



**TOWN OF STRATFORD
PURCHASING DEPARTMENT
STRATFORD, CONNECTICUT**

BID No. 2009-058

Issued : July 20, 2009

Subject : Nichols Elementary School Gym Floor Replacement

The Town of Stratford through the Office of the Purchasing Agent, will receive SEALED BIDS for furnishing the equipment described in the accompanying specifications, in accordance with the instructions, conditions and reservations that follow:

A. CLOSING DATE:

Bids will be received until 3:00 pm July 30, 2009, at which time they will be publicly opened and read. All bidders are invited to attend this public opening, which will be held immediately following the closing time specified above, in the Office of the Purchasing Agent, Room 202, Town Hall, 2725 Main Street, Stratford, CT 06615.

Any bid may be withdrawn prior to the above-scheduled time for receiving bids or authorized postponement thereof. Any bids received after the date and time specified shall NOT be considered. No bidder may withdraw a bid within 45 days after the actual opening thereof.

B. INSTRUCTIONS:

All proposals must be addressed to the attention of the Purchasing Agent, in a sealed envelope with bid subject and number on the face thereof. Proposals may be mailed or submitted in person. FAXED PROPOSALS ARE NOT ACCEPTED.

THE PROJECT MUST BE COMPLETED NO LATER THAN AUGUST 20, 2009.

C. CONDITIONS:

Bidders must state specifically what equipment they propose to supply, giving manufacturer's name, model number, etc. A detailed description should accompany your bid. Any exceptions to Town Specifications should be listed in your bid response.

Bid Surety:

A Certified Check, Cashier's Check or Bid Bond in the amount of \$ 7,500.00 must accompany each proposal, made payable to the Town of Stratford. No bid will be considered without this surety. Upon award or rejection of the bid, all Certified Checks or Cashier's Checks received in lieu of Bid Bonds will be returned to the bidders.

Performance Bond

The successful bidder to whom the contract is awarded must furnish the Town with a Performance Bond in the amount of 100% of the contract price. This bond is to be in effect for the duration of the contract, and to be made in favor of the Town of Stratford, and executed by a Surety Company authorized to transact business within the State of Connecticut, conditioned for the full and faithful performance and observance by the Contractor of all the conditions and terms of the contract.

Insurance

A. General Liability

Occurrence limit \$1,000,000; aggregate limit \$2,000,000. The insurance carried by the proposer shall be on form CG 00 01, or equivalent. The Town of Stratford shall be named as an additional insured on the contractor's General Liability Insurance Policy with form CG 20 10 or CG 20 33, *and* CG 20 37.

B. Automobile Liability

Combined single limit of \$1,000,000. Comprehensive automobile policy to cover all owned, hired or non-owned automobiles or vehicles.

C. Workers Compensation

The proposer must have workers' compensation and employers liability insurance as required by Connecticut and federal law, plus employers liability limits of \$1,000,000 per accident, 1,000,000 disease each employee and \$1,000,000 disease policy limit.

D. Umbrella Liability

The proposer shall have a minimum coverage of \$3,000,000 excess umbrella coverage, naming the Town as additional insured.

The proposer shall procure and pay for the insurance coverage described above and must maintain the indicated insurance for a period of two (2) years after completion of the contract. All policies shall provide for thirty (30) days written notice prior to cancellation, substantial change or nonrenewal. The successful bidder must file the required Performance Bond and an Insurance Certificate within two weeks of the date of notification of award. Failure or neglect to do so may be considered by the Town as proof that the proposer is unable to fulfill the contract. A current insurance certificate and a copy of the endorsement or policy wording adding the Town as Additional Insured must be in the Town's possession at all times. In addition, the selected firm shall require its subcontractors, if any, to meet the same insurance requirements and to furnish the Town with similar evidence of insurance.

In addition, the proposer shall, at all times, save, indemnify and hold harmless the Town of Stratford, its officers, agents, employees and servants from liability of any nature or kind, including costs and expenses for or on account of, any patented or copyrighted equipment, materials, articles, or processes used in the performance of this contract, or on account of any and all claims, damages, losses, litigation expense and counsel fees arising out of loss or injuries (including death) sustained by or alleged to have been sustained by the public or any persons affected by the proposer's work, or by the proposer or any subcontractor, or anyone directly or indirectly employed by them while engaged in the performance of their duties in connection with this contract.

The following information should also be covered in your bid:

Payment: Final payment will be made upon the acceptance of the completed work by an authorized representative of the Town of Stratford. NO partial payments will be made. Invoices covering the work specified herein should be forwarded to the Purchasing Department upon completion of the project.

Delivery: Please state as accurately as possible how long it will take to complete delivery after receipt of order, if you are the successful bidder.

Warranty: All proposals must state the exact nature and duration of any warranty applicable to the equipment you propose to sell to the Town.

Taxes: The Town of Stratford is exempt from all State and Federal taxes. Do not include these amounts in your quotation.

Terms: All quotations must be F.O.B. Stratford, Conn., to the department indicated.

Bid Award: The bid award will be determined by a combination of price, references and equipment proposed.

D. RESERVATIONS:

The Town of Stratford may consider informal any proposal not prepared and submitted to the Town in accordance with the provisions herein stated. The Town of Stratford reserves the right to reject any or all proposals or parts of proposals; to waive defects in same proposals; or to accept any proposal or part thereof deemed to be in the best interests of the Town of Stratford.

Michael Bonnar, Purchasing Agent

For additional information or a site visit, contact Bob Sweger at 203-385-4216.

SPECIFICATIONS: See next page.

**PROJECT MANUAL
BID #2009-058**

STATE PROJECT # TMP-138-CCZS

**NICHOLS ELEMENTARY SCHOOL
GYMNASIUM FLOORING
REPLACEMENT
396 Nichols Avenue
Stratford, Connecticut**

Stratford Public Schools

**PREISS/BREISMEISTER ARCHITECTS
39 Wall Street, Norwalk, Connecticut 06850**

June 2, 2009

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Town of Stratford
BID #2009-058
BID FORM

**PROJECT: STATE PROJECT # TMP-138-CCZS
STRATFORD PUBLIC SCHOOLS
NICHOLS ELEMENTARY SCHOOL
GYMNASIUM FLOOR REPLACEMENT
STRATFORD, CT**

PLEASE NOTE THAT BID DRAWINGS ALSO REFER IN PART TO LORDSHIP AND FRANKLIN ELEMENTARY SCHOOLS. PLEASE DISREGARD INFORMATION RELATED TO THESE SCHOOLS. ALSO DISREGARD WORK IN OTHER AREAS OF THE NICHOLS ELEMENTARY SCHOOL. THIS BID IS FOR THE NICHOLS SCHOOL GYMNASIUM FLOOR REPLACEMENT ONLY.

