PROFESSIONAL CONSULTANT SERVICES AGREEMENT

P B S Engineers, Inc.

[Mechanical, Electrical, Plumbing and Engineering Design Services]

THIS PROFESSIONAL CONSULTANT SERVICES AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 2017 ("Effective Date"), by and between the CITY OF RIVERSIDE ("City"), a California charter city and municipal corporation and P B S Engineers, Inc., a California corporation ("Consultant").

1. **Scope of Services**. City agrees to retain and does hereby retain Consultant and Consultant agrees to provide the services more particularly described in Exhibit "A," "Scope of Services" ("Services"), attached hereto and incorporated herein by reference, in conjunction with the Riverside Regional Water Quality Control Plant Administration Building Heating, Ventilation and Air Conditioning System Renovation/Replacement Project ("Project").

2. **Term**. This Agreement shall be effective on the date first written above and shall remain in effect until December 31, 2018, unless otherwise terminated pursuant to the provisions herein.

3. **Compensation/Payment**. Consultant shall perform the Services under this Agreement for the total sum not to exceed Two Hundred Thirty-Four Thousand Seven Hundred Fifty-Eight Dollars ($234,758), payable in accordance with the terms set forth in Exhibit "B." Said payment shall be made in accordance with City's usual accounting procedures upon receipt and approval of an itemized invoice setting forth the services performed. The invoices shall be delivered to City at the address set forth in Section 4 hereof.

4. **Notices**. Any notices required to be given, hereunder shall be in writing and shall be personally served or given by mail. Any notice given by mail shall be deemed given when deposited in the United States Mail, certified and postage prepaid, addressed to the party to be served as follows:

To City

Public Works Department
City of Riverside
Attn: Usha Kademani
5950 Acorn Street
Riverside, CA 92504

To Consultant

P B S Engineers, Inc.
Attn: Viraj Patel
2100 East Route 66, Ste. 101
Glendora, CA 91740

5. **Prevailing Wage**. If applicable, Consultant and all subcontractors are required to pay the general prevailing wage rates of per diem wages and overtime and holiday wages determined by the Director of the Department of Industrial Relations under Section 1720 et seq. of the California Labor Code and implemented by Resolution No. 13346 of the City Council of the City of Riverside. The Director's determination is available on-line at www.dir.ca.gov/dlsr/DPreWageDetermination.htm and is referred to and made a part hereof; the wage rates therein ascertained, determined, and specified are referred to and made a part hereof as though fully set forth herein.

6. **Contract Administration**. A designee of the City will be appointed in writing by the City Manager or Department Director to administer this Agreement on behalf of City and shall be referred to herein as Contract Administrator.

7. **Standard of Performance**. While performing the Services, Consultant shall exercise the reasonable professional care and skill customarily exercised by reputable members of Consultant's profession practicing in the Metropolitan Southern California Area, and shall use reasonable diligence and best judgment while exercising its professional skill and expertise.

8. **Personnel**. Consultant shall furnish all personnel necessary to perform the Services and shall be responsible for their performance and compensation. Consultant recognizes that the qualifications and experience of the personnel to be used are vital to professional and timely completion of the Services. The key personnel listed in Exhibit "C" attached hereto and incorporated herein by this reference and assigned to perform portions of the Services shall remain assigned through completion of the Services, unless otherwise mutually agreed by the parties in writing, or caused by hardship or resignation in which case substitutes shall be subject to City approval.

9. **Assignment and Subcontracting**. Neither party shall assign any right, interest, or obligation in or under this Agreement to any other entity without prior written consent of the other party. In any event, no assignment shall be made unless the assignee expressly assumes the obligations of assignor under this Agreement, in a writing satisfactory to the parties. Consultant acknowledges that any assignment may, at the City's sole discretion, require City Manager and/or City Council approval. Consultant shall not subcontract any portion of the work required by this Agreement without prior written approval by the responsible City Contract Administrator. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement, including without limitation, the insurance obligations set forth in Section 12. The Consultant acknowledges and agrees that the City is an intended beneficiary of any work performed by any subcontractor for purposes of establishing a duty of care between any subcontractor and the City.

10. **Independent Contractor**. In the performance of this Agreement, Consultant, and Consultant's employees, subcontractors and agents, shall act in an independent capacity as independent contractors, and not as officers or employees of the City of Riverside. Consultant acknowledges and agrees that the City has no obligation to pay or withhold state or federal taxes or to provide workers' compensation or unemployment insurance to Consultant, or to Consultant's employees, subcontractors and agents. Consultant, as an independent contractor, shall be responsible for any and all taxes that apply to Consultant as an employer.

11. **Indemnification.**

11.1 **Design Professional Defined.** For purposes of this Agreement, "Design Professional" includes the following:

A. An individual licensed as an architect pursuant to Chapter 3 (commencing with Section 5500) of Division 3 of the Business and Professions Code, and a business entity offering architectural services in accordance with that chapter.

B. An individual licensed as a landscape architect pursuant to Chapter 3.5 (commencing with Section 5615) of Division 3 of the Business and Professions Code, and a business entity offering landscape architectural services in accordance with that chapter.

C. An individual registered as a professional engineer pursuant to Chapter 7 (commencing with Section 6700) of Division 3 of the Business and Professions Code, and a business entity offering professional engineering services in accordance with that chapter.

D. An individual licensed as a professional land surveyor pursuant to Chapter 15 (commencing with Section 8700) of Division 3 of the Business and Professions Code, and a business entity offering professional land surveying services in accordance with that chapter.

11.2 **Defense Obligation For Design Professional Liability.** Consultant agrees, at its cost and expense, to promptly defend the City, and the City's employees, officers, managers, agents and council members (collectively the "Parties to be Defended") from and against any and all claims, allegations, lawsuits, arbitration proceedings, administrative proceedings, regulatory proceedings, or other legal proceedings to the extent the same arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of Consultant, or anyone employed by or working under the Consultant or for services rendered to the Consultant in the performance of the Agreement, notwithstanding that the City may have benefited from its work or services and whether or not caused in part by the negligence of an Indemnified Party. Consultant agrees to provide this defense immediately upon written notice from the City, and with well qualified, adequately insured and experienced legal counsel acceptable to City. This obligation to defend as set forth herein is binding on the successors, assigns and heirs of Consultant and shall survive the termination of Consultant's Services under this Agreement.

11.3 **Indemnity For Design Professional Liability.** When the law establishes a professional standard of care for Consultant's services, to the fullest extent permitted by law, Consultant shall indemnify, protect and hold harmless the City and the City's employees, officers, managers, agents, and Council Members ("Indemnified Parties") from and against any and all claim for damage, charge, lawsuit, action, judicial, administrative, regulatory or arbitration proceeding, damage, cost, expense (including counsel and expert fees), judgment, civil fines and penalties, liabilities or losses of any kind or nature whatsoever to the extent the same arise out of, pertain to, or

relate to the negligence, recklessness or willful misconduct of Consultant, or anyone employed by or working under the Consultant or for services rendered to the Consultant in the performance of the Agreement, notwithstanding that the City may have benefited from its work or services and whether or not caused in part by the negligence of an Indemnified Party.

11.4 **Defense Obligation For Other Than Design Professional Liability.** Consultant agrees, at its cost and expense, to promptly defend the City, and the City's employees, officers, managers, agents and council members (collectively the "Parties to be Defended") from and against any and all claims, allegations, lawsuits, arbitration proceedings, administrative proceedings, regulatory proceedings, or other legal proceedings which arise out of, or relate to, or are in any way connected with: 1) the Services, work, activities, operations, or duties of the Consultant, or of anyone employed by or working under the Consultant, or 2) any breach of the Agreement by the Consultant. This duty to defend shall apply whether or not such claims, allegations, lawsuits or proceedings have merit or are meritless, or which involve claims or allegations that any or all of the Parties to be Defended were actively, passively, or concurrently negligent, or which otherwise assert that the Parties to be Defended are responsible, in whole or in part, for any loss, damage or injury. Consultant agrees to provide this defense immediately upon written notice from the City, and with well qualified, adequately insured and experienced legal counsel acceptable to City. This obligation to defend as set forth herein is binding on the successors, assigns and heirs of Consultant and shall survive the termination of Consultant's Services under this Agreement.

11.5 **Indemnity For Other Than Design Professional Liability.** Except as to the sole negligence or willful misconduct of the City, Consultant agrees to indemnify, protect and hold harmless the Indemnified Parties from and against any claim for damage, charge, lawsuit, action, judicial, administrative, regulatory or arbitration proceeding, damage, cost, expense (including counsel and expert fees), judgment, civil fine and penalties, liabilities or losses of any kind or nature whatsoever whether actual, threatened or alleged, which arise out of, pertain to, or relate to, or are a consequence of, or are attributable to, or are in any manner connected with the performance of the Services, work, activities, operations or duties of the Consultant, or anyone employed by or working under the Consultant or for services rendered to Consultant in the performance of this Agreement, notwithstanding that the City may have benefited from its work or services. This indemnification provision shall apply to any acts, omissions, negligence, recklessness, or willful misconduct, whether active or passive, on the part of the Consultant or anyone employed or working under the Consultant.

12. **Insurance.**

12.1 **General Provisions.** Prior to the City's execution of this Agreement, Consultant shall provide satisfactory evidence of, and shall thereafter maintain during the term of this Agreement, such insurance policies and coverages in the types, limits, forms and ratings required herein. The rating and required insurance policies and coverages may be modified in writing by the City's Risk Manager or City Attorney, or a designee, unless such modification is prohibited by law.

12.1.1 **Limitations.** These minimum amounts of coverage shall not constitute any limitation or cap on Consultant's indemnification obligations under Section 11 hereof.

12.1.2 **Ratings**. Any insurance policy or coverage provided by Consultant or subcontractors as required by this Agreement shall be deemed inadequate and a material breach of this Agreement, unless such policy or coverage is issued by insurance companies authorized to transact insurance business in the State of California with a policy holder's rating of A or higher and a Financial Class of VII or higher.

12.1.3 **Cancellation**. The policies shall not be canceled unless thirty (30) days' prior written notification of intended cancellation has been given to City by certified or registered mail, postage prepaid.

12.1.4 **Adequacy**. The City, its officers, employees and agents make no representation that the types or limits of insurance specified to be carried by Consultant pursuant to this Agreement are adequate to protect Consultant. If Consultant believes that any required insurance coverage is inadequate, Consultant will obtain such additional insurance coverage as Consultant deems adequate, at Consultant's sole expense.

12.2 **Workers' Compensation Insurance**. By executing this Agreement, Consultant certifies that Consultant is aware of and will comply with Section 3700 of the Labor Code of the State of California requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance before commencing any of the work. Consultant shall carry the insurance or provide for self-insurance required by California law to protect said Consultant from claims under the Workers' Compensation Act. Prior to City's execution of this Agreement, Consultant shall file with City either 1) a certificate of insurance showing that such insurance is in effect, or that Consultant is self-insured for such coverage, or 2) a certified statement that Consultant has no employees, and acknowledging that if Consultant does employ any person, the necessary certificate of insurance will immediately be filed with City. Any certificate filed with City shall provide that City will be given ten (10) days' prior written notice before modification or cancellation thereof.

12.3 **Commercial General Liability and Automobile Insurance**. Prior to City's execution of this Agreement, Consultant shall obtain, and shall thereafter maintain during the term of this Agreement, commercial general liability insurance and automobile liability insurance as required to insure Consultant against damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from or which may concern operations by anyone directly or indirectly employed by, connected with, or acting for or on behalf of Consultant. The City, and its officers, employees and agents, shall be named as additional insureds under the Consultant's insurance policies.

12.3.1 Consultant's commercial general liability insurance policy shall cover both bodily injury (including death) and property damage (including, but not limited to, premises operations liability, products-completed operations liability, independent contractor's liability, personal injury liability, and contractual liability) in an amount not less than $1,000,000 per occurrence and a general aggregate limit in the amount of not less than $2,000,000.

12.3.2 Consultant's automobile liability policy shall cover both bodily injury and property damage in an amount not less than $1,000,000 per occurrence and an aggregate limit of

not less than $1,000,000. All of Consultant's automobile and/or commercial general liability insurance policies shall cover all vehicles used in connection with Consultant's performance of this Agreement, which vehicles shall include, but are not limited to, Consultant owned vehicles, Consultant leased vehicles, Consultant's employee vehicles, non-Consultant owned vehicles and hired vehicles.

12.3.3 Prior to City's execution of this Agreement, copies of insurance policies or original certificates along with additional insured endorsements acceptable to the City evidencing the coverage required by this Agreement, for both commercial general and automobile liability insurance, shall be filed with City and shall include the City and its officers, employees and agents, as additional insureds. Said policies shall be in the usual form of commercial general and automobile liability insurance policies, but shall include the following provisions:

> It is agreed that the City of Riverside, and its officers, employees and agents, are added as additional insureds under this policy, solely for work done by and on behalf of the named insured for the City of Riverside.

12.3.4 The insurance policy or policies shall also comply with the following provisions:

a. The policy shall be endorsed to waive any right of subrogation against the City and its sub-consultants, employees, officers and agents for services performed under this Agreement.

b. If the policy is written on a claims made basis, the certificate should so specify and the policy must continue in force for one year after completion of the services. The retroactive date of coverage must also be listed.

c. The policy shall specify that the insurance provided by Consultant will be considered primary and not contributory to any other insurance available to the City and Endorsement No. CG 20010413 shall be provided to the City.

12.4 **Errors and Omissions Insurance.** Prior to City's execution of this Agreement, Consultant shall obtain, and shall thereafter maintain during the term of this Agreement, errors and omissions professional liability insurance in the minimum amount of $1,000,000 to protect the City from claims resulting from the Consultant's activities.

12.5 **Subcontractors' Insurance.** Consultant shall require all of its subcontractors to carry insurance, in an amount sufficient to cover the risk of injury, damage or loss that may be caused by the subcontractors' scope of work and activities provided in furtherance of this Agreement, including, but without limitation, the following coverages: Workers Compensation, Commercial General Liability, Errors and Omissions, and Automobile liability. Upon City's request, Consultant shall provide City with satisfactory evidence that Subcontractors have obtained insurance policies and coverages required by this section.

