(If a firm has branch offices, complete for each specific branch office seeking work.)

1. ***Annual Request for Qualifications***

a. FIRM (OR BRANCH OFFICE) NAME:	GLHN Architects & Engineers, Inc.
b. FIRM (OR BRANCH OFFICE) STREET:	2939 E Broadway Blvd
c. FIRM (OR BRANCH OFFICE) CITY:	Tucson
d. FIRM (OR BRANCH OFFICE) STATE:	Arizona
e. FIRM (OR BRANCH OFFICE) ZIP CODE:	85716

f. YEAR ESTABLISHED:	1963

(g1). OWNERSHIP - TYPE:	ESOP - Employee Stock Ownership Plan
(g2) OWNERSHIP - SMALL BUSINESS STATUS:	NAICS 541330 - Engineering Serv. - Small Business NAICS 541310 - Architectural Serv. - Large Business

h. POINT OF CONTACT NAME AND TITLE:	Brian G. Hagedon, AIA, NCARB
i. POINT OF CONTACT TELEPHONE NUMBER:	(520) 881-4546
j. POINT OF CONTACT E-MAIL ADDRESS:	bhagedon@glhn.com

k. NAME OF FIRM *(If block 1a is a branch office)*:	

2. EMPLOYEES BY DISCIPLINE

a. Discipline Title	b. Function: Primary (P) or Secondary (S)	c. No. of Employees - Firm	d. No. of Employees - Branch
Architect	P	6	
CADD Technician	P	30	
Civil Engineer	P	2	
Control Systems Engineer	P	1	
Electrical Engineer	P	5	
Mechanical Engineer	P	7	
Technology Engineer (IT, Security)	P	2 RCDD	
HR/Admin/Marketing	S	14	
Total		67	

3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number *(see below)*
1	Barrack & Dormitories	2
1	Cemeteries	2
2	Commercial Building	3
2	Community Facilities	2
6	Communications Systems; TV; Microwave	3
10	Cost Est; Cost Engineering	2
4	Educational Facilities	6
10	Electrical	5
1	Garages, Vehicle Maintenance	2
10	Heating; Ventilation; Air	6
1	Highways, Streets, Parking	2
2	Hospital & Medical Facilities	3
1	Judicial and Courtroom Facilities	4
2	Laboratories; Medical Research Facilities	5
5	Lighting (Exteriors; Streets; Memorials; Athletic Fields, Etc.)	4
10	Plumbing & Piping Design	4

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number *(see below)*
2	Recreation Facilities	2
3	Rehabilitation	2
8	Security Systems; Intruder and Smoke Detection	4
4	Sustainable Design (LEED)	5
2	Transportation	3
3	Utilities (Gas, Steam, Plants)	5
2	Value Analysis; Life Cycle	2

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Brian G. Hagedon, AIA, NCARB	Director of Architecture	34	16

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Bachelor of Architecture	Arizona #26552

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Verde Valley Campus Improvements
Yavapai college, Clarkdale, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Renovation of six buildings, including classroom facilities, IT/computer center, administration, labs, and library; outdoor pavilion, new campus entryway, campus-wide underground utility improvements, simultaneous design and construction packages totaling over 50,000 SF, $8.2 million. Project Civil Engineer.

2.

(1) TITLE AND LOCATION *(City and State)*
Tucson Streetcar Vehicle Maintenance and Storage Facility
City of Tucson, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2014
Construction (if applicable): 2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$18 million, 20,000 SF, Construction Manager at Risk, pending LEED Silver. The facility includes administration and control space (to visually control access to the storage yard), a maintenance area, and mezzanine level. Project Manager/Project Architect.

3.

(1) TITLE AND LOCATION *(City and State)*
Sun Tran Bus Storage, Maintenance, and Fueling Facility
City of Tucson, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

25 Acres, 250-bus fleet, 70,000 SF of building area, Phase II is certified LEED Gold, Phase III is certified LEED Silver. Includes bus maintenance bays, bus wash facility, fueling, fare retrieval, operations, and administration. Project Architect for Phases II and III.

4.

(1) TITLE AND LOCATION *(City and State)*
Fitness and Sports Sciences (FSS) Renovation
Pima Community College West Campus, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$222,000, 23,300 SF, GLHN provided architectural and mechanical upgrades to an existing athletic facility. Architect.

