



**INVITATION TO BID  
BID NO. 9856  
2018 FLOORING REPLACEMENT PROGRAM  
FOR TROY SCHOOL DISTRICT**

The Troy School District will receive firm, sealed bids for all labor, material, equipment and all other services to complete Bid No. 9856 flooring installation at Athens High School, International Academy, Boulton and Larson Middle Schools, Bemis, Wass and Martell Elementary School and the Transportation Building.

Specifications and proposal forms can be obtained online at <http://www.troy.k12.mi.us>. From the main page click the "Business Services" tab listed under "Departments", then click "Purchasing" and scroll down to locate and access the bid document.

Your proposal and two copies marked **"Bid No. 9856 Flooring Replacement Program"** must be delivered no later than 11:00 Tuesday, April 10, 2018, Troy School District Maintenance/Operations and Purchasing Offices, 1140 Rankin, Troy, MI 48083, at which time all bids will be publicly opened and read aloud immediately thereafter. Bid proposals received after this time will not be considered or accepted.

A mandatory pre-bid walk through has been scheduled for 9:00 a.m., Wednesday, April 4, 2018, @ Athens High School, 4333 John R, Troy MI 48085. All questions regarding the services specified, the bid specified, or the bid terms and conditions will be accepted in writing ONLY and subsequently answered through an addendum to all interested parties. Questions must be received no later than the end of business day, Thursday, April 5, 2018; at no other time prior to the bid opening will questions/concerns be addressed or accepted and may be faxed to: 248.823.4077, or emailed as a Word document to: [PurchasingOffice@troy.k12.mi.us](mailto:PurchasingOffice@troy.k12.mi.us).

All bidders must provide familial disclosure in compliance with MCL 380.1267 and attach this information to the bid proposal. The bid proposal will be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the bidder and any member of the Troy School Board or the Troy School Districts Superintendent. Also, a sworn and notarized Affidavit of compliance for the Iran Economic Sanctions Act certifying the vendor does and will comply with Public Act 517 of 2012 shall accompany all proposals. Both forms will be enclosed in the specification's booklet that shall be used for this purpose. The District will not accept a bid proposal that does not include these sworn and notarized disclosure statement.

In accordance with Michigan Compiled Laws Section 129.201, successful bidders whose proposals are \$50,000 or more, for any bid category, will be required to furnish a U.S. Treasury Listed Company Performance and Payment Bond in the amount of 100% of their bid. The cost of the Bond shall be identified within each proposal.

The Troy Board of Education reserves the right to accept or reject any or all bids, either in whole or in part; to award contract to other than the low bidder; to waive any irregularities and/or informalities; and in general to make awards in any manner deemed to be in the best interest of the owner.

Purchasing Department  
Troy School District  
1140 Rankin  
Troy, MI 48083

## INSTRUCTIONS TO BIDDERS

### PROPOSAL/INTENT

1. The Troy School District will receive firm, sealed bids for all labor, material, equipment and all other services to complete flooring removal and installation at Athens High School, International Academy, Boulan and Larson Middle Schools, Bemis, Wass and Martell Elementary School and the Transportation Building.
2. Proposals will be submitted only on the forms provided, will be enclosed in a sealed envelope marked with the name of the bidder, the title of the work and must be delivered to Troy School District Maintenance/Operations and Purchasing Offices, 1140 Rankin, Troy, MI 48083, no later than 11:00 a.m. Tuesday, April 10, 2018, at which time all bids will be publicly opened and read aloud immediately thereafter. Bid proposals received after this time will not be considered or accepted. Oral, telephone, fax or electronic mail bids are invalid and will not receive consideration. Submit one original and two copies.
3. A mandatory pre-bid walk through has been scheduled for 9:00 a.m., Wednesday, April 4, 2018, @ Athens High School, 4333 John R, Troy MI 48085.
4. Proposals will be made in conformity with all the conditions set forth in the specifications. All products must conform to the specifications.
5. Questions must be received no later than the end of business day, Thursday, April 5, 2018.
6. Bidder shall be reputable and a recognized organization, with at least five (5) years successful experience on work of this type and scope, of equal or better quality than this project.
7. References in the specifications to any article, product, material, fixture, form or type of construction, etc., by proprietary name, manufacturer, make or catalog number will be interpreted as establishing a standard quality of design and will not be construed as limiting proposals.
8. Bid bond or certified check, for an amount not less than five (5%) percent of the amount of the bid, must accompany each bid. Failure to submit proper bid security shall constitute rejection of bid.
9. A performance bond shall be required for the project if the cost is in excess of \$50,000 and must be listed separately on the proposal form as an individual line item.
10. A completed Familial Disclosure and an Iran Economic Sanctions form must be included with each proposal submitted or the proposal will not be accepted, please note these forms must be notarized.
11. The Troy Board of Education reserves the right to accept or reject any or all proposals either in whole or in part; to waive any irregularities and/or informalities; and in general to make awards or cancel this proposal, if deemed to be in the best interests of the owner.

### SCOPE

This bid includes flooring removal and installation per the attached documents. Proposals will be on a line item lump sum basis, according to the schedule listed below and where specified only the qualified products listed will be considered in this proposal.

### WARRANTY

All material and equipment will be guaranteed to be free from defects in both workmanship and materials for no less than one year from date of receipt/installation. If manufacturer warranty exceeds this minimum requirement, the manufacturer warranty will prevail. Any item(s) found to be defective will be replaced or repaired within seven working days at Vendor(s) expense.

### WITHDRAWAL OF BIDS

Any bidder may withdraw their bid at any time prior to the scheduled time for receipt of bids. No proposal may be withdrawn until after 45 days after bid opening.

### FIRM PRICING

Unit pricing will prevail when computing total quantity on bids. No price allowance or extra consideration on behalf of the bidder will subsequently be allowed by reason of error or oversight on the part of the bidder. The successful bidder(s) will hold bid prices firm for all purchase orders placed for a period of approximately one full year.

### PERMITS, FEES AND REGULATIONS

The Contractor shall obtain and pay for all permits, assessments, fees, bonds, and other charges as necessary to perform and complete the work of this contract, including disconnection charges, capping and unplugging utilities.

The Contractor shall be responsible for obtaining all permits and licenses necessary for the proper completion of project. Permits and licenses are available from the appropriate agencies having jurisdiction. The Contractor shall give all notices, pay all fees and comply with all laws, ordinances, rules and regulations bearing on the work.

At the completion of the project, the Contractor will provide to the District all paperwork related to the full execution of the permits(s), including all payments and inspections.

If any of the work of the Contractor is done contrary to such laws, ordinance rules and regulations without such notice, he shall bear all costs arising therefrom. The Contractor shall include all cost and taxes in its bid, and make proper provisions for payment of all other State and Federal applicable taxes, fees or other costs.

### TAXES

Troy School District is not automatically exempt from State of Michigan Sales and Use Taxes. The District must pay these taxes when materials are to be incorporated into reality. Materials that are permanently attached, built-in, incorporated or otherwise made part of the structure all applicable taxes shall be paid by the Vendor. Troy School District shall not be responsible for any taxes that are imposed on the Vendor. Furthermore, the Vendor understands that it cannot claim exemption from taxes by virtue of any exemption that is provided to Troy School District.

### DELIVERY/INSTALLATION

Time of delivery is part of the consideration. It is understood that the bidder agrees to deliver prepaid to the schools, specified from the resulting contract, all items. All cost of delivery, drayage, freight, packing, unpacking, and setup are to be included in the prices bid.

The Contractor is responsible for removing from the project all waste materials and rubbish resulting from his operations and installation including all packing cartons and debris. Removal is to occur on a daily basis. Failure to do so will result in the Owner doing so and the cost thereof shall be charged to the Contractor as a deduction in his contract price.

The Contractor shall provide an adequate number of qualified, experienced installers, in harmony with other works at the site.

### BID BOND

Bid Bond or certified check, for an amount not less than five (5%) percent of the amount of the bid, must accompany each bid. The check or bond of each unsuccessful bidder will be returned within ten (10) days after the bid is awarded. Failure of any accepted bidder to enter into a contract to complete the specified work may forfeiture of his bid security. Failure to submit proper bid security shall constitute rejection of bid.

### PERFORMANCE BOND/PAYMENT BOND

Within fourteen (14) days after date of issuance of written notice of selection for the award of a contract, which shall be considered as the notice to proceed, the successful bidder shall enter into a contract with the Owner and shall execute and file with the Owner, the following in the amount 100% equal to full contract sum.

A performance bond shall be required for the project if the cost is in excess of \$50,000 and must be listed separately on the proposal form as an individual line item. The Performance Bond must insure the faithful performance of all provisions of the contract and satisfactory completion of the specified work, within the time agreed upon.

The payment bond must insure the payment and protection of claimants supplying labor or materials to the principal contractor or his subcontractors in the prosecution of the work provided for in the contract. The successful contractor's bond company must be listed by the State of Michigan as a licensed carrier and have an excellent or superior rating from AM Best Company.

### PREVAILING WAGE

This is a prevailing wage project, see attached schedule.

### SAFETY

Under the "General Conditions of the Contract for Construction" of the contract to be awarded, the Contractor;

- a) shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures;
- b) shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the contract;
- c) shall take reasonable precautions for safety of all persons who may be affected, including employees of the Contractor and Subcontractor; and
- d) shall have an accident prevention representative at the site.

The general conditions of the contract for construction and the agreement also require that the Contractor indemnify the Owner in the event of certain claims arising out of the performance of the work.

### INSURANCE REQUIREMENTS

The Contractor shall protect, defend and indemnify the Owner, its officers, agents, servants, volunteers, and employees from any and all liabilities, claims, liens, demands, and costs of whatsoever kind and nature which may result in injury or death to any persons, and for any result in injury or death to any person, and for loss or damage to any property, including property owned or in the care, custody, or control of the Owner in connection with or in any way incident to or arising out of the occupancy, use, with this Agreement resulting in whole or in part from negligent acts or omissions of the Contractor, any Subcontractor, or any employee, agent or representative of the Contractor or any Subcontractor.

The Contractor shall maintain, at its expense, during the term of this contract the following insurance:

- a) Worker's Compensation Insurance with statutory limits and Employer's Liability Insurance with a minimum limit of \$1,000,000 each occurrence.
- b) Comprehensive General Liability Insurance with a minimum combined single limit of \$1,000,000 per occurrence, \$1,000,000 aggregate, in the same amount made for bodily injury and property damage. The

policy is to include products and completed operations, cross liability, broad form property damage, independent contractors, and contractual liability coverage. The policy shall be endorsed to provide sixty (60) days written notice to the District of any material change of coverage, cancellation, or non-renewal of coverage.

- c) If Subcontractors are likely to be used, the Comprehensive General Liability policy shall include coverage for independent Contractors.
- d) Owner's Contractor's Protective Policy-comprehensive in the name of the Owner, with a minimum combined single limit of \$1,000,000 per occurrence in the same amount for bodily injury or property damage.
- e) Automobile Liability insurance covering all owned, hired, and non-owned vehicles with personal protection insurance and property insurance to comply with the provisions of the Michigan no-fault Insurance Law, including residual liability insurance with a minimum combined single limit of \$1,000,000 each occurrence of bodily injury and property damage.
- f) All insurance policies shall be issued by companies licensed to do business in the State of Michigan. The companies issuing the policies must be domestic (on-shore) companies and have an A rating by AM Best.
- g) The Contractor shall be responsible for payment of all deductibles contained in any insurance policy required in this contract.

#### COMPLIANCE WITH SCHOOL SAFETY INITIATIVE LEGISLATION

Meeting the requirements of the School Safety Initiative Legislation, being MCL 380.1230, 80.1230a, 380.1230c, 380.1230d and 380.1230g.

The Bidder acknowledges and agrees that the Bidder will have any and all of its installation personnel (including sub-contractors) subjected to criminal history and background checks. **Personnel that fall into this group will be working on District premises for more than one continuous week.** Criminal history and background checks will be done within a year of the beginning of the project and should be completed before worked begins on this project.

The Bidder is required to provide written documentation listing all personnel who fall into the group indicated in the above paragraph. The documentation will also verify that none of the personnel have a "listed offense" as indicated below. This documentation is to be provided before the beginning of the project and updated as necessary for any additions or subtractions from the list as long as the project lasts.

The Bidder shall indemnify, defend and hold the District, its employees, Board of Education, and each member thereof, agents and consultants, harmless from and against any and all claims, counter-claims, suits, debts, demands, actions, judgments, liens, liabilities, costs, expenses, including actual attorney's fees and actual expert witness fees, arising out of or in connection with any violation of, or the Bidder's failure to comply with the above paragraphs.

The Bidder shall be responsible for all costs and expenses associated with the above-required criminal history and background checks.

#### LISTED OFFENSES

1. MCL 750.145a - Accosting, enticing or soliciting child (less than 16 years of age) for immoral purposes.
2. MCL 750.145b - Accosting, enticing or soliciting child (less than 16 years of age) immoral purposes – second or subsequent offenses.

3. MCL 750.145c - Involvement in child sexually abusive activity or material, including possession of child sexually abusive material (“child” is a person less than 18 years of age who has not been legally emancipated.)
4. MCL 750.158 - Crime against nature (i.e., sodomy and bestiality) if the victim is an individual less than 18 years of age.
5. A third of subsequent violation of any combination of the following:
  - a. MCL 750.167(1)(f) - indecent or obscene conduct in a public place;
  - b. MCL 750.335a - indecent exposure;
  - c. A local ordinance of a municipality substantially corresponding to a section described in (a) or (b), *supra*.
6. Except for juvenile disposition or adjudication, a violation of:
  - a. MCL 750.338 - gross indecency between males; fellatio or masturbation;
  - b. MCL 750.338a - gross indecency between females; oral sex;
  - c. MCL 750.338b - gross indecency between male and female persons; if the victim is an individual less than 18 years of age.
7. MCL 750.349 - Kidnapping, if victim is an individual less than 18 years of age.
8. MCL 750.350 - Kidnapping; child under 14 years of age with intent to detain or conceal from child’s parent or legal guardian.
9. MCL 750.448 - Soliciting or accosting by a person 16 years of age or older, if victim is an individual less than 18 years of age.
10. MCL 750.455 - Pandering
11. MCL 750.520b - First degree criminal sexual conduct.
12. MCL 750.520c - Second degree criminal sexual conduct.
13. MCL 750.520d - Third degree criminal sexual conduct.
14. MCL 750.520e - Fourth degree criminal sexual conduct.
15. MCL 750.520g - Assault with intent to commit criminal sexual conduct.
16. Any other violation of a law of the state or a local ordinance of municipality that by its nature constitutes a sexual offense against an individual who is less than 18 years of age.
17. MCL 750.10a - Offense by sexually delinquent person (i.e., “any person whose sexual behavior is characterized by repetitive or compulsive acts which indicate a disregard of consequences or the recognized rights of others, or by the use of force upon another person in attempting sexual relations of either a heterosexual or homosexual nature, or by the commission of sexual aggressions against children under the age of 16”).
18. An attempt or conspiracy to commit an offense described in (1) through (17).
19. An offense substantially similar to an offense described in (1) through (17) under a law of the United States, any state, or any country or any tribal or military law.

#### TERMINATION BY THE DISTRICT FOR CONVENIENCE

The District may, at any time, terminate the Contract for the District’s convenience and without cause.

Upon receipt of written notice from the District of such termination for the District’s convenience, the Contractor shall:

- a) Cease operations as directed by the District in the notice;
- b) Take actions necessary, or that the District may direct, for the protection and preservation of the Work; and
- c) Except for Work directed to performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further Subcontracts and purchase orders.

#### Owner Is An Equal Opportunity Employer

The Owner is an Equal Opportunity Employer. Pursuant to the Executive Order 11246 as amended, you are advised that under the provisions of this order, Contractors and Subcontractors are obligated to take

affirmative action to provide equal opportunity without regard to race, creed, color, national origin, age or sex.

#### Michigan Right to Know Law

Troy School District will comply with the Michigan Right to Know Law by informing Contractors of hazardous chemicals to which they may be exposed. All Contractors will be required to provide Material Safety Data Sheets for any hazardous chemicals brought to the workplace. The Contractor shall comply with all applicable provisions of the Occupational Safety and Health Act for the duration of the specified work.

#### Asbestos Hazard Emergency Response Act

As required by the Environmental Protection Agency Asbestos Hazard Emergency Response Act, each school district is responsible for providing contractors with information regarding locations of known or assumed asbestos containing material prior to the Contractor entering a building under the school district's jurisdiction. The successful bidder will be required to complete the school district's Contractor Notification forms.

#### Notification of Assumed Lead-Containing Materials

The intent of this section is to formally notify all Contractors and Sub-Contractors applying for or bidding on work covered within this specification that, due to the age of the facilities within this District, there is the presumption that building components do contain lead-based paint pursuant to OSHA definition. The District has not conducted lead-based paint inspections. As a result, all Contractors and Sub-Contractors bidding must assume that building components do contain lead-based paint.

Furthermore, all awarded Contractors and Sub-Contractors shall be responsible to comply with all applicable Federal and Michigan State lead regulations including, but not limited to, 29 CFR Part 1926.62 of the OSHA Lead Construction Standard, (Part 603 of the Michigan State Standards). All costs associated with regulatory compliance shall be borne by the Contractor and/or Sub-Contractor.

#### General Conditions

The District reserves the right to accept or reject any or all proposals, to waive irregularities, and to accept a proposal which, in the District's opinion, is in the District's best interest.

The District reserves the right to declare as non-responsive, and reject, any bid which is incomplete or where material information requested is not furnished, or where indirect or incomplete answers or information is provided.

In the event, the Administration Building is closed due to unforeseen circumstances on the day Proposals are due, Proposals will be due at the same time on the next day that the District and/or the Administration Building is open.

Negligence in preparation, improper preparation, errors in, or omissions from, proposal shall not relieve a bidder from fulfillment of any and all obligations and requirements of the proposed Contract Documents.

The District expects that the awarded bidder will complete the work as outlined in the specifications for the amount bid by the bidder. Any additional costs above the amount bid and awarded, must be approved by the District in advance of any work.

Voluntary alternates for bids are acceptable but should NOT be put in the space for the Base Bid on the Bid Response Form but on an attached sheet, clearly labeled Voluntary Alternative. Such Alternates should be described in enough detail for the District to understand the Bidder's intent.

Owner may choose to conduct testing to verify correct products and installation. If the materials and installation are found not to be per spec, owner will require subsequent tests to be performed by Owners testing company at contractors' expense.

Any exceptions to the terms and conditions contained in this RFP or any special considerations or conditions requested or required by the Contractor MUST be specifically enumerated by the Contractor and be submitted as part of its Proposal, together with an explanation as to the reason such terms and conditions of this RFP cannot be met by, or in the Contractor's opinion should not be applicable to, the Contractor. The Contractor shall be required and expected to meet the specifications and the requirements as set forth in this RFP in their entirety, except to the extent exceptions or special considerations or conditions are expressly set forth in the Contractor's Proposal and those exceptions or special considerations or conditions are expressly accepted by the District.

No responsibility shall attach to the District, or the authorized representatives of either one, for the premature opening of any proposal, which is not properly addressed and identified.

The Contract Documents, as outlined in the executed Agreement, shall imply the inclusion of the entire agreement between the parties thereto, and the Contractor shall not claim any modification thereof resulting from any representation or promise made at any time by an officer, agent or employee of the District or by any other person.

#### Opening and Awarding of Bids

Bids will be publicly opened and read aloud at the Troy School District Maintenance/Operations and Purchasing Offices, 1140 Rankin, Troy, MI 48083, at 11:00 a.m. Tuesday, April 10, 2018.

The recommendation for award will be submitted to the Board of Education at the regular Board of Education Meeting to be held on Tuesday, May 15, 2018.



# Flooring Scope of Work

## Project consists of:

Removal and installation of flooring materials at Athens High School, International Academy (IAE), Boulan Park Middle School, Larson Middle School, Bemis Elementary School, Wass Elementary School, Martell Elementary School and Transportation Building. For each building there is a composite plan showing the areas of work – shaded by color and a room finish schedule. Note: see room finish schedule for information on existing and new materials. Some existing flooring is asbestos containing tile – not mastic. These spaces will be abated by TSD. As such do not include demolition of these rooms. Spaces indicated in the room finish schedule with a “yes” means you are to include demolition in your bid. If it says “no” it will be done by the owner as part of the abatement package.

## Drawing Index:

A1 Bemis Elementary School

A2 Wass Elementary School

A3 Martell Elementary School

A4 Boulan Park Middle School

A5 Larson Middle School

A6 International Academy East (IAE)

A7 Athens High School 1<sup>st</sup> Floor

A8 Athens High School 2<sup>nd</sup> Floor

A9 Transportation

## Scope of work:

Bemis - Remove and replace flooring in three classrooms. Remove existing Schluter strip and recessed mat at exterior doors. Patch floor as required.

Wass - Remove and replace flooring in three classrooms. Remove existing Schluter strip and recessed mat at exterior doors. Patch floor as required.

Martell - Remove and replace flooring in two classrooms.

Boulan Park and Larson – Remove and replace flooring in shaded rooms. Note for tiered music room – install nora rubber Grano series. Install 4 1/2” rubber base at walls and 6” rubber base on face of steps. Provide and install Roppe rubber nosing #1 at all steps.

Athens High School - Remove and replace flooring in shaded rooms/areas.

International Academy - Remove and replace flooring in shaded rooms. Note provide add alternate to install Media Center at 45 degree angle (whole room).

Transportation Building - Remove and replace flooring in shaded rooms/areas.

## **Specifications:**

### **Demolition – VCT and Carpet Areas**

1. Remove existing flooring and base – dispose of legally off site.
2. It is essential that all substrates be permanently dry, clean, smooth, and structurally sound. Substrates shall be free of all foreign materials such as dust, solvent, paint, wax, grease, oil, residual adhesive, adhesive removers, curing, sealing, hardening, or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew, and other foreign materials that might prevent adhesive bond. Substrate preparation should be done while the permanent HVAC is set at a minimum 68°F. Vacuuming the substrates with a commercial shop vacuum is a preferred method of removing dirt and dust. For concrete floors, damp mopping is an excellent way to remove fine dust. A clean substrate is essential for proper bonding of the adhesive to the substrate.

### **Installation – Rubber Flooring (Pink – Boulan and Larson Middle Schools)**

1. Provide new Grano 39" tile as shown on drawings. Colors TBD.
2. All installation will be per the manufacturer's specification for this product.
3. Grind smooth existing surface.
4. Skim coat all areas with Ardex or similar to receive nora product.
5. Check Rh for 60 days prior to install.
6. Provide nosing and base at risers per scope.
7. Product will be installed with nora 485 one part adhesive.
8. Provide new 4 1/2" H Roppe rubber base color; TBD
9. See attached specifications.

### **Installation – Walk off carpet (Green - AHS and Transportation)**

1. Provide new Forbo Coral Brush 24" X 24" tile. Color Hurricane Grey - extent as shown on drawings.
2. All installation will be per the manufacturer's specification for this product.
3. Grind smooth existing surface.
4. Skim coat all areas with Ardex or similar to receive Forbo product.
5. Check Rh for 60 days prior to install.
6. Product will be installed using Forbo Sustain 885 adhesive.
7. Provide new 4 1/2" H Roppe rubber base color; TBD
8. See attached specifications.

### **Installation – Luxury tile (Yellow – multiple schools)**

1. Provide new Forbo Marmolueum modular v1.01 10" X 20" - extent as shown on drawings.
2. All installation will be per the manufacturer's specification for this product.
3. Grind smooth existing surface.
4. Skim coat all areas with Ardex or similar to receive Forbo product.
5. Check Rh for 60 days prior to install.
6. Product will be installed T940 or Sustain 885m adhesive.
7. Provide new 4 1/2" H Roppe rubber base color; TBD.
8. See attached specifications.

**Installation – Flotex (Blue – multiple schools)**

1. Provide new Forbo Flotex modular v1.01 20" X 20" or 10" X 40" - extent as shown on drawings.
2. All installation will be per the manufacturer's specification for this product.
3. Grind smooth existing surface.
4. Skim coat all areas with Ardex or similar to receive Forbo product.
5. Check Rh for 60 days prior to install.
6. Product will be installed with 540 Eurosafe Special adhesive.
7. Provide new 4 1/2" H Roppe rubber base color; TBD.
8. See attached specifications.

**Installation – Stair treads and risers (Purple – Athens High School)**

1. Provide new Johnsonite combo treads/risers with hammered finish. Treads to be full width. If a seam is required (due to limitations of product) it will be in the middle.
2. Grind smooth existing surface.
3. All installation to be per the manufacturer's specification for this product.
4. Skim coat all areas with Ardex or similar to receive Johnsonite product.
5. Check Rh for 60 days prior to install.
6. Provide matching material at the mid landing for all locations.
7. Provide new 4 1/2" H Roppe rubber base color; TBD
8. See attached specifications.
9. Stair A and B – 25 risers 52" wide, stair C- 25 risers 72" wide, stair D and E 25 risers 70" wide and East Stair 25 risers 101" wide.
10. Existing material is rubber.

**Schedule:**

1. All rooms at Bemis, Wass, Martell and Transportation must be completed between July 1 and August 17, 2018.
2. At AHS all rooms with the exception of stairs, Faculty 2528 and 2100 must be completed between July 1 and August 13, 2018. Those spaces can be done second shift or off school hours by October 30, 2018.
3. At Boulan and Larson all rooms with the exception of 807, 806, MC, Office, Workroom and 804 must be completed between July 1 and August 13, 2018. Those spaces can be done second shift or off school hours by October 30, 2018.
4. At International Academy all rooms must be completed between July 1 and August 10, 2018.

**Abatement will begin July 16, 2018 and be complete by**

**TSD will address all moving needs.**

**Color schedule will be issued as an addendum.**

Contractor to provide rubber transitions strips by Tandus MetalEdge at all transitions from soft to hard surface or height differences. Contractor to verify locations with owner prior to install. Color TBD.

DIVISION 09 - FINISHES  
SECTION 096500 RESILIENT FLOORING

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This document is provided to assist in the preparation of a Project or Master Specification and has been formatted in accordance with the Construction Specifications Institute (CSI)'s MasterFormat®.

## PART 1 - GENERAL

### 1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

### 1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Resilient tile flooring for commercial traffic.
  2. Resilient plank flooring for commercial traffic with pre-applied adhesive.
  3. Resilient sheet flooring for commercial traffic.
  4. Resilient sheet flooring for commercial traffic with pre-applied adhesive.
  5. Resilient tile flooring for special fire requirements.
  6. Resilient tile flooring for extra heavy traffic, ice skate and golf spike resistant.
  7. Resilient tile flooring for pre-installed raised access flooring, or releasable application.
  8. Resilient tile flooring for electrostatic dissipative protection.
  9. Resilient sheet flooring for electrostatic dissipative protection.
  10. Resilient stair treads (one-piece nosing, tread and riser).
  11. Resilient stair accessories.
  12. Resilient wall base, sanitary base and accessories.
  13. Substrate preparation.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
- |    |                |   |
|----|----------------|---|
| 1. | Section 033000 | CAST-IN-PLACE CONCRETE for concrete substrate; slab surface tolerances; vapor retarder for applications on or below grade; requirement for 83/90 degree riser and tread edge angle for stair tread and nosings. |
| 2. | Section 055100 | METAL STAIRS AND RAILINGS; requirement for 83/90 degree riser and tread edge angle for stair tread and nosings.   |
| 3. | Section 061000 | ROUGH CARPENTRY for plywood substrate and surface tolerances.   |
| 4. | Section 096900 | ACCESS FLOORING for resilient floor covering for access panels.   |
- C. References (Industry Standards):
1. American Association of Textile Chemists and Colorists (AATCC):
    - a. AATCC 134 Electrostatic Propensity of Carpets
  2. American National Standards Institute (ANSI):
    - a. ANSI ESD S97.2 Floor Materials and Footwear – Voltage Measurement on a Person
  3. ASTM International (ASTM):
    - a. ASTM C518 Standard Test Method for Steady State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
    - b. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension

- c. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine
- d. ASTM D2240 Standard Test Method for Rubber Property – Durometer Hardness
- e. ASTM D3389 Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double Head Abrader)
- f. ASTM D6499 Standard Test Method for the Immunological Measurement of Antigenic Protein in Natural Rubber and its Products
- g. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- h. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
- i. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- j. ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs
- k. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- l. ASTM E2180 Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials
- m. ASTM F150 Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
- n. ASTM F155 Method of Test for Temper of Strip and Sheet Metals for Electronic Devices
- o. ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces
- p. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- q. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring
- r. ASTM F970 Standard Test Method for Static Load Limit
- s. ASTM F1344 Standard Specification for Rubber Floor Tile
- t. ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
- u. ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color Change
- v. ASTM F1515 Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change
- w. ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
- x. ASTM F1860 Standard Specification for Rubber Sheet Floor Covering With Backing
- y. ASTM F1861 Standard Specification for Resilient Wall Base
- z. ASTM F2055 Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
- aa. ASTM F2169 Standard Specification for Resilient Stair Treads
- bb. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- cc. ASTM F2199 Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat
- dd. ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings
- ee. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- 4. European Norm (FTM):
  - a. FTM 101 C 4046 Static Decay.
- 5. International Organization for Standardization (ISO):
  - a. ISO 140 Measurement of sound insulation in buildings and of building elements
- 6. National Fire Protection Association (NFPA):
  - a. NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source

b. NFPA 258                      Test Method for Specific Density of Smoke Generated by Solid Materials

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation guide and maintenance guide for each material and accessory proposed for use.
- B. Samples: Submit three representative samples of each product specified for verification.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide resilient flooring manufactured by a firm with a minimum of 10 years' experience with resilient flooring of type equivalent to those specified.
  - 1. Manufacturer's quality management system must have ISO 9001:2000 approval.
  - 2. Provide resilient flooring products, including wall base, accessories and subfloor preparation products from one manufacturer to ensure color matching and compatibility.
  - 3. Manufacturer shall be capable of providing technical training and technical field service representation.
- B. Installer Qualifications: Acceptable to manufacturer of resilient flooring or INSTALL (International Standards & Training Alliance) resilient certified for the requirements of the project.
- C. Sustainable Design Requirements:
  - 1. ISO 14001 Environmental Management Systems certification.
  - 2. Construction waste take back program for the purpose of reducing jobsite waste by taking back uninstalled waste flooring. Details of the nora<sup>®</sup> program are available at [www.nora.com/us](http://www.nora.com/us).
  - 3. Flooring surfaces that are easily cleaned and do not require coatings and stripping, or use chemicals that may be hazardous to human health.
  - 4. Supply all required products that are CA 01350 compliant.
  - 5. Flooring that is free of materials known to be teratogenic, mutagenic or carcinogenic.
  - 6. Flooring that contains no polyvinyl chloride or plasticizers.
  - 7. Flooring that contains no halogens.
  - 8. Flooring that contains no asbestos.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
- B. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48-hours prior to installation.

1.6 PROJECT CONDITIONS

- A. Maintain temperature and humidity at service levels or the ambient temperature must remain steady ( $\pm 10^{\circ}\text{F}$ ) and be between  $59^{\circ}\text{F}$  and  $80^{\circ}\text{F}$  for at least 48-hours prior, during and 72-hours after installation. .) The ambient relative humidity is recommended to be  $50\% \text{ RH} \pm 10\%$ ; however, dew point must be avoided.

1.7 WARRANTY

- A. Provide manufacturer's standard limited warranty for wear, defect and conductivity.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. Basis-of-Design: nora systems, Inc., 9 Northeastern Blvd., Salem, NH 03079; telephone 800-332-NORA or 603-894-1021; fax 603-894-6615.

## 2.2 RESILIENT TILE FLOORING FOR COMMERCIAL TRAFFIC

## A. Rubber Floor Tile:

- |  |   |
|--|---|
| 1. Product Name:   | <b>norament® grano, Article 1880</b>  |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile  | Type IB and Grade 2   |
| 3. Limited Wear Warranty:  | 10 years  |
| 4. Material:   | nora® vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:  | Homogeneous rubber compound with a random scattered design  |
| 6. Color:  | 32 standard colors  |
| 7. Surface:  | Hammered  |
| 8. Back of Tile/Sheet/Nosing:  | Double-sanded smooth  |
| 9. Material Size(ASTM F2055):<br>± 0.02 inches (± 0.5mm) is required               | ~39.53 inches by ~39.53 inches (1004mm by 1004mm)   |
| 10. Squareness(ASTM F2055):<br>± 0.010 inches (± 0.254mm) is required              | Meets requirements  |
| 11. Thickness(ASTM F386):<br>+ 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required | ~0.14 inches (3.5mm)  |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required  | Meets requirements  |
| 13. Flammability(E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required    | NBSIR 75 950, 0.92  |
| 14. Smoke Density(ASTM E662/NFPA 258):<br>< 450 is required                        | NBS, 256 (flaming) and 138 (non-flaming)  |
| 15. CAN/ULC-S102.2:  | Surface Burning, FSC1 of 70 and SD of 470   |
| 16. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                             | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95 (not recommended for ramps)  |
| 18. Bacteria Resistance(ASTM E2180/ASTM G21):                                      | Resistant to bacteria, fungi, and micro-organism activity   |
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 20. Latex Allergies(ASTM D6499):   | Inhibition Elisa, results are below detection level   |
| 21. Sound Absorption(ASTM E2179/ISO 140):  | Δ IIC 11, Δ Lw 11 dB (compare only Δ values)  |
| 22. Sound Generation:  | 66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested   |
| 23. Hardness(ASTM D2240):<br>≥ 70 is required                                      | Shore type "A", 82  |
| 24. Static Load(ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required            | Residual compression of 0.005 inches with 800 lbs.  |
| 25. Rolling Load Limit:  | ≤ 850 lbs. / sq. inch   |
| 26. Abrasion Resistance(ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required             | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss  |

27. Oil & Grease Resistance:	Yes
28. Heat Resistance(ASTM F1514): Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
29. Static Generation(AATCC 134):	< 2000 Volts at 20% RH
30. Thermal Transmission (ASTM C518):	R-value of -0.90
31. Cleaning:	Cleaned and maintained effectively using water, nora® cleaning pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic.
32. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings
33. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be $\sim 1\text{m}^2$ , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
34. Substrate Preparation:	Per ASTM F710 and the nora® Installation Guide

## PART 3 - EXECUTION

### 3.1 GENERAL CONTRACTOR RESPONSIBILITIES

- A. Supply a safe, climate controlled building and subfloor as detailed in the nora Installation Guide (available at [www.nora.com/us](http://www.nora.com/us)).
- B. A subfloor that meets the requirements of ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring is required, or as detailed in the nora Installation Guide or nora® nTx Installation Guide as appropriate.
- C. A secure storage area that is maintained permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or  $68^{\circ}\text{F} \pm 5^{\circ}\text{F}$  and  $50\% \pm 10\%$  relative humidity, for at least 48-hours prior to and during the application of the flooring, so the flooring contractor can acclimate the flooring materials is required.
- D. An installation area that is weather tight and maintained either permanently or temporarily at ambient service temperature and humidity (except walk in freezers or similar), or  $68^{\circ}\text{F} \pm 5^{\circ}\text{F}$  and  $50\% \pm 10\%$  relative humidity, for at least 48-hours prior to, during and 72-hours after the application of the flooring is required.
- E. Areas with direct prolonged exposure to sunlight should be protected with the use of Low E glass doors and windows or facades.
- F. Areas of the flooring that are subject to direct sunlight through doors or windows should have them covered using blinds, curtains, cardboard or similar for the time of the installation and 72-hours after the installation to allow the adhesive to cure. Note: These areas should be installed using wet adhesives only.



- G. Prevent all traffic for a minimum of 12-hours and rolling loads for 72-hours to allow the adhesive to cure. If required, after 12-hours protect the flooring from damage during construction operations using Masonite, plywood or a similar product, ensuring first that the flooring surface is free of all debris. Lay panels so that the edges form a butt joint and tape the joint to prevent both movement and debris entrapment underneath them. Inspect immediately before covering and after removal for final acceptance.
- H. Have the flooring cleaned no sooner than 72-hours (unless given written permission from the nora<sup>®</sup> Technical Department) after the installation using either the nora pro clean<sup>®</sup> system or a standard method as detailed in the appropriate nora<sup>®</sup> Maintenance Guide.

### 3.2 FLOORING CONTRACTOR RESPONSIBILITIES

- A. Provide trained installers that have at least one of the following:
  - 1. Approved by nora systems, Inc. for all of the requirements of the project or INSTALL (International Standards & Training Alliance) certified for the requirements of the project.
  - 2. An effective installation manager, to manage the project, installers, and ensure that all of the required procedures are followed as detailed in the nora Installation Guide (available at [www.nora.com/us](http://www.nora.com/us)).
- B. Follow all requirements in the appropriate nora Installation Guide or nora nTx Installation Guide.

END OF SECTION

# Installation Guidance Note: Flotex Sheet and Tile

## General Advice

The installation of Flotex sheet and tile should be carried out in accordance with BS8203 code of practice for the installation of resilient floor coverings. As with all resilient floor coverings, bases should be clean, smooth, sound and permanently dry.

## Adhesive recommendations

The recommended adhesive for use with Flotex sheet products is 540 Eurosafe Special. The recommended adhesive for Flotex tiles installed in general traffic areas is 542 Eurofix Tack Plus tackifier adhesive. It is important when using tackifier adhesives that a complete coverage of the subfloor is achieved.

In areas subject to intense or heavy wheeled traffic and areas where heavy point loading occurs, Flotex tiles should be fully adhered using 540 Eurosafe Special.

## Batch Matching

As with any floor covering use of different production batches will always result in visible shade differences. It is essential that different batches are not mixed in the same area. When ordering sheet or tiles, each floor area must be specified from the same batch. The batch number is clearly marked on the reverse of sheet or tile products and must be checked before commencement of installation.

## Acclimatisation

Both rolls and tiles must be acclimatised for 24 hours prior to

installation at a temperature of between 18° and 27° C. Flotex rolls should be stored in an upright position and tiles should be laid flat.

## Installing Flotex Sheet

### Arrows on the back of the sheet indicate the pile direction.

1. Cut the rolls to the required lengths, remembering to allow for the pattern repeat.



2. Butt-join factory edges to ensure an accurate pattern match.

3. Allow at least 5cm trim at ends.

4. Lay the sheets edge to edge, following the direction of the arrows, which should point towards the main light source, NEVER AWAY.



5. Trim off surplus.



6. Mark the position of the first sheet in pencil on the floor.

7. Roll the sheets back onto themselves.

8. Spread the adhesive on the exposed subfloor using the correct notched trowel as per adhesive manufacturer's recommendations.



9. Follow the adhesive manufacturer's instructions regarding coverage, open times, drying times etc.

10. Unroll the first sheet following the pencil mark on the floor.

11. Continue to lay the following sheets in the same way, edge to edge with close joints.

## Installation Guidance Note: Flotex Sheet and Tile

12. Using a rubbing board or glider, press the Flotex firmly into the adhesive from the centre, towards the edges, to eliminate air bubbles and ensure good adhesion to the sub-floor.



13. Trim off excess floor covering along the walls and skirting boards.



14. Continue in the same way for the rest of the room.

15. Finish off with a rubbing board or glider over the entire floor.

**Note:** To prevent potential problems of deviation of wheeled traffic travelling across the dense pile of Flotex; it is strongly recommended that the floor covering is laid lengthways in the main direction of traffic. Flotex tiles must be laid butt jointed, fitted tightly and cut accurately at perimeters. Artline can be used to disguise changes at junctions and as a design feature in corridors over 2 metres wide.

### Laying Flotex to a Staircase

Flotex sheet is suitable for use on stairs, following these guidelines:

- A. Nosing should always be used.
- B. A separate piece of Flotex must be used for each tread and riser.
- C. Use contact adhesive only.

On the tread the pile should lay (arrows) towards the nose of the step.

For the riser the pile should lay (arrows) downwards towards the tread.

### Artline Borders

#### Edging a room with Artline Borders

This method may be followed when Flotex Artline is being used to border the edge of a room.

A. Lay the Flotex sheets, leaving room for the Artline borders. Allow 1cm – 2cm trim from the Artline in case the walls are not perfectly straight.

B. Lay the borders.

C. Press firmly home with a rubbing board.

D. Trim and press home again.

#### Inlaying Borders

A. Lay and adhere all the sheets in the room.

B. Measure out the locations for the Artline strips.

C. Mark with white chalk.



D. Place the cutting guide in position.

E. Cut piece out from both sides.



F. Remove the cut piece of floor covering.



G. Apply a new layer of acrylic adhesive.



## Installation Guidance Note: Flotex Sheet and Tile

H. Lay the Flotex Artline border in position.



I. Using a rubbing board, press border firmly into place.



### Laying Flotex tiles

The arrow marks on the reverse of every tile indicate the direction of pile lay. The preference of the specifier as to "broadloom", "tessellated" or other visual effects must be confirmed before tiles are installed.

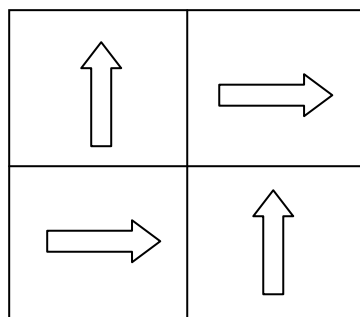
**N.B. Options for the direction of tile installation will vary between product ranges. The installation options are indicated on product sample books and below, but if there is any doubt check with Forbo Flooring prior to installation.**

Tile must be laid butt jointed, fitted tightly and cut accurately at perimeters. Tiles can be cut using a utility knife.

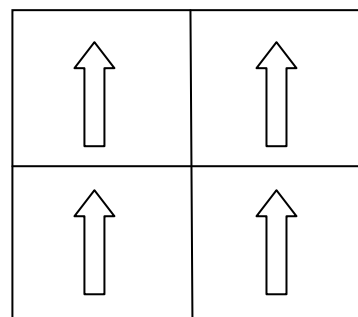
### Under floor heating

As with all Forbo floor coverings, Flotex can be used in conjunction with under-floor heating systems. A separate guidance note "**Installation of Forbo Floor Coverings on Underfloor Heating Systems**" provides more information on the conditions for installation in such circumstances.

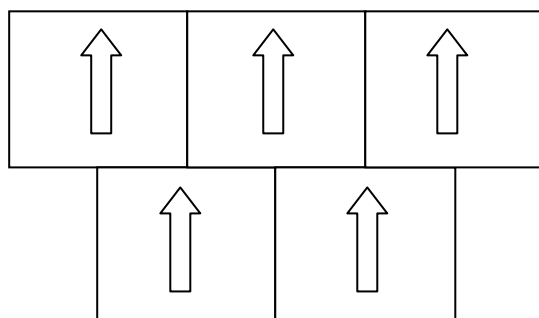
## +Tile Installation options:



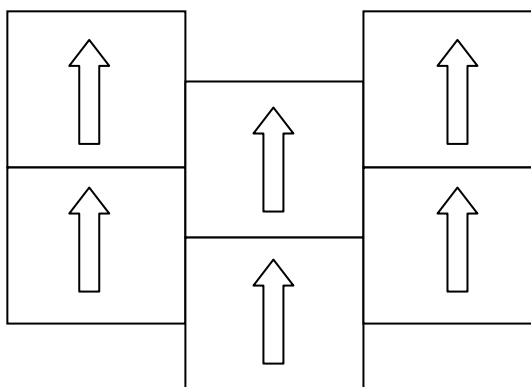
**Tessellated**



**Broadloom**



**Brick**



**Half drop**

### Flotex Tile Range

Integrity<sup>2</sup>

Complexity:

Pinstripe:

Stratus & Cirrus

### Recommended laying options

Tessellated

Tessellated; Brick

Tessellated; Brick; Half drop

Broadloom; Tessellated; Brick; Half drop



# MARMOLEUM® MODULAR TECHNICAL DATA

## 1. PRODUCT NAME & MANUFACTURER

### 1.1 Product:

Marmoleum® Modular linoleum tile resilient floor covering

### 1.2 Manufacturer:

Forbo Flooring Systems  
Humboldt Industrial Park  
Hazleton, PA 18202

[www.forboflooringna.com](http://www.forboflooringna.com)

Phone: +800 842 7839

+570 459 0771

Fax: +570 450 0258



### 1.3 Product Description:

Construction: Marmoleum® Modular is a homogeneous floor covering made from natural ingredients including linseed oil, rosin binders, wood flour, limestone and dry pigments which are mixed and then calendared onto a polyester backing to ensure optimum dimensional stability.

Topshield2™ is a high performance finish. Its double UV cured double layer technology delivers extraordinary performance and clear and vibrant colors that remain over time.

Topshield2™ creates a 'ready to use' Marmoleum® that requires no initial maintenance or polymer application. The surface can be repaired or refreshed in cases of accidents or after years of intensive use.

### 1.4 Physical Characteristics: (dimensions are approximate)

Size-----Approx. 10" x 10" (25 cm x 25 cm)

Approx. 10" x 20" (25 cm x 50 cm)

Approx. 20" x 20" (50 cm x 50 cm)

Gauge-----1/10" (2.5 mm)

Backing-----Polyester

Packaging ----- 10" x 10": 40 tiles (26.91 feet<sup>2</sup>, 2.5 meters<sup>2</sup>)

10" x 20": 40 tiles (53.82 feet<sup>2</sup>, 5 meters<sup>2</sup>)

20" x 20": 20 tiles (53.82 feet<sup>2</sup>, 5 meters<sup>2</sup>)

## 2. PRODUCT PERFORMANCE & TECHNICAL DATA

### 2.1 Reference Specification:

Meets or exceeds all technical requirements as set forth in ASTM F 2195 Standard Specification for Linoleum Tile Flooring Type I

### 2.2 Environmental:

Platinum certified in accordance with SMaRT® Sustainable Products Standard, led by the Institute for Market Transformation to Sustainability (MTS).

100% USDA Certified BioBased Product.

Compliant with CHPS 01350 requirements for VOC emissions and indoor air quality.

Contributes to the following LEED® v4 credits:

Materials & Resources

Credit 4, Option 1: See Forbo's LEED v4 sheet for additional information.

Credit 4, Option 2: Recycled Content (60% Pre-Consumer)

Prerequisite 2: 100% Recyclable Packaging

Indoor Environmental Quality

Credit 2: Low-Emitting Materials ([www.chps.net](http://www.chps.net))

Credit 2: Low-Emitting Materials (Adhesives comply with SCAQMD Rule #1168)

### 2.3 Static Load Limit:

1,500 pounds per square inch when tested in accordance with ASTM F 970-00, Standard Test Method for Static Load Limit.

### 2.4 Slip Resistance:

Meets or exceeds A.D.A. recommendation of 0.6 for flat surfaces when tested in accordance with ASTM D 2047, Standard Test Method for Static Coefficient of Friction.

### 2.5 Castor Resistance:

Suitable for office chairs with castors when tested in accordance with EN 425, Castor Chair Test.

### 2.6 Impact Sound Reduction:

6db when tested in accordance with ISO 717-2, Impact Sound Insulation Test.

### 2.7 Resistance to Bacteria:

Provides a self-sanitizing quality in the form of a bactericidal effect. Independent testing has shown that a sterile zone around the material inhibits the growth of organisms such as staphylococcus aureas (Staph Infection), Clostridium Difficile (C. difficile) and Carbapenem-Resistant Enterobacteriaceae (CRE).

### 2.8 Anti-Static Properties:

Naturally anti-static. This property makes cleaning easier because dirt and dust does not cling to the surface as it may with other materials.

### 2.9 Dimensional Stability:

Due to the polyester back, providing a strong durable foundation, the product is dimensionally stable in all directions when properly installed. It resists cracking, drying, and peeling.

### 2.10 Fire Testing:

Class 1 when tested in accordance with ASTM E 648/NFPA 253, Standard Test Method for Critical Radiant Flux.

Meets 450 or less when tested in accordance with ASTM E 662/ NFPA 258, Standard Test Method for Smoke Density.

### 2.11 Cigarette Resistance:

Resists cigarette burns. Burning cigarettes will leave only a brown mark, which can be rubbed out using steel wool or a scouring pad.

### 2.12 Chemical Resistance: (Exposure Time One Hour)\*

Diluted Acids – Sulfuric, Nitric, Hydrochloric, Acetic,	
Lactic, Citric-----	No Change
Isopropyl Alcohol (70%) -----	No Change
Sodium Hydroxide (5%)-----	Softening
Ammonia (5%), Acetone-----	Possible Softening/Staining
Phenol (5%)-----	No Change
Soda Solution, Soap Solution (Slightly Alkaline) -----	No Change
Gasoline, Kerosene, White Spirit, Paraffin -----	No Change
Benzene, Toluene, Methyl Alcohol, Ethyl Acetate-----	No Change
Methyl Ethyl Ketone, Ether -----	No Change
Mineral Oil, Olive Oil, Vegetable Oil, Animal Fat -----	No Change
Blood, Urine, Excrement -----	No Change
Lipstick-----	No Change
Formaldehyde, Hydrogen Peroxide 3% -----	No Change
Hot Chili Paste, Iodine, Betadine, Hair Dye -----	No Change
Shoe Polish -----	Staining
Silver Nitrate-----	Staining/Possible Softening
Bitumen, Salt Water-----	No Change
Methylene Blue -----	Staining
Gel-Based Hand Sanitizer, Bleach -----	No Change

Tested in accordance with ASTM F 925, Standard Test Method Resistance to Chemicals of Resilient Flooring.

\*Marmoleum® Modular is NOT resistant to prolonged exposure to high alkalis.

### 3. INSTALLATION

#### 3.1 Site Conditions:

The installation should not begin until the work of all other trades has been completed, especially overhead trades. Areas to receive flooring should be clean, fully enclosed and weathertight with the permanent HVAC must be fully operational, controlled and set at a minimum of 68° F (20° C) for a minimum of seven days prior to, during, and seven days after the installation. The flooring material (including adhesive and welding rod) should be conditioned in the same manner for a minimum of 48 hours prior to the installation. Areas to receive flooring shall be adequately lighted to allow for proper inspection of the substrate, installation and seaming of the flooring, and for final inspection.

#### 3.2 Substrates:

Floors shall be sound, smooth, flat, permanently dry, clean, and free of all foreign materials including, but not limited to, dust, paint, grease, oils, solvents, curing and hardening compounds, sealers, asphalt and old adhesive residue. Wood floors should be double construction with a minimum total thickness of 1 inch. Wood floors must be rigid, free from movement and have at least 18" of well-ventilated air space below. Forbo floor coverings should not be installed over wooden subfloors built on sleepers over on or below grade concrete floors without first making sure that adequate precautions have been taken to ensure the structural integrity of the system, and to prevent moisture migration from the concrete slab. Concrete substrates should be prepared in accordance with the latest version of ASTM F 710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. Concrete shall have a minimum compressive strength of 3,000 psi. Patch and repair minor cracks and other imperfections using only the highest quality patching and leveling compounds in strict accordance to the manufacturer's recommendations for their use and application. Floor covering should not be installed over expansion joints. Suitable expansion joint covers should be used. It is essential that moisture tests be conducted on all concrete floors regardless of the age or grade level. Conduct calcium chloride tests in accordance with the latest version of ASTM F 1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. Measure the internal relative humidity of the concrete slab in accordance with the latest version of ASTM F 2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes. One test of each type should be conducted for every 1,000 square feet of flooring (minimum of 3). The tests should be conducted around the perimeter of the room, at columns, and anywhere moisture may be evident. Concrete moisture vapor emissions must not exceed 5.0 lbs. per 1,000 square feet in 24 hours when using Forbo T 940 adhesive, 8.0 lbs. per 1,000 square feet in 24 hours when using Forbo Sustain 885m adhesive. Concrete internal relative humidity must not exceed 75% when using Forbo T 940 adhesive or 85% when using Forbo Sustain 885m adhesive. A diagram of the area showing the location and results of each test should be submitted to the Architect, General Contractor or End User. If the test results exceed these limitations, the installation must not proceed until the problem has been corrected.

**Note: Moisture tests indicate conditions at the time of the test only. The absence of an acceptable vapor retarder under the slab, changes in the environment, or other circumstances beyond Forbo's control, may lead to adverse changes in the moisture condition of the concrete. Forbo's warranty shall not be extended to cover damage or failures caused by moisture conditions in excess of specified limits that occur after the time of initial testing or installation.**

#### 3.3 Adhesive:

Use Forbo T 940 adhesive or Forbo Sustain 885m adhesives. Use a 1/16" x 1/16" x 1/16" square notch trowel. Spread Rate: Approximately 125 square feet/gallon.

#### 3.4 Heat Welding (OPTIONAL):

For seamless, hygienic watertight installation requirements, use Forbo Marmoweld welding rod. Welding rod dimensions: 4 mm; 165 linear feet per spool.

#### 3.5 Installation Guidelines:

Refer to Forbo Flooring's Installation Guide for complete installation guidelines.

### 4. AVAILABILITY & COST

Available through authorized Forbo Flooring suppliers throughout North America. Contact Forbo Flooring or an authorized supplier for cost information.

### 5. WARRANTY

Limited 5-year warranty. For complete details, contact Forbo Flooring.

### 6. CARE & CLEANING

After installation is completed, allow a minimum of 5 days for the adhesive to properly bond and cure before conducting wet cleaning procedures. See Forbo Flooring's Floor Care Guide for additional information.

### 7. SUPPORT SERVICES

Submittal samples for verification and approval are available upon request from Forbo Flooring. Samples shall be submitted in compliance with the requirements of the Contract Documents. Please fax all sample requests to +570 450 0229 or visit our website at [www.forboflooringna.com](http://www.forboflooringna.com). Accepted and approved samples shall constitute the standard materials that represent materials installed in the project.

For current installation and floor care guidelines, guide specifications, and other technical information, visit our website at [www.forboflooringna.com](http://www.forboflooringna.com).

## Boulan Middle School

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Vocal	102	Orchestra 102	Carpet	No	Rubber	RUB - 2	
	202	-	Carpet	Yes	Rubber	CPT - 1	
Classroom	513	-	Carpet	Yes	Rubber	CPT - 1	
Computer Room	509	-	Carpet	No	Rubber	CPT - 1	
Staff	-	508	Carpet	Yes	Rubber	CPT - 1	
	804	-	Carpet	Yes	Rubber	CPT - 1	
	802	-	Carpet	Yes	Rubber	CPT - 1	
	801	-	Carpet	Yes	Rubber	CPT - 1	
Instructional Materials Ctr.		Media Center	Carpet	Yes	Rubber	CPT - 1	
Mini Lecture	807	-	Carpet	Yes	Rubber	CPT - 1	Note tables are fixed
	806	-	Carpet	Yes	Rubber	CPT - 1	
Office	-	-	Carpet	Yes	Rubber	CPT - 1	
Work Room	-	-	Carpet	Yes	Rubber	CPT - 1	

## Larson Middle School

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Vocal	102	-	Carpet	No	Rubber	RUB - 2	
	202	-	Carpet	No	Rubber	CPT - 1	
	401	-	Carpet	Yes	Rubber	CPT - 1	
	509	-	Carpet	No	Rubber	CPT - 1	
	504	-	Carpet	No	Rubber	CPT - 1	
	804	-	Carpet	Yes	Rubber	CPT - 1	
	802	-	Carpet	Yes	Rubber	CPT - 1	
	801	-	Carpet	Yes	Rubber	CPT - 1	
Media Center	-	-	Carpet	Yes	Rubber	CPT - 1	
	807	-	Carpet	Yes	Rubber	CPT - 1	Note tables are fixed
	806	-	Carpet	Yes	Rubber	CPT - 1	
Office	-	-	Carpet	Yes	Rubber	CPT - 1	
Work Room	-	-	Carpet	Yes	Rubber	CPT - 1	



# Athens High School

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Stair A	-	-	Rubber	Yes	Rubber	RUB - 1	25 treads and include landings
Stair B	-	-	Rubber	Yes	Rubber	RUB - 1	26 treads and include landings
Stair C	-	-	Rubber	Yes	Rubber	RUB - 1	27 treads and include landings
Stair D	-	-	Rubber	Yes	Rubber	RUB - 1	25 treads and include landings
Stair E	-	-	Rubber	Yes	Rubber	RUB - 1	25 treads and include landings
East Stair	-	-	Rubber	Yes	Rubber	RUB - 1	25 treads and include landings
East door vest	-	-	Carpet	Yes	Rubber	CPT - 2	
East door lobby	-	-	Carpet	Yes	Rubber	CPT - 2	
Asst. Principals	1500	AP	Carpet	Yes	Rubber	CPT - 1	
Office	1500A	-	Carpet	Yes	Rubber	CPT - 1	
Office	1500 B	-	Carpet	Yes	Rubber	CPT - 1	
Office	1500 C	-	Carpet	Yes	Rubber	CPT - 1	
Office	1500 D	-	Carpet	Yes	Rubber	CPT - 1	
Office	1501	-	Carpet	Yes	Rubber	CPT - 1	
Drama	1505	133	Carpet	Yes	Rubber	CPT - 1	2 Risers at Stage
Business	1528	132	Carpet	Yes	Rubber	CPT - 1	
Teacher Café	1546	Teacher's Lounge	Carpet	Yes	Rubber	CPT - 1	
Recept	1545	131	Carpet	Yes	Rubber	CPT - 1	
Math	151-A	129/A12	Carpet	Yes	Rubber	CPT - 1	
Math	C 1514	128	Carpet	Yes	Rubber	CPT - 1	
Math	C 1510	105	VCT	No	Rubber	MAR - 1	
	2107	207	CPT	Yes	Rubber	MAR - 1	
	2106	204	Carpet	Yes	Rubber	CPT - 1	
	2100	201	Carpet	Yes	Rubber	MAR - 1	
Computer Lab	2105	205	Carpet	Yes	Rubber	MAR - 1	
	2112	209	Carpet	Yes	Rubber	CPT - 1	
	2113	211	Carpet	Yes	Rubber	CPT - 1	
Faculty	2528	265	Carpet	Yes	Rubber	MAR - 1	
	251B	249	Carpet	Yes	Rubber	CPT - 1	
	251C	251	Carpet	Yes	Rubber	CPT - 1	
	251D	253	Carpet	Yes	Rubber	CPT - 1	
	250D	B25	Carpet	?	Rubber	CPT - 1	
	250E	B24	Carpet	?	Rubber	CPT - 1	
Foyer B	-	Main Entrance	Carpet	Yes	Rubber	CPT - 2	
Foyer B 1	-	Main Entrance	Carpet	Yes	Rubber	CPT - 2	

## International Academy East

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Lounge	-	Conference	Carpet	Yes	Rubber	CPT - 3	
	1	-	Carpet	No	Rubber	CPT - 1	
	1.1	Conference Room/Offices	Carpet	Yes	Rubber	CPT - 1	
	1.2	Conference Room/Offices	Carpet	Yes	Rubber	CPT - 1	
	1.3	Conference Room/Offices	Carpet	Yes	Rubber	CPT - 1	
	1.4	Conference Room/Offices	Carpet	Yes	Rubber	CPT - 1	
	2	3	Carpet	No	Rubber	CPT - 1	
	3	5	Carpet	No	Rubber	CPT - 1	
	4	7	Carpet	No	Rubber	CPT - 1	
	5	9	Carpet	No	Rubber	CPT - 1	
	6	11	Carpet	No	Rubber	CPT - 1	
Staff A	-	Work Room	Carpet	No	Rubber	CPT - 1	
	7	13	Carpet Tile	Yes	Rubber	CPT - 1	
	8	15	Carpet Tile	Yes	Rubber	CPT - 1	
	23	17	Carpet Tile	Yes	Rubber	CPT - 1	
	21	18	Carpet Tile	Yes	Rubber	CPT - 1	
Staff B	-	Staff Lounge	Carpet Tile	Yes	Rubber	CPT - 1	
Media Center	-	-	Carpet Tile	Yes	Rubber	CPT - 1	
Media Center Storage	-	-	Carpet Tile	No	Rubber	CPT - 1	
	12		Carpet	No	Rubber	CPT - 1	
	11	8	Carpet	No	Rubber	CPT - 1	
	10	6	Carpet Tile	No	Rubber	CPT - 1	
	9	4	Carpet Tile	No	Rubber	CPT - 1	

## Bemis Elementary School

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Kindergarten "A"	-	-	CPT/VCT	Yes	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type
Kindergarten "B"	-	-	CPT/VCT	Yes	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type
-	21	21	CPT	Yes	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type

## Martell Elementary School

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Kindergarten "A"	-	-	CPT	Yes	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type
Kindergarten "B"	-	-	CPT/VCT	Yes	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type

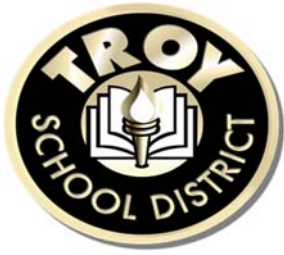
## Wass Elementary School

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Kindergarten "A"	-	-	CPT/VCT	No	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type
Kindergarten "B"	-	-	CPT/VCT	No	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type
-	25	25	CPT	Yes	Rubber	CPT - 1/ MAR - 1	See drawings for extent of each material type

## Transportation Building

Drawing Room Name	Drawing Room Number	Building Room Number	Existing finish	Demo Y or N	Base	New Finish	Notes
Office	106	-	CPT	Yes	Rubber	CPT - 1	
Conference	107	-	CPT	Yes	Rubber	CPT - 1	
Office	108	-	CPT	Yes	Rubber	CPT - 1	
Office	109	-	CPT	Yes	Rubber	CPT - 1	
Recept	110	-	CPT	Yes	Rubber	CPT - 2	
Hall	-	-	CPT	Yes	Rubber	CPT - 1	

CPT - 1      Forbo - Flotex  
 CPT - 2      Forbo - Coral  
 CPT - 3      Shaw Ecworx  
 MAR - 1      Forbo - Marmoleum  
 RUB - 1      Johnsonite combo treads and risers with matching landings  
 RUB - 2      nora - Grano rubber



**DUE:** 11:00 a.m., Tuesday April 10, 2018

**PROPOSAL:** BID 9856 Flooring Replacement Program

**PROPOSAL FORM**

We propose to furnish all material, labor and equipment, as per the specifications, for the Troy School District. and all other services to complete Flooring Replacement

Total Cost - Wass Elementary \$ \_\_\_\_\_

Total Cost – Bemis Elementary \$ \_\_\_\_\_

Total Costs - Martell Elementary \$ \_\_\_\_\_

Total Costs – Larson Middle \$ \_\_\_\_\_

Total Costs – Boulan Middle \$ \_\_\_\_\_

Total Costs – Athens High \$ \_\_\_\_\_

Total Costs - International Academy \$ \_\_\_\_\_ Alt Alt \$ \_\_\_\_\_

Total Costs – Transportation \$ \_\_\_\_\_

Bond Costs – All schools/buildings combined \$ \_\_\_\_\_

**Grand Total (all buildings)** \$ \_\_\_\_\_

Unit Pricing:

Provide price to remove carpet and install Flotex for one 900 s.f. classroom \$ \_\_\_\_\_

Provide labor rate per hour \$ \_\_\_\_\_

BIDDER'S FIRM NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE \_\_\_\_\_ ZIP \_\_\_\_\_

CELL NUMBER \_\_\_\_\_ FAX # \_\_\_\_\_

SIGNED BY \_\_\_\_\_ TITLE \_\_\_\_\_

TYPED NAME \_\_\_\_\_ DATE \_\_\_\_\_

E-MAIL ADDRESS \_\_\_\_\_

VENDOR: LIST FIVE RECENT REFERENCES, PREFERABLY SCHOOL DISTRICTS:

_____ School District	_____ Person to Contact	_____ Phone Number
_____ School District	_____ Person to Contact	_____ Phone Number
_____ School District	_____ Person to Contact	_____ Phone Number
_____ School District	_____ Person to Contact	_____ Phone Number
_____ School District	_____ Person to Contact	_____ Phone Number

**Interested vendors will note in this space only any additional information, criteria or contingencies affecting their proposal, understanding that this additional information, criteria or contingency may be utilized in the evaluation process and subsequent award.**

\_\_\_\_\_  
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**SWORN AND NOTARIZED FAMILIAL DISCLOSURE STATEMENT  
FAMILIAR DISCLOSURE AFFIDAVIT**

The undersigned, the owner or authorized office of the below-named contractor (the ‘Contractor’), pursuant to the familial disclosure requirement provided to Troy Schools, hereby represents and warrants that, excepts as provided below, no familial relationship exists between the owner or key employee of the Contractor, and any member of the Troy School Board or the Troy School Superintendent. A list of the School District’s Board of Education Members and its Superintendent may be found at <http://www.troy.k12.mi.us>.

List any Familial Relationships:

**Contractor:**

\_\_\_\_\_  
Print Name of Contractor

By: \_\_\_\_\_

Its: \_\_\_\_\_

Subscribed and sworn before me, this \_\_\_\_\_

Seal:

day of \_\_\_\_\_, 20 \_\_\_\_, a Notary Public

in and for \_\_\_\_\_ County, \_\_\_\_\_

\_\_\_\_\_  
(Signature)  
NOTARY PUBLIC

My Commission expires \_\_\_\_\_

#

#

## **CERTIFICATION OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT**

Michigan Public Act No. 517 of 2012

The undersigned, the owner, or authorized officer of the below-named Company, pursuant to the compliance certification requirement provided in Troy School District's Request For Proposal, the "RFP", hereby certifies, represents, and warrants that the Company and its officers, directors and employees, is not an "Iran Linked Business" within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the "Act"), and that in the event the Company is awarded a contract by Troy School District as a result of the aforementioned RFP, the Company is not and will not become an "Iran Linked Business" at any time during the course of performing any services under the contract.

The Company further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or two (2) times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of Troy School District's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date the it is determined that the person has submitted the false certification.

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NAME OF COMPANY

---

NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

---

SIGNATURE

---

DATE

## Acceptance of Proposal

The undersigned agrees to execute a Contract for work covered by this Proposal provided that he is notified of its acceptance within thirty days after the opening of the Proposal.

It is agreed that this bid will not be withdrawn until after forty-five (45) days after receipt of bids.

The undersigned affirms that the bid was developed without any collusion, undertaking, or agreement, either directly or indirectly, with any other bidder(s) to maintain the prices of indicated work or prevent any other bidder(s) from bidding the work.

BIDDER'S FIRM NAME

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BUSINESS ADDRESS

---

---

TELEPHONE NUMBER

---

CELL NUMBER

---

FAX NUMBER

---

BY (SIGNATURE)

---

PRINTED NAME

---

TITLE

---

SIGNED THIS

\_\_\_\_\_ DAY OF \_\_\_\_\_, 20 \_\_\_\_\_

E-MAIL ADDRESS

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**BID 9856 2018 Floor Replacement Program  
Bid Tabulation**

Vendors	Wass Elementary Total	Bemis Elementary Total	Martell Elementary Total	Larson Middle Total	Boulan Middle Total	Athens High Total	International Academy Total	Transporation Total	Bond Costs All Locations	Grand Total
Conventionalal Carpet, Inc.	\$ 29,750.00	\$ 31,500.00	\$ 18,500.00	\$ 112,000.00	\$ 108,750.00	\$ 173,000.00	a) \$ 108,000.00	\$ 8,950.00	\$ 3,950.00	\$ 594,400.00
Shock Brothers Floorcovering, Inc.	\$ 37,750.00	\$ 39,200.00	\$ 28,500.00	\$ 135,750.00	\$ 134,500.00	\$ 231,500.00	b) \$ 132,550.00	\$ 15,250.00	\$ 4,250.00	\$ 759,250.00

a) International Academy - Alt Alt - \$ 3,500  
b) International Academy - Alt Alt - \$4,250