

SPECIFICATIONS

LITTLE LAKE CITY SCHOOL DISTRICT

PROPOSITION 39 EXTERIOR LED LIGHTING AT 7 ELEMENTARY SCHOOLS

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SECTION 01010
SUMMARY OF WORK

1.1 GENERAL

- A. Project Description: The Project consists of replacing all existing exterior lighting fixtures with new LED lighting fixtures at all seven elementary schools in the Little Lake City School District.

Elementary Schools

[Cresson Elementary](#)

11650 Cresson St.
Norwalk, CA 90650

[Paddison Elementary](#)

12100 Crewe St.
Norwalk, CA 90650

[Jersey Avenue Elementary](#)

9400 Jersey Ave.
Santa Fe Springs, CA 90670

[Studebaker Elementary](#)

11800 Halcourt Ave.
Norwalk, CA 90650

[Lakeland Elementary](#)

11224 Bombardier Ave,
Norwalk, CA 90650

[William Orr Elementary](#)

12130 S. Jersey Ave.
Norwalk, CA 90650

[Lakeview Elementary](#)

11500 Joslin St.
Santa Fe Springs, CA 90670

- B. Description of Improvements: The Work consists of replacement of wall packs, ceiling fixtures, and pole lamps at some sites with LED lighting fixtures. The work for pole lamps in parking lots and elsewhere on site will consist of replacing heads on existing poles with new LED lighting heads. The work can be done during and after school since it is exterior lighting only. This is a non-DSA project. SCOPE OF WORK. The lighting fixtures installed must be American-made. The lighting fixtures installed must meet the Proposition 39 requirements for efficiency, specifically that the lighting fixtures installed must be at least 1% more efficient than the lighting fixtures that are replaced.
- C.. Cash Allowance: The Contractor shall include in his bid a cash allowance in the amount of \$4,000.00, to be used to pay for extra work, if any, as directed and approved by the District. Any unused portions of the Cash Allowance remaining at the end of the project will be deducted from the final construction cost and credited back to Owner in the form of a Deductive Change Order (reducing the total Contract Price by that amount).
- D. Base Bid: The Project consists of one Base Bid.
1. Description of Base Bid:
 - a. Base Bid: This includes all work described in the project documents and specifications (complete) plus the Cash Allowance.

- E. Basis of Award: The method to determine the lowest bid will be the lowest total of the base bid.
- F. Tentative Project Schedule: The tentative project schedule is subject to change at the sole discretion of the Owner, and is as follows:
1. School Board Award of Construction Contract:
 2. Processing and submittal of bonds, agreements, etc.
 3. Notice to Proceed issued by the District (See section "H" below):
 4. Start of the on-site formal construction schedule:
 5. Completion of Construction:
- G. Phase 0 (Prior to formal start of construction): This is an advance phase of work that will occur prior to the construction contract calendar. This phase of work includes administrative items only. No physical on-site construction activities or mobilization will be permitted. This phase of work includes field verification and measuring. The time shall be used for field measuring, submittal of shop drawings, samples, requests for information (RFIs), etc., to facilitate smooth operation in subsequent construction phases. The time will be used to help procure construction materials, particularly those with long lead times (21 consecutive calendar days).
- H. Work Beyond the Project Schedule: If the project is not completed within the contract schedule, the District may terminate the Contract. At District's sole discretion as an alternative, they may allow (or require) the Contractor to continue working toward completion of the project while assessing liquidated damages. It is possible that the District could take beneficial occupancy of all, or part of the facility prior to Substantial Completion.
1. Hours of Work: All work may be required to take place after school hours and on weekends. Work on all days is governed by City ordinances. Work on school days may begin no earlier than 4:30 p.m., and will conclude by midnight the same day.
 2. No utility outages at any site (such as water, power or fire alarm system), may take place during school days. On weekends where utility interruptions are planned, the school and Architect must be given three days prior written notification describing the work taking place, which utilities will be interrupted and the duration of the interruption.
- I. Owner's Use of Site and Premises: Owner reserves the right to occupy and to place and install equipment in completed areas of buildings and site, prior to Substantial Completion, provided that such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
1. A Certificate will be executed for each specific portion of the Work to be used by Owner ("beneficial occupancy") prior to obtaining Certificate of Occupancy from authorities having jurisdiction.
 2. Prior to use of portions of the Work by Owner, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Unless otherwise agreed, Owner will provide operation and

maintenance of mechanical and electrical systems in portions of the building used by Owner.

- J. Contractor's Use of Site and Premises: Limit the use of the premises to construction activities, allow for Owner access.
1. Keep driveways and entrances clear at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize requirements for storage of materials.
 2. Keep all tools and building materials in places where they will not be accessible to unauthorized individuals or to vandals so as to not present a safety or security problem at the campus.
 3. Remove all debris, excess materials and demolished items from the site promptly so as not to cause safety or security problems.
- K. Contractors Staging and Storage Area: The District will designate construction staging area that may be used on a daily temporary basis for staging and preparation activities if needed, but will not accommodate overnight material storage,. The District will designate parking areas for construction and employee vehiclest.

If the area is utilized during the school day, the area must be completely fenced and secured with lockage access gates. Ingress and egress to the staging area shall be regulated for the safety of the students and site occupants. Contractors will not drive above the speed of five miles per hour on school grounds. If the site is occupied by students and staff (site is scheduled to have occupants moved to another location) in and out access may be limited to before and after school, and/or to periods when students are inside classroom spaces at the District's sole discretion. If the staging area provided is not adequate for site based activities, the contractor will make arrangements for additional off-site storage, staging and parking areas as part of the bid pricing.

At the completion of construction, the Contractor will demobilize and remove all fencing, temporary access drives and other temporary facilities.

The bid scope shall include full restoration of this area to its pre-construction condition, including turf repair with sod, plant replacement if needed and irrigation system repairs or replacement. Damaged A.C. paving shall be repaired to match existing paving thickness and base. Re-stripe and slurry contractor's storage and work area.

- L. Hazard Material Abatement: The Project does not include hazardous material abatement services.
- M. Security: The Contractor will be completely responsible for safety and security concerning its activities at the project site.
- N. The work also includes all removal of existing exterior light fixtures that are being replaced. Unless noted otherwise upon the removal of demolished items, the Contractor shall restore all surfaces, elements, walls, floors, ceilings and roofs which are left unfinished or with holed marks, gaps, etc. to match existing adjacent surfaces and including finished coatings, flashing, etc. as applicable. Any items to be demolished that are reusable or which have a salvage value shall be offered to the Owner to keep for warehousing and

use on other projects. Any such items that the Owner declines to accept/retain will be removed from the site by the Contractor immediately.

END OF SECTION

SECTION 01048

CONTRACTOR'S REQUESTS FOR INFORMATION

PART 1 - GENERAL

1.01 DESCRIPTION:

All other sections of Division 1 apply to this Section. This Section covers the general requirements for Contractor's Requests for Information and pertains to all portions of the contract documents.

A. Related work specified elsewhere:

1. Project meetings
2. Submittals
3. Substitutions

1.02 DEFINITION:

- A. Request for Information: A document submitted by the Contractor requesting clarification of a portion of the contract documents, hereinafter referred to as RFI.

1.03 CONTRACTOR'S REQUESTS FOR INFORMATION:

- A. When the Contractor is unable to determine from the contract documents, the exact material, process or system to be installed, the Architect shall be requested to make a clarification of the indeterminate item. Wherever possible, such clarification shall be requested at the next appropriate project meeting, with the response entered into the meeting minutes. When clarification at the meeting is not possible, either because of the urgency of the need or the complexity of the item, Contractor shall prepare and submit an RFI to the Architect.
- B. Contractor shall endeavor to keep the number of RFI's to a minimum. In the event that the process becomes unwieldy in the opinion of the Architect because of the number and frequency of RFI's submitted, the Architect may require the Contractor to abandon the process and submit all requests as either submittals, substitutions or requests for change.
- C. RFI's shall be submitted on a form provided by or approved by the Architect. Forms shall be completely filled in and if prepared by hand, shall be fully legible after copying by xerographic process. Each page of attachments to RFI's shall bear the RFI number in the lower right corner.
- D. RFI's from subcontractors or material suppliers shall be submitted through, reviewed by, and signed by the Contractor prior to submittal to the Architect.

- E. Contractor shall carefully study the contract documents to assure that the requested information is not available therein. RFI's which request information available in the contract documents will not be answered by the Architect.
- F. In all cases where RFI's are issued to request clarification of coordination issues for example, pipe and duct routing, clearances, specific locations of work shown diagrammatically and similar items, the Contractor shall fully lay out a suggested solution using drawings or sketches drawn to scale, and submit same with the RFI. RFI's which fail to include a suggested solution will not be answered.
- G. RFI's shall not be used for the following purposes:
 - 1. To request approval of submittals.
 - 2. To request approval of substitutions.
 - 3. To request changes which entail additional cost or credit.
 - 4. To request different methods of performing work than those drawn and specified.
- H. In the event the Contractor believes that a clarification by the Architect result in additional cost, Contractor shall not proceed with the work indicated by the RFI until a change order is prepared and approved. Answered RFI's shall not be construed as approval to perform extra work.
- I. Unanswered RFI's will be returned with a stamp or notification: Not Reviewed.
- J. Contractor shall prepare and maintain a log of RFI's and at any time requested by the Architect, Contractor shall furnish copies of the log showing all outstanding RFI's. Contractor shall note all unanswered RFI's in the log.
- K. Contractor shall allow for 14 days review and response time for RFI's.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

SECTION 01060
REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers the general requirements for regulatory requirements pertaining to the work and is supplementary to all other regulatory requirements mentioned or referenced elsewhere in the contract documents.

1.02 REQUIREMENTS OF REGULATORY AGENCIES:

All pertaining statutes, ordinances, laws, rules, codes, regulations, standards and the lawful orders of all public authorities having jurisdiction of the work are hereby incorporated into these contract documents the same as if repeated in full herein and such are intended where any reference is made in either the singular or plural to code or building code unless otherwise specified including, without limitation, those in the list below. Contractor shall make available at the site such copies of the listed documents applicable to the work as the Architect or Owner may request including mentioned portions of the 2013 California Building Code.

- A. Comply with other statutes, ordinances, laws, regulations, rules, orders and codes specified in other Sections of the Specifications or bearing on the Work.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

SECTION 01092

SPECIFICATION ABBREVIATIONS

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers abbreviations for documents mentioned or referenced elsewhere in the contract documents, and language abbreviations used in the text of the Specifications. Abbreviations in drawings and specifications shall be interpreted according to recognized and well-known technical, industry or trade meanings.

