ADDENDUM NO. 1

BREWSTER CENTRAL SCHOOL DISTRICT
BREWSTER HIGH SCHOOL
SECURITY VESTIBULE, SYNTHETIC FIELD AND RELATED WORK

The attention of Bidders submitting proposals for work on the Security Vestibule, Synthetic Field and Related Work at Brewster High School is called to the following Addendum to the Contract Forms and Specifications.

The items set forth herein, whether of omission, addition, substitution or clarification are to be included in and form a part of the proposal submitted. This Addendum is hereby included in and made a part of the Contract Documents, dated April 23, 2024, whether or not attached thereto. All requirements of the original project specifications and drawings shall remain in force except as amended by this addendum.

This Addendum contains changes to the requirements of the Contract Documents. Such changes shall be incorporated into the contract Documents and shall apply to the work with the same meaning and force as if they had been included in the original documents. Wherever or any portion of a drawing, the remainder of the paragraph or drawing affected shall remain in force.

The conditions of the Specifications shall govern all work described in this Addendum. Wherever the conditions of work and the quality or quantity of materials or workmanship are not fully described in this Addendum, the conditions of work, etc., described by the Specifications or drawings for similar items of work shall apply to the work described in this Addendum.

FULLER AND D'ANGELO, P.C..
ARCHITECTS AND PLANNERS
45 KNOLLWOOD ROAD
ELMSFORD, NEW YORK 10523

DATE: April 29, 2024

This Addendum consists of two (2) pages plus Specification Section 32 1822 Synthetic Grass Surfacing, drawing BHS C701 and drawing BHS C707.

THE FOLLOWING ARE MODIFICATIONS, CLARIFICATIONS, DELETIONS OR ADDITIONS TO THE SPECIFICATIONS:

SECTION 32 1822 – SYNTHETIC GRASS SURFACING
DELETE in its entirety and replace with section attached to this addendum.

THE FOLLOWING ARE MODIFICATIONS, CLARIFICATIONS, DELETIONS OR ADDITIONS TO THE DRAWINGS:

BHS C701 – ATHLETIC FIELD, TRACK AND PARKING AT BREWSTER HIGH SCHOOL DETAILS
Synthetic Turf Detail, **REVISE** finishing stone and crushed stone base depth as shown on revised drawing attached to this addendum.

BHS C707 – ATHLETIC FIELD, TRACK AND PARKING AT BREWSTER HIGH SCHOOL DETAILS

Athletic Field Drainage Detail, **REVISE** finishing stone and crushed stone base depth as shown on revised drawing attached to this addendum.

END OF ADDENDUM

SYNTHETIC GRASS SURFACING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

PART 1 - The extent of artificial turf work is shown on the drawings.

PART 2 - Artificial turf work includes, but is not limited to, the following:

SCHEDULE 0 - A complete synthetic turf system, consisting of a vertical draining gravel blanket and nominal 2.25 long polyethylene parallel-ling slit and monofilament blended fibers, tufted through the same stitch into a primary backing with a secondary backing consisting of a minimum of 22 ounces of urethane per square yard.

SCHEDULE 1 - A resilient infill system, consisting of a mixture of rubber granules and sand.

SCHEDULE 2 - Tufted-in game lines and perimeter lines per drawings. Remaining required game marking shall be permanently inlaid or painted as per drawings, direction of Owner or Owner's Representative.

SCHEDULE 3 - Pre-manufactured porous ShockPad.

SCHEDULE 4 - Edge details.

SCHEDULE 5 - Maintenance manual.

SCHEDULE 6 - Written company warranty: 8-year warranty or 12-year (8-year plus 4-year supplemental warranty when installed over an approved pad), supported by a 3rd party insured 8-year warranty policy from an A-Rated domestic insurance carrier. Letters of credit are not permissible. Actual and current policy must be submitted for verification.

SCHEDULE 7 - Striping and seaming plan: Striping plan; layouts for the sports as shown on the drawings showing any field lines, logos, markings and boundaries.

SCHEDULE 8 - Train field maintenance personnel in proper care maintenance procedures.

SCHEDULE 9 - When applicable, Field Builder and Base Construction Contractor to coordinate to make sure soccer goal footings are in correct locations.

PART 3 - Provide all materials, labor, equipment and services required to accomplish related work in accordance with the drawings and specifications.

PART 4 - The artificial turf shall be specifically designed, manufactured and installed for soccer. At the time of substantial completion, the system's shock attenuation shall have an average G-max value less than 110 based on ASTM-F355A. At no time shall the G-max value exceed 145 throughout the life of the warranty.

PART 5 - Copies of independent laboratory test reports on system or components:

SCHEDULE 0 - ASTM D 792 Specific Gravity

SCHEDULE 1 - ASTM D 1335 Tuft Bind

SCHEDULE 2 - ASTM D 5034 Grab Breaking Strength

SCHEDULE 3 - ASTM D 418 Pile Height, Tuft Spacing, Face Weight and Total Weight

SCHEDULE 4 - ASTM D 2859 Flammability (Pill test)

SCHEDULE 5 - ASTM F 1551 Water Permeability

SCHEDULE 6 - Soccer System Specific Performance Testing as Follows:

- AAA FIFA TM 04a – Shock Absorption
- AAA FIFA TM 04b – Vertical Deformation
- EN 15301-1: 2007 - Rotational Resistance Studded
- ASTM F3146 Critical Fall Height – HIC
- EN 12235: 2013 – Vertical Ball Rebound
- EN 12234 2013 – Ball Roll
- FIFA TM 14 – Heat Test
- ISO 4919: 2012 Un-aged Tuft withdrawal
- ISO 4919: 2012 & EN 13744: 2004 14 days water aged tuft withdrawal
- ISO 13934-1: 2013 Un-aged Carpet Tensile Strength Direction of manufacturer and perpendicular of manufacturer.

**All results must meet established testing criteria standards and be tested by a reputable independent laboratory specializing in artificial turf performance testing for soccer applications.*

PART 6 - Prior to Final Acceptance, the Field Builder shall submit to the owner three (3) copies of their maintenance manuals. These manuals will include all necessary instructions for the proper care and maintenance of the newly installed synthetic turf system.

PART 7 - Related Requirements:

SCHEDULE 0 - Section 033013 “Cast-In-Place Concrete for Sitework” for concrete edge restraints.

SCHEDULE 1 - Section 312013 “Earth Moving for Sitework” for preparation, compaction, and grading for granular base.

1.02 SUBMITTALS

Submit the following within 48 hours of bid opening, as requested:

A. Three (3) copies of most recent installation/reference list for all projects of similar scope to this project completed in the last three years.

B. Three (3) copies of most recent independently audited financial statements.

C. Three (3) copies of required 3rd party insurance policy, demonstrating that all of the requirements outlined in Section 1.04 F Quality Assurance are met. Actual policy must be submitted.

D. One (1) 12" x 12" sample of proposed synthetic turf carpet and one (1) 12" x 12" boxed turf sample including infill representative of finished synthetic turf system. Also submit three (3) copies of product data and testing documents demonstrating that proposed system meets or exceeds all specified requirements. One (1) 12" x 12" sample of rubber ShockPad must also be submitted, if applicable.

Note: If these submittal items are requested and deemed to be insufficient, the Field Builder will not be approved.

Submit the following prior to the ordering of materials:

A. Provide a colored striping plan detailing lines, graphics and letters. Coordinate with Owner or Owner's Representative and Architect to get final approval of all designated colors, dimensions and logo/lettering designs.

B. Material Certificates and Samples: Provide electronic copies for each material from material producer that will be used for this project. Each material certificate must be stamped and checked as approved by the Field Builder before submittal to the Architect.

C. Provide to the Architect materials samples of the following: Two (2) 12" x 12" samples of synthetic turf carpet and color yarn samples, two (2) bagged samples each of rubber and sand infill material.

D. Submit two (2) 12" x 12" samples of 10mm porous rubber ShockPad with product data sheet.

E. Submittals: Prior to order of materials, the Field Builder shall submit a sample warranty, seam layout plan, striping plan and any details of construction that deviate from the plans and specifications.

