

In compliance with the Contract Documents, the undersigned hereby proposes to furnish all required labor, materials, supervision, transportation, equipment, services, taxes and incidentals required for:

#### Hagan Educational Barn Accessibility Improvements Installation of Concrete Paving, Signage, Striping, & Electrical Improvements at Hagan Park

ltem No.	Item	Estimated Quantity	Unit	Unit Price	Total			
1.	TEMP FENCE (6' CHAINLINK)	1	LS	\$	\$			
2.	DEMOLITION	1	LS	\$	\$			
3.	CONCRETE PAVING/AG. BASE	1	LS	\$	\$			
4.	PARKING SIGNAGE	1	LS	\$	\$			
5.	STRIPING PAVEMENT MARKING	1	LS	\$	\$			
6.	CONCRETE BUMPERS	1	LS	\$	\$			
7.	TRUNCATED DOMES	1	LS	\$	\$			
8.	ELECTRICAL SHOP DRAWINGS FOR PERMIT (DO NOT REQUIRE STAMP)	1	LS					
9.	ELECTRICAL WORK IN HAGAN BARN	1	LS					
	BASE BID TOTAL				\$			
CONTRACTOR NAME:								
PHONE AND E-MAIL:								

There will be a **non-mandatory pre-bid meeting on Tuesday November 8, 2016 at 10 AM** at the site: Hagan Community Park Red Barn 2197 Chase Drive, Rancho Cordova, CA 95670 (Meet at the parking lot by the barn.)

Sealed bids are due on **Friday December 2<sup>nd</sup> at 2 PM at the Cordova Recreation and Park District Offices** Attn: Cristina James, <u>Cjames@crpd.com</u>, (916) 842-3312, 2729 Prospect Park Dr. Ste. 230, Rancho Cordova, CA 95670

Bidders are hereby notified that this contract is subject to the Davis-Bacon Federal minimum wage rates and State prevailing wage rates. Pursuant to Section 110 of the Housing and Community Development Act of 1974 and Section 1770, et. seq. of the California Labor Code. Bidders and contractors performing work under this advertisement are further bound by the requirements of President's Executive Order 11246 as amended by Executive Order 11375; Title VI of the Civil Rights Act of 1964; Section 109 of Title 1 of the Housing and Community Development Act of 1974, as amended; Section 3 of the Housing and Urban Development Act of 1968; the Immigration Reform and Control Act of 1986; the Davis-Bacon Act; the Copeland "Anti-Kickback" Act; and the Contract Work Hours and Safety Standards Act.

#### Funding for this project is provided by City of Rancho Cordova Community Development Block Grant Program.



#### Detailed Specifications for the Installation of Concrete Paving, Accessible Parking Signage, Striping & Electrical Improvements at Hagan Park

#### I. SCOPE OF WORK

This section includes performance of all work necessary for the installation of concrete paving, striping, and parking signage as shown on attached plans and details. The Contractor shall be responsible for the proper disposal of all items to be removed and/or demolished.

#### II. REFERENCES

- A. County of Sacramento Standard Construction Specifications and Details.
- B. ASTM Specifications.
- C. California Building Code

#### III. JOB COORDINATION

A. Unless otherwise approved by Governing Authorities, provide necessary barricades, detours, warning devices, flag men, and equipment movements to maintain vehicle and pedestrian traffic on public streets and sidewalks. The Contractor shall be solely responsible for public safety within the worksite boundaries.

B. Field Measurements: If field measurement differs slightly from drawing dimensions, modify work as required for accurate fit. If measurements differ substantially, notify Owner prior to starting work.

C. Supervision: Contractor consults with CRPD concerning details of scheduling of all work. Contractor has a competent person in charge of his work at all times to whom CRPD may issue directives and who shall accept and act upon such directives. Failure for the supervisor to act on said directives shall be sufficient cause to give notice that the Contractor is in default of contract unless such directives would create potential personal injury or safety hazards.

D. Inspections: CRPD inspects work at its discretion. Immediate correction of any work not done to industry standards as noted by CRPD will be communicated to the contractor and will be performed by the contractor at no additional expense to CRPD.

E. Utility Agencies: Are contacted by Contractor any time assistance is needed to work safely around overhead or underground installations. The Contractor shall make arrangements with the utility for removal of all necessary limbs and branches that may conflict with or create a personal injury hazard in conducting the operations of this contract.

F. Damages: Done by the Contractor to any person or property, public or private, are the total responsibility of the Contractor and are repaired or compensated for by the Contractor to the satisfaction of both injured party and CRPD at no cost to CRPD.



