

**BID# 44564**  
**CARPET REPLACEMENT – THORP, WEBER & WILLARD HALL**  
**ADDENDUM 3**  
**3/23/17**

Scope of Work Changes:

1. Install Forbo Marmoleum sheet in Willard Hall Laundry Room, approx. 143 sq ft and Thorp Hall Laundry Room, approx. 349 sq ft.
2. Remove existing flooring from the Willard Hall Laundry Room, approx. 143 sq ft
3. Thorp and Weber Hall: Landings shall be carpeted with carpet tiles
4. Willard Hall: Stairs between suites shall be carpeted and vinyl stair nosing installed.
5. Willard Hall transition strips (rubber) between suites and bedrooms
6. Willard Hall: plywood over sub base, 2nd floor suites only
7. Willard Hall: Recreation Room plywood over wood plank floor
8. 4” cove base shall be installed on all walls with wood paneling and drywall.
9. Install Forbo Nuway Connect Cable Entrance Flooring System: Weber, Thorp and Willard Hall Recreation Rooms and Willard Hall Suites.
  - a. Thorp Hall From *Main Entrance to Courtyard Entrance*
    - i. Entrance approx. 441 sq ft
  - b. Weber Hall From *Main Entrance to Courtyard Entrance*
    - i. Entrance approx. approx. 480 sq ft
  - c. Willard Hall
    - i. Entrance into Suites approx. 4’ x 5’
    - ii. Entrance into Recreation Room approx. 300 sq ft
10. All Recreation Rooms shall be the Herringbone style for install. See attached picture for reference.
11. Plank tile will be installed in the Suite Lounges shall be the Brick style for install. See attached picture for reference.
12. Bedrooms and Stairwells shall be broadloom style for install.

13. Work shall begin on 9 May 2017; specific guidance and direction as to where to begin work and what specific phase in construction will be given from Facilities and Operations

## Q & A

- Q: Various rooms and areas of new flooring installations were added to the original Drawings and listings of the installations as within the Scope of Work. Those rooms or areas were added with Thorp Hall first floor, Weber Hall first floor and Willard Hall first and second floors. Accordingly we request that revised drawings and lists of installations in the Scope of Work be issued with designations as to which product is to be installed in which additional room or area and what the existing floor materials is.
- A: Please see attached floor plans and Product Install Guidelines.
- Q: Please confirm that all the resident rooms, Suites and Hallways in all three Halls are to receive new Forbo Flotex carpet.
- A: Yes.
- I. Entryways will receive Forbo Nuway Connect Cable Entrance Flooring System
    - i. Thorp Hall From *Main Entrance to Courtyard Entrance*
      - 1. Entrance approx. 441 sq ft
    - ii. Weber Hall From *Main Entrance to Courtyard Entrance*
      - 1. Entrance approx. approx. 480 sq ft
    - iii. Willard Hall
      - 1. Entrance into Suites approx. 4' x 5'
      - 2. Entrance into Lounge (Rec Room) approx. 300 sq ft
- Q: Willard Hall, 2<sup>nd</sup> Floor-- You indicated that after the removal of the existing carpet in the hallways we are to install a better grade Plywood underlayment. Please confirm including the grade of plywood and what kind of a transition will be required between the hallways and the resident rooms.
- A: Willard Hall 2<sup>nd</sup> Floor has VCT, not carpet. VCT is to be removed. 1/4" Hardwood Plywood shall be installed over the sub base floor.
- Q: Willard Hall—You indicated that it is our responsibility for the trimming of wood doors as well as the trimming or replacement of the steel doors if required. Could Unit Prices be added to the Bid covering both the trimming of the wood doors and the trimming or replacement of the steel doors so that all Bidders are on the same page?
- A: Yes, unit pricing may be provided for both trimming of the wood doors and the trimming and/or replacement of the steel doors. Please see revised bid form.

Q: Thorp and Weber Halls—Same as above for the wood doors.

A: Yes, unit pricing may be provided for both trimming of the wood doors. Please see revised bid form.

Q: Please confirm that the College will move all furniture and equipment for the new flooring installations.

A: Yes, Rhode Island College will move all furniture.

**REVISED BID FORM**

Solicitation #: 44564  
Solicitation Title: Carpet Install at Thorp, Weber, and Willard Residence Halls  
Rhode Island College

## BID FORM

To: Rhode Island College  
Purchasing Office, Building 5 – East Campus  
600 Mt. Pleasant Avenue, Providence, RI 02908

Bidder:

\_\_\_\_\_  
Legal name of entity

\_\_\_\_\_  
Address (street/city/state/zip)

\_\_\_\_\_  
Contact name

\_\_\_\_\_  
Contact email

\_\_\_\_\_  
Contact telephone

\_\_\_\_\_  
Contact fax

### 1. **BASE BID PRICE**

The Bidder submits this bid proposal to perform all of the work (including labor and materials) described in the solicitation for this Base Bid Price (*including the costs for all Allowances, Bonds, and Addenda*):

\$ \_\_\_\_\_

(base bid price *in figures* printed electronically, typed, or handwritten legibly in ink)

\_\_\_\_\_  
(base bid price *in words* printed electronically, typed, or handwritten legibly in ink)

- **Allowances**

There are no allowances for this project.

- **Bonds**

The Base Bid Price ***includes*** the costs for all Bid and Payment and Performance Bonds required by the solicitation.

Solicitation #: 44564

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Rhode Island College

- **Addenda**

The Bidder has examined the entire solicitation (including the following Addenda), and the Base Bid Price **includes** the costs of any modifications required by the Addenda.

*All Addenda must be acknowledged.*

Addendum No. 1 dated: \_\_\_\_\_

Addendum No. 2 dated: \_\_\_\_\_

Addendum No. 3 dated: \_\_\_\_\_

2. **ALTERNATES** (*Additions/Subtractions* to Base Bid Price)

There are no alternates for this project.

3. **UNIT PRICES**

The Bidder submits these predetermined Unit Prices as the basis for any change orders approved in advance by the State. These Unit Prices include **all** costs, including labor, materials, services, regulatory compliance, overhead, and profit.

1. Cover Base \$\_\_\_\_\_/ linear feet
  - Flexco Wallflowers Wall Base Type TS INQOT GRAY WF-070 Group II and/or equivalent.
2. Trimming of Wood Doors \$\_\_\_\_\_/ each
3. Trimming of Steel Doors \$\_\_\_\_\_/ each
4. Replacement of Steel Doors \$\_\_\_\_\_/each

4. **CONTRACT TIME**

Solicitation #: 44564  
Solicitation Title: Carpet Install at Thorp, Weber, and Willard Residence Halls  
Rhode Island College

The Bidder offers to perform the work in accordance with the timeline specified below:

- Start of construction: May 13, 2017
- Final completion: August 15, 2017

**5. LIQUIDATED DAMAGES**

The successful bidder awarded a contract pursuant to this solicitation shall be liable for and pay the State, as liquidated damages and not as a penalty, the following amount for each calendar day of delay beyond the date for substantial completion, as determined in the sole discretion of the State:

**\$750.00 per calendar day**

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**This bid proposal is irrevocable for 60 days from the bid proposal submission deadline.**

**If the Bidder is determined to be the successful bidder pursuant to this solicitation, the Bidder will promptly: (i) comply with each of the requirements of the Tentative Letter of Award; and (ii) commence and diligently pursue the work upon issuance and receipt of the purchase order from the State and authorization from the user agency.**

**The person signing below certifies that he or she has been duly authorized to execute and submit this bid proposal on behalf of the Bidder.**

**BIDDER**

**Date:** \_\_\_\_\_

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_

Solicitation #: 44564

Solicitation Title: Carpet Install at Thorp, Weber, and Willard Residence Halls  
Rhode Island College

