

Attachment  
MRCA Item VI(b)  
October 19, 2016

July 25, 2016  
Proposal No. 02-00346

Ms. Liz Jennings  
Mountains Recreation and Conservation Authority  
570 West Avenue 26, Suite 100  
Los Angeles, California 90065

Subject: Revised Proposal for Geotechnical and Special Inspection and Materials Testing Services, Franklin/Ivar Park, Los Angeles, California

Dear Ms. Jennings:

Ninyo & Moore is pleased to submit this revised proposal for geotechnical and special inspection and materials testing services pertaining to construction of the Franklin/Ivar Park project located in Los Angeles, California. We foresee our services as supplemental and as-requested to assist the full-time construction management and inspection team. Based on our understanding, we understand that the planned project will generally consist of construction of a new approximately 0.83 acre park site that will include a new amphitheater that will be built into an existing slope and an overhead structure that will support photo-voltaic panels, as well as construction of total of approximately 265 linear-feet of up to 10 feet high retaining walls in order to support the exiting slope. We also understand that the proposed construction will include a new approximately 20 linear-feet long sedimentary wall, vehicular parking and pathways, as well as decomposed granite, concrete and asphalt concrete paving.

## **SCOPE OF SERVICES**

Based on our understanding of the proposed construction and our experience with similar projects, we propose to provide the following scope of services:

### **Geotechnical Services**

- Project coordination and management, including work scheduling and review of the project plans, specifications and contract documents.
- Field technician services for observation and field density testing during the rough grading, subgrade and aggregate base, as well as trench and structural excavation backfill compaction operations. Our field technician will perform density tests to evaluate fill compaction.
- Laboratory testing, including proctor density, sieve analysis, sand equivalent on representative samples obtained in the field.

- Preparation and submittal of a Final Compaction Report, which includes a summary of our field density test results and presents the conclusions of our observations.

### **Special Inspection and Materials Testing Services**

- Reinforced concrete special inspection services during structural reinforced concrete construction, including inspection during installation of the foundation rebar and formwork, and continuous inspection during concrete placement including sampling and testing of concrete.
- Reinforced masonry special inspection services during construction of the concrete masonry unit walls, including checking rebar grade, location and quantity and inspection of grout cells prior to grout placement.
- Structural steel welding and bolting special inspection services during welding and bolting at the site.
- Preparation of daily reports and field memoranda to document the items observed and inspected.
- Pick-up and transportation of construction material samples for testing at our laboratory.
- Laboratory testing, including concrete, grout, mortar, and masonry prism compressive strength testing, as well as reinforcing steel and high strength nut, bolt and washer conformance testing.

### **ASSUMPTIONS**

Based on our experience with similar projects, the following assumptions have been made in the preparation of our scope of services:

- Our services are subject to prevailing wage requirements.
- Our services will be scheduled and coordinated by the construction management and inspection team.
- Concrete and masonry batch plant inspection services will not be requested.
- Fabrication shop deputy welding inspection services will not be requested.
- Our estimated fee is based on the assumptions outlined above and does not include stand-by time or costs associated with retesting or reinspecting materials that were found not to be in compliance with the project plans or specifications. Our services, including the use of multi-certified field staff, will depend on the construction schedule and the contractor's operations. Hours spent that exceed those in the attached table will be billed on a time-and-materials basis.

---

## ESTIMATED FEE

We propose to provide geotechnical and special inspection and materials testing and services on a time-and-materials basis in accordance with the attached Schedule of Fees and Schedule of Fees for Laboratory Testing. Our estimated fees for the scope of services described herein is presented are the attached Tables 1 and 2.

Ninyo & Moore appreciates the opportunity to provide services on this project, and we look forward to working with you on this project.

Respectfully submitted,

**NINYO & MOORE**



RMB/

Attachments: Table 1 – Breakdown of Estimated Fee – Geotechnical Services  
Table 2 – Breakdown of Estimated Fee – Deputy Inspection and Materials Testing  
Services  
Fee Proposal Summary  
Schedule of Fees  
Schedule of Fees for Laboratory Testing

Distribution: (1) Addressee (via e-mail)

**TABLE 1 – BREAKDOWN OF ESTIMATED FEE – GEOTECHNICAL SERVICES**

<b>PROJECT COORDINATION AND MANAGEMENT</b>			
Principal Engineer (Plan Review & Approval)		Lump Sum	\$ 840.00
Senior Project Engineer/Geologist	14 hours	@ \$ 160.00 /hour	\$ 2,240.00
	<b>Subtotal</b>		<b>\$ 3,080.00</b>

