



**REQUEST FOR PROPOSAL
No. SF194295P**

Modification of a 3D Systems ProX 300 Printer

PROPOSAL DUE DATE AND TIME

May 3, 2018, 10:00 AM, PT)

SUBMITTAL LOCATION

Oregon State University
Procurement, Contracts and Materials Management
644 SW 13th Avenue
Corvallis, Oregon 97333

OSU Procurement, Contracts and Materials Management Offices are open Monday through Friday 8:00 am-12:00 noon and 1:00 pm-5:00 pm.
Offices are closed during the 12:00 noon-1:00 pm lunch hour.

ELECTRONIC SUBMITTAL ADDRESS

bids@oregonstate.edu

1.0 GENERAL

1.01 SCHEDULE OF EVENTS

- Issue Date April 19, 2018
- Deadline for Requests for Clarification or Change April 26, 2018 (10:00 AM, PT)
- Proposal Due Date and Time May 3, 10:00 AM PT)

This Schedule of Events is subject to change. Any changes will be made through the issuance of Written Addenda.

1.02 PRE-PROPOSAL CONFERENCE

A Pre-Proposal Conference will not be held.

1.03 ISSUING OFFICE

The Procurement, Contracts and Materials Management (PCMM) department of Oregon State University ("OSU") is the issuing office and is the sole point of contact for this Request for Proposal. Address all concerns or questions regarding this Request for Proposal to the Administrative Contact identified below.

1.04 ADMINISTRATIVE CONTACT

Name: Shannon Fanourakis
Title: Procurement Analyst
Telephone: (541) 737-6995
Fax: (541) 737-2170
E-Mail: Shannon.Fanourakis@oregonstate.edu

1.05 DEFINITIONS

As used in this Request for Proposal, the terms set forth below are defined as follows:

- a. "Addenda" means an addition to, deletion from, a material change in, or general interest explanation of the Request for Proposal.
- b. "Exhibits" means those documents which are attached to and incorporated as part of the Request for Proposal.
- c. "Proposal" means an offer, binding on the Proposer and submitted in response to a Request for Proposal.
- d. "Proposer" means an entity that submits a Proposal in response to a Request for Proposal.
- e. "Proposal Due Date and Time" means the date and time specified in the Request for Proposal as the deadline for submitting Proposals.
- f. "Request for Proposal" (RFP) means a Solicitation Document to obtain Written, competitive Proposals to be used as a basis for making an acquisition or entering into a Contract when price will not necessarily be the predominant award criteria.
- g. "Responsible" means an entity that demonstrates their ability to perform satisfactorily under a Contract by meeting the applicable standards of responsibility outlined in OSU Standard 580-061-0130.
- h. "Responsive" means a Proposal that has substantially complied in all material respects with the criteria outlined in the Request for Proposal.
- i. "Written or Writing" means letters, characters, and symbols that are intended to represent or convey particular ideas or meanings and are made in electronic form or inscribed on paper by hand, print, type, or other method of impression.

2.0 INTRODUCTION AND BACKGROUND

2.01 INTRODUCTION

Procurement, Contracts and Materials Management is seeking Responsive Responsible Proposers to submit Proposals for modifying a 3D Systems ProX 300 to incorporate (1) a gas flow driven liquid deposition system and Xerox M-series piezoelectric inkjet. The project includes developing the add-on mechanism concept, designing and building the deposition transport system, programming necessary computer controller(s), and installing and commissioning the system.

2.02 BACKGROUND

The Oregon State University (OSU) Advanced Technology and Manufacturing Institute (ATAMI) is interested in conducting research in the selective doping/alloying of additively manufactured metals. ATAMI has received a donated 3D Systems ProX 300 printer. Efforts are needed to insert the Xerox M-series head in a manner that allows the printing of nanoparticle suspensions and reactant solutions into the powder bed prior to laser cladding.

2.03 OREGON STATE UNIVERSITY

Founded in 1868, Oregon State University is a comprehensive, research-extensive, public university located in Corvallis. OSU is one of only two American universities to hold the Land Grant, Sea Grant, Space Grant and Sun Grant designations. OSU is also the only institution to have earned both Carnegie Foundation classifications for Highest Research Activity and Community Engagement, recognition of the depth and quality of OSU's graduate education and research programs.

Through its centers, institutes, Extension offices and Experiment Stations, OSU has a presence in all of Oregon's 36 counties, including its main campus in Corvallis, the Hatfield Marine Sciences Center in Newport and OSU-Cascades Campus in Bend. OSU offers undergraduate, masters and doctoral degrees through 11 academic colleges, the Honors College, Graduate School and online Ecampus, enrolling more than 31,000 students from every county in Oregon, every state in the country and more than 110 nations.

3.0 STATEMENT OF WORK

3.01 SAMPLE CONTRACT

A sample contract containing Deliverables, Statement of Work and contractual terms and conditions is included at Exhibit A and Attachment B.

4.0 PROPOSER QUALIFICATIONS

4.01 MINIMUM QUALIFICATIONS

In order to qualify as a Responsive Proposer, the Proposer needs to meet the minimum qualifications below.

- a. 20 years industry expertise in software development, research and development and manufacturing development with specific experience in the following:
 - Solid Modeling Computer Aided Design (CAD)
 - Fabrication of complex precision mechanical devices
 - Technology, System Design and Programming of High Performance Servo Systems
 - Machine design, including electrical and electronic systems
 - Software Development of Machine Control Systems
 - Piping and wiring practice related to complex industrial machinery

4.02 PREFERRED QUALIFICATIONS

OSU will award additional points for Proposers able to meet the preferred qualifications below.

