



AEPA IFB #012-C SYNTHETIC TURF

ATHLETIC/RECREATIONAL FACILITY INDOOR AND OUTDOOR SYNTHETIC TURF FOR ATHLETIC FIELDS, PLAYGROUNDS, GOLF COURSES AND LANDSCAPING TO INCLUDE INSTALLATION, RENOVATION, MAINTENANCE, PRODUCTS AND SERVICES

PART B – SPECIFICATIONS

TABLE OF CONTENTS

1. Scope & Type of Bid	1
2. Anticipated AEPA Member Agency Participation	3
3. Glossary of Terms	4
4. Special Terms and Conditions	13
5. Specifications	19
6. Substantiating Documentation	51

1. Scope of Bid

AEPA is seeking qualified, experienced contractor(s) who possess the necessary resources and capabilities to acquire, deliver and perform the required supplies, materials equipment and labor to all 24 member states necessary to:

- 1.1. Consult and work with individual educational institutions and governmental institutions to assess and evaluate their existing athletic and recreational indoor and or outdoor playing fields, playgrounds, golf courses, parks, areas around buildings and related facilities to determine and develop a complete and comprehensive solution for new installations, maintenance, repair, restoration and resurfacing of existing facilities to a condition that meets or exceeds federal, state, local and/or industry standards.
- 1.2. Assist and work with AEPA Member agencies and governmental institutions in planning, designing and implementing a construction program to construct new field or facilities that meet or exceed the institution’s requirements and industry standards.

- 1.3. Perform the required site work to prepare the individual project site to have the synthetic turf or surface installed. Such work may include but is not limited to clearing, excavation, fill, leveling, drainage work, preparing the base course, soil testing etc., to prepare for the installation of the final turf or field surface.
- 1.4. Perform the work required to restore, repair, renovate an existing synthetic turf or surface and associated facilities to good working conditions and so that it meets or exceeds the institution's program requirements, manufacturer's specifications, industry standards and governing agencies and organizations rules, regulations and requirements.
- 1.5. Provide the necessary labor, supplies, materials and equipment to properly and professionally strip, line and provide any event markings required for athletic or recreational events to be held on or within the AEPA Member agencies and governmental institutions facility.
- 1.6. Provide the necessary athletic event hardware, equipment and accessories required to properly conduct any identified athletic events in accordance with the national or state governing organizations that oversee those athletic activities identified.
- 1.7. Perform and complete any warranty work required in accordance with this solicitation's requirements, manufacturer's instructions and specifications and industry standards.
- 1.8. Offer and make available upon request the necessary products and services for the owner to make minor repairs to and to maintain the athletic or recreational turf, surface, event hardware or facility in good condition throughout its life cycle.
- 1.9. Offer and provide AEPA Member agencies and governmental institutions staff with the training, technical support, maintenance instructions, supplies and equipment for them to properly operate, maintain and protect their investment through its life cycle.

The offeror should note that AEPA member states prefer providers/contractors that can provide and perform the scope of work as indicated in items one (1) through nine (9) above as a turn-key solution. However, it is also recognized that there are providers/contractors that specialize in only providing and installing the turf/field surfaces or striping, lining and marking of these types of facilities. Responses can be made for any of the major components of assessing, designing, developing, constructing, renovating, repairing and maintaining the various types of athletic/recreational facilities requested and described herein. Under the terms of this solicitation, AEPA reserves the right to accept or reject offeror responses that do not offer a turn-key solution for the complete scope of work indicated above.

Type of Bid

YES	NO	TYPE OF BID
	√	CATALOG: See page 21 of AEPA 012 Part A for definition.
√		LINE ITEM: See page 21 of AEPA 012 Part A for definition. Other pricing methods may be used along with Line Item pricing.

2. Anticipated AEPA Member Agency Participation (combined total for all athletic surfaces)

State	Participate (Yes/No/Undecided)	Estimated First year Purchase Volume	% Growth for Year 2-4	State	Participate (Yes/No/Undecided)	Estimated First year Purchase Volume	% Growth for Year 2-4
California	Yes	\$100,000	1%	Colorado	Yes	\$100,000	2%
Connecticut	Yes	\$500,000	10%	Florida	Yes	\$25,000	5%
Indiana	No			Iowa	No		
Kansas	Yes	\$1,500,000	5%	Kentucky	Yes	\$300,000	3%
Massachusetts	No			Michigan	Yes	\$50,000	5%
Minnesota	Yes	\$75,000	5%	Missouri	Yes	\$2,500,000	5%
Montana	Yes	\$500,000	0%	Nebraska	No		
New Mexico	Yes	\$5,000,000	5%	North Dakota	Yes	\$50,000	5%
Ohio	Yes	\$1,000,000	3%	Oregon	Yes	\$100,000	50%
Pennsylvania	Yes	\$8,000,000	10%	Texas	Yes	\$200,000	10%
Virginia	Yes	\$600,000	5%	Washington	Yes	\$5,000,000	10%
Wisconsin	Yes	\$1,250,000	10%	Wyoming	Yes	\$100,000	20%
					Estimated Total	\$26,950,000	

THIS CHART IS A TOTAL COMBINED PARTICIPATION FOR ALL ATHLETIC SURFACES INCLUDING: HARDWOOD & SYNTHETIC FLOOR, SYNTHETIC TURF AND OUTDOOR TRACKS AND COURT SURFACES.

Please note that individual AEPA state agencies that have indicated above they would like to participate in any contract awarded under this solicitation does not guarantee or mean that the individual AEPA Member Agency will enter into a contract with any AEPA approved vendor. Each AEPA Member Agency will make that determination after reviewing vendor responses and AEPA's recommendation for acceptance and bid award. The AEPA Member Agency's contracting decision shall be final.

The above information relating to the estimated/projected volume for the first year for this solicitation is provided based on submittals from its members. AEPA Member Agencies anticipate that purchase volumes will increase in contract years two through four (2-4). This information is provided as an aid to offerors in preparing bids only. It is not to be considered a guarantee of volume under this IFB. The successful vendor's discount and pricing schedule shall apply regardless of the volume of business under the contract.

3. Glossary of Terms

AAMA: American Architectural Manufacturers Association (847) 303-5664, www.aamanet.org

AAU: Amateur Athletic Union (407) 934-7200 www.aauathletics.org

Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in specifications or other contract documents, they shall mean the recognized name of the organizations responsible for the standards and regulations in the following list. Names, telephone numbers and websites are subject to change and are believed to be accurate and up-to-date as of the date of the contract documents.

ACI: American Concrete Institute (248) 848-3700, www.aci-int.org

ADA: Americans with Disabilities Act - ADA (42 USC Section 12101 et seq.) (800) 872-2253, www.access-board.gov

ADAAG: Americans with Disabilities Act Architectural Guidelines (800) 872-2253, www.access-board.gov

AEPA Member Agency: A state cooperative purchasing agency recognized by AEPA to represent a specified state in contracting activities associated with this solicitation.

AGCA: Associated General Contractors of America (The) (703) 548-3118, www.agc.org

AI: Asphalt Institute (859) 822-4960, www.asphaltinstitute.org

AIA: American Institute of Architects (The) (800) 242-3837, www.aia.org

ALCA: Associated Landscape Contractors of America (Now PLANET – Professional Landcare Network)

Alternative Costing: If a project requires goods and services that are not covered by R.S. Means or a nationally published price list, the offeror will be required to obtain three (3) written cost proposals from local providers. Use the most advantageous cost proposal and add their normal and customary mark-up and overhead provided as part of their response to obtain the normal/retail cost. The stated AEPA discount will then be taken to arrive at the AEPA price. All products and services falling under this category must be submitted in advance and approved by the AEPA Member's Agency prior to being included in any quote or proposal from the contractor.

If a product or service is required that must be custom designed and manufactured to meet an individual project site's conditions and/or provided for a unique application or project, the contractor must utilize the alternative costing method described above.

AEPA Members and/or their institutions reserve the right to accept or reject any third party cost proposals or quotes provided by the offeror.

If a product or service is required as part of the performance under this solicitation that can only be obtained and/or manufactured from a single source and falls under the sole source provision of some state's procurement codes, the contractor must provide the AEPA Member's Agency with the necessary documentation to substantiate the purchasing method.

ANSI: American National Standards Institute (202) 293-8020, www.ansi.org

API: American Petroleum Institute (202) 682-8000, www.api.org

3. Glossary of Terms

Approved: Is defined as conveying authorization or action on the contractor's submittals, applications and/or requests. The owner shall identify and establish within the contract documents who its' designated representative is and the parameters of the individual's duties, responsibilities and authority.

ASBA: American Sports Builders Association (866) 501-2722, www.sportsbuilders.org

ASCE: American Society of Civil Engineers (800) 548-2723, www.asce.org

ASTM: American Society for Testing and Materials International (610) 832-9585, www.astm.org

Bonding Requirements: Each of the AEPA Member states have their own bonding requirements. It is the offeror's responsibility to be acquainted with each state's rules, regulations, procedures and requirements relating to payment and performance bonds, and to comply with each state's requirement and the following:

1. Upon execution of a contract between an AEPA Member's Agency and the offeror, performance and payment bonds shall be provided to the institution as required by each state's law.
2. The offeror shall execute a performance bond in an amount equal to one hundred percent (100%) of the price specified in the contract between the member institution and from a surety company authorized to do business in that individual state. Performance bonds shall be on standard forms.
3. A payment bond, in an amount equal to one hundred percent (100%) of the price specified in the contract between the member institution and the offeror, shall be executed by a surety company authorized to do business in that individual state. This bond will protect all persons supplying labor and materials to the offeror for the performance of the work provided in the contract. Payment bonds shall be on standard forms.
4. The offeror shall deliver both the performance and payment bonds to the member institution at the time the project contract is executed.
5. All suits for non-payment or non-performance shall be filed as allowed under each state's law.
6. If required by the AEPA Member, the offeror will be responsible for providing the agency with copies of all contracts and bonds in accordance with their purchasing procedures.

CFFA: Chemical Fabrics & Film Association, Inc. (206) 241-7333, www.chemicalfabricsandfilm.com

CLFMI: Chain Link Fence Manufacturers Institute (301) 596-2583, www.chainlinkinfo.org

Contract Between AEPA Member's Agency and the Offeror: In any contract between the offeror and an AEPA Member's Agency for athletic facilities covered by this solicitation, the terms and conditions listed herein will prevail. A contract between the offeror and the AEPA Member institution for any construction services shall contain all elements of and be an industry standard agreement.

If applicable, the following items may need to be addressed:

1. Work to be performed by the AEPA Member institution must be clearly described and the vendor's standards for acceptance stated.
2. The condition of the site prior to start of work by the vendor will be established and agreed upon prior to contract execution.
3. The party responsible for obtaining, providing and paying for temporary utility service, such as power, water and other related items, must be identified and agreed upon by all parties prior to contract execution.
4. If construction space is directly under, above, in or near AEPA Member institution's used space, the vendor must agree to receive written approval from the contact person prior to interrupting any ongoing activity or program.
5. Access to the construction space will be limited to the way agreed upon by the parties.
6. When loading, unloading or operating equipment near an unprotected owner used area, the vendor will keep an employee as a guard to prevent students and adults from entering.
7. Change orders are to be avoided, if possible, since they often indicate poor planning. A mutually agreed upon system for establishing changes must be identified, including changes in scope and changes in compensation for the vendor. Because of cost, safety and scheduling considerations, the ability to make field change orders needs to be permitted, and mutually agreed upon paperwork to document these changes, must be allowed. A change order that increases the contract amount in excess of Five Thousand Dollars (\$5,000), or five percent (5%) of the contract amount, whichever is greater, must be approved, in writing, by the governing authority.

Contract Between Owner, Buyer and Contractor: An agreement between the AEPA Member's Agency (Owner), AEPA Member (Buyer) and the AEPA contractor for the procurement of goods and services in the construction and professional services areas shall be signed for each major contract. AEPA issues this agreement in order to consummate the agreement of the parties in accordance with the terms and conditions specified in the IFB, and that the owner's purchase order to the buyer is in accordance with the same terms and conditions.

Contracting AEPA Member Agency: An AEPA Member Agency that enters into a contract as a result of this solicitation.

Contractor's License: Each of the 24 states covered by this solicitation has its own state licensing qualifications, requirements and processes. The offeror is responsible for knowing each state's requirements and codes. At the time of response, offeror must be able to comply with all licensing requirements. For those states where licenses are required, a copy of the appropriate licenses authorizing the offeror to undertake or purports to undertake, supervise, subcontract others, to construct or to provide services and materials described herein, shall be included with its response. If the offeror intends to subcontract with other qualified distributors, dealers or firms, the subcontractors must be listed and copies of their licenses shall be submitted by the offeror with its response. All required licenses will be kept current and in compliance with the rules and regulations of each state's regulatory agency.

CPSC: U.S. Consumer Product Safety Commission (301) 504-7923, www.cpsc.gov

CSI: Construction Specifications Institute (The) (800) 689-2900, www.csinet.org

Drawings and Specifications: Term for bidding documents and contract documents.

Evaluation Factors: To qualify as a responsive offeror, the response must be responsive and materially satisfy all mandatory requirements identified throughout the solicitation. To be considered responsive, a response must reasonably and substantially conform to all of the specified requirements within each section of the solicitation in the judgment of the AEPA evaluation committee. Therefore, the offerors should take note that AEPA reserves the right to assign any penalties it considers warranted due to the offeror's failure to comply with terms, conditions or specifications contained herein. If the offeror considers terms, conditions or specifications overly restrictive, the offeror is to clearly identify and state in the bid response as exceptions or deviations. Offeror's required responses for evaluation purposes are "yes" responsive or "no" non-responsive.

Cost evaluation will be based on a point system with points being awarded for being a low to high bidder for each cost evaluation item, that is, contractor's labor rates, discount off R.S. Means, overhead and profit percentage markup, mileage charge, per diem rate, travel time, etc. If an offeror leaves out an item that is required, AEPA will allot zero (0) points to that item, and if awarded a contract, cannot be used in providing products or services. The low bidder will receive the full point value and all other bidders will receive points calculated as follows:

$(\text{Lowest Bid} / \text{Other Bid}) \times \text{point value}$

Federal Requirements: Contractor agrees, when working on any federally assisted projects with more than Twenty Thousand Dollars (\$20,000) in labor costs, to comply with the Contract Work Hours and Safety Standards Act, the Davis-Bacon Act (Section 29, CFR Part 5), the Copeland "Anti-Kickback" Act, and the Equal Opportunity Employment requirements of Executive Order 11375. In such projects, the contractor agrees to post wage rates at the work site, and to comply with all reporting requirements. The contractor shall provide AEPA with a copy of any required report filed. In addition, to comply with the Copeland Act, the contractor must keep records for three (3) years, and allow the federal grantor agency access to these records, upon demand. All federally assisted contracts to AEPA members that exceed Ten Thousand Dollars (\$10,000) may be terminated by the federal grantee for non-compliance by the contractor. In projects that are not federally funded, offeror must agree to meet any federal, state or local requirements, as necessary. In addition, if compliance with the federal regulations increases the contract costs beyond the agreed upon costs in this solicitation, the additional costs may only apply to the portion of the work paid by the federal grantee. On all other projects, the prices must agree with this contract.

Furnish: Supply and deliver to project site, ready for unloading, unpacking, assembly, installation and similar operations.

GSI: Geosynthetic Institute (610) 522-8440, www.geosynthetic-institute.org

ICRI: International Concrete Repair Institute, Inc. (847) 827-0830, www.icri.org

Individual Project Contract Documents: Should consist of the construction contract, conditions of the contract, drawings (if required) and specifications defining the scope of work, product specification, delivery timelines, etc. These should be issued prior to signing the construction contract.

Install: Operations at the project site, including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting cleaning, and similar operations.

ISO: International Organization for Standardization www.iso.ch available from ANSI (202) 293-8020, www.ansi.org

Manufacturer's Representative: Dealers, distributors or installers submitting a response to this solicitation for products requested herein or as a manufacturer's representative must include with their response documented evidence from or between them and the manufacturer certifying that the offeror is a bona fide manufacturer's agent for the specific products or services proposed. The offeror is qualified and experienced to assess existing conditions, develop and submit manufacturer acceptable solutions for the product lines offered. The manufacturer will support, review and issue their guarantee on the work performed and products provided. The offeror has a good track record with their product. Should the offeror fail to satisfactorily fulfill any obligations established as a result of completing a project using their products/system under contract as a result of this solicitation, the manufacturer will either assume and discharge such obligations or provide for their competent assumption by one or more bona fide representatives for the balance of the obligations.