BID PRICES:

The undersigned, having familiarized (himself, itself, themselves) with the existing conditions on the Project Site affecting the cost of the work, and with the Contract Documents for the **Nichols Elementary School Gymnasium Floor Replacement** located at 396 Nichols Avenue, Stratford, CT, hereby proposes to furnish all supervision, technical personnel, labor, materials, equipment, tools, appurtenances, services (including utility and transportation services required to perform and complete this Contract), all in accordance with the Contract Documents for the total fixed sum (BASE BID) specified in the schedule of prices which follows, increased or decreased in a manner as provided for in the contract:

NICHOLS ELEMENTARY SCHOOL GYMNASIUM FLOOR REPLACEMENT

----- Dollars (\$))
BASE BID

SLAB SEALER (Required if moisture content of slab is above acceptable levels)

----- Dollars (\$))
ADD ALTERNATE NUMBER ONE

SUBCONTRACTORS:

The bidder proposes to use the following subcontractors:

Subcontractor	Portion of Work
-----	-----
-----	-----
-----	-----

SIGNATURES:

The undersigned has carefully checked all the above figures and understands that the Owner shall not be responsible for any errors or omissions on the part of the undersigned in making up this Bid.

The undersigned acknowledges receipt of Addenda Numbers _____

The undersigned acknowledges that submission of a bid obligates Bidder to hold his bid price for 180 days.

THIS PROJECT MUST BE COMPLETED BY AUGUST 20, 2009.

Days to complete project once bid is awarded? _____ days

Company Name: _____

The Principal(s) of the Bidder (is) (are)

NAME/TITLE

SIGNATURE

SOCIAL SECURITY NUMBER

ADDRESS

PART 1 – GENERAL

1.01 SUMMARY

- A. Project Identification: Nichols Elementary School
Gymnasium Flooring Replacement
396 Nichols Avenue
Stratford, CT
- B. Project Summary and Scope of Work shall include but shall not be limited to:
1. Removal of existing sports flooring as per the construction documents.
 2. Grinding and/or shot blasting of concrete floors to achieve flatness as per Specifications.
 3. Repair of continuous crack in Gymnasium concrete slab as per construction documents. 15 mil vapor barrier is required under all new concrete
 4. Preparation of concrete floors to receive new flooring. This work includes provision of a pourable underlayment as per the construction documents. Provide add alternate price for underlayment containing moisture sealer if concrete floors fail moisture test. See Bid Form.
 5. Undercutting of doors where necessary to adequately clear new floor surface.
 6. Protection of all surfaces from dust caused by shot blasting. See Demolition specification for required procedures.
 7. Provision of new flooring and base as per construction documents.
 8. Removal and reinstallation of floor mounted hardware.
 9. Painting of game lines as per construction documents.
 10. Repair and replacement of all interior and exterior items damaged by the work. It is up to the contractor to inspect the field conditions prior to submitting a bid.
 11. Moving of furniture and equipment is not included in the scope of work.
 12. Asbestos containing materials are not present in the existing flooring and mastic.
 13. Bidder to hold his prices for 180 days.
 - a. All work under this contract shall be warranted for a period of (2) two years from substantial completion, in addition to warranties required under specific conditions of this Specification.
- C. Permits and Fees: Apply for, obtain, and pay for permits, fees, and utility company back charges required performing the work. Submit copies to Owner.
- D. Codes: Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices and similar communications to Owner.
- E. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.
- F. Construction Conditions: Notify owner of conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.
- G. Coordination: Coordinate the work of all trades.

H. Installation Requirements, General:

1. Inspect substrates and report unsatisfactory conditions in writing.
2. Do not proceed until unsatisfactory conditions have been corrected.
3. Take field measurements prior to fabrication where practical. Form to required shapes and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.
4. Install materials in exact accordance with manufacturer's instructions and approved submittals.
5. Install materials in proper relation with adjacent construction and with proper appearance.
6. Restore units damaged during installation. Replace units, which cannot be restored at no additional expense to the Owner.
7. Refer to additional installation requirements and tolerances specified under individual specification sections.

I. Definitions:

1. **Provide: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.**
2. **Approved:** Acceptance of item submitted for approval. Not a limitation or release for compliance with the Contract Documents or regulatory requirements. Refer to limitations of 'Approved' in General and Supplementary Conditions.
3. **Match Existing:** Match existing as acceptable to the Owner.

J. **Intent:** Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the owner. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.

K. **Writing style:** Specifications are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, 'Provide tile' means 'Contractor shall provide tile.'

PART 2 – PRODUCTS – Not Applicable To This Section

PART 3 – EXECUTION – Not applicable To This Section

PART 1 - GENERAL

1.01 SUMMARY

- A. Selective Demolition
 1. Selective demolition of existing flooring, mastic, base, and systems and building components designated to be removed in the contract documents.
 2. Protection of portions of building adjacent to or affected by selective demolition.
 3. Notification to Owner of schedule of shut-off of utilities.
 4. Pollution control, including noise and dust, during selective demolition.
 5. Removal and legal disposal of materials.
- B. Asbestos and hazardous materials demolition or removal work is not part of this contract.

1.02 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Use experienced workers.

1.03 PROJECT CONDITIONS

- A. School must remain operational at all times.

PART 2 - PRODUCTS - Not Applicable To This Section

PART 3 - EXECUTION

3.01 DEMOLITION

- A. Do not damage building elements and improvements indicated to remain. Items of salvage value shall be removed from building. Storage or sale of items at project is not acceptable.
- B. Do not interrupt building utilities without permission from Owner in writing. Provide temporary utilities as required.
- C. Provide protection against accidental trespassing and secure area of work after hours.

END OF SECTION

STRUCTURAL EXCAVATION
AND STRUCTURAL FILL
SECTION 02250-1

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The work under this Section includes all labor, supervision, materials and equipment necessary for the completion of all building structural excavation and fill within the building and excavation and fill five (5') feet outside the building for structures and utility lines, as shown on the Drawings and as specified.

1.2 SUBMITTALS

- A. The Contractor shall submit for approval to the Engineer prior to commencing operations a sieve analysis, a modified proctor density test of proposed structural fill material. The tests shall be prepared by an approved testing laboratory at the Contractor's expense.

1.3 FIELD INSPECTION AND TESTING

- A. The Owner shall retain and pay for an independent soils laboratory to perform inspection and/or testing of structural backfill.
- B. The following field tests shall be performed:
 - 1. One modified Proctor Density Test for each source of fill material performed in accordance with ASSHTO T-180, Method "D", (ASTM D-1557).
 - 2. All required compaction and retesting due to unsatisfactory compaction shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Structural fill shall be clean granular material, free of foreign substances, lumps of clay, silt, loam or vegetable matter. The granular material shall be sound, tough, durable and free from thin elongated pieces. The material shall meet the following gradation requirements:

1. Sieve Size	3-1/2"	1/4"	No. 10	No. 40	No. 100
2. Percent Passing	100	30-65	20-55	5-30	0-5

2.2 LOCATION OF MATERIALS

- A. Structural fill shall be used for all backfill under the slabs on grade, for all backfill against exterior and retaining walls, to extend a distance of five (5') feet beyond the face of building, including that backfill required for structural or utility excavation and trenches within the limits of the outermost foundation walls of the building.