- a. More than 20 years industry expertise in software development, research and development and manufacturing development with specific experience in the following:
 - 3D Metal Printing Technology, Laser sintering, imprinting and ablation
 - Inkjet Technology at the R&D, manufacturing and application levels
 - Robotics
 - Finite Element Modeling

- Research and Development processes
- Intellectual Property development and protection
- Nano Technology
- Computer Science - Operating Systems, Data Base Management and Networking
- Programming in 'C', 'C++', Ladder Logic
- Software Engineering and Software Team Practices
- National Instruments Labview Programming and S/W Development
- Computer Operating Systems – Windows 10, Real Time Executive
- Computer Networks – Ethernet, CAN Bus, MODBUS
- Application of Computer Aided Manufacturing (CAM) software

5.0 REQUIRED SUBMITTALS

5.01 QUANTITY OF PROPOSALS

Submit one (1) electronic or hard copy via any of the methods detailed in the section below titled SUBMISSION. If submitting via hard copy, include one (1) electronic copy (PDF format) of Proposal on CD/DVD/flash drive. Proposals should contain original signatures on any pages where a signature is required (in the case of electronic submissions, either electronic signatures or scans of hand-signed pages should be included). Proposals should contain the submittals listed in this section below.

5.02 REQUIRED SUBMITTALS

It is the Proposer's sole responsibility to submit information in fulfillment of the requirements of this Request for Proposal. If submittals are not substantially compliant in all material respects with the criteria outlined in the RFP, it will cause the Proposal to be deemed non-Responsive.

Proposers must submit the following information:

- Description of how the goods or services offered specifically satisfy the Required Deliverables and Statement of Work described in section 3.
- Detailed information about how the Proposer meets the Minimum Qualifications described in section 4.
- Detailed information about how the Proposer meets the Preferred Qualifications described in section 4.
- Patents: Submit information about number of patents held and the top five (5) patents held in terms of commercial value
- Submit a one sentence work summary for each of your five (5) most recent projects
- Submit information about your number of engineers and the number of engineers available for this project
- Submit the number of bookings you have had, or currently have, from January 2017 – April 2018
- Exhibit B: Certifications, fully completed
- Exhibit C: References, fully completed, with list of your ten (10) most recent clients
- Exhibit D: Bid Price Form

6.0 EVALUATION

6.01 EVALUATION

The stages of review and evaluation are as follows:

- a. Determination of Responsiveness:
OSU will first review all Proposals to determine Responsiveness. Proposals that do not comply with the instructions, that are materially incomplete, that do not meet the minimum requirements, or that are submitted by Proposers who does not meet minimum qualifications may be deemed non-Responsive. Written notice will be sent to Proposers whose Proposal is deemed non-Responsive identifying the

reason. A Proposer has the right to appeal the decision pursuant to OSU Standard 580-061-130(5).

b. First Stage Evaluation:

Those Proposals determined to be Responsive will be evaluated using the required submittals. Proposals will be scored based on the evaluation criteria listed below. Scores will be used to determine Proposers within a competitive range. The competitive range will be made of Proposers whose individual scores, when viewed together, form a group of the highest ranked Proposers above a natural break in the scores.

OSU reserves the right to ask follow-up questions of Proposers during first stage evaluations. The questions will be for the purpose of clarification of information already contained in submittals and not be an opportunity to submit additional documentation or change existing documentation.

OSU may award after the first stage evaluation to the highest ranked Proposer without moving on to the second stage evaluation. If this option is selected, Written notice of intent to award the Contract to the highest ranked Proposer will be provided to all Responsive Proposers, or an award may be made directly without notice of intent in those instances of a single Responsive Proposer.

c. Second Stage Evaluation:

If award is not made after the first stage evaluation, OSU may choose any of the following methods in which to proceed:

- i. Issue a Written invitation to Proposers within the competitive range requesting an interview, presentation, site visit or any other evaluative method that is relevant to the goods or services solicited in the Request for Proposal. Written invitations will contain the evaluation criteria and scoring that will be used by the evaluation committee.
- ii. Engage in oral or Written discussions with and receive best and final Proposals from all Proposers in the Competitive Range or all Proposers submitting Responsive Proposals. Discussions may be conducted for the following purposes:
 - Informing Proposers of deficiencies in their initial Proposals;
 - Notifying Proposers of parts of their Proposals for which OSU would like additional information; or
 - Otherwise allowing Proposers to develop revised Proposals that will allow OSU to obtain the best Proposal based on the requirements set forth in this Request for Proposal.

The conditions, terms, or price of the Proposal may be altered or otherwise changed during the course of the discussions provided the changes are within the scope of the Request for Proposal. Best and final Proposals will be scored based on the evaluation criteria listed below.

Points awarded in the first stage evaluation will not be carried to the second stage evaluation. If a second stage evaluation of all Proposers does not produce an award that is in OSU's best interest, OSU may return to the first stage evaluation to advance additional Proposers to a second stage evaluation.

d. Additional Stages of Evaluation:

If after completion of the second stage of evaluation, an award is not made, OSU may add another stage of evaluation using any of the methods outlined in the second stage evaluation above.

6.02 EVALUATION CRITERIA

Points will be given in each criteria and a total score will be determined. The maximum points available for each criterion are identified below.

<u>Evaluation Criteria</u>	<u>Points</u>
Proposal relative to the Required Deliverables and Statement of Work	30
Proposer's qualifications relative to the qualifications	20
Potential to innovate and solve problems	15
Potential for on time completion and delivery of the project	15
Price of the goods and services	20
Total	100

Pricing Calculation:

The Proposal that contains the lowest price to OSU will receive the maximum number of price points. A Proposal whose price is higher than the lowest submitted price will receive proportionately fewer price points, as demonstrated in the example below.

- Proposer A's price is \$450 (the lowest)
 - Proposer A is awarded 20 price points (the maximum)
- Proposer B's price is \$500
 - Proposer B is awarded 18 price points ($450/500 \times 20$)

In the event of a discrepancy between unit prices and extended (arithmetically calculated) prices, unit prices will prevail over extended prices.

6.03 NEGOTIATIONS

OSU may commence serial negotiations with the highest ranked Proposer or commence simultaneous negotiations with all Responsive Proposers within the competitive range. OSU may negotiate:

- a. The Statement of Work;
- b. The Contract price as it is affected by negotiating the Statement of Work; and
- c. Any other terms and conditions as determined by OSU.

