

December 20, 2018  
Project No. 209821003

Mr. Michael Otavka  
Director of Facilities  
William S. Hart Union High School District  
21380 Centre Pointe Parkway  
Santa Clarita, California 91350

Subject: Proposal for Geotechnical, Materials Testing, and Inspection Services  
William S. Hart High School – Infrastructure Phase 2B  
24825 Newhall Avenue  
Newhall, California  
Division of State Architect (DSA) Application No. 03-115032

Dear Mr. Otavka:

Ninyo & Moore is pleased to submit this cost proposal for geotechnical, materials testing and specialty inspection services during the construction of the William S. Hart High School Infrastructure Phase 2B project located at 24825 Newhall Avenue in Newhall, California. Ninyo & Moore provided geotechnical testing services during the initial phase of construction, Phase 1, which consisted of installing new site utilities at the track and field renovation extending towards Newhall Avenue and during Phase 2A, which consisted of new campus infrastructure including a new outdoor electrical transformer/switchgear area, new site utilities, and new irrigation lines throughout the campus. The next phase, Phase 2B is a continuation of Phase 1A. We understand that the project will commence in spring of 2019 and last through the summer of 2019. Based on our review of the project DSA-103 form, project plans, and specifications, our anticipated scope of services will include inspection and testing of soils, concrete, masonry, reinforcing steel, and post-installed anchors.

## 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:

### Project Coordination and Technical Support

- Project coordination, technical support, and management, including review of the project plans and specifications, distribution of test reports, and work scheduling.
- Regular distribution of tests and DSA interim and final verified reports in accordance with new DSA guidelines, 2013 California Administrative Code and DSA Construction Oversight Process (PR 13-01) requirements.
- Attendance at pre-construction meetings and as-needed field meetings.

## Geotechnical Services

- Field Engineer/Geologist support for inspection of foundation excavations and remedial removal bottoms and to provide written recommendations, if needed.
- Field Technician Services for observation and testing during temporary excavations, trench backfill, structure backfill, subgrade preparation and during aggregate base placement. Field density test will be performed to evaluate the contractor's compaction efforts.
- Laboratory testing, including proctor density and sand equivalent testing of soils and aggregates sampled in the field.
- Preparation of daily reports, test data sheets and field memoranda to document the items inspected.
- Preparation and submittal of the Geotechnical Interim and Final Verified Reports (DSA-293).

## Inspection and Materials Testing Services

- Field technician services for sampling and testing of concrete, including checking slump, temperature, and casting a set of cylinders for each batch.
- Field technician services for concrete batch and grout plant inspection at the production plant including checking mix design and batch weights and signing each delivery ticket.
- Field technician services for sampling, tagging, and testing of construction materials, such as reinforcing steel and anchor bolts.
- Masonry inspection services during structural masonry construction including full-time observation during block placement, inspection of rebar size, grade, quantity and clearances, sampling of grout and mortar, and sampling of masonry prisms.
- Load and/or torque testing of post-installed anchors including epoxy and expansion anchors.
- Field technician with coring equipment to obtain masonry core samples.
- Preparation of progress reports, concrete test data sheets, and field memoranda to document the items inspected.
- Laboratory testing, including bend and tensile testing on rebar, shear and compression testing of masonry cores, conformance testing of masonry block specimens, and compressive strength testing of concrete, grout, mortar, and masonry prisms sampled in the field.
- Preparation and submittal of the Laboratory Interim and Final Verified Reports (DSA-291).

## ASSUMPTIONS

Based on the construction schedule described above and our project understanding, the following assumptions have been made in the preparation of our scope of services:

- Our services will be scheduled and coordinated by the Project Inspector or Construction Manager on an as-needed basis.
- Our services are subject to prevailing wage requirements.
- 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 will depend on the construction schedule and the contractor's operations. Hours spent that exceed those in the attached tables will be billed on a time-and-materials basis.

## ESTIMATED FEE

We propose to provide our services on a time-and-materials basis in accordance with the attached Schedule of Fees and Schedule of Fees for Laboratory Testing. Our estimated fee for the scope of services described herein is presented in the attached Table 1.

