0.39	0.38	0.38	0.37	0.37
63	0.46	0.39	0.37	0.36	0.35	0.35	0.35	0.34
62	0.43	0.36	0.34	0.33	0.32	0.32	0.32	0.32
61	0.39	0.33	0.31	0.30	0.30	0.29	0.29	0.29
60	0.36	0.30	0.28	0.27	0.27	0.27	0.26	0.26
59	0.32	0.27	0.25	0.25	0.25	0.24	0.24	0.24
58	0.29	0.24	0.23	0.22	0.21	0.21	0.21	0.21
57	0.25	0.21	0.20	0.19	0.19	0.19	0.18	0.18
56	0.22	0.18	0.17	0.16	0.16	0.16	0.16	0.16
55	0.18	0.15	0.14	0.14	0.13	0.13	0.13	0.13
54	0.14	0.12	0.11	0.11	0.11	0.11	0.10	0.10
53	0.11	0.09	0.08	0.08	0.08	0.08	0.08	0.08
52	0.07	0.06	0.06	0.05	0.05	0.05	0.05	0.05
51	0.04	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

NOTE: For negative values of Q_U or Q_L, P_U or P_L is equal to 100 minus the table value for P_U or P_L. If the value of Q_U or Q_L does not correspond exactly to a figure in the table, use the next higher figure.

Table DB165-2

REQUIRED QUALITY LEVEL FOR A GIVEN SAMPLE SIZE (n) AND A GIVEN PAY FACTOR								
PAY FACTOR								
	n = 3	n = 4	n = 5	n = 6	n = 7	n = 8	n = 9	n = 11
1.05	100	100	100	100	100	100	100	100
1.04	90	91	92	93	93	93	94	94
1.03	80	85	87	88	89	90	91	91
1.02	75	80	83	85	86	87	88	88
1.01	71	77	80	82	84	85	85	86
1.00	68	74	78	80	81	82	83	84
0.99	66	72	75	77	79	80	81	82

Table DB165-2								
REQUIRED QUALITY LEVEL FOR A GIVEN SAMPLE SIZE (n) AND A GIVEN PAY FACTOR								
PAY FACTOR								n = 10 to
	n = 3	n = 4	n = 5	n = 6	n = 7	n = 8	n = 9	n = 11
0.98	64	70	73	75	77	78	79	80
0.97	62	68	71	74	75	77	78	78
0.96	60	66	69	72	73	75	76	77
0.95	59	64	68	70	72	73	74	75
0.94	57	63	66	68	70	72	73	74
0.93	56	61	65	67	69	70	71	72
0.92	55	60	63	65	67	69	70	71
0.91	53	58	62	64	66	67	68	69
0.90	52	57	60	63	64	66	67	68
0.89	51	55	59	61	63	64	66	67
0.88	50	54	57	60	62	63	64	65
0.87	48	53	56	58	60	62	63	64
0.86	47	51	55	57	59	60	62	63
0.85	46	50	53	56	58	59	60	61
0.84	45	49	52	55	56	58	59	60
0.83	44	48	51	53	55	57	58	59
0.82	42	46	50	52	54	55	57	58
0.81	41	45	48	51	53	54	56	57
0.80	40	44	47	50	52	53	54	55
0.79	38	43	46	48	50	52	53	54
0.78	37	41	45	47	49	51	52	53
0.77	36	40	43	46	48	50	51	52
0.76	34	39	42	45	47	48	50	51
0.75	33	38	41	44	46	47	49	50
REJECT	QUALITY LEVELS LESS THAN THOSE SPECIFIED FOR A 0.75							

NOTE: If the computed Quality Level does not correspond exactly to a figure in the table, use the next lower value.