13. **Business Tax**. Consultant understands that the Services performed under this Agreement constitutes doing business in the City of Riverside, and Consultant agrees that Consultant will register for and pay a business tax pursuant to Chapter 5.04 of the Riverside Municipal Code and keep such tax certificate current during the term of this Agreement.

14. **Time of Essence**. Time is of the essence for each and every provision of this Agreement.

15. **City's Right to Employ Other Consultants**. City reserves the right to employ other Consultants in connection with the Project. If the City is required to employ another consultant to complete Consultant's work, due to the failure of the Consultant to perform, or due to the breach of any of the provisions of this Agreement, the City reserves the right to seek reimbursement from Consultant.

16. **Accounting Records**. Consultant shall maintain complete and accurate records with respect to costs incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

17. **Confidentiality**. All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information, and other materials either created by or provided to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant, except as otherwise directed by City's Contract Administrator. Nothing furnished to Consultant which is otherwise known to the Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use City's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production, website, or other similar medium without the prior written consent of the City.

18. **Ownership of Documents**. All reports, maps, drawings and other contract deliverables prepared under this Agreement by Consultant shall be and remain the property of City. Consultant shall not release to others information furnished by City without prior express written approval of City.

19. **Copyrights.** Consultant agrees that any work prepared for City which is eligible for copyright protection in the United States or elsewhere shall be a work made for hire. If any such work is deemed for any reason not to be a work made for hire, Consultant assigns all right, title and interest in the copyright in such work, and all extensions and renewals thereof, to City, and agrees to provide all assistance reasonably requested by City in the establishment, preservation and enforcement of its copyright in such work, such assistance to be provided at City's expense but without any additional compensation to Consultant. Consultant agrees to waive all moral rights relating to the work developed or produced, including without limitation any and all rights of

identification of authorship and any and all rights of approval, restriction or limitation on use or subsequent modifications.

20. **Conflict of Interest**. Consultant, for itself and on behalf of the individuals listed in Exhibit "C," represents and warrants that by the execution of this Agreement, they have no interest, present or contemplated, in the Project affected by the above-described Services. Consultant further warrants that neither Consultant, nor the individuals listed in Exhibit "C" have any real property, business interests or income interests that will be affected by this project or, alternatively, that Consultant will file with the City an affidavit disclosing any such interest.

21. **Solicitation**. Consultant warrants that Consultant has not employed or retained any person or agency to solicit or secure this Agreement, nor has it entered into any agreement or understanding for a commission, percentage, brokerage, or contingent fee to be paid to secure this Agreement. For breach of this warranty, City shall have the right to terminate this Agreement without liability and pay Consultant only for the value of work Consultant has actually performed, or, in its sole discretion, to deduct from the Agreement price or otherwise recover from Consultant the full amount of such commission, percentage, brokerage or commission fee. The remedies specified in this section shall be in addition to and not in lieu of those remedies otherwise specified in this Agreement.

22. **General Compliance With Laws**. Consultant shall keep fully informed of federal, state and local laws and ordinances and regulations which in any manner affect those employed by Consultant, or in any way affect the performance of services by Consultant pursuant to this Agreement. Consultant shall at all times observe and comply with all such laws, ordinances and regulations, and shall be solely responsible for any failure to comply with all applicable laws, ordinances and regulations. Consultant represents and warrants that Consultant has obtained all necessary licenses to perform the Scope of Services and that such licenses are in good standing. Consultant further represents and warrants that the services provided herein shall conform to all ordinances, policies and practices of the City of Riverside.

23. **Waiver**. No action or failure to act by the City shall constitute a waiver of any right or duty afforded City under this Agreement, nor shall any such action or failure to act constitute approval of or acquiescence in any breach thereunder, except as may be specifically, provided in this Agreement or as may be otherwise agreed in writing.

24. **Amendments**. This Agreement may be modified or amended only by a written agreement and/or change order executed by the Consultant and City.

25. **Termination**. City, by notifying Consultant in writing, shall have the right to terminate any or all of Consultant's services and work covered by this Agreement at any time. In the event of such termination, Consultant may submit Consultant's final written statement of the amount of Consultant's services as of the date of such termination based upon the ratio that the work completed bears to the total work required to make the report complete, subject to the City's rights under Sections 15 and 26 hereof. In ascertaining the work actually rendered through the termination date, City shall consider completed work, work in progress and complete and incomplete reports and other documents only after delivered to City.

25.1 Other than as stated below, City shall give Consultant thirty (30) days' prior written notice prior to termination.

25.2 City may terminate this Agreement upon fifteen (15) days' written notice to Consultant, in the event:

25.2.1 Consultant substantially fails to perform or materially breaches the Agreement; or

25.2.2 City decides to abandon or postpone the Project.

26. **Offsets**. Consultant acknowledges and agrees that with respect to any business tax or penalties thereon, utility charges, invoiced fee or other debt which Consultant owes or may owe to the City, City reserves the right to withhold and offset said amounts from payments or refunds or reimbursements owed by City to Consultant. Notice of such withholding and offset, shall promptly be given to Consultant by City in writing. In the event of a dispute as to the amount owed or whether such amount is owed to the City, City will hold such disputed amount until either the appropriate appeal process has been completed or until the dispute has been resolved.

27. **Successors and Assigns**. This Agreement shall be binding upon City and its successors and assigns, and upon Consultant and its permitted successors and assigns, and shall not be assigned by Consultant, either in whole or in part, except as otherwise provided in paragraph 9 of this Agreement.

28. **Venue.** Any action at law or in equity brought by either of the parties hereto for the purpose of enforcing a right or rights provided for by this Agreement shall be tried in a court of competent jurisdiction in the County of Riverside, State of California, and the parties hereby waive all provisions of law providing for a change of venue in such proceedings to any other county. In the event either party hereto shall bring suit to enforce any term of this Agreement or to recover any damages for and on account of the breach of any term or condition of this Agreement, it is mutually agreed that each party will bear their own attorney's fees and costs.

29. **Nondiscrimination**. During Consultant's performance of this Agreement, Consultant shall not discriminate on the grounds of race, religious creed, color, national origin, ancestry, age, physical disability, mental disability, medical condition, including the medical condition of Acquired Immune Deficiency Syndrome (AIDS) or any condition related thereto, marital status, sex, genetic information, gender, gender identity, gender expression, or sexual orientation, in the selection and retention of employees and subcontractors and the procurement of materials and equipment, except as provided in Section 12940 of the California Government Code. Further, Consultant agrees to conform to the requirements of the Americans with Disabilities Act in the performance of this Agreement.

30. **Severability**. Each provision, term, condition, covenant and/or restriction, in whole and in part, of this Agreement shall be considered severable. In the event any provision, term, condition, covenant and/or restriction, in whole and/or in part, of this Agreement is declared invalid, unconstitutional, or void for any reason, such provision or part thereof shall be severed from this

Agreement and shall not affect any other provision, term, condition, covenant and/or restriction of this Agreement, and the remainder of the Agreement shall continue in full force and effect.

31. **Authority**. The individuals executing this Agreement and the instruments referenced herein on behalf of Consultant each represent and warrant that they have the legal power, right and actual authority to bind Consultant to the terms and conditions hereof and thereof.

32. **Entire Agreement**. This Agreement constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the subject matter of this Agreement, and supersedes all prior and contemporaneous understandings or agreements of the parties. Neither party has been induced to enter into this Agreement by and neither party is relying on, any representation or warranty outside those expressly set forth in this Agreement.

33. **Interpretation**. City and Consultant acknowledge and agree that this Agreement is the product of mutual arms-length negotiations and accordingly, the rule of construction, which provides that the ambiguities in a document shall be construed against the drafter of that document, shall have no application to the interpretation and enforcement of this Agreement.

33.1 Titles and captions are for convenience of reference only and do not define, describe or limit the scope or the intent of the Agreement or any of its terms. Reference to section numbers, are to sections in the Agreement unless expressly stated otherwise.

33.2 This Agreement shall be governed by and construed in accordance with the laws of the State of California in effect at the time of the execution of this Agreement.

33.3 In the event of a conflict between the body of this Agreement and Exhibit "A" - Scope of Services hereto, the terms contained in Exhibit "A" shall be controlling.

34. **Exhibits**. The following exhibits attached hereto are incorporated herein to this Agreement by this reference:

Exhibit "A" - Scope of Services
Exhibit "B" - Compensation
Exhibit "C" - Key Personnel

IN WITNESS WHEREOF, City and Consultant have caused this Agreement to be duly executed the day and year first above written.

CITY OF RIVERSIDE, a California charter city and municipal corporation a California corporation

By: _____
City Manager

Attest: _____
City Clerk

Certified as to Availability of Funds:

By: _____
Chief Financial Officer

Approved as to Form:

By: _____
Deputy City Attorney

P B S Engineers, Inc., a California corporation

By: _____

Kunal G. Shah
[Printed Name]

President
[Title]

By: _____

Mona Shah
[Printed Name]

Vice President
[Title]

EXHIBIT A – SCOPE OF SERVICES

PBS ENGINEERS

MECHANICAL ELECTRICAL PLUMBING | CONSULTING ENGINEERS

RIVERSIDE

City of Arts & Innovation

CITY OF RIVERSIDE
PUBLIC WORKS DEPARTMENT
WATER QUALITY CONTROL PLANT ENGINEERING SECTION
5950 Acorn Street
Riverside, California 92504

REQUEST FOR PROPOSAL FOR

MECHANICAL, ELECTRICAL, PLUMBING AND ENGINEERING DESIGN SERVICES

FOR

RIVERSIDE REGIONAL WATER QUALITY CONTROL PLANT ADMINISTRATION BUILDING HEATING, VENTILATION AND AIR CONDITIONING SYSTEM RENOVATION / REPLACEMENT PROJECT

RFP NO. 1707

Submitted By:

PBS ENGINEERS

"REVISED": August 22, 2017 **PBS No: 2017-620PBS**

Glendora | Los Angeles | San Diego
2100 East Route 66, Suite 101 Glendora, CA 91740 | T 626.650.0350 F 626.650.0352
www.pbsengineers.com

"Revised" August 22, 2017

City of Riverside
Public Work Department
Water Quality Control Plant Engineering Section
5950 Acorn Street
Riverside, California 92504

Project: RFP No. 1707: Mechanical / Engineering Design Services For
Riverside Regional Water Quality Control Plant Administration Building

Dear Sir or Madam:

In response to your Request for Proposals, PBS Engineers, Inc. is pleased to submit our Statement of Qualifications for your consideration. PBS Engineers, Inc., a certified SBE/MBE/DBE, is a mechanical, electrical, and plumbing (MEP) consulting engineering firm.

As a full service engineering firm, we offer an experienced and cohesive team of engineers, designers, draftspersons and CADD technicians. Our commitment to provide quality engineering, which ensures that projects are submitted on time and within the budget. Working with thorough knowledge and experience of local, state and federal codes, PBS provides quality work and a smoothly organized and executed plan check reviews that meets all codes and regulations.

We believe that the following PBS capabilities would be extremely beneficial to this project:

- We have extensive experience with other government agencies, such as, Los Angeles Department of Building and Safety (LADBS), Department State Architect (DSA), Los Angeles World Airports (LAWA), City of Simi Valley, City of Monterey Park, San Diego County Regional Airport Authority and Office of Statewide Health Planning and Development (OSHPD).
- Over 100 years of combined experience of hands-on pro-active Principals.
- Our dedication to "Providing Best Service" (PBS) at minimum cost.

Please see attached acknowledged and signed Addendum No.1 located in the Appendix section of this proposal.

Thank you for the opportunity to provide this Qualification. We hope that the enclosed information answers all of your questions. Should you require any additional information, please call us.

Sincerely,
PBS Engineers, Inc.

Noe Portilla, PE
Principal

A. SCOPE OF THE WORK:

PBS performed a preliminary site survey of the Chiller Plant serving the Administration and Laboratory Building located at 5950 Acorn Street, Riverside, California on May 17, 2017. The purpose for the site survey was to understand the scope of work for the upgrade and replacement of the existing Chiller Plant, including the replacement and refurbishment of the Air Handing Unit serving the Administration Office Building and Laboratory.

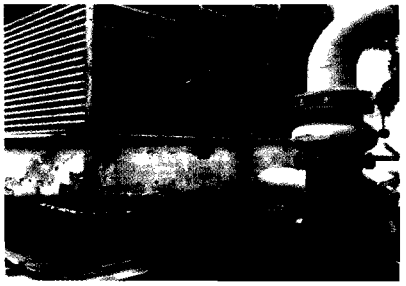
The original HVAC design for serving the Administration and Laboratory Building area was executed in 1995 under the "Laboratory Expansion Project". Per the preliminary site investigation of the Chiller Plant yard, we found that most of the equipment, including the Chiller, Cooling Tower, Chiller Absorption Pumps, Condenser Water Pumps and Heating Hot Water Pumps are rusted and have deteriorated over the last 20 years of operation.

Below is the summary of the Mechanical Engineering design services and supporting engineering services including Plumbing, Electrical, Architectural and Structural engineering.
Replacement of all deteriorated chiller plant equipment located within chiller plant yard with more efficient chillers, cooling tower and premium efficiency motors for pumps with variable frequency drives.

