

00		<u>SECTION 09 30 00</u>	00
01		TILING	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division 01-Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Ceramic tile work as shown on the drawings and in schedules for:		14
15			15
16	Wall tile		16
17			17
18	<u>Related Sections:</u>		18
19			19
20	Removal of existing tile: Section 02 41 19		20
21	Joint sealants: Section 07 92 00		21
22	Cementitious tile backer units: Section 09 29 00		22
23			23
24	1.2 <u>SUBMITTALS:</u>		24
25			25
26	<u>Product Data:</u>		26
27			27
28	Submit manufacturer's technical information and installation instructions for materials required.		28
29	Include manufacturer, supplier, size, style, texture and color.		29
30			30
31	<u>Samples:</u>		31
32			32
33	For initial selection of colors submit manufacturer's actual tile samples, showing full range of colors,		33
34	textures and patterns. Include samples of grout and accessories requiring color selection.		34
35			35
36	Submit verification samples of each type and color of tile required, not less than 12" square on		36
37	plywood, or hardboard backing, and grouted for final verification.		37
38			38
39	Submit samples of trim and other units if requested by Architect.		39
40			40
41	1.3 <u>QUALITY ASSURANCE:</u>		41
42			42
43	<u>Single-Source Responsibility:</u>		43
44			44
45	Tile: Obtain each color, grade, finish, type, composition, and variety of tile from a single source with		45
46	resources to provide products of consistent quality without delaying progress of the Work.		46
47			47
48	Setting and Grouting Materials: Obtain ingredients of uniform quality from one manufacturer for each		48
49	cementitious and admixture component.		49
50			50
51	<u>Installer Qualifications:</u>		51
52			52
53	Engage an experienced Installer who has successfully completed tile installations similar in material,		53
54	design, and extent to that indicated for Project.		54
55			55

00	<u>Preinstallation Conference:</u>	00
01		01
02	Conduct conference at Project site to comply with requirements of Section 01 31 19 "Project	02
03	Meetings" to discuss inspection of substrate, materials to be used, acceptable tolerances, conditions	03
04	detrimental to the successful completion of the work and similar items.	04
05		05
06	<u>Standards:</u>	06
07		07
08	Furnish tile conforming with Standard Grade requirements of ANSI A137.1.	08
09		09
10	Conform to Tile Council of North America "Handbook for Ceramic Tile Installation" and ANSI A108,	10
11	A118 and A136 as applicable.	11
12		12
13	<u>Proprietary Materials:</u>	13
14		14
15	Handle, store, mix and apply proprietary setting, grouting and waterproofing materials in compliance	15
16	with manufacturer's instructions.	16
17		17
18	1.4 <u>DELIVERY, STORAGE AND HANDLING:</u>	18
19		19
20	Deliver packaged materials and store in original containers with seals unbroken and labels intact until	20
21	time of use, in accordance with manufacturer's instructions. Comply with ANS1 A137.1 for labeling	21
22	sealed packages.	22
23		23
24	Prevent damage or contamination to materials by water, freezing, or foreign matter.	24
25		25
26	1.5 <u>PROJECT/SITE CONDITIONS:</u>	26
27		27
28	Maintain environmental conditions and protect work during and after installation to comply with	28
29	referenced standards and manufacturer's printed recommendations.	29
30		30
31	Vent temporary heaters to exterior to prevent damage to tile work from carbon dioxide buildup.	31
32		32
33	Maintain substrate and ambient temperature of not less than 50° F. during installation of tile and for	33
34	at least 7 days thereafter. Maintain higher temperatures for proprietary mortars and grouts where	34
35	recommended by manufacturer or required by referenced standards.	35
36		36
37	1.6 <u>EXTRA MATERIALS:</u>	37
38		38
39	Furnish extra materials that match products installed, packaged with protective covering for storage,	39
40	and identified with labels clearly describing contents. Deliver to the Owner.	40
41		41
42	Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each	42
43	type, composition, color, pattern, and size, but not less than 3 square feet of wall tile.	43
44		44
45	<u>PART 2 - PRODUCTS</u>	45
46		46
47	2.0 <u>MANUFACTURERS:</u>	47
48		48
49	Subject to compliance with requirements, provide products by one of the following:	49
50		50
51	<u>Porcelain Tile:</u>	51
52		52
53	As specified.	53
54	Approved equal.	54
55		55

00	<u>Acrylic Emulsions for Latex-Portland Cement Grouts:</u>	00
01		01
02	American Olean Tile Co., Inc.	02
03	Boiard Products Corp.	03
04	Bostik Construction Products Div.	04
05	Custom Building Products	05
06	C-Cure Chemical Co.	06
07	DAP Inc. Div.; USG Corp.	07
08	L & M Mfg. Inc.	08
09	Laticrete International Inc.	09
10	Mapei Corp.	10
11	Southern Grouts & Mortars, Inc.	11
12	Summitville Tiles, Inc.	12
13	Syracuse Adhesives Co.	13
14		14
15	2.1 <u>GENERAL:</u>	15
16		16
17	<u>Colors, Textures, and Patterns:</u>	17
18		18
19	Provide manufacturer's standard products are indicated for tile, grout, and other products requiring	19
20	selection of colors, surface textures, patterns, and other appearance characteristics, provide	20
21	selections as made by Architect from manufacturer's full range of standard colors, textures, and	21
22	patterns for products of type indicated.	22
23		23
24	Provide tile trim and accessories that match color and finish of adjoining flat tile unless otherwise	24
25	indicated.	25
26		26
27	<u>Factory Blending:</u>	27
28		28
29	For tile exhibiting color variations within the ranges selected, blend tile in factory and package	29
30	accordingly so that tile units taken from one package show the same range in colors as those taken	30
31	from other packages.	31
32		32
33	2.2 <u>TILE:</u>	33
34		34
35	<u>Porcelain Wall Tile:</u>	35
36		36
37	Vitrified porcelain stoneware, square edge tile, approximately 5/16" thick, Thread Series, Glazed	37
38	finish, as manufactured by Emser Tile or approved equal.	38
39		39
40	Size: 12" x 24".	40
41		41
42	Water Absorption: Not more than 0.5% water absorption per ASTM C373.	42
43		43
44	Color: Ivory.	44
45		45
46	<u>Trim Shapes:</u>	46
47		47
48	As required for complete installation, of same material, size, color and finish of field tile. Provide	48
49	shapes from manufacturer's standards as follows:	49
50		50
51	Wainscot Cap: Surface bullnose, 6" x 12", color to match field wall tile.	51
52	In-corners: Field-butted square corners with coved base and cap angle pieces to member with	52
53	stretcher shape.	53
54	Out-corners: Surface bullnose with single piece external corners.	54
55		55

00	Jambs and Where Abutting Dissimilar Material: Surface bullnose where tile projects from	00
01	jamb.	01
02		02
03	2.3 <u>SETTING MATERIALS:</u>	03
04		04
05	<u>Latex-Portland Cement Mortar:</u>	05
06		06
07	Latex-modified, acrylic based portland cement thinset mortar complying with ANSI A118.4,	07
08	formulated specifically for use with large format tile with high flexibility and bond strength and which	08
09	will not sag or slip on vertical wall applications.	09
10		10
11	Provide VersaBond-LFT by Custom Building Products or approved equal by listed	11
12	manufacturer.	12
13		13
14	VOC Content: Not more than 7 percent VOCs by weight in accordance with Section 01 81 16.	14
15		15
16	2.4 <u>GROUTS:</u>	16
17		17
18	<u>Latex-Portland Cement Grout:</u>	18
19		19
20	Proprietary compound composed of portland cement with latex acrylic based additive, ANSI A118.6.	20
21		21
22	VOC Content: Not greater than 65 grams per liter.	22
23		23
24	Color: No. 01 Alabaster by Mapei Corporation USA.	24
25		25
26	Provide Ultracolor Plus FA as manufactured by Mapei Corporation USA or approved equal.	26
27		27
28	Furnish latex additive (water emulsion) serving as replacement for part or all of gauging water added	28
29	at job site with dry grout mixture. Furnish Acrylic resin latex and dry grout mix.	29
30		30
31	2.5 <u>ELASTOMERIC SEALANTS:</u>	31
32		32
33	Provide sealants as specified in Section 07 92 00, including VOC content and other environmental	33
34	requirements.	34
35		35
36	VOC Content: Not more than 4 percent VOCs by weight in accordance with Section 01 81 16.	36
37		37
38	2.6 <u>ACCESSORIES:</u>	38
39		39
40	Metal Edge Strips: Extruded aluminum with clear anodized finish, tapered design to transition from	40
41	wall tile to thinner sheet vinyl cove base with integral provision for anchorage to substrate.	41
42		42
43	Minimum Recycled Content: 60% by weight.	43
44		44
45	Provide RENO-U by Schluter or approved equal in height suited to wall tile and adjacent sheet	45
46	vinyl cove base.	46
47		47
48	Tile Cleaner: Product specifically acceptable to manufacturer of tile and grout manufacturer for	48
49	application indicated and as recommended by National Tile Promotion Federation or Ceramic Tile	49
50	Institute.	50
51		51
52	See Section 01 81 16 for limitations on cleaning compounds which may be used including	52
53	VOC content, chemical content and other restrictions.	53
54		54
55		55

00	2.7	<u>MIXING MORTARS AND GROUT:</u>	00
01			01
02		Mix mortars and grouts to comply with requirements of referenced standards and manufacturers	02
03		including those for accurate proportioning of materials, water, or additive content, type of mixing	03
04		equipment, selection of mixer speeds, mixing containers, mixing time, and other procedures needed	04
05		to produce mortars and grouts of uniform quality with optimum performance characteristics.	05
06			06
07		<u>PART 3 - EXECUTION</u>	07
08			08
09	3.1	<u>EXAMINATION:</u>	09
10			10
11		Refer to Section 01 73 00 for examination of substrate and job conditions.	11
12			12
13		Verify that surfaces to receive thinset tile are correct, suitable, within specified tolerances, and free	13
14		from oil or waxy films and curing compounds.	14
15			15
16		Start of this work constitutes acceptance of substrates as suitable for satisfactory performance of	16
17		work of this Section.	17
18			18
19	3.2	<u>INSTALLATION:</u>	19
20			20
21		<u>General:</u>	21
22			22
23		Comply with applicable ANSI standard installation specifications series A108, A118 and A136.	23
24		Maintain minimum temperature limits and installation practices as recommended by proprietary	24
25		mortar and grout materials manufacturer.	25
26			26
27		Comply with TCNA installation methods indicated.	27
28			28
29		Neutralize and seal substrates in accordance with mortar or adhesive manufacturer's instructions.	29
30			30
31		Extend tile work into recesses and under equipment and fixtures, to form a complete covering without	31
32		interruptions, except as otherwise shown. Terminate work neatly at obstructions, edges and corners	32
33		without disruption of pattern or joint alignments.	33
34			34
35		Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible	35
36		surfaces. Carefully grind cut edges of tile abutting trim, finish or built-in items for straight aligned	36
37		joints. Fit tile closely to electrical outlets, piping, fixtures and other penetrations so that plates, collars,	37
38		or covers overlap tile.	38
39			39
40		<u>Jointing Pattern:</u>	40
41			41
42		Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on walls and trim are	42
43		the same size.	43
44			44
45		Lay out tile work and center tile fields both directions on each wall area. Adjust to minimize tile	45
46		cutting. Provide uniform joint widths, unless otherwise shown. Variations of joint widths or alignment	46
47		which are visually unacceptable to the Architect will require reinstallation or replacement of tile.	47
48			48
49		Provide joint width of 0.125".	49
50			50
51		Sound tile after setting and replace hollow sounding units.	51
52			52
53		Lay out tile wainscots to next full tile beyond dimensions indicated.	53
54			54
55		Grout tile to comply with ANSI A108.10, using grout materials indicated.	55

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3.3 PLACEMENT METHODS:

Interior Walls: (Cementitious Backer Units)

TCNA Method: W-244C.

Bond Coat: Thinset non-sag latex portland cement.

Grout: Colored latex portland cement.

3.4 ACCESSORIES:

Metal Edge Strips:

Provide where porcelain wall tile transitions to sheet vinyl cove base.

3.5 CLEANING AND PROTECTION:

Cleaning:

Upon completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

Remove latex portland cement grout residue from tile as soon as possible.

Finished Tile Work: Leave finished installation clean and free of cracked, chipped, broken, unbonded, or otherwise defective tile work.

Protection:

Protect installed tile work with kraft paper or other heavy covering during the construction period to prevent damage and wear.

Before final inspection, remove protective coverings from all tile surfaces.

END OF SECTION 09 30 00

00		SECTION 09 51 00	00
01		ACOUSTICAL CEILINGS	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division-01 Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Acoustical ceiling as shown on the drawings and in schedules for:		14
15			15
16	Acoustical panel ceilings, exposed suspension.		16
17	Acoustical tile ceilings, adhered to substrate.		17
18			18
19	<u>Related Sections:</u>		19
20			20
21	Sound attenuation batts: Section 09 29 00		21
22			22
23	1.2 <u>SUBMITTALS:</u>		23
24			24
25	<u>Product Data:</u>		25
26			26
27	Submit manufacturer's product specifications and installation instructions for each acoustical ceiling		27
28	material required, and for each suspension system, including certified laboratory test reports and		28
29	other data as required to show compliance with these specifications.		29
30			30
31	Include manufacturer's recommendations for cleaning and refinishing acoustical units,		31
32	including precautions against materials and methods which may be detrimental to finishes and		32
33	acoustical performance.		33
34			34
35	<u>Samples:</u>		35
36			36
37	Submit 12" square samples for each acoustical unit required. In each set of samples show the full		37
38	range of exposed color and texture to be expected in the completed work.		38
39			39
40	Submit 12" long samples of each exposed runner and molding.		40
41			41
42	Architect's review will be for color and texture only. Compliance with other requirements is the		42
43	exclusive responsibility of the Contractor.		43
44			44
45	<u>Certification:</u>		45
46			46
47	Submit Greenguard Gold certification for each required acoustical ceiling panel.		47
48			48
49	1.3 <u>QUALITY ASSURANCE:</u>		49
50			50
51	<u>Installer:</u>		51
52			52
53	Subcontract the installation of acoustical ceilings to an experienced installation firm which is		53
54	acceptable to the manufacturer of the acoustical units, as shown by current written statement from		54
55	the manufacturer.		55

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Standards:

Terminology and Performance: Applicable publications by the Ceilings and Interior Systems Contractors' Association (CISCA), including former Acoustical Materials Association Standards issued by CISCA.

Acoustical Materials: ASTM E1264 and CISCA publications.

Fire Hazard Classification: UL tested, listed and labeled as "Class 0-25", smoke developed of 50 or less, ASTM E84.

1.4 MAINTENANCE:

Maintenance Stock:

At time of completing the installation, deliver stock of maintenance materials to the Owner. Furnish full size units matching the units installed, packaged with protective covering for storage, and identified with appropriate labels.

Acoustical Units: Furnish an amount equal to 2.0% of the amount installed of each type, pattern, color, but not less than 10 units. Do not use for replacement of damaged units prior to building occupancy or substantial completion whichever occurs later.

Exposed Suspension System Members: Furnish quantity of each exposed component equal to 2% of amount installed.

1.5 PROJECT/SITE CONDITIONS:

Do not install interior acoustical ceilings until space has been enclosed and is weathertight, and until wet-work in the space has been completed and is nominally dry, and until work above ceilings has been completed, and until ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

Mineral Panels:

Armstrong World Industries, Inc.
CertainTeed Ceilings.
USG Interiors, Inc.

Suspension Systems:

Armstrong World Industries, Inc.
CertainTeed Ceilings.
Chicago Metallic Corporation.
USG Interiors, Inc.

00	2.2	<u>CEILING UNITS:</u>	00
01			01
02		<u>Adhered Acoustical Tile:</u>	02
03			03
04		Size: 12" x 12" x 0.625", mineral tile, Fine Fissured Tile No. 592 by Armstrong or approved equal by	04
05		listed manufacturer, white color.	05
06			06
07		NRC: Not less than 0.65.	07
08		CAC: Not less than 35.	08
09		Reflectance: Not less than 0.85.	09
10		Minimum Recycled Content: 72% by weight.	10
11			11
12		<u>Lay-In Acoustical Panels:</u>	12
13			13
14		24" x 48" x 0.75", mineral fiber lay-in boards with angled tegular edges, 15/16" scoring to achieve 24"	14
15		x 24" appearance and non-directional fissured pattern, Cortega Second Look II No. 2767 HRC by	15
16		Armstrong or approved equal by listed manufacturer, white color.	16
17			17
18		NRC: Not less than 0.55.	18
19		CAC: Not less than 35.	19
20		Reflectance: Not less than 0.81.	20
21		Minimum Recycled Content: 50% by weight.	21
22		Certifications: Greenguard Gold.	22
23			23
24	2.3	<u>CEILING SUSPENSION MATERIALS:</u>	24
25			25
26		<u>General:</u>	26
27			27
28		Comply with ASTM C635, as applicable to the type of suspension system required for the type of	28
29		ceiling units indicated. Coordinate with other work supported by or penetrating through the ceilings.	29
30			30
31		Structural Class: Intermediate Duty System.	31
32			32
33		<u>Finishes:</u>	33
34			34
35		Provide manufacturer's standard finish for type of system indicated, unless otherwise required. For	35
36		exposed suspension members and accessories with painted finish, provide white standard color.	36
37			37
38		<u>Attachment Devices:</u>	38
39			39
40		Hanger Wires: Galvanized carbon steel, ASTM A641, soft temper, prestretched, yield-stress load of	40
41		at least 3 times design load, but not less than 12 gage (0.106").	41
42			42
43		<u>System:</u>	43
44			44
45		Armstrong World Industries, Inc., as specified below, or approved equal by listed manufacturers.	45
46			46
47		Armstrong Prelude XL 15/16" Wide Suspension System with #7301 mains, #XL7348 (48")	47
48		cross-tees and No. 7800 0.875" hemmed edge angle molding or approved equal by listed	48
49		manufacturer.	49
50			50
51		Edge Moldings: Use for edges and penetrations of ceiling.	51
52			52
53			53
54			54
55			55

00	2.4	<u>MISCELLANEOUS MATERIALS:</u>	00
01			01
02		<u>Sound Attenuation Blankets:</u>	02
03			03
04		Provide sound attenuation blankets complying with the requirements of Section 09 29 00.	04
05			05
06		<u>Tile Adhesive:</u>	06
07			07
08		Comply with ASTM D1779, type recommended by tile manufacturer, bearing UL label for Class 0-25 flame spread.	08
09			09
10			10
11		VOC Content: Not more than 7 percent VOCs by weight in accordance with Section 01 81 16.	11
12			12
13		<u>Tile Joint Splines:</u>	13
14			14
15		Type recommended by tile manufacturer to coordinate with tile installation support system and installation procedure.	15
16			16
17			17
18		<u>Edge Trim Molding:</u>	18
19			19
20		Metal or extruded PVC plastic, of the types and profiles indicated, white finish to match tiles.	20
21			21
22		<u>PART 3 - EXECUTION</u>	22
23			23
24	3.1	<u>PREPARATION:</u>	24
25			25
26		<u>Coordination of Work:</u>	26
27			27
28		Coordinate layout and installation of acoustical ceiling units and suspension system components with other work supported by or penetrating through, ceilings, including light fixtures, HVAC equipment, fire-suppression system components, and partition system.	28
29			29
30			30
31			31
32		<u>Concrete Anchors:</u>	32
33			33
34		Refer to Section 01 73 00 for limitations on anchorage to prestressed concrete.	34
35			35
36		<u>Layout:</u>	36
37			37
38		Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid the use of less-than-half width units at borders, and comply with reflected ceiling plans. In case of conflict between above criteria and reflected ceiling plans or field conditions and other requirements, obtain Architect's direction for resolution before proceeding.	38
39			39
40			40
41			41
42			42
43	3.2	<u>INSTALLATION:</u>	43
44			44
45		<u>General:</u>	45
46			46
47		Install materials in accordance with manufacturer's printed instructions, and to comply with governing regulations, fire resistance rating requirements as indicated, and industry standards applicable to the work.	47
48			48
49			49
50			50
51		Arrange acoustical units and orient directionally-patterned units (if any) in the manner shown by reflected ceiling plans.	51
52			52
53			53
54			54
55			55

00	<u>Exposed Suspension System:</u>	00
01		01
02	Install suspension system to comply with ASTM C636, with hangers supported only from building	02
03	structural members as indicated.	03
04		04
05	Locate hangers near each end (within 12") and spaced not more than 4'-0" along each carrying	05
06	channel or direct-hung runners, unless otherwise indicated. Install additional hanger wires at	06
07	recessed light fixtures, HVAC diffusers and other items resting on same ceiling component or	07
08	supported by cross tees on more than two sides.	08
09		09
10	Secure wire hangers by looping and wire-tying, either directly to structures or to inserts,	10
11	eye-screws or other devices which are secure and appropriate for the substrate, and which	11
12	will not deteriorate or fail with age or elevated temperatures.	12
13		13
14	Install edge moldings of the type indicated at edges of each acoustical ceiling area, and at locations	14
15	where edge of units would otherwise be exposed after completion of the work.	15
16		16
17	Secure moldings to building construction by fastening with screw-anchors or staples into the	17
18	substrate in vertical leg. Space holes not more than 3" from each end and not more than 16"	18
19	o.c. along each molding.	19
20		20
21	Level moldings and ceiling suspension system, to a level tolerance of 0.125" in 12'-0".	21
22		22
23	Miter corners of moldings accurately to provide hairline joints, securely connected to prevent	23
24	dislocation.	24
25		25
26	Except at edge moldings cope exposed flanges of intersecting exposed suspension system	26
27	members, so that flange faces will be flush.	27
28		28
29	<u>Acoustical Tile Adhered to Substrate:</u>	29
30		30
31	Install acoustical tile by cementing to substrate, using amount of adhesive and procedure	31
32	recommended by tile manufacturer. Install splines in joints between tiles and level to 0.125" in 12'-0"	32
33	tolerance. Maintain tight butt joints, aligned both directions, and coordinated with ceiling fixtures and	33
34	penetrations.	34
35		35
36	In general, center rows of tiles on centers of exposed fixtures, to the greatest extent possible.	36
37		37
38	Scribe and cut tile to fit accurately at edges of ceiling and around penetrations in the ceiling.	38
39		39
40	<u>Lay-In System:</u>	40
41		41
42	Install acoustical panels in coordination with suspension system, with edges concealed by support of	42
43	suspension members.	43
44		44
45	Place sound attenuation batts as specified in Section 09 29 00 over ceilings where indicated	45
46	on the drawings.	46
47		47
48	Scribe and cut panels to fit accurately at penetrations.	48
49		49
50	Install edge trim moldings where indicated, and elsewhere as needed to conceal edges of acoustical	50
51	units which would otherwise be exposed to view after completion of the work. Anchor with fasteners	51
52	or, if not possible, secure in place with permanent adhesive.	52
53		53
54		54
55		55

00	3.3	<u>CLEANING AND PROTECTION:</u>	00
01			01
02		Clean exposed surfaces of acoustical ceilings, including trim, edge moldings and suspension	02
03		members; comply with manufacturer's instructions for cleaning and touch-up of minor finish damage.	03
04			04
05		Remove and replace work which cannot be successfully cleaned and repaired to permanently	05
06		eliminate evidence of damage.	06
07			07
08		The Installer shall advise the Contractor of required protection for the acoustical ceilings, including	08
09		temperature and humidity limitations and dust control, so that the work will be without damage and	09
10		deterioration at the time of acceptance by the Owner.	10
11			11
12		END OF SECTION 09 51 00	12
13			13
14			14
15			15
16			16
17			17
18			18
19			19
20			20
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52			52
53			53
54			54
55			55

00		<u>SECTION 09 65 00</u>	00
01		RESILIENT FLOORING	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division 01-Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Resilient flooring and accessories as shown on the drawings and in schedules for:		14
15			15
16	Resilient floor tiles		16
17	Vinyl sheet flooring		17
18	Resilient base		18
19	Metal transition strips		19
20			20
21	<u>Related Sections:</u>		21
22			22
23	Removal of existing flooring and adhesive: Section 02 41 19		23
24	Cast Underlayment: Section 03 54 00		24
25	Tile Carpeting (including stair nosings): Section 09 68 13		25
26	Fluid-Applied Flooring: Section 09 67 00		26
27			27
28	1.2 <u>SUBMITTALS:</u>		28
29			29
30	<u>Product Data:</u>		30
31			31
32	Submit manufacturer's technical data and installation instructions for each type of resilient flooring		32
33	and accessory. Include certification of fire test compliance.		33
34			34
35	<u>Samples:</u>		35
36			36
37	Submit samples of each type, color and finish of resilient flooring and accessory required. Provide		37
38	full-size tile units and 8" x 10" samples of sheet flooring and 2.5" long sample of accessory. Include		38
39	full range of flooring color and pattern variation.		39
40			40
41	<u>Certification:</u>		41
42			42
43	Submit FloorScore certifications for all products as specified.		43
44			44
45	1.3 <u>QUALITY ASSURANCE:</u>		45
46			46
47	<u>Manufacturer:</u>		47
48			48
49	Provide each type of resilient flooring and accessories as produced by a single manufacturer,		49
50	including recommended primers, adhesives, sealants and leveling compounds.		50
51			51
52			52
53			53
54			54
55			55

Fire Test Performance:

Unless otherwise indicated, provide resilient flooring which complies with the following test performance criteria as determined by an independent testing laboratory acceptable to authorities having jurisdiction.

Critical Radiant Flux (CRF): Not less than 0.45 watts per sq. cm., per ASTM E648.

Smoke density not more than 450, ASTM E662.

1.4 DELIVERY, STORAGE AND HANDLING:

Deliver materials to the project site in the manufacturer's original unopened containers, clearly marked to indicate pattern, gage, lot number and sequence of manufacture.

Carefully handle all materials and store in original containers at not less than 65° F. for at least 48 hours before start of installation.

1.5 PROJECT/SITE CONDITIONS:

Continuously heat areas to receive flooring to minimum 65° F. for at least 48 hours prior to installation, when project conditions are such that heating is required. Maintain 65° F. minimum temperature continuously during and after installation as recommended by flooring manufacturer, but for not less than 48 hours. Subsequently maintain 55° F. minimum temperature.

Install resilient flooring and accessories after other finishing operations, including painting, have been completed. Moisture content of concrete slabs, building air temperature, and relative humidity must be within limits recommended by tile manufacturer.

1.6 MAINTENANCE:Maintenance Instructions:

Submit manufacturer's written instructions for recommended maintenance practices for each type of resilient flooring and accessory.

Replacement Material:

After completion of work, deliver to the project site replacement materials from same manufactured lot as materials installed and as follows:

Tile flooring and base, not less than one box for each 50 boxes, or fraction thereof, for each type, size and color installed.

Sheet flooring, not less than 5 lineal yards for each type, width and color installed.

PART 2 - PRODUCTS2.1 COLORS AND PATTERNS:

Provide colors and patterns as specified, or if not specified, as selected by Architect from manufacturer's full line of standards.

00	2.2	<u>TILE FLOORING:</u>	00
01			01
02		<u>Vinyl Tile:</u>	02
03			03
04		ASTM F1700, Class III, printed film vinyl tile, Type B, embossed surface.	04
05			05
06		Thickness: 0.2" with 0.020" thick wear layer with urethane coating.	06
07			07
08		Size: 36" x 36".	08
09			09
10		Seaming Method: Standard.	10
11			11
12		Provide vinyl tile which meets the requirements of the FloorScore standard for low-emitting flooring material.	12
13			13
14		Provide Hot and Heavy Collection No. C0010 Bolder by Mohawk or approved equal.	14
15			15
16		Color: No. 888 Schist.	16
17			17
18			18
19	2.3	<u>SHEET FLOORING:</u>	19
20			20
21		<u>Vinyl Sheet Flooring:</u>	21
22			22
23		Vinyl Sheet Floor Covering with Backing: ASTM F1303, Serenity Resilient Collection No. C2020 Therapeutic by Mohawk or approved equal.	23
24			24
25			25
26		Color: No. 838 Placid.	26
27			27
28		Type (Binder Content): Type I, minimum binder content of 90 percent.	28
29			29
30		Wear-Layer Thickness: Grade 1.	30
31			31
32		Wet Slip Resistance: 0.6 maximum per ASTM D2047.	32
33			33
34		Overall Thickness: 0.08" (2.0 mm).	34
35			35
36		Interlayer Material: None (homogeneous sheet).	36
37			37
38		Backing Class: Class A (fibrous).	38
39			39
40		Wearing Surface: Embossed.	40
41			41
42		Sheet Width: 6 feet.	42
43			43
44		Seaming Method: Heat welded.	44
45			45
46		Welding Thread: Vinyl thread or rod as produced by manufacturer of sheet flooring and intended for heat sealing of sheet flooring joints to produce "seamless" installation.	46
47			47
48			48
49		Color: Match field color of flooring.	49
50			50
51		Provide sheet vinyl which meets the requirements of the FloorScore standard for low-emitting flooring material.	51
52			52
53			53
54			54
55			55

00	2.4	<u>ACCESSORIES:</u>	00
01			01
02		<u>Resilient Base:</u>	02
03			03
04		Provide base complying with ASTM F1861, Type TS (rubber, vulcanized thermoset), Group I (solid),	04
05		smooth surface with matching end stops and preformed or molded corner units, 0.125" gage, 4" high.	05
06			06
07		Legths: Coils in manufacturer's standard length.	07
08			08
09		Provide topset style with cove base toe at all locations.	09
10			10
11		Provide resilient base which meets the requirements of the FloorScore standard for	11
12		low-emitting flooring material.	12
13			13
14		Provide resilient base manufactured by Roppe or approved equal by Burke, Johnsonite,	14
15		Pirrelli, Nora or R.C. Musson.	15
16			16
17		Color: No. 63 Burnt Umber by Johnsonite.	17
18			18
19		<u>Metal Edge and Transition Strips:</u>	19
20			20
21		Between Resilient Flooring and Carpet: Clear anodized aluminum, 0.125" wide at top edge with	21
22		integral provision for anchorage to substrate.	22
23			23
24		Provide Schiene-AE edge strips by Schluter Systems or approved equal in height suited to	24
25		height of carpet.	25
26			26
27		Between Resilient Flooring or Carpet and Concrete: Profile with sloped exposed surface, 0.25" deep	27
28		channel below exposed surface, integrated trapezoid-perforated anchoring leg, and integrated joint	28
29		spacer.	29
30			30
31		Provide Reno-U by Schluter Systems or approved equal fabricated from anodized aluminum.	31
32			32
33		<u>Adhesives, Compounds:</u>	33
34			34
35		Cement or adhesive of types recommended by flooring manufacturer to suit material and substrate	35
36		conditions. Use solvent free type. Adhesive to be moisture resistant material suitable for installation	36
37		over slab on grade..	37
38			38
39		VOC Content: Not more than 7 percent VOCs by weight in accordance with Section 01 81 16.	39
40			40
41		Concrete Slab Primer: Non-staining type as recommended by flooring manufacturer.	41
42			42
43		VOC Content: Not more than 100 grams per liter in accordance with Section 01 81 16.	43
44			44
45		Leveling Compound: Latex type which can be feather edged, as recommended by flooring	45
46		manufacturer.	46
47			47
48		<u>PART 3 - EXECUTION</u>	48
49			49
50	3.1	<u>EXAMINATION:</u>	50
51			51
52		Require Installer to inspect subfloor surfaces to determine that they are satisfactory. A satisfactory	52
53		subfloor surface is defined as one that is smooth and free from cracks, holes, ridges, coatings	53
54		preventing adhesive bond, and other defects impairing performance or appearance.	54
55			55

00	Perform moisture tests on concrete slabs to determine that concrete surfaces are sufficiently	00
01	cured and ready to receive flooring. Record test method, locations and results and submit with	01
02	record documents.	02
03		03
04	Do not allow resilient flooring work to proceed until subfloor surfaces are satisfactory.	04
05		05
06	3.2 <u>PREPARATION:</u>	06
07		07
08	Prior to laying flooring, broom clean or vacuum surfaces to be covered and inspect subfloor. Start of	08
09	flooring installation indicates acceptance of subfloor conditions and full responsibility for completed	09
10	work.	10
11		11
12	Use leveling compound as recommended by flooring manufacturer for filling small cracks and	12
13	depressions in subfloors.	13
14		14
15	Remove coatings from subfloor surfaces that would prevent adhesive bond, including curing	15
16	compounds incompatible with resilient flooring adhesives, paint, oils, waxes and sealers.	16
17		17
18	Broom clean or vacuum surfaces to be covered.	18
19		19
20	Apply concrete slab primer, if recommended by flooring manufacturer, prior to application of	20
21	adhesive. Apply in compliance with manufacturer's directions.	21
22		22
23	3.3 <u>INSTALLATION:</u>	23
24		24
25	<u>General:</u>	25
26		26
27	Place flooring with adhesive cement in strict compliance with manufacturer's recommendations. Butt	27
28	tightly to vertical surfaces, expansion joints, thresholds, and edgings. Scribe around obstructions	28
29	including permanent fixtures, built-in furniture, pipes, outlets and building components and to produce	29
30	neat joints, laid tight, even and straight. Extend flooring into toe spaces, door reveals, into closets and	30
31	similar openings.	31
32		32
33	Maintain reference markers, holes, or openings that are in place or plainly marked for future cutting	33
34	by repeating on finish flooring as marked on subfloor. Use chalk or other non-permanent marking	34
35	device.	35
36		36
37	Tightly cement flooring to subbase without open cracks, voids, raising and puckering at joints,	37
38	telegraphing of adhesive spreader marks, or other surface imperfections.	38
39		39
40	<u>Vinyl Tile Floors:</u>	40
41		41
42	Lay tile from center marks established with principal walls, discounting minor offsets, so that tile at	42
43	opposite edges of the room are of equal width. Adjust as necessary to avoid use of cut widths less	43
44	than one half tile at room perimeters. Lay tile squares to room axis. Terminate flooring at centerline of	44
45	closed door at openings where adjacent floor finish is dissimilar.	45
46		46
47	Match tiles for color and pattern by using tile from cartons in same sequence as manufactured and	47
48	packaged. Cut tile neatly to and around all fixtures. Broken, cracked, chipped or deformed tiles are	48
49	not acceptable.	49
50		50
51	Lay tile with grain in tile running in one direction in each room or area and as directed by	51
52	Architect.	52
53		53
54	Adhere tile flooring to substrate using full spread of adhesive applied in compliance with flooring	54
55	manufacturer's directions.	55

00		00
01	<u>Sheet Flooring:</u>	01
02		02
03	Unroll resilient sheet flooring and allow to relax prior to cutting and fitting.	03
04		04
05	Lay sheet flooring to provide as few seams as possible with economical use of materials. Match	05
06	edges for color shading and pattern at seams in compliance with manufacturer's recommendations,	06
07	such as reversing adjoining sheets of same roll, so that abutting edges are from same edge of roll.	07
08		08
09	Adhere sheet flooring to substrates using method approved by flooring manufacturer for type of sheet	09
10	flooring and substrate condition indicated.	10
11		11
12	Use conventional full spread adhesive method.	12
13		13
14	Prepare seams in vinyl sheet flooring with manufacturer's special routing tool and heat weld with vinyl	14
15	thread in accordance with manufacturer's instructions.	15
16		16
17	Provide integral flash cove base including cove support strip and metal outside corner piece.	17
18		18
19	Construct coved base in accordance with manufacturer's instructions.	19
20		20
21	See Section 09 30 00 for metal transition between top of cove base and adjacent porcelain	21
22	wall tile.	22
23		23
24	3.4 <u>ACCESSORIES:</u>	24
25		25
26	<u>Base:</u>	26
27		27
28	Apply resilient base to walls, columns, pilasters, casework and other permanent fixtures in rooms or	28
29	areas where base is required.	29
30		30
31	Install base in as long lengths as practicable but with 36" minimum joint spacing, with preformed	31
32	external corner units. Internal corners may be preformed or fabricated from base materials mitered	32
33	and coped.	33
34		34
35	Tightly bond base to backing throughout the length of each piece, with continuous contact at	35
36	horizontal and vertical surfaces. Scribe and fit to door frames, interruptions, and returns wider than	36
37	0.75".	37
38		38
39	On masonry surfaces or other similar irregular surfaces, fill voids along top edge of resilient	39
40	wall base with manufacturer's recommended adhesive filler material.	40
41		41
42	Apply adhesive with fluted trowel (gun application not acceptable).	42
43		43
44	<u>Edge Strips:</u>	44
45		45
46	Place metal edge strips tightly butted to flooring and secure with adhesive. Install edging strips at all	46
47	unprotected edges of flooring, unless otherwise shown.	47
48		48
49	<u>Transition Strips:</u>	49
50		50
51	Place metal transition strips tightly butted to flooring and secure with adhesive. Install transition strips	51
52	at all changes in flooring types, unless otherwise shown.	52
53		53
54		54
55		55

00	3.5	<u>CLEANING AND PROTECTION:</u>	00
01			01
02		<u>Cleaning:</u>	02
03			03
04		Remove any excess adhesive or other surface blemishes, using neutral type cleaners as	04
05		recommended by flooring manufacturer.	05
06			06
07		Perform following operations immediately upon completion of resilient flooring:	07
08			08
09		Sweep or vacuum floor thoroughly.	09
10			10
11		Do not wash floor until time period recommended by resilient flooring manufacturer has	11
12		elapsed to allow resilient flooring to become well-sealed in adhesive.	12
13			13
14		Damp mop floor being careful to remove black marks and excessive soil.	14
15			15
16		Clean resilient flooring not more than 4 days prior to date scheduled for inspections intended to	16
17		establish date of substantial completion in each area of project. Clean resilient flooring by method	17
18		recommended by resilient flooring manufacturer.	18
19			19
20		Do not polish vinyl tile flooring or sheet vinyl flooring.	20
21			21
22		<u>Protection:</u>	22
23			23
24		Protect flooring against damage during construction period to comply with resilient flooring	24
25		manufacturer's directions.	25
26			26
27		Protect resilient flooring against damage from rolling loads for initial period following installation by	27
28		covering with plywood or hardboard. Use dollies to move stationary equipment or furnishings across	28
29		floors.	29
30			30
31		Cover resilient flooring with undyed, untreated building paper until inspection for substantial	31
32		completion.	32
33			33
34		END OF SECTION 09 65 00	34
35			35
36			36
37			37
38			38
39			39
40			40
41			41
42			42
43			43
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49			49
50			50
51			51
52			52
53			53
54			54
55			55

00		SECTION 09 67 00	00
01		FLUID-APPLIED FLOORING	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division-01 Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Fluid applied special flooring systems as shown on the drawings and in schedules for inmate toilets		14
15	with integral cove base, including moisture control system.		15
16			16
17	<u>Related Sections:</u>		17
18			18
19	Concrete floor finishing: Section 03 35 00		19
20	Resilient Flooring: Section 09 65 00		20
21			21
22	1.2 <u>SUBMITTALS:</u>		22
23			23
24	<u>Product Data:</u>		24
25			25
26	Submit manufacturer's technical data and installation instructions for resinous flooring and moisture		26
27	control system.		27
28			28
29	<u>Shop Drawings:</u>		29
30			30
31	Submit shop drawings indicating locations, widths, depths and sealing of control and contraction		31
32	joints in fluid applied flooring substrates.		32
33			33
34	<u>Samples:</u>		34
35			35
36	Submit samples of each type and color required, not less than 12" x 12" applied to rigid backing,		36
37	showing the range of color and pattern variation. Sample submittals will be reviewed for color,		37
38	texture, and pattern only.		38
39			39
40	<u>Certification:</u>		40
41			41
42	Submit certification that Installer is franchised by or acceptable to manufacturer for application of		42
43	specified system.		43
44			44
45	Submit moisture test reports with Project Record Documents.		45
46			46
47	1.3 <u>QUALITY ASSURANCE:</u>		47
48			48
49	<u>Manufacturer:</u>		49
50			50
51	Provide each component of each special flooring system produced by a single manufacturer with not		51
52	less than 5 years successful experience in supplying specified materials, including recommended		52
53	primers, moisture control system, base coat, aggregates and top coat materials.		53
54			54
55			55

00	Submit list of projects indicating area installed, materials installed, date of installation, Owner and	00
01	Architect with telephone numbers and contact person.	01
02		02
03	<u>Installer:</u>	03
04		04
05	Engage an Installer who has successfully completed within the last 5 years at least 10 flooring	05
06	applications of similar size and type to that of this project and who will assign mechanics experienced	06
07	in these applications to this project one of which will serve as lead mechanic. Installer must be	07
08	franchised by or acceptable to system manufacturer.	08
09		09
10	<u>Preinstallation Conference:</u>	10
11		11
12	Conduct conference at Project site to comply with requirements of Section 01 31 19 "Project	12
13	Meetings".	13
14		14
15	1.4 <u>DELIVERY, STORAGE AND HANDLING:</u>	15
16		16
17	Deliver flooring materials to the job site in new, unopened containers with intact factory applied	17
18	labels.	18
19		19
20	Store materials in accordance with the manufacturer's instructions.	20
21		21
22	1.5 <u>PROJECT/SITE CONDITIONS:</u>	22
23		23
24	Maintain substrate temperature of not less than 55° F. and room temperature of 78° F. for 48 hours	24
25	before, during and 72 hours after installation or other more restrictive requirements in accordance	25
26	with flooring material manufacturer's instructions. Provide adequate ventilation during application and	26
27	curing periods.	27
28		28
29	1.6 <u>WARRANTY:</u>	29
30		30
31	Submit five-year written warranty stating labor and materials are in conformance with specified	31
32	requirements, and that any defects and work affected by defects which develop within warranty	32
33	period will be corrected immediately after written notice is received.	33
34		34
35	Defects shall include, but are not limited to, pinholes, crazing or cracking, insufficient cure, loss of	35
36	adhesion, deficient thickness, improper materials or workmanship, delamination and checking.	36
37		37
38	Normal wear, physical damage, fire damage, and abnormal usage are excepted from warranty,	38
39		39
40	All warranties shall be jointly signed by Contractor, applicator, and coating manufacturer.	40
41		41
42	1.7 <u>MAINTENANCE:</u>	42
43		43
44	<u>Maintenance Instructions:</u>	44
45		45
46	Submit 2 copies of manufacturer's written instructions for recommended maintenance practices.	46
47		47
48	<u>PART 2 - PRODUCTS</u>	48
49		49
50	2.1 <u>MANUFACTURERS:</u>	50
51		51
52	Dex-O-Tex Division of Crossfield Products Corp.	52
53	General Polymers	53
54	Prime Coat Corp.	54
55	Selby/Ucrete Division of BASF Building Systems	55

00	Stonhard, Inc.	00
01	Tnemec Company, Inc.	01
02		02
03	2.2 <u>FLOORING SYSTEMS:</u>	03
04		04
05	<u>Epoxy - Quartz Chip System:</u>	05
06		06
07	Manufacturer's standard decorative type flooring system consisting of primer; topping including epoxy	07
08	resin, hardener and ceramic coated quartz aggregate; and finish coat or coats. Provide only factory	08
09	supplied and packaged materials including aggregate for all components of flooring system.	09
10		10
11	Provide Prime Coat Corp. Quartz Epoxy Flooring System or approved equal by listed manufacturer.	11
12		12
13	First Coat: Solvent-free polyamine epoxy prime coating (PC100).	13
14		14
15	Second Coat: Solvent-free polyamine epoxy coating (PC320).	15
16		16
17	Non-Slip Finish: Broadcast finish coat with 40 mesh silica at rate of 12-18 pounds/100 SF and	17
18	backrolled to encapsulate.	18
19		19
20	Colors: As selected from manufacturer's standard colors for matrix and aggregate.	20
21		21
22	System Materials:	22
23		23
24	PC 320 Quartz Coat.	24
25		25
26	Anti-Microbial Additive: Provide manufacturer's standard additive designed to resist fungus,	26
27	mildew and bacteria growth.	27
28		28
29	VOC Content for Primer, Intermediate and Finish Coats: Not more than 100 grams per liter in	29
30	accordance with Section 01 81 16.	30
31		31
32	<u>Moisture Control System:</u>	32
33		33
34	Provide a two-coat, 100% solids reactive epoxy moisture management system formulated to	34
35	suppress excessive moisture vapor emissions in new or existing concrete, produce a hard surface	35
36	and tenaciously bond to the substrate and acceptable to the flooring manufacturer.	36
37		37
38	<u>PART 3 - EXECUTION</u>	38
39		39
40	3.1 <u>PREPARATION:</u>	40
41		41
42	<u>Concrete Subfloors:</u>	42
43		43
44	Concrete to have full 28-day cure.	44
45		45
46	Remove mortar droppings and level surface protrusions. Patch surfaces with material recommended	46
47	by coating manufacturer.	47
48		48
49	Surfaces to be free of form release agents, laitance, dirt, oil, contaminants, and chalk.	49
50		50
51	Surfaces to be clean and dry prior to application of coatings.	51
52		52
53	Abrasive blast surface in accordance with ASTM D4259. Acceptable surface to provide surface	53
54	similar to 60-80 grit sandpaper. Excessive surface profile shall be repaired or accepted in writing by	54
55	coating system manufacturer prior to commencing application.	55

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Test surfaces for moisture content. Do not apply coatings to surfaces having moisture content in excess of 15 percent or as recommended by manufacturer.

Cracks less than 1/16" wide shall be stripped with base coat material at 20 mils x 4" wide before installation of base coat.

Cracks in excess of 1/16" wide shall be routed to 0.25" x 0.25" and filled with an elastomeric sealant as recommended by manufacturer.

Cold joints at vertical surfaces, drains, and penetrations shall be caulked with a 0.5" x 0.5" bead of elastomeric sealant as recommended by manufacturer. Tool to produce concave surface of sealant. Strip with base coat material at 20 mils x 4" wide.

3.2 MOISTURE CONTROL SYSTEM:

General:

Provide moisture control system at all locations scheduled to receive fluid-applied flooring.

Joints and Cracks:

Use manufacturer's recommended two-part, rigid polyurethane crack and joint filler to fill small, non-moving cracks and saw-cut joints in existing concrete substrates. Fill cracks greater than a hairline in width 1/32" and saw-cuts in strict accordance with the manufacturer's written installation instructions. Once the dormant cracks and saw-cuts have been properly filled, allow these areas to cure thoroughly in accordance with the manufacturer's recommendations prior to proceeding with the installation.

Moving Joints:

All moving joints and cracks must be honored up through the moisture control system, self-leveling cementitious topping and covering (if any) by installing the manufacturer's recommended flexible sealing compound designed specifically for use over moving joints.

Moisture Control Membrane:

Mix and apply products in accordance with the manufacturer's written instructions.

Apply the first coat of freshly mixed primer to the prepared concrete surface in a uniform direction at an application rate of up to 170 sq. ft. per unit to achieve a coating thickness of 9 - 10 mils. Use a short-nap paint roller or notched squeegee for smoother surfaces, and a longer nap roller for more uneven substrates. Use a paint brush for hard to reach areas and corners.

While the first coat is still in a fresh state (maximum 30 minutes), broadcast an excess of fine sand that is less than 1/50 of an inch in grain size (98.5% passing sieve size #35 or #30) consistently over the entire area. Avoid standing or walking on the freshly applied primer when broadcasting the sand. Allow this coat to dry for a minimum of 6 hours at 70° F. before applying the sealer coat.

Once an area has been completely covered with sand, the surface of the sand can be lightly walked on provided the primer below is not exposed at any time. Use about 1 lb. of sand per square foot of area. Once the sand broadcasting process is complete, avoid all additional traffic over the surface for a minimum of 6 hours.

Working in a direction that is at a 90° angle to direction that the first coat was applied, apply the sealer coat as above at a coverage rate of 100 sq. ft. per unit (14 - 16 mils).

00
01 While this second coat is still in a fresh state (maximum 30 minutes), broadcast an excess of fine 01
02 sand that is less than 1/50 of an inch in grain size (98.5% passing sieve size #35 or #30) consistently 02
03 over the entire area. Avoid standing or walking on the freshly applied sealer when broadcasting the 03
04 sand. 04
05

06 Once an area has been completely covered with sand, the surface of the sand can be walked on be 06
07 provided the sealer below is not exposed at any time. Use about 1 lb. of sand per square foot of area. 07
08 Once the sanding process is complete, avoid all additional traffic over the surface for a minimum of 08
09 16 hours. 09
10

11 After 16 hours, broom sweep and vacuum the surface to remove all loose sand. 11
12

13 The clean prepared surface of sand is the priming system for the self-leveling cementitious topping. 13
14 No additional priming is required. See Section 03 54 00 for application of required topping. 14
15

16 3.3 APPLICATION: 16

17 General: 17

18 Apply flooring only after finishing operations, including painting, have been completed and permanent 18
19 heating system is operating. 19
20

21 Moisture content of concrete slabs, building air temperature and relative humidity must be within 21
22 limits recommended by manufacturer. 22
23

24 Mix materials and apply primer (if any) in accordance with manufacturer's instructions for bonding to 24
25 substrate or moisture control system. 25
26

27 At floor perimeter form 1" radius, minimum of 8" high, cove base. Round interior and external 27
28 corners. At CMU, return base into raked or routed CMU joint. At other locations terminate with 28
29 manufacturer's standard 45° beveled edge. 29
30
31

32 Primer: 32

33 Apply primer (if required) prior to application of the base coat. Apply in accordance with 33
34 manufacturer's directions. Coordinate application of primer and topping mix to insure optimum 34
35 adhesion to substrate or moisture control system. 35
36
37

38 Epoxy System: 38

39 Mix and apply base coat per manufacturer's recommendations. 39
40
41

42 Apply neat binder (no aggregate included) over freshly applied primer at predetermined rate and in 42
43 number of coats recommended by manufacturer to produce thickness indicated. 43
44
45

46 Broadcast aggregate into properly prepared wet base coat obtaining complete coverage. Allow base 46
47 coat and aggregate to thoroughly harden, then sweep off excess with a stiff fiber broom. 47
48

49 Vacuum clean to remove any dust or residue. 49
50

51 Apply top coat material in as many applications as recommended by manufacturer. Allow each coat 51
52 to dry before subsequent applications. 52
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00	Apply materials in the recommended quantities to produce a finished floor system not less than	00
01	0.125" thick (excluding moisture control system), with color and texture per approved sample for	01
02	readily moppable, non-slip surface.	02

03		03
04	3.4 <u>CURING, CLEANING AND PROTECTION:</u>	04

05		05
06	Cure flooring materials in compliance with manufacturer's directions, taking care to prevent their	06
07	contamination during stages of application and prior to completion of curing process.	07

08		08
09	Protect flooring materials from damage and wear during construction operation. Where temporary	09
10	covering is required for this purpose comply with manufacturer's recommendations for protective	10
11	materials and the method of their application.	11

12		12
13	Remove any surface blemishes from installed surfaces using neutral cleaners and procedures as	13
14	recommended by the manufacturer.	14

15		15
16	Protect installed flooring from damage by use of heavy kraft paper or other covering.	16

17		17
18	<u>Finishing:</u>	18

19		19
20	After completion of the project and just prior to the final inspection of the work, thoroughly clean floors	20
21	and apply a final top coat, if required, over scuffed or worn areas in accordance with manufacturer's	21
22	instructions.	22

23		23
24	END OF SECTION 09 67 00	24

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00		SECTION 09 68 13	00
01		TILE CARPETING	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division 01-Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Carpet tile and installation as shown on the drawings and in schedules.		14
15			15
16	<u>Related Sections:</u>		16
17			17
18	Resilient flooring and base and metal accessories: Section 09 65 00		18
19	Entrance Floor Mats: Section 12 48 13		19
20			20
21	1.2 <u>REFERENCES:</u>		21
22			22
23	<u>General Information Standard:</u>		23
24			24
25	Refer to "Carpet Specifier's Handbook" (CRI 104) by the Carpet and Rug Institute for general		25
26	information and recommendations and for definitions of terminology.		26
27			27
28	1.3 <u>SUBMITTALS:</u>		28
29			29
30	<u>Product Data:</u>		30
31			31
32	Submit product data for each type of carpet tile material and installation accessory specified. Submit		32
33	manufacturer's printed data on physical characteristics, durability, fade resistance, fire-test-response		33
34	characteristics and static performance characteristics as required to show compliance with specified		34
35	requirements. Submit methods of installation for each type of substrate.		35
36			36
37	Submit manufacturer's product data for resilient stair nosings.		37
38			38
39	<u>Shop Drawings:</u>		39
40			40
41	Submit shop drawings showing columns, doorways, enclosing walls or partitions, built-in cabinets,		41
42	and locations where cutouts are required in carpet tile. Indicate the following:		42
43			43
44	Existing flooring materials to be removed.		44
45	Carpet tile type, color and dye lot.		45
46	Locations where dye lot changes occur.		46
47	Seam locations, types, and methods.		47
48	Type of subfloor.		48
49	Type of installation.		49
50	Pattern type, location, and direction.		50
51	Pile direction.		51
52	Type, color, and location of insets and borders.		52
53	Type, color, and location of edge, transition, and other accessory strips.		53
54	Transition details to other flooring materials.		54
55			55

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Samples:

Submit samples for verification of the following products, in manufacturer's standard sizes, showing the full range of color, texture, and pattern variations expected. Prepare Samples from the same material to be used for the Work. Label each sample with the manufacturer's name, material type, color, pattern, and designation indicated on Drawings and carpet tile schedule. Submit the following:

Full-size sample of each type of carpet tile required.

Certification:

Submit manufacturer's certification that static resistant carpet meets or exceeds specified requirements under all installation conditions required for this project.

Submit manufacturer's certification stating that carpet materials furnished comply with specified requirements.

Include listing of mill register numbers for carpet furnished.

Include supporting certified laboratory test data indicating that carpet meets or exceeds specified fire performance test requirements.

Qualifications:

Submit qualifications and documentation for Installer indicating compliance with requirements specified below.

Schedule:

Submit a schedule of carpet tile using same room designations indicated on drawings.

Maintenance Data:

Submit maintenance data for carpet tile to include in the operation and maintenance manual specified in Section 01 78 23. Include the following:

Methods for maintaining carpet tile, including manufacturer's recommended frequency for maintaining carpet tile.

Precautions for cleaning materials and methods that could be detrimental to finishes and performance. Include cleaning and stain-removal products and procedures.

1.4 QUALITY ASSURANCE:

Installer Qualifications:

Engage an experienced Installer who is certified by the Floor Covering Installation Board (FCIB) or who can demonstrate compliance with FCIB certification program requirements.

Firm with not less than 5 years continuous successful experience in carpet installations of similar size and type to the carpeting requirements of this project. Engage an Installer certified by the carpet manufacturer which has operated under the same name during the last 5 years.

Single-Source Responsibility:

Obtain each type of carpet tile from one source and by a single manufacturer.

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Fire-Test-Response Characteristics:

Provide carpet tile with the following fire-test-response characteristics as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify carpet tile with appropriate markings of applicable testing and inspecting agency.

Surface Flammability: Passes CPSC 16 CFR, Part 1630 (ASTM D2859).

Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm per ASTM E648.

Smoke Developed: 450 or less per ASTM E662.

Static Control Properties:

Provide carpet tile that is identical to that tested for the following physical properties:

Static Resistance: Rating as scheduled with carpet type, 20% R.H. at 70° F., AATCC 134.

1.5 DELIVERY, STORAGE, AND HANDLING:

General: Comply with the Carpet and Rug Institute's CRI 104, Section 5: "Storage and Handling."

Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.

Store materials on-site in original undamaged packages, inside well-ventilated area protected from weather, moisture, soilage, extreme temperatures, and humidity. Lay flat, with continuous blocking off ground.

Inspect and verify materials upon delivery for quantity, packaging, labeling, condition and compliance with specifications.

Maintain on-site records of lot numbers, shipping receipts, and other identification necessary to track delivery and installation of materials.

1.6 PROJECT CONDITIONS:

General: Comply with CRI 104, Section 6: "Site Conditions."

Space Enclosure and Environmental Limitations: Do not install carpet tile until space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient temperature and humidity conditions are and will be continuously maintained at values near those indicated for final occupancy.

Do not commence with carpet installation until painting and finishing work is complete and ceilings, piping and overhead work has been tested, approved and completed.

Maintain room temperature at minimum 65° F. for at least 24 hours prior to and 72 hours after installation and relative humidity at approximately that at which the area is to be maintained, but not more than 65%.

Subfloor Moisture Conditions: Moisture emission rate of not more than 3 lb/1000 sq. ft./24 hours when tested by calcium chloride moisture test in compliance with CRI 104, 6.2.1, with subfloor temperatures not less than 55 deg F.

00 Subfloor Alkalinity Conditions: A pH range of 5 to 9 when subfloor is wetted with potable water and 00
01 pHydriion paper is applied. 01
02 02

03 1.7 WARRANTY: 03
04 04

05 General Warranty: The special warranty specified in this Article shall not deprive the Owner of other 05
06 rights the Owner may have under other provisions of the Contract Documents and shall be in 06
07 addition to, and run concurrent with, other warranties made by the Contractor under requirements of 07
08 the Contract Documents. 08
09 09

10 Special Carpet Tile Warranty: Submit a written warranty executed by carpet tile manufacturer and 10
11 Installer agreeing to repair or replace carpet tile that does not meet requirements or that fails in 11
12 materials or workmanship within the specified warranty period. Failures include, but are not limited to, 12
13 more than 10 percent loss of face fiber, tile curling, snags, runs, and delamination. 13
14 14

15 Warranty Period: Provide the following warranties: 15
16 16

- 17 Lifetime Face Wear. 17
- 18 Lifetime Moisture Barrier. 18
- 19 Lifetime against Delamination, Loss of Tuft Bind and Unraveling. 19
- 20 15 Year Limited Colorfastness to Bleach Spills 20
- 21 15 Year Limited Stain Warranty. 21
- 22 Lifetime Static. 22
23 23

24 1.8 EXTRA MATERIALS: 24
25 25

26 Furnish extra materials described below that match products installed, are packaged with protective 26
27 covering for storage, and are identified with labels clearly describing contents. 27
28 28

29 Carpet Tile: Before installation begins, furnish quantity of full-size units equal to 6 percent of 29
30 amount installed. 30
31 31

32 Adhesive: Not less than one extra gallon of each type of carpet adhesive used. 32
33 33

34 PART 2 - PRODUCTS 34
35 35

36 2.1 CARPET TILE: 36
37 37

38 General: 38
39 39

40 All carpet tile must meet the testing and product requirements of the Carpet and Rug Institute's 40
41 Green Label Plus program. 41
42 42

43 Carpet Tile: 43
44 44

45 Provide TxStyle Collection, A La Mode, with Infinity 2 backing, by Mannington Commercial, or 45
46 approved equal. 46
47 47

48 Color: No. 35295 Sydney. 48
49 49

50 Provide carpet construction as follows: 50
51 51

52 Tile Size: 24" x 24". 52
53 53

54 Method: Tufted. 54
55 55

00	Style: Patterned loop.	00
01		01
02	Fiber and Yarn: Invista Antron Legacy Nylon 6,6 with Duratech soil protection.	02
03		03
04	Dye Method: Solution/yarn dyed.	04
05		05
06	Static Resistance: 3.0 kV or less.	06
07		07
08	Average Pile Height: 0.137".	08
09		09
10	Stitches or Rows: 10.66 per inch.	10
11		11
12	Gage or Pitch: 5/64.	12
13		13
14	Face Weight: 22 oz. per sq. yd.	14
15		15
16	Density Factor: 5,781 oz./cu. yd.	16
17		17
18	Primary Backing: Infinity 2 backing system.	18
19		19
20	Primary Tufting Substrate: Synthetic non-woven.	20
21		21
22	Fusion Coat: Sealant vinyl.	22
23		23
24	Backing: Reinforced composite closed cell polymer.	24
25		25
26	Installation Method: Brick ashlar.	26
27		27

2.2 INSTALLATION ACCESSORIES:

Carpet Edge Guard and Transition Strips:

Metal edge guard and transition strips specified in Section 09 65 00.

Carpet Stair Nosing:

Furnish stair nosings where shown complying with ASTM F2169, Type TV (vinyl, thermoplastic).

Surface Design: Class 2, Pattern: Raised-rib design.

Manufacturing Method: Group 2.

Nosing Style: Square.

Nosing Height: Approximately 1.5".

Size: Lengths to fit each stair tread in one piece.

Provide No. VCD-XX Flexible Vinyl Stair Nosings by Johnsonite or approved equal.

Color: To match color of resilient base specified in Section 09 65 00.

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Adhesives:

Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated and to comply with flammability requirements for installed carpet tile as recommended by carpet tile manufacturer.

VOC Content: Not more than 7 percent VOCs by weight in accordance with Section 01 81 16.

Miscellaneous Materials:

Concrete-Slab Primer: Nonstaining type as recommended by carpet tile manufacturer.

VOC Content: Not more than 100 grams per liter in accordance with Section 01 81 16.

Trowelable Underlayments and Patching Compounds: As recommended by carpet tile manufacturer.

Provide the types of seaming tape, thread, nails, adhesives, and other accessory items recommended by the carpet manufacturer and Installer for the conditions of installation and use, without failure during the life of the carpet.

PART 3 - EXECUTION

3.1 EXAMINATION:

Examine subfloors and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting performance of carpet tile. Do not proceed with installation until unsatisfactory conditions have been corrected.

Verify that subfloors and conditions are satisfactory for carpet tile installation and comply with requirements specified in this Section and those of carpet tile manufacturer.

3.2 PREPARATION:

General: Comply with carpet tile manufacturer's installation recommendations to prepare substrates indicated to receive carpet tile installation.

Level subfloor within 1/4 inch in 10 feet, noncumulative, in all directions. Sand or grind protrusions, bumps, and ridges. Patch and repair cracks and rough areas. Fill depressions.

Use leveling and patching compounds to fill cracks, holes, and depressions in subfloor as recommended by carpet tile manufacturer.

Remove subfloor coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone.

Broom or vacuum clean subfloors to be covered with carpet tile. Following cleaning, examine subfloors for moisture, alkaline salts, carbonation, or dust.

Concrete-Subfloor Preparation: Apply concrete-slab primer, according to manufacturer's directions, where recommended by carpet tile manufacturer.

3.3 INSTALLATION:

General: Comply with CRI 104, Section 13: "Carpet Modules (Tiles)."

00	Coordinate installation with access flooring requirements specified in Section 09 69 00.	00
01		01
02	Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture	02
03	including cabinets, pipes, outlets, edgings, thresholds and nosings.	03
04		04
05	Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable	05
06	flanges, alcoves, and similar openings.	06
07		07
08	Install borders parallel to walls.	08
09		09
10	Install carpet tile with adhesive to substrate in accordance with the manufacturer's recommendations.	10
11		11
12	Install metal edge guard at every location where edge of carpet is exposed to traffic, except where	12
13	another device, such as an expansion joint cover system or threshold, is indicated with an integral	13
14	carpet binder bar.	14
15		15
16	Install transition strips at every location where carpet meets resilient flooring.	16
17		17
18	Lay carpet on stairs with the run of the pile in opposite direction of anticipated traffic. Conceal edges	18
19	and avoid seams at points of high wear. Coordinate installation with required stair nosings.	19
20		20
21	Apply resilient stair nosings in strict conformance to manufacturer's installation instructions.	21
22		22
23	3.4 <u>CLEANING:</u>	23
24		24
25	Perform the following operations immediately after completing installation:	25
26		26
27	Remove visible adhesive, seam sealer, and other surface blemishes using cleaner	27
28	recommended by carpet tile manufacturer.	28
29		29
30	Remove protruding yarns from carpet tile surface.	30
31		31
32	Vacuum carpet tile using commercial machine with face-beater element.	32
33		33
34	3.5 <u>PROTECTION:</u>	34
35		35
36	General: Comply with CRI 104, Section 15: "Protection of Indoor Installation."	36
37		37
38	Provide final protection and maintain conditions, in a manner acceptable to manufacturer and	38
39	Installer, that ensure carpet tile is without damage or deterioration at the time of Substantial	39
40	Completion.	40
41		41
42	END OF SECTION 09 68 13	42
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00		SECTION 09 72 19	00
01		TEXTILE WALL COVERINGS	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division 01-Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Textile wall coverings as shown on the drawings.		14
15			15
16	<u>Related Sections:</u>		16
17			17
18	Fixed Sound-Absorptive Panels: Section 09 84 13		18
19	Painting and Coating: Section 09 90 00		19
20			20
21	1.2 <u>SUBMITTALS:</u>		21
22			22
23	<u>Product Data:</u>		23
24			24
25	Submit product data for wall covering specified including technical information, installation		25
26	instructions for each type of substrate and maintenance instructions, data of physical characteristics,		26
27	durability, fade resistance and flame resistance characteristics, and manufacturer's recommenda-		27
28	tions for maximum permissible moisture content of substrates.		28
29			29
30	<u>Samples:</u>		30
31			31
32	Submit samples of each type, pattern and color of wall covering, 8.5" x 11", showing full range of		32
33	colors, textures and patterns to be expected in the completed work.		33
34			34
35	<u>Certification:</u>		35
36			36
37	Submit manufacturer's certification that materials furnished comply with requirements specified. If		37
38	requested, submit independent laboratory test data to substantiate compliance.		38
39			39
40	<u>Maintenance Data:</u>		40
41			41
42	Submit maintenance data consisting of manufacturer's printed instructions for maintenance of each		42
43	type of wall covering for inclusion in operating and maintenance manual specified in Division 01.		43
44			44
45	Include methods and frequency recommended for maintaining optimum condition under		45
46	anticipated use conditions.		46
47			47
48	Include precautions for use of cleaning materials and methods which could be detrimental to		48
49	finishes and performance or might damage wall covering material.		49
50			50
51			51
52			52
53			53
54			54
55			55

00	1.3	<u>QUALITY ASSURANCE:</u>	00
01			01
02		<u>Installer Qualifications:</u>	02
03			03
04		Engage an experienced Installer who has specialized in the installation of wall coverings similar to	04
05		that required for this project.	05
06			06
07		<u>Manufacturer Qualifications:</u>	07
08			08
09		Provide each type of wall covering produced by a single manufacturer with not less than 3 years	09
10		production experience, whose published product literature clearly indicated compliance of wall	10
11		coverings with requirements indicated.	11
12			12
13		<u>Fire Hazard Classification:</u>	13
14			14
15		Provide materials bearing the UL label and marking, indicating the fire hazard classification of the	15
16		wall covering, as determined by ASTM E84, flame spread not more than 25, smoke developed not	16
17		more than 50.	17
18			18
19	1.4	<u>DELIVERY, STORAGE AND HANDLING:</u>	19
20			20
21		Deliver materials to the project site in original packages or containers clearly labeled to identify	21
22		manufacturer, brand name, quality or grade, and fire hazard classification.	22
23			23
24		Store materials in original undamaged packages in a well ventilated area protected from weather,	24
25		moisture, soiling and extreme temperatures or humidity. Do not store wall coverings in an upright	25
26		position. Maintain temperature in storage area above 40° F.	26
27			27
28		Comply with manufacturer's special delivery, storage or handling requirements.	28
29			29
30	1.5	<u>PROJECT/SITE CONDITIONS:</u>	30
31			31
32		Maintain a constant minimum temperature of not less than 60° F. at areas of installation for at least	32
33		10 days before, and 10 days after the application of materials.	33
34			34
35		Illuminate areas of installation using permanent building lighting system. Temporary lighting alone will	35
36		not be acceptable.	36
37			37
38	1.6	<u>SEQUENCING AND SCHEDULING:</u>	38
39			39
40		Schedule installation with other construction activities to minimize the possibility of damage and	40
41		soiling during the remainder of the construction period.	41
42			42
43	1.7	<u>MAINTENANCE:</u>	43
44			44
45		<u>Replacement Materials:</u>	45
46			46
47		After completion of work, deliver to the project site not less than 2% of each type, color, and pattern	47
48		of textile wall covering installed, furnished from the same product run as the materials installed.	48
49			49
50		Package replacement materials with protective covering or wrapping, clearly identified with	50
51		appropriate labels as replacement material.	51
52			52
53		Include accessory material as required.	53
54			54
55			55

00	<u>PART 2 - PRODUCTS</u>	00
01		01
02	2.1 <u>TEXTILE WALL COVERING:</u>	02
03		03
04	<u>Manufacturers:</u>	04
05		05
06	Provide textile wall covering produced by basis of design manufacturer as specified below or	06
07	approved equal.	07
08		08
09	<u>Fabric:</u>	09
10		10
11	Provide natural woven fabric of 100% polyester by Designtex weighing not less than 12.7 oz. per lin.	11
12	yd. and bonded to backing suitable for wall application except without backing where applied to fixed	12
13	sound-absorptive panels specified in Section 09 84 13. Provide material which has been treated for	13
14	stain and mildew resistance.	14
15		15
16	Width: 54".	16
17		17
18	Color, Pattern, Texture: No. 3468-815 Gamut.	18
19		19
20	2.2 <u>ACCESSORY MATERIALS:</u>	20
21		21
22	<u>Adhesive:</u>	22
23		23
24	Manufacturer's recommended adhesive, primer and sealer, manufactured expressly for use with the	24
25	selected wall covering. Provide materials which are mildew-resistant and non-staining to the wall	25
26	covering.	26
27		27
28	VOC Content: Not greater than 7 percent VOCs by weight in accordance with Section	28
29	01 81 16.	29
30		30
31	<u>Release Coat:</u>	31
32		32
33	Provide sealer or undercoater for gypsum board substrates and undercoat for previously painted	33
34	gypsum wallboard as recommended by wall covering manufacturer.	34
35		35
36	VOC Content: Not more than 100 grams per liter in accordance with Section 01 81 16, except	36
37	if primer paint is used, comply with the limitations specified in Section 09 90 00.	37
38		38
39	<u>PART 3 - EXECUTION</u>	39
40		40
41	3.1 <u>EXAMINATION:</u>	41
42		42
43	Refer to Section 01 73 00 for examination of substrate and job conditions.	43
44		44
45	Do not install wall coverings over oil-based wood stains or felt-tip pen markings.	45
46		46
47	Check painted surfaces for possible pigment bleed through.	47
48		48
49	Start of this work constitutes acceptance of substrates as suitable for satisfactory performance of	49
50	work of this section.	50
51		51
52	3.2 <u>PREPARATION:</u>	52
53		53
54	Remove wall covering materials from packaging and allow to acclimatize to the area of installation at	54
55	least 24 hours before application.	55

00		00
01	Remove switchplates, wall plates, and surface-mounted fixtures, where wall covering is to be applied.	01
02	Upon completion of wall covering installation, reinstall items removed using skilled workmen.	02
03		03
04	Prime and seal substrate in accordance with the wall covering manufacturer's recommendations for	04
05	the type of substrate. Apply surface sealer to gypsum board which will permit subsequent removal of	05
06	vinyl wall covering without damage to paper facing.	06
07		07
08	Test substrate with electronic moisture meter to verify that surfaces to be covered with vinyl	08
09	wall coverings do not exceed moisture content permitted by manufacturer.	09
10		10
11	3.3 <u>INSTALLATION:</u>	11
12		12
13	Place wall covering panels consecutively in the order they are cut from rolls, including filling of	13
14	spaces above or below openings. Hang by reversing alternate strips except on match patterns.	14
15		15
16	Where returns of less than 6" cannot be avoided, provide temporary blocking and, if necessary,	16
17	special adhesive to secure wall covering.	17
18		18
19	Leave in place at least 24 hours.	19
20		20
21	Remove excess adhesive along with finished seams using warm water and a clean sponge, and	21
22	wipe dry.	22
23		23
24	Install wall covering with an intimate substrate bond, smooth, clean, without wrinkles, gaps and	24
25	overlaps.	25
26		26
27	Replace removed plates and fixtures and ensure that cut edges of wall covering are completely	27
28	concealed.	28
29		29
30	Apply adhesive to wall surface and apply wall covering in accordance with manufacturer's	30
31	instructions, taking care to avoid getting adhesive on fabric face. Install seams plumb, and at least 6"	31
32	from any corner. Horizontal seams are not permitted. Carefully pretrim edges, if necessary, so that	32
33	butt seams will be tight. Roll or brush covering to assure bond and to remove air bubbles, blisters,	33
34	wrinkles, and other defects. Cut wall covering evenly to edges of wall penetrations.	34
35		35
36	3.4 <u>CLEANING:</u>	36
37		37
38	Allow adhesive that appears through seams to dry; when dry, remove with a dry brush. If additional	38
39	adhesive removal is required use only the method recommended by the manufacturer for this	39
40	expressed purpose. Do not wet textile fabric.	40
41		41
42	When removing excess adhesive from surfaces adjacent to wall covering, provide protection	42
43	for the wall covering.	43
44		44
45	3.5 <u>CLEANUP:</u>	45
46		46
47	Upon completion of work, remove surplus materials, rubbish, and debris resulting from wall covering	47
48	installation and leave areas of work in a neat, clean condition.	48
49		49
50	3.6 <u>PROTECTION:</u>	50
51		51
52	Provide protective methods and materials to ensure that wall coverings will be without deterioration	52
53	or damage at time of substantial completion.	53
54		54
55	END OF SECTION 09 72 19	55

SECTION 09 77 30

FIBERGLASS REINFORCED POLYESTER PANELS

PART 1 - GENERAL1.0 RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01-Specification sections, apply to work of this section.

1.1 SUMMARY:Section Includes:

Fiberglass reinforced polyester panels as shown on the drawings including associated trim pieces for inmate toilet walls.

Related Sections:

Joint Sealants: Section 07 92 00

Simulated Stone Countertops: Section 12 36 61

1.2 SUBMITTALS:Product Data:

Submit manufacturer's product data on fiberglass reinforced polyester panels including properties, installation instructions and maintenance instructions.

Samples:

Submit 8" x 10" color samples for verification by the Architect. Submit 10" long samples of trim pieces.

Submit two samples as specified above with joint filled with foam sealant as specified.

1.3 QUALITY ASSURANCE:Standards:

Comply with local Health Department standards and guidelines.

Fire Hazard Classification:

Provide panels bearing the UL label and marking, indicating the fire hazard classification as determined by ASTM E84, flame spread not more than 200, smoke developed not more than 450.

1.4 DELIVERY, STORAGE AND HANDLING:

Protect panels during transit, delivery, storage and handling to prevent damage, soiling and deterioration.

Do not deliver panels, until wet work, grinding and similar operations which could damage, soil or deteriorate panels has been completed in installation areas. If, due to unforeseen circumstances, panels must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas.

00
01 1.5 PROJECT/SITE CONDITIONS: 00
02 01

03 Do not install panels until the required temperature and relative humidity have been stabilized and 03
04 will be maintained in accordance with manufacturer's instructions. 04
05 05

06 PART 2 - PRODUCTS 06
07 07

08 2.1 MATERIALS: 08
09 09

10 Wall Panel System: 10
11 11

12 Provide sanitary wall panel system "Glasbord with Surfaseal", Class C Fire Rating, 4' width, 3/32" 12
13 thick panels, smooth finish, as manufactured by Crane Composites or approved equal by The Marlite 13
14 Organization Division of USG Interiors, Inc., Nudo Products, Inc. or Kemlite Co. 14
15 15

16 Provide panels in height so that no horizontal seams will be required. 16
17 17

18 Provide panels in manufacturer's standard white color. 18
19 19

20 Do not include PVC moldings. 20
21 21

22 Joint Treatment: Polyurethane Foam Sealant system by Crane Composites or approved equal 22
23 specifically designed for use with specified panels for treating joints and creating a seamless 23
24 installation without the use of plastic trim pieces or similar elements. 24
25 25

26 Color: White. 26

27 VOC Content: Not more than 4 percent VOCs by weight in accordance with Section 27
28 01 81 16. 28
29 29

30 Adhesive: Manufacturer's recommended adhesive, manufactured expressly for use with the 30
31 selected panels and indicated substrate. Provide materials which are waterproof, 31
32 mildew-resistant and meet specified fire hazard classification. 32
33 33

34 VOC Content: Not more than 7 percent VOCs by weight in accordance with Section 34
35 01 81 16. 35
36 36

37 PART 3 - EXECUTION 37
38 38

39 3.1 EXAMINATION: 39
40 40

41 Refer to Section 01 73 00 for examination of substrate and job conditions. 41
42 42

43 Start of this work constitutes acceptance of substrates as suitable for satisfactory performance of 43
44 work of this section. 44
45 45

46 3.2 PREPARATION: 46
47 47

48 Remove switchplates, wall plates, and surface-mounted fixtures, where panels are to be applied. 48
49 Upon completion of panel installation, reinstall items removed using skilled workmen. 49
50 50

51 Allow panels to acclimatize to the space for not less than 24 hours prior to the start of installation. 51
52 52

53 Prepare substrate in accordance with the manufacturer's recommendations for the type of substrate. 53
54 54
55 55

00	3.3	<u>INSTALLATION:</u>	00
01			01
02		Install the work plumb, level, true and straight with no distortions. Install to a tolerance of 0.125" in	02
03		8'-0" for plumb and level. Install from top of floor base to ceiling.	03
04			04
05		Install panels in accordance with manufacturer's recommendations.	05
06			06
07		Scribe and cut work to fit adjoining work. Do not leave cut edges exposed. Cover with trim or ensure	07
08		trim to be provided under the work of other sections is adequate to hide all cut edges.	08
09			09
10		Layout full wall panel installation to ensure that each wall to be covered is of a balance design (ie., if	10
11		less than full width panels are required on the ends, that those end panels are of the same width).	11
12			12
13		Install with uniform joints between panels.	13
14			14
15		Fill joints with polyurethane foam sealant in accordance with manufacturer's written recommenda-	15
16		tions to provide a completely smooth, uniform, cleanable surface without joints..	16
17			17
18		Attach panels to substrate with panel adhesive (100% coverage).	18
19			19
20	3.4	<u>CLEANING AND PROTECTION:</u>	20
21			21
22		<u>Repairs:</u>	22
23			23
24		Repair damaged and defective panels wherever possible to eliminate defects functionally and	24
25		visually; where not possible to repair properly, replace panels. Adjust joinery for uniform appearance.	25
26		Where panels cannot be acceptably repaired, replace panels as directed by the Architect.	26
27			27
28		<u>Cleaning:</u>	28
29			29
30		Clean panels on exposed surfaces in accordance with manufacturer's instructions.	30
31			31
32		<u>Protection:</u>	32
33			33
34		The Installer of fiberglass reinforced polyester panels shall advise the Contractor of final protection	34
35		and maintained conditions necessary to ensure that the work will be without damage or deterioration	35
36		at the time of acceptance.	36
37			37
38		END OF SECTION 09 77 30	38
39			39
40			40
41			41
42			42
43			43
44			44
45			45
46			46
47			47
48			48
49			49
50			50
51			51
52			52
53			53
54			54
55			55

 SECTION 09 84 13
 FIXED SOUND-ABSORPTIVE PANELS
PART 1 - GENERAL1.0 RELATED DOCUMENTS:

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01-Specification sections, apply to work of this section.

1.1 SUMMARY:Section Includes:

Fixed sound-absorptive panel treatment with support system as shown on the drawings and in schedules including the following types:

Fabric wrapped panels.

Related Sections:

Acoustical Ceilings: Section 09 51 00

Textile Wall Coverings: Section 09 72 19

1.2 SUBMITTALS:Product Data:

Submit manufacturer's product specifications and installation instructions, including attachment system, including certified laboratory test reports and other data as required to show compliance with these specifications, for panel system.

Include manufacturer's recommendations for cleaning and maintaining fixed sound-absorptive panels.

Include acoustical testing data for panel system.

Shop Drawings:

Submit shop drawings indicating layout of fixed sound-absorptive panels, including exact sizes of each panel, based on field measurements. Include details of mounting system for panels.

Samples:

Provide 12" x 12" samples of fixed sound-absorptive panel units with required fabric for verification by the Architect and representative samples of installation devices.

Certified Test Reports:

Submit test data from an independent testing agency, acceptable to authorities having jurisdiction, evidencing that panel assemblies comply with requirements indicated for fire performance characteristics.

00	<u>Certificates:</u>	00
01		01
02	Submit certificates from manufacturers of fixed sound-absorptive panels attesting that their products	02
03	comply with specified requirements including those for fire performance characteristics.	03
04		04
05	1.3 <u>QUALITY ASSURANCE:</u>	05
06		06
07	Fire Hazard Classification: UL tested, listed and labeled as "Class 0-25", per ASTM E84 with smoke	07
08	developed of 450 or less.	08
09		09
10	Noise Reduction Coefficient: ASTM C423, 0.80 for 1" thick fabric wrapped panels.	10
11		11
12	1.4 <u>DELIVERY, STORAGE AND HANDLING:</u>	12
13		13
14	Protect fixed sound-absorptive panel units from excessive moisture in shipment, storage, and	14
15	handling. Deliver in unopened bundles and store in a dry place with adequate air circulation. Do not	15
16	deliver material to building until "wet work" such as concrete and plaster have been completed and	16
17	cured to a condition of equilibrium.	17
18		18
19	1.5 <u>PROJECT/SITE CONDITIONS:</u>	19
20		20
21	Do not install fixed sound-absorptive panels until space has been enclosed and is weathertight, and	21
22	until wet-work in the space has been completed and is nominally dry, and until ambient conditions of	22
23	temperature and humidity will be continuously maintained at values near those indicated for final	23
24	occupancy.	24
25		25
26	<u>PART 2 - PRODUCTS</u>	26
27		27
28	2.1 <u>MANUFACTURERS:</u>	28
29		29
30	Provide fixed sound-absorptive panels manufactured by one of the following or approved equal:	30
31		31
32	Capaul Architectural Acoustics	32
33	Conwed Designscape an Owens Corning Company	33
34	Decoustics	34
35	Wall Technology	35
36		36
37	2.2 <u>FABRIC WRAPPED WALL PANEL SYSTEM:</u>	37
38		38
39	<u>General:</u>	39
40		40
41	Fabricate panels to sizes and configurations indicated; attach facing materials to cores to produce	41
42	installed panels with visible surfaces fully covered and free from wrinkles, sags, blisters, seams,	42
43	adhesive or other foreign matter.	43
44		44
45	Provide complete system of panels, concealed supports and hangers as follows:	45
46		46
47	A100wp wall panels by Wall Technology, resin hardened square edges, concealed	47
48	mechanical z-clip mounting and woven fabric finish.	48
49		49
50	Thickness: 1".	50
51		51
52	NRC: 0.80 minimum with Mounting "A".	52
53		53
54	Minimum Recycled Content: 20% for fiberglass insulation core by weight.	54
55		55

00	Provide sizes as shown on the drawings.	00
01		01
02	<u>Fabric Facings:</u>	02
03		03
04	Provide custom fabric facing matching textile wall covering specified in Section 09 72 19 without	04
05	backing.	05
06		06
07	Adhesive for Fabric Facing: Water-based adhesive recommended by fabric manufacturer for	07
08	application indicated.	08
09		09
10	VOC Content: Not more than 50 grams per liter.	10
11		11
12	<u>Supports:</u>	12
13		13
14	Manufacturer's standard concealed z-clip system as suited to substrate conditions and which will	14
15	permit removal and replacement of each panel without removing other panels.	15
16		16
17	<u>PART 3 - EXECUTION</u>	17
18		18
19	3.1 <u>INSTALLATION:</u>	19
20		20
21	<u>General:</u>	21
22		22
23	Measure each area where panels are to be installed and establish layout of fixed sound-absorptive	23
24	panel units to balance border widths at opposite edges of each area. Avoid the use of less-than-half	24
25	width units at borders.	25
26		26
27	Install materials in accordance with manufacturer's printed instructions, and to comply with governing	27
28	regulations, fire resistance rating requirements as indicated, and industry standards applicable to the	28
29	work. Do not start this work until painting is complete and all floor coverings are installed (carpet	29
30	excepted).	30
31		31
32	<u>Support System:</u>	32
33		33
34	Install metal supports on substrates to receive panels using quantities and types of anchors	34
35	recommended by manufacturer for system and substrate.	35
36		36
37	Locate accurately so that panels will be plumb, level, and assure that finished surfaces will be in a	37
38	true plane. Center panels on surfaces with tops and bottoms or each side aligned and with equal	38
39	spaces between panels.	39
40		40
41	3.2 <u>CLEANING AND PROTECTION:</u>	41
42		42
43	Clean exposed surfaces of fixed sound-absorptive panels complying with manufacturer's instructions	43
44	for cleaning and repair of minor finish damage. Remove and replace work which cannot be	44
45	successfully cleaned and repaired to permanently eliminate evidence of damage.	45
46		46
47	The Installer shall advise the Contractor of required protection for the fixed sound-absorptive panels,	47
48	including temperature and humidity limitations and dust control, so that the work will be without	48
49	damage and deterioration at the time of acceptance by the Owner.	49
50		50
51	END OF SECTION 09 84 13	51
52		52
53		53
54		54
55		55

00		SECTION 09 90 00	00
01		PAINTING AND COATING	01
02			02
03	<u>PART 1 - GENERAL</u>		03
04			04
05	1.0 <u>RELATED DOCUMENTS:</u>		05
06			06
07	Drawings and general provisions of the Contract, including General and Supplementary Conditions		07
08	and Division 01-Specification sections, apply to work of this section.		08
09			09
10	1.1 <u>SUMMARY:</u>		10
11			11
12	<u>Section Includes:</u>		12
13			13
14	Field painting work as shown on the drawings and schedules, and as follows:		14
15			15
16	Painting and finishing of interior and exterior exposed items and surfaces throughout the		16
17	project.		17
18			18
19	Surface preparation, priming and finish coats of paint specified are in addition to shop priming		19
20	and surface treatment specified in other sections.		20
21			21
22	Painting of exposed bare and covered pipes and ducts, hangers, exposed steel and iron work,		22
23	and primed metal surfaces of equipment installed under the mechanical and electrical work.		23
24	Coordinate with Division 21, 22, 23, 26, 27 and 28 Installers for color coding.		24
25			25
26	Painting of mechanical grilles, registers, louvers (except aluminum), and panel covers and		26
27	frames for electrical work and systems.		27
28			28
29	Painting roof mounted equipment including aluminum and factory finished items.		29
30			30
31	Painting all exposed surfaces whether or not colors are designated in "schedules", except		31
32	where the natural finish of the material is specifically noted as a surface not to be painted.		32
33			33
34	Where exposed surfaces are not specifically mentioned, paint these the same as adjacent similar		34
35	materials or areas. If color or finish is not designated, the Architect will select these from standard		35
36	colors or finishes.		36
37			37
38	<u>Related Sections:</u>		38
39			39
40	Structural steel priming: Section 05 12 00.		40
41	Metal fabrications priming: Section 05 50 00.		41
42	Shop finished plastic laminate casework: Section 06 40 00.		42
43	Shop finished wood veneer casework, countertops, panels and wood trim: Section 06 40 00.		43
44	Shop priming steel doors and frames: Section 08 11 13.		44
45	Factory finished flush wood doors: Section 08 14 16.		45
46	Elastomeric finish for portland cement stucco: Section 09 24 13.		46
47	Surface preparation of gypsum board systems: Section 09 29 00.		47
48	Shop priming of detention equipment: 11 19 00 series sections.		48
49	Painting of fire protection, plumbing, mechanical, electrical, communications and electronic		49
50	safety and security work: Division 21, 22, 23, 26, 27 and 28 sections.		50
51			51
52	1.2 <u>PAINTING NOT INCLUDED:</u>		52
53			53
54	The following categories of work are not included as part of the field-applied finish work:		54
55			55

00	<u>Shop Priming:</u>	00
01		01
02	Surface preparation and shop priming of ferrous metal items and shop manufactured equipment is	02
03	included under the various specification sections.	03
04		04
05	<u>Mechanical and Electrical Work:</u>	05
06		06
07	Pipe and raceway identification taping or stenciled painting is specified in Division 21, 22, 23, 26, 27	07
08	and 28 sections.	08
09		09
10	<u>Pre-Finished Items:</u>	10
11		11
12	Do not include painting when factory-finishing or Installer finishing is specified for such items as:	12
13		13
14	Exterior concrete.	14
15	Interior vertical concrete.	15
16	Architectural plastic laminate casework.	16
17	Shop finished wood veneer casework, countertops, paneling and trim.	17
18	Wood doors.	18
19	Acoustic materials.	19
20	Simulated stone countertops.	20
21	Mechanical equipment, except equipment mounted on roof.	21
22	Electrical equipment.	22
23	Light fixtures.	23
24	Main switchgear and distribution cabinets.	24
25		25
26	<u>Concealed Surfaces:</u>	26
27		27
28	Painting is not required on surfaces such as walls or ceilings in concealed areas and generally	28
29	inaccessible areas, foundation spaces, furred areas and pipe spaces.	29
30		30
31	<u>Finished Metal Surfaces:</u>	31
32		32
33	Metal surfaces of anodized aluminum, factory painted aluminum, stainless steel, chromium plate,	33
34	copper, bronze, and similar finished materials will not require finish painting, unless otherwise	34
35	indicated.	35
36		36
37	Painting of finished metal surfaces of mechanical equipment on roof is required.	37
38		38
39	<u>Operating Parts:</u>	39
40		40
41	Moving parts of operating units, mechanical and electrical parts, such as valve and damper	41
42	operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting.	42
43		43
44	<u>Labels:</u>	44
45		45
46	Do not paint over any code-required labels, such as Underwriters' Laboratories, Factory Mutual, or	46
47	other code required labels, or any equipment identification, performance rating, name or	47
48	nomenclature plates.	48
49		49
50	<u>Unfinished Areas:</u>	50
51		51
52	Do not paint floors, walls or ceilings of rooms or spaces scheduled as unfinished.	52
53		53
54		54
55		55

00	1.3	<u>DEFINITIONS:</u>	00
01			01
02		Standard terminology relating to paint coatings defined in ASTM D16 apply to this section.	02
03			03
04		"Paint" as used herein means all coating systems materials, including primers, emulsions, enamels,	04
05		stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish	05
06		coats.	06
07			07
08	1.4	<u>SUBMITTALS:</u>	08
09			09
10		<u>Product Data:</u>	10
11			11
12		Submit manufacturer's technical information including paint label analysis and application instructions	12
13		for each material specified. Include block fillers and primers.	13
14			14
15		<u>Material List:</u>	15
16			16
17		Submit an inclusive list of required coating materials. Identify each material with manufacturer's	17
18		product number and generic classification. Follow the same system identification as listed in the Paint	18
19		Systems schedule at the end of this section.	19
20			20
21		<u>Initial Selection Samples:</u>	21
22			22
23		Submit manufacturer's color charts showing full range of colors and textures for each type of finish	23
24		coat.	24
25			25
26		<u>Verification Samples:</u>	26
27			27
28		Submit samples for Architect's review of color and texture on the following substrates:	28
29			29
30		For painted concrete masonry, wood, gypsum board or ferrous metals, provide two 12" x 12"	30
31		hardboard samples of each color and material, with texture to simulate actual conditions.	31
32			32
33		For stained or natural wood surfaces, provide two 4" by 8" samples of each natural and	33
34		stained wood finish. Label and identify each as to location and application.	34
35			35
36		Resubmit each sample as requested until acceptable sheen, color and texture is achieved.	36
37			37
38		On actual wall surfaces and other exterior and interior building components, duplicate painted	38
39		finishes of prepared samples. Comply with procedures specified in DPCA P5. On at least 100 sq. ft.	39
40		of surface as directed, provide full-coat finish samples until required sheen, color and texture is	40
41		obtained; simulate finished lighting conditions for review of in-place work.	41
42			42
43		Final acceptance of colors will be from samples applied on the job.	43
44			44
45		<u>Certification:</u>	45
46			46
47		Submit certification and test reports by manufacturer that products comply with local and Federal	47
48		regulations controlling use and specified limits of volatile organic compounds (VOC).	48
49			49
50		Submit certified research and development test reports showing compliance to the specified high	50
51		performance coatings. Include generic type, solid content (by volume), VOC content (unthinned), dry	51
52		film thickness, abrasion resistance, adhesion, hardness, humidity, salt spray (fog), fresh water	52
53		exposure and exterior exposure.	53
54			54
55		No coating will be considered that decreases specified dry film thickness or changes generic type.	55

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551.5 QUALITY ASSURANCE:Standards:

Where not otherwise specified, follow recommendations of "Architectural Specifications Manual" by Painting & Decorating Contractors of America.

Provide paint systems complying with requirements of GS-11 Green Seal Environmental Standard for Paints by Green Seal, Inc. except where specifically noted otherwise.

Provide paint systems for metals, unless otherwise indicated, complying with requirements of GC-03 Green Seal Environmental Standard for Anti-Corrosive Paints by Green Seal, Inc.

Single Source Responsibility:

Obtain block fillers, primers and other undercoat paint produced by same manufacturer as finish coats.

Coordination of Work:

Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.

1.6 DELIVERY, STORAGE AND HANDLING:

Deliver all materials to the job site in original, new and unopened packages and containers bearing manufacturer's name and label, and name of material, FS number if applicable, stock number, date of manufacture, contents by volume for pigment and vehicle constituents, thinning and application instructions, color number and name, and VOC content. Do not remove or make label information illegible.

Store materials not in use in tightly covered containers in an adequately illuminated and ventilated room. Follow applicable safety laws and regulations. Maintain minimum ambient temperature above 45° F and maximum ambient temperature of 90°F.

1.7 PROJECT/SITE CONDITIONS:

Apply water-base paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 50° F. and 90° F.

Apply solvent-thinned paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 45° F. and 95° F.

Do not apply paint in snow, rain, fog or mist; or when relative humidity exceeds 85%; or to damp or wet surfaces.

Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

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00	1.8	<u>EXTRA MATERIALS:</u>	00
01			01
02		Deliver extra materials to Owner not less than 1% of installed finish paint in each color and type	02
03		used, but not less than one gallon. Furnish from same production run as materials applied.	03
04			04
05		Containers to be unopened, factory sealed, and clearly labeled describing contents. Identify location	05
06		where product was used. Provide one and five gallon containers only.	06
07			07
08		<u>PART 2 - PRODUCTS</u>	08
09			09
10	2.1	<u>MANUFACTURERS:</u>	10
11			11
12		Subject to compliance with requirements, provide products indicated in the Paint System schedule by	12
13		one manufacturer for each of the lines listed.	13
14			14
15		<u>Consumer Lines:</u>	15
16			16
17		American Formulating and Manufacturing	17
18		Benjamin Moore and Co.	18
19		Diamond Vogel	19
20		Minwax	20
21		PPG Industries.	21
22		Sherwin-Williams Co.	22
23		Sophir Morris Paint Company	23
24		Wellborn, Dunn-Edwards Paints	24
25			25
26		<u>High Performance Lines:</u>	26
27			27
28		Ameron Protective Coatings Division	28
29		Carboline Company	29
30		Keeler and Long	30
31		Tnemec Company Incorporated	31
32			32
33		Manufacturers listed under "Consumer Lines" are not acceptable for high performance lines.	33
34			34
35		<u>Heavy Duty Concrete Sealer:</u>	35
36			36
37		Dayton Superior (Penta-Hard Densifier)	37
38		L.M. Scofield (Formula One Lithium Densifier)	38
39		L&M Construction Chemicals (LiON Hard)	39
40		ProSoCo (Consolideck LS)	40
41		W.R. Meadows (Liqui-Hard Ultra)	41
42		Approved equal	42
43			43
44	2.2	<u>MATERIALS:</u>	44
45			45
46		<u>Quality:</u>	46
47			47
48		Provide the best quality grade of the various types of coatings as regularly manufactured by	48
49		acceptable paint materials manufacturers. Materials not displaying the manufacturer's product	49
50		identification will not be acceptable.	50
51			51
52		<u>Material Compatibility:</u>	52
53			53
54		Provide block fillers, primers, undercoats and finish coats which are compatible with substrate and	54
55		one another.	55

00		00
01	<u>Accessory Materials:</u>	01
02		02
03	Provide linseed oil, turpentine, paint thinners and other materials recommended by coatings	03
04	manufacturer.	04
05		05
06	See Section 01 81 16 for limitations on cleaning compounds, paint removers, thinners and accessory	06
07	materials which may be used including VOC content, chemical content and other restrictions.	07
08		08
09	<u>Patching:</u>	09
10		10
11	Provide latex fillers as recommended by coatings manufacturer necessary for surface preparation.	11
12		12
13	<u>Color Pigments:</u>	13
14		14
15	Pure, non-fading, applicable types to suit the substrates and services indicated. Limit lead content as	15
16	required by law.	16
17		17
18	<u>VOC Content and Environmental Requirements:</u>	18
19		19
20	Provide primers and finish coats which have a zero VOC content and which have very low odor	20
21	during application, curing and lifetime of the paint for paints used on the following interior surfaces:	21
22		22
23	Painted (not stained) wood.	23
24	CMU, except where epoxy finish is indicated.	24
25	Gypsum board, except where epoxy finish is indicated.	25
26	Insulated pipes.	26
27	Accent colors on above surfaces.	27
28		28
29	Limit VOC content of solvent borne and waterborne paint materials and coatings to the following	29
30	limits in accordance with Section 01 81 16 (except where more stringent requirements are specified	30
31	below):	31
32		32
33	Primers, Sealers and Undercoaters: Not more than 100 grams per liter.	33
34	Flat Finish: Not more than 0 grams per liter.	34
35	Non-Flat Finishes: Not more than 0 grams per liter.	35
36	Concrete Sealer: Not more than 100 grams per liter.	36
37	Wood Stain: Not more than 250 grams per liter.	37
38	Polyurethane Clear Wood Finish (Polyurethane): Not more than 275 grams per liter.	38
39		39
40	For any coating designation not specifically indicated above, comply with requirements for flat	40
41	finish or non-flat finish as specified above as applicable to each coating type.	41
42		42
43	Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight total	43
44	aromatic compounds (hydrocarbon compounds containing one or more benzene rings).	44
45		45
46	Restricted Components: Paints and coatings shall not contain any of the following:	46
47		47
48	Acrolein.	48
49	Acrylonitrile.	49
50	Antimony.	50
51	Benzene.	51
52	Butyl benzyl phthalate.	52
53	Cadmium.	53
54	Di (2-ethylhexyl) phthalate.	54
55	Di-n-butyl phthalate.	55

00	Di-n-octyl phthalate.	00
01	1,2-dichlorobenzene.	01
02	Diethyl phthalate.	02
03	Dimethyl phthalate.	03
04	Ethylbenzene.	04
05	Formaldehyde.	05
06	Hexavalent chromium.	06
07	Isophorone.	07
08	Lead.	08
09	Mercury.	09
10	Methyl ethyl ketone.	10
11	Methyl isobutyl ketone.	11
12	Methylene chloride.	12
13	Naphthalene.	13
14	Toluene (methylbenzene).	14
15	1,1,1-trichloroethane.	15
16	Vinyl chloride.	16

Colors:

Provide colors of the finish paint systems as directed by the Architect.

Assume a maximum of 2 exterior and 8 interior colors may be selected by the Architect.

At patching of existing interior surfaces, match color of existing adjacent painted surface.

Gloss:

Provide finish coats with gloss rating on gloss meter as shown on paint schedule and as follows:

Flat	=	0 to 15	(85° meter)
Eggshell	=	5 to 20	(60° meter)
Satin	=	15 to 35	(60° meter)
Semi-Gloss	=	30 to 65	(60° meter)
Gloss	=	over 65	(60° meter)

At patching of existing interior surfaces, match gloss of existing adjacent painted surface.

2.3 SYSTEMS:

Refer to schedule of surfaces and systems at the end of this Section covering materials to be used. Proprietary names are listed to establish materials and quality required. Equivalent materials (except for consumer lines), subject to the Architect's approval, may be used. Unless otherwise indicated, product identification numbers or names are those of Sherwin Williams.

For stained and transparent wood finishes, product names and identifications are those of Mixwax.

For epoxy and high performance coatings, product identification number and names are those of Tnemec.

PART 3 - EXECUTION3.1 EXAMINATION:

Refer to Section 01 73 00 for examination of substrate and job conditions.

00	Starting of painting work will be construed as the Applicator's acceptance of the surfaces and	00
01	conditions within any particular area.	01
02		02
03	Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions otherwise	03
04	detrimental to the formation of a durable paint film.	04
05		05
06	Measure moisture content of surfaces using an electronic moisture meter. Apply coatings when	06
07	moisture content of surfaces is below the following maximum values:	07
08		08
09	Gypsum Board: 12%.	09
10	Masonry: 12%.	10
11	Wood: 15%.	11
12	Horizontal Concrete: 8%.	12
13		13
14	3.2 <u>PREPARATION:</u>	14
15		15
16	<u>General:</u>	16
17		17
18	Perform surface preparation and cleaning procedures in strict accordance with the paint	18
19	manufacturer's instructions and as herein specified, for each particular substrate condition.	19
20		20
21	Mask off or remove all hardware, hardware accessories, machined surfaces, plates, lighting fixtures,	21
22	and similar items in place and not to be finish painted. Following completion of painting of each space	22
23	or area, remove masking. Reinstall all removed items by workmen skilled in the trades involved.	23
24		24
25	Surfaces shall be perfectly dry, clean and smooth before starting work. Fill cracks, holes or checks	25
26	full and make smooth before finish is applied to surfaces. Fill any cracks, which occur after walls are	26
27	sized.	27
28		28
29	Provide barrier coats over incompatible primers or remove and reprime as required. Notify the	29
30	Architect in writing of any anticipated problems using specified coating systems with substrates	30
31	primed by others.	31
32		32
33	Remove mildew from impervious surfaces by scrubbing with solution of trisodium phosphate and	33
34	bleach. Rinse with water and allow substrate to dry.	34
35		35
36	Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease	36
37	prior to mechanical cleaning. Program the cleaning and painting so that contaminants from the	37
38	cleaning process will not fall onto wet, newly-painted surfaces.	38
39		39
40	<u>Cementitious Surfaces:</u>	40
41		41
42	Remove efflorescence, chalk, dust, dirt, grease, oils and release agents from cementitious materials.	42
43	Roughen as required to remove any glaze. Use abrasive blast cleaning if hardeners or sealers have	43
44	been used.	44
45		45
46	<u>Wood Surfaces:</u>	46
47		47
48	Remove dirt and foreign substances from wood to receive opaque finish. Patch knots, pitch pockets,	48
49	and other surface imperfections with patching compound and apply sealer.	49
50		50
51	Remove dirt and foreign substances from wood to receive transparent finish. Seal knots and pitch	51
52	pockets. Fill nail holes and other surface imperfections with tinted chalking compound after sealer	52
53	has been applied.	53
54		54
55		55

00	<u>Ferrous Metal Surfaces:</u>	00
01		01
02	Remove oil, grease, dirt, loose mill scale, and other foreign substrates. Use solvent or mechanical	02
03	cleaning methods complying with Steel Structure Painting Council (SSPC) recommendations.	03
04		04
05	<u>Galvanized Surfaces:</u>	05
06		06
07	Remove oils and surface contaminants with non-petroleum based solvents. Remove pretreatment	07
08	from sheet metal coil stock by mechanical methods.	08
09		09
10	3.3 <u>SURFACES:</u>	10
11		11
12	Prime, stain, or seal wood required to receive transparent finish using specified topcoat material	12
13	immediately upon delivery to job. Prime edges, ends, faces, undersides and backsides of such wood.	13
14		14
15	3.4 <u>MATERIALS:</u>	15
16		16
17	Store, mix and prepare painting materials in accordance with manufacturer's directions.	17
18		18
19	Stir materials before application to produce a mixture of uniform density, and stir as required during	19
20	the application of the materials.	20
21		21
22	Do not stir surface film into the material. Remove the film and if necessary, strain the material before	22
23	using.	23
24		24
25	3.5 <u>APPLICATION:</u>	25
26		26
27	<u>General:</u>	27
28		28
29	Apply paint in accordance with the manufacturer's directions. Use applicators and techniques best	29
30	suited for the substrate and type of materials being applied.	30
31		31
32	Form true, straight lines against other materials, finishes and color changes.	32
33		33
34	Apply additional coats when undercoats, stains or other conditions show through the final coat of	34
35	paint, until the paint film is of uniform finish, color and appearance. Give special attention to ensure	35
36	that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film	36
37	thickness equivalent to that of flat surfaces.	37
38		38
39	Sand wood and metal surfaces between coats to assure smoothness and adhesion of subsequent	39
40	coats. Use extra fine sandpaper to avoid cutting the edges when sanding. Apply putty or spackling	40
41	compound after surfaces are primed and primer is dry. Bring material flush with adjoining surfaces.	41
42		42
43	Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Paint	43
44	surfaces behind permanently fixed equipment or furniture with prime coat only before final installation	44
45	of equipment.	45
46		46
47	Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular	47
48	black paint.	48
49		49
50	<u>Scheduling Painting:</u>	50
51		51
52	Apply the first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for	52
53	painting as soon as practicable after preparation and before subsequent surface deterioration.	53
54		54
55		55

Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

Prime Coats:

Apply a prime coat to material which is required to be painted or finished. Omit prime coat on shop primed metal surfaces. Touch-up shop prime coat.

Provide prime coat of contrasting color from finish coat.

Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.

Pigmented (Opaque) Finishes:

Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.

Transparent (Clear) Finishes:

Use multiple coats to produce glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.

Provide satin finish for final coats.

Completed Work:

Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.6 CLEANING:

Remove from the site all discarded paint materials, rubbish, cans and rags at the end of each work day.

Upon completion of painting work, clean glass and other paint-spattered surfaces. Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

3.7 PROTECTION:

Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to the Architect.

Furnish and lay drop cloths or mask off areas where finishing is being done to protect floors and other work from damage during the execution of work.

Remove oily rags and waste from the building every night. Do not allow to accumulate.

Provide "Wet Paint" signs as required to protect newly-painted finishes.

00 Remove temporary protective wrappings provided by others for protection of their work, after 00
01 completion of painting operations. 01

02 02
03 At the completion of work of other trades, touch-up and restore all damaged or defaced painted 03
04 surfaces. Comply with procedures specified in PDCA P1. 04

05 05
06 3.8 PAINT SCHEDULE: 06

07 07
08 08

09 09
10 SURFACE SYSTEM PREPARATION 10

11 11

12 Exterior 12

13 13
14 Primed metal, general EM-1 Remove rust, touch up shop coat 14
15 Galvanized, general EM-1 SSPC-SP1, solvent clean 15

16 16
17 Interior 17

18 18
19 Primed steel, general IM-1 Remove rust, touch up shop coat 19
20 Primed steel, epoxy IM-5 Remove rust, touch up shop coat 20

21 (detention doors and 21
22 frames) 22

23 Wood, stain IW-4 Fill, sand, putty nail holes after sealing 23
24 Wood, paint IW-3 Fill, sand, seal knots with shellac 24

25 Concrete floors, seal IC-1 (SC) Clean. Remove any incompatible curing compounds. 25
26 (second application 26
27 for new concrete) 27

28 CMU, semi IC-5 Clean, neutralize surfaces 28
29 CMU, epoxy IC-6 Clean, neutralize surfaces 29

30 Gyp. B'd. - Flat IG-1 Clean 30
31 (Ceilings UON) 31

32 Gyp. B'd. - Eggshell IG-2 Clean 32
33 (Walls UON) 33

34 Gyp. B'd. - Toilets IG-5 Clean 34
35 and Locations 35

36 Scheduled as Epoxy 36
37 Insul. pipes IP-1 Clean 37

38 Accent colors IA-1 38
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43 43
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Existing Surfaces

Clean, fill, patch, sand as required. Roughen glossy surfaces and prepare for finish painting as recommended by manufacturer for surface and finish to be applied. Provide texture on patched surface to match existing adjacent surfaces. Prime or seal patched areas and apply one or two finish coats as scheduled for same or similar surfaces.

3.9 PAINT SYSTEMS:

System	Mfr	Type	Prime*	Finish*	Gloss	Dry Film (Mils)	Notes (H)
EM-1	SW	DTM acrylic		2 B66-200	Semi	6.0	B
IM-1	SW	Acrylic-alkyd		2 B34-850	Semi	4.0	
IM-5	T	Acrylic urethane	1 135	1 1075	Semi	5.5	B
IW-3	SW	Zero VOC acrylic	1 B28W08111	2 B30-4600	Eggshell	2.8	
IW-4	M	Urethane, stain	1 Tintable Int. Wood Stain 250 VOC	2 Polycrylic	Satin	2.0	C
IC-1/SC	S	Lithium densifier		1 Formula One Lithium Densifier			
IC-5	SW	Acrylic-alkyd	1 A24W00200	2 B34-850	Semi	2.8	J
IC-6	T	Water base epoxy	1 130	1 L69	Semi	5.0	B,E,H
IG-1	SW	Zero VOC acrylic	1 B28W02600	2 B30-2600	Flat	3.4	A
IG-2	SW	Zero VOC acrylic	1 B28W04600	2 B20-2600	Eggshell	2.8	A
IG-5	T	Water base epoxy	1 L69	1 L69	Semi	5.0	B
IP-1	SW	Zero VOC acrylic	1 B28W04600	2 B20-2600	Eggshell	2.8	
IA-1	SW	As above for surfaces		2 B20-2600	Eggshell	2.8	D

Notes:

A = Apply light orange peel texture with roller.

B = Spray apply.

C = Mix stain with paste wood filler for open grained wood.

D = Deeptone accent colors.

E = Apply Series 130 primer/filler by spray and backroll to fill all voids and pin holes.

H = Dry film thickness applies to finish coat only.

J = Apply block filler by spray and backroll to fill all voids and pin holes.

Specified dry film thicknesses are minimum required.

* First number in "prime" and "finish" columns indicates number of coats required followed by manufacturer's system number.

Manufacturers:

M = Minwax

S = L. M. Scofield Company

SW = Sherwin Williams

T = Tnemec

END OF SECTION 09 90 00