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

Respectfully submitted,  
**NINYO & MOORE**



Rajindra S. Handapangoda, PE, GE  
Senior Engineer



Alfredo "Tino" Rodriguez  
Principal, Construction Services

RAH/AR/mlc

Attachments: Table 1 – Breakdown of Estimated Fee  
Schedule of Fees

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

## Table 1 - Breakdown of Estimated Fee

### Field Services

Field Technician/Inspector					
Footing Inspection and Pad Preparation	32 hours	@	\$ 92.00 /hour	\$	2,944.00
Trench and Structure Backfill	210 hours	@	\$ 92.00 /hour	\$	19,320.00
Subgrade and Aggregate Base Preparation	44 hours	@	\$ 92.00 /hour	\$	4,048.00
Concrete Sampling and Testing	32 hours	@	\$ 98.00 /hour	\$	3,136.00
Concrete and Grout Batch Plant Inspection	32 hours	@	\$ 98.00 /hour	\$	3,136.00
Specialty Masonry Inspector	54 hours	@	\$ 98.00 /hour	\$	5,292.00
Masonry Core Sampling (includes equipment)	12 hours	@	\$ 180.00 /hour	\$	2,160.00
Anchor Bolt Load Testing	24 hours	@	\$ 98.00 /hour	\$	2,352.00
Observation, Tag and Sample (Rebar and Block)	32 hours	@	\$ 98.00 /hour	\$	3,136.00
Sample Pick-up	24 hours	@	\$ 92.00 /hour	\$	2,208.00
Vehicle and Equipment Usage	496 hours	@	\$ 12.00 /hour	\$	5,952.00
			<b>Subtotal</b>	<b>\$</b>	<b>53,684.00</b>

### Laboratory Analyses

Proctor Density	4 tests	@	\$ 220.00 /test	\$	880.00
Sand Equivalent	2 tests	@	\$ 125.00 /test	\$	250.00
Compressive Strength (Concrete)	32 tests	@	\$ 30.00 /test	\$	960.00
Compressive Strength (Mortar and Grout)	32 tests	@	\$ 45.00 /test	\$	1,440.00
Concrete Block Conformance Package, C 90	1 test	@	\$ 500.00 /test	\$	500.00
Masonry Cores (Shear and Compression)	4 tests	@	\$ 60.00 /test	\$	240.00
Reinforcing Tensile or Bend, up to No. 11, A 615 & A 706	12 tests	@	\$ 60.00 /test	\$	720.00
			<b>Subtotal</b>	<b>\$</b>	<b>4,990.00</b>

### Project Coordination and Management

Senior Project Engineer/Geologist/Environmental Scientist	44 hours	@	\$ 163.00 /hour	\$	7,172.00
			<b>Subtotal</b>	<b>\$</b>	<b>7,172.00</b>

### Report Preparation For The DSA-293, DSA-291

Principal Engineer/Geologist/Environmental Scientist	8 hours	@	\$ 178.00 /hour	\$	1,424.00
Senior Project Engineer/Geologist/Environmental Scientist	16 hours	@	\$ 163.00 /hour	\$	2,608.00
			<b>Subtotal</b>	<b>\$</b>	<b>4,032.00</b>

**TOTAL ESTIMATED FEE** **\$ 69,878.00**

## Schedule of Fees

### Hourly Charges for Personnel

Principal Engineer/Geologist/Environmental Scientist .....	\$ 178
Certified Industrial Hygienist .....	\$ 178
Senior Engineer/Geologist/Environmental Scientist .....	\$ 168
Senior Project Engineer/Geologist/Environmental Scientist .....	\$ 163
Certified Asbestos Consultant, Lead Inspector/Assessor, Lead Project Monitor .....	\$ 163
Project Engineer/Geologist/Environmental Scientist .....	\$ 156
Senior Staff Engineer/Geologist/Environmental Scientist .....	\$ 142
Certified Site Surveillance Technician, Lead Sampling Technician .....	\$ 142
Staff Engineer/Geologist/Environmental Scientist .....	\$ 126
GIS Analyst .....	\$ 116
Field Operations Manager .....	\$ 112
Supervisory Technician .....	\$ 98
Nondestructive Examination Technician, UT, MT, LP .....	\$ 98
ACI Concrete Technician .....	\$ 98
Concrete/Asphalt Batch Plant Inspector .....	\$ 98
Special Inspector (Concrete, Masonry, Steel, Welding, and Fireproofing) .....	\$ 98
Senior Field/Laboratory Technician .....	\$ 92
Field/Laboratory Technician .....	\$ 92
Technical Illustrator/CAD Operator .....	\$ 92
Information Specialist .....	\$ 78
Geotechnical/Environmental/Laboratory Assistant .....	\$ 76
Data Processing, Technical Editing, or Reproduction .....	\$ 68