Material Costs: Costs for materials, including taxes, delivery, handling, storage, and waste.

Member: A public school district or other qualifying agency authorized to use the contracts of an AEPA Member Agency.

MHIA: Material Handling Industry of America (800) 345-1815, www.mhia.org

NAGWS: National Association for Girls and Women in Sport (800) 213-7193, ext. 453, www.aahperd.org/nagws/

NCAA: National Collegiate Athletic Association (The) (317) 917-6222, www.ncaa.org

NFHS: National Federation of State High School Associations (317) 972-6900, www.nfhs.org

Non-Responsive Offer: Any offer that does not conform to the mandatory or essential terms, conditions and/or specified bid requirements for this solicitation is considered non-responsive.

NSSGA: National Stone, Sand & Gravel Association (800) 342-1415, www.nsf.org

Offeror's Price List: For the purpose of this solicitation, the offeror's price lists shall consist of the cost evaluation submittal form; manufacturer's/distributor's published price lists that clearly state and identify all products and services offered with the offeror's discount to be applied to each to determine the AEPA price and because the scope of work covered by this solicitation may require site preparation or other construction related products and services be provided as part of completing the proposed project. The AEPA members have selected "R.S. Means", a nationally accepted costing method, to be used to determine the cost of those items not covered by a published price list and/or the alternative method of costing.

OSHA: Occupational Safety and Health Administration (800) 321- 6742, www.osha.gov

Owner: The AEPA member agency or its individual member organization that has contracted with the successful bidder.

Owner's Representative: An individual identified by the member as contact person for an individual project. Member's representative has authority to make decisions and to authorize any actions as defined for the project.

Ownership of Materials and Documents: AEPA Member's shall be the sole owner of all rights, titles and interests, including copyright, in and to all software, plans, diagrams, facilities

and tools (hereafter "**materials**") which are originated or created through contractor's work pursuant to any contract entered into between AEPA Member and contractor. Contractor, for valuable consideration herein provided, shall execute all **documents** necessary to assign and transfer to, and vest in AEPA Member rights, titles and interests in and to such original **materials**, including any copyright, patent and trade secret rights which arise pursuant to Contractor's work under any contract entered into between AEPA Member and contractor.

PDI: Plumbing & Drainage Institute (800) 589-8956, www.pdionline.org

Performance Specification: Specifies the subsequent performance of completed construction work rather than prescribing how the work shall be constructed and installed.

PLANET: Professional Landcare Network (Formerly: ACLA – Associated Landscape Contractors of America) 800 395-2522, www.landcarenetwork.org

Prime Contractor: Any firm, business and/or individual(s) who submits a response to this IFB and is awarded a contract. The contractor will be considered a prime contractor to AEPA and AEPA will not enter into any agreements with any subcontractor. Any contractor paid directly by AEPA is a prime contractor. Any subcontractor performing under this IFB is contracted and paid by the prime contractor. Prime contractors using subcontractors must be willing, able and capable of obtaining, supervising and being responsible for any subcontractors required to perform and/or provide products and services offered herein.

Project Site: Space available for performing construction activities. The extent of project site is shown on drawings and may or may not be identical with the description of the land on which project is to be built.

Provide: Furnish and install, complete and ready for the intended use.

Provisions Required by Law: Each and every provision of law and any clause required by law to be in the contract will be read and enforced as though it were included therein, and if through mistake or otherwise any such provision is not inserted or is not correctly inserted, then upon application of either party, the contract will forthwith be physically amended to make such insertion or correction.

Qualifications: Includes any and all skills, knowledge, capacities, capabilities, experience, financial stability, available human and physical resources, historical background, past and present performance, properly licensed to perform and provide products within the 24 AEPA Member states. The proposed products/services meet or exceed specifications specified herein and proposed pricing complies with state and local requirements. The evaluation of a respondent's qualifications shall be done in accordance with the criteria set forth herein, and the most recent edition of any relevant regulation, standard, document or code that shall be in effect. Where conflict among the requirements or with these specifications exists, the most stringent requirement shall be utilized.

R.S. Means Quotations/Proposals: When providing R.S. Means costs as part of a project's proposal, the following items apply:

1. R.S. Means proposals must use the current year, standard costs based on the following CD titles:
 - a. Repair and Remodeling Cost Data
 - b. Building Construction Cost Data

c. Facility Construction Cost Data

2. All work proposed under the R.S. Means method must use the R.S. Means format, even if subcontractors are used to do the work. Subcontractor's invoices must tie to the R.S. Means spreadsheet.
3. An R.S. Means spreadsheet must be submitted to substantiate the quote given to the AEPA Member institution. Make sure that spreadsheet columns are expanded to show the full R.S. Means number and a sufficient amount of the description.
4. Pricing must be done by Location Codes. National Average will not be allowed. In order to choose the "closest" location code, the first three (3) numbers of the zip code will be used to determine the city location index in each state. The same criteria are used by R.S. Means. As an example, if the project is in Hobbs, New Mexico, which has a zip code of 88240, the city index to be used is Roswell, New Mexico, which has a zip code of 88201.
5. AEPA discount, bonding cost and sales taxes if applicable, must be shown as separate line items at the bottom of the R.S. Means spreadsheet. This information can be handwritten or typed on the spreadsheet or can be shown on a separate summary sheet. The summary sheet must start with the R.S. Means spreadsheet total and show the detail for each of the items stated above.
6. All change orders which list items covered by R.S. Means must be supported by an R.S. Means spreadsheet.

Regulations: Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the work.

Sample: Samples may be required prior to awarding a contract and/or prior to entering into an individual project contract. Upon request of an AEPA Member, the offeror will provide adequate samples and detailed specifications for any item offered. Samples must be submitted within ten (10) days of request from the AEPA Member. Samples will be free of charge and submitted and removed by offeror at offeror's expense. Samples will be compared to RFP specifications and evaluated as to materials used in construction, quality and workmanship, durability, adaptability to the use for which the items were intended and overall appearance. Samples received may be held for comparison with deliveries. The AEPA Member will not be held responsible for samples damaged or destroyed in examination or testing. Samples not removed within thirty (30) days after notice to offeror will be considered abandoned and the AEPA or its Member Agency will have the right to dispose of them.

Shop Drawings: Drawings made for production purposes by persons other than a designer.

Site Cleanup: Contractor will clean up and remove all debris resulting from its work as required by the AEPA Member. The Contractor shall comply with all laws and regulations governing disposal of construction and hazardous materials. Upon completion of the work, the premises will be left in a neat, unobstructed condition with everything in good repair and order.

Site Examination: Contractor shall familiarize itself with the site, in order to anticipate unseen problems that may develop as the work progresses. Failure to have visited the site before submitting a proposal shall in no way relieve the contractor from furnishing any materials or performing any work required to complete the project in accordance with the contract documents.

Site Preparation: The contractor will not begin a project for which the site is not prepared or in the condition agreed upon in writing by the AEPA Member and the contractor. Site preparation may include but not limited to, moving or relocating equipment, grading, soil testing, clearing and securing the site, installation and relocation of utilities, and any other task as indentify by the AEPA Member.

Specifications: Written descriptions of work, materials, or equipment that complements the construction drawings.

State Wage Rates: Some of the AEPA Member's states have and require the contractors to pay state wage rates. It is the offeror's responsibility to be acquainted with those state's Department of Labor's rules, regulations, procedures and requirements relating to state wage rates, and to comply with state and federal regulations regarding payment of wages on public projects. The offeror and any subcontractors shall pay all tradesmen and laborers employed on the site of the project, unconditionally and not less often than once a week, and without subsequent unlawful deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the advertised specifications.

Subcontractors: If it is necessary for the offeror to contract with third party firms to provide various goods and services, the following will apply:

1. In awarding subcontracts, the contractor agrees that any subcontract competitively solicited by contractor and awarded to subcontractors on their ability to meet the specifications and comply with the requirements of the individual project.
2. Subcontractors, as required need to hold the appropriate contractor license as required by AEPA Members and comply with AEPA Member state laws and regulations.
3. AEPA Member reserves the right to approve or reject any subcontractor listed in the offeror's project proposal.
4. Subcontractors will need to provide performance and payment bonds as required by the AEPA Member state laws and regulations.

SWRI: Sealant, Waterproofing & Restoration Institute (816) 472-7974, www.swrionline.org

TPI: Turfgrass Producers International (847) 649-5555, www.turfgrassod.org

UBC: Uniform Building Codes (800) 468-4322, www.ubc.com

UCS: UCS provider of track & field, sports & recreational products, 511 Hoffman Road Lincolnton, NC 2809, (800) 526-4856, www.ucsspirit.com

UL: Underwriters Laboratories Inc. (877) 854-3577, www.ul.com

Unit Cost: An average cost per unit calculated by dividing total costs of the item by the measured quantity of units. Unit costs may include material costs, labor costs, plant and equipment costs, overhead costs, job and operating and profit. The content of the unit costs must be made clear. An item may have separate unit costs for materials and labor.

Unit Price: Similar to a unit cost but usually consisting of all direct costs and some or all indirect costs.

Value Engineering: Comparison and economic evaluation of alternate construction methods for a given project.

Vendor/Contractor: Individual or entity providing goods and services to AEPA Members based on the specifications of this solicitation.

Waste Construction Material: That is extra to the actual net quantity required by the work, but that is nevertheless required by or used in performing the work, or is somehow lost as a result of doing the work, and therefore contributes to the material cost.

4. Special Terms and Conditions

- 4.1. **BID BOND:** A bid bond is required to be submitted in the amount of \$25,000.00. It will be returned within 10 days of the award to vendors not receiving the award.
- 4.2. By responding to this solicitation, the offeror agrees to and will be solely responsible for doing the research to ascertain that its solutions offered meet or exceed all federal, state, local and industry regulations, rules, standards and/or requirements.
- 4.3. The successful offeror must abide by and ensure that any subcontractor abides by all applicable federal, state, and local laws, codes, and ordinances governing any area(s) in which any products and/or service covered by this solicitation are rendered and must have all required permits, licenses, agreements, tariffs, bonding and insurance required by same. No claims for additional payment will be approved for changes required to comply with any such requirements.
- 4.4. The contractor shall hold AEPA member and its member agencies harmless from damage from trespassing on property of others. There shall be no dumping of construction debris or other material on member's property. Any material that requires special handling as dictated by federal or state law shall be removed in compliance with the requirements of those laws. All such materials shall be removed from the site and properly disposed of by the contractor.
- 4.5. The bidder will familiarize itself with the site in order to obtain a complete and comprehensive knowledge and understanding of its conditions and to anticipate unseen problems that may develop as the work progresses. Failure to have visited the site before submitting a job order/quote/cost proposal shall in no way relieve the bidder from furnishing any materials or performing any work required to complete the project in accordance with the contract documents, without additional cost to the AEPA member and its member agencies
- 4.6. All offerors will need to comply with the building codes for commercial building established by the AEPA member state.
- 4.7. When required by an AEPA Member State or local jurisdiction, building permits maybe required. It is the offerors responsibility to secure all required building permits for the construction services offered unless otherwise specified in the contract between AEPA member and contractor.
- 4.8. Any work or services that do not comply with the currently adopted AEPA member state building codes and requirements, when a project is inspected and a certificate of occupancy is required, will be corrected by the contractor at no additional cost of the owner.
- 4.9. For any project contracted under this solicitation, the proposer must comply with the Americans with Disabilities Act (ADA) (42 USC Section 12101 et seq.) and the Americans with Disabilities Act Architectural Guidelines (ADAAG), as well as the implementing requirements, 28 CFR Part 36, Federal Register, Vol. 56, No. 144, July 26, 1991, as amended.
- 4.10. Cost for temporary utility services electrical, water, gas, etc., that is part of or utilized during the construction process will be identified and agreed upon in writing by the AEPA member and its member agencies. Utility services (electrical, water, gas, etc.)

utilized by the contractor to maintain a project office trailer, maintenance shop, storage facilities, security lighting, etc., will be the responsibility of the contractor and can only be transferred to the AEPA member and its member agencies on written agreement specifically stating what contractor's utilities it will be responsible for. Copies of such agreements shall be provided to the AEPA member and its member agencies prior to a purchase order being issued.

- 4.11. All work will be in compliance with OSHA safety requirements and any additional applicable federal, state or local fire and safety requirements. When specifications or scope of work result in a violation of a code or result in an unsafe condition, the contractor must inform the AEPA member and its member agencies representative of the situation. The contractor will not construct any sub-assembly, structure, or device or produce any condition that intentionally violates a fire, health, safety or building codes or safety standard.
- 4.12. Any contract awarded under this Category is an indefinite-quantity contract for work requested. All costs associated with preparing quotes/job orders/cost proposals shall be the responsibility of the bidder and must be based on a detailed scope of work and in compliance with one of the approved pricing methodologies.
- 4.13. The contractor understands and agrees that it will offer and accept only projects in which they have done their own due diligence in assessing, evaluating, exploring and determining existing site conditions, the level, quality and appropriateness of the construction products and services being requested, and whether or not the project, as requested, allows the contractor to comply with all existing federal, state or local laws, codes and regulations. During the contractor's due diligence, if a concern or issue arises, the contractor must immediately notify the AEPA Member and its Member Agencies representative in writing, so that it can be corrected or properly addressed.
- 4.14. During all phases of a project, the contractor will have a qualified and experienced foreman, supervisor and/or superintendent in the area of construction being performed, and in charge of and in full control of the worksite and all construction activities being performed on the project. The individual assigned must be knowledgeable, qualified and aware of all aspects, specifications and requirements of the project and provide continuous supervision, coordination communication and inspections in order to assure that quality control standards or project outcomes are met.
- 4.15. All equipment, tools and machines used in the performance of this work by either the prime contractor or subcontractors will be maintained in satisfactory working conditions and meet or exceed industry standards at all times.
- 4.16. The contractor will need to provide performance and payment bonds on any project. The bonds need to be executed by a surety company authorized to do business in the AEPA member state and is approved in federal circular 570 as published by the United States Treasury Department or the state board of finance or the local governing authority, in an amount equal to one hundred percent (100%) of the price specified in the contract. The AEPA Member or its Member Agencies representative may waive this requirement.
- 4.17. If a contractor intends to subcontract any part of an individual project, the contractor will be responsible for notifying and furnishing subcontractor the following:
 - 4.17.1. If performance and payment bonds are required and the amount for bonding.

- 4.17.2. A description of the products to be provided, the tasks to be performed, the project's drawings, standard specifications, requirements and timelines the subcontractor must meet.
- 4.17.3. The contractor will instruct subcontractors to complete their own investigation, assessment and careful examination of all elements of a project before it submits a quote or proposal to provide construction products and/or perform construction services for the project. The subcontractor will promptly notify the contractor if it finds any discrepancies in, or omissions from, any plans, drawings, specifications and/or any other documents associated with the project. The contractor will immediately issue written notification to the AEPA member and its member agencies representative. The involved parties' representatives will jointly work with each other to resolve the concerns or issues raised and issue written instructions to the contractor on how the matters raised are to be handled. The contractor will be responsible for ensuring the subcontractor is aware of and incorporates any modifications into its quote/proposal. The AEPA Member and its Member Agencies representative will not be responsible for communicating instructions and/or information to subcontractors.
- 4.17.4. All cost quotes/proposals submitted by subcontractors must be in a format that the contractor needs to prepare and submit its cost quote/proposal in compliance with one of the pricing methodologies defined.
- 4.18. The successful bidder must be willing and agree to provide AEPA members the benefit of all general price reductions extended to its other customers at any time during the period of this contract or any extension thereof. Likewise the bidder may during the annual contract renewal process submit to AEPA any additional products or services covered by their award and may request for price adjustments on published price lists. The R.S. Means price shall be adjusted when the new updates (usually January 1 of each year) become available. Any request must be in writing and submitted to the oversight committee chairman who has been designated by AEPA for that solicitation/category. The chairperson will process the request and submit it to the AEPA board of directors for their approval/disapproval. If approved each AEPA state agency will be responsible for notify its participating members. In the event of a decrease in the prevailing contract price the oversight committee may approve the change and it will become effective immediately upon notification.
- 4.19. If the bidder intends to utilize independent agents/distributors, subcontractors and/or third-party agents to perform and/or provide any part of the products and services offered herein the bidder must ensure that the price from these parties are in accordance with the terms, conditions and pricing submitted and approved by AEPA.
- 4.20. Responses must clearly identify all charges and components necessary for performance of the contract even if such are not specifically addressed in any paragraph, subparagraph or forms that are a part of this solicitation.
- 4.21. Additional and optional products and services must be identified separately, and must include clear descriptions and specifications of proposed items.
- 4.22. Bidders are asked to make available new products and services as they become available and have been tested and proven to be reliable, suitable and appropriate for use within educational and governmental athletic facilities. It shall be communicated to and detailed

information provided to the individual owners indicating that the product and/or service is new technology and any test results or past performance history necessary to allow the owner to make an informed decision on accepting the product/service for the proposed project.