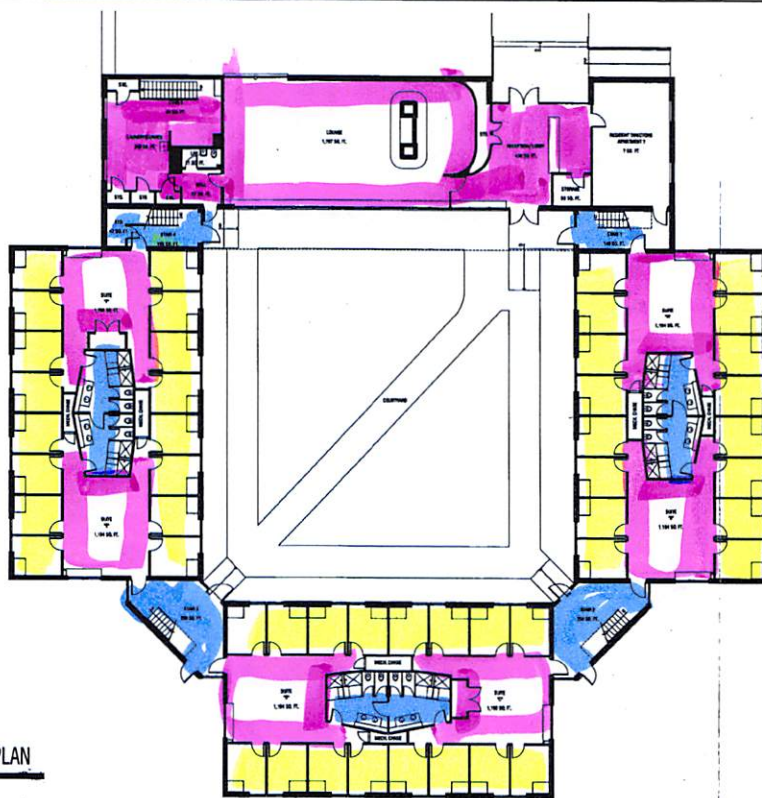
Signature in ink

\_\_\_\_\_  
Printed name and title of person signing on behalf of Bidder

# \_\_\_\_\_  
Bidder's Contractor Registration Number



**WEBER, THORP, AND WILLARD FLOOR PLANS**



1 FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"



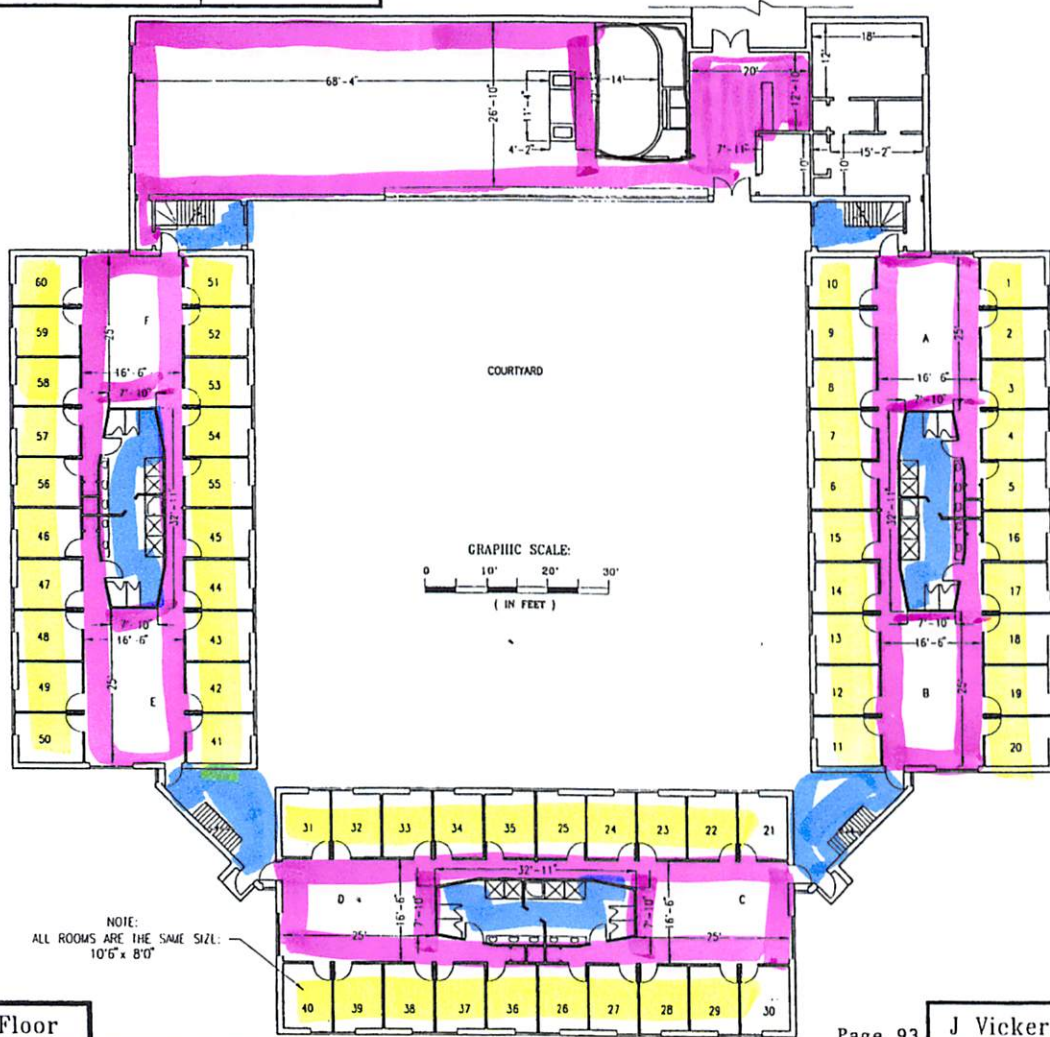
**RHODE ISLAND COLLEGE**  
600 Mount Pleasant Avenue | Providence, Rhode Island | 02908

PREPARED BY:  
**URBAN DESIGN GROUP**  
530 Wood Street | Bristol, Rhode Island | 02809 | 401-254-2032

**BUILDING # 37**  
MARY TUCKER THORP RESIDENCE HALL

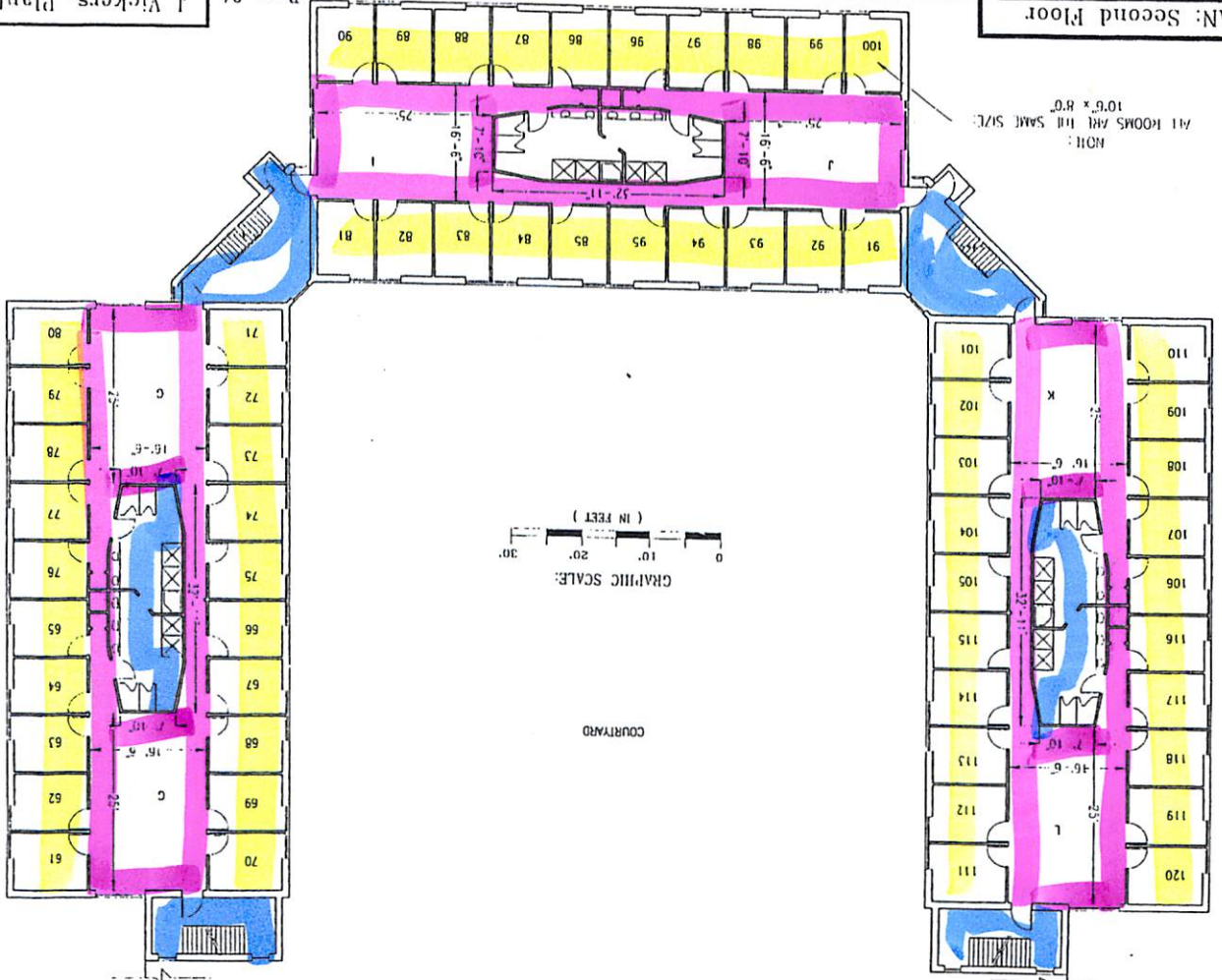
DATE:  
12-01-2011

SHEET #:  
**37.1**



PLAN: Second Floor

NOTE:  
ALL ROOMS ARE THE SAME SIZE:  
10.0' x 8.0'



GRAPHIC SCALE:  
( IN FEET )  
0 10' 20' 30'

