PETTIGREW & ASSOCIATES PA

ENGINEERING | SURVEYING | TESTING

DEFINING QUALITY SINCE 1965

SCHEDULE OF LABORATORY SERVICES

Effective September 15, 2010

SOI S	AASHTO	ASTM
► Moisture Density Curve < 3/4 " material	T 99	D 698
► Moisture Density Curve > 3/4 " material	T 99	D 698
► Moisture Density Curve < 3/4 " material	T 180	D 1557
► Moisture Density Curve > 3/4 " material	T 180	D 1557
► Moisture Density of Soil-Cement Mixtures	T 134	D 558
In-Place Densities		
► Nuclear	T 310	D 6938*
Balloon	T 205	D 2167
► Sand Cone	T 191	D 1556
Soil Constants		
► iquid imit & Plasticity Index	T 89 & T 90	D 4318
► iquid imit & Plasticity Index, inear & Volumetric Shrinkage	T 89, T 90 T 92	D 4318 D 427
► Unconfined Compressive Strength of Cohesive Soils	T 208	D 2166
► Dry Prep for Particle Size Analysis	T 87	D 421
Particle Size Analysis of Soils	T 88	D 422
► Amount of Material in Soils Finer than 200	T 146	D 1140
California Bearing Ratio	T 193	D 1883
California Bearing Ratio Moisture Density not Required	T 193	D 1883
Permeability of Soils	T 215	D 2434 D 5084

► Indicates AASHTO/AMR Certified

*Formerly D 2922/D3017

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AGGREGATES

	AASHTO	ASTM
► Sieve Analysis - 1/2" Max.	T 11, T 27	C 117 C 136
► Sieve Analysis - 1/2" with Classification	M 145	D 3282 D 2487
► Sieve Analysis - 3/4" & arger	T 11, T 27	C 117 C 136
► Sieve Analysis - 3/4" & arger with Classification	M 145	D 3282 D 2487
► Amount of Material Finer than 75 µm Coarse Aggregate	T 11	C 117
► Amount of Material Finer than 75 µm Fine Aggregate	T 11	C 117
► Sieve Analysis for Mineral Filler	T 37	D 546
Sampling		
► Specific Gravity & Absorption	T 84, T85	C 127 C 128
► Moisture Content	T 255, T 265	C 566 D 2216
► Bulk Density/Unit Weight of Voids in Aggregate	T 19	C 29
► Organic Impurities	T 21	C 40
► ightweight Pieces in Aggregate	T 113	C 123
► Clay umps & Friable Particles	T 112	C 142
► Flat or Elongated Particles		D 4791
► Fractured Faces	NMDOT FF - 1	D 5821
► os Angeles Abrasion (Small-Sized Coarse Aggregate)	T 96	C 131
► os Angeles Abrasion (arge-Sized Coarse Aggregate)	T 96	C 535
Crushing		

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	AASHTO	ASTM
AGGREGATES (cont'd)		
► Sulfate Soundness (5 cycles)	T 104	C 88
► Sulfate Soundness (5 cycles) Caliche Additional cycles	T 104	C 88
► Sand Equivalent	T 176	D 2419
► Uncompacted Void Content	T 304	C 1252

CONCRETE

Mix Designs*

Mix Desig s **do ot i clude aggregate co firmatio testi g or co firmatio beams.*

Trial Batch ea.		ACI 211.1
NMDOT Concrete Design	NMDOT	
Retype of Concrete Mix Design (Design must be less than 1 year old) ength Change of Hardened Concrete - 28 Day Duration	T 160	C 157 C 490
Mortar Design		C 270
Grout Design		C 476

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DEFINING QUALITY SINCE 1965

CONCRETE (cont'd)

Concrete Cylinders**

***We fur ish all molds.*

	AASHTO	ASTM
► Making, Curing, & Testing	T 141,T 22, T 23, T 231	C 172, C 31, C 39, C 617
► Cure & Test Cylinders, delivery to ab	T 231, T 22	C 617, C 39
► Cutting Concrete Cylinders	T 231, T 22	C 617, C 39
► Air Test (taken with cylinders)	T 152	C 231
► Air Test (taken with cylinders)	T 196	C 173
► Slump Test (taken with cylinders)	T 119	C 143
► Unit Weight (taken with cylinders)	T 121	C 138
► Air, Slump, Unit Weight	T 141, T 152, T 196, T 119, T 121	C 172, C 231, C 173, C 143, C 138, C 1064

"Hold" cylinders will be charged at regular rates.

MORTAR

Making, Curing, & Testing	C 109
Curing, & Testing	C 109

GROUT

Making, Curing & Testing	C 1019, C 617, C 39
Curing & Testing	C 617, C 39

► Indicates AASHTO/AMR Certified

AMRL Since 1965