- 4.23. The bidder must have the resources necessary to provide a comprehensive training, maintenance support program to any individual owner within the 24 AEPA states which will allow the owner to properly and successfully utilize and maintain the installed facility through its stated life cycle. The programs offered must be appropriate for the owner's staff that will be responsible for and using the facility. The bidder must provide documentation that proves these resources and programs do exist and can be successfully delivered on a national basis. If there are associated cost terms, conditions and stipulations relating to the programs offered they must be clearly identified and stated within the bidder's response.
- 4.24. Applicability of industry standards, unless the individual project contract documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the project's contract documents to the extent referenced. Such standards are made a part of this solicitation by reference provided under item 3 Glossary of Terms above.
 - 4.24.1. Publication Dates: Comply with standards in effect as of date of the individual project's contract documents unless otherwise indicated.
 - 4.24.2. The contractor and any subcontractors engaged in construction project covered by this solicitation should be familiar with industry standards applicable to its construction activity being performed. Copies of applicable standards are not provided as part of this solicitation and when copies of standards are needed to perform a required construction activity, they may be directly obtained from publication source as identified herein.
 - 4.24.3. Where abbreviations and acronyms for standards and regulations are used within this solicitation, individual project's specifications or other contract documents, they shall indicate the recognized name of the organizations/agency responsible for the standards and regulations utilized.
- 4.25. The offeror must demonstrate and present the necessary evidence within its response to communicate its knowledge, experience, willingness and ability to adhere to, utilize and ensure the following:
 - 4.25.1. The contractor must hold and maintain a current and valid contractor's license for any of the AEPA states that allows it to supervise others, to construct, alter, repair, add to, subtract from, improve, move, or demolish any athletic facility covered by this solicitation and found within those states that have such requirements.
 - 4.25.2. The contractor will ensure that all individuals, firms or subcontractors being used to perform or supervise work performed, materials and equipment installed under this contract hold a current contractor's license, as required by those individual AEPA states. All subcontractors to be used for each individual project performed under this contract must be clearly identified and a list submitted with the name, address, trade or type of work, contractor's license number, if applicable, and their federal ID number included.

- 4.25.3. Upon request by an AEPA Member Agency's local member, the contractor shall schedule a meeting with the member/owner to ascertain and develop a comprehensive and complete understanding of the scope of work being requested by the member. The contractor shall conduct and perform the necessary site investigation in order to be aware of any existing site conditions that may require as part of the proposed project additional products and/or services to address identified site conditions and properly complete the project in accordance with the project's contract documents.
- 4.25.4. Any contract between the individual owner and the contractor under this solicitation shall consist of a detailed scope of work (a description of the work to be performed and the products to be provided by the contractor) will include all specifications, drawings, contractor's cost proposal and other project related documents. All applicable industry standards, manufacturer's instructions and requirements, technical specifications and general conditions, federal, state and local codes around which the contract is made shall be included, as if they were physically part of the contract documents.
- 4.25.5. A schedule for performance of work that can be met without planned overtime is the responsibility of the contractor unless otherwise requested and approved by the owner.
- 4.25.6. Terms for what constitutes project completion and acceptance by the owner and taking title to work finished must be clearly identified, described and agreed upon and made a part of any contract. If any part of the construction requires the owner to assume control before the completion, this needs to be defined with all of the agreed to terms, conditions and stipulations. Both parties must agree on the definition of what constitutes total acceptance of the project and that must be obtained before final payment is made to the contractor. Upon completion of the project, the worksite will be left in a condition equal to or better than before the project.
- 4.25.7. The contractor will pay for any failure to conform or for any defect. In addition, contractor will fix any damage to AEPA Member controlled, real or personal property when that damage is the result of contractor's failure to conform to contract requirements or any defect in equipment, material, workmanship, or design furnished or in compliance with federal, state and local laws, codes, regulations and standards. Contractor's warranty with respect to work done, repaired or replaced under these conditions will run for one (1) year from the date of repair or replacement or completion.
- 4.25.8. If contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the AEPA Member will have the right to replace, repair or otherwise remedy the failure, defect or damage at the contractor's expense in accordance with laws of the AEPA Member state.
- 4.25.9. Upon completion of the work, the contractor will present the owner with all documents necessary to close out the project. Including but not limited:
- 4.25.9.1. Certificate of occupancy;
 - 4.25.9.2. Maintenance manuals;

- 4.25.9.3. Up to four (4) complete sets of “as built” project drawings;
 - 4.25.9.4. Two (2) copies each of procedures of using and maintaining the materials and equipment installed;
 - 4.25.9.5. Executed warranties on installed products and equipment; and/or
 - 4.25.9.6. Material Safety Data Sheets for any material supplied.
- 4.25.10. As part of the close-out process or upon request, no-cost training must be offered for the maintenance staff of the owner and must be included as part of the purchase contract.
- 4.26. The prime contractor must warrant the work performed, materials, equipment installed for a period of not less than six (6) years against defects and poor workmanship. Even if final payment is made, if the owner discovers an unfinished and/or improperly installed component, defect or poor workmanship that should have been identified and noted during final inspection, the contractor will complete the work in a timely fashion at no additional cost to the owner. This warranty does not cover damage caused by fire, winds, floods, chemicals or owners’ negligence of reasonable precaution to provide adequate ventilation during hot and humid weather. Furthermore, this warranty does not cover damage to floors caused by ordinary wear and tear, faulty construction of building, separation of concrete slab, or settlement of walls.
- 4.26.1. The bidder may offer extended warranties or maintenance agreements if available at an additional cost to members. The extended warranties or maintenance contract must be offered as a separate line item.
- 4.27. If the offeror submitting a response to this solicitation to provide construction products and services relating to and for athletic, recreational, performing arts, multi-purpose and other educational facilities with specialty hardwood and synthetic flooring systems and is not the product/system manufacturer. Then the offeror must provide written documentation between it and the manufacturer indicating that the product manufacturer(s), for the purpose of this solicitation, is aware of the offeror’s intent to offer the manufacturer’s product line(s) and both parties are jointly committed and are aware of the terms, conditions and stipulations in this IFB, and that the manufacturer acknowledges and agrees to and will stand behind the contractor’s performance under this IFB. Failure of non-manufacturers to submit sufficient documentation to meet this requirement can result in a non-responsive bid.
- 4.28. The offeror must within their response provide a complete listing/catalog of all products offered with their associated cost that are not to be covered by R.S. Means. This will enable an owner’s staff, architect or general contractor to verify the offeror’s individual project quotes for new construction, renovation, retrofit or general maintenance and repair. This listing/catalog must provide complete specifications on each product/service. (This information is required in electronic format.)
- 4.29. Inspection:
- 4.29.1. The bidder shall conduct a pre-inspection prior to any construction meeting or final inspection where the owner is expected to accept and/or sign-off on work that has been completed. This is to ensure that all work meets or exceeds the projects specifications and requirements. Any discrepancies shall be corrected and/or communicated to the owner.

- 4.29.2. Date of final inspection shall be scheduled in advance, with appropriate notice and agreed upon by all parties. The contractor shall provide the owner or owner representative, with copies of the printed check-off list, proposed pay application, state and local inspector's sign-off/reports acquired since the last meeting. Any discrepancies will be noted as a punch list item and corrected prior to the next meeting or within the time specified in the contract documents.
- 4.29.3. Prior to final payment being made and during the project close-out process the contractor shall submit and have the owner or designee acknowledge receipt of as-built drawings, maintenance and operational guides and all activated product warranties and approve any submittals needed.
- 4.30. The offeror must demonstrate they possess the ability, capacity and staff to keep current with federal, state and industry standards, and guidelines that are applicable within any of the 24 states.
- 4.31. Quality Control Issues:
- 4.31.1. During the course of the contract, the owner or designee may request and/or secure samples, according to construction industry standards, guidelines or ASBA standards, of materials being applied, used from containers at the job site, and submit them to an independent laboratory for comparison to specified material. The owner may acquire an independent industry qualified/certified consultant, to evaluate and issue a report on the quality of the materials being used, if the materials installed meet or exceed project's specifications. The cost for these test and services will be paid by the owner.
- 4.31.2. Should the test results prove that a material used and/or applied is not equal to or better than specified or the end product does not meet minimum requirements. The offeror will reimburse the owner for the cost of the tests and/or services acquired. The offeror will also pay all costs incurred and associated to replace, remove and dispose of non-compliant materials and bring the end product up to project specifications and requirements.
- 4.31.3. Should the test results and services prove that materials tested were equal to specified material and the work performed meets the project's specifications and requirements, the offeror shall be notified of the results and the owner shall pay all associated costs.
- 4.32. The offeror must provide in its response proof of documentation and evidence to demonstrate that it has delivered and installed full-size football, soccer, baseball, field hockey and other athletic/recreational fields (minimum of 1,000,000 square feet) in the United States within the past five (5) years.

5. Specifications

5.1. General:

- 5.1.1. The offeror must demonstrate its' knowledge, understanding and experience with dealing and working with drawings, specifications and general provisions of athletic and recreational fields, playgrounds and facility design, construction and related

trades and utilities work, which may be part of any athletic facility project requested under this solicitation.

- 5.1.2. The offeror must provide all labor, materials, equipment and, if required, design services, site inspection and site preparation services for athletic and recreation field, playground and park construction. These services may be provided by the offeror's own crews and staff or by subcontractors contracted and supervised by the offeror. It should be noted that the level of the offeror's involvement will depend on the individual owner's requirements.
- 5.1.3. The offeror is responsible for ensuring that the proposed project's design, construction drawings and manual clearly indicate; identify the products, services and testing requirements that must be provided to deal with existing site conditions, public utilities, sub-base-works, drainage systems and asphalt base-works surfaces. Installations of the synthetic surfaces are in accordance with and comply with applicable ASBA, AAU, NCAA, NFHS and individual state requirements.
- 5.1.4. The offeror must guarantee the suability and playability of the synthetic turf system for intended uses for an eight (8) year period commencing on the date of substantial completion and acceptance by AEPA Member. The warranty coverage shall not be limited to the amount of usage.
- 5.1.5. The offeror is responsible for being knowledgeable of all federal, state and local government codes, regulations and requirements dealing with public athletic and recreational fields and facilities.
- 5.1.6. If the offeror is providing only the synthetic surface, it must provide the owner with construction instructions, guidelines, drawings and recommendations for the site preparation, sub-base and asphalt pavement. However, it should be noted that AEPA and its Members are seeking and prefer providers who can provide a turn-key solution.
- 5.1.7. If any part of the design or construction work is to be performed by the owner's own crews, owner's architect and/or a third party contractor not associated with the awarded contractor, prior to taking possession of the project site or proceeding with its work, the contractor must provide the owner with a signed affidavit stating that it has inspected and has accepted the current site conditions and work completed as meeting and/or exceeding its and the manufacturers, industry and governmental standards and requirements. If the work is not acceptable, the contractor must notify the owner immediately in writing stating what is not acceptable and on what this determination was made.
- 5.1.8. By accepting the owner's notice/order to proceed and executing the construction process, the contractor acknowledges that it has visited the site, is familiar with the current conditions under which the work is to be performed, and understands the scope of work as defined in the contract documents and the product specifications requested.
- 5.1.9. Documentation signed by an authorized representative of the manufacturer will be provided to the owner stating that the installed surfacing has no measurable traces of heavy metals, leachable mercury or any other hazardous materials identified by the EPA. For comparison testing prior to installation and randomly during installation,

an 8" x 10" sample of the material must be furnished to the owner's independent laboratory upon request. This sample must be provided prior to installation.

5.1.10. An additional 8" x 10" product sample, the same color, texture, thickness, etc. as the type of surfacing to be installed for this project shall be provided to the owner. This sample must be submitted and approved by the owner prior to installation.

5.1.11. Upon completion of any striping or line markings, the contractor shall obtain written acceptance and approval of the markings by the owner's designated representative as being complete and meeting their requirements. This document shall state that the field markings and layout meet and comply with the governing bodies' (AAU/NCAA/NFHSA/etc.) requirements for any athletic event stated in the owner's scope of work for the individual project.

5.2. Quality Assurance

5.2.1. Offeror must demonstrate through documentation that it has completed at least ten (10) athletic/recreational fields or facilities similar to those being proposed and that they were completed and accepted by the owner as meeting and complying with the governing bodies' (AAU/NCAA/NFHS/etc.) requirements and rules, governing their level of athletic competition. The products offered shall meet or exceed the ASBA's guidelines, requirements and performance specifications for the various types and levels of synthetic field surfaces recognized and approved by ASBA.

5.2.2. The offeror's proposed solution must be equal or better than turf available from a nationally recognized manufacture specializing in outdoor and indoor synthetic turf products for athletic and recreational facilities.

5.2.3. If the offeror is offering engineering services, then the engineer(s) need to be licensed in the AEPA Member state that they will be providing services.

5.2.4. If the offeror is offering installation services, then the person(s) providing the services will be factory trained, have a minimum of three (3) years experience in the installation of synthetic turf systems and if required licensed in the AEPA member state.

5.2.5. The offeror will only utilize qualified, trained, experienced, manufacturers approved and, if applicable, licensed tradesman to perform all work done under this IFB.

5.2.6. The offeror shall make its' own site visit to fully acquaint itself with the construction site, existing facilities and utilities and shall fully understand the difficulties and restrictions attending the execution of the work under this IFB. All offerors shall advise the owner in writing and receive its' acceptance of any restrictions, project alterations and/or anticipated difficulties prior to accepting a contract to do the individual project.

5.2.7. The offeror shall employ and maintain for the term of the AEPA contract an ASBA certified synthetic field builder on staff to ensure quality control in all aspects of a project conducted under this solicitation. Failure of the offeror to meet this requirement in its response will be deemed non-responsive.

5.2.8. Due to the individual AEPA Member Agency's individual requirements, any offeror responding to this solicitation, who fails to provide the information required

on the Contractor's Qualifications Form (F) or has failed to perform/complete past projects or is in default of warranty work or has been found guilty of violating state and/or local construction/labor codes, as judged by previous clients or AEPA. AEPA reserves the right to consider or not consider the offeror's response as being a responsive based on its own investigation and findings.

5.2.9. All synthetic turf, field, playground and landscape materials shall be warranted/guaranteed to the extent that the surfacing/product manufacturer's has indicated is as stated:

5.2.9.1. Has been manufactured, shipped, stored and applied in accordance with, manufacturer's specifications and instructions.

5.2.9.2. Will hold fast and/or adhere to the asphalt, concrete, edging, filler and patches or overlay materials in accordance with, manufacturer's specifications.

5.2.9.3. Will perform as specified in these specifications, the specifications of the product manufacturer and as identified and indicated in the current product information, literature and specification sheets available to the end user.

5.2.9.4. All components and their installation methods shall be designed and manufactured for use on indoor and outdoor applications. The materials as hereinafter specified must be able to withstand full climatic exposure in the environment of the AEPA Member States, be resistant to insect infestation, rot, fungus and mildew, ultra-violet light and heat degradation, and shall have the basic characteristic of flow-through drainage, allowing free movement of surface run-off through the turf fabric where such water may flow to the existing sub-base and into the field drainage system.

