INVITATION FOR BIDS

REBUILD & INSTALLATION OF STEAM MANHOLE DRAINAGE SYSTEM

TU-1966

PROSPECTIVE BIDDERS/OFFERORS WHO OBTAINED THIS DOCUMENT FROM THE UNIVERSITY’S WEBSITE, E-MARYLAND MARKETPLACE, OR ANY SOURCE OTHER THAN THE PROCUREMENT OFFICER, SHOULD PROVIDE THEIR NAMES AND EMAIL ADDRESSES TO THE ISSUING OFFICE BY CONTACTING (410) 704-2171, TO ENSURE RECEIPT OF ADDENDA AND OTHER COMMUNICATIONS REGARDING THE SOLICITATION.

ISSUING OFFICE
PROCUREMENT DEPARTMENT
8000 YORK ROAD
TOWSON, MD 21252-0001

NOTE:
IF YOU PLAN TO HAND DELIVER YOUR BID/PROPOSAL OR USE AN OVERNIGHT COURIER, DELIVER THE BID TO THE PROCUREMENT OFFICE LOCATION TO ENSURE TIMELY DELIVERY.

PROCUREMENT OFFICE LOCATION
ADMINISTRATION BUILDING
7720 YORK ROAD, 4TH FLOOR
TOWSON, MD 21204

FREE 20-MIN. PARKING METERS ARE AVAILABLE NEAR THE 1ST-FLOOR BUILDING ENTRANCE

DIRECTIONS TO THE UNIVERSITY AND A CAMPUS MAP
http://www.towson.edu/maps/index.html

PARKING INFORMATION
http://www.towson.edu/parking/visitors/index.html

MINORITY BUSINESSES ARE ENCOURAGED TO RESPOND TO THIS SOLICITATION
KEY INFORMATION SUMMARY SHEET

Invitation for Bids (IFB)

TU-1966 – Rebuild & Installation of Steam Manhole Drainage System

IFB Issue Date: 3/28/19

IFB Issuing Office: Towson University Procurement Department

Procurement Officer Representative: Michelle Compton
Phone: 410-704-2050
Fax: 410-704-8233
e-mail: MLCompton@towson.edu

Procurement Office Location: Towson University Procurement Department
Administration Building, 4th Floor
7720 York Road
Towson, MD 21204

Pre-Bid/Proposal Conference: 4/3/19 – 10:30 AM – 1st site visit immediately following Pre-Bid/Proposal Conference
Administration Building, Room 408

2nd Site Visit: 4/8/19 @ 11:00 AM
Meet in the 1st Floor Lobby of the Administration Building

Note: One site visit is mandatory

Deadline for Questions: 4/11/19 – 4:30 PM

Bids Due: 4/18/19 – 2:00 PM
(public bid opening)
Administration Building, Room 408

Contract Term: 6/1/19 – 8/19/19

The University is committed to ensuring that persons with disabilities have equally effective opportunities to participate in and benefit from the University's programs and services. Persons who may require reasonable ADA accommodations should contact the Issuing Office at 410-704-2171 at least five (5) days prior to any meeting scheduled in connection with this solicitation.
To help improve the quality of bid and proposal solicitations and to make our procurement process more responsive and "business friendly," we ask that you provide comments and suggestions regarding the enclosed solicitation. Please return your comments with your bid, proposal or "no bid," response, as the case may be. Thank you for your assistance.

Bid/Proposal Number: ____________ Entitled: ______________________________________

I. If you have responded with a "no bid" please indicate the reasons below:
   ( ) Other commitments preclude our participation at this time.
   ( ) The subject of the solicitation is not something we normally provide.
   ( ) We are inexperienced in the work/commodities required.
   ( ) The specifications are either unclear or too restrictive (Explain below).
   ( ) The scope of work is beyond our current capacity.
   ( ) Doing business with Maryland Government agencies is simply too complicated (Explain below).
   ( ) We cannot be competitive (Explain below).
   ( ) Time allotted for completion of the bid/proposal response is insufficient.
   ( ) Startup time is insufficient.
   ( ) Bonding/Insurance requirements are prohibitive (Explain below).
   ( ) MBE requirements (Explain below)
   ( ) Bid/Proposal requirements (other than specifications or scope) are unreasonable or too risky (Explain below).
   ( ) Prior experience with Towson University contracts was unprofitable or otherwise unsatisfactory (Explain below).
   ( ) Payment schedule too slow.
   ( ) Other: ________________________________________________________________

II. If you have submitted a bid or proposal, but wish to offer suggestions or express concerns, please use the remarks section below.

Remarks: ______________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Offeror Name: ________________________________________________________________
Contact Person: ________________________________________________________________
Signature: ___________________________ Date: ____________________________
Address: ______________________________________________________________________
E-Mail: ______________________________________________________________________
Telephone: ___________________________ Fax: ________________________________
# TABLE OF CONTENTS

## SECTION I. PROCUREMENT OBJECTIVE ................................................................................................. 1

A. SUMMARY STATEMENT .................................................................................................................. 1

B. ISSUING OFFICE AND PROCUREMENT OFFICER ..................................................................... 1

C. PRE-BID CONFERENCE AND SITE VISIT .................................................................................. 1

D. QUESTIONS AND INQUIRIES .................................................................................................. 1

E. SITE INVESTIGATION .............................................................................................................. 1

F. INSURANCE ................................................................................................................................. 2

G. BUILDERS RISK INSURANCE .................................................................................................. 2

H. BID SECURITY ............................................................................................................................. 2

I. LICENSES AND QUALIFICATIONS ............................................................................................ 3

J. BID DUE DATE ........................................................................................................................... 3

K. OPENING OF BIDS .................................................................................................................... 3

L. DURATION OF BID OFFER ......................................................................................................... 3

M. PROCUREMENT METHOD .......................................................................................................... 3

N. AWARD ......................................................................................................................................... 4

O. MULTIPLE BID OR ALTERNATE BIDS ................................................................................... 4

P. MINORITY BUSINESS ENTERPRISE UTILIZATION ................................................................. 4

Q. LIQUIDATED DAMAGES PROVISION RELATED TO MBE GOAL ........................................ 4

## SECTION II. GENERAL INFORMATION FOR VENDORS ................................................................. 6

A. PURPOSE ........................................................................................................................................ 6

B. REVISIONS TO IFB ..................................................................................................................... 6

C. PRE-BID MODIFICATION OR WITHDRAWAL OF OFFERS ...................................................... 6

D. CANCELLATION OF SOLICITATION/REJECTION OF ALL BIDS .......................................... 6

E. INCURRED EXPENSES ................................................................................................................. 6

F. ARREARAGES ................................................................................................................................. 6

G. VERIFICATION OF REGISTRATION AND TAX PAYMENT .................................................... 6

H. ECONOMY OF PREPARATION .................................................................................................... 6

I. PUBLIC INFORMATION ACT NOTICE ....................................................................................... 6

J. EXECUTION OF BIDS .................................................................................................................. 7

K. DISCREPANCIES, EXPLANATIONS AND CLARIFICATIONS .................................................. 7

L. ORDER OF PRECEDENCE .......................................................................................................... 7

M. REQUIRED CONTRACT PROVISIONS ..................................................................................... 7

N. FALSE STATEMENTS .................................................................................................................. 8

O. PAYMENT TO THE CONTRACTOR ........................................................................................... 8
TABLE OF CONTENTS

P. VENDOR ELECTRONIC FUNDS TRANSFER REGISTRATION ........................................ 8
Q. RECIPROCAL PREFERENCE .................................................................................. 8
R. NON-VISUAL ACCESS .......................................................................................... 8
S. PARKING .............................................................................................................. 9
T. SMOKING .............................................................................................................. 9

SECTION III. BID SUBMISSION REQUIREMENTS ...................................................... 10
A. ORGANIZATION OF BIDS .................................................................................. 10
B. SUBMITTAL REQUIREMENTS CHECKLIST ......................................................... 10
C. EVIDENCE OF BIDDER RESPONSIBILITY .......................................................... 10

SCOPE OF WORK
SPECIFICATIONS
DRAWINGS
BID PRICE PROPOSAL FORM
EXHIBIT A1 – Environmental Health and Safety Requirements
EXHIBIT A2 – Required Contract Provisions for Construction and Maintenance
EXHIBIT B – Bid/Proposal Affidavit
EXHIBIT C – Contract Affidavit
EXHIBIT D – Sample Agreement
EXHIBIT E – Minority Business Enterprise Participation Package
EXHIBIT F – Company Profile
EXHIBIT G – Firm Experience
EXHIBIT H – Bid Bond
EXHIBIT I – Performance Bond
EXHIBIT J – Payment Bond
EXHIBIT K – Addenda Acknowledgment
EXHIBIT L – Key Personnel Form
SECTION I. PROCUREMENT OBJECTIVE

A. SUMMARY STATEMENT
Towson University is seeking qualified Contractors to supply all labor, equipment and material to rebuild and install a steam manhole drainage system at the Towson University power plant.

B. ISSUING OFFICE AND PROCUREMENT OFFICER
The sole point of contact in the State for purposes of this IFB is the Procurement Officer or his/her representative (hereinafter referred to as Procurement Officer) noted on the Key Information Summary Sheet. Only the information communicated by the Procurement Officer shall be deemed the official position of the University; no other State or University employee, official, or representative has authority to change the requirements of this solicitation. Attempts by Bidder to contact the requester, evaluator, or otherwise circumvent this procedure in any manner may be grounds for disqualification.

C. PRE-BID CONFERENCE AND SITE VISIT
1. Prior to submitting its bid, each contractor is encouraged to attend the scheduled pre-bid conference to examine the facility and familiarize himself with the full nature and extent of the work to be done. They shall obtain for themselves all information that may be necessary for the satisfactory performance of the contract work and the cost thereof. It is the sole responsibility of the contractor to fully familiarize themselves with the areas involved and the extent of the services required by visual inspection. Failure to visit the site and become familiar with the conditions and requirements affecting the work will not relieve the successful contractor from the provisions of the contract and from completing the work for the consideration set forth.

2. Two (2) site visits are scheduled and listed on the Key Information Summary Sheet. Please note: in order to be considered for award one (1) site visit is mandatory.

2. Towson University is committed to ensuring that persons with disabilities are given an equally effective opportunity to participate in and benefit from the university's programs and services. Persons with disabilities who might need reasonable accommodations should contact the Procurement Department at least 72 hours before any meetings held in connection with this solicitation at (410) 704-2171.

D. QUESTIONS AND INQUIRIES
Bidders shall direct all communications regarding this solicitation to the Procurement Officer, in writing (email preferred), not later than the date indicated on the Key Information Summary Sheet. Addenda, if required, will be furnished to all potential Bidders known to have received the IFB.

E. SITE INVESTIGATION
By submitting a bid the vendor acknowledges that he has investigated and satisfied himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, and electric power. Any failure by the contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the cost
of successfully performing the work. The University shall not be responsible for any conclusions or interpretations made by the contractor of the information made available by the University.

F. INSURANCE
Upon award, the successful bidder shall furnish certificates of insurance as required in the following exhibits whichever exhibit is applicable (specified in Section II. L. 2.):

- Exhibit A - Required Contract Provisions - Section 35, or
- Exhibit A2 - Required Contract Provisions for Construction and Maintenance - Section 37

The certificate must name Towson University as an additional insured, and shall reference the title and number of the solicitation/contract.

G. BUILDERS RISK INSURANCE
The contractor shall carry, at his own expense, Builder’s Risk Insurance for the full contract amount, insuring against the perils of Fire, Lighting, Extended Coverage Vandalism, and Malicious Mischief subject only to the minimum standard deductible currently filed by the Insurance Service Office with the State Insurance Department. The University will provide no coverage during the construction period.

The policy shall contain endorsements reading as follows:

- This policy also covers, as part of the provisional amount, the architects’, engineers’ and builders’ fees.
- Permission is hereby granted for occupancy, in whole or in part, pending acceptance by the owner.
- It is the intent of this insurance to cover, specifically, all the work being done under the contract between the insured and as to such work this policy shall be primary insurance and shall not contribute or claim contribution from any other insurance being carried, which by its terms, would also cover on the property covered hereunder in the absence of this insurance.
- Coverage afforded under this policy will not be canceled until at least fifteen (15) days prior written notice has been given to the Procurement Officer.

Certificates of insurance shall be submitted to the Procurement Officer for review and approval and shall be held by the University’s Procurement Department for the duration of the contract. The University shall have the absolute right to terminate the contract if the policy of insurance is canceled at any time for any reason and a new policy is not obtained by the contractor and approved by the Procurement Officer.

The above insurance shall remain in full force and effect until such time as the University shall fully accept the work covered by this contract.

H. BID SECURITY
1. If the total Bid Price is $100,000.00 or more, each Bidder shall furnish with his bid
price a "bid bond" (See Exhibit H) issued by a surety company licensed to issue bonds in the State of Maryland. The bond must be in an amount not less than five percent (5%) of the total amount of the base bid price and shall be in the form specified with the bid documents.

2. Certified checks, cash and other security in that amount are acceptable in lieu of a "bid bond", and shall be submitted with the Bid Price and subject to the same conditions as a bond.

3. Should the Bidder to whom the contract is awarded fail or be unable to execute the contract, for any reason, within ten (10) days after notification of award, then an amount equal to the difference between the accepted price, and that of the bidder to whom the award subsequently is made shall be paid to the University as liquidated damages.

4. The Bidder to whom a contract in excess of $100,000.00 is awarded also must furnish Performance and Payment Bonds (See Exhibits I and J), each in the amount of one hundred percent (100%) of the contract price, including executed Change Orders, in the form specified with the bid documents. These must be provided at the time of the signing of the contract and prior to the start of any work.

5. Bid Bonds remain in effect a minimum of ninety (90) days from the bid due date.

I. LICENSES AND QUALIFICATIONS
1. Construction contractors must be licensed as Md. Code Ann., Bus: Reg. § 17-601, and shall submit proof of current licensing with the bid.

2. The University reserves the right to require that a contractor demonstrate that it has the skills, equipment and other resources to satisfactorily perform the nature and magnitude of work necessary to complete the project within the proposed contract schedule.

J. BID DUE DATE
Bids must be received at the Issuing Office by date and time indicated on the Key Information Summary Sheet. Requests for extensions will not be granted. Late bids, late requests for modification, or late requests for withdrawal will not be considered. Unless specifically requested, bids submitted by fax or other electronic devices will be rejected. It is recommended that bids be hand delivered.

K. OPENING OF BIDS
A public opening will be held at the date, time and location noted on the Key Information Summary Sheet.

L. DURATION OF BID OFFER
Bids submitted are irrevocable for 90 days after the bid due date. This period may be extended by mutual written agreement between the bidder and the University.

M. PROCUREMENT METHOD
This solicitation shall be conducted in accordance with the provisions of the University System of Maryland (USM) Procurement Policies and Procedures. The procurement method is Competitive Sealed Bidding.
N. AWARD
The University will recommend for award a responsive bid from the responsible bidder submitting the most favorable evaluated bid price for the requirement(s) herein.

O. MULTIPLE BID OR ALTERNATE BIDS
Unless multiple or alternate bids are specifically requested in the solicitation, they will not be accepted.

P. MINORITY BUSINESS ENTERPRISE UTILIZATION
An MBE subcontract participation goal of 10 percent of the total contract dollar amount has been established for this procurement. By submitting a response to this solicitation, the bidder or offeror agree that this percentage of the total dollar amount of the contract will be performed by certified minority business enterprises.

Q. LIQUIDATED DAMAGES PROVISION RELATED TO MBE GOAL
This contract requires the Contractor to make good faith efforts to comply with the Minority Business Enterprise (“MBE”) Program and contract provisions. The University and the Contractor acknowledge and agree that the University will incur damages, including but not limited to, loss of goodwill, detrimental impact on economic development and diversion of internal staff resources if the Contractor does not make good faith efforts to comply with the requirements of the MBE Program and MBE contract provisions. The parties further acknowledge and agree that the damages the University might reasonably anticipate to accrue as a result of such lack of compliance are difficult to ascertain with precision.

Therefore, upon a determination by the University that the Contractor failed to make good faith efforts to comply with one or more of the specified MBE Program requirements or contract provisions, the Contractor agrees to pay liquidated damages to the University at the rates set forth below. The Contractor expressly agrees that the University may withhold payment on any invoices as a set-off against liquidated damages owed. The Contractor further agrees that for each specified violation, the agreed upon liquidated damages are reasonably proximate to the loss the University is anticipated to incur as a result of such violation.

1. Failure to submit each monthly payment report in full compliance with COMAR 21.11.03.13B (3): $24.93 per day until the monthly report is submitted as required.

2. Failure to include in its agreements with MBE subcontractors a provision requiring submission of payment reports in full compliance with COMAR 21.11.03.13B (4): $ 87.24 per MBE subcontractor.

3. Failure to comply with COMAR 21.11.03.12 in terminating, canceling, or changing the scope of work/value of a contract with an MBE subcontractor and/or amendment of the MBE participation schedule: the difference between the dollar value of the MBE participation commitment on the MBE participation schedule for that specific MBE firm and the dollar value of the work performed by that MBE firm for the contract.

4. Failure to meet the Contractor’s total MBE participation goal and sub-goal commitments: the difference between the dollar value of the total MBE participation
commitment on the MBE participation schedule and the MBE participation actually achieved.

Notwithstanding the use of liquidated damages, the University reserves the right to terminate the contract and exercise all other rights and remedies provided in the contract or by law.

END OF SECTION I
SECTION II. GENERAL INFORMATION FOR VENDORS

A. PURPOSE
The overall purpose of this solicitation is to provide information to vendors interested in preparing and submitting bids to meet the requirements herein. Bidders shall familiarize themselves with each section and subsection of this document.

B. REVISIONS TO IFB
1. The University reserves the right to amend this solicitation at any time prior to the bid due date. If it becomes necessary to amend any part of this solicitation, the procurement officer will furnish addenda to all prospective bidders known to have received a copy of this IFB.

2. Each bidder shall acknowledge the receipt of all addenda issued by completing Exhibit K, Addendum Acknowledgment Form, and enclosing it with the bid.

C. PRE-BID MODIFICATION OR WITHDRAWAL OF OFFERS
Bids may be modified or withdrawn by written notice received at the Issuing Office before the bid opening date and time.

D. CANCELLATION OF SOLICITATION/REJECTION OF ALL BIDS
The University reserves the right to cancel this IFB, to accept or reject any or all bids, in whole or in part, received in response to this IFB, and to waive or permit cure of minor irregularities as its best interests may require.

E. INCURRED EXPENSES
The University assumes no responsibility for expenses incurred in preparing and submitting bids in response to this solicitation.

F. ARREARAGES
By submitting a response to this solicitation, a bidder represents that it is not in arrears in the payment of any obligation due and owing the State of Maryland, including the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of the contract if selected for contract award.

G. VERIFICATION OF REGISTRATION AND TAX PAYMENT
Each prospective bidder is encouraged to ensure that it is appropriately registered to do business in the State of Maryland, and in good standing with respect to taxes, personal property returns, unemployment insurance, etc., before the bid opening date. Failure to complete registration with the State Department of Assessments and Taxation (SDAT) may disqualify an otherwise successful bidder from recommendation for contract award.

H. ECONOMY OF PREPARATION
Bids should be prepared simply and economically, providing a straight-forward, concise description of the bidder's ability to fulfill the requirements of this solicitation.

I. PUBLIC INFORMATION ACT NOTICE
Bidder shall give specific attention to identification of those portions of its bid considered confidential, or containing proprietary information or trade secrets. Upon request, bidder shall provide justification why such material should not be disclosed by the University
under the Public Information Act, General Provisions Article, §§ 4-401 et seq., Annotated Code of Maryland.

J. EXECUTION OF BIDS
Bids shall be typewritten or written legibly in ink, and signed in ink as follows, depending on the bidder’s form of business organization:
1. **Sole Proprietorship.** Proprietor shall sign full name, with address.

2. **Partnership and Joint Venture.** Submit the bid/price proposal form in the name of the partnership or joint venture. Clearly state the partnership name and the identity of each general partner, and execute all affidavits and certificates on behalf of the partnership, or on behalf of each general partner. No provision of any agreement among partners will be binding on the University unless it is disclosed in the Bidder’s proposal. Reasonable evidence satisfactory to the University of the authority of one partner to bind other purported partners is required. Include a copy of the partnership agreement, if one exists. If no partnership agreement exists, and if the number of general partners is reasonably small, each general partner may be required to sign. Failure to present the University with satisfactory information concerning a purported partnership or joint venture may be grounds for bid rejection.

3. **Corporation.** An officer or authorized agent of the corporation shall sign with full name, indicate title, and include the name and address of the corporation. In the case of an authorized agent, enclose a letter from an officer of the corporation authorizing said individual to act on behalf of the corporation.

K. DISCREPANCIES, EXPLANATIONS AND CLARIFICATIONS
Bidders finding discrepancies in the specifications or other provisions included in this solicitation, or in doubt as to the meaning or intent of any section or subsection herein, shall request clarification from the Procurement Officer. Failure to request clarification prior to the due date shall be a waiver of any claim by the Bidder for expenses made necessary by reason of later interpretation of the contract documents, and Bidder shall be bound to the University’s interpretation. Request clarifications in accordance with the instructions above.

L. ORDER OF PRECEDENCE
The contract to be entered into as a result of the IFB (the "Contract") will consist of the following contract documents listed in their order of precedence:
1. The contract executed by the parties and/or Purchase Order issued by the University;

2. The solicitation, including Exhibit A2 - Required Contract Provisions for Construction/Maintenance, and all other Exhibits; and

3. The bid as submitted by bidder and accepted by the University.

No modifications to this order of precedence will be accepted.

M. REQUIRED CONTRACT PROVISIONS
Bids submitted, and contract(s) executed with the successful bidder, are subject to Exhibit A and Exhibit A-1 (if applicable).
By submitting a bid, the vendor is deemed to have accepted the terms of this IFB, including exhibits; a bid that takes exception to the terms of the IFB may be rejected. Mutually agreeable modifications of the solicitation provisions, if allowed by law, will be documented by express identification in the final contract as superseding the pertinent provisions of the solicitation.

N. FALSE STATEMENTS
Bidders are advised that the Annotated Code of Maryland provides that in connection with a procurement contract, a person may not willfully: Falsify, conceal or suppress a material fact by any scheme or device; make a false or fraudulent statement or representation of a material fact; use a false writing or document that contains a false or fraudulent statement or entry of a material fact; or aid or conspire with another person to commit any of the aforementioned acts. A person who violates these provisions is guilty of a felony, and on conviction is subject to a fine not exceeding $20,000 or imprisonment not exceeding five (5) years, or both.

O. PAYMENT TO THE CONTRACTOR
Payment is governed by Title 15, Subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland. The State of Maryland is exempt from Maryland Retail Sales tax and Federal Excise Tax.

If the contract is a maintenance service/service contract, at the end of each calendar month, the Contractor shall render to the Accounts Payable Office, its invoice, in triplicate, for work done during the month. The amount shall not exceed one-twelfth (1/12) of the yearly service contract, unless otherwise specified in the Detailed Specifications.

P. VENDOR ELECTRONIC FUNDS TRANSFER REGISTRATION
Contractors of the State are required to complete a COT/GAD Form X-10, Vendor Electronic Funds Transfer (EFT) Registration Request Form, for each new contract with a value greater than $200,000. Vendors must register for EFT by submitting a completed COT/GAD Form X-10 to the Comptroller’s General Accounting Division (GAD) or request an exemption from GAD. The revised form is on the Comptroller’s Web site at http://compnet.comp.state.md.us/General_Accounting_Division/Vendors/Electronic_Funds_Transfer/default.shtml

Q. RECIPROCAL PREFERENCE
While Maryland law does not authorize state agencies to favor resident bidders, other states grant preferences to their residents over Maryland businesses. Therefore, a resident business preference may be given to a Maryland firm if: A responsible bidder whose headquarters, principal base of operations, or principal site that will provide the services required by this IFB is located in another state submits the most advantageous offer; the other state gives a preference to its residents through law, policy, or practice; and the preference does not conflict with a Federal law or grant affecting the contract. The preference given shall be identical to the preference that the other state gives to its residents.

R. NON-VISUAL ACCESS
The Contractor shall ensure compliance in any applicable contract with State of Maryland IT Non-Visual Access Standards. The standards should be incorporated to the fullest extent possible for information technology contracts. These standards/policies may be
revised from time to time and the Contractor shall comply with all such revisions. The Non-visual Access Clause noted in COMAR 21.05.08.05 and referenced in the IFB is the basis for the standards that have been incorporated in the Maryland regulations.

S. PARKING
All vehicles parked on Towson University property must strictly observe University parking regulations. Each vehicle parked on campus between 6 am and 8 pm, Monday through Thursday, and from 6 am to 3 pm on Fridays, must display a valid University permit unless parked at a paid meter. Parking on sidewalks or unpaved areas is prohibited at all times. All fines for parking or other vehicle violations are the responsibility of the Contractor. This applies to vendors, salespersons, company vehicles, and Contractor employees’ personal vehicles. Long- and short-term permits are available, at designated rates, for vendors with contracts that require them to park regularly on the campus; see the parking website at [http://www.towson.edu/parking/visitors/index.html](http://www.towson.edu/parking/visitors/index.html) for permit rates and information to support preparation of Bid/Price Proposal. Parking Transportation phone: (410) 704-7275.

NOTE: INCLUDE PARKING FEES IN BID/PRICE PROPOSAL.

T. SMOKING
Smoking, defined as the burning of tobacco or any other material in any type of smoking equipment, including but not restricted to cigarettes, cigars or pipes, is prohibited on all property owned, leased or operated by the University. This consists of all buildings, including residence halls, leased restaurants and lodging facilities; all grounds, including exterior open spaces, parking lots and garages, on-campus sidewalks, streets, driveways, stadiums, recreational spaces and practice facilities; and in all University-owned or leased vehicles. The policy applies to all individuals on the University campus, including faculty, staff, students, parents, vendors and visitors. Contractor and its employees and subcontractors who violate the policy may be denied access to the University campus.

END OF SECTION II.
SECTION III.  BID SUBMISSION REQUIREMENTS

A. ORGANIZATION OF BIDS
1. Bids must be submitted to the campus location of the Issuing Office not later than the date and time indicated on the Key Information Summary Sheet.
2. Submit one (1) clearly marked original and one (1) copy of each bid, in a sealed envelope. Indicate on the outside of the envelope the solicitation/ project number, bid due date, and bidder’s name and address.
3. If technical data, product literature, or brochures are needed to supplement the bid, enclose those materials after the last required form.
4. Bids that are incomplete or that deviate from the format required in this section may be rejected.

B. SUBMITTAL REQUIREMENTS CHECKLIST
Each bid must include the following:
1. BID/PRICE PROPOSAL FORM, typewritten or completed in ink and executed in accordance with the requirements in Section II. Each alteration to the Bid Form must be initialed, in ink, by the signatory.
2. Exhibit B, BID/PROPOSAL AFFIDAVIT, typewritten or completed in ink and executed in accordance with the requirements in Section II.
3. Attachment 1A, from Exhibit E, MINORITY BUSINESS UTILIZATION PACKAGE.
4. Exhibit F, COMPANY PROFILE
5. Exhibit G, FIRM EXPERIENCE, duplicate as necessary to furnish references for no less than three (3) comparable projects completed within the past five (5) years, or currently underway.
6. Exhibit H, BID BOND
7. Exhibit K, ADDENDA ACKNOWLEDGMENT FORM. Should one or more addenda be issued, each bidder must acknowledge receipt using this form, identifying each addendum by number and date, and signing the document.
8. Exhibit L, KEY PERSONNEL FORM. Provide the names of key personnel to be assigned to this project, if awarded, and a brief resume on each, including educational background, work experience with bidder, previous work experience with other firms, and specific experience similar to the current project.