#### IV. WARRANTY

A. Repair or replace any defective work, material or part which may appear within 1 year of the date of acceptance.

B. Upon failure to comply with the above guarantee within a reasonable length of time after notification is given the Owner's Representative shall have the repairs made at the Contractor's expense.

#### V. QUALITY ASSURANCE

A. Provide at least one person who shall be present at all times during execution of the Work and who shall be thoroughly trained and experienced in placing the types of material specified and who shall direct all Work performed under this project.

#### **VI. JOB CONDITIONS**

A. Prior to installation of the work, carefully inspect the installed work of others and verify that all such work is complete to the point where this installation may properly commence. Contractor shall protect existing conditions and restore and repair any areas that are damaged by the Contractor during the course of the work.

#### VII. CONSTRUCTION COORDINATION

A. Obtain information and instructions from other trades and suppliers in ample time to schedule and coordinate the installation of items furnished by them to be embedded in concrete so provisions for their work can be made without delaying the project.

#### VIII. EXECUTION

#### 1. TEMPORARY FENCE

Provide a temporary chain link fence as shown on attached plans.

**2. DEMOLITION** Contractor shall clear and grub areas to be paved and properly dispose of all material.

#### 3. CONCRETE PAVING/AGGREGATE BASE

- A. Comply with ASTM A-615 "Standard Specifications for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement," and "Manual of Standard Practice for Detailing Reinforced Concrete Structures," publication ACI 315-65 of the American Concrete Institute.
- B. Comply with all pertinent recommendations contained in American Concrete Institute (ACI), "Recommended Practice of Concrete Formwork, ACI-347."
- C. Construct forms to sizes, shapes, lines and dimensions indicated on Drawings, and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, reglects, chamfers, blocking, screeds, bulkheads, anchorages and inserts, and other features required in work. Use selected materials to obtain required finish. Solidly butt joints and provide back-up at joints to prevent leakage of cement paste.



- D. Provide complete forms of such strength and construction as to prevent any spread, shifting, or settling when concrete is deposited, and tight enough to avoid any leakage or washing out of cement mortar.
- E. Transitions of curves to other curves, and curves to straight line tangents, shall be smooth and continuous.
- F. Secure all pipe sleeves, anchors and bolts, including those for angle frames, inserts, ties and other materials in connection with concrete construction, in position before concrete is placed.
- G. Conform to Section 90 of the "Standard Specifications of the State of California", Business and Transportation Agency, Department of Transportation (CSS), latest edition.
- H. Temperature: All concrete design mixes and methods of protecting concrete shall be re-submitted to the District Inspector for review when the following temperatures are anticipated:

The temperature is below 40° F, or when conditions indicate that the temperature will fall below 40° F within seventy-two (72) hours.
The placing temperature of the concrete is, or anticipated to be, above 80° F.

- I. Any cutting and/or patching made necessary by failure or delay in complying with these requirements shall be performed at no cost to the Owner.
- J. Sleeving shall be coordinated with concrete work. Refer to plans for sleeving locations.
- K. FORM CONSTRUCTION TOLERANCES: Set form to required grades and lines, rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work so that forms can remain in place at least twenty-four (24) hours after concrete placement.
- L. Check completed formwork for grade and alignment to following tolerances:
  - 1. Top of forms not more than one-eighth (1/8) inch in ten (10) feet vertical elevation.
  - 2. Vertical face on longitudinal axis not more than one-fourth (1/4) inch in ten feet horiz. width.

#### M. CONCRETE REINFORCEMENT

- 1. Welded Wire Mesh: ASTM A-186 plain type and uncoated finish.
- 2. Tie Wires: Black annealed, ASTM A-82, minimum 16 gauge.

3. Chains, Bolsters, Bar supports, Spacers: Sized and shaped for strength and support of reinforcement during installation and placement of concrete.

4. Smooth dowel steel bars for construction joints: ASTM A-29, Grade 60.

5. Where indicated, provide metal dowel sleeve at one end of dowel to permit longitudinal movement of dowel within concrete section.

6. Provide for movement which equals joint width plus one-half (1/2) inch



### N. CONCRETE FORM MATERIALS

1. Slabs and Walks: Steel, wood or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms, free of distortion and defects.

2. Use flexible spring steel forms or laminated boards to form radius bends as required.

3. Coat forms with a non-staining form release agent that will not discolor or deface surface of concrete.

4. Forms for Exposed Finish Concrete: Unless otherwise shown, construct formwork for exposed concrete surfaces with plywood, to provide continuous, straight, smooth, exposed surfaces. Provide plywood in largest practicable sizes to minimize number of joints. Provide form material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection. Provide solid backing and form supports to ensure stability of forms. On any length of wall the difference in form piece size shall not be greater than 25% plus or minus the dimension of the smallest piece and in no case smaller than two (2) inches in width.

