

SECTION S504 – PORTLAND CEMENT CONCRETE

S504-1 DESCRIPTION

Work consists of furnishing and installing portland cement concrete for general use as required in Contract Documents and as directed by Project Manager

For purposes of this specification, all references are in accordance with *NYSDOT Standard Specifications (US Customary Units dated May 1, 2008)* edition, including any addenda.

S504-2 MATERIALS

Materials are to be in accordance with NYSDOT Section 700 Materials Details:

Type 1 or Type 2 Portland Cement	701-01
Admixtures	711-08
Water	712-01

Concrete sand is to be in accordance with NYSDOT Section 703-01 Fine Aggregate, except as modified herein. When dry, fine aggregate is to be in compliance with following requirements:

Screen Size	Percent Passing by Weight
3/8 inch	100%
#4	95 to 100%
#8	80 to 100%
#16	50 to 85%
#30	25 to 60%
#50	10 to 30%
#100	2 to 8%

Coarse aggregate is to be Type CA 4 in accordance with NYSDOT Sections 501 Portland Cement Concrete – General, and 703-02 Coarse Aggregate, except as modified herein. Type CA 4 coarse aggregate is to be in compliance with following requirements:

Screen Size	Percent Passing by Weight
1-1/2 inch	100%
1 inch	95 to 100%
1/2 inch	25 to 60%
#4	0 to 10%
#8	0 to 5%

S504-3 CONSTRUCTION DETAILS

S504-3.01 General

Construction details are to be in accordance with NYSDOT Section 501-3 Construction Details, except as modified herein.

S504-3.02 Concrete Mixtures

Concrete mixes are to be as follows:

Concrete Class	Cement (pounds per cubic yard)	Percent Air Content	Slump Range (inches)	Type of Coarse Aggregate	Minimum 28 day psi	Primary Use
K	564	5 to 7%	3 to 4 inches	CA 4	3,500 psi	general purpose
L	329	3 to 5%	0 to 2 inches	CA 4	2,000 psi	curb cradle

Criteria are given for design information and data is based on fine aggregate fineness modulus of between 2.50 and 3.00. Mixture proportions are to be determined using actual conditions for fineness modulus and bulk specific gravities (saturated surface dry for aggregates).

Contractor, in cooperation with concrete supplier and as approved by Project Manager, is to determine mix proportions for all concrete. Proportions of ingredients are to be such as to produce mixture which can be satisfactorily placed and consolidated by methods employed.

S504-4 METHOD OF MEASUREMENT

Quantity to be measured for payment will be number of cubic yards of concrete placed.

S504-5 BASIS OF PAYMENT

Unit price bid for includes cost of: furnishing and placing portland cement concrete; and furnishing all labor, material and equipment necessary to complete work.

Payment will be made under:

ITEM NO.	ITEM	PAY UNIT
S504.05	Class K Concrete	Cubic Yard
S504.06	Class L Concrete	Cubic Yard

REVISED May 1, 2013