C. EVIDENCE OF BIDDER RESPONSIBILITY
The University may require any bidder to furnish additional information regarding past performance, financial capacity, technical expertise, or other qualifications bearing on
performance of the contract, and reserves the right to consider any information otherwise available, or to make such additional investigations as it deems necessary to confirm the responsibility of any bidder.

The Procurement Officer shall make purchases from, and award contracts, only to responsible contractors. In the absence of information clearly indicating that the prospective contractor is responsible, the Procurement Officer shall make a determination of non-responsibility.

END OF SECTION III.
TU-1966
Scope of Work
for
Rebuild and Installation of Steam Manhole Drainage System

Part I. General
Towson University is seeking qualified Contractors to rebuild and install a steam manhole drainage system at the TU Power Plant.

Part II. Schedule
A. This project is expected to start on or about June 1, 2019 and be completed no later than August 19, 2019.
B. Contractor is responsible for determining lead time required for all materials required to complete the repairs within the time constraints specified above.

Part III. Scope of Services
A. The Contractor shall provide all necessary services to rebuild and install a new steam manhole drainage system in accordance with the attached specifications and drawings.
B. Review and Evaluation of Pre-Construction and Construction Submittals
   i. Towson University and project engineer will review all submittals during the pre-construction and construction phases and conduct field inspections through the duration of the project.

Part IV. Warranty
A. Contractor shall furnish the university with a minimum of a (5) five year (labor and material) warranty for the repairs upon completion of all work. The warranty shall include, but not be limited to the concrete work, sealants and caulk. The contractor warrants that the products installed will be free from defects in workmanship and materials from the date of substantial completion. Contractor will repair or replace any products of faulty material or defective workmanship proven under normal use or service.
PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Requirements of this Section are applicable to work in Division 23.

B. Contract Documents

1. Unless otherwise modified, drawings and general provisions of the Contract, including provisions of General Conditions, Division 00, and Division 01 govern work under Division 23.
2. Contract drawings for mechanical work are diagrammatic, intended to convey scope and general arrangement.
3. Refer questions involving document interpretation or discrepancies to Engineer for review and direction.
4. Correct faulty work due to resolving discrepancies without proper approval.
6. Follow drawings and specifications in laying out work. Consult other applicable contract drawings and specifications, become familiar with conditions affecting work.

C. Scope

1. The work in Division 23 includes furnishing and installing the mechanical work complete and ready for satisfactory service.
2. Requirements specified govern work in all sections of Division 23.

1.2 RELATED DIVISIONS

A. Division 01 - General Requirements

B. Division 23 - Heating, Ventilating, and Air Conditioning

1.3 QUALITY ASSURANCE

A. Regulations: Comply with regulations of NFPA, state, county, and municipal building ordinances, and other applicable codes and regulations.

B. Material and Equipment Requirements

1. Use products of one manufacturer where two or more items of same kind of equipment are required.
2. Materials and equipment shall have a record of one-year successful field use.
3. For certain items of equipment, the specification and the project design are based upon the specified manufacturer's product. Other manufacturers' names are listed. Contractor may purchase, conditional upon meeting project requirements, equipment from the listed manufacturers.

4. Only the manufacturer's equipment upon which, the specification and the project design has been based, has been checked for this project. Check allocated space and structure for suitability of equipment of other listed manufacturers, including parts replacement and servicing.

5. Where items of equipment are indicated as base bid on the bid form, include in the bid price the cost of providing the equipment upon which the specification is based. In addition, submit with bid for Owner's consideration, the amount to be added or deducted from the base bid for other listed manufacturers' equipment. Owner will advise Contractor within 45 days after award of contract of his selection.

C. Workmanship

1. Remove and replace, at no extra cost, work not in conformance with contract requirements.
2. Coordinate work and cooperate with other trades to facilitate execution of work.

D. Coordination with Other Trades

1. Contractor shall give full cooperation and coordination with other trades and shall furnish any information necessary to permit the work of all trades to be installed satisfactorily with the least possible interference or delay.
2. The Contractor shall furnish to other trades, as required, all necessary templates, patterns, setting plans and shop details for the proper installation of the work and for the purpose of coordination adjacent work.

E. Asbestos or asbestos-containing materials shall not be utilized or allowed on this project. The Contractor shall be rigorous in assuring that all materials, equipment, systems, and components do not contain asbestos. Any deviations from this exclusion shall be remedied at the Contractor’s expense without regard to prior submittal approvals.

F. Access: The Contractor shall specifically consider all materials and equipment installations and shall coordinate with the work of all trades to insure easy and unobstructed accessibility of all systems for operations, maintenance, repairs, and replacement. Installation of all specified materials and equipment including but not limited to, equipment, supports, ductwork, pipe, electrical conduit and controls shall be in a manner which will allow complete unobstructed access to all panels, access doors, filter racks, control boxes, controls actuators, sensors, valves, tube bundles and all other items requiring access for operations or maintenance. All items such as controls, actuators and valves which require servicing or manual operations for system use shall be located such as to be accessible without standing on other equipment, whenever it is possible or practical. Any installation of new equipment or materials which causes problems related to access of new or existing equipment shall be disapproved by the Engineer and reaccomplished by the Contractor.

1.4 SUBMITTALS

A. Manufacturer's technical product data, installation instructions and description of accessories for each type to be used and system designation.

1. Layout drawings for equipment supports.
2. Pipe penetration seals.
3. Operating and maintenance manuals.

1.5 APPLICABLE PUBLICATIONS

The publications listed in this section form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation.

1.6 PROJECT CONDITIONS

A. References

1. References to standards, codes, catalogs and recommendations are latest edition in effect on date of invitation to bid.
2. Refer to applicable contract drawings and specifications pertaining to other Divisions for conditions affecting work.

B. Definitions: The following are definitions of terms and expressions used in Division 23:

1. “Approve” - To permit use of material, equipment or methods conditional upon compliance with contract document requirements.
2. “Concealed” - Hidden from normal sight; includes work in crawl spaces, above ceilings, and in building shafts.
3. “Directed” - directed by Engineer.
4. “Ductwork” - includes ducts, fittings, housings, dampers, supports and accessories comprising a system.
5. “Equal, equivalent” - possessing the same performance qualities and characteristics and fulfilling the same utilitarian function.
7. “Furnish” - Supply and deliver to project site, ready for unloading, unpacking, assembly, installation, and similar operations.
9. “Install” - Operations at project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimensions, finishing, curing, protecting, cleaning and similar operations.
10. “Piping” - includes pipe, fittings, valves, supports and accessories comprising a system.
11. “Provide” - furnish and install, complete and ready for the intended use.
12. “Removable” - detachable from the structure or system without physical alteration of materials or equipment and without disturbance to other construction.
13. “Review” - limited observation or checking to ascertain general conformance with design concept of the work and with information given in contract documents. Such action does not constitute a waiver or alteration of the contract requirements.

1.7 WARRANTY

A. Deliver to the Owner certificates of equipment warranty extending beyond the guarantee period.
B. PVC Pipe Cover Color:
   1. Steam: Orange

PART 2 - PRODUCTS

2.1 CONCRETE WORK

   A. Compressive Strength: 3000-psi minimum after 28 days.
   B. Reinforcing Steel: Yield strength as determined by structural design.
   C. Grout: Non-shrink, non-metallic, pre-mixed, equivalent to Nordbak Fast-set, U.S. Grout Five-star, or Polymeric.

2.2 HANGER ATTACHMENT - Application and Type

   A. Concrete (New): Iron or steel inserts. Expander type anchors, specified for existing may be used provided concrete is clear of conduit for drilled depth.
   B. Concrete (Existing): Double plated expander type anchors. Phillips, Hilti or approved equivalent. Loads shall not exceed 1/4 of tested pullout (or shear) strength.

2.3 SLEEVES AND ESCUTCHEON PLATES

   A. Sleeves for Piping and Conduits - Material and Application
      1. Galvanized Standard Weight Steel Pipe with Anchor Flange Welded to Perimeter:
         a. Exterior concrete walls and roofs.
   B. Escutcheon Plates for Piping: Chromeplated brass.
   C. Sealant: One part polysulfide, equivalent to Pecora Synthacaulk GC-9 or Proseal Ultratite 102 for general use.
   D. Pipe Penetration Seals
      1. Modular interlocking EPDM or silicone rubber links, dielectrically sealed to pipe and wall opening with pressure plates and bolts.
      2. Link sealing elements shall be rated for pipe fluid and steam temperature for each application.
      3. Pressure plates shall be Delrin plastic or equivalent electrical insulating material.
      4. Bolts and nuts shall be zinc phosphated low-carbon steel.
PART 3 - EXECUTION

3.1 CONCRETE WORK

A. Location: Equipment foundation pads, equipment housekeeping pads, piers, pedestals, tank, pipe encasement, electric duct encasement, cradles or saddles for tanks and pipes, manholes, pitsrical work.

B. Perform work in conformance to American Concrete Institute Standard ACI 301-72, Specifications for Structural Concrete for Buildings.

C. Bond new work to existing concrete, by approved adhesive or by roughing existing surface to expose aggregate uniformly, then cleaning surface. Key new pads, piers, curbs, and pedestals to concrete floors using expansion bolts.

D. Bevel exposed vertical and horizontal edges 3/4-inch.

E. Install grout according to manufacturer's recommendations.

3.2 HANGER ATTACHMENT

Select and install structural attachments for hangers supporting pipes, ducts, conduit and equipment adequately for stresses to which they may be subject and for proper distribution of load to building structural members.

3.3 SLEEVES AND ESCUTCHEON PLATES

A. Sleeves are not required for core-drilled holes.

B. Install ends of sleeves flush with finished wall surfaces.

C. Reinforce sleeves temporarily, if necessary, to preserve accurate shape without distortion during construction.

D. Grout sleeves into building structure to make joint watertight.

E. Install escutcheon plates for pipes and conduits at floors, ceilings, walls, and partitions in finished areas unless otherwise indicated.

1. Fit escutcheons around insulation, uninsulated pipe, or conduit.
2. Outside diameter shall cover sleeve.

F. Prime surfaces prior to caulking to obtain good adhesion where recommended by sealant manufacturer.

G. Install pipe penetration seals on pipes passing through underground walls and floors as recommended by the manufacturer. Installation shall result in a watertight and electrically insulated seal.
3.4 SHOP DRAWINGS AND DESCRIPTIVE DATA

A. Refer to Division 01 for additional information.

B. Establish that the physical and functional character of each item including, size, type and required service access is suited for its intended location and use.

C. Coordinate drawings and data before submitting and certify that provisions of the contract documents have been met.

D. Call attention, in writing, to deviations from contract requirements.

E. Do not fabricate, deliver to site, or install items requiring shop drawing review, until the review has been completed by the Engineer and the shop drawing has been marked to indicate "No Exception Taken" or "Make Corrections Noted."

F. Specifically identify pertinent project data on the shop drawings.

G. Include Operation and Maintenance Data.

H. Use only final or corrected drawings and data for construction.

I. The Engineer’s review of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work.

3.5 SITE EXAMINATION

Failure to visit site and become familiar with local conditions prior to bidding will not relieve the Contractor of his responsibility for complying with the Contract Documents.

3.6 CUTTING AND PATCHING

A. Unless otherwise directed, do cutting and patching. Repair damaged fireproofing and waterproofing to original or better condition.

B. Do not cut walls, floors, reinforced concrete or structural steel without Engineer's permission. Install services without affecting reinforcing steel.

3.7 PROTECTION

A. Protect mechanical and electrical material and equipment from the elements or other injury as soon as delivered on premises. Protect plumbing fixtures as soon as they are set. Cover water closets and post notices prohibiting their use.
B. Cap or plug openings in equipment, piping, duct, and conduit systems, to exclude dirt and other foreign material. Do not use rags, wool, cotton, paper, waste or similar materials for plugging.

C. Existing components of the building and its systems shall be protected from damage. Any damage to these components shall be repaired or replaced to the satisfaction of the Owner. Special care shall be taken with regards to insulation on existing piping and ductwork. Damaged insulation shall be replaced so that the vapor barrier and insulating characteristics of the material match those prior to damage taking place.

3.8 ASBESTOS REMOVAL AND DISPOSAL

Should material resembling asbestos-containing materials be encountered during execution of work, immediately notify Owner for instructions before proceeding.

3.9 EXCAVATION AND BACKFILL:

A. Excavate and backfill as required to install underground mechanical and electrical work.

B. Establish required lines and grade.

C. Excavate to sufficient depth to give 30-inch minimum cover, unless otherwise indicated.

D. Keep excavation drained and pumped out.

E. Remove excavated materials not required or suitable for backfill.

F. Protection

1. Protect existing utilities and underground work by shoring and bracing.
2. Provide guardrail, lamps, flags, and other safeguards at temporary walk and road crossings.
3. Provide shoring, sheet piling and bracing for protection of work and safety of personnel. Timber sheeting below top of pipe shall not be removed.
4. Protect trees, structures, and other property from injury during work.
5. Prevent debris and other materials from entering piping and drains.

G. Trenching

1. Excavate to depth and width required for proper installation of item to be buried with a minimum clearance of 8 inches and a maximum of 12 inches on each side of the pipe and to the top of the pipe with a minimum overdepth of 4 inches. If cinders are encountered at bottom of trench, increase overdepth to 10 inches.
2. Sides shall be vertical unless otherwise required by governing safety regulations.
3. Provide manholes and similar structures with a minimum of 2-inch and a maximum of 24-inch clearance on each side.

H. Backfill
1. Use only backfill material free of organic matter, cinders, frozen earth, clay, and rocks exceeding 6 inches in any dimension.

2. Provide bed of firmly compacted sand, gravel, or crushed stone of proper grade to form a uniform support. Hollow out for bells. Backfill excessive overdepth with firmly compacted sand or gravel.

3. Provide a structurally suitable reinforced concrete beam supported by the structure and undisturbed earth to support piping where a properly compacted bed is difficult to obtain, because of fill conditions, such as may occur adjacent to building walls.

4. As items to be buried are laid, backfill with layer of sand, crushed stone, or gravel bedding material to centerline of pipe or 6 inches deep, whichever is less, and tamp.

5. After tests and inspections are complete, backfill with fine earth or sand in 6-inch layers until buried item has 1-foot of cover. Carefully tamp each layer. Compact to at least 95 percent of the maximum dry density as determined by ASTM D 1557.

6. Deposit remainder of backfill material in 8-inch layers and tamp each layer. Compact to at least 95 percent of the maximum dry density as determined by ASTM D 1557.

7. Backfill around manholes and similar structures in 8-inch tamped layers. Compact to at least 95 percent of the maximum dry density as determined by ASTM D 1557.

8. Backfill with sand, graded crushed stone, or washed gravel, inside building under or within 3 feet of equipment and under roadways. Compact to at least 95 percent of the maximum dry density as determined by ASTM D 1557.

I. Restoring

1. Restore existing pavement, curbs, sidewalks, fences, sod, shrubs, and other appurtenances removed or damaged in connection with work to original condition.

2. Replace sod with sod and replace trees, which are damaged, with trees of similar type and size.

3.10 EQUIPMENT SUPPORTS

A. Provide equipment supports consisting of platforms, curbs, concrete pads, gratings, cradles, structural members, hangers, rods, racks, and incidental materials.

B. Design and construct supporting structures of strength to safely withstand stresses to which they may be subjected and to properly distribute the load and impact over building areas.

C. Floor Mounted Stands: Construct with structural steel members or steel pipe and fasten with flanges bolted to floor.

D. Ceiling Suspended Platforms: Construct with steel hangers. Brace and fasten to building structure.

E. Wall Mounted Platforms: Construct with steel brackets.

3.11 OPERATING AND MAINTENANCE MANUAL

A. Furnish manual bound and indexed.
B. Submit to Engineer for review at least 30 days prior to date it is expected system will be turned over to Owner.

C. After review by Engineer, submit electronic copies to Owner and Engineer.

3.12 OUTAGES

A. The purpose of this article is to establish standard procedures for requesting an outage for mechanical, electrical, or operational systems or services associated with the physical plant.

B. An outage is defined as prohibiting or restricting a mechanical, electrical or operational service from routine operation (see attached outage request for service included). For purposes of repair, replacement or connection to an existing system, this standard shall be followed.

C. All persons requesting an outage shall complete an "Outage Request Form" included at the end of this Section.

D. Contractor shall submit, in writing with the "Outage Request Forms" a plan on the work to be performed during the outage, including length of time and reason the utility system must be shutdown. Contractor, in conjunction with the Owner, shall research and identify all systems affected by Outage as well as locating and listing all components by tag or facility equipment number, and all the action required at each to achieve the outage. Submit written Plan and Outage Form 14 days in advance of requested outage to Owner.

E. All "Outage Request Forms" and the Outage Plan shall be reviewed by the construction foreman or superintendent for feasibility and necessity.

F. All “Outage Request Forms” and the Outage Plan shall be forwarded to the “Plant Operations and Maintenance Manager” for review and approval prior to scheduling. Contractor shall attend weekly Outage Review Meetings and be prepared to answer questions and discuss the plan.

G. After approval by the Plant Operations and Maintenance Manager, the outage shall be scheduled by either the Buildings or Utilities Superintendent (according to the services requested for outage). Owner’s representative will notify the Contractor, in writing, to proceed. No outage shall proceed prior to written notification from the Owner’s Representative.

H. All systems, when shutdown, shall be tagged in accordance with OSHA and University lock-out/tag-out procedures.

I. The number and duration of all outages shall be minimized.

J. A master outage list, with the approximate required dates, shall be submitted to the Owner within 14 days from the commencement of work.

Attachments: Outage Request Form

END OF SECTION 230500
OUTAGE REQUEST FORM

DATE: ________________

OUTAGE REQUESTED BY: _____________________________________________

DEPARTMENT/COMPANY NAME: _____________________________________________

PURPOSE OF OUTAGE: _____________________________________________

DATE NEEDED: _____________________________________________

BUILDING AFFECTED: _____________________________________________

AREA WITHIN BUILDING TO BE AFFECTED: _____________________________________________

THE FOLLOWING SERVICES ARE REQUESTED TO BE REMOVED FROM SERVICE:

_____ HOURS

a. ___ SANITARY SEWER
b. ___ STEAM
PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Insulation for piping and equipment specified in Division 23.

1.2 RELATED DIVISIONS AND SECTIONS

A. Division 01 - General Requirements
B. Section 230500 - Basic Mechanical Materials and Methods
C. Section 232000 - Building Services Piping

1.3 QUALITY ASSURANCE

A. Unless otherwise noted, pipe insulation shall have a K value insulation conductivity Btu inch/hour-ft² degrees F in accordance with ASHRAE 90.1-2013.
B. Canvas covering shall be flame and mildew proof.

1.4 SUBMITTALS

A. Submit in accordance with Division 1 and Section 230500.
B. Each type of insulation: Manufacturer and product designation, surface burning characteristics, thickness, density in pounds in accordance with cubic foot, conductivity or R-value, jackets (factory and field applied), and accessories.
C. System application for each type of insulation.
D. Statement of compliance with ASHRAE 90.1-2013.
E. Statement of compliance with NFPA 90A, flame spread index and smoke developed index requirements.
F. Statement of compliance with National Architectural and Industrial Maintenance Rule for VOC levels on Adhesives, Mastics, and Coatings for the State of Maryland.
G. Statement of compliance with Ozone Transport Commission for VOC levels on Adhesives, Mastics, and Coatings for the State of Maryland.
1.5  APPLICABLE PUBLICATIONS

The publications form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation.

1.6  PROJECT CONDITIONS

A. Do not store materials in building until it is enclosed and dry.

B. Where insulation must be installed before building is enclosed, provide polyethylene film cover for protection. Insulation that becomes wet shall be replaced; drying of insulation is not acceptable.

C. Where insulation must be stored outdoors, provide polyethylene film cover for protection. Insulation that becomes wet shall be replaced; drying of insulation is not acceptable.

D. Coordinate clearance requirements for insulation application with pipe and equipment installation.

PART 2 - PRODUCTS

2.1  GENERAL MATERIAL REQUIREMENTS

A. Products shall not contain asbestos, lead, mercury, or mercury compounds.

B. Products shall comply with the National Architectural and Industrial Maintenance (AIM) Rule for VOC levels for the State of Maryland.

C. Products shall comply with the Ozone Transport Commission limits for VOC levels for the State of Maryland.

D. Products that come in contract with stainless steel shall have a leachable chloride content of less than 50 ppm when tested according to ASTM C871.

E. Insulation materials for use on austenitic stainless steel shall be qualified as acceptable to ASTM C795.

2.2  ADHESIVES, MASTICS, COATINGS

A. Adhesives

1. Type A1

   a. High tack, rapid setting water-based adhesive.
   b. Solvent free, low VOC (0.03 pounds/gallon) synthetic elastomer emulsion.
   c. Non-flammable when wet and fire-resistant when dry.
   d. Moisture resistant.
   e. Flame spread index 0 and smoke developed index 0.
   f. Asbestos, lead, and mercury free.
g. ASTM C916 Type 11.

B. Mastics

1. Type M1
   a. White, flexible, water-based vapor barrier mastic.
   b. Low VOC (0.3 pounds/gallon).
   c. Non-flammable when wet and fire-resistive when dry.
   d. Water resistant and low water vapor permeance.
   e. Flame spread index 5 and smoke developed index 25.
   f. Asbestos, lead, and mercury free.
   g. MIL-C-19565C, Type II.

C. Coatings

1. Type C1
   a. White, washable, abrasion-resistant coating.
   b. Low VOC (0.13 pounds/gallon).
   c. Fire resistant.
   d. Flame spread index 10 and smoke developed index 5.
   e. Asbestos, lead, and mercury free.
   f. MIL-A-3316C, Class I, Grade A.

D. Manufacturers: Childers, Foster, Mon-Eco Industries.

2.3 INSULATION TYPES

A. Type A

1. Insulation: Sectional molded glass fiber pipe insulation. Minimum density: 3.0 pounds per cubic foot.
2. Factory Applied Jacket: White, flame retardant vapor barrier jacket of 0.001-inch aluminum foil laminated to kraft paper reinforced with glass fibers, or all-service jacket.
3. Insulated Fitting Covers: Insulation insert with PVC cover equivalent to Zeston.
5. Polyguard RG-CW or approved equal mineralization coating for application to the interior surface of the insulation.

B. Type H

1. Insulation shall be FOAMGLAS® cellular glass insulation manufactured in accordance with ASTM C552, standard Specification for Cellular Glass Thermal Insulation.
2. Insulation Securment
   a. Metal Bands 0.5 inches by 0.015 inches stainless steel bands with matching seals. Metal Bands shall be AISI type 304 (BSI 304 S16) stainless steel.
3. An anti-abrasive coating shall be applied onto the inner side of the FOAMGLAS elements which will be in contact with the metal pipe. The anti-abrasive coating shall be: Hydrocal B-11 gypsum cement, manufactured by US Gypsum Corporation.

4. Protective Jacketing
   a. PITTWRAP® HS Protective jacketing - a 3 mm thick, heat sealable, multi-ply laminate for protecting underground FOAMGLAS® insulation applied to underground steam lines.

5. Self-Seal Lap Joint sealant shall be PITTSEAL 444N Self Sealing Jacketing Primer shall be PITTWRAP SS Primer.

6. Vaport Retarder Mastic shall be PITTCOTE 300 coating.

7. High Temperature Adhesive: For systems operating from 180 F to 400 F, high temperature adhesive shall be PC RTV 450 silicone adhesive for direct exposure to temperatures up to 400 F.

PART 3 - EXECUTION

3.1 GENERAL PREPARATION AND APPLICATION REQUIREMENTS

A. Clean and dry surfaces to be insulated of loose scale, dirt, oil, water and other foreign matter.

B. Insulate completely metal surfaces of piping and equipment other than hangers as delineated under Extent of Insulation.

C. Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment and fittings, and piping including fittings, valves, and specialties.

D. Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer.

E. Install insulation with least number of joints practical.

F. Permit expansion and contraction without causing damage to insulation or surface finish.

G. Extend surface finish to protect surfaces, ends, and raw edges of insulation.

H. Where connections are made to existing systems, provide insulation as specified and to match existing where existing insulation is removed or damaged for new connection. Provide vapor barrier continuously sealed to the existing insulation.

I. Mix insulating cements with clean potable water. If insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.

J. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.

K. Install insulation with longitudinal seams at top and bottom of horizontal runs.
L. Install multiple layers of insulation with longitudinal and end seams staggered.

M. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.

N. Keep insulation materials dry during application and finishing.

O. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness.

P. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.

Q. Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.

R. Penetrations
   1. Below-Grade Exterior Wall Penetrations: Terminate insulation flush with sleeve seal. Seal terminations with flashing sealant.

S. Piping
   1. Insulate valves, strainers and fittings, including unions and flanges. For the purpose of this specification, fittings include unions and flanges. Install insulation with continuous thermal and vapor retardant integrity, unless otherwise noted. Use premolded material where available.
   2. Insulate valve bodies and flanges up to and including bonnets.
   3. Insulate strainers in a manner to permit removal of the basket without disturbing the insulation of the strainer.
   4. Fill hollow interior of protection saddles with insulating cement.
   5. Insulate air separator chamber as specified for fittings.

3.2 ADHESIVES, MASTICS, COATINGS

A. Apply adhesives, mastics and coatings at the rate of coverage and in a manner recommended by the manufacturer.

B. Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise noted.

C. Mastics shall comply with MIL-C-19565C, Type II.

3.3 INSULATION TYPES

A. Type A
   1. Application
a. Pipe: Fit insulation to pipe, staggering longitudinal joints. Seal longitudinal joint overlaps with 4-inch wide sealing strips of vapor barrier jacket material applied on circumferential joints with Type A1 adhesive.
b. Fittings and Valves: Apply fabricated or premolded insulated fitting covers or insulating cement equal in thickness and density to adjoining pipe insulation. Seal with a 1/16-inch thick coat of Type C1 coating for hot lines. Imbed a layer of glass fiber fitting tape in the mastic or coating and after the initial coat has dried, apply an additional 1/16-inch coat of mastic or coating.

2. Surface Finish
   a. All piping
      1) Pipe: Apply laminated, flexible, self-adhering, protective jacketing, vapor barrier and weatherproofing membrane, having a high performance acrylic adhesive capable of installation with no additional mechanical attachment. Material shall be equal to VentureClad 1579CW and have a natural aluminum and flat finish. Jacketing material shall have a maximum flame spread/smoke developed index of 25/20, in accordance with ASTM E84 test, a 0.0000 water vapor permeance rating in accordance with ASTM E-96, and mold inhibitors incorporated. All products shall be UV stable. Fabrication and installation shall conform to the manufacturer’s installation instructions.
      2) Fittings and Valves: Same material as specified for pipes. Apply heavy-duty surface finish to pipes, fittings, and valves that are not concealed above ceiling and within wall cavities.

