

SECTION 901 PORTLAND CEMENT CONCRETE

MATERIAL	REF.	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANTITY	CERT. DISTR.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
	TESTED BY		METHOD		CONTAINER					
THIS SECTION IS TO BE USED AS A GUIDE FOR OTHER ITEM NUMBERS WHEN REFERENCE IS MADE TO SECTION 901 OF THIS MANUAL. THERE ARE NO PAY ITEMS UNDER SECTION 901.										
ADMIXTURES		901.02 1011.02 1018.29 Mat. Lab	Prelim. Source Approval	Dist. Lab S 601	1/type/mfr. batch	1 pt Friction top can	-----	-----	2 months	(QPL 58 & 75)
		901.02 1011.02 1018.29 Mat. Lab	Accept.	Proj. Engr. S 601	1/type/project	1 pt Friction top can	CC 1	-----	-----	(QPL 58) Sample only if not accompanied by CC or if questionable.
		901.02 1011.02 1018.29 Mat. Lab	Verif.	Proj. Engr. S 601	1/type/project	1 pt Friction top can	-----	-----	9 days	(QPL 58) Sample if accompanied by CC.
AGGREGATES (Pavement)	Fine & Coarse	901.02 1003.01 1003.02 Contractor	Quality Control	Contractor S 101	1/day/plant for moisture 2/day/plant for gradation	1 full sample sack	-----	-----	-----	(QPL 2) Gradation results are plotted on control charts which are required for documentation. See*Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures* for details.
		901.02 1003.01 1003.02 Dist. Lab	Accept.	Proj. Engr. S 101	1/pavement lot*	1 full sample sack	-----	50 yd ³	3 days	(QPL 2) Check gradation and foreign matter. *For paving concrete produced from non-dedicated stockpiles.
		901.02 1003.01 1003.02 Dist. Lab	Accept.	Proj. Engr. S 101	1/1000 yd ³ /dedicated stockpile	1 full sample sack	-----	-----	3 days	(QPL 2) Sample as stockpile is being built.

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SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS
		TESTED BY		METHOD		CONTAINER	DISTR.			
AGGREGATES (Structural)	Fine & Coarse	805.18(a) 901.02 1003.01 1003.02 Contractor	Quality Control	Contractor S 101	1/lot	1 full sample sack	-----	-----	-----	(QPL 2) Gradation and moisture content to be run. Lot to be identifiable pour up to 200 yd ³ max of concrete. Gradation results shall be plotted on control charts which are required for documentation. See "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.
		901.02 1003.01 1003.02 Dist. Lab	Accept.	Proj. Engr. S 101	1/every 5 days of production or 500 yd ³ of aggregate*	1 full sample sack	-----	50 yd ³	3 days	(QPL 2) Check gradation and foreign matter. *For structural concrete produced from non-dedicated stockpiles.
		901.02 1003.01 1003.02 Dist. Lab	Accept.	Proj. Engr. S 101	1/1000 yd ³ / dedicated stockpile	1 full sample sack	-----	50 yd ³	3 days	(QPL 2) Sample as stockpile is being built.
		901.02 1003.01 1003.02 Dist. Lab	I A	Dist. Lab S 101	*	-----	-----	-----	-----	*See Independent Assurance Program S 701.
CEMENT (Hydraulic)	Types I, I(B), II IP & IS (Pavement & Structural) Types I, I(B), I(C), II, IP, IS & III (Precast)	901.02 1001.01 1001.02 1001.04 Mat. Lab	Prelim. Source Approval	Mfr. AASHTO T 127	1/month	1 gal Friction top can or acceptable moisture proof container	-----	-----	5 weeks	(QPL 7) Composited and blended from daily plant samples.