6.04 INVESTIGATION OF REFERENCES

OSU reserves the right to investigate and to consider the references and the past performance of any Proposer with respect to such things as its performance or provision of similar goods or services, compliance with specifications and contractual obligations, and its lawful payment of suppliers, subcontractors, and workers. OSU may postpone the award or execution of the Contract after the announcement of the notice of intent to award in order to complete its investigation.

6.05 CONTRACT AWARD

Contract will be awarded to the Proposer who, in OSU's opinion, meets the requirements and qualifications of the RFP and whose Proposal is in the best interest of OSU. If a successful Contract cannot be completed after award, OSU may conclude contract negotiations, rescind its award to that Proposer, and return to the most recent RFP evaluation stage to negotiate with another Proposer(s) for award.

7.0 INSTRUCTIONS TO PROPOSERS

7.01 APPLICABLE STATUTES AND RULES

This Request for Proposal is subject to the applicable provisions and requirements of the Oregon Revised Statutes, Oregon Administrative Rules, and OSU Policies and Procedures.

7.02 COMMUNICATIONS DURING RFP PROCESS

In order to ensure a fair and competitive environment, direct communication between OSU employees other than the Administrative Contact or other PCMM representative and any party in a position to create an unfair advantage to Proposer or disadvantage to other Proposers with respect to the RFP process or the award of a Contract is strictly prohibited. This restricted period of communication begins on the issue date of the solicitation and for Proposer(s) not selected for award ends with the conclusion of the protest period identified in OSU Standard 580-061-0145(3) and for Proposers(s) selected for award ends with the contract execution. This restriction does not apply to communications to other OSU employees during a Pre-Proposal conference or other situation where the Administrative Contact has expressly authorized direct communications with other staff. A Proposer who intentionally violates this requirement of the RFP process or otherwise deliberately or unintentionally benefits from such a violation by another party may have its Proposal rejected due to failing to comply with all prescribed solicitation procedures. The rules governing rejection of individual solicitation responses and potential appeals of such rejections are at OSU Standard 580-061-0130.

7.03 MANUFACTURER'S NAMES AND APPROVED EQUIVALENTS

Unless qualified by the provision "NO SUBSTITUTE" any manufacturers' names, trade name, brand names, information and/or catalogue numbers listed in a specification are for information and not intended to limit competition. Proposers may offer any brand for which they are an authorized representative, which meets or exceeds the specification for any item(s). If Proposals are based on equivalent products, indicate in the Proposal form the manufacturers' name and number. Proposers shall submit with their Proposal, sketches, and descriptive literature, and/or complete specifications. Reference to literature submitted with a previous Proposal will not satisfy this provision. Proposers shall also explain in detail the reason(s) why the proposed equivalent will meet the specifications and not be considered an exception thereto. Proposals that do not comply with these requirements are subject to rejection. Proposals lacking any written indication of intent to provide an alternate brand will be received and considered in complete compliance with the specification as listed in the RFP.

7.04 REQUESTS FOR CLARIFICATION OR CHANGE

Requests for clarification or change of the Request for Proposal must be in Writing and received by the Administrative Contact no later than the Deadline for Request for Clarification or Change as specified in the Schedule of Events. Such requests for clarification or change must include the reason for the Proposer's request. OSU will consider all timely requests and, if acceptable to OSU, amend the Request for Proposal by issuing an Addendum. Envelopes, e-mails or faxes containing requests must be clearly marked as a Request for Clarification or Change and include the RFP Number and Title.

7.05 ADDENDA

Only documents issued as Written Addenda by PCMM serve to change the Request for Proposal in any way. No other direction received by the Proposer, written or verbal, serves to change the Request for Proposal. Addenda will be publicized on the OSU procurement website. Proposers are advised to consult the OSU procurement website prior to submitting a Proposal in order to ensure that all relevant Addenda have been incorporated into the Proposal. Proposers are not required to submit Addenda with their Proposal. However, Proposers are responsible for obtaining and incorporating any changes made by Addenda into their Proposal. Failure to do so may make the Proposal non-Responsive, which in turn may cause the Proposal to be rejected.

7.06 PREPARATION AND SIGNATURE

All Required Submittals must be Written or prepared in ink and signed in ink by an authorized representative with authority to bind the Proposer. Signature certifies that the Proposer has read, fully understands, and agrees to be bound by the Request for Proposal and all Exhibits and Addenda to the Request for Proposal.

7.07 PUBLIC RECORD

Upon completion of the Request for Proposal process, information in all Proposals will become subject records under the Oregon Public Records Law. Only those items considered a "trade secret" under ORS 192.501(2), may be exempt from disclosure. If a Proposal contains what the Proposer considers a "trade secret" the Proposer must mark each sheet of information as such. Only bona fide trade secrets may be exempt and only if public interest does not require disclosure.

7.08 SUBMISSION

Proposals must be received in the PCMM office no later than the Proposal Due Date and Time; it is the Proposer's responsibility to ensure that the Proposal is received prior to the Proposal Due Date and Time indicated in this RFP, regardless of the method used to submit the Proposal. Proposals may be submitted via the following method(s):

- 1) Electronic copy in PDF format included as attachment(s) in an e-mail sent to bids@oregonstate.edu. The e-mail subject line should contain the RFP No. and RFP title. Only those Proposals received at this e-mail address by the Due Date and Time will be considered Responsive; do not e-mail a copy of the Proposal to any other e-mail address. **Proposals submitted directly to the Administrative Contact e-mail address will NOT be considered Responsive.** It is highly recommended that the Proposer confirms receipt of the email with the Administrative Contact noted above or by calling 541-737-4261. The Administrative Contact may open the e-mail to confirm receipt but will NOT verify the integrity of the attachment(s), answer questions related to the content of the Proposal, or address the overall Responsiveness of the Proposal.
- 2) Hard copy in a sealed package or envelope dropped off in person or delivered to the submittal location listed on the Request for Proposal cover sheet. The package or envelope should be addressed to the Administrative Contact. It is highly recommended that the Proposer confirms receipt of the Proposal with the Administrative Contact prior to the Proposal Due Date and Time.