E. Type H
   1. The trench shall be excavated to allow 6 in. minimum clearance in all directions around the final O.D. of the system.
   2. The bottom of the trench shall be graded to the design slope of the piping and to provide uniform bearing along its entire length. Where wet or unstable soils are encountered, such soil shall be removed to a sufficient depth and the trench backfilled with coarse sand or loose granular earth.
   3. This backfill shall be compacted to a density equal to that of the acceptable portions of the trench. Where excavation of rock is required, the rock shall be excavated to an over depth of 6 inches minimum below the specified trench depth. Overdepths in rock shall be backfilled with loose granular earth or coarse sand and thoroughly tamped.
   4. In areas of high water table, adequate drainage shall be provided by a gravel bed and a perforated drain pipe covered with synthetic drainage fabric to prevent clogging. The pipe shall lead to a means to remove water from the trench area.
   5. All insulated piping shall rest in a 6 inches layer of compacted sand. Excavation shall be kept free of standing water during insulation and jacketing application.
   6. Where excessive or cyclical movement is anticipated, the bore of FOAMGLAS® insulation shall be coated with a thin application of bore coating and allowed to dry before insulation is applied to the pipe.
   7. FOAMGLAS® pipe insulation and PITTWRAP® jacketing shall be applied to piping in 10 ft segments (maximum length). After completion, the segments are rotated 180 degrees 5 and the bottom of the jacketing and butt strips shall be inspected for proper application and sealing. If any defects are visible, they shall be corrected.
a. Special considerations—anchors, guides, expansion loops, elbows, etc.: the completed insulated segment is rotated and inspected before installing the connecting section of insulation at the anchors, guides, expansion loops, elbows,

8. Field-jacketed FOAMGLAS® pipe insulation shall be applied to the piping with butt joints staggered and tightly butted. Longitudinal and butt joints shall be left dry. All joints shall be tightly fitted to eliminate voids by refitting or replacing sections of insulation. Each section of insulation shall be held in place by two wraps of strapping tape with a 50 percent overlap per wrap. For double-layer applications, the second layer of FOAMGLAS® insulation shall be applied in a manner similar to the first, with all joints staggered between layers.

9. Apply sections of factory or pre-jacketed insulation to the pipe with insulation butt joints tight and the jacket lap positioned as recommended. For PITTWRAP® HS jacketing, the laps are positioned facing up.

10. Seal the PITTWRAP® HS jacketing laps using a propane torch 1 inch diameter nozzle. The insulation section shall then be rotated such that the lap is facing up in the 10 or 2 o’clock position. Visual inspection of the seal is made by observing that molten asphalt has flowed into and collected in the lap. Further assurance of a positive seal is made by pressing the lap in place using a pointed trowel. Apply 4 in. wide butt strips of the same material to all abutting sections according to the same procedure as above.

11. Apply successive sections of pre-jacketed insulation in the same manner with the insulation sections tightly butted to the previous section and the jacket laps in line.

12. Apply butt strips as per the instructions included on the PITTWRAP® HS jacketing or product data sheets.

13. The FOAMGLAS® insulation shall be applied with the longitudinal insulation joints straight up and down (at the 12 and 6 o’clock position). Insulation shall be applied with no joint sealant. All insulation joints shall be tightly butted.

14. All fittings shall be finished with PITTWRAP® jacketing precut to fit the contour of the surface to which it is to be applied. Precut sections shall allow for 2 inch overlap. All laps shall be sealed.

a. In addition to sealing the PITTWRAP® jacketing on these irregular surfaces, a glove coat of the PITTCOTE® 300 coating shall be applied over the jacketing in accordance with manufacturers instructions.

15. The trench shall be carefully backfilled using the excavated earth approved for backfilling, consisting of sand, clay, earth, loam or other approved materials. Sand backfill shall be placed within 6 in. of the insulated pipe and shall be free of rocks, debris or stones greater than ¼ in. diameter. Care shall be taken not to damage the PITTWRAP® jacketing during backfilling. Backfill shall be applied in 6 in. lifts, tamping each lift until a depth of 1 ft over the insulated pipe is reached. The remainder of the trench shall be backfilled in of 1 ft lifts, with each lift tamped to the desired compaction.

3.4 FIELD APPLIED JACKETS

A. PVC Jacket

1. High-impact resistant, UV-resistant PVC complying with ASTM D 1784, Class 16354-C; 30 mils thick, roll stock ready for shop or field cutting and forming.

2. Adhesive: As recommended by jacket material manufacturer.
3. Color: Color-code jackets based on system.
   a. Orange: Steam

4. Factory-fabricated fitting covers to match jacket if available; otherwise, field fabricate.


B. PVC Tape: White vapor-retarder tape matching field-applied PVC jacket with acrylic adhesive; suitable for indoor and outdoor applications.
   1. Width: 2 inches.
   2. Thickness: 6 mils.
   3. Adhesion: 64 ounces force/inch in width.
   4. Elongation: 500 percent.
   5. Tensile Strength: 18 lbf/inch in width.

C. PVC Jacket Adhesive: Compatible with PVC jacket.
   1. For indoor applications; adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

D. Where PVC jackets are used, install with 1-inch overlap at longitudinal seams and end joints for horizontal applications. Seal with manufacturer’s recommended adhesive.
   1. Apply two continuous beads of adhesive to seams and joints, one bead under lap and the finish bead along seam and joint edge.

3.5 INSTALLATION SCHEDULE

A. Piping

<table>
<thead>
<tr>
<th>PIPING SYSTEM</th>
<th>MATERIAL TYPE</th>
<th>INSULATION THICKNESS IN INCHES FOR PIPE SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steam, High Temp Hot Water Heating, Steam Vapor Vents, Safety Relief Valve Discharge 60 psi &amp; above (above 350°F)</td>
<td>A</td>
<td>Less than 1&quot; 4-1/2 1 to less than 1-1/2 5 1-1/2 to less than 4 5 4 to less than 8 5 8&quot; &amp; Larger 5</td>
</tr>
<tr>
<td>Below Grade Piping</td>
<td>H</td>
<td>3 3 3 3 3 3</td>
</tr>
<tr>
<td>Steam Condensate Including Pumped Discharge 60 psi &amp; above (above 350°F)</td>
<td>A</td>
<td>4-1/2 5 5 5 5</td>
</tr>
<tr>
<td>Steam Condensate Below Grade Piping</td>
<td>H</td>
<td>3 3 3 3 3</td>
</tr>
</tbody>
</table>
3.6 EXTENT OF INSULATION

Piping: Insulate as designated in Installation Schedule.

END OF SECTION 230700
SECTION 232000 - BUILDING SERVICES PIPING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

Piping, fittings, joints, coatings, valves, and supports for Division 23.

1.2 RELATED DIVISIONS AND SECTIONS

A. Division 01 - General Requirements
B. Division 23 – Heating, Ventilating and Air Conditioning

1.3 QUALITY ASSURANCE

A. Valves shall conform to ASME Boiler and Pressure Vessel Code Specifications where indicated or required by state or local code.
B. Comply with ASME B31.9, “Building Services Piping” for materials, products, and installation for steam and steam condensate piping.

1.4 SUBMITTALS

A. Submit in accordance with Division 01 and Section 230500.
B. Statement of piping and fitting material, and type of joint to be used for each piping system.
C. Manufacturer’s technical product data, installation instructions and description of accessories for each type to be used and system designation:
   - Coatings for Pipe
   - Valves
   - Pipe Supports
   - Insulation Protection
   - Strainers
   - Pressure Gages
   - Steam Traps
   - Steam Relief Valves
   - Underground Tank
   - Pump Trap
D. Manufacturer's certification for insulated underground piping installation.
1.5 APPLICABLE PUBLICATIONS

The publications listed in this section form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation.

1.6 PROJECT CONDITIONS

A. Workmanship

1. Cut pipes accurately to measurements established at structure.
2. Install without springing or forcing.
3. Clear windows, doors, and other openings.
4. Permit expansion and contraction without misalignment or damage.
5. During construction, close openings in piping and equipment to keep out foreign matter and to prevent leakage.
6. Piping shall be concealed unless otherwise indicated.
7. Provide offsets required to avoid structural or other interference without extra cost to the Owner.

B. Drainage

1. Grade to low points.
2. Provide hose end drain valves at bottom of risers, low points, and where indicated.

C. Access: All valves, unions, flanges, expansion joints, and flow measurement devices shall be installed in accessible locations.

PART 2 PRODUCTS

2.1 FITTINGS AND ACCESSORIES

A. Welding Branch Fittings: Welding tees, Bonney Weldolets, or Thredolets, Allied Piping Products Type 1 fittings.

B. Reducers: Reducing fittings, eccentric type where required to prevent pocketing of air and water.

C. Unions, Flanges, Mechanical Couplings, and Gaskets

1. Suitable for intended duty and rated for not less than system test pressure.
2. Dielectric (insulating) type in water piping systems, suitable for intended service.

2.2 PIPE, FITTINGS AND JOINTS

A. Pipe

<table>
<thead>
<tr>
<th>TYPE</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Black Steel Pipe: ASTM A53 Grade B, ERW or seamless; or ASTM A106 Grade B</td>
</tr>
</tbody>
</table>
B. Fittings

<table>
<thead>
<tr>
<th>TYPE</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF</td>
<td>Black Cast Iron Screwed Fittings: 125 psi steam, 175 psi water, ANSI/ASME B16.4</td>
</tr>
<tr>
<td>HH</td>
<td>Black Cast Iron Screwed Fittings: 250 psi, ANSI/ASME B16.4</td>
</tr>
<tr>
<td>MM</td>
<td>Steel Butt-Welding Fittings: ANSI/ASME B16.9</td>
</tr>
<tr>
<td>PP</td>
<td>Compatible epoxy fittings are manufactured with the same chemical/temperature capabilities as the pipe.</td>
</tr>
</tbody>
</table>

C. Joints

<table>
<thead>
<tr>
<th>TYPE</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Threaded-AMERICAN Standard for Pipe Threads: ANSI B1.20.</td>
</tr>
<tr>
<td>3</td>
<td>Bell and spigot connections. Epoxy adhesives to secure joints.</td>
</tr>
</tbody>
</table>

2.3 COATING AND WRAPPING

A. Type A: Polypropylene copolymer coating shop applied in shop over a modified rubber blend adhesive equivalent to X-Tru Coating by Standard Pipe Protection Division of General Steel Industries, Inc.

B. Type C: Coal-tar primer and enamel wrapped in coal-tar saturated felt and kraft paper in conformance with American Water Works Association (AWWA) Spec. C-203.

2.4 VALVES

A. Manufacturer's Tests: Each valve shall be given shell and seat tests by the manufacturer and shall carry a permanently affixed indication that tests have been successfully completed.

B. ASME Boiler Code Compliance: Provide valves, which conform to ASME Boiler Code Specifications, where indicated, or where required by state or local code.

C. Gate Valves, Globe and Check Valves

1. Gate and globe valves designed for repacking under pressure when fully opened, and equipped with packing suitable for the intended service. When the valve is fully opened, the back seat shall protect the packing and the stem threads from the fluid. Each gate and globe valve shall have a gland follower.
2. Bronze valves with the basic saturated steam rating of 125 psi or 150 psi shall have pressure containing parts of a material having at least the physical properties of ASTM Specification B-62. Metallic seated bronze globe, angle, check and gate valves with a basic steam rating of 200 or 300 psi having pressure containing parts of material conforming to ASTM B-61, for temperatures to 550 degrees F.

3. Pressure containing parts of iron body valves shall be of material conforming to ASTM A-126 Grade B. If the wedge in OS&Y gate valves is fastened to the stem by threads, it shall be secured by a nickel alloy or monel pin.

4. Face-to-face and end-to-end dimensions of iron body valves to conform to ANSI B16.1. Design, workmanship, materials, and testing to conform to MSS-SP-70, MSS-SP-71, and MSS-SP-85 (Manufacturers Standardization Society of the Valve and Fitting Industry).

5. Solid wedge type gate valves, designed and manufactured in such a way that seating surfaces are prevented from contacting until near the point of closure.

6. Handwheels of ASTM A47 malleable iron or ASTM A126, Class A or B iron.

7. Manufacturers: Unless otherwise indicated, Crane, Grinnell, Hammond, Kennedy, Milwaukee, Crane or other listed manufacturer figure numbers as noted in paragraph Schedule of Services.

D. Ball Valves:

1. Ball valves shall have stem extension to place handle outside the insulation when valve is to be installed in insulated piping.

2. Type B: Same as Type A except with stainless steel body, ball, and stem. Worcester 5966R.

3. Type C: Stainless steel body, ball and stem, reinforced teflon seats and seals, reduced port, flanged end. Worcester 5166RT150.


E. Schedule of Services: Unless otherwise indicated, valves are for aboveground service. Size range indicated is size of pipe where valves are required. Valves shall be pipe size or larger.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SIZE RANGE</th>
<th>SPECIFIC REQUIREMENTS</th>
<th>STYLE</th>
<th>FIGURE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gate</td>
<td>2-1/2 - 16-inch</td>
<td>Steam Supply Over 70 psig Nominal Pressure - Valves: 4-inch and Larger shall have Factory Installed Bypass with Globe Valve</td>
<td>IBBM, OS&amp;Y, FLG</td>
<td>F-617-O</td>
</tr>
<tr>
<td>Gate</td>
<td>2-inch and Smaller</td>
<td>-</td>
<td>-</td>
<td>T-134</td>
</tr>
<tr>
<td>Ball</td>
<td>2-1/2-4-inch</td>
<td>Steam Supply and Condensate Return: Minimum size Valve 3-inch</td>
<td>-</td>
<td>Type C</td>
</tr>
<tr>
<td>Ball</td>
<td>2-inch and Smaller</td>
<td>-</td>
<td>-</td>
<td>Type B</td>
</tr>
</tbody>
</table>
Globe & Check | 2-1/2 -10-inch | - | IBBM, OS&Y, FLG | F-718-B
--- | --- | --- | --- | ---
Globe | 2-inch and Smaller | - | - | T-276-AP
Check | 2-1/2-12-inc | - | IBBM, FLG | F-918-B
Check | 2-inch and Smaller | - | - | T-433-B

2.5 STRAINERS

A. Size and Screen Openings: Provide full line size strainers irrespective of equipment connection size. Provide free area of screen not less than 2-1/2 times inlet pipe area.

B. "Y" Type: For 2-inch and smaller Mueller No. 11 with open bottom stainless steel screen. For 2-1/2-inch or larger, Mueller No. 758 with open bottom stainless steel screen.

C. Perforations: Diameter of perforations, steam service 2-inch and smaller - 0.033-inch, 2-1/2-inch and larger -3/64-inch.

D. Magnet: Bolt Alnico channel magnets to strainer screens at suction of pumps except fuel oil systems. Provide magnets of sufficient strength and spacing to attract all ferrous particles entering strainer.

E. Drain: Pipe plug or factory-installed hose-end drain valve as indicated on drawings.

F. Galvanizing: Strainer bodies for galvanized lines shall be galvanized.

G. Manufacturers:

1. "Y" Type: Boylston, McAlear, Mueller, Spence, Tate Andale, Sarco, Nicholson, Metraflex, Keckley.

2.6 PIPE SUPPORTS

A. General: Supports shall be plastic coated for plastic pipe, copper plated for copper tubing and brass pipe, galvanized for uninsulated galvanized steel pipe, and black steel for other metallic piping. Outdoor supports shall be copper plated for copper tubing and brass piping, and galvanized for all other piping.

B. Horizontal Piping

2. Roll Hangers: Adjustable steel yoke roll hangers for chilled water, hot water heating, steam piping larger than 2-1/2-inch diameter.
3. Under Supports:

   a. Where no provision for expansion and contraction is required:

   (1) Floor Mounted: Adjustable cast iron saddle with floor flanges secured to floor and pipe nipple of suitable length.
(2) Trapeze or Metal Frame Mounted: Inverted U bolts with saddle supports for insulated pipe.

(3) Wall Mounted: Steel J hooks for pipes 3-inch and smaller; welded steel brackets for larger pipes with hanger or support same as for trapeze.

b. Where provision for expansion and contraction is required provide adjustable pipe roller and base secured to support. For floor mounting provide concrete pier under base; for wall mounting provide welded steel bracket.

4. Metal Frame Supports:

a. Provide as required, vertical and horizontal 12 gage galvanized steel channels and fittings bolted together to form a multiple pipe rack secured to the building structure with post bases and brackets. Equal to Grinnell Power-Struct, ASTM A-446, Grade A, hot dipped zinc coated steel with safety end enclosures.

b. Manufacturers: B-Line, Steel City, Unistrut, Grinnell.

5. Lateral Movement: Provide dual movement type rollers where undersupports are required and where expansion and contraction will cause lateral movement.

C. Vertical Piping

1. Steel extension pipe clamps for piping not subject to vertical movement by expansion or contraction.

2. Variable spring supports for piping subject to vertical movement by expansion or contraction.

3. Base fitting set on concrete, brick pier or pipe stand where necessary at bottom of piping risers.

D. Insulation Protection


2. Roller Saddle: Curved steel with protecting lugs or turned up edges.

3. Thermal Shield: 360 degree insert of waterproofed calcium silicate insulation with 100 psi compressive strength encased in galvanized steel jacket equivalent to Pipe Shields, Inc. Model A1000 (CS) for other insulated lines. Use Model A4000 (CSX-CW) and Model A3000 (CSX) wherever pipe hanger span exceeds 10 feet and for pipe roller applications. Insert shall be same thickness as adjoining pipe insulation. Shield length and minimum sheet metal gages as indicated. Insulation insert shall extend 1-inch beyond sheet metal shield on chilled water piping. Where pipe hanger spacing exceeds 10 feet and where pipe rollers are used, provide double layer shield on bearing surface.


<table>
<thead>
<tr>
<th>PIPE SIZE IN INCHES</th>
<th>SHIELD LENGTH IN INCHES</th>
<th>MINIMUM GAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 – 1-1/2</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>2 – 6</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>8 – 10</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>12 – 18</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>
2.7 PIPE ANCHORS

Unless otherwise indicated, provide anchors consisting of steel collars, clamps or similar devices welded to pipe and structural framing of building.

2.8 PRESSURE GAGES AND TEST CONNECTIONS

A. Type: General purpose bronze bourdon tube, bronze bushed movement mounted on socket independent of case, 1 percent minimum accuracy at mid range, 4-1/2-inch white face equal to Ashcroft Catalog No. P2070A.

B. Ranges: Approximately twice the maximum operating pressure. Provide compound gages wherever negative pressures can occur.

C. Accessories: Provide gages with Trerice No. 735 or 740 valve suitable for intended pressure, temperature and service and, for steam, brass siphon tubes. For pump and compressor suction and discharge, provide porous core snubbers.


2.9 TRAPS

A. Traps shall be rated for not less than steam main pressure and shall have capacity to discharge three times the condensate rating of the equipment.

B. Provide inverted bucket traps for all pipe line drips.

C. Manufacturers: Armstrong, Clark, Dunham-Bush, Reliance, Spirax/Sarco.

2.10 RELIEF VALVES

A. Provide ASME approved relief valves equivalent to Farris 2850 or 2600 series with 300 psi inlet connection with packed lever where indicated or required by code.

B. Size valves for distribution system according to manufacturer's recommendations and National Board of Boiler and Pressure Vessel Inspectors' Inspection Code, based on a 10 percent overpressure above the maximum working pressure upstream of relief valve, but in no case higher than the system classification pressure.

C. Manufacturers: Armstrong, Farris, Lonergran, Spence, Spirax/Sarco, Watts.

2.11 UNDERGROUND TANK

A. Underground Water Tanks in the United States:
1. American Concrete Institute (ACI) standard ACI 318, Building Code Requirements for Structural Concrete.
3. Tank manufacturer shall be recognized by Underwriters Laboratories as a manufacturer of tanks listed to the UL-1316 standard.

B. Tank Design - Fiberglass reinforced plastic (FRP) tanks:

1. The tank size, fittings and accessories as required for a complete and operational system.
2. Tank shall be manufactured with structural ribs which are fabricated as an integral part of the tank wall.
3. Tank shall be manufactured with a laminate consisting of resin and glass fiber reinforcement only. No sand/silica fillers or resin extenders shall be used.
4. Tank shall be vented to atmospheric pressure.
5. Tank shall be capable of handling liquids with specific gravity up to 1.1
6. Tank shall be compatible with liquids identified in the manufacturer's standard limited warranty.

C. Loading Conditions - Tank shall meet the following design criteria:

1. Internal Load - Tank shall be designed to withstand a 5-psig (35 kPa) air-pressure test with a 5:1 safety factor.
2. Surface Loads - Tank shall be designed to withstand surface H-20 and HS-20 axle loads when properly installed according to manufacturer's current Installation Manual and Operating Guidelines.
3. External Hydrostatic Pressure - Tank shall be designed for 7 feet of overburden over the top of the tank, the hole fully flooded, and a safety factor of 5:1 against general buckling.

D. Holding Tank

1. Governing Standards, as applicable:
   b. American Concrete Institute (ACI) standard ACI 318, Building Code Requirements for Structural Concrete.
   c. Tank manufacturer shall be recognized by Underwriters Laboratories (UL) as a manufacturer of tanks listed to the UL-1316 standard.

2. Tank Design: Single-Wall vessel as specified and shown on the Drawings.
3. Tank Accessories:
   a. Tank Anchoring:
      1) Anchor straps shall be as supplied by tank manufacturer and designed for a maximum load of 25,000 lbs.
      2) Galvanized turnbuckles shall be supplied by the tank manufacturer.
      3) Prefabricated concrete anchors shall be supplied by the tank manufacturer, designed to the ACI 318 standard, manufactured with 4,000 psi concrete and shall have adjustable anchor points.
b. Access Openings: All access openings shall have a diameter of 24 inches or 30 inches, complete with riser, lid and necessary hardware.

c. Attached Access Risers:

1) Attached access risers shall be PVC or FRP as supplied by tank manufacturer.
2) Attached access risers shall be 24 inches or 30 inches diameter
3) Access risers shall be attached to access openings during installation utilizing adhesive or FRP bonding kits as supplied by the tank manufacturer.

d. Piping and Fittings:

1) Tank shall be equipped with factory-installed threaded fittings, or pipe stubs.
2) PVC piping shall at a minimum meet the requirements of ANSI Schedule 40.
3) All flanged nozzles shall be flanged and flat-faced, and conform to Class 150 bolting patterns as specified in ANSI/ASME/ B16.5.
4) Carbon steel and stainless steel NPT fittings shall withstand a minimum of 150 foot-pounds of torque and 1,000 foot-pounds of bending, both with a 2:1 safety factor.

e. Manway Openings:

1) The standard manway shall be flanged, 22 inches I.D. and complete with gaskets, bolts and cover.
2) Manway openings shall be designed to withstand 5-psig test pressure with a 5:1 safety factor.

2.12 PRESSURE DRIVEN CONDENSATE PUMP TRAP

A. Acceptable Manufacturers: Armstrong Intl, Inc. Model PT-3508 Pump Trap

B. Body shall be constructed of Cast Iron with all stainless steel internals. The mechanism shall incorporate Inconel X-750 springs for a long service life. Springs made of materials other than Inconel shall not be accepted. Single compression springs shall not be accepted. Motive and vent connections shall have externally replaceable seats for viewing and inspecting the internal valves.

C. Motive Force. The Pump Trap shall utilize steam, compressed air or inert gas to remove condensate from the receiving vessel.

D. Pumps shall require no electricity for operation.

E. The Pump Trap shall include a bronze water level gauge with shut off valves.

F. Overall height of the pump shall not exceed 22 inches.

G. Check valves shall be either bronze or stainless steel.

H. Pump condensate inlet and outlet connections shall be 2 inches by 2 inches FNPT.
I. Provide Pump Trap with removable insulation cover and digital cycle counter.

J. Manufacturer’s standard painting will apply.

PART 3 EXECUTION

3.1 FITTINGS AND ACCESSORIES

A. Welding: Make changes in direction and size with welding fittings. Use welded branch fittings in joining a branch to a main. Finish exposed galvanized welds with Galv-Weld.

B. Reducers: Use reducing fittings to make changes in pipe sizes.

C. Unions, Flanges, Mechanical Couplings, and Gaskets

1. Install at each piece of equipment, in bypasses, and long piping runs to permit disassembly for alteration and repairs.

2. Equipment Connections: Provide piping connections which conform to indicated sizes, details, reviewed shop drawings, and printed installation instructions furnished by manufacturer.

3. Dielectric (Insulating) Type: Install in water piping systems where pipes of dissimilar metals are joined and where unions are required by contract documents.

4. Contractor shall install tongue and recess mechanical couplings with a torque wrench in accordance with manufacturer’s recommendations. Use of an impact wrench is not permitted on tongue and recess mechanical couplings.

D. Threads: Remove burrs and ream to full inside diameter.

E. Brace underground pressure piping with clamps and concrete buttresses to prevent movement at joints. Brace or anchor long runs of pressure piping and use mechanical couplings to prevent excessive expansion.

F. Special Sealing: Seal threaded joints in drainage piping above food or beverage storage, preparation, dining, and serving areas with litharge and glycerine.

3.2 PIPE, FITTINGS AND JOINTS

A. Schedule

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>PIPE</th>
<th>FITTINGS</th>
<th>JOINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steam Supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. 2-1/2-inch and larger</td>
<td>E</td>
<td>MM</td>
<td>2</td>
</tr>
<tr>
<td>2. 2-inch and smaller</td>
<td>E</td>
<td>FF</td>
<td>1</td>
</tr>
<tr>
<td><strong>Steam Condensate Return: Gravity and Pumped</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Aboveground: 2-1/2-inch and larger</td>
<td>E (Sched. 80)</td>
<td>MM*</td>
<td>2</td>
</tr>
<tr>
<td>* Extra Strong Pipe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Aboveground: 2-inch and smaller</td>
<td>E (Sched. 80)</td>
<td>HH</td>
<td>1</td>
</tr>
<tr>
<td>* Extra Strong Pipe</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SYSTEM

<table>
<thead>
<tr>
<th>3. Underground</th>
<th>PIPE</th>
<th>FITTINGS</th>
<th>JOINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Underground Steam Vents Only</td>
<td>P</td>
<td>E (Sched. 80)</td>
<td>3</td>
</tr>
<tr>
<td><em>With Type A or C Coating</em></td>
<td>PP</td>
<td>MM</td>
<td>2</td>
</tr>
</tbody>
</table>

#### 3.3 COATING AND WRAPPING

**A. Type A**

1. Apply the adhesive for a uniform thickness between 9 and 11 mils. Apply the polypropylene coating over the adhesive for a uniform coating thickness of 23 mils for pipe up to 2 inches, 27 mils for 2-1/2 and 3-inch pipe, 32 mils for 4 and 5-inch pipe, 36 mils for 6-inch pipe, and 54 mils for 8 through 12-inch pipe. Coating shall have a tensile strength of 3000-psi and elongation of 100 percent.

2. Wrap fittings and joints with primer and manufacturer's plastic tape or hot applied coal tar tapes.

3. Ship piping 2 inches and smaller from coating plant to job site with pipe caps.

**B. Type C**

1. Coat and wrap piping, except field joints, in factory or shop. Coating shall consist of coal tar primer applied immediately after cleaning and two coats of coal-tar enamel to a thickness of not less than 3/32-inch and a wrapper of coal-tar saturated felt followed by a special wrapping of kraft paper.

2. Coat and wrap field joints manually. Overlap the enamel and felt on each side of field joint with field wrapping.

3. Test coating in shop or factory before shipment and again in field after pipe has been placed in trench. Test joints after installation. Conduct tests by means of an electric holiday detector, operating at a crest voltage of not less than 10,000 volts, furnished by the Contractor and on the site at all times. Repair defects indicated by tests at no additional cost to the Owner, as reviewed by Engineer.

4. Pipe coating, wrapping, testing and handling of pipe shall conform to American Water Works Association Spec. C-203.

**C. Provide exterior coating on underground piping system as indicated in piping schedule.**

#### 3.4 VALVES

**A.** Adjust for smooth and easy operation.

**B.** Install in locations where valve can easily be adjusted.

**C.** Install valves full size of pipe before reducing size to make connection to equipment and controls.

**D.** Remove excess solder and other foreign matter from valve interior after installation before operating valve.
E. Provide chainwheel operators for valves in equipment rooms mounted greater than 5 feet above floor level. Extend chain to 5 feet 0 inches above floor level.

F. Cut Off or Stop Service: Gate or ball, as specified.

G. Throttling or Control Valve Bypass: Globe or non-lubricated plug valves.

3.5 STRAINERS

Steam: “Y” type.

3.6 PIPE SUPPORTS

A. Preparation and Application

1. Provide supports to maintain required slope and alignment.
2. Secure hangers to rods with double nuts.
3. Make allowance for expansion and contraction.
4. Do not support pipes from ducts or other pipes.
5. Use trapeze hangers for parallel runs of pipe with same slope.
6. Provide bracing to prevent lateral motion of horizontal or vertical piping.
7. Provide supports at or near changes in direction.
8. Do not pierce ducts with hanger rods.
10. Support piping so there is no strain on the connection to pumps and other equipment.
11. Support piping using mechanical couplings in accordance with manufacturer’s instructions and recommendations.

B. Horizontal Piping

1. Adjustment: Provide vertical adjustment of supports for horizontal piping after installation.
2. Maximum Support Spacing:
   a. Steel Lines: 1-1/2-inch and smaller, 6 feet; 2-inch and larger, 10 feet.
3. Metal Frame Supports: Space frames in accordance with smallest pipe requirements and design for a maximum deflection of 1/360 of the span.

C. Vertical Piping

1. Support vertical lines at locations indicated. Where not indicated, support plastic, copper, and cast iron soil pipe at every floor, steel pipe at every other floor, except for pipes carrying fuel gas, which shall be supported at every floor. Brace plastic piping on maximum 6-foot centers.
2. Where supports are necessary at bottom of risers, provide a base fitting set on either concrete or brick pier or a pipe stand. In lieu of using a base fitting, a hanger at bottom horizontal connection may be used. Locate hanger as close to riser as possible, but permitting sufficient free offset where allowance for expansion and contraction is necessary.
3.7 PIPE ANCHORS

Secure anchors directly to structural framing of building. Before making installation, submit anchor details, locations and method of securing to building for review by Engineer.

3.8 PRESSURE GAGES AND TEST CONNECTIONS

Install pressure gages at pressure control points and elsewhere as indicated.

3.9 PIPE TESTING

A. Preparation and Application
   1. Test piping to prove tightness.
   2. Test concealed piping before enclosing.
   3. Replace and re-test pipe or fittings broken or damaged under test.
   4. Remove or protect from damage items not designed to withstand testing pressure; e.g., control devices, air vents, boilers, and thermostatic trap elements.
   5. Advise Engineer prior to tests.

B. Standing Water Test
   1. Plug and test drainage piping with water by filling to the top of highest pipe.
   2. Test sections of piping separately with a minimum head of 10 feet of water.
   3. Piping shall show no leakage after standing for eight hours.

C. Pressure Testing
   1. Test pressures shall be 1-1/2 times the system working pressures and a minimum of 100-psi, unless otherwise indicated.
   2. Test water, steam, and steam condensate piping hydrostatically protecting traps, seals, etc. from excess pressure.
   3. Valves shall be open, but not backseated for packing check. However, it is permissible to test against a closed valve if the test pressure does not exceed the valve pressure rating at test temperature.
   4. Blind flanges, or the equivalent, shall be used instead of valves for dead-end shutoff.
   5. Test gas piping with dry air or nitrogen as required.
   6. Inspect each joint for leakage while under test.
   7. Apply soapsuds to joints under air pressure test.
   8. Maintain pressure tests for a minimum of four hours.
   9. Maintain applicable safety methods while performing tests. These methods shall include but shall not be limited to applying pressure at increments of 25 psi, providing sufficient time to allow the piping to equalize strains, until specified test pressure is attained. The piping system shall be examined only when the pressure in it is not increasing.
3.10 PRESSURE DRIVEN CONDENSATE PUMP TRAP INSTALLATION

A. Installation Compliance. Install in accordance with manufacturer’s instructions and as shown on the drawing.

B. Insulation. Install the removable insulation cover in accordance with manufacturer’s instructions.

3.11 UNDERGROUND TANK

A. Tank shall be installed according to the tank manufacturer's Installation Manual and Operating Guidelines in effect at time of installation.

B. The tank excavation shall be free from material that may cause damage to the tank coating. Care shall be taken during installation that foreign matter is not introduced into excavation or backfill. The bottom of the excavation shall be covered with clean sand or gravel to depth shown on drawings suitably graded and leveled.

Special Note: If tank is to be placed on a concrete pad for anchoring purposes, the tank must not placed directly on the pad. A layer of fine or pea gravel, sand or #8 crushed stone (#8 coarse aggregate ASTM D-448) at least 6” deep must be spread evenly over the dimensions of the pad to separate the tank from the pad. If installation area is in a tidal area, the tank “bedding” material should be fine gravel or pea gravel rather than sand.

C. An air test of the primary tank and interstitial space should be done above ground prior to installation. Pressure should not exceed 5 psi while a bubble solution is applied to welded seams. Refer to instructions on side of tank or per PEI RP 100-2000.

D. Before placing the tank in the excavation, all dirt clods and similar foreign matter shall be cleaned from the tank, and areas of coating damage shall be repaired with a compatible coating.

E. Equipment to lift the tank shall be of adequate size to lift and lower the tank without dragging and dropping to ensure no damage to the tank or other coating. Tanks shall be carefully lifted and lowered by use of cables or chains of adequate length (not less than 45 including angle) attached to the lifting lugs provided. A spreader bar should be used where necessary. Under no circumstances use chains or slings around the tank shell.

Special Note: Hold Down Straps—Special care should be exercised when installing hold down straps to ensure that the straps are separated from the tanks by separating pads made of an inert, insulation dielectric material. The separating pad should be at least 2” wider than the hold down straps width and must be carefully placed anywhere on the tank where hold down straps would come into direct contact with the tank shell.

E. Backfill consisting of sand, #8 crushed stone (#8 crushed aggregate ASTM D-448) or fine gravel, shall be placed along bottom side of tank by shoveling and tamping to ensure the tank is fully and evenly supported around bottom quadrant. The backfill shall be deposited carefully around tank and to a depth over tank to avoid damage to coating.

F. The plugs at unused tank openings shall be removed, a pipe compound shall be added and the plugs shall be reinstalled in the unused openings. Care should be taken not to cross-thread or damage the tank fittings when replacing plugs or installing required tank piping.
3.12 STEAM SPECIALTIES

A. Install steam traps in accessible locations as close as possible to connected equipment.
B. Pipe relief valve discharge without valves as indicated.
C. Install traps and control valve in accessible locations close to connected equipment.

END OF SECTION 232000
BID/PRICE PROPOSAL FORM

BIDDER’S NAME: ____________________________________________________________

PROJECT TITLE: Rebuild & Installation of Steam Manhole Drainage System

PROJECT NUMBER: TU-1966

Failure to properly complete each blank may be cause for rejection of this proposal.

Having carefully examined the solicitation documents, including all addenda acknowledged on Exhibit K attached hereto, being collectively referred to as the Contract Documents, and having received clarification on all items of conflict or upon which any doubt arose, the undersigned proposes to furnish all labor, materials and equipment required by the said documents for the entire work, all in strict accordance with the Contract Documents, for the sum of:

TOTAL COST OF PROJECT

BASE BID $__________________________________________

Words

Numbers

If the undersigned is notified by the Procurement Officer/Representative of the acceptance of the bid within 90 days after the bid date, Contractor agrees to guarantee the completion of this work as specified in the Contract Documents.

Firm License Number (If applicable) ___________________________ Date Issued ___________ Place of Issuance ___________________________

Minority Business Enterprises:

The undersigned certifies that the Bidder:

______ IS NOT a Certified Minority Business Enterprise.

______ IS a Minority Business Enterprise (MBE), certified by the Maryland Department of Transportation, and assigned the following certification number: __________________________

(Certification Number)
The undersigned affirms, and it is a condition precedent to acceptance of this bid, that the bidder has not been a party to any agreement to bid a fixed or uniform price.

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In the Presence of

Witness: ___________________________  By: ___________________________

Witness: ___________________________  By: ___________________________

Witness: ___________________________  By: ___________________________

Partner

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By: ___________________________

Signature of Officer or Authorized Agent
(Affix Corporate Seal)

Printed Name

Title

Witness: ___________________________
EXHIBIT A-1
ENVIRONMENTAL HEALTH AND SAFETY REQUIREMENTS

The Contractor must contact the TU’s Department of Environmental Health and Safety (EHS) (410-704-2949) immediately following any spill of a hazardous material in excess of one (1) quart.

1. Occupational Safety And Health Act (O.S.H.A.)
All materials, supplies, equipment, or services supplied as a result of this Contract shall comply with the applicable US and Maryland Occupational Safety and Health Act standards.

2. Hazard Communication Standard
The Contractor will be responsible for advising all of its employees of their rights under the University's Hazard Communication Program, or more commonly referred to as the Right To Know (RTK) Program. The University will supply the vendor with sufficient copies of its Employee Safety Program (ESP) booklet which outlines this program. Each and every Contractor who physically works on campus shall be required to sign a form acknowledging the receipt of the ESP booklet and their rights/responsibilities pursuant to this program. The University's Department of Environmental Health and Safety is responsible for administering the RTK program and will handle all information regarding this program. Failure to adhere to the requirements of the RTK Program may result in implementation of punitive action such as the cancellation of the contract(s).

Pursuant to the provisions of the RTK Program, the Contractor will be responsible for the following:

a. Submission to the Contract Services Office and EHS of a complete list of all chemicals or chemical products to be used on the University's property. This listing shall include the chemical name, common name, manufacturer's name, quantity and location (building and room number) for each product. This listing shall be given to EHS by no later than two (2) weeks prior to the start of any work under this contract. Changes, additions, or deletions to the complete campus chemical list must be submitted in writing five (5) working days prior to the actual change occurring. All proposed changes must be approved in writing by EHS prior to the actual use of the new product on campus.

b. Submission to the Contract Services Office and EHS of the manufacturer's Material Safety Data Sheet (MSDS) for all chemicals or chemical products to be used or in use at the University. These MSDS's must be delivered, no later than two (2) weeks prior to the start of any work under this contract. There must be a MSDS for every product in use or present on the campus unless exempted in writing by EHS. MSDS's for any changes or additions to the complete campus chemical list must be submitted five (5) working days prior to the actual change occurring. All proposed changes must be approved in writing by EHS prior to the actual use of the new product on campus. The University, through EHS, reserves the right to order a change in the use, storage, or method of handling of any chemical/chemical product that it feels poses an unreasonable hazard to the University's community.

NOTE: In the absence of the original manufacturer's MSDS, EHS will accept a generic equivalent as long as a letter from the Contractor stating that the original is not available is attached.

c. The Contractor must warrant in writing to Towson University's Contract Administrator that all employees have been trained and will continue to be trained in the proper and safe storage, handling, use and disposal of all chemicals/chemical products in use.

d. The Contractor agrees to obey and follow all local, state, and federal regulations regarding the storage, handling, use and disposal of all chemicals/chemical products. The Contractor agrees to properly dispose of all regulated waste in accordance with all applicable regulations and to make available to EHS all records necessary to support such activity.

3. Asbestos
The Contractor is responsible for training and equipping all personnel concerning work in asbestos environments as applicable. They must be trained as prescribed by COMAR 26.11.21. All new employees must be trained within 30 days after they are hired by the Contractor. This is to be accomplished at no additional cost to this contract or the University. An initial report on all employees as to their asbestos training will be presented to the Contract Administrator within the first 90 days of the Contract and updated on a monthly basis. Thereafter, failure to comply with this requirement would place the Contractor in default status.

4. Lead Paint
The Contractor is responsible for training and equipping all personnel concerning work in lead paint containing environments as applicable. Employees must be trained as required within 60 days of contract commencement and all new employees must be trained within 30 days after they are hired by the Contractor. This training will be provided by the Contractor at no additional cost to this contract or the University. An initial report on all employees as to their lead paint training will be presented to the Contract Administrator within the first 90 days of the contract and updated on a monthly basis. Thereafter, failure to comply with this requirement would place the Contractor in default status.

5. Fire Safety
The Contractor agrees to comply with and follow all local, state, federal and University regulations regarding fire safety. It is the Contractor's sole responsibility to become familiar with all of the applicable regulations and policies. Copies of the University's policies and procedures are available from EHS.

The Contractor will be responsible for the following:

a. To provide all of its employees with sufficient training to ensure that they are fully aware of all pertinent regulations and policies in effect regarding fire safety.

b. To ensure that all of its employees are aware of and react to the University's Emergency Procedures including, but not limited to, fire
d. All electrical devices including extension cords should be disconnected at the completion of the work assigned. All electrical equipment must be approved by Underwriters Laboratory and maintained in good working order. Under no circumstances shall damaged electrical equipment be utilized on this campus.

d. After pulling the fire alarm, evacuate the building to a safe location and contact the University Police by dialing extension 42133 immediately. If using a pay phone, dial 911 direct.

e. SMOKING IS NOT ALLOWED IN ANY OF THE BUILDINGS. Any employee of the Contractor, who wishes to smoke during a designated break, must do so outside.

The Contractor is responsible for fully complying with TU Hot Works Permitting Program. A Hot Works Permit is required any time a Contractor is doing any work on campus involving an actual or potential source of ignition (e.g., arc or gas welding, torch cutting, brazing, open flame soldering, grinding, fired space heaters, etc.); or may potentially cause the activation of a building fire alarm system; or may cause building occupants to notify emergency response agencies about the smell of smoke, heat, etc.

Hot Works Permits are issued prior to the start of the work by EHS at 410-704-2949.

The Contractor assumes all responsibility for any work delays associated with noncompliance with the Hot Works Permit Program.

6. Bloodborne Pathogens

The Contractor will be responsible for providing the required training dealing with occupational exposure to bloodborne pathogens. Employees who have received this training may be required to perform services in areas where they may be at risk of exposure to blood or other potentially infectious materials. Some responsibilities will include collection of domestic trash in areas that generate special medical waste, regular cleaning in these areas and spill response for accidents that occur on campus that involve blood. Employees must be informed on the potential hazards present in these areas and the proper protective measures that can be taken to prevent exposure. EHS is available to provide more information concerning the areas on campus where personnel are at risk of exposure.

7. Confined Space Entry

The Contractor agrees to comply with all local, state and federal regulations pertaining to the entry into confined spaces. The Contractor is responsible for contacting the TU’s Contract Services Manager in the Department of Facilities Management for the location of all campus-confined spaces and for identifying any confined space hazards prior to entry into a confined space. The Contractor is responsible for ensuring his/her workers and Subcontractors are adequately trained in confined space entry procedures in accordance with OSHA 1910.146, Permit Required Confined Spaces for General Industry.

The Contractor will provide the Contract Administrator with a written copy of their Confined Space Entry Plan (CSEP) for review and approval at least 5 working days in advance of the planned entry. Prior to work commencements, the Contractor will also certify in writing that all of his/her workers and Subcontractors have been trained in accordance with OSHA 1910.146, Permit Required Confined Spaces for General Industry. This certification will list all employees working on campus by name and social security number.

If the Contractor's CSEP is approved, the Contractor may utilize his/her CSEP for entering into campus confined spaces. If disapproved, or if the Contractor does not have a written CSEP, the Contractor will comply with the University's CSEP. Until such time as the Contractor provides written certification that all of his/her employees and Subcontractor employees working on campus have been adequately trained in confined space entry procedures, entry in TU confined spaces is strictly forbidden. Questions concerning TU CSEP should be directed to EHS.

The Contractor assumes all responsibility for any work delays associated with noncompliance with confined space regulations.

8. Respiratory Protection

The Contractor agrees to comply with all local, state and federal regulations pertaining to the use of respiratory protection equipment. It is the Contractor’s responsibility to ensure their workers are provided and wearing the appropriate respiratory protection device suitable to the hazard.

The Contractor will provide the Contract Administrator with a written copy of their Respiratory Protection Plan (RPP) for review and approval at least 5 workdays in advance of the planned entry. If approved, the Contractor may utilize his/her RPP while on campus. If disapproved, or if the Contractor does not have a written RPP, the Contractor will comply with the University's RPP. Questions concerning TU RPP should be directed to EHS at 410-704-2949.

The Contractor assumes all responsibility for any work delays associated with noncompliance with respiratory protection regulations.

9. Waste Disposal

The Contractor is responsible for the removal and disposal of all non-hazardous waste products generated from his/her work on campus. All non-hazardous waste materials generated by the Contractor shall be removed from campus (unless otherwise specified) and disposed of in accordance with all applicable federal, state and county laws and regulations. The University reserves the right to require the use of a TU Non-Hazardous Waste Manifest for transport off campus of any University non-hazardous waste. The University also reserves the right to approve or disapprove the facility(ies) the Contractor utilizes for disposal of any University non-hazardous wastes (as necessary). All costs will be borne by the Contractor for the disposal of all hazardous or non-hazardous wastes, unless otherwise specified in the contract.

Under no circumstances is any Contractor generated hazardous waste to be disposed of on campus. The Contractor is responsible for the removal and proper disposal of all his/her hazardous waste, in accordance with all applicable federal, state and county laws and regulations. Contractor’s generated hazardous waste is waste resulting from their operations/equipment on campus when using Contractor owned/supplied materials/chemicals. Disposal costs for this will be borne solely by the Contractor.

The University routinely performs wastewater monitoring in accordance with its Industrial Wastewater Discharge Permit and routinely screens campus discharges for hazardous wastes. The Contractor will be held liable for any assessed penalties attributable to the improper discharge of hazardous wastes from campus facilities.

Contracts that require Contractors to transport and/or dispose of regulated hazardous materials (i.e., hazardous wastes) owned and/or generated by Towson University will be disposed of by Towson University Environmental Health & Safety utilizing existing University hazardous waste disposal contractors. The Contractor should contact EHS as soon as the hazardous wastes have been identified to coordinate the disposal.
All transportation and disposal costs will be paid by Towson University and then back charged to the Contractor.

Any questions concerning the disposal of hazardous or non-hazardous waste should be directed to EHS at 410-704-2949.

10. The Control of Hazardous Energy Source (Lock Out/Tag Out)

The Contractor agrees to comply with all local, state and federal regulations pertaining to the control of hazardous energy sources. The Contractor is responsible for insuring his/her workers and any Subcontractors are adequately trained in Lockout/Tagout procedures in accordance with OSHA 1910.147, The Control of Hazardous Energy Sources (Lock Out/Tag Out).

The Contractor will provide the Contract Administrator with a written copy of their Lock Out/Tag Out policy (LO/TO) and/or procedures for review and approval at least five (5) working days in advance of the commencement date of the contract. Prior to work commencement, the Contractor will also certify in writing that all of his/her workers and Subcontractors have been trained in accordance with OSHA 1910.147. This certification will list all employees working on campus by name and social security number.

If the Contractor’s LO/TO is approved, the Contractor may utilize their LO/TO for work on hazardous energy sources. If disapproved, or if the Contractor does not have a written LO/TO, the Contractor will comply with TU LO/TO Policy/Procedures. Until such time as the Contractor provides written certification that all his/her employees and Subcontractors working on campus have been adequately trained in LO/TO procedures, work on hazardous energy sources is strictly forbidden. Questions concerning TU LO/TO Policy/Procedures shall be directed to EHS at 410-704-2949.

The Contractor assumes all responsibility for any work delays associated with noncompliance with the control of Hazardous Energy Sources regulations.

11. Wastewater/Sewer Discharge

The University’s Wastewater Discharge Permit strictly prohibits the disposal of waste chemicals and corrosives via the sanitary sewer system. NO waste chemicals (i.e., old, unused, excess, etc.), including, but not limited to, organic solvents and/or corrosives (pH less than or equal to 6 and greater than or equal to 10) will be disposed of on campus via the sanitary sewer system without advance written approval of the TU Department of Environmental Health & Safety (EHS). The Contractor shall submit MSDS’s for all waste chemicals they wish to dispose of in the sanitary sewer to EHS five (5) working days in advance for approval.

The University routinely performs wastewater monitoring in accordance with its Industrial Wastewater Discharge Permit and routinely screens campus discharges for waste chemicals and corrosives. The Contractor will be held liable for any assessed penalties attributable to the improper discharge of these materials from campus facilities.

The Contractor is subject to unannounced inspections of the chemicals their employees are using on campus. TU Department of Environmental Health & Safety will conduct these unannounced inspections.

12. Safety Training/Inspections/Meetings

The Contractor is responsible to notify the Contract Administrator five (5) working days in advance of the date, time and location of their monthly safety meeting.

13. Materials

No asbestos, lead, or PCB containing materials (0%) are to be utilized on the University’s campus unless prior written approval has been received from the University’s Department of Environmental Health & Safety (410-704-2949).

14. Stormwater Pollution Prevention/Prohibition of Illicit Discharges

No person shall cause or contribute discharge directly or indirectly into the Towson University municipal storm drain system or waterways any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water.

Refer to 06-20.00 – University Policy on Stormwater Illicit Discharge Detection and Elimination for additional information.

No person may improperly store, handle, use or apply any pollutant in a manner that will cause its exposure to rainfall, runoff and discharge into the Towson University municipal stormwater drain system or campus waterways.

The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described:

a. The following discharges are exempt from discharge prohibitions:
   - water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontrolled pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one PPM chlorine), fire-fighting activities, and any other water source not containing pollutants.

b. Any discharges specified in writing by Towson University Environmental Health & Safety as being necessary to protect public health and safety.

c. Dye testing only with required verbal notification to Towson University Environmental Health & Safety (410) 704-2949 or safety@towson.edu prior to the time of the test.

d. The following discharges are exempt from discharge prohibitions: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontrolled pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if dechlorinated - typically less than one PPM chlorine), fire-fighting activities, and any other water source not containing pollutants.

15. Prohibition of Illicit Connections

The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited. This prohibition expressly includes, without limitation, any illicit connections made in the past. This is regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection. A person is considered to be in violation if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.
16. **Notification of Spills or Illicit Discharges**
Notwithstanding other requirements by law, as soon as any contractor has information regarding any known or suspected release of materials that result or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, campus waterways, said person shall take all necessary steps to ensure the discovery, immediate containment, and cleanup of such release. **In the event of a release of hazardous materials or upon observing an illicit environmental discharge immediately contact the Towson University Police Department (TUPD) at (410) 704-4444.** In the event of a release of non-hazardous materials, notify Towson University Environmental Health & Safety in person or by phone [(410) 704-2949] or e-mail [safety@towson.edu] no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to Environmental Health & Safety, Towson University, 8000 York Road, Towson, MD 21252 within three business days of the phone notice.

17. **Enforcement**

a. Enforcement for student violators will follow the TU Office of Student Conduct and Civility Education Code of Student Conduct.

b. Enforcement for University employees (Faculty and Staff) shall follow the Towson University Policy for discipline or termination Policy No. 07.05.25 – Disciplinary Action for Employees.

c. Enforcement for Visitors (Non-TU Faculty, Staff, Students or Contractors)

d. Individuals or Contractors, depending on the nature and severity of the violation, may be referred to MDE for prosecution for violation of federal and state laws and regulations.

e. Any fines, penalties, environmental monitoring or remediation expenses, etc., resulting from the illicit discharge, will be violator’s responsibility.

f. During normal University business hours (Monday-Friday, 8am-4pm), contact EHS at (410) 704-2949 to report violations.

g. If the violator is still on the scene, they should also immediately contact TUPD at (410) 704-4444.

h. After normal duty hours, weekends and holidays, contact TUPD at (410) 704-4444 to report violations.
EXHIBIT A-2
REQUIRED CONTRACT PROVISIONS
CONSTRUCTION AND MAINTENANCE

The provisions contained in this exhibit will be incorporated and be a part of the contract entered into between Towson University and any contractors as a result of this procurement.

1. Affirmation - Contingent Fees
The Contractor shall submit with its bid/proposal a Procurement Affirmation regarding contingent fees in the form required by USM Procurement Policies and Procedures.

2. Affirmation - Debarment
The Contractor shall submit with its bid/proposal a Procurement Affirmation in the form required by USM Procurement Policies and Procedures.

3. Affirmation Regarding Debarment of Related Entities
The Contractor shall submit with its bid/proposal a Procurement Affirmation regarding debarment of related entities in the form required by USM Procurement Policies and Procedures.

4. Affirmation - Non-Collusion
The Contractor shall submit with its bid/proposal a Non-Collusion Affirmation in the form required by USM Procurement Policies and Procedures.

5. Affirmation Regarding Bribery Convictions
The offeror warrants that neither it nor any of its officer, directors, or partners not any of its employees who are directly involved in obtaining or performing contracts with any public body has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or of the federal government or has engaged in conduct since July 1, 1977, which would constitute bribery, attempted bribery, or conspiracy to bribe under the laws of any state or the federal government.

The Contractor shall submit with its bid/proposal a Procurement Affirmation regarding bribery convictions in the form required by University System of Maryland (USM) Procurement Policies and Procedures.

6. Affirmation Regarding Other Convictions
The Contractor shall submit with its bid/proposal a Procurement Affirmation regarding other convictions in the form required by USM Procurement Policies and Procedures.

7. Affirmation Regarding Sub-Contractors
The Contractor shall submit with its bid/proposal a Procurement Affirmation regarding debarment of sub-contractors in the form required by USM Procurement Policies and Procedures.

8. Affirmation - Drug and Alcohol Free Workplace
The contractor warrants that the contractor shall comply with COMAR 21.11.08 Drug and Alcohol Free Workplace, and that the contractor shall remain in compliance throughout the term of this contract.

9. Certification of Corporation Registration and Tax Payment
The Contractor shall submit with its bid/proposal a Procurement Affirmation regarding certification of corporation registration and tax payment in the form required by USM Procurement Policies and Procedures.

10. Affirmation - Financial Disclosure
The Contractor shall submit with its bid/proposal a Financial Disclosure Affirmation in the form required by USM Procurement Policies and Procedures.

11. Affirmation - Political Contribution Disclosure
The Contractor shall submit with its bid/proposal a Political Contribution Disclosure Affirmation in the form required by USM Procurement Policies and Procedures.

12. Contract Affidavit
The successful bidder shall submit, prior to contract award, a Contract Affidavit in the form required by USM Procurement Policies and Procedures.

13. Affirmative Action
The Contractor and all subcontractors shall develop and maintain affirmative action plans directed at increasing the utilization of women and members of minority groups on State public works projects, pursuant to the Executive Order 11246 of the President of the United States of America and guidelines on Affirmative Action issued by the Equal Employment Opportunities Commission (EEOC) 29 C.F.R. part 1608 and the Governor of Maryland’s Executive Order 01.01.1993.16.

14. Amendments and Modifications
The contract documents, as defined within the contract, constitute the entire agreement between the parties hereto. All other communications between the parties prior to execution of the contract, whether written or oral, with reference to the subject matter of the contract are superseded by the agreement contained therein. No amendment of this contract shall be binding unless in writing and signed by the parties. Amendments may not significantly change the scope of the contract.

15. Civil Rights Act of 1964
Contractors providing materials, equipment, supplies or services to the State under the contract herewith assure the State that they are conforming to the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1988, the Civil Rights Act of 1991, and Section 202 of Executive Order 11246 of the President of the United States of America as amended by Executive Order 11375, as applicable.

16. Compliance with Laws
The Contractor hereby represents and warrants that:

a. It is qualified to do business in the State of Maryland, and that it will take such action, as from time to time hereafter, may be necessary to remain so qualified;

b. It is not in arrears with respect to the payment of any monies and owing the State of Maryland, or any department or agency thereof, including but not limited to the payment of taxes and employee benefits, and that it shall not become so in arrears during the term of the contract;

c. It shall comply with all federal, State and local laws, ordinances applicable to its activities and obligations under the contract; and;
17. Compensation and Method of Payment
Contractor agrees to include on the face of all invoices billed to the University, its Taxpayer Identification Number, which is the Social Security Number for individuals and sale proprietors and the Federal Employee Identification Number for all other types of organizations.

18. Confidentiality; dissemination of Information
Contractor shall not release any information related to services or performance of the services under this Contract, nor publish any final reports or documents without the prior written approval of the University. Contractor shall indemnify and hold harmless the State and the University, its officers, agents and employees from all harm which may be incurred by reason of dissemination, publication, distribution or circulation, in any manner whatsoever, of any information, data, documents, or materials pertaining in any way to this Contract by Contractor, its agents or employees.

19. Conflict of Interest Law
It is unlawful for any State officer, employee, or agent to participate personally in his official capacity through decision, approval, disapproval, recommendation, advice, or investigation in any contract or other matter in which he, his spouse, parent, child, brother, or sister has a financial interest or to which any firm, corporation, association, or other organization in which he has a financial interest or in which he is serving as an officer, director, trustee, partner, or employee, or any person or organization with whom he is negotiating or has any arrangement concerning prospective employment, is a party, unless such officer, employee, or agent has previously complied with the provisions of State Government Article § § 15-501 et seq. of the Annotated Code of Maryland.

20. Contract Modifications and Changes
a. The procurement officer unilaterally may, at any time, without notice to the sureties, if any, by written order designed or indicated to be a change order, make any change in work within the general scope of the contract, including but not limited to changes:

(1) In the specifications (including drawings and designs);
(2) In the method or manner of performance of the work;
(3) In the State-furnished facilities, equipment, materials, services, or site; or
(4) Directing acceleration in the performance of the work.

b. Any other written order or an oral order, including a direction, instruction, interpretation or determination, from the procurement officer that causes any such change, shall be treated as a change order under this clause, provided that the Contractor gives the procurement officer written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a change order.

c. Except as herein provided, no order, statement, or conduct of the procurement officer shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

d. Subject to paragraph f., if any change under this clause causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly; provided, however, that except for claims based on defective specifications, no claim for any change under (b.) above shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as therein required; and provided further, that in the case of defective specifications for which the State is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the Contractor in attempting to comply with such defective specifications.

e. If the Contractor intends to assert a claim for an equitable adjustment under this clause, he shall, within 30 days after receipt of a written change order under a. above or the furnishing or written notice under b. above, submit to the procurement officer a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended by the University. The statement of claim hereunder may be included in the notice under b. above.

f. Each contract modification or change order that affects contract price shall be subject to the prior written approval of the procurement officer and other appropriate authorities and to prior certification of the appropriate fiscal authority of fund availability and the effect of the modification or change order on the project budget or the total construction cost. If, according to the certification of the fiscal authority, the contract modification or change order will cause an increase in cost that will exceed budgeted and available funds, the modification or change order may not be made unless sufficient additional funds are made available or the scope of the project is adjusted to permit its completion within the project budget.

g. No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment under the contract.

21. Contractor’s On-Site Representative
The Contractor is required to maintain on site at all times when the work is in progress on this project an individual who represents the Contractor, is responsible for the entire project, and can communicate in English with the University’s representative.

22. Contractor’s Invoices
Contractor shall include its Taxpayer Identification Number on the face of each invoice billed to the University. If a Purchase Order document is issued, the Purchase Order Number must be included.

23. Cooperation with University and State Representatives
Before any of the work shall begin, the Contractor shall confer with the University’s representative at the site and agree on a sequence of procedure, means of access to the premises, space for storage of materials and equipment, use of approaches, use of facilities, etc.

24. Cost and Price Certification
The Contractor, by submitting cost or price information certifies that, to the best of its knowledge, the information submitted is accurate, complete, and current as of a mutually determined specified date prior to the conclusion of any price discussions or negotiations for:

a. A negotiation contract, if the total contract price is expected to exceed $100,000 or a smaller amount set by the procurement officer; or

b. A change order or contract modification, expected to exceed $100,000 or a smaller amount set by the procurement officer.

c. The price under this contract and any change order or modification hereunder, including profit or fee, shall be adjusted to exclude any significant price increases occurring because the Contractor furnished cost or price information which, as of the date agreed upon between the parties, was inaccurate, incomplete, or not current.

25. Default Delay and Time Extension
Termination for Default — Damages for Delay — Time Extensions
(1) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with such diligence as shall insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the State may, by written notice to the Contractor, terminate his right to proceed with the work or the part of the work as to which there has been delay. In this event the State may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and
utilize in completing the work the materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor’s right to proceed with the work is terminated, he and his sureties shall be liable for any damage to the State resulting from his refusal or failure to complete the work within the specified time.

(2) If fixed and agreed liquidated damages are provided in the contract and if the State so terminates the Contractor’s right to proceed, the resulting damage shall consist of such liquidated damages until a reasonable time as may be required for final completion of the work together with any increased costs occasioned the State in completing the work.

(3) If fixed and agreed liquidated damages are provided in the contract and if the State does not so terminate the Contractor’s right to proceed, the resulting damage shall consist of these liquidated damages until the work is completed or accepted.

(4) The Contractor’s right to proceed may not be so terminated nor the contractor charged with resulting damages if:

(a) The delay in the completion of the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the State in either its sovereign or contractual capacity, acts of another Contractor in the performance of a contract with the State, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and the subcontractors or suppliers; and

(b) The Contractor, within 10 days from the beginning of any such delay (unless the procurement officer grants a further period of time before the date of final payment under the contract), notifies the procurement officer in writing of the causes of delay. The procurement officer shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in his judgement, the findings of fact justify such an extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in the “Disputes” clause of this contract.

(5) If, after notice of termination of the Contractor’s right to proceed under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of the parties shall, if the contract contains a clause providing for termination for convenience of the State, be the same as if the notice of termination had been issued pursuant to the clause. If, in the foregoing circumstances, this contract does not contain a clause providing for termination for convenience of the State, the contract shall be equitably adjusted to compensate for the termination and the contract modified accordingly; failure to agree to any such adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled “Disputes”.

(6) The rights and remedies of the State provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

(7) As used in paragraph (4)(a) of this clause, the term “subcontractors or suppliers” means subcontractors or suppliers at any tier.

26. Delivery and Acceptance

Delivery shall be made in accordance with the specifications. The University reserves the right to test any materials, equipment, supplies, or services delivered to determine if the specifications have been met. The materials listed in the specifications shall be delivered FOB the point or points specified prior to or on the date specified in the solicitation. Any material that is defective or fails to meet the terms of the specifications may be rejected. Rejected materials shall be promptly replaced. The State reserves the right to purchase replacement materials in the open market. Vendors failing to promptly replace materials lawfully rejected shall be liable for any excess price paid for the replacement, plus applicable expenses, if any.

27. Disputes

a. This contract is subject to the USM Procurement Policies and Procedures.

b. Except as otherwise provided in this contract or by law, all disputes arising under or as a result of a breach of this contract that are not disposed of by mutual agreement shall be resolved in accordance with this clause.

c. As used herein, claim means a written demand or assertion by one of the parties seeking, as a legal right, the payment of money, adjustment or interpretation of contract terms, or other relief, arising under or relating to this contract. A voucher, invoice, or request for payment that is not in dispute when submitted is not a claim under this clause. However, if the submission subsequently is not acted upon in a reasonable time, or is disputed as to liability or amount, it may be converted to a claim for the purpose of this clause.

d. Within 30 days after contractor knows or should have known of the basis for a claim relating to this contract, contractor shall file a written notice of claim with the procurement officer.

e. Contemporaneously with, or within 30 days after, the filing of a notice of claim, contractor shall submit the written claim to the procurement officer. If contractor so requests, the procurement officer, on conditions the procurement officer deems satisfactory to the unit, may extend the time in which contractor must submit the claim. An example of when a procurement officer may grant an extension includes situations in which the procurement officer finds that a contemporaneous or timely cost quantification following the filing of the notice of claim is impossible or impractical.

f. The claim shall set forth all the facts surrounding the controversy. Contractor, at the discretion of the procurement officer, may be afforded an opportunity to be heard and to offer evidence in support of the claim.

g. The procurement officer shall mail or deliver written notification of the final decision within:

(1) 90 days after the procurement officer receives the claim if the claim is an amount for which the Appeals Board accelerated procedure, set forth in COMAR 21.10.06.12, may be used;

(2) 180 days after the procurement officer receives the claim for a claim not covered under §G(1) of this regulation; or

(3) A longer period that the procurement officer and contractor agree to in writing.

h. The final decision may award a contract claim only for those expenses incurred not more than 30 days before contractor was initially required to have filed the notice of claim.

i. The procurement officer’s decision is the final action of the University. If the procurement officer fails to render a final decision within the time required, contractor may deem the failure to be a final decision not to pay the claim.

j. If the final decision grants the claim in part and denies the claim in part, the University shall pay contractor the undisputed amount. Payment of the partial claim is not an admission of liability by the University and does not preclude the University from recovering the amount paid if a subsequent determination modifies the final decision.

k. Contractor may file a written appeal with the Maryland State Board of Contract Appeals within 30 days of receipt of notice of the decision.
l. Pending resolution of a claim, contractor shall proceed diligently with the performance of the contract in accordance with the procurement officer’s decision.

28. Dissemination of Information
a. During the term of the contract, the Contractor shall not release any information related to the services or performance of the services under the contract nor publish any final reports or documents without the prior written approval of the University.

b. The Contractor shall indemnify and hold harmless the State and the University, its officers, agents and employees, from all liability which may be incurred by reason of dissemination, publication, distribution or circulation, in any manner whatsoever, of any information, data, documents, or materials pertaining in any way to the contract by the Contractor, its agents or employees.

29. EPA Compliance
Materials, supplies, equipment and services shall comply in all respects with the federal Noise Control Act of 1972, where applicable. Power equipment, to the greatest extent possible, shall be the quietest available. Equipment certified by the US EPA as a Low Noise Emission Product pursuant to the Federal Noise Control Act of 1972 shall be considered to meet the intent of the regulation.

The Contractor must supply and have immediately available to their employees spill containment equipment/supplies necessary to contain any hazards it may introduce to the job site. The Contractor is responsible for any and all costs incurred by the University in remediating spills or releases of materials introduced onto the job site.

Depending on the nature of the contract, the additional environmental and safety provisions contained in Exhibit A-1 may also be required

30. FERPA
The Parties agree to maintain the privacy and security of personally identifiable educational records and health information and to prevent disclosure in compliance with Federal laws.

The Contractor agrees that in performing its obligations under this contract, the Contractor shall comply with all requirements of a non-affiliated third-party who receives a financial institution’s consumer or customer information, under the Gramm-Leach-Bliley Act of 1999 and applicable regulations thereto (the “GLB Act”) and other applicable federal and state consumer privacy acts, rules and regulations. Nonpublic personal information shall have the same meaning as that term is defined in the GLB Act.

a. The Contractor agrees to disclose such nonpublic personal information for the sole purpose of facilitating the Contractor’s performance of its duties and obligations under the contract and will not disclose such nonpublic personal information to any other party unless such disclosure is (i) allowed by the GLB Act and consented to by the University, or (ii) compelled by law, in which case the Contractor will provide notice of such disclosure to the University.

b. The Contractor represents and warrants that it will, for so long as it retains nonpublic personal information, implement and maintain in place the necessary information security policies and procedures for (i) protecting the confidentiality of such nonpublic personal information, (ii) protecting against any anticipated threats or hazards to the security or integrity of such nonpublic personal information, and (iii) protecting against the unauthorized access to or use of such nonpublic personal information. These terms apply to all subcontractors employed by the Contractor who perform work under the scope of the agreement.

If the Contractor’s price includes the cost of Contractor furnishing any other material, equipment, supplies, or other items in connection with the Contract, the Contractor shall pay the Maryland sales tax.

32. Incorporation by Reference
The terms of this solicitation and any amendments thereto are made a part of this Contract.

33. Indemnification
The University shall not assume any obligation to indemnify, hold harmless, or pay attorneys’ fees that may arise from or in any way be associated with the performance or operation of this agreement.

34. Inspection by the University
The University may provide for inspection, at any time, of any part of the Contractor’s work, and of any of the materials, supplies or equipment which the Contractor may have on hand or in the building. The Contractor shall provide adequate cooperation with any inspector assigned by the University to permit the inspector to determine the Contractor’s conformity with these specifications and the adequacy of the work being performed.

35. Intellectual Property
Contractor agrees to indemnify and save harmless the University, its officers, agents and employees with respect to any claim, action, cost or judgment for patent infringement, or trademark or copyright violation arising out of purchase or use of materials, supplies, equipment or services covered by the contract.

36. I-9 Requirement
Contractor warrants and represents that it is currently in compliance, and that during the term of the contract it will remain in compliance, with the Immigration Reform and Control Act of 1986, and that it will obtain original valid employment verification documentation from all its employees on a timely basis as required by law and regulation. This requirement also applies to all subcontractors hired by Contractor.

37. Insurance and Indemnification Provisions
a. The Contractor shall defend, indemnify and save harmless the University System of Maryland, its officers, employees and agents, from any and all claims, liability, losses and causes of actions which may arise out of the performance by the Contractor, employees or agents, of the work covered by the contract.

b. The Contractor shall secure, pay the premiums for, and keep in force until the expirations of the contract, and any renewal thereof, adequate insurance as provided below, such insurance to specifically include liability assumed by the Contractor under the contract.

1. Commercial General Liability Insurance including all extensions
   $2,000,000 each occurrence;
   $2,000,000 personal injury;
   $2,000,000 products/completed operations;
   $2,000,000 general aggregate

2. Workmen’s Compensation Insurance and Unemployment Insurance as required by the laws of the State of Maryland.

3. Owner’s, Landlord’s and Tenant’s and Contractor’s bodily injury liability insurance, with limits of not less than $500,000 for each person and $2,000,000 for each accident.

4. Property damage liability insurance with a limit of not less than $2,000,000 for each accident.

5. If automotive equipment is used in the operation, automobile bodily injury liability insurance with limits of not less than $1,000,000 for each person and $2,000,000 for each accident, and property damage liability insurance, with a limit of not less than $2,000,000 for each accident.

6. Each policy for liability protection, bodily injury or property damage must specifically name, on its face, the University System of Maryland as an additional named insured as respects operations under the contract and premises occupied by the Contractor provided, however,
with respect to the Contractor’s liability for bodily injury or property damage under items b(1) b(6) above, such insurance shall cover and not exclude Contractor’s liability for injury to the property of the University System and to the persons or property of employees, students, faculty members, agents, officers, regents, invitees or guests of the University System.

d. Each insurance policy shall contain the following endorsements: “It is understood and agreed that the Insurance Company shall notify in writing procurement officer forty-five (45) days in advance of the effective date of any reduction in or cancellation of this policy.” A certificate of each policy of insurance shall be furnished to the procurement officer. With the exception of Workmen’s Compensation, upon the request of the procurement officer, a certified true copy of each policy of insurance, including the above endorsement, manually countersigned by an authorized representative of the insurance company, shall be furnished to the procurement officer. A certificate of insurance for Workmen’s Compensation together with a properly executed endorsement for cancellation notice shall also be furnished. Following the notice of contract award, the requested certificates and policies shall be delivered as directed by the procurement officer. Notices of policy changes shall be furnished to the procurement officer.

e. All required insurance coverages must be acquired from insurers authorized to do business in the State of Maryland and acceptable to the University. The insurers must have a policyholders’ rating of “A-” or better, and a financial size of “Class VII” or better in the latest edition of Best’s Insurance Reports.

38. Fire and Extended Coverage Insurance

a. Contractor shall carry, at its own expense, builder’s risk insurance for the full contract amount, insuring against the perils of fire, lightning, extended coverage vandalism, and malicious mischief subject only to the minimum standard deductible currently filed by the Insurance Service Office with the State of Maryland Insurance Department. The University will provide no coverage during the construction period.

b. The builder’s risk policy shall contain endorsements reading as follows:

(1) It is the intent of this insurance to cover specifically all the Work being done under the Contract between the insureds, and as to such Work this policy shall be primary insurance and shall not contribute or claim contribution from any other insurance being carried which, by its terms, would also cover the property covered hereunder in the absence of this insurance.

(2) Coverage afforded under this policy will not be canceled until at least fifteen (15) days prior written notice has been given to the Procurement Officer.

c. Certificates of insurance shall be submitted to the Procurement Officer for review and approval prior to commencement of work, and shall be held for the duration of the contract. The University shall have the absolute right to terminate the contract if the policy of insurance is canceled at any time for any reason and a new policy is not obtained by Contractor and approved by the Procurement Officer.

d. The above insurance shall remain in full force and effect until such time as the University shall fully accept the work covered by this contract.

39. Liquidated Damages

Time is an essential element of the contract and it is important that the work be vigorously prosecuted until completion.

For each day that any work shall remain uncompleted beyond the time(s) specified elsewhere in the contract, the Contractor shall be liable for liquidated damages in the amount(s) provided for in the solicitation, provided, however, that due account shall be taken of any adjustment of specified completion time(s) for completion of work as granted by approved change orders.

40. Local Conditions Covering Work

The Contractor shall cooperate with those in authority on the premises to prevent the entrance and exit of all workmen and/or others whose presence is forbidden or undesirable and in bringing, storing or removal of all materials and equipment, to observe all rules and regulations in force on the grounds, to avoid unnecessary dust or accumulated debris or the undue interference with the convenience, sanitation or routine of the University and to prevent the loss of, or damage to the property of the University and/or its employees. The Contractor shall repair any and all damage he may cause to the building or property, to the full satisfaction of the University.

41. Mandated Contractor Reporting of Suspected Child Abuse & Neglect

Maryland law contains mandatory reporting requirements for all individuals who suspect child abuse or neglect. Contractors performing work on campus also must comply with USM Board of Regents (BOR) VI-1.50 – Policy on the Reporting of Suspected Child Abuse & Neglect, as well as the University Procedures for Reporting Suspected Child Abuse and Neglect. The above-referenced USM/University Policy and Procedures are available in full at the following link: https://inside.towson.edu/generalcampus/tupolicies/documents/06-01.50%20Policy%20on%20the%20Reporting%20of%20Suspected%20Child%20Abuse%20and%20Neglect.pdf, and are incorporated herein. The University reserves the right to terminate the contract if Contractor fails to comply with the above-referenced policy or procedures, or if, in the judgment of the University, termination is necessary to protect the safety and welfare of children who come into contact with the University community.

42. Maryland Law Prevals

The contract shall be governed by the laws of the State of Maryland. The parties agree that exclusive jurisdiction shall reside with the state and federal courts in the State of Maryland.

43. Non-Hiring of Employees

No employee of the State of Maryland, or any department, commission, agency or branch thereof whose duties as such employee include matters relating to or affecting the subject matter of the contract, shall, while so employed, become or be an employee of the party or parties hereby contracting with the State or any department, commission, agency or branch thereof.

44. Non-Discrimination

The Contractor will comply with all applicable Federal and State laws, rules and regulations involving non-discrimination on the basis of race, color, creed, religion, national origin, age, sex, political affiliation, marital status, veteran status, condition of disability, or other non-merit factor. In addition, Towson University’s policies, programs, and activities comply with federal and state laws and University System of Maryland regulations prohibiting discrimination on the basis of race, color, religion, age, national origin, sex, disability, and sexual orientation. Provisions for reasonable accommodations shall be made by the Contractor for handicapped applicants and qualified handicapped individuals.

45. Non-Visual Access

The bidder or offeror warrants that the information technology offered under this bid or proposal (1) provides equivalent access for effective use by both visual and nonvisual means; (2) will present information, including prompts used for interactive communications, in formats intended for both visual and nonvisual use; (3) if intended for use in a network, can be integrated into networks for obtaining, retrieving, and disseminating information used by individuals who are not blind or visually impaired; and (4) is available, whenever possible, without modification for compatibility with software and hardware for nonvisual access. The bidder or offeror further warrants that the costs, if any, of modifying the information technology for compatibility with software and hardware used for nonvisual access will not increase the cost of the information technology by more than 5 percent.
For purposes of this section, the phrase "equivalent access" means that the ability to receive, use and manipulate information and operate controls necessary to access and use information technology by nonvisual means. Examples of equivalent access include keyboard controls used for input and synthesized speech, Braille, or other audible or tactile means used for output.

46. Ownership of Documents and Materials

The Contractor agrees that all documents and materials including, but not limited to, reports, drawings, studies, specifications, estimates, maps, photographs, designs, graphics, mechanical, artwork, and computations prepared by or for it under the terms of the contract shall at anytime during the performance of the services be made available to the University upon request by the University and shall become and remain the exclusive property of the University upon termination or completion of the services. The University shall have the right to use same without restriction or limitation and without compensation to the Contractor other than that provided by the contract. The University shall be the owner for purposes of copyright, patent or trademark registration.

47. Patents, Copyrights and Trade Secrets

a. If the Contractor furnishes any design, device, material, process or other item which is covered by a patent or copyright which is proprietary to or a trade secret of another, Contractor shall obtain the necessary permission or license to use such item.

b. Contractor will defend or settle, at its own expense, any claim or suit against the State alleging that any such item furnished by Contractor infringes any patent, trademark, copyright, or trade secret. Contractor will also pay all damages and costs that by final judgment may be assessed against the State due to such infringement and all attorneys’ fees and litigation expenses reasonably incurred by the State to defend against such a claim or suit. The obligations of this paragraph are in addition to those stated in paragraph c.

c. If any products furnished by Contractor become, or in Contractor’s opinion are likely to become, the subject of a claim of infringement, Contractor will, at its option: (1) procure for the State the right to continue using the applicable item; (2) replace the product with a non-infringing product substantially complying with the item’s specifications; or (3) modify the item so it becomes non-infringing and performs in a substantially similar manner to the original item.

48. Payment Bond

A payment bond is required for all construction contracts in excess of $100,000 in the amount equal to at least 100 percent of the contract price. The payment bond shall be delivered by the contractor to the State not later than the time the contract is executed. If a contractor fails to deliver the required payment bond, the contractor’s bid shall be rejected, its bid security shall be enforced, and award of the contract shall be made to the next lowest responsive and responsible bidder.

The required payment bond shall be in the State of Maryland form in effect at the time the contract is executed per COMAR 21.07.02.10B.

49. Performance Bond

A performance bond is required for all construction contracts in excess of $100,000 in the amount equal to at least 100 percent of the contract price. The performance bond shall be delivered by the contractor to the University not later than the time the contract is executed. If a contractor fails to deliver the required performance bond, the contractor’s bid shall be rejected, its bid security shall be enforced, and award of the contract may be made to the next lowest responsive and responsible bidder.

The required performance bond shall be in the State of Maryland form in effect at the time the contract is executed per COMAR 21.07.02.10A.

50. Payment of State Obligations

Payments to the Contractor pursuant to this contract shall be made no later than 30 days after the University’s receipt of a proper invoice from the Contractor. Charges of late payment of invoices, other than as prescribed by Title 15, subtitle 1, of the State Finance and Procurement Article, Annotated Code of Maryland, or by the Public Service Commission of Maryland with respect to regulated public utilities, as applicable, are prohibited.

51. Policies and Procedures

The USM Procurement Policies and Procedures in effect on the date of execution of this Contract are applicable to this Contract.

52. Responsibility of Contractor

a. The Contractor shall perform the services with that standard of care, skill, and diligence normally provided by a Contractor in the performance of services similar to the services hereunder.

b. Notwithstanding any review, approval, acceptance or payment for the services by the University, the Contractor shall be responsible for professional and technical accuracy of its work, design drawings, specifications and other materials furnished by the Contractor under the contract.

53. Prompt Payment of Subcontractors

a. This contract and all subcontracts issued under this contract are subject to the provisions of State Finance and Procurement Article, §15-226. Annotated Code of Maryland. References to “undisputed amount”, “prime contractor”, “contractor” and “subcontractor” have the meanings stated in Section 6.2 a-d herein have the meanings stated in COMAR 21.10.08.01.

b. A contractor shall promptly pay its subcontractors an undisputed amount to which a subcontractor is entitled for work performed under this contract within 10 calendar days after the contractor receives a progress payment or final payment for work under this contract.

c. If a contractor fails to make payment within the period prescribed in b., a subcontractor may request a remedy in accordance with COMAR 21.10.08.

d. A contractor shall include in its subcontracts for work under the contract, wording that incorporates the provisions, duties, and obligations of 6.1 a-d; State Finance and Procurement Article, §15-226, Annotated Code of Maryland; and COMAR 21.10.08.

54. Responsibility for Claims and Liability

The Contractor shall be responsible for all damage to life and property due to its activities or those of its agents or employees, in connection with the services required under the contract. Further, it is expressly understood that the Contractor shall indemnify and save harmless the University, its officers, agents, and employees from and against all claims, suits, judgments, expenses, actions, damages and costs of every name and description, including reasonable attorney's fees and litigation expenses arising out of or resulting from the negligent performance of the services of the Contractor under the contract.

55. Responsibility for Damage

a. The Contractor shall repair and restore to its original condition any equipment, materials or surfaces damaged by its operations.

b. The Contractor shall be entirely responsible for any loss or damage to its own materials, supplies, and equipment, and to the personal property of its employees while they are in the building.

c. The Contractor shall be solely responsible for any damage to the building or its contents for any loss or damage to any property belonging to the University or the University employees when such loss or damage may be attributable to their actions or negligence or the actions or negligence of their employees.
56. Retainage
a. This section shall apply if the contractor has furnished 100 percent payment security and 100 percent performance security. The contractor and each subcontractor at any tier shall incorporate the mandatory provisions outlined below in paragraphs b. through d. of this section, into each subcontract for work related to this contract.

b. The contractor may not retain from any payment due a subcontractor a percent of the payment greater than the percent for retainage specified in the contract.

c. A subcontractor at any tier may not retain from any payment due a lower tier subcontractor a percent of the payment greater than the percent of payments retained from the subcontractor.

d. A contractor and a subcontractor are not prohibited, by this section from withholding an amount in addition to retainage if the contractor or subcontractor determines that a subcontractor’s performance under the subcontract provides reasonable grounds for withholding an additional amount.

57. Retention of Records
The Contractor shall retain and maintain all records and documents relating to the contract for a minimum period of four years after payment by the University of the final invoice and shall make them available for inspection and audit by the State of Maryland.

58. Set-Off
The University may deduct from and set off against any amounts due and payable to the Contractor any back-charges or damages sustained by the University by virtue of any breach of the contract by the Contractor or by virtue of the failure or refusal of the Contractor to perform the services or any part of the services in a satisfactory manner. Nothing herein shall be construed to relieve the Contractor of liability for additional costs resulting from a failure to satisfactorily perform the services.

59. Site Investigation
The Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the work. The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the University, as well as from information presented by the drawings and specifications made a part of this contract. Any failure by the Contractor to acquaint himself with the available information may not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The University assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the University.

60. Software Contracts:
As specifically provided by § 21-104, Commercial Law Article, Annotated Code of Maryland, the parties agree that this Agreement shall not be governed by the Uniform Computer Information Transactions Act (UCITA), Title 21 of the Commercial Law Article of the Annotated Code of Maryland, as amended from time to time. This Agreement shall be governed by the common law of Maryland relating to written agreements, as well as other statutory provisions, other than UCITA, which may apply, and shall be interpreted and enforced as if UCITA had never been adopted in Maryland.

Contractor agrees that as delivered to buyer, the software does not contain any program code, virus, worm, trap door, back door, timer or clock that would erase data or programming or otherwise cause the software to become inoperable, inaccessible, or incapable of being used in accordance with its user manuals, either automatically upon the occurrence of selected conditions, or manually on command of Contractor.

61. Specifications
All materials, equipment, supplies or services shall conform to Federal and State laws and regulations and to the specifications contained in the solicitation. No asbestos, lead, or PCB-containing materials (0%) are to be utilized/installed on campus unless prior written approval has been received from the University’s Department of Environmental Health & Safety (410-704-2949).

62. Subcontracting or Assignment
The benefits and obligations hereunder shall take effect and be binding upon the parties hereto and neither the contract nor the services to be performed thereunder shall be subcontracted, or assigned or otherwise disposed of, either in whole or in part, except with the prior written consent of the University.

63. Suspension of Work
The procurement officer unilaterally may order the Contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as he may determine to be appropriate for the convenience of the University.

64. Tax Exemption
The State is generally exempt from federal excise taxes, Maryland sales and use taxes, District of Columbia sales taxes, and transportation taxes. Exemption certificates shall be provided upon request. Where a Contractor is required to furnish and install material in the construction of improvement to real property in performance of the Contract, the Contractor shall pay the Maryland sales tax and the exemption does not apply.

65. Termination of Contract for Default
If the Contractor fails to fulfill its obligation under the contract properly and on time, or otherwise violates any provision of the contract, the University may terminate the contract by written notice to the Contractor. The notice shall specify the acts or omissions relied on as cause for termination. All finished or unfinished services provided by the Contractor shall, at the University’s option, become the University’s property. The University shall pay the Contractor fair and equitable compensation for satisfactory performance prior to receipt of notice of termination, less the amount of damages caused by the Contractor’s breach. If the damages are more than the compensation payable to the Contractor, the Contractor will remain liable after termination and the University can affirmatively collect damages. The term “damages” as used in this paragraph may include attorney’s fees and litigation costs. Termination hereunder, including the determination of the rights and obligations of the parties, shall be governed by the provisions of USM Procurement Policies and Procedures.

66. Termination of Contract for Convenience
The performance of work under the contract may be terminated by the University in accordance with this clause in whole, or from time to time in part, whenever the University shall determine that such termination is in the best interest of the University. The University will pay all reasonable costs associated with the contract that the Contractor has incurred up to the date of termination and all reasonable costs associated with termination of the contract. However, the Contractor shall not be reimbursed for any anticipatory profits which have not been earned up to the date of termination. Termination hereunder, including the determination of the rights and obligations of the parties, shall be governed by the provisions of USM Procurement Policies and Procedures.
67. Termination of Multi-Year Contracts
If the General Assembly fails to appropriate funds or if funds are not otherwise made available for continued performance for any fiscal period of the contract succeeding the first fiscal period, the contract shall be canceled automatically as of the beginning of the fiscal year for which funds were not appropriated or otherwise made available; provided, however, that this will not affect either the State's rights or the Contractor's rights under any termination clause in the contract. The effect of termination of the contract hereunder will be to discharge both the Contractor and the State from future performance of the contract, but not from their rights and obligations existing at the time of termination. The Contractor shall be reimbursed for the reasonable value of any non-recurring costs incurred but not amortized in the price of the contract. The State will notify the Contractor as soon as it has knowledge that funds may not be available for the continuation of the contract for each succeeding fiscal period beyond the first.

68. Truth-In-Negotiation Certification
The Contractor by submitting cost or price information, including wage rates or other factual unit costs, certifies to the best of its knowledge, information and belief, that:

a. The wage rates and other factual unit costs supporting the firm's compensation, as set forth in the proposal, are accurate, complete and current as of the contract date;

b. If any of the items of compensation were increased due to the furnishing of inaccurate, incomplete or noncurrent wage rates or other units of costs, the State is entitled to an adjustment in all appropriate items of compensation, including profit or fee, to exclude any significant sum by which the price was increased because of the defective data. The State's right to adjustment includes the right to a price adjustment for defects in costs or pricing data submitted by a prospective or actual subcontractor; and

c. If additions are made to the original price of the contract, such additions may be adjusted to exclude any significant sums where it is determined the price has been increased due to inaccurate, incomplete or noncurrent wage rates and other factual costs."

69. Use of Contractor's Forms Not Binding on State
a. Except as provided in b., the use or execution by the State of any forms, orders, agreements, or other documents of any kind, other than the contract documents, used pursuant to or in the administration of any contract awarded by the State to Contractor, shall not bind the State to any of the terms and conditions contained therein except those provisions:

1) generally describing, for the purposes of ordering: Equipment or services to be provided, locations, quantities, delivery or installation dates, and, to the extent consistent with the contract documents, prices; and

2) not otherwise inconsistent with the contract documents.

b. Any such form, order, agreement or other document shall not vary, modify, or amend the terms and provisions of the contract documents, notwithstanding any provision to the contrary in such document, unless all of the following conditions are met:

1) the document expressly refers to the particular document and provision of the contract documents being modified and plainly and conspicuously identifies any modification thereto as a modification:

2) the document is executed on behalf of the State by the procurement officer; and

3) execution of the document is approved by the procurement authority whose approval is required by law.

70. Variations in Estimated Quantities
Where the quantity of a pay item in this contract is an estimated quantity and where the actual quantity of such pay item varies more than twenty-five percent (25%) above or below the estimated quantity stated in this contract, an equitable adjustment in the contract price shall be made upon demand of either party. The equitable adjustment shall be based upon any increase or decrease in costs due solely to the variation above one hundred twenty-five percent (125%) or below seventy-five percent (75%) of the estimated quantity. If the quantity variation is such as to cause an increase in the time necessary for completion, the procurement officer shall, upon receipt of a written request for an extension of time within ten (10) days from the beginning of the delay, or within a further period of time which may be granted by the procurement officer before the date of final settlement of the contract, ascertain the facts and make the adjustment for extending the completion date as in his judgment the findings justify.
EXHIBIT B
BID/PROPOSAL AFFIDAVIT

A. AUTHORITY

I HEREBY AFFIRM THAT:

I am the (title) ________________________________ and the duly authorized representative of (business) ________________________________ and that I possess the legal authority to make this Affidavit on behalf of myself and the business for which I am acting.

B. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT: Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, §6-220, Annotated Code of Maryland, or has pleaded nolo contendere to a charge of, bribery, attempted bribery, or conspiracy to bribe in violation of Maryland law, or of the law of any other state or federal law, except as follows (indicate the reasons why the affirmation cannot be given and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of person(s) involved, and current positions and responsibilities with the business):

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

C. AFFIRMATION REGARDING OTHER CONVICTIONS RETAINED

I FURTHER AFFIRM THAT: Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

(1) Been convicted under state or federal statute of:
   (a) A criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or
   (b) Fraud, embezzlement, theft, forgery, falsification or destruction of records or receiving stolen property;

(2) Been convicted of any criminal violation of a state or federal antitrust statute;

(3) Been convicted under the provisions of Title 18 of the United States Code for violation of the Racketeer Influenced and Corrupt Organization Act, 18 U.S.C. §1961 et seq., or the Mail Fraud Act, 18 U.S.C. §1341 et seq., for acts in connection with the submission of bids or proposals for a public or private contract;

(4) Been convicted of a violation of the State Minority Business Enterprise Law, §14-308 of the State Finance and Procurement Article of the Annotated Code of Maryland;
(5) Been convicted of a violation of §11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;

(6) Been convicted of conspiracy to commit any act or omission that would constitute grounds for conviction or liability under any law or statute described in subsections (1) - (5) above;

(7) Been found civilly liable under a state or federal antitrust statute for acts or omissions in connection with the submission of bids or proposals for a public or private contract;

(8) Been found in a final adjudicated decision to have violated the Commercial Nondiscrimination Policy under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland with regard to a public or private contract; or

(9) Admitted in writing or under oath, during the course of an official investigation or other proceedings, acts or omissions that would constitute grounds for conviction or liability under any law or statute described in §§B and C and subsections D(1)—(8) above, except as follows (indicate reasons why the affirmations cannot be given, and list any conviction, plea, or imposition of probation before judgment with the date, court, official or administrative body, the sentence or disposition, the name(s) of the person(s) involved and their current positions and responsibilities with the business, and the status of any debarment):

D. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT: Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business’s contracting activities, including obtaining or performing contracts with public bodies, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the proceedings, the name(s) of the person(s) involved and their current positions and responsibilities with the business, the grounds of the debarment or suspension, and the details of each person’s involvement in any activity that formed the grounds of the debarment or suspension).

E. AFFIRMATION REGARDING DEBARMENT OF RELATED ENTITIES

I FURTHER AFFIRM THAT:

(1) The business was not established and it does not operate in a manner designed to evade the application of or defeat the purpose of debarment pursuant to Sections 16-101, et seq., of the State Finance and Procurement Article of the Annotated Code of Maryland; and
(2) The business is not a successor, assignee, subsidiary, or affiliate of a suspended or debarred business, except as follows (indicate reasons why the affirmations cannot be given without qualification):

__________________________________________________________________________________________________________________________________________

__________________________________________________________________________________________________________________________________________

__________________________________________________________________________________________________________________________________________

__________________________________________________________________________________________________________________________________________

F. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT: Neither I, nor to the best of my knowledge, information, and belief, the above business, has knowingly entered into a contract with a public body under which a person debarred or suspended under Title 16 of the State Finance and Procurement Article of the Annotated Code of Maryland will provide, directly or indirectly, supplies, services, architectural services, construction related services, leases of real property, or construction.

G. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT: Neither I, nor to the best of my knowledge, information, and belief, the above business has:

(1) Agreed, conspired, connived, or colluded to produce a deceptive show of competition in the compilation of the accompanying bid or offer that is being submitted;

(2) In any manner, directly or indirectly, entered into any agreement of any kind to fix the bid price or price proposal of the bidder or offeror or of any competitor, or otherwise taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

H. CERTIFICATION OF TAX PAYMENT

I FURTHER AFFIRM THAT: Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

I. CONTINGENT FEES

I FURTHER AFFIRM THAT: The business has not employed or retained any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency working for the business, to solicit or secure the Contract, and that the business has not paid or agreed to pay any person, partnership, corporation, or other entity, other than a bona fide employee, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on making of the Contract.

J. CERTIFICATION REGARDING INVESTMENTS IN IRAN

(1) The undersigned bidder or offeror certifies that, in accordance with State Finance & Procurement Article, §17-705:

   (i) it is not identified on the list created by the Board of Public Works as a person engaging in investment activities in Iran as described in §17-702 of State Finance & Procurement; and

   (ii) it is not engaging in investment activities in Iran as described in State Finance & Procurement Article, §17-702.
(2) The undersigned bidder or offeror is unable to make the above certification regarding its investment activities in Iran due to the following activities:


K. ACKNOWLEDGEMENT

I ACKNOWLEDGE THAT: This Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) the federal government. I further acknowledge that this Affidavit is subject to applicable laws of the United States and the State of Maryland, both criminal and civil, and that nothing in this Affidavit or any contract resulting from the submission of this bid or proposal shall be construed to supersede, amend, modify or waive, on behalf of the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) the contract, and (3) other Affidavits comprising part of the contract.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

Date: ______________________

By: ______________________

(Print Name of Authorized Representative and Affiant)

(Signature of Authorized Representative and Affiant)

(Title of Authorized Representative and Affiant)
EXHIBIT C
CONTRACT AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE

I HEREBY AFFIRM THAT:

I am the ________________________________ (title) and the duly authorized representative of ________________________________ (business) and that I possess the legal authority to make this Affidavit on behalf of myself and the business for which I am acting.

B. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT OR QUALIFICATION WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION

I FURTHER AFFIRM THAT: The business named above is a (X applicable items):

(1) Corporation □ domestic (i.e., organized in Maryland) or □ foreign;
(2) Limited Liability Co. □ domestic or □ foreign;
(3) Partnership □ domestic or □ foreign;
(4) Statutory Trust □ domestic or □ foreign;
(5) Sole Proprietorship □

and is registered or qualified as required under Maryland Law

I further affirm that the above business is in good standing both in Maryland and (IF APPLICABLE) in the jurisdiction where it is presently organized, and has filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation. The name and address of its resident agent (IF APPLICABLE) filed with the State Department of Assessments and Taxation is:

Name and Department ID Number: __________________________________________
Address: __________________________________________

and that if it does business under a trade name, it has filed a certificate with the State Department of Assessments and Taxation that correctly identifies that true name and address of the principal or owner as:

Name and Department ID Number: __________________________________________
Address: __________________________________________

C. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT: I am aware of, and the above business will comply with, the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate $100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches $100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.
D. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT: I am aware of, and the above business will comply with, Election Law Article, §§14-101 through 14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State valued at $200,000 or more, shall file with the State Board of Elections a statement disclosing contributions in excess of $500 made during the reporting period to a candidate for elective office in any primary or general election.

E. DRUG AND ALCOHOL FREE WORKPLACE

I CERTIFY THAT:

(1) Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.

(2) By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:

(a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;

(b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business's workplace and specifying the actions that will be taken against employees for violation of these prohibitions;

(c) Prohibit its employees from working under the influence of drugs or alcohol;

(d) Not hire or assign to work on the contract anyone whom the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;

(e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;

(f) Establish drug and alcohol abuse awareness programs to inform its employees about:

(i) The dangers of drug and alcohol abuse in the workplace;

(ii) The business's policy of maintaining a drug and alcohol free workplace;

(iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;

(g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §(2)(b), above;

(h) Notify its employees in the statement required by §(2)(b) above, that as a condition of continued employment on the contract, the employee shall:

(i) Abide by the terms of the statement; and

(ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;

(i) Notify the procurement officer within 10 days after receiving notice under §(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;

(j) Within 30 days after receiving notice under §(2)(h)(ii) above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
(i) Take appropriate personnel action against an employee, up to and including termination; or

(ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and

(k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §(2)(a) through (j), above.

(3) If the business is an individual, the individual shall certify and agree as set forth in §(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.

(4) I acknowledge and agree that:

(a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;

(b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and

(c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.

F. CERTAIN AFFIRMATIONS VALID

I FURTHER AFFIRM THAT:

To the best of my knowledge, information, and belief, each of the affirmations, certifications, or acknowledgments contained in that certain Bid/Proposal Affidavit dated __________, 20 ____, and executed by me for the purpose of obtaining the contract to which this Exhibit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

DATE: __________________________

BY: ______________________________

(Printed Name and Title of Authorized Representative and Affiant)

(Signature of Authorized Representative and Affiant)
EXHIBIT D
SAMPLE AGREEMENT

This Agreement made the _________ day of __________________________, Two Thousand and ____, by
and between _________________________, herein called "Contractor" and Towson University, herein called
"University." Witnesseth, that the Contractor and the University, for the consideration here mentioned agree as
follows:

Article 1. Scope of Contract - The Contractor shall furnish all materials and perform all of the work described in the
Contract Documents, and shall comply with all of the terms and conditions of the Contract Documents, all of which
are made a part hereof and are referred to herein as "the Contract."

Article 2. Contract Documents - The Contract between the parties is set forth in the Contract Documents which
consist of the following, listed in their order of precedence:

A. This Contract,
B. Towson University - Request for Proposal, for the Procurement of ____________________________,
   Towson University, RFP No. __________ including all attachments, exhibits, and addenda, and
   subsequent Purchase Order, and
C. Contractor's Proposal dated ______________, submitted in response to the RFP (hereinafter referred
to as the "Proposal").

In the event of a conflict between the terms and conditions of any of the Contract Documents, the controlling
terms and conditions shall be in the above listed order of precedence.

Article 3. Services - The Contractor's performance under this Contract shall be in accordance with the requirements
generally set forth in the RFP and specifically described in Section V., Specifications and as set forth in the
Contractor's Technical Proposal.

Article 4. Term of Contract – The term of the contract shall be one year from the date that the University provides
the Contractor with a Notice to Proceed. The University shall have the option to exercise four annual renewal
options, said options to be exercised at the sole discretion of the University. Should the University elect to renew
the contract, all prices, terms and conditions will remain in effect.

Article 5. Contract Price - The University shall pay the Contractors as follows:

Total Project Cost $ ________________

Article 6. Payment of State Obligations - Contractor will be paid for services rendered in accordance with the terms
and conditions of the Contract Documents and upon submission of proper invoices submitted to the Towson
University, Accounts Payable Office. The Contractor's Federal Identification Number and the University's Purchase
Order number must be included on all invoices. Towson University is exempt from the payment of taxes and shall
provide the Contractor with a copy of tax-exempt certificate upon request.
Electronic funds will be used by the State to pay Contractor for this Contract and any other State payments due Contractor unless the State Comptroller’s Office grants Contractor an exemption.

Article 7. **Limitation of Liability** - The University shall not be liable for any indirect, special or consequential damages, such as loss of anticipated profits or other economic loss in connection with or arising out of the services provided in the Contract.

Article 8. **Assignment** - University may assign this Contract with Contractor’s written consent, which shall not be unreasonably withheld.

Article 9. ** Entire Agreement** - This Contract, including all Contract Documents, constitutes the entire agreement between the University and the Contractor. No waiver, modification or amendment of any of the terms or conditions hereof shall be effective unless set forth in writing and duly signed by the Contractor and the University.

IN WITNESS WHEREOF, the parties have executed this Contract by their duly authorized officer, agents or official on the day and year first above written.

CONTRACTOR

Witness

Corporate Officer or Authorized Agent

Printed Name and Title

TOWSON UNIVERSITY

Witness

Authorized Agent

Printed Name and Title
EXHIBIT E

MINORITY BUSINESS ENTERPRISE (MBE) PARTICIPATION
MBE ATTACHMENT-1A:
MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
& MBE PARTICIPATION SCHEDULE

PART 1 - INSTRUCTIONS
PLEASE READ BEFORE COMPLETING THIS DOCUMENT

This form includes Instructions and the MBE Utilization and Fair Solicitation Affidavit & MBE Participation Schedule which must be submitted with the bid/proposal. If the bidder/offeror fails to accurately complete and submit this Affidavit and Schedule with the bid or proposal, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award.

1. Contractor shall structure its procedures for the performance of the work required in this Contract to attempt to achieve the minority business enterprise (MBE) subcontractor participation goal stated in the Invitation for Bids or Request for Proposals. Contractor agrees to exercise good faith efforts to carry out the requirements set forth in these Instructions, as authorized by the Code of Maryland Regulations (COMAR) 21.11.03.

2. MBE Goals and Subgoals: Please review the solicitation for information regarding the Contract's MBE overall participation goals and subgoals. After satisfying the requirements for any established subgoals, the Contractor is encouraged to use a diverse group of subcontractors and suppliers from the various MBE classifications to meet the remainder of the overall MBE participation goal.

3. MBE means a minority business enterprise that is certified by the Maryland Department of Transportation ("MDOT"). Only MBEs certified by MDOT may be counted for purposes of achieving the MBE participation goals. In order to be counted for purposes of achieving the MBE participation goals, the MBE firm, including a MBE prime, must be MDOT-certified for the services, materials or supplies that it is committed to perform on the MBE Participation Schedule. A firm whose MBE certification application is pending may not be counted.

4. Please refer to the MDOT MBE Directory at https://mbe.mdot.maryland.gov/directory/ to determine if a firm is certified with the appropriate North American Industry Classification System ("NAICS") code and the product/services description (specific product that a firm is certified to provide or specific areas of work that a firm is certified to perform). For more general information about NAICS codes, please visit https://www.census.gov/eos/www/naics/. Only those specific products and/or services for which a firm is certified in the MDOT Directory can be used for purposes of achieving the MBE participation goals. CAUTION: If the firm’s NAICS code is in graduated status, such services/products may not be counted for purposes of achieving the MBE participation goals. A NAICS code is in the graduated status if the term “Graduated” follows the code in the MDOT MBE Directory.

5. **Guidelines Regarding MBE Prime Self-Performance.** Please note that when a certified MBE firm participates as a prime contractor on a Contract, a procurement agency may count the distinct, clearly defined portion of the work of the Contract that the certified MBE firm performs with its own workforce toward fulfilling up to, but no more than, fifty-percent (50%) of the overall MBE participation goal, including up to one hundred percent (100%) of not more than one of the MBE participation subgoals, if any, established for the Contract.
✓ In order to receive credit for self-performance, an MBE prime must be certified in the appropriate NAICS code to do the work and must list its firm in the MBE Participation Schedule, including the certification category under which the MBE prime is self-performing and include information regarding the work it will self-perform.

✓ For the remaining portion of the overall goal and the remaining subgoals, the MBE prime must also identify on the MBE Participation Schedule the other certified MBE subcontractors used to meet those goals or request a waiver.

✓ These guidelines apply to the work performed by the MBE Prime that can be counted for purposes of meeting the MBE participation goals. These requirements do not affect the MBE Prime’s ability to self-perform a greater portion of the work in excess of what is counted for purposes of meeting the MBE participation goals.

✓ Please note that the requirements to meet the MBE participation overall goal and subgoals are distinct and separate. If the contract has subgoals, regardless of MBE Prime’s ability to self-perform up to 50% of the overall goal (including up to 100% of any subgoal), the MBE Prime must either commit to use other MBEs for each of any remaining subgoals or request a waiver. As set forth in Attachment 1-B Waiver Guidance, the MBE Prime’s ability to self-perform certain portions of the work of the Contract will not be deemed a substitute for the good faith efforts to meet any remaining subgoal or the balance of the overall goal.

✓ In certain instances where the percentages allocated to MBE participation subgoals add up to more than 50% of the overall goal, the portion of self-performed work that an MBE Prime may count toward the overall goal may be limited to less than 50%. Please refer to the Governor’s Office of Small Minority & Women Business Affairs’ website for the MBE Prime Regulations Q&A for illustrative examples. http://www.goMDsmallbiz.maryland.gov/Documents/MBE_Toolkit/MBEPrimeRegulation_QA.pdf

6. Subject to items 1 through 5 above, when a certified MBE performs as a participant in a joint venture, a procurement agency may count a portion of the total dollar value of the Contract equal to the distinct, clearly-defined portion of the work of the Contract that the certified MBE performs with its own forces toward fulfilling the Contract goal, and not more than one of the Contract subgoals, if any.

7. The work performed by a certified MBE firm, including an MBE prime, can only be counted towards the MBE participation goal(s) if the MBE firm is performing a commercially useful function on the Contract. Please refer to COMAR 21.11.03.12-1 for more information regarding these requirements.
8. **Materials and Supplies: New Guidelines Regarding MBE Participation.**

- **Regular Dealer** (generally identified as a wholesaler or supplier in the MDOT Directory): Up to 60% of the costs of materials and supplies provided by a certified MBE may be counted towards the MBE participation goal(s) if such MBE is a Regular Dealer of such materials and supplies. Regular Dealer is defined as a firm that owns, operates, or maintains a store, a warehouse, or any other establishment in which the materials, supplies, articles, or equipment are of the general character described by the specifications required under the contract and are bought, kept in stock, or regularly sold or leased to the public in the usual course of business; and does not include a packager, a broker, a manufacturer’s representative, or any other person that arranges or expedites transactions.

  **Example for illustrative purposes of applying the 60% rule**

  **Overall contract value:** $2,000,000  
  **Total value of supplies:** $100,000  

  Calculate Percentage of Supplies to overall contract value:  
  $100,000 divided by $2,000,000 = 5%  
  **Apply 60% Rule - Total percentage of Supplies/Products 5% x 60% = 3%**

  3% would be counted towards achieving the MBE Participation Goal and Subgoal, if any, for the MBE supplier in this example.

- **Manufacturer**: A certified MBE firm’s participation may be counted in full if the MBE is certified in the appropriate NAICS code(s) to provide products and services as a manufacturer.

- **Broker**: With respect to materials or supplies purchased from a certified MBE that is neither a manufacturer nor a regular dealer, a unit may apply the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials and supplies required on a procurement toward the MBE contract goals, provided a unit determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services. A unit may not apply any portion of the costs of the materials and supplies toward MBE goals.

- **Furnish and Install and other Services**: The participation of a certified MBE supplier, wholesaler, and/or regular dealer certified in the proper NAICS code(s) to furnish and install materials necessary for successful contract completion may be counted in full. Includes the participation of other MBE service providers in the proper NAICS code(s) may be counted in full.

9. **Dually certified firms.** An MBE that is certified in more than one subgroup category may only be counted toward goal fulfillment of ONE of those categories with regard to a particular contract.

  Example: A woman-owned Hispanic American (dually certified) firm may be used to fulfill the women-owned OR Hispanic American subgoal, but not both on the same contract.

10. **CAUTION**: The percentage of MBE participation, computed using the percentage amounts determined for all of the MBE firms listed in Part 3, MUST meet or exceed the MBE participation goal and subgoals (if applicable) as set forth in Part 2 for this solicitation. If a bidder/offeror is unable to meet the MBE participation goal or any subgoals (if applicable), then the bidder/offeror must request a waiver in Part 2 or the bid will be deemed not responsive, or the proposal not reasonably susceptible of being selected.
for award. You may wish to use the attached Goal/Subgoal Worksheet to assist in calculating the percentages and confirming that your commitment meets or exceeds the applicable MBE participation goal and subgoals (if any).

11. If you have any questions as to whether a firm is certified to perform the specific services or provide specific products, please contact MDOT’s Office of Minority Business Enterprise at 1-800-544-6056 or via email to mbe@mdot.state.md.us sufficiently prior to the submission due date.

**Subgoals (if applicable)**

<table>
<thead>
<tr>
<th>Subgoal</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total African American MBE Participation</td>
<td></td>
</tr>
<tr>
<td>Total Asian American MBE Participation</td>
<td></td>
</tr>
<tr>
<td>Total Hispanic American MBE Participation</td>
<td></td>
</tr>
<tr>
<td>Total Women-Owned MBE Participation</td>
<td></td>
</tr>
</tbody>
</table>

**Overall Goal**

Total MBE Participation (include all categories): 10%
PART 2 - MBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT

This MBE Utilization and Fair Solicitation Affidavit and MBE Participation Schedule must be completed and included with the bid/proposal. If the bidder/offoror fails to accurately complete and submit this Affidavit and the Schedule in Part 3 with the bid or proposal as required, the Procurement Officer shall deem the bid non-responsive or shall determine that the proposal is not reasonably susceptible of being selected for award.

In connection with the bid/proposal submitted in response to Solicitation No. _____, I affirm the following:

1. MBE Participation (PLEASE CHECK ONLY ONE)
   - [ ] I acknowledge and intend to meet IN FULL both the overall certified Minority Business Enterprise (MBE) participation goal of _____ percent and all of the following subgoals:
     - _____ percent for African American-owned MBE firms
     - _____ percent for Hispanic American-owned MBE firms
     - _____ percent for Asian American-owned MBE firms
     - _____ percent for Women-owned MBE firms
   - [ ] I conclude that I am unable to achieve the MBE participation goal and/or subgoals. I hereby request a waiver, in whole or in part, of the overall goal and/or subgoals. I acknowledge that by checking this box and requesting a partial waiver of the stated goal and/or one or more of the stated subgoal(s) if any, I must complete Part 3, the MBE Participation Schedule and Part 4 Signature Page for the portion of the goal and/or subgoal(s) if any, for which I am not seeking a waiver, in order to be considered for award. I acknowledge that by checking this box and requesting a full waiver of the stated goal and the stated subgoal(s) if any, I must complete Part 4 Signature Page in order to be considered for award.

Therefore, I am not seeking a waiver pursuant to COMAR 21.11.03.11. I acknowledge that by checking the above box and agreeing to meet the stated goal and subgoal(s), if any, I must complete Part 3 - MBE Participation Schedule and Part 4 Signature Page in order to be considered for award.

OR

- [ ] I conclude that I am unable to achieve the MBE participation goal and/or subgoals. I hereby request a waiver, in whole or in part, of the overall goal and/or subgoals. I acknowledge that by checking this box and requesting a partial waiver of the stated goal and/or one or more of the stated subgoal(s) if any, I must complete Part 3, the MBE Participation Schedule and Part 4 Signature Page for the portion of the goal and/or subgoal(s) if any, for which I am not seeking a waiver, in order to be considered for award. I acknowledge that by checking this box and requesting a full waiver of the stated goal and the stated subgoal(s) if any, I must complete Part 4 Signature Page in order to be considered for award.

5
Additional MBE Documentation

I understand that if I am notified that I am the apparent awardee or as requested by the Procurement Officer, I must submit the following documentation within 10 working days of receiving notice of the potential award or from the date of conditional award (per COMAR 21.11.03.10), whichever is earlier:

(a) Good Faith Efforts Documentation to Support Waiver Request (Attachment __-1C)
(b) Outreach Efforts Compliance Statement (Attachment __-2);
(c) MBE Subcontractor/MBE Prime Project Participation Statement (Attachments __-3A and 3B);
(d) Any other documentation, including additional waiver documentation if applicable, required by the Procurement Officer to ascertain bidder or offeror responsibility in connection with the certified MBE participation goal and subgoals, if any.

I understand that if I fail to return each completed document within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award. If the contract has already been awarded, the award is voidable.

Information Provided to MBE firms

In the solicitation of subcontract quotations or offers, MBE firms were provided not less than the same information and amount of time to respond as were non-MBE firms.
PART 3 - MBE PARTICIPATION SCHEDULE

Set forth below are the (i) certified MBEs I intend to use, (ii) the percentage of the total Contract value allocated to each MBE for this project and, (iii) the items of work each MBE will provide under the Contract. I have confirmed with the MDOT database that the MBE firms identified below (including any self-performing MBE prime firms) are performing work activities for which they are MDOT-certified.

<table>
<thead>
<tr>
<th>Prime Contractor</th>
<th>Project Description</th>
<th>Project/Contract Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LIST INFORMATION FOR EACH CERTIFIED MBE FIRM YOU AGREE TO USE TO ACHIEVE THE MBE PARTICIPATION GOAL AND SUBGOALS, IF ANY. MBE PRIMES: PLEASE COMPLETE BOTH SECTIONS A AND B BELOW.

SECTION A: For MBE Prime Contractors ONLY (including MBE Primes in a Joint Venture)

<table>
<thead>
<tr>
<th>MBE Prime Firm</th>
<th>Percentage of total Contract Value to be performed with own forces and counted towards the MBE overall participation goal (up to 50% of the overall goal): ____%  Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:__________________________</td>
<td></td>
</tr>
<tr>
<td>MBE Certification Number: ____________</td>
<td>Percentage of total Contract Value to be performed with own forces and counted towards the subgoal, if any, for my MBE classification (up to 100% of not more than one subgoal): ______%</td>
</tr>
<tr>
<td>(If dually certified, check only one box.)</td>
<td></td>
</tr>
<tr>
<td>☐ African American-Owned</td>
<td>☐ Supplier, wholesaler and/or regular dealer (count 60%)</td>
</tr>
<tr>
<td>☐ Hispanic American-Owned</td>
<td>☐ Manufacturer (count 100%)</td>
</tr>
<tr>
<td>☐ Asian American-Owned</td>
<td>☐ Broker (count reasonable fee/commission only)</td>
</tr>
<tr>
<td>☐ Women-Owned</td>
<td>☐ Furnish and Install and other Services (count 100%)</td>
</tr>
<tr>
<td>☐ Other MBE Classification</td>
<td></td>
</tr>
<tr>
<td>NAICS code: __________________________</td>
<td>Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work your firm is self-performing to calculate amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.</td>
</tr>
<tr>
<td></td>
<td>A. Percentage amount of subcontract where the MBE Prime firm is being used for manufacturer, furnish and install, and/or services (excluding products / services from suppliers, wholesalers, regular dealers and brokers) ______%</td>
</tr>
<tr>
<td></td>
<td>B. Percentage amount for items of work where the MBE Prime firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule). Total percentage of Supplies/Products ______% x 60% = ______%</td>
</tr>
<tr>
<td></td>
<td>C. Percentage amount of fee where the MBE Prime firm is being used as broker (count reasonable fee/commission only) ______%</td>
</tr>
<tr>
<td></td>
<td>Description of the Work to be performed with MBE prime’s own forces: _________________________</td>
</tr>
</tbody>
</table>

| | | |
| | | |
SECTION B: For all Contractors (including MBE Primes and MBE Primes in a Joint Venture)

<table>
<thead>
<tr>
<th>MBE Firm</th>
<th>Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>□ Supplier, wholesaler and/or regular dealer (count 60%)</td>
</tr>
<tr>
<td></td>
<td>□ Manufacturer (count 100%)</td>
</tr>
<tr>
<td></td>
<td>□ Broker (count reasonable fee/commission only)</td>
</tr>
<tr>
<td></td>
<td>□ Furnish and Install and other Services (count 100%)</td>
</tr>
<tr>
<td></td>
<td>(If dually certified, check only one box.)</td>
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<tr>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
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<td></td>
<td>[ ] Women-Owned</td>
</tr>
<tr>
<td></td>
<td>[ ] Other MBE Classification</td>
</tr>
<tr>
<td>NAICS code:</td>
<td></td>
</tr>
</tbody>
</table>

Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that the MBE Firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.

A. Percentage amount of subcontract where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers) ______%.

B. Percentage amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule).

Total percentage of Supplies/Products ______ % × 60% = ______ %

C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only) ______ %

Description of the Work to be Performed:
________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
MBE Firm
Name:______________________________________

MBE Certification Number: ____________________

(If dually certified, check only one box.)
☐ African American-Owned
☐ Hispanic American- Owned
☐ Asian American- Owned
☐ Women-Owned
☐ Other MBE Classification

NAICS code: ________________________________

Please refer to Item #8 in Part 1- Instructions of this document for new MBE participation guidelines regarding materials and supplies.

☐ Supplier, wholesaler and/or regular dealer (count 60%)
☐ Manufacturer (count 100%)
☐ Broker (count reasonable fee/commission only)
☐ Furnish and Install and other Services (count 100%)

Complete the applicable prompt (select only one) from prompts A-C below that applies to the type of work that for the MBE firm named to the left will be performing to calculate the amount to be counted towards achieving the MBE Participation Goal and Subgoal, if any.

A. Percentage amount of subcontract where the MBE firm is being used for manufacturer, furnish and install, and/or services (excluding products/services from suppliers, wholesalers, regular dealers and brokers) _______%

B. Percentage amount for items of work where the MBE firm is being used as supplier, wholesaler, and/or regular dealer (60% Rule).
   Total percentage of Supplies/Products ______% X 60% = ______%

C. Percentage amount of fee where the MBE firm is being used as broker (count reasonable fee/commission only) ______ %

Description of the Work to be Performed:

________________________________________________________________________

CONTINUE ON SEPARATE PAGE IF NEEDED
PART 4 – SIGNATURE PAGE
To complete Affidavit committing to MBE(s) or requesting waiver, bidder/offeror must sign below

I solemnly affirm under the penalties of perjury that: (i) I have reviewed the instructions for the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule, and (ii) the information contained in the MBE Utilization & Fair Solicitation Affidavit and MBE Schedule is true to the best of my knowledge, information and belief.

Bidder/Offeror Name
(PLEASE PRINT OR TYPE)

Signature of Authorized Representative

Address

Printed Name and Title

City, State and Zip Code

Date

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL
MBE ATTACHMENT __-1B
WAIVER GUIDANCE

GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET MBE PARTICIPATION GOALS

In order to show that it has made good faith efforts to meet the Minority Business Enterprise (MBE) participation goal (including any MBE subgoals) on a contract, the bidder/offeror must either (1) meet the MBE Goal(s) and document its commitments for participation of MBE Firms, or (2) when it does not meet the MBE Goal(s), document its Good Faith Efforts to meet the goal(s).

I. Definitions

MBE Goal(s) – “MBE Goal(s)” refers to the MBE participation goal and MBE participation subgoal(s).

Good Faith Efforts – The “Good Faith Efforts” requirement means that when requesting a waiver, the bidder/offeror must demonstrate that it took all necessary and reasonable steps to achieve the MBE Goal(s), which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient MBE participation, even if those steps were not fully successful. Whether a bidder/offeror that requests a waiver made adequate good faith efforts will be determined by considering the quality, quantity, and intensity of the different kinds of efforts that the bidder/offeror has made. The efforts employed by the bidder/offeror should be those that one could reasonably expect a bidder/offeror to take if the bidder/offeror were actively and aggressively trying to obtain MBE participation sufficient to meet the MBE contract goal and subgoals. Mere pro forma efforts are not good faith efforts to meet the MBE contract requirements. The determination concerning the sufficiency of the bidder's/offeror’s good faith efforts is a judgment call; meeting quantitative formulas is not required.

Identified Firms – “Identified Firms” means a list of the MBEs identified by the procuring agency during the goal setting process and listed in the procurement as available to perform the Identified Items of Work. It also may include additional MBEs identified by the bidder/offeror as available to perform the Identified Items of Work, such as MBEs certified or granted an expansion of services after the procurement was issued. If the procurement does not include a list of Identified Firms, this term refers to all of the MBE Firms (if State-funded) the bidder/offeror identified as available to perform the Identified Items of Work and should include all appropriately certified firms that are reasonably identifiable.

Identified Items of Work – “Identified Items of Work” means the bid items identified by the procuring agency during the goal setting process and listed in the procurement as possible items of work for performance by MBE Firms. It also may include additional portions of items of work the bidder/offeror identified for performance by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved. If the procurement does not include a list of Identified Items of Work, this term refers to all of the items of work the bidder/offeror identified as possible items of work for performance by MBE Firms and should include all reasonably identifiable work opportunities.

MBE Firms – “MBE Firms” refers to a firm certified by the Maryland Department of Transportation (“MDOT”) under COMAR 21.11.03. Only MDOT-certified MBE Firms can participate in the State's MBE Program.
II. Types of Actions Agency will Consider

The bidder/offeror is responsible for making relevant portions of the work available to MBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE subcontractors and suppliers, so as to facilitate MBE participation. The following is a list of types of actions the procuring agency will consider as part of the bidder's/offeror’s Good Faith Efforts when the bidder/offeror fails to meet the MBE Goal(s). This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Bid Items as Work for MBE Firms

1. Identified Items of Work in Procurements

   (a) Certain procurements will include a list of bid items identified during the goal setting process as possible work for performance by MBE Firms. If the procurement provides a list of Identified Items of Work, the bidder/offeror shall make all reasonable efforts to solicit quotes from MBE Firms to perform that work.

   (b) Bidders/Offerors may, and are encouraged to, select additional items of work to be performed by MBE Firms to increase the likelihood that the MBE Goal(s) will be achieved.

2. Identified Items of Work by Bidders/Offerors

   (a) When the procurement does not include a list of Identified Items of Work or for additional Identified Items of Work, bidders/offerors should reasonably identify sufficient items of work to be performed by MBE Firms.

   (b) Where appropriate, bidders/offerors should break out contract work items into economically feasible units to facilitate MBE participation, rather than perform these work items with their own forces. The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder/offeror of the responsibility to make Good Faith Efforts.

B. Identify MBE Firms to Solicit

1. MBE Firms Identified in Procurements

   (a) Certain procurements will include a list of the MBE Firms identified during the goal setting process as available to perform the items of work. If the procurement provides a list of Identified MBE Firms, the bidder/offeror shall make all reasonable efforts to solicit those MBE firms.

   (b) Bidders/offerors may, and are encouraged to, search the MBE Directory to identify additional MBEs who may be available to perform the items of work, such as MBEs certified or granted an expansion of services after the solicitation was issued.

2. MBE Firms Identified by Bidders/Offerors

   (a) When the procurement does not include a list of Identified MBE Firms, bidders/offerors should reasonably identify the MBE Firms that are available to perform the Identified Items of Work.

   (b) Any MBE Firms identified as available by the bidder/offeror should be certified to perform the Identified Items of Work.
C. Solicit MBEs

1. Solicit all Identified Firms for all Identified Items of Work by providing written notice. The bidder/offeror should:

   (a) provide the written solicitation at least 10 days prior to bid opening to allow sufficient time for the MBE Firms to respond;

   (b) send the written solicitation by first-class mail, facsimile, or email using contact information in the MBE Directory, unless the bidder/offeror has a valid basis for using different contact information; and

   (c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the MBE, and other requirements of the contract to assist MBE Firms in responding. (This information may be provided by including hard copies in the written solicitation or by electronic means as described in C.3 below.)

2. “All” Identified Firms includes the MBEs listed in the procurement and any MBE Firms you identify as potentially available to perform the Identified Items of Work, but it does not include MBE Firms who are no longer certified to perform the work as of the date the bidder/offeror provides written solicitations.

3. “Electronic Means” includes, for example, information provided via a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested MBE cannot access the information provided by electronic means, the bidder/offeror must make the information available in a manner that is accessible to the interested MBE.

4. Follow up on initial written solicitations by contacting MBEs to determine if they are interested. The follow up contact may be made:

   (a) by telephone using the contact information in the MBE Directory, unless the bidder/offeror has a valid basis for using different contact information; or

   (b) in writing via a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, use all other reasonable and available means to solicit the interest of MBE Firms certified to perform the work of the contract. Examples of other means include:

   (a) attending any pre-bid meetings at which MBE Firms could be informed of contracting and subcontracting opportunities; and

   (b) if recommended by the procurement, advertising with or effectively using the services of at least two minority focused entities or media, including trade associations, minority/women community organizations, minority/women contractors’ groups, and local, state, and federal minority/women business assistance offices listed on the MDOT Office of Minority Business Enterprise website.

D. Negotiate With Interested MBE Firms

Bidders/Offerors must negotiate in good faith with interested MBE Firms.

1. Evidence of negotiation includes, without limitation, the following:

   (a) the names, addresses, and telephone numbers of MBE Firms that were considered;

   (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and
(c) evidence as to why additional agreements could not be reached for MBE Firms to perform the work.

2. A bidder/offeror using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE subcontractors, and would take a firm’s price and capabilities as well as contract goals into consideration.

3. The fact that there may be some additional costs involved in finding and using MBE Firms is not in itself sufficient reason for a bidder’s/offeror’s failure to meet the contract MBE goal(s), as long as such costs are reasonable. Factors to take into consideration when determining whether a MBE Firm’s quote is excessive or unreasonable include, without limitation, the following:

(a) the dollar difference between the MBE subcontractor’s quote and the average of the other subcontractors’ quotes received by the bidder/offeror;

(b) the percentage difference between the MBE subcontractor’s quote and the average of the other subcontractors’ quotes received by the bidder/offeror;

(c) the percentage that the MBE subcontractor’s quote represents of the overall contract amount;

(d) the number of MBE firms that the bidder/offeror solicited for that portion of the work;

(e) whether the work described in the MBE and Non-MBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and

(f) the number of quotes received by the bidder/offeror for that portion of the work.

4. The above factors are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.

5. The bidder/offeror may not use its price for self-performing work as a basis for rejecting a MBE Firm’s quote as excessive or unreasonable.

6. The “average of the other subcontractors’ quotes received” by the bidder/offeror refers to the average of the quotes received from all subcontractors. Bidder/offeror should attempt to receive quotes from at least three subcontractors, including one quote from a MBE and one quote from a Non-MBE.

7. A bidder/offeror shall not reject a MBE Firm as unqualified without sound reasons based on a thorough investigation of the firm’s capabilities. For each certified MBE that is rejected as unqualified or that placed a subcontract quotation or offer that the bidder/offeror concludes is not acceptable, the bidder/offeror must provide a written detailed statement listing the reasons for this conclusion. The bidder/offeror also must document the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.

(a) The factors to take into consideration when assessing the capabilities of a MBE Firm, include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.

(b) The MBE Firm’s standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the efforts to meet the project goal.
E. Assisting Interested MBE Firms

When appropriate under the circumstances, the decision-maker will consider whether the bidder/offeror:

1. made reasonable efforts to assist interested MBE Firms in obtaining the bonding, lines of credit, or insurance required by the procuring agency or the bidder/offeror; and

2. made reasonable efforts to assist interested MBE Firms in obtaining necessary equipment, supplies, materials, or related assistance or services.

III. Other Considerations

In making a determination of Good Faith Efforts the decision-maker may consider engineering estimates, catalogue prices, general market availability and availability of certified MBE Firms in the area in which the work is to be performed, other bids or offers and subcontract bids or offers substantiating significant variances between certified MBE and Non-MBE costs of participation, and their impact on the overall cost of the contract to the State and any other relevant factors.

The decision-maker may take into account whether a bidder/offeror decided to self-perform subcontract work with its own forces, especially where the self-performed work is Identified Items of Work in the procurement. The decision-maker also may take into account the performance of other bidders/offerors in meeting the contract. For example, when the apparent successful bidder/offeror fails to meet the contract goal, but others meet it, this reasonably raises the question of whether, with additional reasonable efforts, the apparent successful bidder/offeror could have met the goal. If the apparent successful bidder/offeror fails to meet the goal, but meets or exceeds the average MBE participation obtained by other bidders/offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful bidder/offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, a bidder/offeror seeking a waiver of the MBE Goal(s) or a portion thereof must provide written documentation of its Good Faith Efforts, in accordance with COMAR 21.11.03.11, within 10 business days after receiving notice that it is the apparent awardee. The written documentation shall include the following:

A. Items of Work (Complete Good Faith Efforts Documentation Attachment 1-C, Part 1)

A detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBE Firms in order to increase the likelihood of achieving the stated MBE Goal(s).

B. Outreach/Solicitation/Negotiation

1. The record of the bidder's/offeror's compliance with the outreach efforts prescribed by COMAR 21.11.03.09C(2)(a). (Complete Outreach Efforts Compliance Statement – Attachment 2).

2. A detailed statement of the efforts made to contact and negotiate with MBE Firms including:

   (a) the names, addresses, and telephone numbers of the MBE Firms who were contacted, with the dates and manner of contacts (letter, fax, email, telephone, etc.) (Complete Good Faith Efforts Attachment 1-C- Part 2, and submit letters, fax cover sheets, emails, etc. documenting solicitations); and

   (b) a description of the information provided to MBE Firms regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed and the means used to provide that information.
C. Rejected MBE Firms (Complete Good Faith Efforts Attachment 1-C, Part 3)

1. For each MBE Firm that the bidder/offeror concludes is not acceptable or qualified, a detailed statement of the reasons for the bidder's/offeror's conclusion, including the steps taken to verify the capabilities of the MBE and Non-MBE Firms quoting similar work.

2. For each certified MBE Firm that the bidder/offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the bidder's/offeror’s conclusion, including the quotes received from all MBE and Non-MBE firms bidding on the same or comparable work. *(Include copies of all quotes received.)*

3. A list of MBE Firms contacted but found to be unavailable. This list should be accompanied by a MBE Unavailability Certificate (see Exhibit A to this Part 1) signed by the MBE contractor or a statement from the bidder/offeror that the MBE contractor refused to sign the MBE Unavailability Certificate.

D. Other Documentation

1. Submit any other documentation requested by the Procurement Officer to ascertain the bidder’s/offeror’s Good Faith Efforts.

2. Submit any other documentation the bidder/offeror believes will help the Procurement Officer ascertain its Good Faith Efforts.
Exhibit A

MBE Subcontractor Unavailability Certificate

1. It is hereby certified that the firm of ____________________________________________________________________________
   (Name of Minority Firm)

   located at ____________________________________________________________________________
   (Number)                                           (Street)
   ____________________________________________________________________________
   (City)     (State)            (Zip)

   was offered an opportunity to bid on Solicitation No. ________________

   in ________________ County by ____________________________________________________________________________
   (Name of Prime Contractor’s Firm)

   *************************************************************************************************************

2. ____________________________________________________________________________________
   (Minority Firm), is either unavailable for the

   work/service or unable to prepare a bid for this project for the following reason(s):

   ____________________________________________
   ____________________________________________
   ____________________________________________

   ____________________________________________

   Signature of Minority Firm’s MBE Representative     Title     Date

   ____________________________________________

   MDOT Certification #     Telephone #

3. To be completed by the prime contractor if Section 2 of this form is not completed by the minority firm.

   To the best of my knowledge and belief, said Certified Minority Business Enterprise is either unavailable
   for the work/service for this project, is unable to prepare a bid, or did not respond to a request for a price
   proposal and has not completed the above portion of this submittal.

   ____________________________________________
   (Signature of Prime Contractor)     Title     Date
### MBE ATTACHMENT ___-1C

**GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST**

**PAGE __ OF ___**

<table>
<thead>
<tr>
<th>Prime Contractor</th>
<th>Project Description</th>
<th>Solicitation Number</th>
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**PARTS 1, 2, AND 3 MUST BE INCLUDED WITH THIS CERTIFICATE ALONG WITH ALL DOCUMENTS SUPPORTING YOUR WAIVER REQUEST.**

I affirm that I have reviewed Attachment ___-1B, Waiver Guidance. I further affirm under penalties of perjury that the contents of Parts 1, 2, and 3 of this Attachment ___-1C Good Faith Efforts Documentation Form are true to the best of my knowledge, information, and belief.

____________________________________  ______________________________________
Company Name      Signature of Representative

____________________________________  ______________________________________
Address       Printed Name and Title

____________________________________
City, State and Zip Code

____________________________________
Date
GOOD FAITH EFFORTS DOCUMENTATION
TO SUPPORT WAIVER REQUEST

PART 1 – IDENTIFIED ITEMS OF WORK BIDDER/OFFEROR MADE AVAILABLE TO
MBE FIRMS

Identify those items of work that the bidder/offoror made available to MBE Firms. This includes, where appropriate, those items the bidder/offoror identified and determined to subdivide into economically feasible units to facilitate the MBE participation. For each item listed, show the anticipated percentage of the total contract amount. It is the bidder's/offoror's responsibility to demonstrate that sufficient work to meet the goal was made available to MBE Firms, and the total percentage of the items of work identified for MBE participation equals or exceeds the percentage MBE goal set for the procurement. Note: If the procurement includes a list of bid items identified during the goal setting process as possible items of work for performance by MBE Firms, the bidder/offoror should make all of those items of work available to MBE Firms or explain why that item was not made available. If the bidder/offoror selects additional items of work to make available to MBE Firms, those additional items should also be included below.

<table>
<thead>
<tr>
<th>Identified Items of Work</th>
<th>Was this work listed in the procurement?</th>
<th>Does bidder/offoror normally self-perform this work?</th>
<th>Was this work made available to MBE Firms? If no, explain why?</th>
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Please check if Additional Sheets are attached.
GOOD FAITH EFFORTS DOCUMENTATION
TO SUPPORT WAIVER REQUEST
PART 2 – IDENTIFIED MBE FIRMS AND RECORD OF SOLICITATIONS

Identify the MBE Firms solicited to provide quotes for the Identified Items of Work made available for MBE participation. Include the name of the MBE Firm solicited, items of work for which bids/quotes were solicited, date and manner of initial and follow-up solicitations, whether the MBE provided a quote, and whether the MBE is being used to meet the MBE participation goal. MBE Firms used to meet the participation goal must be included on the MBE Participation Schedule. Note: If the procurement includes a list of the MBE Firms identified during the goal setting process as potentially available to perform the items of work, the bidder/offeror should solicit all of those MBE Firms or explain why a specific MBE was not solicited. If the bidder/offeror identifies additional MBE Firms who may be available to perform Identified Items of Work, those additional MBE Firms should also be included below. Copies of all written solicitations and documentation of follow-up calls to MBE Firms must be attached to this form. This list should be accompanied by a Minority Contractor Unavailability Certificate signed by the MBE contractor or a statement from the bidder/offeror that the MBE contractor refused to sign the Minority Contractor Unavailability Certificate (see Exhibit A to MBE Attachment 1-B). If the bidder/offeror used a Non-MBE or is self-performing the identified items of work, Part 3 must be completed.

<table>
<thead>
<tr>
<th>Firm Name:</th>
<th>Describe Item of Work Solicited</th>
<th>Initial Solicitation Date &amp; Method</th>
<th>Follow-up Solicitation Date &amp; Method</th>
<th>Details for Follow-up Calls</th>
<th>Quote Rec’d</th>
<th>Quote Used</th>
<th>Reason Quote Rejected</th>
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<td>Date:</td>
<td>Date:</td>
<td>Time of Call:</td>
<td>□ Yes □ No</td>
<td>□ Yes □ No</td>
<td>□ Used Other MBE</td>
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<td>□ Mail □ Facsimile □ Email</td>
<td>□ Phone □ Mail □ Facsimile □ Email</td>
<td>Spoke With:</td>
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<td>□ Used Non-MBE</td>
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<td>□ Left Message</td>
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<td>□ Self-performing</td>
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<tr>
<th>Firm Name:</th>
<th>Describe Item of Work Solicited</th>
<th>Initial Solicitation Date &amp; Method</th>
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<td>□ Used Other MBE</td>
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<td>Spoke With:</td>
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<td>□ Self-performing</td>
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</tbody>
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☐ Please check if Additional Sheets are attached.
GOOD FAITH EFFORTS DOCUMENTATION
TO SUPPORT WAIVER REQUEST

PART 3 – ADDITIONAL INFORMATION REGARDING REJECTED MBE QUOTES

This form must be completed if Part 2 indicates that a MBE quote was rejected because the bidder/offeror is using a Non-MBE or is self-performing the Identified Items of Work. Provide the Identified Items Work, indicate whether the work will be self-performed or performed by a Non-MBE, and if applicable, state the name of the Non-MBE. Also include the names of all MBE and Non-MBE Firms that provided a quote and the amount of each quote.

<table>
<thead>
<tr>
<th>Prime Contractor</th>
<th>Project Description</th>
<th>Solicitation Number</th>
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<tr>
<th>Describe Identified Items of Work Not Being Performed by MBE (Include spec/section number from bid)</th>
<th>Self-performing or Using Non-MBE (Provide name)</th>
<th>Amount of Non-MBE Quote</th>
<th>Name of Other Firms who Provided Quotes &amp; Whether MBE or Non-MBE</th>
<th>Amount Quoted</th>
<th>Indicate Reason Why MBE Quote Rejected &amp; Briefly Explain</th>
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<td>□ Self-performing</td>
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<td>□ MBE □ Non-MBE</td>
<td>$________</td>
<td>□ Price □ Capabilities □ Other</td>
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<td>□ Self-performing</td>
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<td>□ MBE □ Non-MBE</td>
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<td>□ Price □ Capabilities □ Other</td>
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☐ Please check if Additional Sheets are attached.
OUTREACH EFFORTS COMPLIANCE STATEMENT

Complete and submit this form within 10 working days of notification of apparent award or actual award, whichever is earlier.

In conjunction with the bid/proposal submitted in response to Solicitation No.__________, I state the following:

1. Bidder/Offeror identified subcontracting opportunities in these specific work categories:

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

2. Attached to this form are copies of written solicitations (with bidding/proposal instructions) used to solicit certified MBE firms for these subcontract opportunities.

3. Bidder/Offeror made the following attempts to personally contact the solicited MDOT-certified MBE firms:

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

4. Please Check One:

☐ This project does not involve bonding requirements.
☐ Bidder/Offeror assisted MDOT-certified MBE firms to fulfill or seek waiver of bonding requirements.

(DESCRIIBE EFFORTS): ______________________________________________________
____________________________________________________________________________

5. Please Check One:

☐ Bidder/Offeror did attend the pre-bid/pre-proposal conference.
☐ No pre-bid/pre-proposal meeting/conference was held.
☐ Bidder/Offeror did not attend the pre-bid/pre-proposal conference.

_________________________________  _____________________________
Company Name       Signature of Representative

_________________________________  _____________________________
Address        Printed Name and Title

_________________________________  _____________________________
City, State and Zip Code      Date
MBE Attachment 3A
MBE SUBCONTRACTOR PROJECT PARTICIPATION CERTIFICATION

PLEASE COMPLETE AND SUBMIT ONE FORM FOR EACH CERTIFIED MBE FIRM LISTED ON THE MBE PARTICIPATION SCHEDULE (ATTACHMENT 1A) WITHIN 10 WORKING DAYS OF NOTIFICATION OF APPARENT AWARD. IF THE BIDDER/OFFEROR FAILS TO RETURN THIS AFFIDAVIT WITHIN THE REQUIRED TIME, THE PROCUREMENT OFFICER MAY DETERMINE THAT THE BIDDER/OFFEROR IS NOT RESPONSIBLE AND THEREFORE NOT ELIGIBLE FOR CONTRACT AWARD.

Provided that __________________________ (Prime Contractor's Name) is awarded the contract in conjunction with Solicitation No. __________, such Prime Contractor intends to enter into a subcontract with_________________________ (Subcontractor's Name) committing to participation by the MBE firm __________________________ (MBE Name) with MDOT Certification Number _______________ which will receive at least $____________ which equals to_____% of the Total Contract Amount for performing the following products/services for the Contract:

<table>
<thead>
<tr>
<th>NAICS CODE</th>
<th>WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE)</th>
<th>DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES</th>
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Each of the Contractor and Subcontractor acknowledges that, for purposes of determining the accuracy of the information provided herein, the Procurement Officer may request additional information, including, without limitation, copies of the subcontract agreements and quotes. Each of the Contractor and Subcontractor solemnly affirms under the penalties of perjury that: (i) the information provided in this MBE Subcontractor Project Participation Affidavit is true to the best of its knowledge, information and belief, and (ii) has fully complied with the State Minority Business Enterprise law, State Finance and Procurement Article §14-308(a)(2), Annotated Code of Maryland which provides that, except as otherwise provided by law, a contractor may not identify a certified minority business enterprise in a Bid/Proposal and:

1. fail to request, receive, or otherwise obtain authorization from the certified minority business enterprise to identify the certified Minority Business Enterprise in its Bid/Proposal;
2. fail to notify the certified Minority Business Enterprise before execution of the Contract of its inclusion of the Bid/Proposal;
3. fail to use the certified Minority Business Enterprise in the performance of the Contract; or
4. pay the certified Minority Business Enterprise solely for the use of its name in the Bid/Proposal.

PRIME CONTRACTOR

Signature of Representative: __________________________

Printed Name and Title: __________________________

Firm's Name: __________________________

Federal Identification Number: __________________________

Address: __________________________

Telephone: __________________________ Date: ____________

SUBCONTRACTOR

Signature of Representative: __________________________

Printed Name and Title: __________________________

Firm's Name: __________________________

Federal Identification Number: __________________________

Address: __________________________

Telephone: __________________________ Date: ____________
MBE Attachment 3B
MBE PRIME PROJECT PARTICIPATION CERTIFICATION

PLEASE COMPLETE AND SUBMIT THIS FORM TO ATTEST EACH SPECIFIC ITEM OF WORK THAT YOUR MBE FIRM HAS LISTED ON THE MBE PARTICIPATION SCHEDULE (ATTACHMENT __-1A) FOR PURPOSES OF MEETING THE MBE PARTICIPATION GOALS. THIS FORM MUST BE SUBMITTED WITHIN 10 WORKING DAYS OF NOTIFICATION OF APPARENT AWARD. IF THE BIDDER/OFFEROR FAILS TO RETURN THIS AFFIDAVIT WITHIN THE REQUIRED TIME, THE PROCUREMENT OFFICER MAY DETERMINE THAT THE BIDDER/OFFEROR IS NOT RESPONSIBLE AND THEREFORE NOT ELIGIBLE FOR CONTRACT AWARD.

Provided that _________________________________________________ (Prime Contractor's Name) with Certification Number __________ is awarded the contract in conjunction with Solicitation No. ______________________, such MBE Prime Contractor intends to perform with its own forces at least $___________ which equals to ___% of the Total Contract Amount for performing the following products/services for the Contract:

<table>
<thead>
<tr>
<th>NAICS CODE</th>
<th>WORK ITEM, SPECIFICATION NUMBER, LINE ITEMS OR WORK CATEGORIES (IF APPLICABLE), FOR CONSTRUCTION PROJECTS, GENERAL CONDITIONS MUST BE LISTED SEPARATELY.</th>
<th>DESCRIPTION OF SPECIFIC PRODUCTS AND/OR SERVICES</th>
<th>VALUE OF THE WORK</th>
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MBE PRIME CONTRACTOR

Signature of Representative:

Printed Name and Title ________________________________________________

Firm's Name: ____________________________________________

Federal Identification Number: ____________________________

Address: ________________________________________________

                                   ________________________________       _______________________
Telephone: ______________________       Date: ___________________
MBE Attachment 4A  
TOWSON UNIVERSITY  
Minority Business Enterprise Participation  
Prime Contractor Paid/Unpaid MBE Invoice Report

Report #: ____________________________  
Reporting Period (Month/Year): __________  
Prime Contractor: Report is due to the MBE Liaison, by the 10th of the month following the month the services were provided.  
Note: Please number reports in sequence

<table>
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<tr>
<th>Prime Contractor</th>
<th>Contact Person</th>
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<tbody>
<tr>
<td>Address:</td>
<td></td>
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<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
<tr>
<td>MBE Subcontractor Name:</td>
<td>Contact Person:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
<tr>
<td>Subcontractor Services Provided:</td>
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</tbody>
</table>

List all payments made to MBE subcontractor named above during this reporting period:

<table>
<thead>
<tr>
<th>Invoice #</th>
<th>Amount</th>
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<tbody>
<tr>
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<td>3.</td>
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<td>4.</td>
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Total Dollars Paid: $  

List dates and amounts of any outstanding invoices:

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<thead>
<tr>
<th>Invoice #</th>
<th>Amount</th>
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<tr>
<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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</table>

Total Dollars Paid: $  

- If more than one MBE subcontractor is used for this contract, you must use separate 4A forms for each subcontractor.  
- Information regarding payments that the MBE prime will use for purposes of meeting the MBE participation goals must be reported separately in Attachment 4B  
- Return one copy (hard or electronic) of this form to the following address (electronic copy with signature and date is preferred):
  
  Victoria Nellis  
  Towson University  
  Procurement Department  
  8000 York Road  
  Towson, MD 21252  
  MBE@towson.edu  
  Ph: 410-704-2697  
  Fax: 410-704-8233

Prime Contractor Signature: ____________________________  
Date: ____________________________  
(Required)
MBE Prime Contractor: ________________________
Certification Number: ________________________
Report #: ________________________
Reporting Period (Month/Year): ________________________

MBE Prime Contractor:  Report is due to the MBE Liaison, by the 10th of the month following the month the services were provided.

Note: Please number reports in sequence

Contract #: ________________________
Contracting Unit: ________________________
Contract Amount: ________________________

Total Value of the Work to the Self-Performed for purposes of Meeting the MBE participation goal/subgoals: ________________________
Project Begin Date: ________________________
Project End Date: ________________________

Contact Person: ________________________
Address: ________________________
City: ________________________ State: ________________________ ZIP: ________________________
Phone: ________________________ Fax: ________________________ E-mail: ________________________

<table>
<thead>
<tr>
<th>Invoice Number</th>
<th>Value of the Work</th>
<th>NAICS Code</th>
<th>Description of the Work</th>
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Victoria Nellis
Towson University
Procurement Department
8000 York Road
Towson, MD 21252

Phone: 410-704-2697
Fax: 410-704-8233

MBE@towson.edu

Signature: ________________________ Date: ________________________
(Required)
**MBE Attachment 5**  
**TOWSON UNIVERSITY**  
Minority Business Enterprise Participation  
Subcontractor Paid/Unpaid MBE Invoice Report

Report #: ____________________

Reporting Period (Month/Year): ______________

Report is due by the 10th of the month following the month the services were provided.

| Contract #: | ____________________ |
| Contracting Unit: | ____________________ |
| Contract Amount: | ____________________ |
| MBE Subcontract Amt: | ____________________ |
| Project Begin Date: | ____________________ |
| Project End Date: | ____________________ |
| Services Provided: | ____________________ |

**MBE Subcontractor Name:**

**MDOT Certification #:**

**Contact Person:**

**Email:**

**Address:**

City: ____________________

State: ____________________

ZIP: ____________________

**Phone:** ____________________

**Fax:** ____________________

**E-mail:** ____________________

**Subcontractor Services Provided:**

<table>
<thead>
<tr>
<th>Invoice Amt.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. $</td>
<td></td>
</tr>
<tr>
<td>2. $</td>
<td></td>
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<tr>
<td>3. $</td>
<td></td>
</tr>
<tr>
<td>4. $</td>
<td></td>
</tr>
</tbody>
</table>

Total Dollars Paid: $ ____________________

**List dates and amounts of any unpaid invoices over 30 days old:**

<table>
<thead>
<tr>
<th>Invoice Amt.</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>1. $</td>
<td></td>
</tr>
<tr>
<td>2. $</td>
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<tr>
<td>3. $</td>
<td></td>
</tr>
<tr>
<td>4. $</td>
<td></td>
</tr>
</tbody>
</table>

Total Dollars Paid: $ ____________________

Prime Contractor: ____________________

Contact Person: ____________________

Signature: ____________________

(Required)

Date: ____________________

**Return one copy (hard or electronic) of this form to the following address (electronic copy with signature and date is preferred):**

Victoria Nellis  
Towson University  
Procurement Department  
8000 York Road  
Towson, MD 21252  
**MBE@towson.edu**  
Phone: 410-704-2697  
Fax: 410-704-8233
EXHIBIT F
COMPANY PROFILE

COMPANY NAME: ____________________________________________________________

DATE OF INCORPORATION: ___________ STATE OF INCORPORATION: ____________

TYPE OF WORK PERFORMED: ________________________________________________

________________________________________________________________________

NUMBER OF YEARS IN BUSINESS: ____________________________________________

OTHER OR FORMER NAMES UNDER WHICH YOUR ORGANIZATION HAS OPERATED:

________________________________________________________________________

TYPE OR ORGANIZATION: (I.E., CORP., PARTNERSHIP, INDIVIDUAL, JOINT VENTURE, OTHER):

________________________________________________________________________

NAME OF PRINCIPAL(S) AND TITLE(S): ______________________________________

________________________________________________________________________

________________________________________________________________________

BRIEF HISTORY OF COMPANY: _____________________________________________

________________________________________________________________________

________________________________________________________________________

TOTAL NUMBER OF EMPLOYEES: _________________________________

NUMBER OF FIELD EMPLOYEES (Excluding Supervisory): ______________________

NUMBER OF FIELD SUPERVISORY PERSONNEL: _______________________________

NUMBER OF OFFICE PERSONNEL (Excluding Supervisory): ______________________

NUMBER OF OFFICE SUPERVISORY PERSONNEL: ______________________________

BONDING CO.: _________________ BONDING CAPACITY: ________________
EXHIBIT G
FIRM EXPERIENCE

Duplicate as necessary to provide all required experience.

PROPOSER: ________________________________

PROJECT NAME: ____________________________

PROJECT DOLLAR SIZE: _____________________

START DATE: _______________________________

COMPLETION DATE: __________________________

CLIENT/CUSTOMER: __________________________

ADDRESS: _________________________________

CONTACT PERSON: __________________________

TELEPHONE NUMBER: _______________________

FAX NUMBER: ______________________________

EMAIL: ____________________________________

PROJECT MANAGER: _________________________

BRIEF, BUT DETAILED DESCRIPTION OF THE PROJECT:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

SIMILARITIES BETWEEN THIS PROJECT AND TU PROJECT:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
EXHIBIT H
BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, ____________________________ (Bidding Company)
as Principal, hereinafter called the Principal, and ____________________________ (Bonding Company)
a corporation duly organized under the laws of the State of ____________________________, as Surety,
hereinafter called the Surety, are held and firmly bound unto the State of Maryland, hereinafter called "State,"
for the sum of ____________________________ Dollars (or $ ____________________________), for the payment of which
sum, the said Principal and the said Surety bind ourselves, our heirs, executors, administrators, successors
and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for ____________________________

__________________________ as to

NOW, THEREFORE, if the Principal, upon acceptance by the State of its bid identified above, within the period
specified therein for acceptance (ninety (90) days, if no period is specified), shall execute such further
contractual documents, if any, and give such bond(s) as may be required by the terms of the bid as accepted
within the time specified (ten (10) days if no period is specified) after receipt of the forms, or in the event of
failure so to execute such further contractual documents and give such bonds, if the Principal shall pay the
State the difference not to exceed the penalty hereof between the amount specified in the Principal's bid and
such larger amount for which the State may in good faith contract with another party to perform the work
covered by said bid, then the above obligation shall be void and of no effect.

The Surety executing this instrument hereby agrees that its obligation shall not be impaired by any
extension(s) of the time for acceptance of the bid that the Principal may grant to the State, notice of which
extension(s) to the Surety being hereby waived; provided that such waiver of notice shall apply only with
respect to extensions aggregating not more than ninety (90) calendar days in addition to the period originally
allowed for acceptance of the bid.

In Presence of:
Witness

__________________________ as to

In Presence of:
Witness

__________________________ as to

__________________________ as to

__________________________ as to

Attest:

Individual Principal

__________________________ (Name)

__________________________ (SEAL)

Partnership Principal

__________________________ (Name)

__________________________ (SEAL)

__________________________ (SEAL)

__________________________ (SEAL)

__________________________ (SEAL)

__________________________ (SEAL)

Corporate Principal

__________________________ (Name of Corporation)
CORPORATE
Secretary

Attest:

CORPORATE

Bonding Agent's Name _______________________
Agent's Address _______________________

Approved as to form and legal sufficiency
this _____ day of ________________________, 20____

Associate University Counsel

_________________________________________________________________
AFFIX

By: _______________________________
President

(SEAL)

_________________________________________________________________
(Affix)

By: _______________________________
Attorney-in-fact

(SEAL)
EXHIBIT I
PERFORMANCE BOND

Principal

Business Address of Principal

Surety

a corporation of the State of ____________________________
and authorized to do business in the State of Maryland

Obligee

STATE OF MARYLAND
By and through the following Administration
TOWSON UNIVERSITY

Penal Sum of Bond (express in words and figures)

Description of Contract

Date of Contract

Date Bond Executed

Contract Number

KNOW ALL MEN BY THESE PRESENTS, That we, the Principal named above and Surety named above, being authorized to do business in Maryland, and having business addresses as shown above, are held and firmly bound unto the Obligee named above in the Penal Sum of this Performance Bond stated above, for the payment of which Penal Sum we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents. However, where Surety is composed of corporations acting as co-sureties, we, the co-sureties, bind ourselves, our successors and assigns, in such Penal Sum jointly and severally as well as severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each co-surety binds itself, jointly and severally with the Principal, for the payment of such sum as appears above its name below, but if no limit of liability is indicated, the limit of such liability shall be the full amount of Penal Sum.

WHEREAS, Principal has entered into or will enter into a contract with the State of Maryland, by and through the Administration named above acting for the State of Maryland, which contract is described and dated as shown above, and incorporated herein by reference. The contract and all items incorporated into the contract, together with any and all changes, extensions of time, alterations, modifications, or additions to the contract or to the work to be performed thereunder or to the Plans, Specifications, and Special Provisions, or any of them, or to any other items incorporated into the contract shall hereinafter be referred to as “the Contract.”

WHEREAS, it is one of the conditions precedent to the final award of the Contract that these presents be executed.

NOW, THEREFORE, during the original term of said Contract, during any extensions thereto that may be granted by the Administration, and during the guarantee and warranty period, if any, required under the Contract, unless otherwise stated therein, this Performance Bond shall remain in full force and effect unless and until the following terms and conditions are met:

1. Principal shall well and truly perform the Contract; and
2. Principal and Surety shall comply with the terms and conditions contained in this Performance Bond.

Whenever Principal shall be declared by the Administration to be in default under the Contract, the Surety may, within 15 days after notice of default from the Administration, notify the Administration of its election to either promptly proceed to remedy the default or promptly proceed to complete the contract in accordance with and subject to its terms and conditions. In the event the Surety does not elect to exercise either of the above stated options, then the Administration thereupon shall have the remaining contract work completed, Surety to remain liable hereunder for all expenses of completion up to but not exceeding the penal sum stated above.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Performance Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

This Performance Bond shall be governed by and construed in accordance with the laws of the State of Maryland and any reference herein to Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Performance Bond. If any individual is a signatory under the Principal heading below, then each such individual has signed below on his or her own behalf, has set forth below the name of
the firm, if any, in whose name he or she is doing business, and has set forth below his or her title as a sole proprietor. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or joint venture have signed below, each member has set forth below the name of the partnership or joint venture, and each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any corporation is a signatory under the Principal or Surety heading below, then each such corporation has caused the following: the corporation's name to be set forth below, a duly authorized representative of the corporation to affix below the corporation's seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as a witness. All of the above has been done as of the Date of Bond shown above.

In Presence of:
Witness
____________________________ as to __________________________ (SEAL)

In Presence of:
Witness
____________________________ as to __________________________ (SEAL)

Co-Partnership Principal
____________________________ as to __________________________ (SEAL)

Name of Co-Partnership

By: __________________________ (SEAL)

____________________________ as to __________________________ (SEAL)

____________________________ as to __________________________ (SEAL)

Corporate Principal

Attest:
____________________________

Name of Corporation

By: __________________________ CORPORATE SEAL

Corporate Secretary

President with Title

Surety

Attest:
____________________________

Title: __________________________

Signature

Bonding Agent’s Name: __________________________

Business Address of Surety

Agent’s Address: __________________________

Approved as to legal form and sufficiency this _____ day of __________, 20_____

__________________________________________

Director of Procurement
EXHIBIT J
PAYMENT BOND

______________________________
Principal

______________________________
Business Address of Principal

______________________________
Surety

______________________________
Obligee

STATE OF MARYLAND
a corporation of the State of Maryland
and authorized to do business in the State of Maryland

______________________________
By and through the following Administration
TOWSON UNIVERSITY

Penal Sum of Bond (express in words and figures)

______________________________
Description of Contract

______________________________
Date of Contract, 20

______________________________
Date Bond Executed, 20

Contract Number

KNOW ALL MEN BY THESE PRESENTS, That we, the Principal named above and Surety named above, being authorized to do business in Maryland, and having business addresses as shown above, are held and firmly bound unto the Obligee named above, for the use and benefit of claimants as hereinafter defined, in the Penal Sum of this Payment Bond stated above, for the payment of which Penal Sum we bind ourselves, our heirs, executors, administrators, personal representatives, successors, and assigns, jointly and severally, firmly by these presents. However, where Surety is composed of corporations acting as co-sureties, we, the co-sureties, bind ourselves, our successors and assigns, in such Penal Sum jointly and severally as well as severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each co-surety binds itself, jointly and severally with the Principal, for the payment of such sum as appears above its name below, but if no limit of liability is indicated, the limit of such liability shall be the full amount of the Penal Sum.

WHEREAS, Principal has entered into or will enter into a contract with the State, by and through the Administration named above acting for the State of Maryland, which contract is described and dated as shown above, and incorporated herein by reference. The contract and all items incorporated into the contract, together with any and all changes, extensions of time, alterations, modifications, or additions to the contract or to the work to be performed thereunder or to the Plans, Specifications, and Special Provisions, or any of them, or to any other items incorporated into the contract shall hereinafter be referred to as "the Contract."

WHEREAS, it is one of the conditions precedent to the final award of the Contract that these presents be executed.

NOW, THEREFORE, the condition of this obligation is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and materials furnished, supplied and reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject to the following conditions:

1. A claimant is defined to be any and all of those persons supplying labor and materials (including lessors of the equipment to the extent of the fair market value thereof) to the Principal or its subcontractors and subcontractors in the prosecution of the work provided for in the Contract, entitled to the protection provided by Section 9-113 of the Real Property Article of the Annotated Code of Maryland, as from time to time amended.

2. The above named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full may, pursuant to and when in compliance with the provisions of the aforesaid Section 9-113, sue on this Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant and have execution thereon. The Obligee shall not be liable for the payment of any costs or expenses of any such suit.
The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any way affect its obligations on this Payment Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

This Payment Bond shall be governed by and construed in accordance with the laws of the State of Maryland and any reference herein to the Principal or Surety in the singular shall include all entities in the plural who or which are signatories under the Principal or Surety heading below.

IN WITNESS WHEREOF, Principal and Surety have set their hands and seals to this Payment Bond. If any individual is a signatory under the Principal heading below, then each such individual has signed below on his or her own behalf, has set forth below the name of the firm, if any, in whose name he or she is doing business, and has set forth below his or her title as a sole proprietor. If any partnership or joint venture is a signatory under the Principal heading below, then all members of each such partnership or joint venture have signed below, each member has set forth below the name of the partnership or joint venture, and each member has set forth below his or her title as a general partner, limited partner, or member of joint venture, whichever is applicable. If any corporation is a signatory under the Principal or Surety heading below, then each such corporation has caused the following: the corporation's name to be set forth below, a duly authorized representative of the corporation to affix below the corporation's seal and to attach hereto a notarized corporate resolution or power of attorney authorizing such action, and each such duly authorized representative to sign below and to set forth below his or her title as a representative of the corporation. If any individual acts as a witness to any signature below, then each such individual has signed below and has set forth below his or her title as a witness. All of the above has been done as of the Date of Bond shown above.

<table>
<thead>
<tr>
<th>In Presence of:</th>
<th>Individual Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Witness</td>
<td></td>
</tr>
</tbody>
</table>
| _______________________ | _____________________ | (SEAL)

<table>
<thead>
<tr>
<th>In Presence of:</th>
<th>Co-Partnership Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Witness</td>
<td></td>
</tr>
</tbody>
</table>
| _______________________ | __________________________ | (SEAL)
| Name of Co-Partnership  |                           |
| _______________________ | __________________________ | (SEAL)
| _______________________ | __________________________ | (SEAL)
| _______________________ | __________________________ | (SEAL)

<table>
<thead>
<tr>
<th>Corporate Principal</th>
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<tbody>
<tr>
<td>Name of Corporation</td>
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<td>_______________________</td>
<td>__________________________</td>
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<tr>
<td>Corporate Secretary</td>
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<td>_______________________</td>
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<tr>
<td>President with Title</td>
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<td>_______________________</td>
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<tr>
<td>Surety</td>
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<td>Attest</td>
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<td>_______________________</td>
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</tbody>
</table>

| Signature               |                           |
| _______________________ | __________________________ |
| Bonding Agent's Name    |                           |
| _______________________ | __________________________ |
| Agent's Address         |                           |
| _______________________ | __________________________ |

Approved as to legal form and sufficiency this _____ day of __________, 20____

______________________________
Director of Procurement
EXHIBIT K
ADDENDA ACKNOWLEDGMENT

NAME OF BIDDER: _______________________________________

SOLICITATION NUMBER: __________________________________

PROJECT TITLE: _________________________________________

DUE DATE: _____________________________________________

ACKNOWLEDGMENT

I hereby acknowledge receipt of the following addenda which have been issued regarding the above referenced solicitation:

Addendum #1, issue date _________________________________

Addendum #2, issue date _________________________________

Addendum #3, issue date _________________________________

Addendum #4, issue date _________________________________

Addendum #5, issue date _________________________________

Addendum #6, issue date _________________________________

__________________________________________  _______________________________________
Signature                                           Printed Name

__________________________________________
Title

__________________________________________  _______________________________________
Date                                               Company
EXHIBIT L
KEY PERSONNEL FORM

SOLICITATION/CONTRACT TITLE: ________________________________

SOLICITATION/CONTRACT NUMBER: ______________________________

1. BIDDER/OFFEROR NAME: ________________________________

2. KEY PERSONNEL NAME: ________________________________

3. POSITION TO BE ASSIGNED: Check applicable
   _____Project Manager  _____Other. Title ________________________________
   _____Field Superintendent

4. EDUCATIONAL BACKGROUND:

   Institution Degree/Diploma/Certification Major (if any) Date of Degree
   ___________________________ ___________________________ ___________________________
   ___________________________ ___________________________ ___________________________
   ___________________________ ___________________________ ___________________________

5. EMPLOYMENT HISTORY. If key personnel have more than three (3) previous employers, provide complete employment history via supplemental page(s) attached to this form.

5.1 CURRENT EMPLOYER: ________________________________

   DATES OF EMPLOYMENT: ________________________________

   POSITION(S) HELD DURATION BY DATE
   ___________________________ ___________________________
   ___________________________ ___________________________

5.2 PRIOR EMPLOYER: ________________________________

   DATES OF EMPLOYMENT: ________________________________

   POSITION(S) HELD DURATION BY DATE
   ___________________________ ___________________________
   ___________________________ ___________________________

NOTE: If space provided is insufficient, attach additional page(s) and indicate “See attached.”
CONTRACT NAME ____________________________________________

CONTRACT NUMBER _______________________________________

EXHIBIT L - KEY PERSONNEL FORM

5.3 PRIOR EMPLOYER: _______________________________________

DATES OF EMPLOYMENT: ________________________________

POSITION(S) HELD DURATION BY DATE

__________________________________________

__________________________________________

6. PROJECT REFERENCES. Furnish reference data for project owners/clients for specific projects to which key personnel were assigned. References from projects listed on Attachment A are preferred.

6.1 CONTACT PERSON: ___________________________ TELEPHONE #: ________________

COMPANY NAME: __________________________________________

EMAIL ADDRESS: __________________________________________

DESCRIPTION OF CONTRACT/PROJECT: ______________________

6.2 CONTACT PERSON: ___________________________ TELEPHONE #: ________________

COMPANY NAME: __________________________________________

EMAIL ADDRESS: __________________________________________

DESCRIPTION OF CONTRACT/PROJECT: ______________________

6.3 CONTACT PERSON: ___________________________ TELEPHONE #: ________________

COMPANY NAME: __________________________________________

EMAIL ADDRESS: __________________________________________

DESCRIPTION OF CONTRACT/PROJECT DONE: __________________

7. ACHIEVEMENTS/OTHER NOTATIONS (Optional):

________________________________________________________________________

________________________________________________________________________

8. SIMILAR PROJECT/CONTRACT EXPERIENCE. Complete a separate *Attachment A to Key Personnel Form for all key personnel proposed. At a minimum, include Project Manager and, if applicable, Field Superintendent(s). List at least three (3) prior projects for each.

NOTE: If space provided is insufficient, attach additional page(s) and indicate “See attached.”

Page 2 of 3
8. SIMILAR PROJECT/CONTRACT EXPERIENCE

KEY PERSONNEL NAME: ___________________________ BIDDER OFFEROR NAME: ___________________________

ROLE TO BE ASSIGNED (check one): PROJECT MANAGER _____ FIELD SUPERINTENDENT _____ OTHER _____ Title: ___________________________

<table>
<thead>
<tr>
<th>PROJECT NAME/LOCATION</th>
<th>PROJECT DESCRIPTION</th>
<th>KEY PERSONNEL ROLE</th>
<th>PROJECT VALUE Must be a minimum of:</th>
<th>START AND COMPLETION DATES (MM/YY-MM/YY)</th>
<th>OWNER/CLIENT CONTACT/TELEPHONE #</th>
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Note: List a minimum of three (3) projects for all key personnel proposed.