

**CONSTRUCTION TESTING AND INSPECTION SERVICES MASTER CONTRACTS - SUMMARY OF SERVICES MATRIX**

106 Group	American Engineering Testing, Inc. (AET)	Bay West	Braun Intertec Corp	Chosen Valley Testing (CVT)	Construction Engineering Laboratory (CEL)	EPC Engineering & Testing	Inspec, Inc.	Kilo Engineering	Landmark Environmental	Pinnacle Engineering, Inc.	Professional Engineering Services	Roof Spec Inc. (RSI)	Terracon	Widseth	WSB, LLC
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**Geotechnical Services**

	X		X	X	X	X		X					X		X
	X		X					X							
	X		X	X	X	X		X					X		X
	X		X	X	X	X		X			X		X		X
	X		X	X	X	X		X					X		X
	X		X	X	X	X		X			X		X		X
				X	X								X		

Pre-construction Soil Exploration and Testing  
Percolation Tests, Recommendations for Septic Systems  
Foundation and Pavement Design Recommendations  
Observation and Testing of Existing Soils during Excavation and Grading  
Laboratory Testing of Proposed Fill Material  
Observation and Testing of Fill and Backfill for Moisture, Compaction  
Other\_\_see individual contract

**Concrete Testing and Inspection Services**

	X		X	X	X										X
	X		X	X	X	X		X			X		X		X
	X		X	X	X	X		X			X		X		X
	X		X	X	X	X		X			X		X		X
	X		X	X	X	X		X			X		X		X
				X											

Concrete, Grout Mix Design  
Observe and Document Formwork Construction  
Observe and Document Placement of Reinforcing Steel  
Slump, Temperature, and Air Entrainment Tests of Fresh Concrete  
Cast, Cure and Test Concrete Cylinders for Compressive Strength  
Other\_\_see individual contract

**Masonry Testing and Inspection Services**

	X		X		X			X							X
	X		X	X	X			X					X		X
	X		X	X	X	X		X					X		X
	X		X	X	X	X		X			X		X		X
							X					X			

Mortar, Masonry Fill Mix Design  
Laboratory Tests on Masonry Prisms  
Laboratory Test of Mortar and Core-fill for Compressive Strength and Bond Strength  
Special Inspection of Structural Masonry Construction (Continuous\_\_\_/ Periodic\_\_\_)  
Other\_\_see individual contract

**Structural Steel Testing and Inspection**

	X		X	X	X								X		X
	X		X	X	X			X					X		X
	X		X	X	X			X					X		X
				X											

Strength Testing of Embedded Bolts  
Observe and Test Welded and Bolted Connections during Structural Steel and Precast Concrete Erection  
Observe and Test Welding and Screw Fastening during Metal Deck Installation  
Other\_\_see individual contract

**Pavement Testing and Inspection**

	X		X	X	X	X		X			X		X		X
	X		X	X	X	X		X			X		X		X
	X		X	X	X	X		X			X		X		X
															X

Observe and Test Rolling Operations on Subgrade Soils  
Field and Laboratory Tests on Aggregate Base  
Field and Laboratory Tests during Bituminous Paving (Continuous\_\_\_/Periodic\_\_\_)  
Other\_\_see individual contract

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**Fireproofing / Firestopping Testing and Inspection**

	X		X	X	X	X							X		X
	X		X		X	X							X		X
				X											

Test Installed Spray-on Fireproofing for Thickness, Density, Adhesion  
 Observe and Document Installation of Fire-Resistive Joint Systems  
 Other \_\_see individual contract\_\_\_\_\_

**Other**

	X		X												
	X		X				X					X			
	X														
			X												

Window/Curtain Wall Testing and Inspection  
 Roofing/Waterproofing Testing and Inspection  
 Sealant Pull Tests  
 Fluid-Applied Vapor Barrier Testing

**Phase I Archaeological Resources Investigation**

X			X												
X			X												
X			X												
X			X												

Determine whether cultural resources are present within the project area, and whether these resources are potentially eligible for the National Register of Historic Places (NRHP).  
 All field methods and reporting of the Phase I Archaeological Resources Investigation will comply with the Minnesota State Historic Preservation Office guidelines as well as federal guidelines, and will meet the requirements of the Secretary of the Interior's Standards.  
 If an archaeological site is found, wash, analyze, and catalogue all recovered artifacts. Laboratory and curation procedures will follow appropriate standard guidelines  
 Curate the artifacts at the Minnesota Historical Society under Contractor's curation agreement. Contractor's lab director will ensure that the cataloging and curation meet the requirements of Minnesota's repository guidelines.  
 Other \_\_\_\_\_

**Phase II Archaeological Resources Investigation**

X			X												
X			X												
X			X												
X			X												

Excavate and document designated features in accordance with Minnesota State Historic Preservation Office guidelines as well as federal guidelines, and will meet the requirements of the Secretary of the Interior's Standards.  
 Record excavation data on standardized forms and in the log book of the principal investigator including location and methods of testing; the numbers, types, and locations of recovered cultural materials; the depth and thickness of excavated soil layers; soil textures and inclusions; and soil color according to Munsell color charts.  
 Take up to 5 radiocarbon samples if suitable materials are encountered and complete standard radiometric analysis.  
 Clean, catalogue, label and bag all recovered artifacts in accordance with professional standards and submit recovered materials to the Minnesota Historical Society for curation.  
 Other \_\_\_\_\_

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**Phase I Environmental Investigation**

	X	X	X	X					X	X	X			X	X	Complete a Phase I Environmental Site Assessment in a manner consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Document #8.
	X	X	X	X					X	X	X			X	X	Conduct a visual (existing structures) assessment for typical suspect asbestos containing materials (ACM).
	X	X	X						X	X	X			X	X	Assess the presence of PCBs at the subject site
	X	X	X						X	X	X			X	X	Collect and evaluate available historical information to determine if evidence exists indicating an existing release, a past release, or a material threat of a release of hazardous substances, hazardous materials or petroleum products to the Property
										X						Other_ see individual contract _____

**Phase II Environmental Investigation**

	X	X	X	X					X	X	X			X	X	Prepare a workplan the Phase II Investigation in a manner consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Document #11 to determine if potential sources of contamination identified during the Phase I Investigation are causing a release or threatened release of hazardous substances, contaminants or pollutants to the soil, surface water and ground water on the property in question.
	X	X	X						X	X	X			X	X	Prepare a site safety and contingency plan in a manner consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Document #10.
	X	X	X	X					X	X	X			X	X	Conduct Phase II Environmental Investigation in accordance with approved work plan and in a manner consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Documents.
										X						Other_ see individual contract _____

**Remediation Services**

	X	X	X						X	X	X			X	X	Prepare and, upon approval, implement the Response Action Plan (RAP) and in a manner consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Documents.
	X	X	X						X	X	X			X	X	Following completion of the RAP, prepare an Implementation Report for submission to the MPCA for review and approval in a manner consistent with the American Society of Testing and Materials standard for a Phase I ESA and the Minnesota Pollution Control Agency Voluntary Investigation and Cleanup Program Guidance Documents.
										X						Other_ see individual contract _____