<b>FIELD SERVICES</b>			
Field Technician			
Rough Grading	100 hours	@ \$ 87.00 /hour	\$ 8,700.00
Retaining Wall Footing Excavation & Backfill	80 hours	@ \$ 87.00 /hour	\$ 6,960.00
Utility Trench Backfill	60 hours	@ \$ 87.00 /hour	\$ 5,220.00
Subgrade & Aggregate Base	60 hours	@ \$ 87.00 /hour	\$ 5,220.00
Vehicle and Equipment Expense	300 hours	@ \$ 12.00 /hour	\$ 3,600.00
	<b>Subtotal</b>		<b>\$ 29,700.00</b>

<b>LABORATORY ANALYSES</b>			
Proctor Density	4 tests	@ \$ 200.00 /test	\$ 800.00
Sieve Analysis	2 tests	@ \$ 120.00 /test	\$ 240.00
Sand Equivalent	2 tests	@ \$ 90.00 /test	\$ 180.00
	<b>Subtotal</b>		<b>\$ 1,220.00</b>

<b>REPORT PREPARATION</b>			
Principal Engineer	1 hour	@ \$ 168.00 /hour	\$ 168.00
Senior Project Engineer/Geologist	5 hours	@ \$ 160.00 /hour	\$ 800.00
Technical Illustrator	4 hours	@ \$ 86.00 /hour	\$ 344.00
Data Processing	3 hours	@ \$ 64.00 /hour	\$ 192.00
			<b>\$ 1,504.00</b>

<b>TOTAL ESTIMATED FEE</b>			<b>\$ 35,504.00</b>
----------------------------	--	--	---------------------

**TABLE 2 – BREAKDOWN OF ESTIMATED FEE  
SPECIAL INSPECTION AND MATERIALS TESTING SERVICES**

<b>PROJECT COORDINATION AND MANAGEMENT</b>				
Senior Project Engineer/Geologist	10 hours	@	\$ 160.00 /hour	\$ 1,600.00
<b>Subtotal</b>				<b>\$ 1,600.00</b>
<b>FIELD SERVICES</b>				
Reinforced Concrete/Masonry Special Inspection	80 hours	@	\$ 87.00 /hour	\$ 6,960.00
Welding and Bolting Special Inspection Services	40 hours	@	\$ 87.00 /hour	\$ 3,480.00
Sample Pick-up	12 hours	@	\$ 73.00 /hour	\$ 876.00
Vehicle and Equipment Expense	132 hours	@	\$ 12.00 /hour	\$ 1,584.00
<b>Subtotal</b>				<b>\$ 12,900.00</b>
<b>LABORATORY ANALYSES</b>				
Compressive Strength (Concrete)	40 tests	@	\$ 25.00 /test	\$ 1,000.00
Compressive Strength (Grout & Mortar)	20 tests	@	\$ 35.00 /test	\$ 700.00
Compressive Strength (Masonry Prism)	4 tests	@	\$ 120.00 /test	\$ 480.00
Steel Reinforcement (Bend and Tensile)	6 tests	@	\$ 55.00 /test	\$ 330.00
High Strength Nuts, Bolts, Washers	2 /sets	@	\$ 130.00 /sets	\$ 260.00
<b>Subtotal</b>				<b>\$ 2,770.00</b>
<b>TOTAL ESTIMATED FEE</b>				<b>\$ 17,270.00</b>



**SCHEDULE OF FEES**

**HOURLY CHARGES FOR PERSONNEL**

Principal Engineer/Geologist/Environmental Scientist .....	\$ 168
Senior Engineer/Geologist/Environmental Scientist.....	\$ 164
Senior Project Engineer/Geologist/Environmental Scientist .....	\$ 160
Project Engineer/Geologist/Environmental Scientist.....	\$ 156
Senior Staff Engineer/Geologist/Environmental Scientist.....	\$ 141
Staff Engineer/Geologist/Environmental Scientist.....	\$ 128
GIS Analyst .....	\$ 114
Field Operations Manager .....	\$ 104
Supervisory Technician* .....	\$ 95
Nondestructive Examination Technician*, UT, MT, LP .....	\$ 95
Senior Field/Laboratory Technician* .....	\$ 87
Field/Laboratory Technician* .....	\$ 87
ACI Concrete Technician* .....	\$ 87
Concrete/Asphalt Batch Plant Inspector* .....	\$ 87
Special Inspector (Concrete, Masonry, Steel, Welding, and Fireproofing)* .....	\$ 87
Technical Illustrator/CAD Operator.....	\$ 86
Geotechnical/Environmental/Laboratory Assistant .....	\$ 73
Information Specialist.....	\$ 73
Data Processing, Technical Editing, or Reproduction.....	\$ 64

**OTHER CHARGES**

Concrete Coring Equipment (includes one technician) .....	\$ 160 /hr
PID/FID Usage.....	\$ 140 /day
Anchor load test equipment (includes technician) .....	\$ 97 /hr
Hand Auger Equipment .....	\$ 65 /day
Inclinometer Usage .....	\$ 40 /hr
Vapor Emission Kits.....	\$ 40 /kit
Level D Personal Protective Equipment (per person per day) .....	\$ 30 /p/d
Rebar Locator (Pachometer).....	\$ 30 /hr
Nuclear Density Gauge Usage.....	\$ 0 /hr
Field Vehicle Usage.....	\$ 12 /hr
Direct Project Expenses.....	Cost plus 15 %
Laboratory testing, geophysical equipment, and other special equipment provided upon request.	