COURTYARD

Weber Hall

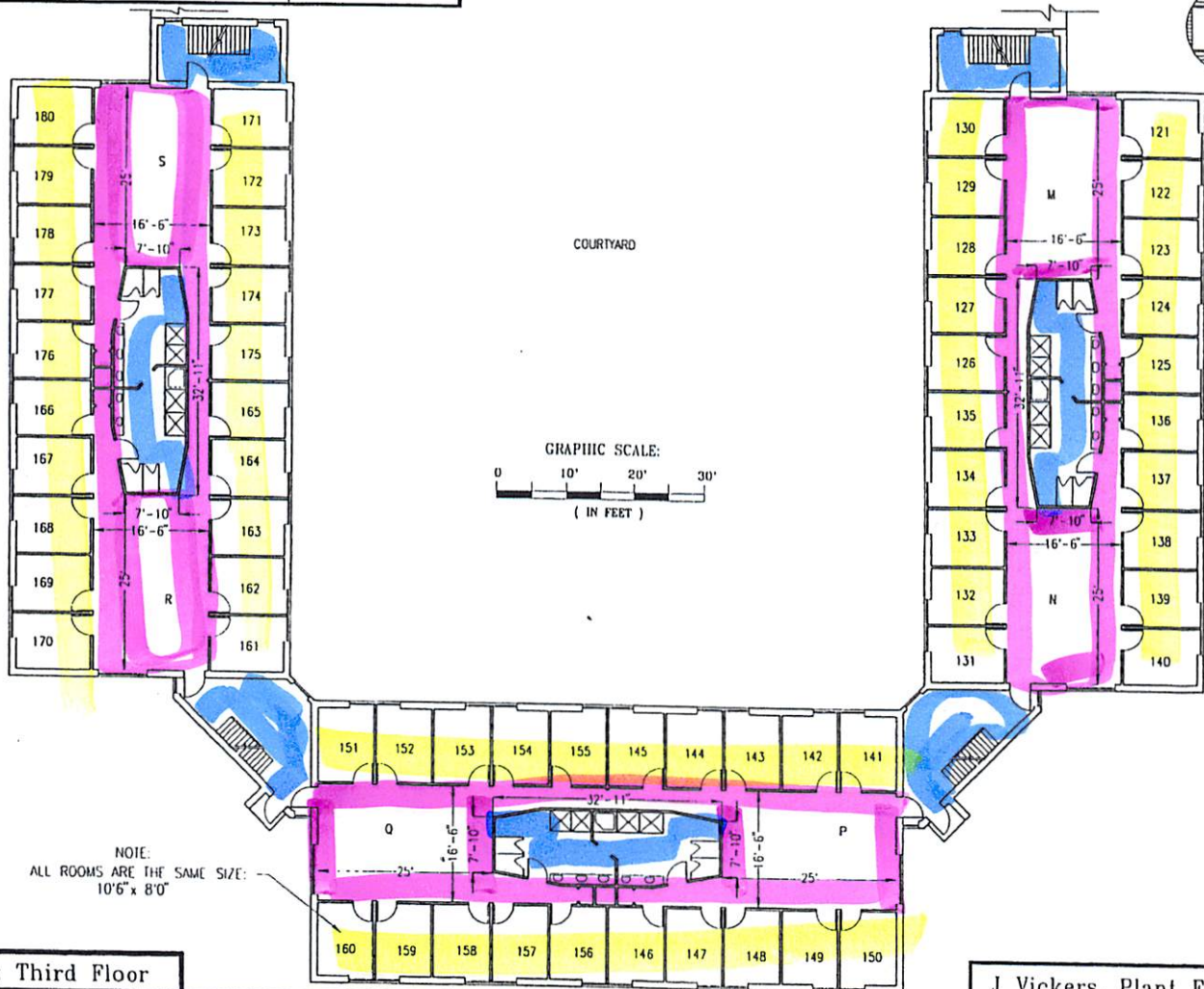
RHODE ISLAND COLLEGE





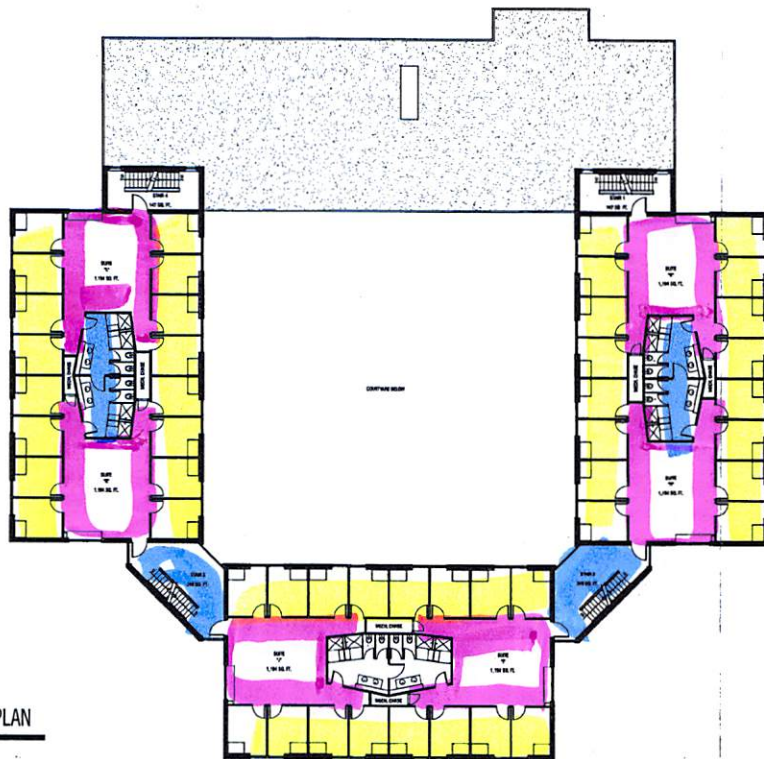
RHODE ISLAND COLLEGE

Weber Hall



PLAN: Third Floor

J Vickers, Plant Engineer



2

SECOND FLOOR PLAN

SCALE: N.T.S.  
1/8" = 1'-0"



**RHODE ISLAND COLLEGE**

600 Mount Pleasant Avenue | Providence, Rhode Island | 02908

PREPARED BY:

**URBAN DESIGN GROUP**

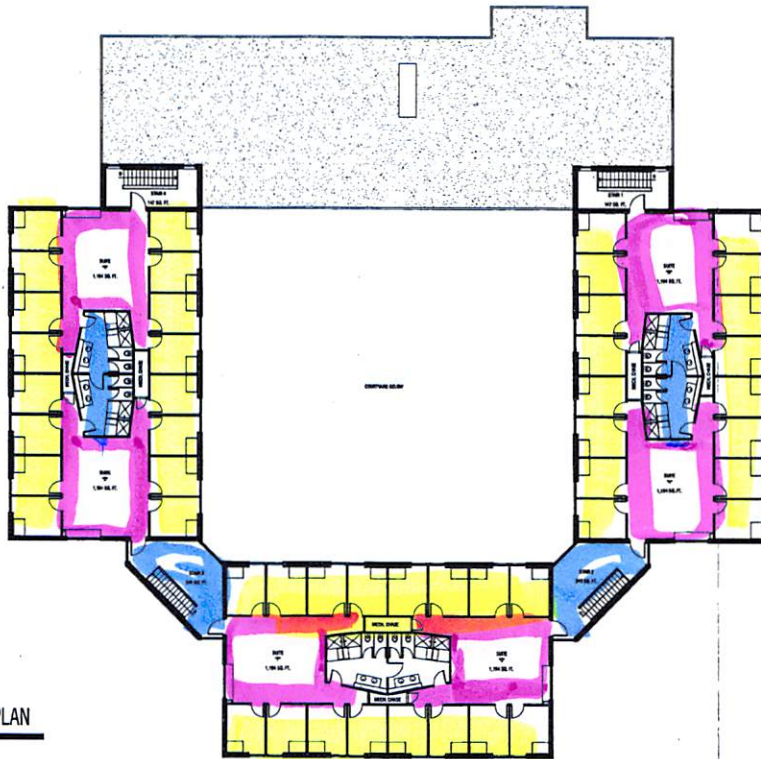
530 Wood Street | Bristol, Rhode Island | 02809 | 401-254-2032

**BUILDING #37**  
**MARY TUCKER THORP RESIDENCE HALL**

DATE:  
12-01-2011

SHEET #:

**37.2**



3 THIRD FLOOR PLAN



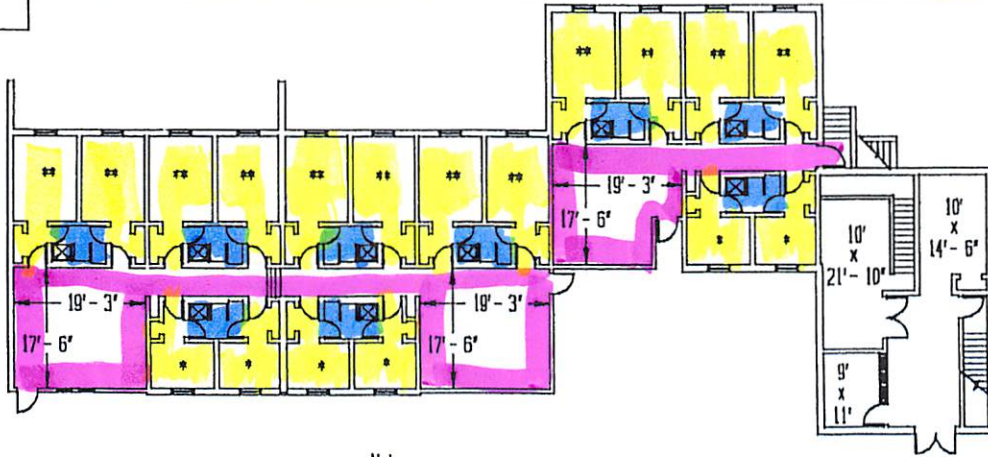
**RHODE ISLAND COLLEGE**  
 600 Mount Pleasant Avenue | Providence, Rhode Island | 02908

PREPARED BY:  
**URBAN DESIGN GROUP**  
 530 Wood Street | Bristol, Rhode Island | 02809 | 401-254-2032

