**Sampson Construction Co., Inc.**
**3730 South 14th Street**
**Lincoln, NE 68502**
**Phone: (402) 434-5450**
**FAX: (402) 434-5466**

# Bid Bulletin #4

PROJECT: Kearney High School, Kearney, Nebraska
Bid Package #3

DATE: October 14, 2014

This Bid Bulletin includes items 2-1 through 2-8. Each item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included. Bidders shall acknowledge receipt of this Bid Bulletin on the bid form. Bidders MUST use the bid form that is included in Bid Bulletin #1 or risk disqualification.

Item 2-1 For Clarification: All Fireproofing is by the trade that makes the penetration or builds the wall. If a duct passes through a CMU wall; the HVAC sub will fireproof the penetration. If a conduit passes through a steel stud wall; the electrician will need to fireproof around the conduit. Masonry will be required to fireproof when topping out walls and around steel. Drywall contractor will be required to fireproof their walls around steel and adjacent to Hollowcore/Decking & Joists & Beams.

Item 2-2 Attached is a copy of Addendum #3 from Wilkins, Hinrichs, Stober Architects LLC dated October 14, 2014.

Item 2-3 3D Masonry North Half & 3E Masonry South Half need to include all temporary bracing of their CMU walls.

Item 2-4 See revised Bid Form to include clarification on who the low Controls Contractor is. Please provide the alternate pricing to go to Trane Controls.

Item 2-5 Revised attached Summaries of Work for the Following: 3M Waterproofing, 3BBB Synthetic Turf, 3CCC Resilient Track Surfacing, 3III Track and Field Turf Subgrade, 3JJJ Track & Field Equipment.

Item 2-6 The last Bid Bulletin #5 will be issued on Thursday October 16th. This will include addendum #4 from WHS Architects.

Item 2-7 Bids will be accepted until 2:00 PM Central Time at the Kearney Public Schools, Whittier Learning Resource Center, Office of Finance Director. Bids will be read aloud at 3:00 PM Central Time in the 2nd Floor Staff Development Conference Room.

Bids can be hand delivered or mailed to 310 West 24th Street, Kearney, NE 68847, submitted by FAX to (308) 698-8001 or by e-mail to kpsbid@sampson-construction.com. It is your responsibility to make sure these bids are received prior to 2:00 PM Central Time.

END OF BID BULLETIN #4

# ADDENDUM #3

## KEARNEY PUBLIC SCHOOLS
## KEARNEY NEW HIGH SCHOOL
### KEARNEY, NEBRASKA
### 1355

**Wilkins Hinrichs Stober Architects, L.L.C.**
**2908 West 39th Street, Suite A**
**Kearney, Nebraska 68845**
**308-237-5787**

Date Issued: October 14, 2014

Bid Date: October 23, 2014

TO: All Bid Holders of Record

Acknowledge receipt of this addendum by inserting its number in the space provided on the BID FORM. Failure to do so may subject Bidder to disqualification. This Addendum forms a part of the BIDDING DOCUMENTS and modifies them as follows.

- - - -

**Addendum #3 - #9** **SPECIFICATION SECTION 08 4200 – ALL-GLASS ENTRANCES**
Paragraph 2.2.A.4: Delete the thickness of "3/4 inch Tempered" and substitute "1/2 inch Tempered".

**Addendum #3 - #10** **SPECIFICATION SECTION - 08 7101 – DOOR HARDWARE SCHEDULE**
General Clarification Note: Delete ALL Doors with the prefix "OP____".

**Addendum #3 - #11** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Clarification Note: Magnetic Door Holders will be 24 volt, wired to the fire alarm system and the power is to be provided by the Division 8 contractor.

**Addendum #3 - #12** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Delete Hardware Set #17.0 in its entirety.

**Addendum #3 - #13** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #19.0: Delete the model number for the Exit Device with Card Reader and substitute the following model number: 72 73O 55 56 8804 x Pull RM221. (The prox reader is required.)

**Addendum #3 - #14** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #30.0 Clarification: 1. A closer /drop plate is required for the non-operator leaf. 2. A prox reader 4302 is required.

**Addendum #3 - #15** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #59.0: Add the following doors to this hardware set: "H115.1".

**Addendum #3 - #16** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #67.0 Clarification: 1. A closer/drop plate is required for the non-operator leaf. 2. Power supply is required, BPS-24-2.

**Addendum #3 - #17** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #69.0 Clarification: The closer/drop plate quantity should be one (1) each with the operator on the non-closer leaf.

**Addendum #3 - #18** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #81.0: At Multi-Point Lock delete the quantity of "1" and substitute "2".

**Addendum #3 - #19** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Hardware Set #82.0: At Multi-Point Lock delete the quantity of "1" and substitute "2".

**Addendum #3 - #22** **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Delete Hardware Set #84.0 in its entirety.

**Addendum #3 - #23** **SPECIFICATION SECTION – 09 2116 – GYPSUM BOARD ASSEMBLIES**
Paragraph 2.4.C.b: Add the following approved manufacturer/product: "Gordon Final Forms 500 Wall Reveal Series".
Paragraph 2.4.C.c: Add the following approved manufacturer/product: "Gordon Final Forms 500 Wall Reveal Series Inserts".
Paragraph 2.4.C.d: Add the following approved manufacturer/product: "Gordon Final Forms 400 Wall Trim Reveal Series".

**Addendum #3 - #24** **SPECIFICATION SECTION 09 3000 – TILING**
Paragraph 2.7.A: Add the following paragraph "5. Extents and Locations of Waterproofing Membrane: Install waterproofing membrane behind all wall tile and underneath all floor tile and tile base at SHOWERS ONLY." (THIS CLARIFICATION SUPERSEDES ANY HEIGHTS OR EXTENTS INDICATED ELSEWHERE ON THE CONTRACT DOCUMENT.)

**Addendum #3 - #25** **SPECIFICATION SECTION – 09 5100 – ACOUSTICAL CEILINGS**
Paragraph 2.2.D.4.: Add the following approved manufacturer: “b. SKY MATE by GORDON Interior Specialties Division, color to match Kal-Lite’s Autumn Frost”.

**Addendum #3 - #26** **SPECIFICATION SECTION – 09 5100 – ACOUSTICAL CEILINGS**
Paragraph 2.2.E.5.b: Add the following approved manufacturer/product: “Quiet Technology Systems, ACC-U-SOUND Pyramidal Diffusers”.
Paragraph 2.2.E.5.c: Add the following approved manufacturer/product: “Sound Seal’s Sound Quality - Pyramidal Diffusers”.
Paragraph 2.2.E.5.d: Add the following approved manufacturer/product: “Sound Concepts – Pyramid Diffusers”.

**Addendum #3 - #27** **SPECIFICATION SECTION – 09 5100 – ACOUSTICAL CEILINGS**
Paragraph 2.2.F: Add the following approved manufacturer/product: “c. Wood Trends by United Process Inc.; Dark Cherry”.
Paragraph 2.2.F: Add the following approved manufacturer/product: “c. Wood Trends by United Process Inc.; Dark Cherry”.

**Addendum #3 - #28** **SPECIFICATION SECTION – 09 5100 – ACOUSTICAL CEILINGS**
Paragraph 2.4.B.2.a: Add the following approved manufacturer: “Gordon Contura, Vantage Point.”.

**Addendum #3 - #29** **SPECIFICATION SECTION – 09 5100 – ACOUSTICAL CEILINGS**
Paragraph 2.4.B.3.c: Add the following approved manufacturer: “Gordon Contura Extruded Aluminum Profiles”.

**Addendum #3 - #30** **SPECIFICATION SECTION – 09 6453 – RESILIENT STAGE FLOORING SYSTEM**
In part 1.3 SUMMARY, delete section C in its entirety. There will be no resilient flooring in the Orchestra Room

In part 2.1 MANUFACTURERS AND PRODUCTS, B.2.c, add “(Forbo Paino 3632, or as selected by Architect)”

**Addendum #3 - #31** **SPECIFICATION SECTION – 09 8400 – ACOUSTICAL ROOM COMPONENTS**
Paragraph 2.2.B.1.a: Add the following approved manufacturer and product: “Quiet Technology Systems: ACC-U-SOUND AWP”.
Paragraph 2.2.B.1.b: Add the following approved manufacturer and product: “Sound Concepts Reflect Wall Panels”.

**Addendum #3 - #32** **SPECIFICATION SECTION – 09 8400 – ACOUSTICAL ROOM COMPONENTS**
Paragraph 2.2.C.1.a: Add the following approved manufacturer and product: “Quiet Technology Systems: ACC-U-SOUND Barrel Shaped Diffusers”.
Paragraph 2.2.C.1.b: Add the following approved manufacturer and product: “Sound Concepts Convex Diffuser”.

**Addendum #3 - #33** **SPECIFICATION SECTION – 09 9600 – HIGH PERFORMANCE COATING SYSTEMS - BROADCAST**
Paragraph 2.1.A: Add the following approved manufacturer: “3. Florock.”.

**Addendum #3 - #34** **SPECIFICATION SECTION – 09 9610 – HIGH PERFORMANCE COATING SYSTEMS - TROWEL**
Paragraph 1.6.B.3: Delete the list of Floor Coating Installers in its entirety. Applicators must be certified by the floor coating manufacturer and by the Architect.

**Addendum #3 - #35** **SPECIFICATION SECTION – 10 2113.19 – SOLID PLASTIC (HDPE) TOILET COMPARTMENTS**

Paragraph 2.2.F: Delete requirements for floor to ceiling vertical upright pilasters and substitute overhead braced upright pilasters. SHOWER SCREENS ARE REQUIRED TO BE ULTRA/ULTIMATE-PRIVACY STYLE SCREENS. PLEASE NOTE THAT SOME MANUFACTURERS LISTED AS APPROVED MAY NOT BE ABLE TO PROVIDE THIS STYLE OF SHOWER SCREEN.

**Addendum #3 - #36** **SPECIFICATION SECTION - 11 4000 - FOOD SERVICE EQUIPMENT**

On Page 11 4000 - 26, under Item 83 Breath Shield, after the words “English Mfg. Inc. Matrix”, delete the words “TMA-120-2” and substitute “TM-120-2”.

**Addendum #3 - #37** **SPECIFICATION SECTION - 11 4000 - FOOD SERVICE EQUIPMENT**

On Page 11 4000 - 26, under Item 85 Breath Shield, after the words “English Mfg. Inc. Matrix”, delete the words “TMA-120-2” and substitute “TM-120-2”.

**Addendum #3 - #38** **SPECIFICATION SECTION – 11 5330 LABORATORY FUME HOODS**

Paragraph 2.1.A: Add the following approved manufacturer: “9. Mott Manufacturing Ltd.: www.mott.ca.”.

**Addendum #3 - #39** **SPECIFICATION SECTION – 11 6100 THEATRICAL RIGGING AND DRAPERY**

In 11 6100 section 1.2 SUMMARY, D. 4., line should read “Ante-Pro Acoustical Reflector and its Rigging. Delete “(refer to Architectural series drawings for reflector details)”.

In 1.2 E, add “In particular, this contractor is responsible for providing cable reels, pantographs, and associated cables for ante-pro reflector, lighting electrics, and concert ceilings.”

In section 2.9 STAGE LIGHTING ELECTRIC CABLE PICKUP, add to the phrase “provide cable management systems” the words “and cable”.In section 2.14 ANTE-PRO ACOUSTIC REFLECTOR A., delete “for”; replace with “and”.

In section 2.16 DRAPERY MATERIAL, delete all references to 32 oz. fabric. Replace with 25 oz.

In section 2.17 SEWING AND FABRICATION OF STAGE DRAPERY, R., in paragraph 1., add “and all full length masking drapery”. Delete paragraph 2 in its entirety.

In section 2.19 ACOUSTIC CURTAIN FABRICATION AND RIGGING, B.1, delete “motorized”; replace with “walk-along”. In B. 3., delete “for motorized”.

**Addendum #3 - #40** **SPECIFICATION SECTION – 11 6100 THEATRICAL RIGGING AND DRAPERY**

Add dimensions to acoustical “eyebrow” on drawing TR-1 – sketch T1

**Addendum #3 - #41** **SPECIFICATION SECTION – 11 6100 THEATRICAL RIGGING AND DRAPERY**

Add rigging schedule to TR-2: sketch T2

**Addendum #3 - #42** **SPECIFICATION SECTION – 11 6100 THEATRICAL RIGGING AND DRAPERY**

Add dimensions to eyebrow on TR-2: sketch T3

**Addendum #3 - #43** **SPECIFICATION SECTION – 11 6100 THEATRICAL RIGGING AND DRAPERY**

Replace plan on TR-12: sketch T4

**Addendum #3 - #44** **SPECIFICATION SECTION – 11 6100 THEATRICAL RIGGING AND DRAPERY**

Add drawing TR-13

**Addendum #3 - #45** **SPECIFICATION SECTION – 11 6113 – CONCERT CEILINGS**

In part 1.2 A. 1, delete “connector strips”; replaced with “junction boxes”.

In part 1.6 A. 1. Delete “e. SECOA, Inc.”

In part 2.3 C 1, delete “2P&G plug”; replace with “hard-wired to junction box”.

In 2.3 D. 1., delete “receptacles”; replace with “fixtures”. Delete “cable to be provided by Div 26”; replace with “cable and cable reel(s) to be provided by rigging contractor. Coordinate with 11 6100.”.

**Addendum #3 - #46** **SPECIFICATION SECTION – 11 6133 – CONCERT CEILINGS**

Make changes to note on drawing OS-1 as noted on sketch T5.

**Addendum #3 - #47** **SPECIFICATION SECTION – 11 6161 – PERFORMANCE LIGHTING FIXTURES & ACCESSORIES**

Under 2.1 FIXTURES, add “Type TTP, Quantity 6, Description Emergency Worklight, Lamp Q500, Manufacturer Futurelight, Equal By L&E”. In 2.2 FIXTURE ACCESSORIES, A. 4., add to “except TTN which shall have Edison u-ground plug” the words “and TTP, which shall have bare leads to be hard-wired into junction box on electric.”

**Addendum #3 - #48** **SPECIFICATION SECTION – 11 6623 GYMNASIUM EQUIPMENT**

Paragraph 2.1.A: Add the following approved manufacturer: “10. ADP Lemco, Inc.: www.adplemco.com”.

**Addendum #3 - #49** **SPECIFICATION SECTION - 12 3530 – EDUCATIONAL CASEWORK**

Clarification to Addendum #2 – Item #15: 1. At cabinet doors, the back sides of all doors are to have white melamine. 2. The underneath surface of upper cabinets is to have plastic laminate to match the cabinet exterior. The top surface of the upper cabinets is to be white melamine, unless that surface will be mounted below 7’-0” above finish floor and not have a countertop on top of it.

**Addendum #3 - #50** **SPECIFICATION SECTION – 12 3450 – LABORATORY CASEWORK**

Paragraph 2.1.A: Add the following approved manufacturer: “9. Mott Manufacturing Ltd.: www.mott.ca.”.

**Addendum #3 - #51** **SPECIFICATION SECTION – 13 1250 – PERMANENT GRANDSTANDS**

Paragraph 2.1.A: Add the following approved manufacturer: “8. All Sports Bleachers.”.

**Addendum #3 - #52** **SPECIFICATION SECTION 21 1313 – WET-PIPE SPRINKLER SYSTEMS**

a. Sub 1.6.B Add the following
“a. Exception: A qualified contractor employing an RME (Responsible Managing Employee) with at least a NICET Level III certification that has obtained a Water-Based Fire Protection Contractors Certificate from the State Fire Marshal may prepare documents as stated above.

**Addendum #3 - #53** **SPECIFICATION SECTION 21 2200 – CLEAN AGENT FIRE EXTINGUISHING SYSTEMS**

Add the following section in its entirety to the documents.

**Addendum #3 - #54** **SPECIFICATION SECTION 22 0701 – MECHANICAL INSULATION**

a. Subparagraph 3.10.D. Delete and add the following
"D. Service: Rectangular or round, outside air supply air ducts downstream of energy recovery ventilator (ERV-xx) supply air fans to connection to return air duct at heat pump.
1. Material: Mineral-fiber blanket.
2. Thickness: 2 inches (51 mm).
3. Number of Layers: One.
4. Field-Applied Jacket: None.
5. Vapor Retarder Required: Yes."
b. Subparagraph 3.10.M..3 Change number of layers to "TWO".

**Addendum #3 - #55** **SECTION 22 1113**

Delete in its entirety and replace with the attached revised Section 22 1113

**Addendum #3 - #56** **SECTION 22 1313**

Delete in its entirety and replace with the attached revised Section 22 1313.

**Addendum #3 - #57** **SPECIFICATION SECTION 22 4000 – PLUMBING FIXTURES**

a. Subparagraph 2.3.A Add the following "5. Moen Commercial"
b. Subparagraph 2.8.A Add the following "5. Sloan"
c. Subparagraph 2.9.A Add the following "5. Sloan"
d. Subparagraph 2.10.A Add the following "8. Sloan"
e. Subparagraph 2.16.A.1 Add the following "c. Willoughby"

**Addendum #3 - #58** **SPECIFICATION SECTION 22 4030 – PLUMBING SPECIALTIES**

a. Delete Subparagraph 2.5.D.4. and refer to schedules on drawings.
b. Delete Subparagraph 2.5.E and refer to schedules on drawings.

**Addendum #3 - #59** **SPECIFICATION SECTION 22 6600 – CHEMICAL WASTE SYSTEMS**

Delete Specification n its entirety and substitute Section 22 6600 – CHEMICAL WASTE SYSTEMS - REVISED

**Addendum #3 - #60** **SPECIFICATION SECTION 23 0501 – CENTRAL GEOTHERMAL PACKAGED PLANT**

a. Subparagraph 2.1A Add the following
"7. Canariis Corp.
8. TMI Climate Solutions
9. Tigerflow"

**Addendum #3 - #61** **SPECIFICATION SECTION 23 0993 – SEQUENCE OF OPERATIONS FOR HVAC CONTROLS**

Add the attached "Sequence of Controls -Points Lists" for additional control requirements.

**Addendum #3 - #62** **SPECIFICATION SECTION 23 2113 – HYDRONIC PIPING**

a. Subparagraph 2.6.C. Add the following "h. PRO Hydronic Specialties"
b. Subparagraph 2.8.E. Add the following "e. Twin City Hose"

**Addendum #3 - #63** **SPECIFICATION SECTION 23 2120 – HYDRONIC PUMPS**

a. Subparagraph 2.1.A. Add the following "j. Pentair / Fairbanks"
b. Subparagraph 2.1.B. Add the following "i. Pentair / Fairbanks"

**Addendum #3 - #64** **SPECIFICATION SECTION 23 2920 – VARIABLE FREQUENCY DRIVES**

a. Subparagraph 2.1.A. Add the following
"g. Franklin Controls
h. Trane."

**Addendum #3 - #65** **SPECIFICATION SECTION 23 3110 – METAL DUCTS**

a. Subparagraph 2.7.D Add the following "h. La Pine metal Products."

**Addendum #3 - #66** **SPECIFICATION SECTION 23 3116 – NONMETAL DUCTS**

a. Subparagraph 2.0 Add the following

"A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Air Distribution Concepts
2. DuctSox
3. KE Fibertec."

**Addendum #3 - #67** **SPECIFICATION SECTION 23 3420 – POWER VENTILATORS**

a. Subparagraph 2.2.A. Add the following "

13. Twin City Fan Company

**Addendum #3 - #68** **SPECIFICATION SECTION 23 3600 – AIR TERMINAL UNITS**

b. Subparagraph 2.1.A. Add the following "

14. MetalAire
15. Tuttle & Bailey

**Addendum #3 - #69** **SPECIFICATION SECTION 23 3710 – DIFFUSERS, REGISTERS, AND GRILLES**

c. Subparagraph 2.1.A. Add the following "

16. Anemostat.

**Addendum #3 - #70** **SPECIFICATION SECTION 23 5523 – LOW-INTENSITY, GAS-FIRED, RADIANT HEATERS**

d. Subparagraph 2.2.A. Add the following "

5. Ambirad

**Addendum #3 - #71** **SPECIFICATION SECTION 23 5700 – HEAT EXCHANGERS FOR HVAC**

e. Subparagraph 2.1.A. Add the following "

4. APV – An SPX Brand
5. Mueller
6. Pentair / Fairbanks
7. Plate Concepts

**Addendum #3 - #72** **SPECIFICATION SECTION 23 7200 – AIR-TO-AIR ENERGY RECOVERY EQUIPMENT**

f. Subparagraph 2.1.A. Add the following "

9. Energy Labs, inc
10. ClimaCool

**Addendum #3 - #73** **SPECIFICATION SECTION 23 7313 – MODULAR CENTRAL STATION AIR-HANDLING UNITS**

g. Subparagraph 2.1.A. Add the following "

5. Energy Labs, inc.
6. Tuttle & Bailey

**Addendum #3 - #74** **SPECIFICATION SECTION 23 7339 – DIRECT-FIRED HEATING AND VENTILATING UNITS**

h. Subparagraph 2.1.A. Add the following "

7. Applied Air.

**Addendum #3 - #75** **SPECIFICATION SECTION 23 8125 – SPLIT SYSTEM AIR-CONDITIONING UNITS**

i. Subparagraph 2.1.A. Add the following "

5. Trane/Samsung

**Addendum #3 - #76** **SPECIFICATION SECTION 23 8413 – HUMIDIFIERS**

j. Subparagraph 2.1.A. Add the following "

4. Energy Labs, inc.
5. Tuttle & Bailey

**Addendum #3 - #77** **SPECIFICATION SECTION – 26 0961 – THEATRICAL DIMMING AND CONTROL**

Make changes to drawing TL-1 as shown on sketch T6.
Make changes to drawing TL-2 as shown on sketch T7.
Make changes to drawing TL-3 as shown on sketch T8.
Make changes to drawing TL-5 as shown on sketch T9.

**Addendum #3 - #78** **SPECIFICATION SECTION – 26 0961 – THEATRICAL DIMMING AND CONTROL**

In section 1.3 SUMMARY, C. 8, delete “and Drop Boxes”.

At “4. WIRING DEVICES”, delete “4”; replace with “2.18”.

In 2.18 B, add “3. Note the requirement for six (6) junction boxes in the electrics above stage to accommodate hard wired, emergency-only worklights. Provide junction boxes in electrics; connect worklights (lights furnished by 11 6161) to emergency-only circuits”

In 2.18 E, delete the paragraph in its entirety. Replace with “Multi-Conductor Feed Cables as well as Pantographs and Cable Reels shall be provided by 11 6100. Coordinate circuit and wire requirements, including requirement for separation of emergency circuits. Provide Kellms grips and cable clamps at end of each lighting batten, as required.”

At “5. HOUSELIGHT CONTROL SYSTEM”, delete “5”; replace with “2.19”.
At “6. HOUSELIGHT MASTER LCD STATIONS (“LCD”)”, delete “6”; replace with “2.20”.
At. “7. ENTRY/WORKLIGHT CONTROL (“E”, “WE”, AND “M”), delete “7.”; replace with “2.21”.
At “8. DATA PATH PROTECTION AND ROUTING”, delete “8”; replace with “2.22”.
At “3. INSTALLATION”, delete “3.”; replace with “3.01”.
At “4. UNIT PRICES”, delete “4”; replace with “3.02”
At “5.COMPLETION”, delete “5”; replace with “3.03”.
At. “6. POST CONSTRUCTION CLOSEOUT”, delete “6”; replace with “3.04”

**Addendum #3 - #79** **SECTION 26 2816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS**

Add the following paragraph:
“2.6 MANUAL SWITCH AND FUSE ASSEMBLY
A. Bussman type SSU or SKA with dual element Type S fuse or equal.”

**Addendum #3 - #80** **SECTION 31 2000**

All references to “City Engineer” in this Section shall be changed to reflect “Architect”
Paragraph 3.3.A. Delete “plus or minus 3%” Add “0 to plus 3%”
Paragraph 3.3.B, 3rd paragraph. Delete “plus or minus 3%” Add “0 to plus 3%”
Paragraph 3.3.B, 4th paragraph. Delete “plus or minus 3%” Add “0 to plus 3%”
Paragraph 3.4.B. Delete “City of Kearney” and Add “Owner”
Paragraph 3.6.A, 2nd paragraph. Delete “plus or minus 3%” Add “0 to plus 3%”
Paragraph 3.6.A, 3rd paragraph. Delete “plus or minus 3%” Add “0 to plus 3%”
Delete Section 3.8 MEASUREMENT AND PAYMENT in its entirety.

**Addendum #3 - #81** **SECTION 31 2010**

Delete Section 1.3 UNIT PRICES in its entirety.
Paragraph 3.16.B.2 Delete 0.2' Add 0.1'
Paragraph 3.16.B.3 Delete 0.2' Add 0.1'
Paragraph 3.16.C Delete in its entirety, and replace with "C. Track and football fields shall be graded per corresponding details and drawings."
Delete Section 3.20 PRE-GRADING VERIFICATION SURVEY in its entirety.

**Addendum #3 - #82** **SECTION 32 1313**

Paragraph 2.4.C. Delete "Concrete Aggregate", Add "Coarse Aggregate"

**Addendum #3 - #83** **SECTION 32 1816**

Delete in its entirety and replace with the attached revised Section 32 1816.

**Addendum #3 - #84** **SECTION 32 5200**

Paragraph 1.7.A.2 Add the following additional manufacturers:
"f. Greenfields, www.greenfieldsusa.com
g. Kiefer, www.kieferusa.com "

Paragraph 1.8.B.1.b. Revise to read "b. Field Marking Plan and details for Football, Soccer, Men's Lacrosse, and Women's Lacrosse if required."

Paragraph 1.9.E. Revise to read "E. Warranty shall include Gmax testing on a bi-annual basis demonstrating an initial Gmax not exceeding 150 G's initially and not exceeding 170 G's at any time during the warranty period at the Contractor's expense. Test results shall be submitted to the Owner within 30 days of each test."

Paragraph 2.3.A.11, Page 8, Revise the Value for Pile Weight* to " 52 oz./yd2 "
Paragraph 2.3.A.12, Page 8, Revise the following Values, shown in the Table under these items:
Finished Pile Height* to " 2 ½" (63.5 mm) "
Product Weight (total)* to " 81 oz./yd2 "
Infill (Sand) to " 2 lbs. Silica Sand "
Infill (Rubber) to " 4 lbs. SBR Rubber "

Paragraph 2.3.F, Page 9, Delete items 1, 2 and 3 in their entirety, and replace with the following:
"1. Color 1: Grass, green in standard color, as selected by Owner
2. Color 2: White for football lines and marking
3. Color 3: Yellow for soccer lines and markings
4. Additional colors as needed."

Add New Section 2.3.A ALTERNATE TURF SYSTEM (RECYCLED MATERIALS IN LIEU OF INFILL RUBBER)

A. It is the Owner's desire to consider the use of tire-derived products as an Alternate Bid in accordance with the Scrap Tire Management Grant Program, as administered by the Nebraska Department of Environmental Quality. The Contractor shall provide an Alternate Bid for the Synthetic Turf utilizing the incorporation of recycled tires complying with the aforementioned grant program.
B. The OWNER may select the Alternate Bid, at his option. It is the Owner's option which bid to select, in the best interests of the Owner.

Change the title only of 2.3 LINES, MARKINGS AND IN-LAID TURF to Section 2.3.B.

**Addendum #3 - #85** **SECTION 33 4100**

Paragraph 2.1.A. Add "All reinforced concrete pipe shall be bedded in Class "C" Bedding per detailed drawings."

Add new paragraph entitled "A.1. High-Density Polyethylene Pipe – High-Density

Polyethylene Pipe (HDPE) meeting AASHTO M252 Type S or M 294 Type S, double wall, corrugated exterior with smooth interior, water-tight. Pipe shall be ADS N-12 WT or approved equal. All HDPE pipe shall be bedded per the granular bedding detail on the drawings."

All references to "City Engineer" shall be changed to reflect "Architect" Paragraph 3.2.I, reference to "City of Kearney" shall be changed to reflect "Architect"

Delete Section 3.3, paragraphs B, C, D, E, and F in their entirety.

Paragraph 3.3.G, 4th paragraph, reference to "City of Kearney" shall be changed to reflect "Owner".

**Addendum #3 - #86** **SHEET C5.0**
Clarification: The Trench Drain Section Detail reflected on this sheet pertains to the trenching located at the loading dock.

**Addendum #3 - #87** **SHEET C6.0**
The trench drains located east of the grandstand and between the long jump and triple jump pits shall be ACO Klassik Drain K200 with Type 678Q Longitudinal Ductile Iron Grates.

**Addendum #3 - #88** **SHEET C2.1**
Delete Sheet C2.1 in its entirety, and replace with Revised Sheet C2.1, with changes in the profile and types of sanitary sewer pipe.

**Addendum #3 - #89** **SHEET C3.0**
Delete Sheet C3.0 in its entirety, and replace with Revised Sheet C3.0, with changes in the types and sizes of water main.

**Addendum #3 - #90** **SHEET C3.1**
Delete Sheet C3.1 in its entirety, and replace with Revised Sheet C3.1, with changes in plan and profile notes

**Addendum #3 - #91** **SHEET C3.2**
Delete Sheet C3.2 in its entirety, and replace with Revised Sheet C3.2, with changes to Water Main Profile 6 and Geothermal Profile.

**Addendum #3 - #92** **SHEET C3.3**
Add Typical Non-Freeze Yard Hydrant Detail Drawing, attached to this Addendum.

**Addendum #3 - #93** **SHEET C5.1**
Add Granular Bedding for HDPE Storm Sewer Drawing, attached to this Addendum.

**Addendum #3 - #94** **SHEET C6.1**
Delete Sheet C6.1 in its entirety, and replace with Revised Sheet C6.1, with modification of text associated with the northwest start and finish lines, and steeplechase pit notes.

**Addendum #3 - #95** **SHEET C6.4**
Delete Sheet C6.4 in its entirety, and replace with Revised Sheet C6.4, adding linework and notes to the details. (Football Field 5 yd. offset buffer, clarified 3' extra point hashmark) (Soccer field, clarified soccer penalty kick lines)

**Addendum #3 - #96** **SHEET C6.5**
Modify: "Track Section – Trench Drain & Synthetic Turf Drawing, as shown on the attached Detailed Drawing.

**Addendum #3 - #97** **SHEET C6.6**
Add: “Site Fencing Detail” Drawing, attached to this Addendum.
Add: Sign Detail, attached to the Addendum, reflecting the Handicap Sign Detail, D9-6P Van Accessible Sign Detail, R7-8 Handicap Sign Detail, Street Sign Detail, Stop Sign Detail.

**Addendum #3 - #98** **SHEET AC1.00 – CODE PLAN – FIRST FLOOR - OVERALL**
CODE PLAN GENERAL NOTES: Add the following note: “6. APPLY INTUMESCENT MASTIC COATING TO ALL EXPOSED STEEL AT FIREWALLS. REFERENCE SPECIFICATION SECTION 07 8123.”.

**Addendum #3 - #99** **SHEET A1.02 – FLOOR PLAN – FIRST FLOOR – AREA AA**
1/A1.02 FLOOR PLAN – FIRST FLOOR – AREA AA: At the east walls of rooms AA105 and AA108, delete the window types shown as “R” and substitute window type “S” at all occurrences in those east metal stud walls.

**Addendum #3 - #100** **SHEET A1.12 – FLOOR PLAN – FIRST FLOOR – AREA K**
1/A1.12 FLOOR PLAN – FIRST FLOOR – AREA K: At the hand wash sink along the north wall of room K117, add a soap dispenser location along with the corresponding accessory tag mark “J”.

**Addendum #3 - #101** **SHEET A1.26 – FLOOR PLAN – SECOND FLOOR – AREA J SOUTH**
1/A1.26 FLOOR PLAN – FIRST FLOOR – AREA J SOUTH: At the guardrail that runs east-west and coincides and runs parallel with Gridline “JB” add the following note and leader line pointing to this guardrail: “1-1/2” O.D. STAINLESS STEEL GUARDRAIL W/ PERFORATED METAL PANELS”.

**Addendum #3 - #102** **SHEET A3.00 – Reflected Ceiling Plan – First Floor – Area A**
See attached sketch A3-A3.00 for adjusted ceiling grid layout in CLASSROOM A105A and A105B

**Addendum #3 - #103** **SHEET A3.06 – Reflected Ceiling Plan – First Floor – Area H**
See attached sketch A3-A3.06 for revised detail of Projector at Balcony Section

**Addendum #3 - #104** **SHEET A3.08 – Reflected Ceiling Plan – First Floor – Area K**
See attached sketch A3-A3.08 for additional dimensions at ceiling elliptical bulkhead in SERVERY K122

**Addendum #3 - #105** **SHEET A3.09 – Reflected Ceiling Plan – First Floor – Area L**
See attached sketch A3-A3.09 for adjusted ceiling grid layout in rooms L111A, L111B, and M109B

**Addendum #3 - #106** **SHEET A3.14 – Reflected Ceiling Plan – Second Floor – Area C**
At 1/A3.14 REFLECTED CEILING PLAN – SECOND FLOOR, change floor plan title to “AREA C” in lieu of “AREA D”
See attached sketch A3-A3.14 for revised ceiling layout and detail at STAIR C200ST

**Addendum #3 - #107** **SHEET A3.19 – Reflected Ceiling Plan – Second Floor – Area J**
See attached sketch A3-A3.19 for revised ceiling layout at TROPHY CASE J202 and J133

**Addendum #3 - #108** **SHEET A4.00 – OVERALL ROOF PLAN**
ROOF GENERAL NOTES: At NOTE 2, delete the following sheet reference “(SHEET A1.60)” and substitute “(SHEET A1.31)”.

**Addendum #3 - #109** **SHEET A4.01 – ENLARGED ROOF PLAN - SLC**
ROOF GENERAL NOTES: At NOTE 2, delete the following sheet reference “(SHEET A1.60)” and substitute “(SHEET A1.31)”.

**Addendum #3 - #110** **SHEET A4.02 – ENLARGED ROOF PLAN – COMMON**
ROOF GENERAL NOTES: At NOTE 2, delete the following sheet reference "(SHEET A1.60)" and substitute "(SHEET A1.31)".

**Addendum #3 - #111** **SHEET A4.03 – ENLARGED ROOF PLAN - ATHLETIC**
ROOF GENERAL NOTES: At NOTE 2, delete the following sheet reference "(SHEET A1.60)" and substitute "(SHEET A1.31)".

**Addendum #3 - #112** **SHEET A7.04 - WALL SECTIONS – AREA F & G**
15/A7.04 - WALL SECTION – AREA G: Revise section to match section shown on attachment 15/A2-A7.04, dated October 14, 2014.

**Addendum #3 - #113** **SHEET A7.12 - WALL SECTIONS – AREA J**
3/A7.12 - WALL SECTION – AREA J: Revise section to match section shown on attachment 3/A2-A7.12, dated October 14, 2014.
4/A7.12 - WALL SECTION – AREA J: Revise section to match section shown on attachment 4/A2-A7.12-2, dated October 14, 2014.

**Addendum #3 - #114** **SHEET A7.13 – WALL SECTIONS – Area J**
See attached sketch A3-A7.13 for revised wall sections at TROPHY CASE J202 and J133

**Addendum #3 - #115** **SHEETS A8.00 – DOOR SCHEDULE – AREAS AA-D**
DOOR AND FRAME SCHEDULE – AREA C: Clarification at DOOR NO. C201C, at this aluminum storefront door, both leafs are to be of equal width. The overall opening width is in fact 8'-2" wide.

**Addendum #3 - #116** **SHEETS A8.00, A8.01, and A8.02 – DOOR SCHEDULES**
Add the following Clarification Notes: 1. ON ALL SCHEDULES AT ALL OCCURENCES OF "FSC" THE APPLICABLE AND ASSOCIATED DETAILS ARE FOUND ON SHEET A8.09.
2. ALL OVERHEAD COILING DOORS/GRILLES AND FIRE AND SMOKE CURTAINS SHOWN IN AREAS WITH FINISHED CEILINGS ARE TO HAVE THE DOOR HOUSING MOUNTED ABOVE THE FINISHED CEILING. CONTRACTOR IS TO ACCOUNT FOR THE ADDITIONAL LENGTH OF DOOR/GRILLE NECESSARY TO ALLOW FOR THE HOUSING TO BE LOCATED ABOVE THE FINISHED CEILING.

**Addendum #3 - #117** **SHEET A8.02 – DOOR SCHEDULE – AREAS K-N**
DOOR AND FRAME SCHEDULE AREA K – At Opening K118.1 revise the opening height to be "9'-4"" in lieu of the "9'-6" opening height listed.

**Addendum #3 - #118** **SHEET A8.05 – Storefront Elevations**
See attached sketch A3-A8.05 for revised elevation of CURTAINWALL CW-J1-13

**Addendum #3 - #119** **SHEET A8.09 – FIRE DOOR AND SMOKE CURTAIN DETAILS**
4/A8.09 HEAD DETAIL: Revise note referencing "STEEL BEAM; SEE STRUCTURAL" to read "STEEL SUPPORT STRUCTURE, TO BE DESIGNED, PROVIDED AND INSTALLED BY CONTRACTOR".

**Addendum #3 - #120** **SHEET A8.13 – DOOR DETAILS**
16/A8.13 SILL DETAIL: Revise detail as shown on Attachment A3-A8.13, dated October 14, 2014.

**Addendum #3 - #121** **SHEET A8.13 – DOOR DETAILS**
18/A8.13 SILL DETAIL: Revise detail as shown on Attachment A3-A8.13, dated October 14, 2014.

**Addendum #3 - #122** **SHEET A8.13 – DOOR DETAILS**

28/A8.13 SILL DETAIL: Revise detail as shown on Attachment A3-A8.13, dated October 14, 2014.

**Addendum #3 - #123** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At MATERIALS LIST, eliminate FT-4 in its entirety.

**Addendum #3 - #124** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At MATERIALS LIST, add the following products as approved equals:

CPT-1: SHAW CONTRACT / VANTAGE / ELEMENT INK – CUSTOM ACCENT COLOR – COLOR PLANK - 407

CPT-2: SHAW CONTRACT / ABSORBED / FREQUENCY – CUSTOM ACCENT COLOR

CPT-3: SHAW CONTRACT / VISIBLE (CUSTOM W0017) / CUSTOM COLOR – NSP NO. 199770

CPT-4: SHAW CONTRACT / INTERACT (CUSTOM M0256) / CUSTOM COLOR – NSP NUMBER 199791

**Addendum #3 - #125** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At MATERIALS LIST, change PATTERN/STYLE notation to be STANDARD COVE in lieu of TIGHTLOCK at WALL BASE “WB-1”, “WB-2”, “WB-4”, “WB-5”, “WB-6”, “WB-7”, “WB-9”, “WB-10”.

**Addendum #3 - #126** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At MATERIALS LIST, RESILENT FLOORING, “RT-1” add clarification information : Tile is straight edged 8mm Rubber Flooring Tiles. Tiles to be cleaned and to be re-installed on clean, prepped floor following manufacturer’s recommendations (Product should be dry laid and allowed to relax before cutting and fitting, 48 hours prior to installation, Lay tiles into fresh adhesive in small sections and roll with a 100lb sectional roller a minimum of 3 times in multiple directions, Suitable weight must be applied over every seam after taping and rolling is complete (DO NOT use duct tape or high grab masking tape))

**Addendum #3 - #127** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At MATERIALS LIST, WT-5, change description to read “PORCELAIN TILE – 6”x24”” in lieu of “PORCELAIN TILE 2 ½” x 7 ¾””

**Addendum #3 - #128** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At MATERIALS LIST, WT-6, change description to read “PORCELAIN TILE – 6”x24”” in lieu of “PORCELAIN TILE 2 ½” x 7 ¾””.

**Addendum #3 - #129** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At ACCESSORY/EQUIPMENT SCHEDULE, Key Note “M” ELECTRIC HAND DRYER, under MANUFACTURER, delete “EXCEL”.

**Addendum #3 - #130** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**

At all CABINETRY/CASEWORK GENERAL NOTES add No. 8 to read “ PROVIDE WALL BASE ON ALL TOEKICKS AND FINISHED EXPOSED ENDS OF CABINETRY AS SCHEDULED IN ROOM FINISH SCHEDULE”.

**Addendum #3 - #131** **SHEET A9.00 - ROOM FINISH SCHEDULE NOTES, MATERIALS LIST & SIGNAGE**
At ROOM FINISH GENERAL NOTES add note No. 12 to read "12. ALL COUNTERTOP FINISHES SCHEDULED WITH MULTIPLE FINISHES ARE CLARIFIED IN CABINETRY SECTIONS; MULTIPLE COUNTERTOP CONSTRUCTION TYPES AND FINISHES MAY BE DETAILD IN THE SAME ROOM".

**Addendum #3 - #132** **SHEET A9.03 - FINISH FLOOR PLAN – FIRST FLOOR – AREA AA & B**
At ROOM FINISH SCHEDULE – AREA AA, change FLOORING designation to be "CPT-2" in lieu of "CPT" at rooms AA105 and AA107D.

**Addendum #3 - #133** **SHEET A9.07 - FINISH FLOOR PLAN – FIRST FLOOR – AREA G**
At ROOM FINISH SCHEDULE, OFFICE G116, change floor to be "CPT-2" in lieu of "CPT-1".

**Addendum #3 - #134** **SHEET A9.10 – FINISH FLOOR PLAN – FIRST FLOOR – AREA K**
ROOM FINISH SCHEDULE – FIRST FLOOR – AREA K: At ROOM NO.'s K128 and K129, at the BASE column add wall base "WB-1".

**Addendum #3 - #135** **SHEET A9.10 – FINISH FLOOR PLAN – FIRST FLOOR – AREA K**
ROOM FINISH SCHEDULE – FIRST FLOOR – AREA K: At ROOM NO.s K114 and K121, at the CASEWORK UPPER column add plastic laminate "PL-1".

**Addendum #3 - #136** **SHEETS A9.11-A9.13 & A9.45-A9.51 – FINISH FLOOR PLANS – FIRST FLOOR – AREAS L,M, and N and corresponding INTERIOR ELEVATIONS**
At all showers in these areas (ALL LOCKER ROOMS) delete any and all wall tile shown and substitute epoxy paint, P-2B. ALL FLOOR TILE AND TILE BASE TO REMAIN IN PROJECT.

**Addendum #3 - #137** **SHEET A9.18 - FINISH FLOOR PLAN – SECOND FLOOR – AREA E & F**
At ROOM FINISH SCHEDULE room E209A add reference at CASEWORK – TOP to note "PL-5 / SS-4" ; See Cabinet Sections for clarification of countertop types/construction.

**Addendum #3 - #138** **SHEET A9.37 – INTERIOR ELEVATIONS – FIRST FLOOR**
At detail 6/A9.37, add section marker to casework referencing 7/A10.00.

**Addendum #3 - #139** **SHEET A9.43 – INTERIOR ELEVATIONS – FIRST FLOOR**
At detail 9/A9.43, add note referencing cabinet doors to read "ALL CABINET DOORS TO HAVE LOCKS KEYED SEPARATELY; SEE SECTION 1/A10.04 FOR DETAILS".

**Addendum #3 - #140** **SHEET A9.43 – INTERIOR ELEVATIONS – FIRST FLOOR**
12/A9.43 INTERIOR ELEVATION – STAGING K135: Revise the 1'-4" R.O. x 2'-0" R.O. to be 1'-2" R.O. x 2'-0" R.O. The dimension from the floor to the bottom of the opening shall remain at 4'-2".
12/A9.43 INTERIOR ELEVATION – STAGING K135: Delete the note pointing to the hood and substitute the following note: "HOOD; SEE FOOD SERVICE EQUIPMENT".

**Addendum #3 - #141** **SHEET A9.43 – INTERIOR ELEVATIONS – FIRST FLOOR**
At details 3/A9.43, 4/A9.43 & 8/A9.43, add note referencing to casework to read "ALL DOORS/DRAWERS TO HAVE CABINET LOCKS AS SPECIFIED; ALL LOCKS TO BE KEYED ALIKE (TYP)".

**Addendum #3 - #142** **SHEET A9.47 – INTERIOR ELEVATIONS – FIRST FLOOR**
At detail 9/A9.47, add section marker to casework referencing 14/A10.00.

**Addendum #3 - #143** **SHEET A9.63 – INTERIOR ELEVATIONS – SECOND FLOOR**
At detail 8/A9.63, add section marker to casework referencing 7/A10.00 BASE ONLY.

**Addendum #3 - #144** **SHEET A9.66 – INTERIOR ELEVATIONS – SECOND FLOOR**
At detail 10/A9.66, add section marker to casework referencing 3/A10.00 BASE ONLY; Change overall height to be 36" in lieu of 2'7 ½".

**Addendum #3 - #145** **SHEET A9.67 – INTERIOR ELEVATIONS – SECOND FLOOR**
At detail 2/A9.67, add section marker to casework referencing 13/A10.00.

**Addendum #3 - #146** **SHEET A9.69 – INTERIOR ELEVATIONS – SECOND FLOOR**
At detail 3/A9.69, add section marker to casework referencing 7/A10.01.

**Addendum #3 - #147** **SHEET A9.73 – INTERIOR ELEVATIONS – SECOND FLOOR**
At details 7/A9.73 & 8/A9.73, add note pointing to casework that reads "ALL DRAWERS TO HAVE CABINET LOCKS AS SPECIFIED; ALL LOCKS TO BE KEYED ALIKE (TYP)".

**Addendum #3 - #148** **SHEET A10.01 – CABINET SECTIONS AND DETAILS**
At detail 16/A10.01, add note to right side of masonry wall, referencing countertop construction to read " ½ INCH SOLID SURFACE COUNTERTOP w/ DOUBLE ROUND-OVER ¼ INCH RADIUS FRONT EDGE AND INTEGRAL BACKSPLASH";
At left side of masonry wall, referencing top of open cabinetry add note to read "PLASTIC LAMINATE FINISH ON ALL EXPOSED FACES OF ¾ INCH PARTICLE BOARD TOP, 3MM EDGING TO MATCH PLASTIC LAMINATE".

**Addendum #3 - #149** **SHEET A10.02 – CABINET SECTIONS AND DETAILS**
At details 2/A10.02 and 3/A10.02 add note referencing drawers to read "ALL DRAWERS TO HAVE CABINET LOCKS AS SPECIFIED; ALL LOCKS TO BE KEYED ALIKE (TYP)".

**Addendum #3 - #150** **SHEET A10.02 – CABINET SECTIONS AND DETAILS**
At detail 7/A10.02, add note referencing low wall door to read " 1 ¾ INCH x 30 INCH x 38 INCH PLASTIC LAMINATE (PL-1) ON ALL SIDES OF PLYWOOD PASS-THRU DOOR; INSTALL w/ HEAVY DUTY CONTINUOUS HINGE (SATIN NICKEL FINISH)".

**Addendum #3 - #151** **SHEET A10.02 – CABINET SECTIONS AND DETAILS**
At detail 9/A10.02, add note referencing underside of countertop to read "PROVIDE L-SHAPED HIDDEN COUNTERTOP SUPPORT BRACKET (4 LOCATIONS) AT OPEN KNEE SPACE AS REQUIRED TO SUPPORT DESKTOP".

**Addendum #3 - #152** **SHEET A10.02 – CABINET SECTIONS AND DETAILS**
At 7/A10.02 ENLARGED PLAN – ADMIN AND COMMONS, 14/A10.02 ENLARGED PLAN – ADMIN RECEPTION DESK, and 15/A10.02 ENLARGED PLAN – MEDIA CENTER, add note "PROVIDE AND INSTALL 3 GROMMETS AT CIRCULATION DESK, LOCATION TO BE DETERMINED BY OWNER".

**Addendum #3 - #153** **SHEET A10.03 – CABINET SECTIONS AND DETAILS**
At detail 3/A10.03, add note referencing countertop construction to be " ½ INCH SOLID SURFACE COUNTERTOP w/ DOUBLE ROUND-OVER ¼ INCH RADIUS FRONT
EDGE AND INTEGRAL BACKSPLASH".

**Addendum #3 - #154** **SHEET A10.03 – CABINET SECTIONS AND DETAILS**
At detail 8/A10.03, add to note referencing low wall to read "PROVIDE 5/8" GWB ON BOTH SIDES OF LOW WALL, PAINTED; PROVIDE ACCESS PANELS AS REQUIRED FOR UTILITY ACCESSIBILITY".

**Addendum #3 - #155** **SHEET A10.04 – CABINET SECTIONS AND DETAILS**
At detail 5/A10.04, add Roll-Top window sill detail reference to “24/A8.13” ; Countertop and wall cap/window sill to be coordinated to be one continuous piece with finished edges.

**Addendum #3 - #156** **SHEET A10.04 – CABINET SECTIONS AND DETAILS**
At detail 1/A10.04, add note referencing the cabinet door to read “ PROVIDE WURTH BAER - COMPX TIMBERLINE CAM LOCK, LOCK PLUG, STRIKE PLATE & BEZEL AT ALL DOORS; FINISH TO BE NICKEL PLATED; ALL LOCKS TO BE KEYED SEPARATELY (TYP)”. Add general note to read “PLASTIC LAMINATE ON ALL SIDES OF EXPOSED SURFACES INCLUDING TOP AND SIDES OF CABINET”.

**Addendum #3 - #157** **SHEET A10.05 – CABINET SECTIONS AND DETAILS**
Delete detail 3/A10.05 in its entirety.

**Addendum #3 - #158** **SHEET A10.05 – CABINET SECTIONS AND DETAILS**
At detail 9/A10.05, add 1 1/2” thick dimension at low wall cap and add notes with leaders to low wall:
“PAINTED 5/8” GWB ON BOTH SIDES OF 3 5/8” METAL STUDS AT 16”o.c. AT LOW WALL; PROVIDE ACCESS PANELS AS REQUIRED FOR UTILITY ACCESSIBILITY”.
“1/2” SOLID SURFACE WALL CAP w/ DOUBLE RADIUS FRONT EDGE.”

**Addendum #3 - #159** **SHEET A10.05 – CABINET SECTIONS AND DETAILS**
At detail 10/A10.05, add 1 1/2” thick and 1” overhang on both sides dimensions at low wall cap and add notes with leaders to low wall:
“PAINTED 5/8” GWB ON BOTH SIDES OF 6” METAL STUDS AT 16”o.c. AT LOW WALL; PROVIDE ACCESS PANELS AS REQUIRED FOR UTILITY ACCESSIBILITY”.
“1/2” SOLID SURFACE WALL CAP w/ DOUBLE RADIUS FRONT EDGE.”

**Addendum #3 - #160** **SHEET A10.06 – CABINET SECTIONS AND DETAILS**
At details 11/A10.06 and 12/A10.06, revise shower partitions to be OVERHEAD BRACED in lieu of FLOOR-TO-CEILING mounted stiles. Ultra privacy partition heights to remain. Stiles to be 83” in height (when not mounted on the tiled curb, stiles on curb to be 79”) and partitions to remain as detailed at 72” total height, installed 8” A.F.F.

**Addendum #3 - #161** **SHEET S1.7 – FOUNDATION PLAN – AREA H**
Delete Drawing in its entirety and substitute S1.7 – FOUNDATION PLAN – AREA H.

**Addendum #3 - #162** **SHEET S1.8 – FOUNDATION PLAN – AREA J**
Delete Drawing in its entirety and substitute S1.8 – FOUNDATION PLAN – AREA J.

**Addendum #3 - #163** **SHEET S1.9 – FOUNDATION PLAN – AREA K**
FOUNDATION PLAN – AREA K: Add the following note: “NOTE: CONTRACTORS ARE TO REFERENCE SHEET FS3.3, ITEM 53, FOR BLOCK OUTS FOR TROUGH DRAINS.

**Addendum #3 - #164** **SHEET S2.3 – FRAMING PLAN – AREA C**
Delete Drawing in its entirety and substitute S2.3 – FRAMING PLAN – AREA C.

**Addendum #3 - #165** **SHEET S2.5 – FRAMING PLAN – AREAS E & F**
Delete Drawing in its entirety and substitute S2.5 – FRAMING PLAN – AREAS E & F.

**Addendum #3 - #166** **SHEET S2.6 – FRAMING PLAN – AREA G**
Delete Drawing in its entirety and substitute S2.6 – FRAMING PLAN – AREA G.

**Addendum #3 - #167** **SHEET S2.7 – FRAMING PLAN – AREA H**
Delete Drawing in its entirety and substitute S2.7 – FRAMING PLAN – AREA H.

**Addendum #3 - #168** **SHEET S2.8 – FRAMING PLAN – AREA J**
Delete Drawing in its entirety and substitute S2.8 – FRAMING PLAN – AREA J.

**Addendum #3 - #169** **SHEET S2.9 – FRAMING PLAN – AREA K**
Delete Drawing in its entirety and substitute S2.9 – FRAMING PLAN – AREA K.

**Addendum #3 - #170** **SHEET S2.10 – FRAMING PLAN – AREA L**
Delete Drawing in its entirety and substitute S2.10 – FRAMING PLAN – AREA L.

**Addendum #3 - #171** **SHEET S2.11 – FRAMING PLAN – AREA M**
Delete Drawing in its entirety and substitute S2.11 – FRAMING PLAN – AREA M.

**Addendum #3 - #172** **SHEET S2.12 – FRAMING PLAN – AREA N & P**
Delete Drawing in its entirety and substitute S2.12– FRAMING PLAN – AREAS N&P.

**Addendum #3 - #173** **SHEET S2.17 – ROOF FRAMING PLAN – AREAS E & F**
Delete Drawing in its entirety and substitute S2.17 – ROOF FRAMING PLAN – AREAS E & F.

**Addendum #3 - #174** **SHEET S2.18 – ROOF FRAMING PLAN – AREA G**
Delete Drawing in its entirety and substitute S2.18 – ROOF FRAMING PLAN – AREA G.

**Addendum #3 - #175** **SHEET S2.19 – ROOF FRAMING PLAN – AREA H**
Delete Drawing in its entirety and substitute S2.19 – ROOF FRAMING PLAN – AREA H.

**Addendum #3 - #176** **SHEET S2.20 – FRAMING PLAN – AREA H TECH LEVEL**
Delete Drawing in its entirety and substitute S2.20 – FRAMING PLAN – AREA H TECH LEVEL.

**Addendum #3 - #177** **SHEET S2.21 – ROOF FRAMING PLAN – AREA J**
Delete Drawing in its entirety and substitute S2.21 – ROOF FRAMING PLAN – AREA J.

**Addendum #3 - #178** **SHEET S2.22 – ROOF FRAMING PLAN – AREA L**
Delete Drawing in its entirety and substitute S2.22 – ROOF FRAMING PLAN – AREA L.

**Addendum #3 - #179** **SHEET S2.23 – ROOF FRAMING PLAN – AREA M**
Delete Drawing in its entirety and substitute S2.23 – ROOF FRAMING PLAN – AREA M.

**Addendum #3 - #180** **SHEET S2.24 – ROOF FRAMING PLAN – AREA N**
Delete Drawing in its entirety and substitute S2.24 – ROOF FRAMING PLAN – AREA N.

**Addendum #3 - #181** **SHEET M0.0 – MECHANICAL SYMBOLS AND ABREVIATIONS**
General Notes No. 8 – Delete “BY THE GENERAL CONTRACTOR”

**Addendum #3 - #182** **SHEET M1.2 – HVAC PLAN – FIRST LEVEL – AREAS AA & B**
Delete Drawing in its entirety and substitute M1.2 – HVAC PLAN – FIRST LEVEL – AREAS AA & B

**Addendum #3 - #183** **SHEET M1.3 – HVAC PLAN – FIRST LEVEL – AREA C**
Delete Drawing in its entirety and substitute M1.3 – HVAC PLAN – FIRST LEVEL – AREA C

**Addendum #3 - #184** **SHEET M1.4 – HVAC PLAN – FIRST LEVEL – AREA D**
Delete Drawing in its entirety and substitute M1.4 – HVAC PLAN – FIRST LEVEL – AREA D

**Addendum #3 - #185** **SHEET M1.5 – HVAC PLAN – FIRST LEVEL – AREAS E & F**
Delete Drawing in its entirety and substitute M1.5 – HVAC PLAN – FIRST LEVEL – AREAS E & F.

**Addendum #3 - #186** **SHEET M1.6 – HVAC PLAN – FIRST LEVEL – AREA G**
Delete Drawing in its entirety and substitute M1.6 – HVAC PLAN – FIRST LEVEL – AREA G

**Addendum #3 - #187** **SHEET M1.7 – HVAC PLAN – FIRST LEVEL – AREA H**
Delete Drawing in its entirety and substitute M1.7 – HVAC PLAN – FIRST LEVEL – AREA H.

**Addendum #3 - #188** **SHEET M1.8 – HVAC PLAN – FIRST LEVEL – AREA J**
Delete Drawing in its entirety and substitute M1.8 – HVAC PLAN – FIRST LEVEL – AREA J

**Addendum #3 - #189** **SHEET M1.9 – HVAC PLAN – FIRST LEVEL – AREA K**
Delete Drawing in its entirety and substitute M1.9 – HVAC PLAN – FIRST LEVEL – AREA K

**Addendum #3 - #190** **SHEET M1.13 – HVAC PLAN – SECOND LEVEL – AREA A**
Delete Drawing in its entirety and substitute M1.13 – HVAC PLAN – SECOND LEVEL – AREA A

**Addendum #3 - #191** **SHEET M1.14 – HVAC PLAN – SECOND LEVEL – AREA B**
Delete Drawing in its entirety and substitute M1.14 – HVAC PLAN – SECOND LEVEL – AREA B

**Addendum #3 - #192** **SHEET M1.15 – HVAC PLAN – SECOND LEVEL – AREA C**
Delete Drawing in its entirety and substitute M1.15 – HVAC PLAN – SECOND LEVEL – AREA C

**Addendum #3 - #193** **SHEET M1.16 – HVAC PLAN – SECOND LEVEL – AREA D**
Delete Drawing in its entirety and substitute M1.16 – HVAC PLAN – SECOND LEVEL – AREA D

**Addendum #3 - #194** **SHEET M1.17 – HVAC PLAN – SECOND LEVEL – AREAS E & F**
Delete Drawing in its entirety and substitute M1.17 – HVAC PLAN – SECOND LEVEL – AREAS E & F

**Addendum #3 - #195** **SHEET M1.18 – HVAC PLAN – SECOND LEVEL – AREA G**
Delete Drawing in its entirety and substitute M1.18 – HVAC PLAN – SECOND LEVEL – AREA G

**Addendum #3 - #196** **SHEET M1.19 – HVAC PLAN – SECOND LEVEL – AREA H**
Delete Drawing in its entirety and substitute M1.19 – HVAC PLAN – SECOND LEVEL – AREA H

**Addendum #3 - #197** **SHEET M1.20 – HVAC PLAN – TECH LEVEL – AREA H**
Delete Drawing in its entirety and substitute M1.20 – HVAC PLAN – TECH LEVEL – AREA H

**Addendum #3 - #198** **SHEET M1.26 – HVAC PLAN – ROOF – AREAS AA, A, B, C, D & E**
Delete Drawing in its entirety and substitute M1.26 – HVAC PLAN – ROOF – AREAS A, B, C, D & E

**Addendum #3 - #199** **SHEET M2.1 – HVAC PIPING PLAN – FIRST LEVEL – AREA A**
Delete Drawing in its entirety and substitute M2.1 – HVAC PIPING PLAN – FIRST LEVEL – AREA A

**Addendum #3 - #200** **SHEET M2.2 – HVAC PIPING PLAN – FIRST LEVEL – AREAS AA & B**
Delete Drawing in its entirety and substitute M2.2 – HVAC PIPING PLAN – FIRST LEVEL – AREAS AA & B

**Addendum #3 - #201** **SHEET M2.3 – HVAC PIPING PLAN – FIRST LEVEL – AREA C**
Delete Drawing in its entirety and substitute M2.3 – HVAC PIPING PLAN – FIRST LEVEL – AREA C

**Addendum #3 - #202** **SHEET M2.5 – HVAC PIPING PLAN – FIRST LEVEL – AREAS E & F**
Delete Drawing in its entirety and substitute M2.5 – HVAC PIPING PLAN – FIRST LEVEL – AREAS E & F

**Addendum #3 - #203** **SHEET M2.6 – HVAC PIPING PLAN – FIRST LEVEL – AREA G**
Delete Drawing in its entirety and substitute M2.6 – HVAC PIPING PLAN – FIRST LEVEL – AREA G

**Addendum #3 - #204** **SHEET M2.7 – HVAC PIPING PLAN – FIRST LEVEL – AREA H**
Delete Drawing in its entirety and substitute M2.7 – HVAC PIPING PLAN – FIRST LEVEL – AREA H

**Addendum #3 - #205** **SHEET M2.8 – HVAC PIPING PLAN – FIRST LEVEL – AREA J**
Delete Drawing in its entirety and substitute M2.8 – HVAC PIPING PLAN – FIRST LEVEL – AREA J

**Addendum #3 - #206** **SHEET M2.9 – HVAC PIPING PLAN – FIRST LEVEL – AREA K**
Delete Drawing in its entirety and substitute M2.9 – HVAC PIPING PLAN – FIRST LEVEL – AREA K

**Addendum #3 - #207** **SHEET M2.12 – HVAC PIPING PLAN – FIRST LEVEL – AREA N**
Delete Drawing in its entirety and substitute M2.12 – HVAC PIPING PLAN – FIRST LEVEL – AREA N

**Addendum #3 - #208** **SHEET M2.13 – HVAC PIPING PLAN – SECOND LEVEL – AREA A**
Delete Drawing in its entirety and substitute M2.13 – HVAC PIPING PLAN – SECOND LEVEL – AREA A

**Addendum #3 - #209** **SHEET M2.14 – HVAC PIPING PLAN – SECOND LEVEL – AREA B**
Delete Drawing in its entirety and substitute M2.14 – HVAC PIPING PLAN – SECOND LEVEL – AREA B

**Addendum #3 - #210** **SHEET M2.15 – HVAC PIPING PLAN – SECOND LEVEL – AREA C**
Delete Drawing in its entirety and substitute M2.15 – HVAC PIPING PLAN – SECOND LEVEL – AREA C

**Addendum #3 - #211** **SHEET M2.16 – HVAC PIPING PLAN – SECOND LEVEL – AREA D**
Delete Drawing in its entirety and substitute M2.16 – HVAC PIPING PLAN – SECOND LEVEL – AREA D

**Addendum #3 - #212** **SHEET M2.17 – HVAC PIPING PLAN – SECOND LEVEL – AREAS E & F**
Delete Drawing in its entirety and substitute M2.17 – HVAC PIPING PLAN – SECOND LEVEL – AREAS E & F

**Addendum #3 - #213** **SHEET M2.18 – HVAC PIPING PLAN – SECOND LEVEL – AREA G**
Delete Drawing in its entirety and substitute M2.18 – HVAC PIPING PLAN – SECOND LEVEL – AREA G

**Addendum #3 - #214** **SHEET M2.24 – HVAC PIPING PLAN – SECOND LEVEL – AREA N**
Delete Drawing in its entirety and substitute M2.24 – HVAC PIPING PLAN – SECOND LEVEL – AREA N

**Addendum #3 - #215** **SHEET M5.2 – MECHANICAL SCHEDULES**
Delete Drawing in its entirety and substitute M5.2 – MECHANICAL SCHEDULES

**Addendum #3 - #216** **SHEET M5.3 – MECHANICAL SCHEDULES**
Delete Drawing in its entirety and substitute M5.3 – MECHANICAL SCHEDULES

**Addendum #3 - #217** **SHEET M5.4 – MECHANICAL SCHEDULES**
Delete Drawing in its entirety and substitute M5.4 – MECHANICAL SCHEDULES

**Addendum #3 - #218** **SHEET M5.5 – MECHANICAL SCHEDULES**
Delete Drawing in its entirety and substitute M5.5 – MECHANICAL SCHEDULES

**Addendum #3 - #219** **SHEET P0.6 – UNDERGROUND PLUMBING PLAN – AREA G**
Delete Drawing in its entirety and substitute P0.6 – UNDERGROUND PLUMBING PLAN – AREA G

**Addendum #3 - #220** **SHEET P1.4 – PLUMBING PLAN – FIRST LEVEL - AREA D**
Delete Drawing in its entirety and substitute P1.4 – PLUMBING PLAN – FIRST LEVEL - AREA D

**Addendum #3 - #221** **SHEET P1.5 – PLUMBING PLAN – FIRST LEVEL – AREAS E & F**
Delete Drawing in its entirety and substitute P1.5 – PLUMBING PLAN – FIRST LEVEL – AREAS E & F

**Addendum #3 - #222** **SHEET P1.6 – PLUMBING PLAN – FIRST LEVEL - AREA G**
Delete Drawing in its entirety and substitute P1.6 – PLUMBING PLAN – FIRST LEVEL - AREA G

**Addendum #3 - #223** **SHEET P1.15 – PLUMBING PLAN – SECOND LEVEL - AREA C**
Delete Drawing in its entirety and substitute P1.15 – PLUMBING PLAN –SECOND LEVEL - AREA C

**Addendum #3 - #224** **SHEET P2.1 – PLUMBING LARGE SCALE PLANS**
Delete Drawing in its entirety and substitute P2.1 – PLUMBING LARGE SCALE PLANS

**Addendum #3 - #225** **SHEET P2.2 – PLUMBING LARGE SCALE PLANS**
Delete Drawing in its entirety and substitute P2.2 – PLUMBING LARGE SCALE PLANS

**Addendum #3 - #226** **SHEET P2.3 – PLUMBING LARGE SCALE PLANS**
Delete Drawing in its entirety and substitute P2.3 – PLUMBING LARGE SCALE PLANS

**Addendum #3 - #227** **SHEET P2.4 – PLUMBING LARGE SCALE PLANS**
Delete Drawing in its entirety and substitute P2.4 – PLUMBING LARGE SCALE PLANS

**Addendum #3 - #228** **SHEET P3.1 – PLUMBING DETAILS**
Delete Drawing in its entirety and substitute P3.1 – PLUMBING DETAILS

**Addendum #3 - #229** **SHEET P3.2 – PLUMBING DETAILS**
Delete Drawing in its entirety and substitute P3.2 – PLUMBING DETAILS

**Addendum #3 - #230** **SHEET EL0.2- EMERG LIGHTING EGRESS PLAN-AREA 3**
Delete Drawing in its entirety and substitute EL0-2-EMERG LIGHTING EGRESS PLAN-AREA 3

**Addendum #3 - #231** **SHEET ES0.3 – SITE ELECTRICAL UTILITES PLAN – AREA 3**
Delete "(1)-3"UGC TO VFD VIA DISCONNECT" and substitute "(1)-3"UGC TO VFD IN ROOM N104E".
Delete "TO CIRCUIT LL1-??. SEE POWER PLAN SHEET, AREA ?" and substitute "TO PANEL LM1 IN ROOM M100BS." on grandstand duplex receptacle. Add "WP" to receptacle.

**Addendum #3 - #232** **SHEET E1.1 – LIGHTING PLAN – FIRST FLOOR – AREA A**
Delete Drawing in its entirety and substitute E1-1 – LIGHTING PLAN – FIRST FLOOR – AREA A

**Addendum #3 - #233** **SHEET E1.5 – LIGHTING PLAN – FIRST FLOOR – AREA E & F**
Delete Drawing in its entirety and substitute E1-5 – LIGHTING PLAN – FIRST FLOOR – AREA E & F

**Addendum #3 - #234** **SHEET E1.7 – LIGHTING PLAN – FIRST FLOOR – AREA H**
Delete Drawing in its entirety and substitute E1-7 – LIGHTING PLAN – FIRST FLOOR – AREA H.

**Addendum #3 - #235** **SHEET E1.13 – LIGHTING PLAN – SECOND FLOOR – AREA A**
Delete Drawing in its entirety and substitute E1-13 – LIGHTING PLAN – SECOND FLOOR – AREA A.

**Addendum #3 - #236** **SHEET E1.19 LIGHTING PLAN – SECOND FLOOR – AREA H**
Delete Drawing in its entirety and substitute E1-19 – LIGHTING PLAN – SECOND FLOOR – AREA H.

**Addendum #3 - #237** **SHEET E1.20 LIGHTING PLAN – TECH LEVEL – AREA H**
Delete dimmer channel number "250E" on Type TA2 fixtures and substitute "273E".

**Addendum #3 - #238** **SHEET E1.21 LIGHTING PLAN – SECOND FLOOR – AREA J**
Delete Drawing in its entirety and substitute E1-21 – LIGHTING PLAN – SECOND FLOOR – AREA J.

**Addendum #3 - #239** **SHEET E1.23 LIGHTING PLAN – SECOND FLOOR – AREA M & PRESS BOX**
Delete Drawing in its entirety and substitute E1-23 – LIGHTING PLAN – SECOND FLOOR – AREA M & PRESS BOX.

**Addendum #3 - #240** **SHEET E1.24 LIGHTING PLAN – SECOND FLOOR – AREA N**
Delete Drawing in its entirety and substitute E1-24 – LIGHTING PLAN – SECOND FLOOR – AREA N.

**Addendum #3 - #241** **SHEET E2.2 POWER PLAN – FIRST FLOOR – AREA AA & B**
Delete Drawing in its entirety and substitute E2-2 – POWER PLAN – FIRST FLOOR – AREA AA & B.

**Addendum #3 - #242** **SHEET E2.7 POWER PLAN – FIRST FLOOR – AREA H**
Delete Drawing in its entirety and substitute E2-7 – POWER PLAN – FIRST FLOOR – AREA H.

**Addendum #3 - #243** **SHEET E2.8 POWER PLAN – FIRST FLOOR – AREA K**
Corridor J107C: Delete mech unit label “SF-J101” and substitute label “SF-J102”.

**Addendum #3 - #244** **SHEET E2.9 POWER PLAN – FIRST FLOOR – AREA J**
Delete Drawing in its entirety and substitute E2-9 – POWER PLAN – FIRST FLOOR – AREA K.

**Addendum #3 - #245** **SHEET E2.12 POWER PLAN – FIRST FLOOR – AREA N**
Room N115: Add Mech unit tag and label “UH-N101” in Northwest corner.

**Addendum #3 - #246** **SHEET 2.19 POWER PLAN – SECOND FLOOR – AREA H**
Delete Drawing in its entirety and substitute E2-19 – POWER PLAN – FIRST FLOOR – AREA H.

**Addendum #3 - #247** **SHEET E2.20 POWER PLAN – TECH LEVEL – AREA H**
Delete Drawing in its entirety and substitute E2-20 – POWER PLAN – FIRST FLOOR – AREA H.

**Addendum #3 - #248** **SHEET E2.26 POWER PLAN – ROOF – AREAS AA - E**
Delete Drawing in its entirety and substitute E2-26 – POWER PLAN – ROOF – AREAS AA - E.

**Addendum #3 - #249** **SHEET E3.1 SPECIAL SYSTEMS PLAN – FIRST FLOOR – AREA E**
Delete (2) fire alarm relays on FCS hoods.

**Addendum #3 - #250** **SHEET E3.18 SPECIAL SYSTEMS PLAN – SECOND FLOOR – AREA G**
Delete Drawing in its entirety and substitute E3-18 – SPECIAL SYSTEMS PLAN – SECOND FLOOR – AREA G.

**Addendum #3 - #251** **SHEET E4.1 LARGE-SCALE POWER PLANS**
Delete Drawing in its entirety and substitute E4-1 – LARGE-SCALE POWER PLANS.

**Addendum #3 - #252** **SHEET E4.2 LARGE-SCALE POWER PLANS**
Delete Drawing in its entirety and substitute E4-2 – LARGE-SCALE POWER PLANS.

**Addendum #3 - #253** **SHEET E4.4 LARGE-SCALE POWER PLAN WOODS AND METALS**
Room A120S: Add Mech unit tag and label “UH-A101” in Northeast corner.
Room A119: Add Mech unit tag and label “UH-A102” in Northeast corner.

**Addendum #3 - #254** **SHEET E4.6 LARGE-SCALE POWER PLAN AUTOS AND SMALL ENGINES**
Delete Drawing in its entirety and substitute E4-6 – LARGE-SCALE POWER PLAN AUTOS AND SMALL ENGINES.

**Addendum #3 - #255** **SHEET E4.8 LARGE-SCALE SPECIAL SYSTEMS PLANS**
Delete Drawing in its entirety and substitute E4-8 – LARGE-SCALE SPECIAL SYSTEMS PLANS.

**Addendum #3 - #256** **SHEET E4.9 LARGE-SCALE SPECIAL SYSTEMS PLANS**
Delete Drawing in its entirety and substitute E4-9 – LARGE-SCALE SPECIAL SYSTEMS PLANS.

**Addendum #3 - #257** **SHEET E5.1 ELECTRICAL ONE-LINE DIAGRAM**
Delete Drawing in its entirety and substitute E5-1 – ELECTRICAL ONE-LINE DIAGRAM.

**Addendum #3 - #258** **SHEET E5.2 ELECTRICAL ONE-LINE DIAGRAM**
Delete Drawing in its entirety and substitute E5-2 – ELECTRICAL ONE-LINE DIAGRAM.

**Addendum #3 - #259** **SHEET E5.3 ELECTRICAL ONE-LINE DIAGRAM**
Delete Drawing in its entirety and substitute E5-3 – ELECTRICAL ONE-LINE DIAGRAM.

**Addendum #3 - #260** **SHEET E6.2 ELECTRICAL DETAILS**
Delete detail 51 in its entirety.

**Addendum #3 - #261** **SHEET E7.1 LIGHTING SCHEDULES**
Delete Drawing in its entirety and substitute E7-1 – LIGHTING SCHEDULES.

**Addendum #3 - #262** **SHEET E7.2 LIGHTING SCHEDULES**
Delete Drawing in its entirety and substitute E7-2 – LIGHTING SCHEDULES.

**Addendum #3 - #263** **SHEET E7.3 LIGHTING SCHEDULES**
Delete Drawing in its entirety and substitute E7-3 – LIGHTING SCHEDULES.

**Addendum #3 - #264** **SHEET E7.4 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-4 – PANELBOARD SCHEDULES.

**Addendum #3 - #265** **SHEET E7.8 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-8 – PANELBOARD SCHEDULES.

**Addendum #3 - #266** **SHEET E7.10 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-10 – PANELBOARD SCHEDULES.

**Addendum #3 - #267** **SHEET E7.11 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-11 – PANELBOARD SCHEDULES.

**Addendum #3 - #268** **SHEET E7.12 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-12 – PANELBOARD SCHEDULES.

**Addendum #3 - #269** **SHEET E7.13 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-13 – PANELBOARD SCHEDULES.

**Addendum #3 - #270** **SHEET E7.14 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-14 – PANELBOARD SCHEDULES.

**Addendum #3 - #271** **SHEET E7.15 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-15 – PANELBOARD SCHEDULES.

**Addendum #3 - #272** **SHEET E7.16 PANELBOARD SCHEDULES**
Delete Drawing in its entirety and substitute E7-16 – PANELBOARD SCHEDULES.

**Addendum #3 - #273** **SHEET E7.21 MECH EQUIPMENT ELECTRICAL SCHEDULES**
Delete Drawing in its entirety and substitute E7-21 – MECH EQUIPMENT ELECTRICAL SCHEDULES.

**Addendum #3 - #274** **SHEET E7.22 MECH EQUIPMENT ELECTRICAL SCHEDULES**
Delete Drawing in its entirety and substitute E7-22 – MECH EQUIPMENT ELECTRICAL SCHEDULES.

**Addendum #3 - #275** **SHEET L1.1 – SITE LANDSCAPING PLAN – AREA 1**

A. At the front entry landscaping, at the three trees labeled with "1-PBBA" delete "1-PBBA" and substitute "1-PPBA."
B. At the northwest corner of the site, add notes regarding Base Bid and Alternate landscaping, and associated boundary lines, as shown on Attachment Nos. L1.1-1 and L1.1-2.
C. Near the front drop-off driveway loop, in the parking lot island, add a tree symbol and reference to "1-AR" as shown on Attachment No. L1.1-3.

**Addendum #3 - #276** **SHEET L1.2 – SITE LANDSCAPING PLAN – AREA 2**

A. At the northeast corner of the site, add notes regarding Base Bid landscaping, and associated boundary lines and add layout of signage landscaping, as shown on Attachment Nos. L1.2-1 and L1.2-2.
B. Delete "Site Landscaping Plan Keyed Notes" and "Site Landscaping Notes and Legend" and replace with new Keyed Notes, Notes and Legend as shown on Attachment No. L1.2-3.
C. Delete "Plant Schedule" in its entirety and substitute New Plant Schedule as shown on Attachment No. L1.2-4.

**Addendum #3 - #277** **SHEET L1.5 – ENTRY PLAZA LANDSCAPE PLAN**

A. At the front entry landscaping, at the three trees labeled with "1-PBBA" delete "1-PBBA" and substitute "1-PPBA."
B. Detail 51/L1.5 "Entry Plaza Landscape Plan." Delete the notes entirely and substitute new notes as shown on Attachment No. L1.5-1.

**Addendum #3 - #278** **SHEET L1.6 – DROP-OFF MEDIAN LANDSCAPE PLAN**

A. Detail 41/L1.6 "Drop-Off Median Landscape Plan." Add plan notes in its entirety as shown on Attachment No. L1.6-1.

**Addendum #3 - #279** **SHEET L1.7 – EAST ENTRANCE MEDIAN LANDSCAPE PLAN**

A. Details 31/L1.7 and 51/L1.7 "East Entrance Median Landscape Plan – West and East." Delete the notes entirely and substitute new notes as shown on Attachment No. L1.7-1.
B. Detail 24/L1.7 "Entry Signage Landscape Plan." Add Detail as shown on Attachment No. L1.7-1.

**Addendum #3 - #280** **SHEET L2.1 – SITE IRRIGATION, SOD AND SEEDING PLAN – AREA 1**

A. At the northwest corner of the site, add notes regarding Base Bid and Alternate seeding, irrigation and irrigation sleeves, and associated boundary lines, as shown on Attachment Nos. L2.1-1 through L2.1-3.

**Addendum #3 - #281** **SHEET L2.2 – SITE IRRIGATION, SOD AND SEEDING PLAN – AREA 2**

A. At the northeast corner of the site, modify the hatching at the location of the entry sign as shown on Attachment No. L2.2-1.
B. At the "Site Irrigation, Sod and Seeding Plan Notes and Legend" modify Note 3 and notes within the Legend as shown on Attachment No. L2.2-1.

## SECTION 07 8123

## INTUMESCENT MASTIC FIREPROOFING

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

A. Thin-film intumescent fire-resistive coatings for exposed structural steel.

B. Protective and/or decorative topcoats.

#### 1.2 RELATED REQUIREMENTS

A. Section 09 9000 - Painting and Coating: Field-applied paints matching intumescent fireproofing.

#### 1.3 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2010b.

B. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2011.

C. SSPC-PA 2 - Measurement of Dry Coating Thickness with Magnetic Gages; 2004.

#### 1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittals procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Performance characteristics and test results.
   2. Preparation instructions and recommendations.
   3. Storage and handling requirements and recommendations.
   4. Installation methods.

C. Verification Samples: For each thickness, color, sheen, and finish required, samples not less than 4 inches square on steel substrate, illustrating finished appearance.

D. Test Reports: Published fire-resistive designs for structural elements of the types required for the project, indicating hourly ratings of each assembly.

E. Certificates: Certify that intumescent fireproofing provided for this project meets or exceeds specified requirements in all respects.

#### 1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company that specializes in manufacturing the type of products specified, with minimum of 10 years of documented experience.

B. Installer Qualifications: Approved, certified, or supervised by manufacturer of intumescent fireproofing, with not less than 5 years of documented experience.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship. Approved mock-up will serve as a standard of comparison for subsequent work of this section.
   1. Finish at least 100 sq ft of steel in areas designated by Architect.
   2. Evaluate mock-up for compliance with specified requirements, including thickness and finish texture.
   3. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
   4. Refinish mock-up area as required to produce acceptable work.
   5. Approved mock-up may remain as part of the project.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers with identification labels and testing agency markings intact and legible.

B. Store products in manufacturer's unopened packaging until ready for installation.
   1. Store at temperatures not less than 50 degrees F in dry, protected area.
   2. Protect from freezing, and do not store in direct sunlight.
   3. Dispose of any materials that have come into contact with contaminants of any kind prior to application.

C. Dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

## 1.7 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
   1. Provide temporary enclosures as required to control environmental conditions.
   2. Do not apply intumescent fireproofing when ambient temperatures are below 50 degrees F without specific approval from manufacturer.
   3. Maintain relative humidity between 40 and 60 percent in areas of application.
   4. Maintain ventilation in enclosed spaces during application and for not less than 72 hours afterward.

# PART 2 PRODUCTS

## 2.1 MANUFACTURERS

A. Intumescent Fireproofing:
   1. Albi Manufacturing Division of StanChem Inc : www.albi.com.
   2. Carboline Company: www.carboline.com.
   3. Isolatek International: www.isolatek.com.
   4. Substitutions: See Section 01 6000 - Product Requirements.

## 2.2 SYSTEM REQUIREMENTS

A. Fireproofing: Provide intumescent thin-film fire-resistive coating systems tested by an independent testing agency in accordance with ASTM E119 and acceptable to authorities having jurisdiction.

B. Structural Steel Beams: Fire resistance rating of 2 hours.

## 2.3 MATERIALS

A. Fire-Resistive Coating System: Thin film intumescent coating system for the fire protection of structural steel.
   1. Surface Burning Characteristics, when tested in accordance with ASTM E84:
      a. Flame Spread Index: 25, maximum.
      b. Smoke Developed Index: 50, maximum.
   2. For Interior Use:
      a. Basis of Design: Carboline Company; Nullifire S606.
      b. Substitutions: See Section 01 6000 - Product Requirements.

B. Protective and Decorative Top Coating: As recommended by fireproofing manufacturer for exposure conditions.
   1. Color and Gloss: See **Materials List** in Drawings.
   2. Coordinate with paint specified in Section 09 9000 for color and sheen match between steel coated with intumescent coating and adjacent painted surfaces.

C. Sealers and Primer: As required by tested and listed assemblies, and as recommended by fireproofing manufacturer to suit specific substrate conditions.

## PART 3 EXECUTION

### 3.1 EXAMINATION

A. Examine substrates to determine if they are in satisfactory condition to receive intumescent fireproofing. Verify that they are clean and free of oil, grease, incompatible primers, or other foreign substances capable of impairing bond to fireproofing system.

B. Do not begin installation until substrates have been properly prepared. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

A. Thoroughly clean surfaces to receive fireproofing.

B. Repair substrates to remove surface imperfections that could affect uniformity of texture and thickness of fireproofing system. Remove minor projections and fill voids that could telegraph through the finished work.

C. Cover or otherwise protect other work that might be damaged by fallout or overspray of fireproofing system. Provide temporary enclosures as necessary to confine operations and maintain required environmental conditions.

### 3.3 INSTALLATION

A. Comply with manufacturer's instructions for particular conditions of installation in each case.

B. Apply manufacturer’s recommended primer to required coating thickness.

C. Apply fireproofing to full thickness over entire area of each substrate to be protected. Apply coats at manufacturer’s recommended rate to achieve dry film thickness required for fire resistance ratings designated for each condition.

D. Apply intumescent fireproofing by spraying to maximum extent possible. If necessary, complete coverage by roller application or other method acceptable to manufacturer.

E. Achieve uniform finished appearance complying with approved mock-up.

### 3.4 FIELD QUALITY CONTROL

A. Perform field inspection and testing in accordance with Section 01 4000.
   1. Arrange for testing of installed intumescent fireproofing by an independent testing laboratory using magnetic thickness gage, in accordance with SSPC-PA 2.
   2. Submit test reports to Architect.

B. Repair or replace fireproofing at locations where test results indicate fireproofing does not meet specified requirements.

### 3.5 CLEANING

A. Immediately after installation of fireproofing in each area, remove overspray and fallout from other surfaces and clean soiled areas.

### 3.6 PROTECTION

A. Protect installed intumescent fireproofing from damage due to subsequent construction activities, so fireproofing is without damage or deterioration at time of Substantial Completion.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

**END OF SECTION**

# SECTION 212200

# CLEAN-AGENT FIRE EXTINGUISHING SYSTEMS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:
   1. Piping and piping specialties.
   2. Extinguishing agent containers.
   3. Extinguishing agent.
   4. Detection and alarm devices.
   5. Control and alarm panels.
   6. Accessories.
   7. Connection devices for and wiring between system components.
   8. Connection devices for power and integration into building's fire-alarm system.

### 1.3 DEFINITIONS

A. ATS: Acceptance Testing Specifications.

B. EPO: Emergency Power Off.

### 1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For clean-agent fire-extinguishing system signed and sealed by a qualified professional engineer.
   1. Include plans, elevations, sections, details, and attachments to other work.
   2. Include design calculations.
   3. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
   4. Wiring Diagrams: For power, signal, and control wiring.

C. Delegated-Design Submittal: For clean-agent fire-extinguishing system signed and sealed by the qualified professional engineer.
   1. Indicate compliance with performance requirements and design criteria, including analysis data.
   2. Include design calculations for weight, volume, and concentration of extinguishing agent required for each hazard area.

3. Indicate the Following on Reflected Ceiling Plans:
    a. Ceiling penetrations and ceiling-mounted items.
    b. Extinguishing-agent containers if mounted above floor, piping and discharge nozzles, detectors, and accessories.
    c. Method of attaching hangers to building structure.
    d. Other ceiling-mounted items including light fixtures, diffusers, grilles, speakers, sprinklers, and access panels.
4. Indicate the Following on Occupied Work Area Plans:
    a. Controls and alarms.
    b. Extinguishing-agent containers, piping and discharge nozzles if mounted in space, detectors, and accessories.
    c. Equipment and furnishings.
5. Indicate the Following on Access Floor Space Plans:
    a. Extinguishing-agent containers, piping and discharge nozzles, detectors, and accessories.
    b. Method of supporting piping.
6. Indicate the Following on Ceiling Plans:
    a. Extinguishing-agent containers, piping and discharge nozzles, detectors, and accessories.
    b. Method of supporting piping.
    c. Other equipment located in the ceiling space that is being protected including sprinkler piping, HVAC equipment, raceways, or conduit.

## 1.5 INFORMATIONAL SUBMITTALS

A. Permit Approved Drawings: Working plans, prepared according to NFPA 2001, that have been approved by authorities having jurisdiction. Include design calculations.

## 1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For special agent system to include in emergency, operation, and maintenance manuals.

## 1.7 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents. Deliver extra materials to Owner.
    1. Detection Devices: Not less than 20 percent of amount of each type installed.
    2. Container Valves: Not less than 10 percent of amount of each size and type installed.
    3. Nozzles: Not less than 20 percent of amount of each type installed.
    4. Extinguishing Agent: Not less than 100 percent of amount installed in largest hazard area. Include pressure-rated containers with valves.

## 1.8 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. FM Global Compliance: Provide components that are FM Approved and that are listed in FM Global's "Approval Guide."

C. UL Compliance: Provide equipment listed in UL's "Fire Protection Equipment Directory."

## PART 2 - PRODUCTS

### 2.1 CLEAN-AGENT SYSTEMS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Ansul Incorporated; Tyco International.
   2. Fike Corporation.
   3. Pyro-Chem; Tyco Fire Suppression & Building Products.
   4. Siemens Building Technologies, Inc.

B. Description: Clean-agent fire-extinguishing system shall be an engineered system for total flooding of the hazard area including the room cavity above the ceiling, below the ceiling, and below the raised floor. System includes separate zones above and below the ceiling and beneath the raised floor. If smoke is detected below the raised floor, extinguishing agent shall be discharged in the underfloor zone only. If smoke is detected below the ceiling, extinguishing agent shall be discharged in zones above and below the ceiling and below the floor. If smoke is detected above the ceiling, extinguishing agent shall be discharged in the zone above the ceiling only.

C. Delegated Design: Design clean-agent fire-extinguishing system and obtain approval from authorities having jurisdiction. Design system for Class A, B, and C fires as appropriate for areas being protected, and include safety factor. Use clean agent indicated and in concentration suitable for normally occupied areas.

D. Performance Requirements: Discharge HFC 227ea within 10 seconds and maintain 7.1 percent concentration by volume at 70 deg F (21 deg C) for 10-minute holding time in hazard areas.
   1. HFC 227ea concentration in hazard areas greater than 9.0 percent immediately after discharge or less than 5.8 percent throughout holding time will not be accepted without written authorization from Owner and authorities having jurisdiction.
   2. System Capabilities: Minimum 620-psig (4278-kPa) calculated working pressure and 360-psig (2484-kPa) initial charging pressure.

E. Verified Detection: Devices located in single zone. Sound alarm on activating single-detection device, and discharge extinguishing agent on actuating second-detection device.

F. System Operating Sequence: System shall be cross-zoned, air-sampling detectors and photoelectric detectors reporting to a fully programmable microprocessor-based control panel programmed to operate as follows:
   1. If one photoelectric detector and air-sampling detector reaches the third detection level (Fire 1), agent discharge will be initiated as described for the third detection level (Fire 1) below.
   2. Air-Sampling System:
      a. First Detection Level (Alert): Mild audible and visual indication on annunciator panel. Strobe lights flash slowly in the protected area.
      b. Second Detection Level (Action): Strong audible and visual indication on annunciator panel. Strobe lights flash rapidly in the protected area.

c. Third Detection Level (Fire 1): Strong audible and visual indication on annunciator panel. Energize horn(s), bell(s), and strobe light(s) in the protected area and outside entry doors. Shut down air-conditioning and ventilating systems serving the protected area, and close doors in the protected area. Send signal to fire-alarm system, initiate 30-second time delay for extinguishing-agent discharge, and discharge extinguishing agent. At agent discharge, terminate power to equipment in the protected area, and release preaction valve to allow water flow to sprinkler system.

d. Fourth Detection Level (Fire 2): Same as Fire 1.

G. Manual stations shall immediately discharge extinguishing agent when activated.

H. EPO: Will terminate power to protected equipment immediately on actuation.

I. Low-Agent Pressure Switch: Initiate trouble alarm if sensing less than set pressure.

J. Power Transfer Switch: Transfer from normal to stand-by power source.

## 2.2 PIPING MATERIALS

A. See "HFC 227ea Agent Piping Applications" Article for applications of pipe, tube, fitting, and joining materials.

B. Piping, Valves, and Discharge Nozzles: Comply with types and standards listed in NFPA 2001, Section "Distribution," for charging pressure of system.

## 2.3 PIPE AND FITTINGS

A. Steel Pipe: ASTM A 53/A 53M, Type S, Grade B or ASTM A 106/A 106M, Grade A; Schedule 40, Schedule 80, and Schedule 160, seamless steel pipe.

1. Threaded Fittings:
   a. Malleable-Iron Fittings: ASME B16.3, Class 300.
   b. Flanges and Flanged Fittings: ASME B16.5, Class 300 unless Class 600 is indicated.
   c. Fittings Working Pressure: 620 psig (4278 kPa) minimum.
   d. Flanged Joints: Class 300 minimum.
2. Forged-Steel Welding Fittings: ASME B16.11, Class 3000, socket pattern.
3. Steel, Grooved-End Fittings: FM Approved and NRTL listed, ASTM A 47/A 47M malleable iron or ASTM A 536 ductile iron, with dimensions matching steel pipe and ends factory grooved according to AWWA C606.

B. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.

1. ASME B16.21, nonmetallic, flat, asbestos-free, 1/8-inch (3.2-mm) maximum thickness unless thickness or specific material is indicated.

C. Flange Bolts and Nuts: ASME B18.2.1, carbon steel.

D. Welding Filler Metals: Comply with AWS D10.12M/D10.12 for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.

E. Steel, Keyed Couplings: UL 213, AWWA C606, approved or listed for clean-agent service, and matching steel-pipe dimensions. Include ASTM A 536, ductile-iron housing, rubber gasket, and steel bolts and nuts.

## 2.4 VALVES

A. General Valve Requirements:
   1. UL listed or FM Approved for use in fire-protection systems.
   2. Compatible with type of clean agent used.

B. Container Valves: With rupture disc or solenoid and manual-release lever, capable of immediate and total agent discharge and suitable for intended flow capacity.

C. Valves in Sections of Closed Piping and Manifolds: Fabricate to prevent entrapment of liquid, or install valve and separate pressure relief device.

D. Valves in Manifolds: Check valve; installed to prevent loss of extinguishing agent when container is removed from manifold.

## 2.5 EXTINGUISHING-AGENT CONTAINERS

A. Description: Steel tanks complying with ASME Boiler and Pressure Vessel Code: Section VIII, for unfired pressure vessels. Include minimum working-pressure rating that matches system charging pressure, valve, pressure switch, and pressure gage.
   1. Finish: Manufacturer's standard color, enamel or epoxy paint.
   2. Manifold: Fabricate with valves, pressure switches, and connections for multiple storage containers, as indicated.
   3. Storage-Tank Brackets: Factory- or field-fabricated retaining brackets consisting of steel straps and channels; suitable for container support, maintenance, and tank refilling or replacement.

## 2.6 FIRE-EXTINGUISHING CLEAN AGENT

A. HFC 227ea Clean Agent: Heptafluoropropane.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. DuPont.
      b. Great Lakes Chemical Corporation.

## 2.7 DISCHARGE NOZZLES

A. Equipment manufacturer's standard one-piece brass or aluminum alloy of type, size, discharge pattern, and capacity required for application.

## 2.8 CONTROL PANELS

A. Description: FM Approved or NRTL listed, including equipment and features required for testing, supervising, and operating fire-extinguishing system.

B. Power Requirements: 120/240-V ac; with electrical contacts for connection to system components and fire-alarm system, and transformer or rectifier as needed to produce power at voltage required for accessories and alarm devices.

C. Enclosure: NEMA ICS 6, Type 1, enameled-steel cabinet.
   1. Mounting: Recessed flush with surface.

D. Supervised Circuits: Separate circuits for each independent hazard area.
   1. Detection circuits equal to the required number of zones, or addressable devices assigned to the required number of zones.
   2. Manual pull-station circuit.
   3. Alarm circuit.
   4. Release circuit.
   5. Abort circuit.
   6. EPO circuit.

E. Control-Panel Features:
   1. Automatic switchover to standby power at loss of primary power.
   2. Storage container, low-pressure indicator.
   3. Service disconnect to interrupt system operation for maintenance with visual status indication on the annunciator panel.

F. Annunciator Panel: Graphic type showing protected, hazard-area plans, as well as locations of detectors and abort, EPO, and manual stations. Include lamps to indicate device-initiating alarm, electrical contacts for connection to control panel, and stainless-steel or aluminum enclosure.

G. Standby Power: Sealed lead calcium batteries with capacity to operate system for 24 hours and alarm for minimum of 15 minutes. Include automatic battery charger that has a varying charging rate between trickle and high depending on battery voltage, and that is capable of maintaining batteries fully charged. Include manual voltage control, dc voltmeter, dc ammeter, electrical contacts for connection to control panel, automatic transfer switch, and suitable enclosure.

## 2.9 DETECTION DEVICES

A. General Requirements for Detection Devices:
   1. Comply with NFPA 2001, NFPA 72, and UL 268.
   2. 24-V dc, nominal.

B. Ionization Detectors: Dual-chamber type, having sampling and referencing chambers, with smoke-sensing element.

C. Photoelectric Detectors: LED light source and silicon photodiode receiving element.

D. Remote Air-Sampling Detector System: Includes air-sampling pipe network, a laser-based photoelectric detector, a sample transport fan, and a control unit.
   1. Pipe Network: CPVC tubing connects control unit with calibrated sampling holes.
   2. Smoke Detector: Particle-counting type with continuous laser beam. Sensitivity adjustable to a minimum of four preset values.
   3. Sample Transport Fan: Centrifugal type, creating a minimum static pressure of 0.05-inch wg (12.5 Pa) at all sampling ports.
   4. Control Unit: Provides same system power supply, supervision, and alarm features as specified for the control panel plus separate trouble indication for airflow and detector problems.

E. Signals to the Central Fire Alarm Control Panel: Any type of local system trouble is reported to the central fire alarm control panel as a composite "trouble" signal. Alarms on each system zone are individually reported to the central fire alarm control panel as separately identified zones.

2.10 MANUAL STATIONS

A. General Description: Surface FM Approved or NRTL listed, with clear plastic hinged cover, 120-V ac or low voltage compatible with controls. Include contacts for connection to control panel.

B. Manual Release: "MANUAL RELEASE" caption, and red finish. Unit can manually discharge extinguishing agent with operating device that remains engaged until unlocked.

2.11 SWITCHES

A. Description: FM Approved or NRTL listed, where available, 120-Vac or low voltage compatible with controls. Include contacts for connection to control panel.
1. Low-Agent Pressure Switches: Pneumatic operation.
2. Power Transfer Switches: Key-operation selector, for transfer of release circuit signal from main supply to reserve supply.

2.12 ALARM DEVICES

A. Description: Listed and labeled by an NRTL or FM Approved, low voltage, and surface mounting. Comply with requirements in Section 283111 "Digital, Addressable Fire-Alarm System" or Section 283112 "Zoned (DC Loop) Fire-Alarm System" for alarm and monitoring devices.

B. Bells: Minimum 6-inch (150-mm) diameter.

C. Horns: 90 to 94 dBA.

D. Strobe Lights: Translucent lens, with "FIRE" or similar caption.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with hazard-area leakage requirements, installation tolerances, and other conditions affecting work performance.

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

3.2 HFC 227ea agent PIPING APPLICATIONS

A. Flanged pipe and fittings and flanged joints may be used to connect to specialties and accessories and where required for maintenance.

B. NPS 2 (DN 50) and Smaller: Schedule 40, steel pipe; malleable-iron threaded fittings; and threaded joints.

C. NPS 2-1/2 (DN 65) and Larger: Schedule 40, steel pipe; forged-steel welding fittings; and welded joints.

## 3.3 CLEAN-AGENT PIPING INSTALLATION

A. Install clean-agent extinguishing piping and other components level and plumb, according to manufacturers' written instructions.

B. Grooved Piping Joints: Groove pipe ends according to AWWA C606 dimensions. Assemble grooved-end steel pipe and steel, grooved-end fittings with steel, keyed couplings and lubricant according to manufacturer's written instructions.

C. Install extinguishing-agent containers anchored to substrate.

D. Install pipe and fittings, valves, and discharge nozzles according to requirements listed in NFPA 2001, Section "Distribution."
   1. Install valves designed to prevent entrapment of liquid, or install pressure relief devices in valved sections of piping systems.
   2. Support piping using supports and methods according to NFPA 13.
   3. Install control panels, detection system components, alarms, and accessories, complying with requirements of NFPA 2001, Section "Detection, Actuation, and Control Systems," as required for supervised system application.

## 3.4 CONNECTIONS

A. Where installing piping adjacent to equipment, allow space for service and maintenance.

B. Connect electrical devices to control panel and to building's fire-alarm system. Electrical power, wiring, and devices are specified in Section 283111 "Digital, Addressable Fire-Alarm System" or Section 283112 "Zoned (DC Loop) Fire-Alarm System."

## 3.5 IDENTIFICATION

A. Identify system components and equipment. Comply with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

B. Identify piping, extinguishing-agent containers, other equipment, and panels according to NFPA 2001.

C. Install signs at entry doors for protected areas to warn occupants that they are entering a room protected with a clean-agent fire-extinguishing system.

D. Install signs at entry doors to advise persons outside the room the meaning of the horn(s), bell(s), and strobe light(s) outside the protected space.

## 3.6 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

B. Tests and Inspections:
   1. After installing clean-agent extinguishing piping system and after electrical circuitry has been energized, test for compliance with requirements.
   2. Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Sections "Inspection and Test Procedures" and "System Function Tests." Certify compliance with test parameters.
   3. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
   4. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation. Remove malfunctioning units, replace with new units, and retest.
   5. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

C. Units will be considered defective if they do not pass tests and inspections.

D. Prepare test and inspection reports.

## 3.7 CLEANING

A. Each pipe section shall be cleaned internally after preparation and before assembly by means of swabbing, using a suitable nonflammable cleaner. Pipe network shall be free of particulate matter and oil residue before installing nozzles or discharge devices.

## 3.8 SYSTEM FILLING

A. Preparation:
   1. Verify that piping system installation is completed and cleaned.
   2. Check for complete enclosure integrity.
   3. Check operation of ventilation and exhaust systems.

B. Filling Procedures:
   1. Fill extinguishing-agent containers with extinguishing agent, and pressurize to indicated charging pressure.
   2. Install filled extinguishing-agent containers.
   3. Energize circuits.
   4. Adjust operating controls.

## 3.9 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain clean-agent fire-extinguishing systems.

END OF SECTION 212200

## SECTION 22 1113

## WATER MAINS

## PART 1 – GENERAL

### 1.1 SCOPE

A. This specification is intended to define and/or limit the required quality standards of the materials furnished and the workmanship performed in connection with herein specified items of piping, fittings, valves and hydrants with all the required accessories and/or appurtenances, including in part: all labor, tools, materials and equipment for the complete work of this project which are in accordance with this specification and the applicable drawings.

### 1.2 GENERAL

A. The Contractor shall remove paving, as may be required, excavate the trenches and pits to the required dimensions; excavate bell holes; and maintain all streets and bridges for traffic control; sheet, brace and support the adjoining ground or structures where necessary; handle all drainage or groundwater; provide barricades guards and warning lights; lay and test pipe, castings, fittings, valves, hydrants and accessories; backfill and consolidate the trenches and pits; restore the roadway surface unless otherwise stipulated; supply required or remove surplus excavated material; and clean the site after the work.

Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, complete and compatible installation shall be furnished and installed as part of this work. The drawings show sizes and general arrangement of all pipes and appurtenances. Responsibility for handling and/or cutting exact lengths of pipe for proper make-up rests with the Contractor.

The work shall comply with the current requirements of the American Water Works Association (AWWA). Water distribution system installation must comply with State of Nebraska Department of Health and Human Services Standards.

## PART 2 - MATERIALS

### 2.1 WATER MAIN MATERIAL

A. DUCTILE IRON PIPE – All mechanical joint, push-on, or restrained ductile iron pipe (D.I.P.) shall be thickness Class 50 for 16 inch diameter and smaller and pressure Class 350 for pipe larger than 16 inch diameter, meeting AWWA Standard Specifications C-150 and C-151. All ductile iron pipes shall have a standard thickness interior cement lining conforming to the requirements of AWWA Standard Specification C-104 and an exterior coating of bituminous material approximately one mil thick except for exposed pipe scheduled to be painted.

All joints shall be either push-on type with single vulcanized rubber gaskets or mechanical (gland type), unless otherwise specified, meeting AWWA Standard Specification C-111. Vulcanized rubber gaskets shall be visually free of defects and areas of foreign materials. When indicated, flanged joints shall be cement lined and shall conform to AWWA Standard Specification C-115. Gaskets shall be 1/8 inch thick.

Polyethylene Encasement for gray and ductile iron piping shall be furnished and installed according to AWWA C-105, Methods A or B. Repair all rips, punctures or other damage to the polyethylene with adhesive tape or short length of polyethylene tube cut open wrapped around the pipe and secured in place. All fittings and valves shall also be covered and wrapped in accordance with manufacturer's instructions.

B. POLYVINYL CHLORIDE (PVC) PLASTIC PIPE - The pipe shall meet the requirements of AWWA Standard Specification C-900, with a dimension ratio of 18. The pipe shall be joined by means of a rubber gasket-integral bell joint. Gaskets will conform to the requirements of ASTM F-477. Joints for plastic pressure pipes shall conform to ASTM D-3139 using flexible elastomeric seals. All pipe shall have a gasket bell section at least as strong as the pipe wall. The outside pipe diameters shall be cast iron pipe equivalent. Pipe lengths shall be nominal 20 ft. (6.10 m) with no more than 15% of footage supplied by the manufacturer in random lengths of not less than 10 feet (3.05 m) long. If pipe is to be stored for periods longer than 90 days, the pipe must be covered in a manner approved by the Engineer.

C. FITTINGS – Fittings shall be mechanical joint conforming to AWWA Standard Specification C-153, C-104 and C-111. Fittings shall be formed from ductile iron and rated for 350 psi working pressure. Caps, plugs and miscellaneous fittings shall be provided conforming to AWW Standard Specification C-110. Bolts and nuts shall be an alloy steel conforming to ASTM A194. Provide polyethylene encasement on all water main fittings and valves in full compliance with AWWA C-105.

D. FIRE HYDRANTS – Hydrants furnished shall conform to the requirements of the AWWA Standard Specification C-502. Hydrants shall open to the left (counter-clockwise) unless otherwise specified. Hydrants shall be designed to operate under 150 psi (10.5 kg/sq. cm) working pressure and tested at 300 psi (21.0 kg/sq. cm).

All water passages shall be of such form and size as to permit the full flow of water without undue loss by friction. Hydrants must have a positive drain, which will allow the water to escape readily from the standpipe when the hydrant valve is closed, but said drain opening must be closed as soon as the hydrant valve is partially opened. The valve stem and valve shall be removed without the necessity of exposure of the hydrant by excavation. Hydrants shall be suitable for the depth of the trench. Bury Depth of the fire hydrant shall be 5 ½ feet unless otherwise specified. If the elevation of a hydrant must be adjusted to conform to the finished grade, hydrant extension kits and grade locks will be allowed. Hydrant extension kits shall be of the same manufacture as the hydrant, no universal aftermarket kits will be allowed. All hydrants shall have a 5 ¼ inch (13.3 cm) valve opening, two 2 ½ inch (6.3 cm) hose nozzles and one 4 ½ inch (11.4 cm) steamer nozzle with the National Standard hose coupling thread, 6 inch (15.2 cm) mechanical joint inlet, and shall be Mueller Cat. No. A423 or approved equal. Bonnet and nozzle caps shall be factory painted yellow.

E. VALVES – Valves shall be furnished as follows:
   (1) Valves 12 in. diameter and smaller to be resilient seat gate valves
   (2) Valves 14 in. diameter and larger to be butterfly valves
   (3) End connections as shown or drawings which are compatible with connection joint
   (4) Shop drawings indicating valve pressure, flange rating valve body material valve trim, operator, internal lining material, dimensions, class, flow coefficients, etc.
   (5) Handwheels for all exposed piping, valves with arrow and “OPEN” work casting impression.

Valves shall be installed according to manufacturer’s directions. Valves shall be supported in such a way to minimize bending of the end connections. Operating wrench shall be able to free operating valve. The operating nut location, when not over the main, will be to the north or west of the main.

F. GATE VALVES – Valves shall be resilient seat valves and shall comply with the requirements of the AWWA Standard Specification C-509. Valves shall have hub ends to fit the pipe for which they are to be used. An adjustable valve box of sufficient length for the depth of trench shall be furnished complete. All gate valves shall have a clear waterway of the full diameter of the valve

and shall be opened by turning to the left. The operating nut shall have cast thereon an arrow indicating the direction of the opening. Each valve shall be designed for a maximum working pressure of 200 psi (14 kg/sq. cm). Prior to shipment from the factory, each valve shall be tested by hydraulic pressure equal to twice the working pressure. Unless otherwise specified, valves shall be resilient seat non-rising stem. Valves shall have "O" Ring packing and a 2 inch (5.1 cm) operating nut. Valve disc and entire inside of valve body shall be coated with a two part thermosetting epoxy coating, complying with AWWA C-550.

G. VALVE BOXES – Valve boxes shall be constructed of cast iron or metal with a 3/16 inch (0.05 cm) minimum thickness at any point. The cover shall have cast thereon the word "WATER". Two piece, Buffalo Type valve boxes shall be equivalent to Mueller screw type H-10360. Valve boxes shall be screw type size 666-S or approved equal. If valve boxes are not located in PCC paving (street, sidewalk, or driveway) a PCC pad shall be poured at the finished grade surface. If the valve box is located in a gravel or asphaltic street or driveway, the pad shall be 8 inches thick and 2.5 feet in diameter. If the valve box is located behind the back of curb in a grassed area the pad shall be 4 inches thick and 1.0 feet in diameter. Backfill around valve boxes shall be existing soil or approved backfill, do not backfill with PCC. Valve box shall be centered over operating nut.

Valve boxes shall be centered on valve nut using a rubber valve box adapter to center the valve box on valve nut equivalent to Larson V-guard or Adaptor, Inc. Adaptor II.

All valve boxes shall be furnished with 4" thick mud plugs and flexible polypropylene handle tested at 300 lb. force with hard hat plug manufactured by Infact or approved equal.

H. TAPPING TEES, CROSSES AND VALVES – All tapping sleeves shall be stainless steel with stainless steel nuts and bolts. The tapping sleeve shall be equivalent to Ford Fast Tap FTSS, Mueller H-304SS or H-304MJ, rated for a minimum pressure of 200 psi, meeting all AWWA Standards.

I. COUPLINGS – Compression Sleeve Couplings. Furnish and install flexible compression-sleeve type coupling. Incorporate units conforming to the following criteria.

(1) Use compression sleeve couplings equal to Ford Style FC 1-ESH.
(2) Provide sleeves constructed of carbon steel having a minimum yield of 300,000 psi. Insure ends are smooth inside tapered for uniform gasket seating.
(3) Provide followers made of malleable iron ASTM A47 Grade 35018 or 32510 or Ductile Iron ASTM A536.
(4) Provide gaskets of special compound or GRS rubber with no reclaimed materials and with good resistance rating for service intended.
(5) Install stainless steel nuts and bolts.
(6) Finish cast parts with epoxy coating.

Install coupling to allow space of not less than ¼ inch but not more than 1 inch.

## 2.2 WATER SERVICES (2" AND SMALLER)

A. POLYETHYLENE (PE) PLASTIC TUBING (CTS) – Pipe 2" in diameter and smaller shall be High Density Polyethylene (HDPE) plastic tubing shall conform to the material requirements of HDPE 3608 (Formerly 3408) cell class 345464C per ASTM D3035 and shall comply with ANSI, NSF Standard 14/61 and AWWA C901. Tubing shall conform to ASTM 2737 for copper tube size (CTS) outside diameter (OD) controlled, SDR 9 (160 psi). Insert stiffeners shall be used with all fittings and polyethylene tubing (PET) and shall be solid 304 tubular stainless steel.

B. CORPORATION STOPS – Corporation stops shall comply with AWWA Standard Specification C-800. Corporation stops shall have AWWA taper or Mueller thread on the inlet end, with copper

service couplings for connections to the service lines. The corporation stops shall be rated to 300 psi and shall be a ball type corporation stop Mueller B-25008N and eighth bends shall be Mueller H-15010N 110 compression connection, or approved equal. All connections to the main shall be electrically insulated by means of approved insulating fitting if specified. Teflon tape shall be used on corporation stop threads when installed.

C. TAPPING SADDLES – Tapping saddles shall be brass double strap saddles with threads compatible with corporation stops. Saddles will be Ford S-90, Mueller BR2B, or approved equal with maximum working pressure rating of 200 psi.

D. CURB STOPS AND BOXES – Service stops shall comply with AWWA Standard Specification C-800. The stops shall be equal to Mueller Oriseal 110 conductive compression connection B-25163, 1- inch. Curb stops for 2 inch services shall be Mueller A-2360 thread by thread with plastic threaded plug.

Extension service boxes of the required length and having either screw or slide type adjustment, shall be installed at all service box locations and to the finished grade. The boxes shall have a housing of sufficient size to completely cover the service stop and shall be complete with identifying covers.

The box shall be equal to Mueller H-10300 with tapped 2" Minneapolis thread for services to 1" and H-10336 for services larger than 1" up to 2" or approved equal. The box shall rest on a cast iron foot piece, brick or other solid support and contain stationary rods. Wood will not be allowed as a permanent solid support. All 2" valves shall have a valve box per this standard specification.

## 2.3 FIRE SERVICE LINES

A. DUCTILE IRON PIPE – All fire service lines material shall conform to Section 3.21 Water Main Material from the tap into the City's water main to the post indicator valve.

# PART 3 – EXECUTION

## 3.1 CONSTRUCTION METHODS

A. The installation of the water main shall conform to the piping manufacturer's recommendation and according to the latest revisions of AWWA C-600 for Ductile Iron and C-605 for PVC. The pipeline shall be constructed in a trench which allows 6 foot (1.83 m) minimum cover or as indicated on the drawings, between the top of the pipe and finished grade. At ditch crossings there shall be 5 foot (1.53 m) of cover at the flow line of the ditch. The size of pipe to be installed shall be indicated on the drawings.

Pipe, fittings, valves and accessories shall be handled in such a manner to insure installation of materials in a sound and undamaged condition, and will conform in all respect to specified requirements. Particular care should be taken not to injure the pipe and lining of cast iron and ductile iron pipe.

Equipment, tools and methods used in unloading, reloading, hauling, and laying pipe and fittings shall be such that no damage is done thereto or to lining therein. Hooks used for insertion in ends of pipe shall have broad, well padded contact surfaces and shall be of such design and length that they will provide uniform support for a distance back from the end of the pipe of not less than one-third of the internal pipe diameter.

Cement lining in pipe or fittings which is broken or loosened in unloading or subsequent handling shall be sufficient cause for rejection of the pipe or fittings containing such damaged and loosened lining. Although defective linings may be repaired by and at the expense of the

Contractor who may employ the pipe manufacturer to make such repairs, all repairs shall be made under the direct supervision of a representative of the pipe manufacturer.

All pipe or coating which is damaged shall be removed from the site at the Contractor's expense.

## 3.2 EXCAVATION, TRENCHING, BEDDING AND BACKFILLING

A. Excavation, trenching, bedding and backfilling shall conform to Section 31 20 00 of this specification.

## 3.3 WATER MAIN INSTALLATION

A. LOWERING OF WATER MAIN INTO TRENCH – Proper implements, tools and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient performance of the work. All pipe, fittings, valves and hydrants shall be carefully lowered into the trench piece-by-piece by means of derrick, ropes or other suitable tools or equipment, in such a manner as to prevent damage to water main materials and protective coatings and linings. Under no circumstances shall water main materials be dropped or dumped into the trench. If damage occurs to any pipe, fitting, valve, hydrant or water main accessories in handling, the damage shall be immediately brought to the attention of the Engineer. The Engineer shall prescribe corrective repairs or rejection of the damaged items.

B. INSPECTION BEFORE INSTALLATION – All pipe and fittings shall be carefully examined for cracks and other defects while suspended above the trench immediately before installation into final position. Spigot ends shall be examined as this area is most vulnerable to damage from handling. Defective pipe or fittings shall be laid aside for inspection by the Engineer, who will prescribe corrective repairs or rejection.

C. CLEANING OF PIPE AND FITTINGS – All lumps, blisters and excess coating shall be removed from the bell and spigot end of each pipe, and the outside of spigot and the inside of the bell shall be wire brushed and wiped clean, dry, and free from oil and grease before pipe is laid. Dirt and other foreign material must be removed from the barrel of pipe before it is laid.

D. PLACEMENT OF PIPE – Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. The Engineer shall require a heavy, tightly woven canvas bag of suitable size to be placed over each end of the pipe section if placement is hampered by the entrance of soil into the pipe barrel. Canvas bags shall be removed at the time of connection to adjacent pipe. During laying operations, no debris, tools, clothing or other material shall be placed in the pipe. Pipe lines or runs intended to be straight shall be laid so. Deflections from a straight line or grade, made necessary by vertical curves and horizontal curves or offsets, shall not exceed the amount of deflection recommended by the pipe manufacturer. The Engineer is the only one who shall make the determination to change the alignment or grade. If an obstruction is encountered, the water main shall be lowered by means of a fitting, if the grade changes in excess of 2 vertical feet. A grade change of less than 2 vertical feet shall be corrected by installing pipes at uniform grades with high and low areas located at fire hydrant locations.

If the specified or required alignment requires deflection in excess of those stipulated above, the Contractor shall provide either special bends as approved be the Engineer, or pipes in shorter lengths; in such length and number, that the angular deflection at any joint, as represented by the specified maximum deflections are not exceeded. As each length of pipe is placed in the trench, the spigot end shall be centered in the bell and the pipe forced into place with slow and steady pressure without jerky or jolting movements and brought to correct line and grade. The pipe shall be secured into place with approved backfill material tamped under it except at the bells. Precautions shall be taken to prevent dirt from entering the joint space. No wooden blocking shall

be left at any point under the pipeline. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means approved by the Engineer.

E. CUTTING OF PIPE – The cutting of pipe for fittings and closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or cement lining to leave a smooth end at right angles to the horizontal axis of the pipe. The cutting method used shall be approved by the manufacture's specifications and by the Engineer prior to any cuts.

F. BELL ENDS TO FACE DIRECTION OF LAYING – Pipe shall be laid with the bell ends facing in the direction of laying, unless directed otherwise by the Engineer. Where pipe is laid on a grade of 10% or greater, the laying shall start at the bottom and shall proceed upward with bell ends of the pipe upgrade.

G. UNSUITABLE CONDITIONS FOR LAYING PIPE – No pipe shall be laid when, in the opinion of the Engineer, trench conditions are unsuitable. Under no circumstances shall the pipe be laid in water. The contractor shall furnish all necessary equipment, labor and materials for pumping or otherwise removing any water that may enter or accumulate in the trenches or other excavations and keep them free from water until all work is constructed and set for sufficient time so water will not damage the work in any way or manner.

H. BRIDGING OF PIPE – Concrete bridging may be required by the Engineer under certain conditions. The Engineer shall determine the size and location of concrete bridging to avoid settlement of the pipe being installed or settlement of existing underground utility pipes. This condition shall also apply to other underground utilities being installed over existing water mains. In certain instances, the Engineer may require the complete encasement of water mains by concrete. The size and location of these encasements shall be determined by the Engineer.

I. INSULATION BETWEEN DIFFERENT METALIC PIPE MATERIALS – Wherever it is necessary to join cast iron pipe with pipe or fittings of dissimilar metal, a method of insulating against the passage of electric current shall be provided and shall be approved by the Engineer.

**3.4 GENERAL REQUIREMENTS OF PIPE JOINTING** – The requirements already set forth shall apply in addition to installation of joints in accordance with pipe manufacturer's recommendations approved by the Engineer.

A. MECHANICAL JOINTS – The general requirements already set forth shall apply except that, where the terms "bell" and "spigot" are used, they shall be considered to refer to the bell and spigot ends of the lengths of mechanical joint pipe. The last eight inches (20.3 cm) outside of the spigot and inside of the bell of the mechanical joint pipe shall be thoroughly cleaned to remove oil, grit, excess coating and other foreign matter from the joint. The cast iron gland shall then be slipped in the spigot end of the pipe with the lip extension of the gland toward the socket, or bell end. The rubber gasket shall be placed on the spigot end with the thick edge toward the gland. Broken glands shall be replaced by the Contractor at his expense.

The entire section of the pipe shall be pushed forward to seat the spigot end in the bell. The gasket shall then be pressed into place within the bell; care shall be taken to locate the gasket evenly around the entire joint. The cast iron gland shall be moved along the pipe into position for bolting, all of the bolts inserted and the nuts screwed up tightly with the fingers. All nuts shall be tightened with a suitable wrench. Nuts spaced 180 degrees apart shall be tightened alternately in order to produce an equal pressure on all parts of the gland.

B. PUSH-ON JOINTS – The general requirements already set forth shall apply except that, where terms "bell" and "spigot" are there used, they shall be considered to refer to the bell and spigot of the lengths of push-on joint pipe.

There is only one nominal dimension of the spigot outside diameter and the bell inside diameter for each size of push-on joint pipe. Similar dimensions of the caulked-joint bell-and-spigot pipe may vary with the class of pipe for each size in existing lines. Therefore, care should be taken that the outside diameter of the existing line is the same as the outside diameter of the push-on joint pipe being installed, otherwise a special adapter to join the two lines may be necessary.

The inside of the bell and the outside of the spigot end shall be thoroughly cleaned to remove oil, grit, excess coating and other foreign matter. The circular rubber gasket shall be flexed inward and inserted in the gasket recess of the bell. Since different types of pipe take different types of rubber gaskets, it shall be the responsibility of the Contractor to see that the proper types of gaskets are installed.

Sufficient lubricant shall be furnished with each order to provide a thin coat on each spigot end. The lubricant shall be non-toxic, shall impart no taste or odor to the conveyed liquid, and shall have no deleterious effect on the rubber gasket or pipe. The lubricant shall be of such consistency that it can be easily applied to the pipe in hot or cold weather and shall adhere to either wet or dry pipe.

The spigot end of the pipe shall be entered into the bell with care used to keep the joint from contacting the ground. The joint shall then be completed by forcing the plain end to the bottom of the bell with a forked tool or jack-type tool or other device approved by the Engineer. Pipe that is not furnished with a depth mark shall be marked before assembly so that the spigot end is inserted to the full depth of the joint. Field-cut pipe lengths shall be filed or ground to resemble the spigot end of such pipe as manufactured. Complete assembly instructions are available from the pipe manufacturer. If pipe is pushed home with a backhoe bucket, a wooden shield must be placed between the backhoe bucket and the end of the pipe.

B. RESTRAINED JOINTS – Where specified or indicated upon drawings, install restrained joints of the following type:

(1) Pipe 24 inches and smaller. For ductile iron pipe use retainer glands equal to Clow Mechanical Retainer Glands, Megalug Series 1100, or U.S. Pipe TR Flex. For polyvinyl chloride pipe use Ford Series 1500-CA, U.S. Pipe Field Lok, Megalug Series 2000 PVC..

Design joints for working pressure of 250 psi. Ensure that samples of restrained push-on joints have successfully been tested to 500 psi by manufacturer without leakage or joint separation in accordance with AWWA C101.

## 3.5 CONNECTIONS WITH EXISTING PIPE LINES

A. It shall be the Contractor's responsibility to verify the existence and location of all water mains along the route of project. The omission from or the inclusion of locations on the drawings is not to be considered as the non-existence of or a definite location of existing utilities. The Contractor shall take the necessary precautions to protect the existing water main from damage due to his operation, and any damage to or abuse of the water mains encountered shall be repaired by the Contractor at his expense.

Relocation of water main in conflict with construction operations will be the responsibility of the Contractor in accordance with the details as shown on the drawings. The Contractor shall coordinate all such conflicts with the Owner and the Engineer to insure restoration of the line as soon as possible. The Contractor shall furnish, install and remove all necessary valves, fittings, caps, etc. to keep the new and existing water main in service. The Contractor shall notify the Owner 24 hours prior to disturbance of any service. Water mains not in direct conflict with the sewer pipe cross-section shall be protected by the Contractor until his construction operations are a sufficient distance from such conflict to insure no damage thereto. Water mains not in direct

conflict with construction and damaged by the Contractor shall be repaired and restored at the Contractors expense.

Where connections are made between new work and existing piping, such connections shall be made in a thorough and workmanlike manner, using suitable and proper fittings to suit the conditions encountered. Each connection with an existing water pipe shall be made at a time and under conditions which will least interfere with water service to customers affected thereby and as authorized by the Owner. Suitable facilities shall be provided for proper dewatering, drainage, and disposal of all water removed from the dewatered lines and excavations, without damage to adjacent properties.

1) CONNECTION – A connection to an existing water main that is not under pressure will be made with a fitting and compression sleeve couplings. The Contractor shall be responsible for controlling and disposing of the water in the trench, removal of plugs, fittings, thrust blocks, anchors, cutting of existing mains, installation couplings and/or sleeves, etc.

2) PRESSURE CONNECTION – A pressure connection shall include all necessary tapping tees, gate valves, and fittings needed to connect to the existing water mains. Pressure connections are to an existing water main that is under pressure. The Contractor shall be responsible for controlling and disposing of the water in the trench. A thrust block will be required.

## 3.6 RELATION OF WATER MAINS TO SEWERS

A. Public sewers shall be separated from public water mains according to the Nebraska Health and Human Services accepted "Recommended Standards for Water Works", by the Committee of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Manager, 1997 Revised Edition.

1) PARALLEL INSTALLATION – Water mains shall be laid at least 10 feet (3.05m) horizontally from any existing or proposed sewer. The distance shall be measured edge to edge.

2) CROSSINGS – Water mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches (45.7 cm) between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. At crossings, a full length of water pipe shall be located so both joints will be as far from the sewer as possible.

## 3.7 SETTING OF VALVE AND FITTINGS

A. Valves and fittings installed in trenches shall be located where indicated by the drawings and as directed by the Engineer. Valves, fittings, plugs, and caps shall be set and joined to pipe in the manner specified for cleaning, laying and joining pipe. Fittings will be blocked using only cast-in-place concrete blocks unless otherwise approved by the Engineer. No wood blocking shall be allowed. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the operating nut of the valve, with the box cover flush with the surface of the finished pavement or such other level as may be directed by the Engineer.

## 3.8 SETTING OF FIRE HYDRANTS

A. Fire hydrants shall be in accordance with the City of Kearney's Standard Fire Hydrant Setting Detail. Hydrants are to be set at such an elevation that the connecting pipe and distributing mains will have the same depth of cover. All hydrants shall stand plumb and shall have their steamer nozzle facing the curb or street. Around the base of the hydrant 10 cubic feet of crushed rock or gravel shall be placed so that the hydrant will completely drain when closed.

Backfill around the hydrant shall be firmly tamped to the surface of the finished grade and to a distance of 5 feet (1.52 m) around the hydrant. Before placing any hydrant, care shall be taken to see that all foreign material is removed from within the body or barrel. The stuffing boxes shall be tightened and the hydrant or valve opened and closed to see that all parts are in working condition.

## 3.9 INSTALLATION OF BRACING, SUPPORTING AND ANCHORING

A. Blocking, bracing, anchoring, or other acceptable means for the prevention of movement, shall be installed. All blocking, bracing, supporting and anchoring shall be in accordance with the Standard Blocking Detail and the Standard Fire Hydrant Detail with the use of concrete as specified in Concrete Paving section of this specification.

1) ANCHORAGE FOR FIRE HYDRANTS – The bowl of each hydrant shall be well braced against the undisturbed natural earth at the end of the trench with a concrete anchor placed behind and a precast block beneath the bowl. The fire hydrant valve shall be tied to the fire hydrant tee with anchor pipe or with two (2) ¾ inch (1.91 cm) or larger all-thread rods as shown on the City of Kearney's Standard Fire Hydrant Detail, Mega Lugs / retaining glands will be allowed.

Whenever a fire hydrant is the means of terminating a water main (such as in a cul-de-sac or dead end); the tie rods and concrete reverse anchors will be required for both the fire hydrant valve (which in this case is also a line valve on the main) and the fire hydrant lateral of the branch feeder pipe connected directly to the fire hydrant. Additional concrete anchors shall be as directed by the Engineer.

2) ANCHORAGE FOR PLUGS, CAPS, TEES, TAPS AND BENDS – Plugs, caps, tees and bends shall be provided with reaction backing in accordance with the Standard Blocking Detail. Reverse concrete anchor and tie backs are acceptable. Blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on the pipe and on the ground, in each instance, shall be shown or directed by the Engineer. No wood or precast blocks shall used as a permanent blocking. Temporary blocking may be used as directed by the Engineer. Blocking will be required regardless of whether a tapping tee or tapping saddle is used. Such blocking will in all cases be sized and placed in a manner that will adequately transfer thrust reaction to solid undisturbed ground or the equivalent thereof.

3) FORMING FOR CONCRETE THRUST BLOCKS AND ANCHORS – All forming for concrete thrust blocks and anchors will be done by bulkheading around the shape of thrust block or anchor with burlap or reinforced paper sacks which have been filled with sand or earth, or other Engineer approved forming method. Filled sacks used to form concrete blocks will be left in place in the trench and backfill will be placed around and over them in the usual manner. Any bolt head or fitting must be left accessible when pouring concrete about them. If the fitting is to be covered completely upon direction of the Engineer, then the joint must be wrapped with suitable polyethylene.

Minimum curing time for concrete anchors regardless of additives shall be thirty-six (36) hours for anchors containing 2 cubic yards (1.53 cu. M) or less, fort-eight (48) hours for anchors containing more than 2 cubic yards (1.53 cu. M) but less than 6 cubic yards (4.59 cu. M) and seventy-two (72) hours for anchors containing more than 6 cubic yards (4.59 cu. M) but less than 12 cubic yards (9.17 cu. M). Anchors containing more than 12 cubic yards (9.17 cu. M) will be cured as directed by the Engineer. Curing time for anchors having flanged rods or other accessories embedded in them for the purpose of tying pipe and/or fittings directly to the anchor will require approximately 25% additional curing time.

## 3.10 SERVICE CONNECTIONS

A. WATER SERVICES – Water services shall include the lines to, and connections with, the building service at a point approximately at the edge of the right-of-way where such building service exists. Where existing service to a building does not exist, the Contractor shall terminate the service at approximately the right-of-way at a point designated by the Engineer. All new water services which are not immediately connected shall be plugged with a watertight stopper furnished by the pipe manufacturer. All service stops and gate valves shall be provided with extension service boxes of the lengths required by the depths of service line stops or valves.

Installation shall be in accordance with the Service Connection Detail. Material for and construction of water service relocation shall be in accordance with the previously specified appurtenances and all material shall be new and furnished by the Contractor. Water services shall remain in service and shall be protected by the Contractor. All new services unless otherwise shown or specified shall be minimum 1 inch in diameter. Service lines shall be laid perpendicular to the line of the main. No service shall be installed between the fire hydrant and the fire hydrant control valve.

The connection to the main for 2 inch (5.08 cm) service lines and smaller in diameter shall consist of a corporation stop and a service stop below the frost line. Where more than one gooseneck connection to the main is required for an individual service, such connection shall be made with standard quality branch connections in conformance with recognized standard practice. The total clear area of the branches shall be at least equal to the clear area of the service which they are to apply. All 2 inch services shall have a valve box not a curb stop.

All new services, relocation and/or restoration of existing water services encountered along the route of the Contractor's work shall be the responsibility of the Contractor at his expense. Existing services are not to be connected to new water mains until disinfection test have been approved by the Engineer. The Contractor shall keep an accurate record of the location of all plugged services. On completion of the job the contractor shall provide a copy of the list to the Engineer.

B. SANITARY SEWER SERVICES – The Contractor shall restore and/or relocate all existing sanitary sewer services encountered during his pipe laying operations which are in direct conflict with his operations. Materials for and construction of said services shall be in accordance with General Specifications and be accomplished in a workmanlike manner. The size and material of service to be restored shall be compatible with the service so encountered, and no reduction in size shall be allowed unless so directed by Engineer. Where marginal clearances are encountered to restore the service to the existing lateral or main, encasement or cradling shall be performed as directed by the Engineer. The Contractor shall furnish all material to complete this item and all materials shall be new. Sanitary sewer services above or below the line of the pipe cross-section shall remain in service and shall be protected by the Contractor, and shall not be considered as a pay item. Damage to any such services not in conflict with construction shall be restored by the Contractor at his expense.

## 3.11 QUALITY ASSURANCE

A. DISINFECTION – After favorable performance of the pressure test, thoroughly flush the entire potable water piping system with a velocity of not less the 2.5 feet per second. Before starting to flush new water mains, the City of Kearney's Utilities Department requires 24 hours of notice. Drain flushed water to location approved by the Owner. Each unit of the completed system shall be disinfected with chlorine before acceptance for domestic operation. All disinfection performed shall be accomplished under the supervision of the Engineer.

B. METHOD – Disinfection shall be accomplished as described below by the AWWA Standard Specification C-651. The amount of chlorine applied shall be such as to provide a dosage of not

less than fifty (50) mg/L. The chlorinating material shall be introduced to the waterlines and distribution system in an approved manner. If possible to do so, the lines shall be thoroughly flushed prior to the introduction of the chlorinating materials. After a contact period of not less than 24 hours, the heavily chlorinated water shall be flushed from the system with clean water until the residual chlorine content is not greater than two-tenths (0.2) mg/L. All valves in the lines being disinfected shall be opened and closed several times during the contact period. All chlorinated compounds shall conform to AWWA Standard Specifications B-300, B-301, and B-302.

C. TESTING – After final flushing and before water main is placed into service, two sets of consecutive water samples, free of chlorine, taken at least 24 hours apart, shall be submitted to an approved State Department of Health and Human Services Laboratory for the detection of coliform and non-coliform bacteria. The results shall be submitted to the Engineer. If the laboratory analysis shows the water is unsafe to use,(presence of any coliform bacteria) disinfection and analysis shall be repeated until two consecutive zero coliform and non-coliform counts are obtained.

The Contractor shall collect and test for chlorine concentration prior to flushing and upon termination of flushing. The number of samples required shall be as indicated in AWWA C-651 which follows:

> "Standard Condition After final flushing and before the new water main is connected to the distribution system, two consecutive sets of acceptable samples, taken at least 24 hours apart, shall be collected from the new main. At least one set of samples shall be collected from every 1200 ft (366 m) of the new water main, plus one set from the end of the line and at least one set from each branch. All samples shall be tested for bacteriological quality in accordance with Standard Methods for the examination of Water and Wastewater, and shall show the absence of coliform organisms. A standard heterotrophic plate count may be required at the option of the owner (or owner's representative).
>
> Special Conditions If trench water has entered the new main during construction or, if in the opinion of the owner (or owner's representative), quantities of dirt or debris have entered the new main, bacteriological samples shall be taken at intervals of approximately 200 ft (61 m) and shall be identified by location. Samples shall be taken of water that stood in the new main for at least 16 hours after final flushing has been completed."

D. PRESSURE AND LEAKAGE TESTS – The pipeline shall be subjected to pressure and leakage tests as specified herein and completed in accordance with the latest edition of AWWA Standards. The required pressure and leakage tests shall be made after all pipe laying and backfilling work has been completed. All concrete reaction blocks and bracing or restraining facilities shall be in place at least 7 days before the initial filling of the line, except where tension joints are used at bends.

The pressure and leakage tests shall be applied to the entire line, service connections and appurtenances. The Contractor shall be solely responsible for any and all damages to the pipelines, and to public and private property, which results from defective materials or workmanship. The section of the line to be tested shall slowly be filled with water and all air expelled from the pipe. Care shall be taken that all air valves are installed and open in the section being filled, and that the rate of filling does not exceed the venting capacity of the air valves.

E. TEST EQUIPMENT AND FACILITIES – The Contractor shall perform the necessary work to fill the pipeline with test water, as specified. The Contractor shall furnish all pumping equipment, water meter, pressure gauge, and all equipment, materials, and facilities required for the tests.

Test pressures shall be applied by means of a force pump of such design and capacity that the required pressure can be applied and maintained without interruption for the duration of each test. The water meter and pressure gauge shall be accurately calibrated and shall be subject to the approval of the Engineer.

F. PRESSURE TEST – The low point in the pipeline for each test section shall be subjected to a test pressure of 150 psi (10.56 kg/sq. cm). Test pressure shall not exceed the rated pressure of the valves, pipe or appurtenances when the pressure boundary of the test section includes closed, resilient-seated gate valves or butterfly valves. After the section of the line to be tested has been filled with water, the specified test pressure shall be applied and maintained for a period of not less than 2 hours and for whatever longer period as may be necessary for the Engineer to complete the inspection of the line under test or for the Contractor to locate any and all defective joints and pipeline materials. If repairs are needed, such repairs shall be made, the line refilled, and the test pressure applied as before; this operation shall be repeated until the line and all parts thereof withstand the test pressure in a satisfactory manner.

G. LEAKAGE TEST – After the specified pressure test has been completed, the line being tested shall be subjected to a leakage test under a hydrostatic pressure of 150 psi (10.56 kg/ sq. cm). The pressure shall be maintained constant (within a maximum variation, plus or minus, of 5 psi) during the entire time that line leakage measurements are being made, so that the allowable leakage rate may be determined accurately from the leakage rate formula.

Leakage tests shall not be started until a constant test pressure has been established. Compression of air trapped in un-vented pipes or fittings will give false leakage readings under changing pressure conditions. After the test pressure has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump. Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The pipeline, or tested section thereof, will not be accepted if and while it has a leakage rate in excess of that rate determined by the following formula for the specific type of pipe:

Ductile Iron Pipe

$$Q=\frac{LD(P)^{1/2}}{148{,}000}$$

Q = Maximum permissible leakage rate, in gallons per hours
L = Length of pipe tested, in feet
D = Nominal internal diameter of the pipe, in inches
P = Average test pressure, in pounds per square in (gauge)

Where the leakage test shows a leakage rate in excess of the permissible maximum, the Contractor shall make all necessary surveys in connection with the location and repair of leaking joints to the extent required to reduce the total leakage to an acceptable amount.
All joints in piping and closed valves shall be watertight and free from visible leaks during the prescribed tests. Each and every leak which may be discovered at any time prior to the expiration date of one year from and after the date of final acceptance of the work by the Owner shall be located and repaired by and at the expense of the Contractor, regardless of any amount that the total line leakage rate during the specified leakage test may be below the specified maximum rate.

## 3.12 SUBMITTALS

A. Certification by Manufacturer - The Contractor shall furnish a statement from the manufacturer that the inspection and all the specified tests have been made and the results thereof comply with the requirements of the applicable standards herein specified for all materials furnished.

B. Quality Control Testing – The Contractor shall submit but not be limited to the following:

1. Chlorine Concentration Testing
2. Bacteriological Quality Testing
3. Pressure and Leak Testing

C. Shop Drawings – The Contractor shall submit sufficient data and information to allow an evaluation of "or equal materials". If required, samples with detailed technical data shall be furnished. Shop drawings for, but not limited to, water main, fire hydrants, valves and boxes, meters, meter pits, service lines, curb stops, curb boxes, corporation stops, couplings, shall be submitted.

**END OF SECTION**

## SECTION 22 1313

## SANITARY SEWERS

### PART 1 – GENERAL

### 1.1 SCOPE

A. The work covered by this section of the specification consists of furnishing all plant, labor, equipment, appliances, and materials, and for performing all operations in connection with the construction of the sewers including appurtenant structures complete in accordance with this section of the specifications and the applicable drawings.

### 1.2 GENERAL

A. The Contractor shall remove paving, as may be required, excavate the trenches and pits to the required dimensions; excavate bell holes; construct and maintain all bridges for traffic control; sheet, brace and support the adjoining ground or structures where necessary; handle all drainage valves, hydrants and accessories; backfill and consolidate the trenches and pits; restore the roadway surface unless otherwise stipulated; supply required or remove surplus excavated material; and clean the site of the work.

B. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure, complete and compatible installation shall be furnished and installed as part of this work. The drawings show sizes and general arrangements of all pipes and appurtenances. Responsibility for handling and/or cutting exact lengths of the various sizes of pipe for proper make-up rests with the Contractor.

### PART 2 - PRODUCTS

### 2.1 GRAVITY SEWERS

A. The Contractor shall furnish the Owner with certified records of the tests required herein made by the manufacturer or by a reliable commercial laboratory.

1) **POLYVINYL CHLORIDE (PVC) SDR 35 SEWER PIPE** - PVC sewer pipe shall conform to the requirements of ASTM Standard Specification Type PSM Polyvinyl Chloride (PVC), Designation D-3034 with a minimum dimension ratio of 35 (PS46) for pipe diameter 15 inches or less. Pipe diameters over 15 inches shall meet ASTM F-679 (T-1). Pipe shall be furnished in minimum 12.5 feet lengths, and shall not exceed 20 feet.

PVC sewer pipe shall be single rubber gasket joint. The gaskets shall conform to ASTM F-477.

### 2.2 PRESSURE SEWERS

A. POLYVINYL CHLORIDE (PVC) PLASTIC PIPE - The pipe shall meet the requirements of AWWA Standard Specification C-900, with a dimension ratio of 18. The pipe shall be joined by means of a rubber gasket-integral bell joint. Gaskets will conform to the requirements of ASTM F-477. Joints for plastic pressure pipes shall conform to ASTM D-3139 using flexible elastomeric seals. All pipe shall have a gasket bell section at least as strong as the pipe wall. The outside pipe diameters shall be cast iron pipe equivalent. Pipe lengths shall be nominal 20 ft. (6.10 m) with no more than 15% of footage supplied by the manufacturer in random

lengths of not less than 10 feet (3.05 m) long. If pipe is to be stored for periods longer than 90 days, the pipe must be covered in a manner approved by the Engineer.

B. Gate Valves – Valves shall be resilient seal valves and shall comply with the requirements of the AWWA Standard Specification C-509. Valves shall have hub ends to fit the pipe for which they are to be used. An adjustable valve box of sufficient length for the depth of trench shall be furnished complete. All gate valves shall have a clear waterway of the full diameter of the valve and shall be opened by turning to the left. The operating nut shall have cast thereon an arrow indicating the direction of the opening. Each valve shall be designed for a maximum working pressure of 200 psi (14 kg/sq. cm). Prior to shipment from the factory, each valve shall be tested by hydraulic pressure equal to twice the working pressure. Unless otherwise specified, valves shall be resilient seat non-rising stem. Valves shall have "O" Ring packing and a 2 inch (5.1 cm) operating nut. Valve disc and entire inside of valve body shall be coated with two part thermosetting epoxy coating, complying with AWWA C550.

C. Plug Valve – Valve shall be comprised of cast-iron body (ASTM A126, Class B), ductile iron plug (ASTM A536 65-45-12), plug shall be resilient faced with Buna-N resilient seating surface, permanently lubricated stainless steel or bronze shaft bearing bushings, valve seats with welded-in overlay of 90 percent nickel (minimum 1/8" thick) and stem seal with nitrile butadiene packing or Buna-N dual U-cups.

Valves shall have sleeve type metal bearings and shall be of stainless steel or bronze permanently lubricated type. Grit excluder seals shall be provided in upper and lower journals to isolate the bearings. All valves shall be supplied with standard 2" wrench nut for operation. Pressure rating of valve shall be 175 psi working pressure. Keystone/Henry Pratt and DeZurik, or an approved equal will be acceptable for plug valve installation.

D. Valve Boxes – Valve boxes shall be constructed of cast iron or metal with a 3/16 inch (0.05 cm) minimum thickness at any point. Two piece, Buffalo Type valve boxes shall be equivalent to Mueller screw Type H-10360. Valve boxes shall be screw type size 666-S or approved equal. Valve boxes shall be centered on valve nut using a rubber valve box adapter to center the valve box on valve nut equivalent to Larson V-guard or Adaptor, Inc. Adaptor II.
All valve boxes shall be furnished with 4" thick mud plugs and flexible polypropylene handle tested at 300 lb. force with hard hat plug manufactured by Infact or approved equal.

## 2.3 CONSTRUCTION METHODS

A. Excavation, Trenching and Backfilling – Sanitary sewers shall conform to the requirements of section 31 20 00, "Excavation, Trenching, Bedding and Backfilling".

B. Pipe Installation – Vitrified Clay Sewer Pipe shall be installed in compliance with ASTM Standard Specification Designation C-12 and PVC shall be installed in accordance with ASTM D2321 or with the manufacturer's recommendations and approval of the Engineer. Pipe installation shall be in Class B bedding unless otherwise specified. Pipe laying shall proceed upgrade so that the spigot ends point in the direction flow. All pipes shall be laid with ends abutting and true to line and grade. The pipe shall be matched so that when laid, they will form a sewer with a smooth, uniform invert. Sockets shall be carefully cleaned before pipes are lowered into trenches. All joints shall be watertight, root resistant, durable, and any leaks or defects discovered shall be immediately repaired. Any pipe which has been disturbed after being laid shall be taken up, the joints cleaned and the pipe properly relaid.

The Contractor shall include furnishing, placing and compacting granular pipe bedding as per the Detail. Bedding material will be paid per lineal foot installed in place. The granular material shall be gravel. Gravel bedding shall also be provided for service reconnections. Bedding for service reconnections shall be incidental to the Bid.

Gradation for gravel bedding shall be the following:

| *Total Percent Retained On* | *Minimum* | *Maximum* |
|---|---|---|
| 1-inch sieve | | 0 |
| No. 4 sieve | 5 | 39 |
| No. 10 sieve | 69 | 100 |
| No. 200 sieve | 94 | 100 |

C. Plugging of Pipe During Installation – Each time pipe laying work is stopped; the sewer shall be closed with a suitable plug to exclude water, foreign material and other objects. If any water, mud or foreign material should enter the new sewer, or any existing sewer connected thereto, the Contractor shall remove same at his expense and he shall be liable for any damage that may result thereby. Mud, water, etc.; to be removed, shall be pumped out of the sewer and shall not be flushed down into another sewer line or municipal utility.

D. Dewatering In Pipe Installation – The Contractor shall furnish all necessary equipment, labor and materials for pumping or otherwise removing any water that may enter or accumulate in the trenches or other excavations and keep them free from water until work is constructed and set for sufficient time so water will not damage the work in any way. Water shall not be allowed to flow through any sewer until joints are sufficiently set and the trench backfill is made to a point where pipe settlement will not occur. Also water shall not be allowed to flow through any sewer where the flooding of basements or other damage is possible.

## 2.4 SEWER APPURTENANCES

A. All sewer appurtenances shall be of the same type of material as the sewer pipe used and specified. All appurtenances shall conform to the drawings.

1) MANHOLES – Manholes shall be installed at the location shown on the drawings or as located and directed by the Engineer. Standard manholes shall be constructed in accordance with the Manhole Detail, while drop manholes when required shall be constructed in accordance with the Drop Manhole Detail. All manholes shall be constructed with covers, ladder steps, etc. Manholes above foundations, unless otherwise required by the drawings, shall be constructed of precast concrete rings shall be in accordance with ASTM Standard Specification, Designation C-478. Precast concrete sections shall be jointed tightly using mastic joint sealing compound or other methods approved by the Engineer. The eccentric section of manholes shall not extend above the proposed top of subgrade for pavement.

Manhole ring and cover shall be Deeter 1030, or approved equal. If the lid is located in a gravel street or in an agricultural area the pad shall slope 1 inch per foot away from the ring and cover. Rim elevations shall be 1.5 feet below the gravel surface of the street or 3.0 feet below the existing grade in agricultural areas,. Manhole inverts shall be carefully constructed to maintain the proper velocities through the manhole, and in no case shall the invert sections through the manhole be greater than the outgoing pipe. The shape of the invert shall conform to the lower half of the pipe it connects. Pipes joining the main sewer shall be connected with as large a radius of curve as practicable. The Nebraska Department of Roads Type 47B-3500 shall be utilized.

The main sewer shall be carried through manholes by split pipe whenever practicable. The sewer should be laid continuously through the manhole locations with a pipe joint just outside the manhole whenever grade and alignment permit and the manhole built later. The foundation shall be laid and carried up approximately to the center of the pipe. From the center of the pipe to the walls of the manhole the floor shall have a minimum slope of

1 inch per foot (8.33 cm/m). After the manhole is built, the upper half of the pipe shall be cut out. Cement mortar, if required shall be used to provide a smooth clean surface.

Where it is not practicable to use split pipe through manholes because of breaks in grade or elevation of incoming sewers, the sewer invert shall be made of concrete deposited between forms. The shape of the invert shall exactly conform to the lower half of the pipe in connects. Inverts shall be plastered with cement mortar if required to provide a smooth clean surface.

2) WYE BRANCHES AND TEES – Wye branches and tees shall be installed at the location designated by the drawings. Where not immediately connected to service sewers the fittings shall be closed with a stopper lightly cemented or sealed in place. Install service at minimum grade of ¼ inch per foot from sewer main to back of curb under paving. Continue to install service line at minimum slope of ¼ inch per foot to property line if bury depth is less than 10 feet or install to a minimum bury depth of 10 feet below top of finished curb grade at property line. Install a 1 inch inside diameter schedule 40 PVC pipe extending from the end flowline of the sanitary sewer service to the top of finished grade at the property line. Install plastic caps on the bottom and top ends of the 1 inch PVC pipe, do not glue the top cap so that the flowline depth of the sanitary sewer service can be measured. Install a 2 foot length of standard steel fencing tee post driven directly behind PVC pipe for locating purposes. The Contractor shall record accurately the location of all sealed fittings with double ties and the record shall be submitted to the Engineer.

3) SERVICE CONNECTIONS – Service connections shall be located as shown on the drawings. Connections shall be constructed in accordance with the Service Connection Detail. Slope of the service mains shall be ¼ inch per foot from sewer main to back of curb under paving. Continue to install service at minimum slope of ¼" per foot if bury depth is less than 10.0 feet or install service to a minimum depth of 10.0 feet bellow finished grade of back of curb paving at property line.

4) ANCHORAGE FOR PLUGS, CAPS, WYES, TEES AND BENDS – Plugs, caps, wyes and bends for pressure sewers shall be provided with a reaction backing in accordance with the Standard Blocking Detail. Reverse concrete anchor and tie backs are acceptable. Blocking shall be placed between solid ground and the fitting to be anchored; the area of bearing on the pipe and on the ground, in blocking. Temporary wood blocking may be used as directed by the Engineer.

   All forming for concrete thrust blocks and anchors will be done by bulkheading around the shape of thrust block or anchor with burlap or reinforced paper sacks which have been filled with sand or earth, or other Engineer approved forming method. Filled sacks used to form concrete blocks will be left in place in the trench and backfill will be placed around and over them in the usual manner. Any bolt head or fitting must be left accessible when pouring concrete around them.

5) RELATION OF WATER MAINS TO SEWERS – Public Sewers shall be separated from public water mains according to "Recommended Standards for Sewage Works", by the Committee of the Great Lakes-Upper Mississippi River Board of State Sanitary Engineer, (10 State Standards). Horizontal separation shall be 10 feet (3.05 m) measured from edge to edge. Vertical separation where a sewer crosses a water main shall not be less than 18 inches (45.7 cm), clear.

6) ADAPTOR COUPLINGS – All connections to existing sewer, new sewers, stubouts, dissimilar types of new and old pipes shall be by means of a properly sized neoprene adaptor. The adaptor shall be encased in concrete.

## PART 3 – EXECUTION - QUALITY ASSURANCES

### 3.1 TESTING GRAVITY SEWERS

A. FIELD QUALITY CONTROL – All work performed under this specification shall be inspected, tested and approved. Tests shall be made in the presence of the Engineer. The Contractor shall provide all necessary equipment and shall perform all work required in connection with the tests at the expense of the Contractor.

B. LIGHT TEST – A light test shall be performed on all lines as follows. A light held in a pipe at one manhole shall be visible from the next manhole as a full circle of light. Sewer line sections not meeting the above test shall be relaid and the test repeated.

C. INFILTRATION AND AIR TEST – All lines shall be tested for tightness by one of the following methods. If the ground water table is at least two feet above the top of the pipe, the infiltration test shall be used. Otherwise, the air test shall be used. In all cases if leakage is above the specified amount, the sewer line or manhole shall be repaired and retested at the expense of the Contractor.

D. AIR TEST – This test will be performed according to ASTM C828 for VCP and ASTM 1417 for PVC pipe, stated procedures and under the supervision of the Engineer for gasket type joint pipe. If leakage is above the specified amount, the sewer shall be repaired, replaced and retested at the expense of the Contractor.

Equipment used shall meet the following minimum requirements: a) Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be tested. b) Pneumatic plugs shall resist internal testing pressure without requiring external bracing or blocking. c) All air used shall pass through a single control unit. d) These individual hoses shall be used for the following connections: (1) From control unit to pneumatic plugs for inflation (2) From control unit to scaled line for introducing low pressure air (3) From sealed line to control unit for continually monitoring the air pressure inside the pipe being tested. Procedures: All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be pressurized to 25 psig. The sealed pipe shall be pressurized to 5 psig. The plugs shall hold against this pressure without movement of the plugs out of the pipe.

After a manhole to manhole reach of the pipe has been backfilled to final grade and cleaned and the pneumatic plugs are checked by the above procedures, the plugs shall be placed in the line and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure of any ground water that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.

After the stabilization period (3.5 psig minimum pressure in the pipe), the air hose from the control unit to the air supply shall be disconnected. The portion of the line being tested shall be termed “acceptable” if the time required in minutes for the pressure to decrease from 3.5 psig to 2.5 psig (greater than average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

SPECIFICATION TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q=0.0015*

| 1 Pipe Diameter (in) | 2 Minimum Time (min:sec) | 3 Length for Minimum Time (ft) | 4 Time for Longer Length (sec) | Specified Minimum for Length (L) Shown (min:sec) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 100 ft | 150 ft | 200 ft | 250 ft | 300 ft | 350 ft | 400 ft | 450 ft |
| 4 | 3:46 | 597 | .380 L | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 | 3:46 |
| 6 | 5:40 | 398 | .854 L | 5:40 | 5:40 | 5:40 | 5:40 | 5:40 | 5:40 | 5:42 | 6:24 |
| 8 | 7:34 | 298 | 1.520 L | 7:34 | 7:34 | 7:34 | 7:34 | 7:36 | 8:52 | 10:08 | 11:24 |
| 10 | 9:26 | 239 | 2.374 L | 9:26 | 9:26 | 9:26 | 9:53 | 11:52 | 13:51 | 15:49 | 17:48 |
| 12 | 11:20 | 199 | 3.418 L | 11:20 | 11:20 | 11:24 | 14:15 | 17:05 | 19:56 | 22:47 | 25:38 |
| 15 | 14:10 | 159 | 5.342 L | 14:10 | 14:10 | 17:48 | 22:15 | 26:42 | 31:09 | 35:36 | 40:04 |
| 18 | 17:00 | 133 | 7.692 L | 17:00 | 19:13 | 25:38 | 32:03 | 38:27 | 44:52 | 51:16 | 57:41 |
| 21 | 19:50 | 114 | 10.470 L | 19:50 | 26:10 | 34:54 | 43:37 | 52:21 | 61:00 | 69:48 | 78:31 |
| 24 | 22:40 | 99 | 13.674 L | 22:47 | 34:11 | 45:34 | 56:58 | 68:22 | 79:46 | 91:10 | 102:33 |
| 27 | 25:30 | 88 | 17.306 L | 28:51 | 43:16 | 57:41 | 72:07 | 86:32 | 100:57 | 115:22 | 129:48 |
| 30 | 28:20 | 80 | 21.336 L | 35:37 | 53:25 | 71:13 | 89:02 | 106:50 | 124:38 | 142:26 | 160:15 |
| 33 | 31:10 | 72 | 25.852 L | 43:05 | 64:38 | 86:10 | 107:43 | 129:16 | 150:43 | 172:21 | 193:53 |
| 36 | 34:00 | 66 | 30.768 L | 51:17 | 76:55 | 102:34 | 128:12 | 153:50 | 179:29 | 205:07 | 230:46 |
| 42 | 39:48 | 57 | 41.883 L | 69:48 | 104:42 | 139:37 | 174:30 | 209:24 | 244:19 | 279:13 | 314:07 |
| 48 | 45:34 | 50 | 54.705 L | 91:10 | 136:45 | 182:21 | 227:55 | 273:31 | 319:06 | 364:42 | 410:17 |
| 54 | 51:02 | 44 | 69.236 L | 115:24 | 173:05 | 230:47 | 288:29 | 346:11 | 403:53 | 461:34 | 519:16 |
| 60 | 65:40 | 40 | 85.476 L | 142:28 | 213:41 | 284:55 | 356:09 | 427:23 | 498:37 | 469:50 | 641:04 |

Note: If there has been no leakage (zero psig drop) after one hour of testing, the test section shall be accepted and the test complete.
*Q is the allowable leak rate in $ft^3/min/ft^2$ of inside surface area of pipe.

In areas where ground water is known to exist, the Contractor shall determine in the water elevation prior to running the test. The height of water over the invert of the pipe shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of the water is 11 ½ foot, then the added pressure will be 5 psig. This increases the 3.5 psig to 8.5 psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing will remain the same.

If the pressure drops more than 1.0 psi during the test time, the line is presumed to have failed. The Contractor shall, at his own expense, determine the source of leakage. He shall then repair or replace all defective materials and/or workmanship. Air testing shall then be performed on the repaired line to meet the above specifications.

E. TELEVISION INSPECTION – Television inspection shall be required for the following:

1. Televise sewer new construction 6" and larger only – for review purposes.
2. Televise sewer rehabilitation/replacement to determine if any defects exist prior to acceptance.

3. Televise sewer after all other infrastructure has been constructed to determine if sewer main has been damaged and to see if new main is clear of all mud, concrete, and debris prior to acceptance.

A minimum of 14 days shall lapse between completion of rehabilitation/replacement and television inspection. All other infrastructure shall be constructed and project ready for final inspection before the new main has televised inspection. In all cases the existing sewer shall be cleaned prior to any televising event. The cleaning shall be accomplished with a high-pressure stream to move debris to the downstream manhole.

Debris shall be vacuumed and removed from the downstream manhole of each run to be televised and not allowed to flow into the existing main. The Contractor shall provide public notification to each resident affected by the cleaning event, a minimum of 24 hours prior to cleaning. Mobile closed circuit television inspection equipment shall be used to televise sewer lines between manholes. The camera shall be pulled through the line. Push type cameras are not acceptable. Robotic type camera equipment shall be used to televise stubouts.

The television camera used for the inspection shall be a color camera specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. Picture quality and definition shall be satisfactory to determine characteristics and defects of sewer being televised. Inspection operations shall cease if the quality of the image on the screen is unsatisfactory. A continuous image for viewing shall be produced. A system, which displays the camera location in feet on the monitor with respect to the starting manhole's centerline, shall be used. This system shall automatically update the camera location display as the camera is pulled forward or backward through the sewer line.

Measurement for location of observations to be recorded shall be made at the ground level by means of a meter device. Measurements shall be accurate to one-half (0.5) foot. Measurements shall be referenced from the center of the manhole where the camera is started to the center of the manhole where observations are terminated. The measurements shall be verified at the completion of the observations by measuring the distance between manhole centers at the ground level. The observed measurements shall correspond to within plus or minus one foot. Surface measurements shall be made by the contractor in the presence of the Engineer's representative.

The television camera shall be moved through the line at a uniform slow rate. During the inspection the camera shall be stopped at the points where one or more of the following conditions are observed and distances recorded.

1. Service line tees, wyes or taps.
2. Infiltration/inflow source.
3. Structural defects, including broken pipe, collapsed pipe, cracks, punctures, settling, etc.
4. Abnormal joint conditions, such as horizontal and vertical misalignment, open joints, joints not fully sealed, etc.
5. Unusual conditions.

Photographs of all questionable conditions shall be taken for subsequent review. The photographs shall be color and shall be taken from the image on the TV monitor with approved methods. The TV camera shall be positioned so the optimum view can be obtained. The image size of photographs shall be no smaller than three inches by four inches. All photographs shall be identified by location, date taken, and names of the owner's and Contract representative. The location of all photographs shall be identified by recording the distance from each defect or point of interest to the center of the reference manhole. All photographs shall be submitted as specified.

A CD, DVD, or VHS with a clear and audible voice narrative of the entire TV monitoring shall be furnished. Each video will be delivered to the Engineer in charge. Each report shall be titled on the screen with the date, manhole numbers, pipe size, and district or project number. The camera shall be set to begin at the center of the manhole and the footage zeroed out. The title shall change at each manhole and the footage zeroed out again before starting a new pull when more than one section of sewer is televised in succession. Defects in the sewer line shall be repaired or replaced by the Contractor, as directed by the Engineer, at no cost to the Owner. If the sewer is televised in a location where no construction has been completed, no repairs shall be required. Two bound copies of the final inspection report shall be submitted to the Engineer. Included in the report shall be a map showing the work area, a wye locations report, a television inspection report, video and all pictures.

## 3.2 TESTING PRESSURE SEWERS

A. HYDROSTATIC TEST – A pressure of 100 psi (7.0 kg/sq. cm) at the lowest elevation shall be applied for not less than 4 hours. No acceptance shall be granted until the leakage is less than 7 gallons per diameter inch per mile of pipe (6.5 liters per centimeter diameter per kilometer of pipe). Water shall be added and gauged continuously throughout the duration of the test under supervision of the Engineer, to maintain the required test pressure.

If the installation fails to meet this requirement, the Contractor shall, at his expense, determine the source of leakage. He shall repair or replace the defective materials and/or workmanship. The repaired line shall then be retested to meet the above requirements.

B. PRESSURE AND LEAKAGE TESTS – The pipeline shall be subjected to pressure and leakage tests as specified herein and as directed by the Engineer.

The required pressure and leakage tests shall be made after all pipe laying and backfilling work has been completed. All concrete reaction blocks and bracing or restraining facilities shall be in place at least 7 days before the initial filling of the line, except where tension joints are used at bends. The pressure and leakage tests shall be applied to the entire line and end plugs. The Contractor shall be solely responsible for any and all damage to the pipeline, and to public and private property, which results from defective material or workmanship.

The section of the line to be tested shall slowly be filled with water and all air expelled from the pipe. Care shall be taken that all air valves are installed and open in the section being filled, and that the rate of filling does not exceed the venting capacity of the air valves.

C. TEST EQUIPMENT AND FACILITIES – The Contractor shall perform the necessary work to fill the pipeline with test water, as specified. The Contractor shall furnish all pumping equipment, water meter, pressure gauge, and all equipment, materials, and facilities required for the tests.

Test pressures shall be applied by means of a force pump of such design and capacity that the required pressure can be applied and maintained without interruption for the duration of each test. The water meter and pressure gauge shall be accurately calibrated and shall be subject to the approval of the Engineer.

D. PRESSURE TEST – The low point in the forcemain for each test section shall be subjected to a test pressure of 100 psi (7.0 kg/sq.com). Test pressure shall not exceed the rated pressure of the valves, pipe or appurtenances when the pressure boundary of the test section includes closed, resilient-seated gate valves.

After the section of the line to be tested has been filled with water, the specified test pressure shall be applied and maintained for a period of not less than 2 hours and for whatever longer

period as may be necessary for the Engineer to complete the inspection of the line under test or for the Contractor to locate any and all defective joints and pipeline materials. If repairs are needed, such repair shall be made, the line refilled, and the test pressure applied as before; this operation shall be repeated until the line and all parts thereof withstand the test pressure in a satisfactory manner.

E. LEAKAGE TESTS – After the specified pressure test has been completed, the line being tested shall be subjected to a leakage test under a hydrostatic pressure of 100 psi (7.0 kg/sq.com). The pressure shall be maintained constant (within a maximum variation, plus or minus, of 5 psi) during the entire time that line leakage measurements are being made, so that the allowable leakage rate may be determined accurately from the leakage rate formula.

Leakage shall not be started until a constant test pressure has been established. Compression of air trapped in un-vented pipes or fittings will give false leakage readings under changing pressure conditions. After the test pressure has been established and stabilized, the line leakage shall be measured by means of a water meter installed on the line side of the force pump.

Line leakage is defined as the total amount of water introduced into the line as measured by the meter during the leakage test. The forcemain, or tested section thereof, will not be accepted if and while it has a leakage rate in excess of that rate determined by the following formula:

$$L=\frac{SD^{1/2}(P)}{133{,}200}$$ in which:

L = Maximum permissible leakage rate, in gallons per hour.
S = Length of pipe tested, in feet.
D = Nominal internal diameter of the pipe, in inches.
P = Average test pressure, in pounds per square inch (gauge).

Where the leakage test shows a leakage rate in excess of the permissible maximum, the Contractor shall make all necessary surveys in connection with the location and repair of leaking joints to the extent required to reduce the total leakage to an acceptable amount.

All joints in piping and closed valves shall be watertight and free from visible leaks during the prescribed tests. Each and every leak which maybe discovered at any time prior to the expiration of one year from and after the date of final acceptance of the work by the Owner shall be located and repaired by and at the expense of the Contractor, regardless of any amount that the total line leakage rate during the specified leakage test may be below the specified maximum rate.

**END OF SECTION**

# SECTION 226600

# CHEMICAL-WASTE SYSTEMS (REVISED)

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. Section Includes:
   1. Single-wall piping.
   2. Piping specialties.
   3. Neutralization tanks.

### 1.3 PERFORMANCE REQUIREMENTS

A. Single-Wall Piping Pressure Rating: 10 feet head of water (30 kPa).

### 1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

### 1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For chemical-waste specialties and neutralization tanks to include in emergency, operation, and maintenance manuals.

### 1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Neutralization-Tank Limestone: Equal to 100 percent of amount required for each tank sump initial charge. Chips shall be 1 ½" to 3" diameter with 90% calcium carbonate content. Furnish limestone in 50-lb (22.7-kg) bags.

### 1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store piping and specialties with sealing plugs in ends or with end protection.

B. Do not store plastic pipe or fittings in direct sunlight.

C. Protect pipe, fittings, and seals from dirt and damage.

1.8 COORDINATION

A. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases.

PART 2 - PRODUCTS

2.1 SINGLE-WALL PIPE AND FITTINGS

A. Polypropylene Pipe Schedule 40 joined by the coil fusion method. Pipe shall be manufactured of non-flame retardant homopolymer polypropylene. Flammability requirements are based on ASTM D635 “Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self Supporting Plastics in a Horizontal Position.
   1. All components of the system shall conform to the following applicableASTM Standards, D4101, D3311, D1599, D2122, F1290 and F1412. All pipe shall be marked with manufacturers name, pipe size, schedule, type, quality control mark and ASTM information. All fittings shall be legibly marked showing manufacturers trademark, fitting size, manufacturers part number, and symbol indicating the material
   2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. GF Piping Systems LLC
      b. IPEX Inc
      c. Orion Fittings, Inc: a division of Watts Water Technologies, Inc
      d. Zurn Plumbing Products Group; Chemical Drainage Systems

B. Polyvinylidene (PVDF) Pipe Schedule 40 joined by the coil fusion method. Pipe shall be manufactured of flame retardant PVDF for service in plenum rated areas or high temperature (to 280 degrees) flow stream. Flammability requirements are based on ASTM D635 “Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Self Supporting Plastics in a Horizontal Position”. The pipe must also meet or exceed ASTM E84 25/50 (UL 723) and UL 94-VO.
   1. All components of the system shall conform to the following applicable standards, ASTM E-84 25/50 (UL 723) and UL 94-VO. All pipe shall be marked with manufacturers name, schedule, pipe size, ASTM-F1673, E-84, UPC, UL Classified date stamp and “Made In USA”. All fittings shall be legibly marked showing manufacturers trademark, fitting size, manufacturers part number, symbol indicating the material, ASTM F1673, UPC, USA.
   2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. GF Piping Systems LLC
      b. IPEX Inc
      c. Orion Fittings, Inc: a division of Watts Water Technologies, Inc
      d. Zurn Plumbing Products Group; Chemical Drainage Systems

C. Polypropylene fittings shall be manufactured to Schedule 40 dimensions. Fittings shall be joined to the polypropylene pipe by means of coil fusion method.

D. Flame Retardant Polyvinylidene (PVDF) fittings shall be manufactured to Schedule 40 dimensions. Fittings shall be joined to the PVDF pipe by means of coil fusion method. Fittings shall meet the same flammability requirements as described for pipe above.

E. Adapters and Transition Fittings: Assemblies with combination of clamps, couplings, adapters, and gaskets; compatible with piping and system liquid; made for joining different piping materials.

2.2 JOINING MATERIALS

A. Couplings: Electro-fused produced by the piping system manufacturer and catalogued for use within the system. Mechanical joint couplings shall meet the same chemical resistance criteria as the piping system and be produced and catalogued by the piping system manufacturer.

B. Adapters and Transition Fittings: Assemblies with combination of clamps, couplings, adapters, gaskets, and threaded or flanged parts; compatible with piping and system liquid; and made for joining different piping materials.

C. Flanges: Assemblies of companion flanges and gaskets complying with ASME B16.21 and compatible with system liquid, and bolts and nuts. Flanges shall not be installed below grade.

2.3 PIPING SPECIALTIES

A. Corrosion-Resistant Traps:
1. Type: Universal P-trap with mechanical joints.
2. Size: NPS 1-1/2 or NPS 2 (DN 40 or DN 50), as required to match connected piping.
3. PP: ASTM D 4101, with mechanical-joint pipe connections.

