ADDENDUM NUMBER THREE TO PLANS AND SPECIFICATIONS

FOR

NEW COMPLEX FOR WASHINGTON COUNTY ROAD & BRIDGE BRENHAM, TEXAS

October 25, 2018

PLANNORTH ARCHITECTURAL CO.

P.O. BOX 2468 101 SOUTH BAYLOR ST. BRENHAM, TEXAS 77833 PH 979-421-8003

NOTICE TO BIDDERS:

This Addendum shall be considered part of the specifications and drawings for the above-named project as though it had been issued at the same time and incorporated integrally with such plans. Wherein provisions of the following supplementary plans and specifications contained in this Addendum differ from the provisions of the original drawings, the provisions of this Addendum shall govern and take precedence.

Bidders are hereby notified that they are to make any adjustments in their estimates which they may deem necessary because of this Addendum; it will be considered that each bidder's proposal is submitted with full knowledge of all modifications and changes specified herein. This Addendum shall become a component of the Contract Documents.

This document contains:

- 03 35 43 DIAMOND POLISHING CONCRETE FLOORS (previously CONCRETE FINISHES)
- C100 SITE PLAN
- C700 STORM PLAN
- C800 UTILITY PLAN
- C1000 WATER PLAN
- F1.1 FURNITURE, FIXTURES AND EQUIPEMENT FLOOR PLAN
- DAVIS BACON ACT INFORMATION

A. Clarifications

- On sheet C100 the "Proposed Fiber Optic Line to be Coordinated w/Housley Communications" is to be coordinated by contractor during construction but will not be furnished and installed in this contract.
- 2. O.S.S.F indicated on sheet C100 to be designed, furnished and installed in this contract.
- 3. All proposals shall abide by the Davis Bacon Act. Reference the attachment and refer to the website provided for detailed information regarding Davis Bacon.

B. Modifications to Project Manual

4. Change the name of Spec. Section 03 35 43 CONCRETE FINISHES to 03 35 43 DIAMOND POLISHING CONCRETE FLOORS

- 5. <u>03 35 43 DIAMOND POLISHING CONCRETE FLOORS</u> Concrete to be diamond polished with densifier applied and then burnished. Refer attached 03 35 73 CONCRETE FINISHES.
- 6. 09 61 19 CONCRETE FLOOR SEALER Remove this spec. section from the Project Manual.
- 7. <u>Section 13 34 19 Pre-Engineered Metal Building</u>, Part 2 2.1 PRE-ENGINEERED BUILDING MANUFACTURERS: Add Red Dot Buildings to acceptable PEMB manufacturers.

C. Modifications to Civil Plans

- 8. <u>C100 SITE PLAN, C700 STORM PLAN, C800 UTILITY OVERALL, C1000 WATER PLAN</u>- Add 1" water line to "Proposed Sign Shop". Replace Sheets C100, C700, C800, C1000.
- 9. <u>C1000 WATER PLAN</u> Add Vault for Double Check Valve. Replace Sheet C1000.

D. Modifications to Architectural Plans

- 10. <u>A11.01 COMPOSITE ROOM FINISH SCHEDULE</u> Remove the floor finish "Polished Concrete Slip Res. Coating" from the Shop Building Room Finish Schedule. All Concrete in the Shop Building to be Diamond Polished Concrete. Sheet not reissued.
- 11. <u>A6.02 BUILDING SECTION SHOP BUILDING</u> Section 2 remove "Galvanized Steel" from the Tapered Column note that is INSIDE the Shop Bay. Interior metal building components will not be galvanized. Sheet not reissued.
- 12. <u>F1.01 FURNITURE, FIXTURES AND EQUIPMENT FLOOR PLAN</u> The Metal Storage Shelves in SHOP STORAGE 210 are to be provided by the contractor. Shelving size, location and quantities have changed. Replace entire sheet F1.01.
- 13. <u>A2.04 TIRE & SIGN STORAGE BUILDING</u> West Elevation Add eave height at low side of building to be 10'-0".

END OF DOCUMENT



October 25, 2018

DAVIS BACON ACT INFORMATION, AS COPIED FROM: https://www.wdol.gov/wdol/scafiles/davisbacon/tx245.dvb

General Decision Number: TX180245 10/19/2018 TX245

Superseded General Decision Number: TX20170245

State: Texas

Construction Type: Building

Counties: Lee, Limestone, Newton, San Augustine, Shelby and

Washington Counties in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification	Number	Publication	Date
0		01/05/2018	
1		03/23/2018	
2		08/03/2018	
3		09/14/2018	
4		10/19/2018	

ASBE0021-007 06/01/2016

LIMESTONE, SAN AUGUSTINE, AND SHELBY COUNTIES

	Rates	Fringes	
Heat and Frost Insulator/Asbestos Worker	\$ 24.32	7.52	
ASBE0022-003 06/01/2018			

Rates Fringes

ASBESTOS WORKER/HEAT & FROST INSULATOR	\$ 24 15	13.29
ASBE0087-005 01/01/2018		
Lee County		
-	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	.\$ 22.72	10.02
ASBE0112-001 03/14/2017		
Newton County		
	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	.\$ 26.13	8.03
BOIL0074-007 01/01/2017		
Lee, Limestone, and Washington C	ounties	
	Rates	Fringes
Boilermaker	.\$ 28.00	22.35
BOIL0587-005 01/01/2017		
Newton, San Augustine, and Shelb	y Counties	
	Rates	Fringes
Boilermaker	.\$ 28.00	22.35
CARP0551-007 04/01/2016		
	Rates	Fringes
CARPENTER (Form Work Only)	.\$ 23.05	8.78
IRON0084-004 06/01/2018		
Washington County		
	Rates	Fringes
IRONWORKER, STRUCTURAL AND REINFORCING		7.12
IRON0135-003 09/01/2018		
Newton and San Augustine Countie	S	

	Rates	Fringes
IRONWORKER, REINFORCING AND STRUCTURAL	.\$ 31.85	12.14
IRON0263-024 06/01/2017		
Shelby County		
	Rates	Fringes
Ironworker, reinforcing and structural	.\$ 23.25	7.32
IRON0482-010 06/01/2017		
Lee and Limestone Counties		
	Rates	Fringes
IRONWORKER, STRUCTURAL AND REINFORCING	.\$ 22.15	6.68
LABO0154-005 05/01/2008		
Lee County		
	Rates	Fringes
Laborers: (Mason Tender - Cement/Concrete)	.\$ 12.98	3.49
LABO0154-019 05/01/2008		
Newton, San Augustine, and Washi	ngton Counties	
	Rates	Fringes
Laborers: (Mason Tender - Cement/Concrete)	.\$ 14.53	3.49
LABO0154-025 05/01/2008		
Limestone and Shelby Counties		
	Rates	Fringes
Laborers: (Mason Tender - Cement/Concrete)		2.90
* PLUM0068-005 10/01/2018	_ _	-
	Rates	Fringes
PLUMBER Lee & Washington Counties Newton, San Augustine, &	.\$ 35.60	11.04

Shelby Counties	\$ 30.67	10.91
PLUM0100-007 11/01/2017		
SAN AUGUSTINE & SHELBY COUNTIL	ES	
	Rates	Fringes
PLUMBER		11.51
PLUM0529-003 04/01/2017		
Limestone County		
	Rates	Fringes
Plumber	\$ 26.14	9.31
SUTX2009-100 04/20/2009		
	Rates	Fringes
BRICKLAYER	\$ 18.00	0.00
CARPENTER, Includes Acoustical Ceiling Installation, Batt Insulation, and Metal Stud Installation (Excludes Drywall Hanging, and Form		
Work)	\$ 15.13	2.63
CEMENT MASON/CONCRETE FINISHED	R\$ 12.09	0.00
DRYWALL HANGER	\$ 13.89	1.00
ELECTRICIAN	\$ 18.06	4.87
LABORER: Common or General	\$ 9.24	0.00
LABORER: Landscape & Irrigation	\$ 8.50	0.22
LABORER: Mason Tender - Bric	k\$ 12.02	0.00
LABORER: Mortar Mixer	\$ 12.00	0.00
OPERATOR: Backhoe/Excavator/Trackhoe	\$ 14.67	0.47
OPERATOR: Bulldozer	\$ 13.00	0.35
OPERATOR: Crane	\$ 21.33	0.00
OPERATOR: Forklift	\$ 14.58	0.00
OPERATOR: Loader (Front End)	\$ 10.54	0.00

PAINTER: Brush, Roller and Spray\$ 11.75	0.00
ROOFER\$ 13.64	1.80
SHEET METAL WORKER\$ 17.00	0.00
TILE SETTER\$ 15.00	0.00
TRUCK DRIVER\$ 10.68	0.34

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed

in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

SECTION 03 35 43

DIAMOND POLISHING CONCRETE FLOORS

3	PART 1 - GENERAL

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4 1.1 SUMMARY

5 A. Section Includes: Products and procedures for non-colored diamond polishing concrete floors 6 using multi-step wet/dry mechanical process, and accessories indicated, specified, or required to 7 complete polishing.

8 1.2 **DEFINITIONS**

9 A. Terminology: As defined by CPAA.

10 1.3 SUBMITTALS

- 11 A. Product Data: Manufacturer's technical literature for each product indicated, specified, or required. Include manufacturer's technical data, application instructions, and recommendations.
- B. Installer Qualifications: Data for company, principal personnel, experience, and training specified in PART 1 "Quality Assurance" Article.
- 15 C. Field Quality Control Static Coefficient of Friction Test Reports: Reports of testing specified in PART 3 "Field Quality Control" Article.
- D. Maintenance Data: For inclusion in maintenance manual required by Division 01.
 - 1. Include manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use.
 - 2. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.

22 1.4 QUALITY ASSURANCE

- A. Polisher Qualifications:
- 24 1. Experience: Company experienced in performing specified work similar in design, 25 products, and extent to scope of this Project; with a record of successful in-service 26 performance; and with sufficient production capability, facilities, and personnel to 27 produce specified work.
 - 2. Supervision: Maintain competent supervisor who is at Project during times specified work is in progress, and is currently certified as Craftsman or Master Craftsman by CPAA.
- 30 Manufacturer Qualification: Approved by manufacturer to apply liquid applied products.
- B. Walkway Auditor: Certified by NFSI to test polished floors for static coefficient of friction according to NFSI 101-A.
- 33 C. Static Coefficient of Friction: Achieve not less than 0.5 for level floor surfaces as determined by quality control testing according to NFSI 101-A.

D. Field Mock-up for Aesthetic Purposes: Before performing work of this Section, provide as many 1 field mock-ups required to verify selections made under submittals and to demonstrate aesthetic 2 effects of polishing. Approval does not constitute approval of deviations from Contract 3 Documents, unless such deviations are specifically approved by Architect in writing. 4 Grind, hone, and polish as shown in the drawings, floor area for one color finish approved 1. 5 under sample submittals; include edges and joints (saw cut). 6 Use same personnel, including supervisors, which will perform work. 7 2. Install products and materials according to specified requirements. 8 3. Work shall be representative of those to be expected for work. 9 4. Finish various components to show maximum variation that will exist in work. 10 5. Approval is for following aesthetic qualities: 11 6. Compliance with approved submittals. a. 12 Uniformity of exposed aggregate. b. 13 Uniformity of sheen. 14 c. 15 Obtain Architect's approval before starting work on Project. 16 7. Protect approved field mock-ups from elements with weather resistant covering. 8. 17 Maintain field mock-ups during construction in an undisturbed condition as a standard for 18 9. judging completed work. 19 Do not demolish, alter, or remove field mock-ups until acceptable to Owner and Architect. 10. 20 E. Pre-Installation of Concrete Conference: Prior to placing concrete for areas scheduled for 21 polishing, conduct conference at Project to comply with requirements of applicable Division o1 22 Sections. 23 Required Attendees: 1. 24 Owner. a. 25 26 b. Architect. Contractor, including supervisor. c. 27 d. Concrete polisher, including supervisor. 28 Minimum Agenda: Polisher shall demonstrate understanding of work required by 29 2. reviewing and discussing procedures for, but not limited to, following: 30 a. Tour mock-up and representative areas of required work, discuss and evaluate for 31 compliance with Contract Documents, including substrate conditions, surface 32 preparations, sequence of procedures, and other preparatory work performed by 33 34 other installers. b. Review Contract Document requirements. 35 Review approved submittals. 36 c. Review procedures, including, but not limited to: d. 37 38 1) Details of each step of grinding, honing, and polishing operations. 39 2) Application of liquid applied products. 40 Protecting concrete floor surfaces until polishing work begins. 3) 41 Protecting polished concrete floors after polishing work is completed. 42 Reports: Record discussions, including decisions and agreements reached, and furnish 43 3. copy of record to each party attending. 44

1.5 FIELD CONDITIONS

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- 2 A. Damage and Stain Prevention: Take precautions to prevent damage and staining of concrete surfaces to be polished.
 - 1. Prohibit vehicle parking over concrete surfaces to be polished.
 - 2. Prohibit pipe-cutting operations over concrete surfaces to be polished.
 - 3. Prohibit storage of any items over concrete surfaces to be polished for not less than 28 days after concrete placement.
 - 4. Prohibit ferrous metals storage over concrete surfaces to be polished.
 - 5. Protect from petroleum, oil, hydraulic fluid, or other liquid dripping from equipment working over concrete surfaces to be polished.
 - 6. Protect from acids and acidic detergents contacting concrete surfaces to be polished.
 - 7. Protect from painting activities over concrete surfaces to be polished.
 - B. Environmental Limitations: Comply with manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting liquid applied product application.

PART 2 - PRODUCTS

17 2.1 LIQUID APPLIED PRODUCTS

- A. Surface Treatment: Colorless, odorless, water-based, Micro Lithium surface treatment that penetrates and seals by reacting chemically with the concrete surface forming a clear, dense, durable and hard inorganic topical surface layer
- Design Basis: Design is based upon Luma-Hard by Luma Concrete Systems.
- 23 O2 Physical Properties:
 - a. Form: Clear, pale green, water-based solution.
- b. Total Solids: 16%
- c. Active Ingredients: 100% of total solids.
- d. Specific Gravity: 1.11
- 28 e. pH: 11.0

B. Finish Treatment: Colorless, finish coat applied over polished concrete to provide improved stain resistance and increase the gloss level and co-efficient of friction.

- o1 Design Basis: Starseal Finish Coat Ultra by Vexcon
- 34 02 3 coat application (approximately 1,500 s.f./gal)
- 35 og After Drying, coating must be high speed propane burnished.

36 2.2 ACCESSORIES

- A. Patching Compound: Compound composed of 40 percent portland cement, 45 percent limestone, and 15 percent vinyl acetate copolymer, when mixed with dust salvaged from grinding process forms a paste that hardens when surface imperfections are filled.
- B. Grout Material: Clear modified silicate sealant, containing no pore clogging latex, when mixed with dust salvaged from grinding process forms a paste that reacts with calcium hydroxide in concrete that hardens when surface imperfections are filled.

1 C. Protective Cover: Non-woven, puncture and tear resistant, polypropylene fibers laminated with a multi-ply, textured membrane, not less than 18 mils in thickness.

3 2.3 POLISHING EQUIPMENT

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- 4 A. Field Grinding and Polishing Equipment:
 - 1. Variable speed, multiple head, counter-rotating, walk-behind machine with not less than 600 pounds of down pressure on grinding or diamond polishing pads.
 - 2. If dry grinding, honing, or polishing, use dust extraction equipment with flow rate suitable for dust generated, with squeegee attachments.
- 9 B. Edge Grinding and Polishing Equipment: Hand-held or walk-behind machines which produces same results, without noticeable differences, as field grinding and polishing equipment.
- 11 C. Burnishing Equipment: High speed walk-behind or ride-on machines capable of generating 1000 12 to 2000 revolutions per minute and with sufficient head pressure of not less than 20 pounds to 13 raise floor temperature by 20 degrees F.
- D. Metal Bonded Pads: Grinding pads with embedded industrial grade diamonds of varying grits fabricated for mounting on equipment.
- 16 E. Resin Bonded Pads: Polishing pads with embedded industrial grade diamonds of varying grits fabricated for mounting on equipment.
- 18 F. Burnishing Pads: Maintenance pads for use with high speed burnishing equipment.

19 PART 3 - EXECUTION

20 3.1 EXAMINATION

- 21 A. Acceptance of Surfaces and Conditions:
 - 1. Examine substrates to be polished for compliance with requirements and other conditions affecting performance.
 - 2. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents.
 - 3. Starting work within a particular area will be construed as acceptance of surface conditions.

28 3.2 PREPARATION

- 29 A. Cleaning New Concrete Surfaces:
- 30 1. Prepare and clean concrete surfaces.
- Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, paint splatter, and other contaminants incompatible with liquid applied products and polishing.

3.3 VAPOR TESTING CONCRETE FLOORS

2 A. Alkalinity:

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- Test Method: Measure pH according to method indicated in ASTM F 710.
- 4 2. Acceptable Results: pH between 8 and 10.
- 5 B. Moisture Vapor Transmission Rate:
- 6 1. Test Method: Perform anhydrous calcium chloride test according to ASTM F 1869.
- Acceptable Results: Not more than 5 pounds per 1000 square feet in 24 hours.
- 8 C. Relative Humidity:
- 9 1. Test Method: Perform relative humidity test using in situ probes according to ASTM F 2170.
- 11 2. Acceptable Results: Not more than 75 percent.

12 3.4 POLISHING CONCRETE FLOORS

- 13 A. Sequence of Polishing: Perform polishing in Maintenance Shop after the overhead work is done.
- 14 B. Initial Grinding:
- 15 1. Use grinding equipment with metal bonded grinding pads.
- 16 2. Begin grinding in one direction using sufficient size grit pad.
- Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 150 grit.
 - 4. Achieve maximum refinement with each pass before proceeding to finer grit pads.
- 5. Vacuum floor using squeegee vacuum attachment after each pass.
- 21 6. Continue grinding until aggregate exposure matches approved field mock-ups.
- 22 C. Treating Surface Imperfections:
- 23 1. Mix patching compound and grout material with dust created by grinding operations to match color of adjacent concrete surface.
 - 2. Fill surface imperfections including, but not limited to, holes, surface damage, small and micro cracks, air holes, pop-outs, and voids.
 - 3. Work compound and treatment until color differences between concrete surface and filled surface imperfections are not reasonably noticeable when viewed from 10 feet away under lighting conditions that will be present after construction.
- D. Liquid Densifier Application: Apply undiluted to point of rejection, remove excess liquid, and allow to cure according to manufacturers instructions.
- 32 E. Grout Grinding:
- 1. Use grinding equipment and appropriate grit grinding pads.
- While applying fresh grout material prior to, grind concrete in direction perpendicular to initial grinding to remove scratches.
- 36 Yacuum floor using squeegee vacuum attachment after each pass.
- 37 F. Honing:

- Use grinding equipment with resin bonded grinding pads.
 Grind concrete in one direction starting with 50 grit pad and make as many sequential passes required to remove scratches, each pass perpendicular to previous pass, up to 400 grit pad reaching maximum refinement with each pass before proceeding to finer grit pads.
 - 3. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.

7 G. Polishing:

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- 1. Use polishing equipment with resin bonded polishing and burnishing pads.
- 2. Begin polishing in one direction starting with 800 grit pad.
 - 3. Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 3000 grit.
 - 4. Achieve maximum refinement with each pass before proceeding to finer grit pads.
 - 5. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.
 - 6. Continue polishing until gloss appearance, as measured according to ASTM E 430, matches approved field mock-ups.
- 16 H. Polish Guard: Uniformly apply and remove excessive liquid according to manufacturer's instructions.
- 18 I. Final Polish: Using burnishing equipment and finest grit burnishing pads, burnish to uniform sheen matching approved mock-up.
- 20 J. Final Polished Concrete Floor Finish:
 - 1. Class B Fine Aggregate (Salt and Pepper) Finish: Remove not more than 1/16 inch of concrete surface by grinding and polishing resulting in majority of exposure displaying fine aggregate with no, or small amount of, medium aggregate at random locations.
 - 2. Level 2 Medium Gloss Appearance:
 - a. Procedure: Not less than 5 step process with full refinement of each diamond pad up to 800 grit resin bonded pad with one application of densifier.
 - b. Gloss Reading: Not less than 55 according to ASTM E 430 before polish guard application.

29 3.5 FIELD QUALITY CONTROL

A. Field Testing: Engage a qualified walkway auditor to perform field-testing according to NFSI 101-A to determine if polished concrete floor finish complies with specified static coefficient of friction.

3.6 CLOSEOUT ACTIVITIES

A. Maintenance Training: CPAA Master Craftsman shall train Owner's designated personnel in proper procedures for maintaining polished concrete floor.

36 **3.7 PROTECTION**

A. Covering: After completion of polishing, protect polished floors from subsequent construction activities with protective covering.

39 END OF SECTION









