CITY
OF
JOPLIN, MISSOURI

BID PACKAGE

2017-RFP-02

For

SYNTHETIC TURF FOR BASEBALL STADIUM(S)

JOPLIN PARKS & RECREATION DEPARTMENT

3301 W 1ST STREET

JOPLIN, MO 64801

(417) 625-4750

NOTICE TO BIDDERS

The City of Joplin, Missouri will accept sealed proposals until 10:00 A.M., Monday, February 13, 2017 at the Joplin PARKS & RECREATION Department located at 3301 W 1ST Street, Joplin, Missouri, 64801 to PURCHASE the following:

SYNTHETIC TURF FOR BASEBALL STADIUM(S)

Specifications and bid forms are available from Greg Bertoncino, Joplin Athletic Complex, by calling 417-625-4750, by writing to the address indicated above or by emailing to gbertonc@joplinmo.org. Any bids received after the specified deadline will be returned to the vendor.

The City reserves the right to evaluate all proposals, to reject any or all proposals and solicit again at a later date. The City may waive any irregularities in the proposal or negotiate variances from specifications, and make awards that are in the best interests of the City. The City will have final decision in all matters regarding acceptance of proposals and issuance of awards.

The City encourages minority and female owned businesses to submit proposals on all City purchases.

Leslie Haase, CPA
Finance Director

Publication Date: ***Wednesday, January 11, 2017***

General Scope of Work

Part 1: Detail

A. Existing conditions:

The site is an existing stadium, asphalt parking lots and completed landscaping. The contractor must take all precautions to prevent damage. Any damage that occurs will be the contractor's responsibility to repair at no additional cost to the City.

Scope of Work for Base Bid:

- It is the bidders' responsibility to visit the site prior to bidding. No additional costs will be paid to the successful bidder should they fail to include anything that might be required for this to be a fully functional sports stadium with a synthetic playing surface.
- The project scope of work may or may not include all work necessary to complete project. It is each bidder's responsibility to review the entire set of specifications and visit the site to determine the scope of work. This is to be a turnkey project and all bidders should include all costs necessary to complete the project.
- Each contractor must supply the owner with a performance bond prior to the start of construction.
- All bids must be prevailing wage using the most current wage order.
- Provide County, DNR, City, State and any other permits required for construction.
- Provide as-built drawings.
- Supply all surveying, staking required for the project.
- Conformance surveys will be required for subgrade and finished rock grade by a certified 3rd party testing company licensed in the state of MO.
- Contractor will be responsible for supplying a Stormwater Pollution Prevention Plan (SWPPP) prior to construction.
- Provide an experienced on-site project superintendent with a minimum of 5 stadium projects completed under employment of bidder.
- Conduct pre-construction meeting.
- Provide dumpsters, portable restrooms and construction fencing as needed.
- Provide on-site supervision of all staging area, materials, and equipment.
- Inspect quality of work.
- Conduct final walk thru with owner
- Demo any item necessary to provide a synthetic turf baseball field.
- Perform cuts and fills as needed. All excavated materials to be hauled to area off site and not supplied by the owner:
    - Sub-grade for synthetic turf installation
- If required, install all concrete flatwork per the following scope:
    - 6"X12" concrete curbing with 2 pieces of #4 rebar for the perimeter of the baseball infield.
- If required, install pressure treated 2"x4" nailer boards around entire perimeter of the baseball infield.
- Install 4 oz. geotextile fabric to cover the entire field, including under collector drains and along the face of the inside curb totaling at approximately 30,000 SF. Seams will overlap at 12"
- Install 12" perforated perimeter drain system around entire outside edge of field with 1" clean backfill and installed in a fabric-laced trench.

- Install 12" wide flat panel drains on 25' centers in a herringbone pattern that will gravity feed into the collection drain.
- Install 6 inches of 1-inch clean drainable base (approximately 30,000 SF).
- Install 2 inches of 3/8-inch clean drainable base (approximately 30,000 SF).
- Laser grade sub-grade, base stone, and surface stone in the synthetic turf area.
- Install approximately 30,000 sf of synthetic turf for the infield
- Install all baseball markings
- Provide and install one (1) True Pitch 318-G Portable Mound with RamTurf Baseball System installed or equivalent mound system.
- Install home plate and 3 sets of bases in concrete sleeves (Baseball & 2-Softball)
- Provide one (1) pull behind sweeper with rotating brush and hopper; Greens Groomer or equivalent.
- Provide one (1) turf grooming drag mat
- Final Clean up and Inspection.
- Close out maintenance manual and training of owner personnel.
- 8-Year Synthetic Turf Warranty to cover all components of the synthetic turf system (fiber, tufting, backing and installation).
- 8-Year Third Party Insured Synthetic Turf Warranty.
- Liquidated damages will be assessed at the rate of $1,000.00 per day for each and every calendar day beyond final completion date. Any missed event that is missed due to the project not being completed on time will incur a financial penalty of $5,000.00 per event day.
- Alternate 1: 8-Year Sub-Base Warranty to cover all base work, rock, and drainage under the turf are guaranteed against soft spots, low spots and drainage problems.
  Alternate 2: 8-year Comprehensive service to include once annual full field inspection and onsite repairs, hash marks, letters and logos, industrial grooming and magnetic sweeping of the field, leveling of infill as needed, adding infill as needed, de-compacting the infill as needed, removing all dirt and debris from the field and site, and training of owner field maintenance personnel for proper turf field care.

