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This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by the following method in Microsoft Word:

 Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select of deselect HIDDEN TEXT.

This guide specification section has been prepared by Floor Seal Technology, Inc.. for use in the preparation of a project specification section covering decorative concrete surfaces.

The following should be noted in using this specification:

Hypertext links to manufacturer websites are included after manufacturer names to assist in product selection and further research. Hypertext links are shown in blue text, e.g.:

www.acme.com

Optional text requiring a selection by the user is enclosed within brackets and shown in red text, e.g.: Color: [Red.] [Black.]"

Items requiring user input are enclosed within brackets and shown in red text, e.g.: "Section [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_\_]."

Optional paragraphs are separated by an "OR" statement shown in red text, e.g.:

 \*\*\*\* OR \*\*\*\*

For assistance in selecting decorative concrete material samples, contact Floor Seal Technology, Inc. calling 800-572-2344 or visit [www.floorseal.com](http://www.floorseal.com)

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**SECTION 03 35 00 – DECORATIVE CONCRETE FINISHING**

1. **GENERAL**
	1. SECTION INCLUDES

A. Slab on grade [and above grade] concrete finishing for areas schedule to exposed as a polished

 concrete finish.

* 1. ADMINISTRATIVE REQUIREMENTS
		1. Pre-Installation Conference:
			1. Schedule: Fifteen days prior to scheduled concrete placement.
			2. Attendance: [Architect,] [Owner,] [Contractor,] [Construction Manager,] installer, and related trades.
			3. Document meeting notes and distribute to parties.
			4. Review: Project conditions, manufacturer requirements, delivery and storage, staging and sequencing, and protection of completed work.
			5. Batch plant agreement in writing to supply approved mix design throughout project.
	2. SUBMITTALS

* + 1. Action Submittals:
			1. Product Data: Manufacturer’s descriptive data and product attributes for each product.
			2. Decorative concrete manufacturers’ acceptance of mix design.
			3. Samples: 6-inch x 6-inch [selection samples.] [verification samples.]
	1. QUALITY ASSURANCE
		1. Quality Standards Requirements: Comply with the following:
			1. ACI 301, “Guide to Cast-in-Place Architectural Concrete Practice”.
			2. ACI 302.1-R “Guide to Concrete Floor Slab Construction”.
			3. ACI 305, “Specification for Hot Weather Concreting.”
			4. ACI 306, “Guide to Cold Weather Concreting”.
			5. ACI 117, “Guide for tolerance Compatibility in Concrete Construction”.
			6. CRSI publication, “Manual of Standard Practice”.

Contact manufactures technical representative to obtain mix design recommendations.

* + 1. Concrete Requirements:
			1. Approved concrete mix design, approved by decorative concrete materials manufacturer.
			2. Compressive Strength: 4,000psi
			3. Water to Cement Ratio: max. 0.45
			4. Pozzolans conforming to ASTM C618, Class C or N.
			5. Portland cement conforming to ASTM C150, Type 1 or 2.
			6. Slump:
				1. Slab on grade: Max. of 5-inches, plus or minus one inch.
				2. Slab on deck: Max. of 8-inches, plus or minus one inch.
			7. Air Content: In accordance with ACI 301 requirements. Not to exceed 3-percent on lightweight

 concrete.

* + 1. Manufacturer Qualifications:

1. Decorative concrete materials manufacturer to provide on-site supervision during placement and finishing.

2. Written acceptance of mix design, and products to achieve specified requirements.

3. Five projects of similar sizes and complexity completed within the last 5 years.

* + 1. Maintain a floor flatness of FF50 (minimum of FF35) and FL20 (minimum of FL18) within 72 hours of placement when tested to ASTM E1155, following ACI 117 using 3D laser imaging to meet requirements.
		2. Installer Qualifications:
			1. Minimum [5] [\_\_] years’ experience in work of this Section.
			2. Decorative concrete material manufacturer approved applicator.
		3. Mockups: Minimum [10 x 10] [\_\_ x \_\_] feet.
			1. Show each concrete color and finish.
			2. Batch plant to agree approved mix design to remain consistent throughout project.

1.4 WARRANTY

 A. Manufacturers 20-year warranty for installation defects and material performance.

 B. Manufacturer to guarantee the installation and on-sight oversight floor flatness of FF50 (minimum of FF35) and FL20 (minimum of FL18) within 72 hours of placement when tested to ASTM E1155.

1. **PRODUCTS**
	1. FORMWORK MATERIALS
		1. General:

1. Beveled edges and accepted by decorative concrete manufacturer.

2. Full-dimensional lumber: #1 or #2 grade Douglass conforming to WCLIB Grading Rules S4S,

 dried to a maximum moisture content of 19-percent, and stamped “S-DRY”.

* 1. STEEL REINFORCEMENT
		1. Reinforcement accepted by decorative concrete manufacturer for placement.
		2. Reinforcing Bars: ASTM A615, Grade 60, unless otherwise required to meet engineering requirements, deformed.
		3. Welded Wire Reinforcement: ASTM A185, fabricated into flat sheets from as drawn plain streel wire confirming to ASTM A82.
		4. Deformed-Steel Welded Wire Reinforcement: ASTM A497, flat sheet.
	2. DECORATIVE CONCRETE MATERIALS
		1. Product: TekCrete manufactured by Floor Seal Technology, Inc. www.floorseal.com

Contact manufacturer to obtain decorative samples and aggregate mixture information.

* + 1. Aggregates:
			1. Description: ASTM [C330 lightweight] [and ASTM C33] graded coarse aggregate.
			2. Aggregate Size: Manufacturers sourced colored aggregate.
			3. Color Mix: [\_\_\_\_.] [To be selected from manufacturer’s full color range.]

Contact manufacturer to obtain decorative concrete sample information.

* + 1. Color Pigment:
			1. Description: Manufacturer recommended coloring.
			2. Color: [\_\_\_\_.] [To be selected from manufacturer’s full color range.]
			3. Product: MirrorCrete Integral Color
		2. Admixture:
			1. Description: Water-retention, crack-reducer, high early strength admixture to allow polishing of concrete at 5 to 7 days.
			2. Product: MirrorCrete nano admixture
		3. Finishing Aid:
			1. Description: Liquid applied, finishing aid to reduce surface imperfections, and machine finishing

 Imperfections.

* + - 1. Product: MirrorCrete Finishing Aid
	1. CONCRETE CURING
		1. Product: MirrorCure manufactured by Floor Seal Technology, Inc. www.floorseal.com
		2. Water Retention: 0.40 kg/m2 when tested to ASTM C156.
		3. Resin-based, film forming curing-sealing membrane complying to ASTM C1315 and ASTM C309.
	2. ACCESSORIES
		1. Form Coatings and Sealers: Acceptable sealer types.
			1. Low Build Sealer: Clear pigmented polyurethane wood sealer.
			2. High Build Sealer: Transparent polyurethane wood sealer.
			3. Edge Sealer: Sealer with form release agent.
		2. Form Release: Nox-Crete PCE manufactured by Nox-Crete Product Group.
		3. Joint Filler: Semi-rigid, closed-cell polypropylene foam, complying with ASTM D8139,

 manufactured by Nomaco, Inc.

D. Joint Sealant: Moisture-resistant, self-leveling, 100-percent solids, elastomeric, UV-resistant, two-component polyurea joint sealant manufactured by Floor Seal Technology, Inc. www.floorseal.com

 1. Color: To be selected from manufacturer’s full color range.

 E. Surface Repair Products: Manufacturers polishable, three-component, UV and moisture resistant, fast-curing resinous-cement color matching repair system for a seamless visual surface.

1. Product: ColorMatchpatch

F. Temporary Floor Protection: Decorative concrete manufacturers 1/8-inch, moisture-resistant protection board and cover board for wheel traffic.

G. Concrete Bonding Agent for Topping Slabs: Manufactured by Weldcrete for bonding a topping slab of less than 4-inches with a tensile strength of 265 PSI when tested to ASTM D932 and shear bond strength of 603 PSI when tested to ASTM C78.

1. **EXECUTION**
	1. INSTALLATION
		1. General: Install materials in accordance with manufacturers’ instructions and at the direction of the decorative concrete material manufacturers on site personnel.
		2. Install concrete bonding agent a minimum of 24 hours prior to pouring topping slab.
		3. Install reinforcement in accordance with CRSI’s “Manual of Standard Practice”.
		4. Notify decorative concrete materials manufacturer of cast-in-place concrete placement schedule.
		5. Place concrete following ACI 301, ACI 302R, ACI 117 and decorative concrete materials factory employed personnel.
		6. Apply decorative concrete to match approved mockups.
	2. APPLICATION
		1. Apply products in accordance with manufacturer’s instructions.
		2. Apply curing to a uniform coverage by manufacturers employed personnel.
	3. FILED QUALITY CONTROL
2. Repair and replace concrete at no additional cost to Owner, following decorative materials manufacturer recommendations.
3. Install and maintain temporary floor protection to prevent contamination and damage until Substantial Completion.

 END OF SECTION