5.

(1) TITLE AND LOCATION *(City and State)*
New Dental Building
Carl T. Hayden VA Medical Center, Phoenix, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$6.3 million, 16,000 SF ground up building designed as a full service dental facility. Includes 32 operatories, complete lab with porcelain functions and oral surgery facilities. Project Principal.

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Robert G. Lara, AIA	Architecture Dept. Manager	36	2

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Bachelor of Architecture	Arizona #14355

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Southern Arizona Energy Design Award; Arizona's Governor Design Award for energy efficiency; Governor Design Award for public accessibility; State of Arizona Best Recreational Facility Design Award.

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Multi-Use / Public Safety Facility Needs Assessment
Town of Marana, AZ

(2) YEAR COMPLETED
Professional Services: 2013
Construction (if applicable): 2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Assessment of needs for the Marana Police Department. Analysis of existing conditions, programming and planning for future needs, cost estimating to aid in development of budgets for capital expenditure. Project Manager.

2.

(1) TITLE AND LOCATION *(City and State)*
State Museum Basket Collection Renovation
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2014
Construction (if applicable): 2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$753,000, 10,020 SF Creation of a thermatically controlled environment for presentation of Native American artifacts. Project Architect.

3.

(1) TITLE AND LOCATION *(City and State)*
New Dental Building
Carl T. Hayden VA Medical Center, Phoenix, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$6.3 million, 16,000 SF ground up building designed as a full service dental facility. Includes 32 operatories, complete lab with porcelain functions and oral surgery facilities. Project Architect.

4.

(1) TITLE AND LOCATION *(City and State)*
Outpatient Mental Health Clinic
VA Medical Center, Albuquerque, NM

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[ ] Check if project performed with current firm

$8 million, 17,000 SF, LEED Silver. Required creative space planning and management control of an aggressive schedule and limited budget. Site planning, design, construction documents, bidding and construction administration. Project Architect.

5.

(1) TITLE AND LOCATION *(City and State)*
Outpatient Mental Health Expansion
VA Medical Center, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2010
Construction (if applicable): 2010

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[ ] Check if project performed with current firm

$8 million, 15,000 SF. Aggressive schedule and limited budget. Scope of services included site planning, design, construction documents, bidding and construction administration. Project Architect.

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
John C. McGann, PE	Director of civil Engineering	36	28

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Bachelor of Science / Civil Engineering	Arizona #22206

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Verde Valley Campus Improvements
Yavapai college, Clarkdale, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Renovation of six buildings, including classroom facilities, IT/computer center, administration, labs, and library; outdoor pavilion, new campus entryway, campus-wide underground utility improvements, simultaneous design and construction packages totaling over 50,000 SF, $8.2 million. Project Civil Engineer.

2.

(1) TITLE AND LOCATION *(City and State)*
Infrastructure Phase VII, North Campus Utilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

$32 million dollar planning, design, construction administration, and commissioning. Includes capacity expansions to production, distribution systems and rehabilitation of utility systems required to support loads of main and Arizona Health Sciences Center (AHSC) campuses. Co-Project Manager.

3.

(1) TITLE AND LOCATION *(City and State)*
Tucson Streetcar Vehicle Maintenance and Storage Facility
City of Tucson, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2014
Construction (if applicable): 2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

$18 million, 20,000 SF, Construction Manager at Risk, pending LEED Silver. The facility includes administration and control space (to visually control access to the storage yard), a maintenance area, and mezzanine level. Project Civil Engineer.

4.

(1) TITLE AND LOCATION *(City and State)*
Sun Tran Bus Storage, Maintenance, and Fueling Facility
City of Tucson, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

25 Acres, 250-bus fleet, 70,000 SF of building area, Phase II is certified LEED Gold, Phase III is certified LEED Silver. Includes bus maintenance bays, bus wash facility, fueling, fare retrieval, operations, and administration. Project Civil Engineer for Master Planning and Phases I, II, and III.

5.

(1) TITLE AND LOCATION *(City and State)*
Campus Chilled Water Improvements
New Mexico State University, Las Cruces, NM

(2) YEAR COMPLETED
Professional Services: 2013
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

$24 million campus-wide underground utility infrastructure improvements and construction of new satellite chilled water plant. Project Civil Engineer.