### Other Charges

Concrete Coring Equipment (includes one technician) .....	\$ 180/hr
X-Ray Fluorescence .....	\$ 300/day
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 .....	\$ 12/hr
Field Vehicle Usage .....	\$ 10/hr
Direct Project Expenses .....	Cost plus 15 %
Laboratory testing, geophysical equipment, and other special equipment provided upon request.	

### Notes

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.

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.

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	\$ 170
California Bearing Ratio (CBR), D 1883	\$ 550
Chloride and Sulfate Content, CT 417 & CT 422	\$ 175
Consolidation, D 2435, CT 219	\$ 300
Consolidation, Hydro-Collapse only, D 2435	\$ 150
Consolidation – Time Rate, D 2435, CT 219	\$ 75
Direct Shear – Remolded, D 3080	\$ 350
Direct Shear – Undisturbed, D 3080	\$ 300
Durability Index, CT 229	\$ 175
Expansion Index, D 4829, IBC 18-3	\$ 190
Expansion Potential (Method A), D 4546	\$ 170
Geofabric Tensile and Elongation Test, D 4632	\$ 200
Hydraulic Conductivity, D 5084	\$ 350
Hydrometer Analysis, D 422, CT 203	\$ 220
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	\$ 300
pH and Resistivity, CT 643	\$ 175
Proctor Density D1557, D 698, CT 216, AASHTO T-180	\$ 220
Proctor Density with Rock Correction D 1557	\$ 340
R-value, D 2844, CT 301	\$ 325
Sand Equivalent, D 2419, CT 217	\$ 125
Sieve Analysis, D 422, CT 202	\$ 145
Sieve Analysis, 200 Wash, D 1140, CT 202	\$ 100
Specific Gravity, D 854	\$ 125
Thermal Resistivity (ASTM 5334, IEEE 442)	\$ 925
Triaxial Shear, C.D., D 4767, T 297	\$ 450
Triaxial Shear, C.U., w/pore pressure, D 4767, T 2297 per pt	\$ 400
Triaxial Shear, C.U., w/o pore pressure, D 4767, T 2297 per pt	\$ 250
Triaxial Shear, U.U., D 2850	\$ 180
Unconfined Compression, D 2166, T 208	\$ 130

#### MASONRY

Brick Absorption, 24-hour submersion, 5-hr boiling, 7-day, C 67	\$ 70
Brick Compression Test, C 67	\$ 55
Brick Efflorescence, C 67	\$ 55
Brick Modulus of Rupture, C 67	\$ 50
Brick Moisture as received, C 67	\$ 45
Brick Saturation Coefficient, C 67	\$ 60
Concrete Block Compression Test, 8x8x16, C 140	\$ 70
Concrete Block Conformance Package, C 90	\$ 500
Concrete Block Linear Shrinkage, C 426	\$ 200
Concrete Block Unit Weight and Absorption, C 140	\$ 70
Cores, Compression or Shear Bond, CA Code	\$ 70
Masonry Grout, 3x3x6 prism compression, C 39	\$ 45
Masonry Mortar, 2x4 cylinder compression, C 109	\$ 35
Masonry Prism, half size, compression, C 1019	\$ 120
Masonry Prism, Full size, compression, C 1019	\$ 200

#### REINFORCING AND STRUCTURAL STEEL

Chemical Analysis, A 36, A 615	\$ 135
Fireproofing Density Test, UBC 7-6	\$ 60
Hardness Test, Rockwell, A 370	\$ 70
High Strength Bolt, Nut & Washer Conformance, per assembly, A 325	\$ 150
Mechanically Spliced Reinforcing Tensile Test, ACI	\$ 175
Pre-Stress Strand (7 wire), A 416	\$ 170
Reinforcing Tensile or Bend up to No. 11, A 615 & A 706	\$ 60
Structural Steel Tensile Test: Up to 200,000 lbs. (machining extra), A 370	\$ 80
Welded Reinforcing Tensile Test: Up to No. 11 bars, ACI	\$ 65