**NOTES (Field Services)**

For field and laboratory technicians and special inspectors, regular hourly rates are charged during normal weekday construction hours. Overtime rates at 1.5 times the regular rates will be charged for work performed outside normal construction hours and all day on Saturdays. Rates at twice the regular rates will be charged for all work in excess of 12 hours in one day or on Sundays and holidays. Lead time for any requested service is 24 hours. Field Technician rates are based on a 4-hour minimum. Special inspection rates are based on a 4-hour minimum for the first 4 hours and an 8-hour minimum for hours exceeding 4 hours. Field personnel are charged portal to portal.

\*Indicates rates that are based on Prevailing Wage Determination made by the State of California, Director of Industrial Relations on a semiannual basis. Our rates will be adjusted in conjunction with the increase in the Prevailing Wage Determination during the life of the project.

**INVOICES**

Invoices will be submitted monthly and are due upon receipt. A service charge of 1.0 percent per month may be charged on accounts not paid within 30 days.

**TERMS AND CONDITIONS**

The terms and conditions of providing our consulting services include our limitation of liability and indemnities as presented in Ninyo & Moore's Work Authorization and Agreement.

**SCHEDULE OF FEES FOR LABORATORY TESTING**  
**Laboratory Test, Test Designation, and Price Per Test**

**Soils**

Atterberg Limits, D 4318, CT 204 .....	\$ 160
California Bearing Ratio (CBR), D 1883 .....	\$ 485
Chloride and Sulfate Content, CT 417 & CT 422 .....	\$ 150
Consolidation, D 2435, CT 219 .....	\$ 300
Consolidation – Time Rate, D 2435, CT 219 .....	\$ 75
Direct Shear – Remolded, D 3080 .....	\$ 325
Direct Shear – Undisturbed, D 3080 .....	\$ 275
Durability Index, CT 229 .....	\$ 165
Expansion Index, D 4829, IBC 18-3 .....	\$ 180
Expansion Potential (Method A), D 4546 .....	\$ 160
Geofabric Tensile and Elongation Test, D 4632 .....	\$ 180
Hydraulic Conductivity, D 5084 .....	\$ 330
Hydrometer Analysis, D 422, CT 203 .....	\$ 210
Moisture, Ash, & Organic Matter of Peat/Organic Soils .....	\$ 120
Moisture Only, D 2216, CT 226 .....	\$ 35
Moisture and Density, D 2937 .....	\$ 45
Permeability, CH, D 2434, CT 220 .....	\$ 255
pH and Resistivity, CT 643 .....	\$ 155
Proctor Density D 1557, D 698, CT 216, & .....	\$ 200
AASHTO T-180 (Rock corrections add \$80)	
R-value, D 2844, CT 301 .....	\$ 275
Sand Equivalent, D 2419, CT 217 .....	\$ 90
Sieve Analysis, D 422, CT 202 .....	\$ 120
Sieve Analysis, 200 Wash, D 1140, CT 202 .....	\$ 100
Specific Gravity, D 854 .....	\$ 100
Thermal Resistivity (ASTM 5334, IEEE 442) .....	\$ 880
Triaxial Shear, C.D., D 4767, T 297 .....	\$ 430
Triaxial Shear, C.U., w/pore pressure, D 4767, T 2297 per pt. \$	365
Triaxial Shear, C.U., w/o pore pressure, D 4767, T 2297 per pt. \$	210
Triaxial Shear, U.U., D 2850 .....	\$ 155
Unconfined Compression, D 2166, T 208 .....	\$ 110
Wax Density, D 1188 .....	\$ 100

**Roofing**

Roofing Tile Absorption, (set of 5), C 67 .....	\$ 210
Roofing Tile Strength Test, (set of 5), C 67 .....	\$ 210