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Theodore C. Moeller, PE, LEED AP	Dir. of Electrical Engineering	30	16

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Bachelor of Science / Electrical Engineering Master of Fine Arts/ Creative Writing	Arizona #17029

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Illumination Engineering Society of North America

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Residence Life Building Renewal
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$50 million, multi-phase, renovation of 10 university residence halls spanning 10 years. Space renovations, ADA requirements, plumbing/piping, electrical/lighting upgrades. Tight construction schedule for each phase in 72-day summer break window. Project Electrical Engineer.

2.

(1) TITLE AND LOCATION *(City and State)*
Infrastructure Phase VII, North Campus Utilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$32 million dollar planning, design, construction administration, and commissioning. Includes capacity expansions to production, distribution systems and rehabilitation of utility systems required to support loads of main and Arizona Health Sciences Center (AHSC) campuses. Electrical Engineer.

3.

(1) TITLE AND LOCATION *(City and State)*
Facility Condition Assessments / FCA Database Validation & Reconciliation, VA Medical Centers nationwide

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Facility Condition Assessments performed at over 100 VA Medical centers nationwide, multiple phases, performed over 10 years. Assessed all electrical systems from medium voltage utility service to branch circuits and lighting, as well as telecommunications and auxiliary systems. Lead Electrical Engineer.

4.

(1) TITLE AND LOCATION *(City and State)*
Old Main Relocation Study / Bear Down Gym Temporary Facilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$2.6 million, 64,800 GSF, four months from Notice to Proceed to Occupancy. Project to renovate building and relocate staff with full functionality to service students. Electrical Engineer.

5.

(1) TITLE AND LOCATION *(City and State)*
Exterior Master Lighting Plan
Northern Arizona University, Flagstaff, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Surveyed existing campus lighting, identified deficiencies, and addressed location for improvements, along with recommendations for future campus lighting design. Goals were to provide nighttime visibility and function, compliance with the City of Flagstaff Outdoor Lighting Code, safety and security, etc. Project Manager.

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Robert A. Alcalá, PE, CLEP	Electrical Eng. Dept. Manager	46	2

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Bachelor of Science in Electrical Engineering Master of Science in Electrical Engineering	Arizona #1485

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Certified Lighting Efficiency Professional (CLEP), IMSA work zone safety, IMSA Traffic Signal I.

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Air Handler Replacements and Upgrade Projects Arizona Health Sciences Center (AHSC), University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

Analysis and design of existing building and systems; recommendations for repair and replacement of existing systems; preparation of biddable documents; construction administration, and value engineering. Project Electrical Engineer.

2.

(1) TITLE AND LOCATION *(City and State)*
Utilities Distribution Plan
University of New Mexico Gallup Campus, Gallup, NM

(2) YEAR COMPLETED
Professional Services: 2013
Construction (if applicable): 2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

GLHN provided subconsultant engineering services to a local Prime Consultant. Evaluation of existing 15 kV campus power system for growth over the next 10 years. Project Electrical Engineer.

3.

(1) TITLE AND LOCATION *(City and State)*
Utilities Master Plan
Southwester Indian Polytechnic Institute, Albuquerque, NM

(2) YEAR COMPLETED
Professional Services: 2013
Construction (if applicable): 2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

GLHN provided subconsultant engineering services to a local Prime Consultant. Campus-wide evaluation of existing 15 kV power distribution system to accommodate facility growth. Project Electrical Engineer.

4.

(1) TITLE AND LOCATION *(City and State)*
Heritage Park Master Plan
Town of Marana, Marana, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

GLHN is providing civil, electrical, mechanical, and architectural services to a Landscape Architect Prime Consultant. Long range plan for electrical utility distribution for the park facilities. Project Electrical Engineer.

5.

(1) TITLE AND LOCATION *(City and State)*
New Dental Building
Carl T. Hayden VA Medical Center, Phoenix, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$6.3 million, 16,000 SF ground up building designed as a full service dental facility. Includes 32 operatories, complete lab with porcelain functions and oral surgery facilities. Project Electrical Engineer.

