SECTION 09 65 19

RESILIENT TILE FOORING

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Karndean Designflooring; resilient tile flooring, adhesives.  
.  
This section is based on the products of Karndean Designflooring, which is located at:  
1100 Pontiac Court  
Export, PA 15632  
Toll Free: 888-266-4343  
Fax: 800-887-7043  
Web: http://www.karndean.com  
Email: info@karndean.com  
[ [Click Here](http://www.arcat.com/arcatcos/cos43/arc43494.html) ] for additional information.  
Quality, design, service and availability: Those are the hallmarks of Karndean Designflooring. We develop luxury flooring inspired by nature. We are the leader in Designflooring - we make it easy to find the perfect floor to suit any space and style. As a luxury brand, we offer the beauty of natural products without the practical drawbacks.  
At Karndean, we believe that providing excellent customer service is paramount. We are a US-based company with state-of-the-art showroom and warehouse facilities in Pittsburgh, Dallas and Las Vegas. We provide fast, direct shipping to anywhere in the US and our knowledgeable customer service team is available to answer your calls from 8 am to 8 pm (ET).  
Originally founded in the United Kingdom in 1973, Karndean has nearly 47 years of experience in luxury vinyl flooring. Karndean has been, and still is, family owned. We remain true to our roots and are fiercely committed to our customers.

1. GENERAL
   1. SECTION INCLUDES
      1. Resilient tile flooring and accessories.
      2. Moisture barrier membrane.
      3. Noise reduction underlayment.
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 06 10 00 - Rough Carpentry.
    3. Section 07 27 19 - Plastic Sheet Air Barriers .
    4. Section 09 65 16 - Resilient Sheet Flooring.
    5. Section 09 65 13 - Resilient Base and Accessories.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American Association of Textile Chemists and Colorists, AATCC 134 - Electrostatic Propensity of Carpets.
    2. ASTM International (ASTM):
       1. ASTM D2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
       2. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
       3. ASTM D3884 - Standard Guide for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method), Abrasion Wheels- H18 with 1000 grams load.
       4. ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
       5. ASTM E492 - Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine.
       6. ASTM E662 - Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
       7. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
       8. ASTM E989 - Standard Classification for Determination of Impact Insulation Class (IIC).
       9. ASTM F137 - Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus.
       10. ASTM F386 - Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces.
       11. ASTM F925 - Standard Test Method for Resistance to Chemicals of Resilient Flooring.
       12. ASTM F970 - Standard Test Method for Static Load Limit.
       13. ASTM F1514 - Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color Change.
       14. ASTM F1515 - Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change.
       15. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile.
       16. ASTM F1914 - Standard Test Methods for Short-Term Indentation and Residual Indentation of Resilient Floor Covering.
       17. ASTM F2055 - Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method.
       18. ASTM F2199 - Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat.
       19. ASTM F3261- Standard Specification for Resilient Flooring in Modular Format with Rigid Polymetric Core.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Provide detailed data on each product to be used including but not limited to the following information as applicable:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
        4. Maintenance recommendations.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two sets of each type, colors and finish of resilient flooring and accessory required, indicating full range of color and pattern variation.
    2. Verification Samples: For each finish product specified, two sets of each type, colors and finish of resilient flooring and accessory required, indicating color and pattern of actual product, including variations, as proof of application compliance.
    3. Closeout Submittals: Submit three copies of the following:
       1. Maintenance and operation data includes - methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
       2. Documentation of warranty specified herein.
    4. Flame Spread Certification: Submit manufacturer's certification that resilient flooring furnished for areas indicated to comply with required flame spread rating has been tested and meets or exceeds indicated or required standard.
  1. QUALITY ASSURANCE

\*\* NOTE TO SPECIFIER \*\* Add quality requirements if required. Delete if not required.

* + 1. Installer Qualifications: Minimum two years' experience, and have completed at least three projects of similar magnitude, material, and complexity. Upon request, provide project references including contact names and telephone numbers for three projects.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, sheen, and finished appearance are approved by Architect.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
     2. Flooring material and adhesive shall be acclimated to the installation area for a minimum of 48 hours prior to installation.
     3. Store cartons of tile products flat and squarely on top of one another, not on edge.

\*\* NOTE TO SPECIFIER \*\* Delete if specified application does not include design strips or borders.

* + 1. Store tubes of design strips and borders in a horizontal position. Storage in a vertical or inclined position causes uneven weight distributions, which will spaghetti the ends of the design strips. Store all tubes lying flat.
  1. PROJECT CONDITIONS
     1. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations. Areas to receive flooring shall be clean, fully enclosed, weather tight with the permanent HVAC set at a uniform temperature of at least 65 degrees F (18 degrees C) and less than 85 degrees (30 degrees C) 48 hours prior to and during and for not less than 48 hours after installation. The flooring material shall be conditioned in the same manner prior to installation.
     2. Close off areas to traffic during resilient flooring installation, and for a period of time after installation as recommended in writing by the manufacturer.
     3. Install resilient flooring materials and accessories after other finishing operations, including painting, have been completed.
     4. Where demountable partitions and other items are indicated for installation on top of sheet resilient flooring material, install flooring material before these items are to be installed.
     5. Concrete substrates must be tested in accordance with ASTM F2170 or ASTM F1869. If the results exceed limits of the product or adhesive to be used a moisture mitigation system or damp-proof membrane must be installed to bring moisture levels within specifications.
     6. Store tubes of design strips and borders in a horizontal position. Storage in a vertical or inclined position causes uneven weight distributions, which will spaghetti the ends of the design strips. Store all tubes lying flat.
  2. WARRANTY
     1. Warranty Period: Manufacturer's standard warranty against manufacturing defects and wearing for flooring are as follows:

\*\* NOTE TO SPECIFIER \*\* Delete warranty periods based on requirements of project and availability with products specified.

