

3:09 Admixtures

3:09.1 Air Entraining Admixture:

1. All structural concrete shall be considered subject to potentially destructive exposure and shall contain entrained air in amounts conforming with the following:

Nominal Maximum Size
of Coarse Aggregate

Total Air Content
% by Volume

3/4 in.
1-1/2 in.

5-7
4.5-5

2. An air entraining admixture shall be used conforming to "Air-Entraining Admixtures for Concrete, Spec. for," ASTM C 260-66 T.

3:09.2 Water Reducing Densifier:

A water reducing densifier shall be added to all structural concrete. The admixture shall be "Plastiment," a product of Sika Chemical Company, "Pozzolith, 100-R," a product of the Master Builders Co., or "Protard", a product of Protex Industries, Inc. These products shall conform in all respects to "Chemical Admixtures for Concrete, Spec. for," ASTM C 494-67 T, Type D. The quantity to be added, the controlling temperatures, and the method of mixing shall conform to the manufacturers' recommendations for use of their product.

3:09.3 Calcium Chloride:

Admixtures containing calcium chloride shall not be used.

3:10 Water-Cement Ratio

Maximum water-cement ratio for various strength of concrete shall be as follows:

Compressive Strength
(psi at 28 days)

Gallons of Water/
Sack of Cement

5000
3000

5
6

3:11 Mixing Concrete

3:11.1 Measuring Materials:

A concrete batch plant shall be utilized which complies in all respects including provisions for storage and precision of measurements with "Ready-Mixed Concrete, Spec. for," ASTM C 94-67. The TESTING LABORATORY will maintain an inspector at the batch plant to insure that the mix

GILBERT ASSOCIATES, INC.

ADDENDUM B

Sheet 2 of 3
January 22, 1969

2. The grading and uniformity of the fine aggregate shall conform to the following requirement as delivered to the mixers:

<u>Sieve Designation, U.S. Standard Square Mesh</u>	<u>Percentage by Weight Passing</u>
No. 4	95 - 100
No. 8	85 - 100
No. 16	65 - 97
No. 30	30 - 70
No. 50	5 - 35
No. 100	0 - 5

3. In addition to the grading limits above, the fine aggregate, as delivered to the mixer shall have a fineness modulus of not less than 2.20 nor more than 2.70; however, the fineness modulus may not vary more than 0.20 from the value assumed in selecting properties for the concrete. This variation to be based on an average of the last ten gradation samples. The aggregate shall not be used unless approved by the OWNER in writing after the results of the test have been ascertained. The source of the fine aggregate shall not be changed without the written approval of the OWNER.

3:09 Admixtures

3:09.1 Air Entraining Admixtures:

1. Delete the contents of this subitem in its entirety and replace with the following:
1. All structural concrete shall be considered subject to potentially destructive exposure and shall contain entrained air in amounts conforming with the following:

<u>Nominal Maximum Size of Coarse Aggregate</u>	<u>Total Air Content % by Volume</u>
3/4 in.	4-6
1-1/2 in.	4-6

ADDENDUM A

Sheet 1 of 2
October 17, 1963

SECTION II - PROPOSAL

Attached to this addendum is Alternate Proposal Form for use as specified in this addendum, subitem 3:07.1.

SECTION III - DETAILED SPECIFICATIONS

3:07 Aggregates

3:07.1 Fine Aggregates:

Add the following paragraph to this subitem:

Alternate prices for concrete made with the following fine aggregate
ASTM C 33-67 modified sieve analysis:

<u>Sieve</u>	<u>Percentage Passing</u>
No. 4	99-100
No. 8	85-100
No. 16	65-97
No. 30	30-70
No. 50	5-35
No. 100	0-5

3:09 Admixtures

3:09.2 Fourth line, after "Master Builders Co.," add the following:

"Daratard HC, a product of W. R. Grace and Company,"

ADDENDUM D

Sheet 1 of 1
June 23, 1971SECTION III - DETAILED SPECIFICATIONS3:09 Admixtures

3:09.1 Air Entraining Admixture:

Subitem 1.:

Delete this subitem as written in Addendum B (dated January 22, 1969) in its entirety and replace with the following:

- "1. All structural concrete shall be considered subject to potentially destructive exposure and shall contain entrained air in amounts conforming with the following:

<u>Nominal Maximum Size of Coarse Aggregate</u>	<u>Total Air Content % by Volume</u>
3/4 in	3 - 6
1-1/2 in	3 - 6 "

3:11 Mixing Concrete

3:11.2 Transit Mixing:

Third sentence - Lines 5, 6, and 7: :

Delete this sentence in its entirety and replace with the following:

"The maximum number of revolutions at mixing speed shall be 110; any additional mixing shall be at agitating speed, as required by ASTM C 94-67."