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2200 ENTERPRISE AV LA CROSSE, WI 54603 WASTEWATER TREAT **ENUE** T ME N T

RELEASED: MAY 23, 2018

ARCHITECTURAL DENOTES DRAWINGS INCLUDED WITH RELEASE / PACKAGE OVERALL GROUND FLOOR FACILITY REFERENCE PLAN GROUND FLOOR PLAN EXTERIOR ELEVATIONS OVERALL ROOF PLAN ENLARGED ROOF PLAN ROOF DETAILS ARCHITECTURAL COVER SHEET CODE COMPLIANCE INFORMATION SHEET **BUILDING SECTIONS** ROOM FINISH SCHEDULE / DOOR and FRAME SCHEDULE & DETAILS DRAWING ARCHITE A10.001 A10.002 A10.003 A10.004 A10.005 A10.006 A10.007 A10.008 ARCHITECTURAL SPECIFICATIONS - SHEET 1 ARCHITECTURAL SPECIFICATIONS - SHEET 2 ARCHITECTURAL SPECIFICATIONS - SHEET 3 ARCHITECTURAL SPECIFICATIONS - SHEET 4 ARCHITECTURAL SPECIFICATIONS - SHEET 5 ARCHITECTURAL SPECIFICATIONS - SHEET 7 ARCHITECTURAL SPECIFICATIONS - SHEET 7 ARCHITECTURAL SPECIFICATIONS - SHEET 8 ARCHITECTURAL SPECIFICATIONS - SHEET 9 ARCHITECTURAL SPECIFICATIONS - SHEET 9 CTURAL CONT. STRUCTURAL **PLUMBING** FIRE PROTECTION REFRIGERATION MECHANICAL ELECTRICAL SEE STRUCTURAL DRAWINGS COVER SHEET SEE ELECTRICAL DRAWINGS COVER SHEET SEE PLUMBING DRAWINGS COVER SHEET SEE FIRE PROTECTION DRAWINGS COVER SHEET SEE ELECTRICAL DRAWINGS COVER SHEET SEE MECHANICAL DRAWINGS COVER SHEET PRODUCTION ROOM A100 70°• SHEET NUMBER – DETAIL NUMBER – SHEET NUMBER SHEET NUMBER **BUILDING SECTION** ELEVATION SHEET NUMBER WALL SECTION - \bigotimes SYMBOLS FLOOR / GRADE ELEVATION MARKER WINDOW TYPE INSULATED METAL PANEL WALLS METAL STUD WALLS WALL TYPE ROOM NUMBER **ROOM NAME** CONCRETE MASONRY UNIT WALLS ROOM TEMPERATURE DOOR NUMBER A3.1 SECTION INTERIOR ELEVATION SYMBOL DETAIL REFERENCE BUILDING SECTION AB BREVIATIONS CAL ESS OTHERWISE NOTED L COMPOSITION TILE FY IN FIELD IN CONTRACT TO SCALE ACH DRAIN PHONE ET PAPER DISPENSER JFACTURER //UM APPLICABLE SUM WALL BOARD SUM BOARD SRETE SEALER N ACCOUSTICAL TILE DLITHIC RESINOUS R CLEAN-OUT R DRAIN EXTINGUISHER EXTINGUISHER CA 1 FLOOR 1ED TRICAL PANEL IRED TORAIN LEADER TORAIN SH OPENING TORE OW METAL ING, VENTILATING AND ONDITIONING ATED METAL PANEL ORY OF CONCRETE OF FINISH OF MASONRY OF STUD R SINK ENTER FIC LAMINATE RETE MASONRY UNIT MIC TILE (ING FOUNTAIN R TOWEL DISPENSER SURE TREATED WOOD ERTY LINE, PLATE STRUCTURAL CONSTRUCTION MANAGER REFRIGERATION ENGINEER MECHANICAL PLUMBING ENGINEER ARCHITECT DESIGN CTRICAL THE DENNIS GROUP, LLC THE DENNIS THE DENNIS THE DENNIS THE DENNIS THE DENNIS GROUP, LLC THE DENNIS GROUP, LLC THE DENNIS ENGINEER ENGINEER ENGINEER GROUP, GROUP, GROUP, GROUP, LLC GROUP, LLC TEAM DRAWING NO.

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GREAT LAKES CHEESE 2200 ENTERPRISE AVENUE LA CROSSE, WISCONSIN 54603

> **ARCHITECTURAL COVER SHEET**

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Α	05.23.2018	SDP	SDP	PLAN COMMISSION REVIEW
RELEASE	DATE	BY	APP.	RELEASED FOR
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GROUND **FLOOR** PLAN

EG 233' END: INDICATES MAX.

ESS CAPACITY = 165

JAL UNOBSTRUCTED OPENING ÷
TH EGRESS WIDTH PER OCCUPANT

\mathbb{H}

EXISTING BUILDING TO REMAIN (ALL LEVELS)

TOTAL NEW BUILDING

CLIMATE ZONE PER CHAPTER 3 OF THE IECC - ZONE 6A

ASSIGNED R-VALUES TO CONDITIONED AREAS PER 2015 IECC TABLE 502.2(1):

• EXTERIOR PROCESS AREA WALLS = R-34 (CODE MINIMUM = U-0.069 OR R-14.5)

• ROOF = R-24.2 LTTR (CODE MINIMUM = R-20)

• FOUNDATIONS (ALL AREAS) = R-10 (CODE MINIMUM = R-10 FOR 24" BELOW GRADE)

CHAPTER 13 - ENERGY EFFICIENCY

PUSH SIDE = 18" MINIMUM
PULL SIDE = 18" MINIMUM
DOOR WIDTH = 2'-8" (32") MINIMUM CLEAR OPENING WIDTH
ACCESSIBLE ROUTE DIMENSIONS
MINIMUM WIDTH = 36"
MINIMUM WIDTH AT ANY GIVEN POINT = 32" IF LESS THAN 24" LONG
PUBLIC ENTRANCES COMPLY WITH SECTION 1105.1
60% OF ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE

COMPLIES WITH STATE ACCESSIBILITY REQUIREMENTS
DOOR CLEARANCE DIMENSIONS
• PUSH SIDE = 0", 12" FOR DOOR WITH CLOSER AND LATCH
• PULL SIDE = 18" MINIMUM

BUILDING AREAS

a. NEW BUILDING AREA: USE GROUP

1600

S.F.

661"	167.8"			RIOR ON	(ТО ЕХТЕ) WIDTH	TOTAL EGRESS WIDTH (TO EXTERIOR ONLY)
33"	3.2"	0.2		_	16	T	FACTORY
166"	107.2%	0,2	57	8	506	77.2	FACTORY
363"	42"	0.2	23	2	215	S-2	STORAGE
99"	21.4	0:2	N	2	107	B	BUSINESS
WIDTH PROVIDED	EXITS EXITS CAPACITY MIN. EGRESS WIDTH REQ'D PROVIDED MULTIPLIER WIDTH REQUIRED PROVIDED	CAPACITY MULTIPLIER	EXITS PROVIDED	EXITS REQ'D	OCC.	USE	

BUILDINGS ON THE SAME LOT: SECTION 503.1.2

• WASTEWATER TREATMENT BUILDING WILL BE CONSIDERED AS PORTIONS OF THE MAIN FACILITY.

AREA LIMITATIONS: <u>UNLIMITED</u> PER SECTION 507.8
 AUTOMATIC SPRINKLER SYSTEM THROUGHOUT: 903.3.1.1
 60-FOOT WIDE PERIMETER OF PUBLIC WAYS OR YARDS

CHAPTER 11 - ACCESSIBILITY (ICC/ANSI a117.1 ACCESSIBILITY STANDARDS) and ADA STANDARDS FOR ACCESSIBLE DESIGN

F-1 16 1	F-1 506	S-2 215	В	USE
	506			
_			107	CALC. OCC. LOAD
	3	N	2	EXITS REQ'D
1	5	1	2	EXITS PROVIDED
0.2	0,2	0.2	0.2	CAPACITY MULTIPLIER
3.2"	707.2"	42"	21.4"	EXITS EXITS CAPACITY MIN. EGRESS REQ'D PROVIDED MULTIPLIER WIDTH REQUIRED
33"	166"	363"	99"	EGRESS WIDTH PROVIDED
	3.2"	3.2"	42" 101.2"	3.2" 3.2"

TORAGE	USINESS		NUMBER OF EXITS
S-2	В	USE	OF EXI
215	107	CALC. OCC. LOAD	S
N	2	EXITS REQ'D	
23	2	EXITS PROVIDED	PER S
0.2	0.2	CAPACITY MULTIPLIER	SECTION 1006
42"	21.4	EGRESS EXITS EXITS CAPACITY MIN. EGRESS WIDTH REQ'D PROVIDED MULTIPLIER WIDTH REQUIRED PROVIDED	PER SECTION 1006 AND TABLE 106.2.1 AND 1006.3.
363"	99"	EGRESS WIDTH PROVIDED	ND 1006.3.1
X			

WITH APPROVED
SMOKE
VENT SYSTEM

TRAVEL DISTANCE

WITH APPROVED FIRE SPRINKLER SYSTEM

ACCESSIBLE MEANS OF EGRESS COMPLY WITH SECTION 1009
STAIRS COMPLY WITH SECTION 1011
RAMPS (IF PROVIDED) COMPLY WITH SECTION 1012
HANDRAILS COMPLY WITH SECTION 1014
GUARDS COMPLY WITH SECTION 1015

550 GAL < 1,000 GAL: SPACE NEED NOT BE CLASSIFIED AS HIGH HAZARD GROUP H.

CHEMICALS TO BE STORED IN TOTES AND DIRECTLY HOOKED UP AND PUMPED IN TO THE INJECTION POINTS.

PER TABLE 307.1 (2) FOOTNOTES B & D, AGGREGATE OF 1,000 GAL OF CORROSIVES MAY BE STORED AND USED IN CLOSED SYSTEMS.

SODIUM HYDROXIDE (NAOH) 50% CONCENTRATION TOTAL ALLOWED TOTAL QUANTITY QUANTITY 275 GAL 275 GAL 550 GAL

CHEMICAL SULFURIC ACID (${\rm H_2SO_4}$) 30% CONCENTRATION HAZARD

CORROSIVE

CORROSIVE

• TABLE 307.1 (2)

PER SECTION 1005

ION-SEPARATED MIXED USE FACTORY INDUSTRIAL - MODERATE HAZARD (306.2) **BUSINESS** (304.1) PER 508.3.2 TOTAL =

COMBINED TOTALS = 107,310 SF 50,563 SF 10,663 SF 168,536 SF 1600 SF N/A XX N A

EXISTING NEW

CHAPTER 10 - MEANS OF EGRESS

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT - OVERALL FACILTY

SF / OCC.

AREA SF

SMOKE AND HEAT VENTS

• THE DESIGN AND INSTALLATION OF SMOKE AND HEAT VENTS SHALL BE IN ACCORDANCE WITH SECTIONS 910.3.1 THROUGH 910.3.3

PORTABLE FIRE EXTINGUISHERS

• PER FIRE/LIFE SAFETY CODE: NFPA-1 2012 (WISCONSIN COMMERCIAL CODE, CHAPTER SPS 314) & NFPA 10

Y SPRINKLED BUILDING - AUTOMATIC SPRINKLER SYSTEM
DESIGNED IN ACCORDANCE WITH NFPA 13 EDITION 2007 (903.3.1.1)
PER IBC 903.4 THE FIRE PROTECTION SYSTEM, SWITCHES, TAMPER SWITCHES, PRESSURE SWITCHES, ETC. ARE MONITORED BY THE EXISTING FACILITY'S FIRE ALARM SYSTEM. REFER TO THE ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION.

PER SECTION 903

0

0

0

0

FACTORY INDUSTRIAL

107,310

49,560

496

<u>\$</u>

10,663

AS PROJECTED BY OWNER (ON LARGEST SHIFT)

TOTAL =

6

• MIXED USE AND OCCUPANCY CLASSIFICATION
(302.1)

CHAPTER 9 - FIRE PROTECTION

FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS

ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS

NONBEARING WALLS & PARTITIONS INTERIOR

NONBEARING WALLS
EXTERIOR

STRUCTURAL FRAME

BUILDING ELEMENT

ONAL ELECTRICAL CODE (NFPA 70): 2011 (WISCONSIN COMMERCIAL BUILDING CODE, CHAPTER 316)
316)
IONAL FIRE ALARM CODE (NFPA-72-07): 2013
INTERNATIONAL ENERGY CONSERVATION CODE: 2015 (WISCONSIN COMMERCIAL BUILDING E, CHAPTER SPS 363)
CODES INCLUDE WISCONSIN COMMERCIAL BUILDING CODE AMENDMENTS

RE/LIFE SAFETY CODE: NFPA-1 2012 (WISCONSIN COMMERCIAL CODE, CHAPTERS SPS 314)
ANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (NFPA-13): 2013
SCONSIN PLUMBING CODE (WISCONSIN COMMERCIAL BUILDING CODE, CHAPTERS SPS 381-384)
C INTERNATIONAL FUEL GAS CODE: 2015 (WISCONSIN COMMERCIAL BUILDING CODE, CHAPTER
C 385)

IBILITY: ICC/ANSI A117.1-2015 (AS AMENDED BY WISCONSIN) RNATIONAL MECHANICAL CODE: 2015 (WISCONSIN COMMERCIAL

ONSIN COMMERCIAL BUILDING CODE TERNATIONAL BUILDING CODE: 2015 (WISCONSIN COMMERCIAL BUILDING CODE, CHAPTER , NCARB - PROJECT ARCHITECT

PLAN COMMISSION REVIEW

CHAPTER 6 - CONSTRUCTION CLASSIFICATION TYPE

TYPE II-B THROUGHOUT
 FIRE RESISTANCE REQUIREMENT FOR BUILDING ELEMENTS = 0 HRS. (PER TABLE 601)
 REQUIRED FIRE RATING OF EXTERIOR WALLS = 0 HOURS. NO SIDE YARD LESS THAN 60 FEET. (PER 507.4 & TABLE 602)

FIRE RESISTANCE RATING FOR TYPE II-B CONSTRUCTION (TABLE 601)

FIRE RATING

AUTHORIZED AGENT:

CLIENT:
PROPOSED USE:
PROJECT NAME:
PROJECT LOCATION:

IENT
IENT BUILDING | DGL PROJECT: 5590

BUILDING CODE

SUMMARY

0

0

DRAWING NO. A0. 100

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170,136 S.F.

168,536 S.F.

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CHAPTER 5 - GENERAL BUILDING HEIGHTS and AREAS
 HEIGHT LIMITATIONS (PER TABLE 503; TYPE IIB CONSTRUCTION)

W/ AUTOMATIC SPRINKLER SYSTEM INCREASE: 504.2

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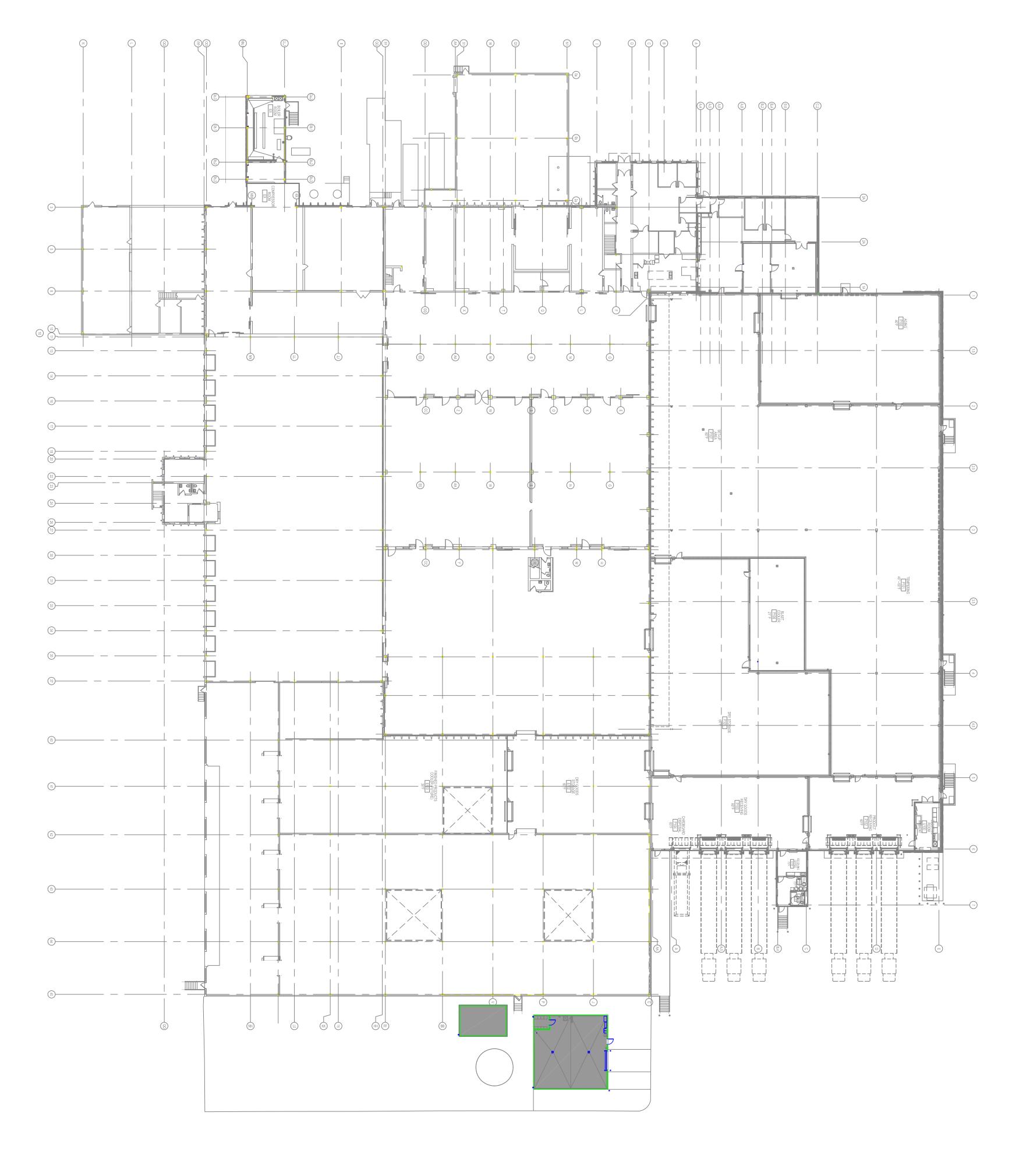


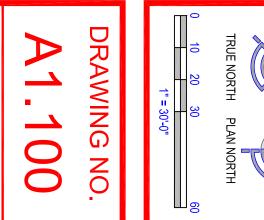
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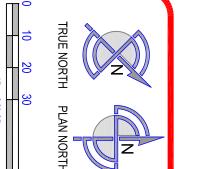
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INFORMATION SHEET

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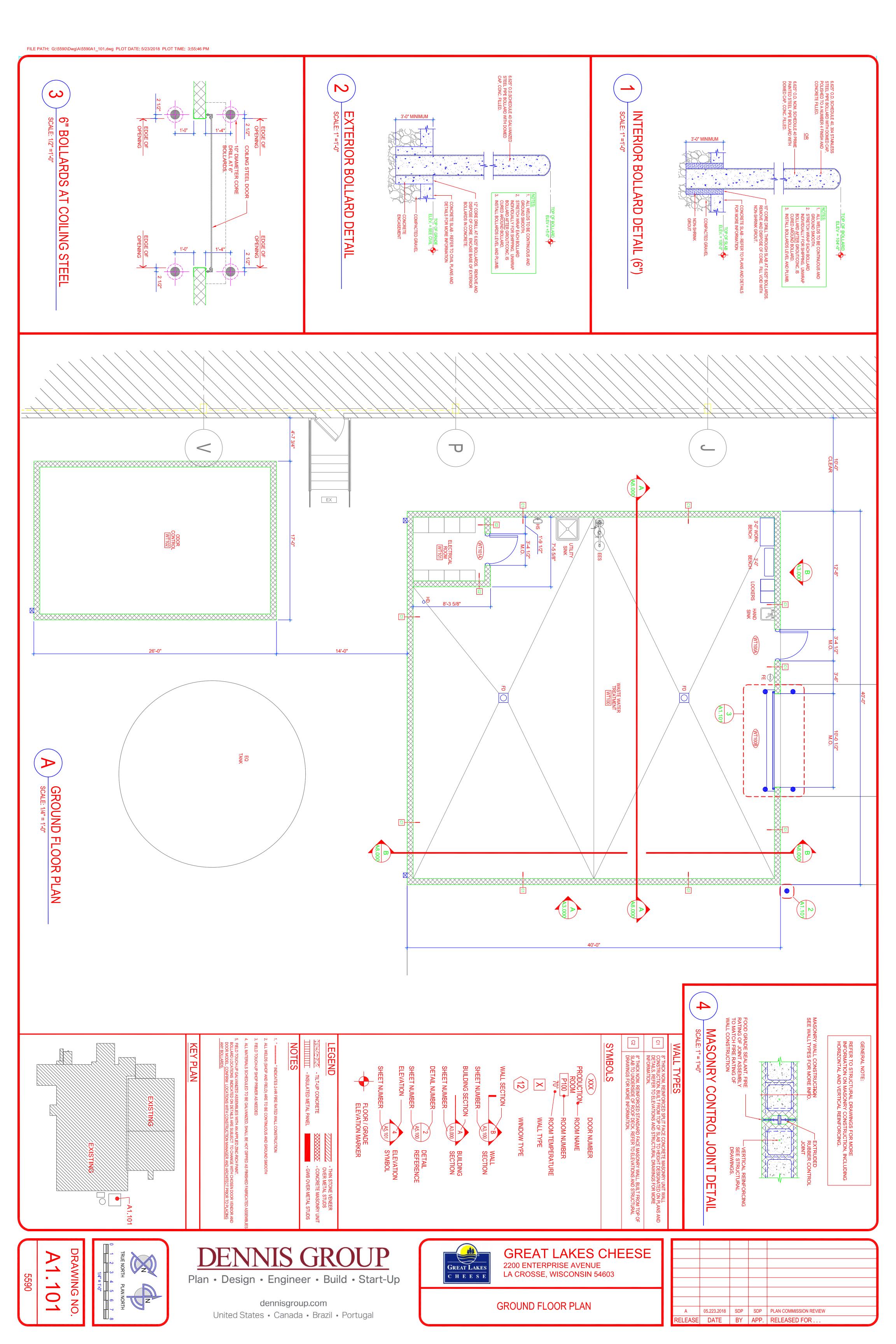
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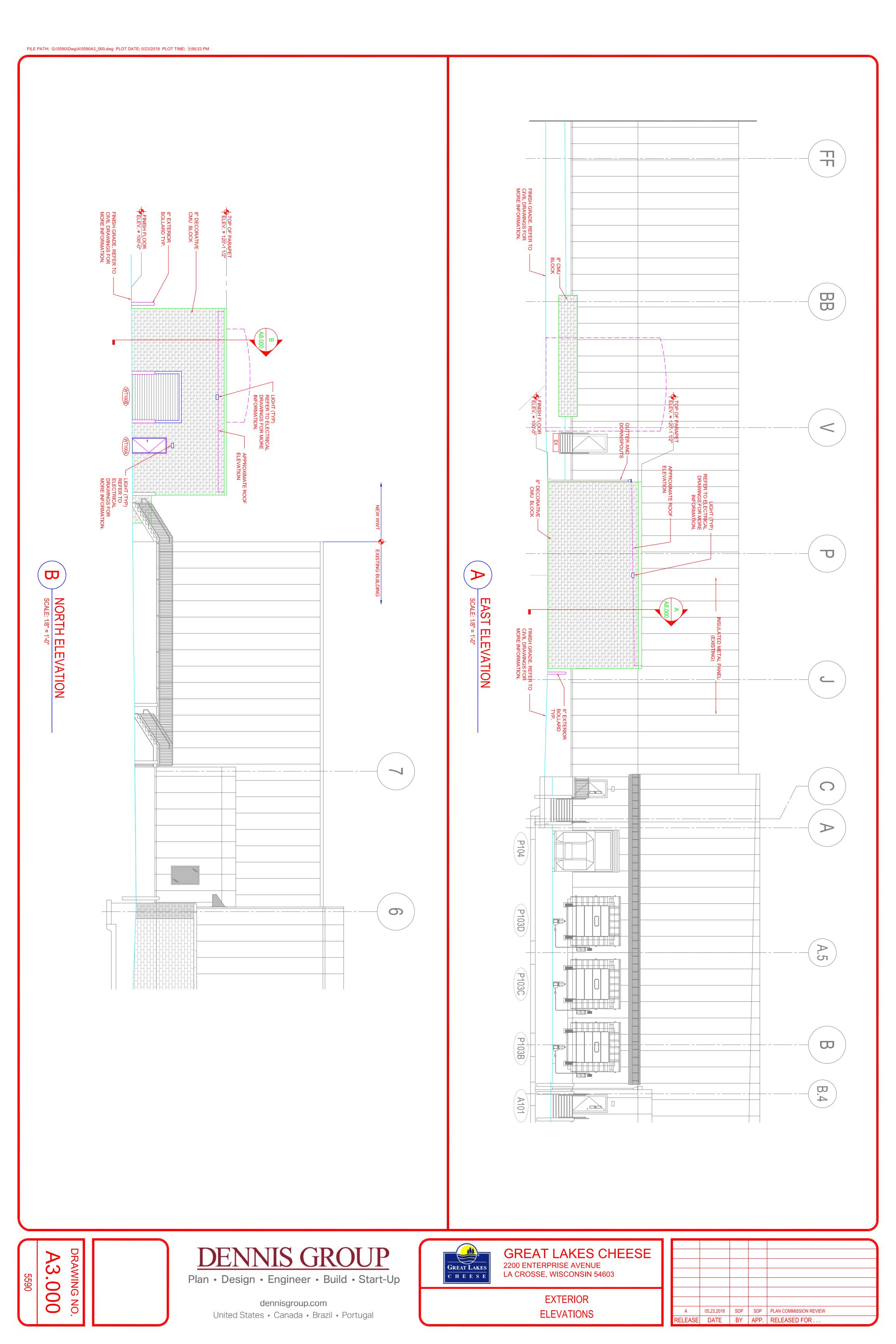


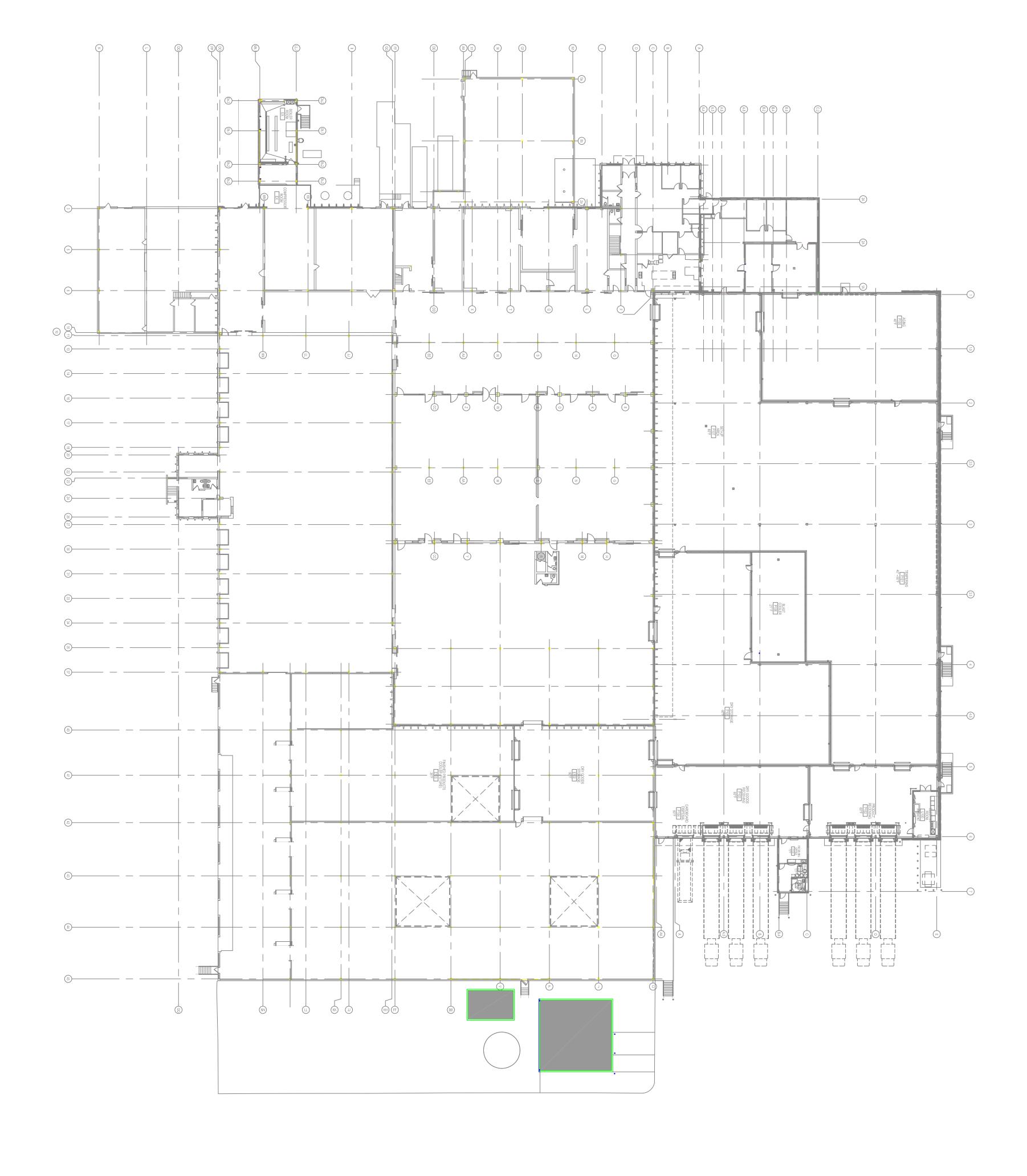
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LA CROSSE, WISCONSIN 54603

OVERALL GROUND FLOOR FACILITY
REFERENCE PLAN

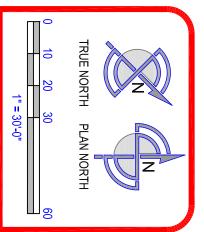
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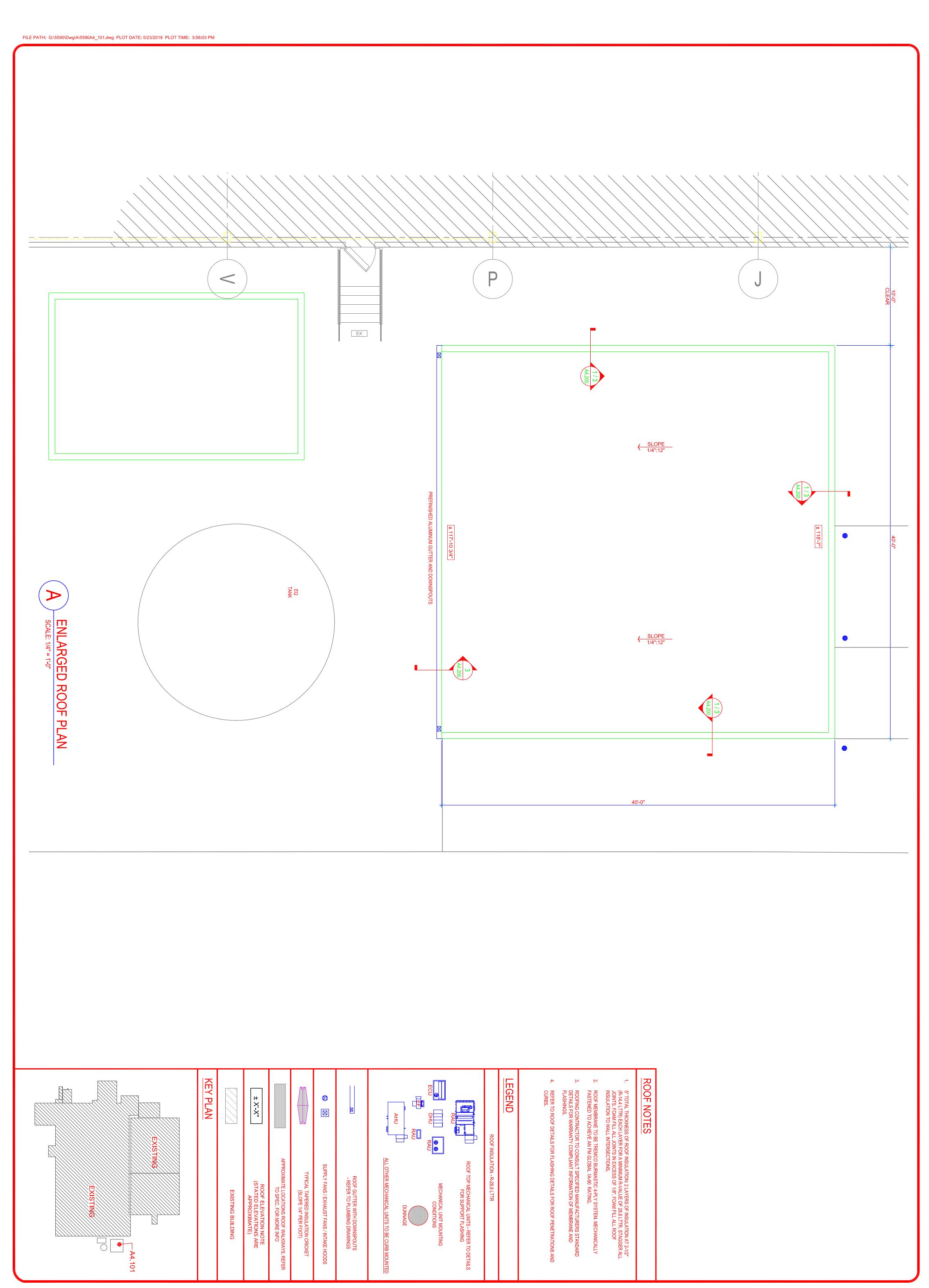
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OVERALL FACILITY ROOF PLAN