5.2.9.5. The finished playing surface shall appear as mowed grass with no irregularities and shall afford excellent traction for conventional athletic shoes of all types. The finished surface shall resist abrasion and cutting from normal use. The installed system shall be ideal for football, soccer, lacrosse, baseball, softball, PE classes, intramurals and recreational use.

5.2.9.6. All machinery, materials, coatings, site and base specification used must be approved by the turf or surfacing manufacturer.

5.2.9.7. The offeror and its surface manufactures must meet the following criteria:

5.2.9.7.1. Shall inspect and certify to the facility owner that the solution installed meets and/or exceeds the manufacturer's specifications and installation requirements.

5.2.9.7.2. The offeror and the surface manufacturer guarantees that the usability and playability of the synthetic turf, field, playground and landscape system installed is appropriate for the site conditions that exist and for the intended uses as identified with the project's scope of work for an eight (8) year period commencing with the date of substantial completion and acceptance by the owner. The warranty coverage shall not be limited to the amount of usage.

5.2.9.7.3. Any and all warranty terms, conditions, stipulations and/or requirements must be provided, discussed and accepted in writing by the AEPA Member prior to issuing a purchase order.

5.3. Project Site considerations, Investigation, inspections and Preparations

5.3.1. Depending on the individual AEPA Member Agency's organizational purpose and scope, they may or may not work with and serve educational institutions (pre-school through colleges and universities), government agencies (federal, state, county and city), non-public/not-for-profit organizations (education, recreational and community based). Therefore, AEPA is requesting a range of indoor and outdoor athletic, recreational solutions that can meet the individual sports and recreational activity needs of the above noted groups. AEPA has presented the following information to communicate, provide and establish for the offeror minimum and general specifications, requirements, product quality and performance standards for the offeror to base its proposed solutions. It is understood that various manufacturers' materials, products and/or installation processes may differ. However, the end result for the same level and type of indoor and outdoor athletic and recreational solutions shall meet or exceed the minimum materials, product, performance and life cycle specifications as its competitors' solutions.

5.3.2. For each outdoor synthetic turf or surfacing solution, the offeror must provide the information necessary for AEPA and institutional owners to determine the quality level, performance specifications and construction components of the solution proposed.

5.3.3. Site Inspection and Investigation: The ultimate performance and life cycle of any synthetic turf or surfacing solution depends to a significant degree on the subsoil and drainage conditions of the site. The stability of the subsoil also has a direct influence on the ability to properly prepare the site, construct the field and to maintain design grades under the deformations generated by the construction equipment itself. Such site conditions as, expansive soils or plastic soils and use of base course materials consisting of these types of soils can create problems and frost action is exaggerated where frost susceptible materials exist with moisture available to generate frost heave. It is, therefore, necessary for the contractor, in cooperation with the owner, to ensure that a complete and accurate site inspection/investigation has been performed to identify soil conditions existing at the site and to take these conditions into account in designing the project. Site preparation, including stripping, placement of backfill and base construction must be properly performed to minimize the risk of problems due to subsoil and sub-grade conditions.

5.3.3.1. The scope and level of any site inspection/investigation must be flexible and dependent on the nature of the conditions that exist at a particular site, and the degree of risk that the owner is willing to acknowledge, accept and take regarding adverse effects of subsoil conditions. During the design and development of the project the contractor will advise and consult with the owner to determine the scope and level of site inspection required. Obviously, the more serious site conditions may require an adequate study, which includes, but is not limited to:

5.3.3.1.1. The existence of peat or other organic soils at the site;

- 5.3.3.1.2. Uncontrolled fill materials or waste materials at the site;
 - 5.3.3.1.3. Expansive soils at the site;
 - 5.3.3.1.4. High ground water conditions or surface water retention areas (low area flooding);
 - 5.3.3.1.5. Special usage of the facility for a variety of activities;
 - 5.3.3.1.6. Adjoining facilities and their impact of the project site conditions; and
 - 5.3.3.1.7. What has the site been used for in the past?
- 5.3.3.2. Soils should be classified, in general, in accordance with the visual manual method of identification of soils, utilizing the Unified Soil Classification System. (ASTM Methods D2488 “Description of Soil Visual Manual Procedure,” and D2487 “Classification of Soils for Engineering Purposes”) It is not intended, however, that a rigorous use of these methods be required, but only use of terminology that will describe the soil conditions in terms of soil types using the Unified Soil Classification symbols, such as CL, CH, etc.
- 5.3.3.3. Data obtained from this investigation should be prepared and submitted as part of the project record documents for later reference, if necessary, or for review by a qualified engineer if an evaluation is decided upon by the owner and/or the contractor.
- 5.3.3.4. Once a site study has been completed, identified risks require the owner and the contractor to make a joint decision as to the level of site preparation required before the project is started. This is done so that an adequate site can be available for the field construction, and in the event of any problems developing because of sub-grade conditions, the responsibility can be clearly distinguished between the owner and the contractor.
- 5.3.3.5. Where any site and/or soil conditions are suspect for problems, such as existence of fill material, organic material or expansive soils, then it is required that the owner and contractor review, access and discuss the pros and cons of the condition and the owner may choose to retain a geotechnical consultant to obtain samples in accordance with ASTM Method D 1587 in cohesive soils, and D 1586 in granular soils, with borings to a depth of at least 10 ft. or into firm materials. This should be followed by appropriate unconfined compression tests, water content and density determinations on cohesive soils, and penetration resistances and blows per foot for granular soils, plus water level determinations, again with borings at each corner of the tennis court or at each quadrant of the field and intermediate borings not greater than 200 feet apart outside the pavement area.
- 5.3.3.6. All information and communications relating to the site inspection and investigation shall become part of the project’s documentation.
- 5.3.4. Site Preparation, Earthwork, Drainage and Sub-base Construction
- 5.3.4.1. For new field construction, the site must be properly prepared in accordance with project design documents based on the site inspection and investigation which address:

- 5.3.4.1.1. Site grade and elevations;
- 5.3.4.1.2. The sub soil, topsoil and drainage conditions;
- 5.3.4.1.3. The existence of peat or other organic soils at the site;
- 5.3.4.1.4. Uncontrolled fill materials or waste materials at the site;
- 5.3.4.1.5. Expansive soils at the site;
- 5.3.4.1.6. High ground water conditions or surface water retention areas (low area flooding); and
- 5.3.4.1.7. If an existing athletic facility, how is it being utilized and by whom?

5.3.5. Stripping and excavation: Unless otherwise specified, topsoil and other unsuitable materials at the site, and to a minimum distance of 5' beyond the surfaced area, should be removed in such a manner as to minimize disturbance of the remaining sub-grade soils, and to facilitate placement of embankment materials and/or base course materials. Topsoil should be stored at the site and reused for landscaping at the completion of construction.

5.3.6. Subsurface Drainage

- 5.3.6.1. Where surface inlets are provided on or near the field(s), drain lines to carry the water to appropriate discharge channels should be in accordance with manufacturer's specifications, local building codes and regulations.
- 5.3.6.2. Where it is necessary or otherwise decided to lower the water table at the site, French drains (permeable, properly graded gravel-filled trenches), geocomposites or perforated drain lines surrounded with a stone material, should be utilized, discharging to appropriate channels. Non-woven geotextile fabric may be used, depending on the stone materials available.
- 5.3.6.3. Backfill of all trenches should be granular material, placed in layers not to exceed 6" in thickness, compacted with appropriate compaction equipment to 95% of the maximum density determined by ASTM Method D698 (Modified Proctor). This compaction is necessary to minimize the risk of subsequent settlement of the surface over the trench.
- 5.3.6.4. When trenching or drain tile is used under existing permanent pavement, it is recommended that this area be compacted to 100% of the maximum density determined by ASTM Method D698 (Modified Proctor). This method will reduce the amount of settlement that may occur in these trenches, which will reflect on the final surface.

5.3.7. Sub-base Embankment

- 5.3.7.1. Embankment is fill material necessary to raise the grade at the site, after removal of unsuitable materials identified during the site investigation, to provide the surface on which to place the base course for the proposed field.
- 5.3.7.2. While well-graded granular soil is preferred for embankment fill, normal locally available soil is used for economic reasons. The material should be free of organic or expansive material, and of particles greater than 1 ½" in dimension. It should be placed in lifts not to exceed 6" in thickness and

compacted to 95% of the maximum density determined by ASTM Method D 698 (Modified Proctor). The water content of the fill should be reduced by aeration or increased by adding water, as necessary, to achieve the required compaction.

5.3.7.3. Where the natural soil at the bottom of the sub-base course is stable, as evidenced by stability under construction equipment, hand auger or other exploration, base course materials can be placed on this soil. Soft clay and plastic soils should be appropriately stabilized.

5.3.8. Vegetation Control or Vegetation Re-Growth Prevention: Soil conditions vary from area to area. Where problems exist, it may be necessary to sterilize the soil. The contractor should, during project development or construction, recognize and determine when soil sterilization is necessary and offer methods and options to the owner for rectifying problems caused by vegetation.

5.3.9. As noted above, some owners may choose to have the project site designed, developed and prepared by its own crews or by another contractor. In all cases prior to the beginning of installation of the synthetic turf/field surface, the manufacturer/installer of the synthetic solutions shall make arrangements for and conduct an inspection of the current site conditions, sub-base and supply a written certificate form for the manufacturer/installer, indicating that the current project site/sub-base meets or exceeds the manufacturer's specifications and requirements for the installation of the synthetic playing surface and accepts the responsibility for the project site from that date forward for the purpose of obtaining manufacturer's warranty for the finished athletic/recreational facility.

5.4. Synthetic Turf/Field System Requirements

5.4.1. Manufacturer: Proposed solutions must be from a nationally recognized manufacturer(s) specializing in the providing of indoor and outdoor synthetic turf and field products for all levels of public and educational athletic and recreational facilities throughout the 24 AEPA states.

5.4.2. Manufacturer Qualifications: Manufacturer must have a minimum of ten (10) years of experience in the manufacture of synthetic turf systems, which meet and/or exceed the standards and guidelines established and adopted by ASBA and other related professional and industry organizations actively involved with the governing and overseeing sporting events and facilities covered by the solicitation.

5.4.3. Engineering Qualifications: The offeror must have on staff or have under contract and available, an engineer registered and licensed in the state they are providing stamped engineered drawings. The engineer must have a minimum of five (5) years of actual athletic facility design and engineering experience working with the proposed products being offered. The engineer shall review and certify that the proposed site, site conditions and the synthetic turf system being proposed and to be installed meets or exceeds the design criteria of the project specifications, and the site condition exceeds the minimum requirements of the system's design performance standards set by the manufacturer in order for the end product to meet its project life cycle and functionality. It should be noted that within the 24 AEPA states there are established codes and standards that require that these facilities have an architect's or engineer's seal on the plans who is registered within that state. If

this is a requirement of the individual project, the contractor must include any/all cost associated with obtaining this required seal within their individual state multiplier/factor.

5.4.4. Installer Qualifications: Must have experience working with and installing the products offered. The synthetic turf/field system manufacturer must approve and certify to the owner that the installer meets their requirements and the manufacturer will stand behind and warrant the product installed. The installation team's foreman/lead person must have a minimum of three (3) years experience of successfully installing synthetic turf systems in public facilities.

5.4.5. Guidelines for the Design and Construction of Athletic/Recreational Synthetic Field Infrastructure/Foundation (permeable base): These guidelines are general in nature and may require adaptation in order to suit local soil, rainfall and temperature conditions, expected loads, expected drainage rate, material availability and other factors specific to each individual project. Requirements for soil bed preparation, thickness and nature of stone base, layout, spacing, diameter, nature of the drainage system, geotextile or liner specification, watering system, heating system, and edging system must be determined by qualified engineers and based on the project's existing site location and condition. The extremely strict tolerances for gradients and flatness which are stipulated by the ASBA, Sport Federations and industry associations that oversee and govern these types of facilities and sports activities means that the construction of adequate synthetic field infrastructure/foundation is of supreme importance and a critical component of any synthetic field solution. Tolerances are required to be met not only by the newly completed facility, but also over its projected life cycle, which might be two or three times the expected life of the artificial turf system.

5.4.5.1. The synthetic field infrastructure/foundation should be designed to meet the following criteria, if applicable, to project site location and conditions:

- 5.4.5.1.1. It should be capable of supporting and transmitting to the existing soils the loads of all vehicles, machines and materials to be used throughout the construction process without causing deformation.
- 5.4.5.1.2. It should be capable of supporting and transmitting the loads from athletes and maintenance equipment without causing deformation.
- 5.4.5.1.3. It should be sufficiently flexible to provide protection to the playing surface from the effects of sub-soil movement and frost heave.
- 5.4.5.1.4. It should allow for proper drainage of the playing surface.
- 5.4.5.1.5. It should allow for proper watering of the playing surface.
- 5.4.5.1.6. It should allow for proper heating of the playing surface.
- 5.4.5.1.7. It should allow for proper edging of the artificial turf system.
- 5.4.5.1.8. It should ensure that the above criteria are maintained throughout the life of the end product.

5.4.5.2. The base is generally water-permeable unless local climatic conditions allow for an impermeable or semi-permeable base.

- 5.4.5.2.1. In general, a permeable base consists of two (2) layers of permeable crushed stone: the base course and the finishing course. The total thickness of the stone should be a minimum of 6" (150mm) along, the longitudinal axis of the field. The thickness of the finishing course should not exceed 2" (50mm).
- 5.4.5.2.2. The installation of a layer of asphaltic concrete above the crushed stone base improves the structural stability, weight-bearing capacity and durability of the infrastructure/ foundation. If a layer of asphaltic concrete is to be installed, water-permeable asphalt should be used in combination with water-permeable crushed stone bases; impermeable or semi-permeable asphalt should be used in combination with impermeable or semi-permeable crushed stone bases.
- 5.4.5.2.3. In most cases a crushed stone base only is sufficient to guarantee the long-term stability of the playing surface.
- 5.4.5.2.4. To allow for proper base design, a comprehensive Geotechnical investigation should be performed to accurately determine the local subsoil conditions. A Geotechnical survey should be performed to determine the depth of excavation, the thickness and nature of the ordinary fill, the characteristics of the geotextile or liner, the thickness and nature of the crushed stone base.
- 5.4.5.3. Subsurface Water Collection System: Hydraulic calculations based on the nature and depth of the stone base, on local rainfall and expected drainage rate should be performed in order to determine the layout, spacing, dimensions, and nature of the subsurface water collection system, and to determine the gradient of the soil bed, which should be a minimum of 0.5% from the longitudinal axis of the field towards the sidelines. The drainage rate depends upon the local rainfall and upon the use for which the field is designed. A college football team's stadium may be designed to remove several inches of water per hour while a high school field may be designed to remove ½" of water per hour.
- 5.4.5.3.1. The minimum configuration of the subsurface water collection system consists of the perimeter drain. The perimeter drain consists of a perforated drainpipe to be installed in the perimeter trench. The minimum diameter of the perimeter drainpipe should be 8" [200mm]. The perimeter trench should be protected from infiltration of impervious or plastic materials through a geotextile membrane or liner, and backfilled with clean gravel. The perimeter drain should be connected to an efficient storm drain or discharge outlet.
- 5.4.5.3.2. If additional drainage capability is requested, a network of field drains should be installed throughout the entire playing field in addition to the perimeter drain. A fishbone layout is generally used. The dimension and spacing of the drains varies upon the expected drainage rate. Two types of drainpipe may be used for the field drains:

- 5.4.5.3.2.1. Traditional perforated drainpipe installed in trenches protected with geotextile membrane or liner and backfilled with clean gravel. The minimum diameter of the perforated drainpipe should be 4" (100mm).
- 5.4.5.3.2.2. Panel-shaped perforated drainpipes laid flat on the soil bed upon installation of the geotextile membrane or liner. The minimum dimension of the panel-shaped drainpipe should be 1" x 6".
- 5.4.5.3.3. The network of drains should be connected to the perimeter drainpipe or to a perimeter collector pipe, non-perforated, to be installed in the perimeter trench together with the perimeter drainpipe. The minimum diameter of the perimeter collector pipe should be 8" (200mm). The perimeter collector pipe should be connected to an efficient storm drain or discharge outlet.
- 5.4.5.3.4. All drains should be placed below the frost zone.
- 5.4.5.3.5. Proper access to the drains should be provided to allow for maintenance.
- 5.4.5.4. Watering System: The installation of an appropriate watering system is recommended in countries where summers are long and hot. The watering system is intended to regulate the temperature of the playing surface and to make the artificial turf fibers smoother.
- 5.4.5.5. Underground Heating System: The installation of an appropriate underground heating system is recommended in states where winters are long and harsh. The main purpose of a heating system is to ensure a playable field, not to melt the snow, which should be removed mechanically. The heating system should keep the stone base unfrozen and permeable, thus rain and snow water can drain into the ground. The heating system should be calculated to achieve a surface temperature of +32 to +35.5°F (\pm 0°C to +2°C). The heating system should be designed so as to melt snow falling shortly before and during an event.
- 5.4.5.6. Edging System: The construction of a proper edging system is essential to the long-term performance of an artificial turf system. Several products are available on the market, or can be custom designed and built on site. The artificial turf system can be anchored to special perimeter turf anchors, clamped into special perimeter drain channels, or simply nailed to a perimeter nailer to be imbedded in or fastened to a perimeter curbstone or perimeter channel.
- 5.4.5.7. Materials (Water Permeable Stone Base): The permeable crushed stone base is made of two (2) layers of crushed stone material, the base course and the finishing course. The artificial infill turf system is installed above the finishing course. Materials used for the permeable crushed stone base courses should meet the following gradation:

Sieve-Imperial	Sieve-Metric	Percent of Base Course	Passing Finishing Course
2"		100	
1 1/2"		90-100	
1"		75-100	
3/4"		65-95	
1/2"	12.5mm	55-85	100
3/8"	9.5mm	40-75	85-100
1/4"	6.25mm	25-65	75-100
#4	4.75mm	15-60	60-90
#8	2.36mm	0-40	35-75
#16	1.18mm	0-20	Oct-55
#30	0.6mm	0-7	0-40
#50-60	0.3-0.25mm	0-5	0-15
#100	0.15mm	0-3	0-8
#200	0.075mm	0-2	0-2

5.4.5.8. To guarantee structural stability it is important that both gradations meet the following criteria:

100% Fragmentation

$D_{60}/D_{10} > 5$

$1 < D_{30}^2/D_{10}/D_{60} < 3$

5.4.5.9. To guarantee separation between finishing stone and base stone, it is important that the gradations meet the following criteria:

$D_{85 \text{ FINISHING COURSE}} / D_{15 \text{ BASE COURSE}} > 2$

$3 < D_{50 \text{ BASE COURSE}} / D_{50 \text{ FINISHING COURSE}} < 6$

5.4.5.10. To guarantee proper drainage both stones should meet the following criteria when saturated and compacted to 95% Proctor:

Permeability $> 10 \text{ in/hr}$ ($7 \times 10^{-3} \text{ cm/sec}$)

Porosity $> 25\%$

“Dx” is the size of the sieve (in mm) that lets pass x% of the stone. For example: D_{60} is the size of the sieve that lets 60% of the stone pass. These sizes, for calculation purposes, may be obtained by interpolation on a semi-log graph of the sieve analysis.

5.4.5.11. Execution: The procedure adopted for the construction of a permeable infrastructure will normally consist of the following operations:

5.4.5.11.1. Remove all vegetable matter, topsoil, organic, loose, non-compactable or frost susceptible material down to firm, load-bearing soils.

5.4.5.11.2. Scarify exposed soils to create the soil bed at the specified grades.

- 5.4.5.11.3. Optional: Import ordinary fill to create the soil bed at the specified grades.
- 5.4.5.11.4. The grade of the soil bed shall not vary more than ½” (12mm) from the specified grade to allow for proper drainage. Laser grading is recommended.
- 5.4.5.11.5. Compact the soil bed to attain the specified compaction rate.
- 5.4.5.11.6. Install perimeter drain, protect trenches with geotextile membrane or liner, and backfill trenches with clean gravel.
- 5.4.5.11.7. Optional: Install perimeter water collector.
- 5.4.5.11.8. Optional: If traditional perforated pipes are used as field drains, install field drains, protect trenches with geotextile membrane or liner, and backfill trenches with clean gravel.
- 5.4.5.11.9. Optional: Install watering system.
- 5.4.5.11.10. Optional: Install underground heating system and edging system.
- 5.4.5.11.11. Optional: Place geotextile membrane or liner over the soil bed in accordance to specifications. If an impermeable liner is used, make sure that perimeter trench and field trenches are not covered.
- 5.4.5.11.12. Optional: If panel-shaped pipes are used as field drains, install panel-shaped pipes flat over the geotextile membrane or liner and connect to perimeter collector.
- 5.4.5.11.13. Place crushed stone base course without damaging the soil bed, geotextile membrane, liner, drains or watering system. It is important to create no depressions of the soil bed with heavy equipment.
- 5.4.5.11.14. If the required compacted depth of the base course exceeds 6” (150mm), the base shall be constructed in two (2) or more layers of approximate equal thickness. Each layer must be compacted to attain the specified compaction rate.
- 5.4.5.11.15. The crushed stone base course must be sloped 0.5% from the longitudinal axis of the field towards the sidelines.
- 5.4.5.11.16. The grade of the crushed stone base course shall not vary more than ½” (12mm) from the specified grade. Laser grading is recommended.
- 5.4.5.11.17. Compact the crushed stone base course to attain the specified compaction rate.
- 5.4.5.11.18. Place crushed stone finishing course.
- 5.4.5.11.19. The crushed stone finishing course must be sloped 0.5% from the longitudinal axis of the field towards the sidelines.
- 5.4.5.11.20. The grade of the crushed stone finishing course shall not vary more than ½” (12mm) from the specified grade. The deviation from a

straightedge in all direction shall not exceed ¼” in 10 feet. Laser grading is recommended.

- 5.4.5.11.21. Compact the crushed stone finishing course to attain the specified compaction rate.
- 5.4.5.11.22. Optional: Place water-permeable asphaltic concrete.
- 5.4.5.11.23. Optional: The water-permeable asphaltic concrete must be sloped 0.5% from the longitudinal axis of the field towards the sidelines.
- 5.4.5.11.24. Optional: The grade of the water-permeable asphaltic concrete shall not vary more than ½” (12mm) from the specified grade. The deviation from a straightedge in all directions shall not exceed ¼” in 10 feet. Electronic guided paving equipment is recommended.

5.4.6. Design: The types, kinds and levels of athletic and recreational facilities found in the 24 AEPA states will vary greatly. Because of this, a comprehensive and complete line of synthetic turf/field systems are requested. The following information is intended to provide the offeror a general guideline and minimum specifications of the types and levels of synthetic field systems being requested. Products offered must be equal to or better than those manufacturers’ products listed below and the offeror is encouraged to provide alternative systems.

5.4.6.1. Systems offered by Field Turf International Inc. 5211 Mitchell Bridge Road, Dalton, GA, 30721, Phone Number (800) 724-2969, Fax Number (514) 340-9311, website www.fieldturf.com

5.4.6.1.1. Outdoor Soccer “Monofilament” Series 1 (FTOM 1S) - Pile Yarn Type: Polyethylene (UV resistant); Yarn Linear Density: 9000 (6 end monofilament with CF Wrap); Units: Denier +/- 5%; ASTM: D1577; Pile Height: 1 7/8” – 2 1/8”; Units: Inches; ASTM: D418/D5848; Pile Weight: 30; Units: oz/sq. yd.”; ASTM: D418/D5848; Turf Bind 6.0 lbs without infill. ASTM D1335; Grab Tear width and length, >200 lbs/force, ASTM D1682/D5034; Carpet permeability, > 40 inches/hour, ASTM D4491; Impact Attenuation, GMAX = <135 at installation and = <200 over field life, ASTM F355/F1936.

5.4.6.1.2. FieldTurf Outdoor Soccer Series #2 (FTOS2-S) - Pile Yarn Type: UV resistant Polyethylene, UV-Performance: >80% retained tensile strength after 5,000 hours; ISO4892-2; Linear Density: 8,000; Units: Denier +/- 5%; ASTM: D1577; Yarn Breaking Strength: 47; Units: lbs; ASTM: D2256; Yarn Maximum Elongation: 40%; ASTM: D2256; Yarn Melting Point: 250; Units: Degrees F; ASTM: D789; Minimum Pile Height: 2; Units: Inches; ASTM: D418; Maximum Pile Height: 2 1/8”; Units: Inches; ASTM: D418; Pile Weight: 27; Units: oz/yd²; ASTM: D418; Primary Backing Weight: 8.5 Units: oz/yd²; ASTM: D418; Secondary Backing Weight: 16-18; Units oz/yd²; ASTM: D418; Stitch Gauge ¾ inch centers; ASTM: D418; Tuft Bind (without infill): 7; Units lbs; ASTM: D1335; Tuft Bind (with infill): 12; Units lbs; ASTM: D1335; Grab Tear Strength (width): 207; Units:

lbs/force; ASTM: D1682; Grab Tear Strength (length): 297; Units: lbs/force; ASTM: D1682; Pill Burn Test: meets standard requirements; ASTM: 2859; Critical Radian Flux: 24; Units: BTU/hr/ft²; ASTM: E648; Impact Attenuation: 140-175; Units: Gmax; ASTM: F355/F1936; Relative Abrasiveness Index: 20; ASTM: F1015; Permeability: 40-60; Units: Inches/hour; ASTM: F1551; Depth of Infill Material: 1 1/4; Unit: Inches.

- 5.4.6.1.3. FieldTurf Duo Series 2 Soccer (FTHS-2S) - Pile Yarn Type: UV-Resistant Polyethylene; Yarn Linaer Density: 12500; Unit: Denier +/- 5%; ASTM: D1907; Yarn Breaking Strength: 25 Nominal; Units: lbs; ASTM: D2256; Yarn Maximum Elongation: 40% Nominal; ASTM: D2256; Pile Height: 2"; Units: Inches; ASTM: D5848; Pile Weight: 34; Units: oz/yd²; ASTM: D5848; Total Weight: 57; Units oz/yd; ASTM: D5848; Primary Backing Weight: >7; Units: oz/yd²; ASTM: D5848; Secondary Backing Weight 16-18; Units oz/yd²; ASTM: D5848; Stitch Gage: 3/4 inch centers; ASTM: D5848; Tuft Withdrawal Force: >7 (per bundle); Units: lbs/force; ASTM: D1335; Grab Tear Length: >200; Units: lbs/force; ASTM: D5034; Grab Tear Width: >200; Units: lbs/force; ASTM: D5034; Pill Burn Test: Pass; ASTM: D2859; Impact Attenuation: <200; Units G-max; ASTM: F1936; Permeability: >40; Units: Inches/hour; DIN 18-035; Total Depth of Infill Material: 1.25; Units: Inches; Impact Attenuation, GMAX = <135 at installation and = <200 over field life, ASTM F355/F1936.
- 5.4.6.1.4. FieldTurf Proscape 2" US Units(GF-FTS) – Pile Yarn Type: UV-Resistant Polyethylene; UV-Performance: >80% retained tensile strength after 500 hours; ISO: 4892-2; Linear Density: 8000; Units: Denier +/- 5%; ASTM: D15770; Yarn Breaking Strength: 40 Units: lbs. ASTM: D2258; Yarn Maximum Elongation: 40% nominal; ASTM: D2256; Yarn Melting Point: 250; Units Degrees F; ASTM: D789; Minimum Pile Height: 2; Units: Inches; ASTM: D418; Maximum Pile Height: 2.125; Units: Inches; ASTM: D418; Pile Weight: 27; Units: oz/yd²; ASTM: D418; Primary Backing Weight >7.0; Units: oz/yd²; ASTM: D418; Secondary Backing Weight: 16-18; Units: oz/yd²; ASTM: D418; Stitch Gauge: 3/4 inch centers; Tuft Bind (without infill): 8; Units: lbs; ASTM: D1335; Grab Tear Strength width: >200; Units: lbs/force; ASTM: D1682; Grab Tear Strength length: >200; Units: lbs/force; ASTM: D1682; Pill Burn Test: Pass; ASTM: D2859; Critical Radiant Flux: 24; Units: BTU/hr/ft²; Impact Attenuation, GMAX = <135 at installation and = <200 over field life, ASTM F355/F1936; Relative Abrasiveness: 20; ASTM: F1015; Permeability: >40; Units: Inches/hour; ASTM: F1551; Depth of Infill Material: 1.25; Units: Inches.
- 5.4.6.1.5. FieldTurf Landscaping Grass (GF-FTS) – Pile Yarn Type: UV-Resistant Polyethylene; UV-Performance: >80% retained tensile strength after 5000hrs; ISO: 4892-2; Linear Density: 8000; Units:

Denier +/- 5%; ASTM: D1577; Yarn Breaking Strength: 40 nominal; Units: lbs; ASTM: D2256; Yarn Maximum Elongation: 40% nominal; ASTM: D2256; Yarn Melting Point: 250; Units Degrees F: ASTM: D789; Minimum Pile Height: 1.5; Units: Inches; ASTM: D418; Maximum Pile Height: 1.625; Units: Inches; ASTM: D418; Pile Weight: 18; Units: oz/ yd²; ASTM: D418; Primary Backing Weight: >7.0; Units: oz/ yd²; ASTM: D418; Secondary Backing Weight: 16-18; Units: oz/ yd²; ASTM: D418; Stitch Gauge: 3/4 inch centers; ASTM: D418; Tuft Bind (without infill): 8 Units: lbs; ASTM: D1335; Grab Tear Strength Width: >200; Units: lbs/force; ASTM: D1682; Grab Tear Strength Length: >200; Units: lbs/force; ASTM: D1682; Pill Burn Test: Pass; ASTM: D2859; Critical Radiant Flux: 24 Units: BTU/hr/ft²; ASTM: E648; Relative Abrasiveness Index: 20 ASTM: F1015; Permeability: >40; Units: Inches/hour; ASTM: F1551; Depth of Infill Material: 1; Units: Inches; Depth of Infill Material: Sand and Rubber Filled.

- 5.4.6.1.6. FieldTurf Professional Putting Green – Pile Yarn Type: UV-resistant polypropylene; UV-performance: >80% retained tensile strength after 5000hrs ISO: 4892-2; Linear Density: 7,600; Units: Denier + - 5%; ASTM: D1577; Yarn Breaking Strength: 47; Units: lbs; ASTM: D2256; Yarn Maximum Elongation: 40%; ASTM: D2256; Yarn Melting Point: 250; Units: Degrees F; ASTM: D789; Pile Height: 1 1/4 1/2"; Units: Inches; ASTM: D418; Pile Weight: 30; Units: oz/yd²; ASTM: D418; Primary Backing Weight: 4; Units: oz/yd²; ASTM: D418; Secondary Backing: Urethane; Units: No Perforations; ASTM: D418; Stitch Gauge: 3/8"; Units: Centers; ASTM: D418; Permeability: 40-60 Units: Inches/hours; ASTM: F1551; Depth of Infill Materials: 1"; Units: Inches.
- 5.4.6.1.7. FieldTurf Duo-Monofilament Series I (FTHS-1S) Pile Yarn Type: UV-resistant polyethylene; Yarn Linear Density: 12500; Units: Denier +1-5%; ASTM: D1907; Yarn Breaking Strength: 25 nominal; Units: lbs; ASTM: D2256; Yarn Maximum Elongation: 40% nominal; ASTM: D2256; Pile Height: 2.5 nominal (N.B. Variation of +1-5% on pile height is within normal manufacturing tolerances); Units: Inches; ASTM: D5848; Pile Weight: 40; Units oz/yd²; ASTM: D5848; Primary Backing Weight: >7; Units ox/yd/2; ASTM: D5848; Secondary Backing Weight: 16-18; Units: oz/yd²; ASTM: D5848; Stitch Gauge: 3/4 inch centers; ASTM: D5848; Tuft Withdrawal Force: >7 (per bundle) Units: lbs/force; ASTM: D1335; Grab Tear Length: >200; Units: lbs/force; ASTM: D5034; Grab Tear Width: >200; Units: lbs/force; ASTM: D5034; Pill Burn Test: Pass; ASTM: D2859; Impact Attenuation, GMAX = <135 at installation and = <200 over field life, ASTM F355/F1936; Permeability: <40; Units: Inch/hour; ASTM: DIN 18-033.