* + - 1. Opus Range:
         1. 15-year commercial warranty.
         2. Lifetime residential warranty.
      2. Knight Tile and Knight Tile Rigid Core Ranges:
         1. 10-year commercial warranty.
         2. Lifetime residential warranty.
      3. Van Gogh and Van Gogh Rigid Core Ranges:
         1. 15-year commercial warranty.
         2. Lifetime residential warranty.
      4. Karndean LooseLay and LooseLay Longboard Ranges:
         1. 15-year commercial warranty.
         2. Lifetime residential warranty.
      5. Da Vinci Range:
         1. 20-year commercial warranty.
         2. Lifetime residential warranty.
      6. Art Select Range:
         1. 20-year commercial warranty.
         2. Lifetime residential warranty.
      7. Korlok Select and Korlok Reserve Ranges:
         1. 15-year commercial warranty.
         2. Lifetime residential warranty.
      8. KTrade Gluedown Range:
         1. 10-year commercial warranty.
         2. Lifetime residential warranty.
      9. KTrade LooseLay Range:
         1. 15-year commercial warranty.
         2. Lifetime residential warranty.
      10. KTrade Rigid Core Range:
          1. 10-year commercial warranty.
          2. Lifetime residential warranty.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* 1. EXTRA MATERIALS
     1. 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 requirements.
        1. Quantity: Furnish quantity of flooring units equal to 2 percent of amount installed. Karndean Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage, and protection of extra materials.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Karndean Designflooring, which is located at: 1100 Pontiac Ct.; Export, PA 15632; ASD Toll Free Tel: 888-266-4343; Fax: 800-887-7043; Email: info@karndean.com; Web: www.karndean.com

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. RESILIENT TILE FLOORING

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Planks by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. WP311 GRANO.
        2. WP313 IGNEA.
        3. WP316 RUBRA.
        4. WP318 CARBO.
        5. WP321 LUTEUS.
        6. WP322 CANITIA.
        7. WP325 ARRADO.
        8. WP326 NATURAL WALNUT.
        9. WP328 WASHED WALNUT.
        10. WP329 BLEACHED GREY WALNUT.
        11. WP330 TENEBRA WALNUT.
        12. WP331 TEXTUM.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Planks by Karndean Designflooring.
       1. Dimensions: 48 by 9 inches (1219 by 228 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. WP411 NIVEUS.
        2. WP413 MAGNA.
        3. WP414 ARGEN.
        4. WP415 ORDO.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Tiles by Karndean Designflooring.
       1. Dimensions: 18 by 18 inches (457 by 457 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:
         1. SP115 NERO.
         2. SP116 NOALE.
         3. SP117 LUCA.
         4. SP118 SALUTE GRISIO.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Tiles by Karndean Designflooring.
       1. Dimensions: 18 by 24 inches (457 by 610 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SP212 TERRA.
        2. SP213 URBUS.
        3. SP216 FUMO.
        4. SP218 LUTUM.
        5. SP219 CASABLANCA.
        6. SP220 MARRAKESH.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Tiles by Karndean Designflooring.
       1. Dimensions: 18 by 3 inches (457 by 76 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:
         1. SM-SP216 FUMO.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Tiles by Karndean Designflooring.
       1. Dimensions: 18 by 36 inches (457 by 915 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884:124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SP714 CLARUS.
        2. SP723 ZINC.
        3. SP725 CHALK GREY.
        4. SP728 BLACK IRON.
        5. SP729 SAN MARCO.
        6. SP730 LEONCINI.
        7. SP731 STRATUS.
        8. SP732 UMBRA.
        9. SP733 ALBERTINA.
        10. SP734 CONTARINI.
        11. SP735 TIZINA.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Planks by Karndean Designflooring.
       1. Dimensions: 36 by 4 inches (915 by 102 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. WP511 WEATHERED ELM.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Range Tiles by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:
         1. SP719 BURNT SIENNA.
         2. SP720 INDIGO.
         3. SP721 AMBER.
         4. SP722 ZINC.
         5. SP724 CHALK GREY.
         6. SP726 YELLOW OCHRE.
         7. SP727 BLACK IRON.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Heritage Range Tiles by Karndean Designflooring.
       1. Dimensions: 9 by 9 inches (228 by 228 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:
         1. CLIF-01 CLIFTON.
         2. CLIF-04 CLIFTON.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Opus Heritage Range Tiles by Karndean Designflooring.
       1. Dimensions: 12 by 12 inches (305 by 305 mm).
       2. Thickness: 3/32 inches (2.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F1700.
       6. Classification: ASTM F1700: Class 3 Type B.
       7. Reaction to Fire:
          1. ASTM E648-06: Class 1.
          2. ASTM E662-15a: Pass.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Less than 8.
       10. Dimensional Stability: ASTM F2199: Pass.
       11. Indentation, Residual: ASTM F1914: Pass.
       12. Abrasion Resistance: ASTM D3884: 124,000 cycles.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0120 m^2K/W.
      2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
      3. Item Number, Name:
         1. MAYF-01 MAYFAIR.
         2. MAYF-02 MAYFAIR.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Knight Tile Range Chevron Planks by Karndean Designflooring.
       1. Dimensions: 48 by 9 inches (1219 by 228 mm).
       2. Wear Layer Thickness: 12 mil (0.3 mm).
       3. Tile Thickness: 0.08 inches (2 mm).
       4. Edge: Non-beveled edge.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.88).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. CH-KP94 PALE LIMED OAK.
        2. CH-KP96 MID LIMED OAK.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Knight Tile Range Planks by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Wear Layer Thickness: 12 mil (0.3 mm).
       3. Tile Thickness: 0.08 inches (2 mm).
       4. Edge: Non-beveled edge.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.88).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. KP94 PALE LIMED OAK.
        2. KP96 MID LIMED OAK.
        3. KP97 CLASSIC LIMED OAK.
        4. KP98 AGED OAK.
        5. KP99 LIME WASHED OAK.
        6. KP105 WHITE PAINTED PINE.
        7. KP133 NATURAL SCANDI PINE.
        8. KP138 GREY LIMED OAK.
        9. KP141 URBAN SPOTTED GUM.
        10. KP144 WASHED CHARACTER OAK.
        11. KP145 NATURAL CHARACTER OAK.
        12. KP150 SHADOW STUDIO OAK.
        13. KP154 DUTCH LIMED OAK.
        14. KP155 HONEY LIMED OAK.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Knight Tile Range Tiles by Karndean Designflooring.
       1. Dimensions: 12 by 18 inches (305 by 457 mm).
       2. Wear Layer Thickness: 12 mil (0.3 mm).
       3. Tile Thickness: 0.08 inches (2 mm).
       4. Edge: Non-beveled edge.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: D2047: Pass (Dry 0.88).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. ST5-18 SOAPSTONE.
        2. ST12 BATH STONE.
        3. ST13 PORTLAND STONE.
        4. ST14 CUMBRIAN STONE.
        5. ST16 GREY RIVEN SLATE.
        6. ST17 HONED OYSTER SLATE.
        7. ST18 IVORY RIVEN SLATE.
        8. ST24 OLTEN STONE.
        9. ST30 BERN STONE.
        10. ST31 RIVER MARBLE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Knight Tile Rigid Core Chevron Planks by Karndean Designflooring.
       1. Dimensions: 48 by 9 inches (1219 by 228 mm).
       2. Wear Layer Thickness: 12 mil (0.3 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Non-beveled edge.
       5. Compliance: ASTM F3261.
       6. Classification, ASTM F1700: Class 3 Type B.
       7. Slip Resistance, ASTM D2047: Pass (Dry 0.89).
       8. Reaction to Fire: ASTM E648-06: Class 1.
       9. Staining Resistance, ASTM F925: Pass.
       10. Light Fastness, ASTM F1515: Less than 8.
       11. Abrasion Resistance, ASTM D4060: 25,000 Cycles.
       12. Dimensional Stability, ISO 23999: Pass.
       13. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
       14. Indentation, Residual, ASTM F1914: Pass.
       15. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SCB-CH-KP94 PALE LIMED OAK.
        2. SCB-CH-KP96 MID LIMED OAK.
    1. Resilient Tile Flooring: Knight Tile Rigid Core Planks by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Wear Layer Thickness: 12 mil (0.3 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Non-beveled edge.
       5. Compliance: ASTM F3261.
       6. Classification, ASTM F1700: Class 3 Type B.
       7. Slip Resistance, ASTM D2047: Pass (Dry 0.89).
       8. Reaction to Fire: ASTM E648-06: Class 1.
       9. Staining Resistance, ASTM F925: Pass.
       10. Light Fastness, ASTM F1515: Less than 8.
       11. Abrasion Resistance, ASTM D4060: 25,000 Cycles.
       12. Dimensional Stability, ISO 23999: Pass.
       13. Acoustic Impact Noise Reduction: ASTM E492-09: IIC69.
       14. Indentation, Residual, ASTM F1914: Pass.
       15. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SCB-KP94-6 PALE LIMED OAK.
        2. SCB-KP96-6 MID LIMED OAK.
        3. SCB-KP97-6 CLASSIC LIMED OAK.
        4. SCB-KP98-6 AGED OAK.
        5. SCB-KP99-6 LIMED WASHED OAK.
        6. SCB-KP105-6 WHITE PAINTED PINE.
        7. SCB-KP133-6 NATURAL SCANDI PINE.
        8. SCB-KP138-6 GREY LIMED OAK.
        9. SCB-KP141-6 URBAN SPOTTED GUM.
        10. SCB-KP144-6 WASHED CHARACTER OAK.
        11. SCB-KP145-6 NATURAL CHARACTER OAK.
        12. SCB-KP150-6 SHADOW STUDIO OAK.
        13. SCB-KP154-6 DUTCH LIMED OAK.
        14. SCB-KP155-6 HONEY LIMED OAK