All Proposals, including those submitted through electronic methods (if allowed), must contain Written signatures indicating intent to be bound by the offer. If the Proposer submits multiple versions of the Proposal via different methods and does not explicitly direct OSU as to which version to use, OSU will determine which version of the Proposal will be used for evaluation.

7.09 MODIFICATION

Prior to submittal, Proposers should initial modifications or erasures in ink by the person signing the Proposal. After submittal but prior to the Proposal Due Date and Time, Proposals may be modified by submitting a Written notice indicating the modifications and a statement that the modification amends and supersedes the prior Proposal. After the Proposal Due Date and Time, Proposers may not modify their Proposal.

7.10 WITHDRAWALS

A Proposer may withdraw their Proposal by submitting a Written notice to the Administrative Contact identified in this Request for Proposal prior to the Proposal Due Date and Time. The Written notice must be on the Proposer's letterhead and signed by an authorized representative of the Proposer. The Proposer, or authorized representative of the Proposer, may also withdraw their Proposal in person prior to the Proposal Due Date and Time, upon presentation of appropriate identification and evidence of authority to withdraw the Proposal satisfactory to OSU.

7.11 LATE SUBMITTALS

Proposals and Written notices of modification or withdrawal must be received no later than the Proposal Due Date and Time (in the case of electronic submissions, the time/date stamp of the email received at the PCMM office must be no later than the Proposal Due Date and Time). OSU may not accept or consider late Proposals, modifications, or withdrawals except as permitted in OSU Standard 580-061-0120. Sole responsibility rests with the Proposer to ensure OSU's receipt of its Proposal prior to the Proposal Due Date and Time. OSU shall not be responsible for any delays or misdeliveries caused by common carriers or by transmission errors, malfunctions, or electronic delays. Any risks associated with physical delivery or electronic transmission of the Proposal are borne by the Proposer.

7.12 PROPOSAL OPENING

Proposals will be opened immediately following the Proposal Due Date and Time at the Submittal Location. Proposer may attend the Proposal opening. Only the names of the Proposers submitting Proposals will be announced. No other information regarding the content of the Proposals will be available.

7.13 PROPOSALS ARE OFFERS

The Proposal is the Proposer's offer to enter into a Contract pursuant to the terms and conditions specified in the Request for Proposal, its Exhibits, and Addenda. The offer is binding on the Proposer for one hundred twenty (120) days. OSU's award of the Contract constitutes acceptance of the offer and binds the Proposer. The Proposal must be a complete offer and fully Responsive to the Request for Proposal.

7.14 CONTINGENT PROPOSALS

Proposer shall not make its Proposal contingent upon OSU's acceptance of specifications or contract terms that conflict with or are in addition to those in the Request for Proposal, its Exhibits, or Addenda.

7.15 RIGHT TO REJECT

OSU may reject, in whole or in part, any Proposal not in compliance with the Request for Proposal, Exhibits, or Addenda, if upon OSU's Written finding that it is in the public interest to do so. OSU may reject all Proposals for good cause, if upon OSU's Written finding that it is in the public interest to do so. Notification of rejection of all Proposals, along with the good cause justification and finding of public interest, will be sent to all who submitted a Proposal.

7.16 AWARDS

OSU reserves the right to make award(s) by individual item, group of items, all or none, or any combination thereof. OSU reserves the right to delete any item from the award when deemed to be in the best interest of OSU.

7.17 LEGAL REVIEW

Prior to execution of any Contract resulting from this Request for Proposal, the Contract may be reviewed by a qualified attorney for OSU pursuant to the applicable Oregon State University Standards, Oregon Revised Statutes and Oregon Administrative Rules. Legal review may result in changes to the terms and conditions specified in the Request for Proposal, Exhibits, and Addenda.

7.18 PROPOSAL RESULTS

A Written notice of intent to award will be issued to all Proposers. The Proposal file will be available for Proposer's review during the protest period at the PCMM Department. Proposers must make an appointment with the Administrative Contact to view the Proposal file. After the protest period, the file will be available by making a Public Records Request to OSU Office of General Counsel.

7.19 PROPOSAL PREPARATION COST

OSU is not liable for costs incurred by the Proposer during the Request for Proposal process.

7.20 PROPOSAL CANCELLATION

If a Request for Proposal is cancelled prior to the Proposal Due Date and Time, all Proposals that may have already been received will be returned to the Proposers. If a Request for Proposal is cancelled after the Proposal Due Date and Time or all Proposals are rejected, the Proposals received will be retained and become part of OSU's permanent Proposal file.

7.21 PROTEST OF CONTRACTOR SELECTION, CONTRACT AWARD

Any Proposer who feels adversely affected or aggrieved may submit a protest within three (3) business days after OSU issues a notice of intent to award a Contract. The protest must be clearly identified as a protest, identify the type and nature of the protest, and include the Request for Proposal number and title. The rules governing protests are at OSU Standard 580-061-0145.

EXHIBIT A
TERMS AND CONDITIONS / SAMPLE CONTRACT
OREGON STATE UNIVERSITY
PERSONAL/PROFESSIONAL SERVICES CONTRACT (PPSC)

Department Contract # 194295

This Contract is entered into by and between Oregon State University (OSU/Institution) for its Advanced Technology and Manufacturing Institute (ATAMI) (Department) and _____ (Contractor).

Whereas OSU has need of the services which Contractor is competent to provide; now therefore, in consideration of the sum not to exceed \$ _____ to be paid upon completion of all work to Contractor by OSU, Contractor agrees to perform between date of last signature and _____, inclusive, the following personal and/or professional services:

Required Deliverables and Statement of Work described in Attachment B. Selection of Contractor was performed in accordance with SF194295P.

Contractor shall not begin work until the Contract is signed by all parties listed below. Unless otherwise specified herein, OSU shall pay only for work performed. Contractor shall submit detailed invoice(s) for work performed to Department for payment. Invoices are paid according the OSU's standard payment terms which are Net 30 days from receipt of correct invoice.

The following attachments are incorporated by this reference and made a part of this contract: Attachment A, OSU Standard Contract Provisions and Attachment B; SOW Attachment C; Proposer Response Other Attachments _____, _____, _____.

