



**University of Massachusetts Amherst
Department of Procurement
Request for Bids:**

**Steam and Condensate Pre-Insulated Piping for the Gorman Project
per the following specifications or approved equal**

RFB# AA12-RH-4500

Bid Opening Date – February 22, 2012 @ 1:00 p.m. EST

The Central Heating Plant at the University of Massachusetts Amherst is seeking bids to provide and install Steam and Condensate Pre-Insulated Piping for the Gorman Project per the following specifications or approved equal. All materials must be delivered between May 15, 2012 and May 20, 2012.

Implementation Schedule:

RFB release date to vendors:	February 1, 2012
Questions due from vendors:	February 15, 2012 @ 2:00 pm EST
Answers/official addendum released:	February 17, 2012
<u>Mandatory site visit must be completed by</u>	February 22, 2012 @ 1:00 pm EST
Deadline for submission of bids:	February 22, 2012 @ 1:00 pm EST

Summary:

This Section includes the following for 200 ft. Low Pressure (LP) steam, and 200 ft. Condensate Return (CR) piping.

1. Pipe, fittings and accessories.
2. Pipe Insulation.
3. Field Joint Closure Materials.

Include price of technical support separately in the bid. This specification section shall apply to all Steam, Condensate and Relief Piping which is pre-insulated at the manufacturer's facility.

Pipe is to be delivered between May 15, 2012 and May 20, 2012.

Performance Requirements:

Components and installation shall be capable of withstanding the following minimum working pressures and temperatures:

GORMAN HOUSE, BLDG 294 to MANNHOLE 58 -- 200 FOOT LINE

1. **LP Steam and LP Steam Relief Piping: 200 FT, 8 INCH DIA.** (40 ft. sections maximum length)
 - a. Design (Working) Pressure/Temperature 40 psig/360 deg. F
 - b. Normal Operating Pressure/Temperature 13 psig/300 deg. F
2. **Condensate Return Piping: 200 FT, 3.0 INCH DIA.** (40 ft. sections maximum length)
 - a. Design (Working) Pressure/Temperature: 50 psig/180 deg. F
 - b. Normal Operating Pressure/Temperature: 8 psig/180 deg. F
3. **Conduit Vent and Drain Piping:**
 - a. Design (Working) Pressure/Temperature: 10 psig/210 deg. F
 - b. Normal Operating Pressure/Temperature: 0 psig/180 deg. F

4. **Air-Vent and Vacuum-Breaker Piping: Equal to pressure of the piping system to which it is attached.**

GORMAN STEAM LINE

	LP Steam	Condensate
Typical Cross Section Proposed:		
Service Pipe Diameter (in)	8	3.0
Service Pipe Schedule	Schedule 40	Schedule 80
Service Pipe Insulation Thickness	2	1
Service Pipe Insulation Material	Foam Glass	Foam Glass
Outer Conduit Diameter (in)	16	10.75
Outer Conduit Insulation Thickness (in)	1.0	1.0
Jacket Outside Diameter (in)	12.75	10.75
Jacket Material	HDPE	HDPE

LINE REQUIREMENTS by BUILDING	
Building # 294 to M/H 58	
Steam Supply 8 inch	
Linear Feet	200
Oversized straight (feet)	45
Prefabricated 16" oversized elbows	4 each
Prefabricated Anchors	2 each
Prefabricated End Seals	2 each
Prefabricated Casing Ecc / Conc Fittings	2 each
Condensate Return 3.0 inch	
Linear Feet	200
Prefabricated 90 pipe elbows	4 each
Prefabricated Anchors	2 each
Prefabricated End Seals	2 each
Prefabricated Casing Ecc / Conc Fittings	2 each

Additional General Requirements

- A. Provide direct burial, pre-insulated piping and accessories for the above location.
 - 1. Contractor shall provide direct piping and accessories for the above location.
 - 2. All fabricated systems shall be designed to withstand Highway AASHTOH-20 loading.
 - 3. Provide a complete system with all components provided by the same manufacturer, including integral leak detection system inside and outside of the steel conduit and associated alarm system.
- B. Steel will be domestic.
- C. Insulation will be Foam Glass.
- D. Exterior steel service pipe shall be abrasive blast-cleaned to a minimum of a near white surface per SSPC-SP10-63T. Profile must be a minimum of 1.5 mil peak to valley range. Any areas of rust bloom or oil shall be wiped or reblasted. After blasting the steel conduit shall be coated with water-based inorganic zinc rich coating. The zinc coating shall be high solids inorganic zinc rich coating that protects the steel galvanically, thus eliminating sub-film corrosion. The zinc coating shall be a two part sprayable coating consisting of a liquid base portion and a dry

powered metal. The two components when mixed together can be sprayed applied. The dry film thickness shall be in the range of 2 to 4 mil.

- E. The outside of the insulation will have an aluminum diffusion barrier applied prior to application of the outer jacket or an equivalent process to extend the foam life.
- F. There are no drawings provided with this specification.
- G. **All bidders *must* visit the site prior to submittal of the bid response. Failure to attend this mandatory site visit is a reason for bid disqualification. This mandatory site visit must be arranged by appointment only. Please contact Ben Caron to arrange the appointment.**

**University of Massachusetts
Attn: Mr. Ben Caron
Central Heating Plant
200 Mullins Way
Amherst, MA 01003-9352
Phone: 413-545-6460 / E-Mail: ben@admin.umass.edu**

- H. Contractor is responsible for all measurements.
- I. Subassemblies- End seals, gland seals and anchors shall be designed and factory prefabricated to prevent the ingress of moisture into the system. All subassemblies shall be designed to allow for the complete draining and drying of the conduit system.
- J. All specific requirements must be addressed in the bid response.

Bid Response must include the following:

Product Data: For each type of the following:

1. Pipe, fittings and accessories.
2. Pipe Insulation.
3. Field Joint Closure Materials.
4. Expansion Joints and Loops.
5. Warranties specified herein.

Shop Drawings:

Detail: 1/4 inch equals 1 foot scale, pipe, multiple pipes, alignment guides, expansion joints and loops.

Provide Part Drawing Layout (PDL) which details locations and fabrication of each assembly, anchors, alignment guides, and expansion joints and loops.

All straight sections, fittings, anchors, end seals and other accessories shall be factory fabricated to job dimensions and designed to minimize the number of field welds.

Locations of necessary oversized casing and guides shall be indicated.

Each system layout shall be computer analyzed by a State of Massachusetts Professional Engineer employed by the piping system manufacturer to determine stress on the steam pipes and condensate pipes and anticipated thermal movement of the steam and condensate pipes.

The system design shall be in strict conformance with ANSI/ASME B31.1, latest edition and ASME standards listed.

Corrosion allowance for all steel pipe schedules on this project (new and existing piping) shall be 0.05” for sizes 1” and smaller, and 0.063” for pipes 1¼” and larger. Connections to existing piping shall be in accordance with ANSI/ASME B31.1 “Power Piping”.

The computer generated analysis shall be included in this submittal and clearly identify piping, fittings and appurtenances as designated on the Part Drawing Layout (PDL).

The analysis submittal shall include detailed input and output stress analysis, a stress analysis node drawing, and a report interpreting the data showing stress analysis to be in compliance with ASME B31.1 “Power Piping”.

