



The City of **WORCESTER**

DEPARTMENT OF PUBLIC WORKS & PARKS

Parks, Recreation & Cemetery Division - Capital Projects

REQUEST FOR BIDS

**Playground Renovations:
PIP Rubber Safety Surfacing
at Wetherell Estate &
Cristoforo Columbo Park (Add Alt #1)
May 03, 2023**

PROJECT SPECIAL CONDITIONS & SPECIFICATIONS

Jay J. Fink, P.E., Commissioner

Robert C. Antonelli, Jr., Assistant Commissioner



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PROJECT SPECIAL CONDITIONS

ARTICLE 1 PROJECT SITE

- a. All work of this contract is located within the confines and adjacent Right- of-Way of;
 - a. Wetherell Estate/Duffy Playground, 55 Newton Ave.
 - b. **ADD ALTERNATE #1** - Cristoforo Columbo Park, 180 Shrewsbury St.
 - c. Both properties owned and maintained by the City of Worcester DPW and Parks.

ARTICLE 2 SUMMARY OF WORK

- a. The work to be completed under this contract involves the furnishing of all labor, materials, and equipment for the following items of work and all incidentals thereto. All work shall be performed in full accordance with the specifications, other contract documents, obviously implied and necessary or under the direction of the Owner.
- b. The plans and specifications are intended to be cooperative, and any item called for in one and not the other shall be as binding as if called for in both. During the bidding period discrepancies should be immediately brought to the attention of the Owner for clarification. If a discrepancy is discovered within the plans and the specifications after the Bid period, **the Owner will determine which shall apply.**
- c. When Applicable, The City of Worcester DPW and Parks, will specify Project Standard appurtenances/amenities such as, but not limited to, park benches, trash receptacles, irrigation controllers, pedestrian, parking and sports field lighting, etc. in the facilities within their jurisdiction that are currently installed at this or other facilities. By standardizing, it provides the Division with a consistent product which through familiarity reduces operator training and maintenance time. Standardization also provides opportunities for maintenance cost saving through interchangeable parts such as but not inclusive to luminaries, ballast, poles, compatibility with current Division maintenance equipment etc.
 - i. No substitution or equal will be accepted for the following item(s);
 - 1. Poured-in-Place Rubber Safety Surfacing
- d. Quality Control: In order to ensure the highest level of quality with respect to the playing surface of this greatly utilized public athletic facility, the General Contractor / Awardee shall have a minimum of five (5) years of successful experience.
 - 1. as the Prime Contractor constructing (provide verifiable references upon request)
 - 2. ability to demonstrate constructing (provide verifiable references upon request)
 - 3. coordinating and supervising (provide verifiable references upon request)

Park and Playground Improvements of similar scope, quality and size of this Project as per the standards of the Project specifications and construction drawings.

- e. **Project Scope of Work:** Provide a lump sum price to furnish and install poured in place rubber safety surfacing to for the playground location(s) indicated.

1. Duffy Field Playground and Cristoforo Colombo Park Playground

- a. **Furnish, install, and maintain six-foot height panelized/mobile temporary constructions metal fence and hardware as required to protect and secure the limits of work and staging area. Restore any areas disturbed or damaged by the work.**
- b. Limits of work, staging and entrance shall be determined in the field.

- c. Furnish and install 6' height panelized/mobile temporary construction fence and hardware (Limits of Playground and Work), protect existing equipment and amenities. Restore any areas disturbed/damaged by work.
- d. Remove and dispose of existing Poured-in-Place safety surfacing within limits of playground. Protect existing sub grade playground equipment and appurtenances.
- e. Existing PIP was installed to meet the minimum standard for Shock Attenuation of ASTM F1292, estimated existing total thickness of PIP is 3.5 to 4.0 inches. Remove and dispose offsite any dynamic or existing gravel subbase as required for new finished work and profile of new PIP safety Surfacing.
- f. Furnish and install poured in place (PIP) rubber safety surfacing to limits of existing PIP, perimeter curbing and sidewalk at entrances, taper/slope profile to pass under existing perimeter fence fabric. Coordinate grades by use height of adjacent designated play equipment/surface and flush and accessible at existing access/entrances.
- g. **Due to planned summer and school programs, the Work shall be completed by:**
 - i. Base Bid work shall be completed by June 30, 2023.
 - ii. Add Alternate #1 work shall be completed by August 30, 2023.
 - iii. No work allowed at Add Alternate #1 location from July 3 – August 11, 2023.

ARTICLE 3 WORK WITHIN A PUBLIC PROPERTY

- a. As a point of information, all the work to be undertaken is located within the confines of an unsecured public property, and as such is subject to acts of vandalism. The City of Worcester is not liable for any damage to the Contractor's equipment or materials. The Contractor shall take all means and measures necessary to protect the public, work in progress, work completed, and all furnishings, materials and equipment stored at the site through the completion of the Project. The repair or replacement of work in place or in progress shall be the sole responsibility of the Contractor and shall be accomplished at no cost to the Owner.

ARTICLE 4 SITE INSPECTION

- a. **It shall be contingent upon the Contractor to inspect the site as an aid to determining the extent and quantity of the work under the various contract items before submission of the Bid.**
 - i. **For informational purposes only, Bidder responsible to verify prior to submission of bid.**
 - 1. Owner's calculations for the square footage of the playground existing PIP Safety Surfacing are:
 - a. Wetherell Estate Playground – Approximately 3,900 SF.
 - b. Cristoforo Columbo Playground - Shrewsbury St (2-12 age group) – Approximately 7,200 SF.

ARTICLE 5 PRE-CONSTRUCTION MEETINGS

- a. A mandatory pre-construction meeting will be arranged by the Owner's representative after the award of the Contract. Sub-consultants may be asked to attend the pre-construction meeting if determined by the Owner's Representative to be warranted.

ARTICLE 6 SITE ACCESS

- b. Prospective bidders are advised that access to the Project sites shall be in accordance with the governing traffic patterns with specific locations into the site, to be verified in the field after award of the contract.
- c. Regardless of the eventual location of the construction access and limits of work, the Contractor shall make every provision to ensure the access and safety of the public using the balance of any of the existing amenities on the property.



ARTICLE 7 OWNER'S TAX EXEMPTION

- a. The Awarding Authority, as a department of a corporate municipality in the Commonwealth is exempt from the taxes listed below. Contractor shall notify all suppliers of the following current certificates.
 1. Federal Excise Taxes as applied to articles taxable under Chapter 32 of the Internal Revenue Code of 1954, as amended, City Excise Tax Exemption Certificate is not required.
 2. From Sales and Use Tax imposed by the Commonwealth of Massachusetts under Chapter 14, Acts of 1966, the City has been assigned and exemption certificate with respect to leases, rentals, or purchases of "Tangible Personal Property". The Owner at the Contractor's request will furnish the tax-exempt certification number.