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Henry W. Johnstone, PE	Dir. of Mechanical Engineering	31	28

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Associates of Science / Solar Energy Technology Bachelor of Science / Mechanical Engineering Master of Science / Mechanical Engineering	Arizona #26010

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
International District Energy Association (IDEA), engaged by IDEA to develop a District Energy Screening Tool for use in considering economic return of investment in district energy for urban-planned, mixed-use communities. The tool has been deployed at three opportunities in Pittsburgh, PA, and for projects in Denver, Westminster, and Boulder, CO.

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Residence Life Building Renewal
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$50 million, multi-phase, renovation of 10 university residence halls spanning 10 years. Space renovations, ADA requirements, plumbing/piping, electrical/lighting upgrades. Tight construction schedule for each phase in 72-day summer break window. Project Manager.

2.

(1) TITLE AND LOCATION *(City and State)*
Old Main Relocation Study / Bear Down Gym Temporary Facilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$2.6 million, 64,800 GSF, four months from Notice to Proceed to Occupancy. Project to renovate building and relocate staff with full functionality to service students. Project Principal/Project Manager.

3.

(1) TITLE AND LOCATION *(City and State)*
Campus Energy Reduction Program and Projects
Arizona State University, Tempe, Arizona

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$28 million, Utility Infrastructure Study, assess energy use in 20 large campus laboratory buildings, related infrastructure upgrades and systems commissioning. Project Principal.

4.

(1) TITLE AND LOCATION *(City and State)*
Infrastructure Phase VII, North Campus Utilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$32 million dollar planning, design, construction administration, and commissioning. Includes capacity expansions to production, distribution systems and rehabilitation of utility systems required to support loads of main and Arizona Health Sciences Center (AHSC) campuses. Co-Project Manager.

5.

(1) TITLE AND LOCATION *(City and State)*
Campus Chilled Water Improvements
New Mexico State University, Las Cruces, NM

(2) YEAR COMPLETED
Professional Services: 2013
Construction (if applicable): 2013

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE

[X] Check if project performed with current firm

$24 million campus-wide underground utility infrastructure improvements and construction of new satellite chilled water plant. Project Principal/Project Manager.

4. Resumes of Key Personnel Proposed for this Contract (*Complete one Section 4 for each key person.*)

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
R. Douglas Stingelin, PE, QCxP, LEED AP	Mechanical Eng. Dept. Manager	14	10

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Bachelor of Architectural Engineering – Environmental Option Master of Architectural Engineering – Environmental Option	Arizona #83047

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Certified Commissioning Authority, Certified Level 2 Thermographer.

H. RELEVANT PROJECTS

1.

(1) TITLE AND LOCATION *(City and State)*
Verde Valley Campus Improvements
Yavapai college, Clarkdale, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Renovation of six buildings, including classroom facilities, IT/computer center, administration, labs, and library; outdoor pavilion, new campus entryway, campus-wide underground utility improvements, simultaneous design and construction packages totaling over 50,000 SF, $8.2 million. Project Civil Engineer.

2.

(1) TITLE AND LOCATION *(City and State)*
Infrastructure Phase VII, North Campus Utilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

$32 million dollar planning, design, construction administration, and commissioning. Includes capacity expansions to production, distribution systems and rehabilitation of utility systems required to support loads of main and Arizona Health Sciences Center (AHSC) campuses. Mechanical Engineer.

3.

(1) TITLE AND LOCATION *(City and State)*
Old Main Relocation Study / Bear Down Gym Temporary Facilities
University of Arizona, Tucson, AZ

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

$2.6 million, 64,800 GSF, four months from Notice to Proceed to Occupancy. Project to renovate building and relocate staff with full functionality to service students. Mechanical Engineer.

4.

(1) TITLE AND LOCATION *(City and State)*
As-Needed LEED Commissioning Services
Northern Arizona University, Flagstaff, AZ

(2) YEAR COMPLETED
Professional Services:
Construction (if applicable):

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Five Projects: Applied Research and Development (59,000 SF, certified LEED Platinum), College of Business Administration (110,000 SF, certified LEED Gold), College of Engineering and Technology (95,600 SF, LEED certified), Chemistry Laboratory Building (100,000 SF), and High Country Conference Center (44,000 SF). Lead Commissioning Authority.

5.