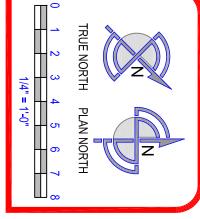
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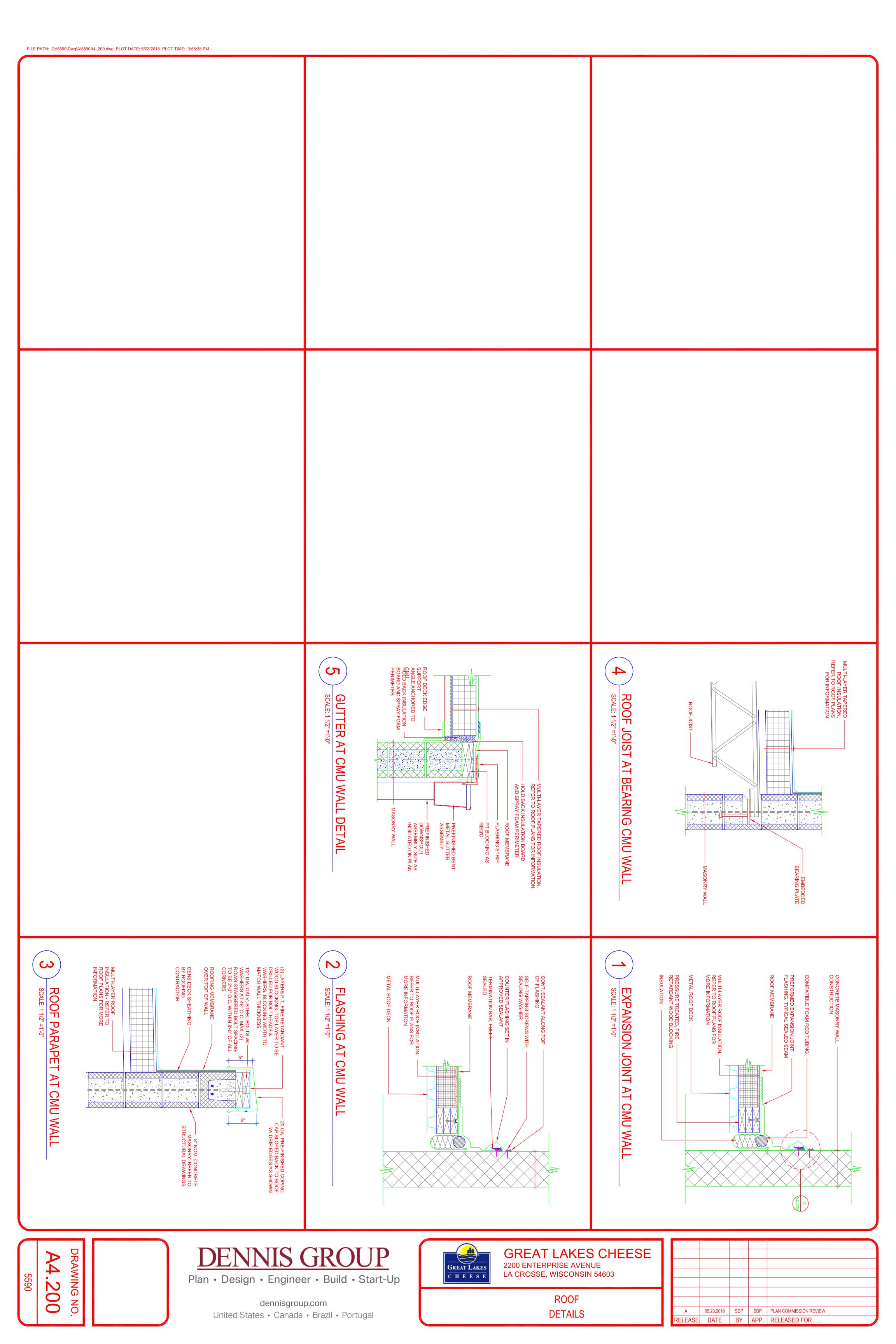
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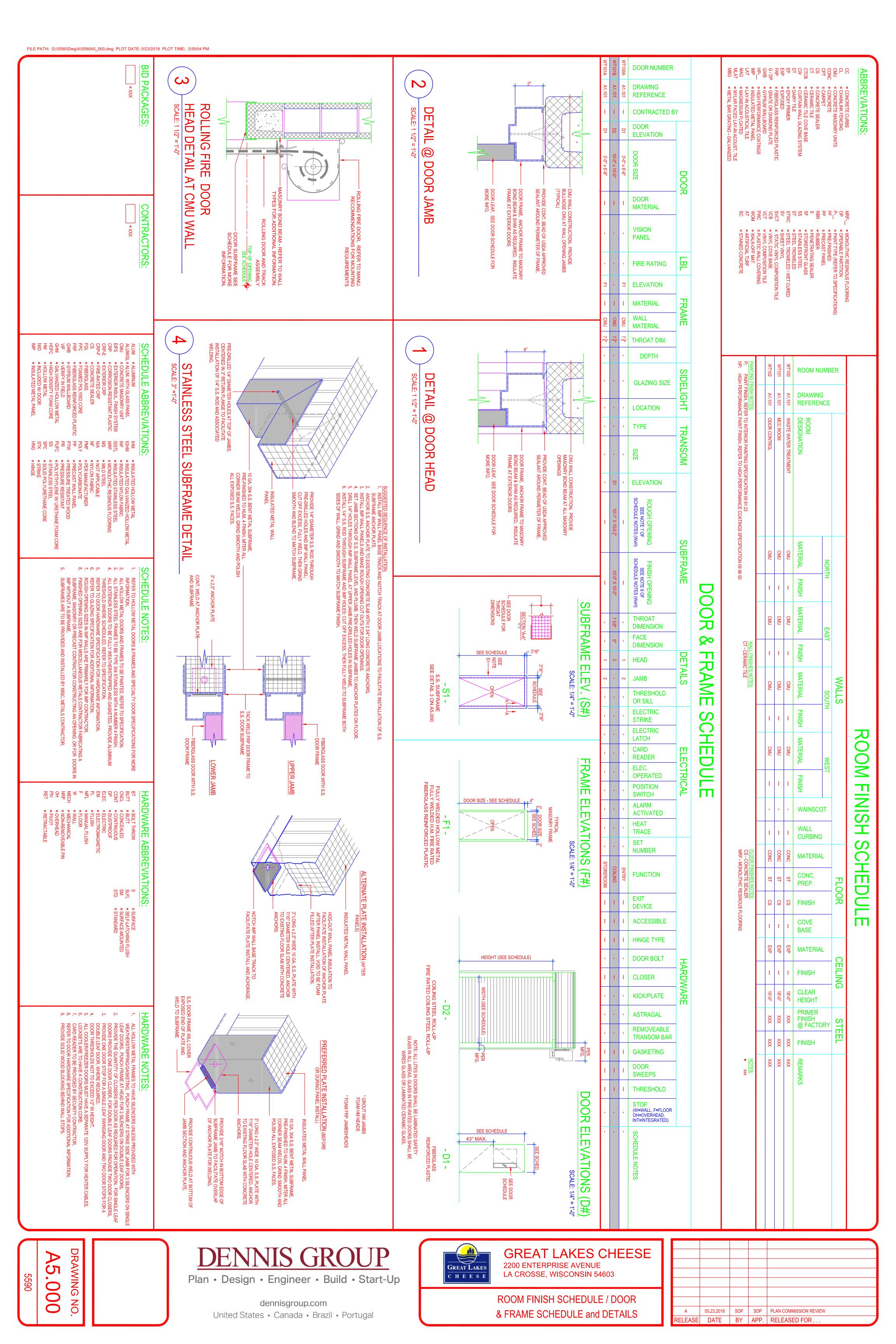
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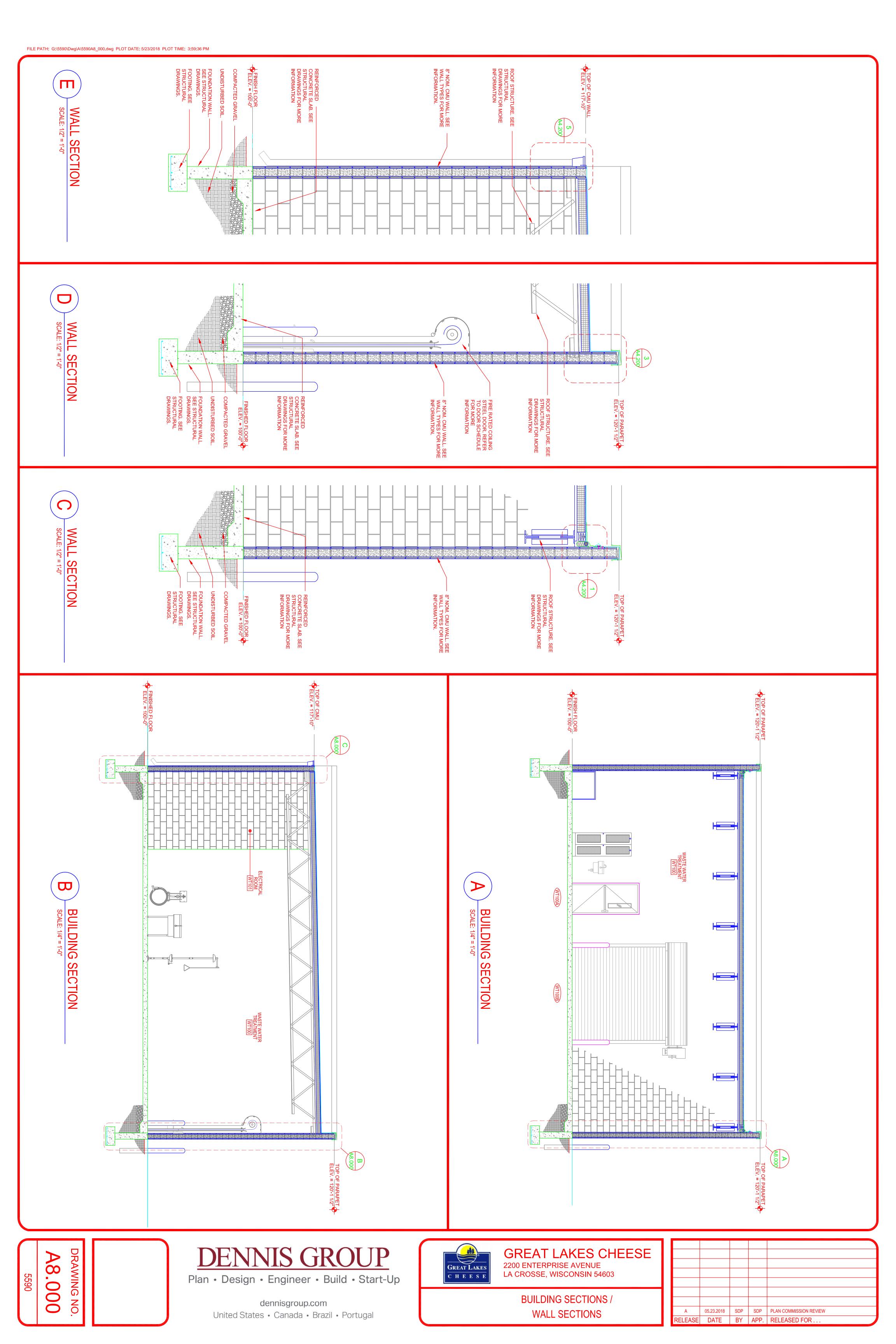


ENLARGED
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ROOF PLAN

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04 22 00 - UNIT MASONRY ASSEMBLIES CONT.

1.01 ITEMS REQUIRED BUT NOT SPECIFIED

A. IF AN ITEM OR MATERIAL OF THIS TRADE IS INDICATED ON THE DRAWINGS BUT NOT SPECIFICALLY LISTED IN THIS SECTION, PROVIDE SUCH ITEM OR MATERIAL AT A STANDARD OF QUALITY EQUAL TO THE STANDARD ESTABLISHED FOR THE BALANCE OF THE WORK SPECIFIED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

1.02 EXECUTION, CORRELATION AND INTENT

A. IF AN ITEM OR MATERIAL OF THIS TRADE IS INDICATED ON THE DRAWINGS BUT NOT SPECIFICALLY LISTED IN THIS SECTION, PROVIDE SUCH ITEM OR MATERIAL AT A STANDARD OF QUALITY EQUAL TO THE STANDARD ESTABLISHED FOR THE BALANCE OF THE WORK SPECIFIED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

B. IN CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK IS TO BE PROVIDED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

1.03 SECTION INCLUDES

A. FURNISH AND INSTALL: 1. REINFORCED UNIT MASONRY CONSTRUCTION AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.

A. STANDARD UNITS B. SPLIT-FACE UNITS.

CONCRETE MASONRY UNITS.

PRECAST LINTELS.

5. GROUT FILL FOR HOLLOW METAL STEEL FRAMES, AND WHEREVER TIES OR ANCHORAGE ITEMS OCCUR, AND AS FURTHER INDICATED IN THE DRAWINGS

6. VERTICAL AND HORIZONTAL REINFORCING, TIES, ANCHORS, AND OTHER METAL ACCESSORIES, FOR ANCHORING UNIT MASONRY TOGETHER AND TO OTHER MATERIALS.

7. COMPRESSIBLE JOINT FILLERS FOR CONTROL JOINTS IN UNIT MASONRY WORK AND JOINTS WITH STRUCTURAL STEEL.

8. METAL / FLEXIBLE SHEET FLASHING.

B. INSTALL THE FOLLOWING FURNISHED UNDER THE INDICATED SECTIONS:

1. PLACEMENT AND BUILDING-IN OF, AS WORK PROGRESSES, ANCHOR BOLTS, WOOD BLOCKING, AND ANCHORAGE FOR ITEMS FURNISHED OR SET BY OTHER TRADES AS SPECIFIED IN INDIVIDUAL SECTIONS.

2. CLEAN AND POINT EXPOSED TO VIEW SURFACE MASONRY.

1.04 RELATED SECTIONS

A. SECTION 061000 - ROUGH CARPENTRY: SETTING AND TEMPORARY BRACING OF HOLLOW METAL FRAMES OCCURRING IN MASONRY, AND REMOVAL OF TEMPORARY CENTERING WHEN FRAMES HAVE BEEN BUILT INTO THE

B. SECTION 07 92 00 - JOINT SEALERS: SEALANT, CAULKING MATERIALS, AND COMPRESSIBLE JOINT BEAD BACK-UP, IN CONJUNCTION WITH MASONRY WORK.

A. COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND THOSE OTHERS REFERENCED IN

. AMERICAN CONCRETE INSTITUTE (ACI) AND AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE): ACI 530.1/ASCE 6 - "SPECIFICATIONS FOR MASONRY STRUCTURES"

2. ASTM (AMERICAN SOCIETY OF TESTING AND MATERIALS)

A. ASTM A 123 - ZINC (HOT-DIP GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.

B. ASTM A 153 - ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.

3. ASTM A 615 - DEFORMED AND PLAIN BILLET-STEEL BAR FOR CONCRETE REINFORCEMENT.

A. ASTM C 90 - LOAD-BEARING CONCRETE MASONRY UNITS.

B. ASTM C 144 - AGGREGATE FOR MASONRY MORTAR.

C. ASTM C 150 - PORTLAND CEMENT.

D. ASTM C 270 - MORTAR FOR UNIT MASONRY E. ASTM C 404 - AGGREGATES FOR MASONRY GROUT.

F. ASTM C 476 - GROUT FOR MASONRY.

G. ASTM C 1142 - READY-MIX MORTAR FOR UNIT MASONRY.

H. ASTM E 119 - FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS

4. AMERICAN NATIONAL STANDARDS INSTITUTE BUILDING CODE REQUIREMENTS. IMIAC (INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL

B. IMIAC - RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR HOT/COLD WEATHER MASONRY

C. THE FOLLOWING REFERENCE MATERIALS ARE HEREBY MADE A PART OF THIS SECTION BY REFERENCE THERETO:

UL FIRE RESISTANCE DIRECTORY.

2. IMI: MASONRY CONSTRUCTION GUIDE MANUAL.

3. PCA, "CONCRETE MASONRY HANDBOOK"

4. NCMA (NATIONAL CONCRETE MASONRY ASSOCIATION

NCMA: APPLICABLE TEK BULLETINS.

A. SUBMIT THE FOLLOWING UNDER PROVISIONS OF DIVISION 1:

1. LITERATURE: MANUFACTURER'S PRODUCT DATA SHEETS, SPECIFICATIONS, PERFORMANCE DATA, PHYSICAL PROPERTIES FOR EACH ITEM FURNISHED HEREUNDER.

2. MATERIAL CERTIFICATES: PROVIDE FOR THE FOLLOWING, SIGNED BY MANUFACTURER AND SUBCONTRACTOR CERTIFYING THAT EACH MATERIAL COMPLIES WITH REQUIREMENTS.

A. EACH DIFFERENT CEMENT PRODUCT REQUIRED FOR MORTAR AND GROUT, INCLUDING NAME OF MANUFACTURER, BRAND, TYPE, AND WEIGHT SLIPS AT TIME OF DELIVERY.

B. EACH MATERIAL AND GRADE INDICATED FOR REINFORCING BARS.

C. EACH TYPE AND SIZE OF JOINT REINFORCEMENT.

D. EACH TYPE AND SIZE OF ANCHORS, TIES, AND METAL ACCESSORIES.

3. MATERIAL TEST REPORTS FROM A QUALIFIED INDEPENDENT LABORATORY EMPLOYED AND PAID BY SUBCONTRACTOR INDICATING AND INTERPRETING TEST RESULTS RELATIVE TO COMPLIANCE OF THE FOLLOWING PROPOSED MASONRY MATERIALS WITH REQUIREMENTS INDICATED:

A. MORTAR COMPLYING WITH PROPERTY REQUIREMENTS OF ASTM C 270.

B. GROUT MIXES: INCLUDE DESCRIPTION OF TYPE AND PROPORTIONS OF GROUT INGREDIENTS.

SAMPLES:

C. MASONRY UNITS; REPORT FOR TESTS PERFORMED WITHIN THE PREVIOUS SIX MONTHS.

A. SAMPLES OF EACH MASONRY ACCESSORY OR ANCHORAGE ITEM REQUIRED.

5. SUBCONTRACTOR'S COLD WEATHER AND HOT WEATHER PROCEDURES: SHOW EVIDENCE OF COMPLIANCE WITH REQUIREMENTS SPECIFIED IN REFERENCED UNIT MASONRY STANDARD.

REINFORCING SHOP DRAWINGS.

1.07 QUALIFICATIONS

A. INSTALLER: COMPANY SPECIALIZING IN PERFORMING THE MASONRY WORK OF THIS SECTION WITH MINIMUM OF 10 YEARS DOCUMENTED EXPERIENCE. WORK SHALL BE DONE BY SKILLED WORKMEN, FULLY INSTRUCTED AS TO THE REQUIREMENTS OF THE SPECIFICATIONS AND ADEQUATELY SUPERVISED DURING THE WORK.

1.08 QUALITY ASSURANCE

A. SINGLE-SOURCE RESPONSIBILITY FOR CONCRETE MASONRY UNITS: OBTAIN CONCRETE MASONRY UNITS FOR THE PROJECT FROM A SINGLE MANUFACTURER.

SINGLE-SOURCE RESPONSIBILITY FOR MORTAR MATERIALS: OBTAIN MORTAR INGREDIENTS OF UNIFORM QUALITY, INCLUDING COLOR FOR EXPOSED MASONRY, FROM ONE MANUFACTURER FOR EACH CEMENTITIOUS COMPONENT AND FROM ONE SOURCE AND PRODUCER FOR EACH AGGREGATE.

1.09 REGULATORY REQUIREMENTS

FIRE PERFORMANCE CHARACTERISTICS: WHERE INDICATED, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE OF ASSEMBLIES WHOSE FIRE RESISTANCE HAS BEEN DETERMINED PER ASTM E 119 BY A TESTING AND INSPECTING ORGANIZATION, BY EQUIVALENT CONCRETE MASONRY THICKNESS, OR BY ANOTHER MEANS, AS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

1.10 DELIVERY, STORAGE, AND HANDLING

A. GENERAL: DO NOT DELIVER CEMENT, LIME, AND SIMILAR PERISHABLE MATERIALS TO THE SITE UNTIL SUITABLE STORAGE IS AVAILABLE. STORE SUCH MATERIALS IN WEATHERPROOF STRUCTURES. AND ENSURE THAT MATERIALS ARE IN PERFECTLY FRESH CONDITION WHEN BROUGHT FOR USE. PROTECT MASONRY UNITS AND MANUFACTURED

PRODUCTS OF ALL TYPES FROM WETTING BY RAIN OR SNOW, AND KEEP COVERED WHEN NOT IN USE.

MASONRY FACE UNITS: HANDLE ALL MASONRY UNITS CAREFULLY IN TRANSIT AND ON THE SITE, SO AS TO KEEP UNITS WHOLE, WITH EDGES SHARP, AND FACES CLEAN AND UNDAMAGED, DELIVER ALL MASONRY UNITS ON PALLETS; OR HANDLE UNITS INDIVIDUALLY, AND PROPERLY STACK SAME.

AGGREGATES: DELIVER, STORE AND HANDLE AGGREGATE MATERIALS SO AS TO PREVENT CONTAMINATION WITH FARTH OR OTHER FOREIGN MATERIALS

04 22 00 - UNIT MASONRY ASSEMBLIES CONT.

D. STORE CEMENT, LIME AND SIMILAR PRODUCTS UNDER COVER AND FROM DIRECT CONTACT WITH EARTH OR FLOOR

MANUFACTURED ITEMS: DELIVER MANUFACTURED PRODUCTS IN ORIGINAL CONTAINERS PLAINLY MARKED WITH PRODUCT IDENTIFICATION AND MANUFACTURER'S NAME.

STORE METAL ACCESSORIES AND THE LIKE UNDER COVER AND FROM DIRECT CONTACT WITH GROUND, AND IN MANNER TO PREVENT RUST

DAMAGED MATERIAL: REMOVE ANY DAMAGED OR CONTAMINATED MATERIALS FROM JOB SITE IMMEDIATELY, INCLUDING MATERIALS IN BROKEN PACKAGES, PACKAGES CONTAINING WATER MARKS, OR WHICH SHOW OTHER EVIDENCE OF DAMAGE, UNLESS ARCHITECT SPECIFICALLY AUTHORIZES CORRECTION THEREOF AND USAGE ON

1.11 ENVIRONMENTAL CONDITIONS

A. HOT AND COLD WEATHER REQUIREMENTS AS SPECIFIED BY THE IMIAC (INTERNATIONAL MASONRY INDUSTRY ALL-WEATHER COUNCIL)

1. HOT WEATHER REQUIREMENTS SHALL BE ENFORCED WHEN AMBIENT TEMPERATURES ARE ABOVE 90 DEGREES FAHRENHEIT (32 DEGREES CELSIUS).

COLD WEATHER REQUIREMENTS SHALL BE ENFORCED WHEN AMBIENT TEMPERATURES BELOW 40 DEGREES FAHRENHEIT (5 DEGREES CELSIUS).

1.12 COORDINATION AND SEQUENCING A. COORDINATE WORK WITH THAT OF OTHER TRADES WHICH REQUIRE PLACEMENT AND BUILDING-IN OF, AS WORK PROGRESSES, ANCHOR BOLTS, WOOD BLOCKING, HOLLOW METAL FRAMES, AND ANCHORAGE ITEMS.

EXAMINE ALL DRAWINGS AS TO REQUIREMENTS FOR THE ACCOMMODATION OF WORK OF OTHER TRADES. PROVIDE ALL REQUIRED RECESSES, CHASES, SLOTS, AND CUTOUTS. PLACE ANCHORS, BOLTS, SLEEVES AND OTHER ITEMS OCCURRING IN THE MASONRY WORK. TAKE EVERY PRECAUTION TO MINIMIZE FUTURE CUTTING AND PATCHING. CLOSELY COORDINATE THE LOCATION AND PLACEMENT OF SUCH ITEMS.

2.01 CONCRETE MASONRY UNITS

PART 2 - PRODUCTS

A. LOAD BEARING HOLLOW AND SOLID, LIGHT WEIGHT CONCRETE MASONRY UNITS: CONFORM TO ASTM C90, TYPE 1, CLASS 1, NORMAL WEIGHT, 2-CORE, 58 PERCENT SOLID FOR 2 HOUR FIRE RESISTANT CONSTRUCTION:

PLAIN-FACED UNITS OF NOMINAL THICKNESS INDICATED ON THE DRAWINGS, LIGHT GRAY COLOR WITH UNIFORM MEDIUM-FINE TEXTURE, SOUND, TRUE TO PLANE AND LINE, AND FREE FROM CHIPS, CRACKS, AND OTHER DEFECTS. NOMINAL DIMENSIONS AS FOLLOWS:

A. NOMINAL 4 X 16 FACE DIMENSIONS.

B. NOMINAL 8 X 16 FACE DIMENSIONS

C. NOMINAL 12 X 16 FACE DIMENSIONS

SPLIT-FACED UNITS OF NOMINAL THICKNESS INDICATED ON THE DRAWINGS, INTEGRAL WATERPROOFING LIGHT GRAY COLOR WITH UNIFORM MEDIUM-FINE TEXTURE, SOUND, TRUE TO PLANE AND LINE, AND FREE FROM CHIPS, CRACKS, AND OTHER DEFECTS. NOMINAL DIMENSIONS AS FOLLOWS:

A. NOMINAL 8 X 16 FACE DIMENSIONS; STANDARD SPLIT FACE.

B. NOMINAL 8 X 16 FACE DIMENSIONS; DOUBLE-SIDED SPLIT FACE

C. NOMINAL 8 X 16 FACE DIMENSIONS; STANDARD, SINGLE SCORE/FLUTE.

D. NOMINAL 8 X 16 FACE DIMENSIONS; DOUBLE-SIDED, SINGLE SCORE/FLUTE.

3. PRODUCTS FROM THE FOLLOWING MANUFACTURERS, PROVIDED THEY COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, WILL BE AMONG THOSE CONSIDERED ACCEPTABLE:

A. PLAIN-FACED; ADAMS PRODUCTS - REDLINE LIGHTWEIGHT MASONRY OR ARCHITECT APPROVED EQUAL

B. SPLIT-FACED; SCHORY CEMENT PRODUCTS (THOMAS BRICK CO.)

SPECIAL SHAPES: PROVIDE SPECIAL BLOCK TYPES WHERE REQUIRED FOR CORNERS, CONTROL JOINTS AND OTHER SPECIAL CONDITIONS, WHETHER OR NOT SPECIFICALLY INDICATED ON THE DRAWINGS AS "SPECIAL". A. BULLNOSE CORNERS AT OUTSIDE CORNERS

B. DOUBLE BULLNOSE AT DOOR AND WINDOW ROUGH OPENINGS.

C. BOND BEAMS.

D. SOLID, CHAMFER (SILL) UNITS FOR TOP OF COURSINGS, AS INDICATED ON DRAWINGS.

5. U.L. FIRE RATED CONCRETE MASONRY UNITS: PROVIDE IN ALL FIRE WALL LOCATIONS AS INDICTED ON THE

6. AGGREGATE: SAND AND GRAVEL: CONFORM TO ASTM C 331. 7. MINIMUM ALLOWABLE COMPRESSIVE STRENGTH FOR AN INDIVIDUAL UNIT OF NOT LESS THAN 1,900 PSI. (NET

AREA) FOR AVERAGE OF 3 UNITS; WHEN TESTED IN ACCORDANCE WITH ASTM C 140.

8. OVEN DRY DENSITY: 105 POUNDS PER CUBIC FOOT.

9. MOISTURE CONTENT FOR AVERAGE OF 3 UNITS, WHEN DELIVERED, NOT EXCEEDING 35 PERCENT OF THE

A. MORTAR: SITE-MIXED PORTLAND CEMENT MORTAR COMPLYING WITH ASTM C 270 AS SPECIFIED HEREIN.

1. ADMIXTURES ARE NOT PERMITTED EXCEPT WHERE EXPRESSLY SPECIFIED HEREIN OR AS OTHERWISE

APPROVED BY THE ARCHITECT FOR SPECIFIC FIELD CONDITIONS. MORTAR MATERIALS FOR SITE MIXED MORTAR:

PORTLAND CEMENT FOR MASONRY CONFORMING TO ASTM C 150, TYPE I, NON-STAINING, WITHOUT AIR

ENTRAINMENT. USE TYPE III AS NECESSARY FOR LAYING MASONRY IN COLD WEATHER. 2. FOR CONCRETE MASONRY, USE GRAY COLOR PORTLAND CEMENT

3. AGGREGATES FOR GROUT: CONFORMING TO ASTM C 144 FOR FINE AGGREGATE AND ASTM C 404, SIZE 8 OR

4. AGGREGATE FOR CONCRETE MASONRY MORTAR: CLEAN, WASHED UNIFORMLY WELL GRADED SAND CONFORMING TO ASTM C 144, WITH THE FOLLOWING GRADATION, AND HAVING A FINENESS MODULUS

> SIEVE SIZE PERCENTAGE PASSING 100% 95 TO 100% 70 TO 100% 40 TO 75% 10 TO 35% 2 TO 15% 0 TO 5%

5. LIME: APPROVED BRAND OF PLASTIC HYDRATED LIME, CONFORMING TO ASTM C 207, TYPE "S".

WATER: CLEAN AND FRESH WITHOUT CONTAMINANTS

MORTAR TYPES:

D. MORTAR MIX COLOR(S):

1. MORTAR FOR LOAD BEARING MASONRY: ASTM C 270 TYPE S USING THE PROPERTY SPECIFICATION.

2. MORTAR FOR POINTING, DIRT AND STAIN RESISTANT TYPE: ASTM C 270 TYPE N USING THE PROPERTY SPECIFICATION WITH ADDED ALUMINUM TRISTEARATE, CALCIUM STEARATE, OR AMMONIUM STEARATE TO A QUANTITY OF 3 PERCENT OF PORTLAND CEMENT WEIGHT.

1. STANDARD MORTAR COLOR AS APPROVED BY THE ARCHITECT.

A. ALL LOCATIONS EXCEPT DECORATIVE CMU TYPE 1.

2. COLORED MORTAR TO MATCH DECORATIVE CMU TYPE 1.

A. AT EXTERIOR MASONRY VENEER CAVITY WALLS.

COMPLYING WITH ASTM C 476 MAY BE USED

AT EACH SIDE OF CONTROL JOINT.

2.1. GROUT MIXES

1. FIVE STAR PRODUCTS, INC. PRODUCT "FIVE STAR GROUT".

2. L&M CONSTRUCTION CHEMICALS, INC., PRODUCT "CRYSTEX". 3. SYMONS CORPORATION, DESPLAINES, IL, PRODUCT "SYMONS MULTI_PURPOSE GROUT".

B. GROUT FOR ENGINEERED MASONRY: COURSE GROUT HAVING A COMPRESSIVE STRENGTH OF 1,800 POUNDS PER SQUARE INCH AT 28 DAYS; SLUMP 8 TO 10 INCHES. 3.1. REINFORCEMENT AND ANCHORAGE MATERIALS

A. SINGLE WYTHE LONGITUDINAL REINFORCEMENT FOR CONCRETE MASONRY UNIT WALLS AND PARTITIONS: IN

OVERALL WIDTH 1-5/8 INCHES LESS THAN THE OVERALL WALL THICKNESS, AS MANUFACTURED BY DUR-O-WAL,

PREPACKAGED GROUT (READY MIX) COMPLYING WITH ASTM C 1107, OR SITE-MIXED PORTLAND CEMENT GROUT

HOHMANN, HECKMANN BUILDING PRODUCTS, INC., OR ARCHITECT APPROVED SUBSTITUTE.

1. INTERIOR PARTITIONS: LADDER DESIGN, 9 GAGE ASTM A 641 CLASS 1 GALVANIZED WIRE. PROVIDE PREFORMED REINFORCING SECTIONS AT INTERSECTIONS OF MASONRY WALLS AND PARTITIONS, AND WHENEVER WALLS AND PARTITIONS CHANGE DIRECTION.

REINFORCING STEEL, ADDITIONAL TO RODS WHICH ARE EMBEDDED IN CONCRETE: SOLID STEEL REINFORCING BARS, CONFORMING TO ASTM A 615, GRADE 60. ALL REINFORCING BARS FOR THIS SCOPE OF WORK ARE TO BE AS INDICATED ON THE STRUCTURAL DRAWINGS.

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BOND BEAMS. C. ADJUSTABLE VENEER ANCHORS

1. MINIMUM W1.7 ADJUSTABLE WIRE ANCHORS, MINIMUM 1.5 OUNCES PER SQUARE FOOT HOT-DIPPED

GALVANIZED, TWO PIECE PER ASTM A 153 CLASS B-2. 2. MAXIMUM VERTICAL SPACING: 18 INCHES O.C.

3. MAXIMUM HORIZONTAL SPACING: 32 INCHES O.C.

4. SECURELY ATTACH ANCHORS TO THE STEEL STUDS THROUGH THE SHEATHING, NOT TO THE SHEATHING

5. MINIMUM W1.7 ADJUSTABLE WIRE ANCHORS, HOT-DIPPED GALVANIZED, TWO PIECE PER ASTM A 153 CLASS

2.1. ACCESSORIES

A. COMPRESSIBLE FILLER: CLOSED CELL POLYVINYL CHLORIDE; OVERSIZED 50 PERCENT TO JOINT WIDTH; SELF-EXPANDING, CONTINUOUS IN LENGTH, AND IN WIDTH TO FILL THE JOINT TO A POINT 3/4 INCH BACK FROM EACH

COMPRESSIBLE FILLER FOR JOINTS AT TOPS OF NON-LOAD BEARING MASONRY PARTITIONS, AND FOR EXPANSION

JOINTS IN MASONRY WALLS: CLOSED CELL PVC FOAM BOARD, SOFT GRADE, 25 PERCENT THICKER THAN JOINT

WIDTH, CONTINUOUS IN LENGTH, AND IN WIDTH TO FILL THE JOINT TO A POINT 3/4 INCH BACK FROM EACH FACE OF

WALL OR PARTITION. 1. HOHMANN & BARNARD, INC.; #NS CLOSED CELL NEOPRENE SPONGE

A. THICKNESS & WIDTH AS REQUIRED BY WALL CONSTRUCTION.

C. FLEXIBLE SHEET FLASHING: 5 OUNCE COPPER FABRIC FLASHING AS MANUFACTURED BY YORK MFG. EMBED COMPLETELY, BOTH SIDES, IN MORTAR, UNLESS INDICATED OTHERWISE.

PREMOLDED CONTROL JOINTS FOR CONCRETE MASONRY CONSTRUCTION: SOLID RUBBER OF PROFILE AS INDICATED (TO MAINTAIN LATERAL STABILITY OF WALL), 60-80 SHORE A HARDNESS.

1. HOHMANN & BARNARD, INC.; #RS SERIES RUBBER CONTROL JOINT A. STYLE & SIZE AS DICTATED BY MASONRY CONSTRUCTION.

1. MINIMUM NO. 10 SELF-TAPPING CORROSION RESISTANT SCREWS WITH A MINIMUM SHANK DIA. OF 0.190 INCH. CORROSION RESISTANCE PROVIDED BY A POLYMER COATING, ZINC PLATING OR STAINLESS STEEL.

F. AIR SPACE.

1. PROVIDE A 2 INCH AIR SPACE BETWEEN POLYSTYRENE INSULATION AND BRICK VENEER SURFACES.

1. PROVIDE MORTAR NET WHICH HAS BEEN MANUFACTURED, FABRICATED AND INSTALLED TO MAINTAIN

PERFORMANCE CRITERIA STATED BY THE MANUFACTURER WITHOUT DEFECTS, DAMAGE OR FAILURE. 2.1. MIXING MORTARS AND GROUT

A. MIX MORTAR AND GROUT IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C 270, ASTM C 94, AND ASTM C 476 AS APPLICABLE. CONTROL BATCHING PROCEDURE TO ENSURE PROPER PROPORTIONS BY MEASURING MATERIALS BY VOLUME. AMOUNT OF MIXING WATER AND MORTAR CONSISTENCY SHALL BE CONTROLLED BY MASON.

B. MAINTAIN SAND UNIFORMLY DAMP IMMEDIATELY BEFORE MIXING PROCESS. C. ADD MORTAR COLOR AND ADMIXTURES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE UNIFORMITY OF MIX AND COLORATION.

D. DO NOT USE ANTI-FREEZE COMPOUNDS TO LOWER THE FREEZING POINT OF MORTAR OR GROUT. E. POURING GROUT SHALL BE FLUID CONSISTENCY (AS FLUID AS POSSIBLE FOR POURING WITHOUT SEPARATION OF

CONSTITUENT PARTS). F. RETEMPERING WILL BE PERMITTED ONLY WITHIN THE FIRST TWO HOURS OF INITIAL MIX. DISCARD MORTAR THAT

HAS PARTIALLY SET. 2.1. SOURCE QUALITY CONTROL

PRECONSTRUCTION TESTING: CONSTRUCTION MANAGER MAY EMPLOY AND PAY A QUALIFIED INDEPENDENT TESTING LABORATORY TO PERFORM THE FOLLOWING PRECONSTRUCTION TESTING INDICATED AS WELL AS OTHER INSPECTING AND TESTING SERVICES REQUIRED BY REFERENCED UNIT MASONRY STANDARD OR INDICATED HEREIN FOR SOURCE AND FIELD QUALITY CONTROL

2. PRISM TESTS: FOR EACH TYPE OF WALL CONSTRUCTION INDICATED, MASONRY PRISMS WILL BE TESTED PER ASTM E 447, METHOD B.

3. MORTAR PROPERTIES WILL BE TESTED PER PROPERTY SPECIFICATION OF ASTM C 270.

4. MORTAR EFFLORESCENCE: TEST EACH MORTAR TYPE PER ASTM C780. TEST EACH MORTAR TYPE WHICH WILL BE EXPOSED TO WEATHER FOR EFFLORESCENCE IN ACCORDANCE WITH THE "WICK TEST" PROCEDURE IN BIA RESEARCH REPORT NUMBER 15, THE CAUSES AND CONTROL OF EFFLORESCENCE IN BRICKWORK", SECTION 4.4. MORTAR MIXES WHICH SHOW EFFLORESCENCE SHALL NOT BE USED IN THE WORK.

STRENGTH, CONSISTENCY, MORTAR AGGREGATE RATIO, WATER CONTENT, AIR CONTENT, AND SPLITTING 6. GROUT COMPRESSIVE STRENGTH WILL BE TESTED PER ASTM C 1019 FOR COMPRESSIVE STRENGTH AND

2.1. MASONRY CLEANER A. ACIDIC CLEANER: GENERAL-PURPOSE CLEANER DESIGNED FOR NEW MASONRY SURFACES, COMPRISED OF BLENDED ACIDS COMBINED WITH SPECIAL WETTING SYSTEMS AND APPROVED BY MANUFACTURER OF MASONRY

1. PRODUCTS OF THE FOLLOWING MANUFACTURER'S PROVIDED THEY COMPLY WITH THE REQUIREMENTS OF

THE CONTRACT DOCUMENTS WILL BE AMONG THOSE CONSIDERED ACCEPTABLE. A. SURE-KLEAN NO. 600 DETERGENT; PROSOCO, INC.

B. SURE-KLEAN NO. 101 LIME SOLVENT; PROSOCO. INC.

PART 3 - EXECUTION 3.01 EXAMINATION

A. VERIFY THAT FIELD CONDITIONS ARE ACCEPTABLE AND ARE READY TO RECEIVE THE WORK OF THIS SECTION.

B. VERIFY BUILT-IN AND OTHER ITEMS PROVIDED BY SEPARATE SECTIONS OF THE WORK ARE PROPERLY SIZED AND C. VERIFY FOUNDATION WALLS SUPPORTING MASONRY IS CONSTRUCTED WITHIN TOLERANCES REQUIRED BY CODE.

D. BEGINNING OF INSTALLATION MEANS ACCEPTANCE OF SITE CONDITIONS.

A. DIRECT AND COORDINATE PLACEMENT OF METAL ANCHORS SUPPLIED TO OTHER SECTIONS.

1. DO NOT COMMENCE INSTALLATION UNTIL FOUNDATIONS ARE CLEAN, ROUGH, AND LEVEL.

2. SANDBLAST THE FOUNDATION TOPS, IF NECESSARY, AND REMOVE ALL LAITANCE AND FOREIGN MATERIAL. 3. VERIFY THAT THE FOUNDATION ELEVATION IS SUCH THAT THE BED JOINT THICKNESS SHALL NOT VARY FROM SPECIFIED THICKNESS, AND THAT THE FOUNDATION EDGE IS TRUE TO LINE WITH MASONRY NOT PROJECTING

PROVIDE TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT BRACING.

D. PROTECT SURFACES OF WINDOWS, DOOR FRAMES, LOUVERS AND VENTS AS WELL AS SIMILAR FINISH PRODUCTS

3.03 INSTALLATION - GENERAL A. BUILD CHASES AND RECESSES AS SHOWN OR REQUIRED TO ACCOMMODATE ITEMS SPECIFIED IN THIS AND OTHER SECTIONS OF THE SPECIFICATIONS. PROVIDE NOT LESS THAN 8 INCHES OF MASONRY BETWEEN CHASE RECESS AND JAMB OF OPENINGS AND BETWEEN ADJACENT CHASES AND RECESSES.

B. LEAVE OPENINGS FOR EQUIPMENT TO BE INSTALLED BEFORE COMPLETION OF MASONRY. AFTER INSTALLATION OF EQUIPMENT, COMPLETE MASONRY TO MATCH CONSTRUCTION IMMEDIATELY ADJACENT TO THE OPENING. C. ESTABLISH LINES, LEVELS AND COURSING INDICATED. PROTECT FROM DISPLACEMENT.

WITH PAINTED AND INTEGRAL FINISHES FROM MORTAR DROPPINGS AND STAINS.

D. MAINTAIN MASONRY COURSES TO UNIFORM DIMENSION. FORM VERTICAL AND HORIZONTAL JOINTS OF UNIFORM E. ISOLATE MASONRY PARTITIONS FROM VERTICAL STRUCTURAL FRAMING AND WHERE INDICATED ON THE DRAWINGS. MAINTAIN JOINTS FREE FROM MORTAR, READY TO RECEIVE SEALANT AND JOINT BEAD BACK-UP.

F. PROVIDE COMPRESSIBLE FILLER AT TOPS OF INTERIOR MASONRY PARTITIONS ABUTTING STRUCTURE ABOVE.

3.04 CONSTRUCTION TOLERANCES A. COMPLY WITH TOLERANCES IN ACI 530.1/ ASCE 6/TMS 602.

EXCEED 1/4 INCH IN 20 FEET

B. MAXIMUM VARIATION FROM TRUE SURFACE LEVEL FOR EXPOSED TO VIEW WALLS AND PARTITIONS: C. UNIT-TO-UNIT TOLERANCE: 1/16 INCH.