2.4 NEUTRALIZATION TANKS

A. Plastic Neutralization Tanks:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. GF Piping Systems LLC
   b. Chem-Tainer Industries.
   c. IPEX Inc.
   d. Orion Fittings, Inc.; a division of Watts Water Technologies, Inc.
   e. Town & Country Plastics, Inc
   f. Zurn, Inc
2. Description: Corrosion-resistant plastic materials; with removable, gastight cover; interior, sidewall, dip-tube inlet; outlet; vent; and threaded or flanged, sidewall pipe connections.
   a. Material: HDPE or PP
   b. Tank Capacity: 275 gallons
   c. Dip Tube: On inlet pipe.
   d. Extension: HDPE. (one piece custom fabricated PP tank will be acceptable in lieu of HDPE tank with extension section)
   e. Traffic Cover: Light-duty plastic, bolted.
   f. Limestone: Chips or lumps, with more than 90 percent calcium carbonate content and 1 ½ to 3-inch diameter.

PART 3 - EXECUTION

3.1 EARTHWORK

A. Comply with requirements in Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

3.2 CONCRETE BASES

A. Anchor neutralization tanks to concrete bases refer to detail 6/P3.2.

## 3.3 PIPING SCHEDULE

A. Transition and special fittings with pressure ratings at least equal to piping pressure rating may be used in applications below, unless otherwise indicated.

B. Above Floor Chemical-Waste Piping: Use any of the following piping materials for each size range:
   1. NPS 1-1/2 to NPS 4 (DN 40 to DN 100): PVDF drainage piping and electrofusion joints.

C. Under Slabs-on-Grade, Chemical-Waste Piping: Use any of the following piping materials for each size range:
   1. NPS 1-1/2 to NPS 4 (DN 40 to DN 100): PP drainage piping and electrofusion joints.
   2. NPS 1-1/2 to NPS 4 (DN 40 to DN 100): PVDF drainage piping and electrofusion joints.

## 3.4 PIPING INSTALLATION

A. Chemical-Waste Piping Inside the Building:
   1. Install piping next to equipment, accessories, and specialties to allow service and maintenance.
   2. Transition and special fittings with pressure ratings at least equal to piping pressure rating may be used unless otherwise indicated.
   3. Flanges may be used on aboveground piping unless otherwise indicated.
   4. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas. All joints made in concealed areas shall be electro-fused type.
   5. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
   6. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
   7. Install piping at indicated slopes.
   8. Install piping free of sags and bends.
   9. Install fittings for changes in direction and branch connections.
   10. Verify final equipment locations for roughing-in.
   11. Install sleeves for piping penetrations of walls, ceilings, and floors.
   12. Install escutcheons for piping penetrations of walls, ceilings, and floors.
   13. Mechanical joint connections shall be installed in under bench locations only.
   14. Pipe and fittings shall be installed according to current installation instructions as delivered in print or documented online by the system manufacturer. An onsite installation seminar shall be conducted by manufacturer personnel who are certified to conduct said seminar. Seminar topics shall include all aspects of product installation (storage, set-up, support spacing, fusion process, mechanical joint process, fusion machine operation, testing procedure, etc.). At the conclusion of the installation seminar, all installers will be given a certification test and, upon successful completion of said test, will be issued a certification card verifying they have met the requirements of the manufacturer with regards to knowledge of proper product installation and testing methods.

## 3.5 JOINT CONSTRUCTION

A. Chemical-Waste Piping Inside the Building:
   1. Plastic-Piping Electro-fusion Joints: Make polyolefin drainage-piping joints according to ASTM F 1290.
   2. Dissimilar-Material Piping Joints: Make joints using adapters compatible with both system materials.

## 3.6 HANGER AND SUPPORT INSTALLATION

A. Pipe sizes in this article refer to aboveground, single-wall piping.

B. Comply with requirements in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment" for installation of supports.

C. Support horizontal piping and tubing within 12 inches (300 mm) of each fitting and coupling.

D. Support vertical piping and tubing at base and at each floor.

E. Rod diameter may be reduced 1 size for double-rod hangers, to minimum of 3/8 inch (10 mm).

F. Install vinyl-coated hangers for PP piping with the following maximum horizontal spacing and minimum rod diameters:
   1. NPS 2 (DN 50): 33 inches (840 mm) with 3/8-inch (10-mm) rod.
   2. NPS 2-1/2 and NPS 3 (DN 65 and DN 80): 42 inches (1067 mm) with 1/2-inch (13-mm) rod.
   3. NPS 4 and NPS 5 (DN 100 and DN 125): 48 inches (1220 mm) with 5/8-inch (16-mm) rod.
   4. NPS 6 (DN 150): 48 inches (1220 mm) with 3/4-inch (19-mm) rod.
   5. NPS 8 (DN 200): 48 inches (1220 mm) with 7/8-inch (22-mm) rod.

G. Install supports for vertical PP piping every 72 inches (1830 mm).

## 3.7 NEUTRALIZATION TANK INSTALLATION

A. Install interior neutralization tanks on smooth and level concrete base. Include full initial charge of limestone.

## 3.8 CONNECTIONS

A. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to equipment to allow service and maintenance.

## 3.9 LABELING AND IDENTIFICATION

A. Comply with requirements in Section 220550 "Mechanical Identification" for labeling of equipment and piping.
   1. Use detectable warning tape over ferrous piping.
   2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

## 3.10 FIELD QUALITY CONTROL

A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
   1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
   2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.

B. Re-inspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for re-inspection.

C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.

D. Test sanitary drainage and vent piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
   1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
   2. Leave uncovered and unconcealed new, altered, extended, or replaced drainage and vent piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
   3. Roughing-in Plumbing Test Procedure: Test drainage and vent piping, except outside leaders, on completion of roughing-in. Close openings in piping system and fill with water to point of overflow, but not less than 10-foot head of water (30 kPa). From 15 minutes before inspection starts to completion of inspection, water level must not drop. Inspect joints for leaks.
   4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled with water, test connections and prove they are gastight and watertight. Plug vent-stack openings on roof and building drains where they leave building. Introduce air into piping system equal to pressure of 1-inch wg (250 Pa). Use U-tube or manometer inserted in trap of water closet to measure this pressure. Air pressure must remain constant without introducing additional air throughout period of inspection. Inspect plumbing fixture connections for gas and water leaks.
   5. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
   6. Prepare reports for tests and required corrective action.

## 3.11 CLEANING

A. Use procedures prescribed by authorities having jurisdiction or, if not prescribed, use procedures described below:
   1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
   2. Clean piping by flushing with potable water.

END OF SECTION 226600

# 4-PIPE ENERGY RECOVERY UNITS - SYSTEM POINTS LIST

| CONTROLLER: UC600 | POINT TYPE | | | | | | | | ALARMS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM POINT DESCRIPTION | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | HARDWIRE INTERLOCK | WIRELESS | NETWORK | DEFAULT VALUE | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| DISCHARGE AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| DUCT STATIC PRESSURE LOCAL | X | AI | | | | | | | | | | | | | | |
| HEAT EXCHANGER RETURN AIR FROST AVOIDANCE TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| LEAVING OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| MIXED AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR FLOW LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SPACE STATIC PRESSURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SUPPLY FAN AIR FLOW LOCAL | X | AI | | | | | | | | | | | | | | |
| EXHAUST FAN STATUS | X | BI | | | | | | | | | X | | | | | |
| HIGH STATIC PRESSURE CUTOUT OPEN | | BI | | | X | | | | | | | | | | | |
| LOW LIMIT TEMPERATURE CUTOUT OPEN | X | BI | | | X | | | | | | X | X | | | LOW TEMP DETECT | NOTE 1 |
| OUTDOOR AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| RETURN AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| SUPPLY FAN STATUS OPEN | X | BI | | | | | | | | | | | | | | |
| CHILLED WATER COIL VALVE | X | | AO | | | | | | | | | | | | | |
| EXHAUST AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN SPEED OUTPUT COMMAND | X | | AO | | | | | | | | | | | | | |
| HEAT EXCHANGER ENTERING RETURN AIR FACE & BYPASS DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| OUTSIDE AIR TRAQ DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| RETURN AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| SUPPLY FAN SPEED COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| HEAT EXCHANGER OUTDOOR AIR FROST DAMPER COMMAND | X | | BO | | | | | | | | | | | | | |
| SUPPLY FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| OCCUPIED COOLING SETPOINT | | | | X | | | | 74.0 deg. F | | | | | | | | |
| OCCUPIED HEATING SETPOINT | | | | X | | | | 70.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY COOLING SETPOINT | | | | X | | | | 80.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY HEATING SETPOINT | | | | X | | | | 65.0 deg. F | | | | | | | | |
| UNOCCUPIED COOLING SETPOINT | | | | X | | | | 85.0 deg. F | | | | | | | | |
| UNOCCUPIED HEATING SETPOINT | | | | X | | | | 60.0 deg. F | | | | | | | | |
| OCCUPIED BYPASS TIMER | | | | X | | | | 2.0 HRS | | | | | | | | |
| DISCHARGE AIR TEMPERING SETPOINT | | | | X | | | | 55.0 deg. F | | | | | | | | |
| DISCHARGE AIR TEMPERATURE CONTROL POINTS | | | | X | | | | | | | | | | | | |
| BAS COMMUNICATION STATE | X | | | X | | | | | | | | | | X | | NOTE 2 |
| MAINTENANCE REQUIRED | | | | X | | | | 600 HRS | | | | | | | | |
| **CONTROLLER SPARE HARDWARE POINTS** | | | | | | | | | | | | | | | | |
| ANALOG INPUT(S) | | 2 | | | | | | | | | | | | | | |
| UNIVERSAL INPUT(S) | | 13 | | | | | | | | | | | | | | |
| ANALOG OUTPUT(S) | | | 5 | | | | | | | | | | | | | |
| BINARY OUTPUT(S) | | | 9 | | | | | | | | | | | | | |

**GENERAL NOTES**

1. DEVICE IS HARDWIRE INTERLOCKED, MANUAL RESET MAY BE REQUIRED
2. DISPLAYED AT THE BAS USER INTERFACE IF PRESENT

# 4-PIPE ROOFTOP UNITS - SYSTEM POINTS LIST

| CONTROLLER: UC600 | POINT TYPE | | | | | | | | ALARMS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM POINT DESCRIPTION | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | HARDWIRE INTERLOCK | WIRELESS | NETWORK | DEFAULT VALUE | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| DISCHARGE AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| DUCT STATIC PRESSURE LOCAL | X | AI | | | | | | | | | | | | | | |
| LEAVING OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| MIXED AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR FLOW LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SPACE STATIC PRESSURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SUPPLY FAN AIR FLOW LOCAL | X | AI | | | | | | | | | | | | | | |
| EXHAUST FAN STATUS | X | BI | | | | | | | | | X | | | | | |
| HIGH STATIC PRESSURE CUTOUT OPEN | | BI | | | X | | | | | | | | | | | |
| LOW LIMIT TEMPERATURE CUTOUT OPEN | X | BI | | | X | | | | | | X | X | | | LOW TEMP DETECT | NOTE 1 |
| OUTDOOR AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| RETURN AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| SUPPLY FAN STATUS OPEN | X | BI | | | | | | | | | | | | | | |
| CHILLED WATER COIL VALVE | X | | AO | | | | | | | | | | | | | |
| EXHAUST AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN SPEED OUTPUT COMMAND | X | | AO | | | | | | | | | | | | | |
| OUTSIDE AIR TRAQ DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| RETURN AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| SUPPLY FAN SPEED COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| SUPPLY FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| OCCUPIED COOLING SETPOINT | | | | X | | | | 74.0 deg. F | | | | | | | | |
| OCCUPIED HEATING SETPOINT | | | | X | | | | 70.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY COOLING SETPOINT | | | | X | | | | 80.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY HEATING SETPOINT | | | | X | | | | 65.0 deg. F | | | | | | | | |
| UNOCCUPIED COOLING SETPOINT | | | | X | | | | 85.0 deg. F | | | | | | | | |
| UNOCCUPIED HEATING SETPOINT | | | | X | | | | 60.0 deg. F | | | | | | | | |
| OCCUPIED BYPASS TIMER | | | | X | | | | 2.0 HRS | | | | | | | | |
| DISCHARGE AIR TEMPERING SETPOINT | | | | X | | | | 55.0 deg. F | | | | | | | | |
| DISCHARGE AIR TEMPERATURE CONTROL POINTS | | | | X | | | | | | | | | | | | |
| BAS COMMUNICATION STATE | X | | | X | | | | | | | | | | X | | NOTE 2 |
| MAINTENANCE REQUIRED | | | | X | | | | 600 HRS | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **CONTROLLER SPARE HARDWARE POINTS** | | | | | | | | | | | | | | | | |
| ANALOG INPUT(S) | | 2 | | | | | | | | | | | | | | |
| UNIVERSAL INPUT(S) | | 13 | | | | | | | | | | | | | | |
| ANALOG OUTPUT(S) | | | 5 | | | | | | | | | | | | | |
| BINARY OUTPUT(S) | | | 9 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**GENERAL NOTES**

1. DEVICE IS HARDWIRE INTERLOCKED, MANUAL RESET MAY BE REQUIRED
2. DISPLAYED AT THE BAS USER INTERFACE IF PRESENT

# 4-PIPE SINGLE ZONE VAV - SYSTEM POINTS LIST

| CONTROLLER: UC600 | POINT TYPE | | | | | | | | ALARMS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM POINT DESCRIPTION | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | HARDWIRE INTERLOCK | WIRELESS | NETWORK | DEFAULT VALUE | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| COOLING COIL LEAVING TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| DISCHARGE AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| MIXED AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR FLOW LOCAL | X | AI | | | | | | | | | | | | | | |
| OUTDOOR AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR HUMIDITY LOCAL | X | AI | | | | | | | | | | | | | | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SPACE CO2 CONCENTRATION LOCAL | X | AI | | | | | | | X | | | X | | | CO2 SENSOR FAILURE | |
| SPACE STATIC PRESSURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SPACE TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | NOTE 1, 2 |
| SPACE TEMPERATURE SETPOINT LOCAL | | AI | | | | | | | | | | | X | | SENSOR FAILURE | NOTE 1, 2, 3 |
| SUPPLY FAN AIR FLOW LOCAL | X | AI | | | | | | | | | | | | | | |
| EXHAUST FAN STATUS OPEN | X | BI | | | | | | | | | | | | | | |
| FILTER STATUS OPEN | X | BI | | | | | | | | | | X | | | DIRTY FILTER | |
| LOW LIMIT TEMPERATURE CUTOUT OPEN | X | BI | | | X | | | | | | X | X | | | LOW TEMP DETECT | NOTE 4 |
| SUPPLY FAN STATUS OPEN | X | BI | | | | | | | | | | | | | | |
| CHILLED WATER COIL VALVE | X | | AO | | | | | | | | | | | | | |
| RETURN AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| RETURN FAN SPEED OUTPUT COMMAND | X | | AO | | | | | | | | | | | | | |
| REHEAT VALVE | X | | AO | | | | | | | | | | | | | |
| RETURN AIR DAMPER | X | | AO | | | | | | | | | | | | | |
| SUPPLY FAN SPEED COMMAND | X | | AO | | | | | | | | | | | | | |
| RETURN FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| SUPPLY FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| OCCUPIED COOLING SETPOINT | | | | X | | | | 74.0 deg. F | | | | | | | | |
| OCCUPIED HEATING SETPOINT | | | | X | | | | 70.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY COOLING SETPOINT | | | | X | | | | 80.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY HEATING SETPOINT | | | | X | | | | 65.0 deg. F | | | | | | | | |
| UNOCCUPIED COOLING SETPOINT | | | | X | | | | 85.0 deg. F | | | | | | | | |
| UNOCCUPIED HEATING SETPOINT | | | | X | | | | 60.0 deg. F | | | | | | | | |
| OCCUPIED BYPASS TIMER | | | | X | | | | 2.0 HRS | | | | | | | | |
| DISCHARGE AIR TEMPERING SETPOINT | | | | X | | | | 55.0 deg. F | | | | | | | | |
| DISCHARGE AIR TEMPERATURE CONTROL POINTS | | | | X | | | | | | | | | | | | |
| BAS COMMUNICATION STATE | X | | | X | | | | | | | | | | X | | NOTE 1 |
| MAINTENANCE REQUIRED | | | | X | | | | 600 HRS | | | | | | | | |
| **CONTROLLER SPARE HARDWARE POINTS** | | | | | | | | | | | | | | | | |
| UNIVERSAL INPUT(S) | | 8 | | | | | | | | | | | | | | |
| ANALOG OUTPUT(S) | | | 3 | | | | | | | | | | | | | |
| BINARY OUTPUT(S) | | | 2 | | | | | | | | | | | | | |

**GENERAL NOTES**

1. DISPLAYED AT THE BAS USER INTERFACE IF PRESENT
2. SETPOINT & ON / CANCEL = OPTIONAL FEATURE
3. OPTIONAL FEATURE (SETPOINT)
4. DEVICE IS HARDWIRE INTERLOCKED, MANUAL RESET MAY BE REQUIRED

# 4-PIPE VAV - SYSTEM POINTS LIST

| CONTROLLER: UC600 | POINT TYPE | | | | | | | | ALARMS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM POINT DESCRIPTION | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | HARDWIRE INTERLOCK | WIRELESS | NETWORK | DEFAULT VALUE | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| COOLING COIL LEAVING TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| DISCHARGE AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| DUCT STATIC PRESSURE LOCAL | X | AI | | | | | | | | | | | | | | |
| EXHAUST AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| EXHAUST AIR TEMPERTURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| LEAVING EXHAUST AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| LEAVING OUTDOOR AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| LEAVING OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| MIXED AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR FLOW LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| PREHEAT LEAVING COIL TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SPACE STATIC PRESSURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SUPPLY FAN AIR FLOW LOCAL | X | AI | | | | | | | | | | | | | | |
| EXHAUST FAN STATUS OPEN | X | BI | | | | | | | | | X | | | | | |
| HIGH STATIC PRESSURE CUTOUT OPEN | | BI | | | X | | | | | | | | | | | |
| LOW LIMIT TEMPERATURE CUTOUT OPEN | X | BI | | | X | | | | | | X | X | | | LOW TEMP DETECT | NOTE 1 |
| OUTDOOR AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| RETURN AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| SUPPLY FAN STATUS OPEN | X | BI | | | | | | | | | | | | | | |
| CHILLED WATER COIL VALVE | X | | AO | | | | | | | | | | | | | |
| EXHAUST AIR BYPASS DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN SPEED OUTPUT COMMAND | X | | AO | | | | | | | | | | | | | |
| OUTSIDE AIR BYPASS DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| OUTSIDE AIR TRAQ DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| PREHEAT VALVE | X | | AO | | | | | | | | | | | | | |
| RETURN AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| SUPPLY FAN SPEED COMMAND | X | | AO | | | | | | | | | | | | | |
| ENERGY WHEEL ROTATION START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| EXHAUST FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| SUPPLY FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| OCCUPIED COOLING SETPOINT | | | | X | | | | 74.0 deg. F | | | | | | | | |
| OCCUPIED HEATING SETPOINT | | | | X | | | | 70.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY COOLING SETPOINT | | | | X | | | | 80.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY HEATING SETPOINT | | | | X | | | | 65.0 deg. F | | | | | | | | |
| UNOCCUPIED COOLING SETPOINT | | | | X | | | | 85.0 deg. F | | | | | | | | |
| UNOCCUPIED HEATING SETPOINT | | | | X | | | | 60.0 deg. F | | | | | | | | |
| OCCUPIED BYPASS TIMER | | | | X | | | | 2.0 HRS | | | | | | | | |
| DISCHARGE AIR TEMPERING SETPOINT | | | | X | | | | 55.0 deg. F | | | | | | | | |
| DISCHARGE AIR TEMPERATURE CONTROL POINTS | | | | X | | | | | | | | | | | | |
| BAS COMMUNICATION STATE | X | | | X | | | | | | | | | | X | | NOTE 2 |
| MAINTENANCE REQUIRED | | | | X | | | | 600 HRS | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **CONTROLLER SPARE HARDWARE POINTS** | | | | | | | | | | | | | | | | |
| UNIVERSAL INPUT(S) | | 12 | | | | | | | | | | | | | | |
| ANALOG OUTPUT(S) | | | 7 | | | | | | | | | | | | | |
| BINARY OUTPUT(S) | | | 9 | | | | | | | | | | | | | |

**GENERAL NOTES**

1. DEVICE IS HARDWIRE INTERLOCKED, MANUAL RESET MAY BE REQUIRED
2. DISPLAYED AT THE BAS USER INTERFACE IF PRESENT

# DX ROOFTOP UNITS - SYSTEM POINTS LIST

| CONTROLLER: UC600 | POINT TYPE | | | | | | | | ALARMS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM POINT DESCRIPTION | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | HARDWIRE INTERLOCK | WIRELESS | NETWORK | DEFAULT VALUE | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| DISCHARGE AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| DUCT STATIC PRESSURE LOCAL | X | AI | | | | | | | | | | | | | | |
| LEAVING OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| MIXED AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR FLOW LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| OUTDOOR AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR HUMIDITY LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| RETURN AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SPACE STATIC PRESSURE LOCAL | X | AI | | | | | | | X | X | | | X | | SENSOR FAILURE | |
| SUPPLY FAN AIR FLOW LOCAL | X | AI | | | | | | | | | | | | | | |
| EXHAUST FAN STATUS | X | BI | | | | | | | | | X | | | | | |
| HIGH STATIC PRESSURE CUTOUT OPEN | | BI | | | X | | | | | | | | | | | |
| LOW LIMIT TEMPERATURE CUTOUT OPEN | X | BI | | | X | | | | | | X | X | | | LOW TEMP DETECT | NOTE 1 |
| OUTDOOR AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| RETURN AIR FILTER STATUS OPEN | X | BI | | | | | | | | | X | X | X | | DIRTY FILTER | |
| SUPPLY FAN STATUS OPEN | X | BI | | | | | | | | | | | | | | |
| NG HEAT EXCHANGER STATUS | X | | AO | | | | | | | | | | | | | |
| DX-REFRIGERANT COMPRESSOR STATUS | X | | AO | | | | | | | | | | | | | |
| EXHAUST AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN SPEED OUTPUT COMMAND | X | | AO | | | | | | | | | | | | | |
| OUTSIDE AIR TRAQ DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| RETURN AIR DAMPER COMMAND | X | | AO | | | | | | | | | | | | | |
| SUPPLY FAN SPEED COMMAND | X | | AO | | | | | | | | | | | | | |
| EXHAUST FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| SUPPLY FAN START STOP COMMAND | X | | BO | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| OCCUPIED COOLING SETPOINT | | | | X | | | | 74.0 deg. F | | | | | | | | |
| OCCUPIED HEATING SETPOINT | | | | X | | | | 70.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY COOLING SETPOINT | | | | X | | | | 80.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY HEATING SETPOINT | | | | X | | | | 65.0 deg. F | | | | | | | | |
| UNOCCUPIED COOLING SETPOINT | | | | X | | | | 85.0 deg. F | | | | | | | | |
| UNOCCUPIED HEATING SETPOINT | | | | X | | | | 60.0 deg. F | | | | | | | | |
| OCCUPIED BYPASS TIMER | | | | X | | | | 2.0 HRS | | | | | | | | |
| DISCHARGE AIR TEMPERING SETPOINT | | | | X | | | | 55.0 deg. F | | | | | | | | |
| DISCHARGE AIR TEMPERATURE CONTROL POINTS | | | | X | | | | | | | | | | | | |
| BAS COMMUNICATION STATE | X | | | X | | | | | | | | | | X | | NOTE 2 |
| MAINTENANCE REQUIRED | | | | X | | | | 600 HRS | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **CONTROLLER SPARE HARDWARE POINTS** | | | | | | | | | | | | | | | | |
| ANALOG INPUT(S) | | 2 | | | | | | | | | | | | | | |
| UNIVERSAL INPUT(S) | | 13 | | | | | | | | | | | | | | |
| ANALOG OUTPUT(S) | | | 5 | | | | | | | | | | | | | |
| BINARY OUTPUT(S) | | | 9 | | | | | | | | | | | | | |

**GENERAL NOTES**

1. DEVICE IS HARDWIRE INTERLOCKED, MANUAL RESET MAY BE REQUIRED
2. DISPLAYED AT THE BAS USER INTERFACE IF PRESENT

# HEAT PUMPS - SYSTEM POINTS LIST

| CONTROLLER: UC400 | POINT TYPE | | | | | | | | ALARMS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SYSTEM POINT DESCRIPTION | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | HARDWIRE INTERLOCK | WIRELESS | NETWORK | DEFAULT VALUE | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| DISCHARGE AIR TEMPERATURE LOCAL | X | AI | | | | | | | X | X | | | X | | | |
| ENTERING WATER TEMPERATURE LOCAL | X | AI | | | | | | | | | | | | | | |
| LEAVING WATER TEMPERATURE LOCAL | | AI | | | | | | | | | | | | | | |
| SPACE TEMPERATURE LOCAL | X | AI | | | | | | | | | | | | | | |
| SPACE TEMPERATURE SETPOINT LOCAL | X | AI | | | | | | | | | | | | | | |
| COMPRESSOR 1 STATUS | X | BI | | | | | | | | | | | | | | |
| CONDENSATE OVERFLOW DETECTION LOCAL | X | BI | | | | | | | | | X | | | | | |
| SUPPLY FAN STATUS LOCAL OPEN | X | BI | | | | | | | | | X | X | | | | |
| COMPRESSOR 1 START/STOP | X | | BO | | | | | | | | | | | | | |
| COMPRESSOR 2 START/STOP | X | | BO | | | | | | | | | | | | | |
| ISOLATION VALVE COMMAND | X | | BO | | | | | | | | | | | | | |
| MIXED AIR DAMPER | X | | BO | | | | | | | | | | | | | |
| REVERSING VALVE | X | | BO | | | | | | | | | | | | | |
| SUPPLY FAN START/STOP | X | | BO | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| OCCUPANCY | | | | X | | | | | | | | | | | | |
| OCCUPIED COOLING SETPOINT | | | | X | | | | 74.0 deg. F | | | | | | | | |
| OCCUPIED HEATING SETPOINT | | | | X | | | | 70.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY COOLING SETPOINT | | | | X | | | | 80.0 deg. F | | | | | | | | |
| OCCUPIED STANDBY HEATING SETPOINT | | | | X | | | | 65.0 deg. F | | | | | | | | |
| UNOCCUPIED COOLING SETPOINT | | | | X | | | | 85.0 deg. F | | | | | | | | |
| UNOCCUPIED HEATING SETPOINT | | | | X | | | | 60.0 deg. F | | | | | | | | |
| OCCUPIED BYPASS TIMER | | | | X | | | | 2.0 HRS | | | | | | | | |
| SETPOINT OFFSET | | | | X | | | | | | | | | | | | |
| COMPRESSOR ENABLE | | | | X | | | | AUTO | | | | | | | | |
| HEAT / COOL MODE | | | | X | | | | COOL | | | | | | | | |
| FAN MODE COMMAND | | | | X | | | | ON | | | | | | | | |
| APPLICATION MODE | | | | X | | | | AUTO | | | | | | | | |
| EFFECTIVE OCCUPANCY | X | | | X | | | | | | | | | | | | |
| EFFECTIVE HEAT / COOL MODE | X | | | X | | | | | | | | | | | | |
| EFFECTIVE SPACE TEMPERATURE | X | | | X | | | | | | | | | | | | |
| EFFECTIVE SPACE SETPOINT | | | | X | | | | | | | | | | | | |
| LOCAL SETPOINT | | | | X | | | | | | | | | | | | |
| HEAT OUTPUT | X | | | X | | | | | | | | | | | | |
| COOL OUTPUT | X | | | X | | | | | | | | | | | | |
| ALARM | X | | | X | | | | | | | | | | | | |
| SPACE HEATING/COOLING SETPOINT | X | | | X | | | | | | | | | | | | |
| MAINTENANCE REQUIRED | | | | X | | | | 600 HRS | | | | | | | | |
| BAS COMMUNICATION STATE | X | | | X | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **CONTROLLER SPARE HARDWARE POINTS** | | | | | | | | | | | | | | | | |
| ANALOG INPUT(S) | | 3 | | | | | | | | | | | | | | |
| BINARY INPUT(S) | | 2 | | | | | | | | | | | | | | |
| UNIVERSAL INPUT(S) | | 1 | | | | | | | | | | | | | | |
| BINARY OUTPUT(S) | | | 4 | | | | | | | | | | | | | |

**GENERAL NOTES**

| CHILLER PLANT - SYSTEM POINT LIST | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | POINT TYPE | | | | | | ALARMS | | | | | | | | | |
| SYSTEM POINT DESCRIPTION | | GRAPHIC | HARDWARE INPUT | HARDWARE OUTPUT | SOFTWARE POINT | DEFAULT VALUE | HARDWARE CONFIGURATION | HIGH ANALOG LIMIT | LOW ANALOG LIMIT | BINARY | LATCH DIAGNOSTIC | SENSOR FAIL | COMMUNICATION FAIL | DIAGNOSTICS | NOTES: |
| Central Geothermal Chiller Plant - (3) Parallel Water Cooled Chillers, (2) Manifolded Variable Flow Chilled Water Pumps with VFD, (2) Manifolded Variable Flow Hot Water Pumps with VFD, (2) Energy Transfer Condenser Loop Pumps with VFD, (2) Energy Transfer Evaperator Loop Pumps with VFD, (2) Heat Exchanger Pumps, with VFD, (3) Condenser Crossover Valves, (3) Evaporator Crossover Valves, and 2-Way Chilled Water and Hot Water Bypass Valves | | | | | | | | | | | | | | | | | |
| OA SENSOR | OUTSIDE AIR TEMPERATURE | X | AI | | | | AI | | | | | X | | SENSOR FAILURE | |
| | OUTSIDE AIR RELATIVE HUMIDITY | X | UI | | | | UI | | | | | X | | SENSOR FAILURE | |
| CHILLED WATER (P-K102A) PUMP 1 START/STOP | | X | | BO | | | BO | | | | | | | | |
| CHILLED WATER (P-K102B)PUMP 2 START/STOP | | X | | BO | | | BO | | | | | | | | |
| HOT WATER (P-K103A)PUMP 1 START/STOP | | X | | BO | | | BO | | | | | | | | |
| HOT WATER (P-K103B) PUMP 2 START/STOP | | X | | BO | | | BO | | | | | | | | |
| HEAT EXCHANGER (P-K104A) PUMP 1 START/STOP | | X | | BO | | | BO | | | | | | | | |
| HEAT EXCHANGER (P-K104B) PUMP 2 START/STOP | | X | | BO | | | BO | | | | | | | | |
| ENERGY TRANSFER CONDENSER LOOP (P-K105A) PUMP 1 START/STOP | | X | | BO | | | BO | | | | | | | | |
| ENERGY TRANSFER CONDENSER LOOP (P-K105B) PUMP 2 START/STOP | | X | | BO | | | BO | | | | | | | | |
| ENERGY TRANSFER EVAPORATOR LOOP (P-K106A) PUMP 1 START/STOP | | X | | BO | | | BO | | | | | | | | |
| ENERGY TRANSFER EVAPORATOR LOOP (P-K106B) PUMP 2 START/STOP | | X | | BO | | | BO | | | | | | | | |
| CHILLER 1 EVAPORATOR ISOLATION VALVE | | X | | BO | | | BO | | | | | | | | |
| CHILLER 1 CONDENSER ISOLATION VALVE | | X | | BO | | | BO | | | | | | | | |
| CHILLER 2 EVAPORATOR ISOLATION VALVE | | X | | BO | | | BO | | | | | | | | |
| CHILLER 2 CONDENSER ISOLATION VALVE | | X | | BO | | | BO | | | | | | | | |
| CHILLER 3 EVAPORATOR ISOLATION VALVE | | X | | BO | | | BO | | | | | | | | |
| CHILLER 3 CONDENSER ISOLATION VALVE | | X | | BO | | | BO | | | | | | | | |
| CONDENSER CROSSOVER VALVE 1 (VCC1) OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| EVAPORATOR CROSSOVER VALVE 1 (VEC1) OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| CONDENSER CROSSOVER VALVE 2 (VCC2) OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| EVAPORATOR CROSSOVER VALVE 2 (VEC2) OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| CONDENSER CROSSOVER VALVE 3 (VCC3) OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| EVAPORATOR CROSSOVER VALVE 3 (VEC3) OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| LOAD (CRES) HEAT EXCHANGER 1A VALVE OPEN/CLOSE | | X | | AO | | | BO | | | | | | | | |
| LOAD (CRES) HEAT EXCHANGER 1B VALVE OPEN/CLOSE | | X | | AO | | | BO | | | | | | | | |
| LOAD (CRES) HEAT EXCHANGER 2A VALVE OPEN/CLOSE | | X | | AO | | | BO | | | | | | | | |
| LOAD (CRES) HEAT EXCHANGER 2B VALVE OPEN/CLOSE | | X | | AO | | | | | | | | | | | |
| LOAD (CRES) HEAT EXCHANGER 3A VALVE OPEN/CLOSE | | X | | AO | | | | | | | | | | | |
| LOAD (CRES) HEAT EXCHANGER 3B VALVE OPEN/CLOSE | | X | | AO | | | | | | | | | | | |
| SYSTEM HEAT EXCHANGER 1 VALVE OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| SYSTEM HEAT EXCHANGER 2 VALVE OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| SYSTEM HEAT EXCHANGER 3 VALVE OPEN/CLOSE | | X | | BO | | | BO | | | | | | | | |
| ENERGY TRANSFER LOOP MODE VALVE | | X | | BO | | | BO | | | | | | | | |
| CHILLED WATER SUPPLY TEMPERATURE (TS1) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| CHILLED WATER RETURN TEMPERATURE (TS2) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| PRE AUXILARY HEAT TEMPERATURE(TS3) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| HOT WATER SUPPLY TEMPERATURE (TS4) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| HOT WATER RETURN TEMPERATURE (TS5) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| COOLING PRIORITY HEAT EXCHANGER SUPPLY TEMPERATURE (TS6) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| CASCADE CONDENSER TEMPERATURE (TS7) | | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HEATING PRIORITY HEAT EXCHANGER SUPPLY TEMPERATURE (TS8) | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| CASCADE EVAPORATOR TEMPERATURE (TS9) | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| CRES HX-1 SUPPLY TEMPERATURE | X | AI | | | | | | | | | | | | |
| CRES HX-1 RETURN TEMPERATURE | X | AI | | | | | | | | | | | | |
| CRES HX-2 SUPPLY TEMPERATURE | X | AI | | | | | | | | | | | | |
| CRES HX-2 RETURN TEMPERATURE | X | AI | | | | | | | | | | | | |
| CRES HX-3 SUPPLY TEMPERATURE | X | AI | | | | | | | | | | | | |
| CRES HX-3 RETURN TEMPERATURE | X | AI | | | | | | | | | | | | |
| SYSTEM HEAT EXCHANGER SUPPLY TEMPERATURE (TS10) | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| SYSTEM HEAT EXCHANGER RETURN TEMPERATURE (TS11) | X | AI | | | | AI | X | X | | | X | | SENSOR FAILURE | |
| | | | | | | | | | | | | | | |
| CHILLED WATER DIFFERENTIAL PRESSURE (DPT1) | X | AI | | | | AI | | | | | X | | SENSOR FAILURE | |
| HOT WATER DIFFERENTIAL PRESSURE (DPT2) | X | AI | | | | AI | | | | | X | | SENSOR FAILURE | |
| CONDENSER TRANSFER DIFFERENTAIL PRESURE (DPT3) | X | AI | | | | AI | | | | | X | | SENSOR FAILURE | |
| EVAPORATOR TRANSFER DIFFERENTIAL PRESSURE (DPT4) | X | AI | | | | AI | | | | | X | | SENSOR FAILURE | |
| | | | | | | | | | | | | | | |
| CHILLED WATER (P-K102A) PUMP 1 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| CHILLED WATER (P-K102B) PUMP 2 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| HOT WATER (P-K103A)PUMP 1 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| HOT WATER (P-K103B) PUMP 2 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| HEAT EXCHANGER (P-K104A) PUMP 1 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| HEAT EXCHANGER (P-K104B) PUMP 2 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| ENERGY TRANSFER CONDENSER LOOP (P-K105A) PUMP 1 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| ENERGY TRANSFER CONDENSER LOOP (P-K105B) PUMP 2 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| ENERGY TRANSFER EVAPORATOR LOOP (P-K106A) PUMP 1 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| ENERGY TRANSFER EVAPORATOR LOOP (P-K106B) PUMP 2 STATUS | X | BI | | | | BI | | | | | | | PUMP FAILURE | |
| | | | | | | | | | | | | | | |
| CHILLED WATER BYPASS VALVE | X | | AO | | | AO | | | | | | | | |
| HOT WATER BYPASS VALVE | X | | AO | | | AO | | | | | | | | |
| CHILLED WATER (P-K102A) PUMP 1 SPEED | X | | AO | | | AO | | | | | | | | |
| CHILLED WATER (P-K102B) PUMP 2 SPEED | X | | AO | | | AO | | | | | | | | |
| HOT WATER (P-K103A) PUMP 1 SPEED | X | | AO | | | AO | | | | | | | | |
| HOT WATER (P-K103B) PUMP 2 SPEED | X | | AO | | | AO | | | | | | | | |
| HEAT EXCHANGER (P-K104A) PUMP 1 SPEED | X | | AO | | | AO | | | | | | | | |
| HEAT EXCHANGER (P-K104B) PUMP 2 SPEED | X | | AO | | | AO | | | | | | | | |
| ENERGY TRANSFER CONDENSER LOOP (P-K105A) PUMP 1 SPEED | X | | AO | | | AO | | | | | | | | |
| ENERGY TRANSFER CONDENSER LOOP (P-K105B) PUMP 2 SPEED | X | | AO | | | AO | | | | | | | | |
| ENERGY TRANSFER EVAPORATOR LOOP (P-K106A) PUMP 1 SPEED | X | | AO | | | AO | | | | | | | | |
| ENERGY TRANSFER EVAPORATOR LOOP (P-K106B) PUMP 2 SPEED | X | | AO | | | AO | | | | | | | | |
| | | | | | | | | | | | | | | |
| CHILLER 1 EVAPORATOR PROOF OF FLOW | | | | | | | | | | | | | | NOTE 1 |
| CHILLER 1 CONDENSER PROOF OF FLOW | | | | | | | | | | | | | | NOTE 1 |
| CHILLER 2 EVAPORATOR PROOF OF FLOW | | | | | | | | | | | | | | NOTE 1 |
| CHILLER 2 CONDENSER PROOF OF FLOW | | | | | | | | | | | | | | NOTE 1 |
| CHILLER 3 EVAPORATOR PROOF OF FLOW | | | | | | | | | | | | | | NOTE 1 |
| CHILLER 3 CONDENSER PROOF OF FLOW | | | | | | | | | | | | | | NOTE 1 |
| | | | | | | | | | | | | | | |
| CHILLER PLANT ENABLE | | | | X | OFF | | | | | | | | | |
| CHILLED WATER SUPPLY TEMPERATURE SETPOINT | | | | X | 42-56°F | | | | | | | | | |
| HOT WATER SUPPLY TEMPERATURE SETPOINT | | | | X | 130-110°F | | | | | | | | | |
| HEATING MODE EVAPORATOR SUPPLY TEMPERATURE SETPOINT | | | | X | 50-38°F | | | | | | | | | |
| COOLING MODE CONDENSER SUPPLY TEMPERATURE SETPOINT | | | | X | 83-98°F | | | | | | | | | |
| OUTSIDE AIR TEMPERATURE ENABLE SETPOINT | | | | X | 50°F | | | | | | | | | |
| | | | | | | | | | | | | | | |
| BAS COMMUNICATION STATE | | | | X | | | | | | | | X | | NOTE 2 |
| | | | | | | | | | | | | | | |

**GENERAL NOTES:**

1. COMMUNICATED VALUE FROM CHILLER
2. DISPLAYED AT THE BAS USER INTERFACE IF PRESENT

**SECTION 32 1816**

**RESILIENT TRACK SURFACING**

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This section includes the following:

1. Polyurethane base mat track surface with red structural spray.
2. Track surfacing system shall be an IAAF certified track system.

B. Related Sections include the following:

1. Section 31 2001 Earth Moving
2. Section 33 1216 Asphalt Paving

### 1.3 DEFINITIONS

A. SBR: Styrene-butadiene rubber.

B. EPDM: Ethylene propylene diene monomer (rubber).

C. MDI: Methylene Diphenyle Isocyana

### 1.4 PERFORMANCE REQUIREMENTS

A. Minimum Performance standard per IAAF:

| | | |
|---|---|---|
| 1. | Thickness | ≥13mm |
| 2. | Force Reduction | 35 to 50% |
| 3. | Friction | ≥47 TRRL Skid Resistance |
| 4. | Modified Vertical Deformation . | 6 to 2.5mm |
| 5. | Tensile Strength | ≥.4MPa |
| 6. | Elongation at Break | ≥40% |

### 1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show the following:
1. Lane lines and event markings.

C. Samples for Initial Selection: For each type of track surface system indicated.
1. Include similar Samples of track surface system and accessories.
2. Three samples 12” x 12” in size, color, texture thickness etc.

D. Qualification Data: Provide current IAAF certificate for track surfacing system.

E. Material Test Reports: For the following, from the United States Sports Surfacing Laboratory Inc. or Architect approved testing agency, indicating compliance with requirements:
   1. Polyurethane track surface.

F. Material Certificates: For each track surface system product, signed by manufacturers.

G. Maintenance Data: For track surface system to include in maintenance manuals.

H. Warranty: Special warranty specified in this Section.

## 1.5 QUALITY ASSURANCE

A. Specified track system shall be IAAF certified. Provide current IAAF certificate to architect prior to approval.

B. Provide documentation that specified track surfacing system meets IAAF performance specification for synthetic surfaced athletic tracks (outdoor).

C. Track surfacing installation company (if different from manufacturer) shall supply current letter attesting they are an approved installer of the manufacturer track surfacing system specified.

D. Installer Qualifications: An employer of workers trained and approved by manufacturer. Minimum of 10 successful projects of this type in the last 5 years.

E. The manufacturer shall review the asphalt pavement mix design, installation and accept the asphalt base before installing the resilient surfacing. The manufacturer shall immediately notify the Contractor and Architect of any deficiencies in the asphalt pavement mix design upon award of contract.

## 1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit track surface system installation to be performed according to manufacturer's written instructions and warranty requirements.

## 1.7 GUARANTEE

A. Special Guarantee: Manufacturer's standard form in which manufacturer agrees to repair or replace components of track surface system that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Surfacing material found to be defective as a result of faulty workmanship and/or material failure such as delamination, bubbling, cracking, loss of integrity or excessive wear.
      b. Deterioration of surface and other materials beyond normal weathering.
   2. Guarantee Period: Five years from date of acceptance.
   3. The guarantee does not cover vandalism, neglect, improper care, improper footwear or acts of God.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection

1. Basis-of-Design Product: The design for each product is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product approved by the Owner.

### 2.2 POLYURETHANE RESILIENT SURFACING COURSE

A. BASIS OF DESIGN: BSS 200 Paved-in-place synthetic track surfacing system, manufactured by Beynon a division of Tarkett Group. Substitutions: allowed. Submit IAAF certificate, product data and material test reports to demonstrate equivalency to Basis of Design Product to Architect for approval.

B. MATERIALS:
1. Primers: Primers must be polyurethane-based, specifically formulated to be compatible with the paved SBR base and track surface material.
2. Black SBR Granules: The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1-3 mm size, containing less than 1% dust.
3. EPDM Granules: The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of 1.5 $\pm$ 0.1 g/cm3. The EPDM rubber shall be the same color as chosen by the Owner for the track surface.
4. Polyurethane Binder: Binder for the black mat shall be BEYPUR, an MDI-based single-component, polyurethane binding agent. The binder shall not have a free TDI monomer level above 0.2% and must be solvent free. The binder must be specifically formulated for compatibility with SBR rubber crumb.
5. Structural Spray Coating: The spray coating shall be BEYPUR, an MDI-based single-component, moisture cured, 100% solids, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color specified by the Owner. Pigment intergraded in the field shall not be allowed.
6. Seal Coat – BEYPUR 200, the two-compound polyurethane resin for this application, shall be pigmented to match the color of the wear coat. The material shall be applied by a squeegee to insure that the black mat is sealed.

C. Leveling and Patching Material: Polyurethane-based formulation suitable for exterior use and approved by track surface system manufacturer.

### 2.3 ALTERNATE SURFACE MATERIAL (RECYCLED MATERIALS IN LIEU OF RUBBER GRANULES AND CRUMBS)

A. It is the Owner's desire to consider the use of tire-derived products as an Alternate Bid in accordance with the Scrap Tire Management Grant Program, as administered by the Nebraska Department of Environmental Quality. The Contractor shall provide an Alternate Bid for the Resilient Track Surfacing utilizing the incorporation of recycled tires complying with the aforementioned grant program.

B. The OWNER may select the Alternate Bid, at his option. It is the Owner's option which bid to select, in the best interests of the Owner.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. General: Prepare substrates to receive surfacing products according to track surface system manufacturer's written instructions. Verify that substrates are sound and without high spots, ridges, hole, and depressions, from asphalt paving contractors data. The synthetic surfacing Contractor must accept the planarity of the asphalt receiving base in writing before work can commence. The synthetic surfacing contractor shall verify asphalt has cured a minimum of 21 days and concrete has cured a minimum of 28 days.

B. Asphalt Substrates: Provide clean, sound surface free of foreign material, loose material, and other contaminants incompatible with track surface system.

1. Repair unsatisfactory surfaces and fill holes and depressions.
2. Treat control joints and other nonmoving substrate cracks to prevent telegraphing through track surface system.

### 3.2 INSTALLATION, GENERAL

A. General: Comply with track surface system manufacturer's written installation instructions. Install track surface system over area and in thickness indicated. Surfacing system components shall be processed and installed by specifically designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.

### 3.3 PRIMING

A. Apply polyurethane primer to entire area to be surfaced at a uniform rate of not less than 0.2 pounds per square yard. Allow minimum of thirty minutes curing time before applying base mat.

### 3.4 BASE COURSE

A. The SBR granules and BEYPUR shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% by weight in the base mat portion of the system. The BEYPUR shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

### 3.5 SEAL COAT

A. The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

### 3.6 WEARING COURSE

A. The 0.5 to 1.5 mm EPDM granules shall be mixed with BEYPUR, the single-component structural spray coating. The structural spray shall be made in two uniform applications.

### 3.7 LINE MARKING

A. Measure and mark lines in accordance with National Federation of State High School Associations Current Rules, IAFF, and state rules. Submittal drawing required.

B. Paint utilizing a single-component, moisture cured, aliphatic paint compatible with the surfacing as recommended by manufacturer.

C. Clean the surface of dirt, grease or other objectionable material.

D. Lines shall be sharp and free of overspray.

E. Provide certification attesting to the accuracy of the marking.

## 3.8 PROTECTION

A. Monitor relative humidity conditions and relative curing rates for each step of installation process until curing is complete.

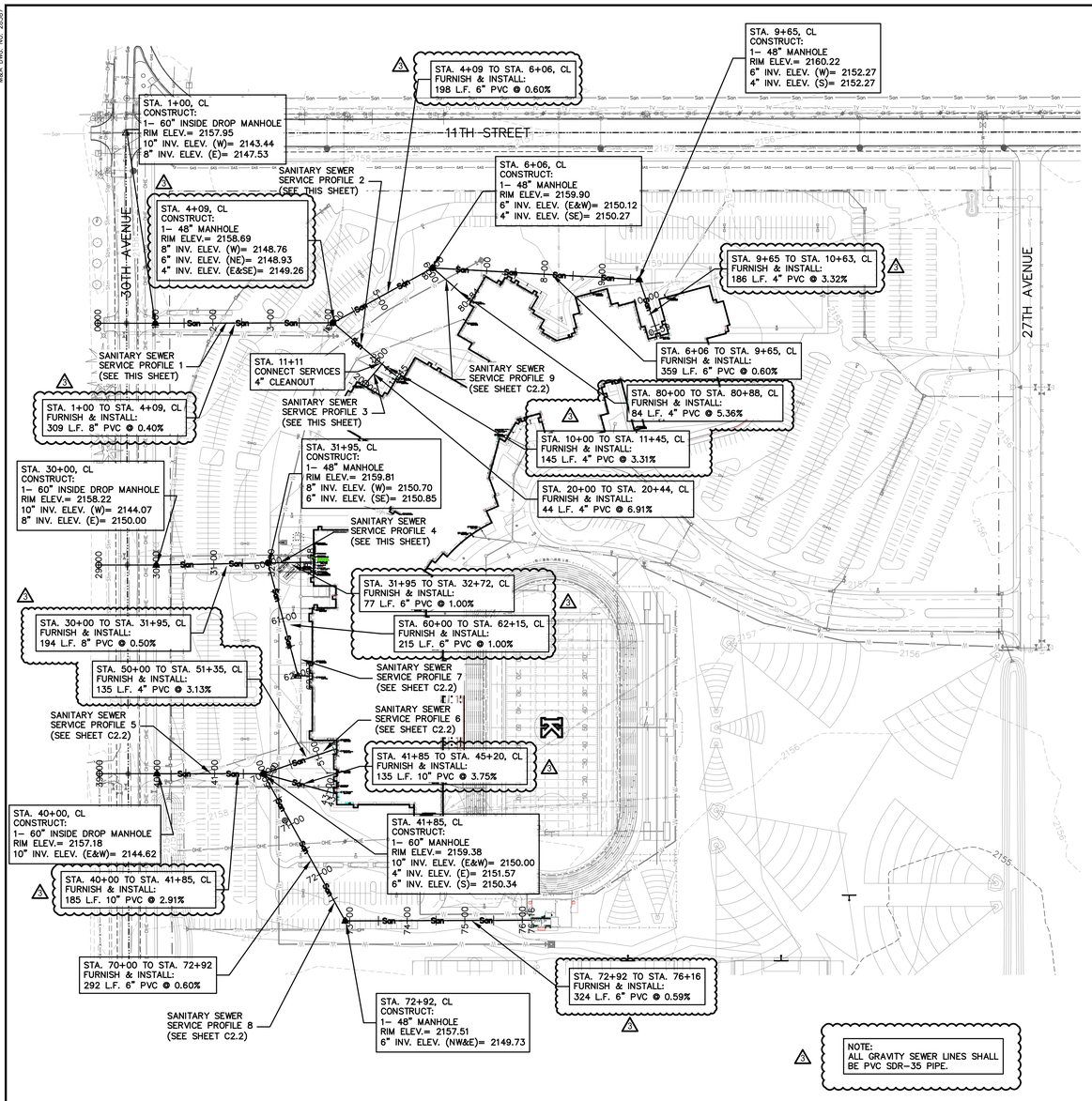
B. Restrict all traffic and foot traffic from surfaces until curing is complete.

C. Synthetic surfacing shall not be installed if adjacent conditions generates dust, abrasives or by-products that would be harmful to surface installation.

D. Installation temperature shall be 50 degrees F and rising.

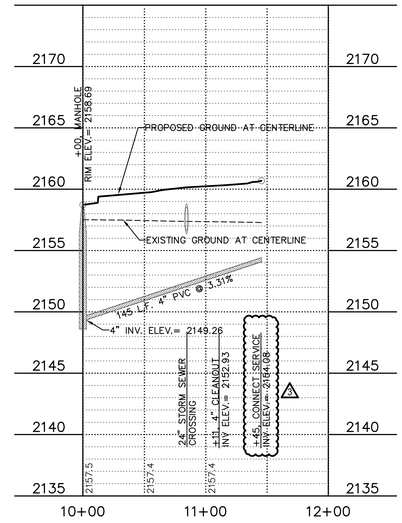
**END OF SECTION**

M&A DWG. NO. 28587

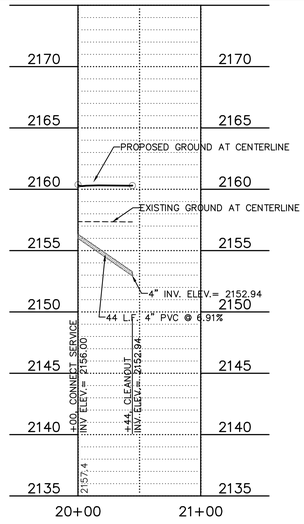



NOTE:
ALL GRAVITY SEWER LINES SHALL BE PVC SDR-35 PIPE.

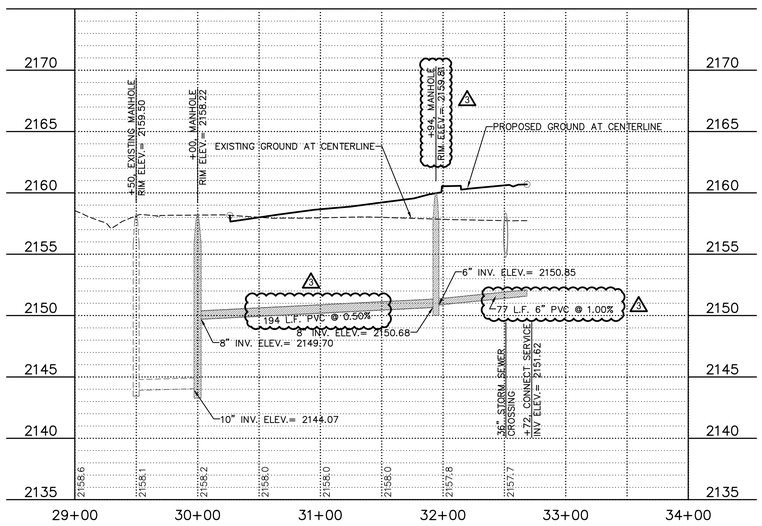
## SANITARY SEWER PROFILE 2



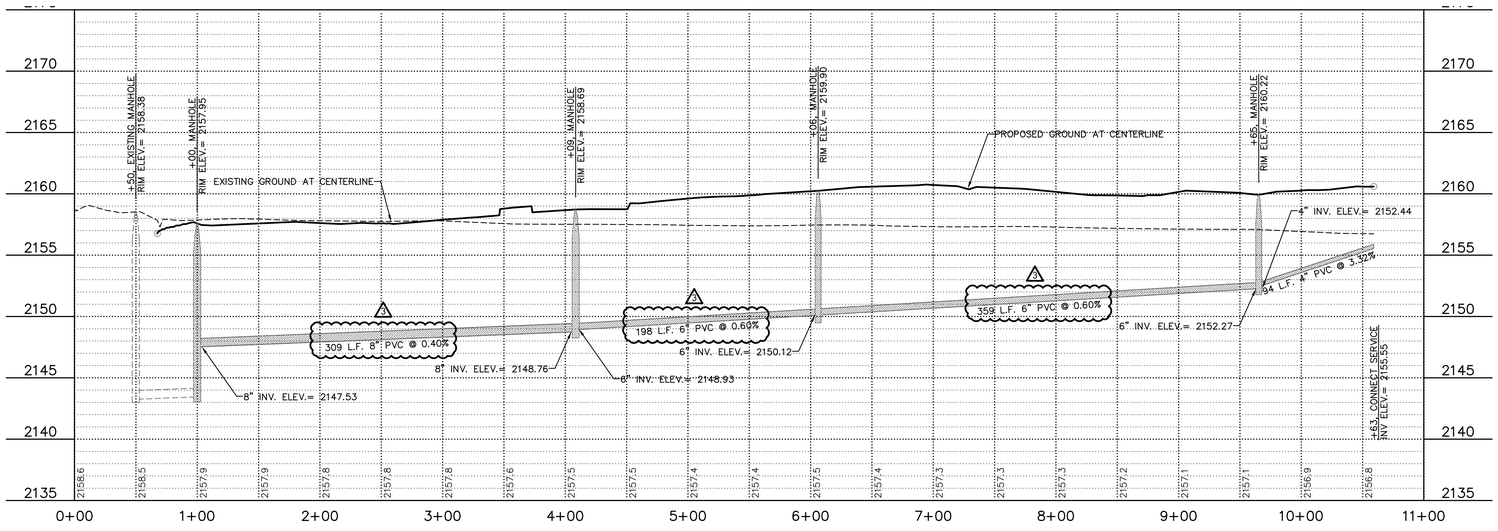

## SANITARY SEWER PROFILE 3




## SANITARY SEWER PROFILE 4



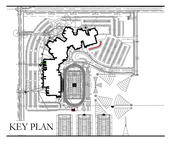

## SANITARY SEWER PROFILE 1




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5757 T
308-236-6929 F

10/30/14
REID A. MILLER
STATE OF NEBRASKA
PROFESSIONAL CIVIL ENGINEER

M&A
Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710




# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| 3 Addendum No. 3 | 10-14-14 |

SANITARY SEWER PROFILES

Project Number: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
C2.1

PLOTTED:10/14/2014 8:49 AM SAVED:10/14/2014 8:45 AM G:\Projects\13XX\13XX-PS6-001\Civil-Dwgs\Sheet Drawings\SH_CIVIL PROFILES .dwg

Wilkins Hinrichs Stober Architects, L.L.C.
2008 West 39th Street Suite A
Kearney, NE 68845
308-237-3447 T
308-236-6029 F

Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710

KEY PLAN

# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| 3 Addendum No. 3 | 10-14-14 |

OVERALL
WATER UTILITY
PLAN

Project Number: 1355
Date: September 30, 2014

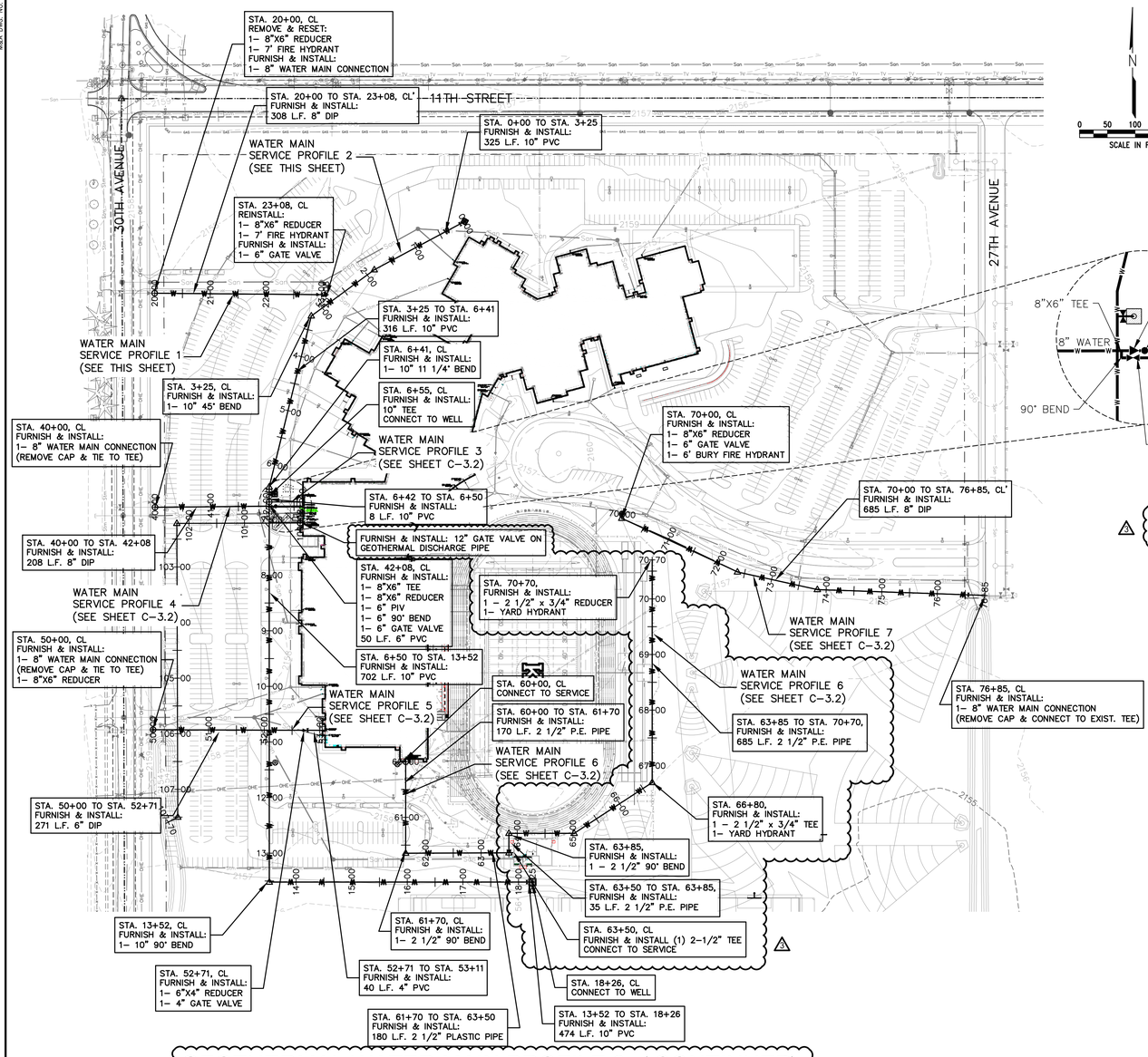
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

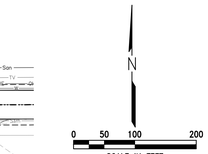
Sheet Number:
C3.0

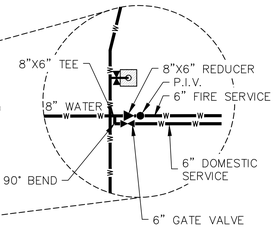
11TH STREET
27TH AVENUE
30TH AVENUE
8" D.I.P. WATER
2 1/2" P.E. WATER
10" PVC GEOTHERMAL WATER
12" GEOTHERMAL WATER
12" GEOTHERMAL DISCHARGE
8" D.I.P. WATER
6" D.I.P. WATER
2-1/2" P.E. WATER
10" PVC GEOTHERMAL WATER
WELL #1
WELL #2
WELL #3
F.F. = 2160.75
HAMMER
DISCUS
SHOT
SCALE IN FEET
0 25 50 100
N

PLOTTED:10/14/2014 9:18 AM SAVED:10/13/2014 6:57 PM ---- C:\Projects\130\130-058-011\Civil-Dwgs\Sheet Drawings\SH_Civil Plans.dwg
M&A DWG. NO. 28584

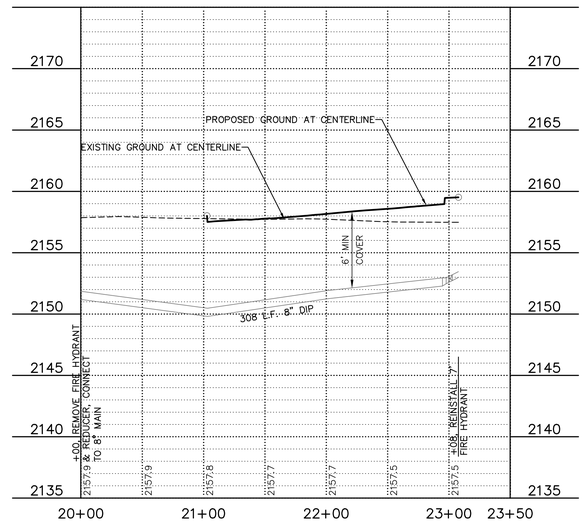
M&A DWG. NO. 28583



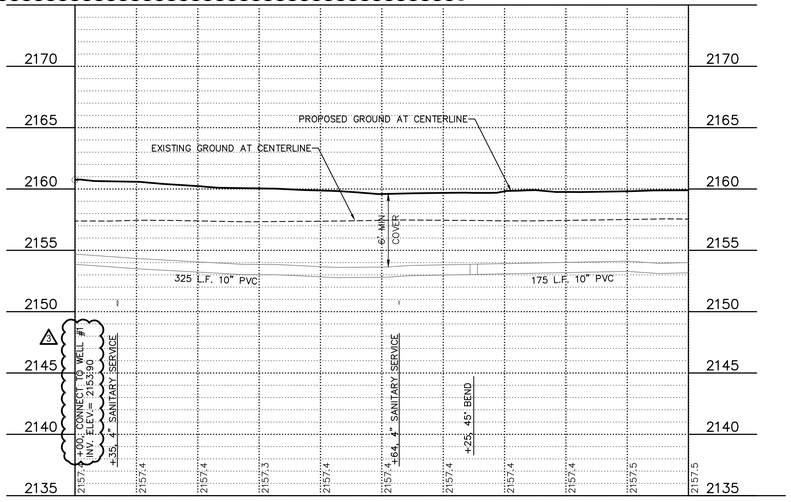



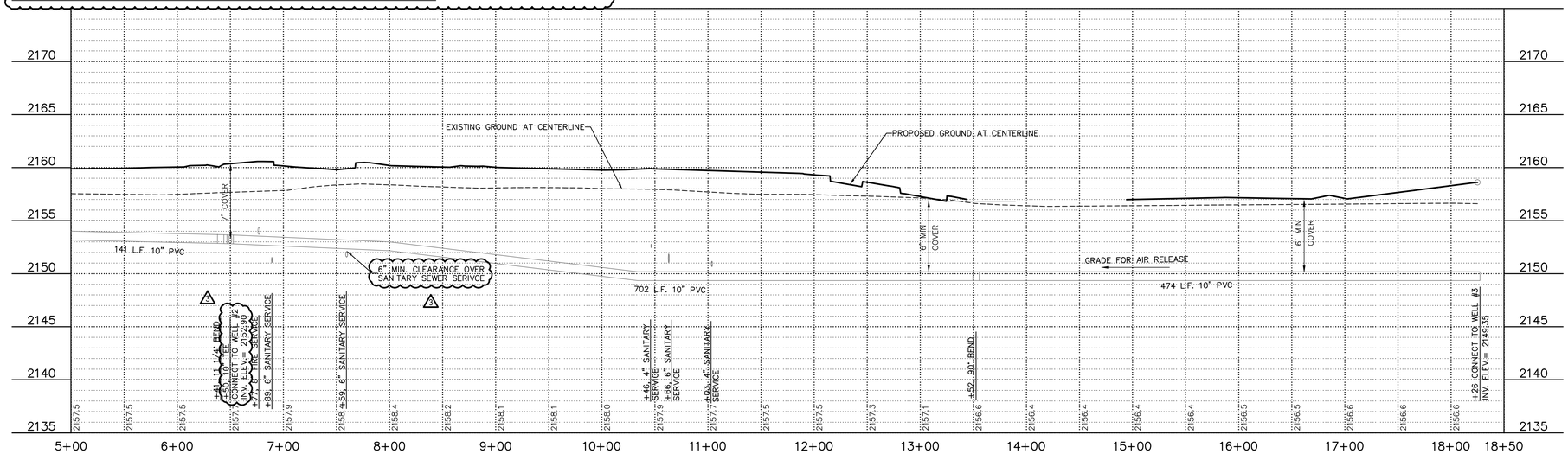

## WATER MAIN 1 PROFILE




## ⚠3 GEOTHERMAL WATER MAIN PROFILE 2




## ⚠3 GEOTHERMAL WATER MAIN PROFILE 2 ( CONTINUED)

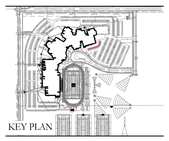




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5757 T
308-236-6929 F

NEBRASKA REGISTERED PROFESSIONAL ENGINEER
CHRIS A. MILLER
E-18778
9/30/14
STATE OF NEBRASKA

M&A
Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ⚠3 Addendum No. 3 | 10-14-14 |

WATER MAIN PROFILES

Project Number: 1355
Date: September 30, 2014

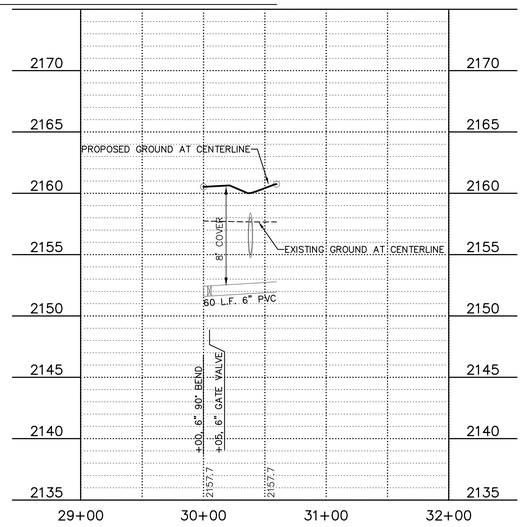
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
C3.1

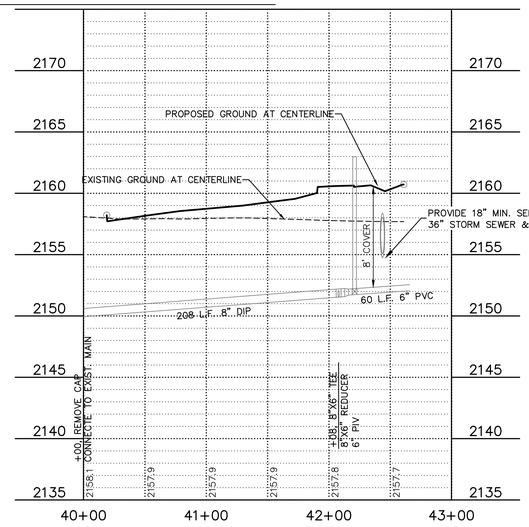
PLOTTED:10/14/2014 8:46 AM SAVED:10/14/2014 8:45 AM ----- G:\Projects\1301\30-PSB-01\Civil-Dwgs\Sheet Drawings\SI_CIVIL PROFILES .dwg

M&A DWG. NO. 28582

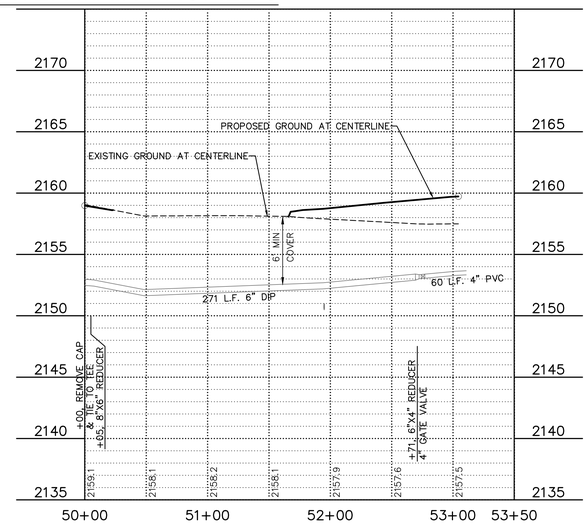
## WATER MAIN PROFILE 3



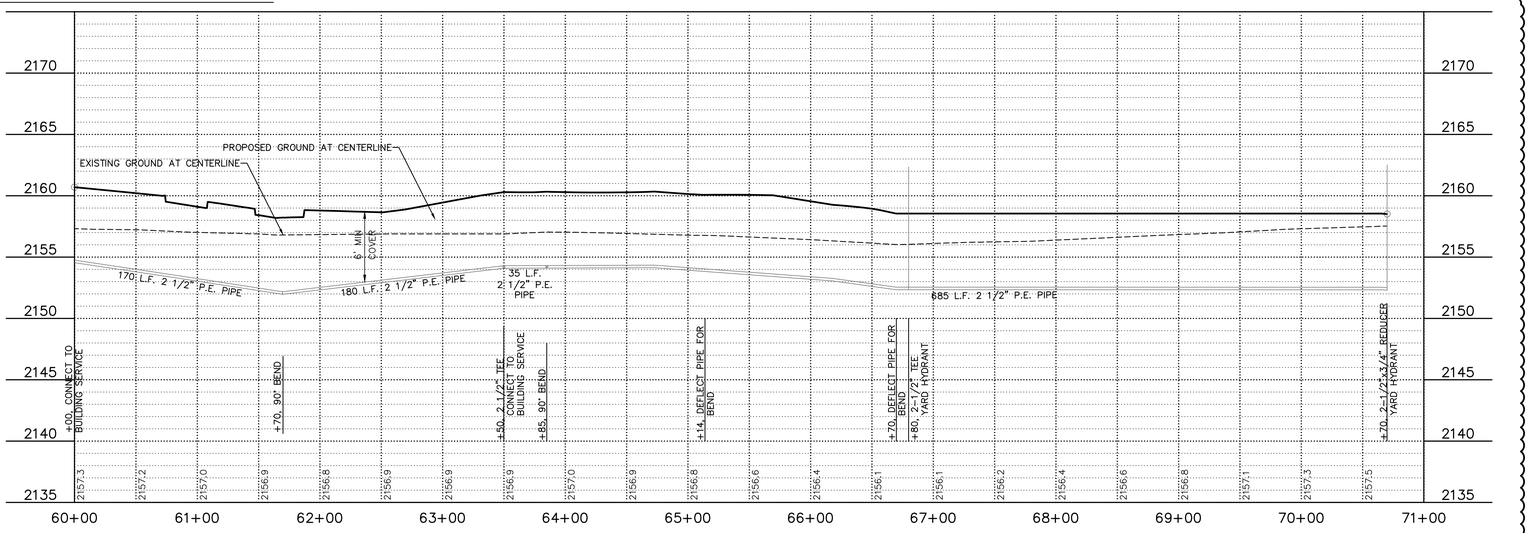

## WATER MAIN PROFILE 4



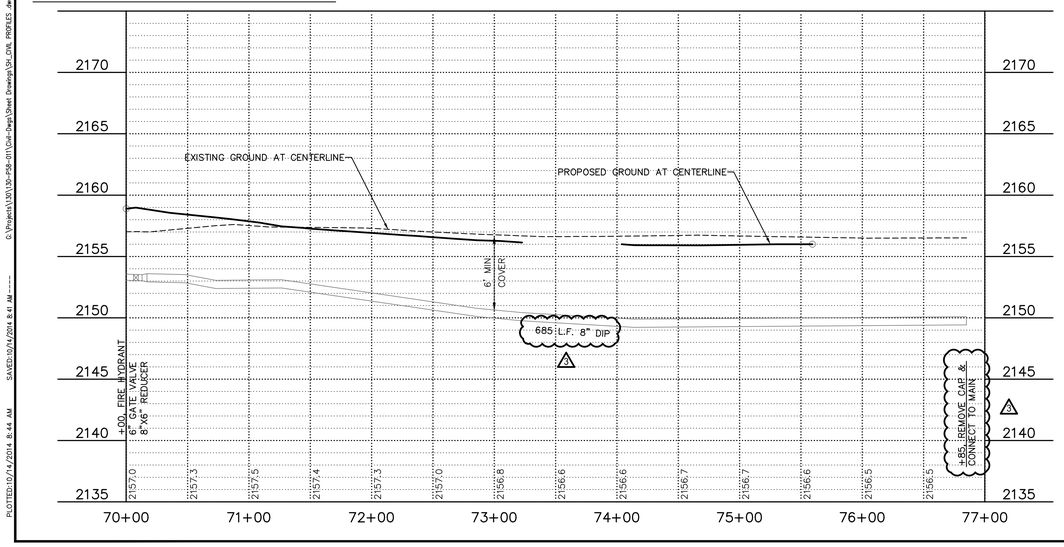

## WATER MAIN PROFILE 5



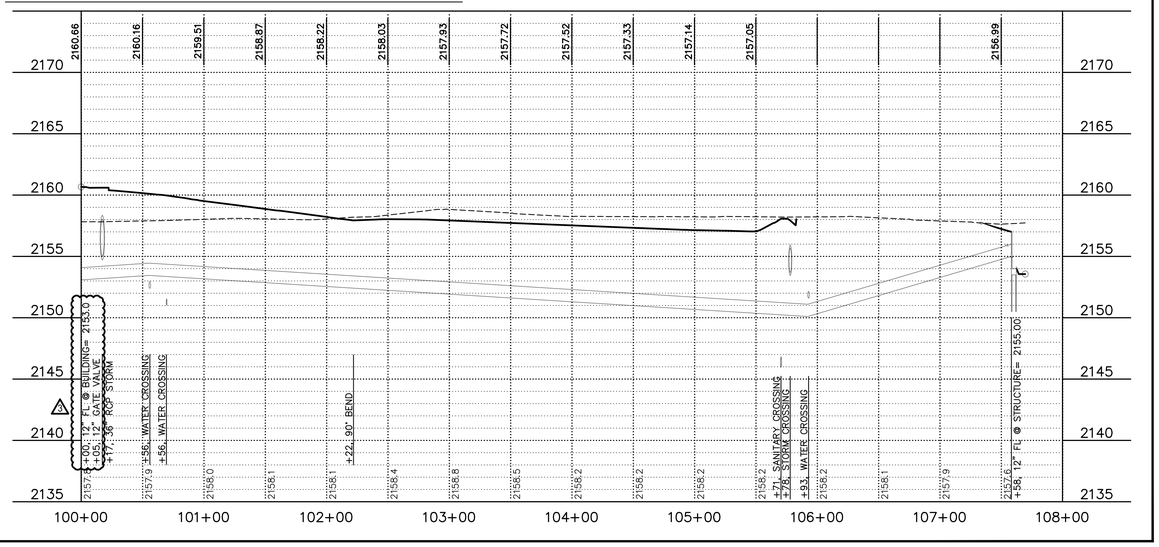

## WATER MAIN PROFILE 6




## WATER MAIN PROFILE 7




## GEOTHERMAL DISCHARGE PROFILE





Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5757 T
308-236-6929 F


REGISTERED PROFESSIONAL CIVIL ENGINEER
CHRIS A. MILLER
E-8774
9/30/14
STATE OF NEBRASKA


Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710


KEY PLAN

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| 3 Addendum No. 3 | 10-14-14 |

WATER MAIN PROFILES

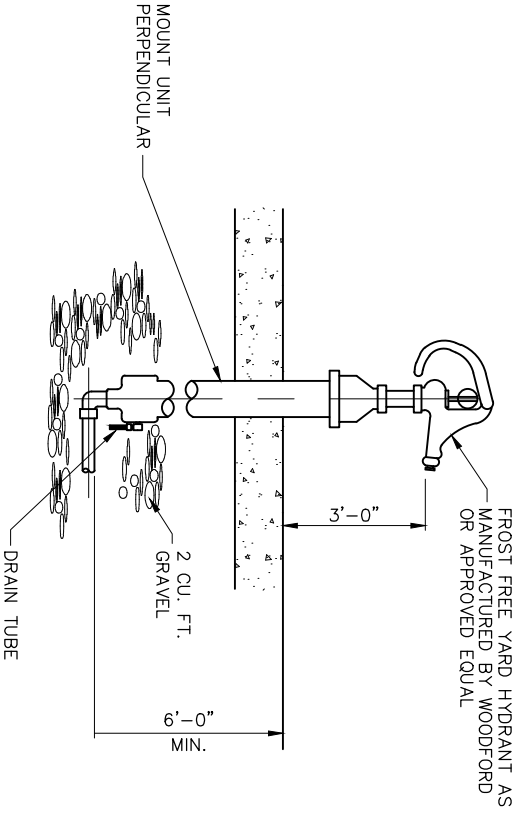
Project Number: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
C3.2


G:\Projects\1355\100-PS8-2011\Civil-Dwgs\Sheet Drawings\GH_CIVIL_PROFILES .dwg
SAVED:10/14/2014 8:41 AM
PLOTTED:10/14/2014 8:44 AM

3




TYPICAL NON-FREEZE YARD HYDRANT DETAIL

NO SCALE

LEGEND

$W_T$ = WIDTH OF TRENCH

NOTE: GRANULAR BACKFILL TO BE AASHTO #57 GRADATION. REFER TO SPECIFICATION SECTION 33 4600 "SUBDRAINAGE FOR SYNTHETIC TURF" FOR GRADATION.

3

| MINIMUM TRENCH WIDTH | |
|---|---|
| PIPE DIA. | $W_T$ |
| 4" | 21" |
| 6" | 23" |
| 8" | 26" |
| 10" | 28" |
| 12" | 30" |
| 15" | 34" |
| 18" | 39" |
| 24" | 48" |

## GRANULAR BEDDING FOR HDPE STORM SEWER

NO SCALE

Addendum No. 3

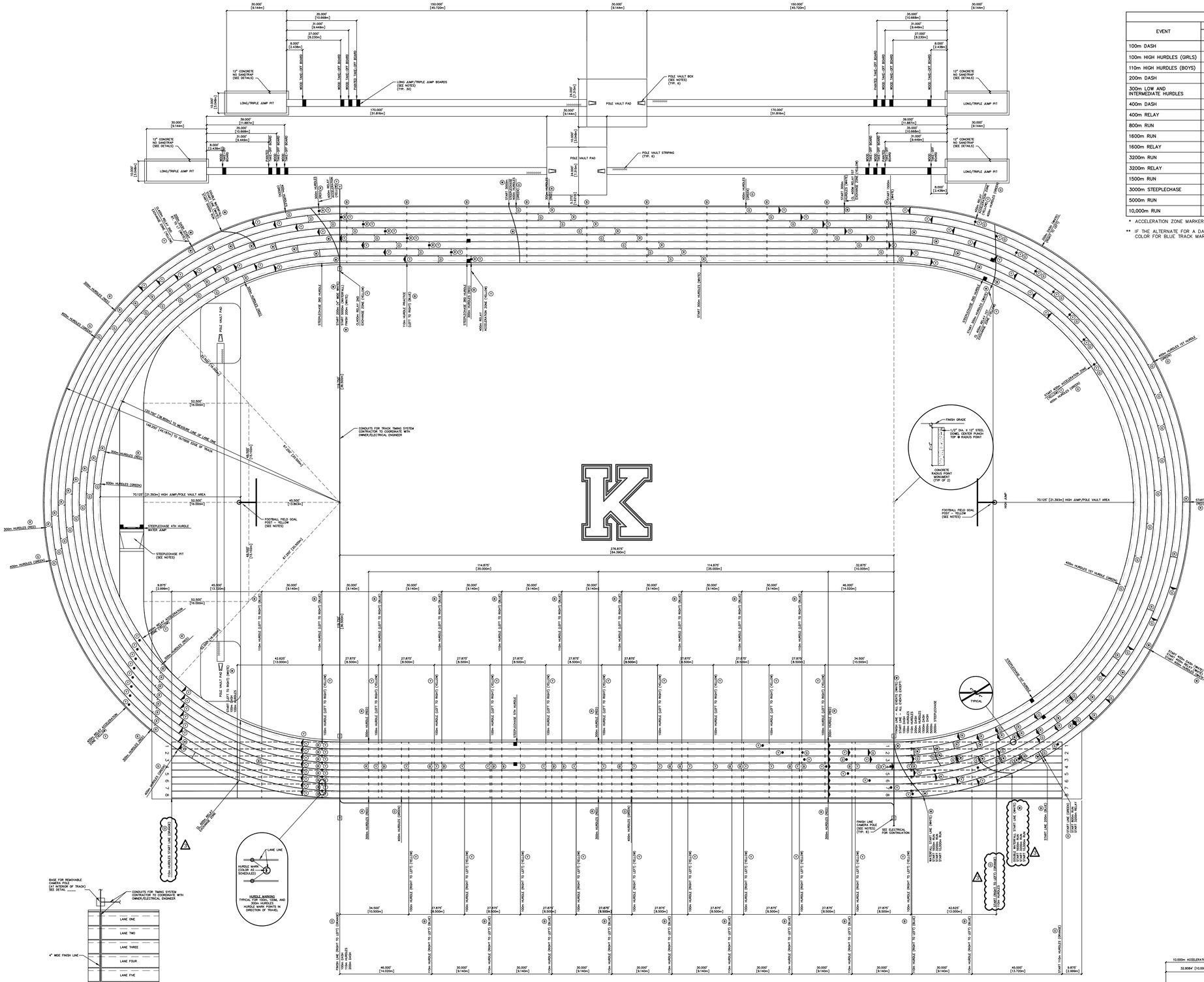
C5.1

Project Number: 1355

Kearney Public Schools
New Kearney High School
October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

M&A DWG. NO. 28558




| TRACK STRIPING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| EVENT | COLOR MARKING | | | | |
| | STAGGERED STARTS | START LINE | FINISH LINE | HURDLE MARK | RELAY EXCHANGE ZONE* |
| 100m DASH | ------- | WHITE (L TO R) ORANGE ( R TO L) | WHITE (L TO R) ORANGE ( R TO L) | ------- | ------- |
| 100m HIGH HURDLES (GIRLS) | ------- | WHITE (L TO R) ORANGE ( R TO L) | WHITE (L TO R) ORANGE ( R TO L) | YELLOW | ------- |
| 110m HIGH HURDLES (BOYS) | ------- | WHITE (L TO R) ORANGE ( R TO L) | WHITE (L TO R) ORANGE ( R TO L) | BLUE ** | ------- |
| 200m DASH | 1 STAGGER | WHITE | WHITE | ------- | ------- |
| 300m LOW AND INTERMEDIATE HURDLES | 1 STAGGER | WHITE | WHITE | RED | ------- |
| 400m DASH | 2 STAGGERS | WHITE | WHITE | ------- | ------- |
| 400m RELAY | 2 STAGGERS | WHITE | WHITE | ------- | YELLOW |
| 800m RUN | 1 STAGGER | GREEN | WHITE | ------- | ------- |
| 1600m RUN | WATERFALL (DOUBLE) | WHITE | WHITE | ------- | ------- |
| 1600m RELAY | 3 STAGGERS | BLUE ** | WHITE | ------- | BLUE ** |
| 3200m RUN | WATERFALL (DOUBLE) | WHITE | WHITE | ------- | ------- |
| 3200m RELAY | 1 STAGGER | WHITE | WHITE | ------- | ------- |
| 1500m RUN | WATERFALL | WHITE | WHITE | ------- | ------- |
| 3000m STEEPLECHASE | WATERFALL | WHITE | WHITE | ------- | ------- |
| 5000m RUN | WATERFALL (DOUBLE) | WHITE | WHITE | ------- | ------- |
| 10,000m RUN | WATERFALL (DOUBLE) | WHITE | WHITE | ------- | ------- |

* ACCELERATION ZONE MARKER DOTS SAME COLOR AS EXCHANGE ZONE ARROWS

** IF THE ALTERNATE FOR A DARK BLUE COLORED STRUCTURAL SPRAY IS USED, USE A LIGHTER CONTRASTING COLOR FOR BLUE TRACK MARKINGS

NOTES:

1. RUNNING TRACK SHALL BE STRIPED FOR THE FOLLOWING EVENTS:
   - 100m DASH
   - 200m DASH
   - 400m DASH
   - 800m RUN
   - 1500m RUN
   - 1600m RUN
   - 5000m RUN
   - 10,000m RUN
   - 400m RELAY
   - 1600m RELAY
   - 3200m RELAY
   - 100m LOW HURDLES
   - 110m HIGH HURDLES
   - 300m LOW AND INTERMEDIATE HURDLES
   - 400m HURDLES
   - 3000m STEEPLE CHASE

   PAINT STRIPING OF METRIC TRACK SHALL CONFORM WITH THE NATIONAL FEDERATION OF HIGH SCHOOLS (NFHS) AND BE APPROVED BY THE NEBRASKA SCHOOL ACTIVITIES ASSOCIATION (NSAA). FINAL RULING ON METRIC TRACK STRIPING BY NFHS.
2. RUNNING TRACK LANE NUMBERS SHALL BE 3'-0" TALL. LETTERING STYLE SHALL BE HELVETICA MEDIUM.
3. ALL EVENT STARTS, FINISHES, HURDLES, AND EXCHANGE ZONES SHALL BE LABELED WITH 2 INCH TALL HELVETICA MEDIUM STENCILED LETTERS. LETTERING COLOR SHALL MATCH MARKINGS BEING IDENTIFIED. LABELS SHALL BE ON RIGHT HALF OF LANE WHEN FACING IN DIRECTION OF TRAVEL.
4. PRIOR TO PAINTING THE TRACK, THE PAINTER SHALL MEET WITH THE ACTIVITIES DIRECTOR AND TRACK COACHES (KEARNEY HIGH SCHOOL AND UNIVERSITY OF NEBRASKA AT KEARNEY) TO REVIEW THE STRIPING PLAN, EVENT COLORS, LANE NUMBERS, AND EXCHANGE ZONE MARKINGS. MAKE MINOR ADJUSTMENTS AS DIRECTED.
5. THE STRIPER SHALL INCLUDE ANY COST FOR PROFESSIONAL SURVEYING SERVICES IN HIS COST AS REQUIRED TO MEET STATE CERTIFIED TRACK REGULATIONS.
6. ADD ALLEY, MINI-WATERFALL, 1500m, 5000m START LINES AS DESIRED BY THE OWNER.

FURNISH & INSTALL

INSTALL PER MANUFACTURERS SPECIFICATIONS, SUBMIT SHOP DRAWINGS FOR APPROVAL.

1. LONG JUMP/TRIPLE JUMP BOARDS
   - UCS MODEL #519-2300 LONG JUMP/TRIPLE JUMP TAKE OFF BOARD WITH BLANKET LID
2. POLE VAULT BOX
   - UCS MODEL #725-2596 CAST ALUMINUM VAULT BOX FORM
3. STEEPLECHASE PIT
   - UCS MODEL #506-5124 WATER JUMP PIT FORM SYSTEM
   - UCS MODEL #506-5413 WATER JUMP BARRIER SEAL
   - UCS MODEL #506-5410 ADJUSTABLE WATER JUMP BARRIER
   - UCS MODEL #506-5420 WATER JUMP COVER, RECESSED FOR SYNTHETIC SURFACING
4. FINISH LINE CAMERA POLE
   - GILL MODEL #E39918
   - SEE DETAILS FOR CONCRETE BASE
5. FOOTBALL FIELD/GOAL POST W/ PLATE
   - UCS MODEL #751-6120
   - (2 EA.)-YELLOW MAIN FIELD
   - (4 EA.)-WHITE PRACTICE FIELD


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5757 T
308-236-6929 F

PROFESSIONAL CIVIL ENGINEER
10-14
REID A. MILLER
E-19918
STATE OF NEBRASKA

M&A
Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| 3 Addendum No. 3 | 10-14-14 |

TRACK LAYOUT & STRIPING PLAN

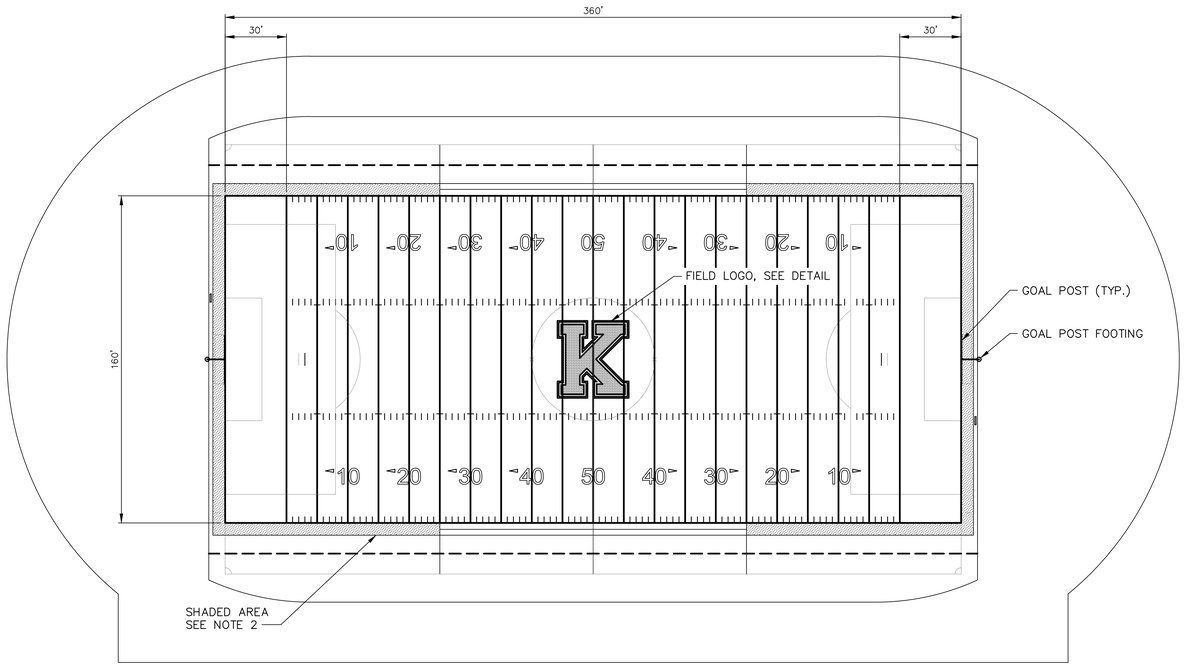
Project Number: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
C6.1

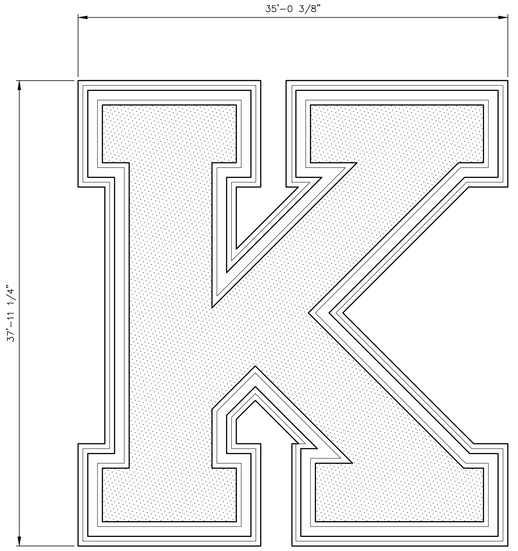

PLOTTED:10/14/2014 9:34 AM SAVED:10/14/2014 8:13 AM Andrew C. Olson © V:\Projects\1301\05-PSB-2011\Civil-Dwgs\Sheet Drawings\SH-Track.dwg

M&A DWG. NO. 28555




FOOTBALL FIELD NOTES:
1. HEAVY LINES DENOTE 4" WHITE NFHS STANDARDS FOOTBALL MARKINGS, COMPLETE COLOR NAME: WHITE, PANTONE COLOR NUMBER: WHITE.
2. SHADED AREA TO BE COMPLETE COLOR NAME: REFLEX BLUE, PANTONE COLOR NUMBER RFXC.

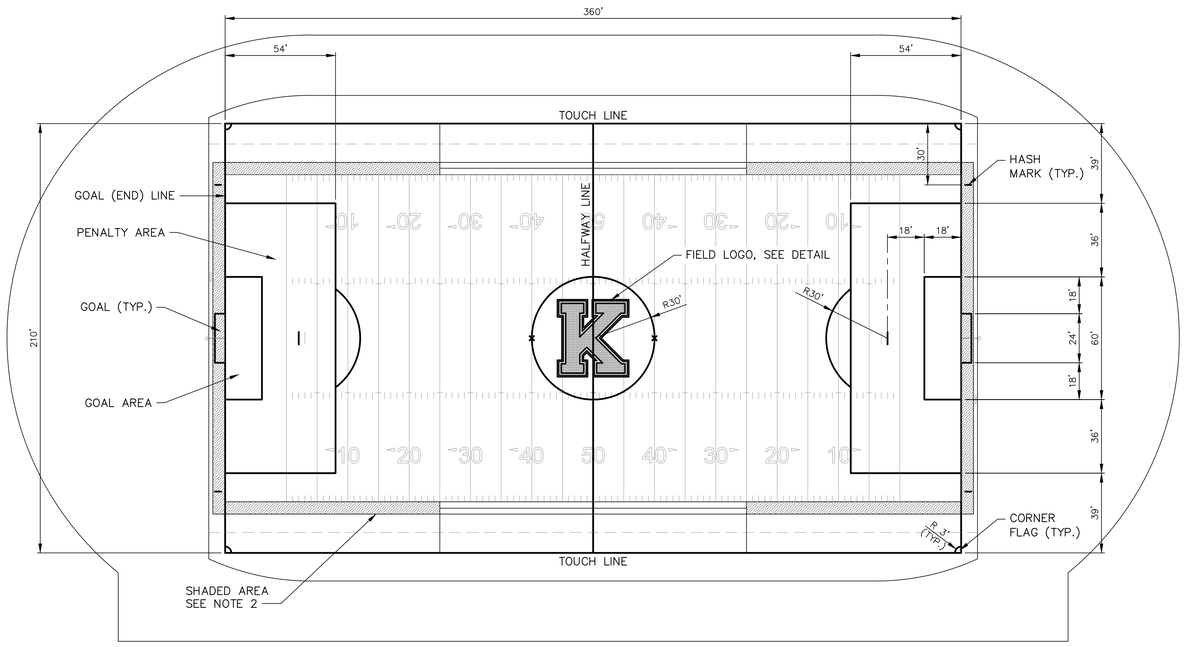
## FOOTBALL FIELD STRIPING PLAN
SCALE: 1" = 30'




NOTE:

DIMENSIONS ARE APPROXIMATE. COORDINATE LOGO SIZE AND COLORS WITH OWNER

## FIELD LOGO DETAIL
SCALE: 1" = 5'




SOCCER FIELD NOTES:
1. HEAVY LINES DENOTE 4" YELLOW NFHS STANDARDS SOCCER MARKINGS, COMPLETE COLOR NAME: CANARY YELLOW, PANTONE COLOR NUMBER: 136C.
2. SHADED AREA TO BE COMPLETE COLOR NAME: REFLEX BLUE, PANTONE COLOR NUMBER RFXC.

## SOCCER FIELD STRIPING PLAN
SCALE: 1" = 30'

FIELD LAYOUT NOTES:

1. FIELD DOMINANCY IS ONLY WITHIN THE FOOTBALL FIELD OF PLAY.
2. ALL DIMENSIONS TO BE VERIFIED BEFORE ANY CONSTRUCTION BEGINS.
3. ALL COLORS AND STRIPING SHALL BE DETAILED IN THE SHOP DRAWINGS AND APPROVED BY OWNER.

Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5727 T
308-236-6929 F

PROFESSIONAL CIVIL ENGINEER
10/14/14
REED A. MILLER
STATE OF NEBRASKA

M&A
Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| 3 Addendum No. 3 | 10-14-14 |

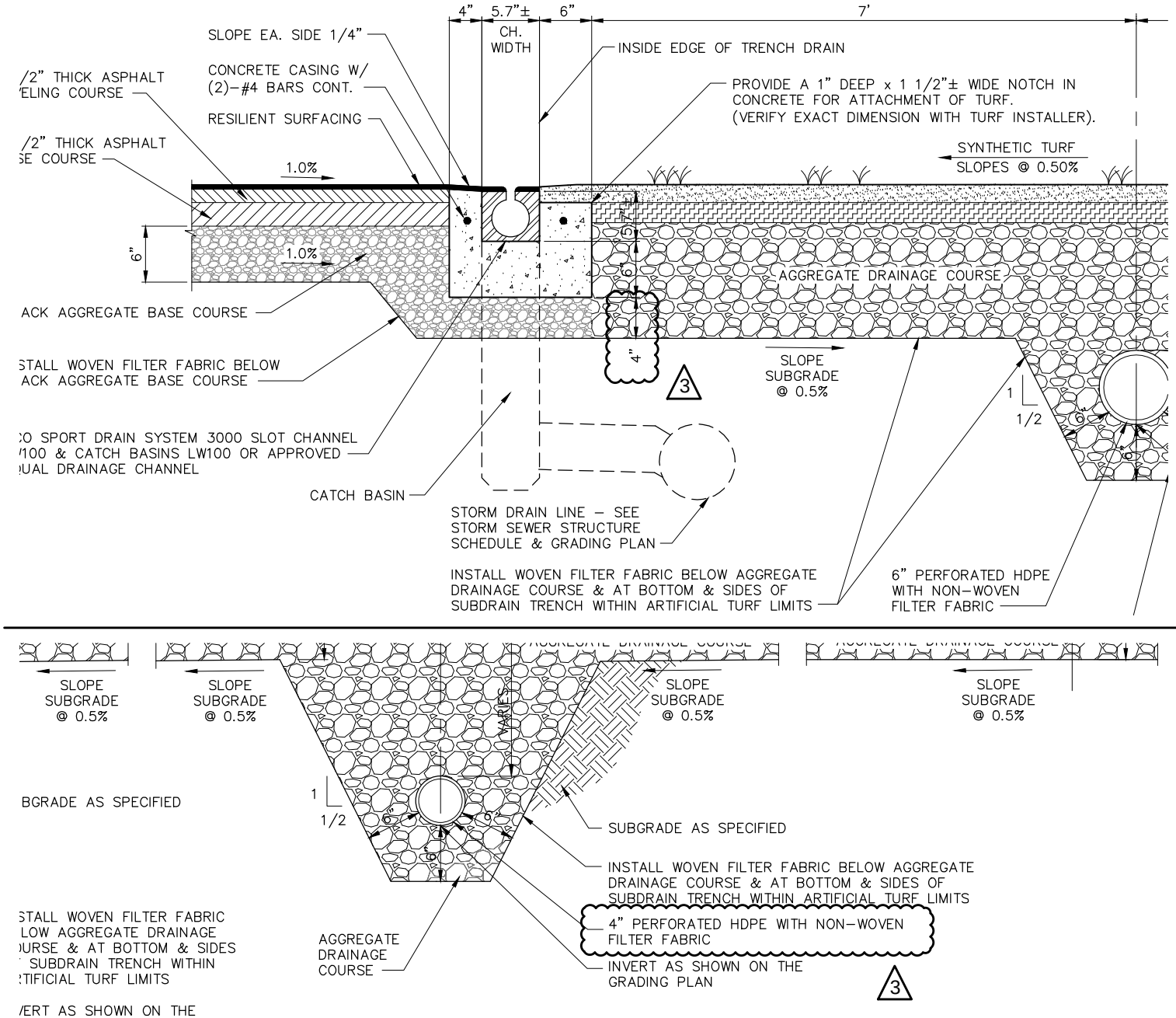
FIELD STRIPING
PLANS & DETAILS

Project Number: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
C6.4

PLOTTED:10/14/2014 8:50 AM SAVED:10/14/2014 8:01 AM Andrew C. Olson G:\Projects\13351\05-PS&-01\Civil-Dwgs\Sheet Drawings\Sht-Field Striping.dwg




## TRACK SECTION – TRENCH DRAIN & SYNTHETIC TURF

NO SCALE

Addendum No. 3

C6.5

Project Number: 1355

Kearney Public Schools
New Kearney High School
October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

GATES:
- Ⓐ 4'–0" WIDE SINGLE GATE
- Ⓑ 8'–0" WIDE OPENING, (2) 4'–0" WIDE GATES.
- Ⓒ 12'–0" WIDE OPENING, (2) 6'–0" WIDE GATES W/ ROLLER

6'–0" HIGH FENCE

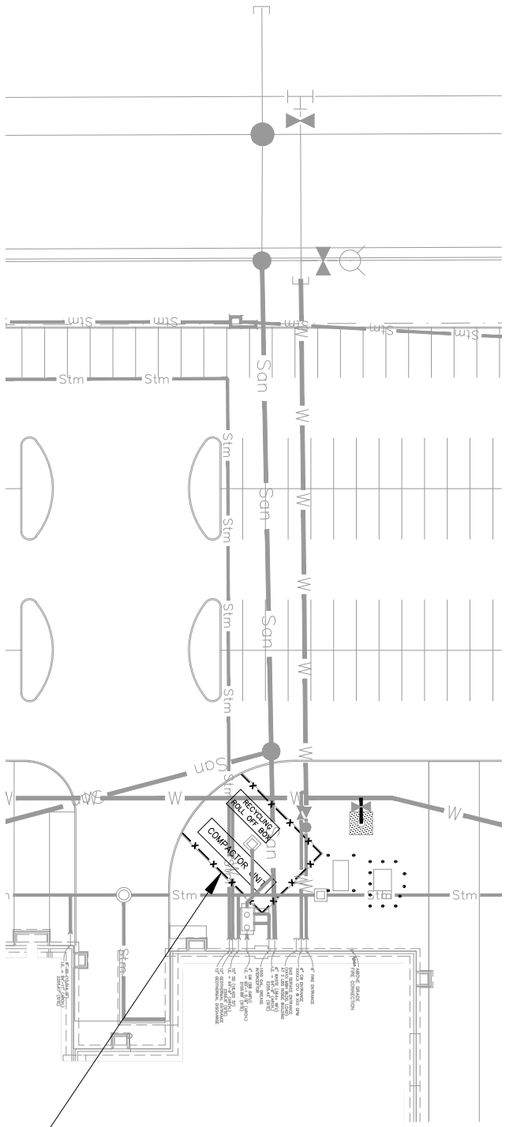
3'–6" HIGH FENCE

6'–0" HIGH FENCE

3'–6" HIGH BLACK PVC COATED CHAIN LINK FENCE (TYP.)

6'–0" HIGH BLACK PVC COATED CHAIN LINK FENCE (TYP.)

## ⚠3 SITE FENCING DETAIL
NO SCALE




8'–0" HIGH BLACK PVC COATED CHAIN LINK FENCE WITH PRIVACY SLATS

0 60 120
SCALE IN FEET

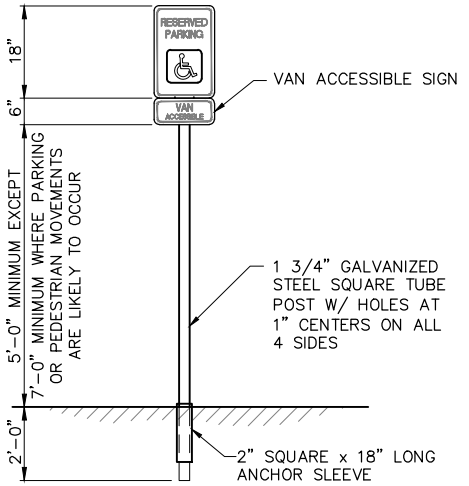
C6.6

Addendum No. 3

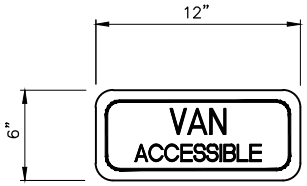
Project Number: 1355

Kearney Public Schools
New Kearney High School
October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.




## HANDICAP SIGN DETAIL
NO SCALE



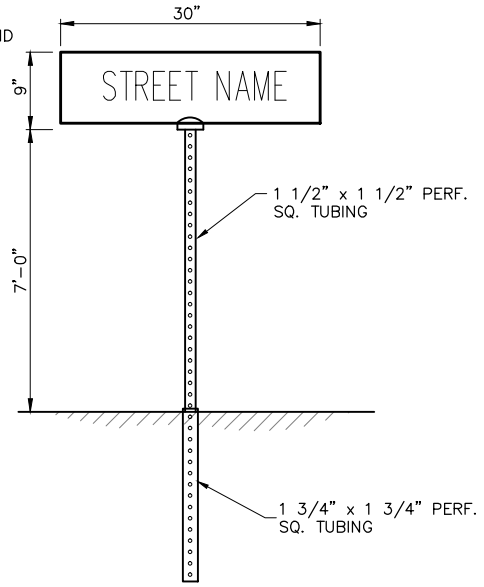

WHITE LETTERING ON
BLUE BACKGROUND
WHITE BORDER

## D9-6P VAN ACCESSIBLE SIGN DETAIL
NO SCALE

SYMBOL
WHITE SYMBOL ON
BLUE BACKGROUND

SIGN
GREEN LETTERING ON
WHITE BACKGROUND
GREEN BORDER

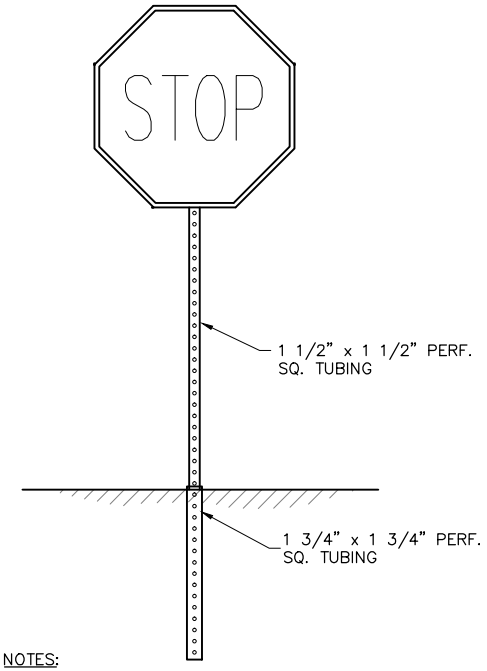
## R7-8 HANDICAP SIGN DETAIL
NO SCALE




NOTES:
1. CONTRACTOR SHALL COORDINATE SIZE AND COLOR WITH THE CITY OF KEARNEY.
2. STREET NAME TO BE DETERMINED BY OWNER.
3. SIGN POST SHALL BE TELESPAR PERFORATED SQUARE TUBING, GALVANIZED.
4. SHALL BE PLACED AT THE SOUTH BOULEVARD ENTRANCE OF 27TH STREET. COORDINATE FINAL LOCATION WITH OWNER

## STREET SIGN DETAIL
NO SCALE

3




NOTES:
1. ALL SIGNS TO BE INSTALLED IN ACCORDANCE WITH THE LATEST ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. STOP SIGN SHALL BE R1-1.
3. SIGN POST SHALL BE TELESPAR PERFORATED SQUARE TUBING, GALVANIZED.
4. SIGNS SHALL BE PLACED AT FOUR PRIVATE (4) DRIVEWAY LOCATIONS ONTO PUBLIC STREETS. (2-DRIVES ON 30TH AVENUE AND 2-DRIVES ON 27TH AVENUE.).

## STOP SIGN DETAIL
NO SCALE

Addendum No. 3

C6.6

Project Number: 1355

Kearney Public Schools
New Kearney High School
October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

ADD #03

TREES LOCATED WITHIN BOUNDARY SHALL BE INCLUDED IN THE BASE BID, TOTAL OF 25 TREES (BB-X)

GAS EASEMENT

5 GD

3 AR

8 MP

2 PP

3 GT

BB-1 BB-2 BB-3 BB-4 BB-5 BB-6 BB-7 BB-8 BB-9 BB-10 BB-11 BB-12 BB-13 BB-14 BB-15 BB-16 BB-17 BB-18 BB-19 BB-20 BB-21 BB-22 BB-23 BB-24 BB-25

2 PP

2 GT

1 GT

1 GT

1 GT

1 GT

ADD #03

ISLAND TREES WITHIN LIMITS SHALL BE INCLUDED IN ALTERNATE NO. 2

ADD #03

ISLAND TREES WITHIN LIMITS SHALL BE INCLUDED IN ALTERNATE NO. 2

G

UGE

SD

18"SD

8"S

6"S

10"W

3" HOTLINE

4"S

NORTH

# SITE LANDSCAPING PLAN - AREA 1

SCALE: 1" = 30.00'

Attachment No. L1.1-1
to Addendum No. 3
Dated: October 14, 2014

# L1.1

Addendum No. 3

Project Number:1355

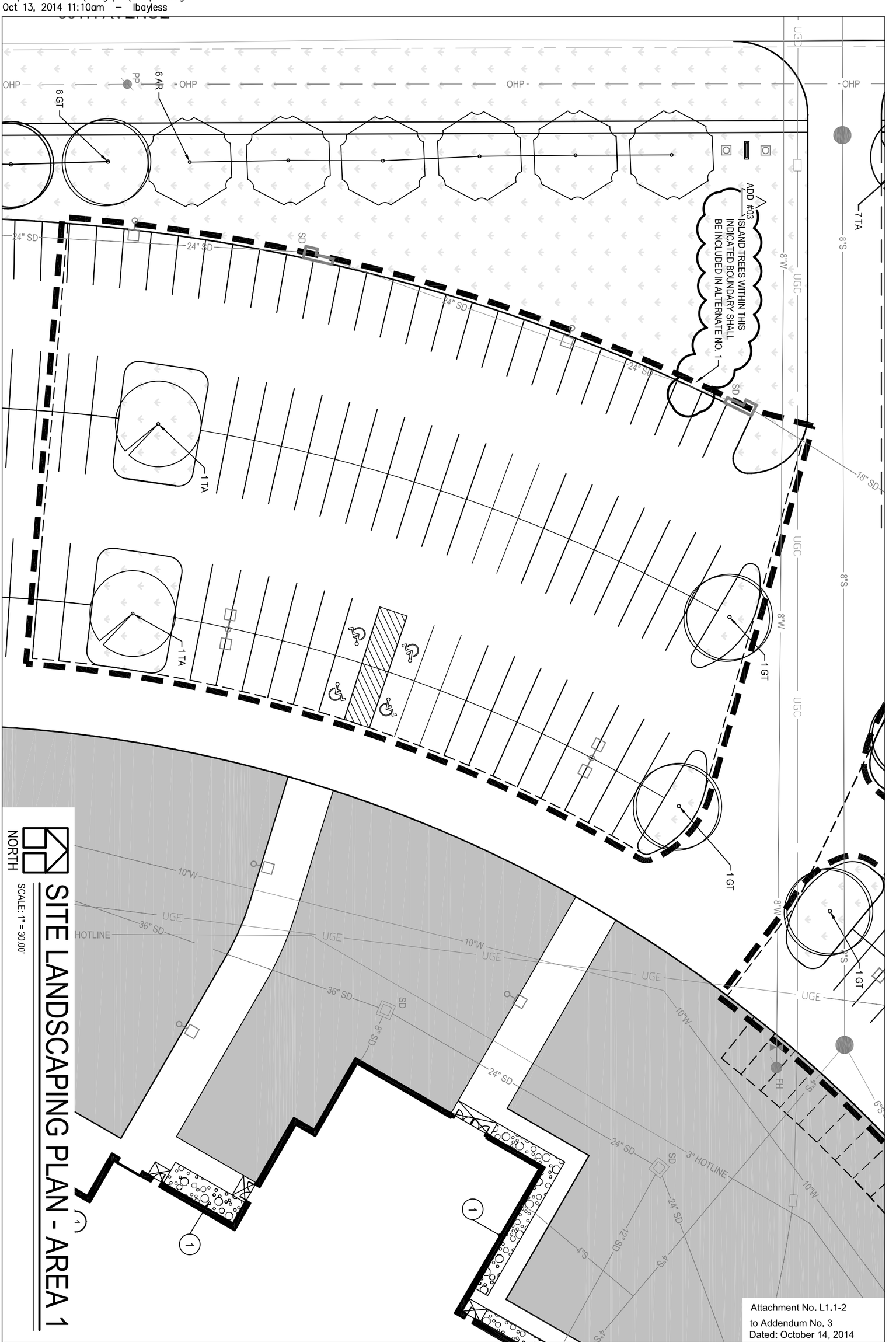
Kearney Public Schools
New Kearney High School
October 13, 2014

DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

P:\10-13113-00*dwg\Cv\zz-lp01.dwg
Oct 13, 2014 11:08am - lbayless

P:\10-13113-00\^dwg\Cv\zz-lp01.dwg
Oct 13, 2014 11:10am - lbayless




NORTH

SCALE: 1" = 30.00'

# SITE LANDSCAPING PLAN - AREA 1

Attachment No. L1.1-2
to Addendum No. 3
Dated: October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

DLR Group
Architecture Engineering Planning Interiors

©2014 DLR Group Inc., a Nebraska corporation. ALL RIGHTS RESERVED.
DLR Group Project No. 10-13113-00

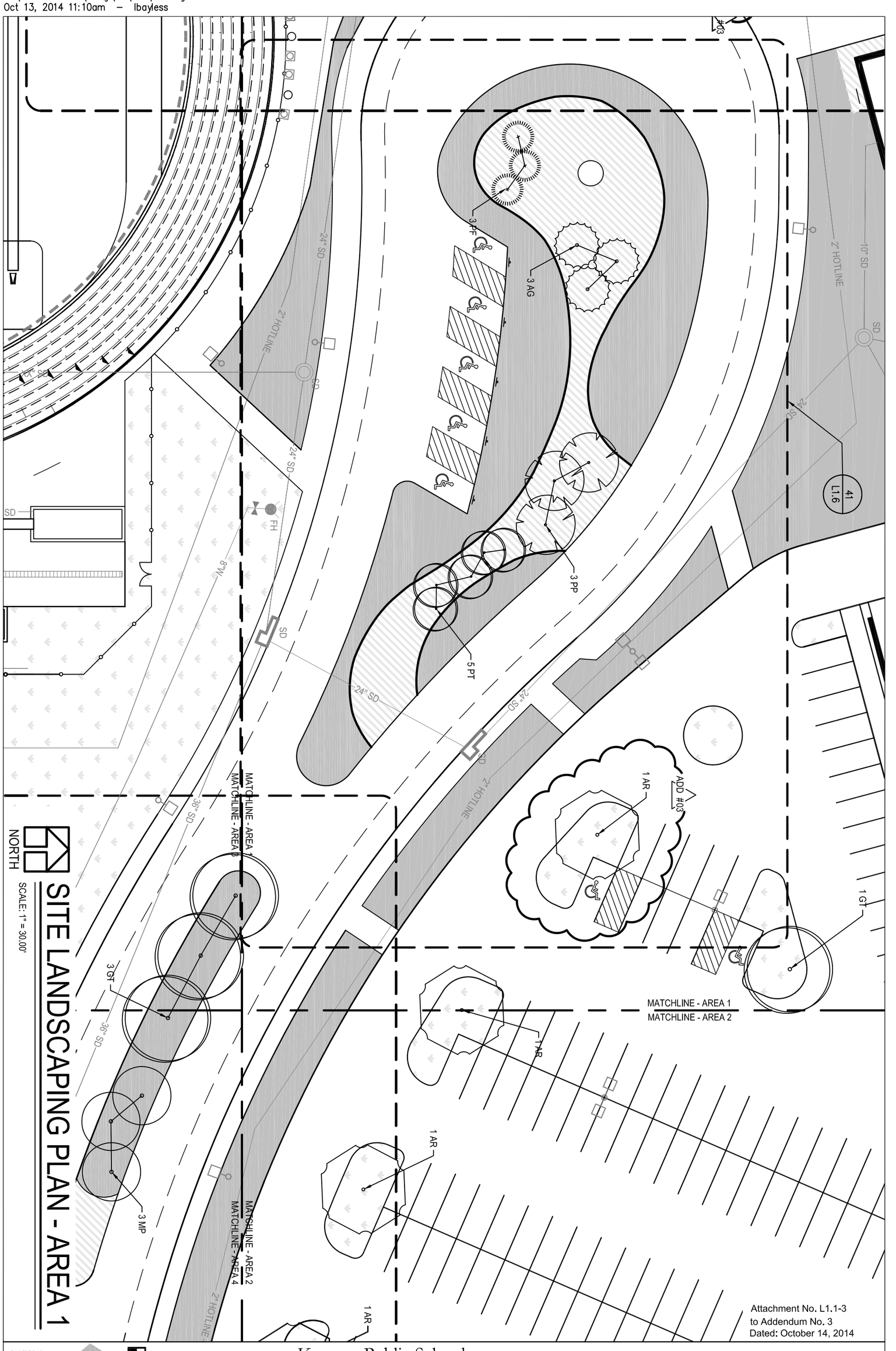
Kearney Public Schools
New Kearney High School
October 13, 2014

Addendum No. 3

Project Number:1355

L1.1

P:\10-13113-00\^dwg\Cv\zz-lp01.dwg
Oct 13, 2014 11:10am - lbayless




# SITE LANDSCAPING PLAN - AREA 1

Attachment No. L1.1-3
to Addendum No. 3
Dated: October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

DLR Group
Architecture Engineering Planning Interiors

©2014 DLR Group Inc., a Nebraska corporation. ALL RIGHTS RESERVED.
DLR Group Project No. 10-13113-00

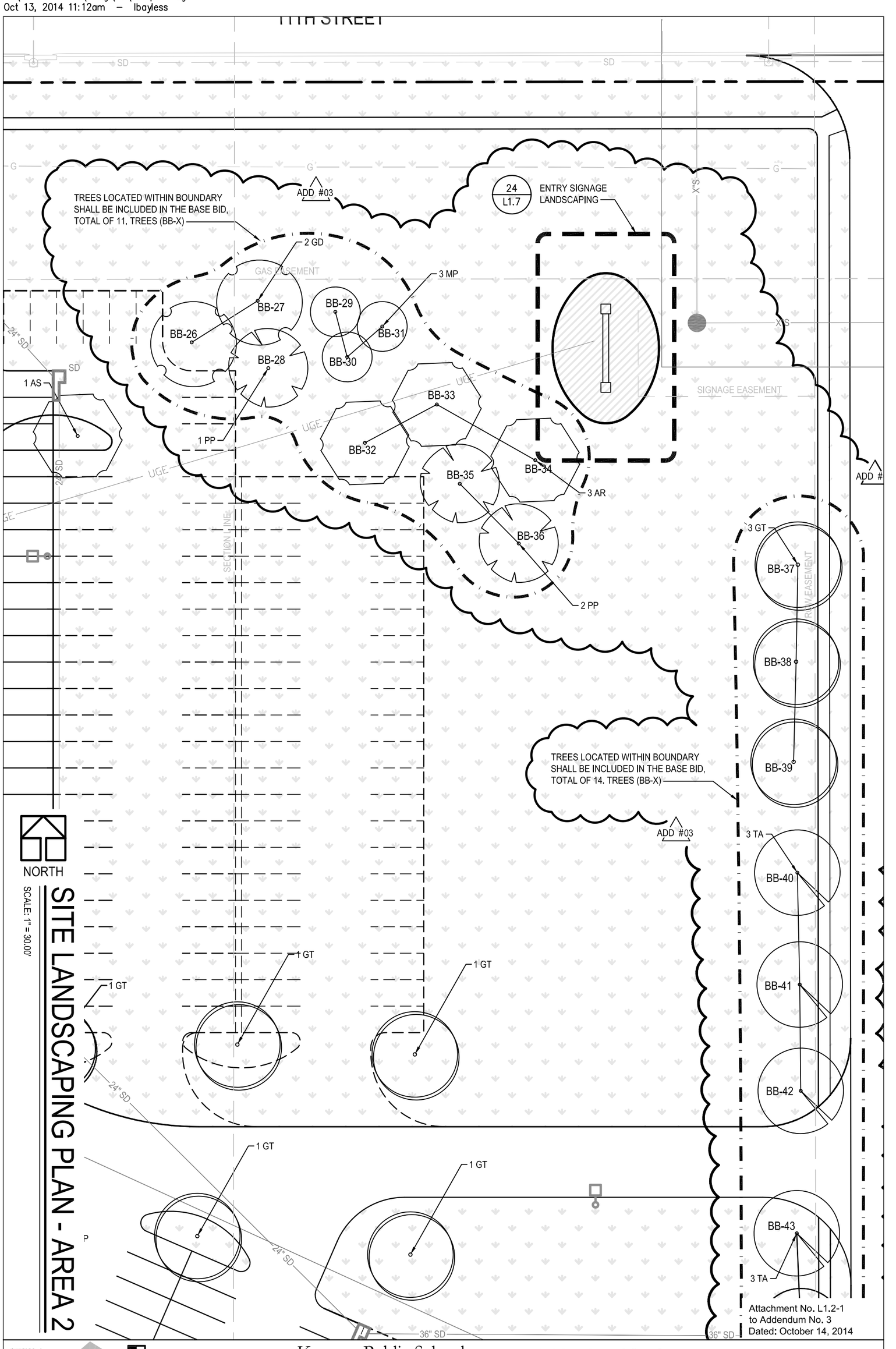
Kearney Public Schools
New Kearney High School
October 13, 2014

Addendum No. 3

Project Number:1355

L1.1

P:\10-13113-00\^dwg\Cv\zz-lp02.dwg
Oct 13, 2014 11:12am - lbayless




Attachment No. L1.2-1
to Addendum No. 3
Dated: October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

DLR Group
Architecture Engineering Planning Interiors

©2014 DLR Group Inc., a Nebraska corporation. ALL RIGHTS RESERVED.
DLR Group Project No. 10-13113-00

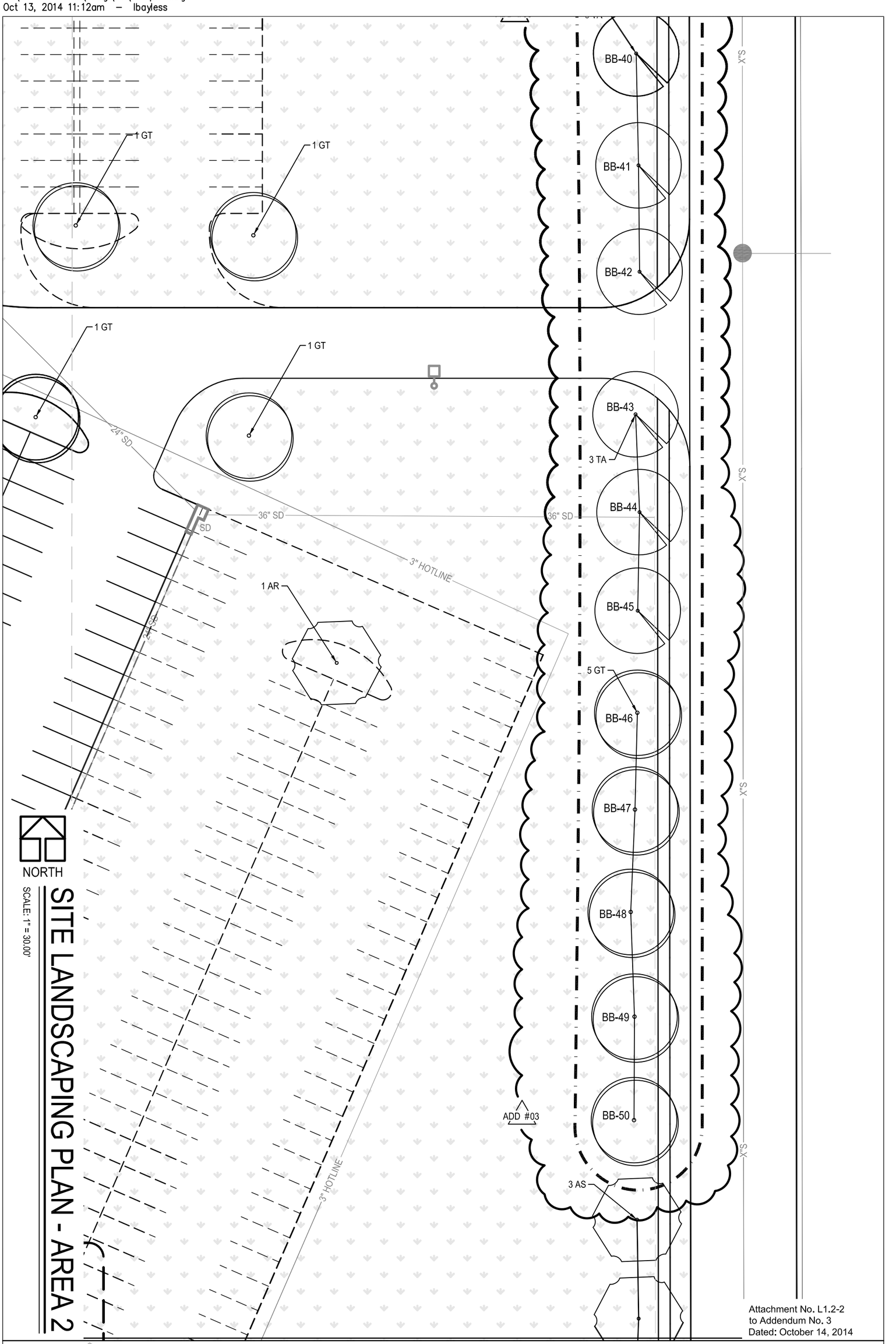
Kearney Public Schools
New Kearney High School
October 13, 2014

Addendum No. 3

Project Number:1355

L1.2

P:\10-13113-00\^dwg\Cv\zz-lp02.dwg
Oct 13, 2014 11:12am - lbayless




# SITE LANDSCAPING PLAN - AREA 2

SCALE: 1" = 30.00'

Attachment No. L1.2-2
to Addendum No. 3
Dated: October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

DLR Group
Architecture Engineering Planning Interiors

©2014 DLR Group Inc., a Nebraska corporation. ALL RIGHTS RESERVED.
DLR Group Project No. 10-13113-00

Kearney Public Schools
New Kearney High School
October 13, 2014

Addendum No. 3

Project Number:1355

L1.2

# SITE LANDSCAPING PLAN KEYED NOTES

ADD #03

1. 3" THICK LAYER OF MINERAL MULCH ABOVE WEED FABRIC FABRIC AS SPECIFIED SHALL BE INCLUDED IN ALTERNATE NO. 16. AREA SHALL BE SODDED AND IRRIGATED UNDER BASE BID.

2. EDGING AS SPECIFIED SHALL BE INCLUDED IN ALTERNATE NO. 16.

# SITE LANDSCAPING NOTES AND LEGEND

1. SEE SHEETS L2.1 THROUGH L2.6 FOR IRRIGATION, SOD AND SEEDING LIMITS.

2. BASE BID LANDSCAPING INDICATED ON SHEETS L1.1 AND L1.2 CONSISTS OF A TOTAL OF 50 STREET TREES IN LOCATIONS INDICATED ON THE PLAN. THESE 50 TREES ARE PART OF THE MINIMUM CODE REQUIRED STREET TREE LANDSCAPING ALONG 11TH STREET AND 27TH AVENUE.

3. THE ADDITIONAL CODE REQUIRED STREET TREES, BEYOND THE 50 NOTED STREET TREES, SHOWN ALONG 27TH AND 30TH AVENUES SHALL BE INCLUDED IN ALTERNATE NO. 16.

4. THE PARKING LOT ISLAND TREES INDICATED ON SHEETS L1.1 THROUGH L1.4 ARE CODE REQUIRED LANDSCAPING AND SHALL BE INCLUDED IN ALTERNATE NO. 16.

5. THE MAIN DRIVEWAY LANDSCAPING (INCLUDING TREES, SHRUBS, MULCH AND EDGING) AS DETAILED ON SHEETS L1.5 THROUGH L1.7 SHALL BE INCLUDED IN ALTERNATE NO. 16. UNDER BASE BID THESE AREAS SHALL ALL BE SODDED AND IRRIGATED.

6. LANDSCAPING BED (INCLUDING SHRUBS, MULCH AND EDGING) INDICATED AT THE 27TH AVENUE MONUMENT SIGN, AS SHOWN ON DETAIL 24/L1.7 SHALL BE INCLUDED IN ALTERNATE NO. 16.

7. CODE REQUIRED LANDSCAPING:
   STREET TREES, 1 PER 50 LINEAL FEET OF RIGHT-OF-WAY STREET FRONTAGE:
   11th STREET: 1490 LF RIGHT-OF-WAY FRONTAGE = 30 STREET TREES REQUIRED
   27th AVENUE: 850 LF RIGHT-OF-WAY FRONTAGE = 17 STREET TREES REQUIRED
   30th AVENUE: 1500 LF RIGHT-OF-WAY FRONTAGE = 30 STREET TREES REQUIRED

   TOTAL STREET TREES REQUIRED = 77 TREES

   PARKING LOT LANDSCAPING:
   CITY OF KEARNEY CODE, CHAPTER 48, REQUIRES (1) MIN 2" CAL DECIDUOUS TREE IN EACH ISLAND REQUIRED TO MEET PARKING LOT INTERIOR LANDSCAPING REQUIREMENTS (UNLESS A LIGHT POLE IS LOCATED WITHIN THE ISLAND). EACH PARKING LOT ISLAND TREE INDICATED ON THE PLANS IS REQUIRED TO MEET THE LANDSCAPING CODE REQUIREMENTS.

SOD AND FULLY-AUTOMATED IRRIGATION SYSTEM

SEED TYPE A AND FULLY-AUTOMATED IRRIGATION SYSTEM

SEED TYPE B, NON-IRRIGATED

BASE BID:
SOD AND FULLY-AUTOMATED IRRIGATION SYSTEM
ALTERNATE NO. 16:
SHRUB BED AREAS, SEE LANDSCAPE PLANS L1.5 THROUGH L1.7

ADD #03

BASE BID:
SOD AND FULLY-AUTOMATED IRRIGATION SYSTEM
ALTERNATE NO. 16:
3" LAYER OR MINERAL MULCH ABOVE WEED BARRIER FABRIC, NON-IRRIGATED, WITH EDGING INDICATED

NORTH

# SITE LANDSCAPING PLAN - AREA 2

SCALE: 1" = 30.00'

Attachment No. L1.2-3
to Addendum No. 3
Dated: October 14, 2014

L1.2

Addendum No. 3

Project Number:1355

Kearney Public Schools
New Kearney High School
October 13, 2014

DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

P:\10-13113-00*dwg\Cv\zz-lp02.dwg
Oct 14, 2014 7:58am - lbayless

## PLANT SCHEDULE

| KEY | QTY | LATIN NAME | COMMON NAME | SIZE | SYMBOL |
|---|---|---|---|---|---|
| **TREES** | | | | | |
| AR | 25 | ACER RUBRUM 'FRANKSRED' | RED SUNSET MAPLE | 2" CAL | |
| AS | 23 | ACER SACCHARUM 'BAILSTA' | FALL FIESTA SUGAR MAPLE | 2" CAL | |
| AG | 5 | AMELANCHIER GRANDIFLORA 'AUTUMN BRILLIANCE' | AUTUMN BRILLIANCE SERVICEBERRY | 8' CLUMP | |
| GD | 7 | GYMNOCLADUS DIOICUS | KENTUCKY COFFEE TREE | 2" CAL | |
| GT | 56 | GLEDITSIA TRICANTHOS 'SKYCOLE' | SKYLINE HONEYLOCUST | 2" CAL | |
| MP | 21 | MALUS X 'PRAIRIE FIRE' | PRAIRIE FIRE CRABAPPLE | 2" CAL | |
| PT | 5 | POPULUS TREMULOIDES 'NE ARB' | PRAIRIE GOLD ASPEN | 8' CLUMP | |
| TA | 20 | TILIA AMERICANA 'MCSENTRY' | MCSENTRY LINDEN | 2" CAL | |
| PC | 3 | PYRUS CALLERYANA 'CHANTICLEER' | CHANTICLEER PEAR | 2" CAL | |
| | | | | | |
| **EVERGREEN TREES** | | | | | |
| PP | 10 | PICEA PUNGENS | COLORADO BLUE SPRUCE | 8' | |
| PPB | 1 | PICEA PUNGENS 'BABY BLUE EYES' | BABY BLUE EYES BLUE SPRUCE | 6' | |
| PPBA | 3 | PICEA PUNGENS 'BAKERI' | BAKERI BLUE SPRUCE | 6' | |
| PF | 3 | PINUS FLEXILIS | VANDERWOLF PINE | 8' | |
| | | | | | |
| **SHRUBS** | | | | | |
| CS | 8 | CORNUS SERICEA 'ALLEMAN'S' | ALLEMAN'S COMPACT DOGWOOD | #3 | |
| HP | 29 | HYDRANGEA PANICULATA 'JANE' | LITTLE LIME HYDRANGEA | #3 | |
| HK | 30 | HYPERICUM KALMIANUM 'GEMO' | GEMO ST. JOHNS WORT | #3 | |
| PB | 36 | PRUNUS BESSEYI 'PAWNEE BUTTES' | PAWNEE BUTTES WESTERN SANDCHERRY | #3 | |
| RA | 116 | RHUS AROMATICA 'GRO-LOW' | GRO-LOW SUMAC | #3 | |
| VD | 9 | VIBURNUM DENTATUM 'BLUE MUFFIN' | 'BLUE MUFFIN' VIBURNUM | #3 | |
| | | | | | |
| **EVERGREEN SHRUBS** | | | | | |
| JH | 7 | JUNIPERUS HORIZONTALIS 'ANDORRA' | ANDORRA COMPACT JUNIPER | #3 | |
| TM | 68 | TAXUS X MEDIA 'EVERLOW' | EVERLOW YEW | #3 | |
| | | | | | |
| **PERENNIALS** | | | | | |
| EP | 35 | ECHINACEA PUPERURIA 'KIM'S KNEE HIGH' | 'KIM'S KNEE HIGH' CONEFLOWER | #1 | |
| GR | 16 | GERANIUM 'ROZANNE' | ROZANNE CRANESBILL | #1 | |
| PA | 21 | PEROVSKIA ATRIPLICIFOLIA | RUSSIAN SAGE | #1 | |
| SS | 53 | SEDUM SPECTABLE 'AUTUMN FIRE' | AUTUMN FIRE SEDUM | #1 | |
| SR | 42 | SOLIDAGO RUGOSA 'FIREWORKS' | FIREWORKS GOLDENROD | #1 | |
| | | | | | |
| **ORNAMENTAL GRASS** | | | | | |
| PAH | 61 | PENNISETUM ALOPECUROIDES 'HEMELN' | 'HAMELN' FOUNTAIN GRASS | #1 | |
| CA | 148 | CALAMAGROSTIS X ACCTFLORA 'KARL FORESTER' | 'KARL FORESTER' REED GRASS | #1 | |
| PV | 96 | PANICUM V. PRAIRIE FIRE' | PRAIRIE FIRE SWITCH GRASS | #1 | |
| SH | 61 | SPOROBOLUS HETEROLEPIS | PRAIRIE DROPSEED | #1 | |

ADD #03

ADD #03

ADD #03

ADD #03

ADD #03

NORTH

SCALE: 1" = 30.00'

# SITE LANDSCAPING PLAN - AREA 2

Attachment No. L1.2-4
to Addendum No. 3
Dated: October 14, 2014


©2014 DLR Group Inc., a Nebraska corporation. ALL RIGHTS RESERVED.

ADD #03

NOTES:

1. ALL LANDSCAPING (INCLUDING SHRUBS, ORNAMENTAL GRASSES, TREES, MULCH, WEED BARRIER FABRIC AND EDGING) SHALL BE BID UNDER ALTERNATE NO. 16.
2. UNDER BASE BID THE INDICATED SHRUB BED AREAS SHALL BE SODDED AND IRRIGATED.
3. SEE SHEET L1.2 FOR PLANT SCHEDULE.

NORTH

51
L1.5

# ENTRY PLAZA LANDSCAPE PLAN

SCALE: 1" = 10.00'

Attachment No. L1.5-1
to Addendum No. 3
Dated: October 14, 2014

L1.5

Addendum No. 3

Project Number:1355

Kearney Public Schools
New Kearney High School

October 13, 2014

DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

P:\10-13113-00*dwg\Cv\zz-lp-cvla01.dwg
Oct 13, 2014 2:12pm - lbayless

ADD #03

NOTES:

1. ALL LANDSCAPING (INCLUDING SHRUBS, ORNAMENTAL GRASSES, TREES, MULCH, WEED BARRIER FABRIC AND EDGING) SHALL BE BID UNDER ALTERNATE NO. 16.
2. UNDER BASE BID THE INDICATED SHRUB BED AREAS SHALL BE SODDED AND IRRIGATED.
3. SEE SHEET L1.2 FOR PLANT SCHEDULE.

NORTH

41
L1.6

# DROP-OFF MEDIAN LANDSCAPE PLAN

SCALE: 1" = 10.00'

P:\10-13113-00*dwg\cv\zz-lp-cvla02.dwg
Oct 13, 2014 11:36am - lbayless

Attachment No. L1.6-1
to Addendum No. 3
Dated: October 14, 2014

L1.6

Addendum No. 3

Project Number:1355

Kearney Public Schools
New Kearney High School
October 13, 2014

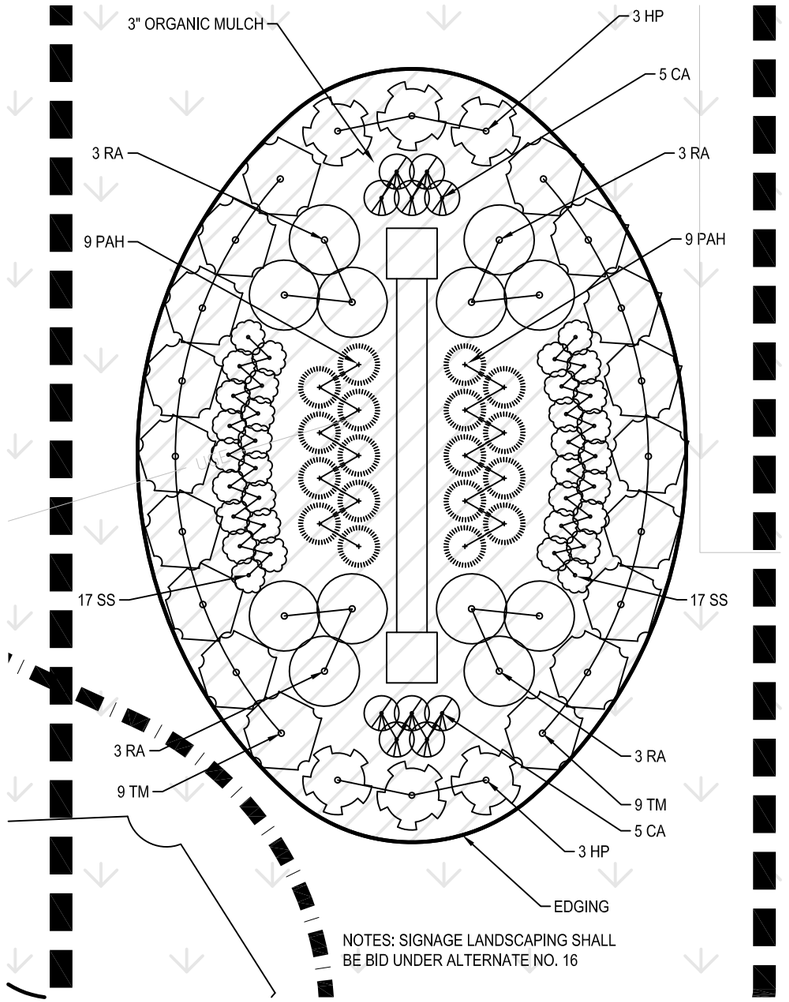
DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

ADD #03

NOTES:

1. ALL LANDSCAPING (INCLUDING SHRUBS, ORNAMENTAL GRASSES, TREES, MULCH, WEED BARRIER FABRIC AND EDGING) SHALL BE BID UNDER ALTERNATE NO. 16.
2. UNDER BASE BID THE INDICATED SHRUB BED AREAS SHALL BE SODDED AND IRRIGATED.
3. SEE SHEET L1.2 FOR PLANT SCHEDULE.




NORTH

ADD #03

24 / L1.7 ENTRY SIGNAGE LANDSCAPING

SCALE: 1" = 10.00'

31 / L1.7 EAST ENTRANCE MEDIAN LANDSCAPE PLAN-WEST

SCALE: 1" = 10.00'

51 / L1.7 EAST ENTRANCE MEDIAN LANDSCAPE PLAN-EAST

SCALE: 1" = 10.00'

Attachment No. L1.7-1
to Addendum No. 3
Dated: October 14, 2014

# L1.7

Addendum No. 3

Project Number:1355

Kearney Public Schools
New Kearney High School
October 13, 2014


DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.


P:\10-13113-00\^dwg\Cv\zz-lp-cvla03.dwg
Oct 13, 2014 11:53am - lbayless

BASE BID: THE AREA INDICATED TO BE PAVED IN ALTERNATE NO. 6 SHALL INCLUDE SEED TYPE 'B' UNDER BASE BID.
ALTERNATE NO. 6: SEED TYPE 'B' IS REPLACED WITH PAVING AS INDICATED AND SLEEVES INDICATED FTO CROSS THE DRIVE FOR FUTURE IRRIGATION SHALL BE INCLUDED IN ALTERNATE NO. 6

ADD #03

ADD #03

3" HOTLINE

# SITE IRRIGATION, SOD AND SEEDING PLAN-AREA 1

NORTH

SCALE: 1" = 30.00'

Attachment No. L2.1-1
to Addendum No. 3
Dated: October 14, 2014

L2.1

Addendum No. 3

Project Number:1355

Kearney Public Schools
New Kearney High School
October 13, 2014

DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

P:\10-13113-00\^dwg\Cv\zz-li01.dwg
Oct 13, 2014 1:11pm - lbayless

ADD #03

BASE BID: THE AREA INDICATED TO BE PAVED IN ALTERNATE NO. 2 SHALL INCLUDE SEED TYPE 'B' UNDER BASE BID.
ALTERNATE NO. 2: ISLANDS SHALL BE SEEDED WITH SEED TYPE 'B' AND SLEEVES INDICATED FOR FUTURE IRRIGATION TO SERVE THE ISLANDS WITHIN INDICATED AREA SHALL BE INCLUDED IN ALTERNATE NO. 2

SD
18" SD
8"S
UGC
8"W
UGE
6"S
S MH
HOTLINE

BASE BID: THE ENTIRE PAVING AREA INDICATED WITHIN LIMITS INDICATED SHALL INCLUDE SEED TYPE 'B'
ALTERNATE NO. 2: ISLANDS SHALL BE SEEDED WITH SEED TYPE 'B' AND SLEEVES INDICATED FOR FUTURE IRRIGATION TO SERVE THE ISLANDS WITHIN INDIATED AREA SHALL BE NCLUDED IN ALTERNATE NO. 2

ADD #03

NORTH

# SITE IRRIGATION, SOD AND SEEDING PLAN-AREA 1

SCALE: 1" = 30.00'

Attachment No. L2.1-2
to Addendum No. 3
Dated: October 14, 2014

L2.1

Addendum No. 3

Project Number:1355

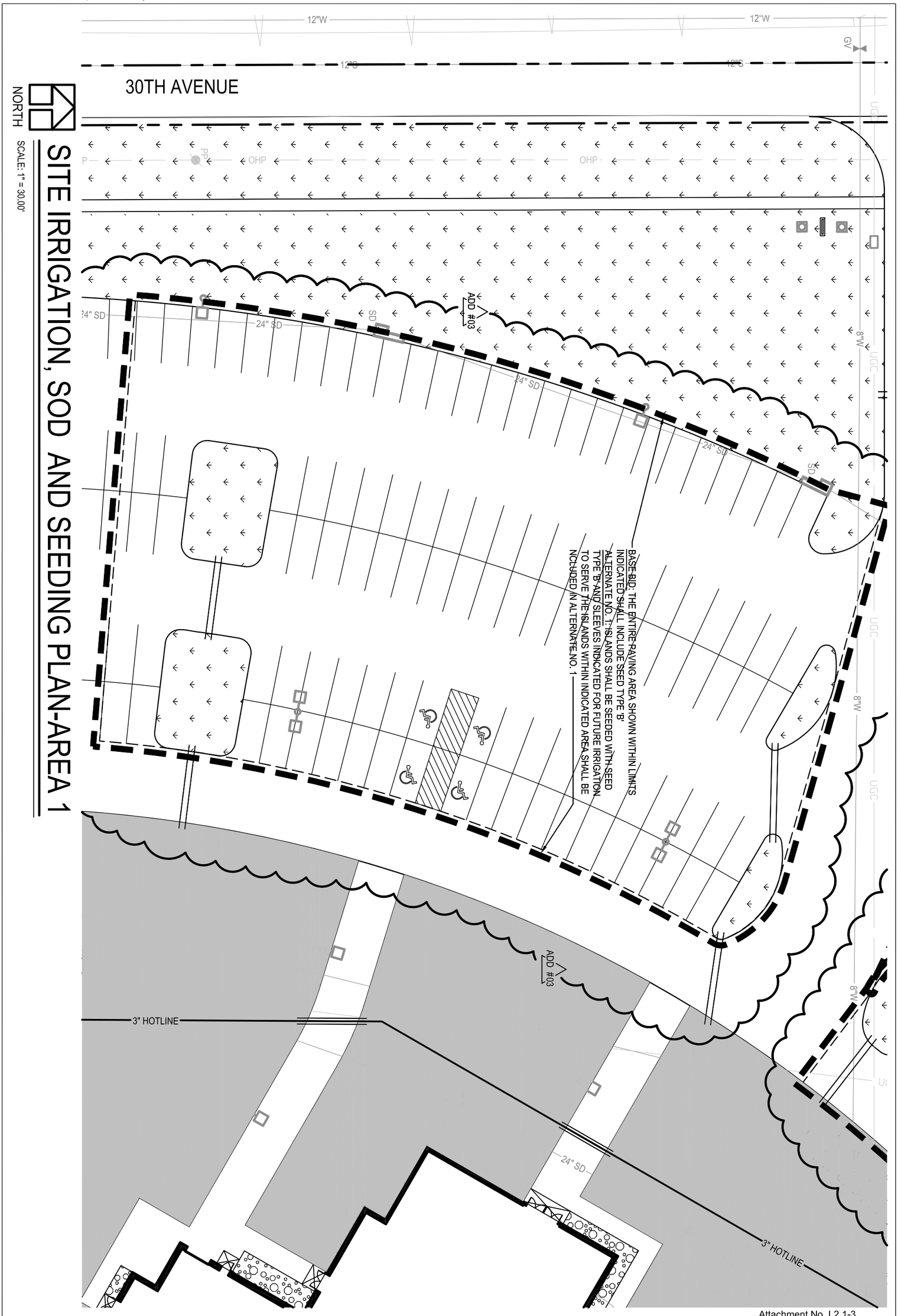
Kearney Public Schools
New Kearney High School
October 13, 2014

DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

P:\10-13113-00*dwg\Cv\zz-ii01.dwg
Oct 13, 2014 1:11pm - lbayless

P:\10-13113-00\^dwg\Cv\zz-li01.dwg
Oct 13, 2014 1:11pm - lbayless




# SITE IRRIGATION, SOD AND SEEDING PLAN-AREA 1

Attachment No. L2.1-3
to Addendum No. 3
Dated: October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

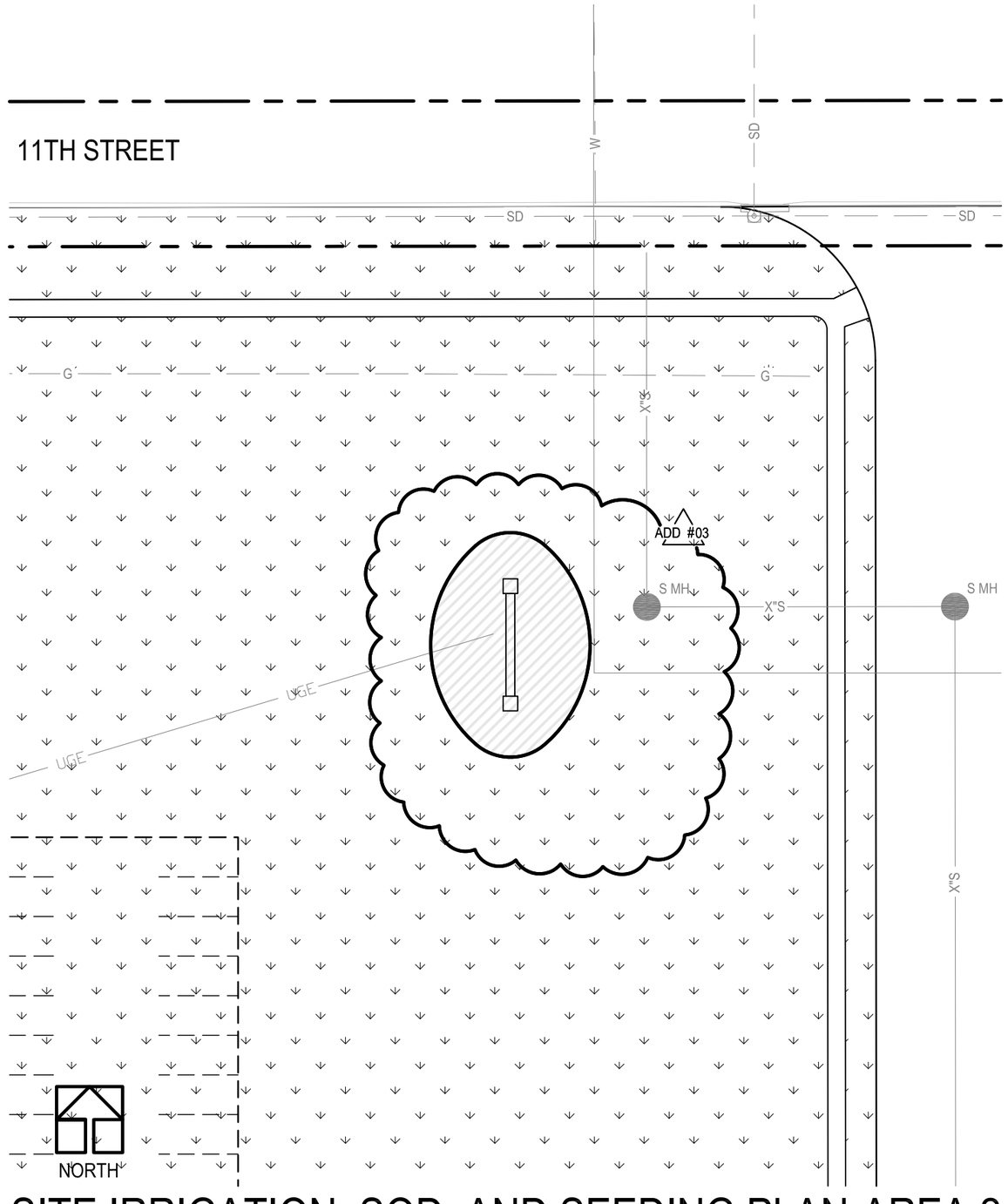
DLR Group
Architecture Engineering Planning Interiors
©2014 DLR Group Inc., a Nebraska corporation. ALL RIGHTS RESERVED.
DLR Group Project No. 10-13113-00

Kearney Public Schools
New Kearney High School
October 13, 2014

Addendum No. 3

Project Number:1355

L2.1




# SITE IRRIGATION, SOD AND SEEDING PLAN-AREA 2

SCALE: 1" = 30.00'

## SITE IRRIGATION, SOD AND SEEDING PLAN NOTES

1. SEED AND MULCH OR SOD AS SPECIFIED ALL AREAS DISTURBED BY GRADING AND/OR CONSTRUCTION NOT RECEIVING OTHER SURFACING.
2. ALL SEEDED AREAS MUST BE MULCHED AS SPECIFIED. FAILURE TO USE MULCH WILL REQUIRE REMOVAL OF SEED AND REPLACEMENT WITH SOD.
3. SEE SHEETS L1.1 THROUGH L1.7 FOR LANDSCAPING (TREES AND SHRUBS) THAT ARE TO BE INCLUDED IN BASE BID AND/OR ALTERNATE NO. 16. ADD #03
4. THE IRRIGATION HOTLINE, VALVES AND QUICK COUPLERS SHOWN ON THE DRAWINGS ARE SHOWN APPROXIMATELY FOR THE GENERAL ROUTING OF THE IRRIGATION SYSTEM HOTLINE. THE IRRIGATION SYSTEM DESIGNER CAN MODIFY THE ROUTING AS REQUIRED TO FACILITATE THE COMPLETION OF THE FULLY-AUTOMATED SPRINKLER SYSTEM FOR THE AREAS INDICATED.

## SITE IRRIGATION, SOD AND SEEDING PLAN LEGEND

- SOD AND FULLY-AUTOMATED IRRIGATION SYSTEM
- SEED TYPE B, NON-IRRIGATED
- SEED TYPE A AND FULLY-AUTOMATED IRRIGATION SYSTEM
- SHRUB BED AREAS — ADD #03
  - BASE BID: BIDDERS SHALL INCLUDE THESE AREAS AS SOD WITH FULLY-AUTOMATED IRRIGATION.
  - ALTERNATE NO. 16: BIDDERS SHALL INCLUDE THESE SHRUB BED AREAS AS BEING FULLY AUTOMATED WITH DRIP IRRIGATION. SEE SHEETS L1.5 THROUGH L1.7 FOR LANDSCAPING TO BE INCLUDED IN ALTERNATE NO. 16.
- MINERAL MULCH AREAS
  - BASE BID: BIDDERS SHALL INCLUDE THESE AREAS AS SOD WITH FULLY-AUTOMATED IRRIGATION.
  - ALTERNATE NO. 16: BIDDERS SHALL INCLUDE THESE AREAS TO INCLUDE 3" MINERAL MULCH ABOVE WEED BARRIER FABRIC AND NON-IRRIGATED.
- HOT LINE — IRRIGATION HOTLINE, IN SIZE INDICATED
- 4" DIAMETER (MIN) PVC SLEEVES WHERE HOTLINE CROSSES PAVING AND/OR SIDEWLAK
- 4" DIAMETER (MIN) PVC SLEEVES FOR IRRIGATION EXTENSION
- QC — QUICK COUPLER
- GV — GATE VALVE

Attachment No. L2.2-1
to Addendum No. 3
Dated: October 14, 2014

L2.2

Addendum No. 3

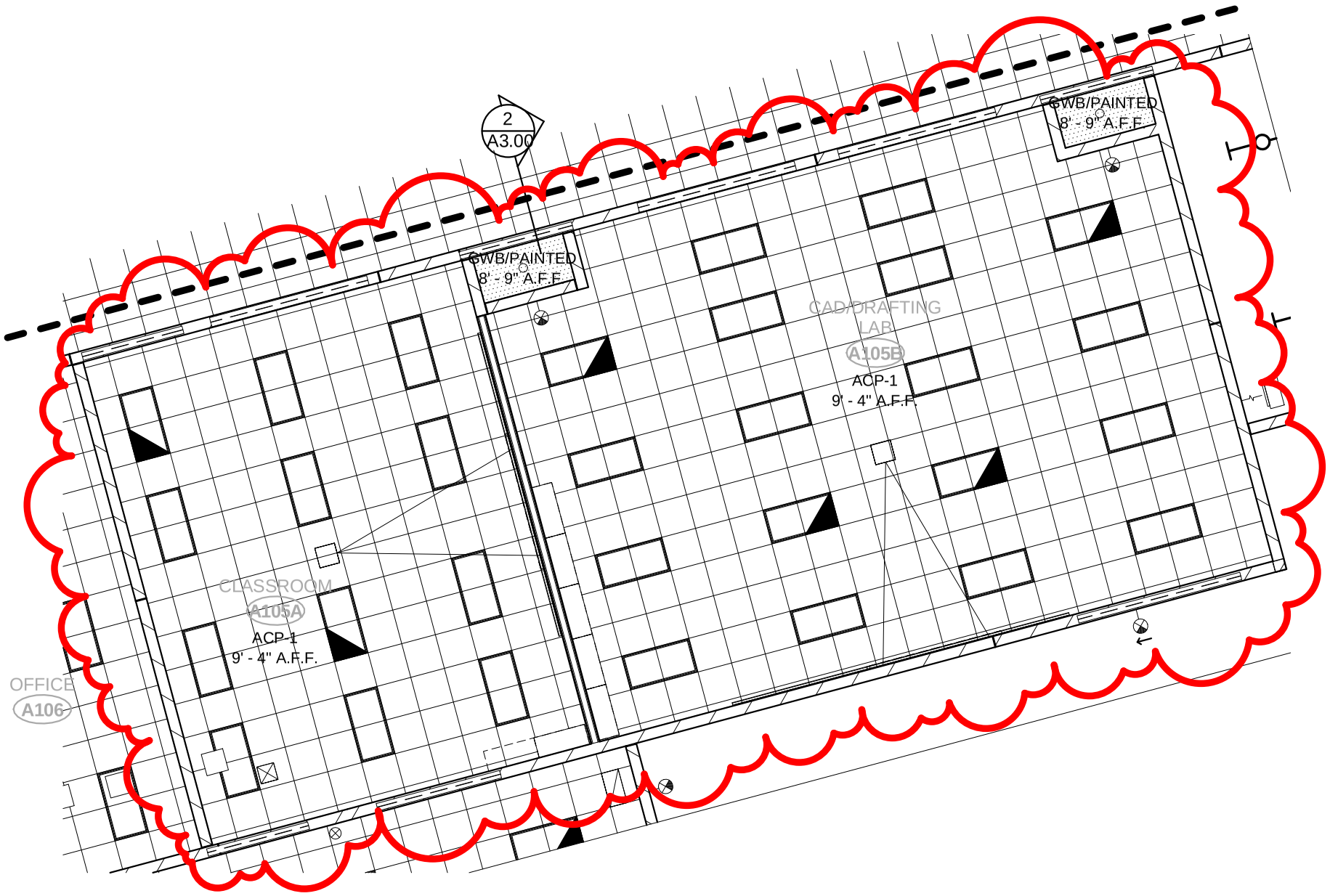
Project Number:1355

Kearney Public Schools
New Kearney High School
October 13, 2014

DLR Group
Architecture Engineering Planning Interiors
DLR Group Project No. 10-13113-00

Wilkins Hinrichs Stober Architects, L.L.C.

P:\10-13113-00\^dwg\Cv\zz-ii02.dwg
Oct 13, 2014 1:38pm - lbayless




## 1 REFLECTED CEILING PLAN - FIRST FLOOR - AREA A

A3-A3.00 SCALE: 1/8" = 1'-0"

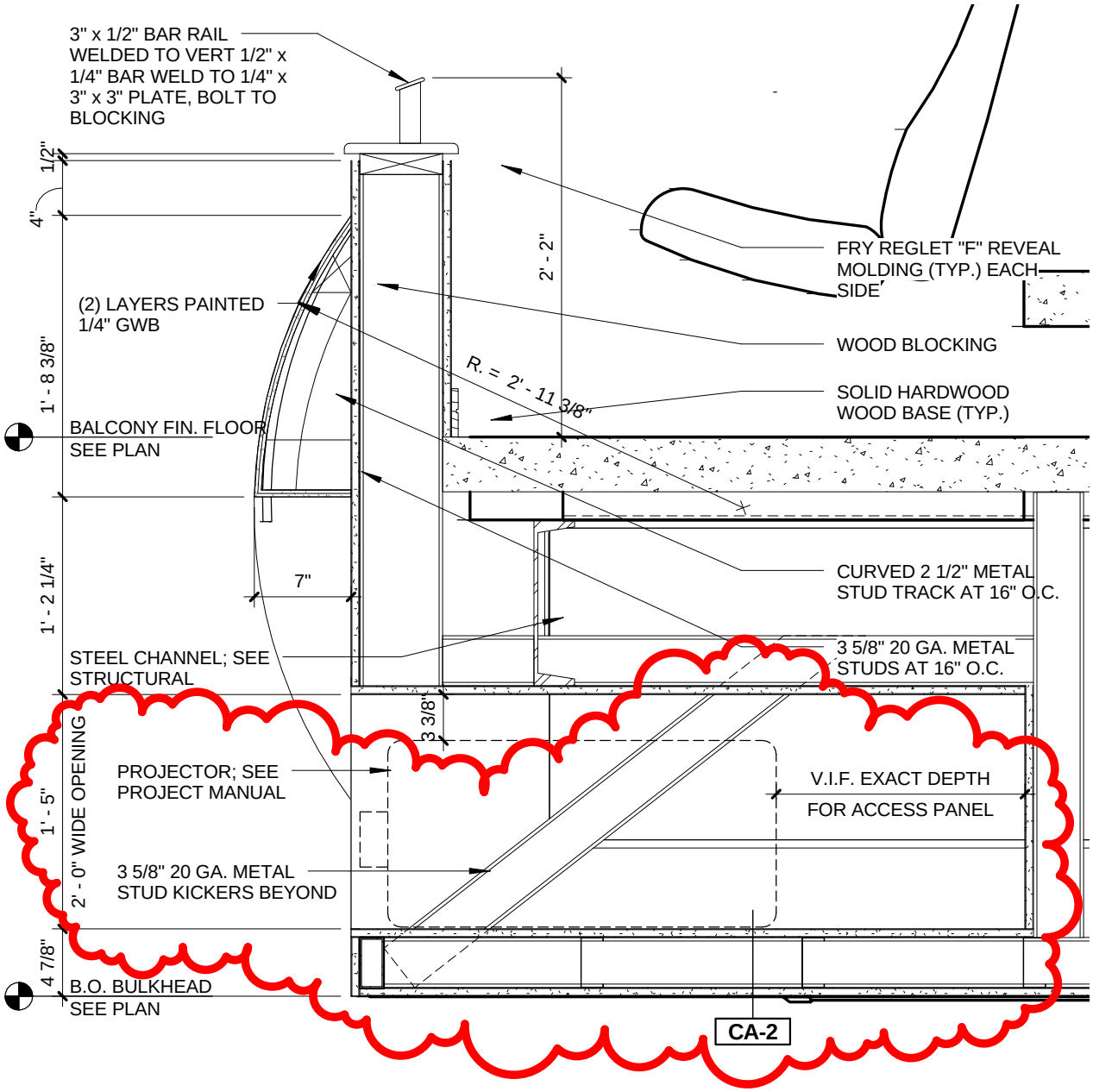
Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
Addendum No. 3

Date: October 14, 2013

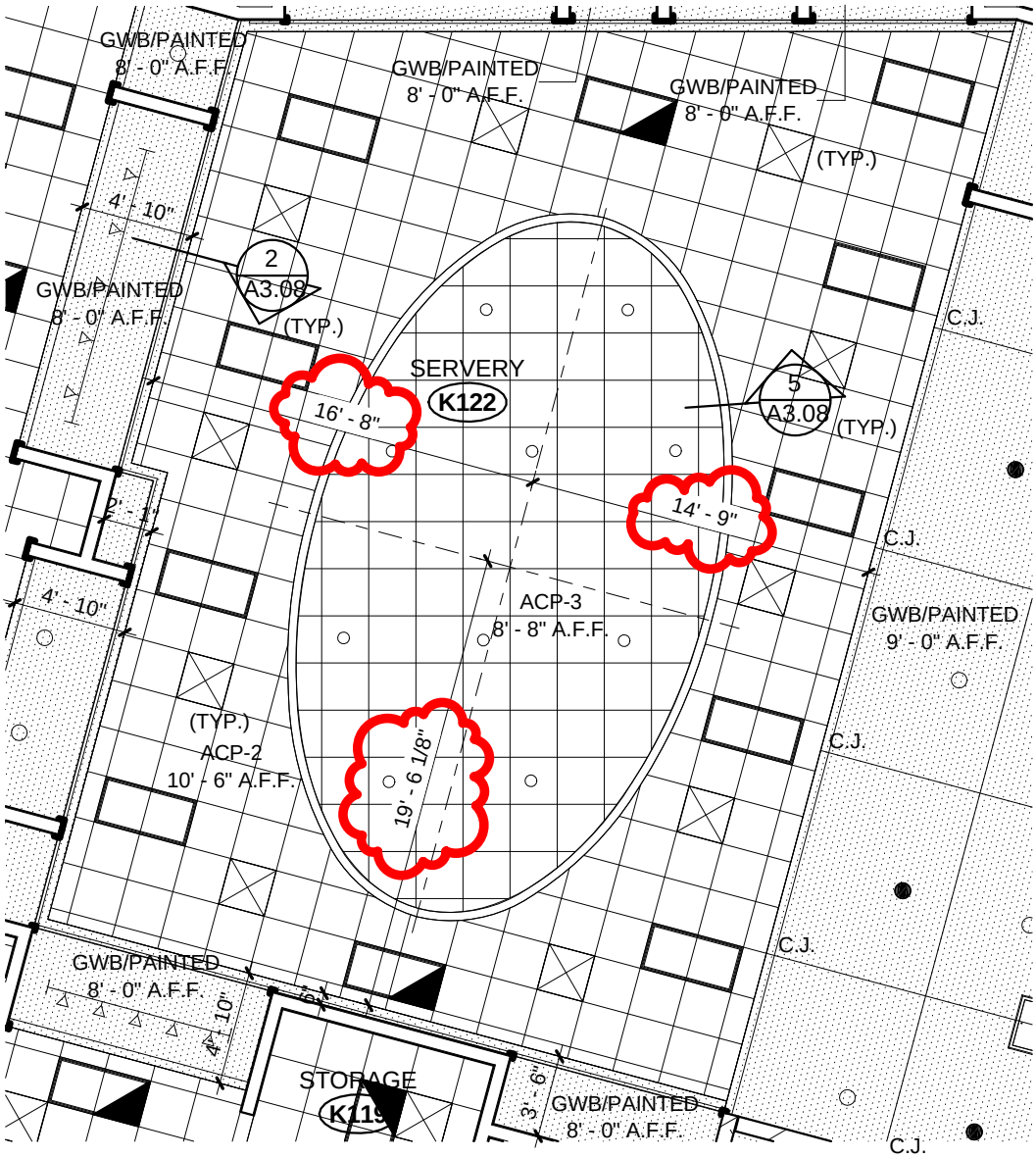
Project Number: 1355

A3-A3.00




## 1 BALCONY SECTION

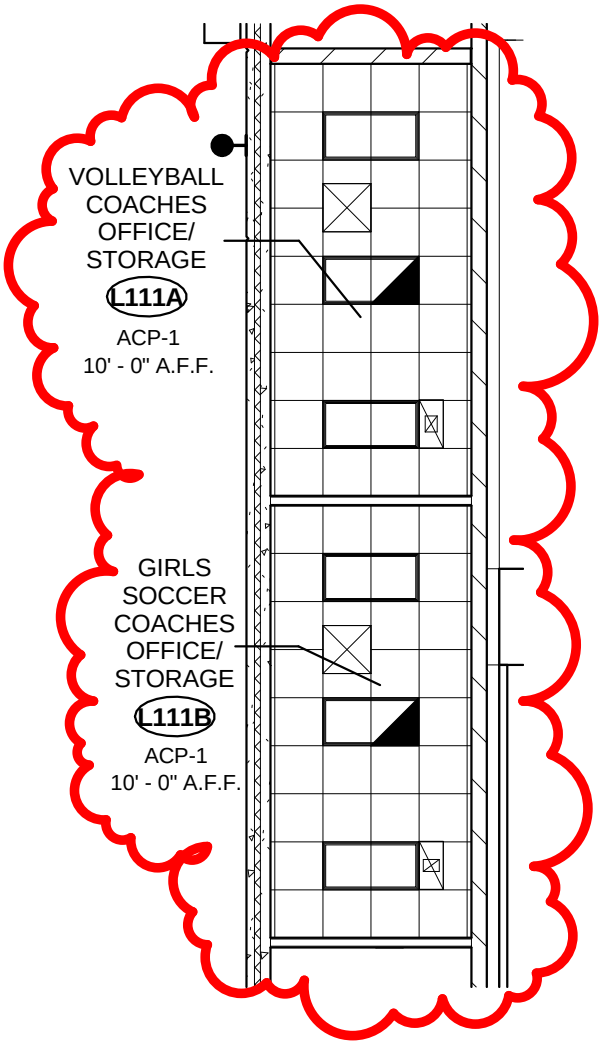
A3-A3.06 SCALE: 1" = 1'-0"




1
A3-A3.08

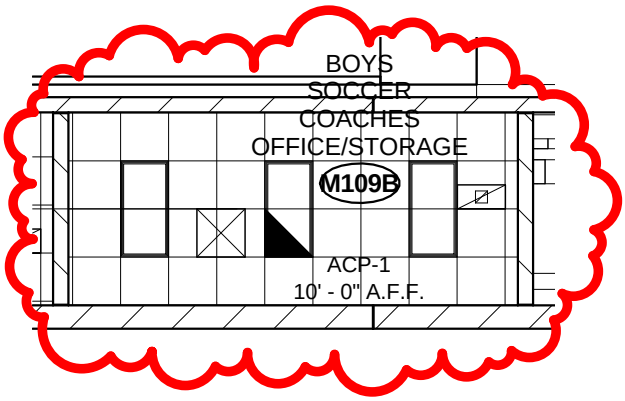
# REFLECTED CEILING PLAN - FIRST FLOOR - AREA K

SCALE: 1/8" = 1'-0"




## 1 REFLECTED CEILING PLAN - FIRST FLOOR - AREA L

A3-A3.09 SCALE: 1/8" = 1'-0"




## 2 REFLECTED CEILING PLAN - FIRST FLOOR - AREA L

A3-A3.09 SCALE: 1/8" = 1'-0"

CORR.
C201C
ES-1

4
A3.14

26' - 6 3/4"

24' - 2"

112.5°

EQ.