(1) TITLE AND LOCATION *(City and State)*
Campus Energy Reduction Program and Projects
Arizona State University, Tempe, Arizona

(2) YEAR COMPLETED
Professional Services: 2012
Construction (if applicable): 2012

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

$28 million, Utility Infrastructure Study, assess energy use in 20 large campus laboratory buildings, related infrastructure upgrades and systems commissioning. Mechanical Engineer/Lead Commissioning Authority.

4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Paul Norine	Tech. Eng. Dept. Manager	34	5

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Undergraduate Studies - Architecture	

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*
Technology Project Director for the Olympic Summer Games in Atlanta and the Winter Olympic Games in Salt Lake City, as well as for the Goodwill Games, seven World Cup venues, and two Super Bowls.

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Verde Valley Campus Improvements Yavapai college, Clarkdale, AZ	2012	2012
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	X Check if project performed with current firm	
	Renovation of six buildings, including classroom facilities, IT/computer center, administration, labs, and library; outdoor pavilion, new campus entryway, campus-wide underground utility improvements, simultaneous design and construction packages totaling over 50,000 SF, $8.2 million. IT/Security Design Lead.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
2.	Old Main Relocation Study / Bear Down Gym Temporary Facilities University of Arizona, Tucson, AZ	2012	2012
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	X Check if project performed with current firm	
	$2.6 million, 64,800 GSF, four months from Notice to Proceed to Occupancy. Project to renovate building and relocate staff with full functionality to service students. IT/Security Design Lead.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
3.	UITS Data Center and Network Operations Center (NOC University of Arizona, Tucson, AZ	2012	2012
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	X Check if project performed with current firm	
	2,000 SF, $2.1 million. GLHN provides architecture, power, lighting, mechanical, and fire protection design services. IT/Security Design Lead.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
4.	Information Transport Systems (ITS) Upgrades Amphitheater Unified School District, Tucson, AZ		
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	X Check if project performed with current firm	
	18 district facilities. All spaces involve incorporation of a new HVAC unit, the design of new equipment and the relocation of any existing electrical devices. Project Manager.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
5.	Infrastructure Phase VII, North Campus Utilities University of Arizona, Tucson, AZ		
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	X Check if project performed with current firm	
	$32 million dollar planning, design, construction administration, and commissioning. Includes capacity expansions to production, distribution systems and rehabilitation of utility systems required to support loads of main and Arizona Health Sciences Center (AHSC) campuses. IT/Security Design Lead.		

4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section 4 for each key person.)*

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
		1. TOTAL	2. WITH CURRENT FIRM
Victoria Childs, RCDD	Sr. Communications and Life Safety Systems Design Lead	22	5

d. LOCATION *(City and State)* Tucson, Arizona

e. EDUCATION *(DEGREE AND SPECIALIZATION)*	f. PROFESSIONAL TRAINING - REGISTRATIONS
Pima Community College, Tucson, AZ	Building Industry Consulting Service International (BICSI) since 1999

g. OTHER PROFESSIONAL QUALIFICATIONS *(Organizations, Awards, etc.)*

H. RELEVANT PROJECTS

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
1.	Information Transport Systems (ITS) Upgrades Amphitheater Unified School District, Tucson, AZ		
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	
	18 district facilities. All spaces involve incorporation of a new HVAC unit, the design of new equipment and the relocation of any existing electrical devices. IT/Security Design Lead.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
2.	Design Guides, Design Manuals, & Master Construction Specifications, IDIQ 2005-2010, Department of Veterans Affairs Central Office, Washington, D.C.	2012	
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	
	Prepared a conceptual summary/outline for inclusion of communications in the Electrical Design Manual and Electrical Master Construction Specifications.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
3.	Southeast Ambulatory Care Center, Gila River Indian Community Gila River Health Care Corporation, Sacaton, AZ		
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	
	New 140,000 SF Care Center -- design of all Ultra Low Voltage systems, including fire alarm, security, public address, video surveillance, monitoring, cable television, voice/data, audio/visual, and wireless.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
4.	National Wildlife Refuge Complex, U.S. Game and Fish San Diego, CA	2012	2012
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	
	$5.7 million, 17,000 SF -- design of voice/data, communications outlets, security devices, wireless access, security risks, and digital signage. Admin Headquarters and Visitor Contact Station, certified LEED Gold and LEED Silver.		
	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		Professional Services	Construction (if applicable)
5.	Building 17 Science Laboratory Renovation/Correct Code Deficiencies, Northern Arizona University, Flagstaff, AZ	2011	2011
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	[X] Check if project performed with current firm	
	100,000 SF, $3.8 million. Life safety, exiting, pressurization, environmental control. IT/Security Design Lead.		