Table DB165-3							
REQUIRED QUALITY LEVEL FOR A GIVEN SAMPLE SIZE (n) AND A GIVEN PAY FACTOR							
PAY FACTOR	n = 12	n = 15	n = 19	n = 26	n = 38	n = 70	n = 201
	to n = 14	to n = 18	to n = 25	to n = 37	to n = 69	to n = 200	to n = ∞
1.05	100	100	100	100	100	100	100
1.04	95	95	96	96	97	97	99
1.03	92	93	93	94	95	95	97
1.02	89	90	91	92	93	94	95

Table DB165-3							
REQUIRED QUALITY LEVEL FOR A GIVEN SAMPLE SIZE (n) AND A GIVEN PAY FACTOR							
PAY FACTOR	n = 12	n = 15	n = 19	n = 26	n = 38	n = 70	n = 201
	to n = 14	to n = 18	to n = 25	to n = 37	to n = 69	to n = 200	to n = ∞
1.01	87	88	89	90	91	93	94
1.00	85	86	87	89	90	91	93
0.99	83	85	86	87	88	90	92
0.98	81	83	84	85	87	88	90
0.97	80	81	83	84	85	87	89
0.96	78	80	81	83	84	86	88
0.95	77	78	80	81	83	85	87
0.94	75	77	78	80	81	83	86
0.93	74	75	77	78	80	82	84
0.92	72	74	75	77	79	81	83
0.91	71	73	74	76	78	80	82
0.90	70	71	73	75	76	79	81
0.89	68	70	72	73	75	77	80
0.88	67	69	70	72	74	76	79
0.87	66	67	69	71	73	75	78
0.86	64	66	68	70	72	74	77
0.85	63	65	67	69	71	73	76
0.84	62	64	65	67	69	72	75
0.83	61	63	64	66	68	71	74
0.82	60	61	63	65	67	70	72
0.81	58	60	62	64	66	69	71
0.80	57	59	61	63	65	67	70
0.79	56	58	60	62	64	66	69
0.78	55	57	59	61	63	65	68
0.77	52	56	57	60	62	64	67
0.76	51	55	56	58	61	63	66
0.75	51	53	55	57	59	62	65
REJECT	QUALITY LEVELS LESS THAN THOSE SPECIFIED FOR A 0.75						

NOTE: If the computed Quality Level does not correspond exactly to a figure in the table, use the next lower value.

DB165.50 Statistical Acceptance Sampling and Testing - Design-Builder shall sample and test Materials for acceptance, as required by the Contract. Design-Builder may statistically evaluate test results for QC purposes, or to predict a Pay Factor or Composite Pay Factor. The following apply:

(a) Statistical Acceptance - Design-Builder shall perform statistical analysis according to Subsection 165.40 for acceptance and to determine a Pay Factor (PF) or Composite Pay

DB165.50(a)

Factor (CPF). Design-Builder's determination of the PF or CPF shall not be controlling except upon Agency concurrence.

(b) Pay Adjustments - As an incentive to produce quality Materials, the Agency may make a pay adjustment based upon the following:

(1) Specification Materials - Any constituent with a PF of 1.00 or greater, or any Materials with a CPF of 1.0000 or greater, will be considered Specification Materials. A constituent with a PF greater than 1.00 or Materials with a CPF greater than 1.0000 will be considered of superior quality and, when specified, may earn a PF adjustment greater than 1.00, up to a maximum of 1.05.

(2) Non-Specification Materials - Any constituent with a PF less than 1.00, or any Materials with a CPF less than 1.0000 will be considered non-Specification Materials. When specified, a lot containing non-Specification Materials may be accepted at a reduced price as described in (c) below.

(c) Non-Specification Materials

(1) A Lot-in-Progress - Design-Builder shall shut down production when any of the following occurs:

- a. The CPF for a lot-in-progress drops below 1.0000, and Design-Builder is taking no corrective action;
- b. The CPF is less than 0.7500; or
- c. Any constituent test is continually out of Specification limits, regardless of whether or not the CPF is below 0.7500.

Design-Builder shall not resume production until the Agency has received confirmation that Specification Materials can be produced, and has given authorization to resume.

(2) An Entire Lot - Design-Builder or the Agency may reject an entire lot of Materials with a CPF between 0.7500 and 1.0000, or may take action in accordance with **DB General Provisions**, Subsection 150.20(c).