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SECTION 901 PORTLAND CEMENT CONCRETE (Cont'd)

MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANTITY	CERT.	SMALL QUANT.	TYPICAL HANDLING TIME	REMARKS
		TESTED BY		METHOD		CONTAINER	DISTR.			
CEMENT (Hydraulic) (Cont'd)	Types I, I(B), II, IP & IS (Pavement & Structural) Types I, I(B), I(C), II, IP, IS & III (Precast) (cont'd)	901.02 1001.01 1001.02 1001.04 Proj. Engr.	Accept.	-----	1/shipment	-----	CD 1 & 7	50 yd ³	17 days	(QPL 7)
		901.02 1001.01 1001.02 1001.04 Mat. Lab	Verif.	Proj. Engr. S 102	1/600 tons/ source*	1 gal Friction top can	CD** 1 & 7	50 yd ³	17 days	(QPL 7) *Maximum of one sample per day per source unless questionable. **Copy of CD shall be submitted with sample.
CONCRETE (Minor Structure)	Compressive Strength	901.08(f)(2) Dist. Lab	Accept.	Proj. Engr. S 301	3 cyl/50 yd ³	1 ft ³ 6 in. x 12 in. cylinder mold	-----	50 yd ³	30 days	-----
	Mix Design	901.06(a) Contractor/ Dist. Lab	Design/ Accept.	*	1/mix class or type/material source/plant	-----	-----	-----	3 days	(QPL 58 - Admixtures, QPL 2 - Aggregates, and QPL 7 - Cement.) *The contractor shall submit to the Dist. Lab Engr. the standard Mix Design form indicating the intended source of all materials and the mix design. Acceptance by the Dist. Lab Engineer is required prior to starting work.
	Slump and Air	901.12 Proj. Engr.	Accept.	Proj. Engr. S 301	1/50 yd ³	0.5 ft ³	-----	50 yd ³	1 day	When required in Table 1 or individual section.
CONCRETE (Pavement)	Entrained Air	901.06(b) Contractor	Quality Control	Contractor S 301	2/half day	0.25 ft ³	-----	-----	-----	Air test results shall be plotted on control charts which are required for documentation. Air tests will only be required when an air-entraining admixture is used.
		901.12 Proj. Engr.	Accept.	Proj. Engr. S 301	1/half day	0.25 ft ³	-----	-----	1 day	-----

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MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANTITY	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		TESTED BY		METHOD		CONTAINER	DISTR.				
CONCRETE (Pavement) (Cont'd)	Mix Design	901.06(a) Contractor/ Dist. Lab	Design/ Accept.	*	1/mix type/ material source/plant	-----	-----	-----	3 days	*Contractor shall submit to the Dist. Lab Engr. the standard Mix Design form indicating the intended source for all materials and the mix design. Acceptance by the Dist. Lab Engineer is required prior to starting work.	
	Mix Temperature	901.06(b) 901.11 Contractor	Quality Control	Contractor S 301	*	-----	-----	-----	-----	*When temperature control is needed, testing must be sufficient to prevent exceeding appropriate limits.	
	Slump	901.06(b) Contractor	Quality Control	Contractor S 301	2/half day	0.5 ft ³	-----	-----	-----	-----	Slump test results shall be plotted on control charts which are required for documentation.
		901.12 Proj. Engr.	Accept.	Proj. Engr. S 301	1/half day	0.5 ft ³	-----	-----	1 day	-----	-----
	Unit Weight	901.06(b) Contractor	Quality Control	Contractor S 301	*	1.5 ft ³ 0.5 or 1 ft ³ yield bucket	-----	-----	-----	-----	*Unit weight will be run as necessary.
CONCRETE (Structural)	Entrained Air	901.06(b) Contractor	Quality Control	Contractor S 301	2/lot	0.25 ft ³	-----	-----	-----	Air test results shall be plotted on control charts which are required for documentation.	
		901.12 Proj. Engr.	Accept.	Proj. Engr. S 301	1/lot	0.25 ft ³	-----	-----	1 day	When pump placement is used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.	
	901.12 Dist. Lab	I A	Dist. Lab S 301	SEE INDEPENDENT ASSURANCE PROGRAM S 701.							