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Knight Tile Rigid Core Tiles by Karndean Designflooring.
       1. Dimensions: 12 by 18 inches (305 by 457 mm).
       2. Wear Layer Thickness: 12 mil (0.3 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Classification, ASTM F1700: Class 3 Type B.
       7. Slip Resistance, ASTM D2047: Pass (Dry 0.89).
       8. Reaction to Fire: ASTM E648-06: Class 1.
       9. Staining Resistance, ASTM F925: Pass.
       10. Light Fastness, ASTM F1515: Less than 8.
       11. Abrasion Resistance, ASTM D4060: 25,000 Cycles.
       12. Dimensional Stability, ISO 23999: Pass.
       13. Acoustic Impact Noise Reduction: ASTM E492-09: IIC69.
       14. Indentation, Residual, ASTM F1914: Pass.
       15. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SCB-ST5-G SOAPSTONE.
        2. SCB-ST12-G BATH STONE.
        3. SCB-ST13-G PORTLAND STONE.
        4. SCB-ST14-G CUMBRIAN STONE.
        5. SCB-ST16-G GREY RIVEN SLATE.
        6. SCB-ST17-G HONED OSYTER SLATE.
        7. SCB-ST18-G IVORY RIVEN SLATE.
        8. SCB-ST24-G OLTEN STONE.
        9. SCB-ST30-G BERN STONE.
        10. SCB-ST31-G RIVER MARBLE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Van Gogh Range Planks by Karndean Designflooring.
       1. Dimensions: 48 by 7 inches (1219 by 178 mm).
       2. Wear Layer Thickness: 20 mil (0.5 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Micro bevel.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. VGW39T ANTIQUE KARRI.
        2. VGW41T MERBAU.
        3. VGW42T JATOBA.
        4. VGW44T LANCEWOOD.
        5. VGW49T RIMU.
        6. VGW53T WELLINGTON OAK.
        7. VGW70T SMOKED OAK.
        8. VGW76T VINTAGE PINE.
        9. VGW81T COUNTRY OAK.
        10. VGW85T FRENCH OAK.
        11. VGW86T CLASSIC OAK.
        12. VGW89T EBONY.
        13. VGW91T TAWNY OAK.
        14. VGW93T HESSIAN OAK.
        15. VGW94T HONEY OAK.
        16. VGW99T RECLAIMED REDWOOD.
        17. VGW100T AGED REDWOOD.
        18. VGW115T Natural Prime Oak.
        19. VGW136T Blond Farmhouse Oak.
        20. VGW137T Silver Farmhouse Oak.
        21. VGW138T Smoked School Cedar.
        22. VGW139T Light Country Oak.
        23. VGW142T Natural School Cedar.
        24. VGW143T Ohana Koa.
        25. VGW144T Auburn Spotted Gum.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Van Gogh Rigid Core Planks by Karndean Designflooring.
       1. Dimensions: 48 by 7 inches (1219 by 178 mm).
       2. Wear Layer Thickness: 20 mil (0.5 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Classification, ASTM F1700: Class 3 Type B.
       7. Slip Resistance, ASTM D2047: Pass (Dry 0.89).
       8. Reaction to Fire: ASTM E648-06: Class 1.
       9. Staining Resistance, ASTM F925: Pass.
       10. Light Fastness, ASTM F1515: Less than 8.
       11. Abrasion Resistance, ASTM D4060: 20,000 Cycles.
       12. Dimensional Stability, ISO 23999: Pass.
       13. Acoustic Impact Noise Reduction: ASTM E492-09: IIC69.
       14. Indentation, Residual, ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SCB39 ANTIQUE KARRI.
        2. SCB41 MERBAU.
        3. SCB42 JATOBA.
        4. SCB44 LANCEWOOD.
        5. SCB49 RIMU.
        6. SCB53 WELLINGTON OAK.
        7. SCB70 SMOKED OAK.
        8. SCB76 VINTAGE PINE.
        9. SCB81 COUNTRY OAK.
        10. SCB83 Frosted Birch.
        11. SCB85 FRENCH OAK.
        12. SCB86 CLASSIC OAK.
        13. SCB89 EBONY.
        14. SCB91 TAWNY OAK.
        15. SCB93 HESSIAN OAK.
        16. SCB94 HONEY OAK.
        17. SCB99 RECLAIMED REDWOOD.
        18. SCB100 AGED REDWOOD.
        19. SCB115 Natural Prime Oak.
        20. SCB136 Blond Farmhouse Oak.
        21. SCB137 Silver Farmhouse Oak.
        22. SCB138 Smoked School Cedar.
        23. SCB139 Light Country Oak.
        24. SCB142 Natural School Cedar.
        25. SCB143 Ohana Koa.
        26. SCB144 Auburn Spotted Gum.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Karndean LooseLay Range Planks by Karndean Designflooring.
       1. Dimensions: 41.3 by 9.85 inches (1050 by 250 mm).
       2. Wear Layer Thickness: 20 mil (0.5 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Non-beveled edge.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.92).

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0245 m^2K/W.
      2. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LLP5-7 BURNT GINGER.
        2. LLP33 COPPER GUM.
        3. LLP38 TASMANIAN WATTLE.
        4. LLP39 ANTIQUE KARRI.
        5. LLP91 MERBAU.
        6. LLP92 COUNTRY OAK.
        7. LLP94 NEWPORT.
        8. LLP95 ASHLAND.
        9. LLP108 PROVIDENCE.
        10. LLP109 STAMFORD.
        11. LLP110 BURLINGTON.
        12. LLP111 BOSTON.
        13. LLP112 HARTFORD.
        14. LLP113 CAMBRIDGE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Karndean LooseLay Range Tiles by Karndean Designflooring.
       1. Dimensions: 19.7 by 24 inches (500 by 610 mm).
       2. Wear Layer Thickness: 20 mil (0.5 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Non-beveled edge.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.92).

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0245 m^2K/W.
      2. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LLT201 COLORADO.
        2. LLT202 INDIANA.
        3. LLT203 MONTANA.
        4. LLT206 GEORGIA.
        5. LLT208 TINO.
        6. LLT209 CAPRI.
        7. LLT211 VULCANO.
        8. LLT212 DAKOTA.
        9. LLT213 MAINE.
        10. LLT214 SEATTLE.
        11. LLT217 VERMONT.
        12. LLT218 ONTARIO.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Da Vinci Range Planks by Karndean Designflooring.
       1. Dimensions: 36 by 3 inches (915 by 76 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. RP41 AUSTRALIAN WALNUT.
        2. RP61 CANADIAN MAPLE.
        3. RP73 KENYAN TIGERWOOD.
        4. RP91 LORENZO WARM OAK.
        5. RP94 SCORCHED OAK.
        6. RP95 BLENDED OAK.
        7. RP96 LIMED SILK OAK.
        8. RP97 LIMED JUTE OAK.
        9. RP98 LIMED LINEN OAK.
        10. RP99 LIMED COTTON OAK.
        11. RP100 COASTAL DRIFTWOOD.
        12. RP101 BEACH DRIFTWOOD.
        13. RP102 NATURAL OAK.
        14. RP103 HARVEST OAK.
        15. RP104 SINGLE SMOKED ACACIA.
        16. RP105 DOUBLE SMOKED ACACIA.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Da Vinci Range Tiles by Karndean Designflooring.
       1. Dimensions: 16 by 16 inches (406 by 406 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. CC08 OXIDE.
        2. LST03 PIAZZA LIMESTONE.
        3. LST04 SPIRITO LIMESTONE.
        4. LST05 SANTI LIMESTONE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Da Vinci Range Tiles by Karndean Designflooring.
       1. Dimensions: 12 by 18 inches (305 by 457 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. CER11 MOLTEN.
        2. CER12 IRON ORE.
        3. CER13 EISEN.
        4. CER14 CARBON.
        5. CER15 DUNE.
        6. CER16 SABLE.
        7. CER17 DRIFT.
        8. CER19 BURNET.
        9. CER20 CAMBRIC.
        10. CER21 SINDON.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Hand Crafted Wood Collection Planks by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. EW01 HICKORY PAPRIKA.
        2. EW02 HICKORY PEPPERCORN.
        3. EW03 HICKORY NUTMEG.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Limestone Collection Tiles by Karndean Designflooring.
       1. Dimensions: 9 assorted tiles sizes in 36 by 36 inches (915 by 915 mm) roman pattern design.
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LM01 JERSEY.
        2. LM02 GUERNSEY.
        3. LM03 ALDERNEY.
        4. LM20 HERM.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Marble collection Tiles by Karndean Designflooring.
       1. Dimensions: 16 by 16 inches (406 by 406 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LM15 OTONO.
        2. LM16 FIORE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Slate collection Tiles by Karndean Designflooring.
       1. Dimensions: 18 by 24 inches (457 by 610 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LM05 MELBOURNE.
        2. LM06 CANBERRA.
        3. LM21 OAKELEY.
        4. LM22 CORRIS.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Travertine Collection Tiles by Karndean Designflooring.
       1. Dimensions: 18 by 24 inches (457 by 610 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LM07 WASHBURN.
        2. LM08 CALDERA.
        3. LM09 GALLATIN.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Travertine Collection Tiles by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LM27 WASHBURN.
        2. LM28 CALDERA.
        3. LM29 GALLATIN.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Planks by Karndean Designflooring.
       1. Dimensions: 48 by 7 inches (1219 by 178 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. RL01 SPRING OAK. (Oak Royale).
        2. RL02 SUMMER OAK. (Oak Royale).
        3. RL03 AUTUMN OAK. (Oak Royale).
        4. RL04 WINTER OAK. (Oak Royale).
        5. RL05 SPANISH CHERRY. (Cherry Royale).
        6. RL07 SANTINA CHERRY. (Cherry Royale).
        7. RL12 STORM OAK. (Oak Royale).

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Planks by Karndean Designflooring.
       1. Dimensions: 4 inches (102 mm), 5 inches (127 mm), 7 inches (178 mm) by Random Lengths.
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. RL09 COFFEE MAPLE.
        2. RL11 TOASTED MAPLE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Planks by Karndean Designflooring.
       1. Dimensions: 56 by 9 inches (1422 by 228 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. EW11 WEATHERED HICKORY.
        2. EW12 VINTAGE HICKORY.
        3. EW13 CLASSIC HICKORY.
        4. EW21 RECLAIMED CHESTNUT.
        5. EW22 SALVAGED CHESTNUT.
        6. RL21 GLACIER OAK.
        7. RL23 SAVANNAH OAK.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Oak Premiere Collection Planks by Karndean Designflooring.
       1. Dimensions: 36 by 6 inches (915 by 152 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. HC01 DAWN OAK.
        2. HC03 DUSK OAK.
        3. HC04 SUNDOWN OAK.
        4. HC06 MIDNIGHT OAK.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Art Select Range; Parquet Collection Planks by Karndean Designflooring.
       1. Dimensions: 18 by 3 inches (457 by 76 mm).
       2. Wear Layer Thickness: 30 mil (0.7 mm).
       3. Tile Thickness: 1/8 inches (3 mm).
       4. Edge: Beveled edge, 2.5 mm thick.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).
       6. Item Number and Name:
          1. SM-RL21 GLACIER OAK.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Karndean LooseLay Longboard Range Planks by Karndean Designflooring.
       1. Dimensions: 59.1 by 9.85 inches (1500 by 250 mm).
       2. Wear Layer Thickness: 20 mil (0.5 mm).
       3. Tile Thickness: 0.18 inches (4.5 mm).
       4. Edge: Non-beveled edge.
       5. Material Compliance: ASTM F1700.
          1. Reaction to Fire: ASTM E662, ASTM E648.
          2. Slip Resistance: ASTM D2047: Pass (Dry 0.89).

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.0245 m^2K/W.
      2. Item Number and Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LLP301 TWILIGHT OAK.
        2. LLP302 RAVEN OAK.
        3. LLP303 ANTIQUE HEART PINE.
        4. LLP304 WEATHERED HEART PINE.
        5. LLP305 RECLAIMED HEART PINE.
        6. LLP306 PEARL OAK.
        7. LLP307 NEUTRAL OAK.
        8. LLP308 FRENCH GREY OAK.
        9. LLP309 TAUPE OAK.
        10. LLP310 CHAMPAGNE OAK.
        11. LLP315 CHARACTER WALNUT.
        12. LLP317 LEMON SPOTTED GUM.
        13. LLP330 WORN FABRIC OAK.
        14. LLP331 SHADOW FABRIC OAK.
        15. LLP332 URBAN FABRIC OAK.
        16. LLP333 VANILLA OAK.
        17. LLP335 WEATHERED AMERICAN PINE.
        18. LLP336 DISTRESSED AMERICAN PINE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Korlok Select Range Planks by Karndean Designflooring.
       1. Dimensions: 56 by 9 inches (1420 by 225 mm).
       2. Thickness: 1/4 inches (6.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Slip Resistance: ASTM D2047.
       7. Reaction to Fire: ASTM E648-06: Class 1.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.052 m^2K/W
      2. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. RKP8101 BALTIC WASHED OAK.
        2. RKP8102 WASHED VELVET ASH.
        3. RKP8103 WARM ASH.
        4. RKP8104 WASHED GREY ASH.
        5. RKP8105 TEXAS WHITE ASH.
        6. RKP8107 SMOKED BUTTERNUT.
        7. RKP9108 WASHED BUTTERNUT.
        8. RKP8109 RECLAIMED FRENCH OAK.
        9. RKP8110 ANTIQUE FRENCH OAK.
        10. RKP8111 BALTIC LIMED OAK.
        11. RKP8114 CATHEDRAL OAK.
        12. RKP8116 CANADIAN URBAN OAK.
        13. RKP8122 NATURAL KOA.
        14. RKP8124 KILAUEA KOA.
        15. RKP8126 SMOKED KOA.
        16. RKP8202 OSYTER OAK.
        17. RKP8203 SHADOW OAK.
        18. RKP8206 BARLEY OAK.
        19. RKP8209 SALVAGED BARNWOOD.
        20. RKP8215 WARM BRUSHED OAK.
        21. RKP8217 IVORY BRUSHED OAK.
        22. RKP8236 BALTIC COASTAL OAK.
        23. RKP8237 GLENMORE OAK.
        24. RKP8238 BRAEMAR OAK.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Korlok Select Range Planks by Karndean Designflooring.
       1. Dimensions: 24 by 6 inches (609 by 152 mm).
       2. Thickness: 1/4 inches (6.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Slip Resistance: ASTM D2047.
       7. Reaction to Fire: ASTM E648-06: Class 1.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.052 m^2K/W.
      2. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SM-RKP8105 TEXAS WHITE ASH.
        2. SM-RKP8116 CANADIAN URBAN OAK.
        3. SM-RKP8209 SALVAGED BARNWOOD.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: Korlok Select Stone Range by Karndean Designflooring.
       1. Dimensions: 18 by 24 inches (457 by 610 mm).
       2. Thickness: 1/4 inches (6.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Slip Resistance: ASTM D2047.
       7. Reaction to Fire: ASTM E648-06: Class 1.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.052 m^2K/W
      2. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. RKT2407 SHADOW LACE.
        2. RKT2408 ALPINE LACE.
        3. RKT3001-G VOLCANIC SLATE.
        4. RKT3002-G ANTIQUE COPPER.
        5. RKT3003-G MOUNTAIN SLATE.
        6. RKT3004-G COASTAL FOG.
        7. RKT3005-G ARTIC MIST.
        8. RKT3006-G BLACK SANDS.
        9. RKT3007-G METRO GREY.
        10. RKT3008-G OXFORD GREY.
        11. RKT3009-G PEBBLE GREY.
        12. RKT3010-G SANDSTORM.
        13. RKT3011-G AGED PARCHMENT.
        14. RKT3012-G PALAZZO MARBLE.
        15. RKT3013-G BRUNELLE MARBLE.
    1. Resilient Tile Flooring: Korlok Select Stone Range by Karndean Designflooring.
       1. Dimensions: 24 by 6 inches (609 by 152 mm).
       2. Thickness: 1/4 inches (6.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Slip Resistance: ASTM D2047.
       7. Reaction to Fire: ASTM E648-06: Class 1.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D4060: 36000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.052 m^2K/W
      2. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. SM-RKT3012-G PALAZZO MARBLE.
        2. SM-RKT3013-G BRUNELLE MARBLE.
    1. Resilient Tile Flooring: Korlok Reserve Range Planks by Karndean Designflooring.
       1. Dimensions: 48 by 7 inches (1219 by 178 mm).
       2. Thickness: 1/4 inches (6.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: Micro bevel.
       5. Compliance: ASTM F3261.
       6. Slip Resistance: ASTM D2047.
       7. Reaction to Fire: ASTM E648-06: Class 1.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D4060: 20,000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC68.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Thermal Conductivity: ISO 8302, 0.052 m^2K/W.
      2. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. RCP6531 VINTAGE OREGON OAK.
        2. RCP6532 WEATHERED OAK.
        3. RCP6533 NORTH AMERICAN OAK.
        4. RCP6534 LIMED COASTAL OAK.
        5. RCP6535 AGED SPANISH OAK.
        6. RCP6536 NATURAL OILED OAK.
        7. RCP6539 CHARRED WEATHERED PINE.
        8. RCP6541 GREY OILED OAK.
        9. RCP6543 MARRON ELM.
        10. RCP6544 GHOST ELM.
        11. RCP6545 SMOKED AMERICAN MAPLE.
        12. RCP6546 MILLSTONE SYCAMORE.

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: KTrade Gluedown Planks by Karndean Designflooring.
       1. Dimensions: 48 by 7 inches (1219 by 178 mm).
       2. Thickness: 0.08 inches (2 mm).
       3. Wear Layer: 12 mil (0.3 mm).
       4. Beveled Edge: No.
       5. Compliance: ASTM F1700.
       6. Slip Resistance: ASTM D2047.
       7. Reaction to Fire: ASTM E648-06: Class 1, ASTM E662.
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D3884: 42000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC43.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. PVP120 CHARLESTON.
        2. PVP121 ATHENS.
        3. PVP123 NAPLES.
        4. PVP128 CLEMSON.
        5. PVP142 SICILIA.
        6. PVP145 TORCELLO.
        7. PVP147 LAMPIONE.
        8. PVP148 LINOSA.
        9. PVP150 LEVANZO.
        10. PVP151 VIVARA

\*\* NOTE TO SPECIFIER \*\* Delete resilient floor tile type if not required.

* + 1. Resilient Tile Flooring: KTrade LooseLay Planks by Karndean Designflooring.
       1. Dimensions: 41.3 by 9.85 inches (1050 by 250 mm).
       2. Thickness: 0.18 inches (4.5 mm).
       3. Wear Layer: 20 mil (0.5 mm).
       4. Beveled Edge: No.
       5. Compliance: ASTM F1700.
       6. Slip Resistance: ASTM D2047
       7. Reaction to Fire: ASTM E648-06: Class 1, ASTM E662
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D3884: 113000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC56.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. LLP120 CHARLESTON.
        2. LLP121 ATHENS.
        3. LLP123 NAPLES.
        4. LLP128 CLEMSON.
        5. LLP142 SICILIA.
        6. LLP145 TORCELLO.
        7. LLP147 LAMPIONE.
        8. LLP148 LINOSA.
        9. LLP150 LEVANZO.
        10. LLP151 VIVARA.

\*\* NOTE TO SPECIFIER \*\* Delete if application does include Karndean Borders or design strips.

* + 1. Resilient Tile Flooring: KTrade Rigid Core Planks by Karndean Designflooring.
       1. Dimensions: 48 by 7 inches (1219 by 178 mm).
       2. Thickness: 0.18 inches (4.5 mm).
       3. Wear Layer: 12 mil (0.3 mm).
       4. Beveled Edge: No.
       5. Compliance: ASTM F1700.
       6. Slip Resistance: ASTM D2047
       7. Reaction to Fire: ASTM E648-06: Class 1, ASTM E662
       8. Staining Resistance: ASTM F925: Pass.
       9. Light Fastness: ASTM F1515: Pass.
       10. Abrasion Resistance: ASTM D3884: 25,000 Cycles.
       11. Dimensional Stability: ASTM F2199: Pass.
       12. Acoustic Impact Noise Reduction: ASTM E492-09: IIC56.
       13. Indentation, Residual: ASTM F1914: Pass.

\*\* NOTE TO SPECIFIER \*\* Suitable for underfloor heating.

* + - 1. Item Number, Name:

\*\* NOTE TO SPECIFIER \*\* Delete item numbers and names not required.

* + - * 1. PVP120-SCB CHARLESTON.
        2. PVP121-SCB ATHENS.
        3. PVP123-SCB NAPLES.
        4. PVP128-SCB CLEMSON.
        5. PVP142-SCB SICILIA.
        6. PVP145-SCB TORCELLO.
        7. PVP147-SCB LAMPIONE.
        8. PVP148-SCB LINOSA.
        9. PVP150-SCB LEVANZO.
        10. PVP151-SCB VIVARA.
    1. Karndean Borders and Design strips: Location, quantity, type, style, and configuration as indicated on the Drawings.
  1. ACCESSORlES

\*\* NOTE TO SPECIFIER \*\* Delete if floor care kit not required.

* + 1. Karndean Floor Care Kit with cleaning and maintenance products in quantities appropriate to size and scope of resilient flooring application are available but not required.
    2. Adhesive: Manufacturer's recommended adhesive as follows.

\*\* NOTE TO SPECIFIER \*\* Karndean Epoxy is a 2-part epoxy adhesive for moisture prone areas. Epoxy resin suitable for areas with extreme temperature variations. Moisture shall be less than 90 percent RH or 8 lb MVER. 45 minutes working time. Recommended for 3 seasons rooms, over metal substrates, and epoxy coated floors. Delete if not required.

* + - 1. Karndean Epoxy adhesive.

\*\* NOTE TO SPECIFIER \*\* If moisture is not within the manufacturer's specifications, a moisture mitigation system shall be used to correct the problem. Delete if not required.

* + - * 1. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Karndean DrySet Roll-on Adhesive.

\*\* NOTE TO SPECIFIER \*\* If moisture is not within the manufacturer's specifications, a sealer can be used to correct the problem. Delete if not required.

* + - * 1. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Karndean K-Spray Spray Adhesive.

\*\* NOTE TO SPECIFIER \*\* If moisture is not within the manufacturer's specifications, a sealer can be used to correct the problem. Delete if not required.

* + - * 1. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Karndean K99 HM.

\*\* NOTE TO SPECIFIER \*\* If moisture is not within the manufacturer's specifications, a sealer can be used to correct the problem. Delete if not required.

* + - * 1. Moisture readings higher than approved by the adhesive shall use a moisture mitigation system.

\*\* NOTE TO SPECIFIER \*\* Coordinate with Division 1 sections Unit Prices, Allowances. Depending on application and substrate condition, scope of work for substrate preparation can vary greatly. Manufacturer's recommended substrate tolerances ensure high quality finish appearance. Delete adhesive types not required.

* + 1. Portland based cementitious base leveler or patch. Gypsum based not acceptable unless properly prepared.

\*\* NOTE TO SPECIFIER \*\* Delete if application does require moisture barrier membrane.

* 1. MOISTURE BARRIER MEMBRANE
     1. Moisture Barrier Membrane:

\*\* NOTE TO SPECIFIER \*\* KOVARA 95 is a moisture barrier membrane designed to be laid down above concrete floor slabs and below floor coverings to protect these materials, as well as their adhesives, from any staining, warping, or mold that may result from water vapor emissions and alkaline salts infiltrating through the concrete slab up to 95 percent relative humidity. Delete if not required.

* + - 1. KOVARA 95 as manufactured by GCP Applied Technologies.
         1. Material: Three-layer composite construction of a HDPE bottom layer, glass mat middle layer, and gray mineral top layer.
         2. Thickness: 0.024 inches (0.61 mm).
         3. Resistant to heavy rolling loads.
         4. No VOC content.
         5. Does not support mold or mildew growth.
         6. Provides resistance to 95 percent relative humidity.
         7. Tapes: As recommended by Manufacturer.

\*\* NOTE TO SPECIFIER \*\* KOVARA MBX is a moisture barrier membrane designed to be laid down above concrete floor slabs and below floor coverings to protect these materials, as well as their adhesives, from any staining, warping, or mold that may result from water vapor emissions and alkaline salts infiltrating through the concrete slab up to 99.5 percent relative humidity. Delete if not required.

* + - 1. KOVARA MBX as manufactured by GCP Applied Technologies.
         1. Material: Three-layer composite construction of a HDPE bottom layer, glass mat middle layer, and dark blue mineral top layer.
         2. Thickness: 0.028 inches (0.71 mm).
         3. Resistant to heavy rolling loads.
         4. No VOC content.
         5. Does not support mold or mildew growth.
         6. Provides resistance to 99.5 percent relative humidity.
         7. Tapes: As recommended by Manufacturer.

\*\* NOTE TO SPECIFIER \*\* QuietChoice is a Noise Reduction Underlayment engineered to reduce sound transmission within multi-level structures. Delete if application does not require noise reduction underlayment.

* 1. NOISE REDUCTION UNDERLAYMENT
     1. Noise Reduction Underlayment: QuietChoice Acoustic Underlayment.
        1. Material Composition: Frothed polyurethane foam.
        2. Thickness: 0.055 inches (1.4 mm).
        3. Sound Rating with 6 inch (152 mm) concrete slab, drop ceiling, and 5 mm (0.20 inch) LVT:
           1. Impact Isolation Class (IIC): 71.
           2. Delta IIC: 25.

1. EXECUTION
   1. EXAMINATION
      1. Inspect floor to be installed immediately upon arriving at job site; perform a moisture test.
      2. Do not begin installation until substrates have been properly prepared.
      3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
      4. The installation of the resilient flooring shall not begin until the work of all other trades has been completed, particularly wet and overhead trades.
      5. Areas to receive flooring shall be adequately lighted during all phases of the installation process.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Using Portland based cementitious base leveler or patch fill and cover all seams, nail heads, voids, cracks, and expansion joints. Achieve smooth, even, firmly attached substrate for best finish results. Gypsum based underlayment not acceptable with Karndean Luxury Vinyl Flooring unless it is first properly prepared.
         1. Encapsulate any gypsum with a premium latex primer/sealer recommended by gypsum manufacturer.
         2. Cement slabs can be floated or repaired using Portland cement based compound. Follow patch manufacturers' instructions.
         3. Once substrate flatness is achieved, 3/16 inch (5 mm) in 10 feet (mm in 3 m), continue with the next step.

\*\* NOTE TO SPECIFIER \*\* Delete if substrate is within manufacturer's tolerances for moisture and sealer is not required.

* + 1. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

\*\* NOTE TO SPECIFIER \*\* Delete if concrete substrates not required.

* + 1. Concrete Substrates: The Contractor shall verify to the Owner and installer a minimum of 30 days prior to the scheduled resilient flooring installation the following substrate conditions. All substrate testing shall be documented and submitted to the Architect and Owner before commencement of the flooring installation.
       1. Verify that substrates are dry, free of debris, and that all surfaces have properly cured.
       2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
       3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
       4. Moisture Testing: Perform ASTM 1869 Calcium Chloride or ASTM 2170 In-Situ RH test and record results. Choose proper adhesive or moisture mitigation systems to meet manufacturers' specifications for moisture content. Proceed with installation only after substrates meet specifications.
  1. INSTALLING RESILIENT TILES AND PLANKS
     1. General:
        1. Karndean does not mandate any one brand of resilient flooring underlayment. Permanent HVAC system shall be turned on and set to a minimum of 65 degrees F (20 degrees C) for a minimum of 48 hours prior to, during and 48 hours after installation.
        2. All products shall be allowed to acclimate at least 24 hours before installation. This means product shall be placed in the same room as the install that is taking place and removed from its factory packaging.
        3. Material shall be visually inspected prior to installation.
        4. Ensure that all recommendations for sub-floor and jobsite conditions are met prior to beginning the installation. Once the installation is started, Contractor and installer have accepted those conditions.
        5. Install in accordance with manufacturer's installation instructions for each product type and application specified.
     2. Layout and Installation:

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if not specifying plank shaped simulated wood resilient tile flooring.

* + - 1. Position planks so the end seams are no closer than the width of the plank being installed. Maintain this approach to staggering the planks throughout the entire installation while keeping a random appearance.
      2. Center tiles or planks in rooms and hallways so borders are not less than half a tile or plank when possible.
      3. Cut edges shall always be installed against a wall.
      4. Install using tile and plank installation techniques recommended by manufacturer.
      5. Install tiles, planks, borders and design strips in locations and configurations indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* A moisture test is required over any concrete substrate. Karndean LooseLay product can be installed in the interior of any building without adhesive so long as the walls are less than 13 feet (3962 mm) long and the sub floor has been prepared to the standard as stated in Subfloor Preparation. Installations with walls over 13 feet (3962 mm) in length require a 4 inch (100 mm) perimeter band of adhesive. When installing Karndean LooseLay, flooring should be net fit to walls and other permanent vertical structures. There is no need to allow gaps around the vertical structures or at transition areas for expansion and contraction. In high traffic transition areas, please follow the instructions below as they relate to extreme conditions.

* + 1. Product Application:
       1. Install in accordance with adhesive recommendations on label or data sheet.
       2. Refer to manufacturer's literature for selection criteria for applicator, type.
       3. Using proper applicator, apply adhesive in accordance with label on adhesive.
       4. For LooseLay installations only, spread a 4 inch (100 mm) wide band of adhesive around the perimeter of the area designated as an extreme condition area. An additional 4 inch (100 mm) band shall be spread at approximately 10 foot (3 m) intervals, forming a grid pattern.
       5. For transitional areas, from LooseLay to another floor covering of a different height, a 4 inch (100 mm) band of adhesive should be spread across the length of the transition.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if Korlok products are not required.

* + - 1. Additional requirements for Korlok Products:
         1. Comply with manufacturer's instruction sheets included in material packaging.
         2. Install as "Floating Floor" assembly only. Use of adhesives is not recommended.
         3. Clean, stable, and dry subfloors are required. Concrete subfloors must be moisture tested and any above 75 percent RH must have a DPM, damp proof membrane, or moisture mitigation installed.
         4. Confirm floors are flat to within 3/16 inch (5 mm) in 10 feet (2 mm in 3 m).
         5. Install with 3/16 inch (5 mm) expansion at walls and other vertical abutments.
  1. CLEANING
     1. Wipe off any adhesive on floor as installation proceeds. Wait 48 hours before applying the cleaning and maintenance products.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraph if not specifying plank shaped simulated wood resilient tile flooring.

* + 1. Prior to installation of permanent fixtures or furniture, remove all dirt, debris, or residual adhesive and clean the floor. If desired, a protective covering may be applied at this time. Specific products and instructions are available from the manufacturer.
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.
  2. MAINTENANCE
     1. Comply with manufacturer's instructions for proper cleaning and maintenance of the products.

END OF SECTION