**BUILDING # 37**  
 MARY TUCKER THORP RESIDENCE HALL

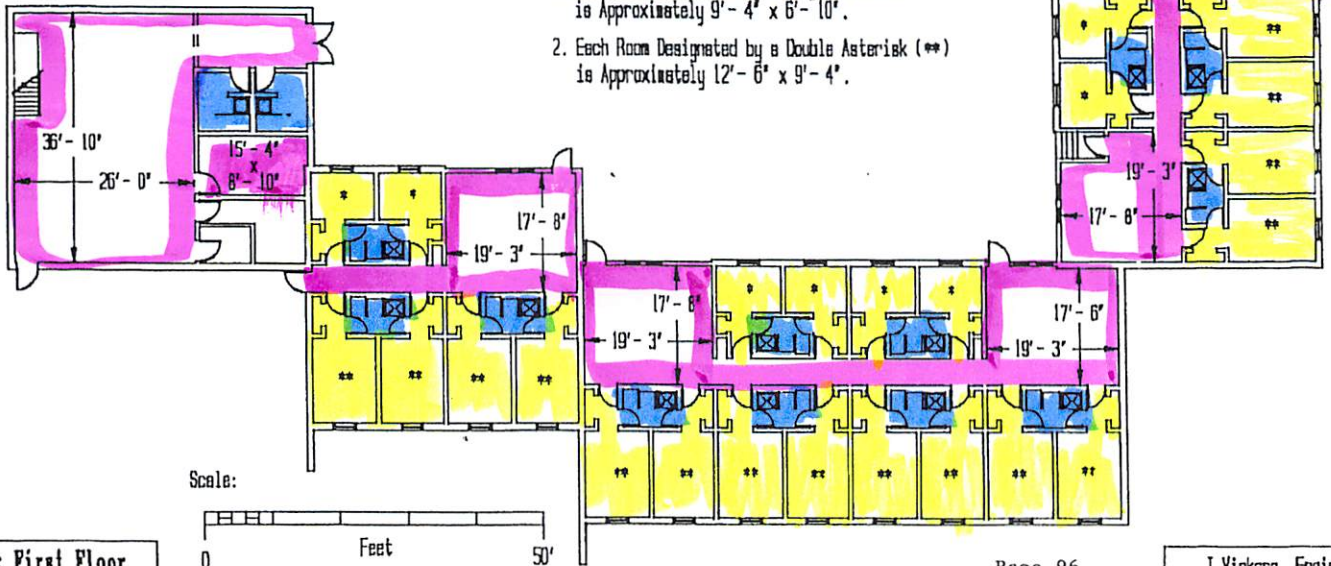
DATE:  
 12-01-2011

SHEET #:  
**37.3**

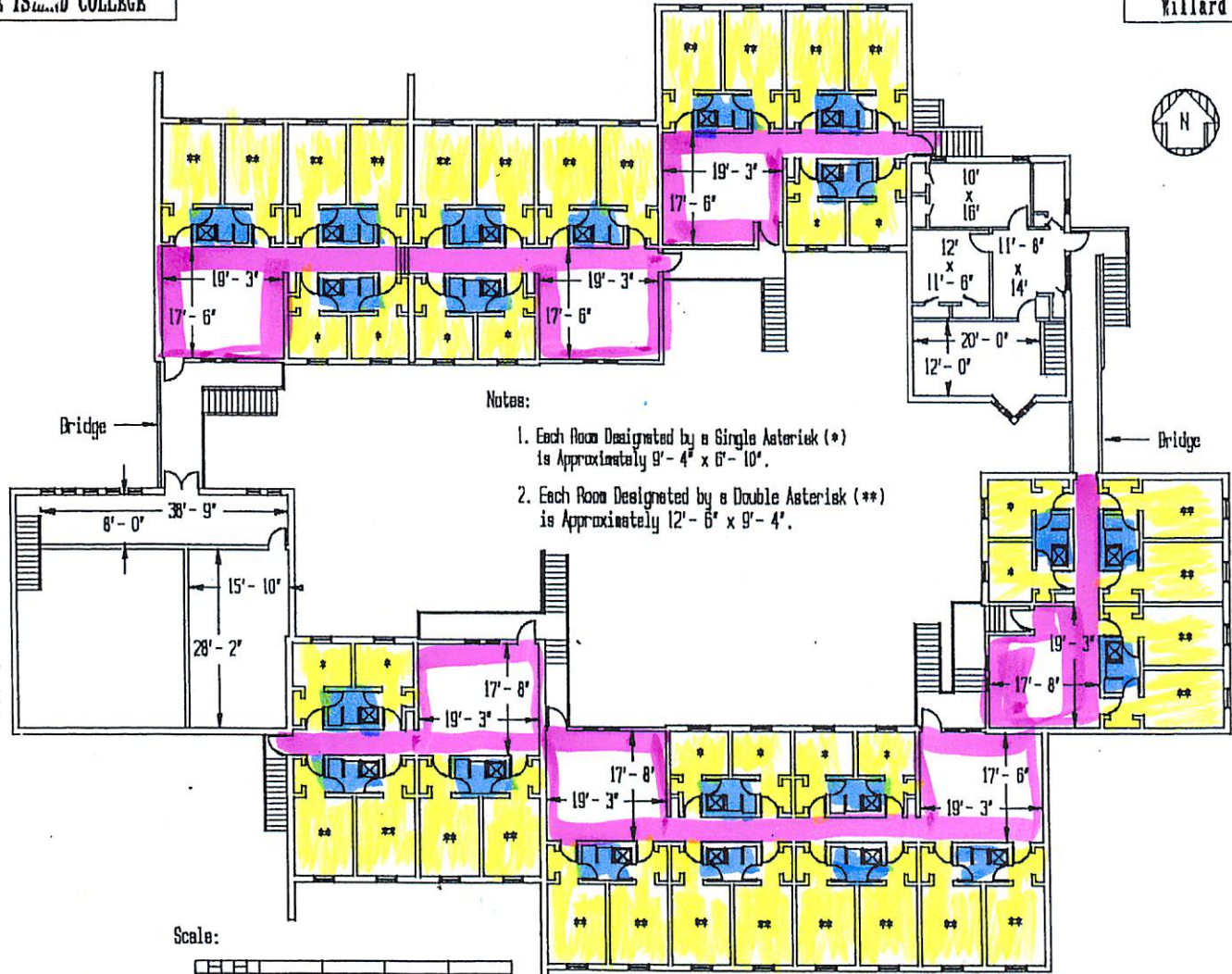


Notes:

1. Each Room Designated by a Single Asterisk (\*) is Approximately 9'-4" x 6'-10".
2. Each Room Designated by a Double Asterisk (\*\*) is Approximately 12'-6" x 9'-4".



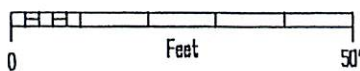




Notes:

1. Each Room Designated by a Single Asterisk (\*) is Approximately 9'-4" x 6'-10".
2. Each Room Designated by a Double Asterisk (\*\*) is Approximately 12'-6" x 9'-4".

Scale:



**FLOTEX LAYOUT SAMPLE OF DESIGN INSTALL**

**&**

**FORBO INSTALLATION SPECIFICATIONS**





Forbo Flooring Systems  
Humboldt Industrial Park  
P. O. Box 667  
Hazleton, PA 18202  
Phone +800 842 7839  
Phone +570 459 0771  
Fax +570 450 0258  
[info.na@forbo.com](mailto:info.na@forbo.com)  
[www.forboflooringNA.com](http://www.forboflooringNA.com)



This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) Manual of Practice®, including MasterFormat™, SectionFormat™, and PageFormat™. A MANU-SPEC® is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text indicated by brackets [ ]; delete optional text in final copy of specification.

This MANU-SPEC® specifies resilient sheet flooring, marketed under the Flotex® Calgary, Flotex® Journeys, Flotex® Metro and Flotex® Vision brand names, as manufactured by Forbo Flooring. Revise the MANU-SPEC® section number and title below to suit project requirements, specification practices, and section content. Refer to CSI MasterFormat™ for other section numbers and titles, including 096000 Flooring; 096500 Resilient Flooring.

SECTION 09 65 16  
FLOTEX® RESILIENT SHEET FLOORING

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes: Resilient Sheet Flooring
1. Flotex® [Calgary] [Journeys] [Metro] [Vision] Flooring, Adhesive Installation, Sanitized® Treatment
  2. Flotex® [Calgary] [Journeys] [Metro] [Vision] Flooring, Adhesive and Flash Cove Installation, Sanitized® Treatment
  3. Forbo Flooring Systems Resilient Base
  4. Forbo Flooring Systems Resilient Transition Accessories

*Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI MasterFormat™ and specifier's practice.*

- B. Related Sections: Section(s) related to this section include:
1. Concrete: Refer to Division 3 Concrete Sections for cast-in-place concrete, concrete toppings, and cementitious underlayments.
  2. Wood Subflooring: Refer to Division 6 Carpentry Section for wood subflooring and wood underlayment.
  3. Resilient Flooring Accessories: Refer to Division 9 Finishes Sections for resilient wall bases, reducer strips, metal edge strips and other resilient flooring accessories.
  4. Expansion Joint Covers: Refer to Division 10 Specialties Section for expansion joint covers to be used with resilient flooring.

*Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. "Conditions of the Contract" or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.*

## 1.02 REFERENCES

- A. Forbo Installation Guide
- B. Forbo Floor Care Guide
- C. American Society for Testing and Materials (ASTM):
  - 1. ASTM F 1861 Standard Specification for Resilient Wall Base.
  - 2. ASTM F 1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
  - 3. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
  - 4. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
  - 5. ASTM F 1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring.
  - 6. ASTM E 648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
  - 7. ASTM E 662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
  - 8. ASTM E 492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine.
  - 9. ASTM E 492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine
  - 10. ASTM E 989 Standard Classification for Determination of Impact Insulation Class (IIC)
- D. National Fire Protection Association (NFPA):
  - 1. NFPA 253 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
  - 2. NFPA 258 Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- E. Standards Council of Canada
  - 1. CAN/ULC S102 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

*Specifier Note:* Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties to extent necessary to link multiple components of a system, and to interface with other systems.