ARTICLE 8 TIME FOR COMPLETION & SEQUENCE OF WORK

- a. Except as the work may be interrupted by weather conditions as hereinafter specified, the Contractor shall prosecute the Work with the diligence necessary to ensure its completion within the required time. The Contractor shall provide sufficient labor, materials, and equipment, and shall promptly take such appropriate action to keep the Work on schedule or as directed by the Owner. No additional time shall be provided for Change Orders.
- b. The Parks, Recreation and Cemetery Division shall be solely responsible for determining when the work shall be interrupted due to unsatisfactory weather conditions. Determination of the period to be included in the Time for Completion shall cease when the City directs that the work stops due to weather and shall commence again on the first working day thereafter that the City may designate for the work to be resumed.
- c. The Contractor must completely understand that once the Contractor mobilizes and begins work, the Contractor shall be on-site, every day during the normal work week, and must work continuously until substantial completion of the Project. The Parks, Recreation, and Cemetery Division will not allow any time gaps of any length of time during the construction due to the Contractor's scheduling of other work not related to this specific Contract.
- d. It should be further understood that this Project will not be a "fill-in" for the Contractor and that the Contractor does not have the ability to start and stop construction at the Contractor's option. Any unauthorized time gaps will be subject to a flat fee of \$500.00 per day. The Owner reserves the right to deduct said fee from the Contractor's periodic application for payment and the Contract Sum.
- e. The Contractor shall carry on the Work and adhere to the schedule during all disputes and disagreements with the Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements. The Contractor shall exercise reasonable precautions, efforts and measures to avoid or mitigate situations that would cause delays.
- f. Punch list shall be completed within 28 days from date of issue.
- g. The Contractor is advised that the **required calendar days** regarding Time for Completion and Punchlist, shall be consecutive.

ARTICLE 9 LIQUIDATED DAMAGES

- a. Prospective Bidders are advised that liquidated damages shall be in effect for this Project. The Contractor shall be liable for and compensate the Owner.

1. the sum of Five Hundred and Dollars (\$500.00) as fixed and agreed, as liquidated damages for each calendar day of delay from the date stipulated for completion, or as modified in accordance with the provisions of the Contract
2. If Applicable, State and Federal Grant Funding losses.
3. and/or actual costs incurred by the Owner for additional Construction Administration/Management (City Staff, Consultants, etc.) salaries/compensation from the date stipulated for completion, or as modified in accordance with the provisions of the Contract and notification to The Sureties.

ARTICLE 10 CONSTRUCTION SCHEDULES & PAYMENT ESTIMATES

- a. The Contractor must submit a construction schedule to the Owner indicating the general sequence of all work under this Contract. This schedule must be submitted within 7 calendar days of the date of the Notice-to-Proceed and shall be revised if required to the satisfaction of the Owner.
- b. The Contractor shall submit a breakdown and monthly cost estimate (schedule of values) for all items of work, including separate categories, phases, grant funded or reasonable requests by the Owner.
- c. The established breakdown of items, categories and values shall be utilized to prepare the monthly pay requisition forms. It is recommended that the Contractor submit a draft Payment Applications to the Owner for approval, no later than the second week of every month. The Owner shall review and edit this copy to indicate the amount of payment to be approved and return this to the Contractor after field review.
- d. Revised/updated; monthly payment estimates, construction schedule, As Builts and proof of up-to-date daily construction reports shall be submitted with monthly Payment Applications. The Contractor shall then formally submit three (3) originals of the Payment Applications, conforming to the Owner's approval, for payment.

ARTICLE 11 CONSTRUCTION REPORTS & WEEKLY PROGRESS MEETINGS

- a. The Contractor and Sub-Contractors shall attend a regular weekly meeting with the Owner at the Parks, Recreation and Cemetery Division Headquarters, 50 Officer Manny Familia Way, Worcester, MA, at a pre-determined time set by the Owner. The Contractor must be present for these meetings during the Contract and reserves no right to cancel the meeting.
- b. The Contractor will be required to take minutes for the weekly scheduled meetings. The Contractor will have three (3) business days from the date of the meeting to submit to the Owner the minutes of the meeting on the Parks, Recreation and Cemetery Division form. The form will be supplied to the respective Contractor when the Notice to Proceed has been issued.
- c. The Contractor will be required to maintain daily construction reports (DCRs) (format and information required to be provided and/or approved by Owner). PDF of the DCRs shall be submitted weekly for Owner review and files.
- d. The Owner may desire other meetings from time to time, and the Contractor shall attend these, and such Sub-Contractors as are directed to attend. All the above-mentioned conditions should apply.

ARTICLE 12 HOURS OF OPERATION

- a. Unless otherwise approved by the Owner, hours of operation shall be 7:00 a.m. to 3:30 p.m., Monday through Friday, excluding City observed holiday(s).

ARTICLE 13 CONTRACT DOCUMENTS

- a. The Owner will furnish the Contractor, without charge, four (4) complete copies of the Contract Documents. Additional copies requested by the Contractor will be furnished at cost.



ARTICLE 14 STORAGE, USE OF MATERIALS & EQUIPMENT/MACHINERY

- a. Bidders are advised that the storage of equipment within the confines of the Project limit shall be at the Contractors own risk. No material or equipment shall be stored outside the limits of work as defined in the contract documents, designated and agreed to by the Owner.
- b. The Contractor shall not use as any part of his operation any skid steered, track driven, or heavy machinery/equipment on adjacent roadways.

ARTICLE 15 DELIVERY, INSPECTION & ACCEPTANCE OF NEW AMENITIES

- a. General Contractor shall provide product manufacturer and Owner, 72 hours advance notice of any onsite scheduled deliveries of Amenities for Inspection and Acceptance.
- b. Any damages noted by any of the parties present at time of inspection shall be corrected in one of the three options below, as determined by the Owner, with no delays or extensions to the Project Schedule.
 1. Repair to the **FIT & FINISH** of the manufacturer's/factory Specification prior to installation.
 2. Replace with new product from manufacturer/factory.
 3. Install damaged product and field repair to the Owner's satisfaction and provide new identical replacement part as spare.
 4. This Article shall also apply to amenities stored offsite and damages discovered while under the Responsibilities of the General Contractor, until the Acceptance of Work.

ARTICLE 16 CARE AND RESPONSIBILITIES OF CONTRACTOR

- a. Except as otherwise specifically stated in the Contract Documents and Technical Specifications, the Contractor shall provide and pay for all materials, tools, labor, equipment, water, light, heat, power, transportation, superintendence, protection, temporary construction of every nature, charges, levies, fees or other expenses, permits and back charges and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract completed in every respect within the specified time.
- b. Unless otherwise specified herein all materials, workmanship, methods, and practices shall conform to the current Standards and Ordinances of the appropriate Departments and/or Commissions of the City. The following documents are available online at online at www.worcesterma.gov/engineering.
 - i. The City of Worcester DPW and Parks, Engineering Division, Construction Management Section, Standard Specifications and Details - March 2007 or current edition.
 - ii. Permit Manual – Revised 2004 or current edition.
- c. The Contractor shall be responsible for detailed layout. All stakeout and grade control shall be performed by a third-party MA registered Land Surveyor, approved by the Owner, for this purpose. The Owner has the option to verify and approve the layout and locations of improvements prior to excavation or installation.
- d. Grade control shall be verified by the Contractor for compliance with federal, state and or local accessibility requirements. During the construction sequence (such as: installation of subbase, bituminous binder and/or top, concrete flatwork etc.), the Contractor shall be required to verify grades, by approved methods, with the Owner present and prior to placement of finished grade for sidewalks, pathways, plazas, ramps, parking spaces, associated appurtenances, etc., that are required to meet accessibility and the Project Documents.
- e. The Contractor shall verify dimensions and utility locations shown on the plans and if any inconsistencies or discrepancies should be noted on the Drawings, or between the Drawings and actual field conditions, or between the Drawings and the specifications he/she shall immediately notify the Owner. The Contractor will be held responsible for any errors resulting from his/her failure to exercise the precaution. Such information

shall be marked on copies of the “As Built” drawings and the original “As Built” drawings are to be reviewed at weekly job meetings.

- f. The Contractor shall provide final As Built Survey Drawings to the Owner. See “Record Drawings – As Built” of this Section. Punch list items shall be completed within twenty-eight (28) consecutive calendar days from date of issue, unless agreed upon otherwise by both parties. Owner has the right to complete punch list items not completed in within this timeline and deduct cost from the Contract.
- g. The Contractor shall maintain a full-time onsite superintendent, whether the construction forces are employed by his construction company or employed by a Sub-Contractor.
- h. As soon as the Contract is executed, the Contractor shall order materials, submit construction schedules as herein after specified and otherwise anticipate the Notice to Proceed. When the Owner gives the Notice to Proceed, the work of construction shall begin at the time stipulated therein and shall be completed within the Time for Completion specified.
- i. It is the Contractor's responsibility to make his own investigation and related assumptions, to satisfy her/him as to subsurface conditions and to ensure that these are reflected in the bid.
- j. In order to verify locations of utilities and varying field conditions, exploratory excavations may be necessary, the cost of which is to be included in the contract bid price.
- k. The Contractor's attention is called to the necessity of obtaining permits and coordination with, especially those required by various departments of the City and all external utility companies. These permit fees will **not be waived** by the City and must be paid in full by the Contractor.
- l. The Contractor shall furnish and maintain all temporary fences, barriers, enclosures, lights and warning devices necessary to protect his/her work area and to protect the public and his work forces throughout the life of this Contract.

ARTICLE 17 EMERGENCY CONTACT INFORMATION

- a. The Contractor will be required to submit within seven (7) business days after the Notice to Proceed a list of all people that will be involved with the completion of this Project including all principal(s), president(s), superintendent, and Project manager of the company. The list shall contain the following information, including but not limited to name, title, address, voice mail number, cell/contact phone number, fax number and email address.

ARTICLE 18 ON SITE SUPERINTENDENT & PROJECT MANAGER

- a. The Contractor must, always, maintain an on-site Superintendent during the construction and administration of this Contract. The superintendent must be completely familiar with all aspects of the Project and capable of following the construction through from start to finish. The Contractor does not have the right to switch, replace, change or otherwise remove the superintendent assigned to this Project unless specifically authorized in writing by the Owner. The on-site superintendent must be present a minimum of seven (7) hours per day during construction. If the on-site superintendent fails to meet the above-mentioned requirements, the Contractor will be subject to a flat fee of \$500.00 per day. The Owner reserves the right to deduct said fee from the Contractor's periodic application for payment and the Contract Sum.

The Contractor must assign a Project Manager to this Contract that is completely familiar with all aspects of the work, available and capable of completing the Project. The Contractor does not have the right to switch, replace, change or otherwise remove the on-site Superintendent and/or Project Manager assigned to this Project unless specifically authorized in writing by the Owner. It should be further understood that the Owner would discuss all matters regarding the administration of this Contract with only one (1) Project Manager, regardless of how many the Contractor assigns to the Project.



All correspondence, emails, voice mail, faxes, etc. will be handled through the designated Project Manager only. The Parks, Recreation and Cemetery Division reserves the right, in conjunction with the Contractor, to remove the Contractor's assigned on-site Superintendent and/or Project Manager if the City feels it is the best interest to do. Upon written notification, the Contractor must assign a new Project Manager within three (3) business days.

ARTICLE 19 PROVISIONS FOR TRAFFIC/POLICE DETAIL (As Applicable)

- a. The Contractor shall not close or obstruct any portion of the **RIGHT-OF-WAY** without obtaining the necessary permission from the proper municipal authorities. If any street or private way shall be rendered unsafe by the Contractor's work, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the Owner including the provision of police details required to complete the work.
- b. The Contractor at his/her expense shall maintain public roads and sidewalks passable and accessible, and the Contractor shall assume full responsibility for the adequacy and safety of provisions made. He shall conduct his construction operations such that interference with the activities of park users will be held to a minimum.
- c. The Contractor shall cooperate in every way possible with the municipal authorities in accommodating park activities and events.

ARTICLE 20 COMMUNICATIONS

- a. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing and must be presented in person or by mail to the Owner, or alternate methods (s) agreed upon by both parties.
- b. Any notice to or demand upon the Contractor shall be considered sufficiently given if delivered at the office or field office of the Contractor stated on the signature page of the Agreement (or at such other office as the Contractor may from time to time designate in writing to the Owner), or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission, in each case addressed to such office.
- c. All papers required to be delivered to the **Owner** shall, unless otherwise specified in writing to the Contractor, be delivered to:

Robert C. Antonelli, Jr., Assistant Commissioner
Department of Public Works and Parks
50 Officer Manny Familia Way, Worcester, MA 01605

and any notice to or demand upon the Owner shall be sufficiently given is so delivered, or if deposited in the United States mail in a sealed, postage prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representatives of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purpose.

- d. Any such notice shall be deemed to have been given as of the time of actual delivery or (in the case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt.

ARTICLE 21 PARTIAL USE OF SITE IMPROVEMENTS

- a. The Owner, at its election, may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and can be accepted as complying with the Technical Specifications and if, in its opinion, each such section is reasonably safe, fit and convenient for the use and accommodation for which it was intended, provided:
 1. The use of such sections of the improvements shall in no way impede the completion of the remainder of the work by the Contractor.

2. The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.
3. The use of such sections shall in no way relieve the Contractor of his liability due to having used defective materials or due to poor workmanship.
4. The period of guarantee stipulated in the specifications shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

ARTICLE 22 SAMPLING, TESTING, INSPECTION OF WORK & MATERIALS

- a. Sampling, testing and inspections ordered or required by the Owner to ensure that work and materials are as specified, and that compaction of all materials conforms to the necessary requirements shall be taken and completed by the Owner or representatives of a Massachusetts certified testing laboratory satisfactory to the Owner and shall be paid for by the Owner unless described/required in the Technical Specifications. Contractor shall provide the Owner at least 72 hours advance notice of work to coordinate the intent of this Article and shall apply automatically with all work below finished grade unless directed otherwise by the Owner.

ARTICLE 23 TEMPORARY FACILITIES

- a. Furnish all labor, materials, and services to fulfill the requirements for temporary facilities, at no additional cost to the Owner, and comply with all requirements set forth herein, except where noted requirements conflict with Federal, State, or Local laws, rules, and regulations, in which case(s) the applicable Federal, State, or Local requirements shall govern.

ARTICLE 24 SANITARY FACILITIES

- a. Provide, place, and maintain in good order from the commencement to final completion of the work, suitable temporary toilet facilities for use by all persons employed under this contract. Toilets shall be rented from and serviced by an approved company and shall be kept sanitary and always secured. The type of toilets proposed for use shall have the approval of the appropriate City Agency, and the number of units shall be as recommended by the Department of Labor. Toilets shall be locked during nonworking hours and placed in a secured (fenced) location, where possible.

ARTICLE 25 TEMPORARY LIGHT AND POWER

- a. Make all necessary arrangements with the local utility company and pay all costs including labor, in operating and maintaining all temporary services for electricity used during the construction, unless specifically noted otherwise.
- b. Ensure that temporary wiring, outlets, and lighting are provided in accordance with the current requirements of Bulletin No. 12, Division of Industrial Safety, Department of Public Safety, Commonwealth of Massachusetts.

ARTICLE 26 TEMPORARY WATER

- a. Contractor shall be responsible to furnish, install and coordinate temporary water needs and temporary connections.

ARTICLE 27 UTILITIES

- a. The Contractor shall obtain and pay for all licenses and/or permits, which are required by the City or any other agencies that may be involved; he/she shall comply with all codes, regulations and standards of the City.
- b. Contractor shall be responsible for all on-site coordination with utility companies and public agencies and for obtaining all required permits and paying all required fees. In accordance with M.G.L., Chapter 82, Section 40, including amendments; Contractor shall notify all utility companies and government agencies in writing



prior to such excavation, Contractor shall also call "Dig Safe" at 1-(888) 344-7233 no less than 72 hours (exclusive of Saturdays, Sundays and Holidays.) prior to such excavation. Documentation of requests and numbers provided to Contractor shall be provided to Owner prior to excavation work.

ARTICLE 28 PHOTOGRAPHS & TIME-LAPSE CAMERAS Not in Contract (NIC)

ARTICLE 29 CONTRACTOR'S SHOP & WORKING DRAWINGS

- a. Contractor to coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- b. All Contractors are directed to the timeliness and critical importance of expediting the submittal process. Any lead times that may impact sequencing should be prioritized to meet the Project schedule. The Owner must be notified if any delays arise that impact lead times.
- c. The Contractor shall coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that requires sequential activity.
- d. The Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
- e. To avoid the need to delay installation as a result of the time required to process submittals and to allow sufficient time for submittal review, all initial product submittals, shop drawings shall be submitted for processing and within **twenty-eight calendar days** (28) days from the date of Notice to Proceed.
- f. The Contractor must allow the Owner **10 calendar days** (10) per initial and subsequent shop drawing review to achieve efficient construction sequencing. Allow additional time if the Owner must delay processing to permit coordination with subsequent submittals. If an intermediate submittal is necessary, process the same as the initial submittal. Allow ample time for reprocessing each submittal to achieve efficient construction sequencing.
- g. No extension of Contract Time will be authorized because of the Contractor's failure to transmit submittals to the Owner for processing sufficiently in advance of the scheduled Work.
- h. Shop drawings, product data and samples submitted for each item will be reviewed no more than two (2) times at the Owner's expense. Submittals failing to comply with the Contract requirements will be reviewed at times convenient to the Owner and the Owner's consultants and at the Contractor's expense, based upon the hourly rate of the Engineer/Consultant for each subsequent re-submittal. The Owner reserves the right to deduct said reimbursement from the Contractor's periodic application for payment and the Contract Sum.
- i. The Owner's review and approval of submittals shall be held to limitations stated in the conditions of the Contract. In no case shall approval or acceptance by the Owner be interpreted as release of Contractor of responsibility to fulfill requirements of Contract Documents. No acceptance or approval of submittals, nor any indication or note marked by the Owner on submittals, shall constitute authorization for increase in Contract Sum. The Owner will stamp each submittal with an action stamp.
- j. As the timely submittal of samples, shop drawings, catalogue cuts and other related submittals is of paramount importance to the completion of the Project within the stipulated time period, a contract value of 1% will be assigned to this effort. Upon receipt of the complete submittal package the General Contractor will be permitted to submit payment of this item with a value equal to 1% of the base bid contract amount.
- k. Show in large-scale any unique fabrication and setting requirements or any other specified areas seen as necessary or as directed by the Owner's Representative.

- l. Prior to review by Owner's representative, shop drawings shall indicate specification section or drawing reference and proof of review and approval by Contractor for Project compliance, otherwise the submittal will be rejected immediately and count as one (1) official review as per item "h" above.
- m. The Contractor shall provide two sets of bindered hard copies of all final approved shop documents and or drawings and warranties as part of the closeout of the Project.
- n. Contractor shall submit to the Owner's Representative a notarized certificate of compliance from the galvanizer with all galvanizing requirements including ASTM number and weight of coatings in ounces per square foot. Certificate of compliance shall also contain the following:
 - 1. Sole Source Responsibility: include statement that galvanizer accepts sole responsibility for coatings under this Article. Galvanizer who does not accept this responsibility is not acceptable and will be rejected.
 - 2. Quality Assurance: include evidence that Galvanizer meets requirements of ANSI Q90.
 - 3. Certificate of Compliance with Current Environmental Regulations: Galvanizer shall certify that coatings proposed for use comply with applicable environmental regulations. Contractor and Galvanizer shall be responsible for penalties assessed by governmental or environmental authorities for coatings that do not comply with current environmental regulations. All coatings shall be Lead-free.

ARTICLE 30 HISTORICAL, ARCHAEOLOGICAL OR ANTIQUE ITEMS

- a. The Contractor during his excavation, site clearance and other operations may come upon, uncover or otherwise discover items of historical, archaeological or antique nature. The Contractor shall immediately stop operations at the site of the discovery and notify the Owner so that a proper evaluation may be made of its importance. The Owner shall arrange for the evaluation in a manner that shall not unduly interfere with the Contractor's operation.
- b. All such items, if designated by competent authority to be of historical, archaeological or antique nature shall not become the property of the Contractor but shall be placed in the custody of the Owner for disposition.
- c. The Contractor shall be required to remove with care or to assist in the removal of any such item or items and to transport the same to a place of safe keeping within the City. The costs for so assisting shall be reimbursed to the Contractor if approved by the Owner.

ARTICLE 31 PROVISIONS FOR PUBLIC SAFETY & CONVENIENCE

- a. Care shall be taken to establish and maintain such methods and procedures as will not create hazards. Access to all park facilities and shall be maintained in a reasonable and safe manner for the duration of the construction period.
- b. Every reasonable effort shall be made to reduce to a minimum any interference with or inconveniences to park operations and park patrons due to the construction work. Excavated material shall be trucked away and returned if the Owner deems it necessary and practical as a means for avoiding serious interference with and inconvenience to business concerns and abutters.
- c. The Contractor's attention is directed to the fact that the work on this Project is to be performed within a recreation area and adjacent to park drives and walkways which are utilized by pedestrians, bikers, joggers and vehicles. The Contractor shall be responsible for the installation of adequate precautions and other safety measures and controls deemed necessary by the Owner in order to protect all park users.
- d. Any automotive equipment not protected by traffic cones that is operating on a public way under this Project shall have one amber flashing warning light mounted on the cab roof or on the highest practical point of the machinery. This light shall be in operation while the equipment is so working.



- e. Trenches shall not be opened in park areas until all material and equipment required for the work are on the site and available for immediate use. The work at each trench shall be practically continuous, with the placing of utilities, backfill and patching (where applicable) of the surface closely following each preceding operation. When work is not in progress, trenches in areas subject to use by park patrons shall be covered with steel plates capable of safely sustaining all anticipated loads.
- f. The Contractor shall provide traffic signs, warning markers and other construction safety measures as necessary to maintain public safety and optimum traffic flow. Parking of personal vehicles will be prohibited in construction areas as directed.
- g. With suspension of construction activities during holidays, weekends and nights, the Contractor shall remove temporary traffic and/or safety control devices, as requested, and return them to their positions when work begins again. Payment for the installation and maintenance of appropriate safety provisions shall be included under the base bid price and no separate payment shall be considered.
- h. The Contractor shall without additional compensation be required to always maintain access to the Project area and property for fire apparatus and other emergency vehicles.