5.4.6.1.8. Tarket Prestige Synthetic Grass; Yarn Characteristics: Composition – Polyethylene; Structure: Straight Monofilament; Yarn Count: 10000 Dtex/9000 denier +10%; Tape Thickness: 120-80 Microns; Tape Width Number of Tape: 6; Tuft Characteristics: Tufting: In line; Gauge: 3/4"; Pile height: 2"; Number of Stitches: 1 2/3 " +/- 5%; Velour weight: 30 oz/sqy +/- 10%; Backing Characteristics: Primary Backing: Polypropylene two part composite comprised of both woven and non-woven component; Weight Per Unit: 7 oz/sqy; Type of Coating: solid urethane with perforations; Coating Weight: 18-20 oz/sqy; Total Carpet Weight: 5.5 oz/sqy +/- 11%; Ballast Characteristic: Ballasting sand must be siliceous (95% min) washed and dried; rubber granules (SBR) must be clean with 1% of small elements under 0,5 mm; the grains must be as round as possible; Sand Type d/D - granule size 0.5 / 1.2 mm; Quantity: 2 lbs/sqf; Recycled Type Granules: (particle size 0,5/1,8) in accordance with NF P 1856; Quantity: 3 lbs/sqf; Test Results: Ribbon Denier: 12412; Ribbon breaking strength: 34.15 lbs/force; Ribbon Elongation: 39.1%; Ribbon Tenacity 1.82; Ribbon Thickness: 100 microns; Melt Point: 125-C Polyethylene.

5.4.7. Scope for Synthetic Surface Installation

- 5.4.7.1. Furnish all labor, materials, tools and equipment necessary to inspect and install, in place, all proposed synthetic turf systems offered under this solicitation. Any project covered by this solicitation must meet or exceed the athletic, recreational and/or landscaping synthetic turf facility requirements as indicated on the owner's drawings, project scope, specifications and the terms, conditions, standards, specified herein. The type of synthetic surface solicitations offered may include but are not limited to those suitable for football, soccer, baseball, softball, lacrosse, field hockey, public parks, playgrounds and public facility landscaping. The installation of all new materials shall be performed in strict accordance with the manufacturer's written instructions and in accordance with approved shop drawings. The turf contractor installer must have installed a minimum of ten (10) fields in using the infill system being proposed. The turf contractor installer shall be responsible for the acceptance and/or installation of the turf base and final grade. The turf contractor installer shall be a single source and if not, the sub-contractor will be the responsibility of the AEPA contractor.
- 5.4.7.2. For each project for synthetic turf the submittals may include but are not limited to:
- 5.4.7.2.1. Synthetic Turf: One (1) sample approximately 8" x 10"
 - 5.4.7.2.2. Tufted 4" white line
 - 5.4.7.2.3. Manufacturer's installation instructions, specifications and requirements.
 - 5.4.7.2.4. Manufacturer's data certifying compliance with the standards and specifications of this solicitation.

- 5.4.7.2.5. Submit to owner for approval, quality assurance information relating to product appropriateness for the proposed project, installer qualifications, bonds, certificate of insurance, permits, etc.
- 5.4.7.2.6. List of existing installations, including owner representative and telephone number, attesting compliance with quality assurance information.
- 5.4.7.2.7. Prior to final acceptance, the contractor shall submit to the owner two (2) copies of maintenance manuals and if requested a electronic copy, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and striping.
- 5.4.7.2.8. Prior to the beginning of installation, the manufacturer/ installer of the synthetic turf shall inspect the sub-base and supply a certificate of sub-base acceptance for the purpose of obtaining manufacturer's warranty for the finished synthetic playing surface.
- 5.4.7.2.9. Other submittals after contract signing will include samples of the liner and credentials of the liner installer and sieve analysis of the proposed base rock.
- 5.4.7.2.10. Shop drawings shall be prepared and contain all pertinent information regarding installation. These drawings shall be submitted to the owner for approval prior to the manufacturing and shipment of materials. Submit drawings for:
 - 5.4.7.2.10.1. Site preparation;
 - 5.4.7.2.10.2. Installation of the turf;
 - 5.4.7.2.10.3. Seaming plan;
 - 5.4.7.2.10.4. Installation details to include but not limited to; edge detail, goal post detail, other inserts, etc.; and
 - 5.4.7.2.10.5. Striping plan; layouts showing any field lines, markings and boundaries, and field logos per project drawings.

5.4.8. Quality Assurance

5.4.8.1. Manufacturer's Qualifications and Experience

- 5.4.8.1.1. The synthetic turf solution/system manufacturer must be nationally recognized and produce the quality and level of products solicited herein. All solutions/systems offered must have been through extensive and industry accepted testing methodologies to verify the product's physical attributes, performance, durability and reliability.
- 5.4.8.1.2. The synthetic turf solutions/systems manufacturer must have a minimum of 10 years of manufacturing experience in synthetic turf systems.

5.4.8.1.3. The synthetic turf manufacturer must have a demonstrated track record in acknowledging, dealing with and resolving warranty claims and work.

5.4.8.1.4. The synthetic turf manufacturer must have a demonstrated capacity and proven track record for providing the necessary inspections, maintenance programs, materials, equipment and/or labor required for the owner to operate and maintain the installed facility for its identified life cycle.

5.4.8.2. Offeror's Qualifications and Experience

5.4.8.2.1. The offeror must be recognized and approved by the turf surface system/solution manufacturer as an experienced provider and installer, capable of performing and providing all of the materials, equipment and labor to properly inspect, prepare the site, install the turf surface/system/solution in accordance with the manufacturer's instructions and specifications, while meeting or exceeding any federal, state, local or industry standard codes, regulations and/or requirements.

5.4.8.2.2. The offeror must have a demonstrated record of successfully providing, installing and performing warranty work on a minimum of 25 fields using the proposed turf surfaces/systems/solutions.

5.4.8.2.3. The offeror must have completed a turf project in a minimum of 10 of the 24 AEPA states.

5.4.8.2.4. The offeror shall employ and utilize only qualified, experienced supervisors and technicians skilled in the installation of the individual turf system being provided.

5.4.8.2.5. The offeror, for each of the 24 AEPA states, when required, must have and agrees to maintain the appropriate licenses and registrations enabling them to offer, conduct and to perform the construction products and services covered by this solicitation. The offeror's license(s) must be in good standing with the appropriate governing authority.

5.4.8.3. Warranty

5.4.8.3.1. The offeror shall submit its manufacturer's warranty that guarantees the usability and playability of the synthetic turf system for its intended uses for an eight (8) year period, commencing with the date of acceptance of the owner. The warranty coverage shall not be prorated nor limited to the amount of the usage. The warranty submitted must have the following characteristics:

5.4.8.3.1.1. Must provide full coverage for eight (8) years from the date of warranty activation.

5.4.8.3.1.2. Must warrant materials and workmanship.

5.4.8.3.1.3. Must warrant that the materials installed meet or exceed the product specifications and industry standards.

5.4.8.3.1.4. Must have a provision to repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable and playable surface based on industry standards.

5.4.8.3.1.5. Must be a warranty from a single source covering workmanship, all self-manufactured/produced or procured materials.

5.4.8.3.1.6. Guarantee the availability of replacement material for the synthetic turf system installed for the full warranty period.

5.4.8.3.2. If required, any warranty offered under this solicitation must be secured by an insurance/bonding company nationally recognized and licensed to do business in the 24 AEPA states.

5.4.8.4. Maintenance

5.4.8.4.1. The contractor shall furnish the owner with a written maintenance and instruction manual for proper use and care of the provided facility. The maintenance manual shall be specific to the turf surface/system/solution installed and specify any use limitations for the field (that is, heavy vehicle traffic, etc.)

5.4.8.4.2. The contractor shall make available all materials and equipment the owner may need to maintain the facility.

5.4.8.4.3. As an option, and at an additional cost to the owner, the contractor may offer to perform regular and ongoing maintenance related services.

5.4.8.5. System Performance Characteristics

5.4.8.5.1. After the contractor installs the system, it must guarantee that the field will meet the following performance criteria:

5.4.8.5.1.1. Permeability to ASTM: D4491. The system shall allow a minimum percolation rate of 10 inches per hour.

5.4.8.5.1.2. Relative abrasiveness to ASTM: F1015. The system has an abrasiveness index of 20.2.

5.4.8.5.1.3. Shock Absorbency to ASTM: F355. Less than 200 G-Max for an eight (8) year warranty.

5.4.8.5.2. Flammability to ASTM: D2859 – pass

5.4.9. Synthetic Turf Installation

5.4.9.1. Prior to beginning the installation, contractor/installer shall:

5.4.9.1.1. Review the project design drawings and walk the project site to verify and confirm the proposed system's layout and measurements.

5.4.9.1.2. From either the design drawings or the owner, learn where all existing utilities; that is, water lines, electrical lines, etc. are located.

- 5.4.9.1.3. Understand and verify with the owner any special project site restrictions and/or access requirements that may be needed.
- 5.4.9.1.4. Inspect and take an inventory of the synthetic turf product, supplies and equipment to ensure that the products are what is requested, are in the amounts needed to complete the project and are being stored in accordance with the manufacturer's instructions.
- 5.4.9.1.5. Perimeter edge details, underground storm sewer piping and connections, and goal post foundations required for the system shall be as detailed and recommended by the manufacturer, and as approved by the owner.
- 5.4.9.1.6. The surface to receive the synthetic turf shall be inspected and certified by the manufacturer as ready for the installation of the synthetic turf system and must be clean before installation commences and be maintained in that condition throughout the process.
- 5.4.9.1.7. If any deviations and/or discrepancies are found, the installer shall not proceed with the installation until these are addressed and accepted by manufacturer and owner.
- 5.4.9.2. Installation shall not proceed when:
 - 5.4.9.2.1. Ambient air temperature is below 50 degrees F. Material temperature is below 50 degrees F.
 - 5.4.9.2.2. Rain is falling or pending, unless acceptable to qualified installers.
 - 5.4.9.2.3. Conditions exist, or are pending, that will be unsuitable for the installation procedures being utilized.
- 5.4.9.3. The installation shall be in accordance with manufacturer's instructions. The turf contractor shall strictly adhere to installation procedures and processes outlined in the manufacturer's instructions specifically relating to the individual project being installed. Any variance from these requirements must be accepted in writing, by the manufacturer's representative, and submitted to the architect/owner's representative, verifying that the changes do not in any way affect the end product and/or the warranty. Infill materials shall be approved by the manufacturer and installed in accordance with the manufacturer's standard procedures.
- 5.4.9.4. The carpet rolls are to be installed directly over the properly prepared base. Extreme care should be taken to avoid disturbing the base, both in regard to compaction and planarity. It is suggested that a 2-5 ton static roller is on site and available to repair and properly compact any disturbed areas of the base.
- 5.4.9.5. The full width rolls shall be laid out across the field. Turf shall be of sufficient length to permit full cross-field installation from sideline to sideline. No head or cross seams will be allowed in the main playing area between the sidelines. Utilizing standard state of the art sewing procedures identified by the manufacturer, each roll shall be attached to the next. When all of the rolls of

the playing surface have been installed, the sideline areas shall be installed at right angles to the playing field turf.

- 5.4.9.6. If manufacturer's instructions require a 99% sewn installation, gluing of rolls shall not be acceptable. Minimum gluing will only be permitted to repair problem areas, corner completions and to cut in any logos or inlaid lines as required by the specifications. All seams shall be sewn using double bagger stitches and polyester thread, or in the case of inlays only, adhered using seaming tape and high grade adhesive (per the manufacturer's standard procedures). Seams shall be flat, tight and permanent with no separation or fraying.
- 5.4.9.7. Infill materials shall be applied in numerous thin lifts. The turf shall be brushed as the mixture is applied. The infill material shall be installed to a depth determined by the manufacturer based on the individual project's specifications.
- 5.4.9.8. The infill materials shall be installed to fill the voids between the fibers and allow the fibers to remain vertical and non-directional. The infill installation consists of a base layer of sand followed by a homogenous mixture of the sand and the cryogenically processed rubber. A final application of specifically sized cryogenically processed rubber completes the system. The infill shall be installed to the depth as specified by the individual project's specifications. Infill density shall consist of no more sand and rubber than specified per square foot. The infill shall be placed so that there is a void as specified for the system to the top of the fibers.
- 5.4.9.9. Field Markings
 - 5.4.9.9.1. All fields of play perimeter lines, five-yard lines, hash marks, yardage numbers, perimeter boundary and logo shall be done in accordance with the turf manufacturer's instructions and specifications. The individual project's design drawings shall comply with national and state sport organizations, national associations and industry standards.
 - 5.4.9.9.2. Prior to the application of any line painting, the turf shall be fibrillated by means of a nylon rotary brush to provide the look, feel and safety of optimally maintained natural grass, including subtle undulations normally associated with natural grass athletic fields.
 - 5.4.9.9.3. Non-tufted or inlaid lines and markings shall be painted according to the recommendations of the turf manufacturer and of the paint manufacturer. All markings are to be installed in accordance with approved shop drawings.
 - 5.4.9.9.4. If football is to be the primary sport, all five-yard lines will be tufted in.
 - 5.4.9.9.5. Balance of sports markings will be inlaid/painted in accordance with the contract drawings.

5.4.9.9.6. The center field logo will be inlaid/painted according to artwork shown on the contract drawings and in accordance with turf manufacturer's standard palette of colors.

5.4.9.9.7. The end-zone letters and logos will be inlaid/painted according to artwork and fonts shown on the contract drawings, and in accordance with turf manufacturer's standard palette of colors.

5.4.9.10. In-Ground Equipment and Accessories

5.4.9.10.1. The offeror must provide, deliver and install, as required by AEPA member, in-ground equipment and accessories. In-ground equipment offered under this IFB may include but is not limited to the following (Model number is UCS equivalent) or equal:

5.4.9.10.1.1. Pole Vault Boxes: Provide (#711-1100) cast aluminum vault boxes. The contractor shall provide synthetic surfacing material plugs, which are to be installed level to the surfacing of the respective runway and be of similar texture as the surrounding synthetic surfacing.

5.4.9.10.1.2. Take-Off Boards: Provide (#519-2100) take-off board systems.

5.4.9.10.1.3. Shot Put Toe Boards: Provide (#716-1630) 3-1/4 shot put toe boards.

5.4.9.10.1.4. Discus, Shot & Hammer Ring Forms With Built-In Circles

5.4.9.10.1.4.1. Shot Put Rings Form #725-2592

5.4.9.10.1.4.2. Discus Rings Form #725-2591

5.4.9.10.1.4.3. Hammer Rings Form #725-2593

5.4.9.10.1.5. Combination Hammer/Discus Cage #572-4100R IAAF Stadium Model - IAAF Certified E-99-0058

5.4.9.10.1.6. Hammer/Discus Conversion Ring #725-2535

5.4.9.10.1.7. Adjustable Water Jump Hurdle with Sleeves #506-5413

5.4.9.10.1.8. Aluminum Water Jump Cover Recessed #505-5420. As required by the AEPA Member the offeror is to install track surfacing onto the cover. The cover, when installed with synthetic surfacing on it, shall be flush with the surrounding area.

5.4.9.10.1.9. Removable Aluminum Track Curbing: Removable track curbing shall consist of extruded anodized aluminum section constructed to allow portable installation. The curb shall meet the requirements of the IAAF. The curb will run the length of the 400m tracks with a section to run alongside the water jump inside of lane one on the second bend. The sections indicated on the drawings shall be removable when the curb is fully installed to allow passage of athletes. The following finishes are to be offered:

- 5.4.9.10.1.9.1. #792-9410 Powder-Coated Gold
- 5.4.9.10.1.9.2. # 792-9411 Powder-Coated Silver
- 5.4.9.10.1.9.3. #792-9412 Non-Powder-Coated
- 5.4.9.10.1.9.4. #792-9413 White Powder-Coated

5.4.9.10.1.10. Long Jump Sandpits and Traps: The sandpits shall be constructed using the ACO border and sand trap system, Parts Number 2739/1453/0962, installed to manufacturer's instructions.

5.4.9.10.1.11. Sand: All sand for the long/triple jumps sand pits shall be clean, washed, white sand, containing not more than five percent (5%) clay and shall be free of trash, organic matter, and rock. Installed sand is to meet all specifications of the IAAF – washed river sand, 0 to 2mm graining, no organic components, maximum five percent (5%) of weight up to 0.2mm. Prior to installation, the contractor shall provide the member with a one (1) gallon sample for approval.

5.4.9.10.2. Other accessories that may be required to conduct and/or perform athletic events held within the athletic facility, which is a semi-permanent part of the structure may be provided as required by the AEPA Member.

5.4.9.11. Cleaning

- 5.4.9.11.1. Protect installed field turf surface from subsequent construction operations.
- 5.4.9.11.2. Do not permit traffic over unprotected surface.
- 5.4.9.11.3. Contractor shall provide the labor, supplies, and equipment as necessary for final cleaning of surfaces and installed items.
- 5.4.9.11.4. All usable remnants of new material shall become the property of the owner.
- 5.4.9.11.5. The contractor shall keep the area clean throughout the project and clear of debris.
- 5.4.9.11.6. Surfaces, recesses, enclosures, etc., shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the owner.

5.4.9.12. Project Close-Out

- 5.4.9.12.1. The contractor and the member's representative shall conduct a complete and extensive site inspection of all work performed and products provided and installed.
- 5.4.9.12.2. The contractor shall provide all the testing data to the owner that the finished field installed meets the required shock attenuation, as per ASTM F1936.

- 5.4.9.12.3. Two (2) copies of maintenance manuals, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system, including painting and markings, will be furnished to the owner.
- 5.4.9.12.4. The contractor shall provide owner's personnel with training to enable them to develop a complete knowledge and understanding of the supplies, materials and equipment required to maintain and keep the install system in good working condition through its life cycle.
- 5.4.9.12.5. Based on the owner's individual project requirements, provide at least one (1) copy of the project record documents that may include but is not limited to:
 - 5.4.9.12.5.1. As-built drawings showing the actual locations of seams, drains, in-ground equipment and other accessories installed/ or provided.
 - 5.4.9.12.5.2. Manufacturer's instruction and maintenance manuals for turf and installed equipment.
 - 5.4.9.12.5.3. Any state, local and/or manufacturer's inspection report or certificate certifying that all state, local and manufacturer's standards, codes and requirements have been met.

5.4.9.13. Warranty Documents

- 5.4.9.13.1. Submit manufacturer's warranty with all of the forms that were completed and submitted in owner's name and registered with the manufacturer. Within this documentation, the turf manufacturer must verify that their factory representative has inspected the installation of the completed project and that all work conforms to the manufacturer's specifications and requirements.
- 5.4.9.13.2. The manufacturer's warranty shall include general wear and damage caused from UV degradation. The artificial grass field turf must maintain an ASTM 355 G-max in accordance with product specifications for the life of the warranty. The warranty shall specifically exclude vandalism and acts of God beyond the control of the owner or the manufacturer.
- 5.4.9.13.3. The turf manufacturer's/contractor's warranty must be supported by a paid-up insurance policy or performance bond to ensure that if warranty work is required during the eight (8) year warranty period, the work can be performed, even if the manufacturer/contractor goes out of business or no longer exists.
- 5.4.9.13.4. The prime contractor shall provide a warranty to the owner that covers defects in the prep-work, installation, workmanship, and further warrants that the installation was done in accordance with both the manufacturer's recommendations and any written directives of the manufacturer's onsite representative.

5.5. Turf Cleaning, Grooming and Maintenance Services

- 5.5.1. The offeror must be willing and able to demonstrate its past experience in cleaning, grooming and maintaining various manufacturers of synthetic turf field systems in the United States within the past five (5) years. Preferably, the experience will be with educational and governmental customers located in the Southwest area of the United States.
- 5.5.2. The offeror shall use its own employees or subcontractors that are experienced and skilled in the cleaning, grooming and maintaining of various manufacturers' synthetic turf field systems.
- 5.5.3. The offeror must meet the following criteria:
 - 5.5.3.1. Guarantees the usability and playability of the synthetic turf system for its intended uses after any cleaning, grooming and maintenance completed by the offeror.
 - 5.5.3.2. Prior to order of materials or use of any equipment on the synthetic turf, the contractor shall submit the following documentation:
 - 5.5.3.2.1. The materials that will be used meet the manufacturer's specifications and will not void any part of the Member's warranty for the synthetic turf.
 - 5.5.3.2.2. Any equipment that will be used for grooming, cleaning and maintenance is approved by the turf manufacturer and will not void any part of the Member's warranty for the synthetic turf.
- 5.5.4. Prior to beginning any services, the offeror must identify the following for the Member's synthetic turf:
 - 5.5.4.1. Identify the manufacturer of the turf and infill material used.
 - 5.5.4.2. Identify the turf construction (i.e. tufted, woven, knitted, etc.).
 - 5.5.4.3. Identify the play lines (i.e. permanent, temporary, etc.).
 - 5.5.4.4. Identify the drainage and irrigation systems to include, but not be limited to:
 - 5.5.4.4.1. How they operate.
 - 5.5.4.4.2. How they are controlled.
 - 5.5.4.4.3. System design.
- 5.5.5. Work to Include:
 - 5.5.5.1. Assess and determine existing site conditions and Member's expectations for the project.
 - 5.5.5.2. Develop a proposed solution to conform to and meet the Member's expectations while considering and ensuring the following:
 - 5.5.5.2.1. The solution proposed is adequate and functional within the existing site conditions and will comply with all turf manufacturers' specifications.

- 5.5.5.2.2. Provide labor, materials, equipment and supervision necessary to provide the services offered, to include the following:
 - 5.5.5.2.2.1. Site inspection and investigation.
 - 5.5.5.2.2.2. Turf type and manufacturer.
 - 5.5.5.2.2.3. Grooming of the turf surface per manufacturers' specifications.
 - 5.5.5.2.2.4. Removing unwanted foreign material to include, but not limited to, leaves, weeds, unwanted vegetation, and any other debris that will affect the performance of the turf.
 - 5.5.5.2.2.5. Repair damaged turf to manufacturer's specifications.
 - 5.5.5.2.2.6. Remove spots and stains per manufacturer's specifications.
 - 5.5.5.2.2.7. Re-leveling infill as required, keeping the pitch in optimum condition.
 - 5.5.5.2.2.8. Play Lines:
 - 5.5.5.2.2.8.1. Permanently inlaid play lines are secured and affixed to the turf per the manufacturer's specifications and/or repair or re-secure as required.
 - 5.5.5.2.2.8.2. All painted lines are to use proprietary or recommended paint by the turf manufacturer.
- 5.5.5.2.3. Provide cost estimates and information relating to ongoing inspections and maintenance services to ensure proper operation and upkeep of the synthetic field.
- 5.5.5.3. Identification of Infilled Systems: The specifics of the synthetic surface, fiber, infill, construction, play lines, and any other basic elements or unusual features must be accurately identified so that the appropriate maintenance regimen can be applied. Such identification should be obtained from the provider of the system.
 - 5.5.5.3.1. Fiber Identification
 - 5.5.5.3.1.1. Fibers vary in length, thickness, and density depending upon the performance requirements of the synthetic turf system for which it has been designed.
 - 5.5.5.3.1.2. Long pile systems may be filled with a combination of sand and rubber granules, rubber granules only, or a combination of other specialty materials in order to meet the pre-determined performance criteria.
 - 5.5.5.3.2. Infill Identification
 - 5.5.5.3.2.1. Sand: The sand material used as infill should be rounded to sub-angular and silt free.
 - 5.5.5.3.2.2. Rubber: The rubber granules used as infill material are typically Styrene Butadiene Rubber (SBR) or Ethylene

Propylene Dien Polimerisat (EPDM.) The granules must be clean and metal free.

- 5.5.5.3.2.3. Other: Combinations of sand, rubber, or other suitable materials in various combinations must be capable of meeting all the guidelines and environmental requirements at the installation location.

5.5.5.3.3. Construction Identification

- 5.5.5.3.3.1. Tufted: The most commonly used process by which the fiber yarns that form the pile are inserted into a previously prepared blanket-like primary backing.
- 5.5.5.3.3.2. Woven: The process where the surface is composed of interlacing sets of continuous yarn.
- 5.5.5.3.3.3. Knitted: The process in which the yarn fibers of the pile are tied to the backing which was simultaneously constructed in the same over and under, criss-cross process.

5.5.5.3.4. Play Lines Identification

- 5.5.5.3.4.1. The permanent play lines defining the field of play can be tufted into the surface backing or are an integral part with the surface, having been inlaid or cut into the surface with designated colors.
- 5.5.5.3.4.2. Temporary play lines are encountered when changes in field definitions are required. They are painted onto the surface, but require frequent attention, repainting, or repair to maintain their appearance. Frequent inspection is recommended.
- 5.5.5.3.4.3. Desirability of permanent or temporary markings depends on the use of the sport, seasonality, and preference of the users.

- 5.5.5.4. Maintenance Procedures: Maintenance procedures implement the processes available that will help assure continued performance of the system as specified in relation to the declared purpose and use of the synthetic turf surface.

5.5.5.4.1. General Surface Cleaning

- 5.5.5.4.1.1. Airborne pollutants such as leaves and other debris should not be allowed to remain on the surface for any length of time. If not removed, they will migrate into the system, forming a drainage inhibition within the surface which can reduce drainage effectiveness.
- 5.5.5.4.1.2. A wide soft broom can be used for removing the surface debris.
- 5.5.5.4.1.3. A mechanical leaf sweeper or special vacuum cleaner which does not remove the infill can be used.

5.5.5.4.1.4. All mechanical equipment must be well maintained and carefully operated to avoid contamination or physical damage to the synthetic turf system.

5.5.5.4.2. Grooming

5.5.5.4.2.1. Proper grooming achieves a freshening of the synthetic turf surface appearance. It is a crucial operation which will help prevent the premature deterioration of the performance characteristics, appearance, and drainage properties.

5.5.5.4.2.1.1. Mechanical grooming can accelerate the process when the proper equipment is chosen and operated by skilled personnel.

5.5.5.4.2.1.2. Drainage is essential to effective maintenance. It is possible that the bed of infill material serves as a filter. Infill can unavoidably retain inert particulate matter conveyed or blown onto the field or carried by rainfall or other air contaminants. By moving and re-leveling the upper layers of infill, mechanical grooming can delay the timeline when problems may begin to occur in the normal course of use, which could reduce the drainage process.

5.5.5.4.2.1.3. Accumulation of unwanted or foreign materials is inevitable. Too much grooming, or the negligence of grooming, can affect the long-term turf performance, even if such does not appear in the short run. Should a contaminant have a growth potential, the species and its eradication agents should be carefully identified and removal should be immediate before serious infestation occurs. Equipment designed for that specific purpose must be operated by skilled personnel who have precise knowledge of its effects.

5.5.5.4.2.1.4. Routine maintenance, if regularly applied, can reduce the long-term effects of any external contaminants, making such occurrences almost a non-issue.

5.5.5.4.3. Brushing

5.5.5.4.3.1. The synthetic turf pile needs to be maintained vertically and requires regular brushing to maintain the vertical pitch of the turf. The surface should be brushed in a number of directions, alternating the direction in consecutive activities.

5.5.5.4.3.2. Methods of brushing can be, but not limited to, synthetic lawn rake, mechanical sweepers or blowers.

5.5.5.4.3.3. It is critical that the type of brush used does not abuse the condition of the surface.

5.5.5.4.3.4. Brushes that have a rotary action in a horizontal position in front of the drive unit are preferred since they agitate the blades of the synthetic turf. The simultaneous vacuuming action should remove the undesired pollutants and debris. Drag brushes are not recommended for use for AEPA Members since they have a tendency to flatten the turf pile and increase cleaning process.

5.5.5.4.3.5. Any equipment used for brushing, grooming and cleaning the synthetic turf system needs to meet the turf manufacturer's specifications as not to void any of the Member's warranty.

5.5.5.4.4. Frequency

5.5.5.4.4.1. The offeror will need to consult with the turf manufacturer as to the maintenance schedule.

5.5.5.4.4.2. A change in the use patterns and the intensity of play can influence the frequency of maintenance. It will be the contractor's responsibility to keep abreast of the schedule of activities that will take place on the field so the contractor can ascertain the amount of labor and materials needed to maintain the field.

5.5.5.4.4.3. In the case of new installation, it may take up to six months for the infill to finally settle into the pile of the synthetic turf. Environmental, climatic and use conditions may affect the final settling. Testing of the synthetic surface should occur as noted in the manufacturer's specifications or in the "Suggested Guidelines for the Essential Elements of Synthetic Turf Systems," published by the Synthetic Turf Council, and available at www.syntheticurfCouncil.org.

5.5.5.5. Special Conditions

5.5.5.5.1. Play lines

5.5.5.5.1.1. Permanent lines require no special attention other than checking how securely they are affixed. At a minimum, such a check of the seams in the synthetic turf field should also be made at every grooming session. Any breakdown of the seams at lines or in the main covering should be immediately remedied in order to avoid ongoing deterioration and to help prevent tripping hazards.

5.5.5.5.1.2. When additional lines are required for special events or changes in the sports being played, these can be painted onto the surface using proprietary or recommended paints that have been specified by the manufacturer of the synthetic turf. The contractor will work with the AEPA Member to recommend the most effective solution for the event. The lines can be a combination of permanent, semi-

permanent, or temporary effects. Marking compounds for natural grass should not be used, as these will leave a buildup, forming a crust and potential mobility hazards.

5.5.5.5.2. Stain Removal

5.5.5.5.2.1. Most stains can be removed easily with a solution of hot (not boiling) water and a manufacturer-approved household detergent. Removal of chewing gum can be simplified by making the gum brittle with a proprietary aerosol freezing material. Any other contamination requires the turf manufacturer's individual consultation and determination of what course of action is to be taken.

5.5.5.5.3. Snow and Ice

5.5.5.5.3.1. Snow and ice are not harmful and can be permitted to melt. If it is urgent to remove the snow in order to allow play, brushes may be used. If the area to be cleared is a full field size, logistics of transporting and disposing of snow may prove prohibitive. The contractor will not use mechanical snow removal equipment other than the equipment recommended by the manufacturer of the turf.

5.5.5.5.4. Vehicles Used on the Turf

5.5.5.5.4.1. No vehicles with narrow wheels or tires should run over the turf.

5.5.5.5.4.2. All vehicles should be lightweight as to not form grooves in the surface or compact the sub-base formation. The offeror will need to verify with the turf manufacturer the type and size of vehicle that can be used on the turf.

5.5.5.5.4.3. When carrying out maintenance with a vehicle, the grounds person should slow down when maneuvering and turn in a wide circle to ensure that the wheels/tires do not dig into the turf.

5.5.5.5.4.4. The vehicle should turn its wheels only when in motion. All vehicles should travel at slow speeds and avoid any and all abrupt and sudden braking, sudden acceleration or spinning of the wheels, especially on wet surfaces.

5.5.5.5.4.5. Vehicle load limits to be determined by the manufacturer of the synthetic turf system.

5.5.5.5.4.6. The offeror will need to verify with the manufacturer as to the suggested turning circles on any vehicles to be used on the turf.

5.5.5.5.4.7. All vehicles must be checked before use to determine oil or gas leaks. If such are found, they should be repaired before entry onto the field.

5.5.5.5.5. Use Patterns

- 5.5.5.5.5.1. Maintenance input is dependent upon the extent to which a field is used and the effectiveness of the maintenance operations.
- 5.5.5.5.5.2. Any effects upon the maintenance schedule due to a change of use or condition of the field should be brought to the attention of the AEPA Member by the contractor.
- 5.5.5.5.5.3. The contractor will keep daily maintenance logs as to the work performed on the synthetic turf field. If maintaining more than one field, separate maintenance logs will be kept for each field. The log is to include, at a minimum, type of maintenance completed, materials used, hours required, and any other information the AEPA Member requires.
- 5.5.5.5.5.4. The contractor will provide copies of the maintenance logs at the request of the AEPA Member.