1.02 ORGANIZATION NAME ABBREVIATIONS:

These abbreviations include but are not limited to the following:

AA	The Aluminum Association, Inc.
AABC	Associated Air Balance Council
AAIEE	American Institute of Electrical and Electronics Engineers
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Traffic Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AGA	American Gas Association
AGC	Associated General Contractors
AHA	American Hardwood Association
AI	Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulating Materials Association
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
AMCA	Air Moving and Conditioning Association, Inc.
ANSI	American National Standards Institute
APA	APA – The Engineered Wood Association
ARI	Air Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineers
ASTM	ASTM International (formerly American Society for Testing and Materials)
ATBCB	Architectural & Transportation Barriers Compliance Board
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
CBM	Certified Ballast Manufacturers
CCR	California Code of Regulations
CFPA	Certified Forest Products Council
CFR	Code of Federal Regulations
CLFMI	Chain Link Fence Manufacturers Institute

CISPI	Cast-Iron Soil Pipe Institute
CRA	California Redwood Association
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard, US Department of Commerce
CSFM	California State Fire Marshal
CSI	Construction Specifications Institute
CTI	Cooling Tower Institute
CTIOA	Ceramic Tile Institute of America
DHI	Door and Hardware Institute
DOD	Department of Defense
DSA	Division of the State Architect, Office of Regulation Services
EIA	Electronic Industries Association
EPA	United States Environmental Protection Agency
ETL	Electrical Testing Laboratories
Fed Spec	Federal Specification or Standard
FIA	Factory Insurance Association
FM	Factory Mutual
FS	Federal Specifications
FSC	Forest Stewardship Council
GA	Gypsum Association
GANA	Glass Association of North America
HMMA	Hollow Metal Manufacturers Association
HPVA	Hardwood Plywood & Veneer Association
IAMPO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
IGMA	Insulating Glass Manufacturers Association
IPCEA	Insulated Power Cable Engineers Association
ISAT	International Seismic Application Technology
ISO	International Organization for Standardization
MFMA	Maple Flooring Manufacturers Association
MIA	Masonry Institute of America
MLMA	Metal Lath Manufacturers Association
MLSFA	Metal Lath/Steel Framing Association
NAAMM	National Association of Architectural Metal Manufacturers
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health

NIST	National Institute of Standards and Technology
NLMA	National Lumber Manufacturers Association
NPDES	National Pollutant Discharge Elimination System
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NSWMA	National Solid Wastes Management Association
NUSIG	National Uniform Seismic Installation Guidelines
PCA	Portland Cement Association
PDI	Plumbing and Drainage Institute
PEI	Porcelain Enamel Institute
PS	Product Standard, US Department of Commerce
RIS	Redwood Inspection Service
SAE	Society of Automotive Engineers
SCAQMD	South Coast Air Quality Management District
SDEI	Steel Deck Institute
SDI	Steel Door Institute
SFM	State Fire Marshal
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPR	Simplified Practice Recommendations, U.S. Dept. of Commerce
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute
TCA	Tile Council of America
UBC	Uniform Building Code
UBPPA	Uni-Bell PVC Pipe Association
UFAS	Uniform Federal Accessibility Standards
UL	Underwriters' Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WDMA	Window and Door Manufacturers Association (formerly National Wood Window and Door Association)
WI	Woodwork Institute (formerly Woodwork Institute of California)
WWPA	Western Wood Products Association

1.03 TEXT ABBEVIATIONS:

Text abbreviations include but are not limited to the following:

ac	Alternating current
amp	ampere
BTU	British thermal unit
cfh	Cubic feet per hour
cfm	Cubic feet per minute
cm	Centimeter
Co.	Company
COP	Coefficient of performance
Corp.	Corporation
d	Penny

db.	Decibel
DB	Dry bulb
dc	Direct current
EER	Energy efficiency ratio
F	Degrees Fahrenheit
fpm	Feet per minute
ft	Foot or feet
gph	Gallons per hour
gpm	Gallons per minute
HP	Horsepower
HVAC	Heating, ventilating and air conditioning
Hz	Hertz
Inc.	Incorporated
KHz	Kilohertz
Kip	thousand pounds
Ksf	Thousand pounds per square foot
Ksi	Thousand pounds per square inch
Kv	Kilovolt
KVA	Kilovolt amperes
KW	Kilowatt
KWH	Kilowatt hour
LF	Linear foot
MPH	Miles per hour
lb	Pound
LED	Light emitting diode
MBH	1000 BTUs per hour
MHz	Mega hertz
mil	Thousandth of an inch
mm	Millimeter
mph	Miles per hour
oz.	Ounce
PCF	Pounds per cubic foot
pH	Acidity-alkalinity balance
psf	Pounds per square foot
psi	Pounds per square inch
psig	Pounds per square inch, gage
RF	Radio frequency
rpm	Revolutions per minute
SF	Square foot
SY	Square yard
V	Volt
WB	Wet bulb

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

SECTION 01094

DEFINITIONS

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers definitions supplementary to those given in the Conditions of the contract.

1.02 DEFINITIONS:

- A. District or Owner: The term "District" or "Owner" refers to LITTLE LAKE CITY SCHOOL DISTRICT, 10515 S. Pioneer Blvd., Santa Fe Springs, CA 90670, or their authorized representative. The terms are used interchangeably.
- B. Architect: There is no Architect on this project. If used, the term "Architect" shall be understood to refer to the District.
- C. References to Drawings: Words such as "shown", "indicated", "detailed", "scheduled", "noted", and words of similar meaning shall mean that reference is made to the information on the drawings unless stated otherwise.
- D. Actions of Architect: Such words as "directed", "designated", "selected", and words of similar meaning shall mean the direction, designation, selection, or similar action of the Architect is intended unless stated otherwise.
- E. Required: The word "required" and words of similar meaning shall mean "as required to complete the Work" and "required by the Architect", as is applicable to the context of the place where used, unless stated otherwise.
- F. Perform: The word "perform" shall mean that Contractor, at Contractor's expense, shall perform all the operations necessary to complete the Work or the mentioned portions of the Work, including furnishing and installing materials as are indicated, specified or required to complete such performance.
- G. Provide: The word "provide" shall mean that Contractor, at Contractor's expense, shall furnish and install the Work and mentioned portion of the Work, complete in place and ready for the intended use. These definitions apply the same to future, present and past tenses except "provided" may mean "contingent upon" where such is the context.
- H. Equal: Words such as "equal", "approved equal", "equivalent", and terms of similar meaning shall be understood to be followed by the phrase "in opinion of the Architect" unless stated otherwise.
- I. Approval: The words "approved", "approval", "acceptable", "acceptance" and other words of similar meaning shall mean that approval or acceptance of Architect, or similar meaning, is intended unless stated otherwise.

- J. Review: The word “review” and words of similar meaning shall mean the review and observation of the Architect is intended unless stated otherwise.
- K. Submit: The words “submit”, “submittal”, “submission”, and other terms of similar meaning shall include the meaning of the phrase “submit to the Architect for approval” unless otherwise stated.
- L. Expense: Such phrases as “at Contractor’s expense”, “at no extra cost to Owner”, “at no additional contract cost”, “with no extra compensation to Contractor”, or phrases of similar meaning shall mean that Contractor shall perform or provide the operation of work without increase in the contract price.
- M. Fees and Charges: District reimburses contractor for utility fees charged by jurisdictional agencies. DSA fees are paid by District. Contractor is required to pay for all licenses and similar requirements that he must have in effect in order for him to accomplish his work.
- N. Language: Specifications are written in a modified brief style consistent with clarity. Words and phrases requiring an action or performance, such as “perform”, “provide”, “erect”, “install”, “furnish”, “connect”, “test”, “coordinate”, and words and phrases of similar meaning, shall be understood to be preceded by the phrase “The Contractor shall” unless otherwise stated. Requirements indicated and specified apply to all work of the same kind, class and type, even if the word “all” is not stated. The use of the singular number implies the plural, if more than one of an item or unit is required; likewise the use of the plural number implies the singular, if only one of an item or unit is required.
- O. Titling and Arrangement: Article, paragraph and subparagraph titles and other identifications of subject matter in the specifications are intended as an aid in locating and recognizing the various requirements in the specifications. Except where the titling forms a part of the text, such as beginning words of a sentence or where the title establishes the subject, the titles are subordinate to and do not define, limit or restrict the specification text. Underlining or capitalizing of any words in the text does not signify or mean that such words convey special or unique meanings having precedence over any other part of the contract documents. Specification text shall govern over titling and shall be understood to be and interpreted as a whole. The listings of various parts of work to be included or not included under various sections of the specifications are for convenience only and do not control the Contractor in dividing the work among the subcontractors or establish the extent of the work to be performed or provided by any subcontractor or trade. Contractor is solely responsible for providing the complete work without respect to where or how the various parts of the work may be indicated or specified. The sequence of articles, paragraphs, subparagraphs and subsubparagraphs in the specifications text is defined by the sequence 1.01A.1.a.(1)(a).

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

SECTION 01150
ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.01 DESCRIPTION:

All other sections of Division 1 apply to this Section, and the requirements of this Section apply to all sections where the work involves the protection of the environment. During the progress of the work, the Contractor shall protect the environment, both on-site and off-site, throughout and upon completion of the construction project.

A. Related work specified in other sections:

1. Cleaning.
2. Field engineering.

1.02 MITIGATION OF CONSTRUCTION IMPACTS:

A. Requirements: The Contractor's operations shall comply with all federal, state and local regulations pertaining to water, air, solid waste and noise pollution.

B. Definitions of Contaminants:

1. Sediment: Soil and other debris that has been eroded and transported by storm or well production runoff water.
2. Solid Waste: Rubbish, debris, garbage, vegetation and other discarded solid materials resulting from construction activities.
3. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalies, herbicides, pesticides, organic chemicals and inorganic wastes.
4. Sanitary Wastes:
 - a. Sewage: That which is considered as domestic sanitary sewage.
 - b. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing and consumption of food.

C. Contractor is to protect existing water system during construction from contamination. Water is to be tested as required for purity during construction. It is the Contractor's responsibility to provide a testing policy for the full duration of the project.

1.03 PROTECTION OF NATURAL RESOURCES:

A. General: It is intended that the natural resources within the project boundaries and outside the limits of permanent work performed under this Contract be preserved in their

existing condition or be restored to an equivalent or improved condition upon completion of the work. The Contractor shall confine the construction activities to areas defined by the public roads, easements and work area limits shown on the drawings.

- B. Temporary Construction: Remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction as directed by the Architect. Level all temporary roads, parking areas and any other areas that have become compacted or shaped. Any unpaved areas where vehicles are operated shall receive a suitable surface treatment or shall be periodically wetted down to prevent construction operations from producing dust damage and nuisance to persons and property, at no additional cost to the Owner. Keep haul roads clear at all times of any object which creates an unsafe condition. Promptly remove any contaminants or construction materials dropped from construction vehicles. Do not drop mud and debris from construction equipment on public streets. Sweep clean turning areas and pavement entrances as necessary.
- C. Land Resources: Do not remove, cut, deface, injure or destroy trees or shrubs outside the work area limits. Do not remove deface, injure or destroy trees within the work area without permission from the Architect. Such improvements shall be removed and replaced, if required, by the Contractor at his own expense.
 - 1. Protection: Protect trees that are located near the limits of the Contractor's work areas which may possibly be defaced, bruised or injured or otherwise damaged by the Contractor's operations. No ropes, cables or guys shall be fastened to or be attached to any existing nearby trees or shrubs for anchorages. No vehicles or equipment shall be parked within the extents of the canopy of any tree.
 - 2. Repair or Restoration: Repair or replace any trees or other landscape feature scarred or damaged by equipment or construction operations as specified below. The repair and/or restoration plan shall be reviewed and approved by the Architect prior to its initiation.
- D. Water Resources: Contractor shall investigate and comply with all applicable Federal, state and local regulations concerning the discharge (direct or indirect) of pollutants to the underground and natural waters. All work under this contract shall be performed in such a manner that any adverse environmental impacts are reduced to a level that is acceptable to the Owner and regulatory agencies.
 - 1. Oily substances: At all times, special measures shall be taken to prevent oily or other hazardous substances from entering the ground, drainage areas or local bodies of water in such quantities as to affect normal use, aesthetics or produce a measurable ecological impact on the area.
 - 2. Mosquito Abatement: Construction activities shall be conducted such that ponding of stagnant water conducive to mosquito breeding habitat will not occur at any time.
- E. Dust Control, Air Pollution and Odor Control: Take measures to avoid the creation of dust, air pollution and odors.