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
RESIDENCE LIFE BUILDING RENEWAL University of Arizona, Tucson, AZ	2012	2012

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
University of Arizona	$50 million	$50 million

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

This $50+ million, multi-phase project, renovated spaces and systems in ten residence halls. Many of the involved residence halls are among the university's most historic structures and required special consideration regarding staging areas during construction and the impact of the project on well-established sites. Utilizing a fast-track, Construction Manager at Risk delivery method, Phase I of the project -- involving a 9-story dorm and two 2-story dorms -- completed $7 million of construction in 70 days during Summer Break 2004. Work advanced 24 hours a day, 7 days a week, demolishing, replacing, and finishing three facilities simultaneously. To ensure that the 70-day schedule for each phase was met and that RFIs were addressed quickly, GLHN assigned a full-time, on-site construction manager to the project. Bathroom facilities were modernized to offer residents more privacy, gang sleeping areas were converted to private or double rooms, and unused or outdated common areas like typing rooms were converted to increase bed count or to accommodate other uses. Old building systems were replaced to extend the buildings' useful life and interior architectural modifications were made in accordance with updated ADA requirements.

Projects were completed in four phases over the course of 10 years, demonstrating the firm's vigilance through difficult economic times and adaptability to changing university staff, availability of construction work force, and construction material costs. GLHN kept the same A/E staff on the project throughout all phases.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
INFRASTRUCTURE PHASE VII, NORTH CAMPUS UTILITIES University of Arizona, Tucson, AZ		

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
University of Arizona	$32 million	$32 million

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

This project demonstrates GLHN's capability in utility infrastructure design for capital improvements and facility growth, as well as its breadth of in-house engineering services. The University of Arizona selected GLHN Architects & Engineers (GLHN) as design professionals for the planning, design, construction administration and commissioning for the North Campus Infrastructure project. The scope of the project includes capacity expansions to the University's production and distribution systems and rehabilitation of utility systems required to support the loads on the Main and Arizona Health Sciences Center campuses.

The initial phase of the project included an assessment of the capacity and quality of the existing utility systems and developing alternatives for each system that were consistent with the short term needs and compatible with the long range growth plans indicated in the Campus Comprehensive Plan. The alternatives were prioritized to refine the scope of the project that was within budget and provided the University with systems that were efficient to operate, sustainable, and provided the redundancy required to support critical campus demands.

The developed project included expansions and upgrades to the water, sanitary sewer, chilled water steam, tunnel, communication/data and electrical systems. Specific aspects of the project include:

- Replacement of a 450 gpm groundwater well, well head improvements, development of a new water booster pump station and a 450,000 gallon water storage tank. To support the improved water production system, water system improvements also include new water distribution mains and control systems.
- The expansion of the chilled water generation capacity included the addition of 5,000 tons of water cooled chillers and cooling towers at AHSC Central Plant, 2,500 tons of chiller capacity at the Central Heating and Refrigeration Plant (CHRP), primary pumps, header improvements, distribution piping and control systems. The chillers and equipment were selected based on operating efficiencies and life cycle costs analysis.
- The steam generating capacity improvements at the CHRP will be increased by 30,000 lbs/hr utilizing modular water tube steam boilers. The selected boilers also provide increased flexibility in plant operations and increase efficiencies of the steam generation system. Plant improvements also include new boiler auxiliaries, header modifications, and control systems.
- The tunnel system is a principle corridor for the steam distribution system; portions of the system were constructed over 80 years ago and required structural rehabilitation. Due to development over the tunnels, in-situ rehabilitation methods were required. The selected method for rehabilitation consisted of carbon fabric reinforcement of approximately 1,200 lf of tunnel.
- Steam and condensate distribution improvements included approximately 2,000 LF of 14 and 12-inch high pressure steam mains
- Other aspects of the project included cured-in-place-pipe (CIPP) lining of sanitary sewers, primary power and fiber optic distribution.

