

SECTION 03
POLISHED CONCRETE FLOOR FINISHING

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes Polished Concrete Floor Finishing for new and existing interior concrete flatwork.
- B. Application of densifier, sealer/guard, and mechanical polishing of concrete floor slabs, including repairs, staining/dyes, joints, grinding/polishing process and tools.
- C. Labor, material, equipment and services for the diamond grinding and polishing of concrete floors finished to specified Surface Texture Grade (STG) requirements.

1.02 RELATED SECTIONS

- A. Cast-in-Place Concrete.

1.03 REFERENCE

- A. ANSI B101.3 - Standard for Evaluating High-Traction Flooring Materials, Coatings, and Finishes.
- B. ASTM C779 - Standard Test Method for Abrasion Resistance of Horizontal Concrete.
- C. ASTM D 523 – Standard Test Method for Specular Gloss.
- D. ASTM D5767 - Standard Test Methods for Instrumental Measurement of Distinctness-of-Image.
- E. CSDA ST 115 – Standard Test Method for Measuring Concrete Micro Surface Texture.

1.04 SYSTEM DESCRIPTION

- A. Application of Polished Concrete Floor Finishing for new and existing interior concrete floors by dry and/or wet grinding and polishing with various size/grit/bonded abrasive tools/diamonds, and the application of concrete densifier, penetrating dye, stencil/artwork, sealer/guard, as well as construction joint fillers and any necessary repairs.
- B. Finish Requirements: STG grade, Gloss level, and DOI level as defined in the Execution section of this specification.

POLISHED CONCRETE FLOOR FINISHING

1.05 SUBMITTALS

- A. Contractor Qualification
 - 1. Selected bidder or bidders are subject to perform a required mock-up area on-site in a specified area of the project at Owners/owner's consultant request. The mock-up process may be the determining factor for selecting or qualifying the subcontractor that will be performing the concrete polishing scope.
 - 2. Owner and its consultants reserve the right to approve concrete polishing contractors
- B. Product Data:
 - 1. Polishing equipment: Submit product data, for review and approval, polishing equipment prior to beginning polishing operations.
 - a. Provide list of tools to be used with grinding/polishing equipment including edge tooling.
 - b. Provide Dust collection equipment information.
 - c. Provide Slurry management equipment information.
 - 2. Floor scrubber manufacturer and size
 - 3. Densifier: Brand name, type of densifier, application directions.
 - 4. Sealer/guard
 - 5. Penetrating Dye
 - 6. Joint fill material
 - 7. Repair materials
- C. Test and Evaluation Reports: Independent third-party test reports indicating compliance with specified requirements.
- D. Manufacturer's Instructions
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Application methods.
 - 4. Concrete grinding procedures.
- E. Closeout Submittals
 - 1. Manufacturer's instructions for cleaning and maintenance.
 - a. Include manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use.
 - b. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.
 - 2. Warranty Documentation.
 - 3. Material Safety Data Sheets.

1.06 QUALITY ASSURANCE

- A. District approved concrete floor polishing management services:
 - 1. MUSD may provide a district consultant for polished concrete floor finishing management services
- B. Field Mock-up:

POLISHED CONCRETE FLOOR FINISHING

1. Prior to performing work of this Specification section, provide a field mock-up in area selected by Owner to verify selections made under submittals. Refer to the Execution section of the specification for Field Mock-up requirements.
- C. Delivery, Storage, and Handling:
1. Delivery:
 - a. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
 2. Storage:
 - a. Store materials in clean, dry area indoors, in accordance with manufacturer's instructions.
 - b. Do not store temperature sensitive materials in uncontrolled environment to prevent potential damage due to extreme heat or cold such as in outdoor container boxes.
 - c. Keep all materials from freezing.
 3. Handling:
 - a. Protect materials during handling and application to prevent contamination or damage.
 - b. Dispense densifier, sealer/guard, color, repair materials, and joint fill materials from factory-sealed containers.
 4. Provide a list of all materials (tooling, chemicals, etc.) ordered/supplied for the project.

1.07 FIELD CONDITIONS

- A. Damage and Stain Prevention:
1. General contractor shall be responsible to prohibit and/or protect surface from any operations, chemicals and/or any other activities over concrete that could damage surface.
 2. No satisfactory chemical or cleaning procedure is available to remove petroleum stains from concrete surfaces. Prevention is therefore essential.
 3. Protection measures listed below shall begin immediately after the concrete slab is poured.
 - a. All hydraulic powered equipment shall be diapered to avoid staining the concrete.
 - b. Lifts shall have non-marking tires.
 - c. No trade will park vehicles on the interior slab. If parking on the interior slab is necessary to complete their scope of work, drop cloths shall be placed under vehicles at all times.
 - d. No pipe fitting machine will be used on the interior slab floor.
 - e. Steel will not be placed on interior slab in order to avoid rust staining.
 - f. Acids and acidic detergents will not come into contact with slab.
 - g. All painters will use drop cloths on the concrete. If paint gets on the concrete, it shall be immediately removed.
 - h. All trades to be informed that the slab shall be protected at all times.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. General contractor / Prime contractor shall be responsible to limit and control damage from moisture. Immediately remove standing moisture from floor after densifier and stain protector application.

POLISHED CONCRETE FLOOR FINISHING

- B. Comply with manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and any other conditions affecting liquid applied product application.

1.09 WARRANTY

- A. Provide manufacturer's standard warranty for replacement of defective densifier and stain protector products, as well as joint fill material.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with project requirements, provide products as manufactured by the following to the extent as specified hereinafter for the specific product:
 1. Silex System, Diamatic USA, 5220 Gaines St; San Diego, CA 92110 (844) 239-4056
 2. Ameripolish, Inc. 120 Commercial Ave.; Lowell, AR 72745. (800) 592-9320
 3. VersaFlex 686 South Adams Street; Kansas City, Kansas 66105 (888) 722-3796
 4. Metzger McGuire. P.O. Box 2217; Concord, NH 03302. (603) 224-6122
 5. Prosoco 3741 Greenway Circle; Lawrence, KS 66046 (800) 255-4255
 6. Match Patch Pro, 1101 Lincoln Avenue, Wapekoneta OH, 45895 (877)743-9732
 7. CTS Rapid Set, 12442 Knott Street, Garden Grove CA, 92841, (800)929-3030
 8. Floormaps, 810 Northwest 3rd Street unit A, Bentonville AR 72712, (832)329-3648
 9. Colledi Designs, 2525 E Malaga Ave, Fresno CA 93725, (559)442-4042
 10. MQ Slabarmor, 6141 Katella Ave, Suite 200, Cypress CA 90603 (800)496-4260

2.02 ACCESSORY MATERIALS

- A. Concrete Densifier: Concrete chemical densifier specifically for concrete surface treatment which reacts chemically to the concrete surface forming a dense, durable, hard, abrasion-resistant surface. Product shall be a solution that is less than 40 VOC.
 1. Ameripolish 3DHS Densifier
 2. Silex Hard
 3. Prosoco Consolideck LS Densifier
 4. Slabarmor, Seal and Shine
- B. Concrete sealer/guard:
 1. MUSD reserves the right to provide stain guard of their choice
 2. Ameripolish
 3. Silex
 4. Surtec
 5. Or approved equal.
- C. Penetrating Color / Dye:
 1. Manufacturer: Ameripolish, Inc. or approved equal.

POLISHED CONCRETE FLOOR FINISHING

2. Solvent based, unless otherwise approved in writing during mock-up.
 3. Color / Dye: To be determined.
- D. Joint Filler (at Control joints, Construction joints, Expansion joints):
1. Acceptable manufacturers:
 - a. VersaFlex SL85/SL88
 - b. Metzger McGuire RS88
 - c. Or approved equal.
 2. Shall be 100% polyurea.
 3. Color selected by Owner.
- E. Crack Repair:
1. Acceptable manufacturers:
 - a. Quick Mender by Versa Flex
 - b. Match Patch Pro
 - c. Or approved equal.
 2. Color selected by Owner. Integral color approved during mock-ups.
- F. Spall Repair:
1. Acceptable manufacturers:
 - a. Quick Mender by VersaFlex
 - b. Match Patch Pro
 - c. TRU/TRU PC polishable overlay by CTS RapidSet.
 2. Color selected by Owner/owners consultant. Integral color approved during mock-ups.
- G. Autoscrubber Cleaner:
1. Acceptable manufacturers:
 - a. Silex Clean CR
 - b. Slab Armor
 - c. Or approved equal.
- H. Stencils:
1. Acceptable manufacturers:
 - a. Floor Maps Inc.
 - b. Colledi Designs
 - c. Or approved equal
 2. Install stencils according to manufacturer's instructions.
 3. Owner/owners consultant reserve the right to approve/disqualify stencil material

2.03 EQUIPMENT TO BE USED FOR APPLICATION

- A. Floor Grinder:
1. Type: Multi-orbital, planetary-action, opposing-rotational floor grinder.
 2. Head: 3 or 4-head system contours to floor surface.
 3. Appropriate edge grinding equipment and tooling to blend edge work with main floor finish.
 4. Owner/Owner's consultants reserve the right to approve/disqualify grinding equipment.
- B. Vacuum System:

POLISHED CONCRETE FLOOR FINISHING

1. Contractor is responsible to comply with OSHA Silica Dust Regulations.
 2. Suitable Dust Collection equipment to properly handle dust created by selected grinding equipment, including edge grinding equipment.
 - a. Contractor shall keep dust from contaminating other trade's work.
 - b. Sweeping dust shall not be permitted.
 - 1) Usage of squeegees to move dust is permitted.
 3. Filtration: Certified HEPA filtration system.
 4. Owner/Owner's consultants reserve the right to approve/disqualify dust collection equipment.
- C. Slurry Management System:
1. Suitable slurry management equipment to properly handle slurry created from wet grinding process, including edge grinding equipment.
 2. Slurry shall be disposed of in accordance with all local, state, and federal regulations.
 3. Owner/Owner's consultants reserve the right to approve/disqualify slurry management equipment.
- D. Diamond Tooling for Coating Removal, Initial Grinding, and Preparing Floor for Polishing:
1. Metal bonded abrasive tooling, PCD scrapers, hybrid metal/resins, semi-metals, ceramics, transitionals, etc.
 2. Owner/Owner's consultants reserve the right to approve/disqualify Diamond Tooling.
- E. Diamond Tooling for Polishing Concrete:
1. Resin bonded abrasive tooling.
 2. Owner/Owner's consultants reserve the right to approve/disqualify Resin Bonded Tooling.
- F. Automatic Floor Scrubber:
1. Floor Scrubber machines used for cleaning operations shall have a head pressure sufficient to produce the specified results and shall be in proper working condition.
 2. Floor Scrubber machines shall be minimum of 20" cleaning pads.
 3. Squeegee shall be in proper operating condition.
 4. Owner/owners consultant reserves the right to approve/disqualify floor scrubber equipment
- G. Propane Powered Floor Burnisher:
1. Propane powered burnishers capable of at least 1,700 rpms.
 - a. Electric burnishers shall not be permitted.

PART 3 - EXECUTION

3.01 PRE-INSTALLATION MEETING

- A. New Concrete Slabs: Conduct a pre-slab placement meeting at project site for interior floor slabs to be polished.
1. Review special inspection, testing and inspecting agency procedures for field quality control, concrete finishes and finishing, cold- and hot-weather concreting procedures, curing procedures, construction, contraction and isolation joints, joint-filler strips, semi-

POLISHED CONCRETE FLOOR FINISHING

rigid joint fillers, forms and form removal limitations, floor flatness and levelness measurement, concrete repair procedures, and concrete protection.

- B. New and Existing Concrete Slabs: Conduct a pre-polish meeting at project site for interior floor slabs to be polished.
- C. The following representatives of each entity directly concerned with the floor slabs are required to attend:
 - 1. Owners Representatives
 - 2. Construction Management Group
 - 3. General Contractor/Prime Contractor's superintendent
 - 4. Independent testing agency
 - 5. Ready-mix concrete manufacturer
 - 6. Concrete Placement Contractor
 - 7. Concrete Polishing contractor
 - 8. Owner's concrete consultant
 - 9. Architect
 - 10. Project Inspector

3.02 EXAMINATION

- A. Examine floor to receive Polished Concrete Floor Finishing.
- B. Notify Owner/owner's consultants of conditions that would adversely affect floor finishing application or subsequent use.
- C. Verify the following for new concrete floors:
 - 1. Floor finish:
 - a. Imprints are not acceptable (i.e. boots, foreign objects dropped into concrete)
 - b. Power trowel marks/imprints/gouges are not acceptable
 - c. Unfinished and/or rough low spots are not acceptable
 - d. Floor surface should be void of any contaminants which could stain or adversely effect the application of any materials during the grinding/polishing process
 - 2. Floor and joints
 - a. Joints need to be free of debris and excessive dirt, clay, mud, etc.
 - b. Joints need to be dry
 - 3. Use the straightedge method test to verify that there is no more than ¼ inch deviation in flatness in a 10 foot span
 - 4. Lightweight concrete is not allowed
 - 5. Concrete adjacent to floor penetrations: troweled flat and level with surrounding concrete
 - 6. Concrete adjacent to drains, clean-outs, etc: Finish level to the top of the structure
 - 7. No curing agents present
- D. General contractor/prime contractor shall correct conditions that are found to be out of compliance with the requirements of this section. Any repairs necessary to the concrete must first be approved on a case-by case basis by the owner/owners consultant.

POLISHED CONCRETE FLOOR FINISHING

- E. Do not begin surface preparation or application until unacceptable conditions are corrected.
 - 1. Proceeding with work in this section constitutes acceptance of existing conditions.

3.03 FLOOR PREPARATION AND REPAIRS

- A. Protection: Surrounding areas including adjacent flooring, fixtures, finishes, etc shall be protected from:
 - 1. Overspray of concrete densifier.
 - 2. Overspray of Color / Dye.
 - 3. Overspray of Sealer/Guard.
 - 4. Accumulation of dust.
 - a. Any fixtures, desks, cabinets, classroom equipment, etc. shall be draped with plastic to prevent accumulation of dust in the area work is being performed.
 - b. Sweeping of dust shall not be permitted.
 - c. Squeegees can be used to move dust around.
 - 5. Slurry splatter (for wet grind applications).
- B. All surface contaminants/coatings shall be removed which could adversely affect application of any materials during the grinding/polishing process
 - 1. All VCT glue shall be removed during the grinding process
 - 2. All thin-set, leveling compounds, etc shall be completely removed during the grinding process.
 - 3. 100% of foreign materials removed from the surface, leaving only the original concrete slab surface
 - 4. Prior to application of densifier, color, and sealer/guard all contaminants including dirt, dust, debris, oil, grease, curing agents, bond breakers, paint, coatings, etc. shall be removed.
- C. Repairs of Cracks: All visible cracks shall be repaired as described in this specification.
- D. Repairs of Pits, Spalls, Voids, Holes, etc: All pits, spalls, voids, holes, etc, larger than ¼” diameter shall be repaired as described in this specification.
- E. Coordinate with joint filling operations. Do not perform wet cleaning within 72 hours prior to joint filling or per joint filler manufacturers recommendations
- F. Treat oil spots with oil remediation system

3.04 GRINDING AND POLISHING APPLICATION

- A. Field Mock-up requirements:
 - 1. Immediately following removal of existing floor coverings, Owner/owner’s consultants will select a mock-up location up to 10ft x 10ft for review and approval.
 - 2. Mock-up conditions to match proposed scope of work including any floor covering removal, glue/thinset removal, grinding/polishing process, repairs, application of densifiers, color, joint fill and stain protectors.
 - 3. Mock-up shall be executed using process and techniques which will be employed during the execution of the main project floor.

POLISHED CONCRETE FLOOR FINISHING

4. Mock-up shall be executed by workers who will be performing the scope of work on the project floor. It will not be acceptable for one crew to perform the mock-up and a different crew to perform the main scope of work
5. The mock-up shall be completed with the same equipment and tooling that will be used on the main scope of work.
6. Once mock-up is completed, Owner/Owner's consultants shall review and approve the following in writing:
 - a. Process/recipe used by contractor.
 - b. Color / Dye.
 - c. Finish requirements: STG, DOI, Gloss.
 - d. Repairs including cracks, pits, spalls, etc.
 - e. Joint filler.
 - f. Grout coat application if necessary.
 - g. Sealer/guard.
7. Approval does not constitute approval of deviations from Contract Documents, unless such deviations are approved by Owner/owner's consultant in writing.
8. Approved mock-up shall be kept undisturbed throughout execution of floor process and main floor shall be finished seamlessly back into the mock-up.
9. Approved mock-up will become part of the completed work to ensure that the selected polishing process/appearance is fully executed when the scope is completed.
10. The following information will be determined via the mock-up process:
 - a. Initial starting grit required to remove glue/thinset/etc. and/or to "set" a consistent surface in which to continue with the grinding/polishing process and allowing for a finished floor with a consistent finish, void of glue and/or thinset, void of scratches, and void of low spots.
 - b. Necessary grinding/polishing steps and tools used to perform steps.
 - c. Acceptable repairs.
 - 1) Spalls, cracks, joints, etc.
 - d. Joint fill application and color.
 - e. Color / Dye application and approval of color.
 - f. Densifier and sealer/guard application.
 - g. Whether the floor will require a grout coat to achieve desired STG Finish.
 - h. Determination of achievable STG finish level and approval of final STG.
11. This mock-up process develops the "recipe" which shall be followed throughout the entirety of the floor process.
 - a. Unless contractor receives written approval, deviation from the "mock-up recipe" shall not be permitted.

B. Examination and Preparation:

1. Any and all newly placed concrete such as pour-backs shall be cured for the recommended minimum of 28 days prior to grinding, densifier application, polishing, color application, joint fill, or sealer/guard application per manufacturer recommendations.
 - a. Any deviation from the manufacturer's recommendations shall have written approval from Owner/owner's consultants.
 - b. Do not use liquid curing materials that leave a bond barrier to densifier penetration, especially dissipative cures.

C. Execution of Grinding and Polishing:

POLISHED CONCRETE FLOOR FINISHING

1. The following grinding steps shall be included both in the common floor areas as well as all edges. Note that the “recipe” and sequencing of steps which were approved during the mock-up is the approved process for the main scope of work. Alternate methods and/or sequencing of steps or equipment substitutions are not permitted without written approval by owner/owner’s consultant
 - a. For new slabs, fill control and isolation joints before initial grinding steps begin. The Joint filler shall also be the same as was approved in the mock-up. For existing/remodel slabs, fill joints as early in the process without causing staining along joint edges.
 - 1) Prepare and fill joints according to manufacturer’s instructions and then shave flush.
 - 2) No substitutions or alternates are accepted after the mock-up approval process.
 - b. Select metal bonded abrasive tool necessary to properly remove VCT glue, thinset etc. and/or to provide a fresh, consistent concrete surface, and operate the tool until maximum refinement is achieved on the surface according to the tool’s Ra number.
 - c. After the proper Ra number is achieved, change to the next tool that will properly remove the prior Ra produced and operate this tool in a perpendicular direction until its maximum Ra refinement number is achieved.
 - d. Each successive pass is to be perpendicular to the previous pass, regardless of whether or not the tool grit has been changed.
 - e. After completing each grit, clean the floor with an Autoscrubber in preparation for the next tool grit step.
 - 1) Be sure to use approved cleaner dilution in the solution tank of the Autoscrubber.
 - 2) For dry grinding application, it is permitted to vacuum in between metal bond steps. Once all metal bond steps are completed, contractor is required to auto-scrub the floor in between each step for the remainder of the process.
 - 3) For wet grinding application, it is required to auto scrub in between all steps.
 - f. Perform all necessary repairs (spalls, cracks, joints, etc.) prior to application of color / dye.
 - g. Continue through the tool grits according the to the recipe used in the approved mock-up until the dye application step has been reached or if color /dye is not being applied then continue until the approved STG is achieved.
 - h. Ensure that the proper RA has been achieved prior to the application of color.
 - i. Apply color / dye if applicable.
 - j. Install any logos, stencils, artwork, etc according to manufacturer’s directions
 - k. Approval for color and/or stencil application is required by owner/owner’s consultant before proceeding with the next polishing steps.
 - l. After proper color and densification steps, continue operating the final resin bonded tools to achieve the specified STG.
 - m. Once the specified STG is achieved, obtain written approval from Owner/owner’s consultants for achieved finish prior to applying sealer/guard.
 - 1) It is not permitted to apply sealer/guard prior to this approval.
 - n. Thoroughly clean floor with auto scrubber and apply performance enhancing stain guard treatment according to manufacturer’s application instructions.
 - o. Burnish the floor with the manufacturers recommended burnisher pad on a high-speed floor burnisher.

POLISHED CONCRETE FLOOR FINISHING

3.05 REPAIRS

- A. Repairs of cracks
 - 1. Repair all visible cracks according to manufacturer's written instructions
 - 2. Cementitious crack fillers are not permitted
- B. Repairs of pits, spalls, voids, holes, etc:
 - 1. All pits, spalls, voids, holes, etc. larger than ¼" diameter shall be repaired, ensuring the repairs are completed according to manufacturer's instructions
 - 2. Be sure to properly clean and prep all repair surfaces
- C. New concrete slabs
 - 1. Repairs shall be done prior to beginning initial grinding steps
 - a. Avoid unnecessary staining along cracks, spalls, etc.
- D. Remodel slabs
 - 1. If glue exists, wait to begin repairs until glue removal steps are completed
- E. After completing the initial aggressive grinding steps and prior to beginning transitional steps, perform any necessary touch up crack and spall repairs
- F. If the contractor plans a different sequence of repairs than recommended in this specification, contractor shall gain approval from owner/owner's consultant prior to starting repairs

3.06 DENSIFIER APPLICATION

- A. Apply densifier according to manufacturer's application instructions including recommended application rates.
- B. Examination and Preparation:
 - 1. Examine surfaces receiving densifier. Verify that surfaces conform to product manufacturer's requirements for substrate conditions.
 - 2. If applying densifier prior to joint fill operations, vacuum and clean saw cut joints and surrounding area so that no dust remains to react with concrete densifier material.
 - 3. Prior to application, auto scrub floor to remove latent salts, dust and debris making sure that no dust remains to react with concrete densifier.
 - 4. Do not walk through wet densifier leaving footprints
 - 5. Do not proceed until unsatisfactory conditions have been corrected.
 - 6. Beginning of application indicates acceptance of existing conditions.
- C. Application:
 - 1. Application shall be performed by certified applicator in accordance with manufacturers published instructions.
 - 2. Apply densifier at the rate recommended by manufacturer.
 - 3. Apply with low pressure sprayer with enough coverage to keep concrete surface wet for the manufacturers recommended dwell times to ensure the slab has been densified to its maximum potential and to the point of rejection.

POLISHED CONCRETE FLOOR FINISHING

3.07 PENETRATING COLOR / DYE APPLICATION

- A. Clean the floor thoroughly prior to application.
- B. Mix color / dye concentrate according to manufacturer's instructions and allow to dwell the recommended time prior to application.
 - 1. Dilution of dye shall not be permitted unless approved during mock-up process.
 - 2. Use same color / dye as was approved in the mock-up.
- C. Apply color / dye according to manufacturer instructions using approved sprayer and conical tip in same manner as was used for the approved mock-up.
- D. Streaks, puddles, runs, and/or any other applicator induced blemishes will not be accepted.
- E. Clean floor immediately following the application of dye according to manufacturer's instructions and prior to proceeding to the next step in the process being sure to remove all dye residue from the surface.
- F. Contractor shall obtain written approval from owner/owners consultant prior to continuing with the polishing process.

3.08 STENCIL APPLICATION

- A. Provide one (1) stencil layer per color / dye applied. More than one (1) color /dye application per stencil layer is not permitted, unless approved by Owner/Owner's consultants.
- B. Contractor shall obtain written approval from owner/owners consultant prior to continuing with the polishing process.

3.09 SEALER/GUARD APPLICATION –

- A. Apply sealer/guard to all polished concrete floor surfaces as the final step following approval from Owner/Owner's consultants of STG Finish Level, DOI readings, and Gloss readings.
- B. Examination and Preparation:
 - 1. Examine surfaces receiving sealer/guard. Verify that surfaces conform to product manufacturer's requirements for substrate conditions.
 - 2. Scrub floor to be treated prior to application of sealer/guard with a nonabrasive pad to ensure the floor surface is free of all dust, debris, contaminants, etc. which could negatively affect proper application and/or results.
 - 3. Do not proceed until unsatisfactory conditions have been corrected.
 - 4. Beginning of application indicates acceptance of existing conditions.
- C. Application:
 - 1. Application shall be performed by certified applicator in accordance with manufacturers published instructions.
 - 2. Apply sealer/guard finish at the rate recommended by manufacturer. Do not over apply.

POLISHED CONCRETE FLOOR FINISHING

3. Apply with low pressure sprayer with conical tip and follow with microfiber applicator pad. Used applicator pads are not approved and will not be accepted.
4. Be sure not to “streak” sealer/guard application.
5. Protect treated area from traffic until stain protector has completely dried.
6. Burnish the floor with the manufacturers recommended burnishing pad on a high-speed floor burnisher.

3.10 FINISH REQUIREMENTS

- A. Floor surface shall be 100% free from any visible scratches, scratch patterns, and/or any mechanical patterns or blemishes (e.g. “corn rows”)
- B. Surface Texture Grade (STG): Finish Level shall be B2+ (RA of 25 or better) prior to sealer/guard application, per CSDA ST 115.
- C. Clarity (DOI): Shall be no less than 75 per ASTM D5767 prior to sealer/guard application.
- D. Gloss reading: Shall be no less than 50 per ASTM D523 prior to sealer/guard application.
- E. Color/Dye
 1. Color to be determined by owner/owner consultant
- F. Aggregate Exposure:
 1. No specified aggregate exposure.
 2. Surface of the concrete shall be ground aggressively enough to effectively and completely remove all surface coatings, glues, mastics, thinsets, leveling compounds, etc. to ensure the finished surface is newly exposed concrete ground and polished to specified finish levels.

3.11 RECORDING

- A. Contractor shall provide Recording of the final STG, DOI and Gloss readings in the pre-approved designated testing areas by Owner/owner’s consultants and submit the data for final approval.
 1. All readings are to be taken and recorded prior to stain protector application

3.12 QUALITY CONTROL

- A. Inspect completed polished concrete floor finish with Owner/owner’s consultants, General Contractor/Prime Contractor, and polished concrete contractor.
- B. Compare final results with approved mock-up results.
- C. Review procedures with Owner/owner’s consultants to correct unacceptable areas of completed polished concrete floor system.

POLISHED CONCRETE FLOOR FINISHING

3.13 PROTECTION OF COMPLETED FLOOR FINISH

- A. General contractor/Prime Contractor is responsible to protect finished polished concrete floor through substantial completion of project.
- B. Immediately remove mortar splatter, sheetrock compound, spilled liquids, oil, grease, paint, coatings, caustic chemicals and materials, acids and acidic detergents, and other surface contaminants which could adversely affect completed polished concrete floor system.
- C. Use of a protective material may be necessary to properly protect the completed floor finish.

3.14 PRODUCT DISPOSAL

- A. Upon completion of densifier and sealer/guard application, dispose of excess material as required by local agency having jurisdiction.
- B. Certified applicator shall remove all product containers from job site immediately upon completion of treatment.

END OF SECTION