#### CONCRETE

Compression Tests, 6x12 Cylinder, C 39	\$ 30
Concrete Mix Design Review, Job Spec	\$ 180
Concrete Mix Design, per Trial Batch, 6 cylinder, ACI	\$ 850
Concrete Cores, Compression (excludes sampling), C 42	\$ 60
Drying Shrinkage, C 157	\$ 400
Flexural Test, C 78	\$ 75
Flexural Test, C 293	\$ 75
Flexural Test, CT 523	\$ 85
Gunite/Shotcrete, Panels, 3 cut cores per panel and test, ACI	\$ 275
Jobsite Testing Laboratory	Quote
Lightweight Concrete Fill, Compression, C 495	\$ 50
Petrographic Analysis, C 856	\$ 2,000
Restrained Expansion of Shrinkage Compensation	\$ 450
Splitting Tensile Strength, C 496	\$ 100
3x6 Grout, (CLSM), C 39	\$ 45
2x2x2 Non-Shrink Grout, C 109	\$ 45

#### ASPHALT CONCRETE

Air Voids, T 269	\$ 75
Asphalt Mix Design, Caltrans (incl. Aggregate Quality)	\$ 4,500
Asphalt Mix Design Review, Job Spec	\$ 180
Dust Proportioning, CT LP-4	\$ 75
Extraction, % Asphalt, including Gradation, D 2172, CT 382	\$ 250
Extraction, % Asphalt without Gradation, D 2172, CT 382	\$ 150
Film Stripping, CT 302	\$ 120
Hveem Stability and Unit Weight D 1560, T 246, CT 366	\$ 225
Marshall Stability, Flow and Unit Weight, T 245	\$ 240
Maximum Theoretical Unit Weight, D 2041, CT 309	\$ 150
Moisture Content, CT 370	\$ 85
Moisture Susceptibility and Tensile Stress Ratio, T 238, CT 371	\$ 1,000
Slurry Wet Track Abrasion, D 3910	\$ 150
Superpave, Asphalt Mix Verification (incl. Aggregate Quality)	\$ 4,900
Superpave, Gyrotory Unit Wt., T 312	\$ 100
Superpave, Hamburg Wheel, 20,000 passes, T 324	\$ 1,000
Unit Weight sample or core, D 2726, CT 308	\$ 100
Voids in Mineral Aggregate, (VMA) CT LP-2	\$ 75
Voids filled with Asphalt, (VFA) CT LP-3	\$ 75
Wax Density, D 1188	\$ 100

#### AGGREGATES

Clay Lumps and Friable Particles, C 142	\$ 180
Cleaness Value, CT 227	\$ 180
Crushed Particles, CT 205	\$ 175
Durability, Coarse or Fine, CT 229	\$ 205
Fine Aggregate Angularity, ASTM C 1252, T 304, CT 234	\$ 180
Flat and Elongated Particle, D 4791	\$ 220
Lightweight Particles, C 123	\$ 180
Los Angeles Abrasion, C 131 or C 535	\$ 200
Material Finer than No. 200 Sieve by Washing, C 117	\$ 90
Organic Impurities, C 40	\$ 90
Potential Alkali Reactivity, Mortar Bar Method, Coarse, C 1260	\$ 1,250
Potential Alkali Reactivity, Mortar Bar Method, Fine, C 1260	\$ 950
Potential Reactivity of Aggregate (Chemical Method), C 289	\$ 475
Sand Equivalent, T 176, CT 217	\$ 125
Sieve Analysis, Coarse Aggregate, T 27, C 136	\$ 120
Sieve Analysis, Fine Aggregate (including wash), T 27, C 136	\$ 145
Sodium Sulfate Soundness, C 88	\$ 450
Specific Gravity and Absorption, Coarse, C 127, CT 206	\$ 115
Specific Gravity and Absorption, Fine, C 128, CT 207	\$ 175

#### ROOFING

Roofing Tile Absorption, (set of 5), C 67	\$ 250
Roofing Tile Strength Test, (set of 5), C 67	\$ 250

Special preparation of standard test specimens will be charged at the technician's hourly rate.  
Ninyo & Moore is accredited to perform the AASHTO equivalent of many ASTM test procedures.