21' - 8 1/8"

18' - 9 3/8"

112.5°

112.5°

112.5°

STAIR
C200ST
ES-1

25' - 3 1/2"

22' - 0 5/8"

18' - 8 3/4"

15' - 9 7/8"

123' - 0 15/32"

122' - 6 15/32"

122' - 0 15/32"

121' - 6 15/32"

PAINTED
CLOUD CEILING

ELEC.
C204E
ES-2

GWB/PAINTED
9' - 3" A.F.F.

GWB/PAINTED
9' - 3" A.F.F.

8"

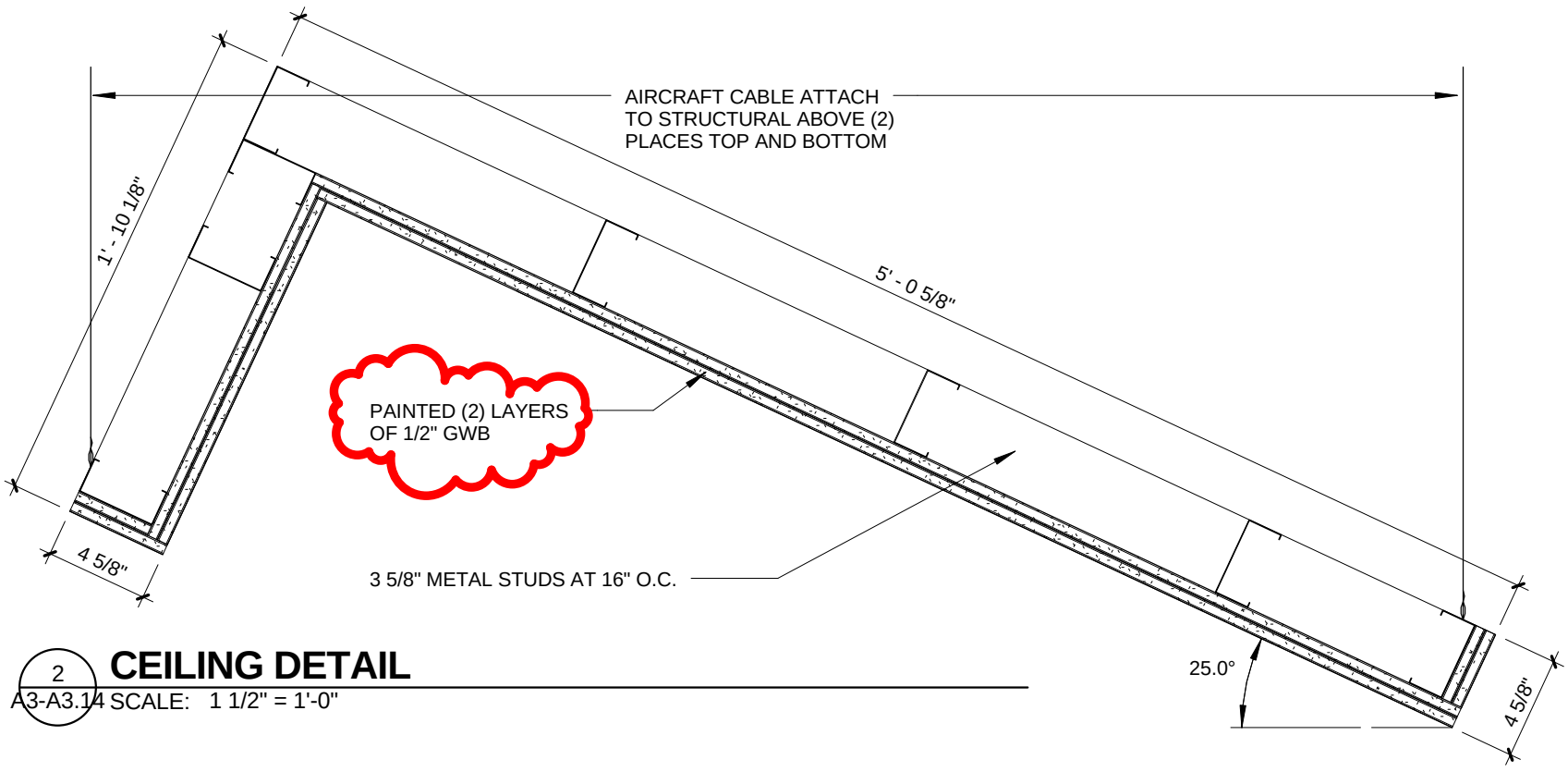
EQ.

4
A3.01

ACP-1
9' - 4" A.F.F.

# 1 REFLECTED CEILING PLAN - SECOND FLOOR - AREA C

A3-A3.14 SCALE: 1/8" = 1'-0"




# 2 CEILING DETAIL

A3-A3.14 SCALE: 1 1/2" = 1'-0"

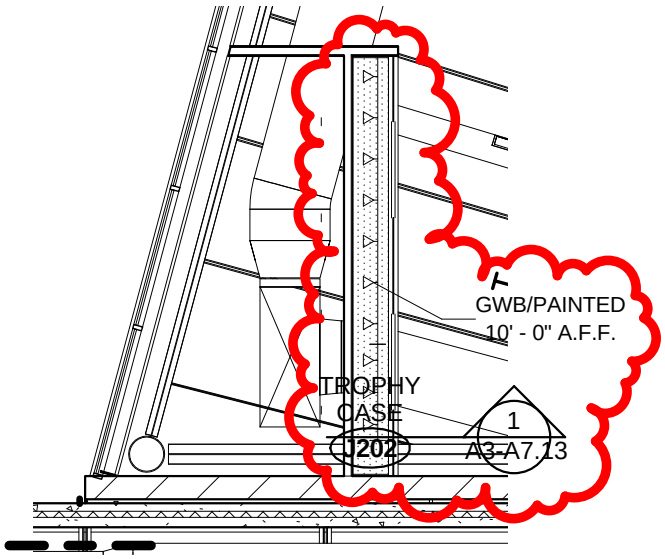
Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
October 14, 2014

Addendum #3

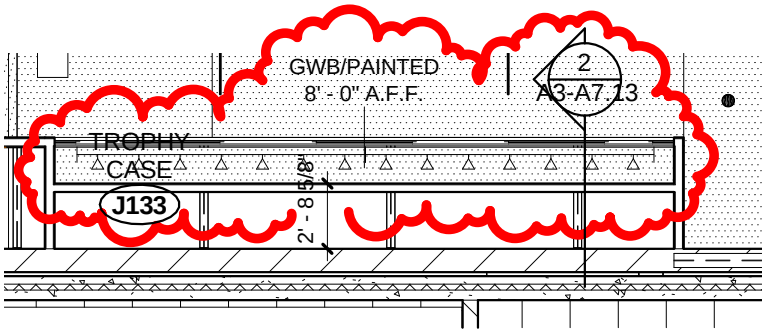
Project Number: 1355

A3-A3.14



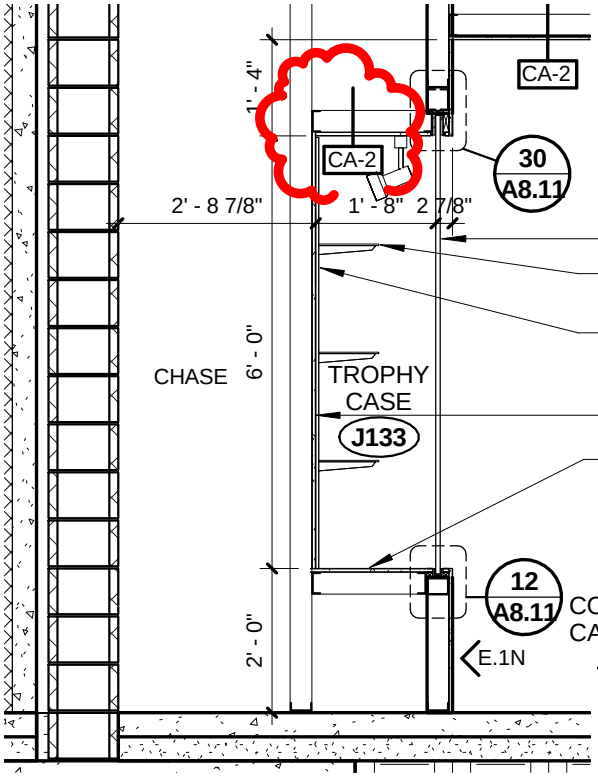

## 1 REFLECTED CEILING PLAN - SECOND FLOOR - AREA J

A3-A3.19 SCALE: 1/8" = 1'-0"

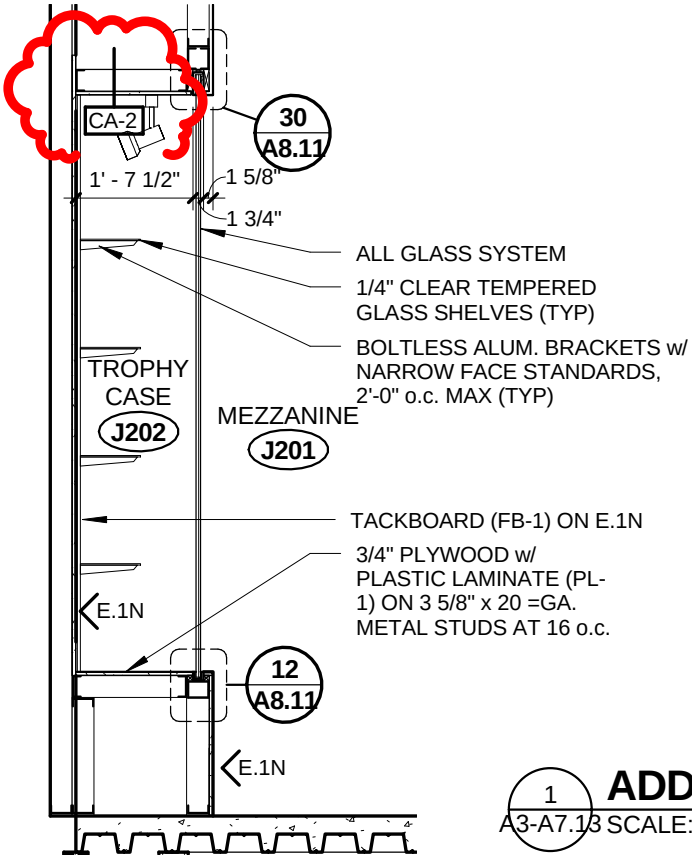



## 2 REFLECTED CEILING PLAN - FIRST FLOOR - AREA J

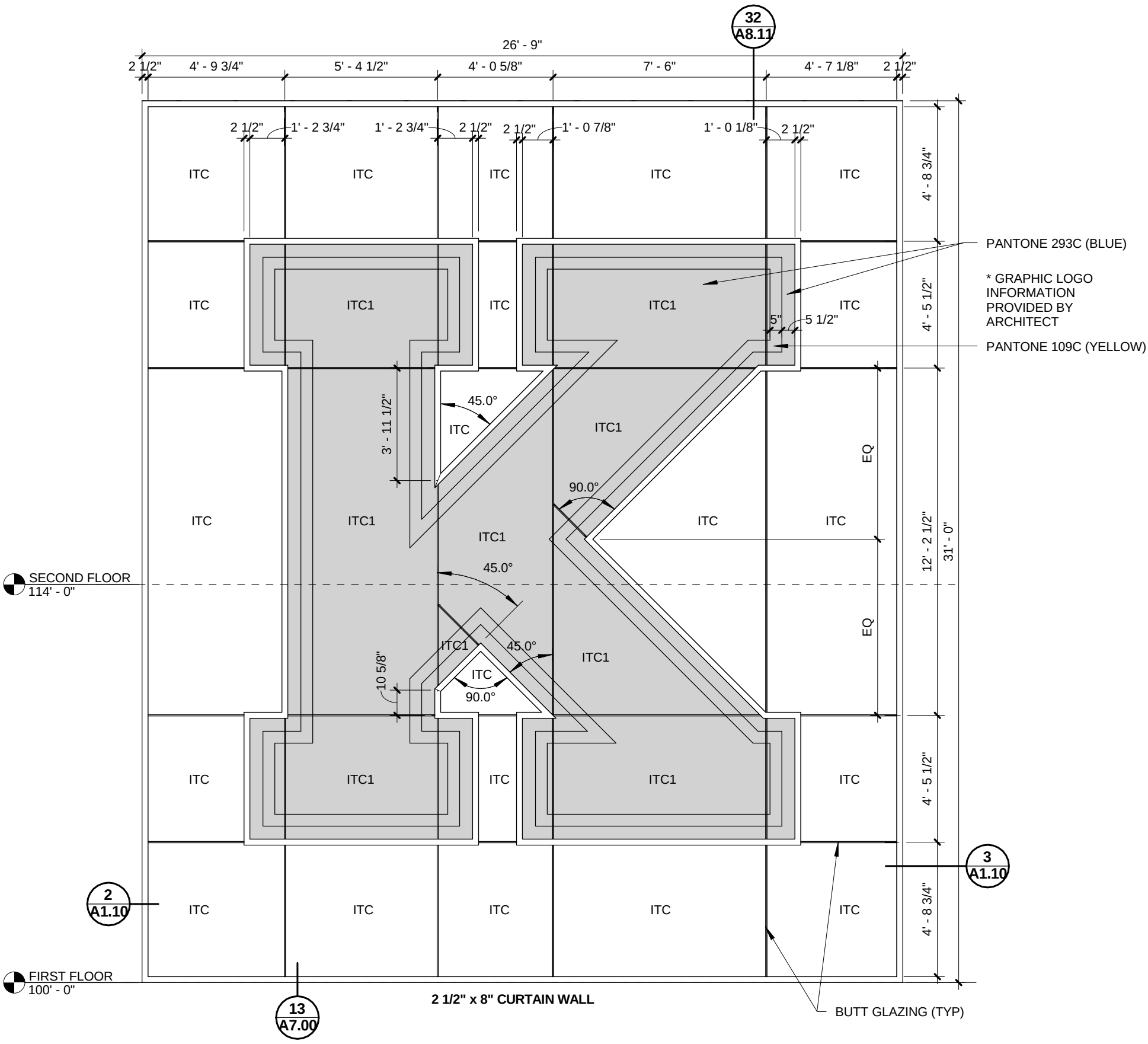
A3-A3.19 SCALE: 1/8" = 1'-0"




2 A3-A7.13 **ADD3 J133 TROPHY CASE**
SCALE: 3/8" = 1'-0"

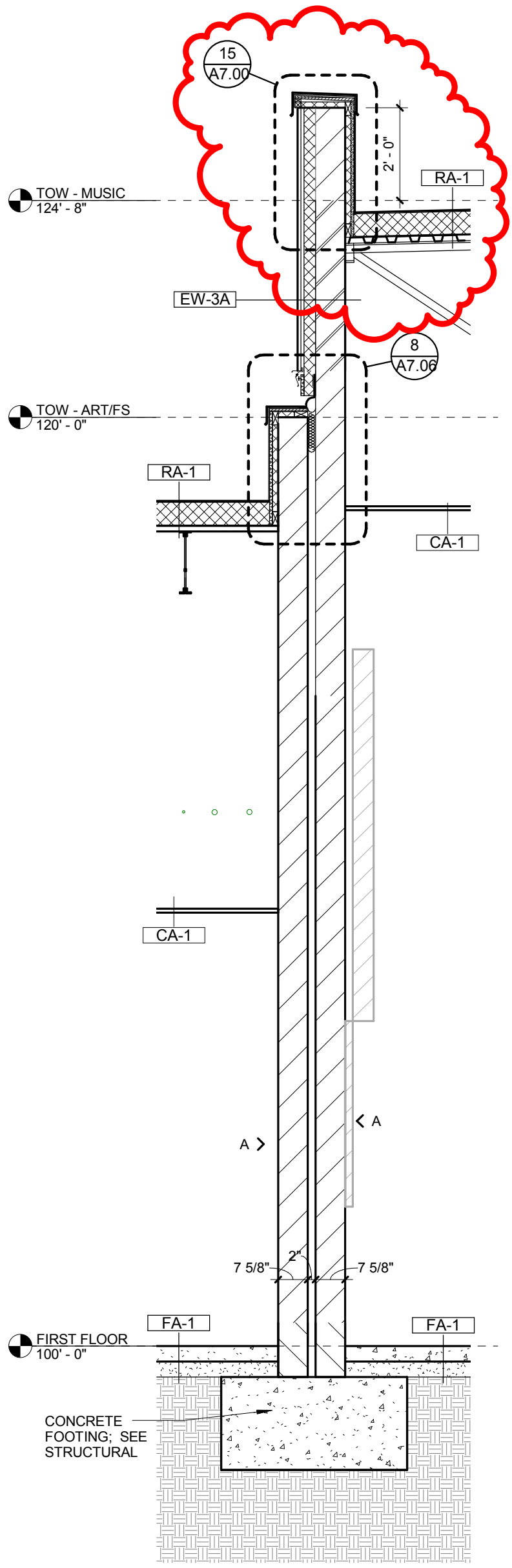



1 A3-A7.13 **ADD3 J132 TROPHY CASE**
SCALE: 3/8" = 1'-0"



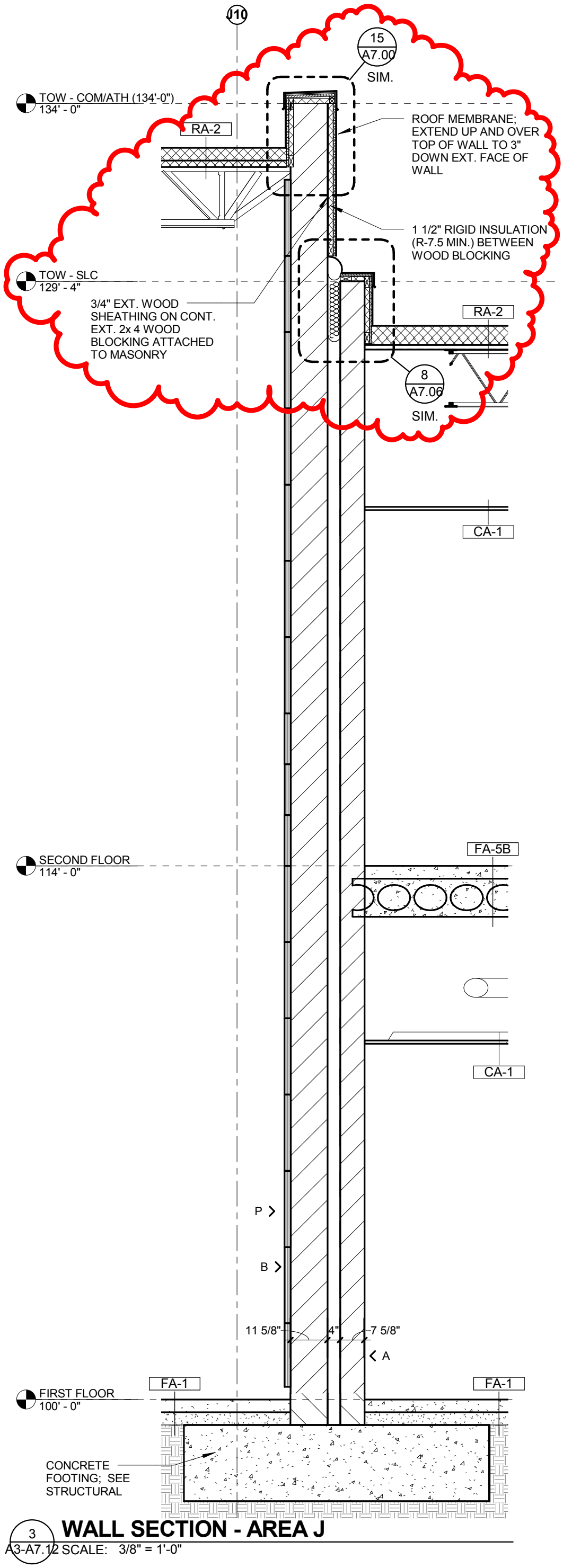

1 **ADD3 CW-J1-13**

A3-A8.05 SCALE: 1/4" = 1'-0"




15 **WALL SECTION - AREA G**

A3-A7.04 SCALE: 3/8" = 1'-0"




3
A3-A7.12

## WALL SECTION - AREA J

SCALE: 3/8" = 1'-0"

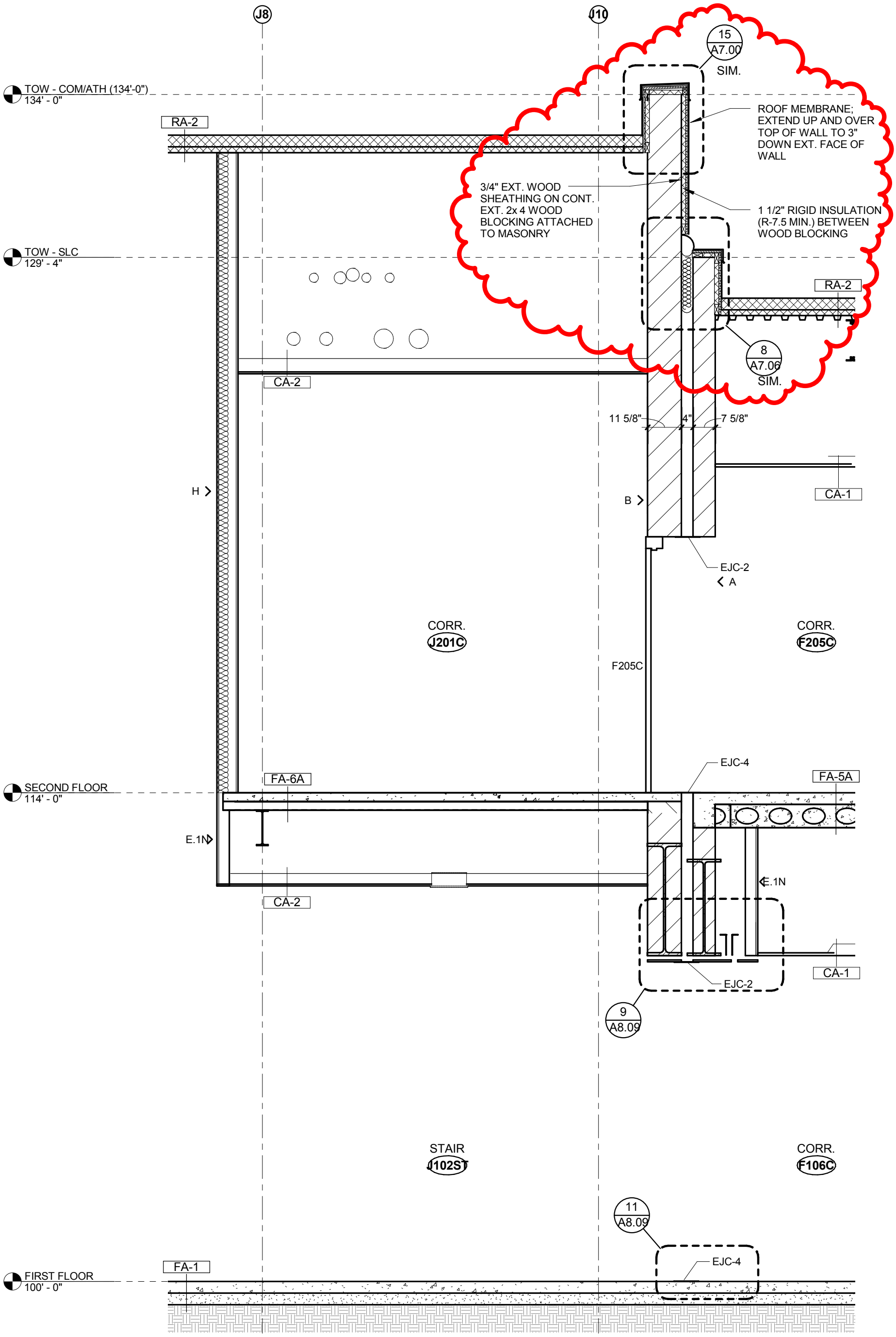
Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
October 14, 2014

Wall Sections - Area J

Project Number:1355

A3-A7.12




## 4 WALL SECTION - AREA J

A3-A7.12-2 SCALE: 3/8" = 1'-0"

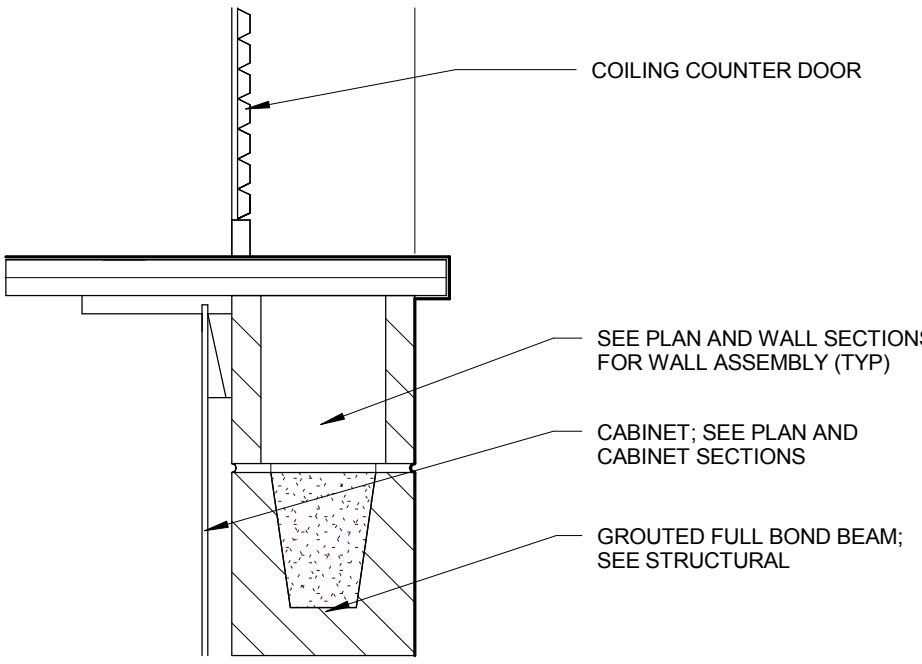
Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
October 14, 2014

Wall Sections - Area J

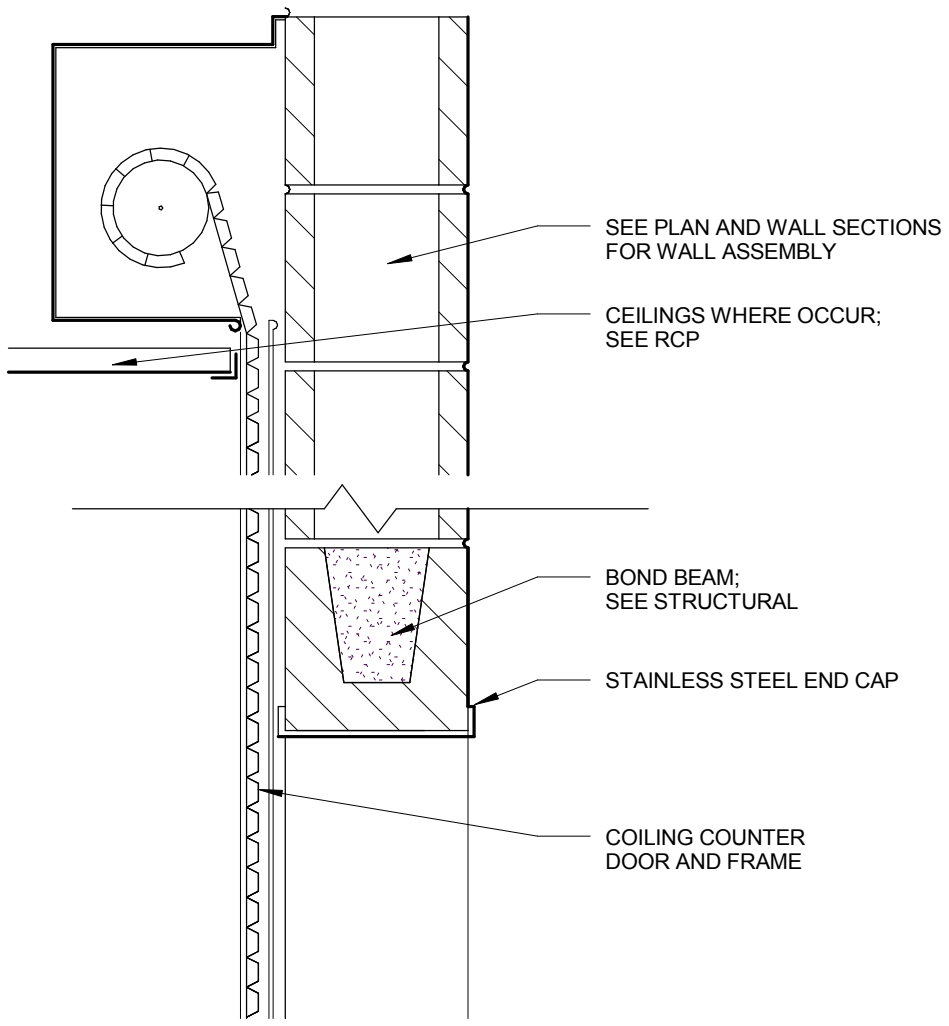
Project Number: 1355

A3-A7.12-2



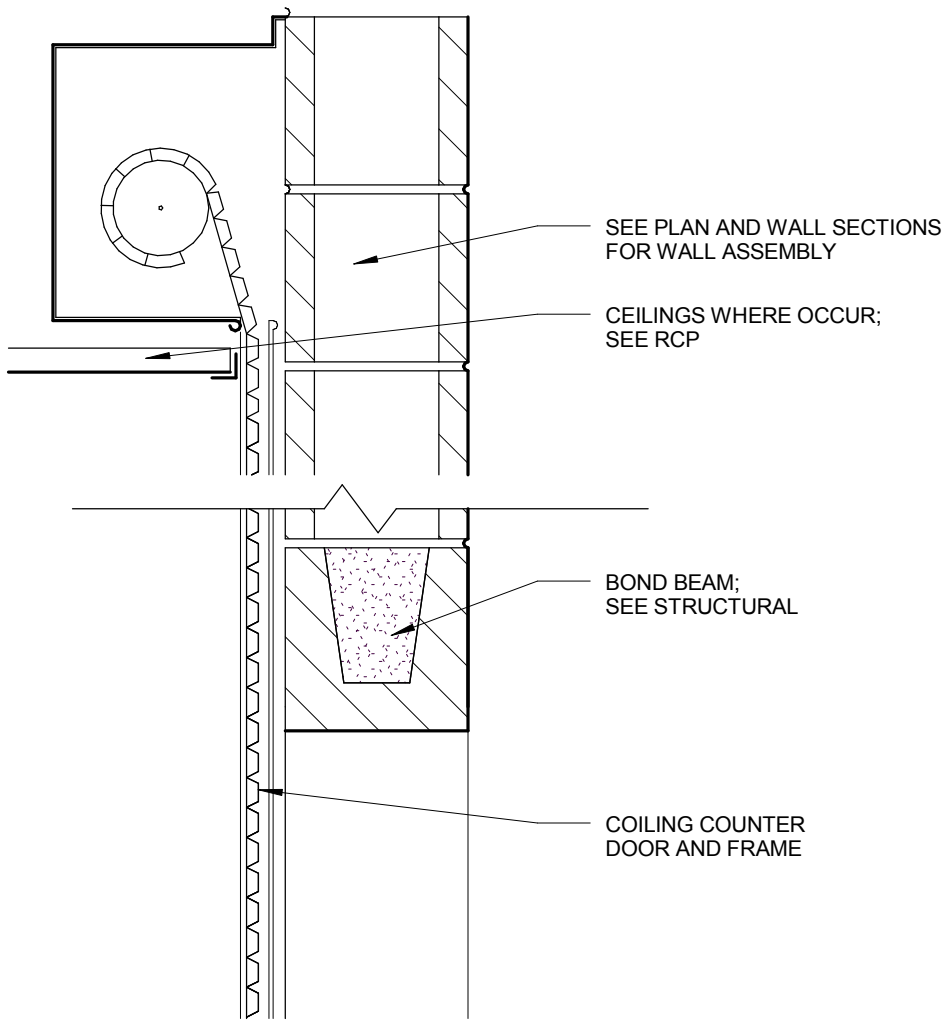

16 A8.13 **SILL DETAIL**

SCALE:1 1/2" = 1'-0"



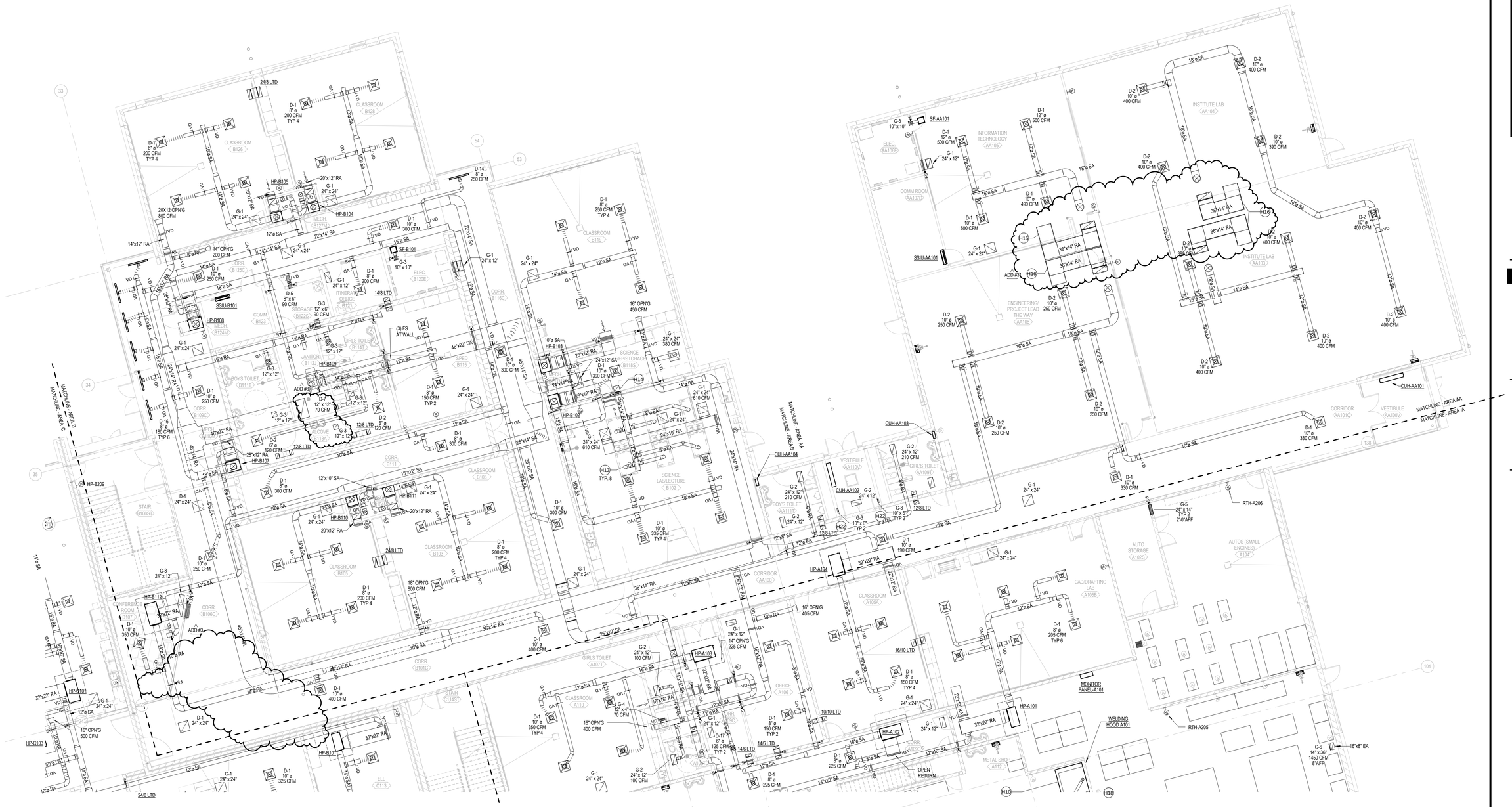

18 A8.13 **HEAD DETAIL**

SCALE:1 1/2" = 1'-0"




28 A8.13 **HEAD DETAIL**

SCALE:1 1/2" = 1'-0"




# HVAC PLAN - FIRST LEVEL - AREA AA & B

NORTH

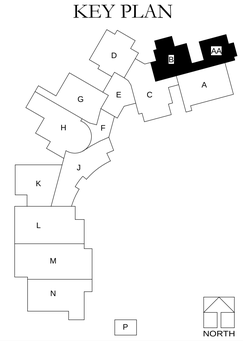
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW-VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H10 | ROUTE 6 INCH BRANCH LINES ACROSS TOP OF HOOD AND ELBOW DOWN TO TOP OF HOOD. PROVIDE BELLMOUTH 6 INCH TO 10 INCH OPENING CUT INTO HOOD TOP. CENTER HOLES ON BELOW WELDING STATION NEAR BACK OF HOOD. |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |
| H14 | REFER TO SECOND FLOOR PLAN FOR CONTINUATION. |
| H16 | PROVIDE DOUBLE-WALL DUCTWORK FOR RETURN DUCTING FROM UNIT IN ENTIRETY (FOR ACOUSTICAL PURPOSES) |
| H18 | EACH DROP FROM COLLECTOR SHALL HAVE BLAST GATE AND HAVE RIGID DUCTWORK TO EQUIPMENT (NO FLEX DUCTING). BLAST GATES (EXCEPTION PLASMA CUTTER) SHALL BE FOR BALANCING AND BE LOCKED/PINNED AFTER SETTING. TYPICAL FOR SYSTEM. |
| ADD #3 H22 | PROVIDE GRILLE HIGH (9'-0"AFF) AND LOW (1'-0"AFF) FOR DRAW-THRU PLUMBING CHASE. |

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREAS AA & B

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.2

## HVAC PLAN - FIRST LEVEL - AREA C

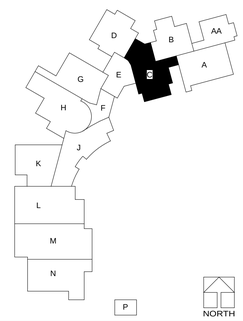
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET MA 2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/MM.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/MM.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSFER DUCTS, SEE DETAIL 4/MM.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/MM.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/MM.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/MA.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |
| H14 | REFER TO SECOND FLOOR PLAN FOR CONTINUATION. |
| H15 | EXHAUST DUCT DOWN TO HOOD OR BOOTH. |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREA C

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.3

HVAC PLAN - FIRST LEVEL - AREA D

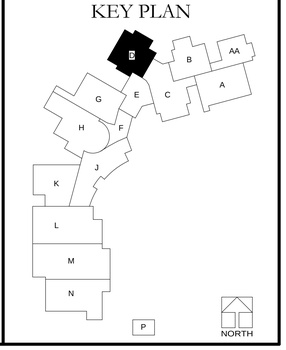
NORTH SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   - A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   - B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   - C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   - D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   - E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   - F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   - G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   - H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   - I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   - J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   - K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   - L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   - M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   - N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   - O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   - P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   - Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   - R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |
| H14 | REFER TO SECOND FLOOR PLAN FOR CONTINUATION. |

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREA D

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.4

## HVAC PLAN - FIRST LEVEL - AREA F

NORTH

SCALE: 1/8" = 1'-0"

## HVAC PLAN - FIRST LEVEL - AREA E

NORTH

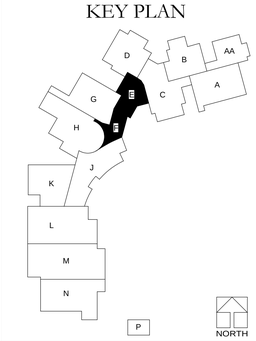
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1.
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H14 | REFER TO SECOND FLOOR PLAN FOR CONTINUATION. |
| H24 | GRILLES TO BE MOUNTED AT 30 DEGREE DOWNWARD ANGLE FROM HORIZONTAL. TYPICAL FOR ROOM. |

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Paul Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREAS E & F

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

M1.5

## HVAC PLAN - FIRST LEVEL - AREA G

NORTH

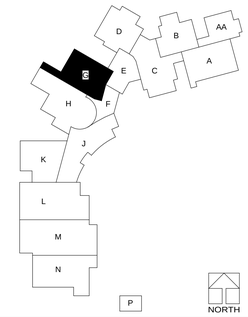
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   - A. SEE "VERTICAL HEAT PUMP INSTALLATION" DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 4/E8.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   - B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   - C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   - D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   - E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   - F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   - G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   - H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   - I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   - J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   - K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   - L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   - M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   - N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   - O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   - P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   - Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   - R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H14 | REFER TO SECOND FLOOR PLAN FOR CONTINUATION. |
| H15 | EXHAUST DUCT DOWN TO HOOD OR BOOTH. |
| H20 | OPEN ENDED RETURN DUCT IN ARCHITECTURAL ENCLOSURE. TERMINATE AT 10'-0" AFF. |
| H24 | GRILLES TO BE MOUNTED AT 30 DEGREE DOWNWARD ANGLE FROM HORIZONTAL. TYPICAL FOR ROOM. |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER — E-12412 — STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

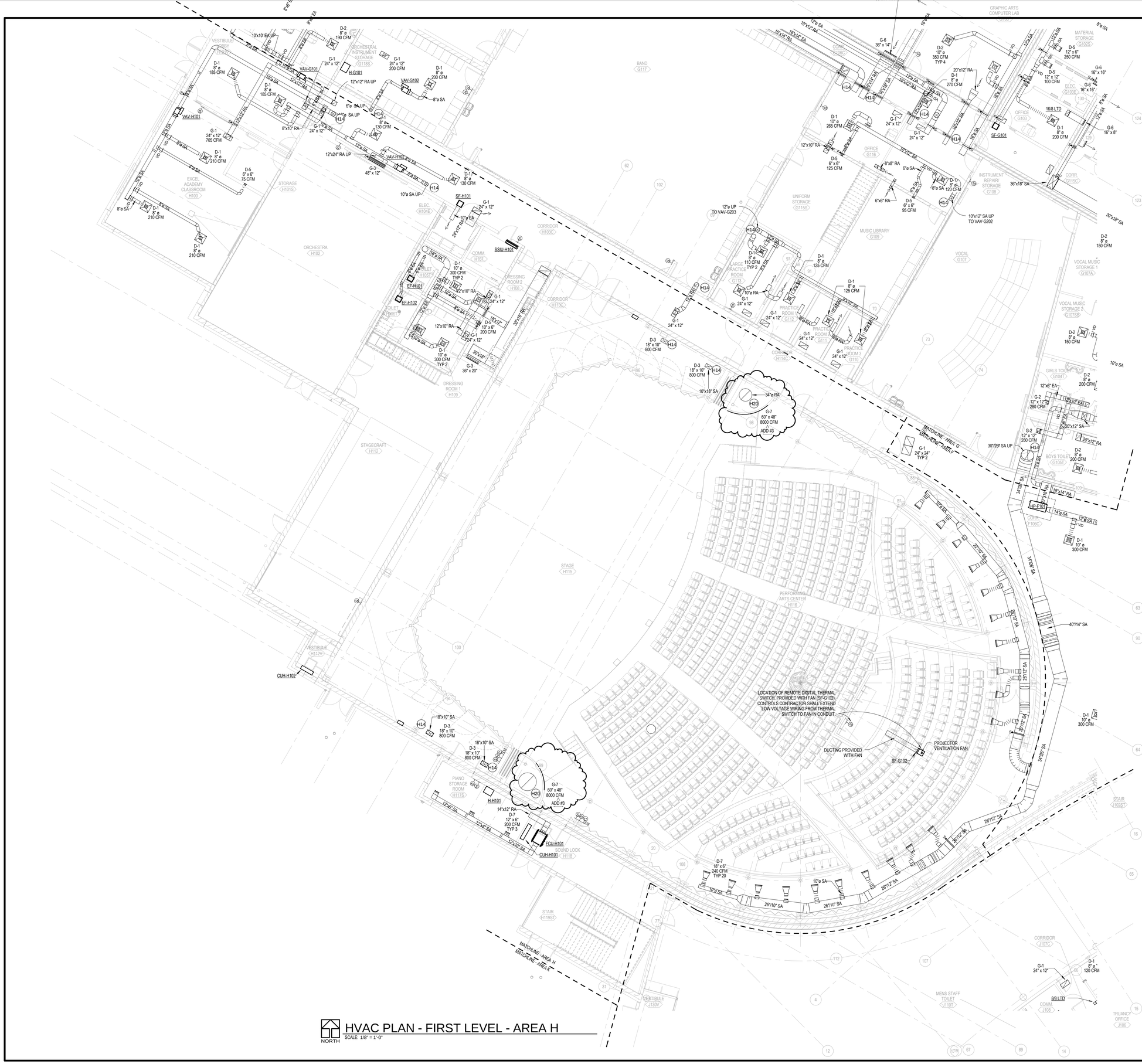
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREA G

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.6




## HVAC PLAN - FIRST LEVEL - AREA H

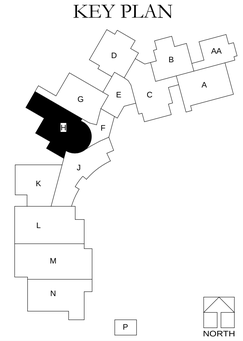
NORTH SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   - A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   - B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   - C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   - D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   - E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   - F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   - G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   - H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   - I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   - J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   - K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   - L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   - M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   - N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   - O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   - P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   - Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   - R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H14 | REFER TO SECOND FLOOR PLAN FOR CONTINUATION. |
| H20 | OPEN ENDED RETURN DUCT IN ARCHITECTURAL ENCLOSURE. TERMINATE AT 10'-0" AFF. |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREA H

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.7

## HVAC PLAN - FIRST LEVEL - AREA J

NORTH

SCALE: 1/8" = 1'-0"

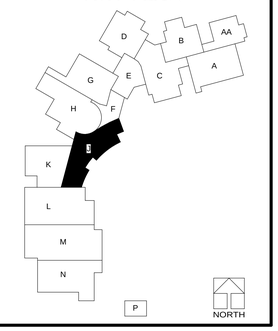
GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   - A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 4,3/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   - B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   - C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   - D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   - E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   - F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   - G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   - H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   - I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   - J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   - K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   - L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   - M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   - N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   - O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   - P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   - Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   - R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

Keynote Legend

| Key Value | Keynote Text |
|---|---|
| H3 | 4" X 16" S/S DUCTWORK, TO EXTENDED HOODS ON DISHWASHER, SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. CONNECT DUCTS TOGETHER ABOVE CEILING. |
| H20 | OPEN ENDED RETURN DUCT IN ARCHITECTURAL ENCLOSURE. TERMINATE AT 10'-0" AFF. |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

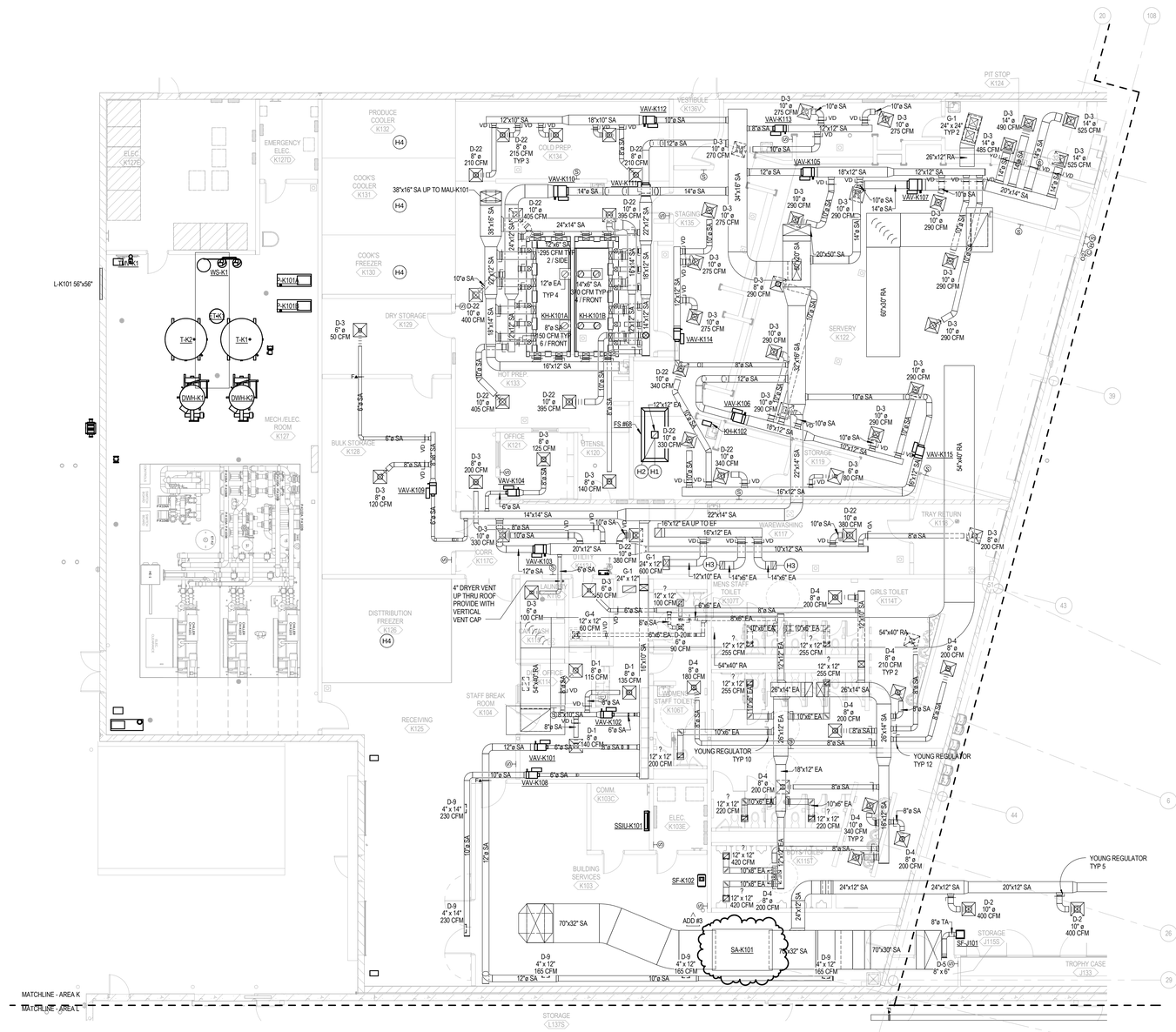
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREA J

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.8




## HVAC PLAN - FIRST LEVEL - AREA K

NORTH

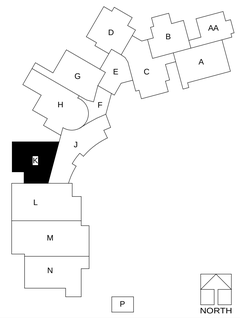
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H1 | 12" X 12" S/S TYPE "B" DUCTWORK SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. DUCTWORK SHALL EXTEND FROM TOP OF EXTENDED DUCT COLLAR ON ITEM 68 TO FAN, ITEM 68A, LOCATED ON ROOF. |
| H2 | EXHAUST FAN AND ROOF CURB, ITEM 68A, SHALL BE FURNISHED BY FOOD SERVICE EQUIPMENT CONTRACTOR. INSTALLED AND CONNECTED BY MECHANICAL CONTRACTOR. |
| H3 | 4" X 16" S/S DUCTWORK, TO EXTENDED HOODS ON DISHWASHER, SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. CONNECT DUCTS TOGETHER ABOVE CEILING. |
| H4 | CONNECT REMOTE CONTACTS ON WALK-IN FREEZER ALARM SYSTEMS TO BAS SYSTEM. |

KEY PLAN





Wilkins Hinrichs Stober Architects L.L.C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER — Paul R. Hinrichs — E-12412 — STATE OF NEBRASKA

9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - FIRST LEVEL - AREA K

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

M1.9

## HVAC PLAN - SECOND LEVEL - AREA A

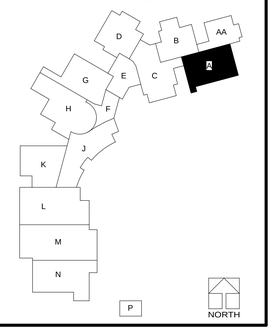
NORTH SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   - A. SEE "VERTICAL HEAT PUMP INSTALLATION" DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   - B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   - C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   - D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   - E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   - F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   - G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   - H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   - I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   - J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   - K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   - L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   - M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   - N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   - O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   - P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   - Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   - R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H5 | DUCTWORK TO BE WRAPPED WITH DUCTBOARD AND STUCCO EMBOSSED ALUMINUM LAGGING FOR DUCTWORK FROM COLLECTOR TO WALL. CONTINUE DUCTBOARD INTO SHOP TO DUCT TERMINATION. |
| H6 | LOCATE RETURN AIR FILTER AND DRAINPAN MINIMUM 15'-0" FROM EDGE THIS RETURN AIR GRILLE |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL MECHANICAL ENGINEER — E-12412 — STATE OF NEBRASKA

9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

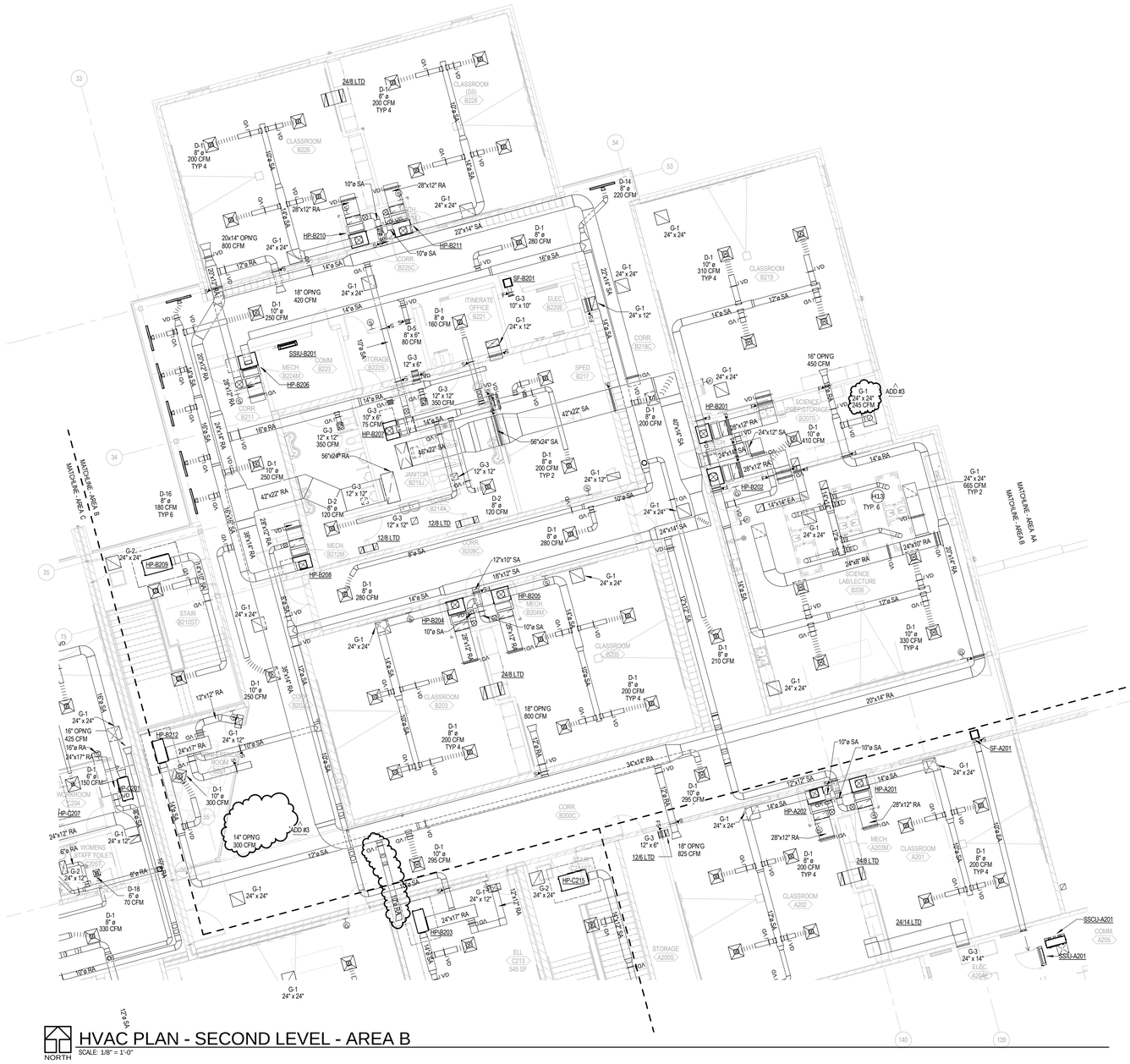
HVAC PLAN - SECOND LEVEL - AREA A

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

M1.13




## HVAC PLAN - SECOND LEVEL - AREA B

NORTH

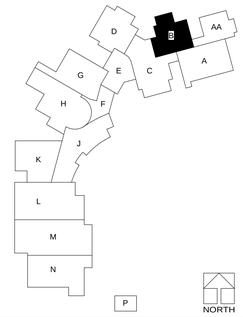
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   - A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   - B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   - C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   - D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   - E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   - F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   - G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   - H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   - I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   - J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   - K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   - L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   - M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   - N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   - O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   - P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   - Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   - R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - SECOND LEVEL - AREA B

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.14

## HVAC PLAN - SECOND LEVEL - AREA C

NORTH

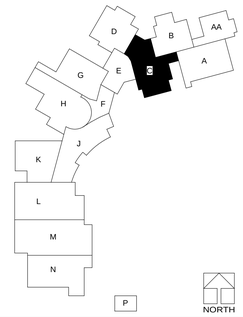
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET MA 2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET MA 1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET MS.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/MM.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/MA.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/MA.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |
| H15 | EXHAUST DUCT DOWN TO HOOD OR BOOTH. |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - SECOND LEVEL - AREA C

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.15

NORTH

## HVAC PLAN - SECOND LEVEL - AREA D

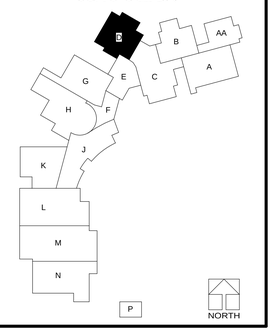
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |
| H13 | CONNECT 8" BRANCH DUCT TO 100 MM (4") EXHAUST SNORKEL. BALANCE TO 200 CFM. MECHANICAL CONTRACTOR IS TO FURNISH AND INSTALL EXHAUST SNORKEL AT CEILING WHERE CONNECTION IS SHOWN. SNORKEL IS TO BE NEDERMAN FX CHEM WITH ANODIZED ALUMINUM HOOD. |
| H15 | EXHAUST DUCT DOWN TO HOOD OR BOOTH. |

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

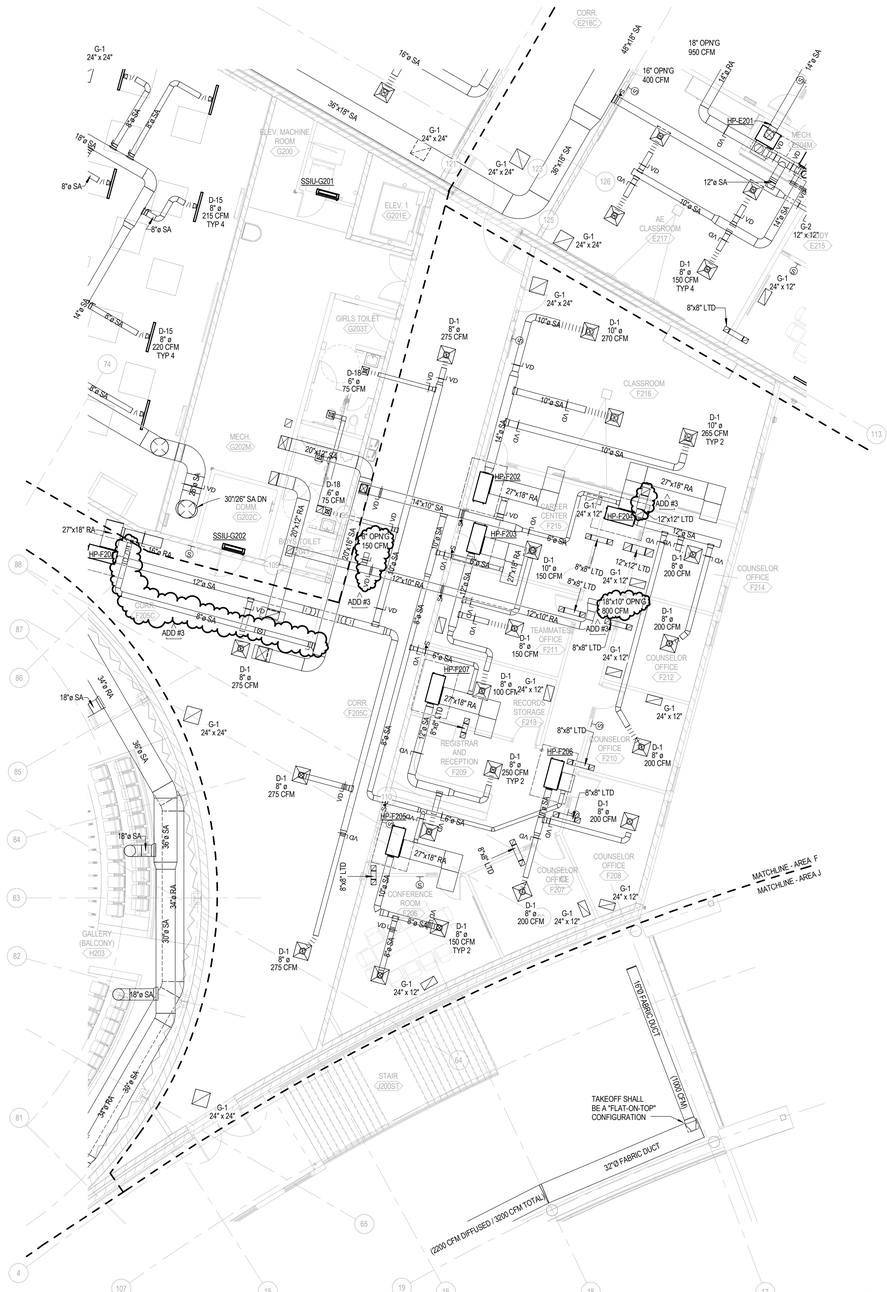
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - SECOND LEVEL - AREA D

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
M1.16




## HVAC PLAN - SECOND LEVEL - AREA F

SCALE: 1/8" = 1'-0"

## HVAC PLAN - SECOND LEVEL - AREA E

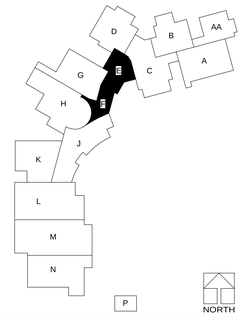
SCALE: 1/8" = 1'-0"

GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSFER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN



Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER — E-12412 — STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

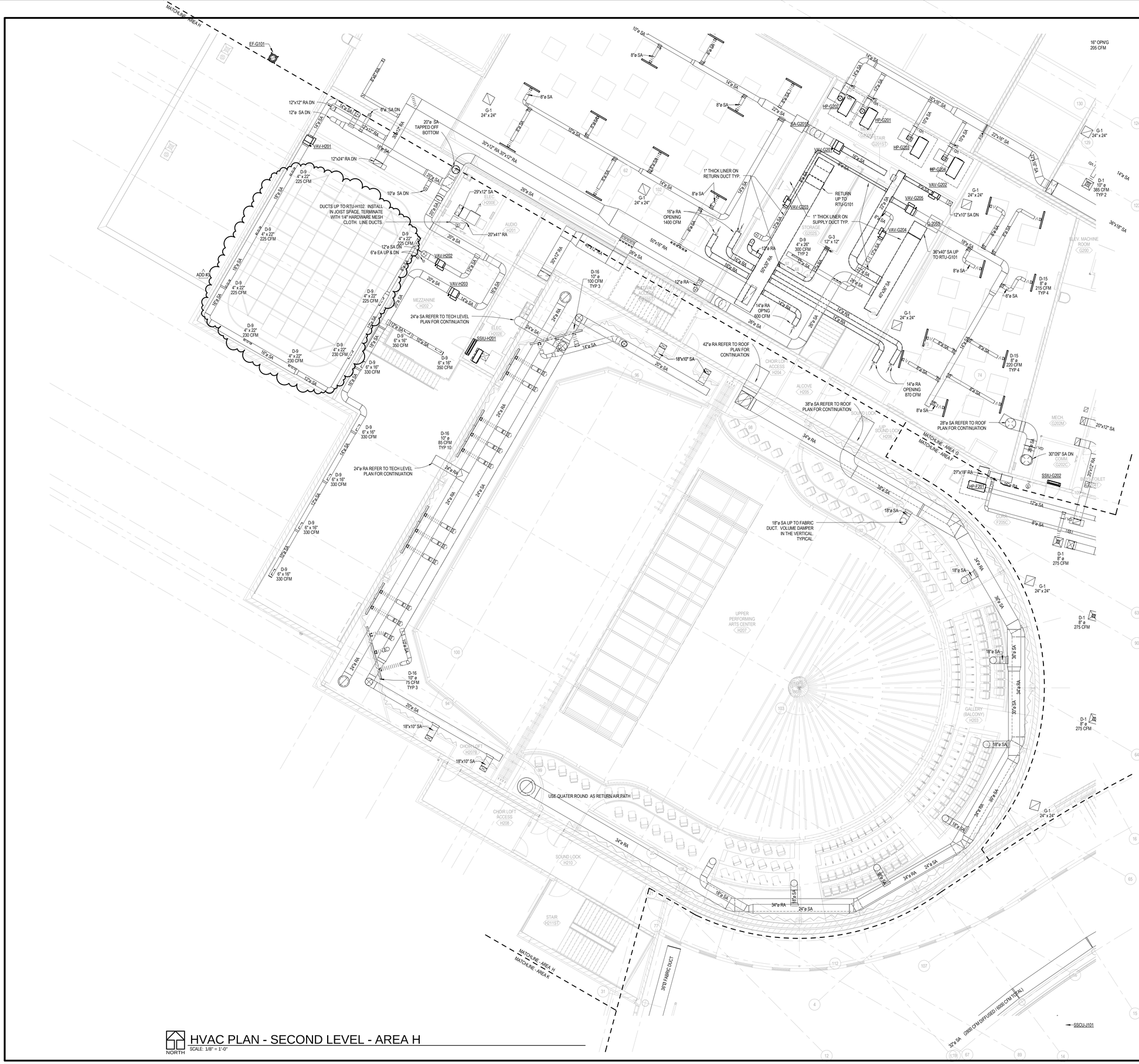
HVAC PLAN - SECOND LEVEL - AREAS E & F

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.17

EF-G101
12"x12" RA DN
12"ø SA DN
VAV-H201
12"x24" RA DN
D-9
4" x 22"
225 CFM
ADD #3
10"ø SA DN
DUCTS UP TO RTU-H102. INSTALL IN JOIST SPACE. TERMINATE WITH 1/4" HARDWARE MESH CLOTH. LINE DUCTS.
12"ø SA DN
6"ø EA UP & DN
VAV-H202
VAV-H203
24"ø SA REFER TO TECH LEVEL PLAN FOR CONTINUATION
SSIU-H201
24"ø RA REFER TO TECH LEVEL PLAN FOR CONTINUATION
D-16
10" ø
85 CFM
TYP 10
D-14
8" ø
200 CFM
TYP 14
G-1
24" x 24"
20"ø SA TAPPED OFF BOTTOM
30"x12" RA 30"x12" RA
20"x41" RA
29"x12" SA
18"x10" SA
16"ø RA OPENING 1400 CFM
1" THICK LINER ON RETURN DUCT TYP.
RETURN UP TO RTU-G101
1" THICK LINER ON SUPPLY DUCT TYP.
G-3
12" x 12"
D-9
4" x 26"
300 CFM
TYP 2
14"ø RA OPNG 600 CFM
42"ø RA REFER TO ROOF PLAN FOR CONTINUATION
38"ø SA REFER TO ROOF PLAN FOR CONTINUATION
28"ø SA REFER TO ROOF PLAN FOR CONTINUATION
14"ø RA OPENING 870 CFM
D-15
8" ø
215 CFM
TYP 4
D-15
8" ø
220 CFM
TYP 4
18"x12" OPN'G
925 CFM
20" OPN'G
925 CFM
18"x12" OPN'G
800 CFM
18"x12" OPN'G
425 CFM
24"x14" RA
12"x12" RA
16" OPN'G
205 CFM
HP-G202
HP-G201
HP-G203
HP-G204
VAV-G201
VAV-G202
VAV-G205
VAV-G203
VAV-G204
SA-G201S
ADD #3
22"x16" SA
16"x16" SA
12"x10" SA DN
36"x40" SA UP TO RTU-G101
SSIU-G201
SSIU-G202
30"x26" SA DN
27"x18" RA
HP-F201
14"ø SA
14"ø RA
D-1
10" ø
390 CFM
TYP 2
16" OPNG
400 CFM
D-1
10" ø
385 CFM
TYP 2
D-1
10" ø
380 CFM
TYP 2
D-1
10" ø
300 CFM
D-1
10" ø
150 CFM
D-1
8" ø
275 CFM
D-1
10" ø
270 CFM
D-18
6" ø
75 CFM
D-18
6" ø
75 CFM
8" OPNG
150 CFM
14X32 CFM
48"x18" RA
28"x12" RA
10"ø SA
16"ø SA
16" OPNG
400 CFM
36"x18" SA
45"x18" SA
10"ø SA
12"ø SA
8"ø SA
8"x8" LTD
12"x12" LTD
18"x10" OPNG
800 CFM
MATCHLINE - AREA D
MATCHLINE - AREA G
MATCHLINE - AREA F
COMPUTER LAB G221
COMPUTER LAB G219
MECH. G220M
CORR. E218C
ELEV. MACHINE ROOM G200
ELEV. 1 G201E
AE CLASSROOM F217
GIRLS TOILET G203T
CLASSROOM F216
LOBBY VESTIBULE F215
TOILET
CORR. F205C
MECH. G202M
COMM. G202C
STAIR G201ST
STORAGE G202S
MEZZANINE H202
ELEC. H200E
AUDIO H201
ELEC. H202E
MATWELL ACCESS H203ST
CHOIR LOW ACCESS H204
ALCOVE H205
SOUND LOCK H206
UP SOUND LOCK H206
1ST FLOOR BELOW
1ST FLOOR BELOW
1ST FLOOR BELOW

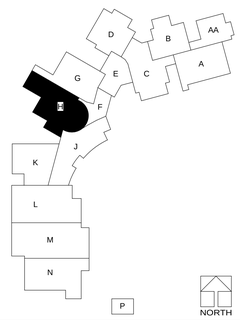



GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSABLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

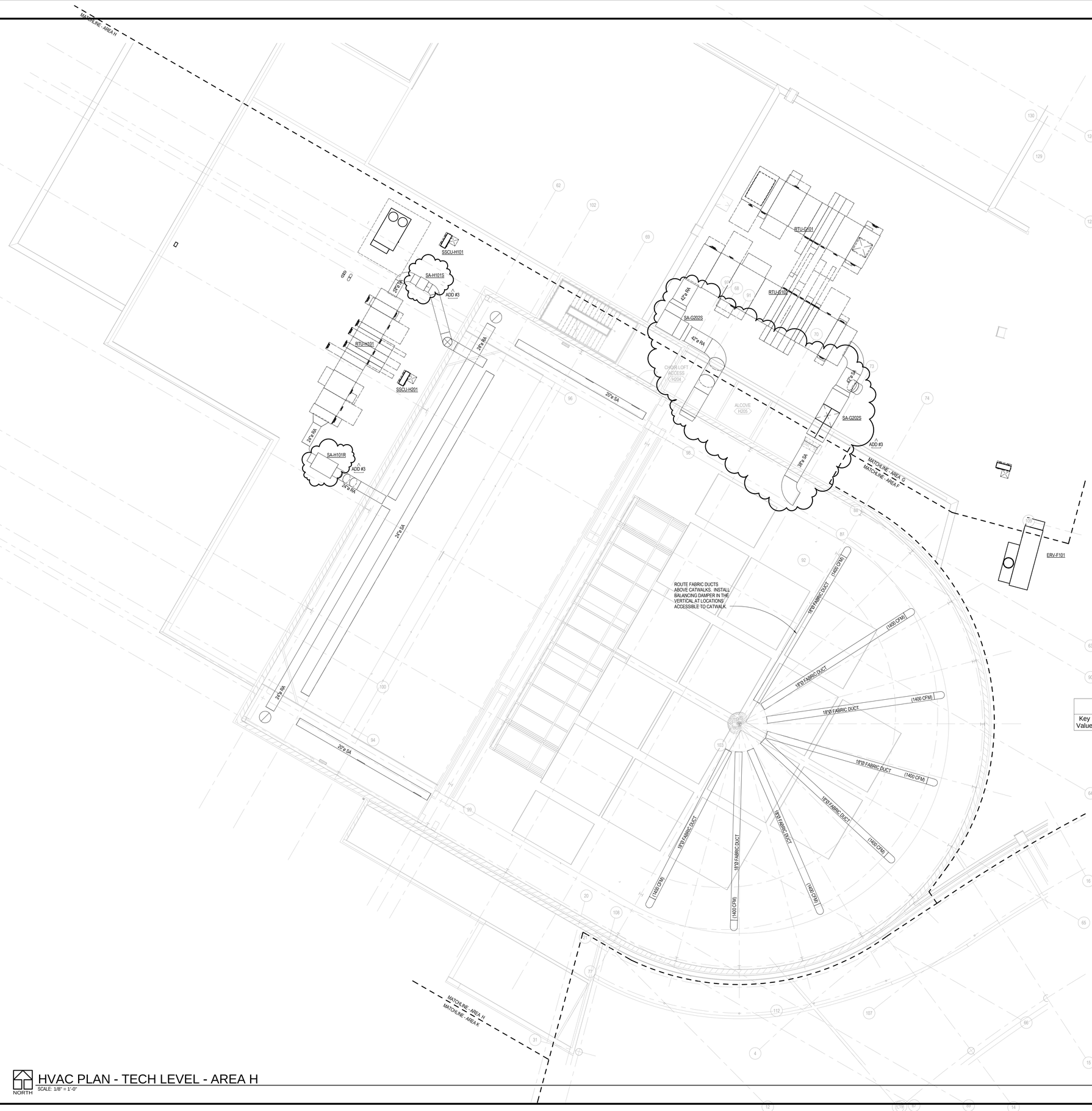
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - SECOND LEVEL - AREA H

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.19

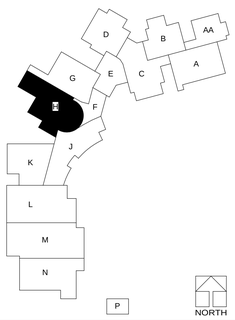



GENERAL HVAC PLAN NOTES:

1. LIMIT ALL FLEXIBLE DUCT RUNS TO 3 FEET MAXIMUM LENGTH. FLEXIBLE DUCT(S) SHALL BE OF THE SAME SIZE AS THE DIFFUSER NECKS THAT THEY CONNECT TO UNLESS NOTED OTHERWISE.
2. COORDINATE EXACT LOCATIONS OF ALL DIFFUSERS WITH ELECTRICAL, FIRE SPRINKLERS, AND GRID CEILINGS.
3. BALANCING DAMPERS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANLES FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING. VOLUME DAMPERS SHALL BE PROVIDED WITH REMOTE DAMPER OPERATORS WITH ADJUSTABLE COVER IN NON-ACCESSIBLE CEILING AREAS. SEE DETAIL 8, SHEET M4.2, "REMOTE VOLUME DAMPER" AND SPECIFICATIONS FOR FURTHER INFORMATION.
4. PROVIDE CEILING AND/OR WALL ACCESS DOORS FOR ACCESS TO DUCT ACCESS DOORS RELATED TO THE INSPECTION AND RESETTING OF FIRE DAMPERS AND COMBINATION SMOKE AND FIRE DAMPERS. PROVIDE MINIMUM 18" X 18" SIZE. CEILING AND/OR WALL ACCESS DOOR RATING SHALL BE EQUIVALENT TO CEILING AND/OR WALL WHERE DOOR IS TO BE INSTALLED.
5. BRANCH DUCT SIZES SHALL BE THE SAME AS THE NECK SIZE OF THE DIFFUSERS OR THE CONNECTION SIZE OF THE GRILLES, UNLESS NOTED OTHERWISE.
6. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
7. VERTICAL HEAT PUMPS:
   A. SEE "VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
8. FOR OUTSIDE AIR SUPPLY DUCTWORK SIZES TO HEAT PUMPS, REFER TO HEAT PUMP SCHEDULE ON SHEET M5.1.
9. GENERALLY SPEAKING, DUCTWORK THROUGHOUT THE BUILDING WAS LOCATED AS HIGH AS POSSIBLE TO ALLOW ROOM FOR FITTINGS DOWN TO DIFFUSERS AND OTHER TRADES.
10. COORDINATE EXACT LOCATION OF ELECTRICAL CABLE TRAY. SEE DETAIL 43/E6.1 FOR CLEARANCES TO CABLE TRAY. IF ANY DUCTWORK OR PIPING IS RUN WITH IN THIS CONSTRAINT, THE DUCTWORK OR PIPE SHALL BE REMOVED AND RE-ROUTED SO IT IS NOT WITHIN THIS CONSTRAINT.
11. RTU EXHAUST OUT OF CLASSROOMS SHALL EQUAL THE OUTSIDE AIR CFM TO CLASSROOM UNLESS STATED OTHERWISE.
12. GENERALLY INSTALL THE VAV BOXES JUST ABOVE THE CEILING SO THEY ARE EASILY ACCESSIBLE. MAINTAIN ACCESS TO THE MANUFACTURER'S CONTROL BOX. PIPE THE HOT WATER PIPING SUCH THAT IT DOES NOT INTERFERE WITH ACCESS TO THE CONTROL BOX AND SO THAT THE CONTROLS AND VALVES & STRAINERS ARE ACCESSIBLE FOR SERVICING. VALVES SHALL BE LOCATED SO AS TO BE EASILY ACCESSIBLE TO THE OPERATOR OF THE EQUIPMENT.
13. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   A. FOR LOW VELOCITY BRANCH DUCT TAKE-OFF, SEE DETAIL 1/M4.1.
   B. FOR FLEX DUCT SUPPORT, SEE DETAIL 2/M4.1
   C. DUCT-MOUNTED DIFFUSER CONNECTION, SEE DETAIL 3/M4.1
   D. FOR LINED TRANSER DUCTS, SEE DETAIL 4/M4.1.
   E. FOR DISHWASHER EXHAUST CONNECTION, SEE DETAIL 5/M4.1.
   F. FOR LOUVER PLENUM CONNECTION, SEE DETAIL 6/M4.1
   G. FOR MECHANICAL UNIT HANGER, SEE DETAILS 7 & 8/M4.1
   H. FOR DUCTWORK WALL PENETRATION, SEE DETAIL 9/M4.1.
   I. FOR DUCTWORK HANGERS, SEE DETAILS 10&11/M4.1.
   J. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 12/M4.1.
   K. FOR RETURN AIR CONNECTIONS, SEE DETAIL 13/M4.1
   L. FOR DUCT SECURITY BARRIERS SEE DETAIL 14/M4.1.
   M. FOR EXHAUST HOODS, SEE DETAIL 15/M4.1
   N. FOR HEAT PUMP FILTER ACCESS, SEE DETAIL 16/M4.1
   O. FOR CONDENSING WATER HEATER VENTING, SEE DETAIL 17/M4.1
   P. FOR VERTICAL HEAT PUMP INSTALLATION, SEE DETAIL 18/M4.1.
   Q. FOR DUCTWORK HANGERS, SEE DETAIL 10/M4.1.
   R. FOR FIRE, SMOKE, AND F/S DAMPER, SEE DETAIL 13/M4.1.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




HVAC PLAN - TECH LEVEL - AREA H

NORTH SCALE: 1/8" = 1'-0"

Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

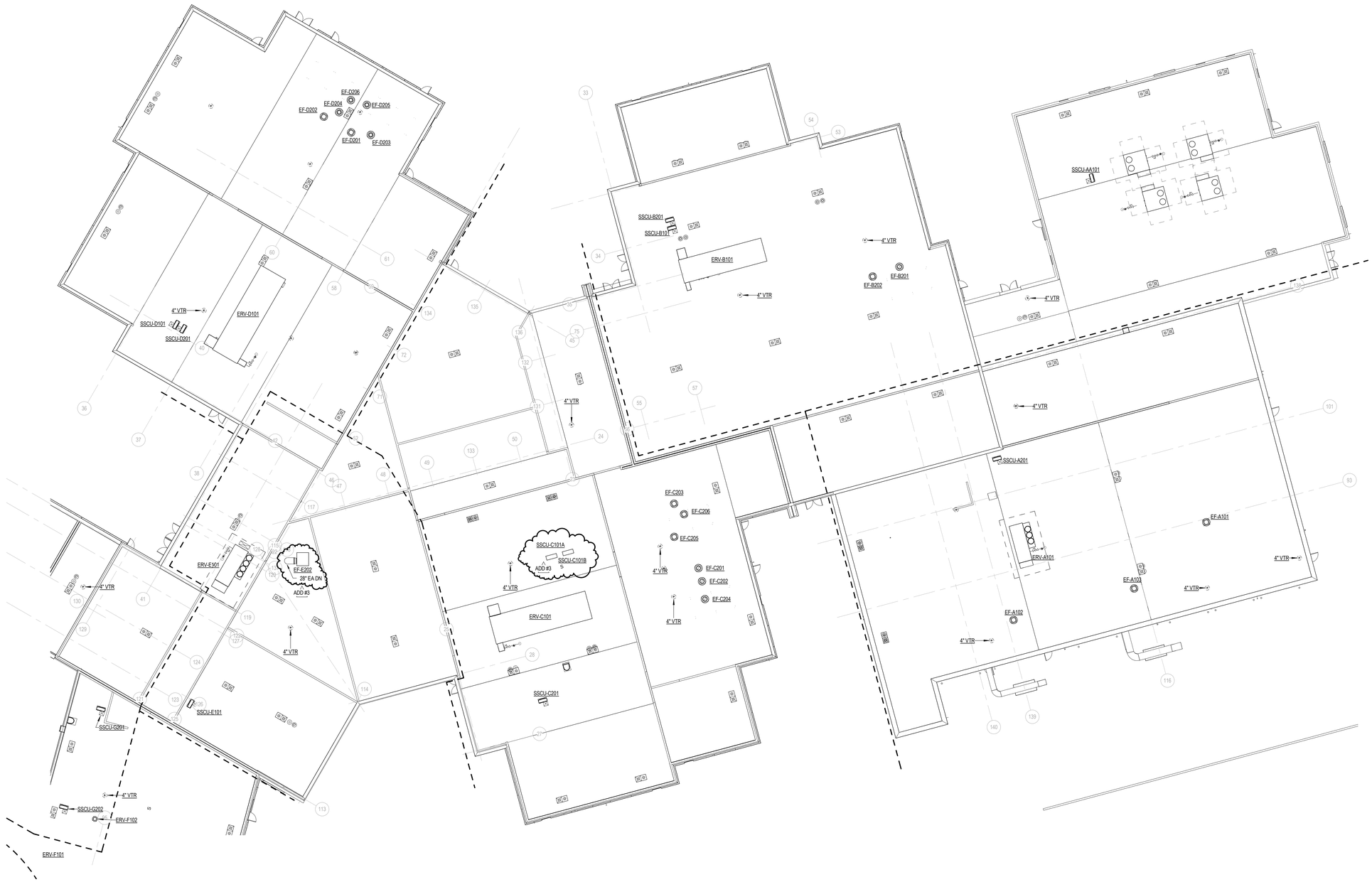
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PLAN - TECH LEVEL - AREA H

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M1.20



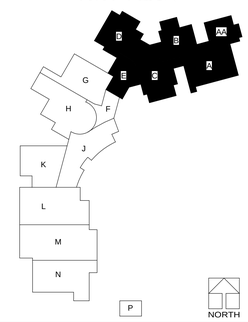

# HVAC PLAN - ROOF LEVEL - AREAS AA, A, B, C, D & E

NORTH

SCALE: 1/16" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

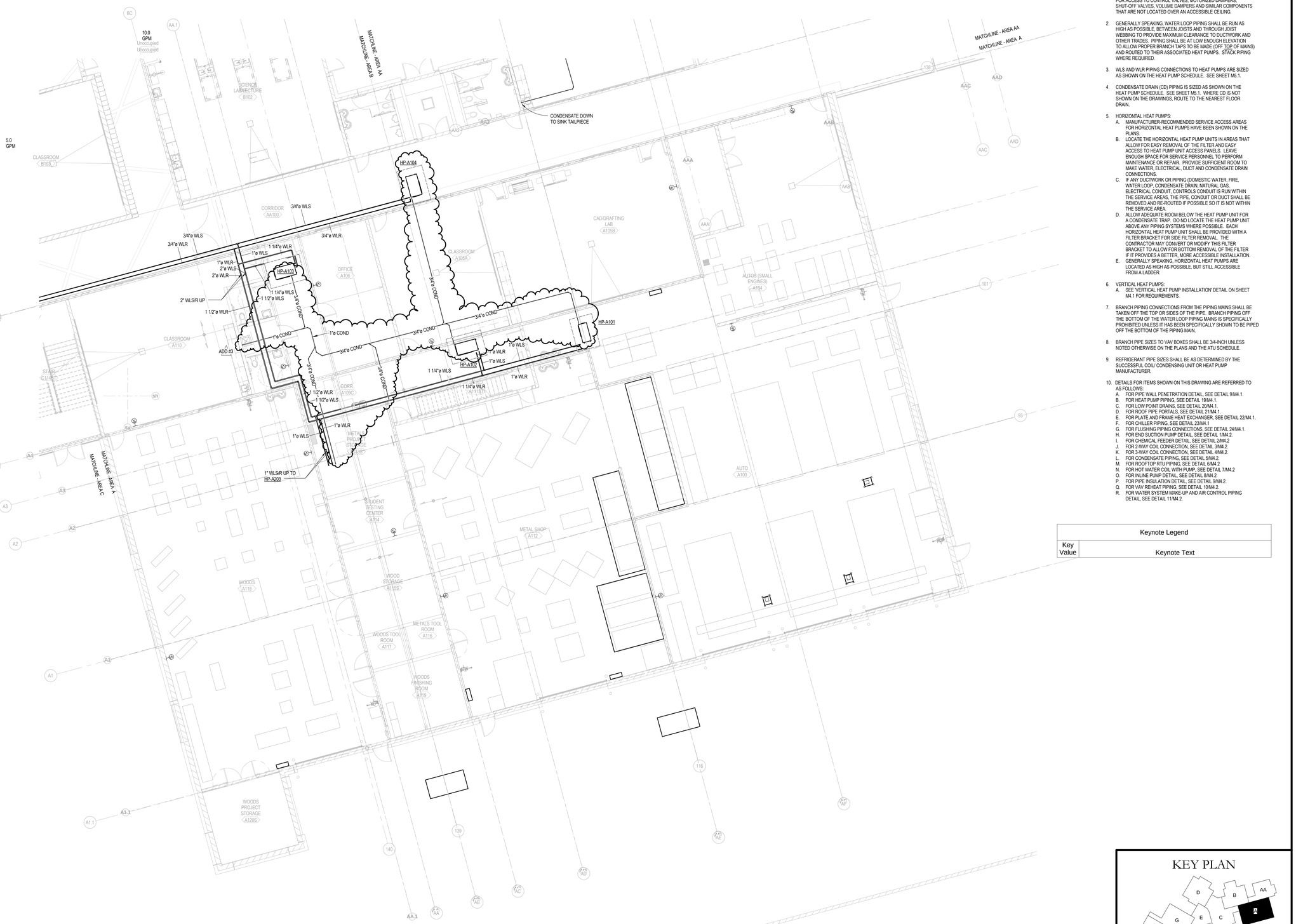
HVAC PLAN - ROOF - AREAS AA, A, B, C, D & E

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

M1.26




## HVAC PIPING PLAN - FIRST LEVEL - AREA A

NORTH

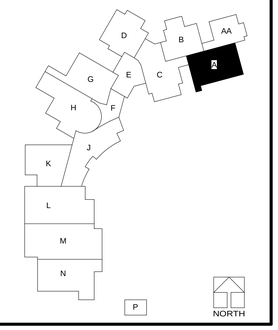
SCALE: 1/8" = 1'-0"

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   - A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    - A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    - B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    - C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    - D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    - E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    - F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    - G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    - H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    - I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    - J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    - K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    - L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    - M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    - N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    - O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2.
    - P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    - Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    - R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

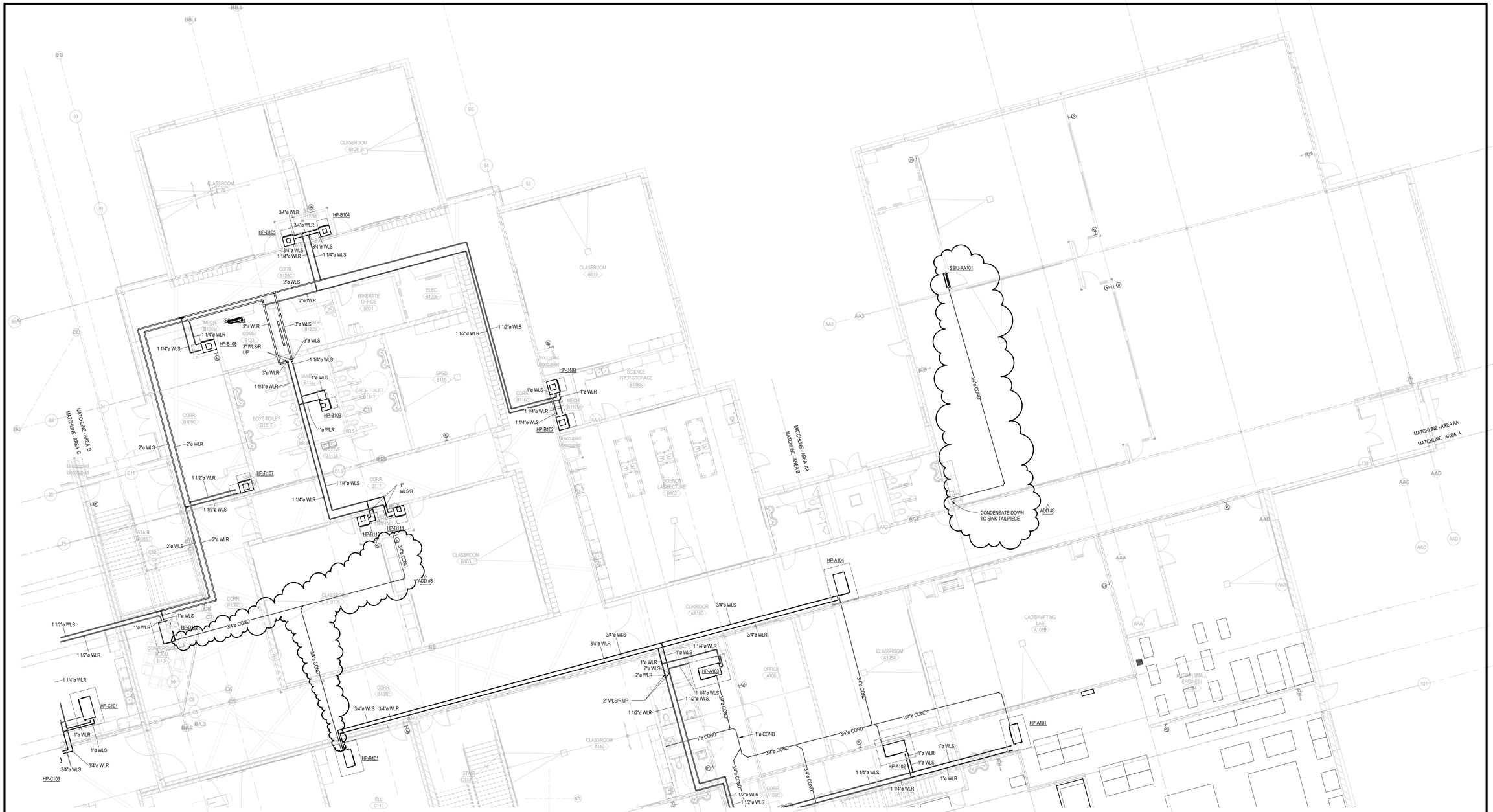
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - FIRST LEVEL - AREA A

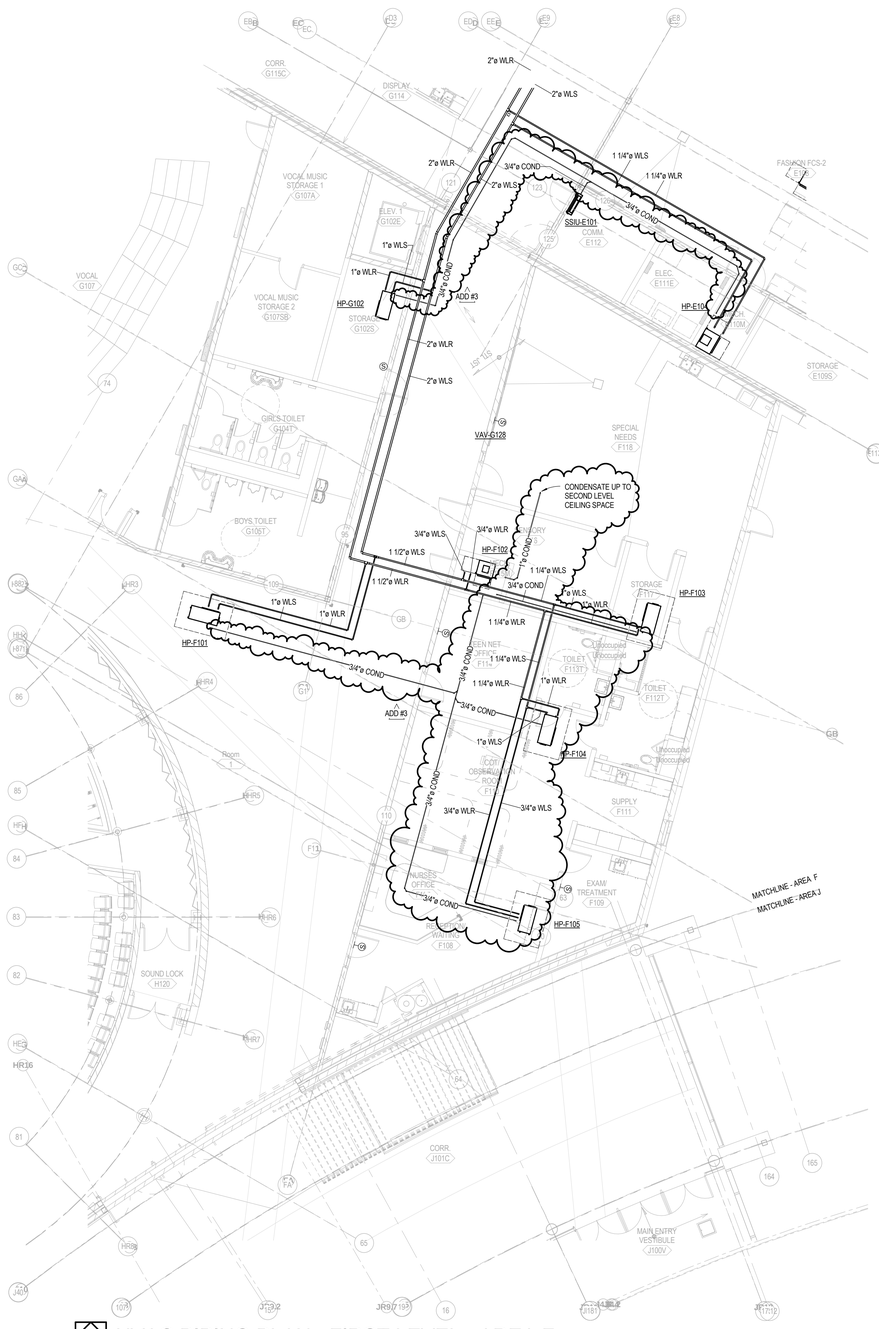
ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.1

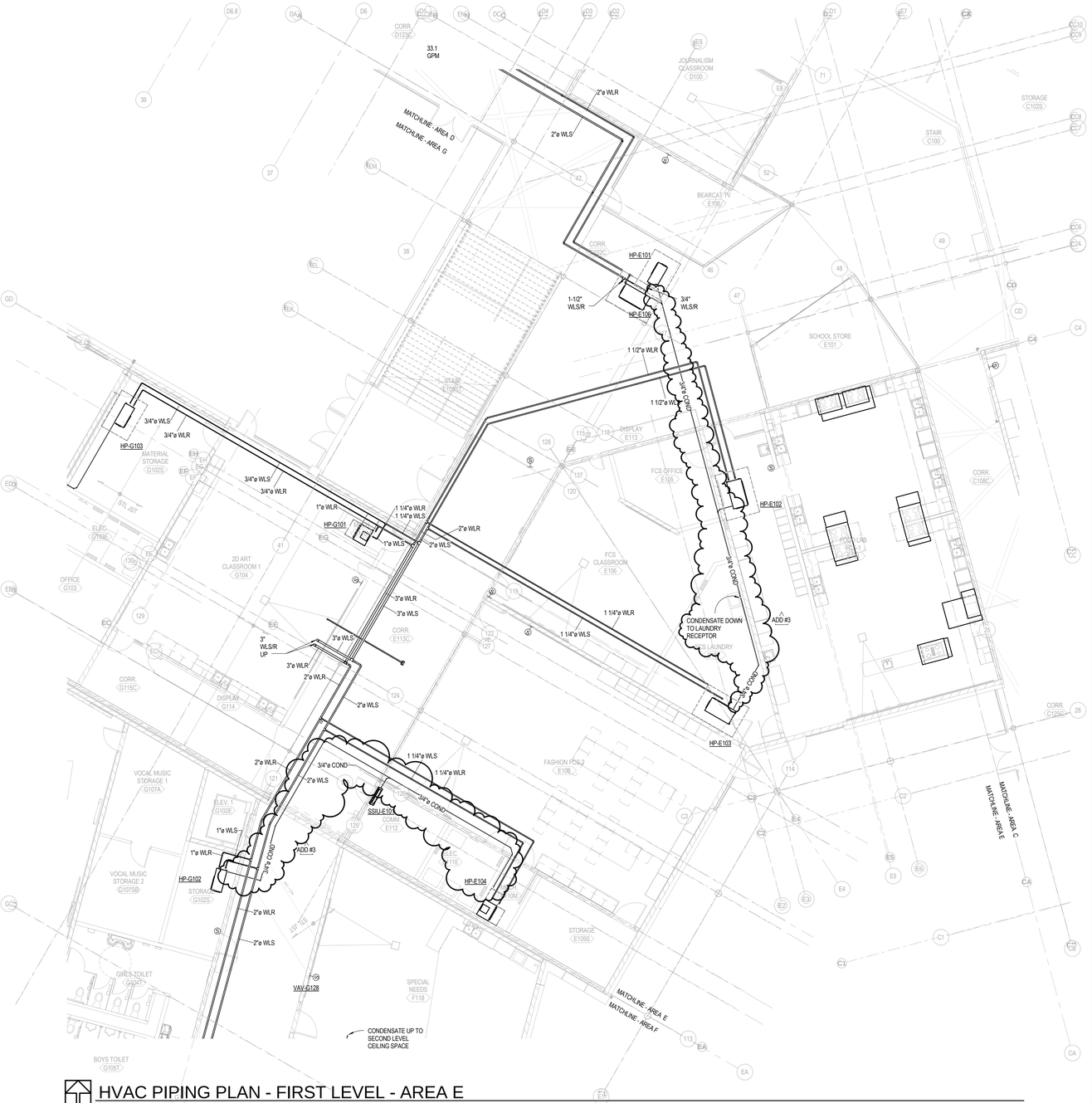

HP-B104
HP-B105
HP-B108
HP-B109
HP-B107
HP-B110
HP-B111
HP-B101
HP-C101
HP-C103
HP-B103
HP-B102
HP-A104
HP-A103
HP-A102
HP-A101
SSIU-AA101
ADD #3
CONDENSATE DOWN TO SINK TAILPIECE
MATCHLINE - AREA A
MATCHLINE - AREA B
MATCHLINE - AREA C
MATCHLINE - AREA AA
MATCHLINE - AREA A
MATCHLINE - AREA B
CLASSROOM B128
CLASSROOM B126
CLASSROOM B119
CLASSROOM B104
CLASSROOM A110
CLASSROOM A105A
CORRIDOR AA100
CAD/DRAFTING LAB A105B
OFFICE A106
ITINERATE OFFICE B121
ELEC. B120E
SCIENCE PREP/STORAGE B118S
SCIENCE LABORATORY B102
SPED B115
CORR B109C
BOYS TOILET B111T
GIRLS TOILET B114T
CORR B111
CORR B116C
CORR B101C
CORR A109C
CONSTRUCTION B107
STAIR C105ST
STAIR C114ST
ELL C113
Unoccupied Unoccupied
3/4"ø WLR
3/4"ø WLS
1 1/4"ø WLR
1 1/4"ø WLS
2"ø WLR
2"ø WLS
3"ø WLR
3"ø WLS
3" WLS/R UP
1"ø WLR
1"ø WLS
1 1/2"ø WLR
1 1/2"ø WLS
2" WLS/R UP
1" WLS/R
3/4"ø COND
1"ø COND
1 1/4"ø WLS
3/4"ø WLS
1 1/4"ø WLR
1"ø WLS
1"ø WLR
2"ø WLS
2"ø WLR
1 1/2"ø WLS
1 1/2"ø WLR
3/4"ø WLS
3/4"ø WLR

HP-D104
HP-D103
HP-D102
HP-D101
HP-D105
HP-C101
HP-C103
HP-B107
HP-B109
HP-B110
HP-B111
HP-B101
HP-C104
HP-C105
HP-C106
HP-C107
HP-C108
HP-C110
HP-C111
HP-C113
HP-C114
SSU-C101A
ADD #3
MATCHLINE: AREA D
MATCHLINE: AREA C
MATCHLINE: AREA B
MATCHLINE: AREA A
MATCHLINE: AREA E
1 1/2"ø WLR
1"ø WLS
1"ø WLR
3/4" WLS/R
1-1/4" WLS/R
1 1/4"ø WLR
1 1/4"ø WLS
3/4"ø COND
1 1/2"ø WLS
2"ø WLS
2"ø WLR
1 1/4"ø WLS
1 1/4"ø WLR
1 1/2"ø WLR
3/4"ø WLS
3/4"ø WLR
1" WLS/R
2 1/2"ø WLS
2 1/2"ø WLR
3"ø WLS
3"ø WLR
3" WLS/R UP
1-1/4" WLS/R
CONDENSATE DOWN TO LAUNDRY RECEPTOR
FCS LABORATORY E102
FCS LAUNDRY E107
SCHOOL STORE E101
BEARCAT TV E105
JOURNALISM CLASSROOM D100
MEDIA PRO CLASSROOM D103
COOL-OFF ROOM 1 D106A
PSD (SD) LEVEL D106
STORAGE C102S
STAIR C100
STUDENT HELP TESTING CENTER C103
WOMEN'S STAFF TOILET C105T
TEACH PLANNING CENTER OFFICE C106
CONFERENCE ROOM B107
CORR B109C
JANITOR B112J
GIRLS TOILET B114T
BOYS TOILET B111T
CORR B115C
SPED B115
STAIR B108ST
CORR B111
CLASSROOM B103
CORR B104C
CLASSROOM B105
CORR B101C
STAIR C114ST
ELL C113
SCIENCE LAB/LECTURE C112
CORR C107C
LEVEL 2 SPED CLASSROOM C109
TOILET C109T
MECH C110M
CORR C108C
CORR C118C
CORR C117C
Unoccupied Unoccupied
SCIENCE PREP/STORAGE C115S
SCIENCE LAB/LECTURE C130
SPED C119
GIRLS TOILET C123T
BOYS TOILET C120T
ELEC C129E
ITINERATE OFFICE C128
JANITOR STORAGE C127J
CORR C125C
CORR C135C
CLASSROOM C132
CLASSROOM (SS) C133
CLASSROOM C136
CLASSROOM C134
CORR C131C
CORR B113C
CORR B113M
CORR B113S
CORR B113W
CORR B113E
CORR B113N
CORR B113NE
CORR B113SE
CORR B113SW
CORR B113NW
CORR B113NW
CORR B113NE
CORR B113SE
CORR B113S




HVAC PIPING PLAN - FIRST LEVEL - AREA F

NORTH SCALE: 1/8" = 1'-0"




HVAC PIPING PLAN - FIRST LEVEL - AREA E

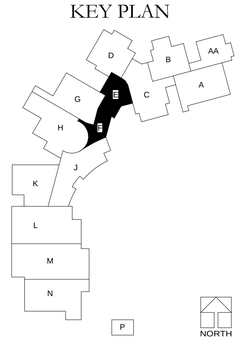
NORTH SCALE: 1/8" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2.
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - FIRST LEVEL - AREAS E & F

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.5

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.

2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.

3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.

4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.

5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.

6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.

7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.

8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.

9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.

10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2.
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

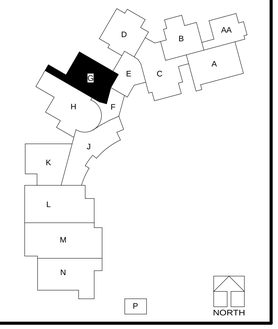
## HVAC PIPING PLAN - FIRST LEVEL - AREA G

NORTH

SCALE: 1/8" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN





Wilkins Hinrichs Stober Architects L.L.C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

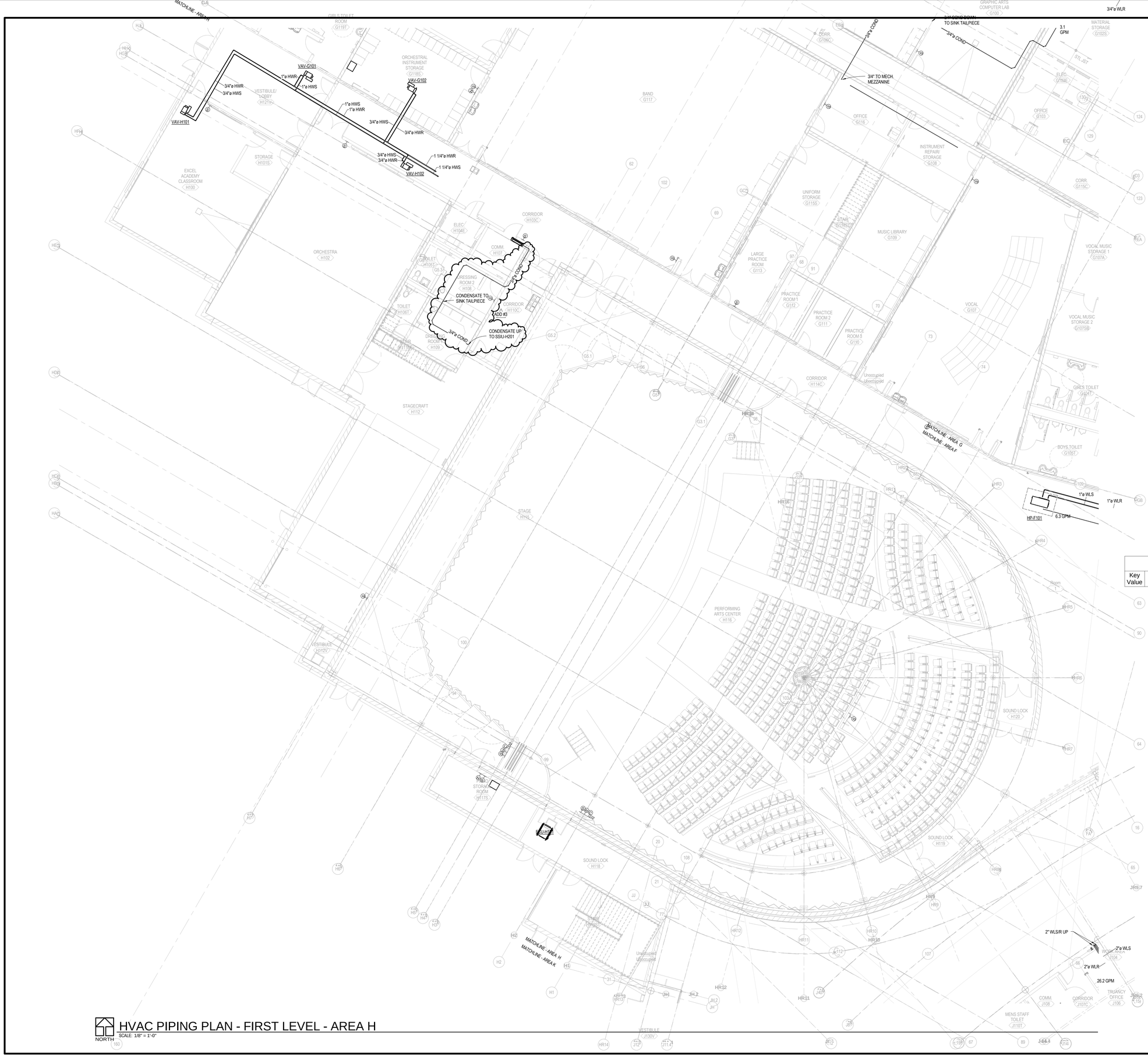
HVAC PIPING PLAN - FIRST LEVEL - AREA G

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

M2.6




## HVAC PIPING PLAN - FIRST LEVEL - AREA H

SCALE: 1/8" = 1'-0"

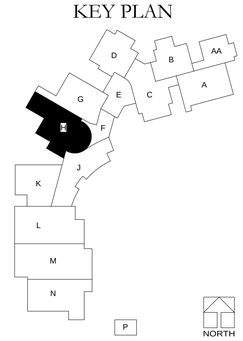
NORTH

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - FIRST LEVEL - AREA H

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.7

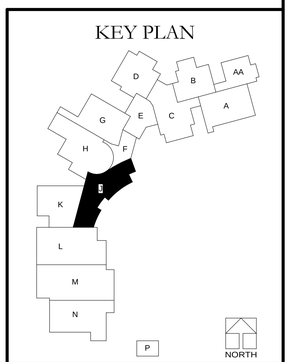
# HVAC PIPING PLAN - FIRST LEVEL - AREA J

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2.
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

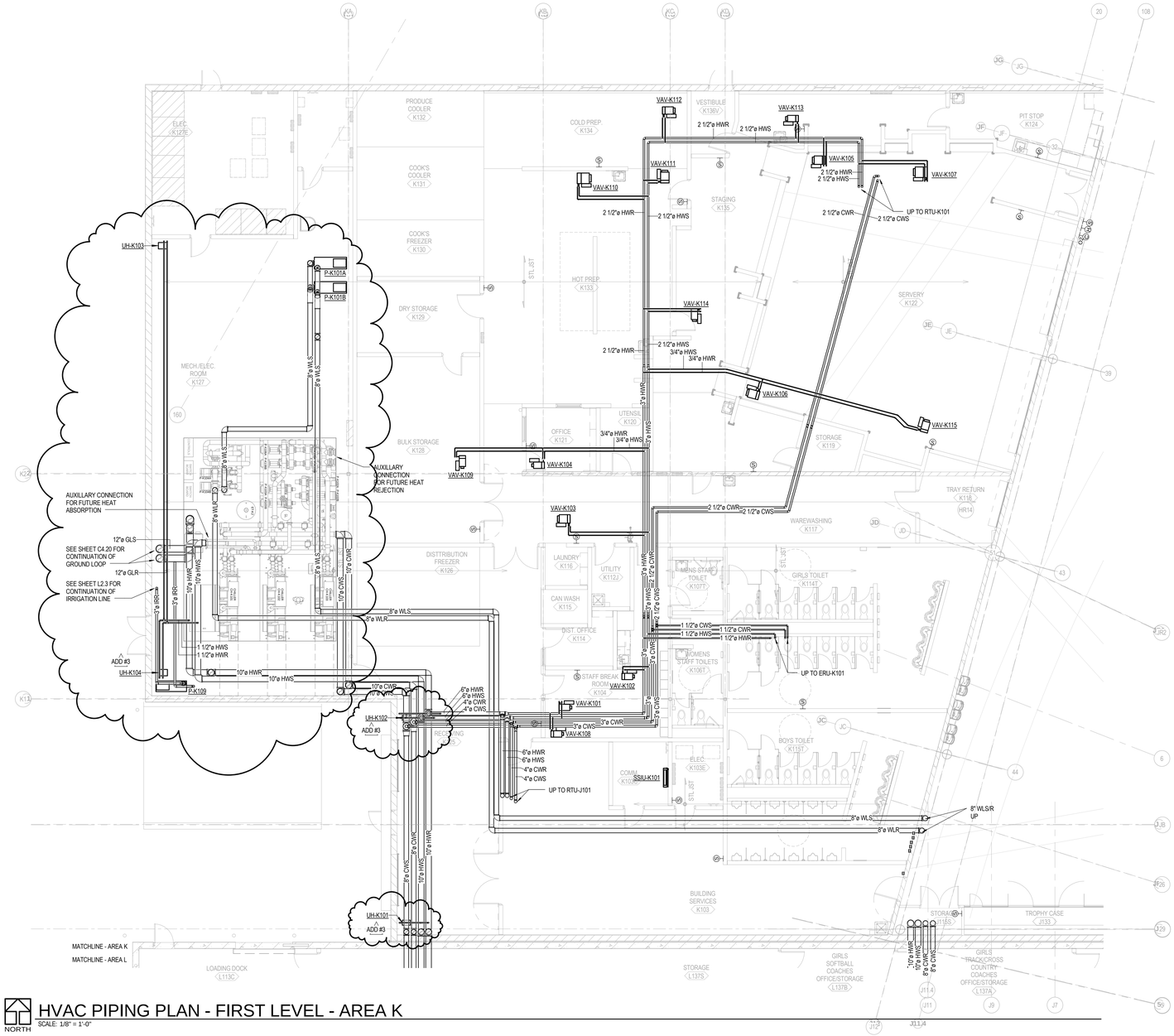
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - FIRST LEVEL - AREA J

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.8




# HVAC PIPING PLAN - FIRST LEVEL - AREA K

SCALE: 1/8" = 1'-0"

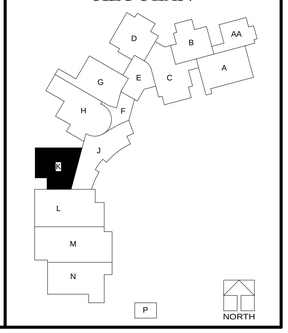
NORTH

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

## KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

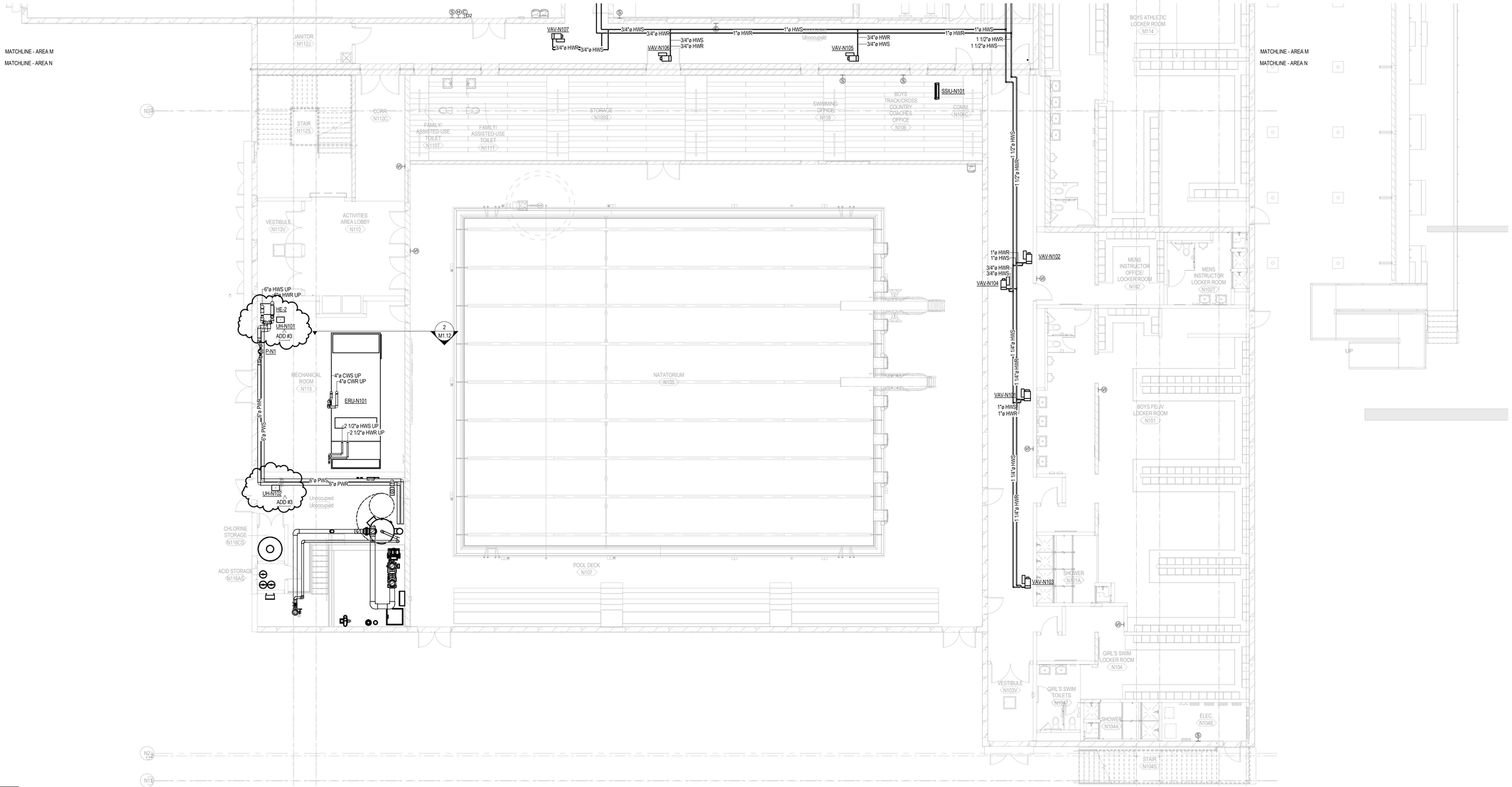
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - FIRST LEVEL - AREA K

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.9




NORTH

# HVAC PIPING PLAN - FIRST LEVEL - AREA N

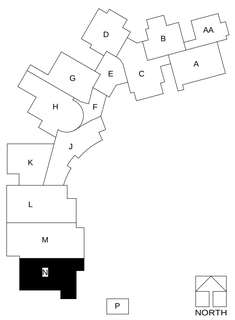
SCALE: 1/8" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - FIRST LEVEL - AREA N

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.12

HVAC PIPING PLAN - SECOND LEVEL - AREA A

NORTH

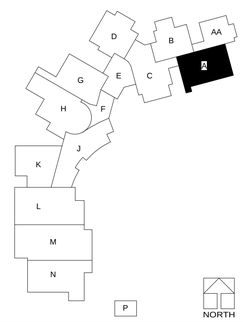
SCALE: 1/8" = 1'-0"

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2.
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - SECOND LEVEL - AREA A

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.13

## HVAC PIPING PLAN - SECOND LEVEL - AREA B

NORTH SCALE: 1/8" = 1'-0"

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2.
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |


Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

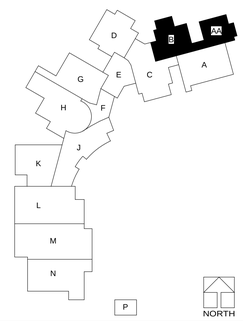

PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


KEY PLAN




Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - SECOND LEVEL - AREA B

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
M2.14

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   - A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   - B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   - C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   - D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   - E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   - A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    - A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    - B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    - C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    - D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    - E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    - F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    - G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    - H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    - I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    - J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    - K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    - L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    - M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    - N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    - O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    - P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    - Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    - R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

Keynote Legend

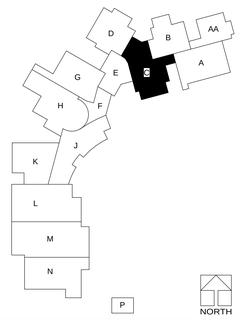
| Key Value | Keynote Text |
|---|---|

## HVAC PIPING PLAN - SECOND LEVEL - AREA C

NORTH

SCALE: 1/8" = 1'-0"

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

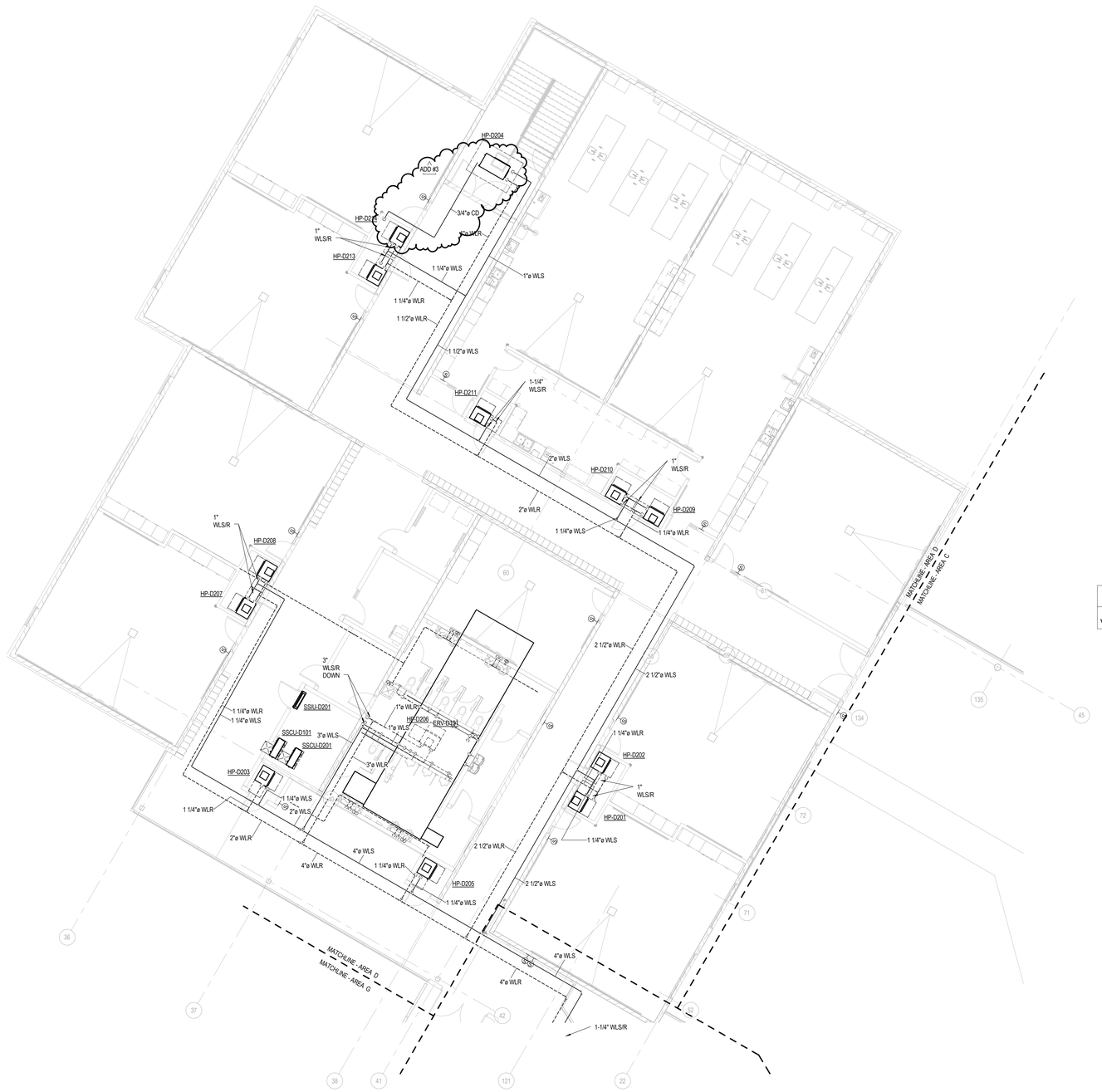
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - SECOND LEVEL - AREA C

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.15




## HVAC PIPING PLAN - SECOND LEVEL - AREA D

NORTH

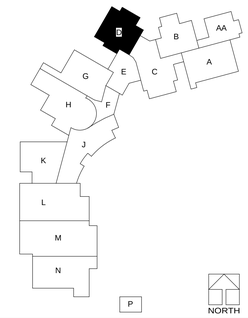
SCALE: 1/8" = 1'-0"

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

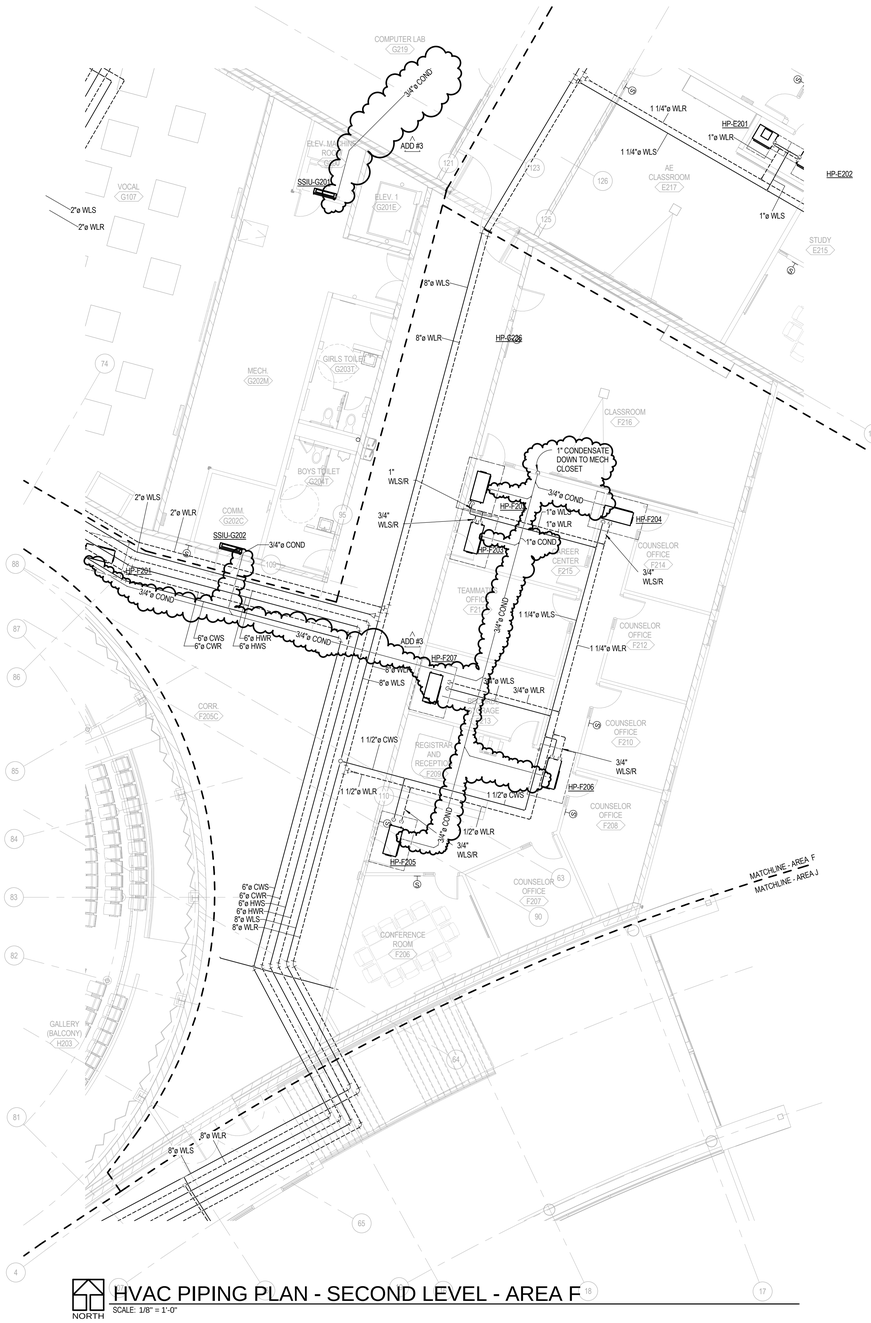
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - SECOND LEVEL - AREA D

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.16




NORTH

# HVAC PIPING PLAN - SECOND LEVEL - AREA F

SCALE: 1/8" = 1'-0"

NORTH

# HVAC PIPING PLAN - SECOND LEVEL - AREA E

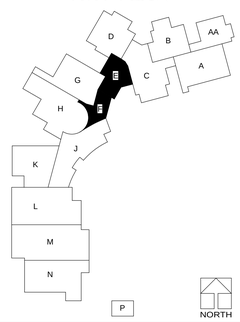
SCALE: 1/8" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES. MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul R. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

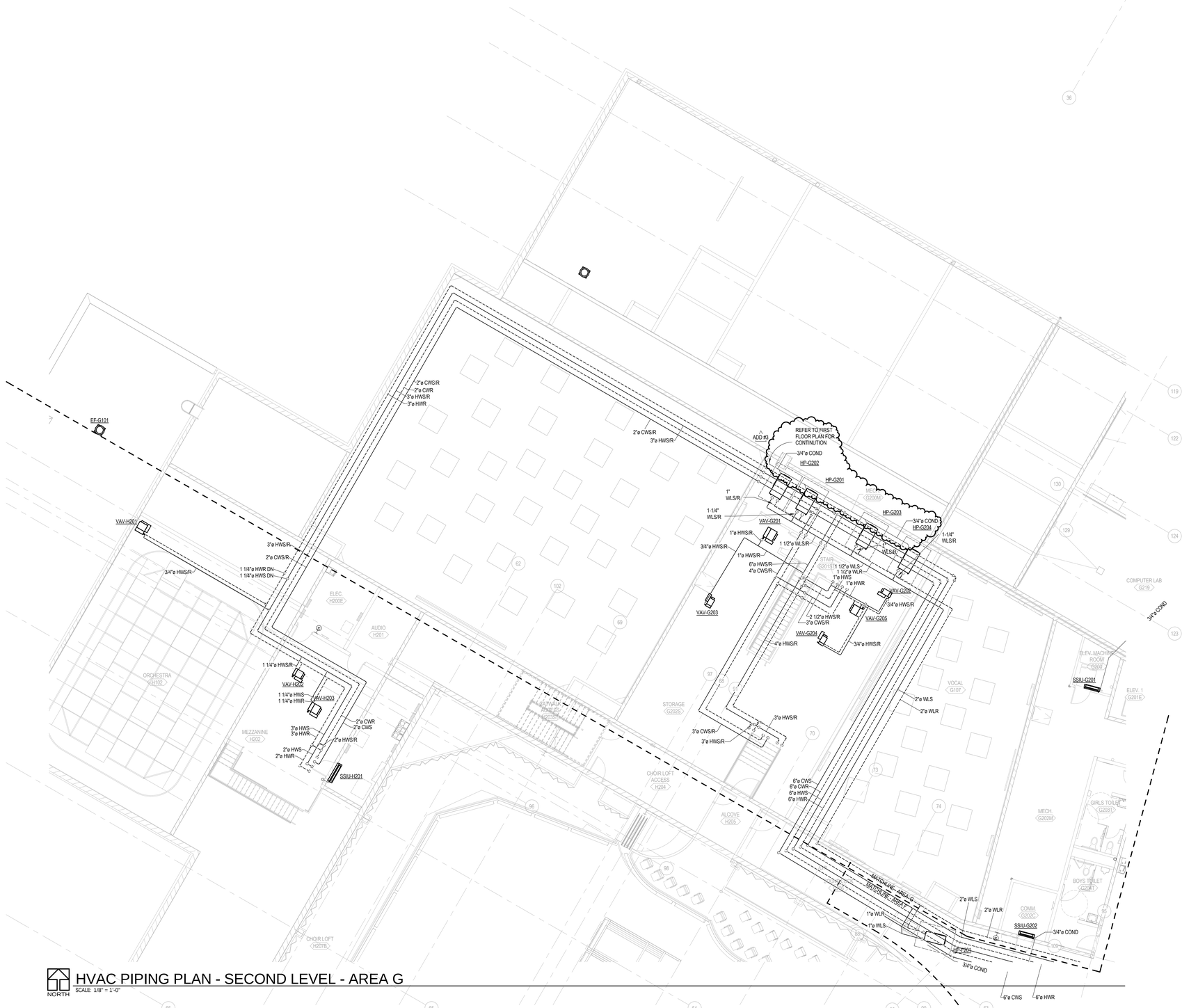
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - SECOND LEVEL - AREAS E & F

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.17




## HVAC PIPING PLAN - SECOND LEVEL - AREA G

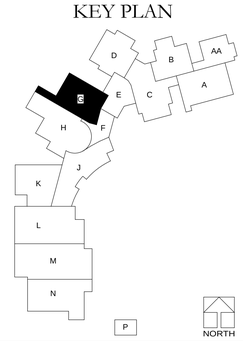
NORTH SCALE: 1/8" = 1'-0"

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1.
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2.
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Paul D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

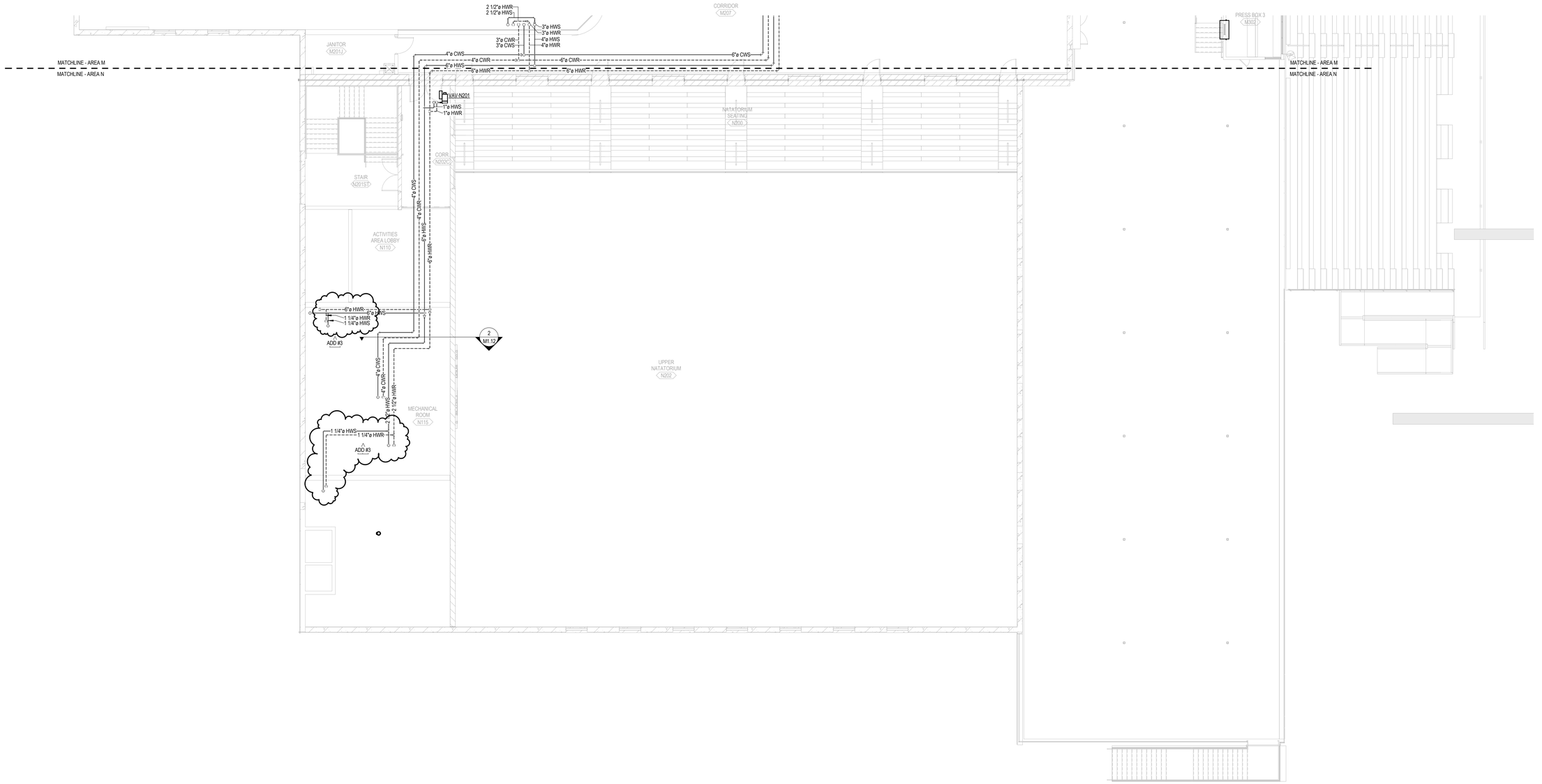
HVAC PIPING PLAN - SECOND LEVEL - AREA G

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

M2.18




# HVAC PIPING PLAN - SECOND LEVEL - AREA N

NORTH

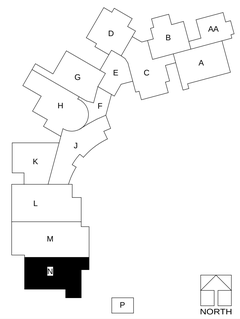
SCALE: 1/8" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

GENERAL HVAC PIPING PLAN NOTES:

1. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE PANELS FOR ACCESS TO CONTROL VALVES, MOTORIZED DAMPERS, SHUT-OFF VALVES, VOLUME DAMPERS AND SIMILAR COMPONENTS THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
2. GENERALLY SPEAKING, WATER LOOP PIPING SHALL BE RUN AS HIGH AS POSSIBLE, BETWEEN JOISTS AND THROUGH JOIST WEBBING TO PROVIDE MAXIMUM CLEARANCE TO DUCTWORK AND OTHER TRADES. PIPING SHALL BE AT LOW ENOUGH ELEVATION TO ALLOW PROPER BRANCH TAPS TO BE MADE (OFF TOP OF MAINS) AND ROUTED TO THEIR ASSOCIATED HEAT PUMPS. STACK PIPING WHERE REQUIRED.
3. WLS AND WLR PIPING CONNECTIONS TO HEAT PUMPS ARE SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1.
4. CONDENSATE DRAIN (CD) PIPING IS SIZED AS SHOWN ON THE HEAT PUMP SCHEDULE. SEE SHEET M5.1. WHERE CD IS NOT SHOWN ON THE DRAWINGS, ROUTE TO THE NEAREST FLOOR DRAIN.
5. HORIZONTAL HEAT PUMPS:
   A. MANUFACTURER-RECOMMENDED SERVICE ACCESS AREAS FOR HORIZONTAL HEAT PUMPS HAVE BEEN SHOWN ON THE PLANS.
   B. LOCATE THE HORIZONTAL HEAT PUMP UNITS IN AREAS THAT ALLOW FOR EASY REMOVAL OF THE FILTER AND EASY ACCESS TO HEAT PUMP UNIT ACCESS PANELS. LEAVE ENOUGH SPACE FOR SERVICE PERSONNEL TO PERFORM MAINTENANCE OR REPAIR. PROVIDE SUFFICIENT ROOM TO MAKE WATER, ELECTRICAL, DUCT AND CONDENSATE DRAIN CONNECTIONS.
   C. IF ANY DUCTWORK OR PIPING (DOMESTIC WATER, FIRE, WATER LOOP, CONDENSATE DRAIN, NATURAL GAS, ELECTRICAL CONDUIT, CONTROLS CONDUIT IS RUN WITHIN THE SERVICE AREAS, THE PIPE, CONDUIT OR DUCT SHALL BE REMOVED AND RE-ROUTED IF POSSIBLE SO IT IS NOT WITHIN THE SERVICE AREA.
   D. ALLOW ADEQUATE ROOM BELOW THE HEAT PUMP UNIT FOR A CONDENSATE TRAP. DO NO LOCATE THE HEAT PUMP UNIT ABOVE ANY PIPING SYSTEMS WHERE POSSIBLE. EACH HORIZONTAL HEAT PUMP UNIT SHALL BE PROVIDED WITH A FILTER BRACKET FOR SIDE FILTER REMOVAL. THE CONTRACTOR MAY CONVERT OR MODIFY THIS FILTER BRACKET TO ALLOW FOR BOTTOM REMOVAL OF THE FILTER IF IT PROVIDES A BETTER, MORE ACCESSIBLE INSTALLATION.
   E. GENERALLY SPEAKING, HORIZONTAL HEAT PUMPS ARE LOCATED AS HIGH AS POSSIBLE, BUT STILL ACCESSIBLE FROM A LADDER.
6. VERTICAL HEAT PUMPS:
   A. SEE 'VERTICAL HEAT PUMP INSTALLATION' DETAIL ON SHEET M4.1 FOR REQUIREMENTS.
7. BRANCH PIPING CONNECTIONS FROM THE PIPING MAINS SHALL BE TAKEN OFF THE TOP OR SIDES OF THE PIPE. BRANCH PIPING OFF THE BOTTOM OF THE WATER LOOP PIPING MAINS IS SPECIFICALLY PROHIBITED UNLESS IT HAS BEEN SPECIFICALLY SHOWN TO BE PIPED OFF THE BOTTOM OF THE PIPING MAIN.
8. BRANCH PIPE SIZES TO VAV BOXES SHALL BE 3/4-INCH UNLESS NOTED OTHERWISE ON THE PLANS AND THE ATU SCHEDULE.
9. REFRIGERANT PIPE SIZES SHALL BE AS DETERMINED BY THE SUCCESSFUL COIL/ CONDENSING UNIT OR HEAT PUMP MANUFACTURER.
10. DETAILS FOR ITEMS SHOWN ON THIS DRAWING ARE REFERRED TO AS FOLLOWS:
    A. FOR PIPE WALL PENETRATION DETAIL, SEE DETAIL 9/M4.1.
    B. FOR HEAT PUMP PIPING, SEE DETAIL 19/M4.1.
    C. FOR LOW POINT DRAINS, SEE DETAIL 20/M4.1.
    D. FOR ROOF PIPE PORTALS, SEE DETAIL 21/M4.1.
    E. FOR PLATE AND FRAME HEAT EXCHANGER, SEE DETAIL 22/M4.1.
    F. FOR CHILLER PIPING, SEE DETAIL 23/M4.1
    G. FOR FLUSHING PIPING CONNECTIONS, SEE DETAIL 24/M4.1.
    H. FOR END SUCTION PUMP DETAIL, SEE DETAIL 1/M4.2.
    I. FOR CHEMICAL FEEDER DETAIL, SEE DETAIL 2/M4.2.
    J. FOR 2-WAY COIL CONNECTION, SEE DETAIL 3/M4.2.
    K. FOR 3-WAY COIL CONNECTION, SEE DETAIL 4/M4.2.
    L. FOR CONDENSATE PIPING, SEE DETAIL 5/M4.2.
    M. FOR ROOFTOP RTU PIPING, SEE DETAIL 6/M4.2
    N. FOR HOT WATER COIL WITH PUMP, SEE DETAIL 7/M4.2
    O. FOR INLINE PUMP DETAIL, SEE DETAIL 8/M4.2
    P. FOR PIPE INSULATION DETAIL, SEE DETAIL 9/M4.2.
    Q. FOR VAV REHEAT PIPING, SEE DETAIL 10/M4.2.
    R. FOR WATER SYSTEM MAKE-UP AND AIR CONTROL PIPING DETAIL, SEE DETAIL 11/M4.2.

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

HVAC PIPING PLAN - SECOND LEVEL - AREA N

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
M2.24

HEAT PUMP - WATER SOURCE SCHEDULE

| MARK | LOCATION | SERVES | ERV | SUPPLY CFM | ADD #3 O.A. CFM | FAN SPEED | ESP (IN WG) | CONDENSER DATA EWT CLG (°F) | LWT CLG (°F) | EWT HTG (°F) | LWT HTG (°F) | GPM | PD (FT WG) | COOLING COIL DATA HOSE KIT SIZE (IN) | TOTAL CAP (MBH) | SENS CAP (MBH) | EAT DB (°F) | EAT WB (°F) | LAT DB (°F) | ADD #3 LAT WB (°F) | GWHP EER | HEATING DATA SENS CAP (MBH) | EAT DB (°F) | LAT DB (°F) | ADD #3 COP | ELECTRICAL DATA VOLTAGE | PH | RLA | UNIT FLA | MCA | MAX HACR BKR | CONFIGURATION | BASIS OF DESIGN (CLIMATEMASTER) | WEIGHT | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HP-A101 | A109C - CORRIDOR | A105A - CLASSROOM | ERV-B101 | 1250 | 500 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 327 | 1,2 |
| HP-A102 | A109C - CORRIDOR | A106 - OFFICE | ERV-B101 | 1000 | 225 | C3/H2 | 0.50 | 85 | 95.8 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 27.0 | 27.0 | 78 | 62 | 51.1 | 48.9 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-A103 | A109C - CORRIDOR | A110 - CAD LAB 1 | ERV-B101 | 1400 | 400 | C3/H3 | 0.50 | 85 | 94.9 | 45 | 38.4 | 8.8 | 7.3 | 1" | 35.0 | 35.0 | 78 | 62 | 53.1 | 49.6 | 23.3 | 36.3 | 60 | 85.8 | 4.7 | 460 | 3 | 5.8 | 9.7 | 11.2 | 15 | HORIZONTAL | TS042-ECM | 414 | 1,3 |
| HP-A104 | AA100 - CORRIDOR | A105A - CLASSROOM | ERV-B101 | 600 | 300 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | HORIZONTAL | TC015 | 153 | 1,3 |
| HP-A201 | A203M - MECH | A201 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-A202 | A203M - MECH | A202 - CLASSROOM | ERV-B101 | 1000 | 425 | C3/H2 | 0.50 | 85 | 95.8 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 27.0 | 27.0 | 78 | 62 | 51.1 | 48.9 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-A203 | A207M - MEZZANINE | A114 - STUDENT TEST CENTER | N/A | 1000 | 0 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.4 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.8 | 23.5 | 60 | 88.8 | 4 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | HORIZONTAL | TS024-ECM | 266 | 1,3 |
| HP-B101 | C113 - ELL | C113 - ELL | ERV-C101 | 600 | 235 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | HORIZONTAL | TC015 | 153 | 1,3 |
| HP-B102 | B117M - MECH | B102 - SCIENCE LAB/LECTURE | ERV-B101 | 1730 | 1600 | C4/H3 | 0.75 | 85 | 96.3 | 45 | 37.9 | 10.0 | 9.6 | 1" | 44.5 | 44.5 | 78 | 62 | 49.4 | 48.2 | 24.0 | 44.9 | 60 | 91.3 | 4.2 | 460 | 3 | 6.2 | 13.5 | 17.1 | 20 | VERTICAL | TS048-ECM | 416 | 1,2 |
| HP-B103 | B117M - MECH | B119 - CLASSROOM | ERV-B101 | 1000 | 450 | C3/H2 | 0.50 | 85 | 95.8 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 27.0 | 27.0 | 78 | 62 | 51.1 | 48.9 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-B104 | B127M - MECH | B128 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B105 | B127M - MECH | B126 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B106 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,3 |
| HP-B107 | B110M - MECH | B109C - CORRIDOR | ERV-B101 | 1830 | 120 | C3/H2 | 0.75 | 85 | 96.3 | 45 | 38.5 | 12.5 | 8.8 | 1" | 57.0 | 57.0 | 78 | 62 | 47.0 | 46.9 | 22.0 | 53.4 | 60 | 90.4 | 4.3 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 441 | 1,2 |
| HP-B108 | B124M - MECH | B111 - CORRIDOR | ERV-B101 | 2050 | 550 | C4/H3 | 0.75 | 85 | 96.4 | 45 | 38.2 | 12.5 | 8.8 | 1" | 57.3 | 57.3 | 78 | 62 | 50.2 | 48.5 | 22.0 | 54.4 | 60 | 86.4 | 4.5 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 441 | 1,2 |
| HP-B109 | B112J - JANITOR | B115 - SPED | ERV-B101 | 800 | 310 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B110 | B104M - MECH | B105 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B111 | B104M - MECH | B103 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B112 | B107 - CONFERENCE ROOM | B107 - CONFERENCE ROOM | ERV-B101 | 880 | 250 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-B201 | B208M - MECH | B219 - CLASSROOM | ERV-B101 | 1250 | 450 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 327 | 1,2 |
| HP-B202 | B208M - MECH | B206 - SCIENCE LAB/LECTURE | ERV-B101 | 1730 | 1575 | C4/H3 | 0.75 | 85 | 96.3 | 45 | 37.9 | 10.0 | 9.6 | 1" | 44.5 | 44.5 | 78 | 62 | 49.4 | 48.2 | 24.0 | 44.9 | 60 | 91.3 | 4.2 | 460 | 3 | 6.2 | 13.5 | 17.1 | 20 | VERTICAL | TS048-ECM | 416 | 1,2 |
| HP-B203 | B200C - CORRIDOR | C213 - ELL | ERV-B101 | 600 | 235 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | HORIZONTAL | TC015 | 153 | 1,3 |
| HP-B204 | B204M - MECH | B203 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B205 | B204M - MECH | B205 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B206 | B224M - MECH | B209C - CORRIDOR | ERV-B101 | 1550 | 460 | C3/H2 | 0.75 | 85 | 96.1 | 45 | 38.1 | 10.0 | 9.6 | 1" | 44.5 | 44.5 | 78 | 62 | 49.4 | 48.2 | 24.0 | 44.9 | 60 | 91.3 | 4.2 | 460 | 3 | 6.2 | 13.5 | 17.1 | 20 | VERTICAL | TS048-ECM | 443 | 1,2 |
| HP-B207 | B215J - JANITOR | B217 - SPED | ERV-B101 | 800 | 240 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B208 | B212M - MECH | B211 - CORRIDOR | ERV-B101 | 1830 | 200 | C3/H2 | 0.75 | 85 | 96.3 | 45 | 38.5 | 12.5 | 8.8 | 1" | 57.0 | 57.0 | 78 | 62 | 47.0 | 46.9 | 22.0 | 53.4 | 60 | 90.4 | 4.3 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 441 | 1,2 |
| HP-B209 | STAIR - B210ST | STAIR - B210ST | N/A | 800 | 0 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B210 | B227M - MECH | B226 - CLASSROOM | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B211 | B227M - MECH | B228 - CLASSROOM (SS) | ERV-B101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-B212 | B201 - CONFERENCE ROOM | B201 - CONFERENCE ROOM | ERV-B101 | 880 | 250 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C101 | C106 - TPC | C106 - TPC | ERV-C101 | 1250 | 300 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 441 | 1,2 |
| HP-C102 | C106 - TPC | C106 - TPC | ERV-C101 | 1250 | 200 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 416 | 1,2 |
| HP-C103 | C107C - CORRIDOR | C107C - CORRIDOR | ERV-C101 | 750 | 450 | C4/H4 | 0.50 | 85 | 96.7 | 45 | 38.0 | 3.8 | 4.6 | 3/4" | 17.3 | 17.3 | 78 | 62 | 55.0 | 50.3 | 25.0 | 17.0 | 60 | 85.6 | 4.4 | 208-230/60 | 1 | 9.0 | 12.9 | 15.2 | 20 | HORIZONTAL | TS018-ECM | 252 | 1,3 |
| HP-C104 | C116M - MECH | C112 - SCIENCE LAB/LECTURE | ERV-C101 | 1250 | 1250 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 327 | 1,2 |
| HP-C105 | C116M - MECH | C130 - SCIENCE LAB/LECTURE | ERV-C101 | 1730 | 1650 | C4/H3 | 0.75 | 85 | 96.3 | 45 | 37.9 | 10.0 | 9.6 | 1" | 44.8 | 44.8 | 78 | 62 | 52.2 | 49.3 | 24.0 | 45.7 | 60 | 87.6 | 4.5 | 460 | 3 | 6.2 | 13.5 | 17.1 | 20 | VERTICAL | TS048-ECM | 416 | 1,2 |
| HP-C106 | C131M - MECH | C132 - CLASSROOM | ERV-C101 | 880 | 400 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C107 | C134M - MECH | C133 - CLASSROOM | ERV-C101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-C108 | C134M - MECH | C136 - CLASSROOM | ERV-C101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-C109 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,3 |
| HP-C110 | C126M - MECH | C125C - CORRIDOR | ERV-C101 | 1830 | 100 | C3/H2 | 0.75 | 85 | 96.3 | 45 | 38.5 | 12.5 | 8.8 | 1" | 57.0 | 57.0 | 78 | 62 | 47.0 | 46.9 | 22.0 | 53.4 | 60 | 90.4 | 4.3 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 441 | 1,2 |
| ADD #3 HP-C111 | C111M - MECH | C109 - LEVEL 2 SPED CLASSROOM | ERV-C101 | 880 | 400 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C112 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,3 |
| HP-C124 | C124M - MECH | C118C - CORRIDOR | ERV-C101 | 1830 | 760 | C3/H2 | 0.75 | 85 | 96.3 | 45 | 38.5 | 12.5 | 8.8 | 1" | 57.0 | 57.0 | 78 | 62 | 47.0 | 46.9 | 22.0 | 53.4 | 60 | 90.4 | 4.3 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 441 | 1,2 |
| HP-C114 | C122J - JANITOR | C119 - SPED | ERV-C101 | 880 | 300 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C201 | C206C - CORRIDOR | C202 - CLASSROOM | ERV-C101 | 750 | 450 | C4/H4 | 0.50 | 85 | 96.7 | 45 | 38.0 | 3.8 | 4.6 | 3/4" | 17.3 | 17.3 | 78 | 62 | 55.0 | 50.3 | 24.4 | 17.0 | 60 | 85.6 | 4.4 | 208-230/60 | 1 | 9.0 | 12.9 | 15.2 | 20 | HORIZONTAL | TS018-ECM | 252 | 1,3 |
| HP-C202 | C201C - CORRIDOR | C201C - CORRIDOR | ERV-C101 | 1400 | 1100 | C3/H3 | 0.50 | 85 | 94.9 | 45 | 38.4 | 8.8 | 7.3 | 1" | 35.0 | 35.0 | 78 | 62 | 53.1 | 49.6 | 23.4 | 36.3 | 60 | 85.8 | 4.7 | 460 | 3 | 5.8 | 9.7 | 11.2 | 15 | HORIZONTAL | TS042-ECM | 698 | 1,3 |
| HP-C203 | C201C - CORRIDOR | C200 - 2ND FLOOR FORUM | ERV-C101 | 1400 | 1100 | C3/H3 | 0.50 | 85 | 94.9 | 45 | 38.4 | 8.8 | 7.3 | 1" | 35.0 | 35.0 | 78 | 62 | 53.1 | 49.6 | 23.4 | 36.3 | 60 | 85.8 | 4.7 | 460 | 3 | 5.8 | 9.7 | 11.2 | 15 | HORIZONTAL | TS042-ECM | 698 | 1,3 |
| HP-C204 | C210M - MECH | C208 - CLASSROOM | ERV-C101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-C205 | C210M - MECH | C211 - CLASSROOM | ERV-C101 | 800 | 400 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-C206 | C228M - MECH | C234C - CORRIDOR | ERV-C101 | 880 | 300 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C207 | C202 - CLASSROOM | C200 - FORUM | ERV-C101 | 600 | 0 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | VERTICAL | TC015 | 268 | 1,2 |
| HP-C208 | C234M - MECH | C236 - CLASSROOM | ERV-C101 | 880 | 350 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C209 | C234M - MECH | C233 - CLASSROOM (SS) | ERV-C101 | 880 | 350 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C210 | C231M - MECH | C232 - CLASSROOM | ERV-C101 | 1000 | 400 | C2/H2 | 0.50 | 85 | 95.8 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 27.0 | 27.0 | 78 | 62 | 51.1 | 48.9 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-C211 | C216M - MECH | C230 - SCIENCE LAB/LECTURE | ERV-C101 | 1730 | 1550 | C4/H3 | 0.75 | 85 | 96.3 | 45 | 37.9 | 10.0 | 9.6 | 1" | 44.8 | 44.8 | 78 | 62 | 52.2 | 49.3 | 24.0 | 45.7 | 60 | 87.6 | 4.5 | 460 | 3 | 6.2 | 13.5 | 17.1 | 20 | VERTICAL | TS048-ECM | 416 | 1,2 |
| HP-C212 | C216M - MECH | C212 - SCIENCE LAB/LECTURE | ERV-C101 | 1250 | 1230 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 327 | 1,2 |
| HP-C213 | C220J - JANITOR | C218 - SPED | ERV-C101 | 800 | 330 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-C214 | C225M - MECH | C222C - CORRIDOR | ERV-C101 | 1830 | 840 | C3/H2 | 0.75 | 85 | 96.3 | 45 | 38.5 | 12.5 | 8.8 | 1" | 57.0 | 57.0 | 78 | 62 | 47.0 | 46.9 | 22.0 | 53.4 | 60 | 90.4 | 4.3 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 441 | 1,2 |
| HP-C215 | STAIR - C214ST | STAIR - C214ST | N/A | 800 | 0 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.9 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,3 |
| HP-C216 | C206C - CORRIDOR | C206C - CORRIDOR | ERV-C101 | 800 | 325 | C3/H2 | 0.50 | 85 | 97.0 | 45 | 38.0 | 5.0 | 6.1 | 3/4" | 24.1 | 17.4 | 78 | 62 | 56.6 | 50.3 | 23.8 | 23.5 | 60 | 88.8 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | HORIZONTAL | TS024-ECM | 266 | 1,3 |
| HP-D101 | D104 - MECH | D100 - JOURNALISM CLASSROOM | ERV-D101 | 600 | 400 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | HORIZONTAL | TC015 | 153 | 1,3 |
| HP-D102 | D104 - MECH | D101A - COMPUTER LAB1, D101B - COMPUTER LAB2 | ERV-D101 | 1400 | 400 | C3/H3 | 0.50 | 85 | 94.9 | 45 | 38.4 | 8.8 | 7.3 | 1" | 35.0 | 35.0 | 78 | 62 | 53.1 | 49.6 | 23.4 | 36.3 | 60 | 85.8 | 4.7 | 460 | 3 | 5.8 | 9.7 | 11.2 | 15 | HORIZONTAL | TS042-ECM | 414 | 1,3 |
| HP-D103 | D104 - MECH | D103 - MEDIA PRO CLASSROOM | ERV-D101 | 600 | 400 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | HORIZONTAL | TC015 | 153 | 1,3 |
| HP-D104 | D104 - MECH | D106 - PSD (BD) LEVEL 1 | ERV-D101 | 600 | 265 | HI | 0.40 | 85 | 96.1 | 45 | 38.5 | 3.1 | 5.7 | 1/2" | 13.6 | 13.6 | 78 | 62 | 55.7 | 50.6 | 24.5 | 13.6 | 60 | 91.2 | 4.0 | 208-230/60 | 1 | 6.0 | 7.2 | 8.7 | 15 | HORIZONTAL | TC015 | 153 | 1,3 |
| HP-D105 | D113M - MECH | D109 - PSD (BD) LEVEL 2 | ERV-D101 | 725 | 265 | C2/H1 | 0.50 | 85 | 96.6 | 45 | 38.3 | 5.0 | 6.1 | 3/4" | 23.6 | 16.1 | 78 | 62 | 56.1 | 50.5 | 25.2 | 22.2 | 60 | 92.0 | 4.0 | 208-230/60 | 3 | 8.0 | 11.9 | 13.9 | 20 | VERTICAL | TS024-ECM | 266 | 1,2 |
| HP-D106 | D113M - MECH | D110 - SCIENCE LAB/LECTURE | ERV-D101 | 1250 | 1250 | C3/H3 | 0.50 | 85 | 95.1 | 45 | 38.5 | 7.5 | 11.8 | 3/4" | 31.0 | 31.0 | 78 | 62 | 53.3 | 49.7 | 24.4 | 30.6 | 60 | 85.4 | 4.9 | 208-230/60 | 3 | 10.4 | 14.3 | 16.9 | 25 | VERTICAL | TS036-EM | 327 | 1,2 |
| HP-D107 | D114M - MECH | D111 - SCIENCE LAB/LECTURE | ERV-D101 | 1830 | 1580 | C3/H2 | 0.75 | 85 | 96.3 | 45 | 38.5 | 12.5 | 8.8 | 1" | 57.0 | 57.0 | 78 | 62 | 47.0 | 46.9 | 22.0 | 53.4 | 60 | 90.4 | 4.3 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 416 | 1,2 |
| HP-D108 | D135M - MECH | D136 - HEALTH SCIENCE LAB | ERV-D101 | 880 | 400 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-D109 | D135M - MECH | D134 - HEALTH SCIENCE LAB | ERV-D101 | 880 | 400 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-D110 | D131M - MECH | D132 - CLASSROOM (SS) | ERV-D101 | 880 | 400 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-D111 | D131M - MECH | D130 - CLASSROOM | ERV-D101 | 880 | 400 | C2/H2 | 0.50 | 85 | 95.6 | 45 | 38.3 | 6.3 | 8.9 | 3/4" | 26.6 | 26.6 | 78 | 62 | 47.9 | 47.6 | 23.9 | 27.2 | 60 | 87.6 | 4.5 | 208-230/60 | 3 | 8.3 | 12.2 | 14.3 | 20 | VERTICAL | TS030-ECM | 268 | 1,2 |
| HP-D112 | NOT USED | NOT USED | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,3 |
| HP-D113 | D124M - MECH | D123C - CORRIDOR | ERV-D101 | 2050 | 100 | C4/H3 | 0.75 | 85 | 96.4 | 45 | 38.2 | 12.5 | 8.8 | 1" | 57.3 | 57.3 | 78 | 62 | 50.2 | 48.5 | 22.0 | 54.4 | 60 | 86.4 | 4.5 | 460 | 3 | 7.8 | 15.1 | 17.1 | 20 | VERTICAL | TS060-ECM | 658 | 1,2 |
| HP-D114 | D122M - MECH | D120C - CORRIDOR | ERV-D101 | 1730 | 840 | C4/H3 | 0.75 | 85 | 96.3 | 45 | 37.9 | 10.0 | 9.6 | 1" | 44.8 | 44.8 | 78 | 62 | 52.2 | 49.3 | 24.0 | 45.7 | 60 | 87.6 | 

## DUST AND METAL COLLECTION SYSTEMS AND ACCESSORIES SCHEDULE

| MARK | LOCATION | TYPE | CFM | ESP (IN) | MIN FILTER AREA | MOTOR DATA HP | MOTOR DATA V | MOTOR DATA PH | VFD | COLLECTION TYPE | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DC-A101 | OUTDOORS (SERVES WOODSHOP) | DUST COLLECTOR CYCLONE | 4800 | 13 | - | 15 | 460 | 3 | | 55 GALLON BARRELLS | FARR GS8 - ISMF | 2,5 |
| EV-A101 | OUTDOORS (FOR DC-1 SYSTEM) | EXPLOSION BACKDRAFT/VENT | - | - | - | | | | | - | CLARKS PNEUMATIC CONVEYING SYSTEMS - MODEL BDD-SV | |
| DCP-A101 | INDOORS (FOR DC-1 SYSTEM) | DUST COLLECTOR CONTROL PANEL | - | - | - | - | 120 | 1 | | - | AGET | |
| SILENCER-DC-A101 | OUTDOORS (SERVES MC-A101) | FAN DISHARGE SOUND ATTENUATOR (BELOW 85dBA) | - | - | - | - | - | - | - | - | FARR | |
| MC-A101 | OUTDOORS (SERVES METALSHOP) | METAL COLLECTOR | 10000 | 14 | - | 30 | 460 | 3 | YES | HOPPER | FARR GS8 - LB | 1,4,5 |
| MCP-A101 | INDOORS (FOR DC-2) | METAL COLLECTOR CONTROL PANEL | - | - | - | - | 120 | 1 | - | - | FARR | |
| SILENCER-MC-A101 | OUTDOORS (SERVES MC-A101) | FAN DISHARGE SOUND ATTENUATOR (BELOW 85dBA) | - | - | - | - | - | - | - | - | FARR | |
| WELDING HOOD-A101 | A112 - METAL SHOP | WELDING WELDING HOOD (324 IN x 66 IN x 16 IN) | - | - | - | - | - | - | - | - | CONTRACTOR FABRICATED 14 GAUGE WELDED | 3 |
| WELDING HOOD-A102 | A112 - METAL SHOP | WELDING WELDING HOOD (252 IN x 66 IN x 16 IN) | - | - | - | - | - | - | - | - | CONTRACTOR FABRICATED 14 GAUGE WELDED | 3 |
| WELDING HOOD-A103 | A112 - METAL SHOP | WELDING HOOD (168 IN X 126 IN X 16 IN) | - | - | - | - | - | - | - | - | CONTRACTOR FABRICATED 14 GAUGE WELDED | 3 |

MECHANICAL NOTES:
1. METAL COLLECTOR TO INCLUDE: AUTOMATIC FILTER CLEANING, SUPPORT LEG STRUCTURE, FILTER ACCESS, HEMIPLEAT CARTRIDGES, HOPPER/SUPPORT STAND, SPARK BAFFLE, STAGGERED CHANNEL INLET BAFFLE, INTEGRATED TIME CONTROLLER/VFD, STATIC BLOWER CONTROL, SOLENOID HEATERS, SILENCER, AND FIRE SUPPRESSION FACTORY INSTALLED WITHIN UNIT.
2. DUCT COLLECTOR TO INCLUDE: AUTOMATIC FILTER CLEANING, SUPPORT LEG STRUCTURE, FILTER ACCESS, HEMIPLEAT CARTRIDGES, CARTRIDGE OVERBAGS, STAGGERED CHANNEL INLET BAFFLE, DETECT/QUENCH RIGA-FLOW STYLE B, EXPLOSION VENT, EXPLOSION BACKDRAFT/VENT, ELECTRICAL SWITCH FOR STINGER ACTIVATION SIGNAL, INSPECTION PORT, SOLENOID HEATERS, 55-GALLON DRUMS, SILENCER, INTEGRATED TIMER CONTROLLER/VFD, STATIC BLOWER CONTROLS, FIRE SUPPRESSION FACTORY INSTALLED WITHIN UNIT.
3. BOTTOM OF HOOD SET AT 6'-8" AFF.
4. PROVIDE SPARK SCREEN.
ADD #3 5. BASIS OF DESIGN PRODUCT: PROVIDE AS SHOWN OR WITH A COMPARABLE PRODUCT.

