G. APPENDIX – Base Standard Equipment

Contents

1. HVAC 2
1.1 Chiller 2
1.2 Boiler 2
1.3 Boiler primary water filter 2
1.4 Split System Air Conditioners 2
2. EMCS 4
2.1 EMCS controls 4
3. Structures 5
3.1 Lock/door hardware 5
3.2 Ceiling Tile 5
3.3 Paint Colors 7
4. Plumbing 8
4.1 Commode 8
4.2 Urinals 8
4.3 Faucets 8
4.4 Shower 8
4.5 Hot Water Heaters 9
4.6 Water distribution 9
4.7 Gas distribution 10
4.8 Sewer distribution 10
4.9 Exterior water main valves 11
4.10 Fire Suppression Pipe 11
4.11 Water Fountains 11
4.12 Mech Room and Backflow 11
5. Electric 13
5.1 Light Diffusers 13
5.2 Drop Ceiling LED Fixtures 13
5.3 Ceiling Mounted LED Fixture 14
5.4 Fluorescent Bulb LED Replacements 14
5.5 Emergency Light & Exit Sign 15
5.6 Electrical Boxes 16
6. Generators 17
6.1 Generator 17
6.2 Generator transfer switch 18
7. Fire Alarms 20

1. HVAC

1.1 Chiller

Type: Chiller
Mfr: Trane
Color: Standard
Finish: Standard
Model: CGAM
Other: Air Cooled Scroll
UFGS: Section 63 24 10 Water Chillers Vapor Compression Type

1. Standard refrigerant for on base is R410A.
   Section 23 81 00 Part 2.2.2.3

1.2 Boiler

Type: Boiler
Mfr: Advanced Thermal Hydronics
Color: Standard
Finish: Standard (Stainless)
Model: KN
Other: High efficiency, Cast Iron, Natural Gas, Condensing, Fully Modulating Burner
UFGS: Section 23 52 00

1.3 Boiler primary water filter

Type: 4 in 1 Water Treatment System
Mfr: Skidmore X-Pot
Color: Stainless Steel
Finish: Stainless Steel
Model: X-Pot 6/XP
Other: Requires: Slip Stream Filter, Magnetic Filter, Air Separator and Shot Feeder
UFGS: Section 22 52 Part 2.17 Boiler Water Treatment

1.4 Split System Air Conditioners

Type: Forced Air
Mfr: Varies (Availability)
Color: Standard
Finish: Standard
Model: Varies (Individual requirement)
Other:
UFGS: Section 23 81 00 Decentralized Unitary HVAC Equipment

Ductless Split System Air Conditioners
Type: Mini Split A/C
Mfr: Fujitsu, Mitsubishi (Availability)
Color: White (Near White)
Finish: Standard
Model: Varies (Individual Requirement)
Other:
UFGS: Section 23 81 00 Decentralized Unitary HVAC Equipment

2. EMCS

2.1 EMCS controls

Base standard for EMCS controls is Automated Logic.

EMCS controls
Type: **Control Modules**
Mfr: Automated Logic
Color:
Finish:
Model: Routers, Controllers, Expanders
Other: electronic control, two way
UFGS:

EMCS controls
Type: **VFD**
Mfr: Toshiba
Color:
Finish:
Model:
Other: The VFD shall be capable of automatic control by a remote 4-20 mA signal, by network command, or manually by the VFD control panel. The VFD must be able to provide actual real-time RPM readings through a hardwired connection.
UFGS:

EMCS controls
Type: **Lighting Controls**
Mfr: Wattstopper
Color:
Finish:
Model: CI-24
Other:
UFGS:

EMCS controls
Type: **Gas Pressure**
Mfr: Dwyer
Color:
Finish:
Model: IS626-08-GH-P1-E1-S1
Other:
UFGS:

EMCS controls
Type: **Transducer**
Mfr: Honeywell
Color:
Finish:
Model: 6635
Other:
UFGS:

3. Structures

3.1 Lock/door hardware

Type: Door closer
Mfr: LCN
Color:
Finish: Brushed Nickel (US26D)
Model: 4040XP "Super Smoothee"
Other:
UFGS:

Type: Panic Hardware
Mfr: Von Duprin
Color:
Finish: Brushed Nickel (US26D)
Model: 98
Other: Exit trim would depend on the function of the door.
UFGS:

Type: Cylindrical Lockset
Mfr: Schlage ND
Color:
Finish: Brushed Nickel (US26D)
Model: Different model #'s for different functions
Other: Must accept Schlage Large Format Interchangeable Cores
UFGS:

3.2 Ceiling Tile

Type: Square Edge 2'x4'
Mfr: USG
Color: White
Finish: N/S
Model: R2310
Other:
UFGS:

Type: Square Edge 24"x24"
Mfr: USG
Color: White
Finish: N/S
Model: R2110
Other:
UFGS:

Type: Shadowline Tapered Edge 2'x4'
Mfr: USG
Color: White
Finish: N/S
Model: R2320
Other:
UFGS:

Type: Shadowline Tapered Edge 24”x24”
Mfr: USG
Color: White
Finish: N/S
Model: R2120
Other:
UFGS:

3.3 Paint Colors

OFFICE INTERIOR	PAINT COLOR	SPEC INFO
Wall Finishes	SW 7006	Sherwin-Williams Extra White Semi-Gloss Latex
Trim Finishes	SW 6249	Sherwin-Williams Storm Cloud Semi-Gloss Latex
	SW 6073	Sherwin-Williams Perfect Greige Semi-Gloss Latex
	SW 6990	Sherwin-Williams Caviar Semi-Gloss Latex

DORMITORY INTERIOR	PAINT COLOR	SPEC INFO
Wall Finishes	SW 7006	Sherwin-Williams Extra White Semi-Gloss Latex
Wall Finishes	Custom Color Match	China White Semi-Gloss Latex

EXTERIOR COLORS	Paint Color	Spec Info
Trim - Fired Brick	SW 3655	Semi-Gloss Latex
Trim - Brown	Federal standard #30108	Base- Super Paint, Ultra deep base # A89T154, Satin finish
Trim - White	Federal Standard 27886	Base- Super Paint extra white base, #A89W2151, Satin Finish
Trim - Gray	Federal Standard #26329	Base – Super Deck, Deck and dock coating #6509-25720

4. Plumbing

4.1 Commode

Type: Tank less Toilet
Mfr: American Standard
Color: White
Finish:
Model: 3043001.020
Note: Must be ADA compliant

Type: Tank Type Toilet
Mfr: Kohler
Color: White
Finish:
Model: K-3531
Note: Must be ADA compliant

Type: Flushometers Toilet/Urinal
Mfr: Sloan
Color: Chrome
Finish: Chrome
Model: royal 186-1 urinal/toilet regal 110 xl

4.2 Urinals

Type: Siphon Jet Urinal
Mfr: American Standard
Color: White
Finish:
Model: 6561017.020

Type: Flushometers Toilet/Urinal
Mfr: Sloan
Color: Chrome
Finish: Chrome
Model: royal 186-1 urinal/toilet regal 110 xl

4.3 Faucets

Type: Manuel Faucet
Mfr: Delta
Color: Chrome
Finish: Chrome
Model: 500 DST
Note: Must be ADA compliant. Automatic faucets are not standard equipment
UFGS:

4.4 Shower

Shower Heads
Type: plastic
Mfr: delta/kohler/moen
Color: chrome
Finish: chrome
Model:

Shower Valves
Type: brass
Mfr: delta
Color: chrome
Finish: chrome
Model: classic

4.5 Hot Water Heaters

Type: Natural gas water heater/electric
Mfr: RHEEM
Color: Tan/Gray
Finish:
Model: Commercial/residential

Type: Natural Gas/electric
Mfr: Bradford White
Color: White
Finish:
Model: Commercial/residential

4.6 Water distribution

Type: PVC C-900
Mfr: Any distributor
Color: blue
Finish:
Model: Schedule 40__ PVC
Other: Mains will be a minimum of 4 in

Interior domestic water
Type: PEX type B
Mfr: Any distributor
Color: Cold Water – Blue/ Hot Water - Red
Finish:
Model:
Other: Interior domestic water, minimum of ½ inch,
Conforms to ASTM requirements

Interior domestic water
Type: PEX Fittings
Mfr: any distributor
Color: Brass
Finish:
Model: All Fittings will be Brass Barbed
Other: Minimum of ½ inch

Interior domestic water
Type: PEX Connectors
Mfr: any distributor
Color:
Finish:
Model: Solid Copper “Crimp Ring” Style connectors
Other: Minimum of ½ inch

4.7 Gas distribution

Type: PE Polypipe
Mfr: any distributor
Color: yellow
Finish:
Model: Schedule 40__ PVC
Other: Mains will be minimum of 1 ½ in

4.8 Sewer distribution

Type: PVC/ABS
Mfr: Charlotte pipe/ us plastic
Color: green
Finish:
Model: Schedule 40__ PVC

4.9 Exterior water main valves
Type: Steel
Mfr: Mueller
Color: brown
Finish:
Model: 350 W

4.10 Fire Suppression Pipe
Type: carbon Steel
Mfr: us Steel
Color: Black
Finish:
Model:
Schedule 40

4.11 Water Fountains
Type: Wall mount/ free standing/ bottle fillers
Mfr: Elkay
Color: Tan
Finish:
Model: LZS8WLK/EZSL8
Note: Must be compatible with Elkay Water Sentry Plus (3000 Gallons) Model: 51300C

Water Fountain Filter
Type: Bottle Filler Filter
Mfr: Elkay
Mfr Name: Elkay Water Sentry Plus (3000 Gallons)
Model: 51300C

4.12 Mech Room and Backflow
Bell and Gossett recirculation pumps
Type: recirculation pump
Mfr: Bell and Gossett
Color: red
Finish:
Model: series 100

Backflow Preventers
Type: DC/RPPD/ RP
Mfr: Watts
Color: brass
Finish:
Model: 909/009/007/757/957/008

Backflow Preventers
Type: DC/RPPD/ RP
Mfr: Febco
Color: brass
Finish:
Model: 850/880V/860/825/805/805Y/826/765

Backflow Preventers
Type: DC/RPPD/ RP
Mfr: Wilkins/Zurn
Color: brass
Finish:
Model: 950xl/975xl/357/350A/375A

5. Electric

Light fixtures/ballasts must meet requirements of UFC 3-530-01

5.1 Light Diffusers

Smooth Pattern Light Diffusers
Type: Polycarbonate
Mfr: **Varies**
Color: Clear/White
Finish:
Model: 60URXX or similar
Other: Size 2'x2' or 4'x2' – fixture dependent
UFGS:
Note: Due to constraints on availability of grid-style sizing, smooth pattern light diffusers are recommended based on recessed 2'x2'/4'x2' fixtures.

5.2 Drop Ceiling LED Fixtures

1 Recessed Troffer Fixture 4'

4' Recessed LED Fixture
Type: Recessed troffer 4'x2'
Mfr: LITHONIA LIGHTING
Color: White, 3500k
Finish: Unfinished
Model: 2GTL 4 30L EZ1 LP835
Other: 72,000 Rated Life, 120V to 277V, Dimmable
UFGS:

2' Recessed LED Fixture
Type: Recessed troffer 2'x2' LED
Mfr: LITHONIA LIGHTING
Color: White, 3500k
Finish: Matte, Powder Coated
Model: 2BLT2R 40L ADP EZ1 LP835
Other: 60,000 Rated Life, 120V to 277V, Dimmable
UFGS:
Note: Currently only fluorescent grid-style recessed fixtures are available. Only LED fixtures shall be used using above data as reference. Both recessed fixtures are for reference and must be compatible with interchangeable 2'x2'/4'x2' polycarbonate diffusers while still meeting lighting requirements **UFC 3-530-01**.

5.3 Ceiling Mounted LED Fixture

2 LED Wraparound Fixture 4'

4' LED Wraparound Fixture
Type: Surface Mounted 4' LED Fixture
Mfr: LITHONIA LIGHTING
Color: White
Finish: High Gloss
Model: SBL4 LP835
Other: 50,000 Rated Life, 120V to 277V, Dimmable
UFGS: **Light color and lumen intensity will conform to UFC 3-530-01**

a. Standard is 32 Watt, CCT of 3500K and CRI of 80.
b. Dimmable. 0-10 volts.
c. Compatible with NEMA SSL 7A Dimmers and dimmer systems.
d. Linear LED lamps with conversion kits are NOT ALLOWED.

5.4 Fluorescent Bulb LED Replacements

4' Linear LED Bulb [Ballast Compatible] T8 socket
Type: Type A, T8, Medium bi-pin
Mfr: GE
Color: 3500k
Finish: Frosted
Model: LED14ET8/G/4/835
Other: 4' Length, 1" Diameter, Dimmable, Plug and Play style -50,000 hr rated
UFGS: Ensure fixture utilizes correct socket type - T8 being most common

2' Linear LED Bulb [Ballast Compatible] T8 socket
Type: Type A, T8, Medium bi-pin
Mfr: GE
Color: 3500k
Finish: Frosted
Model: LED9ET8/G/2/935
Other: 2' Length, 1" Diameter, Dimmable, Plug and Play style -70,000 hr rated
UFGS: Ensure fixture utilizes correct socket type - T8 being most common

LED Bulb replacement LED driver
Type: Hybrid LED Tube Driver – 2 Lamp
Mfr: GE
Color: Black
Finish:
Model: LED-ET8/DR/2L
Other: 120v to 277v
UFGS:

5.5 Emergency Light & Exit Sign

Exit Sign
Type: 1 or 2 Faces, Nickel Cadmium battery
Mfr: Compass
Color: White, Red Letter
Finish: Plastic
Model: CERRC
Other: 120v/277v, Universal mounting, LED. Fixture must be compatible with emergency light battery
_____
UFGS:

Emergency Light
Type: 2 Lamp, Nickel Cadmium battery
Mfr: Fulham Firehorse
Color: White
Finish: Plastic
Model: FHEM10W
Other: 120v/277v, Ceiling/wall mounting, LED Fixture must be compatible with emergency light battery
_____
UFGS:

Exit Sign battery
Type: Nickel Cadmium battery
Mfr: Batteries + Bulbs
Color:
Finish: Shrink Wrapped
Model: COT 10104
Other: Battery Emergency Exit 1.2V

Emergency Light battery
Type: Nickel Cadmium battery
Mfr: Batteries + Bulbs
Color:
Finish: Shrink Wrapped
Model: COT10041A
Other: Battery Emergency Exit 3.6v

5.6 Electrical Boxes

Type: **Panelboards and devices must meet requirements in UFC 3-520-01**
Mfr: **Square D**
Color: **No Preference**
Finish: **No Preference**
Model: **Model depends on application**
Other: **Panel should be hinged**
UFGS:

1. Contractors will leave 20% free space/ capacity in electrical boxes to accommodate expansion and mission change.
2. Provide one spare ¾" conduit for every 3 spare breakers.
3. Must be bolt on type breakers.

Receptacles will be single gang or double gang with covers matching color scheme.

6. Generators

6.1 Generator

Type: Diesel generator
Applies to: __ Group 1 __ Group 2 __ Group 3 __ Group 4 __ Other
Mfr: Onan
Make: Onan with Cummins Power Generation engine
Color:
Finish:
Model: There is no specific model or series that we require as long as is a Cummins Onan generator designed for the environment it is being installed in, (indoors without shrouding, outdoors with shrouding). Filters and parts across Onan generators with Cummins engines are common across their models or series. Model or series is based on kW, amperage/single or 3 phase/voltage requirements of emergency circuit or facility being installed on, also whether is being installed indoors or outdoors. Shrouding is only difference.

Prefer generators installed outdoors, but if installed indoors, have in exterior room of facility with double doors that open to the outside the building.
UFGS: Must meet requirements of AFMAN 32-1062, and UFC 3-540-01

Other:
Fuel tank: Double walled belly tank. Minimum fuel capacity to run generator 24 hours at full facility load per UFC 3-540-01
Batteries: Interstate

3 Generator indoors sitting on double walled belly tank

4 Generator outdoors shrouded sitting on double walled belly tank

6.2 Generator transfer switch

Type: Automatic Transfer Switch (ATS)/4-pole neutral transfers
Mfr: Onan
Color:
Finish:
Model: BTPC Bypass Isolation Transfer Switch meeting amperage/voltage requirements of facility being installed on.
Other: Have commercial service disconnect or emergency circuit disconnect going into ATS to be able to shut off commercial power to facility for generator testing. This type of ATS combines a drawout automatic transfer switch with isolation mechanism and a manual bypass switch, to provide redundant power transfer and re-transfer capability for critical-need applications requiring a reliable power supply to the load.

Exterior ATS picture is this type of ATS.
UFGS: Must meet requirements of AFMAN 32-1062, and UFC 3-540-01

5 ATS indoors

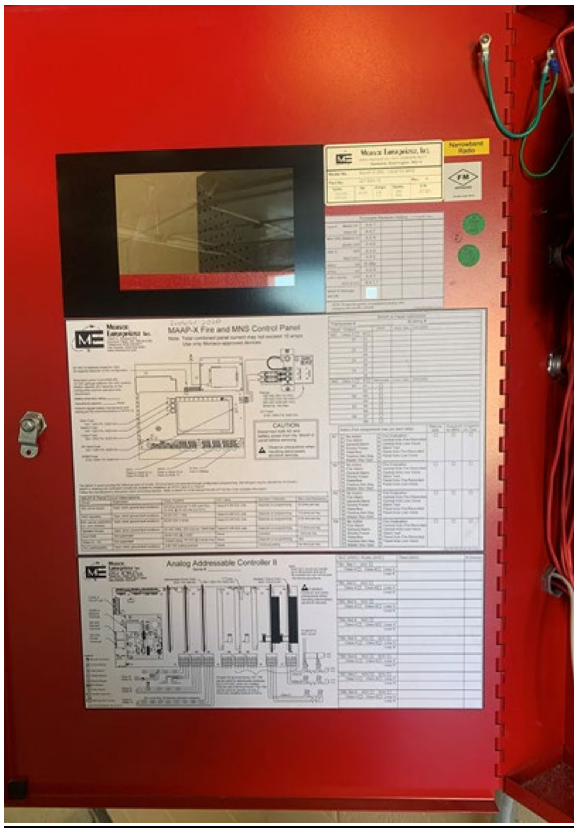
6 ATS outdoors with bypass isolation transfer capability as required by UFC 3-540-01 now

7. Fire Alarms

Base standard equipment for Fire alarms is Monaco systems

Fire Alarm system
Type: **Fire Alarm/ Mass Notification panel**
Mfr: **Monaco Enterprises, Inc.**
Color: **Red**
Finish:
Model: **MAAP-X**
Other: 227-955-XX
UFGS: Specific frequency (*XX) when ordering

7 Panel exterior



8 Panel Inside Door Cover

9 Inside FACP

10 Close up of touchscreen inside panel

Type: Standard VHF Antenna
Mfr: **Monaco Enterprises, Inc.**
Color: **Metallic Silver**
Finish:
Model: 190-400-00
Other:
UFGS

11 Omnidirectional VHF Antenna

Type: Manual Pull Station
Mfr: **Monaco Enterprises, Inc.**
Color: **Red**
Finish:
Model: **708-026-01**
Other: Double Action
UFGS:

12 Pull Station

Type: Heat/Smoke Detector base
Mfr: **Monaco Enterprises, Inc.**
Color: **White**
Finish:
Model: 729-132-00
Other: Detector base, plug-in 6.1"
UFGS:

13 Detector base

Type: Heat Detector
Mfr: **Monaco Enterprises, Inc.**
Color: **White**
Finish:
Model: 721-124-00
Other: 135F Fixed or 15F/Min Rate-of-Rise detector
UFGS:

14 Heat Detector

Type: Smoke Detector
Mfr: **Monaco Enterprises, Inc.**
Color: **White**
Finish:
Model: 723-353-00
Other: Plug-in, low profile
UFGS:

15 Smoke Detector

Type: Carbon Monoxide Detector
Mfr: **Monaco Enterprises, Inc.**
Color: **White**
Finish:
Model: 725-602-00
Other: Rectangular 4-wire
UFGS:

16 Carbon Monoxide Detector

Mass Notification device
Type: Outdoor Wall-Mount Type 1
Mfr: **Monaco Enterprises, Inc.**
Color: **Red**
Finish:
Model: **585-097-01**
Other:
UFGS:

17 Alert Notification device outdoor style - wall

Mass Notification device
Type: Indoor Wall-Mount Type 1
Mfr: **Monaco Enterprises, Inc.**
Color: **White**
Finish:
Model: **585-102-00**
Other: Indoor horn/strobe type 1 – Wall mount
UFGS:

18 Alert Notification device indoor style - wall

Mass Notification device
Type: Indoor Ceiling-Mount Type 1
Mfr: **Monaco Enterprises, Inc.**
Color: **White**
Finish:
Model: **585-105-00**
Other: Indoor horn/strobe type 1 – Ceiling mount
UFGS:

19 Alert Notification device indoor style - ceiling

Type: Duct Detector
Mfr: **Monaco Enterprises, Inc.**
Color: **Black**
Finish:
Model: **723-370-00**
Other:
UFGS:

20 Duct Detector