PART 3 - EXECUTION

3.1 EXCAVATION

- A. Excavate all areas as required to perform work shown on Drawings and to conform to new finish grades. Excavations shall be to proper depth and width to allow for slabs, gravel bases and other subsequent construction.
- B. Excavate to depth and lineal dimensions required to permit subsequent formwork and concrete operations to proceed without hindrance. Excavation for footings, walls, piers, grade beams, etc., must be sufficiently wide to compact all fill by mechanical means. In general, excavation shall be cut to line eighteen (18") inches outside of the face of footings, with no under-cutting permitted.
- C. If footing bottoms are disturbed, allowed to freeze, or if excavations for footings are carried below indicated elevations shown on the Drawings, the Contractor shall notify the Engineer for instructions prior to proceeding.

3.2 PROTECTION OF UTILITIES

- A. Protect existing utilities and relocate only as shown on Plans or in Specifications.
- B. Any damage to existing drainage and utility structures to be retained shall be repaired at the Contractor's expense.

3.3 REMOVAL OF UNSUITABLE MATERIALS

- A. Remove from the interior of the building all unsuitable materials such as topsoil, loam or other organic materials.
- B. Remove from the site, all excavated materials not required for filling.

3.4 STOCKPILES

- A. Approved excavated material suitable for fill or structural fill (i.e., clean granular material) shall be stockpiled.

3.5 PROTECTION OF WORK AND PROPERTY

- A. Protect structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to structure excavation from damage caused by settlement, lateral movement, undermining, washout and other hazards.

STRUCTURAL EXCAVATION
AND STRUCTURAL FILL
SECTION 02250-3

- B. Protect exposed earth and foundations in excavation areas when the atmospheric temperature is less than 35 degrees F by covering with dry insulating materials of sufficient depth to prevent frost penetration of soil.

3.6 DRAINAGE AND PUMPING

- A. Provide and maintain pumps, sumps, suction and discharge lines and other dewatering system components necessary to convey the water away from excavations. Convey water removed from excavations and rain water to runoff areas. Provide and maintain temporary drainage ditches and other diversions out side the excavation limits for each structure. Do not use trench excavations for site utilities as temporary drainage ditches.

3.7 STRUCTURAL FILL CONSTRUCTION METHODS

- A. Structural fill shall be deposited in eight (8") inch layers and compacted to the following percent optimum density (ASSHT T-180):
 - 1. Ninety-five (95%) percent under footings and under all slabs on grade, trenches and against interior face of foundation walls and retaining walls, also under driveways and sidewalks outside building.
 - 2. Ninety (90%) percent against exterior face of foundation walls and retaining walls.
- B. No material shall be compacted when its moisture content is greater than optimum.
- C. Do not place structural fill or backfill on frozen material. Do not place frozen fill material.
- D. If grade freezes or excavation bottom freezes, remove frozen material to extent of freezing prior to placing new structural fill or backfill material.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The work in this Section consists of furnishing all labor, supervision, materials and equipment necessary to execute concrete formwork for cast-in-place concrete as shown on the Contract Drawings and/or as specified herein, including installation of built-in inserts and anchors furnished by Others.

1.02 REFERENCE

- A. Concrete work shall conform to all requirements of the Specifications for Structural Concrete for Buildings (ACI 301-72) and Concrete Formwork (ACI 347-78).

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Unexposed Surfaces: May be formed with dressed matched lumber free from loose knots or major defects.
- B. Exposed concrete surfaces: Shall be formed with three-quarter (3/4") inch thick sound plywood without patches, A.P.A. Plyform Ext. B-B, using a minimum of pieces and placed symmetrically.
- C. Form Release Agent: Shall be Nox-Crete, or approved equal.

PART 3 - EXECUTION

3.1 PREPARATION OF FORM SURFACES

- A. Forms shall be coated with non-staining, parting form release agent before the reinforcement is placed.
- B. Forms shall be thoroughly cleaned and recoated with form release agent before reuse.

3.2 CONSTRUCTION

- A. Construct forms to shape, grade and dimensions shown on the Contract Drawings. Forms shall be tight to prevent leakage. Securely brace and shore forms to prevent displacement and to securely support construction loads.
- B. Install all inserts, anchors and other accessories required for mechanical and electrical work.

C. Locate form ties for exposed concrete in horizontal rows and vertical tiers.

3.3 REMOVAL OF FORMWORK

- A. The Contractor shall be solely responsible for safety of construction during and after form removal.
- B. Formwork supporting the weight of concrete shall not be removed in less than 14 days or until the concrete has attained a minimum compressive strength of 3000 psi.
- C. Formwork for footings may be removed 24 hours after placing of concrete.
- D. Formwork not supporting the weight of concrete such as walls, columns, and side of beams may not be removed in less than 72 hours after placing concrete and provided that curing and protection of concrete is maintained.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The work in this Section consists of furnishing all labor, supervision, materials and equipment to execute cast-in-place concrete as shown on the drawings and/or as specified herein.
- B. Work shall include all footings, walls and slabs-on-grade shown on the drawings.

1.2 REFERENCE

- A. Concrete work shall conform to all requirements of the Specifications for Structural Concrete for Buildings (ACI 307-72).

1.3 TESTING

- A. The Owner may engage and pay for an approved Testing Laboratory to test concrete used on the project. Not less than four cylinders shall be made for each test. The Contractor shall notify the Engineer and the Laboratory 24 hours before concrete placement, and shall cooperate with the Testing Laboratory in the making of cylinders.
- B. Specimens shall be made, cured and tested in accordance with ASTM C-31 and C-39.
- C. Tests shall be made as follows:
 - 1. One (1) after 7 days.
 - 2. Two (2) after 28 days
 - 3. One (1) reserve to be tested after 56 days if required.
- D. Results of Tests: If the average of the 28 day tests indicates the compressive strength of concrete for any portion of the structure to be 5% or more under that specified, the Owner may require other tests, such as cored cylinders or load tests, at the Contractor's expense. Should the concrete fail to pass such tests, it shall be removed and replaced at no cost to the Owner.
- E. Three (3) copies of all Test Reports shall be promptly forwarded by this Testing Laboratory to the Engineer, plus one (1) copy each to the Contractor and Concrete Supplier.

1.4 STORAGE AND HANDLING

- A. Store materials protected from exposure to harmful weather conditions and at a temperature above 40°Fahrenheit.

1.5 WARRANTY FOR SLAB WATERPROOFING ADMIXTURE

- A. Project warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. The manufacturer's standard warrantee document executed by an authorized company official. The manufacturer's warrantee is in addition to, and not a limitation of, other rights the owner may have under provisions of the Contract Documents.
 - 1. Warrantee Period: Five years commencing on the date of acceptance of the property by the Owner or Notice of Completion.
 - 2. Warrantee terms: Terms in include moisture related failures, including all finish floor materials and labor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cement: Domestic portland cement, ASTM C-150, Type I or Type II use one brand of cement from one source throughout project.
- B. Aggregates: ASTM C-33.
- C. Coarse Aggregates: ASTM C-33.
- D. Sand: Clean, hard, durable, uncoated grains; free from silt, loam and clay.
- E. Mixing Water: Clean and potable.
- F. Admixtures:
 - 1. Air-entraining Agent: ASTM C-260.
 - 2. Retarder Densifier: ASTM C-494, Type D.
 - 3. Formulate admixtures to avoid increase in water-cement ratio or loss of strength.
 - 4. No additives or add mixtures containing calcium chloride or other salts shall be used in any concrete..
 - 5. Curing Compound: Shall be approved equal of Master Builders Masterseal. Curing compound shall have maximum water loss of 0.035 grams per square centimeter.
- G. Vapor retarder shall be manufactured product for use as vapor retarder beneath interior concrete slabs on grade with minimum 15 mil thickness.
 - 1. Vapor retarder must have the following qualities:
 - a. Maximum WVTR as tested by ASTM E 96 of 0.01 perms.
 - b. Water vapor retarder that meets or exceeds ASTM E-1745 Class A.
 - 2. Vapor retarders
 - a. Stego Wrap Class A (15 mil) Vapor Retarder by Stego Industries, LLC, San Juan

Capistrano, CA

- b. SealTight Perminator by W.R. Meadows, Hampshire, Illinois.
 - c. Barrier-Bac VB-350 16 mil by Barrier-Bac, Livingston, NJ.
3. Accessories such as seam tape, pipe boots and mastic shall be as recommended by vapor retarder manufacturer.
- H. Concrete moisture proofing admixture for interior slab construction shall be Barrier-1 Inc., 1901 Tumblewater Blvd., Ocoee, Florida 34761.

2.2 CONCRETE

- A. Concrete shall conform to the requirements shown in Table A.

TABLE A

Minimum compressive strength at 28 days (psi)	3,000
Minimum cement factor (sacks of cement per cu. yd.).....	5 1/2
Slump (inches)	3"-4"
Maximum size coarse aggregate (inches)	1"
Percentage of air content.....	6.0% + 1.5%

- B. Concrete for Interior Slabs shall also conform to the following requirements:
- Min. compressive strength @ 28 days (psi).....4,000
 - Maximum water cement ratio shall be.....0.45
 - Min. cement factor (sacks per C.Y.)
 - 6 1/2
1. Total combined coarse and fine aggregates shall be blended to provide a uniform sieve gradation. Retained aggregate weight shall be 8% minimum and 20% maximum of the total combined aggregate weight.
 2. Mix shall include a mid-range water reducer such as Polyheed 997 as manufactured by Master Builders, Inc. or equivalent.
 3. Mix shall be proportioned to provide a maximum 5" slump at point of discharge.
 4. Add Barrier-1 Admixture in strict accordance with manufacturer's recommendations to all ready mix concrete to be placed in interior slab on grade construction at the batch plant or at the job site at a rate of 14oz per 100 lbs of cement. The minimum amount shall be 50oz per cubic yard.
 - a. A representative of Barrier-1 Admixture must be present at the jobsite during the mixing and placement of the first batch of treated concrete. The Contractor must not proceed without the Barrier 1 representative being present for the certification of the mix and placement process. Contractor to provide 10 days notice of the placement of the first batch of treated concrete to Barrier-1 representative.
 - b. Add Barrier-1 Admixture to ready mix concrete truck, in the require dosage, and ix for 7 (seven) minutes before discharge at jobsite. Barrier-1 Admixture is to be used in lieu of designed mix water, not in addition to mix water.
 - c. Do not alter 0.45 water/cementitious materials ratio.

- C. Concrete for exterior flatwork shall be 4,000 psi at twenty-eight (28) days and meet the values shown in the following Table:

Min. compressive strength @ 28 days (psi).....	4,000
Slump (inches)	2 1/2 - 4
Max. size coarse aggregate (inches).....	1 1/2
Max. size coarse aggregate for suspended slabs and pumped concrete (inches) ..	1
Max. size coarse aggregate for minimum 5 inch thick slab on grade (inches)	1 1/2
Min. cement factor (sacks per cy)	6 1/2

1. Water content shall include surface water in aggregates.

- D. Variations of proportions may be permitted to produce more workable material on approval by the Engineer.
- E. Ready-mixed concrete shall conform to ASTM C-94 and as herein specified.
- F. All concrete materials, including water, shall be mixed at the batch plant and discharged within 1 1/2 hours after water is first added.

2.3 PROPORTIONS

- A. Submit proposed concrete mix proportions for approval at least two weeks prior to placing any concrete. If it is intended to place any concrete by pumping, a corresponding mix shall be submitted.
- B. Furnish the following data with submission of concrete mix design:
1. Standard 28 day cylinder compressive test results of proposed mix.
 2. Cement type and brand.
 3. Coarse aggregate type, size and average weighted loss in accordance with ASTM C-33.
 4. Fine aggregate type, specific gravity and fineness modulus.
 5. Admixture type, brand and quality.
- C. Prior to initial placing of concrete, Contractor shall submit results of 28 day tests (4 cylinders) of concrete, using the approved mix design.

2.4 DELIVERY TICKETS

- A. One copy of all concrete delivery tickets shall be furnished to the Engineer. Tickets shall be noted by the Superintendent as to the location of placement and shall show all constituents and weights of materials in each batch.

PART 3 - EXECUTION

NICHOLS ELEMENTARY SCHOOL
FLOORING REPLACEMENT

3.1 DEPOSITING CONCRETE

- A. Depositing of all concrete shall be in accordance with ACI 301 and ACI 304.
- B. Soil bottoms for footings shall be subject to approval before placing concrete.
- C. All space to be occupied by concrete shall be free from debris, ice and water.
- D. Concrete shall be conveyed from the mixer to the place of final deposit in a practically continuous flow by methods which will prevent the separation or loss of the ingredients. It shall be placed in the forms or slabs as nearly as practicable to its final position and shall be thoroughly tamped, spaded or vibrated around all reinforcing bars and mesh to assure complete absence of voids. Partially hardened concrete shall not be placed in the work.
- E. Locate construction joints where shown or as approved, with reinforcement continuous through joints unless otherwise shown. Key Bulkhead Joints: Size of key 1/3 width of wall unless otherwise shown.
- F. Before placing new concrete against the surface of hardened concrete, roughen surface, remove all laitance and foreign matter, and apply a coat of neat cement grout.

3.2 CURING

- A. Cure all concrete in accordance with ACI 301-72.
- B. Maintain all concrete in a moist condition for 7 days after placement.
- C. Cover floor slabs with approved curing compound, polyethylene film or burlap. Wet as necessary to maintain a moist condition.

3.3 COLD WEATHER REQUIREMENTS

- A. Provide adequate equipment for heating concrete materials and protecting concrete. Keep all materials, accessories and forms free from frost.
- B. When ambient temperature is below 40 degrees F, concrete shall have a temperature of between 60 degrees F and 90 degrees F when placed.
- C. Maintain a temperature of not less than 50 degrees F for 72 hours minimum after placing.
- D. Maintain protective coverings in place for 24 hours after heating is discontinued.
- E. Conform to ACI 306, "Recommended Practice for Cold Weather Concreting".

- F. The use of unvented unit heaters is prohibited.
- G. The use of calcium chlorides or other chlorides will not be permitted.

3.4 HOT WEATHER REQUIREMENTS

- A. Conform to ACI 305, "Recommended Practice for Hot Weather Concreting".
- B. In warm weather (i.e., above 70 degrees F) all concrete except footings shall contain a retarder-densifier. Amount and applications shall be in accordance with the manufacturer's instructions.

3.5 EXPOSED CONCRETE FINISH

- A. Clean all exposed surfaces, concrete and adjoining work stained by the leakage of concrete.
- B. Immediately after removing forms, all concrete surfaces shall be inspected and any pour joints, voids, pockets, or other surface defects shall be repaired at once, before the concrete is thoroughly dry.
- C. Cut out surface defects which do not impair structural strength to one (1") inch minimum depth. Wet cuts thoroughly and immediately fill with mortar. Finish shall be similar to texture and color to adjoining work.
- D. Remove tie rods and fill holes with concrete mortar as specified above.
- E. All surfaces on both the interior and exterior, which are exposed or are within six (6") inches of being exposed in the completed building, shall have a "rubbed finish" (i.e., smooth rubbed finish, or grout cleaned finish). Parging will not be accepted. Finish all rubbed concrete surfaces in accordance with ACI 301, Chapter 10.
- F. Do not clean, rub or patch in freezing temperatures, or when frost is on concrete surface.
- G. Permission to patch does not imply waiver of Engineer's right to require complete removal and replacement of said work if, in Engineer's opinion, said patching does not satisfactorily restore quality and appearance of work.

3.6 INSTALLATION (Vapor Retarder)

- A. Install vapor retarder beneath all interior concrete slabs-on-grade and slab infills.
- B. Installation shall be in accordance with manufacturer's instructions and ASTM E 1643-98.

- a. Unroll vapor retarder with the longest dimension parallel with the direction of the pour.
- b. Lap vapor retarder over footings and seal to foundation walls.
- c. Seal all penetrations (including pipes) with pipe boot and tape.
- d. No penetration of vapor retarder is allowed except for reinforcing steel and permanent utilities.
- e. Repair damaged areas by cutting patches of vapor retarder, overlapping damaged area six (6") inches and taping all four (4) sides with tape.

3.7 INTERIOR SLABS

- A. Add Barrier-1 Admixture in strict accordance with manufacturer's recommendations to all ready mix concrete to be placed for interior slab construction at the batch plant or at the job site at a rate of 14 oz per 100 lbs of cementitious materials. The minimum amount shall be 50 oz per cubic yard.
 1. A Representative of Barrier-1 Admixture must be present at the jobsite during mixing and placement of the first batch of treated concrete. The Contractor must not proceed without the Barrier-1 Representative being present for the certification of the mix and placement process. Please provide 10 days notice of the placement of the first batch of treated concrete.
 2. Manufacturer's onsite mixing instructions:
 - a. Add Barrier-1 Admixture to ready mix concrete truck, in the required dosage, and mix for seven (7) minutes before discharge at the jobsite. Barrier-1 Admixture is to be used in lieu of designed mix water, not in addition to mix water.
 - b. Do not alter 0.45 water cementitious materials ratio.
 - c. The addition of non-chlorinated admixture is permitted.

3.8 TESTING

- A. Testing of slabs containing Barrier-1 Waterproofing Admixture will be carried out by Barrier-1 to include: drilled sample cores and/or 4" cylinders on all project slabs. The sample cores and/or cylinders will be sent to an independent laboratory and tested for permeability, and the result will be provided to the General Contractor/Project Manager prior to the installation of floor covering as part of the warranty closeout documents.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Self-Leveling Cement Based Underlayment
- B. Multi-purpose Primer

1.2 RELATED SECTIONS

- A. Section 03300 – Cast Underlayment Concrete
- B. Section 09000 – Finishes

1.3 REFERENCES

- A. ASTM C 109 Modified – Compressive Strength of hydraulic Cement Mortars
- B. ASTM C 580 Flexural Strength
- C. ASTM C 531 (modified) Shrinkage
- D. ASTM D 3931 Bond Strength (concrete)
- E. ASTM 1869 Standard Test for measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- F. ASTM F 2170 Relative Humidity in Concrete

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300
- B. Manufacturer's MSDS and Product Data Sheets on each product to be used, including:
 - 1. Surface preparation instructions and recommendation
 - 2. Storage and handling requirements and recommendations
 - 3. Installation methods

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing Products specified in this section
- B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship
- C. Prepare area designated by Architect
- D. Mock-up area shall be 6 feet by 6 feet (1.83 m by 1.83 m)
- E. Do not proceed with remaining work until workmanship, is approved by Architect
- F. Incorporate mock-up into final construction upon approval
- G. Warranty: Product shall be free from manufacturing defects and will not break down deteriorate under normal use for 3 years.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of section 01650 and section 1660
- B. Store products in manufacturer's unopened packaging until ready for installation
- C. Store products in a cool dry place out of direct sunlight
- D. Maximum shelf life is 6 months from date of manufacture in unopened containers

1.7 PROJECT CONDITIONS

- A. For interior application only
- B. Do not install over wood products or vinyl
- C. Do not install below 43 degrees F substrate temperature
- D. Not for use in conditions of hydrostatic pressure or excessive moisture (>95% Relative Humidity) per ASTM F2170

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Brand/Manufacturer: Dramatic Surface Products/ Specialty Constructions Brands, Inc; 1105 S Frontenac Street, Aurora, IL 60504 ASD. Tel: 800-832-9023. Fax: 800-952-2368.
 - 1. DSP™ 510 Standard Self Leveling Underlayment
- B. **All substitutions are at the sole discretion of the Architect**

2.2 MATERIALS

- A. DSP 510 Standard Self-Leveling Underlayment: Technical Data:
 - 1. Compressive Strength: 4,000 psi @ 28 days (Air curing samples) when tested in conformance with ASTM C 109
 - 2. Flexural Strength; 900 psi @ 28 days when tested in conformance with ASTM C 580
 - 3. Shrinkage: 0.025-0.045% @ 28 days when tested in conformance with ASTM C 531
 - 4. Ideal Slump range 11"-12" (2" diameter pipe, 4" high)
 - 5. Bond Strength: 325-375 psi when tested in conformance with ASTM D 3931
 - 6. Walkable hardness: 2-4 hours
 - 7. Finish flooring installation: 48-72 hours
 - 8. Working Time: 15-20 minutes at 70 degrees F (21 degrees c)
 - 9. "0" VOC
 - 10. Minimum 10% recycled content

- B. Primer: DSP 500 Primer
 - 1. "0" VOC
- C. Aggregate shall be well graded, washed pea gravel, 1/8 inch or larger. Use for underlayment installed in the thickness over 1-1/2 inch thick.
- D. Water shall be clean and potable.
- E. **Moisture mitigation: DSP 508 Moisture Mitigator**
 - 1. 100% solids epoxy
 - 2. "0" VOC

2.3 MIXING

- A. Mix materials in accordance with manufacture's instructions
- B. Standard Mix: Mix in accordance with manufacturers instructions
 - 1. Slowly add a 50 lb. bag into water while mixing
 - 2. Use a 4.5 – 5 quarts of water per 50 lb. bag
 - 3. Use cool water not over 70 degrees F
 - 4. Mix using a 1/2 –inch heavy-duty drill with blending paddle at a minimum of 650 rpm. Mix thoroughly for approximately 2-3 minutes. Scrape containers sides and remix to ensure lump-free consistency.
- C. Aggregate Mix: For areas to be installed over 1-1/2 inch thick.
 - 1. Mix as specified for standard mix
 - 2. Add 1/3 to 1 part by volume of 1/8 inch or larger aggregate and mix thoroughly to evenly coat all aggregate
 - 3. Do not use sand
- D. Pumped Mix:
 - 1. Mix as specified for standard mix. Do not over water
 - 2. Check the consistency of the product with a Slump test

PART 3 EXECUTION

3.1 EXAMINATION

- A. Test moisture content of substrates:
 - 1. per ASYM F2170, do not install if relative humidity is > 95%
 - 2. **For moisture sensitive floor finished refer to the finish floor manufacturers specifications for moisture limitations. Remediation of excessive moisture vapor emissions to an acceptable level, use DSP 508 Moisture Mitigator (see DSP 508 Data Sheet for application details).**
- B. Notify the Architect and General Contractor in writing of any unsatisfactory conditions

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation
- B. Prepare surfaces using the methods recommended by the manufacturer for

achieving the best result for the substrate under the project conditions

1. All surfaces shall be structurally sound and free from any contaminants that may inhibit bond, including oil, grease, dust, loose or peeling paint, sealers, floor finishes, curing compounds or other contaminants
 2. Concrete subfloors and other subfloors such as ceramic and quarry tile as well as Cement terrazzo should be clean and free of all waxes and sealers. Mechanically clean if necessary using shot blasting or other methods
 3. For installation over cutback adhesive, remove adhesive by scraping until all that remains is a thin transparent layer of adhesive residue
- C. Joint Preparation: Repair and reinforce all cracks in the subfloors to minimize telegraphing through the underlayment
1. Do not cover existing building expansion or control joints
 2. Create 1/8" to 1/4" wide gaps where self-leveling abuts walls, columns, and fixtures by installing a self-sticking foam weather-stripping tape or damp sand
- D. Seal all floor openings

3.3 APPLICATION OF PRIMER

- A. Install products in accordance with manufacturer's instructions
- B. Prime standard subfloors with DSP 500 Primer
1. Mix Primer 1:3 with water and apply evenly with a paintbrush, short nap roller or soft bristled push broom
 2. Apply an even continuous coat
 3. Allow to dry to a clear film (typically 1-3 hours)
 4. Do not apply underlayment until the primer is dry
 5. Primer coverage is approximately 140 square feet per gallon
- C. Prime extremely absorbent subfloors twice
- D. Prime DSP 508 Moisture Mitigator and cutback adhesive residues over concrete as follows:
1. Prime with DSP 500 (undiluted)
 2. Apply evenly with a paintbrush, short nap roller or soft bristled push broom
 3. Apply an even continuous coat
 4. Allow to dry to a clear film (typically 1-3 hours)
 5. Do not apply underlayment until the primer is dry
 6. Primer coverage is approximately 140 square feet per gallon

3.4 APPLICATION OF UNDERLAYMENT

- A. Placing:
1. Mix underlayment as specified
 2. Immediately pour or pump the underlayment onto the primed flooring substrate
 3. Spread in place with a long handled, gauged spreader or smoother covering

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- all high spots on the floor
4. Underlayment can be walked on in 2-4 hours at 70 degrees F
- B. Preparation For Finish Flooring Installation:
1. Underlayment can accept finish floor covering materials 48-72 hours at 70 F and 50 percent relative humidity
 2. Due to the wide range of adhesives that are used to install floor coverings, some adhesives may dry more quickly over underlayment than over the substrates

3.5 PROTECTION

- A. Protect installed products until completion of the project
- B. Do not permit traffic over unprotected floor underlayment surfaces

END OF SECTION

**SECTION 09624
RESILIENT ATHLETIC FLOORING**

PART I – GENERAL

1.0 DESCRIPTION

A. Scope

1. The complete installation of poured-in-place synthetic sports surfacing system including adhesive, resilient pad, sealer, resin, topcoat and gameline striping.

B. Related work.

1. CONCRETE MOISTURE VAPOR EMISSION AND pH TESTING

- a. General Contractor shall perform moisture vapor emission and pH tests of concrete. Moisture vapor emissions must not exceed 4 lbs/1,000 ft² per 24 hours as verified using Calcium Chloride test ASTM F 1869-04 or ERH value of less than 80%. pH level should be in the range of 7 to 8.5.

2. CONCRETE SUBFLOORS – See Structural Drawings

- a. The general contractor shall prepare the concrete subfloor as per the construction documents. See structural drawings for repair of continuous crack in gym floor.
- b. After all existing flooring and mastic have been removed, the levelness of the existing concrete slab shall be surveyed every five feet on center in 1/8" vertical increments. The slab shall be ground and/or shot blasted to a tolerance of 1/8" vertical in any 10' horizontal radius, non cumulative. Floor flatness and floor levelness (FF and FL) numbers are not recognized. High spots shall be ground level and low spots filled with approved leveling compound. Grinding machines will be equipped with HEPA vacuum shrouds
- c. No concrete curing, hardening or sealing agents shall be applied or mixed with the concrete subfloor.

3. MEMBRANE WATERPROOFING – See Structural Drawings

- a. Concrete subfloors on or below grade shall be installed over a suitable moisture retardant membrane. Water vapor membrane shall comply with ASTM E 1745-97 (2004).

1.02.1 REFERENCES

A. ASTM (American Society for Testing & Materials)

1. ASTM D 2240-04
2. ASTM E 1745-97 (2004)
3. ASTM F 1869-04

B. International Standards

1. European Standard (EN 14904)
2. DIN 18032

C. American Sports Builders Association

1.02.2 SUBMITTALS

- A. Product data, including manufacturer's information for specified products
- B. Samples for field color(s) and gamelines
- C. Installation and maintenance instructions.

1.02.3 QUALITY ASSURANCE

- A. The manufacturer must have a minimum of five (5) years experience in the manufacturing of synthetic sports flooring.
- B. Installer must have performed installations of the same scale in the last three years.
- C. Installer to be recognized and approved by the athletic rubber flooring manufacturer.

1.02.4 DELIVERY, STORAGE, AND HANDLING

- A. Materials must be delivered in manufacturer's original, unopened and undamaged containers with identification labels intact.
- B. Protect all materials from exposure to harmful weather conditions, on a clean, dry, flat surface protected from all possible damage. Store rolls up-right.
- C. Recommended environmental condition for storage is a minimum of 55° F (13° C).
- D. Material need not suffer excessive damage during handling (i.e. edge chipping, excessive warping, etc).

1.02.5 SITE CONDITIONS

- A. Maintain a stable room and sub floor temperature for a period of 48 hours prior, during and 48 hours after installation. Recommended range: 65°F to 80°F (18°C to 27°C).
- B. Installation to be carried-out no sooner than the specified curing time of sub-floor.

- C. Substrate Flatness (concrete or asphalt) must not vary more than 1/8" vertical in 10' horizontal radius.
- D. Moisture vapor emission content of the concrete slab must not exceed 4lbs/1000ft² per 24 hrs when using the Calcium Chloride test as per ASTM F 1869.
- E. Installation of athletic flooring will not commence unless all other finishes in the building have been completed.
- F. Existing 6" vinyl cove base shall be removed and replaced with new 6" vinyl base.
- G. Vinyl reducer strips shall be provided and installed at all doorways where there is an elevation change.
- H. Undercut or trim all doors that do not have proper clearance after flooring is installed. Replace all hardware, weatherstripping, and associated items removed during door modification procedures.

1.02.6 WARRANTY

- A. Provide manufacturer's standard warranty
- B. The athletic rubber flooring is warranted to be free from manufacturing defects for a period of three (3) years from the date of shipment from the manufacturer.

PART 2 - PRODUCTS

2.0 MANUFACTURER

- A. Basis for design: MaxxPlay by TRACTION, North American Specialty Flooring, Woodstock, IL 866-757-5569 and manufactured by BASF, or approved equal. **Approval of substitutions is at the sole discretion of the Architect.**
- B. All components shall be non-hazardous, and shall not contain ANY lead, mercury, heavy metals, PCB, or formaldehyde.
- C. MaxxPlay 110 Adhesive – Two-component polyurethane.
- D. MaxxPlay Resilient Base Mat – Specially formulated prefabricated resilient basemat made of recycled rubber bound with MDI polyurethane. Base Mat density – 30lbs/ft³. Base Mat standard thickness – 7mm.
- E. MaxxPlay 220 Sealer – Two-component, thixotropic polyurethane compound.
- F. MaxxPlay 224 Resin – Two-component, pigmented, seamless, self-leveling polyurethane.
- G. Total wear layer thickness – 2mm throughout the floor (3mm for 14+3 system).
- H. Physical Properties – Surface Hardness; Shore A 80 minimum per ASTM D-2240.
- I. MaxxPlay 67 Top Coat – Matte Finish, select from standard colors.
- J. MaxxPlay 45 Gameline Paint – Two-component polyurethane. Select from standard colors.

Physical Properties

- A. Physical properties of the polyurethane athletic rubber floor to conform to the following requirements:

Physical Properties	Standard	Specification
Shock Absorption	DIN 18032	35% (7+2)
Vertical Deformation	DIN 18032	1.06
Resistance to Rolling Load	EN 14904	1500
Resistance to Impact	IASTM D2632	11Nm
Resistance to Indentation	EN 14904	.38mm
Vertical Ball Rebound	DIN 18032	99%
Sliding Properties	DIN 18032	0.40 – 0.50
Resistance to Fungi	ASTM G 22	Non-growth
Critical Radiant Flux	ASTM E 648	0.59 W/cm ²
Optical Density of Smoke	ASTM E 662	<450, Class I
Color, Chemical & UV Stability		Aliphatic - Excellent

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

The following must be ensured prior to installation of the primary product:

- A. Concrete sub floors to be placed a minimum of thirty (30) days prior to the installation of athletic rubber floor. See structural drawings for repair of continuous crack in gym floor.
- B. No concrete or asphalt sealers or curing compounds are applied or mixed with the sub floors (refer to Section 03050 of Division 3 and/or Section 02065 of Division 2).
- C. The underlayment is adequate (if installing over wood sub floors). APA Exterior Underlayment Grade Plywood is recommended.
- D. Water vapor membrane complies with specification in ASTM E 1745.
- E. Alkalinity test and moisture test must be performed. PH level should be in the range of 7 to 8.5. Moisture content must not exceed 3lbs/1000ft² per 24 hrs (verify using the calcium chloride test as per ASTM F 1869).
- F. Smooth, dense, concrete finish is required, highly compacted with a tolerance of 1/8" in the 10ft radius (3mm in 3.05 m radius). Floor flatness and floor levelness (FF and FL) numbers are not recognized.
- G. Concrete or asphalt sub floors on/or below-grade are installed over a suitable moisture retardant membrane as per ASTM E 1643 and E 1745.
- H. Sub floors must be clean, free of paint, dust, sealer, hardeners, grease, oil, solvents, or adhesive and any other foreign substances that may act as a bond barrier.

- I. Sealing of cracks, holes and, smoothing and leveling of rough, uneven surfaces, must be carried out using a good quality Portland cement based leveling compound (feathering compound), approved by the manufacturer.
- J. Installation of athletic flooring will not commence unless all other finishes in the building have been completed.
- K. The gym and the surrounding areas must be closed during removal and installation of flooring.
- L. Contractor shall have access to the site seven days a week.
- M. Contractor shall hang 3 mil poly sheeting from top of all four walls down to floor to protect surfaces from migrating dust. An additional layer of poly sheeting shall be installed over vents and doorways to protect from migrating dust.
- N. Contractor shall mobilize a minimum of two negative air machines into project area to filter air and exhaust to exterior of building.
- O. Contractor shall protect floor of hallways and other routes used by workmen with masonite or poly sheeting.
- P. Doorways leading into project area shall be taped off with caution tape.
- Q. Installation will not be carried out unless above conditions are satisfied.
- R. Report any discrepancies to the General Contractor or Owner for correction.

3.2 INSTALLATION

- A. Unroll the base mat and allow it to relax overnight or approximately 12 hours. Do not cut the base mat to final dimensions until it is laid into the adhesive.
- B. Thoroughly mix the two-component polyurethane adhesive per NASF's instructions and apply it directly to the concrete subfloor with a V-notched 3/32" X 3/32" X 3/32" trowel.
- C. Install the base mat into the freshly applied adhesive. Do not allow a compression fit at any seam. Roll the base mat with a 100 lb segmented roller and repeat the rolling process on the entire mat 45 minutes after installation. Allow the adhesive to cure before proceeding to the Seal Coat.
- D. Thoroughly mix the two-component Seal Coat per NASF's instructions.
- E. Apply two layers of Seal Coat to the base mat with a flat trowel. Allow each layer to cure a minimum of 8 hours before proceeding to the next application. Inspect for, and fill all gaps by applying additional material as needed. Sand down any ridges in the cured Seal Coat with 100 grit sand paper.
- F. Mix two-component MaxxPlay pigmented polyurethane resin and spread over Sealer in accordance with supplier's instructions. Allow to cure minimum 12 hours before proceeding.
- G. Mix two-component MaxxPlay Coating and apply using multiple rollers to achieve desired coverage and texture. Allow 24 to 48 hours curing time before proceeding.
- H. Mix two-component MaxxPlay Gameline striping paint by supplier's instructions.
- I. Color of game lines shall be chosen from MaxxPlay Line standard colors.
- J. Consult architectural drawings for game line locations and chosen colors.
- K. Existing 6" rubber cove base shall be removed and replaced with new 6" vinyl

- base.
- L. Rubber reducer strips shall be provided and installed at all doorways where there is an elevation change.
- M. Undercut or trim all doors that do not have proper clearance after flooring is installed.
- N. Replace all hardware, weatherstripping, and associated items removed during door modification procedures.

3.3 PROTECTION

- A. Cure Time: No traffic or other trades shall be allowed on the surface for a period of one week following completion to allow for complete and proper cure of the finish.
- B. Other Trades: It shall be the responsibility of the general contractor to protect the surface from damage by other trades before acceptance by the owner or the owner's agent.
- C. Safety: No smoking, open flames or sparks from electrical equipment or any other source shall be permitted during the installation process, or in areas where materials are stored

PART 1 GENERAL

1.01 WORK INCLUDED

A. Work Included: The Work of this Section shall include but not be limited to the following:

1. Resilient wall base and accessories.

1.02 RELATED WORK

- A. Section 09624 – Resilient Athletic Flooring
- B. Section 09650 – Resilient Flooring
- C. Section 09684 - Carpet

1.03 QUALITY ASSURANCE

- A. Manufacturer: Provide each type of resilient wall base and accessories as produced by a single manufacturer, including recommended primers, adhesives, sealants, and leveling compounds.
- B. Fire Test Performance: Provide resilient wall base which complies with the requirements of the building code and is acceptable to authorities having jurisdiction.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of resilient wall base and accessory, including installation instructions.
 1. Certification by tile manufacturer that products supplied for tile installation comply with local regulations controlling use of volatile organic compounds (VOC's).
- B. Samples for Initial Selection: Submit manufacturer's standard colors in the form of actual sections of resilient flooring, including accessories, showing full range of colors and patterns.
- C. Attic Stock: Deliver 2% of the total amount of product used to the jobsite as attic stock
- D. Maintenance Instructions: Submit manufacturer's recommended practices for maintaining each type of resilient flooring required.

1.05 PROJECT CONDITIONS

- A. Maintain minimum temperature of 65 deg. F in spaces to receive resilient wall base. Store resilient wall base materials in spaces where they will be installed for at least 48 hours before installation.
- B. Install resilient wall base and accessories after other finishing operations, including painting, have been completed.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to project site in original factory wrappings and containers, clearly labeled with identification of manufacturer, model, style/pattern, color, grade (if applicable) and lot number.
- B. Store materials in original undamaged packages and containers, inside well-ventilated area protected from weather, moisture, soiling, and laid flat atop skids and off ground to prevent warping.
- C. Comply with instructions and recommendations of manufacturer for special delivery, temperature and humidity requirements, and storage and handling requirements.
- D. Provide 2% of the total amount of product used to the jobsite as attic stock.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide resilient wall base as manufactured by the following manufacturers or approved equal:
 - 1. Roppe
 - 2. Johnsonite
- B. **Substitutions are at the sole discretion of the Architect.**

2.02 MATERIALS

- A. Colors and Patterns: As selected from manufacturer's standards.
- B. Vinyl Base: Type TS, Thermoset Vulcanized Pinnacle Extruded Rubber Wall Base, Group 1 (solid), 1/8" thickness, height as shown on Finish Schedule. Provide straight base at carpeted floors, top-set cove at other locations, and molded corners.
Manufacturer : Roppe

2.03 ACCESSORIES

- A. Primers and underlayment compounds (if required) shall be water-resistant type and of consistency recommended by the flooring manufacturer for the type and condition of the surface to be covered. Use primer and underlayment compound in accordance with the manufacturer's printed instructions.
- B. Adhesive: Specially formulated adhesive as recommended by sheet flooring manufacturer and compatible type for heat-welding of seams.
- C. Concrete Slab Primer: Non-staining type as recommended by flooring manufacturer.
- F. Leveling and Patching Compound: Latex cement type as recommended by flooring manufacturer.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspect surfaces to determine that they are smooth and free from cracks, holes, ridges, coatings preventing adhesive bond, and other defects impairing performance or appearance. Patch defects prior to installing wall base.

3.02 PREPARATION

- A. Prepare surfaces as follows:
 - 1. Use leveling and patching compound for filling small cracks, holes and depressions in walls.
 - 2. Remove coatings from wall surfaces that would prevent adhesive bond, including curing compounds incompatible with resilient flooring adhesives, paint, oils, waxes and sealers.
- B. Broom clean or vacuum surfaces to be covered, and inspect wall surfaces.
- C. Apply primer, if recommended by manufacturer, in compliance with manufacturer's directions.

3.03 INSTALLATION, GENERAL

- A. Install resilient wall base using method indicated in strict compliance with manufacturer's printed instructions. Extend resilient wall base into toe spaces, door reveals, and into closets and similar openings.
- B. Scribe, cut and fit resilient wall base to permanent fixtures, built-in furniture and cabinets, pipes, outlets and permanent columns, walls and partitions.
- C. Install resilient wall base on flush covers and similar items occurring within finished floor areas to remain concealed. Maintain overall continuity of color and pattern with pieces of base installed on these covers. Tightly cement edges to perimeter of covers and to covers.
- E. Tightly cement resilient wall base to subbase without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections.

3.04 INSTALLATION OF RESILIENT WALL BASE

- A. Tightly bond base to substrate.
- B. On masonry surfaces, or other similar irregular substrates, fill voids along top edge of resilient wall base with manufacturer's recommended adhesive filler material.
- C. Match base for color by using base from cartons in same sequence as manufactured and packaged if so numbered. Damaged or defective base are not acceptable.
- D. Clean resilient wall base not more than 4 days prior to date scheduled for inspections intended to establish date of substantial completion in each area of project. Clean base by method recommended by resilient flooring manufacturer.

3.07 SCHEDULE OF MATERIALS

- A. Refer to the Finish Schedule for the location and use of these materials.

END OF SECTION