D. SURFACE, OVERALL TOLERANCE: 1/4 INCH IN 10 FEET IN ANY DIRECTION AND 1/2 INCH IN 20 FEET OR MORE. 1. WHERE BOTH FACES OF SINGLE WYTHE WALL OR PARTITION WILL BE EXPOSED TO VIEW, REQUEST AND OBTAIN DECISION FROM THE ARCHITECT AS TO WHICH FACE WILL BE REQUIRED TO CONFORM TO THE SPECIFIED SURFACE LEVEL TOLERANCE

MAXIMUM VARIATION FROM PLUMB: FOR LINES AND SURFACES OF WALLS DO NOT EXCEED 1/4 INCH IN 10 FEET, 3/8

INCH IN ANY STORY UP TO 20 FEET MAXIMUM. AT EXPANSION JOINTS AND OTHER CONSPICUOUS LINES, DO NOT

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EXCEED 1/8 INCH IN 3 FEET, OR 1/4 INCH IN 10 FEET AND 1/2 INCH IN 30 FEET. G. MAXIMUM VARIATION OF LINEAR BUILDING LINE: FOR POSITION SHOWN IN PLAN RELATING TO COLUMNS, WALLS AND

MAXIMUM VARIATION FROM LEVEL: FOR LINES OF SILLS, TOPS OF WALLS AND OTHER CONSPICUOUS LINES, DO NOT

PARTITIONS, DO NOT EXCEED 1/2 INCH IN 20 FEET OR 3/4 INCH IN 40 FEET.

H. MAXIMUM VARIATION IN SPECIFIED HEIGHT: 1/2 INCH PER STORY.

I. MAXIMUM VARIATION OF JOINT THICKNESS: 1/8 INCH IN 3 FEET.

J. MAXIMUM HORIZONTALLY PROJECTED UNSUPPORTED MASONRY UNIT: 1-1/8 INCHES

.05 COURSING, BONDS AND JOINTS A. COURSING, JOINTS AND BOND PATTERN: RUNNING BOND EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS.

B. EXPOSED TO VIEW MASONRY: EXCEPT AS SPECIFIED BELOW, FILL ALL JOINTS WITH MORTAR, STRIKE OFF FLUSH, AND WHEN MORTAR IS THUMB PRINT HARD TOOL JOINTS FLUSH WITH A NON-STAINING TOOL. JOINTS SHALL BE FREE

WORK AT NO ADDITIONAL COST TO THE CONTRACT.

CLEAN, UNCHIPPED EDGES.

OF DRYING CRACK.

D. LAYING MASONRY UNITS

3.06 CONTROL JOINTS A. DO NOT CONTINUE HORIZONTAL JOINT REINFORCEMENT THROUGH CONTROL JOINTS.

B. INSTALL PREFORMED CONTROL JOINT DEVICE IN CONTINUOUS LENGTHS. SEAL BUTT AND CORNER JOINTS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION. C. LOCATE CONTROL JOINTS NO GREATER THAN 24'-0" ON CENTER, AT CORNERS ADJACENT TO OPENINGS IN MASONRY, CHANGES IN WALL HEIGHT AND INTERSECTIONS WITH STRUCTURAL WALLS AS APPROVED BY

D. SIZE CONTROL JOINTS IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 07 92 10 - JOINT SEALERS.

.07 LAYING MASONRY - GENERAL A. BUILD THE MASONRY WALLS AND PARTITIONS IN THE VARIOUS COMBINATIONS AND THICKNESS AS INDICATED ON

THE DRAWINGS. B. ERECT ALL MASONRY WORK IN COMPLIANCE WITH THE LINE AND LEVEL TOLERANCES SPECIFIED HEREIN. HOLD

C. LAY OUT COURSING BEFORE SETTING TO MINIMIZE CUTTING CLOSURES OR JUMPING BOND, AVOID THE USE OF LESS-THAN-HALF-SIZE UNITS.

UNIFORM JOINT SIZES. CORRECT, OR REPLACE, AS DIRECTED BY THE ARCHITECT, NON-CONFORMING MASONRY

1. LAY MASONRY UNITS IN FULL BED OF MORTAR, WITH FULL HEAD JOINTS; UNIFORMLY JOINT WITH OTHER

2. LAY HOLLOW MASONRY UNITS WITH FACE SHELL BEDDING ON HEAD AND BED JOINTS. 3. BUTTERING CORNERS OF JOINTS OR EXCESSIVE FURROWING OF MORTAR JOINTS ARE NOT PERMITTED.

4. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS. 5. CUT ALL EXPOSED MASONRY WITH A MOTOR-DRIVEN CARBORUNDUM BLADE SAW TO ENSURE STRAIGHT AND

6. LAY NO UNIT HAVING CHIPPED EDGES OR FACE DEFECTS WHERE SUCH UNIT WOULD BE EXPOSED TO VIEW. REMOVE ANY SUCH UNIT, IF INSTALLED, AND REPLACE WITH AN UNDAMAGED UNIT, AND BEAR ALL COSTS

7. DO NOT SPREAD ANY MORE MORTAR THAN CAN BE COVERED BEFORE SURFACE OF MORTAR HAS BEGUN TO

9. EXCEPT FOR CLEANING DOWN AND REPOINTING, FINISH ALL MASONRY AS THE WALLS AND PARTITIONS ARE

8. DO NOT SHIFT OR TAP MASONRY UNITS AFTER MORTAR HAS ACHIEVED INITIAL SET. WHERE ADJUSTMENT

ENDS, CAREFULLY PLACE MASONRY UNITS DOWN OVER THE UPTURNED ENDS OF THE RODS, AND FILL CELLS

10. ALL MASONRY CUTS SHALL BE MADE UTILIZING A "WET" CUTTING METHOD TO CONTROL SILICA DUST. CLEAN WATER SHALL BE USED ON EXPOSED UNITS.

MUST BE MADE, REMOVE ENTIRELY, CLEAN OFF MORTAR, AND RESET WITH FRESH MORTAR.

E. BUILD-IN REINFORCEMENT AND ANCHORAGE ITEMS AS THE WORK PROGRESSES, GROUTING FOR SECURE 1. WHERE STEEL REINFORCING RODS HAVE BEEN CAST INTO CONCRETE SLABS, AND LEFT WITH UPTURNED

OF MASONRY UNITS WITH SPECIFIED GROUT. F. EXCEPT AS INDICATED OTHERWISE, ISOLATE MASONRY FROM OVERHEAD STRUCTURE:

2. ISOLATE TOP JOINT OF MASONRY PARTITIONS FROM HORIZONTAL STRUCTURAL FRAMING MEMBERS AND SLABS OR DECKS WITH COMPRESSIBLE JOINT FILLER. G. PROVIDE CONTROL JOINTS AT 24 FEET ON CENTER MAXIMUM SPACING. AND KEEP CLEAN OF MORTAR DROPPINGS. H. PROVIDE COMPLETE PROTECTION AGAINST BREAKAGE AND WEATHER DAMAGE TO ALL MASONRY WORK, INCLUDING

1. ISOLATE MASONRY PARTITIONS FROM VERTICAL STRUCTURAL FRAMING MEMBERS WITH A CONTROL JOINT.

SUBSTANTIAL WOOD BOXING AROUND DOOR JAMBS, OVER THE TOPS OF WALLS AND WHEREVER NECESSARY TO PROTECT WORK AT ALL STAGES OF COMPLETION. PROTECT MASONRY WHEN NOT ROOFED OVER, AT ALL TIMES

WHEN MASONS ARE NOT WORKING ON THE WALLS. APPLY TARPAULINS OR WATERPROOF PAPER, PROPERLY WEIGHTED, OR NAILED, TO ASSURE THEIR REMAINING IN PLACE TO PROTECT MASONRY FROM ALL POSSIBLE POINT AND FILL ALL HOLES AND CRACKS IN NEW MORTAR JOINTS WITH ADDITIONAL FRESH MORTAR; DO NOT MERELY SPREAD ADJACENT MORTAR OVER DEFECT OR USE DEAD MORTAR DROPPINGS. DO ALL POINTING WHILE

MORTAR IS STILL SOFT AND PLASTIC. IF HARDENED, CHISEL DEFECT OUT AND REFILL SOLIDLY WITH FRESH ADDITIONAL MORTAR, AND TOOL OR RAKE JOINTS AS SPECIFIED HEREIN. PROTECT ALL MASONRY FROM RAIN PRIOR TO, AND DURING THE INSTALLATION THEREOF. IF THE TEMPERATURE IS IN EXCESS OF 80 DEGREES FAHRENHEIT AT TIME OF INSTALLATION, LIGHTLY MOISTEN CONTACT SURFACES OF

MASONRY UNITS BY BRUSHING WITH WATER. K. COLD/HOT WEATHER PROCEDURES: NO MASONRY WORK SHALL BE LAID IN TEMPERATURES BELOW 40 DEGREES FAHRENHEIT WITHOUT THE SUBMITTAL TO AND REVIEW BY THE ARCHITECT OF COLD WEATHER PROCEDURES.

1. IN AMBIENT TEMPERATURES BELOW 40 DEGREES FAHRENHEIT MAKE PROVISIONS TO ADEQUATELY PROTECT THE MASONRY MATERIALS AND THE FINISHED WORK FROM FROST BY HEATING MATERIALS, ENCLOSING THE WORK OR HEATING THE ENCLOSED SPACES.

3. ANY COMPLETED WORK FOUND TO BE AFFECTED BY FROST SHALL BE TAKEN DOWN AND REBUILT AT NO

ADDITIONAL EXPENSE. 3.08 ENGINEERED MASONRY

2. NO FROZEN WORK SHALL BE BUILT UPON NOR SHALL ANTI-FREEZE ADMIXTURES BE PERMITTED IN THE

B. PLACE MORTAR IN MASONRY UNIT BED JOINTS BACK 1/4 INCH FROM EDGE OF UNIT GROUT SPACES, BEVEL BACK AND UPWARD. PERMIT MORTAR TO CURE 7 CALENDAR DAYS BEFORE PLACING GROUT. C. REFER TO THE DRAWINGS FOR LOCATIONS WHERE VERTICAL STEEL REINFORCING RODS WILL BE REQUIRED IN

D. RETAIN VERTICAL REINFORCEMENT IN POSITION AT TOP AND BOTTOM OF CELLS AND AT INTERVALS NOT EXCEEDING

A. LAY MASONRY UNITS WITH CORE CELLS VERTICALLY ALIGNED AND CLEAR OF MORTAR AND UNOBSTRUCTED.

MASONRY WALLS. REINFORCE MASONRY UNIT CORES WITH REINFORCEMENT BARS AND GROUT.

E. WET MASONRY UNIT SURFACES IN CONTACT WITH GROUT JUST PRIOR TO GROUT PLACEMENT.

MASONRY UNIT TO FORM A POSITIVE KEY FOR SUBSEQUENT GROUT PLACEMENT.

F. GROUT SPACES LESS THAN 2 INCHES IN WIDTH WITH FINE GROUT USING LOW LIFT GROUTING TECHNIQUES. GROUT SPACES 2 INCHES OR GREATER IN WIDTH WITH COURSE GROUT USING HIGH OR LOW GROUTING TECHNIQUES. G. WHEN GROUTING IS STOPPED FOR MORE THAN ONE HOUR, TERMINATE GROUT 1_1/2 INCH BELOW TOP OF UPPER

H. LOW LIFT GROUTING: PLACE FIRST LIFT OF GROUT TO A HEIGHT OF THREE CONCRETE MASONRY UNIT COURSES AND ROD FOR GROUT CONSOLIDATION. PLACE SUBSEQUENT LIFTS IN 8 INCH INCREMENTS AND ROD FOR GROUT

CONSOLIDATION.

A. AS WORK PROGRESSES INSTALL BUILT-IN METAL DOOR AND GLAZED FRAMES, FABRICATED METAL FRAMES, WOOD

B. INSTALL BUILT-IN ITEMS PLUMB AND LEVEL; TAKE CARE NOT TO DISTORT ALIGNMENT OF SUCH ITEMS.

NAILING STRIPS, ANCHOR BOLTS, PLATES AND OTHER ITEMS TO BE BUILT-IN THE WORK.

C. BED ANCHORS OF METAL FRAMES IN ADJACENT MORTAR JOINTS. FILL FRAME VOIDS SOLID WITH GROUT EXCEPT WHERE JOINTS ARE INDICATED TO RECEIVE CAULKING AND SEALANT. FILL ADJACENT MASONRY CORES WITH GROUT MINIMUM 12 INCHES FROM FRAMED OPENINGS.

1. RAKE JOINTS TO RECEIVE SEALANT TO A UNIFORM DEPTH OF 3/4 INCH FOR INSTALLATION OF CAULKING AND

D. DO NOT BUILD-IN ORGANIC MATERIALS SUBJECT TO DETERIORATION.

3.010 REINFORCEMENT AND ANCHORAGE A. REINFORCE HORIZONTAL JOINTS WITH CONTINUOUS MASONRY JOINT REINFORCEMENT, SPACED 16 INCHES

VERTICALLY COMMENCING ONE COURSE ABOVE SUPPORTING CONCRETE SLAB.

B. PLACE MASONRY JOINT REINFORCEMENT IN FIRST AND SECOND HORIZONTAL JOINT ABOVE AND BELOW OPENINGS. EXTEND 16 INCHES EACH SIDE OF OPENING. C. PLACE JOINT REINFORCEMENT IN FIRST AND SECOND JOINT BELOW TOP OF WALLS.

E. INSTALL PREFORMED UNITS (OR OPTIONAL FIELD-FORMED UNITS) AT CORNERS, REVEALS, AND OFFSETS IN

EXTERIOR MASONRY, AT INTERSECTIONS OF ALL MASONRY WALLS AND PARTITIONS, AND WHEREVER WALLS AND PARTITIONS CHANGE DIRECTIONS.

F. DO NOT BRIDGE CONTROL AND EXPANSION JOINTS IN THE WALL SYSTEM.

D. LAP JOINT REINFORCEMENT ENDS MINIMUM 6 INCHES.

G. ANCHOR ENDS OF WALLS TO STRUCTURE WITH ANCHORS SPACED 24 INCHES, EXCEPT AS OTHERWISE SHOWN.



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1. USE TREATMENT FOR WHICH CHEMICAL MANUFACTURER PUBLISHES PHYSICAL PROPERTIES OF TREATED WOOD AFTER EXPOSURE TO ELEVATED TEMPERATURES, WHEN TESTED BY A QUALIFIED INDEPENDENT TESTING AGENCY ACCORDING TO ASTM D 5664, FOR LUMBER AND ASTM D 5516, FOR PLYWOOD. USE TREATMENT THAT DOES NOT PROMOTE CORROSION OF METAL FASTENERS. 3. USE EXTERIOR TYPE FOR EXTERIOR LOCATIONS AND WHERE INDICATED. 4. USE INTERIOR TYPE A HIGH TEMPERATURE (HT), UNLESS OTHERWISE INDICATED. 2.04 DIMENSION LUMBER A. GENERAL: PROVIDE DIMENSION LUMBER OF GRADES INDICATED ACCORDING TO THE AMERICAN LUMBER STANDARDS COMMITTEE NATIONAL GRADING RULE PROVISIONS OF THE GRADING AGENCY INDICATED. 2.05 PLYWOOD BACKING PANELS

A. TELEPHONE AND ELECTRICAL EQUIPMENT BACKING PANELS: DOC PS 1, EXPOSURE 1, C-D PLUGGED,

FIRE-RETARDANT TREATED, IN THICKNESS INDICATED OR, IF NOT INDICATED, NOT LESS THAN 1/2 INCH (12.7MM)

2.06 ACCESSORIES

A. FASTENERS AND ANCHORS:

1. GENERAL: PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURE.

B. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IN GROUND CONTACT, IN AREAS OF HIGH RELATIVE HUMIDITY, OR IN TREATED WOOD LOCATIONS, PROVIDE FASTENERS WITH HOT-DIP ZINC COATING COMPLYING

WITH ASTM A 153/A 153M. NAILS, BRADS, AND STAPLES: ASTM F 1667.

POWER-DRIVEN FASTENERS: CABO NER-272. WOOD SCREWS: ASME B18.6.1.

4. SCREWS FOR FASTENING TO COLD-FORMED METAL FRAMING: ASTM C 954, EXCEPT WITH WAFER HEADS AND REAMER WINGS, LENGTH AS RECOMMENDED BY SCREW MANUFACTURER FOR MATERIAL BEING

LAG BOLTS: ASME B18.2.1 (ASME B18.2.3.8M).

ASTM A 563 (ASTM A 563M) HEX NUTS AND, WHERE INDICATED, FLAT WASHERS. EXPANSION ANCHORS: ANCHOR BOLT AND SLEEVE ASSEMBLY OF MATERIAL INDICATED BELOW WITH CAPABILITY TO SUSTAIN, WITHOUT FAILURE, A LOAD EQUAL TO 6 TIMES THE LOAD IMPOSED WHEN INSTALLED IN UNIT MASONRY ASSEMBLIES AND EQUAL TO 4 TIMES THE LOAD IMPOSED WHEN INSTALLED IN CONCRETE AS DETERMINED BY TESTING PER ASTM E 488 CONDUCTED BY A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY

C. MATERIAL: CARBON-STEEL COMPONENTS, ZINC PLATED TO COMPLY WITH ASTM B 633, CLASS FE/ZN 5.

3.01 INSTALLATION, GENERAL A. SET ROUGH CARPENTRY TO REQUIRED LEVELS AND LINES, WITH MEMBERS' PLUMB, TRUE TO LINE, CUT AND FITTED. PLACE HORIZONTAL MEMBERS WITH CROWN SIDE UP. FIT ROUGH CARPENTRY TO OTHER CONSTRUCTION: SCRIBE AND COPE AS NEEDED FOR ACCURATE FIT. LOCATE FURRING, NAILERS, BLOCKING.

B. ALL MATERIALS SHALL BE INSPECTED BEFORE USE, WITH ALL CHECKED, SPLIT AND OTHERWISE DEFICIENT STOCK REJECTED, OR USED ONLY FOR MISCELLANEOUS BLOCKING, FURRING OR OTHER INCIDENTAL USE. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL LUMBER WHICH, DUE TO WARPAGE, TWIST, SPLITTING, OR CHECKING, RESULTS IN UNSATISFACTORY WORK. SUCH REPLACEMENT SHALL BE REQUIRED AT ANY TIME, WHETHER BEFORE OR AFTER APPLICATION OF FINISH MATERIAL UNDER OTHER SECTIONS

C. DO NOT USE MATERIALS WITH DEFECTS THAT IMPAIR QUALITY OF ROUGH CARPENTRY OR PIECES THAT ARE TOO SMALL TO USE WITH MINIMUM NUMBER OF JOINTS OR OPTIMUM ARRANGEMENT. D. APPLY FIELD TREATMENT COMPLYING WITH AWPA M4 TO CUT SURFACES OF PRESERVATIVE-TREATED LUMBER

AND PLYWOOD. E. SECURELY ATTACH ROUGH CARPENTRY WORK TO SUBSTRATE BY ANCHORING AND FASTENING AS INDICATED, COMPLYING WITH THE FOLLOWING:

1. "FASTENING SCHEDULE" IN THE 2006 INTERNATIONAL BUILDING CODE 2. CABO NER-272 FOR POWER-DRIVEN FASTENERS.

F. USE COMMON WIRE NAILS, UNLESS INDICATED OTHERWISE. SELECT FASTENERS OF SIZE THAT WILL NOT FULLY PENETRATE MEMBERS WHERE OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR WILL RECEIVE FINISH MATERIALS. MAKE TIGHT CONNECTIONS BETWEEN MEMBERS. INSTALL FASTENERS WITHOUT SPLITTING WOOD; PRE-DRILL AS

G. USE FINISHING NAILS FOR EXPOSED WORK, UNLESS INDICATED OTHERWISE. COUNTERSINK NAIL HEADS AND FILL HOLES WITH WOOD FILLER.

H. FRAMING STANDARD: COMPLY WITH AFPA'S "MANUAL FOR WOOD FRAME CONSTRUCTION," UNLESS INDICATED OTHERWISE.

3.02 INSTALLATION - WOOD BLOCKING

A. INSTALL WHERE INDICATED AND WHERE REQUIRED FOR ATTACHING OTHER WORK. FORM TO SHAPES INDICATED AND CUT AS REQUIRED FOR TRUE LINE AND LEVEL OF ATTACHED WORK. COORDINATE LOCATIONS WITH OTHER WORK INVOLVED.

B. ATTACH ITEMS TO SUBSTRATE TO SUPPORT APPLIED LOADING. RECESS BOLTS, NUTS AND WASHERS FLUSH WITH SURFACES, UNLESS OTHERWISE INDICATED.

CONSTRUCT CURBS AT ROOF OPENINGS EXCEPT WHERE PREFABRICATED CURB UNITS ARE PROVIDED. FORM

CORNERS BY ALTERNATING LAPPING SIDE MEMBERS.

3.03 INSTALLATION - METAL DOOR FRAMES A. PLACE IN POSITION ALL STEEL FRAMES, FURNISHED UNDER SECTION 08110 -STEEL DOORS AND FRAMES, IN

B. COORDINATE INSTALLATION OF FRAMES WITH THE VARIOUS TRADES INSTALLING ABUTTING WALL CONSTRUCTION FOR ANCHOR PLACEMENT.

C. COORDINATE INSTALLATION OF FRAMES WITH INSTALLATION OF HARDWARE UNDER SECTION 06200 - FINISH CARPENTRY AND AS FURNISHED UNDER SECTION 08 71 00 - HARDWARE

D. INSTALL FRAMES AND DOORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, ANSI/SDI_100, SDI_105, AND THE DOOR HARDWARE INSTITUTE (DHI) RECOMMENDATIONS. E. PROVIDE RIGID TEMPORARY BRACING FOR FRAMES AS REQUIRED TO ENSURE MAINTENANCE OF POSITIONING.

AND REMOVE ONLY AFTER FRAMES HAVE BEEN PERMANENTLY ANCHORED. SECURE FRAMES, OCCURRING IN EXISTING MASONRY, WITH EXPANSION BOLTS AND SLEEVES. G. WHERE EXPOSED FASTENER HEADS OCCUR IN FRAMES, FILL WITH AUTOMOTIVE BODY FILLER AND SAND

A. DAILY CLEAN WORK AREAS BY SWEEPING AND DISPOSING OF SCRAPS AND SAWDUST. B. UPON COMPLETION OF THE WORK OF THIS SECTION IN ANY GIVEN AREA, REMOVE TOOLS, EQUIPMENT AND ALL RUBBISH AND DEBRIS FROM THE WORK AREA; LEAVE AREA IN BROOM-CLEAN CONDITION.

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ADHERED TO THE CLEANED INSULATION SURFACE IN EITHER FAS-N-FREE OR LOW-RISE FOAM ADHESIVE.

ADHERED GYPSUM COVERBOARD COMPONENTS: FOLLOW ALL COVERAGE-RATE GUIDELINES STIPULATED IN THE FM GLOBAL ROOFNAV ASSEMBLY DATA FOR ADHERED GYPSUM COVERBOARD COMPONENTS.

3. INCREASE ADHESIVE QUANTITIES WITHIN EIGHT (8) FEET OF OUTSIDE PERIMETERS BY FIFTY (50) PERCENT. INCREASE INSULATION ADHESIVE QUANTITIES WITH EIGHT (8) FEET OF OUTSIDE CORNERS BY SEVENTY-FIVE

SURFACE FOR ROOFING INSTALLATION.

END OF SECTION 07 22 00

IMMEDIATELY AFTER PLACEMENT, WALK GYPSUM COVERBOARDS INTO ADHESIVE TO ACHIEVE SOLID BOND.

PROMPTLY SPREAD-OUT ANY ACCUMULATED ADHESIVE ON COVERBOARD SURFACES, TO ACHIEVE SMOOTH

07 51 00 - COLD-PROCESS BUILT-UP ROOFING CONT. 2. SOLVENT-BASED, ASPHALTIC PRIMER.

A. BULLDOG ASPHALT PRIMER, OR APPROVED EQUIVALENT.

3. FLASHING SHEET:

A. TRA REINFORCED EPDM/SBR SHEETING. B. COLOR: BLACK.

4. ROOFING AGGREGATE:

A. HARD, DURABLE, OPAQUE; WASHED FREE OF CLAY, LOAM OR OTHER FOREIGN SUBSTANCES.

B. SIZE: ASTM D 1863-86, SIZE SIX (6), 5/8"-3/4", WASHED AGGREGATE. 5. MULTIPLE-PURPOSE SEALANT: A. DYMONIC SINGLE COMPONENT, POLYURETHANE SEALANT.

6. STRIPPING MASTICS FOR REINFORCEMENT AT METAL FLANGES: A. BASE LAYER: KARNAK #19 (ASBESTOS FREE) ASPHALT MASTIC, OR APPROVED EOUIVALENT.

B. TOP LAYER: BURMASTIC COLD-PROCESS ADHESIVE. 7. STRIPPING PLIES FOR METAL/LEAD FLANGES:

A. BASE LAYER: BURMESH FIBERGLASS MESH (6"). B. TOP LAYER: BURMASTIC COMPOSITE-PLY HT (12").

8. NON-SHRINKING, NON-ROTTING WOVEN GLASS MESH:

A. BURMESH FIBERGLASS MESH.

2.02 SYSTEM / MATERIAL PERFORMANCE REQUIREMENTS A. BURMASTIC COLD-PROCESS INTERPLAY, VAPOR BARRIER AND SURFACING ADHESIVE: TYPICAL VALUE TEST METHOD PROPERTY NONE EPA 600/R-93/116 ASBESTOS CONTENT VISCOSITY @ 77°F 25,000-75,000cP ASTM D 2196-86 DENSITY @ 77°F 8.6 LBS/GAL ASTM D 6511-00 NONVOLATILE CONTENT 72% ASTM D 6511-00 ASPHALT CONTENT, MIN 50% ASTM D 6511-00 $> 100^{\circ} \, \text{F}$ ASTM D 93-97 FLASH POINT UNIFORMITY & CONSISTENCY PASS ASTM D 6511-00

ASTM D 6511-00 VOC B. POLYROOF S.F. SOLVENT-FREE, ELASTOMERIC FLASHING-SHEET MASTIC: **PROPERTY** TYPICAL VALUE TEST METHOD ASBESTOS CONTENT NONE EPA 600/R-93/116 600,000-2,000,000 cP ASTM D 2196-86 VISCOSITY @ 77°F DENSITY @ 77°F 8.6 LBS/GAL ASTM D 1475-90 TENSILE STRENGTH @ 77°F 30 - 50 PSI ASTM D 412-87 **ELONGATION 77°F** 300% ASTM D 412-87

ASTM D 3960-89 VOC $< 20 \, \text{G/L}$ C. BURMASTIC COMPOSITE-PLY HT TRILAMINATE (POLYESTER/FIBERGLASS/POLYESTER), REINFORCED PLY SHEET: PROPERTY WEIGHT 38 LB/100SF ASTM D 5147-07B

TENSILE STRENGTH @ 77°F 145 LBF/IN. MD ASTM D 5147-07B 135 LBF/IN, XMD PLIABILITY, ½ IN, RADIUS, NO FAILURES ASTM D 146-90 MASS OF DE-SATURATED MAT 3.0 LB / 100 FT² ASTM D 228-90A ASTM D 5147-07B 55 MILS. THICKNESS SURFACING & STABILIZER 65% ASTM D 4601-91 ASPHALT CONTENT 10.0 LB/100 FT² ASTM D 228-69 (1978) TEAR STRENGTH @ 77°F 225 LBF MD ASTM E 5147-07B

NONE

80%

9.3 LB/GAL

E. TRA ELASTOMERIC, POLYESTER-REINFORCED, EPDM/SBR FLASHING SHEET:

77 LBF MD

300 LBF XMD

77 LBF XMD

35% XMD

F. BURMESH NON-SHRINKING, NON-ROTTING WOVEN GLASS MESH:

(1.32 LB/)

480 - 1000 PA S

350 LBF MD

31% MD

-40° F

41.6 OZ/SQ. YD.

1.32 LB 100 FT²

65 LBF/IN

75 LBF/IN

PVC/ACRYLIC

B. DO NOT BEGIN ROOFING UNTIL ALL UNSATISFACTORY CONDITIONS ARE CORRECTED.

C. VERIFY THAT WORK OF OTHER TRADES PENETRATING ROOF DECK OR REQUIRING MEN

D. CHECK PROJECTIONS, CURBS, AND DECK FOR INADEQUATE ANCHORAGE, FOREIGN

A. SUBSTRATE: FREE OF FOREIGN PARTICLES PRIOR TO LAYING ROOF MEMBRANE.

C. TRAFFIC AND EQUIPMENT: KEPT OFF COMPLETED PLIES UNTIL COLD-PROCESS

MATERIAL, MOISTURE, OR UNEVENNESS THAT WOULD PREVENT QUALITY AND

B. PHASED APPLICATION: NOT PERMITTED. ALL PLIES SHALL BE COMPLETED EACH DAY.

D. WRAPPER AND PACKAGING MATERIALS: NOT TO BE INCLUDED IN ROOFING SYSTEM.

E. ENTRAPPED AGGREGATE/DEBRIS: NOT PERMITTED WITHIN NEW MEMBRANE. ITS

F. PLY SHALL NEVER TOUCH PLY, EVEN AT ROOF EDGES, LAPS, TAPERED EDGE STRIPS,

G. EXTEND ROOFING MEMBRANE TO TOP EDGE OF CANT AT WALL AND PROJECTION

H. CUT OUT FISHMOUTHS/SIDE LAPS WHICH ARE NOT COMPLETELY SEALED; PATCH.

REPLACE ALL SHEETS WHICH ARE NOT FULLY AND CONTINUOUSLY BONDED.

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PROPERTY

EQUIPMENT AND OTHER PIECES OF PROPERTY SHALL BE PROTECTED FROM

ROOFING, FLASHING, MEMBRANE REPAIRS, AND INSULATION SHALL BE

INSTALLED AND SEALED IN A WATERTIGHT MANNER ON SAME DAY OF INSTALLATION OR BEFORE ARRIVAL OF INCLEMENT WEATHER.

PREPARATION WORK SHALL BE LIMITED TO THOSE AREAS THAT CAN BE

COVERED WITH INSTALLED ROOFING MATERIAL ON SAME DAY AND BEFORE

4. ARRANGE WORK SEQUENCE TO AVOID USE OF NEWLY CONSTRUCTED ROOFING

FOR STORAGE, WALKING SURFACE, AND EQUIPMENT MOVEMENT. MOVE

5. AT END OF EACH WORKING DAY, REMOVAL AREAS SHALL BE SEALED WITH

PROVIDE CLEAN PLYWOOD WALKWAYS AND TAKE OTHER PRECAUTIONS

WHERE DEBRIS CAN BE TRAPPED WITHIN NEW ROOFING MEMBRANE.

REQUIRED TO PREVENT TRACKING OF FOREIGN DEBRIS INTO NEW WORK AREA

CONTRACTOR SHALL INSTRUCT AND POLICE WORKMEN TO ENSURE THAT DEBRIS

IS NOT TRACKED INTO NEW WORK AREAS ON WORKMEN'S SHOES OR EQUIPMENT

EQUIPMENT AND GROUND STORAGE AREAS AS WORK PROGRESSES.

WATER STOPS ALONG EDGES TO PREVENT WATER ENTRY.

DAMAGE. REPAIR ANY/ALL JOB-RELATED DAMAGE AT NO EXTRA ADDITIONAL

DURING THE COURSE OF WORK. BUILDING EXTERIORS/INTERIORS, PAVED AREAS,

AND EQUIPMENT TO TRAVERSE ROOF DECK HAS BEEN APPROVED BY THE PROJECT

18.7%

BEGINNING WORK CONSTITUTES ACCEPTANCE OF CONDITIONS.

A. VERIFY CONDITIONS AS SATISFACTORY TO RECEIVE WORK.

ENGINEER AND TREMCO'S ONSITE INSPECTOR.

DISCOVERY IS SUFFICIENT CAUSE FOR REJECTION.

EXECUTION OF NEW ROOFING SYSTEM.

0.045"

TYPICAL VALUE TEST METHOR

3.18 MM (1/8 IN.) ASTM D 4586-86

2 - 6 G/M2/24 HRS. ASTM E 398-83

TYPICAL VALUE TEST METHOD

TYPICAL VALUE TEST METHO

ASTM D 146-90

ASTM D 146-90

ASTM D 579-90

ASTM D 1475-85

ASTM D 276-87

ASTM D 4586-86

ASTM D 751

ASTM D 751

ASTM D 2136

ASTM D 751

ASTM D 751

ASTM D 146-90

ASTM D 146-90

ASTM D 2196-86

190 LBF XMD

VISCOSITY @ 77°F

BEHAVIOR AT 140°F

(SAG RESISTANCE)

MOISTURE VAPOR

PROPERTY

ELONGATION

THICKNESS

WEIGHT

TRANSMISSION RATE

BREAKING STRENGTH

LOW-TEMPERATURE FLEX.

MOISTURE BASED ON

WARP THREADS

FILLING THREADS

AVERAGE TENSILE

STRENGTH @ 70°F

NET WEIGHT

WEIGHT

3.02 GENERAL WORKMANSHIP

AND CANTS.

3.03 PREPARATION

A. PROTECTION:

ADHESIVES HAVE SET.

COST TO THE OWNER

ARRIVAL OF INCLEMENT WEATHER.

TYPE

PART 3 - EXECUTION

3.01 EXAMINATION

NONVOLATILE MATTER

DENSITY @ 77°F

DURING COURSE OF THE WORK, THE PROJECT ENGINEER MAY SECURE SAMPLES, IN ACCORDANCE WITH TESTING GUIDELINES DEFINED WITHIN ASTM D140-70 (1981), OF MATERIALS AND/OR COMPLETED ROOFING BEING INSTALLED AT THE JOBSITE AND D. KARNAK #19 (ASBESTOS FREE) ASPHALT MASTIC SUBMIT THEM TO AN INDEPENDENT LABORATORY FOR COMPARISON TO THE PROPERTY ASBESTOS CONTENT

MATERIAL PERFORMANCE REQUIREMENTS LISTED IN THESE SPECIFICATIONS. 1. SHOULD TEST RESULTS PROVE THAT MATERIALS AND/OR COMPLETED ROOFING DO NOT MEET-OR-EXCEED THE PERFORMANCE REQUIREMENTS LISTED WITHIN THESE SPECIFICATIONS:

A. ROOFING CONTRACTOR SHALL PAY FOR ALL TESTING.

B. CONSTRUCTION INSTALLED AND FOUND NOT TO COMPLY WITH THE SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT NO CHANGE IN THE CONTRACT PRICE. CONTRACTOR REQUIREMENTS: THE ROOFING CONTRACTOR MUST BE EXPERIENCED,

TREMCO'S PROGRAM FOR PROVIDING FULL-TIME, JOBSITE INSPECTION.

JOBSITE INSPECTION DURING THE PAST CALENDAR YEAR.

COMPLEXITY WHERE THE JOBSITE-INSPECTOR HAS PROVIDED FULL-TIME.

TO THE SATISFACTION OF THE PROJECT ENGINEER AND TREMCO, IN THE INSTALLATION OF COLD-PROCESS, MULTIPLE-PLY ROOFING SYSTEMS

SPECIFIED HEREIN AND AS SHOWN ON PROVIDED DRAWINGS.

SURFACING.

FM GLOBAL LOSS-PREVENTION MANDATES: ALL INSTALLED COMPONENTS MUST BE INSTALLED AS AN 'APPROVED' ASSEMBLY, AS DEFINED BY FM GLOBAL INC. NEW ROOFING ASSEMBLY IS REQUIRED TO ACHIEVE A CLASS 1A-90 RATING, AS LISTED IN ROOFNAV ASSEMBLY # 72128-49045-0 (ROOFNAV.COM) (FM GLOBAL).

A. PRECONSTRUCTION CONFERENCE SHALL BE HELD ONE WEEK PRIOR TO THE COMMENCEMENT OF WORK.

B. ROOFING CONTRACTOR AND HIS JOB FOREMAN, THE ONSITE TREMCO JOBSITE INSPECTOR, AND REPRESENTATIVE OF THE PROJECT ENGINEER SHALL ATTEND, ALONG WITH ANY OTHER PARTIES DIRECTLY AFFECTING THE WORK.

C. CONDITIONS OF INSTALLATION, INSTALLATION PROCEDURES AND SCHEDULES, AND COORDINATION REQUIRED SHALL BE REVIEWED.

A. MATERIALS SHALL BE DELIVERED TO THE SITE IN ORIGINAL, UNOPENED CONTAINERS BEARING APPROPRIATE WARNINGS, LABELS AND OTHER IDENTIFICATION. B. MATERIALS SHALL BE STORED AND HANDLED ON SITE IN ORIGINAL CONTAINERS IN

COMPLIANCE WITH STORAGE AND HANDLING CONDITIONS MARKED ON THE CONTAINER OR REQUIRED BY TREMCO. C. MATERIALS SHALL BE KEPT DRY PRIOR TO AND DURING INSTALLATION. D. ANY MATERIALS DAMAGED DURING HANDLING OR STORAGE SHALL BE REMOVED FROM THE SITE AND SHALL NOT BE USED IN ANY PART OF THE ROOFING SYSTEM.

E. STORE ROLL GOODS ON ENDS ONLY. DISCARD ROLLS WHICH HAVE BEEN FLATTENED, CREASED, OR OTHERWISE DAMAGED. 1.07 ENVIRONMENTAL REQUIREMENTS

A. ROOF SYSTEM INSTALLATION SHALL NOT TAKE PLACE DURING INCLEMENT WEATHER OR WHEN THE AIR TEMPERATURE OR WIND CHILL TEMPERATURE IS UNACCEPTABLE TO THE ONSITE, FULL-TIME INSPECTOR.

B. MATERIAL SAFETY DATA SHEETS OF ALL SPECIFIED PRODUCTS OF THIS SECTION SHALL BE KEPT ON SITE DAILY FOR PROJECT DURATION.