**Masonry**

Brick Absorption, 24-hour submersion, C 67 .....	\$ 50
Brick Absorption, 5-hour boiling, C 67 .....	\$ 60
Brick Absorption, 7-day, C 67 .....	\$ 65
Brick Compression Test, C 67 .....	\$ 50
Brick Efflorescence, C 67 .....	\$ 50
Brick Modulus of Rupture, C 67 .....	\$ 45
Brick Moisture as received, C 67 .....	\$ 40
Brick Saturation Coefficient, C 67 .....	\$ 55
Concrete Block Compression Test, 8x8x16, C 140 .....	\$ 65
Concrete Block Conformance Package, C 90 .....	\$ 485
Concrete Block Linear Shrinkage, C 426 .....	\$ 135
Concrete Block Unit Weight and Absorption, C 140 .....	\$ 60
Cores, Compression or Shear Bond, CA Code .....	\$ 60
Masonry Grout, 3x3x6 prism compression, C 39 .....	\$ 35
Masonry Mortar, 2x4 cylinder compression, C 109 .....	\$ 35
Masonry Prism, half size, compression, C 1019 .....	\$ 120
Masonry Prism, Full size, compression, C 1019 .....	\$ 175

**Concrete**

Compression Tests, 6x12 Cylinder, C 39 .....	\$ 25
Concrete Mix Design Review, Job Spec .....	\$ 155
Concrete Mix Design, per Trial Batch, 6 cylinder, ACI .....	\$ 825
Concrete Cores, Compression (excludes sampling), C 42 .....	\$ 60
Drying Shrinkage, C 157 .....	\$ 275
Flexural Test, C 78 .....	\$ 55
Flexural Test, C 293 .....	\$ 60
Flexural Test, CT 523 .....	\$ 65
Gunite/Shotcrete, Panels, 3 cut cores per panel and test, ACI .....	\$ 275
Jobsite Testing Laboratory .....	Quote
Lightweight Concrete Fill, Compression, C 495 .....	\$ 45
Petrographic Analysis, C 856 .....	\$ 1,200
Restrained Expansion of Shrinkage Compensation .....	\$ 270
Splitting Tensile Strength, C 496 .....	\$ 90
3x6 Grout, (CLSM), C39 .....	\$ 45
2x2x2 Non-Shrink Grout, C 109 .....	\$ 45

**Reinforcing and Structural Steel**

Fireproofing Density Test, UBC 7-6 .....	\$ 60
Hardness Test, Rockwell, A-370 .....	\$ 55
High Strength Bolt, Nut & Washer Conformance, per assembly, A-325 .....	\$ 130
Mechanically Spliced Reinforcing Tensile Test, ACI .....	\$ 105
Pre-Stress Strand (7 wire), A 416 .....	\$ 155
Chemical Analysis, A-36, A-615 .....	\$ 135
Reinforcing Tensile or Bend up to No. 11, A 615 & A 706 .....	\$ 55
Structural Steel Tensile Test: Up to 200,000 lbs. (machining extra), A 370 .....	\$ 80
Welded Reinforcing Tensile Test: Up to No. 11 bars, ACI .....	\$ 60

**Asphalt Concrete**

Asphalt Mix Design, Caltrans .....	\$ 2,400
Asphalt Mix Design Review, Job Spec .....	\$ 165
Extraction, % Asphalt, including Gradation, D 2172, CT 382 .....	\$ 240
Film Stripping, CT 302 .....	\$ 110
Hveem Stability and Unit Weight CTM or ASTM, CT 366 .....	\$ 215
Marshall Stability, Flow and Unit Weight, T-245 .....	\$ 240
Maximum Theoretical Unit Weight, D 2041 .....	\$ 135
Unit Weight sample or core, D 2726, CT 308 .....	\$ 100
Air Voids, T-269 .....	\$ 50
Voids in Mineral Aggregate, (VFA) CT Sp-2 .....	\$ 50
Voids filled with AC, (VMA) CT Sp-2 .....	\$ 50
Dust Proportioning, (VFA) CT Sp-2 .....	\$ 50

**Aggregates**

Absorption, Coarse, C 127 .....	\$ 40
Absorption, Fine, C 128 .....	\$ 40
Clay Lumps and Friable Particles, C 142 .....	\$ 110
Cleaness Value, CT 227 .....	\$ 135
Crushed Particles, CT 205 .....	\$ 155
Durability, Coarse, CT 229 .....	\$ 145
Durability, Fine, CT 229 .....	\$ 145
Los Angeles Abrasion, C 131 or C 535 .....	\$ 200
Organic Impurities, C 40 .....	\$ 60
Potential Reactivity of Aggregate (Chemical Method), C 289 .....	\$ 430
Sand Equivalent, CT 217 .....	\$ 100
Sieve Analysis, Coarse Aggregate, C 136 .....	\$ 115
Sieve Analysis, Fine Aggregate (including wash), C 136 .....	\$ 115
Sodium Sulfate Soundness (per size fraction), C 88 .....	\$ 175
Specific Gravity, Coarse, C 127 .....	\$ 85
Specific Gravity, Fine, C 128 .....	\$ 95