INSURANCE: the minimum limit is \$ 1M

Type required: CGL AUTO Professional

THIS CONTRACT SHALL BECOME EFFECTIVE AND BINDING UPON LAST SIGNATURE BY AUTHORIZED REPRESENTATIVES OF THE PARTIES AS PROVIDED HEREIN.

OSU

CONTRACTOR

 OSU Department Head Date
 (Typed Name):

 Signature Date
 Typed Name:
 Address:

Phone:

 OSU Contract Officer Date

Banner Vendor ID No.:
 U.S. Tax Identification No.:
 Contractor is a: (Check One)
 Resident U.S. citizen
 Resident non-U.S. citizen (Green Card Holder)
 Non-U.S. citizen
 Partnership
 Corporation
 Contractor is also a minority group member

OSU VENDOR NO.	FORM PREPARED BY	PREPARER'S ADDRESS	DATE

INDEX CODE	ACCOUNT CODE	ACTIVITY CODE	PAYMENT AMOUNT

Place Bar Code Label Here	All payments and reimbursements made on this contract will be 1099-misc. reportable. Rev 11-/09
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ATTACHMENT A
OREGON STATE UNIVERSITY STANDARD PERSONAL/PROFESSIONAL SERVICES CONTRACT PROVISIONS

ACCESS TO RECORDS. Contractor shall maintain books, records, documents, and other evidence and accounting procedures and practices sufficient to reflect properly all costs of whatever nature claimed to have been incurred and anticipated to be incurred in the performance of this Contract. OSU and the federal government and their respective duly authorized representatives shall have access to the books, documents, papers, and records of Contractor which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Such books and records shall be maintained by Contractor for three years from the date of contract expiration unless a shorter period is authorized in writing. Contractor is responsible for any audit discrepancies involving deviation from the terms of this Contract and for any commitments or expenditures in excess of amounts authorized by Institution.

ASSIGNMENT. Contractor shall not assign or transfer its interest nor delegate its obligation in this Contract without the express written consent of the Institution.

AVAILABILITY OF FUNDS. Institution certifies that sufficient funds are available and authorized for expenditure to finance costs of this Contract within its current biennial appropriation or expenditure limitation, provided, however, that continuation of the Contract, or any extension, after the end of the fiscal period in which it is written, is contingent upon a new appropriation or limitation for each succeeding fiscal period for the purpose of this Contract.

CAPTIONS. The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.

COMPLIANCE WITH APPLICABLE LAW. Contractor agrees to comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the work to be done under this Contract. Contractor specifically agrees to comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules, and regulations. Contractor also shall comply with the Americans with Disabilities Act of 1990 (Pub L No. 101-336), ORS 659.425, and all regulations and administrative rules established pursuant to those laws. Failure or neglect on the part of Contractor to comply with any or all such laws, ordinances, rules, and regulations shall not relieve Contractor of these obligations nor of the requirements of this Contract. Contractor further agrees to make payments promptly when due, to all persons supplying to such Contractor, labor or materials for the prosecution of the work provided in this Contract; pay all contributions or amounts due the Industrial Accident Fund from such contractor incurred in the performance of this Contract; not permit any lien or claim to be filed or prosecuted against the state on account of any labor or material furnished; pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. If Contractor fails or refuses to make any such payments required herein, the appropriate Institution official may pay such claim to such payment. Any payment of a claim in the manner authorized in this section shall not relieve the Contractor or Contractor's surety from obligation with respect to any unpaid claims.

CONFLICT OF INTEREST. Contractor covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services hereunder. Contractor further covenants that in the performance of this Contract no person having any such interest shall be employed.

DUAL PAYMENT. Contractor shall not be compensated for work performed under this Contract from any other entity of the State of Oregon.

EXECUTION AND COUNTERPARTS. This Contract may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

GOVERNING LAW. This Contract shall be governed and construed in accordance with the laws of the State of Oregon. Any claim, action, or suit between Institution and Contractor that arises out of or relates to performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Benton County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought only in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon.

HAZARD COMMUNICATION. Contractor shall notify Institution prior to using products containing hazardous chemicals to which Institution employees may be exposed. Products containing hazardous chemicals are those products defined by Oregon Administrative Rules, Chapter 437. Upon Institution's request, Contractor shall immediately provide Material Safety Data Sheets, as required by OAR 437-155-025, for the products subject to this provision.

INDEMNITY, RESPONSIBILITY FOR DAMAGES. Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay which may be caused by, or result from, the conduct of work under this contract, or from any act, omission, or neglect of contractor, its subcontractors, or employees. Contractor shall save, defend, indemnify, and hold harmless OSU and its officers, board members, employees, and agents from all claims, suits, and actions of any nature resulting from or arising out of the activities or omissions of Contractor or its subcontractors, officers, agents, or employees acting under this contract.

INDEPENDENT CONTRACTOR STATUS. The service(s) to be rendered under this Contract are those of an independent contractor. Contractor is not to be considered an agent or employee of Institution for any purpose, and neither Contractor nor any of Contractor's agents or employees are entitled to any of the benefits that Institution provides for its employees. Contractor will be solely and entirely responsible for its acts and for the acts of its agents or employees during the performance of this Contract. If Contractor is providing personal services as an **individual**, (a) Contractor: (1) Is engaged as an independent contractor and will be responsible for any Federal or State taxes applicable to this payment; (2) Will not be eligible for any Federal Social Security, State Workers' Compensation, unemployment insurance, or Public Employees Retirement System benefits from this Contract payment; (3) Is not an officer, employee, or agent of the State as these terms are used in ORS 30.265 and will not be under the direction and control of Institution; (4) Is not currently employed by the Federal Government and the amount charged does not exceed his normal charge for the type of service provided if payment is to be charged against Federal funds; (5) Is not a member of the Oregon Public Employees Retirement System; or (6) if a contributing member of the Oregon Public Employees Retirement System for which contributions to the retirement system must be withheld, Contractor's contribution to the retirement system will be withheld and a corresponding Institution contribution made; and (7) Must furnish Form IRS Form 8233 in duplicate with this Contract if Contractor is a non-resident alien and claims exemption from Federal Withholding tax.