5. Use five (5) ply exterior plywood complying with U.S. Product Standard PS 1-66,

"B-B (Concrete Form) Plywood," Class 1, Exterior Grade or better, with each piece bearing legible inspection trademark

6. Use form material in largest practicable sizes to minimize number of form joints. Arrange form joints orderly and symmetrically with minimum number of joints.

7. Forms for Curved Exposed Surfaces: Forms shall be built up with hand sewn two (2) inch stringers, sized and carefully fitted to desired form, with segmental tacking. Exposed face surfaces shall be sheet metal, oil tempered hardboard, or one-quarter (1/4) inch waterproof plywood facing.

8. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off metal form ties (break back cone ties), designed to prevent form deflection, and to prevent spalling concrete surfaces upon removal. All form ties to be used on unexposed concrete surfaces.

#### O. CONCRETE MIX

1. Mix concrete in accordance with ASTM C-94 and with aggregates complying with ASTM C-33 and Portland Cement ASTM C-150, Type II.

2. All concrete mixes shall be designed by a testing laboratory approved by the District

Inspector. All mixes shall conform to applicable building code requirements listed herein. All mix designs shall be submitted to the District Inspector for approval before being used. Mix design shall show proportions of cement, fine and coarse aggregate, and water and graduation of combined aggregates. Calcium chloride shall not be added at any mix.

3. Concrete shall be as specified:

ltem	Min. Cement Content	28-Day Min. Strength	Max. Slump	Aggregate Size	Gal/Bag Cement Ratio Max.
Walkways	505 lb/cu. Yd	2800 PSI	5"	3/4"	Five

#### P. CONCRETE REINFORCEMENT PLACEMENT

1. Fabricate reinforcement in accordance with ACI-315, providing a minimum concrete cover of two inches.

2. Place all reinforcement in the exact position shown on the Drawings and secure in position during the placing and compacting of concrete. Wire bars together with No.16 gauge wire with



ties at all intersections except where spacing is less than 12" in each direction, in which case tie alternate intersections.

3. Overlap welded wire mesh one square plus six (6) inches to maintain a uniform strength, and securely fasten at the ends, edges and support to maintain clearances.

4. Place all sleeves, inserts, anchors and embedded items required for adjoining work or for its support prior to concreting. Fill voids in embedded items temporarily with readily removable material to prevent entry of concrete.

5. Give all contractors and subcontractors whose work is related to concrete or supported by it, ample notice and opportunity to introduce and/or furnish embedded items before concrete placement.

#### Q. CONCRETE FORMWORK CONSTRUCTION

1. Construct support, brace and maintain formwork to support vertical and lateral loads that might be applied until such loads can be supported by concrete.

2. Contractor assumes full responsibility in the removal of forms. The length of time forms must remain in place depends on the rate of time required for concrete to obtain a proper strength. Remove forms after the concrete is sufficiently hard to prevent damage to concrete.

3. Reuse of Forms

- Do not reuse forms if there is any evidence of surface wear or defect which would impair quality of surface.
- Thoroughly clean and properly coat forms before reuse.

4. Field Quality Control

- Observe formwork continuously while concrete is being placed to see that there are no deviations from desired elevation, alignment, plumbness or camber.
- If during construction any weakness develops and falsework shows undue settlement or discoloration, stop work, remove affected construction if permanently damaged, and strengthen falsework.

#### R. CONCRETE PLACEMENT AND FINISHES

1. Place concrete in accordance with ACI-304 and Section 2605 of the UBC. Immediately after depositing, compact concrete by mechanical vibration. No vibrating of form is allowed. Mixing shall be continuous, with no interruptions from the time the truck is filled until the time it is emptied. Concrete shall be placed within one hour of the time water is first added.

2. Ensure anchors, seats, plates, and other items to be cast into concrete are placed,

held securely and will not cause hardship in placing concrete.

3. Ensure reinforcement, inserts, embedded parts, etc. are not disturbed during concrete placement.

4. Pour concrete continuously between predetermined construction and control joints. Do not break or interrupt successive pours such that cold joints occur, unless otherwise indicated on the Drawings.

5. Lines and Grades: Elevations requiring accurate placement shall be set by a competent instrument person, using a professional type instrument.

6. For all concrete placed on soil, the subgrade shall be wet and compacted prior to placing.7. Before placing concrete mixing, conveying and finishing equipment, forms and reinforcing shall be well cleaned. Wet form before placing concrete, unless oiled forms are used.



