

Butterfield Color® T1000™ Fine Overlay – Decorative Guide Specification

NOTE** This Section is based on systems of

NOTE** Butterfield Color®

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NOTE** This guide specification is intended to be used by a qualified construction specifier. It should not be used without appropriate modifications.

NOTE** Notes for review by specifier begin with “NOTE**.” Optional text requiring a selection is enclosed within brackets, e.g., “Color shall be [gray] [white].” Items requiring specifier input are indicated by a blank line enclosed within brackets, e.g., “Color: [_____].” Delete specifier notes and non-applicable optional text in final specification.

NOTE** Specification Section numbers and Section titles are according to The Construction Specifications Institute MasterFormat™ 1995 edition and indicated within brackets for MasterFormat™ 2004 edition.

GUIDE SPECIFICATION

NOTE ** Retain one Section number and title below and revise footer Section number and title to match.

SECTION 02980 [32 01 26]

CEMENT CONCRETE BONDED OVERLAYS [RIGID PAVING REHABILITATION]

SECTION 03920 [03 01 50]

CONCRETE RESURFACING [RESUFACING OF CONCRETE]

SECTION 09980 [09 97 23]

CONCRETE COATINGS [CONCRETE COATINGS]

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

NOTE** Delete overlay cementitious topping system subparagraphs below that are not required. Delete optional text below for exterior concrete pavement or interior concrete floor that is not required.

1. Spray-applied overlay cementitious toppings for stenciled decorative concrete [pavement] [floor].
2. Overlay cementitious toppings for stained decorative concrete [pavement] [floor].

B. Related Sections:

NOTE** Delete subparagraphs below that are not required; add others as required.

1. [Division 2 Section "Cement Concrete Pavement"] [Division 32 Section "Concrete Paving"] for cast-in-place concrete pavement with overlay cementitious toppings.
2. Division 3 Section "Cast-in-Place Concrete" for interior concrete with overlay cementitious toppings.
3. [Division 3 Section "Chemically Stained Concrete"] [Division 9 Section "Concrete Floor Stain"] for staining overlay cementitious toppings.

1.2 SUBMITTALS

- A. Submit according to Conditions of the Contract and Division 1 Specification Sections.
- B. Product Data: For each product indicated.
- C. Samples for Initial Selection: Manufacturer's color charts.
- D. Sample Panels: [2 by 2 feet (610 by 610 mm)] [_____], to demonstrate finish, color, and texture of overlay cementitious topping.
- E. Qualification Data: For Installer and manufacturer specified in Quality Assurance Article, including names and addresses of completed projects, architects, and owners.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Two year's experience with projects of similar scope and quality.

NOTE ** Delete paragraph above or below.

- B. Installer Qualifications: Trained or approved by Manufacturer of overlay cementitious topping systems.
- C. Manufacturer's Qualifications: Three year's experience manufacturing products required.
- D. Source Limitations: Obtain products from same source throughout Project.
- E. Field Samples: Locate at site and obtain approval before start of final work. Field samples shall be minimum [4 by 4 feet (1.2 by 1.2 m)] [_____].
 1. Demonstrate range of finishes and workmanship, including curing procedures.
 2. Approved field samples set quality standards for comparison with remaining work.
 3. [Remove field samples when directed.] [Approved field samples may become part of the completed Work if undisturbed at completion of Project.]

NOTE ** Delete paragraph below if preinstallation conference is not required.

- F. Preinstallation Conference: Conduct conference at site to comply with requirements of Division 1 Section "Project Meetings."

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packaging with labels intact.
- B. Store in clean, dry and protected location, according to manufacturer's requirements.

1.5 PROJECT CONDITIONS

- A. Environmental Requirements: Comply with overlay cementitious topping manufacturer's instructions.
 - 1. Do not apply overlay cementitious topping if air temperature and concrete substrate temperature are not between 45 to 85 deg F before and during installation.
 - 2. In hot weather, install overlay cementitious topping in early morning or when surfaces are shaded.
 - 3. Keep bagged products out of sunlight. Use cool water; do not use water from hot watering hoses.
 - 4. Protect overlay cementitious topping from rain for 24 hours.

NOTE ** Delete subparagraph below if spray-applied overlay cementitious topping is not required.

- 5. In windy weather, protect adjacent construction from discoloration and over-spray during application of overlay cementitious topping and sealers.

PART 2 - PRODUCTS

2.1 OVERLAY CEMENTITIOUS TOPPING MATERIALS

- A. Overlay Cementitious Topping: Polymer-modified cementitious topping designed for [resurfacing] [texturing] stable, non-moving concrete [floors] [pavements].
 - 1. Product: Butterfield Color® T1000™ Fine Overlay.

NOTE ** Retain Paragraph article below if primer is required for added durability.

- B. Primer: Butterfield Color® T1000™ Primer.
- C. Water: Potable.

NOTE ** Delete article below if integrally colored overlay cementitious topping is not required.

2.2 INTEGRALLY-COLORED CONCRETE MATERIALS

- A. Integral Concrete Colorant: ASTM C 979, factory-measured powdered mix, consisting of non-fading finely ground synthetic mineral-oxide coloring pigments and water reducing wetting agent.
 - 1. Product: Butterfield Color® T1000™ Color Pack.
 - 2. Colors: As selected by [Architect] [_____].

NOTE ** Delete subparagraph above if colors are selected and indicate Butterfield Color® T1000™ Color Pack number in subparagraph below. Add a schedule if multiple colors are required. Delete subparagraph below if colors are not selected.

3. Color: Butterfield Color® T1000™ Color Pack U[_____]CP.

NOTE **Delete Article below if overlay cementitious topping will not be stained.

2.3 STAIN MATERIALS

- A. Penetrating Reactive Stain: As specified in Division 3 Section “Chemically Stained Concrete.”

NOTE ** Delete Article below if stencil-finished overlay cementitious topping is not required.

2.4 STENCIL MATERIALS

- A. Stencils: Moisture-resistant paper stencils, designed for use on plastic concrete.
 1. Manufacturer: Butterfield Color®.
 2. Pattern: As selected by [Architect] [_____].

NOTE ** Delete subparagraph above if patterns are selected and indicate pattern name and number in subparagraph below. Add a schedule if multiple patterns are required. Delete subparagraph below if patterns are not selected.

3. Pattern: [_____].

2.5 SEALING MATERIALS

- A. Clear, Solvent-Borne, Membrane-Forming Sealing Compound: ASTM C 309, non-yellowing, VOC-compliant, high-gloss, clear liquid.
 1. Product: Butterfield Color® Clear-Guard™ Cure & Seal.

NOTE ** Delete paragraph below if matte finish for sealer is not required.

- B. Flatten Paste: Manufacturer's standard product designed to reduce sealer gloss finish to matte finish.
 1. Product: Butterfield Color® Flatten Paste.

NOTE ** Delete paragraph below if slip-resistive additive is not required.

- C. Slip-Resistive Additive: Finely graded aggregate or polymer additive designed to add to sealer for slip-resistant surface.

2.6 MIXING

- A. Mixing Overlay Cementitious Topping: Mix thoroughly according to manufacturer's instructions.

1. Bulk Mixing: For machine mixing of overlay cementitious topping, use a paddle mortar mixer.

NOTE** Delete paragraph below if integrally colored overlay cementitious topping is not required.

- B. Add Butterfield Color® T1000™ Color Pack to water and then mix with overlay cementitious topping according to manufacturer's instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate for compliance with requirements.
- B. Do not proceed with overlay cementitious topping installation until unacceptable conditions are corrected.

3.2 SUBSTRATE PREPARATION

- A. Map out locations of existing control joints before installation of overlay cementitious topping.
- B. Thoroughly clean substrate using high-pressure water or trisodium phosphate (TSP) and water with a scrub brush, then rinse thoroughly. Remove potential bond breakers, such as grease, oil, silicone, paint, sealant, curing and sealing compound, drywall taping compound, etc.
- C. For painted, sealed, or overly slick hard-troweled concrete substrates, mechanically abrade surfaces by sanding, scarifying, or shot blasting to allow for proper bonding.
- D. Remove weak, delaminated, or unsound concrete substrates.

NOTE** Delete paragraph below if concrete does not require patching.

- E. Patching: Fill chips, pits, and cracks prior to application of overlay cementitious topping with a slurry of Butterfield Color® T1000™ Fine Overlay and water in lifts up to 3/16 inch. Fill depths not exceeding one inch with a slurry of Butterfield Color® T1000™ Fine Overlay, water, and clean pea gravel or small aggregate.
- F. Allow surfaces to dry thoroughly prior to application of overlay cementitious topping.

NOTE** Delete Article below if priming substrate for added durability is not required.

3.3 PRIMING SUBSTRATES

- A. Apply an even coat of concrete primer from two directions, free of holidays, to prepared substrates using a paint roller or stiff bristle brush. Protect adjacent surfaces from overspray or splash.
- B. Allow concrete primer to dry tack free prior to application of overlay cementitious topping. If primed substrates become wet, reapply primer.

- C. Prevent contamination of primed surfaces by moisture, dirt or other deleterious materials or conditions.
- D. Apply overlay cementitious topping within 24 hours of concrete primer application.

3.4 TROWEL-APPLIED OVERLAY CEMENTITIOUS TOPPING PLACEMENT

- A. Trowel Application: Distribute overlay cementitious topping by trowel or squeegee to a uniform thickness of 1/16 to 3/16 inch.

NOTE** Delete paragraph above for stenciled overlay cementitious topping if grout-line color is different from spray-applied color. Delete paragraph below if stenciled overlay cementitious topping is not required or if grout-line color is not different from surface-coat color.

- B. Apply 1/16-inch-thick smooth base coat of overlay cementitious topping in desired color using trowel or squeegee. For large areas, use a fresno. Allow overlay cementitious topping to cure before placing adhesive-backed stencils. Do not adhere stencils if overlay appears damp.
- C. Clean tools frequently to avoid build up of topping materials.
- D. Do not add water to surface once placing has begun. Do not retemper overlay cementitious topping.

NOTE** Delete Article below if stenciling is not required.

3.5 STENCILING

- A. Layout entire stencil pattern before exposing adhesive backing and sticking stencils to surface. Install stencils according to manufacturer's instructions, ensuring that there are no voids between stencils and surface.
 - 1. Avoid placing stencils on hot concrete or exposing stencils to sunlight for extended time period.
 - 2. Do not allow stencils to remain adhered to concrete substrates for extended periods prior to overlay application.
- B. Overlap mortar joint on trailing edge of each section of stencil onto leading mortar joint of previous section.
- C. Trim stencils to fit slab and special patterns, such as [soldier courses] [cobble circles] [_____].
- D. Remove stencils when overlay cementitious topping has set enough to prevent chipping on the edges. Pull stencils off in common direction. Do not leave stencils in concrete overnight.
- E. Remove debris with mechanical blower or clean, soft bristle broom before applying sealer.

NOTE** Delete Article below if spray-applied overlay cementitious topping is not required.

3.6 SPRAY-APPLIED OVERLAY CEMENTITIOUS TOPPING APPLICATION

A. Spray-Applied Overlay Cementitious Topping:

1. Apply overlay cementitious topping with hopper gun on properly prepared concrete substrates according to manufacturer's instructions. Apply an even coat over entire surface. Trowel or texture as needed.

NOTE** Delete subparagraph below if spatter-brush-applied accent color is not required.

2. For spatter-brush-applied accent color, apply overlay cementitious topping accent color in an even, spattered pattern over spray-applied overlay cementitious topping before final set is reached.

NOTE** Delete subparagraph below if knock-down look is not required.

3. For knock-down look, use steel trowel randomly over overlay cementitious topping before final set is reached.

3.7 JOINTS

- #### A. Recut existing control joints before cracking occurs, generally within 8 to 24 hours after placement at 70 deg F.

NOTE **Delete Article below if cementitious stampable overlay will not be stained.

3.8 STAINING

- #### A. Apply stain as specified in [Division 3 Section "Chemically Stained Concrete."] [Division 9 Section "Concrete Floor Stain."]

NOTE** Delete Article below if overlay cementitious topping is stained.

3.9 SEALING

- #### A. Sealer Application: Apply uniformly in continuous operation by sprayer or short nap roller according to manufacturer's instructions. After initial application is dry and tack free, apply a second coat.
1. Do not over apply or apply in a single heavy coat.

NOTE ** Delete subparagraph below if flatten paste not required for reducing sealer gloss finish to matte finish.

2. Thoroughly mix flatten paste in sealer according to manufacturer's instructions. Stir occasionally to maintain uniform distribution of paste.

NOTE ** Delete subparagraphs below for interior concrete. For interior applications subject to wetting, consider slip-resistant floor wax over sealer.

3. Thoroughly mix slip-resistant additive in sealer according to manufacturer's instructions. Stir occasionally to maintain uniform distribution of additive.
4. Verify adequacy of slip resistance before opening up surfaces to traffic.

3.10 REPAIRS AND PROTECTION

- A. Repair damaged overlay cementitious topping according to manufacturer's instructions.
- B. Clean spillage and soiling from adjacent construction according to manufacturer's instructions.
- C. Protect overlay cementitious topping from damage or deterioration until date of Substantial Completion.

END OF SECTION

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