INSURANCE. Contractor shall secure at its own expense and keep in effect during the term of this Contract general liability insurance. Insurance policies, which cannot be excess to a self-insurance program, are to be issued by an insurance company authorized to do business in the State of Oregon. OSU and its officers, board members, employees, and agents shall be included as additional insured in said insurance policy. If any of the liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 24 months.

NOTICES AND REPRESENTATIVES. All notices, certificates, or communications shall be delivered or mailed postage prepaid to the parties at their respective places of business as identified in the signature block of this Contract, unless otherwise designated in writing. Copies of such correspondence shall also be sent to all other Contract signatories.

OVERDUE PAYMENTS. Any charges claimed by the Contractor for payment of an overdue amount shall be in accordance with the provisions of ORS 293.462.

OWNERSHIP OF WORK PRODUCT. All work products or any form of property originated or prepared by Contractor which result from this Contract are the exclusive property of Institution.

SEVERABILITY. If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

SUBCONTRACTS AND ASSIGNMENTS. Contractor shall not enter into any subcontracts for any of the work scheduled under this Contract, or assign or transfer any of its interest in this Contract, without obtaining prior written approval from the Institution.

SUCCESSORS IN INTEREST. The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns.

TERMINATIONS. This Contract may be terminated at any time by mutual consent of both parties, or by either party upon thirty (30) days' notice in writing and delivered by certified mail or in person to the other party. In addition, the Institution may terminate this Contract effective upon delivery of written notice to Contractor, or at such later date as may be established by the Institution, if (a) Federal or state regulations or guidelines are modified, changed, or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract; or (b) Any license or certificate required by law or regulation to be held by the Contractor to provide the services required by this Contract is for any reason denied, revoked, or not renewed. This Contract may also be terminated by Institution for default (including breach of contract) if (a) Contractor fails to provide services or materials called for by this Contract within the time specified; or (b) Contractor fails to perform any of the other provisions of this Contract, or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from Institution, fails to correct such failures within ten days. The rights and remedies of Institution provided in the above clause related to defaults (including breach of contract) by Contractor shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

TERMINATION DUE TO NONAPPROPRIATION OF FUNDS. If sufficient funds are not provided in future legislatively approved budgets of Institution (or from applicable Federal, state, or other sources) to permit Institution in the exercise of its reasonable administrative discretion to continue this Contract, or if Institution or program for which this Contract was executed is abolished, the Institution may terminate this Contract without further liability by giving Contractor not less than thirty (30) days notice. In determining the availability of funds from the Oregon Legislature for this Contract, Institution may use the budget adopted for it by the Joint Ways and Means Committee of the Oregon Legislative Assembly.

FOREIGN CONTRACTOR. If Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporation Division, all information required by those agencies relative to this Contract. Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.

FORCE MAJEURE. Neither Institution nor Contractor shall be held responsible for delay or default caused by fire, riot, acts of God, or war where such cause was beyond, respectively, Institution's or Contractor's reasonable control. Contractor shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.

WAIVER. The failure of Institution to enforce any provision of this Contract shall not constitute a waiver by Institution of that or any other provision.

APPROVALS. In some instances, another state agency may be required to approve this Contract before any work may commence under this Contract.

RECYCLED PRODUCTS: Contractors will use recycled products, as defined in ORS 279A.010(1)(ii), to the maximum extent economically feasible in the performance of the Contract.

WORKERS' COMPENSATION. All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required workers' compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its subcontractors complies with these requirements.

MERGER. THIS CONTRACT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN

WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. CONTRACTOR, BY THE SIGNATURE HERETO OF ITS AUTHORIZED REPRESENTATIVE, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THE CONTRACT AND CONTRACTOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

Attachment B to Exhibit A

Required Deliverables and Statement of Work

1.01 Required Deliverables

- a. Two 3 Axis servo positioning systems controlled by flexible programming that can dispense liquid over a planar 8" x 8" area, and that can be installed in a 3D Systems ProX300 Metal Printer, now owned by ATAMI
 - An ALPHA unit built with a deposition system of the proposer's design
 - A BETA unit built using a Xerox Piezoelectric Driven Inkjet System
 - M Series Down Shooter model
 - One system will be used at a time, installed in a 3D Systems ProX300 Metal 3D Printer
 - One servo controller will be used for both ALPHA and BETA positioners. i.e., one controller, compatible with each, after installation.
- b. Both liquid deposition systems will precisely deliver, over the 8" x 8" area, in 20 seconds or less, liquids between
 - 1 uL per mm²
 - 1 mL per mm²
 - from 7 to 10 cP viscosity
 - uniform coverage over the area (i.e., "blackout"). Thickness tolerance TBD.
 - variable density control through programming and/or component adjustment or substitution
- c. Deposition systems that can operate in a stainless-steel powder dust environment, from 70° - 140°F
- d. A protective cover over the BETA liquid deposition system to avoid exposed nozzle dry out or clogging when not in use (i.e. "Service Station")
- e. Operate in a Nitrogen rich environment
 - Introduce no appreciable N₂ leaks into the Prox300 cabinet after installation
- f. Do not interfere with the Laser process used in the 3D Metal printing
- g. Computer based controls of the machine functions and the scanning parameters
 - Contractor will furnish default programs
 - Contractor will design the system to be programmed by ATAMI Engineers
 - Contractor will train ATAMI engineers on use of the controls and programming
- h. An interface design to allow the deposition system to work seamlessly with the ProX300 Metal Printer
 - No assistance from 3D Systems Engineering is to be assumed
- i. Contractor will install, debug and commission both systems in the ProX300
 - The Contractor's deposition design first (ALPHA)
 - The Xerox printhead design second (BETA)
 - One servo controller will be used for both positioners
 - Coverage thickness and uniformity will be measured after commissioning
- j. Both positioners will be designed plug compatible to the same machine connections

1.02 Project Phases

There will be five (5) phases during this project as follows:

- Phase 1 – Concept Presentation
- Phase 2 – Technical Design including cost quotes and schedule
- Phase 3 – Procurement, Fabrication and Assembly
- Phase 4 – Programming and Testing
- Phase 5 – Installation and Commissioning

PLEASE NOTE: Proposer's proposal must include estimates and a master schedule (Gantt Chart format) for the required phases. Key dates are as follows:

- **ALPHA UNIT commissioned no later than Nov. 1, 2018**
- **BETA UNIT commissioned no later than the end of 1Q2019**

Conclusion of the above phases will include formal reviews with ATAMI in Corvallis, conforming to the content definitions shown below.

Note that phases will likely overlap, minimizing the develop time.

Concept Presentation Review Content

The goal of the Concept Presentation Phase will be to achieve consensus between Contractor and ATAMI on a design to pursue, by mutual discussion of:

- Process and Design Requirements
 - Safety and Cleanliness Requirements
 - Functionality, Accuracy, Robustness
 - Scope, Potential Cost, Schedule
 - Technical Design Musts and Wants
- Hold a Design Concepts Review meeting for 1-3 hours with free discussion on the above issues
 - At ATAMI Office, B11, HP Campus
 - Present topics for discussion:
 - Review Power Point bullet list of Process and Design Requirements in priority order
 - Present CAD sketches of proposed design(s)
 - Discuss Functionality, Accuracy, Robustness of design(s)
 - Narrow choice of concept as much as possible
 - Discuss Fabrication and Development Method, Estimated Cost, Performance, Schedule
 - Materials to be presented are to be distributed prior to the meeting, for attendee preparation

Technical Design Phase Content

The technical design phase will begin after agreement on a design between ATAMI and Contractor. There will be two meetings in this phase, including a Design Lineup Meeting to discuss Process and Design Requirements. The objective of this meeting is to create H/W designs that will be fabricated in Phase 3.

The process requirements are listed in the Deliverables section above.

After specific design objectives are established, the Contractor will use 3D CAD to create models and engineering drawings of H/W, control flow charts and electrical schematics. These designs will comply with detailed instructions provided by ATAMI engineers during the design phase. Animation and Finite Element Analysis should be applied, if recommended by the Contractor.

The Contractor will use engineering, design knowledge and experience to specify:

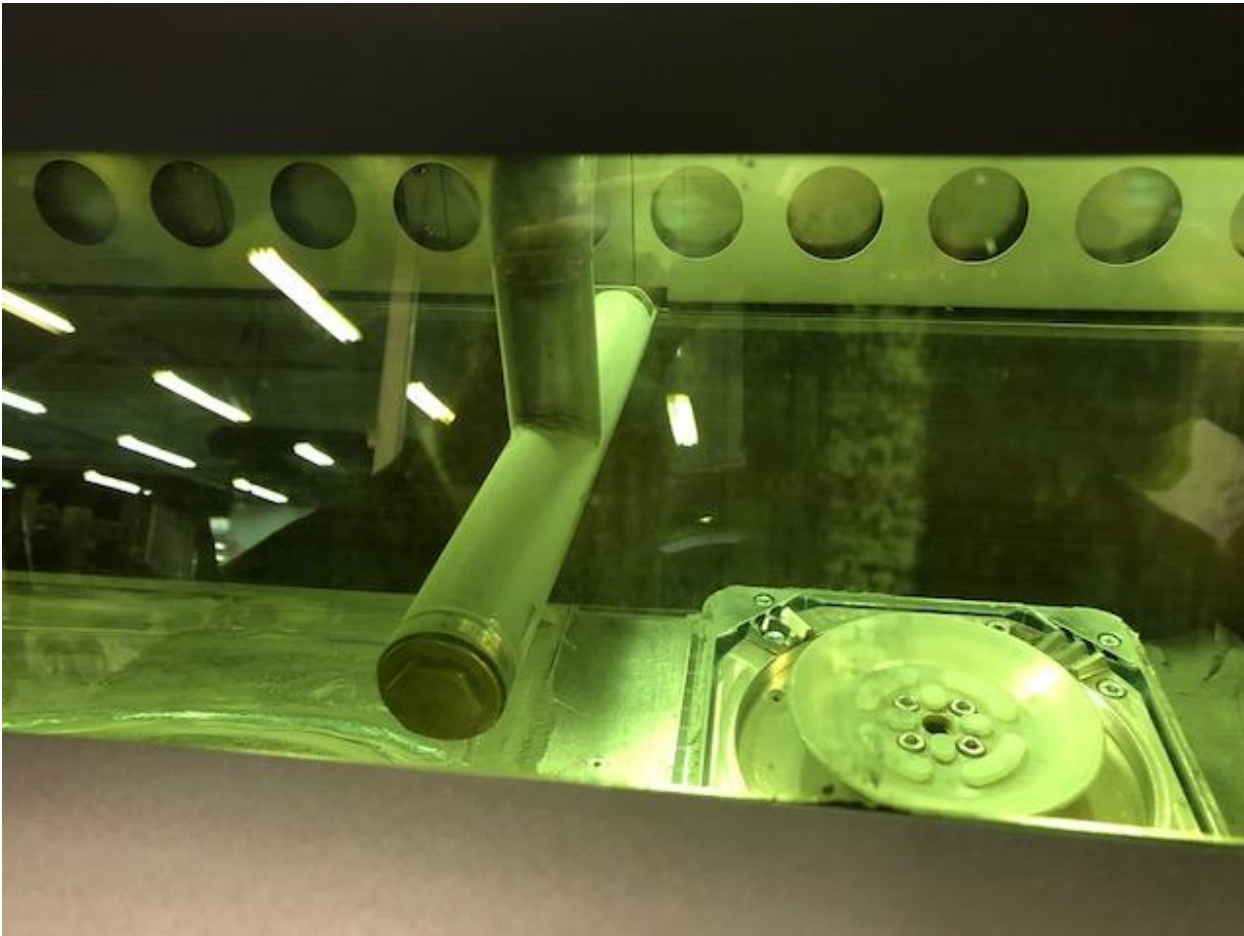
- Appropriate motion control mechanical and electrical components
- Appropriate motion controller H/W and S/W
- Possible interfacing schemes between 3D Systems and Contractor's control H/W and S/W

The deliverables of the Technical Design Phase will be:

- IGS and STP CAM files to support fabrication at local sources
- Part and assembly number organization comprising a Bill of Material (BOM) capturing the following:
 - Fabricated parts
 - Purchased parts
 - ATAMI supplied materials
 - 3D Systems applied materials and/or modifications
 - Contractor Systems materials and/or modifications
- 2D Engineering drawings in PDF format that add form, fit and finish data to the assemblies and parts
- Electrical schematics
- Printed documents, STP, DXF and PDF computer files for engineering archives
- Design Reviews as required. A Final Design Review before release to Fabrication.

The high priority challenges in the technical design will be to:

- Fit all mechanical components in a confined space (see image below)
- Positioning components to avoid interfering with laser operation and 3D Metal Printer mechanical movements under all operating conditions with 99.9999% certainty
- Protecting precision components from metal powder dust
- Modifying the 3D Printer minimally, without affecting the printing operation



When the design documentation is stable, a second meeting will be held at ATAMI to review specifics. After approval, the Contractor will continue to the next phase.

Procurement, Fabrication and Assembly Phase Content

The Contractor will manage and execute this phase, with the checkpoint approvals of the ATAMI Program Manager. Activities will include the following:

- Soliciting machine shop fabricators, quoting and placing work orders for fabricated components
- Purchasing standard parts, managing delivery and order float
- Assembling components and resolving integration issues
 - With 3D Systems and major sub-contractor components
- Piping and wiring mechanics, electrical and control panels
- Powering up and testing basic operations
- Demonstration of basic functionality of the mechanism to ATAMI Engineers

Materials and components will be fabricated, purchased and assembled. The unit should be designed as a modular, “desktop” unit for development away from the ProX300 metal printer. Ideally, the unit will be test run in a **stand-alone mode** before migration to the host metal printer.

Programming and Offline Assembly Phase Content

The system will require integrating 3 control systems:

- The 3D Metal Printer controller
- System controls to activate the liquid deposition system
- Servo and logic control of the fluid deposition positioner

The 3D Metal Printer proprietary control S/W may not be modified, impacted or change requested according to current plans. The reason is the 3D Systems company holds their S/W closely and is not likely to respond to request for an API or special coding for this application.

The Fluid Deposition Control S/W can interact passively with the 3D Systems Control by first inhibiting the 3D Metal Printing Cycle and then release that machine when liquid deposition is complete. This can be done with a hardwired connection to existing machine push buttons. The Contractor S/W would thus manage a hold and continue function within the 3D Metal Print cycle.

The Servo and Liquid Dispenser Positioner S/W would be extensively developed by the Contractor. The system must include all the typical H/W and S/W servo components.

Safety will be a primary concern. Interlocks among all added systems will be designed with redundancy.

The added control system will likely be housed in a NEMA enclosure outside the machine and wired to the liquid dispenser controller and ProX300 Printer controller through electrical fuses, disconnects and connectors. Power can be tapped from the ProX300 Printer power source, for safety reasons.

Demonstration of programming efficacy will take place with the deposition outside the ProX300.

Installation and Commissioning

The Contractor will install the 2 deposition systems in the 3D System DP300X metal printer during this phase. Once installed, the Contractor will demonstrate the added equipment functions acceptably to the specifications included in this document and as added by mutual agreement during the design phase. The ALPHA unit will be installed and tested first. Commissioning must be complete by Nov. 1, 2018. The BETA unit will then be installed and tested. After acceptance, ATAMI will assume responsibility for future removals and installs. The Contractor will subsequently train ATAMI personnel on proper operation. The Contractor will also include an Instruction and Operations Manual for the equipment. The Contractor will be approved for payment following successful completion of commissioning.

**EXHIBIT B
CERTIFICATIONS**

By signature on this certification the undersigned certifies that they are authorized to act on behalf of the Proposer and that under penalty of perjury the undersigned will comply with the following:

SECTION I. OREGON TAX LAWS

The undersigned hereby certifies under penalty of perjury that the Proposer, to the best of the undersigned's knowledge, is not in violation of any tax laws described in ORS 305.380(4).

SECTION II. AFFIRMATIVE ACTION

The undersigned hereby certifies that they have not discriminated against Minority, Women or Emerging Small Business Enterprises in obtaining any required subcontracts, pursuant to OSU Standard 580-061-0030 (3).

SECTION III. COMPLIANCE WITH SOLICITATION

The undersigned agrees and certifies that they:

1. Have read, fully understands and agrees to be bound by the Request for Proposal and all Exhibits and Addenda to the Request for Proposal; and
2. Are an authorized representative of the Proposer, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Proposal or Contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the Request for Proposal and the Contract; and
4. Has provided a correct Federal Employer Identification Number or Social Security Number with the Proposal.

SECTION IV. PERMISSIVE COOPERATIVE PROCUREMENTS

If Proposer is awarded a contract from this Request for Proposal, Proposer hereby (check one)

- agrees
- disagrees

to offer the resulting contractual terms and prices to other public institutions.

Authorized Signature: _____ Date: _____

Name (Type or Print): _____ Telephone:(_____) _____

Title: _____ Fax:(_____) _____

FEIN ID# or SSN# (required): _____ Email: _____

Company: _____

Address, City, State, Zip: _____

Construction Contractors Board (CCB) License Number (if applicable): _____

Business Designation (check one):

- Corporation
- Partnership
- LLC
- Sole Proprietorship
- Non-Profit

**EXHIBIT C
REFERENCES**

NOTE: Include ten (10) most recent clients

REFERENCE 1

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 2

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 3

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 4

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 5

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 6

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 7

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 8

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 9

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

REFERENCE 10

COMPANY: _____ CONTACT NAME: _____
ADDRESS: _____ PHONE NUMBER: _____
CITY, STATE ZIP: _____ FAX NUMBER: _____
WEBSITE: _____ E-MAIL: _____
GOODS OR SERVICES PROVIDED: _____

EXHIBIT D
BID PRICE FORM

TOTAL COST FOR ALL PROJECT WORK AND DELIVERABLES: \$ _____