

ADDENDUM NO. TWO (2)

TO THE BIDDING DOCUMENTS
FOR

Blue Valley School District – 2016 Flooring Replacement – Package B

ISSUE DATE: 20, November, 2015

Contractors are hereby notified that the Construction Documents on the above-named project, for which bids will be taken 24 November, 2015, are amended as noted below.

This Addendum forms a part of the Contract Documents and consists of (5) pages of 8.5 X 11.

CHANGES TO THE DOCUMENTS – Blue Valley School District – 2016 Flooring Replacement – Package B

Changes to the SPECIFICATIONS

- AD1.1** Section 03536 – Polished Concrete Flooring.
DELETE the entire spec section and **REPLACE** with the attached spec section. (4 pages)
- AD1.2** Section 00100 – Invitation to Bid; **REVISE** bid date to read **November 24, 2015**.

Contractors must acknowledge receipt of this Addendum with bid.
END OF ADDENDUM NO. TWO (2)

**SECTION 03536
POLISHED CONCRETE FINISH**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Mechanically bonded-abrasive polished concrete floor finish: Large aggregate – High Gloss
 - 2. Concrete protective treatment.
 - 3. Special cut-outs and patching of floor projections such as floor clean outs and electrical floor boxes.
 - 4. Dust barriers for protection of adjacent spaces.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 07920 - Joint Sealers.

1.2 REFERENCES

- A. American National Standards Institute (ANSI) A1264-2 - Standard for the Provision of Slip Resistance on Walking/Working Surfaces.
- B. Concrete Polishing Association of America (CPAA) - Accreditation Program.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Product Data: Manufacturer's descriptive data and application instructions for concrete treatment products.
- B. Quality Control Submittals:
 - 1. Applicator qualifications, including list of previous projects and certification issued by flooring system manufacturer.
- C. Sustainable Design Submittals:
 - 1. Low-Emitting Materials.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Minimum 3 years documented experience in dyed and polished concrete floors.
 - 2. Certified by concrete treatment manufacturer or minimum Master Craftsman accreditation by CPAA.
- B. Concrete:
 - 1. Mix Design: Free from admixtures and additives not specifically approved by concrete surface treatment manufacturer.
 - 2. Curing compound acceptable to concrete treatment manufacturer.
 - 3. Overlay product must be cementitious and able to be polished.
- C. **Pre-Installation Conference:**
 - 1. **Convene 2 weeks prior to beginning work of this section.**
 - 2. **Attendance: Contractor, Owner, Architect, and concrete polishing subcontractor.**
 - 3. **Review and discuss:**
 - a. **Staging and sequencing.**
 - b. **Schedule by area with manpower breakdown to complete.**
 - c. **Relationship of each party and their effect on finished product.**
 - d. **Protection with dust barriers or zipper openings in all areas affected by work.**
 - e. **Protection of concrete surfaces prior to polishing with emphasis on need to understand that trades are working on a finished surface.**
 - f. **Special conditions such as floor cleanouts and electrical boxes to level area around projections and provide method and means to resolve any differences in heights.**
 - g. **Protection of completed work.**
 - h. **Cleanup – daily and final.**

- D. Mockup:
 - 1. Size: Minimum 50 square feet.
 - 2. Show polished finish and concrete surface treatment.
 - 3. Locate one mockup on slab, final location to be determined.
 - 4. Approved mockup may not remain as part of the Work.
- E. Slip Resistance: After polishing, achieve minimum slip resistance of 0.42. **Provide range for Owner selection.**

1.5 PROJECT CONDITIONS

- A. Concrete Substrate:
 - 1. Concrete is existing and must be prepared in accordance with the manufacturer's strict recommendations to achieve the approved finish previously completed in locations to be determined.
- B. Protect concrete surfaces scheduled to receive polished finish prior to finishing; prevent damage and staining:
 - 1. Provide fluid containment for equipment working on floors before and after polishing.
 - 2. Do not allow vehicular traffic on floors before or after polishing.
 - 3. Do not allow acids to contact surface.
- C. Apply concrete treatment when ambient and surface temperatures are between 35 and 90 degrees F.
- D. Close areas to traffic during finishing and for minimum time period after finishing as recommended by concrete treatment manufacturer.
- E. Review existing areas for projections (cleanouts and electrical boxes) in the floor that will require patching and or coring to maintain level with new polished concrete surface. Include necessary repairs in bid.
- F. General Contractor shall take pre-existing photos to be used in discussions should any damage occur.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design is products by Husqvarna Construction Products: Olathe, Kansas 66061 – 206-375-3066 Chris Bennett (www.husqvarna.com), or pre-approved equal.
- B. Dual-Drive, variable speed, three-phase, walk-behind machine with not less than 700 pounds of down pressure on grinding or diamond polishing pads.

2.2 MATERIALS

- A. Concrete Treatment Materials:
 - 1. Latex grouting mix: GM3000.
 - 2. Densifier: Hiperhard.
 - a. *Potassium densifier for exposed aggregate*
 - 3. Penetrating solvent-based sealer: Hiperguard or Hiperguard Green (VOC compliant)
- B. Edge-Tint: **Do not provide Edge Tint – not required**

2.3 ACCESSORIES

- A. Cleaning Products: Non-corrosive, neutral pH, of type recommended by concrete treatment manufacturer.
- B. Joint Sealer: Specified in Section 07920.
- C. Rapid Set Tru Concrete Patching materials. Submit colors available.

2.4 EQUIPMENT

- A. Grinding and Polishing Equipment: As manufactured by Husqvarna Construction Products.
 - 1. Grinding tools: Metal bonded diamond type, G600 or G1100 Series.
 - 2. Honing and polishing tools: Resin bonded diamond type, P600 or P1200 Series.

PART 3 - EXECUTION

3.1 ACCEPTABLE INSTALLERS

- A. Following installers are trained, certified and approved to perform work of this Section:
1. Artistic Concrete Surfaces, 913-829-7222, mike.denny@kansascityconcrete.com
 2. Royale Concrete: (Jessica Ledger-Kalen <jlk@royaleconcrete.com>) 641-919-8912
 3. Superior Aggregate Designs: (Pat Watkins Pat@superiorks.com) 316-943-2347
 4. George J. Shaw: (sdegraeve@gjshaw.com; ptournor@gjshaw.com) 816-231-8200
 5. Polished & Decorative Concrete: (Jon Chambers) www.flooringevolutions.com 913-238-0372
 6. AllStar Concrete: (Jason Duke stainedfloors@gmail.com) 512-740-2234
 7. Musselman & Hall Contractors, LLC: 816-861-1234, 800-257-4255
 8. Husqvarna trained/certified installer approved prior to bid.
- B. Substitutions: Under provisions of Division 01.
- C. **General Contractor shall provide two (2) separate fully trained and certified subcontracting firms to perform the grinding and polishing work at Blue Valley Northwest High School. Refer to Sheet BVNW A102 for defined areas of work for each subcontractor. As part of the pre-installation meeting, each subcontractor shall submit his plan to complete his portion of the work within the required construction schedule.**

3.2 EXAMINATION

- A. Examine substrate for conditions that could adversely affect application or performance of finish; correct detrimental conditions.
- B. Verify that concrete floors meet requirements specified under "Project Conditions".
- C. Verify that surfaces were cured using water-based curing compound.

3.3 PREPARATION

- A. Provide wood dust barriers with visqueen or plastic zipper openings to control dust from seeping into adjacent spaces.
- B. Thoroughly clean floors; remove debris. Remove residues using non-corrosive cleaning products.
- C. Protect adjacent surfaces including all surrounding building materials from damage, walls, doors, frames, metal thresholds, etc.
- D. Joints should be cleaned, v21 blade cut to create protective bevel for exposed aggregate floors – bevel shape to be removed during grinding process according to manufacturer's instructions unless approved as part of finished floor.
- E. Remove existing coatings using planetary grinder and dust extraction equipment with metal bonded diamond tooling. Tooling grit and bond appropriate for materials being removed, concrete mix design, placement technique, and location, to produce required final polishing.
- F. Install sealant at all open joints, color to match adjacent or previous projects, material type as recommended by manufacturer.

3.4 GRINDING

- A. Using G1100 20 or 30 grit metal-bonded grinding tool, grind surface until uniform, consistent scratch pattern is achieved.
- B. Using G1100 60 grit metal-bonded grinding tool, grind surface to expose consistent aggregate coverage, remove initial scratches
- C. Using G1100 120grit metal-bonded grinding tool, grind surface to remove 60 grit scratches, grout with latex grouting mix to fill pop-outs, pin-holes and micro-craters. Do not use epoxy, polyurea or other non-densifying grout mixture.

D. Hand grind inside/outside corners and all corners at door jambs and at all other locations that interfere with installation of new metal thresholds and metal transitions.

E. Large aggregate exposure polished concrete floor with a Roughness Average (Ra) of 6 µin (microinches.”

3.5 DENSIFYING

A. After grinding apply densifier in accordance with manufacturer's instructions.

3.6 HONING

A. After grinding and densifying hone successively using P1200, 50, 100, 200 bonded polishing tools. Each honing to remove scratch marks from previous honing.

3.7 POLISHING

A. After grinding and densifying, and successful honing use P1200, 400 grit resin bonded polishing tools. Each honing to remove scratch marks from previous honing.

B. Polish successively using P1200, 800, 1500 and 3000 grit resin bonded polishing tools until total refinement of scratches is achieved. Ensure excess densifier is removed according to manufacturer's instructions.

C. Light meter test to ensure required lumens have been met.

1. Very High Gloss (3000 Grit): Lumen Reading not less than **70** according to ASTM E 430 **before** polish guard application. Gloss meter reading to be met to prove calcium silicate layer is in existence and refined appropriately to meet Hiperfloor Premium requirements.
2. General Contractor, Architect and owner representative to be present at gloss meter reading. Five separate readings will be taken from random selection of each floor area. Average light meter reading shall exceed 70 lumens.
3. In the event lumens are not met, continue to refine floors with 3000 resin until met or other recommended procedures by the manufacturer.
4. **Lumen testing is a part of the requirements to meet Substantial Completion.**

3.8 SEALING

A. Apply penetrating solvent based sealer to manufacturer's recommend coverage.

B. Burnish using black nylon pads. Final polishing to provide smooth, even finish.

C. Final lumen meter reading, record reading and submit to Architect and owner as part of Substantial Completion requirements and include in closeout documents.

3.9 FIELD QUALITY CONTROL

A. Measure gloss rating using Horiba 320 gloss meter (or approved); re-polish if required to achieve specified gloss rating.

B. Measure slip-resistance using BOT-3000 slip-tester by Universal Walkway Testing; ensure compliance with specified slip resistance rating. Provide Owner options for selection.

3.10 PROTECTION

A. Close areas to traffic until concrete treatment has cured.

B. Protect completed work with non-staining sheet coverings.

C. Contractor shall be responsible for any repairs required due to damage to adjacent materials or building components until acceptable to the Owner.

D. Sub-contractor, owner representative and responsible facility maintenance party will go over required maintenance for optimum floor performance.

END OF SECTION 03536