1. Unpaved areas where vehicles are operated shall be periodically wetted down or given an equivalent form of treatment to eliminate dust formation.
2. All volatile liquids, including fuels or solvents, shall be stored in closed containers.
3. No open burning of debris, lumber or other scrap will be permitted.
4. Equipment shall be properly maintained or reduce gaseous pollutant emissions.

1.04 NOISE CONTROL:

Perform demolition and construction operations to minimize noise. Perform noise producing work in less sensitive hours of the day or week as directed by the Architect.

- A. Repetitive, high level impact noise will be permitted only between the hours of 8:00 AM and 6:00 PM, Monday through Friday. Repetitive impact noise on the property shall not exceed the following limitations:

Sound level (dB)	Duration of impact noise
70	12 minutes per hour
80	3 minutes per hour

- B. Provide equipment, sound-deadening devices and take noise abatement measures that are necessary to comply with these requirements.
- C. Maximum permissible construction equipment noise levels at 50 feet:
- | | |
|--------|--|
| 80 dB: | Scrapers, stationary pavers, rock drills, pneumatic tools. |
| 75 dB: | All other construction equipment. |
- D. Whenever work is being performed which exceeds 55 dB noise level, measure the sound level every 5 days to determine noise exposure to the construction. Use the A weighing network of a general purpose sound level meter at slow response. Take measurements not less than six feet in front of building faces. Submit records to Architect.

1.05 CONSTRUCTION STORAGE AREAS:

Storage of construction equipment and materials shall be limited to designated work areas. Store and service equipment at the designated areas where oil wastes shall be collected. Oily wastes shall not be allowed to flow on to the ground or to enter surface waters.

1.06 DISPOSAL OPERATIONS:

- A. Solid Waste Management: Supply storage containers. Remove daily all debris, such as spent air filters, oil cartridges, cans, bottles, combustibles and litter. Convey contents only to a favorably reviewed sanitary landfill. Care shall be taken to prevent papers from blowing onto adjacent property. Personnel shall be encouraged to use refuse containers.

- B. Chemical Waste Management: Supply containers to store spent chemicals used during construction operations. Chemicals shall be disposed of in a favorably reviewed sanitary landfill.
- C. Garbage: Garbage shall be stored in covered containers, picked up daily and disposed of a favorably reviewed sanitary landfill.

1.07 PRESERVATION OF MONUMENTS AND EXISTING FEATURES:

All monuments, bench marks or property line stakes disturbed by construction operations shall be promptly re-established by a registered land surveyor or civil engineer.

1.08 SAFETY:

Comply with all rules and regulations of NIOSH, CAL/OSHA and local authorities concerning jobsite safety.

1.09 EXISTING UTILITIES:

The Contractor shall coordinate construction activities with the government agencies, land owners and utility companies, and operations shall be planned to allow access to all property and utility owners.

1.10 PROTECTION OF WORK:

The Contractor shall be responsible for the care of all work until its completion and final acceptance. Replace damaged or lost material and repair damaged parts of the work at no additional contract cost.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

SECTION 01200
PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers the general requirements for the project meetings.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION

3.01 PROJECT MEETINGS:

- A. Attendees: Unless otherwise specified or required by the District, meetings shall be attended by the District, Architect, Contractor, Contractor's Superintendent and the Inspector of Record. Subcontractors may attend the meetings when involved in matters to be discussed or resolved but only when requested by the District, Architect or Contractor.
- B. Meeting Records: The Architect will record minutes of each meeting and furnish copies within a reasonable time thereafter to the District, Contractor, Inspector of Record and other attendees. Unless written objection to contents of the meeting minutes is received by Contractor within 3 days after presentation, it shall be understood and agreed that the minutes are a true and complete record of the meeting.
- C. Meeting Schedule: Dates, times and locations for various meetings shall be agreed upon and recorded at pre-construction meeting. Thereafter, changes to the meeting schedule shall be agreed between the District and the Contractor, with appropriate written notice to all parties involved.

3.02 PRE-CONSTRUCTION MEETING:

- A. General: Before issuance of Notice to Proceed, a pre-construction meeting shall be held at the location, date and time designated by District. In addition to attendees named herein, this meeting shall be attended by representatives of the regulatory agencies having jurisdiction, if required, and such other persons the District may designate.
- B. Agenda: The matters to be discussed or resolved and the instructions and information to be furnished to or given by the Contractor at the preconstruction conference include:
 - 1. Schedule of progress meetings.
 - 2. Progress schedule and schedule of values submitted by Contractor.
 - 3. Communication procedures between the parties.
 - 4. Names and titles of all persons authorized by Contractor to represent and execute documents for Contractor, with samples of all authorized signatures.

5. The names, addresses and telephone numbers of all those authorized to act for the Contractor in emergencies.
6. Construction permit requirements, procedures and posting.
7. Public notice of starting Work.
8. Forms and procedures for Contractor's submittals.
9. Change Order forms and procedures.
10. Payment application forms and procedures and revised progress schedule reports to accompany the applications.
11. Contractor's designation of his organization's accident prevention member and his qualifications if other than the Superintendent.
12. Contractor's provisions for barricades, traffic control, utilities, sanitary facilities and other temporary facilities and controls.
13. Consultants and professionals employed by District and their duties.
14. Construction surveyor and initiation of surveying services.
15. Testing Laboratory or Agency and testing procedures.
16. Procedures for payroll and labor cost reporting by the Contractor.
17. Procedures to ensure nondiscrimination in employment.
18. Warranties and guarantees.
19. Long lead item status.
20. Other administrative and general matters as needed.

3.03 CONSTRUCTION PROGRESS MEETINGS:

Progress meetings shall be held according to the agreed schedule. All matters bearing on progress and performance of the Work since preceding progress meeting shall be discussed and resolved including, without limitation, any previously unresolved matters, deficiencies in the work or methods being employed for the work and problems, difficulties or delays which may be encountered.

3.04 PROGRESS MEETINGS:

Conduct progress meetings at the project site at regularly scheduled intervals. Notify the District and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

- A. Attendees: In addition to representatives of the District and Architect each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by personnel familiar with the project and authorized to conclude matters relating to progress.
- B. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the project.
- C. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's construction schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities

will be completed within the contract time. Provide a 2 week "look ahead" schedule at each construction progress meeting.

- D. Review the present and future needs of each entity present, including such items as interface requirements, time, sequences, deliveries, off-site fabrication problems, access, site utilization, temporary facilities and services, hours of work, hazards and risks, housekeeping, quality and work standards, change orders, documentation of information for payment requests.
- E. Reporting: No later than 5 days after each progress meeting date, distribute copies of minutes of the meeting to each party present and to other parties who should have been present. Include a brief summary of progress since the previous meeting and report.
- F. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

3.05 SPECIAL MEETINGS:

After notice to other parties, special meetings may be called by the District, Architect or Contractor. Special meetings shall be held where and when designated by the District. Other special meetings, such as the pre-roofing conference, shall be conducted as specified in the various sections of the specifications.

3.06 POST-CONSTRUCTION MEETING:

This meeting shall be held prior to the final inspection of the work to discuss and resolve all unsettled matters. Bonds and insurance to remain in force and the other documents required to be submitted by the Contractor will be reviewed and any deficiencies determined. Schedule and procedures for the final inspection and for final correction of defects and deficiencies shall be agreed.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION:

All other Sections of Division 1 apply to this Section. Provide shop drawings, product data, samples and certificates, complete. Refer also to Articles 23 and 31 of the General Conditions.

- A. Submit for approval of Architect shop drawings, product data and samples required by specification sections.
- B. Prepare and submit, with construction schedule, a separate schedule listing dates for submission and dates reviewed shop drawings, product data and samples will be needed for each product.
- C. Requests for substitutions of materials or processes shall not be submitted as part of the submittal process specified herein. All requests for substitutions shall be separately submitted.

1.02 SHOP DRAWINGS:

- A. The requirements of the article on shop drawings in the General Conditions of the contract shall include the following additional requirements.
 - 1. Transmittals: Submittal of shop drawings to the Architect shall be made by the Contractor with a dated transmittal form or letter; (not by sub-contractor or suppliers) at least 15 days before dates reviewed submittals will be needed.
 - 2. Reproducible and Method of Review: With initial submittal of two copies, include a reproducible of the shop drawings. Comments will be noted on the reproducible and returned to the Contractor, who shall revise the original and resubmit in the same manner. When approved, the reproducible will be stamped and returned to the Contractor, who shall make distribution of copies as specified hereinafter.
 - 3. Information Copy: For each submittal and resubmittal, deliver one copy of shop drawings and a copy of the letter of transmittal therefore to the District for information, at same time as Architect's copy.
 - 4. Number of Copies: 6 minimum, and not less than the following:
 - a. Initial Submittal: Reproducible and 3 copies to the Architect, one copy to the District, one copy to the Inspector of Record.
 - b. Resubmittals: Reproducible of revised original and 3 copies to the Architect; one copy to the District.
 - c. Final Distribution: Two copies to the Architect, two copies to the District and copies to those concerned.
- B. Additional Requirements for Shop Drawings and Schedules:
 - 1. Drawings and schedules shall be identified by serial numbers and descriptive titles indicating their reference to specific portions of Contract drawings and specifications, and shall be

- dated and signed. A box shall be provided at the lower right corner above the title block, for the Architect's use. Drawings not dated, signed, certified, and/or completed by the Contractor will be returned unchecked.
2. When the Contractor's drawings indicate deviations or changes from the Contract drawings and specifications that may be acceptable, the Contractor shall clearly indicate in his drawings all other changes required to correlate the work, and shall state in writing, his assumption of the costs of all other related changes.
 3. Drawings and schedules shall be certified and stamped by the Contractor that they have been checked by him and conform to the Contract requirements.
 4. Drawings shall be complete in every respect, and shall contain the following:
 - a. Details of fabrication, assembly, erection and connection.
 - b. Materials used, including fasteners and attachments.
 - c. All required dimensions, including variations between dimensions shown on the Contract drawings and actual conditions.
 - d. Complete schedules, as applicable.
 - e. All protective coatings and factory finishes, fully described as to materials, number of coats, plated finishes, treatments, and similar information.
 5. No changes are to be made to resubmitted drawings and schedules in excess of those corrections noted by the Architect unless the resubmitted drawings are accompanied by a separate written notice from the Contractor precisely setting forth such additional changes and stating his assumption of costs as specified for deviations; and/or such changes as are approved by the Architect.