Construction Cost: $32 million, numerous design and construction packages.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Campus Energy Reduction Program and Projects Arizona State University, Tempe, Arizona	2012	2012

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Arizona State University	$28 million for all projects	$28 million for all projects

g. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

This project involved assessment of energy use in 20 large campus laboratory buildings, related infrastructure upgrades, and systems commissioning. Two representative projects under this contract:

Physical Sciences E-Wing Recommissioing
Life Sciences E-Wing was designed in the early 1990s as an academic and research laboratory facility for the study of biology. Occupying a relatively small footprint (160 FT X 110 FT) in a dense part of the central campus, the 198,500 SF facility has a total of 10 floors. Two auditorium style classrooms are located at grade, on the plaza level.

The second floor houses classrooms and administrative office space. Floors 3-7 contain offices and lab support functions at the exterior north and south exposures. The Life Sciences project involved overall reduction in building air changes and re-commissioning of lab fume hoods and zone temperature controls. In addition to re-balancing required for air change reductions and individual lab pressurization, overall building pressurization was addressed.

Re-commissioning results:

- Large amount of zone controllers found not working and were replaced
- Fan motor amperage was lowered on average between 30 and 50 percent
- Fume hoods were balanced to lower cfm values and re-certified
- Overall building airflow was reduced by 30 percent
- Overall temperature is more uniform causing maintenance calls to be reduced

Physical Sciences F-Wing Infrastructure and Recommissioing
GLHN evaluated the ability of the existing air handling systems of the existing 175,000 SF lab and office facility to provide higher ventilation rates, examined the capacity of the existing normal electric power and standby electric power systems, and prepared a hydraulic model of the existing chilled water piping system to analyze its ability to accommodate additional loads. Following the study, GLHN was contracted to implement the recommended chilled water piping systems, fundamentally an energy conservation project, involving multiple phases of renovation within an occupied building. Installation of two-way control valves and variable frequency drives reduce building pumping energy and increase the efficiency of the central chilled water distribution system. GLHN participated in weekly construction meetings, resolved submittal issues, assisted in coordination of contractor phasing and outage schedules, and took an active role in start-up and commissioning.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
VERDE VALLEY CAMPUS IMPROVEMENTS Yavapai college, Clarkdale, AZ	2012	2012

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
Yavapai College	$8.2 million	$8.2 million

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

This educational facility included renovation of five buildings. The project time frame was worked out closely with the contractor, KCS to provide for just-in-time documents and for optimizing the construction schedule. Only two buildings could commence demolition during the school year. KCS and GLHN developed a plan to stagger the project document delivery so that renovation work could start in March of 2012. After preliminary design, we provided updated drawings every two weeks for review and pricing confirmation beginning in January 2012 and ending in April 2012. The goal was not just to update the buildings but also to provide interactive space that promotes communication and collaboration between students, faculty, and staff.

A majority of the renovation work occurred over the summer of 2012. The fast-track work included five buildings containing classrooms and labs, library, computer labs, faculty offices, administration, assembly space, student center with recreation and food court, as well as campus security. All spaces had to be up and functional for fall classes 2012. Total project construction duration was 6 months with a majority of the work completed in three months during the summer and successfully opening for fall classes.

GLHN's work included:

- Building F: Renovation of classrooms into student center with café and small art gallery, 6,200 SF.
- Building G: Renovation of existing classrooms and computer lab spaces, 9,450 SF.
- Building H: Renovation of existing administration and student center to digital and visual art classrooms and pottery lab with outdoor kiln. Bathrooms added for ADA compliance.
- Building I: Renovation of existing administration building, 15,600 SF.
- Building. M: Consolidation and renovation of new faculty offices, 11,000 SF; expansion of classrooms, 4,000 SF; and minor remodel of library and computer lab, 12,000 SF.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present no more than five (5) projects. Complete one Section 5 for each project.)

a. TITLE AND LOCATION *(City and State)*	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Old Main Relocation Study / Bear Down Gym Temporary Facilities University of Arizona, Tucson, AZ	2012	2012

23. PROJECT OWNER'S INFORMATION

c .PROJECT OWNER	d .ORIGINAL BUDGET/NTE AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
University of Arizona	$2.6 million	$2.6 million

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

The Bear Down project demonstrates GLHN's high-level responsiveness, capacity to realign staff commitments to accommodate fast-track schedules, utilize Building Information Modeling (BIM) to assess design options, and develop creative solutions under pressure.