5.5.5.6. Normal Maintenance

- 5.5.5.6.1. Daily: Check the field after each day's use for distribution and condition of the heavily played areas.
- 5.5.5.6.2. Weekly: Brush the surface of the field with a static (non-rotary) double brush including simultaneous vacuum devices to redistribute the infill, maintain vertical fibers, and a level playing "use" field.
- 5.5.5.6.3. Monthly: Check infill levels, seams, inlaid lines, etc., and report failures (if any) to the manufacturer. Also, check for over-compaction and de-compaction as may be necessary. It is essential that the appropriate equipment is used in order to achieve the specified performance criteria.
- 5.5.5.6.4. Periodically: At least once a year, a full grooming session should take place, brushing (rotating unit), vacuuming, de-compacting, and grooming (static brush). Top dress with new infill may be required. Contact the manufacturer if any aspect of the maintenance process is causing a significant concern.

5.5.5.7. Maintenance Agreement

- 5.5.5.7.1. The offeror can offer the annual maintenance agreement based upon, at the minimum, specifications as recommended by the turf manufacturer.
- 5.5.5.7.2. Any maintenance agreement offered by the contractor needs to include, at a minimum, the following:
 - 5.5.5.7.2.1. For what items and services the Member is responsible and for what items the contractor is responsible.

5.5.5.7.2.2. The agreement is to be based upon the turf manufacturer's specifications for annual maintenance for the synthetic turf system installed.

5.5.5.7.2.3. The offeror can offer other products and services that are related to turf maintenance under this IFB.

5.5.5.8. Submittals

5.5.5.8.1. Synthetic turf manufacturer's specifications and procedures for grooming, cleaning and maintenance of the turf system installed.

5.5.5.8.2. Material Safety Data Sheet (MSDS) to include, but not limited to, all types of infill, paints, glues, herbicides, etc., used in the performance of the service.

5.5.5.8.3. Samples: Samples of materials and colors as requested by the member or member's representative.

5.5.5.8.4. Detailed information on all items and work to be provided and/or performed by the member and stipulate minimum requirements.

5.5.5.8.5. Maintenance Instructions: Instructions on how to inspect and maintain turf system on an ongoing basis to obtain maximum performance.

5.5.5.8.6. Warranty: Written warranty to the member upon completion of any repair, weed treatment, infill corrections or play line striping.

5.5.5.8.7. Cost Proposal: Detailed breakdown of all costs associated with the design, manufacture, delivery, installation and warranty of the proposed solution.

5.5.5.9. Quality Assurance

5.5.5.9.1. Contractor: Proposed solutions must meet or exceed the turf manufacturer's specifications for grooming, cleaning and maintenance.

5.5.5.10. Contractor Qualifications

5.5.5.10.1. Contractor must have five (5) years of experience in the installation and maintenance of synthetic turf systems which meet and/or exceed the standards and guidelines from the turf manufacturer.

5.5.5.10.2. Factory-trained and certified by the turf manufacturer for maintaining synthetic turf systems.

6. Substantiating Documentation

6.1. Required Categorical Responses: Please Note: AEPA reserves the right to deem an offeror's response non-responsive if offeror fails to provide the information and/or documentation requested below.

- 6.1.1. Offeror must respond to and provide all of the documentation requested in Form F, Contractor's Qualifications.
- 6.1.2. Offeror must, through written narrative, clearly identify the products and services it is proposing to provide AEPA members under this IFB. The narrative shall include:
 - 6.1.2.1. The manufacturer's name(s).
 - 6.1.2.2. The levels of products offered from each manufacturer.
 - 6.1.2.3. Submit one sample of each product offered, 6x6 inch in size, illustrating details of finished product.
 - 6.1.2.4. Submit the major component manufacturer's/supplier's name, component and composition of the component.
 - 6.1.2.5. Certified copies of independent (third-party) laboratory reports on ASTM tests on the products offered.
 - 6.1.2.6. For each manufacturer, provide the required documentation to demonstrate its ability to perform as a party to this solicitation.
 - 6.1.2.7. Completed information on any subcontractor that will be utilized to provide any major components/products and/or perform services under this solicitation.
 - 6.1.2.8. Samples of the turf surface manufacturer's/contractor's warranty to be provided to the owner covering defects in materials, workmanship, excessive color change, excessive wear, and any other feature which is not deemed ordinary wear on a running tracks/courts of the type provided for a period of eight (8) years from the date of substantial completion. The method utilized by the surface manufacturer to verify that their onsite representative has inspected the installation and that the work conforms to the manufacturer's specifications and requirements for the warranty to be issued.
 - 6.1.2.9. Provide documentation demonstrating the surface manufacturer's/contractor's warranties is supported by an insurance policy or performance bond for the full eight (8) year period.
 - 6.1.2.10. Provide a sample of the subcontractor's warranty to be provided to the AEPA contractor covering defects in the work performed, installation, workmanship and further warrants that the installation was done in accordance with both the manufacturer's recommendations and any written directives of the manufacturer's onsite representative.
- 6.1.3. Offeror must, through written documentation, demonstrate its ability to provide and perform those products and services offered herein to all 24 AEPA states by providing prior experience with educational and or governmental institutions. The documentation shall include:
 - 6.1.3.1. For each product offered, list one (1) previous project performed in 10 of the 24 states, which has been used by the owner for one or more years.
 - 6.1.3.2. The general scope of work for each project and the size and type of turf system installed.
 - 6.1.3.3. The manufacturer's product used for each project listed.

- 6.1.3.4. The total cost of each project.
 - 6.1.3.5. The institution's name, address, phone number, contact person's name and title for each project.
 - 6.1.3.6. Provide the timeline for each project listed and provide a brief narrative of the pre-sale and follow-up consulting services offered to ensure institution's satisfaction.
- 6.1.4. Provide a brief narrative for three (3) projects that you have done for educational and or governmental institutions that, since the project was completed and signed off, you have had to go back and perform warranty work. Please include the following:
- 6.1.4.1. Through your evaluation of the problem, what did you find as the cause of the problem?
 - 6.1.4.2. What products and/or services did you have to provide to resolve the problem?
 - 6.1.4.3. Was the customer satisfied with your solution and would they be willing to give you a letter of reference if requested?
 - 6.1.4.4. Provide a narrative of your company's policies, procedures and strategies to ensure quality control, response to concerns before, during and after the project. Indicate what follow-up, review and oversight process your management team has in place to ensure member satisfaction.
- 6.1.5. If providing Turf Cleaning, Grooming and Maintenance Services provide the following:
- 6.1.5.1. Offeror must, through written documentation, demonstrate its ability to provide and perform those products and services offered herein to all 24 AEPA states by providing prior experience with educational and or governmental institutions. The documentation shall include:
 - 6.1.5.1.1. For each product offered, list one (1) previous project performed in 10 of the 24 states, which has been used by the owner for one or more years.
 - 6.1.5.1.2. The process used to identify the turf manufacture and the type of cleaning, grooming and maintenance services provided.
 - 6.1.5.1.3. What type of maintenance agreements provided, weekly, monthly or yearly services?
 - 6.1.5.1.4. The total cost of the services provided for each project completed to include the length of the contract.
 - 6.1.5.1.5. The institution's name, address, phone number, contact person's name and title for each project.
 - 6.1.5.1.6. Provide the timeline for each project listed and provide a brief narrative of the pre-sale and follow-up consulting services offered to ensure institution's satisfaction.

6.2. Cost Considerations

- 6.2.1. The offeror must provide a complete listing of all products and services that it is proposing to offer under this solicitation. All products and services pricing must be determined by one of the pricing methods defined herein.
- 6.2.2. Price sheets and/or catalogs: For those products and services that are priced using a manufacturer's published price list or product catalog, provide complete price list and/or catalogs that includes product number, product description, unit of measure for the available product, the item's price and what that price includes (delivery, installation, etc.). The offeror will indicate in its response the amount of discount to be applied to each item to arrive at the individual AEPA state agency price. Within the terms of this IFB, different manufacturers/products can have different discounts as long as the discounts are clearly stated within the offeror's response. If a price list or MSRP is not available, then the offeror must utilize one of the other established pricing methodologies.
- 6.2.2.1. AEPA understands the basic cost of the products/services listed on a published price list indicates the cost of acquiring, manufacturing, and preparing the products/ services shipped to a project site. It is also understood that the cost incurred by the AEPA contractor to deliver, store and install the products/services to an individual project site will differ depending on the AEPA state that the project site is located and the distance from the contractor's home location. Therefore, for each of the AEPA states listed herein, provide your multiplier/factor to be applied to the base AEPA price shown on the published price list to arrive at the individual AEPA state price.
- 6.2.2.2. Example: If the published price on the price is \$1,000 and the AEPA discount is 20%, the AEPA price would be ($\$1,000 \times .20 = \200 amount of AEPA discount and $\$1,000 - \$200 =$ an AEPA price of \$800). If the contractor bid a state multiplier/factor of 1.02%, to arrive at the AEPA state, the price would be \$816 ($\$800 \times 1.02 = \816).
- 6.2.3. The R.S. Means Company publishes a CD Rom and books covering the areas specified in the General Terms and Conditions of this IFB. The current CD/books will be the basis for all quotes and proposals.
- 6.2.3.1. For individual construction, cost items within the R.S. Means cost-book (including labor, overhead and profit), will be charged to the member for construction items. Please note that costs relating to non-construction items/assemblies (general condition items) such as season of the year; home, office costs; insurance; project management and supervision; office and storage trailers; pick-up trucks, mileage, per diem, transportation/delivery; safety equipment, weather conditions, etc., must be included as part of the contractor's multiplier/factor to be applied to the R.S. Means cost proposal to achieve the AEPA cost for the project. A bid multiplier/factor of 92% indicates that the contractor will charge the R.S. Means total cost times .92 as the billable amount. A bid multiplier/factor of 102% indicates that the contractor will charge the R.S. Means total cost times 1.02 as the billable amount.
- 6.2.3.2. When using the R.S. Means assembly cost items, the contractor must, for each individual cost item/assembly, indicate and document any of the R.S. Means

special factors that are applicable, including factors affecting cost, quality of materials, productivity of labor force, size of project and location.

- 6.2.3.3. No R.S. Means (General Conditions Items), such as contract management/supervision, home office costs, travel, per diem, pickup trucks, office trailers, storage facilities etc, are to be included in a project's cost proposal, unless it has been requested and approved by the owner.
- 6.2.3.4. Any costs associated with permits, state gross receipts and tribal taxes, performance and payment bond costs and other applicable reimbursable costs approved in advance by the member will appear as separate line items on the contractor's quote/proposal.
- 6.2.3.5. As noted above, the most recent edition of the R.S. Means will be utilized and this will adjust for inflation, material costs and labor rates effective January 1st of each year.
- 6.2.3.6. The contractor's R.S. Means bid factor/multiplier will be adjusted on the contractor's contract anniversary date by applying the escalation/de-escalation as measured by the Construction Cost Index (CCI) published in the ENR (formerly known as Engineering News and Record).
- 6.2.3.7. If there are goods and services provided under this contract that are not covered by R.S. Means, then the cost of these items will be calculated by utilizing one of the other costing methodologies defined herein.
- 6.2.4. Alternative Costing Methodology: Any items not covered by R.S. Means and/or published price list/catalog. The price will be obtained by issuing, receiving and evaluating three (3) written quotes, which shall be submitted in advance and approved by the owner prior to being included into any final contract documents. AEPA and its members reserve the right to accept or reject any quote or proposal, including such items and may obtain these items through other procurement means (other existing contracts). The AEPA price will be determined by utilizing two percentages:
 - 6.2.4.1. Based on the most advantageous and cost effective quote received by the contractor, the contractor will apply its normal and customary overhead and profit percentage to the total cost submitted by the subcontractor and add that amount to obtain the normal and customary retail price (item cost multiplied by percent for overhead/profit equals amount of profit and overhead to be add to item cost equal retail price).
 - 6.2.4.2. Taking the normal and customary retail price as established in No. 1 above, the contractor will apply the AEPA discount percentage and subtract this amount from the normal and customary retail price to obtain the AEPA price (item retail price multiplied by percent of AEPA discount equals amount of discount to be subtracted to obtain AEPA price).
- 6.2.5. If products or services are required as part of the performance under this contract that can only be obtained and/or manufactured from a single source and fall under the sole source provision that is found within most state procurement codes, the contractor must provide the owner with the documentation to substantiate the purchasing method as sole source.

- 6.2.6. Cost evaluation will be based on a point system with points being awarded for being low to high bidder for each cost evaluation item, that is, contractor, discount off R.S. Means, overhead and profit percentage mark-up, mileage charge, per diem rate, travel time, etc. If an offeror leaves out an item that is required, AEPA will allot zero (0) points to that item, and if awarded a contract, cannot be used in providing products or services. The low bidder will receive the full point value and all other bidders will receive points calculated as follows:

$$(\text{Lowest Bid} / \text{Other bid}) \times \text{point value}$$

- 6.3. Cost Evaluation Information (Form G): The following factors will be used to evaluate and award this solicitation. Please note that these are only a few items selected to do the cost evaluation. The offeror must provide all of the pricing information required herein.

6.3.1. General Cost Items

- 6.3.1.1. Performance and Payment Bond Costs: This represents the cost the contractor incurs to provide a performance and payment bond to the member for an individual project when it is required. The offeror is to indicate the percentage rate charged on the total cost of an individual project to obtain a bond, and the documentation to substantiate the rate, that is, two percent (2%).
- 6.3.1.2. Bonding Capacity: This represents the offeror's maximum level of bonds that it can obtain at any one time. Offeror is to indicate its bonding capacity and provide documentation from a security company to substantiate the amount indicated.
- 6.3.1.3. Offeror's Bid Factor/Multiplier off R.S. Means costing of products and services relating to construction projects during Normal Hours (Monday through Friday 7:30 a.m. to 4:30 p.m.) and not covered by other costing methods.
- 6.3.1.4. Offeror's Bid Factor/Multiplier off R.S. Means costing of products and services relating to construction projects during Outside Normal Hours (Monday through Friday 4:30 p.m. to 7:30 a.m., Saturday and Sunday) and not covered by other costing methods.
- 6.3.1.5. Alternative Method of Costing: Percentage of overhead and profit. This method includes custom manufactured items that are not covered by other R.S. Means or sole source items. Offeror is to indicate the percent of overhead and/or mark-up to be applied to these costs to obtain the retail cost. Example: Item cost \$1,000 multiplied by percent of profit/overhead 20% equal \$200 for overhead and profit. Item cost \$1,000 plus overhead and profit of \$200 equals a retail price of \$1,200. Note this percentage has no relationship to the R.S. Means costing method indicated above.
- 6.3.1.6. Alternative Method of Costing: Percentage of AEPA discount to obtain AEPA price (item retail price multiplied by percent of AEPA discount equals amount of discount to be subtracted from retail price to obtain AEPA price). Example: Item retail cost \$1,200 multiplied by percent of 10% AEPA discount equal discount of \$120. Retail cost \$1,200 less the AEPA discount \$120 equal the AEPA price of \$1,080). Note this percentage has no relationship to the

percentage of discount of manufacturer's/suppliers price sheets or catalogs indicated below.

- 6.3.1.7. Discounts Provided on Price List and Catalogs: This represents the average discount provided by the offeror on stated prices. Note different product lines and/or category of products on published price sheets may be offered at different discount percentages. If different discount percentages are offered, AEPA will calculate an average percentage for evaluation purposes.
- 6.3.1.8. Provide for each of the AEPA states list, your multiplier/factor to be applied to the AEPA price calculated from the published price list to arrive at the individual AEPA state price.
- 6.3.1.9. Offeror's Support for AEPA Pricing: This is the percent of difference between what the offeror's price to AEPA and the price that the offeror would offer the same products directly to any public educational institution in the 24 states. The offeror's AEPA price is \$100, the offeror's direct price to AEPA members is \$103. The difference is 3% percent.
- 6.3.1.10. A number of individual items have been selected for evaluation purposes. Offeror must indicate for each of the items what its cost would be to provide and install each of the item would be to provide and install each of the items listed in each of the 24 states.