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MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANTITY	CERT.	SMALL QUANTITY	TYPICAL HANDLING TIME	REMARKS	
		TESTED BY		METHOD		CONTAINER	DISTR.				
CONCRETE (Structural) (Cont'd)	Compressive Strength	901.08(f)(1) Dist. Lab	Accept.	Proj. Engr. S 301	3 cyl/batch 2 batches/lot	1 ft ³ 6 in. x 12 in. cylinder mold	-----	-----	30 days	A lot is an identifiable pour not to exceed 200 yd ³ . For specific details see Specification Subsection 805.17.	
		901.08(f)(1) Dist. Lab	I A	Dist. Lab S 301	SEE INDEPENDENCE ASSURANCE PROGRAM S 701.						
	Mix Design	901.06(a) Contractor/ Dist. Lab	Design/ Accept.	*	1/mix class/ material source/plant	-----	-----	-----	3 days	*Contractor shall submit to the Dist. Lab Engr. the standard Mix Design form indicating the intended source of all materials and the mix design. Acceptance by the Dist. Lab Engineer is required prior to starting work.	
	Mix Temperature	901.06(b) 901.11 Contractor	Quality Control	Contractor S 301	*	-----	-----	-----	-----	*When temperature control is required, testing must be sufficient to prevent exceeding appropriate limits.	
	Slump	901.06(b) Contractor	Quality Control	Contractor S 301	2/lot	0.5 ft ³	-----	-----	-----	-----	Slump test results shall be plotted on control charts which are required for documentation.
		901.12 Proj. Engr.	Accept.	Proj. Engr. S 301	1/lot	0.5 ft ³	-----	-----	1 day	When pump placement is used, see "Application of Quality Assurance Specifications for Portland Cement Concrete Pavement and Structures" for details.	
		901.12 Dist. Lab	I A	Dist. Lab S 301	SEE INDEPENDENCE ASSURANCE PROGRAM S 701.						
	Unit Weight	901.06(b) Contractor	Quality Control	Contractor S 301	*	1.5 ft ³ 0.5 or 1 ft ³ yield bucket	-----	-----	-----	*Unit weight will be run as necessary.	

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MATERIAL		REFERENCE	PURP.	SAMPLED BY	MIN. FREQ.	MIN. QUANT.	CERT.	SMALL QUANTIT Y	TYPICAL HANDLING TIME	REMARKS
		TESTED BY		METHOD		CONTAINER	DISTR.			
FLY ASH	Cement Replacement	901.02 1018.15 Mat. Lab	Prelim. Source Approval	Mfr. S 102	1/month	1 gal Friction top can or acceptable moisture proof container	-----	-----	10 weeks	(QPL 50)
		901.02 1018.15 Proj. Engr.	Accept.	-----	1/shipment	-----	CD 1 & 7	50 yd ³	-----	(QPL 50)
		901.02 1018.15 Mat. Lab	Verif.	Proj. Engr. S 102	1/200 tons/ source	1 gal Friction top can	CD* 1 & 7	50 yd ³	17 days	(QPL 50) *Copy of CD shall be submitted with sample.
GROUND GRANULATED BLAST- FURNACE SLAG	Cement Replacement	901.02 1018.28 Mat. Lab	Prelim. Source Approval	Mfr. S 102	1/month	1 Gal Friction top can	CD 1 & 7	-----	17 days	(QPL 70)
		901.08 1018.28 Proj. Engr.	Accept.	-----	1/shipment	-----	CD 1 & 7	50 yd ³	-----	(QPL 70)
		901.02 1018.28 Mat. Lab	Verif.	Proj. Engr. S 102	1/200 tons/ source	1 gal Friction top can	CD* 1 & 7	50 yd ³	17 days	(QPL 70) *Copy of CD shall be submitted with sample.
WATER		901.02 1018.01 Mat. Lab	Accept.	Proj. Engr. S 301	1/source	1 qt Plastic bottle	-----	50 yd ³	11 days	Drinkable water need not be sampled.

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