## S. CONCRETE FINISHING

1. Exterior Slabs and Sidewalks: After concrete has been placed, consolidate strikeoff and screed uniformly to the required grades. Float concrete to a uniform surface, then steel trowel lightly to compact surface. Finish exterior slabs and sidewalks as detailed on Drawings, or with a light broom finish if not otherwise noted. Exterior slabs and sidewalks shall be formed with slope as indicated, as directed or as necessary to ensure proper drainage. Exterior slabs and sidewalks adjacent to buildings shall drain away from buildings.

2. Light Broom Finish:

a. Floating: Float surface once it has sufficiently stiffened. Check planeness of surface with a 10 ft. straightedge in all directions. Cut down high spots and fill lows. Immediately refloat to a uniform non-directional sandy texture.

b. Obtain texture and required slip-resistance by drawing a stiff bristled broom across a floated finish.

c. Direction of brooming to be perpendicular to direction of paving.

d. Finish shall be applied by the same workers, under the same conditions, throughout the project. Texture shall be uniform throughout, as solely determined by the owner.

3. Light Sand Blast Finish:

a. Apply sand blasted finish to exposed surfaces as indicated on the Drawings.

b. Perform sand blasting as least 72 hours after placement of concrete. Coordinate with formwork construction, concrete placement schedule, and formwork removal to ensure that surfaces to be blast finished are blasted at the same age for uniform results.

c. Contractor shall provide a one foot by one foot (1'x1') minimum field sample for approval by the District Inspector.

d. Sand blast corners and edges of patterns carefully, using back-up boards, to maintain uniform corners or edge lines.

e. Use an abrasive grit of proper type and gradation to expose aggregate and surrounding matrix surface to match the approved field sample.

f. Expose fine aggregate with occasional exposure of coarse aggregate; maximum 1/16-inch reveal.

g. Surface Continuity: Perform sand blast finishing as continuous an operation as possible, utilizing the same work crew to maintain continuity of finish on each surface or area of work. Maintain patterns of variances in depth of cuts as indicated.

h. Construction Joints: Use techniques acceptable to the District Inspector to achieve uniform treatment of construction joints.

i. Protection and repair:

a. Protect adjacent materials and finished from dust, dirt, and other surface or physical damage during sand blast finishing operations. Provide protections as required and remove from site at completion of the work.

b. Repair or replace other work damaged by finishing operations.

j. Clean-Up: Maintain control of concrete chips, dust, and debris in each area of the work. Clean up and remove such materials at the completion of each day of operation. Prevent migration of airborne materials by the use of tarpaulins, wind breaks, and similar containing devices.

T. Curing and Protection

1. Beginning immediately after placement, protect concrete from premature drying, from excessively hot or cold temperatures, and from mechanical injury. Maintain concrete with minimal moisture loss at relatively constant temperature for a period necessary for hydration of



cement and hardening of concrete. Hairline fissures and cracks developed in first ninety (90) days shall result in replacement of concrete.

## 4. ACCESSIBLE PARKING SIGNAGE

A. Signage shall be per attached plans and details. All signage shall comply with the most recent edition of the California Building Code.

#### 5. STRIPING/PAVEMENT MARKING

A. Colors as directed by District Inspector. Colors of painted traffic stripes and pavement markings must comply with ASTM D 6628.

B. Waterborne traffic line - colors white, yellow and red, State specification PTWB-01R3.

C. Waterborne traffic line for the international symbol of accessibility and other curb markings – blue, red and green, Federal specification TT-P-1952E.

D. Pavement markings shall be done at least 7 days after the concrete pour. Existing surfaces to be striped with traffic paint shall be cleaned of dust, dirt, grime, oil, rust or other contaminants which will impair the quality of work or interfere with proper bond of paint coats. Provide measured layouts, temporary markings, templates, and other means necessary to provide required marking. Prepare and apply paint in accordance with manufacturer's instructions; paint shall be applied by spray and shall achieve complete coverage free from voids and thin spots. Where indicated on the Drawings, paint parking stall strips, lettering, arrows, accessible symbols, etc. on concrete paving. Paint strips shall be 4 inches wide (except otherwise indicated) and applied with two (2) coats of herein specified Traffic Line Paint; white (except as otherwise specified or indicated).