GLHN was engaged by the University of Arizona in Spring 2012 to assist in the delivery of a project with an unusually quick schedule. The university needed to develop temporary facilities to house Old Main's approximately 90 full-time staff while the building was to be renovated. A primary challenge was the real time schedule; it was essential that the staff relocation and move be completed before student programs became fully functional again in Fall 2012.

GLHN received Notice to Proceed in early April and the project completed construction the first week of July. The GLHN team evaluated several alternatives for the temporary adaptation of the historic gymnasium. The firm's integrated, multi-discipline structure allowed for timely and thorough examination of the alternatives and the use of three-dimensional building modeling. Photorealistic renderings provided visual aids for use in decision making. The team worked closely with quantity surveyor-construction cost estimators to derive comparative construction cost estimates that would capture the intense time pressure and potential construction risk factors. Working closely with UA Planning, Design, and Construction, a set of quantitative and qualitative pros and cons were developed for each alternative.

The architectural group at GLHN developed a space program through evaluation of existing conditions, staff rosters, and discussion of the student access criteria. Technical issues involved modification of power, sewer, IT, and HVAC systems and options were evaluated by senior engineering staff with deep knowledge of the University's utility infrastructure. GLHN architects met the challenge of maintaining a balance between low cost and temporary facilities and providing a warm and functional environment that is welcoming to the public. Success depended on open communication, rapid response, and mutual trust among the University, contractor, and AE project team.

6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. *(ATTACH ADDITIONAL SHEETS AS NEEDED.)*

GLHN ARCHITECTS & ENGINEERS, INC.
firm profile: capabilities, focus, and relationships

Established in 1963, GLHN Architects & Engineers, Inc. is an employee-owned firm headquartered in Tucson, Arizona with a satellite support office in Flagstaff, Arizona. The firm offers integrated, multi-discipline services in architecture and mechanical, electrical, civil, and technology engineering. GLHN's staff includes LEED Accredited Professionals in all disciplines (LEED AP), Green Globes Professionals (GGP), Registered Communications Distribution Designers (RCDD), Building Energy Simulation Analysts (BESA), Certified Energy Managers (CEM), Energy Reduction Analysts, Certified Commissioning Agents and Technicians (Cx and CxT, staff Certified in Plumbing Engineering (CIPE), and a Lighting Certified (LC) designer.

GLHN is guided by the principle that our success comes from helping others succeed. The firm's philosophy on success fosters dedication and long-term client relationships. GLHN has worked for the Department of Veterans Affairs continuously since 1975 and has completed projects at over 120 VA Medical Centers nationwide. GLHN has also worked for nearly two dozen higher educational institutions and has established itself a leader in the development of campus carbon reduction programs, promoting initiatives to economize building performance and implement the use of alternative energies. GLHN excels at utility master planning, design of central plants and underground utility distribution systems, complex multi-phased renovation projects, medical and laboratory facilities, vehicle maintenance facilities, security and communications systems, and enhanced systems commissioning.

GLHNgreen, an initiative established in 2008, supports and promotes the firm's environmentally-responsible office efforts and sustainable design practices. GLHNgreen focuses on five areas: sustainable/LEED design, professional practices (client-oriented efforts), office practices, reduction of the firm's carbon footprint, and staff education. In 2010, the GLHN office building was awarded LEED-EB Gold by the USGBC; it is the first building in Southern Arizona to be certified LEED for Existing Buildings.

GLHN embraces technological advancements in the A/E industry for the benefit of its clients and believes Building Information Modeling (BIM) is the future of the design and construction industry. The firm has transitioned from 2D CAD production to fully-integrated 3D design, using the Autodesk Autocad-based Revit and Civil3D platforms.

For contact information, an updated news blog, downloadable brochures, and project portfolio, visit glhn.com.

7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a.	Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	90% (includes universities)
b.	Percentage of Total Work Attributable to Non-Government Work:	10%

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: Brian G. Hagedon

Date: 12-3-14

Name: Brian G. Hagedon, AIA, NCARB

Title: Principal / Director of Architecture