

GUIDE SPECIFICATION FOR POURED IN PLACE TERRAZZO STAIRS

(Revised 6/94 Supersedes all previous Specifications)

SECTION 09

TERRAZZO STAIRS (POURED IN PLACE)

Terrazzo stairs (poured in place): Where specified in conjunction with terrazzo floors include in terrazzo floor specification. This specification is written for Cast in Place Terrazzo Stairs only for concrete or steel substrates.

PART 1-GENERAL

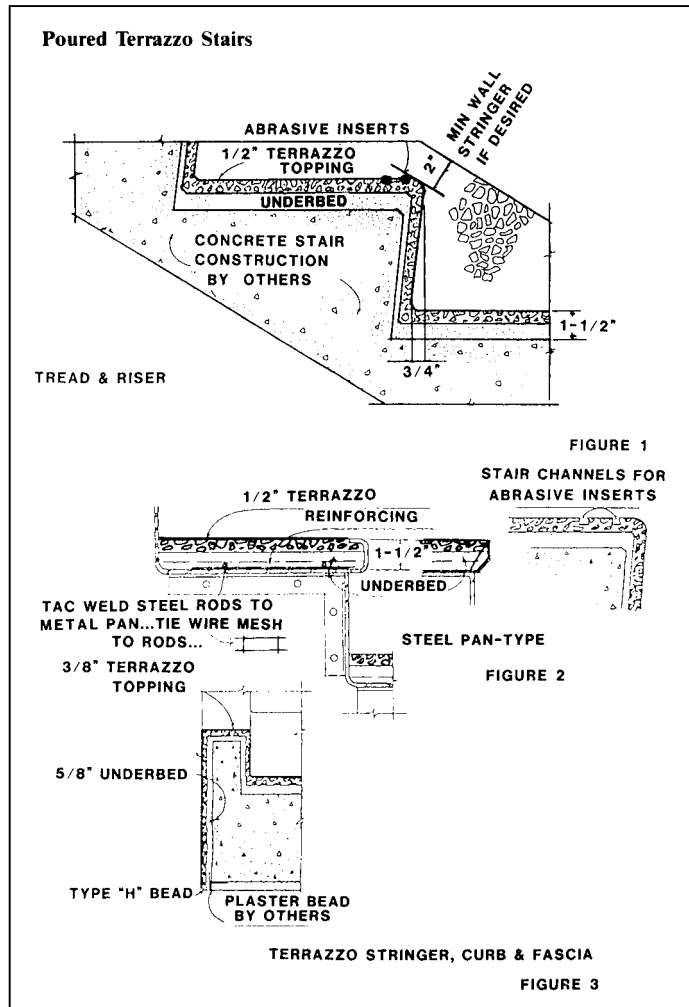
1.01 RELATED WORK SPECIFIED IN OTHER SECTIONS

NOTE: DELETE NONAPPLICABLE ITEMS.

- A. Furnishing and/or installation of metal lath and scratch coat.
Section _____
- B. Attachment of metal stairs, any welding and mesh reinforcing.
Section _____
- C. Furnishing and setting surface hardware.
Section _____
- D. Setting of metal base beads and wood ground.
Section _____

NOTE: DELETE IN CASES WHERE JURISDICTION PERMITS TERRAZZO CONTRACTOR TO INSTALL.

- E. Backing for terrazzo base must be a cement board, concrete or concrete block.
- F. Concrete subfloor, Section _____
NOTE: SUBFLOOR SHOULD NOT VARY MORE THAN 1/4" FROM TRUE PLANE IN A 10 FOOT SPAN WITH A BROOM FINISH FREE OF LAITANCE. NO CURING AGENTS OR OTHER ADDITIVES WHICH COULD PREVENT BONDING SHOULD BE USED.
- G. Broom clean area to receive terrazzo of loose chips, laitance and all foreign matter.
- H. Sufficient water, temporary heat and light, and adequate electric with suitable outlets connected and distributed for use within 100 feet of any working space.
NOTE: AMBIENT TEMPERATURES SHALL BE MAINTAINED AT A MINIMUM OF 50 DEGREES FAHRENHEIT.



1.02 QUALITY ASSURANCE

- A. Acceptable supplier:
 1. Materials furnished shall meet NTMA Specifications.
- B. Installer qualifications:
 1. Installer shall be a contractor member of NTMA and shall perform all work in accordance with NTMA standards.
 2. If installer is not a contractor member of NTMA, installer shall submit a list of completed projects of a similar magnitude and complexity.

1.03 SUBMITTAL

- A. Samples:
 1. Submit a maximum of three samples, minimum 6" x 6" for each color and type of terrazzo.
 2. Submit two, 6" minimum lengths of each type and kind of divider strips.
- B. Maintenance Literature:
 1. Submit two copies of maintenance recommendations of NTMA or maintenance product members of NTMA.
- C. Certification:
 1. Suppliers shall furnish certification attesting that materials meet specification requirements.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Delivery of materials:
 1. Deliver materials in a manner to prevent damage to containers and/or bags.
- B. Storage of materials:
 1. Store materials in a clean, dry and heated (if necessary) location.

1.05 GUARANTEE

One year from date of substantial completion of Terrazzo installation.

PART 2-PRODUCTS

2.01 MATERIALS

- A. Portland cement: ASTM C 150, Color
NOTE: SELECT AND SPECIFY WHITE OR GRAY FOR TERRAZZO TOPPING. WHITE CEMENT IS UNIFORM IN COLOR. GRAY CEMENT MAY NOT BE UNIFORM IN COLOR AND MAY PRODUCE A VARIATION OF SHADE IN THE MATRIX. (See product information)
- B. Sand: Clean, washed, locally available sand.
- C. Marble Chips:
1. Size to conform with NTMA gradation standards.
NOTE: SEE PRODUCT INFORMATION.
2. Abrasion and Impact resistance when testing in accordance with ASTM C 131-89 shall not exceed 40% loss.
3. Abrasive safety lines shall be _____
NOTE: SPECIFY ONE LINE, TWO LINE, OR THREE LINE ABRASIVE INSERTS.
- D. Strips:
1. Divider _____ (gauge)
_____ (material)
with a depth of _____ (inches)
for a topping thickness of _____ (inches).
NOTE: (SEE DIVIDER STRIPS) SELECT GAUGE, MATERIAL & STRIP DEPTH. GAUGE: 18, 16 OR 14 B & S GAUGE, OR 1/8, 1/4, OR 3/8 INCH HEAVY TOP. MATERIAL: WHITE ALLOY OF ZINC, BRASS OR PLASTIC. DEPTH: 1-1/4 INCHES FOR 1/2 INCH STANDARD TOPPING.
- E. Colorants: Alkali-resistant color stable pigments.
NOTE: REFER TO NTMA INFORMATION GUIDE FOR FURTHER INFORMATION.
- F. Curing Material: Water, Wet Sand, or Polyethylene Sheeting.
- G. TERRAZZO CLEANER:
1. Ph factor between 7 and 10, where applicable.
2. Biodegradable and phosphate free.
- H. Sealer:
1. Ph factor between 7 and 10, where applicable.
2. Shall not discolor or amber.
3. Penetrating type specially prepared for use on Terrazzo.
4. Flash Point: ASTM D 56, 80 degrees Fahrenheit minimum, where applicable.
5. U/L listed as Slip Resistance.
- I. Abrasive strips: Carborundum or similar grit.
- J. Abrasive Strip Channel: 1/2" wide by 1/2" deep white alloy of zinc or brass.

2.02 MIXES

- A. Terrazzo Selection:
1. Type: _____
NOTE: SELECT TYPE OR TYPES: STANDARD OR VENETIAN
2. NTMA Plate # _____
NOTE: SELECT COLOR AND DESIGN FROM NTMA INFORMATION GUIDE OR COLOR PLATE. ANY DEVIATION FROM NTMA PLATES MUST BE CLEARLY STIPULATED.
- B. Proportions:
1. Underbed: One part Portland cement to three parts sand and sufficient water to provide workability at as low a slump as possible.
2. Terrazzo Topping: One 94 pound bag of Portland Cement per 125 pounds of marble chips, color pigment if required and sufficient potable water to produce a workable mix,
- C. Mixing:
1. Underbed:
a. Charge and mix sand, aggregate and Portland cement.
b. Add water and mix.
2. Terrazzo topping:
a. Charge and mix marble chips, Portland cement and color pigment, if required.
b. Add water and mix to a uniform workable consistency.

PART 3-EXECUTION

3.01 INSPECTION

- A. Examine areas to receive terrazzo for defects in existing work that affect proper execution of Terrazzo.
1. Defects in existing work that affect proper execution of terrazzo.
2. Deviations beyond allowable tolerances.
- B. Start work only when all defects have been corrected by others.

3.02 INSTALLATION

- A. Underbed:
1. Thoroughly saturate concrete substrate with water, slush and broom with neat cement slurry.
NOTE: OVER STEEL SUBSTRATE, PLACE UNDERBED UNDER AND OVER MESH.
2. Place concrete underbed.
3. Screed underbed to 1/2 inch below finished elevation or slope.
4. Install divider strips as shown on drawings in semi-plastic underbed.
5. Position Abrasive Strip channels on stair treads as indicated on drawings.

- B. Placing Terrazzo:
 - 1. Slush underbed with neat cement slurry same color as specified for the topping.
 - 2. Broom slurry into underbed surface.
 - 3. Place terrazzo mixture in panels formed by divider strips on landings and on treads, risers, curbs and stringers as detailed. Trowel mixture to level of top of strips.
 - 4. Roll and compact surface until excess cement and water has been extracted.
 - 5. Trowel to a dense uniform flat surface disclosing lines of divider strips.
- C. Curing:
 - 1. After completing placement of terrazzo and composition has sufficiently set, cover with water, wet sand or polyethylene sheeting.
 - 2. Cure until topping develops sufficient strength to prevent lifting or pulling of terrazzo chips during grinding.
- D. Finishing:
 - 1. Rough Grinding:
 - a. Grind with 24 or finer grit stones or with comparable diamond plates.
 - b. Follow initial grind with 80 or finer grit stones.
 - 2. Grouting:
 - a. Cleanse terrazzo with clean water and rinse.
 - b. Remove excess rinse water and hand apply grout using identical Portland cement, color pigments as used in topping, taking care to fill voids.
 - 3. Cure Grout.
NOTE: GROUT MAY BE LEFT ON TERRAZZO UNTIL ALL HEAVY AND MESSY WORK IN PROJECT IS COMPLETED.
 - 4. Fine Grinding:
 - a. Grind with 80 or finer grit stones until all grout is removed from surface.
 - b. Upon completion, terrazzo shall show a minimum of 70% of marble chips.
- E. Abrasive Inserts:
 - 1. Carefully mask terrazzo on either side of abrasive channel to protect finished terrazzo.
 - 2. Clean all foreign matter from channel.
 - 3. Trowel abrasive mix into channel with finished elevation approximately 1/16" above terrazzo tread.
 - 4. Remove masking material and allow to cure.
 - 5. Prefabricated abrasive strips optional.
- F. Cleaning and Sealing:
 - 1. Wash all surfaces with a neutral cleaner.
 - 2. Rinse with clean water and allow surface to dry.
 - 3. Apply sealer in accordance with manufacturer's directions.
- G. Protection:
 - 1. Upon completion, the work shall be ready for final inspection and acceptance by the owner or his agent.
 - 2. The General Contractor shall protect the finished work from the time that the terrazzo contractor completes the work.