1.08 WARRANTY & PERIODIC INSPECTION PROVISIONS A. PROVIDE RROOFING CONTRACTOR'S WARRANTY TO COVER ALL DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF TWO (2) YEARS FROM DATE OF

ACCEPTANCE. B. TREMCO ROOFING SYSTEM WARRANTY & PERIODIC INSPECTION PROGRAM:

TREMCO AND OWNER, THE CONTRACTOR SHALL OBTAIN AND DELIVER TREMCO'S TWENTY (20) YEAR COMPLETE ROOFING SYSTEM WARRANTY AND COMPANION INSPECTION PROGRAM, TO THE OWNER. THE OWNER IS REQUIRING THAT TREMCO'S WARRANTY PROVIDE COMPANION INSPECTION PROVISIONS FOR THE ROOFING SYSTEM AT THIS FACILITY. WARRANTY

AGREEMENT SHALL INCLUDE PROVISIONS COMMITTING TREMCO TO PERFORM ONSITE INSPECTIONS OF THE ROOFING SYSTEM AT YEARS 2, 5, 10 AND 15 OF THE WARRANTY

AT EACH INSPECTION, TREMCO WILL BE REQUIRED TO PERFORM, AT THEIR SOLE EXPENSE, A COMPREHENSIVE VISUAL INSPECTION OF THE ROOFING SYSTEM AND SURFACING COMPONENTS. DETAILED INSPECTIONS WILL ALSO BE PERFORMED AT ROOF SYSTEM FLASHING SITES, INCLUDING PERIMETERS, PENETRATIONS AND EQUIPMENT FLASHING DETAILS. AT EACH INSPECTION, TREMCO WILL BEAR RESPONSIBILITY FOR GENERAL ROOFTOP HOUSEKEEPING, MEANT TO INCLUDE THE COLLECTION, REMOVAL AND DISPOSAL OF INCIDENTAL QUANTITIES OF ROOFTOP

INSPECTIONS ARE INTENDED TO ASSIST THE OWNER IN VARIOUS PREVENTIVE MAINTENANCE PRIORITIES THAT MAY EXIST ON THE ROOF SYSTEM AND ASSOCIATED FLASHING DETAILS. FOLLOWING EACH INSPECTION, TREMCO WILL BE REQUIRED TO PROVIDE A WRITTEN SUMMARY, WITH PHOTOGRAPHS, TO BE DELIVERED TO THE OWNER DESCRIBING FIELD CONDITIONS AND CATALOGING PREVENTIVE/REMEDIAL MAINTENANCE ITEMS WHICH MAY BE REQUIRED ON PARTICULAR ROOF SECTION(S). ANY/ALL EVIDENCE OF PHYSICAL ABUSE OR VANDALISM, WHICH IS NOT COVERED UNDER THE WARRANTY PROGRAM, SHALL BE IMMEDIATELY REPORTED TO THE OWNER FOR CORRECTIVE ACTION.

PART 2 - PRODUCTS

2.01 ROOFING MATERIALS

A. COLD PROCESS ADHESIVES:

1. INTERPLY, VAPOR-BARRIER AND SURFACING ADHESIVE:

A. BURMASTIC COLD PROCESS ADHESIVE. 2. FLASHING SHEET ADHESIVE:

A. POLYROOF S.F. SOLVENT-FREE, ELASTOMERIC MASTIC/ADHESIVE. B. TRILAMINATE, REINFORCED ROOFING PLY & VAPOR BARRIER SHEET:

1. BURMASTIC COMPOSITE-PLY HT SHEET.

C. RELATED MATERIALS:

ASPHALT MASTIC:

A. KARNAK #19 (ASBESTOS FREE) ASPHALT MASTIC, OR APPROVED EQUIVALENT.

 \square SP FT RCHITE

A. GENERAL: INSTALL METAL ROOFING PANELS TO PROFILES, PATTERNS AND DRAINAGE INDICATED AND REQUIRED FOR LEAK-PROOF INSTALLATION. PROVIDE FOR STRUCTURAL AND THERMAL MOVEMENT AT WORK. SEAL JOINTS FOR LEAK PROOF INSTALLATION. 1. SEAMS: PROVIDE UNIFORM, NEAT SEAMS

AND ANCHORS FOR WATERTIGHT AND LEAK-PROOF INSTALLATION. 3. SEALANT-TYPE JOINTS: PROVIDE SEALANT-TYPE JOINTS WHERE INDICATED. FORM JOINTS TO CONCEAL SEALANT. COMPLY WITH DIVISION 7 JOINT SEALANTS SECTION FOR SEALANT INSTALLATION.

3.05 FIELD QUALITY REQUIREMENTS A. SITE TESTS: (POST INSTALLATION TESTING): OWNER RESERVES RIGHT TO PERFORM POST INSTALLATION TESTING OF INSTALLED SHEET METAL ROOFING.

B. MANUFACTURER'S FIELD SERVICES: UPON OWNER'S REQUEST, PROVIDE MANUFACTURER'S FIELD SERVICE CONSISTING OF PRODUCT USE RECOMMENDATIONS AND PERIODIC SITE VISIT FOR INSPECTION OF PRODUCT INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. C. FACTORY MUTUAL APPROVAL: INSTALLED SHEET METAL ROOFING SYSTEM WILL BE INSPECTED BY FACTORY

MUTUAL FOR COMPLIANCE WITH INSTALLATION REQUIREMENTS. A. CLEANING: REMOVE TEMPORARY COVERINGS AND PROTECTION OF ADJACENT WORK AREAS. REPAIR OR REPLACE DAMAGED INSTALLED PRODUCTS. CLEAN INSTALLED PRODUCTS IN ACCORDANCE WITH

MANUFACTURER'S INSTRUCTIONS PRIOR TO OWNER'S ACCEPTANCE. REMOVE CONSTRUCTION DEBRIS FROM PROJECT SITE AND LEGALLY DISPOSE OF DEBRIS. 3.07 PROTECTION

A. PROTECTION: PROTECT INSTALLED PRODUCT FROM DAMAGE DURING CONSTRUCTION.

USE OF PORTABLE ROLL FORMER IS NOT ACCEPTABLE.

(.025 MM) TOTAL DRY FILM THICKNESS. MEETING AAMA 620-96 FOR ALUMINUM COIL

UPON FIELD DIMENSIONS

END OF SECTION 07 61 00

2. PANELS TO BE FACTORY ROLL FORMED WITH CORRECTIVE LEVELING OF METAL DURING THE ROLL

07 71 00 - MANUFACTURED ROOF SPECIALTIES CONT.

II. BABCOCK-DAVIS HATCHWAYS, INC.

III. OR ARCHITECT APPROVED SUBSTITUTE. 2.04 ACCESSORIES

A. UNDERLAYMENT: ASPHALT SATURATED BUILDING FELT, NON-PERFORATED, 15 POUNDS PER SQUARE AS

RECOMMENDED FOR USE IN WATERPROOFING AND IN CONSTRUCTION OF BUILT-UP ROOFS. B. FLASHING CEMENT: TROWEL GRADE, COMPOSED OF SELECTED ASPHALT, SOLVENTS, AND NON-ASBESTOS FILLERS, CONFORMING TO FS SS-C-153 TYPE 1, ASTM D 2822, TYPE 1 AND ASTM D 4586, TYPE 1 (NON-ASBESTOS) AS MANUFACTURED BY KARNAK CHEMICAL CORPORATION, PRODUCT Nº. 19 "FLASHING

CEMENT", OR EQUAL AS MANUFACTURED BY KOCH MATERIALS COMPANY, J & P PETROLEUM PRODUCTS COMPANY OR OTHER APPROVED MANUFACTURER. SEALANT: SEALANT IN CONJUNCTION WITH METAL WORK: ONE-PART ACRYLIC TERPOLYMER SEALANT, TREMCO MONO, PECORA UNICRYLIC, SONNEBORN SONAC, OR EQUIVALENT, IN COLOR TO MATCH THE

D. SPLASH PADS: PRECAST CONCRETE TYPE, SIZE AND PROFILES INDICATED; MINIMUM 3000 PSI AT 28 DAYS,

WITH MINIMUM 5 PERCENT AIR ENTRAINMENT. E. GALVANIZED METAL FLASHING: COMMERCIAL GRADE GALVANIZED STEEL MEETING ASTM A653-95, COATING DESIGNATION G-90, MINIMUM.

 COUNTER FLASHING: 26 GAGE CONCRETE REGLET: 26 GAGE

3. SURFACE MOUNTED REGLET: 24 GAGE 4. MASONRY REGLET: 24 GAGE ST STUCCO REGLET: 24 GAGE

REPLACE ANY WORK SO DAMAGED AND SOILED

STX REGLET: 24 GAGE PART 3 - EXECUTION 3.02 EXAMINATION

> A. VERIFY ROOF NAILING STRIPS AND WOOD BLOCKING ARE SOLIDLY SET. B. BEGINNING OF WORK SHALL CONSTITUTE ACCEPTANCE OF THE CONDITIONS OF THE SURFACES TO WHICH THIS WORK IS TO BE APPLIED.

3.03 PREPARATION

A. FIELD MEASURE SITE CONDITIONS PRIOR TO FABRICATION. B. INSTALL STARTER AND EDGE STRIPS, AND CLEATS BEFORE STARTING INSTALLATION. C. DURING THE INSTALLATION OF WORK OF THIS SECTION, PROTECT THE WORK OF OTHER TRADES AGAINST

D. INSTALL SURFACE MOUNTED REGLETS TRUE TO LINES AND LEVELS. SEAL TOP OF REGLETS WITH SEALANT. E. SECURE FLASHINGS IN PLACE USING CONCEALED CONTINUOUS CLEATS, CLIPS AND FASTENERS IN ACCORDANCE WITH PRODUCT DATA AS INDICATED. USE EXPOSED FASTENERS ONLY IN LOCATIONS APPROVED BY ARCHITECT

UNDUE SOILAGE AND DAMAGE BY THE EXERCISE OF REASONABLE CARE AND PRECAUTIONS. REPAIR OR

F. APPLY PLASTIC CEMENT COMPOUND BETWEEN METAL FLASHINGS AND FELT FLASHINGS. G. LAP AND SEAL ALL JOINTS.

H. FIT FLASHINGS TIGHT IN PLACE. MAKE CORNERS SQUARE, SURFACES TRUE AND STRAIGHT IN PLANES, AND LINES ACCURATE TO PROFILES. I. SOLDER METAL JOINTS WATERTIGHT FOR FULL METAL SURFACE CONTACT. AFTER SOLDERING, WASH

METAL CLEAN WITH NEUTRALIZING SOLUTION AND RINSE WITH WATER. SEAL METAL JOINTS WATERTIGHT. J. COORDINATE COUNTER FLASHING AT ROOF SURFACES WITH ROOFING WORK TO PROVIDE WEATHERTIGHT CONDITION AT ROOF TERMINATIONS.

K. ISOLATE DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS. SEPARATE USING BITUMINOUS COATING. L. INSTALL REGLETS AS WALLS ARE BUILT BY VARIOUS TRADES, ROOFING CONTRACTOR TO PROVIDE PRODUCTS TO TRADE INSTALLING WITH INSTALLATION INSTRUCTIONS. ROOFING CONTRACTOR TO VERIFY

THAT RELETS HAVE BEEN PROPERLY INSTALLED AND CORRECT AS REQUIRED. A. COORDINATE WITH ROOFING INSTALLER PRIOR TO INSTALLATION. VERIFY SITE CONDITIONS AND

MANUFACTURERS ROOF EDGING DETAILS. COMPLY WITH ROOF EDGING MANUFACTURER'S INSTALLATION B. NAIL GALVANIZED SPRING CLIP IN CONTINUOUS MANNER TO VERTICAL FACE OF WOOD NAILERS. LOCATE

FASTENERS 3/4 INCH BELOW ROOF EDGE AND 12 INCHES ON CENTER USING A MINIMUM 1-1/2 INCH GALVANIZED ROOFING NAIL. ALLOW 1/4-INCH GAP BETWEEN SECTIONS OF SPRING CLIP. LAY ROOFING MEMBRANE OVER THE SPRING CLIP ALLOWING IT TO EXTEND DOWN THE FACE TO THE DRIP

EDGE. LOCATE AND HANG JOINT COVERS AT ALL JOINTS BETWEEN CORNERS AND STRAIGHT SECTIONS D. HOOK EACH FASCIA SECTION OVER THE TOP OF THE SPRING CLIP AND MEMBRANE. PRESS DOWN ON THE FASCIA UNTIL THE DRIP EDGE IS ENGAGE. ALLOWED 1/8 TO 1/4-INCH GAP FOR EXPANSION (AS RECOMMENDED BY MANUFACTURER).

A. DAILY CLEAN WORK AREAS BY SWEEPING AND DISPOSING OF DEBRIS.

B. UPON COMPLETION OF THE WORK OF THIS SECTION IN ANY GIVEN AREA, REMOVE TOOLS, EQUIPMENT AND ALL RUBBISH AND DEBRIS FROM THE WORK AREA; LEAVE AREA IN BROOM-CLEAN CONDITION.

END OF SECTION 07 71 00

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1.01 ITEMS REQUIRED BUT NOT SPECIFIED A. IF AN ITEM OR MATERIAL OF THIS TRADE IS INDICATED ON THE DRAWINGS BUT NOT SPECIFICALLY LISTED IN THIS SECTION, PROVIDE SUCH ITEM OR MATERIAL AT A STANDARD OF QUALITY EQUAL TO THE STANDARD ESTABLISHED FOR THE BALANCE

1.02 EXECUTION, CORRELATION AND INTENT A. IN CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK IS TO BE PROVIDED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

OF THE WORK SPECIFIED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

1.03 SECTION INCLUDES A. PREPARE SEALANT SUBSTRATE SURFACES.

B. FURNISH AND INSTALL SEALANT AND BACKING 1.04 REFERENCES

A. THE STANDARDS REFERENCED HEREIN ARE INCLUDED TO ESTABLISH RECOGNIZED QUALITY ONLY. EQUIVALENT QUALITY AND TESTING STANDARDS WILL BE ACCEPTABLE, SUBJECT TO THEIR TIMELY SUBMISSION, REVIEW AND ACCEPTANCE BY THE ARCHITECT.

B. COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND THOSE OTHERS REFERENCED IN THIS SECTION. WHERE THESE STANDARDS CONFLICT WITH OTHER SPECIFIED REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENTS

1. ASTM (AMERICAN SOCIETY OF TESTING AND MATERIALS):

A. ASTM C 717 - TERMS RELATING TO BUILDING SEALS AND SEALANTS.

B. ASTM C 790 - USE OF LATEX SEALING COMPOUNDS. C. ASTM C 834 - LATEX SEALING COMPOUNDS.

D. ASTM C 920 - ELASTOMERIC JOINT SEALANTS. E. ASTM C 962 - USE OF ELASTOMERIC JOINT SEALANTS.

F. ASTM C 1193 - GUIDE FOR USE OF JOINT SEALANTS. G. ASTM D 1056 - FLEXIBLE CELLULAR MATERIALS - SPONGE OR EXPANDED RUBBER. 2. FS (FEDERAL SPECIFICATIONS, GENERAL SERVICES ADMINISTRATION):

A. FS TT-S-00227E - SEALING COMPOUND: ELASTOMERIC TYPE, MULTI-COMPONENT. B. FS TT-S-001543A - SEALING COMPOUND, SILICONE RUBBER BASE.

C. FS TT-S-001657 - SEALING COMPOUND, SINGLE COMPONENT, BUTYL RUBBER BASED, SOLVENT RELEASE TYPE. THE FOLLOWING REFERENCE MATERIALS ARE HEREBY MADE A PART OF THIS SECTION

BY REFERENCE THERETO: 1. SWRI (SEALANT, WATERPROOFING & RESTORATION INSTITUTE) - SEALANT AND CAULKING GUIDE SPECIFICATION.

A. SUBMIT THE FOLLOWING UNDER PROVISIONS OF DIVISION 1:

1. LITERATURE: MANUFACTURER'S PRODUCT DATA SHEETS, SPECIFICATIONS, PERFORMANCE DATA, CHEMICAL AND PHYSICAL PROPERTIES AND INSTALLATION INSTRUCTIONS FOR EACH ITEM FURNISHED HEREUNDER.

2. MANUFACTURER'S CERTIFICATION THAT THE PRODUCTS SUPPLIED MEET OR EXCEED SPECIFIED REQUIREMENTS.

3. COMPATIBILITY AND ADHESION TEST REPORTS: TEST REPORTS FROM SEALANT MANUFACTURER INDICATING THAT SEALANT PROPOSED FOR USE HAVE BEEN TESTED FOR COMPATIBILITY AND ADHESION WITH ACTUAL SAMPLES OF SUBSTRATES TO BE USED ON THIS PROJECT. INCLUDE SEALANT MANUFACTURER'S INTERPRETATION OF TEST RESULTS, AND RECOMMENDATIONS FOR PRIMERS AND SUBSTRATE PREPARATION SPECIFIC TO THIS PROJECT

4. SELECTION SAMPLES: SAMPLE CARD INDICATING MANUFACTURER'S FULL RANGE OF COLORS AVAILABLE FOR SELECTION BY ARCHITECT.

A. APPLICATOR SPECIALIZING IN APPLYING THE WORK OF THIS SECTION WITH A MINIMUM OF 3 YEARS DOCUMENTED EXPERIENCE APPROVED BY SEALANT B. OBTAIN JOINT SEALERS FROM A SINGLE MANUFACTURER FOR EACH TYPE SPECIFIED.

C. CONFORM TO SWRI REQUIREMENTS FOR INSTALLATION. 1.07 DELIVERY, STORAGE AND HANDLING A. EACH CONTAINER AND PACKAGE MUST BEAR AN UNBROKEN SEAL, TEST NUMBER AND

LABEL OF THE MANUFACTURER UPON DELIVERY TO THE SITE. FAILURE TO COMPLY WITH THESE REOUIREMENTS SHALL BE SUFFICIENT CAUSE FOR REJECTION OF THE MATERIAL IN QUESTION, BY THE CONSTRUCTION MANAGER AND HIS REQUIRING ITS REMOVAL FROM THE SITE. NEW MATERIAL CONFORMING TO SAID REQUIREMENTS SHALL BE PROMPTLY FURNISHED AT NO ADDITIONAL COST TO THE CONTRACT. 1.08 PROJECT CONDITIONS

A. DO NOT INSTALL SINGLE COMPONENT SOLVENT CURING SEALANT IN ENCLOSED BUILDING SPACES.

ENVIRONMENTAL REQUIREMENTS: MAINTAIN TEMPERATURE AND HUMIDITY RECOMMENDED BY THE SEALANT MANUFACTURER DURING AND 24 HOURS AFTER INSTALLATION. DO NOT PROCEED WITH INSTALLATION OF JOINT SEALERS UNDER THE FOLLOWING CONDITIONS 1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE BELOW 40

2. WHEN JOINT SUBSTRATES ARE WET DUE TO RAIN, FROST, CONDENSATION, OR OTHER CAUSES.

C. DO NOT PROCEED WITH INSTALLATION OF JOINT SEALERS UNTIL CONTAMINATES CAPABLE OF INTERFERING WITH THEIR ADHESION ARE REMOVED FROM SUBSTRATES.

PART 2 - PRODUCTS 2.09 SEALANT MATERIALS

A. JOINT SEALER TYPE AA (ACRYLIC ACOUSTICAL): ONE COMPONENT ACRYLIC LATEX, PERMANENTLY ELASTIC, NON-STAINING, NON-SHRINKING, NON-MIGRATING AND

1. TREMCO, BEACHWOOD OH.; PRODUCT, "ACOUSTICAL SEALANT".

2. UNITED STATES GYPSUM COMPANY, CHICAGO IL; PRODUCT "USG ACOUSTICAL B. JOINT SEALER TYPE AP (ACRYLIC PAINTERS CAULK): ONE COMPONENT ACRYLIC LATEX CAULKING COMPOUND, CONFORMING TO FS 19-TP-21M AND ASTM C 834, PAINTABLE WITHIN 24 HOURS AFTER APPLICATION, WITH A MINIMUM MOVEMENT

CAPABILITY OF ± 12.5 PERCENT, EQUAL TO ONE OF THE FOLLOWING: 1. SONNEBORN BUILDING PRODUCTS INC., MINNEAPOLIS MN; PRODUCT, "SONOLAC".

2. TREMCO, BEACHWOOD OH.; PRODUCT, "TRIMFLEX 834". 3. BOSTIK; PRODUCT, "CHEM-CALK 600"

C. JOINT SEALER TYPE B (BUTYL): GUN-GRADE MODIFIED BUTYL AND POLYISOBUTYLENE SEALANT, CONFORMING TO FS TT-S-001657, TYPE I, AND ASTM C-834, WITH A MOVEMENT CAPABILITY OF ±10 PERCENT OR BETTER AND A SHORE A HARDNESS OF 24 TO 28, EQUAL TO ONE OF THE FOLLOWING:

1. TREMCO, BEACHWOOD OH.; PRODUCT, "BUTYL SEALANT". 2. PECORA CORPORATION, HARLEYSVILLE PA.; PRODUCT "BC-158".

D. JOINT SEALER TYPE BP2 (BITUMEN MODIFIED POLYURETHANE, MULTI-COMPONENT): POURING GRADE SELF-LEVELING BITUMEN MODIFIED TWO COMPONENT URETHANE SEALANT, CONFORMING TO ASTM C920, TYPE M, GRADE P, CLASS 25 AND FS SS-S-00227E, TYPE 1, CLASS A, WITH A MINIMUM MOVEMENT CAPABILITY OF +50/-25 PERCENT, EQUAL TO ONE OF THE FOLLOWING:

1. MAMECO INTERNATIONAL, INC., PRODUCT "VULKEM 202".

2. SONNEBORN BUILDING PRODUCTS INC., MINNEAPOLIS MN; PRODUCT, "SONOMERIC 2".

3. PECORA CORPORATION, HARLEYSVILLE PA.; PRODUCT "UREXPAN NR-300". E. JOINT SEALER TYPE CP2 (POLYURETHANE, MULTI-COMPONENT, INSIDE OF INSULATED ROOMS): METZGER/MCGUIRE SPAL PRO 2000

F. JOINT SEALER TYPE HL2 (HORIZONTAL-SELF-LEVELING, 2-COMPONENT): POURING GRADE SELF-LEVELING MULTI-COMPONENT URETHANE SEALANT, CONFORMING TO FS TT-S-000227E, TYPE I, CLASS A, AND ASTM C 920, WITH A MINIMUM MOVEMENT CAPABILITY OF ±25 PERCENT, EQUAL TO THE FOLLOWING:

1. MAMECO INTERNATIONAL, INC., PRODUCT "VULKEM 245/255".

2. SIKA CORP, LYNDHURST NJ; PRODUCT, "SIKAFLEX 2CSL". 3. SONNEBORN BUILDING PRODUCTS INC., MINNEAPOLIS MN; PRODUCT, "SL2".

4. TREMCO, BEACHWOOD OH.; PRODUCT, "THC-900".

G. JOINT SEALER TYPE SC (SILICONE, GENERAL CONSTRUCTION): ONE-PART MEDIUM MODULUS, NATURAL CURE, SYNTHETIC SEALANT, HAVING A USEFUL LIFE EXPECTANCY OF AT LEAST 20 YEARS, CONFORMING TO ASTM C 920, TYPE S, NS, CLASS 25, USE NT, G, A, M, O WITH A MINIMUM MOVEMENT CAPABILITY OF ±50 PERCENT, **EQUAL TO THE FOLLOWING:**

1. DOW CORNING CORPORATION, MIDLAND MI.; PRODUCT, "791". 2. GENERAL ELECTRIC COMPANY (GE SILICONES) WATERFORD

NY; PRODUCT, "SILPRUF" 3. SONNEBORN BUILDING PRODUCTS INC., MINNEAPOLIS MN; PRODUCT, "SONOLASTIC - OMNISEAL".

4. TREMCO, BEACHWOOD OH.; PRODUCT, "SPECTREM 2" H. JOINT SEALER TYPE SF (SILICONE, FOOD CONTACT): ONE COMPONENT SILICONE RUBBER, ACCEPTABLE TO LOCAL HEALTH OFFICIALS, CONFORMING TO U.S. FOOD AND DRUG ADMINISTRATION REGULATION 21 CFR 175.105, 175.300 AND 177.2600, FS TT-S-001543A, TYPE NON-SAG, CLASS A, AND ASTM C 920, TYPE NS, CLASS 25, USE NT, G, O AND A WITH A MINIMUM MOVEMENT CAPABILITY OF ±25 PERCENT, AND A SHORE A MINIMUM HARDNESS OF 20, EQUAL TO THE FOLLOWING:

1. DOW CORNING CORPORATION, MIDLAND MI.; PRODUCT, "732".

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2. GENERAL ELECTRIC COMPANY, WATERFORD NY; PRODUCT, "SERIES SCS1000". I. JOINT SEALER TYPE SM (SILICONE, MILDEW-RESISTANT): ONE COMPONENT ACETOXY SILICONE RUBBER, MILDEW RESISTANT, ACCEPTABLE TO LOCAL HEALTH OFFICIALS, FS TT-S-001543A, TYPE NON-SAG, CLASS A, AND FS TT-S-00230C, TYPE II, CLASS A AND ASTM C 920, TYPE S, CLASS 25, GRADE NS, USE NT, G AND A WITH A MINIMUM MOVEMENT CAPABILITY OF ±25 PERCENT, AND A SHORE A HARDNESS OF 20, EQUAL TO THE FOLLOWING:

1. DOW CORNING CORPORATION, MIDLAND MI.; PRODUCT, "786".

2. GENERAL ELECTRIC COMPANY, WATERFORD NY; PRODUCT, "SANITARY 1700". 3. SONNEBORN BUILDING PRODUCTS INC., MINNEAPOLIS MN; PRODUCT, "SONOLASTIC - OMNIPLUS" TREMCO, BEACHWOOD OH.; PRODUCT, "PROGLAZE".

J. JOINT SEALER TYPE SP (SILICONE FOR PLASTIC FABRICATIONS): ONE-PART SILICONE SEALANT, HAVING A USEFUL LIFE EXPECTANCY OF AT LEAST 20 YEARS, CONFORMING TO ASTM C 920, TYPE S, NS, CLASS 25, WITH A MINIMUM MOVEMENT CAPABILITY OF ± 50 PERCENT, HAVING A PSI STRESS AT 50% EXTENSION OF 35 PSI. PROVIDE IN MANUFACTURER'S STANDARD COLORS AS SELECTED BY THE ARCHITECT. SEALANT SHALL BE DESIGNED FOR PRIMERLESS APPLICATION TO POLYCARBONATE, ACRYLICS, PVC AND CPVC MATERIALS EQUAL TO: GENERAL ELECTRIC COMPANY (GE SILICONES) WATERFORD NY; PRODUCT, "LEXSIL".

MULTICOMPONENT NONSAG URETHANE SEALANT: WHERE JOINT SEALANTS OF THIS TYPE ARE INDICATED, PROVIDE PRODUCTS COMPLYING WITH THE FOLLOWING: 1. PRODUCTS

A. NP 2; SONNEBORN BUILDING PRODUCTS DIV., CHEMREX INC.

2. TYPE AND GRADE: M (MULTICOMPONENT) AND NS (NONSAG). 3. CLASS: 25.

4. USES RELATED TO EXPOSURE: NT.

5. USES RELATED TO JOINT SUBSTRATES: M

UNDERSIDE OF PRECAST CONCRETE SLABS AND BEAMS.

APPLICATIONS: INTERIOR JOINTS IN THE FOLLOWING VERTICAL SURFACES AND HORIZONTAL NON-TRAFFIC SURFACES: A. CONTROL AND EXPANSION JOINTS ON EXPOSED INTERIOR SURFACES OF EXTERIOR

WALLS. B. JOINTS BETWEEN PRECAST CONCRETE UNITS INCLUDING FIRE RATED JOINTS.

C. VERTICAL CONTROL JOINTS ON EXPOSED SURFACES OF INTERIOR UNIT MASONRY AND CONCRETE WALLS AND PARTITIONS. D. JOINTS BETWEEN TOPS OF NON-LOAD-BEARING UNIT MASONRY WALLS AND

E. JOINTS BETWEEN STRUCTURAL PRECAST COLUMNS, BEAMS AND SLABS AND JOINTS BETWEEN THESE ELEMENTS AND PRECAST CONCRETE WALLS. F. PERIMETER JOINTS BETWEEN INTERIOR WALL SURFACES AND FRAMES OF INTERIOR

DOORS, WINDOWS, AND ELEVATOR ENTRANCES. G. JOINTS BETWEEN METAL BRACKETS AND ANGLES BOLTED TO PRECAST OR MASONRY WALLS AND CEILINGS.

MULTICOMPONENT NONSAG URETHANE SEALANT: WHERE JOINT SEALANTS OF THIS TYPE ARE INDICATED, PROVIDE PRODUCTS COMPLYING WITH THE FOLLOWING: 1. PRODUCTS:

A. DYMERIC; TREMCO. 2. TYPE AND GRADE: M (MULTICOMPONENT) AND NS (NONSAG).

3. CLASS: 25.

4. USE RELATED TO EXPOSURE: NT (NON-TRAFFIC). 5. USES RELATED TO JOINT SUBSTRATES: M.

6. APPLICATIONS: EXTERIOR JOINTS IN THE FOLLOWING VERTICAL SURFACES AND NON-TRAFFIC HORIZONTAL SURFACES

A. CONTROL AND EXPANSION JOINTS IN CAST-IN-PLACE CONCRETE. B. JOINTS BETWEEN ARCHITECTURAL PRECAST CONCRETE UNITS.

C. PERIMETER JOINTS BETWEEN MATERIALS LISTED ABOVE AND FRAMES OF DOORS AND

D. RATED WALL ASSEMBLIES. M. SINGLE-COMPONENT NONSAG URETHANE SEALANT: WHERE JOINT SEALANTS OF THIS TYPE ARE INDICATED, PROVIDE PRODUCTS COMPLYING WITH THE FOLLOWING:

1. PRODUCTS: PROVIDE ONE OF THE FOLLOWING 2. NP 1; SONNEBORN BUILDING PRODUCTS DIV., CHEMREX INC.

3. TYPE AND GRADE: S (SINGLE COMPONENT) AND NS (NONSAG).

4. CLASS: 12-1/2.

5. USES RELATED TO EXPOSURE: T (TRAFFIC). 6. USES RELATED TO JOINT SUBSTRATES: M.

APPLICATIONS: EXTERIOR CONCRETE PAVING JOINTS AND CONTROL JOINT IN TRUCK APRONS AND SLOPING INTERIOR CONCRETE FLOOR JOINTS NOT USING

N. SINGLE-COMPONENT POURABLE URETHANE SEALANT: WHERE JOINT SEALANTS OF THIS TYPE ARE INDICATED, PROVIDE PRODUCTS COMPLYING WITH THE FOLLOWING: 1. PRODUCTS: PROVIDE ONE OF THE FOLLOWING:

A. VULKEM 45; MAMECO INTERNATIONAL. 2. TYPE AND GRADE: S (SINGLE COMPONENT) AND NS (NONSAG).

3. CLASS: 12-1/2.

4. USES RELATED TO EXPOSURE: T (TRAFFIC). 5. USES RELATED TO JOINT SUBSTRATES: M.

6. <u>APPLICATIONS: NON-SLOPING INTERIOR CONCRETE FLOOR JOINTS NOT USING</u> EPOXY RESIN JOINT FILLER. 2.010 ACCESSORIES

A. COMPRESSIBLE JOINT BEAD BACK-UP: COMPRESSIBLE CLOSED CELL POLYETHYLENE, EXTRUDED POLYOLEFIN FOAM OR POLYURETHANE FOAM ROD, 1/3 GREATER IN DIAMETER THAN WIDTH OF JOINT. SHAPE AND SIZE OF COMPRESSIBLE BACK-UP SHALL BE AS RECOMMENDED BY MANUFACTURER FOR THE SPECIFIC CONDITION USED. PROVIDE ONE OF THE FOLLOWING, OR EQUAL. (ONLY CLOSED CELL RODS WILL BE CONSIDERED)

1. APPLIED EXTRUSION TECHNOLOGIES, INC., MIDDLETOWN DE, PRODUCT "SOF

2. BACKER ROD MANUFACTURING, INC., DENVER, CO, PRODUCT "DENVER FOAM". 3. SONNEBORN BUILDING PRODUCTS INC., MINNEAPOLIS MN, PRODUCT

B. PRIMERS: FURNISH AND INSTALL JOINT PRIMERS OF THE TYPES, AND TO THE EXTENT, RECOMMENDED BY THE RESPECTIVE SEALANT MANUFACTURERS FOR THE SPECIFIC JOINT MATERIALS AND JOINT FUNCTION.

C. BOND-BREAKER TAPE, AND TEMPORARY MASKING TAPE: OF TYPES AS RECOMMENDED BY THE MANUFACTURER OF THE SPECIFIC SEALANT AND CAULKING MATERIAL USED AT EACH APPLICATION, AND COMPLETELY FREE FROM CONTAMINANTS WHICH WOULD ADVERSELY AFFECT THE SEALANT AND CAULKING MATERIALS.

PART 3 - EXECUTION 3.02 EXAMINATION

A. INSPECT ALL SURFACES

3.03 PREPARATION

A. WEATHER CONDITIONS MUST BE DRY AND OF THE TEMPERATURE, AS RECOMMENDED BY SEALANT MANUFACTURER, DURING APPLICATION OPERATIONS.

FREE. ALL JOINTS RECEIVING SEALANT AND CAULKING MATERIALS AND BE SUBJECT

TO THE APPROVAL OF THE MATERIAL MANUFACTURER FOR PROPER USE OF THE SPECIFIED MATERIALS. C. THOROUGHLY CLEAN ALL JOINTS, REMOVING ALL LOOSE MORTAR, OIL, GREASE, DUST, FROST, AND OTHER FOREIGN MATERIALS THAT WILL PREVENT PROPER

B. SURFACE RECEIVING WORK OF THIS SECTION MUST BE ABSOLUTELY DRY AND DUST

ADHESION OF PRIMERS AND SEALANT MATERIALS. 1. CLEAN FERROUS METALS OF ALL RUST AND COATINGS BY WIRE BRUSH, GRINDING OR SANDBLASTING. REMOVE OIL, GREASE AND PROTECTIVE COATINGS WITH CLEANERS RECOMMENDED BY SEALANT MANUFACTURER.

D. IF SO RECOMMENDED AND FURNISHED BY THE SPECIFIC SEALANT MANUFACTURER, APPLY PRIMER TO ALL JOINT SURFACES, TAKING CARE NOT TO STAIN ADJACENT E. VERIFY THAT JOINT BACKING AND RELEASE TAPES ARE COMPATIBLE WITH SEALANT.

F. PERFORM PREPARATION IN ACCORDANCE WITH ASTM C 804 AND C 790 FOR SOLVENT AND LATEX BASE SOLVENTS, RESPECTIVELY. 3.04 INSTALLATION A. INSTALL JOINT BEAD BACK-UP IN ALL JOINTS IN EXCESS OF 5/8-INCH DEPTH, AND

MANNER THAT WILL ASSURE A CONSTANT DEPTH 1/8 INCH GREATER THAN THE SEALANT AND CAULKING MATERIAL DEPTH TOLERANCES. 1. SET BEADS INTO JOINTS CONTINUOUSLY, BY SLIGHTLY STRETCHING DURING PLACEMENT, TO PERMIT COMPRESSION AGAINST SIDES OF JOINT, WITHOUT SURFACE WRINKLES OR BUCKLES.

JOINTS THAT HAVE NO BACK-UP THEREIN, PLACING THE JOINT BEAD IN THE JOINT IN A

B. INSTALL BOND BREAKER IN JOINTS WHERE SHOWN IN THE DRAWINGS AND WHEREVER RECOMMENDED BY THE SEALANT MANUFACTURER TO PREVENT BOND OF THE SEALANT TO SURFACES WHERE SUCH BOND MIGHT IMPAIR THE WORK.

C. APPLY MASKING TAPE OR OTHER PRECAUTIONS TO PREVENT MIGRATION OR SPILLAGE

1. THE DEPTH OF SEALANT AND CAULKING MATERIALS SHALL BE IN ACCORDANCE

2. DO NOT STRETCH BACK-UP MATERIAL INTO JOINTS.

OF MATERIALS ONTO ADJOINING SURFACES. D. APPLY URETHANE SEALANT AND LATEX CAULKING MATERIALS INTO JOINTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, USING MECHANICAL OR POWER CAULKING GUN EQUIPPED WITH NOZZLE OF APPROPRIATE SIZE, WITH SUFFICIENT PRESSURE TO COMPLETELY FILL THE JOINTS.

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WITH MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIC JOINT FUNCTION BUT IN NO CASE EXCEED 1/2-INCH IN DEPTH, NOR LESS THAN 1/4-INCH REGARDLESS OF THE JOINT WIDTH.

MAINTAIN THE OUTER EDGE OF THE SEALANT AND CAULKING MATERIALS WHERE SIDE FACES OF JOINTS ARE IN THE SAME PLANE, BACK 1/8-INCH FROM THE

APPLY SEALANT IN CONTINUOUS BEADS WITHOUT OPEN JOINTS, VOIDS OR AIR POCKETS SO AS TO PROVIDE A WATERTIGHT AND AIRTIGHT SEAL FOR THE ENTIRE

4. AFTER PLACEMENT OF THE SEALANT AND CAULKING MATERIALS CONCAVE-TOOL THE SURFACES TO UNIFORM DENSITY, USING A WATER-WET TOOL. DO NOT USE DETERGENTS OR SOAPY WATER FOR THE TOOLING

REMOVE THE TEMPORARY MASKING TAPE IMMEDIATELY AFTER TOOLING, AND BEFORE THE SEALANT OR CAULKING MATERIAL HAS TAKEN INITIAL SET. E. SEALANT INSTALLATION STANDARD: COMPLY WITH RECOMMENDATIONS OF ASTM C 834, C 920, C 1193 OR C 1311 FOR USE OF JOINT SEALANTS AS APPLICABLE TO

A. CLEAN ALL SURFACES OF ADJACENT SURFACES WHICH HAVE BEEN MARKED OR SOILED BY THE WORK OF THIS SECTION, REMOVING ALL EXCESS SEALANT AND CAULKING MATERIALS WITH SOLVENTS WHICH WILL NOT DAMAGE THE SURFACES IN

MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.

AND INTERSECTIONS BETWEEN DISSIMILAR MATERIALS.

3.06 PROTECTION A. DURING THE OPERATION OF SEALANT WORK, PROTECT THE WORK OF OTHER TRADES AGAINST UNDUE SOILAGE AND DAMAGE BY THE EXERCISE OF REASONABLE CARE

AND PRECAUTIONS. REPAIR OR REPLACE ANY WORK SO DAMAGED AND SOILED. 3.07 SCHEDULE A. GENERAL: SEAL JOINTS INDICATED ON EXTERIOR JOINTS ALL INTERIOR JOINTS, SEAMS,

1. COLORS FOR SEALANT TYPES "HL2", "SC", "SF", "SP", AND "SM": AS SELECTED BY

THE ARCHITECT FROM MANUFACTURER'S STANDARD COLORS. 2. COLOR FOR SEALANT TYPES "AA" AND "AP": WHITE.

3. COLOR FOR SEALANT TYPE "B": BLACK 4. IN CONCEALED INSTALLATION AND IN PARTIALLY OR FULLY EXPOSED INSTALLATION WHERE SO APPROVED BY THE ARCHITECT, STANDARD GRAY OR BLACK SEALANT MAY BE USED.

C. INTERIOR JOINTS (LISTED BY PRIMARY BUILDING MATERIAL ABUTTING SEALANT 1. INTERIOR CONCRETE:

CONCRETE TO CONCRETE, VERTICAL JOINTS, OUTSIDE OF INSULATED ROOMS: SC CONCRETE TO CONCRETE: HORIZONTAL WALKABLE SURFACES, OUTSIDE OF INSULATED ROOMS: HL2 CONCRETE TO CONCRETE HORIZONTAL VEHICULAR TRAFFIC SURFACES

CONCRETE TO CONCRETE INSIDE OF INSULATED ROOMS: CP2 INTERIOR JOINTS AT FOOD PROCESSING AREAS AND INSULATED FOOD STORAGE

ALL JOINTS AT THESE LOCATIONS, INCLUDING BETWEEN INSULATED

METAL PANELS, CONCRETE TO INSULATED METAL PANELS, AND

(INCLUDING FORKLIFT), OUTSIDE OF INSULATED ROOMS: BP2

INSULATED METAL PANELS TO STAINLESS STEEL CURB: SF 3. GYPSUM BOARD (NOT IN FOOD AREAS): GYPSUM BOARD TO METAL OR WOOD TRIM: AP GYPSUM BOARD TO ABUTTING SURFACES AT EXPOSED TOPS AND BOTTOMS PARTITIONS AND WALLS: AA GYPSUM BOARD TO INTERIOR DOOR AND WINDOW FRAMES. PENETRATING CONDUITS AND PIPING, LIGHT-FIXTURES,

ELECTRICAL COVER PLATES, BUILDING SPECIALTY ITEMS,

DUCTWORK, GRILLES, SUPPLY DIFFUSERS, FAUCETS, PIPING,

ESCUTCHEON PLATES AND SIMILAR ITEMS: AP GYPSUM BOARD TO PLUMBING FIXTURES: SM A PCHITECTURAL MILL WORK AND CASEWORK (NOT IN FOOD AREAS). CASEWORK AND COUNTERS TO ABUTTING MATERIALS, COFFEE

ROOMS, LUNCH ROOMS, TOILET ROOMS AND SIMILAR "WET SPACES": SM CASEWORK TO ABUTTING SURFACES (EXCEPT IN "WET" SPACES): AP COUNTERTOPS TO PLUMBING FIXTURES AND FITTINGS: SM

5. INTERIOR METAL (NOT IN FOOD AREAS): METAL TO METAL: SC BEDDING OF METAL THRESHOLDS: B

6. ACOUSTICAL CEILINGS (NOT IN FOOD AREAS): ACOUSTICAL CEILING EDGE ANGLE TO IRREGULAR WALL SURFACE: AP

TILE TO TILE, HORIZONTAL PEDESTRIAN TRAFFIC JOINTS: HL2 8. INTERIOR PLASTIC (NOT IN FOOD AREAS):

PLASTIC FABRICATIONS (POLYCARBONATES, LEXAN, PVC AND CPVC)

TILE TO TILE VERTICAL, AND HORIZONTAL NON-TRAFFIC JOINTS: SM

TO ABUTTING MATERIALS: SP

END OF SECTION 07 92 10

7. TILE (NOT IN FOOD AREAS):

1.02 EXECUTION, CORRELATION AND INTENT A. IN CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK IS TO BE PROVIDED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

1.03 SECTION INCLUDES A. FURNISH THE FOLLOWING PRODUCTS TO BE INSTALLED UNDER THE DESIGNATED SECTIONS:

1. SEAMLESS, UL-LABELED AND NON-LABELED STEEL DOORS, COMPLETE WITH INTERNAL REINFORCING, HARDWARE CUT-OUTS; AND PROVIDED WITH GLAZING OPENINGS, WHERE SO INDICATED.

2. HOLLOW METAL FRAMES FOR DOORS, UL-LABELED AND NON-LABELED, COMPLETE WITH INTERNAL REINFORCING; INSTALLED.

B. RELATED SECTIONS INCLUDE THE FOLLOWING:

1. 08 71 00 - DOOR HARDWARE.

A. COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND THOSE OTHERS REFERENCED IN THIS SECTION. WHERE THESE STANDARDS CONFLICT WITH OTHER SPECIFIED REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENTS

1. ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE) AND SDI (STEEL DOOR

A. ANSI A 117.1 - SPECIFICATIONS FOR MAKING BUILDINGS AND FACILITIES ACCESSIBLE TO AND USABLE BY PHYSICALLY HANDICAPPED PEOPLE.

B. ANSI/SDI 100 - STANDARD STEEL DOORS AND FRAMES.

2. ASTM (AMERICAN SOCIETY OF TESTING AND MATERIALS): A. ASTM E 152 - METHODS OF FIRE TESTS OF DOOR ASSEMBLIES.

B. ASTM A 366 - STEEL, CARBON, COLD ROLLED SHEET, COMMERCIAL QUALITY.

C. ASTM A 568 - STEEL, CARBON AND HIGH STRENGTH LOW ALLOY HOT ROLLED STRIP, AND COLD ROLLED SHEET.

D. ASTM A 525 - STEEL SHEET, ZINC-COATED BY THE HOT-DIP PROCESS.

E. ASTM A 526 - STEEL SHEET, ZINC COATED (GALVANIZED) BY THE HOT DIP PROCESS, COMMERCIAL OUALITY.

3. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION): A. NFPA PUBLICATION 80 - FIRE DOORS AND WINDOWS.

4. UL (UNDERWRITERS LABORATORY INC.):

A. UL PUBLICATION 10B - FIRE TESTS OF DOOR ASSEMBLIES. 5. ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL CODES, LAWS AND REGULATIONS FOR EXITS.

1.05 SUBMITTALS A. SUBMIT THE FOLLOWING UNDER PROVISIONS OF DIVISION 1:

LITERATURE: MANUFACTURER'S PRODUCT DATA SHEETS, SPECIFICATIONS, FOR

DOORS, FRAMES AND SHOP APPLIED FINISHES. CERTIFICATION: MANUFACTURER'S WRITTEN CERTIFICATION STATING THAT DOORS, FRAMES, AND ALL RELATED ITEMS TO BE FURNISHED HEREUNDER, MEET OR EXCEED THE REQUIREMENTS SPECIFIED UNDER THIS SECTION; THAT SPECIFIED GALVANIZED AND SHOP PRIMING HAS BEEN PERFORMED; AND THAT ALL UL FIRE-RESISTIVE REQUIREMENTS FOR THE INDICATED LABELS HAVE BEEN

3. SHOP DRAWINGS: A COMPLETE SCHEDULE OF DOORS AND FRAMES, TO BE FURNISHED HEREUNDER, COORDINATED WITH THE DOOR AND FRAME SCHEDULE CONTAINED IN THE CONTRACT DRAWINGS. LARGE SCALE DETAILS OF EACH TYPE DOOR AND FRAME CONSTRUCTION, INDICATING ALL GAGES, REINFORCING, AND

1.06 REGULATORY REQUIREMENTS

A. FIRE RATED DOOR CONSTRUCTION SHALL CONFORM TO UL PUBLICATION 10B. B. INSTALL FIRE RATED DOOR ASSEMBLIES IN COMPLIANCE WITH NFPA 80.

NUMBER AND LOCATION.

A. COORDINATE THE WORK OF THIS SECTION WITH THE RESPECTIVE TRADES RESPONSIBLE FOR FURNISHING HARDWARE AND INSTALLING DOORS AND FRAMES. B. ENSURE THAT THE WORK PERFORMED HEREUNDER IS COORDINATED WITH ISSUED

TEMPLATES AUTHORIZED BY THE HARDWARE SUPPLIER. DO NOT FABRICATE DOORS OR FRAMES BEFORE RECEIVING A COPY OF THE APPROVED HARDWARE SCHEDULE, SUBMITTED BY THE HARDWARE SUPPLIER, REVIEWED BY THE SUBCONTRACTOR AND ACCEPTED BY THE CONTRACTOR AND THE ARCHITECT. VERIFY IMMEDIATELY NOTIFY THE ARCHITECT, IN WRITING, OF ANY CONFLICTS.

1.08 DELIVERY, STORAGE, AND HANDLING A. PRIOR TO SHIPPING, IDENTIFY EACH FRAME AND DOOR WITH A REMOVABLE METAL OR PLASTIC LABEL WHICH CORRESPONDS WITH DOOR SCHEDULE IDENTIFYING OPENING

B. DELIVER DOORS AND FRAMES BOXED OR CRATED TO PROVIDE PROTECTION DURING

C. INSPECT DOORS AND FRAMES UPON DELIVERY FOR DAMAGE. MINOR DAMAGE MAY BE REPAIRED PROVIDED THE REFINISHED ITEMS ARE EQUAL IN RESPECTS TO NEW WORK AND ACCEPTABLE TO THE ARCHITECT; OTHERWISE REMOVE AND REPLACE DAMAGED

D. STORE DOORS AND FRAMES AT THE BUILDING SITE UPRIGHT AND UNDER COVER. PLACE THE UNITS ON WOOD DUNNAGE AND COVER IN A MANNER THAT WILL PREVENT RUST AND DAMAGE

PART 2 - PRODUCTS 2.01 MANUFACTURERS

> A. SUBJECT TO COMPLIANCE WITH THE REQUIREMENTS SPECIFIED HEREIN, MANUFACTURERS OFFERING PRODUCTS WHICH MAY BE INCORPORATED IN THE WORK INCLUDE THE FOLLOWING:

1. STEELCRAFT, CINCINNATI, OH.

2. CECO COMPANY, OAKBROOK TERRACE, IL. 3. CURRIES COMPANY / ESSEX INDUSTRIES, MASON CITY, IA.

4. PHILLIPP MANUFACTURING, HOLYOKE, MA.

5. REPUBLIC BUILDERS PRODUCTS CORPORATION, MCKENZIE, TN.

6. ARCHITECT APPROVED EQUAL.

B. UNLESS OTHERWISE SPECIFICALLY ACCEPTED BY ARCHITECT, ALL DOORS AND FRAMES SHALL BE OF ONE MANUFACTURER.

C. MATERIALS: 1. HOT-ROLLED STEEL SHEETS AND STRIP: COMMERCIAL-QUALITY CARBON STEEL, PICKLED AND OILED, COMPLYING WITH ASTM A 569 (ASTM A 569M).

2. COLD-ROLLED STEEL SHEETS: CARBON STEEL COMPLYING WITH ASTM A 366 (ASTM A 366M), COMMERCIAL QUALITY, OR ASTM A 620 (ASTM A 620M), DRAWING QUALITY, SPECIAL KILLED.

3. GALVANIZED STEEL SHEETS: ZINC-COATED CARBON STEEL COMPLYING WITH ASTM A 526 (ASTM A 526M), COMMERCIAL QUALITY, OR ASTM A 642 (ASTM A 642M), DRAWING QUALITY, HOT-DIP GALVANIZED ACCORDING TO ASTM A 525, WITH A 60 OR G 60 (ASTM A 525M, WITH Z 180 OR ZF 180) COATING DESIGNATION, MILL PHOSPHATIZED

4. SUPPORTS AND ANCHORS: FABRICATED FROM NOT LESS THAN 0.0478-INCH-THICK STEEL SHEET; 0.0516-INCH- THICK GALVANIZED STEEL WHERE USED WITH GALVANIZED STEEL FRAMES.

5. INSERTS, BOLTS, AND FASTENERS: MANUFACTURER'S STANDARD UNITS. WHERE ITEMS ARE TO BE BUILT INTO EXTERIOR WALLS, HOT-DIP GALVANIZE COMPLYING WITH ASTM A 153, CLASS C OR D AS APPLICABLE

A. GENERAL: REFER TO THE DRAWINGS FOR DESIGN OF DOORS, SIZES, AND DETAILS.

B. CONSTRUCTION: SEAMLESS COMMERCIAL TYPE, 1-3/4 INCHES THICK, UNLESS NOTED OTHERWISE, MEETING OR EXCEEDING THE MATERIALS, GAGES, CONSTRUCTION, AND TESTING REQUIREMENTS OF THE REFERENCED ANSI AND SDI PUBLICATIONS.

C. CLEARANCES: NOT MORE THAN 1/8 INCH AT JAMBS AND HEADS, EXCEPT NOT MORE THAN 1/4 INCH (BETWEEN NON-FIRE-RATED PAIRS OF DOORS. NOT MORE THAN 3/4

INCH AT BOTTOM.

1. FIRE DOORS: PROVIDE CLEARANCES ACCORDING TO NFPA 80. D. EXTERIOR/INTERIOR DOORS: ANSI/SDI 100, LEVEL 2 (PERFORMANCE LEVEL B) HEAVY-DUTY, MODEL 2 (SEAMLESS CONSTRUCTION), 18-GAGE GALVANIZED STEEL FACES, WITH A MINIMUM STC RATING OF 32 (NON-INSULATED) OR STC RATING OF 23 (INSULATED). TOP AND BOTTOM OF DOOR SHALL BE CLOSED WITH FLUSH CHANNELS. THE CHANNELS SHALL HAVE A MINIMUM MATERIAL THICKNESS OF 18-GAGE STEEL AND BE WELDED AND EPOXY SEALED INTO THE TOP CHANNEL OF THE DOOR ASSEMBLY. CORE CONSTRUCTION SHALL FULLY FILL ALL INTERNAL VOIDS, HONEYCOMB, BATT INSULATION OR SIMILAR ARE NOT PERMITTED.

HARDWARE REINFORCING: WELDED IN PLACE STEEL REINFORCEMENT, HOT ROLLED PICKLED AND OILED STEEL PER ASTM A569, WITH THE FOLLOWING MINIMUM GAGES: 1. HINGES, 7-GAGE.

2. KICK PLATES, 18-GAGE.

3. CLOSERS, LOCKS, AND ALL OTHER HARDWARE: 10-GAGE. 4. LOCATIONS FOR REINFORCING SHALL BE DETERMINED FROM INFORMATION AND

TEMPLATES PROVIDED UNDER SECTION 08710 - DOOR HARDWARE.

08 11 00 - STEEL DOORS AND FRAMES

F. PROVIDE UL APPROVED WELDED STEEL ASTRAGAL AT EACH UL PAIR OF FIRE DOORS. G. FABRICATION

1. FABRICATE DOORS WITH HARDWARE REINFORCEMENT WELDED IN PLACE. 2. ATTACH FIRE RATED LABEL TO EACH DOOR UNIT.

2.03 HOLLOW METAL FRAMES A. GENERAL: REFER TO THE DRAWINGS FOR VARIOUS TYPES OF FRAMES, SIZES, AND PROFILES, UL FIRE-RESISTIVE LABEL FRAMES, AND OTHER CHARACTERISTICS OF

FRAMES AND RELATED ITEMS 1. ALL FRAMES (DOOR, WINDOW, SIDELIGHT, TRANSOM, ETC.) SHALL BE SHOP WELDED WITH MITERED JOINTS. JOINTS SHALL BE FULL PROFILE WELDED. FACES AND RETURNS SHALL BE GROUND AND FINISHED SMOOTH WITH NO

B. MATERIALS FOR FRAMES, REINFORCEMENT, ANCHORS, ANCHOR CLIPS AND RELATED

REQUIRED FOR SPECIFIC UL LABEL. 2. REINFORCING CHANNELS WITHIN FRAMES, EXCEPT WHERE STRUCTURAL STEEL CHANNELS ARE INDICATED, AND EXCEPT WHERE UL LABEL REQUIREMENTS

1. FRAME GAGE: 16-GAGE, PER ANSI/SDI 100, LEVEL 2, EXCEPT AS OTHERWISE

PROHIBIT SAME: 12-GAGE. 3. HINGE, LOCK AND STRIKE REINFORCEMENT: 10-GAGE.

4. DOOR CLOSER REINFORCEMENT: 12-GAGE. 5. FLOOR CLIPS: 3/16 INCH THICK.

6. SPLICE PLATES OR CHANNELS: 16-GAGE.

C. FRAME CONSTRUCTION:

1. FIRE-RATED FRAME ASSEMBLIES: MODIFY SPECIFIED CONSTRUCTION TO MEET ALL CONSTRUCTION REQUIREMENTS REQUIRED FOR FIRE-RESISTIVE RATING. A. AFFIX APPROPRIATE UL, FM OR WARNOCK HERSEY LABELS TO EACH RATED FRAME

ASSEMBLY, INDICATING APPLICABLE RATING. 2. SHOP-FABRICATE FRAMES AS WHOLE SINGLE UNITS PER DOOR OPENING, EXCEPT WHEN FRAME SIZE IS TOO LARGE TO SHIP AS A SINGLE UNIT. OVERSIZED FRAMES MAY BE SHIPPED IN LARGE SECTIONS AS PRACTICABLE FOR FIELD ASSEMBLY WITH CONCEALED SPLICE PLATES OR CHANNELS.

3. FRAME CORNER CONSTRUCTION: AS SPECIFIED IN PARAGRAPH 2.04-A, ABOVE. 4. REINFORCEMENTS, STIFFENERS, AND BASE ANGLE CLIPS: WELDED TO INTERIOR SURFACES OF FRAMES TO PROVIDE A STABLE BASE AND SO AS TO NOT

INTERFERE WITH INSTALLATION OF HARDWARE. 5. PROVIDE PLASTER GUARDS WELDED TO FRAME, AT BACK OF HARDWARE CUT-OUTS WHERE MORTAR OR OTHER MATERIALS MAY OBSTRUCT HARDWARE OPERATION OR INSTALLATION.

6. APPEARANCE OF FINISHED FRAMES: STRONG, RIGID, COMPLETELY FREE FROM WARP AND BUCKLE, WITH MITERS WELL-FORMED AND IN TRUE ALIGNMENT, AND WITH SURFACES SMOOTH AND FREE FROM DEFECTS OF ANY KIND.

DOOR SILENCERS: EXCEPT ON WEATHER-STRIPPED OR GASKETED FRAMES, DRILL STOPS TO RECEIVE 3 SILENCERS ON STRIKE JAMBS OF SINGLE-DOOR FRAMES AND 2 SILENCERS ON HEADS OF DOUBLE-DOOR FRAMES.

D. ANCHORAGE: 1. ANCHOR CLIPS FOR FRAMES IN METAL SCREW STUD PARTITIONS: 12-GAGE STEEL Z SHAPED CLIPS, 1-1/2 INCH UPTURNED AND DOWNTURNED LEGS, OR EQUIVALENT TYPE STANDARD WITH THE MANUFACTURER, CONTAINED WITHIN THE FRAMES, FOR SCREW ATTACHMENT TO METAL STUDS UNDER SECTION 09250 -GYPSUM BOARD.

ANCHORS FOR FRAMES IN MASONRY WALLS: ADJUSTABLE, T-SHAPED, POSITIVELY ENGAGING THE RETAINERS ON BOTH FLANGES OF EACH JAMB MEMBER, WHEN PLACED. THE STEM OF THE ANCHORS SHALL BE 2 INCHES WIDE BY 12 GAGE, MINIMUM, CORRUGATED OR PERFORATED FOR MORTAR BOND, AND EXTEND 10 INCHES INTO THE MASONRY, UNLESS OTHERWISE INDICATED.

3. ANCHORS FOR FIRE-RESISTIVE RATED FRAMES: CONFORM TO ALL UL REQUIREMENTS FOR THE SPECIFIC FIRE-RESISTIVE RATINGS. 4. PROVIDE NOT LESS THAN 3 ANCHORS, CLIPS, OR BOLTS, PER JAMB, AS APPLICABLE.

5. ANCHOR TO FLOOR WITH MINIMUM OF 1 ANCHOR PER JAMB 2.04 FABRICATION TOLERANCES

A. MAXIMUM VARIATION FOR DOORS AND FRAMES: MAXIMUM DIAGONAL DISTORTION 1/16 INCH MEASURED WITH STRAIGHT EDGE, CORNER TO CORNER. 2.05 FACTORY FINISHING

A. PREPARATION: PRESSURE-SAND ALL SURFACES OF ALL DOORS, FRAMES, ACCESSORY ITEMS, ANCHORS, AND RELATED ITEMS, TO REMOVE BLEMISHES AND FOREIGN MATTER AND PROVIDE PAINT GRIP. SPOT-FILL IMPERFECTIONS WITH METALLIC FILLER, AND SAND SMOOTH. THOROUGHLY CLEAN THE SURFACES BY APPLYING HOT

OR COLD PHOSPHATE TREATMENT STANDARD WITH THE MANUFACTURER. B. FOLLOWING CLEANING APPLY ONE DIP OR SPRAY COAT OF RUST-INHIBITIVE METALLIC OXIDE, ZINC CHROMATE, OR SYNTHETIC RESIN PRIMER TO ALL SURFACES, INCLUDING THOSE WHICH WILL BE CONCEALED AFTED EDECTION DAKE OF OVEN DRY, THE PRIMER AT TIME AND TEMPERATURE RECOMMENDED BY THE MANUFACTURER FOR DEVELOPING MAXIMUM HARDNESS AND RESISTANCE TO ABRASION. THE FINISH SHALL MEET THE REQUIREMENTS FOR ACCEPTANCE STATED

PART 3 - EXECUTION 3.01 EXAMINATION

A. EXAMINE DOORS AND FRAMES BEFORE BEGINNING DOOR / FRAME INSTALLATIONS.

1. VERIFY THAT FRAMES COMPLY WITH INDICATED REQUIREMENTS FOR TYPE, SIZE, LOCATION AND SWING CHARACTERISTICS AND HAVE BEEN INSTALLED WITH LEVEL HEADS AND PLUMB JAMBS. 2. REJECT DOORS WITH DEFECTS.

B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.02 INSTALLATION - DOORS, FRAMES AND HARDWARE A. INSTALL DOORS & FRAMES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, ANSI/SDI-100, SDI-105, AND THE DOOR HARDWARE INSTITUTE RECOMMENDATIONS.

B. INSTALL HARDWARE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND REQUIREMENTS OF REFERENCED ORGANIZATIONS, AND THE REQUIREMENTS OF

SECTION 08710 - DOOR HARDWARE.

C. USE THE TEMPLATES PROVIDED BY HARDWARE ITEM MANUFACTURER. D. CONFORM TO ANSI 117.1 FOR POSITIONING REQUIREMENTS FOR THE HANDICAPPED. E. TOOLS FOR MAINTENANCE: ALL SPECIAL TOOLS PACKAGED WITH HARDWARE ITEMS

SHALL BE SAVED, TAGGED/IDENTIFIED AS TO PRODUCT USE, AND TURNED OVER TO

THE OWNER UPON COMPLETION OF THE WORK. F. CLEAN ADJACENT SURFACES SOILED BY HARDWARE INSTALLATION. G. PRIOR TO FINAL INSPECTION MAKE FINAL CHECK AND ADJUSTMENT OF ALL HARDWARE, CLEAN OPERATING ITEMS AS NECESSARY TO RESTORE PROPER FUNCTION

AND FINISH OF HARDWARE. A. MAXIMUM VARIATION FOR WOOD WORK FROM TRUE POSITION OF 1/8 INCH IN 8 FEET

FOR PLUMB AND LEVEL AND WITH A MAXIMUM OF 1/16 INCH OFFSETS IN ADJOINING SURFACES INTENDED TO BE FLUSH. B. MAXIMUM VARIATION FOR DOORS AND FRAMES: MAXIMUM DIAGONAL DISTORTION 1/16 INCH MEASURED WITH STRAIGHT EDGE, CORNER TO CORNER.

A. ADJUST DOOR AND FRAMES FOR SMOOTH AND BALANCED MOVEMENT.

B. CLEAN WORK AREAS DAILY BY SWEEPING AND DISPOSING OF SCRAPS AND SAWDUST. C. UPON COMPLETION OF THE WORK OF THIS SECTION IN ANY GIVEN AREA, REMOVE TOOLS, EQUIPMENT AND ALL RUBBISH AND DEBRIS FROM THE WORK AREA; LEAVE AREA IN BROOM-CLEAN CONDITION.

D. REMOVE PROTECTIVE MATERIAL FROM PRE-FINISHED SURFACES. 3.06 PROTECTION

E. DURING THE OPERATION OF STEEL DOORS & FRAMES, PROTECT THE WORK OF OTHER TRADES AGAINST UNDUE SOILAGE AND DAMAGE BY THE EXERCISE OF REASONABLE CARE AND PRECAUTIONS. REPAIR OR REPLACE ANY WORK SO DAMAGED AND SOILED. END OF SECTION 08 11 00

08 30 00 - SPECIALTY DOORS

PART 1 - GENERAL

1.01 SECTION INCLUDES

1. HIGH-SPEED FABRIC ROLL-UP DOORS

A. FURNISH THE FOLLOWING PRODUCTS TO BE INSTALLED UNDER THE DESIGNATED SECTIONS:

2. INSULATED TRAFFIC / IMPACT DOORS 3. POLYPROPYLENE CORE DOORS (FRP) AND FILLED FRAMES

4. IN-FITTING COOLER / FREEZER PERSONNEL DOORS 5. VERTICAL LIFT COOLER / FREEZER DOORS 6. VERTICAL LIFT COOLER / FREEZER DOCK DOORS

7. PERSONNEL BLAST RESISTANT DOORS B. PROVIDE 12 MONTH MAINTENANCE AND CALL BACK SERVICE FOR SPECIALTY DOORS FURNISHED.

C. RELATED SECTIONS INCLUDE THE FOLLOWING:

1. SECTION 07 92 10 - JOINT SEALERS SECTION 16010 - GENERAL ELECTRICAL

3. SECTION 16110 - RACEWAYS SECTION 16120 - CONDUCTORS SECTION 16130 - BOXES

6. SECTION 16190 - HANGERS AND SUPPORTS 7. SECTION 16195 - ELECTRICAL IDENTIFICATION

8. SECTION 16450 - GROUNDING A. COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND THOSE OTHERS

REFERENCED IN THIS SECTION. WHERE THESE STANDARDS CONFLICT WITH OTHER SPECIFIED REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN. 1. STATE BUILDING CODE, CURRENT VERSION.

NEC (NATIONAL ELECTRIC CODE), CURRENT VERSION.

UL (UNDERWRITERS LABORATORY):

A. UL: APPLICABLE REQUIREMENTS FOR MOTORS, SWITCHES AND OTHER ELECTRICAL COMPONENTS. 4. ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL CODES, LAWS AND REGULATIONS FOR EQUIPMENT

5. ALL ELECTRICAL EQUIPMENT AND ASSEMBLIES; I.E. CONTROL PANELS, MOTORS, PUSH BUTTON CONTROLS, SENSORS, LIGHTS, ETC. SHALL BE UL LISTED AND LABELED.

A. SUBMIT THE FOLLOWING UNDER PROVISIONS OF DIVISION 1:

1. LITERATURE: MANUFACTURER'S PRODUCT DATA SHEETS, SPECIFICATIONS, PERFORMANCE DATA, FOR SPECIALTY DOORS COMPONENTS FURNISHED. 2. MANUFACTURER'S WARRANTIES: MANUFACTURER'S WRITTEN WARRANTY, COUNTERSIGNED BY THE INSTALLER, CLEARLY STATING ALL TERMS AND CONDITIONS OF THE WARRANTY AND COVERING ALL

MATERIALS AND WORKMANSHIP PROVIDED FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION OF THE GENERAL CONTRACT. 3. IN ADDITION TO THIS WARRANTY, THE MANUFACTURER SHALL WARRANT THAT THE EQUIPMENT WILL PERFORM IN A MANNER SATISFACTORY TO THE OWNER FOR A PERIOD OF 12 MONTHS FROM DATE OF SUBSTANTIAL COMPLETION OF THE GENERAL CONTRACT. IF OWNER IS NOT THEN SATISFIED WITH THE PERFORMANCE OF THE EQUIPMENT OR SERVICE OF INSTALLING COMPANY, THE OWNER MAY NOTIFY THE MANUFACTURER OR SERVICE COMPANY, AND THE MANUFACTURER/SERVICE COMPANY SHALL REMOVE THE EQUIPMENT AND REFUND THE EQUIPMENT PURCHASE PRICE TO THE OWNER.

THIS WARRANTY SHALL BE PROVIDED BY THE MANUFACTURER IN WRITING AT THE TIME OF BID. 4. SHOP DRAWINGS: LARGE SCALE DRAWINGS OF EACH TYPE OF DOOR, FRAME AND ANY ASSOCIATED CONSTRUCTION, INDICATING ALL GAGES, REINFORCING, ANCHORAGE, AND CUT-OUTS FOR GLAZING IN

A. A COMPLETE SCHEDULE OF DOORS AND FRAMES, TO BE FURNISHED HEREUNDER, COORDINATED WITH THE DOOR AND FRAME SCHEDULE CONTAINED IN THE CONTRACT DRAWINGS. B. SUBMIT ALL TECHNICAL DATA AND DRAWINGS INCLUDING MANUFACTURER'S MOUNTING INSTRUCTIONS AND

INSTALLATION INFORMATION. C. SUBMIT MANUFACTURER'S OWNER'S MANUAL, MAINTENANCE MANUAL AND MASTER SERVICE MANUAL TO

5. MANUFACTURER'S CERTIFICATION: MANUFACTURER'S LETTER, CERTIFIED BY A NOTARY PUBLIC, THAT NO PROPRIETARY EQUIPMENT AS SPECIFIED UNDER PART 2 - PRODUCTS WILL BE USED IN INSTALLATION. B. SUBMIT THE FOLLOWING UNDER PROVISION DIVISION 1:

1. PARTS LIST AND WIRING DIAGRAM; UPON COMPLETION OF THE INSTALLATION, SUBMIT FOUR (4) COPIES OF A COMPLETE PARTS LIST AND AS-BUILT WIRING DIAGRAMS FOR CONTROLLER AND MAINTENANCE INSTRUCTIONAL MANUAL.

2. PROVIDE TECHNICAL INFORMATION FOR SERVICING OPERATING EQUIPMENT. 3. INCLUDE LEGIBLE WIRING DIAGRAM OF INSTALLED ELECTRICAL EQUIPMENT AND CHANGES MADE IN THE WORK. LIST SYMBOLS CORRESPONDING TO IDENTITY OF MARKINGS ON APPARATUS.

4. MANUFACTURER'S WRITTEN INSTALLATION WARRANTY AND MAINTENANCE CONTRACT AS SPECIFIED HEREIN BELOW.

2.01 MANUFACTURER AND TYPE A. MANUFACTURER: TO ESTABLISH A STANDARD OF QUALITY, DESIGN AND FUNCTION DESIRED

B. PROPRIETARY EQUIPMENT: NO PROPRIETARY EQUIPMENT SHALL BE USED IN THE INSTALLATION. ALL EQUIPMENT INCLUDED IN THE SPECIALTY DOOR INSTALLATION SHALL HAVE REPAIR OR REPLACEMENT PARTS READILY ACCESSIBLE TO THE GENERAL SPECIALTY DOOR TRADE. WITHOUT LIMITATION, THIS SHALL INCLUDE DIAGNOSTIC TOOLS AND CONTROLLER COMPONENTS REQUIRED FOR THE COMPLETE MAINTENANCE OF THE INSTALLED DOORS.

1. ANY COSTS INCURRED FOR CHANGES IN THE WORK FROM THAT SHOW ON THE DRAWINGS, INCLUDING WORK OF THIS AND OTHER SECTIONS, DUE TO THE REQUIREMENTS OF THE PARTICULAR SPECIALTY DOORS FURNISHED THERE UNDER ARE THE SOLE RESPONSIBILITY OF THE SPECIALTY DOOR

2.02 HIGH-SPEED FABRIC ROLL UP DOORS (STANDARD - RYTEC PREDADOOR NXT)

A. PROVIDE STANDARD STYLE RAPID ROLL UP DOORS AS INDICATED ON DRAWINGS. 1. DOOR PANEL: 2-PLY MONOFILAMENT FABRIC. POLYURETHANE COVER IS APPLIED THROUGH USE OF A CALENDARING PROCESS. FABRIC IS SMOOTH FOR EASY CLEANING AND WASH DOWN; STANDARD

WHITE. FULL WIDTH, VISION PANEL CONSTRUCTED OF USDA COMPLIANT MATERIAL. 2. SIDE FRAMES: FULLY BOLT-TOGETHER ANODIZED ALUMINUM CONSTRUCTION WITH FULL HEIGHT WEATHER SEAL TO SEAL AGAINST PANEL MATERIAL.

3. BOTTOM BAR: BREAK-AWAY EXTRUDED ALUMINUM BOTTOM BAR; TO RELEASE IN EITHER DIRECTION WITHOUT DAMAGE TO THE DOOR. DUAL CUT-OFF SWITCHES TO SHUT ELECTRIC MOTOR OF WHEN BOTTOM BAR IS IMPACTED. STANDARD PNEUMATIC AUTO-REVERSING EDGE ON BOTTOM BAR. NO EXPOSED JUNCTION BOX ON BOTTOM BAR. VINYL LOOP HUGS CONTOUR OF FLOOR FOR TIGHT SEAL.

BOTTOM BAR PRE-ASSEMBLED ON DOOR AT FACTORY. 4. MOTOR: 3 PH, VARIABLE SPEED AC DRIVE TO PROVIDE SOFT ACCELERATION AND DECELERATION. INDEPENDENT OPENING AND CLOSING SPEEDS. MAX SPEED; 50 INCHES PER SECOND

5. DOORS SHALL BE ACTIVATED BY THE FOLLOWING: (ALL ASPECTS OF THESE ACTIVATORS ARE TO BE

FURNISHED AND INSTALLED BY THE DOOR INSTALLATION CONTRACTOR.) A. DOORS TO BE OPENED AND CLOSED VIA MANUAL PUSH BUTTONS, AND OVERHEAD PULL CHORDS MOUNTED ON BOTH SIDES OF THE DOOR. A TIMER SEQUENCE IS TO BE INSTALLED TO CLOSE THE DOOR AT A SET 6. TRAVEL SPEED: OPEN AND CLOSES AT A MINIMUM OF 50 INCHES PER SECOND.

7. ELECTRICAL CONTROLS: SELF-DIAGNOSTIC, MICROPROCESSOR-BASED DIGITAL GATEWAY DOOR CONTROLLER HOUSED IN A STAINLESS STEEL NEMA 4X RATED ELECTRICAL ENCLOSURE WITH VISION WINDOW. CONTROLLER INCLUDES NON-ADJUSTABLE CYCLE COUNTER WITH LED READOUT. PROGRAMMABLE LIMITS SETTINGS. PROVIDE PROGRAMMABLE PROXIMITY SENSORS BOTH SIDES OF WALL. PROVIDE PUSH BUTTON CONTROLS BOTH SIDES OF WALLS. CONTROL PANEL TO BE FULLY ASSEMBLED, WIRED AND TESTED AT FACTORY AND INSTALLED BY SPECIALTY DOOR SUPPLIER HIRED

2.03 HIGH-SPEED FABRIC ROLL UP DOORS (CLEAN - RYTEC PHARMA-ROLL)

A. PROVIDE USDA / CLEAN STYLE RAPID ROLL UP DOORS AS INDICATED ON DRAWINGS. 1. DOOR PANEL: USDA / FDA COMPLIANT 2-PLY MONOFILAMENT FABRIC. POLYURETHANE COVER IS APPLIED THROUGH USE OF A CALENDARING PROCESS. FABRIC IS SMOOTH FOR EASY CLEANING AND WASH DOWN; STANDARD WHITE. FULL WIDTH, VISION PANEL CONSTRUCTED OF USDA COMPLIANT

2. SIDE FRAMES: FULLY BOLT-TOGETHER WITH ANODIZED ALUMINUM FINISH WITH FULL HEIGHT WEATHER SEAL. #4 FINISH STAINLESS STEEL COVERS CAN BE REMOVED FOR EASY CLEANING AND 3. HEAD ASSEMBLY: CARBON STEEL ROLL DRUM WITH STEEL-IT PAINT. ROLL DRUM FEATURES

STAINLESS STEEL END PLATES AND STAINLESS STEEL SHAFTS WITH FULL-WIDTH HEADER SEAL. #4 FINISH STAINLESS STEEL ROLL DRUM AND MOTOR COVER. 4. BOTTOM BAR: BREAK-AWAY STAINLESS STEEL BOTTOM BAR RELEASES IN EITHER DIRECTION WITHOUT DAMAGE TO THE DOOR. DUAL CUT-OFF SWITCHES SHUT OFF MOTOR WHEN BOTTOM BAR IS IMPACTED. STANDARD PNEUMATIC AUTO-REVERSING EDGE ON BOTTOM BAR. NO EXPOSED

JUNCTION BOX ON BOTTOM BAR. VINYL LOOP HUGS CONTOUR OF FLOOR FOR TIGHT SEAL. BOTTOM BAR PRE-ASSEMBLED ON DOOR AT FACTORY. 5. MOTOR: 3 PH, VARIABLE SPEED AC DRIVE TO PROVIDE SOFT ACCELERATION AND DECELERATION. INDEPENDENT OPENING AND CLOSING SPEEDS. MAX SPEED; 50 INCHES PER SECOND

FURNISHED AND INSTALLED BY THE DOOR INSTALLATION CONTRACTOR.) A. DOORS TO BE OPENED AND CLOSED VIA MANUAL PUSH BUTTONS, AND OVERHEAD PULL CHORDS MOUNTED ON BOTH SIDES OF THE DOOR. A TIMER SEQUENCE IS TO BE INSTALLED TO CLOSE THE DOOR AT A SET

6. DOORS SHALL BE ACTIVATED BY THE FOLLOWING: (ALL ASPECTS OF THESE ACTIVATORS ARE TO BE

7. TRAVEL SPEED: OPEN AND CLOSES AT A MINIMUM OF 50 INCHES PER SECOND. 8. ELECTRICAL CONTROLS: SELF-DIAGNOSTIC, MICROPROCESSOR-BASED DIGITAL GATEWAY DOOR CONTROLLER HOUSED IN A STAINLESS STEEL NEMA 4X RATED ELECTRICAL ENCLOSURE WITH VISION WINDOW. CONTROLLER INCLUDES NON-ADJUSTABLE CYCLE COUNTER WITH LED READOUT. PROGRAMMABLE LIMITS SETTINGS. PROVIDE PROGRAMMABLE PROXIMITY SENSORS BOTH SIDES OF WALL. PROVIDE PUSH BUTTON CONTROLS BOTH SIDES OF WALL. CONTROL PANEL TO BE FULLY ASSEMBLED, WIRED AND TESTED AT FACTORY AND INSTALLED BY SPECIALTY DOOR SUPPLIER HIRED

08 30 00 - SPECIALTY DOORS CONT

BANDING (PRIOR TO MACHINING). CATEGORY B TYPE DOOR CONSTRUCTION, WITH POST APPLIED AND/OF EXPOSED EDGE INTUMESCENT COMPONENTS OR PRODUCTS ARE NOT ACCEPTABLE. A. PROVIDE USDA / CLEAN STYLE RAPID ROLL UP DOORS AS INDICATED ON DRAWINGS. D. FACES: DOOR FACINGS SHALL BE 0.120" COMPOSITE FRP SHEET EXTERIOR GRADE, FIBER REINFORCED 1. DOOR PANEL: USDA / FDA COMPLIANT 2-PLY MONOFILAMENT FABRIC. POLYURETHANE COVER IS PLASTIC PANEL ON INTERIOR AND EXTERIOR FACES. COLORED PIGMENT SHALL BE MAXIMUM AMOUNT APPLIED THROUGH USE OF A CALENDARING PROCESS. FABRIC IS SMOOTH FOR EASY CLEANING AND WASH DOWN; STANDARD WHITE. FULL WIDTH, VISION PANEL CONSTRUCTED OF USDA COMPLIANT

08 30 00 - SPECIALTY DOORS CONT.

2.04 HIGH-SPEED FABRIC ROLL UP DOORS (USDA - RYTEC CLEANROLL)

2. SIDE FRAMES: FULLY BOLT-TOGETHER, 304 STAINLESS STEEL SIDE FRAMES WITH #2B FINISH. #4

THRU-BEAM PHOTO EYES INTERNALLY MOUNTED IN SIDE FRAME, ONE SET FIELD INSTALLED.

OUT OF WAY, PROVIDING FULL ACCESS DURING WASH DOWN.

BAR PRE-ASSEMBLED ON DOOR AT FACTORY.

2.05 HIGH-SPEED FABRIC ROLL UP DOORS (FREEZER - RYTEC TURBO-SEAL INSULATED)

BOTTOM BAR PRE-ASSEMBLED ON DOOR AT FACTORY.

CELL FOAM PANEL

2.06 INSULATED TRAFFIC / IMPACT DOORS

3. HEAD ASSEMBLY: STAINLESS STEEL ROLL DRUM WITH STAINLESS STEEL PIANO HINGE CONNECTS TO

4. BOTTOM BAR: BREAK-AWAY STAINLESS STEEL BOTTOM BAR RELEASES IN EITHER DIRECTION

5. MOTOR: 1.0 HP, 480 VOLT 3 PH, 60 HZ, SINGLE SPEED FOOD GRADE WASH DOWN MOTOR WITH

6. DOORS SHALL BE ACTIVATED BY THE FOLLOWING: (ALL ASPECTS OF THESE ACTIVATORS ARE TO BE

ON BOTH SIDES OF THE DOOR. A TIMER SEQUENCE IS TO BE INSTALLED TO CLOSE THE DOOR AT A SET

8. ELECTRICAL CONTROLS: SELF-DIAGNOSTIC, MICROPROCESSOR-BASED DIGITAL GATEWAY DOOR

CONTROLLER HOUSED IN A STAINLESS STEEL NEMA 4X RATED ELECTRICAL ENCLOSURE WITH VISION

WINDOW. CONTROLLER INCLUDES NON-ADJUSTABLE CYCLE COUNTER WITH LED READOUT.

PROGRAMMABLE LIMITS SETTINGS. PROVIDE PROGRAMMABLE PROXIMITY SENSORS BOTH SIDES OF

WALL. PROVIDE PUSH BUTTON CONTROLS BOTH SIDES OF WALL. CONTROL PANEL TO BE FULLY

ASSEMBLED, WIRED AND TESTED AT FACTORY AND INSTALLED BY SPECIALTY DOOR SUPPLIER HIRED

1. DOOR PANEL: USDA / FDA COMPLIANT 2-PLY MONOFILAMENT FABRIC, WITH ONE INCH THICK CLOSED

2. SIDE FRAMES: THERMALLY BROKEN, FULLY BOLT-TOGETHER ANODIZED ALUMINUM CONSTRUCTION

3. BOTTOM BAR: BREAK-AWAY EXTRUDED ALUMINUM BOTTOM BAR; TO RELEASE IN EITHER DIRECTION

4. MOTOR: 3 PH, VARIABLE SPEED AC DRIVE TO PROVIDE SOFT ACCELERATION AND DECELERATION.

5. DOORS SHALL BE ACTIVATED BY THE FOLLOWING: (ALL ASPECTS OF THESE ACTIVATORS ARE TO BE

ON BOTH SIDES OF THE DOOR. A TIMER SEQUENCE IS TO BE INSTALLED TO CLOSE THE DOOR AT A SET

7. ELECTRICAL CONTROLS: SELF-DIAGNOSTIC, MICROPROCESSOR-BASED DIGITAL GATEWAY DOOR

A. THE IMPACT TRAFFIC DOORS SHALL BE MANUFACTURED BY CHASE DOOR COMPANY, CINCINNATI, OH. OR

CMI DOORS (A DIVISION OF CHAM MANUFACTURING, INC.), WINNIPEG, MANITOBA OR ARCHITECT APPROVED

2. THE DOORS SHALL CONSIST OF A 1/4" POLYETHYLENE OUTER SKIN WITH A URETHANE FOAM CORE.

3. STANDARD BLACK POLYETHYLENE TEARDROP BUMPERS SHALL BE 42" HIGH AND SHALL BE PROVIDED

4. STANDARD BLACK PROTECTIVE PANELS SHALL BE 42" HIGH AND SHALL BE PROVIDED ON BOTH SIDES

6. ALL DOORS SHALL BE FULLY GASKETED AND HAVE MANUFACTURES STANDARD, MAXIMUM SIZE,

7. ALL DOORS SHALL BE PROVIDED WITH 1/4" THICK STAINLESS STEEL WELD PLATES (2 PER LEAF). ALL

8. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS. DOOR SIZES

9. ALL FASTENERS USED SHALL BE STAINLESS STEEL. THERE SHALL BE NO EXPOSED FASTENERS OR

WITH ALL COMPONENTS REQUIRED FOR COMPLETE INSTALLATION AND OPERATION.

A. THE CORROSION RESISTANT MAN DOORS SHALL BE MANUFACTURED BY OVERLY/TIGER DOOR, OR

A. DESIGN: FRP DOORS SHALL BE OF SEAMLESS PRESS-MOLDED CONSTRUCTION. LAMINATED FRP FACE

SHEETS SHALL BE APPLIED WHILE WET AND UNCURED TO AN INTERNAL DOOR STILE AND RAIL

SUBFRAME/CORE ASSEMBLY AND THEN PRESS-MOLDED UNDER HEAT AND PRESSURE. THE COMPOSITE

DOOR PANEL MUST BE INTEGRALLY FUSED OVER ITS ENTIRE SURFACE AREA, NOT JUST ADHESIVE-BONDED

AT PERIMETER STILES AND RAILS. DOORS SHALL REMAIN UNDER PRESSURE DURING CURING FOR FLAT,

STILES & RAILS: A HIGH-MODULUS PULTRUDED FRP SQUARE OR RECTANGULAR TUBE SUBFRAME IS TO BE

PROVIDED WITHIN THE DOOR. TUBES ARE TO BE MITERED AND JOINED INTERNALLY AT THE CORNERS WITH

SOLID POLYMER BLOCKS TO YIELD A ONE-PIECE UNIT THAT DOES NOT REQUIRE ANY SECONDARY EXTERNAL

SEALING. PROVIDE A TUBULAR MIDRAIL ACROSS WIDTH OF DOOR AT LOCK HEIGHT, AND ADDITIONAL

HORIZONTAL RAILS WHERE SPECIFIC DESIGN CONDITIONS DICTATE. DOORS SHALL INCORPORATE

MOLDED-IN FRP EDGE STRIPS, CHEMICALLY BONDED TO THE SUBFRAME STILES, FOR MACHINING OF

HARDWARE MORTISES SO AS NOT TO CUT OR OTHERWISE COMPROMISE THE INTEGRITY OF THE

PULTRUDED STILES, NOR ALLOW MOISTURE TO PENETRATE INTO THE CORE OF THE DOOR. ALL

CONNECTIONS SHALL BE CHEMICALLY WELDED. NO MECHANICAL FASTENERS WILL BE ALLOWED. THE USE

OR INCLUSION OF ALUMINUM, STEEL, GYPSUM OR WOOD INTO STILE AND RAIL CONSTRUCTION IS NOT

SCRIM CORE SHALL BE USED. MOLDING PRESSURE AND RESIN GEL TIME SHALL BE SUFFICIENT TO ALLOW

FOR PENETRATION OF RESIN INTO THE CELLULAR STRUCTURE OF THE CORE TO MAXIMIZE SHEAR AND PEEL

STRENGTHS AT THE SKIN/CORE INTERFACE AND ELIMINATE THE POSSIBILITY OF DELAMINATION. THE

POLYPROPYLENE HONEYCOMB IS TO BE COMPLETELY ENCLOSED WITHIN THE STILE AND RAIL SUBFRAME.

COMPRESSION BLOCKS, OR PLASTIC COMPRESSION BLOCKING AT ALL HARDWARE LOCATIONS, AND

CORNER LOCATIONS. NO WOOD BLOCKING, STEEL OR ALUMINUM REINFORCING PLATES, RIBS OR FITTINGS

SHALL BE USED. A MINIMUM OF 900 LBS OF PULLOUT STRENGTH IS REQUIRED FOR EACH FACTORY

SYSTEM WITH FIBER REINFORCING LAYERS. SUPPLIER SHALL FURNISH DOOR FACES AS SHOWN ON THE

DRAWINGS AND IN THE DOOR ELEVATIONS. CHOPPED STRAND MAT LAYERS SHALL BE USED TO PROVIDE

BOND INTEGRITY BETWEEN GELCOAT, LAMINATED FACINGS AND THE INTERNAL DOOR STRUCTURE.

STRUCTURAL REINFORCEMENT SHALL BE IN THE FORM OF A KNITTED MULTI-LAYER MATERIAL WITH LAYERS

OF UNI-DIRECTIONAL GLASS FIBER ORIENTED IN BOTH THE VERTICAL AND HORIZONTAL DIRECTIONS FOR

HIGH STIFFNESS, IMPACT RESISTANCE AND RESISTANCE TO WARPING. GELCOAT SURFACE INTEGRALLY

MOLDED TO BE 25/30 MILS THICK (WET) ULTRA-VIOLET LIGHT STABILIZED MARINE GRADE NPG-ISOPHTHALIC

FINISH: THE EXPOSED FRP DOOR FACES SHALL HAVE A 3-4 MILS (WET) FACTORY APPLIED TWO-PART

A. DESIGN: FRP DOORS SHALL BE OF SEAMLESS PRESS-MOLDED CONSTRUCTION. LAMINATED FRP FACE

ALIPHATIC POLYURETHANE FULLY CURED COATING OF INDUSTRIAL URETHANE. COATING SHALL HAVE A

MINIMUM HARDNESS OF H TO 2H. FINISH SHALL BE A SLIGHTLY TEXTURED SEMI-GLOSS TO MINIMIZE THE

SHEETS SHALL BE APPLIED WHILE WET AND UNCURED TO AN INTERNAL DOOR STILE AND RAIL

SUBFRAME/CORE ASSEMBLY AND THEN PRESS-MOLDED UNDER HEAT AND PRESSURE. THE COMPOSITE

DOOR PANEL MUST BE INTEGRALLY FUSED OVER ITS ENTIRE SURFACE AREA, NOT JUST ADHESIVE-BONDED

AT PERIMETER STILES AND RAILS. DOORS SHALL REMAIN UNDER PRESSURE DURING CURING FOR FLAT,

CORE: FOR MAXIMUM RIGIDITY AND COMPRESSIVE STRENGTH A FIRE RESISTANT MINERAL CORE SHALL BE

USED. MOLDING PRESSURE AND RESIN GEL TIME SHALL BE SUFFICIENT TO ALLOW FOR PENETRATION OF

RESIN INTO THE CELLULAR STRUCTURE OF THE CORE TO MAXIMIZE SHEAR AND PEEL STRENGTHS AT THE

SKIN/CORE INTERFACE AND REDUCE THE POSSIBILITY OF DELAMINATION. THE MINERAL CORE IS TO BE

C. INTUMESCENT: ONLY CATEGORY A TYPE DOOR CONSTRUCTION IS PERMITTED. ALL INTUMESCENTS SHALL

COMPLETELY ENCLOSED WITHIN THE INTUMESCENT AND FRP LAMINATED EDGE PERIMETER.

C. CORE: FOR MAXIMUM RIGIDITY AND COMPRESSIVE STRENGTH A POLYPROPYLENE HONEYCOMB WITH FACE

D. INTERNAL REINFORCEMENT: HIGH-MODULOUS PULTRUDED TUBULAR FRP, HIGH-DENSITY POLYMER

E. FACES: DOOR FACINGS SHALL UTILIZE A CHEMICAL RESISTANT THERMOSETTING POLYESTER RESIN

USE OF FOAM, BALSA WOOD OR KRAFT HONEYCOMB PAPER IS NOT PERMITTED.

G. COLOR: TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

2. FIRE-RATED FIBERGLASS REINFORCED PLASTIC DOORS:

AND LOCATIONS ARE AS SHOWN ON THE DRAWINGS AND SCHEDULES. DOORS SHALL BE COMPLETE

ALL DOORS SHALL HAVE STAINLESS STEEL "V" CAM HINGES WITH A STAINLESS STEEL BEARING, CAST

ALUMINUM HINGE ADAPTER AND LOWER HINGE GUARDS. HINGES SHALL BE 90D WHERE SHOWN ON

THE DRAWINGS. HINGES AND GUARDS SHALL BE JAMB MOUNTED (FLOOR MOUNTING WILL NOT BE

CONTROLLER HOUSED IN A STAINLESS STEEL NEMA 4X RATED ELECTRICAL ENCLOSURE WITH VISION

WINDOW. CONTROLLER INCLUDES NON-ADJUSTABLE CYCLE COUNTER WITH LED READOUT.

PROGRAMMABLE LIMITS SETTINGS. PROVIDE PROGRAMMABLE PROXIMITY SENSORS BOTH SIDES OF

WALL. PROVIDE PUSH BUTTON CONTROLS BOTH SIDES OF WALLS. CONTROL PANEL TO BE FULLY

ASSEMBLED, WIRED AND TESTED AT FACTORY AND INSTALLED BY SPECIALTY DOOR SUPPLIER HIRED

INDEPENDENT OPENING AND CLOSING SPEEDS. MAX SPEED; 182 INCHES PER SECOND.

A. DOORS TO BE OPENED AND CLOSED VIA MANUAL PUSH BUTTONS, AND OVERHEAD PULL CHORDS MOUNTED

WITHOUT DAMAGE TO THE DOOR. DUAL CUT-OFF SWITCHES TO SHUT ELECTRIC MOTOR OF WHEN

BOTTOM BAR IS IMPACTED. STANDARD PNEUMATIC AUTO-REVERSING EDGE ON BOTTOM BAR. NO

EXPOSED JUNCTION BOX ON BOTTOM BAR. VINYL LOOP HUGS CONTOUR OF FLOOR FOR TIGHT SEAL.

A. DOORS TO BE OPENED AND CLOSED VIA MANUAL PUSH BUTTONS, AND OVERHEAD PULL CHORDS MOUNTED

ENCODER. MOTOR AND ALL ELECTRICAL COMPONENTS PRE-WIRED AT FACTORY

FURNISHED AND INSTALLED BY THE DOOR INSTALLATION CONTRACTOR.)

7. TRAVEL SPEED: OPEN AND CLOSES AT A MINIMUM OF 32 INCHES PER SECOND.

A. PROVIDE STANDARD INSULATED STYLE RAPID ROLL UP DOORS AS INDICATED ON DRAWINGS.

WITH FULL HEIGHT WEATHER SEAL TO SEAL AGAINST PANEL MATERIAL.

FURNISHED AND INSTALLED BY THE DOOR INSTALLATION CONTRACTOR.)

6. TRAVEL SPEED: OPEN AND CLOSES AT A MINIMUM OF 101 INCHES PER SECOND

1. THE DOORS SHALL BE A HIGH IMPACT, HEAVY DUTY TRAFFIC DOOR.

POLYCARBONATE VISION PANEL AND SHALL BE WASH DOWN PROOF.

WELDS ARE TO BE CLEANED AND POLISHED TO MATCH SUB-FRAME.

RIVETS ON THE OUTER SURFACES OF THE DOOR BODY.

1. NON-RATED FIBERGLASS REINFORCED PLASTIC DOORS:

2.07 PHARMACEUTICAL DUTY, POLYPROPYLENE CORE DOORS (FRP)

APPROVED SUBSTITUTE.

SUPPLIED HINGE SCREW.

POLYESTER GELCOAT.

WARP-FREE SURFACES.

VISUAL EFFECTS OF WEAR AND TEAR.

DOOR PANELS SHALL BE 1-7/8" THICK.

OF ALL SINGLE DOORS.

ON BOTH SIDES ON ALL DOUBLE DOORS.

FINISH COVERS CAN BE REMOVED FOR EASY CLEANING AND WASH DOWN. ONE SET NEMA 4X

FABRIC. NO EXCESS FABRIC ON DRUM WHEN DOOR IS IN THE CLOSED POSITION. BY SWITCHING

DOOR TO "CLEANING MODE", DRUM ROTATES AN ADDITIONAL QUARTER REVOLUTION TO ALLOW FOR

FAST AND EASY CLEANING. HINGED DRIP GUARD FULLY ENCLOSES DRUM ASSEMBLY AND SWINGS

WITHOUT DAMAGE TO THE DOOR. DUAL CUT-OFF SWITCHES SHUT OFF MOTOR WHEN BOTTOM BAR IS

IMPACTED. STANDARD PNEUMATIC AUTO-REVERSING EDGE ON BOTTOM BAR. NO EXPOSED

JUNCTION BOX ON BOTTOM BAR. VINYL LOOP HUGS CONTOUR OF FLOOR FOR TIGHT SEAL. BOTTOM

FORMULATED WITH THE RESIN. FRP FACE SHEETS SHALL BE USDA ACCEPTABLE, NON-POROUS, WITH A MAXIMUM FLAME SPREAD RATING OF 200, AND SMOKE GENERATED MAXIMUM OF 450 DEGREES MEETING CLASS C REQUIREMENTS PER ASTM E84. E. FINISH: THE EXPOSED FRP DOOR FACES SHALL HAVE A 3-4 MILS (WET) FACTORY APPLIED TWO-PART

ALIPHATIC POLYURETHANE FULLY CURED COATING OF INDUSTRIAL URETHANE. COATING SHALL HAVE A MINIMUM HARDNESS OF H TO 2H. FINISH SHALL BE A SLIGHTLY TEXTURED SEMI-GLOSS TO MINIMIZE THE VISUAL EFFECTS OF WEAR AND TEAR.

BE MOLDED INTO THE DOOR STRUCTURE WITH A MINIMUM OF 1/8" THICK PERIMETER FRP EDGE

F. COLOR: TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS. 3. NON-RATED FIBERGLASS REINFORCED PLASTIC FRAMES:

A. DESIGN: FRP DOOR FRAMES FURNISHED UNDER THIS SPECIFICATION SHALL UTILIZE A HIGH-MODULUS PULTRUDED STRUCTURAL FRP SHAPE. THE FRAME SECTION SHALL BE STANDARD DOUBLE RABBETED 5-3/4" DEEP X 2" FACE, 3/16" THICK, WITH INTEGRAL 5/8" DOORSTOP WITH 1-15/16" SOFFITS, TO MATCH TYPICAL HOLLOW METAL CONFIGURATIONS. FRAME CAVITIES SHALL BE FOAM FILLED.

B. CORNER JOINTS: FRAME JAMBS AND HEADER SHALL BE JOINED AT CORNERS VIA MITER CONNECTIONS

WITH HIDDEN FRP ANGLE CLIPS AND ASSOCIATED FASTENERS. FRAMES SHALL BE FACTORY SET-UP & ALL

JOINTS CHEMICALLY WELDED SO ALL CONNECTIONS WILL BE SEALED. POST AND BEAM CORNERS WILL NOT BE ACCEPTABLE. EXPOSED FASTENERS FOR MITER CONNECTIONS WILL NOT BE ACCEPTABLE EXCEPT FOR WRAP WALL APPLICATIONS C. HARDWARE REINFORCEMENTS: FRP REINFORCING SHALL BE CHEMICALLY WELDED TO DOOR FRAME

MATERIAL AT REQUIRED LOCATIONS. MINIMUM SCREW PULLOUT STRENGTH OF 1100 LB PER #12 X 1" SHEET METAL SCREW IS REQUIRED. MECHANICALLY FASTENED REINFORCEMENTS ARE NOT PERMITTED. D. ANCHORS, BOLT-IN: PROVIDE MANUFACTURER'S REQUIRED NUMBER OF 3/8" DIAMETER X 4" LONG FLAT

HEAD STAINLESS STEEL SLEEVE ANCHORS FOR MASONRY OPENINGS, 3/8" DIAMETER X 4" MACHINE SCREW WITH NUT AND WASHERS FOR STRUCTURAL STEEL OPENINGS, #14 X 4 INCH STAINLESS STEEL FLAT HEAD SHEET METAL SCREWS FOR WOOD OR STEEL STUD OPENINGS. INCLUDE EXTRA ANCHORS FOR ADDITIONAL FRAME HEIGHT IN TWO FOOT INCREMENTS ABOVE 8'-0". PROVIDE SINGLE BOLT ANCHOR AT CENTER OF ALL HEADERS OVER FOUR FEET IN NOMINAL WIDTH. STAINLESS STEEL FASTENERS SHALL BE FURNISHED BY THE FACTORY

E. FINISH: FRAMES SHALL HAVE A 3-4 MILS (WET) FACTORY APPLIED TWO-PART ALIPHATIC POLYURETHANE FULLY CURED COATING OF INDUSTRIAL URETHANE. INDUSTRIAL URETHANE CHEMICAL COATING COLOR TOPCOAT, TO MATCH THE COLOR AND SHEEN OF THE DOORS, FOR SUPERIOR WEATHER-ABILITY. GELCOAT MAY NOT BE SPRAYED ONTO THE FRAME AS A SECONDARY COATING.

F. COLOR: TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

4. FIRE-RATED FIBERGLASS REINFORCED PLASTIC FRAMES A. DESIGN: FIRE RATED FRP DOOR FRAMES FURNISHED UNDER THIS SPECIFICATION SHALL UTILIZE A HIGH-MODULUS PULTRUDED STRUCTURAL FRP SHAPE. STANDARD FRAME PROFILE IS A DOUBLE RABBETED 5-3/4" DEPTH X 2" FACE, 3/16" THICK, WITH INTEGRAL 5/8" DOORSTOP. THE MINIMUM FRAME SECTION SHALL BE LIMITED TO A 4" JAMB DEPTH, 1" FACE. FOUR INCH HEADER AND EXPANDED PROFILES ARE ACCEPTABLE. FRAME CAVITIES SHALL BE FILLED WITH A PROPRIETARY FIRE RESISTANT COMPOSITE

B. INTUMESCENT: ALL INTUMESCENT MATERIAL SHALL BE INTERNAL TO THE DOOR STRUCTURE. POST APPLIED OR EXPOSED INTUMESCENT COMPONENTS OR PRODUCTS ARE NOT ACCEPTABLE C. CORNER JOINTS: JAMBS AND HEADER SHALL BE JOINED AT CORNERS VIA MITER CONNECTIONS WITH

HIDDEN STAINLESS STEEL FLAT HEAD SCREWS. CORNER SCREWS SHALL NOT BE VISIBLE ON INTERIOR OR

FXTERIOR FRAME FACES D. ANCHORS, BOLT-IN: PROVIDE MANUFACTURER'S REQUIRED NUMBER OF 3/8" DIAMETER X 4" LONG FLAT HEAD STAINLESS STEEL SLEEVE ANCHORS FOR MASONRY OPENINGS, 3/8" DIAMETER X 4" MACHINE SCREW WITH NUT AND WASHERS FOR STRUCTURAL STEEL OPENINGS, #14 X 4" STAINLESS STEEL FLAT HEAD SHEET METAL SCREWS FOR WOOD OR STEEL STUD OPENINGS. INCLUDE EXTRA ANCHORS FOR ADDITIONAL FRAME HEIGHT IN TWO FOOT INCREMENTS ABOVE 8'-0". PROVIDE SINGLE BOLT ANCHOR AT CENTER OF ALL HEADERS OVER FOUR FEET IN NOMINAL WIDTH. STAINLESS STEEL FASTENERS SHALL BE FURNISHED BY

E. FINISH: FRAMES SHALL HAVE A 3-4 MILS (WET) FACTORY APPLIED TWO-PART ALIPHATIC POLYURETHANE FULLY CURED COATING OF INDUSTRIAL URETHANE. INDUSTRIAL URETHANE CHEMICAL COATING COLOR TOPCOAT, TO MATCH THE COLOR AND SHEEN OF THE DOORS, FOR SUPERIOR WEATHER-ABILITY. GELCOAT MAY NOT BE SPRAYED ONTO THE FRAME AS A SECONDARY COATING. F. COLOR: TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS.

5. ALL DOOR HARDWARE SHALL BE FURNISHED AND INSTALLED BY THE DOOR MANUFACTURER. ALL DOOR PANELS SHALL HAVE MINIMUM (3) THREE FULL MORTISE, HEAVY DUTY, STAINLESS STEEL, BALL 6. ALL DOORS SHALL HAVE FULL, SHOP APPLIED, WEATHER-STRIPPING AND DOOR SWEEPS. WEATHER-STRIPPING AND DOOR SWEEPS SHALL BE MOLDED FIBERGLASS (COLOR MATCHED TO

FRAME) WITH A NEOPRENE BULB SEAL AND INSTALLED TO THE STOP/DOOR WITH STAINLESS STEEL

FASTENERS. 2.08 IN-FITTING COOLER PERSONNEL DOORS A. MANUFACTURER: WHERE PRODUCT MANUFACTURERS OR BRAND NAMES ARE LISTED, IT IS DONE SO TO ESTABLISH A STANDARD OF QUALITY, DESIGN AND FUNCTION DESIRED.

1. PRODUCTS OF THE FOLLOWING MANUFACTURERS, PROVIDED THEY COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE AMONG THOSE CONSIDERED ACCEPTABLE. A. FRANK DOOR COMPANY, NEWPORT, NC B. ARCHITECT APPROVED SUBSTITUTE.

2. ALL DOORS WILL HAVE A FOAMED-IN-PLACE POLYURETHANE CORE PANEL WITH FLUSH SILL, HAVE RETURN JAMBS AND INSIDE CASING WITH PRE-FINISHED CLADDING IN 26-GA STUCCO EMBOSSED G90 GALVANIZED STEEL AND ALL EXPOSED SEAMS SEALED. A. DOOR THICKNESS TO CORRESPOND TO ADJACENT WALL PANEL THICKNESS AND /OR ROOM TEMPERATURE

TO WHICH THE DOOR WILL BE LOCATED. B. FURNISH HEAD, JAMB AND SILL DETAILS IN COMPLIANCE WITH CONTRACT DOCUMENTS. 3. ALL HARDWARE SHALL BE STAINLESS STEEL AND ALL DOORS SHALL HAVE A SAFETY RELEASE ON A SINGLE POINT LATCH. SEE DOOR SCHEDULE FOR HARDWARE REQUIRED.

 A. CAM LIFT HINGES. B. ALL DOORS TO BE EQUIPPED WITH CLOSERS.

C. EGRESS DOORS TO BE EQUIPPED WITH APPROVED PANIC HARDWARE. 4. THE PERIMETER OF THE DOOR PANEL SHALL BE SEALED WITH REINFORCED NEOPRENE GASKETS AND A DOUBLE WIPER SEAL ON THE BOTTOM. 2.09 VERTICAL LIFT COOLER / FREEZER DOORS

A. MANUFACTURER: WHERE PRODUCT MANUFACTURERS OR BRAND NAMES ARE LISTED, IT IS DONE SO TO ESTABLISH A STANDARD OF QUALITY, DESIGN AND FUNCTION DESIRED. 1. PRODUCTS OF THE FOLLOWING MANUFACTURERS, PROVIDED THEY COMPLY WITH THE

REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE AMONG THOSE CONSIDERED ACCEPTABLE. A. FRANK DOOR COMPANY, NEWPORT, NC. MODEL EFD-VLE B. ASI TECHNOLOGIES / ENVIRO, MILWAUKEE, WI. MODEL 507 POWER

C. HERCULES / KINGSPAN, DELAND, FL. MODEL EVL D. ARCHITECT APPROVED SUBSTITUTE

B. THE VERTICAL LIFT DOOR SHALL HAVE THE FOLLOWING FEATURES: 1. DOOR PANEL: THE DOOR PANEL SHALL BE CONSTRUCTED OF AN AIRCRAFT GRADE ALUMINUM INNEF FRAME WITH STEEL CORNER BRACKETS AND CLAD WITH TWO USDA APPROVED 24 GAUGE STEEL OR .040 ALUMINUM FACE SHEETS. THE PANEL IS FOAMED-IN-PLACE OF AT LEAST 4" OF POLYURETHANE INSULATION (R32). GASKETING SHALL BE PANEL MOUNTED DUAL BLADE SANTOPRENE GASKETS AND A THRESHOLD COMPRESSION GASKET. NO ORGANICS SUCH AS WOOD OR WOOD COMPOSITES SHALL BE USED FOR THE DOOR PANEL STRUCTURE OR BLOCKING. ALL FREEZER DOORS SHALL BE EQUIPPED

WITH A FULL PERIMETER, REGULATED HEATER CABLE. CASINGS/HEADER: EXTRUDED ALUMINUM PROFILES ARE INSULATED WITH POLYSTYRENE INSERTS. MATCHING BACK-UP HEADER AND CASINGS. RETURN JAMBS WITH JAMB CAPS. NO ORGANICS SUCH AS WOOD OR WOOD COMPOSITES SHALL BE ACCEPTED. ALL SWEEP BOTTOM FREEZER DOORS SHALL BE EQUIPPED WITH A HEATER CABLE IN THE THREE SIDED CASING FRAMES.

3. TRACK SYSTEM: COUNTER BALANCED, 12 GAUGE GALVANIZED STEEL J TRACK SYSTEM WITH 3 INCH DIAMETER STEEL WHEELS, ADJUSTABLE SHAFTS AND STEEL BRACKETS. SHEAVE ASSEMBLY TO INCLUDE CHAIN, SPROCKET AND COUNTERWEIGHTS. SYSTEM WITH INTEGRATED ENCODER-BASED POSITIONING SYSTEM. THE USER INTERFACE SHALL

4. POWER OPERATOR: THE POWER OPERATOR SHALL BE A MICROPROCESSOR-BASED CONTROL PROVIDE SELF-DIAGNOSTICS WITH KEYPAD AND LCD READOUT. FEATURES SHALL INCLUDE AUTOMATED SELF-POSITIONING ON START-UP, ADJUSTABLE OPENING AND CLOSE SPEEDS, ADJUSTABLE SOFT STARTS AND STOPS, PARTIAL OPEN, TIME DELAY CLOSE, CYCLE COUNTER, OVERLOAD PROTECTION AND AUTOMATIC RESET ON OVERLOAD. THE MOTOR SHALL BE A FRACTIONAL HP. OPERATOR WILL HAVE A MULTI-TAP TRANSFORMER TO PROVIDE CHOICE OF 208/230/400/460/480VAC SINGLE PHASE, 60HZ OPERATION. OPERATOR SHALL PROVIDE HEATED MOTOR, TRANSMISSION AND CONTROL PANEL. CORROSION RESISTANT NICKEL-PLATED CHAIN WITH ADJUSTABLE, SPRING-LOADED IDLER ASSEMBLY IS STANDARD. PNEUMATIC REVERSING EDGE.

EMERGENCY INTERIOR DISCONNECT IS STANDARD. A. DOORS TO BE OPENED AND CLOSED VIA MANUAL PUSH BUTTONS, AND OVERHEAD PULL CHORDS MOUNTED ON BOTH SIDES OF THE DOOR.

5. DOOR HARDWARE: EXTERIOR AND RECESSED INTERIOR PULL HANDLES. LOCKING PROVISION PROVIDED. ALL HARDWARE AND MECHANISMS SHALL BE CORROSION RESISTANT MATERIALS. 2.010 VERTICAL LIFT COOLER / FREEZER DOCK DOORS A. MANUFACTURER: WHERE PRODUCT MANUFACTURERS OR BRAND NAMES ARE LISTED, IT IS DONE SO TO

ESTABLISH A STANDARD OF QUALITY, DESIGN AND FUNCTION DESIRED. 1. PRODUCTS OF THE FOLLOWING MANUFACTURERS, PROVIDED THEY COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE AMONG THOSE CONSIDERED ACCEPTABLE.

B. ARCHITECT APPROVED SUBSTITUTE B. THE VERTICAL LIFT DOCK DOOR SHALL HAVE THE FOLLOWING FEATURES:

A. TKO DOCK DOORS, SUSSEX, WISCONSIN. MODEL TKO VERTICOL

1. DOOR PANEL: DOOR PANELS TO BE 4" THICK UNITIZED CONSTRUCTION WITH EXTERIOR AND INTERIOR PANEL SKINS FIRMLY BONDED TO HIGH DENSITY 1.6 POUNDS PER CUBIC FOOT EXTRUDED POLYSTYRENE CORE INSULATION. INTERIOR PANEL SKIN TO BE CONSTRUCTED OF .090" HIGH-IMPACT POLYMER SHEET FOR DAMAGE RESISTANCE. EXTERIOR PANEL TO BE CONSTRUCTED OF .030" ALUMINUM WITH AN ENAMEL FINISH. PANELS TO HAVE CALCULATED INSULATION R VALUE

OF 23(CALCULATED PER DASMA TDS 163). PANELS TO BE CAPPED WITH CO-EXTRUDED

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HIGH-DURABILITY PVC EDGE CAPPING CONTAINING UV INHIBITORS. PRIMARY PANEL SIZE A. THERMAL PANE INSULATING TEMPERED GLASS WINDOW UNIT MOUNTED IN MOLDED HIGH-DURABILITY POLYMER FRAME - REFER TO DOOR SCHEDULE. 3.04 TOLERANCES, TESTS AND ADJUSTMENTS

INTEGRAL 5/8" HDPE (HIGH DENSITY POLYETHYLENE) THERMAL BREAK INSERT, FOIL ENERGY REFLECTIVE BACKING AND FOAM THERMAL BREAK BETWEEN JAMB AND HDPE INSERT. DOOR HARDWARE IS TO RIDE IN CHANNEL. TRACKS TO BE SECURELY MOUNTED TO DOOR JAMB AND FLOOR. 3. SUPPORTS: 8 GAUGE GALVANIZED STEEL TRACK MOUNTING ANGLE BRACKETS ARE PROVIDED BY THE FACTORY. SECURE, REINFORCE AND SUPPORT TRACKS AS REQUIRED FOR SIZE AND WEIGHT OF DOOR TO PROVIDE STRENGTH AND RIGIDITY WITHOUT SAG, SWAY AND VIBRATION DURING OPENING,

2. TRACKS: PROVIDE MANUFACTURER'S 14-GUAGE STANDARD STEEL STRAIGHT TRACK WITH

4. WEATHERSEAL: PROVIDE TWO (2) EXTRUDED LOOPS OF TPR (THERMO PLASTIC RUBBER) EXTRUDED WEATHER SEAL ALONG BOTH VERTICAL EDGES OF EACH DOOR PANEL FOR SIDE SEALS. PROVIDE TWO (2) EPDM (ETHYLENE PROPYLENE DIENE MONOMER) BOTTOM LOOP SEALS EXTENDING THE FULL HORIZONTAL WIDTH OF THE DOOR. PROVIDE CO-EXTRUDED PVC AND TPR; DUAL BULB SEALS EXTENDING FULL HORIZONTAL WIDTH OF DOOR FOR SEALING BETWEEN DOOR PANELS. PROVIDE TWO (2) 2" HORIZONTAL BLADE SEALS TO SEAL UPPERMOST DOOR SECTION WHEN DOOR IS IN CLOSED POSITION. PROVIDE TWO (2) ENHANCED 9/16" D PROFILE EPDM PANEL SEAL BETWEEN PANEL SECTIONS DOOR-MOUNTED WEATHER SEAL RISES WITH THE DOOR, SO THERE IS NO EXPOSED SEAL IN THE DOORWAY. WEATHERSEALS ATTACHED TO THE DOOR TRACK OR DOOR FRAME ARE NOT

5. POWER OPERATOR: FURNISH ELECTRIC JACKSHAFT OPERATOR ASSEMBLY RATED FOR THE APPROPRIATE HP FOR CONTINUAL OPERATION. OPERATOR IS ATTACHED TO SOLID 1" SPRING SHAFT. OPERATOR TO CONFORM WITH THE REQUIREMENTS OF UL325 STANDARD. OPERATOR TO INCLUDE HIGH STARTING TORQUE, CONTINUOUS DUTY INDUSTRIAL MOTOR WITH OVERLOAD PROTECTION, MECHANICAL ADJUSTABLE DRIVEN LIMIT SWITCHES, 24VAC CONTROL CIRCUIT, SELF-LOCKING REDUCTION SYSTEM TO ACT AS HOLDING BRAKE, EFFICIENT V-BELT PRIMARY DRIVE AND ADJUSTABLE FRICTION CLUTCH. SYSTEM TO INCLUDE A FLOOR LEVEL DISCONNECT FOR EMERGENCY MANUAL DOOR OPERATION. STANDARD ACTUATION TO INCLUDED ONE (1) THREE-BUTTON PUSH BUTTON CONTROL (OPEN/CLOSE/STOP). DOORS ARE REQUIRED TO HAVE A MANUAL CHAIN HOIST AS BACK-UP TO THE POWER OPERATOR.

A. REFER TO ELECTRICAL SPECIFICATIONS AND NEMA DRAWINGS FOR ELECTRICAL REQUIREMENTS. 6. DOOR HARDWARE: EXTERIOR AND RECESSED INTERIOR PULL HANDLES, LOCKING PROVISION PROVIDED. ALL HARDWARE AND MECHANISMS SHALL BE CORROSION RESISTANT MATERIALS.

A. PROVIDE PERSONNEL BLAST RESISTANT DOORS AS INDICATED ON THE DRAWINGS, AS MANUFACTURED BY PROTECTIVE DOOR INDUSTRIES, HARVEY, IL OR APPROVED SUBSTITUTE. APPROVED SUBSTITUTE MUST BE APPROVED PRIOR TO SUBMITTING BID. BASIS OF SPECIFICATION IS THE DB-200 SINGLE BLAST RESISTANT DOOR AND FRAME.

1. DOORS SHALL BE DESIGNED AND CONSTRUCTED FOR 200 PSF PEAK BLAST RESISTANCE.

DOORS SHALL BE DESIGNED AND CONSTRUCTED FOR A 4-HOUR FIRE RATING. ALL HARDWARE IS SHALL BE DESIGNED IN ACCORDANCE WITH A 200 PSF BLAST RATING AND SHALL BE PROVIDED BY THE DOOR MANUFACTURER.

A. HARDWARE SHALL NOT RELEASE UNDER BLAST LOADS OR REBOUND. PROVIDE EGRESS HARDWARE ON

B. DOOR CLOSERS SHALL BE NON-HOLD-OPEN TYPE AND SUPPLIED WITH ALL DOORS BY DOOR MANUFACTURER.

C. HINGES SHALL BE BY THE BLAST DOOR MANUFACTURER AND SHALL BE EITHER A CONTINUOUS STEEL HINGE OR HALF MORTISE OR SURFACE BOLTED HIGH STRENGTH CAST PER THE DOOR MANUFACTURER.

PART 3 - EXECUTION 3.01 EXAMINATION A. INSPECT ALL SURFACES, AND REQUIRED EMBEDDED ANCHORAGE DEVICES, AND VERIFY THAT THEY ARE IN

PROPER CONDITION TO RECEIVE THE WORK OF THIS SECTION. VERIFY THAT FIELD MEASUREMENTS ARE AS INDICATED ON APPROVED SHOP DRAWINGS. 3.02 INSTALLATION - GENERAL A. DOORS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS, DETAILS SHOWN ON

THE DRAWINGS, AND IN ACCORDANCE WITH APPROVED MANUFACTURER'S RECOMMENDATIONS. B. DOORS SHALL BE SET SQUARE AND PLUMB. ADJUSTMENTS SHALL BE MADE SO DOORS HAVE A TIGHT SEAL ON ALL FOUR EDGES WHEN CLOSED. SPRINGS OR COUNTERWEIGHTS SHALL BE ADJUSTED SO THAT DOOR OPERATION IS SMOOTH AND OPERATES WITH EASE.

C. DOORS SHALL BE INSTALLED BY FACTORY QUALIFIED AND AUTHORIZED PERSONNEL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL WELDING REQUIRED SHALL BE TIG

3.03 INSTALLATION - ELECTRICAL A. COMPLY WITH MANUFACTURER'S DIRECTIONS AND APPROVED SUBMITTAL INFORMATION.

B. INSTALL DOORS FOLLOWING APPLICABLE UNDERWRITERS LABORATORIES REQUIREMENTS AND IN

ACCORDANCE WITH THE FOLLOWING: 1. ALL ELECTRICAL COMPONENTS, CONNECTIONS AND WIRING SHALL BE UL LISTED OR RECOGNIZED AND RATED FOR 3 PHASE/480 VOLT OPERATION. THE PUSH BUTTON CONTROL PANEL SHALL BE USED TO ALLOW FOR OVERHEAD DOOR CONTROL AND FUSE DISCONNECT. THE CONTROL PANELS SHALL HAVE EITHER A MAIN CIRCUIT BREAKER DISCONNECT OR MAIN FUSED DISCONNECT. THE MAIN CIRCUIT BREAKER DISCONNECT OR FUSED DISCONNECT SHALL BE RATED 65KAIC. ALL COMPONENTS

POWER WIRING SHALL BE THE RESPONSIBILITY OF THE DOOR CONTRACTOR. 2. THE BUILDING ELECTRICAL CONTRACTOR SHALL PROVIDE A 480 VOLT, NON-FUSED DISCONNECT AND POWER TO THE LINE SIDE OF THE DISCONNECT. THE DISCONNECT SHALL BE LOCATED WITHIN 15'-0" OF THE DOOR CONTROLLER.

3. THE DOOR CONTRACTOR SHALL PROVIDE POWER WIRING FROM THE LOAD SIDE OF THE DISCONNECT TO THE DOOR CONTROLLER, POWER AND CONTROL WIRING FROM THE CONTROLLER TO ALL REMOTE DEVICES, SENSORS, PUMPS, INTERLOCKS, ETC.

4. ALL WIRING SHALL BE INSTALLED IN CONDUIT AND SHALL BE INSTALLED AS INDICATED BELOW. 5. ALL WIRE AND CABLE SHALL BE ANNEALED, COATED COPPER PER ASTM B33 OR B189 WITH

CONDUCTIVITY OF NOT LESS THAN 98%. ALL STRANDED WIRE SHALL BE CLASS B PER ASTM B8.

6. ALL WIRE SHALL HAVE 600V INSULATION, ULLISTED AND COMPLYING WITH UL 83, ICEA S-61-402 OR ICEA S-66-524 FOR RESPECTIVE INSULATION TYPE.

ALL FEEDER, BRANCH CIRCUIT, REMOTE CONTROL, SIGNAL CIRCUIT AND INTERLOCK WIRING SHALL BE MANUFACTURED OF COPPER, RATED AT 600 VOLTS, SINGLE CONDUCTOR. CONDUCTORS' #8 AND LARGER SHALL BE STRANDED. ALL WIRING #10 AND SMALLER SHALL BE SOLID.

8. MINIMUM SIZE WIRE FOR BRANCH CIRCUIT AND POWER WIRING SHALL BE #12 AWG. WHEN 20 AMPERE, 1-POLE CIRCUITS FOR POWER AND LIGHTING EXCEED 60'-0" FOR 120 VOLT CIRCUITS OR 120'-0" FOR 277 VOLT CIRCUITS TO THE CENTER OF LOAD, #10 AWG WIRE OR LARGER, AS REQUIRED, SHALL BE USED FOR A MAXIMUM 3% VOLTAGE DROP AT FULL CIRCUIT CAPACITY.

9. REMOTE CONTROL SIGNAL WIRING AND INTERLOCK WIRING SHALL BE #14 AWG NON-SHIELDED. 10. WIRE AND CABLE FOR LIGHTING, POWER AND CONTROL CIRCUITS FOR SYSTEMS OPERATING

BETWEEN 50 AND 600 VOLTS SHALL BE SOFT DRAWN, 98% CONDUCTIVE COPPER WITH 600 VOLT RATED INSULATION. 600V WIRE SIZE #6 AND SMALLER SHALL BE TYPE THWN OR THHN. 11. INSULATION TYPES FOR ALL CONDUCTORS SHALL BE AS FOLLOWS:

LOCATIONS

WET BRANCH CIRCUITS #6 AWG AND SMALLER WIRING IN AREAS WITH AN AMBIENT TEMPERATURE LESS THAN 320F XHHW-2 XHHW-2 XHHW-2

12. COLOR CODING SHALL BE CONTINUOUS ON THE INSULATION AND SHALL BE AS FOLLOWS:

208/120 VOLTS 480/277 VOLTS A PHASE - BLACK A PHASE - BROWN B PHASE - RED B PHASE - ORANGE C PHASE - BLUE C PHASE - YELLOW

NEUTRAL - WHITE NEUTRAL - GREY GROUND - GREEN GROUND - GREEN WITH YELLOW STRIPE

13. CONDUCTORS SHALL BE CONNECTED WITH PRE-INSULATED SPRING CONNECTORS INCASED IN A STEEL SHELL AND RATED AT NOT LESS THAN 105OC. A MINIMUM OF 3/8" SKIRT SHALL COVER THE BARE WIRES. THE CONNECTOR SHALL MEET WITH UL LISTING FOR FIXTURE AND PRESSURE WORK. 14. LUGS AND WIRE CONNECTORS SHALL BE ONE OF THE FOLLOWING: BURNDY CORP., THOMAS & BETTS,

IDEAL OR BUCHANAN. 15. DERATING OF CONDUCTOR SHALL BE LIMITED TO 80% AND <u>NOT</u> MORE THAN SIX CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN EACH CONDUIT.

16. IDENTIFY EACH CONDUCTOR IN CONTROL PANELS, DISCONNECTS, JUNCTION OR PULL BOXES, OR TROUGHS WITH A PERMANENT PREPRINTED POLYOLEFIN BARREL TYPE WIRE MARKERS WITH SUITABLE NUMBERS OR LETTERS FOR EASY RECOGNITION. IDENTIFY CONTROL WIRING AT EACH END AND IN JUNCTION BOXES WITH NUMERIC WIRE NUMBER CORRESPONDING TO CONTROL WIRING

17. PROVIDE A BEAD OF FOOD GRADE CAULKING AROUND THE PERIMETER OF ALL BOXES, CONDUIT SUPPORTS, AND CABINETS MOUNTED TO METAL PANEL WALLS, EQUIPMENT FRAMES, BUILDING

18. CONDUIT RUNS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS. CONDUIT SHALL ENTER AND BE SECURED TO CABINET, JUNCTION BOX, PULL BOX OR OUTLET BOX WITH LIQUID TIGHT, THREADED, SELF-LOCKING, COLD-WELD WEDGE ADAPTER. LOCKNUTS AND BUSHINGS OR SELF-LOCKING ADAPTERS WILL NOT BE REQUIRED WHERE CONDUITS ARE SCREWED INTO TAPPED CONNECTIONS. VERTICAL CONDUIT RUNS SHALL HAVE LOW POINT DRAINS AND SHALL TERMINATE IN BOTTOM OF BOXES OR CABINETS. THE LOW POINT DRAIN SHALL BE A CONDUIT BODY WITH A DRAIN

19. CHECK RACEWAY SIZES TO DETERMINE THAT GREEN EQUIPMENT GROUND CONDUCTOR FITS INTO SAME RACEWAY WITH PHASE AND NEUTRAL CONDUCTORS TO MEET NEC PERCENTAGE OF FILL REQUIREMENTS. INCREASE DUCT, CONDUIT, TUBING AND RACEWAY SIZES SHOWN OR SPECIFIED AS REQUIRED TO ACCOMMODATE CONDUCTORS.

20. PROVIDE ALL EMPTY CONDUITS INSTALLED WITH A PULL WIRE. PULL WIRE SHALL BE NO. 14 ZINC-COATED STEEL, OR OF PLASTIC HAVING NOT LESS THAN 200 POUND TENSILE STRENGTH. LEAVE NOT LESS THAN 12" OF SLACK AT EACH END OF THE PULL WIRE. PROVIDE A TAG AT EACH END OF PULL

WIRE INDICATING LOCATION OF OPPOSITE END. 21. PROVIDE GREEN GROUND WIRE IN ALL CONDUITS, BOXES, ETC, ALL EQUIPMENT SHALL BE GROUNDED,

BONDED, ETC., AS REQUIRED PER THE NEC.

A. IN CONFORMANCE WITH MANUFACTURER'S OPERATING PARAMETERS AND WARRANTY REQUIREMENTS. B. UPON COMPLETION OF THE INSTALLATION, THE DOORS SHALL BE TESTED AND ADJUSTED AS NECESSARY TO ASSURE SMOOTH AND PROPER OPERATION INCLUDING THE PROPER SEALING PRIOR TO TURNOVER OF FACILITY TO OWNER.

08 30 00 - SPECIALTY DOORS CONT

3.05 CLEANING A. AFTER ALL WORK UNDER THIS SECTION HAS BEEN COMPLETED AND SATISFACTORILY TESTED, REMOVE ALL APPLIED PACKING LABELS FROM THE VARIOUS SURFACES, THOROUGHLY CLEAN AND POLISH ALL PLASTIC LAMINATE, STAINLESS STEEL AND PREFINISHED SURFACES. TOUCH UP ALL SCRATCHES, ABRASIONS, AND OTHER SURFACE DEFECTS IN THE PREFINISHED SURFACES, USING THE SAME MATERIAL, COLOR AND GLOSS AS USED IN THE PREFINISHING SYSTEM

B. UPON COMPLETION OF THE WORK OF THIS SECTION, REMOVE TOOLS, AND ALL RUBBISH AND DEBRIS FROM THE WORK AREA; LEAVE AREA IN BROOM-CLEAN CONDITION.

END OF SECTION 08 30 00

08 33 00 - OVERHEAD COILING DOORS

PART 1 - GENERAL

1.01 ITEMS REQUIRED BUT NOT SPECIFIED A. IF AN ITEM OR MATERIAL OF THIS TRADE IS INDICATED ON THE DRAWINGS BUT NOT SPECIFICALLY LISTED IN THIS SECTION, PROVIDE SUCH ITEM OR MATERIAL AT A

STANDARD OF QUALITY EQUAL TO THE STANDARD ESTABLISHED FOR THE BALANCE OF THE WORK SPECIFIED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION. 1.02 EXECUTION, CORRELATION AND INTENT A. IN CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR

WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK IS TO BE PROVIDED, IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION. 1.03 SECTION INCLUDES

A. FURNISH THE FOLLOWING PRODUCTS TO BE INSTALLED UNDER THE DESIGNATED SECTIONS:

1. OVERHEAD COILING DOORS, INSULATED 2. OVERHEAD COILING FIRE DOORS

B. RELATED SECTIONS INCLUDE THE FOLLOWING:

1. SECTION 16010 - GENERAL ELECTRICAL 2. SECTION 16110 - RACEWAYS

3. SECTION 16120 - CONDUCTORS

4. SECTION 16130 - BOXES 5. SECTION 16190 - HANGERS AND SUPPORTS

6. SECTION 16195 - ELECTRICAL IDENTIFICATION 7. SECTION 16450 - GROUNDING

1.04 REFERENCES

A. COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND THOSE OTHERS REFERENCED IN THIS SECTION. WHERE THESE STANDARDS CONFLICT WITH OTHER SPECIFIED REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN

1. STATE BUILDING CODE, CURRENT EDITION.

2. STATE ELECTRICAL CODE, CURRENT EDITION. 3. NFPA 70: NATIONAL ELECTRICAL CODE, 2011 EDITION.

4. UL (UNDERWRITERS LABORATORY):

A. UL: APPLICABLE REQUIREMENTS FOR MOTORS, SWITCHES AND OTHER ELECTRICAL COMPONENTS.

5. ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL CODES, LAWS AND REGULATIONS FOR EQUIPMENT REQUIREMENTS.

6. ALL ELECTRICAL EQUIPMENT AND ASSEMBLIES; I.E. CONTROL PANELS, MOTORS, PUSH BUTTON CONTROLS, SENSORS, LIGHTS, ETC. SHALL BE UL LISTED AND

A. SUBMIT 5 COPIES OF THE FOLLOWING SHOP DRAWING FOR APPROVAL PRIOR TO FABRICATION UNDER PROVISIONS OF DIVISION 1, CLEARLY INDICATING 1. DESIGN AND INSTALLATION DETAILS TO WITHSTAND LOCAL WIND LOADING

STANDARDS A. DETAILED PLANS, INCLUDING DETAILS OF FRAMING MEMBERS, REQUIRED

CLEARANCES, ANCHORS AND ACCESSORIES. B. ELEVATIONS.

2. ALL DETAILS REQUIRED FOR COMPLETE OPERATION AND INSTALLATION. 3. HARDWARE LOCATION.

4. TYPE AND GAGE OF METAL AND FINISH FOR DOOR SECTION.

5. FINISH FOR MISCELLANEOUS COMPONENTS AND ACCESSORIES. B. PRODUCT DATA: INDICATING MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS. INCLUDE BOTH PUBLISHED DATA AND SPECIFIC DATA FOR THIS

C. PROVIDE 4 X 6 INCH PIECE OF BASE METAL WITH SPECIFIED FINISH. 1.06 QUALITY ASSURANCE

A. SINGLE-SOURCE RESPONSIBILITY: PROVIDE DOORS, TRACK, MOTORS AND ACCESSORIES FROM ONE MANUFACTURER. SECONDARY COMPONENTS MAY BE PROVIDED BY A SOURCE ACCEPTABLE TO THE COILING STEEL DOOR MANUFACTURER. B. INSTALLER: INSTALLATION OF COILING STEEL DOORS SHALL BE PERFORMED BY AN

AUTHORIZED REPRESENTATIVE OF THE MANUFACTURER. C. PRE-INSTALLATION CONFERENCE: SCHEDULE AND CONVENE A PRE-INSTALLATION

CONFERENCE JUST PRIOR TO COMMENCEMENT OF FIELD OPERATIONS, TO ESTABLISH PROCEDURES TO MAINTAIN OPTIMUM WORKING CONDITIONS AND TO COORDINATE THIS WORK WITH RELATED AND ADJACENT WORK. 1.07 DELIVERY STORAGE AND HANDLING

C. DELIVER MATERIALS AND PRODUCTS IN ORIGINAL LABELED PROTECTIVE PACKAGES WITH FACTORY SEALS INTACT. PRODUCT MUST BE DRY AND UNDAMAGED IN ORDER TO BE DELIVERED TO SITE. STORE AND HANDLE IN STRICT COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. PROTECT FROM FROM WEATHER, EXCESSIVE TEMPERATURES AND CONSTRUCTION OPERATIONS.

1.08 SEQUENCING AND SCHEDULING A. COORDINATE THE WORK OF THIS SECTION WITH THE RESPECTIVE TRADES RESPONSIBLE FOR INSTALLING INTERFACING WORK, AND ENSURE THAT THE WORK PERFORMED HEREUNDER IS ACCEPTABLE TO SUCH TRADES FOR THE INSTALLATION OF

PART 2 PRODUCTS

2.01 MANUFACTURER AND TYPE A. COILING STEEL DOOR AS MANUFACTURED BY,

1. THE COOKSON COMPANY

2. AMARR ENTREMATIC.

3. OR ARCHITECT APPROVED SUBSTITUTE.

2.02 MATERIALS

A. IRON CASTINGS: ASTM A 48. B. STEEL: ASTM A 446, STRUCTURAL QUALITY, COLD ROLLED STEEL SHEETS, GRADE A.

A. MINIMUM 22-GAGE GALVANIZED.

B. PROVIDE FIRE RATINGS AS SCHEDULED ON THE DRAWINGS. 2.03 MANUFACTURED UNITS

1. GALVANIZED COATING: ASTM A 525, G90 COATING.

A. OVERHEAD COILING SERVICE DOORS:

1. WIND RESISTANCE: 20 POUNDS PER SQUARE FOOT. 2. CURTAIN:

A. MATERIAL: GALVANIZED STEEL.

B. GAGE: 20. C. SLAT PROFILE: MANUFACTURER'S STANDARD FLAT-FACED.

D. FINISH: POWDER COAT FINISH.

E. INSULATION: MINIMUM 2.2 LB DENSITY FOAMED-IN-PLACE POLYURETHANE FOAM INSULATION (R=6.0 MIN.) INSTALLED BETWEEN EXTERIOR AND INTERIOR SLATS.

F. VISION PANELS: CLEAR POLYCARBONATE, AS INDICATED ON DRAWINGS.

A. MATERIAL: GALVANIZED STEEL. B. FINISH: MANUFACTURER'S STANDARD PRIME PAINT.

4. HOOD:

A. MATERIAL: GALVANIZED STEEL, MINIMUM 24 GAGE.

5. OPERATOR: MOTOR: A. FURNISH WITH AUXILIARY MANUAL CHAIN.

B. MOTOR TYPE: OPEN DRIP PROOF. 1. HORSEPOWER RATING: AS RECOMMENDED BY DOOR MANUFACTURER FOR DOOR SIZE AND FREQUENCY OF OPERATION.

6. CONTROL STATION: KEY SWITCH LOCAKBLE, THREE PUSH BUTTONS: UP, DOWN

7. LOCKING DEVICE: INTERIOR SLIDE BOLT WITH INTERLOCK SWITCH.

B. WIRELESS, SAFETY ELECTRIC SENSING DOOR EDGE.

8. FURNISH THE FOLLOWING MANUFACTURER'S OPTIONAL ACCESSORIES: A. WEATHER-STRIPPING AT DOOR JAMBS AND HEAD.

C. BOTTOM BAR; GALVANIZED STEEL. BRACKETS; GALVANIZED STEEL.

A. ENCLOSURE: REFER TO NEMA DRAWING.

D. PHOTOELECTRIC SENSORS. B. OVERHEAD COILING FIRE DOORS:

1. FIRE RATING: UL RATING PER THE DOOR SCHEDULE

B. FINISH: MATCH CURTAIN FINISH.

2. CURTAIN: A. MATERIAL: GALVANIZED STEEL.

B. GAGE: AS REQUIRED TO COMPLY WITH UL REQUIREMENTS FOR DOOR CONSTRUCTION FOR FIRE RATING AND SIZE OF DOOR INDICATED. C. SLAT PROFILE: MANUFACTURER'S STANDARD CURVED SLAT.

D. FINISH: MANUFACTURER'S STANDARD POLYESTER TOP COAT. 3. GUIDES: A. MATERIAL: GALVANIZED STEEL.

B. FINISH: MANUFACTURER'S STANDARD POLYESTER TOP COAT. 4. HOOD: A. MATERIAL: GALVANIZED STEEL, MINIMUM 24-GAGE.

5. OPERATOR: MANUAL PUSH-UP WITH LIFT HANDLE.

08 33 00 - OVERHEAD COILING DOORS CONT. 6. AUTOMATIC CLOSING: FUSIBLE LINK.

2.04 COMPONENTS A. END LOCKS (DOORS): GALVANIZED IRON CASTINGS, ASTM A 48; FASTEN TO EACH END

OF CURTAIN AT ABOUT 24 INCHES ON CENTER TO RESIST LATERAL FORCE. B. BOTTOM BAR: BOTTOM BAR, OVERHEAD COILING DOORS: 2 ANGLES, MINIMUM 1-1/2 INCHES BY

1-1/2 INCHES BY 1/8 INCH THICK; GALVANIZED. A. BOTTOM SEAL: REPLACEABLE VINYL OR NEOPRENE GASKET BETWEEN BOTTOM BAR

C. CURTAIN GUIDES (DOORS):

1. CONSTRUCT DOOR GUIDES FROM GALVANIZED STEEL ANGLES OF A SIZE AND IN CONFIGURATION NECESSARY TO SUPPORT CURTAIN LOADS.

D. WEATHER-STRIPPING: 1. VINYL OR NEOPRENE STRIPS.

E. COUNTERBALANCE MECHANISM: 1. ADJUSTABLE STEEL HELICAL TORSION SPRING, ON A STEEL SHAFT.

1. ENCLOSED CURTAIN COIL AND COUNTERBALANCE MECHANISM WITH GALVANIZED SHEET METAL HOOD. 2. CLOSE HOOD ENDS AT SURFACE-MOUNTED INSTALLATIONS.

CONTROL, GEAR REDUCTION UNIT, BRAKE, WIRING AND ACCESSORIES REQUIRED FOR PROPER OPERATION. A. EMERGENCY MANUAL OPERATION: HAND-OPERATED DISCONNECT ACCESSIBLE FROM

1. COMPLETE ASSEMBLY OF CAPACITY INDICATED, INCLUDING ELECTRIC MOTOR

2. OPERATOR TYPE: A. WALL - OR BRACKET - MOUNTED OPERATOR UNITS CONSISTING OF ELECTRIC MOTOR, WORM GEAR DRIVE OR CHAIN GEAR DRIVE AND AN EMERGENCY DISCONNECT FOR MANUAL OPERATION.

3. CONTROL STATION: A. MOMENTARY-CONTACT, 3-BUTTONS, LABELED OPEN, CLOSE AND STOP.

4. AUTOMATIC REVERSING CONTROL: A. CONTINUOUS AUTOMATIC SAFETY SWITCH OF TYPE INDICATED, LOCATED IN FLEXIBLE ASTRAGAL AT BOTTOM RAIL; COMPLY WITH UL 325.

B. AUTOMATIC BOTTOM BAR: WIRELESS, ELECTRICALLY ACTUATED. C. PHOTOELECTRIC SENSORS LOCATED AT BASE OF JAMB ASSEMBLY.

FLOOR TO ENGAGE MANUAL CHAIN OPERATOR.

H. MANUAL OPERATORS: 1. MANUAL PUSH OPERATION.

START AT ANY POSITION

G. ELECTRICAL OPERATORS:

2. OVERHEAD CURTAIN, LIFT-UP OPERATION FORCE: 25 POUNDS MAXIMUM. 3. DESIGN OPERATING MECHANISM TO ALLOW CURTAIN OPERATION TO STOP AND

4. WHERE INDICATED, FURNISH LIFT HANDLE ON OUTSIDE OF BOTTOM BAR. AUTOMATIC CLOSING

A. PROVIDE AUTOMATIC CLOSING DEVICE. CONSTRUCT UNIT TO BE INOPERATIVE DURING NORMAL OPERATIONS.

B. CLOSING MECHANISM: ACTIVATE BY TEMPERATURE RISE AND MELTING OF FUSIBLE

LINK AT 160 DEGREES F. C. DOORS LOCATED IN FIRE WALLS INDICATED ON THE DRAWINGS, WILL BE EQUIPPED WITH FUSIBLE LINE DEVICES ON BOTH SIDES OF THE WALL.

6. RELEASE MECHANISM: DESIGN TO BE EASILY REST. 7. WHERE INDICATED, ACTIVATE CLOSING MECHANISM BY FIRE ALARM SYSTEM, WITH FAIL-SAFE ELECTROMAGNETIC RELEASE DEVICE.

A. COORDINATE LOCATION OF RELEASE DEVICE ENCLOSURE, TO WORK WITH ADJACENT CEILINGS, AND OTHER FIXED BUILDING COMPONENTS. 8. EMERGENCY EXIT: DESIGN UNIT TO ALLOW MANUAL LIFTING OF CURTAIN, AFTER AUTOMATIC RELEASE WITH CURTAIN RETURNING TO CLOSED POSITION AFTER

2.05 FABRICATION A. DOOR CURTAIN:

> 1. INTERLOCKING SLATS CONTINUOUS FOR ENTIRE DOOR WIDTH; DESIGNED TO RESIST INDICATED WIND LOADS.

B. SHOP/FACTORY FINISHING: POWDER COAT, COLOR SELECTION FROM MANUFACTURER'S STANDARD COLOR SELECTION. DO NOT PAINT/COAT SURFACES REQUIRING LUBRICATION.

PART 3 EXECUTION

STANDARDS.

3.01 INSTALLATION - GENERAL A. INSTALL DOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION AND

B. COMMENCING WORK OF THIS SECTION IS ACCEPTANCE OF ALL MATERIALS AND CONDITIONS IN-PLACE AT COMMENCEMENT. C. INSTALL DOOR COMPLETE WITH ALL SPECIFIED AND NECESSARY HARDWARE, JAMB

AND HEAD MOLD STRIPS, ANCHORS, INSERTS, HANGERS, AND EQUIPMENT SUPPORTS IN ACCORDANCE WITH FINAL SHOP DRAWINGS AND MANUFACTURER'S INSTRUCTIONS. D. FIT AND ALIGN COILING STEEL DOOR TO BE LEVEL AND PLUMB FOR SMOOTH

E. COORDINATE INSTALLATION WITH ADJACENT WORK TO ENSURE PROPER CLEARANCES AND ALLOW OF MAINTENANCE. F. INSTRUCT OWNER'S PERSONNEL IN PROPER OPERATING PROCEDURES AND

MAINTENANCE SCHEDULE. 3.02 INSTALLATION - ELECTRICAL A. COMPLY WITH MANUFACTURER'S DIRECTIONS AND APPROVED SUBMITTAL

B. INSTALL DOORS FOLLOWING APPLICABLE UNDERWRITERS LABORATORIES REQUIREMENTS AND IN ACCORDANCE WITH THE FOLLOWING: 1. ALL ELECTRICAL COMPONENTS, CONNECTIONS AND WIRING SHALL BE UL LISTED OR RECOGNIZED AND RATED FOR 3 PHASE/480 VOLT OPERATION. THE PUSH BUTTON CONTROL PANEL SHALL BE USED TO ALLOW FOR OVERHEAD DOOR CONTROL AND FUSE DISCONNECT. THE CONTROL PANELS SHALL HAVE EITHER A MAIN CIRCUIT BREAKER DISCONNECT OR MAIN FUSED DISCONNECT. THE MAIN CIRCUIT BREAKER DISCONNECT OR FUSED DISCONNECT SHALL BE RATED 65KAIC. ALL COMPONENTS SHOULD BE INTERLOCKED AND SEQUENCED TO PROVIDE SAFE OPERATION. ALL CONTROL AND POWER WIRING SHALL BE THE RESPONSIBILITY

OF THE DOOR CONTRACTOR. 2. THE BUILDING ELECTRICAL CONTRACTOR SHALL PROVIDE A 480 VOLT, NON-FUSED DISCONNECT AND POWER TO THE LINE SIDE OF THE DISCONNECT. THE DISCONNECT SHALL BE LOCATED WITHIN 15'-0" OF THE DOOR

3. THE DOOR CONTRACTOR SHALL PROVIDE POWER WIRING FROM THE LOAD SIDE OF THE DISCONNECT TO THE DOOR CONTROLLER, POWER AND CONTROL WIRING FROM THE CONTROLLER TO ALL REMOTE DEVICES, SENSORS, PUMPS,

4. ALL WIRING SHALL BE INSTALLED IN CONDUIT AND SHALL BE INSTALLED AS ALL WIRE AND CABLE SHALL BE ANNEALED, COATED COPPER PER ASTM B33 OR B189 WITH CONDUCTIVITY OF NOT LESS THAN 98%. ALL STRANDED WIRE SHALL

6. ALL WIRE SHALL HAVE 600V INSULATION, ULLISTED AND COMPLYING WITH UL 83, ICEA S-61-402 OR ICEA S-66-524 FOR RESPECTIVE INSULATION TYPE. 7. ALL FEEDER, BRANCH CIRCUIT, REMOTE CONTROL, SIGNAL CIRCUIT AND INTERLOCK WIRING SHALL BE MANUFACTURED OF COPPER, RATED AT 600 VOLTS,

SINGLE CONDUCTOR. CONDUCTORS' #8 AND LARGER SHALL BE STRANDED. ALL WIRING #10 AND SMALLER SHALL BE SOLID. 8. MINIMUM SIZE WIRE FOR BRANCH CIRCUIT AND POWER WIRING SHALL BE #12 AWG. WHEN 20 AMPERE, 1-POLE CIRCUITS FOR POWER AND LIGHTING EXCEED 60'-0" FOR 120 VOLT CIRCUITS OR 120'-0" FOR 277 VOLT CIRCUITS TO THE CENTER OF LOAD, #10 AWG WIRE OR LARGER, AS REQUIRED, SHALL BE USED FOR

A MAXIMUM 3% VOLTAGE DROP AT FULL CIRCUIT CAPACITY. 9. REMOTE CONTROL SIGNAL WIRING AND INTERLOCK WIRING SHALL BE #14 AWG NON-SHIELDED.

12. COLOR CODING SHALL BE CONTINUOUS ON THE INSULATION AND SHALL BE AS

C PHASE - YELLOW

10. 4WIRE AND CABLE FOR LIGHTING, POWER AND CONTROL CIRCUITS FOR SYSTEMS OPERATING BETWEEN 50 AND 600 VOLTS SHALL BE SOFT DRAWN, 98% CONDUCTIVE COPPER WITH 600 VOLT RATED INSULATION. 600V WIRE SIZE #6 AND SMALLER SHALL BE TYPE THWN OR THHN.

11. INSULATION TYPES FOR ALL CONDUCTORS SHALL BE AS FOLLOWS:

LOCATION: BRANCH CIRCUITS #6 AWG AND SMALLER

C PHASE - BLUE

DRY: THHN DAMP: THWN WET: THWN WIRING IN AREAS WITH AN AMBIENT LESS THAN 320F DAMP: XHHW-2 WET: XHHW-2 DRY: XHHW-2

FOLLOWS: 208/120 VOLTS A PHASE - BLACK A PHASE - BROWN B PHASE - RED B PHASE - ORANGE 08 33 00 - OVERHEAD COILING DOORS CONT

NEUTRAL - WHITE NEUTRAL - GREY GROUND - GREEN WITH YELLOW STRIPE GROUND - GREEN

13. CONDUCTORS SHALL BE CONNECTED WITH PRE-INSULATED SPRING CONNECTORS INCASED IN A STEEL SHELL AND RATED AT NOT LESS THAN 105OC. A MINIMUM OF 3/8" SKIRT SHALL COVER THE BARE WIRES. THE CONNECTOR SHALL MEET WITH

UL LISTING FOR FIXTURE AND PRESSURE WORK.

14. LUGS AND WIRE CONNECTORS SHALL BE ONE OF THE FOLLOWING: BURNDY CORP., THOMAS & BETTS, IDEAL OR BUCHANAN. 15. DERATING OF CONDUCTOR SHALL BE LIMITED TO 80% AND NOT MORE THAN SIX

CURRENT CARRYING CONDUCTORS SHALL BE INSTALLED IN EACH CONDUIT. 16. IDENTIFY EACH CONDUCTOR IN CONTROL PANELS, DISCONNECTS, JUNCTION OR PULL BOXES, OR TROUGHS WITH A PERMANENT PREPRINTED POLYOLEFIN BARREL TYPE WIRE MARKERS WITH SUITABLE NUMBERS OR LETTERS FOR EASY RECOGNITION. IDENTIFY CONTROL WIRING AT EACH END AND IN JUNCTION BOXES WITH NUMERIC WIRE NUMBER CORRESPONDING TO CONTROL WIRING

17. PROVIDE A BEAD OF FOOD GRADE CAULKING AROUND THE PERIMETER OF ALL BOXES, CONDUIT SUPPORTS, AND CABINETS MOUNTED TO METAL PANEL WALLS EQUIPMENT FRAMES, BUILDING COLUMNS, ETC.

18. CONDUIT RUNS SHALL BE MECHANICALLY AND ELECTRICALLY CONTINUOUS. CONDUIT SHALL ENTER AND BE SECURED TO CABINET, JUNCTION BOX, PULL BOX OR OUTLET BOX WITH LIQUID TIGHT, THREADED, SELF-LOCKING, COLD-WELD WEDGE ADAPTER. LOCKNUTS AND BUSHINGS OR SELF-LOCKING ADAPTERS WILL NOT BE REQUIRED WHERE CONDUITS ARE SCREWED INTO TAPPED CONNECTIONS. VERTICAL CONDUIT RUNS SHALL HAVE LOW POINT DRAINS AND SHALL TERMINATE IN BOTTOM OF BOXES OR CABINETS. THE LOW POINT DRAIN SHALI BE A CONDUIT BODY WITH A DRAIN FITTING

19. CHECK RACEWAY SIZES TO DETERMINE THAT GREEN EOUIPMENT GROUND CONDUCTOR FITS INTO SAME RACEWAY WITH PHASE AND NEUTRAL CONDUCTORS TO MEET NEC PERCENTAGE OF FILL REQUIREMENTS, INCREASE DUCT, CONDUIT, TUBING AND RACEWAY SIZES SHOWN OR SPECIFIED AS REQUIRED TO ACCOMMODATE CONDUCTORS. 20. PROVIDE ALL EMPTY CONDUITS INSTALLED WITH A PULL WIRE. PULL WIRE

SHALL BE NO. 14 ZINC-COATED STEEL, OR OF PLASTIC HAVING NOT LESS THAN 200

POUND TENSILE STRENGTH. LEAVE NOT LESS THAN 12" OF SLACK AT EACH END OF THE PULL WIRE. PROVIDE A TAG AT EACH END OF PULL WIRE INDICATING LOCATION OF OPPOSITE END.

21. PROVIDE GREEN GROUND WIRE IN ALL CONDUITS, BOXES, ETC, ALL EQUIPMENT SHALL BE GROUNDED, BONDED, ETC., AS REQUIRED PER THE NEC. 3.03 ADJUSTING

A. TEST AND ADJUST DOORS TO OPERATE EASILY AND BE WEATHER SEALED WHEN

A. CLEAN DOOR ASSEMBLY SURFACES, REMOVING DUST, DIRT AND GREASE BEFORE

B. ADJUST AUTOMATIC CLOSING DEVICE ON FIRE-RATED DOORS TO OPERATE WITHIN THE DELAY TIME INDICATED. 3.04 CLEANING

END OF SECTION 08 33 00

ACCEPTANCE.

DIAGRAM.



08 71 00 - DOOR HARDWARE	08 71 00 - DOOR HARDWARE CONT.	08 71 00 - DOOR HARDWARE CONT.		
				A 05.23.2018 SDP PLAN COMMISSION REVIEW RELEASE DATE BY APP. RELEASED FOR
				GREAT LAKES CHEESE 2200 ENTERPRISE AVENUE LA CROSSE, WISCONSIN 54603 ARCHITECTURAL SPECIFICATIONS SHEET 8
				DENNIS GROUP Plan • Design • Engineer • Build • Start-Up dennisgroup.com United States • Canada • Brazil • Portugal
				DRAWING NO. A10.008 5590

BUT NOT LIMITED TO:

B. WORK NOT INCLUDED:

OTHER SECTIONS.

PART 1 - GENERAL

1.01 SECTION INCLUDES

AVOID DAMAGE TO FINISHED WORK.

DEMONSTRATING COATING COMPATIBILITY.

1.010 SEQUENCING AND SCHEDULING

A. IMMEDIATELY NOTIFY THE ARCHITECT AND CONSTRUCTION MANAGER IN WRITING OF CONDITIONS WHICH MAY REQUIRE A CHANGE IN THE SPECIFICATIONS OF THIS IN THE WORK, RESULTING FROM THE USE OF SUCH MATERIALS.

SUBMITTED, REVIEWED AND APPROVED BY ARCHITECT. C. SEQUENCING, SCHEDULING OF WORK IN SENSITIVE AREAS: DO NOT BLOCK AIR INTAKE OR EXHAUST LOUVERS AND GRILLES IN ORDER TO PREP OR FINISH THESE ITEMS. NOTIFY CONSTRUCTION MANAGER AND OBTAIN TIMES WHEN THESE AREAS

1. THE FOLLOWING SURFACES ARE NOT TO BE PAINTED: a. NEW, PRE-FINISHED ITEMS SUCH AS CONNECTORS AND LIGHT FIXTURES, 1.011 MAINTENANCE STOCK PRE-FINISHED MECHANICAL AND ELECTRICAL EQUIPMENT, EXCEPT WHERE INDICATED OTHERWISH b. NEW, PRE-FINISHED ITEMS SUCH AS LOCKERS, TOILET PARTITIONS,

BENCHES, ALUMINUM FRAMES, ACOUSTICAL CEILINGS, IMP WALLS AND IMP FURNISHED FOR THE WORK. c. CONCEALED SURFACES, UNLESS SPECIFICALLY INDICATED.

d. MOVING PARTS OF EQUIPMENT. 2.01 MANUFACTURERS

C. RELATED SECTIONS INCLUDE THE FOLLOWING: 1. 07 92 00 - JOINT SEALERS

2. 09 96 00 - HIGH PERFORMANCE COATINGS

A. COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING STANDARDS AND THOSE OTHERS REFERENCED IN THIS SECTION. 1. PDCA INDUSTRY STANDARDS (PAINTING AND DECORATING CONTRACTORS OF

A. DFM (DRY FILM MILS): THICKNESS, MEASURED IN MILLS, OF A COAT OF PAINT IN THE

A. THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS, LABOR AND EQUIPMENT

AND FRAMES IN THE AREA OF THE WORK UNDER CONTRACT.

FOR THE PAINTING WORK AS SHOWN ON THE DRAWINGS AND OR DESCRIBED HEREIN,

1. PAINT FINISH ON ALL WOOD, GYPSUM WALL BOARD, HOLLOW METAL DOORS

PAINT ALL AREAS AND MATERIALS INDICATED IN THE ROOM FINISH SCHEDULE.

4. PAINT EXPOSED SURFACES WHETHER OR NOT COLORS ARE DESIGNATED IN

SURFACE PREPARATION, PRIMING AND FINISH COATS SPECIFIED IN THIS SECTION

ARE IN ADDITION TO SHOP PRIMING AND SURFACE TREATMENT SPECIFIED UNDER

SCHEDULES, EXCEPT WHERE A SURFACE OR MATERIAL IS SPECIFICALLY

INDICATED NOT TO BE PAINTED OR IS TO REMAIN NATURAL. WHERE AN ITEM OF

SURFACE IS NOT SPECIFICALLY MENTIONED, PAINT THE SAME AS SIMILAR

ADJACENT MATERIALS OR SURFACES. IF COLOR OR FINISH IS NOT DESIGNATED.

THE ARCHITECT WILL SELECT FROM STANDARD COLORS OR FINISHES

WARNOCK-HERSEY OR OTHER CODE REQUIRED LABELS OR EQUIPMENT NAME,

LABELS: DO NOT PAINT OVER LABELS, INCLUDING UL, FACTORY MUTUAL,

IDENTIFICATION, PERFORMANCE RATING OR NOMENCLATURE PLATES.

CURED STATE. 1.04 SUBMITTALS

A. SUBMIT THE FOLLOWING UNDER PROVISIONS OF DIVISION 1:

1. LITERATURE: MANUFACTURER'S PRODUCT DATA SHEETS, SPECIFICATIONS, PERFORMANCE DATA, PHYSICAL PROPERTIES, MATERIAL COMPOSITIONS, AND APPLICATION INSTRUCTIONS FOR ALL FINISHING PRODUCTS TO BE APPLIED

2. MATERIAL ANALYSIS INCLUDING VEHICLE TYPE AND PERCENTAGE BY WEIGHT AND BY VOLUME OF VEHICLE, RESIN AND PIGMENT.

APPLICATION INSTRUCTIONS INCLUDING MIXING, SURFACE PREPARATION, COMPATIBLE PRIMERS AND TOPCOATS, RECOMMENDED WET AND DRY FILM THICKNESS AND RECOMMENDED APPLICATION METHODS.

4. ALL PAINT FINISHES USED ON THIS PROJECT, WHETHER SPECIFIED OR NOT, SHALL COMPLY WITH EMISSIONS OF VOLATILE ORGANIC COMPOUNDS (VOC). COORDINATE WITH PAINT MANUFACTURERS FOR CURRENT PAINT PRODUCT NUMBERS AND CROSS-REFERENCE TO THOSE SPECIFIED IN SCHEDULES.

5. INCLUDE CERTIFICATION FOR ALL PAINTS; DATA INDICATING VOLATILE ORGANIC COMPOUND (VOC) CONTENT IS IN COMPLIANCE WITH VIRGINIA LIMITS. SUBMIT THE FOLLOWING UNDER PROVISIONS OF DIVISION 1

SELECTION SAMPLES: MANUFACTURER'S COLOR SELECTOR FOR ARCHITECT'S COLOR SCHEDULING.

C. WARRANTY: SUBMIT MANUFACTURER'S STANDARD WARRANTY. 1.05 QUALIFICATIONS

A. MANUFACTURER: SPECIALIZING IN MANUFACTURE OF COATING WITH A MINIMUM OF 10 YEARS SUCCESSFUL EXPERIENCE.

B. APPLICATOR: COMPANY SPECIALIZING IN PERFORMANCE OF THE WORK OF THIS SECTION WITH 3 YEARS MINIMUM DOCUMENTED EXPERIENCE AND ACCEPTABLE TO

C. APPLICATOR'S PERSONNEL: EMPLOY PERSONS TRAINED FOR APPLICATION OF SPECIFIED COATINGS.

1.06 QUALITY ASSURANCE

. ALL COATING MATERIALS REQUIRED BY THIS SECTION SHALL BE PROVIDED BY A SINGLE MANUFACTURER, UNLESS OTHERWISE REQUIRED OR, APPROVED. B. APPLICATOR: FIRM WITH SUCCESSFUL EXPERIENCE IN PAINTING WORK SIMILAR IN

1. MAINTAIN THROUGHOUT DURATION OF THE WORK, A CREW OF PAINTERS WHO ARE FULLY QUALIFIED TO SATISFY REQUIREMENTS OF THE SPECIFICATIONS.

C. MOCK-UP: BEFORE PROCEEDING WITH WORK OF THIS SECTION, FINISH ONE COMPLETE SPACE OR ITEM OF EACH COLOR SCHEME REQUIRED, SHOWING SELECTED COLORS, FINISH TEXTURE, MATERIALS AND WORKMANSHIP.

1.07 DELIVERY, STORAGE AND HANDLING A. DELIVERY: DELIVER MATERIALS IN MANUFACTURER'S ORIGINAL CONTAINERS BEARING COATING NAME AND COLOR, MATERIAL COMPOSITION DATA, DATE OF MANUFACTURE, LEGAL NOTICES IF APPLICABLE, AND MIXING, THINNING, AND

1. STORE MATERIALS IN AN ORDERLY FASHION AND IN CLEAN, WELL-CLOSED

CONTAINERS WITH LABELS INTACT. MAINTAIN ABOVE 40 DEGREES F. DO NOT ALLOW MATERIALS TO FREEZE.

3. STORE AND MIX MATERIALS ON WATERPROOF PAPER OR TARPAULINS. C. FIRE PRECAUTION: TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FIRE. KEEP CONTAINERS SEALED WHEN NOT IN USE AND REMOVE SOILED AND USED RAGS AND WASTE FROM THE PREMISES AT THE COMPLETION OF EACH DAY'S WORK.

D. SAFETY REGULATIONS: COMPLY WITH ALL OSHA SAFETY REQUIREMENTS. 1.08 PROJECT CONDITIONS A. PROVIDE CONTINUOUS VENTILATION AND HEATING FACILITIES TO MAINTAIN

SURFACE AND AMBIENT TEMPERATURES ABOVE 45 DEGREES FAHRENHEIT FOR 24 HOURS BEFORE, DURING AND 48 HOURS AFTER APPLICATION OF FINISHES, UNLESS REQUIRED OTHERWISE BY MANUFACTURER'S INSTRUCTIONS.

B. APPLY COATINGS ONLY UNDER THE FOLLOWING ENVIRONMENTAL CONDITIONS: 1. AIR AND SURFACE TEMPERATURES ARE BETWEEN 50 AND 100 DEGREES F, UNLESS OTHERWISE RECOMMENDED BY MANUFACTURER.

SURFACE TEMPERATURE IS AT LEAST 5 DEGREES F ABOVE DEW POINT. 3. RELATIVE HUMIDITY IS LESS THAN 85 PERCENT.

C. DO NOT APPLY COATINGS DURING INCLEMENT WEATHER EXCEPT WITHIN ENCLOSED, CONDITIONED SPACES.

1. PROVIDE TEMPORARY LIGHTING TO ACHIEVE A WELL-LIT SURFACE WITH A LEVEL OF AT LEAST 80 FOOT CANDLES MEASURED MID-HEIGHT: PROVIDE CONTINUOUS VENTILATION AND HEATING TO PREVENT ACCUMULATION OF HAZARDOUS FUMES AND TO MAINTAIN SURFACE AND AMBIENT TEMPERATURES ABOVE 45 DEGREES F FOR 24 HOURS BEFORE, DURING AND FOR 48 HOURS AFTER APPLICATION OF FINISHES, OR LONGER IF REQUIRED

TO OBTAIN FULL CURE AS INDICATED BY MANUFACTURER'S INSTRUCTIONS. DO NOT APPLY EXTERIOR PAINT IN SNOW, RAIN, FOG, OR MIST, WHEN THE RELATIVE HUMIDITY EXCEEDS 85%, AT TEMPERATURES LESS THAN 5 DEGREES F ABOVE THE DEW POINT, OR TO DAMP OR WET SURFACES OR OTHER CONDITIONS UNACCEPTABLE TO FINISH MANUFACTURER.

D. PROTECTION:

1. PROTECT WORK BY OTHERS: COVER OR OTHERWISE PROTECT FINISHED WORK OF OTHER TRADES AND SURFACES NOT BEING PAINTED CONCURRENTLY OR NOT TO

2. PROTECTION OF MISCELLANEOUS ITEMS: REMOVE OR OTHERWISE PROTECT FINISH HARDWARE, ELECTRICAL PLATES, LIGHTING FIXTURES, PREFINISHED ACCESSORIES MOUNTED TO SURFACES TO BE PAINTED, AND SIMILAR ITEMS.

3. PROTECTION OF IDENTIFYING MARKINGS: UNDERWRITERS' LABORATORIES LABELS, NAMEPLATES, AND IDENTIFYING STICKERS GIVING FIRE RATINGS, UNIT RATING, DIRECTIONS OR OTHER PERTINENT INFORMATION ON MATERIALS AND EQUIPMENT SPECIFIED TO BE PAINTED SHALL NOT BE PAINTED OVER AND SHALL BE PROTECTED DURING PAINTING FORM OVERSPRAY OR DEFACEMENT. RESTORE IDENTIFYING MARKINGS WHICH ARE DEFACED DURING PAINTING TO THEIR ORIGINAL CONDITION AND TO SATISFACTION OF THE OWNER'S REPRESENTATIVE.

4. SIGNS AND BARRICADES: POST SIGNS AND INSTALL BARRICADES AS REQUIRED TO PROTECT PAINTING WORK FROM DAMAGE. 5. FIRE PREVENTION: TAKE EXTRAORDINARY CARE TO PREVENT FIRE. OPEN CANS

OF PAINT OR VARNISH ONLY WHEN NEEDED. KEEP RUBBING CLOTHS AND OILY

6. PROTECTION OF OTHER SURFACES: COVER OR IN SOME OTHER WAY PROTECT WINDOWS, SHRUBS, TRUCKS, AUTOS, CYCLES FROM PAINT SPRAY AND CLEANERS. 7. DUST GENERATION: CONTROL ANY DUST GENERATED DURING THE

RAGS SUBMERGED IN WATER.

APPLICATION/FINISHING PROCESS TO WITHIN THE AREA OF WORK.

A. GENERAL: PERFORM WORK IN PROPER SEQUENCE WITH WORK OF OTHER TRADES TO

B. COORDINATION: WHERE SPECIAL COATINGS WILL BE APPLIED OVER SHOP COATINGS SPECIFIED IN OTHER SECTIONS, COORDINATE WORK OF SUCH OTHER SECTIONS TO ENSURE THAT ONLY APPROVED, COMPATIBLE PRIMERS ARE APPLIED.

1. FURNISH THE ARCHITECT WITH PRODUCT DATA ON BOTH COATINGS

SECTION BEFORE PROCEEDING WITH THE WORK. FAILURE TO DO SO, IN A TIMELY FASHION, SO AS NOT TO INTERFERE WITH THE SCHEDULE OF WORK OF THIS CONTRACT, SHALL BE CONSTRUED AS ACCEPTANCE OF THE PAINTS SPECIFIED. PERFORM ALL CORRECTIVE MEASURES, AT NO ADDITIONAL COST, FOR ANY DEFECTS

B. DO NOT ORDER MATERIALS UNTIL ALL REQUIRED SCHEDULES HAVE BEEN PROPERLY

CAN BE SHUT DOWN TO ALLOW WORK TO PROCEED. DO NOT BLOCK AIR EXHAUST OR AIR INTAKES OR ALLOW THEM TO DRAW IN DUST OR FUMES FROM WORK OPERATIONS.

A. AT TIME OF COMPLETING APPLICATION, DELIVER STOCK OF MAINTENANCE MATERIAL TO THE OWNER. FURNISH NOT LESS THAN ONE PROPERLY LABELED AND UNOPENED 1-GALLON CAN OF EACH TYPE OF FINISH COAT OF EACH COLOR, TAKEN FROM LOTS

PART 2 - PRODUCTS

A. THE FOLLOWING MANUFACTURERS ARE THE BASIS OF THE CONTRACT DOCUMENTS:

1. SHERWIN-WILLIAMS (S-W) 2. BENJAMIN-MOORE & CO. (B-M)

3. COMPARABLE SYSTEMS OF ICI PAINTS, PPG INDUSTRIES, PRATT & LAMBERT. VALSPAR CORPORATION AND DIAMOND VOGEL ARE ACCEPTABLE PROVIDED

B. MANUFACTURER'S PRODUCT NAMES AND NUMBERS ARE GIVEN TO ESTABLISH A STANDARD OF QUALITY, DESIGN AND FUNCTION DESIRED. DRAWINGS AND SPECIFICATIONS HAVE BEEN BASED ON THOSE PRODUCTS SPECIFIED HEREIN. PRODUCTS FROM OTHER MANUFACTURERS PROVIDED THEY COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS MAY BE CONSIDERED. ALL SUPPLIERS MUST FURNISH CERTIFICATES THAT THEIR MATERIAL IS IN COMPLIANCE. DETERMINATION OF EQUIVALENCY AND SUBSTITUTION OF MANUFACTURER IS AT THE SOLE DISCRETION OF THE ARCHITECT.

THEY MEET THE REQUIREMENTS OF THE SPECIFICATION.

2.02 PRODUCTS A. GENERAL

1. PRODUCTS USED SHALL NOT CONTAIN ANY TOXIC PROPERTIES UNLESS APPROVED BY THE ARCHITECT.

2. PAINT PRODUCTS ARE TO BE APPROVED BY THE USDA FOR NON-FOOD CONTACT AREAS, UNLESS APPROVED BY THE ARCHITECT.

3. MIX AND THIN MATERIALS STRICTLY ACCORDING TO THE MANUFACTURER'S

INSTRUCTION WITHOUT ALTERATION. PREMIX PAINTS INSOFAR AS POSSIBLE. THIN ONLY AS PERMITTED BY MANUFACTURER'S LABEL INSTRUCTIONS, AND AVOID UNNECESSARY THINNING. MIX MATERIALS THOROUGHLY BEFORE STARTING APPLICATION, AND REMIX PERIODICALLY DURING APPLICATION. B. COLORS/FINISHES:

REFER TO SCHEDULE AT END OF THIS SECTION FOR SURFACE FINISH SCHEDULE. FOR MULTI-COAT SYSTEMS, APPLY EACH COAT USING A SUCCESSIVELY DARKER TINT OR SHADE, UNLESS APPROVED OTHERWISE.

3. TOP COAT COLORS: AS INDICATED ON ROOM FINISH SCHEDULE. 4. THERE SHALL BE NO LIMIT AS TO THE NUMBER OF COLORS.

C. CAULKING:

1. MINOR CAULKING OF JOINTS GREATER THAN 1/8" WIDE - ONE COMPONENT URETHANE SEALANT, 20-YEAR LIFE, SELF-PRIMING.

a. ACCEPTABLE PRODUCTS OR APPROVED EQUAL: NPI SONOLASTIC, SONNEBORN-CONTECH; DYMONIC, TREMCO; VULKEM 921, MAMECO INT.; DYNATROL 1, PECORA CORP.; PROVIDE WITH CLOSED CELL TYPE, NON-GASSING, JOINT BACKING COMPATIBLE WITH SEALANTS AND

APPROPRIATE FOR USE CONDITIONS. SMALL IOINT CALLKING LESS THAN 1/8" WIDE - TREMCO SMALL IOINT SEALANT

1. MASONRY, CONCRETE - 2 COMPONENT, ACRYLIC AND CEMENT BASE PATCHING MATERIAL BY THORO SYSTEM PRODUCTS (THORITE).

PART 3 - EXECUTION 3.01 INSPECTION

A. VERIFY THAT SURFACES AND CONDITIONS ARE READY FOR WORK IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS.

B. PRIOR TO COMMENCEMENT OF WORK, EXAMINE SURFACES SCHEDULED TO BE FINISHED.

1. REPORT ANY UNSATISFACTORY CONDITIONS IN WRITING.

2. DO NOT APPLY COATINGS TO UNSATISFACTORY SUBSTRATES.

3. BEGINNING PAINTING WORK ON AN AREA WILL BE DEEMED CONSTRUED ACCEPTANCE OF SURFACES IN THAT AREA.

A. APPLY COATINGS TO SURFACES THAT ARE CLEAN AND PROPERLY PREPARED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND AS HEREIN SPECIFIED. REMOVE DIRT, DUST, GREASE, OILS, AND FOREIGN MATTER. PREPARE SURFACE FOR PROPER TEXTURE NECESSARY TO OBTAIN OPTIMUM COATING ADHESION AND INTENDED FINISHED APPEARANCE. PLAN CLEANING, PREPARATION, AND COATING OPERATIONS TO AVOID CONTAMINATION OF FRESHLY COATED SURFACES. 1. DO NOT APPLY COATINGS TO LABELS THAT IDENTIFY EQUIPMENT,

FIRE-RESISTANCE RATINGS, ETC.

2. REMOVE HARDWARE, COVER PLATES, AND SIMILAR ITEMS BEFORE APPLYING COATINGS. 3. PROVIDE PROTECTION FOR NON-REMOVABLE ITEMS NOT SCHEDULED FOR

COATING. AFTER APPLICATION OF COATINGS, INSTALL REMOVED ITEMS. USE ONLY SKILLED WORKMEN FOR REMOVAL AND REPLACEMENT OF SUCH ITEMS. 4. PROTECT SURFACES NOT SCHEDULED FOR COATING. CLEAN, REPAIR OR REPLACE

TO THE SATISFACTION OF THE ARCHITECT ANY SURFACES INADVERTENTLY SPATTERED OR COATED. 5. PATCH HOLES AND CRACKS. TOUCH-UP BARE AREAS AND SHOP-APPLIED PRIME

COATS THAT HAVE BEEN DAMAGED. WIRE-BRUSH, CLEAN WITH SOLVENTS RECOMMENDED BY THE PAINT MANUFACTURER, AND TOUCH-UP WITH THE SAME PRIMER AS THE SHOP COAT.

1. APPLY COATINGS TO FULLY CURED SURFACES THAT ARE LEAST 28 DAYS OLD. 2. PERFORM ANY REQUIRED SURFACE REPAIRS BEFORE APPLYING COATINGS. REMOVE ANY FINS OR PROTRUSIONS FROM SURFACE. PATCH ANY HOLES AND

CRACKS IN AN APPROVED MANNER. 3. CLEAN SURFACE OF ALL DIRT, OIL, WAX, GREASE OR OTHER CONTAMINANTS BEFORE PREPARING SURFACE PROFILE. USE APPROPRIATE DETERGENTS AND PRESSURIZED HOT WATER. THOROUGHLY FLUSH CLEANING AGENTS FROM

4. SURFACE PROFILE HORIZONTAL SURFACES; ACID ETCH OR BRUSH-OFF BLAST TO REMOVE LAITANCE AND TO PREPARE SURFACE PROFILE. NEW SURFACES THAT HAVE BEEN CURED USING MEMBRANE-FORMING CURING COMPOUNDS SHALL BE PREPARED BY BRUSH-OFF BLAST METHOD.

5. ACID ETCHING: PREPARE SURFACE PROFILE BY UNIFORMLY ETCHING SURFACE TO A TEXTURE, TO TOUCH, OF 100 GRIT SANDPAPER; DO NOT OVER-ETCH SURFACE. AFTER ETCHING, SURFACE SHALL BE FREE FROM SURFACE GLAZE, LAITANCE, SALTS, LOOSELY ADHERING MATERIAL, ETCHING SOLUTIONS AND FOREIGN MATERIAL OF ANY KIND. 6. AFTER DETERGENT CLEANING AND WHILE CONCRETE IS IN A SATURATED BUT

SURFACE DRY CONDITION, APPLY ACID SOLUTION (1 PART 20 DEGREE BAUME MURIATIC ACID AND 2 TO 4 PARTS POTABLE WATER) USING LOW-PRESSURE SPRAY EOUIPMENT. 7. WHEN BUBBLING ACTION BEGINS TO SUBSIDE, REMOVE SALT FORMATIONS, LOOSE MATERIAL AND SPENT SOLUTION BY SCRUBBING WITH BRISTLE BROOM

AND FLUSHING WITH WATER UNDER MODERATE PRESSURE. REPEAT RINSING OPERATION UNTIL PH TEST PAPERS YIELD PH OF 7 OR HIGHER ON THE SURFACE. 8. BRUSH-OFF BLAST CLEANING: PREPARE SURFACE PROFILE AND REMOVE LAITANCE AND SOLID CONTAMINANTS FROM SURFACE BY ABRASIVE BLAST CLEANING. AFTER BLAST CLEANING, SURFACE SHALL BE FREE FROM CURING COMPOUNDS, SURFACE GLAZE, LAITANCE, SALTS, LOOSELY ADHERING

MATERIAL AND FOREIGN MATERIAL OF ANY KIND. 9. PERFORM BLASTING OPERATION SO AS TO OPEN ANY SURFACE VOIDS, BUG HOLES, ETC., AND REMOVE CURING COMPOUNDS, SURFACE GLAZES, LAITANCE, SALTS, LOOSELY ADHERING MATERIAL AND FOREIGN MATERIAL OF ANY KIND, BUT WITHOUT EXPOSING UNDERLYING AGGREGATE OR FRACTURING AGGREGATE SURFACES.

10. USE ONLY DRY, OIL-FREE AIR AND CLEAN MEDIA, UNLESS OTHER BLAST

CLEANING METHODS ARE APPROVED. 11. AFTER BLAST CLEANING, COMPLETELY REMOVE DUST AND LOOSE PARTICLES BY VACUUMING; BRUSHING OR BLOWING WILL NOT BE PERMITTED.

12. PATCH SURFACE VOIDS, BUG HOLES, ETC., IN APPROVED MANNER AND ALLOW TO

CURE BEFORE APPLYING COATINGS. 13. ALLOW SUBSTRATE TO DRY THOROUGHLY. TEST FOR MOISTURE IN ACCORDANCE WITH COATING MANUFACTURERS' RECOMMENDATIONS BEFORE APPLYING COATINGS.

C. WOOD: 1. SCRAPE AND REMOVE ANY SAP OR PITCH DEPOSITS FROM SURFACE AND CLEAN WITH MINERAL SPIRITS. SEAL ANY KNOTS AND PITCH POCKETS WITH SUITABLE PRODUCT RECOMMENDED BY COATING MANUFACTURER. SAND ROUGH SPOTS.

2. AFTER FIRST COAT HAS DRIED, FILL HOLES, CRACKS OR DEPRESSIONS WITH SUITABLE WOOD FILLER RECOMMENDED BY THE COATING MANUFACTURER. SAND FILLER WHEN DRY.

3. SAND SURFACES LIGHTLY BETWEEN SUCCESSIVE COATS. REMOVE DUST. D. MASONRY: 1. APPLY COATINGS TO FULLY CURED SURFACES THAT ARE AT LEAST 28 DAYS OLD. 2. PERFORM REQUIRED SURFACE REPAIRS BEFORE APPLYING COATINGS. REMOVE

ANY FINS OR PROTRUSIONS FROM SURFACE. PATCH ANY HOLES AND CRACKS IN

AN APPROVED MANNER. VERIFY THE JOINTS ARE STRUCK FLUSH OR CONCAVE UNLESS OTHERWISE SPECIFICALLY REQUIRED. 3. CLEAN SURFACE OF ALL DIRT, OIL WAX, GREASE OR OTHER CONTAMINANTS. USE APPROPRIATE DETERGENTS AND HOT WATER. THOROUGHLY FLUSH CLEANING AGENTS FROM SURFACE.

E. FERROUS METAL: 1. CLEAN AND PREPARE SURFACE PROFILE IN ACCORDANCE WITH THE APPLICABLE

SSPC SPECIFICATIONS FOR HAND TOOL OR POWER TOOL CLEANING. 2. INTRICATE FABRICATED SHAPES MAY BE PICKLED IN LIEU OF HAND OR POWER 3. BEFORE HAND OR POWER TOOL CLEANING, REMOVE VISIBLE OIL, GREASE,

SOLUBLE WELDING RESIDUE, AND SALTS BY SOLVENT CLEANING. AFTER HAND OR POWER TOOL CLEANING, RE-CLEAN SURFACES IF NECESSARY. 4. BEFORE TOUCHING UP COATINGS DAMAGED BY HANDLING OR WELDING, RE-PREPARE DAMAGED SURFACES.

F. GALVANIZED METAL: SOLVENT CLEAN IN ACCORDANCE WITH SSPC SPECIFICATIONS. ALUMINUM SCHEDULED FOR PAINTING: REMOVE PROTECTIVE CLEAR COATING OR PLASTIC FILM WHERE PRESENT. CLEAN SUBSTRATE IN ACCORDANCE WITH COATING MANUFACTURER'S RECOMMENDATIONS.

H. GYPSUM BOARD: 1. LATEX-FILL MINOR DEFECTS.

2. SPOT-PRIME DEFECTS AFTER REPAIR.

I. MILDEW: 1. REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI-SODIUM PHOSPHATE

2. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY. J. EXISTING SURFACES:

1. ALL EXISTING PAINTED SURFACES SHALL BE SANDED, DE-GLOSSED, WASHED AND PRIMED PRIOR TO RECEIVING FINISH TOPCOATS.

3.03 MIXING AND THINNING A. REMOVE AND DISCARD ANY SKIN FORMED ON SURFACE OF COATINGS IN CONTAINERS. DISCARD ANY CONTAINERS WHERE SKIN COMPRISES 2 PERCENT OR MORE OF THE REMAINING MATERIAL. DO NOT ADD THINNER EXCEPT AS SPECIFICALLY RECOMMENDED (NOT MERELY PERMITTED) BY THE COATING MANUFACTURER FOR PROPER COATING APPLICATION UNDER THE CIRCUMSTANCES PREVAILING AT THE PROJECT SITE WHEN APPLICATION EQUIPMENT RECOMMENDED BY THE COATING MANUFACTURER IS EMPLOYED. USE ONLY THE QUANTITIES AND THE TYPES OF THINNER RECOMMENDED.

B. MIX MATERIALS USING MECHANICAL MIXERS IN ACCORDANCE WITH COATING MANUFACTURER'S INSTRUCTIONS. AGITATE MIXED MATERIALS DURING APPLICATION, IF RECOMMENDED BY MANUFACTURER. COMBINE MULTI-COMPONENT PAINTS IN QUANTITIES NEEDED FOR USE WITHIN THE MANUFACTURER'S RECOMMENDED POT LIFE AT THE ANTICIPATED APPLICATION TEMPERATURES. DISCARD REMAINING MIXED MATERIAL AFTER POT LIFE HAS EXPIRED.

C. STRAIN PIGMENTED COATINGS AFTER MIXING EXCEPT WHERE MECHANICAL APPLICATION EQUIPMENT IS PROVIDED WITH EFFECTIVE STRAINERS. TINTING: EXCEPT WHERE COATING MATERIALS CANNOT BE TINTED, TINT EACH SUCCESSIVE COAT OF PAINT A SUFFICIENTLY CONTRASTING COLOR TO FACILITATE IDENTIFICATION OF COMPLETE COATING COVERAGE.

1. APPLY COATINGS IN ACCORDANCE WITH COATING MANUFACTURER'S INSTRUCTIONS AND USING APPLICATION METHOD BEST SUITED FOR OBTAINING FULL, UNIFORM COVERAGE OF SURFACES TO BE COATED.

IN GOOD WORKING ORDER, AND OF THE TYPE RECOMMENDED BY THE COATING 3. APPLY SUCCESSIVE COATS AFTER ADEQUATE CURE OF THE PRECEDING COAT

AND WITHIN THE RECOMMENDED RECOATING TIME. 4. APPLY EACH COAT TO ACHIEVE THE DRY FILM THICKNESS PER COAT RECOMMENDED BY THE COATING MANUFACTURER. APPLICATIONS RATES IN EXCESS OF THOSE RECOMMENDED AND FEWER NUMBERS OF COATS THAN SPECIFIED WILL NOT BE ACCEPTED.

2. EMPLOY ONLY APPLICATION EQUIPMENT THAT IS CLEAN, PROPERLY ADJUSTED,

5. COMPLETED COATINGS SHALL BE FREE OF DEFECTS SUCH AS RUNS, SAGS, VARIATIONS IN COLOR, LAP OR BRUSH MARKS, HOLIDAYS AND SKIPS. 6. APPLY COATINGS ACCORDING TO THE SCHEDULE AT THE END OF THIS SECTION AND AS OTHERWISE INDICATED. COAT ALL SIMILAR SURFACES NOT SPECIFICALLY MENTIONED UNLESS SPECIFICALLY EXEMPTED.

7. ENSURE THAT ALL SURFACES RECEIVE A DRY FILM THICKNESS EQUIVALENT TO THOSE OF FLAT SURFACES. 8. COAT FRONT AND BACK OF MISCELLANEOUS ITEMS SUCH AS COVERS, ACCESS PANELS, AND GRILLES. APPLY FULLY FINISH COATS BEHIND MOVABLE ITEMS OF FURNITURE AND EQUIPMENT BEFORE INSTALLATION. APPLY PRIME COAT ONLY

BEHIND NON-MOVABLE ITEMS OF FURNITURE AND EQUIPMENT BEFORE INSTALLATION.

9. SAND GLOSS COATS BEFORE APPLYING SUBSEQUENT COATINGS. 10. STOP PAINT 3 INCHES ABOVE FINISH FLOOR ON WALLS WHERE RESILIENT BASE IS APPLIED TO WALL SURFACES.

11. FINISH EXTERIOR FACE AND EDGES OF EXTERIOR DOORS. FINISH ALL EXTERIOR SURFACES OF FIXED LOUVERS. FINISH EXTERIOR, INTERIOR EDGES OF PIVOTING LOUVERS USED FOR ACCESS 12. APPLY UNDER CONDITIONS AND AS RECOMMENDED BY MANUFACTURER.

INSTALL JOINT BACKING AT ALL JOINTS WIDER THAN 1/8". INSTALL BACKING AT 13. PREPARE AND INSTALL PATCHING MATERIAL AS MANUFACTURER RECOMMENDS. B. APPLY COATINGS TO MATCH APPROVED MOCK-UP.

RE-PREPARE SURFACES AS SPECIFIED, AND APPLY COATINGS TO COMPLY WITH THE CONTRACT DOCUMENTS. 1. APPLY FIRST COAT OF MATERIAL TO PROPERLY PREPARED SURFACES WITHOUT

C. REMOVE COATINGS NOT IN COMPLIANCE WITH THIS SPECIFICATION, RE-CLEAN AND

a. APPLY SUCCESSIVE COATS WITHIN THE TIME LIMITS RECOMMENDED BY THE MANUFACTURER. 3.05 PRIME COATS

A. GENERAL 1. FIELD APPLY BOTTOM COATS SCHEDULED EXCEPT WHERE THE CONTRACT

DOCUMENTS REQUIRE SHOP COATING OF FERROUS METALS. 2. WHERE FIRST COAT SHOWS SIGNS, OF SUCTION SPOTS, OR POORLY SEALED AREAS, REAPPLY FIRST COAT MATERIAL TO ADEQUATELY SEAL SURFACE BEFORE

PROCEEDING WITH SUCCESSIVE COATS 3. APPLY BLOCK FILLERS USING MANUFACTURER'S RECOMMENDED APPLICATION TECHNIQUES AND ACHIEVING A PINHOLE-FREE SURFACE. 4. FERROUS METALS THAT HAVE NOT BEEN SHOP PRIMED SHALL BE FIELD PRIMED

PROMPTLY AFTER ARRIVAL AT THE SITE OR SHALL BE STORED AWAY FROM THE EFFECTS OF WEATHER. 5. RE-PREPARE AND RE-TOUCH DAMAGED PRIME COATS USING APPROVED, COMPATIBLE PRIMER.

B. PRIMERS FOR CATALYZED COATING: WHERE CATALYZED BOTTOM COATINGS ARE SCHEDULED FOR METAL SURFACES, STANDARD "SHOP PRIMERS" WILL NOT BE ACCEPTED; APPLY ONLY THE COATINGS SCHEDULE IN THIS SECTION. EITHER FIELD APPLY THE SCHEDULED COATINGS TO BARE, PROPERLY PREPARED METAL OR ARRANGE WITH SUPPLIERS OF THESE ITEMS TO SHOP-APPLY THE SCHEDULED COATING TO BARE, PROPERLY PREPARED METAL (UNLESS SHOP OR FIELD APPLICATION ONLY IS SPECIFICALLY INDICATED).

1. APPLY FIRST COAT TO WOOD UPON RECEIPT AT THE SITE AND BEFORE WOOD IS EXPOSED TO SUN OR RAIN.

INTERIOR WOOD, INCLUDING ENDS.

3.06 FINISH COATS

A. NUMBER OF COATS AND MINIMUM COATING THICKNESS: 1. APPLY NOT LESS THAN THE NUMBER OF COATS INDICATED.

2. APPLY EACH COAT TO ACHIEVE NOT LESS THAN THE DRY FILM THICKNESS INDICATED PER COAT.

3. APPLY ADDITIONAL COATS AT NO ADDITIONAL COST TO THE OWNER, WHEN NECESSARY TO ACHIEVE COMPLETE HIDING, UNIFORM TEXTURE, OR UNIFORM

A. CLEAN WORK AREA ON A DAILY BASIS; DISPOSE OF SPENT MATERIALS AND EMPTY

CONTAINERS. IF REQUESTED, TURN OVER TO THE ARCHITECT ALL EMPTY COATINGS CONTAINERS USED DURING THE COURSE OF EACH DAY. B. REMOVE ALL TRACES OF COATINGS FROM ADJACENT SURFACES NOT SCHEDULED TO

C. REMOVE BY APPROPRIATE METHODS THAT DO NOT DAMAGE SURFACES. 3.08 PROTECTION AND TOUCH-UP

A. DURING APPLICATION OF PAINT, PROTECT THE WORK OF OTHER TRADES AGAINST UNDUE SOILAGE AND DAMAGE BY THE EXERCISE OF REASONABLE CARE AND PRECAUTIONS. PROPERLY CLEAN, REPAIR OR REPLACE ANY WORK SO DAMAGED AND SOILED. PROVIDE 'WET PAINT' SIGNS TO INDICATE NEWLY PAINTED FINISHES. B. PROTECT ALL PAINTED AND FINISHED SURFACES AGAINST DAMAGE UNTIL THE DATE

OF FINAL ACCEPTANCE OF THE WORK. THE ARCHITECT WILL CONDUCT A FINAL REVIEW OF ALL WORK PERFORMED. RE-COAT OR TOUCH-UP, ALL SCRATCHES AND OTHER BLEMISHES ON SURFACES, AND AS DIRECTED BY THE ARCHITECT, ANY AREAS FOUND WHICH DO NOT COMPLY WITH THE REQUIREMENTS OF THIS SECTION, AND

VISIBLY DIFFERENT FROM SURROUNDING SURFACES. WHERE RESULT IS DIFFERENT EITHER IN COLOR SHEEN, OR TEXTURE, RECOAT ENTIRE SURFACE.

A. GYPSUM WALLBOARD SURFACES: (P-01) - REFER TO ROOM FINISH SCHEDULE . PRIMER: ONE COAT PREP RITE INTERIOR LATEX PRIMER B28W200; 1.1 MILS DFT. 2. FINISH: TWO COATS PROMAR 200 INTERIOR LATEX EGG-SHELL ENAMEL B20W201;

1. TOUCH-UP OF MINOR DAMAGE WILL BE ACCEPTABLE WHERE RESULT IS NOT

B. FERROUS METALS SHALL BE GIVEN: (P-02) - REFER TO ROOM FINISH SCHEDULE 1. DOORS AND FRAMES, RAILINGS, LINTEL ANGLES, GUARDRAILS:

a. PRIMER: ONE COAT KEM BOND HS PRIMER B50AZ8; 3.0 MILS DFT (IF NOT

b. FINISH: ONE COAT COROTHANE II POLYURETHANE B65W200, 3.0 MILS DFT. 2. BOLLARDS AND OTHER SAFETY AREAS: a. PRIMER: ONE COAT (B-M) 163-01 IRONCLAD TINT 4X YE (WOOD/METAL

b. FINISH: TWO COATS (B-M) M22-15 IMC ALKYD URETHANE GLOSS ENAMEL

a. PRIMER: ONE COAT (B-M) M24-3B, ALKYD SEMI-GLOSS #2022-30. b. FINISH: TWO COATS (B-M) M22-15 URETHANE GLOSS ENAMEL SAFETY

C. GALVANIZED METAL: (P-03) - REFER TO ROOM FINISH SCHEDULE 1. FIRST COAT: ONE COAT (S-W) TILE-CLAD HIGH SOLIDS B60VZ75; 3.0 MILS DFT. . FINISH: ONE COAT (S-W) COROTHANE II POLYURETHANE B65W200; 3.0 MILS DFT.

D. CONCRETE MASONRY SURFACES - DRY AREAS: (P-8) 1. FILLER: ONE COAT BLOCK FILLER: (B-M) M88-01 BLOCK FILLER. 2. FIRST COAT: ONE COAT LATEX EPOXY: (B-M) M43-1B, M44-84 GLOSS CATALYST.

3. FILL ALL PIN HOLES WITH CAULKING. 4. FINISH: ONE COAT LATEX EPOXY: (B-M) M43-1B, M44-84 GLOSS CATALYST. E. PRECAST/CAST-IN-PLACE CONCRETE SURFACES - DRY AREAS: (P-9)

PRIMER: ONE COAT PRIMER: (B-M) 023-00 FRESH START PRIMER. 2. FILLER: ONE COAT BLOCK FILLER: (B-M) M88-01 BLOCK FILLER.

3. FIRST COAT: ONE COAT LATEX EPOXY: (B-M) M43-1B, M44-84 GLOSS CATALYST.

4. FILL ALL PIN HOLES WITH CAULKING. 5. FINISH: ONE COAT LATEX EPOXY: (B-M) M43-1B, M44-84 GLOSS CATALYST.

SAME MATERIALS AS AROUND ENTIRE PERIMETER.

F. CONCRETE MASONRY SURFACES - WET AREAS: 1. REFER TO SECTION 09960 - HIGH PERFORMANCE COATINGS.

G. NOTE: ALL MECHANICAL ITEMS MUST BE IN PLACE BEFORE PAINTING EXCEPT FOR

LIGHT FIXTURES, OPERATING PARTS OF VALVES OR ANY ITEM AFFECTED BY PAINTS. PAINTER SHALL TOUCH-UP ITEMS, AS REQUIRED, TO COMPLETE JOB. H. NOTE: WALLS SHALL BE FINISHED AT HEAD TO BOTTOM OF BEAMS OR JOIST WITH THE

END OF SECTION 09 91 00



2. BEFORE INSTALLATION, PRIME BOTH CONCEALED AND EXPOSED SURFACES OF

C. PRIMER FOR WOOD AND WOOD PRODUCTS: