

June 30, 2021

**SOLICITATION ADDENDUM NO. 1
ITB 20-0046
Mountainside High School Field Turf Remediation**

THE FOLLOWING CHANGES/ADDITIONS TO THE ABOVE CITED SOLICITATION ARE ANNOUNCED:

This Addendum modifies the Invitation to Bid (ITB) document(s) only to the extent indicated herein. All other areas not changed or otherwise modified by this Addendum shall remain in full force and effect. This Addendum is hereby made an integral part of the ITB document. Bidder must be responsive to any requirements of this Addendum as if the requirements were set forth in the ITB. Failure to do so may result in Bid rejection. See the ITB regarding requests for clarification or change and protests of this Addendum, and the deadlines for the foregoing.

This addendum is to be acknowledged in the space provided on the Bidder Certification form supplied in the solicitation document. Failure to acknowledge receipt of this addendum may be cause to reject your offer.

The closing date **IS July 13, 2021 at 2:00 PM Pacific Time**

CHANGES:

- 1) The Additional Specifications attached to this Addendum 1 are hereby included in ATTACHMENT K Specifications. The Additional Specifications and the Division 1 specifications together, form the Specifications.**

Additional Specifications

02 10 00

SITE PREPARATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. Provide all labor, materials, and equipment to perform the following work of the Contract, including incidentals related to that work and coordination and support of other work specified elsewhere in the Contract Documents:
- B. The work occurs at Mountainside High School, 12500 SW 175th Ave, Beaverton, OR 97007.
- C. Related Work of other Sections includes;
 - 32 11 23 Aggregate Base Courses
- D. Work specified in this section includes, but is not necessarily limited to, the following:
 - 1. Conform to the requirements and conditions of all jurisdictions, including State and Local code requirements relating to the control of fugitive dust and sediment and application of Temporary Erosion Sediment & Control measures.
 - 2. Layout and field engineering related to the identification of specific limits of work and selective demolition.
 - 3. Protecting from harm objects not specifically scheduled for removal including the existing electrical, storm drainage, and irrigation systems, furnishings and fencing and synthetic turf surfacing.
 - 4. Erection of such temporary chain link fencing as necessary to completely secure any and all construction staging, stockpiling, and laydown areas.
 - 5. Installation, Maintenance, and Removal of temporary construction access as necessary.
 - 6. Removal and offsite disposal of existing synthetic turf surfacing and infill materials. The Contractor shall make every effort to recycle used synthetic turf materials.
 - 7. Contractor shall use extreme care to protect the existing synthetic turf and aggregate base during construction. Employ protective measures to minimize impact and damage to the existing surfaces and section.
 - 8. Remove and securely store all loose furnishings and equipment encountered that interferes with the performance of the work.
 - 9. The Contractor shall take all precautions to protect the existing permeable aggregate base materials during the removal of the existing synthetic turf. Construction traffic should be limited to areas of the existing synthetic turf rather than on the surface of the permeable aggregate base.
 - 10. The Contractor shall re-grade and compact the permeable aggregate base areas that are damaged, disturbed and displaced by the turf removal activities.
 - 11. The Contractor shall establish planarity for the entire field surface with the least possible disturbance, to meet and match existing surfacing and edge anchors and the limit of work. For field adjustments where permeable aggregate top course material proved coarser than the planarity deficiency being remedied, approved washed plaster sand or infill sand may be used as specified.
- E. Prior to Mobilization, the Contractor shall submit for approval a comprehensive staging, access, and work sequencing plan illustrating protections to the existing conditions to

remain undisturbed.

1.02 EXISTING SITE CONDITIONS

- A. Refer to drawings for existing condition information.
- B. Carefully maintain benchmarks, monuments and other reference points. If disturbed or destroyed, replace as directed. It is the responsibility of the Contractor to familiarize themselves with all records of existing utilities in area of site work.

1.03 EXISTING UTILITIES

- A. The Contractor shall contact the appropriate utility agencies for identification of underground utility location, and coordinate with all existing utilities prior to proceeding with demolition activity. Protect any active pipe and conduit encountered; notify Engineer of their existence and record on "as-built" drawings. The contractor shall contact 8-1-1 a minimum of 72 hours prior to excavation.
- B. Existing utilities shown on the plans are from record drawings and may not indicate exact locations of subsurface components.
- C. Other Available Information: Refer to the Record Drawings provided with the Bid Documents.

1.04 DUST CONTROL

- A. Protect persons and property from damage and discomfort caused by dust. Apply water as necessary to quell dust.

1.05 ROADWAY PROTECTION

- A. Provide wheel-cleaning stations to clean wheels and undercarriage of trucks before leaving site, as necessary to prevent dirt from being carried onto public streets. If streets are fouled, they must be cleaned immediately in conformance with the City and County requirements, as applicable. This requirement applies to all vehicle movements for the entire period of construction.

1.06 TRAFFIC REGULATION

- A. Conduct operations in such a manner to avoid unnecessary interference to existing traffic. Minimize heavy vehicle traffic to and from site during peak traffic hours. Do not park or queue vehicles in traffic lanes. Provide flagmen as required. Conform to City and County traffic control requirements.
- B. Contractor shall be responsible for all traffic control and emergency call outs resulting from Contractor operations.
- C. Maintain fire lanes, roadways and alleys to existing buildings continuously, as required by the fire department having jurisdiction.

- D. Existing walkways and roadways leading past the construction shall remain clear and safe at all times. Provide barriers, flashing lights, walkways, guardrails and night lighting as required for safety and control.

1.07 DIMENSIONS AND LAYOUT

- A. The Contractor shall be responsible for furnishing, setting and marking all line, grade, and location stakes, including offsets and general construction staking, together with clearing limits. The Engineer will provide layout data in a digital format upon request.
- B. There shall be on site at all times, when work-requiring control is being performed, all necessary equipment, supplies, and instruments related thereto. A qualified layout Engineer, surveyor, or technical specialist must be assigned to the Contractor's crew for this work. This equipment and personnel must be available at no additional cost to the Owner for the purpose of verifying layout and certifying the accuracy of work on the site.
- C. The Contractor is responsible for preserving all benchmarks and stakes and replacing any that are displaced or missing as a result of the Contractor's operations.
- D. The Contractor is responsible for review of all Owner records relative to the existing underground utilities. The Contractor is responsible to avoid damaging these facilities and shall repair all recorded utilities at no additional cost to the Owner.
- E. The Contractor shall notify the Owner's Representative immediately of underground utilities encountered, which are not shown on the Owner's record.

1.08 CONSTRUCTION ACCESS PROTECTION

- A. Provide all protection measures required to maintain existing asphalt pavement, concrete curbs and walkways, and landscape including, but not limited to geotextile fabric, plastic sheeting, plywood sheeting and steel plates.
- B. Specific requirements for construction access over the existing synthetic turf surface and section are provided elsewhere.
- C. Deviation from the Approved Access and Staging Plan shall be performed only as approved.

1.09 QUALITY ASSURANCE

- A. The Contractor is responsible for verifying the quality of the work and shall perform compaction and density tests on request of the Engineer to check compliance with these specifications. A copy of the test reports shall be furnished to the Engineer.
- B. The Engineer's Testing Agency may perform compaction and density tests to verify compliance with these specifications.
- C. The Engineer may require that an independent testing laboratory test imported materials at any time. If the material is found to be non-compliant with the Contract, the Contractor shall bear the cost of testing, removal of all non-compliant materials from the Project Site, and replacement of the materials with materials meeting the requirements of the Contract.

If the materials tested are found to be compliant with the requirements of the Contract, the Owner will reimburse the Contractor for costs incurred by testing plus mark-ups as allowed for elsewhere in the Contract.

- D. 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.
- E. Submittals:
 - 1. Safety Products:
 - a. Submit for the Engineer's approval manufacturers product data for each worker safety product specified.
 - b. Provide current calibration certificates for each piece of mechanical monitoring equipment to be used in the work. Perform field testing of equipment for the Engineers approval prior to commencing excavation.
 - 2. Bulk Materials: The Engineer shall approve in principle all products used in the execution of this section prior to their importation to the Project Site. Submit a particle gradation analysis in graph and table form for each product specified. Approval of the Engineer of an analysis does not constitute approval of the actual product, which may be subject to additional testing at any time per paragraph 1.09.C above.

1.10 PROTECTION OF EXISTING FIELD SURFACES AND SECTIONS

The Contractor shall take all measures possible to protect the existing surfacing and aggregate base, these shall include:

- A. Light weight, specialized equipment for removal and installation of synthetic turf.
- B. To the greatest extent practical, construction traffic associated with the removal of the existing synthetic turf should occur on the existing synthetic turf to be removed, or on the exposed base protected with sheeting.
- C. Further protection to include but not limited to staggered $\frac{3}{4}$ " plywood protection over existing base for vehicle and equipment access.
- D. Steel plates placed at field construction entrance to protect existing permeable aggregate base and existing utilities.

PART 2 MATERIALS

2.01 GENERAL

- A. Prior to the importation of any materials, the Contractor shall provide the Engineer with a certified test lab report of the sieve analysis of each aggregate product. The Engineer shall be the final determining factor in establishing compliance with sieve requirements. No material shall be brought onto the job site until the initial sieve analysis has been approved in writing by the Engineer.

- B. During the course of importation of materials, the Contractor shall be responsible for continually checking the materials to ensure that they continue to meet the Specifications.

2.02 TEMPORARY CONSTRUCTION ACCESS

A. Geotextile Fabric

1. Material: Fabric to be 100% Polypropylene, non-woven, needle-punched engineering fabric with a minimum weight of 4.0 oz/sy.
2. Physical Properties:
 - a. Tensile Strength, lbs., (ASTM D-4632): 100
 - b. Elongation (%), (ASTM D4632): 50
 - c. Puncture Strength, (lbs), (ASTM D4833): 65
 - d. Mullen Burst Strength (PSI), (ASTM D3786): 200
 - e. Trapezoidal Tear, (lbs), (ASTM D4533): 45
 - f. Abrasion Res. % Str. Ret., (ASTM D4886): 80
 - g. Coefficient. of Perm., cm/sec., (ASTM D4491): 0.22
 - h. Flow Rate Gal./Min./Sq. Ft.) (ASTM D4491): 140
3. Soil Bearing Structural Fabric to be Tencate Geosynthetics Mirafi 140N or approved equal.

- B. Plywood to be minimum 3/4" CDX or better, minimum 4'x8' sheets.

- C. Steel Plate to be 1" common road plate ASTM A-36 or better with appropriate lifting points, 5'x8' standard to 8'x20' curb crossing as appropriate, straight and flat, with no burrs or jagged edges. Prefabricated plastic mats may be substituted as approved.

- D. Timber curb spacers as needed.

2.03 FIELD SECTION AGGREGATES RECOVERY VOLUME

- A. For replacement of volume lost to contamination refer to Section 32 11 23.

2.04 WASHED PLASTER SAND

- A. Washed plaster sand shall be installed in areas where the finished surface of the top course permeable aggregate requires fill adjustment of less than 3/8" depth in the areas where the existing permeable aggregate has been displaced. Material shall be installed at such depth to meet and match the top of the existing, adjacent permeable aggregate areas.

- B. Gradation: Sand to meet the following particle size limitations:

| <u>Sieve Size</u> | <u>Percent Passing by Weight</u> |
|---------------------|----------------------------------|
| No. 4 | 100 |
| No. 8 | 95-100 |
| No. 30 | 75-85 |
| No. 100 | 0-4 |
| No. 200 (Wet Sieve) | 0 - 2 |
| No. 270 (Wet Sieve) | 0 - 1 |

PART 3 EXECUTION

3.01 FIELD LAYOUT AND ENGINEERING

- A. The General Contractor shall be responsible for the layout of all the preparation and demolition work required to construct all work in accordance with the drawings and specifications. The Engineer will provide layout data in a digital format upon request.

3.02 PROTECTION OF EXISTING CONDITIONS

- A. Provide, erect and maintain barricades, coverings, or other types of protection necessary to prevent damage to existing trees indicated to remain in place.
- B. Do not shut off or cap utilities without prior notice. Coordinate work with Division 1 requirements. Maintain storm drains and sewers open for free drainage:
- C. Provide storm drain inlet protection at all catch basins located within 300' including those in adjacent rights-of-way and anywhere materials staging, or stockpiling occurs.
- D. Objectionable noises: Limit use of air hammers and other noisy equipment as much as possible. Conform to Owner requirements regarding noise control.
- E. Maintain vehicular and pedestrian traffic routes:
 - 1. Ensure minimum interference with roads, sidewalks, and adjacent facilities.
 - 2. Do not close or obstruct streets, sidewalks, alleys or passageways without permission from Owner.
 - 3. If required by Owner or city, provide alternate routes around closed or obstructed traffic ways.
- F. Temporary Construction Access
 - 1. Curb Crossings shall be performed to SDOT Standards by Permit only.
 - 2. Temporary construction access roads over existing pavement or landscape shall include fabric, one lift of plywood, one lift of steel plate. Stagger joints.

3.03 DEMOLITION

- A. Completely remove and dispose of synthetic turf where defined. See notes on drawings for items to be removed and limits of removal.
- B. Selective Removal
 - 1. Synthetic Turf: The Contractor shall remove such synthetic turf as defined, leaving a clean and viable edge remaining, suitable for attachment of the new materials.
- C. Adjacent materials and surfaces designated to remain that are damaged by the Contractor's operations shall be removed and new materials shall be furnished and installed to match existing, at no additional cost to the Owner.

- D. Carefully dismantle and remove items, if any, to be salvaged. The salvaged items shall then be labeled, bundled, and delivered to a storage site specified by the Owner's Representative.

3.04 DISPOSAL OF MATERIALS

- A. The Contractor in a manner consistent with all government regulations shall dispose the refuse resulting from clearing and grubbing.
 - 1. No burning permitted.
 - 2. Do not leave refuse material on the project site, shoved onto abutting private properties, or buried in embankments or trenches on the project site.
 - 3. Do not deposit debris in stream, body of water, street or alley, or upon private property except by written consent of the private property Owner.
 - 4. Maintain hauling routes clean and free of debris resulting from work of this section.

3.05 PERMEABLE AGGREGATE BASE PREPARATION

- A. Top course permeable aggregate shall be carefully compacted to 90-95% maximum dry density. The top surface shall meet and match the top of the adjacent areas. Surface tolerance for all areas within the playfield shall not vary by more than 1/4".
- B. The entire surface area of the permeable aggregate base shall be verified for planarity. The synthetic turf installation foreman and the Engineer shall confirm planarity by pulling a string line taut across the width and length of the field, at a minimum 2' interval. Any areas deviating more than ¼" shall be modified / reworked by the contractor to the required tolerance.
- C. The entire surface area of the permeable aggregate base shall be verified for stability and suitability for the installation of the synthetic turf. The finished surface shall be uniformly firm and unyielding, and laterally stable under loading.
- D. The permeable aggregate base shall be inspected for infiltration rate by the engineer prior to acceptance.
- E. Contractor shall establish a transition zone by removing aggregate sufficiently to allow the Supplemental Resilient Pad System to uniformly meet and match the existing Synthetic Turf Edge Anchor.
- F. Turf installation may not begin until aggregate base is accepted in writing by the turf vendor.

3.06 AGGREGATE TOLERANCES

- A. The Contractor shall utilize a laser plane system for grade control.
- B. The surface of the top course permeable aggregate shall not deviate from designated compacted grade within the range of -0.00" and +0.25" and shall not deviate more than ¼" as measured by a 10-foot straight edge.

- C. Upon completion of the fine grading, compaction, and Contractor confirmation of conformance with the tolerances, the Contractor shall notify the Engineer and schedule an inspection for approval. The Contractor shall have a laser plane system available to the Engineer for the inspections. The Contractor shall not be authorized to install synthetic turf over the permeable aggregate until it has been inspected and approved by the Engineer.
- D. Upon completion of elevation verification, the entire permeable aggregate surface shall be inspected for planarity. Planarity inspection shall be completed in conjunction, coordination with the synthetic turf vendor. The installation foreman for the synthetic turf shall be present at the time of the inspection. Inspection shall consist of stretching a string line taut over the finished permeable aggregate surface at such interval as may be required to confirm surface planarity and acceptance for installation of synthetic turf surface. Any deviation greater than $\frac{1}{4}$ " shall require remediation efforts as may be required to meet subgrade tolerance.

3.07 CLEANING

- A. The Contractor shall utilize such means as he deems necessary to remove all loose debris and surfacing from existing base mat structural spray system without affecting the performance characteristics of the system to remain including permeability and resilience.
- B. All waste generated shall be disposed of off-site within 24 hours of its initial accumulation.

END OF SECTION 02 10 00

32 11 23

AGGREGATE BASE COURSES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes aggregate base and leveling aggregates and geotextile separation fabric to be installed under synthetic turf surfacing.

1.03 ACTION SUBMITTALS

- A. General: Submit the following in accordance with Division 1 Section "Administrative Requirements".
 - 1. Product data for drainage piping specialties.
- B. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for geotextile fabrics.
 - 2. Drainage Aggregate Particle Gradation
 - 3. Permeable Base Course Aggregate Particle Gradation
 - 4. Permeable Top Course Aggregate Particle Gradation
- C. Samples:
 - 1. Geotextile fabric: Submit 12"x12" sample
 - 2. For each aggregate type, submit a 1 gallon zip lock bag with representative sample.

1.04 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For installer.
- B. Material Test Reports: For each aggregate type by a qualified testing agency.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company performing the work of this Section shall have experience in the satisfactory performance of earthwork and aggregate placement for at least three artificial turf fields.
- B. Grading Tolerances:
 - 1. Subgrade: ± 0.04 feet
 - 2. Surface of leveling aggregate: $\pm 0.02' : 20' / \pm 0.04$ feet cumulative from design grade

- C. Compaction of Subgrade Tolerance: Minimum of 92 percent of maximum dry density at the moisture content of the material as defined by ASTM D 1557.
- D. Stability of Subgrade: No more than ¼ inch deflection of the subgrade under proof roll.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide the following:

1. Geotextile Separation Fabric: A needle-punched non-woven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Fabric shall meet the following mechanical properties:
 - a. Grab tensile strength: ASTM D 4643 ≥ 160 lbs.
 - b. Grab tensile elongation: ASTM D 4632 ≥ 50%
 - c. Trapezoid tear strength: ASTM D 3533 ≥ 60
 - d. CBR Puncture strength: ASTM D 6241 ≥ 410 lbs.
 - e. AOS: ASTM D 4751 ≤ #70 US standard mesh
 - f. Permittivity: ASTM D 4491 ≥ 1.5 sec-1
 - g. Flow Rate: ASTM D 4355 ≥ 110 gal./min./ft.2
 - h. Weight: 4oz / sy

2.02 MATERIALS

- A. Storm Drainage

1. Conduit Materials: Furnish ells, clean-outs, tees, reducing tees, wyes, couplings, increasers, crosses, transitions, and end caps of the same type and class of material as the conduit, or of material having equal or superior physical and chemical properties as acceptable to the Architect. Use soil tight joints in lateral and collector drains.
2. Closed Pipe: ADS N-12 smooth interior corrugated HDPE pipe. Pipe shall conform to AASHTO M294, ASTM D1248, and ASTM D2412.
3. Perforated Pipe for French Drain Applications: ADS N-12 smooth interior corrugated HDPE pipe. Use perforated pipe in lateral drains. Pipe shall conform to AASHTO M294, ASTM D1248, and ASTM D2412. Perforations shall conform to AASHTO M252, Class1.
4. Flat Pipe: ADS AdvanEDGE 12" height pipe, no fabric wrap.
5. Slot Drains: ACO Sport System 3000 (Aco Polymer Products 800 993-2738) with catch basin (8 required). Use radiused segments. Catch basins shall be installed at each point of connection to storm system and at other locations for access for cleaning as shown on plans.
6. Drain Rock: Washed 3/4"-1/2" aggregate with less than 1% by weight passing the US Standard No. 200 Sieve.
7. Filter Fabric: Mirafi 140N or approved equivalent.

- B. Base and Leveling Synthetic Turf Aggregates: Gravel crushed from durable rock parent material having a slake durability index of at least 90%, based on a two-cycle slake durability test according to ASTM D 4644. It shall be angular having at least two fractured faces. It shall be free of foreign material.

1. Aggregates shall meet the following gradation requirements as determined by ASTM C136 and C117:

- a. Per project submittal dated 12/29/2015, base aggregate percent passing value ranges for sieve sizes 1" through 3/8" should be expanded to allow matching of field conditions.
- b. Per project submittal dated 07/28/2016, leveling aggregate percent passing value ranges for sieve sizes 3/8" through #100 should be expanded to allow matching of field conditions.

| Tyler standard Screen U.S. Series Equiv. No. Sieve Size | % of particles Passing Base Aggregate | % of particles Passing Leveling Aggregate |
|---|---|---|
| 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 |
| #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 (wet) | 0-2 | 0-5 |

2.03 SOURCE QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to evaluate base and leveling aggregates.
- B. Testing: Test and inspect base and leveling aggregates according to ASTM C136 and C117.
 - 1. Provide a supplier test gradation for provisional approval.
 - 2. Provide a sample for each aggregate specified sufficient for the owners testing of approved products. If accepted, this will become the testing basis for production quality control.
 - 3. Coordinate collection of production / import samples with the Owners Testing Laboratory.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine subgrades with Installer present for compliance with requirements for line and grade, compaction, stability, and other conditions affecting performance of the Work.
- B. Areas failing to meet specified tolerances shall be corrected.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PROOF ROLL

- A. Proof roll ground surface in the presence of Owner's Representative or Owner-designated consultant. Proof rolling shall be done with a 10 to 12 yd. dump truck filled with aggregate. Compact the subgrade until it is firm and unyielding.

3.03 GEOTEXTILE FABRIC

- A. Geotextile fabric shall be placed on approved subgrade where indicated in the drawings. Subgrade shall be smooth free of obstructions, depressions, debris, soft or low-density pockets of material. Shingle/Lap edges and ends of geotextile fabrics not less than 12 inches. Fabric shall be free of tension, stress, folds, wrinkles, or creases.

3.04 SUBSURFACE DRAINAGE

- A. Stockpile and reinstall existing storm drain pipe to greatest extent feasible. If new material is needed, refer to Section 2.2A above and replace with like material as required.

3.05 BASE AND LEVELING AGGREGATES

- A. Minimize construction traffic over drain pipe to prevent damage. Sequence work so that drainage aggregates are applied over top of pipe in advance of tracked vehicle traffic.
- B. Place layer of unsegregated and uniformly dispersed base aggregates in position for compacting layers. Place material in lifts not to exceed 8". Grade and compact to specified tolerances.
- C. Place layer of leveling aggregates compact to a firm, unyielding condition. Grade to specified tolerances.
- D. During placement and compaction, the moisture content of the material shall be maintained at the highest-level practical for the material without causing free water to drain through the material and build up on lower courses or on the subgrade. Frequent light applications of water shall be applied rather than heavy applications to provide the necessary moisture without washing finer graded fraction.

3.06 COMPACTION

- A. Artificial Turf Base and Leveling Aggregates: Immediately following spreading and final shaping, the full depth of each layer of crushed aggregates shall be compacted to a well keyed, unyielding condition. Compaction shall be accomplished with a static roller on artificial turf base and leveling aggregates. Vibratory action is not permitted. Test compaction by conducting a proof roll with a fully loaded dump truck in the presence of the Owner's Representative. If there is any deformation or rutting it shall be further compacted until the aggregates are completely unyielding.
- B. Planarity Test: Conduct planarity test in the presence of the Owner's Representative and the synthetic turf manufacturer's authorized representative. Finished surface of leveling aggregate shall not deviate from true plane by more than the specified grading tolerances in the Quality Assurance paragraph in Part 1 of this Section. Provide a 200 foot masons line, and marking paint sufficient to mark areas to be corrected. Provide workers to hold each end of the string line. Demonstrate surface planarity by stretching string line over surface at regular intervals as directed by turf manufacturer's representative and/or Owner's Representative sufficient to identify all areas in need of correction.
- C. Correct any deficiencies observed during test.
- D. Repeat steps B and C above until planarity is approved by Owner and synthetic turf manufacturer's representative.

END OF SECTION 32 11 23