For a lot of Material with a CPF below 0.7500, Design-Builder shall take one or more of the following actions:

- a. **Remain in Place** - With Agency concurrence, allow Materials to remain in place with an appropriate price reduction that may range from 25% to 100% (no payment);
- b. **Corrective Work** - With Agency concurrence, require corrective work, at Design-Builder's expense, with an appropriate price reduction that may range from zero (full payment) to 100% (no payment); and/or
- c. **Remove and Replace** - Require complete removal and replacement with Specification Materials at Design-Builder's expense (No payment will be made for the rejected Materials, the cost of removal, or for the costs of sampling and testing.).

DB165.70 Use of Materials Without Acceptable Materials Conformance Documents

(a) General - Design-Builder shall not incorporate Materials into the Project prior to receipt of Materials Conformance Documents confirming compliance with all Contract requirements. Agency may waive this requirement temporarily if Materials are necessary for immediate traffic safety.

(b) Materials Incorporated for Immediate Traffic Safety - If Materials are incorporated into the Project for immediate traffic safety before acceptable Materials Conformance Documents are available, no payment will be made for the value of the Materials, or the costs of incorporating them, until acceptable Materials Conformance Documents have been received by the Design-Builder, or the Materials are otherwise found through testing to comply with Specifications required under the Contract.

(c) Contractor's Request for Testing Assistance - If acceptable Materials Conformance Documents are not available, Design-Builder may either have the necessary tests performed at a private laboratory or request in writing that the Agency:

- (1) Determine if the Agency or its agents can sample and test;
- (2) Estimate the cost to Design-Builder for the testing service; or
- (3) Estimate the time required to obtain the test results.

The Agency will provide this information to Design-Builder in writing. If Design-Builder requests the Agency, in writing, to proceed, the Agency will arrange for the sampling and testing at Design-Builder's expense. If these tests determine the Material complies with Contract Specifications, the Materials may be incorporated into the Project, or, for Materials previously incorporated pursuant to (b) above, payment will be authorized.

DB165.75 Storage and Handling of Materials - Design-Builder shall store and handle Materials so as to preserve their quality and fitness for incorporation into the Project. Design-Builder shall restore all storage sites to their original condition according to **DB General Provisions**, Subsection 140.90, or to comply with any applicable permits, orders, or agreements, at Design-Builder's expense. Stored Materials:

- (a) Shall be readily accessible for Inspection;
- (b) May be stored on approved parts of the Right-of-Way; or
- (c) May be stored on private property if written permission of the owner or lessor is obtained.

DB165.91 Fabrication Inspection Expense - Fabrication of certain items outside of the State creates additional shop and plant Inspection expense to the Agency. It is impractical, and extremely difficult, to determine the actual additional expenses incurred. Therefore, each time Inspection by Agency personnel is necessary, the Agency will deduct from monies due or to become due to Design-Builder under the Contract an amount computed at the following rates:

Zone	Place of Fabrication	Deduction
1	All of State of Oregon, and those portions of adjacent states within 80 airline km (50 airline miles) of the Oregon border.	\$0
2	Outside of Zone 1, and up to 500 airline km (300 airline miles) from the Oregon border.	\$100 per Calendar Day
3	Outside of Zone 2, up to 5000 airline km (3,000 airline miles) from the Oregon border, and within the continental United States.	Round trip coach airfare from Portland, Oregon plus \$100 per Calendar Day
4	Outside of Zone 3, or outside of the continental United States.	Round trip coach airfare from Portland, Oregon plus \$150 per Calendar Day

Calendar Day charges begin on the first day the Agency's inspector begins travel to begin work at the fabrication site, and continue each Calendar Day without interruption through the final day of travel back to the State. Design-Builder will be notified in writing of the beginning and ending dates used in computing amounts deducted from payment pursuant to this Subsection.

This Subsection applies to all fabricated items or manufactured Materials that are Inspected by Agency, including, but are not limited to:

- (a) Structural steel fabrication;
- (b) Prestressed concrete members;
- (c) Precast concrete;
- (d) Signs;
- (e) Preservative treatment of wood products;
- (f) Epoxy coating of reinforcing steel; and
- (g) Other items specifically identified in the Contract Specifications as requiring fabrication site or in-plant inspection by the Agency.