- a. Paints shall be delivered to the site in unopened containers.
- b. Paint shall not be diluted, or watered down.
- c. Paint shall be applied in 10-12 wet mil thickness (4-6 mil dried). Coat thickness shall be verified by the District Construction Inspector.
- d. International Accessible Symbol: Symbol shall be white figures on a blue background. Blue shall be equal to color No. 15080 in Fed. Std. 595a. Lines and symbols shall be accurately formed and true to line and form; lines shall be straight and uniform in width. Painted edges shall be clean cut and free from raggedness, and corners shall be cut sharp and square. Tolerances: Apply striping within a tolerance 1/2 inch in 50 feet. Apply markings and striping to widths indicated with a tolerance of 1/4 inch on straight sections and 1/2 inch on curved sections.

#### 6. PRECAST CONCRETE BUMPERS:

A. 3000 psi at 28 day minimum strength; 48" length unless otherwise indicated; provide with steel dowel anchors and concrete epoxy.

#### 7. TRUNCATED DOMES

A. Install truncated domes where shown on plans and details.

## 8. SHOP ELECTRICAL DRAWINGS FOR PERMIT (Design-Build)

Contractor shall provide the following plans to the City of Rancho Cordova for the electrical permit:

- Energy Calculations for all new lighting
- Cover Sheet



- Site Plan
- Floor Plan
- One Line Diagram
- Panel Schedules
- Specify and Detail all accessible upgrades as required by 2013 CBC 11B 202.

Three sets of hard copy drawings and one digital copy shall be provided.

## 9. ELECTRICAL WORK AT HAGAN BARN

Once approval and City of Rancho Cordova permit has been obtained the Contractor can begin demolition and electrical work.

Electrical systems required for this work include labor, materials, equipment, and services necessary to complete installation of electrical work as designed on drawings provided by the Contractor (item above) and specified herein or required for a complete operable facility and not specifically described in other Sections of these Specifications.

Among the items required are:

- a. Service and distribution equipment.
- b. Feeders to switchboards, distribution panels, and other equipment.

c. Branch circuit wiring from the distribution panels for lighting, receptacles, motors, signal systems and other detailed circuit wiring.

d. Luminaires, control switches, receptacles, relays, supports and other accessory items.

Scope of work includes:

- Upgrade existing disconnect to 60-amp sub-panel with distribution
- Weather-tight installation of 2 120 volt outlets where shown on plan.
- Weather-tight installation of 2 120 volt switches.
- Weather-tight installation of 13 LED lights per electrical concept plan

Contractor shall be in compliance with all applicable current standards and codes including:

- Americans With Disabilities Act
- Authority Having Jurisdiction
- American National Standards Institute American Public Works Association
- American Society for Testing and Materials California Building Code
- California Electrical Code
- California Fire Code
- Federal Communications Commission Heating, Ventilating and Air Conditioning Institute of Electrical and Electronics Engineers. International Electrical Testing Association
- FM Global
- National Electrical Code
- National Electrical Manufacturers Association National Fire Protection Association
- Occupational Safety and Health Administration Underwriters Laboratories Inc.



# REQUEST FOR QUOTE FORM ELECTRICAL INSTALLATION:

A. Install electrical equipment complete as directed by manufacturer's installation instructions. Obtain installation instructions from manufacturer prior to rough-in of the electrical equipment, examine the instructions thoroughly. When requirements of the installation instructions conflict with the Contract Documents, request clarification from Architect/Engineer prior to proceeding with the installation.

B. Do not install electrical equipment in obvious passages, doorways, scuttles or crawl spaces which would impede or block the area passage's intended usage.

- C. Earthwork:
- 1. Perform excavation and backfill required for the installation of electrical work.

## FIELD QUALITY CONTROL

A. Tests:

1. Conduct tests of equipment and systems to demonstrate compliance with requirements specified in Division 26. Refer to individual Specification Sections for required tests. Document tests and include in Closeout Documents.

2. During site evaluations by Architect/Engineer, provide an electrician with tools to remove and replace trims, covers, devices, and the like, so that a proper evaluation of the installation can be performed.

B. Lighting System Control Testing and Commissioning:

1. Test lighting controls to ensure that control devices, components, equipment and systems are calibrated, adjusted and operate in accordance with Drawings and Specifications. Provide functional testing of sequences of operation to ensure operation in accordance with Drawings and Specifications. Provide complete report of test procedures and results to Architect/Engineer and insert approved copy into project closeout documents.

- 2. Testing includes:
- a. Automatic controls.
- b. Occupant sensing automatic controls.
- c. Automatic time and override controls for lighting.
- d. Automatic time and photo controls for lighting.

## CLEANING

A. Remove dirt and debris caused by the execution of the electrical work.

B. Leave the entire electrical system installed under this Contract in clean, dust-free and proper working order.

C. Vacuum clean interiors of all new and modified electrical signal and communication equipment enclosures.

## End of Section