## FAN COIL UNIT SCHEDULE

| MARK | LOCATION | CFM | ESP (IN WC) | HEATING COIL DATA: HEATING CAP (MBH) | EWT (°F) | LWT (°F) | EAT DB (°F) | LAT DB/WB (°F) | GPM | MAX. WATER PD (FT WG) | COOLING COIL DATA: TOTAL CAP (MBH) | SENSIBLE CAP (MBH) | EAT DB/WB (°F) | LAT DB/WB (°F) | GPM | WATER PD (FT WG) | MOTOR DATA HP | MOTOR DATA V | MOTOR DATA PH | VFD | PIPE SIZE TO COIL (CONTRACTOR) | PIPE SIZE TO COIL (CONTRACTOR) | WEIGHT | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCU-H101 | H118 - SOUND LOCK | 600 | 0.5 | 45.5 | 140 | 110 | 70 | 90 | 2.8 | .8 | 28.9 | 26.1 | 78 / 65 | 58 / 57 | 4.35 | 1.3 | 1 | 460 | 3 | YES | 1 | 1 | 450 | DAIKIN MCQUAY LAH003A | 1,2,3 |

MECHANICAL NOTES:
1. PROVIDE VIBRATION ISOLATORS AT UNIT SUPPORTS.
2. CONTRACTOR TO PROVIDE SUPPLY/RETURN FLEX CONNECTIONS AT UNIT.
3. FACTORY MOUNTED AND PRE-WIRED VFD ON UNIT.

## TERMINAL BOX - HOT WATER SCHEDULE

| MARK | SYSTEM | ROOM SERVING | MAX CFM | MIN CFM | P.D. AT MAX CFM (IN) | INLET DIA (IN) | SOUND POWER LEVEL 1.0" PD - 4TH BAND: RADIATED | SOUND POWER LEVEL 1.0" PD - 4TH BAND: DISCHARGE | HOT WATER COIL DATA: MIN. CAP (MBH) | Apd | ROWS | GPM | WPd (FT H2O) | PIPE SIZE TO COIL (CONTRACTOR) | DETAIL REF. | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VAV-G101 | RTU-G101 | G119T GIRLS TOILET, G120T BOYS TOILET | 380 | 380 | 0.38 | 06 | 17 | 17 | 13.30 | 0.28 | 2 | 4.5 | 2.430000067 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G102 | RTU-G101 | G118S ORCHESTRAL INSTRUMENT STORAGE | 200 | 200 | 0.11 | 06 | 11 | 11 | 7.60 | 0.08 | 2 | 1.5 | 0.280000001 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G201 | RTU-G101 | G117 BAND | 2800 | 840 | 0.54 | 16 | 19 | 20 | 31.90 | 0.51 | 2 | 4.2 | 1.009999998 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G202 | RTU-G101 | G116 OFFICE, G108 INSTRUMENT REPAIR | 605 | 180 | 0.34 | 08 | 19 | 18 | 7.30 | 0.32 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G203 | RTU-G101 | G110-G113 PRACTICE ROOMS | 595 | 180 | 0.33 | 08 | 19 | 18 | 7.30 | 0.31 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G204 | RTU-G101 | G202S STORAGE | 600 | 180 | 0.33 | 08 | 19 | 18 | 7.30 | 0.32 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G205 | RTU-G101 | G107 VOCAL | 1960 | 590 | 0.42 | 14 | 18 | 15 | 22.40 | 0.38 | 2 | 2.2 | 0.490000011 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H101 | RTU-G101 | H100 EXCEL ACADEMY | 705 | 210 | 0.44 | 08 | 20 | 18 | 8.00 | 0.42 | 2 | 1.0 | 0.170000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H102 | RTU-G101 | H121V VESTIBULE | 630 | 190 | 0.36 | 08 | 19 | 19 | 7.50 | 0.35 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H201 | RTU-G101 | H102 ORCH/BLACK BOX | 1815 | 545 | 0.37 | 14 | 18 | 15 | 20.70 | 0.34 | 2 | 1.9 | 0.360000014 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H202 | RTU-G101 | H108 & H109 DRESSING ROOMS | 1400 | 420 | 0.42 | 12 | 20 | 20 | 16.00 | 0.41 | 2 | 1.7 | 0.419999987 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H203 | RTU-G101 | H112 STAGECRAFT | 2350 | 705 | 0.57 | 14 | 20 | 17 | 30.60 | 0.52 | 2 | 7.7 | 5.650000095 | 1-1/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K101 | RTU-K101 | K103 BUILDING SERVICES | 495 | 150 | 0.55 | 06 | 21 | 21 | 5.70 | 0.37 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K102 | RTU-K101 | K104 STAFF BREAK ROOM, K114 DIST. OFFICE | 390 | 195 | 0.36 | 06 | 18 | 17 | 6.80 | 0.25 | 2 | 1.1 | 0.170000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K103 | RTU-K101 | K117 WAREWASHING | 1590 | 480 | 0.52 | 12 | 22 | 22 | 16.90 | 0.51 | 2 | 1.9 | 0.519999981 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K104 | RTU-K101 | K121 OFFICE | 125 | 125 | 0.05 | 06 | - | - | 5.20 | 0.04 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K105 | RTU-K101 | K122 NORTH SERVERY | 1450 | 435 | 0.45 | 12 | 20 | 21 | 15.30 | 0.44 | 2 | 1.6 | 0.349999994 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K106 | RTU-K101 | K122 SOUTH SERVERY | 1450 | 435 | 0.45 | 12 | 20 | 21 | 15.30 | 0.44 | 2 | 1.6 | 0.349999994 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K107 | RTU-K101 | K124 PIT STOP | 2025 | 610 | 0.44 | 14 | 19 | 17 | 21.40 | 0.41 | 2 | 2.0 | 0.409999996 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K108 | RTU-K101 | K125 RECEIVING | 460 | 230 | 0.48 | 06 | 20 | 20 | 8.10 | 0.33 | 2 | 1.7 | 0.389999986 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K109 | RTU-K101 | K128 BULK STORAGE, K129 DRY STORAGE | 170 | 170 | 0.08 | 06 | 10 | 10 | 6.10 | 0.06 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K110 | RTU-K101 | K133 HOT PREP COOKING | 2160 | 635 | 0.49 | 14 | 19 | 17 | 22.30 | 0.45 | 2 | 2.2 | 0.479999989 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K111 | RTU-K101 | K133 HOT PREP BAKING | 1830 | 550 | 0.65 | 12 | 23 | 23 | 19.30 | 0.65 | 2 | 2.6 | 0.949999988 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K112 | RTU-K101 | K134 COLD PREP | 1065 | 320 | 0.45 | 10 | 22 | 20 | 11.30 | 0.44 | 2 | 1.4 | 0.230000004 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K113 | RTU-K101 | K135 STAGING DELI | 820 | 245 | 0.56 | 08 | 23 | 21 | 8.60 | 0.54 | 2 | 1.1 | 0.230000004 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K114 | RTU-K101 | K135 STAGING DAILY SPECIAL & SANDWICHES | 825 | 250 | 0.57 | 08 | 23 | 21 | 8.80 | 0.54 | 2 | 1.2 | 0.25 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K115 | RTU-K101 | K135 STAGING PIZZA | 1090 | 330 | 0.47 | 10 | 22 | 20 | 11.60 | 0.46 | 2 | 1.4 | 0.25 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L101 | ERU-M101 | L100 GIRLS PE/JV LOCKER ROOM | 910 | 910 | 0.52 | 10 | 20 | 19 | 31.90 | 0.51 | 3 | 4.9 | 2.170000076 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L102 | ERU-M101 | L101 WOMENS INSTRUCTOR OFFICE LOCKER ROOM | 345 | 245 | 0.16 | 06 | 14 | 14 | 8.60 | 0.12 | 2 | 2.1 | 0.560000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L103 | ERU-M101 | L107C CORRIDOR | 215 | 215 | 0.14 | 06 | 13 | 11 | 7.60 | 0.11 | 2 | 1.0 | 0.129999995 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L105 | ERU-M101 | 137A,B & T COACHES OFFICE & STORAGE | 470 | 470 | 0.67 | 06 | 21 | 21 | 16.50 | 0.51 | 3 | 2.5 | 1.210000038 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M101 | ERU-M101 | M100 TRAINING ROOM | 475 | 475 | 0.68 | 06 | 21 | 21 | 16.70 | 0.52 | 3 | 2.6 | 1.259999990 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M102 | ERU-M101 | M100C HYDROTHERAPY | 420 | 420 | 0.55 | 06 | 18 | 18 | 14.70 | 0.43 | 3 | 1.9 | 0.680000007 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M103 | ERU-M101 | M101 GIRLS ATHLETIC LOCKER ROOM | 880 | 880 | 0.49 | 10 | 20 | 18 | 30.90 | 0.48 | 3 | 4.5 | 1.809999943 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M104 | ERU-M101 | M102C CORRIDOR | 690 | 690 | 0.62 | 08 | 20 | 20 | 24.20 | 0.60 | 3 | 4.9 | 2.930000067 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M105 | ERU-M101 | M114 BOYS ATHLETIC LOCKER ROOM | 1200 | 1200 | 0.49 | 12 | 19 | 18 | 42.10 | 0.48 | 3 | 5.2 | 2.710000038 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M201 | ERU-M101 | BLOWER COILS AD/PE CLASSRROM | 515 | 0 | 0.01 | 08 | 19 | 20 | - | - | - | - | - | - | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N101 | ERU-M101 | N101 BOYS PE/JV LOCKER ROOM | 1015 | 1015 | 0.62 | 10 | 22 | 20 | 35.60 | 0.61 | 3 | 6.9 | 4.199999809 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N102 | ERU-M101 | N102 MENS INSTRUCTOR OFFICE LOCKER ROOM | 245 | 245 | 0.16 | 06 | 14 | 14 | 8.60 | 0.12 | 2 | 2.1 | 0.560000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N103 | ERU-M101 | N104 GIRL'S SWIM LOCKER ROOM | 330 | 330 | 0.27 | 06 | 17 | 16 | 11.60 | 0.19 | 2 | 7.6 | 6.670000076 | 1-1/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N104 | ERU-M101 | N104C CORRIDOR | 390 | 390 | 0.48 | 06 | 18 | 17 | 13.70 | 0.38 | 3 | 1.6 | 0.490000010 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| | | | | | | | | | | | | | | | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L104 | AHU-M101 | L111A, L111B, L111S COACHES OFFICES & STORAGE | 540 | 165 | 0.28 | 08 | 18 | 18 | 6.60 | 0.27 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M106 | AHU-M101 | M103 WEIGHT ROOM | 1340 | 400 | 0.66 | 10 | 24 | 23 | 14.10 | 0.65 | 2 | 2.2 | 0.579999983 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M107 | AHU-M101 | M104 WRESTLING ROOM | 2040 | 610 | 0.44 | 14 | 19 | 17 | 21.40 | 0.41 | 2 | 2.0 | 0.409999996 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M108 | AHU-M101 | M104S M107 M107S WRESTLING OFFICE & STORAGE | 695 | 150 | 0.55 | 06 | 21 | 21 | 5.70 | 0.37 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M109 | AHU-M101 | M108S M109A M109B OFFICE STORAGE | 340 | 170 | 0.28 | 06 | 17 | 16 | 6.10 | 0.20 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M110 | AHU-M101 | M110 GIRLS COACHES OFFICE/STORAGE | 130 | 130 | 0.05 | 06 | - | - | 5.30 | 0.04 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M202 | AHU-M101 | M207 CORRIDOR | 2075 | 830 | 0.45 | 14 | 19 | 17 | 29.10 | 0.42 | 2 | 3.9 | 1.490000001 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M204 | AHU-M101 | M208 CONCESSIONS | 1140 | 340 | 0.50 | 10 | 23 | 22 | 11.90 | 0.50 | 2 | 1.5 | 0.280000001 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M205 | AHU-M101 | M210 FITNESS ROOM | 1725 | 515 | 0.33 | 14 | 17 | 15 | 19.10 | 0.31 | 2 | 1.8 | 0.330000013 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M206 | AHU-M101 | M202M MECHANICAL | 565 | 170 | 0.15 | 08 | 19 | 19 | 4.80 | 0.13 | 1 | 0.9 | 0.529999971 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N105 | AHU-M101 | N106 BOYS TRACK/CC COACHES OFFICE | 150 | 150 | 0.07 | 06 | - | - | 5.70 | 0.05 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N106 | AHU-M101 | N108 SWIMMING OFFICE | 310 | 155 | 0.24 | 06 | 15 | 15 | 5.80 | 0.17 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N107 | AHU-M101 | N110T & N111T FAMILY USE TOILETS | 475 | 310 | 0.68 | 06 | 21 | 21 | 10.90 | 0.52 | 3 | 1.0 | 0.189999998 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N201 | AHU-M101 | N110 ATHLETIC LOBBY / CORRIDOR | 230 | 230 | 0.14 | 06 | 14 | 13 | 8.10 | 0.10 | 2 | 1.7 | 0.389999986 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |

MECHANICAL NOTES:
1. INCLUDE INTERGRAL 1" THICK FIBER FREE SOUND INSTULATION
2. COIL CAPACITIES & PRESSURE DROPS BASED ON MAX. CFM
3. REFERENCE "ROWS" COLUMN FOR APPROPRIATE NUMBER OF ROWS. ALL COILS ARE MINIMUM 2 ROWS.
4. SIZE THE COIL SELECTION BASED OFF OF 130 DEG EWT AND 95 DEG LAT.
5. BTU CAPACITY IS BASED ON MIN CFM VALUE.

## MONITOR PANEL

| MARK | LOCATION | MIN. MEASURING FEATURES | DUAL SENSOR (Y/N) | V | PH | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|
| MONITOR PANEL-A101 | A100 | CARBON MONOXIDE (CO), NITROGEN DIOXIDE (NO2), AND PROPANE (C3H8) | Y | 115 | 1 | HONEYWELL E3 POINT | 1,2 |

MECHANICAL NOTES:
1. MECHANICAL CONTRACTOR AND CONTROLS CONTRACTORS TO COORDINATE AND INSTALL UNIT AND PROVIDE ALL INTER-WIRING TO SENSORS.
2. OPERATION TO BE TIED-INTO EF-A101

## CHILLER - WATER COOLED SCHEDULE

| MARK (CH-) | NET COOLING CAP (TON) | CHILLED WATER DATA: GPM | EWT (°F) | LWT (°F) | PD (MAX) (FT WG) | CONDENSER WATER DATA: NET HEATING CAP (MBH) | GPM | EWT (°F) | LWT (°F) | PD (MAX) (FT WG) | COMPRESSOR DATA: NO | REFR TYPE | NPLV KW/TON (MAX) | MOTOR DATA V | PH | MIN CIRCUIT AMPS | MAX FUSE AMPS | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CH-K101 | 170.2 | 340 | 54 | 42 | 14.1 | 2483.4 | 490 | 85 | 95 | 17.8 | 2 | R134A | 0.597 | 460 | 3 | 253 | 350 | TRANE RTWD-180 HI | 1,2,3 |
| CH-K102 | 170.2 | 340 | 54 | 42 | 14.1 | 2483.4 | 490 | 85 | 95 | 17.8 | 2 | R134A | 0.597 | 460 | 3 | 253 | 350 | TRANE RTWD-180 HI | 1,2,3 |
| CH-K103 | 170.2 | 340 | 54 | 42 | 14.1 | 2483.4 | 490 | 85 | 95 | 17.8 | 2 | R134A | 0.597 | 460 | 3 | 253 | 350 | TRANE RTWD-180 HI | 1,2,3 |
| CH-XX | 138 | 275 | 56 | 44 | 9.7 | 2251.5 | 490 | 120 | 130 | 14.6 | 2 | R134A | - | - | - | - | - | TRANE RTWD-180 HI | 4 |

MECHANICAL NOTES:
1. CHILLED WATER FOULING FACTOR = .0001, CONDENSER WATER FOULING FACTOR = .00025.
2. NPLV IS MAXIMUM VALUE AND SHALL NOT BE EXCEEDED. IEEE FILTER LOSS SHALL BE INCLUDED IN THE NPLV VALUE. PROVIDE CHILLER SELECTION PROGRAM OUTPUT WITH SHOP DRAWINGS.
3. CHILLERS SHALL BE FACTORY MOUNTED ON A SKID WITH ALL ASSOCIATED PUMPS, PIPING, AND CONTROLS. SEE DRAWINGS FOR MORE INFORMATION.
4. CH-XX IS CAPACITIES OF CH-K1, CH-K2, OR CH-K3 WHEN OPERATING IN HEATING MODE.

## MAKE UP AIR UNIT - OUTDOOR GAS FIRED SCHEDULE

| MARK | LOCATION | TYPE | CFM SUPPLY | ESP | FUEL TYPE | CODNEDING UNIT TAGS | HEATING: SOURCE | EAT (°F) | LAT (°F) | INPUT (MBH) | OUTPUT (MBH) | DX COOLING: EAT (°F) | LAT (°F) | TOTAL CAPACITY (MBH) | SENSIBLE CAPACITY (MBH) | MOTOR DATA: HP | V | PH | MOCP | MCA | VFD | WEIGHT (LBS) | BASIS OF DESIGN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAU-K101 | AREA K - ROOF | ROOF DIRECT FIRED | 5,320 | 0.5 | NAT. GAS | SSCU-K102 & K103 | NG | -10 | 70 | 500 | 460 | 95 / 78 | 83 / 73 | 120 | 68 | 5 | 460 | 3 | 15 | 6.8 | YES | 5152 | CAPTIVE AIRE A3-D.500-G18-MPU | 1,2,3,4,5 |

MECHANICAL NOTES:
1. PROVIDE UNIT WITH A DUAL CIRCUI MODULAR PACKAGED COOLING OPTION, INCLUDING CONDENSERS (480 VOLT 3 PHASE), DX COOLING, FILTER/DRRYER KIT, THERMAL EXPANSION VALAVE, R410A REFRIDGERANT AND REFRIGERANT PIPING.
2. PROVIDE WITH VFD FOR VARIABLE VOLUME SYSTEM. VFD TO BE MOUNTED INSIDE UNIT CONTROLS CABINET.
3. PROVIDE WITH 18" ROOF CURB
4. COORDINATE WITH ELECTRICAL CONTRACTOR FOR MOUNTING OF CONTROL PANEL FOR UNIT.
5. UNIT TO BE INTERLOCKED WITH ASSOCIATED EXHAUST FAN FOR KITCHEN HOODS.

ADD #3

## KITCHEN HOOD SCHEDULE

| MARK (KH-) | TYPE | DIMENSIONS (W X D X T) | SERVES | MAKE UP AIR: PLENUM SIZE (L X W X H) | MAKE UP AIR: COLLAR SIZE (L X W) | MAKE UP AIR: CFM | MAKE UP AIR: ESP (IN) | SUPPLY AIR: PLENUM SIZE (L X W X H) | SUPPLY AIR: COLLAR SIZE (DIAMETER) | SUPPLY AIR: CFM | SUPPLY AIR: ESP (IN) | EXHAUST: COLLAR SIZE (DIAMTER) | EXHAUST: CFM | EXHAUST: ESP (IN) | MOUNTING HEIGHT | WEIGHT (LBS) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KH-E101 | TYPE 1 | 90" X 42" X 24" | FCS | - | - | - | - | - | - | - | - | 10" x 14" | 1500 | 0.716 | 80" | 410 | CAPTIVE AIRE 4224 | 1,2,3,7,9,14 |
| KH-E102 | TYPE 1 | 72" X 54" X 24" | FCS | - | - | - | - | - | - | - | - | 10" x 20" | 1950 | 1.214 | 80" | 490 | CAPTIVE AIRE 5424 | 1,2,3,7,9,14 |
| KH-E103 | TYPE 1 | 72" X 54" X 24" | FCS | - | - | - | - | - | - | - | - | 10" x 20" | 1950 | 1.214 | 80" | 490 | CAPTIVE AIRE 5424 | 1,2,3,9,14,15 |
| KH-E104 | TYPE 1 | 48" X 48" X 20" | FCS | - | - | - | - | - | - | - | - | 10" x 14" | 1300 | 1.1 | 80" | 410 | CAPTIVE AIRE 4824 | 1,2,3,7,9,14 |
| KH-E105 | TYPE 1 | 54" X 66" X 20" | FCS | - | - | - | - | - | - | - | - | 8" x 8" | 675 | 0.428 | 80" | 370 | CAPTIVE AIRE 6624 | 1,2,3,9,14,16 |
| KH-K101A | TYPE 1 | 186" X 60" X 30" | KITCHEN | 198" X 9" X 6" & | (4) 28" X 6" & | 2660 | 0.105 | 198" X 10" X 6" | (6) 8" | 900 | 0.069 | (2) 12" | 2712 | 0.564 | 80" | 1,275 | CAPTIVE AIRE 6030ND | 1 THRU 11 |
| KH-K101B | TYPE 1 | 186" X 60" X 30" | KITCHEN | (2) 79" X 9" X 6 | (2) 28" X 6" | 2660 | 0.105 | 198" X 10" X 6" | (6) 8" | 900 | 0.069 | (2) 12" | 2712 | 0.564 | 80" | 1,275 | CAPTIVE AIRE 6030ND | 1 THRU 11 |
| KH-K102 | TYPE 1 | - | CONVEY. OVEN | - | - | - | - | - | - | - | - | - | - | - | - | - | FSE #68 | 12, 13 |

MECHANICAL NOTES:
1. DIMENSIONS ARE FOR HOOD ONLY. AN ADDITIONAL 12" IN LENGTH IS FOR FIRE SUPPRESSION / CONTROLS CABINET. BOTH HOODS ARE TO HAVE THE SAME OVERALL DIMENSIONS.
2. PROVIDE WITH 12" HIGH FIELD WRAPPER TO CONCEAL DUCTWORK CONNECTIONS BELOW KITCHEN CEILING.
3. PROVIDE WITH SERIES OF SINGLE-STAGE BAFFLE FILTERS CONSTRUCTED OF 430 STAINLESS STEEL, SIZED TO FIT INTO STANDARD 2-INCH HOOD CHANNELS.
4. PROVIDE WITH AC-PSP DUAL STREAM PLENUM WITH LED LIGHTS ACCESSORY. THE 12" BACK PLENUM IS THE HOOD MAKE-UP AIR PLENUM SUPPLIED WITH (4) 28"x6" OPENINGS EACH BALANCED TO 360 CFM. THE 10" FRONT PLENUM IS THE AC PLENUM SUPPLIED WITH (6) 8" DIAMETER OPENINGS EACH BALANCED TO 150 CFM.
5. PROVIDE WITH PSP PLENUM ALONG THE RIGHT AND LEFT SIDES OF HOOD. MAKE-UP AIR PLENUM (EACH SIDE) SUPPLIED WITH (2) 28"x6" OPENINGS EACH BALANCED TO 285 CFM.
6. INSTALL HOOD WITH BOTTOM AT 6'-6" AFF. INSTALL AC-PSP AND SIDE PSP WITH BOTTOM AT 5'-4" AFF.
7. PROVIDE WITH ANSUL R102 FIRE SYSTEM MOUNTED IN CABINET LOCATED ON END OF HOOD AS SHOWN.
8. PROVIDE WITH CAPTIVEAIRE DEMAND CONTROL VENTILATION MODEL DCV-4111 MOUNTED IN CONTROLS CABINET. CONTROLS UNIT SHALL CONTROL BOTH HOODS. CABINET IS TO BE LOCATED ON NORTH END OF ISLAND AS SHOWN WITH REMOTE MOUNTED FAN AND LIGHT SWITCH.
9. PROVIDE HOOD WITH (3) 4' LED LIGHT FICTURES.
10. PROVIDE WITH PERFORMANCE ENHANCING LIP
11. HOODS ARE SPECIFIED AS CANOPY HOOD, BUT THE AIRFLOWS SHALL FUNCTION AS AN ISLAND TYPE HOOD. TWO CANOPY HOODS ARE TO BE INSTALLED BACK TO BACK WITH 6" STAINLESS STEEL FILLER STRIP BETWEEN THE BACK OF THE HOODS.
12. HOOD PROVIDED BY FOOD SERVICE CONTRACTOR. REFER TO FSE #68. PROVIDE DUCTWORK CONNECTION BETWEEN HOOD AND EXHAUST FAN AS SHOWN ON PLANS.
13. PROVIDE 3LB ANSUL R102, STAINLESS STEEL FIRE SUPPRESSION CABINET, NATURAL GAS SOLENOID VALVE AND ROUTE PIPING TO CONVEYOR OVEN & HOOD PREPIPED CONNECTION. MOUNT TOP OF CABINET FLUSH WITH CEILING.
14. INTERLOCK ALL ANSUL R102 FIRE SYSTEM IN FCS CLASSROOM TO ACT AS ONE UNIT.
15. ANSUL FIRE SUPPRESSION SYSTEM TO BE TIED INTO HOOD KH-E102 CABINET. PROVIDE CONTROLS UTILITY CABINET AS SHOWN. CONTROLS UNIT SHALL CONTROL ALL FCS HOODS AND EF-E202.
16. ANSUL FIRE SUPPRESSION SYSTEM TO BE TIED INTO HOOD KH-E104 CABINET.

## HEAT EXCHANGER - PLATE AND FRAME (WATER TO WATER)

| MARK (HE-X) | SERVES | LOAD MBH | COLD SIDE DATA: FLUID | GPM | EWT (°F) | LWT (°F) | PD (PSI) | HOT SIDE DATA: FLUID | GPM | EWT (°F) | LWT (°F) | PD (PSI) | NUMBER OF PLATES | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HE-1 | HEAT PUMP LOOP SYSTEM | 10820 | 1,000 | GLYCOL/WATER | 55 | 83 | 1.55 | 2,450 | 100% WATER | 95 | 85 | 9.92 | 92 | ALFA LAVAL T20M-FG | 1,2,3,4,5 |
| HE-2 | POOL WATER HEATING | 1047 | 285 | POOL WATER | 78 | 85.4 | 6.66 | 250 | 100% WATER | 95 | 86.6 | 5.58 | 42 | ALFA LAVAL M10B-FG | 1,2,3,4,6 |

MECHANICAL NOTES:
1. PROVIDE ASME-RATED.
2. RATE PERFORMANCE IN ACCORDANCE WITH AHRI STANDARD 400.
3. PROVIDE OSHA SAFETY SHROUD.
4. PROVIDE 4" CONCRETE HOUSEKE

## DUCTLESS SPLIT SYSTEM - INDOOR UNIT

| MARK | LOCATION (ROOM) | SERVES | CALCULATED TOTAL CAPACITY (MBH) | CALCULATED SENSIBLE CAPACITY (MBH) | COIL DATA NOMINAL CAPACITY (TONS) | COIL DATA TOTAL CAPACITY (MBH) | COIL DATA SENSIBLE CAPACITY (MBH) | COIL DATA E.A.T. DB/WB (°F) | FAN DATA AIRFLOW (CFM) | MOTOR DATA MCA | MOTOR DATA V | MOTOR DATA PH | MOTOR DATA MOCP | MOUNTING HEIGHT (BOTT OF UNIT) | COND. DRAIN SIZE (IN) | WEIGHT (LBS.) | BASIS OF DESIGN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SSIU-A201 | A205 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.4 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-AA101 | AA107D | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.0 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-B101 | B123 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.1 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-B201 | B223 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.5 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-C101-A | C110 | HEAD END | 21.2 | 17.8 | 2.0 | 21.2 | 17.8 | 72.0/60.0 | 800 | 3.5 | 208 | 1 | 15 | 10'-0" | 3/4 | 245 | LIEBERT MMD24E | 1 |
| SSIU-C101-B | C110 | HEAD END | 21.2 | 17.8 | 2.0 | 21.2 | 17.8 | 72.0/60.0 | 800 | 3.5 | 208 | 1 | 15 | 10'-0" | 3/4 | 245 | LIEBERT MMD24E | 1 |
| SSIU-C201 | C226 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.6 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-D101 | D125 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.2 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-D201 | | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-E101 | E112 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.3 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-G201 | G200 | ELEV EQUIP RM | 12.0 | 8.2 | 1.0 | 12.0 | 8.2 | 72.0/61.0 | 330 | - | 208 | 1 | - | 10'-0" | 3/4 | 16 | DAIKIN FTXN12KEVJU | |
| SSIU-G202 | G202C | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-H101 | H107 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-H201 | H107 | COMM | 24.0 | - | 2.0 | 24.0 | - | 72.0/61.7 | 635 | 16.5 | 208 | 1 | 20 | 10'-0" | 3/4 | 31 | DAIKIN FAQ24PVJU | |
| SSIU-J101 | J108 | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-K101 | K103C | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-L101 | L105 | ELEV EQUIP RM | 12.0 | 8.2 | 1.0 | 12.0 | 8.2 | 72.0/61.0 | 330 | - | 208 | 1 | - | 10'-0" | 3/4 | 16 | DAIKIN FTXN12KEVJU | |
| SSIU-M201 | M210C | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |
| SSIU-N101 | N106C | COMM | 18.0 | 13.7 | 1.5 | 18.0 | 13.7 | 72.0/61.7 | 500 | 0.4 | 208 | 1 | 15 | 10'-0" | 3/4 | 31 | DAIKIN FAQ18PVJU | |

GENERAL NOTES:
A. PROVIDE LOW AMBIENT CONTROLS FOR COOLING BELOW 55 °F OUTDOOR DB TEMPERATURES, DOWN TO (0) °F.
B. MOUNTING HEIGHT SHOWN IS A MINIMUM, TO FACILITATE CONDENSATE DRAINAGE. FINAL HEIGHT MAY BE HIGHER TO ACCOMMODATE CLEARANCES OR FACILITATE ATTACHMENT TO STRUCTURE.
C. PROVIDE UNITS WITH INTEGRAL CONDENSATE PUMP TO LIFT CONDENSATE ABOVE UNIT, AND ALLOW GRAVITY DRAINAGE ABOVE ADJACENT CEILING HEIGHTS.
D. CALCULATED CAPACITY BASED ON PIPING LENGTH SHOWN ON DRAWINGS.

MECH NOTES:
1. PROVIDE AIR DISTRIBUTION PLENUM

## DUCTLESS SPLIT SYSTEM - OUTDOOR UNIT

| MARK | LOCATION (ROOM) | SERVES | EFFICIENCY AT A.R.I. (SEER) | ELECTRICAL DATA V | PH | MCA | MOCP | WEIGHT (LBS.) | BASIS OF DESIGN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| SSCU-A201 | ROOF A205 | SSIU-A201 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-AA101 | ROOF AA105 | SSIU-AA101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-B101 | ROOF B224M | SSIU-B101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-B201 | ROOF B224M | SSIU-B201 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-C101-A | ROOF C2XX | SSIU-C101 | - | 208 | 1 | 18.4 | 30 | 241 | LIEBERT PFH027A-HL7 | |
| SSCU-C101-B | ROOF C2XX | SSIU-C101 | - | 208 | 1 | 18.4 | 30 | 241 | LIEBERT PFH027A-HL7 | |
| SSCU-C201 | ROOF | SSIU-C201 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-D101 | ROOF D223M | SSIU-D101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-D201 | ROOF D223M | SSIU-D201 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-E101 | ROOF E___ | SSIU-E101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-G201 | ROOF G200 | SSIU-G201 | 18.0 | 208 | 1 | 7.0 | 15 | 66 | DAIKIN RKN12KEVJU | |
| SSCU-G202 | ROOF G202C | SSIU-G202 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-H101 | ROOF H200E | SSIU-H101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-H201 | ROOF H202E | SSIU-H201 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ24PVJU | |
| SSCU-J101 | ROOF J108 | SSIU-J101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-K101 | ROOF K103C | SSIU-K101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-L101 | ROOF L204S | SSIU-L101 | 18.0 | 208 | 1 | 7.0 | 15 | 66 | DAIKIN RKN12KEVJU | |
| SSCU-M201 | ROOF M210C | SSIU-M201 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |
| SSCU-N101 | ROOF N200 | SSIU-N101 | 18.6 | 208 | 1 | 16.5 | 20 | 150 | DAIKIN RZQ18PVJU | |

GENERAL:
A. REFRIGERANT LIQUID AND SUCTION LINES ARE TO BE SIZED AND INSTALLED AS RECOMMENDED BY THE MANUFACTURER'S INSTALLATION GUIDELINES.
B. UNITS MUST MEET ASHRAE 90.1-2007 MINIMUM EFFICIENCIES AND U.S. DEPARTMENT OF ENERGY'S FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP) RECOMMENDATIONS. SCHEDULED EFFICIENCIES ARE AT ARI CONDITIONS.
C. PROVIDE LOW AMBIENT CONTROLS FOR COOLING BELOW 55 °F OUTDOOR DB TEMPERATURES, DOWN TO (0) °F.

## HUMIDIFIER - ELECTRIC SCHEDULE

| MARK | SERVES | ROOM DESIGN CONDITIONS DB (°F) | ROOM DESIGN CONDITIONS RH % | MAXIMUM ABSORPTION DISTANCE (FT) | OUTPUT (LBS/HR) | ELECTRICAL DATA FLA | V | PH | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| H-G101 | H117S | 72 | 45 | 0 | 9 | 20 | 120 | 1 | HUMIDIFIRST MF-10 | 1,2 |
| H-H101 | H117S | 72 | 45 | 0 | 9 | 20 | 120 | 1 | HUMIDIFIRST MF-10 | 1,2 |

MECHANICAL NOTES:
1. PROVIDE 6-FOOT 120-VOLT POWER CORD.
ADD #3 2. BASIS OF DESIGN PRODUCT: PROVIDE AS SHOWN OR WITH A COMPARABLE PRODUCT.

## LOUVERED PENTHOUSE HOOD SCHEDULE

| MARK (LP-X) | SERVES | CFM | MAX PD (IN WG) | INSIDE CURB L (IN) | INSIDE CURB W (IN) | HEIGHT D (IN) | OVERALL LOUVER FREE AREA (SQ. FT.) | FREE AREA FACE VELOCITY (FPM) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| LP-M201 | AHU-M101 | 11,000 | 0.1 | 48 | 64 | 31 | 21.4 | 514.02 | GREENHECK WIH | 1,2,3,4 |
| LP-M202 | AHU-M101 | 11,000 | 0.1 | 48 | 64 | 31 | 21.4 | 514.02 | GREENHECK WAH | 1,2,3,4 |
| LP-M203 | ERU-M101 | 8,000 | 0.1 | 36 | 72 | 27 | 18 | 444.44 | GREENHECK WIH | 1,2,3,4 |
| LP-M204 | ERU-M101 | 8,000 | 0.1 | 36 | 72 | 27 | 18 | 444.44 | GREENHECK WAH | 1,2,3,4 |
| LP-N201 | ERU-N101 | 12,500 | 0.1 | 42 | 86 | 35 | 27.21 | 459.39 | GREENHECK WIH | 1,2,3,4 |

MECHANICAL NOTES:
1. LOUVER SHALL BE PROVIDED WITH BIRDSCREEN.
2. PROVIDE INSULATED 18" HIGH CURB.
ADD #3 3. LOUVER SHALL BE PROVIDED WITH A 115 V NON-OVERLOADING MOTORIZED BACKDRAFT DAMPER.
4. BASIS OF DESIGN PRODUCT: PROVIDE AS SHOWN OR WITH A COMPARABLE PRODUCT.

## SOUND ATTENUATOR SCHEDULE

| MARK | SERVES | LOCATION | EQUIPMENT TYPE | TOTAL CFM | MAX PRESS DROP (IN) | FACE DIMENSION/ LENGTH (FT) | MIN OPERATING INSERTION LOSS (dBA) 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SA-C201S | HP-C203 | SUPPLY AIR | HEAT PUMP | 3000 | 0.3 | 5 | 1 | 10 | 16 | 23 | 23 | 19 | 16 | PRICE RM60/6E | 1,2 |
| SA-C201R | HP-C203 | RETURN AIR | HEAT PUMP | 3000 | 0.3 | 4 | 0 | 6 | 12 | 16 | 17 | 13 | 10 | PRICE RM48/YD | 1,2 |
| SA-G201S | VAV-G201 | SUPPLY AIR | VAV BOX | 2800 | 0.3 | 3 | 7 | 17 | 13 | 4 | 0 | 0 | 0 | PRICE CMX36/22E | 1,2 |
| SA-G205S | VAV-G205 | SUPPLY AIR | VAV BOX | 1960 | 0.3 | 5 | 7 | 19 | 21 | 21 | 20 | 13 | 11 | PRICE CMX60/18E | 1,2 |
| SA-H101S | RTU-H101 | SUPPLY AIR | AHU | 5300 | 0.3 | 2 | 9 | 13 | 27 | 18 | 13 | 9 | 11 | PRICE CMX24/24E | 1,2 |
| SA-H101R | RTU-H101 | RETURN AIR | AHU | 5300 | 0.3 | 5 | 0 | 2 | 18 | 16 | 11 | 12 | 12 | PRICE CHX60/24A | 1,2 |
| SA-K101 | RTU-J101 | SUPPLY AIR | AHU | 25000 | 0.3 | 9 | 10 | 15 | 23 | 29 | 27 | 24 | 18 | PRICE RMX108/XD | 1,2 |
| SA-L201S | RTU-L101 | SUPPLY AIR | AHU | 36000 | 0.3 | 8 | 8 | 14 | 11 | 14 | 15 | 15 | 0 | PRICE RMX96/WE | 1,2 |
| SA-L201R | RTU-L101 | RETURN AIR | AHU | 36000 | 0.3 | 6 | 6 | 2 | 4 | 8 | 14 | 12 | 6 | PRICE RMX72/YD | 1,2 |
| SA-M201S | RTU-M101 | SUPPLY AIR | AHU | 12000 | 0.3 | 5 | 4 | 12 | 19 | 26 | 25 | 21 | 14 | PRICE CMX60/42C | 1,2 |
| SA-M201R | RTU-M101 | RETURN AIR | AHU | 12000 | 0.3 | 6 | 3 | 12 | 11 | 12 | 10 | 9 | 2 | PRICE ERMX67/XC | 1,2 |
| SA-N201S | ERU-N101 | SUPPLY AIR | AHU | 29000 | 0.3 | 5 | 0 | 3 | 15 | 12 | 8 | 7 | 0 | PRICE R60/7D | 1,2 |

MECHANICAL NOTES:
1. MECHANICAL CONTRACTOR TO LOCATE SOUND ATTENUATORS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO ASSURE PROPER PERFORMANCE.
ADD #3 2. BASIS OF DESIGN PRODUCT: PROVIDE AS SHOWN OR WITH A COMPARABLE PRODUCT.

## UNIT HEATER - ELECTRIC

| PLAN MARK | LOCATION | HEATING KW | HEATING EAT DB | HEATING AIR TEMP RISE | MOTOR DATA HP | MOTOR DATA V | MOTOR DATA PH | MOTOR DATA MCA | CABINET DATA THROW DIRECTION | EXPLOSION PROOF | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UH-A101 | A120S | 5.0 | 60 | 40 | 1/125 | 480 | 3 | 35 | HORIZONTAL | NO | TRANE UHEC-05 | 1,2,3 |
| UH-A102 | A119 | 3.0 | 60 | 20 | 1/4 | 480 | 3 | 32.4 | HORIZONTAL | YES | TRANE UHXA-03 | 1,2,3,4 |

MECHANICAL NOTES:
1. INTERNAL 2 STAGE THERMOSTAT.
2. PROVIDE INTEGRAL MOTOR OVERLOAD PROTECTION.
3. PROVIDE UNIT MOUNTED DISCONNECT SWITCH
4. EXPLOSION PROOF UNIT.

## PACKAGED HEAT PUMP UNIT - AIR SOURCE SCHEDULE

| MARK | CFM | ESP (IN WG) | COOLING DATA TOTAL CAP (MBH) | COOLING DATA SENS CAP (MBH) | EAT DB / WB (°F) | HEATING DATA ELEC INPUT (KW) | HEATING DATA SENS CAP (MBH) | EAT DB (°F) | HEATING DATA ELEC INPUT (KW) | CONDENSER DATA BACKUP HEAT (KW) | CONDENSER DATA EAT (°F) CLG | CONDENSER DATA EAT (°F) HTG | ELECTRICAL DATA V | PH | MCA | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PTHP-M201 | 340 | 0.2 | 8.768 | 6.14 | 80 / 67 | 0.782 | 9 | 70 | 2.5 | - | 95 | 47 | 208 | 1 | 12 | ISLANDAIRE EZ4209B9AIF4 | 1 |
| PTHP-M202 | 340 | 0.2 | 8.768 | 6.14 | 80 / 67 | 0.782 | 9 | 70 | 2.5 | - | 95 | 47 | 208 | 1 | 12 | ISLANDAIRE EZ4209B9AIF4 | 1 |
| PTHP-M203 | 340 | 0.2 | 8.768 | 6.14 | 80 / 67 | 0.782 | 9 | 70 | 2.5 | - | 95 | 47 | 208 | 1 | 12 | ISLANDAIRE EZ4209B9AIF4 | 1 |
| PTHP-M204 | 340 | 0.2 | 8.768 | 6.14 | 80 / 67 | 0.782 | 9 | 70 | 2.5 | - | 95 | 47 | 208 | 1 | 12 | ISLANDAIRE EZ4209B9AIF4 | 1 |

MECHANICAL NOTES:
GENERAL PROVIDE UNIT WITH ONE INCH FILTER HOUSING AND DISPOSABLE FILTER.
1. PROVIDE UNIT WITH CONDENSATE REMOVAL KIT, INSULATED WALL SLEEVE WITH OUTDOOR ARCHITECTURAL LOUVER, WIRE REMOTE THERMOSTAT, AND ELECTRICAL SUB BASE KIT WITH CORD AND PLUG.

ADD #3

## UNIT HEATER - HOT WATER SCHEDULE

| MARK (UH-X) | COIL DATA CAP (MBH) | COIL DATA CFM | COIL DATA GPM | COIL DATA EWT (°F) | COIL DATA LWT (°F) | COIL DATA MAX PD (FT WG) | COIL DATA EAT (°F) | COIL DATA LAT (°F) | ELECTRICAL DATA HP | V | PH | HZ | TYPE | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UH-K101 | 13.1 | 395 | 1.3 | 130 | 110 | 0.10 | 30 | 60 | 16 WATTS | 120 | 1 | 60 | HORIZONTAL | TRANE S-18 | 1,2 |
| UH-K102 | 13.1 | 395 | 1.3 | 130 | 110 | 0.10 | 30 | 60 | 16 WATTS | 120 | 1 | 60 | HORIZONTAL | TRANE S-18 | 1,2 |
| UH-K103 | 34.8 | 1000 | 3.5 | 130 | 110 | 0.12 | 30 | 60 | 1/20 HP | 120 | 1 | 60 | HORIZONTAL | TRANE S-48 | 1,2 |
| UH-K104 | 34.8 | 1000 | 3.5 | 130 | 110 | 0.12 | 30 | 60 | 1/20 HP | 120 | 1 | 60 | HORIZONTAL | TRANE S-48 | 1,2 |
| UH-N101 | 34.8 | 1000 | 3.5 | 130 | 110 | 0.12 | 30 | 60 | 1/20 HP | 120 | 1 | 60 | HORIZONTAL | TRANE S-48 | 1,2 |
| UH-N102 | 34.8 | 1000 | 3.5 | 130 | 110 | 0.12 | 30 | 60 | 1/20 HP | 120 | 1 | 60 | HORIZONTAL | TRANE S-48 | 1,2 |

MECHANICAL NOTES:
1. PROVIDE LOUVER FIN DIFFUSER FOR THROW ADJUSTMENT.
2. MINIMUM MOUNTING HEIGHT IS 7'-6" FEET ABOVE FINISH FLOOR TO COMPLY WITH OSHA REGULATIONS.

## ROOF-TOP AIR CONDITIONING UNIT

| MARK (RTU-X) | LOCATION | SUPPLY CFM | OUTSIDE AIR CFM | DX (EVAPORATOR) SECTION EAT (oF DB) | EAT (oF WB) | LAT (oF DB) | LAT (oF WB) | TOTAL CAP (MBH) | SENS CAP (MBH) | COIL AREA SF | COIL FACE VEL (FPM) | HOT GAS REHEAT SECTION LAT (oF DB) | LAT (oF WB) | REHEAT COIL CAP (MBH) | HEATING SECTION EAT (oF DB) | LAT (oF DB) | N. GAS INPUT (MBH) | N. GAS OUTPUT (MBH) | UNIT WEIGHT (LB) | FAN DATA SUPPLY HP | FAN DATA TOTAL SP (IN WG) | ELECTRICAL DATA V / PH | MCA | MOCP | MANUFACTURER & MODEL NUMBER | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-AA101 | AA105 | 1990 | 1000 | 85 | 69.0 | 54.4 | 54.4 | 91.7 | 66.5 | 14.00 | 142 | 70.0 | 60.2 | 33.6 | 30.0 | 104.0 | 200 | 160 | 2210 | 2.3 | 2.2 | 460 / 3 | 15.6 | 20.0 | DAIKIN DPS 007A | 1 THRU 11 |
| RTU-AA102 | AA104 | 1990 | 1000 | 85 | 69.0 | 54.4 | 54.4 | 91.7 | 66.5 | 14.00 | 142 | 70.0 | 60.2 | 33.6 | 30.0 | 104.0 | 200 | 160 | 2210 | 2.3 | 2.2 | 460 / 3 | 15.6 | 20.0 | DAIKIN DPS 007A | 1 THRU 11 |
| RTU-AA103 | AA108 | 1990 | 1000 | 85 | 69.0 | 54.4 | 54.4 | 91.7 | 66.5 | 14.00 | 142 | 70.0 | 60.2 | 33.6 | 30.0 | 104.0 | 200 | 160 | 2210 | 2.3 | 2.2 | 460 / 3 | 15.6 | 20.0 | DAIKIN DPS 007A | 1 THRU 11 |
| RTU-AA104 | AA103 | 1990 | 1000 | 85 | 69.0 | 54.4 | 54.4 | 91.7 | 66.5 | 14.00 | 142 | 70.0 | 60.2 | 33.6 | 30.0 | 104.0 | 200 | 160 | 2210 | 2.3 | 2.2 | 460 / 3 | 15.6 | 20.0 | DAIKIN DPS 007A | 1 THRU 11 |
| RTU-H102 | H200E | 3500 | 0 | 80 | 64.0 | 55.9 | 54.3 | 100.0 | 90.9 | 13.50 | 259 | | | | | | | | | 3 | 1.25 | 460 / 3 | 26 | 30.0 | DAIKIN MPSS008B | 1 THRU 10 |

MECHANICAL NOTES:
1. DESIGN TEMPERATURES TO BE USED FOR UNIT SELECTIONS ARE: 95/78 F SUMMER OUTDOOR, 75 F / 50% RH SUMMER INDOOR, -10 F WINTER OUTDOOR, 70 F / 30% RH WINTER INDOOR.
2. EVAPORATOR (DEHUMIDIFYING COIL) MAXIMUM FACE VELOCITY SHALL NOT EXCEED 500 FPM.
3. UNIT SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED, TESTED AND PROVIDED WITH SINGLE POINT POWER, INTEGRAL NON-FUSED DISCONNECT SWITCH, INTEGRAL 115 VOLT GFI SERVICE RECEPTACLE, PHASE AND BROWNOUT PROTECTION.
4. UNIT SHALL INCLUDE " THICK R7 FOAM INSULATED DOUBLE WALL CONSTRUCTION, 2" PLEATED MERV 8 FILTERS, STAINLESS STEEL CONDENSATE DRAIN PAN AND CONDENSER COIL GUARDS.
5. UNIT SHALL BE PROVIDED AS A PACKAGED AIR COOLED DX COOLING WITH R-410A REFRIGERANT; MODULATING SCROLL COMPRESSOR, MODULATING HOT GAS REHEAT, MODULATING CONDENSER FAN HEAD PRESSURE CONTROL, REFRIGERANT SIGHT GLASSES AND 5 YEAR COMPRESSOR PARTS WARRANTY.
6. UNIT SHALL BE PROVIDED WITH SWSI SUPPLY FAN WITH INTEGRAL SPEED CONTROL (ECM OR VFD).
7. PERFORMANCE INCLUDES AN ALLOWANCE OF 0.35 IN WG FOR FILTER LOADING (I.E. LOADED FILTER = CLEAN FILTER + 0.35 IN WG).
8. UNIT SHALL BE PROVIDED WITH A BACNET INTERFACE LINK TO COMMUNICATE WITH BMS CONTROL SYSTEM PROVIDED BY OTHERS.
9. UNIT SHALL BE INSTALLED ON A 16-INCH HIGH INSULATED, SOLID BOTTOM ROOF CURB.
10. PROVIDE CONDENSATE DRAIN PER DETAIL 5/M4.2. ROUTE CONDENSATE TO NEAREST ROOF DRAIN WHERE FEASIBLE.
11. UNIT SHALL INCLUDE NATURAL GAS HEAT WITH A MINIMUM 10:1 TURNDOWN AND MODULATING CAPACITY CONTROL.

## FAN SCHEDULE

| MARK | LOCATION | FAN DATA FAN TYPE | WHEEL TYPE | CFM | ESP (IN WG) | FAN RPM | MOTOR DATA DRIVE TYPE | HP/W | V | PH | MAX. SONES | VFD | CONTROL | DETAIL REF. | BASIS OF DESIGN (GREENHECK) | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-A101 | A100 | ROOF UPBLAST | CENT | 5800 | 0.5 | 1775 | BELT | 1 | 208 | 3 | 10.3 | YES | CO CONTROL - HONEYWELL E3 CONTROLLER - INTERLOCK WITH MUA | | CUBE-300-10 | 2 |
| EF-A102 | A119 | ROOF UPBLAST | CENT | 3500 | 1 | 1230 | DIRECT | 2 | 208 | 1 | 16.4 | NO | LOCAL SWITCH | | CUE-180-VG | - |
| EF-A103 | A112 | ROOF UPBLAST | CENT | 1500 | 0.375 | 1284 | DIRECT | 1/2 | 120 | 1 | 13.2 | NO | LOCAL SWITCH | | CUE-131-VG | - |
| EF-B201 | B206 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-B202 | B206 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-C201 | C230 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-C202 | C212 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-C203 | C212 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-C204 | C230 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-C205 | C212 | ROOF UPBLAST | CENT | 770 | 0.75 | 1725 | BELT | 3/4 | 208 | 3 | 68 DB | NO | FUME HOOD SWITCH | | VEKTOR-H-10-6 | 2 |
| EF-C206 | C212 | ROOF UPBLAST | CENT | 770 | 0.75 | 1725 | BELT | 3/4 | 208 | 3 | 72 DB | NO | FUME HOOD SWITCH | | VEKTOR-H-10-6 | 2 |
| ADD #3 EF-C207 | | NOT USED | | | | | | | | | | | | | NOT USED | 2 |
| EF-D201 | D204 | ROOF UPBLAST | CENT | 770 | 0.75 | 1725 | BELT | 3/4 | 208 | 3 | 73 DB | NO | FUME HOOD SWITCH | | VEKTOR-H-10-6 | 2 |
| EF-D202 | D205 | ROOF UPBLAST | CENT | 770 | 0.75 | 1725 | BELT | 3/4 | 208 | 3 | 74 DB | NO | FUME HOOD SWITCH | | VEKTOR-H-10-6 | 2 |
| EF-D203 | D204 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-D204 | D205 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-D205 | D204 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-D206 | D205 | ROOF UPBLAST | CENT | 1200 | 1.875 | 2136 | DIRECT | 3/4 | 208 | 1 | 19 | NO | LOCAL SWITCH | | CUE-141HP-VG | 2 |
| EF-E201 | E209 | CEILING | CENT | 375 | 0.375 | 1350 | DIRECT | 150 W | 120 | 1 | 4.5 | NO | LOCAL SWITCH - INTERLOCK LIGHTS | | SP-A390 | - |
| ADD #3 EF-E202 | E208 | ROOF UPBLAST | CENT | 7375 | 2.25 | 945 | DIRECT | 10 | 460 | 3 | 29 | NO | FCS HOOD CONTROLS | | CAPTIVE AIRE USB030BD-RM | 2 |
| EF-G101 | H121V | ROOF UPBLAST | CENT | 420 | 0.375 | 1725 | DIRECT | 1/6 | 120 | 1 | 7.9 | NO | LOCAL SWITCH | | CUE-085-VG | 2 |
| EF-G102 | G122 | ROOF UPBLAST | CENT | | | | DIRECT | 1/4 | 120 | 1 | | NO | LOCAL SWITCH | | CUE-99-VG | - |
| EF-G103 | G118 | WALL MOUNT | - | 140 | - | - | DIRECT | 1.4 A | 120 | 1 | - | - | INTERLOCK WITH KILN | | ENVIROVENT 2 | - |
| EF-H101 | H105T | CEILING | CENT | 75 | 0.375 | 950 | DIRECT | 100 W | 277 | 1 | 2.5 | NO | LOCAL SWITCH - INTERLOCK LIGHTS | | GREENHECK SP-B110 | - |
| EF-H102 | H106T | CEILING | CENT | 75 | 0.375 | 950 | DIRECT | 100 W | 277 | 1 | 2.5 | NO | LOCAL SWITCH - INTERLOCK LIGHTS | | GREENHECK SP-B110 | - |
| EF-J101 | J111T | CEILING | CENT | 75 | 0.375 | 950 | DIRECT | 100 W | 277 | 1 | 2.5 | NO | LOCAL SWITCH - INTERLOCK LIGHTS | | GREENHECK SP-B110 | - |
| EF-J102 | J110T | CEILING | CENT | 75 | 0.375 | 950 | DIRECT | 100 W | 277 | 1 | 2.5 | NO | LOCAL SWITCH - INTERLOCK LIGHTS | | GREENHECK SP-B110 | - |
| EF-K105 | K117 | ROOF UPBLAST | CENT | 1200 | 0.4 | 1630 | DIRECT | 1/4 HP | 120 | 1 | 11.4 | NO | DISHWASHER - INTERLOCK | | GREENHECK CUE-101-VG | - |
| EF-M201 | M210 | ROOF UPBLAST | CENT | 1140 | 0.4 | 1570 | DIRECT | 1/4 HP | 120 | 1 | 10.9 | NO | BAS | | GREENHECK CUE-101-VG | - |
| EF-N101 | N116M | CENT. INLINE | CENT | 150 | 0.375 | 1712 | DIRECT | 1/6 HP | 120 | 1 | 5.7 | NO | BAS | | GREENHECK SQ-70-VG | - |
| ADD #3 EF-N102 | N116M | CENT. INLINE | CENT | 125 | 0.375 | 1550 | DIRECT | 1/6 HP | 120 | 1 | 5.3 | NO | BAS | | GREENHECK SQ-70-VG | - |
| EF-N103 | N116M | ROOF UPBLAST | CENT | 2700 | 0.375 | 1725 | DIRECT | 1 HP | 120 | 1 | 25 | NO | BAS | | GREENHECK CUE-141-A | - |
| KEF-K101 | K133 | ROOF UPBLAST | CENT | 1355 | 0.9 | 1309 | BELT | 1 HP | 208 | 3 | 12.9 | YES | KITCHEN HOOD CONTROLS (KH-K101A & KH-K101B) | | CAPTIVE AIRE NCA14HPFA | 1,5,8 |
| KEF-K102 | K133 | ROOF UPBLAST | CENT | 1355 | 0.9 | 1309 | BELT | 1 HP | 208 | 3 | 12.9 | YES | KITCHEN HOOD CONTROLS (KH-K101A & KH-K101B) | | CAPTIVE AIRE NCA14HPFA | 1,5,8 |
| KEF-K103 | K133 | ROOF UPBLAST | CENT | 1355 | 0.9 | 1309 | BELT | 1 HP | 208 | 3 | 12.9 | YES | KITCHEN HOOD CONTROLS (KH-K101A & KH-K101B) | | CAPTIVE AIRE NCA14HPFA | 1,5,8 |
| KEF-K104 | K133 | ROOF UPBLAST | CENT | 1355 | 0.9 | 1309 | BELT | 1 HP | 208 | 3 | 12.9 | YES | KITCHEN HOOD CONTROLS (KH-K101A & KH-K101B) | | CAPTIVE AIRE NCA14HPFA | 1,5,8 |
| SF-AA101 | AA105 | CEILING | CENT | 300 | 0.375 | 1232 | DIRECT | 150 W | 120 | 1 | 4 | NO | LOCAL THERMOSTAT | | SP-A390 | - |
| SF-A201 | B200C | CEILING | CENT | 300 | 0.375 | 1232 | DIRECT | 150 W | 120 | 1 | 4 | NO

## KITCHEN PLUMBING CONNECTION SCHEDULE

| MK | QTY | DESCRIPTION | C.W. | H.W. | | | WASTE | | GAS | | EXHAUST | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | SIZE | SIZE | TEMP | GPH | DIRECT | INDIRECT | SIZE | BTUH | SIZE | CFM | |
| 2 | 1 | SOILED DISHTABLE W/ CONVEYOR | 1/2" | 1/2" | 140° | 8 | | 4 @ 1-1/2" | | | | | TAIL TANK, CONVEYOR MOROR HOUSING, SINK & QUICK DRAIN |
| 4 | 1 | TROUGHVEYOR DISPOSER | 3/4" | 3/4" | 140° | 210 | 2" | 2" | | | | | 2" DIRECT DISPOSER DRAIN<br>2" INDIRECT RESERVOIR DRAIN<br>1-1/2" TEMP. WATER CONN. TO TROUGH INLET |
| 4A | 2 | GUSHER HEAD ASSEMBLY | | | | | | | | | | | 3/4" TEMPERED WATER CONN. FROM ITEM 4 |
| 7 | 1 | PRE-RINSE ASSEMBLY | 1/2" | 1/2" | 140° | 45 | | | | | | | |
| 8 | 1 | CONVEYOR DISHWASHER | | 1/2" | 180° | 132 | | 2" | | | 16"X4" | ENT. 200 | PROVIDE 4" FLOOR SINK |
| 8A | 1 | BLOWER DRYER | | | | | | 1" | | | 16"X4" | 400 | |
| 10 | 1 | BOOSTER HEATER | | 2 @ 3/4" | 140 /180 | | | 3/4" | | | | | |
| 11 | 1 | EQUIPMENT WASHER | 1/2" | 1/2" | 140° | 45 | | | | | | | |
| 15A | 1 | EVAPORATOR COIL (PRODUCE CLR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 15B | 1 | EVAPORATOR COIL (COOK'S CLR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 15C | 1 | EVAPORATOR COIL (COOK'S FZR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 15D | 1 | EVAPORATOR COIL (DIST. FZR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 26 | 1 | PREPARATION SINK | 1/2" | 1/2" | 140° | 60 | | 2" | | | | | PROVIDE 3" FLOOR SINK |
| 27 | 1 | DISPOSER | 1/2" | | | | 2" | | | | | | |
| 28 | 1 | PRE-RINSE ASSEMBLY | 1/2" | 1/2" | 140° | 45 | | | | | | | |
| 34 | 1 | PRODUCE WASHER | 1/2" | 1/2" | 140° | 30 | | 2" | | | | | CORD & PLUG BY ELECT., PROVIDE 3" FLOOR SINK |
| 38 | 1 | SINK WORK TABLE | 1/2" | 1/2" | 140° | 30 | | 1-1/2" | | | | | |
| 39 | 1 | HOT WATER DISPENSER | 1/4" | | | | | 3/4" | | | | | NEMA 6-30P, WATER & DRAIN HOSE BY F.S.E. |
| 39A | 1 | WATER FILTER ASSEMBLY | 3/8" | | | | | | | | | | |
| 42 | 1 | SINK WORK TABLE | 1/2" | 1/2" | 140° | 30 | | 2" | | | | | |
| 48 | 1 | TWO COMPARTMENT CONVECTION STEAMER | 3/8" | | | | | 1-1/2" | 3/4" | 84,000 | | | CW HOSE BY F.S.E |
| 49 | 1 | SEDIMENT PRE-FILTER SYSTEM | 3/4" | | | | | | | | | | |
| 49A | 1 | WATER TREATMENT SYSTEM | 3/4" | | | | | | | | | | |
| 50 | 1 | REACH-IN COMBINATION OVEN/STEAMER | 3/4" | | | | | 2" | 3/4" | 168,000 | | | NEMA 6-15P, C.W. HOSE & GAS QUICK DISC. BY F.S.E. |
| 51 | 1 | DOUBLE CONVECTION OVEN | | | | | | | 3/4" | 126,000 | | | GAS MANIFOLD & QUICK DISCONNECT BY F.S.E. |
| 53 | 2 | TROUGH DRAIN | | | | | 3" | | | | | | |
| 55 | 1 | KETTLE FILLER / SPRAY STANCHION | 1/2" | 1/2" | 140° | 60 | | | | | | | |
| 56 | 1 | KETTLE STAND | | | | | | 1-1/4" | | | | | |
| 57 | 1 | COUNTERTOP KETTLE / 12 GALLON | 1/2" | 1/2" | 140° | 10 | | | | | | | |
| 58 | 1 | WATER FILTER ASSEMBLY | 3/8" | | | | | | | | | | |
| 59 | 1 | SINK WORK TABLE | 1/2" | 1/2" | 140° | 30 | | 2" | | | | | |
| 62 | 1 | FOUR COMPARTMENT SINK | 2 @ 3/4" | 2 @ 3/4" | 140° | 110 | | 2" | | | | | PROVIDE 4" FLOOR SINK |
| 63 | 1 | DISPOSER | 1/2" | | | | 2" | | | | | | |
| 64 | 1 | HOSE REEL SPRAY ASSEMBLY | 1/2" | 1/2" | 140° | 45 | | | | | | | |
| 67 | 1 | DOUBLE CONVEYOR OVEN | | | | | | | 1 @ 1-1/2" | 2@96,100 | | | NEMA 5-15P (2 CIRCUITS), GAS QUICK DISCONNECTS BY F.S.E. |
| 68 | 1 | CONVEYOR OVEN EXHAUST HOOD W/ FIRE SPP. PREPIPING | | | | | | | | | 12"X12" | 828 | DUCTWORK & FIRE SUPP. BY MECH. |
| 71 | 1 | SINK COUNTER | 1/2" | 1/2" | 140° | 20 | | 1-1/2" | | | | | |
| 82 | 1 | MOBILE REFRIGERATED DELI COUNTER | | | | | | 1" | | | | | NEMA 5-15P, DRAIN HOSE BY F.S.E. |
| 84 | 1 | MOBILE REFRIGERATED DELI COUNTER | | | | | | 1" | | | | | NEMA 5-15P, DRAIN HOSE BY F.S.E. |
| 100 | 2 | DROP-IN HOT WELLS | | | | | | 3/4" | | | | | NEMA 5-15P, DRAIN MANIFOLD & GATE VALVE BY F.S.E. |
| 102 | 2 | DROP-IN REFRIGERATED PAN | | | | | | 3/4" | | | | | NEMA 5-15P, OPEN DRAIN BY MECH. |
| 156 | 1 | SEDIMENT PRE-FILTER SYSTEM - ALT. NO. 15 | 3/4" | | | | | | | | | | ROUGH-IN BASE BID |
| 156A | 1 | WATER TREATMENT SYSTEM - ALT. NO. 15 | 3/4" | | | | | | | | | | ROUGH-IN BASE BID |
| 157 | 1 | REACH-IN COMBINATION OVEN/STEAMER - ALT. NO. 15 | 3/4" | | | | | 2" | 3/4" | 168,00 | | | ROUGH-IN BASE BID, NEMA 6-15P, C.W. HOSE & GAS QUICK DISC. BY F.S.E. |
| 188 | 1 | TILTING SKILLET / 40 GALLON - EXISTING | | | | | | | 3/4" | 144,00 | | | GAS QUICK DISC. (ITEM 52) BY F.S.E. |
| 191 | 1 | ICE MAKER W/ BIN | 3/8" | | | | | 3/4"<br>3/4" | | | | | NEMA 5-15P<br>BIN DRAIN |
| 218 | 1 | HOT SERVING COUNTER - EXISTING | | | | | | 3/4" | | | | | CORD & PLUG BY ELECT., DRAIN HOSE BY F.S.E. |
| 219 | 1 | HOT SERVING COUNTER - EXISTING | | | | | | 3/4" | | | | | CORD & PLUG BY ELECT., DRAIN HOSE BY F.S.E. |

## TANK SCHEDULE

| MARK | LOCATION | APPLICATION | CAPACITY (GAL) | TANK SIZE DIA (IN) | TANK SIZE HEIGHT (IN) | MOUNTING | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|
| T-K1 | K127 | DWH | 1750 | 75 | 130 | FLOOR | PVI MODEL P-1750A-TR TANK ONLY | - |
| T-K2 | K127 | DWH | 1750 | 75 | 130 | FLOOR | PVI MODEL P-1750A-TR TANK ONLY | - |
| NT-D1 | D118J | ACID NEUTRAL. | 275 | 42 | 48 | DIRECT BURY | ZURN MODEL Z9A-NT-275 | 1,2 |

MECHANICAL NOTES:
1. PROVIDE WITH 3,500 LBS LIMESTONE.
2. PROVIDE WITH (1) 4" INLET, (1) 4" OUTLET, (1) 3" VENT CONNECTIONS. CONNECTION LOCATED AS SHOWN ON DRAWINGS.

## PLUMBING FIXTURE CONNECTION SCHEDULE

ADD #3

| MARK | FIXTURE | FIXTURE CONNECTIONS CW | HW | TEMPERED WATER | WASTE | VENT | REMARKS | MECH NOTES |
|---|---|---|---|---|---|---|---|---|
| CS-2,3,6,7,9 | COUNTER SINK | 1/2" | 1/2" | - | 1-1/2" | 1-1/2" | COUNTER-TOP MOUNTED | |
| CS-1,4,5,8 | COUNTER SINK<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | 1-1/2"<br>- | 1-1/2"<br>- | COUNTER-TOP MOUNTED<br>- | |
| DW-1 | DISHWASHER | - | 1/2" | - | 1-1/2" | 1-1/2" | STANDPIPE 30" A.F.F. | |
| EWC-1 | ELECTRIC WATER COOLER | 1/2" | - | - | 1-1/4" | 1-1/4" | 34" TO SPOUT | |
| EWC-2 | ELECTRIC WATER COOLER/<br>BOTTLE FILLER ADA COMPLIANT | 1/2"<br>- | -<br>- | -<br>- | 1-1/4"<br>- | 1-1/4"<br>- | 36" TO SPOUT<br>- | |
| EEW-1 | EMERGENCY EYE/FACE WASH,<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | 1/2"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | 34" TOP OF FLOW HEADS<br>USE WIETMV-1 | |
| EEWS-1 | EMERGENCY EYE/FACE WASH<br>SHOWER, ADA COMPLIANT | 1-1/4"<br>- | 1"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | -<br>- | FLOOR MOUNTED<br>USE WIETMV-2 | 1 |
| EEWS-2 | EMERGENCY EYE/FACE WASH<br>SHOWER, ADA COMPLIANT | 1-1/4"<br>- | 1"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | CABINET STATION<br>USE WIETMV-2 | 1 |
| - | FUME HOOD | 1/2" | - | - | 1-1/4" | 1-1/4" | CONNECT TO CABINET | |
| L-2,3,4 | LAVATORY, ADA COMPLIANT | 1/2" | 1/2" | - | 1-1/4" | 1-1/4" | 34" TO RIM | |
| LT-1 | LAUNDRY TUB | 1/2" | 1/2" | - | 1-1/2" | 1-1/2" | FLOOR MOUNTED | |
| MS-1 | MOP SINK | 1/2" | 1/2" | - | 3" | SEE PLANS | FLOOR MOUNTED | |
| SH-1 | SHOWER, INDIVIDUAL, BOYS | 1/2" | 1/2" | - | - | - | 72" TO HEAD | |
| SH-2 | SHOWER, INDIVIDUAL, GIRLS | 1/2" | 1/2" | - | - | - | 66" TO HEAD | |
| SH-3 | SHOWER, INDIVDUAL, BOYS<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | -<br>- | -<br>- | CONTROL VALVE AREA TO BE<br>38" TO 48" AFF,<br>72" TO HEAD | |
| SH-4 | SHOWER, INDIVDUAL, GIRLS<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | -<br>- | -<br>- | CONTROL VALVE AREA TO BE<br>38" TO 48" AFF,<br>66" TO HEAD | |
| SH-5 | COLUMN SHOWER, BOYS<br>ADA COMPLIANT | 3/4"<br>- | 3/4"<br>- | -<br>- | 3"<br>- | 2"<br>- | 84" TO HEADS<br>- | |
| SS-1 | SERVICE SINK | 1/2" | 1/2" | - | 2" W TO FS | SEE PLANS | FLOOR MOUNTED | |
| - | SCIENCE FUME HOOD | 1/2" | - | - | 1 1/2" AW | 1 1/2" AV | 3/4" GAS CONNECTION | 2 |
| UR-1 | URINAL | 3/4" | - | - | 2" | 1-1/2" | 24" TO RIM | |
| UR-2 | URINAL, ADA COMPLIANT | 3/4" | - | - | 2" | 1-1/2" | 17" TO RIM | |
| WF-1,2 | WASH FOUNTAIN,<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | 1-1/2"<br>- | 1-1/2"<br>- | 34" TO RIM<br>- | |
| WMF-1 | WASHING MACHINE FITTING | 1/2" | 1/2" | - | 2" | 1-1/2" | 42" TO RIM | |
| WC-1 | WATER CLOSET | 1" | - | - | 4" | 2" | 15" TO RIM | |
| WC-2 | WATER CLOSET,<br>ADA COMPLIANT | 1" | - | - | 4" | 2" | 17" TO TOP OF SEAT<br>- | |
| RH-1 | ROOF HYDRANT | 3/4" | - | - | 1/4" | - | ROOF MOUNTED | |
| WH-1 | WALL HYDRANT | 3/4" | - | - | - | - | 18" ABOVE FINISH FLOOR / GRADE | |

MECHANICAL NOTES:
1. PROVIDE 1-1/4" COPPER DRAIN LINE FROM WASTE CONNECTION AT SHOWER STAND AND SPILL TO FLOOR DRAIN.
2. COORDINATE SUPPLY ROUGH-IN HEIGHT AND LOCATION BASED ON MANUFACTURER BEING SUPPLIED.

## SUMP PUMP SCHEDULE

ADD #3

| MARK (SP-X) | SERVES | LOCATION | PUMP TYPE | GPM (EA PUMP) | PUMP HEAD (FT WG) | MIN EFF (%) | MOTOR DATA HP | V | PH | HZ | RPM | BASIN DATA MATERIAL | SIZE L x W x D (IN) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP-G1 | ELEVATOR SHAFT | ELEVATOR PIT | SIMPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE | 24 x 24 x 24 | ZOELLER MODEL 6292 | 1,2 |
| SP-L1 | ELEVATOR SHAFT | ELEVATOR PIT | SIMPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE | 24 x 24 x 24 | ZOELLER MODEL 6292 | 1,2 |
| SP-N1 | POOL PUMP PIT | N116M | DUPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE | 30 x 36 x 24 | ZOELLER MODEL 268 | 1,2 |
| SP-N2 | FOUNDATION DRAIN | MANHOLE OUTSIDE N116 | DUPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE BY CIVIL | MANHOLE BY CIVIL | ZOELLER MODEL 268 | 1,2 |

MECHANICAL NOTES:
1. PROVIDE WITH AUTOMATIC FLOAT SWITCH.
2. PUMP SHALL HAVE 2-INCH DISCHARGE, AND 20 FOOT ELECTRICAL CORD WITH STANDARD GROUNDED PLUG.

## WATER SOFTENER

ADD #3

| MARK (WS-X) | SERVES | ROOM # LOCATION | SERVICE FLOW RATE PEAK FLOW RATE (GPM) | PEAK PRESS. DROP (PSI) | CONTINUOUS FLOW FLOW RATE (GPM) | CONTINUOUS FLOW PRESS. DROP (PSI) | SOFTENER TANK SIZE (DIA. X H.) (IN) EACH | BRINE TANK SIZE (DIA. X H.) (IN) | ARRANGEMENT | ELECTRICAL DATA V | PH | HZ | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WS-K1 | DOM WTR | K127 | 100 | 25 | 75 | 15 | 30 x 72 | 39 x 48 | DUPLEX PROGRESSIVE | 115 | 1 | 60 | CULLIGAN HCE-450-2 | 1, 2, 3 |

MECHANICAL NOTES:
1. EXCHANGE CAPACITY OF 470,300 GRAINS AT 225 POUND OF SALT (10 LBS PER CUBIC FOOT) PER REGENERATION MAXIMUM.
2. BRINE TANK WITH 1200 POUNDS OF SALT STORAGE.

## THERMOSTATIC MIXING VALVES

ADD #3

| MARK | ROOM LOCATION | SERVES | APPLICATION | CW INLET (IN) | HW INLET (IN) | HWC INLET (IN) | HW OUTLET (IN) | FLOW CAPACITY (GAL) | OUTLET TEMP (oF) | MOUNTING | PUMP MARK | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TMV-K1 | K127 | DWH-K1 & 2 | DOM HOT WTR | 2" | 2" | 1 1/4" | 2" | 129 GPM @ 15 PSID | 110 | WALL | P-K107 | LEONARD MEGATRON MODEL 6N-LF | 1,2,3 |
| ETMV-1 | MULTIPLE | EEW-1 | EMER. EYE WASH | 3/4 | 3/4 | - | 3/4 | 1-4 GPM @ 5 PSID | 98 | WALL | - | HAWS MODEL TWBS.EWE | 4 |
| ETMV-2 | MULTIPLE | EEWS-1 | EMER. SHOWER | 3/4 | 3/4 | - | 3/4 | 1-52 GPM @ 15 PSID | 60-100 | WALL | - | HAWS MODEL TWBS.SHE | 4 |
| TMV-M1 | M100C | HYDRO TUBS | HYDROTHERAPY | 3/4 | 3/4 | - | 3/4 | 80 GPM @ 15 PSID | 110 | EXP. WALL | - | LEONARD TM-262-30-DT-CP-2-(2) 10HDH-2(HR) | 5 |

MECHANICAL NOTES:
1. INSTALL PIPING METHOD #4 AS DEFINED BY MANUFACTURER.
2. INSTALL ASSEMBLY WITH VALVE AT 48" AFF.
3. PROVIDE FACTORY ASSEMBLED AND TESTED MIXING ASSEMBLY, WITH RECIRC PUMP P-C3.
4. CABINET MODEL 9200SUR.
5. DOUBLE OUTLETS WITH BALL VALVES, VACUUM BREAKER, 3/4"GARDEN HOSE CONNECTION , (2) 10' HEAVEY DUTY HOSES, (2 ) STAINLESS STEEL HOSE RACKS

## LOUVER SCHEDULE

| MARK | SERVES | TYPE | CFM | MAX VEL (CFM) | MAX PD (IN WG) | FINISH | SIZE (INCHES) W | H | D | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| L-N201 | POOL MECHANICAL N116M | DRAINABLE | 15,400 | 500 | 0.05 | | 82 | 82 | | GREENHECK ESJ-401 | 1 THRU 6 |

MECHANICAL NOTES:
1. COLOR TO BE SELECTED DURING SHOP DRAWING PHASE.
2. MUST BE SELF DRAINING
3. PROVIDE EXTENDED SILL
4. PROVIDE WIREMESH SCREEN
5. CONTACTOR TO COORDINATE TIE-IN OF LOUVER TO ADJACENT WALLS.
6. PROVIDE KYNAR 500 20YR WARRANTY

## CABINET UNIT HEATER - ELECTRIC

ADD #3

| PLAN MARK | LOCATION | ELECTRIC COIL DATA CFM (NOM) | KW | EAT DB | MOTOR DATA HP | V | PH | AMPS | CABINET DATA THROW DIRECTION | CONFIGURATION | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CUH-AA101 | VESTIBULE - AA100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-AA102 | VESTIBULE - AA100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-AA103 | GIRLS TOILET - AA109T | 200 | 2.0 | 55 | 1/8 | 208 | 1 | 9.6 | HORIZONTAL | WALL RECESSED | QMARK AWH4408 | 1,2,3,4 |
| CUH-AA104 | BOYS TOILET - AA111T | 200 | 2.0 | 55 | 1/8 | 208 | 1 | 9.6 | HORIZONTAL | WALL RECESSED | QMARK AWH4408 | 1,2,3,4 |
| CUH-G101 | VESTIBULE - G105V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-H101 | SOUND LOCK - H118 | 200 | 2.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-H102 | VESTIBULE - H112V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-J101 | VESTIBULE - J100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J102 | VESTIBULE - J100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J103 | VESTIBULE - J127V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J104 | VESTIBULE - J127V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J105 | VESTIBULE - J130V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J106 | VESTIBULE - J130V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-L101 | VESTIBULE - L112V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-L102 | STAIR L102ST | 600 | 6.0 | 55 | 1/8 | 480 | 3 | 8 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-L103 | VESTIBULE L110V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-N101 | STAIR N112S | 600 | 6.0 | 55 | 1/8 | 480 | 3 | 8 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-N102 | VESTIBULE N113V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-N103 | VESTIBULE N103V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |

MECHANICAL NOTES:
1. INTERNAL 2 STAGE THERMOSTAT.
2. PROVIDE INTEGRAL MOTOR OVERLOAD PROTECTION.
3. PROVIDE A CONCEALED UNIT MOUNTED FAN SWITCH WITH "OFF-HIGH-MEDIUM-LOW" POSITIONS.
4. PROVIDE UNIT MOUNTED DISCONNECT SWITCH
5. PROVIDE MOUNTING SLEEVE FOR SEMI RECESSED INSTALLATION.
6. PROVIDE TRIM KIT FOR RECESSED CEILING INSTALLATION.

## BLOWER COIL - CHILLED & HOT WATER SCHEDULE

| MARK (BC-X) | CFM | ESP (IN WG) | COOLING COIL TOT CAP (MBH) | SENS CAP (MBH) | GPM | EWT (°F) | LWT (°F) | PD (FT WG) | HEATING COIL TOT CAP (MBH) | GPM | EWT (°F) | LWT (°F) | PD (FT WG) | ELECTRICAL V | PH | Hz | FLA | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-M201 | 1400 | 0.5 | 36.37 | 25.56 | 7.25 | 42 | 56 | 1.88 | 46.9 | 9.4 | 130 | 120 | 1.39 | 115 | 1 | 60 | 7.46 | TRANE | 1 |
| BC-M202 | 600 | 0.5 | 18.01 | 13.36 | 3.59 | 42 | 56 | 1.81 | 18.32 | 3.67 | 130 | 120 | 9.82 | 115 | 1 | 60 | 7.46 | TRANE | 1 |

MECHANICAL NOTES:
1. PROVIDE UNIT WITH THE FOLLOWING:
   A. PRE-PIPED TWO-WAY CHILLED WATER VALVE.
   B. FILTER BOX WITH 4 INCH THICK 30% EFFICIENT PLEATED FILTERS.

## EXPANSION TANK SCHEDULE

| MARK | LOCATION | SERVES | NUMBER OF TANKS | TANK VOLUME (GAL) | ACCEPTANCE VOLUME | OPERATING TEMP (°F) | DETAIL REF. | WEIGHT (EACH) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| ET-K1 | K127 | DWH SYSTEM | 1 | 211 | 137 | 140 | 12/P3.1 | 760 | AMTROL ST-452-C | 1 |
| ET-K2 | K127 | HVAC HYDRONIC | 1 | 500 | 500 | 100 | 11/M4.2 | 1120 | TACO PSS500 | 2 |

MECHANICAL NOTES:
1. PROVIDE 4" CONCRETE HOUSEKEEPING PAD.
2. PROVIDE AS PART OF THE CHILLER SKID.

## DOMESTIC WATER HEATER - GAS FIRED SCHEDULE

| MARK (DWH-X) | LOCATION | TANK CAPACITY (GAL) | EXPANSION TANK MARK (ET-X) | MINIMUM RECOVERY (GAL/HR) | EWT (°F) | LWT (°F) | INPUT (MBH) | ELECTRICAL DATA AMPS | V | PH | HZ | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DWH-K1 | K127 | 300 | ET-K1 | 2053 | 40 | 140 | 1,800 | 7.5 | 120 | 1 | 60 | PVI 180 LX 300A-PVIF | 1,2 |
| DWH-K2 | K127 | 300 | ET-K1 | 2053 | 40 | 140 | 1800 | 7.5 | 120 | 1 | 60 | PVI 180 LX 300A-PVIF | 1,2 |

MECHANICAL NOTES:
1. WATER HEATER SHALL INCLUDE ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE AND DRAIN VALVE.
2. PROVIDE 4" CONCRETE HOUSEKEEPING PAD.


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #2 Addendum #2 | 10/10/2014 |
| ADD #3 Addendum #3 | 10/14/2014 |

MECHANICAL SCHEDULES

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
M5.5

## DUST AND METAL COLLECTION SYSTEMS AND ACCESSORIES SCHEDULE

| MARK | LOCATION | TYPE | CFM | ESP (IN) | MIN FILTER AREA | MOTOR DATA HP | MOTOR DATA V | MOTOR DATA PH | VFD | COLLECTION TYPE | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DC-A101 | OUTDOORS (SERVES WOODSHOP) | DUST COLLECTOR CYCLONE | 4800 | 13 | - | 15 | 460 | 3 | | 55 GALLON BARRELLS | FARR GS8 - ISMF | 2,5 |
| EV-A101 | OUTDOORS (FOR DC-1 SYSTEM) | EXPLOSION BACKDRAFTVENT | - | - | - | | | | | - | CLARKS PNEUMATIC CONVEYING SYSTEMS - MODEL BDD-SV | |
| DCP-A101 | INDOORS (FOR DC-1 SYSTEM) | DUST COLLECTOR CONTROL PANEL | - | - | - | - | 120 | 1 | | - | AGET | |
| SILENCER-DC-A101 | OUTDOORS (SERVES MC-A101) | FAN DISHARGE SOUND ATTENUATOR (BELOW 85dBA) | - | - | - | - | - | - | - | - | FARR | |
| MC-A101 | OUTDOORS (SERVES METALSHOP) | METAL COLLECTOR | 10000 | 14 | - | 30 | 460 | 3 | YES | HOPPER | FARR GS8 - LB | 1,4,5 |
| MCP-A101 | INDOORS (FOR DC-2) | METAL COLLECTOR CONTROL PANEL | - | - | - | - | 120 | 1 | - | - | FARR | |
| SILENCER-MC-A101 | OUTDOORS (SERVES MC-A101) | FAN DISHARGE SOUND ATTENUATOR (BELOW 85dBA) | - | - | - | - | - | - | - | - | FARR | |
| WELDING HOOD-A101 | A112 - METAL SHOP | WELDING WELDING HOOD (324 IN x 66 IN x 16 IN) | - | - | - | - | - | - | - | - | CONTRACTOR FABRICATED 14 GAUGE WELDED | 3 |
| WELDING HOOD-A102 | A112 - METAL SHOP | WELDING WELDING HOOD (252 IN x 66 IN x 16 IN) | - | - | - | - | - | - | - | - | CONTRACTOR FABRICATED 14 GAUGE WELDED | 3 |
| WELDING HOOD-A103 | A112 - METAL SHOP | WELDING HOOD (168 IN X 126 IN X 16 IN) | - | - | - | - | - | - | - | - | CONTRACTOR FABRICATED 14 GAUGE WELDED | 3 |

MECHANICAL NOTES:
1. METAL COLLECTOR TO INCLUDE: AUTOMATIC FILTER CLEANING, SUPPORT LEG STRUCTURE, FILTER ACCESS, HEMIPLEAT CARTRIDGES, HOPPER/SUPPORT STAND, SPARK BAFFLE, STAGGERED CHANNEL INLET BAFFLE, INTEGRATED TIME CONTROLLER/VFD, STATIC BLOWER CONTROL, SOLENOID HEATERS, SILENCER, AND FIRE SUPPRESSION FACTORY INSTALLED WITHIN UNIT.
2. DUCT COLLECTOR TO INCLUDE: AUTOMATIC FILTER CLEANING, SUPPORT LEG STRUCTURE, FILTER ACCESS, HEMIPLEAT CARTRIDGES, CARTRIDGE OVERBAGS, STAGGERED CHANNEL INLET BAFFLE, DETECT/QUENCH RIGA-FLOW STYLE B, EXPLOSION VENT, EXPLOSION BACKDRAFTVENT, ELECTRICAL SWITCH FOR STINGER ACTIVATION SIGNAL, INSPECTION PORT, SOLENOID HEATERS, 55-GALLON DRUMS, SILENCER, INTEGRATED TIMER CONTROLLER/VFD, STATIC BLOWER CONTROLS, FIRE SUPPRESSION FACTORY INSTALLED WITHIN UNIT.
3. BOTTOM OF HOOD SET AT 6'-8" AFF.
4. PROVIDE SPARK SCREEN.
5. BASIS OF DESIGN PRODUCT: PROVIDE AS SHOWN OR WITH A COMPARABLE PRODUCT.

ADD #3

## FAN COIL UNIT SCHEDULE

| MARK | LOCATION | CFM | ESP (IN WC) | HEATING COIL DATA: HEATING CAP (MBH) | EWT (°F) | LWT (°F) | EAT DB (°F) | LAT DB/WB (°F) | GPM | MAX. WATER PD (FT WG) | COOLING COIL DATA: TOTAL CAP (MBH) | SENSIBLE CAP (MBH) | EAT DB/WB (°F) | LAT DB/WB (°F) | GPM | WATER PD (FT WG) | MOTOR DATA HP | MOTOR DATA V | MOTOR DATA PH | VFD | PIPE SIZE TO COIL (CONTRACTOR) | PIPE SIZE TO COIL (CONTRACTOR) | WEIGHT | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCU-H101 | H118 - SOUND LOCK | 600 | 0.5 | 45.5 | 140 | 110 | 70 | 90 | 2.8 | .8 | 28.9 | 26.1 | 78 / 65 | 58 / 57 | 4.35 | 1.3 | 1 | 460 | 3 | YES | 1 | 1 | 450 | DAIKIN MCQUAY LAH003A | 1,2,3 |

MECHANICAL NOTES:
1. PROVIDE VIBRATION ISOLATORS AT UNIT SUPPORTS.
2. CONTRACTOR TO PROVIDE SUPPLY/RETURN FLEX CONNECTIONS AT UNIT.
3. FACTORY MOUNTED AND PRE-WIRED VFD ON UNIT.

## TERMINAL BOX - HOT WATER SCHEDULE

| MARK | SYSTEM | ROOM SERVING | MAX CFM | MIN CFM | P.D. AT MAX CFM (IN) | INLET DIA (IN) | SOUND POWER LEVEL 1/3 OCT BAND RADIATED | SOUND POWER LEVEL 1/3 OCT BAND DISCHARGE | HOT WATER COIL DATA MIN. CAP (MBH) | Apd | ROWS | GPM | WPd (FT H2O) | PIPE SIZE TO COIL (CONTRACTOR) | DETAIL REF. | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VAV-G101 | RTU-G101 | G119T GIRLS TOILET, G120T BOYS TOILET | 380 | 380 | 0.38 | 06 | 17 | 17 | 13.30 | 0.28 | 2 | 4.5 | 2.430000067 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G102 | RTU-G101 | G118S ORCHESTRAL INSTRUMENT STORAGE | 200 | 200 | 0.11 | 06 | 11 | 11 | 7.60 | 0.08 | 2 | 1.5 | 0.280000001 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G201 | RTU-G101 | G117 BAND | 2800 | 840 | 0.54 | 16 | 19 | 20 | 31.90 | 0.51 | 2 | 4.2 | 1.009999999 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G202 | RTU-G101 | G116 OFFICE, G108 INSTRUMENT REPAIR | 605 | 180 | 0.34 | 08 | 19 | 18 | 7.30 | 0.32 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G203 | RTU-G101 | G110-G113 PRACTICE ROOMS | 595 | 180 | 0.33 | 08 | 19 | 18 | 7.30 | 0.31 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G204 | RTU-G101 | G202S STORAGE | 600 | 180 | 0.33 | 08 | 19 | 18 | 7.30 | 0.32 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-G205 | RTU-G101 | G107 VOCAL | 1960 | 590 | 0.42 | 14 | 18 | 15 | 22.40 | 0.38 | 2 | 2.2 | 0.490000011 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H101 | RTU-G101 | H100 EXCEL ACADEMY | 705 | 210 | 0.44 | 08 | 20 | 18 | 8.00 | 0.42 | 2 | 1.0 | 0.170000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H102 | RTU-G101 | H121V VESTIBULE | 630 | 190 | 0.36 | 08 | 19 | 19 | 7.50 | 0.35 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H201 | RTU-G101 | H102 ORCH/BLACK BOX | 1815 | 545 | 0.37 | 14 | 18 | 15 | 20.70 | 0.34 | 2 | 1.9 | 0.360000014 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H202 | RTU-G101 | H108 & H109 DRESSING ROOMS | 1400 | 420 | 0.42 | 12 | 20 | 20 | 16.00 | 0.41 | 2 | 1.7 | 0.419999987 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-H203 | RTU-G101 | H112 STAGECRAFT | 2350 | 705 | 0.57 | 14 | 20 | 17 | 30.60 | 0.52 | 2 | 7.7 | 5.650000095 | 1-1/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K101 | RTU-K101 | K103 BUILDING SERVICES | 495 | 150 | 0.55 | 06 | 21 | 21 | 5.70 | 0.37 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K102 | RTU-K101 | K104 STAFF BREAK ROOM, K114 DIST. OFFICE | 390 | 195 | 0.36 | 06 | 18 | 17 | 6.80 | 0.25 | 2 | 1.1 | 0.170000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K103 | RTU-K101 | K117 WAREWASHING | 1590 | 480 | 0.52 | 12 | 22 | 22 | 16.90 | 0.51 | 2 | 1.9 | 0.519999981 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K104 | RTU-K101 | K121 OFFICE | 125 | 125 | 0.05 | 06 | - | - | 5.20 | 0.04 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K105 | RTU-K101 | K122 NORTH SERVERY | 1450 | 435 | 0.45 | 12 | 20 | 21 | 15.30 | 0.44 | 2 | 1.6 | 0.349999994 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K106 | RTU-K101 | K122 SOUTH SERVERY | 1450 | 435 | 0.45 | 12 | 20 | 21 | 15.30 | 0.44 | 2 | 1.6 | 0.349999994 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K107 | RTU-K101 | K124 PIT STOP | 2025 | 610 | 0.44 | 14 | 19 | 17 | 21.40 | 0.41 | 2 | 2.0 | 0.409999996 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K108 | RTU-K101 | K125 RECEIVING | 460 | 230 | 0.48 | 06 | 20 | 20 | 8.10 | 0.33 | 2 | 1.7 | 0.389999986 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K109 | RTU-K101 | K128 BULK STORAGE, K129 DRY STORAGE | 170 | 170 | 0.08 | 06 | 10 | 10 | 6.10 | 0.06 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K110 | RTU-K101 | K133 HOT PREP COOKING | 2160 | 635 | 0.49 | 14 | 19 | 17 | 22.30 | 0.45 | 2 | 2.2 | 0.479999989 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K111 | RTU-K101 | K133 HOT PREP BAKING | 1830 | 550 | 0.65 | 12 | 23 | 23 | 19.30 | 0.65 | 2 | 2.6 | 0.949999988 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K112 | RTU-K101 | K134 COLD PREP | 1065 | 320 | 0.45 | 10 | 22 | 20 | 11.30 | 0.44 | 2 | 1.4 | 0.230000004 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K113 | RTU-K101 | K135 STAGING DELI | 820 | 245 | 0.56 | 08 | 23 | 21 | 8.60 | 0.54 | 2 | 1.1 | 0.230000004 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K114 | RTU-K101 | K135 STAGING DAILY SPECIAL & SANDWICHES | 825 | 250 | 0.57 | 08 | 23 | 21 | 8.80 | 0.54 | 2 | 1.2 | 0.25 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-K115 | RTU-K101 | K135 STAGING PIZZA | 1090 | 330 | 0.47 | 10 | 22 | 20 | 11.60 | 0.46 | 2 | 1.4 | 0.25 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L101 | ERU-M101 | L100 GIRLS PE/JV LOCKER ROOM | 910 | 910 | 0.52 | 10 | 20 | 19 | 31.90 | 0.51 | 3 | 4.9 | 2.170000076 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L102 | ERU-M101 | L101 WOMENS INSTRUCTOR OFFICE LOCKER ROOM | 245 | 245 | 0.16 | 06 | 14 | 14 | 8.60 | 0.12 | 2 | 2.1 | 0.560000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L103 | ERU-M101 | L107C CORRIDOR | 215 | 215 | 0.14 | 06 | 13 | 11 | 7.60 | 0.11 | 2 | 1.0 | 0.129999995 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L105 | ERU-M101 | L37A,B & T COACHES OFFICE & STORAGE | 470 | 470 | 0.67 | 06 | 21 | 21 | 16.50 | 0.51 | 3 | 2.5 | 1.210000038 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M101 | ERU-M101 | M100 TRAINING ROOM | 475 | 475 | 0.68 | 06 | 21 | 21 | 16.70 | 0.52 | 3 | 2.6 | 1.259999990 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M102 | ERU-M101 | M100C HYDROTHERAPY | 420 | 420 | 0.55 | 06 | 18 | 18 | 14.70 | 0.43 | 3 | 1.9 | 0.680000007 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M103 | ERU-M101 | M101 GIRLS ATHLETIC LOCKER ROOM | 880 | 880 | 0.49 | 10 | 20 | 18 | 30.90 | 0.48 | 3 | 4.5 | 1.809999943 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M104 | ERU-M101 | M102C CORRIDOR | 690 | 690 | 0.62 | 08 | 20 | 20 | 24.20 | 0.60 | 3 | 4.9 | 2.930000067 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M105 | ERU-M101 | M114 BOYS ATHLETIC LOCKER ROOM | 1200 | 1200 | 0.49 | 12 | 19 | 18 | 42.10 | 0.48 | 3 | 5.2 | 2.710000038 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M201 | ERU-M101 | BLOWER COILS AD/PE CLASSRROM | 515 | 0 | 0.01 | 08 | 19 | 20 | - | - | - | - | - | - | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N101 | ERU-M101 | N101 BOYS PE/JV LOCKER ROOM | 1015 | 1015 | 0.62 | 10 | 22 | 20 | 35.60 | 0.61 | 3 | 6.9 | 4.199999809 | 1" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N102 | ERU-M101 | N102 MENS INSTRUCTOR OFFICE LOCKER ROOM | 245 | 245 | 0.16 | 06 | 14 | 14 | 8.60 | 0.12 | 2 | 2.1 | 0.560000002 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N103 | ERU-M101 | N104 GIRL'S SWIM LOCKER ROOM | 330 | 330 | 0.27 | 06 | 17 | 16 | 11.60 | 0.19 | 2 | 7.6 | 6.670000076 | 1-1/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N104 | ERU-M101 | N104C CORRIDOR | 390 | 390 | 0.48 | 06 | 18 | 17 | 13.70 | 0.38 | 3 | 1.6 | 0.490000010 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| | | | | | | | | | | | | | | | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-L104 | AHU-M101 | L111A, L111B, L111S COACHES OFFICES & STORAGE | 640 | 165 | 0.28 | 08 | 18 | 18 | 6.60 | 0.27 | 2 | 0.9 | 0.150000006 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M106 | AHU-M101 | M103 WEIGHT ROOM | 1340 | 400 | 0.66 | 10 | 24 | 23 | 14.10 | 0.65 | 2 | 2.2 | 0.579999983 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M107 | AHU-M101 | M104 WRESTLING ROOM | 2040 | 610 | 0.44 | 14 | 19 | 17 | 21.40 | 0.41 | 2 | 2.0 | 0.409999996 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M108 | AHU-M101 | M104S M107 M107S WRESTLING OFFICE & STORAGE | 495 | 150 | 0.55 | 06 | 21 | 21 | 5.70 | 0.37 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M109 | AHU-M101 | M108S M109A M109B OFFICE STORAGE | 340 | 170 | 0.28 | 06 | 17 | 16 | 6.10 | 0.20 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M110 | AHU-M101 | M110 GIRLS COACHES OFFICE/STORAGE | 130 | 130 | 0.05 | 06 | - | - | 5.30 | 0.04 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M202 | AHU-M101 | M207 CORRIDOR | 2075 | 830 | 0.45 | 14 | 19 | 17 | 29.10 | 0.42 | 2 | 3.9 | 1.490000011 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M204 | AHU-M101 | M208 CONCESSIONS | 1140 | 340 | 0.50 | 10 | 23 | 22 | 11.90 | 0.50 | 2 | 1.5 | 0.280000001 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M205 | AHU-M101 | M210 FITNESS ROOM | 1725 | 515 | 0.33 | 14 | 17 | 15 | 19.10 | 0.31 | 2 | 1.8 | 0.330000013 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-M206 | AHU-M101 | M202M MECHANICAL | 565 | 170 | 0.15 | 08 | 19 | 19 | 4.80 | 0.13 | 1 | 0.9 | 0.529999971 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N105 | AHU-M101 | N106 BOYS TRACK/CC COACHES OFFICE | 150 | 150 | 0.07 | 06 | - | - | 5.70 | 0.05 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N106 | AHU-M101 | N108 SWIMMING OFFICE | 310 | 155 | 0.24 | 06 | 15 | 15 | 5.80 | 0.17 | 2 | 0.9 | 0.109999999 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N107 | AHU-M101 | N110T & N111T FAMILY USE TOILETS | 475 | 310 | 0.68 | 06 | 21 | 21 | 10.90 | 0.52 | 3 | 1.0 | 0.189999998 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |
| VAV-N201 | AHU-M101 | N110 ATHLETIC LOBBY / CORRIDOR | 230 | 230 | 0.14 | 06 | 14 | 13 | 8.10 | 0.10 | 2 | 1.7 | 0.389999986 | 3/4" | 15/M4.1, 10/M4.2 | TITUS DESV | 1,2,3,4,5 |

MECHANICAL NOTES:
1. INCLUDE INTERGRAL 1" THICK FIBER FREE SOUND INSTULATION
2. COIL CAPACITIES & PRESSURE DROPS BASED ON MAX. CFM
3. REFERENCE "ROWS" COLUMN FOR APPROPRIATE NUMBER OF ROWS. ALL COILS ARE MINIMUM 2 ROWS.
4. SIZE THE COIL SELECTION BASED OFF OF 130 DEG EWT AND 95 DEG LAT.
5. BTU CAPACITY IS BASED ON MIN CFM VALUE.

## MONITOR PANEL

| MARK | LOCATION | MIN. MEASURING FEATURES | DUAL SENSOR (Y/N) | V | PH | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|
| MONITOR PANEL-A101 | A100 | CARBON MONOXIDE (CO), NITROGEN DIOXIDE (NO2), AND PROPANE (C3H8) | Y | 115 | 1 | HONEYWELL E3 POINT | 1,2 |

MECHANICAL NOTES:
1. MECHANICAL CONTRACTOR AND CONTROLS CONTRACTORS TO COORDINATE AND INSTALL UNIT AND PROVIDE ALL INTER-WIRING TO SENSORS.
2. OPERATION TO BE TIED-INTO EF-A101

## CHILLER - WATER COOLED SCHEDULE

| MARK (CH-) | NET COOLING CAP (TON) | CHILLED WATER DATA GPM | EWT (°F) | LWT (°F) | PD (MAX) (FT WG) | CONDENSER WATER DATA NET HEATING CAP (MBH) | GPM | EWT (°F) | LWT (°F) | PD (MAX) (FT WG) | COMPRESSOR DATA NO | REFR TYPE | NPLV KW/TON (MAX) | MOTOR DATA V | PH | MIN CIRCUIT AMPS | MAX FUSE AMPS | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CH-K101 | 170.2 | 340 | 54 | 42 | 14.1 | 2483.4 | 490 | 85 | 95 | 17.8 | 2 | R134A | 0.597 | 460 | 3 | 253 | 350 | TRANE RTWD-180 HI | 1,2,3 |
| CH-K102 | 170.2 | 340 | 54 | 42 | 14.1 | 2483.4 | 490 | 85 | 95 | 17.8 | 2 | R134A | 0.597 | 460 | 3 | 253 | 350 | TRANE RTWD-180 HI | 1,2,3 |
| CH-K103 | 170.2 | 340 | 54 | 42 | 14.1 | 2483.4 | 490 | 85 | 95 | 17.8 | 2 | R134A | 0.597 | 460 | 3 | 253 | 350 | TRANE RTWD-180 HI | 1,2,3 |
| CH-XX | 138 | 275 | 56 | 44 | 9.7 | 2251.5 | 490 | 120 | 130 | 14.6 | 2 | R134A | - | - | - | - | - | TRANE RTWD-180 HI | 4 |

MECHANICAL NOTES:
1. CHILLED WATER FOULING FACTOR = .0001, CONDENSER WATER FOULING FACTOR = .00025.
2. NPLV IS MAXIMUM VALUE AND SHALL NOT BE EXCEEDED. IEEE FILTER LOSS SHALL BE INCLUDED IN THE NPLV VALUE. PROVIDE CHILLER SELECTION PROGRAM OUTPUT WITH SHOP DRAWINGS.
3. CHILLERS SHALL BE FACTORY MOUNTED ON A SKID WITH ALL ASSOCIATED PUMPS, PIPING, AND CONTROLS. SEE DRAWINGS FOR MORE INFORMATION.
4. CH-XX IS CAPACITIES OF CH-K1, CH-K2, OR CH-K3 WHEN OPERATING IN HEATING MODE.

## MAKE UP AIR UNIT - OUTDOOR GAS FIRED SCHEDULE

| MARK | LOCATION | TYPE | CFM SUPPLY | ESP | FUEL TYPE | CODNEDING UNIT TAGS | HEATING SOURCE | HEATING EAT (°F) | HEATING LAT (°F) | HEATING INPUT (MBH) | DX COOLING OUTPUT (MBH) | DX COOLING EAT (°F) | DX COOLING LAT (°F) | DX COOLING TOTAL CAPACITY (MBH) | DX COOLING SENSIBLE CAPACITY (MBH) | MOTOR DATA HP | MOTOR DATA V | MOTOR DATA PH | MOCP | MCA | VFD | WEIGHT (LBS) | BASIS OF DESIGN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAU-K101 | AREA K - ROOF | ROOF DIRECT FIRED | 5,320 | 0.5 | NAT. GAS | SSCU-K102 & K103 | NG | -10 | 70 | 500 | 460 | 95 / 78 | 83 / 73 | 120 | 68 | 5 | 460 | 3 | 15 | 6.8 | YES | 5152 | CAPTIVE AIRE A3-D.500-G18-MPU | 1,2,3,4,5 |

MECHANICAL NOTES:
1. PROVIDE UNIT WITH A DUAL CIRCUI MODULAR PACKAGED COOLING OPTION, INCLUDING CONDENSERS (480 VOLT 3 PHASE), DX COOLING, FILTER/DRRYER KIT, THERMAL EXPANSION VALAVE, R410A REFRIDGERANT AND REFRIGERANT PIPING.
2. PROVIDE WITH VFD FOR VARIABLE VOLUME SYSTEM. VFD TO BE MOUNTED INSIDE UNIT CONTROLS CABINET.
3. PROVIDE WITH 18" ROOF CURB
4. COORDINATE WITH ELECTRICAL CONTRACTOR FOR MOUNTING OF CONTROL PANEL FOR UNIT.
5. UNIT TO BE INTERLOCKED WITH ASSOCIATED EXHAUST FAN FOR KITCHEN HOODS.

ADD #3

## KITCHEN HOOD SCHEDULE

| MARK (KH-) | TYPE | DIMENSIONS (W X D X T) | SERVES | MAKE UP AIR PLENUM SIZE (L X W X H) | MAKE UP AIR COLLAR SIZE (L X W) | MAKE UP AIR CFM | MAKE UP AIR ESP (IN) | SUPPLY AIR PLENUM SIZE (L X W X H) | SUPPLY AIR COLLAR SIZE (DIAMETER) | SUPPLY AIR CFM | SUPPLY AIR ESP (IN) | EXHAUST COLLAR SIZE (DIAMTER) | EXHAUST CFM | EXHAUST ESP (IN) | MOUNTING HEIGHT | WEIGHT (LBS) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KH-E101 | TYPE 1 | 90" X 42" X 24" | FCS | - | - | - | - | - | - | - | - | 10" x 14" | 1500 | 0.716 | 80" | 410 | CAPTIVE AIRE 4224 | 1,2,3,7,9,14 |
| KH-E102 | TYPE 1 | 72" X 54" X 24" | FCS | - | - | - | - | - | - | - | - | 10" x 20" | 1950 | 1.214 | 80" | 490 | CAPTIVE AIRE 5424 | 1,2,3,7,9,14 |
| KH-E103 | TYPE 1 | 72" X 54" X 24" | FCS | - | - | - | - | - | - | - | - | 10" x 20" | 1950 | 1.214 | 80" | 490 | CAPTIVE AIRE 5424 | 1,2,3,9,14,15 |
| KH-E104 | TYPE 1 | 48" X 48" X 20" | FCS | - | - | - | - | - | - | - | - | 10" x 14" | 1300 | 1.1 | 80" | 410 | CAPTIVE AIRE 4824 | 1,2,3,7,9,14 |
| KH-E105 | TYPE 1 | 54" X 66" X 20" | FCS | - | - | - | - | - | - | - | - | 8" x 8" | 675 | 0.428 | 80" | 370 | CAPTIVE AIRE 6624 | 1,2,3,9,14,16 |
| KH-K101A | TYPE 1 | 186" X 60" X 30" | KITCHEN | 198" X 9" X 6" & | (4) 28" X 6" & | 2660 | 0.105 | 198" X 10" X 6" | (6) 8" | 900 | 0.069 | (2) 12" | 2712 | 0.564 | 80" | 1,275 | CAPTIVE AIRE 6030ND | 1 THRU 11 |
| KH-K101B | TYPE 1 | 186" X 60" X 30" | KITCHEN | (2) 79" X 9" X 6 | (2) 28" X 6" | 2660 | 0.105 | 198" X 10" X 6" | (6) 8" | 900 | 0.069 | (2) 12" | 2712 | 0.564 | 80" | 1,275 | CAPTIVE AIRE 6030ND | 1 THRU 11 |
| KH-K102 | TYPE 1 | - | CONVEY. OVEN | - | - | - | - | - | - | - | - | - | - | - | - | - | FSE #68 | 12, 13 |

MECHANICAL NOTES:
1. DIMENSIONS ARE FOR HOOD ONLY. AN ADDITIONAL 12" IN LENGTH IS FOR FIRE SUPPRESSION / CONTROLS CABINET. BOTH HOODS ARE TO HAVE THE SAME OVERALL DIMENSIONS.
2. PROVIDE WITH 12" HIGH FIELD WRAPPER TO CONCEAL DUCTWORK CONNECTIONS BELOW KITCHEN CEILING.
3. PROVIDE WITH SERIES OF SINGLE-STAGE BAFFLE FILTERS CONSTRUCTED OF 430 STAINLESS STEEL, SIZED TO FIT INTO STANDARD 2-INCH HOOD CHANNELS.
4. PROVIDE WITH AC-PSP DUAL STREAM PLENUM WITH LED LIGHTS ACCESSORY. THE 12" BACK PLENUM IS THE HOOD MAKE-UP AIR PLENUM SUPPLIED WITH (4) 28"x6" OPENINGS EACH BALANCED TO 360 CFM. THE 10" FRONT PLENUM IS THE AC PLENUM SUPPLIED WITH (6) 8" DIAMETER OPENINGS EACH BALANCED TO 150 CFM.
5. PROVIDE WITH PSP PLENUM ALONG THE RIGHT AND LEFT SIDES OF HOOD. MAKE-UP AIR PLENUM (EACH SIDE) SUPPLIED WITH (2) 28"x6" OPENINGS EACH BALANCED TO 285 CFM.
6. INSTALL HOOD WITH BOTTOM AT 6'-8" AFF. INSTALL AC-PSP AND SIDE PSP WITH BOTTOM AT 9'-4" AFF.
7. PROVIDE WITH ANSUL R102 FIRE SYSTEM MOUNTED IN CABINET LOCATED ON END OF HOOD AS SHOWN.
8. PROVIDE WITH CAPTIVEAIRE DEMAND CONTROL VENTILATION MODEL DCV-4111 MOUNTED IN CONTROLS CABINET. CONTROLS UNIT SHALL CONTROL BOTH HOODS. CABINET IS TO BE LOCATED ON NORTH END OF ISLAND AS SHOWN WITH REMOTE MOUNTED FAN AND LIGHT SWITCH.
9. PROVIDE HOOD WITH (3) 4 LED LIGHT FICTURES.
10. PROVIDE WITH PERFORMANCE ENHANCING LIP
11. HOODS ARE SPECIFIED AS CANOPY HOOD, BUT THE AIRFLOWS SHALL FUNCTION AS AN ISLAND TYPE HOOD. TWO CANOPY HOODS ARE TO BE INSTALLED BACK TO BACK WITH 6" STAINLESS STEEL FILLER STRIP BETWEEN THE BACK OF THE HOODS.
12. HOOD PROVIDED BY FOOD SERVICE CONTRACTOR. REFER TO FSE #68. PROVIDE DUCTWORK CONNECTION BETWEEN HOOD AND EXHAUST FAN AS SHOWN ON PLANS.
13. PROVIDE 3LB ANSUL R102, STAINLESS STEEL FIRE SUPPRESSION CABINET, NATURAL GAS SOLENOID VALVE AND ROUTE PIPING TO CONVEYOR OVEN & HOOD PREPIPED CONNECTION. MOUNT TOP OF CABINET FLUSH WITH CEILING.
14. INTERLOCK ALL ANSUL R102 FIRE SYSTEM IN FCS CLASSROOM TO ACT AS ONE UNIT.
15. ANSUL FIRE SUPPRESSION SYSTEM TO BE TIED INTO HOOD KH-E102 CABINET. PROVIDE CONTROLS UTILITY CABINET AS SHOWN. CONTROLS UNIT SHALL CONTROL ALL FCS HOODS AND EF-E202.
16. ANSUL FIRE SUPPRESSION SYSTEM TO BE TIED INTO HOOD KH-E104 CABINET.

## HEAT EXCHANGER - PLATE AND FRAME (WATER TO WATER)

| MARK (HE-X) | SERVES | LOAD MBH | COLD SIDE FLUID | COLD SIDE GPM | COLD SIDE EWT (°F) | COLD SIDE LWT (°F) | COLD SIDE PD (PSI) | HOT SIDE FLUID | HOT SIDE GPM | HOT SIDE EWT (°F) | HOT SIDE LWT (°F) | HOT SIDE PD (PSI) | NUMBER OF PLATES | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HE-1 | HEAT PUMP LOOP SYSTEM | 10820 | 1,000 | GROUND WATER | 55 | 83 | 1.55 | 2,450 | 100% WATER | 95 | 85 | 9.92 | 92 | ALFA LAVAL T20M-FG | 1,2,3,4,5 |
| HE-2 | POOL WATER HEATING | 1047 | 285 | POOL WATER | 78 | 85.4 | 6.66 | 250 | 100% WATER | 95 | 86.6 | 5.58 | 42 | ALFA LAVAL M10B-FG | 1,2,3,4,6 |

MECHANICAL NOTES:
1. PROVIDE ASME-RATED.
2. RATE PERFORMANCE IN ACCORD

KITCHEN PLUMBING CONNECTION SCHEDULE

| MK | QTY | DESCRIPTION | C.W. | H.W. | | | WASTE | | GAS | | EXHAUST | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | SIZE | SIZE | TEMP | GPH | DIRECT | INDIRECT | SIZE | BTUH | SIZE | CFM | |
| 2 | 1 | SOILED DISHTABLE W/ CONVEYOR | 1/2" | 1/2" | 140˚ | 8 | | 4 @ 1-1/2" | | | | | TAIL TANK, CONVEYOR MOROR HOUSING, SINK & QUICK DRAIN |
| 4 | 1 | TROUGHVEYOR DISPOSER | 3/4" | 3/4" | 140˚ | 210 | 2" | 2" | | | | | 2" DIRECT DISPOSER DRAIN<br>2" INDIRECT RESERVOIR DRAIN<br>1-1/2" TEMP. WATER CONN. TO TROUGH INLET |
| 4A | 2 | GUSHER HEAD ASSEMBLY | | | | | | | | | | | 3/4" TEMPERED WATER CONN. FROM ITEM 4 |
| 7 | 1 | PRE-RINSE ASSEMBLY | 1/2" | 1/2" | 140˚ | 45 | | | | | | | |
| 8 | 1 | CONVEYOR DISHWASHER | | 1/2" | 180˚ | 132 | | 2" | | | 16"X4" | ENT. 200 | PROVIDE 4" FLOOR SINK |
| 8A | 1 | BLOWER DRYER | | | | | | 1" | | | 16"X4" | 400 | |
| 10 | 1 | BOOSTER HEATER | | 2 @ 3/4" | 140 /180 | | | 3/4" | | | | | |
| 11 | 1 | EQUIPMENT WASHER | 1/2" | 1/2" | 140˚ | 45 | | | | | | | |
| 15A | 1 | EVAPORATOR COIL (PRODUCE CLR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 15B | 1 | EVAPORATOR COIL (COOK'S CLR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 15C | 1 | EVAPORATOR COIL (COOK'S FZR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 15D | 1 | EVAPORATOR COIL (DIST. FZR.) | | | | | | 3/4" | | | | | CONDENSATE DRAIN BY F.S.E. |
| 26 | 1 | PREPARATION SINK | 1/2" | 1/2" | 140˚ | 60 | | 2" | | | | | PROVIDE 3" FLOOR SINK |
| 27 | 1 | DISPOSER | 1/2" | | | | 2" | | | | | | |
| 28 | 1 | PRE-RINSE ASSEMBLY | 1/2" | 1/2" | 140˚ | 45 | | | | | | | |
| 34 | 1 | PRODUCE WASHER | 1/2" | 1/2" | 140˚ | 30 | | 2" | | | | | CORD & PLUG BY ELECT., PROVIDE 3" FLOOR SINK |
| 38 | 1 | SINK WORK TABLE | 1/2" | 1/2" | 140˚ | 30 | | 1-1/2" | | | | | |
| 39 | 1 | HOT WATER DISPENSER | 1/4" | | | | | 3/4" | | | | | NEMA 6-30P, WATER & DRAIN HOSE BY F.S.E. |
| 39A | 1 | WATER FILTER ASSEMBLY | 3/8" | | | | | | | | | | |
| 42 | 1 | SINK WORK TABLE | 1/2" | 1/2" | 140˚ | 30 | | 2" | | | | | |
| 48 | 1 | TWO COMPARTMENT CONVECTION STEAMER | 3/8" | | | | | 1-1/2" | 3/4" | 84,000 | | | CW HOSE BY F.S.E |
| 49 | 1 | SEDIMENT PRE-FILTER SYSTEM | 3/4" | | | | | | | | | | |
| 49A | 1 | WATER TREATMENT SYSTEM | 3/4" | | | | | | | | | | |
| 50 | 1 | REACH-IN COMBINATION OVEN/STEAMER | 3/4" | | | | | 2" | 3/4" | 168,000 | | | NEMA 6-15P, C.W. HOSE & GAS QUICK DISC. BY F.S.E. |
| 51 | 1 | DOUBLE CONVECTION OVEN | | | | | | | 3/4" | 126,000 | | | GAS MANIFOLD & QUICK DISCONNECT BY F.S.E. |
| 53 | 2 | TROUGH DRAIN | | | | | 3" | | | | | | |
| 55 | 1 | KETTLE FILLER / SPRAY STANCHION | 1/2" | 1/2" | 140˚ | 60 | | | | | | | |
| 56 | 1 | KETTLE STAND | | | | | | 1-1/4" | | | | | |
| 57 | 1 | COUNTERTOP KETTLE / 12 GALLON | 1/2" | 1/2" | 140˚ | 10 | | | | | | | |
| 58 | 1 | WATER FILTER ASSEMBLY | 3/8" | | | | | | | | | | |
| 59 | 1 | SINK WORK TABLE | 1/2" | 1/2" | 140˚ | 30 | | 2" | | | | | |
| 62 | 1 | FOUR COMPARTMENT SINK | 2 @ 3/4" | 2 @ 3/4" | 140˚ | 110 | | 2" | | | | | PROVIDE 4" FLOOR SINK |
| 63 | 1 | DISPOSER | 1/2" | | | | 2" | | | | | | |
| 64 | 1 | HOSE REEL SPRAY ASSEMBLY | 1/2" | 1/2" | 140˚ | 45 | | | | | | | |
| 67 | 1 | DOUBLE CONVEYOR OVEN | | | | | | | 1 @ 1-1/2" | 2@96,100 | | | NEMA 5-15P (2 CIRCUITS), GAS QUICK DISCONNECTS BY F.S.E. |
| 68 | 1 | CONVEYOR OVEN EXHAUST HOOD W/ FIRE SPP. PREPIPING | | | | | | | | | 12"X12" | 828 | DUCTWORK & FIRE SUPP. BY MECH. |
| 71 | 1 | SINK COUNTER | 1/2" | 1/2" | 140˚ | 20 | | 1-1/2" | | | | | |
| 82 | 1 | MOBILE REFRIGERATED DELI COUNTER | | | | | | 1" | | | | | NEMA 5-15P, DRAIN HOSE BY F.S.E. |
| 84 | 1 | MOBILE REFRIGERATED DELI COUNTER | | | | | | 1" | | | | | NEMA 5-15P, DRAIN HOSE BY F.S.E. |
| 100 | 2 | DROP-IN HOT WELLS | | | | | | 3/4" | | | | | NEMA 5-15P, DRAIN MANIFOLD & GATE VALVE BY F.S.E. |
| 102 | 2 | DROP-IN REFRIGERATED PAN | | | | | | 3/4" | | | | | NEMA 5-15P, OPEN DRAIN BY MECH. |
| 156 | 1 | SEDIMENT PRE-FILTER SYSTEM - ALT. NO. 15 | 3/4" | | | | | | | | | | ROUGH-IN BASE BID |
| 156A | 1 | WATER TREATMENT SYSTEM - ALT. NO. 15 | 3/4" | | | | | | | | | | ROUGH-IN BASE BID |
| 157 | 1 | REACH-IN COMBINATION OVEN/STEAMER - ALT. NO. 15 | 3/4" | | | | | 2" | 3/4" | 168,00 | | | ROUGH-IN BASE BID, NEMA 6-15P, C.W. HOSE & GAS QUICK DISC. BY F.S.E. |
| 188 | 1 | TILTING SKILLET / 40 GALLON - EXISTING | | | | | | | 3/4" | 144,00 | | | GAS QUICK DISC. (ITEM 52) BY F.S.E. |
| 191 | 1 | ICE MAKER W/ BIN | 3/8" | | | | | 3/4"<br>3/4" | | | | | NEMA 5-15P<br>BIN DRAIN |
| 218 | 1 | HOT SERVING COUNTER - EXISTING | | | | | | 3/4" | | | | | CORD & PLUG BY ELECT., DRAIN HOSE BY F.S.E. |
| 219 | 1 | HOT SERVING COUNTER - EXISTING | | | | | | 3/4" | | | | | CORD & PLUG BY ELECT., DRAIN HOSE BY F.S.E. |

TANK SCHEDULE

| MARK | LOCATION | APPLICATION | CAPACITY (GAL) | TANK SIZE DIA (IN) | TANK SIZE HEIGHT (IN) | MOUNTING | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|
| T-K1 | K127 | DWH | 1750 | 75 | 130 | FLOOR | PVI MODEL P-1750A-TR TANK ONLY | - |
| T-K2 | K127 | DWH | 1750 | 75 | 130 | FLOOR | PVI MODEL P-1750A-TR TANK ONLY | - |
| NT-D1 | D118J | ACID NEUTRAL | 275 | 42 | 48 | DIRECT BURY | ZURN MODEL Z9A-NT-275 | 1,2 |

MECHANICAL NOTES:
1. PROVIDE WITH 3,500 LBS LIMESTONE.
2. PROVIDE WITH (1) 4" INLET, (1) 4" OUTLET, (1) 3" VENT CONNECTIONS. CONNECTION LOCATED AS SHOWN ON DRAWINGS.

ADD #3

PLUMBING FIXTURE CONNECTION SCHEDULE

| MARK | FIXTURE | FIXTURE CONNECTIONS CW | HW | TEMPERED WATER | WASTE | VENT | REMARKS | MECH NOTES |
|---|---|---|---|---|---|---|---|---|
| CS-2,3,6,7,9 | COUNTER SINK | 1/2" | 1/2" | - | 1-1/2" | 1-1/2" | COUNTER-TOP MOUNTED | |
| CS-1,4,5,8 | COUNTER SINK<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | 1-1/2"<br>- | 1-1/2"<br>- | COUNTER-TOP MOUNTED<br>- | |
| DW-1 | DISHWASHER | - | 1/2" | - | 1-1/2" | 1-1/2" | STANDPIPE 30" A.F.F. | |
| EWC-1 | ELECTRIC WATER COOLER | 1/2" | - | - | 1-1/4" | 1-1/4" | 34" TO SPOUT | |
| EWC-2 | ELECTRIC WATER COOLER/<br>BOTTLE FILLER ADA COMPLIANT | 1/2"<br>- | - | - | 1-1/4" | 1-1/4" | 38" TO SPOUT | |
| EEW-1 | EMERGENCY EYE/FACE WASH,<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | 1/2"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | 34" TOP OF FLOW HEADS<br>USE WIETMV-1 | |
| EEWS-1 | EMERGENCY EYE/FACE WASH<br>SHOWER, ADA COMPLIANT | 1-1/4"<br>- | 1"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | -<br>- | FLOOR MOUNTED<br>USE WIETMV-2 | 1 |
| EEWS-2 | EMERGENCY EYE/FACE WASH<br>SHOWER, ADA COMPLIANT | 1-1/4"<br>- | 1"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | 1-1/4"<br>- | CABINET STATION<br>USE WIETMV-2 | 1 |
| - | FUME HOOD | 1/2" | - | - | 1-1/4" | 1-1/4" | CONNECT TO CABINET | |
| L-2,3,4 | LAVATORY, ADA COMPLIANT | 1/2" | 1/2" | - | 1-1/4" | 1-1/4" | 34" TO RIM | |
| LT-1 | LAUNDRY TUB | 1/2" | 1/2" | - | 1-1/2" | 1-1/2" | FLOOR MOUNTED | |
| MS-1 | MOP SINK | 1/2" | 1/2" | - | 3" | SEE PLANS | FLOOR MOUNTED | |
| SH-1 | SHOWER, INDIVIDUAL, BOYS | 1/2" | 1/2" | - | - | - | 72" TO HEAD | |
| SH-2 | SHOWER, INDIVIDUAL, GIRLS | 1/2" | 1/2" | - | - | - | 66" TO HEAD | |
| SH-3 | SHOWER, INDIVIDUAL, BOYS<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | -<br>- | -<br>- | CONTROL VALVE AREA TO BE<br>38" TO 48" AFF,<br>72" TO HEAD | |
| SH-4 | SHOWER, INDIVIDUAL, GIRLS<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | -<br>- | -<br>- | CONTROL VALVE AREA TO BE<br>38" TO 48" AFF,<br>66" TO HEAD | |
| SH-5 | COLUMN SHOWER, BOYS<br>ADA COMPLIANT | 3/4"<br>- | 3/4"<br>- | -<br>- | 3"<br>- | 2"<br>- | 84" TO HEADS<br>- | |
| SS-1 | SERVICE SINK | 1/2" | 1/2" | - | 2" W TO FS | SEE PLANS | FLOOR MOUNTED | |
| - | SCIENCE FUME HOOD | 1/2" | - | - | 1 1/2" AW | 1 1/2" AV | 3/4" GAS CONNECTION | 2 |
| UR-1 | URINAL | 3/4" | - | - | 2" | 1-1/2" | 24" TO RIM | |
| UR-2 | URINAL, ADA COMPLIANT | 3/4" | - | - | 2" | 1-1/2" | 17" TO RIM | |
| WF-1,2 | WASH FOUNTAIN,<br>ADA COMPLIANT | 1/2"<br>- | 1/2"<br>- | -<br>- | 1-1/2"<br>- | 1-1/2"<br>- | 34" TO RIM<br>- | |
| WMF-1 | WASHING MACHINE FITTING | 1/2" | 1/2" | - | 2" | 1-1/2" | 42" TO RIM | |
| WC-1 | WATER CLOSET | 1" | - | - | 4" | 2" | 15" TO RIM | |
| WC-2 | WATER CLOSET,<br>ADA COMPLIANT | 1" | - | - | 4" | 2" | 17" TO TOP OF SEAT<br>- | |
| RH-1 | ROOF HYDRANT | 3/4" | - | - | 1/4" | - | ROOF MOUNTED | |
| WH-1 | WALL HYDRANT | 3/4" | - | - | - | - | 18" ABOVE FINISH FLOOR / GRADE | |

MECHANICAL NOTES:
1. PROVIDE 1-1/4" COPPER DRAIN LINE FROM WASTE CONNECTION AT SHOWER STAND AND SPILL TO FLOOR DRAIN.
2. COORDINATE SUPPLY ROUGH-IN HEIGHT AND LOCATION BASED ON MANUFACTURER BEING SUPPLIED.

ADD #3

SUMP PUMP SCHEDULE

| MARK (SP-X) | SERVES | LOCATION | PUMP TYPE | GPM (EA PUMP) | PUMP HEAD (FT WG) | MIN EFF (%) | MOTOR DATA HP | V | PH | HZ | RPM | BASIN DATA MATERIAL | SIZE L x W x D (IN) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP-G1 | ELEVATOR SHAFT | ELEVATOR PIT | SIMPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE | 24 x 24 x 24 | ZOELLER MODEL 6292 | 1,2 |
| SP-L1 | ELEVATOR SHAFT | ELEVATOR PIT | SIMPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE | 24 x 24 x 24 | ZOELLER MODEL 6292 | 1,2 |
| SP-N1 | POOL PUMP PIT | N116M | DUPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE | 30 x 36 x 24 | ZOELLER MODEL 268 | 1,2 |
| SP-N2 | FOUNDATION DRAIN | MANHOLE OUTSIDE N116 | DUPLEX SUBMERSIBLE SUMP PUMP | 50 | 10 | - | 1/2 | 115 | 1 | 60 | 3450 | CONCRETE BY CIVIL | MANHOLE BY CIVIL | ZOELLER MODEL 268 | 1,2 |

MECHANICAL NOTES:
1. PROVIDE WITH AUTOMATIC FLOAT SWITCH.
2. PUMP SHALL HAVE 2-INCH DISCHARGE, AND 20 FOOT ELECTRICAL CORD WITH STANDARD GROUNDED PLUG.

ADD #3

WATER SOFTENER

| MARK (WS-X) | SERVES | ROOM # LOCATION | SERVICE FLOW RATE PEAK FLOW RATE (GPM) | PEAK PRESS. DROP (PSI) | CONTINUOUS FLOW FLOW RATE (GPM) | CONTINUOUS FLOW PRESS. DROP (PSI) | SOFTENER TANK SIZE (DIA. X H.) (IN) EACH | BRINE TANK SIZE (DIA. X H.) (IN) | ARRANGEMENT | ELECTRICAL DATA V | PH | HZ | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WS-K1 | DOM WTR | K127 | 100 | 25 | 75 | 15 | 30 x 72 | 39 x 48 | DUPLEX PROGRESSIVE | 115 | 1 | 60 | CULLIGAN HCE-450-2 | 1, 2, 3 |

MECHANICAL NOTES:
1. EXCHANGE CAPACITY OF 470,300 GRAINS AT 225 POUND OF SALT (10 LBS PER CUBIC FOOT) PER REGENERATION MAXIMUM.
2. BRINE TANK WITH 1200 POUNDS OF SALT STORAGE.

ADD #3

THERMOSTATIC MIXING VALVES

| MARK | ROOM LOCATION | SERVES | APPLICATION | CW INLET (IN) | HW INLET (IN) | HWC INLET (IN) | HW OUTLET (IN) | FLOW CAPACITY (GAL) | OUTLET TEMP (oF) | MOUNTING | PUMP MARK | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TMV-K1 | K127 | DWH-K1 & 2 | DOM HOT WTR | 2" | 2" | 1 1/4" | 2" | 129 GPM @ 15 PSID | 110 | WALL | P-K107 | LEONARD MEGATRON MODEL 6N-LF | 1,2,3 |
| ETMV-1 | MULTIPLE | EEW-1 | EMER. EYE WASH | 3/4 | 3/4 | - | 3/4 | 1-4 GPM @ 5 PSID | 98 | WALL | - | HAWS MODEL TWBS.EWE | 4 |
| ETMV-2 | MULTIPLE | EEWS-1 | EMER. SHOWER | 3/4 | 3/4 | - | 3/4 | 1-52 GPM @ 15 PSID | 60-100 | WALL | - | HAWS MODEL TWBS.SHE | 4 |
| TMV-M1 | M100C | HYDRO TUBS | HYDROTHERAPY | 3/4 | 3/4 | - | 3/4 | 80 GPM @ 15 PSID | 110 | EXP. WALL | - | LEONARD TM-262-30-DT-CP-2-(2) 10HDH-2(HR) | 5 |

MECHANICAL NOTES:
1. INSTALL PIPING METHOD #4 AS DEFINED BY MANUFACTURER.
2. INSTALL ASSEMBLY WITH VALVE AT 48" AFF.
3. PROVIDE FACTORY ASSEMBLED AND TESTED MIXING ASSEMBLY, WITH RECIRC PUMP P-C3.
4. CABINET MODEL 9200SUR.
5. DOUBLE OUTLETS WITH BALL VALVES, VACUUM BREAKER, 3/4"GARDEN HOSE CONNECTION , (2) 10' HEAVEY DUTY HOSES, (2 ) STAINLESS STEEL HOSE RACKS

LOUVER SCHEDULE

| MARK | SERVES | TYPE | CFM | MAX VEL (CFM) | MAX PD (IN WG) | FINISH | SIZE (INCHES) W | H | D | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| L-N201 | POOL MECHANICAL N116M | DRAINABLE | 15,400 | 500 | 0.05 | | 82 | 82 | | GREENHECK ESJ-401 | 1 THRU 6 |

MECHANICAL NOTES:
1. COLOR TO BE SELECTED DURING SHOP DRAWING PHASE.
2. MUST BE SELF DRAINING
3. PROVIDE EXTENDED SILL
4. PROVIDE WIREMESH SCREEN
5. CONTACTOR TO COORDINATE TIE-IN OF LOUVER TO ADJACENT WALLS.
6. PROVIDE KYNAR 500 20YR WARRANTY

CABINET UNIT HEATER - ELECTRIC

| PLAN MARK | LOCATION | ELECTRIC COIL DATA CFM (NOM) | KW | EAT DB | MOTOR DATA HP | V | PH | AMPS | CABINET DATA THROW DIRECTION | CONFIGURATION | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CUH-AA101 | VESTIBULE - AA100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-AA102 | VESTIBULE - AA100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-AA103 | GIRLS TOILET - AA109T | 200 | 2.0 | 55 | 1/8 | 120 | 1 | 15 | HORIZONTAL | WALL RECESSED | QMARK AWH4408 | 1,2,3,4 |
| CUH-AA104 | BOYS TOILET - AA111T | 200 | 2.0 | 55 | 1/8 | 120 | 1 | 15 | HORIZONTAL | WALL RECESSED | QMARK AWH4408 | 1,2,3,4 |
| CUH-G101 | VESTIBULE - G105V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-H101 | SOUND LOCK - H118 | 200 | 2.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-H102 | VESTIBULE - H112V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-J101 | VESTIBULE - J100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J102 | VESTIBULE - J100V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J103 | VESTIBULE - J127V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J104 | VESTIBULE - J127V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J105 | VESTIBULE - J130V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-J106 | VESTIBULE - J130V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-L101 | VESTIBULE - L112V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-L102 | STAIR L102ST | 600 | 6.0 | 55 | 1/8 | 480 | 3 | 8 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-L103 | VESTIBULE L110V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-N101 | STAIR N112S | 600 | 6.0 | 55 | 1/8 | 480 | 3 | 8 | HORIZONTAL | WALL, SURFACE MOUNT | QMARK CU900 | 1,2,3,4,5 |
| CUH-N102 | VESTIBULE N113V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |
| CUH-N103 | VESTIBULE N103V | 400 | 4.0 | 55 | 1/8 | 480 | 3 | 6 | VERTICAL | CEILING RECESSED | QMARK CU900 | 1,2,3,4,5,6 |

MECHANICAL NOTES:
1. INTERNAL 2 STAGE THERMOSTAT.
2. PROVIDE INTEGRAL MOTOR OVERLOAD PROTECTION.
3. PROVIDE A CONCEALED UNIT MOUNTED FAN SWITCH WITH "OFF-HIGH-MEDIUM-LOW" POSITIONS.
4. PROVIDE UNIT MOUNTED DISCONNECT SWITCH
5. PROVIDE MOUNTING SLEEVE FOR SEMI RECESSED INSTALLATION.
6. PROVIDE TRIM KIT FOR RECESSED CEILING INSTALLATION.

BLOWER COIL - CHILLED & HOT WATER SCHEDULE

| MARK (BC-X) | CFM | ESP (IN WG) | COOLING COIL TOT CAP (MBH) | SENS CAP (MBH) | GPM | EWT (°F) | LWT (°F) | PD (FT WG) | HEATING COIL TOT CAP (MBH) | GPM | EWT (°F) | LWT (°F) | PD (FT WG) | ELECTRICAL V | PH | Hz | FLA | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-M201 | 1400 | 0.5 | 36.37 | 25.56 | 7.25 | 42 | 56 | 1.88 | 46.9 | 9.4 | 130 | 120 | 1.39 | 115 | 1 | 60 | 7.46 | TRANE | 1 |
| BC-M202 | 600 | 0.5 | 18.01 | 13.36 | 3.59 | 42 | 56 | 1.81 | 18.32 | 3.67 | 130 | 120 | 9.82 | 115 | 1 | 60 | 7.46 | TRANE | 1 |

MECHANICAL NOTES:
1. PROVIDE UNIT WITH THE FOLLOWING:
   A. PRE-PIPED TWO-WAY CHILLED WATER VALVE.
   B. FILTER BOX WITH 4 INCH THICK 30% EFFICIENT PLEATED FILTERS.

EXPANSION TANK SCHEDULE

| MARK | LOCATION | SERVES | NUMBER OF TANKS | TANK VOLUME (GAL) | ACCEPTANCE VOLUME | OPERATING TEMP (°F) | DETAIL REF. | WEIGHT (EACH) | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| ET-K1 | K127 | DWH SYSTEM | 1 | 211 | 137 | 140 | 12/P3.1 | 760 | AMTROL ST-452-C | 1 |
| ET-K2 | K127 | HVAC HYDRONIC | 1 | 500 | 500 | 100 | 11/M4.2 | 1126 | TACO PS500 | 2 |

MECHANICAL NOTES:
1. PROVIDE 4" CONCRETE HOUSEKEEPING PAD.
2. PROVIDE AS PART OF THE CHILLER SKID.

DOMESTIC WATER HEATER - GAS FIRED SCHEDULE

| MARK (DWH-X) | LOCATION | TANK CAPACITY (GAL) | EXPANSION TANK MARK (ET-X) | MINIMUM RECOVERY (GAL/HR) | EWT (°F) | LWT (°F) | INPUT (MBH) | ELECTRICAL DATA AMPS | V | PH | HZ | BASIS OF DESIGN | MECH NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DWH-K1 | K127 | 300 | ET-K1 | 2053 | 40 | 140 | 1,800 | 7.5 | 120 | 1 | 60 | PVI 180 LX 300A-PVIF | 1,2 |
| DWH-K2 | K127 | 300 | ET-K1 | 2053 | 40 | 140 | 1800 | 7.5 | 120 | 1 | 60 | PVI 180 LX 300A-PVIF | 1,2 |

MECHANICAL NOTES:
1. WATER HEATER SHALL INCLUDE ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE AND DRAIN VALVE.
2. PROVIDE 4" CONCRETE HOUSEKEEPING PAD.


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #2 Addendum #2 | 10/10/2014 |
| ADD #3 Addendum #3 | 10/14/2014 |

MECHANICAL SCHEDULES

ProjectNumber: 1355
Date: September 30, 2014

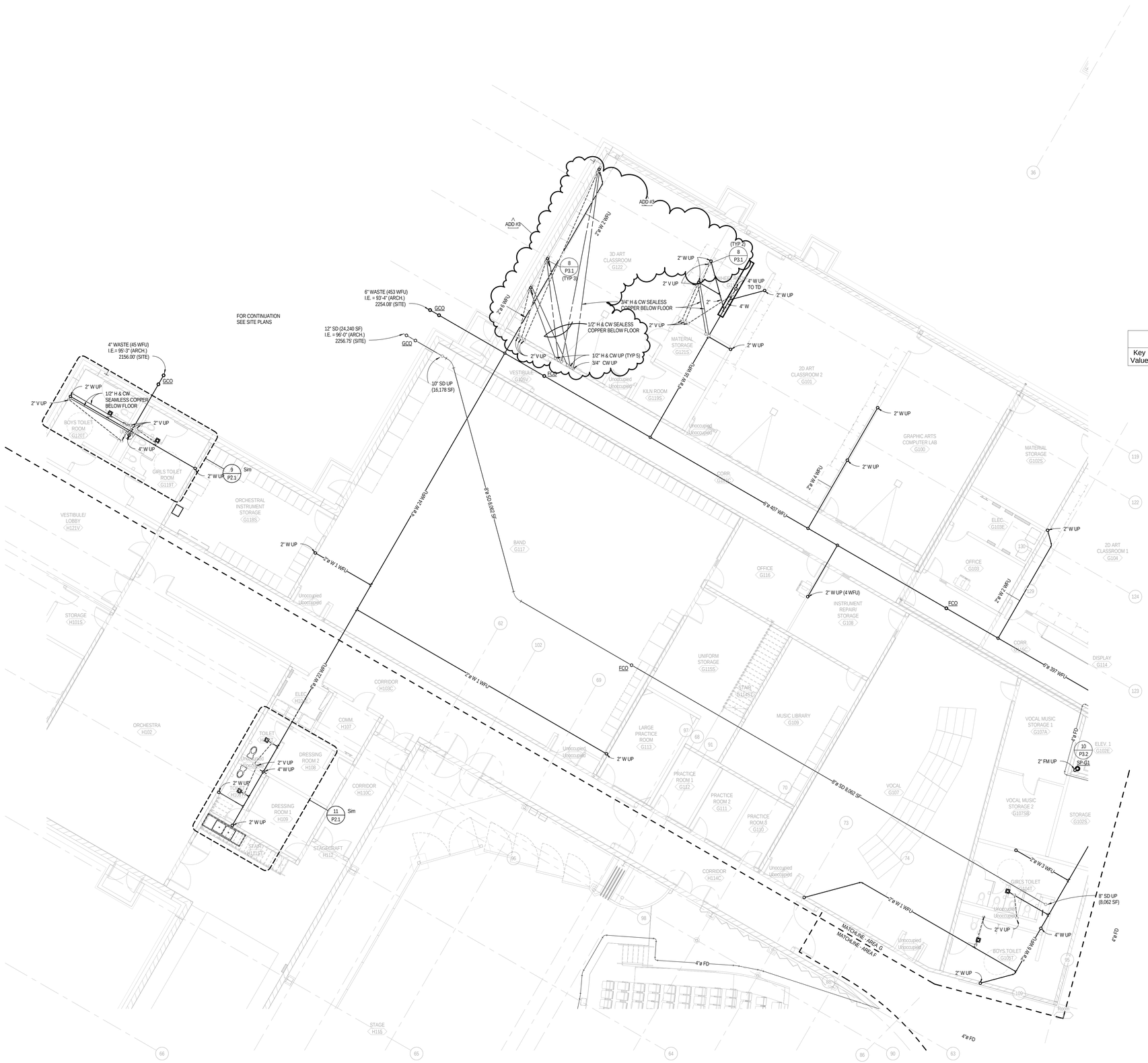

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
M5.5

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

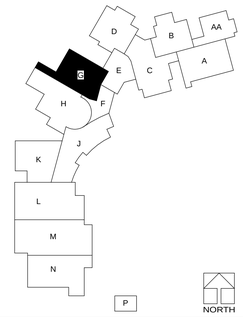
| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |




## UNDERGROUND PLUMBING PLAN - AREA G

NORTH SCALE: 1/8" = 1'-0"

KEY PLAN





Wilkins Hinrichs Stober Architects L.L.C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL MECHANICAL ENGINEER
Paul D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

UNDERGROUND PLUMBING PLAN - AREA G

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

P0.6

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

NORTH

## PLUMBING PLAN - FIRST LEVEL - AREA D

SCALE: 1/8" = 1'-0"


Wilkins Hinrichs Stober Architects L.L.C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
E-12412
STATE OF NEBRASKA
9-30-2014

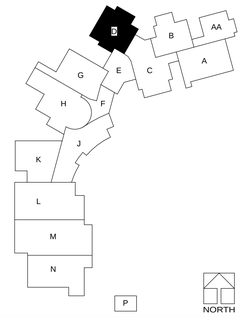

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00



© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


KEY PLAN




Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

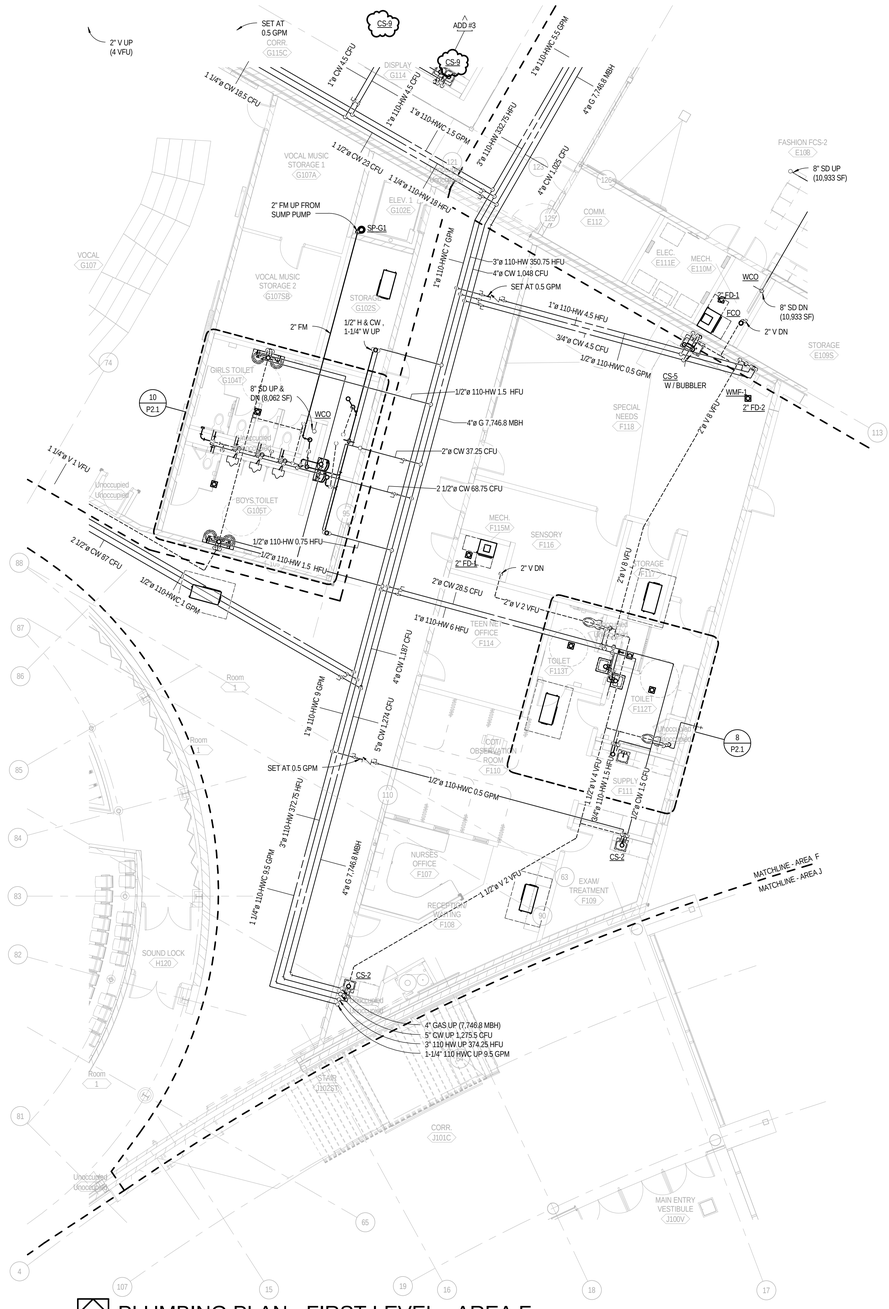
PLUMBING PLAN - FIRST LEVEL - AREA D

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

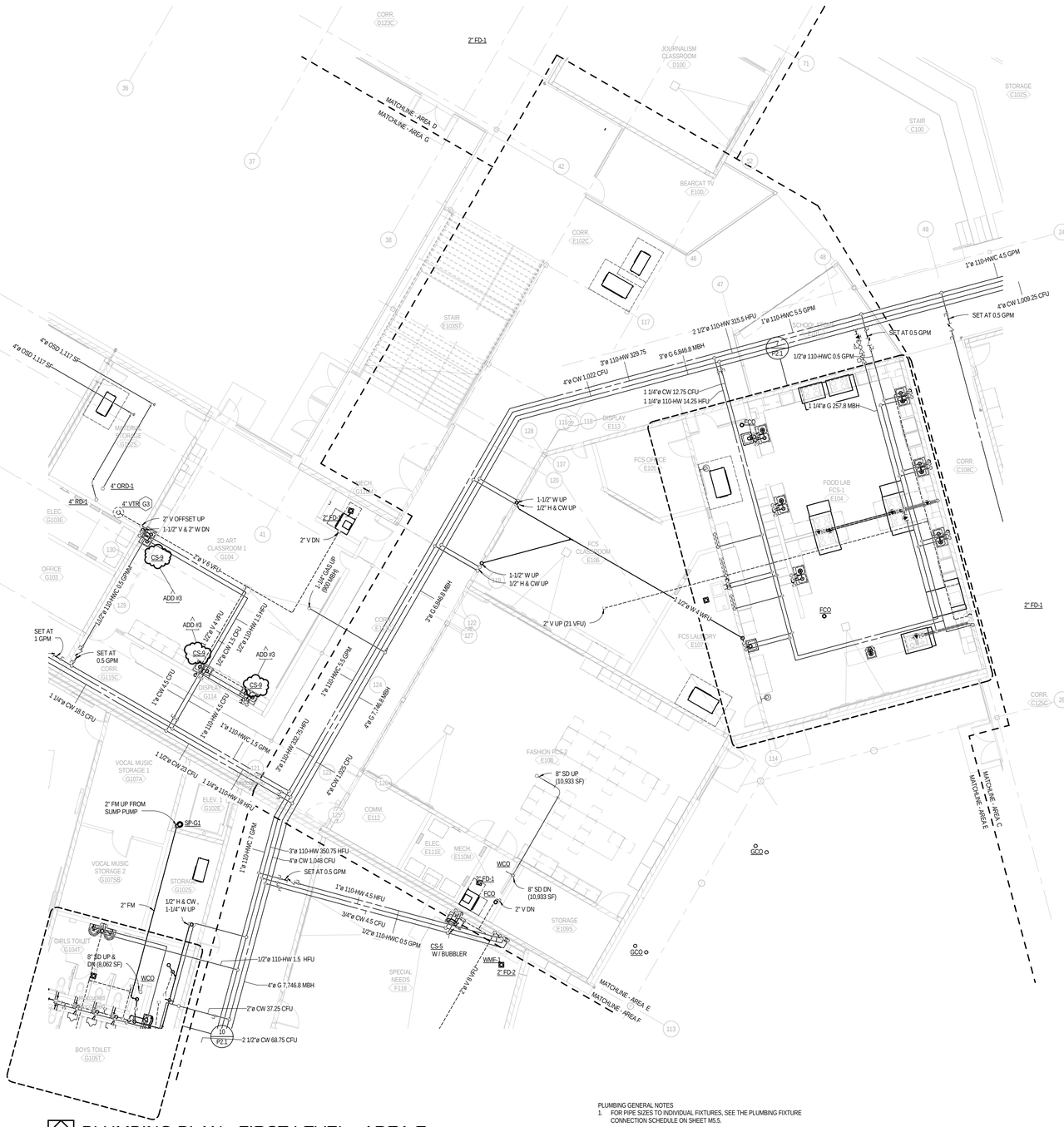
P1.4




## PLUMBING PLAN - FIRST LEVEL - AREA F

NORTH

SCALE: 1/8" = 1'-0"




## PLUMBING PLAN - FIRST LEVEL - AREA E

NORTH

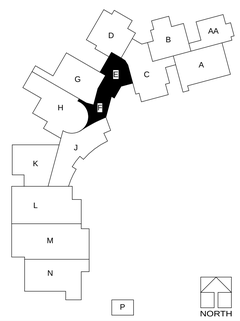
SCALE: 1/8" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 3/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

PLUMBING PLAN - FIRST LEVEL - AREAS E & F

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

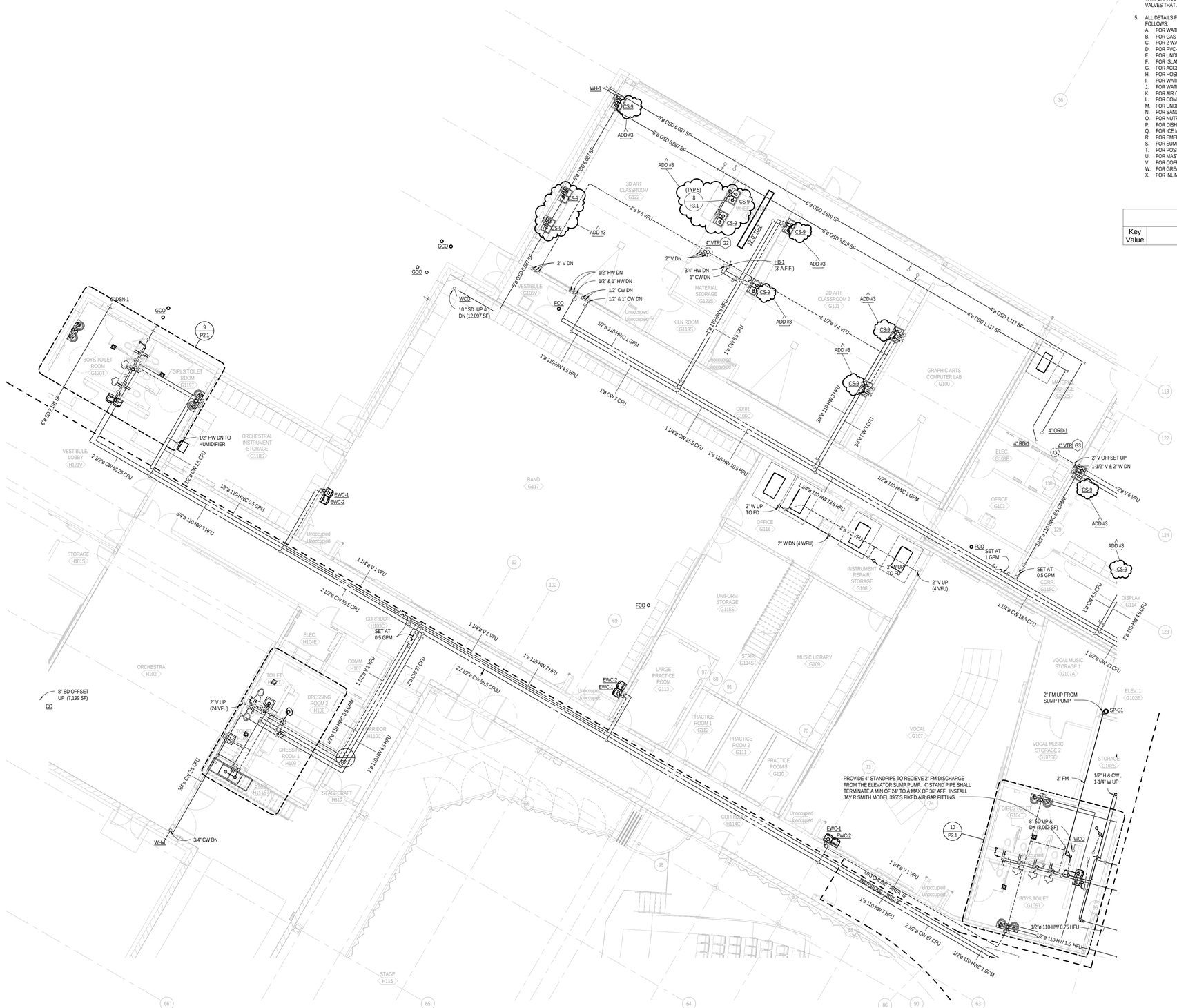
Sheet Number:

P1.5

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

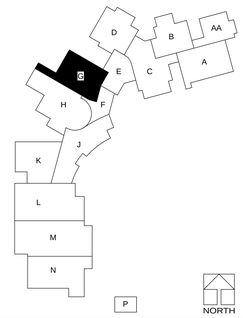



## PLUMBING PLAN - FIRST LEVEL - AREA G

NORTH

SCALE: 1/8" = 1'-0"

KEY PLAN





Wilkins Hinrichs Stober Architects L.L.C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Paul Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

PLUMBING PLAN - FIRST LEVEL - AREA G

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

P1.6

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

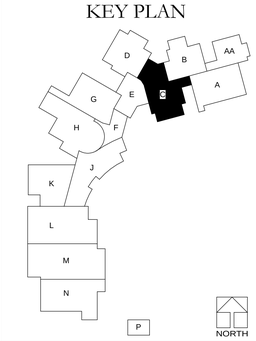
| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

NORTH

## PLUMBING PLAN - SECOND LEVEL - AREA C

SCALE: 1/8" = 1'-0"

KEY PLAN





Wilkins Hinrichs Stober Architects L.L.C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

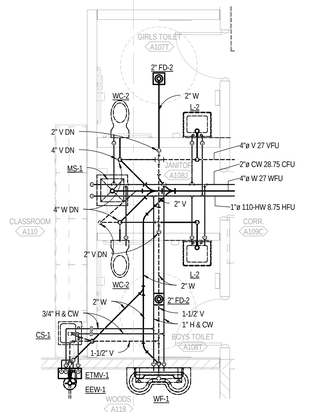
PLUMBING PLAN - SECOND LEVEL - AREA C

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

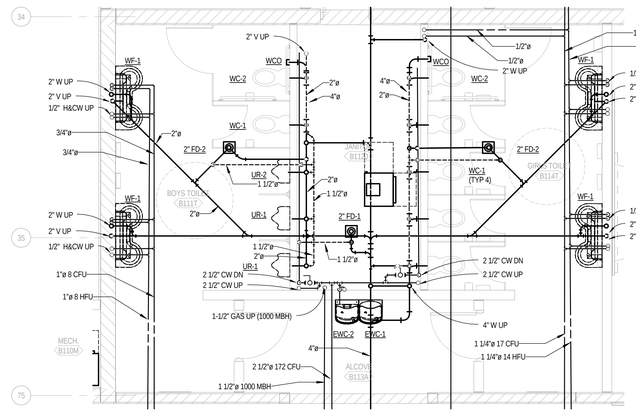

Sheet Number:

P1.15



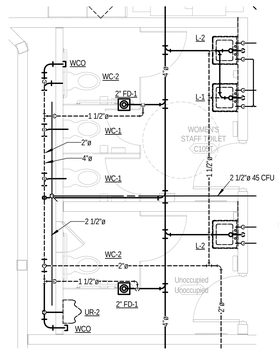

1 P2.1 LARGE SCALE A107T, A08J, A108T, A110 & A118

SCALE: 1/4" = 1'-0"



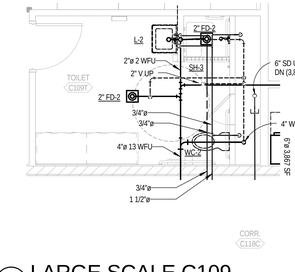

2 P2.1 LARGE SCALE B111T, B113A & B114T

SCALE: 1/4" = 1'-0"




3 P2.1 LARGE SCALE C104T & C105T

SCALE: 1/4" = 1'-0"

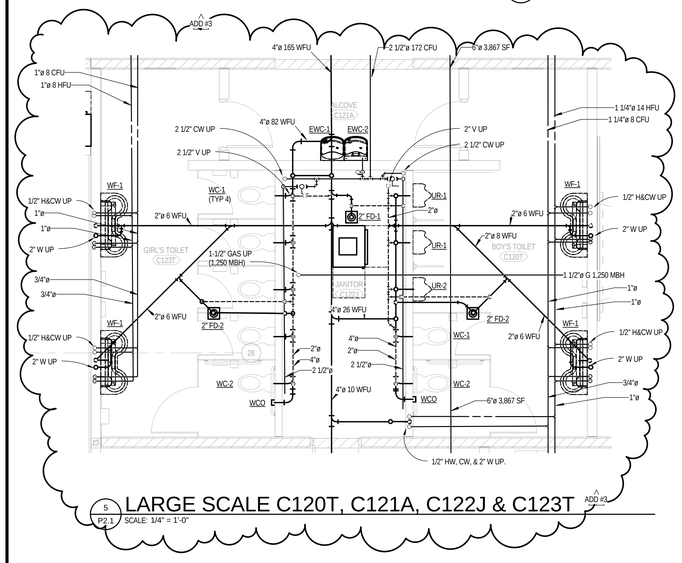



4 P2.1 LARGE SCALE C109

SCALE: 1/4" = 1'-0"

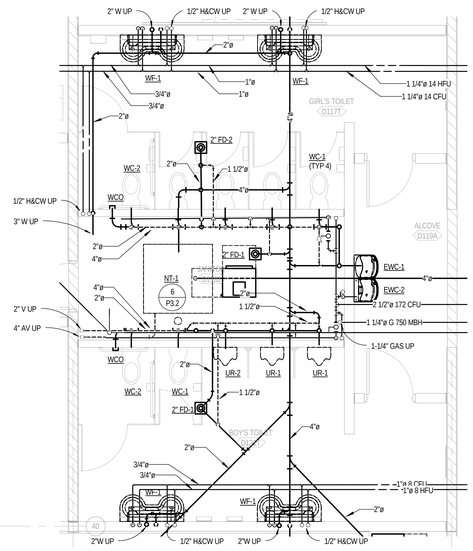
PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.