F. Submit three (3) copies of the resume of proposed installation foreman. Installation crew must meet or exceed all requirements outlined in Section 1.04.

G. Three (3) copies of Field Builder’s recommended maintenance equipment cut sheets.

H. Shop Drawings and Product Data

i. Provide shop drawing of all field layouts showing striping plan; layouts for Soccer, Lacrosse, Baseball, Little League and showing any field lines, markings and boundaries, alternating colors.

ii. Installation details including edge detail, other inserts and covers, layouts for lines and markings, etc. as required by contract.

E. Recycled rubber from old turf fields shall not be acceptable. A Bill of Lading letter supporting the above shall be submitted prior to procurement.

1.03 JOB CONDITIONS

A. All job conditions in General Conditions shall apply.

1.04 QUALITY ASSURANCE

A. Provide a qualified installation foreman to coordinate and review the component parts of the artificial turf system. Submit a resume of experience for Architect's approval prior to starting work.

B. Rubber & Sand Filled Artificial Turf:

1. Factory-trained technicians skilled in the installation of athletic-caliber infilled synthetic turf systems will undertake the placement of the turf. Special brushing equipment and techniques will be used in the installation.

2. The designated installation crew shall have installed a minimum of 25 high quality, stadium grade rubber/sand filled synthetic turf systems of 45,000 square feet or greater in the past five years.

3. A notarized letter from the Field Builder that the installation crew and foreman are factory certified must be submitted prior to the start of turf installation.

C. The Field Builder shall meet the following criteria:
1. **Manufacturer/Field Builder's Experience:**

a. The Turf Manufacturer and the Field Builder must be experienced in the manufacturing and installation of this type of artificial turf system and provide project references of the synthetic grass system being installed at 25 similar exterior sites in the United States over the last 5 years, a minimum of 45,000 square feet each.

b. The Field Builder must have actively been in business – under its current name and ownership – for at least the past five years; and must have a minimum of 25 athletic fields still in use in the United States for a minimum of the past 5 years.

c. The Field Builder must provide competent workmen skilled in this type of artificial turf installation. The designated Supervisory personnel on the project must be certified, in writing, by the Field Builder as competent in the installation of this material, including gluing or sewing seams and proper installation of the infill mixture. The Field Builder shall have a qualified job foreman on site to certify the installation and warranty compliance.

D. Warranty:

1. The warranty coverage shall not be prorated nor place limits on the amount of the field's usage

2. The Field Builder shall submit its written company warranty: 8-year warranty (8-year plus 4-year supplemental warranty when installed over an approved pad), which warrants the usability and playability of the artificial turf system for its intended uses. A 3rd party insured 8-year warranty from an A-Rated domestic insurance carrier is required in addition to the Field Builder's warranty. Letters of credit in lieu of an insurance policy are no acceptable.

3. The Field Builder's warranty must have the following characteristics:

a. Provide full coverage for a minimum of eight (8) or twelve (12) years from the date of Substantial Completion.

b. Warrant materials and workmanship.

c. Warrant that the materials installed meet or exceed the system specifications.

d. Repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable and playable surface.

e. Be from a single source covering workmanship and all materials.

f. Assure the availability of exact or substantially the same replacement materials for the artificial turf system installed for the full warranty period.

g. Include general wear and damage caused from UV degradation. The warranty shall specifically exclude vandalism and acts of God beyond the control of the Turf Manufacturer or Field Builder.

h. Cover defects in the installation and workmanship. Assure the installation was done in accordance with both the Field Builder's recommendations and any written directives of the Field Builder's on-site representative.

i. Shall be limited to repair or replacement of the affected areas at the option of the Field Builder, and shall include all necessary materials, labor, transportation costs, etc. to complete said repairs.

j. The Field Builder may be required, upon the request of the Owner, to provide a list of ten (10) clients for which they have completed after-the-sale warranty work.

k. All designs, game markings and layouts shall conform to all currently applicable National Federation State High School Association or NCAA rules and regulations, or league specific requirements, depending on what applies.

l. All components and Field Builder’s installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified, shall withstand full climatic exposure in the location of the field, be resistant to insect infestation, rot, fungus and mildew; it shall also withstand ultra-violet rays and extreme heat, it shall allow the free flow of water horizontally to perimeter areas and vertically to the gravel blanket and into the field drainage system below the surface.

m. The adhesive bonded or sewn seams of all system components shall provide a permanent, tight, secure and hazard-free athletic playing surface. All inlaid markings (game lines, logos, etc.) shall remain in place throughout the duration of the warranty period.

n. The installed artificial turf system's drainage capability shall allow water flow through the system (turf & infill) at a rate of not less than 10 inches +/- per hour.

PART 2 – PRODUCTS

2.01 SYNTHETIC GRASS SYSTEM

A. Synthetic Grass – Titan DiamondBlade
Pile Weight: 52 oz/sy
Face Yarn Type: 100% polyethylene parallel-long slit fiber and monofilament blended in dual yarn types and dual yarn thicknesses
Yarn Size: Minimum 12,200 (parallel long slit film & monofilament fibers combined)
Yarn Thickness: Minimum 100 microns for parallel long slit film, 310 microns for monofilament fiber
Pile Height (Finished): 2.25”
Color: Field Green, Field Green / Lime Green (dual colors as alternating panels or blended fibers)
Construction: Broadloom tufted
Stitch Rate: 10/3"
Tufting Gauge: 1/2"
Primary Backing: ArmourLoc 3L™
Secondary Backing: 22 oz/sy urethane
Backing Weight: 7.5 oz/sq. yd minimum

Total Product Weight: 80 oz/sy (+/- 2 oz)
Finished Roll Width: 15’
Finished Roll Length: Up to 220’
Perforation (Outdoors): 3/16" holes on staggered 4" (approximate) centers
Turf Permeability: > 20" +/- per hour
Infill Composition: Ambiently ground SBR crumb rubber mixture and rounded or sub-angular, uniformly sized silica sand.

The carpet shall be delivered in 15-foot wide rolls with the four (4") inch white soccer mid and lines tufted into roll, when applicable. The perimeter white line shall also be tufted into the individual sideline rolls, when applicable. The rolls shall be of sufficient length to go from sideline to sideline. Head seams, between the sidelines, will not be acceptable.

As applicable, provide game markings as follows: soccer, football, flag football, field hockey, boys’ lacrosse, girls’ lacrosse, logos, letters, and related markings shall be cut in and glued or painted in accordance with design drawings.

Provide a school or owner logo as follows: Brewster Bears Logo and lettering provided by school.

A. Seaming Materials:

Adhesives for bonding tufted synthetic turf shall be two-component fast-set urethane adhesive obtained from a single manufacturer and be equivalent to Ultrabond Turf PU 2K as manufactured by Mapei Corporation, Deerfield Beach, FL (800) 992-6273, or one-part moisture-cured polyurethane obtained from a single manufacturer and be equivalent to 34-G as manufactured by Synthetic Surfaces, Inc., Scotch Plains, NJ (908) 233-6803, or approved equal as designated by the Field Builder.

1. Seaming Tape: Tape for securing seams in the tufted synthetic turf and inlaid lines shall be high quality tape made with a minimum roll width of 12 inches.

If seams are to be sewn, they must be sewn with high quality cord/thread as recommended by Field Builder.

B. Resilient Infill: A resilient infill system, consisting of a specially formulated mixture of approximately 3 lbs. per square foot of rubber and 3 lbs. per square foot of sand (a minimum of 6 lbs. per square foot) to provide the look, feel, footing and shock absorption of a natural grass field in ideal conditions.

1. Ambiently ground SBR Crumb Rubber. Granules shall contain minimal dust or contaminants and shall be derived from the ambient processing form of recycled tires. Color shall be substantially black and shall meet the 10 – 20 or 8 – 16 mesh size designation.

A. The clean, uniformly sized particles shall be consistent in shape and particle size distribution.

B. The particles shall resist abrasion in high traffic and excessive wear applications and provide stability to artificial sports turf applications.

C. The particles shall be processed and sized under rigid specifications and Manufacturers' statistical and quality control assurance program.

D. Particles shall be structurally pure and consistently uniform in size distribution for predictable performance.

2. Sand Particulate. The sand provided as a component of the infill mixture shall be rounded or sub-angular so as to minimize abrasion to the athlete and synthetic grass fibers. Bottom sand layer shall act as ballast and shall be clean, sub-angular silica sand. Must be a 20-40 sieve size and shall be delivered to site in Super Sacks – bulk sand delivery is not allowed.

D. **BASE BID:** Standard of Quality shall be A-Turf Titan DiamondBlade synthetic turf system as built by A-Turf, Inc. Acceptable alternate Filled Synthetic Turf Systems:

Manufacturer	**Product**	**Minimum Pile Weight**	**Contact Number**
TenCate/Greenfields	All Sport Ultra	52 oz./sq.yrd.	413-575-7993
Astroturf	Rhino Blend	52 oz./sq.yrd.	717-293-0670
FieldTurf	Vertex Core	52 oz./sq.yrd.	514-772-1744

Manufacturers for synthetic turf alternates shall meet or exceed the requirements listed in Part 2.01. If these submittal items are requested and deemed to be insufficient, the Field Builder will not be approved.

2.02 RESILIENT UNDERLAYMENT (PRE-MANUFACTURED RESLIENT SHOCKPAD)

A. The ShockPad shall be a porous composite (100% SBR particles bound with polyurethane) rubber pad (6010SP) in typical thickness of 10mm and shall have an infiltration rate of not less than 12 inches (12") per hour, a minimum recovery rate of 94% at 100 psi per ASTM F36 and a tensile strength of 44 psi per ASTM D412, Die C. Material shall be delivered in four foot (4') wide rolls with protective wrapping, and be of such continuous length to cover the width of the field allowing only one head seam per roll. Standard of quality shall be 6010SP resilient ShockPad as manufactured by ECORE International or Architect approved equal. Contact ECORE: 800-322-1923.

2.03 VERTICAL DRAINAGE BASE MATERIALS

B. Excavation: Existing natural grass field shall be excavated to the depth established by the Architect and as shown on the excavation plan. The sub grade shall be shaped to achieve a .5% (one half of one percent) slope from the center of the field to each sideline in order to mirror the grade of the finished synthetic turf surface. The sub grade shall also be compacted and proof rolled to a minimum of a 95% compaction rate.

C. Geotextile Filter Fabric: Non-woven polypropylene geotextile fabric shall be chemically and biologically inert and shall be Mirafi 140N, Mirafi Inc., Pendergrass, GA (888) 795-0808, or approved equal.

D. Drainage Pipe: A network of perforated HDPE highway grade drainage pipe (1" x 12" flat panel pipe) shall be installed under a free draining base aggregate. The drainage pipe will be installed every 15 feet on center and will be connected to perimeter collector lines as shown on drawings. ADS AdvanEdge, 800-821-6710 or approved equal.

C. Stone Base Courses. See Section 312013 "Earth Moving for Sitework," for preparation, compaction, and grading for granular base.

The following gradation of stone is a typical and recommended specification. The synthetic turf Base Contractor is required to focus on achieving the planarity, porosity and compaction requirements to provide a sound crushed stone base for synthetic turf installation.

1. The free-draining base aggregate base layer shall consist of a consistent depth of open graded material. Base drainage aggregate must be rolled and compacted to eliminate settling. Material shall conform to the AASHTO #57 limestone classification. An open graded aggregate material may be used if available. Subgrade must achieve 95% compaction level and pass a proof roll before placement of the drainage stone can commence.

¾" Gravel Base Aggregate (7" depth)

Sieve	Approximate Percentage Passing
1-1/2" Sieve	100%
1" Sieve	95-100%
1/2" Sieve	25-60%
#4 Sieve	0-10%
#8 Sieve	0-5%

¼" Finish Stone Layer (1" depth)

Sieve	Approximate Percentage Passing
1/2"	100%

3/8”	95-100%
#4	70-85%
#8	45-60%
#16	25-40%
#100	8-15%
#200	0-5%

It is critically important that the finish stone layer is not laser-graded at more than 1” depth. Layers deeper than 1” are susceptible to over-compaction and restriction of porosity, leading to drainage issues. Subject to architectural approval, local or regional stone specifications that meet compaction and porosity requirements are permitted.

Subject to architectural approval, local or regional stone specifications that meet compaction and porosity requirements are permitted.

PART 3 – EXECUTION

3.01 SUBMITTALS

A. Prior to ordering materials, submit a 3rd party insured warranty policy, a sample warranty, seam layout of field, striping plan and all details of construction that deviate from the plans and specifications.

B. See Specification Section 33 40 00 for perimeter drainage system.

3.02 EXAMINATION

A. Before any synthetic turf Before any synthetic turf is installed, Contractor shall have a licensed Surveyor prepare a final to stone course survey/plan with elevations at 10’ oc. The synthetic turf installer shall inspect the finished stone base and review the survey, and when satisfied with its condition, shall notify the Authority in writing of acceptance of the base. Submit a Certificate of Subbase Acceptance for the purpose of obtaining a complete manufacturer’s warranty for the finished playing surface. The Turf Manufacturer shall also provide a Certificate of Subbase Acceptance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. The surface to receive the synthetic turf shall be inspected and certified by the manufacturer as ready for the installation of the synthetic turf system and must be perfectly clean as installation commences and shall be maintained in that condition throughout the process. The final stone base surface shall be surveyed by the contractor by means of a laser level at a (10-foot grid).

D. The installation shall be performed in full compliance with approved shop drawings. Only factory-trained technicians skilled in the installation of athletic caliber synthetic turf systems, working under the direct supervision of the manufacturer’s supervisors, shall undertake the placement of the system. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer, as competent in the installation of this material, including sewing seams and proper installation of the infill mixture. The manufacturer shall certify the installation and warranty compliance. The surface to receive the synthetic turf shall be inspected and certified by the manufacturer as ready for the installation of the synthetic turf system and must be perfectly clean as installation commences and shall be maintained in that condition throughout the process.

3.03 VERTICALLY DRAINING BASE

B. The synthetic turf Base Contractor shall strictly adhere to the installation procedures outlined under this section. Any variance from these requirements must be accepted in writing, by the Field Builder's on-site

representative, and submitted to the Architect/Owner, verifying that the changes do not in any way affect the warranty.

C. Install geotextile fabric over excavated and prepared sub-grade in accordance Field Builder's recommendations. Provide a 36" minimum overlap at all seams. Fabric shall first be installed in the drainage trenches prior to installation of perimeter collector lines. After backfilling of all trenches is complete, the entire field shall be covered with fabric prior to the base aggregate application.

D. Trenching, Drainage Pipe Installation and Backfilling: All piping shall be as specified and connected by Field Builder's couplers, plugs etc.

1. The base grade shall be shaped to mirror the finished grade and approved by the Architect and/or Owner's Representative. The Base Contractor shall begin layout and trenching for the drainage network as indicated on the drainage plan and all details that apply. Collector lines shall be installed before lateral lines and shall begin with the deepest elevations. Collector lines shall be connected to discharge outlet at the onset of operations. Trenching progress shall work upward in elevation to allow for immediate discharge of water from the entire field in the event of a rainfall.
2. No trenches, with or without pipe, shall be permitted, to remain unfilled overnight and/or while crews are not progressively working on site.
3. All perimeter trenches must be dug in accordance with the field drainage plan details.
4. After all collector and lateral lines have been installed, the Base Contractor shall repair any sub grade undulations prior to installing geotextile fabric.

E. Concrete Header Curb and Pressure Treated Wood Turf Nailer: The synthetic turf perimeter fastening structure shall be installed before the drainage aggregate.

1. The 6" x 24" concrete header curb shall be installed in accordance with the Drawings and/or Shop Drawings and these Specifications. The foundation of the concrete header curb shall be a compacted free draining aggregate. Future water entering the foundation shall have a free draining path directly to the perimeter collector pipe.
2. Recycled plastic 2" x 4" nailer. Nailer shall be set 1.5 inches below top of the curb by means of a Tapcon or ramset every 12 inches. This shall be the responsibility of the Base Contractor. See synthetic turf at Brewster High School detail.

F. Base Drainage Aggregate: The installation of the base drainage aggregate shall only begin after the drainage pipe installation has been inspected and approved by Owner's Representative. Installation of the Free Draining Base Aggregate shall follow procedures that protect the base grade soils and drainage pipe. The drainage pipe network and its existing elevations shall not be disrupted through ground pressures from trucks, dozers or by any other means.

1. The base grade subsoil shall be dry before undertaking the placement of base aggregate.

2. Delivery trucks shall enter the field only from the designated entrance point. Base course stone shall be dumped closest to the entrance first and continuously worked towards the furthest point of the field. Extreme care must be taken not to disturb sub grade or drainage network.

3. Track-type dozers shall push out the stone from behind the pile onto and toward the field center. Dozers shall only traffic the aggregate they are spreading.

4. Bulldozer blades shall be equipped with a laser-guided hydraulic system. Care shall be taken not to disturb or contact the base grade soils with the dozer blades or tracks. All equipment trafficking over the drainage aggregate shall insure there is a minimum depth of 3" of aggregate between the geotextile fabric and the dozer track ground contact position.

5. When the aggregate spreading is completed, the surface shall be further-firmed by a 5-ton roller. Static vibration shall not be part of this process.

6. The stone shall be left firm, but not over-compacted as to protect the porosity and drainage capabilities of the aggregate profile.

7. After the drainage stone has been uniformly spread throughout the surface, the surface shall receive a final laser finished grade. This process shall be accomplished using a turf-type tractor, or lightweight grader, equipped with high flotation tires and a hydraulically controlled laser blade.

8. The free-draining base course must be installed and shall be independently tested for an overall compaction rate of 95% proctor.

G. Finish Stone Levels: The base drainage stone final elevations shall mirror the proposed finish stone layer final grade material. Care shall be taken not to allow the coarser aggregate to surface into the profile or finished grade of the finish stone layer.

1. It is critically important that the finish stone layer is not laser-graded at more than 1” depth. Layers deeper than 1” are susceptible to over-compaction and restriction of porosity, leading to drainage issues.

2. The finish stone layer shall be applied using high flotation grading equipment. The finish stone material shall be evenly spread throughout the proposed field surface to the final pre-pad or pre-turf elevations.

3. After the finish stone material has been uniformly spread throughout the surface by the described method, the surface shall receive a final laser finish grade. This process shall be accomplished using a turf-type tractor, or lightweight grader, equipped with high flotation tires and a hydraulically controlled laser blade.

4. Care shall be taken throughout the installation not to force the finish stone material into the porosity of the base aggregate below.

5. Final finish stone layer must be graded by means of a laser within 0 to 1/2 inch from design grade. The finished surface tolerance must not exceed ¼ inch over 10 feet in all directions. Base

Contractor must provide a topographical survey with a minimum of 200 shots demonstrating finished grade meets all written requirements.

6. Final layer of stone must be installed at a depth of 1 inch. Finished aggregate base must be proof-rolled by means of 2- to 5-ton roller. The finished aggregate base must achieve an overall compaction rate of 95% proctor in accordance with ASTM D1557. It shall also be flush with top of nailer.

7. The synthetic turf Base Contractor is required to stringline the entire field every five feet to identify high and low spots. And identified high and low spots must be eliminated prior to installation of the synthetic turf.

H. Base Acceptance: The Architect, Owner's Representative, and Turf Installer must jointly approve the base

I. Resilient ShockPad:

1. After the finish stone layer grades have been approved and inspected, the resilient ShockPad shall be installed from sideline to sideline.

    A. Equipment and personnel shall take extreme care to minimize disturbance of the stone base during ShockPad installation.

    B. All operations shall work from behind the rolled out ShockPad or from adjacent, pre-installed pad surface.

    C. One head seam shall be allowed per length. Head seams shall be staggered so as not to be within 10' of the previously installed roll.

    D. The head seam shall overlap approximately 4 inches on original roll out. Second and subsequent rolls shall be rolled out within 1 inch, or less, of the previous roll and allowed to expand or contract before manually sliding in place.

    E. After allowance for expansion or contraction, the padding shall slide into place so as to touch the edge or seam of the previous. Care shall be taken so as not to disturb the choker layer material when butting the seams together.

2. The Resilient ShockPad shall not receive a final cut or edging detail until the material has relaxed/expanded in direct sunlight for a minimum of six hours.

    A. No open seams shall exceed 1/4" (in expanded state) after final seam or end cutting is complete.

    B. Padding material shall stop just short of the exposed nailer board.

3. The Resilient ShockPad shall be inspected by the Field Builder after completion to insure the surface is smooth with only minor bumps from stone particles or other material protruding from underneath that will not show up once the turf is laid over top.

    A. Expansion bubbles and open seams shall be repaired prior to final inspection.

B. Repeat inspections shall be carried out prior to each roll of synthetic turf being installed.

J. Synthetic Turf and Infill Materials

1. After a final inspection of the Resilient ShockPad by the Field Builder and the Owner's Representative, the synthetic turf installation shall begin. The first roll shall begin with the longest perpendicular cross-field distance. No head seams shall be permitted in the inbound playing surface.

2. The rolls of turf shall be rolled out a minimum of four hours prior to starting seaming procedures and allowed to relax/expand.

A. All visible wrinkles shall be stretched out before seaming.

B. Seams shall be flat, tight and permanent with no separation or fraying.

C. Synthetic turf yarn fabric that is trapped or glued between seams shall be freed from the seams by hand or other approved method to an upright position prior to the commencement of brushing and top dressing procedures.

D. All synthetic turf seams shall be assembled as follows: The full width rolls shall be laid out across the field. Utilizing standard state of the art adhering or sewing procedures, each roll shall be attached to the next.

E. When all of the rolls of the playing surface have been installed, the sideline areas shall be installed perpendicular to the playing field. The yard lines, game markings, sidelines, etc. of all applicable sports shall be tufted into carpet by the manufacturer wherever possible.

3. After all seaming is completed and inlaid lines, logos and lettering have been installed; the infill materials shall be spread evenly, using a drop spreader or top dresser.

A. Crumb rubber and sand shall be applied in a uniform rate of multiple applications until the specified infill depth is achieved.

B. Infill material shall be brushed between infill applications with a motorized rotary broom and pull-type groomer brush simultaneously.

C. A minimum infill rate of 3 lbs. of rubber and 3 lbs. of sand per square foot is required.

K. Tufted and Inlaid Lines

1. Layout and descriptions of tufted, inlaid and/or painted lines shall be as indicated on final shop drawings.

2. Inlaid lines and field markings shall be cut in using seaming methods recommended by the Field Builder.

L. Synthetic Turf Perimeter Attachment:

1. After final trimming of the turf, the turf shall be screwed, nailed or stapled to the pressure treated wood nailer system as per the Field Builder’s recommendations.

3.04 FIELD LAYOUT

A. Game Line Layout: Designs, markings, layouts, and materials shall conform to all currently applicable National Collegiate Athletic Association rules, NFHS rules, and/or other rules or standards that may apply to this type of synthetic grass installation. Designs, markings and layouts shall first be approved by the Architect in the form of final shop drawings.

B. Game Line Installation: Dimensions of the field and locations for markings shall be measured by a registered surveyor to verify conformity to the specifications and applicable standards. A record of the finished field as-built measurements shall be made.

3.05 LINE MARKINGS

A. Line markings for game fields shall be installed as specified herein and in accordance with the Drawings and approved Shop Drawings.

B. Templates for numerals, arrows, and other markings shall be given to the Owner for future use.

3.06 CLOSEOUT

A. The Field Builder must verify that a qualified representative has inspected the installation and that the finished field surface conforms to the Field Builder's requirements.

B. The Field Builder shall provide a warranty to the Owner that covers defects in materials and workmanship of the turf for a period of 8 years from the date of Substantial Completion as described in 1.04 F. Submit three (3) copies of the warranty.

C. The company’s 8-year (8-year plus 4-year supplemental warranty when installed over an approved pad) warranty must also be supported by a 3rd party insured 8-year warranty from an A-rated domestic insurance carrier. Only true 3rd party policies will be accepted. Companies submitting policies that are actually letters of credit or not truly a 3rd party insurance policy will not be accepted. Submit three (3) copies of the actual insurance policy.

D. The Field Builder must submit three (3) copies of its standard maintenance manual to the owner.

E. Field Builder must train Owner's designated field personnel in proper grooming and care procedures. This includes training field personnel how to properly use grooming equipment as well as make minor repairs.

F. Extra materials: Field Builder must leave 500 lbs. of rubber granules and the equivalent of 15’ x 10' (all pieces combined) of turf with Owner before leaving job site. All salvageable pieces of colored turf used during the installation should be left with the Owner as well.

3.07 CLEAN UP

A. Field Builder shall provide the labor, supplies and equipment as necessary for final cleaning of surface and installed items.

B. All usable remnants of new material shall be neatly rolled up and turned over to the Owner at a place and area designated by the Owner.

C. During the contract and at intervals as directed by the Architect and as synthetic turf installation is completed, clear the site of all extraneous materials, rubbish, or debris and leave the site in a clean, safe, well draining, neat condition.

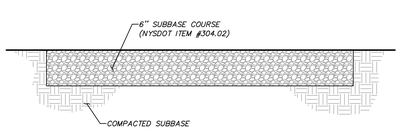
D. Surface, recesses, enclosures, etc. shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

3.08 G-MAX TESTING

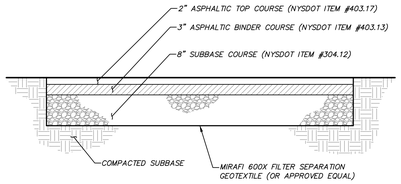
A. The Field Builder shall hire an independent testing laboratory to perform a G-max test (ASTM 355, 1936 method) to verify that the shock attenuation properties of the field meet the requirements set forth in this specification. Submit three (3) copies of the G-max test to the Owner.

B. At the time of substantial completion, the average G-max rating must not exceed 110 for a padded system and 135 for a non-padded system. The average G-max of a padded system must not exceed 145 and for a non-padded system 165 at any time during the life of the warranty. The Owner reserves the right to have the field tested for shock attenuation at its own cost at anytime it deems necessary. If at anytime the G-max ranges reach unacceptable levels, it is the responsibility of the Field Builder to bring the field back into the required ranges at no cost to the Owner.

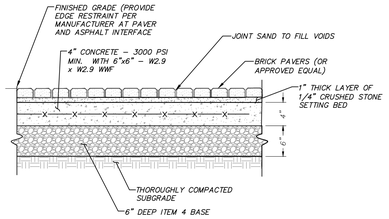
END OF SECTION 32 1822



GRAVEL ACCESS DRIVE DETAIL
(N.T.S.)

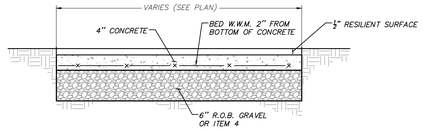


ASPHALT ROADWAY PAVEMENT DETAIL
(N.T.S.)

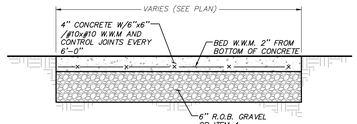


NOTES:
1. PAVERS TO BE SALVAGED MEMORIAL BRICKS SET IN RUNNING BOND PATTERN.
3. NEW BRICK SURROUND COLOR TO MATCH SALVAGED BRICKS.
2. JOINT SAND COLOR TO BE COORDINATED WITH BRICK COLOR.
3. UTILIZE UNILOCK EDGE RESTRAINT BETWEEN THE BRICK BAND ASPHALT AS PER MANUFACTURER'S STANDARDS.

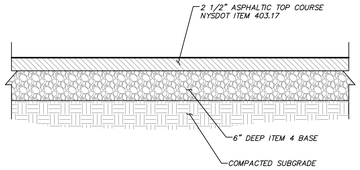
BRICK PAVERS DETAIL
(N.T.S.)



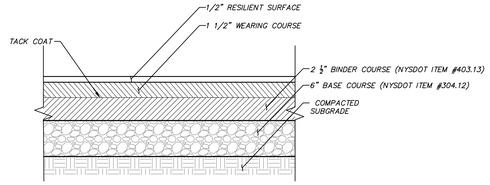
STEEPLECHASE PIT SURFACE DETAIL
(N.T.S.)



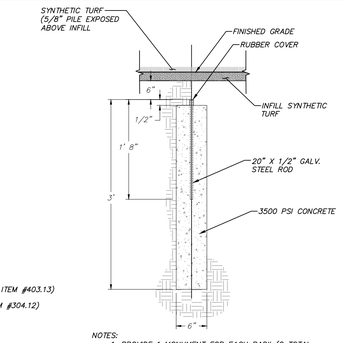
CONCRETE SIDEWALK DETAIL
(N.T.S.)



ASPHALT SIDEWALK
(N.T.S.)

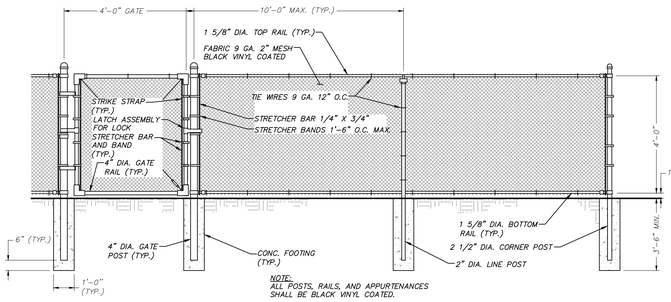


RESILIENT SURFACE OVER ASPHALT PAVEMENT
(N.T.S.)



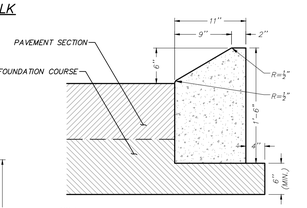
NOTES:
1. PROVIDE 1 MONUMENT FOR EACH RADII (2 TOTAL, SEE LAYOUT PLAN)
2. ALL REBAR TO BE EPOXY COATED (TYP)

MEASURING MONUMENT (TRACK RADII)
(N.T.S.)



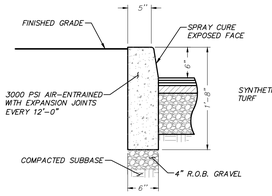
NOTE:
ALL POSTS, RAILS, AND APPURTENANCES SHALL BE BLACK VINYL COATED.

CHAIN LINK FENCE DETAIL
(N.T.S.)

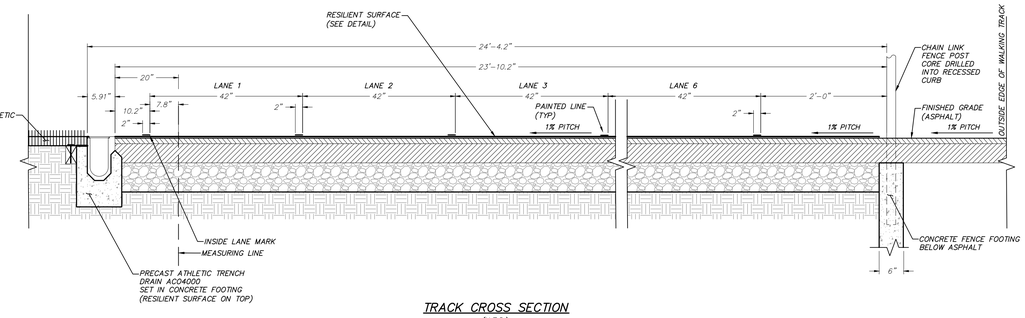


NOTE:
TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 10'-0" APART AND SHALL BE FILLED WITH CELLULAR COMPRESSION MATERIALS AS SPECIFIED, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

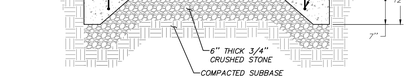
MOUNTABLE CONCRETE CURB DETAIL
(N.T.S.)



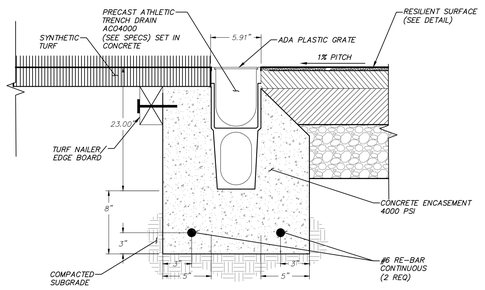
CONCRETE CURB DETAIL
(N.T.S.)



TRACK CROSS SECTION
(N.T.S.)



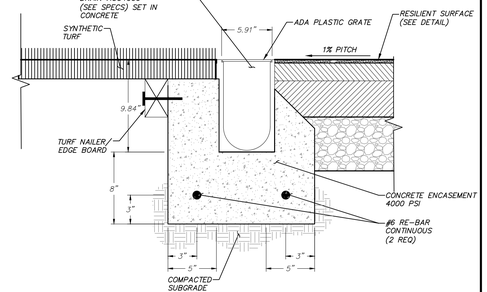
CONCRETE PAD DETAIL
(N.T.S.)



NOTES: TURF NAILER / EDGE BOARD

NOTES: GENERAL
1. ALL RE-BAR TO BE EPOXY COATED (TYP).
2. INFILL TO ALIGN WITH TRACK/SLOT DRAIN SURFACE.
3. TURF NAILER SHALL BE 2" X 4", 100% HIGH DENSITY POLYETHYLENE WITH FIBERGLASS REINFORCEMENT.
4. TAPCON OR RAMSET NAILER TO CONCRETE CURBS EVERY 24" O.C.
5. TURF SHALL BE STAPLED OR FASTENED EVERY 8" O.C. TO NAILER, TO MANUFACTURER STANDARDS

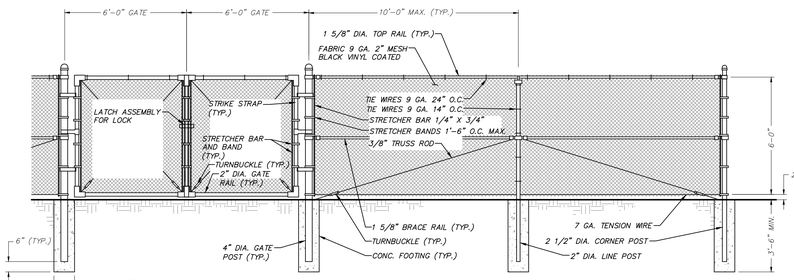
TRACK ATHLETIC TRENCH DRAIN CATCH BASIN
(N.T.S.)



NOTES: TURF NAILER / EDGE BOARD

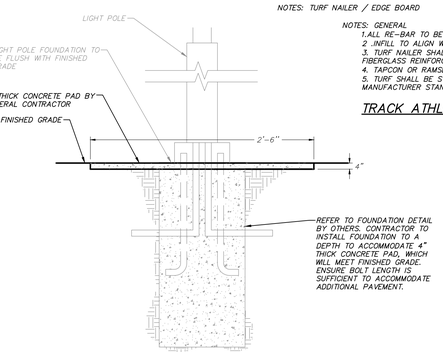
NOTES: GENERAL
1. ALL RE-BAR TO BE EPOXY COATED (TYP).
2. INFILL TO ALIGN WITH TRACK/SLOT DRAIN SURFACE.
3. TURF NAILER SHALL BE 2" X 4", 100% HIGH DENSITY POLYETHYLENE WITH FIBERGLASS REINFORCEMENT.
4. TAPCON OR RAMSET NAILER TO CONCRETE CURBS EVERY 24" O.C.
5. TURF SHALL BE STAPLED OR FASTENED EVERY 8" O.C. TO NAILER, TO MANUFACTURER STANDARDS

TURF AT EDGE OF TRACK ATHLETIC TRENCH DRAIN
(N.T.S.)



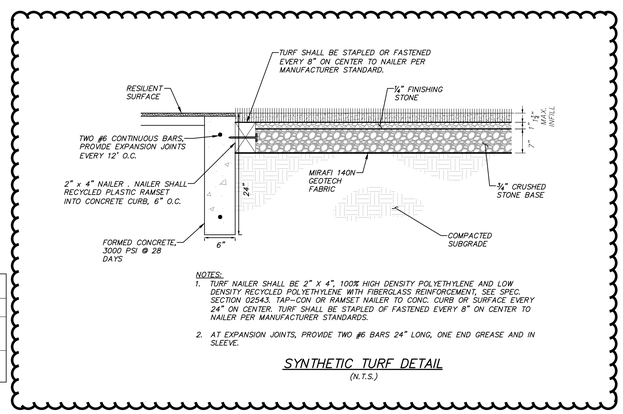
NOTE:
ALL POSTS, RAILS, AND APPURTENANCES SHALL BE BLACK VINYL COATED.

6' TALL CHAIN LINK FENCE DETAIL
(N.T.S.)



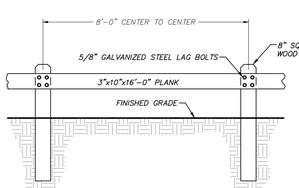
NOTES:
1. GENERAL CONTRACTOR TO CONSTRUCT 4" THICK CONCRETE PAD AT LIGHT POLE LOCATIONS.
2. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE CONTRACTOR WHO WILL BE INSTALLING THE LIGHTING STANDARD PRIOR TO INSTALLATION OF THE FOUNDATIONS.

TRACK LIGHT CONCRETE PAD
(N.T.S.)

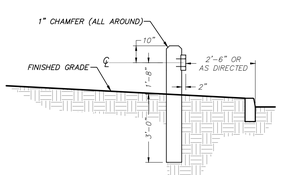


NOTES:
1. TURF NAILER SHALL BE 2" X 4", 100% HIGH DENSITY POLYETHYLENE AND LOW DENSITY RECYCLED POLYETHYLENE WITH FIBERGLASS REINFORCEMENT, SEE SPEC. SECTION 02543. TAP-CON OR RAMSET NAILER TO CONC. CURB OR SURFACE EVERY 24" ON CENTER. TURF SHALL BE STAPLED OF FASTENED EVERY 8" ON CENTER TO NAILER PER MANUFACTURER STANDARDS.
2. AT EXPANSION JOINTS, PROVIDE TWO #6 BARS 24" LONG, ONE END GREASE AND IN SLEEVE.

SYNTHETIC TURF DETAIL
(N.T.S.)



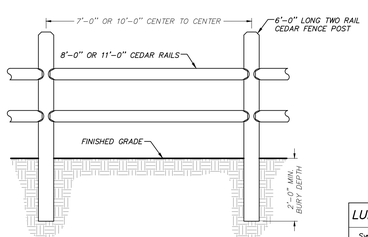
ELEVATION



SECTION

NOTES:
1. ALL WOOD TO BE SEASONED NO.1 DOUGLAS FIR, SOUTHERN YELLOW PINE OR OTHER APPROVED STRUCTURAL LUMBER.
2. ALL WOOD TO BE TREATED WITH AN APPROVED WOOD PRESERVATIVE SUITABLE FOR INSTALLATION IN AND ADJACENT TO GROUND SURFACES.

WOOD GUIDERAIL DETAIL
(N.T.S.)



POST AND RAIL FENCE DETAIL
(N.T.S.)

LUMINAIRE SCHEDULE

Sym	Qty	Catalog Number	Description	Lamp	Mounting Height	Watts
■	38	(VF1-L20-750-HF-CU-FVS-VFICS-GREEN)*	VF1 LED VOLTAIRE ARCHITECTURAL FLOODLIGHT – SMALL TRACK LIGHT	LED	10'-6"±	19
▼	3	DSXO LED P1 30K T3M MVOLT	LITHONIA LIGHTING – DSXO LED 3000K TYPE 3 LED	LED	18'-0"	38.0

ENGINEERING AND SURVEYING BY:
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-4690
(845) 225-8977 fax
www.insite-ny.com
INSITE PROJECT#: 23149.100

FULLER D'ANGELO P.C.
ARCHITECTS PLANNERS
48 KNOLLWOOD ROAD ELMSFORD NEW YORK 10523
TEL: 914.592.2444 FAX: 914.592.1717
www.fullerdangelo.com

LICENSE EXP. DATE: 07-31-2026
CERT. NO: 2438573

S.E.D. CONTROL NUMBER:
BREWSTER HIGH SCHOOL
48-06-01-06-0-004-018

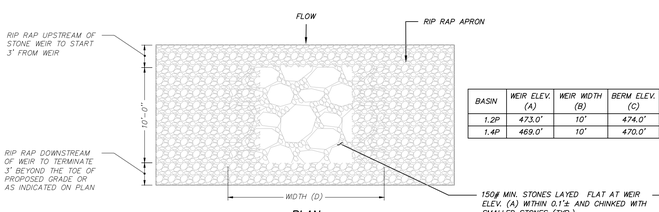
PROJECT TITLE:
BREWSTER CENTRAL SCHOOL DISTRICT
BREWSTER H.S. & ADMINISTRATION BUILDING
SELECTIVE DEMOLITION, NEW ATHLETIC FIELD & SAFETY IMPROVEMENTS
50 FOGGINTOWN ROAD BREWSTER, NY 10509

DRAWING TITLE:
ATHLETIC FIELD, TRACK, AND PARKING AT BREWSTER HIGH SCHOOL
DETAILS

04-23-2024	BID
10-25-2023	NYCDEP SUBMISSION
10-02-2023	CD SUBMISSION
06-20-2023	SD SUBMISSION
06-13-2023	SD SUBMISSION
DATE	ISSUED TO

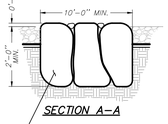
SHEET SIZE: 30"x42"
DRAWING NO.: BHS C701
SCALE: AS SHOWN
DRAWN BY: MEU
FILE NO.: 23505.01

PLOT DATE: April 26, 2024 - 4:18pm
Z:\E\23149100 F&D Brewster CSD\CADD Package 1\BHS C701.dwg 4/26/2024 4:18:40 PM, archieribeiro.11
FILE: Z:\E\23149100 F&D Brewster CSD\CADD Package 1\BHS C701.dwg

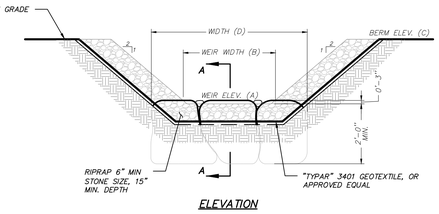


BASIN	WEIR ELEV. (A)	WEIR WIDTH (B)	BERM ELEV. (C)	WIDTH (D)
1.2P	473.0'	10'	474.0'	15'
1.4P	469.0'	10'	470.0'	15'

PLAN

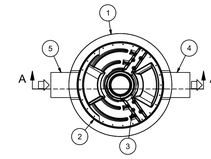


SECTION A–A

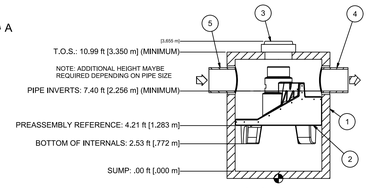


ELEVATION

STONE AUXILIARY SPILLWAY DETAIL
(N.T.S.)



PLAN VIEW



SECTION A-A

HYDRO FRAME AND COVER (INCLUDED)
GRADE RINGS BY OTHERS AS REQUIRED

PRODUCT SPECIFICATION:

1. PEAK HYDRAULIC FLOW: 50.0 cfs (1415 l/s)
2. MIN SEDIMENT STORAGE CAPACITY: 2.8 cu. yd. (2.1 cu. m.)
3. MAXIMUM INLET/OUTLET PIPE DIAMETERS: 48 in. (1200 mm)
4. THE TREATMENT SYSTEM SHALL USE AN INDUCED VORTEX TO SEPARATE POLLUTANTS FROM STORMWATER RUNOFF.
5. FOR MORE PRODUCT INFORMATION INCLUDING REGULATORY ACCEPTANCES, PLEASE VISIT https://hydro-int.com/en/products/first-defense

GENERAL NOTES:

1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 48".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s)
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.
3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

PARTS LIST				
ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	96	2400	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	48 (MAX)	1200 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	48 (MAX)	1200 (MAX)	INLET PIPE (BY OTHERS)

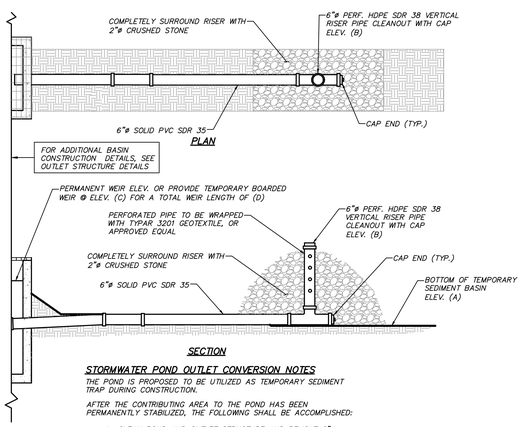
FIRST DEFENSE OPTIMUM HYDRODYNAMIC SEPARATOR FDO–8 (HDS 1.1P)
(N.T.S.)

PERMANENT STORMWATER FACILITIES MAINTENANCE SCHEDULE

PRACTICE/FACILITY	MONTHLY	AFTER MAJOR STORM EVENTS	BI–ANNUALLY	YEARLY	EVERY 5 to 10 YEARS
GRASS & RIP RAP SWALES	Ensure contributing areas clean of debris, no evidence of erosion, & mowing performed.	Inspect for erosion, soil permeability & evidence of flow going around structures.	–	Inspect & clean accumulated sediment.	–
INFILTRATION BASIN	Inspect first few months after construction for eroding soils & slumpage & repair immediately	Inspect for eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately.	Mow berms and exterior embankments Remove debris & litter from basins & outlet structures. Remove Sediment if accumulated greater than an 1"	–	Inspect for & remove accumulated sediment
WATER QUALITY SWALES	Inspect first few months after construction for eroding soils & slumpage & repair immediately	–	Inspect & clean Mow & remove debris & litter. Revegetate as needed.	–	Inspect for & remove accumulated sediment
INFILTRATION UNITS	–	Confirm infiltrators dewater within 40 hours	Inspect & clean	Inspect outlet structures & remove accumulated sediment.	Clean isolator row per manufactures recommendations
SUBSURFACE STORMWATER COLLECTION SYSTEMS	–	–	Inspect & clean	Inspect, clean, repair and/or replace structures. Remove debris.	–
STORMWATER BASIN	Inspect first few months after construction for eroding soils & slumpage & repair immediately	Inspect orifices, inlets & outlets for clogging, eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately.	Mow berm and exterior embankments Remove debris & litter from basin & outlet structures	–	Inspect for & remove accumulated sediment
DEEP SUMP CATCH BASINS	–	–	Inspect for damage to frame and grate, and pipe inlets/outlets. Clean accumulated sediment in sump.	–	–
GRASS SWALES	Inspect first few months after construction for eroding soils & slumpage & repair immediately	–	Inspect & clean Mow & remove debris & litter. Revegetate as needed.	–	Inspect for & remove accumulated sediment
INFILTRATION BASINS, SEDIMENTATION BASIN, BIORETENTION AREAS	Inspect first few months after construction for eroding soils & slumpage & repair immediately	Inspect orifices, inlets & outlets for clogging, eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately.	Mow berms and exterior embankments Remove debris & litter from basins & outlet structures. Remove Sediment if accumulated greater than an 1"	–	Inspect for & remove accumulated sediment

Note: The party responsible for implementation of the maintenance schedule during and after construction is:

BREWSTER CENTRAL SCHOOL DISTRICT
50 FOGGINTOWN ROAD
BREWSTER, NY 10509



PLAN

SECTION

STORMWATER POND OUTLET CONVERSION NOTES

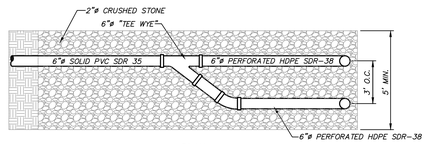
THE POND IS PROPOSED TO BE UTILIZED AS TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION.

AFTER THE CONTRIBUTING AREA TO THE POND HAS BEEN PERMANENTLY STABILIZED, THE FOLLOWING SHALL BE ACCOMPLISHED:

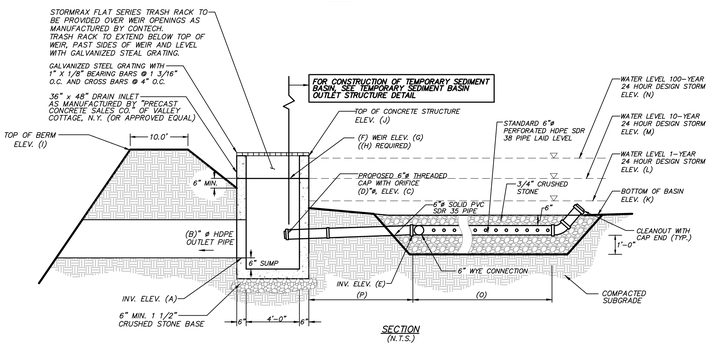
A. CLEAN POND AND OUTLET STRUCTURE AND REMOVE 6"ø PERFORATED VERTICAL RISER PIPE, CRUSHED STONE AND FILTER FABRIC.
B. ADD THREADED CAP WITH ORIFICE AT DISCHARGE END OF 6"ø SOLID PVC SDR 35 PIPES PER DETAIL.
C. ESTABLISH THE FINAL VEGETATION AND ELEVATIONS IN THE POND.

STORMWATER MANAGMENT PRACTICE	CONTRIBUTING AREA (AC)	DISTURBED AREAS WITHIN CONTRIBUTING AREA (AC)	STORAGE VOLUME REQUIRED (SEDIMENT STORAGE ZONE + DEWATERING ZONE)	STORAGE VOLUME PROVIDED BELOW WEIR (CY)	BOTTOM OF TEMPORARY BASIN ELEVATION (A)	CLEANOUT ELEVATION (B)	WEIR ELEVATION (PERMANENT OR BOARDED) (C)	TEMPORARY WEIR LENGTH (D)
1.3	10.1	7.5	43,860	44,916	464.0	470.5	469.6	13'

TEMPORARY SEDIMENT BASIN OUTLET DETAIL
(N.T.S.)



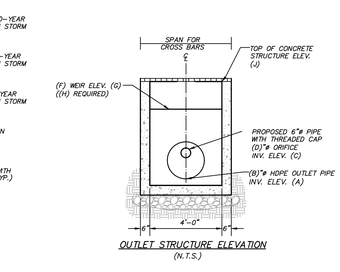
PLAN



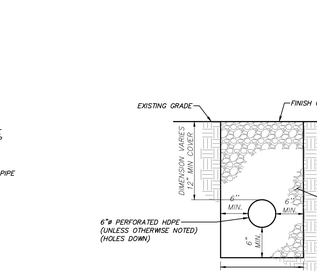
SECTION

STORMWATER MANAGMENT PRACTICE	OUTLET PIPE ELEVATION (A)	OUTLET PIPE DIAMETER ø" (B)	ORIFICE INVERT ELEV. (C)	ORIFICE DIAMETER ø" (D)	LOW FLOW INVERT ELEV. (E)	WEIR LENGTH (ft.)(each) (F)	WEIR ELEVATION (G)	NUMBER OF WEIRS REQUIRED (H)	TOP OF BERM ELEVATION (I)	TOP OF OUTLET STRUCTURE ELEVATION (J)	BOTTOM OF BASIN ELEVATION (K)	1–YEAR 24 HOUR DESIGN STORM ELEVATION (L)	10–YEAR 24 HOUR DESIGN STORM ELEVATION (M)	100–YEAR 24 HOUR DESIGN STORM ELEVATION (N)	LENGTH OF PERFORATED UNDER DRAIN (O)	LENGTH OF SOLID UNDER DRAIN (P)
1.3P	463.0	30"	463.0	6"	463.0	0.7'	464.5	1	470.6	469.6	464.0	463.5	466.2	469.4	120'–0"	10'–0"

PERMANENT EXTENDED DETENTION DRY STORMWATER BASIN OUTLET STRUCTURE DETAIL
(N.T.S.)



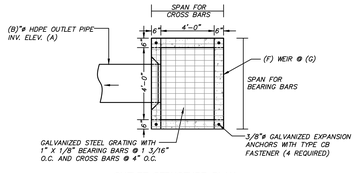
PLAN



ELEVATION

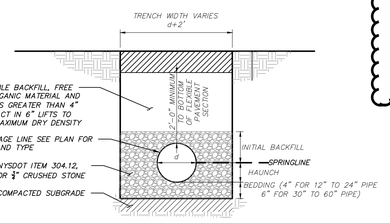
STORMWATER MANAGMENT PRACTICE	OUTLET PIPE ELEVATION (A)	OUTLET PIPE DIAMETER ø" (B)	UNDER DRAIN INVERT ELEV. (C)	WEIR LENGTH (ft.)(each) (D)	WEIR ELEVATION (E)	NUMBER OF WEIRS REQUIRED (F)	TOP OF BERM ELEVATION (G)	TOP OF OUTLET STRUCTURE ELEVATION (H)	BOTTOM OF BASIN ELEVATION (I)
1.2P	465.0	24"	465.0	4'	472.3	1	474.0	473.0	466.0

INFILTRATION BASIN OUTLET STRUCTURE DETAIL
(N.T.S.)



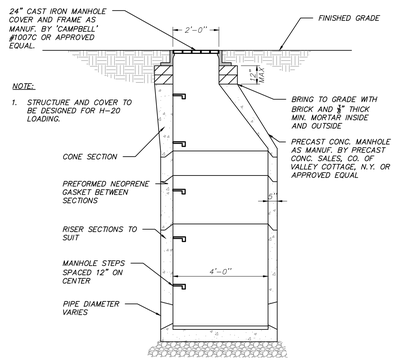
OUTLET STRUCTURE PLAN
(N.T.S.)

OUTLET STRUCTURE ELEVATION
(N.T.S.)

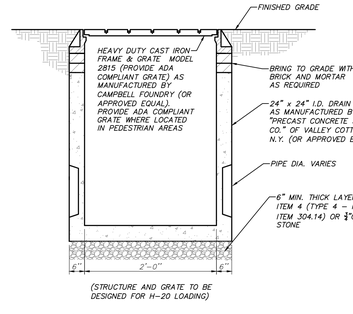


DRAINAGE LINE TRENCH DETAIL
(N.T.S.)

UNDERDRAIN DETAIL
(N.T.S.)



DRAINAGE MANHOLE DETAIL
(N.T.S.)



24" x 24" YARD DRAIN DETAIL
(N.T.S.)

ENGINEERING AND SURVEYING BY:
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LICENSE EXP. DATE: 07-31-2026
CERT. NO: 2438573

S.E.D. CONTROL NUMBER:
BREWSTER HIGH SCHOOL
48-06-01-06-0-004-018

PROJECT TITLE
BREWSTER CENTRAL SCHOOL DISTRICT
BREWSTER H.S. & ADMINISTRATION BUILDING RENOVATIONS/ADDITIONS/ATHLETIC FIELD & RELATED WORK
50 FOGGINTOWN ROAD BREWSTER, NY 10509

DRAWING TITLE
ATHLETIC FIELD, TRACK, AND PARKING AT BREWSTER HIGH SCHOOL
DETAILS

DATE	ISSUED TO
04-23-2024	BID
10-25-2023	NYCDEP SUBMISSION
10-02-2023	CD SUBMISSION
06-20-2023	SD SUBMISSION
06-13-2023	SD SUBMISSION

SHEET SIZE 30"x42"
DRAWING NO. BHS C707
SCALE AS SHOWN
DRAWN BY MEU
FILE NO. 23505.01

PLOT DATE: April 26, 2024 - 4:13pm
Z:\E\23149100 F&D Brewster CSD\CADD Package 1\BHS C701.dwg, 4/26/2024 4:13:23 PM, architecture 1:1
FILE: Z:\E\23149100 F&D Brewster CSD\CADD Package 1\BHS C701.dwg