## 1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performance criteria certified by manufacturer without defects, damage, or failure.

*Specifier Note:* Article below includes submittal of relevant data to be furnished by Contractor before, during, or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in "Conditions of the Contract" and Division 1 Submittal Procedures Section.

## 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with "Conditions of the Contract" and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, finish colors, patterns and textures.
- D. Samples: Submit selection and verification samples for finishes, colors, and textures.
- E. Quality Assurance Submittals: Submit the following:
  - 1. Manufacturers Technical Data: Manufacturers document specifying performance characteristics and criteria, and physical requirements.
  - 2. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

3. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- F. [Sustainable Submittals for LEED v2009 Projects:
1. Product data for MR Credit 4 Options 1 & 2 for products having recycled content, including documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
    - a. Include statement indicating costs for each product having recycled content.
  2. Product data for EQ Credit 4.3 for low emitting materials.
    - a. Confirm that that each product complies with the testing and product requirements of the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small Scale Environmental Chambers, including 2004 Addenda. If a product specified has not been tested as noted, provide a substitution to the Architect for review and approval of an equal product meeting noted California Department of Health standard.
  3. Product data for EQ Credit 4.1 for low emitting adhesives and sealants.
  4. Confirm that each product complies with the testing and product requirements of the South Coast Air Quality Management District Rule #1168.
  5. Product data for EQ Credit 5 for indoor chemical & pollutant source control.
  6. Product data for MR Credit 2 for construction waste management.
  7. Product data for MR Credit 5 for regional manufacturing and extraction locations.
  8. Product data for Sustainable Attributes.]
- G. [Sustainable Submittals for LEED v4 Projects:
1. Product data for MR Credit 4 Option 1 for products having regional manufacturing and extraction locations.
  2. Product data for MR Credit 4 Option 2 for products having recycled content, including documentation indicating percentages by weight of post-consumer and pre-consumer recycled content and sustainable attributes.
    - a. Include statement indicating costs for each product having recycled content.
    - b. Include product data for bio-based content and certification of SMART sustainable product certification.
  3. Product data for MR Policy 2 for construction and demolition waste management.
  4. Product data for EQ Credit 2 for low emitting adhesives and sealants, including printed statement of VOC content as required by Division 01.
  5. Confirm that each product complies with the testing and product requirements of the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small Scale Environmental Chambers, including 2004 Addenda. If a product specified has not been tested as noted, provide a substitution to the Architect for review and approval of an equal product meeting noted California Department of Health standard.]
- H. Closeout Submittals: Submit the following:
1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
  2. Warranty: Warranty documents specified herein.

Specifier Note: Article below should include prerequisites, standards, limitations, and criteria which establish an overall level of quality for products and workmanship for this section. Coordinate below article with Division 1 Quality Assurance Section.

## **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
1. Must be a Forbo Certified Installer.
  2. Proof of valid certification must be submitted to the GC and verified by Forbo Flooring Systems prior to the start of the project.
  3. The Forbo Certified Installer must manage and be on site during installation at all times.

Specifier Note: Retain paragraph below to suit project requirements; otherwise delete paragraph below.

4. Certificate: Submit certificate indicating installer qualifications for project. This project requires a [Forbo Associate Mechanic for standard installations] [Forbo Master Mechanic for complex installations].

*Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in "Conditions of the Contract" and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.*

B. Regulatory Requirements:

1. Fire Performance Characteristics: Provide resilient linoleum sheet flooring with the following fire performance characteristics as determined by testing products in accordance with the latest version of ASTM method indicated below by a certified testing laboratory or another testing and inspecting agency acceptable to authorities having jurisdiction:
  - a. Critical Radiant Flux: Class 1 Rating per NFPA 253 (ASTM E 648) (0.45 watts/cm<sup>2</sup> or greater).
  - b. Smoke Density: Less than 450 per NFPA 258 (ASTM E 662).

*Specifier Note: Retain paragraph below for erected assemblies (either on-site or off-site) required for review of construction, coordination of work of several sections, testing, or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 1 Quality Control (Mock-Up Requirements) Section.*

- C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

*Specifier Note: Edit paragraph below to specify mock-up requirements.*

1. Mock-Up Size: [Specify mock-up size.]
2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

*Specifier Note: Coordinate paragraph below with Division 1 Project Management and Coordination (Project Meetings) Section.*

- D. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
- E. Pre-Installation Testing: Conduct pre-installation testing as follows: [Specify testing (bond testing, pH testing, calcium chloride testing, relative humidity testing, etc.)]

*Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 1 Product Requirements Section.*

## **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
  1. Material should be stored in areas that are fully enclosed and weathertight. The permanent HVAC should be fully operational, controlled and set at a minimum of 68° F (20° C) for at least 48 hours prior to the installation.



## 1.07 PROJECT CONDITIONS

- A. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations, areas to receive flooring should be clean, fully enclosed and weathertight. 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 should be conditioned in the same manner for at least 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.
- B. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.
  - 1. Temperature Conditions: 68° F (20° C) for a minimum of seven days prior to, during, and seven days after the installation.
- C. Existing Conditions: [Specify existing conditions affecting product use and installation.]
- D. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

*Specifier Note: Article below is a combination of two CSI SectionFormat article titles.*

## 1.08 SEQUENCING AND SCHEDULING

- A. Finishing Operations: Install flooring after finishing operations, including painting and ceiling operations, have been completed.
- B. Concrete Curing: Do not install flooring over concrete substrates until substrates have cured and are dry to bond with adhesive as determined by resilient flooring manufacturer's recommended bond testing, moisture testing, and pH testing.
  - 1. [Owner assigned responsibility.]
  - 2. [Flooring Contractor assigned to report responsibility back to owner/architect.]

*Specifier Note: Coordinate article below with "Conditions of the Contract" and with Division 1 Closeout Submittals (Warranty) Section. Below warranty article assumes the use of The American Institute of Architects document A201 "Conditions of the Contract for Construction." If other "Conditions" are used for the project, revise article below accordingly.*

## 1.09 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

*Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.*

- 1. Warranty Period: Ten (10) year limited warranty commencing on Date of Substantial Completion.

*Specifier Note: Coordinate article below with Division 1 Closeout Submittals (Maintenance Materials) Section.*

## 1.10 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.

*Specifier Note: Revise paragraph below specifying size and percentage as required for project.*

- 1. Quantity: Furnish quantity of flooring units equal to 5% of amount installed.
- 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

## PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes performance characteristics, material standards, and descriptions as applicable. Use of such phrases as "Equal" or "Approved Equal," or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal, and regulatory) and assignment of responsibility for determining "Equal" products.

### 2.01 FLOTEX® RESILIENT SHEET FLOORING

A. Manufacturer: Forbo Flooring, Inc.

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to MANU-SPEC®. Retain or delete paragraph below per project requirements and specifier's practice.

1. Contact: Forbo Flooring, Inc.  
P.O. Box 667  
Hazleton, PA 18202  
Telephone +800 842 7839 or +570 459 0771  
Fax + 570 450 0258

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to MANU-SPEC®. Retain or delete paragraph below per project requirements and specifier's practice.

2. Representative Contact: [Specify representative contact information.]

B. Proprietary Product(s): Flotex® [Calgary] [Journeys] [Metro] [Vision] Resilient Sheet and Adhesive

1. Description: Flocked textile sheet floor covering has 100% nylon type wear layer with an intermediate fiberglass layer and a closed cell vinyl cushioned base.
2. Width: 79" (2 Meters)
3. Length: 98.4 Linear Feet (30 Meters)
4. Gauge: 0.17" (4.3mm)
5. Backing: Closed Cell Vinyl Cushioned Backing
6. Pattern and Color: [As selected by Architect from manufacturer's standard patterns and colors.]
7. Adhesive: Forbo FRS 885 Adhesive
8. Sanitized® Treatment

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to MANU-SPEC®. Retain or delete paragraph below per project requirements and specifier's practice.

C. Product Criteria Forms: Refer to Product Criteria Forms as an attachment to this section.

1. Product Forms: Subject to compliance with specified requirements, provide products specified in each Technical Data Sheet.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

### 2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

Specifier Note: Add article below for alternates required for project; state work covered. Coordinate with Part 1 General Summary Article herein, applicable Division 1 Sections, and other Bid and Contract Documents.

### 2.03 RELATED MATERIALS

A. Related Materials: Refer to other sections for related materials as follows:

1. Underlayment and Patching Compound: Refer to Division 3 Concrete Sections for Portland cement based underlayments and patching compounds.
2. Resilient Flooring Accessories: Refer to Division 9 Finishes Sections for resilient flooring accessories.
3. Expansion Joint Covers: Refer to other specification section for expansion joint covers to be used with resilient flooring.

### 2.04 SOURCE QUALITY

A. Source Quality: Obtain flooring product materials from a single manufacturer.

## PART 3 EXECUTION

*Specifier Note:* Article below is an addition to the CSI SectionFormat and a supplement to MANU-SPEC®. Revise article below to suit project requirements and specifier's practice.

### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

### 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions (bond testing, pH testing, calcium chloride testing, relative humidity testing, etc.).
- B. Material Inspection: In accordance with manufacturer's installation requirements, visually inspect materials prior to installation. Material with visual defects shall not be installed and shall not be considered as a legitimate claim.

### 3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
- B. Surface Preparation:
  - 1. General: Prepare floor substrate in accordance with manufacturer's instructions.
  - 2. Floor Substrate: 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.
  - 3. Concrete Floor Substrate: Concrete floor substrate shall have a minimum compressive strength of 3,000 psi. Refer to Division 3 Concrete sections for patching and repairing crack materials and leveling compounds with Portland cement based compounds.
    - a. Reference Standard: Comply with the latest version of ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- C. Concrete Moisture Testing: Conduct moisture tests on all concrete floors regardless of the age, grade level or the presence of existing flooring. Conduct calcium chloride tests in accordance with the latest version of ASTM F 1869. Measure the internal relative humidity of the concrete slab in accordance with the latest version of ASTM F 2170. 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 8.0 lbs. per 1,000 square feet in 24 hours when using Forbo FRS 885 adhesive. Concrete internal relative humidity must not exceed 85% when using Forbo FRS 885 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.
- D. Concrete pH Test: Perform pH tests on concrete floors regardless of the age or grade level. The surface pH of concrete slabs must not exceed a pH of 10. Concrete substrates with pH readings less than 7.0 or above 10.0 will require remediation prior to installation.
- E. Wood Subfloors: 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.
  - 1. Refer to Division 6 Carpentry sections for wood subfloor construction.
  - 2. Reference Standard: Comply with the latest version of ASTM F 1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring

Specifier Note: Coordinate article below with manufacturer's recommended installation details and requirements.

### 3.04 INSTALLATION

- A. Material Installation: Roll out the material with top surface up. All arrows on the back must point in the of the main natural light source whenever possible, never away from the light source. Trim off any damaged edges. If not damaged, butt all factory edges while maintaining the pattern repeat. Apply adhesive and lay sheet flooring into semi-wet adhesive and roll with a 75 pound three section roller in both directions and repeat as necessary to ensure adequate transfer of adhesive to the backing.
- B. Adhesive Installation: Use trowel as recommended by flooring manufacturer for specific adhesive (1/16" x 1/16" x 1/16" square notch trowel). Spread rate is approximately 125 ft<sup>2</sup>/gallon.
- C. [Flash Cove Installation: Extend flooring up the wall in a flash-coved method to a height of [4] [6] inches ([102] [152] mm), as indicated.]
- D. Installation Techniques:
  - 1. Where demountable partitions and other items are indicated for installation on top of finished flooring, install flooring before these items are installed.
  - 2. Scribe, cut, fit flooring to butt tightly to vertical surfaces, permanent fixtures and built-in furniture, including pipes, outlets, edgings, thresholds, nosings, and cabinets.
  - 3. Extend flooring into toe spaces, door reveals, closets, and similar openings.
  - 4. Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on these covers.
  - 5. Do not install resilient flooring over expansion joints. Use expansion joint covers manufactured for use with resilient flooring. Refer to other specification sections for expansion joint covers.
  - 6. Adhere resilient flooring to substrate without producing open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections in completed installation.
    - a. Use adhesive applied to substrate in compliance with manufacturer's recommendations, including those for mixing, trowel notch, and adhesive open and working times.
  - 7. Roll resilient flooring as required by resilient flooring manufacturer.
- E. Finish Flooring Patterns: [As selected by Architect.]

Specifier Note: Coordinate article below with Division 1 Quality Assurance and Quality Control Sections.

### 3.05 FIELD QUALITY REQUIREMENTS

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer, and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- A. Manufacturer's Field Services: Upon Owner's request and with at least 72 hours' notice, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
  - 1. Site Visits: [Specify number and duration of periodic site visits.]

Specifier Note: Coordinate article below with Division 1 Execution Requirements (Cleaning) Section.

### 3.06 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
  - 1. Remove visible adhesive and other surface blemishes using cleaning methods recommended by floor manufacturer.
  - 2. Vacuum floor after installation per manufacturer's recommendations.
  - 3. Spot clean using the "Scrape, Scrub, and Rinse" procedures per the manufacturer's recommendations.

Specifier Note: Coordinate article below with Division 1 Execution Requirements Section.

### **3.07 PROTECTION**

- A. Protection: Protect installed product and finish surfaces from damage during construction. Remove and legally dispose of protective covering at time of Substantial Completion.

Specifier Note: Add or delete article below to suit project requirements.

### **3.08 INITIAL MAINTENANCE PROCEDURES**

- A. General: Include in Contract Sum Amount cost for initial maintenance procedures, and execute procedures after flooring installation as recommended by flooring manufacturer.
- B. Initial maintenance to be conducted by awarded Flooring Contractor using a Certified Forbo Floor Care Technician.

Specifier Note: Retain article below to suit project requirements. CSI PageFormat allows for Schedules, Forms, and Tables to be located at the end of a section. Article may be used to describe specific criteria requirements of similar products or equipment.

### **3.09 SCHEDULES AND (PRODUCT CRITERIA) FORMS**

Specifier Note: Retain paragraph below to suit project requirements. Reference a schedule or include a schedule as an attachment which indicates where to locate products and equipment.

- A. Schedules: [Specify reference to applicable schedules.]

Specifier Note: Retain paragraph below to suit project requirements. Include forms as an attachment which indicates product criteria.

- B. Product Criteria Forms Attachments: Refer to Product Criteria Form(s) [No.] of [No.], dated [specify date], attached herewith.

### **END OF SECTION**

Manufacturer's Obligatory Disclaimer Statement (For Electronic Media; Not Print Media)

Forbo Flooring Systems  
Humboldt Industrial Park  
P. O. Box 667  
Hazleton, PA 18202  
Phone +800 842 7839  
Phone +570 459 0771  
Fax +570 450 0258  
[info.na@forbo.com](mailto:info.na@forbo.com)  
[www.forboflooringNA.com](http://www.forboflooringNA.com)



This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) Manual of Practice®, including MasterFormat™, SectionFormat™, and PageFormat™. A MANU-SPEC® is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text indicated by brackets [ ]; delete optional text in final copy of specification.

This MANU-SPEC® specifies resilient sheet flooring, marketed under the Flotex® Calgary, Flotex® Cirrus, Flotex® Complexity, Flotex® Integrity 2, Flotex® Metro, Flotex® Penang, Flotex® Pinstripe, Flotex® Stratus brand names, as manufactured by Forbo Flooring Systems. Revise the MANU-SPEC® section number and title below to suit project requirements, specification practices, and section content. Refer to CSI MasterFormat™ for other section numbers and titles, including 096000 Flooring; 096500 Resilient Flooring.

SECTION 09 65 19  
FLOTEX® RESILIENT TILE FLOORING

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. Section Includes: Resilient Tile Flooring
1. Flotex® [Calgary] [Cirrus] [Complexity] [Integrity 2] [Metro] [Penang] [Pinstripe] [Stratus] Flooring, Adhesive Installation, Sanitized® Treatment
  2. Forbo Flooring Systems Resilient Base
  3. Forbo Flooring Systems Resilient Transition Accessories

*Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI MasterFormat™ and specifier's practice.*

- B. Related Sections: Section(s) related to this section include:
1. Concrete: Refer to Division 3 Concrete Sections for cast-in-place concrete, concrete toppings, and cementitious underlayments.
  2. Wood Subflooring: Refer to Division 6 Carpentry Section for wood subflooring and wood underlayment.
  3. Resilient Flooring Accessories: Refer to Division 9 Finishes Sections for resilient wall bases, reducer strips, metal edge strips and other resilient flooring accessories.
  4. Expansion Joint Covers: Refer to Division 10 Specialties Section for expansion joint covers to be used with resilient flooring.

*Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. "Conditions of the Contract" or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.*

## 1.02 REFERENCES

- A. Forbo Installation Guide
- B. Forbo Floor Care Guide
- C. American Society for Testing and Materials (ASTM):
  - 1. ASTM F 1861 Standard Specification for Resilient Wall Base.
  - 2. ASTM F 1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
  - 3. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
  - 4. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
  - 5. ASTM F 1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring.
  - 6. ASTM E 648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
  - 7. ASTM E 662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
  - 8. ASTM E 492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine.
  - 9. ASTM E 492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission through Floor-Ceiling Assemblies Using the Tapping Machine
  - 10. ASTM E 989 Standard Classification for Determination of Impact Insulation Class (IIC)
- D. National Fire Protection Association (NFPA):
  - 1. NFPA 253 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
  - 2. NFPA 258 Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- A. Standards Council of Canada
  - 1. CAN/ULC S102 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

*Specifier Note:* Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties to extent necessary to link multiple components of a system, and to interface with other systems.

## 1.03 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performance criteria certified by manufacturer without defects, damage, or failure.

*Specifier Note:* Article below includes submittal of relevant data to be furnished by Contractor before, during, or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in "Conditions of the Contract" and Division 1 Submittal Procedures Section.

## 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with "Conditions of the Contract" and Division 1 Submittal Procedures Section.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, finish colors, patterns and textures.
- D. Samples: Submit selection and verification samples for finishes, colors, and textures.
- E. Quality Assurance Submittals: Submit the following:
  - 1. Manufacturers Technical Data: Manufacturers document specifying performance characteristics and criteria, and physical requirements.
  - 2. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

3. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- F. [Sustainable Submittals for LEED v2009 Projects:
1. Product data for MR Credit 4 Options 1 & 2 for products having recycled content, including documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
    - a. Include statement indicating costs for each product having recycled content.
  2. Product data for EQ Credit 4.3 for low emitting materials.
    - a. Confirm that that each product complies with the testing and product requirements of the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small Scale Environmental Chambers, including 2004 Addenda. If a product specified has not been tested as noted, provide a substitution to the Architect for review and approval of an equal product meeting noted California Department of Health standard.
  3. Product data for EQ Credit 4.1 for low emitting adhesives and sealants.
  4. Confirm that each product complies with the testing and product requirements of the South Coast Air Quality Management District Rule #1168.
  5. Product data for EQ Credit 5 for indoor chemical & pollutant source control.
  6. Product data for MR Credit 2 for construction waste management.
  7. Product data for MR Credit 5 for regional manufacturing and extraction locations.
  8. Product data for Sustainable Attributes.]
- G. [Sustainable Submittals for LEED v4 Projects:
1. Product data for MR Credit 4 Option 1 for products having regional manufacturing and extraction locations.
  2. Product data for MR Credit 4 Option 2 for products having recycled content, including documentation indicating percentages by weight of post-consumer and pre-consumer recycled content and sustainable attributes.
    - a. Include statement indicating costs for each product having recycled content.
    - b. Include product data for bio-based content and certification of SMART sustainable product certification.
  3. Product data for MR Policy 2 for construction and demolition waste management.
  4. Product data for EQ Credit 2 for low emitting adhesives and sealants, including printed statement of VOC content as required by Division 01.
  5. Confirm that each product complies with the testing and product requirements of the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small Scale Environmental Chambers, including 2004 Addenda. If a product specified has not been tested as noted, provide a substitution to the Architect for review and approval of an equal product meeting noted California Department of Health standard.]
- H. Closeout Submittals: Submit the following:
1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
  2. Warranty: Warranty documents specified herein.

Specifier Note: Article below should include prerequisites, standards, limitations, and criteria which establish an overall level of quality for products and workmanship for this section. Coordinate below article with Division 1 Quality Assurance Section.

## **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
1. Must be a Forbo Certified Installer.
  2. Proof of valid certification must be submitted to the GC and verified by Forbo Flooring Systems prior to the start of the project.
  3. The Forbo Certified Installer must manage and be on site during installation at all times.

Specifier Note: Retain paragraph below to suit project requirements; otherwise delete paragraph below.



4. Certificate: Submit certificate indicating installer qualifications for project. This project requires a [Forbo Associate Mechanic for standard installations] [Forbo Master Mechanic for complex installations].

*Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in "Conditions of the Contract" and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.*

B. Regulatory Requirements:

1. Fire Performance Characteristics: Provide resilient linoleum sheet flooring with the following fire performance characteristics as determined by testing products in accordance with the latest version of ASTM method indicated below by a certified testing laboratory or another testing and inspecting agency acceptable to authorities having jurisdiction:
  - a. Critical Radiant Flux: Class 1 Rating per NFPA 253 (ASTM E 648) (0.45 watts/cm<sup>2</sup> or greater).
  - b. Smoke Density: Less than 450 per NFPA 258 (ASTM E 662).

*Specifier Note: Retain paragraph below for erected assemblies (either on-site or off-site) required for review of construction, coordination of work of several sections, testing, or observation of operation. Mock-ups, when accepted or approved, establish standards by which work will be judged. Coordinate below with Division 1 Quality Control (Mock-Up Requirements) Section.*

- C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer approved installation methods. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.

*Specifier Note: Edit paragraph below to specify mock-up requirements.*

1. Mock-Up Size: [Specify mock-up size.]
2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

*Specifier Note: Coordinate paragraph below with Division 1 Project Management and Coordination (Project Meetings) Section.*

- D. Pre-Installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
- E. Pre-Installation Testing: Conduct pre-installation testing as follows: [Specify testing (bond testing, pH testing, calcium chloride testing, relative humidity testing, etc.)]

*Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 1 Product Requirements Section.*

## **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
  1. Material should be stored in areas that are fully enclosed and weathertight. The permanent HVAC should be fully operational, controlled and set at a minimum of 68° F (20° C) for at least 48 hours prior to the installation.

## 1.07 PROJECT CONDITIONS

- A. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations, areas to receive flooring should be clean, fully enclosed and weathertight. 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 should be conditioned in the same manner for at least 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.
- B. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.
  - 1. Temperature Conditions: 68° F (20° C) for a minimum of seven days prior to, during, and seven days after the installation.
- C. Existing Conditions: [Specify existing conditions affecting product use and installation.]
- D. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

Specifier Note: Article below is a combination of two CSI SectionFormat article titles.

## 1.08 SEQUENCING AND SCHEDULING

- A. Finishing Operations: Install tile flooring after finishing operations, including painting and ceiling operations, have been completed.
- B. Concrete Curing: Do not install tile flooring over concrete substrates until substrates have cured and are dry to bond with adhesive as determined by resilient flooring manufacturer's recommended bond testing, moisture testing, and pH testing.
  - 1. [Owner assigned responsibility.]
  - 2. [Flooring Contractor assigned to report responsibility back to owner/architect.]

Specifier Note: Coordinate article below with "Conditions of the Contract" and with Division 1 Closeout Submittals (Warranty) Section. Below warranty article assumes the use of The American Institute of Architects document A201 "Conditions of the Contract for Construction." If other "Conditions" are used for the project, revise article below accordingly.

## 1.09 WARRANTY

- A. Project Warranty: Refer to "Conditions of the Contract" for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.

- 1. Warranty Period: Ten (10) year limited warranty commencing on Date of Substantial Completion.

Specifier Note: Coordinate article below with Division 1 Closeout Submittals (Maintenance Materials) Section.

## 1.10 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.

Specifier Note: Revise paragraph below specifying size and percentage as required for project.

- 1. Quantity: Furnish quantity of flooring units equal to 5% of amount installed.
- 2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

## PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes performance characteristics, material standards, and descriptions as applicable. Use of such phrases as "Equal" or "Approved Equal," or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal, and regulatory) and assignment of responsibility for determining "Equal" products.

### 2.01 FLOTEX® RESILIENT TILE FLOORING [PRODUCT TYPE]

A. Manufacturer: Forbo Flooring, Inc.

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to MANU-SPEC®. Retain or delete paragraph below per project requirements and specifier's practice.

1. Contact: Forbo Flooring, Inc.  
P.O. Box 667  
Hazleton, PA 18202  
Telephone +800 842 7839 or +570 459 0771  
Fax + 570 450 0258

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to MANU-SPEC®. Retain or delete paragraph below per project requirements and specifier's practice.

2. Representative Contact: [Specify representative contact information.]

B. Proprietary Product(s): Flotex® [Calgary] [Cirrus] [Complexity] [Integrity 2] [Metro] [Penang] [Pinstripe] [Stratus] Resilient Tile and Adhesive

1. Description: Flocked textile sheet floor covering has 100% nylon type wear layer with an intermediate fiberglass layer and a recycled vinyl cushioned base.
2. Size: Approx. 20" x 20" (50cm x 50cm)
3. Carton Size: 12 tiles (32.3 feet<sup>2</sup>, 3 meters<sup>2</sup>)
4. Gauge: 0.21" (5.3mm)
5. Backing: Recycled Vinyl Cushioned Backing
6. Pattern and Color: [As selected by Architect from manufacturer's standard patterns and colors.]
7. Adhesive: Forbo FRT 950 Adhesive
8. Sanitized® Treatment

Specifier Note: Paragraph below is an addition to CSI SectionFormat and a supplement to MANU-SPEC®. Retain or delete paragraph below per project requirements and specifier's practice.

C. Product Criteria Forms: Refer to Product Criteria Forms as an attachment to this section.

1. Product Forms: Subject to compliance with specified requirements, provide products specified in each Technical Data Sheet.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

### 2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

Specifier Note: Add article below for alternates required for project; state work covered. Coordinate with Part 1 General Summary Article herein, applicable Division 1 Sections, and other Bid and Contract Documents.

### 2.03 RELATED MATERIALS

A. Related Materials: Refer to other sections for related materials as follows:

1. Underlayment and Patching Compound: Refer to Division 3 Concrete Sections for Portland cement based underlayments and patching compounds.
2. Resilient Flooring Accessories: Refer to Division 9 Finishes Sections for resilient flooring accessories.
3. Expansion Joint Covers: Refer to other specification section for expansion joint covers to be used with resilient flooring.

### 2.04 SOURCE QUALITY

A. Source Quality: Obtain flooring product materials from a single manufacturer.

## PART 3 EXECUTION

*Specifier Note:* Article below is an addition to the CSI SectionFormat and a supplement to MANU-SPEC®. Revise article below to suit project requirements and specifier's practice.

### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

### 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions (bond testing, pH testing, calcium chloride testing, relative humidity testing, etc.).
- B. Material Inspection: In accordance with manufacturer's installation requirements, visually inspect materials prior to installation. Material with visual defects shall not be installed and shall not be considered as a legitimate claim.

### 3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
- B. Surface Preparation:
  - 1. General: Prepare floor substrate in accordance with manufacturer's instructions.
  - 2. Floor Substrate: 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.
  - 3. Concrete Floor Substrate: Concrete floor substrate shall have a minimum compressive strength of 3,000 psi. Refer to Division 3 Concrete sections for patching and repairing crack materials and leveling compounds with Portland cement based compounds.
    - a. Reference Standard: Comply with the latest version of ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- C. Concrete Moisture Testing: Conduct moisture tests on all concrete floors regardless of the age, grade level or the presence of existing flooring. Conduct calcium chloride tests in accordance with the latest version of ASTM F 1869. Measure the internal relative humidity of the concrete slab in accordance with the latest version of ASTM F 2170. 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 FRT 950 adhesive. Concrete internal relative humidity must not exceed 75% when using Forbo FRT 950 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.
- D. Concrete pH Test: Perform pH tests on concrete floors regardless of the age or grade level. The surface pH of concrete slabs must not exceed a pH of 10. Concrete substrates with pH readings less than 7.0 or above 10.0 will require remediation prior to installation.
- E. Wood Subfloors: 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.
  - 1. Refer to Division 6 Carpentry sections for wood subfloor construction.
  - 2. Reference Standard: Comply with the latest version of ASTM F 1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring

Specifier Note: Coordinate article below with manufacturer's recommended installation details and requirements.

### 3.04 INSTALLATION

- A. Material Installation: Establish a line along the center of the longest dimension of the area to be installed. Determine the center of the starting line and adjust the starting point as necessary to create the largest possible perimeter tile. Once the starting point has been determined, establish a second line that is perpendicular to the first line and intersects at the starting point. After establishing the starting lines, apply adhesive with nap roller. Allow the adhesive to turn clear and dry to the touch before installing. After turning clear, the flooring *MUST* be placed into the adhesive within four hours. Beginning at the starting point and carefully following the starting lines, install in a pyramid fashion in one quadrant of the area at a time. Install with the arrows at right angles to one another (quarter turned). *Note: Certain patterns may be installed with arrows all in the same direction.* Roll the completed installation with a 75 pound three-section roller in both directions and repeat as necessary to ensure adequate transfer of adhesive to the backing.
- B. Adhesive Installation: Use nap roller as recommended by flooring manufacturer for specific adhesive (3/8" nap roller). Spread rate is approximately 300ft<sup>2</sup>/gallon.
- C. Installation Techniques:
  - 1. Where demountable partitions and other items are indicated for installation on top of finished flooring, install flooring before these items are installed.
  - 2. Scribe, cut, fit flooring to butt tightly to vertical surfaces, permanent fixtures and built-in furniture, including pipes, outlets, edgings, thresholds, nosings, and cabinets.
  - 3. Extend flooring into toe spaces, door reveals, closets, and similar openings.
  - 4. Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on these covers.
  - 5. Do not install resilient flooring over expansion joints. Use expansion joint covers manufactured for use with resilient flooring. Refer to other specification sections for expansion joint covers.
  - 6. Adhere resilient flooring to substrate without producing open cracks, voids, raising and puckering at joints or other surface imperfections in completed installation.
    - a. Use adhesive applied to substrate in compliance with manufacturer's recommendations, including those for mixing, trowel notch, and adhesive open and working times.
  - 7. Roll resilient flooring as required by resilient flooring manufacturer.
- D. Finish Flooring Patterns: [As selected by Architect.]

Specifier Note: Coordinate article below with Division 1 Quality Assurance and Quality Control Sections.

### 3.05 FIELD QUALITY REQUIREMENTS

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer, and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- A. Manufacturer's Field Services: Upon Owner's request and with at least 72 hours' notice, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
  - 1. Site Visits: [Specify number and duration of periodic site visits.]

Specifier Note: Coordinate article below with Division 1 Execution Requirements (Cleaning) Section.

### 3.06 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.
  - 1. Remove visible adhesive and other surface blemishes using cleaning methods recommended by floor manufacturer.
  - 2. Vacuum floor after installation per manufacturer's recommendations.
  - 3. Spot clean using the "Scrape, Scrub, and Rinse" procedures per the manufacturer's recommendations.

Specifier Note: Coordinate article below with Division 1 Execution Requirements Section.

### **3.07 PROTECTION**

- A. Protection: Protect installed product and finish surfaces from damage during construction. Remove and legally dispose of protective covering at time of Substantial Completion.

Specifier Note: Add or delete article below to suit project requirements.

### **3.08 INITIAL MAINTENANCE PROCEDURES**

- A. General: Include in Contract Sum Amount cost for initial maintenance procedures, and execute procedures after flooring installation as recommended by flooring manufacturer.
- B. Initial maintenance to be conducted by flooring contractor.

Specifier Note: Retain article below to suit project requirements. CSI PageFormat allows for Schedules, Forms, and Tables to be located at the end of a section. Article may be used to describe specific criteria requirements of similar products or equipment.

### **3.09 SCHEDULES AND (PRODUCT CRITERIA) FORMS**

Specifier Note: Retain paragraph below to suit project requirements. Reference a schedule or include a schedule as an attachment which indicates where to locate products and equipment.

- A. Schedules: [Specify reference to applicable schedules.]

Specifier Note: Retain paragraph below to suit project requirements. Include forms as an attachment which indicates product criteria.

- B. Product Criteria Forms Attachments: Refer to Product Criteria Form(s) [No.] of [No.], dated [specify date], attached herewith.

### **END OF SECTION**

Manufacturer's Obligatory Disclaimer Statement (For Electronic Media; Not Print Media)

## **CONTRACTOR STAGING DETAILS**

N



Physical Plant  
Office of Facilities and Operations



Library Rd

6th Street

Student Union Loop

Metcalfe Ave

Milton St

College Road

Rowley St

Thorp Hall

Wilard Hall

Weber Hall

L Lot

Rosedale St

Fruit Hill Ave

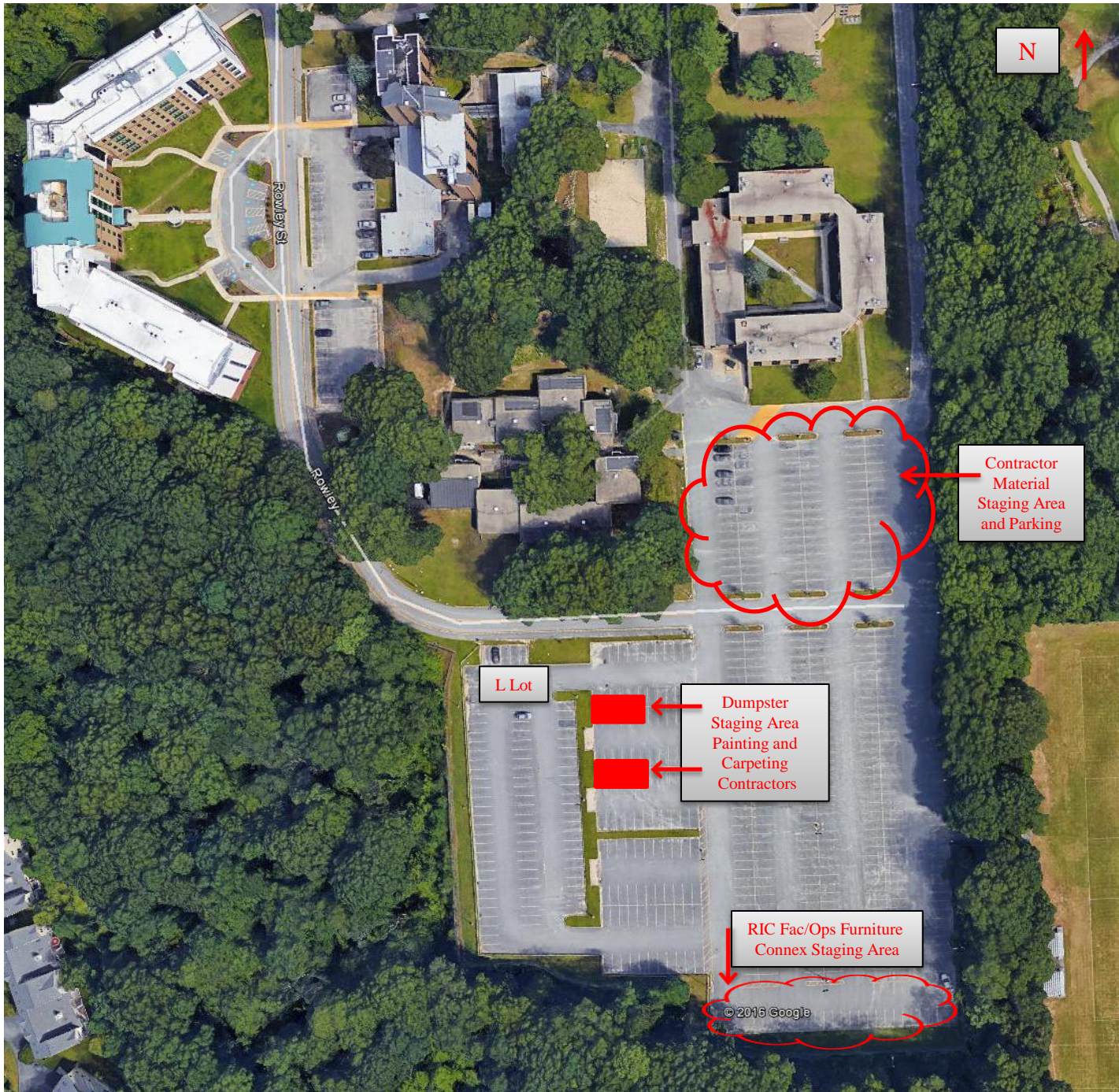
St Thomas St

Rowley

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N

Contractor  
Material  
Staging Area  
and Parking

L Lot

Dumpster  
Staging Area  
Painting and  
Carpeting  
Contractors

RIC Fac/Ops Furniture  
Connex Staging Area

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