Survey Requirements and Permits

Part 1: General

A. Successful contractor shall be required to provide an engineer's survey of the completed project while attesting to its accuracy. All as-built drawings shall be provided to the Owner on 24" x 36" blueprint and CD in AutoCAD format.

Part 2: Detail

Successful Contractor will provide Owner the following survey, layouts and drawings:

A. Provide 2 copies of all survey drawings.
B. Provide survey for each of the following:
    1. New conditions of on a minimum 100' grid.
    2. As-built drawing of the finished site including location and elevations on a minimum 100' grid.
C. Survey and install the following items:
    1. Survey and install permanent radius hubs.
    2. Survey for new artificial turf for field.
    3. Earthwork and grading as shown.

PART3- PERMITS

A. Provide City, DNR, State and County Permits required to complete project

Site Demolition

Part 1: Summary

- Demo items will be required to be removed and hauled to a landfill or dumping area approved for these materials.

- All old drainage piping, irrigation, concrete structures will be required to be removed and hauled to a landfill or dumping area approved for these materials.

- Excavate all areas as necessary

Site Preparation

Part 1: General

Summary:

A. A pre-construction conference shall be held on the job site with all Contractors and Subcontractors prior to the start of any work.

Execution:

A. Contractor shall provide all survey work required to locate lines and grades for the construction of this project as herein specified.
B. Upon entering the site and before any other work is underway, the Contractor shall establish and verify all finish grades.
C. All work under this section shall be coordinated with the Owner so as to verify their understanding of the plans and intended layout.
D. Protect all existing items not part of the demolition from damage during construction.
E. Subgrade, drainable stone and all components of the turf must be installed and warrantied.

Removal of Debris:

A. Promptly remove cleared debris from the site.
B. Obtain permission from applicable regulatory authority for disposal of debris to waste disposal site.
C. Costs of all removals shall be included in contractors bid price.

Earthwork

Part 1: General

1.1 SCOPE

A. Furnish approved labor, materials, equipment, transportation, and services required to complete all earthwork . The Base Bid includes all earthwork and grading to provide a sub grade that implements a positive drainage for the site.
B. The Contractor is expected to visit the site to determine all conditions to be encountered, protect improvements on Owner's property, and to restore any improvements damaged by his work to their original condition, as acceptable to the owner, or other parties or authorities having such jurisdiction.

1.2 SAFETY CODES AND STANDARDS

Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

1.3 GRADE CONTROL

A. The Contractor shall perform all work so as to permit the site to be free draining at all times and to prevent ponding. Contractor shall provide positive drainage for the entire site during the course of construction to eliminate standing water in excavated areas.

1.4 DEBRIS

A. All debris is to be disposed of away from Owner's property unless otherwise directed.
B. Debris may not be buried over existing sewer or water mains.
C. All debris must be removed on a daily basis.

PART 2 – BACKFILL AND FILL MATERIALS

Backfill shall be excavated soil free of rock or gravel larger than 1/2" in any dimension, debris, waste, frozen materials, vegetable matter, and other deleterious matter. Existing materials may be used for backfill, provided no silt is mixed with material. Backfill consists of placement of acceptable soil material in layers, in excavations, to required sub grade elevation, for each area classification listed below.

Fill Material: Fill material shall be clean, hard, durable, uncoated particles of sand or sand gravel mixture, provided that there shall be a substantial excess of sand-screenings. Embankment fill materials shall be limited to mixtures of sand, silt, gravel, silty clay, or sandy clay meeting USCS designations GW, GM, GC, SW, SP, SC, CL, or ML-CL. Soil materials that are predominately silt, organic material, or highly plasticity clays shall not be used.

2.1 TOPSOIL – If required, Topsoil shall be free of rock or gravel larger than 1/2" in any dimension.

PART 3 - Excavation

3.1 Excavation consists of removal of material encountered to obtain required sub grade elevations.

A. Removal of Unsatisfactory Soil Materials: Excavate unsatisfactory soil materials encountered that extend below required elevations to additional depth as directed.
B. Material Storage: Place excavated materials classified as unsatisfactory fill materials where directed by Owners geotechnical consultant.

3.2 BACKFILL AND FILL MATERIALS

A. Remove vegetation, debris, unsatisfactory soil materials, obstruction and deleterious materials from ground surface prior to placement of fills.
B. Compaction: Perform compaction of soil materials for fills and backfills using suitable soil compaction equipment for materials to be compacted and work area locations. Control soil compaction during construction for compliance with percentages of maximum density specified for each classification. All Compaction test shall be in accordance with ASTM D1557 or AASHO T180 C Modified Proctor Method.
C. Placement and Compaction: Place backfill materials in layers not more than eight (8″) in loose depth. Before compaction, moisten or aerate each layer, as necessary, to provide the optimum moisture content. Compact each layer to required percentage of maximum density for each area classification. Do not place backfill or fill material on surfaces that are muddy, or frozen, or contain frost or ice. Thoroughly compact all fill and backfill by rolling each layer, following spreading, as close as possible. Roll the areas in equal amounts in two directions. Provide compaction equipment or type best suited to achieve the desired results with the type of soil. In general, use pneumatic wheeled or vibrating rollers on granular fill material. Operate compacting equipment on each layer until the entire area has been thoroughly and uniformly compacted to the required density.
D. Maximum Density Requirements: Provide not less than 95% compaction of maximum density of the same soil material compacted at optimum moisture content, for the actual density of each layer of soil material in place. Any soils found unsuitable for specified compaction requirements shall be removed as directed by Owner.
E. Grading: Preparation of subgrade: Rough grade all areas within the limits of site grading under this section, including adjacent transition areas. The rough grade shall be compacted as required. Shape the surface of future lawn areas to the line grade and cross Section with the surface not more than 0.10 feet above or below a surface runoff. Ponding shall be non-existent or at a minimum.
F. Gravel Areas: Shape the surface of the areas under pavement to the line grade and cross-section with the surface not more than 1/2″ above or below the subgrade elevation for walks. All frost heave materials such as topsoil, organic material, mulch, peat, silt, etc., shall be removed within lines two feet. Uniform bearing power shall be obtained by loosening exceptionally hard spots and re-compacting. Take every precaution to obtain a uniform bearing power through compacting by such means as will provide a firm base and ensure against future settlement of superimposed construction. Utility trenches and holes left from grubbing or from other removal operations shall be backfilled with suitable fill material for that application.

3.3 FINISH GRADING:

A. Fine grade sub-soil systematically to eliminate uneven areas and low spots. Remove debris, roots branches, stones, etc., in excess of two inches (2") in size.
B. Cultivate sub-grade to a depth of six inches (6") where topsoil is to be placed. Repeat cultivation in areas where equipment used for hauling and spreading topsoil has compacted sub-soil.
C. Compact sub-soil at the following percentages to a depth of 12 inches:
    1. 85% Modified Proctor where topsoil is to be placed.
    2. 95% Modified Proctor where artificial turf is to be placed.

Aggregate Rock Base – Turf Field

Part 1: General

1.1 The work under this section of the specifications shall consist of furnishing all labor, materials and equipment to produce, place, spread, compact and finish to proper grade and cross section all aggregate rock base courses accordingly.

Part 2: Products

2.1 If required, limestone rock shall meet a L.A. Abrasion of 25 or less.
2.2 Install 1" clean washed rock with 1% or less fines to a depth of 6"
2.3 Install 3/8" clean washed rock with 3% or less fines to a depth of 2"

Part 3: Execution

3.1 All references to thickness are compacted thickness.
3.2 Sub-grade shall be compacted to not less than ninety-five (95%) of maximum density at no less than seventy-five (75%) of optimum moisture content.
3.3 The finished surface of any aggregate base course shall not vary more than 1/4" over 10" from the elevations, grades and cross sections.

Sub-Base Drainage System

Part 1: General

1.1 SUMMARY

This Section includes gravity-flow storm drainage with the following:

A. Pipe, Gaskets and Sealants
B. Catch Basins, Inline Drains and Grates

1.2 SCOPE

A. All work under this section of specifications shall include the furnishing of all labor, materials and equipment necessary to install, connect, set and finish to proper elevation the sub-drainage system.

Part 2: Products

2.1 APPROVED MANUFACTURER

A. Advanced Drainage Systems, Inc. or approved equal by Owner.
B. Goulds Pumps or approved equal by Owner.

2.2 PIPE AND FITTINGS

A. All Pipes shall be HDPE corrugated single wall, Type C/CP.
B. Pipe and Fittings shall meet AASHTO M 252M, Type C with smooth waterway for coupling joints and these joints shall be soil-tight.
C. Pipe shall have a stiffness of 240 Kn/sq m when tested.

2.3 CATCH BASINS, INLINE DRAINS, GRATES AND OTHERS

A. PVC inlets shall be of the catch basin and inline drain type
B. Cast iron or Ductile iron grates for these inlets shall be furnished by the same manufacturer.
C. The catch basins shall be manufactured by thermo-molding process to comply with specified configuration. Pipe connection stubs shall be manufactured from PVC pipe and formed to provide a watertight connection with the pipe system.
D. Material used shall conform to ASTM D3034 and ASTM F1336.
E. If required, grates furnished shall provide a round bottom flange that matches the diameter of the surface drainage inlet and shall be capable of supporting H-20 or better wheel load for heavy-duty traffic. Grates provided shall be black in color.

Part 3: Execution

3.1 PIPE INSTALLATION

A. Pipe shall be installed in accordance with ASTM D2321. A 6" bedding shall be placed beneath the pipe to establish correct line and grade.
B. Backfill shall be compacted to + 90% modified proctor density.
C. Install all gaskets, seals, sleeves and couplings according to manufacturers written instructions.
D. Piping install is at ½% slope unless otherwise indicated.
E. All piping shall be below frost line.

Synthetic Turf Surfacing

Part 1: General

1.1 SUMMARY

A. This Section includes the installation of a Synthetic Turf System for athletic fields, including the following:

1. Synthetic turf surfacing and backing.
2. Resilient infill system.
3. All field markings and lines required
4. Field drainage base, subdrain and drainage piping.
5. All edgers/nailers and other related work to accommodate the new playing field system.

1.2 PERFORMANCE REQUIREMENTS

A. The completed synthetic grass surfacing shall meet the following performance criteria:

1. Dynamic Cushioning: Upon completion the synthetic turf system shall have an Average G-max value of 165, plus or minus 10%. Over the life of the field warranty the synthetic turf system shall maintain a maximum G-max value of 180, plus or minus 10%.
2. G-max Testing: All G-max testing shall be performed by an independent testing Service and in accordance with ASTM Standard Specification F1936 and ASTM Standard Test Method F355 (Procedure A).
3. Rotational Resistance: Rotational grip or "fixation" shall be between 25 Nm and 50 Nm.
4. Linear Resistance: Linear resistance of the surface shall be between 3.0 g and 6.0 g.
5. Wear Testing: Lisport test results after a minimum of 20,000 cycles:
    a. Synthetic grass system shall have no decisive change in appearance, no shortening of fibers or abrasion.
6. Lead in each component of the system shall be the least amount but not exceed 50ppm (parts per million). Components include, but are not limited to fiber, infill, and backings.
7. Grading: Completed field subgrade, drainage layer, perimeter curbing (if required), and surface shall have a uniform cross pitch.
    a. Field subgrade shall have a maximum variation of 0.5" over 10 feet from true grade.
    b. Field drainage layer and field surface shall have a maximum variation of 0.25" over 10 feet from true grade.
8. Compaction and permeability of turf system subgrade and aggregate base shall be verified by contractors soils testing agency on a 25-foot grid. All report(s) to be reviewed and verified by turf installer or project manager.

1.3 ACTION SUBMITTALS

A. Bid Time Submittals: Submit the following at the time of bidding along with the required bid form:
    1. G-max verification: For each of the listed installations above include both the G-max rating at time of installation and, where available, the yearly G-max rating performed in compliance with ASTM F1936 and ASTM F355.
B. Product Data: For each type of product specified.
    1. For synthetic turf include characteristics of grass yarn, primary and secondary backings, yarn weight, total system weight, stitch gage and spacing, permeability, and shock attenuation.
C. Shop Drawings: Shall include all pertinent information regarding installation including the following:
    1. Recommended details of construction noting:
        Include any and all miscellaneous details for inserts, covers, edge termination, etc. required for a complete installation.
    2. Submit drawings for:
        a. Synthetic grass seaming plan.
        b. Field layout and striping plan identifying all inlaid markings.
        c. Provide a scaled color drawing of the field, indicating colors and field lines.

D. Samples: Submit for selection or verification of specified products:
    a. Two (2) 12-inch x 12-inch manufacturer's product samples showing backing with perforations, seam makeup, either sewn or glued, each field color, one linear foot of game striping colors.
    b. Two (2) 12-inch x 12-inch assembled turf samples with backing and infill.
E. Installer Certification: Submit proof that the installer is authorized and/or approved by the manufacturer to install their products.