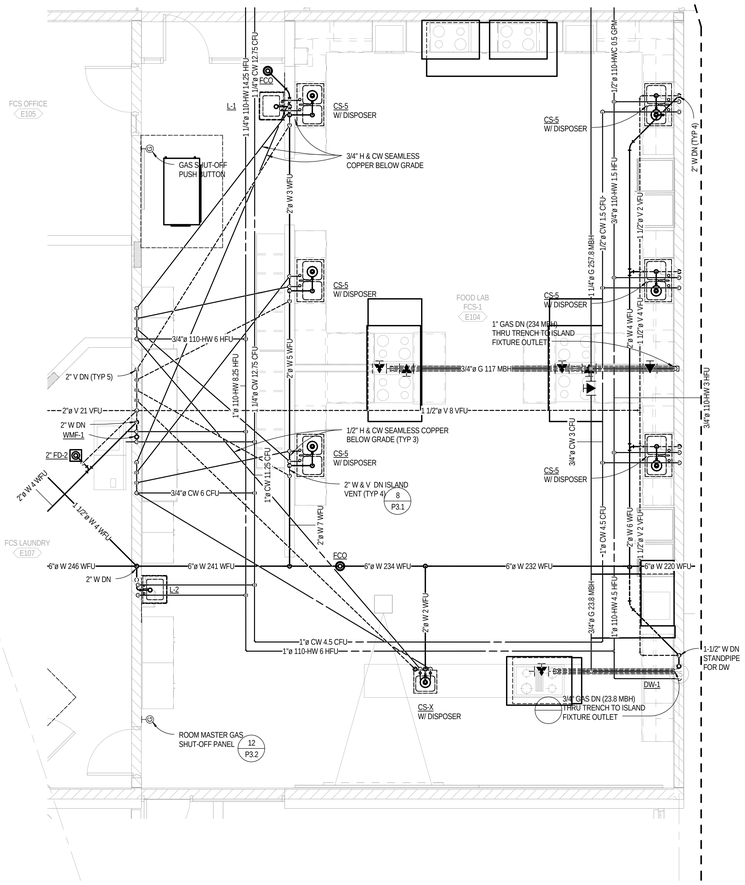

5 P2.1 LARGE SCALE C120T, C121A, C122J & C123T

SCALE: 1/4" = 1'-0"



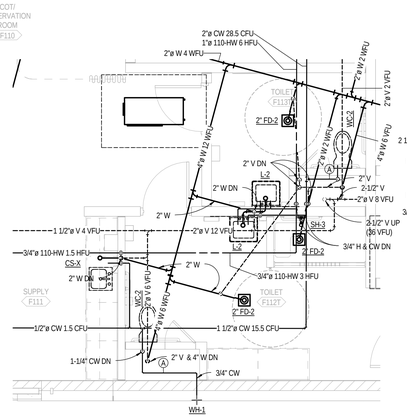

6 P2.1 LARGE SCALE D117T, D118J, D119A & D121T

SCALE: 1/4" = 1'-0"



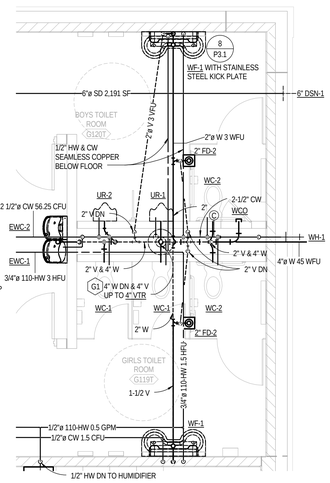

7 P2.1 LARGE SCALE E104

SCALE: 1/4" = 1'-0"



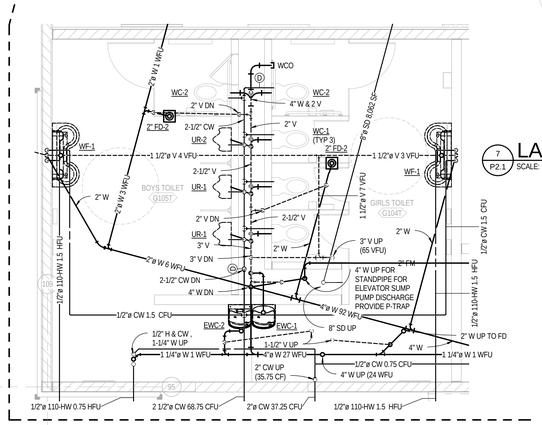

8 P2.1 LARGE SCALE F111, F112T & F113T

SCALE: 1/4" = 1'-0"



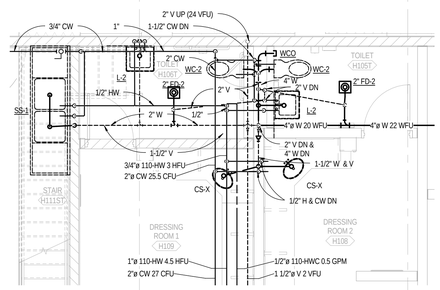

9 P2.1 LARGE SCALE G119T & G120T

SCALE: 1/4" = 1'-0"




10 P2.1 LARGE SCALE G104T & G105T

SCALE: 1/4" = 1'-0"




11 P2.1 LARGE SCALE H105T, H106T, H108 & H109

SCALE: 1/4" = 1'-0"


Wilkins Hinrichs Stober Architects L.L.C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum #3 | 10/14/2014 |

PLUMBING LARGE SCALE PLANS

ProjectNumber: **1355**
Date: **September 30, 2014**

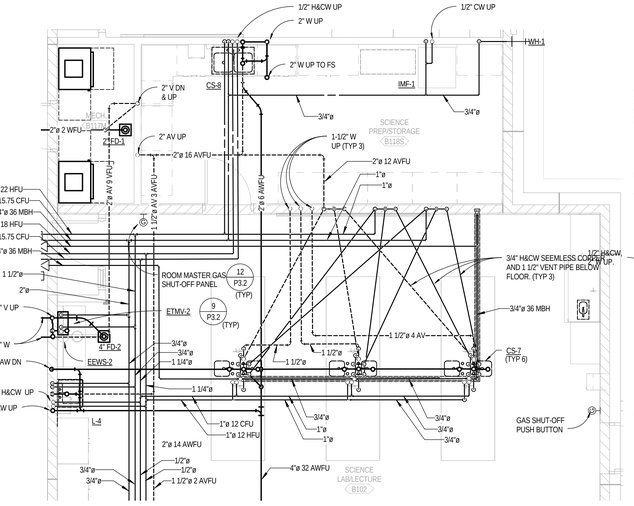

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

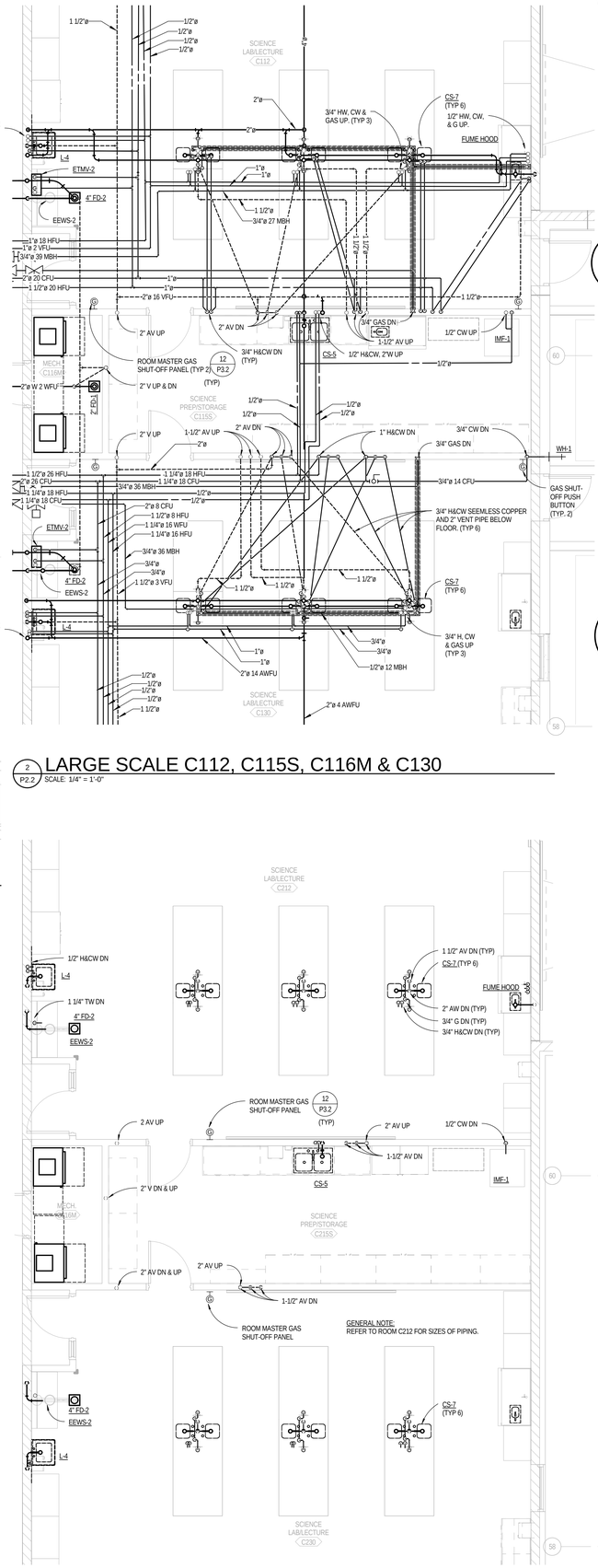
**P2.1**

PLUMBING GENERAL NOTES

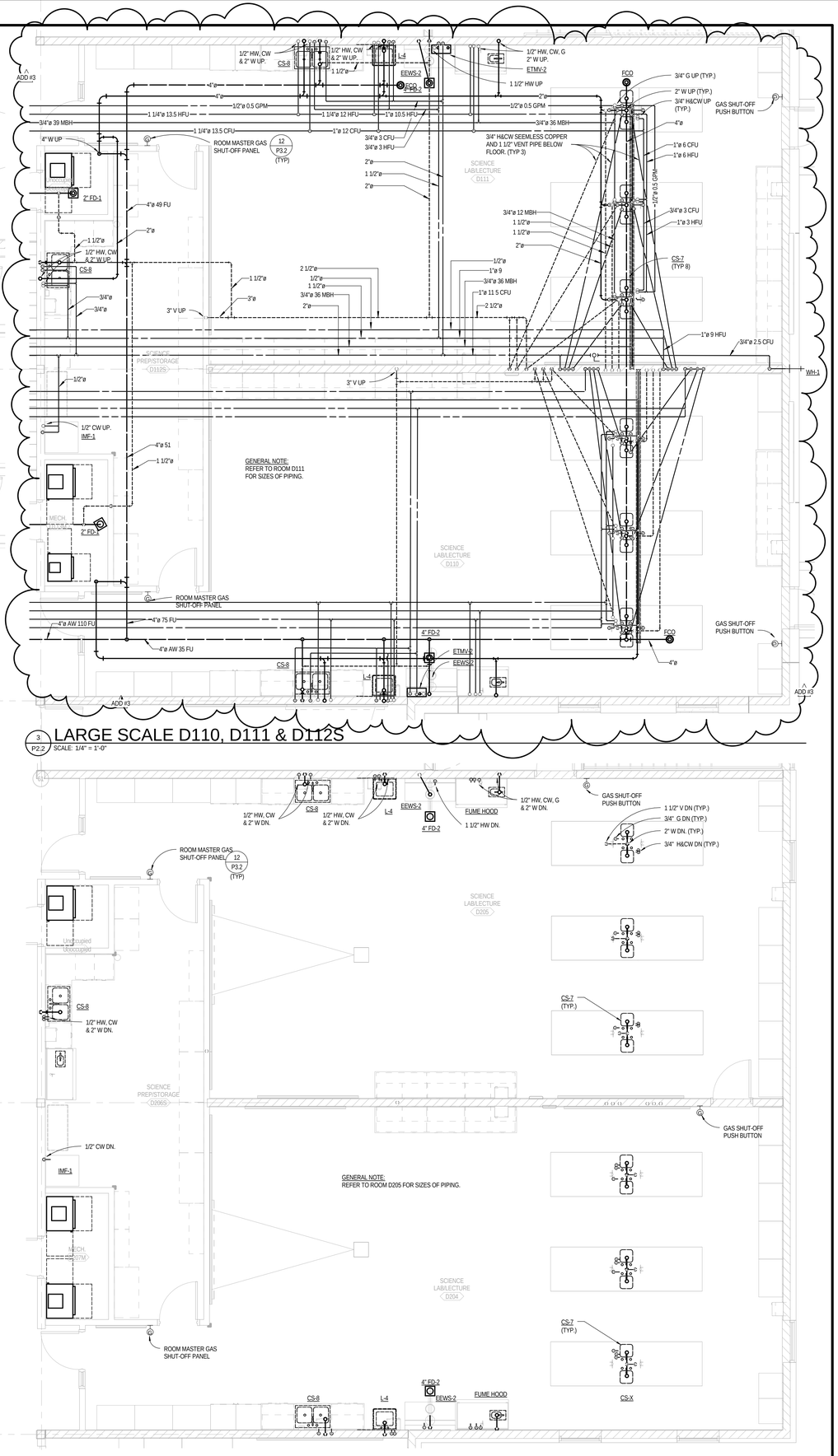
1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.



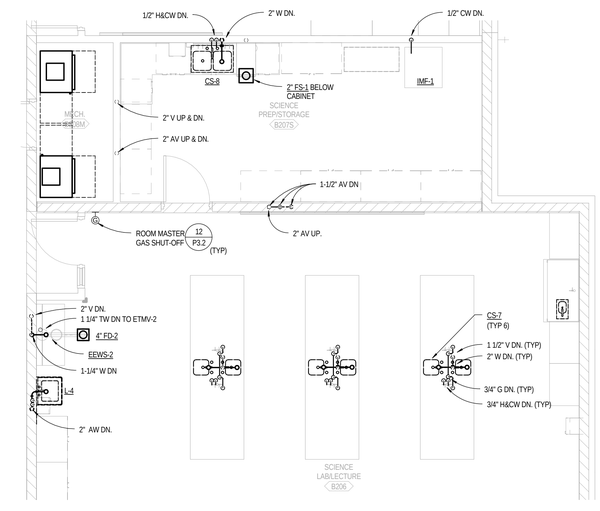

1 P2.2 LARGE SCALE B102, B118S & B117M
SCALE: 1/4" = 1'-0"




2 P2.2 LARGE SCALE C112, C115S, C116M & C130
SCALE: 1/4" = 1'-0"




3 P2.2 LARGE SCALE D110, D111 & D112S
SCALE: 1/4" = 1'-0"




4 P2.2 LARGE SCALE B206 & B207S
SCALE: 1/4" = 1'-0"




5 P2.2 LARGE SCALE C212, C215S & C230
SCALE: 1/4" = 1'-0"




6 P2.2 LARGE SCALE D204, D205 & D206S
SCALE: 1/4" = 1'-0"

61


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

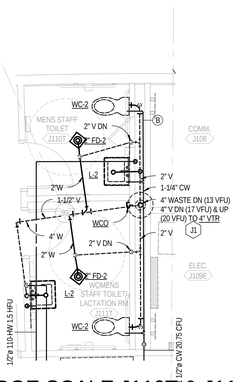
| Revision/Issue | | Date |
|---|---|---|
| ADD #1 | Addendum #1 | 10/7/2014 |
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

PLUMBING LARGE SCALE PLANS

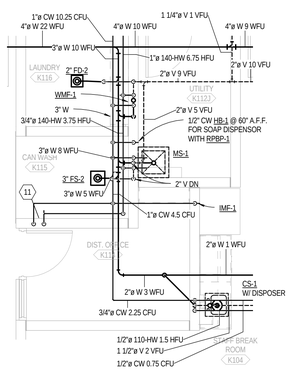
ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

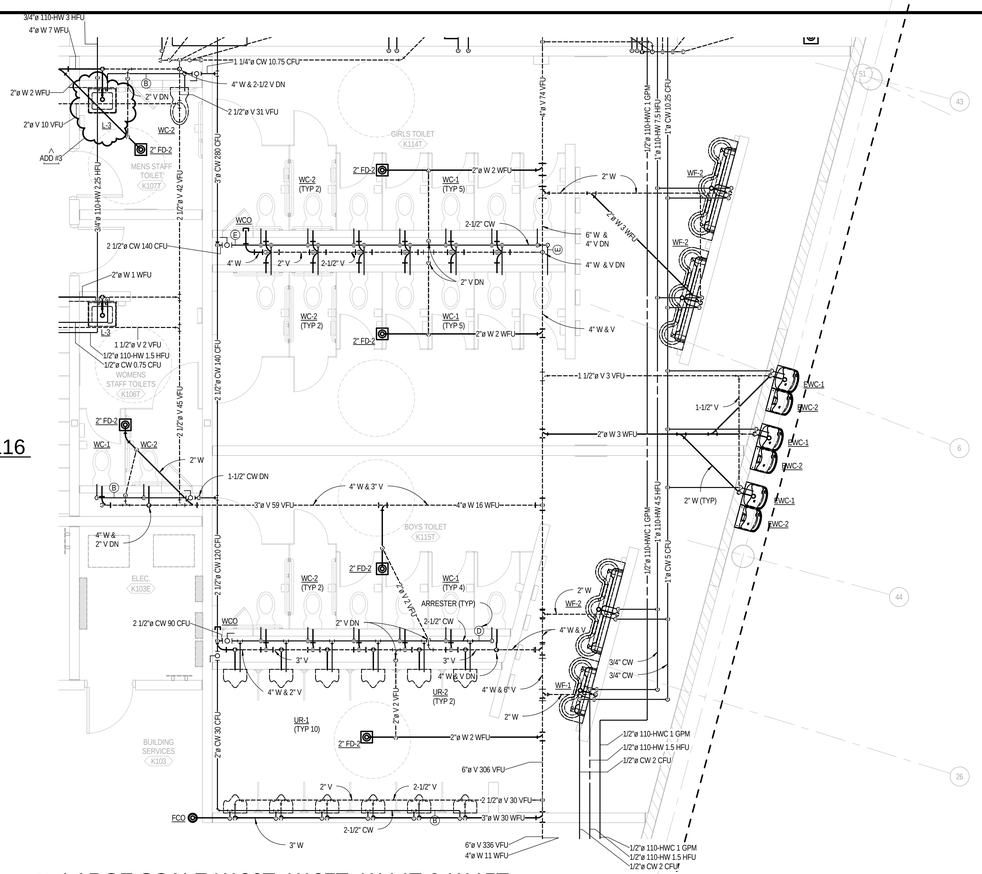

Sheet Number:
P2.2



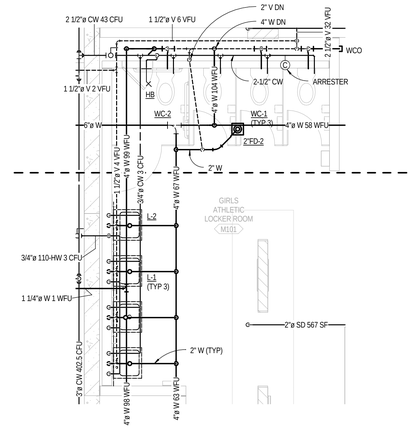

1 P2.3 LARGE SCALE J110T & J111T
SCALE: 1/4" = 1'-0"



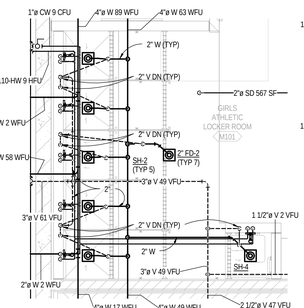

2 P2.3 LARGE SCALE K112J, K115 & K116
SCALE: 1/4" = 1'-0"



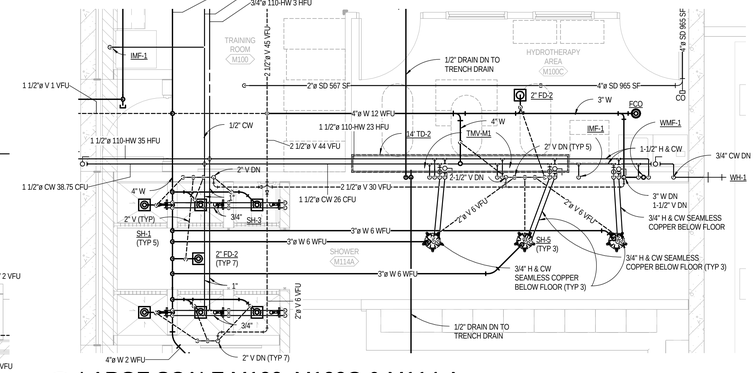

5 P2.3 LARGE SCALE L101T
SCALE: 1/4" = 1'-0"



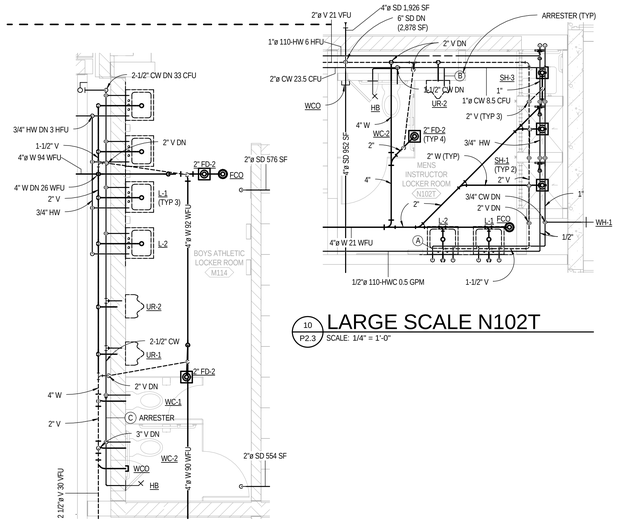

6 P2.3 LARGE SCALE M101-A
SCALE: 1/4" = 1'-0"




7 P2.3 LARGE SCALE M101-B
SCALE: 1/4" = 1'-0"



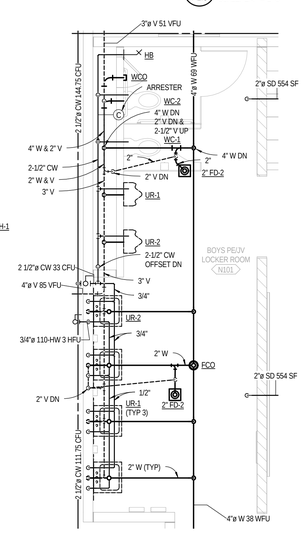

8 P2.3 LARGE SCALE M100, M100C & M114-A
SCALE: 1/4" = 1'-0"



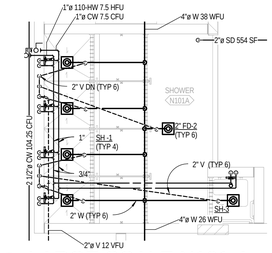

9 P2.3 LARGE SCALE M114
SCALE: 1/4" = 1'-0"




10 P2.3 LARGE SCALE N102T
SCALE: 1/4" = 1'-0"



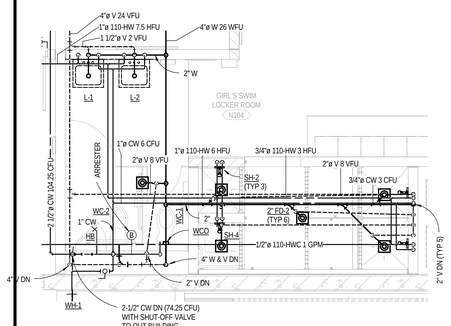

11 P2.3 LARGE SCALE N101
SCALE: 1/4" = 1'-0"



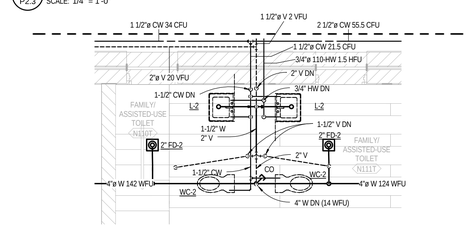

12 P2.3 LARGE SCALE N101-A
SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.




13 P2.3 LARGE SCALE N104
SCALE: 1/4" = 1'-0"




15 P2.3 LARGE SCALE N110T & N111T
SCALE: 1/4" = 1'-0"


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

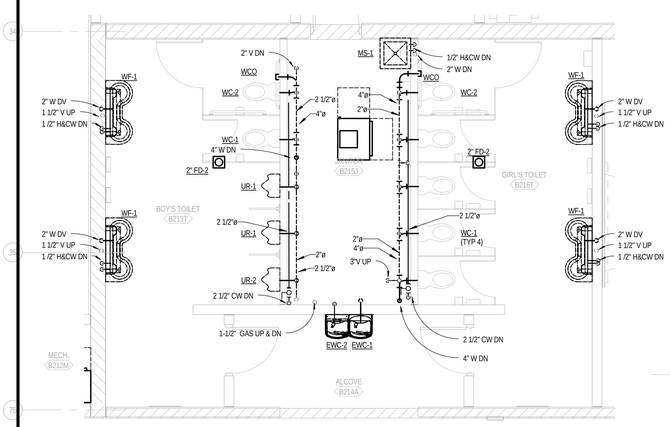
| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum #3 | 10/14/2014 |

PLUMBING LARGE SCALE PLANS

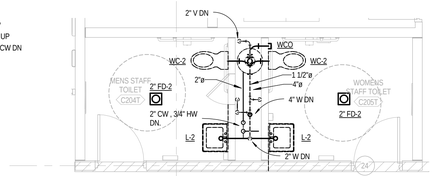
ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

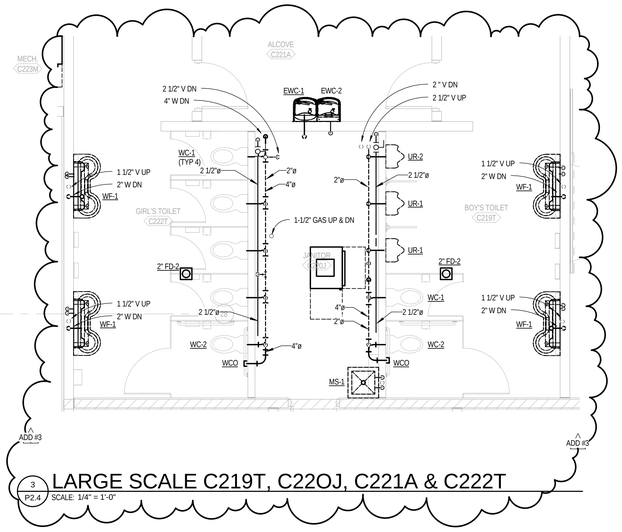

Sheet Number:
P2.3



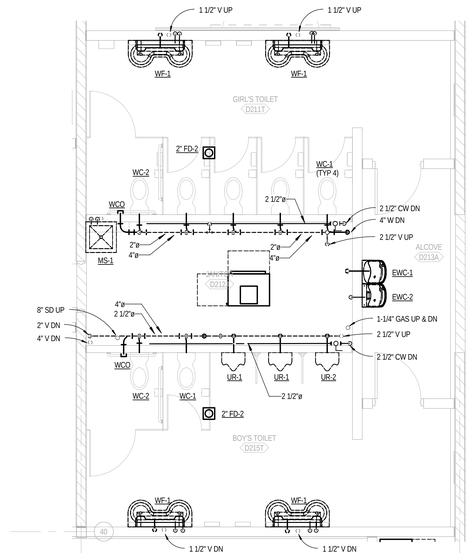

1 P2.4 LARGE SCALE B213T, B214A, B215J & B216T
SCALE: 1/4" = 1'-0"




2 P2.4 LARGE SCALE C204T & C205T
SCALE: 1/4" = 1'-0"




3 P2.4 LARGE SCALE C219T, C22OJ, C221A & C222T
SCALE: 1/4" = 1'-0"



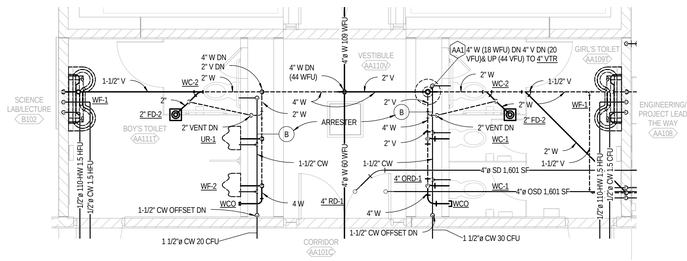

4 P2.4 LARGE SCALE D211T, D212J, D213A & D215T
SCALE: 1/4" = 1'-0"




5 P2.4 LARGE SCALE G203T & G204T
SCALE: 1/4" = 1'-0"




6 P2.4 LARGE SCALE M209T & M210T
SCALE: 1/4" = 1'-0"




7 P2.4 LARGE SCALE AA109T, AA110V & AA11T
SCALE: 1/4" = 1'-0"

| Keynote Legend | |
|---|---|
| Key Value | Keynote Text |

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1
   - B. FOR GAS SERVICE ENTRANCE DETAIL SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER E-12412 STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

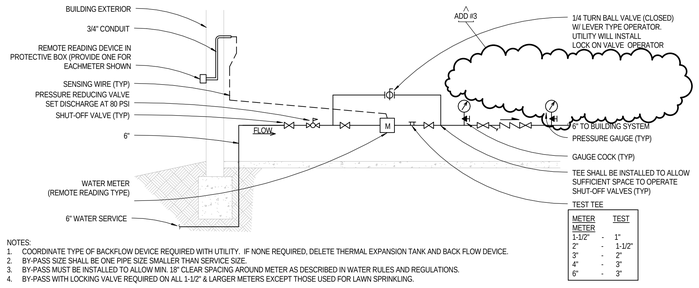
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum #3 | 10/14/2014 |

PLUMBING LARGE SCALE PLANS

ProjectNumber: **1355**
Date: **September 30, 2014**

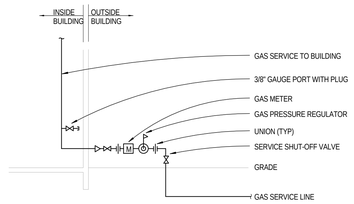
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
P2.4

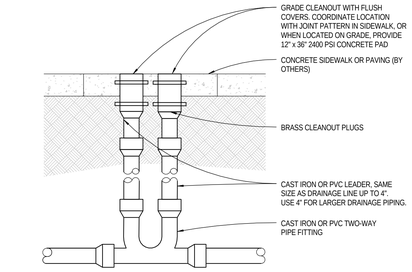



NOTES:
1. COORDINATE TYPE OF BACKFLOW DEVICE REQUIRED WITH UTILITY. IF NONE REQUIRED, DELETE THERMAL EXPANSION TANK AND BACK FLOW DEVICE.
2. BY-PASS SIZE SHALL BE ONE PIPE SIZE SMALLER THAN SERVICE SIZE.
3. BY-PASS MUST BE INSTALLED TO ALLOW MIN. 18" CLEAR SPACING AROUND METER AS DESCRIBED IN WATER RULES AND REGULATIONS.
4. BY-PASS WITH LOCKING VALVE REQUIRED ON ALL 1-1/2" & LARGER METERS EXCEPT THOSE USED FOR LAWN SPRINKLING.

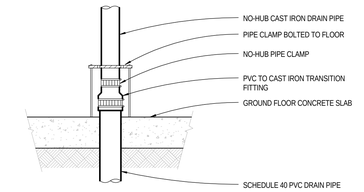
1 P3.1 WATER METER ENTRANCE - BLDG & LAWN
NO SCALE



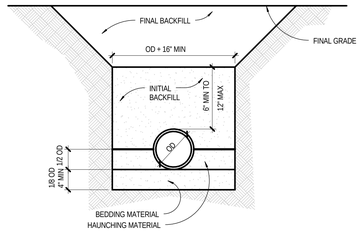

2 P3.1 GAS SERVICE ENTRANCE
NO SCALE




3 P3.1 CLEANOUT TWO WAY GRADE
NO SCALE



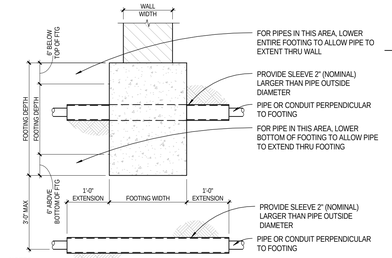

4 P3.1 PVC CASTIRON TRANSITION
NO SCALE




GRAVITY SEWER, ACID & STORM PIPES

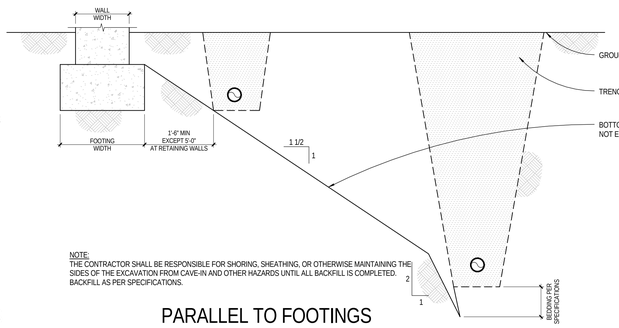
NOTES:
1. SEE SPECIFICATION SECTION 312000 FOR FINAL BACKFILL MATERIALS AND COMPACTION REQUIREMENTS.
2. BEDDING, HAUNCHING, AND INITIAL BACKFILL MATERIAL SHALL BE USED FOR ALL PLASTIC GRAVITY SEWER, ACID &
STORM PIPING AS FOLLOWS:
A. MATERIAL SHALL MEET THE REQUIREMENTS OF ASTM D 2321, CLASS II.
B. 47B MATERIAL CODE 2109 MEETS THE REQUIREMENTS OF ASTM D 2321, CLASS II. LIMITS OF PASSING ARE AS FOLLOWS (SIEVE SIZE):
1) 1-1/2", 100%
2) #4, 77 TO 97%
3) #10, 50 TO 70%
4) #30, 16 TO 40%
5) #200, 0 TO 3%
C. BEDDING, HAUNCHING, AND INITIAL BACKFILL MATERIAL SHALL BE INSTALLED AND COMPACTED IN MAXIMUM 6" LAYERS. COMPACTION SHALL PROVIDE A MINIMUM DENSITY 85% STANDARD PROCTOR BY USE OF HAND TAMPERS OR VIBRATORY COMPACTORS. BEDDING AND HAUNCHING LAYERS SHALL BE COMPACTED SEPARATELY.
3. PROVIDE SHOP DRAWING PRODUCT DATA FOR BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL.
4. COMPACTION SHALL BE TESTED FOR COMPLIANCE BY A CERTIFIED GEOTECHNICAL CONSULTANT AND WITNESSED BY THE ENGINEER OF RECORD. MINIMUM STANDARD PROCTOR SHALL BE COORDINATED WITH GEOTECH CONSULTANT. A HIGHER STANDARD PROCTOR MAY BE REQUIRED BASED ON ACTUAL FIELD CONDITIONS.

5 P3.1 PVC UNDERGROUND PIPE
NO SCALE




NOTES:
1. FOR PIPES 3'-0" OR LESS BELOW FOOTING, PROVIDE SLEEVE AS SHOWN.
2. FOR PIPES MORE THAN 3'-0" BELOW FOOTING, PIPE SLEEVE MAY BE ELIMINATED.
3. COORDINATE WITH GS AND ALL OTHER EFFECTED TRADES.

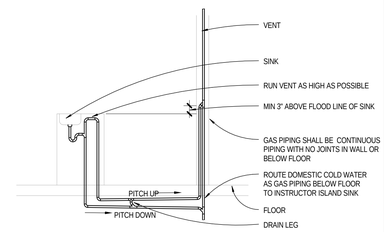
PERPENDICULAR TO FOOTINGS



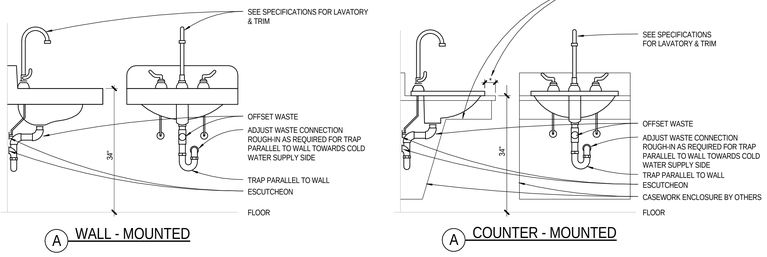

NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING, SHEATHING, OR OTHERWISE MAINTAINING THE SIDES OF THE EXCAVATION FROM CAVE-IN AND OTHER HAZARDS UNTIL ALL BACKFILL IS COMPLETED. BACKFILL AS PER SPECIFICATIONS.

PARALLEL TO FOOTINGS

6 P3.1 UNDERGROUND PIPE
NO SCALE




8 P3.1 ISLAND SINK PLUMBING
NO SCALE

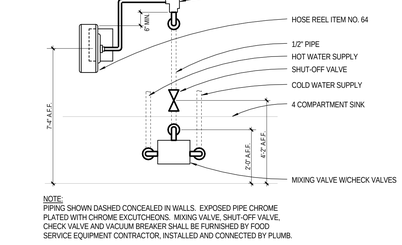



A WALL - MOUNTED



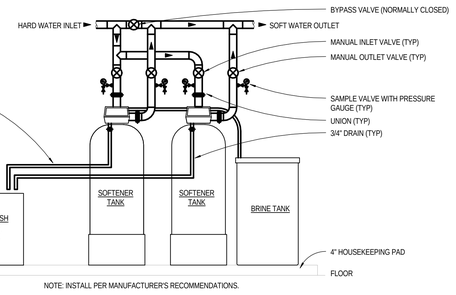

A COUNTER - MOUNTED

9 P3.1 ADA ACCESSIBLE LAVATORY OR COUNTER SINK
NO SCALE



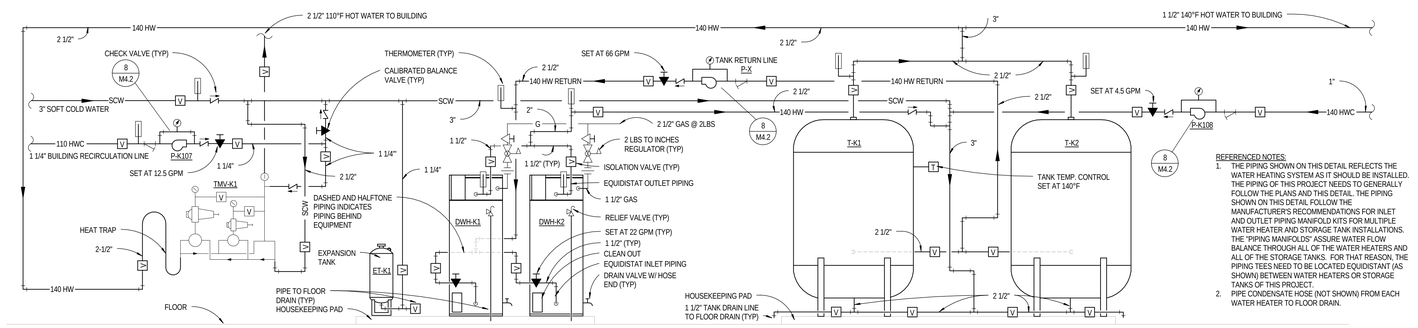

NOTE:
PIPING SHOWN DASHED CONCEALED IN WALLS. EXPOSED PIPE CHROME PLATED WITH CHROME EXCUTCHEONS. MIXING VALVE, SHUT-OFF VALVE, CHECK VALVE AND VACUUM BREAKER SHALL BE FURNISHED BY FOOD SERVICE EQUIPMENT CONTRACTOR, INSTALLED AND CONNECTED BY PLUMB.

10 P3.1 HOSE REEL ASSEMBLY
NO SCALE




NOTE: INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

11 P3.1 WATER SOFTENER DUAL TANK
NO SCALE




REFERENCED NOTES:
1. THE PIPING SHOWN ON THIS DETAIL REFLECTS THE WATER HEATING SYSTEM AS IT SHOULD BE INSTALLED. THE PIPING OF THIS PROJECT NEEDS TO GENERALLY FOLLOW THE PLANS AND THIS DETAIL. THE PIPING SHOWN ON THIS DETAIL FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR INLET AND OUTLET PIPING MANIFOLD KITS FOR MULTIPLE WATER HEATER AND STORAGE TANK INSTALLATIONS. THE "PIPING MANIFOLDS" ASSURE WATER FLOW BALANCE THROUGH ALL OF THE WATER HEATERS AND ALL OF THE STORAGE TANKS. FOR THAT REASON, THE PIPING TEES NEED TO BE LOCATED EQUIDISTANT (AS SHOWN) BETWEEN WATER HEATERS OR STORAGE TANKS OF THIS PROJECT.
2. PIPE CONDENSATE HOSE (NOT SHOWN) FROM EACH WATER HEATER TO FLOOR DRAIN.

12 P3.1 WATER HEATER W/STORAGE TANKS
NO SCALE

Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Mark D. Hinrichs
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

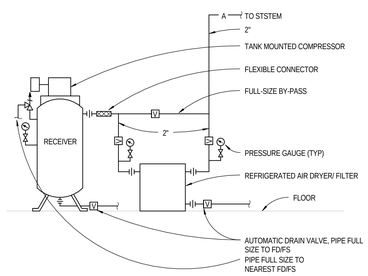
| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum #3 | 10/14/2014 |

PLUMBING DETAILS

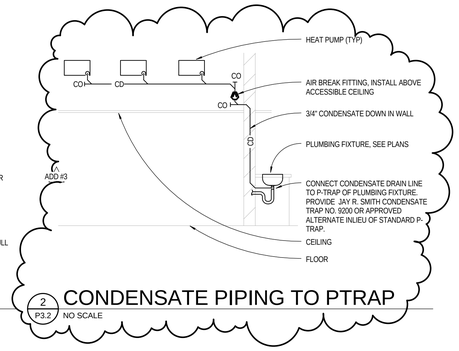
ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

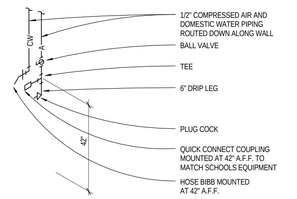
Sheet Number:
P3.1



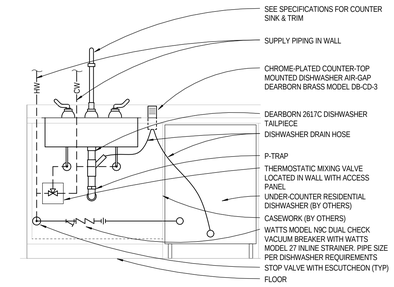

1 P3.2 **AIR COMPRESSOR**
NO SCALE



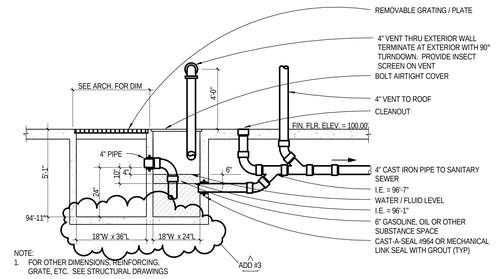

2 P3.2 **CONDENSATE PIPING TO PTRAP**
NO SCALE



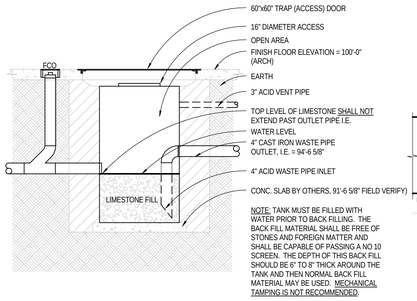

3 P3.2 **COMP AIR OUTLET & HOSE BIBB**
NO SCALE



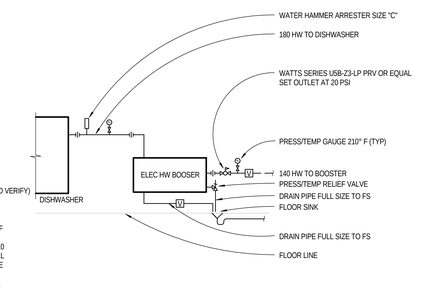

4 P3.2 **UNDER COUNTER RES. TYPE DW**
NO SCALE



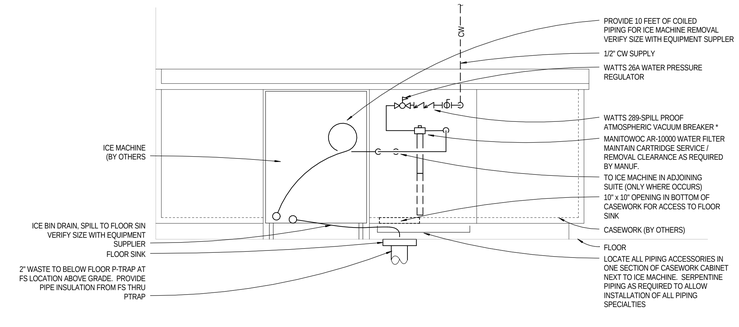

5 P3.2 **SAND & OIL INTERCEPTOR**
NO SCALE



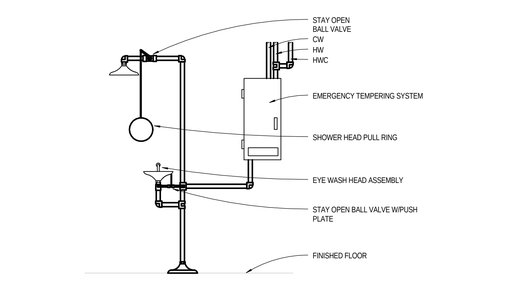

6 P3.2 **ACID NEUTRALIZATION TANK**
NO SCALE




7 P3.2 **DISHWASHER BOOSTER HEATER**
NO SCALE




8 P3.2 **ICE MACHINE - UNDER COUNTER**
NO SCALE




9 P3.2 **EMERGENCY SHOWER/EYEWASH**
NO SCALE




10 P3.2 **SUMP PUMP**
NO SCALE




11 P3.2 **POST HYDRANT ROOF**
NO SCALE




12 P3.2 **MASTER GAS SHUTOFF**
NO SCALE




13 P3.2 **COFFEE MAKER**
NO SCALE




14 P3.2 **EXTERIOR GREASE INTERCEPTOR (1500 GAL.)**
NO SCALE

Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL MECHANICAL ENGINEER
Paul D. Stober
E-12412
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #1 | Addendum #1 | 10/7/2014 |
| ADD #2 | Addendum #2 | 10/10/2014 |
| ADD #3 | Addendum #3 | 10/14/2014 |

PLUMBING DETAILS

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
P3.2

MATCHLINE - AREA 1
MATCHLINE - AREA 3

30TH AVENUE

LOADING DOCK AREA
Illuminance (Fc)
Average = 1.56
Maximum = 5.2
Minimum = 0.2
Max/Min Ratio = 25.00

SW WALKWAYS
Illuminance (Fc)
Average = 2.99
Maximum = 6.3
Minimum = 0.1
Max/Min Ratio = 63.00

N PARKING LOT WALKWAYS
Illuminance (Fc)
Average = 1.88
Maximum = 3.9
Minimum = 0.2
Max/Min Ratio = 19.50

AREA J S PLAZA
Illuminance (Fc)
Average = 1.
Maximum = 7.
Minimum = 0.
Max/Min Ratio = 24.00

SEE LARGE-SCALE PLAN FOR GRAND STANDS AND ROOFTOP PLAZA

CHAMPIONSHIP PLAZA
Illuminance (Fc)
Average = 4.40
Maximum = 5.6
Minimum = 3.0
Max/Min Ratio = 1.87

AREA AROUND CHAMPIONSHIP PLAZA
Illuminance (Fc)
Average = 3.36
Maximum = 5.6
Minimum = 1.2
Max/Min Ratio = 4.67

ADD #3

BLEACHERS EXIT N
Illuminance (Fc)
Average = 2.16
Maximum = 3.6
Minimum = 0.7
Max/Min Ratio = 5.14

BLEACHER PATH 1
Illuminance (Fc)
Average = 4.67
Maximum = 11.3
Minimum = 1.9
Max/Min Ratio = 5.95

BLEACHER PATH 2
Illuminance (Fc)
Average = 4.71
Maximum = 11.8
Minimum = 1.9
Max/Min Ratio = 6.21

ROOFTOP PLAZA
Illuminance (Fc)
Average = 7.80
Maximum = 23.6
Minimum = 0.7
Max/Min Ratio = 33.71

BLEACHER PATH 3
Illuminance (Fc)
Average = 3.81
Maximum = 10.1
Minimum = 1.7
Max/Min Ratio = 5.94

BLEACHER PATH 4
Illuminance (Fc)
Average = 4.81
Maximum = 11.3
Minimum = 0.9
Max/Min Ratio = 12.56

STAIRS
Illuminance (Fc)
Average = 5.17
Maximum = 7.4
Minimum = 2.2
Max/Min Ratio = 3.36

BLEACHERS EXIT S
Illuminance (Fc)
Average = 3.40
Maximum = 11.1
Minimum = 0.3
Max/Min Ratio = 37.00

## LARGE SCALE PLAN GRANDSTANDS AND ROOFTOP PLAZA

NORTH
SCALE: 1" = 50.00'

MATCHLINE - AREA 3
MATCHLINE - AREA 5

## EXTERIOR EMERGENCY LIGHTING EGRESS PLAN - AREA 3

NORTH
SCALE: 1" = 30.00'

P:\10-13113-00\Dwg\CV\Ar-e002.dwg
Oct 14, 2014 - 12:54pm - Dbeebe


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-0929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No.: 10-13113-00


©2014 DLR Group Inc., a Nebraska corporation
ALL RIGHTS RESERVED.


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| Addendum #3 | 10/14/14 |

EMERG LIGHTING
EGRESS
PLAN-AREA 3

Project Number: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

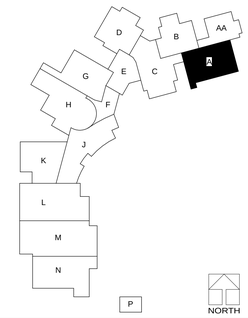

Sheet Number:
EL0.2

| KEYNOTES | |
|---|---|
| **KEY #** | **KEYNOTE TEXT** |
| 1 | EMERGENCY RELAY FOR FIXTURES IN A119. |
| 2 | PROVIDE UNISTRUT AND MOUNT FIXTURE TO BOTTOM OF HOOD. TYPICAL OF TYPE "PL20". |

## LIGHTING PLAN - FIRST FLOOR - AREA A

NORTH SCALE: 1/8" = 1'-0"

## KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

LIGHTING PLAN - FIRST FLOOR - AREA A

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E1.1

MATCHLINE - AREA G
MATCHLINE - AREA E
MATCHLINE - AREA F
MATCHLINE - AREA J
SPECIAL NEEDS E116
NURSE'S OFFICE E115
RECEPTION WAITING E106
EXAM TREATMENT E105
CORR. E108C
COUNSELOR E117
COUNSELOR E118
COUNSELOR E119
COUNSELOR E120
COUNSELOR E121
COUNSELOR E122
COUNSELOR E123
COUNSELOR E124
COUNSELOR E125
COUNSELOR E126
COUNSELOR E127
COUNSELOR E128
COUNSELOR E129
COUNSELOR E130
COUNSELOR E131
COUNSELOR E132
COUNSELOR E133
COUNSELOR E134
COUNSELOR E135
COUNSELOR E136
COUNSELOR

## GENERAL NOTES

A. SEE SHEET E0.1 FOR GENERAL NOTES.

B. SEE "TE" SERIES SHEETS FOR ADDITIONAL SCOPE OF WORK. ELECTRICAL CONTRACTOR TO PROVIDE ALL RACEWAYS, OUTLET BOXES AND CONNECTIONS TO THEATRICAL EQUIPMENT NOT SPECIFIED AS BY THEATRICAL EQUIPMENT CONTRACTOR.

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | PROVIDE BOTH 277V AND 120V RELAYS TO CONTROL ALL LIGHTING CIRCUITS IN DRESSING ROOM WITH OCCUPANCY SENSOR. |
| 2 | MOUNT TYPE "TN" FIXTURES ADJACENT TO WALL, 2'-6" ON CENTER AND CENTERED ON FULL LENGTH MIRROR. CONNECT TO CIRCUIT INDICATED VIA WALLBOX DIMMER AND OCCUPANCY SENSOR RELAY. |
| 3 | MOUNT TYPE "TS" AND "TSV" ALONG TOP AND SIDES OF MAKE-UP MIRRORS. SEE ARCHITECTURAL ELEVATIONS. CONNECT TO CIRCUIT INDICATED VIA WALL SWITCH AND OCCUPANCY SENSOR RELAY. |
| 4 | NON-METALLIC FLOORBOX FLUSH IN FLOOR BELOW SEAT. TYPE "LMS" CHAIR ARM LED LIGHT STRIP FURNISHED WITH AUDITORIUM SEATING. PROVIDE FMC FROM CHAIR TO OUTLET BOX. PROVIDE 3/4"C BETWEEN BOXES. CONNECT LED LIGHT STRIPS TO TRANSFORMER AND CONNECT TO DIMMING SYSTEM. SEE THEATRICAL LIGHTING DIMMER SCHEDULE. TYPICAL. |
| 5 | MOUNT FIXTURES TO BOTTOM OF LANDING. |
| 6 | CONTINUOUS LINEAR FIXTURE MOUNTED FLUSH WITH STAGE FLOOR. SEE "TE" SERIES DRAWINGS FOR MOUNTING DETAIL. CONNECT TO REMOTE LED DRIVER. SEE SHOP DRAWINGS FOR DISTANCE LIMITATIONS. CIRCUIT DRIVER TO DESIGNATED CIRCUIT OF DIMMER/RELAY SYSTEM AND DMX CONTROL TO ASSOCIATED CONTROL. |
| 7 | LINEAR LIGHT INTEGRAL WITH BULLNOSE EXTRUSION. PROVIDE FULL WIDTH OF EACH STEP. COORDINATE INSTALLATION WITH CARPET INSTALLER. CONNECT TO REMOTE LED DRIVER. SEE SHOP DRAWINGS FOR LOAD AND DISTANCE LIMITATIONS. CONNECT ALL SECTIONS IN PERFORMING ARTS CENTER TOGETHER AND CIRCUIT DRIVER TO DESIGNATED CIRCUIT. |
| 8 | EMERGENCY LIGHTING RELAY FOR EXTERIOR FIXTURES. CONNECT TO RELAY PANEL FOR CONTROL. SEE DETAIL 26/E6.1. |
| 9 | REMOTE LED DRIVER, TRANSFORMER OR POWER SUPPLY FOR TYPE "TM1";"TM2";TM4" AND "TM5" LOW-VOLTAGE LIGHTS. FIELD LOCATE TRANSFORMERS. |
| 10 | MOUNT TYPE "TM4" AT 10" ABOVE FINISHED FLOOR. CONNECT TOGETHER AND TO TRANSFORMER. |
| 11 | MOUNT TYPE "TM3" AT 24" ABOVE FINISHED FLOOR. CONNECT 120V AND 0-10V DIMMING CIRCUIT TO DIMMER RACK. TYPICAL. |
| 12 | RECESSED DOWNLIGHTS MOUNTED UNDER BALCONY. |
| 13 | FIXTURES IN THIS ROOM HAVE 0-10V DIMMING, SEE FIXTURE SCHEDULE. CONTROLLED BY WALLBOX DIMMER OR RELAY PANEL ANALOG OUTPUT. |
| 14 | NUMBER INDICATES DIMMER CHANNEL. CIRCUIT TO DIMMER BANK IN ROOM H202E. FIXTURES ARE DMX CONTROLLED AND REQUIRE SEPARATE CONDUIT FOR CONTROL. SEE THEATRICAL SHEETS. "E" SUFFIX INDICATES EMERGENCY. CONNECT TO DIMMER BANK VIA THEATRICAL EMERGENCY TRANSFER PANEL. USE #10S FOR VOLTAGE DROP. TYPICAL OF CIRCUITS IN PERFORMING ARTS CENTER UNO. |

SEE SHEET E1.19 FOR LIGHTING IN THIS AREA

SEE SHEET E1.19 FOR LIGHTING IN THIS AREA

MATCHLINE - AREA G

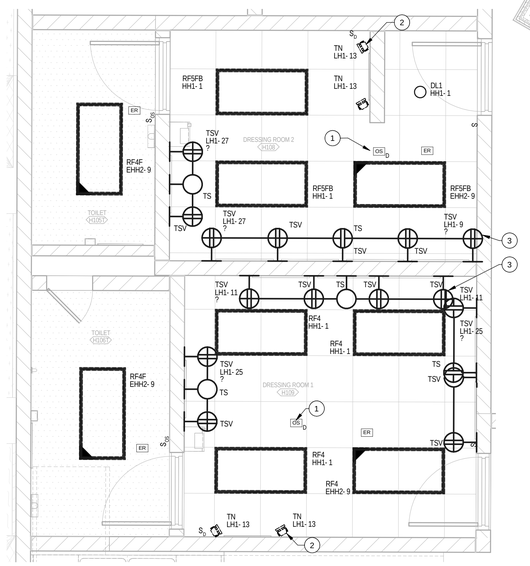
MATCHLINE - AREA H

MATCHLINE - AREA F

MATCHLINE - AREA J

MATCHLINE - AREA H

MATCHLINE - AREA K




## DRESSING ROOMS LARGE-SCALE

NORTH

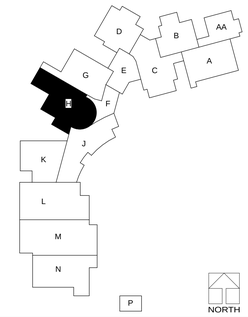
SCALE: 3/8" = 1'-0"

## LIGHTING PLAN - FIRST FLOOR - AREA H

NORTH

SCALE: 1/8" = 1'-0"

## KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

LIGHTING PLAN - FIRST FLOOR - AREA H

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E1.7

## GENERAL NOTES

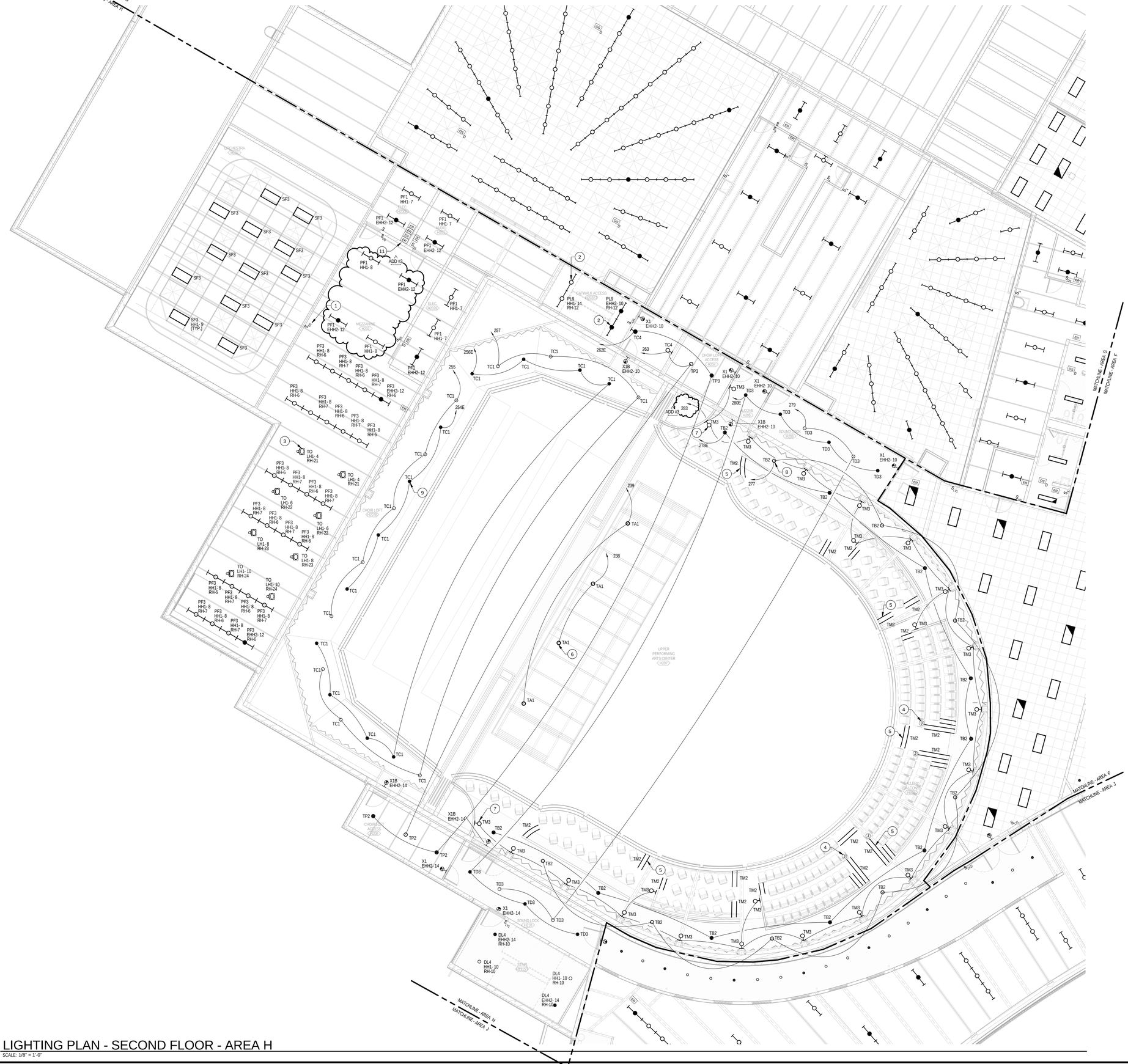
A. SEE SHEET E0.1 FOR GENERAL NOTES.

B. ALL COMMUNICATIONS CABLES IN THIS AREA SERVED FROM TELECOMMUNICATIONS ROOM "TR2A."

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | EMERGENCY LIGHTING RELAY FOR EXTERIOR FIXTURES. CONNECT TO RELAY PANEL FOR CONTROL. SEE DETAIL 26/E6.1. |

MATCHLINE - AREA AA
MATCHLINE - AREA A
MATCHLINE - AREA A
MATCHLINE - AREA C
PF11 HA2- 14 RA2-11,12
PF11 EHA2-1 RA2-11,12
MH=12'-0" AFF
PF11 HA2- 14 RA2-11,13
PF11 HA2- 14 RA2-12
PF11 EHA2- 1 RA2-11
PF11 HA2- 14 RA2-11,12
PF3 HA2- 1 RA2-4.5
PF3 EHA2- 1 RA2-4
PF3 HA2- 6 RA2-5
PF3 HA2- 6 RA2-5.4
PF3 HA2- 6 RA2-4
PF3 EHA2- 1 RA2-5
PF3 HA2- 6 RA2-4.5
MH=17'-6" AFF
PF3 HA2- 10 RA2-8.9
PF3 HA2- 10 RA2-8
PF3 HA2- 10 RA2-9.8
PF3 EHA2- 1 RA2-9
PF3 HA2- 8 RA2-7.6
PF3 HA2- 8 RA2-6.7
PF3 HA2- 8 RA2-6
PF3 HA2- 8 RA2-7
PF3 EHA2- 1 RA2-6
PF1 HA2- 7
PF1 EHA2- 1
MH=8'-0" AFF
WF3 HA2- 7 MH=8' ABOVE LANDING
MH=10'-0" AFF
PF1 HA2- 7 (TYP.)
PF1
PF1 EHA2- 1
EWL4 HA2- 4 RA2-3 MH=20'-2"
PF1 HA2- 10
MH=16'-0"
RF3
RF3 EHA2- 3
RF3 HA2- 5 a,c
RF3 HA2- 5 a,b
PF1 EHA2- 3
PF1 HA2- 5
WF1 HB1- 11 MH=8'-0"
S1
S1,S3
S1,S2
S1,S4
S1,S5
S1,S6
S1,S7
S1,S8
S1,S9
S1,S10
S1,S11
S1,S12
S1,S13
S1,S14
S1,S15
S1,S16
S1,S17
S1,S18
S1,S19
S1,S20
S1,S21
S1,S22
S1,S23
S1,S24
S1,S25
S1,S26
S1,S27
S1,S28
S1,S29
S1,S30
S1,S31
S1,S32
S1,S33
S1,S34
S1,S35
S1,S36
S1,S37
S1,S38
S1,S39
S1,S40
S1,S41
S1,S42
S1,S43




## GENERAL NOTES

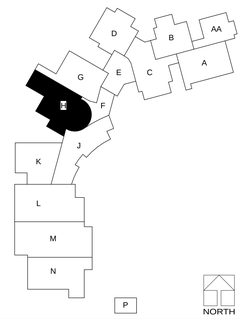
A. SEE SHEET E0.1 FOR GENERAL NOTES.

B. SEE "TE" SERIES SHEETS FOR ADDITIONAL SCOPE OF WORK. ELECTRICAL CONTRACTOR TO PROVIDE ALL RACEWAYS, OUTLET BOXES AND CONNECTIONS TO THEATRICAL EQUIPMENT NOT SPECIFIED AS BY THEATRICAL EQUIPMENT CONTRACTOR.

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | MOUNT SWITCH ON MEZZANINE LEVEL. |
| 2 | MOUNT FIXTURES TO BOTTOM OF LANDING. |
| 3 | MOUNT TYPE "TO" FIXTURES TO UNISTRUT FRAME SUSPENDED AT APPROXIMATELY 18'-6". CONNECT TO CIRCUIT SHOWN VIA RELAY PANEL. |
| 4 | NON-METALLIC FLOORBOX FLUSH IN FLOOR BELOW SEAT. TYPE "LMS" CHAIR ARM LED LIGHT STRIP FURNISHED WITH AUDITORIUM SEATING. PROVIDE FMC FROM CHAIR TO OUTLET BOX. PROVIDE 3/4"C. BETWEEN BOXES. CONNECT LED LIGHT STRIPS TO TRANSFORMER AND CONNECT TO DIMMING SYSTEM. SEE THEATRICAL LIGHTING DIMMER SCHEDULE. TYPICAL. |
| 5 | LINEAR LIGHT INTEGRAL WITH BULLNOSE EXTRUSION. PROVIDE FULL WIDTH OF EACH STEP. COORDINATE INSTALLATION WITH CARPET INSTALLER. CONNECT TO REMOTE LED DRIVER. SEE SHOP DRAWINGS FOR LOAD AND DISTANCE LIMITATIONS. CONNECT ALL SECTIONS IN PERFORMING ARTS CENTER TOGETHER AND CIRCUIT DRIVER TO DESIGNATED CIRCUIT. |
| 6 | RECESSED ADJUSTABLE DOWNLIGHT MOUNTED IN BOTTOM OF EYEBROW. TYPICAL OF TYPE "TA1". |
| 7 | MOUNT TYPE "TM3" AT 24" ABOVE FINISHED FLOOR. CONNECT 120V AND 0-10V DIMMING CIRCUIT TO DIMMER RACK. TYPICAL. |
| 8 | SUSPEND TYPE "TB2" FIXTURE 2'-6" BELOW SOFFIT TO BOTTOM OF FIXTURE. TYPICAL. |
| 9 | RECESSED ADJUSTABLE DOWNLIGHT MOUNTED IN SLOPED CEILING OF CHOIR LOFT. TYPICAL OF TYPE "TC1". |
| 10 | FIXTURES IN THIS ROOM HAVE 0-10V DIMMING, SEE FIXTURE SCHEDULE. CONTROLLED BY WALLBOX DIMMER OR RELAY PANEL ANALOG OUTPUT. |
| 11 | EMERGENCY LIGHTING RELAY FOR EXTERIOR FIXTURES. CONNECT TO RELAY PANEL FOR CONTROL. SEE DETAIL 26/E6.1. |

## KEY PLAN




## LIGHTING PLAN - SECOND FLOOR - AREA H

SCALE: 1/8" = 1'-0"

NORTH

Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

LIGHTING PLAN - SECOND FLOOR - AREA H

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

E1.19

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | SUSPEND LUMINAIRE AT 26'-0" AFF CENTERED BETWEEN JOISTS. ORIENT PERPENDICULAR TO CURVED WALL. COORDINATE WITH ARCHITECTURAL SHEETS FOR THE WALL RADIUS POINT. CONNECT TO CIRCUIT INDICATED VIA RELAY PANEL. TYPICAL ALL LUMINAIRES THIS ROOM. |
| 2 | FIXTURES IN THIS ROOM HAVE 0-10V DIMMING, SEE FIXTURE SCHEDULE. CONTROLLED BY WALLBOX DIMMER OR RELAY PANEL ANALOG OUTPUT. |
| 3 | MOUNT ON CEILING. MOUNT AS CLOSE AS POSSIBLE TO GLASS, WITH CENTER OF TRACK AT LEAST 3" AWAY FROM OBSTRUCTIONS. TYPICAL FOR TRACK FIXTURES. |
| 4 | CONNECT TO CIRCUIT INDICATED VIA RELAY PANEL. TYPICAL FOR TRACK FIXTURES. |

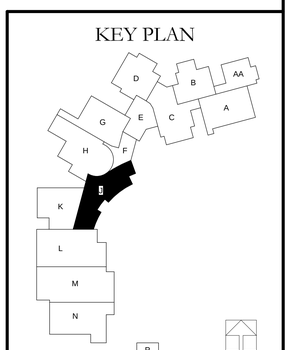
ADD #3

## LIGHTING PLAN - SECOND FLOOR - AREA J

NORTH

SCALE: 1/8" = 1'-0"

### KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

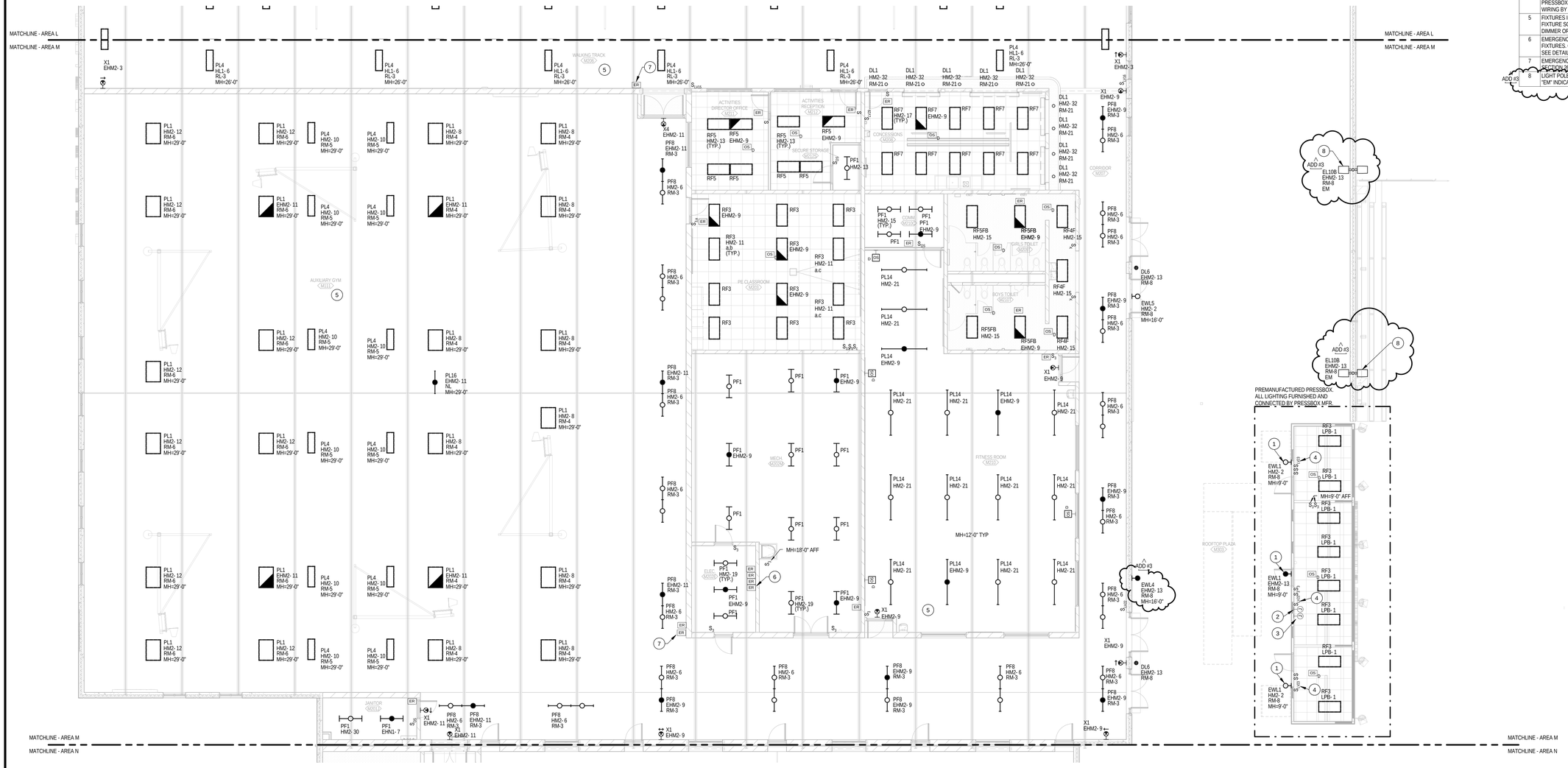
LIGHTING PLAN - SECOND FLOOR - AREA J

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E1.21




## LIGHTING PLAN - SECOND FLOOR - AREA M

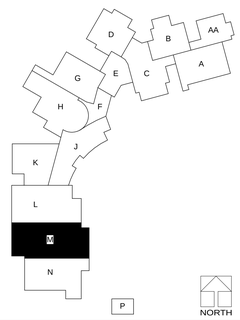
NORTH

SCALE: 1/8" = 1'-0"

### KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | PRESSBOX MANUFACTURER SHALL PROVIDE 4" SQUARE BACK BOX AND 1"C TO JUNCTION BOX BELOW PRESSBOX FOR INSTALLATION OF LIGHT FIXTURE BY ELECTRICAL CONTRACTOR. MOUNT JUNCTION BOX TO ALLOW FOR FIXTURE MOUNTING HEIGHT OF 9'-0" ABOVE PRESSBOX LANDING. |
| 2 | 4" SQUARE JUNCTION BOX BELOW PRESSBOX, FURNISHED BY PRESSBOX MFR, FOR ROUTING OF NORMAL POWER LIGHTING CIRCUIT BY ELECTRICAL CONTRACTOR. |
| 3 | 4" SQUARE JUNCTION BOX BELOW PRESSBOX, FURNISHED BY PRESSBOX MFR, FOR ROUTING OF EMERGENCY POWER LIGHTING CIRCUIT BY ELECTRICAL CONTRACTOR. |
| 4 | 4" SQUARE JUNCTION BOX WITH AND 1"C, FURNISHED BY PRESSBOX MFR, ROUTED TO JUNCTION BOX BELOW PRESSBOX FOR INSTALLATION LIGHTING CONTROL WIRING BY ELECTRICAL CONTRACTOR. |
| 5 | FIXTURES IN THIS ROOM HAVE 0-10V DIMMING, SEE FIXTURE SCHEDULE. CONTROLLED BY WALLBOX. DIMMER OR RELAY PANEL ANALOG OUTPUT. |
| 6 | EMERGENCY LIGHTING RELAY FOR EXTERIOR FIXTURES. CONNECT TO RELAY PANEL FOR CONTROL. SEE DETAIL 26/E6.1. |
| 7 | EMERGENCY RELAY FOR 0-10V DIMMING DRIVERS. SEE SECTION 26923. |
| 8 | LIGHT POLE MOUNTED ON ROOFTOP. SEE STRUCTURAL. "EM" INDICATES DESIGNATED EMERGENCY FIXTURE. |

### KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

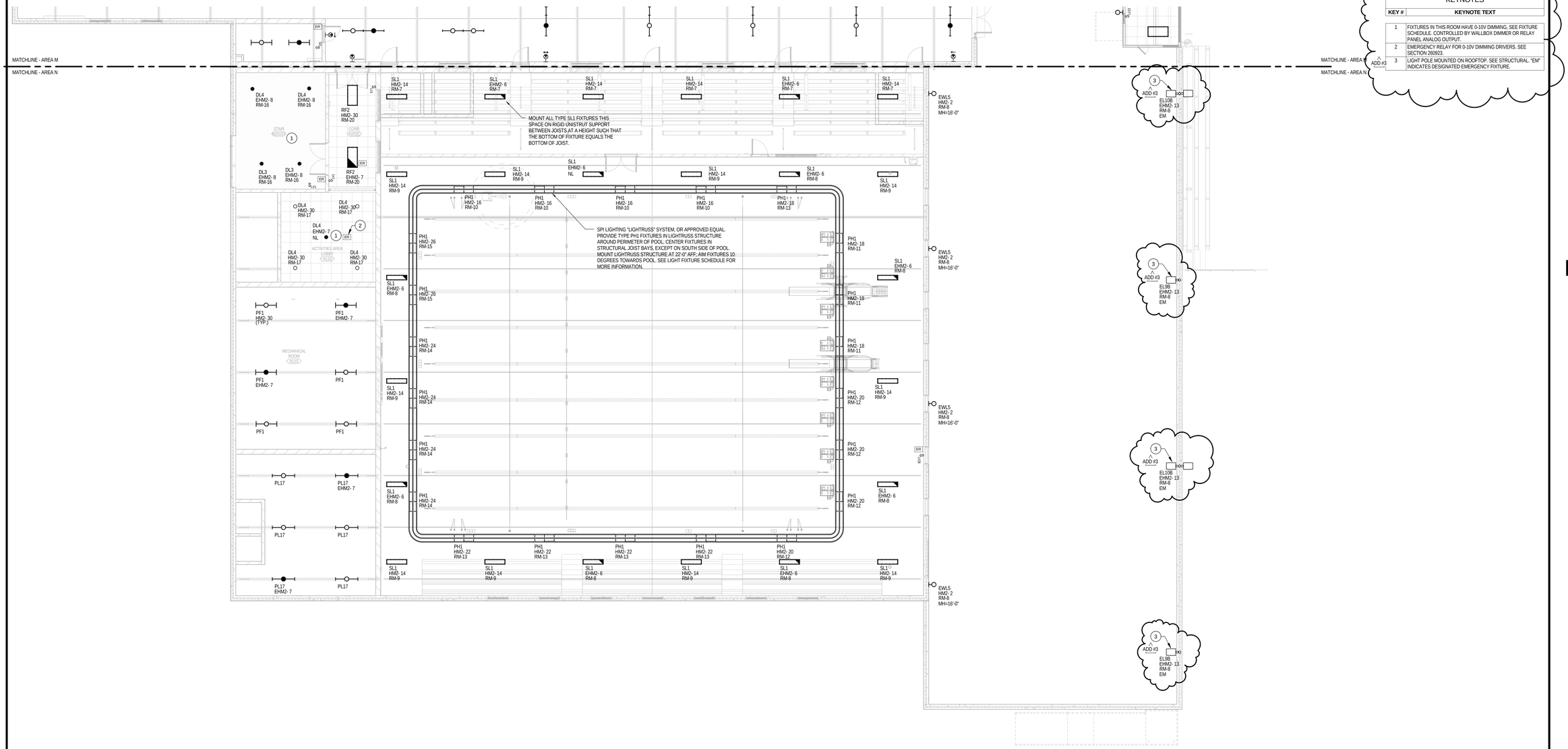
LIGHTING PLAN - SECOND FLOOR - AREA M & PRESS BOX

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

E1.23




## LIGHTING PLAN - SECOND FLOOR - AREA N

NORTH

SCALE: 1/8" = 1'-0"

| KEYNOTES | |
|---|---|
| KEY # | KEYNOTE TEXT |
| 1 | FIXTURES IN THIS ROOM HAVE 0-10V DIMMING, SEE FIXTURE SCHEDULE. CONTROLLED BY WALLBOX DIMMER OR RELAY PANEL ANALOG OUTPUT. |
| 2 | EMERGENCY RELAY FOR 0-10V DIMMING DRIVERS. SEE SECTION 260923. |
| 3 | LIGHT POLE MOUNTED ON ROOFTOP. SEE STRUCTURAL. "EM" INDICATES DESIGNATED EMERGENCY FIXTURE. |


Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

LIGHTING PLAN - SECOND FLOOR - AREA N

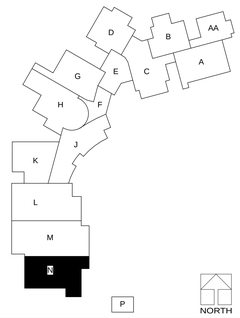
ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E1.24

KEY PLAN



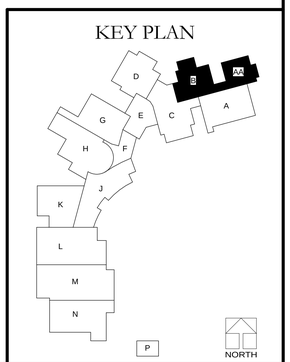
## POWER PLAN - FIRST FLOOR - AREA AA & B

SCALE: 1/8" = 1'-0"

NORTH

| KEYNOTES | |
|---|---|
| **KEY #** | **KEYNOTE TEXT** |
| 1 | AUTOMATIC DOOR OPERATOR FURNISHED BY DIVISION 8. CONNECT OPERATOR TO CIRCUIT INDICATED. PROVIDE OUTLET BOXES AND RACEWAYS FOR PUSH PADS EXCEPT ON GLASS WALLS. |
| 2 | PROVIDE JUNCTION BOX OR RECEPTACLE AT STRUCTURE. PROVIDE RETRACTABLE CORD AND REEL ATTACHED TO STRUCTURE WITH DUPLEX, NEMA 5-20R GFI. TYPICAL ALL CEILING RECEPTACALES IN THIS ROOM. SET REEL STOP SO RECEPTACLE IS AT 60 INCHES AFF. |
| 3 | COORDINATE LOCATION OF RECEPTACLE WITH OWNER PROVIDED PROJECTOR PRIOR TO INSTALLATION. LOCATION MAY VARY BY ROOM. TYPICAL OF ALL CLASSROOMS. |
| 4 | HAND DRYER PROVIDED BY SECTION 262726. SEE MOUNTING HEIGHT SCHEDULE ON SHEET E0.1. MOUNT ONE HAND DRYER IN EACH TOILET AT ADA HEIGHT. TYPICAL. |
| 5 | POWER FOR DOOR CONTROL PANEL. MOUNT ABOVE CEILING OR AT 9'-0" IN ROOMS WITH EXPOSED STRUCTURE. |
| 6 | EMERGENCY GAS SHUT-OFF REMOTE. BACKBOX FURNISHED BY MFR. PROVIDE CONDUIT TO MAIN CONTROLLER. |
| 7 | NEMA L5-30 RECEPTACLE FOR UPS IN RACK. SEE SPECIAL SYSTEMS AND LARGE-SCALE PLAN. LOCATE BEHIND RACK TO ALLOW SPACE FOR UPS CONNECTOR. |

## KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

POWER PLAN - FIRST FLOOR - AREA AA & B

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E2.2

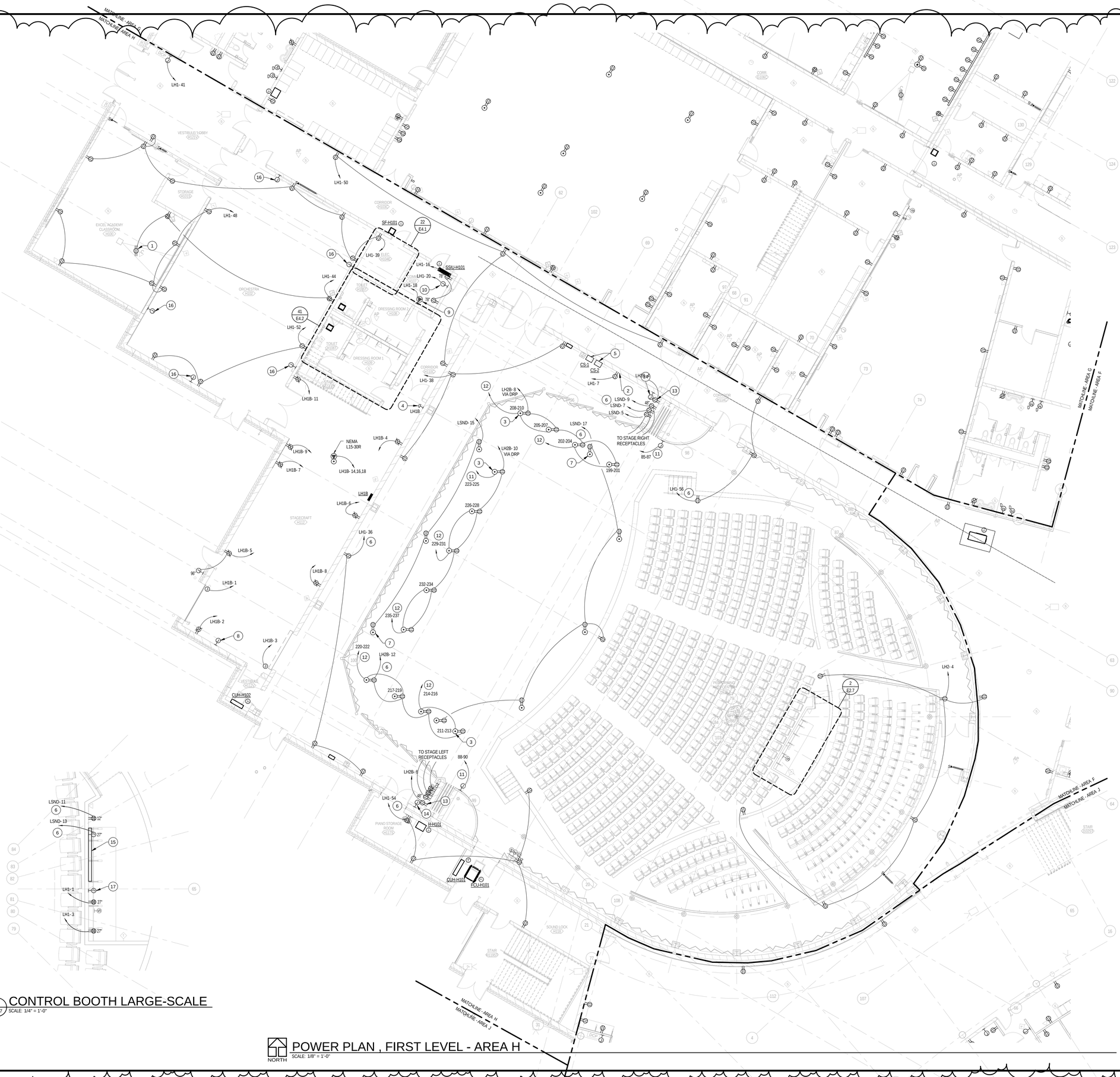
## GENERAL NOTES

A. SEE SHEET E0.1 FOR GENERAL NOTES.

B. SEE "SR" AND "TE" SERIES SHEETS FOR ADDITIONAL SCOPE OF WORK. ELECTRICAL CONTRACTOR TO PROVIDE ALL RACEWAYS, OUTLET BOXES AND CONNECTIONS TO SOUND REINFORCEMENT AND THEATRICAL EQUIPMENT NOT SPECIFIED AS BY SOUND REINFORCEMENT OR THEATRICAL EQUIPMENT CONTRACTORS.

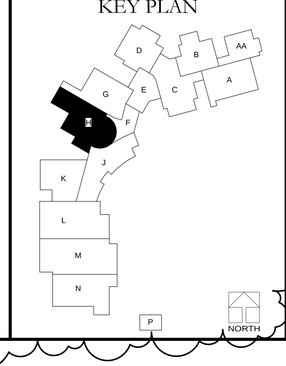
## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | COORDINATE LOCATION OF RECEPTACLE WITH OWNER PROVIDED PROJECTOR PRIOR TO INSTALLATION. LOCATION MAY VARY BY ROOM. TYPICAL OF ALL CLASSROOMS. |
| 2 | COMPUTERIZED RIGGING CONTROL PANEL LOCATION. PROVIDE (2)-1"C. FROM 4'-0" ABOVE STAGE LEVEL TO HOIST MOTOR LOCATIONS (TECH LEVEL) ON STAGE LEFT AND STAGE RIGHT. (4) CONDUITS TOTAL. COORDINATE EXACT LOCATION WITH THEATRICAL RIGGING CONTRACTOR. |
| 3 | FLOORBOXES ON THIS CIRCUIT ARE SPECIFIED BY THEATRICAL CONSULTANT, FURNISHED BY SECTION 260961 AND INSTALLED BY ELECTRICAL CONTRACTOR. SEE TE SERIES SHEETS FOR ADDITIONAL REQUIREMENTS. |
| 4 | EMERGENCY STOP PUSHBUTTON WITH PROTECTIVE COVER. CONNECT TO SHUNT-TRIP MAIN CIRCUIT BREAKER ON PANEL INDICATED. |
| 5 | COMPANY SWITCHES BY DIVISION 26. SEE POWER ONE-LINE DIAGRAMS |
| 6 | USE #10S, #10G FOR THIS CIRCUIT TO COMPENSATE FOR VOLTAGE DROP. |
| 7 | FLOORBOXES ON THIS CIRCUIT ARE SPECIFIED BY SOUND SYSTEM CONSULTANT AND PROVIDED BY ELECTRICAL CONTRACTOR. SEE SR SERIES SHEETS FOR ADDITIONAL REQUIREMENTS. |
| 8 | 6"X0"x18" WIREWAY AT 12FT AFF. PROVIDE (3)-1"C AND (1) 2"C TO PANELBOARD LH1B. |
| 9 | NEMA L5-30 RECEPTACLE FOR UPS IN RACK. SEE SPECIAL SYSTEMS AND LARGE-SCALE PLAN. LOCATE BEHIND RACK TO ALLOW SPACE FOR UPS CONNECTOR. |
| 10 | POWER FOR DOOR CONTROL PANEL. MOUNT ABOVE CEILING OR AT 9'-0" IN ROOMS WITH EXPOSED STRUCTURE. |
| 11 | PROVIDE (6)#10,#10G IN 3/4"C HOMERUN TO DIMMER BANK. |
| 12 | PROVIDE (12)#10,#10G IN 1"C HOMERUN TO DIMMER BANK. |
| 13 | M STATION, SEE THEATRICAL. CONNECT TO CIRCUIT INDICATED VIA "DRP". (2)#10,#10G IN 3/4"C. |
| 14 | 2-GANG BOX, 2-1/8" DEEP, WITH 1" MUD-RING AND 1"C ROUTED TO CONTROL BOOTH FOR PROJECTOR/VIDEO CONTROLS. COORDINATE BOX LOCATION WITH PROJECTION/VIDEO MONITORING SYSTEM CONSULTANT. |
| 15 | PROVIDE SURFACE MOUNTED RACEWAY WITH NEMA 5-20R OUTLETS 12" ON CENTER ALONG FULL WIDTH OF COUNTERTOP. |
| 16 | PROVIDE 4/Y OUTLET PER DETAIL 5/E6.2, EXCEPT WITH (2) 1"C. ONE TO EACH JUNCTION BOX IN NORTHEAST CORNER OF ROOM. SEE SECOND FLOOR PLAN. |
| 17 | PROVIDE 12"x12" BOX BELOW COUNTER AND ROUTE 1"C TO PAC PROJECTOR ON LEVEL ABOVE. COORDINATE BOX LOCATION WITH PROJECTION/VIDEO CONSULTANT. |




2 / E2.7 CONTROL BOOTH LARGE-SCALE
SCALE: 1/4" = 1'-0"

NORTH POWER PLAN , FIRST LEVEL - AREA H
SCALE: 1/8" = 1'-0"





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

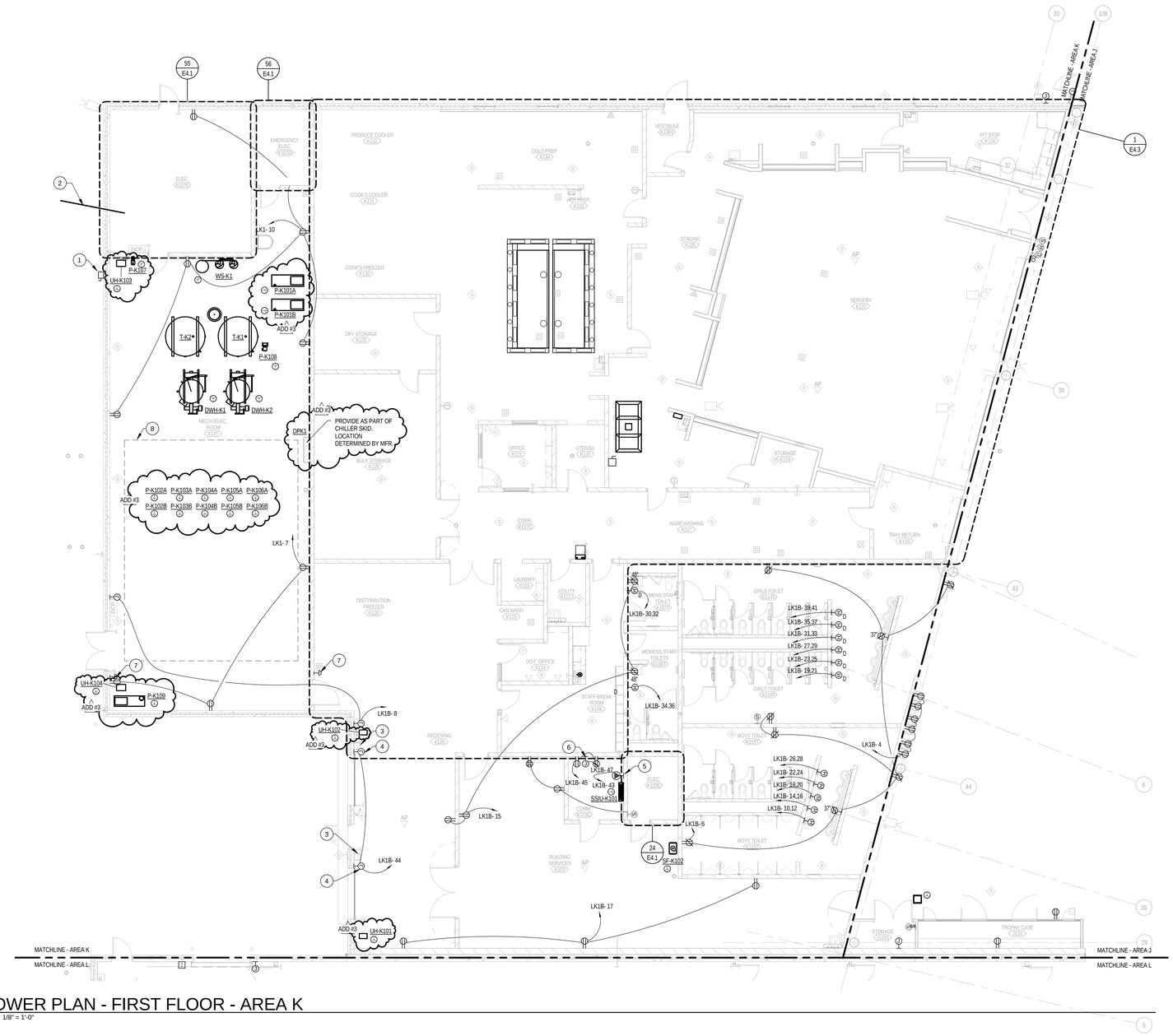
POWER PLAN - FIRST FLOOR - AREA H

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E2.7




## POWER PLAN - FIRST FLOOR - AREA K

NORTH

SCALE: 1/8" = 1'-0"

### KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | NEMA 3R 100A/3P DISCONNECT FOR GEO THERMAL WELL PUMP. SEE SITE ELECTRICAL UTILITIES PLAN. |
| 2 | SERVICE ENTRANCE CONDUCTORS. SEE SITE ELECTRICAL UTILITY PLAN AND POWER ONE-LINE DIAGRAM. SEE STRUCTURAL DRAWINGS FOR RACEWAY PENETRATIONS THROUGH FOUNDATIONS. CONTRACTOR TO COORDINATE. |
| 3 | PUSHBUTTON CONTROL FOR OVERHEAD DOOR FURNISHED WITH DOOR, INSTALLED BY ELECTRICAL CONTRACTOR. |
| 4 | POWER FOR COILING DOOR OR FIRE/SMOKE SHUTTER. COORDINATE CONNECTION WITH REVIEWED SHOP DRAWING. CONNECT MOTOR AND CONTROL PANEL. |
| 5 | NEMA L5-30 RECEPTACLE FOR UPS IN RACK. SEE SPECIAL SYSTEMS AND LARGE-SCALE PLAN. LOCATE BEHIND RACK TO ALLOW SPACE FOR UPS CONNECTOR. |
| 6 | POWER FOR DOOR CONTROL PANEL. MOUNT ABOVE CEILING OR AT 9'-0" IN ROOMS WITH EXPOSED STRUCTURE. |
| 7 | BOILER EMERGENCY SHUT-DOWN. PROVIDE RED MUSHROOM PUSHBUTTON LABELED "EMERGENCY BOILER SHUT-OFF". CONNECT TO SHUNT-TRIP CIRCUIT BREAKERS FOR DWH-K1 AND DWH-K2. PROVIDE 24V CONTROL TRANSFORMER, RELAY AND CONNECT TO GAS SOLENOID VALVE. |
| 8 | EQUIPMENT WITHIN THIS AREA IS PROVIDED AS A SELF-CONTAINED PRE-WIRED SKID WITH DISTRIBUTION, DISCONNECTS AND CONTROLS. PROVIDE FEEDER TO DISTRIBUTION EQUIPMENT. SEE ONE-LINE DIAGRAMS ON SHEET E5.1 AND E5.2. |


Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

POWER PLAN - FIRST FLOOR - AREA K

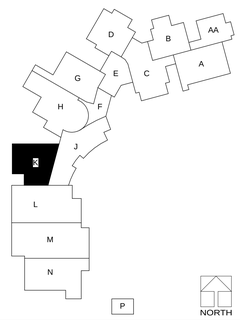
ProjectNumber: 1355
Date: September 30, 2014

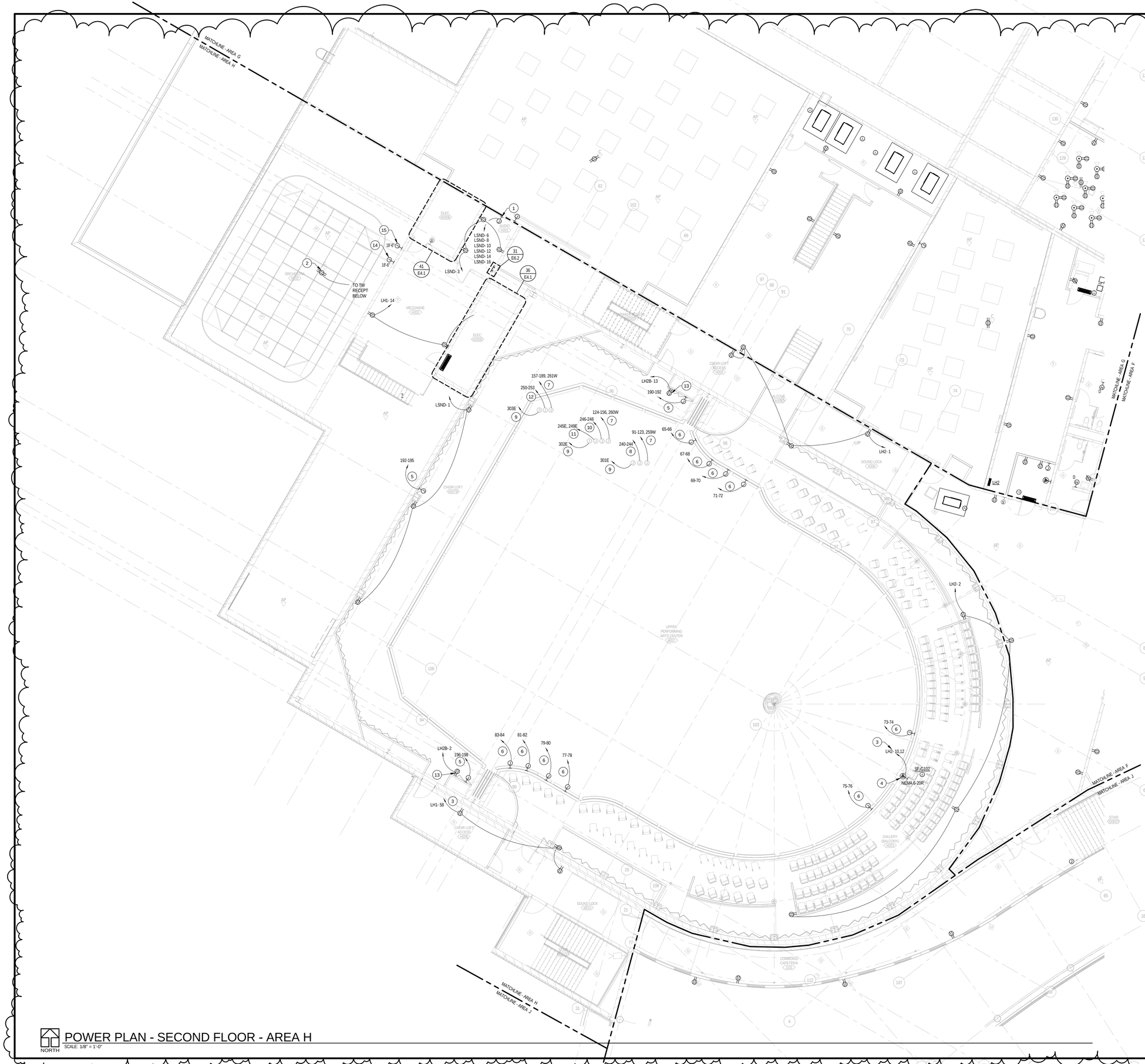

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E2.9

KEY PLAN






## GENERAL NOTES

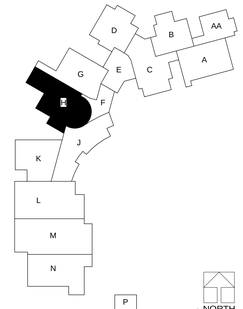
A. SEE SHEET E0.1 FOR GENERAL NOTES.

B. SEE "SR" AND "TE" SERIES SHEETS FOR ADDITIONAL SCOPE OF WORK. ELECTRICAL CONTRACTOR TO PROVIDE ALL RACEWAYS, OUTLET BOXES AND CONNECTIONS TO SOUND REINFORCEMENT AND THEATRICAL EQUIPMENT NOT SPECIFIED AS BY SOUND REINFORCEMENT OR THEATRICAL EQUIPMENT CONTRACTORS.

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | COORDINATE CONNECTION TO SOUND SYSTEM EQUIPMENT POWER DISTRIBUTION WITH "SR" SERIES SHEETS. PROVIDE MULTIPLE JUNCTION BOXES. ONLY (1) SHOWN FOR CLARITY. |
| 2 | COORDINATE LOCATION OF RECEPTACLE WITH OWNER PROVIDED PROJECTOR PRIOR TO INSTALLATION. LOCATION MAY VARY BY ROOM. TYPICAL OF ALL CLASSROOMS. |
| 3 | USE #10S, #10G FOR THIS CIRCUIT TO COMPENSATE FOR VOLTAGE DROP. |
| 4 | PERFORMING ARTS CENTER PROJECTOR RECEPTACLE. COORDINATE LOCATION WITH ARCHITECTURAL DETAILS. |
| 5 | PROVIDE (6)#10,#10G IN 3/4"C HOMERUN TO DIMMER BANK. |
| 6 | PROVIDE (4)#10,#10G IN 3/4"C HOMERUN TO DIMMER BANK. |
| 7 | STAGE ELECTRIC. PROVIDE (3) 1-1/4"C FROM GRID IRON JUNCTION BOX TO DIMMER BANK. EACH CONDUIT WITH (10)#10 PHASE, (10)#10 NEUTRAL, (1)#10 GROUND. (1) 3/4"C. EACH WITH (4)#10 PHASE, (4)#10 NEUTRAL, (1)#10 GROUND. SEE THEATRICAL DRAWINGS FOR ADDITIONAL CONDUITS FOR CONTROL CIRCUITS. |
| 8 | CONCERT CEILING LIGHTS. PROVIDE (1) 1"C FROM GRID IRON JUNCTION BOX TO DIMMER BANK. CONDUIT WITH (5)#10 PHASE, (5)#10 NEUTRAL, (1)#10 GROUND. |
| 9 | STAGE ELECTRIC EMERGENCY LIGHTS. PROVIDE (2) #10,#10G IN 3/4"C HOMERUN FROM EACH STAGE ELECTRIC JUNCTION BOX TO EMERGENCY TRANSFER PANEL. NOT CONNECTED TO DIMMER BANK. |
| 10 | CONCERT CEILING LIGHTS. PROVIDE (1) 3/4"C FROM GRID IRON JUNCTION BOX TO DIMMER BANK. CONDUIT WITH (3)#10 PHASE, (3)#10 NEUTRAL, (1)#10 GROUND. |
| 11 | CONCERT CEILING EMERGENCY LIGHTS. PROVIDE (4) #10,#10G IN 3/4"C FROM GRID IRON JUNCTION BOX TO DIMMER BANK VIA EMERGENCY TRANSFER PANEL. |
| 12 | CONCERT CEILING LIGHTS. PROVIDE (1) 3/4"C FROM GRID IRON JUNCTION BOX TO DIMMER BANK. CONDUIT WITH (4)#10 PHASE, (4)#10 NEUTRAL, (1)#10 GROUND. |
| 13 | M STATION, SEE THEATRICAL. CONNECT TO CIRCUIT INDICATED VIA "DRP". (2)#10,#10G IN 3/4"C. |
| 14 | PROVIDE 8"x6"x36" WIREWAY WITH (6) 1-1/4"C TO EQUAL WIREWAY IN ROOM H200E BY DIMMER RACK "B" FOR FUTURE CIRCUITS FROM DIMMER RACK TO GRID MOUNTED RECEPTACLES. |
| 15 | PROVIDE 6"x6"x6" JUNCTION BOX WITH (2) 1"C TO EQUAL BOX IN ROOM H200E BY DIMMER RACK "B" FOR FUTURE DMX AND CONTROL SIGNALS. |

## KEY PLAN




## POWER PLAN - SECOND FLOOR - AREA H

SCALE: 1/8" = 1'-0"

NORTH

Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F

PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

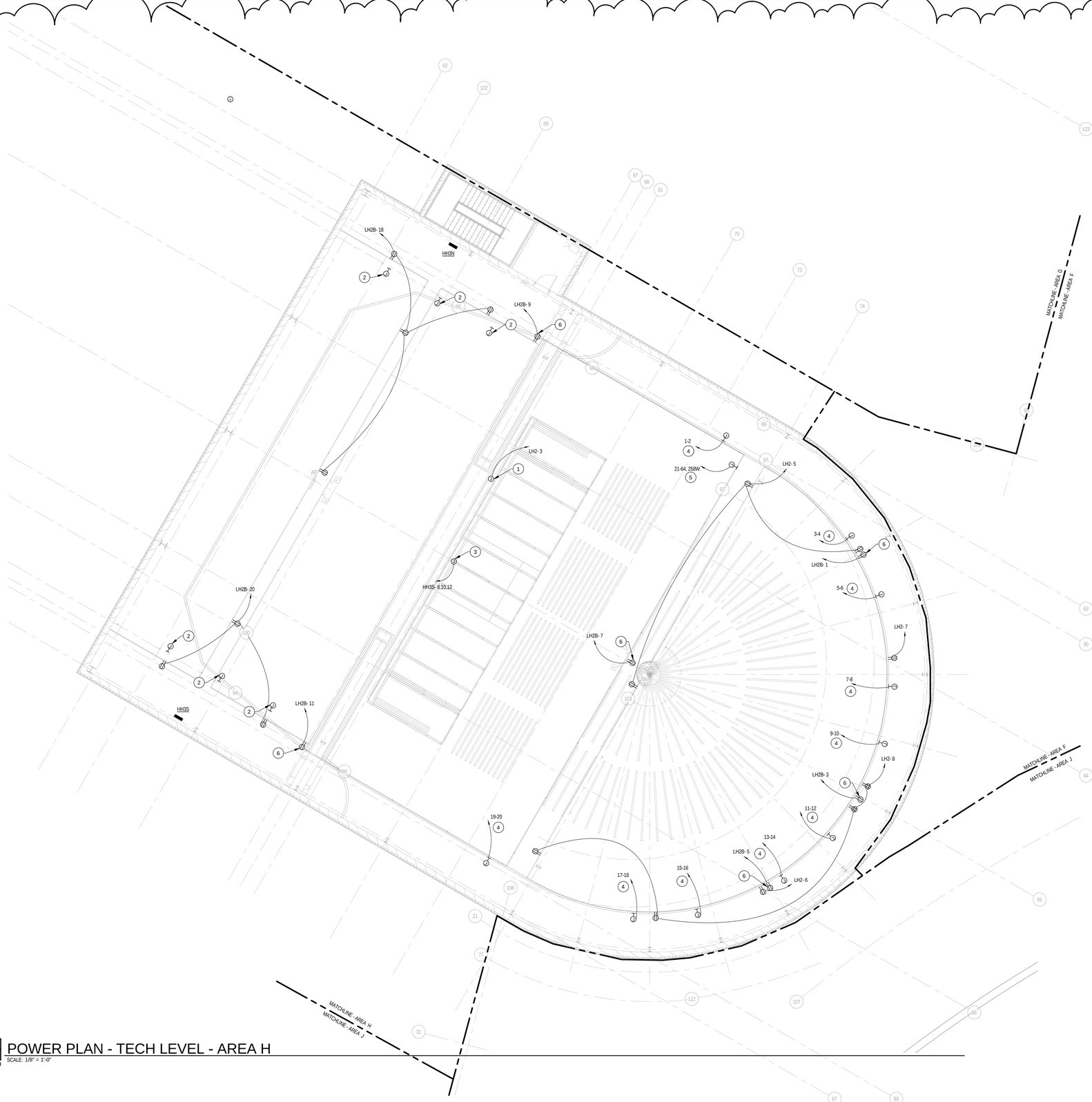
POWER PLAN - SECOND FLOOR - AREA H

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

E2.19




## POWER PLAN - TECH LEVEL - AREA H

NORTH

SCALE: 1/8" = 1'-0"

## GENERAL NOTES

A. SEE SHEET E0.1 FOR GENERAL NOTES.

B. SEE "SR" AND "TE" SERIES SHEETS FOR ADDITIONAL SCOPE OF WORK. ELECTRICAL CONTRACTOR TO PROVIDE ALL RACEWAYS, OUTLET BOXES AND CONNECTIONS TO SOUND REINFORCEMENT AND THEATRICAL EQUIPMENT NOT SPECIFIED AS BY SOUND REINFORCEMENT OR THEATRICAL EQUIPMENT CONTRACTORS.

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | CONNECT TO PROJECTION SCREEN MOUNTED IN STAGE EBROW. COORDINATE LOCATION WITH THEATRICAL RIGGING CONTRACTOR. SCREEN WILL BE CONNECTED VIA CABLE SLING. PROVIDE (1) 1-1/4"C. TO STAGE MANAGERS PANEL. |
| 2 | ELECTRICAL DISTRIBUTION FOR RIGGING HOISTS FURNISHED BY THEATRICAL RIGGING CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. VERIFY WITH REVIEWED SHOP DRAWINGS. |
| 3 | POWER TO ANTI-PRO HOIST MOTOR.(3)#10,#10G IN 3/4"C. VERIFY WITH REVIEWED SHOP DRAWINGS. |
| 4 | PROVIDE (4)#10,#10G IN 3/4"C HOMERUN TO DIMMER BANK. |
| 5 | LONG BEAM PLUGSTRIP. PROVIDE (4) 1-1/4"C FROM GRID IRON JUNCTION BOX TO DIMMER BANK. EACH CONDUIT WITH (1)9)#10 PHASE, (1)9)#10 NEUTRAL, (1)#10 GROUND. (1) 1"C. EACH WITH (5)#10 PHASE, (5)#10 NEUTRAL, (1)#10 GROUND. SEE THEATRICAL DRAWINGS FOR ADDITIONAL CONDUITS FOR CONTROL CIRCUITS. |
| 6 | M STATION. SEE THEATRICAL. CONNECT TO CIRCUIT INDICATED VIA "DRP". (2)#10,#10G IN 3/4"C. |


Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

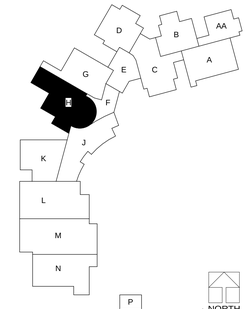

DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

KEY PLAN




| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

POWER PLAN - TECH LEVEL - AREA H

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

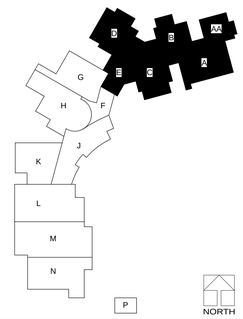
E2.20

NORTH

# POWER PLAN - ROOF - AREAS AA - E

SCALE: 1/16" = 1'-0"

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

POWER PLAN - ROOF - AREAS AA - E

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

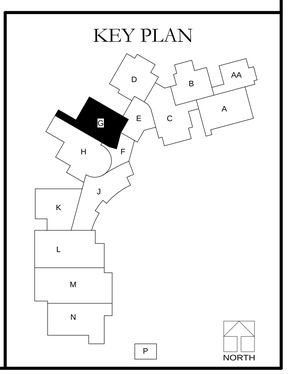
E2.26

## SPECIAL SYSTEMS PLAN - SECOND FLOOR - AREA G

NORTH

SCALE: 1/8" = 1'-0"

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

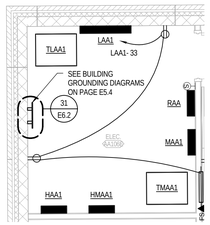
SPECIAL SYSTEMS PLAN - SECOND FLOOR - AREA G

ProjectNumber: **1355**
Date: **September 30, 2014**

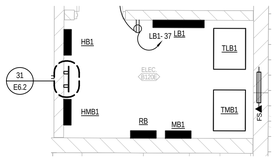
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

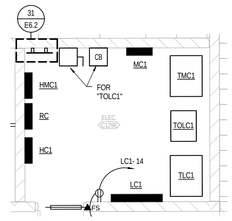
E3.18



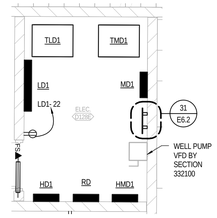

11 E4.1 AA106E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



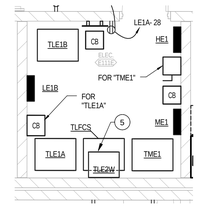

12 E4.1 B120E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"




13 E4.1 C129E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"

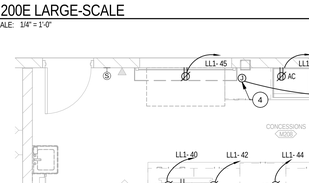



14 E4.1 D128E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"

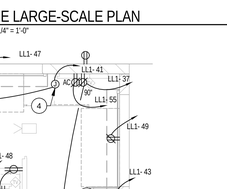



15 E4.1 E111E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"

| KEYNOTES | |
|---|---|
| KEY # | KEYNOTE TEXT |
| 1 | ALL CONDUIT IN THIS AREA SHALL BE ALUMINUM EMT WITH STAINLESS STEEL FASTENERS AND HOT DIPPED GALVANIZED STRUT. DISCONNECTS SHALL BE NEMA 4X STAINLESS STEEL AND DEVICES SHALL HAVE NYLON FACEPLATES. |
| 2 | ALL CONDUCTORS FOR POOL EQUIPMENT ARE 10 - 10 - 3/4", SIZED FOR VOLTAGE DROP UNLESS NOTED OTHERWISE. |
| 3 | PROVIDE #6 BONDING JUMPER TO GROUND BUS IN MECH RM M104. |
| 4 | POWER FOR COILING DOOR OR FIRE/SMOKE SHUTTER. COORDINATE CONNECTION WITH REVIEWED SHOP DRAWING. CONNECT MOTOR AND CONTROL PANEL. |
| 5 | SUSPEND TRANSFORMER "TLE2W" FROM STRUCTURE. SEE STRUCTURAL DETAIL. |
| 6 | CONNECT EMERGENCY CIRCUITS FROM PANEL "ELH2" IN ROOM H200E. SEE THEATRICAL SHEETS FOR ADDITIONAL SENSING AND CONTROL. |



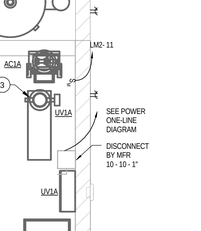

21 E4.1 G103E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"




22 E4.1 H104E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



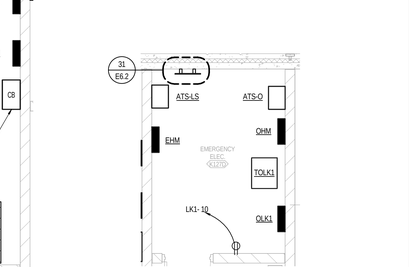

23 E4.1 J109E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



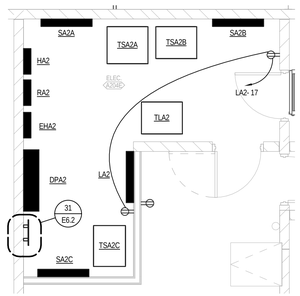

24 E4.1 K103E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



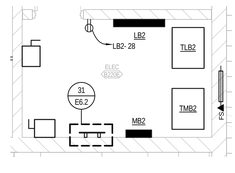

25 E4.1 L100E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



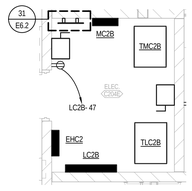

26 E4.1 N104E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



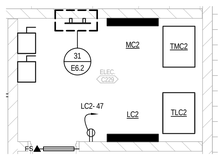

31 E4.1 A204E LARGE-SCALE PLAN
SCALE: 1/4" = 1'-0"



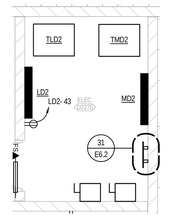

32 E4.1 B220E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



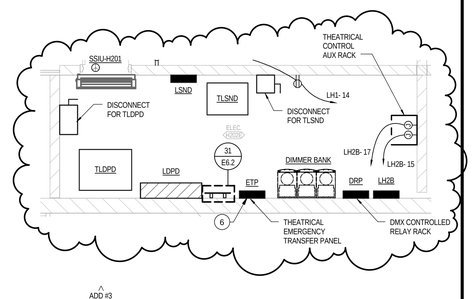

33 E4.1 C204E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



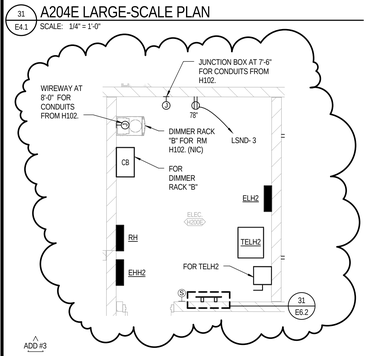

34 E4.1 C229 LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



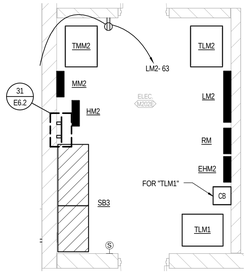

35 E4.1 D227E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



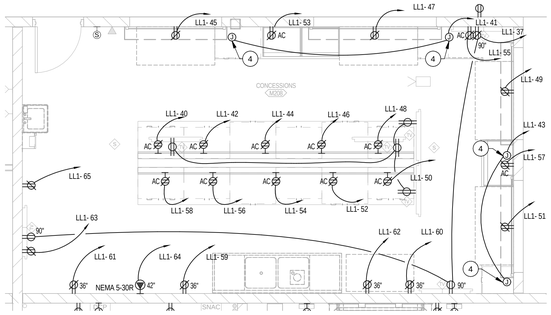

36 E4.1 H202E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"



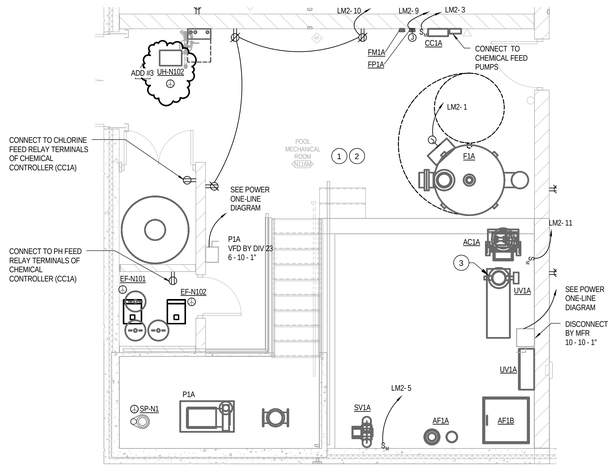

41 E4.1 H200E LARGE-SCALE
SCALE: 1/4" = 1'-0"



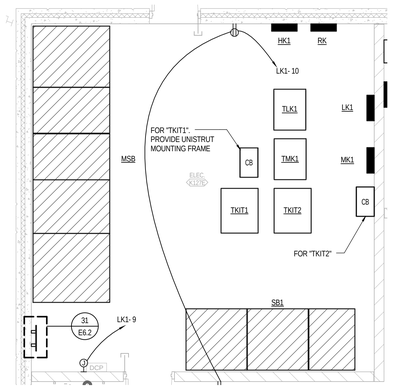

42 E4.1 M202E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"




51 E4.1 M208 CONCESSIONS LARGE-SCALE
SCALE: 1/4" = 1'-0"




53 E4.1 N116M POOL MECH LARGE-SCALE
SCALE: 1/4" = 1'-0"




55 E4.1 K127E LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"




56 E4.1 K127D LARGE-SCALE POWER PLAN
SCALE: 1/4" = 1'-0"

Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

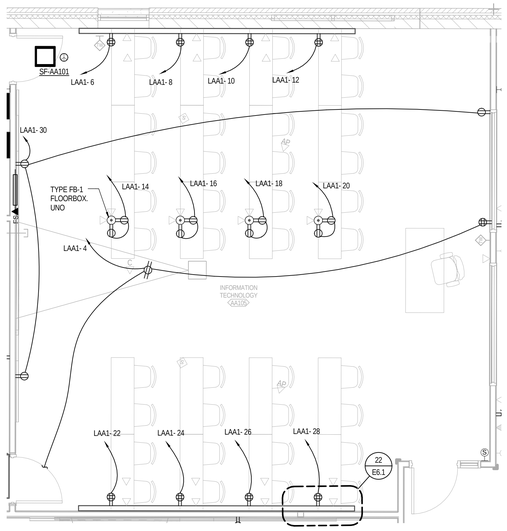
| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

LARGE-SCALE POWER PLANS

ProjectNumber: 1355
Date: September 30, 2014

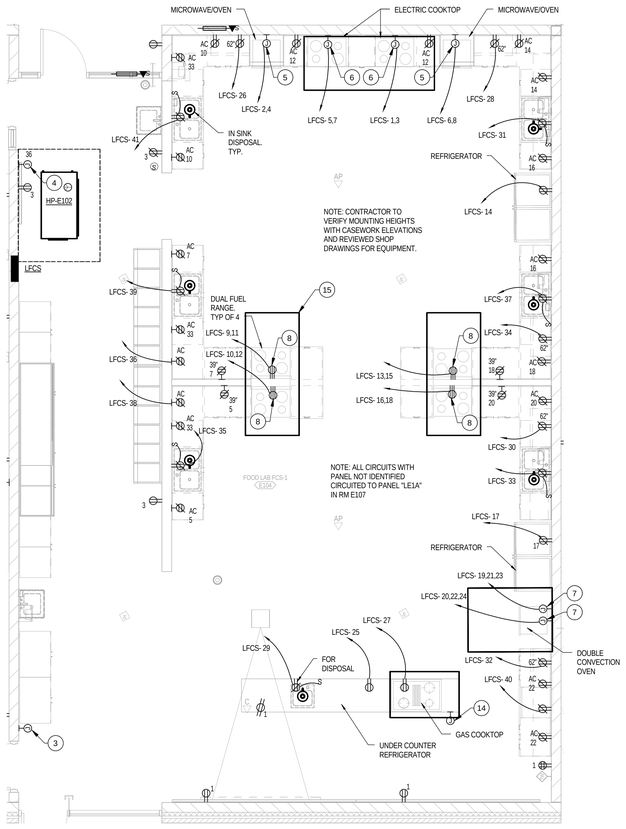
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
E4.1



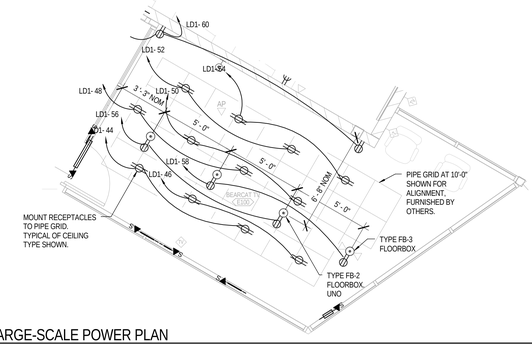

21 / E4.2 AA105 LARGE-SCALE POWER PLAN

SCALE: 1/4" = 1'-0"



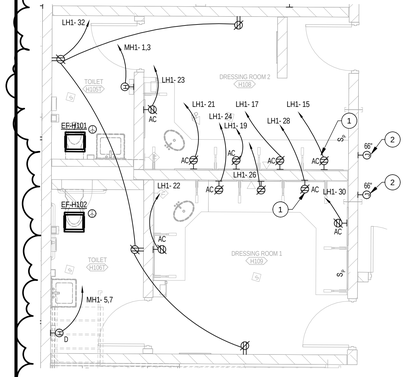

33 / E4.2 E104 LARGE-SCALE POWER PLAN

SCALE: 1/4" = 1'-0"



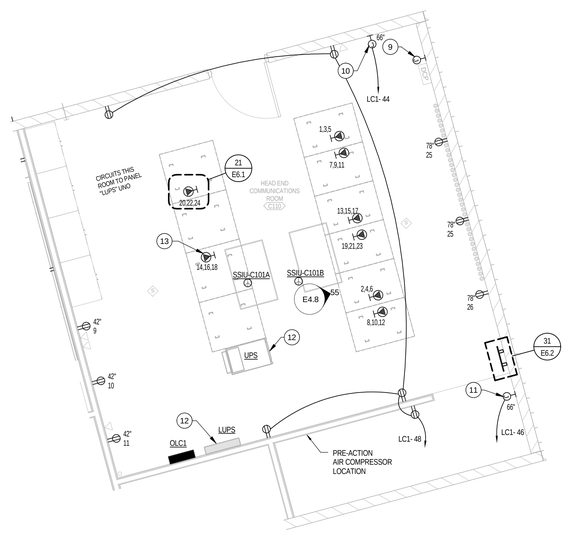

35 / E4.2 E100 LARGE-SCALE POWER PLAN

SCALE: 1/4" = 1'-0"




41 / E4.2 AREA H-DRESSING ROOMS LARGE-SCALE

SCALE: 1/4" = 1'-0"




55 / E4.2 C110 LARGE-SCALE POWER PLAN

SCALE: 1/4" = 1'-0"

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | CONNECT EACH COUNTERTOP RECEPTACLE IN THIS DRESSING ROOM TO CIRCUIT INDICATED VIA MECHANICALLY HELD CONTACTOR. CONNECT CONTACTOR TO PILOT SWITCH AND REMOTE INDICATOR LAMP. PROVIDE ENGRAVED STAINLESS STEEL FACEPLATE FOR SWITCH LABELED "COUNTERTOP RECEPTACLES". |
| 2 | REMOTE INDICATOR LAMP FOR DRESSING ROOM RECEPTACLES. PROVIDE ENGRAVED STAINLESS STEEL FACEPLATE LABELED "DRESSING ROOM COUNTERTOP RECEPTACLES" |
| 3 | EMERGENCY GAS SHUT-OFF REMOTE. BACKBOX FURNISHED BY MFR. PROVIDE CONDUIT TO MAIN CONTROLLER. |
| 4 | EMERGENCY GAS SHUT-OFF CONTROLLER FURNISHED BY DIVISION 23. BACKBOX FURNISHED BY MFR. REQUIRES 120V POWER, 24V CONTROL TO GAS VALVE AND CONNECTION TO FIRE ALARM SYSTEM. PROVIDE RACEWAYS AND CONNECT PER MFR WRITTEN INSTRUCTIONS. |
| 5 | CONNECT TO COMBINATION MICROWAVE/OVEN. HOMERUN (3)#8,#10G, IN 3/4"C TO CIRCUIT INDICATED. |
| 6 | CONNECT TO COOKTOP. HOMERUN (3)#6,#10G, IN 1"C TO CIRCUIT INDICATED. |
| 7 | OUTLET BOX FOR (2) CONVECTION OVENS. MAKE CONNECTION TO OVENS AND HOMERUN (4)#8,#10G IN 3/4"C TO CIRCUIT INDICATED. |
| 8 | PROVIDE NEMA ?? RECEPTACLE AND (3)#6,#10 IN 1"C TO CIRCUIT INDICATED. |
| 9 | POWER FOR DOOR CONTROL PANEL. MOUNT ABOVE CEILING OR AT 9'-0" IN ROOMS WITH EXPOSED STRUCTURE. |
| 10 | POWER FOR MAIN FIRE ALARM CONTROL PANEL. COORDINATE HEIGHT WITH REVIEWED SHOP DRAWINGS. |
| 11 | POWER FOR FIRE SUPPRESSION SYSTEM CONTROL PANEL. COORDINATE HEIGHT WITH REVIEWED SHOP DRAWINGS. |
| 12 | DISCONNECT UPS AND BYPASS PANEL "LUPS" FROM EXISTING HIGH SCHOOL AND RECONNECT AT LOCATION SHOWN. COORDINATE DOWNTIME AND RELOCATION SCHEDULE WITH OWNER. |
| 13 | VERTICAL POWER DISTRIBUTION UNIT (PDU) MOUNTED IN RACK. PDU AND RACK FURNISHED BY SECTION 271500. PROVIDE A NEMA L21-30P RECEPTACLE. TYPICAL OF EACH RECEPTACLE SHOWN IN THIS ROOM. |
| 14 | FAN AND LIGHT CONTROL SWITCHES FOR HOODS MOUNTED IN CASEWORK. SWITCH PANEL FURNISHED BY DIV 23. PROVIDE 3/4"C. TO HOOD CONTROL PANEL. COORDINATE WITH REVIEWED SHOP DRAWINGS. |
| 15 | TYPE I HOOD, TYPICAL OF 5. CONTROL PANEL LOCATED IN HOOD END-PANEL. COORDINATE LOCATION OF FIRE SUPPRESSION MANUAL PULLS WITH ARCHITECT. |


Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors



DLR Group Project No: 10-13113-00



© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

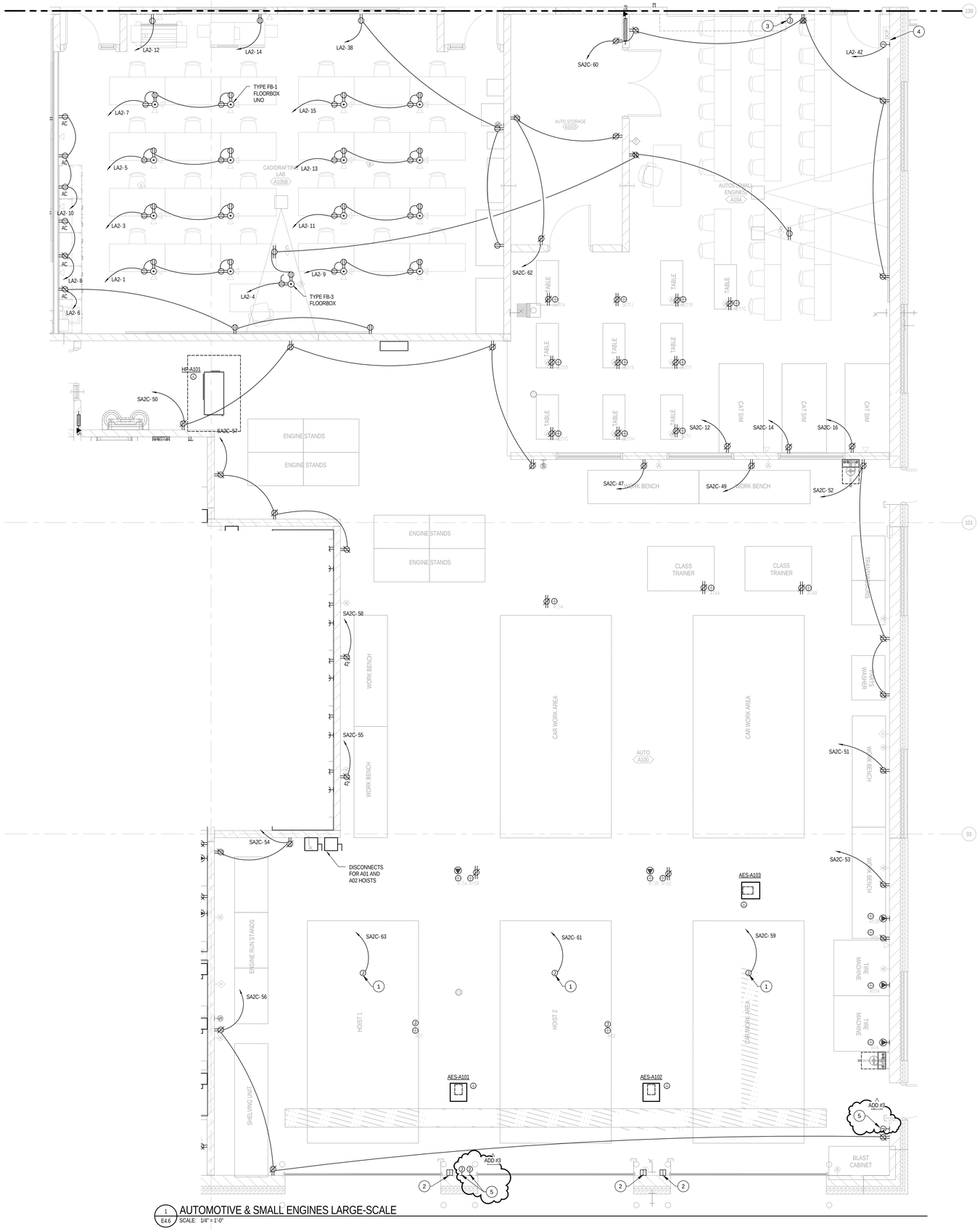
LARGE-SCALE POWER PLANS

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E4.2




1 AUTOMOTIVE & SMALL ENGINES LARGE-SCALE
E4.6 SCALE: 1/4" = 1'-0"

| KEYNOTES | |
|---|---|
| **KEY #** | **KEYNOTE TEXT** |
| 1 | POWER FOR OVERHEAD DOOR. PROVIDE MOTOR-RATED TOGGLE SWITCH AND CONNECT TO OPERATOR. |
| 2 | PUSHBUTTON CONTROL FOR OVERHEAD DOOR FURNISHED WITH DOOR, INSTALLED BY ELECTRICAL CONTRACTOR. |
| 3 | POWER FOR COILING DOOR OR FIRE/SMOKE SHUTTER. COORDINATE CONNECTION WITH REVIEWED SHOP DRAWING. CONNECT MOTOR AND CONTROL PANEL. |
| 4 | SEE NOTE NO. 9 ON DETAIL 31/E6.1. TYPICAL. |
| 5 | CONTROL PANEL FOR AUTOPORT EXHAUST SYSTEM. CONNECT CONTROL PANEL TO CIRCUIT SHOWN ON SCHEDULE. CONNECT CONTROL PANEL TO ASSOCIATED FAN UNIT AND AND TO 120V HOSE REEL MOTOR. |

## AUTOS AND SMALL ENGINES EQUIPMENT CONNECTION SCHEDULE

| EQUIPMENT MARK | EQUIPMENT DESCRIPTION | VOLTAGE | POLES | VA | RECEPTACLE/ DISCONNECT | MOUNTING HEIGHT | CONDUCTORS | NOTES | PANEL | CIRCUIT NO. |
|---|---|---|---|---|---|---|---|---|---|---|
| A01 | CAR HOIST | 208 V | 2 | 1768 VA | DIRECT CONNECTION, 30A/2P NF | | 10 - 10 - 3/4" | FEED FROM ABOVE. PROVIDE UNISTRUT SUPPORT IF REQUIRED | SA2C | 23,25 |
| A02 | CAR HOIST | 208 V | 2 | 1768 VA | DIRECT CONNECTION, 30A/2P NF | | 10 - 10 - 3/4" | FEED FROM ABOVE. PROVIDE UNISTRUT SUPPORT IF REQUIRED | SA2C | 27,29 |
| A03A | TIRE MACHINE | 208 V | 2 | 1404 VA | NEMA 6-20R | 22" | 12 - 12 - 3/4" | FLUSH IN WALL | SA2C | 31,33 |
| A03B | TIRE MACHINE | 208 V | 2 | 1404 VA | NEMA 6-20R | 42" | 12 - 12 - 3/4" | FLUSH IN WALL | SA2C | 64,66 |
| A04 | TIRE MACHINE | 208 V | 2 | 1560 VA | NEMA 6-20R | 22" | 12 - 12 - 3/4" | FLUSH IN WALL | SA2C | 35,37 |
| A05 | PLASMA CUTTER | 120 V | 1 | 1200 VA | NEMA 5-20R GFI | 42" | 12 - 12 - 3/4" | FLUSH IN WALL | SA2C | 38 |
| A13A | WELDER | 208 V | 2 | 2645 VA | NEMA 6-50R | 60" | 6 - 10 - 1" | SUSPEND FROM CEILING PER DETAIL. | SA2C | 39,41 |
| A13B | WELDER OUTLET | 208 V | 2 | 2645 VA | NEMA 6-50R | 60" | 6 - 10 - 1" | SUSPEND FROM CEILING PER DETAIL. | SA2C | 43,45 |
| A14A | TRAINER TABLE | 120 V | 1 | 180 VA | DUPLEX NEMA 5-20R GFI | 50" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL. | SA2C | 40 |
| A14B | TRAINER TABLE | 120 V | 1 | 180 VA | DUPLEX NEMA 5-20R GFI | 50" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL. | SA2C | 42 |
| A15A | CORD AND REEL | 120 V | 1 | 180 VA | DUPLEX NEMA 5-20R | | 12 - 12 - 3/4" | PROVIDE CORD AND REEL SUSPENDED FROM STRUCTURE. | SA2C | 44 |
| A15B | CORD AND REEL | 120 V | 1 | 180 VA | DUPLEX NEMA 5-20R | | 12 - 12 - 3/4" | PROVIDE CORD AND REEL SUSPENDED FROM STRUCTURE. | SA2C | 46 |
| A15C | CORD AND REEL | 120 V | 1 | 180 VA | DUPLEX NEMA 5-20R | | 12 - 12 - 3/4" | PROVIDE CORD AND REEL SUSPENDED FROM STRUCTURE. | SA2C | 48 |
| SE01A | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 18 |
| SE01B | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 20 |
| SE01C | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 22 |
| SE01D | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 24 |
| SE01E | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 26 |
| SE01F | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 28 |
| SE01G | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 30 |
| SE01H | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 32 |
| SE01I | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 34 |
| SE01J | TABLE | 120 V | 1 | 180 VA | NEMA 5-20R GFI | 60" | 12 - 12 - 3/4" | SUSPEND FROM CEILING PER DETAIL | SA2C | 36 |


Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

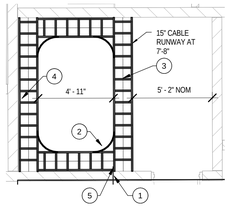
LARGE-SCALE POWER PLAN AUTOS AND SMALL ENGINES

ProjectNumber: **1355**
Date: **September 30, 2014**

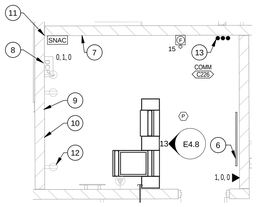

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

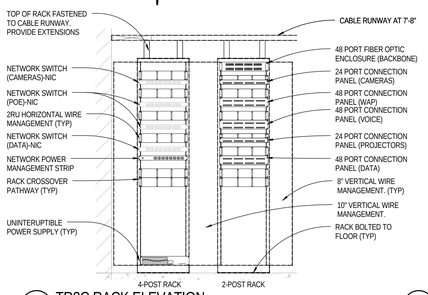
E4.6



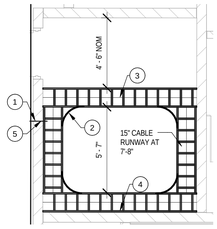

11 E4.8 C226-TR2C CABLE RUNWAY
SCALE: 1/4" = 1'-0"



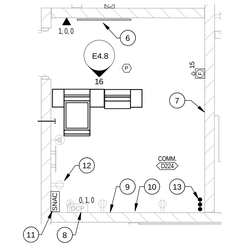

12 E4.8 C226-TR2C LARGE-SCALE
SCALE: 1/4" = 1'-0"



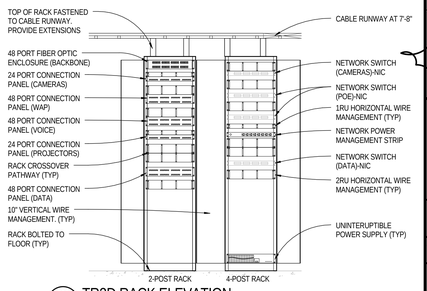

13 E4.8 TR2C RACK ELEVATION
SCALE: 1/2" = 1'-0"



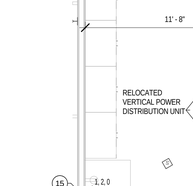

14 E4.8 D224-TR2D CABLE RUNWAY
SCALE: 1/4" = 1'-0"



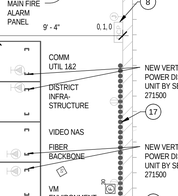

15 E4.8 D224-TR2D LARGE-SCALE
SCALE: 1/4" = 1'-0"



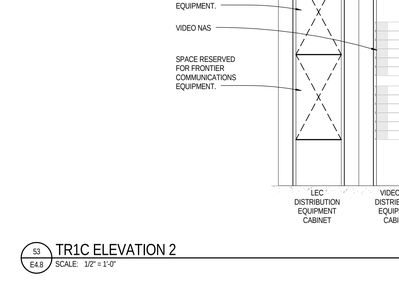

16 E4.8 TR2D RACK ELEVATION
SCALE: 1/2" = 1'-0"



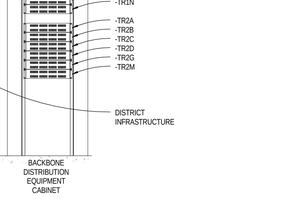

21 E4.8 G202C-TR2G CABLE RUNWAY
SCALE: 1/4" = 1'-0"



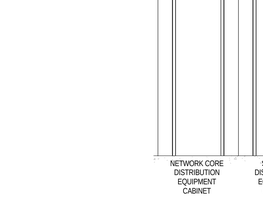

22 E4.8 G202C-TR2G LARGE-SCALE
SCALE: 1/4" = 1'-0"



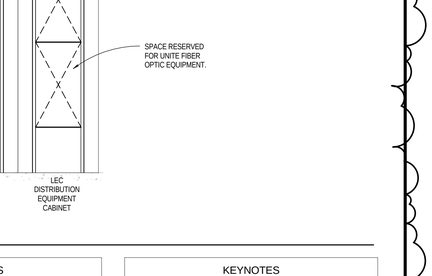

23 E4.8 TR2G RACK ELEVATION
SCALE: 1/2" = 1'-0"




24 E4.8 M210C-TR2M CABLE RUNWAY
SCALE: 1/4" = 1'-0"




25 E4.8 M210C-TR2M LARGE-SCALE
SCALE: 1/4" = 1'-0"




26 E4.8 TR2M RACK ELEVATION
SCALE: 1/2" = 1'-0"



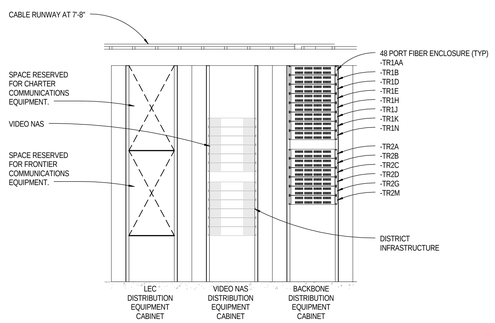

31 E4.8 C110-TR1C CABLE RUNWAY
SCALE: 1/4" = 1'-0"



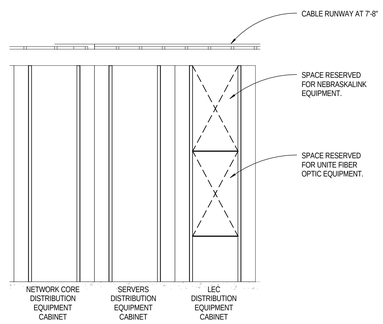

43 E4.8 TR1C ELEVATION 1
SCALE: 1/2" = 1'-0"




45 E4.8 TR1C ELEVATION 3
SCALE: 1/2" = 1'-0"




53 E4.8 TR1C ELEVATION 2
SCALE: 1/2" = 1'-0"




55 E4.8 TR1C ELEVATION 4
SCALE: 1/2" = 1'-0"




51 E4.8 C110-TR1C LARGE-SCALE
SCALE: 1/4" = 1'-0"

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | SLEEVES THROUGH WALL. STACK AND ALIGN WITH CABLE RUNWAY. TYPICAL. |
| 2 | PROVIDE RADIUS CORNER BRACKETS FOR ALL CABLE RUNWAY CORNERS. TYPICAL. |
| 3 | PROVIDE CABLE DROP-OUTS AT EACH VERTICAL CABLE MANAGEMENT. |
| 4 | PROVIDE CABLE DROP-OUTS 3'-0" ON CENTER AT WALL FIELD. |
| 5 | PROVIDE VERTICAL RUNWAY FOR SUPPORT OF CABLES UP TO SLEEVES. TYPICAL. |
| 6 | FRAMED CABLE ADMINISTRATION DRAWINGS WITH PLEXIGLASS COVER MOUNTED ON WALL. |
| 7 | PLYWOOD FROM 0'-4" TO 8'-4" ON ALL 4 WALLS. |
| 8 | DOOR CONTROL PANEL PROVIDED BY SECURITY CONTRACTOR. |
| 9 | WALL FIELD LOCATION FOR INTERCOM TERMINATIONS. |
| 10 | COAXIAL CABLE TERMINATIONS AND BROADBAND DISTRIBUTION ON WALL. |
| 11 | FIRE ALARM POWER SUPPLY PANEL LOCATION IF NEEDED. |

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 12 | ALL WALL-MOUNTED ELECTRICAL DEVICES FLUSH MOUNTED THIS ROOM. |
| 13 | CONDUITS FROM C110 HEADEND ROOM. SEE NOTE 7 UNDER GENERAL SPECIAL SYSTEMS NOTES. |
| 14 | (1) 1-1/4"C FROM 8'-0" AFF UP TO ROOF. SEE DETAIL 8/A4.04 FOR ROOF PENETRATION DETAIL. |
| 15 | PROVIDE (2) STRANDS 50um MM FIBER OPTIC TO MAIN FIBER DISTRIBUTION CABINET. |
| 16 | PROVIDE CABLE DROP-OUTS AT EACH VERTICAL CABLE MANAGEMENT OR SIDE OF CABINETS. |
| 17 | UNDERGROUND CONDUITS FOR BACKBONE CABLES. LOCATED TIGHT TO WALL. DOUBLE STACKING IS PREFERRED IF CONDUITS DO NOT EXTEND BEYOND 6 INCHES FROM WALL. |
| 18 | LOCATE BATTERY CABINET 12" MIN ABOVE CABLE RUNWAY TO NOT IMPEDE WALKWAY. |


Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

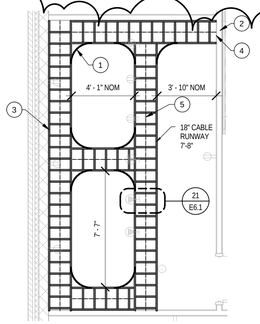
| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

LARGE-SCALE SPECIAL SYSTEMS PLANS

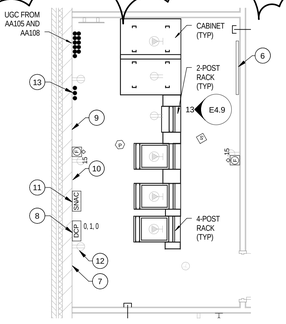
ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

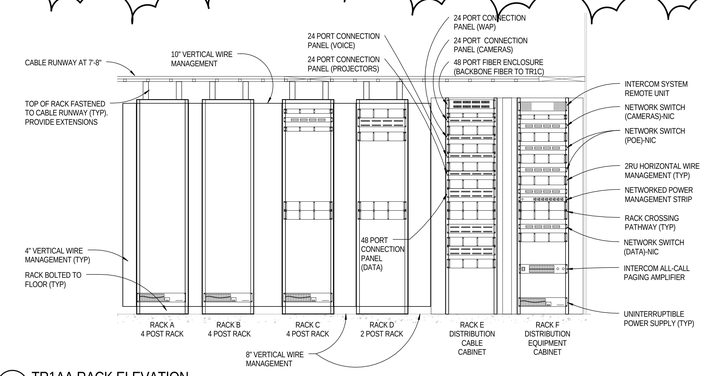

Sheet Number:
E4.8



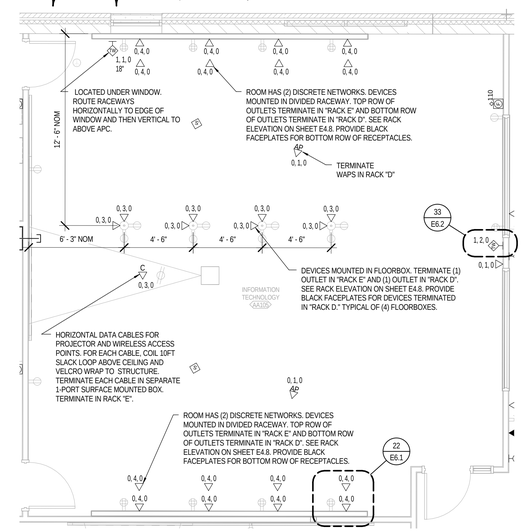

11 E4.9 AA107D-TR1AA CABLE RUNWAY PLAN
SCALE: 1/4" = 1'-0"




12 E4.9 AA107D-TR1AA LARGE-SCALE PLAN
SCALE: 1/4" = 1'-0"




13 E4.9 TR1AA RACK ELEVATION
SCALE: 1/2" = 1'-0"




25 E4.9 AA105 LARGE-SCALE SPECIAL SYSTEMS PLAN
SCALE: 1/4" = 1'-0"

| KEYNOTES | |
|---|---|
| **KEY #** | **KEYNOTE TEXT** |
| 1 | PROVIDE RADIUS CORNER BRACKETS FOR ALL CABLE RUNWAY CORNERS. TYPICAL. |
| 2 | SLEEVES THROUGH WALL. STACK AND ALIGN WITH CABLE RUNWAY. TYPICAL. |
| 3 | PROVIDE CABLE DROP-OUTS 3'-0" ON CENTER AT WALL FIELD. |
| 4 | PROVIDE VERTICAL RUNWAY FOR SUPPORT OF CABLES UP TO SLEEVES. TYPICAL. |
| 5 | PROVIDE CABLE DROP-OUTS AT EACH VERTICAL CABLE MANAGEMENT. |
| 6 | FRAMED CABLE ADMINISTRATION DRAWINGS WITH PLEXIGLASS COVER MOUNTED ON WALL. |
| 7 | PLYWOOD FROM 0'-4" TO 8'-4" ON ALL 4 WALLS. |
| 8 | DOOR CONTROL PANEL PROVIDED BY SECURITY CONTRACTOR. |
| 9 | COAXIAL CABLE TERMINATIONS AND BROADBAND DISTRIBUTION ON WALL. |
| 10 | WALL FIELD LOCATION FOR INTERCOM TERMINATIONS. |
| 11 | FIRE ALARM POWER SUPPLY PANEL LOCATION IF NEEDED. |
| 12 | ALL WALL-MOUNTED ELECTRICAL DEVICES FLUSH MOUNTED THIS ROOM. |
| 13 | CONDUITS FROM C110 HEADEND ROOM. SEE NOTE 7 UNDER GENERAL SPECIAL SYSTEMS NOTES. |


Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F


PROFESSIONAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

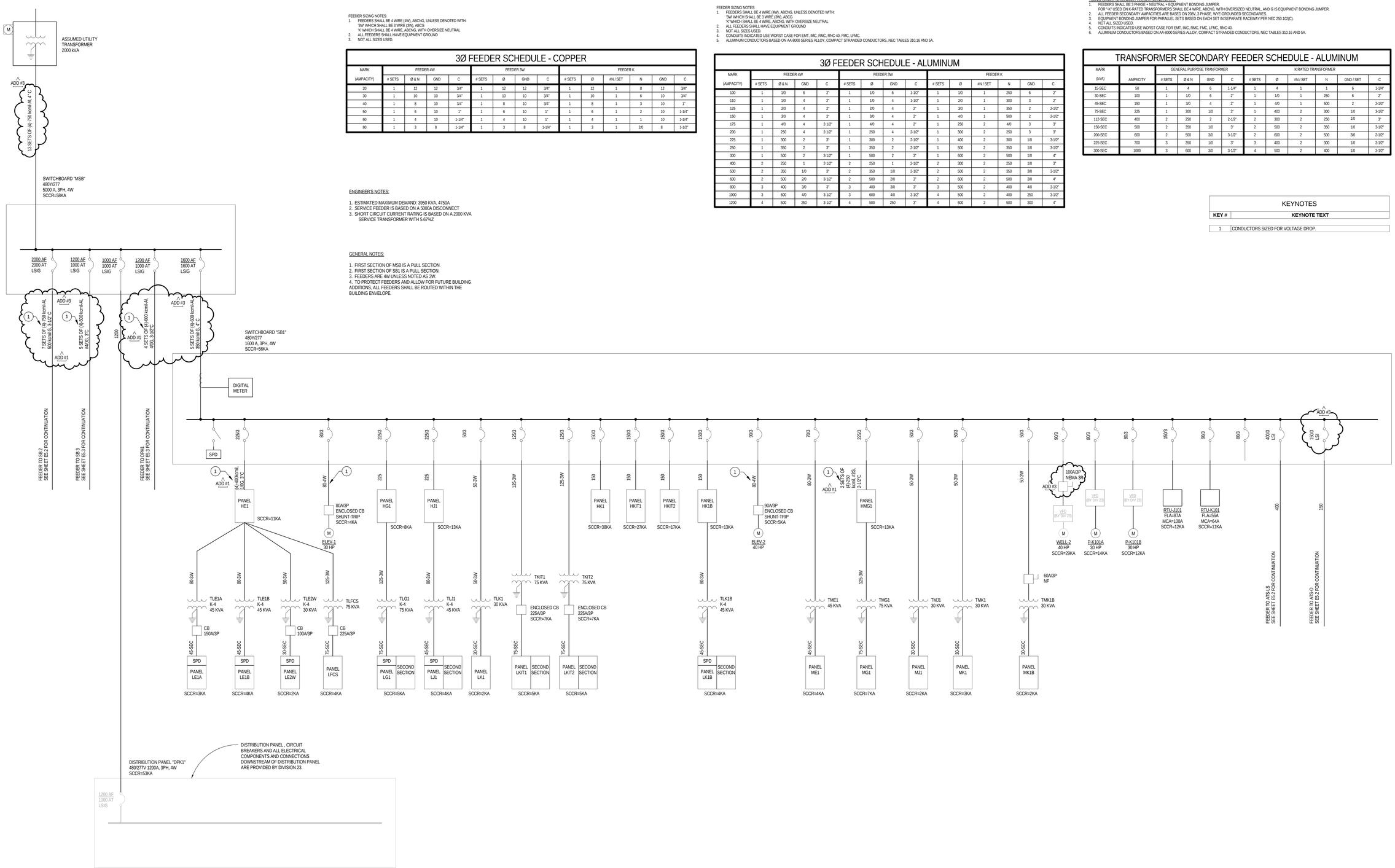
| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

LARGE-SCALE SPECIAL SYSTEMS PLANS

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E4.9




FEEDER SIZING NOTES:
1. FEEDERS SHALL BE 4 WIRE (4W), ABCNG, UNLESS DENOTED WITH:
   '3W' WHICH SHALL BE 3 WIRE (3W), ABCG
   'K' WHICH SHALL BE 4 WIRE, ABCNG, WITH OVERSIZE NEUTRAL
2. ALL FEEDERS SHALL HAVE EQUIPMENT GROUND
3. NOT ALL SIZES USED.

## 3Ø FEEDER SCHEDULE - COPPER

| MARK | FEEDER 4W | | | | FEEDER 3W | | | | FEEDER K | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (AMPACITY) | # SETS | Ø & N | GND | C | # SETS | Ø | GND | C | # SETS | Ø | #N / SET | N | GND | C |
| 20 | 1 | 12 | 12 | 3/4" | 1 | 12 | 12 | 3/4" | 1 | 12 | 1 | 8 | 12 | 3/4" |
| 30 | 1 | 10 | 10 | 3/4" | 1 | 10 | 10 | 3/4" | 1 | 10 | 1 | 6 | 10 | 3/4" |
| 40 | 1 | 8 | 10 | 3/4" | 1 | 8 | 10 | 3/4" | 1 | 8 | 1 | 3 | 10 | 1" |
| 50 | 1 | 6 | 10 | 1" | 1 | 6 | 10 | 1" | 1 | 6 | 1 | 2 | 10 | 1-1/4" |
| 60 | 1 | 4 | 10 | 1-1/4" | 1 | 4 | 10 | 1" | 1 | 4 | 1 | 1 | 10 | 1-1/4" |
| 80 | 1 | 3 | 8 | 1-1/4" | 1 | 3 | 8 | 1-1/4" | 1 | 3 | 1 | 2/0 | 8 | 1-1/2" |

ENGINEER'S NOTES:

1. ESTIMATED MAXIMUM DEMAND: 3950 KVA, 4750A
2. SERVICE FEEDER IS BASED ON A 5000A DISCONNECT
3. SHORT CIRCUIT CURRENT RATING IS BASED ON A 2000 KVA SERVICE TRANSFORMER WITH 5.67%Z

GENERAL NOTES:

1. FIRST SECTION OF MSB IS A PULL SECTION.
2. FIRST SECTION OF SB1 IS A PULL SECTION.
3. FEEDERS ARE 4W UNLESS NOTED AS 3W.
4. TO PROTECT FEEDERS AND ALLOW FOR FUTURE BUILDING ADDITIONS, ALL FEEDERS SHALL BE ROUTED WITHIN THE BUILDING ENVELOPE.

FEEDER SIZING NOTES:
1. FEEDERS SHALL BE 4 WIRE (4W), ABCNG, UNLESS DENOTED WITH:
   '3W' WHICH SHALL BE 3 WIRE (3W), ABCG
   'K' WHICH SHALL BE 4 WIRE, ABCNG, WITH OVERSIZE NEUTRAL
2. ALL FEEDERS SHALL HAVE EQUIPMENT GROUND
3. NOT ALL SIZES USED.
4. CONDUITS INDICATED USE WORST CASE FOR EMT, IMC, RMC, RNC-40, FMC, LFMC.
5. ALUMINUM CONDUCTORS BASED ON AA-8000 SERIES ALLOY, COMPACT STRANDED CONDUCTORS, NEC TABLES 310.16 AND 5A.

## 3Ø FEEDER SCHEDULE - ALUMINUM

| MARK | FEEDER 4W | | | | FEEDER 3W | | | | FEEDER K | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (AMPACITY) | # SETS | Ø & N | GND | C | # SETS | Ø | GND | C | # SETS | Ø | #N / SET | N | GND | C |
| 100 | 1 | 1/0 | 6 | 2" | 1 | 1/0 | 6 | 1-1/2" | 1 | 1/0 | 1 | 250 | 6 | 2" |
| 110 | 1 | 1/0 | 4 | 2" | 1 | 1/0 | 4 | 1-1/2" | 1 | 2/0 | 1 | 300 | 3 | 2" |
| 125 | 1 | 2/0 | 4 | 2" | 1 | 2/0 | 4 | 2" | 1 | 3/0 | 1 | 350 | 2 | 2-1/2" |
| 150 | 1 | 3/0 | 4 | 2" | 1 | 3/0 | 4 | 2" | 1 | 4/0 | 1 | 500 | 2 | 2-1/2" |
| 175 | 1 | 4/0 | 4 | 2-1/2" | 1 | 4/0 | 4 | 2" | 1 | 250 | 2 | 4/0 | 3 | 3" |
| 200 | 1 | 250 | 4 | 2-1/2" | 1 | 250 | 4 | 2-1/2" | 1 | 300 | 2 | 250 | 3 | 3" |
| 225 | 1 | 300 | 2 | 3" | 1 | 300 | 2 | 2-1/2" | 1 | 400 | 2 | 300 | 1/0 | 3-1/2" |
| 250 | 1 | 350 | 2 | 3" | 1 | 350 | 2 | 2-1/2" | 1 | 500 | 2 | 350 | 1/0 | 3-1/2" |
| 300 | 1 | 500 | 2 | 3-1/2" | 1 | 500 | 2 | 3" | 1 | 600 | 2 | 500 | 1/0 | 4" |
| 400 | 2 | 250 | 1 | 2-1/2" | 2 | 250 | 1 | 2-1/2" | 2 | 300 | 2 | 250 | 1/0 | 3" |
| 500 | 2 | 350 | 1/0 | 3" | 2 | 350 | 1/0 | 2-1/2" | 2 | 500 | 2 | 350 | 3/0 | 3-1/2" |
| 600 | 2 | 500 | 2/0 | 3-1/2" | 2 | 500 | 2/0 | 3" | 2 | 600 | 2 | 500 | 3/0 | 4" |
| 800 | 3 | 400 | 3/0 | 3" | 3 | 400 | 3/0 | 3" | 3 | 500 | 2 | 400 | 4/0 | 3-1/2" |
| 1000 | 3 | 600 | 4/0 | 3-1/2" | 3 | 600 | 4/0 | 3-1/2" | 4 | 500 | 2 | 400 | 250 | 3-1/2" |
| 1200 | 4 | 500 | 250 | 3-1/2" | 4 | 500 | 250 | 3" | 4 | 600 | 2 | 500 | 300 | 4" |

TRANSFORMER SECONDARY FEEDER SIZING NOTES:
1. FEEDERS SHALL BE 3 PHASE + NEUTRAL + EQUIPMENT BONDING JUMPER. FOR "K" USED ON K-RATED TRANSFORMERS SHALL BE 4 WIRE, ABCNG, WITH OVERSIZED NEUTRAL, AND G IS EQUIPMENT BONDING JUMPER.
2. ALL FEEDER SECONDARY AMPACITIES ARE BASED ON 208V, 3 PHASE, WYE-GROUNDED SECONDARIES.
3. EQUIPMENT BONDING JUMPER FOR PARALLEL SETS BASED ON EACH SET IN SEPARATE RACEWAY PER NEC 250.102(C).
4. NOT ALL SIZED USED.
5. CONDUITS INDICATED USE WORST CASE FOR EMT, IMC, RMC, FMC, LFMC, RNC-40.
6. ALUMINUM CONDUCTORS BASED ON AA-8000 SERIES ALLOY, COMPACT STRANDED CONDUCTORS, NEC TABLES 310.16 AND 5A.