Storage Requirements:

Suppliers shall provide storage requirements in writing to ensure the storage of the pre-insulated piping systems, fittings and appurtenances meet the warrant requirements specified. The written requirements shall also indicate the minimum area required for storage of said materials.

Substitutions:

It shall be the sole-responsibility of the Supplier to provide all written documentation to support a substitution which deviates from the specified items contained within this specification. Documentation shall include specific product and installation data which clearly shows an equal to or better than situation exists for the Owner. Documentation shall include previous project installations and brief descriptions of project scope that have been completed for a minimum of five (5) years with reference information including specific contact names of Owners, their facility name, address and telephone number.

References:

List three (3) customers with similar requirements as those of the University of Massachusetts Amherst whom the University may contact for reference purposes, including the company name, contact person, telephone number, and address and brief description of business done with the company within the past year. By submitting this information the vendor authorizes the University of Massachusetts Amherst to contact these clients for the purposes consistent with the review of this bid.

Field Quality Control: N/A

Piping Assembly Manufacturer:

1. Quality Assurance Procedures Manual.
2. The factory shall provide the QA manual detailing pipe handling, fabrication, insulating, testing & storage.
3. Service Pipe:
 - a. Mill Cert’s (MTR’s) are required.
 - b. 100% Radiographic Testing (X – Ray) of all Factory Service Pipe Welds shall be required, by a third party testing laboratory regularly engaged in X – Ray inspection.
 - c. Pipe Bending – Fittings that utilize a pipe bender shall be identified as such on the Submittal or Part Drawing Lay - Out (PDL).
4. Conduit:
 - a. 100% Air Test of all Spool Pieces, reports shall be traceable to each individual spool piece.
 - b. Conduit Insulation – Test Reports shall be submitted as detailed under the Outer Conduit Insulation section of these specifications.
 - c. FRP or HDPE Jacket – Test Reports shall be submitted as detailed under the Outer Conduit Insulation jacket section of this specification.

5. Installation instructions shall be required, detailing manufacturer's installation, warranty, maintenance and operation of the pipe system.
6. All factory documentation shall be provided during the submittal stage. All documentation shall be furnished directly to the Owner's Representative. The factory shall also provide a copy of all documentation to the Installing Contractor.

Operation and Maintenance Data.

Installer Certificates: Welder's certificates for welding processes and operators.

Design Calculations: Piping system stress analysis, to include design of expansion joints, loops and bends.

Heat Loss Calculations.

Required Concrete Anchor Sizes.

Quality Assurance:

ASME Compliance: Comply with ANSI/ASME B31.1, "Power Piping" for materials, products, and installation. Safety valves and pressure vessels shall bear the appropriate ASME label.

Reference "Common Work Results for HVAC" in Division 15 for additional Quality Assurance requirements.

Warranty:

Piping manufacturer shall submit a written warranty to The University, with copy to the Installing Contractor, for the piping to be executed upon installation by the Installing Contractor from the date of Substantial Completion for a period of five (5) years to repair piping systems and replace components damaged by failure.

Likewise, the Installing Contractor shall submit a written warranty to The University for the field joints to be executed upon installation from the date of Substantial Completion for a period of five (5) years to repair field joints and replace field joints damaged by failure.

These warranty requirements shall apply to the pre-purchased piping as well as to the piping provided under this contract.

The warranty as specified above shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrently with other warranties made by the Manufacturer under requirements of the Contract Documents.

Award of the Contract:

The University reserves the right to award this contract in a manner that is deemed in the best interest of the University.

Allow up to two (2) weeks for review of bid responses by the University of Massachusetts Amherst and the Engineer. This process may require revised submittals to be submitted within several days after initial review by the Engineer.

Field Joint Sequence/Quality Assurance Documentation:

All field joints shall be assembled and tested in the following sequence. Standard (traceable) Report Form documentation shall be provided as described below. Documentation format shall be submitted to Owners Representative for approval.

Sequence	Documentation
Service Pipe Fit and Weld	Contractor Weld Map
Service Pipe Weld Stamp	Contractor Weld Map / Welder Stamp
X-Ray of Service Pipe Welds (5%)	Contractor Weld Map / X-Ray Film
Remove Shipping Bars	Contractor / MFG's Weld Map
Insulate Service Pipe	Contractor Weld Map
Weld Closure Sleeve	Owners Test / MFG's Test Report
Weld Stamp Closure Sleeve	Owners Test / MFG's Test Report
Hydrostatic Test of Service Pipe	Owners Test / MFG's Test Report
Conduit Air Test	Owners Test / MFG's Test Report
Conduit Air Test – Sensitive Leak Test (Soap Test)	Owners Test / MFG's Test Report
Sensitive Leak Test (Soap Test) prior to Insulating Casing	Owners Test / MFG's Test Report
Insulate Casing with Polyurethane Foam/Seal Insulation	MFG's Test Report
Shrink Wrap Polyurethane Foam/Seal Insulation	MFG's Test Report

Record Drawings shall be the responsibility of the installing contractor. Record Drawings shall be submitted to the Owners Representative. Record Drawings shall include the weld map, shall be traceable to the weld map and shall have a numbering system for each field joint weld. The weld map and trace number shall correspond with the Pre-insulated Pipe Manufacturer's pipe trace identification numbers.

Factory Field Technician:

1. A factory employed and certified field technician shall be required on site to provide inspection & written report during the critical periods of installation defined as:
 - a. Unloading of the first load of material.
 - b. Inspection of the initial trench, bedding and pitch.
 - c. Field joint instruction.
 - d. Cold springing of steam pipe.
 - e. Pouring of anchor blocks.
 - f. Initial backfill.

2. Factory Field Technician requirements:

- a. Technically qualified, factory trained piping system installation instructor with a minimum of five (5) years of experience.
- b. A resume shall be submitted to the Owner for approval. If the Owner does not approve, the proposed Technician, the Manufacturer shall submit an alternate for approval.
- c. The Technician shall remain on the project until completion unless the Owner approves their departure or requests removal of the Technician.
- d. All costs associated with the Technician **shall be included** in the bid.

A daily field report shall be required from the factory technician detailing work observed while on the site. Field reports shall be submitted to the Installing Contractor and Owners representative. Field reports shall include the condition and quality of materials used in accordance with the contract documents and manufacturer's instructions. Field reports shall also include any discrepancies, installation concerns, unsatisfactory work performed and the Technician's recommendations for appropriate and corrective action to be taken.

Upon completion of the pipe installation the contractor shall deliver to the Owners Representative, a **notarized certificate** from the manufacturer stating that the installation has been made in accordance with the manufacturer's recommendations and warranty requirements. Sales representatives will not be acceptable to perform pipe installation inspections.

Outer Conduit: Shall be pneumatically tested at 15 psig with a corresponding sensitive leak test (soap test) for a period of not less than one (1) hour. The contractor shall repair all areas suggestive of failing the sensitive leak test. No pressure drop shall be allowed. The manufacturer's field service technician shall witness all testing.

PLEASE NOTE: DO NOT exceed 15 psig test pressure and DO NOT stand in front of, in line with, or near end of test cap(s) when the pressure is applied. This may result in serious injury or death if the caps dislodge from the piping or the 15 psig is exceeded. A competent observer shall be present at all times during pneumatic test to assure that 15 psig is not exceeded.

Field Joints: The Installing Contractor shall develop a field joint procedure sign-off sheet. The sheet shall be developed in conjunction with inputs from the factory technical representative and shall include the welder's identification for the service pipe and conduit. A checklist will be developed on the sign-off sheet that all procedural items conform to manufacturer's installation pamphlet. The field joint checklist shall correspond to the Part Drawing Layout and shall be identified and traceable to a number or code on the Part Drawing Layout. A final contractor "As - Built" will be submitted back to the factory for recording purposes. Any field cuts, additions or changes to the system will be noted and re-drawn by the factory for submission to the owner's representative.

PRODUCTS :

Available manufacturers or approved equal

A. Products:

1. Perma Pipe/Ricwil Inc., Multi - Therm 500 System
2. Rovanco Piping Systems, Inc. - Insul 800 System
3. Tricon Piping Systems, Inc. / Steel-Con Plus System Insulated Piping Systems
4. Thermacor Process, L.P., Duotherm 505 (HDPE) System

- B. The prefabricated pre-insulated direct buried Steam and Condensate lines as shown on the contract drawings shall be insulated, with either a fiberglass reinforced polyester (FRP) or high density polyethylene (HDPE) jacketed, steel conduit. Wherever HDPE jackets are indicated on the drawings or specifications, FRP jackets shall be permitted.

- C. The pipe system shall be designed to operate at the pressures indicated for the steam and for the condensate, in separate conduits. The design is based upon model type Multiherm – 500 as manufactured by Perma Pipe/Ricwil (1-860-349-0468). The system supplier shall have fabricated systems of the composition defined herein for at least ten years.
- D. All straight sections, fittings, anchors, end seals and other accessories shall be factory fabricated to job dimensions and designed to minimize the number of field welds. Locations of necessary oversized casing and guides shall be indicated. Each system layout shall be computer analyzed by a State of Massachusetts Professional Engineer employed by the piping system manufacturer to determine stress on the steam pipes and condensate pipes and anticipated thermal movement of the steam and condensate pipes. The system design shall be in strict conformance with ANSI/ASME B31.1, latest edition and ASME standards listed above. Corrosion allowance for all steel pipe schedules on this project (new and existing piping) shall be 0.05” for sizes 1” and smaller, and 0.063” for pipes 1¼” and larger. Connections to existing piping shall be in accordance with ANSI/ASME B31.1 “Power Piping”. The computer generated analysis shall be included in this submittal and clearly identify piping, fittings and appurtenances as designated on the Part Drawing Layout (PDL). The analysis submittal shall include detailed input and output stress analysis, a stress analysis node drawing, and a report interpreting the data showing stress analysis to be in compliance with ASME B31.1 “Power Piping”.
- E. The Supplier shall furnish the length of straight pipe calculated plus an additional 5 percent for each category and size of pipe. Where warranted provide **40 foot lengths** to limit the number of field joints required during installation by the Installing Contractor. Smaller lengths shall be provided to facilitate installation and to suit site conditions.
- F. The Supplier shall furnish the required quantity of field joint closure materials for each system cross section type plus a minimum of 10% additional field joint closure materials. Provide no less than 2 additional field joint closure materials for each system cross section type.

SERVICE PIPE:

- A. HP and LP steam piping shall be Schedule 40, ASTM A-53 or ASTM A106, Gr. B, Seamless Carbon Domestic Steel. Standard Weight schedule piping for sizes NPS 12 and larger shall not be permitted. American made steel.
- B. Condensate Piping shall be Schedule 80, ASTM A-53 or ASTM A106, Gr. B, Seamless Carbon Steel. American made steel.
- C. All joints shall be butt welded for sizes 2½. inches and larger, and socket welded for 2 inches and below. Where possible, straight sections shall be supplied in 40 foot random lengths with 6 inches of piping exposed at each end or field joint fabrication. Piping assemblies containing service pipes 2½ inches and larger shall have beveled ends on the service pipe.

SERVICE PIPE FITTINGS:

- A. Forged Steel, Socket Weld Fittings (NPS 2” and smaller): ANSI B16.11, ASTM A105; Class 3000, 2000 psig, WOG (minimum) class.
- B. Seamless Forged (Wrought) Steel, Butt Weld Fittings (NPS 2-1/2” to 26”): ANSI B16.9 and either ASTM A105 or ASTM A234, Grade B (WPB). Elbows shall be long radius. Use standard weight butt weld fittings, except use extra strong weight butt weld fittings for NPS 12” and larger (LPS and HPS) and for NPS 2½” and larger CR.
- C. Service pipe elbows may be manufactured with the use of a pipe bending machine.

SUB-ASSEMBLIES:

- A. End seals and gland seals shall be designed and factory fabricated to prevent the ingress of moisture into the system. All subassemblies shall be designed to allow for complete draining and drying of the conduit system.
- B. End Seals and Gland Seals shall be manufactured in accordance with details shown on the contract plans. End Seals or Gland Seals shall not be manufactured with modular rubber belts such as Mechanical Sleeve Seal as component parts. End Seals shall be a steel plate welded to carrier pipes and to casing, complete with drain and vent openings on vertical centerline. Gland Seals shall be a packed stuffing box and gland follower mounted on steel plate, welded to end of casing, permitting axial movement of carrier piping, with drain and vent connections on vertical centerline. Gland seals shall be compressible silicone rubber adjustable sealing type, suitable up to 4500F and shall fill the space between the carrier pipe and outer casing.
- C. End Seals and Gland Seals that penetrate walls, floors, vaults or manholes shall include a compression plate under the jacket designed to withstand link belt compression. The assembly shall be shown on the submittal documents and shall be subject to the Engineer's and Owner's approval. The Mechanical Contractor shall be responsible for sizing and providing the appropriate sleeve and mechanical sleeve seal at each penetration point. Refer to articles 2.03 and 3.01 of specification section 15053.

ANCHORS:

- A. Prefabricated plate anchors shall be furnished and installed where shown on the drawings and Part Drawing Layouts (PDL) and shall consist of a ASTM A36 steel plate welded to the service pipe and conduit. The anchor shall be insulated in a manner that prevents excessive heat transfer to the polyurethane foam and jacket. Heat transfer calculations shall be provided demonstrating that the anchor to jacket interface points, do not exceed the temperature rating of the polyurethane foam and jacket. The anchor shall be factory fabricated to allow the conduit system to be drainable, dryable and air pressure testable through the anchor plate. The contractor shall follow other Specification Sections and Manufacturer's written instructions for concrete encapsulation and installation in the field. Anchor axial forces due to piping thermal expansion from within the steam tunnels and manholes will be provided to the pre-insulated piping manufacturer. As part of the stress analysis required herein, the pre-insulated piping manufacturer shall calculate the forces acting on the same anchor from the direct buried piping thermal expansion. Utilizing both these anchor forces the pre-insulated piping manufacturer shall determine the required anchor plate size and provide the required concrete anchor size as part of the submittals. Assume excavation around anchor is filled with bedding material and compacted to 95% modified proctor.

SERVICE PIPE INSULATION :

- A. The insulation for the direct-buried piping should be **mineral wool**, in accordance with ASTM C- 552 Standard Specification for Cellular Glass Thermal Insulation. The mineral; wool insulation shall be fabricated in half, curved sidewall, or insulation sections.
- B. Thermal Conductivity (k Values): 0.29 BTU-in/hr-sq.ft.-deg F at 75 deg F per ASTM C177, C518
 - 1. Service Temperature: +900 deg F.
 - 2. Moisture Absorption: Maximum 0.2 percent by volume per ASTM C240.
 - 3. Dry Density: 7.5 lbs/cu.ft. maximum per ASTM C303.
 - 4. Compressive Strength: 90 psig minimum at +/- 10% deformation per ASTM C165.
 - 5. Water Vapor Transmission: 0.00 perm-inches per ASTM E96.
- C. The bore coating shall be Hydrocal B-11 Gypsum cement, manufactured by U.S. Gypsum Corporation.
- D. The insulation shall be secured to the pipe by stainless steel bands. Banding shall be required every 12".
- E. Insulation Thickness shall be as shown in Attachment 1 of this specification:
- F. Substitutions of insulation type or thickness shall not be allowed.

OUTER CONDUIT:

- A. The steel conduit casing shall be insulated. Each service pipe shall be in a separate conduit. The conduit shall be ASTM A – 139 smooth wall, spiral or ERW welded steel, of sizes 10 gauge for up to 26” diameter, 6 gauge for 28-36” diameter, and 4 gauge for 38-42” diameter.
- B. Outer Conduit diameter shall be as shown in Attachment 1 of this specification. Any exceptions taken shall be noted at time of bid.
- C. Changes in casing size, as required at oversized casing to allow for carrier pipe expansion, shall be accomplished by eccentric and/or concentric fittings and shall provide for continuous drainage.
- D. Manufacturer shall be responsible for adapting conduit size at tie-in to existing direct buried, preinsulated steam and condensate piping, where noted on drawings. Where existing conduit is found to be leaking steam or condensate, do not connect conduits. Notify owner and engineer.
- E. Manufacturer shall be responsible for calculating lengths and locations of necessary oversized casing and guides.

EXPANSION LOOPS:

- A. Supply expansion loops with the designations and sizes as shown in on civil plan and profiles Refer also to Profile Notes. Manufacturer shall verify as part of engineering function the proper pipe sizes, lengths of pipe, dimensions of expansion loops, etc. Any exceptions taken shall be noted at time of bid. Do not value -engineer any part of design without first obtaining written approval from both Engineer and the University’s Project Manager.

OUTER CONDUIT INSULATION:

- A. Conduit insulation shall be spray applied polyurethane foam, having a nominal 2 pound per cubic foot density for all straight lengths and fittings. The insulation thickness shall be as shown in Attachment 1 of this specification. Quality assurance procedures for the insulation shall include either a visual check prior to jacketing, infrared, or x-ray testing of the entire length, to insure there are no insulation voids. The Manufacturer shall provide documented test results of these tests. The urethane foam shall meet ASTM C591 and have the minimum characteristics of .18 K-factors, density of 2 pcf and a closed cell content of 90 to 95% with a compressive strength of 40 PSI.
- B. The polyurethane foam shall be tested by the pre-insulated pipe manufacturer for mechanical and thermal properties to assure compliance with the above values. All test samples will be taken from production material, identified, tagged and tested in accordance with the table below. Test reports showing results will be furnished to the Engineer and Owner’s Representative for approval. Data supplied by the polyurethane foam chemical supplier is not acceptable.

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Attribute

Insulation Density	< 0.18 Btuin/hr/ft ² /°F
Insulation Compression Strength	-320 °F to +250 °F Max 0.054% by vol.
Insulation Closed Cell Content	1.26 perm-inches

Insulation Thermal
Conductivity

Service Temperature

Moisture Absorption

Water Vapor
Transmission

ASTM STD

D 1622

D 1621

D 2856

C177 /C518

n/a

D2842

E96

Sample Frequency

Once Per Shift

Requirement

> 2 lb/ft³

> 40 PSIG min at
5% deformation

> 90%

OUTER CONDUIT INSULATION JACKET:

- A. All straights and fittings shall be either fiberglass reinforced polyester FRP) or high density polyethylene (HDPE) factory jacketed (exterior casing).
- B. FRP jackets shall be filament wound/chop spray up directly over the insulation. The resin content shall include a gray pigment, all straights and fittings shall be the same color. FRP jackets shall be a minimum 90 - 100 mils thick for OD less than or equal to 15", and minimum 120 mils thick for OD less than or equal to 24"
- C. HDPE jackets shall be ASTM D-1248 and minimum 150 mils thick for all pipe sizes, and the following physical properties:
 - ASTM D-3350 Resin Type III, Grade P34
 - ASTM D-638 Ultimate Elongation 850%
 - ASTM D-638 Tensile Yield Strength 3,300 psi,
 - ASTM D-790 Tangent Flexural Modulus 175,000 psi.
- D. All spool pieces shall have stenciling or labeling on the jacket that correspond to part numbers on the part drawing lay-out, identifying each piece of pipe.
- E. Quality assurance procedures at the plant shall include a mil thickness check of the jacket during each production shift, a test report showing results will be furnished to the Engineer and Owner's Representative for approval.
- F. A sample coupon shall be required to determine Flexural, Compressive and Tensile Strength of the jacket. The test sample will be taken from production material, identified, tagged and tested, a test report showing results will be furnished to the Engineer and Owner's Representative for approval.
- G. Jacket Outside Diameter shall be as shown in Attachment 1 of this specification. Elbows shall be oversized as recommended by the pre-insulated piping manufacturer. Any exceptions taken shall be noted at time of bid.
- H. No alternate jacket types, including, PVC, Aluminum or Tape shall be allowed on the factory supplied pre-insulated piping.

INSULATION JACKET CUT BACKS:

Shall be sealed at the factory using mastic or resin/chopped matt. The insulation shall be protected during shipping and while on site with plastic bags or shrink wrap.

PIPE SUPPORTS:

All pipes within the outer casing shall be supported at not more than 10-foot intervals. These supports shall be designed to allow for continuous airflow and drainage of the conduit in place. The straight supports shall be designed to occupy not more than 10% of the annular air space. Supports shall be 18 gauge galvanized corrugated ring support, tack welded construction, and of the type where insulation thermally isolates the carrier pipe from the outer conduit. The surface of the insulation shall be protected at the support by a 18 gauge galvanized lagging sleeve not less than 12 inches long, fitted with traverse and, where required rotational arresters.

FITTINGS:

- A. All fittings shall be factory prefabricated and pre-insulated. All fittings shall have factory welded or bent straight legs, that are factory insulated and jacketed on each end to insure a "straight" field joint connection.
- B. Factory pipe bending of the service pipe is permissible. Fittings that utilize a pipe bender shall be documented and identified by the pipe manufacturer on the submittal and Part Drawing Layout.

C. Fitting insulation and jackets shall be continuous and uniform and shall adhere to the Outer Conduit Insulation and Jacket requirements as detailed in these specifications. Field fabricated or insulated fittings shall not be allowed.

Add Alternate Separate pricing for Optional Leak Detection System

AA.1 Leak Detection System and Condensate Conduit System

1. Furnish the complete cable type leak detection and location system consisting of a microprocessor based monitoring unit, sensor cable, probes, system layout map and auxiliary equipment required to provide continuous monitoring of the sensing string for leaks, shorts, breaks and probe activations. If any of these conditions should occur at any point along the cable, an alarm shall sound, the type of condition shall be clearly identified, and the location clearly displayed.
2. The system manufacturer shall have at least ten years' experience with energy monitoring sensor cable technology and provide a factory trained representative at two on site meetings for pre-construction and sensor/electronics installation.
3. The Leak Detection System shall locate the point of origin of the first leak or fault (break/short/probe) within plus or minus 0.1% of the sensor string length, or plus or minus five feet whichever is greater. The system shall identify the type of alarm leak/break/short/probe as well as the location. The system shall be able to monitor (detect and locate) with up to 100' of cable wetted without significant inaccuracy in location.
4. The system shall be capable of monitoring up to 5000 feet of cable per sensor string from a single monitoring unit.
5. The system shall be capable of monitoring (detecting and locating) for multiple leaks or additional liquid on the sensor cable. The system shall be able to monitor up to 100 feet of cable wetted with reduced location accuracy. The system shall be capable of detecting and locating additional leaks both further away from the initial leak location and closer to the panel than the initial detection location.
6. The system shall be capable of identifying the location of breaks and shorts on the cable. When either of these faults occur, an alarm shall sound and a display visible on the front of the monitoring unit shall clearly indicate the type of fault, i.e. Break or Short and display the location of the fault.
7. The system shall be capable of detecting all liquids, including, but not limited to aqueous, hydrocarbon, conductive and non-conductive liquids. The system for this application shall be set up for aqueous liquids; the detection of hydrocarbons or solvents is not required.
8. The system shall provide relays for remote indication of an alarm condition. The relays shall provide indication that no alarm conditions exist, an alarm condition exists but has not yet been acknowledged, and an alarm condition exists and has been acknowledged. Communications shall be available via RS-232 and ASCII communication protocol to allow central point monitoring and control via a remote computer.
9. The system shall record significant events in nonvolatile memory. A minimum of 900 events shall be stored. When the memory becomes full, the recorded events shall be deleted from memory on a FIFO basis. Each recorded event shall include the time and the date that the event occurred. Archives shall be retrievable through the RS-232 and the ASCII communication protocol.
10. The system shall continuously provide positive indication that it is monitoring the sensing string and the status of the sensing string. The system clock shall provide the time and date on the LCD of the monitoring panel. The system clock shall be programmable by the year. A time and date indication shall be included for all events recorded in memory.
11. The system shall have assignable password security to provide for varying levels of system access. A minimum of twenty passwords shall be available within the system. The system shall not permit unauthorized modifications to the sensing string to be made without causing an alarm condition.

12. The system shall be capable of monitoring sensor cables, probe sensors and switch sensors (such as float switches, pressure switched etc.) from the same monitoring panel.

13. The system shall not detect incidental liquid contact that is not at least equivalent to a small puddle, 3 inches in diameter. The sensitivity of the system shall be field adjustable to increase or decrease the amount of wetted cable needed to cause an alarm from several inches to several feet.

14. The monitoring unit shall be microprocessor based and capable of monitoring up to 5000 feet of sensing string per cable, including sensor cable, probes and jumper cable, depending on cable type. The monitoring unit shall indicate when any liquid comes in contact with the sensor cable by sounding an alarm, actuating two output relays, displaying a message stating that a leak has been detected and the location of that leak on the sensing string.

- A. The monitoring unit shall have a green LED on the front panel to indicate that the unit is powered. A 2-line by 40 character backlit LCD shall be visible from the front of the unit to provide system data. A red LED on the front panel shall indicate an alarm condition has occurred.
- B. The monitoring unit power requirements shall be 120/240 VAC, 100 VA, 50/60 HZ, single phase. Monitoring units shall be equipped with an RS-232 communications port and a minimum of one common and one per cable SPDT output relay, rated for 250 VAC, 10A.
- C. The monitoring unit shall be enclosed in a modified NEMA 12 enclosure. The unit shall be UL Listed and FM approved to provide connections for intrinsically safe sensor circuits for use in Class I, Division I, Groups C and D hazardous locations. The ability to locate a leak shall not depend on battery backed up functions. In the event of power failure, system conditions and parameters shall be stored in nonvolatile memory allowing the unit to automatically resume monitoring, without resetting, upon restoration of power. An on-off switch shall be provided in the panel for servicing.

15. The sensor cables shall be suitable for use with the monitoring unit.

- A. Sensor cable in Interior air space: The sensor cable is to be installed at the low point of the space between the carrier pipe insulation and the inner surface of the steel conduit. It shall be of fluoropolymer and polymer coated wire construction with no exposed metal parts. Cable shall detect water based, chemical and hydrocarbon liquids. For this project, the system shall be set up for water based liquids only. The sensor cable can be flushed and dried in-place and will not require replacement after a leak event of any volatile liquid. The cable shall have a breaking strength of at least 100 pounds and shall be resistant to corrosion, abrasion and most chemicals tested in accordance with exposure procedures in ASTM D-543. All cables must be field repairable by trained technicians.
- B. Sensor cables embedded in Polyurethane Insulation: The sensor cables are to be installed on the outer surface of the steel conduit, one at the low point and one at the high point (6:00 and 12:00 positions). They shall be a twisted pair design consisting of 2 insulated 1.5 mm(2) insulated copper wires suitable for exposure to temperatures up to 275F (135C). The sensor cable shall detect water based liquids. Maximum length of cable sensor string shall be 5000 feet.

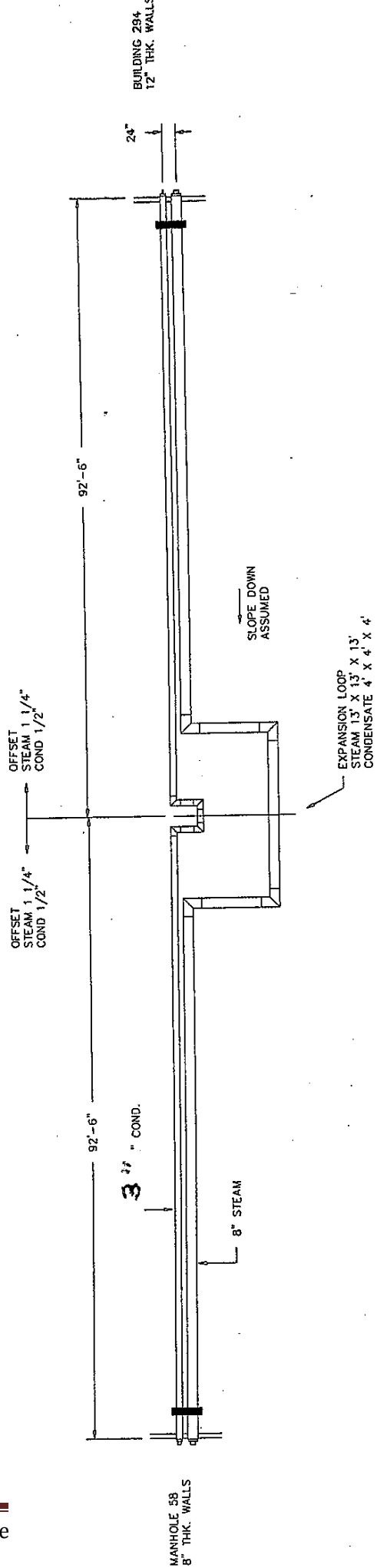
16. Field tests shall be performed to demonstrate the ability of the system to detect and locate breaks, shorts and probes on the string. The cable shall be shorted and the alarm and location verified. Leak testing shall be done per the following procedure to verify operation and ability to work with condensation pools of other static moisture.

- A. Wet the sensor cable near the start of the sensor string and acknowledge the detection/location alarm and remap the system
- B. Wet the sensor cable near the end of the sensor string with the first location still wetted and acknowledge the detection/location alarm and remap the system.
- C. Wet the sensor cable in three additional locations between the first and second location with each detection/location alarm being acknowledged and all prior leak locations still wetted.
- D. Prepare and submit a report verifying leak location and detection accuracy for each event. Furnish a history print out of the test results from the panel. Submit TDR traces for each test run to allow verification of wet locations.

17. Contractor is to follow all manufacturers' instructions for installation. A time domain reflectometry graph of the cable installation shall be provided at time of owner training.

18. A knowledgeable manufacturer's representative or technician shall provide one day of training. Training shall include alarm system principles of operation and specifics. The training shall provide UMASS personnel with an understanding of the alarm system testing and operation procedures, as well as maintenance requirements and procedures. The training person will demonstrate testing, operation and reporting procedures in the field.

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Contract for Services:

The selected vendor(s) will be required to enter into the standard University Contract for Services. The successful vendor must sign the standard University Contract for Services and agree to all Terms and Conditions listed. A copy of the University Contract for Services can be viewed at: http://www.umass.edu/procurement/Fill-In_Forms/CFSL_RE_060208.pdf.

Respondents must indicate in their response if they are not willing to sign the Contract for Services without exception. Any vendor indicating that they are not willing to sign the University Contract for Services may be eliminated from the process either during the review process or during the final contact negotiation process at the discretion of the University.

Insurance and Liability:

The awarded vendor shall purchase and maintain at its sole cost and expense throughout the term of this Agreement adequate insurance coverage necessary for the performance of the work under the Contract. Such insurance should include but not be limited to the following types and amounts of coverage:

- a. The following minimum insurance coverage is required.
 - i) Workers' Compensation Insurance in compliance with applicable federal and state laws, including Employers Liability Insurance with limits of at least one million dollars (\$1,000,000) per occurrence.
 - ii) Automobile Liability Insurance covering owned, non-owned, and hired vehicles with combined limits for bodily injury and property damage of at least one million dollars (\$1,000,000) per accident. The policy must be endorsed to include the University as an additional insured.
 - iii) Commercial General Liability Insurance including products and completed operations liability, and contractual liability coverage specifically covering this Agreement, written on an occurrence form, with combined limits for bodily injury, personal injury, and property damage of at least one million dollars (\$1,000,000) per occurrence and three million dollars (\$3,000,000) per aggregate. The policy must be endorsed to include the University as an additional insured.
- b. All insurance maintained by the Contractor pursuant to this Agreement shall be written by insurance companies licensed to do business in the Commonwealth of Massachusetts. If the Contractor determines that any such insurance needs to be placed with surplus lines carriers not licensed by the Commonwealth of Massachusetts, written permission from the University is required. All insurance companies to be used by the Contractor must have a Best's Rating of not less than A- and be reasonably acceptable to the University.
- c. If requested by the University in writing, the Contractor shall furnish certified copies of the aforementioned policies to the University's designated representative.
- d. All insurance maintained by the Contractor shall provide that insurance for the benefit of the University shall be primary and the University's own insurance shall be non-contributing. The Contractor shall provide the University with certificates of insurance evidencing the above referenced insurance policies within ten (10) days of the execution of this Agreement.
- e. The certificates shall contain an unequivocal provision that the University shall be given thirty (30) days prior written notice of cancellation, material change, or non-renewal of the coverage.
- f. Contractor shall cause its subcontractors to purchase, carry, and maintain all insurance coverage and coverage limits that Section requires Contractor to have.
- g. Contractor's and/or Contractor's subcontractor's failure to provide or to continue in full force the insurance that this section requires shall be a material breach of this Agreement and may, at the sole determination of the University, result in termination of this Agreement for cause.

Special Note: If you are submitting a bid on an “approved equal” all detailed information on the product must be included within the bid. Failure to include this information may disqualify the bid.

“Or Approved Equal” Specifications:

Any reference to brand names and numbers in this solicitation is descriptive, but not restrictive, unless otherwise specified. Offers on equivalent items meeting the standards of quality thereby indicated will be considered, unless otherwise specified, providing the offer clearly describes the article offered and how it differs from the referenced brands. Unless the respondent specified otherwise, it is understood that the respondent is offering a referenced brand item as specified in the solicitation. The University will determine whether a substitute offer is equivalent to and meets the standards of quality indicated by the brand name referenced; and the University may require a respondent offering a substitute to supply additional descriptive material and a sample.

If items requested have quality guidelines of brand name or equal; the items offered must be equal to or better than the brands and model numbers specified as determined by the University of Massachusetts. The use of brand names in this solicitation are for the purpose of describing the standard of quality, performance and characteristics desired and is not intended to limit or restrict competition. Substantially equivalent products to those designated may be considered for award. “Or Equal” submissions will not be rejected because of minor differences in design, construction or features that do not affect the suitability of the product for its intended use.

Cancellation for Cause:

Any purchase agreement or contract arising from this solicitation will be subject to cancellation by the University of Massachusetts upon written notice and without penalty to the University of Massachusetts if, in the opinion of the University of Massachusetts, the quality, delivery schedule, specifications, terms, conditions, and other service requirements are not maintained as originally stated and accepted by the vendor.

The contract may be terminate, with cause, by either party, upon ninety (90) days written notice, one to the other.

Obligations in Event of Termination:

1. Upon termination of this Contract, all finished or unfinished documents, data, studies and reports prepared by the Contractor pursuant to this Contract, shall become the property of the University.
2. Upon termination of this Contract, without cause, the University shall promptly pay the Contractor for all services performed to the effective date of termination, subject to offset of sums due the Contractor against sums owed by the Contractor to the University, and provided Contractor is not in default of this Contract and Contractor submits to the University a properly completed invoice, with supporting documentation covering such services, no later than thirty (30) calendar days after the effective date of termination.

Order Placement:

University Department will place orders with a University Purchase Orders or use of the University PROCard Credit Card.

Payment:

The University’s payment terms are net thirty (30) days from the date of receipt of contractor’s invoice, with late penalty interest assessable at rates established by the Commonwealth after 45 days in accordance with Massachusetts General Laws ch. 29 §29C and with Commonwealth regulation 815 C.M.R. 4.00.

Invoices submitted to the University by the successful bidder for acquisitions under the contract will be itemized and priced out by the successful bidder in accordance with the figures contained in the bidder’s response to this RFB. Therefore, bids must be inclusive. All payment shall be made in arrears, after services have been rendered to the satisfaction of the University.

W-9:

The successful bidder will be required to provide original signed W-9 form to the University if they are not already a recognized University vendor. A copy of this form can be accessed at: www.umass.edu/procurement - Click on "Forms" – Click on "University of Massachusetts Substitute W-9 Form".

Bid Rejection

The University reserves the right to reject any or all bids, wholly or in part, and to request any additional information it deems necessary to support the bids, including, but not necessarily limited to, bidder's technical, service, and financial qualifications. The University further reserves the right to make the award in a manner deemed in the best interests of the University.

Massachusetts Freedom of Information Law:

All bids and related documents submitted in response to this RFB are subject to the Massachusetts Freedom of Information Law, M.G.L. Chapter 66, and Section 10 and to M.G.L. Chapter 4, Section 7, Subsection 26, regarding public access to such documents. Statements in the bid response that are inconsistent with those statutes will be disregarded.

Certification:

Contractor certifies under the pains and penalties of perjury that pursuant to Mass. Gen. Laws ch.62C, §49A, that the contractor has filed all state tax returns, paid all taxes and complied with all applicable laws relating to taxes; and that pursuant to Mass. Gen. Laws ch.151A, §19A(b), has complied with all laws of the Commonwealth relating to contributions and payment in lieu of contributions to the Employment Security System; and with all laws of the Commonwealth relating to Worker's Compensation, ch.152. Pursuant to federal law, contractor shall verify the immigration status of all workers assigned to the contract without engaging in unlawful discrimination; and contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker.

Independent Contractor Status:

The contractor is an independent contractor and not an employee or agent of the University. No act or direction of the University shall be deemed to create an employer/employee or joint employer relationship. The University shall not be obligated under any contract, subcontract, or other commitment made by the contractor.

Compliance with Laws and Regulations:

The contractor shall observe and obey all laws, ordinances, regulations, and rules of the Federal Government, the Commonwealth of Massachusetts, local municipalities, and the University of Massachusetts Amherst which may be applicable to its operation herein, and shall, at its own cost, obtain and maintain all permits and licenses necessary of and to its operation.

Affirmative Action, Equal Opportunity Employer:

The University of Massachusetts is an Affirmative Action, Equal Opportunity Employer and as such prohibits discrimination on the basis of race, color, religion, creed, sex, age, marital status, national origin, mental or physical disability, political belief or affiliation, veteran status, sexual orientation, gender identity and expression, genetic information and any other class of individuals protected from discrimination under state or federal law in any aspect of the admission or treatment of students or in employment. The successful Contractor shall adhere to the same principles.

Minority-Owned Business Enterprises (MBE) or Woman-Owned Business Enterprises (WBE) is strongly encouraged to submit proposals in response to this request for bid. For the purposes of this RFB the term MBE or WBE shall mean a consultant who is certified as a minority business enterprise by the State Office of Minority and Women-Owned Business Assistance (SOMWBA), and who is still certified at the time the Respondent's Qualifications are submitted. All minority owned businesses are encouraged

to apply for SOMWBA certification. For further information on SOMWBA qualifications, or access to vendor lists, contact the State Office of Minority and Woman-Owned Business Assistance at (617) 727-8692 or go to <http://www.somwba.state.ma.us> for more information.

The University of Massachusetts is an Affirmative Action, Equal Opportunity Employer.

Rehabilitation Compliance:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the implementing regulations of that Federal Act (45 CFR 84), the University of Massachusetts / Amherst does not discriminate on the basis of handicap in admission or access to, or treatment of employment in the programs and activities which the University operates. Inquiries concerning compliance with the regulations stated in the Federal Act should be directed to the Chancellor's Office; Whitmore Building; Amherst, MA 01003 Phone: 413-545-2004.

Recordkeeping, Audit and Inspection of Records:

The contractor shall maintain books, records and other compilations of data pertaining to the requirements of the Contract to the extent and in such detail as shall properly substantiate claims for payment under the Contract. All such records shall be kept for a period of six (6) years or for such longer period as is specified herein. All retention periods start on the first day after final payment under this Contract. If any litigation, claim, negotiation, audit or other action involving the records is commenced prior to the expiration of the applicable retention period, all records shall be retained until completion of the action and resolution of all issues resulting therefrom, or until the end of the applicable retention period, whichever is later. The Governor, the Secretary of Administration and Finance, the State Comptroller, the State Auditor, the Attorney General, the Federal grantor agency (if any), the University, or any of their duly authorized representatives or designees shall have the right at reasonable times and upon reasonable notice, to examine and copy, at reasonable expense, the books, records, and other compilations of data of the contractor which pertain to the provisions and requirements of this Contract. Such access shall include on-site audits, review, and copying of records.

Political Activity Prohibited – Anti Boycott Warranty:

The contractor may not use any Contract funds and none of the services to be provided by the contractor may be used for any partisan political activity or to further the election or defeat of any candidate for public office. During the term of this Contract, neither the contractor nor any controlled group, within the meaning of §993 (a) (3) of the Internal Revenue Code, as amended, shall participate in or cooperate with any international boycott, as defined in §999(b) (3) and (4) of the Internal Revenue Code of 1986, as amended; nor shall either engage in conduct declared to be unlawful by Mass Gen. Laws Ch.151E §2.

Choice of Law:

The laws of the Commonwealth of Massachusetts, without giving effect to its conflicts of law principles, govern all matters arising out of or relating to this Contract and all of the transactions it contemplates, including, without limitation, its validity, interpretation, construction, performance and enforcement. The contractor agrees to bring any federal or state legal proceedings arising under this Contract in which the Commonwealth or the University is a party, in a court of competent jurisdiction within the Commonwealth of Massachusetts. This paragraph shall not be construed to limit any other legal rights of the Parties.

Indemnification of the University:

The contractor shall defend, indemnify, and hold harmless the Commonwealth, the University, its Trustees, Officers, servants, and employees from and against any and all claims, liability, losses, third party claims, damages, costs, or expenses (including attorneys' and experts' fees) arising out of or resulting from the performance of the services performed by the contractor, its agents, servants, employees, or subcontractors under this Contract, provided that any such claims, liability, losses, third party claims, damages, costs, or expenses are attributable to bodily injury, personal injury, pecuniary injury, damage to real or tangible personal property, resulting there- from and caused in whole or in part by any intentional or negligent acts or omissions of the contractor, its employees, servants, agents, or subcontractors. The foregoing express obligation of indemnification shall not be construed to negate or abridge any other obligation of indemnification running to the Commonwealth and/or the University that

would otherwise exist. The University shall give the contractor prompt and timely notice of any claims, threatened or made, or any law suit instituted against it which could result in a claim for indemnification hereunder. The extent of this Contract of indemnification shall not be limited by any obligation or any term or condition of any insurance policy. The obligations set forth above shall survive the expiration or termination of this Contract.

Tax Exempt Status:

The University is exempt from federal excise, state, and local taxes; therefore, sales to the University are exempt from Massachusetts sales and use taxes. If the University should become subject to any such taxes during the term of this Contract, the University shall reimburse the contractor for any cost or expense incurred. Any other taxes imposed on the contractor on account of this Contract shall be borne solely by the contractor.

Sustainability:

Jack Wilson, UMass President, signed the President's Climate commitment in 2007. See link for more information: www.presidentsclimatecommitment.org The University is committed to reducing the adverse environmental impact of our purchasing decisions; we are committed to buy goods and services from manufacturers and suppliers who share our environmental concern and commitment. We encourage proposals to include economical and environmentally friendly products and service options which serve to minimize waste, reduce excess packaging, recycle, reduce, reuse, prevent pollution and/or offer resource efficiency. It is our goal to maximize environmental responsibility on the UMass Campuses. Please propose details on how your company can support our initiative to provide sustainable products and services to our end-users.

- ◆ Describe the tools and resources that are available to our campuses.
- ◆ Describe what initiatives your company has implemented and is working on.
- ◆ Are green and recycled products clearly identified on your web ordering system so users can easily recognize them when ordering?

The University recommends that vendors use recycled paper and double-sided copying for production of all printed and photocopied documents.

Data Security and Breach Notification:

The vendor shall protect data and information provided by the University to Vendor (“University Data”) to commercially acceptable standards and no less rigorously than it protects its own confidential information.

The vendor shall develop, implement, maintain and use appropriate administrative, technical, and physical security measures to preserve the confidentiality, integrity, and availability of University data.

The Vendor will not provide any University data to and sub-contractor or agent without the prior express written permission of the University or as otherwise provided under the agreement.

The Vendor shall retain any University data only as long as needed for the specified purposed and to securely dispose of any University data when there is no longer a business need to retain that data.

The Vendor agrees to notify the University immediately if any breach of the security, confidentiality or integrity of University data occurs; assist the University in any subsequent investigation and notification processes; and to otherwise comply with all applicable Massachusetts and federal laws and regulations regarding data security and breach notifications, such as M.G.L. c. 93H and Health Information Technology for Economic and Clinical Health Act (HITECH Act).

PCI-DSS (Payment Card Industry-Data Security Standard):

Treasurers Office required language:

Service Providers and third-party providers and the “UMASS merchant” represent and warrant to the other party that it is Payment Card Industry Data Security Standard (PCI-DSS) compliant and shall remain compliant during the term of the Agreement. In the case of a third-party application, the applications will be listed as PA DSS compliant at the time of implementation by the University. In either situation, should either party become non-compliant during the term, the non-compliant party shall promptly notify the other party of its non-compliance status. Both parties are responsible for the security of the cardholder data that is in such party’s control or possession, as mandated by PCI DSS in the performance of their individual and mutual responsibilities under this Agreement.

Service Providers must be listed on the Visa Global List of PCI DSS Validated Service Providers. Third-party applications must be listed on the PCI Security Standards Council List of Validated Payment Applications (PA-DSS). Should the Service Provider or Third Party Application not be listed, a letter from a Qualified Security Assessor stating compliance must be submitted.

Receipt of RFB from a Source Other than Issuing Office – WARNING:

Prospective bidders who have received this document from a source other than the Issuing Office should be aware that all official documents, including amendments, are posted on the University of Massachusetts Amherst Procurement web-site at: <http://www.umass.edu/procurement/bidsopen>

Bidders assume complete responsibility for obtaining all amendments, and will be bound by the terms of all amendments, even in the event that they do not receive direct communications from the Issuing Office prior to the closing date. It is the vendor’s responsibility to check the University of Massachusetts Amherst Procurement web-site.

Submission of a Bid:

Submission of a bid indicates that the bidder has read, completely understands and agrees with this Request for Bid document. If the bidder takes exception to any of the contract terms and conditions contained herein, the bidder shall so note it as an exception in this Bid Response, referencing the section and item number and giving a complete explanation for the exception. The University reserves the right to use any such exception as grounds for rejection of the bid.

Bid Opening Time and Date:

Bidders shall deliver **two (2) copies** of their bid response in its entirety including all requested samples and/or supporting documentation as required in the bid specifications to the following address by **Wednesday, February 22, 2012 at 1:00 pm, EST at which time the bids will be opened and publicly read.**

Bids shall be clearly marked and addressed to:

**University of Massachusetts
Procurement Department
407 Goodell Building ~ 140 Hicks Way
Amherst, MA 01003
Fax 413-545-1643
*Attention: RFB AA12-RH-4500***

The University is not responsible for any expenses that may be incurred by any bidder to prepare or submit bids.

Each bidder is solely responsible for the accuracy and completeness of its bid. Errors or omissions may be grounds for rejection, or may be interpreted in favor of the University. The University will not increase the purchase order to the successful vendor for omissions or oversights not due to the fault of the University or its agents. All changes must be approved in writing.

It is the sole responsibility of the bidder to insure that its bid is delivered to the Procurement Department *in its entirety* by the due date and time. Late bids or bids delivered to an incorrect location will not be considered, and will be placed, unopened, in the bid file. Faxed bids will be accepted, provided the original is received within 5 working days after bid deadline submission date.

Only bids that are received by the bid opening date and time will be considered. The UNIVERSITY reserves the right to reject any of all bids, wholly or in part and to make an award in a manner deemed by the Director of Procurement at the Amherst Campus to be in the University's best interest.

The UNIVERSITY reserves the right to make a partial award for the services requested, or to make an award to more than one vendor.

If, at the time of the scheduled bid opening the University of Massachusetts Amherst is closed due to inclement weather or another unforeseeable event, the bid opening will be extended until 1:00 pm on the next normal business day. Bids will be accepted until that date and time.

No electronic bids will be accepted.

Any samples and/or supporting documentation that is required in the bid specifications must be delivered at the time of bid opening.

All questions from prospective vendors regarding this Request for Bid shall be referred to the Purchasing Manager in the Procurement Department by email or fax only, by Wednesday, February 15, 2012 at 2:00 PM.

No telephone calls will be entertained.

Inquiries received after the specified date and time will not be accepted. The University will E-Mail its response to all questions to all bidders of record by formal addendum on Thursday, February 17, 2012. The contact information for this individual is:

<p style="text-align: center;">University of Massachusetts Amherst Rosemary A. Hassay, Purchasing Manager FAX: (413) 545-1643 E-Mail: procurement@admin.umass.edu</p>
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The University will extend the due date by written addendum if such information significantly amends this request for bid or makes compliance with the original proposed due date impractical.

List three (3) customers with similar requirements as those of the University of Massachusetts Amherst whom the University may contact for reference purposes, including the company name, contact person, telephone number, address and brief description of business done with the company within the past year. By submitting this information the vendor authorizes the University of Massachusetts Amherst to contact these clients for the purposes consistent with the review of this bid.

Reference #1

Company Name: _____

Address: _____

Description of Services: _____

Contact: _____

Phone: _____ **Fax:** _____ **E-Mail:** _____

Contract Term: _____ **Through:** _____

Reference # 2

Company Name: _____

Address: _____

Description of Services: _____

Contact: _____

Phone: _____ **Fax:** _____ **E-Mail:** _____

Contract Term: _____ **Through:** _____

Reference #3

Company Name: _____

Address: _____

Description of Services: _____

Contact: _____

Phone: _____ **Fax:** _____ **E-Mail:** _____

Contract Term: _____ **Through:** _____

Your signature below signifies that your company complies with the RFB.

Vendor Name: _____

Address: _____ **City:** _____ **State:** _____ **ZIP:** _____

Telephone: _____ **FAX:** _____ **E-Mail Address:** _____

Name of Person Submitting Bid: _____

Authorized Signature: _____