1. Replacement of existing obsoleted MCC switch that is serving equipment's located within chiller plant yard.
2. Replacement/Refurbishment of AHU-1 serving administration offices with new air handing unit. Rebalance existing administration office building air distribution.
3. Provide Cooling only HVAC for **12KV Power Building electrical room** besides main generators.
4. Modify existing branch duct distribution to reduce the airborne noise in existing administration office building. Provide sound dampening to minimize airborne noise.
5. Provide new Title-24 compliant thermostat and interlock them with existing Building Management System (BMS) for better response to space temperature variation.
6. Refurbishment of AHU-2 and AHU-3 serving the laboratory area for efficient operation of existing air handling unit. Revised air balance pressurization for existing laboratory.
7. Provide Electrical power from existing mains, as required to feed new mechanical equipment.
8. Provide Plumbing design and engineering services for Makeup water to cooling tower, condensate water drains, as required for new HVAC equipment.
9. Provide details and structural calculation, as required for HVAC equipment support, as required for the project including wall and roof opening.
10. Provide architectural AutoCAD background for site plan and building plans and sections.
11. Provide Construction administration and engineering support for bid process, contractor selection process as required.
12. Provide past construction MEP commissioning services including detailed commissioning report.

A. SCOPE OF THE WORK (CONTINUED):

See below for preliminary report on existing condition of chiller plant and recommendation for HVAC system renovation. Refer Task 4 for detail scope of work.



Cooling Tower:

Existing Condition: More than 20 years old, deteriorated, rusted, Evaporative media rusted. Leakage from cooling tower basin.

Recommendations: Replace existing cooling tower with new cooling tower.

Condenser water pumps:

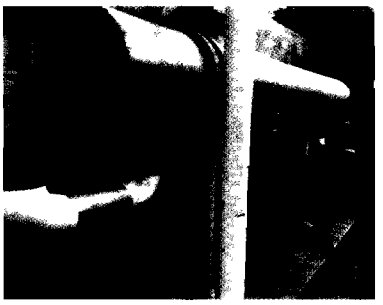
Existing Condition: Observed Condenser water pumps are rusted. Pump couplings are rusted and deteriorated.

Recommendations: Replace with new condenser water pumps.

Absorption chiller hot water heat exchanger:

Existing Condition: Heat exchanger with absorption chiller to be removed.

Recommendations: New technology chiller will not require this (E) heat exchanger associated with (E) absorption chiller.



Hot water secondary loop Heat Exchanger:

Existing Condition: More than 20 years old, deteriorated, rusted pipes, and flanges, almost at the life expectancy.

Recommendations: Replace with new hot water secondary loop Heat Exchanger.

A. SCOPE OF THE WORK (CONTINUED):

Expansion tank with chilled water and hot water

Existing Condition: Deteriorated and rusted pipes and flanges.

Recommendations: Replace with new expansion tank for chilled water and hot water.

Heating hot water circulating pumps:

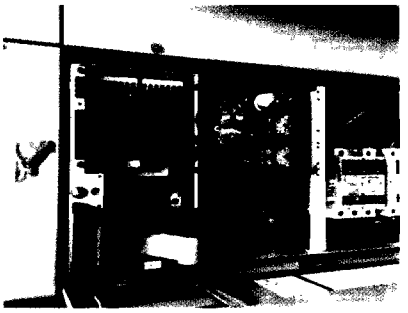
Existing Condition: Heating Hot water pumps are rusted and deteriorated, Pipes and flanges are deteriorated

Recommendations: Replace heating hot water pumps with the new energy efficient Heating Hot water pumps with VFD.

Chilled water circulating pumps:

Existing Condition: Chilled water pumps are rusted and deteriorated, Pipes and flanges are deteriorated.

Recommendations: Replace Chilled water pumps with the new energy efficient Chilled water pumps with VFD.

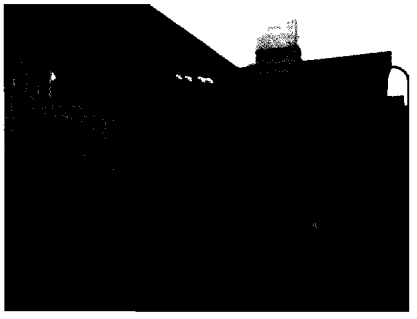


Electrical motor started for central plants:

Existing Condition: Electrical motor started in the switchgear are obsolete.

Recommendation: Replace new motor started with new technology.

A. SCOPE OF THE WORK (CONTINUED):



Air Handling Unit-2

Existing Condition: More than 20 years old, not proper air balance maintained in the area served by air handler, issue of dust and flakes entering in the building served by AHU-2.

Recommendations: Refurbishment of the (E) air handler system and provide carbon filter section at outside air intake to avoid issue of odor, dust and flakes.

Ductwork Associated with Air Handling Units

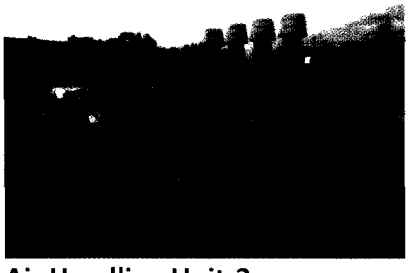
Existing Condition: Rusted and damaged ductwork, wear and tear on the insulation on the ductwork.

Recommendations: Provide new ductwork with the new insulation at the areas identified with existing ductwork in the bad condition.

Air Handling Unit-1

Existing Condition: More than 20 years old, not proper air balance maintained in the area served by air handler.

Recommendations: Replace (E) air handler Ahu-1 due to life expectancy and required modification on the capacity of the Ahu-1 based on the heating and cooling load demand of the expansion of the existing LAB.

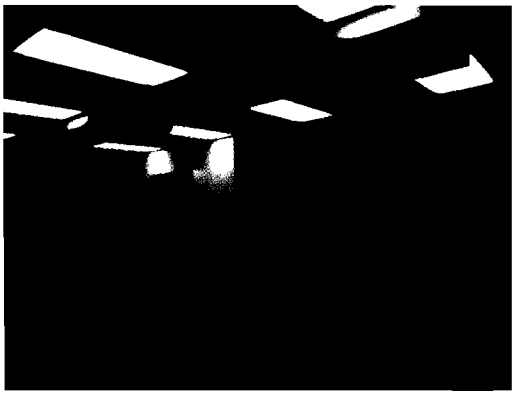


Air Handling Unit-3

Existing Condition: More than 20 years old, not proper air balance maintained in the area served by air handler.

Recommendations: Refurbishment of the (E) air handler system and provide carbon filter section at outside air intake to avoid issue of odor, dust, and flakes.

A. SCOPE OF THE WORK (CONTINUED):



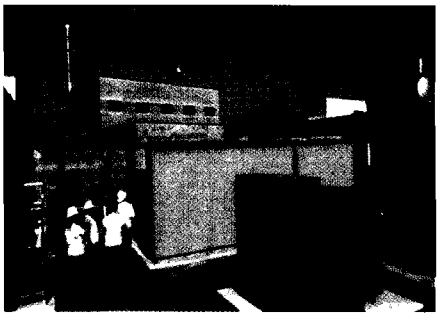
Existing Lab air balance and noise issue:
Observations: During the site visit, observed and provided information from one of the staff for noise issue, draft issue, not proper air balance, odor, dust and flakes coming from the air outlets.

Recommendations:
Provide carbon filter to the AHU-2 serving LAB area. Analyze noise and draft issue to overcome the problem, Ensure the air balance of the Lab.

Existing offices at LAB Expansion area:
Observations: Not enough cooling and heating, Air draft and noise issue at air devices, thermostats were not responding based on variation in room temperature.

Recommendations:
Provide sound treatment at the concerned areas to mitigate airborne noise. Provide air as per heating and cooling load calculation to ensure comfort in the space. Provide new thermostat and associated controls to ensure accurate performance of the zone HVAC system.

A. SCOPE OF THE WORK (CONTINUED):



Existing 12KV Power Building Electrical Room temperature issue:

Observations: During the additional scope site visit on July 31, 2017, It is observed that existing electrical room has only exhaust fan with thermostat to maintain the room temperature. It is recommended to maintain 78°F DB to 90°F DB temperature for electrical room. Existing exhaust fan with makeup louver cannot maintain room temperate below 90°F while outdoor temperature increase over 90°F DB in peak summer. During peak summer riverside area temperature may rise to 107°F DB Also, equipment in electrical room also dissipates the heat.

Recommendations:
For prolonged and optimal performance of equipment in electrical room it is recommend to maintain room temperature within 78°F DB to 90°F DB. PBS recommend to provide mechanical cooling by providing cooling only split system with outdoor condensing unit and indoor fan coil to maintain room temperature within recommended temperature range.

PBS will provide customary basic Mechanical, Electrical, Plumbing, Structural and Architectural/Engineering services as outlined in Article No. 4 of AIA Document No. C141 (1997 edition). Any services not customarily furnished in accordance with generally accepted engineering practice will be considered additional services.

Project Description: Replace the deteriorated Heating, Ventilation and Air Conditioning equipment serving West Admin Building, Replace the deteriorated Cooling Tower, Chiller, Condenser Water pumps, Chilled Water Pumps and Heating Hot Water Pumps at Chiller Plant Yard, replace existing and an obsolete MCC Switch Gear serving existing Chiller plant, provide cooling only HVAC for 12KV power building electrical room besides main generators at Riverside Water Quality Control Building located at 5950 Acorn St, Riverside, California.

A. SCOPE OF THE WORK (CONTINUED):

The following is included in the scope of work:

TASK 1: PROJECT MANAGEMENT AND ADMINISTRATION

1. PBS to provide project management throughout the course of the project to ensure fulfillment of the project scope of work within budget and schedule.
2. PBS to provide the project management responsibilities associated with proper scheduling review, budget control, invoice preparation and coordination with Riverside RWQCP Project Manager and staff, including managing subconsultants.
3. Maintain a project schedule outlining all tasks, durations, milestone dates and Riverside
4. RWQCP review periods.
5. PBS including project sub consultant to attend up to five (5) project progress meetings relative to the design activities.
6. PBS to prepare meeting minutes for review by City staff and approval.

TASK 2: DATA COLLECTION AND ASSESSMENT STUDY

1. PBS and including subconsultants to attend a kickoff meeting with the City of Riverside to discuss the Project goals and objectives.
2. PBS and projects subconsultants to Review the City of Riverside's existing data, reports, record drawings and studies regarding the existing HVAC system.
3. PBS and its subconsultant to collect the data of existing system.
4. Measure and record all actual fan operating data for the three main Air Handling Unit (AHU-1, AHU-2 and AHU-3) Supply and Return air fan. Specifically, obtain and record all actual and required unit information, as available on equipment tags to include:
   a. Fan manufacturer, model & serial number.
   b. Motor manufacturer, HP, service factor, design FLA, actual AMP draw.
   c. Sheave and belt information.
   d. Examine filters and fan belt and provide a recommendation for replacement if required.
   e. Verify and report if automatic control devices (valves and dampers) are functioning properly.
   f. Provide a static pressure profile of each component within the unit.
   g. Total supply, return and OSA CFM.
   h. Measure and record air temperature readings for each unit at OSA, return air, mixed air and supply air locations.
5. Measure and record the actual static pressure and CFM by duct traverse of each main zone of the building by means of duct traverse (if possible).
6. Verify and document all obtainable information for each VAV box and re-heat coil.
7. Measure and record CFM readings at all existing air distribution.
8. Provide a summary of duct leakage by comparison of zone totals versus air distribution totals.

A. SCOPE OF THE WORK (CONTINUED):

9. Measure and record the total flow (GPM) of hot water for the boiler/ hot water system by means of ultrasonic flow measuring if necessary.
10. Measurement and record the total flow (GPM) of Chilled water from Chiller Pump main riser to each AHU.
11. Measure and record the sound pressure levels, full octave band (eight octave bands, from 31.5 to 4000 HZ) levels with the HVAC Supply/Return/Exhaust air "equipment on" and "equipment off" in each room / space with the admin office building.
12. Inspect, identify, document and describe any observed conditions that may affect system performance for all areas surveyed. Provide photos of abnormalities, deficiencies and/or special conditions where possible.
13. Inspect, verify and document the current condition of the DDC control system. Provide photos of abnormalities, deficiencies and/or special conditions where possible.
14. Inspect, verify and document the current condition of the AHU Supply Air Distribution. Provide photos of abnormalities, deficiencies and/or special conditions where possible.
15. Develop schematic "AutoCAD" drawings by means of tracing out the existing ductwork to document the current conditions of the existing system(s). The components included are: all Air Handlings Unit, Fan Coils, Exhaust Fans, Make up Air Units, ductwork, zone dampers, CAV/ VAV boxes, smoke/fire dampers, humidifiers, re-heat coils, air distribution and thermostats, as applicable. The actual conditions will be identified on the plans, ductwork sizes measured, and new single line schematic CAD diagrams will be provided.
16. Provide Schematic "AutoCAD" drawings and indicate the location of each reading taken, including all duct traverses and air distribution readings.
17. Provide Two (2) copies of "Test & Balance Survey Analysis Report" within five working days of completion.
18. Perform testing of existing air quality within Administration Building and Laboratory
19. PBS to prepare a report with findings and present to city of riverside with alternative recommendations and life cycle costs.
20. PBS to provide two (2) hard copies of the assessment study report with a CD containing electronic files in both source format and Portable Document Format (PDF) and meet with City staff and address any concerns that staff may have.

A. SCOPE OF THE WORK (CONTINUED):

TASK 3: PRELIMINARY DESIGN REPORT

1. PBS to Investigate feasibility and develop design alternatives from Task 2.
2. Attend up to two (2) meetings with the City for review and approval of the Schematic Design package.
3. PBS and subconsultants to perform site investigation work to determine and identify all necessary improvements required to achieve and complete the intended project scope.
4. PBS and subconsultant to attend one meeting with the plan review agencies for preliminary plan check review and code requirement verifications.
5. PBS to coordinate with Riverside Public Utilities to review rebate programs and incentives if available.
6. PBS to Coordinate with Building, Fire and other agencies having jurisdiction over this project as necessary to obtain plan review approval and/or permits.
7. Prepare presentations, drawings and documents necessary to obtain approval from the City agencies.
8. Submit Preliminary design drawings (20% CD) to the City for review and comments.
9. PBS to review and incorporate city review comments and finalize the schematic design package.
10. Provide Rough order magnitude (ROM) construction cost estimates for design alternatives.
11. PBS to provide two (2) hard copies of the preliminary design report and drawings with a CD containing electronic files in both source format and Portable Document Format (PDF) and meet with City staff and address any concerns that staff may have.

A. SCOPE OF THE WORK (CONTINUED):

TASK 4: CONSTRUCTION DOCUMENTS

1. Provide complete Construction Documents in accordance with the approved Schematic Design plans and Preliminary Design Report. Construction Documents shall be prepared per applicable codes and City standards.
2. Note: Entire Admin building HVAC System replacement including all AHU is not included in scope of work.
3. PBS to attend up to two (2) meetings with the City for review and approval of the Construction Documents package.
4. Meet with various government agencies having jurisdiction for review and approval of code compliance.
5. Submit Construction Documents at fifty percent (50%) and ninety percent (90%) completion stages to the City for review and comments.
6. Submit the ninety percent (90%) Construction Documents to City for plan check.
7. Coordinate with all agencies having jurisdiction over the project as necessary to obtain approval.
8. Submit 100% Construction Documents, which shall incorporate all review comments by the City.
9. Technical specifications shall be prepared in CSI format, and written in Microsoft Word format.
10. Construction cost estimates.
11. Construction schedule.
12. PBS Submit construction drawings and specification to city as required to the Purchasing Service Manager in PDF format for public advertising.
13. PBS to provide two (2) hard copies of the construction drawings at 50% and 90% with a CD containing electronic files in both source format and Portable Document Format (PDF) and meet with City staff and address any concerns that staff may have.
14. PBS to provide six (6) hard copies of the construction drawings, specifications and equipment cut sheets at 100% with a CD containing electronic files in both source format and Portable Document Format (PDF) and meet with City staff and address any concerns that staff may have.

A. SCOPE OF THE WORK (CONTINUED):

MECHANICAL:

Demolition Scope Chiller Plant Equipment Yard

1. Remove existing 150 Nominal Tonnage Capacity Absorption Chiller and associated piping within central plant yard.
2. Remove asbestos material from hot water piping and mud leg from boilers.
3. Remove existing heat exchanger, insulation, piping and supports.
4. Remove existing chilled water expansion tank ET-1.
5. Remove existing heating hot water expansion tank ET-2.
6. Remove existing two Heating Hot water pumps associated piping within central plant yard.
7. Remove existing two Chilled water pumps associated piping within central plant yard.
8. Remove existing two Condenser water pumps and associated piping within central plant yard.
9. Remove existing two Absorption water pumps and associated piping within central plant yard.
10. Remove existing Heating hot water exchanger and associated piping within central plant yard.
11. Remove existing Absorption water heat exchanger and associated piping within central plant yard.
12. Remove existing Cooling Tower and associated piping within central plant yard
13. Remove cooling tower pumps, base and valves.
14. Remove exterior cooling tower piping, fittings and valves.
15. Remove cooling tower water treatment system.
16. Remove make-up water and drainage system.
17. Remove existing Chiller plant control system.

Demolition Scope Admin Office and Lab Building

1. Remove existing AHU-1 Serving admin office building including associated main supply and return duct and its accessories.
2. Remove identified damaged, corroded and rusted ductwork from AHU-1, 2 and 3 serving existing and expansion Lab area.
3. Remove field verified abandoned ductwork in the ceiling space and abandoned existing HVAC units.
4. Remove existing deteriorated exposed insulation on chilled water and heating hot water supply/return piping as required for AHU-2 and AHU-3.
5. Remove chilled/hot water pipes, fittings, valves, insulation, and controls associated to AHU-1.

A. SCOPE OF THE WORK (CONTINUED):

General Scope of work:

1. All new HVAC equipment shall be specified and designed in accordance with RWQCP design guidelines and specifications.
2. Perform cooling and heating load calculations to verify required equipment capabilities.
3. Internally clean all existing ductwork which will be connected to new air handlers.
4. Install duct insulation and vapor barrier where missing or damaged.
5. Perform an air and water balance for all HVAC systems that are provided as new or are modified as part of this scope of work to be provided by awarded air balance contractor.
6. Provide structural calculations and anchorage details for all equipment $\geq$ 400 lbs. 20 lbs. and over for concentrated suspended equipment.
7. Patch and repair existing walls, ceiling, floors and roof finish impacted by demolition work.
8. Provide ceiling repair details as needed.
9. Interlock all air conditioning equipment over 2,000 CFM with the fire alarm system to shut down upon activation of the fire alarm system.
10. Install all components for a complete system, including any required structural, electrical and mechanical components for a complete and operable system.
11. Provide existing systems site investigation report.
12. Provide hot and chilled water pipe flushing, prior to any demolition work.
13. Provide isolation valves as required for phasing work.
14. Provide Title 24 Prescriptive energy compliance with approved energy compliance software by CEC.
15. Provide pretesting of equipment and air distribution system reading report prior to any demolition and duct cleaning.
16. **Provide pre-air balance report with Measure and record the sound pressure levels at full octave band (eight octave bands, from 31.5 to 4000 HZ)** levels with the HVAC Supply/Return/Exhaust air "equipment on" and "equipment off" in each room / space with the admin office building.

A. SCOPE OF THE WORK (CONTINUED):

Installation Item (Mechanical)

Remodel Scope Chiller Plant Equipment Yard

1. Provide energy efficient new technology Chiller and associated piping within central plant yard.
2. Provide chilled water expansion tank.
3. Provide heating hot water expansion tank.
4. Provide two Heating Hot water pumps associated piping within central plant yard.
5. Provide two Chilled water pumps associated piping within central plant yard.
6. Provide two Condenser water pumps and associated piping within central plant yard.
7. Provide Heating hot water secondary loop heat exchanger and associated piping within central plant yard.
8. Provide Cooling Tower and associated piping within central plant yard
9. Provide cooling tower pumps, base and valves.
10. Provide exterior cooling tower piping, fittings, and valves.
11. Provide cooling tower water treatment system.
12. Provide make-up water and drainage system.
13. Provide existing Chiller plant control system.
14. Provide new concrete pad design and structural calculations for central plant equipment as required.

A. SCOPE OF THE WORK (CONTINUED):

Remodel Scope Admin Office and Lab Building

1. Provide new build-up air handling unit AHU-1 with chilled water coils, filter section including Pre-filter, final-filter and Carbon filter, 100% modulating economizer, and motorized dampers. High efficiency motor with VFD, installed on roof.
2. Modify existing curb of the AHU-1 as per new AHU-1 Footprint.
3. Install new CHW pipes, valves, insulation, and controls for new air handling units AHU-1 to the existing CHW pipes on roof.
4. Refurbish existing AHU-2 serving the Existing Lab area and replace/refurbished existing chilled water coil, Provide new duct mounted filter section with Pre-filter and carbon filter.
5. Refurbish existing AHU-3 serving the Existing Lab area and replace/refurbished existing chilled water coil, Provide new duct mounted filter section with Pre-filter and carbon filter.
6. Provide new ductwork and insulation associated with AHU-1, 2 and 3 at the damaged areas identified.
7. **Provide Airborne sound mitigation treatment in the areas identified with noise issue in the existing lab, the expansion of the lab and administration office building.**
8. Provide air balance as per CEC table 4A in the Existing Lab area and Expansion of LAB areas.
9. Adjust the air flow as per the heating and cooling load calculations in order to provide comfort in the areas identified of discomfort.
10. Provide new title 24 compliant thermostats to respond the space temperature variation and communicate with existing zone HVAC system for better thermal comfort.
11. Provide pretesting of equipment and air distribution system reading report prior to any demolition and duct cleaning.
12. Provide existing duct and air distribution system cleaning for Lab area.
13. Provide stand-alone DDC control system and provision to tie in campus wide BMS system.
14. Provide duct detectors for large units for shutdown and connect to existing fire alarm system.
15. Fix walls, ceiling and roofs affected by removal mechanical equipment. Roof repair shall be warranted and match to existing.
16. Provide complete hydronic system and airside testing and balancing report after the construction.
17. Provide energy compliance with approved energy compliance software by CEC.
18. All system shall meet current indoor air quality requirements.

A. SCOPE OF THE WORK (CONTINUED):

Remodel Scope for 12 KVA Power Building Electrical Room Beside Main Gwneratots.

1. Provide HVAC cooling only design for electrical room besides main generators.
2. Provide prescriptive T-24 compliance.

Plumbing (General)

1. Field verify existing utilities, such as condensate drain.
2. Provide new drainage system, as required, for new equipment.
3. Provide make-up water and drainage system for new cooling tower.

Electrical (General)

1. Field verify the existing electrical and control system for HVAC project buildings.
2. Disconnect power for the existing demolished mechanical equipment and control system.
3. Remove all conduits, wires, and panels that are not used from the space.
4. Provide new electrical power from existing main, as required, for new the mechanical equipment.
5. Provide new panels, controls, wiring, and conduits for the HVAC equipment as required.

Architectural (General)

1. Provide architectural AutoCad backgrounds for Site Plan, 1st Floor Plan, RCP, Roof Plan, Building Section, Equipment Pad and Central Plant.
2. Site visit(s) to confirm existing conditions
3. Architectural coordination for new mechanical unit at existing roof curb
4. Kick-off meeting
5. 2 Construction documents meetings
6. 1 Contractor meeting
7. Architectural segment (1-2 pages) to overall Report
8. Specification sections at affected mechanical modification areas
9. Architectural sheets: Site Plan, Floor Plan, RCP, Building Section
10. Architectural details at affect areas
11. Construction RFI's, architectural submittal review

A. SCOPE OF THE WORK (CONTINUED):

Structural Engineering (General)

NS Structural Engineering, Inc. propose to provide the following Structural Engineering services for this proposal based on the following tasks described in RFP No. 1707:

1. Initial Kick-Off meeting.
2. Review record-set of structural as-built drawings.
3. Review existing and new Roof-top equipment cutsheet (1 total).
4. Review new equipment cutsheets at equipment yard (15 total).
5. Feasibility study in preparation for city review and approval based on schematic design package.
6. Meeting with City to discuss Preliminary Design.
7. Stamped/Signed structural calculations for the following:
    a. Roof top seismic anchorage.
    b. Verification of existing roof framing.
    c. Seismic Anchorage of all equipment at equipment yard (15 total).
    d. Foundation design (as required).
8. Stamped/Signed structural drawings:
    a. General Notes and Typical Details.
    b. Partial Roof framing Plan.
    c. Foundation Plan at Equipment Yard.
    d. Details.
9. Review and markup CSI specifications.
10. Respond to City comments.
11. Attend pre-bid job walk.
12. Construction Support.

A. SCOPE OF THE WORK (CONTINUED):

TASK 5: BIDDING AND AWARD SERVICES

1. Attend two (2) bid and pre-bid meetings.
2. Provide plan clarification during the Bid and Award period, and provide information and issuance of bid addenda, if necessary.
3. Assist city staff in bid review, evaluation and contractor selection.

TASK 6: MEP, ARCHITECTURAL, STRUCTURAL ENGINEERING CONSTRUCTION ADMINISTRATION (ENGINEERING SERVICES DURING CONSTRUCTION 6 MONTH PERIOD)

1. Attend pre-construction meeting and provide answers to comments by the contractor.
2. Attend weekly construction meetings, twenty-six (26) meetings, Six Month construction time per design manager. For additional services, more than six months of construction administration shall be negotiated with City of Riverside.
3. Attend six (6) HVAC equipment – system commissioning meetings.
4. Provide responses to Requests for Information (RFI).
5. Review change order proposals and provide estimate for each change order when requested.
6. Review shop drawings and submittals.
7. Review acceptability of substitutions proposed by the contractor.
8. Participate in the job walk inspections and prepare punch lists for preliminary and final acceptance.
9. Provide as-built record drawings in the latest AutoCAD version format per latest City of Riverside Standards.
10. Provide past construction MEP commissioning services including detailed commissioning report.
11. Provide project close-out.

TASK 8. ADDITIONAL ENGINEERING SERVICES

This task includes additional work needed to complete the project and is not-to-exceed ten (10) percent of the proposed fee.

A. SCOPE OF THE WORK (CONTINUED):

PROJECT SCHEDULE

PBS hereby confirms responsibility for the preparation of construction documents, plans and specifications for the BID Package within thirty-two (32) weeks after the Notice-to-Proceed is issued by the District and will adhere to the following submittal schedule:

SUBMITTAL SCHEDULE		
Item	**Description**	**Weeks**
1	**Preliminary Design Drawings and Design Alternative Report** Field Survey of Existing Condition and provide deficiency report with recommended design alternative including life cycle cost analysis. Preliminary design drawings (20% CD). Preliminary Cost Estimate with maximum two design alternatives. One (**1**) CD of 20% Submittal (CD containing electronic files in both source format and **PDF**)	8
2	**City Review and Comments**	2
3	**Construction Design Phase 50% Submittal** Six (6) Sets Half-Scale Drawing Specifications Cost Estimate One (**1**) CD of 50% Submittal (CD containing electronic files in both source format and **PDF**)	6
4	**City Review and Comments**	2
5	**Construction Design Phase 90% Submittal** Six (6) Sets Half-Scale Drawing Specifications Cost Estimate One (**1**) CD of 90% Submittal (CD containing electronic files in both source format and **PDF**)	6
6	**City Review and Comments**	2
7	**City Submittal 90% (Stamped and Signed)** Four (4) Sets of Drawings Four (4) Sets of Specifications Four (4) Sets of Cut Sheets One (1) Riverside City Plan Check Application Intake Forms One (1) CD of Final Submittal One (1) CD CAD File Drawings (CD containing electronic files in both source format and **PDF**)	4
8	**Final 100% Construction Drawing (Stamped and Signed)** Four (4) Sets of Drawings Four (4) Sets of Specifications Four (4) Sets of Cut Sheets One (1) Riverside City Plan Check Application Intake Forms One (1) CD of Final Submittal One (1) CD CAD File Drawings (CD containing electronic files in both source format and **PDF**)	2
	TOTAL WEEKS	**32**

A. SCOPE OF THE WORK (CONTINUED):

EXCLUSIONS

1. Upgrade fire alarm system is not included in scope of work or fees.
2. Upgrade electrical system is not included in scope of work or fees.
3. Electrical lighting and Title-24 compliance for electrical lighting is not included in scope of work or fees.
4. Upgrade site utilities is not included in scope of work or fees.
5. Title 24 Energy Compliance Documentation (prescriptive approach) consisting of Mechanical and preparation of Forms MECH-1 thru MECH-4 in scope of work. A building envelope, Day lighting and lighting study/simulation (DOE or similar) are not included in scope to document Title 24 energy compliance.
6. Site work (fire protection, natural gas, domestic water, sewer, and storm drain) design will be by civil engineer.
7. Plumbing scope of work will extend 5 feet outside of building wall.
8. Site investigation is limited to non-destructive verification of existing mechanical, plumbing and electrical conditions. Temporary relocation of furniture, equipment and casework to verify site conditions is not included in this scope of work or fee.
9. Existing electrical, telephone, cable TV, domestic water, natural gas, sewer and fire protection utility services are assumed to have adequate capacity to serve the areas included in the scope of this work.
10. Utility services upgrade is not included in the scope of work and fee.
11. The existing power, low voltage, mechanical, and plumbing systems equipment and distribution systems are assumed to have capacity to service the area included in the scope of this work and also meet current code requirements. Equipment and distribution systems upgrade is not included in the scope of work and fee.
12. As-built drawings are available. If as-built drawings are not available, additional services will be required for site verification of existing conditions.
13. Any cost of recordings of power, air, water, and sewer is not included in scope of work or fee.
14. Multiple bid packages are not included in the scope of work and fee.
15. Phasing or sequencing of drawings is not included in the scope of work or fee.
16. Preparation of alternate bid packages is not included in the scope of work and fee (AIA #C141 3.2.3 Modification)
17. Re-design services, if project is over budget after approval/completion of design development, will be performed for an additional service fee (AIA #C141 3.2.5 Modification)
18. Code upgrade of existing facility is not included in the scope of work and fee.
19. Active data network equipment design is not included in the scope of work and fee.
20. Telephone system equipment design is not included in the scope of work and fee.

B. METHODOLOGY:

Approach to Scope of Work

PBS reviews the owner-furnished program and scope of work and develops a schematic, design development and construction document packages. After completion of each package, we will arrange a meeting with the city to review the programming and scope of work to make sure that the design meets the City's needs before proceeding with the next package.

Each submittal consists of the following documents:

- Schematic package will consist of a plan that meets the scope of work and programming, a preliminary construction budget and a project schedule.
- Design development document package consists of more detail drawings and includes outline specifications, more detailed cost estimate and more developed project schedule.
- Construction document package includes all the required drawings, sections, details, complete specifications for bidding and final cost estimate.

This process will provide a complete construction document that is ready to bid, meet the owner's programming and stays within the budget.

Approach to Documenting and Verifying As-Built Conditions

To verify the as-built conditions, PBS visits the job site to verify the existing conditions and floor plans. A representative will be present on field verification trips

HVAC

- Document make and model of all equipment
- Verify existing duct routing and equipment capacities.
- If necessary, obtain the service of an air balance company to prepare an airflow and water flow reading where existing equipment is to be re-used.
- Survey existing equipment for condition, useful life.
- Meet with maintenance personnel.
- Address all existing deficiencies.

PLUMBING

- Verify location and condition of the existing plumbing, condensate and make-up water system, general piping condition, etc.
- Gather as-built plans.

ELECTRICAL

- Verify location of the existing panels and distribution system.
- Survey existing equipment for condition, useful life.
- Meet with maintenance personnel.
- Address all existing deficiencies.

Experience with Constructability Reviews

PBS has extensive experience with constructability reviews, both as peer review and in-house reviews.The process is continuous and offered as part of our fee through the end of construction document phase prior to bidding and includes the cost of modifying the documents.

B. METHODOLOGY (CONTINUED):

Experience in Developing Designs and Construction Documents that Consider Phasing Due to Financing Situations

PBS has addressed this approach on several projects by preparing drawings and specifications for the main portion of the work with add alternates (for phasing) identified within the documents that are separate line items during the bidding process.

Our goal is to meet and exceed our clients' expectations. Keeping this in mind we follow the following QA&QC procedures:

IMPLEMENTATION:

- Kick-off Meeting with Design Team at Project Inception to Communicate Quality Standards and Implementation.
- Adhere to Client and Company Standards Throughout Design Process.
- Perform Independent In-House Peer Review at 50% and 90% Completion.
- Follow Oral and Written Communication Procedures During Construction.

DESIGN PHASE:

- Utilize Design Checklist and Utilize Design and Drawing Standards.
- Perform Independent Quality Assurance Review and Detailed Interdisciplinary Coordination (Redicheck).
- Conduct Regularly Scheduled Coordination Meetings with Team.

CONSTRUCTION ADMINISTRATION:

- Assist the Owner during contractor selection process including pre-construction job walk-thru, review of the construction bids, and attend weekly construction meetings.
- Review of the shop drawings, submittals, etc., in expeditious manner.
- Maintain open communication with all parties involved in construction and continuous communication on all unresolved issues/items.
- Proper justification of our engineering design to Contractors and Owner to resolve any conflicts.
- Prompt response to R.F.I.'s questions from contractor.
- Assistance during post construction, including presence during testing and balancing at site, review balance report, debugging the systems, etc.
- Arrange immediate site visit to resolve any conflicts or construction related problems.
- Maintain the integrity of the contract documents by identifying alternatives that avoid changes to the original scope.
- Resolutions to conflicts shall minimize hardships to the construction team and its respective members.
- Final project job-walk thru, and preparation of punch list.

EXHIBIT B – COMPENSATION

ARCHITECTURAL/ENGINEERING FEE MATRIX
Mechanical, Electrical, Plumbing, Structural and Architectural/Engineering Services

CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT PUBLIC WORKS DEPARTMENT
WATER QUALITY CONTROL PLANT ENGINEERING SECTION
5950 Acorn Street Riverside, CA 92504

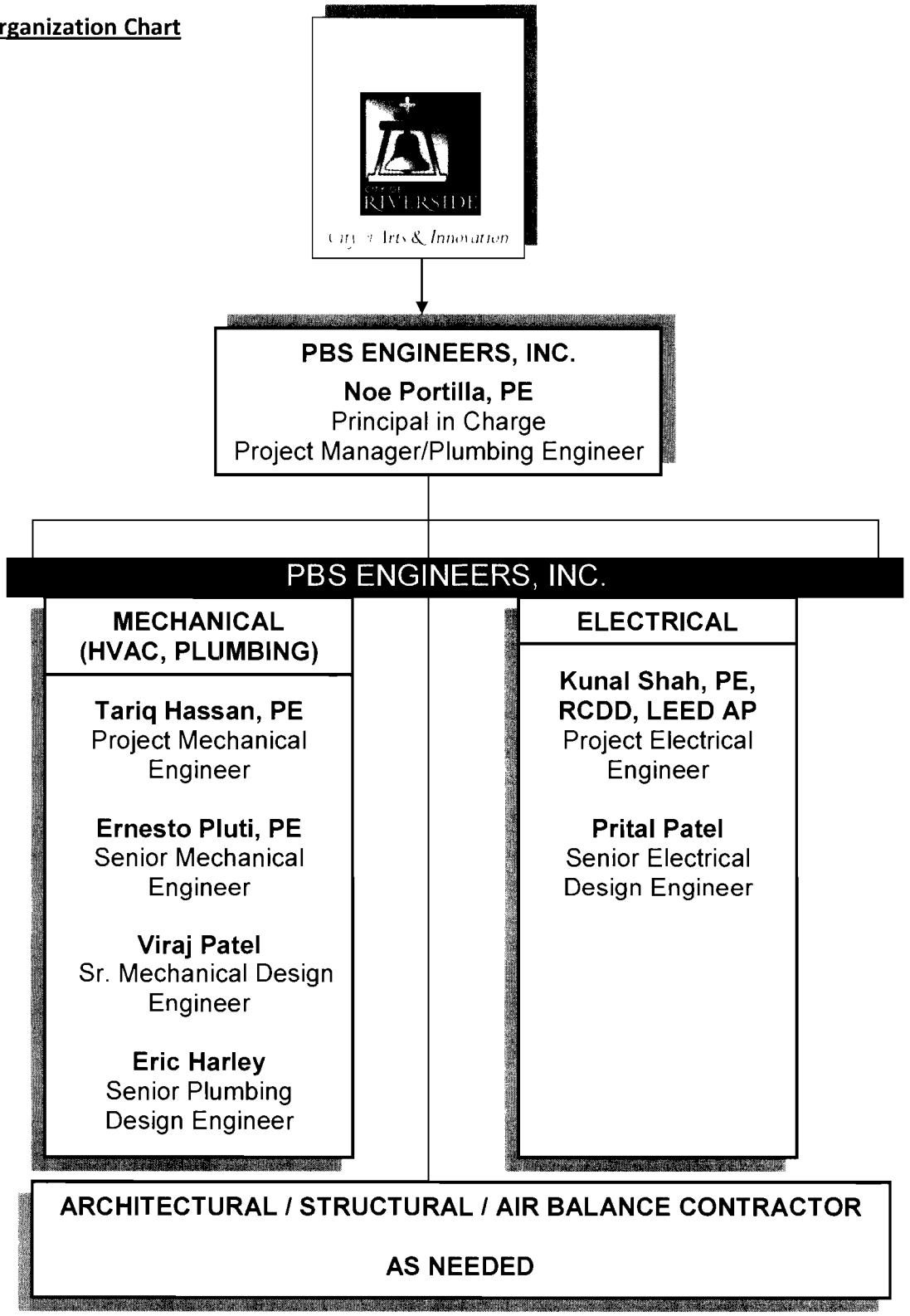
Replace Heating, Ventilation and Air Conditioning (HVAC) Systems at Admin Building and Chiller Plant Equipment Replacement.

Task and Description		Hours								Fees by Task
		Principal Engineer	Project Manager	MEP Sr. Design Engineer	MEP Sr. CADD Operator	Project Architect	Project Structural Engineer	Word Clerical Processing	Total Hours by Task	
Task 1: Project Management And Administration	Total of 5 Project Progress Meeting	2	60	0	0	16	16	0	94	$13,454
	Project Task management and review	8	6	12	0	0	0	0	26	$3,700
									Task 1 Total:	**$17,154**
Task 2: Data Collection and Assessment Study	Pre Air Reading and Existing Condition Report	4	0	140	12	0	0	0	156	$19,344
	preliminary Assessment Study with Options and recommendations	2	8	40	12	8	2	24	96	$11,030
	Life Cycle Cost Analysis with Design Alternatives	2		16	16			8	42	$4,558
									Task 2 Total:	**$34,932**
Task 3: Preliminary Design Report and 20% Construction Document	Preliminary Design Report	4	4	24	10	4	4	6	56	$6,836
	20% CD, MEP, Architectural and Structural	4	20	98	114	82	16	0	334	$40,690
									Task 3 Total:	**$47,526**
Task 4: 60%, 90% & 100% Construction Document (Optional)	60% CD, MEP, Architectural and Structural	4	12	32	44	12	26	0	130	$16,028
	90% CD, MEP, Architectural and Structural	4	16	84	84	12	50	0	250	$30,384
	100% CD, MEP, Architectural and Structural	4	12	34	34	12	10	0	106	$13,058
									Task 4 Total:	**$59,470**
Task 5: Bidding and Award Services (Optional)	Pre Bid Walk With Contractor	0	4	16	16	8	6	0	50	$6,104
	Provide plan clarification and assist city staff in bid review and contractor selection	4	6	32	0	0	0	0	42	$5,532
									Task 5 Total:	**$11,636**
Task 6: Engineering Service During Construction and Construction Administration (Optional)	Pre construction Meetings and construction progress	4	16	36	36	16	16	16	140	$16,792
	Review Shop drawings, Submittal and RFIs, Overview change order proposal, punch walk and punch walk	2	8	24	8	14	8	0	64	$8,350
	Weekly visits by project engineer to project site and final inspection by project engineer	2	4	48	0	0	0	8	62	$7,566
	Deliver record drawings	4	8	16	36	8	8	16	96	$10,900
	Commissioning of MEP System after Construction.		16	96						$14,304
									Task 6 Total:	**$57,912**
Task 8: Additional Engineering Services 10% Maximum of Total Proposal Fees (Optional)	Additional services Max 10%	4	6	16	6	6	6	4	48	$6,128
									Task 8 Total:	**$6,128**
Grand Total for Engineering and Architectural Design Services	**Two Hundred Thirty-Four Thousand Seven Hundred Fifty Eight Dollars**									**$234,758**

EXHIBIT C – PERSONNEL

C. PERSONNEL:

Organization Chart



C. PERSONNEL (CONTINUED):

Resumes of Key Staff

Noe Portilla, PE
Principal | Mechanical Engineer

Project Role
Principal in Charge
Project Manager/
Plumbing Engineer

Education
M.S. Mechanical and Electrical Engineering
Veracruz State University,
Veracruz, México

License
California Registered Mechanical Engineer
#M-29029

Affiliations
American Society of Plumbing Engineers (ASPE)

National Fire Protection Association (NFPA)

Years of Experience
35+

Background

Mr. Portilla has over 35 years of experience, which includes 15 years with LAWA in design and construction. He has designed a comprehensive range of mechanical systems such as HVAC, plumbing, fire protection and medical gas systems for aviation, institutional, educational, commercial, healthcare, government (federal and state), military, and municipal facilities. His experience also includes preliminary design, construction documentation, calculations, equipment document review and punch list observations.

Mr. Portilla's responsibilities include research and application of building, mechanical, plumbing and fire protection codes to develop design criteria, scope and construction documentation. Additionally, he is responsible for plumbing systems design and testing, water and utility waste prevention and energy management. Mr. Portilla is also experienced in facility surveys, construction cost estimating, fire protection system design, technical evaluations, energy audits, and feasibility studies for various energy conservation and alternative energy systems. He has effectively managed numerous complex conservation projects.

Project Experience

- ***City of Simi Valley, California - City Hall HVAC Replacement***
- ***LAUSD, Banning High School, Wilmington, California***
  Remove/Replace Deteriorated HVAC System, Cooling Tower & Chiller
- ***LAUSD, Crenshaw High School, Los Angeles, California***
  Replace Steam Boilers Central Plant with High Efficiency Space Heating Boiler
- ***GUSD, Glendale High School, Glendale, California***
  Replacement of Existing Steam Absorption Chiller- Central Plant
- ***Regional Intermodal Transportation Center (RITC),***
  Bob Hope Airport, Burbank, California
  Redesign of Elevated Bridge with moving walkway

C. PERSONNEL (CONTINUED):

Tariq Hassan, PE
Senior Associate | Mechanical Engineer

Project Role
Senior Mechanical Engineer

Education
B.S., Mechanical Engineering
California State Polytechnic University
Pomona, California

License
California Registered Mechanical Engineer #M33827

Affiliations
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

Years of Experience
19

Background

Mr. Hassan has more than 19 years of experience of engineering and design for various systems, such as HVAC, laboratory and kitchen hood exhaust and ventilation, vehicle garage ventilation, dust collection systems, central plant systems, etc. He has designed these types of mechanical systems for numerous new and existing facilities such as commercial, educational, healthcare, industrial and military facilities, including entertainment centers, computer and data rooms, civil centers, institutional facilities and cogeneration plants.

Mr. Hassan has worked as a designer, HVAC engineer, project engineer and project manager during his engineering experience. His primary duties include the design of HVAC, preparation of specifications and cost estimates, performance of mechanical peer review, attendance at project meetings and project coordination.

Additional responsibilities for Mr. Hassan consists of initial design development, field investigations, heating and cooling load calculations, preparation of California Administrative Code Title 24 energy compliance documents, specifications, and review of shop drawings and construction project coordination.

Mr. Hassan is also well-versed in feasibility and comparative energy utilization studies and energy conservation projects such as chilled water, cogeneration and energy audits. He has experience in the field of HVAC and EMS control systems.

Project Experience

- ***City of Simi Valley, California - City Hall HVAC Replacement***
- ***Bob Hope Airport, Burbank, California***
  Design/Build Regional Intermodal Transportation Center (RITC)
- ***GUSD, Glendale High School, Glendale, California***
  Replacement of Existing Steam Absorption Chiller- Central Plant
- ***Regional Intermodal Transportation Center (RITC),***
  Bob Hope Airport, Burbank, California
  Redesign of Elevated Bridge with moving walkway
- ***LAUSD, Downtown Business Magnet High School, Los Angeles, CA***
  Replace HVAC Systems

C. PERSONNEL (CONTINUED):

Kunal Shah, PE, RCDD, LEED AP
Principal | Electrical Engineer

Project Role
Project Electrical Engineer

Education
B.S., Electrical Engineering
University of California, Irvine, California

Licenses
-Professional Electrical Engineer #E-17249
-Registered Communication Distribution Designer (RCDD) # 07039
-LEED AP

Affiliations
-Institute of Electrical and Electronic Engineers (IEEE)
-Building Industry Consulting Service International (BICSI)
ACEE (Association of Consulting Electrical Engineers)

Years of Experience
19

Background

Mr. Shah has over 19 years of electrical engineering experience for aviation, healthcare, government, commercial and higher educational facilities, which include major State and Federal funded modernization projects. His responsibilities include construction cost estimating, specification writing, construction administration, bidding and negotiation and all aspects of electrical engineering and design.

Mr. Shah has designed power, lighting, and signal systems for various airports for Los Angeles World Airports (LAWA). He is knowledgeable with LAWA's requirements and regulations. At present, he has been involved in managing LAWA's various on-call contract projects at various airports, such as LAX, Ontario and Van Nuys, CA.

Mr. Shah has designed voice and data distribution systems (including fiber optic backbones and Category 5 copper to workstations). Telephone systems using both on-site PBX and Centrex Systems have been included in many of his projects. Mr. Shah possesses hands-on experience for construction administration, such as reviewing shop drawings, field observation and reports, responses to RFI's, etc.

Project Experience

- ***Bob Hope Airport, Burbank, California***
  Design/Build Regional Intermodal Transportation Center (RITC)
- ***Glendale USD, Glendale High School, Glendale, California***
  Replacement of Existing Steam Absorption Chiller- Central Plant
- ***Regional Intermodal Transportation Center (RITC),***
  Bob Hope Airport, Burbank, California
  Redesign of Elevated Bridge with moving walkway
- ***LAUSD, Downtown Business Magnet High School, Los Angeles, CA***
  Replace HVAC Systems
- ***Glendale USD, Glendale High School, Glendale, CA***
  Replace HVAC Equipment and DDC Control System
- ***El Monte Busway and Transit Center, El Monte, California***
  Design/Build for El Monte Busway-Transit

C. PERSONNEL (CONTINUED):

Ernesto Pluti, PE
Associate, Senior Mechanical Engineer

Project Role
Senior Mechanical Engineer

Education
B. S. Mechanical Engineering
University of Civil Engineering
Bucharest

Licenses
Professional Mechanical Engineer California, #M35319

Affiliations
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

Years of Experience
20+

Background

Mr. Pluti has more than 20 years of experience of engineering and design for various systems, such as heating, ventilation and air conditioning, laboratory and kitchen hood exhaust and ventilation, vehicle garage ventilation, dust collection systems, central plant systems, etc. He has designed these types of mechanical systems for numerous new and existing facilities such as commercial/residential, educational, healthcare, industrial and military facilities, including entertainment centers, and computer and data rooms. He has also worked on civil centers, institutional facilities and cogeneration plants.

Mr. Pluti has worked as a designer, HVAC engineer, project engineer and project manager during his engineering experience. Mr. Pluti's primary duties will include the design of heating, ventilating and air conditioning systems, preparation of specifications and cost estimates, performance of mechanical peer review, attendance at project meetings and project coordination.

Mr. Pluti is also well versed in feasibility and comparative energy utilization studies and energy conservation projects such as chilled water, cogeneration and energy audits. He has experience in the field of HVAC and EMS control systems.

His experience lies with the design of HVAC systems for various facilities, where the projects are required to be reviewed and approved by various agencies. Working in close coordination with these agencies, Mr. Pluti communicates with them throughout the development of the contract documents, submissions for their review and during construction administration, to meet all of their requirements.

Project Experience

- ***City of Simi Valley, California - City Hall HVAC Replacement***
- ***Westfield Century City Mall, Los Angeles, CA, Renovation and Addition***
- ***Glendale USD, Glendale High School, Glendale, California Replacement of Existing Steam Absorption Chiller- Central Plant***
- ***Glendale USD, Glendale High School, Glendale, CA Replace HVAC Equipment and DDC Control System***

C. PERSONNEL (CONTINUED):

Prital Patel, PMP, RCDD, LEED AP
Senior Associate | Design Director

Project Role
Senior Electrical Design Engineer

Education
B.E. Electrical Engineering
South Gujarat University
Gujarat, India

Certifications
Project Management Professional (PMP)

Registered Communication Distribution Designer (RCDD)

LEED AP

Affiliations
Illuminating Engineering Society (IES)

Building Industry Consulting Service International (BICSI)

Years of Experience
9

Background

Mrs. Patel has electrical design, engineering and construction administration experience in aviation, large to small scale commercial, religious facilities, health care, retail, educational and relocatable classroom.

Ms. Patel has strong electrical design, construction administration, and project management experience, having performed these functions on multiple aviation projects for Los Angeles World Airports (LAWA). She first began working under LAWA contracts as an Electrical Design Engineer, working under the supervision of a Senior Electrical Engineer, performing design tasks on multiple projects at LAX. In this capacity she became familiar with not only the design requirements, but the processes and protocols of both LAWA as well as the Los Angeles Department of Building and Safety (LABDS).

Ms. Patel is fluent with the process for getting design documents permitted by any agency when needed and can often expedite that process by leveraging her previous experience with LADBS requirements and personnel. She has intensive experience with the LADBS Plan Checking team, including the site inspection team, with whom she has regular interactions.

Project Experience

- ***El Monte Busway and Transit Center, El Monte, California***
  Design/Build for El Monte Busway-Transit
- ***Bob Hope Airport, Burbank, California***
  Design/Build Regional Intermodal Transportation Center (RITC)
- ***Regional Intermodal Transportation Center (RITC)***
  Bob Hope Airport, Burbank, California
  Redesign of Elevated Bridge with moving walkway
- ***Los Angeles International Airport, Los Angeles, California***
  Terminal 5 – Landside Redevelopment
- ***Los Angeles International Airport, Los Angeles, California***
  Midfield Satellite Concourse

C. PERSONNEL (CONTINUED):

Viraj Patel
Associate | Sr. Mechanical Design Engineer

Project Role
Mechanical Design Engineer

Education
M.S. Mechanical Engineering
University of Bridgeport
Bridgeport, CT 06604

B.S. Mechanical Engineering
Shivaji University - India

Diploma Mechanical Engineering
MS University – India

Years of Experience
8

Background

Mr. Patel has mechanical design, engineering and construction coordination experience in large to small scale commercials, aviation, religious facilities, health care, retail, educational and relocatable classroom. Mr. Patel's primary duties will include the design of heating, ventilating and air conditioning systems, preparation of specifications, cost estimates, attendance at Project Meetings and Project coordination.

His experience lies with the design of healthcare, educational and aviation facilities, where the projects are required to be reviewed and approved by various agencies working in close coordination with these agencies, Mr. Patel communicates with them throughout the development of contract documents submissions for their review and during construction administration to meet all their requirements.

His experience includes various aspects of construction activities such as construction pre-walks with the contractor, responding to RFIs and coordination with the architect and electrical engineer. His responsibilities also include attending meetings and coordination between architects, electrical engineers, plumbing engineers, structural engineers, owners and other associations involved in the project.

Project Experience

- ***LAUSD, Downtown Business Magnet High School, Los Angeles, CA***
  Replace HVAC Systems
- ***Glendale USD, Glendale High School, Glendale, CA***
  Replace HVAC Equipment and DDC Control System
- ***City of Simi Valley, California - City Hall HVAC Replacement***
- ***LAUSD, Banning High School, Wilmington, California***
  Remove/Replace Deteriorated HVAC System, Cooling Tower & Chiller
- ***Glendale USD, Glendale High School, Glendale, CA***
  Replace HVAC Equipment and DDC Control System

C. PERSONNEL (CONTINUED):

Eric Harley
Associate | Senior Plumbing Engineer

Project Role
Senior Plumbing Engineer

Certification
Plumbing Design #5192 American Society of Plumbing Engineers

Affiliations
American Society of Plumbing Engineers

Years of Experience
35

Background

Eric Harley is a veteran of plumbing design with thirty-five years of experience in engineering for major projects in Southern California. In addition to his plumbing design expertise for almost any application, Mr. Harley has managed multi-million dollar projects requiring skill in master planning and cost control, as well as intricate plumbing systems coordination across disciplines from design to construction.

Mr. Harley is responsible for plumbing systems design and testing, water and utility waste prevention, as well as energy management. He has designed systems for a diverse range of facilities including airports, corporate offices, manufacturing, retail, restaurants, law enforcement facilities, and amusement parks, but his area of specialization is in hospital and laboratory plumbing systems design. His portfolio of healthcare work includes dozens of the finest public, private and university hospital campuses in California.

His experience also lies with the design of municipal, healthcare and educational facilities, where the projects are required to be reviewed and approved by the various agencies. Working in close coordination with those agencies, he communicates with them throughout the development of the contract documents, submission for their review and during construction administration, and meeting all their requirements.

Project Experience

- ***City of Simi Valley, California - City Hall HVAC Replacement***
- ***GUSD, Glendale High School, Glendale, California***
  Replacement of Existing Steam Absorption Chiller- Central Plant
- ***Regional Intermodal Transportation Center (RITC),***
  Bob Hope Airport, Burbank, California
  Redesign of Elevated Bridge with moving walkway
- ***Glendale USD, Glendale High School, Glendale, CA***
  Replace HVAC Equipment and DDC Control System
- ***El Monte Busway and Transit Center, El Monte, California***
  Design/Build for El Monte Busway-Transit

Please refer to Appendix for resumes for NS Structural Engineering, Inc. and GTS Architecture.

D. EXPERIENCE OF THE COMPANY:

Please refer to Appendix for our company experience for this project.

E. ESTIMATE OF CONSULTING FEE:

1. Please refer to the attached Fee Matrix.
2. Please see anticipated expense items listed below.
3. The fee for our services will be based on the hourly rates listed below. All fee quotations are applicable for a period of 90 days from the date of the proposal to which this schedule is attached. We reserve the right to modify these rates upon thirty (30) days advance notice.

PERSONNEL/HOURLY RATE

Principal Engineer	$167	Designer	$111
Project Manager	$144	Senior CADD/Revit Operator	$98
Project Structural Engineer	$140	CADD/Revit Operator/Drafting	$88
Project Architect	$140	Senior Field Representative	$113
Project/Senior Engineer	$125	Field Representative	$103
Senior Designer	$117	Word Processor/Clerical	$82

These rates apply to regular time and travel time in the continental United States. A maximum travel time of eight hours will be charged in any day. Overtime, if required in the interest of the project, will be charged at the above rates for professional personnel and at 1.5 times the above rates for other personnel. Overtime will apply to time in excess of eight hours per weekday and all time on Saturdays, Sundays, and holidays. In the event of adverse weather conditions or other factors beyond our control, a standby charge of four hours per weekday will be made for field personnel. Reimbursable expenses are in addition to personnel rates. Reimbursables will be billed at cost except as noted below.

ANTICIPATED EXPENSE ITEMS

Plotting	$5.00/sheet
Photocopy	$0.07/page

INSURANCE

PBS Engineers maintains Professional Liability, General Liability Insurance for bodily injury and property damage with a limit of $1,000,000 per occurrence for its own account and will furnish certificates of such insurance upon request. In the event the client desires additional coverage, we will, upon the client's written request, obtain additional insurance at the client's expense.

F. COMPLETION SCHEDULE:

PBS Engineers, Inc. fully accepts and will comply to the project schedule provided in the RFP.

APPENDIX

RFP No. 1707

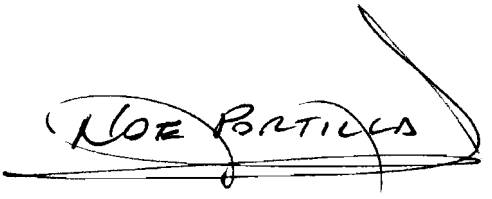
Mechanical/Engineering Design Services for
Riverside Regional Water Quality Control Plant
Administration Building Heating, Ventilation and Air
Conditioning System Renovation / Replacement
Project

ADDENDUM NO. 1

05/23/2017

Refer to the attached pages for any questions/changes.

*** ACKNOWLEDGEMENT OF THIS ADDENDUM IS REQUIRED. Please acknowledge all addenda manually by signing and uploading all addenda cover pages as part of your response before the deadline. Failure to acknowledge an addendum, unless the requirement to acknowledge has been waived, will immediately cause your submittal to be deemed non-responsive.

Authorized Signature 

(Sign here to acknowledge receipt of this addendum)

A. SCOPE OF THE WORK (CONTINUED):

Please see attached information provided by American Air Balance Company, Inc. (if needed at additional cost).

American
Air Balance Co., Inc.

May 22, 2017

Mr. Viraj B. Patel
PBS Engineers
2100 E. Route 66, Suite 101
Glendora, CA 91740

Via e-mail: **vpatel@pbsengineers.com**

Re: RWQCP Admin Building HVAC System Renovations, Riverside

Dear Mr. Patel:

American Air Balance Co., Inc. proposes to provide our services to assist with an assessment of the HVAC equipment and their components. **Our services are inclusive of:**

Survey of the HVAC Systems

1. Measure and record all actual fan operating data for the three main Air Handling Unit (AHU-1, AHU-2 and AHU-3) Supply and Return air fan. Specifically, obtain and record all actual and required unit information, as available on equipment tags to include:
   A. Fan manufacturer, model & serial number.
   B. Motor manufacturer, HP, service factor, design FLA, actual AMP draw.
   C. Sheave and belt information.
   D. Examine filters and fan belt and provide a recommendation for replacement if required.
   E. Verify and report if automatic control devices (valves and dampers) are functioning properly.
   F. Provide a static pressure profile of each component within the unit.
   G. Total supply, return and OSA CFM.
   H. Measure and record air temperature readings for each unit at OSA, return air, mixed air and supply air locations.
2. Measure and record the actual static pressure and CFM by duct traverse of each main zone of the building by means of duct traverse (if possible).
3. Verify and document all obtainable information for each VAV box and re-heat coil.
4. Measure and record CFM readings at all existing air distribution.
5. Provide a summary of duct leakage by comparison of zone totals versus air distribution totals.
6. Measure and record the total flow (GPM) of hot water for the boiler/ hot water system by means of ultra-sonic flow measuring if necessary.
7. Measurement and record the total flow (GPM) of Chilled water from Chiller Pump main riser to each AHU.
8. Measure and record the sound pressure levels, full octave band (eight octave bands, from 31.5 to 4000 HZ) levels with the HVAC Supply/Return/Exhaust air "equipment on" and "equipment off" in each room / space with the admin office building.
9. Inspect, identify, document and describe any observed conditions that may affect system performance for all areas surveyed. Provide photos of abnormalities, deficiencies and/or special conditions where possible.
10. Inspect, verify and document the current condition of the DDC control system. Provide photos of abnormalities, deficiencies and/or special conditions where possible.
11. Inspect, verify and document the current condition of the AHU Supply Air Distribution. Provide photos of abnormalities, deficiencies and/or special conditions where possible.

12. Develop schematic "AutoCAD" drawings by means of tracing out the existing ductwork to document the current conditions of the existing system(s). The components included are: all Air Handlings Unit, Fan Coils, Exhaust Fans, Make up Air Units, ductwork, zone dampers, CAV/ VAV boxes, smoke/fire dampers, humidifiers, re-heat coils, air distribution and thermostats, as applicable. The actual conditions will be identified on the plans, ductwork sizes measured, and new single line schematic CAD diagrams will be provided.
13. Provide Schematic "AutoCAD" drawings and indicate the location of each reading taken, including all duct traverses and air distribution readings.
14. Two (2) copies of "Test & Balance Survey Analysis Report" within five working days of completion.

The exclusions specifically not included in our price for this project are as follows:

A. Adjustment, repair and/or installation of any mechanical devices (i.e., purchasing, sizing and/or installing sheaves and belts or volume dampers on air moving systems as required to obtain design values).
B. Overtime.
C. Re-testing and/or Re-inspections.
D. Additional insurance coverage (AI) Endorsement, changes to our policy limits, Pollution Liability, Environmental Impairment Liability, Extended Overhead costs related to OCIP and/or Waiver of Subrogation.
E. As-building of ductwork drawings, specifically scaled drawings indicating exact size, elevation and location of ductwork, zone dampers, CAV/VAV boxes, smoke/fire damper, humidifier, and re-heat coil sizes and exact locations and ceiling / attic space dimensions and elevations.
F. Verification of the HVAC Control System(s) operation and calibration, including thermostat location, operation and calibration verification.

Conditions and Assumptions:

It is understood that the systems will be running in their normal operating mode, with all maintenance completed and current, prior to scheduling this work.

1. All areas of the project will be occupied at the time of our field work and site assessment visits. **Off-hours will be provided as required to work around occupant usage**, so as not to disrupt or impede procedures and staff operations. Coordination with building maintenance staff as required to complete the scope of work will be required and included.
2. Reasonable access will be provided to all areas of the facility.
3. HVAC systems and all related subsystems (i.e. – exhaust fans) will be running at all times.
4. Site support staff will be available to turn equipment on and off as necessary during testing.
5. Occupants of the affected spaces will be notified of the testing schedule and the possible system interruptions that will occur.

C. PERSONNEL (CONTINUED):

Please see attached resumes for NS Structural Engineering, Inc. and GTS Architecture.

NS STRUCTURAL ENGINEERING, INC

NEAL N. SHAH, MS, PE, SE

EDUCATION: University of California, Irvine, CA
Master or Science (M.S.) in Structural Engineering September, 1999-June, 2000

University of California, Irvine, CA
Bachelor or Science (B.S.) in Civil Engineering
(Major: Structures) September, 1994-June, 1999

REGISTRATION:
Professional Engineer in California (Civil License # 64965)
California Structural Engineer (Structural License # 5107)
Professional Engineer in Texas (Civil License # 109205)
Professional Engineer in Arizona (Structural License #52693)
Professional Engineer in Nevada (Structural License # 21471)
Professional Engineer in Hawaii (Structural License # 14657)
Professional Engineer in North Carolina (Civil License # 041270)

AFFILIATIONS:
Member of Structural Engineers Association of Southern California (SEAOSC) Existing Building Committee
Member of SEAOSC

PROFESSIONAL EXPERIENCE:

NS STRUCTURAL ENGINEERING, INC., La Canada Flintridge, CA January, 2010-Current
President/Owner

Structural engineer in charge of the analysis and design of both existing and new structures as well as roof top and ground mount solar design. Responsibilities included: proposal and report writing, man-hour estimate, leading coordination meetings with clients and other disciplines, and managing the project. Experience involves working with various building materials such as steel, light gauge steel, concrete, post-tension concrete, wood, masonry, and aluminum.

- **Seismic Equipment Renovation & Upgrades/Tenant Improvement Projects**

Responsible for the seismic equipment upgrades and tenant improvement to help maintain and upgrade existing systems for the following projects:

- Kaiser Napa located in Napa, CA
- USC School of Cinematic Arts located in Los Angeles, CA
- Kaiser South Bay Medical Center located in Los Angeles, CA
- Kaiser Vermont located in Los Angeles, CA
- Martin Luther King Jr. Hospital in Los Angeles, CA
- Port of Los Angeles: Police Station in Los Angeles, CA
- Anaheim Convention Center Cooling Tower in Anaheim, CA
- Korea Times Building HVAC Replacement in Los Angeles, CA
- Marina Towers Mechanical Upgrade Project in Marina Del Rey, CA
- Ernst & Young Tower Chiller Replacement in Los Angeles, CA
- Simi Valley City Hall located in Simi Valley, CA
- Kaiser Irvine located in Irvine, CA
- Little Lake Unified School District in Santa Fe Springs, CA
- AT&T Building in Sherman Oaks, CA
- Several dental offices in Southern California.

Neal Shah neal@ns-se.com www.ns-se.com

4642 Rockland Place, La Canada Flintridge, CA 91011

- **El Camino Replacement Hospital, Office of Statewide Health Planning and Development (OSHPD), Sacramento, CA**

Lead structural plan reviewer for $140 million in new construction (450,000 square feet) at the El Camino Hospital. Structure consists of one story below grade and four stories above grade, with penthouses. The new construction is a structural steel building with a special moment resisting frame (SMRF), and a concentric braced frame at the penthouse level. The foundation system consists of independent footings, grade beams for the moment frame columns, and continuous footings. Shah's responsibilities included checking of exterior GFRC and glass curtain wall connections, shop drawings, and all equipment anchorage calculations. Professional Services: 2004 to 2005

- **Salinas Valley Memorial Hospital, Salinas, CA**

Structural engineer supervising the design of a new generator building. The building was a three story CMU wall and steel frame building to support mechanical and electrical equipment for the life support system of the hospital. The building was designed to comply with OSHPD requirements.

- **VA Medical Center, San Francisco, CA**

Structural engineer providing construction administration services for the seismically upgrade Building 203 on the San Francisco VA Medical Center Campus. The building was five-story, 335,000-square foot acute care hospital built in 1970. Seismic upgrade and retrofit consists of reinforcing exterior shear walls along the building perimeter, and non-structural electrical and mechanical equipment and architectural components. The seismic strengthening was in accordance with Veteran's Administration "Seismic design Requirements" H18-8 for the immediate occupancy performance criteria after a major earthquake event.

- **Highland Hospital, Oakland, CA**

Structural engineer providing consulting services for the seismic anchorage and bracing per 2013 CBC for piping/plumbing systems at the Koret Building Mechanical Room.

- **Los Angeles International Airport, CA**

Structural Engineer for the structural design of equipment anchorage and electrical and MEP trapeze supports throughout the terminals (i.e. Tom Bradley International, Southwest, Alaska, United, and Delta). The work included review and design for Antenna Towers. Involved task include: design review meetings, plan check meetings, and expeditious RFI response.

- **Catalina Express, Port of Long Beach, CA**

Structural Engineer for the structural design of a two-story steel and CMU building. The structure is located in an area where incompetent and poor soil conditions may cause unusually large settlement due to liquefiable material during a seismic event. In which case to mitigate seismically induced settlement our design involved installing pre-cast pile with pile caps and grade beams. Involved task include: pile feasibility study, design review meetings, plan check meetings, expeditious RFI response, review of submittals and shop drawings, performing structural observations, solving job site issues, and answering filed engineering questions from inspectors.

- **Crane Maintenance Building & Repair Bay, Port of Los Angeles, CA**

Lead Structural Engineer for the structural design of two independent structures: Repair bay and Crane Maintenance Building are a one-story steel frame structure with steel moment frames and CMU shear walls. The buildings are supported on pre-cast piles. The work will include review of submittals and shop drawings, responding to RFIs, making structural observations at various stages of construction, providing engineering during construction, attending review and construction meetings, and addressing job site issues.

- **MTA Division 3-Articulated Bus Repair Building, Los Angeles, CA**

Responsible for the structural analysis and design of a one-story CMU structure and support of various equipments and fall protection systems. As structural engineer of record some tasks included: schematic design, design development, construction documents, and construction administration.

- **Structural Design of Photovoltaic (PV)/Thermal Systems**

Lead structural engineer for the structural design of over 800,000 kW of solar energy in various locations such as California, Nevada, Texas, Arizona, Hawaii, and Saudi Arabia. Engineer of Record for a pre-check DSA parking canopy structure. Engineer of Record for a work in progress US patent roof mount PV racking system. Responsible for the structural analysis, design, anchorage for the placement of roof mounted PV panels, and foundation design of ground mounts. Tasks included: schematic design, design development, construction documents, plan check, and construction administration. Project names, location and size are available upon request.

- **Santa Rosa Junior College: Cogeneration Replacement**

Responsible for the structural analysis, design, and anchorage for the placement of a new roof mount steel skid and several floor mounted equipment. Tasks included: schematic design, design development, construction documents, plan check, and construction administration.

- **Cedars-Sinai Admin. Building-Tenant Improvement,**

Responsible for the structural analysis, design, and anchorage for the placement of a new PET Scanner on a post-tension slab. Tasks included: schematic design, design development, construction documents, plan check, and construction administration.

COMPUTER	Visual Analysis 5.5	Enercalc 6.1	RISA3D	SAP2000
SKILLS:	AutoCAD 2016	MSWINDOWS	STAAD III	MathCAD

Neal Shah neal@ns-se.com www.ns-se.com

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Greg Sadowski - experience

GTS Architecture, Inc. *owner*
Internap Data Center-Redondo Beach, CA - 112,000 sf (TYPE-IIIB) Architectural consultant to design/build contractor Carlson Construction. Improvements to existing data center included new chillers, water tanks, cooling towers and pumps.

14 Story High Rise-Los Angeles, CA - 450,000 sf (TYPE-I) office building. Architectural support for a voluntary seismic improvement of a concrete high-rise, for both structure and a selected scope of exterior precast concrete cladding. Improvements included path of travel disabled access up-grade. Consultant to ABS Consulting Structural Engineers.

Aerospace Corporation-El Segundo, CA - 2,000 sf (TYPE-II) testing facility (approx. $2M- new shell construction/interior laboratory design).

SGI International USA-Laguna Hills, CA - 25,000 sf interior design, seismic upgrade and conversion of an existing Type V-B structure to a Type III-B. Additional assembly occupancy required modification to higher construction detailing standard along with conditional use permit.

SGI International USA-Santa Monica, CA - 6,000 sf office and lobby interior design for the SGI corporate headquarters in a Type 1 high rise originally constructed in the 1970's. Currently in construction document phase. Approximately $1M construction cost

Texas Instrument-Santa Clara, CA Existing 4 level / Type II-A / 1061 car parking structure. Architectural consultant to ABS Consulting (structural engineer) for seismic upgrade/disabled access retrofit to this 1980's precast structure. Project abandoned due to construction cost considerations after building department approvals.

Swimmer Residence-Corona del Mar, CA Complete remodel of existing Type V residential bathroom. Approximately $100,000 construction cost.

Sadowski Architects, Inc. (Studio SA) owner/*partner*

Latisys Datacenter-Irvine, CA 90,000 sf of a co-location data center with structural design upgrade. Design/build architectural consultant to Carlson Construction including 8 site generators; entire project was new except for 4 existing walls that remained.

DLR Datacenter-Santa Clara, CA 140,000 sf of co-location data center. Design/build architectural consultant to Carlson Construction ($45M 2009)

Irvine Montessori-Irvine, CA 12,000 sf / 340 student Montessori school design in an existing commercial zone. Services and documentation from City conditional use approval use through state of California review and acceptance.

Comerica Bank-Westwood, CA 5,000 sf bank tenant improvement complete with second floor vault in existing Type I & Type III configuration.

Cibola Systems-Orange, CA 18,000 sf LEED certified, tenant improvement to an audio/visual design-construct client.

Occidental College-Los Angeles, CA 500 sf chemistry laboratory remodel and disabled access upgrade for Norris Hall of Science.

LabCorp-West Los Angeles, CA 4,000 sf office and testing laboratory tenant improvement.

Aerospace Corporation-El Segundo, CA 20,000 sf (TYPE-I) extensive architectural / mechanical/ structural phased remodel of 9 various laboratories in a 1975 vintage building.

University of Southern California-Los Angeles, CA 3,000 sf electronic/microwave research laboratory tenant improvement in an existing 4 story type V-A building (Denny Research Center).

Edwards Lifesciences-Irvine, CA 40,000 sf of complete interior design/seismic upgrade/ façade renovation for an existing 2 story, Type III-B constructed in the 1970's.

Edwards Lifesciences-Irvine, CA 12,000 sf new laboratories: chemistry, biology, microbiology, metrology and product evaluation. Tenant improvement to existing 2 story Type III-B constructed in the 1970's.

Edwards Lifesciences-Irvine, CA Vivarium Building Renovation. Architectural renovation of existing building with new updated exterior and interior ADA upgrade.

Edwards Lifesciences-Irvine, CA 3,200 sf tissue organic chemistry laboratory tenant improvement

Edwards Lifesciences-Irvine, CA 750 car, 4-story cast-in-place new concrete structure. ($9M 2005)

Edwards Lifesciences-Irvine, CA 9,000 sf of Showcase Lab and Manufacturing tenant improvement.

Edwards Lifesciences-Irvine, CA 14,000 sf. Extension of existing class 10,000 cleanroom along with "continuous occupancy" seismic upgrade for the existing Type 1 building constructed in the mid 1990's

Edwards Lifesciences-Irvine, CA 100 occupant conference center. State of the art assembly occupancy for visiting doctors.

Edwards Lifesciences-Irvine, CA 50 occupant training center. State of the art training facility specifically for ELS's primary product: thoracic heart valve installation (THV).

Edwards Lifesciences-Irvine, CA Various tenant improvement and interior design laboratory and office remodel projects- ranging from 1,000 to 50,000 sf.

MVE Partners, Irvine *production architect*
Various 3 to 4 story multi-residential podium projects- production architect; design development through construction documentation.

HLW International, Santa Monica *project architect*
Amgen-Thousand Oaks, CA 150,000 sf / 4 level / Type I / B, A+H occupancies. New laboratory building. HLW was interior and executive architect. ZGF was shell design

architect. Project architect from design development through construction administration. Turner Construction contractor.

Specialty Laboratories-Santa Clarita, CA 200,000 sf / 3 level / Type II / B, A, S+H occupancies. New shell+core and interiors for laboratory building. Project architect from construction document phase through construction administration.

Various tenant improvement and interior design projects -ranging from 10,000 to 100,000 sf Project architect from design through construction administration.

Luckman Partnership *project architect*
Vandenberg Air Force Base-Vandenberg, CA Project designer, Project architect for a remodel of the existing headquarters facility. Project incorporated interior design of new lobby and space planning of approximately 60,000 sf Included is the Space Operations Center with sensitive S.C.I.F. design issues.

Universal Studios *design architect*
Japan, Showset design development for the attraction Terminator 2. All work conforming to the Universal AutoCAD Standards. 6 month contract.

The Arroyo Group *project architect*
Flintridge Sacred Heart Academy-LaCañada, Flintridge Project Architect on a ($7M-1996), Type- III, Student Activities Center Building featuring gymnasium, locker/shower facility, chemistry, physics and biology classrooms. Project was designed and detailed to sensitively coexist with existing campus structures originally designed by architect Myron Hunt (Rose Bowl designer) as a Hotel in the late 1920's.

Jeffery M Kalban & Associates *design + production architect*
J. Paul Getty Trust (Beverly Park Building)- Brentwood, CA Construction Documents and Design Development on a 5-story, 60,000 sf maintenance and office building supporting the new Getty Museum of Art. Situated adjacent to the San Diego Freeway, the steel frame Type 1 structure accommodates 3 levels of occupied space over parking below with a pedestrian bridge linking the upper levels.

The Curtis School-Pacific Palisades, CA Project design development and construction documents for major addition to the prominent k-6 private school. Campus plan includes 3 existing buildings with the addition of 4 new classroom buildings and gymnasium/ auditorium structure.

Greg Sadowski Architect *owner*
Sadowski Residence-Mount Washington, Los Angeles owner builder, architect of a 1900 sf three story, six level, custom designed, contemporary hillside residence, designed to maximize the constricted 1000 sf curving, "hairpin turn" site. The exposed cast-in-place concrete, concrete block, wood and plaster structure takes full advantage of the San Gabriel Mountain view.

Private Residence-Big Island Hawaii 4000 sf contemporary style residence with subtle Japanese elements featuring open structure high ceilings with extensive exposed woodwork and use of native materials. Complete architectural services through construction documents including interior and lighting design.

Shimabukuro Architect *designer*
AMGEN Biotechnology Research Center (Building 14)-Thousand Oaks, CA project designer and interior design consultant to Shimabukuro Architect and Pedersen, Beckhart, Wesley +Stice Architects for a fast-tracked, 200,000 sf, Type 1, ($50M-1990) research and development facility. Ove Arup provided engineering design. The center features state-of-the-art laboratories, scientist's offices, a full service library, various conference and meeting spaces and an employee cafeteria. 2 yr project from conceptual design through construction services.

Yuma Diagnostic Imaging Center-Yuma, Arizona project designer for a new 16,000 sf magnetic resonance imaging and C.T. scan diagnostic facility for the Yuma Regional Medical Center. Full service design package including interior design, production of 10 original artworks and graphic design.

Diagnostic and Therapeutic Facility-Torrance, California project designer on a 2000 sf medical facility incorporating 2 M.R.I. suites, C.T. scan and linear accelerator for Fashion Way Associates/ Little Company of Mary.

M.R.I. Facility-Cerritos, California prototype M.R.I. facility for International Imaging of Chicago. 10,000 sf freestanding concrete and glass block structure.

AMGEN Biotechnology Research Center-Building Number 5 Thousand Oaks, California design and construction documents on a 75,000 sf new research facility in an existing building featuring research laboratories, vivarium and two atriums.

McClellan Cruz Gaylord and Associates *designer*
Carmel Mountain Ranch-San Diego, California one of the project designers on a 50 acre, hillside commercial and retail complex for Watt Development Company.

Downtown Brea Mixed Use Redevelopment Competition - Brea, CA one of the project designers on the winning competition for an extensive redevelopment of the Old Town section of Brea, for Watt Development Company. Program included commercial, retail, office and residential uses.

Past Employment
GTS Architecture, Inc. (owner) 8/2012-present
Sadowski Architects, Inc. (owner/partner), 11/2004-8/2012
MVE & Partners, 4/2003-4/2004
HLW International(Associate) 1/1998-4/2003
Universal Creative 8/1997-1/1998
The Arroyo Group 3/1996-8/1997
The Luckman Partnership, Inc. 3/1995-4/1996
Jeffrey M. Kalban and Associates. 9/1993-3/1995
Gregory T. Sadowski, Architect
Shimabukuro Architecture,1984-1989, 1990-1992
McClellan, Cruz, Gaylord and Associates 1989-1990

Education: University of California Berkeley- Architecture 1984
License: California Licensed Architect/ 1989/ C-2081

D. EXPERIENCE OF THE COMPANY:

Los Angeles Unified School District, Banning High School, Wilmington, California
Remove and Replace Deteriorated Heating, Ventilation, and Air Conditioning Equipment for Multipurpose Building "C" (007DOT); Shop Building No. 1 (006COG); Shop Building No. 3 (010COT), Replace Cooling Tower and Chiller at Shop Building No. 3 (010COT)
PBS provided Architectural/Engineering services to replace the deteriorated Heating, Ventilation and Air Conditioning equipment serving the Multipurpose Building "C" (007DOT), Shop Building No. 1 (006COG) and Shop Building No. 3 (010COT); Replace Cooling Tower and Chiller at Shop Building No. 3 (010COT), located at Los Angeles Unified School District, Banning High School, Wilmington, California.

Los Angeles Unified School District, Downtown Business Magnet High School, Los Angeles, CA
Replace HVAC Systems
PBS Engineers provided an HVAC replacement for the Los Angeles Unified School District, Downtown Business Magnet High School. The project is a two-story classroom and administration building, built in 1960. The total project size was approximately 108,000 square feet. A/E Services included: assessment report of mechanical equipment and systems, basis of design and recommendation, selected equipment to comply with Title-24, high energy efficient, indoor air quality requirement, economizer as required per code, energy rebate for efficient units and demand controls from local utility company to benefit to the District.

Glendale Unified School District, Glendale High School, Glendale, California
Glendale High School Replacement of Existing Steam Absorption Chiller- Central Plant
PBS provided Mechanical, Electrical and Plumbing Engineering Services for the replacement of one (1) existing steam absorption chiller with new 300 ton, direct gas fired chiller, upgrade boiler plants and pumps for Glendale High School.

Regional Intermodal Transportation Center (RITC), Bob Hope Airport, Burbank, California
Redesign of Elevated Bridge with moving walkway
Provided complete Mechanical, Electrical, Plumbing, and Fire Protection Engineering Services for the design/build process. Design of all Heating, Ventilation and Air Conditioning (HVAC), sanitary plumbing systems for the project, including water, sewer, and natural gas systems to a point-of-connection five (5) feet outside of the main building. The basic Electrical and Telecom engineering services included the design of building and site electrical systems. This included utilities (power, telephone, and cable television) service from the building to a point-of-connection, design of general lighting and power services as required to meet requirements, as well as the design of power to all HVAC, plumbing equipment, and equipment furnished by others. Additionally, this included all fire and smoke detection, emergency lighting and power systems, as well as fire alarm and detection system. Also, provided Infrastructure design for television signal distribution, security system, and data/telephone system.

D. EXPERIENCE OF THE COMPANY (CONTINUED):

- **Glendale Unified School District, Glendale High School, Glendale, California**
  Replace HVAC Equipment and DDC Control System
  PBS provided Mechanical, Electrical and Plumbing engineering services to replace the existing hot water heating and ventilating equipment and system for two existing buildings 2000 and 3000, approximately 65,000 SF. MEP services included: Assessment Report, Basis of Design and System Recommendation. Selected equipment and systems were in compliance with Title-24, indoor air quality requirement, high energy efficient roof top package and split heat pump system with Direct Digital Controls. Construction document drawings and specifications approved by the DSA and the project was completed successfully in 2014 in a timely manner and per the District's Classroom Opening Schedule. Project DSA application closed and was certified.

- **Los Angeles Unified School District, Crenshaw High School, Los Angeles, California**
  Replace Steam Boilers Central Plant with High Efficiency Space Heating Boiler
  PBS provided Architectural/Engineering Services to replace steam boilers (central plant 13 million BTWH) with new hot water boilers, pumps piping and controls (DDC).

- **City of Simi Valley, California**
  City Hall HVAC Replacement Project
  PBS Engineers, Inc. provided Architectural/Engineering services for the replacement of HVAC in the City Hall and Development Building. PBS performed heating and cooling load calculations, site assessments to gather necessary data for selection of new units based on existing conditions, reviewed existing unit capacity and compared with load requirements. In addition, PBS recommended units sizes and discussed with the Client possible impacts with respect to cost, operability and comfort.

- **Los Angeles Unified School District, Sheridan Elementary School, Los Angeles, California**
  Replace Heating, Ventilating and Air Conditioning Equipment and System
  PBS provided Architectural/Engineering Services to replace existing heating, ventilating and equipment for entire Campus, Classrooms, Administration, Kindergarten, and Multi-purpose building built in 1970. The total project size was approximately 52,000 SF. A/E Services included: Assessment Report of existing Mechanical equipment and system, which was heating and ventilation only and no cooling. Basis of Design and Recommendation. Selected equipment was in compliance with Title-24, high energy efficient. System was selected and designed with a variable refrigerant flow heat pump system to accommodate in historical preserve building. Construction documents, drawing and specifications approved by the DSA and the successful project was completed in 2012. Prepared as-built record drawings, close out paper for DSA and certification.