1.03 PRODUCT DATA:

- A. A bound list of products to be used in the work shall be submitted according to the following procedure:
 1. Within 35 days after agreement between District and Contractor is executed, submit bound copies, 2 copies to the Architect and 1 copy to the District.
 2. The Architect will notify the Contractor in writing of any disapproved items. Within 15 days after receipt of such notice, the Contractor shall submit proposed substitutions for disapproved items, number of copies, and distribution of the same as initial submittal for each resubmittal until approval is obtained for proposed substitutions. Resubmittals need not be bound, but the transmittal shall identify each disapproved item and the proposed substitute therefore. The Architect will notify the Contractor in writing of approved substitutions.
 3. Within 15 days after receipt of notice of approval, the Contractor shall submit corrected bound copies, 2 copies to the Architect, 2 copies to the District, and copies to others concerned.
 4. In determination of acceptability, the Architect will consider the ready availability of maintenance and replacement parts and materials, the availability of manufacturer's technical representatives, and such other factors that relate to the maintenance and repair of installed items without excessive inconvenience to the District, as well as determination of conformance with the Contract Documents.

5. The Contractor shall provide those items included in the approved lists, without deviation, unless subsequently revised by change order procedure.

B. The items shall be submitted in the following manner:

1. Manufacturer's Standard Schematic Drawings:

- a. Modify drawings to delete information which is not applicable to project.
- b. Supplement standard information to provide additional information applicable to project.

2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data.

- a. Clearly mark each copy to identify pertinent materials, products, or models.
- b. Show dimensions and clearances required.
- c. Show performance characteristics and capacities.
- d. Show wiring diagrams and controls.

3. All items shall be neatly bound in a loose-leaf binder with a proper project identification label and a table of contents.

1.04 SAMPLES:

A. Submittal of samples, where specified or directed, shall be made by the Contractor with a dated transmittal form or letter, and not by subcontractor or suppliers. Samples of manufactured or process materials and equipment will be submitted within 15 days after receipt of approved material list. Samples of field-applied Paint materials and colors shall be submitted not less than 30 days prior to start of field painting work. Unless otherwise specified, samples shall be submitted in triplicate; two to the Architect and one to the District, with copy of letter of transmittal.

1. Label or tag each sample or set of samples identifying the manufacturer's name and address, brand name, catalog number, project title, and intended use.
2. For items required to be of selected and approved colors, patterns, textures or other finish sufficient samples to show the range of shades, tones, values, patterns, texture, or other features corresponding to the instructions, shall be submitted. Submit color samples of field-applied paint materials as specified for painting work.
3. Selection of colors will not be made until all related items requiring selection have been submitted.

1.05 CERTIFICATES:

A. Professional Certification: Where calculations or certification of performance criteria of materials, systems or equipment is required by the contract documents, the Architect and District shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

B. Certificates Required of Contractor: Where certificates are required attesting to compliance with regulations, compliance with standards or with the specifications, or for other reasons as specified, they shall be provided in 4 copies. Certificates required as part of the shop drawing or

substitution approval processes shall be submitted with the shop drawings or request for substitution as applicable. All other certificates shall be submitted no later than the date of final acceptance.

- C. All copies of certificates shall bear original signatures of appropriate sub-contractor and material suppliers and the Contractor.
- D. Calculations and certifications shall be prepared under the direction of, and signed and sealed by, a professional engineer registered in the State of California, unless otherwise specifically permitted.

PART 2 – PRODUCTS Not applicable to this Section.

PART 3 – EXECUTION Not applicable to this Section.

END OF SECTION

SECTION 01380

CONSTRUCTION ELECTRONIC DIGITAL MEDIA

PART 1 - GENERAL

1.01 DESCRIPTION:

All other sections of Division 1 apply to this Section. Provide construction videos, complete.

1.02 SUBMITTALS:

- A. DVD: Submit upon completion of recording as specified hereafter.

1.03 QUALITY ASSURANCE:

- A. Video Camera Operator: Shall be a member of the Contractor's staff, such as the superintendent or one of his assistants. Video camera operator shall be able to demonstrate familiarity with the equipment and an understanding of the ongoing construction process, so that videos can be made of all significant operations.
- B. Associated Services: Cooperate with the video camera operator's work. Provide reasonable auxiliary services as requested, including access and use of temporary facilities including temporary lighting.

PART 2 – PRODUCTS

2.01 ELECTRONIC DIGITAL MEDIA FILES (DVD and or any other acceptable media):

- A. Maintain a video camera / smart phone, etc., on the project at all times.
- B. Identification: Label each DVD and the case with the following information:
 1. Name of the Project, Architect and Contractor,
 2. Date or dates the recording was taken,
 3. Name of the person taking the recording,
 4. Description: Vantage points, in terms of location, direction (by compass point) and elevation or phase of construction.

PART 3 – EXECUTION

3.01 PRE-CONSTRUCTION VIDEO DIGITAL MEDIA:

Before starting construction, take recording of the site and surrounding properties from different points of view as selected by the Architect. DVD shall contain views in sufficient number to show existing conditions adjacent to the property before starting Work. Take images of existing buildings either on or adjoining the property in sufficient detail to record accurately the physical conditions at the start of construction.

3.02 VIDEO DIGITAL MEDIA:

- A. One recording shall be taken each week in sufficient detail to show all major construction operations, and additional recording exposure shall be taken whenever significant construction operations occur. Length of DVD will vary, depending on the complexity and diversity of construction operations, but approximately 30 minutes per week will be required for ongoing construction operations.
- B. In addition, DVD records shall be made of all concealed underground utilities, prior to covering. Recording shall be taken of pipes roughed-in walls and above solid ceilings prior to covering. Recording shall be taken of typical concealed construction details in sufficient number to enable the Owner to determine approximate locations and configurations of concealed conditions.
- C. During construction, DVD's shall be recorded on a weekly basis and given to the Owner's inspector for verification following completion of the recording session.

END OF SECTION

SECTION 01400
TESTS AND INSPECTIONS

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers testing and inspection procedures.

A. Requirements not in this Section:

1. Specific test requirements are specified in each section where they occur.
2. Verification of conditions.
3. Tolerances nomenclature.

1.02 PAYMENT FOR TESTING:

A. District will employ and pay for services of an independent testing laboratory approved by DSA to perform specified inspection and testing, including required continuous inspection. Contractor shall reimburse the District for excessive inspection costs incurred by the District because of the following:

1. Contractor's failure to complete entire work within the contract time stated in Agreement, and any previously authorized extensions thereof.
2. Claims between separate contractors.
3. Covering of work before required inspections or tests are performed.
4. Extra inspections for Contractor's correction of defective work.
5. Overtime costs for acceleration of work for Contractor's convenience.

B. Contractor shall pay cost of the following:

1. Additional tests necessitated if materials fail to meet contract requirements.
2. Tests required by Architect to substantiate proposed substitutions.
3. Tests required to determine code compliance.
4. Costs of concrete mix designs.

1.03 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY:

A. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on the requirements of the contract documents.
2. Approve or accept portion of the work.
3. Perform any duties of the Contractor.
4. Stop work.

B. Work of the testing laboratory shall in no way limit Contractor's quality control procedures or relieve Contractor of his obligation to perform work in accordance with the contract documents.

1.04 ADDITIONAL TESTING:

- A. If the Architect determines that any work requires additional inspection, testing or approval, District will direct the Contractor to order such special inspection, testing or approval.
- B. If special inspection, testing or approval reveals a failure of the work to comply with the contract documents, the Contractor shall reimburse the District for the costs, including additional services made necessary by such failure.
- C. If special inspection, testing or approval indicates that the work complies with the contract documents, the District will bear the costs.

1.05 GENERAL QUALITY CONTROL REQUIREMENTS:

- A. General Test Requirements: Materials to be furnished under the Contract are subject to testing and inspection for compliance with the requirements of drawings and inspections.
- B. Testing laboratory: The licensed testing laboratory certified as meeting requirements of ASTM D3666, D3740, E329, E543 and E548, as applicable to work involved and approved by District, referred to hereafter as the testing laboratory. Perform testing under the supervision and control of a California registered professional engineer employed by testing laboratory.
- C. Disqualified Material: Material shipped or delivered to the site by Contractor from the source of supply prior to having satisfactorily passed the required testing and inspection, or prior to the receipt of a notice from the Architect that such testing and inspection will not be required, shall not be incorporated in the work.
- D. Notification of Field Tests: Architect and District reserve the right to be present at field testing as required by the contract documents. Contractor shall notify the Architect not less than 24 hours in advance of field testing.
- E. Disqualified Work: Work in place which fails to conform to test requirements shall be removed and replaced without cost to the District. Where feasible, and subject to the approval of the Architect, disqualified work may be repaired, strengthened or otherwise modified to bring it into conformance with test requirements.

1.06 TEST PROCEDURES:

- A. Materials to be furnished under the Contract shall be subject to testing for compliance with the contract documents. Tests will be made in accordance with the applicable standard methods of the ASTM, AASHTO or procedure herein specified.
- B. Materials so specified herein, including such others as the Architect may direct, shall be tested. The Contractor shall furnish samples of the materials prepared for tests as required to the testing laboratory providing adequate time for testing before need at the project. The materials represented by samples under tests shall not be incorporated in the work without the approval of the Architect.

- C. Test Procedures: Testing laboratory shall perform tests according to ASTM or other methods of test specified for various materials in other sections. If no procedure or test method is specified, testing shall conform to the material specification referenced except as otherwise directed. Testing laboratory shall tag, seal, label, record or otherwise adequately identify materials for testing and no such materials, shall be used or installed in the work until test result reports are submitted and approved, excepting only those materials specified to be placed or installed prior to testing.
- D. Test Repeating: Repeat applicable tests at specified intervals, whenever source of supply is changed, or whenever the characteristics of materials change or vary in the opinion of District or Architect.

1.07 COORDINATION AND COOPERATION:

The Contractor shall initiate and coordinate testing and inspections required by the contract documents and public authorities having jurisdiction of the work. Notify the testing laboratory sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but not limited to:

- A. Providing access to the work and furnishing incidental labor and facilities necessary for inspections and tests.
- B. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
- C. Providing facilities for storage and curing of test samples and delivery of samples to testing laboratories.
- D. Providing testing laboratory with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
- E. Security and protection of samples and test equipment at the project site.
- D. Furnish copies of mill test reports.

1.08 TEST REPORTS:

- A. Reports shall be provided of tests. Such reports shall include tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations as required shall also be reported. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of CBC and with the approved specifications. Test reports shall show the specified design strength. They shall also state definitely whether or not the material or materials tested comply with requirements.
- B. Furnish and deliver copies of each test report, signed and certified by the testing laboratory professional engineer, as follows:

No. of Copies:

1	District
1	Architect
1	Structural Engineer (structural tests only)
2	Contractor
1	DSA
1	DSA Inspector or Record

- C. Promptly notify the Architect of observed irregularities or deficiencies in the work or in products to be used in the work.
- D. Each report shall include:
1. Date issued.
 2. Project title and number.
 3. Testing laboratory name, address and telephone number.
 4. Name and signature of laboratory inspector.
 5. Date and time of sampling or inspection.
 6. Record of temperature and weather conditions.
 7. Date of test.
 8. Identification of product and specification section.
 9. Location of sample or test in the project.
 10. Type of inspection or test.
 11. Results of tests and compliance with contract documents.
 12. Interpretation of test results, when requested.
 13. DSA application number.

1.09 VERIFICATION OF TEST REPORTS:

Each testing agency shall submit to DSA a verified report in duplicate covering the tests which are required to be made by that agency during the progress of the project. Such report shall be furnished each time that work on the project is suspended, covering the tests up to that time, and at the completion of the project, covering the tests.

1.10 REPORTING TEST FAILURES:

Immediately upon determination of a test failure, the laboratory will telephone the results of the test to the Architect. On the same day, the laboratory will send written test results to those named on the above distribution list.

1.11 AVAILABILITY OF SAMPLES:

- A. Contractor shall make materials available to the laboratory and assist in acquiring these materials as directed by the District's Inspector. The samples shall be taken under the immediate direction and supervision of the testing laboratory or inspector.
- B. If work which is required to be tested or inspected is covered up without prior notice or approval, such work may be uncovered at the discretion of the Architect at no additional cost to the District.

- C. Unless otherwise specified, the Contractor shall notify the testing laboratory a minimum to 10 working days in advance of required tests and a minimum of 2 working days in advance of required inspections. Extra laboratory expenses resulting from a failure to notify the laboratory will be paid by the District and reimbursed by the Contractor.
- D. The Contractor shall give sufficient advance notice to the testing laboratory in the event of cancellation or time extension of a scheduled test or inspection. Charges due to insufficient advance notice of cancellations or time extension will be paid for by the District and reimbursed by the Contractor.

1.12 REMOVAL OF MATERIALS:

Unless otherwise directed, materials not conforming to the requirements of the contract documents shall be promptly removed from the site.

1.13 DISTRICT'S INSPECTOR:

- A. The District will furnish inspection of the work at not cost to the Contractor except as otherwise provided herein and except for those inspections required to be furnished and paid for by the Contractor elsewhere in the contract documents. Perform and construct work under inspection of the District's Inspector unless waived in writing by the District in each case or exempted wholly or in part from inspection elsewhere in the contract documents. Any work requiring such inspection that is performed or constructed during the absence of the District's Inspector is considered defective and is subject to rejection. The Contractor shall give written notice to District at least 2 working days in advance of performance of any part of the work requiring special inspection by someone other than District's Inspector and shall state probable duration of the required special inspection.
- B. The inspection of any material or equipment at the factory or shop will not constitute an acceptance. The District's Inspector will advise the District to suspend any part or all of the work, by notice to the Contractor confirmed in writing, whenever a question arises as to whether materials or equipment being installed or the methods or workmanship being employed comply with the contract documents until such question is decided upon by District.
- C. The District's Inspector is not authorized to accept or reject any work, to modify any contract document requirement, to advise or instruct Contractor or his employees as to prosecution of the work, or to perform any duty or service for the Contractor. Inspection of the work will not relieve the Contractor of the obligation to fulfill requirements of the contract documents.

1.14 INSPECTOR – DISTRICT'S:

- A. An inspector employed by the District in accordance with the requirements of 2001 CBC will be assigned to the work. His duties are specifically defined in 2001 CBC.
- B. The work of construction shall be subject to the personal continuous observation of the Inspector. He shall have free access to any or all parts of the work at any time. The Contractor shall furnish the Inspector reasonable facilities for obtaining such information

as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the Contractor from any obligation to fulfill this Contract.

1.15 INSPECTOR – DISTRICT – FIELD OFFICE: NOT APPLICABLE

The Contractor shall provide for the use of the District's Inspector a temporary office to be located as directed by the Inspector and to be maintained until removal is authorized by the District. This office shall be of substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. The door shall have a lock. A table satisfactory for the study of plans and two chairs shall be provided by the Contractor. The Contractor shall provide and pay for adequate electric lights, private local telephone service with a loud exterior bell and separate line for a Contractor-provided FAX machine, and adequate heat and air conditioning for this field office until the completion of the Contract.

1.16 CONTINUOUS INSPECTIONS

- A. Inspections: Continuous inspections shall be performed by registered special inspectors (hereinafter referred to as inspector) as required by the contract documents and building code. During course of work under inspection, inspector shall submit detailed reports relative to the progress and condition of work including variances from contract documents and stipulating dates, hours and locations of the inspections.

PART 2 – PRODUCTS – Not applicable.

PART 3 – EXECUTION – Not applicable.

END OF SECTION

SECTION 01410

QUALITY ASSURANCE/QUALITY CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION:

The requirements of this Section apply to, and are a component part of each section, of the specifications.

1.02 DEFINITIONS:

- A. Quality Control: Activities performed by the Contractor to assure compliance with the contract documents.
- B. Quality Assurance: Activities performed by the Owner, the Architect, or persons or firms employed and paid by them to assure compliance with the contract documents.

1.03 SUBMITTALS:

The following shall be submitted in accordance with Section 01300, in sufficient detail to show full compliance with the specification:

- A. Certificates: Submit qualifications of Contractor's Quality Control Representative and required special certifications.
- B. Contractor's Quality Control Plan: Describe the Contractor's Quality Control (QC) plan and procedures that will be implemented to meet the project quality requirements of the specifications. The system shall address:
 - 1. Management and organization.
 - 2. Identification and data retrieval.
 - 3. Procurement and subcontract.
 - 4. Quality control.
 - 5. Nonconformance control.
 - 6. Drawings and change control.
 - 7. Control of field services.
 - 8. Quality records.
 - 9. Handling and storage.
- C. Records: Records shall include all quality control data; factory tests of manufacturer's certifications, quality control coordinating actions, quality training/certifications, concrete pour records and records of inspections and tests.

1.04 QUALITY CONTROL PLAN:

The Contractor shall establish a quality control plan which shall include procedures to assure that the construction, and all components thereof, conform to the contract documents. The

Contractor shall assign competent personnel as Contractor Quality Control Representative (CQCR) to provide the inspection and direction to ensure the implementation of the Contractor's quality control plan.

- A. The Contractor's quality system shall encompass management and supervisory actions required to ensure the quality of the completed construction work.
- B. The CQCR shall report to the Contractor's management and shall have the necessary authority to discharge contractual responsibilities.
- C. Contractor shall be responsible for ensuring that the activities and work of its suppliers and subcontractors meet contractual quality requirements.
- D. The Contractor shall be responsible for controlling procurement and subcontracts to ensure that the quality requirements of the project are properly specified. The CQCR shall maintain a site receiving inspection system that ensures procured materials and equipment are inspected and tested. Records of site receiving inspection shall be maintained by the Contractor and made available to the Architect for review. Records shall show the results of inspections and tests, including defects, discrepancies and waivers.
- E. Quality Control Records shall be maintained at the site. Maintenance of quality records shall not relieve the Contractor from submitting samples, test data, detail drawings, material certificates, or other information required by each section in the specification. Contractor shall ensure that each record is identified and traceable to specific requirements in the specification and drawings.
- F. Nonconformance Control: Control nonconformances discovered by the CQCR, the Contractor, Subcontractors or Owner's quality representatives to prevent their use and to correct deficient operations. Monitor and correct deficient operations.
- G. Quality Audits: The Architect may verify the Contractor's implementation of the Quality Control plan at any time during the performance of the work.
- H. Contractor Responsibilities: The Contractor shall be responsible for:
 - 1. Maintaining a site receiving inspection system that ensures procured materials and equipment are inspected and tested;
 - 2. Ensuring that any nonconformance identified is documented and controlled;
 - 3. Notifying the Architect of the completion of work or activities identified in the QA/QC Plan as hold or witness points;
 - 4. Maintaining the calibration of measuring and test equipment used for the performance of the work within the required accuracy;
 - 5. Maintaining results of any inspection and tests performed by the Contractor and making them available to the Architect for review;

6. Generating monthly summary report of all quality system activities, including inspections and tests, nonconformances, discrepancies and corrective action taken; and
7. Maintaining quality records.

1.05 QUALITY ASSURANCE:

- A. The owner will provide testing and inspection as the Owner may required to assure that the construction, and the Contractor's quality control efforts are sufficient to protect the interests of the Owner under the contract. In addition, as described in Section 01400, the Owner will provide for testing laboratory services to perform tests as required by the specifications.
- B. Inspections and tests performed by or for the Owner are for the sole benefit of the Owner and do not:
 1. Relieve the Contractor the responsibility for providing adequate quality control measures;
 2. Relieve the Contractor of responsibility for damage to or loss of the material before acceptance;
 3. Constitute or imply acceptance; or
 4. Affect the continuing right of the Owner after acceptance of the completed work under paragraph I below.
- C. The Architect has the right to observe and evaluate the work performed or being performed under the contract, and the premises where the work is being performed, at all reasonable times and in a manner that will not unduly delay the work. If the Architect performs observation or evaluation on the premises of the Contractor or a subcontractor, Contractor shall furnish and shall require subcontractors to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

1.06 VERIFICATION OF CONDITIONS:

Prior to installing any portion of the work, inspect the work in place to receive the work to be installed and arrange for correction of defects in the existing workmanship, material or conditions that may adversely affect work to be installed. Such inspections shall include test applications of the materials to be installed as required to establish the correct condition of surfaces involved. Installation of materials on work in place constitutes acceptance of such work in place as being in proper condition to receive the materials to be applied and waiver of claim that the work in place is defective as pertains to warranty requirements, excluding unascertainable or concealed conditions. Where the specifications require a material to be installed under the supervision or inspection of the material manufacturer or his representative, the manufacturer or his representative also shall inspect the work in place and issue a letter of approval to Architect.

1.07 TOLERANCES NOMENCLATURE:

- A. Tolerance of Numbers: Unless other tolerances are indicated or specified elsewhere, specified numbers such as gauges, weights, temperatures and similar references, but specifically not including dimensions and time, will be acceptable if within formally established, written and recognized commercial tolerances established for the affected trade. In the absence of formally written and recognized commercial tolerances, plus or minus 1 percent will be acceptable. If a specified number cannot be obtained, the number shall be interpreted as the next larger, provided it meets other requirements of the contract documents including sufficient space being available as indicated on the drawings.
- B. Tolerances of Specified Words: Unless otherwise specified, the following words shall have the following meanings. Construction executed within these tolerances will be considered acceptable.
1. "Straight": Allowed deviations from an absolutely straight line of sight shall be plus or minus 1/16" in one foot, plus or minus 1/8" in 10 feet, and plus or minus 1/4" for the entire length of a particular construction. These deviations shall be non-accumulative. Straight lines or planes on drawings shall conform to these tolerances.
 2. "Flat": Allowed deviations from an absolutely flat plane shall be plus or minus 1/1000 inch in one square inch, within plus or minus 1/16 inch in one square foot, within plus or minus 1/8 inch in an area ten feet by ten feet, and within plus or minus 1/4 inch for the entire area of a particular construction item. Flat planes on drawings shall conform to these tolerances.
 3. "Level": Allowed deviation from an absolutely horizontal plane shall be 1/2 degree of angle. Horizontal lines or planes on drawings shall conform to this tolerance.
 4. "Plumb": Allowed deviation from an absolutely vertical plane of plus or minus 1/2 degree of angle. Vertical lines or planes on drawings shall conform to this tolerance.

END OF SECTION

SECTION 01650

PRODUCT HANDLING AND PROTECTION

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers the requirements for handling and protection of materials and equipment to be incorporated into the work.

- A. Transport, deliver, handle and store materials and equipment at the job site in such manner as to prevent damage, including damage which might result from the intrusions of foreign matter or moisture from any source. Comply with:
 - 1. Material and equipment manufacturer's instructions regarding temperature limitations.
 - 2. Other environmental conditions which are required to maintain the original quality of the materials and equipment.
 - 3. Handle materials to prevent damage to products and finishes.
- B. Packaging:
 - 1. Maintain packaged materials in manufacturer's original containers with seals unbroken and labels intact until they are incorporated into the work.
 - 2. Packaged material shall bear the name of the manufacturer, the product, including brand name, color, stock number and all other complete identifying information.
- C. Remove all damaged or otherwise unsuitable materials and equipment promptly from the job site.
- D. Storing:
 - 1. Locate storage piles, stacks or bins so as to avoid being disturbed. Provide barricades as required to protect storage from damage.
 - 2. Store all materials and equipment in accord with manufacturer's instructions, above grade and properly protected from weather and construction activities. Provide space heaters to prevent condensation where required.
- E. Protection:
 - 1. Protect all finished surfaces, including jambs and soffits of all openings used as passage-ways through which materials and equipment are handled.

2. Provide protection for all finished flooring surfaces in traffic areas before allowing any materials and equipment to be moved over those finished surfaces.
3. Maintain all finished surfaces clean, unmarred and suitably protected until occupied by Owner.
4. Consult individual Specification Sections for any additional specific product handling and protection requirements.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

END OF SECTION

SECTION 01700
PROJECT COMPLETION

PART 1 - GENERAL

1.01 DESCRIPTION:

Division 1 applies to this Section. Perform duties specified herein for project completion, complete.

1.02 SUBSTANTIAL COMPLETION:

- A. When the work is considered substantially complete, submit to Architect a written notice that the work, or designated portion thereof, is substantially complete, and a list of items to be completed or corrected.
- B. After receipt of such notice, Architect will make an inspection to determine the status of completion.
- C. If Architect determines that the work is not substantially complete, Architect will promptly notify the Contractor in writing, giving the reasons therefore. Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion to the Architect. Architect will re-inspect the work.
- D. When Architect concurs that the work is substantially complete, he will prepare a Certificate of Substantial Completion on AIA Form G704, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect. Architect will submit the Certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

1.03 FINAL COMPLETION:

- A. When the work is considered complete, submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents.
 - 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
 - 5. Work is completed and ready for final inspection.
- B. Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. If Architect considers that the work is incomplete or defective, he will promptly notify the Contractor in writing, listing the incomplete or defective work. Contractor shall take immediate steps to remedy the stated deficiencies and send a second written certification to Architect that the work is complete. Architect will reinspect the work.

- D. When the Architect finds that the work is acceptable to the requirements of the Contract Documents, he will request the Contractor to make closeout submittals.

1.04 PROJECT CLOSEOUT:

The following items shall be completed and approved prior to the approval of the final certificate of payment.

- A. Warranties and Guarantees: Provide as specified in Section 01740. Unless otherwise provided elsewhere, warranties and guarantees shall commence with the date of final acceptance of the project. Verify date with the Architect, execute the forms and deliver to Architect for transmission to the Owner.
- B. Final cleaning: Perform final cleaning as specified in Section 01710, immediately prior to final inspection.
- C. Project Record Documents: Deliver to Architect record documents specified in Section 01720 at time of final inspection.
- D. Operations and Maintenance Manuals and Parts: Deliver all documents and parts specified in Section 01730 at time of final inspection.
- E. Keys: Unless keys are shipped directly to Owner from the factory, properly tag and deliver all keys to Owner at time of final inspection.
- F. Water Purity: Deliver reports of water sterilization to Architect at time of final inspection.
- G. Air Balance Reports: Deliver to Architect at time of final inspection.
- H. Extra Materials: Deliver extra materials specified in the various sections to Owner's storage facility as directed.
- I. Instructions: Instruct the Owner's operating and maintenance personnel in proper operation and maintenance of systems, equipment and similar items which were provided as part of the work. Submit evidence that such instruction has been satisfactorily completed to Architect.
- J. Provide all documentation required by DSA and CBC.
- K. Certificate of Insurance for Products and Completed Operations: Furnish to Owner at time of final inspection.

1.05 REINSPECTION FEES:

Should Architect perform reinspection due to failure of work to comply with the claims of status of completion made by the Contractor:

- A. Owner will compensate Architect for such additional services.

- B. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.06 FINAL ADJUSTMENT OF ACCOUNTS:

- A. Submit a final statement of accounting to Architect.
- B. Statement shall reflect all adjustments to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from:
 - a. Previous Change Orders.
 - b. Allowances.
 - c. Unit Prices.
 - d. Deductions for uncorrected work.
 - e. Deductions for liquidated damages.
 - f. Deductions for reinspection payments.
 - g. Other adjustments.
 - 3. Total Contract Sum, as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- C. Architect will prepare a final Change Order, reflecting approved adjustments to the Contract Sum which were not previously made by Change Orders.

1.07 FINAL APPLICATION FOR PAYMENT:

Submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

1.08 INSTRUCTIONS:

Instruct the Owner's operating and maintenance personnel in proper operation and maintenance of systems, equipment and similar items which were provided as part of the work.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION– Not applicable to this Section.

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION:

Division 1 applies to this Section. Provide cleaning, complete.

- A. Maintain premises and public properties from accumulations of waste, debris and rubbish caused by operations.
- B. At completion of work, remove waste materials rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces; leave project clean and ready for occupancy.

PART 2 – PRODUCTS

2.01 MATERIALS:

- A. Use cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use each type of cleaning material on surfaces recommended by manufacturer.

PART 3 – EXECUTION

3.01 DURING CONSTRUCTION:

- A. Execute cleaning to ensure that building, grounds and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Daily during progress of work, clean construction site and utilized public properties, and dispose of waste materials, debris and rubbish.
- C. Provide on-site containers for collection of waste materials, debris and rubbish. Provide for frequent emptying or pickup.
- D. Remove waste materials, debris and rubbish from site and legally dispose of at public or private dumping areas off Owner's property.
- E. Handle materials in a controlled manner with as few handlings as possible. Do not drop or throw materials from heights; rather a closed chute shall be used.
- F. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

END OF SECTION

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

Provide project record documents, complete.

1.01 MAINTENANCE OF DOCUMENTS:

- A. Maintain at job site at all times during construction and until final acceptance, one copy of:
 - 1. Contract drawings and specifications.
 - 2. Addenda, bulletins, change orders and construction change directives.
 - 3. Reviewed and approved shop and erection drawings.
 - 4. Samples, manufacturer's product data and installation instructions.
 - 5. Field test reports.
 - 6. Project correspondence and transmittals.
 - 7. Other documents relevant to work.
- B. These documents shall be latest current issue and shall bear, as applicable, all approvals and revisions.
- C. Store documents in temporary field office apart from documents used for construction. Provide files and racks for storage of documents. File documents in accordance with project filing format of CSI Masterformat. Maintain documents in clean, dry legible condition.
- D. Do not use record documents for construction purposes. Make documents available at all times for inspection.

1.02 RECORD DRAWINGS:

- A. Record drawings are required for all construction. Record drawings shall conform to the following requirements.
 - 1. Maintain, and keep up to date, a complete record set of documentation showing lighting fixtures installed by location.
 - 2. At completion of the work, provide final documentation to the Owner showing manufacturer name, fixture model, fixture wattage, and location. Following acceptance of the quality of work Submit one set of documentation to Architect for review, and following review, make corrections as required, stamp each sheet "Record Drawing", stamp Contractor's name, print and sign name of preparer, and date the drawings. Each sheet shall be signed by an authorized representative of the Contractor. Upon completion, deliver the set of drawings to the Architect for transmittal to the Owner.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION– Not applicable to this Section.

END OF SECTION

SECTION 01730

OPERATIONS AND MAINTENANCE MANUALS AND PARTS

PART 1 - GENERAL

1.01 DESCRIPTION:

This Section covers the general requirements for operations and maintenance manuals, spare parts and extra material.

1.02 SUBMITTALS:

- A. Conform all submittals under this Section to applicable requirements of Section 01300.
- B. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of work. Architect will review draft and return one copy with comments.
- C. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- D. Submit 1 copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned, with Architect comments. Revise content of all document sets as required prior to final submission.
- E. Submit two sets of revised final volumes in final form within 10 days after final inspection.

1.03 QUALITY ASSURANCE:

Prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.04 FORMAT:

- A. Prepare data in the form of instructional manuals.
- B. Binders: Commercial quality, 8-1/2 x 11 inch, three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of project; identify subject matter of contents.
- D. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.
- E. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.

- F. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- G. Arrange content by systems under section numbers and sequence of table of contents of this project manual.

1.05 CONTENTS, EACH VOLUME:

- A. Table of Contents: Provide title of project; names, addresses and telephone numbers of Architect, subcontractors and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.
- B. For each Product of System: List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use project record documents as maintenance drawings.
- E. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- F. Warranties: As specified in Section 01740.

1.06 MANUAL FOR MATERIALS AND FINISHES:

- A. Building Products, Applied Materials and Finishes: Include product data, with catalog number, size, composition and color and texture designations. Provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition and details of installation. Provide recommendations for inspections, maintenance and repair.
- D. Additional Requirements: As specified in individual product specifications sections.
- E. Provide a listing in table of contents for design data, with tabbed fly sheet and space for insertion of data.

1.07 MANUAL FOR EQUIPMENT AND SYSTEMS:

- A. Each Item of Equipment and Each System: Include description of unit or system and component parts. Identify function, normal operating characteristics and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
- B. Panelboard Circuit Directories: Provide electrical service characteristics, controls and communications; typed or by label machine.
- C. Include color coded wiring diagrams as installed.
- D. Operating Procedures: Include start-up, break-in and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down and emergency instructions. Include summer, winter and any special operating instructions.
- E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair and reassembly instructions; and alignment, adjusting, balancing and checking instructions.
- F. Provide servicing and lubrication schedule, and list of lubricants required.
- G. Include manufacturer's printed operation and maintenance instructions.
- H. Include sequence of operation by controls manufacturer.
- I. Provide original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
- J. Provide control diagrams by controls manufacturer as installed.
- K. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Provide list of original manufacturer's spare parts, current prices and recommended quantities to be maintained in storage.
- N. Include test and balancing reports as specified in Division 15.
- O. Additional Requirements: As specified in individual product specification sections.
- P. Provide a listing in table of contents for design data, with tabbed dividers and space for insertion of data.

1.08 INSTRUCTION OF OWNER PERSONNEL:

- A. Before final inspection, instruct Owner's designated personnel in operation, adjustment and maintenance of products, equipment and systems, at agreed upon times.
- B. For equipment requiring seasonal operation, perform instructions for other seasons within six months.
- C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- D. Prepare and insert additional data in operation and maintenance manual when need for such data becomes apparent during instruction.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION

3.01 MAINTENANCE MATERIALS AND SPARE PARTS:

Furnish and deliver special tools, instruments, accessories, spare parts and maintenance materials required by the contract documents, and furnish and deliver the special tools, instruments, accessories, and the special lifting and handling devices shown in the instruction manuals approved above. Unless otherwise specified or directed, deliver the items to the Owner with the Contractor's written transmittal accompanying each shipment, in the manufacturer's original containers labeled to describe the contents and the equipment for which it is furnished. Deliver a copy of each transmittal to Architect for record purposes.

END OF SECTION

SECTION 01740

WARRANTIES AND GUARANTEES

PART 1 - GENERAL

1.01 DESCRIPTION:

This section specifies the general requirements for written warranties and guarantees required by the Contract Documents. Final payment under the contract will not be made until the warranties and guarantees have been submitted in acceptable form.

1.02 WARRANTIES AND GUARANTEES:

- A. General: Provide all warranties and manufacturer's guarantees with Owner named as beneficiary. For equipment and products, or components thereof, bearing a manufacturer's warranty or guarantee that extends for a period of time beyond the Contractor's warranty and guarantee, so state in the warranty or guarantee.
- B. Specific Warranty and Guarantee Requirements: Refer to Divisions 2 through 16.
- C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve the Contractor of warranty on the work that incorporates the products, nor shall they relieve suppliers, manufacturers and installers required to countersign special warranties with Contractor.
- D. Related Damages and Losses: When correcting warranted work that has been found defective, remove and replace other work that has been damaged as a result of such defect or that must be removed and replaced to provide access for correction of warranted work.
- E. Reinstatement of Warranty: When work covered by a warranty has been found defective and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to be original warranty with an equitable adjustment for depreciation.
- F. Replacement Cost: Upon determination that work covered by a warranty has been found to be defective, replace or reconstruct the work to a condition acceptable to Owner, complying with applicable requirements of the contract documents. Contractor shall be responsible for all costs for replacing or reconstructing defective work regardless of whether Owner has benefited for use of work through a portion of its anticipated useful service life.
- G. Owner's Recourse: Written warranties made to the owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.

- H. **Rejection of Warranties:** The Owner reserves the right to reject warranties and to disallow the use of products with warranties in conflict with contract document requirements.
 - I. **Warranty as Condition of Acceptance:** The Owner reserves the right to refuse to accept work for the project where a special warranty, certification or similar commitment is required until evidence is presented that those required to countersign such commitments are willing to do so.
- 1.03 **PREPARATION OF WARRANTY AND GUARANTEE SUBMITTALS:**
- A. **Number of Copies:** 2, unless otherwise specified, or directed.
 - B. **Special Project Warranty and Manufacturer's Guarantee Forms:** Forms for Special Project Warranties and for Manufacturer's Guarantees are included at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the Owner through the Architect for approval prior to final execution.
 - 1. Refer to Divisions 1 through 16 for specific content requirements, and particular requirements for submittal of special project warranties.
 - 2. Prepare standard product warranties and product guarantees, excepting manufacturer's standard printed warranties and guarantees, on Contractor's subcontractor's material supplier's or manufacturer's own letterhead, addressed to Owner.
 - 3. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by Owner to suit the conditions pertaining to the warranty or guarantee.
 - C. **Manufacturer's Guarantee Form:** Manufacturer's guarantee forms may be used in lieu of special project forms included at the end of the Section. Manufacturer's guarantee forms shall contain appropriate terms and identification, ready for execution by the required parties.
 - 1. If proposed terms and conditions restrict guarantee coverage or require actions by Owner beyond those specified, submit draft of guarantee to Owner through Architect for review and acceptance before performance of the work.
 - 2. In other cases, submit draft of guarantee to Owner through Architect for approval prior to final execution of guarantee.
 - D. **Signatures:** By persons authorized to sign warranties and guarantees, on behalf of entity providing the warranty or guarantee. All signatures shall be notarized.
 - E. **Co-Signature:** All warranties, except manufacturer's printed guarantees, shall be co-signed by the Contractor.

1.04 FORM OF WARRANTY SUBMITTALS:

- A. At final completion, compile 2 copies of each required warranty and guarantee properly executed by the Contractor, or by the Contractor and sub-contractor, supplier or manufacturer. Collect and assemble all written warranties and guarantees into binders and deliver binders to Architect for final review and acceptance.
- B. Prior to submission, verify that documents are in proper form, contain all required information and are properly signed.
- C. Organize the warranty documents into an orderly sequence based on the Table of Contents of the Project Manual.
- D. Include Table of Contents for the binder, neatly typed, following order and Section names and numbers of the Project Manual.
- E. Bind warranties and guarantees in heavy-duty, commercial quality, 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, with clear front and spine to receive inserts, and sized to receive 8-1/2" by 11" paper.
- F. Provide heavy paper dividers with celluloid or plastic covered tabs for each separate warranty. Mark tabs to identify products or installation, and Section number and title.
- G. Include on a separate typed sheet, if information is not contained in warranty or guarantee form, a description of the product or installation, and the name, address, telephone number and responsible person for applicable installer, supplier and manufacturer.
- H. Identify each binder on front and spine with typed or printed inserts with title "WARRANTIES AND GUARANTEES", the project title and the name of the Contractor. If more than one volume of warranties and guarantees is produced, identify volume number on binder.
- I. When operating and maintenance data manuals are required for warranted construction, include additional copies of each required warranty in each required manual. Coordinate with requirements specified in Section 01730.

1.05 TIME OF WARRANTY AND GUARANTEE SUBMITTALS:

- A. Preliminary Submittal: Unless otherwise specified, obtain preliminary copies of warranties and guarantees within 10 days of completion of applicable item or work. Prepare and submit preliminary copies for review as specified herein.
- B. Final Submittal: Submit fully executed copies of warranties and guarantees within 10 days of date of substantial completion by not later than 3 days prior to date of application for final payment.
- C. Date of Warranties and Guarantees: Unless otherwise directed, the commencement date for warranty and guarantee periods shall be the date of substantial completion.

1. Warranties for work accepted in advance of date of substantial completion:
Commencement date will be the date of acceptance of such work.
2. Warranties for work not accepted as of the date of substantial completion:
Commencement date will be the date of acceptance of such work.

PART 2 – PRODUCTS – Not applicable to this Section.

PART 3 – EXECUTION – Not applicable to this Section.

WARRANTY/GUARANTEE

FOR _____ WORK

We, the undersigned, do hereby warranty and guarantee that the parts of the Work described above which we have furnished and/or installed for:

**Proposition 39 Exterior LED Lighting
at 7 Elementary Schools**
10515 S. Pioneer Blvd.
Santa Fe Springs, CA 90670

is in accordance with the Contract Documents and that all said Work as installed will fulfill or exceed all of the Warranty and Guarantee requirements. We agree to repair or replace Work installed by us, together with any adjacent Work which is displaced or damaged by so doing, that proves to be defective in workmanship, material or operation with a period of _____ () year(s) from the date of final acceptance by Owner or from the Date of Certificate of Substantial Completion, whichever is earlier, ordinary wear and tear and unusual neglect or abuse excepted.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by the Owner, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the Owner to have said defective Work repaired and/or replaced and made good, and agree to pay to the Owner upon demand all moneys that the Owner may expend in making good said defective Work, including all collection cost and reasonable attorney fees.

(Subcontractor, Subsubcontractor, Manufacturer or Supplier)

By _____

Title _____

State_License_No. _____ Date _____

(Contractor)

By _____

State_License_No. _____ Date _____

Local_Representative. For Maintenance, repair or replacement service, contact:

Name: _____

Address _____

Phone Number _____

SECTION 16010

BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Lighting Inventory and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specifications apply to work of this Section.

1.02 WORK INCLUDED

A. The specifications and existing lighting fixture inventories are intended to cover a complete installation of replacement all exterior lighting fixtures with new LED lighting fixtures. The omission of expressed reference to any item of labor or material for the proper execution of the work in accordance with present practice of the trade shall not relieve the Contractor from providing such additional labor and materials.

B. All labor, materials, appliances, tools, equipment, facilities, transportation and services necessary for and incidental to performing all operations in connection with furnishing, delivery and installation of electrical system, complete, as shown on the drawings and/or specified herein. Work includes but is not necessarily limited to the following:

1. Replacement of existing Exterior Wall Pack lighting fixtures with new LED Exterior Wall Pack lighting fixtures .

2. Replacement of existing Exterior Canopy lighting fixtures with new LED Exterior Canopy lighting fixtures .

3. Replacement of existing Pole-Mounted lighting fixtures with new LED Pole-Mounted lighting fixtures (Lights/heads only, not poles).

4. Replacement of any, if any, specified incidental Interior lighting fixtures with new LED fixtures.

5. New LED Lighting fixtures complete with required accessories.

6. Supply any electrical wiring and all connections and other miscellaneous equipment, apparatus and material to correctly install the lighting fixtures and equipment being furnished.

7. Required backing, supports and blocking for lighting fixtures, if damaged or not existing.

8. Proper sealing of fixtures on exterior wall/canopy and poles as required.

9. Careful removal of lighting fixtures to be demolished, and proper and legal disposal of such fixtures.

10. Tests of entire system.

11. Guarantees.

12. Temporary lighting during construction, as needed.

1.03 GUARANTEE

A. In addition to guarantee required in Division 1 or specifically specified elsewhere, all materials and equipment provided and installed under this Division of Specifications shall be guaranteed by Contractor in writing for a period of one year from date of acceptance of work by Owner. Should any trouble develop during this period due to defective materials or faulty workmanship, the Contractor shall furnish all necessary labor and materials to correct the trouble without costs to Owner.

B. Guarantee complete and perfect operation of entire system and that all apparatus will perform in accordance with detailed drawings and Specifications.

C. Guarantee that all equipment will be supported in such a way as to be free from objectionable vibration and noise.

D. Guarantee that all licenses and royalties for use of any patented feature of system will be paid before acceptance of system.

1.04 GENERAL REQUIREMENTS

A. Codes: Construct project in accordance with following codes:

1. Regulations of State and Local Fire Marshal.
2. California State Electrical Safety Orders, Title 8.
3. California Electric Code, National Fire Protection Association, edition in force.
4. Local codes and ordinances.
5. Title 24, California Code of Regulations.
6. Division of State Architect (DSA).

Keep a copy of applicable code available at Site while performing work of this Section. Nothing in these Drawings and Specifications to be construed as authority to violate codes and ordinances. Conflict with applicable regulations to be resolved at Contractor's expense before installation.

B. Permits, Fees and Inspections: Obtain and pay for all necessary permits and fees required by any constituted authority having jurisdiction including utilities. Arrange and pay for all required inspections or examinations and deliver certificates of inspection to Architect.

C. Record Drawings:

1. Provide record drawings for work of this Section.
2. Keep up-to-date a complete "As-Built" record set of documentation corrected daily and showing exact "As-Built" locations, sizes, and kinds of equipment.
3. Documentation to serve as work progress sheets. Make neat and legible notations thereon daily as work proceeds, showing work as actually installed. Documentation to be available at all times for inspection, and kept at a location designated by Architect.

5. On completion of work, provide to the Owner one set of final documentation together with Contractor's name, address and phone number. Incorrect, non-legible or non-reproducible documentation will not be accepted.

D. Selection and Ordering of Equipment and Materials: Within two weeks after award of Contract, arrange for purchase and delivery of all light fixtures, equipment and materials required in ample quantities and at proper time. Inform Architect immediately of any inability to obtain suitable delivery of any equipment or material. Send copy of letter verifying date of purchases to Architect.

E. Shop Drawings and Material Lists:

1. Submit material lists and shop drawings as called for in Division 1, and as supplemented by this Division, and with sufficient promptness to ensure that overall work of project will not be delayed.

2. Submit two copies of a list of materials and equipment manufacturers that Contractor intends to use.

3. Provide shop drawings for following:

a. Lighting fixtures and necessary accessories.

4. Do not fabricate work until reviewed shop drawings for work have been received from Architect. Work fabricated or erected in advance of reviewed shop drawings will be at risk of Contractor.

5. Architect's or Engineer's review of shop drawings does not relieve Contractor of responsibility for errors including details, dimensions, or materials, as well as conformance with requirements of Drawings and Specifications.

6. Shop drawings will be checked by Architect and Engineer for conformance to design as a convenience to Contractor. Dimensions will not be checked. Should interferences become evident, notify Architect immediately so that matter may be resolved prior to proceeding with fabrication.

7. No reimbursement based on a claim that work was placed in accordance with dimensions shown on a reviewed shop drawing will be allowed for removing or replacing work already in place.

8. Make available a copy of every reviewed shop drawing at Project Site.

9. Submit shop drawings in coherent groups; e.g., all lighting fixtures at one time.

10. Submit actual samples of specified equipment or material to Architect for review when requested.

F. Substitution and Approval of Material:

1. Base all bids and proposals only upon materials, construction and equipment named or described in specification and/or shown on drawing. Should a Contractor wish to use other equipment than that specified, he shall submit proposed substitution by fully describing equipment he prefers to use and by listing credit or additional cost to his bid as a separate item should substitution be acceptable.

2. All equipment and materials proposed for substitution shall be similar in design and equal in quality and function to those specified herein or on drawings. Contractor (not sales vendor) shall demonstrate his proposed substitution and shall specifically note all differences between item specified and proposed substitution. Actual samples and test data, certified by an independent testing laboratory, shall be submitted when requested.

3. Each substitution will be given consideration, but without any obligation expressed or implied on part of Architect to change named requirements of specification. Only one substitution for each item of equipment will be permitted. Contractor assumes sole responsibility for performance and space requirements for substitute equipment. Decision of Architect shall be final as to whether or not substitution is acceptable.

G. Terminology:

1. Term "provide" used on Drawings and elsewhere in the Specifications shall be considered to mean "furnish and install".

2. Term "UL" means Underwriters Laboratories Inc.

H. Workmanship: See supplementary Conditions, Architect is sole judge of whether execution is in a workmanlike manner.

I. Safety Conditions: Be responsible in preventing energized switches, circuit breakers or circuits from being turned to "On" position during construction period. Be responsible for damages to personnel and/or property resulting from contact with energized circuits, switches, circuit breakers, busses or other electrical apparatus. Construct all electrical work with electrical system de-energized in area. At no time permit work on equipment or apparatus with energized circuits.

J. Verification of Dimensions: All scaled and figured dimensions are approximate and are given for estimating purposes only. Before proceeding with work carefully check and verify all dimensions and sizes and assume all responsibility for fitting of materials and equipment to other parts of equipment and to structure. Where apparatus and equipment have been indicated on drawings, dimensions have been taken from typical equipment of class indicated. Carefully check drawings and see that equipment will fit into spaces provided.

K. Locations:

1. Replacement lighting fixtures are to be installed in the same locations as the existing lighting fixtures to be removed.

L. These Specifications and attendant Drawings are intended to cover a complete and operable electrical system. Follow Lighting Inventory and Specifications and execute all work according to true intent and meaning. Should any error or omission exist in either or both of these Lighting Inventory and Specifications, or conflict one with another, have same explained and adjusted by Engineer before submitting bid price for electrical work; otherwise at own expense, supply proper materials and labor to completely install same, make good any damage to or defect in work of results obtained therefor caused by such error, omission or conflict. Most restrictive, greater quantity or size, better quality or other superior condition of all representations shall prevail.

M. Omission of expressed reference in Lighting Inventory or Specifications to any item of labor or material necessary for proper execution of work in accordance with present good practice of trade will not relieve Contractor from providing such additional labor and materials.

N. Job Visits by Engineer: Periodic visits to job by Engineer is for express purpose of verifying

compliance by Contractor with contract documents. Such visits by Engineer shall not be construed as construction supervision. Neither shall such visits be construed to make Engineer responsible for providing a safe place for performance of work by Contractor or Contractor's employees or safety of supplies of Contractor or his subcontractors.

O. Cooperation with Others: N/A

P. Protection of Finish: Provide adequate means for protecting all finished parts of materials and equipment against damage from any cause during progress of work and until acceptance by Architect. Cover all material and equipment in storage and during construction in such a manner that no finished surfaces will be damaged, marred or splattered with paint. Keep moving parts perfectly clean and dry. No paint spraying will be permitted in building. Replace or refinish damaged material or equipment without additional costs to Owner.

Q. Cleaning Equipment and Premises: Thoroughly clean all parts of materials, equipment and exposed parts. Remove all oil and grease spots with a non-flammable cleaning solvent. Brush exposed metal work with steel brushes to remove rust and other spots and leave smooth and clean. During progress of work, carefully clean up and leave premises and all portions of building free from debris. At completion of work, remove all waste materials and debris resulting, leaving everything in a complete and satisfactory condition.

R. Cutting and Patching: No cutting should be required. Notify the Owner if you believe cutting is required. No cutting may be done without the owner's permission. No cutting of structural members will be permitted. Any patching required due to cutting must well match the surrounding surface. The contractor may need to hire a properly licensed trade worker to make the patch as applicable..

S. Conditions at Site: Visit Job Site and become familiar with all existing conditions within scope of work and include in Bid Proposal allowance for these conditions. Verify exact locations of services prior to construction. Notify all other Contractors of these utility locations.

T. Documents: Read all relevant documents, become familiar with job, scope of work, type of general construction, Architectural, Structural, Mechanical and Electrical Drawings and Specifications. Also become familiar with purpose for which these Drawings have been prepared and become cognizant of all details involved.

U. Acceptance: Before work will be accepted, demonstrate to Owner and Architect that entire installation is complete and in proper operating condition and Contract has been fully and properly executed. Following items shall be prepared and submitted to Architect:

1. Two copies of all test results required under this Division.
2. Two copies of local and/or state code enforcing authorities final inspection certificates.
3. Copies of as-built record drawings as required.
4. Notify Architect in writing when installation is complete and that a final inspection of this work can be performed. In event defects or deficiencies are found during this final inspection they shall be corrected to satisfaction of Architect before final acceptance can be issued.
5. Two Maintenance and Operating Manuals as required.

V. Field Inspections: Provide proper facilities for access of Owner or Owner's representative to conveniently examine and inspect all portions of work covered in this Contract at any and all

reasonable hours.

W. Completing Work: At completion of work, remove all waste materials and debris resulting from work, leaving everything in a complete and satisfactory condition.

X. Electrical Superintendent: Include services of a qualified electrical foreman capable of interpreting intent of Lighting Inventory and Specifications, to study Lighting Inventory, Specifications and references, authorized to make decisions and issue instructions; be constantly in charge of work and available at job site at all times and at final inspection. Instruct Owner's representative for proper operation and recommend maintenance of all systems.

Y. Maintenance and Operating Manuals:

1. Before completion and acceptance of work, furnish Owner with two complete sets of operating and maintenance instruction manuals. Bind each set in durable hardboard binder and index.

2. Compile data for manuals upon approval of material list and sketches so as not to delay final approval of work installed. Operating manuals to contain all pertinent data relating to electrical installation such as fixture cuts, manufacturer's approval, shop drawings, sketches, wiring diagrams and equipment operating instructions.

3. Instruct Owner's operating personnel with electrical operating procedures before work is considered complete.

Z. .NOT USED.

AA. Tests:

1. Upon completion of work and adjustment of all equipment, all systems shall be tested under direction of Owner's representative to demonstrate that all equipment furnished and installed and/or connected under provision of these Specifications shall function electrically in manner required. All tests shall be completed prior to final inspection of project.

2. All systems shall test free from short circuits and grounds and shall be free from mechanical and electrical defects. All circuits shall be tested for proper neutral connection.

3. All instrumentation and personnel required for testing shall be furnished by Contractor.

BB. Noise Control:

1. Perform electrical work to a manner in minimize transmission of noise and preserve acoustical properties of building structure.

2. Use glass fiber material, "Duxseal" compound, for acoustic seals if needed.

END OF SECTION

SECTION 16510
LIGHTING FIXTURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Lighting Inventory and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specifications apply to work of this Section.

1.02 DESCRIPTION

A. Work includes but is not limited to the following:

1. LED Lighting fixtures and accessories.
2. Pole Lighting heads with new LED lighting.

B. Related Work:

1. Section 16010 - Basic Materials and Methods.

1.03 SUBMITTALS

A. Submit Cut Sheets.

B. Include lighting fixture data including wattage, support points, weights, and accessory information for each lighting fixture type.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS AND LIGHTING FIXTURES

A. American made LED lighting fixtures, of equivalent configuration and functionality to those being replaced, New lighting fixtures must be more efficient than those being replaced and must meet the Proposition 39 Clean Energy Jobs Act requirements for savings to investment ratio (SIR) as defined by the California Energy Commission.

2.06 EXISTING CONTROLS

A. New LED lighting fixtures shall be compatible with existing controls.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Support surface-mounted lighting fixtures directly from building structure. Provide additional blocking, unistruts, steel channels, etc. if required.

B. Provide required backing for all lighting fixtures if damaged or not existing.

3.02 TESTS

A. Immediately before turning completed job over to Owner, clean all light fixtures inside and out, including plastics and glassware, adjust and tighten all trim, replace broken or damaged parts, and test fixtures for electrical and mechanical operation. Replace all inoperative equipment.

END OF SECTION

SECTION 16999

EXTERIOR EXISTING LIGHTING INVENTORY

PART 1 - GENERAL

1.01 LIGHTING INVENTORY

A. The Lighting Inventory consists of a Lighting Count List and a Lighting Survey.

B. Lighting Count List:

Cresson:

Wall Lights- 40
Ceiling Lights- 19
Pole Lights- 3

Jersey:

Wall Lights-20
Canopy Lights- 50
Pole Lights- 2

Lakeland:

Wall Lights- 31
Pole Lights-7
Canopy Lights- 28

Lakeview:

Wall Lights- 50
Canopy Lights- 50
Pole Lights- 0

Paddison:

Wall Lights- 41
Canopy Lights- 29
Pole Lights- 5

Studebaker:

Wall Lights-36
Pole Lights-3
Canopy Lights-25

William Orr:

Wall Lights-25
Pole Lights- 1
Canopy lights-35

C. Lighting Survey

1. The Lighting Survey consists of seven (7) separate excel workbooks, one for each school, and is incorporated as if fully set forth herein

D. In the event of a conflict between the Lighting Count List and the Lighting Survey, the greater quantity shall be used.

END OF SECTION