ARTICLE 32 PROTECTION OF EXISTING FACILITIES

- a. All existing walks, pipes, conduits, poles, fences, stairways, curbing, walls, buildings, trees and other structures which are to remain in place shall be carefully supported and protected from injury by the Contractor without additional compensation and in case of injury they shall be restored by him without compensation therefore to as good condition as that in which they were found. The value of any trees damaged shall be determined in accordance with established practices of the American Association of Nurserymen or a Registered or Certified Arborist selected by the Project Manager. Limits of liability shall not be limited to the replacement with new and immature trees.
- b. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings, where required, for accommodation of travel and to provide access to the building/property during construction, and shall remove said structures thereafter.
- c. The location of all/ prior existing utility systems is not known and therefore may not be shown on the drawings prepared for this Project. The existence of utilities shall not be considered as an unusual obstacle, and the Contractor shall not be entitled to extra compensation for maintaining, protecting, or repairing these utilities. The Contractor shall use the exploratory excavation included in his contract price, whenever he/she or the Owner's representatives deem it necessary to verify, or prevent interruption of, existing services.

ARTICLE 33 AS BUILT SURVEY / PROJECT CLOSEOUT DELIVERABLES - (NIC)

ARTICLE 34 RUBBISH REMOVAL

- a. The Contractor shall remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in the execution of the work; but this shall in no way be construed to relieve the Contractor of his primary responsibility for maintaining the site clean and free of debris, leaving all work in a clean condition. The Contractor shall always keep the site free of rubbish and construction debris.
- b. The Contractor shall provide sufficient metal barrels or dumpsters into which all refuse and garbage shall be deposited. All containers shall have tight fitting covers. These shall be secured overnight or removed daily.
- c. At the end of each work week, the Contractor shall thoroughly clean premises of rubbish and debris of any nature and remove such from the premises.

ARTICLE 35 PROJECT CONSTRUCTION SIGN

- a. Contractor will provide and temporarily install one monolithic 48" high X 96" wide X ¾" thick Project sign and 2- 4"x 4" posts to identify the Project at a location to be determined in the field by the Owner.
- b. The Project sign shall conform exactly to the City of Worcester's DPW and Parks, Parks, Recreation and Cemetery Division's prototype Projects sign including but not limited to size, backer material, font style, size and relief, capitalization, color, weather proofing, fasteners and fastener locations.
- c. **Final Graphic and language will be provided by the Owner** (Background color is forest green, text is white).
Sample below is for reference only.
- d. The Contractor shall be responsible installation and removal of sign and posts.



End of DPW & Parks Special Conditions

PROJECT SPECIAL SPECIFICATIONS

General

1. The following special standard specifications are to be used on contract work awarded by the City of Worcester DPW and Parks, Parks Recreation and Cemetery Division. They are intended to supplement, support and suit this specific Project.

ARTICLE 36 DEMOLITION, SITE EXCAVATION & PREPARATION

- a. The work shall consist of excavating, removing and legal disposal of surplus if any, vegetation, earth, boulders, masonry, existing pavements, building materials, footings, appurtenances and other materials encountered of whatever nature that is unsuitable for the construction and improvements of finished conditions. Excavated to the depth necessary to install according to the specifications, plans and details plans provided in the construction bidding documents.
- b. Location of existing utilities shall be verified before excavation commences. The Drawings are based on available utility record drawings and site observation.
- c. The excavation shall be carried out to such depths that sufficient materials will be left above the designated grade to allow for compaction to this grade. Should the Contractor, through negligence or other fault, excavate below the designated lines, he shall replace such excavation at his own expense. The Owner shall have complete control over excavation, moving, placing, and disposition of all material. Existing materials/objects determined to be unsuitable or not required or used, as determined by the Owner, for finished conditions shall be disposed offsite at no additional cost.
- d. The Contractor shall inform and satisfy himself as to the character, quantity, and distribution of all material to be excavated. No payment shall be made for any excavated material, which is used for purposes other than those designated or implied.
- e. If it is necessary in the process of the work to interrupt existing surface drainage, sewers, or to pass under drainage, conduits, utilities, or similar underground structures, or parts thereof, the Contractor shall protect it or provide temporary services. The Contractor shall, at his own expense, satisfactorily repair all damage to such facilities or structures that may result from any of his operations or from negligence during the period of the Contract.
- f. No excavation shall be started until the Owner has approved the proposed area of construction.
- g. Excavation shall be performed at such places as are indicated on the Drawings, to the lines, grades and elevations shown or as directed by the Project Manager and shall be made in such manner that requirements for the formation of the sub-grade can be followed. Unless directed otherwise any disturbed existing rimmed structures shall be adjusted flush to final adjacent grade.
- h. Existing pavements and base courses shall be carefully saw cut or core drilled and removed to the lines indicated and, in a manner, to obtain sound edges or connections, and so as not to disturb or damage existing buildings, utilities, pavements, and base coats which are to remain.
- i. Unit pavers, such as granite brick and concrete, shall be carefully removed and stockpiled for reuse, if required.
- j. All excavations shall be opened using minimum, straight, parallel cuts through pavement and base materials, and other excavations opened using square or rectangular cuts or as directed to minimize removal while permitting regular, straight-line repair and patching.
- k. No excavation shall commence in any until the pavement covering the proposed excavation has been marked for cutting.
- l. Excavated areas shall be made safe for the residents at the end of each workday.
- m. Transport excavated materials, waste materials, trash, and debris and legally dispose of it off City property.

- n. Prevent, minimize and control groundwater and/or surface water to accumulate in excavations. Remove water to prevent the undercutting of footings and soil changes detrimental to the stability of sub-grades, foundations and granite, brick or concrete paving.
- o. Payment for site excavation and preparation work shall be considered incidental to the individual items installed. No separate payment shall be made for site excavation and preparation work. No separate payment shall be made for all labor, equipment, tools and incidentals necessary to complete the work to the satisfaction of the City, including transportation and disposal of excavated materials.
- p. It is the responsibility of the Contractor to verify the accuracy of all survey information provided by the Owner prior to commencing excavations or filling operations. Commencement of these operations constitutes acceptance of the survey information as appropriate to meet the intent of the Contract.
- q. Soil testing, if required, for all materials to be reused on-site or removed and disposed of offsite, shall be the responsibility of the Contractor. The City reserves the right to obtain its own test results from the same sample as the Contractor without penalties to the Owner. The Contractor is required to obtain a large enough sample to divide with the Owner for this proposes.
- r. Transport excavated materials, waste materials, trash, and debris and legally dispose of it off City property.
- s. Surplus excavated material not needed as specified above shall be hauled away and disposed of by the Contractor at no additional cost to the Owner, at appropriate locations, and in accordance with arrangements made by him. Disposal of all rubble shall be in accordance with all applicable local, state and federal regulations.
- t. The Contractor shall comply with Massachusetts regulations (310 CMR 40.0032) that govern the removal and disposal of surplus excavated materials. Materials, including contaminated soils, having concentrations of oil or hazardous materials less than an otherwise Reportable Concentration and that are not a hazardous waste, may not be disposed of at locations where concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and /or hazardous materials present in the soil being disposed or reused.
- u. If required: In response to the State/ Federal imposed quarantine regarding the Asian long-horned beetle infestation, the protocol for handling and disposal of wood-based materials within the Project area by the Contractor shall be to:
 - i. at a minimum, process all onsite vegetative, wood and cellulose based materials (trees, shrubs, root, stumps, branches, leaves, etc. **twelve inches and under in diameter** and designated for disposal) to a size of less than one inch as measured in two directions by approved mechanical means (woodchipper) prior to disposal/removal offsite. All other existing vegetative, wood and cellulose based products; tree trunks, stumps, branches etc., **greater than twelve inches, in diameter** and designated for removal/disposal shall be delivered to the current transfer station.
 - ii. Contractor shall be responsible to comply with changes or current quarantine protocols for the duration of the Project.

ARTICLE 37 CAST IN PLACE CEMENT CONCRETE (NIC)

ARTICLE 38 GRAVEL BORROW (NIC)

ARTICLE 39 BITUMINOUS CONCRETE PAVING (NIC)

ARTICLE 40 GENERAL LAWN AREAS, LOAM & SEEDING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The work under this section shall require the Contractor to provide all labor, materials, equipment and transportation involved in the installation and establishment of playfield turf or lawn. The work shall include, but



not limited to the re-use, screening, re-spreading of existing topsoil and the furnishing of additional loam borrow-if required, incorporating soil additives, fine grading, seeding and the protection and maintenance of the established lawn until final acceptance of the Project, or a minimum of sixty (60) days, whichever is longer.

1.02 Not Used.

1.03 QUALITY ASSURANCE

A. Qualifications of Work

Provide at least one person who shall be always present during execution of this portion of the Work, be thoroughly familiar with the type of materials being installed and the best methods for their installation, and direct all work performed under this Section.

B. Standards

1. All planting material shall meet or exceed the specifications of Federal and State laws requiring inspection for plant disease and insect control.
1. Quality shall conform to the current edition of "Horticultural Standards" for number one grade nursery stock, as adopted by the American Association of Nurserymen. ANSI 2260.1 - Nursery Stock.

C. It is the responsibility of the Contractor to verify the accuracy of all survey information provided by the Owner prior to commencing excavations or filling operations. Commencement of these operations constitutes acceptance of the survey information as appropriate to meet the intent of the Contract.

1.04 SUBMITTALS

A. Materials List

Within 30 days after award of Contract and before any seeding materials are delivered to the job site, submit to the Owner a complete list of all seeding and other items proposed to be installed. At least 10 days prior to shipment/delivery of materials, the Contractor shall submit to the Owner a one (1) cubic foot representative sample, certifications, certified test results for materials as specified below. The Contractor shall provide a listing of the addresses (locations) identifying the origin of the soil to be delivered. If the origin is from multiple locations, all locations shall be provided at the time of submission of required information specified above. No material shall be ordered or delivered until the required submittals have been submitted and approved by the Owner. Delivered materials shall closely match the approved samples. Approval shall not constitute final acceptance. The Owner reserves the right to reject, on or after delivery, any material that does not meet these specifications.

1. Include complete data on source, size, and quality.
2. Demonstrate complete conformance with the requirements of this Section.
3. This shall in no way be construed as permitting substitution for specific items described in the Drawings or these Specifications unless the substitution has been approved in advance by the Owner.

B. Certificates

1. All certificates required by law shall accompany shipments.
2. Prior to installation, deliver all certificates to the Owner.

1.05 PRODUCT HANDLING

A. Delivery and Storage

1. Deliver all items to the site in their original containers with all labels intact and legible at time of Owner's inspection.
2. Immediately remove from the site all seeding materials, which are not true to name, and all materials, which do not comply with the provisions of this Section of these Specifications.
3. Use all means necessary to protect seeding materials before, during, and after installation and to protect the installed work and materials of all other trades.

B. Replacements

In the event of damage or rejection, immediately make all repairs and replacements necessary to the approval of the Owner, at no additional cost to the Owner.

1.06 PLANTING SEASON

A. Seeding

Seeding shall be done between August 15th to September 30 and/or April 1st to June 15th.

B. Variance

If special conditions exist which may warrant a variance in the above planting dates, a written request shall be submitted to the Owner stating the special conditions for the proposed variance. Permission for the variance will be given if warranted in the opinion of the Owner. Regardless of the time of seeding, the Contractor shall be responsible for a full growth of grass.

PART 2.00 - PRODUCTS

2.01 TOPSOIL

A. General

Screened loam shall be "fine sandy loam" or "sandy loam" determined by mechanical analysis (ASTM d-422) and based on the USDA Classification System. Screened loam shall have the following mechanical analysis:

Textural Class	Percentage of Total Weight	Average Percentage
Sand (0.05-2.0mm dia.)	45-75	60
Silt (0.002-0.05mm dia.)	15-35	25
Clay (<0.002mm dia.)	5-20	15

Screened loam shall not contain less than 5 percent nor more than 10 percent organic matter as determined by the loss on ignition of oven-dried samples, at 100 degrees C, +/- 5 degrees C.



Screened loam shall consist of fertile, friable natural loam capable of sustaining vigorous plant growth. Loam shall be without admixture of subsoil and refuse, resulting in a homogenous material free of stones greater than ½" in the greatest dimension, be free of lumps, plants, glass, roots, sticks, excessive stone content, debris and extraneous matter as determined by the Owner. Screened loam shall fall within the pH range of 6.0-6.5 except as noted on plans and details. It shall be uncontaminated by salt water, foreign matter and substances harmful to plant growth. The maximum soluble salt index shall be 100. Screened loam shall not have levels of aluminum greater than 200 parts per million.

If limestone is required to amend the screened loam to bring it within the pH range of 6.0-6.5, no more than 200 pounds of limestone per 1000 square feet of loam, incorporated into the soil, or 50 pounds of limestone per 1000 square feet of loam, surface application, per season.

The Owner will reject any material delivered to the site which, after post-delivery testing does not meet these specifications. If the delivered screened loam does not meet the specifications in this document, the delivered screened loam will be removed by the Contractor at the Contractor's expense and at the time of rejection.

B. Testing

The Contractor shall take representative samples of topsoil from the site and from topsoil to be hauled in and shall submit samples to a Soil Testing Laboratory for chemical analysis, and physical analysis. The Contractor shall indicate to the testing agencies that turf is to be planted and who the Owner is. The Contractor shall forward to the Owner two copies of analysis and recommendations of the testing agencies.

2.02 FERTILIZER

A. General

All fertilizer shall be a commercial balanced, 10-6-4 fertilizer delivered to the site in bags labeled with the manufacturer's guaranteed analysis.

B. Commercial Fertilizer

Commercial fertilizer shall be a complete fertilizer in which 50-70 percent of the nitrogenous elements shall be derived from organic sources; phosphate shall be derived from superphosphate containing 16-20 percent phosphoric acid or bonemeal containing 25-30 percent phosphoric acid and 2-3 percent nitrogen; and potash shall be derived from muriate of potash containing 55-60 percent potash. It shall contain the following percentages by weight.

18% Nitrogen - 26% Phosphoric Acid - 12% Potash

Fertilizer shall be mixed, as specified, and delivered to the site in standard, unopened containers showing weight, guaranteed analysis, and name of manufacturer.

C. Special Protection

If stored at the site, always protect fertilizer from the elements.

2.03 SOIL AMENDMENTS

A. Peat

Peat shall be moist. It shall be finely shredded, consist of 90 percent organic moss peat, be brown in color, and suitable for horticultural purposes. Shredded particles shall not exceed one (1) inch in diameter. Peat shall be measured in air-dry condition, containing not more than 35 percent moisture by weight. Ash content shall not exceed 10 percent.

B. Limestone

Ground dolomitic limestone shall be an approved agricultural limestone and shall contain not less than 85 percent of total carbonates. Limestone shall be ground to such fineness that 50 percent will pass a 100-mesh sieve, and 90 percent will pass a 20-mesh sieve.

2.04 GRASS SEED

A. General

All grass seed shall be:

1. Free from noxious weed seeds and cleaned.
2. Grade A current crop seed.
3. Treated with appropriate fungicide at time of mixing.
2. Delivered to the site in sealed containers with dealer's guaranteed analysis.

B. Seed Mix Proportions by Weight

<u>Percent by Weight</u>	<u>Seed</u>	<u>Min. % of Purity</u>	<u>Min. % of Germination</u>
10%	Shamrock Kentucky Bluegrass	98%	90%
10%	Perennial Creeping Red Fescue	98%	90%
20%	Annual Ryegrass	98%	90%
30%	Intermediate Ryegrass	98%	90%
30%	Perennial Ryegrass	98%	90%

SECTION 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Inspection

1. Prior to all work of this Section, carefully inspect the installed work of all other trades, and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that seeding may be completed in accordance with the original design and the referenced standards.

B. Discrepancies



1. In the event of discrepancy, immediately notify the Owner.
2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 SUBGRADE PREPARATION

- A. The Contractor shall do whatever grading is necessary to bring the subgrade to a true, smooth slope, parallel and 6" below finished grade, for all seed bed areas. Remove all existing lawns and grasses, including roots.
- B. There must be sufficient grade staked, as determined by the Owner, to insure correct line and grade of subgrade and of finished grade.
- C. Immediately prior to being covered with topsoil, the top 3" of the subgrades shall be raked or otherwise loosened and shall be free of stones, rock, and other foreign material 3" or greater in dimensions.

3.03 FINISH GRADE PREPARATION

- A. Topsoil shall not be delivered or worked in a wet, frozen or muddy condition.
- B. Topsoil shall be placed and spread over approved areas to a depth sufficiently no less than 4" in "loam and seed" lawn areas and 15" in plant bed areas so that after natural settlement and light rolling, the completed work will conform to the lines, grades, and elevations indicated. If excess topsoil exists, topsoil shall be spread a maximum of 8" deep on lawn areas.
- C. After topsoil has been spread in approved areas, it shall be carefully prepared by scarifying or harrowing, and stones over one inch in diameter shall be removed from the topsoil. It shall be free of smaller stones in excessive quantities, as determined by the Owner.
- D. The whole surface shall then be rolled with a roller, which weighs not more than 100 pounds per foot of width. During the rolling, all depressions caused by settlement of rolling shall be filled with additional topsoil, and the surface shall be regraded and rolled until presenting a smooth and even finish to the required grade.

3.04 SEED BED PREPARATION

- A. After the areas to be seeded have been brought to the grades specified, spread limestone at a rate of 100 pounds per 1,000 square feet.
- B. Apply the 18-26-12 fertilizers at a rate of 5 pounds per 1,000 square feet within 10 days prior to seeding. Thoroughly and evenly incorporate fertilizer and lime with the soil to a depth of 3" by discing or other approved method. In areas inaccessible to power equipment, use hand tools. Adjacent to trees and shrubs, use hand tools to avoid disturbances of the roots.
- C. The Seeding Contractor shall reconstitute the soil, as may be recommended by a soil testing agency, prior to use as planting soil. Any deficiencies in the topsoil shall be corrected by the Contractor, as recommended, at no expense to the Owner.
- D. After incorporation of fertilizer and lime into the soil, the seedbed shall be fine graded to remove all ridges and depressions and the surface cleared of all debris and of all stones one inch or more in diameter.

3.05 SEEDING

- A. Immediately before seeding, the ground shall be restored, as necessary, to a loose friable condition by dicing or other approved method to a depth of not less than 2". The surface shall be cleared of all debris and of all stones 1" or more in diameter.

- B. Seed all areas to be seeded with specified grass seed, sowing evenly with an approved mechanical seeder at the rate of 6 pounds per 1,000 square feet. Sow 3 pounds per 1,000 square feet in one direction and 3 pounds per 1,000 square feet at right angles to the first seeding. Spread seed when soil is moist. Cultipacker, or approved similar equipment, may be used to cover the seed and to firm the seedbed in one operation. In areas inaccessible to cultipacker, the seeded ground shall be lightly raked and rolled in two directions with a water ballast roller. Extreme care shall be taken during seeding and raking to ensure that no change shall occur in the finished grades and that the seed is not raked from one spot to another. Hydro-seeding is an acceptable manner of seeding, providing the Contractor certifies in writing that the hydro-seed fertilizer mix is as herein specified and applied at the equivalent rate of 6 pounds per 1,000 square feet.
- C. Promptly after seeding, wet the seedbed thoroughly, keeping all areas moist throughout the germination period.
- D. Mulch shall be placed immediately after seeding. Straw or salt marsh hay that has been thoroughly fluffed shall be spread evenly and uniformly at the rate of two to three tons per acre. Lumps and thick mulch materials shall be thinned. All mulch anchor stakes, strings and matting shall be removed before final acceptance of lawns. In addition, following mulching, all slopes of 5:1 or greater shall be covered with jute, biodegradable tobacco netting or approved equal for additional stabilization. Securely stapled in place. Overlap all joints in netting a minimum of 6".
- E. Take whatever measures are necessary to protect the seeded area while it is germinating. These measures shall include furnishing warnings signs, barriers, and other needed measures of protection.

3.06 MAINTENANCE

- A. Maintenance shall begin immediately after seeding operations and shall continue until Acceptance or for a minimum of 60 days or after two pre-approved cuttings, whichever is longer.
- B. Maintenance of seed areas shall consist of watering, weeding, curing, repair of all erosion, and reseeding as necessary to establish a uniform stand of grass. Lawns shall be watered in a satisfactory manner during and immediately after planting, and not less than twice per week until final acceptance. All areas, which fail to show a uniform stand of grass for any reason, shall be reseeded repeatedly until a uniform stand is attained. Scattered bare spots and not exceeding 6" square of any lawn area, will be allowed at the discretion of the Owner.
- C. At the time of the first cutting, there shall be a uniform stand between 3 and 3-1/2" high, and mechanical mower blades shall be set between 2-1/2" and 3" high.
- D. Catch shall be representative of seed specified.

3.07 SPRING RE-SEEDING

If the original seeding of the areas affected by work takes place in the fall, the Contractor shall be responsible for additional spring maintenance, including reseeding by slice seeding, application of fertilizer and removal of weeds.

3.08 ACCEPTANCE

The Owner shall inspect all work for Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date of inspection. **Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the Owner**, he shall certify in writing to the Contractor as to the Acceptance of the work.

3.09 ACCEPTANCE IN PART



The work may be accepted in parts when it is deemed to be in the Owner's best interest to do so and when approval is given to the Contractor in writing to complete the work in parts. Acceptance and use of such areas by the Owner shall not waive any other provisions of this Contract.

3.10 CLEANUP

- A. When any of this work is done while buildings are occupied, pavements shall be always kept clear, broom cleaned to prevent tracking dirt into buildings.
- B. After completion of all planting operations, dispose of all debris and excess material to the satisfaction of the Owner. All pavements shall be swept and hosed clean.

3.11 FINAL INSPECTION AND ACCEPTANCE

At the end of the guarantee period, the Owner will inspect all guaranteed work for the Final Acceptance upon written request of the Contractor. The request shall be received at least 10 calendar days before the anticipated date for final inspection.

Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the Owner at that time, he shall certify in writing to the Contractor as to the Final Acceptance of the Project.

ARTICLE 41 SECURITY CAMERA APPURTENANCES (NIC)

ARTICLE 42 PLAYGROUND EQUIPMENT (NIC)

ARTICLE 43 POURED-IN-PLACE (PIP) PLAYGROUND SAFETY SURFACING

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Poured-in-place playground surfacing system.

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):

1. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
2. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
3. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
4. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.
5. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
6. ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems under and Around Playground Equipment.

7. ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems under and Around Playground Equipment.

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide a 2-layer rubber-polyurethane playground surfacing system which has been designed, manufactured and installed to meet the following criteria:

1. Shock Attenuation (ASTM F1292):

a. Gmax: **less than or equal to 150.**

b. Head Injury Criteria: **less than or equal to 850.**

2. Flammability (ASTM D2859): Pass. 4. Tear Resistance (ASTM D624): 140%.

5. Water Permeability: 0.4 gal/yd²/second.

6. Accessibility: Comply with requirements of ASTM F1951.

1.04 SUBMITTALS

A. General: Submit listed submittals in accordance with Conditions of the Contract.

B. Product Data: Submit manufacturer's product data and installation instructions.

C. Verification Samples: Submit manufacturer's standard verification square sample for field testing of 18" x 18".

D. Quality Assurance/Control Submittals: Submit the following:

1. Certificate of qualifications of the playground surfacing installer.

E. Closeout Submittals: Submit the following:

1. Warranty and Testing documents specified herein.

1.05 QUALITY ASSURANCE

A. Qualifications: Utilize an installer approved and trained by the manufacturer of the playground surfacing system, having experience with other Projects of the scope and scale of the work described in this section. For installation of the poured-in-place play surface the Contractor shall have a minimum of five (5) years of experience. Provide evidence of successful completion of twenty-five (25) like surfaces installed during the past five (5) years with names of clients and phone numbers.

B. Certifications: Certification by manufacturer that installer is an approved applicator of the playground surfacing system.

C. International Play Equipment Manufacturers Association (IPEMA) certified.

D. Testing: After seventy-two (72) hours but within thirty (30) days following installation of the finished playground surface, the Contractor shall be required to perform, with the Owner present, field testing by a third party (qualifications to be reviewed/approved by Owner), demonstrating that the surface is following ASTM F1292 for impact attenuation, ASTM F1951 for wheelchair accessibility and Project Documents.



NO REQUEST OR PAYMENT FOR MATERAILS AND LABOR FOR SAFETY SURFACING SHALL BE REVIEWED OR APPROVED BY OWNER WITHOUT WRITTEN SUBMITTAL OF THE TESTING REPORT RESULTS, VERIFYING/PROOF OF 100% COMPLIANCE WITH THIS ARTICLE.

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

1.07 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Install surfacing system when minimum ambient temperature is 40 degrees F (1 degree C), and maximum ambient temperature is 90 degrees F (32 degrees C). Do not install in steady or heavy rain.

1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for Project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.
- C. Warranty Period: Surfacing shall maintain impact performance criteria as per the latest edition of ASTM F1292 and be guaranteed against defects in workmanship and materials for a period of no less than seven (7) years from the date of **ACCEPTANCE** of work.

PART 2 PRODUCTS

2.01 POURED-IN-PLACE (PIP) PLAYGROUND SURFACING SYSTEM

- A. Poured-in-place playground surfacing system, including the following:
 - 1. Dynamic Stone Blend Base: if required.
 - 2. Poured-In-Place Primer:
 - a. Material: Polyurethane.
 - 3. Poured-in-Place Basemat:
 - a. Material: Blend of 100% recycled SBR (styrene butadiene rubber) and polyurethane.
 - b. Thickness meets ASTM F1292 requirements for Impact Attenuation of Surface Systems within use areas of Playground Equipment and Swings for **designed maximum critical fall height:**

- i. **10'-0" at Whetherell Estates**
- ii. **8'-0" at Cristoforo Colombo Park**

c. Formulation Components: Blend of strand and granular material.

4. Poured-In-Place Top Surface:

- a. Material: Blend of recycled EPDM (ethylene propylene diene monomer) and **Aromatic** polyurethane.
- b. Thickness: Nominal 1/2" minimum.
- c. Color: Uniform Custom Combination - 50% Black and 50 % of Manufacturer's three (3) Premium colors.
- d. Dry Static Coefficient of Friction (ASTM D2047): 1.0.
- e. Wet Static Coefficient of Friction (ASTM D2047): 0.9.
- f. Dry Skid Resistance (ASTM E303): 89.
- g. Wet Skid Resistance (ASTM E303): 57.

2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: N/A

2.03 MIXES

A. Required mix proportions by weight:

- 1. Basemat: 14% polyurethane, 86% rubber.
- 2. Top Surface: 18% polyurethane, 82% rubber.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Comply with the instructions and recommendations of the playground surfacing manufacturer

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions are suitable for installation of the playground surfacing system.
- B. Do not proceed with installation until unsuitable conditions are corrected.

3.03 PREPARATION



A. Surface Preparation: Using a brush or short nap roller, apply primer to the substrate perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft²/gal (7.5 m²/L).

3.04 INSTALLATION

A. Do not proceed with playground surfacing installation until all applicable site work, including substrate preparation, fencing, playground equipment installation and other relevant work, has been completed.

B. Basemat Installation:

1. Using screeds and hand trowels, install the basemat at a consistent density of approximately 29 pounds, 1 ounce per cubic foot (466 kg/m³) to the specified thickness or as determined by Section 1.03 and verification sample or whichever is more stringent.

2. Allow basemat to cure for sufficient time so that indentations are not left in the basemat from applicator foot traffic or equipment.

3. Do not allow foot traffic or use of the basemat surface until it is sufficiently cured.

C. Primer Application: Using a brush or short nap roller, apply primer to the basemat top surface, perimeter and any adjacent vertical and horizontal barriers such as playground equipment support legs, curbs or slabs that will contact the surfacing system at the rate of 300 ft²/gal (7.5 m²/L).

D. Top Surface Installation: Using a hand trowel, install top surface at a consistent density of approximately 58 pounds, 9 ounces per cubic foot (938 kg/m³) to a nominal thickness of 1/2" (12.7 mm), or as determined by Section 1.03 and verification sample or whichever is more stringent.

3. Single application of each color/blend, no cold seams.

4. Allow top surface to cure for a minimum of 48 hours.

5. At the end of the minimum curing period, verify that the top surface is sufficiently dry and firm to allow foot traffic and use without damage to the surface.

6. Do not allow foot traffic and protect the safety surfacing until it is sufficiently cured.

3.05 PROTECTION

A. Protect the installed playground surface from damage resulting from subsequent construction activity on the site.

ARTICLE 44 SPORTS COURTS BIT. CONCRETE PAVING & PAINTING (NIC)

ARTICLE 45 WPRC DIVISION CHAIN LINK FENCE FRAMEWORK & FABRIC (NIC)

ARTICLE 46 ATTACHMENTS

NONE

End of DPW & Parks Special Conditions and Specifications.