F. Test Data
    1. Submit proof from an independent testing lab of an actual sample of the product taken from the material delivered to the site. Test for lead content of each component. The report shall identify the manufacturer, the specific product name, and the lead amount for each component including fiber, infill and backings. Lead content shall comply with specified requirements.
    2. Submit testing data to substantiate that installed synthetic turf system meets or exceeds required impact/shock attenuation properties (g-max.) when tested per ASTM F355, ASTM F1936 and other applicable standards.
    3. Submit results certified by an independent testing laboratory experienced in synthetic turf testing for the following:
        a. Pile Yarn Type
        b. Yarn Denier – ASTM D1907/D1907M-12

c. Yarn Breaking Strength – ASTM D2256
d. Yarn Melting Point – ASTM D7138-08
e. Pile Height – ASTM D5823-05a
f. Pile Weight – ASTM D5848-10e1
g. Total Weight – ASTM D5848-10e1
h. Backing Perforations
i. Tuft Bind (without infill) – ASTM D1335
j. Grab Tear Strength – ASTM D5034
k. Pill Burn Test – ASTM D2859

G. Maintenance Data: Prior to Final Acceptance submit to the Owner four (4) copies of the manufacturer's maintenance manuals, which will include necessary instructions for the proper care and preventative maintenance of the synthetic turf system.

1.4 Quality Assurance

A. Manufacturer Qualifications: Manufacturer must have at least five (5) years of experience in the design and manufacture of infilled synthetic turf systems with a record of successful in service performance.
    1. Synthetic turf surface, including yarn and carpet backing shall be supplied by a single manufacturer.
    2. Provide additional components including anchoring materials, seaming products, binders and adhesives from single sources.

B. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and whose work has resulted in installations with a record of successful in-service performance. Installer shall have a minimum of five (5) similar installations of baseball infields and outfields (minimum 70,000 sq. ft.) within the past five (5) years and shall have been a company doing business for the last five (5) years.

C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

D. Testing: Perform tests in accordance with ASTM F355, "Standard Test Method for Shock Absorbing Properties of Playing Surface Systems," to verify that shock attenuation values (Gmax Levels) of installed synthetic turf meet specified performance requirements. Test the installed system at time of completion and at the following intervals during the Warranty Period specified in Part 1 herein:
    1. Testing Frequency: Before the start of the baseball Season in each year of the eight (8) years following the Date of Substantial Completion.

E. Testing of the turf sample shall be completed prior to the start of the installation of the turf.

1.5 Delivery, Storage & Handling

A. Deliver and store products in original unopened packaging with intact and legible manufacturer's labels.

B. Comply with manufacture's recommendations for storage and protection.
    1. Store turf materials in a dry place, under cover, out of direct sunlight and elevated above ground.

2. Protect from damage by elements and construction procedures

C. Deliver bulk materials in clean and covered trucks to eliminate contamination during transportation. On site stockpiling location to be coordinated with Owner. Stockpile only in areas free of debris and away from drainage routes. Cover with plastic or geotextile fabric if material is to be stockpiled more than 24 hours.

1.6 Project Conditions

A. Environmental Limitations: Do not apply any part of the synthetic turf system over wet, frozen, or excessively damp substrates.

B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit synthetic turf system to be performed according to manufacturer's written instructions.

C. Field Measurements: Verify dimensions of other construction assemblies by field measurement for compliance and installation requirements of all synthetic turf components.

1.7 Warranties

A. Synthetic Turf Surfacing: Provide a warranty to the Owner for the complete synthetic turf system for a period of eight years from the Date of Substantial Completion against defects in materials and workmanship for the following:
    1. Synthetic Turf surfacing shall be covered for failure from seam rupture, backing delamination, synthetic yarn UV stability, excessive wear, and tear strength over the term of the warranty.
    2. G-max: Average G-max level of the field will not exceed 180, plus or minus 10% over the term of the warranty.

B. Warranty will not cover damage caused by improper use, neglect, vandalism, floods, change in water table or other acts of God.

C. Warranty period of 8 years shall also cover all subsurface drainage systems and associated grading, piping, connections and tie-ins against soft spots, low spots, or drainage problems.

1.8 Surplus Materials

A. Turf contractor shall supply the following additional materials upon completion:
    1. Minimum of 800 square feet of turf for future repairs in each color.
        a. Material may be roll ends or cutoffs, however, each piece of fabric shall be at least 5 feet x 10 feet. One turf piece shall be a least 15 feet wide x 30 feet long.
        b. b. When field has two main colors provide minimum 500 square feet of both colors.
    2. 50 lineal feet of primary line color in 4" width in each color.
    3. 1000 pounds of infill material in weather proof containers (rubber).
    4. One gallon of an industrial strength cleaning solution and cleaning instructions recommended by the synthetic turf manufacturer. Include Material Safety Data Sheet (MSDS) with submittal.

Part 2: Products

2.1 SPECIFICATIONS FOR SYNTHETIC GRASS SURFACING

A. The turf systems shall meet or exceed the following requirements:
    1. Resin Type: C8 Resin
    2. Fiber Type: Row A: two ends per needle consisting of 5,000 denier polyethylene fibrillated fiber. Row B: two ends per needle consisting of 5,000 denier polyethylene fibrillated fiber and 5,000 denier polypropylene texturized fiber.
    3. Pile Height: 1.75" to 2"
    4. Face Weight: 52 oz.
    5. Total Fabric Weight: 79.4 oz.
    6. Primary Backing Weight: 7.4 oz.
    7. Secondary Coating Weight: 20 oz.
    8. Tuft Bind: >10 lbs.
    9. Grab Tear Strength Average: >200 lbs.
    10. Lead Content: <50 ppm
    11. Total Yarn Linear Density (Yarn 1): 5,000 denier polyethylene fibrillated fiber
    12. Total Yarn Linear Density (Yarn 2): 5,000 denier polypropylene texturized fiber
    13. Tensile Strength: 16 lbs.
    14. Stitch Rate: 11 per 3"
    15. Machine Gauge: 3/8"
    16. Flammability: PASSED
    17. Water Permeability with Infill: >30" per hour
    18. Fiber Thickness: 100 microns
    19. Fabric Width: 15 ft.
    20. Infill Type: Manufacturer's standard for product specified
        a. Rubber shall be recycled, non-compacting, 100% SBR rubber granules size 10-20 mesh, ambient or cryogenically ground, clean of dust or foreign materials
    21. Seaming Method: Sewn Seams
        a. Line markings to be tufted to the greatest extent possible.

B. Installation Materials: Anchors, connectors, waterproof sealant tape and other material recommended by manufacturer for securing system components in place.

2.2 Turf Anchor Nailer

A. Nailer shall be preservative treated wood 2 X material, size as indicated on drawings.

B.Nailer shall be anchored with stainless steel concrete wedge anchors. Anchor shall be installed at each end and every 2 feet OC.

    1. Anchors shall be a 1/4" x 4" drive anchor: Powers, Model 043-211-1, or approved equal.

2.3 Fabric Membrane

A. The prepared soil subsurface shall be isolated from the field and drainage system above it with a fabric membrane placed across the entire surface of the field.
B. Permeable Soil Barrier: Propex Geosysthetics "Geotex 451" polypropylene non-woven permeable geotextile fabric or other permeable barriers recommended by and acceptable to the turf system manufacturer for sub-base materials and conditions indicated. Meet the following physical requirements:
    1. Tensile Strength: 120# per ASTM D-4632.
    2. Elongation: 50% per ASTM D-4632.
    3. Puncture Resistance: 65# per ASTM D-4833, 230psi.
    4. Mullen Burst: Comply with ASTM D-3786 requirements.
    5. Trapezoidal Tear: 50# per ASTM D-4533.
    6. Water Flow Rate: 120gpm/ft² per ASTM D-4491.

2.4 SUBSURFACE DRAINAGE PIPING

A. Collection Piping shall be a series of low profile high-density polyethylene piping. The core shall be constructed using interconnected corrugated pipes defining the flow channels and providing structural integrity. The pipes shall be wrapped with a non-woven geotextile which functions as a filter.
    1. Product: Multi-Flow 12" x 1" perforated drainage pipes.
    2. Flow Rate: 29 gallons per minute per square foot: ASTM D4716.
    3. Fittings shall be of "snap together" design. In no case shall any product be joined without the use of the manufacturer's connector designed specifically for the purpose.
B. Transport Piping: Dual wall HDPE Drainage Pipe and Fittings: AASHTO M 294, Type S, corrugated, with smooth waterway, for coupled joints.
    1. Couplings: AASHTO M 294, corrugated, band type, matching tubing and fittings.
    2. Gaskets: ASTM D 1056, elastomeric seal.
    3. Perforated pipe shall have AASHTO Class 1 perforations.
C. Slotted Trench Drain: Provide with appropriate materials for each trench drain system. Trench drain shall be manufactured by ACO Polymer Products, or an approved equal. Modular Trench drain system manufactured from corrosion resistant polyester polymer concrete including interconnecting modular components. Each unit will feature a full radius in the trench bottom and male-to-female interconnecting ends. Units shall have horizontal cast-in anchoring features on outside wall to ensure maximum mechanical bond to the surrounding bedding material. Each unit shall have 0.50" (12.7 mm) longitudinal inlet lot on the top surface. Drainage system shall include radius channels to match the profiles indicated. Provide in-line catch basins, with covers, at locations where storm sewer piping connects to the drainage system.

2.5 PERMEABLE STONE BASE

A. The permeable crushed stone base is made up of two (2) layers of crushed stone material, the base course and the finishing course. The infilled synthetic turf is

installed above the finishing course. Materials used for the permeable crushed stone base shall meet the following gradation:

SIEVE SIZE BASE COURSE % PASSING FINISH COURSE % PASSING
2" 100
1-1/2" 90 -100
1" 75-100
3/4" 65-95
1/2" 55-85 100
3/8" 40-75 85-100
1/4" 25-65 75-100
#4 15-60 60-90
#8 0-40 35-75
#16 0-20 10-55
#30 0-7 0-40
#50-#60 0-5 0-15
#100 0-3 0-8
#200 0-2 0-2

B. Drainage Fill in Transport Pipe Trenches: Use base course aggregate.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Contractor shall examine the area where the work is to be performed and notify the owner, in writing, of all areas not acceptable to permit installation to begin.
   1. Work shall not commence until all deficiencies have been corrected.
B. Manufacturer's Recommendations:
   1. Installer to comply with manufacturer's written recommendations and instructions.
C. Athletic Surfacing Installation:
   1. Installation shall be under the direct supervision of an on-site representative of the manufacturer and by installers approved by the manufacturer.

D. Preparation:
   1. Manufacturer's on-site representative and contractor shall Inspect prepared sub- base and submit written verification that sub-base slope, compaction, and other requirements are acceptable for installation of athletic surfing system. If unsatisfactory conditions are encountered, do not proceed with surfacing installation until unsatisfactory conditions are corrected.

E. Installation:
   1. Install geotextile membrane over entire surface of the prepared subgrade.
   2. Install field, connector and perimeter drains as required and connect to storm drainage system for proper installation.
   3. Lay-out artificial turf to cover the full length and width of the field from side to side. Install carpet rolls directly over the aggregate base, taking care to avoid disturbing the aggregate base both in regard to compaction and planarity. Repair and properly re-compact any disturbed areas of the

aggregate base, using specified motorized roller or other suitable mechanical compactor recommended by the manufacturer.

4. Use sewing or gluing procedures recommended by manufacturer to attach each roll to the next.
5. Install infill immediately following the completion of the turf installation. The blended infill material shall be spread evenly with a large specialized field spreader (minimum four feet (4') wide). Between applications, brush in-filled area with a motorized rotary nylon broom. Minimum infill depth shall be one-and-a-half inches (1 1/2-inch).

F. Field Quality Control:
    1. Testing Agency: The Contractor will engage a qualified independent testing and inspecting agency to perform specified tests for Quality Assurance.
    2. Contractor to provide a written acceptance by the turf manufacturer that the turf and base system is installed in accordance with their recommendations prior to final completion.

G. Cleaning:
    1. Clean and smooth synthetic sports turf per manufacturer's recommendations.

H. Final Acceptance:
    1. Prior to final acceptance, the Contractor shall provide the Owner four (4) copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system.
    2. 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.

Project Manager

PART 1 – GENERAL

Summary:

1. Bidder shall include in their bid to provide an on site Project Manager (PM) that is a direct employee of the bidder (not sub-contractor). Bidders agrees to have at least (1) PM on site each day during construction. The PM will be required to keep daily records and pictures of construction work.
2. PM must be on site each day during construction including all site work and artificial turf. There will be a $1,000.00 per day automatic deduct from the contract amount for each day the contractor fails to have a project manager on site. Submit the name and qualification of PM with the bid. The PM shall be approved by the district prior to construction.
3. PM shall provide written weekly updates of the project. Updates shall include percent complete of each phase of work plus percent complete on the entire project. Updates shall also include any change orders and change in completion time, if any.

Pay Schedule

1.0 - GENERAL

Each contractor should include all cost to meet the following Pay schedule. Progress payments every 30 days.

The owner will be hold 10% retainage until final payment is made

Bid Form

Only bids on the provided bid forms will be accepted. No modifications shall be made to this bid form.

The undersigned Bidder, in response to your Notice of Bid for construction of the above project being familiar with all conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies, and to construct the project within the time set forth therein, and at the prices stated below. Bidder agrees to all conditions and terms of the proposed contract agreement.

The owner has the right to reject any and all bids and except any abnormality as they see fit.

<table>
<tr><td colspan="4">Name of Bidder:</td></tr>
<tr><td colspan="4">(Circle One)

Proprietorship Partnership Corporation Other</td></tr>
<tr><td colspan="2">Authorized Signature:</td><td>Date:</td><td></td></tr>
<tr><td colspan="2">Printed Name:</td><td>Title:</td><td></td></tr>
<tr><td colspan="3">Address (Street):</td><td></td></tr>
<tr><td colspan="3">Address (City, State, Zip Code):</td><td></td></tr>
<tr><td>Phone #:</td><td>Fax #:</td><td>Email Address:</td><td></td></tr>
</table>

The City seeks bids for synthetic turf for four different options as follows:

Option #1: Joe Becker Stadium Baseball Field Synthetic Turf for Infield Only

Option #2: Joe Becker Stadium Baseball Field Synthetic Turf for Infield and Outfield (Complete Stadium)

Option #3: Wendell Redden Stadium Baseball Field Synthetic Turf for Infield Only

Option #4: Joe Becker Stadium Baseball Field and Wendell Redden Stadium Baseball Field Synthetic Turf Infields Only

Base Bid:

The undersigned bidder agrees to perform all work required as shown and indicated in the Contract Documents for the sum of:

Option #1 $_____

$_____ Dollars

Option #2 $_____

$_____ Dollars

Option #3 $_____

$_____ Dollars

Option #4 $_____

$_____ Dollars

Amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.

Recommended Turf System included in Base Bid: _____

Alternate Bids: (As Specified)

Option (1)

Eight (8) Year Sub-Base Warranty

$_____

Eight (8) Year Maintenance & Grooming

$_____

Option (2)

Eight (8) Year Sub-Base Warranty $_____

Eight (8) Year Maintenance & Grooming $_____

Option (3)

Eight (8) Year Sub-Base Warranty $_____

Eight (8) Year Maintenance & Grooming $_____

Option (4)

Eight (8) Year Sub-Base Warranty $_____

Eight (8) Year Maintenance & Grooming $_____

Construction Schedule Form

Submit a signed copy of this document with the bid. The Contractor shall agree to construction start and completion dates, per the attached Construction Schedule, for the work which is being bid.

Construction Schedule:

Item	Description / Scope of Work	Start	Complete
1	**Bid Date**	**1/11/2017**	**2/13/2017**
2	**Board Approval**		
3	**Mobilization Construction Start**		
4	**Substantial Completion**		
5	**Final Completion**		
6	**Liquidated Damages Begin**		

Liquidated Damages:

Liquidated damages will be assessed at the rate of $1,000.00 per day for each calendar day beyond final completion date as stated above. Any event that is missed due to the project not being completed on time will incur a financial penalty of $5,000.00 per event day.

Authorized Signature:

_____

Printed Name & Title:

_____

Date:

_____

MARK PROPOSAL ENVELOPES: "2017-RFP-02 Synthetic Turf For Baseball Stadium(s); 10:00 A.M., Monday, February 13, 2017"

Synthetic Turf Product Form

Synthetic Turf Product: _____

Manufacturer: _____

Fiber Type: _____

Resin Type: _____

Infill Type: _____

Oldest field still in use that meets performance and safety standards

Field: _____ Date Installed: _____

Owner Representative: _____

Product Testing			
ASTM Test Method	**Test Description**	**Unit(s)**	**Test Result**
D-5823	Pile Height (Nominal)	In.	
D-5848	Face Weight	Oz/yd²	
D-5848	Total Fabric Weight	Oz/yd²	
D-5848	Primary Backing Weight	Oz/yd²	
D-5848	Secondary Coating Weight	Oz/yd²	
D-1335	Tuft Bind	Lbs.	
D-2256	Grab Tear Strength Average	Lbs.	
D-2765	Lead Content	Ppm	
D-1577	Total Yarn Linear Density (Yarn 1)	Denier	
D-1577	Total Yarn Linear Density (Yarn 2)	Denier	
D-5034	Tensile Strength	Lbs.	
D-5793	Stitch Rate	Per 3”	
D-5793	Machine Gauge	In.	
F-1551	Water Permeability w/ infill	In./Hr.	
D-3218	Fiber Thickness	Microns	
None	Fabric Width	Ft.	

Contractors Field Construction Experience Form

All bidders must have completed a minimum of 5 synthetic turf fields as a General Contractor in the past five (5) years.

Field Constructed/Date	Contact Name	Phone Number
1.		
2.		
3.		
4.		
5.		

Unauthorized Aliens Workers Act

The successful bidder will have to sign an agreement that they are enrolled and participating a Federal Work Authorization Program ("FWAP") that ensures that all of its employees or agents or subcontractors have the legal right to work in the United States, as defined in 8 U.S.C. 1324a(h)(3) and RSMo § 285.525-285.555, and that it will maintain this compliance for the entire duration of its contract with the City of Joplin, and will provide an Affidavit of Compliance to the City stating the same.

AFFIDAVIT OF COMPLIANCE

(Missouri Unauthorized Alien Workers Act)

My name is _____ (name) _____ and I am the _____ (Title) _____ of _____ (Company Name) _____. I hereby represent, affirm and certify to the City of Joplin that my company does not knowingly employ any person who is an unauthorized alien in connection with contracted services with the City. I further affirm that my company is actively enrolled and participating in a federal work authorization program with respect to all employees working in connection with the contract services provided to the City.

_____

_

Affiant