## TRANSFORMER SECONDARY FEEDER SCHEDULE - ALUMINUM

| MARK | | GENERAL PURPOSE TRANFORMER | | | | K RATED TRANSFORMER | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (kVA) | AMPACITY | # SETS | Ø & N | GND | C | # SETS | Ø | #N / SET | N | GND / SET | C |
| 15-SEC | 50 | 1 | 4 | 6 | 1-1/4" | 1 | 4 | 1 | 1 | 6 | 1-1/4" |
| 30-SEC | 100 | 1 | 1/0 | 6 | 2" | 1 | 1/0 | 1 | 250 | 6 | 2" |
| 45-SEC | 150 | 1 | 3/0 | 4 | 2" | 1 | 4/0 | 1 | 500 | 2 | 2-1/2" |
| 75-SEC | 225 | 1 | 300 | 1/0 | 3" | 1 | 400 | 2 | 300 | 1/0 | 3-1/2" |
| 112-SEC | 400 | 2 | 250 | 2 | 2-1/2" | 2 | 300 | 2 | 250 | 1/0 | 3" |
| 150-SEC | 500 | 2 | 350 | 1/0 | 3" | 2 | 500 | 2 | 350 | 1/0 | 3-1/2" |
| 200-SEC | 600 | 2 | 500 | 3/0 | 3-1/2" | 2 | 600 | 2 | 500 | 3/0 | 2-1/2" |
| 225-SEC | 700 | 3 | 350 | 1/0 | 3" | 3 | 400 | 2 | 300 | 1/0 | 3-1/2" |
| 300-SEC | 1000 | 3 | 600 | 3/0 | 3-1/2" | 4 | 500 | 2 | 400 | 1/0 | 3-1/2" |

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | CONDUCTORS SIZED FOR VOLTAGE DROP. |


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


ERIC W. KAMIN E-12827 PROFESSIONAL ELECTRICAL ENGINEER STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #1 | Addendum No. 1 | 10/7/2014 |
| ADD #3 | Addendum No. 3 | 10/14/2014 |

ELECTRICAL ONE-LINE DIAGRAM

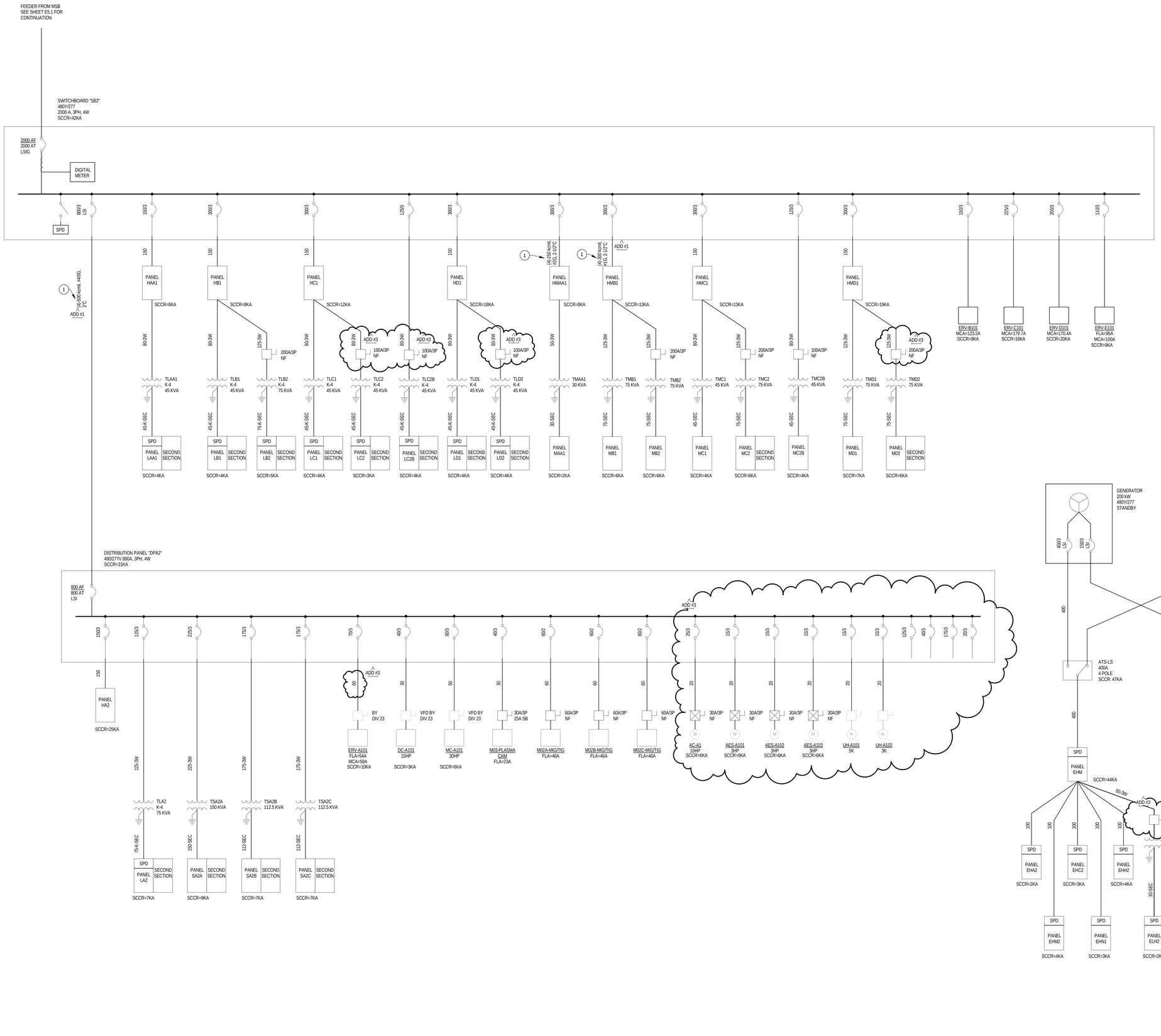
ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E5.1

## KEYNOTES

| KEY # | KEYNOTE TEXT |
|---|---|
| 1 | CONDUCTORS SIZED FOR VOLTAGE DROP. |





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #1 | Addendum No. 1 | 10/7/2014 |
| ADD #3 | Addendum No. 3 | 10/14/2014 |

ELECTRICAL ONE-LINE DIAGRAM

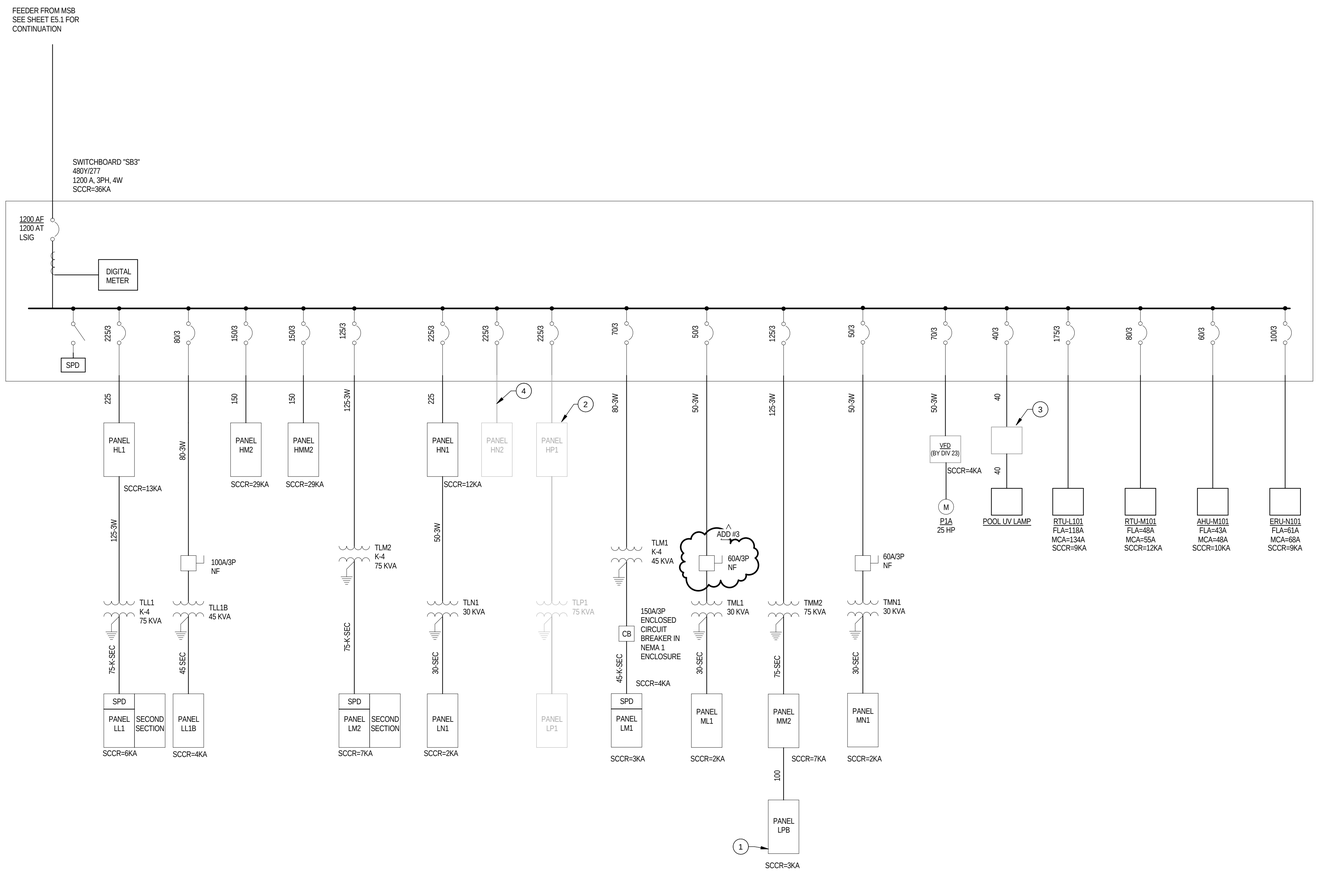
ProjectNumber: **1355**
Date: **September 30, 2014**

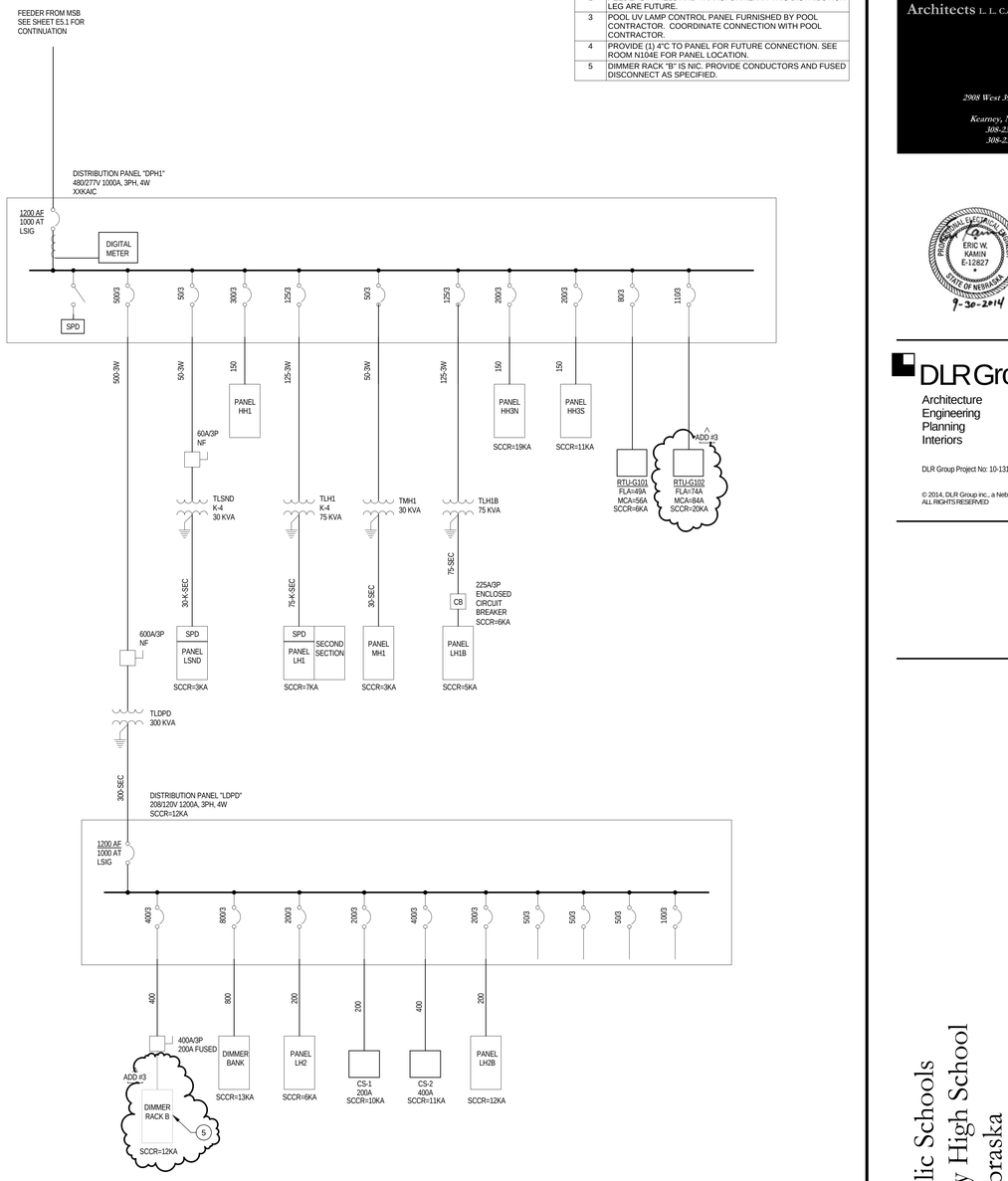

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E5.2

| KEYNOTES - ONE-LINE | |
|---|---|
| KEY # | KEYNOTE TEXT |
| 1 | PANELBOARD PROVIDED BY PRESSBOX MANUFACTURER. FEEDER PROVIDED BY ELECTRICAL CONTRACTOR. |
| 2 | FEEDERS PANELS AND TRANSFORMER IN THIS DISTRIBUTION LEG ARE FUTURE. |
| 3 | POOL UV LAMP CONTROL PANEL FURNISHED BY POOL CONTRACTOR. COORDINATE CONNECTION WITH POOL CONTRACTOR. |
| 4 | PROVIDE (1) 4"C TO PANEL FOR FUTURE CONNECTION. SEE ROOM N104E FOR PANEL LOCATION. |
| 5 | DIMMER RACK "B" IS NIC. PROVIDE CONDUCTORS AND FUSED DISCONNECT AS SPECIFIED. |





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

ELECTRICAL ONE-LINE DIAGRAM

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E5.3

# INTERIOR LUMINAIRE SCHEDULE

| TYPE | MFR | MODEL | LAMP | VOLT | APPARENT LOAD | LUMINAIRE TYPE/MOUNTING | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| DL1 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,000lm, 4100K | UNV | 25 VA | RECESSED DOWNLIGHT | 6" DOWNLIGHT, SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR, 16-GAUGE GALVANIZED STEEL CONSTRUCTION, LIGHT ENGINE AND DRIVER ACCESSIBLE THROUGH APERTURE. |
| DL2 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,000lm, 4100K | UNV | 31 VA | RECESSED DOWNLIGHT, SHOWER | 6" DOWNLIGHT, DIFFUSE ACRYLIC REGRESSED LENS WITH WHITE FLANGE.16-GAUGE GALVANIZED STEEL CONSTRUCTION, LIGHT ENGINE AND DRIVER ACCESSIBLE THROUGH APERTURE. |
| DL3 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,800lm, 4100K | UNV | 35 VA | RECESSED DOWNLIGHT | 8" DOWNLIGHT, CLEAR MATTE DIFFUSE OPEN REFLECTOR, 16-GAUGE GALVANIZED STEEL CONSTRUCTION, SELF-FLANGED REFLECTOR, LIGHT ENGINE AND DRIVER ACCESSIBLE THROUGH APERTURE. |
| DL4 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 2,900lm, 4100K | UNV | 49 VA | RECESSED DOWNLIGHT | SAME AS DL3, EXCEPT LUMEN OUTPUT. |
| DL5 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,400lm, 4100K | UNV | 34 VA | RECESSED DOWNLIGHT | 4" DOWNLIGHT, SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR,16-GAUGE GALVANIZED STEEL CONSTRUCTION, LIGHT ENGINE AND DRIVER ACCESSIBLE THROUGH APERTURE. |
| DL6 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,000lm, 4100K | UNV | 25 VA | RECESSED DOWNLIGHT REMODEL | 8" REMODEL, DOWNLIGHT, SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR, WET LOCATION LISTED, 16-GAUGE GALVANIZED STEEL CONSTRUCTION, LIGHT ENGINE AND DRIVER ACCESSIBLE THROUGH APERTURE. OPTION FOR CEILING THICKNESS UP TO 2 INCHES. |
| DL7 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,400lm, 4100K | UNV | 34 VA | RECESSED WALLWASH | 6" WALLWASH, SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR,16-GAUGE GALVANIZED STEEL CONSTRUCTION, LIGHT ENGINE AND DRIVER ACCESSIBLE THROUGH APERTURE. |
| DL8 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,000lm, 4100K | UNV | 34 VA | RECESSED DOWNLIGHT | SAME AS DL1, EXCEPT WITH WIDE DISTRIBUTION. |
| DL9 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,800lm, 4100K | UNV | 28 VA | RECESSED DOWNLIGHT | SAME AS DL1 EXCEPT LUMEN OUTPUT AND WIDE DISTRIBUTION. |
| DL10 | GOTHAM PORTFOLIO PRESCOLITE | EVO | LED, 1,400lm, 4100K | UNV | 34 VA | RECESSED DOWNLIGHT | SAME AS DL1, EXCEPT LUMEN OUTPUT. |
| DL11 | PORTFOLIO GOTHAM PRESCOLITE | LD6A | LED, 3,000lm, 4000K | UNV | 44 VA | RECESSED DOWNLIGHT, DECO TRIM | 6" DOWNLIGHT, SELF-FLANGED, SEMI-SPECULAR CLEAR REFLECTOR, LIGHT ENGINE, AND DRIVER ACCESSIBLE THROUGH APERTURE, DECO TRIM (DT-6) COBALT BLUE RING WITH FROSTED FUNNEL. |
| PD1 | BRUCK | ZARA | LED | UNV | 3 VA | DECORATIVE PENDANT | DECORATIVE GLASS PENDANT, CINNAMON COLOR, MATTE CHROME HARDWARE WITH KISS 4" CANOPY. |
| PD2 | BRUCK | CIRO | LED | UNV | 3 VA | DECORATIVE PENDANT | DECORATIVE GLASS PENDANT, GOLD-LEAF COLOR, MATTE CHROME HARDWARE WITH KISS 4" CANOPY. |
| PD3 | BRUCK | RAINBOW II | LED | UNV | 3 VA | DECORATIVE PENDANT | DECORATIVE GLASS PENDANT, SMOKY COLOR, BRONZE HARDWARE WITH KISS 4" CANOPY. |
| PF1 | LITHONIA METALUX H.E. WILLIAMS | EJSA | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SURFACE OR SUSPENDED 1X4 PENDANT MOUNTED | 1X4, 20-GAUGE, COLD-ROLLED STEEL, HIGH GLOSS BAKED WHITE FINISH. UPLIGHT CHANNEL, INDUSTRIAL STRIP. SURFACE AND PENDANT MOUNTED WITH WIREGUARD. PROVIDE (1) ADVANCE OPTANIUM PROGRAM START BALLAST WITH .88 BALLAST FACTOR PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF1E | LITHONIA METALUX H.E. WILLIAMS | EJSA | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SURFACE OR SUSPENDED 1X4 PENDANT MOUNT | SAME AS PF1, EXCEPT WITH 700 LUMEN EMERGENCY BATTERY BALLAST . APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF3 | LITHONIA METALUX H.E. WILLIAMS | AFP | (2)-F54T5HO/ES (49W) | UNV | 109 VA | SURFACE OR SUSPENDED PENDANT MOUNT | 1X4 HIGH OUTPUT HEAVY DUTY INDUSTRIAL. COLD ROLLED STEEL HOUSING, DIE FORMED CHANNEL CONNECTOR FOR STRAIGHT ROWS, BAKED ENAMEL FINISH, 10% UPLIGHT REFLECTOR TO PREVENT DUST ACCUMULATION, CHAIN MOUNTED, PROVIDE WITH FULL HEIGHT END PLATES AND WIRE GUARD. PROVIDE (1) ADVANCE OPTANIUM T5 PROGRAM RAPID START BALLAST PER 4 FOOT SECTION. APPARENT LOAD AND LAMP DATA FOR 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF5 | LITHONIA METALUX | ST8 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SUSPENDED 1X4 VOLUMETRIC PENDANT | 1X4 VOLUMETRIC ACRYLIC LENS, 20-GAUGE, COLD-ROLLED STEEL, HIGH GLOSS BAKED WHITE FINISH. PROVIDE (1) ADVANCE OPTANIUM PROGRAM START BALLAST WITH .88 BALLAST FACTOR PER 4FT SECTION. APPARENT LOAD AND LAMP INFORMATION FOR 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF6 | AXIS LIGHTING FOCAL POINT CORELITE | L2 | (2)-F32T8/ES (25W), 4000K | UNV | 45 VA | SUSPENDED DECORATIVE LINEAR | 1X4 LOW PROFILE EXTRUDED ALUMINUM WITH DIE CAST END CAPS,SILVER POWDER COATED FINISH. AIRCRAFT CABLE SUSPENSION, 20% UPLIGHT, 80% DOWNLIGHT. PROVIDE (1) ADVANCE OPTANIUM PROGRAM START BALLAST WITH .88 BALLAST FACTOR PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF7 | LITHONIA METALUX | ST8 | (3)-F32T8/ES (25W), 4100K | UNV | 69 VA | SUSPENDED 1X4 VOLUMETRIC PENDANT | SAME AS PF5, EXCEPT LAMP QTY AND PROVIDE (2) ADVANCE OPTANIUM PROGRAM START BALLAST WITH .88 BALLAST FACTOR PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF8 | CORELITE FINELITE AXIS LIGHTING | JAYLUM | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SUSPENDED 1X4 LINEAR PENDANT MOUNT | 1X4 LOW PROFILE HOUSING, 20 GAUGE COLD ROLLED STEEL, WHITE COATED REFLECTOR, MICRO PRISMATIC LENS. AIRCRAFT CABLE MOUNTING, 35% UPLIGHT, 65% DOWNLIGHT. PROVIDE (1) ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF9 | AXIS LIGHTING FOCAL POINT PEERLESS | D535 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SUSPENDED LINEAR PENDANT | SMALL PROFILE EXTRUDED ALUMINUM HOUSING, AIRCRAFT CABLE MOUNTING, CLEAR ACRYLIC SIDE OPTIC. PROVIDE (1) ADVANCED OPTANIUM PROGRAM START BALLAST WITH .88 BALLAST FACTOR PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF10 | LITHONIA METALUX H.E. WILLIAMS | FGB | (4)-F54T5HO/ES (49W), 4100K | UNV | 218 VA | SURFACE OR PENDANT MOUNT | 1x4, 20-GAUGE, COLD-ROLLED STEEL, HIGH GLOSS BAKED WHITE FINISH. UPLIGHT CHANNEL, INDUSTRIAL STRIP. SURFACE AND PENDANT MOUNTED. PROVIDE (2) ADVANCE OPTANIUM PROGRAM START BALLASTS PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF11 | LITHONIA METALUX H.E. WILLIAMS | AFP | (3)-F32T8/ES (25W), 4100K | UNV | 70 VA | SUSPENDED LINEAR PENDANT MOUNT | HEAVY DUTY INDUSTRIAL, COLD ROLLED STEEL HOUSING, DIE FORMED CHANNEL CONNECTOR FOR STRAIGHT ROWS, BAKED ENAMEL FINISH, 10% UPLIGHT REFLECTOR TO PREVENT DUST ACCUMULATION, CHAIN MOUNTED, PROVIDE WITH FULL HEIGHT END PLATES AND WIRE GUARD. PROVIDE (1) ADVANCE OPTANIUM T8 PROGRAM RAPID START BALLAST PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PF12 | LITHONIA METALUX H.E. WILLIAMS | EJS | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SUSPENDED 1X4 PENDANT | SAME AS PF1, EXCEPT WITHOUT UPLIGHT AND WIREGUARD. PROVIDE (1) ADVANCE OPTANIUM BALLAST WITH .88 BALLAST FACTOR PER 4 FOOT SECTION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PH1 | SPI LIGHTING | LEI3803 LIGHTTRUSS | (1)-1000W MH, 4000K | UNV | 1080 VA | CONTINUOUS, SUSPENDED STRUCTURE | INDIRECT, FORWARD-THROW NATATORIUM LIGHTING FIXTURE MOUNTED IN CONTINUOUS, SUSPENDED STRUCTURE ALONG PERIMETER OF POOL. STANDARD 25 DEGREE ANGLE. EXTRUDED ALUMINUM LIGHT MODULES WITH BALLAST TRAY. 95% REFLECTIVE POLISHED AND ANODIZED ALUMINUM REFLECTOR. 2 MIL THICK THERMOSET POWDER COAT POLYESTER PAINT, NATATORIUM FINISH; COLOR OFF-WHITE. GLASS COVER OVER LAMP AND REFLECTOR. |
| PL1 | LITHONIA METALUX | IBL | LED, 34,000lm, 4000K | UNV | 388 VA | SUSPENDED PENDANT MOUNT | HIGH BAY LED PENDANT, AIR CRAFT CABLE MOUNTING, ALUMINUM CHASSIS, WHITE REFLECTORS, WHITE FINISH, WIDE DISTRIBUTION, 0-10V DIMMING, 80 CRI, SEMI-DIFFUSE ACRYLIC LENS WITH WIRE GUARD. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL3 | LITHONIA METALUX | IBL | LED, 17,145lm, 4000K | UNV | 192 VA | SUSPENDED PENDANT MOUNT | SAME AS PL1, EXCEPT LUMEN OUTPUT. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL4 | LITHONIA METALUX | IBL | LED, 8,682, 4000K | UNV | 95 VA | SUSPENDED PENDANT MOUNT | SAME AS PL1, EXCEPT LUMEN OUTPUT. APPARENT LOAD AND LAMP INFORMATION FOR 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL6 | STILE | MUSE TRYG - J SHAPE | LED, 11,335lm, 4500K | UNV | 107 VA | SUSPENDED LINEAR PENDANT | LINEAR PENDANT, STYLE J SHAPE, EXTRUDED ALUMINUM BODY, ANODIZED SILVER FINISH, WHITE LENS, CANOPY AND AIRCRAFT CABLE MOUNTING, 0-10V DIMMING. DRIVERS WITHIN EXTRUSION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL7 | STILE | MUSE TRYG - J SHAPE | LED, 5,458lm, 4500K | UNV | 53 VA | SUSPENDED LINEAR PENDANT | SAME AS PL6, EXCEPT LUMEN OUTPUT. APPARENT LOAD AND LAMP INFORMATION FOR 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL9 | AXIS LIGHTING FINELITE | BEAM 4 | LED, 4,000lm, 4000K | UNV | 44 VA | SUSPENDED LINEAR PENDANT | LINEAR PENDANT. EXTRUDED ALUMINUM HOUSING, FROSTED ACRYLIC LENS, WHITE POWDER COATED REFLECTORS. 0-10V DIMMING. AIRCRAFT CABLE SUSPENSION. COLOR: WHITE. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL11 | RIG-A-LITE | XP LED | LED, 10,918lm, 3500K | UNV | 93 VA | CLASS 1, DIVISION I, UL LISTED | CLASS 1, DIVISION I LISTED, IP66 RATED, 4FT - 4 TUBE, CAST ALUMINUM BODY WITH IMPACT AND HEAT RESISTANT GLASS TUBES. 2.5 MIL EXTRUDED ALUMINUM REFLECTORS. |
| PL12 | CORELITE | DIVIDE SUSPENDED | LED, 3,290lm, 4000K | UNV | 32 VA | SUSPENDED LINEAR PENDANT MOUNT | LOW PROFILE EXTRUDED ALUMINUM HOUSING, OPTICAL GRADE EDGELIT ACYLIC LOW GLARE LENS. WHITE POWDER COATED REFLECTORS, INTEGRALLY MOUNTED DRIVER. AIRCRAFT CABLE SUSPENSION, SILVER COLOR. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL13 | LUMENPULSE FINELITE | LUMENLINE 2 | LED, 4,556lm, 4000K | UNV | 85 VA | SUSPENDED LINEAR PENDANT | EXTRUDED ALUMINUM POWDER COATED HOUSING APPROXIMATELY 3 INCHES BY 5 INCHES WITH 30% UPLIGHT, 70% DOWNLIGHT. WHITE POWDER COATED REFLECTORS, 0-10V DIMMING. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL14 | CORELITE FINELITE AXIS LIGHTING | JAYLUM | LED, 9,462lm, 4000K | UNV | 100 VA | SUSPENDED PENDANT MOUNT | LOW PROFILE HOUSING CONSTRUCTED FROM 20 GAUGE COLD ROLLED STEEL. WHITE COATED REFLECTOR, FROSTED LENS. AIRCRAFT CABLE MOUNTING, (1) 8 FOOT SECTION. 0-10V DIMMING. |
| PL15 | FINELITE AXIS LIGHTING | HP - 4 | LED, 4432lm, 4000K | UNV | 55 VA | LINEAR PENDANT | 4-INCH APERTURE, LINEAR SUSPENDED INDIRECT/DIRECT MOUNTED CONTINUOUS. EXTRUDED ALUMINUM BODY AND ENDCAPS, TOP GLOW LENS AND FLUSH FROSTED WHITE BOTTOM LENS. FINISH: WHITE. STANDARD OUTPUT UPLIGHT, HIGH OUTPUT DOWNLIGHT. AIRCRAFT CABLE SUSPENSION. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDI<br>WHITE. AIRCRAFT CABLE SUSPENSION. PROVIDE TOTAL LUMINAIRE LENGTHS SHOWN ON LIGHTING PLANS. |
| PL16 | LITHONIA | ZL1N | LED, 4,391lm, 4000K | UNV | 42 VA | LINEAR PENDANT | EXTRUDED COLD ROLLED STEEL CONSTRUCTION, WHITE FINISH, DIFFUSE LENS, PENDANT MOUNTED. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL17 | CREE | WS4 | LED, 5,900lm, 4000K | UNV | 63 VA | VAPOR TIGHT PENDANT | SAME AS WL3, EXCEPT PENDANT MOUNTED. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL18 | STILE | MUSE TRYG - K SHAPE | LED, 5,458lm, 4500K | UNV | 53 VA | SUSPENDED LINEAR PENDANT | SAME AS PL6, EXCEPT LUMEN OUTPUT AND STYLE K SHAPE. APPARENT LOAD AND LAMP INFORMATION FOR 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| PL19 | LITHONIA METALUX | IBL | LED, 24,637lm, 4000K | UNV | 241 VA | SUSPENDED PENDANT MOUNT | SAME AS PL1, EXCEPT LUMEN OUTPUT. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| ADD #3 PL20 | CREE | WS4 | LED, 5,900lm, 4000K | UNV | 50 VA | SURFACE MOUNTED | SAME AS WL3, EXCEPT SURFACE MOUNTED AND STAINLESS STEEL CLIPS. APPARENT LOAD AND LAMP INFORMATION PER 4 FOOT SECTION. PROVIDE LENGTHS AS INDICATED ON PLAN. |
| RF1F | LITHONIA METALUX H.E. WILLIAMS | SP8 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | RECESSED 1X4 FLANGED TROFFER | RECESSED FLANGED 1X4 PRISMATIC #12 PATTERN ACRYLIC 0.125" THICK LENS, STEEL HOUSING, BAKED WHITE ENAMEL FINISH, MIN REFLECTANCE 90%, REINFORCED FLAT STEEL DOOR, HINGE AND LATCH FROM EITHER SIDE WITH MECH SEAL, STATIC. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF2 | LITHONIA METALUX H.E. WILLIAMS | 2SP8 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | RECESSED 2X4 TROFFER | RECESSED GRID 2X4 TROFFER WITH PRISMATIC #12 PATTERN ACRYLIC 0.125" THICK LENS, STEEL HOUSING, BAKED WHITE ENAMEL FINISH, MIN REFLECTANCE 90%, REINFORCED FLAT STEEL DOOR, HINGE AND LATCH FROM EITHER SIDE WITH MECH SEAL, STATIC. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF3 | LITHONIA METALUX H.E. WILLIAMS | 2SP8 | (3)-F32T8/ES (25W), 4100K | UNV | 69 VA | RECESSED 2X4 TROFFER | SAME AS RF2, EXCEPT LAMP QTY AND (2) ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF3B | LITHONIA METALUX H.E. WILLIAMS | 2SP8 | (3)-F32T8/ES (25W), 4100K | UNV | 70 VA | RECESSED 2X4 TROFFER | SAME AS RF2, EXCEPT LAMP QTY. |
| RF4 | LITHONIA METALUX H.E. WILLIAMS | 2VT8 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | RECESSED 2X4 GRID VOLUMETRIC | RECESSED GRID 2X4 VOLUMETRIC TROFFER WITH ACRYLIC LINEAR PRISMATIC LENS. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF4F | LITHONIA METALUX H.E. WILLIAMS | 2VT8 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | RECESSED 2X4 FLANGED VOLUMETRIC | SAME AS RF4, EXCEPT FLANGE MOUNTED. |
| RF5 | LITHONIA METALUX H.E. WILLIAMS | 2VT8 | (3) F32T8/ES (25W), 4100K | UNV | 69 VA | RECESSED 2X4 GRID VOLUMETRIC | SAME AS RF4, EXCEPT GRID MOUNT, LAMP QTY AND (2) ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF5FB | LITHONIA METALUX H.E. WILLIAMS | 2VT8 | (3) F32T8/ES (25W), 4100K | UNV | 70 VA | RECESSED 2X4 FLANGED VOLUMETRIC | SAME AS RF4, EXCEPT LAMP QTY AND (1) ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF7 | LITHONIA METALUX H.E. WILLIAMS | SRT | (3)-F32T8/ES (25W), 4100K | UNV | 70 VA | RECESSED 2X4 TROFFER SEALED | RECESSED GRID 2X4, CLEAN ROOM, PRISMATIC #12 PATTERN ACRYLIC 0.125" THICK LENS, SEALED STEEL HOUSING, BAKED WHITE ENAMEL FINISH, MIN REFLECTANCE 90%, ALUMINUM DOORFRAME WITH NEOPRENE GASKETING, HINGE AND LATCH FROM EITHER SIDE WITH GASKETING, STATIC. PROVIDE WITH ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |

# INTERIOR LUMINAIRE SCHEDULE

| TYPE | MFR | MODEL | LAMP | VOLT | APPARENT LOAD | LUMINAIRE TYPE/MOUNTING | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| RF8 | LITHONIA METALUX H.E. WILLIAMS | SRT | (4)-F32T8/ES (25W), 4100K | UNV | 90 VA | RECESSED 2X4 TROFFER SEALED | SAME AS RF7, EXCEPT LAMP QTY AND (2) ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF9 | METALUX LITHONIA | 2AC | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | RECESSED 2X4 ARCHITECTURAL | RECESSED 2X4 INDIRECT TROFFER WITH WHITE ENAMEL REFLECTORS AND SQUARE PATTERN INSERT LENSES. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| RF10 | METALUX LITHONIA H.E. WILLIAMS | 2ALNG | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | RECESSED GRID 2X4 VOLUMETRIC | RECESSED GRID 2X4 VOLUMETRIC TROFFER WITH FROSTED ACRYLIC LENS, TOOLLESS DOOR ASSEMBLY ACCESSIBLE FROM BELOW, BAKED WHITE ENAMEL FINISH. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR |
| RF11 | METALUX LITHONIA H.E. WILLIAMS | 2ALNG | (3)-F32T8/ES (25W), 4100K | UNV | 69 VA | RECESSED 2X4 GRID VOLUMETRIC | SAME AS RF10 EXCEPT LAMP QUANTITY AND PROVIDE (2) ADVANCE OPTANIUM PROGRAM RAPID START BALLASTS WITH .88 BALLAST FACTOR. |
| RL1 | LITHONIA METALUX | 2VTL2 | LED, 3,300lm, 4000K | UNV | 35 VA | RECESSED GRID 2X2 VOLUMETRIC | RECESSED GRID 2X2 VOLUMETRIC TROFFER WITH ACRYLIC LINEAR PRISMATIC LENS. 0-10V DIMMING. |
| RL2 | LITHONIA METALUX | 2VTL | LED, 4,800lm, 4000K | UNV | 47 VA | RECESSED 2X4 GRID VOLUMETRIC | SAME AS RL1, EXCEPT 2X4 AND LUMEN OUTPUT. |
| RL3 | LITHONIA METALUX | 2ALL2 | LED, 3,700lm, 3500K | UNV | 37 VA | RECESSED 2X2 GRID VOLUMETRIC | RECESSED GRID 2X2 VOLUMETRIC TROFFER WITH TRANSMITTANCE DIFUSSER AND CONCAVE RIBBED REFLECTOR. ACRYLIC LINEAR PRISMATIC LENS. 0-10V DIMMING. CRI >82. |
| RL4-2 | FINELITE AXIS | HP4-R | LED, 724lm, 4000K | UNV | 9 VA | RECESSED LINEAR ACCENT | 4" APERTURE EXTRUDED ALUMINUM RECESSED BODY WITH DIE-FORMED 20 GAUGE COLD ROLLED STEEL MATTE WHITE POWDER COATED REFLECTOR AND FROST WHITE SNAP-IN LENS. 99% DIFFUSION AND 73% TRANSMISSIVE LENS. SINGLE CIRCUIT WITH GYPSUM FLUSH FLANGELESS MOUNTING. 2FT SECTION. |
| RL4-3 | FINELITE AXIS | HP4-R | LED, 1086lm, 4000K | UNV | 14 VA | RECESSED LINEAR ACCENT | SAME AS RL4-2, EXCEPT 3FT SECTION. |
| RL4-4 | FINELITE AXIS | HP4-R | LED, 1448lm, 4000K | UNV | 18 VA | RECESSED LINEAR ACCENT | SAME AS RL4-2, EXCEPT 4FT SECTION. |
| RL4-6 | FINELITE AXIS | HP4-R | LED, 2172lm, 4000K | UNV | 27 VA | RECESSED LINEAR ACCENT | SAME AS RL4-2, EXCEPT 6FT SECTION. |
| ADD #3 RL5 | LITHONIA METALUX | 2VTL2 | LED, 4,000lm, 4000K | UNV | 42 VA | RECESSED 2X2 GRID VOLUMETRIC | SAME AS RL1, EXCEPT LUMEN OUTPUT AND BI-LEVEL SWITCHING. |
| SF1 | LITHONIA METALUX H.E. WILLIAM | LB | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SURFACE MOUNT 1X4 | SURFACE MOUNTED 1x4, IMPACT-RESISTANT DIFFUSER, RUST RESISTANT WHITE FINISH, COLD ROLLED STEEL HOUSING, #12 PATTERN 0.140" HIGH-IMPACT ACRYLIC DIFFUSER. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| SF2 | LITHONIA METALUX H.E. WILLIAM | M | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SURFACE MOUNT 1X4 | SURFACE MOUNTED 1x4, IMPACT-RESISTANT DIFFUSER, RUST RESISTANT WHITE FINISH, COLD ROLLED STEEL HOUSING, FULL BODY HOUSING WITH WELDED ENDS, #19 PATTERN 0.156" HIGH-IMPACT ACRYLIC DIFFUSER. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| SF3 | LITHONIA METALUX H.E. WILLIAM | 2M | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | SURFACE MOUNT 2X4 | SAME AS SF2, EXCEPT 2X4. |
| SL1 | KENALL | MLHA12 | LED, 4,500 lm, 4000K | UNV | 58 VA | NATATORIUM WRAP 1X4 | SURFACE MOUNTED 1x4 NATATORIUM-GRADE FIXTURE. MARINE-GRADE ALUMINUM HOUSING WITH DIE-CAST FLAT END CAPS. TGIC POLYESTER POWDER COAT OFF-WHITE FINISH. HIGH-IMPACT EXTRUDED CLEAR LENS. ALL FIXTURE COMPONENTS OF NON-CORROSIVE MATERIAL. AIRCRAFT CABLE SUSPENSION. |
| TL1-2 | JUNO HALO | TRAC-MASTER II, AVANT GARDE | LED, 2,705@, 3500K | 120V | 120 VA | SURFACE MOUNTED TRACK | SAME AS TL1-6, EXCEPT 2FT LENGTH, WITH 120W POWER LIMITING ADAPTER, AND QTY OF FIXTURES. |
| TL1-6 | JUNO HALO | TRAC-MASTER II, AVANT GARDE | LED, 2,705@, 3500K | 120V | 240 VA | SURFACE MOUNTED TRACK | 6FT WHITE SINGLE CIRCUIT TRACK WITH 240W POWER LIMITING ADAPTER, POWER FEED, COUPLERS AND QTY OF 40W CONIX II LED DIMMABLE NARROW FLOOD WHITE FIXTURES AS SHOWN. |
| TL1-8 | JUNO HALO | TRAC-MASTER II, AVANT GARDE | LED, 2,705@, 3500K | 120V | 480 VA | SURFACE MOUNTED TRACK | SAME AS TL1-6, EXCEPT 8FT LENGTH, WITH 480W POWER LIMITING ADAPTER, AND QTY OF FIXTURES. |
| TL1-12 | JUNO HALO | TRAC-MASTER II, AVANT GARDE | LED, 2,705@, 3500K | 120V | 480 VA | SURFACE MOUNTED TRACK | SAME AS TL1-6, EXCEPT 12FT LENGTH, WITH 480W POWER LIMITING ADAPTER, AND QTY OF FIXTURES. |
| TL2-8 | HATCO | | | 120V | 1000 VA | SURFACE MOUNTED TRACK | FURNISHED BY FOOD SERVICE CONTRACTOR. |
| TL2-10 | HATCO | | | 120V | 200 VA | SURFACE MOUNTED TRACK | FURNISHED BY FOOD SERVICE CONTRACTOR. |
| TL2-12 | HATCO | | | 120V | 150 VA | SURFACE MOUNTED TRACK | FURNISHED BY FOOD SERVICE CONTRACTOR. |
| TL3-4 | JUNO HALO | TRAC 12 | LED, 900lm, 3500K | 120V | 150 VA | SURFACE MOUNTED TRACK | 4FT WHITE LOW-VOLTAGE TRACK WITH 150VA REMOTE MOUNTED MAGNETIC TRANSFORMER, AND QTY OF 13W LED CYLINDRA DIMMABLE NARROW FLOOD WHITE FIXTURES AS SHOWN. |
| TL3-12 | JUNO HALO | TRAC 12 | LED, 900lm, 3500K | 120V | 150 VA | SURFACE MOUNTED TRACK | SAME AS TL3-4, EXCEPT 12FT TRACK LENGTH AND FIXTURE QTY. |
| WF1 | LITHONIA METALUX H.E. WILLIAMS | WC | (2)-F17T8, 4100K | UNV | 30 VA | WALL MOUNTED LINEAR | 2FT WALL MOUNT LINEAR FIXTURE WITH WHITE ACRYLIC LENS, STEEL HOUSING, BAKED WHITE ENAMEL FINISH. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST. |
| WF2 | LITHONIA METALUX H.E. WILLIAMS | WC | (1)-T32T8/ES (25W), 4100K | UNV | 24 VA | WALL MOUNTED LINEAR | SAME AS WF1, EXCEPT LAMP AND LENGTH. |
| WF3 | LITHONIA METALUX H.E. WILLIAMS | WT8 | (2)-F32T8/ES (25W), 4100K | UNV | 45 VA | WALL MOUNTED LINEAR | 4FT SURFACE WALL MOUNTED LINEAR FIXTURE WITH FACETED DIFFUSED LENS, STEEL HOUSING, BAKED WHITE ENAMEL FINISH. PROVIDE ADVANCE OPTANIUM PROGRAM RAPID START BALLAST WITH .88 BALLAST FACTOR. |
| WL1 | LITHONIA METALUX | ZL1N | LED, 3177lm, 4000K | UNV | 32 VA | WALL MOUNTED | COMPACT, LOW PROFILE COLD ROLLED STEEL HOUSING LINEAR STRIP WITH POWDER COATED PAINTED FINISH. |
| WL3 | CREE | WS4-59L-40K | LED, 5,900lm, 4100K | UNV | 63 VA | VAPOR TIGHT WALL MOUNT | 4FT VAPOR TIGHT, WET LOCATION LISTED, IP65 RATED. FIRBERGLASS BODY WITH VANDAL PROOF SCREWS (NO CLIPS) UV STABALIZED IMPACT-RESISTANT DIFFUSED ACRYLIC LENS. |
| X1 | LITHONIA DUAL LITE SURE-LITES | LE-S-W-1-R | LED | UNV | 5 VA | CEILING OR WALL MOUNTED | UNIVERSAL MOUNT EXIT SIGN, AC ONLY POWER. DIE CAST ALUMINUM CONSTRUCTION. DOUBLE FACE, RED LETTERS, ALL WHITE FINISH. |
| X1B | LITHONIA DUAL LITE SURE-LITES | LE-S-B-1-R | LED | UNV | 5 VA | CEILING OR WALL MOUNTED | SAME AS X1, EXCEPT COLOR BLACK |
| X2 | LITHONIA DUAL LITE SURE-LITES | LE-S-W-2-R | LED | UNV | 5 VA | CEILING OR WALL MOUNTED | SAME AS X1, EXCEPT DOUBLE SIDED. |
| X4 | EVENLITE | RZR-AC-R-1-W W-W-RS | LED | UNV | 5 VA | WALL MOUNTED | EXIT SIGN, A

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RAA
NO. RELAYS: 8
LOCATION: AA106E ELEC
VOLTAGE: 277V
CONTROL CKT: LAA-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HAA1-2 | EXTERIOR-N PARKING LOT CKT | 3 | |
| 2 | 2 | HAA1-4 | EXTERIOR-AREA AA BUILDING LIGHTS | 3 | |
| 3 | 3 | HAA1-6 | AA103, AA104 INSTITUTE | 2 | LV3 |
| 4 | 4 | HAA1-6 | AA103, AA104 INSTITUTE | 2 | LV3 |
| 5 | 5 | HAA1-8 | AA100, AA110V, AA101C, AA100V CORRIDOR | 2 | LV1 |
| 6 | 6 | HAA1-10 | SPARE | | |
| 7 | 7 | HAA1-12 | SPARE | | |
| 8 | 8 | HAA1-14 | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RD
NO. RELAYS: 24
LOCATION: D128E ELEC
VOLTAGE: 277V AND 120V
CONTROL CKT: LD1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HD1-2 | EXTERIOR-NW PKG LOT UPPER CKT | 3 | |
| 2 | 2 | HD1-4 | EXTERIOR-AREA D BUILDING LIGHTS | 3 | |
| 3 | 3 | HD1-6 | LIGHTING-AREA D LVL 1CORRIDOR | 1,2 | LV1 |
| 4 | 4 | HD1-8 | LIGHTING-AREA D C237ST STAIR | 1,2,4,5 | 15lc, LV1 |
| 5 | 5 | HD1-10 | LIGHTING-AREA D LVL 2 CORRIDOR | 1,2 | LV1 |
| 6 | 6 | HD1-12 | SPARE | | |
| 7 | 7 | HD1-14 | SPARE | | |
| 8 | 8 | HD1-16 | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RJ
NO. RELAYS: 24
LOCATION: J109E ELEC
VOLTAGE: 277V AND 120V
CONTROL CKT: LJ1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HJ1-2 | EXTERIOR-E DRIVE | 3 | |
| 2 | 2 | HJ1-2 | EXTERIOR-FLAG POLE LIGHTS | 3,4 | |
| 3 | 3 | HJ1-4 | EXTERIOR-J127V ENTRANCE DOWNLIGHTS | 3,4 | |
| 4 | 4 | HJ1-6 | EXTERIOR-"K" WINDOW GRAZING | 3,4 | |
| 5 | 5 | HJ1-8 | LIGHTING-AREA J LVL 2 EAST | 1,2,3,4,5 | 30lc:LV26 |
| 6 | 6 | HJ1-10 | LIGHTING-AREA J LVL 2 WEST | 1,2,3,4,5 | 30lc:LV26 |
| 7 | 7 | HJ1-10 | LIGHTING-AREA J UNDER BALCONY | 1,2,4 | LV26 |
| 8 | 8 | HJ1-12 | LIGHTING-AREA J EGRESS/EMG | 1,2,4 | LV26 |
| 9 | 9 | HJ1-14 | LIGHTING-AREA J WALLWASHERS | 1,2,4 | LV26 |
| 10 | 10 | HJ1-16 | LIGHTING-J130V VESTIBULE | 3,4 | |
| 11 | 11 | HJ1-18 | LIGHTING-AREA J PAC WALKWAY-WALLWASHERS | 4 | LV27 |
| 12 | 12 | HJ1-20 | LIGHTING-AREA J PAC WALKWAY-DOWNLIGHTS | 4 | LV27 |
| 13 | 13 | HJ1-22 | LIGHTING AREA J VESTIBULE J127V | 3,4 | |
| 14 | 14 | HJ1-24 | LIGHTING AREA J VESTIBULE J100V | 3,4 | |
| 15 | 15 | HJ1-26 | SPARE | | |
| 16 | 16 | HJ1-28 | SPARE | | |
| 17 | 17 | HJ1-30 | SPARE | | |
| 18 | 18 | | SPACE | | |
| 19 | 19 | | SPACE | | |
| 20 | 20 | | SPACE | | |
| ----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V | | | | | |
| 21 | 21 | LJ1-36 | LIGHTING-AREA J BALCONY DISPLAY CASE | 2,4 | LV13 |
| 22 | 22 | LJ1-36 | LIGHTING-AREA J TROPHY CASE | 2,4 | LV13 |
| 23 | 23 | LJ1-38 | SPARE | | |
| 24 | 24 | LJ1-38 | SPARE | | |

ADD #3

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RA2
NO. RELAYS: 16
LOCATION: A204E ELEC
VOLTAGE: 277V
CONTROL CKT: LA2-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HA2-2 | EXTERIOR-EAST PARKING LOT CKT | 3 | |
| 2 | 2 | HA2-2 | EXTERIOR-EAST PARKING LOT CKT | 3 | |
| 3 | 3 | HA2-4 | EXTERIOR-AREA A BUILDING LIGHTS | 3 | |
| 4 | 4 | HA2-6 | LIGHTING-AREA A AUTO SHOP | 2 | LV2 |
| 5 | 5 | HA2-6 | LIGHTING-AREA A AUTO SHOP | 2 | LV2 |
| 6 | 6 | HA2-8 | LIGHTING-AREA A METALS SHOP | 2 | LV2 |
| 7 | 7 | HA2-8 | LIGHTING-AREA A METALS SHOP | 2 | LV2 |
| 8 | 8 | HA2-10 | LIGHTING-AREA A WOODS SHOP | 2 | LV2 |
| 9 | 9 | HA2-10 | LIGHTING-AREA A WOODS SHOP | 2 | LV2 |
| 10 | 10 | HA2-12 | LIGHTING-AREA A LVL 1 CORRIDOR A109C | 1,2 | LV1 |
| 11 | 11 | HA2-14 | LIGHTING-AREA A A104 | 2 | LV20,LV21 |
| 12 | 12 | HA2-14 | LIGHTING-AREA A A104 | 2 | LV20,LV21 |
| 13 | 13 | HA2-14 | LIGHTING-AREA A A104 | 2 | LV20,LV21 |
| 14 | 14 | HA2-16 | LIGHTING-AREA A WELDING HOODS | 2 | |
| 15 | 15 | HA2-20 | SPARE | | |
| 16 | 16 | HA2-22 | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RE
NO. RELAYS: 24
LOCATION: E107
VOLTAGE: 277V AND 120V
CONTROL CKT: LE1A-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HE1-2 | LIGHTING-AREA E LVL 1 CORRIDOR | 1,2 | LV2 |
| 2 | 2 | HE1-4 | LIGHTING-AREA E LVL 1 E103C | 1,2,4 | LV2 |
| 3 | 3 | HE1-6 | LIGHTING-AREA E LVL 2 CORRIDOR | 1,2 | LV2 |
| 4 | 4 | HE1-8 | LIGHTING-AREA E LVL 2 E201C | 1,2,4 | LV2 |
| 5 | 5 | HE1-10 | LIGHTING-SCHOOL STORE | 1,2,4 | PLAN NOTE |
| 6 | 6 | HE1-12 | LIGHTING-MEDIA CENTER COMMONS-GENERAL BALLAST 1 | 1 | LV4,LV5 |
| 7 | 7 | HE1-12 | LIGHTING-MEDIA CENTER COMMONS-GENERAL BALLAST 2 | 1 | LV4,LV5 |
| 8 | 8 | HE1-12 | LIGHTING-MEDIA CENTER BOOKSHEVLES | 1 | LV4 |
| 9 | 9 | HE1-12 | LIGHTING-MEDIA CENTER-DAYLIGHT-GENERAL BALLAST 1 | 3,6 | LV4 |
| 10 | 10 | HE1-12 | LIGHTING-MEDIA CENTER-DAYLIGHT-GENERAL BALLAST 2 | 3,6 | LV4 |
| 11 | 11 | HE1-12 | LIGHTING-MEDIA CENTER-DAYLIGHT-DOWNLIGHTING | 3,4,5 | 40lc:LV4 |
| 12 | 12 | HE1-14 | LIGHTING-MEDIA CENTER CIRC DESK GENERAL | 1 | LV4 |
| 13 | 13 | HE1-14 | LIGHTING-MEDIA CENTER CIRC DESK DOWNLIGHTING | 1,4 | LV4 |
| 14 | 14 | HE1-16 | LIGHTING-AREA F LVL 1 CORRIDOR | 1,2 | LV1 |
| 15 | 15 | HE1-18 | LIGHTING-AREA F LVL 1 CORRIDOR | 1,2,4 | LV19 |
| 16 | 16 | HE1-18 | LIGHTING-AREA F LVL 1 CORRIDOR DIAGONAL | 1,2,4 | LV19 |
| 17 | 17 | HE1-20 | LIGHTING-AREA F LVL 2 CORRIDOR | 1,2 | LV1 |
| 18 | 18 | HE1-22 | LIGHTING-AREA E E 203ST STAIR | 1,2,4,5 | 15lc, LV1 |
| 19 | 19 | HE1-24 | SPARE | | |
| 20 | 20 | HE1-26 | SPARE | | |
| ----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V | | | | | |
| 21 | 21 | LE1A-4 | LIGHTING-E101 TRACK FIXTURES | 2,4 | PLAN NOTE |
| 22 | 22 | LE1A-6 | LIGHTING-E113 TRACK FIXTURES | 2,4 | LV13 |
| 23 | 23 | LE1A-8 | SPARE | | |
| 24 | 24 | LE1A-8 | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RK
NO. RELAYS: 16
LOCATION: K127E ELEC
VOLTAGE: 277V AND 120V
CONTROL CKT: LK1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HK1-2 | EXTERIOR-WEST PARKING CKT | 3 | |
| 2 | 2 | HK1-4 | LIGHTING-AREA K SERVERY | 1,2 | LV8 |
| 3 | 3 | HK1-6 | LIGHTING-AREA K BEHIND COUNTER | 2 | LV9 |
| 4 | 4 | HK1-6 | LIGHTING-PIT STOP | 2 | LV10 |
| 5 | 5 | HK1-8 | LIGHTING-AREA K WAREWASHING CORRIDOR | 2 | LV11 |
| 6 | 6 | HK1-10 | LIGHTING-AREA K PREP | 2 | LV12 |
| 7 | 7 | HK1-12 | EXTERIOR-AREA K,L BUILDING LIGHTS | 3 | |
| 8 | 8 | HK1-14 | SPARE | | |
| 9 | 9 | HK1-18 | SPARE | | |
| 10 | 10 | HK1-20 | SPARE | | |
| 11 | 11 | HK1-22 | SPARE | | |
| 12 | 12 | HK1-24 | SPARE | | |
| ----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V | | | | | |
| 13 | 13 | LK1-4 | LIGHTING-AREA K HEAT LAMPS OVER DELI COUNTER | 2,4 | LV13 |
| 14 | 14 | LK1-4 | LIGHTING-AREA K HEAT LAMPS OVER DELI COUNTER | 2,4 | LV13 |
| 15 | 15 | LK1-6 | LIGHTING-AREA K BEHIND COUNTER TRACK | 2,4 | LV13 |
| 16 | 16 | LK1-8 | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RB
NO. RELAYS: 16
LOCATION: B120E ELEC
VOLTAGE: 277V
CONTROL CKT: LB1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HB1-2 | EXTERIOR-AREA B | 3 | |
| 2 | 2 | HB1-4 | CORR B109C,B125C,B116C,B101C,B106C | 1,2 | LV2 |
| 3 | 3 | HB1-6 | CORR B111 | 1,2 | LV1 |
| 4 | 4 | HB1-8 | CORR B106C | 1,2,4 | LV2 |
| 5 | 5 | HB1-10 | CORR B200, B218C, B225C, B211, B209C | 1,2 | LV2 |
| 6 | 6 | HB1-12 | B202C | 1,2,4 | LV2 |
| 7 | 7 | HB1-14 | CORR B209C | 1,2 | LV1 |
| 8 | 8 | HB1-16 | B108ST STAIR | 1,2,4,5 | 15lc, LV1 |
| 9 | 9 | HB1-18 | SPARE | | |
| 10 | 10 | HB1-20 | SPARE | | |
| 11 | 11 | HB1-22 | SPARE | | |
| 12 | 12 | HB1-24 | SPARE | | |
| 13 | 13 | | SPACE | | |
| 14 | 14 | | SPACE | | |
| 15 | 15 | | SPACE | | |
| 16 | 16 | | SPACE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RG
NO. RELAYS: 12
LOCATION: G103E ELEC
VOLTAGE: 277V AND 120V
CONTROL CKT: LG1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HG1-2 | LIGHTING-AREA G LVL 1 CORRIDOR | 1,2 | LV1 |
| 2 | 2 | HG1-2 | LIGHTING-AREA G LVL 1 G106C CORR | 1,2 | LV1 |
| 3 | 3 | HG1-4 | SPARE | | |
| 4 | 4 | HG1-6 | SPARE | | |
| 5 | 5 | HG1-8 | SPARE | | |
| 6 | 6 | HG1-10 | SPARE | | |
| 7 | 7 | | SPACE | | |
| 8 | 8 | | SPACE | | |
| ----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V | | | | | |
| 9 | 9 | LG1-4 | LIGHTING-AREA G LVL 1 DISPLAY CASE TRACK | 2,4 | LV13 |
| 10 | 10 | LG1-6 | LIGHTING AREA G LVL 1 DISPLAY CASE TRACK | 2,4 | LV13 |
| 11 | 11 | LG1-8 | SPARE | | |
| 12 | 12 | LG1-8 | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RKB
NO. RELAYS: 8
LOCATION: K103E ELEC
VOLTAGE: 277V
CONTROL CKT: LK1B-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HK1B-2 | EXTERIOR-WEST SITE WALKWAY | 3 | |
| 2 | 2 | HK1B-4 | SPARE | 3 | |
| 3 | 3 | HK1B-6 | SPARE | | |
| 4 | 4 | HK1B-8 | SPARE | | |
| 5 | 5 | HK1B-10 | SPARE | | |
| 6 | 6 | | SPACE | | |
| 7 | 7 | | SPACE | | |
| 8 | 8 | | SPACE | | |

ADD #3

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RH
NO. RELAYS: 24
LOCATION: H200E ELEC
VOLTAGE: 277V AND 120V
CONTROL CKT: LH1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HH1-2 | EXTERIOR-NW PARKING CKT | 3 | |
| 2 | 2 | HH1-4 | EXTERIOR - AREA H, G BUILDING LIGHTS | 3 | |
| 3 | 3 | HH1-6 | LIGHTING-AREA H LVL 1 CORRIDOR | 1,2 | LV1 |
| 4 | 4 | HH1-6 | LIGHTING-AREA H LVL 1 H114C CORRIDOR | 1,2,7 | LV1 |
| 5 | 5 | HH1-6 | LIGHTING-AREA H LVL 1 H121V VESTIBULE | 1,2 | LV1 |
| 6 | 6 | HH1-8 | LIGHTING-AREA H SCENESHOP-GENERAL LIGHTING | | |
| 7 | 7 | HH1-8 | LIGHTING-AREA H SCENSHOP-GENERAL LIGHTING | | |
| 8 | 8 | HH1-8 | LIGHTING-MEZZANINE | | |
| 9 | 9 | HH1-8 | SPARE | | |
| 10 | 10 | HH1-10 | LIGHTING-AREA H H119ST STAIR | 1,2,4,5 | 15lc, LV1 |
| 11 | 11 | HH1-12 | EXTERIOR-SIGN LIGHTING WEST ENTRANCE | 3 | |
| 12 | 12 | HH1-14 | LIGHTING-AREA H H203ST STAIR | 1,2,4,5 | LV1 |
| 13 | 13 | HH1-16 | SPARE | | |
| 14 | 14 | HH1-18 | SPARE | | |
| 15 | 15 | HH1-20 | SPARE | | |
| 16 | 16 | HH1-22 | SPARE | | |
| ----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V | | | | | |
| 17 | 17 | LH1-2 | LIGHTING-AREA H SCENESHOP SCOOP 1 | | LV7 |
| 18 | 18 | LH1-4 | LIGHTING-AREA H SCENESHOP SCOOP 2 | | LV7 |
| 19 | 19 | LH1-6 | LIGHTING-AREA H SCENESHOP SCOOP 3 | | LV7 |
| 20 | 20 | LH1-8 | LIGHTING-AREA H SCENESHOP SCOOP 4 | | LV7 |
| 21 | 21 | LH1-10 | LIGHTING-AREA H SCENESHOP SINK | | LV6, LV7 |
| 22 | 22 | | SPARE | | |
| 23 | 23 | | SPARE | | |
| 24 | 24 | | SPARE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RC
NO. RELAYS: 16
LOCATION: C129E
VOLTAGE: 277V
CONTROL CKT: LC1-42

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HC1-2 | EXTERIOR-E DRIVE | 3 | |
| 2 | 2 | HC1-2 | EXTERIOR-BUILDING LIGHTS | 3 | |
| 3 | 3 | HC1-4 | LIGHTING-AREA C LVL1 C107C | 1,2,4 | LV2 |
| 4 | 4 | HC1-6 | LIGHTING-AREA C LVL 1 CORRIDOR | 1,2 | LV2 |
| 5 | 5 | HC1-8 | LIGHTING-AREA C C114ST STAIR | 1,2,4,5 | 15lc, LV1 |
| 6 | 6 | HC1-10 | LIGHTING-AREA C LVL2 CORRIDOR | 1,2 | LV2 |
| 7 | 7 | HC1-12 | LIGHTING-AREA C LVL2 C206C | 1,2,4 | LV2 |
| 8 | 8 | HC1-14 | LIGHTING-AREA C FORUM-UPPER FLOOR | 1,2,3,4,5 | 15lc, LV24 |
| 9 | 9 | HC1-14 | LIGHTING-AREA C FORUM STEPS AND BOTTOM FLOOR | 1,2,3,4,5 | 40lc, LV24 |
| 10 | 10 | HC1-16 | SPARE | | |
| 11 | 11 | HC1-18 | SPARE | | |
| 12 | 12 | HC1-20 | SPARE | | |
| 13 | 13 | HC1-22 | SPARE | | |
| 14 | 14 | | SPACE | | |
| 15 | 15 | | SPACE | | |
| 16 | 16 | | SPACE | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

PANEL: RL
NO. RELAYS: 16
LOCATION: L100E
VOLTAGE: 277V
CONTROL CKT: LL1-2

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HL1-2 | LIGHTING-AREA L LVL 1 CORRIDOR | 1,2 | LV1 |
| 2 | 2 | HL1-4 | LIGHTING-AREA L LVL 1 STAIR | 1,2,4,5 | 15lc, LV1 |
| 3 | 3 | HL1-6 | LIGHTING-AREA L LVL 2 WALKING TRACK | 4 | LV15,LV16 |
| 4 | 4 | HL1-6 | LIGHTING-AREA L LVL 2 CORRIDOR | 1,2 | LV15,LV16 |
| 5 | 5 | HL1-8 | LIGHTING-AREA L LVL 2 GYM SUPPLEMENTARY | 4 | LV15,LV16 |
| 6 | 6 | HL1-8 | LIGHTING-AREA L LVL 2 GYM EGRESS | 1,2,4 | LV15,LV16 |
| 7 | 7 | HL1-10 | LIGHTING- AREA L LVL 2 MAIN GYM E | 4 | LV15,LV16 |
| 8 | 8 | HL1-12 | LIGHTING-AREA L LVL 2 MAIN GYM W | 4 | LV15,LV16 |
| 9 | 9 | HL1-14 | LIGHTING-AREA L LVL 2 MAIN GYM CENTER | 4 | LV15,LV16 |
| 10 | 10 | HL1-16 | LIGHTING-AREA L L112V AND L110V VESTIBULE | 1,3 | |
| 11 | 11 | HL1-18 | SPARE | | |
| 12 | 12 | HL1-20 | SPARE | | |
| 13 | 13 | HL1-22 | SPARE | | |
| 14 | 14 | HL1-24 | SPARE | | |
| 15 | 15 | | SPACE | | |
| 16 | 16 | | SPACE | | |

GENERA NOTES

A. SEE SECTION 260943.23 FOR ADDITIONAL INFORMATION.

RELAY PANEL KEYED NOTES

1. CONTROLLED BY ON/OFF SCHEDULE
2. SCHEDULED SWEEP OFF
3. CONTROLLED BY PHOTOSENSOR CONNECTED TO BAS SYSTEM.
4. PROVIDE 0-10V DIMMING CONTROL.
5. ZONE CONTROLLED BY PHOTOSENSOR. SEE PLAN SHEETS FOR LOCATION. DIM ZONE TO MAINTAIN TARGET LEVEL AS INDICATED ON SCHEDULE.
6. ZONE CONTROLLED BY PHOTOSENSOR. SEE PLAN SHEETS FOR LOCATION. PRGRAM RELAYS AS SHOWN BELOW:

   PHOTOSENSOR PROGRAMMING
   SENSOR READING — PROGRAM
   <20fc — RELAY ZONE 1 AND 2 ON
   <20fc — RELAY ZONE 1 AND 2 ON
   <26fc — RELAY ZONE 1 ON, 2 OFF
   <32fc — RELAY ZONE 1 OFF, 2 ON
   <40fc — RELAY ZONE 1 OFF, 2 OFF

7. PROVIDE INPUT CONTACT CONNECTED TO DIMMER SYSTEM IN H202E. UPON ACTIVATION THIS ZONE TURNED OFF.


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

LIGHTING SCHEDULES

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E7.2

## LIGHTING CONTROL RELAY PANEL SCHEDULE

| | |
|---|---|
| PANEL: | RM |
| NO. RELAYS: | 32 |
| LOCATION: | M202E |
| VOLTAGE: | 277V AND 120V |
| CONTROL CKT: | LD1-2 |

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HM2-2 | EXTERIOR-PRESSBOX BUILDING | 3 | |
| 2 | 2 | HM2-4 | LIGHTING-AREA M LVL 1 CORRIDOR | 1,2 | LV1 |
| 3 | 3 | HM2-6 | LIGHTING-AREA M LVL 2 CORRIDOR | 1,2 | LV1 |
| 4 | 4 | HM2-8 | LIGHTING-AREA M GYM E | 2,4 | LV17 |
| 5 | 5 | HM2-10 | LIGHTING-AREA M GYM CENTER | 2,4 | LV17 |
| 6 | 6 | HM2-12 | LIGHTING-AREA M GYM W | 2,4 | LV17 |
| 7 | 7 | HM2-14 | LIGHTING-NATATORIUM SEATING | 2 | LV18 |
| 8 | 8 | HM2-14 | LIGHTING-NATATORIUM EGRESS | 2 | LV18,LV28 |
| 9 | 9 | HM2-14 | LIGHTING-NATATORIUM DECK | 2 | LV18 |
| 10 | 10 | HM2-16 | LIGHTING-NATATORIUM UPLIGHT 1 | | LV18 |
| 11 | 11 | HM2-18 | LIGHTING-NATATORIUM UPLIGHT 2 | | LV18 |
| 12 | 12 | HM2-20 | LIGHTING-NATATORIUM UPLIGHT 3 | | LV18 |
| 13 | 13 | HM2-22 | LIGHTING-NATATORIUM UPLIGHT 4 | | LV18 |
| 14 | 14 | HM2-24 | LIGHTING-NATATORIUM UPLIGHT 5 | | LV18 |
| 15 | 15 | HM2-26 | LIGHTING-NATATORIUM UPLIGHT 6 | | LV18 |
| 16 | 16 | HM2-28 | LIGHTING-AREA N N112S STAIR | 1,2 | LV1 |
| 17 | 17 | HM2-30 | LIGHTING-AREA N N110 LOBBY | 1,2 | LV1 |
| 18 | 18 | HM2-30 | LIGHTING-AREA N N113V VESTIBULE | 1,2 | |
| 19 | 19 | HM2-30 | LIGHTING-AREA N LVL 1 N112C CORRIDOR | 1,2 | LV1 |
| 20 | 20 | HM2-30 | LIGHTING-AREA N LVL 2 N202C CORRIDOR | 1,2 | LV1 |
| 21 | 21 | HM2-32 | LIGHTING-AREA M CONCESSIONS | 2 | LV30 |
| 22 | 22 | HM2-34 | SPARE | | |
| 23 | 23 | HM2-36 | SPARE | | |
| 24 | 24 | HM2-38 | SPARE | | |
| 25 | 25 | HM2-40 | SPARE | | |
| 26 | 26 | | SPACE | | |
| 27 | 27 | | SPACE | | |
| 28 | 28 | | | | |
| ----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V----120V | | | | | |
| 29 | 29 | LM2-4 | LIGHTING-POOL UNDERWATER | 2 | LV18 |
| 30 | 30 | LM2-6 | SPARE | | |
| 31 | 31 | LM2-8 | SPARE | | |
| 32 | 32 | LM2-8 | SPARE | | |
| | | | | | |

## LIGHTING CONTROL RELAY PANEL SCHEDULE

| | |
|---|---|
| PANEL: | RN |
| NO. RELAYS: | 8 |
| LOCATION: | N104E |
| VOLTAGE: | 277V |
| CONTROL CKT: | LN1-2 |

| RELAY CKT | ZONE | PANEL | LOAD DESCRIPTION | NOTES | SWITCH TYPE |
|---|---|---|---|---|---|
| 1 | 1 | HN1-2 | EXTERIOR-S OF CHAMP PLAZA CKT | 3 | |
| 2 | 2 | HN1-2 | EXTERIOR-CHAMP PLAZA | 1 | |
| 3 | 3 | HN1-4 | EXTERIOR-BUILDING AREA N | 3 | |
| 4 | 4 | HN1-6 | LIGHTING-AREA N N104C CORR | 1,2 | LV1 |
| 5 | 5 | HN1-8 | SPARE | | |
| 6 | 6 | HN1-8 | SPARE | | |
| 7 | 7 | HN1-10 | SPARE | | |
| 8 | 8 | HN1-12 | SPARE | | |
| | | | | | |

GENERA NOTES

A. SEE SECTION 260943.23 FOR ADDITIONAL INFORMATION.

RELAY PANEL KEYED NOTES

1. CONTROLLED BY ON/OFF SCHEDULE
2. SCHEDULED SWEEP OFF
3. CONTROLLED BY PHOTOSENSOR CONNECTED TO BAS SYSTEM.
4. PROVIDE 0-10V DIMMING CONTROL.
5. ZONE CONTROLLED BY PHOTOSENSOR. SEE PLAN SHEETS FOR LOCATION. DIM ZONE TO MAINTAIN TARGET LEVEL AS INDICATED ON SCHEDULE.
6. ZONE CONTROLLED BY PHOTOSENSOR. SEE PLAN SHEETS FOR LOCATION. PRGRAM RELAYS AS SHOWN BELOW:

   PHOTOSENSOR PROGRAMMING

   | SENSOR READING | PROGRAM |
   |---|---|
   | <20fc | RELAY ZONE 1 AND 2 ON |
   | <20fc | RELAY ZONE 1 AND 2 ON |
   | <26fc | RELAY ZONE 1 ON, 2 OFF |
   | <32fc | RELAY ZONE 1 OFF, 2 ON |
   | <40fc | RELAY ZONE 1 OFF, 2 OFF |

7. PROVIDE INPUT CONTACT CONNECTED TO DIMMER SYSTEM IN H202E. UPON ACTIVATION THIS ZONE TURNED OFF.

ADD #3

## LIGHTING CONTROL SWITCH SCHEDULE

| SWITCH TYPE | BUTTON | ROOM | FUNCTION TY | CONTROL ZONES | ENGRAVING | NOTES |
|---|---|---|---|---|---|---|
| LV1 | 1 | VARIOUS | TOGGLE | VARIOUS | CORRIDOR | SEE PLANS FOR CORRIDOR CIRCUIT AND SWITCH COMBINATIONS. SWITCHES ARE LOCKED OUT DURING OCCUPIED SCHEDULE OF BUILDING AUTOMATION SYSTEM. |
| LV2 | 1 | VARIOUS | TOGGLE | VARIOUS | CORRIDOR | LOCKOUT DURING SCHOOL HOURS |
| LV2 | 2 | VARIOUS | TOGGLE | VARIOUS | ACCENT LIGHTS | LOCKOUT DURING SCHOOL HOURS |
| LV3 | 1 | VARIOUS | TOGGLE | VARIOUS | LAB 1 | LOCKOUT DURING SCHOOL HOURS |
| LV3 | 2 | VARIOUS | TOGGLE | VARIOUS | LAB 2 | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 1 | MEDIA CENTER | TOGGLE | RE-6 | MAIN AREA 1 | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 2 | MEDIA CENTER | TOGGLE | RE-7 | MAIN AREA 2 | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 3 | MEDIA CENTER | TOGGLE | RE-9 | WINDOW GENERAL 1 | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 4 | MEDIA CENTER | TOGGLE | RE-10 | WINDOW GENERAL 2 | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 5 | MEDIA CENTER | TOGGLE | RE-11 | WINDOW DOWNLIGHTS | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 6 | MEDIA CENTER | TOGGLE | RE-12 | CIRC DESK GENERAL | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 7 | MEDIA CENTER | TOGGLE | RE-13 | CIRC DESK DOWNLIGHT | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 8 | MEDIA CENTER | TOGGLE | RE-8 | STACKS | LOCKOUT DURING SCHOOL HOURS |
| LV4 | 9 | MEDIA CENTER | OFF | RE-6,13 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV5 | 1 | MEDIA CENTER | TOGGLE | RE-6 | MAIN AREA 1 | LOCKOUT DURING SCHOOL HOURS |
| LV5 | 2 | MEDIA CENTER | TOGGLE | RE-7 | MAIN AREA 2 | LOCKOUT DURING SCHOOL HOURS |
| LV5 | 3 | MEDIA CENTER | OFF | RE-6-13 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV6 | 1 | SCENESHOP | TOGGLE | RH-9 | SINK | |
| LV7 | 1 | SCENESHOP | TOGGLE | RH-6 | GENERAL LIGHTING 1 | |
| LV7 | 2 | SCENESHOP | TOGGLE | RH-7 | GENERAL LIGHTING 2 | |
| LV7 | 3 | SCENESHOP | TOGGLE | RH-17 | SCOOP 1 | |
| LV7 | 4 | SCENESHOP | TOGGLE | RH-18 | SCOOP 2 | |
| LV7 | 5 | SCENESHOP | TOGGLE | RH-19 | SCOOP 3 | |
| LV7 | 6 | SCENESHOP | TOGGLE | RH-20 | SCOOP 4 | |
| LV7 | 7 | SCENESHOP | OFF | RH-6,7,9,17,18,19,20 | OFF | |
| LV8 | 1 | SERVERY | TOGGLE | RK-2 | SERVERY | LOCKOUT DURING SCHOOL HOURS |
| LV9 | 1 | STAGING | TOGGLE | RK-3 | STAGING | LOCKOUT DURING SCHOOL HOURS |
| LV10 | 1 | PIT STOP | TOGGLE | RK-4 | PIT STOP | LOCKOUT DURING SCHOOL HOURS |
| LV11 | 1 | WAREWASHING | TOGGLE | RK-5 | WASH | LOCKOUT DURING SCHOOL HOURS |
| LV12 | 1 | PREP | TOGGLE | RK-6 | PREP 1 | LOCKOUT DURING SCHOOL HOURS, CONTROLS 1 BALLAST |
| LV12 | 1 | PREP | TOGGLE | RK-6 | PREP 2 | LOCKOUT DURING SCHOOL HOURS, CONTROLS 1 BALLAST |
| LV13 | 1 | VARIOUS | DIM | VARIOUS | TRACK DOWN | |
| LV13 | 1 | VARIOUS | DIM | VARIOUS | TRACK UP | |
| LV14 | NOT USED | NOT USED | NOT USED | NOT USED | NOT USED | |
| LV15 | 1 | MAIN GYM | TOGGLE | RL-3,6 | WALKING TRACK | |
| LV15 | 2 | MAIN GYM | TOGGLE | RL-5,6,7,8,9 | CROSSCOURT | RELAY RL-7,8,9=80% OUTPUT, ALL OTHER RELAYS =100% OUTPUT |
| LV15 | 3 | MAIN GYM | TOGGLE | RL-5,6,7,8,9 | COMPETITION | |
| LV15 | 4 | MAIN GYM | TOGGLE | RL-4,6 | CORRIDOR | |
| LV15 | 5 | MAIN GYM | OFF | RL-3-9 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV16 | 1 | MAIN GYM | TOGGLE | RL-3,4,6 | WALKING TRACK | LOCKOUT DURING SCHOOL HOURS |
| LV16 | 2 | MAIN GYM | TOGGLE | RL-4,6 | CORRIDOR | LOCKOUT DURING SCHOOL HOURS |
| LV 16 | 3 | MAIN GYM | TOGGLE | RL-3-9 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV17 | 1 | AUX GYM | TOGGLE | RM-4,5,6 | AUXGYM | |
| LV18 | 1 | NATATORIUM | TOGGLE | RM-8,10-15 | UPLIGHT | |
| LV18 | 2 | NATATORIUM | TOGGLE | RM-8,9 | DECK | |
| LV18 | 3 | NATATORIUM | TOGGLE | RM-7 | SEATING | |
| LV18 | 4 | NATATORIUM | TOGGLE | RM-29 | UNDERWATER LIGHTS | |
| LV18 | 5 | NATATORIUM | OFF | RM-7,8,9,10-15,29 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV19 | 1 | F106C | TOGGLE | RE-15 | FULL | LOCKOUT DURING SCHOOL HOURS |
| LV19 | 2 | F106C | TOGGLE | RE-15 | HALF | LOCKOUT DURING SCHOOL HOURS |
| LV19 | 3 | F106C | TOGGLE | RE-16 | DIAGONAL | LOCKOUT DURING SCHOOL HOURS |
| LV20 | 1 | A104 | TOGGLE | RA2-11 | MAIN | |
| LV20 | 2 | A104 | TOGGLE | RA2-11,12,13 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV21 | 1 | A104 | TOGGLE | RA2-11 | MAIN 1 | |
| LV21 | 2 | A104 | TOGGLE | RA2-12 | MAIN 2 | |
| LV21 | 3 | A104 | TOGGLE | RA2-13 | TEACHING WALL | |
| LV21 | 4 | A104 | TOGGLE | RA2-11,12,13 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV22 | 1 | ROOFTOP PLAZA | TOGGLE | | ROOFTOP PLAZA | MOMENTARY KEY SWITCH |
| LV23 | 1 | PRESSBOX | TOGGLE | | ROOFTOP PLAZA | |
| LV24 | 1 | AREA C FORUM | TOGGLE | RC-8 | UPPER FLOOR | LOCKOUT DURING SCHOOL HOURS |
| LV24 | 2 | AREA C FORUM | DIM | RC-8 | UP | LOCKOUT DURING SCHOOL HOURS, DIMS ZONE UP |
| LV24 | 3 | AREA C FORUM | DIM | RC-8 | DOWN | LOCKOUT DURING SCHOOL HOURS, DIMS ZONE DOWN |
| LV24 | 4 | AREA C FORUM | TOGGLE | RC-9 | LOWER FLOOR | LOCKOUT DURING SCHOOL HOURS |
| LV24 | 5 | AREA C FORUM | DIM | RC-9 | UP | LOCKOUT DURING SCHOOL HOURS, DIMS ZONE UP |
| LV24 | 6 | AREA C FORUM | DIM | RC-9 | DOWN | LOCKOUT DURING SCHOOL HOURS, DIMS ZONE DOWN |
| LV24 | 7 | AREA C FORUM | OFF | RC-8,9 | OFF | LOCKOUT DURING SCHOOL HOURS |
| LV25 | 1 | K103 | ON | NONE | CORR SWITCH ON | OVER-RIDES NORMAL SCHEDULE AND ALLOWS CORRIDOR SWITCHES TO FUNCTION WHEN PRESSED. |
| LV25 | 2 | K103 | OFF | NONE | CORR SWITCH OFF | RETURNS TO NORMAL SCHEDULE AND DISABLES CORRIDOR SWITCHES |
| LV26 | 1 | COMMONS | DIM | RJ-5,6,7,8,9 | GENERAL | LOCKOUT DURING SCHOOL HOURS |
| LV26 | 2 | COMMONS | DIM | RJ-9 | UNDER BALCONY | LOCKOUT DURING SCHOOL HOURS |
| LV27 | 1 | COMMONS | TOGGLE | RJ-11,13 | WALKWAY | LOCKOUT DURING SCHOOL HOURS |
| LV28 | 1 | NATATORIUM | TOGGLE | RM-8 | NATATORIUM | LOCKOUT DURING SCHOOL HOURS |
| LV29 | 1 | CONCESSIONS | TOGGLE | RM-21 | DOWNLIGHTS | |
| LV30 | 1 | A112 | TOGGLE | RA2-14 | WELDING BOOTHS | |


Wilkins Hinrichs Stober Architects L.L.C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

LIGHTING SCHEDULES

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

E7.3

## PANEL: OLC1

**LOCATION:** HEAD END COMM ROOM C110
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | UPS PANEL | 100 A | 3 | 12540... | 1000 VA | | | | | 1 | 20 A | SPARE | 2 |
| 3 | -- | -- | -- | | | 14000... | 1000 VA | | | 1 | 20 A | SPARE | 4 |
| 5 | -- | -- | -- | | | | | 14000... | 2764 VA | 2 | 30 A | SSCU-C101A, SSIU-C101A | 6 |
| 7 | DCP-C110 COMM | 20 A | 1 | 200 VA | 2764 VA | | | | | -- | -- | -- | 8 |
| 9 | RECEPT- BENCH C110 #3 | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | RECEPT-BENCH C110 #2 | 10 |
| 11 | RECEPT-BENCH C110 #1 | 20 A | 1 | | | | | 500 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 2764 VA | | | 2 | 30 A | SSCU-C101B, SSIU-C101B | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 2764 VA | -- | -- | -- | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 26504 VA | | 27764 VA | | 30028 VA | | | |
| | | | | TOTAL AMPS: | | 221 A | | 233 A | | 252 A | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 2040 VA | 100.00% | 2040 VA | | |
| Appliance | 24200 VA | 96.53% | 23360 VA | CONNECTED LOAD: | 84296 VA |
| Motor | 11056 VA | 100.00% | 11056 VA | ESTIMATED DEMAND: | 38806 VA |
| Spare | 47000 VA | 5.00% | 2350 VA | CONNECTED CURRENT: | 234 A |
| | | | | EMD CURRENT: | 108 A |

## PANEL: EHM

**LOCATION:** EMERGENCY ELEC K127D
**BUS RATING:** 400 A
**MAIN BREAKER:** 400A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EHH1 | 100 A | 3 | 5804 VA | 7333 VA | | | | | 3 | 100 A | EHM2 | 2 |
| 3 | -- | -- | -- | | | 4161 VA | 7749 VA | | | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | | | 4154 VA | 7952 VA | -- | -- | -- | 6 |
| 7 | EHN1 | 100 A | 3 | 4278 VA | 7567 VA | | | | | 3 | 100 A | EHA2 | 8 |
| 9 | -- | -- | -- | | | 3759 VA | 7512 VA | | | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | | | 5057 VA | 7028 VA | -- | -- | -- | 12 |
| 13 | EHC2 | 100 A | 3 | 6789 VA | 428 VA | | | | | 1 | 20 A | EXTERIOR-WEST WALKWAY EMG CKT | 14 |
| 15 | -- | -- | -- | | | 6642 VA | 1806 VA | | | 1 | 20 A | LIGHTING-AREA K KITCHEN (VIA RK-2,3,4,6) | 16 |
| 17 | -- | -- | -- | | | | | 4021 VA | 1495 VA | 1 | 20 A | LIGHTING-AREA K RR, BRK RM | 18 |
| 19 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 3036 VA | | | | | 3 | 50 A | TELH2 | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 3993 VA | | | -- | -- | -- | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 5798 VA | -- | -- | -- | 42 |
| | | | | TOTAL LOAD: | | 38735 VA | | 39122 VA | | 39006 VA | | | |
| | | | | TOTAL AMPS: | | 140 A | | 141 A | | 141 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 65517 VA | 125.00% | 81896 VA | | |
| Appliance | 720 VA | 100.00% | 720 VA | CONNECTED LOAD: | 164237 VA |
| Spare | 98000 VA | 5.00% | 4900 VA | ESTIMATED DEMAND: | 87516 VA |
| | | | | CONNECTED CURRENT: | 198 A |
| | | | | EMD CURRENT: | 105 A |

## PANEL: EHA2

**LOCATION:** ELEC A204E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-AREA A SHOPS (VIA... | 20 A | 1 | 1657 VA | 252 VA | | | | | 1 | 20 A | EXTERIOR-AREA AA LIGHTS (VIA RAA-2) | 2 |
| 3 | LIGHTING-AREA A (VIA RAA-9) | 20 A | 1 | | | 1757 VA | 534 VA | | | 1 | 20 A | EXTERIOR-AREA A (VIA RA2-2) | 4 |
| 5 | LIGHTING-AREA AA CORR (RAA-4,5) | 20 A | 1 | | | | | 1171 VA | 296 VA | 1 | 20 A | LIGHTING-C114ST STAIR (VIA RC-5) | 6 |
| 7 | LIGHTING-AREA B LVL 1 CENTER (VIA RB-3) | 20 A | 1 | 824 VA | 500 VA | | | | | 1 | 20 A | SPARE | 8 |
| 9 | LIGHTING-AREA B LVL 1 CORR (VIA RB-2) | 20 A | 1 | | | 1027 VA | 500 VA | | | 1 | 20 A | SPARE | 10 |
| 11 | LIGHTING-AREA B LVL 2(VIA RB-5) | 20 A | 1 | | | | | 1063 VA | 500 VA | 1 | 20 A | SPARE | 12 |
| 13 | LIGHTING-AREA B LVL 2 CENTER | 20 A | 1 | 846 VA | 500 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | LIGHTING-AREA B108ST STAIR | 20 A | 1 | | | 214 VA | 500 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 8578 VA | | 8533 VA | | 8030 VA | | | |
| | | | | TOTAL AMPS: | | 31 A | | 31 A | | 29 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 9675 VA | 125.00% | 12094 VA | | |
| Spare | 15500 VA | 5.00% | 775 VA | CONNECTED LOAD: | 25175 VA |
| | | | | ESTIMATED DEMAND: | 12869 VA |
| | | | | CONNECTED CURRENT: | 30 A |
| | | | | EMD CURRENT: | 15 A |

## PANEL: EHC2

**LOCATION:** ELEC C204E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-AREA C LVL1 | 20 A | 1 | 2105 VA | 748 VA | | | | | 1 | 20 A | EXTERIOR-N PARKING LOT/WALKWAY (VI... | 2 |
| 3 | LIGHTING-AREA C LVL1 CORR (VIA RC-3,4) | 20 A | 1 | | | 600 VA | 1576 VA | | | 1 | 20 A | EXTERIOR-AREA J PLAZA (VIA RC-1) | 4 |
| 5 | LIGHTING-AREA C LVL2 | 20 A | 1 | | | | | 1612 VA | 216 VA | 1 | 20 A | EXTERIOR -AREA D BLDG LIGHTS (VIA... | 6 |
| 7 | LIGHTING-AREA C CORR.FRM(VIA RC-7,8,9) | 20 A | 1 | 869 VA | 377 VA | | | | | 1 | 20 A | EXTERIOR - AREA F, B BLDG LIGHTS (VIA... | 8 |
| 9 | LIGHTING-AREA D LVL1 (VIA RD-3) | 20 A | 1 | | | 2413 VA | 1568 VA | | | 1 | 20 A | LIGHTING-AREA E LVL 1 (VIA RE-1,5) | 10 |
| 11 | LIGHTING-AREA D LVL2 (VIA RD-5) | 20 A | 1 | | | | | 1667 VA | 37 VA | 1 | 20 A | LIGHTING-AREA E LVL 1 DIAG (VIA RE-1,2) | 12 |
| 13 | LIGHTING-AREA D STAIRS (VIA RD-4) | 20 A | 1 | 301 VA | 2419 VA | | | | | 1 | 20 A | LIGHTING-AREA E LVL 2 (VIA RE-3,4) | 14 |
| 15 | SPARE | 0 A | 1 | | | 0 VA | 500 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 10820 VA | | 10656 VA | | 8532 VA | | | |
| | | | | TOTAL AMPS: | | 40 A | | 40 A | | 31 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 16557 VA | 125.00% | 20696 VA | | |
| Spare | 13500 VA | 5.00% | 675 VA | CONNECTED LOAD: | 30057 VA |
| | | | | ESTIMATED DEMAND: | 21371 VA |
| | | | | CONNECTED CURRENT: | 36 A |
| | | | | EMD CURRENT: | 26 A |

## PANEL: EHH2

**LOCATION:** ELEC H200E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-AREA F LVL 1 (VIA RE-15) | 20 A | 1 | 1005 VA | 107 VA | | | | | 1 | 20 A | EXTERIOR-AREA E EMG POLE (VIA RH-1) | 2 |
| 3 | LIGHTING-AREA F LVL 2 (VIA RE-17) | 20 A | 1 | | | 870 VA | 428 VA | | | 1 | 20 A | EXTERIOR-AREA H EMG POLE CKT (VIA... | 4 |
| 5 | LIGHTING-AREA G LVL 1 (VIA RG-1) | 20 A | 1 | | | | | 2019 VA | 75 VA | 1 | 20 A | EXTERIOR-J127V ENTRANCE DOWNLIGHT... | 6 |
| 7 | LIGHTING-AREA G LVL 2 | 20 A | 1 | 1860 VA | 396 VA | | | | | 1 | 20 A | EXTERIOR-AREA G, H BLDG (VIA RH-2) | 8 |
| 9 | LIGHTS-DRESSING ROOMS H108 & H109 | 20 A | 1 | | | 205 VA | 335 VA | | | 1 | 20 A | LIGHTING-AREA H H202ST (VIA RH-12) | 10 |
| 11 | LIGHTING-AREA H LVL 1 (VIA RH-3,5) | 20 A | 1 | | | | | 612 VA | 453 VA | 1 | 20 A | LIGHTING-AREA H LVL2 (VIA RH-###) | 12 |
| 13 | LIGHTING-AREA J LVL 1 (VIA RJ-8) | 20 A | 1 | 1209 VA | 250 VA | | | | | 1 | 20 A | LIGHTING-AREA H H119ST STAIR (VIA... | 14 |
| 15 | LIGHTING-AREA J LVL 2 (VIA RJ-8) | 20 A | 1 | | | 1217 VA | 118 VA | | | 1 | 20 A | LIGHTING-AREA L L102ST STAIR (VIA RL-2) | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 8827 VA | | 7172 VA | | 8158 VA | | | |
| | | | | TOTAL AMPS: | | 32 A | | 26 A | | 30 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 11204 VA | 125.00% | 14005 VA | | |
| Spare | 13000 VA | 5.00% | 650 VA | CONNECTED LOAD: | 24204 VA |
| | | | | ESTIMATED DEMAND: | 14655 VA |
| | | | | CONNECTED CURRENT: | 29 A |
| | | | | EMD CURRENT: | 18 A |

## PANEL: EHM2

**LOCATION:** ELEC M202E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-AREA L LVL 1 (VIA RL-1,10) | 20 A | 1 | 1505 VA | 230 VA | | | | | 1 | 20 A | EXTERIOR-W BUILDING (VIA RK-7) | 2 |
| 3 | LIGHTING-AREA L LVL 2 (VIA RL-6) | 20 A | 1 | | | 2754 VA | 122 VA | | | 1 | 20 A | EXTERIOR-BUILDING (VIA RKB-2) | 4 |
| 5 | LIGHTING-AREA M LVL1 (RL-1, RM-2) | 20 A | 1 | | | | | 2084 VA | 580 VA | 1 | 20 A | LIGHTING-AREA N LVL2 (VIA RM#######) | 6 |
| 7 | LIGHTING-AREA N W (VIA RM-18,19,20) | 20 A | 1 | 507 VA | 215 VA | | | | | 1 | 20 A | LIGHTING-AREA N N112S (VIA RM-16) | 8 |
| 9 | LIGHTING-AREA M LVL 2 EAST (VIA RM-3) | 20 A | 1 | | | 1379 VA | 500 VA | | | 1 | 20 A | SPARE | 10 |
| 11 | LIGHTING-AREA M LVL2 WEST (VIA RM-4,6) | 20 A | 1 | | | | | 1788 VA | 500 VA | 1 | 20 A | SPARE | 12 |
| 13 | LIGHTING-ROOFTOP PLAZA | 20 A | 1 | 2403 VA | 500 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 9360 VA | | 9754 VA | | 9952 VA | | | |
| | | | | TOTAL AMPS: | | 34 A | | 35 A | | 36 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 13611 VA | 125.00% | 17014 VA | | |
| Spare | 15500 VA | 5.00% | 775 VA | CONNECTED LOAD: | 29111 VA |
| | | | | ESTIMATED DEMAND: | 17789 VA |
| | | | | CONNECTED CURRENT: | 35 A |
| | | | | EMD CURRENT: | 21 A |

## PANEL: EHN1

**LOCATION:** ELEC N104E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | 302 VA | | | | | 1 | 20 A | EXTERIOR - S OF CHAMP PLAZA (VIA RN-1) | 2 |
| 3 | LIGHTING-AREA N N104C CORR (VIA RN-4) | 20 A | 1 | | | 45 VA | 214 VA | | | 1 | 20 A | EXTERIOR - CHAMPIONSHIP PLAZA (VIA... | 4 |
| 5 | LIGHTING-AREA M LVL 1 LOCKERROOMS | 20 A | 1 | | | | | 999 VA | 568 VA | 1 | 20 A | EXTERIOR-W BUILDING (VIA RN-3) | 6 |
| 7 | LIGHTING-AREA N LVL1 ( VIA... | 20 A | 1 | 1480 VA | 500 VA | | | | | 1 | 20 A | SPARE | 8 |
| 9 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 10 |
| 11 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 7282 VA | | 6259 VA | | 7567 VA | | | |
| | | | | TOTAL AMPS: | | 27 A | | 23 A | | 28 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 3625 VA | 125.00% | 4531 VA | | |
| Spare | 17500 VA | 5.00% | 875 VA | CONNECTED LOAD: | 21125 VA |
| | | | | ESTIMATED DEMAND: | 5406 VA |
| | | | | CONNECTED CURRENT: | 25 A |
| | | | | EMD CURRENT: | 7 A |

ADD #3

## PANEL: ELH2

**LOCATION:** ELEC H200E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. THIS PANEL IS A FUSED PANELBOARD. ALL REFERENCES TO CIRCUIT BREAKERS SHOULD BE CONSIDERED FUSES.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 273E-HOUSE REAR | 20 A | 1 | 300 VA | 364 VA | | | | | 1 | 20 A | 274E-UNDER BALCONY | 2 |
| 3 | 254E-CHOIR LOFT CENTER | 20 A | 1 | | | 1000 VA | 750 VA | | | 1 | 20 A | 278E-WALKWAY SECOND LEVEL | 4 |
| 5 | 256E-CHOIR LOFT SIDES | 20 A | 1 | | | | | 2000 VA | 196 VA | 1 | 20 A | 280E-SOUND LOCK H118 | 6 |
| 7 | 262E-CHOIR LOFT ACCESS | 20 A | 1 | 100 VA | 112 VA | | | | | 1 | 20 A | 268E MAIN FLOOR WALKWAY | 8 |
| 9 | 264E-UNDER CHOIR LOFT | 20 A | 1 | | | 332 VA | 175 VA | | | 1 | 20 A | 288E-STAGE MARKER | 10 |
| 11 | 266E-CATWALK | 20 A | 1 | | | | | 1247 VA | 175 VA | 1 | 20 A | 286E-STAIR TREAD MAIN FLOOR &... | 12 |
| 13 | 270E-HOUSE FRONT | 20 A | 1 | 300 VA | 180 VA | | | | | 1 | 20 A | 249E-CONCERT CEILING | 14 |
| 15 | 284E-EGRESS DOWNLIGHTS | 20 A | 1 | | | 56 VA | 1000 VA | | | 1 | 20 A | 245E-CONCERT CEILING | 16 |
| 17 | 301E-STAGE ELECTRIC 1 | 20 A | 1 | | | | | 180 VA | 500 VA | 1 | 20 A | SPARE | 18 |
| 19 | 302E-STAGE ELECTRIC 2 | 20 A | 1 | 180 VA | 500 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | 303E-STAGE ELECTRIC 3 | 20 A | 1 | | | 180 VA | 500 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 500 VA | 500 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 500 VA | 500 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | | 5036 VA | | 6993 VA | | 8298 VA | | | |
| | | | | TOTAL AMPS: | | 42 A | | 61 A | | 72 A | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 7107 VA | 125.00% | 8884 VA | | |
| Appliance | 720 VA | 100.00% | 720 VA | CONNECTED LOAD: | 20327 VA |
| Spare | 12500 VA | 5.00% | 625 VA | ESTIMATED DEMAND: | 10229 VA |
| | | | | CONNECTED CURRENT: | 56 A |
| | | | | EMD CURRENT: | 28 A |

| | | |
|---|---|---|
| OLC1 | | EHM |
| EHA2 | EHC2 | EHH1 |
| EHM2 | EHN1 | ELH2 |


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
K

# PANEL: HN1

**LOCATION:** ELEC N104E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-AREA N LVL 1 UTILITY, RR | 20 A | 1 | 45 VA | 1349 VA | | | | | 1 | 20 A | RELAY RN-1,2 | 2 |
| 3 | LIGHTING-AREA N BOYS PE/JV LOCKER | 20 A | 1 | | | 765 VA | 108 VA | | | 1 | 20 A | RELAY RN-3 | 4 |
| 5 | LIGHTING-AREA N GIRLS SWIM LOCKER | 20 A | 1 | | | | | 180 VA | 363 VA | 1 | 20 A | RELAY RN-4 | 6 |
| 7 | LIGHTING-AREA N BOYS PE/JV LOCKER... | 20 A | 1 | 217 VA | 1000 VA | | | | | 1 | 20 A | RELAY RN-5 | 8 |
| 9 | LIGHTING-AREA N GIRLS SWIM LOCKER... | 20 A | 1 | | | 124 VA | 1000 VA | | | 1 | 20 A | RELAY RN-6 | 10 |
| 11 | LIGHTING-AREA N N104E ELEC | 20 A | 1 | | | | | 45 VA | 1000 VA | 1 | 20 A | RELAY RN-7 | 12 |
| 13 | CUH-N103 | 15 A | 3 | 1662 VA | 1000 VA | | | | | 1 | 20 A | RELAY RN-8 | 14 |
| 15 | -- | -- | -- | | | 1662 VA | 540 VA | | | 1 | 20 A | LIGHTING-AREA M BOY'S LOCKER ROOM | 16 |
| 17 | -- | -- | -- | | | | | 1662 VA | 434 VA | 1 | 20 A | LIGHTING-AREA M BOYS LOCKER SHOWER | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 780 VA | | | | | 1 | 20 A | LIGHTING-AREA M LVL 1 TRAIN, OFF, STRG | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 217 VA | | | 1 | 20 A | LIGHTING-AREA M LVL 1 HYDROTHERAPY | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 15 A | 3 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | -- | -- | -- | | | 1000 VA | 1000 VA | | | 2 | 15 A | SPARE | 34 |
| 35 | -- | -- | -- | | | | | 1000 VA | 1000 VA | -- | -- | -- | 36 |
| 37 | TLN1 | 50 A | 3 | 7160 VA | 14404... | | | | | 3 | 90 A | GEO-THERMAL WELL PUMP #3 | 38 |
| 39 | -- | -- | -- | | | 5060 VA | 14404... | | | -- | -- | -- | 40 |
| 41 | -- | -- | -- | | | | | 4140 VA | 14404... | -- | -- | -- | 42 |
| | | **TOTAL LOAD:** | | 32617 VA | | 28880 VA | | 28228 VA | | | | | |
| | | **TOTAL AMPS:** | | 118 A | | 105 A | | 102 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 5169 VA | 125.00% | 6461 VA | | |
| Receptacle | 6120 VA | 100.00% | 6120 VA | **CONNECTED LOAD:** | 105727 VA |
| Appliance | 7240 VA | 100.00% | 7240 VA | **ESTIMATED DEMAND:** | 69969 VA |
| Heating | 4986 VA | 100.00% | 4986 VA | **CONNECTED CURRENT:** | 127 A |
| Motor | 43212 VA | 100.00% | 43212 VA | **EMD CURRENT:** | 84 A |
| Spare | 39000 VA | 5.00% | 1950 VA | | |

# PANEL: LA2

**LOCATION:** ELEC A204E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | 720 VA | 200 VA | | | | | 1 | 20 A | RELAY PANEL RA CONTROL POWER | 2 |
| 3 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | | | 720 VA | 1120 VA | | | 1 | 20 A | RECEPT- PROJECTORS, TW A105B, A104 | 4 |
| 5 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | | | | | 720 VA | 1160 VA | 1 | 20 A | RECEPT-A105B LARGE FORMAT PRINTER | 6 |
| 7 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | 720 VA | 1380 VA | | | | | 1 | 20 A | RECEPT-A105B LARGE FORMAT PLOTTER | 8 |
| 9 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | | | 720 VA | 540 VA | | | 1 | 20 A | RECEPT-A105B PRINTER | 10 |
| 11 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | | | | | 720 VA | 1200 VA | 1 | 20 A | RECEPT-A105B NORTH PRINTER 1 | 12 |
| 13 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | 720 VA | 1500 VA | | | | | 1 | 20 A | RECEPT-A105B PRINTER 2 | 14 |
| 15 | RECEPT-A105B CAD DRAFTING FLOOR... | 20 A | 1 | | | 720 VA | 1120 VA | | | 1 | 20 A | RECEPT-PROJECTOR A102, A202 | 16 |
| 17 | RECEPT - MEZZANINE & ELECTRICAL,... | 20 A | 1 | | | | | 1260 VA | 1080 VA | 1 | 20 A | RECEPT - CLASSROOM A201 | 18 |
| 19 | RECEPT-PROJECTOR A110 | 20 A | 1 | 920 VA | 1080 VA | | | | | 1 | 20 A | RECEPT - CLASSROOM A202 | 20 |
| 21 | RECEPT - CLASSROOM A110 | 20 A | 1 | | | 1080 VA | 540 VA | | | 1 | 20 A | RECEPT - OFFICE A106 | 22 |
| 23 | RECEPT-PROJECTOR A105A | 20 A | 1 | | | | | 900 VA | 540 VA | 1 | 20 A | RECEPT - OFFICE A106 | 24 |
| 25 | RECEPT - CLASSROOM A105A | 20 A | 1 | 900 VA | 540 VA | | | | | 1 | 20 A | RECEPT - OFFICE A106 | 26 |
| 27 | HAND DRYER - GIRLS TOILET A107T | 15 A | 2 | | | 780 VA | 200 VA | | | 1 | 20 A | DCP-STAIRS AREA C | 28 |
| 29 | -- | -- | -- | | | | | 780 VA | 1000 VA | 1 | 20 A | COILING DOORS-A207M MEZZ | 30 |
| 31 | HAND DRYER - BOYS TOILET A108T | 15 A | 2 | 780 VA | 360 VA | | | | | 1 | 20 A | RECEPT-A205 COMM WALL | 32 |
| 33 | -- | -- | -- | | | 780 VA | 1500 VA | | | 1 | 20 A | UPS-A205 COMM | 34 |
| 35 | RECEPT - CORRIDOR, TOILET, JANITOR | 20 A | 1 | | | | | 900 VA | 500 VA | 1 | 20 A | COILING DOOR-A104 SMALL ENGINES | 36 |
| 37 | EWC - CORRIDOR A109C** | 20 A | 1 | 360 VA | 540 VA | | | | | 1 | 20 A | RECEPT-A105B CAD LAB EAST | 38 |
| 39 | DCP-METALS SHOP | 20 A | 1 | | | 200 VA | 200 VA | | | 1 | 20 A | DCP-A205 COMM | 40 |
| 41 | | | | | | | | | 200 VA | 1 | 20 A | DCP-SMALL ENGINES | 42 |
| 43 | SPARE | 20 A | 1 | 1000 VA | 500 VA | | | | | 1 | 20 A | FIRE/SMOKE DAMPERS | 44 |
| 45 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 46 |
| 47 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 48 |
| 49 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 50 |
| 51 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 52 |
| 53 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 54 |
| 55 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 56 |
| 57 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 62 |
| 63 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 64 |
| 65 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 66 |
| 67 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 68 |
| 69 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 70 |
| 71 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | **TOTAL LOAD:** | | 16220 VA | | 16220 VA | | 16960 VA | | | | | |
| | | **TOTAL AMPS:** | | 135 A | | 135 A | | 141 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 19080 VA | 76.21% | 14540 VA | | |
| Appliance | 12620 VA | 100.00% | 12620 VA | **CONNECTED LOAD:** | 49400 VA |
| Spare | 17700 VA | 5.00% | 885 VA | **ESTIMATED DEMAND:** | 28045 VA |
| | | | | **CONNECTED CURRENT:** | 137 A |
| | | | | **EMD CURRENT:** | 78 A |

# PANEL: LAA1

**LOCATION:** ELEC AA106E
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-AA108 PLTW FLOOR #1 | 20 A | 1 | 360 VA | 200 VA | | | | | 1 | 20 A | RELAY PANEL RAA CONTROL POWER | 2 |
| 3 | RECEPT-AA108 PLTW FLOOR #2 | 20 A | 1 | | | 360 VA | 1100 VA | | | 1 | 20 A | RECEPT-AA108 PLTW & AA105... | 4 |
| 5 | RECEPT-AA108 PLTW FLOOR #3 | 20 A | 1 | | | | | 360 VA | 360 VA | 1 | 20 A | RECEPT-AA105 NORTH WALL #1 | 6 |
| 7 | RECEPT-AA108 PLTW FLOOR #4 | 20 A | 1 | 360 VA | 360 VA | | | | | 1 | 20 A | RECEPT-AA105 NORTH WALL #2 | 8 |
| 9 | RECEPT-AA108 PLTW FLOOR #5 | 20 A | 1 | | | 540 VA | 360 VA | | | 1 | 20 A | RECEPT-AA105 NORTH WALL #3 | 10 |
| 11 | RECEPT-AA108 PLTW SOUTH & WEST... | 20 A | 1 | | | | | 540 VA | 360 VA | 1 | 20 A | RECEPT-AA105 NORTH WALL #4 | 12 |
| 13 | RECEPT-PLTW03 3D PRINTER | 20 A | 1 | 180 VA | 360 VA | | | | | 1 | 20 A | RECEPT-AA105 FLOORBOX #1 | 14 |
| 15 | RECEPT-PLTW02 MILL | 20 A | 1 | | | 1200 VA | 360 VA | | | 1 | 20 A | RECEPT-AA105 FLOORBOX #2 | 16 |
| 17 | RECEPT-AA108 PLTW EAST WALL | 20 A | 1 | | | | | 540 VA | 360 VA | 1 | 20 A | RECEPT-AA105 FLOORBOX #3 | 18 |
| 19 | RECEPT-AA108 PLTW | 20 A | 1 | 360 VA | 360 VA | | | | | 1 | 20 A | RECEPT-AA105 FLOORBOX #4 | 20 |
| 21 | RECEPT- TOILETS AA109T, AA111T, CORR... | 20 A | 1 | | | 1080 VA | 360 VA | | | 1 | 20 A | RECEPT-AA105 SOUTH WALL #1 | 22 |
| 23 | UPS-AA107D RACK A | 30 A | 1 | | | | | 1200 VA | 360 VA | 1 | 20 A | RECEPT-AA105 SOUTH WALL #2 | 24 |
| 25 | UPS-AA107D RACK B | 30 A | 1 | 1200 VA | 360 VA | | | | | 1 | 20 A | RECEPT-AA105 SOUTH WALL #3 | 26 |
| 27 | UPS-AA107D RACK C | 30 A | 1 | | | 1200 VA | 360 VA | | | 1 | 20 A | RECEPT-AA105 SOUTH WALL #4 | 28 |
| 29 | RECEPT-AA107D RACKS D&E | 20 A | 1 | | | | | 360 VA | 540 VA | 1 | 20 A | RECEPT-AA105 INFO TECH WALLS | 30 |
| 31 | UPS-AA107D RACK F | 30 A | 1 | 1200 VA | 200 VA | | | | | 1 | 20 A | DCP-VEST AA100V | 32 |
| 33 | RECEPT-AA106E ELEC ROOM | 20 A | 1 | | | 540 VA | 200 VA | | | 1 | 20 A | DCP-AA110V VESTIBULE | 34 |
| 35 | RECEPT-INSTITUTE LAB, WEST WALL 1 | 20 A | 1 | | | | | 540 VA | 360 VA | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #1** | 36 |
| 37 | RECEPT-INSTITUTE LAB, WEST WALL 2 | 20 A | 1 | 540 VA | 360 VA | | | | | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #2** | 38 |
| 39 | RECEPT-INSTITUTE LAB, NORTH WALL | 20 A | 1 | | | 540 VA | 540 VA | | | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #3** | 40 |
| 41 | RECEPT-INSTITUTE LAB, EAST WALL 1 | 20 A | 1 | | | | | 360 VA | 500 VA | 1 | 20 A | FIRE/SMOKE DAMPERS | 42 |
| 43 | RECEPT-INSTITUTE LAB, EAST WALL 2 | 20 A | 1 | 540 VA | 360 VA | | | | | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #4** | 44 |
| 45 | RECEPT-INSTITUTE LAB, EAST WALL 3 | 20 A | 1 | | | 540 VA | 360 VA | | | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #5** | 46 |
| 47 | HAND DRYER-AA109T | 20 A | 2 | | | | | 780 VA | 360 VA | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #6** | 48 |
| 49 | -- | -- | -- | 780 VA | 360 VA | | | | | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #7** | 50 |
| 51 | RECEPT-AA107D COMM ROOM WALL | 20 A | 1 | | | 540 VA | 360 VA | | | 1 | 20 A | RECEPT-INSTITUTE LAB, CEILING #8** | 52 |
| 53 | HAND DRYER-AA111T | 20 A | 2 | | | | | 780 VA | 200 VA | 1 | 20 A | DCP-INSTITUTE LAB AA104 | 54 |
| 55 | -- | -- | -- | 780 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 56 |
| 57 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 70 |
| 71 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | **TOTAL LOAD:** | | 14220 VA | | 16540 VA | | 12860 VA | | | | | |
| | | **TOTAL AMPS:** | | 120 A | | 140 A | | 107 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 21420 VA | 73.34% | 15710 VA | | |
| Appliance | 6500 VA | 100.00% | 6500 VA | **CONNECTED LOAD:** | 43620 VA |
| Spare | 15700 VA | 5.00% | 785 VA | **ESTIMATED DEMAND:** | 22995 VA |
| | | | | **CONNECTED CURRENT:** | 121 A |
| | | | | **EMD CURRENT:** | 64 A |

# PANEL: LB1

**LOCATION:** ELEC B120E
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-PROJECTORS B126, B128 | 20 A | 1 | 1120 VA | 1080 VA | | | | | 1 | 20 A | RECEPT - CORRIDOR B109C | 2 |
| 3 | RECEPT - CLASSROOM B126 | 20 A | 1 | | | 1080 VA | 900 VA | | | 1 | 20 A | RECEPT - CORRIDOR | 4 |
| 5 | RECEPT - CLASSROOM B128 | 20 A | 1 | | | | | 1080 VA | 940 VA | 1 | 20 A | RECEPT - CONFERENCE B107 | 6 |
| 7 | RECEPT-PROJECTOR B115, B119 | 20 A | 1 | 1120 VA | 1200 VA | | | | | 1 | 20 A | REFRIGERATOR - SCIENCE PREP B118S | 8 |
| 9 | RECEPT - CLASSROOM B115 | 20 A | 1 | | | 900 VA | 380 VA | | | 1 | 20 A | DCP-B109C CORR | 10 |
| 11 | RECEPT - CLASSROOM B119 | 20 A | 1 | | | | | 1080 VA | 540 VA | 1 | 20 A | RECEPT - SCIENCE PREP B118S | 12 |
| 13 | RECEPT-PROJECT B103, B105 | 20 A | 1 | 1120 VA | 360 VA | | | | | 1 | 20 A | RECEPT - SCIENCE LABS B102 | 14 |
| 15 | RECEPT - CLASSROOM B103 | 20 A | 1 | | | 1080 VA | 360 VA | | | 1 | 20 A | RECEPT - SCIENCE LABS B102 | 16 |
| 17 | RECEPT - CLASSROOM B105 | 20 A | 1 | | | | | 1080 VA | 360 VA | 1 | 20 A | RECEPT - SCIENCE LABS B102 | 18 |
| 19 | EWC - ALCOVE B113A** | 20 A | 1 | 360 VA | 360 VA | | | | | 1 | 20 A | RECEPT - SCIENCE LABS B102 | 20 |
| 21 | HAND DRYER 1 - BOYS TOILET B111T | 15 A | 2 | | | 780 VA | 360 VA | | | 1 | 20 A | RECEPT - SCIENCE LABS B102 | 22 |
| 23 | -- | -- | -- | | | | | 780 VA | 360 VA | 1 | 20 A | RECEPT - SCIENCE LABS B102 | 24 |
| 25 | HAND DRYER 2 - BOYS TOILET B111T | 15 A | 2 | 780 VA | 1100 VA | | | | | 1 | 20 A | RECEPT-PROJECTOR SCIENCE B102 | 26 |
| 27 | -- | -- | -- | | | 780 VA | 720 VA | | | 1 | 20 A | RECEPT - SCIENCE B102 | 28 |
| 29 | HAND DRYER 1 - GIRLS TOILET B114T | 15 A | 2 | | | | | 780 VA | 100 VA | 1 | 20 A | GAS SHUT-OFF CONTROLLER-B102 | 30 |
| 31 | -- | -- | -- | 780 VA | 200 VA | | | | | 1 | 20 A | DCP-B123 COMM | 32 |
| 33 | HAND DRYER 2 - GIRLS TOILET B114T | 15 A | 2 | | | 780 VA | 360 VA | | | 1 | 20 A | RECEPT-B123 COMM WALL | 34 |
| 35 | -- | -- | -- | | | | | 780 VA | 1500 VA | 1 | 20 A | UPS-B123 COMM | 36 |
| 37 | RECEPT - CORRIDOR, JANITOR, TOILETS | 20 A | 1 | 1080 VA | 200 VA | | | | | 1 | 20 A | DCP-B102 SCIENCE | 38 |
| 39 | COPIER - ITINERATE OFFICE B121 | 20 A | 1 | | | 984 VA | 200 VA | | | 1 | 20 A | DCP-B101C CORRIDOR | 40 |
| 41 | RECEPT - ITINERATE OFFICE B121 | 20 A | 1 | | | | | 720 VA | 500 VA | 1 | 20 A | AUTO OPERATOR B109C | 42 |
| 43 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 44 |
| 45 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 46 |
| 47 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 48 |
| 49 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 50 |
| 51 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 52 |
| 53 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 54 |
| 55 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 56 |
| 57 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 70 |
| 71 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | **TOTAL LOAD:** | | 20860 VA | | 19664 VA | | 18600 VA | | | | | |
| | | **TOTAL AMPS:** | | 175 A | | 165 A | | 155 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 17820 VA | 78.06% | 13910 VA | | |
| Appliance | 13304 VA | 100.00% | 13304 VA | **CONNECTED LOAD:** | 59124 VA |
| Spare | 28000 VA | 5.00% | 1400 VA | **ESTIMATED DEMAND:** | 28614 VA |
| | | | | **CONNECTED CURRENT:** | 164 A |
| | | | | **EMD CURRENT:** | 79 A |

# PANEL: LH2B

ADD #3

**LOCATION:** ELEC H202E
**BUS RATING:** 200 A
**MAIN BREAKER:** MLO

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DRP-1 | 20 A | 1 | 180 VA | 180 VA | | | | | 1 | 20 A | DRP-8 | 2 |
| 3 | DRP-2 | 20 A | 1 | | | 180 VA | 180 VA | | | 1 | 20 A | DRP-9 | 4 |
| 5 | DRP-3 | 20 A | 1 | | | | | 180 VA | 180 VA | 1 | 20 A | DRP-10 | 6 |
| 7 | DRP-4 | 20 A | 1 | 180 VA | 720 VA | | | | | 1 | 20 A | DRP-11 | 8 |
| 9 | DRP-5 | 20 A | 1 | | | 180 VA | 900 VA | | | 1 | 20 A | DRP-12 | 10 |
| 11 | DRP-6 | 20 A | 1 | | | | | 180 VA | 720 VA | 1 | 20 A | DRP-13 | 12 |
| 13 | DRP-7 | 20 A | 1 | 180 VA | 1000 VA | | | | | 1 | 20 A | DRP-SPARE | 14 |
| 15 | DIMMER AUX RACK 1 | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | DRP-SPARE | 16 |
| 17 | DIMMER AUX RACK 2 | 20 A | 1 | | | | | 1000 VA | 720 VA | 1 | 20 A | RECEPT - CATWALK STAGE NORTH | 18 |
| 19 | | | | | 540 VA | | | | | 1 | 20 A | RECEPT - CATWALK STAGE SOUTH | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 0 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 0 VA | 0 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 0 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 0 VA | 0 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 0 VA | 0 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 0 VA | 0 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 0 VA | 0 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 0 VA | 0 VA | 1 | 20 A | SPARE | 42 |
| | | **TOTAL LOAD:** | | 8980 VA | | 5440 VA | | 2980 VA | | | | | |
| | | **TOTAL AMPS:** | | 78 A | | 48 A | | 25 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 5400 VA | 100.00% | 5400 VA | | |
| Appliance | 1000 VA | 100.00% | 1000 VA | **CONNECTED LOAD:** | 17400 VA |
| Spare | 10000 VA | 5.00% | 500 VA | **ESTIMATED DEMAND:** | 7900 VA |
| | | | | **CONNECTED CURRENT:** | 48 A |
| | | | | **EMD CURRENT:** | 22 A |

| | | |
|---|---|---|
| HN1 | | |
| LA2 | LAA1 | LB1 |
| LH2B | | |


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

PANELBOARD SCHEDULES

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E7.8

## PANEL: LE1A

**LOCATION:** FCS LAUNDRY E107 | **VOLTS:** 120/208 Wye | **MOUNTING:** FLUSH
**BUS RATING:** 150 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 150A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-PROJECTOR FCS | 20 A | 1 | 920 VA | 200 VA | | | | | 1 | 20 A | RELAY PANEL "RE" CONTROL POWER | 2 |
| 3 | RECEPT - FCS | 20 A | 1 | | | 540 VA | 1680 VA | | | 1 | 20 A | RELAY RE-21 | 4 |
| 5 | RECEPT - WEST FCS | 20 A | 1 | | | | | 360 VA | 1080 VA | 1 | 20 A | RELAY RE-22 | 6 |
| 7 | RECEPT - WEST FCS | 20 A | 1 | 360 VA | 1000 VA | | | | | 1 | 20 A | RELAY RE-23,24 | 8 |
| 9 | WASHER - FCS LAUNDRY | 20 A | 1 | | | 180 VA | 360 VA | | | 1 | 20 A | RECEPT - NORTHWEST FCS | 10 |
| 11 | DRYER - FCS LAUNDRY | 30 A | 2 | | | | | 2500 VA | 360 VA | 1 | 20 A | RECEPT - NORTH FCS | 12 |
| 13 | -- | -- | -- | 2500 VA | 360 VA | | | | | 1 | 20 A | RECEPT - NORTHEAST FCS | 14 |
| 15 | RECEPT - FCS OFFICE E105 | 20 A | 1 | | | 900 VA | 360 VA | | | 1 | 20 A | RECEPT - EAST FCS | 16 |
| 17 | RECEPT-PROJECTOR E106, E108 | 20 A | 1 | | | | | 1120 VA | 360 VA | 1 | 20 A | RECEPT - FCS EAST | 18 |
| 19 | RECEPT - CLASSROOM E106 | 20 A | 1 | 1080 VA | 360 VA | | | | | 1 | 20 A | RECEPT - EAST FCS | 20 |
| 21 | RECEPT - FCS LAUNDRY | 20 A | 1 | | | 540 VA | 360 VA | | | 1 | 20 A | RECEPT - SOUTHEAST FCS | 22 |
| 23 | COILING DOOR-E101 STORE | 20 A | 1 | | | | | 500 VA | 720 VA | 1 | 20 A | RECEPT-E108 FASHION FLOORBOXES... | 24 |
| 25 | COILING DOOR-E103ST NORTH | 20 A | 1 | 500 VA | 720 VA | | | | | 1 | 20 A | RECEPT-E108 FASHION FLOORBOXES... | 26 |
| 27 | COILING DOOR-E103ST #2 | 20 A | 1 | | | 500 VA | 1440 VA | | | 1 | 20 A | RECEPT-FASHION E108 WALLS | 28 |
| 29 | COILING DOOR-E103ST #1 | 20 A | 1 | | | | | 500 VA | 900 VA | 1 | 20 A | RECEPT-E101 STORE WALL | 30 |
| 31 | COILING DOOR-E113C SOUTH | 20 A | 1 | 180 VA | 900 VA | | | | | 1 | 20 A | RECEPT-E101 STORE CENTER FLOORBOX | 32 |
| 33 | RECEPT - FOOD LAB FCS-1 E104 | 20 A | 1 | | | 540 VA | 540 VA | | | 1 | 20 A | RECEPT-E113C CORRIDOR | 34 |
| 35 | AUTO DOOR E103ST | 20 A | 1 | | | | | 180 VA | 200 VA | 1 | 20 A | GAS SHUT-OFF CONTROLLER | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 10000... | 500 VA | 1 | 20 A | FIRE/SMOKE DAMPERS | 42 |
| | | | **TOTAL LOAD:** | 11080 VA | | 9940 VA | | 19280 VA | | | | | |
| | | | **TOTAL AMPS:** | 94 A | | 83 A | | 162 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 2760 VA | 125.00% | 3450 VA | | |
| Receptacle | 13500 VA | 87.04% | 11750 VA | **CONNECTED LOAD:** | 40300 VA |
| Appliance | 8340 VA | 100.00% | 8340 VA | **ESTIMATED DEMAND:** | 24325 VA |
| Spare | 15700 VA | 5.00% | 785 VA | **CONNECTED CURRENT:** | 112 A |
| | | | | **EMD CURRENT:** | 68 A |

## PANEL: LE1B

**LOCATION:** ELEC E111E | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 150 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 150A | **WIRES:** 4 | **SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DCP-E112 COMM | 20 A | 1 | 200 VA | 2500 VA | | | | | 2 | 40 A | DRYER-F118 SPECIAL NEEDS | 2 |
| 3 | RECEPT-PROJECTOR F118 | 20 A | 1 | | | 560 VA | 2500 VA | | | -- | -- | -- | 4 |
| 5 | RECEPT-F118 SPECIAL NEEDS | 20 A | 1 | | | | | 1440 VA | 780 VA | 2 | 15 A | HAND DRYER-F112T | 6 |
| 7 | RECEPT-REFRIGERATOR F118 | 20 A | 1 | 800 VA | 780 VA | | | | | -- | -- | -- | 8 |
| 9 | RECEPT-F118 WASHING MACHINE | 20 A | 1 | | | 600 VA | 780 VA | | | 2 | 15 A | HAND DRYER-F113T | 10 |
| 11 | RECEPT-F116 SENSORY, F117, F112T,... | 20 A | 1 | | | | | 1080 VA | 780 VA | -- | -- | -- | 12 |
| 13 | RECEPT-F108 RECEPTION, F110 COTS | 20 A | 1 | 900 VA | 1260 VA | | | | | 1 | 20 A | RECEPT-F114 TEEN NET, F110 COTS | 14 |
| 15 | RECEPT-F107 NURSES | 20 A | 1 | | | 720 VA | 1080 VA | | | 1 | 20 A | RECEPT-F111 SUPPLY, F109 EXAM | 16 |
| 17 | COILING DOOR-F106C CORRIDOR | 20 A | 1 | | | | | 500 VA | 360 VA | 1 | 20 A | EWC-F205C CORRIDOR** | 18 |
| 19 | RECEPT-F205C CORRIDOR, ROOF | 20 A | 1 | 1080 VA | 1920 VA | | | | | 1 | 20 A | RECEPT-COPIER F209 | 20 |
| 21 | RECEPT-F216 PROJECTOR, TW | 20 A | 1 | | | 560 VA | 1260 VA | | | 1 | 20 A | RECEPT-F209 REGISTRAR | 22 |
| 23 | RECEPT-F216 CLASSROOM | 20 A | 1 | | | | | 1260 VA | 200 VA | 1 | 20 A | DCP-F213 RECORDS | 24 |
| 25 | RECEPT-F214 COUNSELOR | 20 A | 1 | 900 VA | 720 VA | | | | | 1 | 20 A | RECEPT-F211 TEAMMATES | 26 |
| 27 | RECEPT-F212, F210 COUNSELOR | 20 A | 1 | | | 1440 VA | 900 VA | | | 1 | 20 A | RECEPT-F215 CAREER CENTER | 28 |
| 29 | RECEPT-F208, F207 COUNSELOR | 20 A | 1 | | | | | 1440 VA | 360 VA | 1 | 20 A | RECEPT-E112 COMM WALL | 30 |
| 31 | RECEPT-F206 CONF ROOM | 20 A | 1 | 1480 VA | 1500 VA | | | | | 1 | 30 A | UPS-COMM E112 #1 (ADD #1) | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1500 VA | | | 1 | 30 A | UPS-COMM E112 #2 (ADD #1) | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | **TOTAL LOAD:** | 16040 VA | | 14900 VA | | 12200 VA | | | | | |
| | | | **TOTAL AMPS:** | 137 A | | 128 A | | 102 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 21000 VA | 73.81% | 15500 VA | | |
| Appliance | 13140 VA | 100.00% | 13140 VA | **CONNECTED LOAD:** | 43140 VA |
| Spare | 9000 VA | 5.00% | 450 VA | **ESTIMATED DEMAND:** | 29090 VA |
| | | | | **CONNECTED CURRENT:** | 120 A |
| | | | | **EMD CURRENT:** | 81 A |

## PANEL: LE2W

**LOCATION:** TECH WORKROOM E209A | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 100 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 100A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-E218C CORR, ROOF | 20 A | 1 | 900 VA | 1080 VA | | | | | 1 | 20 A | RECEPT-A207 MEDIA EAST WALL | 2 |
| 3 | RECEPT-E208 OFFICE | 20 A | 1 | | | 900 VA | 720 VA | | | 1 | 20 A | RECEPT-E202 MEDIA FLOORBOX | 4 |
| 5 | RECEPT-E209B, E209A WORKROOMS | 20 A | 1 | | | | | 1080 VA | 720 VA | 1 | 20 A | RECEPT-E205 MEDIA FLOORBOX | 6 |
| 7 | RECEPT-COPIER E209B | 20 A | 1 | 800 VA | 900 VA | | | | | 1 | 20 A | RECEPT-E212 MEDIA FLOORBOX | 8 |
| 9 | RECEPT-E209A BENCH 1 | 20 A | 1 | | | 360 VA | 1440 VA | | | 1 | 20 A | RECEPT-E212 MEDIA, E215, E216 | 10 |
| 11 | RECEPT-E209A BENCH 2 | 20 A | 1 | | | | | 360 VA | 900 VA | 1 | 20 A | RECEPT-E206 CONF RM | 12 |
| 13 | RECEPT-E209A BENCH 3 | 20 A | 1 | 360 VA | 560 VA | | | | | 1 | 20 A | RECEPT-E217 PROJECTOR, TW | 14 |
| 15 | RECEPT-E209A BENCH 4 | 20 A | 1 | | | 360 VA | 720 VA | | | 1 | 20 A | RECEPT-E217 AE CLASSROOM | 16 |
| 17 | RECEPT-E210 CIRC DESK | 20 A | 1 | | | | | 720 VA | 720 VA | 1 | 20 A | RECEPT-E217 AE CLASSROOM | 18 |
| 19 | RECEPT-E211 GENIUS BACK COUNT | 20 A | 1 | 840 VA | 200 VA | | | | | 1 | 20 A | DCP-WORKROOM | 20 |
| 21 | RECEPT-E211 GENIUS COUNTER | 20 A | 1 | | | 540 VA | 500 VA | | | 1 | 20 A | COILING DOOR-E203ST | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 42 |
| | | | **TOTAL LOAD:** | 9640 VA | | 9540 VA | | 10500 VA | | | | | |
| | | | **TOTAL AMPS:** | 80 A | | 80 A | | 88 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 13680 VA | 86.55% | 11840 VA | | |
| Appliance | 2000 VA | 100.00% | 2000 VA | **CONNECTED LOAD:** | 29680 VA |
| Spare | 14000 VA | 5.00% | 700 VA | **ESTIMATED DEMAND:** | 14540 VA |
| | | | | **CONNECTED CURRENT:** | 82 A |
| | | | | **EMD CURRENT:** | 40 A |

## PANEL: LFCS

**LOCATION:** FOOD LAB FCS-1 E104 | **VOLTS:** 120/208 Wye | **MOUNTING:** FLUSH
**BUS RATING:** 225 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 225A | **WIRES:** 4 | **SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ELECTRIC COOKTOP-FCS CLASSROOM | 45 A | 2 | 3599 VA | 2974 VA | | | | | 2 | 40 A | MICROWAVE/CONVECTION OVEN - FCS | 2 |
| 3 | -- | -- | -- | | | 3599 VA | 2974 VA | | | -- | -- | -- | 4 |
| 5 | ELECTRIC COOKTOP-FCS CLASSROOM | 45 A | 2 | | | | | 3599 VA | 2974 VA | 2 | 40 A | MICROWAVE/CONVECTION OVEN - FCS | 6 |
| 7 | -- | -- | -- | 3599 VA | 2974 VA | | | | | -- | -- | -- | 8 |
| 9 | DUAL FUEL RANGE - FCS | 50 A | 2 | | | 2800 VA | 2800 VA | | | 2 | 50 A | DUAL FUEL RANGE - FCS | 10 |
| 11 | -- | -- | -- | | | | | 2800 VA | 2800 VA | -- | -- | -- | 12 |
| 13 | DUAL FUEL RANGE - FCS | 50 A | 2 | 2800 VA | 1092 VA | | | | | 1 | 20 A | REFRIGERATOR - NORTH FCS | 14 |
| 15 | -- | -- | -- | | | 2800 VA | 2800 VA | | | 2 | 50 A | DUAL FUEL RANGE - FCS | 16 |
| 17 | REFRIGERATOR - SOUTH FCS | 20 A | 1 | | | | | 1092 VA | 2800 VA | -- | -- | -- | 18 |
| 19 | CONVECTION OVEN 1-FCS CLASSROOM | 40 A | 3 | 3610 VA | 3610 VA | | | | | 3 | 40 A | CONVECTION OVEN 2-FCS CLASSROOM | 20 |
| 21 | -- | -- | -- | | | 3610 VA | 3610 VA | | | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | | | 3610 VA | 3610 VA | -- | -- | -- | 24 |
| 25 | REFRIGERATOR - UNDERCABINET FCS | 20 A | 1 | 384 VA | 1200 VA | | | | | 1 | 20 A | MICROWAVE - NORTHWEST FCS | 26 |
| 27 | GAS RANGE - FCS DEMONSTRATION | 20 A | 1 | | | 180 VA | 1200 VA | | | 1 | 20 A | MICROWAVE - NORTHEAST FCS | 28 |
| 29 | GARBAGE DISPOSAL - DEMONSTRATION... | 20 A | 1 | | | | | 500 VA | 1200 VA | 1 | 20 A | MICROWAVE - SOUTHEAST FCS | 30 |
| 31 | GARBAGE DISPOSAL - NORTHEAST FCS | 20 A | 1 | 500 VA | 1200 VA | | | | | 1 | 20 A | MICROWAVE - DEMONSTRATION FCS | 32 |
| 33 | GARBAGE DISPOSAL - SOUTHEAST FCS | 20 A | 1 | | | 500 VA | 1200 VA | | | 1 | 20 A | MICROWAVE - EAST FCS | 34 |
| 35 | GARBAGE DISPOSAL - SOUTHWEST FCS | 20 A | 1 | | | | | 500 VA | 1200 VA | 1 | 20 A | MICROWAVE - WEST FCS | 36 |
| 37 | GARBAGE DISPOSAL - EAST FCS | 20 A | 1 | 500 VA | 1200 VA | | | | | 1 | 20 A | MICROWAVE - SOUTHWEST FCS | 38 |
| 39 | GARBAGE DISPOSAL - WEST FCS | 20 A | 1 | | | 500 VA | 1300 VA | | | 1 | 20 A | DISHWASHER - DEMONSTRATION FCS | 40 |
| 41 | GARBAGE DISPOSAL - NORTHWEST FCS | 20 A | 1 | | | | | 500 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | **TOTAL LOAD:** | 29242 VA | | 29873 VA | | 28185 VA | | | | | |
| | | | **TOTAL AMPS:** | 245 A | | 250 A | | 235 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Appliance | 86300 VA | 72.75% | 62780 VA | | |
| Spare | 1000 VA | 5.00% | 50 VA | **CONNECTED LOAD:** | 87300 VA |
| | | | | **ESTIMATED DEMAND:** | 62830 VA |
| | | | | **CONNECTED CURRENT:** | 242 A |
| | | | | **EMD CURRENT:** | 174 A |

## PANEL: LG1

**LOCATION:** ELEC G103E | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 225 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 225A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-AREA G ELEVATOR PIT | 20 A | 1 | 276 VA | 200 VA | | | | | 1 | 20 A | RELAY PANEL "RG" CONTROL POWER | 2 |
| 3 | KILN FANS | 20 A | 1 | | | 1000 VA | 1920 VA | | | 1 | 20 A | RELAY RG-9 | 4 |
| 5 | DCP-G104 2D ART | 20 A | 1 | | | | | 200 VA | 1440 VA | 1 | 20 A | RELAY RG-10 | 6 |
| 7 | RECEPT-G104, G100 PROJECTORS | 20 A | 1 | 1120 VA | 1000 VA | | | | | 1 | 20 A | RELAY RG-11,12 | 8 |
| 9 | RECEPT-G104 2D ART | 20 A | 1 | | | 1080 VA | 720 VA | | | 1 | 20 A | RECEPT-G100 DIVIDED RACEWAY 1 | 10 |
| 11 | RECEPT-G104 2D ART, G102S | 20 A | 1 | | | | | 1080 VA | 720 VA | 1 | 20 A | RECEPT-G100 DIVIDED RACEWAY 2 | 12 |
| 13 | RECEPT-G103 COPIER | 20 A | 1 | 800 VA | 720 VA | | | | | 1 | 20 A | RECEPT-G100 DIVIDED RACEWAY 3 | 14 |
| 15 | RECEPT-G103 OFFICE, G115C CORRIDOR | 20 A | 1 | | | 900 VA | 720 VA | | | 1 | 20 A | RECEPT-G100 DIVIDED RACEWAY 4 | 16 |
| 17 | RECEPT-G101, G122 PROJECTORS | 20 A | 1 | | | | | 1120 VA | 720 VA | 1 | 20 A | RECEPT-G100 DIVIDED RACEWAY 5 | 18 |
| 19 | RECEPT-G101 2D ART | 20 A | 1 | 1080 VA | 360 VA | | | | | 1 | 20 A | RECEPT-G100 FLOORBOX 1 | 20 |
| 21 | RECEPT-G118 POTTERY WHEEL 1 | 20 A | 1 | | | 1656 VA | 360 VA | | | 1 | 20 A | RECEPT-G100 FLOORBOX 2 | 22 |
| 23 | RECEPT-G118 POTTERY WHEEL 2 | 20 A | 1 | | | | | 1836 VA | 360 VA | 1 | 20 A | RECEPT-G100 FLOORBOX 3 | 24 |
| 25 | RECEPT-G118 POTTERY WHEEL 3 | 20 A | 1 | 1656 VA | 1080 VA | | | | | 1 | 20 A | RECEPT-G121S MATERIAL STORAGE | 26 |
| 27 | RECEPT-G118 POTTERY WHEEL 4 | 20 A | 1 | | | 1656 VA | 1080 VA | | | 1 | 20 A | RECEPT-G107A, G102S, G102S, G107 | 28 |
| 29 | RECEPT-G106C CORRIDOR | 20 A | 1 | | | | | 540 VA | 360 VA | 1 | 15 A | EWC-G105T, G104T** | 30 |
| 31 | RECEPT-G122 3D ART | 20 A | 1 | 720 VA | 1620 VA | | | | | 1 | 20 A | RECEPT-G104T, G105T TOILETS | 32 |
| 33 | DCP-G105V | 20 A | 1 | | | 200 VA | 780 VA | | | 2 | 15 A | HAND DRYER-G104T GIRLS 1 | 34 |
| 35 | HAND DRYER-G104T GIRLS 2 | 15 A | 2 | | | | | 780 VA | 780 VA | -- | -- | -- | 36 |
| 37 | -- | -- | -- | 780 VA | 780 VA | | | | | 2 | 15 A | HAND DRYER-G105T BOYS 1 | 38 |
| 39 | HAND DRYER-G105T BOYS 2 | 15 A | 2 | | | 780 VA | 780 VA | | | -- | -- | -- | 40 |
| 41 | -- | -- | -- | | | | | 780 VA | 360 VA | 1 | 15 A | EWC-G107 VOCAL ROOM** | 42 |
| 43 | RECEPT-G112, G113, G115S PRACTICE | 20 A | 1 | 1260 VA | 1080 VA | | | | | 1 | 20 A | RECEPT-G110, G111 PRACTICE | 44 |
| 45 | RECEPT-G108, G109 MUSIC STORAGE | 20 A | 1 | | | 1260 VA | 760 VA | | | 1 | 20 A | RECEPT-G107 VOCAL PROJECTOR | 46 |
| 47 | RECEPT-G116 OFFICE | 20 A | 1 | | | | | 1080 VA | 180 VA | 1 | 20 A | RECEPT-COPIER G116 OFFICE | 48 |
| 49 | RECEPT-G219 LAB, FLOOR 1 | 20 A | 1 | 720 VA | 500 VA | | | | | 1 | 20 A | SCREEN-G107 VOCAL | 50 |
| 51 | RECEPT-G219 LAB, FLOOR 2 | 20 A | 1 | | | 720 VA | 720 VA | | | 1 | 20 A | RECEPT-G221 LAB, FLOORBOX 1 | 52 |
| 53 | RECEPT-G219 LAB, FLOOR 3 | 20 A | 1 | | | | | 720 VA | 720 VA | 1 | 20 A | RECEPT-G221 LAB, FLOORBOX 2 | 54 |
| 55 | RECEPT-G219 LAB, FLOOR 4 | 20 A | 1 | 720 VA | 720 VA | | | | | 1 | 20 A | RECEPT-G221 LAB, FLOORBOX 3 | 56 |
| 57 | RECEPT-G219 LAB, FLOOR 5 | 20 A | 1 | | | 720 VA | 720 VA | | | 1 | 20 A | RECEPT-G221 LAB, FLOORBOX 4 | 58 |
| 59 | RECEPT-G219 LAB, FLOOR 6 | 20 A | 1 | | | | | 720 VA | 720 VA | 1 | 20 A | RECEPT-G221 LAB, FLOORBOX 5 | 60 |
| 61 | RECEPT-G219, G221 PROJECTORS | 20 A | 1 | 1120 VA | 720 VA | | | | | 1 | 20 A | RECEPT-G221 LAB, FLOORBOX 6 | 62 |
| 63 | RECEPT-G219 COMPUTER LAB | 20 A | 1 | | | 1080 VA | 900 VA | | | 1 | 20 A | RECEPT-G221 COMPUTER LAB | 64 |
| 65 | HAND DRYER-G203T GIRLS | 15 A | 2 | | | | | 780 VA | 1080 VA | 1 | 20 A | RECEPT-G204T, G203T, G202M | 66 |
| 67 | -- | -- | -- | 780 VA | 1440 VA | | | | | 1 | 20 A | RECEPT-G200M, G202S, ROOF | 68 |
| 69 | HAND DRYER-G204T BOYS | 15 A | 2 | | | 780 VA | 360 VA | | | 1 | 20 A | RECEPT-G202C COMM WALL | 70 |
| 71 | -- | -- | -- | | | | | 780 VA | 1500 VA | 1 | 20 A | UPS-G202C COMM | 72 |
| 73 | LIGHTING-G200 ELEV MACHINE ROOM | 20 A | 1 | 267 VA | 200 VA | | | | | 1 | 20 A | DCP-G202C COMM | 74 |
| 75 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | ELEVATOR 1 - CAB LIGHTS & AC | 76 |
| 77 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 78 |
| 79 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 80 |
| 81 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 82 |
| 83 | SPARE | 20 A | 1 | | | | | 100 VA | 1000 VA | 1 | 20 A | SPARE | 84 |
| | | | **TOTAL LOAD:** | 23719 VA | | 25652 VA | | 22456 VA | | | | | |
| | | | **TOTAL AMPS:** | 199 A | | 215 A | | 187 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 3546 VA | 125.00% | 4433 VA | | |
| Receptacle | 36000 VA | 63.89% | 23000 VA | **CONNECTED LOAD:** | 71830 VA |
| Appliance | 20984 VA | 99.06% | 20787 VA | **ESTIMATED DEMAND:** | 50685 VA |
| Motor | 2000 VA | 100.00% | 2000 VA | **CONNECTED CURRENT:** | 199 A |
| Spare | 9300 VA | 5.00% | 465 VA | **EMD CURRENT:** | 141 A |

## PANEL: LH1

**LOCATION:** ELEC H104E | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 225 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 225A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-CONTROL BOOTH #1 | 20 A | 1 | 360 VA | 200 VA | | | | | 1 | 20 A | RG CONTROL POWER | 2 |
| 3 | RECEPT-CONTROL BOOTH #2 | 20 A | 1 | | | 360 VA | 1500 VA | | | 1 | 20 A | RELAY RH-17 (ADD #3) | 4 |
| 5 | SPARE | 20 A | 1 | | | | | 1000 VA | 1500 VA | 1 | 20 A | RELAY RH-18 | 6 |
| 7 | RECEPT-STAGE RIGGING CONTROLLER | 20 A | 1 | 800 VA | 1500 VA | | | | | 1 | 20 A | RELAY RH-19 | 8 |
| 9 | LIGHTS-DRESSING H108 MAKE-UP... | 20 A | 1 | | | 1440 VA | 1500 VA | | | 1 | 20 A | RELAY RH-20 | 10 |
| 11 | LIGHTS-DRESSING H109 MAKE-UP... | 20 A | 1 | | | | | 1500 VA | 300 VA | 1 | 20 A | RELAY RH-21 | 12 |
| 13 | LIGHTS-DRESSING ROOM FRESNELS | 20 A | 1 | 400 VA | 720 VA | | | | | 1 | 20 A | RECEPT-H202 MEZZANINE, ROOF | 14 |
| 15 | RECEPT-DRESSING H108, COUNTER 1 | 20 A | 1 | | | 1500 VA | 360 VA | | | 1 | 20 A | RECEPT-H107 COMM WALL | 16 |
| 17 | RECEPT-DRESSING H108, COUNTER 2 | 20 A | 1 | | | | | 1500 VA | 1500 VA | 1 | 20 A | UPS-H107 COMM | 18 |
| 19 | RECEPT-DRESSING H108, COUNTER 3 | 20 A | 1 | 1500 VA | 200 VA | | | | | 1 | 20 A | DCP-H107 COMM | 20 |
| 21 | RECEPT-DRESSING H108, COUNTER 4 | 20 A | 1 | | | 1500 VA | 1500 VA | | | 1 | 20 A | RECEPT-DRESSING H109, COUNTER 1 | 22 |
| 23 | RECEPT-DRESSING H108, COUNTER 5 | 20 A | 1 | | | | | 1500 VA | 1500 VA | 1 | 20 A | RECEPT-DRESSING H109, COUNTER 2 | 24 |
| 25 | LIGHTING-WEST MAKE-UP MIRROR H109 | 20 A | 1 | 1800 VA | 1500 VA | | | | | 1 | 20 A | RECEPT-DRESSING H109, COUNTER 3 | 26 |
| 27 | LIGHTING-WEST MAKE-UP H108 | 20 A | 1 | | | 1200 VA | 1500 VA | | | 1 | 20 A | RECEPT-DRESSING H109, COUNTER 4 | 28 |
| 29 | RECEPT-G117 BAND FLOORBOXES | 20 A | 1 | | | | | 1260 VA | 1500 VA | 1 | 20 A | RECEPT-DRESSING H109, COUNTER 5 | 30 |
| 31 | EWC-G117 BAND EAST** | 15 A | 1 | 360 VA | 720 VA | | | | | 1 | 20 A | RECEPT-DRESSING H108, H109, TOILET... | 32 |
| 33 | EWC-G117 BAND WEST** | 15 A | 1 | | | 360 VA | 500 VA | | | 1 | 20 A | COILING DOOR-G118S | 34 |
| 35 | RECEPT-G119T, G120T TOILETS | 20 A | 1 | | | | | 360 VA | 540 VA | 1 | 20 A | RECEPT-STAGE RIGHT, REAR | 36 |
| 37 | EWC-G120T, G119T TOILETS** | 15 A | 1 | 360 VA | 540 VA | | | | | 1 | 20 A | RECEPT-STAGE LEFT, REAR | 38 |
| 39 | RECEPT-H100 EXCEL, H101S, H102 ORCH | 20 A | 1 | | | 1440 VA | 760 VA | | | 1 | 20 A | RECEPT-G117 BAND PROJECTOR | 40 |
| 41 | DCP-H121V | 20 A | 1 | | | | | 200 VA | 900 VA | 1 | 20 A | RECEPT-G118S INSTRUMENT | 42 |
| 43 | HAND DRYER-G119T 1 | 15 A | 2 | 780 VA | 1100 VA | | | | | 1 | 20 A | RECEPT-H100 EXCEL, H102 ORCH... | 44 |
| 45 | -- | -- | -- | | | 780 VA | 500 VA | | | -- | -- | SCREEN-G107 BAND | 46 |
| 47 | HAND DRYER-G119T 2 | 15 A | 2 | | | | | 780 VA | 1080 VA | 1 | 20 A | RECEPT-H100 EXCEL, H101S, H102 ORCH | 48 |
| 49 | -- | -- | -- | 780 VA | 720 VA | | | | | 1 | 20 A | RECEPT-H103C, H110C CORRIDOR | 50 |
| 51 | HAND DRYER-G120T 1 | 15 A | 2 | | | 780 VA | 540 VA | | | 1 | 20 A | RECEPT-H102 ORCH | 52 |
| 53 | -- | -- | -- | | | | | 780 VA | 900 VA | 1 | 20 A | RECEPT-H117S, H118 SOUND LOCK | 54 |
| 55 | HAND DRYER-G120T 2 | 15 A | 2 | 780 VA | 540 VA | | | | | 1 | 20 A | RECEPT-RH-DOOR 2 (ADD #3) | 56 |
| 57 | -- | -- | -- | | | 780 VA | 540 VA | | | 1 | 20 A | RECEPT-H108, H210 SOUND LOCKS | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 70 |
| 71 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 72 |
| 73 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 74 |
| 75 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 76 |
| 77 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | | **TOTAL LOAD:** | 21660 VA | | 25340 VA | | 26600 VA | | | | | |
| | | | **TOTAL AMPS:** | 181 A | | 216 A | | 226 A | | | | | |

| LOAD CLASSIFIC

## PANEL: LH1B

**LOCATION:** STAGECRAFT H112 | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 225 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 225A | **WIRES:** 4 | **SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE. SHUNT-TRIP MAIN CIRCUIT BREAKER

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OVERHEAD DOOR-H112 STAGECRAFT... | 20 A | 1 | 800 VA | 180 VA | | | | | 1 | 20 A | RECEPT-H112 STAGECRAFT SOUTH | 2 |
| 3 | OVERHEAD DOOR-H112 STAGE DOOR | 20 A | 1 | | | 800 VA | 180 VA | | | 1 | 20 A | RECEPT-STAGECRAFT H112 EAST 1 | 4 |
| 5 | RECEPT-STAGECRAFT H112 WEST 1 | 20 A | 1 | | | | | 360 VA | 180 VA | 1 | 20 A | RECEPT-STAGECRAFT H112 EAST 2 | 6 |
| 7 | RECEPT-STAGECRAFT H112 WEST 2 | 20 A | 1 | 180 VA | 180 VA | | | | | 1 | 20 A | RECEPT-STAGECRAFT H112 EAST 3 | 8 |
| 9 | RECEPT-STAGECRAFT H112 WEST 3 | 20 A | 1 | | | 180 VA | 1000 VA | | | 1 | 20 A | SPARE | 10 |
| 11 | RECEPT-STAGECRAFT H112 BY SINK | 20 A | 1 | | | | | 180 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SHORE POWER BUS (FUTURE) | 50 A | 3 | 2500 VA | 1440 VA | | | | | 3 | 30 A | TABLE SAW-FLOOR OUTLET | 14 |
| 15 | -- | -- | -- | | | 2500 VA | 1440 VA | | | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | | | 2500 VA | 1440 VA | -- | -- | -- | 18 |
| 19 | SHORE POWER SEMI (FUTURE) | 50 A | 3 | 2500 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | -- | -- | -- | | | 2500 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | -- | -- | -- | | | | | 2500 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SHORE POWER RV (FUTURE) | 50 A | 3 | 2500 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | -- | -- | -- | | | 2500 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | -- | -- | -- | | | | | 2500 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 5000 VA | | | | | 3 | 100 A | SHORE POWER VIDEO (FUTURE) | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 5000 VA | | | -- | -- | -- | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 5000 VA | -- | -- | -- | 42 |
| | | **TOTAL LOAD:** | | 20280 VA | | 21100 VA | | 20660 VA | | | | | |
| | | **TOTAL AMPS:** | | 169 A | | 176 A | | 173 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 5760 VA | 100.00% | 5760 VA | | |
| Appliance | 1600 VA | 100.00% | 1600 VA | **CONNECTED LOAD:** | 62040 VA |
| Motor | 180 VA | 100.00% | 180 VA | **ESTIMATED DEMAND:** | 10265 VA |
| Spare | 54500 VA | 5.00% | 2725 VA | **CONNECTED CURRENT:** | 172 A |
| | | | | **EMD CURRENT:** | 28 A |

ADD #3

## PANEL: LH2

**LOCATION:** MECH G202M | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 225 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** | **WIRES:** 4 | **SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-H204, H205 PAC NORTH | 20 A | 1 | 720 VA | 720 VA | | | | | 1 | 20 A | RECEPT-PAC BALCONY | 2 |
| 3 | SCREEN - PAC PROJECTION | 20 A | 1 | | | 960 VA | 1080 VA | | | 1 | 20 A | RECEPT-H116 PAC CENTER REAR | 4 |
| 5 | RECEPT-CATWALK HOUSE | 20 A | 1 | | | | | 540 VA | 1800 VA | 1 | 20 A | FOLLOWSPOT | 6 |
| 7 | FOLLOWSPOT-NORTH | 20 A | 1 | 1800 VA | 1080 VA | | | | | 1 | 20 A | Receptacle | 8 |
| 9 | SPARE | 20 A | 1 | | | 1000 VA | 925 VA | | | 2 | 20 A | PAC PROJECTOR | 10 |
| 11 | SPARE | 20 A | 1 | | | | | 1000 VA | 925 VA | -- | -- | -- | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 42 |
| | | **TOTAL LOAD:** | | 12320 VA | | 11965 VA | | 12265 VA | | | | | |
| | | **TOTAL AMPS:** | | 103 A | | 100 A | | 103 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 4140 VA | 100.00% | 4140 VA | | |
| Appliance | 2810 VA | 100.00% | 2810 VA | **CONNECTED LOAD:** | 36550 VA |
| Spare | 26000 VA | 5.00% | 1300 VA | **ESTIMATED DEMAND:** | 11850 VA |
| | | | | **CONNECTED CURRENT:** | 101 A |
| | | | | **EMD CURRENT:** | 33 A |

## PANEL: LJ1

**LOCATION:** ELEC J109E | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 150 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 150A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-COMMONS COUNTER NW | 20 A | 1 | 1500 VA | 200 VA | | | | | 1 | 20 A | RJ CONTROL POWER | 2 |
| 3 | RECEPT-COMMONS COUNTER SE | 20 A | 1 | | | 1500 VA | 800 VA | | | 1 | 20 A | RECEPT-TV, J112 STAFF | 4 |
| 5 | RECEPT-COMMONS COUNTER SW | 20 A | 1 | | | | | 1500 VA | 1560 VA | 1 | 20 A | RECEPT-TV, J126, J125, J124 | 6 |
| 7 | DCP-J116 ADMIN | 20 A | 1 | 200 VA | 1200 VA | | | | | 1 | 20 A | RECEPT-TV, J123, J122, J121 | 8 |
| 9 | RECEPT-ADMIN CORR J113S STRG, ROOF | 20 A | 1 | | | 1260 VA | 800 VA | | | 1 | 20 A | RECEPT-TV, J120, J119 OFFICES | 10 |
| 11 | RECEPT-J116 ADMIN | 20 A | 1 | | | | | 720 VA | 1080 VA | 1 | 20 A | RECEPT-J126 OFFICE, J125 CONF RM | 12 |
| 13 | REFRIGERATOR-J117 STAFF** | 20 A | 1 | 800 VA | 1080 VA | | | | | 1 | 20 A | RECEPT-J124 SRO, J123 OFFICE | 14 |
| 15 | DISHWASHER-J112 STAFF** | 20 A | 1 | | | 1200 VA | 1080 VA | | | 1 | 20 A | RECEPT-J122 OFFICE, J121 OFFICE | 16 |
| 17 | MICROWAVE-J112 STAFF** | 20 A | 1 | | | | | 1450 VA | 1080 VA | 1 | 20 A | RECEPT-J120 OFFICE, J119 OFFICE | 18 |
| 19 | DISPOSAL-J112 STAFF** | 20 A | 1 | 950 VA | 1080 VA | | | | | 1 | 20 A | RECEPT-J106 OFFICE, J105 OFFICE, J104... | 20 |
| 21 | RECEPT-J112 STAFF | 20 A | 1 | | | 1080 VA | 800 VA | | | 1 | 20 A | RECEPT-COPIER J104 WORKROOM | 22 |
| 23 | DCP-J113S STORAGE | 20 A | 1 | | | | | 200 VA | 1200 VA | 1 | 20 A | DCP, AUTO | 24 |
| 25 | RECEPT-J110T, J111T TOILETS | 20 A | 1 | 540 VA | 540 VA | | | | | 1 | 20 A | RECEPT-J103 ATTENDANCE | 26 |
| 27 | HAND DRYER-J110T MENS | 15 A | 2 | | | 780 VA | 720 VA | | | 1 | 20 A | RECEPT-J102 WAITING, J101C WEST | 28 |
| 29 | -- | -- | -- | | | | | 780 VA | 1200 VA | 1 | 20 A | DCP, AUTO OPERATORS-J113W ENTRANCE | 30 |
| 31 | HAND DRYER-J111T WOMENS | 15 A | 2 | 780 VA | 360 VA | | | | | 1 | 20 A | RECEPT-J101C COMMONS, PAC WALL | 32 |
| 33 | -- | -- | -- | | | 780 VA | 720 VA | | | 1 | 20 A | RECEPT-TV, J131 COMMONS | 34 |
| 35 | COILING DOOR-J200 TOP OF STAIRS | 20 A | 1 | | | | | 500 VA | 1260 VA | 1 | 20 A | RELAY RJ-21,22 | 36 |
| 37 | RECEPT-J108 COMM WALL | 20 A | 1 | 360 VA | 1000 VA | | | | | 1 | 20 A | RELAY RJ-23,24 | 38 |
| 39 | DCP-J108 COMM | 20 A | 1 | | | 200 VA | 1500 VA | | | 1 | 20 A | UPS-J108 COMM | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 720 VA | 1 | 20 A | RECEPT-J131 COMMONS COLUMNS | 42 |
| 43 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 44 |
| 45 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 46 |
| 47 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 48 |
| 49 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 50 |
| 51 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 52 |
| 53 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 54 |
| 55 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 56 |
| 57 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 70 |
| 71 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | **TOTAL LOAD:** | | 20590 VA | | 23220 VA | | 22250 VA | | | | | |
| | | **TOTAL AMPS:** | | 172 A | | 196 A | | 188 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 1260 VA | 125.00% | 1575 VA | | |
| Receptacle | 14230 VA | 85.14% | 12115 VA | **CONNECTED LOAD:** | 66060 VA |
| Appliance | 20170 VA | 99.83% | 20136 VA | **ESTIMATED DEMAND:** | 35536 VA |
| Spare | 30200 VA | 5.00% | 1510 VA | **CONNECTED CURRENT:** | 183 A |
| | | | | **EMD CURRENT:** | 99 A |

## PANEL: LK1

**LOCATION:** ELEC K127E | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 100 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 100A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ENGINE BLOCK HEATER-GENERATOR | 20 A | 1 | 1500 VA | 200 VA | | | | | 1 | 20 A | RELAY PANEL RK CONTROL POWER | 2 |
| 3 | GENERATOR CONTROL POWER | 20 A | 1 | | | 180 VA | 350 VA | | | 1 | 20 A | RELAY RK-21,22 | 4 |
| 5 | GENERATOR BATTERY CHARGER | 20 A | 1 | | | | | 200 VA | 1000 VA | 1 | 20 A | RELAY RK-23 | 6 |
| 7 | RECEPT-K127 MECH ROOM SOUTH | 20 A | 1 | 540 VA | 1000 VA | | | | | 1 | 20 A | RELAY RK-24 | 8 |
| 9 | DCP-MAIN ELECTRICAL | 20 A | 1 | | | 200 VA | 1440 VA | | | 1 | 20 A | RECEPT-K127 MECH NORTH, ROOF | 10 |
| 11 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | 1 | 20 A | FIRE/SMOKE DAMPERS | 42 |
| | | **TOTAL LOAD:** | | 11240 VA | | 10170 VA | | 9200 VA | | | | | |
| | | **TOTAL AMPS:** | | 95 A | | 86 A | | 77 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 1350 VA | 125.00% | 1688 VA | | |
| Receptacle | 1980 VA | 100.00% | 1980 VA | **CONNECTED LOAD:** | 30610 VA |
| Appliance | 580 VA | 100.00% | 580 VA | **ESTIMATED DEMAND:** | 7008 VA |
| Heating | 1500 VA | 100.00% | 1500 VA | **CONNECTED CURRENT:** | 85 A |
| Spare | 25200 VA | 5.00% | 1260 VA | **EMD CURRENT:** | 19 A |

## PANEL: LK1B

**LOCATION:** ELEC K103E | **VOLTS:** 120/208 Wye | **MOUNTING:** SURFACE
**BUS RATING:** 150 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 150A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SOUND-AMP RACK #1 | 20 A | 1 | 600 VA | 200 VA | | | | | 1 | 20 A | RELAY PANEL "RKB" CONTROL POWER | 2 |
| 3 | SOUND-AMP RACK #2 | 20 A | 1 | | | 600 VA | 1080 VA | | | 1 | 20 A | EWC-J131C COMMONS** | 4 |
| 5 | SOUND-AMP RACK #3 | 20 A | 1 | | | | | 600 VA | 1440 VA | 1 | 20 A | RECEPT-K115T BOYS, K114T GIRLS | 6 |
| 7 | RECEPT-TV JS201 CORRIDOR | 20 A | 1 | 400 VA | 400 VA | | | | | 1 | 20 A | DCP-K125 RECEIVING | 8 |
| 9 | RECEPT-J131 COMMONS DISPLAY | 20 A | 1 | | | 720 VA | 780 VA | | | 2 | 15 A | HAND DRYER-K115T BOYS 1 | 10 |
| 11 | RECEPT-K104 STAFF, K114 OFFICE | 20 A | 1 | | | | | 1260 VA | 780 VA | -- | -- | -- | 12 |
| 13 | DISPOSAL-K104 STAFF** | 20 A | 1 | 950 VA | 780 VA | | | | | 2 | 15 A | HAND DRYER-K115T BOYS 2 | 14 |
| 15 | RECEPT-K107T, K106T, K103 BUILDING | 20 A | 1 | | | 720 VA | 780 VA | | | -- | -- | -- | 16 |
| 17 | RECEPT-K103 BUILDING SERVICES, ROOF | 20 A | 1 | | | | | 900 VA | 780 VA | 2 | 15 A | HAND DRYER-K115T BOYS 3 | 18 |
| 19 | HAND DRYER-K114T GIRLS 1 | 15 A | 2 | 780 VA | 780 VA | | | | | -- | -- | -- | 20 |
| 21 | -- | -- | -- | | | 780 VA | 780 VA | | | 2 | 15 A | HAND DRYER-K115T BOYS 4 | 22 |
| 23 | HAND DRYER-K114T GIRLS 2 | 15 A | 2 | | | | | 780 VA | 780 VA | -- | -- | -- | 24 |
| 25 | -- | -- | -- | 780 VA | 780 VA | | | | | 2 | 15 A | HAND DRYER-K115T BOYS 5 | 26 |
| 27 | HAND DRYER-K114T GIRLS 3 | 15 A | 2 | | | 780 VA | 780 VA | | | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | | | 780 VA | 780 VA | 2 | 15 A | HAND DRYER-K107T MENS | 30 |
| 31 | HAND DRYER-K114T GIRLS 4 | 15 A | 2 | 780 VA | 780 VA | | | | | -- | -- | -- | 32 |
| 33 | -- | -- | -- | | | 780 VA | 780 VA | | | 2 | 15 A | HAND DRYER-K106T WOMENS | 34 |
| 35 | HAND DRYER-K114T GIRLS 5 | 15 A | 2 | | | | | 780 VA | 780 VA | -- | -- | -- | 36 |
| 37 | -- | -- | -- | 780 VA | 1080 VA | | | | | 1 | 20 A | RECEPT-L137S, L137A, L137B OFFICES | 38 |
| 39 | HAND DRYER-K114T GIRLS 6 | 15 A | 2 | | | 780 VA | 540 VA | | | 1 | 20 A | RECEPT-L109 WALKWAY NORTH, ROOF | 40 |
| 41 | -- | -- | -- | | | | | 780 VA | 720 VA | 1 | 20 A | RECEPT-L137S STORAGE | 42 |
| 43 | UPS-K103C COMM | 20 A | 1 | 1500 VA | 1000 VA | | | | | 1 | 20 A | COILING DOOR-K125 RECEIVING | 44 |
| 45 | RECEPT-K103C COMM WALL | 20 A | 1 | | | 360 VA | 1000 VA | | | 1 | 20 A | SPARE | 46 |
| 47 | DCP-K103C COMM | 20 A | 1 | | | | | 200 VA | 1000 VA | 1 | 20 A | SPARE | 48 |
| 49 | RECEPT-REFRIGERATOR BREAKER RM** | 20 A | 1 | 800 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 50 |
| 51 | RECEPT-K103 CUSTODIAL, K103E ELEC | 20 A | 1 | | | 720 VA | 1000 VA | | | 1 | 20 A | SPARE | 52 |
| 53 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 54 |
| 55 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 56 |
| 57 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 70 |
| 71 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 72 |
| 73 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 74 |
| 75 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 76 |
| 77 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | **TOTAL LOAD:** | | 22170 VA | | 21760 VA | | 23140 VA | | | | | |
| | | **TOTAL AMPS:** | | 185 A | | 181 A | | 193 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 9360 VA | 100.00% | 9360 VA | | |
| Appliance | 25530 VA | 95.67% | 24424 VA | **CONNECTED LOAD:** | 67070 VA |
| Motor | 180 VA | 100.00% | 180 VA | **ESTIMATED DEMAND:** | 37274 VA |
| Spare | 30200 VA | 5.00% | 1510 VA | **CONNECTED CURRENT:** | 186 A |
| | | | | **EMD CURRENT:** | 103 A |

## PANEL: LKIT1

**LOCATION:** STAGING K135 | **VOLTS:** 120/208 Wye | **MOUNTING:** FLUSH
**BUS RATING:** 225 A | **PHASES:** 3 | **FED FROM:** SEE ONE-LINE
**MAIN BREAKER:** 225A | **WIRES:** 4 | **SCCR:** SEE ONE-LINE

**NOTES:**
NEMA 4X ENCLOSURE. **INDICATES GFI CIRCUIT BREAKER.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27-DISPOSER | 15 A | 3 | 746 VA | 541 VA | | | | | 2 | 15 A | 34-PRODUCE WASHER | 2 |
| 3 | -- | -- | -- | | | 746 VA | 541 VA | | | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | | | 746 VA | 2496 VA | 2 | 30 A | 39-HOT WATER DISPENSER | 6 |
| 7 | 41-MOBILE PASS-THRU HOT CABINET | 20 A | 1 | 2316 VA | 2496 VA | | | | | -- | -- | -- | 8 |
| 9 | 72-ROLL-IN REFRIGERATOR** | 20 A | 1 | | | 1368 VA | 912 VA | | | 1 | 20 A | 82-REFRIGERATED DELI COUNTER | 10 |
| 11 | 84-REFRIGERATED DELI COUNTER | 20 A | 1 | | | | | 912 VA | 1632 VA | 1 | 20 A | 105-MILK COOLER | 12 |
| 13 | 154-BLAST CHILLER | 25 A | 3 | 1203 VA | 900 VA | | | | | 1 | 20 A | RECEPT-STAGING K135 NORTH | 14 |
| 15 | -- | -- | -- | | | 1203 VA | 2046 VA | | | 3 | 20 A | 155A-SOFT SERVE ICE CREAM | 16 |
| 17 | -- | -- | -- | | | | | 1203 VA | 2046 VA | -- | -- | -- | 18 |
| 19 | 155B-SOFT SERVE ICE CREAM | 20 A | 3 | 1805 VA | 2046 VA | | | | | -- | -- | -- | 20 |
| 21 | -- | -- | -- | | | 1805 VA | 2040 VA | | | 1 | 20 A | 176-MICROWAVE | 22 |
| 23 | -- | -- | -- | | | | | 1805 VA | 360 VA | 1 | 20 A | RECEPT-K134 COLD PREP | 24 |
| 25 | 33-REACH-IN REFRIGERATOR** | 20 A | 1 | 1092 VA | 1244 VA | | | | | 1 | 20 A | 180,182-CAN OPENER, SLICER | 26 |
| 27 | 184-20QT MIXER | 20 A | 1 | | | 984 VA | 2004 VA | | | 1 | 20 A | 185-HOT PROOF CABINET | 28 |
| 29 | 198-REACH-IN DISPLAY REFRIGERATOR | 20 A | 1 | | | | | 624 VA | 1350 VA | 1 | 20 A | 201-COOKIE OVEN | 30 |
| 31 | 202-REACH-IN FREEZER** | 20 A | 1 | 864 VA | 1920 VA | | | | | 1 | 20 A | 203-MOBILE HOT CABINET** | 32 |
| 33 | 204-REACH-IN DISPLAY REFRIGERATOR** | 20 A | 1 | | | 864 VA | 1320 VA | | | 1 | 20 A | 205-REACH-IN DISPLAY REFRIGERATOR** | 34 |
| 35 | 212-COUNTERTOP DISPLAY WARMER | 20 A | 1 | | | | | 1512 VA | 704 VA | 1 | 20 A | 210A-NACHO CHEESE DISPENSER | 36 |
| 37 | RECEPT-K134 COLD PREP | 20 A | 1 | 720 VA | 1500 VA | | | | | 1 | 20 A | 236,241A,241B-POINT OF SALE | 38 |
| 39 | RECEPT-MENU BOARDS/TV | 20 A | 1 | | | 560 VA | 540 VA | | | 1 | 20 A | RECEPT-K134 COLD PREP ISLAND | 40 |
| 41 | 218-HOT SERVING COUNTER | 20 A | 2 | | | | | 1365 VA | 1176 VA | 1 | 20 A | COILING DOOR-K124 | 42 |
| 43 | -- | -- | -- | 1365 VA | 1365 VA | | | | | 2 | 20 A | 219-HOT SERVING COUNTER | 44 |
| 45 | 210B-NACHO CHEESE DISPENSER | 20 A | 1 | | | 204 VA | 1365 VA | | | -- | -- | -- | 46 |
| 47 | RECEPT-PIT STOP, COMMONS, WALKWAY | 20 A | 1 | | | | | 360 VA | 1176 VA | 1 | 20 A | COILING DOOR-K122 | 48 |
| 49 | 100B-DROP IN HOT WELL | 20 A | 1 | 1320 VA | 2820 VA | | | | | 1 | 30 A | 217-OPEN REFRIGERATED DISPLAY CASE | 50 |
| 51 | 220B-SERVING COUNTER | 20 A | 1 | | | 500 VA | 1260 VA | | | 1 | 20 A | 101A, 102A, 103A--SERVING COUNTER... | 52 |
| 53 | RECEPT-K124 PIT STOP | 20 A | 1 | | | | | 360 VA | 360 VA | 1 | 20 A | RECEPT-K124 PIT STOP 1 | 54 |
| 55 | SPARE | 20 A | 1 | 1000 VA | 360 VA | | | | | 1 | 20 A | RECEPT-K124 PIT STOP 2 | 56 |
| 57 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 70 |
| 71 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | **TOTAL LOAD:** | | 31623 VA | | 26262 VA | | 24187 VA | | | | | |
| | | **TOTAL AMPS:** | | 266 A | | 222 A | | 202 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMA

## PANEL: LKIT2

**LOCATION:** CORR, K117C
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** FLUSH
**FED FROM:** SEE ONE-LINE
**SCCR:**

**NOTES:**
NEMA 4X ENCLOSURE. **INDICATES GFI CIRCUIT BREAKER.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2-DISH CONVEYOR | 20 A | 2 | 718 VA 744 VA | | | 3 | 15 A | 68-DISPOSER WAREWASHING | 2 |
| 3 | -- | -- | -- | | 718 VA 744 VA | | -- | -- | -- | 4 |
| 5 | 25,179-TRAY SEALER, MIXER | 20 A | 1 | | | 950 VA 744 VA | -- | -- | -- | 6 |
| 7 | SPARE | 30 A | 2 | 1000 VA 400 VA | | | 2 | 20 A | 157-COMBINATION OVEN STEAMER | 8 |
| 9 | -- | -- | -- | | 1000 VA 400 VA | | -- | -- | -- | 10 |
| 11 | 12-INSECT LIGHT | 15 A | 1 | | | 124 VA 0 VA | -- | -- | SHUNT-TRIP ACCESSORY | 12 |
| 13 | 45-MOBILE HOT/PROOF CABINET | 20 A | 1 | 1650 VA 600 VA | | | 1 | 20 A | 188-TILTING GAS SKILLET | 14 |
| 15 | 46-MOBILE PASS-THRU FREEZER | 20 A | 1 | | 1380 VA 0 VA | | -- | -- | SHUNT-TRIP ACCESSORY | 16 |
| 17 | 48-CONVECTION STEAMER | 20 A | 1 | | | 240 VA 1512 VA | 1 | 20 A | 191-ICE MAKER** | 18 |
| 19 | SHUNT-TRIP ACCESSORY | -- | -- | 0 VA 2004 VA | | | 1 | 20 A | 196A-MOBILE HOT CABINET | 20 |
| 21 | 50-COMBINATION OVEN STEAMER | 20 A | 2 | | 400 VA 2004 VA | | 1 | 20 A | 196B-MOBILE HOT CABINET | 22 |
| 23 | -- | -- | -- | | | 400 VA 1440 VA | 1 | 20 A | 226-MOBILE HOT CABINET | 24 |
| 25 | SHUNT-TRIP ACCESSORY | -- | -- | 0 VA 1104 VA | | | 1 | 20 A | 230-REACH-IN DISPLAY REFRIGERATOR | 26 |
| 27 | 51A-DOUBLE CONVECTION OVEN | 20 A | 1 | | 864 VA 1680 VA | | 1 | 20 A | 241D,241E-POINT OF SALE | 28 |
| 29 | SHUNT-TRIP ACCESSORY | -- | -- | | | 0 VA 360 VA | 1 | 20 A | RECEPT-K133 HOT PREP END OF HOOD | 30 |
| 31 | 51B-DOUBLE CONVECTION OVEN | 20 A | 1 | 864 VA 0 VA | | | -- | -- | SHUNT-TRIP ACCESSORY | 32 |
| 33 | SHUNT-TRIP ACCESSORY | -- | -- | | 0 VA 1176 VA | | 1 | 20 A | COILING DOOR-K122 | 34 |
| 35 | 60-CAN OPENER | 20 A | 1 | | | 144 VA 1176 VA | 1 | 20 A | COILING DOOR-K118 | 36 |
| 37 | 106B,106C-MILK COOLERS | 20 A | 1 | 1632 VA 720 VA | | | 1 | 20 A | RECEPT-K118 TRAY RETURN | 38 |
| 39 | KITCHEN HOOD CONTROL CABINET | 20 A | 1 | | 200 VA 720 VA | | 1 | 20 A | RECEPT-STAGING K135 | 40 |
| 41 | RECEPT-OFFICE K121 | 20 A | 1 | | | 900 VA 720 VA | 1 | 20 A | RECEPT-K128 BULK STORAGE, K117C... | 42 |
| 43 | 229-OPEN REFRIGERATED DISPLAY CASE | 30 A | 1 | 2820 VA 900 VA | | | 1 | 20 A | RECEPT-K119 STORAGE, K135 SOUTH... | 44 |
| 45 | RECEPT-SERVING ISLANDS | 20 A | 1 | | 360 VA 1083 VA | | 2 | 15 A | 86-CONVEYOR OVEN HOOD | 46 |
| 47 | 100-DROP IN HOT WELL | 20 A | 1 | | | 1320 VA 1083 VA | -- | -- | -- | 48 |
| 49 | 220A-UTILITY SERVING COUNTER | 20 A | 2 | 1238 VA 1000 VA | | | 1 | 20 A | SPARE | 50 |
| 51 | -- | -- | -- | | 1238 VA 720 VA | | 1 | 20 A | 67A-CONVEYOR OVEN NO 1 | 52 |
| 53 | RECEPT-SOUTH WALL SERVERY | 20 A | 1 | | | 180 VA 0 VA | -- | -- | SHUNT-TRIP ACCESSORY | 54 |
| 55 | 221B-SERVING COUNTER | 20 A | 1 | 500 VA 720 VA | | | 1 | 20 A | 67B-CONVEYOR OVEN NO 2 | 56 |
| 57 | 221A-UTILITY SERVING COUNTER | 20 A | 2 | | 1238 VA 0 VA | | -- | -- | SHUNT-TRIP ACCESSORY | 58 |
| 59 | -- | -- | -- | | | 1238 VA 1440 VA | 1 | 20 A | 223-SERVING COUNTER | 60 |
| 61 | 224-SERVING COUNTER | 20 A | 1 | 1440 VA 1260 VA | | | 1 | 20 A | 101B,102B-SERVING COUNTER... | 62 |
| 63 | RECEPT-CORR. K117C | 20 A | 1 | | 540 VA 1524 VA | | 3 | 25 A | 4-CONVEYOR DISPOSER | 64 |
| 65 | DRYER-K116 LAUNDRY | 40 A | 2 | | | 2500 VA 1524 VA | -- | -- | -- | 66 |
| 67 | -- | -- | -- | 2500 VA 1524 VA | | | -- | -- | -- | 68 |
| 69 | WASHING MASHINE K116** | 20 A | 1 | | 500 VA 1000 VA | | 1 | 20 A | SPARE | 70 |
| 71 | RECEPT-K116 LAUNDRY, K113J UTIL | 20 A | 1 | | | 900 VA 1000 VA | 1 | 20 A | SPARE | 72 |
| 73 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 74 |
| 75 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 76 |
| 77 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 78 |
| 79 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 80 |
| 81 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 82 |
| 83 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 84 |
| | | | **TOTAL LOAD:** | 29338 VA | 23489 VA | 23895 VA | | | | |
| | | | **TOTAL AMPS:** | 245 A | 196 A | 200 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 10940 VA | 95.70% | 10470 VA | | |
| Kitchen | 45550 VA | 65.00% | 29608 VA | **CONNECTED LOAD:** | 76722 VA |
| Appliance | 880 VA | 100.00% | 880 VA | **ESTIMATED DEMAND:** | 44160 VA |
| Motor | 2352 VA | 100.00% | 2352 VA | **CONNECTED CURRENT:** | 213 A |
| Spare | 17000 VA | 5.00% | 850 VA | **EMD CURRENT:** | 123 A |

## PANEL: LL1

**LOCATION:** ELEC L100E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EWC-L106 MAIN GYM** | 15 A | 1 | 360 VA 200 VA | | | 1 | 20 A | RELAY PANEL "RL" CONTROL POWER | 2 |
| 3 | RECEPT-L106C CORRIDOR | 20 A | 1 | | 1260 VA 1324 VA | | 3 | 20 A | BLEACHERS-MAIN GYM EAST | 4 |
| 5 | RECEPT-L100 TOILETS 1 | 20 A | 1 | | | 180 VA 1324 VA | -- | -- | -- | 6 |
| 7 | RECEPT-L100 TOILETS 2 | 20 A | 1 | 180 VA 1324 VA | | | -- | -- | -- | 8 |
| 9 | RECEPT-L100 MIRROR | 20 A | 1 | | 360 VA 1324 VA | | 3 | 20 A | BLEACHERS-MAIN GYM SOUTH | 10 |
| 11 | MAIN GYM-SCOREBOARDS EAST | 20 A | 1 | | | 1680 VA 1324 VA | -- | -- | -- | 12 |
| 13 | HAND DRYER-L100 GIRLS PE 1 | 15 A | 2 | 780 VA 1324 VA | | | -- | -- | -- | 14 |
| 15 | -- | -- | -- | | 780 VA 780 VA | | 2 | 20 A | HAND DRYER-M101 GIRLS LOCKER RM 1 | 16 |
| 17 | HAND DRYER-L100 GIRLS PE 2 | 15 A | 2 | | | 780 VA 780 VA | -- | -- | -- | 18 |
| 19 | -- | -- | -- | 780 VA 780 VA | | | 2 | 20 A | HAND DRYER-M101 GIRLS LOCKER RM 2 | 20 |
| 21 | HAND DRYER-L101 WOMENS COACH... | 15 A | 2 | | 780 VA 780 VA | | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 780 VA 360 VA | 1 | 20 A | RECEPT-M101 GIRLS LOCKER SINK | 24 |
| 25 | RECEPT-L100 GIRLS PE | 20 A | 1 | 360 VA 360 VA | | | 1 | 20 A | RECEPT-M101 GIRLS LOCKER SINK | 26 |
| 27 | RECEPT-L100 ENTRANCE, CLOCK | 20 A | 1 | | 380 VA 360 VA | | 1 | 20 A | RECEPT-M101 GIRLS LOCKER NORTH | 28 |
| 29 | RECEPT-L101 OFFICE AREA | 20 A | 1 | | | 720 VA 360 VA | 1 | 20 A | RECEPT-M101 GIRLS LOCKER MIRRORS | 30 |
| 31 | RECEPT-L101 BY MIRROR | 20 A | 1 | 180 VA 360 VA | | | 1 | 20 A | RECEPT-M101 GIRLS LOCKER CLOCK | 32 |
| 33 | RECEPT-L101 WOMEN COACH LOCKER | 20 A | 1 | | 360 VA 720 VA | | 1 | 20 A | RECEPT-M103 WEIGHT RM NORTH | 34 |
| 35 | DCP-L100, M102 | 20 A | 1 | | | 400 VA 180 VA | 1 | 15 A | EWC-M103 WEIGHT RM** | 36 |
| 37 | TV-M208 CONCESSIONS, WALL | 20 A | 1 | 1200 VA 720 VA | | | 1 | 20 A | RECEPT-M207, M303 ROOF, ROOF | 38 |
| 39 | TV-M208 CONCESSIONS, CEILING | 20 A | 1 | | 1940 VA 1200 VA | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 1 | 40 |
| 41 | COILING DOORS-M208 CONCESSIONS #1 | 20 A | 1 | | | 1000 VA 1200 VA | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 2 | 42 |
| 43 | COILING DOORS-M208 CONCESSIONS 2 | 20 A | 1 | 1000 VA 1200 VA | | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 3 | 44 |
| 45 | BUNKER COOLER-CONCESSION 1 | 20 A | 1 | | 1080 VA 1200 VA | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 4 | 46 |
| 47 | BUNKER COOLER-CONCESSION 2 | 20 A | 1 | | | 1080 VA 1200 VA | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 5 | 48 |
| 49 | BUNKER COOLER-CONCESSION 3 | 20 A | 1 | 1080 VA 1200 VA | | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 6 | 50 |
| 51 | BUNKER COOLER-CONCESSION 4 | 20 A | 1 | | 1080 VA 1200 VA | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 7 | 52 |
| 53 | RECEPT-CONCESSIONS 1 | 20 A | 1 | | | 1000 VA 1200 VA | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 8 | 54 |
| 55 | RECEPT-CONCESSIONS 2 | 20 A | 1 | 1000 VA 1200 VA | | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 9 | 56 |
| 57 | RECEPT-CONCESSIONS 3 | 20 A | 1 | | 180 VA 1200 VA | | 1 | 20 A | RECEPT-CONCESSIONS ISLAND 10 | 58 |
| 59 | RECEPT-CONCESSIONS 4 | 20 A | 1 | | | 1200 VA 1440 VA | 1 | 20 A | DRINK COOLER 1-CONCESSIONS | 60 |
| 61 | RECEPT-CONCESSIONS 5 | 20 A | 1 | 1200 VA 1440 VA | | | 1 | 20 A | DRINK COOLER 2-CONCESSIONS | 62 |
| 63 | RECEPT-CONCESSIONS 6 | 20 A | 1 | | 1200 VA 2900 VA | | 1 | 30 A | POPCORN POPPER-CONCESSIONS | 64 |
| 65 | RECEPT-CONCESSIONS 7 | 20 A | 1 | | | 1200 VA 276 VA | 1 | 20 A | ELEVATOR L104- PIT LIGHTS | 66 |
| 67 | HAND DRYER-M209T GIRLS 1 | 15 A | 2 | 780 VA 267 VA | | | 1 | 20 A | ELEVATOR RM L105-LIGHTS | 68 |
| 69 | -- | -- | -- | | 780 VA 1000 VA | | 1 | 20 A | ELEVATOR L105- LIGHTS, RECEPT | 70 |
| 71 | HAND DRYER-M209T GIRLS 2 | 15 A | 2 | | | 780 VA 780 VA | 2 | 20 A | HAND DRYER-M210T BOYS 1 | 72 |
| 73 | -- | -- | -- | 780 VA 780 VA | | | -- | -- | -- | 74 |
| 75 | RECEPT-TRACK HANDHOLES NORTH | 20 A | 1 | | 360 VA 780 VA | | 1 | 15 A | HAND DRYER-M210T BOYS 2 | 76 |
| 77 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 78 |
| 79 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 80 |
| 81 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 82 |
| 83 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 84 |
| | | | **TOTAL LOAD:** | 22835 VA | 27308 VA | 25224 VA | | | | |
| | | | **TOTAL AMPS:** | 190 A | 231 A | 213 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 186 VA | 125.00% | 233 VA | | |
| Receptacle | 9820 VA | 100.00% | 9820 VA | **CONNECTED LOAD:** | 75370 VA |
| Appliance | 48220 VA | 82.81% | 39932 VA | **ESTIMATED DEMAND:** | 59339 VA |
| Motor | 8944 VA | 100.00% | 8944 VA | **CONNECTED CURRENT:** | 209 A |
| Spare | 8200 VA | 5.00% | 410 VA | **EMD CURRENT:** | 165 A |

## PANEL: LL1B

**LOCATION:** STORAGE L111S
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SOUND-AMP RACK #1 | 20 A | 1 | 900 VA 1324 VA | | | 3 | 20 A | BLEACHERS-MAIN GYM WEST | 2 |
| 3 | SOUND-AMP RACK #2 | 20 A | 1 | | 900 VA 1324 VA | | -- | -- | -- | 4 |
| 5 | SOUND-AMP RACK #3 | 20 A | 1 | | | 900 VA 1324 VA | -- | -- | -- | 6 |
| 7 | SOUND-AMP RACK #4 | 20 A | 1 | 900 VA 360 VA | | | 1 | 15 A | EWC-MAIN GYM** | 8 |
| 9 | RECEPT-L111A, L111B OFFFICES | 20 A | 1 | | 720 VA 200 VA | | 1 | 20 A | DCP-L113C LOADING DOCK | 10 |
| 11 | RECEPT-L109 FRONT OF BLEACHERS | 20 A | 1 | | | 720 VA 360 VA | 1 | 20 A | RECEPT-L109 WALKWAY WEST | 12 |
| 13 | COILING DOOR-L113C LOADING DOCK | 20 A | 1 | 500 VA 720 VA | | | 1 | 20 A | RECEPT-M110 OFFICE | 14 |
| 15 | RECEPT-M109A OFFICE | 20 A | 1 | | 720 VA 1200 VA | | 1 | 20 A | TV OUTLETS-M110, M109A, M109B OFFICE | 16 |
| 17 | RECEPT-M109B OFFICE, M108S STORAGE | 20 A | 1 | | | 900 VA 540 VA | 1 | 20 A | RECEPT-L111S STORAGE, WALKING | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA 1500 VA | | | 1 | 20 A | MAIN GYM-SCOREBOARDS WEST | 20 |
| 21 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | **TOTAL LOAD:** | 13204 VA | 13064 VA | 12744 VA | | | | |
| | | | **TOTAL AMPS:** | 110 A | 109 A | 106 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 4680 VA | 100.00% | 4680 VA | | |
| Appliance | 3400 VA | 100.00% | 3400 VA | **CONNECTED LOAD:** | 39012 VA |
| Motor | 4332 VA | 100.00% | 4332 VA | **ESTIMATED DEMAND:** | 17162 VA |
| Spare | 23000 VA | 5.00% | 1150 VA | **CONNECTED CURRENT:** | 108 A |
| | | | | **EMD CURRENT:** | 48 A |

## PANEL: LM1

**LOCATION:** STORAGE M100BS
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-M100A OFFICE | 20 A | 1 | 900 VA 2550 VA | | | 2 | 30 A | CLOTHES DRYER-M100C HYDRO | 2 |
| 3 | RECEPT-TV, M100A OFFICE | 20 A | 1 | | 1200 VA 2550 VA | | -- | -- | -- | 4 |
| 5 | RECEPT-M100 TRAINING RM TABLES | 20 A | 1 | | | 900 VA 500 VA | 1 | 20 A | WASHING MACHINE-M100C HYDRO | 6 |
| 7 | DCP-M100BS | 20 A | 1 | 200 VA 1440 VA | | | 1 | 20 A | RECEPT-M100C ICE MACHINE | 8 |
| 9 | REFRIGERATOR-M100 TRAINING | 20 A | 1 | | 500 VA 960 VA | | 1 | 20 A | RECEPT-M100C HYDRO TUB 1 | 10 |
| 11 | RECEPT-M100 TRAINING BY HYDRO | 20 A | 1 | | | 900 VA 960 VA | 1 | 20 A | RECEPT-M100C HYDRO TUB 2 | 12 |
| 13 | RECEPT-M100 TRAINING CENTER | 20 A | 1 | 1080 VA 960 VA | | | 1 | 20 A | RECEPT-M100C HYDRO TUB 3 | 14 |
| 15 | RECEPT-M100 TRAINER | 20 A | 1 | | 180 VA 540 VA | | 1 | 20 A | RECEPT-M102C CORRIDOR | 16 |
| 17 | EWC-M102C CORRIDOR** | 15 A | 1 | | | 360 VA 540 VA | 1 | 20 A | RECEPT-M114 BOYS LOCKER | 18 |
| 19 | HAND DRYER-M114 BOYS LOCKER | 15 A | 2 | 780 VA 780 VA | | | 2 | 15 A | HAND DRYER-M100 TRAINING | 20 |
| 21 | -- | -- | -- | | 780 VA 780 VA | | -- | -- | -- | 22 |
| 23 | HAND DRYER-M114 BOYS LOCKER 2 | 15 A | 2 | | | 780 VA 540 VA | 1 | 20 A | RECEPT-M103 WEIGHT RM CENTER | 24 |
| 25 | -- | -- | -- | 780 VA 720 VA | | | 1 | 20 A | RECEPT-M103 WEIGHT RM SOUTH | 26 |
| 27 | RECEPT-M114 BOYS LOCKER | 20 A | 1 | | 360 VA 180 VA | | 1 | 20 A | RECEPT-FRONT OF GRANDSTANDS | 28 |
| 29 | RECEPT-M114 BOYS LOCKER | 20 A | 1 | | | 360 VA 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | RECEPT-M114 BOYS LOCKER SOUTH | 20 A | 1 | 360 VA 1000 VA | | | 1 | 20 A | SPARE | 32 |
| 33 | RECEPT-M114 BY SINK 1 | 20 A | 1 | | 360 VA 1000 VA | | 1 | 20 A | SPARE | 34 |
| 35 | RECEPT-M114 BY SINK 2 | 20 A | 1 | | | 360 VA 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | **TOTAL LOAD:** | 13550 VA | 11390 VA | 10200 VA | | | | |
| | | | **TOTAL AMPS:** | 114 A | 96 A | 85 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 8460 VA | 100.00% | 8460 VA | | |
| Appliance | 13620 VA | 100.00% | 13620 VA | **CONNECTED LOAD:** | 35140 VA |
| Motor | 2880 VA | 100.00% | 2880 VA | **ESTIMATED DEMAND:** | 25469 VA |
| Spare | 10180 VA | 5.00% | 509 VA | **CONNECTED CURRENT:** | 98 A |
| | | | | **EMD CURRENT:** | 71 A |

## PANEL: LM2

**LOCATION:** ELEC M202E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. **PROVIDE GFI CIRCUIT BREAKER. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | POOL FILTER CONTROL PANEL | 20 A | 1 | 180 VA 200 VA | | | 1 | 20 A | RELAY PANEL "RM" CONTROL POWER | 2 |
| 3 | CHEMICAL CONTROLLER** | 20 A | 1 | | 1476 VA 0 VA | | 1 | 20 A | RELAY RM-29 | 4 |
| 5 | SURGE TANK EXHAUST FAN | 15 A | 1 | | | 864 VA 1000 VA | 1 | 20 A | RELAY RM-30 | 6 |
| 7 | SCOREBOARD-NATATORIUM | 20 A | 1 | 180 VA 1000 VA | | | 1 | 20 A | RELAY RM-31,32 | 8 |
| 9 | FLOW METER POWER SUPPLY | 15 A | 1 | | 20 VA 540 VA | | 1 | 20 A | RECEPT-M116M-POOL MECH | 10 |
| 11 | AIR COMPRESSOR - POOL FILTER | 30 A | 1 | | | 1800 VA 720 VA | 1 | 20 A | RECEPT-N200 NATATORIUM SEATING | 12 |
| 13 | RECEPT-POOL VACUUM | 20 A | 1 | 2100 VA 540 VA | | | 1 | 20 A | RECEPT-POOL EAST WALL | 14 |
| 15 | RECEPT-SOUND POOL AMPLIFIER RACK #1 | 20 A | 1 | | 600 VA 540 VA | | 1 | 20 A | RECEPT-POOL WEST WALL | 16 |
| 17 | RECEPT-SOUND POOL AMPLIFIER RACK #2 | 20 A | 1 | | | 600 VA 180 VA | 1 | 15 A | EWC-POOL AREA** | 18 |
| 19 | EWC - FITNESS M210** | 15 A | 1 | 360 VA 720 VA | | | 1 | 20 A | RECEPT-N108 SWIM OFFICE | 20 |
| 21 | TREADMILL - FITNESS M210 | 20 A | 1 | | 1500 VA 540 VA | | 1 | 20 A | RECEPT-POOL NORTH WALL | 22 |
| 23 | TREADMILL - FITNESS M210 | 20 A | 1 | | | 1500 VA 360 VA | 1 | 20 A | RECEPT-N106C COMM WALL | 24 |
| 25 | TREADMILL - FITNESS M210 | 20 A | 1 | 1500 VA 1500 VA | | | 1 | 30 A | UPS-N106C COMM | 26 |
| 27 | TREADMILL - FITNESS M210 | 20 A | 1 | | 1500 VA 900 VA | | 1 | 20 A | RECEPT-N106 CC OFFICE | 28 |
| 29 | TREADMILL - FITNESS M210 | 20 A | 1 | | | 1500 VA 720 VA | 1 | 20 A | RECEPT-N110T, N111T, N112C, N109S | 30 |
| 31 | TREADMILL - FITNESS M210 | 20 A | 1 | 1500 VA 780 VA | | | 2 | 15 A | HAND DRYER-N111T | 32 |
| 33 | TREADMILL - FITNESS M210 | 20 A | 1 | | 1500 VA 780 VA | | -- | -- | -- | 34 |
| 35 | ELLIPTICAL - FITNESS M210 | 20 A | 1 | | | 500 VA 780 VA | 2 | 15 A | HAND DRYER-N110T | 36 |
| 37 | ELLIPTICAL - FITNESS M210 | 20 A | 1 | 500 VA 780 VA | | | -- | -- | -- | 38 |
| 39 | ELLIPTICAL - FITNESS M210 | 20 A | 1 | | 500 VA 500 VA | | 1 | 20 A | COILING DOOR-N112S | 40 |
| 41 | ELLIPTICAL - FITNESS M210 | 20 A | 1 | | | 500 VA 360 VA | 1 | 20 A | RECEPT-N108 SCOREBOARD TIMING... | 42 |
| 43 | ELLIPTICAL - FITNESS M210 | 20 A | 1 | 500 VA 200 VA | | | 1 | 20 A | DCP-N113V | 44 |
| 45 | ELLIPTICAL - FITNESS M210 | 20 A | 1 | | 500 VA 360 VA | | 1 | 20 A | DOOR OPERATOR-N113V | 46 |
| 47 | FLOOR BOX - FITNESS M210 | 20 A | 1 | | | 1000 VA 540 VA | 1 | 20 A | RECEPT-N115 MECH RM | 48 |
| 49 | FLOOR BOX - FITNESS M210 | 20 A | 1 | 1000 VA 1000 VA | | | 1 | 20 A | VENDING MACHINE-N110 LOBBY #1** | 50 |
| 51 | FLOOR BOX - FITNESS M210 | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | VENDING MACHINE-N110 LOBBY #2** | 52 |
| 53 | RECEPT - FITNESS M210 | 20 A | 1 | | | 900 VA 1200 VA | 1 | 20 A | SCOREBOARDS-AUX GYM | 54 |
| 55 | RECEPT - TV, FITNESS M210 | 20 A | 1 | 540 VA 360 VA | | | 1 | 20 A | MAIN GYM-BACKBOARD LIGHTS | 56 |
| 57 | RECEPT - FITNESS M210 | 20 A | 1 | | 900 VA 720 VA | | 1 | 20 A | RECEPT-M111 AUX GYM WEST, SOUTH | 58 |
| 59 | RECEPT-M104 WRESTLING SOUTH | 20 A | 1 | | | 720 VA 540 VA | 1 | 20 A | EWC-M111 AUX GYM** | 60 |
| 61 | RECEPT-M113C CORRIDOR | 20 A | 1 | 540 VA 940 VA | | | 1 | 20 A | RECEPT-M107S OFFICE | 62 |
| 63 | RECEPT-M207 CORR, ROOF | 20 A | 1 | | 1440 VA 360 VA | | 1 | 20 A | RECEPT-M104S, M107 WRESTLING OFFICE | 64 |
| 65 | DCP-M210C COMM | 20 A | 1 | | | 200 VA 540 VA | 1 | 20 A | RECEPT-M104 WRESTLING NORTH | 66 |
| 67 | UPS-M210C COMM | 30 A | 1 | 1500 VA 500 VA | | | 1 | 20 A | COILING DOOR-N202C | 68 |
| 69 | RECEPT-M210C COMM WALL | 20 A | 1 | | 360 VA 960 VA | | 1 | 20 A | RECEPT-M211 TV, M203 PROJECTOR | 70 |
| 71 | DCP-N106C COMM | 20 A | 1 | | | 200 VA 900 VA | 1 | 20 A | RECEPT-M211 AD OFFICE | 72 |
| 73 | RECEPT-M111 AUX GYM BLEACHER | 20 A | 1 | 360 VA 800 VA | | | 1 | 20 A | COPIER-M212 ACTIVITIES | 74 |
| 75 | DOOR OPERATOR-N110 | 20 A | 1 | | 180 VA 720 VA | | 1 | 20 A | RECEPT-M212 ACTIVITIES OFFICE | 76 |
| 77 | SPARE | 20 A | 1 | | | 1000 VA 1080 VA | 1 | 20 A | RECEPT-M203 PE CLASSROOM | 78 |
| 79 | SPARE | 20 A | 1 | 1000 VA 720 VA | | | 1 | 20 A | RECEPT-M207 CORR | 80 |
| 81 | SPARE | 20 A | 1 | | 1000 VA 1000 VA | | 1 | 20 A | SPARE | 82 |
| 83 | SPARE | 20 A | 1 | | | 1000 VA 500 VA | 1 | 20 A | FIRE/SMOKE DAMPERS | 84 |
| | | | **TOTAL LOAD:** | 21800 VA | 21396 VA | 21704 VA | | | | |
| | | | **TOTAL AMPS:** | 182 A | 178 A | 181 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 0 VA | 0.00% | 0 VA | | |
| Receptacle | 21300 VA | 73.47% | 15650 VA | **CONNECTED LOAD:** | 64900 VA |
| Appliance | 29416 VA | 93.60% | 27533 VA | **ESTIMATED DEMAND:** | 50052 VA |
| Motor | 5284 VA | 100.00% | 5284 VA | **CONNECTED CURRENT:** | 180 A |
| Spare | 7700 VA | 5.00% | 385 VA | **EMD CURRENT:** | 139 A |

## PANEL: LN1

**LOCATION:** ELEC N104E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DCP-M114, N101 | 20 A | 1 | 400 VA 1000 VA | | | 1 | 20 A | RELAY PANEL "RN" CONTROL POWER | 2 |
| 3 | RECEPT-N102 MENS COACH BY SINK | 20 A | 1 | | 360 VA 540 VA | | 1 | 20 A | RECEPT-N101 BOYS PE/JV NORTH | 4 |
| 5 | RECEPT-N102 BY MIRROR | 20 A | 1 | | | 180 VA 360 VA | 1 | 20 A | RECEPT-N101 BOYS PE BY SINK 1 | 6 |
| 7 | RECEPT-N102 OFFICE | 20 A | 1 | 940 VA 360 VA | | | 1 | 20 A | RECEPT-N101 BOYS PE BY SINK 2 | 8 |
| 9 | HAND DRYER-N102 MENS COACH | 15 A | 2 | | 780 VA 780 VA | | 2 | 15 A | HAND DRYER-N101 BOYS PE 1 | 10 |
| 11 | -- | -- | -- | | | 780 VA 780 VA | -- | -- | -- | 12 |
| 13 | RECEPT-N101 BOYS PE | 20 A | 1 | 360 VA 780 VA | | | 2 | 15 A | HAND DRYER-N101 BOYS PE 2 | 14 |
| 15 | RECEPT-N101 BOYS PE | 15 A | 1 | | 720 VA 780 VA | | -- | -- | -- | 16 |
| 17 | RECEPT-N104 GIRLS SWIM BY SINK | 20 A | 1 | | | 360 VA 780 VA | 2 | 15 A | HAND DRYER-N104 

## PANEL: LPB

**LOCATION:** PRESS BOX 2 M301
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** FLUSH
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LIGHTING-PRESSBOX | 20 A | 1 | 552 VA | 900 VA | | 1 | 20 A | RECEPT-M300 | 2 |
| 3 | RECEPT-STADIUM SOUND #1 | 20 A | 1 | | 600 VA | 720 VA | 1 | 20 A | RECEPT-M301 | 4 |
| 5 | RECEPT-STADIUM SOUND #2 | 20 A | 1 | | | 600 VA 900 VA | 1 | 20 A | RECEPT-M301 | 6 |
| 7 | RECEPT-STADIUM SOUND #3 | 20 A | 1 | 600 VA | 900 VA | | 1 | 20 A | RECEPT-M302 | 8 |
| 9 | AIR CONDITIONER-M301 NORTH | 15 A | 2 | | 406 VA | 406 VA | 2 | 15 A | AIR CONDITIONER- M300 | 10 |
| 11 | -- | -- | -- | | | 406 VA 406 VA | -- | -- | -- | 12 |
| 13 | AIR CONDITIONER-M301 SOUTH | 15 A | 2 | 406 VA | 406 VA | | 2 | 15 A | AIR CONDITIONER-M302 | 14 |
| 15 | -- | -- | -- | | 406 VA | 406 VA | -- | -- | -- | 16 |
| 17 | RECEPT-CAMERA DECK | 20 A | 1 | | | 360 VA 1000 VA | 2 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | -- | -- | -- | 20 |
| 21 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 30 |
| | | | | TOTAL LOAD: | 7763 VA | 6942 VA 7671 VA | | | | |
| | | | | TOTAL AMPS: | 66 A | 58 A 65 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 552 VA | 125.00% | 690 VA | | |
| Receptacle | 3780 VA | 100.00% | 3780 VA | CONNECTED LOAD: | 22377 VA |
| Appliance | 2611 VA | 100.00% | 2611 VA | ESTIMATED DEMAND: | 10165 VA |
| Motor | 2434 VA | 100.00% | 2434 VA | CONNECTED CURRENT: | 62 A |
| Spare | 13000 VA | 5.00% | 650 VA | EMD CURRENT: | 28 A |

## PANEL: LSND

**LOCATION:** ELEC H202E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE WITH SEPARATE ISOLATED GROUND BUS. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-H207B CHOIR LOFT | 20 A | 1 | 540 VA | 1000 VA | | 1 | 20 A | SOUND-AMP RACK #1 | 2 |
| 3 | RECEPT-H201 AUDIO | 20 A | 1 | | 540 VA | 1000 VA | 1 | 20 A | SOUND-AMP RACK #2 | 4 |
| 5 | RECEPT-STAGE LEFT CONTROL 1 | 20 A | 1 | | | 360 VA 1000 VA | 1 | 20 A | SOUND-AMP RACK #3 | 6 |
| 7 | RECEPT-STAGE LEFT CONTROL 2 | 20 A | 1 | 360 VA | 1000 VA | | 1 | 20 A | SOUND-AMP RACK #4 | 8 |
| 9 | RECEPT-STAGE LEFT CONTROL 3 | 20 A | 1 | | 360 VA | 1000 VA | 1 | 20 A | SOUND-AMP RACK #6 | 10 |
| 11 | RECEPT-SOUND RACK, OPERATOR'S... | 20 A | 1 | | | 1440 VA 1000 VA | 1 | 20 A | SOUND-AMP RACK #5 | 12 |
| 13 | RECEPT-SOUND & LIGHT CONTROL | 20 A | 1 | 1200 VA | 100 VA | | 1 | 20 A | SPARE | 14 |
| 15 | RECEPT-STAGE SOUND FLOOR BACK | 20 A | 1 | | 540 VA | 1000 VA | 1 | 20 A | SPARE | 16 |
| 17 | RECEPT-STAGE SOUND FLOOR FRONT | 20 A | 1 | | | 1080 VA 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPACE ONLY | 34 |
| 35 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | -- | -- | SPACE ONLY | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 42 |
| | | | | TOTAL LOAD: | 10200 VA | 10440 VA 11880 VA | | | | |
| | | | | TOTAL AMPS: | 85 A | 87 A 99 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 4980 VA | 100.00% | 4980 VA | | |
| Spare | 20100 VA | 5.00% | 1005 VA | CONNECTED LOAD: | 32520 VA |
| | | | | ESTIMATED DEMAND: | 13425 VA |
| | | | | CONNECTED CURRENT: | 90 A |
| | | | | EMD CURRENT: | 37 A |

## PANEL: MAA1

**LOCATION:** ELEC AA106E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SPARE | 20 A | 1 | 1000 VA | 1642 VA | | 2 | 20 A | SSCU-AA101, SSIU-AA101 | 2 |
| 3 | SPARE | 20 A | 1 | | 1000 VA | 1642 VA | -- | -- | -- | 4 |
| 5 | SCA-A101 | 15 A | 1 | | | 154 VA 1000 VA | 1 | 20 A | SPARE | 6 |
| 7 | CUH-AA103 | 15 A | 2 | 1000 VA | 1000 VA | | -- | -- | -- | 8 |
| 9 | -- | -- | -- | | 1000 VA | 1000 VA | 2 | 20 A | SPARE | 10 |
| 11 | CUH-AA104 | 15 A | 2 | | | 1000 VA 1000 VA | -- | -- | -- | 12 |
| 13 | -- | -- | -- | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 2 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 16 |
| 17 | -- | -- | -- | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 2 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 20 |
| 21 | -- | -- | -- | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 28 |
| 29 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 30 |
| 31 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 32 |
| 33 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 34 |
| 35 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 42 |
| | | | | TOTAL LOAD: | 10642 VA | 10642 VA 7150 VA | | | | |
| | | | | TOTAL AMPS: | 93 A | 93 A 60 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 3283 VA | 100.00% | 3283 VA | | |
| Other | 150 VA | 100.00% | 150 VA | CONNECTED LOAD: | 28433 VA |
| Spare | 21000 VA | 5.00% | 1050 VA | ESTIMATED DEMAND: | 8483 VA |
| Electric Heat | 4000 VA | 100.00% | 4000 VA | CONNECTED CURRENT: | 79 A |
| | | | | EMD CURRENT: | 24 A |

## PANEL: MB1

**LOCATION:** ELEC B120E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-A101 | 25 A | 3 | 1716 VA | 1464 VA | | 3 | 20 A | HP-A102 | 2 |
| 3 | -- | -- | -- | | 1716 VA | 1464 VA | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | 1716 VA 1464 VA | -- | -- | -- | 6 |
| 7 | SPARE | 20 A | 1 | 1000 VA | 1464 VA | | 3 | 20 A | HP-B103 | 8 |
| 9 | SPARE | 20 A | 1 | | 1000 VA | 1464 VA | -- | -- | -- | 10 |
| 11 | HP-B104 | 20 A | 3 | 1428 VA | 1428 VA | | -- | -- | -- | 12 |
| 13 | -- | -- | -- | | | 1428 VA 1464 VA | -- | -- | -- | 14 |
| 15 | -- | -- | -- | 1428 VA | 1428 VA | | 3 | 20 A | HP-B105 | 16 |
| 17 | HP-B109 | 20 A | 3 | | | 1428 VA 1428 VA | -- | -- | -- | 18 |
| 19 | -- | -- | -- | 1428 VA | 1428 VA | | 3 | 20 A | HP-B110 | 20 |
| 21 | -- | -- | -- | | 1428 VA | 1428 VA | -- | -- | -- | 22 |
| 23 | HP-B111 | 20 A | 3 | | | 1428 VA 1428 VA | -- | -- | -- | 24 |
| 25 | -- | -- | -- | 1428 VA | 1464 VA | | 3 | 20 A | HP-B112 | 26 |
| 27 | -- | -- | -- | | 1428 VA | 1464 VA | -- | -- | -- | 28 |
| 29 | SSCU-B101, SSIU-B101 | 20 A | 2 | | | 1642 VA 1464 VA | -- | -- | -- | 30 |
| 31 | -- | -- | -- | 1642 VA | 150 VA | | 1 | 15 A | SF-B101 | 32 |
| 33 | SPARE | 20 A | 3 | | 1000 VA | 1000 VA | 3 | 20 A | SPARE | 34 |
| 35 | -- | -- | -- | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | -- | -- | -- | 1000 VA | 1000 VA | | -- | -- | -- | 38 |
| 39 | SPARE | 15 A | 2 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 40 |
| 41 | -- | -- | -- | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | 18040 VA | 18248 VA 18890 VA | | | | |
| | | | | TOTAL AMPS: | 150 A | 152 A 158 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 43177 VA | 100.00% | 43177 VA | | |
| Spare | 12000 VA | 5.00% | 600 VA | CONNECTED LOAD: | 55177 VA |
| | | | | ESTIMATED DEMAND: | 43777 VA |
| | | | | CONNECTED CURRENT: | 153 A |
| | | | | EMD CURRENT: | 122 A |

## PANEL: MB2

**LOCATION:** ELEC B220E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-A201 | 20 A | 3 | 1428 VA | 1464 VA | | 3 | 20 A | HP-A202 | 2 |
| 3 | -- | -- | -- | | 1428 VA | 1464 VA | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | 1428 VA 1464 VA | -- | -- | -- | 6 |
| 7 | HP-A203 | 20 A | 3 | 1428 VA | 1716 VA | | 3 | 25 A | HP-B201 | 8 |
| 9 | -- | -- | -- | | 1428 VA | 1716 VA | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | 1428 VA 1716 VA | -- | -- | -- | 12 |
| 13 | HP-B204 | 20 A | 3 | 1428 VA | 1428 VA | | 3 | 20 A | HP-B205 | 14 |
| 15 | -- | -- | -- | | 1428 VA | 1428 VA | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 1428 VA 1428 VA | -- | -- | -- | 18 |
| 19 | HP-B207 | 20 A | 3 | 1428 VA | 1428 VA | | 3 | 20 A | HP-B209 | 20 |
| 21 | -- | -- | -- | | 1428 VA | 1428 VA | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 1428 VA 1428 VA | -- | -- | -- | 24 |
| 25 | HP-B210 | 20 A | 3 | 1428 VA | 1428 VA | | 3 | 20 A | HP-B211 | 26 |
| 27 | -- | -- | -- | | 1428 VA | 1428 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1428 VA 1428 VA | -- | -- | -- | 30 |
| 31 | HP-B212 | 20 A | 3 | 1464 VA | 1000 VA | | 1 | 20 A | SPARE | 32 |
| 33 | -- | -- | -- | | 1464 VA | 1000 VA | 1 | 20 A | SPARE | 34 |
| 35 | -- | -- | -- | | | 1464 VA 1642 VA | 2 | 20 A | SSCU-B201, SSIU-B201 | 36 |
| 37 | SF-B201 | 15 A | 1 | 150 VA | 1642 VA | | -- | -- | -- | 38 |
| 39 | EF-B201 | 15 A | 2 | | 828 VA | 828 VA | 2 | 15 A | EF-B202 | 40 |
| 41 | -- | -- | -- | | | 828 VA 828 VA | -- | -- | -- | 42 |
| | | | | TOTAL LOAD: | 18860 VA | 18724 VA 19366 VA | | | | |
| | | | | TOTAL AMPS: | 157 A | 156 A 162 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 54949 VA | 99.10% | 54454 VA | | |
| Spare | 2000 VA | 5.00% | 100 VA | CONNECTED LOAD: | 56949 VA |
| | | | | ESTIMATED DEMAND: | 54554 VA |
| | | | | CONNECTED CURRENT: | 158 A |
| | | | | EMD CURRENT: | 151 A |

## PANEL: MC1

**LOCATION:** ELEC C129E
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:**

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-C111 | 20 A | 3 | 1464 VA | 1000 VA | | 3 | 20 A | SPARE | 2 |
| 3 | -- | -- | -- | | 1464 VA | 1000 VA | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | 1464 VA 1000 VA | -- | -- | -- | 6 |
| 7 | HP-C108 | 20 A | 3 | 1428 VA | 1428 VA | | 3 | 20 A | HP-C107 | 8 |
| 9 | -- | -- | -- | 1428 VA | 1428 VA | | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | 1428 VA 1428 VA | -- | -- | -- | 12 |
| 13 | HP-C106 | 20 A | 3 | 1464 VA | 1716 VA | | 3 | 25 A | HP-C104 | 14 |
| 15 | -- | -- | -- | 1464 VA | 1716 VA | | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 1464 VA 1716 VA | -- | -- | -- | 18 |
| 19 | HP-B101 | 15 A | 2 | 749 VA | 1464 VA | | 3 | 20 A | HP-C114 | 20 |
| 21 | -- | -- | -- | 749 VA | 1464 VA | | -- | -- | -- | 22 |
| 23 | SF-C101 | 15 A | 1 | | | 150 VA 1464 VA | -- | -- | -- | 24 |
| 25 | SPARE | 20 A | 3 | 1000 VA | 1000 VA | | 3 | 20 A | SPARE | 26 |
| 27 | -- | -- | -- | | 1000 VA | 1000 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1000 VA 1000 VA | -- | -- | -- | 30 |
| 31 | SPARE | 15 A | 2 | 1000 VA | 1000 VA | | -- | -- | -- | 32 |
| 33 | -- | -- | -- | | 1000 VA | 1000 VA | -- | -- | -- | 34 |
| 35 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 42 |
| | | | | TOTAL LOAD: | 16713 VA | 16713 VA 16114 VA | | | | |
| | | | | TOTAL AMPS: | 140 A | 140 A 134 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 28540 VA | 100.00% | 28540 VA | | |
| Spare | 21000 VA | 5.00% | 1050 VA | CONNECTED LOAD: | 49540 VA |
| | | | | ESTIMATED DEMAND: | 29590 VA |
| | | | | CONNECTED CURRENT: | 138 A |
| | | | | EMD CURRENT: | 82 A |

## PANEL: MC2

**LOCATION:** ELEC C229
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-B203 | 15 A | 2 | 749 VA | 1428 VA | | 3 | 20 A | HP-C204 | 2 |
| 3 | -- | -- | -- | | 749 VA | 1428 VA | -- | -- | -- | 4 |
| 5 | HP-C205 | 20 A | 3 | | | 1428 VA 1428 VA | -- | -- | -- | 6 |
| 7 | -- | -- | -- | 1428 VA | 1464 VA | | 3 | 20 A | HP-C206 | 8 |
| 9 | -- | -- | -- | | 1428 VA | 1464 VA | -- | -- | -- | 10 |
| 11 | HP-C208 | 20 A | 3 | | | 1464 VA 1464 VA | -- | -- | -- | 12 |
| 13 | -- | -- | -- | 1464 VA | 1464 VA | | 3 | 20 A | HP-C209 | 14 |
| 15 | -- | -- | -- | | 1464 VA | 1464 VA | -- | -- | -- | 16 |
| 17 | HP-C210 | 20 A | 3 | | | 1464 VA 1464 VA | -- | -- | -- | 18 |
| 19 | -- | -- | -- | 1464 VA | 1716 VA | | 3 | 25 A | HP-C212 | 20 |
| 21 | -- | -- | -- | | 1464 VA | 1716 VA | -- | -- | -- | 22 |
| 23 | HP-213 | 20 A | 3 | | | 1464 VA 1716 VA | -- | -- | -- | 24 |
| 25 | -- | -- | -- | 1428 VA | 1000 VA | | 1 | 20 A | SPARE | 26 |
| 27 | -- | -- | -- | | 1428 VA | 1000 VA | 1 | 20 A | SPARE | 28 |
| 29 | SSCU-C201, SSIU-C201 | 20 A | 2 | | | 1642 VA 828 VA | 2 | 15 A | EF-C203 | 30 |
| 31 | -- | -- | -- | 1642 VA | 828 VA | | -- | -- | -- | 32 |
| 33 | EF-C204 | 15 A | 1 | | 150 VA | 828 VA | 2 | 15 A | EF-C204 | 34 |
| 35 | EF-C201 | 15 A | 2 | | | 828 VA 828 VA | -- | -- | -- | 36 |
| 37 | -- | -- | -- | 828 VA | 444 VA | | 3 | 15 A | EF-C205 | 38 |
| 39 | EF-C202 | 15 A | 2 | | 828 VA | 444 VA | -- | -- | -- | 40 |
| 41 | -- | -- | -- | | | 828 VA 444 VA | -- | -- | -- | 42 |
| 43 | SPARE | 20 A | 3 | 1000 VA | 444 VA | | 3 | 15 A | EF-C206 | 44 |
| 45 | -- | -- | -- | | 1000 VA | 444 VA | -- | -- | -- | 46 |
| 47 | -- | -- | -- | | | 1000 VA 444 VA | -- | -- | -- | 48 |
| 49 | SPARE | 20 A | 3 | 1000 VA | | | | | | 50 |
| 51 | -- | -- | -- | | 1000 VA | | | | | 52 |
| 53 | -- | -- | -- | | | 1000 VA 1000 VA | 2 | 15 A | SPARE | 54 |
| 55 | SPARE | 15 A | 2 | 1000 VA | 1000 VA | | -- | -- | -- | 56 |
| 57 | -- | -- | -- | | 1000 VA | 1000 VA | 2 | 20 A | SPARE | 58 |
| 59 | SPARE | 20 A | 2 | | | 1000 VA 1000 VA | -- | -- | -- | 60 |
| 61 | -- | -- | -- | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 70 |
| 71 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 84 |
| | | | | TOTAL LOAD: | 25791 VA | 24299 VA 24698 VA | | | | |
| | | | | TOTAL AMPS: | 215 A | 202 A 206 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 49787 VA | 100.00% | 49787 VA | | |
| Spare | 25000 VA | 5.00% | 1250 VA | CONNECTED LOAD: | 74787 VA |
| | | | | ESTIMATED DEMAND: | 51037 VA |
| | | | | CONNECTED CURRENT: | 208 A |
| | | | | EMD CURRENT: | 142 A |

## PANEL: MC2B

**LOCATION:** ELEC C204E
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-C103 | 20 A | 2 | 1342 VA | 1716 VA | | 3 | 25 A | HP-C101 | 2 |
| 3 | -- | -- | -- | | 1342 VA | 1716 VA | -- | -- | -- | 4 |
| 5 | HP-C102 | 25 A | 3 | | | 1716 VA 1716 VA | -- | -- | -- | 6 |
| 7 | -- | -- | -- | 1716 VA | 1342 VA | | 2 | 20 A | HP-C201 | 8 |
| 9 | -- | -- | -- | | 1716 VA | 1342 VA | -- | -- | -- | 10 |
| 11 | HP-C207 | 15 A | 2 | | | 749 VA 1428 VA | 3 | 20 A | HP-C215 | 12 |
| 13 | -- | -- | -- | 749 VA | 1428 VA | | -- | -- | -- | 14 |
| 15 | HP-C216 | 20 A | 3 | | 2687 VA | 1428 VA | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 2687 VA 150 VA | 1 | 15 A | SF-C201 | 18 |
| 19 | -- | -- | -- | 2687 VA | 1000 VA | | 3 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 3 | | 1000 VA | 1000 VA | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 1000 VA 1000 VA | -- | -- | -- | 24 |
| 25 | -- | -- | -- | 1000 VA | 1000 VA | | 2 | 15 A | SPARE | 26 |
| 27 | SPARE | 20 A | 2 | | 1000 VA | 1000 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | 1000 VA 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | 0 VA 0 VA | -- | -- | SPACE ONLY | 42 |
| | | | | TOTAL LOAD: | 15980 VA | 16231 VA 14446 VA | | | | |
| | | | | TOTAL AMPS: | 135 A | 137 A 120 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 29657 VA | 100.00% | 29657 VA | | |
| Spare | 17000 VA | 5.00% | 850 VA | CONNECTED LOAD: | 46657 VA |
| | | | | ESTIMATED DEMAND: | 30507 VA |
| | | | | CONNECTED CURRENT: | 130 A |
| | | | | EMD CURRENT: | 85 A |

| | | |
|---|---|---|
| | LPB | LSND |
| MAA1 | MB1 | MB2 |
| MC1 | MC2 | MC2B |


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

PANELBOARD SCHEDULES

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E7.13

## PANEL: MD1

**LOCATION:** ELEC D128E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-D101 | 15 A | 2 | 749 VA | 749 VA | | 2 | 15 A | HP-D103 | 2 |
| 3 | -- | -- | -- | | | 749 VA | -- | -- | -- | 4 |
| 5 | HP-D104 | 15 A | 2 | | | 749 VA | 3 | 20 A | HP-D105 | 6 |
| 7 | -- | -- | -- | 749 VA | 1428 VA | | -- | -- | -- | 8 |
| 9 | HP-D106 | 25 A | 3 | | 1716 VA | 1428 VA | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | 1716 VA | 3 | 20 A | HP-D108 | 12 |
| 13 | -- | -- | -- | 1716 VA | 1464 VA | | -- | -- | -- | 14 |
| 15 | HP-D109 | 20 A | 3 | | 1464 VA | 1464 VA | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 1464 VA | 3 | 20 A | HP-D110 | 18 |
| 19 | -- | -- | -- | 1464 VA | 1464 VA | | -- | -- | -- | 20 |
| 21 | HP-D111 | 20 A | 3 | | 1464 VA | 1464 VA | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 1464 VA | 3 | 20 A | HP-D115 | 24 |
| 25 | -- | -- | -- | 1464 VA | 1428 VA | | -- | -- | -- | 26 |
| 27 | SPARE | 20 A | 1 | | 1000 VA | 1428 VA | -- | -- | -- | 28 |
| 29 | SPARE | 20 A | 1 | | | 1000 VA | 2 | 20 A | SSCU-D101, SSIU-D101 | 30 |
| 31 | SSCU-D201, SSIU-D101 | 20 A | 2 | 1642 VA | 1642 VA | | | | | 32 |
| 33 | -- | -- | -- | | | 1642 VA | 150 VA | | SF-D101 | 34 |
| 35 | SPARE | 20 A | 1 | | | | 1000 VA | 1000 VA | SPARE | 36 |
| 37 | -- | -- | -- | 1000 VA | 1000 VA | | -- | -- | -- | 38 |
| 39 | -- | -- | -- | | 1000 VA | 1000 VA | 2 | 15 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | -- | -- | 42 |
| | | TOTAL LOAD: | | 17958 VA | 16718 VA | 17819 VA | | | | |
| | | TOTAL AMPS: | | 151 A | 139 A | 150 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Motor | 42494 VA | 100.00% | 42494 VA | |
| Spare | 10000 VA | 5.00% | 500 VA | CONNECTED LOAD: 52494 VA |
| | | | | ESTIMATED DEMAND: 42994 VA |
| | | | | CONNECTED CURRENT: 146 A |
| | | | | EMD CURRENT: 119 A |

## PANEL: MD2

**LOCATION:** ELEC D227E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-D201 | 20 A | 3 | 1464 VA | 1464 VA | | 3 | 20 A | HP-D202 | 2 |
| 3 | -- | -- | -- | | | 1464 VA | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | 1464 VA | -- | -- | -- | 6 |
| 7 | HP-D204 | 20 A | 3 | 1428 VA | 1428 VA | | 3 | 20 A | HP-D206 | 8 |
| 9 | -- | -- | -- | | 1428 VA | 1428 VA | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | 1428 VA | -- | -- | -- | 12 |
| 13 | HP-D207 | 20 A | 3 | 1464 VA | 1464 VA | | 3 | 20 A | HP-D208 | 14 |
| 15 | -- | -- | -- | | 1464 VA | 1464 VA | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 1464 VA | -- | -- | -- | 18 |
| 19 | HP-D209 | 20 A | 3 | 1464 VA | 1716 VA | | 3 | 25 A | HP-D210 | 20 |
| 21 | -- | -- | -- | | 1464 VA | 1716 VA | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 1464 VA | -- | -- | -- | 24 |
| 25 | HP-D213 | 20 A | 3 | 1464 VA | 1464 VA | | 3 | 20 A | HP-D214 | 26 |
| 27 | -- | -- | -- | | 1464 VA | 1464 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1464 VA | -- | -- | -- | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 300 VA | | 3 | 15 A | EF-D201 | 32 |
| 33 | SPARE | 20 A | 1 | | 1000 VA | 300 VA | -- | -- | -- | 34 |
| 35 | EF-D202 | 15 A | 1 | | | 150 VA | 300 VA | -- | -- | 36 |
| 37 | EF-D203 | 20 A | 2 | 828 VA | 300 VA | | 3 | 15 A | EF-D202 | 38 |
| 39 | -- | -- | -- | | 828 VA | 300 VA | -- | -- | -- | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA | 300 VA | -- | -- | 42 |
| 43 | EF-D204 | 15 A | 2 | 828 VA | 1000 VA | | 3 | 15 A | SPARE | 44 |
| 45 | -- | -- | -- | | 828 VA | 1000 VA | -- | -- | -- | 46 |
| 47 | EF-D205 | 15 A | 2 | 828 VA | 1000 VA | | 3 | 20 A | SPARE | 48 |
| 49 | -- | -- | -- | | | 1000 VA | -- | -- | -- | 50 |
| 51 | EF-D206 | 15 A | 2 | | 828 VA | 1000 VA | -- | -- | -- | 52 |
| 53 | -- | -- | -- | | | 1000 VA | -- | -- | -- | 54 |
| 55 | SPARE | 15 A | 2 | 1000 VA | 1000 VA | | 3 | 20 A | SPARE | 56 |
| 57 | -- | -- | -- | | 1000 VA | 1000 VA | -- | -- | -- | 58 |
| 59 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 60 |
| 61 | SPARE | 20 A | 1 | | | 1000 VA | 1 | 20 A | SPARE | 62 |
| 63 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 64 |
| 65 | SPARE | 20 A | 1 | | | 1000 VA | 1 | 20 A | SPARE | 66 |
| 67 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 68 |
| 69 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 70 |
| 71 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 72 |
| 73 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 74 |
| 75 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 76 |
| 77 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 78 |
| 79 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 80 |
| 81 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 82 |
| 83 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 84 |
| | | TOTAL LOAD: | | 26904 VA | 26904 VA | 24226 VA | | | | |
| | | TOTAL AMPS: | | 228 A | 228 A | 202 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Motor | 53035 VA | 99.43% | 52732 VA | |
| Spare | 25000 VA | 5.00% | 1250 VA | CONNECTED LOAD: 78035 VA |
| | | | | ESTIMATED DEMAND: 53982 VA |
| | | | | CONNECTED CURRENT: 217 A |
| | | | | EMD CURRENT: 150 A |

## PANEL: ME1

**LOCATION:** ELEC E111E
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-E101 | 15 A | 2 | 749 VA | 1716 VA | | 3 | 25 A | HP-E203 | 2 |
| 3 | -- | -- | -- | | 749 VA | 1716 VA | -- | -- | -- | 4 |
| 5 | HP-E201 | 15 A | 2 | | | 749 VA | 1716 VA | -- | -- | 6 |
| 7 | -- | -- | -- | 749 VA | 1464 VA | | 3 | 20 A | HP-F101 | 8 |
| 9 | HP-E202 | 15 A | 2 | | 749 VA | 1464 VA | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | 749 VA | 1464 VA | -- | -- | 12 |
| 13 | HP-F102 | 15 A | 2 | 749 VA | 1464 VA | | 3 | 20 A | HP-F103 | 14 |
| 15 | -- | -- | -- | | 749 VA | 1464 VA | -- | -- | -- | 16 |
| 17 | HP-F104 | 20 A | 3 | | | 1464 VA | 1464 VA | -- | -- | 18 |
| 19 | -- | -- | -- | 1464 VA | 720 VA | | 2 | 15 A | HP-F105 | 20 |
| 21 | -- | -- | -- | | 1464 VA | 720 VA | -- | -- | -- | 22 |
| 23 | HP-F202 | 20 A | 3 | | | 1428 VA | 624 VA | 2 | 15 A | HP-F203 | 24 |
| 25 | -- | -- | -- | 1428 VA | 624 VA | | -- | -- | -- | 26 |
| 27 | -- | -- | -- | | 1428 VA | 749 VA | 2 | 15 A | HP-F204 | 28 |
| 29 | HP-F205 | 15 A | 2 | | | 562 VA | 749 VA | -- | -- | 30 |
| 31 | -- | -- | -- | 562 VA | 624 VA | | 2 | 15 A | HP-F206 | 32 |
| 33 | HP-E207 | 15 A | 2 | | 749 VA | 624 VA | -- | -- | -- | 34 |
| 35 | -- | -- | -- | | | 749 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SSCU-E101, SSIU-E101 | 20 A | 2 | 1642 VA | 1000 VA | | | | | 38 |
| 39 | -- | -- | -- | | 1642 VA | 150 VA | 1 | 20 A | SPARE | 40 |
| 41 | SF-E101 | 15 A | 1 | | | | 150 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | TOTAL LOAD: | | 14955 VA | 14417 VA | 13868 VA | | | | |
| | | TOTAL AMPS: | | 125 A | 121 A | 116 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Motor | 40239 VA | 100.00% | 40239 VA | |
| Spare | 3000 VA | 5.00% | 150 VA | CONNECTED LOAD: 43239 VA |
| | | | | ESTIMATED DEMAND: 40389 VA |
| | | | | CONNECTED CURRENT: 120 A |
| | | | | EMD CURRENT: 112 A |

## PANEL: MJ1

**LOCATION:** ELEC J109E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HP-J101 | 15 A | 2 | 624 VA | 1269 VA | | 3 | 20 A | HP-J103 | 2 |
| 3 | -- | -- | -- | | 624 VA | 1269 VA | -- | -- | -- | 4 |
| 5 | HP-J102 | 20 A | 3 | | | 1464 VA | 1269 VA | -- | -- | 6 |
| 7 | -- | -- | -- | 1464 VA | 150 VA | | 1 | 15 A | SF-J101 | 8 |
| 9 | -- | -- | -- | | 1464 VA | 749 VA | 2 | 15 A | HP-J106 | 10 |
| 11 | HP-J105 | 15 A | 2 | | | 749 VA | 749 VA | -- | -- | 12 |
| 13 | -- | -- | -- | 749 VA | 1000 VA | | 1 | 20 A | SPARE | 14 |
| 15 | HP-J107 | 20 A | 3 | | 1428 VA | 1000 VA | 1 | 20 A | SPARE | 16 |
| 17 | -- | -- | -- | | | 1428 VA | 1642 VA | 2 | 20 A | SSCU-J101, SSIU-J101 | 18 |
| 19 | -- | -- | -- | 1428 VA | 1642 VA | | | | | 20 |
| 21 | SPARE | 20 A | 3 | | 1000 VA | 1000 VA | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 1000 VA | 1000 VA | -- | -- | 24 |
| 25 | -- | -- | -- | 1000 VA | 1000 VA | | -- | -- | -- | 26 |
| 27 | SPARE | 20 A | 3 | | 1000 VA | 1000 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1000 VA | 1000 VA | 2 | 15 A | SPARE | 30 |
| 31 | -- | -- | -- | 1000 VA | 1000 VA | | -- | -- | -- | 32 |
| 33 | SPARE | 0 A | 1 | | 1000 VA | 1000 VA | 2 | 15 A | SPARE | 34 |
| 35 | SPARE | 0 A | 1 | | | 1000 VA | 1000 VA | -- | -- | -- | 36 |
| 37 | SPARE | 0 A | 1 | 1000 VA | 1000 VA | | -- | -- | -- | 38 |
| 39 | SPARE | 0 A | 1 | | 1000 VA | 1000 VA | 1 | 0 A | SPARE | 40 |
| 41 | SPARE | 0 A | 1 | | | 1000 VA | 1000 VA | 1 | 0 A | SPARE | 42 |
| | | TOTAL LOAD: | | 14325 VA | 14534 VA | 15300 VA | | | | |
| | | TOTAL AMPS: | | 119 A | 121 A | 128 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Motor | 20160 VA | 100.00% | 20160 VA | |
| Spare | 24000 VA | 5.00% | 1200 VA | CONNECTED LOAD: 44160 VA |
| | | | | ESTIMATED DEMAND: 21360 VA |
| | | | | CONNECTED CURRENT: 123 A |
| | | | | EMD CURRENT: 59 A |

## PANEL: ML1

**LOCATION:** ELEC L100E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EVC-M101, M201 | 15 A | 1 | 360 VA | 360 VA | | 1 | 20 A | SPARE | 2 |
| 3 | SSCU-L101, SSIU-L101 | 15 A | 2 | | 750 VA | 1000 VA | 1 | 20 A | SPARE | 4 |
| 5 | -- | -- | -- | | | 750 VA | 1176 VA | 1 | 20 A | SF-L101 | 6 |
| 7 | SF-L102 | 15 A | 1 | 150 VA | 736 VA | | 1 | 15 A | VF-L101 - VF-L116 | 8 |
| 9 | SPARE | 15 A | 2 | | 1000 VA | 1000 VA | 2 | 15 A | SPARE | 10 |
| 11 | -- | -- | -- | | | 1000 VA | 1000 VA | -- | -- | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 26 |
| 27 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 28 |
| 29 | SPACE ONLY | -- | -- | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 30 |
| 31 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | -- | -- | SPACE ONLY | 32 |
| 33 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 34 |
| 35 | SPACE ONLY | -- | -- | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | | | | -- | -- | SPACE ONLY | 42 |
| | | TOTAL LOAD: | | 8246 VA | 7750 VA | 7926 VA | | | | |
| | | TOTAL AMPS: | | 69 A | 65 A | 66 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Receptacle | 360 VA | 100.00% | 360 VA | |
| Motor | 3412 VA | 100.00% | 3412 VA | CONNECTED LOAD: 23922 VA |
| Other | 150 VA | 100.00% | 150 VA | ESTIMATED DEMAND: 4922 VA |
| Spare | 20000 VA | 5.00% | 1000 VA | CONNECTED CURRENT: 66 A |
| | | | | EMD CURRENT: 14 A |

## PANEL: MG1

**LOCATION:** ELEC G103E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SKUTT KILN KM-1227PK | 90 A | 2 | 7176 VA | 6240 VA | | 2 | 80 A | KILN-L&L KILN | 2 |
| 3 | -- | -- | -- | | 7176 VA | 6240 VA | -- | -- | -- | 4 |
| 5 | SPRAY BOOTH-G122 | 20 A | 1 | | | 800 VA | 1716 VA | 3 | 25 A | HP-F201 | 6 |
| 7 | HP-G101 | 25 A | 3 | 1716 VA | 1716 VA | | -- | -- | -- | 8 |
| 9 | -- | -- | -- | | 1716 VA | 1716 VA | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | 1716 VA | 1428 VA | 3 | 20 A | HP-G102 | 12 |
| 13 | HP-G103 | 15 A | 2 | 749 VA | 1428 VA | | -- | -- | -- | 14 |
| 15 | -- | -- | -- | | 749 VA | 1428 VA | -- | -- | -- | 16 |
| 17 | HP-G201 | 25 A | 3 | | | 1716 VA | 1428 VA | 3 | 20 A | HP-G203 | 18 |
| 19 | -- | -- | -- | 1716 VA | 1428 VA | | -- | -- | -- | 20 |
| 21 | -- | -- | -- | | 716 VA | 1428 VA | -- | -- | -- | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 26 |
| 27 | SSCU-G201, SSIU-G201 | 15 A | 2 | | 750 VA | 1642 VA | 2 | 20 A | SSCU-G202, SSIU-G202 | 28 |
| 29 | -- | -- | -- | | | 750 VA | 1642 VA | -- | -- | -- | 30 |
| 31 | SF-G1 | 20 A | 1 | 1176 VA | 150 VA | | 1 | 15 A | SF-G101 | 32 |
| 33 | SPARE | 20 A | 3 | | 1000 VA | 696 VA | 1 | 15 A | EF-G102 | 34 |
| 35 | -- | -- | -- | | | 1000 VA | 170 VA | 1 | 15 A | EF-G103 | 36 |
| 37 | -- | -- | -- | 1000 VA | 1000 VA | | 2 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | -- | -- | -- | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | TOTAL LOAD: | | 27495 VA | 28257 VA | 16366 VA | | | | |
| | | TOTAL AMPS: | | 243 A | 250 A | 136 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Motor | 59251 VA | 98.44% | 58326 VA | |
| Other | 866 VA | 100.00% | 866 VA | CONNECTED LOAD: 72117 VA |
| Spare | 12000 VA | 5.00% | 600 VA | ESTIMATED DEMAND: 59792 VA |
| | | | | CONNECTED CURRENT: 200 A |
| | | | | EMD CURRENT: 166 A |

## PANEL: MH1

**LOCATION:** ELEC H104E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HAND DRYER-TOILET H105T | 15 A | 2 | 780 VA | 360 VA | | 1 | 20 A | H-G101 | 2 |
| 3 | -- | -- | -- | | | 780 VA | 360 VA | 1 | 20 A | VF-G101 | 4 |
| 5 | HAND DRYER-TOILET H106T | 15 A | 2 | | | 780 VA | 1662 VA | 2 | 20 A | SSCU-H201, SSIU-H201 | 6 |
| 7 | -- | -- | -- | 780 VA | 1662 VA | | -- | -- | -- | 8 |
| 9 | SSCU-H101, SSIUH101 | 20 A | 2 | | | 1642 VA | 1000 VA | 3 | 20 A | SPARE | 10 |
| 11 | -- | -- | -- | | | | | -- | -- | -- | 12 |
| 13 | SF-G101 | 20 A | 1 | 528 VA | 1000 VA | | -- | -- | -- | 14 |
| 15 | SF-H101 | 20 A | 1 | | | 150 VA | 1000 VA | 2 | 20 A | SPARE | 16 |
| 17 | SF-G102 | 20 A | 1 | | | | | | | | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | | 20 |
| 21 | SPARE | 15 A | 2 | | | 1000 VA | 1000 VA | | | | 22 |
| 23 | -- | -- | -- | | | | | | | | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | | 28 |
| 29 | SPARE | 20 A | 1 | | | | | | | | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | | 34 |
| 35 | SPACE ONLY | -- | -- | | | | | | | | 36 |
| 37 | SPACE ONLY | -- | -- | | | | | | | | 38 |
| 39 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | | 40 |
| 41 | SPACE ONLY | -- | -- | | | | | | | | 42 |
| | | TOTAL LOAD: | | 11110 VA | 10932 VA | 10184 VA | | | | |
| | | TOTAL AMPS: | | 94 A | 92 A | 85 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Appliance | 3120 VA | 100.00% | 3120 VA | |
| Motor | 8006 VA | 100.00% | 8006 VA | CONNECTED LOAD: 32226 VA |
| Other | 100 VA | 100.00% | 100 VA | ESTIMATED DEMAND: 12276 VA |
| Spare | 21000 VA | 5.00% | 1050 VA | CONNECTED CURRENT: 89 A |
| | | | | EMD CURRENT: 34 A |

## PANEL: MK1

**LOCATION:** ELEC K127E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BLEACHERS-MAIN GYM NORTH | 20 A | 3 | 1324 VA | 36 VA | | 1 | 20 A | WS-K1 | 2 |
| 3 | -- | -- | -- | | 1324 VA | 900 VA | 1 | 15 A | DWH-K2 | 4 |
| 5 | -- | -- | -- | | | 1324 VA | 0 VA | -- | -- | SHUNT TRIP | 6 |
| 7 | P-K107 | 15 A | 1 | 240 VA | 900 VA | | 1 | 15 A | DWH-K1 | 8 |
| 9 | P-K108 | 15 A | 1 | | 180 VA | 0 VA | 1 | -- | -- | SHUNT TRIP | 10 |
| 11 | UH-K102, UH-K104 | 15 A | 1 | | | 480 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | KEF-K101 | 15 A | 3 | 576 VA | 576 VA | | 3 | 15 A | KEF-K102 | 14 |
| 15 | -- | -- | -- | | 576 VA | 576 VA | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 576 VA | 576 VA | -- | -- | -- | 18 |
| 19 | KEF-K103 | 15 A | 3 | 576 VA | 576 VA | | 3 | 15 A | KEF-K104 | 20 |
| 21 | -- | -- | -- | | 576 VA | 576 VA | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | 576 VA | 576 VA | -- | -- | -- | 24 |
| 25 | SPARE | 15 A | 3 | 1000 VA | 1000 VA | | 3 | 20 A | SPARE | 26 |
| 27 | -- | -- | -- | | 1000 VA | 1000 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1000 VA | 1000 VA | -- | -- | -- | 30 |
| 31 | SPARE | 15 A | 3 | 1000 VA | 1000 VA | | 2 | 15 A | SPARE | 32 |
| 33 | -- | -- | -- | | 1000 VA | 1000 VA | -- | -- | -- | 34 |
| 35 | -- | -- | -- | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | TOTAL LOAD: | | 10806 VA | 10710 VA | 11110 VA | | | | |
| | | TOTAL AMPS: | | 90 A | 89 A | 93 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Heating | 1800 VA | 100.00% | 1800 VA | |
| Motor | 11825 VA | 100.00% | 11825 VA | CONNECTED LOAD: 32625 VA |
| Spare | 19000 VA | 5.00% | 950 VA | ESTIMATED DEMAND: 14575 VA |
| | | | | CONNECTED CURRENT: 91 A |
| | | | | EMD CURRENT: 40 A |

## PANEL: MK1B

**LOCATION:** ELEC K103E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | UH-K101, UH-K102 | 15 A | 1 | 480 VA | 1642 VA | | 2 | 20 A | SSCU-K101, SSIU-K101 | 2 |
| 3 | SPARE | 20 A | 1 | | | 1000 VA | 1642 VA | | | | 4 |
| 5 | EF-K101 | 15 A | 1 | | | 696 VA | 150 VA | 1 | 15 A | SF-J101 | 6 |
| 7 | SF-K102 | 15 A | 1 | 528 VA | 1000 VA | | 2 | 20 A | SPARE | 8 |
| 9 | SPARE | 15 A | 2 | | 1000 VA | 1000 VA | -- | -- | -- | | 10 |
| 11 | -- | -- | -- | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 15 A | 2 | 1000 VA | 1000 VA | | -- | -- | -- | | 14 |
| 15 | -- | -- | -- | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | | 16 |
| 17 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | 1 | 20 A | SPARE | | 20 |
| 21 | SPARE | 20 A | 1 | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | | 22 |
| 23 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 0 VA | | 1 | 20 A | SPACE ONLY | | 26 |
| 27 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | | 28 |
| 29 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 30 |
| 31 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | | 32 |
| 33 | SPACE ONLY | -- | -- | | 0 VA | 0 VA | -- | -- | SPACE ONLY | | 34 |
| 35 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | -- | -- | SPACE ONLY | | 38 |
| 39 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 42 |
| | | TOTAL LOAD: | | 8650 VA | 8642 VA | 6846 VA | | | | |
| | | TOTAL AMPS: | | 74 A | 74 A | 57 A | | | | |

ADD #3

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS |
|---|---|---|---|---|
| Motor | 4459 VA | 100.00% | 4459 VA | |
| Other | 678 VA | 100.00% | 678 VA | CONNECTED LOAD: 24137 VA |
| Spare | 19000 VA | 5.00% | 950 VA | ESTIMATED DEMAND: 6087 VA |
| | | | | CONNECTED CURRENT: 67 A |
| | | | | EMD CURRENT: 17 A |


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00



© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

PANELBOARD SCHEDULES

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E7.14

|

A
ADD #3

## PANEL: MM2

**LOCATION:** ELEC M202E
**BUS RATING:** 225 A
**MAIN BREAKER:** 225A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | AUX GYM RELAY PANEL #1 | 30 A | 1 | 1656 VA | 1656 VA | | | | | 1 | 30 A | MAIN GYM RELAY PANEL #1 | 2 |
| 3 | AUX GYM RELAY PANEL #2 | 30 A | 1 | | | 1656 VA | 1656 VA | | | 1 | 30 A | MAIN GYM RELAY PANEL #2 | 4 |
| 5 | AUX GYM RELAY PANEL #3 | 30 A | 1 | | | | | 1656 VA | 1656 VA | 1 | 30 A | MAIN GYM RELAY PANEL #3 | 6 |
| 7 | AUX GYM RELAY PANEL #4 | 30 A | 1 | 1656 VA | 1656 VA | | | | | 1 | 30 A | MAIN GYM RELAY PANEL #4 | 8 |
| 9 | AUX GYM BLEACHERS | 15 A | 3 | | | 939 VA | 900 VA | | | 1 | 15 A | BC-M201 | 10 |
| 11 | -- | -- | -- | | | | | 939 VA | 900 VA | 1 | 15 A | BC-M202 | 12 |
| 13 | -- | -- | -- | 939 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 1642 VA | 2 | 20 A | SSCU-M201, SSIU-M201 | 18 |
| 19 | SSCU-N101, SSIU-N101 | 20 A | 2 | 1642 VA | 1642 VA | | | | | -- | -- | -- | 20 |
| 21 | -- | -- | -- | | | 1642 VA | 32 VA | | | 1 | 15 A | UH-N101, UH-N102 | 22 |
| 23 | EF-M201 | 15 A | 1 | | | | | 696 VA | 500 VA | 1 | 15 A | SPARE | 24 |
| 25 | SF-M201 | 15 A | 1 | 528 VA | 5740 VA | | | | | 3 | 100 A | PANEL LPB | 26 |
| 27 | VF-M101 - VF-M109 | 15 A | 1 | | | 414 VA | 5942 VA | | | -- | -- | -- | 28 |
| 29 | SPARE | 30 A | 1 | | | | | 1000 VA | 6671 VA | -- | -- | -- | 30 |
| 31 | SPARE | 15 A | 3 | 1000 VA | 1000 VA | | | | | 2 | 15 A | SPARE | 32 |
| 33 | -- | -- | -- | | | 1000 VA | 1000 VA | | | -- | -- | -- | 34 |
| 35 | -- | -- | -- | | | | | 1000 VA | 1000 VA | 2 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | -- | -- | -- | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | **TOTAL LOAD:** | | 22114 VA | | 19181 VA | | 20660 VA | | | | | |
| | | **TOTAL AMPS:** | | 186 A | | 160 A | | 174 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 552 VA | 125.00% | 690 VA | | |
| Receptacle | 3780 VA | 100.00% | 3780 VA | **CONNECTED LOAD:** | 65978 VA |
| Appliance | 2611 VA | 100.00% | 2611 VA | **ESTIMATED DEMAND:** | 37141 VA |
| Motor | 28007 VA | 100.00% | 28007 VA | **CONNECTED CURRENT:** | 183 A |
| Other | 528 VA | 100.00% | 528 VA | **EMD CURRENT:** | 103 A |
| Spare | 30500 VA | 5.00% | 1525 VA | | |

## PANEL: MN1

**LOCATION:** ELEC N104E
**BUS RATING:** 100 A
**MAIN BREAKER:** 100A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SP-N1 | 20 A | 1 | 1176 VA | 528 VA | | | | | 1 | 20 A | EF-N101 | 2 |
| 3 | SP-N2 | 20 A | 1 | | | 1176 VA | 528 VA | | | 1 | 15 A | EF-N102 | 4 |
| 5 | SF-N101 | 15 A | 1 | | | | | 528 VA | 1920 VA | 1 | 30 A | EF-N103 | 6 |
| 7 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 8 |
| 9 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 15 A | SPARE | 10 |
| 11 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 22 |
| 23 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 24 |
| 25 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 26 |
| 27 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 28 |
| 29 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 30 |
| 31 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 32 |
| 33 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 34 |
| 35 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 36 |
| 37 | SPACE ONLY | -- | -- | 0 VA | 0 VA | | | | | -- | -- | SPACE ONLY | 38 |
| 39 | SPACE ONLY | -- | -- | | | 0 VA | 0 VA | | | -- | -- | SPACE ONLY | 40 |
| 41 | SPACE ONLY | -- | -- | | | | | 0 VA | 0 VA | -- | -- | SPACE ONLY | 42 |
| | | **TOTAL LOAD:** | | 7704 VA | | 5704 VA | | 6448 VA | | | | | |
| | | **TOTAL AMPS:** | | 65 A | | 48 A | | 55 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Motor | 5328 VA | 100.00% | 5328 VA | | |
| Other | 528 VA | 100.00% | 528 VA | **CONNECTED LOAD:** | 19856 VA |
| Spare | 14000 VA | 5.00% | 700 VA | **ESTIMATED DEMAND:** | 6556 VA |
| | | | | **CONNECTED CURRENT:** | 55 A |
| | | | | **EMD CURRENT:** | 18 A |

## PANEL: OHM

**LOCATION:** EMERGENCY ELEC K127D
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A
**VOLTS:** 480/277 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
100

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | TOLK1 | 125 A | 3 | 22039... | 1000 VA | | | | | 1 | 20 A | SPARE | 2 |
| 3 | -- | -- | -- | | | 22210... | 1000 VA | | | 1 | 20 A | SPARE | 4 |
| 5 | -- | -- | -- | | | | | 21887... | 1000 VA | 1 | 20 A | SPARE | 6 |
| 7 | TOLC1 | 125 A | 3 | 19719... | 1000 VA | | | | | 1 | 20 A | SPARE | 8 |
| 9 | -- | -- | -- | | | 20444... | 1000 VA | | | 1 | 20 A | SPARE | 10 |
| 11 | -- | -- | -- | | | | | 23132... | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | **TOTAL LOAD:** | | 53758 VA | | 54654 VA | | 57019 VA | | | | | |
| | | **TOTAL AMPS:** | | 194 A | | 198 A | | 206 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 720 VA | 125.00% | 900 VA | | |
| Receptacle | 2040 VA | 100.00% | 2040 VA | **CONNECTED LOAD:** | 186466 VA |
| Kitchen | 33450 VA | 65.00% | 21743 VA | **ESTIMATED DEMAND:** | 64849 VA |
| Appliance | 24200 VA | 96.53% | 23360 VA | **CONNECTED CURRENT:** | 224 A |
| Motor | 11056 VA | 100.00% | 11056 VA | **EMD CURRENT:** | 78 A |
| Spare | 115000 VA | 5.00% | 5750 VA | | |

## PANEL: OLC1

**LOCATION:** HEAD END COMM ROOM C110
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. PROVIDE 200% RATED NEUTRAL BUS.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | UPS PANEL | 100 A | 3 | 12540... | 1000 VA | | | | | 1 | 20 A | SPARE | 2 |
| 3 | -- | -- | -- | | | 14000... | 1000 VA | | | 1 | 20 A | SPARE | 4 |
| 5 | -- | -- | -- | | | | | 14000... | 2764 VA | 2 | 30 A | SSCU-C101A, SSIU-C101A | 6 |
| 7 | DCP-C110 COMM | 20 A | 1 | 200 VA | 2764 VA | | | | | -- | -- | -- | 8 |
| 9 | RECEPT- BENCH C110 #3 | 20 A | 1 | | | 500 VA | 500 VA | | | 1 | 20 A | RECEPT-BENCH C110 #2 | 10 |
| 11 | RECEPT-BENCH C110 #1 | 20 A | 1 | | | | | 500 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 2764 VA | | | 2 | 30 A | SSCU-C101B, SSIU-C101B | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 2764 VA | -- | -- | -- | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | **TOTAL LOAD:** | | 26504 VA | | 27764 VA | | 30028 VA | | | | | |
| | | **TOTAL AMPS:** | | 221 A | | 233 A | | 252 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 2040 VA | 100.00% | 2040 VA | | |
| Appliance | 24200 VA | 96.53% | 23360 VA | **CONNECTED LOAD:** | 84296 VA |
| Motor | 11056 VA | 100.00% | 11056 VA | **ESTIMATED DEMAND:** | 38806 VA |
| Spare | 47000 VA | 5.00% | 2350 VA | **CONNECTED CURRENT:** | 234 A |
| | | | | **EMD CURRENT:** | 108 A |

## PANEL: OLK1

**LOCATION:** EMERGENCY ELEC K127D
**BUS RATING:** 150 A
**MAIN BREAKER:** 150A
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE AND COVER. ** INDICATES GFI CIRCUIT BREAKER

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15-REMOTE REFRIGERATION UNIT | 80 A | 3 | 8254 VA | 648 VA | | | | | 1 | 15 A | 15A,15B-COOLER EVAP K132, K131 | 2 |
| 3 | -- | -- | -- | | | 8254 VA | 1633 VA | | | 2 | 20 A | 15C-COOLER EVAP K130 | 4 |
| 5 | -- | -- | -- | | | | | 8254 VA | 1633 VA | -- | -- | -- | 6 |
| 7 | 16,17,18-DOOR HEAT TAPE** | 20 A | 1 | 1500 VA | 1637 VA | | | | | 2 | 30 A | 15D-COOLER EVAP K126 | 8 |
| 9 | LIGHTING-WALK-IN COOLERS | 20 A | 1 | | | 720 VA | 1637 VA | | | -- | -- | -- | 10 |
| 11 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 12 |
| 13 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 14 |
| 15 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 16 |
| 17 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 18 |
| 19 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 20 |
| 21 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 22 |
| 23 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 24 |
| 25 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 26 |
| 27 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 28 |
| 29 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 30 |
| 31 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | **TOTAL LOAD:** | | 22039 VA | | 22244 VA | | 21887 VA | | | | | |
| | | **TOTAL AMPS:** | | 184 A | | 186 A | | 182 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Lighting | 720 VA | 125.00% | 900 VA | | |
| Kitchen | 33450 VA | 65.00% | 21743 VA | **CONNECTED LOAD:** | 66170 VA |
| Spare | 32000 VA | 5.00% | 1600 VA | **ESTIMATED DEMAND:** | 24243 VA |
| | | | | **CONNECTED CURRENT:** | 184 A |
| | | | | **EMD CURRENT:** | 67 A |

## PANEL: LUPS

**LOCATION:** HEAD END COMM ROOM C110
**BUS RATING:** 100 A
**MAIN BREAKER:**
**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4
**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
RELOCATED APC PANELBOARD/BYPASS SWITCH. PROVIDE NEW CIRCUIT BREAKERS ONLY

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | | B | | C | | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PDU RACK 1 | 30 A | 3 | 1000 VA | 1000 VA | | | | | 3 | 30 A | PDU RACK 5 | 2 |
| 3 | -- | -- | -- | | | 1000 VA | 1000 VA | | | -- | -- | -- | 4 |
| 5 | -- | -- | -- | | | | | 1000 VA | 1000 VA | -- | -- | -- | 6 |
| 7 | PDU RACK 2 | 30 A | 3 | 1000 VA | 1000 VA | | | | | 3 | 30 A | PDU RACK 6 | 8 |
| 9 | -- | -- | -- | | | 1000 VA | 1000 VA | | | -- | -- | -- | 10 |
| 11 | -- | -- | -- | | | | | 1000 VA | 1000 VA | -- | -- | -- | 12 |
| 13 | PDU RACK 3 | 30 A | 3 | 1000 VA | 1000 VA | | | | | 3 | 30 A | PDU RACK 8 | 14 |
| 15 | -- | -- | -- | | | 1000 VA | 1000 VA | | | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | | | 1000 VA | 1000 VA | -- | -- | -- | 18 |
| 19 | PDU RACK 4 | 30 A | 3 | 1000 VA | 1000 VA | | | | | 3 | 30 A | PDU RACK 10 | 20 |
| 21 | -- | -- | -- | | | 1000 VA | 1000 VA | | | -- | -- | -- | 22 |
| 23 | -- | -- | -- | | | | | 1000 VA | 1000 VA | -- | -- | -- | 24 |
| 25 | RECEPT-WALL C110 1 | 20 A | 1 | 360 VA | 180 VA | | | | | 1 | 20 A | RECEPT-WALL C110 2 | 26 |
| 27 | SPARE | 30 A | 3 | | | 1000 VA | 1000 VA | | | 3 | 30 A | SPARE | 28 |
| 29 | -- | -- | -- | | | | | 1000 VA | 1000 VA | -- | -- | -- | 30 |
| 31 | -- | -- | -- | 1000 VA | 1000 VA | | | | | -- | -- | -- | 32 |
| 33 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 34 |
| 35 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 36 |
| 37 | SPARE | 20 A | 1 | 1000 VA | 1000 VA | | | | | 1 | 20 A | SPARE | 38 |
| 39 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | | | 1 | 20 A | SPARE | 40 |
| 41 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 42 |
| | | **TOTAL LOAD:** | | 12540 VA | | 14000 VA | | 14000 VA | | | | | |
| | | **TOTAL AMPS:** | | 105 A | | 119 A | | 119 A | | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 540 VA | 100.00% | 540 VA | | |
| Appliance | 24000 VA | 96.67% | 23200 VA | **CONNECTED LOAD:** | 40540 VA |
| Spare | 16000 VA | 5.00% | 800 VA | **ESTIMATED DEMAND:** | 24540 VA |
| | | | | **CONNECTED CURRENT:** | 113 A |
| | | | | **EMD CURRENT:** | 68 A |

| | | |
|---|---|---|
| MM2 | MN1 | OHM |
| OLC1 | OLK1 | LUPS |
| | | |


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL ELECTRICAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD #3 Addendum No. 3 | 10/14/2014 |

PANELBOARD SCHEDULES

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E7.15

# PANEL: SA2A

**LOCATION:** ELEC A204E
**BUS RATING:** 400 A
**MAIN BREAKER:** 400A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE, **PROVIDE GFI CIRCUIT BREAKER

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT- STUDENT TESTING A114, A113S,... | 20 A | 1 | 1080 VA | 5463 VA | | 2 | 60 A | M01A WELDING BOOTH | 2 |
| 3 | RECEPT-TOOL ROOMS A116, A117 | 20 A | 1 | | 720 VA | 5463 VA | -- | -- | -- | 4 |
| 5 | AIR COMPRESSOR** | 20 A | 1 | | | 1800 VA | 5463 VA | 2 | 60 A | M01B WELDING BOOTH | 6 |
| 7 | M06A LATHE | 30 A | 3 | 1805 VA | 5463 VA | | -- | -- | -- | 8 |
| 9 | -- | -- | -- | | 1805 VA | 5463 VA | 2 | 60 A | M01C WELDING BOOTH | 10 |
| 11 | -- | -- | -- | | | 1805 VA | 5463 VA | -- | -- | -- | 12 |
| 13 | M06B LATHE | 30 A | 3 | 1805 VA | 5463 VA | | 2 | 60 A | M01D WELDING BOOTH | 14 |
| 15 | -- | -- | -- | | 1805 VA | 5463 VA | -- | -- | -- | 16 |
| 17 | -- | -- | -- | | | 1805 VA | 5463 VA | 2 | 60 A | M01E WELDING BOOTH | 18 |
| 19 | M06C LATHE | 30 A | 3 | 1805 VA | 5463 VA | | -- | -- | -- | 20 |
| 21 | -- | -- | -- | | 1805 VA | 5463 VA | 2 | 60 A | M01F WELDING BOOTH | 22 |
| 23 | -- | -- | -- | | | 1805 VA | 5463 VA | -- | -- | -- | 24 |
| 25 | M06D LATHE | 30 A | 3 | 1805 VA | 5463 VA | | 2 | 60 A | M01G WELDING BOOTH | 26 |
| 27 | -- | -- | -- | | 1805 VA | 5463 VA | -- | -- | -- | 28 |
| 29 | -- | -- | -- | | | 1805 VA | 5463 VA | 2 | 60 A | M01H WELDING BOOTH | 30 |
| 31 | M06E LATHE | 30 A | 3 | 1805 VA | 5463 VA | | -- | -- | -- | 32 |
| 33 | -- | -- | -- | | 1805 VA | 5463 VA | 2 | 60 A | M01I WELDING BOOTH | 34 |
| 35 | -- | -- | -- | | | 1805 VA | 5463 VA | -- | -- | -- | 36 |
| 37 | M05A MILL | 15 A | 3 | 457 VA | 180 VA | | 1 | 20 A | RECEPT- M01A WELDING BOOTH | 38 |
| 39 | -- | -- | -- | | 457 VA | 180 VA | 1 | 20 A | RECEPT-M01B WELDING BOOTH | 40 |
| 41 | -- | -- | -- | | | 457 VA | 180 VA | 1 | 20 A | RECEPT-M01C WELDING BOOTH | 42 |
| 43 | M05B MILL | 15 A | 3 | 782 VA | 180 VA | | 1 | 20 A | RECEPT-M01D WELDING BOOTH | 44 |
| 45 | -- | -- | -- | | 782 VA | 180 VA | 1 | 20 A | RECEPT-M01E WELDING BOOTH | 46 |
| 47 | -- | -- | -- | | | 782 VA | 180 VA | 1 | 20 A | RECEPT-M01F WELDING BOOTH | 48 |
| 49 | M07A PEDESTAL GRINDER | 15 A | 3 | 890 VA | 180 VA | | 1 | 20 A | RECEPT-M01G WELDING BOOTH | 50 |
| 51 | -- | -- | -- | | 890 VA | 180 VA | 1 | 20 A | RECEPT-M01H WELDING BOOTH | 52 |
| 53 | -- | -- | -- | | | 890 VA | 180 VA | 1 | 20 A | RECEPT-M01I WELDING BOOTH | 54 |
| 55 | M07B PEDESTAL GRINDER | 15 A | 3 | 890 VA | 180 VA | | 1 | 20 A | RECEPT-M08A TABLE** | 56 |
| 57 | -- | -- | -- | | 890 VA | 180 VA | 1 | 20 A | RECEPT-M08C TABLE** | 58 |
| 59 | -- | -- | -- | | | 890 VA | 180 VA | 1 | 20 A | RECEPT-M08E TABLE | 60 |
| 61 | 208V RECEPT-M08B TABLE** | 30 A | 2 | 2650 VA | 180 VA | | 1 | 20 A | RECEPT-M08G TABLE | 62 |
| 63 | -- | -- | -- | | 2650 VA | 180 VA | 1 | 20 A | RECEPT-M08I TABLE | 64 |
| 65 | 208V RECEPT-M08D TABLE | 30 A | 2 | | | 2650 VA | 180 VA | 1 | 20 A | RECEPT-M08K TABLE | 66 |
| 67 | -- | -- | -- | 2650 VA | 360 VA | | 1 | 20 A | RECEPT-PLASMA CAM** | 68 |
| 69 | 208V RECEPT-M08F TABLE | 30 A | 2 | | 2650 VA | 1083 VA | 3 | 20 A | M18-SCOTTSMAN IRON WORKER | 70 |
| 71 | -- | -- | -- | | | 2650 VA | 1083 VA | -- | -- | -- | 72 |
| 73 | 208V RECEPT-M08H TABLE | 30 A | 2 | 2650 VA | 1083 VA | | -- | -- | -- | 74 |
| 75 | -- | -- | -- | | 2650 VA | 1472 VA | 1 | 20 A | M20-HORIZONTAL BAND SAW | 76 |
| 77 | 208V RECEPT-M08J TABLE | 30 A | 2 | | | 2650 VA | 180 VA | 1 | 20 A | M15-FOUNDRY | 78 |
| 79 | -- | -- | -- | 2650 VA | 2645 VA | | 2 | 30 A | M17-SMALL BRAKE | 80 |
| 81 | 208V RECEPT-M08L TABLE | 30 A | 2 | | 2650 VA | 2645 VA | -- | -- | -- | 82 |
| 83 | -- | -- | -- | | | 2650 VA | 1536 VA | 1 | 20 A | M21-DRILL PRESS | 84 |
| | | | **TOTAL LOAD:** | 61490 VA | 62242 VA | 60921 VA | | | | |
| | | | **TOTAL AMPS:** | 513 A | 519 A | 508 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 20760 VA | 74.08% | 15380 VA | | |
| Appliance | 163893 VA | 66.71% | 109336 VA | **CONNECTED LOAD:** | 184653 VA |
| | | | | **ESTIMATED DEMAND:** | 124716 VA |
| | | | | **CONNECTED CURRENT:** | 513 A |
| | | | | **EMD CURRENT:** | 346 A |

# PANEL: SA2B

**LOCATION:** ELEC A204E
**BUS RATING:** 400 A
**MAIN BREAKER:** 400A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE, PROVIDE SHUNT-TRIP MAIN CIRCUIT BREAKER.**PROVIDE GFI CIRCUIT BREAKER

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECEPT-W24A WORK TABLE | 20 A | 1 | 180 VA | 1320 VA | | 1 | 20 A | RECEPT-W12 ROUTER | 2 |
| 3 | RECEPT-W24B WORK TABLE | 20 A | 1 | | 180 VA | 360 VA | 1 | 20 A | RECEPT-W17 BENCH GRIDER | 4 |
| 5 | RECEPT-W24C WORK TABLE | 20 A | 1 | | | 180 VA | 720 VA | 1 | 20 A | RECEPT-W16 SANDER | 6 |
| 7 | RECEPT-W24D WORK TABLE | 20 A | 1 | 180 VA | 1608 VA | | 1 | 20 A | RECEPT-W04A LATHE | 8 |
| 9 | RECEPT-W24E WORK TABLE | 20 A | 1 | | 180 VA | 1608 VA | 1 | 20 A | RECEPT-W04B LATHE | 10 |
| 11 | RECEPT-W24F WORK TABLE | 20 A | 1 | | | 180 VA | 1608 VA | 1 | 20 A | RECEPT-W04C LATHE | 12 |
| 13 | RECEPT-W24G LOCKER TABLE | 20 A | 1 | 180 VA | 1608 VA | | 1 | 20 A | RECEPT-W04D LATHE | 14 |
| 15 | RECEPT-W24H LOCKER TABLE | 20 A | 1 | | 180 VA | 1608 VA | 1 | 20 A | RECEPT-W04E LATHE | 16 |
| 17 | RECEPT-W24I LOCKER TABLE | 20 A | 1 | | | 180 VA | 1368 VA | 1 | 20 A | RECEPT-W10A BAND SAW | 18 |
| 19 | RECEPT-W24J LOCKER TABLE | 20 A | 1 | 180 VA | 1368 VA | | 1 | 20 A | RECEPT-W10B BAND SAW | 20 |
| 21 | RECEPT-W24K LOCKER TABLE | 20 A | 1 | | 180 VA | 1920 VA | 1 | 20 A | RECEPT-W13A ROUTER | 22 |
| 23 | RECEPT-W24L LOCKER TABLE | 20 A | 1 | | | 180 VA | 1920 VA | 1 | 20 A | RECEPT-W13B ROUTER | 24 |
| 25 | RECEPT-W24M BIG TABLE | 20 A | 1 | 180 VA | 1800 VA | | 1 | 20 A | RECEPT-W11A MITER SAW | 26 |
| 27 | RECEPT-W24N BIG TABLE | 20 A | 1 | | 180 VA | 1800 VA | 1 | 20 A | RECEPT-W11B MITER SAW | 28 |
| 29 | RECEPT-W24O GENERAL | 20 A | 1 | | | 180 VA | 1368 VA | 1 | 20 A | RECEPT-W15B DRILL PRESS | 30 |
| 31 | RECEPT-W24P GLUE TABLE | 20 A | 1 | 180 VA | 1368 VA | | 1 | 20 A | RECEPT-W15A DRILL PRESS | 32 |
| 33 | RECEPT-W24Q GLUE TABLE | 20 A | 1 | | 180 VA | 457 VA | 3 | 15 A | W06-JOINTER | 34 |
| 35 | W05-JOINTER | 20 A | 2 | | | 1035 VA | 457 VA | -- | -- | -- | 36 |
| 37 | -- | -- | -- | 1035 VA | 457 VA | | -- | -- | -- | 38 |
| 39 | W02-RADIAL ARM SAW | 25 A | 2 | | | 1104 VA | 2645 VA | 2 | 40 A | W07A-DRUM SANDER | 40 |
| 41 | -- | -- | -- | | | | 1104 VA | 2645 VA | -- | -- | 42 |
| 43 | W07B-DRUM SANDER | 20 A | 1 | 180 VA | 3968 VA | | 2 | 60 A | W08A-PLANER | 44 |
| 45 | RECEPT-WOODS SOUTH | 20 A | 1 | | | 720 VA | 3968 VA | -- | -- | -- | 46 |
| 47 | RECEPT-WOODS SOUTHWEST | 20 A | 1 | | | | 540 VA | 180 VA | 1 | 20 A | RECEPT-W08B PLANER | 48 |
| 49 | W14-SHAPER | 20 A | 3 | 1155 VA | 1444 VA | | 3 | 30 A | W03A-TABLE SAW #1 | 50 |
| 51 | -- | -- | -- | | | 1155 VA | 1444 VA | -- | -- | -- | 52 |
| 53 | -- | -- | -- | | | | 1155 VA | 1444 VA | -- | -- | 54 |
| 55 | W09-PLANER | 15 A | 3 | 746 VA | 1444 VA | | 3 | 30 A | W03B-TABLE SAW #2 | 56 |
| 57 | -- | -- | -- | | | 746 VA | 1444 VA | -- | -- | -- | 58 |
| 59 | -- | -- | -- | | | | 746 VA | 1444 VA | -- | -- | 60 |
| 61 | RECEPT-WOODS WEST CENTER WALL | 20 A | 1 | 180 VA | 540 VA | | 1 | 20 A | RECEPT-WOODS NORTH WALL | 62 |
| 63 | RECEPT-WOODS SOUTHEAST WALL | 20 A | 1 | | | 360 VA | 360 VA | 1 | 20 A | RECEPT-WOODS EAST WALL | 64 |
| 65 | 208V RECEPT-WOODS NORTH WALL | 30 A | 2 | | | | 2496 VA | 2496 VA | 2 | 30 A | 208V RECEPT-WOODS NORTHWEST WALL | 66 |
| 67 | -- | -- | -- | 2496 VA | 2496 VA | | -- | -- | -- | 68 |
| 69 | 208V RECEPT- WOODS SOUTHWEST WALL | 30 A | 2 | | | 2496 VA | 1000 VA | 1 | 20 A | SPARE | 70 |
| 71 | -- | -- | -- | | | | 2496 VA | 1000 VA | 1 | 20 A | SPARE | 72 |
| 73 | 208V RECEPT-WOODS SOUTHEAST WALL | 30 A | 2 | 2496 VA | 2496 VA | | 2 | 30 A | 208V RECEPT-WOODS EAST CENTER WALL | 74 |
| 75 | -- | -- | -- | | | 2496 VA | 2496 VA | -- | -- | -- | 76 |
| 77 | 208V RECEPT-WOODS NORTHEAST WALL | 30 A | 2 | | | | 2496 VA | 1150 VA | 2 | 20 A | M17B-SMALL BRAKE | 78 |
| 79 | -- | -- | -- | 2496 VA | 1150 VA | | -- | -- | -- | 80 |
| 81 | DOOR OPENER - METALS | 20 A | 1 | | 1656 VA | 1656 VA | 1 | 20 A | DOOR OPENER-WOODS | 82 |
| 83 | SPARE | 20 A | 1 | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 84 |
| | | | **TOTAL LOAD:** | 34931 VA | 34579 VA | 32768 VA | | | | |
| | | | **TOTAL AMPS:** | 293 A | 290 A | 273 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 5220 VA | 100.00% | 5220 VA | | |
| Appliance | 89746 VA | 72.26% | 64848 VA | **CONNECTED LOAD:** | 102278 VA |
| Motor | 3312 VA | 100.00% | 3312 VA | **ESTIMATED DEMAND:** | 73580 VA |
| Spare | 4000 VA | 5.00% | 200 VA | **CONNECTED CURRENT:** | 284 A |
| | | | | **EMD CURRENT:** | 204 A |

# PANEL: SA2C

**LOCATION:** ELEC A204E
**BUS RATING:** 400 A
**MAIN BREAKER:** 400A

**VOLTS:** 120/208 Wye
**PHASES:** 3
**WIRES:** 4

**MOUNTING:** SURFACE
**FED FROM:** SEE ONE-LINE
**SCCR:** SEE ONE-LINE

**NOTES:**
TYPE 1 ENCLOSURE. ** PROVIDE GFI CIRCUIT BREAKER.

| CKT | CIRCUIT DESCRIPTION | BKR TRIP | POLES | A | B | C | POLES | BKR TRIP | CIRCUIT DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M22-VERTICAL BAND SAW | 30 A | 2 | 1725 VA | 1500 VA | | 1 | 20 A | M23-DISC SANDER | 2 |
| 3 | -- | -- | -- | | | 1725 VA | 180 VA | 1 | 20 A | M08M-SURF G | 4 |
| 5 | M24-DRILL PRESS | 20 A | 1 | | | | 1500 VA | 180 VA | 1 | 20 A | RECEPT-METALS NORTHEAST CORNER | 6 |
| 7 | 208V RECEPT-METALS SOUTH WALL | 50 A | 2 | 2645 VA | 540 VA | | | | 1 | 20 A | RECEPT-METALS SOUTH AND WEST... | 8 |
| 9 | -- | -- | -- | | | 2645 VA | 180 VA | | | | 1 | 20 A | RECEPT-METALS WEST WALL | 10 |
| 11 | 208V RECEPT-METALS NORTHWEST WALL | 50 A | 2 | | | | 2645 VA | 500 VA | 1 | 20 A | RECEPT-S.E. CAT SIMULATOR 1 | 12 |
| 13 | -- | -- | -- | 2645 VA | 500 VA | | | | 1 | 20 A | RECEPT-S.E. CAT SIMULATOR 2 | 14 |
| 15 | 208V RECEPT-METALS NORTHWEST WALL | 50 A | 2 | | | 2645 VA | 500 VA | | | | 1 | 20 A | RECEPT-S.E. CAT SIMULATOR 3 | 16 |
| 17 | -- | -- | -- | | | | 2645 VA | 180 VA | 1 | 20 A | RECEPT-SE01A TABLE | 18 |
| 19 | 208V RECEPT-METALS WEST WALL | 50 A | 2 | 2645 VA | 180 VA | | | | 1 | 20 A | RECEPT-SE01B TABLE | 20 |
| 21 | -- | -- | -- | | | 2645 VA | 180 VA | | | | 1 | 20 A | RECEPT-SE01C TABLE | 22 |
| 23 | A01-CAR HOIST #1 | 30 A | 2 | | | | 1768 VA | 180 VA | 1 | 20 A | RECEPT- SE01D TABLE | 24 |
| 25 | -- | -- | -- | 1768 VA | 180 VA | | | | 1 | 20 A | RECEPT-SE01E TABLE | 26 |
| 27 | A01-CAR HOIST #2 | 20 A | 2 | | | 1768 VA | 180 VA | | | | 1 | 20 A | RECEPT-SE01F TABLE | 28 |
| 29 | -- | -- | -- | | | | 1768 VA | 180 VA | 1 | 20 A | RECEPT-SE01G TABLE | 30 |
| 31 | A03A-TIRE MACHINE | 30 A | 2 | 1404 VA | 180 VA | | | | 1 | 20 A | RECEPT-SE01H TABLE | 32 |
| 33 | -- | -- | -- | | | 1404 VA | 180 VA | | | | 1 | 20 A | RECEPT-SE01I TABLE | 34 |
| 35 | A04-TIRE MACHINE | 30 A | 2 | | | | 1560 VA | 180 VA | 1 | 20 A | RECEPT-SE01J TABLE | 36 |
| 37 | -- | -- | -- | 1560 VA | 1200 VA | | | | 1 | 20 A | RECEPT-A05 PLASMA CUTTER** | 38 |
| 39 | A13A-208V RECEPTACLE | 60 A | 2 | | | 2645 VA | 180 VA | | | | 1 | 20 A | RECEPT-A14A TRAINER TABLE | 40 |
| 41 | -- | -- | -- | | | | 2645 VA | 180 VA | 1 | 20 A | RECEPT-A14B TRAINER TABLE | 42 |
| 43 | A13B-208V RECEPTACLE | 60 A | 2 | 2645 VA | 180 VA | | | | 1 | 20 A | RECEPT-A15A AUTO WORK | 44 |
| 45 | -- | -- | -- | | | 2645 VA | 180 VA | | | | 1 | 20 A | RECEPT-A15B CORD AND REEL** | 46 |
| 47 | RECEPT-AUTOS WORKBENCH #1 | 20 A | 1 | | | | | | 1 | 20 A | RECEPT-A15C CORD AND REEL** | 48 |
| 49 | RECEPT-AUTOS WORKBENCH #2 | 20 A | 1 | 180 VA | 720 VA | | | | 1 | 20 A | RECEPT- AUTOS NORTH WALL | 50 |
| 51 | RECEPT-AUTOS WORKBENCH #3 | 20 A | 1 | | | 180 VA | 540 VA | | | | 1 | 20 A | RECEPT-AUTOS EAST WALL | 52 |
| 53 | RECEPT-AUTOS WORKBENCH #4 | 20 A | 1 | | | | | | 1 | 20 A | RECEPT-AUTOS WEST WALL CENTER | 54 |
| 55 | RECEPT-AUTOS WORKBENCH #5 | 20 A | 1 | 180 VA | 540 VA | | | | 1 | 20 A | RECEPT-AUTOS SOUTH WALL | 56 |
| 57 | RECEPT-AUTOS ENTRANCE SOUTH SIDE | 20 A | 1 | | | 540 VA | 180 VA | | | | 1 | 20 A | RECEPT-AUTOS WORKBENCH #6 | 58 |
| 59 | DOOR OPENER - AUTO #1 | 20 A | 1 | | | | | | 1 | 20 A | RECEPT-A104 SMALL ENGINES | 60 |
| 61 | DOOR OPENER - AUTO #2 | 20 A | 1 | 1656 VA | 540 VA | | | | 1 | 20 A | RECEPT-A102S AUTO STORAGE | 62 |
| 63 | DOOR OPENER - AUTO #3 | 20 A | 1 | | | 1656 VA | 1404 VA | | | | 2 | 30 A | A03B-TIRE MACHINE | 64 |
| 65 | RTH-A201, A202, A203 | 20 A | 1 | | | | | 240 VA | 1404 VA | 1 | 20 A | RTH-A202 | 66 |
| 67 | RTH-A204, A205 | 20 A | 1 | 120 VA | 240 VA | | | | 1 | 20 A | RTH-A206, A207, A208 | 68 |
| 69 | RTH-A209, A210, A211 | 20 A | 1 | | | 120 VA | 1000 VA | | | | 1 | 20 A | SPARE | 70 |
| 71 | SSCU-A201, SSIU-A201 | 20 A | 2 | | | | | 1642 VA | 1000 VA | 1 | 20 A | SPARE | 72 |
| 73 | -- | -- | -- | 1642 VA | 150 VA | | | | 1 | 15 A | EF-A201 | 74 |
| 75 | ASU-SOUTH ROOF | 20 A | 1 | | | 180 VA | 936 VA | | | | 2 | 25 A | EF-A102 | 76 |
| 77 | EF-A101 | 15 A | 1 | | | | | 576 VA | 936 VA | 1 | 20 A | -- | -- | 78 |
| 79 | -- | -- | -- | 576 VA | 1440 VA | | | | 1 | 20 A | EF-A103 | 80 |
| 81 | -- | -- | -- | | | 576 VA | 1000 VA | | | | 1 | 20 A | SPARE | 82 |
| 83 | SPARE | 20 A | 1 | | | | | 1000 VA | 1000 VA | 1 | 20 A | SPARE | 84 |
| | | | **TOTAL LOAD:** | 29481 VA | 28195 VA | 27365 VA | | | | |
| | | | **TOTAL AMPS:** | 247 A | 236 A | 228 A | | | | |

| LOAD CLASSIFICATION | CONNECTED LOAD | DEMAND FACTOR | ESTIMATED DEMAND | PANEL TOTALS | |
|---|---|---|---|---|---|
| Receptacle | 7020 VA | 100.00% | 7020 VA | | |
| Appliance | 58678 VA | 78.75% | 46207 VA | **CONNECTED LOAD:** | 85041 VA |
| Heating | 720 VA | 100.00% | 720 VA | **ESTIMATED DEMAND:** | 67820 VA |
| Motor | 13623 VA | 100.00% | 13623 VA | **CONNECTED CURRENT:** | 236 A |
| Spare | 5000 VA | 5.00% | 250 VA | **EMD CURRENT:** | 188 A |

| SA2A | SA2B | SA2C |
|---|---|---|
| | | |
| | | |


Wilkins Hinrichs Stober Architects L.L.C.
*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


PROFESSIONAL ENGINEER
ERIC W. KAMIN
E-12827
STATE OF NEBRASKA
9-30-2014


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD #3 | Addendum No. 3 | 10/14/2014 |

PANELBOARD SCHEDULES

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
E7.16

## RADIANT HEATER CONNECTION SCHEDULE

| UNIT MARK | LOCATION | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | FLA | CB SIZE | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RTH-A201 | A118 | 120 V | 1 | 120 VA | 12 - 12 - 3/4" | MOTOR RATED TOGGLE | 1.0 A | 20 A | SA2C | 68 | 1 |
| RTH-A202 | A118 | 120 V | 1 | 120 VA | 12 - 12 - 3/4" | MOTOR RATED TOGGLE | 1.0 A | 20 A | SA2C | 68 | 1 |
| RTH-A203 | A112 | 120 V | 1 | 120 VA | 12 - 12 - 3/4" | MOTOR RATED TOGGLE | 1.0 A | 20 A | SA2C | 69 | 1 |
| RTH-A204 | A100 | 120 V | 1 | 120 VA | 12 - 12 - 3/4" | MOTOR RATED TOGGLE | 1.0 A | 20 A | SA2C | 65 | 1 |
| RTH-A205 | A100 | 120 V | 1 | 120 VA | 12 - 12 - 3/4" | MOTOR RATED TOGGLE | 1.0 A | 20 A | SA2C | 65 | 1 |
| RTH-A206 | A104 | 120 V | 1 | 120 VA | 12 - 12 - 3/4" | MOTOR RATED TOGGLE | 1.0 A | 20 A | SA2C | 67 | 1 |

RTH NOTES:
1. PROVIDE MOTOR RATED FOR ELECTRICAL CONNECTION. COORDINATE LOCATION WITH RADIANT HEATER REQUIREMENTS. CIRCUIT TOGETHER AS SCHEDULED.

## HUMIDIFIER CONNECTION SCHEDULE

| UNIT MARK | LOCATION | POLES | VOLTAGE | VA/PHASE | CONDUCTOR SIZE P - G - C | CB SIZE | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| H-G101 | G118S | 1 | 120 V | 360 VA | 12 - 12 - 3/4" | 20 A | MH1 | 2 | 1 |
| H-H101 | H117S | 1 | 120 V | 360 VA | 12 - 12 - 3/4" | 20 A | MH1 | 4 | 1 |

HUMIDIFIER NOTES:
1. PROVIDE NEMA 5-20 RECEPTACLE FOR ELECTRICAL CONNECTION. COORDINATE LOCATION WITH HUMIDIFIER REQUIREMENTS.

## CABINET UNIT HEATER CONNECTION SCHEDULE

| UNIT MARK | LOCATION | HP | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | FLA | CB SIZE | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CUH-AA101 | VESTIBULE - AA100V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HMAA1 | 2,4,6 | |
| CUH-AA102 | VESTIBULE - AA100V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HMAA1 | 7,9,11 | |
| CUH-AA103 | GIRS TOILET - AA109T | | 208 V | 2 | 1000 VA | 12 - 12 - 3/4" | BY DIV 23 | 9.6 A | 15 A | MAA1 | 7,9 | 1 |
| CUH-AA104 | BOY'S TOILET - AA111T | | 208 V | 2 | 1000 VA | 12 - 12 - 3/4" | BY DIV 23 | 9.6 A | 15 A | MAA1 | 11,13 | 1 |
| CUH-G101 | VESTIBULE - G105V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HMG1 | 32,34,36 | |
| CUH-H101 | SOUND LOCK - H118 | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HH1 | 24,26,28 | |
| CUH-H102 | VESTIBULE - H112V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HH1 | 19,21,23 | |
| CUH-J101 | VESTIBULE - J100V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HJ1 | 7,9,11 | |
| CUH-J102 | VESTIBULE - J100V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HJ1 | 13,15,17 | |
| CUH-J103 | VESTIBULE - J127V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HJ1 | 19,21,23 | |
| CUH-J104 | VESTIBULE - J127V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HJ1 | 25,27,29 | |
| CUH-J105 | VESTIBULE - J130V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HJ1 | 32,34,36 | |
| CUH-J106 | VESTIBULE - J130V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HJ1 | 31,33,35 | |
| CUH-L101 | VESTIBULE - L112V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HK1B | 14,16,18 | |
| CUH-L102 | STAIR - L102ST | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HL1 | 37,39,41 | |
| CUH-L103 | VESTIBULE - L110V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HK1B | 7,9,11 | |
| CUH-N101 | STAIR - N113V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HMM2 | 25,27,29 | |
| CUH-N102 | VESTIBULE - N113V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HMM2 | 31,33,35 | |
| CUH-N103 | VESTIBULE - N103V | 1/8 | 480 V | 3 | 1662 VA | 12 - 12 - 3/4" | BY DIV 23 | 6.0 A | 15 A | HN1 | 13,15,17 | |

CUH NOTES:
1. UNIT SHIPS AS 4000W, FIELD CHANGE TO 2000W PER MFR INSTRUCTIONS.

## SPLIT SYSTEM INDOOR UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SSIU-A201 | A205 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | SA2C | 71,73 | 1 |
| SSIU-AA101 | AA107D | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MAA1 | 2,4 | 1 |
| SSIU-B101 | B123 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MB1 | 29,31 | 1 |
| SSIU-B201 | B223 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MB2 | 36,38 | 1 |
| SSIU-C101A | C110 | 208 V | 2 | 364 VA | 12 - 12 - 3/4" | BY DIV 23 | 3.5 A | 15 A | OLC1 | 6,8 | 1 |
| SSIU-C101B | C110 | 208 V | 2 | 364 VA | 12 - 12 - 3/4" | BY DIV 23 | 3.5 A | 15 A | OLC1 | 16,18 | 1 |
| SSIU-C201 | C226 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MC2 | 29,31 | 1 |
| SSIU-D101 | D125 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MD1 | 30,32 | 1 |
| SSIU-D201 | D224 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MD1 | 31,33 | 1 |
| SSIU-E101 | E112 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | ME1 | 37,39 | 1 |
| SSIU-G201 | G200 | 208 V | 2 | 0 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.0 A | 0 A | MG1 | 27,29 | 1,2 |
| SSIU-G202 | G202C | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MG1 | 28,30 | 1 |
| SSIU-H101 | H107 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MH1 | 9,11 | 1 |
| SSIU-H201 | H202E | 208 V | 2 | 62 VA | 12 - 12 - 3/4" | 30A/3P, FUSED AT 3A | 0.6 A | 15 A | MH1 | 6,8 | 1 |
| SSIU-J101 | J108 | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MJ1 | 18,20 | 1 |
| SSIU-K101 | K103C | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MK1B | 2,4 | 1 |
| SSIU-L101 | L105 | 208 V | 2 | 0 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.0 A | 0 A | ML1 | 3,5 | 1,2 |
| SSIU-M201 | M210C | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MM2 | 18,20 | 1 |
| SSIU-N101 | N106C | 208 V | 2 | 42 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.4 A | 15 A | MM2 | 19,21 | 1 |

SSIU NOTES:
1. INDOOR UNIT SHARES CIRCUIT WITH OUTDOOR UNIT.
2. UNIT POWERED FROM OUTDOOR UNIT. PROVIDE LOCAL DISCONNECT.
3. PROVIDE 3/4" CONDUIT BETWEEN SPLIT SYSTEM INDOOR UNIT AND OUTDOOR UNIT FOR CONTROL WIRING.

## SPLIT SYSTEM OUTDOOR UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | SERVED FROM | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SSCU-A201 | ROOF A205 | SSIU-A201 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | SA2C | 71,73 | 1 |
| SSCU-AA101 | ROOF AA105 | SSIU-AA101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MAA1 | 2,4 | 1 |
| SSCU-B101 | ROOF B224M | SSIU-B101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MB1 | 29,31 | 1 |
| SSCU-B201 | ROOF B224M | SSIU-B201 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MB2 | 36,38 | 1 |
| SSCU-C101A | ROOF C110 | SSIU-C101 | 208 V | 2 | 2400 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 18.4 A | 30 A | OLC1 | 6,8 | 1 |
| SSCU-C101B | ROOF C110 | SSIU-C101 | 208 V | 2 | 2400 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 18.4 A | 30 A | OLC1 | 16,18 | 1 |
| SSCU-C201 | ROOF C226 | SSIU-C201 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MC2 | 29,31 | 1 |
| SSCU-D101 | ROOF D223M | SSIU-D101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MD1 | 30,32 | 1 |
| SSCU-D201 | ROOF D223M | SSIU-D201 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MD1 | 31,33 | 1 |
| SSCU-E101 | ROOF E112 | SSIU-E101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | ME1 | 37,39 | 1 |
| SSCU-G201 | ROOF G200 | SSIU-G201 | 208 V | 2 | 750 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MG1 | 27,29 | 1,2 |
| SSCU-G202 | ROOF G202C | SSIU-G202 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MG1 | 28,30 | 1 |
| SSCU-H101 | ROOF H200E | SSIU-H101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MH1 | 9,11 | 1 |
| SSCU-H201 | ROOF H200E | SSIU-H201 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MH1 | 6,8 | 1 |
| SSCU-J101 | ROOF J108 | SSIU-J101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 7.0 A | 15 A | MJ1 | 18,20 | 1 |
| SSCU-K101 | ROOF K103C | SSIU-K101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MK1B | 2,4 | 1 |
| SSCU-L101 | ROOF L204S | SSIU-L101 | 208 V | 2 | 750 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 7.0 A | 15 A | ML1 | 3,5 | 1,2 |
| SSCU-M201 | ROOF M210C | SSIU-M201 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MM2 | 18,20 | 1 |
| SSCU-N101 | ROOF N200 | SSIU-N101 | 208 V | 2 | 1600 VA | 12 - 12 - 3/4" | NEMA 3R 30A/3P | 16.5 A | 20 A | MM2 | 19,21 | 1 |

SSCU NOTES:
1. MOUNT DISCONNECT TO UNISTRUT FRAME ON ROOF.
2. SSIU POWERED FROM OUTDOOR UNIT. CONTINUE CIRCUIT BETWEEN SSCU AND CORRESPONDING SSIU.

## EXHAUST EXTRACTION SYSTEM CONNECTION SCHEDULE

| MARK NO. | VOLTAGE | POLES | HP | VA/PHASE | MCA | MOCP | STARTER | DISCONNECT | BRANCH CIRCUIT P - N - G | PANEL | CIRCUIT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AES-A101 | 480 V | 3 | 3 | 1330 VA | 0 A | 15 A | FURNISHED WITH UNIT | FURNISHED WITH UNIT | 12 - 12 - 3/4" | DPA2 | 14,16,18 | 1 |
| AES-A102 | 480 V | 3 | 3 | 1330 VA | 0 A | 15 A | FURNISHED WITH UNIT | FURNISHED WITH UNIT | 12 - 12 - 3/4" | DPA2 | 38,40,42 | 1 |
| AES-A103 | 480 V | 3 | 3 | 1330 VA | 0 A | 15 A | FURNISHED WITH UNIT | FURNISHED WITH UNIT | 12 - 12 - 3/4" | DPA2 | 43,45,47 | 1 |

NOTES:
1. CONTROL PANEL FURNISHED WITH UNIT.

## ELECTRIC UNIT HEATER CONNECTION SCHEDULE

| UNIT MARK | LOCATION | HP | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | FLA | CB SIZE | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UH-A101 | A120S | | 480 V | 3 | 2500 VA | 12 - 12 - 3/4" | BY DIV 23 | 8.4 A | 15 A | DPA2 | 49,51,53 | |
| UH-A102 | A119 | | 480 V | 3 | 1500 VA | 12 - 12 - 3/4" | BY DIV 23 | 5.4 A | 15 A | DPA2 | 44,46,48 | |

## HOT WATER UNIT HEATER CONNECTION SCHEDULE

| UNIT MARK | LOCATION | HP | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | FLA | CB SIZE | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UH-K101 | K125 | | 120 V | 1 | 240 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 4A | 2.0 A | 15 A | MK1B | 1 | |
| UH-K102 | K125 | | 120 V | 1 | 240 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 4A | 2.0 A | 15 A | MK1B | 1 | |
| UH-K103 | K127 | | 120 V | 1 | 240 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 4A | 2.0 A | 15 A | MK1 | 11 | |
| UH-K104 | K127 | | 120 V | 1 | 240 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 4A | 2.0 A | 15 A | MK1 | 11 | |
| UH-N101 | N115 | | 120 V | 1 | 16 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.1 A | 15 A | MM2 | 22 | |
| UH-N102 | N116M | | 120 V | 1 | 16 VA | 12 - 12 - 3/4" | MANUAL SWITCH WITH FUSE AT 1A | 0.1 A | 15 A | MM2 | 22 | |

## FAN CONNECTION SCHEDULE

| MARK NO. | VOLTAGE | POLES | HP [WATTS] | VA/PHASE | MCA | MOCP | STARTER | DISCONNECT | BRANCH CIRCUIT P - N - G | PANEL | CIRCUIT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-A101 | 208 V | 3 | 1 | 576 VA | 6 A | 15 A | VFD BY DIV 23 | 30A/3P NON FUSED | 12 - 12 - 3/4" | SA2C | 77,79,81 | |
| EF-A102 | 120 V | 1 | 2 | 1440 VA | 15 A | 25 A | NEMA 0 | 30A/3P NON FUSED | 12 - 12 - 3/4" | SA2C | 80 | |
| EF-A103 | 208 V | 2 | 1/2 | 936 VA | 6 A | 15 A | NEMA 00 | 30A/3P NON FUSED | 12 - 12 - 3/4" | SA2C | 76,78 | |
| EF-B201 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MB2 | 39,41 | |
| EF-B202 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MB2 | 40,42 | |
| EF-C201 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MC2 | 35,37 | |
| EF-C202 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MC2 | 39,41 | |
| EF-C203 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MC2 | 30,32 | |
| EF-C204 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MC2 | 34,36 | |
| EF-C205 | 208 V | 3 | 3/4 | 444 VA | 5 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MC2 | 38,40,42 | |
| EF-C206 | 208 V | 3 | 3/4 | 444 VA | 5 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MC2 | 44,46,48 | |
| EF-D201 | 208 V | 3 | 3/4 | 300 VA | 3 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MD2 | 32,34,36 | |
| EF-D202 | 208 V | 3 | 3/4 | 300 VA | 3 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MD2 | 38,40,42 | |
| EF-D203 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MD2 | 37,39 | |
| EF-D204 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MD2 | 43,45 | |
| EF-D205 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MD2 | 47,49 | |
| EF-D206 | 208 V | 2 | 3/4 | 828 VA | 9 A | 15 A | NEMA 00 | BY DIV 23 | 12 - 12 - 3/4" | MD2 | 51,53 | |
| EF-E201 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | NEMA 00 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ME1 | 40 | 1 |
| EF-E202 | 480 V | 3 | 10 | 3878 VA | 18 A | 25 A | BY DIV 23 | BY DIV 23 | 12 - 12 - 3/4" | HE1 | 25,27,29 | 5,6 |
| EF-G101 | 120 V | 1 | 1/6 | 528 VA | 6 A | 15 A | - | BY DIV 23 | 12 - 12 - 3/4" | MH1 | 13 | |
| EF-G102 | 120 V | 1 | 1/4 | 696 VA | 7 A | 15 A | - | BY DIV 23 | 12 - 12 - 3/4" | MG1 | 34 | |
| EF-G103 | 120 V | 1 | [170] | 170 VA | 2 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MG1 | 36 | |
| EF-H101 | 277 V | 1 | [100] | 100 VA | 1 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | HH1 | 1 | 2 |
| EF-H102 | 277 V | 1 | [100] | 100 VA | 1 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | HH1 | 1 | 2 |
| EF-J101 | 277 V | 1 | [100] | 100 VA | 1 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | HJ1 | 1 | 2 |
| EF-J102 | 277 V | 1 | [100] | 100 VA | 1 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | HJ1 | 1 | 2 |
| EF-K105 | 120 V | 1 | 1/4 | 696 VA | 7 A | 15 A | - | BY DIV 23 | 12 - 12 - 3/4" | MK1B | 5 | 3 |
| EF-M201 | 120 V | 1 | 1/4 | 696 VA | 7 A | 15 A | - | BY DIV 23 | 12 - 12 - 3/4" | MM2 | 23 | |
| EF-N101 | 120 V | 1 | 1/6 | 528 VA | 6 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MN1 | 2 | |
| EF-N102 | 120 V | 1 | 1/6 | 528 VA | 6 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MN1 | 4 | |
| EF-N103 | 120 V | 1 | 1 | 1920 VA | 20 A | 30 A | BY DIV 23 | BY DIV 23 | 10 - 10 - 3/4" | MN1 | 6 | |
| KEF-K101 | 208 V | 3 | 1 | 576 VA | 6 A | 15 A | VFD BY DIV 23 | BY DIV 23 | 12 - 12 - 3/4" | MK1 | 13,15,17 | 5,6 |
| KEF-K102 | 208 V | 3 | 1 | 576 VA | 6 A | 15 A | VFD BY DIV 23 | BY DIV 23 | 12 - 12 - 3/4" | MK1 | 14,16,18 | 5,6 |
| KEF-K103 | 208 V | 3 | 1 | 576 VA | 6 A | 15 A | VFD BY DIV 23 | BY DIV 23 | 12 - 12 - 3/4" | MK1 | 19,21,23 | 5,6 |
| KEF-K104 | 208 V | 3 | 1 | 576 VA | 6 A | 15 A | VFD BY DIV 23 | BY DIV 23 | 12 - 12 - 3/4" | MK1 | 20,22,24 | 5,6 |
| SF-A201 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | SA2C | 74 | |
| SF-AA101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MAA1 | 5 | |
| SF-B101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MB1 | 32 | |
| SF-B201 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MB2 | 37 | |
| SF-C101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MC1 | 23 | |
| SF-C201 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MC2B | 18 | |
| SF-C202 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MC2 | 33 | |
| SF-D101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MD1 | 34 | |
| SF-D201 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MD2 | 35 | |
| SF-E101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ME1 | 41 | |
| SF-C101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MC1 | 32 | |
| SF-G102 | 120 V | 1 | FRAC | 100 VA | 1 A | 1 A | BY DIV 23 | BY DIV 23 | 12 - 12 - 3/4" | MH1 | 17 | 7 |
| SF-H101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MH1 | 15 | |
| SF-J101 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MK1B | 6 | |
| SF-J102 | 120 V | 1 | [150] | 150 VA | 2 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MJ1 | 8 | |
| SF-K102 | 120 V | 1 | 1/6 | 528 VA | 6 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MK1B | 7 | |
| SF-L101 | 120 V | 1 | [150] | 150 VA | 0 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 7 | |
| SF-M201 | 120 V | 1 | 1/6 | 528 VA | 6 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 25 | |
| SF-N101 | 120 V | 1 | 1/6 | 528 VA | 6 A | 15 A | BY DIV 23 | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MN1 | 5 | |
| VF-L101 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L102 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L103 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L104 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L105 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L106 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L107 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L108 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L109 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L110 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L111 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L112 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L113 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L114 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L115 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-L116 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | ML1 | 8 | 4 |
| VF-M101 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M102 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M103 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M104 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M105 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M106 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M107 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M108 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |
| VF-M109 | 120 V | 1 | [46] | 46 VA | 0 A | 15 A | - | MOTOR RATED TOGGLE | 12 - 12 - 3/4" | MM2 | 27 | 4 |

FAN CONNECTION SCHEDULE NOTES:
1. CONNECT TO PANEL AND CIRCUIT SHOWN. PROVIDE 277V STARTER COIL AND CONNECT TO LIGHTING CIRCUIT SERVING ROOM.
2. CONNECT TO LIGHTING CIRCUIT SERVING ROOM.
3. SEE KITCHEN LARGE SCALE PLAN FOR CONTROL.
4. FURNISHED BY DIV 23, INSTALLED BY DIV 26. CORD AND PLUG CONNECTED, PROVIDE SIMPLEX RECEPTACLE AND CONNECT TO FAN SPEED CONTROL IN RM M202.
5. FAN CONTROLLED BY KITCHEN OR FCS HOOD CONTROLLER, FURNISHED BY DIVISION 23.
6. FAN CONTROLLED WITH WALL SWITCH, SEE POWER PLANS FOR LOCATION.
7. ROUTE 3/4" CONDUIT FROM FROM DIGITAL THERMAL SWITCH TO PROJECTOR ALCOVE FAN FOR REMOT

## OUTDOOR MODULAR AIR HANDING UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | HP | VOLTAGE | POLES | BRANCH CIRCUIT P - N - G | DISCONNECT | VA/PHASE | MCA | MOCP | PANEL | CIRCUIT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-G101 | AREA G - ROOF | (1) - 20, (1) - 15 | 480 V | 3 | 4 - 10 - 1 1/4" | BY DIVISION 23 | 13573 VA | 56 A | 80 A | DPH1 | 26,28,30 | |
| RTU-G102 | AREA G - ROOF | (2) - 15, (2) - 7.5 | 480 V | 3 | 1 - 8 - 2" | BY DIVISION 23 | 20498 VA | 84 A | 110 A | DPH1 | 25,27,29 | |
| RTU-H101 | AREA H - ROOF | (1) - 7.5, (1) - 5 | 480 V | 3 | 10 - 10 - 3/4" | BY DIVISION 23 | 5540 VA | 22 A | 30 A | HH1 | 13,15,17 | |
| RTU-J101 | AREA K - ROOF | (1) - 40, (1) - 25 | 480 V | 3 | 1 - 8 - 2" | BY DIVISION 23 | 24099 VA | 100 A | 150 A | SB1 | 21 | |
| RTU-K101 | AREA K - ROOF | (1) - 25, (1) - 15 | 480 V | 3 | 3 - 8 - 1 1/4" | BY DIVISION 23 | 15512 VA | 64 A | 90 A | SB1 | 20 | |
| RTU-L101 | MAIN COMPETITION GYM - AREA L | (1) - 50, (1) - 40 | 480 V | 3 | 1/0 - 6 - 2" | BY DIVISION 23 | 32686 VA | 134 A | 175 A | SB3 | 13 | |
| RTU-M101 | AUXILIARY GYM - AREA M | (1) - 20, (1) - 15 | 480 V | 3 | 4 - 10 - 1 1/4" | BY DIVISION 23 | 13296 VA | 55 A | 80 A | SB3 | 12 | |

## INDOOR MODULAR AIR HANDING UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | HP | VOLTAGE | POLES | BRANCH CIRCUIT P - N - G | DISCONNECT | VA/PHASE | MCA | MOCP | PANEL | CIRCUIT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AHU-M101 | M202M | (2) - 15 | 480 V | 3 | 6 - 10 - 1" | BY DIVISION 23 | 11911 VA | 48 A | 60 A | SB3 | 11 | |

## OUTDOOR MODULAR ENERGY RECOVERY UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | FLA | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | DISCONNECT | VA/PHASE | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ERU-K101 (ENERGY WHEEL) | AREA K - ROOF | 0.6 | 480 V | 3 | 12 - 12 - 3/4" | BY DIVISION 23 | 166 VA | 0.7 A | 15 A | HKIT2 | 14,16,18 | |
| ERU-K101 (EXHAUST FAN) | AREA K - ROOF | 4.8 | 480 V | 3 | 12 - 12 - 3/4" | BY DIVISION 23 | 1330 VA | 6.0 A | 15 A | HKIT2 | 2,4,6 | |
| ERU-K101 (SUPPLY FAN) | AREA K - ROOF | 4.8 | 480 V | 3 | 12 - 12 - 3/4" | BY DIVISION 23 | 1330 VA | 6.0 A | 15 A | HKIT2 | 8,10,12 | |

## INDOOR MODULAR ENERGY RECOVERY UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | FLA | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | DISCONNECT | VA/PHASE | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ERU-M101 (ENERGY WHEEL) | M202M - MECH RM | 1.2 A | 480 V | 3 | 12 - 12 - 3/4" | BY DIVISION 23 | 332 VA | 1.5 A | 15 A | HMM2 | 13,15,17 | |
| ERU-M101 (EXHAUST FAN) | M202M - MECH RM | 11.22 A | 480 V | 3 | 12 - 12 - 3/4" | BY DIVISION 23 | 3108 VA | 14.0 A | 20 A | HMM2 | 7,9,11 | |
| ERU-M101 (SUPPLY FAN) | M202M - MECH RM | 21.22 A | 480 V | 3 | 10 - 10 - 3/4" | BY DIVISION 23 | 5878 VA | 27.0 A | 45 A | HMM2 | 1,3,5 | |
| ERU-N101 | N115 - MECH RM | (1) - 30 HP, (1) - 15 HP | 480 V | 3 | 3 - 8 - 1 1/4" | BY DIVISION 23 | 16897 VA | 68.0 A | 100 A | SB3 | 14 | |

## ROOF-TOP AIR CONDITIONING UNIT - 100% OA SCHEDULE

| UNIT MARK | LOCATION | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | VA/PHASE | MCA | MOCP | UNIT DISCONNECT | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ERV-A101 | ROOF AREA A | 480 V | 3 | 4 - 10 - 1 1/4" | 14958 VA | 58.5 A | 70 A | BY DIVISION 23 | DPA2 | 19,21,23 | |
| ERV-B101 | ROOF AREA B | 480 V | 3 | 1/0 - 6 - 2" | 34126 VA | 123.2 A | 150 A | BY DIVISION 23 | SB2 | 12 | |
| ERV-C101 | ROOF AREA C | 480 V | 3 | 3/0 - 6 - 2 1/2" | 49832 VA | 179.7 A | 225 A | BY DIVISION 23 | SB2 | 13 | |
| ERV-D101 | ROOF AREA D | 480 V | 3 | 2/0 - 6 - 2" | 47200 VA | 170.4 A | 200 A | BY DIVISION 23 | SB2 | 14 | |
| ERV-E101 | ROOF AREA E | 480 V | 3 | 1 - 6 - 2" | 26398 VA | 99.5 A | 110 A | BY DIVISION 23 | SB2 | 15 | |
| ERV-F101 | ROOF AREA F | 480 V | 3 | 10 - 10 - 3/4" | 6426 VA | 26.4 A | 35 A | BY DIVISION 23 | HMG1 | 37,39,41 | |
| ERV-J101 | ROOF AREA J | 480 V | 3 | 12 - 12 - 3/4" | 4460 VA | 16.1 A | 20 A | BY DIVISION 23 | HJ1 | 38,40,42 | |

## ROOF-TOP AIR CONDITIONING UNIT CONNECTION SCHEDULE

| UNIT MARK | LOCATION | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | VA/PHASE | MCA | MOCP | UNIT DISCONNECT | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-AA101 | AREA AA ROOF | 480 V | 3 | 12 - 12 - 3/4" | 3324 VA | 15.6 A | 20 A | BY DIVISION 23 | HMAA1 | 8,10,12 | |
| RTU-AA102 | AREA AA ROOF | 480 V | 3 | 12 - 12 - 3/4" | 3324 VA | 15.6 A | 20 A | BY DIVISION 23 | HMAA1 | 13,15,17 | |
| RTU-AA103 | AREA AA ROOF | 480 V | 3 | 12 - 12 - 3/4" | 3324 VA | 15.6 A | 20 A | BY DIVISION 23 | HMAA1 | 14,16,18 | |
| RTU-AA104 | AREA AA ROOF | 480 V | 3 | 12 - 12 - 3/4" | 3324 VA | 15.6 A | 20 A | BY DIVISION 23 | HMAA1 | 19,21,23 | |
| RTU-H102 | AREA H - ROOF | 480 V | 3 | 10 - 10 - 3/4" | 6509 VA | 26.0 A | 30 A | BY DIVISION 23 | HH1 | 25,27,29 | |

## DUST AND METAL COLLECTION SYSTEMS AND ACCESSORIES SCHEDULE

| UNIT MARK | LOCATION | UNIT HP | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | DISCONNECT | CONTROLS | VA/PHASE | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DC-A101 | OUTDOORS (SERVES WOODSHOP) | 15 | 480 V | 3 | 10 - 10 - 3/4" | BY DIV 23 | FACTORY MOUNTED VFD & CONTROLS | 5817 VA | 26.3 A | 40 A | DPA2 | 25,27,29 | |
| MC-A101 | OUTDOORS (SERVES METALSHOP) | 30 | 480 V | 3 | 6 - 10 - 1" | BY DIV 23 | FACTORY MOUNTED VFD & CONTROLS | 11080 VA | 50.0 A | 80 A | DPA2 | 31,33,35 | |

## FAN COIL UNIT SCHEDULE

| UNIT MARK | LOCATION | UNIT HP | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | DISCONNECT | VA/PHASE | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCU-H101 | H118 - SOUND LOCK | 1 | 480 V | 3 | 12 - 12 - 3/4" | 30A/3P | 582 VA | 2.1 A | 15 A | HH1 | 30,32,34 | |

## SUMP PUMP SCHEDULE

| MARK NO. | SERVES | VOLTAGE | POLES | HP | VA/PHASE | CONDUCTOR SIZE P - N - G | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| SP-G1 | ELEVATOR SHAFT | 120 V | 1 | 1/2 | 1176 VA | 12 - 12 - 3/4" | MG1 | 31 | |
| SP-L1 | ELEVATOR SHAFT | 120 V | 1 | 1/2 | 1176 VA | 12 - 12 - 3/4" | ML1 | 6 | |
| SP-N1 | POOL PUMP PIT | 120 V | 1 | 1/2 | 1176 VA | 12 - 12 - 3/4" | MN1 | 1 | |
| SP-N2 | FOUNDATION DRAIN | 120 V | 1 | 1/2 | 1176 VA | 12 - 12 - 3/4" | MN1 | 3 | |

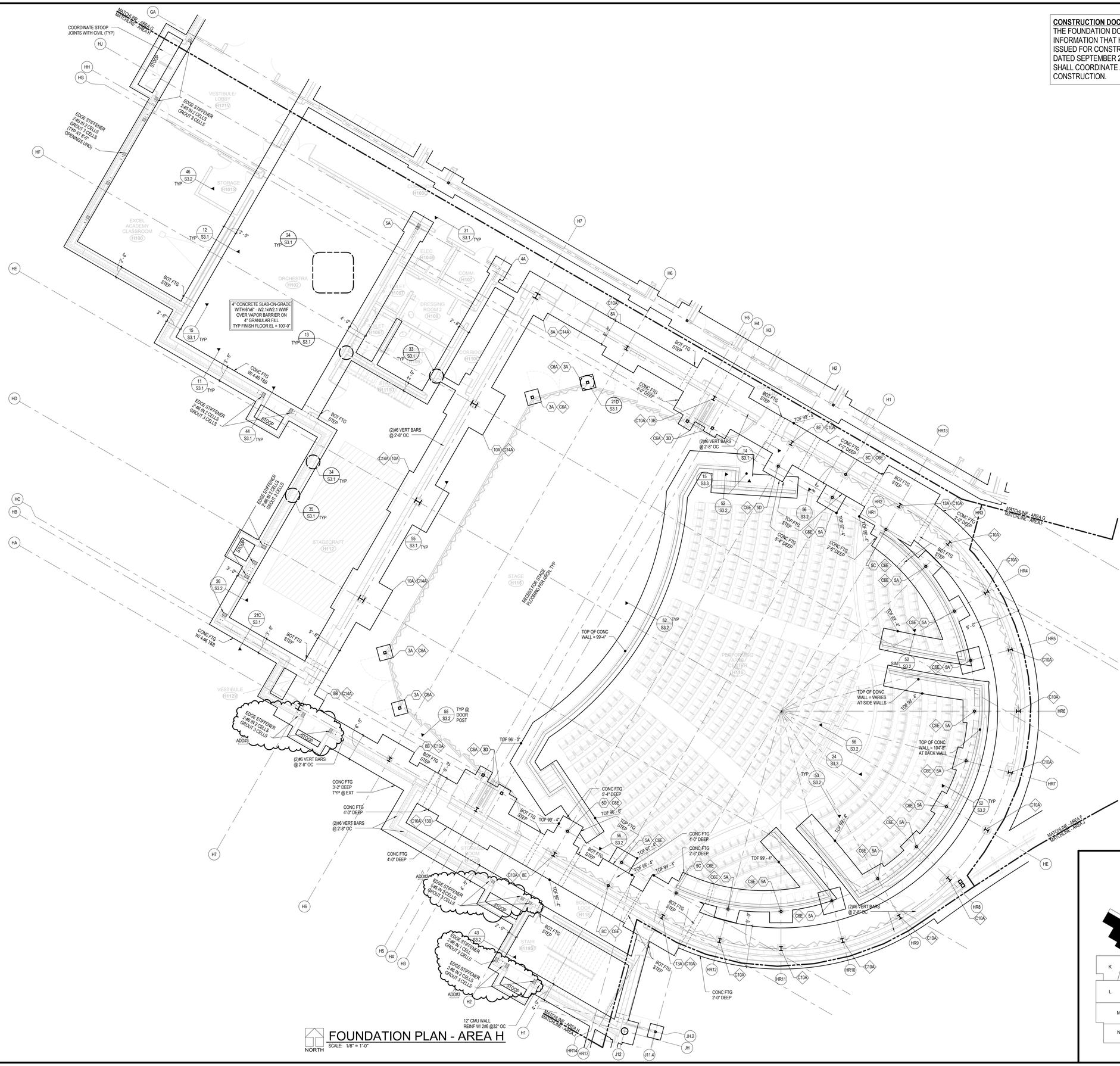
## MAKE UP AIR UNIT - OUTDOOR GAS FIRED SCHEDULE

| UNIT MARK | LOCATION | FLA | VOLTAGE | POLES | CONDUCTOR SIZE P - G - C | DISCONNECT | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAU-K101 (CONDENSER 1) | AREA K ROOF | 8.5 A | 480 V | 3 | 12 - 12 - 3/4" | BY DIV 23 | 10.5 A | 15 A | HKIT2 | 20,22,24 | |
| MAU-K101 (CONDENSER 2) | AREA K ROOF | 8.5 A | 480 V | 3 | 12 - 12 - 3/4" | BY DIV 23 | 10.5 A | 15 A | HKIT2 | 25,27,29 | |
| MAU-K101 (FAN) | AREA K ROOF | 6.8 A | 480 V | 3 | 12 - 12 - 3/4" | BY DIV 23 | 6.8 A | 15 A | HKIT2 | 19,21,23 | |

## HEAT PUMP - WATER SOURCE SCHEDULE

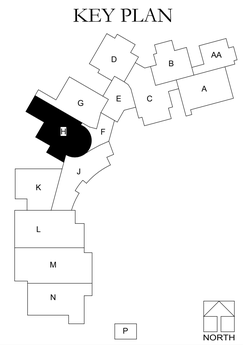
| UNIT MARK | LOCATION | SERVED FROM | VOLTAGE | POLES | VA/PHASE | BRANCH CIRCUIT P - G - C | DISCONNECT | MCA | MOCP | PANEL | CIRCUIT NUMBER | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HP-A101 | A109C - CORRIDOR | ERV-B101 | 208 V | 3 | 1716 VA | 12 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MB1 | 1,3,5 | |
| HP-A102 | A109C - CORRIDOR | ERV-B101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MB1 | 2,4,6 | |
| HP-A103 | A109C - CORRIDOR | ERV-B101 | 480 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | HMB1 | 7,9,11 | 1 |
| HP-A201 | A203M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 1,3,5 | |
| HP-A202 | A203M - MECH | ERV-B101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MB2 | 2,4,6 | |
| HP-A203 | A207M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 7,9,11 | |
| HP-B101 | C113 - ELL | ERV-C101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MC1 | 19,21 | |
| HP-B102 | B117M - MECH | ERV-B101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMB1 | 8,10,12 | 1 |
| HP-B103 | B117M - MECH | ERV-B101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MB1 | 8,10,12 | |
| HP-B104 | B127M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB1 | 11,13,15 | |
| HP-B105 | B127M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB1 | 14,16,18 | |
| HP-B107 | B110M - MECH | ERV-B101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMB1 | 13,15,17 | 1 |
| HP-B108 | B124M - MECH | ERV-B101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMB1 | 14,16,18 | 1 |
| HP-B109 | B112J - JANITOR | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB1 | 17,19,21 | |
| HP-B110 | B104M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB1 | 20,22,24 | |
| HP-B111 | B104M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB1 | 23,25,27 | |
| HP-B112 | B107 - CONFERENCE ROOM | ERV-B101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MB1 | 26,28,30 | |
| HP-B201 | B208M - MECH | ERV-B101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MB2 | 8,10,12 | |
| HP-B202 | B208M - MECH | ERV-B101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMB1 | 19,21,23 | 1 |
| HP-B203 | B200C - CORRIDOR | ERV-B101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MC2 | 1,3 | |
| HP-B204 | B204M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 13,15,17 | |
| HP-B205 | B204M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 14,16,18 | |
| HP-B206 | B224M - MECH | ERV-B101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMB1 | 20,22,24 | 1 |
| HP-B207 | B215J - JANITOR | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 19,21,23 | |
| HP-B208 | B212M - MECH | ERV-B101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMB1 | 25,27,29 | 1 |
| HP-B209 | STAIR - B210ST | N/A | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 20,22,24 | |
| HP-B210 | B227M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 25,27,29 | |
| HP-B211 | B227M - MECH | ERV-B101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MB2 | 26,28,30 | |
| HP-B212 | B201 - CONFERENCE ROOM | ERV-B101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MB2 | 31,33,35 | |
| HP-C101 | C106 - TPC | ERV-C101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MC2B | 2,4,6 | |
| HP-C102 | C106 - TPC | ERV-C101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MC2B | 5,7,9 | |
| HP-C103 | C107C - CORRIDOR | ERV-C101 | 208 V | 2 | 1342 VA | 12 - 12 - 3/4" | 30A/3P | 15.2 A | 20 A | MC2B | 1,3 | |
| HP-C104 | C116M - MECH | ERV-C101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MC1 | 14,16,18 | |
| HP-C105 | C116M - MECH | ERV-C101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMC1 | 7,9,11 | 1 |
| HP-C106 | C131M - MECH | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC1 | 13,15,17 | |
| HP-C107 | C134M - MECH | ERV-C101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MC1 | 8,10,12 | |
| HP-C108 | C134M - MECH | ERV-C101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MC1 | 7,9,11 | |
| HP-C110 | C126M - MECH | ERV-C101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMC1 | 8,10,12 | 1 |
| HP-C111 | C111M - MECH | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC1 | 1,3,5 | |
| HP-C113 | C124M - MECH | ERV-C101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMC1 | 13,15,17 | 1 |
| HP-C114 | C122J - JANITOR | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC1 | 20,22,24 | |
| HP-C201 | C206C - CORRIDOR | ERV-C101 | 208 V | 2 | 1342 VA | 12 - 12 - 3/4" | 30A/3P | 15.2 A | 20 A | MC2B | 8,10 | |
| HP-C202 | C201C - CORRIDOR | ERV-C101 | 480 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | HMD1 | 1,3,5 | 1 |
| HP-C203 | C206C - CORRIDOR | ERV-C101 | 480 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | HMD1 | 7,9,11 | 1 |
| HP-C204 | C210M - MECH | ERV-C101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MC2 | 2,4,6 | |
| HP-C205 | C210M - MECH | ERV-C101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MC2 | 5,7,9 | |
| HP-C206 | C223M - MECH | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC2 | 8,10,12 | |
| HP-C207 | C201C - CLASSROOM | ERV-C101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MC2B | 11,13 | |
| HP-C208 | C234M - MECH | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC2 | 11,13,15 | |
| HP-C209 | C234M - MECH | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC2 | 14,16,18 | |
| HP-C210 | C231M - MECH | ERV-C101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MC2 | 17,19,21 | |
| HP-C211 | C216M - MECH | ERV-C101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMC1 | 14,16,18 | 1 |
| HP-C212 | C216M - MECH | ERV-C101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MC2 | 20,22,24 | |
| HP-C213 | C220J - JANITOR | ERV-C101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MC2 | 23,25,27 | |
| HP-C214 | C225M - MECH | ERV-C101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMC1 | 19,21,23 | 1 |
| HP-C215 | STAIR - C214ST | N/A | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MC2B | 12,14,16 | |
| HP-C216 | C201C - CORRIDOR | ERV-C101 | 208 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | MC2B | 15,17,19 | |
| HP-D101 | D104 - MECH | ERV-D101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MD1 | 1,3 | |
| HP-D102 | D104 - MECH | ERV-D101 | 480 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | HMD1 | 2,4,6 | 1 |
| HP-D103 | D104 - MECH | ERV-D101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MD1 | 2,4 | |
| HP-D104 | D104 - MECH | ERV-D101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MD1 | 5,7 | |
| HP-D105 | D113M - MECH | ERV-D101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MD1 | 6,8,10 | |
| HP-D106 | D113M - MECH | ERV-D101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MD1 | 9,11,13 | |
| HP-D107 | D114M - MECH | ERV-D101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMD1 | 13,15,17 | 1 |
| HP-D108 | D135M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD1 | 12,14,16 | |
| HP-D109 | D135M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD1 | 15,17,19 | |
| HP-D110 | D131M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD1 | 18,20,22 | |
| HP-D111 | D131M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD1 | 21,23,25 | |
| HP-D113 | D124M - MECH | ERV-D101 | 480 V | 3 | 4238 VA | 12 - 12 - 3/4" | 30A/3P | 16.9 A | 20 A | HMD1 | 8,10,12 | 1 |
| HP-D114 | D122M - MECH | ERV-D101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMD1 | 19,21,23 | 1 |
| HP-D115 | D118J - JANITOR | ERV-D101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MD1 | 24,26,28 | |
| HP-D201 | D201M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 1,3,5 | |
| HP-D202 | D201M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 2,4,6 | |
| HP-D203 | D223M - MECH | ERV-D101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMD1 | 14,16,18 | 1 |
| HP-D204 | STAIR - D237ST | N/A | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MD2 | 7,9,11 | |
| HP-D205 | D216M - MECH | ERV-D101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMD1 | 25,27,29 | 1 |
| HP-D206 | D212J - JANITOR | ERV-D101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MD2 | 8,10,12 | |
| HP-D207 | D230M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 13,15,17 | |
| HP-D208 | D230M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 14,16,18 | |
| HP-D209 | D207M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 19,21,23 | |
| HP-D210 | D207M - MECH | ERV-D101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MD2 | 20,22,24 | |
| HP-D211 | D208M - MECH | ERV-D101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMD1 | 20,22,24 | 1 |
| HP-D213 | D234M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 25,27,29 | |
| HP-D214 | D234M - MECH | ERV-D101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MD2 | 26,28,30 | |
| HP-E101 | E100 - BEARCAT TV | ERV-D101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | ME1 | 1,3 | |
| HP-E102 | E104 - FOOD LAB FCS-1 | ERV-E101 | 480 V | 3 | 4238 VA | 12 - 12 - 3/4" | 30A/3P | 16.9 A | 20 A | HMG1 | 7,9,11 | 1 |
| HP-E103 | E107 - FCS LAUNDRY | ERV-E101 | 480 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | HMG1 | 2,4,6 | 1 |
| HP-E104 | E110M - MECH | ERV-E101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMG1 | 8,10,12 | 1 |
| HP-E106 | E102C - CORRIDOR | ERV-D101 | 480 V | 3 | 4238 VA | 12 - 12 - 3/4" | 30A/3P | 16.9 A | 20 A | HMD1 | 31,33,35 | 1 |
| HP-E201 | E204M - MECH | ERV-E101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | ME1 | 5,7 | |
| HP-E202 | E204M - MECH | ERV-E101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | ME1 | 9,11 | |
| HP-E203 | E212-STACKS/REFERENCE | ERV-E101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | ME1 | 2,4,6 | |
| HP-E204 | E210C - CORRIDOR | ERV-E101 | 480 V | 3 | 4183 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMG1 | 14,16,18 | 1 |
| HP-E205 | E210C - CORRIDOR | ERV-E101 | 480 V | 3 | 4238 VA | 12 - 12 - 3/4" | 30A/3P | 16.9 A | 20 A | HMC1 | 20,22,24 | 1 |
| HP-E206 | E201C - CORRIDOR | ERV-D101 | 480 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | HMG1 | 13,15,17 | 1 |
| HP-E207 | E200 - CONFERENCE ROOM | ERV-E101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMG1 | 20,22,24 | 1 |
| HP-F101 | F106C - CORRIDOR | ERV-F101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | ME1 | 8,10,12 | |
| HP-F102 | F115M - MECH | ERV-F101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | ME1 | 13,15 | |
| HP-F103 | F117 - STORAGE | ERV-F101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | ME1 | 14,16,18 | |
| HP-F104 | F110 - COT/OBSERVATION ROOM | ERV-F101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | ME1 | 17,19,21 | |
| HP-F105 | F107 - NURSES OFFICE | ERV-F101 | 208 V | 2 | 720 VA | 12 - 12 - 3/4" | 30A/3P | 7.3 A | 15 A | ME1 | 20,22 | |
| HP-F201 | F205C - CORRIDOR | ERV-F101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MG1 | 6,8,10 | |
| HP-F202 | F215 - CAREER CENTER | ERV-F101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | ME1 | 23,25,27 | |
| HP-F203 | F215 - CAREER CENTER | ERV-F101 | 208 V | 2 | 624 VA | 12 - 12 - 3/4" | 30A/3P | 7.3 A | 15 A | ME1 | 24,26 | |
| HP-F204 | F209 - REGISTRAR AND RECEPTION | ERV-F101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | ME1 | 28,30 | |
| HP-F205 | F209 - REGISTRAR AND RECEPTION | ERV-F101 | 208 V | 2 | 562 VA | 12 - 12 - 3/4" | 30A/3P | 6.5 A | 15 A | ME1 | 29,31 | |
| HP-F206 | F209 - REGISTRAR AND RECEPTION | ERV-F101 | 208 V | 2 | 624 VA | 12 - 12 - 3/4" | 30A/3P | 7.3 A | 15 A | ME1 | 32,34 | |
| HP-F207 | F213 - RECORDS STORAGE | ERV-F101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | ME1 | 33,35 | |
| HP-G101 | G116M - MECH | ERV-E101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MG1 | 7,9,11 | |
| HP-G102 | G102S - STORAGE | ERV-E101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MG1 | 12,14,16 | |
| HP-G103 | G102S - STORAGE | ERV-E101 | 208 V | 2 | 749 VA | 12 - 12 - 3/4" | 30A/3P | 8.7 A | 15 A | MG1 | 13,15 | |
| HP-G201 | G200M - MECH | ERV-E101 | 208 V | 3 | 1716 VA | 10 - 10 - 3/4" | 30A/3P | 16.9 A | 25 A | MG1 | 17,19,21 | |
| HP-G202 | G200M - MECH | ERV-E101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMG1 | 19,21,23 | 1 |
| HP-G203 | G200M - MECH | ERV-E101 | 208 V | 3 | 1428 VA | 12 - 12 - 3/4" | 30A/3P | 13.9 A | 20 A | MG1 | 18,20,22 | |
| HP-G204 | G200M - MECH | ERV-E101 | 480 V | 3 | 2687 VA | 12 - 12 - 3/4" | 30A/3P | 11.2 A | 15 A | HMG1 | 25,27,29 | 1 |
| HP-G205 | G220M - MECH | ERV-E101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMG1 | 26,28,30 | 1 |
| HP-G206 | G220M - MECH | ERV-E101 | 480 V | 3 | 3740 VA | 12 - 12 - 3/4" | 30A/3P | 17.1 A | 20 A | HMG1 | 31,33,35 | 1 |
| HP-J101 | J118C - CORRIDOR | ERV-J101 | 208 V | 2 | 624 VA | 12 - 12 - 3/4" | 30A/3P | 7.3 A | 15 A | MJ1 | 1,3 | |
| HP-J102 | J118C - CORRIDOR | ERV-J101 | 208 V | 3 | 1464 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A | 20 A | MJ1 | 5,7,9 | |
| HP-J103 | J118C - CORRIDOR | ERV-J101 | 208 V | 3 | 1269 VA | 12 - 12 - 3/4" | 30A/3P | 14.3 A

**CONSTRUCTION DOCUMENTS NOTES:**
THE FOUNDATION DOCUMENTS CONTAIN SOME INFORMATION THAT HAS BEEN PREVIOUSLY BID AND ISSUED FOR CONSTRUCTION (FOUNDATION PACKAGE DATED SEPTEMBER 2, 2014). THE CONTRACTOR SHALL COORDINATE ALL ITEMS PREVIOUSLY BID FOR CONSTRUCTION.




## FOUNDATION PLAN - AREA H

SCALE: 1/8" = 1'-0"





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


JACOB M. WILKINS E-10275 9-30-14 REGISTERED STRUCTURAL ENGINEER STATE OF NEBRASKA


DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00



© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#1 | Addendum No. 1 - FNDN PKG | 9/12/2014 |
| ADD#3 | Addendum No. 3 | 10/14/2014 |

FOUNDATION PLAN - AREA H

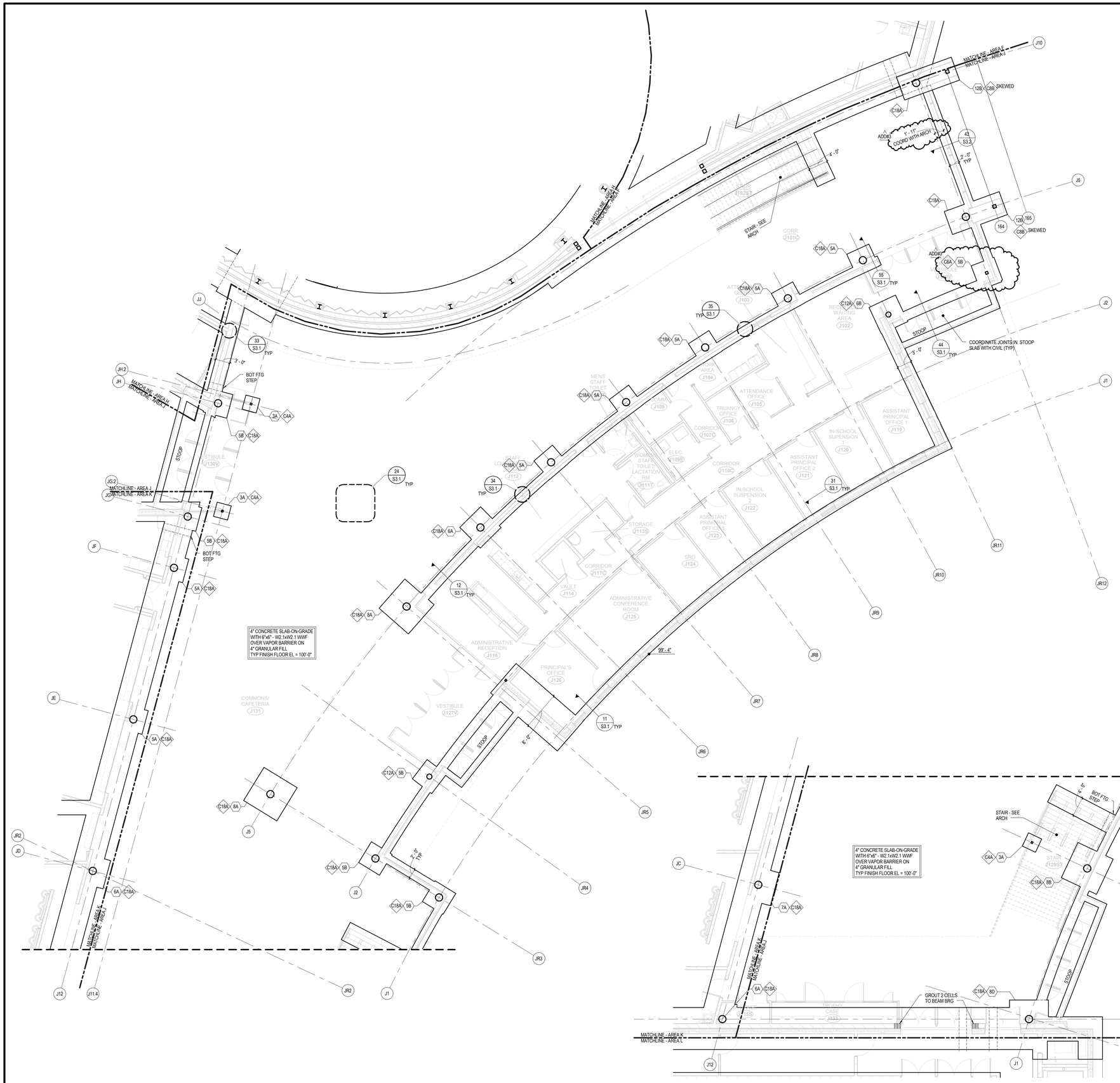
ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

S1.7

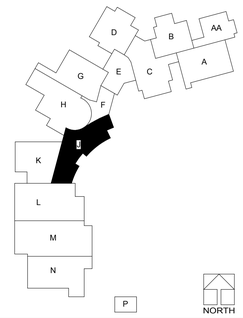
**CONSTRUCTION DOCUMENTS NOTES:**
THE FOUNDATION DOCUMENTS CONTAIN SOME INFORMATION THAT HAS BEEN PREVIOUSLY BID AND ISSUED FOR CONSTRUCTION (FOUNDATION PACKAGE DATED SEPTEMBER 2, 2014). THE CONTRACTOR SHALL COORDINATE ALL ITEMS PREVIOUSLY BID FOR CONSTRUCTION.




# FOUNDATION PLAN - AREA J
SCALE: 1/8" = 1'-0"

NORTH

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


PROFESSIONAL STRUCTURAL ENGINEER
JACOB D. MARRELL
E-10275
9-30-14
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

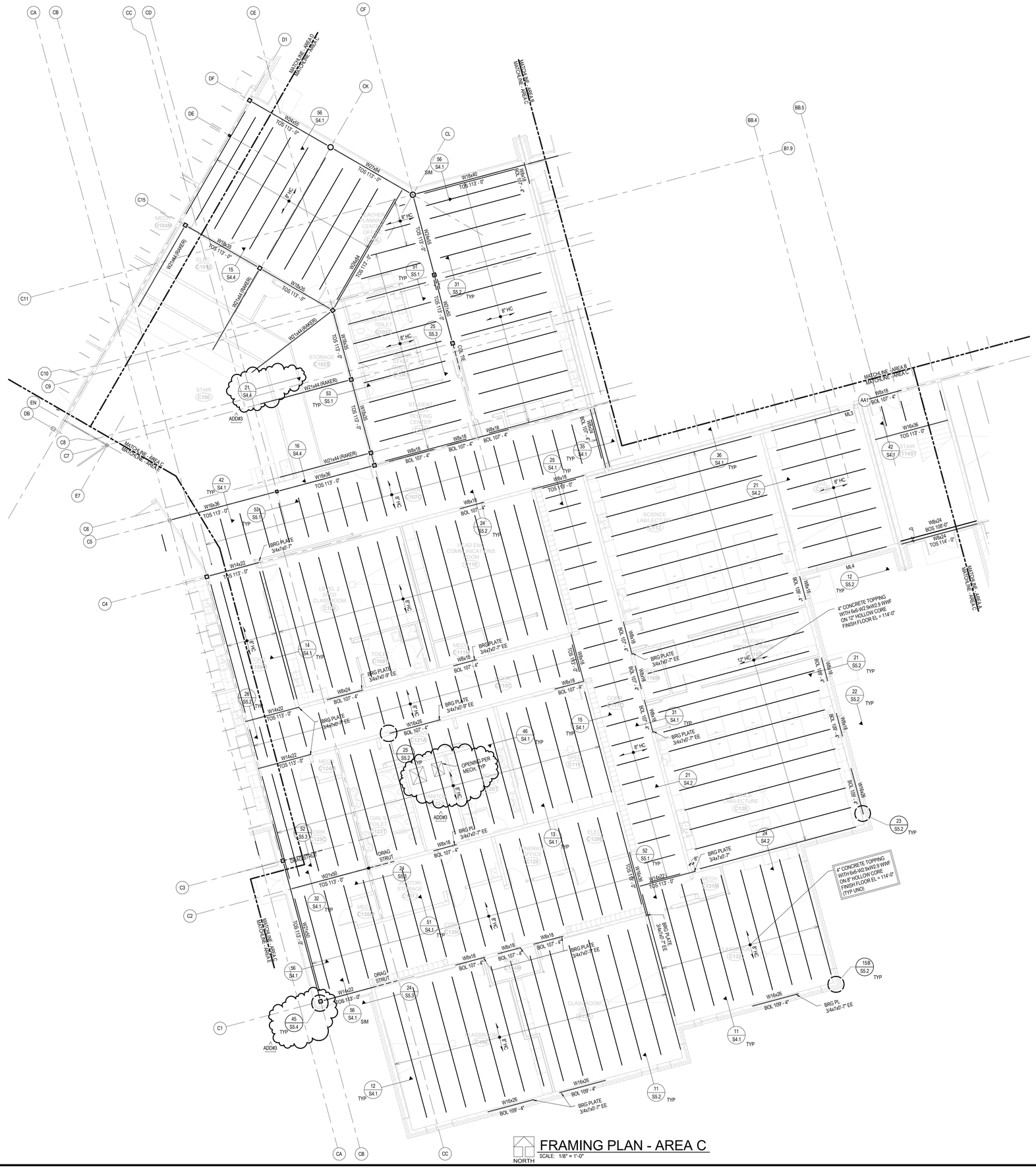
| Revision/Issue | | Date |
|---|---|---|
| ADD#1 | Addendum No. 1 - FNDN PKG | 9/12/2014 |
| ADD#3 | Addendum No. 3 | 10/14/2014 |

FOUNDATION PLAN - AREA J

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
S1.8





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


JACOB M. WILKINS
E-13275
9-30-14
REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

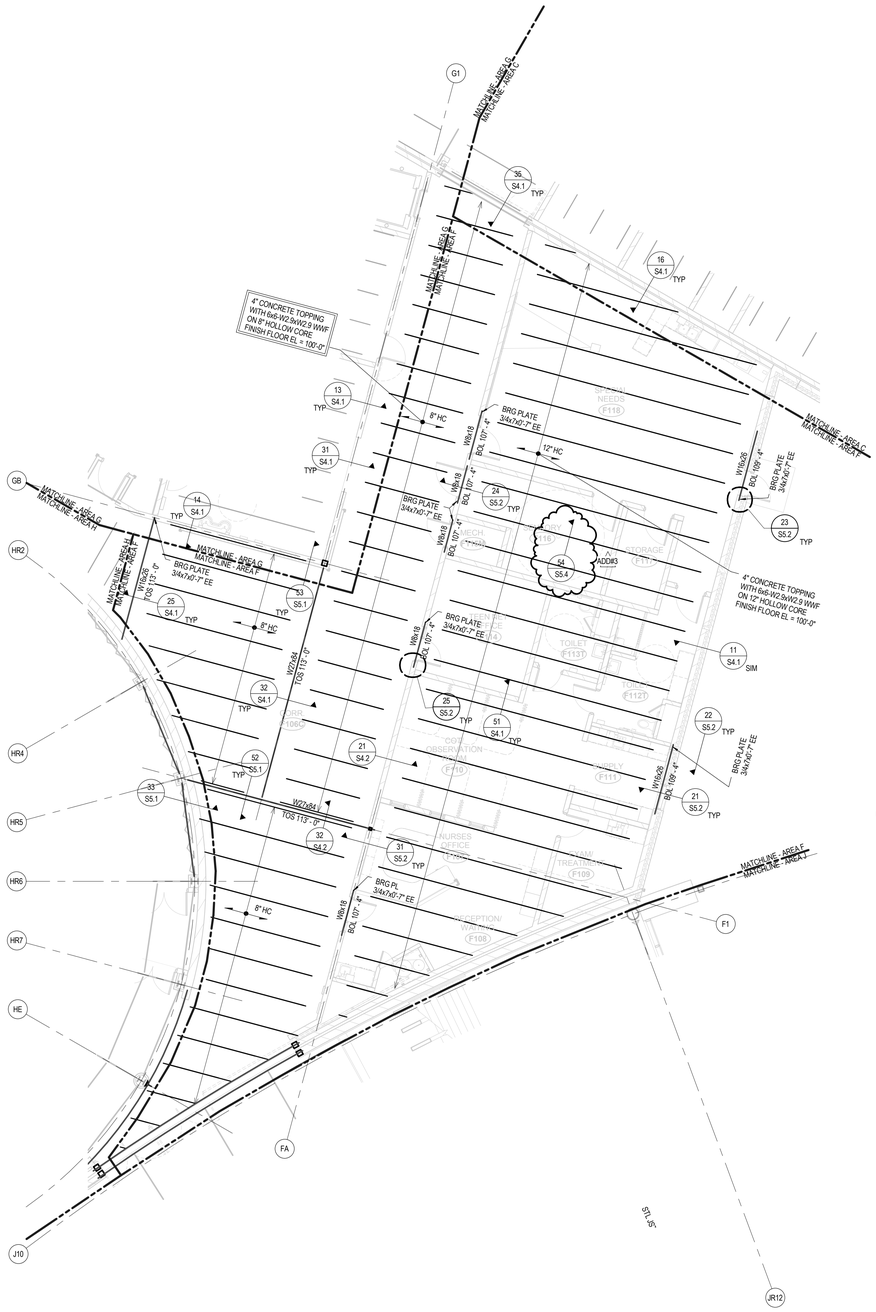
FRAMING PLAN - AREA C

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

S2.3


4" CONCRETE TOPPING WITH 6x6-W2.9xW2.9 WWF ON 8" HOLLOW CORE FINISH FLOOR EL = 100'-0"
MATCHLINE - AREA G
MATCHLINE - AREA C
MATCHLINE - AREA A
MATCHLINE - AREA E
MATCHLINE - AREA F
BRG PLATE 3/4x7x0'-7" EE
8" HC
12" HC
W18x35
W18x50
W27x84
W18x76
W18x40
W18x55
W18x65
W18x106
W18x119
W18x158
W24x84
W24x94
W24x103
W24x131
W24x146
W24x162
W24x176
W24x192
W24x207
W24x229
W24x250
W24x279
W24x306
W24x335
W24x370
W24x408
W24x450
W24x492
W24x535
W24x583
W24x629
W24x679
W24x731
W24x783
W24x837
W24x897
W24x962
W24x1046
W24x1161
W24x1266
W24x1355
W24x1441
W24x1538
W24x1653
W24x1760
W24x1882
W24x2009
W24x2146
W24x2292
W24x2438
W24x2605
W24x2761
W24x2946
W24x3131
W24x3317
W24x3502
W24x3687
W24x3872
W24x4057
W24x4242
W24x4427
W24x4612
W24x4797
W24x4982
W24x5167
W24x5352
W24x5537
W24x5722
W24x5907
W24x6092
W24x6277
W24x6462
W24x6647
W24x6832
W24x7017
W24x7202
W24x7387
W24x7572
W24x7757
W24x7942
W24x8127
W24x8312
W24x8497
W24x8682
W24x8867
W24x9052
W24x9237
W24x9422
W24x9607
W24x9792
W24x9977
W24x10162
W24x10347
W24x10532

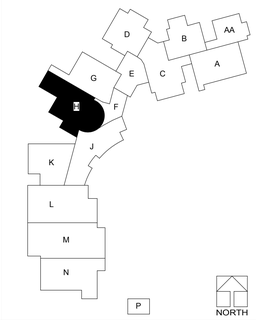
W24x104
BOL 108'-0"
W24x104
BOL 108'-0"
DRMS STRM
METAL DECK
WIDE RIB
1.5"x20 GAUGE
ACOUSTICAL
METAL DECK
WIDE RIB
1.5"x20 GAUGE
ACOUSTICAL
METAL DECK
WIDE RIB
1.5"x20 GAUGE
TYP METAL DECK
LSE 3WB/3S.1
TYP METAL DECK
LSE 3WB/3S.1
W16x36
BOL 107'-4"
W16x26
BOL 107'-4"
W16x18
BOL 107'-4"
W16x18
BOL 107'-4"
W16x18
BOL 107'-4"
W16x18
BOL 107'-4"
W16x26

# FRAMING PLAN - AREA H

SCALE: 1/8" = 1'-0"

NORTH

## KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


JACOB A. WILKINS
E-14275
9-30-14
REGISTERED STRUCTURAL ENGINEER
STATE OF NEBRASKA


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

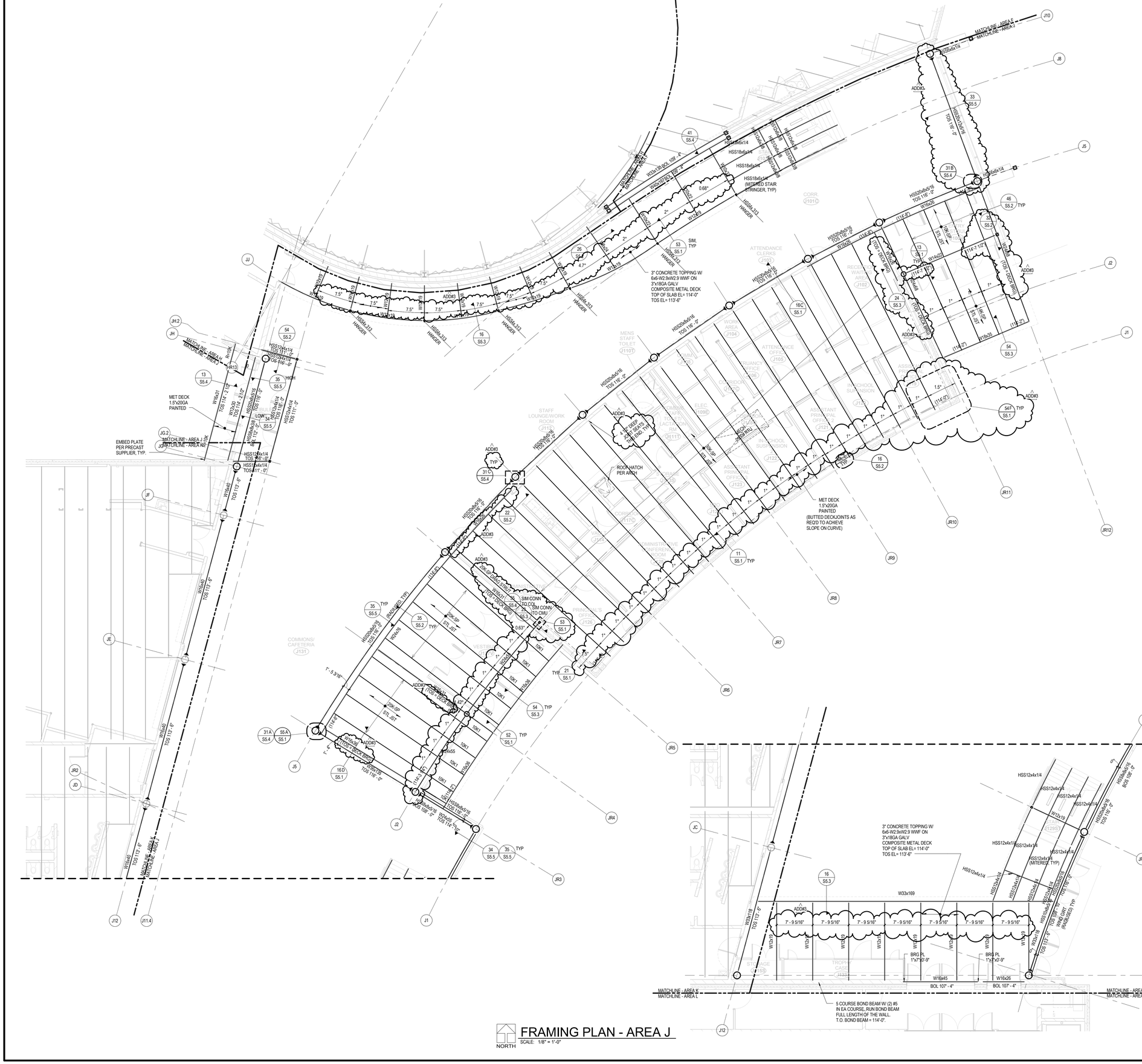
FRAMING PLAN - AREA H

ProjectNumber: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

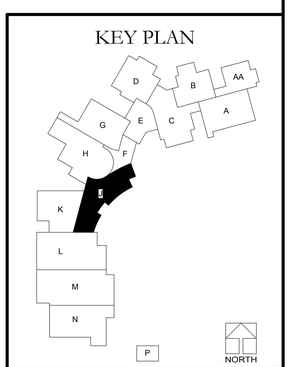

Sheet Number:

S2.7




# FRAMING PLAN - AREA J

SCALE: 1/8" = 1'-0"





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


JACOB D. WILKINS E-13275 9-30-14 REGISTERED STRUCTURAL ENGINEER STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

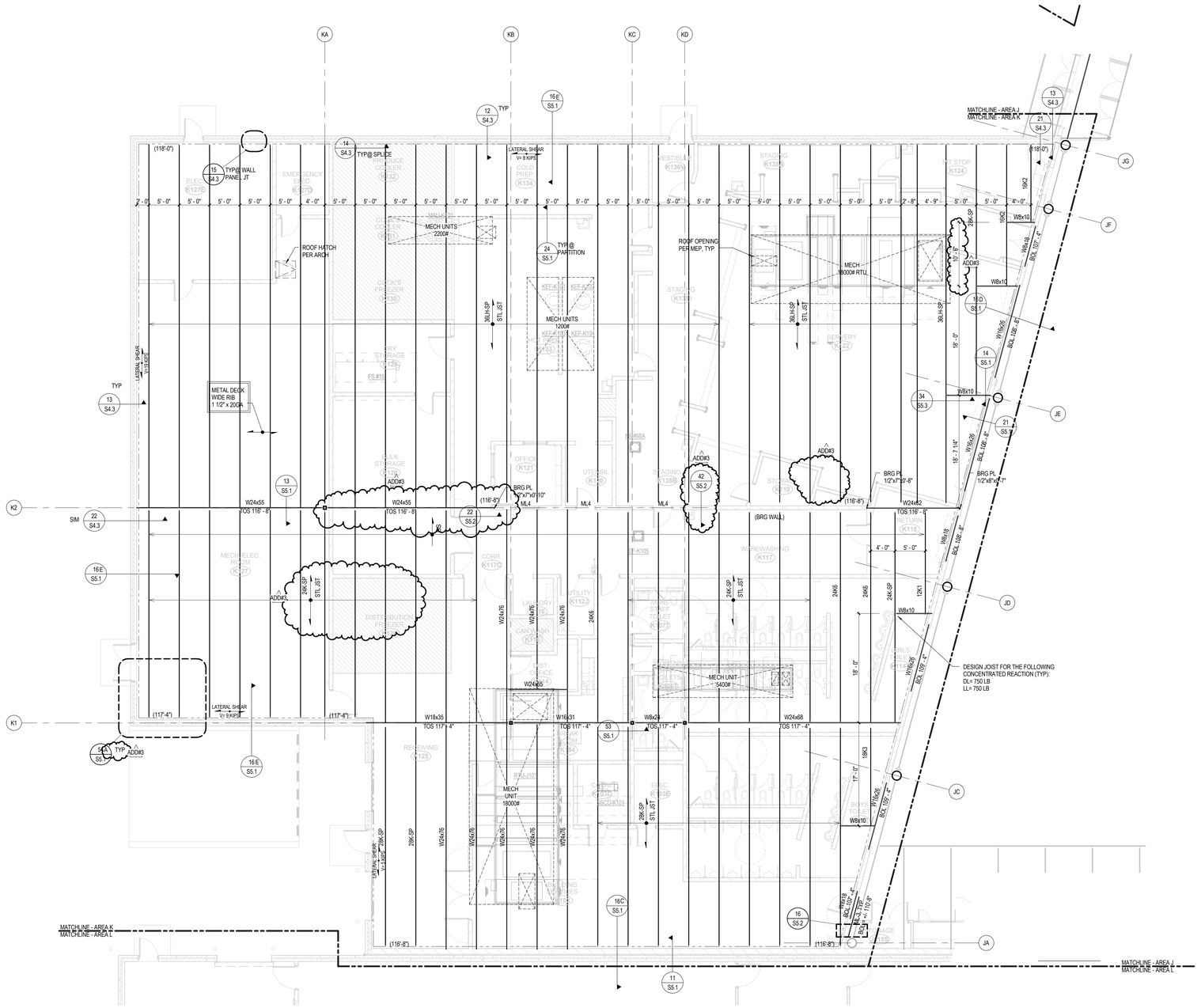
FRAMING PLAN - AREA J

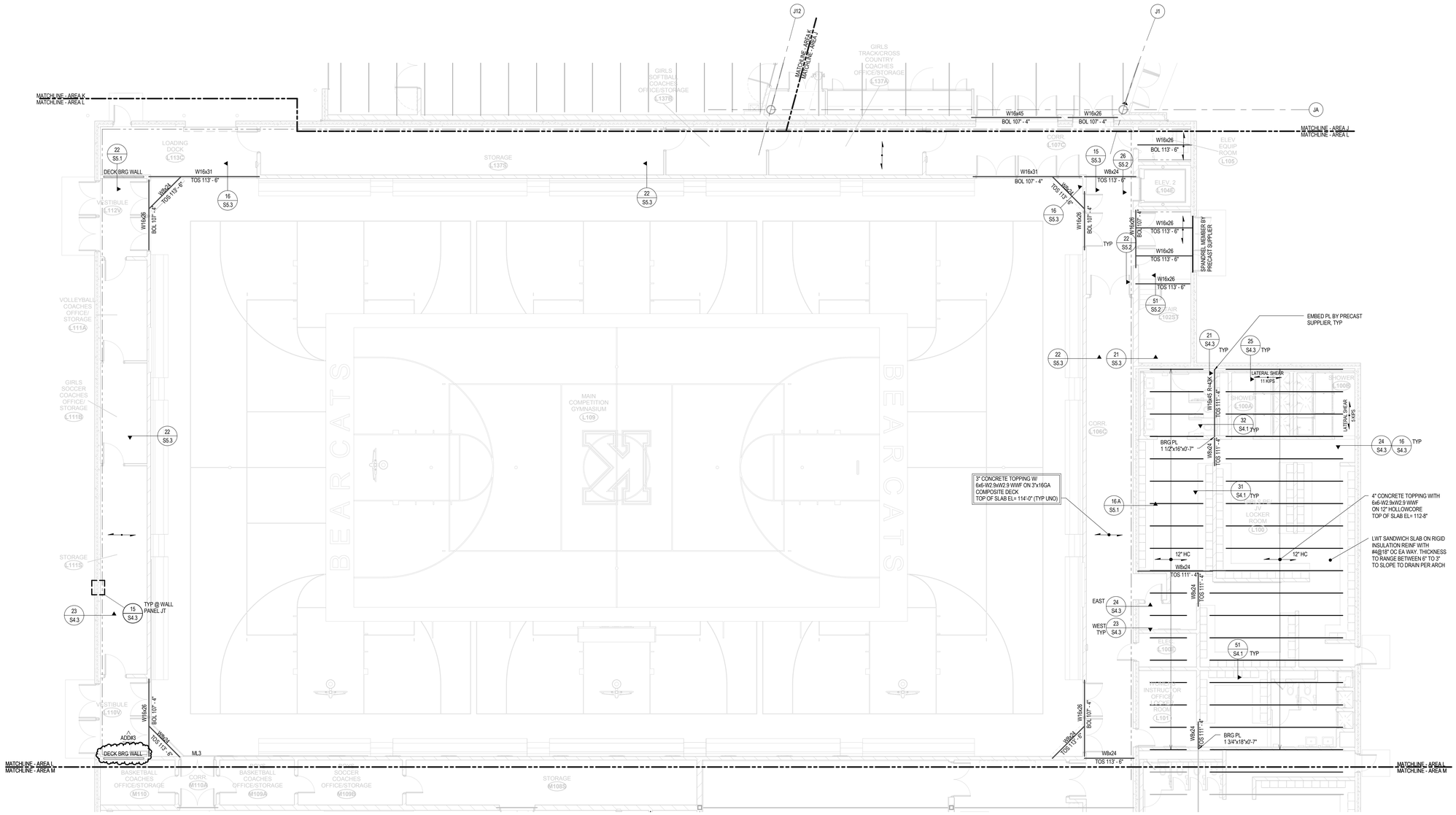
ProjectNumber: **1355**
Date: **September 30, 2014**

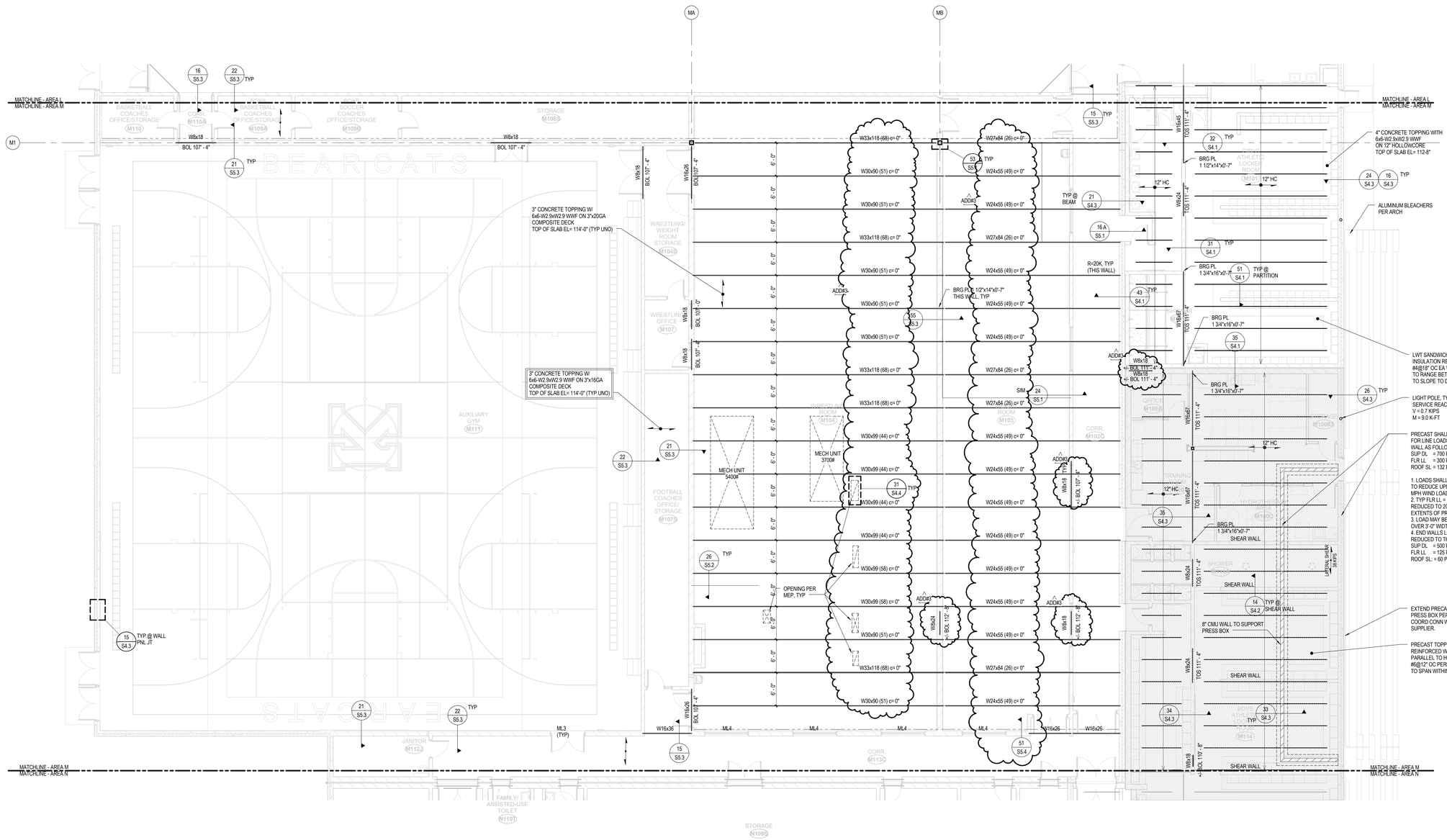

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

**S2.8**


KA
KB
KC
KD
K1
K2
MATCHLINE - AREA J
MATCHLINE - AREA K
MATCHLINE - AREA L
(118'-0")
(117'-4")
(116'-8")
TOS 116' - 8"
TOS 117' - 4"
ROOF HATCH PER ARCH
MECH UNITS 2200#
MECH UNITS 1200#
MECH UNIT 18000#
MECH UNIT 5400#
MECH 19000# RTU
ROOF OPENING PER MEP, TYP
TYP@ SPLICE
TYP@ WALL PANEL JT
TYP @ PARTITION
LATERAL SHEAR V= 8 KIPS
LATERAL SHEAR V= 9 KIPS
LATERAL SHEAR V= 3 KIPS
METAL DECK WIDE RIB 1 1/2" x 20GA
ADD#3
ADD#4
ADD#5
BRG PL 1/2"x7'-0"x7'-10"
BRG PL 1/2"x7'-0"-8"
BRG PL 1/2"x8"x7'-7"
DESIGN JOIST FOR THE FOLLOWING CONCENTRATED REACTION (TYP):
DL= 750 LB
LL= 750 LB
W24x55
W24x62
W24x68
W24x76
W18x35
W16x31
W8x24
W8x10
W16x26
W16x36
W16x45
W16x50
W16x58
W16x67
W16x89
24K-SP
26K-SP
28K-SP
30LH-SP
STL-ST
STL-JST
ML4
(BRG WALL)
EMERGENCY ELEC. K127D
ELEC. K127S
FREEZER K132
COLD PREP K134
VESTIBULE K136V
STAGING K135S
STAGING K135B
STAGING K135A
STOR K124
MALK-UP COOLER K131
COOKS FREEZER K130
DRY STORAGE K129
FS 815
BULK STORAGE K122
OFFICE K121
UTENSIL K120
KEF-K103
KEF-K104
KEF-K106
KEF-K107
KEF-K108
KEF-K109
KEF-K110
KEF-K111
KEF-K112
KEF-K113
KEF-K105
SCULPTURE K101
SCULPTURE K102
SCULPTURE K103
SCULPTURE K104
SCULPTURE K105
SCULPTURE K106
SCULPTURE K107
SCULPTURE K108
SCULPTURE K109
SCULPTURE K110
SCULPTURE K111
SCULPTURE K112
SCULPTURE K113
SCULPTURE K114
SCULPTURE K115
SCULPTURE K116
SCULPTURE K117
SCULPTURE K118
SCULPTURE K119
SCULPTURE K120
SCULPTURE


MATCHLINE - AREA K
MATCHLINE - AREA L
MATCHLINE - AREA J
MATCHLINE - AREA L
MATCHLINE - AREA L
MATCHLINE - AREA M
MATCHLINE - AREA L
MATCHLINE - AREA M
J12
J1
JA
JK
GIRLS SOFTBALL COACHES OFFICE/STORAGE L137B
GIRLS TRACK/CROSS COUNTRY COACHES OFFICE/STORAGE L137A
LOADING DOCK L113C
STORAGE L137S
CORR L107C
ELEV EQUIP ROOM L105
ELEV 2 L104E
VESTIBULE L112V
VOLLEYBALL COACHES OFFICE/ STORAGE L111A
GIRLS SOCCER COACHES OFFICE/ STORAGE L111B
STORAGE L111S
MAIN COMPETITION GYMNASIUM L109
CORR L106C
SHOWER L100B
SHOWER L100A
LOCKER ROOM L100
ELEC L100E
INSTRUCTOR OFFICE L101
VESTIBULE L110V
BASKETBALL COACHES OFFICE/STORAGE M110
CORR M110A
BASKETBALL COACHES OFFICE/STORAGE M109A
SOCCER COACHES OFFICE/STORAGE M109B
STORAGE M108S
ML3
DECK BRG WALL
W16x31 TOS 113' - 6"
W16x31 BOL 107' - 4"
W16x45 BOL 107' - 4"
W16x26 BOL 107' - 4"
W16x26 BOL 113' - 6"
W8x24 TOS 113' - 6"
W16x26 TOS 113' - 6"
W16x26 TOS 113' - 6"
W16x26 TOS 113' - 6"
W16x26 BOL 107' - 4"
W8x24 TOS 113' - 6"
W16x26 BOL 107' - 4"
W8x24 TOS 113' - 6"
W16x26 BOL 107' - 4"
W8x24 TOS 113' - 6"
W16x26 BOL 107' - 4"
W8x24 TOS 113' - 6"
W8x24 TOS 113' - 6"
W8x24 TOS 111' - 4"
W8x24 TOS 111' - 4"
W8x24 TOS 111' - 4"
W8x24 TOS 111' - 4"
W8x24 TOS 111' - 4"
W16x26 BOL 107' - 4"
W16x26 BOL 107' - 4"
W16x26 BOL 107

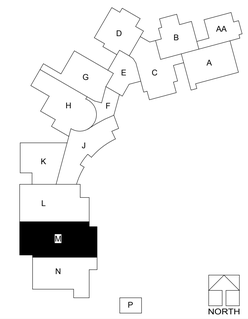



## FRAMING PLAN - AREA M

SCALE: 1/8" = 1'-0"

NORTH

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

JACOB D. WILKINS
E-13275
9-30-14
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

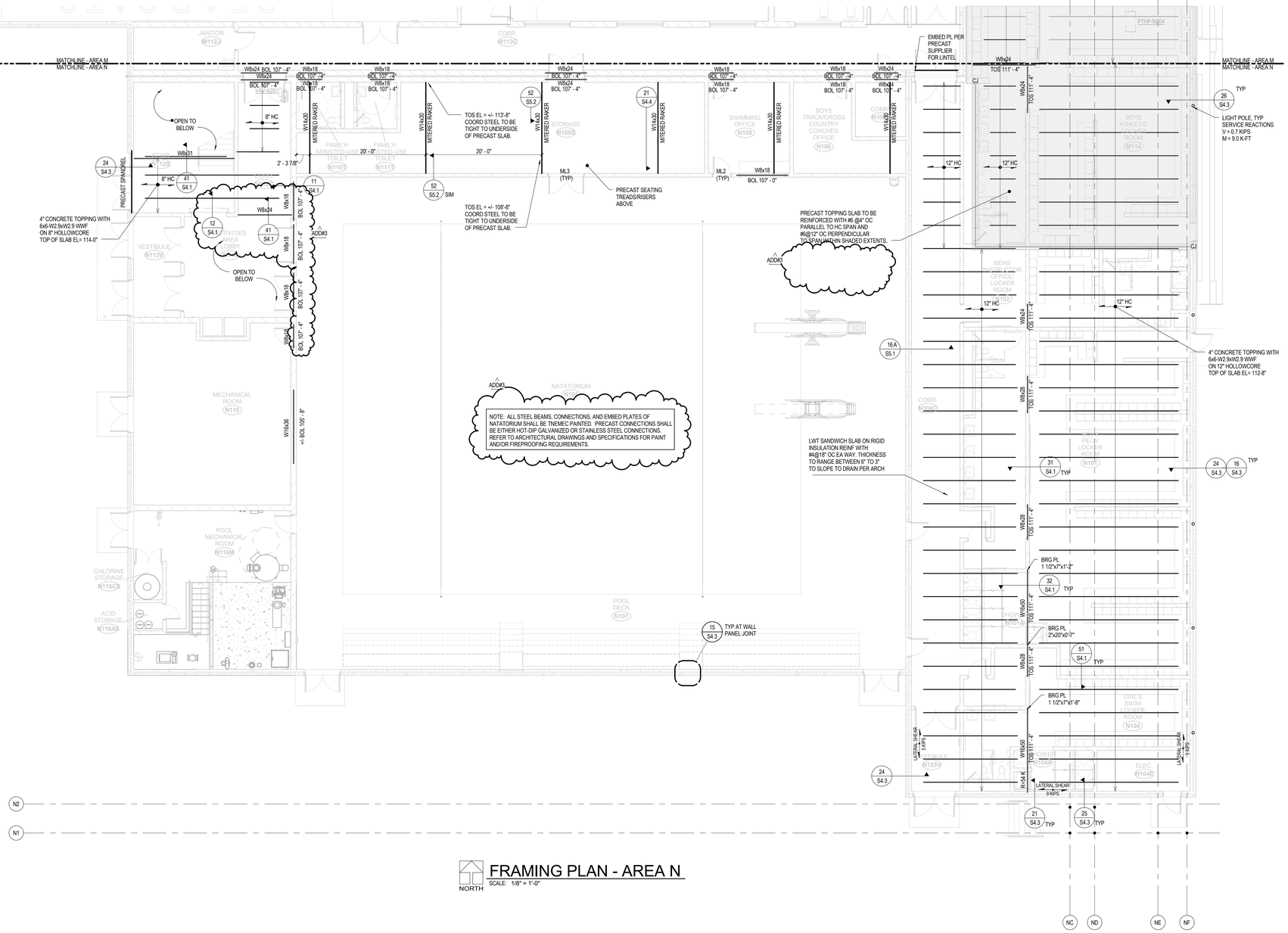
| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

FRAMING PLAN - AREA M

ProjectNumber: 1355
Date: September 30, 2014

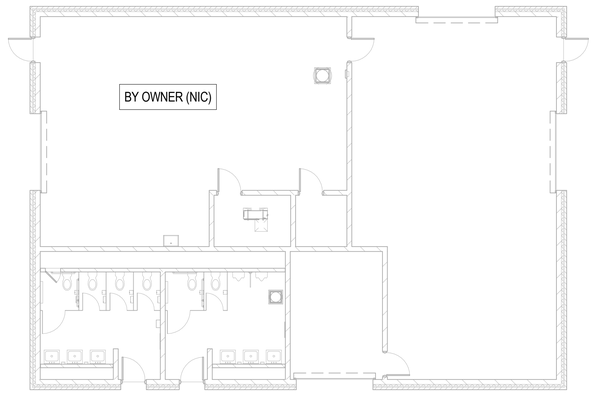
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
S2.11




## FRAMING PLAN - AREA N

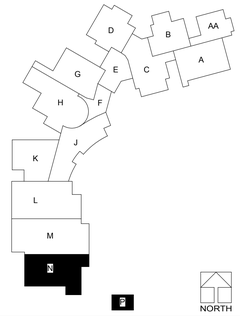
NORTH SCALE: 1/8" = 1'-0"




## ROOF FRAMING PLAN - AREA P

NORTH SCALE: 1/8" = 1'-0"

KEY PLAN




Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

JACOB L. STRUCTURAL ENGINEER E-14275 9-30-14 STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

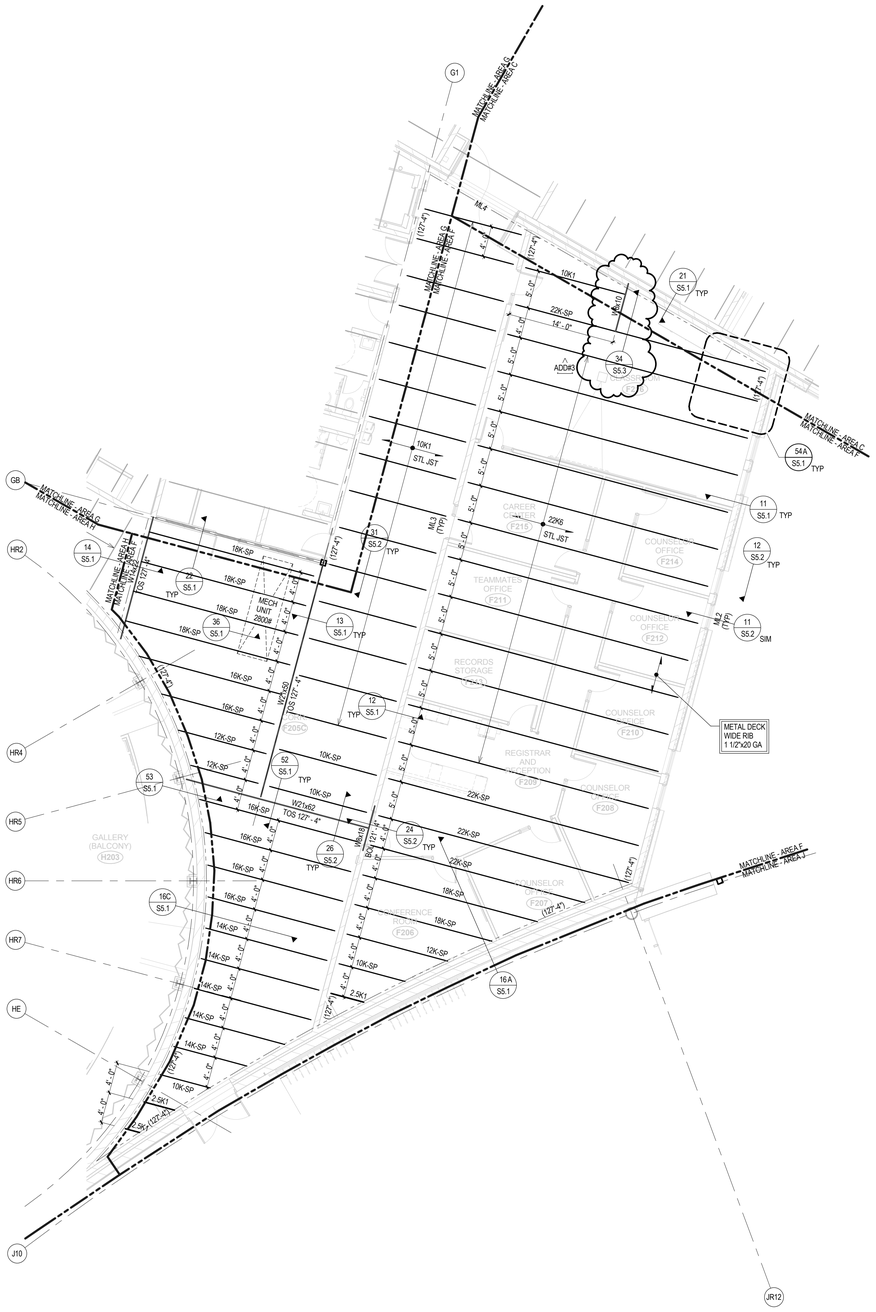
| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

FRAMING PLAN - AREA N & P

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

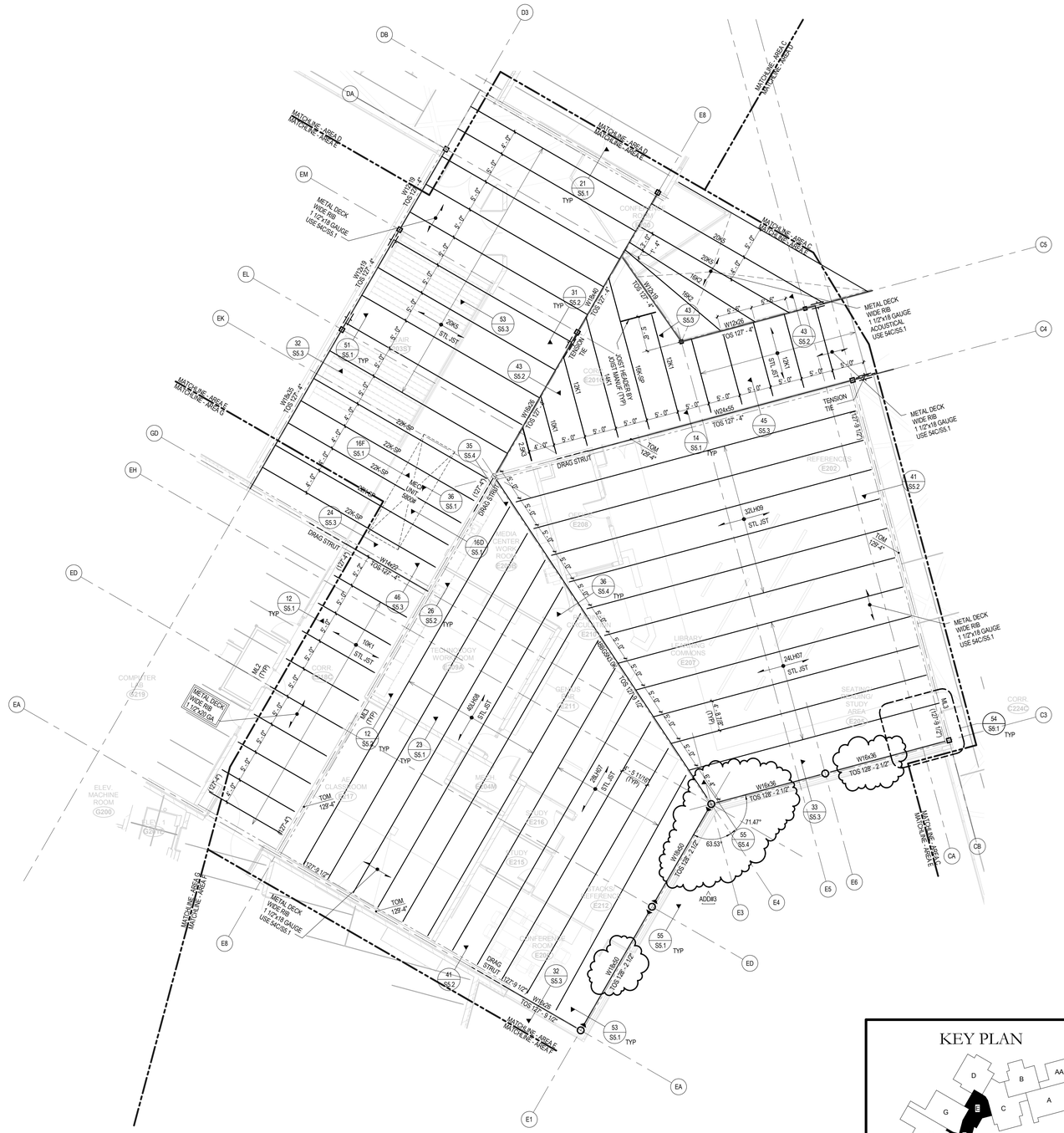
Sheet Number:
S2.12




## ROOF FRAMING PLAN - AREA F

NORTH

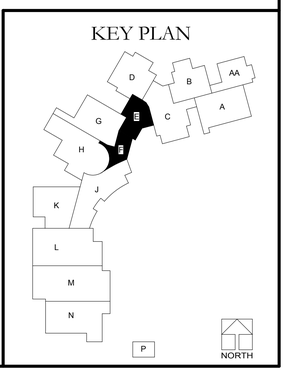
SCALE: 1/8" = 1'-0"




## ROOF FRAMING PLAN - AREA E

NORTH

SCALE: 1/8" = 1'-0"




Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

JACOB A. WILKINS
E-10275
9-30-14
REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

ROOF FRAMING PLAN - AREAS E & F

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

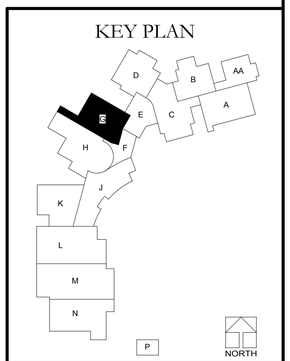
Sheet Number:
S2.17

## ROOF FRAMING PLAN - AREA G

SCALE: 1/8" = 1'-0"

NORTH

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


JASON M. WILKINS E-10275 9-30-14 REGISTERED PROFESSIONAL STRUCTURAL ENGINEER STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

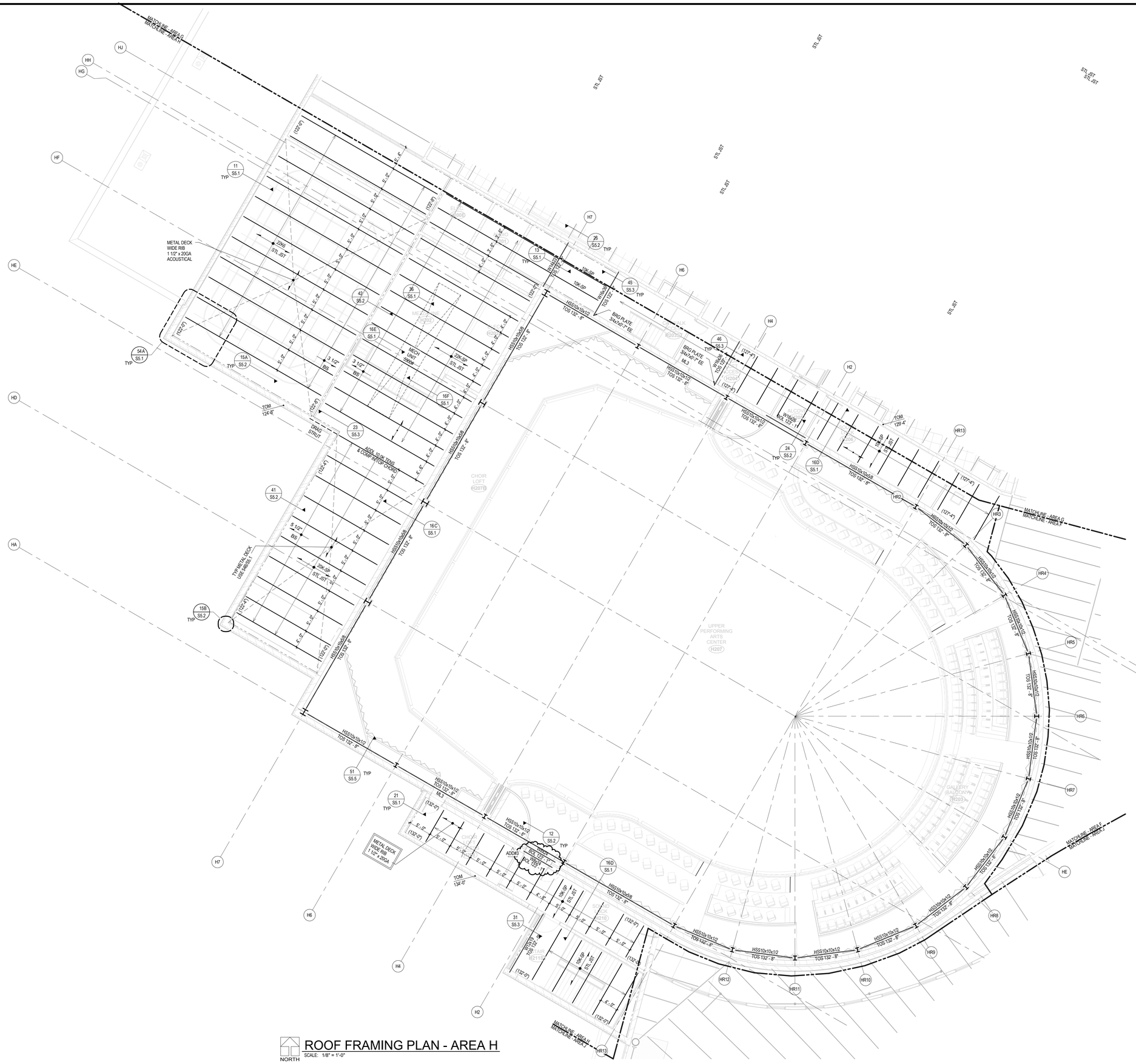
ROOF FRAMING PLAN - AREA G

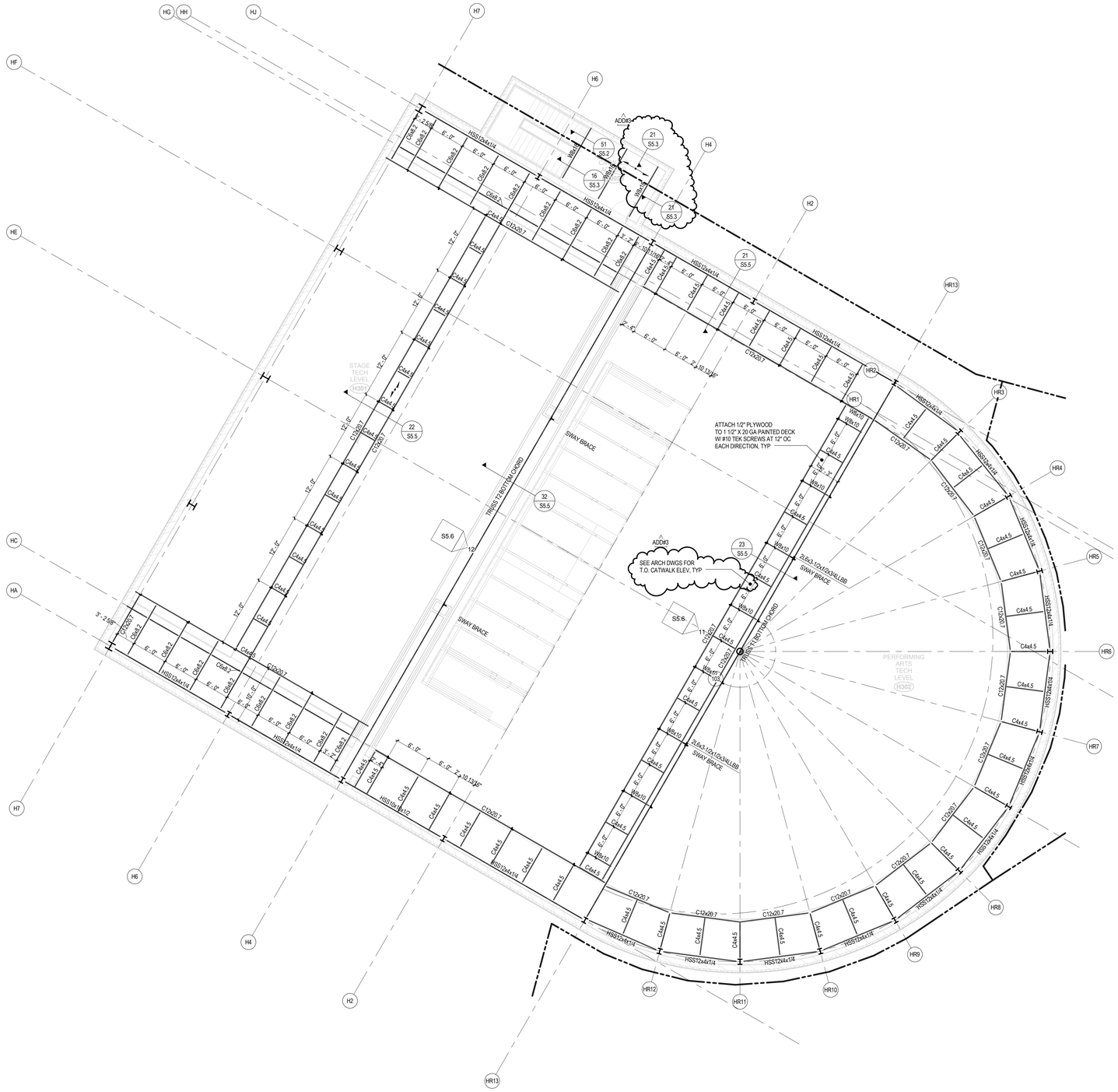
ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

S2.18

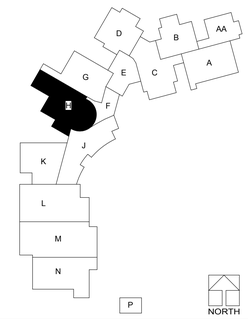

MATCHLINE - AREA G
MATCHLINE - AREA H
METAL DECK WIDE RIB 1 1/2" x 20GA ACOUSTICAL
TYP METAL DECK USE PAB36.1
STL JST
25K-SP
10K-SP
HSS10x10x1/2
TOS 132' - 8"
W16x26
BRG PLATE 3/4"x7'-7" EE
BRG PLATE 3/4"x10'-0" EE M1.3
MECH UNIT 3900lb
ADD#3
TOM 124'-6"
TOM 129'-4"
TOM 134'-0"
ARAG STRUT
ADDL BLK TRNG & COMP MTR (TOP CHORD)
3 1/2" BS
5 1/2" BS
(127'-4")
(132'-0")
(132'-4")
CHOIR LOFT H207B
UPPER PERFORMING ARTS CENTER H207
GALLERY (BALCONY) H203
ORCH PIT H211
ALK H203A
ALK H204
ALK H205
ALK H206
ALK H208
ALK H210
ALK H212
ALK H213
ALK H214
ALK H215
ALK H216
ALK H217
ALK H218
ALK H219
ALK H220
ALK H221
ALK H222
ALK H223
ALK H224
ALK H225
ALK H226
ALK H227
ALK H228
ALK H229
ALK H230
ALK H231
ALK




## FRAMING PLAN - TECH LEVEL - AREA H

NORTH SCALE: 1/8" = 1'-0"

KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


JASON M. WILKINS E-13275 9-30-14 STRUCTURAL PROFESSIONAL ENGINEER STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD#2 Addendum No. 3 | Date 3 10/14/2014 |

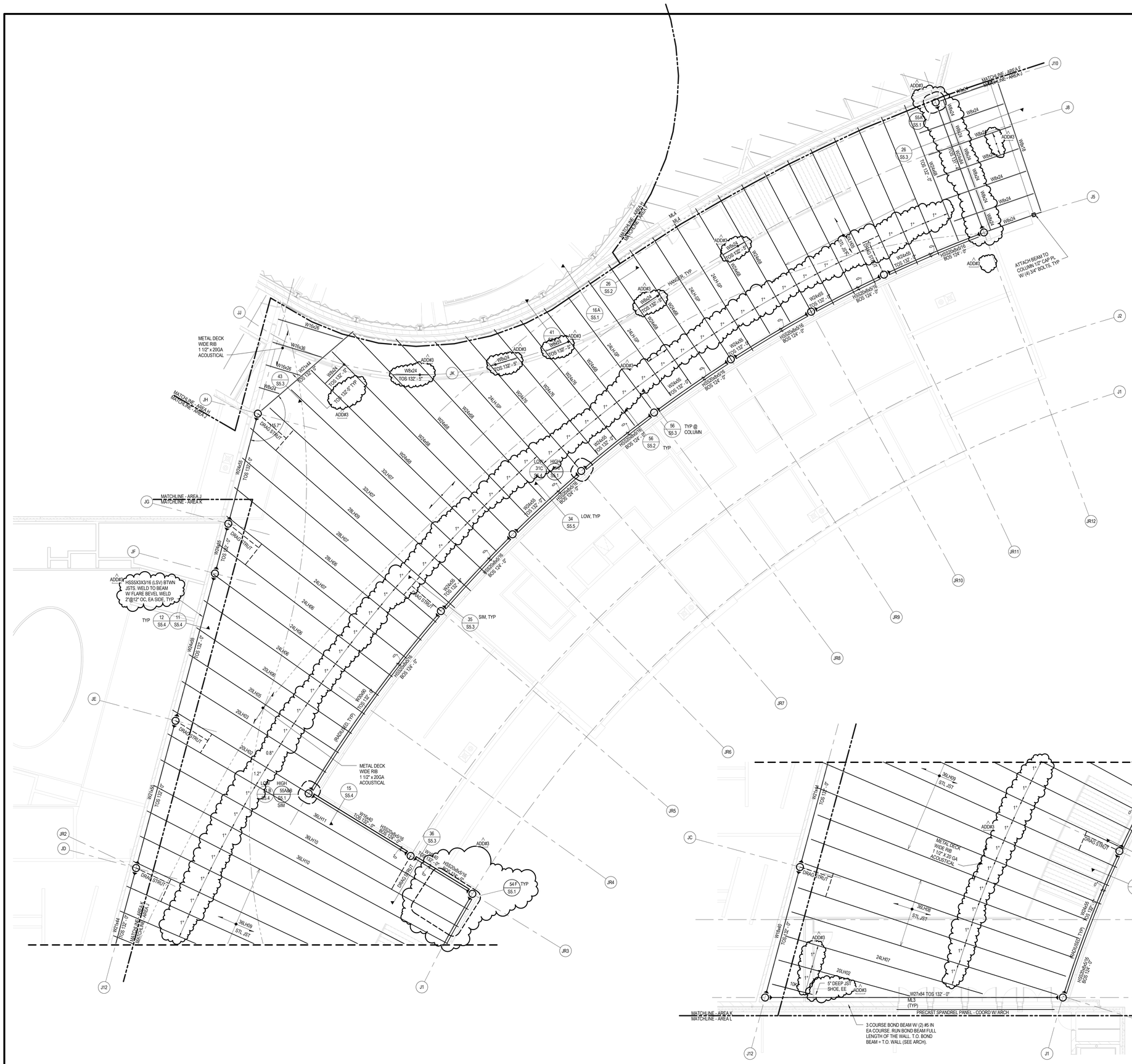
FRAMING PLAN - AREA H TECH LEVEL

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

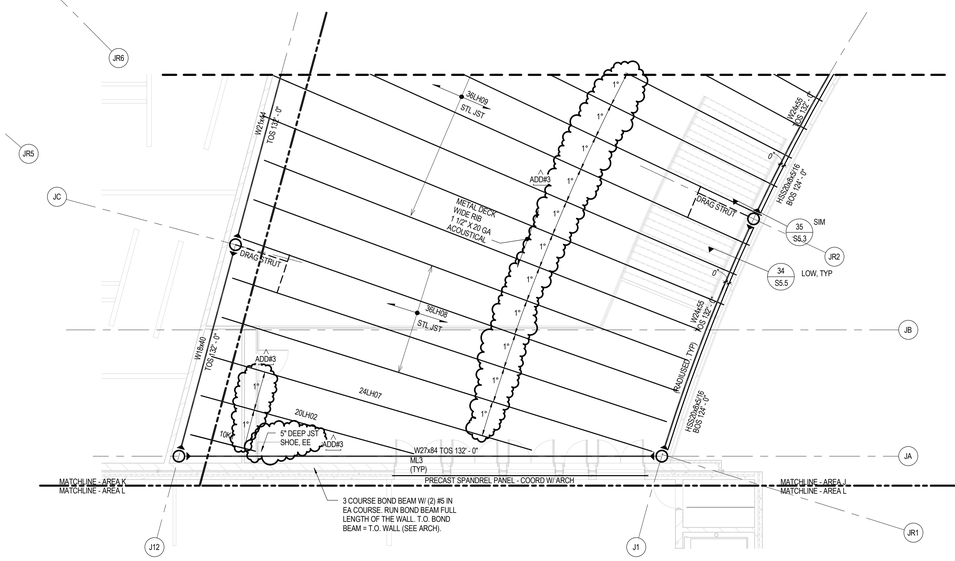
S2.20



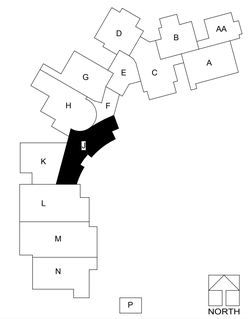

## ROOF FRAMING PLAN - AREA J

NORTH

SCALE: 1/8" = 1'-0"




KEY PLAN





Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*


JASON R. MARSHALL
E-13275
9-30-14
REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


# Kearney Public Schools
# New Kearney High School
# Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

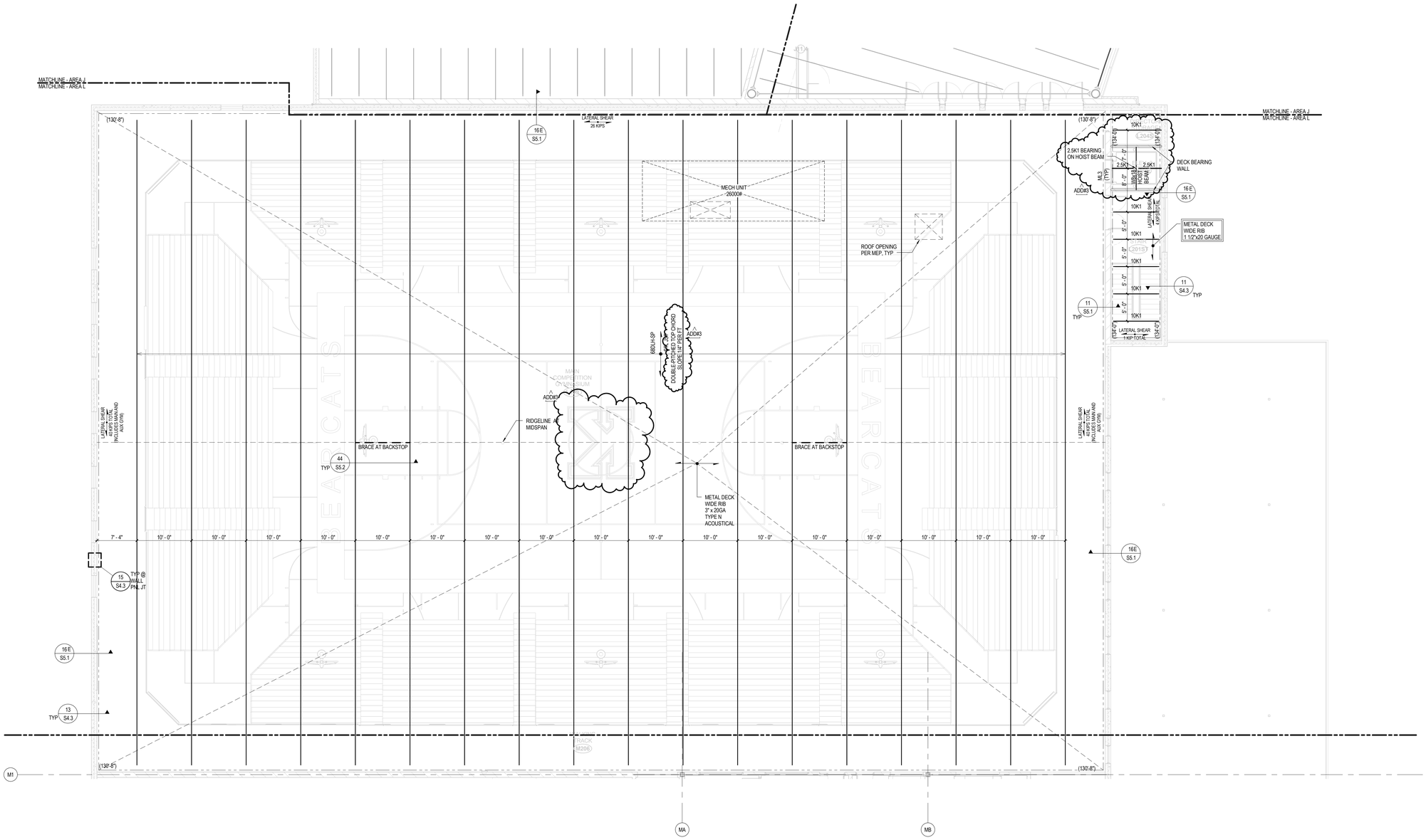
ROOF FRAMING PLAN - AREA J

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

**S2.21**

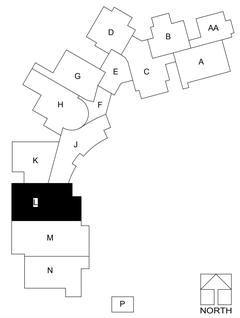



## ROOF FRAMING PLAN - AREA L

SCALE: 1/8" = 1'-0"

NORTH

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

JACOB A. WILKINS
E-14275
9-30-14
REGISTERED STRUCTURAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

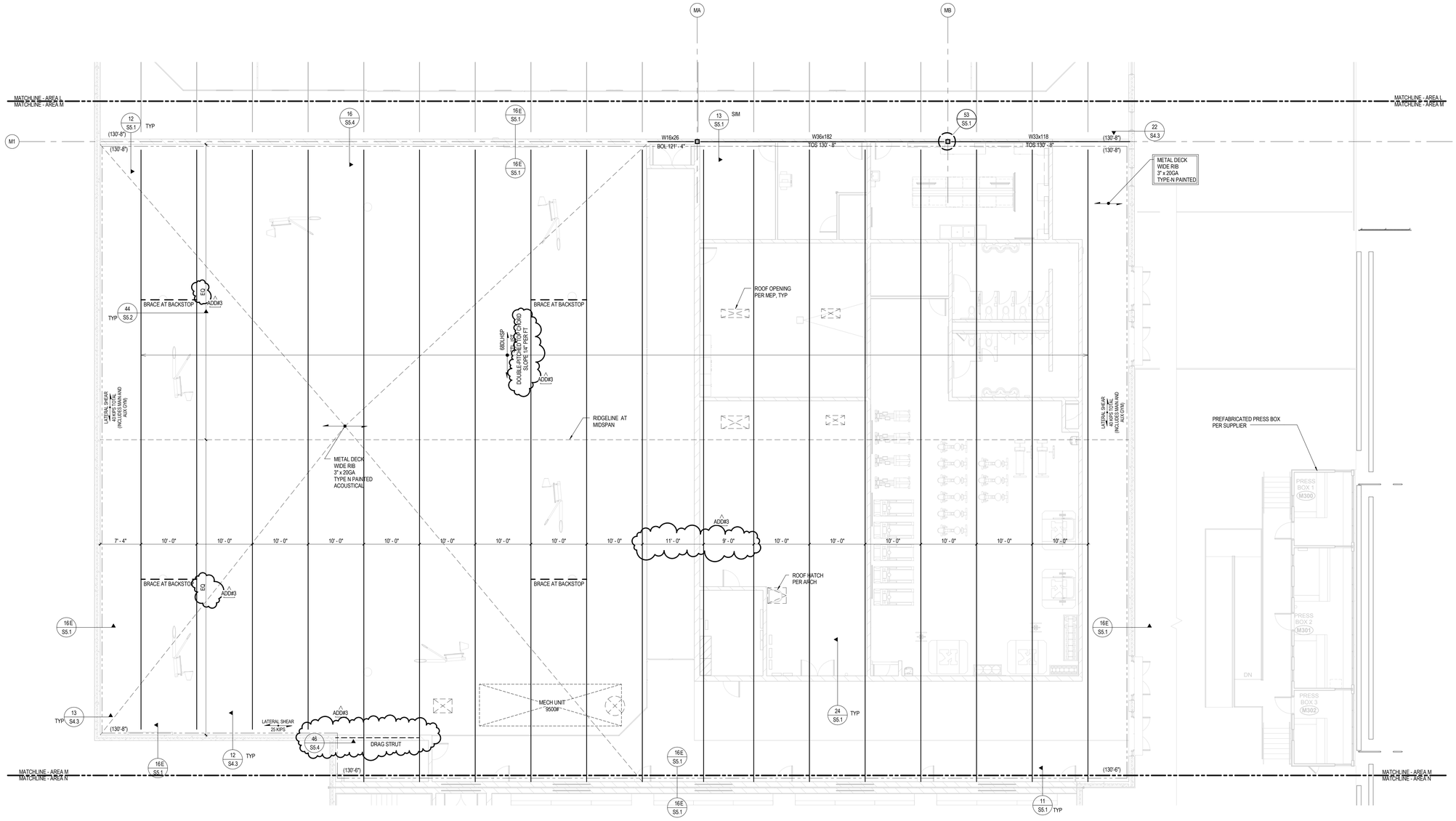
ROOF FRAMING PLAN - AREA L

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

S2.22

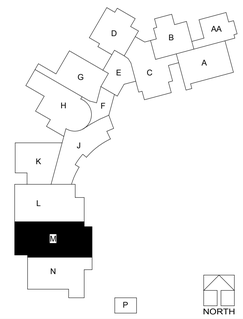



## ROOF FRAMING PLAN - AREA M

NORTH

SCALE: 1/8" = 1'-0"

KEY PLAN




Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*

JACOB M. WILKINS
E-13275
9-30-14
REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

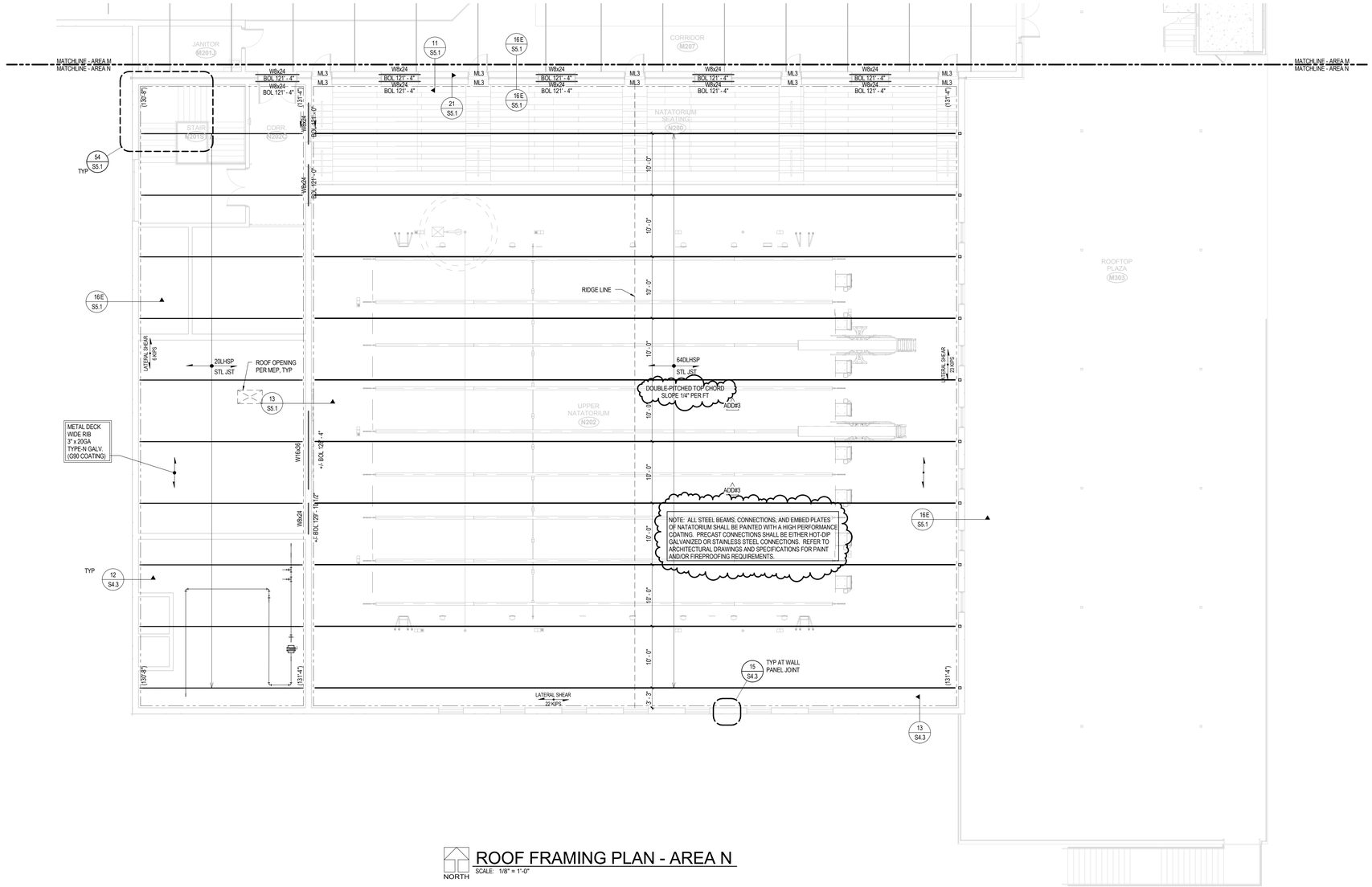
ROOF FRAMING PLAN - AREA M

ProjectNumber: **1355**
Date: **September 30, 2014**

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:

S2.23




NORTH

## ROOF FRAMING PLAN - AREA N

SCALE: 1/8" = 1'-0"


Wilkins Hinrichs Stober Architects L. L. C.

*2908 West 39th Street*
*Suite A*
*Kearney, NE 68845*
*308-237-5767 T*
*308-236-6929 F*

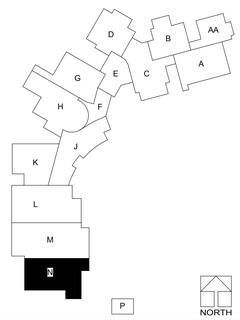

PROFESSIONAL STRUCTURAL ENGINEER
JACOB M. WILKINS
E-14275
9-30-14
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


KEY PLAN




Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

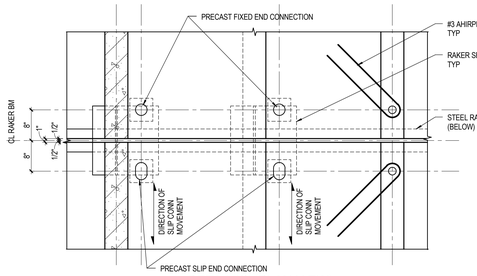
ROOF FRAMING PLAN - AREA N

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

S2.24

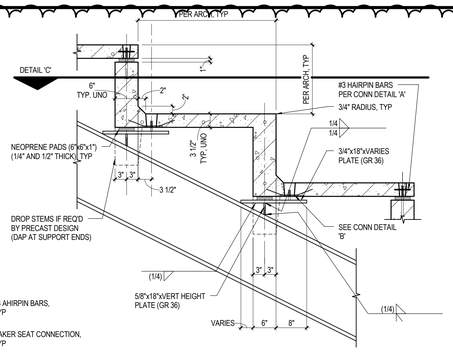


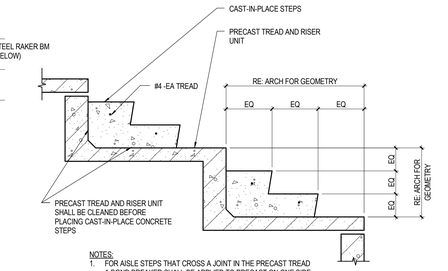

## DETAIL 'C' (PLAN VIEW)

NOTES:
1. PRECAST SIZES SHOWN ARE MINIMUM. PRECASTER IS RESPONSIBLE FOR PRECAST DESIGN. ALL GEOMETRY OF PRECAST TREAD AND RISER UNITS SHALL BE VERIFIED WITH THE ARCHITECTURAL PRIOR TO FABRICATION.
2. PRECAST TREAD AND RISER UNIT AND ALL CONNECTIONS TO THE STRUCTURE SHALL BE DESIGNED BY THE PRECAST SUPPLIER. ALL CONNECTION INFORMATION SHOWN IS SCHEMATIC AND IS FOR DESIGN INTENT ONLY.
3. PRECASTER TO REFER TO 2S/S4.4 FOR SEATING CONNECTION TO PRECAST TREAD AND RISER UNIT CRITERIA.

## PRECAST TREAD AND RISER UNIT AND CONNECTION TO STEEL RAKER

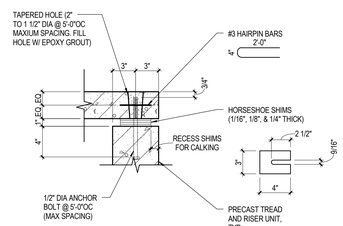
21 S4.4 PRECAST TREAD AND RISER UNIT TYPICAL DETAIL
NO SCALE



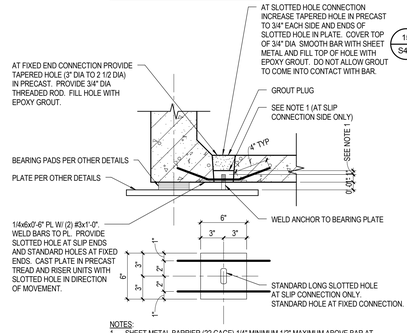




NOTES:
1. FOR AISLE STEPS THAT CROSS A JOINT IN THE PRECAST TREAD A BOND BREAKER SHALL BE APPLIED TO PRECAST ON ONE SIDE OF THE JOINT.

## CAST-IN-PLACE AISLE STEPS OVER PRECAST TREAD AND RISER UNITS



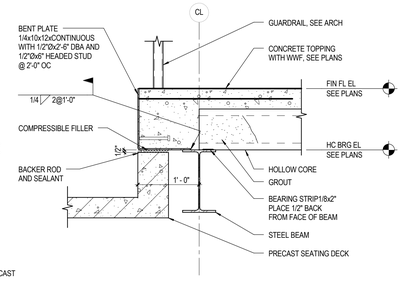

## CONNECTION DETAIL 'A'



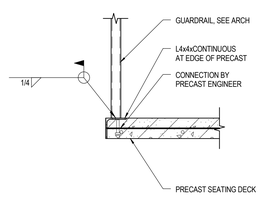

NOTES:
1. SHEET METAL BARRIER (22 GAGE) 1/4" MINIMUM 1/2" MAXIMUM ABOVE BAR AT SLOTTED HOLE CONDITION.

## CONNECTION DETAIL 'B'

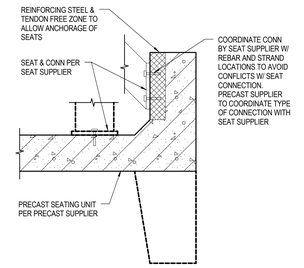
24 S4.4 PRECAST TREAD AND RISER UNIT TYPICAL DETAIL
NO SCALE



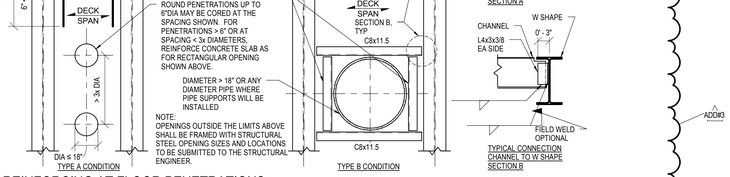

15 S4.4 PRECAST SEATING DECK DETAIL
NO SCALE




16 S4.4 PRECAST SEATING DECK DETAIL
NO SCALE




25 S4.4 SEAT CONN TO PRECAST SEATING UNIT
NO SCALE




31 S4.4 TYP REINFORCING AT FLOOR PENETRATIONS
NO SCALE


Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F


JASON M. MARSHALL
E-13275
9-30-14
REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
STATE OF NEBRASKA


DLR Group
Architecture
Engineering
Planning
Interiors


DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

STRUCTURAL DETAILS

ProjectNumber: **1355**
Date: **September 30, 2014**


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

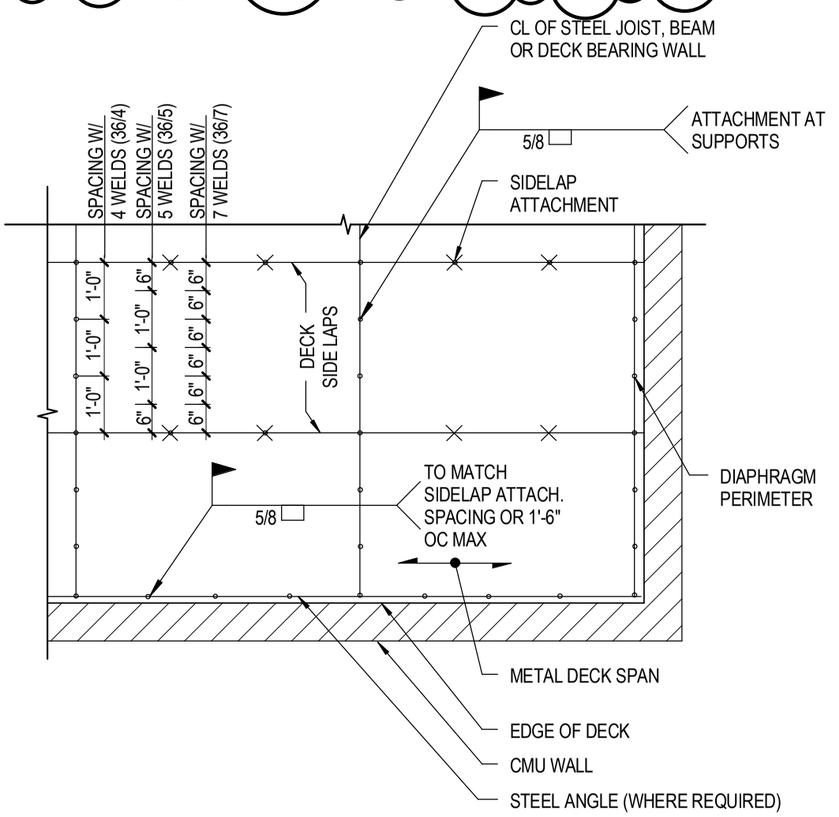

Sheet Number:

S4.4

## DECK ATTACHMENT SCHEDULE

| ATTACHMENT TYPE | ATTACHMENT AT SUPPORTS | ATTACHMENT AT SIDE LAPS | REMARKS |
|---|---|---|---|
| A | 36/4: 4-5/8Ø PER 36" WIDE SHEET | 2 - NO. 10 SCREWS @ 1/3 POINTS | USE UNO ON PLANS |
| B | 36/4: 4-5/8Ø PER 36" WIDE SHEET | 4 - NO. 10 SCREWS @ 1/5 POINTS | |
| C | 36/7: 7-5/8Ø PER 36" WIDE SHEET | 2 - NO. 10 SCREWS @ 1/3 POINTS | |
| D | 36/7: 7-5/8Ø PER 36" WIDE SHEET | 4 - NO. 10 SCREWS @ 1/3 POINTS | |
| E | 24/4: 4-5/8Ø PER 24" WIDE SHEET | 9 - NO. 10 SCREWS PER SPAN | |
| F | 36/7: 7-5/8Ø PER 36" WIDE SHEET | 7 - NO. 10 SCREWS PER SPAN | |

ADD#3




## 54 / S5.1 TYP METAL DECK ATTACHMENT (DIAPHRAGM ATTACHMENT)

NO SCALE

Attachment No. S5.1-1
to Addendum No. 3
Dated: October 14, 2014

Wilkins Hinrichs Stober Architects, L.L.C.

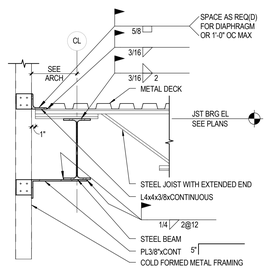
DLR Group
Architecture Engineering Planning Interiors

© 2014, DLR Group inc., a Nebraska corporation, ALL RIGHTS RESERVED

DLR Project # 10-13113-00

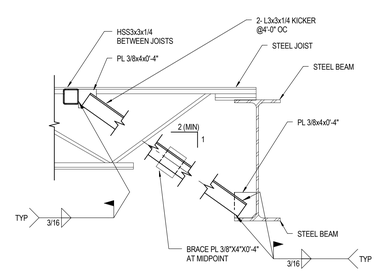
Kearney Public Schools
New Kearney High School

Project Number: 1355

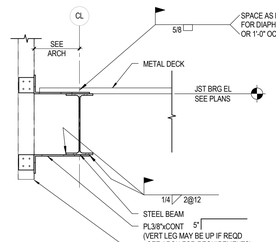



NOTE:
COLD-FORMED METAL STUD FRAMING, BRACING, AND CONNECTIONS TO BE DESIGNED BY METAL STUD ENGINEER

11 S5.4 **METAL STUD BRACING DETAIL**
NO SCALE

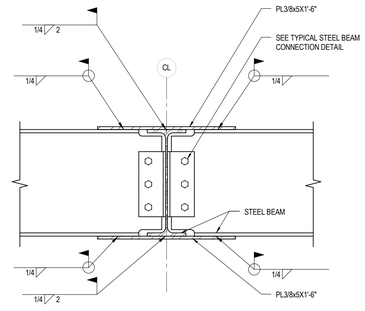



12 S5.4 **BEAM BRACE DETAIL**
NO SCALE

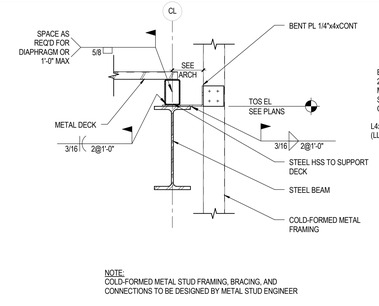



NOTE:
COLD-FORMED METAL STUD FRAMING, BRACING, AND CONNECTIONS TO BE DESIGNED BY METAL STUD ENGINEER

13 S5.4 **METAL STUD BRACING DETAIL**
NO SCALE

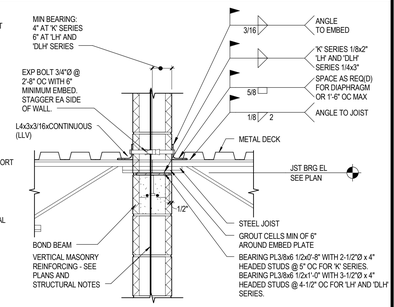



14 S5.4 **CANTILEVERED BEAM CONNECTION DETAIL**
NO SCALE (AT MOMENT CONNECTION)

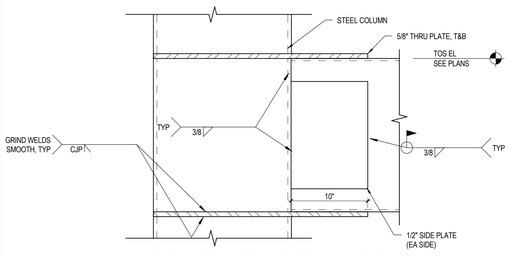



NOTE:
COLD-FORMED METAL STUD FRAMING, BRACING, AND CONNECTIONS TO BE DESIGNED BY METAL STUD ENGINEER

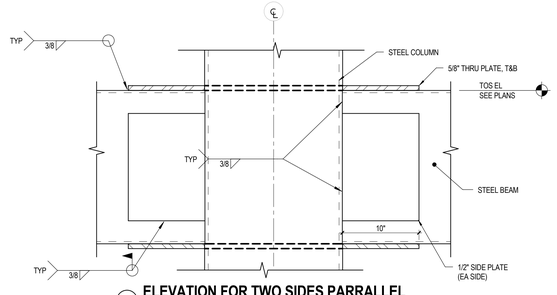
15 S5.4 **STEEL FRAMING DETAIL**
NO SCALE



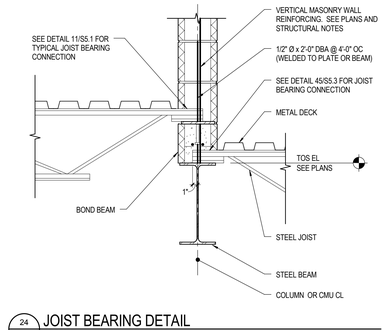

16 S5.4 **JOIST BEARING DETAIL**
SCALE: 1" = 1'-0" (AT MASONRY WALL, 2 SIDE)



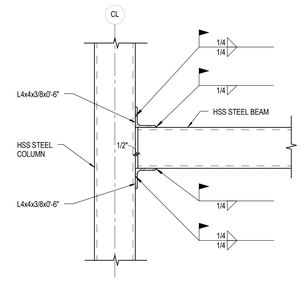

**ELEVATION FOR ONE SIDE & TWO SIDES PERPENDICULAR**



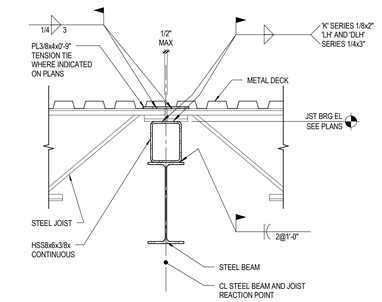

**ELEVATION FOR TWO SIDES PARRALLEL**



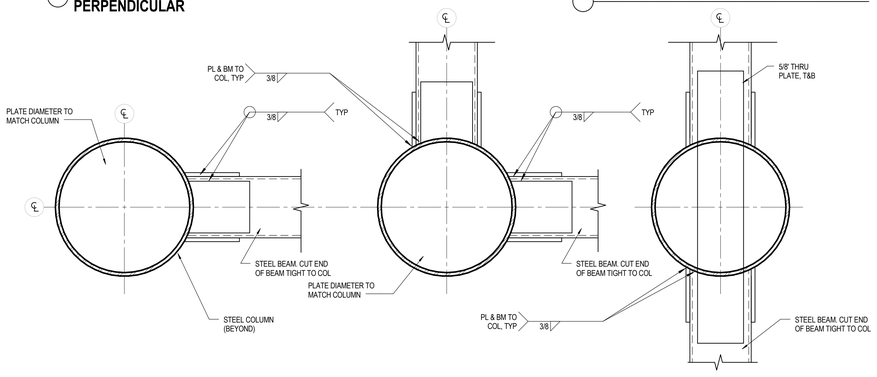

24 S5.4 **JOIST BEARING DETAIL**
NO SCALE




25 S5.4 **HSS STEEL BEAM CONNECTION**
NO SCALE




26 S5.4 **JOIST BEARING DETAIL**
NO SCALE

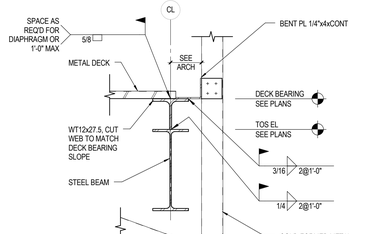



A **ONE SIDE**

B **TWO SIDES PERPENDICULAR**

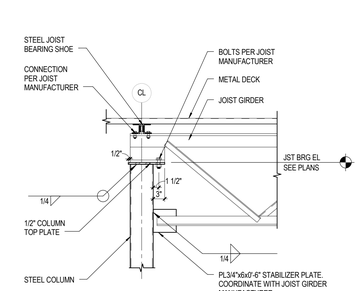
C **TWO SIDES PARRALLEL**

31 S5.4 **MOMENT CONNECTION DETAIL**
SCALE: 1 1/2" = 1'-0"

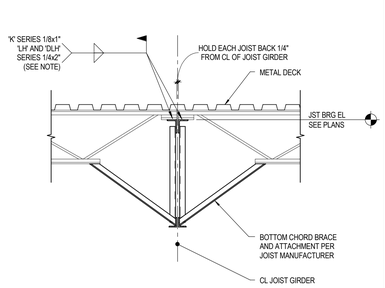



NOTE:
COLD-FORMED METAL STUD FRAMING, BRACING, AND CONNECTIONS TO BE DESIGNED BY METAL STUD ENGINEER

34 S5.4 **STEEL FRAMING DETAIL**
NO SCALE

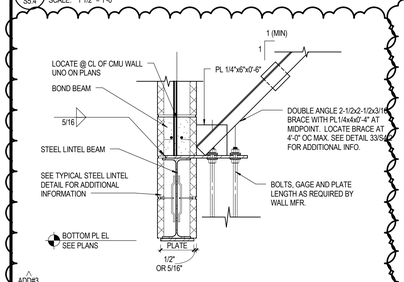



35 S5.4 **TYP JOIST GIRDER / COLUMN DETAIL**
NO SCALE




NOTE:
USE BOLTS IN PLACE OF WELDS WHERE SHOWN BY JOIST MANUFACTURER ON SHOP DRAWINGS

36 S5.4 **TYP JOIST BEARING DETAIL**
NO SCALE




ADD#3

41 S5.4 **TYP SLIDING DOOR SUPPORT DETAIL**
SCALE: 1" = 1'-0"

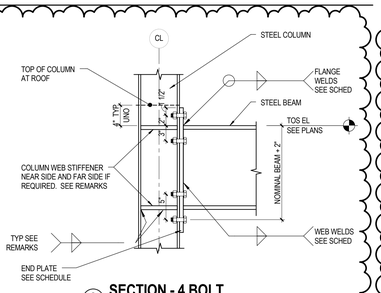
| END PLATE MOMENT CONN SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| BM SIZE/ COL SIZE | END PL SIZE | END PL BOLT DIAMETER | NO OF BOLTS PER FLANGE | FLANGE WELD | WEB FILLET WELD | REMARKS |
| W16X45/ W14x99 | 1 x9 1/2x 1'-11" | 1"Ø | 4 | 3/8" | 3/8" | 1/2" STIFFENER WITH 1/4" FILLET |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

NOTES:

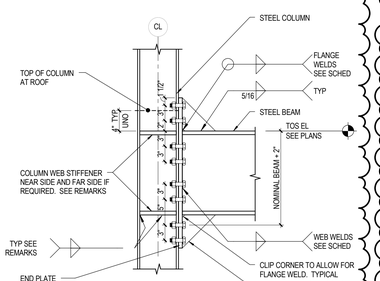
1. BOLT DIAMETER: SEE END PLATE MOMENT CONNECTION SCHEDULE
2. BOLT TYPE: A325N
3. HOLES: BOLT DIAMETER + 1/16"
4. COLUMN GAGE: 5 1/2"
5. INSPECTION
   A.) WELDS:
   1.) FLANGE FILLET WELDS: 100% VISUAL
   2.) WEB FILLET WELDS: 100% VISUAL
   3.) FLANGE GROOVE WELDS: 50% ULTRASONIC, 100% VISUAL
   B.) BOLTS:
   100% FIELD INSPECTION OF LOAD INDICATOR WASHERS.
6. PROVIDE LOAD INDICATOR WASHERS AND ONE HARDENED WASHER PER BOLT. FULLY TIGHTEN BOLTS TO REQUIRED PRETENSION FORCE.
7. WEB STIFFENERS TO EXTEND FULL DEPTH OF COLUMN. SEE REMARKS FOR SIZE.
8. PROVIDE ACCESS HOLES THRU WEB AT COMPLETE PENETRATION GROOVE WELDS.

ADD#3

52 S5.4 **TYP END PLATE MOMENT CONNECTION**
NO SCALE

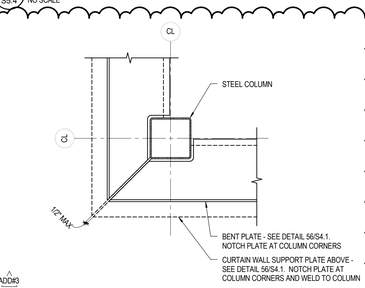



A **SECTION - 4 BOLT**

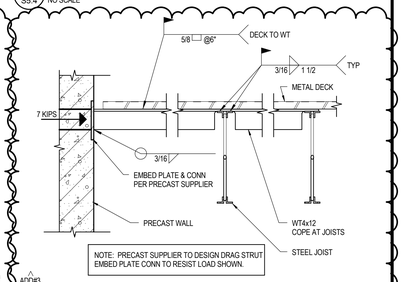



B **SECTION - 8 BOLT**

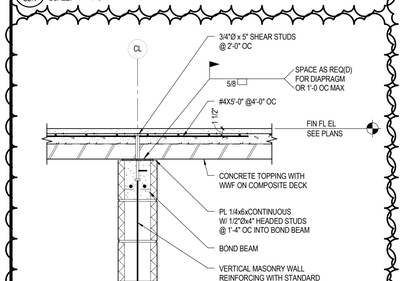
44 S5.4 **TYP LINTEL BRACKET DETAIL**
NO SCALE




45 S5.4 **TYP FLOOR SLAB EDGE DETAIL**
NO SCALE (AT COLUMN CORNER)

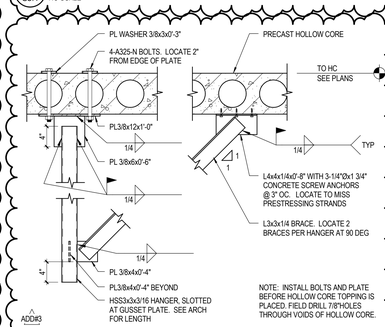



46 S5.4 **COLUMN DRAG STRUT DETAIL**
NO SCALE (PERPENDICULAR TO JOISTS)



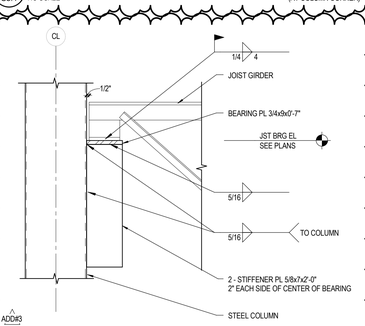

ADD#3

51 S5.4 **TYP FLOOR DETAIL**
NO SCALE




ADD#3

54 S5.4 **HANGER SUPPORT DETAIL**
NO SCALE




ADD#3

55 S5.4 **JOIST GIRDER TO COLUMN DETAIL**
NO SCALE


Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00


© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED


Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| ADD#3 Addendum No. 3 | 10/14/2014 |

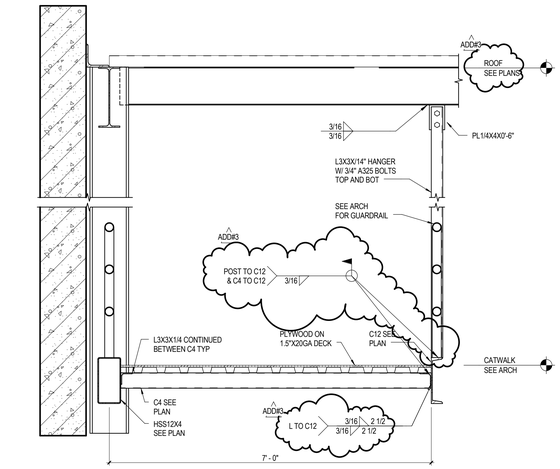
STRUCTURAL DETAILS

ProjectNumber: **1355**
Date: **September 30, 2014**

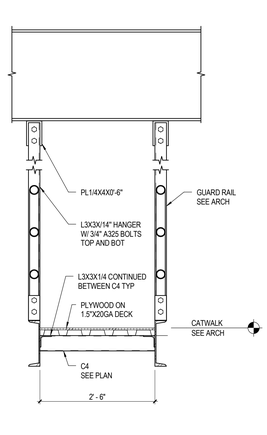

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:

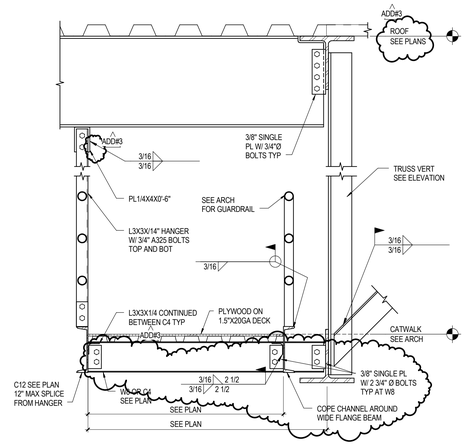
S5.4



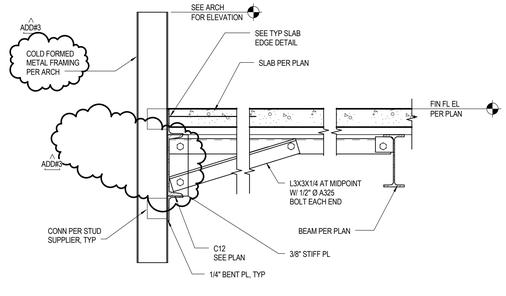

21 S5.5 TYP CATWALK DETAIL
NO SCALE



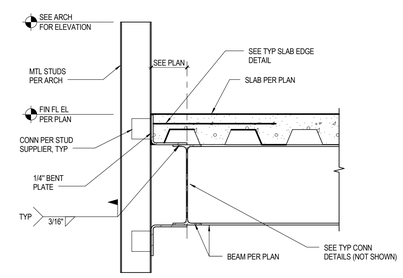

22 S5.5 TYP CATWALK DETAIL
NO SCALE



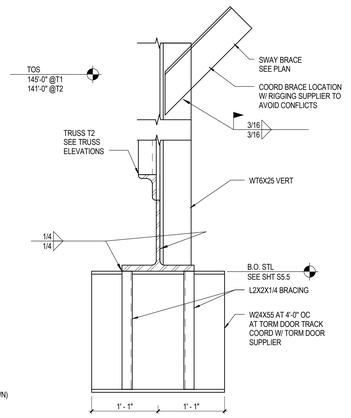

23 S5.5 TYP CATWALK DETAIL
NO SCALE



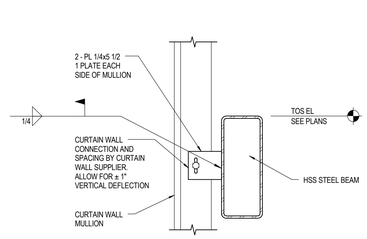

24 S5.5 TYP BALCONY EDGE DETAIL
NO SCALE



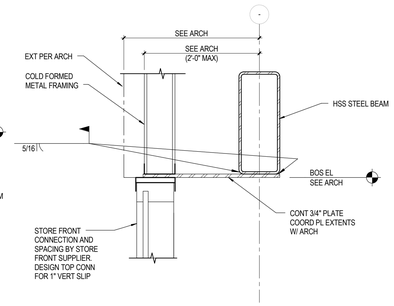

31 S5.5 TYP BALCONY EDGE DETAIL
NO SCALE



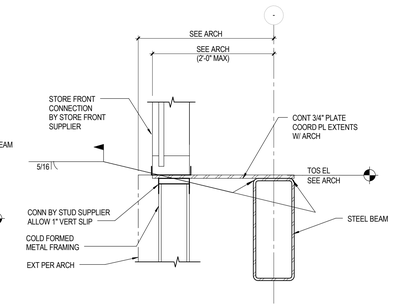

32 S5.5 TORM DOOR CONNECTION DETAIL
NO SCALE



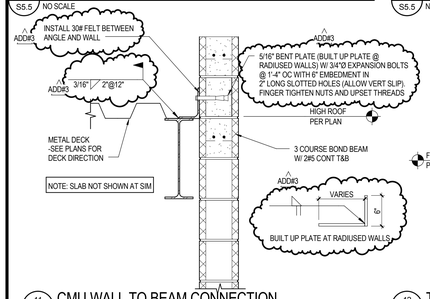

33 S5.5 STEEL FRAMING DETAIL
NO SCALE (AT CURTAIN WALL)



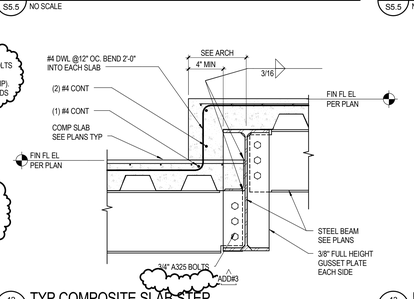

34 S5.5 STEEL FRAMING DETAIL
NO SCALE (AT STORE FRONT)



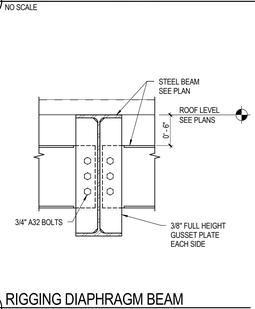

35 S5.5 STEEL FRAMING DETAIL
NO SCALE (AT STORE FRONT)



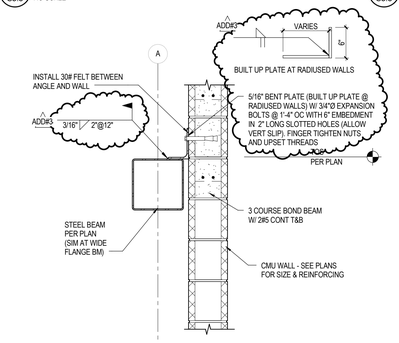

41 S5.5 CMU WALL TO BEAM CONNECTION
NO SCALE



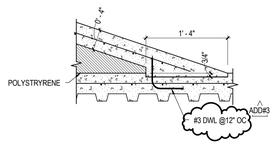

42 S5.5 TYP COMPOSITE SLAB STEP
NO SCALE



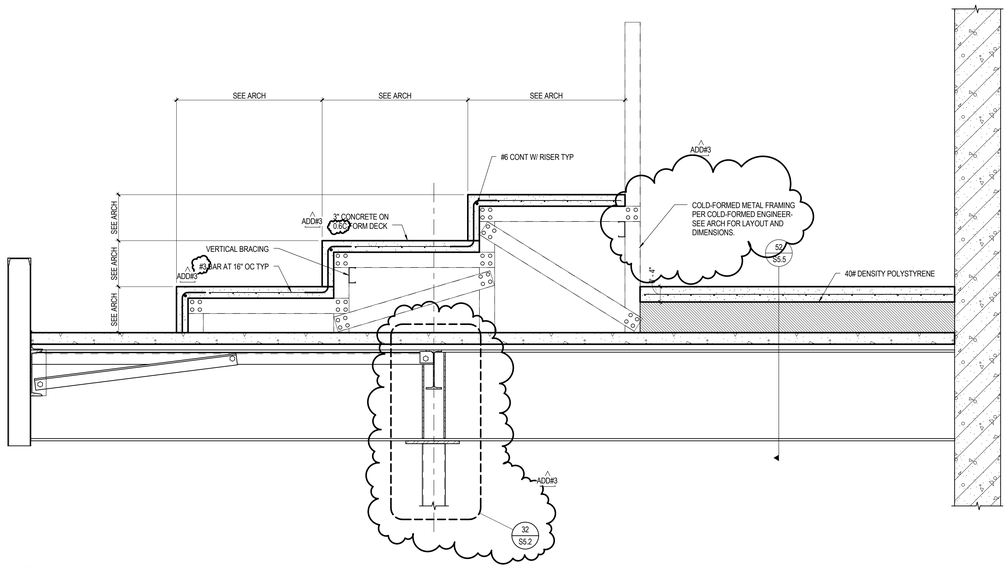

43 S5.5 RIGGING DIAPHRAGM BEAM
NO SCALE




51 S5.5 CMU WALL TO BEAM CONNNECTION
NO SCALE




52 S5.5 TYP RAMP ON COMPOSITE DECK
NO SCALE




54 S5.5 TYP BUILT-UP BALCONY SEATING DETAIL
NO SCALE

Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

PROFESSIONAL STRUCTURAL ENGINEER
JASON R. MARRELL
E-13275
9-30-14
REGISTERED
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

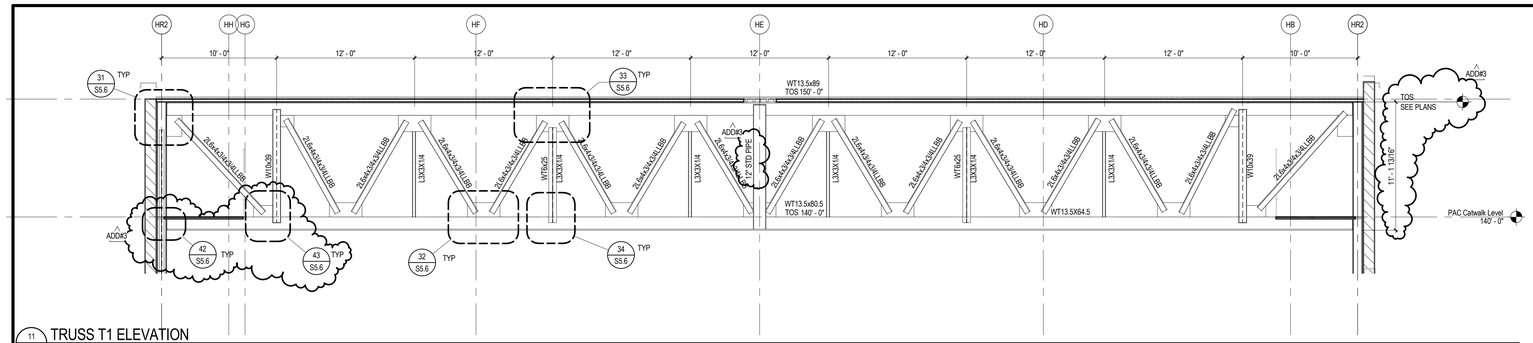
| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

STRUCTURAL DETAILS

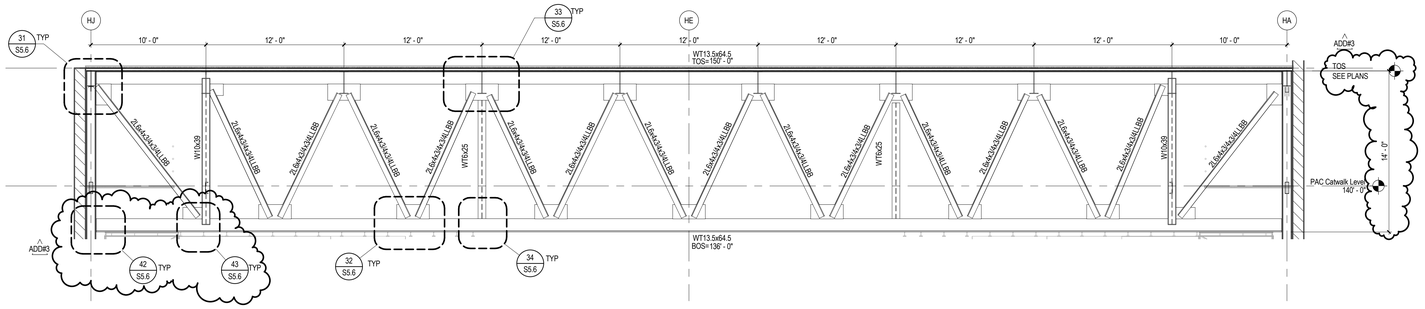
ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
S5.5



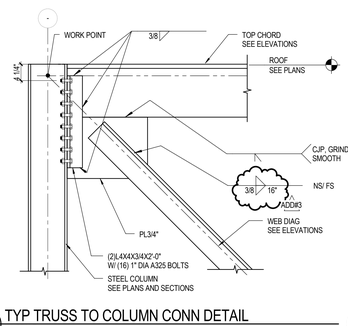

11 S5.6 TRUSS T1 ELEVATION
SCALE: 3/16" = 1'-0"



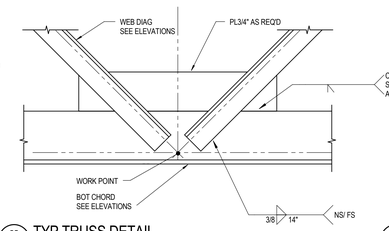

12 S5.6 TRUSS T2 ELEVATION
SCALE: 3/16" = 1'-0"

**TYPICAL TRUSS NOTES:**

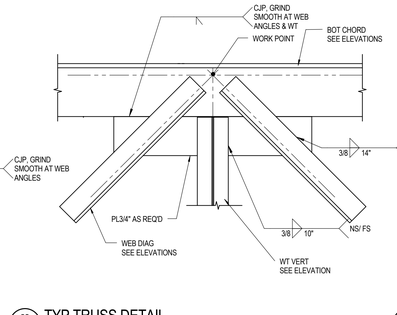
1. ALL CONNECTION PLATES SHALL BE GRADE A572 GRADE 50 PLATES
2. WORK POINT IS DEFINED AS THE INTERSECTION OF MEMBER CENTROIDAL AXIS UNLESS UNLESS OTHERWISE NOTED.
3. PROVIDE FILLER PLATES WHERE NECESSARY TO ALIGN SURFACES.
4. ALL DOUBLE ANGLE WEB MEMBERS SHALL HAVE (3) 3/4" X 7" X0'-7" STITCH PLATES EQUALLY SPACED ALONG THE LENGTH OF THE MEMBER.
5. OTHER INFORMATION SUCH AS SIMPLE BEAM SHEAR CONNECTIONS MAY NOT BE SHOWN FOR CLARITY. SEE OTHER DETAILS FOR INFORMATION.
6. SHOP SPLICES OF MEMBERS SHALL BE COMPLETE JOINT PENETRATION WELDS. LOCATE ALL SPLICES OUTSIDE THE MIDDLE THIRD OF THE LENGTH OF MEMBER.
7. SEE PLANS FOR BOTTOM CHORD BRACING SIZES AND LOCATIONS.



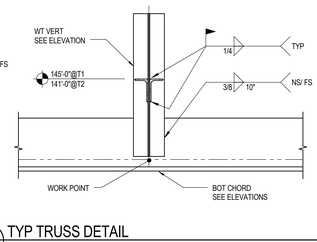

31 S5.6 TYP TRUSS TO COLUMN CONN DETAIL
NO SCALE



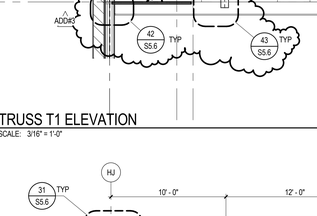

32 S5.6 TYP TRUSS DETAIL
NO SCALE



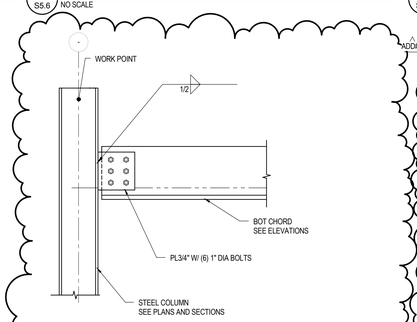

33 S5.6 TYP TRUSS DETAIL
NO SCALE



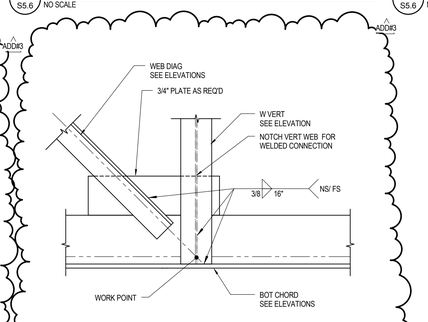

34 S5.6 TYP TRUSS DETAIL
NO SCALE




41 S5.6 TRUSS CENTER POST DETAIL
NO SCALE

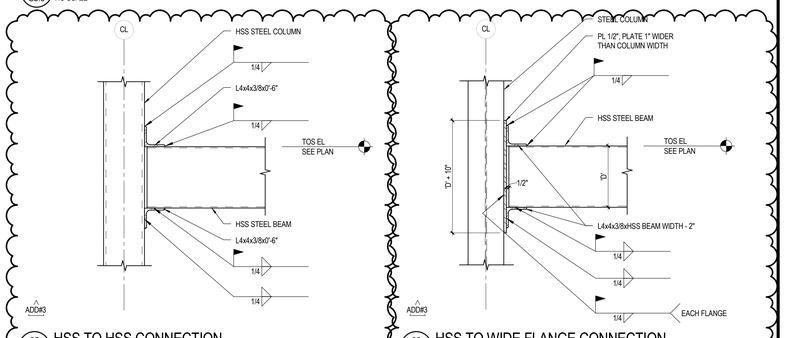



42 S5.6 TYP TRUSS TO COLUMN CONN DETAIL
NO SCALE




43 S5.6 TYP TRUSS DETAIL
NO SCALE

25 S5.6 TRUSS NOTES
NO SCALE




35 S5.6 HSS TO HSS CONNECTION
NO SCALE

36 S5.6 HSS TO WIDE FLANGE CONNECTION
NO SCALE

Wilkins Hinrichs Stober Architects L. L. C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5767 T
308-236-6929 F

JACOB M. MARRELL
E-13275
9-30-14
REGISTERED PROFESSIONAL STRUCTURAL ENGINEER
STATE OF NEBRASKA

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

© 2014, DLR Group inc., a Nebraska corporation
ALL RIGHTS RESERVED

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

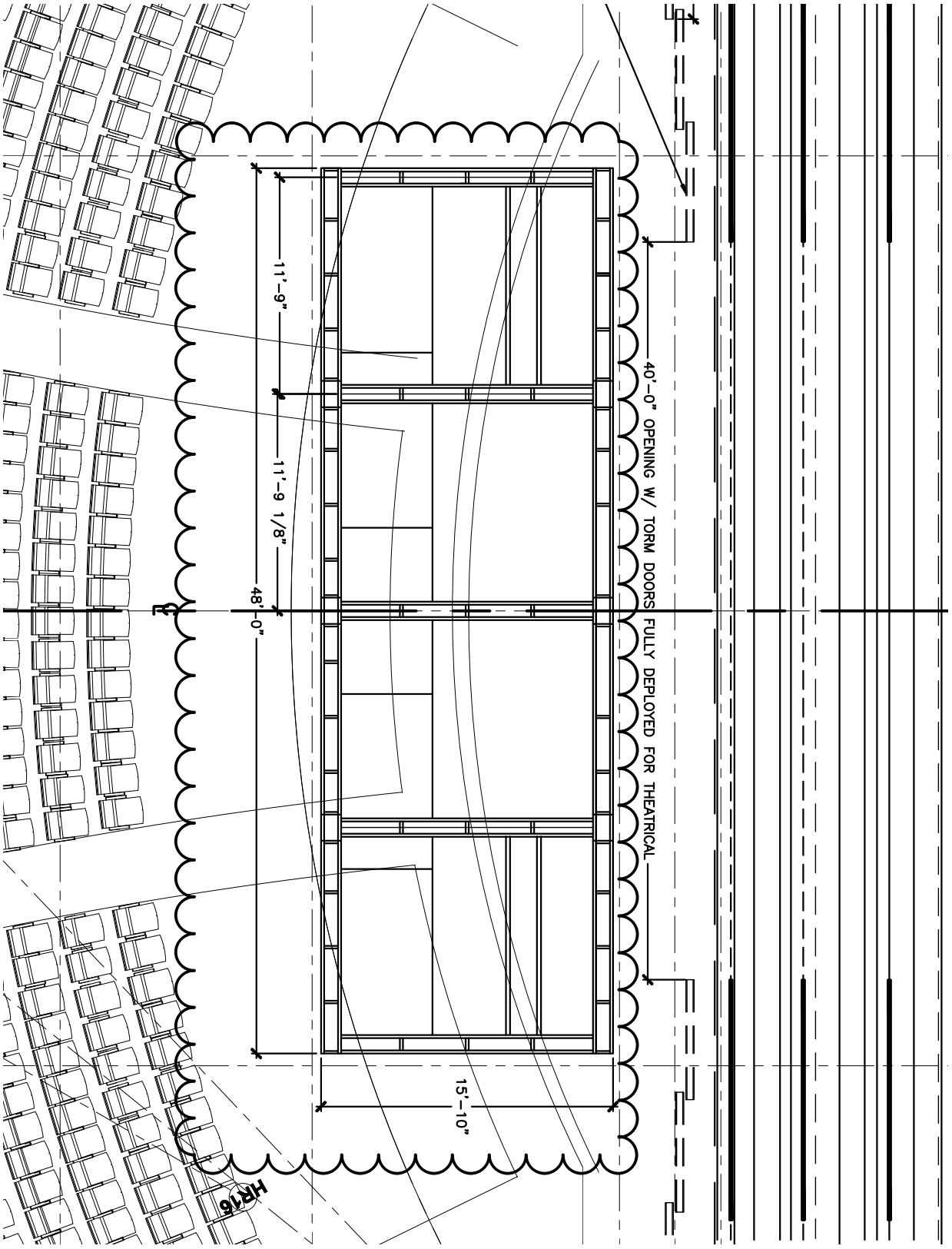
| Revision/Issue | | Date |
|---|---|---|
| ADD#3 | Addendum No. 3 | 10/14/2014 |

STRUCTURAL DETAILS AND ELEVATIONS

ProjectNumber: 1355
Date: September 30, 2014

Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
S5.6




Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
October 14, 2014

Addendum No. 3

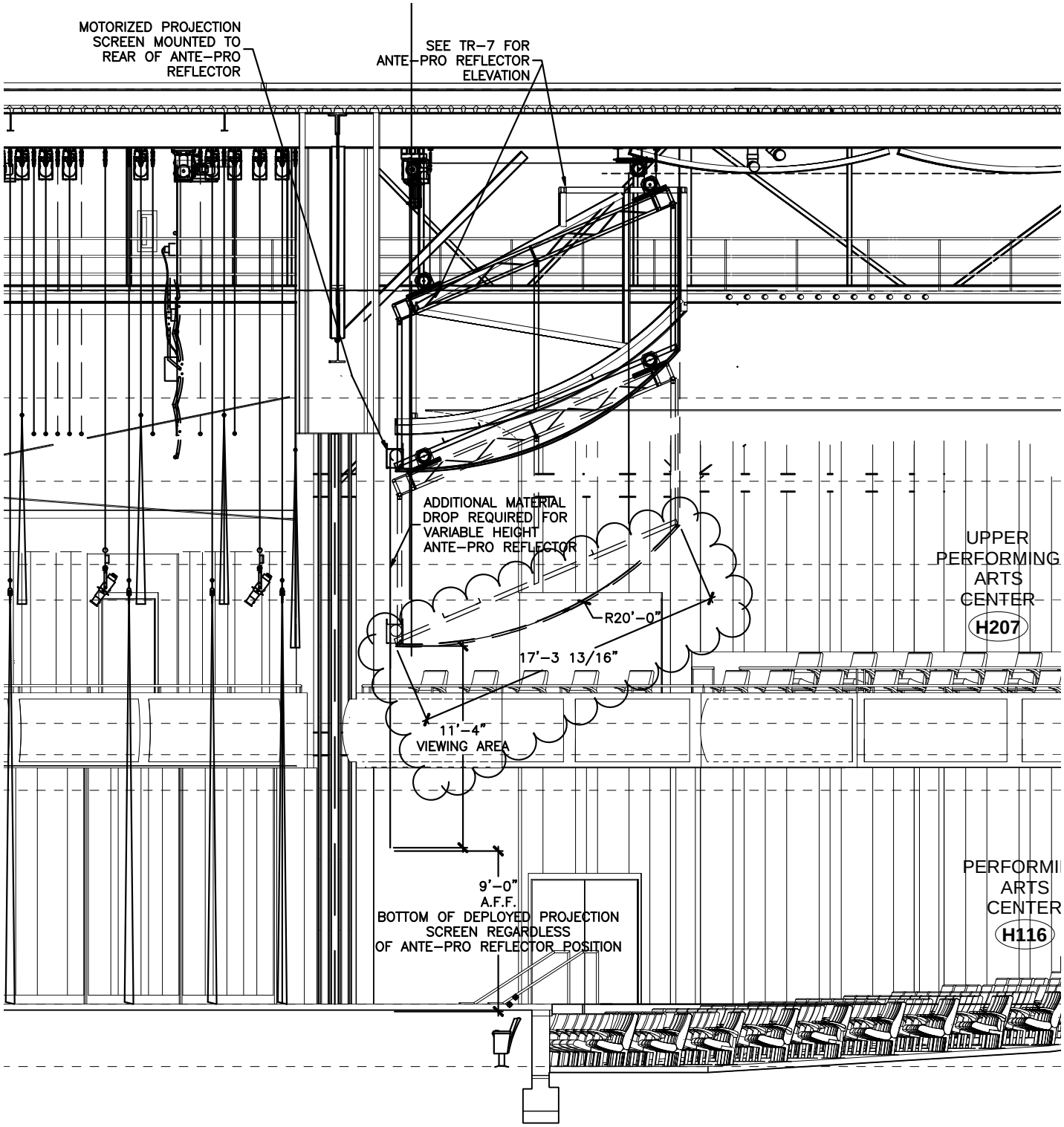
Project Number: 1355

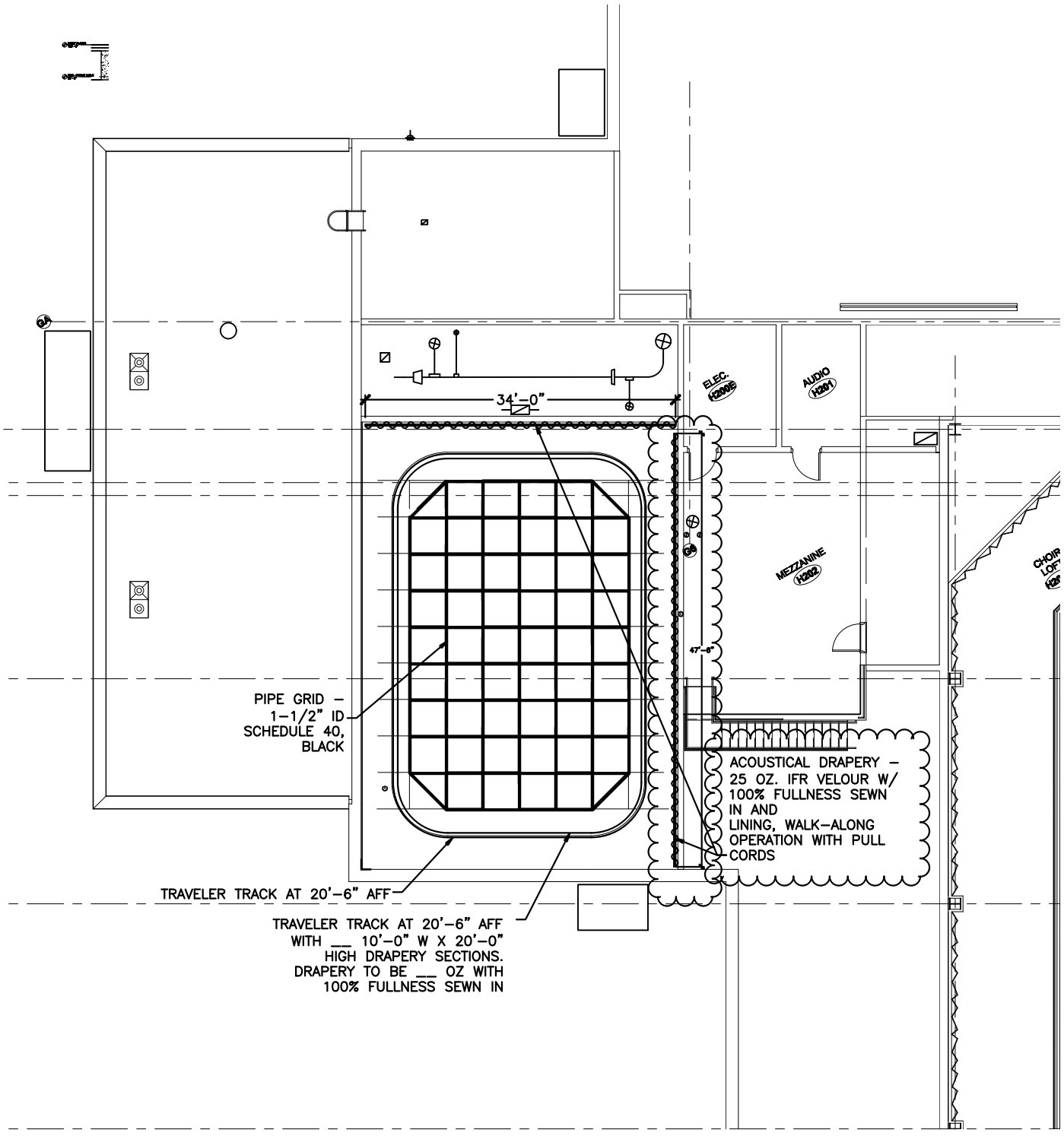
T1

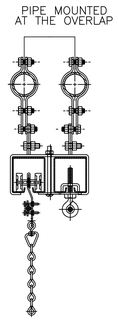
# LINESET SCHEDULE

| LINE SET NO. | | | | FUNCTION | | NOTES |
|---|---|---|---|---|---|---|
| B | | | | ANTE–PRO REFLECTOR LINESET #2 | | ANTE–PRO REFLECTOR LINESET #2 |
| A | | | | ANTE–PRO REFLECTOR LINESET #1 | | ANTE–PRO REFLECTOR LINESET #1 |
| | | | | PROJECTION SCREEN | | PROJECTION SCREEN |
| | | | | TORM DOORS | | SEPARATE BID PACKAGE |
| 0 | | | | PLASTER LINE | | |
| 1 | | | | FRONT VALANCE | | 68'–0" LONG SINGLE–PIPE BATTEN<br>DRAPE: 68'–0"W x 11'–0"H<br>COLOR: AS SELECTED BY ARCHITECT |
| 2 | | | | MAIN CURTAIN W/TRACK | | 68'–0" LONG SINGLE–PIPE BATTEN<br>68'–0" LONG BI–PARTING TRACK: (2) 36'–0" LONG<br>DRAPE: (2) 36'–0"W x 22'–6"H<br>COLOR: AS SELECTED BY ARCHITECT |
| 3 | | | | ELECTRIC LIGHTING BATTEN #1 | | 68'–0" LONG DOUBLE–PIPE BATTEN<br>WITH PANTOGRAPH AND CABLE |
| 4 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 5 | | | | MASKING BORDER #1 | | 68'–0" LONG SINGLE–PIPE BATTEN<br>DRAPE: 68'–0"W x 10'–6"H<br>COLOR: BLACK |
| 6 | | | | MASKING LEG #1 W/ TRACK | | 68'–0" LONG SINGLE–PIPE BATTEN, TRACK: (2) 19'–0" LONG<br>DRAPE: (2) 19'–0"W x 23'–0"H<br>COLOR: BLACK |
| 7 | | | | SCENERY BATTEN (FUTURE) | | 68'–0" LONG SINGLE–PIPE BATTEN (ALTERNATE #11) |
| 8 | | | | ORCHESTRA SHELL CEILING #1 | | 70'–4" LONG DOUBLE PIPE BATTEN<br>DOUBLE PURCHASE AT BATTEN<br>WITH CABLE REEL AND CABLE |
| 9 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 10 | | | | MASKING BORDER #2 | | 68'–0" LONG SINGLE–PIPE BATTEN<br>DRAPE: 68'–0"W x 10'–6"H<br>COLOR: BLACK |
| 11 | | | | MID–STAGE TRAVELER W/TRACK | | 68'–0" LONG SINGLE–PIPE BATTEN<br>68'–0" LONG BI–PARTING TRACK: (2) 36'–0" LONG<br>DRAPE: (2) 36'–0"W x 22'–6"H<br>COLOR: BLACK |
| 12 | | | | ELECTRIC LIGHTING BATTEN #2 | | 68'–0" LONG DOUBLE–PIPE BATTEN<br>WITH PANTOGRAPH AND CABLE |
| 13 | | | | SCENERY BATTEN (FUTURE) | | 68'–0" LONG SINGLE–PIPE BATTEN (ALTERNATE #11) |
| 14 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 15 | | | | SCENERY BATTEN (FUTURE) | | 68'–0" LONG SINGLE–PIPE BATTEN (ALTERNATE #11) |
| 16 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 17 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE 8ATTEN |
| 18 | | | | MASKING BORDER #3 | | 68'–0" LONG SINGLE–PIPE 8ATTEN<br>DRAPE: 68'–0"W x 10'–6"H<br>COLOR: BLACK |
| 19 | | | | MASKING LEG #2 W/ TRACK | | 68'–0" LONG SINGLE–PIPE BATTEN, TRACK: (2) 19'–0" LONG<br>DRAPE: (2) 19'–0"W x 23'–0"H<br>COLOR: BLACK |
| 20 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 21 | | | | ORCHESTRA SHELL CEILING #2 | | 70'–4" LONG DOUBLE PIPE BATTEN<br>DOUBLE PURCHASE AT BATTEN<br>WITH CABLE REEL AND CABLE |
| 22 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 23 | | | | MASKING BORDER #4 | | 68'–0" LONG SINGLE–PIPE BATTEN<br>DRAPE: 68'–0"W x 10'–6"H<br>COLOR: BLACK |
| 24 | | | | REAR–STAGE TRAVELER W/TRACK | | 68'–0" LONG SINGLE–PIPE BATTEN<br>68'–0" LONG BI–PARTING TRACK: (2) 36'–0" LONG<br>DRAPE: (2) 36'–0"W x 22'–6"H<br>COLOR: BLACK |
| 25 | | | | ELECTRIC LIGHTING BATTEN #3 | | 68'–0" LONG DOUBLE–PIPE BATTEN<br>WITH PANTOGRAPH AND CABLE |
| 26 | | | | ORCHESTRA SHELL CEILING #3 | | 68'–1" LONG DOUBLE PIPE BATTEN<br>DOUBLE PURCHASE AT BATTEN<br>WITH CABLE REEL AND CABLE |
| 27 | | | | SCENERY BATTEN | | 68'–0" LONG SINGLE–PIPE BATTEN |
| 28 | | | | CYCLORAMA | | 68'–0" LONG SINGLE–PIPE BATTEN<br>66'–0" LONG CYC DRAPE: 68'–0" WIDE x 21'–0" HIGH |
| | | | | | | |

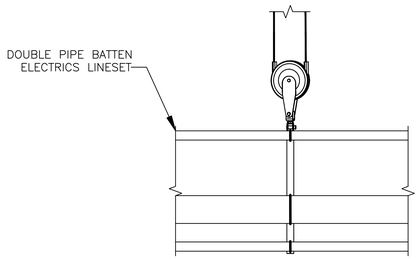
PROVIDE ALL FLOOR–LENGTH DRAPES WITH TRIP RINGS AND HOOKS – SEE SHEET TR–13
PROVIDE ALL ELECTRICS WITH PANTOGRAPHS AND CABLE
PROVIDE ALL CONCERT CEILINGS WITH CABLE REELS AND CABLE
PROVIDE ADJUSTABLE–HEIGHT "EYEBROW" WITH CABLE REELS AND CABLE FOR LIGHTING AND AV


MOTORIZED PROJECTION SCREEN MOUNTED TO REAR OF ANTE-PRO REFLECTOR
SEE TR-7 FOR ANTE-PRO REFLECTOR ELEVATION
ADDITIONAL MATERIAL DROP REQUIRED FOR VARIABLE HEIGHT ANTE-PRO REFLECTOR
R20'-0"
17'-3 13/16"
11'-4" VIEWING AREA
9'-0" A.F.F. BOTTOM OF DEPLOYED PROJECTION SCREEN REGARDLESS OF ANTE-PRO REFLECTOR POSITION
UPPER PERFORMING ARTS CENTER
H207
PERFORMI ARTS CENTER
H116

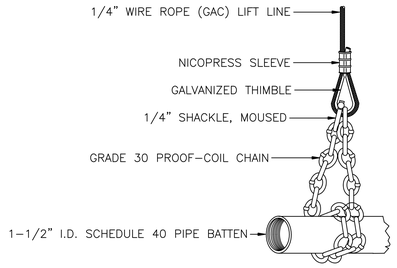

34'-0"
ELEC.
H200E
AUDIO
H201
MEZZANINE
H202
47'-6"
PIPE GRID – 1-1/2" ID SCHEDULE 40, BLACK
ACOUSTICAL DRAPERY – 25 OZ. IFR VELOUR W/ 100% FULLNESS SEWN IN AND LINING, WALK-ALONG OPERATION WITH PULL CORDS
TRAVELER TRACK AT 20'-6" AFF
TRAVELER TRACK AT 20'-6" AFF WITH ___ 10'-0" W X 20'-0" HIGH DRAPERY SECTIONS. DRAPERY TO BE ___ OZ WITH 100% FULLNESS SEWN IN



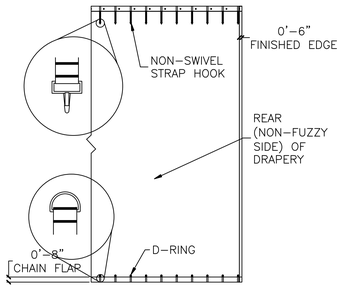

1 DRAPERY TRACK CONNECTION
TR-13 SCALE:NOT TO SCALE



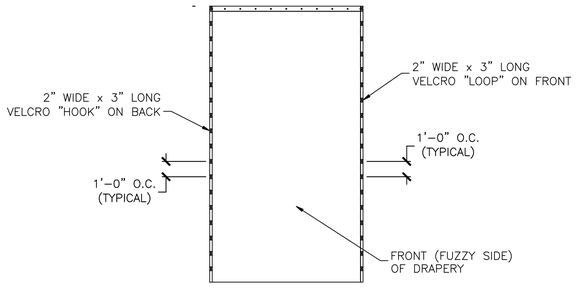

2 DOUBLE PURCHASE BATTEN CONNECTION
TR-13 SCALE:NOT TO SCALE




3 DOUBLE WRAP TRIM CHAIN
TR-13 SCALE:NOT TO SCALE




4 DRAPERY PANEL TRIP HARDWARE
TR-13 SCALE:NOT TO SCALE




5 ORCHESTRA ROOM DRAPERY
TR-13 SCALE:NOT TO SCALE

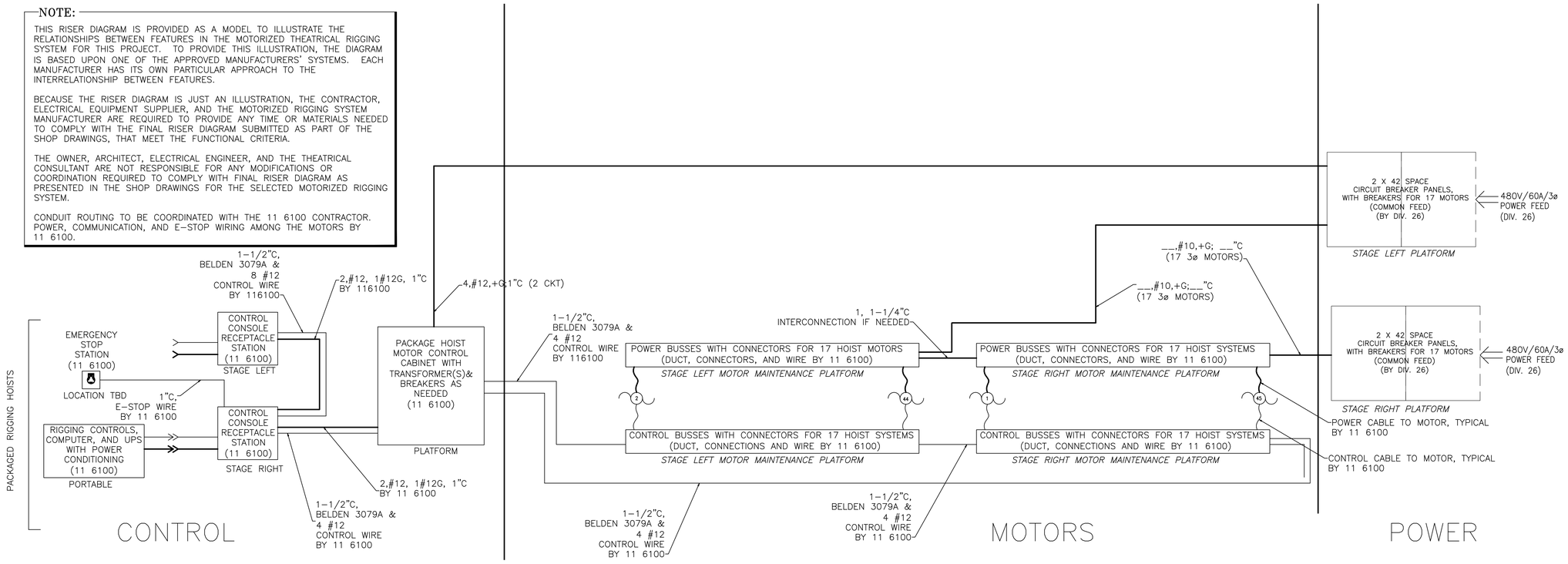
**NOTE:**

THIS RISER DIAGRAM IS PROVIDED AS A MODEL TO ILLUSTRATE THE RELATIONSHIPS BETWEEN FEATURES IN THE MOTORIZED THEATRICAL RIGGING SYSTEM FOR THIS PROJECT. TO PROVIDE THIS ILLUSTRATION, THE DIAGRAM IS BASED UPON ONE OF THE APPROVED MANUFACTURERS' SYSTEMS. EACH MANUFACTURER HAS ITS OWN PARTICULAR APPROACH TO THE INTERRELATIONSHIP BETWEEN FEATURES.

BECAUSE THE RISER DIAGRAM IS JUST AN ILLUSTRATION, THE CONTRACTOR, ELECTRICAL EQUIPMENT SUPPLIER, AND THE MOTORIZED RIGGING SYSTEM MANUFACTURER ARE REQUIRED TO PROVIDE ANY TIME OR MATERIALS NEEDED TO COMPLY WITH THE FINAL RISER DIAGRAM SUBMITTED AS PART OF THE SHOP DRAWINGS, THAT MEET THE FUNCTIONAL CRITERIA.

THE OWNER, ARCHITECT, ELECTRICAL ENGINEER, AND THE THEATRICAL CONSULTANT ARE NOT RESPONSIBLE FOR ANY MODIFICATIONS OR COORDINATION REQUIRED TO COMPLY WITH FINAL RISER DIAGRAM AS PRESENTED IN THE SHOP DRAWINGS FOR THE SELECTED MOTORIZED RIGGING SYSTEM.

CONDUIT ROUTING TO BE COORDINATED WITH THE 11 6100 CONTRACTOR. POWER, COMMUNICATION, AND E-STOP WIRING AMONG THE MOTORS BY 11 6100.




6 DIVISION OF RESPONSIBILITY RISER
TR-13 SCALE:NOT TO SCALE

Wilkins
Hinrichs
Stober
Architects L.L.C.

2908 West 39th Street
Suite A
Kearney, NE 68845
308-237-5787 T
308-236-6929 F

JONES – PHILLIPS ASSOCIATES
THEATRICAL CONSULTATION AND DESIGN
PO BOX 378, LAFAYETTE, IN 47902
(765) 423-1123 WWW.JONESPHILLIPS.COM

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| Addendum No. 3 | 10/14/2014 |

Sheet Title
THEATRICAL RIGGING
DETAIL SHEET
- AREA H

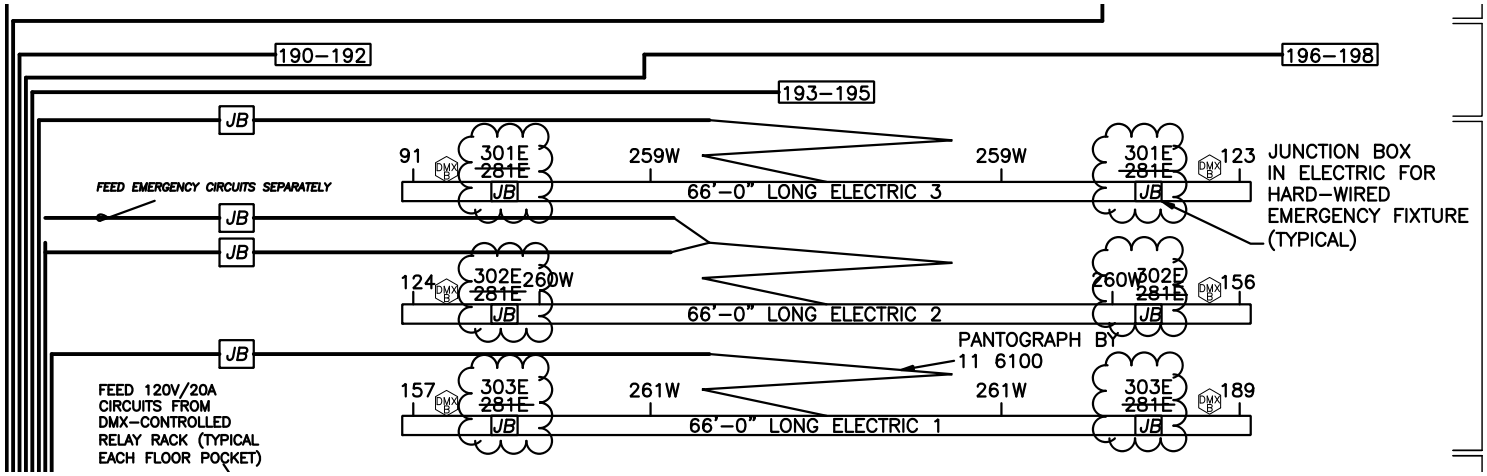
Project Number: 1355
Date: September 30, 2014

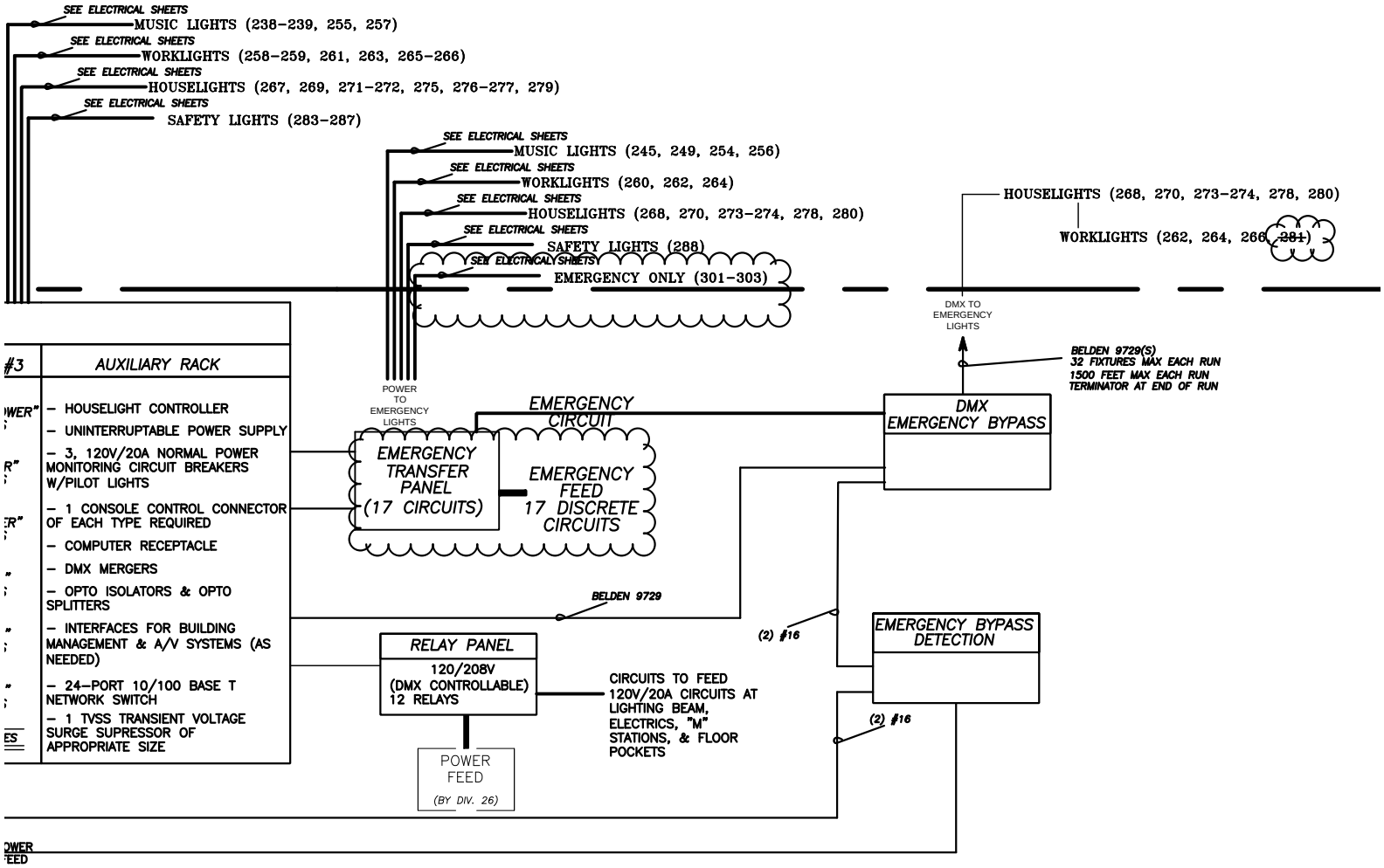
Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.

Sheet Number:
TR-13

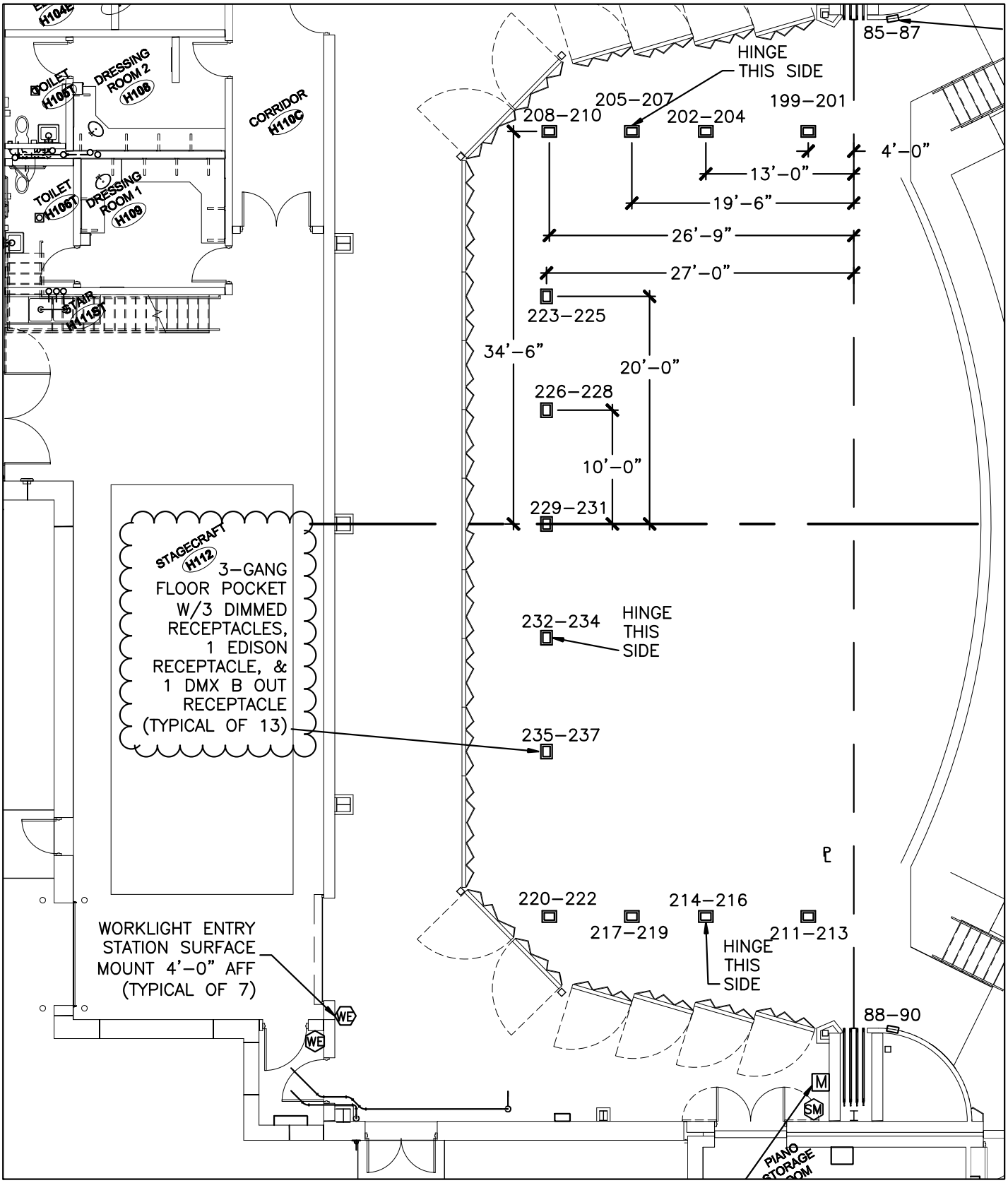
**NOTE:**

**CONCERT CEILINGS, LIGHTS, & JUNCTION BOX(ES) ON CEILINGS BY 11 6113; MULTICABLE AND CABLE REELS BY 11 6100; JUNCTION BOX TO DIMMING SYSTEM, WIRE, CONDUIT, & ELECTRICAL CONNECTION TO DIMMING SYSTEM BY DIV. 26. MULTICABLE WILL BE MANAGED VIA CABLE REEL; COORDINATE WITH 11 6100 AND DIV. 26.**


190–192
196–198
193–195
JB
CHOIR LOFT
FEED EMERGENCY CIRCUITS SEPARATELY
91
301E
281E
259W
259W
123
66'–0" LONG ELECTRIC 3
JUNCTION BOX IN ELECTRIC FOR HARD–WIRED EMERGENCY FIXTURE (TYPICAL)
124
302E
281E
260W
260W
156
66'–0" LONG ELECTRIC 2
PANTOGRAPH BY 11 6100
157
303E
281E
261W
261W
189
66'–0" LONG ELECTRIC 1
OVER STAGE
FEED 120V/20A CIRCUITS FROM DMX–CONTROLLED RELAY RACK (TYPICAL EACH FLOOR POCKET)


SEE ELECTRICAL SHEETS
MUSIC LIGHTS (238–239, 255, 257)
WORKLIGHTS (258–259, 261, 263, 265–266)
HOUSELIGHTS (267, 269, 271–272, 275, 276–277, 279)
SAFETY LIGHTS (283–287)
MUSIC LIGHTS (245, 249, 254, 256)
WORKLIGHTS (260, 262, 264)
HOUSELIGHTS (268, 270, 273–274, 278, 280)
SAFETY LIGHTS (288)
EMERGENCY ONLY (301–303)
HOUSELIGHTS (268, 270, 273–274, 278, 280)
WORKLIGHTS (262, 264, 266, 281)
DMX TO EMERGENCY LIGHTS
BELDEN 9729(S)
32 FIXTURES MAX EACH RUN
1500 FEET MAX EACH RUN
TERMINATOR AT END OF RUN
#3
AUXILIARY RACK
– HOUSELIGHT CONTROLLER
– UNINTERRUPTABLE POWER SUPPLY
– 3, 120V/20A NORMAL POWER MONITORING CIRCUIT BREAKERS W/PILOT LIGHTS
– 1 CONSOLE CONTROL CONNECTOR OF EACH TYPE REQUIRED
– COMPUTER RECEPTACLE
– DMX MERGERS
– OPTO ISOLATORS & OPTO SPLITTERS
– INTERFACES FOR BUILDING MANAGEMENT & A/V SYSTEMS (AS NEEDED)
– 24–PORT 10/100 BASE T NETWORK SWITCH
– 1 TVSS TRANSIENT VOLTAGE SURGE SUPRESSOR OF APPROPRIATE SIZE
POWER TO EMERGENCY LIGHTS
EMERGENCY CIRCUIT
EMERGENCY TRANSFER PANEL (17 CIRCUITS)
EMERGENCY FEED 17 DISCRETE CIRCUITS
DMX EMERGENCY BYPASS
BELDEN 9729
(2) #16
EMERGENCY BYPASS DETECTION
RELAY PANEL
120/208V (DMX CONTROLLABLE) 12 RELAYS
CIRCUITS TO FEED 120V/20A CIRCUITS AT LIGHTING BEAM, ELECTRICS, "M" STATIONS, & FLOOR POCKETS
(2) #16
POWER FEED
(BY DIV. 26)

# POWER FEED



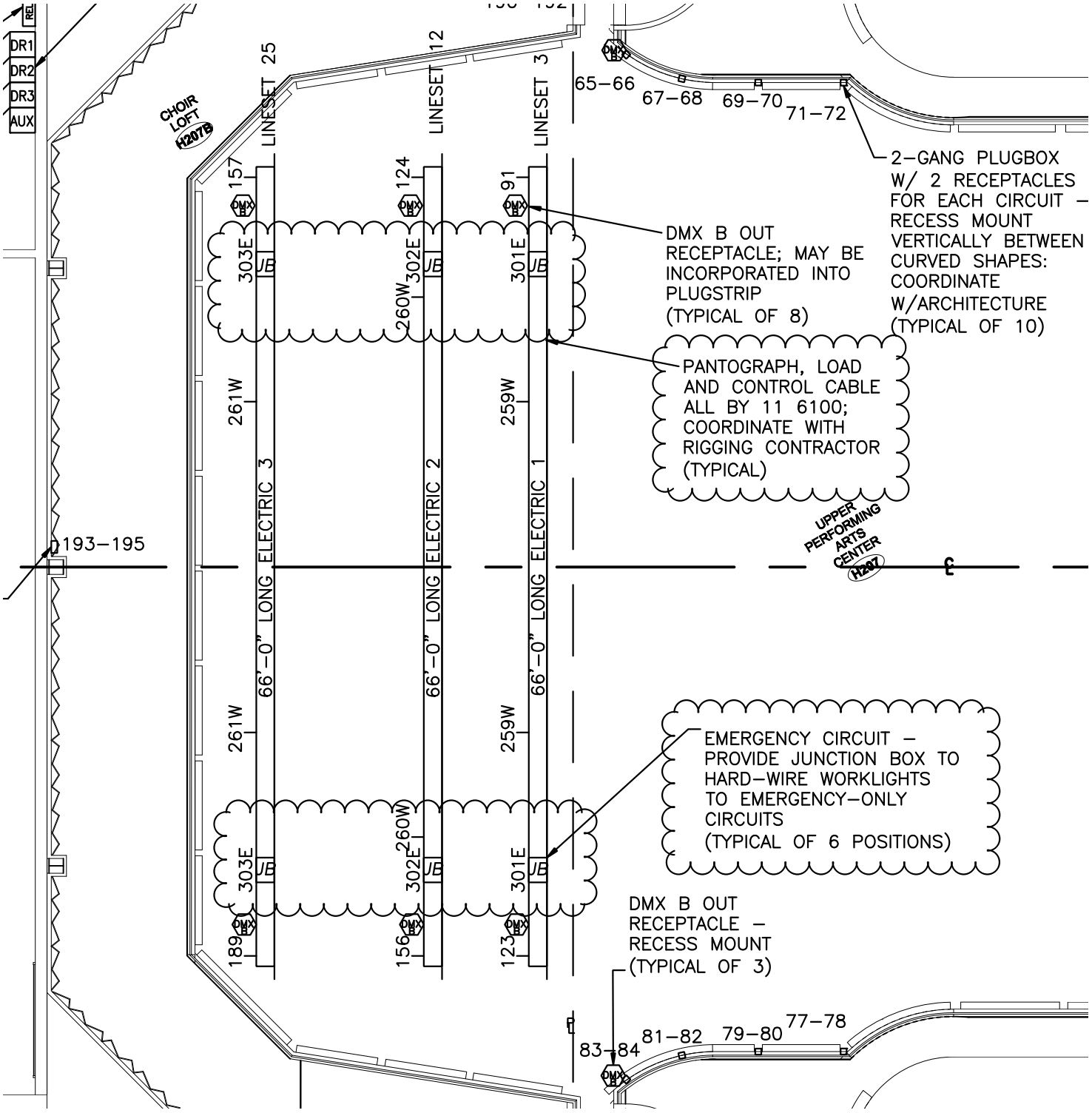

Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
October 14, 2014

Addendum No. 3

Project Number: 1355

T7




Wilkins Hinrichs Stober Architects, L.L.C.

Kearney Public Schools
New Kearney High School
October 14, 2014

Addendum No. 3

Project Number: 1355

T8

SAFETY LIGHTS:

| | | |
|---|---|---|
| HOUSE WALL | 283 | SEE ELECTRICAL DRAWINGS |
| APRON STEP WASH | 284 | SEE ELECTRICAL DRAWINGS |
| APRON WALL | 285 | SEE ELECTRICAL DRAWINGS |
| STEPS | 286 | SEE ELECTRICAL DRAWINGS |
| SEATS | 287 | SEE ELECTRICAL DRAWINGS |
| STAGE EDGE | 288 | SEE ELECTRICAL DRAWINGS |

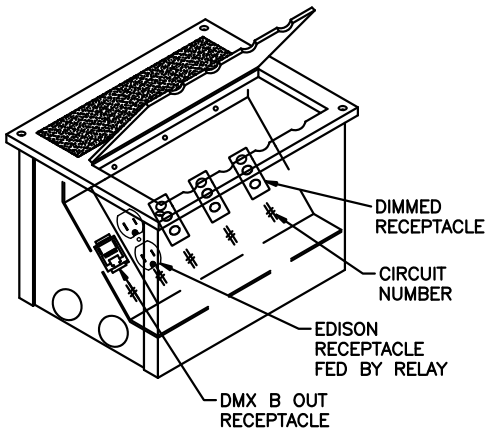
EMERGENCY ONLY:

| | | |
|---|---|---|
| ONSTAGE ELECTRICS | 301–303E | JUNCTION BOXES IN ELECTRICS FOR HARD–WIRED EMERGENCY FIXTURE |

1 TL–5 DIMMER SCHEDULE
SCALE: NOT TO SCALE

| | | |
|---|---|---|
| MOTOR GALLERIES | | |
| STAGE LEFT | 5 | 1 M STATION |
| STAGE RIGHT | 6 | 1 M STATION |
| CHOIR LOFT | | |
| STAGE LEFT | 7 | 1 M STATION |
| STAGE RIGHT | 8 | 1 M STATION |
| ONSTAGE | | |
| DOWNSTAGE LEFT | 9 | 1 M STATION |
| DOWNSTAGE RIGHT | 10 | 1 M STATION |
| FLOOR POCKETS | 11 | STAGE LEFT |
| FLOOR POCKETS | 12 | STAGE RIGHT |
| FLOOR POCKETS | 13 | UPSTAGE |

5 TL–5 RELAY SCHEDULE
SCALE: NOT TO SCALE




8 TL–5 FLOOR POCKET
SCALE: NOT TO SCALE

**BID FORM**

Owner: Kearney Public Schools

Project: Kearney High School

Construction Manager: Sampson Construction Co., Inc.

Bid Package No. **3** Bid Package Title: **Balance of Project (Excludes precast wall panels/rebar fabrication/footings previously bid and earthwork/signage in future bid)**

**Summary of Work: (Please indicate the summaries of work you are bidding)**

| | | |
|---|---|---|
| **[ ] 3A Interior Slabs** | **[ ] 3AA Painting/VWC/Sealed Concrete** | **[ ] 3AAA Communications** |
| **[ ] 3B Exterior Pavement/Walks** | **[ ] 3BB Wood Gym Flooring** | **[ ] 3BBB Synthetic Turf** |
| **[ ] 3C Structural Precast Concrete** | **[ ] 3CC Carpeting** | **[ ] 3CCC Resilient Surfacing** |
| **[ ] 3D Masonry-North Half** | **[ ] 3DD Provide Specialties** | **[ ] 3DDD Chain Link Fencing** |
| **[ ] 3E Masonry-South Half** | **[ ] 3EE Install Specialties** | **[ ] 3EEE Turf, Grasses, Plants** |
| **[ ] 3F Steel Material** | **[ ] 3FF Folding Panel Partitions** | **[ ] 3FFF Site Irrigation** |
| **[ ] 3G Steel Erection** | **[ ] 3GG Carpentry-Lockers** | **[ ] 3GGG Site Utilities** |
| **[ ] 3H Rough Carpentry** | **[ ] 3HH Supply Lockers** | **[ ] 3HHH Geothermal Well** |
| **[ ] 3I Educational Casework** | **[ ] 3II Appliances & Equipment** | **[ ] 3III Track & Field Turf Subgrade** |
| **[ ] 3J Install Millwork** | **[ ] 3JJ Food Service** | **[ ] 3JJJ Track & Field Equipment** |
| **[ ] 3K Provide Millwork** | **[ ] 3KK Theatre Rigging/Lighting/Drapes** | |
| **[ ] 3L Roofing** | **[ ] 3LL Lab Fumehoods/Casework** | |
| **[ ] 3M Waterproofing/Air Barrier** | **[ ] 3MM Gymnasium Equipment** | |
| **[ ] 3N NOT USED** | **[ ] 3NN NOT USED** | |
| **[ ] 3O Metal Wall Panels** | **[ ] 3OO Roller Shades** | |
| **[ ] 3P Joint Sealants** | **[ ] 3PP Music Casework** | |
| **[ ] 3Q Provide Expansion Joints** | **[ ] 3QQ Countertops** | |
| **[ ] 3R HM/HDW/Doors** | **[ ] 3RR Audience Seating** | |
| **[ ] 3S Install HM/HDW/Doors** | **[ ] 3SS Telescoping Bleachers** | |
| **[ ] 3T Coiling Doors** | **[ ] 3TT Swimming Pool** | |
| **[ ] 3U Aluminum & Glass** | **[ ] 3UU Grandstands** | |
| **[ ] 3V Fire Curtain** | **[ ] 3VV Elevators** | |
| **[ ] 3W Polished Floor System** | **[ ] 3WW Fire Suppression** | |
| **[ ] 3X Tiling** | **[ ] 3XX Plumbing** | |
| **[ ] 3Y Acoustical Ceilings** | **[ ] 3YY HVAC** | |
| **[ ] 3Z Studs & Drywall** | **[ ] 3ZZ Electrical** | |

Company Name _____

Address _____

City/State/Zip _____

Contact: _____

Office Phone: _____

Cell Phone: _____

FAX: _____

E-mail Address: _____

*Addenda:*

The Bidder hereby acknowledges receipt and inclusion in the Bid Proposal the following addenda:

| | | | |
|---|---|---|---|
| Bid Bulletin | _____ | Dated: | _____ |
| Bid Bulletin | _____ | Dated: | _____ |
| Bid Bulletin | _____ | Dated: | _____ |
| Bid Bulletin | _____ | Dated: | _____ |
| Bid Bulletin | _____ | Dated: | _____ |

In the following proposals, the amounts shall be shown in both words and figures. In the case of discrepancy between the words and the figures, the words shall govern.

_____

_____ ($ )

*Alternates:*

The following amounts shall be added or deducted from the Base Bid: _____

| | | | |
|---|---|---|---|
| #1 | Add (100) parking stalls & associated light poles | ($ _____ | (ADD) |
| #2 | Add (100) parking stalls & associated light poles | ($ _____ | (ADD) |
| #3 | Furnish and install 5" thick sidewalks in lieu of 4" thick sidewalks | ($ _____ | (ADD) |
| #4 | Delete 4" thick concrete along West 11th Street | ($ _____ | (DEDUCT) |
| #5 | Delete 4" thick concrete along 30th Avenue | ($ _____ | (DEDUCT) |
| #6 | Add connecting drive between the north parking lots & associated light poles | ($ _____ | (ADD) |
| #7 | Add precast concrete screen wall south & east of Area A | ($ _____ | (ADD) |
| #8 | Add (200) metal academic lockers & associated concrete bases | ($ _____ | (ADD) |
| #9 | Additional casework and countertops as indicated | ($ _____ | (ADD) |
| #10 | Add 6" thick concrete paving @ parking stalls | ($ _____ | (ADD) |
| #11 | Additional theatrical performance lighting/rigging/flooring | ($ _____ | (ADD) |
| #12 | Add Food Service Items 113,114, 117 through 153 | ($ _____ | (ADD) |
| #13 | Add Food Service Item 154. Include Electrical R.I. in bid | ($ _____ | (ADD) |
| #14 | Add Food Service Item 155. Include Electrical R.I. in bid | ($ _____ | (ADD) |
| #15 | Add Food Service Item 156, 156A and 157. Include all MEP rough-ins in bid | ($ _____ | (ADD) |
| #16 | Add landscaping plantings/materials at main entry boulevard and at monument sign | ($ _____ | (ADD) |
| #17 | Provide Performance/Payment Bonds | ($ _____ | (ADD) |

*Unit Prices* :

1. **Provide cost of floor prep for wood gymnasium floor if RH Level is 80-85/SF.** **$** _____

2. **Provide cost of floor prep for wood gymnasium floor if RH Level is 85-90/SF.** $ _____

3. **Provide SF cost for each flooring type (except Section 096543) for moisture mitigation/relative humidity. This is requred for ALL BIDS!!**

| **If concrete is:** | **Resilient Flooring** | **Resilient Athletic Flooring** | **Tile Carpeting** |
|---|---|---|---|
| **75-80 RH $/SF** | **$** _____ | **$** _____ | **$** _____ |
| **80-85 RH $/SF** | **$** _____ | **$** _____ | **$** _____ |
| **85-90 RH $/SF** | **$** _____ | **$** _____ | $ _____ |
| **90-95 RH $/SF** | **$** _____ | **$** _____ | $ _____ |

4 **Controls Vendor in Base Bid:** _____ **If TRANE Controls are not in Base Bid; Provide alternate price to provide Trane:** $ _____

Changes in the work shall be as established in the Contract Documents. The following fees shall be used for lump sum pricing and actual cost pricing of additions and deletions to that Work included in the Bid, namely:

| | Not to Exceed |
|---|---|
| a. To Subcontractor/Supplier for work performed by their own forces. | 10% |
| b. To Subcontractor/Supplier for work performed by other than their own forces. | 5% |
| c. To Subcontractor's Subcontractor/Material supplier for work performed by Subcontractor's Subcontractor/Material Supplier own forces. | 10% |
| d. To Subcontractor's Subcontractor/Material supplier for work performed by other than Subcontractor's Subcontractor/Material Supplier own forces. | 5% |

- Fee includes general requirements, all supervision, overhead and profit.

*Time of Commencement, Completion, and Damages:*

a. The Bidder agrees that if awarded the Contract, he will Substantially Complete the Work in accordance with the schedule developed by the Construction Manager.
   1. The Bidder hereby agrees to commence work under the Contract within seven (7) days after the date of a "Notice to Proceed", unless otherwise stipulated in that notice.
   2. Shop drawing submittals shall be assembled immediately upon the Notice to Proceed and forwarded to the Construction Manager within 14 calendar days of said notice.

b. Time is expressly declared to be of the essence in completion of the Work covered by these Contract Documents, and the Successful Bidder shall be liable for actual damages for delay in completion of Work. Where additional time is allowed under the Agreement for the completion of the Work, the new time limits shall be of the essence of the Agreement.

c. Substantial Completion of the Work: The undersigned will have the Work ready for either the following Contractor's work or the Final Inspection and Owner's acceptance within the time limit established in the Construction Milestone Schedule.

*General Agreements:*

a. The Bidder agrees that he has had an opportunity to examine the site of the Work and has examined the Contract Documents, and that he has carefully prepared his proposal upon the basis thereof and that he has carefully examined and checked this Bid and the materials, equipment, and labor required thereunder, the cost thereof, and his figures therefore, and hereby states that the amount or amounts set forth in this Bid is, or are, correct and that no mistake or error has occurred in this Bid or in the Bidder's computations upon which this Bid is based and the Bidder agrees that he will make no claim for reformation, modification, rescission, or correction of this Bid after the scheduled closing time for receipt of Bid.

b. The Bidder acknowledges that the Owner reserves the right to waive informalities and to reject any or all Bids.

c. The Bidder agrees that Bid shall not be withdrawn or altered for a period of forty five (45) calendar days after the last date scheduled for the submission of Bids.

d. By signing this Bid, each Bidder certifies that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

The undersigned Bidder agrees that, when these requirements have been completed, he will execute an agreement with the Owner on the Standard Form of Agreement Between Owner and Construction on the Agreement included in the bidding documents.

DATED THIS _____ DAY OF _____, 20___.

Name of Firm

_____

By: Signature of Authorized Officer

_____

SEAL

County of _____

My Commission Expires: _____

**SECTION 011000 - SUMMARY OF WORK #03M WATERPROOFING & WEATHER BARRIERS**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

**A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:**

- **Section 071324 Pre-Applied Sheet Waterproofing**
- **Section 071325 Self Adhering Sheet Waterproofing**
- **Section 072500 Weather Barriers**

**Contract includes, but is not limited to the following:**

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **All preparation work needed for proper installation/manufacturer installation/or industry standard installations.**
13. **Superintendents or project managers will be required to attend weekly coordination meetings with other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

**SECTION 011000 - SUMMARY OF WORK #03BBB SYNTHETIC TURF**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

**A. Provide all labor, material, equipment, supervision and other items necessary to complete the following sections:**

- **Section 321818 Field Turf & Track/Field Event Rubber Surfacing (Field Turf Only)**

**Contract specifically includes, but is not limited to the following:**

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
13. **Provide & Install Turf and Accessories only under this scope**
14. **Coordinate Subgrade installation by Others**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

**SECTION 011000 - SUMMARY OF WORK #03CCC RESILIENT SURFACING**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

**A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:**

- **Section 321816 Resilient Track Surfacing**
-

**Contract specifically includes, but is not limited to the following:**

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
7. **Coordinate all tests and inspections.**
8. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
9. **Overtime, if required, to meet commitment to schedule.**
10. **Provide all layout requirements for this scope of work.**
11. **Provide all surface prep work, clean-up of overspray and assurance of adhesion.**
12. **Provide all unloading, material handling and hoisting of own materials.**
13. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
14. **Trench Drains by others.**
15. **Asphalt Base Course By Others**
16. **Coordinate Painting layout with Owner and Architect.**
17. **This scope includes runway's outside of the track. Coordinate with Athletic Equipment in division 116833/Scope of Work 03JJJ.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

**SECTION 011000 - SUMMARY OF WORK #03III TRACK & FIELD TURF SUBGRADE**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

**A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:**

- **Section 321215 Vehicle Grade Aggregate Surfacing**
- **Section 321216 Asphalt Paving**
- **Section 334600 Sub-Drainage System for Synthetic Turf**
- **Section 033000 Cast in Place Concrete (as it relates to ACO Drain and Curbs Directly Under Asphalt Paving and Synthetic Turf.)**

**Contract specifically includes, but is not limited to the following:**

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Provide all surface prep work, clean-up of overspray and assurance of adhesion.**
13. **Provide all unloading, material handling and hoisting of own materials.**
14. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
15. **Verify accessibility and existing conditions prior to submitting a proposal.**
16. **Includes base courses as specified.**
17. **Includes concrete track aprons.**
18. **Includes all ACO Drains and associated concrete.**
19. **Subgrade to be +/-.10'**
20. **See supplemental drawing below for limits of draintile and storm piping to be installed under this scope. Coordinate connection locations with Utility contractor.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

F.F. = 2160.75

DROP CURB AT DRIVEWAY

6' BLACK PVC COATED CHAIN LINK PERIMETER SECURITY FENCE

F.F. = 2160.50
BUILDING BY OTHERS

ACO SPORT DRAIN SYSTEM 3000 SLOT (SEE DETAIL)

ACO SPORT DRAIN HIGH POINT

Goal Posts by 03JJ typ.

CONNECT ACO SPORT DRAIN

6" PERF. HDPE @ 0.5%

4" PERF. HDPE @ 0.5%

12" PERF. HDPE @ 0.5%

03III Scope from outside edge of Asphalt In.

Inlet by Summary of Work 03GGG Utilities and Highlighted Piping by 03III

CIP Trench Drain installed by 03B Exterior Pavement & Walks; Grate by 03F Steel Material. Piping by 03GGG.

CONSTRUCT GRATE INLET
TOP GRATE ELEV.= 2158.92
18" INV. ELEV.= 2154.18

CONSTRUCT JUNCTION MANHOLE/GRATE INLET
TOP GRATE ELEV.= 2159.21
24" INV. ELEV.= 2154.03
18" INV. ELEV.= 2154.03
8" INV. ELEV.= 2154.86

NO TRENCH DRAIN. SOLID ACO CONNECTOR PIPE IN STEEPLECHASE LANE

ACO SPORT DRAIN HIGH POINT

FIELD GOAL POSTS (YELLOW–TYP. 2)

FLAGPOLES (3)

Pole Vault Pits by 03JJJ typ. Runways by 03III & 03CCC

CONSTRUCT JUNCTION MANHOLE
TOP RIM ELEV.= 2159.39
36" INV. ELEV.= 2153.48
24" INV. ELEV.= 2153.48
18" INV. ELEV.= 2153.48

CONSTRUCT 8" GRATE INLET
TOP GRATE ELEV.= 2160.07
4" INV. ELEV.= 2155.64

CONSTRUCT 8" GRATE INLET
TOP GRATE ELEV.= 2160.07
8" INV. ELEV.= 2155.64

TRENCH DRAIN FLOW LINE BREAK POINT

Highlighted Piping by 03III

Sand at Vault Pits by 03B Exterior Pavement & Walks

CIP Trench Drain installed by 03B Exterior Pavement & Walks; Grate by 03F Steel Material. Piping by 03GGG.

6' BLACK PVC COATED CHAIN LINK PERIMETER SECURITY FENCE

ALL FENCING TO BE 3'–6" HIGH BLACK PVC COATED CHAIN LINK UNLESS OTHERWISE NOTED

SCALE IN FEET
0 10 20 40

## Summary of Work 03III

All work inside the Blue area from Subgrade (+/- .10)

PACKAGE 03III EXCLUDES:

Electrical (by 3ZZ)
Track timing conduits/boxes (by 03ZZ)
Water Supply by (03GGG)
Athletic Equipment or Track and Field Equipment (by 03JJJ)
Trench drains (responsibility noted on call outs this sheet)
Concrete outside edge of track (by 3B)
Fencing (by 3DDD)
Track Surfacing (by 03CCC)
Synthetic Turf (by03BBB)

Package 03III INCLUDES

All Concrete and Re-Steel under or inside of Track & Field Surface
All utility Piping That extends outside of shaded area on this page. Inlets Outside of shaded area installed and supplied by Utility Contractor (03GGG)
All ACO Drain Assemblies inside Track Oval


Wilkins Hinrichs Stober Architects L.L.C.
2908 West 39th Street
Suite A
Kearney, NE 68845
308.237.5767 T
308-236-0929 F

REGISTERED PROFESSIONAL CIVIL ENGINEER
REED A. MILLER
E-5439
STATE OF NEBRASKA

M&A
Miller & Associates
Consulting Engineers, P.C.
Kearney, NE (308) 234-6456
McCook, NE (308) 345-3710


KEY PLAN

Kearney Public Schools
New Kearney High School
Kearney, Nebraska

| Revision/Issue | Date |
|---|---|
| Addendum No. 2 | 10/10/2014 |

ENLARGED TRACK PLAN/DETAIL

Project Number: 1355
Date: September 30, 2014


Copyright 2014
Wilkins Hinrichs Stober Architects, L.L.C.


Sheet Number:
C6.0


M&A DWG. NO. 28559
PLOTTED:10/10/2014 9:03 AM
SAVED:10/10/2014 9:01 AM
O:\Projects\1355\08-Pdf-011\Grd-Drwg\Sheet Drawings\06-Civil Plans.dwg

**SECTION 011000 - SUMMARY OF WORK #03JJJ TRACK & FIELD EQUIPMENT**

**PART 1 - GENERAL**

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

**A. Provide all labor, material, equipment supervision and other items necessary for the following sections:**

- **Section 116833 Track & Field Equipment**

**Contract includes, but is not limited to the following:**

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner. Protect adjacent surfaces during installation.**
7. **Coordinate all tests and inspections.**
8. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
9. **Overtime, if required, to meet commitment to schedule.**
10. **Provide all unloading, material handling and hoisting of own materials. Provide all field verification and coordination with other trades.**
11. **Runways to be installed by Others; Takeoff boards and vault box installations to be coordinated with exterior slab contractor.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK