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Re: A BID FOR TWO NEW PROJECT BUILDINGS:

A. A NEW CAFETERIA AND OFFICE ADDITION-LYNN CAMPUS PROJECT 1920-3809-002
B. A NEW CAFETERIA/MULTI-PURPOSE ROOM BUILDING-STRAWBERRY CAMPUS PROJECT 1920-3809-001

Owner: HILLCREST SCHOOL DISTRICT

South Main /Highway 25,
PO Box 50
Strawberry, Arkansas 72469
Superintendent of Schools, Mr. Greg Crabtree

Projects to be located on:

Lynn School Campus- Lynn, Arkansas
Strawberry School Campus- Strawberry, Arkansas

ADDENDUM #1
March 7, 2021

Modifications or clarifications to original plans and specifications FOR BOTH PROJECTS UNLESS NOTED OTHERWISE:

1. **BID GUARANTEE** Add the following language to specification section APPENDIX – D section 2 - BID GUARANTEE BOND Each bid shall include with it a bid bond in

the amount of 5% of the total bid offered. It shall be in the form of a cashier's check or insurance surety bond (with Power of Attorney attached) made payable to the owner. The Bid Guarantee bond shall become the property of the OWNER in the event the Contract, Performance and Payment Bond and Insurance Requirements are not executed within the time as set forth herein (thirty (30) days unless noted otherwise), as liquidated damages for the delay and additional work caused thereby.

2. **BONDING**- The subcontractors **SHALL NOT** be required to provide a Performance and Payment Bond. Only the General Contractor is required to provide a Performance and Payment Bond.
3. **CONSTRUCTION TIME** -The General Contractor shall disregard any reference to a required construction time in the bid documents. A space has been provided on the **NEW BID FORM** for the General Contractor to specify the construction time that the contractor shall require in order to reach substantial completion for **EACH** project. If there is a different construction time required for each project, the Owner shall request that the high school be completed before the Cafeteria. Although not required, the owner will look favorably upon any ability to reach substantial completion AS QUICKLY AS POSSIBLE. Both projects may be under construction at the same time and may be managed by one field superintendent. The construction start date is anticipated to be as soon as practical after receiving bids
4. **ALLOWANCES** –. The contractor shall include the allowances as shown on the allowance section. Allowances included in the bid shall include materials, labor, taxes, installation etc. No other costs shall be added to the allowances for these items.
5. **Hardware Allowance**- the hardware allowance is for all interior and exterior doors.
6. **No Storm Shelter**- The two projects as currently designed are not designed for and shall have NO storm shelter provisions.

ADA

7. Generic details for handicapped accessibility are provided on sheets A001 and A002. Not all details are required for this project but are provided in the event they may be required as additional work during the course of construction.

EARTHWORK, SITEWORK, FOOTINGS AND CONCRETE

8. **GEOTECH**-The Geotech information (soil investigation reports) for both projects is included by SRI (Southern Reprographics Incorporated) in the specification manuals. Any Contractor bidding the project that has not

received them shall contact SRI for copies of these reports. The soils report and the structural design may require different soils treatment for the foundation work under each project:

9. The LYNN project soils report indicates that probably no undercut shall be required. However if unsuitable soils are encountered unit prices for providing undercut and importing additional engineered fill are provided on the bid form
10. The STRAWBERRY project soils report indicates that undercut may be required. However if unsuitable soils are encountered unit prices for providing undercut and importing engineered fill are provided on the bid form.
11. The Contractor shall bid both projects with NO undercut and NO additional importing of engineered fill beyond what is required to achieve the grades and slab elevations as shown on the plans.
12. The Contractor shall include in the base bid sufficient imported engineered fill as required to achieve the grades and slab elevations as shown on the plans.
13. Unit prices for rock removal are also included in the BID FORM. Contractor shall bid the projects as if NO rock shall be found during the excavation and fill. Should rock be encountered during excavation, the unit prices provided for rock removal and listed on the bid form shall be used for determining total rock removal prices and shall be considered additional work and shall be added to the original contract amount.
14. Section 02200 –Earthwork – 4.B/G.1—clarification. All fill shall be placed in 8" layers. (not to exceed).
15. Section 02200 –Earthwork – 5.A.1—clarification- No need for any area to be cross sectioned.
16. Termite Control- disregard any reference to North Carolina Law. All Termite control shall be done in accordance with Arkansas Law.
17. **SUBGRADE WATERPROOFING- clarification** All retaining walls for both projects shall have drainage fill place inside them with filter fabric and a drainage system by Marflex as described in Specification section 03460 with filter fabric and drainage "pipe" system- also see attached literature.
18. After conferring with the Owner it has been decided to eliminate **ALL** sheet waterproofing membrane from **ALL** retaining walls in the project. Disregard any reference to sheet waterproofing at retaining walls.

19. **CONCRETE POLISHING** – the attached new specification for POLISHED CONCRETE FINISHING- 03354 shall be included in the specifications and used to control concrete floor polishing.

SITE WORK

20. Lynn Project- Handrails shall be 1-1/2" diameter x 1/8" welded steel tubes.
21. Lynn Project- Disregard detail #18 on C1.4 and the site electric details.
22. Lynn Project –the site water line work and the fire hydrants shown on C1.5 shall **NOT** be a part of this contract.
23. Lynn Project –Asphalt paving – provide 14,350 SF of asphalt paving in the area shown on C1.3. Asphalt paving shall be 3" thick on an 8" highway grade base. The 3" of asphalt paving shall be deductive alternate #3. The 8" of highway grade base shall remain in the bid. See sheet C1.3
24. Lynn Project –curb and gutter- Contractor shall PROVIDE CURB AND GUTTER on the entire "building" side of the new asphalt and concrete vehicle paving. The other side of the drive, away from the building, shall have no curb and gutter.
25. **PAVEMENT MARKINGs -**The projects have no pavement markings.
26. **FOUNDATION AND STRUCTURE** – the top of footing elevations shown on the structural plans use the TOP OF FINISH SLAB as the benchmark.
27. The following concrete strength shall be used for both projects in lieu of any other concrete strength given in the documents:
    A.FOOTINGS, GRADE BEAMS AND DRILLED PIERS - 3,000 psi
    B.STAIR LANDINGS, STAIR TREADS- 3,000 psi
    C.SLABS ON GRADE, WALLS, PILASTERS, PEDESTALS-4.000 psi
    D.EXTERIOR WALKWAYS AND STAIRS- (air entrained) 3,000 psi
28. As regards structural information in the event of a conflict between the bound specifications and the plans the plans will take precedent.
29. Lynn Project- the retaining walls adjacent to the exterior stairs west of the front entry shall not be required and shall be disregarded for this bid. However 3 handrails to meet code shall be provided and installed at this stair location
30. Lynn Project -Retaining wall at east side of kitchen dock and truck delivery. The top of footing elevations provided on the structural sheet should be changed as follows:

a. From column Line 1 to column Line 3+6'-0" the TOF= (minus)-11' below FIN BLDG. SLAB. The top of this section of wall shall coincide with the top of the slab at the dock the wall at this section shall be approximately 11' above grade. The remainder of the dock retaining wall footing shall be adjusted accordingly
b. From column Line 3 +6'-0" to column Line 10 +3'-0" the TOF varies from (minus) - 5' to (minus) -3' below TOP OF ADJACENT PAVING. The Footing shall step at the approximate same locations as shown. The TOP of this section wall shall be 8" above adjacent paving

31. **SITE UTILITIES-** The site utilities including: Domestic water, Sewer and Fire suppression water **SHALL NOT** be included in this bid.
32. The building Plumbing contractor shall include all domestic water plumbing to 5' outside the building and shall provide sewer a minimum of 30' outside the building and also include the grease traps and any other oil water separators shown on the plumbing sheets.
33. Beyond that described above, a separate Civil design package shall be produced later that shall include the site water and site sewer utilities for both the Strawberry and the Lynn locations and shall be bid and contracted separately.
34. LYNN PROJECT-MANHOLES- refer to sheet C1.1 – the existing manhole #2549 shall be demolished as part of this contract. The existing manhole #2555 shall remain and the height of the top shall be adjusted as required to meet the new adjacent grade. The sewer line from MH #2549 to MH #2555 shall be demolished as a part of this contract.
35. **PROPANE PIPING**-The Building contractor shall provide and install the gas piping system within the building and 20' outside the building.
36. **PROPANE TANKS ON SITE** – the Owner shall be responsible for removing- relocating existing tanks and providing and installing new propane tanks and the UG piping from those locations to the buildings.
37. **FIRE SPRINKLER SYSTEM AT STRAWBERRY LOCATION** – The Cafeteria/ Safe room building at Strawberry, AR shall NOT BE Fire Sprinkled. Disregard any reference in plans, if any to a fire sprinkler system in either building at either location.
38. **WATER MAIN AND FIRE HYDRANT AT LYNN LOCATION-** The Cafeteria/ Safe room building at Lynn, AR **SHALL NOT** be Fire Sprinkled. However, a new water main and hydrant that will serve the new classroom

project at Lynn shall be provided under separate contract. The approximate location of the new main and hydrant is shown on the plans.

39. **FIRE RATING OF WALLS.** The project at Lynn shall be required to have 1 hour fire rating at all exit corridors. The corridors shall have 1 hour rated light gauge and gyp bd walls from the top of masonry walls to the roof deck. No (none) 2 hour walls are required at the Lynn project. 4 hour fire walls are shown on the plans for the Lynn project and are required with 3 hour fire rated doors and openings.
40. **SITE SAFETY**- Both construction sites are adjacent to an active school area. The Contractor shall provide a construction barricade(s) between the new building site and the adjacent school area. This barricade(s) shall be sufficient to prevent all children and adults (including small and curious children) from accessing the site either by purpose or inadvertently. The barricade(s) shall also allow the free movement around the existing school buildings for staff and students. The contractor shall erect temporary barricades around any site work that occurs outside the main site. It shall be the Contractors responsibility to monitor the site for any breaks in this barricade and to monitor its' effectiveness in preventing access to the site and to adjust the barricade(s) as required.
41. **ASBESTOS** -The school campus has been certified asbestos free by a certified inspector at an earlier date. Copies of the reports and the certifications shall be made available to the contractor selected for the projects. If any additional asbestos discovery is needed it will be paid for by the Owner. All demolition shall be disposed of legally. Contractor shall perform all demolition coordination with ADEQ as required.
42. **DEMOLITION** – Demolition and removal of all existing unseen footings, removal of all existing refuse that may exist and any other existing features including trees that conflict with the new building and site work SHALL be performed by the contractor and shall be a part of the base bid. Demolition shall include work as required for all trades, equipment demo, electrical demo etc. At locations where footings or basement slabs and walls are removed the contractor shall import approved fill as required to bring the existing grade to match the surrounding grade. All demolition materials shall be disposed of properly and legally at areas approved for the type of material being disposed.
43. **LANDSCAPING**. These projects shall have no landscaping except for hydro-seed on any existing soil area disturbed by the new and new 2" topsoil placed at all disturbed areas. Contractor shall finish grade the site at the completion of the project. Any additional landscaping shall be done by Owner. The project has no fence or gates.

44. **TESTING-** All concrete testing and soil compaction testing is to be paid by Contractor. Testing may be performed by any reputable licensed company approved by the Architect.

MASONRY CLARIFICATIONS

45. MASONRY WALLS- All CMU masonry walls are to be standard weight CMU block. NO Lightweight CMU shall be used.
46. MASONRY WALLS- Interior CMU masonry walls shall NOT be required to have integral waterproofing.
47. MASONRY WALLS- Interior masonry walls shall have no core insulation.
48. MASONRY WALLS- All interior door jambs and window jambs shall be constructed with a bullnose type CMU.
49. MASONRY WALLS- All vertical reinforcing in masonry walls shall occur at 32" intervals. Cells with vertical re-bar shall be grouted solid.
50. MASONRY WALLS- The insulation installed between the CMU exterior walls and the metal siding and/or CMU veneer shall be a 1" rigid insulation in lieu of any reference to a sprayed on insulation.
51. MASONRY WALLS- 20 mil Nervestral shall be used for thru the wall flashing at exterior masonry walls
52. MASONRY WALLS- Disregard any reference to thru wall flashing at interior masonry walls.
53. MASONRY WALLS- The contractor shall disregard any reference, if any, to brick masonry in the construction documents. The building has NO brick masonry.
54. Lynn and Strawberry projects -The split face CMU veneer and other exposed split face CMU shall be tinted to match as closely as possible the adjacent and/ or connected building. Tinted CMU shall be selected from the Factory standard tints available. Separate tints may be selected for each project if required.

MILLWORK MODIFICATIONS and CLARIFICATIONS

55. **REVISED-PLANS**-Regarding the Millwork drawing elevations of the base and overhead cabinets: Provide locks on all lower and upper cabinet doors. All cabinets to be have a Plastic Laminate exterior finish. All millwork is to be included in the base bid. The contractor shall provide a 1 year warranty on all casework. Disregard any reference to a "TEACHER WORK ROOM" in the Lynn project. There is no teacher work room.
56. All millwork either in contract at bid time or added later by addendum shall comply with the 2010 Standards regarding accessible height and reach ranges (per section 308). The general contractor and the casework subcontractor shall verify compliance before fabrication

INTERIOR FINISHES, DOORS HARDWARE AND WINDOWS

57. CEILINGS- All acoustic ceilings panels are to be white color and installed in a black grid. In lieu of the original ceiling tile specified the contractor shall provide and install an Armstrong tile- Fine fissured- 1713. The tile and grid shall be the same size as original specification.
58. DOORS- Pioneer brand hollow metal doors and frames shall be considered an equal to CECO or Curries brand for the purposes of the bid. The contractor shall provide solid core wood doors with factory finish at all interior doors that are shown to be wood on the door schedule. Frames shall be 16 gauge steel as specified. All doors types as shown on the door elevations are to remain unchanged. All required fire ratings are to remain unchanged.
59. COILING DOORS- all coiling doors shall be by **OVERHEAD DOOR** or equal. Coiling doors on the Strawberry project are NOT required to have any fire rating. However the coiling doors (and other doors) installed in the 4 hour wall in the Lynn project at the Kitchen area are required to have a 3 hour fire rating.
60. HARDWARE- In lieu of a hardware specification an ALLOWANCE shall be used for all door hardware as listed below for all types of required door hardware, including closers, BB hinges, kick plates, wall stops, gaskets, silencers, thresholds, rain guards, sweeps, cylinder locks, exit devices, etc: see bid documents for allowance amounts.
61. DOOR FRAME widths are to be coordinated with their wall thickness and wall type in all cases.
62. OPERABLE WINDOWS shall be- Quaker traditional series –T500 with Low E glazing with 4-1/4" jambs – or equal.
63. STOREFRONT WINDOW – Frames for storefront windows at entries are to be 5-3/4" wide. Disregard any reference to other widths
64. WINDOW BLINDS- An attached specification 12213 shall be used for interior horizontal louvre window blinds. All windows shall receive operable interior window blinds.
65. Where storefront windows and doors are required on either project a YKK AP or Kawneer or Tubelite 4-1/2" storefront window frame shall be used . If a deeper frame(6-1/2") is required for coverage of insulation air space then a YKK AP 6-1/2" frame , Kawneer T-601 or a Tubelite T-14650 shall be used. Disregard any reference to other frame sizes Equal products may be acceptable.
66. The low e-glass for all exterior windows shall be a soft tint gray with a (soft) Solar control Low-E coating. Disregard any reference to other coatings or tints.

EXTERIOR WALL CLARIFICATIONS

67. INSULATION- The insulation installed on all exterior walls over either stud walls or masonry walls and beneath the CMU veneer of the metal siding shall be a 1" rigid insulation in lieu of any reference to other thickness to a sprayed on insulation.

ATTIC WALLS, LIGHT GAUGE METAL STUDS AND BRACING

68. STUDWALLS – Stud Bridging shall be accomplished with Simpson Metal Clips. Disregard any reference to welded stud bridging. The project requires NO welding for stud bridging.
69. STUDWALLS - all light gauge metal stud walls shall extend to a capable component of the building structure or be braced to a component of the building structure. If braced, the braces should be the same gauge as the wall and @ 48" O.C. and extend at approximately a 45 degree angle to the surrounding structure.

STEEL FABRICATION, METAL BUILDING AND EXTERIOR METAL FINISHES

70. STRUCTURAL STEEL AND PEMB-There shall be no requirement that the steel fabricator(s) be AISC (American Institute of Steel Construction) certified but the structural engineer recommends it. However, it shall be required that if a non AISC certified fabricator is selected, that they undergo all the same inspection requirements required to meet the IBC special inspection requirements.
71. STRUCTURAL STEEL AND PEMB -The structural metal frame and metal building shall comply with IBC 2012 which calls for 115 mph wind protection.
72. PEMB-The metal building structural specifications on the structural drawing sheets shall take precedence over section 1300 in the bound specifications where a conflict exists.
73. PEMB-As stated on the plans, both building shall have a snow/ice retention system supplied for the full extent of all roofs. THE SNOW AND ICE RETENTION SYSTEM SHALL BE COMPLIANT WITH THE ROOF SYSTEM AND BE APPROVED BY THE ROOF MANUFACTURER.
74. PEMB-The walls panels by MBCI that were originally specified have been discontinued. The FW-120 panel also by MBCI or equal shall be used in lieu of the original specification
75. PEMB-The exterior wall panels and their mounting devices are considered to be a system. In addition to the normal 8" and 12" girts at specified locations, and where called for, the contractor shall use horizontal mounting hat channels on top of the exterior gypsum wall sheathing that are over the

18 gauge vertical studs (provided by others). These horizontal channels shall be 18 gauge 1" high steel hat channels spaced at 5'-0" maximum. The exterior gypsum board shall be an exterior rated 5/8" gypsum board by National Gypsum, gold bond or equal.

76. PEMB - contractor shall disregard any reference, if any, to a vented ridge. No vented ridge is required on the metal building roofs.
77. PEMB - contractor shall disregard any reference, if any, in the plans to a vented soffit panels. No vented metal soffit is required on the metal buildings. Metal building fabricator shall provide framing for metal soffits as part of the building system and as required to coordinate with light gauge framing. All soffits shall be 24 gauge with a non-perforated "flat" underside in lieu of the 26 gauge specified on the drawings and specifications.
78. PEMB- In lieu of the 22 gauge shown on the plans the contractor shall supply a 24 gauge gutter with stays located at every other roof panel. Downspouts also shall be 24 gauge.
79. PEMB - The exterior finish on all wall panels, gutters and downspouts shall be a Kynar finish. Contractor shall disregard any references to SP finish. The contractor shall also provide a 20 year Manufacturer's warranty on the exterior metal wall panels.
80. Bird stops shall be required on both projects.

ROOF and WALL INSULATION

81. ROOF INSULATION. The metal building fabricator shall determine the size and depth of the purlins based on structural requirements-the contractor shall coordinate the thickness of the "Simple Saver" type insulation to be installed to the purlin depth.Roof insulation with an equivalent installation system and an equal vinyl liner thickness as the similar "Simple Saver" system shall be acceptable. the 2" fiberglass insulation in the metal building roof shall be an UN-FACED fiberglass insulation.
82. WALL INSULATION. – The vinyl faced fiberglass insulation in the walls of the metal building shall be 8"thru-out. The additional 2" vinyl backed insulation in the walls shall not be required. Disregard any reference to 10" or 12" insulation between the metal wall girts.

OTHER CLARIFICATIONS

83. The attic space shall be sealed from the exterior, Tempered air indirectly conditioned from the occupied space below. No general ventilation louvres are to be installed in the exterior wall to the attic unless the louvre is connected to the HVAC equipment. Disregard any reference to general attic ventilation louvres on the drawings, if any.

84. FIRE EXTINGUISHER CABINETS- In Lieu of the original specification, fire **extinguisher cabinets shall be a surface mounted cabinet by JL Industries,** Ambassador series model 1013-F10 with acrylic window. Also provide fire extinguisher to fit the cabinet. In Lieu of what is shown on the plans. Provide four (4) wall mtd. Fire extinguishers in cabinets in each of the cafeterias at each location. 2 shall be in the kitchen near exit door locations to be selected and 2 shall be in the dining room located at exit doors at opposite ends.

TOILET ACCESSORIES CLARIFICATIONS

85. PROVIDE AND INSTALL THE FOLLOWING ACCESSORIES AS SPECFIED IN TOILET ACCESSORIES SECTION. a. Toilet tissue dispenser as specified- one per toilet stall. b. Mirror with stainless steel frame as specified- one per wall mounted Lavatory c. Plate glass mirrors as shown on drawings in group restrooms- 2 required. d. Combined paper towel dispenser and waste receptacle; 4 required. e. Liquid-soap dispensers at each lavatory; as specified. f. Under lavatory guard as specified; one at each Lavatory with no skirt guard. g. ADA approved grab bars as specified: one at each ADA rated stall. h. Mop and broom holder- one at each janitors sink

INTERIOR EQUIPMENT

86. WALK IN FREEZER/COOLERS**-**No foam insulation shall be below the walk in freezer floor. No concrete is required on top of the freezer floor.

87. The contractor shall provide and install one 4'x 12' white boards in each classroom and large teaching room. White boards shall be by MOORECO, porcelain magnetic steel with deluxe aluminum trim and top tack strip model #202AM or equal. Verify mounting locations and heights with owner. Contact Teresa Snook, 501-920-1699 for specifications or equal. . Contractor shall provide three (3) white boards total for the Lynn project and one (1) white board for the Strawberry project.

88. A request has been made to approve alternates for specified kitchen equipment. No alternates shall be approved. All kitchen equipment shall be provided and installed as called out in the original specifications.

89. **DOCK BUMPERS-**The loading dock at the Cafeteria at each project shall have dock bumpers installed on the face of the dock as per MFR's directions. Provide and install Blue Giant Laminated Dock Bumper 12"W x 4.5"D x 10"H- (3) qty required at each project. Mount per MFR.

PLUMBING CHANGES AND/OR CLARIFICATIONS

90. If not called out on the plans provide cold water hose bibs in wall mounted lockable cabinets at all group restrooms of any size and also large mechanical rooms that are over 60 sf in size. See the plumbing drawings large group restrooms for the type of cabinet specified. Cabinets shall have a removable key

HVAC CHANGES OR CLARIFICATIONS

91. Both projects- The vents located in the CMU veneer shall be a minimum of 8 inch diameter with a weather hood and spring damper. Similar to a speedi-products model sm-rwvd-8 with spring damper.
92. The Test and Balance contractor shall be a sub-consultant to the General Contractor and NOT to the Mechanical Contractor

ELECTRICAL CHANGES AND/OR CLARIFICATIONS

93. The General Contractor shall be responsible for setting temporary power poles and temporary power for the projects.
94. Craighead Electric shall bring 3 phase permanent power to the Lynn project location before the projects are substantially complete. Existing power pole re-location shall be required at both the Strawberry and the Lynn location. Allowances are provided in the bid to pay for these power company costs. Any additional expense above the allowance, if any, shall be paid for by the Owner.
95. Transformer pads shall be provided and installed by the Contractor to meet the power company's specifications.
96. Duplex receptacles within 6' of plumbing fixtures shall all be ground fault protected. All electrical conduits provided and installed for this project shall be 3/4" minimum trade size.
97. The main fire alarm system control panel shall be located in the administration area in room #119, Clerical, on the wall of the owner's choosing. (Lynn campus building.
98. All electrical conduits provided and installed for this project shall be 3/4" minimum trade size.
99. No site electrical or lighting is provided or is required for either project at this time. Disregard any reference to lighting "bollards".
100. ELECTRIC SERVICE ENTRY -Due to the fact that the final building transformer location is not known at this time, the contractor shall allow the following distances for trenching and conduit from the building to the transformer. If actual distances are different from that shown below an adjustment in the contract price shall be made based on the length difference. THE PROJECT AT STRAWBERRY-provide trenching and UG

POWER conduit a distance of fifty feet (50'). THE PROJECT AT LYNN- - provide trenching and UG POWER conduit a distance of one hundred feet (100').

LOW VOLTAGE ELECTRICAL.

101. All data drops are to be 1-1/4" conduit
102. The fire alarm is specified on the plans as FCI-7100—series control panel with voice evac. This control panel has been replaced by FCI -7075 series.
103. The data conduits shall not be required to run all the way to the cable tray? In most cases the cable tray shall be hung over the classroom making it easy to stub conduits to above ceiling and cable can then extend to the tray without conduit.
104. TELEPHONE AND DATA SERVICE ENTRY-The point of service for the telephone and data is also not known at this time, the plans call for the contactor to run two 2" conduits to the point of service. The contractor shall allow the following distances for trenching and conduit from the building to the point of service. If actual distances are different from that shown below an adjustment in the contract price shall be made based on the length difference. THE PROJECT AT STRAWBERRY -provide trenching and UG DATA conduit a distance of fifty feet (50'). THE PROJECT AT LYNN- provide trenching and UG DATA conduit a distance of one hundred feet (100').
105. The main fire alarm system control panel shall be located in the administration area in room #119, Clerical, on the wall of the owner's choosing. (Lynn campus building)
106. The owner will contract separately for the CCTV, intercom, and access control systems.

(End of addendum)

mar-flex WATERPROOFING & BUILDING PRODUCTS

COMMERCIAL PRODUCT

For Heavy Duty Horizontal and Vertical Drainage Applications

ArmorDrain 150 Protection/Drainage Mat

Description

ArmorDrain 150 is a moderate duty impermeable polymeric sheet that while under heat and pressure is formed into a dimpled drainage core. The core is then bonded to a single layer of non-woven filter fabric. The filter fabric retains soil and sand particles as well as freshly placed concrete or grout, allowing water to pass into the drainage core.

Purpose

ArmorDrain 150 is used as a protection and drainage roll and is engineered to provide ample strength to protect membranes against back fill soil and sediment and to provide excellent drainage capabilities.

Advantages

- Higher compressive strength for greater depth
- Strong resistance to hydrostatic pressure
- High flow dimpled drainage core
- Protects waterproofing membrane
- Easy installation

Leeds Data

ArmorDrain 150 Core is considered a GREEN product and can be used toward LEEDS building credits.

Prep/Application (With Membrane)

Application of waterproofing membrane should be completed. Starting at a corner, install the ArmorDrain horizontally against the waterproofing membrane with the non-woven filter fabric side facing out-wards.

Extend the roll from the top of the footer to finished grade. When two edges come together from two separate rolls, overlap the dimples to create a continuous coverage of the wall.

For good adherence, **with** a membrane, apply uniform pressure throughout the surface area, not just the edges and corners. If needed, secure rolls to the wall using powder actuated mechanical fasteners.

For good adherence, **without** a membrane, mechanical fasteners or a suitable adhesive will be required to secure rolls to the wall. When using mechanical fasteners install top fasteners within the top 4" (102 mm).
If the roll overlaps the membrane once you have reached the grade line, a utility knife or similar tool can be used to cut the rolls to the correct height.

Backfilling/Drainage

Residential - Backfilling should begin no sooner than 24 hours after the installation of the board, but must be backfilled within 30 days.

Technical Data

Product Name	ArmorDrain 150	Method
Color	Black	
Material	Drainage core: co-polymer polypropylene Geotextile:Polypropylene	
CORE		
Dimple Height	.40" (10.16mm)	ASTM D1777-96
Compressive Strength	15,000 psf (718 kN/m²)	ASTM D6364-06
Geocomposite water flow rate@hydr. Grad 0.1	21 g/min/ft-260L/min/M	ASTM D4716
Drainage Core impact resistance	2.9 J mean failure energy at 5° C	ASTM D4226-09
Drainage core maximum tearing strength	MD 550N CD 800N	ASTM D5884-04a
Drainage core stress cracking resistance	504 hrs @ 156 kPa (No cracking at test termination)	SAGEOS GD 001-2012
Fabric		
Geotextile water flow rate	140 gal/min/ft² (5704 L/min/m²)	ASTM D4491
Geotextile grab tensile strength	100 lbs (.45kN)	ASTM D4632
Geotextile elongation	60%	ASTM D4632
Geotextile trapezoidal tear	45 lbs. (200N)	ASTM D4533
Geotextile puncture strength	250 lbs (1.1113 kN)	ASTM D6241
Geotextile mullen burst	210 psi (1446 kPa)	ASTM D3786
Geotextile apparent opening size (AOS)	70 US Sieve (.212mm)	ASTM D4751
Geotextile weight(typical)	4.0 oz-yd² (135 g/m²)	ASTM D5261
Geotextile UV resistance	70% strength retained	ASTM D4355
Toxicity	Non-toxic, non-polluting	
Roll size/weight	*4' x 50' (1.2 x 15.25m) 39 lbs. (15.87kg) *6' or 8' widths available as special order	
Service life expectancy	>25 years (at pH between 4 and 9, and temperature below 77°F / 25°C) **Do not expose to UV light for more than 30 days.**	

www.Mar-flex.com 1-800-498-1411

6” Geo Drain Tile and 12” Geo Drain Tile

High Flow Three Dimensional Drainage Core

PRODUCT DESCRIPTION
6” Geo Drain Tile and 12" Geo Drain Tile are three dimensional, high-flow, drainage cores that are wrapped with a non-woven filter fabric.

PURPOSE:
The Geo Drain Tile 6” and 12” are designed to collect water from around the foundation and/or retaining wall. It is then connected to a 4” corrugated pipe with connectors in order to dispense the water away from the foundation and/or retaining wall.

The Geo Drain Tile 6” and 12” can be used in place of a conventional 4” gravel or sand covered corrugated pipe when placed at the base of the foundation and/or retaining wall. However, Mar-flex recommends gravel backfill in high silt/clay or sandy areas

ADVANTAGES:
- Lightweight and easy to install
- Cost effective
- Code approvals
- Saves time and labor
- Can be installed in any type of soil

SPECIFICATION:
- Color – Black with black filter fabric
- Thickness –ASTM D-1777 – 1"
- Compression Resistance – ASTM D-1621 –9,500 psf
- Drainage Capacity - ASTM D-4716 –170 gpm/ft.width

PACKAGING:
6' or 12” x 165' Roll

COVERAGE:
165/lin.ft./roll

ACCESSORIES:
Multiple connectors are available to allow for a smooth transition from one section of the DrainAway to another as well as to 4" corrugated pipe to remove the collected water away from the footer to either a sump pump or to daylight.

Following are the connectors that are available.

END OUT CONNECTOR
Used to make the connection from the Geo Drain Tile to 4" corrugated pipe.

SIDE OUT CONNECTOR
Used to make the connection from the Geo Drain Tile to 4" corrugated pipe.

SPLICE CONNECTOR
Used to connect two sections of the Geo Drain Tile either vertically or horizontally.

END CAP
Used to cover the cut end of the Geo Drain Tile.

STEP-DOWN CONNECTOR
Used to connect two sections of the Geo Drain Tile on a vertical stepped foundation.

CORNER CONNECTOR
Used to connect two sections of the Geo Drain Tile on either an inside or outside corner.

PREP/APPLICATION:
Unroll the Geo Drain Tile with the flat side against the wall. Place the roll vertically against the foundation wall on top or at the base of the footer.

Determine the locations for the fittings that may be need to be installed. Then add extra length to allow for insertion into fittings. Cut roll to needed length.
The fittings and the Geo Drain Tile can be adhered to the side of the footer with 362 Mastic, a panel adhesive or insulation board adhesive. If needed, a mechanical fastener can be used. Note: Place a fastener through a dimple to prevent disruption of the water flow.

Connect fittings to a 4" corrugated pipe and run them out to a sump pump or to daylight if present. If not present, leave ready for connection. NOTE: Special care should be taken to properly compact the soil under the drainpipe to prevent settling of drainpipe.

Generally every 50’-75’ run, add a side out to a collection point using the 6” tile on a 8’ or smaller height wall. If larger than 8’, the 12” is recommended.

If required by code, install gravel.

CLEAN UP:
Disposal methods must be in compliance with all federal, state and local laws and regulations.

PRODUCT HANDLING/STORAGE:
- Do not smoke while handling
- When installing wear respirator
- No special storage requirements
- Wash thoroughly with soap and water after handling

WARNING/DANGERS:
- Keep away from sparks, open flames, or any heat source
- Dust might create mechanical irritation

Product Only Warranty:
We warrant the product to be of good quality and manufactured to meet published physical properties and quality control standards.

Except as specifically provided herein, Mar-flex makes no warranty, express, implied or oral including but not limited to any warranty or merchantability, fitness for a particular purpose, usage of trade, course of dealing or course of performance in connection with this agreement. In no event shall Mar-flex be liable on any such warranty with respect to the product. Mar-flex shall not be liable for incidental or consequential damages including, but not limited to damages of the structure, its replacement, contents or personal injury. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

HEALTH AND SAFETY INFORMATION IS GIVEN IN THE MATERIAL SAFETY DATA SHEET AVAILABLE FOR THIS PRODUCT. THE MATERIAL SAFETY DATA SHEET SHOULD BE READ AND UNDERSTOOD BEFORE USING THIS PRODUCT.

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Rev. 4-18sm

PART 1 GENERAL

1.01

A Concrete Floor Polishing System Including:

1. Surface preparation
2. Densifying agent
3. Polished concrete floor finish for interior use
4. Polishing System
5. Stain Protection
6. Joint Filler

1.02 RELATED SECTIONS

A Section 03 3000 - Cast-In-Place Concrete.

1.03 REFERENCES

A. ASTM 4039 Standard Test Method of reflection Haze of High-Gloss Surfaces

B. ASTM 05767 Standard Test Method for Instrumental Measurement of Distinctness of Image Gloss of Coating Surfaces

C. ACI 310 Guide to Decorative Concrete

0. ASTM 02047 Standard Test for Static Coefficient of Friction of Polish-Coated Floor Surfaces as
Measured by the James Machine

E. ANSI 8101.1 Floor Safety Standard

F. ANSI 8101. 3 Test Method for Measuring Wed DCOF of Common Hard-Surface Floor Materials

G. ASTM 0523 Standard Test Method for Specular Gloss

1.04 SUBMITTAL$

A See Section 01 3323 - Submittals, for submittal

procedures. B. Product Data:

1. For each type of product and system indicated.

a. Submit manufacturer's polishing system specifications.

b. Submit products to be provided, giving manufacturer's name and product name for the specified materials proposed to be provided under this Section.

c. Submit Manufacturer's recommended installation procedures; which when approved by the Architect, will become the basis for accepting or rejecting actual installation procedures used on the work.

d. Submit technical data sheet giving descriptive data, curing time, and application requirements.

e. Submit recommended maintenance and repair instructions for the installed floor system. C. Installer Qualification Data:

1. Submit Installer qualifications, references, and certifications as indicated.

1.05 QUALITY ASSURANCE

A Regulatory Requirements

1. Accessibility Requirements: Comply with applicable requirements of the Americans with Disabilities Act Accessibility Guidelines (ADMGs) for Building Facilities,; Final Guidelin.es, revisions, and updates for static coefficient of friction for walkway surfaces.

2. Environmental Requirements: Comply with current Federal and local toxicity and air quality regulations and with Federal requirements on content of lead, mercury, and other heavy metals/ Do not use solvents in floor polish products that contributes to air pollution or impact food quality.

B. Manufacture Qualifications:

1. A firm with a minimum of 5 years experience in manufacturing concrete floor polishing product systems.

2. Firm shall have completed work similar in material, design, and extent to that indicated for the Project with a record of successful in-service performance.

C. Installer Qualifications:

1. A firm that is regularly engaged in the installation of polished concrete floor system with a minimum of 3 years experience with proposed system. Furnish documentation of successful completion of a minimum of five projects with proposed system on projects of similar magnitude and complexity. The installer shall have been certified In writing by the special concrete floor finish manufacturer within 12 months prior to start of this project, certifying that the installer is:

a. Current on the latest application means and methods of special concrete floor finish. b. Eligible to receive manufacturer's special warranty.

2. The special concrete finish manufacturer shall certify, in writing, that the installer selected for this project is qualified for the scope of this project and has qualified personnel to perform the work.

D. Source Limitations:

1. Obtain each type of material for Special Concrete Floor Finish System from one source approved by Special Concrete Floor Finish System manufacturer with resources to provide materials of consistent quality in appearance and physical properties.

E. Mock-up:

1. Provide benchmark sample of Special Concrete Floor Finish System to verify finish indicated and to demonstrate aesthetic effects and set quality standards for materials and execution, i.e., typical joints, surface finish, color variation (if any), and standard of workmanship.

a. Provide mock-up of approximately 250 square feet at location directed by the Architect.

b. Notify Architect and special concrete floor finish manufacturer seven days in advance of date and time when mock-up will be constructed.

c. Measure the slip resistance of mock-up and obtain approval of the Architect and Owner before starting application of special concrete floor finish. Mockup finish shall be finished to Level 3.

d. Measure the finish level of mock-up and obtain approval of the Architect and Owner before starting application of special concrete floor finish. If the mock-up

does not meet requirements and/or is not approved by the Architect and Owner, re-polish floor sample until mock-up is approved.

e. Maintain mock-up during construction in an undisturbed condition as a standard for judging the completed work.

f. Approved mock-up may become part of the completed work if undisturbed at time of substantial completion.

g. Apply benchmark sample after permanent lighting and other environmental services have been activated.

E. Pre-Pour and Pre-installation Conferences:

1. The installer shall participate telephonically before the placement of the concrete slab related to this Section with the General Contractor, and technical inspector to review requirements necessary for a successful polished floor surface.

2. The installer shall conduct a conference at the Project site to comply with requirements.

a. Include Architect, Contractor, Installer, Concrete Subcontractor, and Special Concrete Floor Finish System Manufacturer's representative to establish guidelines and expectations for finished concrete work including floor flatness, levelness, and finished appearance of troweled floor slab.

b. Unacceptable finishes include blisters, ghosting, cracking, crazing, curling, delamination, surface discoloration, dusting, efflorescence, popouts, scaling, and spalling.

c. Review methods and procedures related to the Special Concrete Floor Finish System including, but not limited to, the following protection precautions.

1.) No satisfactory chemical or cleaning procedure is available to remove petroleum stains from the concrete floor surface. Prevention is therefore essential.

2.) Diaper hydraulic powered equipment to avoid staining concrete.

3.) Do not park vehicles on concrete floor slab. Place drop cloths under vehicles if it is necessary to park vehicles on concrete slab to complete work.

4.) Do not use pip cutting machines on the concrete floor slab.

5.) To avoid rust staining do not place steel on concrete floor slab.

6.) Do not allow acids and acidic detergents to come into contact with concrete floor slab.

7.) Inform all trades that the concrete floor slab must be protected at all times.

8.) Equip lifts with non-marking tires.

9.) Do not use poly sheeting PVC or plastic protection sheets as cover or protection of finished floor.

1.06 DELIVERY, STORAGE, AND HANDLING

A Deliver materials in original containers, with seals, unbroken, bearing manufacturer labels indicating brand name and directions for storage. Dispense special concrete finish materials from factory numbered and sealed containers. Maintain record of container numbers.

1.07 PROJECT CONDITIONS

A General:

1. Close spaces to traffic during Special Concrete Floor Finish System application.

B. Environmental Limitations:

1. Comply with Special Concrete Floor Finish System manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting Special Concrete Floor Finish System application.

C. Grinding Operations:

1. Planetary rotating 3 head and 4 head variable speed floor grinder. Minimum size of grinding head shall be 32 inches in diameter. Tilt-back machines shall be used for grinding and polishing operations.

2. Dust extraction system for above grinders incorporating HEPA filters.

3. Protect adjacent construction from detrimental effects of grinding operations.

4. Hand or edge grinders with dust extraction or dust suppression attachment

5. Grinding heads must include both metal bonded diamonds and resin bonded diamonds using a flexible head system.

6. High speed burnisher with a minimum 2500 RPM and minimum 20 Inch diameter head.

7. Diamond impregnated burnishing pads

8. Provide dustproof partitions and temporary enclosures to limit dust migration and to isolate areas from noise.

9. All grinding diamonds used shall be approved by concrete polishing system manufacturer.

1.08 WARRANTY

A Special Warranty

1. Manufacturer's standard from in which manufacturer agree to repair or replace Special Concrete Floor Finish System that fails in materials or workmanship within specified warranty period.

a. Special warranty includes penetrating liquid concrete floor densifying agent, joint filler, finish, and other components of Special Concrete Floor Finish System.

b. Warranty Period: 10 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design Products: To establish the significant quantities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other manufacturers, a specific manufacturer's products and system are named and accompanied by the words "basis of design," including make or model number or other designation. Subject to compliance with requirements, provide either the named products or equal products.

2.02 SPECIAL CONCRETE FLOOR FINISH SYSTEM

A. Concrete Polishing System:

1. Patented process of metal bond diamond grinding and polishing in graduated grits from coarse to fine.

2. Basis of design systems:

a. Advanced Floor Products, Inc.; Retro-Plate Concrete Polishing System;

www.retroplatesystem.com. b.

Aggregate Exposure:

1.) Class B: Mottled salt and pepper aggregate exposure. Approximate Surface Cut Depth 1/16 inch. c. Finish

Definition:

1.) Level 3: Semi-Polished

(a.) Reflective Sheen with a Gloss Meter Reading of 50 or better.(b.) Reflective Clarity with a DOI of 40 or better.

d. Level of Finish shall be measured for verification and approved by the Architect prior to the application of stain protection.

3. The basis of Design Special Concrete Floor Finish System manufacturer shall comply to the following performance criteria:

a. General:

1.) Coefficient of Friction: All levels of finish exceed OSHA and ADA Recommendations per ASTM C 1028.

B. Penetrating Liquid Floor Densifying Agent:

1. Clear, chemically reactive, waterborne solution of inorganic materials, catalyzed sodium silicate, and proprietary compounds; odorless and colorless; that penetrates, hardens and densities concrete surfaces. Do not use siliconates, meta silicate, siloxane or inorganic siloxane, magnesium flourosilicates.

a. Basis of Design Products:

1.) Advanced Floor Products, Inc.; Retro-Plate 99; www.retroplatesystem.com.

2.03 STAIN REPELLENT

A. Penetrating Stain Repellent:

1. Non-film forming, water-based penetrating stain repellent specifically formulated for the protection of polished concrete form oil and water-based stains.

2. Basis of Design Products:

1.) Advanced Floor Products, Inc.; RetroGuard; www.retroplatesystem.com.

2.04 JOINT FILLER

A. Semi-Rigid Polyurea Joint Filler:

Rapid setting, 100 percent solids, flexible two part polyurea joint filler with a Type A Shore durometer hardness of at least 65 per ASTM D 2240 when cured. Designed to fill and protect joints in industrial floors that are subject to traffic such as trucks, forklifts or steel wheeled carts.

2. Basis of Design Product: Advanced Floor Products, Inc.; Crete-Fill Pro 65; www.retroplatesystem.com.

3. Performance criteria:

a. Tensile Strength: 740 psi minimum per ASTM D 412-98

b. Sets rapidly and consistently in application temperatures rangin from minus 20 deg F to 130 deg F.

c. Elongation: 420 percent minimum.

d. Hardness: 65 (shore A) per ASTM D 2240-02.

PART 3 EXECUTION

3.01 GENERAL

A. Comply with manufacturer's written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting performance.

B. Verify concrete floor slab has cured a minimum of 45 days or as directed by the manufacturer before beginning application of system.

C. Apply Special Concrete Floor Finish System at least 10 days prior to installation of equipment, provide a complete, uninhibited concrete slab for application.

D. Close areas to traffic during floor application and for amount of time recommended by manufacturer after application.

3.02 SURFACE CONDITIONS

A. Examine substrate, with special floor finish installer present, for conditions affecting performance of finish. Correct conditions detrimental to timely and proper work. Do not proceed unless unsatisfactory conditions are corrected.

1. Verify flatness and levelness of concrete slabs meet or exceed Specified Overall Values and levels recommended by manufacturer. Do not proceed until unsatisfactory conditions are corrected.

B. Verify that concrete floor slab meet finish and surface profile requirements in Section 03 3000 – Cast-In-Place Concrete.

C. Prior to application, verify that floor surfaces are free of construction laitance.

3.03 APPLICATION GENERAL

A. General:

1. Start floor finish applications in presence of manufacturer's representative.

2. Densifying and polishing of concrete surface.

a. Only a certified applicator shall apply the penetrating liquid densifying agent. Applicable procedures shall be followed as recommended by the product.

b. Achieve waterproofing, hardening, dust-proofing, and abrasion resistance of the surface without changing the natural appearance of the concrete, except for the sheen.

c. Polish to required sheen level

d. Measure and verify Finish Level and obtain approval from Architect prior to application of stain protection.

3.04 POLISHING SYSTEM

A. Repair and fill all cracks.

B. Thoroughly clean the floor surface as required by manufacturer's instructions.

C. Start the process with the appropriate metal diamond grinding head (for example: 40, 80, 120 grit) depending on condition of concrete floor slab. Continue with additional grinding steps as necessary to achieve a consistent and uniform salt and pepper concrete slab appearance (showing sand aggregate only) and void of random scratches. All metal bond grinding shall be performed wet.

D. Install penetrating densifier at a rate of 200 square feet per gallon, scrubbing product into floor and allowing product to soak until turning slick, leaving the product

on floor for a minimum of 60 minutes. Remove excess material using water to neutralize product and dispose of IAW environmental regulations.

E. Begin the polishing process with a 100 grit resin bonded diamond grinding head followed in succession with a 200, 400, 800, and finally a 1500 grit resin bonded diamond grinding head as necessary, to achieve specified sheen.

F. Progressive edge grinding will be necessary within *W'* of all vertical abutments, including walls, columns, posts, etc.

G. Use hand grinders and burnishers along edges and other areas of floor slab, exposed to view, that are not reachable using a planetary floor grinder.

3.05 STAIN PROTECTION

A Preparation:

1. Complete all densification, grinding, and polishing before application of stain repellent.

2. Clean substrate of substances that might interfere with penetration or performance of stain repellent. Check surface for water, according to stain repellent manufacturer's written instructions, to ensure that surface is totally dry.

3. Install per manufacturer requirements:

a. Remove oil, laitance, and other substances that could prevent adhesion or penetration of stain repellent.

4. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Application:

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect the substrate before application of stain repellent and to instruct applicator on the product and application method to be used. Comply with manufacturer's written application instructions.

a. Apply two light "film" coats with application devices recommended by manufacturer's field representative. Apply second coating, repeating first application. Burnish floor between applications. Comply with manufacturer's written instructions for limitations on drying time between coats.

3.06 JOINT FILLING

A General:

1. Prepare, clean, and install joint filler according to manufactures written instructions and the following requirements.

a. Defer joint filling until after concrete floor polishing and application of stain protection are completed. Do not fill joints until construction traffic has permanently ceased in areas receiving joint filler.

b. Remove all foreign material from joint substrates that could interfere with adhesion of joint filler, including dust, paints (except for permanent, protective coatings tested and approved for filler adhesion and compatibility by joint filler manufacturer), old joint sealants and fillers, grease, dirt, debris, and saw cuttings; leave contact faces of joint clean and dry.

c. Clean out joints with a diamond impregnated saw blade equipped with a dustless vacuum system to ensure sides of joint walls are clean so that joint filler can bond with them.

2. Install joint filler full depth in saw-cut joints and at least 2 inches deep in formed joints.

Overfill joint and trim joint filler flush with floor surface after hardening.

3.07 CLEANING

A General:

1. Keep premises clean and free of debris at all times.
2. Remove spatter from adjoining surfaces that are to remain exposed.
3. Repair damages to surface caused by cleaning operations.
4. Remove debris from job site.

3.08 PROTECTION

A. Protect finished work until project is turned over to the Owner.

SECTION 12213
HORIZONTAL LOUVER BLINDS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Horizontal slat louver blinds.
2. Operating hardware.

B. Related Sections:
1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 SUBMITTALS

A. Submittals for Review:
1. Product Data: Describe blind construction and finishes.
2. Samples: [3] [__] inch long slat samples showing available colors.

1.3 PROJECT CONDITIONS

A. Do not install blinds until painting and finishing work is complete.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
1. Hunter Douglas, Inc. (www.hunterdouglas.com)
2. Levolor Contract. (www.levolor.com)
3. Springs Window Fashions Division, Inc. (www.springs.com)
4. [_____].
5. [_____].
6. [_____].

B. Substitutions: Under provisions of Division 01.

2.2 COMPONENTS

A. Louver Slats: 1 inch inches wide, prefinished spring tempered aluminum, horizontal slats with radiused corners.

B. Slat Support: Woven polypropylene ladders.

C. Head Rail: Prefinished, formed aluminum or steel box, internally fitted for hardware, pulleys, and bearings for blind operation.

D. Cord: Braided nylon or polypropylene.

E. Control Wand: Hollow extruded plastic, height of window opening less [12] [__] inches.

F. Support Brackets: Suitable for wall or soffit mounting, formed metal to match head rail, allowing removal of head rail for maintenance without removing bracket.

G. Operation:Full range lift locking.

2.3 FABRICATION

A. Fabricate blinds to fit openings with uniform edge clearance of 1/4 inch.

B. At openings requiring multiple blind units, provide separate blind assemblies with space of 1/4 inch between assemblies, occurring at window mullion centers.

2.4 FINISHES

A. Slats: Static-reducing, Baked enamel, color to be selected from manufacturer's full color range.

B. Head Rails and Brackets: Static-reducing, Baked enamel, color to be selected from manufacturer's full color range.

C. Ladders and cords: Dyed to closely match slats.

D. Control Wands: Clear.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install blinds in accordance with manufacturer's instructions.

B. Secure with concealed fasteners.

C. Place intermediate head supports at maximum 48 inches on center.

D. Installation Tolerances:
1. Maximum gap at window opening perimeter: 1/4 inch.
2. Maximum offset from level: 1/8 inch.

3.2 ADJUSTING

A. Adjust blinds for proper operation.

END OF SECTION