ADDENDUM NO. 003

FOR

Morrison Center Addition Project

East Campus
4240 Fair Street
University of Nebraska – Lincoln
Lincoln, Nebraska

UNL Project No.: A126P003

UNL Invitation No.: 909360-12

UNIVERSITY OF NEBRASKA-LINCOLN
FACILITIES MANAGEMENT & PLANNING DEPARTMENT
FACILITIES PLANNING & CONSTRUCTION
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Addendum Documents Date:
05/30/2012

FARRIS ENGINEERING

ADDENDUM NO. 003

PROJECT NAME: Morrison Center Addition Project
UNL PROJECT NUMBER: **A126P003**
UNL BID INVITATION NUMBER: **909360-12**

CONSULTANT: Farris Engineering
ADDRESS: 11239 Chicago Circle

ADDENDUM DATE OF ISSUANCE: March 30, 2012
DATE OF BID OPENING: May 10, 2012

The bid documents dated March 30, 2012 for the above referenced project is amended by this addendum.

NOTICE: This Addendum is issued to all interested prospective bidders as an amendment to the project manual or other parts of the bidding (contract) documents for the above named project. Reference to this Addendum must be included in the Bid proposal. The information contained herein shall be fully incorporated into the contract documents as though originally included therein.

NOTICE: This addendum is applicable to the referenced project and is issued to all known planholders prior to receipt of proposals. The information contained herein shall be fully incorporated into the Bid Contract Documents as though originally incorporated. Failure to acknowledge all amendments may be cause for rejection of the bid.

TO: Bidders and Others Concerned

Changes to the Project Manual

1. PROJECT MANUAL COVER: Change UNL Invitation No. to read 909360-12.

2. SECTION 00 01 10 TABLE OF CONTENTS: Delete Division 14 - Conveying Equipment and Section 14 24 23 Hydraulic Passenger Elevators in its entirety.

3. SECTION 00 01 20 - LIST OF SCHEDULES: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

4. SECTION 00 11 16 – INVITATION TO BID: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

5. SECTION 00 21 13 - INSTRUCTION TO BIDDERS: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

6. SECTION 00 41 13 – BID PROPOSAL FORM: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

7. SECTION 05 51 00 METAL STAIRS: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

8. SECTION 08 06 10 DOOR SCHEDULE: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

9. SECTION 08 80 00 GLAZING: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

10. SECTION 09 06 10 ROOM FINISH SCHEDULE: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

11. SECTION 09 30 00 TILING: Delete this section in its entirety and replace with the attached new section issued with this Addendum No. 003.

12. SECTION 11 60 10 LABORATORY FUME HOODS: Reference to Section 1.4, Paragraph A, add the following:

    "The Fume Hoods specified herein and scheduled on the drawings sheet NVM-0100 shall be manufactured and furnished by the same manufacture that provides the Laboratory Casework as specified in section 12 35 53 LABORATORY CASEWORK. It is critical that the Fume Hoods have the same cabinet tops and cabinets to match the style and color of the Laboratory Casework. If Fume Hoods by a different manufacture than the Casework are submitted, they will in fact be rejected. The warranty of the Fume Hoods shall match the warranty of the Laboratory Casework which is the standard one year Contractor's Warranty. In the Laboratory Fume Hood Schedule on sheet NVM-0100 it lists for the Fume Hoods to have a 32 inch Nominal Depth. The Fume Hoods shall have a counter depth of 30-inches to match the depth of the Laboratory Casework Countertops. The Fume Hood top shall overhang the counter top and be approximately 39-inches deep. The Fume Hoods must be coordinated with the Laboratory Casework for a complete Casework System."

13. SECTION 14 24 23 – HYDRAULIC PASSENGER ELEVATORS: Delete this section in its entirety.

14. SECTION 22 11 16 DOMESTIC WATER PIPING: Reference to Section 2.2, add the following;

    "The Contractor shall have the option of using grooved pipe, fittings, and coupling for the domestic cold water and domestic hot water piping systems only for pipe sizes 2 inch and larger. The pipe shall be Type L copper pipe. Approved grooved piping systems include Victaulic, Tyco-Grinnel, and Gruvlok-Anvil Industries."

15. SECTION 22 11 16 DOMESTIC WATER PIPING: Reference to Section 2.2, add the following:

    "The Contractor shall have the option of using ProPress fittings, and couplings for the domestic cold water and domestic hot water piping systems. The pipe shall be Type L copper for pipe sizes 2-inch and smaller and Schedule 5 Type 304 stainless steel pipe for pipe sizes 2-1/2-inch and larger.

16. SECTION 23 07 00 MECHANICAL INSULATION: Reference Section 2.1, Paragraphs A18, A19, and A20. Change the insulation type from Calcium Silicate to 4-pcf density fiberglass insulation with a fire-resistive, ASJ vapor barrier jacket. The insulation thickness shall be 3-inch for pipe sizes 1-inch and less, and 4-inch for pipe sizes 1-1/4 inch through 4-inch to meet the requirements of ASHRAE 90.1.

17. SECTION 23 09 94 LAB VENTILATION CONTROL VALVES: The Contractor shall note that these valves as herein specified and scheduled on the drawings shall be furnished by the Owner (UNL BSM) and installed by the Mechanical Contractor. The warranty for these valves shall be furnished by the Owner and shall be a standard 12 month construction warranty.

18. SECTION 23 21 14 HYDRONIC PIPING: Reference to Section 2.5, add the following:

"The Contractor shall have the option of using grooved pipe, fittings, and coupling for the chilled water and heat recovery piping systems only for pipe sizes 2-1/2 inch and larger. The pipe shall be schedule 40 black steel pipe. Approved grooved piping systems include Victaulic, Tyco-Grinnel, and Gruvlok-Anvil Industries. Hot water heating systems shall be threaded and welded as specified in this section."

19. SECTION 23 31 13 METAL DUCTS: Reference to Section 2.5, Paragraph F; Change the first sentence to read "Chemical fume hood exhaust duct shall be constructed of Type 304 stainless steel with a Type 1 finish through out the building." The Type 316 stainless steel construction is no longer required.

20. SECTION 23 31 12 METAL DUCTS; Reference to Section 2.5, Paragraph I; Change the last sentence to read "S-lock and drive cleat joined ductwork is not acceptable upstream of the VAV Terminal Units. However the S-lock and drive cleat can be used downstream of the VAV Terminal Units. All S-lock and drive cleats shall be sealed with duct sealant following fabrication and assembly. Adjustable 90 degree elbows will not be allowed downstream of the VAV Terminal Units."

21. SECTION 23 23 10 LABORATORY EXHAUST SYSTEMS: Reference Section 2.1, Paragraph A; Add the following:

"Other manufacturers of Laboratory Exhaust Fans will be considered for this project such as MK Plastics, Plastic Air, and others. The factory representatives for these alternative manufacturers shall submit to the Engineer fan selections they wish to quote on for the Engineer's review prior to the Project Bid Date for final approval. Fan physical dimensions, weight, sound performance criteria, and energy performance criteria will be considered in the approval process."

22. SECTION 23 73 13 AIR HANDLERS AND HEAT RECOVERY MODULE: Reference Section 2.1, Paragraphs A1 and A2; The Contractor shall note that manufacturer's representatives for Air Enterprises and Engineered Aire have been requested to submit product information on their products for approval to bid on this project. This would include both air handling units and the energy recovery module scheduled for this project. . Physical dimensions, weight, product construction, materials, leakage rate, number of fans, sound performance criteria, and energy performance criteria will be considered in the approval process.

23. SECTION 26 05 19 WIRES AND CABLES: Reference to Section 2.2, Add Paragraph B as follows:

"Aluminum conductors may be provided in lieu of copper conductors for copper sizes 3/0 or larger when complying with all conditions set forth in the hereinafter specifications. 1. Increased conduit size as required by the NEC. Ratings for aluminum shall be identical to or greater than the copper ratings. 2. Coordination of connections to mechanical equipment shall be the responsibility of this Contractor. Aluminum conductors shall not be used for Mechanical Equipment requiring only copper conductors. 3. Terminals shall be UL approved suitable for copper or aluminum wire and marked CU/AL. Wire or cable shall be installed on terminals of only proper size. Terminations shall be crimp-on bolt down for connections to MLO panels and crimp-on pin adapters for all other applications. 4. Conductors are to be cleaned before connections and immediately coated with conductive oxidation inhibitor. 5. Stripping, splicing, pulling, etc. of aluminum conductors shall be done in accordance with Aluminum Building Wire Installation Manual by the Aluminum Association or other published standards."

Changes to the Drawings

1. SHEET NVAC0201 ARCHITECTURAL CODE SUMMARY: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

2. SHEET NVA-1-E- ARCHITECTURAL LEVEL 1 SECTOR E FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

3. SHEET NVA-2-E- ARCHITECTURAL LEVEL 2 SECTOR E FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

4. SHEET NVA-3-E- ARCHITECTURAL LEVEL 3 SECTOR E FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

5. SHEET NVA-4-E- ARCHITECTURAL LEVEL 4 - MECHANICAL SECTOR E FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

6. SHEET NVA-1DE- ARCHITECTURAL LEVEL 1 SECTOR E REFLECTIVE CEILING PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

7. SHEET NVA-2DE- ARCHITECTURAL LEVEL 2 SECTOR E REFLECTIVE CEILING PLAN: Delete the sheet in its entirety and replace with the attached new sheet.

8. SHEET NVA-3DE- ARCHITECTURAL LEVEL 3 SECTOR E REFLECTIVE CEILING PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

9. SHEET NVA-7001 ARCHITECTURAL PARTIAL PLANS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

10. SHEET NVA-7101 ARCHITECTURAL STAIR $ & ELEV 2 PLANS & SECTION: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

11. SHEET NVA-7301 ARCHITECTURAL WALL SECTIONS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

12. SHEET NVA-7302 ARCHITECTURAL WALL SECTIONS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

13. SHEET NVA-7303 ARCHITECTURAL WALL SECTIONS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

14. SHEET NVA-7401 ARCHITECTURAL EXTERIOR ELEVATIONS SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

15. SHEET NVA-7402 ARCHITECTURAL EXTERIOR ELEVATIONS SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

16. SHEET NVA-7501 ARCHITECTURAL INTERIOR ELEVATIONS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

17. SHEET NVA-7502 ARCHITECTURAL INTERIOR ELEVATIONS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

18. SHEET NVA-7503 ARCHITECTURAL INTERIOR ELEVATIONS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

19. SHEET NVA-7600 ARCHITECTURAL EXTERIOR ASSEMBLY TYPES: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

20. SHEET NVA-7601 ARCHITECTURAL EXTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

21. SHEET NVA-7602 ARCHITECTURAL EXTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

22. SHEET NVA-7603 ARCHITECTURAL EXTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

23. SHEET NVA-7604 ARCHITECTURAL EXTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

24. SHEET NVA-7605 ARCHITECTURAL EXTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

25. SHEET NVA-7609 ARCHITECTURAL INTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

26. SHEET NVA-7610 ARCHITECTURAL INTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

27. SHEET NVA-7611 ARCHITECTURAL INTERIOR DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

28. SHEET NVS-0003 STRUCTURAL FOUNDATION AND FRAMING SCHEDULES: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

29. SHEET NVS-1U-E STRUCTURAL SECTOR E PILE PLAN: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

30. SHEET NVS-1-E- STRUCTURAL LEVEL 1 FOUNDATION PLAN SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

31. SHEET NVS-2-E- STRUCTURAL LEVEL 2 FRAMING PLAN SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

32. SHEET NVS-3-E- STRUCTURAL LEVEL 3 FRAMING PLAN SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

33. SHEET NVS-4-E- STRUCTURAL LEVEL 4 FRAMING PLAN SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

34. SHEET NVS-5-E- STRUCTURAL LEVEL 5 FRAMING PLAN SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

35. SHEET NVS-7100 STRUCTURAL PARTIAL STAIR PLANS SECTOR E: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

36. SHEET NVS-7630 STRUCTURAL FOUNDATION DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

37. SHEET NVS-7651 STRUCTURAL FRAMING DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

38. SHEET NVS-7661 STRUCTURAL ROOF FRAMING DETAILS: Delete the sheet in its entirety and replace with the attached new sheet issued with this Addendum No. 003.

39. SHEET NVM-0002 MECHANICAL GENERAL NOTES AND COORDINATION RESPONSIBILITIES: Add note F-20 to the list of General Fire Protection Notes. Note F-20 should read as follows: "ALL JANITORIAL AND MECHANICAL ROOMS SHALL BE DESIGNED FOR ORDINARY HAZARD GROUP 2 OCCUPANCY.WITH A DESIGN DENSITY OF 0.20 GPM/SF OVER 1500 SF."

40. SHEET NVMH1-E MECHANICAL HVAC SECTOR E FIRST LEVEL FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet. The Elevator originally specified to occupy Elev. Mach. 154 and Elev. 156 has been removed from the project and these two rooms have been combined into a new Storage 156. As a result add a new VAV Terminal Unit VAV-156-6 and revise the return air duct as shown on the revised drawing NVMH1-E- dated March 30, 2012 that is attached with this Addendum No. 003.

41. SHEET NVMH2-E- MECHANICAL HVAC SECTOR E SECOND LEVEL FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet. The elevator originally specified to occupy Elev. 256 has been removed from the project. This space has been converted to Storage 255. As a result add a new VAV Terminal Unit VAV-255-5 and revise the return air duct as shown on the revised drawing NVMH2-E- dated March 30, 2012 that is attached with this Addendum No. 003.

42. SHEET NVMH3-E- MECHANICAL HVAC SECTOR E THIRD LEVEL FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet. The elevator originally specified to occupy Elev. 356 has been removed from the project. This space has been converted to Storage 356. As a result add a new VAV Terminal Unit VAV-356-5 and revise the return air duct as shown on the revised drawing NVMH3-E- dated March 30, 2012 that is attached with this Addendum No. 003.

43. SHEET NVMH4-E- MECHANICAL HVAC SECTOR E FOURTH LEVEL FLOOR PLAN: The elevator originally specified to occupy Elev. 456 has been removed from the project. This space has been converted to Storage 454. As a result add a new VAV Terminal Unit VAV-454-6 and revise the return air duct as shown on the Addendum Sketch M-1 dated March 30, 2012 that is attached with this Addendum No. 003.

44. SHEET NVMH-5-E MECHANICAL HVAC SECTOR E ROOF PLAN: The elevator originally specified to occupy Elev. 456 has been removed from the project. As a result delete the Elevator smoke damper and relief hood RH-7 as shown on Addendum Sketch M-2 dated March 30, 2012 that is attached with this Addendum No. 003.

45. SHEET NVMP1-E- MECHANICAL PIPING SECTOR E FIRST LEVEL FLOOR PLAN: Reference Addendum Sketch M-3 issued with this Addendum No. 003 showing additional hot water heating piping to serve the new VAV Terminal VAV-156-6 added to Storage 156.

46. SHEET NVMP2-E- MECHANICAL PIPING SECTOR E SECOND LEVEL FLOOR PLAN: Reference Addendum Sketch M-4 issued with this Addendum No. 003 showing additional hot water heating piping to serve the new VAV Terminal VAV-255-5 added to Storage 255.

47. SHEET NVMP3-E- MECHANICAL PIPING SECTOR E THIRD LEVEL FLOOR PLAN: Reference Addendum Sketch M-5 issued with this Addendum No. 003 showing additional hot water heating piping to serve the new VAV Terminal VAV-356-5 added to Storage 356.

48. SHEET NVMP4-E- MECHANICAL PIPING SECTOR E FOURTH LEVEL FLOOR PLAN: Reference Addendum Sketch M-6 issued with this Addendum No. 003 showing additional hot water heating piping to serve the new VAV Terminal VAV-454-6 added to Storage 454.

49. SHEET NVMW0-E- MECHANICAL PLUMBING SECTOR E FIRST LEVEL FLOOR PLAN: Reference Addendum Sketch M-7 issued with this Addendum No. 003.

50. SHEET NVMW1-E MECHANICAL PLUMBING SECTOR E FIRST LEVEL FLOOR PLAN: Delete the sheet in its entirety and replace with the attached new sheet. The Elevator originally specified to occupy Elev. Mach. 154 and Elev. 156 has been removed from the project and these two rooms have been combined into a new Storage 156. As a result delete sump pump SP-3, Oil Detection Control, Drain Box DB-1,and condensate drain as shown on the revised drawing NVMW1-E- dated March 30, 2012 that is attached with this Addendum No. 003.

51. SHEET NVMW2-E- MECHANICAL PLUMBING SECTOR E SECOND LEVEL FLOOR PLAN; Reference Addendum Sketch M-8 issued with this Addendum No. 003.

52. SHEET NVMW3-E- MECHANICAL PLUMBING SECTOR E THIRD LEVEL FLOOR PLAN; Reference Addendum Sketch M-9 issued with this Addendum No. 003.

53. SHEET NVMW0300 MECHANICAL PLUMBING WASTE AND VENT RISER DIAGRAM; Reference Addendum Sketch M-10 issued with this Addendum No. 003.

54. SHEET NVMW7000 MECHANICAL PLUMBING – BASEMENT FLOOR PLAN - EXISTING: Submit a deductive credit to eliminate the work indentified in mechanical keynotes 11 and 12.

55. SHEET NVMW7601 MECHANICAL PLUMBING DETAILS: Delete detail 5/NVMW7601.

56. SHEET NVMF1-E- FIRE PROTECTION SECTOR E FIRST LEVEL FLOOR PLAN: Elev. Mach. 154 and Elev. 156 have been replaced with Storage 156. Remove bold dashed line that was placed around Elev. 156. Remove sidewall sprinkler and associated piping shown in Elev. Mach. 154. Add dot hatching to new Storage 156 that indicates room shall have exposed construction. Remove Keynotes 14 and 15 from new Storage 156 and add Keynote 17 to space.

57. SHEET NVMF1-E- FIRE PROTECTION SECTOR E FIRST LEVEL FLOOR PLAN: Replace text written under Fire Protection Keynotes 14 and 15 with the words “NOT USED.”

58. SHEET NVMF2-E- FIRE PROTECTION SECTOR E SECOND LEVEL FLOOR PLAN: Elev. 256 has been replaced with Storage 255. Change Keynote 7 that is pointing to Storage 255 to Keynote 9. Fire Protection Keynote #9 shall read as follows: “ROOM TO BE USED FOR GENERAL STORAGE ON SHELVING LESS THAN 12’-0” IN HEIGHT. COORDINATE SPRINKLER ROUTING WITH SHELVING TO PREVENT POTENTIAL ACCIDENTAL DAMAGE TO SPRINKLERS. KPROVIDE PROTECTIVE WIRE GUARD ON SPORINKLERS IN THIS ROOM. ROOM TO BE DESIGNED FOR ORDINARY HAZARD GROUP 2 OCCUPANCY WITH A DESIGN DENSITY OF 0.20 GPM/SF OVER 1500 SF.”

59. SHEET NVMF2-E- FIRE PROTECTION SECTOR E SECOND LEVEL FLOOR PLAN: Add Keynote 8 to Fire Protection Keynotes. Keynote 8 should read” “NOT USED.”

60. SHEET NVMF3-E- FIRE PROTECTION SECTOR E THIRD LEVEL FLOOR PLAN: Elev. 356 has been replaced with Storage 356. Change Keynote 5 that is pointing to Storage 356 to Keynote 8. Fire Protection Keynote #8 shall read as follows: “ROOM TO BE USED FOR GENERAL STORAGE ON SHELVING LESS THAN 12’-0” IN HEIGHT. COORDINATE SPRINKLER ROUTING WITH SHELVING TO PREVENT POTENTIAL ACCIDENTAL DAMAGE TO SPRINKLERS. KPROVIDE PROTECTIVE WIRE GUARD ON SPORINKLERS IN THIS ROOM. ROOM TO BE DESIGNED FOR ORDINARY HAZARD GROUP 2 OCCUPANCY WITH A DESIGN DENSITY OF 0.20 GPM/SF OVER 1500 SF.”

61. SHEET NVMF4-E- FIRE PROTECTION SECTOR E PETHOUSE LEVEL FLOOR PLAN: Elev. 456 has been removed and Storage 454 has grown in size to incorporate space originally dedicated to the elevator. Extend boundary for Storage 454 to reflect new floor plan. Coordinate with HVAC and Electrical plans for further changes in this area.

62. SHEET NVM-0103 MECHANICAL SCHEDULES: Delete Sump Pump Schedule.

63. SHEET NVM-7601 MECHANICAL DETAILS:

    A. Reference Detail Number 5 Reheat Water Heating Coil Detail. Eliminate the two thermometers, the pressure gage assembly, the manual air vent, the flexible connections, and the coil drain assembly.

    B. Reference Detail Number 9 Base Mounted Pump Detail. Eliminate the Y Strainer from the suction of the pump. The pump is protected by a strainer in the Air Separator upstream of the pump.

64. SHEET NVEL1-E- ELECTRICAL – LIGHTING SECTOR E FIRST LEVEL FLOOR PLAN: Elev. Mach. 154 and Elev. 156 have been replaced with Storage 156. Reference Addendum Sketch E-1 issued with this Addendum No. 003.

65. SHEET NVEL2-E- ELECTRICAL – LIGHTING SECTOR E SECOND LEVEL FLOOR PLAN: Elev. 256 has been replaced with Storage 255. Reference Addendum Sketch E-2 issued with this Addendum No. 003.

66. SHEET NVEL3-E- ELECTRICAL – LIGHTING SECTOR E THIRD LEVEL FLOOR PLAN: Elev. 356 has been replaced with Storage 356. See Addendum Sketch E-3 issued with this Addendum No. 003.

67. SHEET NVEL4-E- ELECTRICAL – LIGHTING SECTOR E PENTHOUSE LEVEL FLOOR PLAN:

    A. Elev. 456 has become part of Storage 454. See Addendum Sketch E-4 issued with this Addendum No. 003.

    B. Revise Electrical Keynote ‘3’ to “Not Used.”

68. SHEET NVEP0-E- ELECTRICAL – POWER SECTOR E FIRST LEVEL FLOOR PLAN: Submit a deductive credit to eliminate the work indentified in electrical keynote 7 and delete the last sentence in keynote 7 referencing note 8.

69. SHEET NVEP1-E- ELECTRICAL – POWER SECTOR E FIRST LEVEL FLOOR PLAN:

    A. Elev. Mach. 154 and Elev. 156 have been replaced with Storage 156. See Addendum Sketch E-5 issued with this Addendum No. 003.

    B. Revise Electrical Keynotes ‘1’, ‘2’, ‘5’, ‘6’, ‘17’, and ‘19’, to “Not Used.”

70. SHEET NVEP2-E- ELECTRICAL – POWER SECTOR E SECOND LEVEL FLOOR PLAN: Elev. 256 has been replaced with Storage 255. Add duplex receptacle to north wall and connect to circuit M2A-4.

71. SHEET NVEP3-E- ELECTRICAL – POWER SECTOR E THIRD LEVEL FLOOR PLAN: Elev. 356 has been replaced with Storage 356. Add duplex receptacle to north wall and connect to circuit M3A-4.

72. SHEET NVEP4-E- ELECTRICAL – POWER SECTOR E PENTHOUSE LEVEL FLOOR PLAN:

    A. Elev. 456 has become part of Storage 454. Move receptacle as required for new door location. See Addendum Sketch E-6 issued with this Addendum No. 003.

    B. Mechanical Room 459; delete all electrical connections to CU-1.

73. SHEET NVEP4-E- ELECTRICAL – POWER SECTOR E PENTHOUSE LEVEL FLOOR PLAN: Revise Electrical Keynote '3' to "Not Used."

74. SHEET NVEY1-E- ELECTRICAL – SPECIAL SYSTEMS SECTOR E FIRST LEVEL FLOOR PLAN:

    A. Elev. Mach. 154 and Elev. 156 have been replaced with Storage 156. See Addendum Sketch E-7 issued with this Addendum No. 003.

    B. Revise Electrical Keynote '14' to "Not Used."

75. SHEET NVEY2-E- ELECTRICAL – SPECIAL SYSTEMS SECTOR E SECOND LEVEL FLOOR PLAN: Elev. 256 has been replaced with Storage 256. Delete card reader and associated connections. Delete smoke detector in corridor.

76. SHEET NVEY3-E- ELECTRICAL – SPECIAL SYSTEMS SECTOR E THIRD LEVEL FLOOR PLAN: Elev. 356 has been replaced with Storage 356. Delete card reader and associated connections. Delete smoke detector in corridor.

77. SHEET NVEY4-E- ELECTRICAL – SPECIAL SYSTEMS SECTOR E PENTHOUSE LEVEL FLOOR PLAN:

    A. Elev. 456 has become part of Storage 454. See Addendum Sketch E-8 issued with this Addendum No. 003.

    B. Revise Electrical Keynote '5' to "Not Used."

78. SHEET NVE-0103 ELECTRICAL – PANEL SCHEDULES: Panel 'EQA1' – change circuits 32 and 33 to spare 20/1 breakers. Panel 'EQA4' – change circuit 5 to spare 20/1 breaker and circuit 11,13 to spare 20/2 breaker. Panel ' ELSL' – change circuit 1 to a spare 20/1 breaker. Panel 'M1A' – change circuit 15 to a spare 20/1 breaker.

Attachments

1. SECTION 00 01 20 - List of Schedules
2. SECTION 11 11 16 Invitation to Bid
3. SECTION 00 21 13 Instruction to bidders
4. SECTION 11 41 13 Bid Proposal Form
5. SECTION
6. SECTION
7. SECTION
8. SECTION
9. SECTION
10. NVAC0201
11. NVA-1-E-
12. NVA-2-E-
13. NVA-3-E-
14. NVA-4-E-
15. NVA-1DE-

16. NVA-2DE-
17. NVA-3DE-
18. NVA-7001
19. NVA-7101
20. NVA-7301
21. NVA-7302
22. NVA-7303
23. NVA-7401
24. NVA-7402
25. NVA-7501
26. NVA-7502
27. NVA-7503
28. NVA-7600
29. NVA-7601
30. NVA-7602
31. NVA-7603
32. NVA-7604
33. NVA-7605
34. NVA-7609
35. NVA-7610
36. NVA-7611
37. NVS-0003
38. NVS-1-E-
39. NSV-1U-E
40. NVS-2-E-
41. NVS-3-E-
42. NSV-4-E-
43. NSV-5-E-
44. NSV-7100
45. NSV-7630
46. NSV-7651
47. NSV-7661
48. MVMH1-E-
49. MVMH2-E-
50. MVMH3-E-
51. MVMW1-E-
52. Sketch M-1
53. Sketch M-2
54. Sketch M-3
55. Sketch M-4
56. Sketch M-5
57. Sketch M-6
58. Sketch M-7
59. Sketch M-8
60. Sketch M-9
61. Sketch M-10
62. Sketch E-1
63. Sketch E-2

64. Sketch E-3
65. Sketch E-4
66. Sketch E-5
67. Sketch E-6
68. Sketch E-7
69. Sketch E-8

--END--

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SECTION 00 01 20 - LIST OF SCHEDULES

PART 1 GENERAL

1.0 **PROJECT SCHEDULE**

The anticipated project schedule is as follows:

▪ Legal Notices Published	April 15 & 22, 2012
▪ Pre-Bid Meeting (1:30 PM – UNL Facilities Planning & Const, 2nd Flr Mtg. Rm. 219)	April 26, 2012
▪ Bids Due (2:00 PM CDT – UNL Purchasing)	May 10, 2012
▪ Execution of F-P Construction Services Contract & Notice To Proceed:	June 29, 2012
▪ Occupancy of Project Site:	July 2, 2012
▪ F-P General Construction Services Contract Substantial Completion	July 5, 2013
▪ Bldg. Commissioning Complete	October 1, 2013
▪ Owner Occupancy	November 4, 2013

END OF SECTION

SECTION 00 11 16 – INVITATION TO BID

THE UNIVERSITY OF NEBRASKA
INVITATION TO BID
INVITATION NO.: 909360-12

1.0 INVITATION

A. The Board of Regents of the University of Nebraska invites Bids for the following project:

Project Name: Morrison Center Addition Project

Campus: East Campus

Project Address: 4240 Fair Street, Lincoln NE 68583

Architect/Engineer: Farris Engineering, Inc./IDC Architects

Identification of Contract(s) to be Awarded: Single Prime Contract covering the work of all trades.

2.0 TIME AND PLACE FOR RECEIPT OF BIDS

A. Sealed Bid Proposals will be received and publicly opened and read aloud as follows:

Closing Date and Time for Receipt of Bids: **Thursday May 10th, 2012**
2:00 PM CDT

Place for Receipt of Hand-Carried Bids:

University of Nebraska-Lincoln
Business Services
Procurement Services Dept.
1700 Y Street
Lincoln, NE

Address for Delivery of Mailed Bids:

University of Nebraska-Lincoln
Business Services
Procurement Services Dept.
1700 Y Street
Lincoln, NE 68588-0645

Opening Place:

Business Services,- Procurement Services Dept.
1700 Y Street, Lincoln, NE

3.0 BID SECURITY

A. Bid Security in the amount of 5% of the amount of the Base Bid is required.

4.0 BOND

A. Successful Bidder will be required to furnish an Owner's Protective Bond (University of Nebraska Standard Form) in the amount of 100% of the Contract Amount.

B. The University of Nebraska Standard Form of the Owner's Protective Bond shall be used in lieu of AIA Document A311 - Performance Bond and Labor and Materials Payment Bond.

5.0 BID DOCUMENTS

A. Bidding Documents may be examined at the following locations:
   1. A & D Technical Supply Co., 1301 L St., Suite A, Lincoln, NE 68509, (402) 474-5454
   2. A & D Technical Supply Co., 4320 S. 89th St., Omaha, NE 68127, (402) 592-4950
   3. Plan Services:
      a. Lincoln Builders Bureau, 5910 South 58th Street, Suite "C", Lincoln, NE 68516 (402) 421-8332, FAX (402) 421-8334
      b. F. W. Dodge Information Services, F. W. Dodge Information Services, 2507 Ingersoll Avenue, Des Moines, IA 50312 (515) 223-1046. FAX (515)-223-8564
      c. Omaha Builders Bureau, 4255 South 94th Street, Omaha, NE 68127 (402) 593-6908, FAX (402) 593-6912

B. Bid Documents may be obtained from **A & D Technical Supply Co**. listed above, upon payment of a refundable deposit check in the amount of Two Hundred Dollars and No Cents ($200.00) for each set of documents, in the form of a check made payable to **A & D Technical**. If documents are to be transmitted by mail or a parcel delivery service, submit a separate, nonrefundable check in the amount of Twenty Five Dollars and No Cents ($25.00) per set of documents, made payable to **A & D Technical**, to cover the cost of postage and handling. Builders Bureau cards will not be accepted. Builders Bureaus interested in obtaining a set of Bid Documents should contact the University's Project Manager.

   1. Only complete sets of Bid Documents will be issued.
   2. Deposit will be refunded upon return of usable and complete set of Bidding Documents within 45 days following receipt of bids to **A & D Technical Supply Co**. Documents returned by mail or parcel service shall be shipped postpaid.
   3. Check deposits by successful low bidder will be returned.

6.0 INFORMALITIES AND REJECTION OF BIDS

A. Owner reserves the right to waive any informality or irregularity, in any Bid, which does not materially affect the integrity or effectiveness of the competitive bidding process. Owner further reserves the right to reject any or all bids and to re-advertise for Bids.

7.0 PRE-BID MEETING

A. Prospective Bidders and Sub-bidders are invited to attend a pre-Bid meeting at the time and place indicated below:

   1. Date and Time of Meeting: **Thursday April 26, 2012, 1:30 PM CDT**
   2. Place: UNL Facilities Management & Planning
      University of Nebraska-City Campus
      Mtg Rm. 219
      1901 Y St.
      Lincoln, NE 68588

END OF SECTION

SECTION 00 21 13 - INSTRUCTIONS TO BIDDERS

1.0 DEFINITIONS

A. All definitions set forth in Section 00 72 13 - General Conditions of the Contract for Construction are applicable to these Instructions to Bidders.

B. Bidding Documents include Invitation to Bidders; Instructions to Bidders, Bid Proposal Form and proposed Contract Documents, including any Addenda issued prior to receipt of Bids.

2.0 BIDDER'S REPRESENTATION

A. The Bidder, by making a Bid, represents that:

1. The Bidder has read and understands Bidding Documents.
2. The Bidder has visited the site, and has become familiar with local conditions under which the work is to be performed and with Federal, State and Local laws, ordinances, rules and regulations affecting performance of the work, and correlated personal observations with requirements of proposed contract documents.
3. The Bid is based upon labor, materials, products, systems, equipment and other items required by Bidding Documents without exception.

3.0 EXAMINATION OF BIDDING DOCUMENTS

A. Each Bidder shall examine and study Bidding Documents carefully and compare with each other, examine site and local conditions and shall make written request to the Owner's Representative for interpretation or correction by the Architect of any ambiguity, error or inconsistency discovered. Request must be received by the Owner's Representative at least 7 working days before the Bid date.

B. Any instruction, change, interpretation or correction shall be set forth by Addenda. No Bidder shall rely upon response made in any other manner.

4.0 ADDENDA

A. Addenda are written or graphic instruments prepared by Architect and issued by Owner prior to the Bid closing date, which modify or interpret Bidding Documents by additions, deletions, clarifications, or corrections. Addenda shall be binding and shall become part of the Contract Documents.

B. Prior to date and time for receipt of Bids, Addenda will be issued to each person or firm recorded by Architect as having Bidding Documents, and copies will be available wherever Bidding Documents are on file for inspection.

C. Bidder is responsible to verify with Architect that Bidder has received all addenda. Failure to receive such addenda shall not relieve Bidder from any obligation under the Bid as submitted.

5.0 BID SECURITY

A. Bid Security is required. Make payable to: Board of Regents of the University of Nebraska, in the amount of 5% of the Lump Sum Base Bid Amount.

B. Bid Security shall be one of: cashier's check, certified check, or Bid Bond issued by a Surety licensed to conduct business in the State of Nebraska. Form of Bid Bond is AIA Document A310. Any agent signing a bid bond on behalf of the Surety must attach a Power of Attorney effectively evidencing the agent's authority to bind the Surety to the performance of the Bid Bond.

C. Bid Security shall be submitted with the Bid Proposal Form.

D. Owner reserves right to retain Bid Security of three lowest Bidders until 45 days after receipt of Bid or until selected Bidder enters into Contract, whichever is shorter. Bid Security furnished by all other

Bidders will be returned to the appropriate Bidder upon Owner's receipt of a written request from such Bidder.

E. Bid Security of selected Bidder shall be retained until Owner receives executed Owner-Contractor Agreement, Owner's Protective Bond and Certificates of Insurance.

F. If any Bidder refuses to enter into a Contract or fails to furnish required Bonds and Certificates of Insurance within 10 days following notice of contract award, Bid Security shall be forfeited to Owner as liquidated damages but not as penalty.

6.0 OWNER'S PROTECTIVE BOND

A. The selected Bidder will be required to furnish an Owner's Protective Bond as required by Nebraska Revised Statutes §52-118, and as specified in Section 00 72 13 – General Conditions, in the amount equal to 100% of the Contract Sum to cover contractual performance and as security for the payment of all obligations of the Contractor to all laborers and mechanics for labor, and for all materials and equipment used in the completion of the project.

B. The required bond shall be delivered to the Owner not less than 10 days following notice of contract award. If the work is to be commenced prior thereto in response to a notice to proceed, the selected Bidder shall, prior to commencement of the work, submit evidence satisfactory to the Owner that such bond will be furnished and delivered in accordance with this paragraph.

C. Bond shall be written on University of Nebraska Owner's Protective Bond Standard Form, January 2002 Edition, by a Surety licensed to conduct business in the State of Nebraska.

D. The bond shall be dated to coincide with the date of the Contract.

E. Attorney-in-fact who executes required Bond on behalf of Surety shall affix thereto a certified and current copy of his or her Power of Attorney, indicating monetary limit of such power. An original signature shall be on all documents; no facsimile signature will be accepted.

7.0 SUBSTITUTIONS

A. Where Bidding Documents refer to any items, materials, products, and equipment, by means of one or more manufacturer's trade name, catalog reference, or similar means of identification or manufacturer, such reference establishes standard of required quality, appearance, dimension or function. References to all items, materials, products, equipment, and acceptable manufacturers within the contract documents do not indicate compliance with the Buy American Provisions under Section 1605 of American Reinvestment & Recovery Act (ARRA).

B. Requests for proposed substitution shall be made in writing to the Architect.

1. Request shall be received by Architect no later than 10 working days prior to date of receipt of Bids.
2. Request shall be submitted using the "Request for Approval of Substitution Form" included herein 00 63 25 Substitution Request Form.
3. Bidder shall assume and bear all responsibility for coordinating and performing related changes in the Work necessitated by such substitution and has included such costs in the Bid.
4. Burden of proof of merit of proposed substitution is upon Bidder.
5. All approved substitutions shall be set forth in Addenda. No Bidder shall rely upon approvals made in any other manner.

8.0 PREPARATION OF BIDS

A. Bids must be submitted on 00 41 13 Bid Proposal Form identical to the form included herein.

B. All blanks on the Bid Proposal Form shall be completed using typewriter or handwritten in ink.

C. Complete all blanks and provide all information requested on Bid Proposal Form. Failure to complete the form in its entirety may be the basis for the rejection of bid.

D. Interlineations, alterations, and erasures must be initialed by the signer of the bid.

E. Where so indicated by the makeup of the bid form, sums shall be expressed in both words and figures, and in the case of discrepancy between the two, the amount written in words shall govern.

F. All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change". Where Alternate price quotations are not provided, it will be assumed that there is no change in the Bid if the Alternate is accepted.

G. Each copy of the Bid shall include the legal name of the Bidder and a statement that the Bidder is a sole proprietor, partnership or corporation or other legal entity. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

9.0 SUBMISSION OF BIDS

A. All Bids must be submitted on the Bid Proposal Forms and must be accompanied by Bid Security and any other required documents, enclosed and sealed in ad envelope, identified with:
   1. Project Title
   2. Bid Invitation No.
   3. Name of Bidder

B. Bids sent by mail shall be sealed in the Owner-provided envelope as described above, then placed in a separate mailing envelope and addressed to the location indicated in the Invitation to Bid.

C. Bidder is responsible for method and timely delivery to location designated for receiving Bids.

D. A Bid is invalid if it has not been deposited at designated location prior to time and date for receipt of Bids indicated in Invitation to Bid, or prior to any extension thereof issued to Bidders.

   1. Bid is invalid if transmitted by automated electronic means.

E. Unless otherwise provided, no Bidder shall modify, withdraw, or cancel the Bid or any part thereof for 90 days after the time designated for receipt of Bids.

F. Architect will not answer questions regarding the Bidding Documents within 24 hours of time established for receipt of Bids.

10.0 RECEIPT OF BIDS

A. Bids shall be received by the Owner's designated representative at the location indicated in the Invitation for Bids.

11.0 OPENING OF BIDS

A. Bids will be opened publicly and read aloud at the location indicated in the Invitation for Bids directly following the specified closing time for receipt of bids.

12.0 BID PROTEST

A. Bid/RFP protests must be received in the office of the Director of Purchasing no later than 7 calendar days after contract award notification is received.

Director of Procurement Services
University of Nebraska-Lincoln
1700 Y Street
Lincoln, NE 68588-0645

B. Protest procedures can be reviewed on the Procurement Service's website at http://procurement.unl.edu.

13.0 REJECTION OF BIDS

A. Bidder acknowledges right of Owner to reject any or all bids and to waive any informalities or irregularities which do not materially affect the integrity or effectiveness of the competitive bidding process.

B. Bidder recognizes right of Owner to reject a bid if Bidder has failed to:

1. Furnish the required Bid Security.
2. Submit data required by Bidding Documents.
3. Complete in any way the Proposal Form.
4. Attend the pre-Bid meeting where attendance at such meeting is required as a part of the Bidder qualification process.

14.0 AWARD OF CONTRACT

A. Intent of Owner is to award Contract to the lowest responsible Bidder, taking into consideration the best interests of the University. In determining the lowest responsible Bidder, bids may be rejected and awards made upon consideration of the following factors:

1. Ability, capacity and skill to comply with the specifications and perform the work required by the contract.
2. Character, integrity, reputation, judgment, experience and efficiency.
3. Ability to perform the Work within the time specified.
4. Previous and current compliance with laws relating to the Contract.
5. The price bid for the Work
6. The time to complete the work. Time is of the essence and will be a factor in the award of this Contract.
7. The quality of the Bidder's performance of previous contracts.
8. Such other information as may be secured having a bearing on the decision to award the contract.

B. Owner reserves right to:

1. Waive informalities or irregularities, in all circumstances to analyze Bids in detail and to award contract which, in the good faith exercise of reasonable discretion of the Owner, believes it to be in its best interest.
2. Accept Alternates in any order or combination, unless otherwise specified.
3. To determine the low responsible Bidder on the basis of lump sum Bid and Alternates accepted.

C. If a Bidder offers or submits a voluntary alternate, it shall be received as information only and not used as a basis for determination of the low Bidder.

15.0 SUBMISSION OF POST-BID INFORMATION

A. Upon notification by Owner, apparent low responsible Bidder shall submit within five days the following:

1. Statement of costs for each major item of work included in Bid.
2. A designation of the work to be performed by Bidder with his own forces.
3. A list of names of subcontractors, other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for such portions of the Work designated in Bidding Documents or names of subcontractors proposed for principal portions of the Work.

    a. Prior to final determination of low responsible Bidder, Owner will notify apparent low Bidder in writing if Owner has reasonable and substantial objection to and refuses to accept any person or firm on the list. If Owner has objection, Bidder may either withdraw Bid or submit a substitute person or firm with an adjustment in cost to cover any differences. Owner shall accept adjusted Bid price or disqualify Bidder. In either condition, Bid Security shall not be forfeited.

    b. Staff Names: Submit a confirmation list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

B. Subcontractors and other persons and organizations proposed by Bidder and accepted by Owner must be used for the work for which they were proposed and accepted, and shall not be changed except with written approval of Owner.

C. If federal or state law, ordinances, or professional organizations provide for licensing of contractors, the work shall be performed by licensed contractors.

1. This includes but is not limited to the following services:

    a. Plumbing
    b. Electrical
    c. Heating and Air Conditioning
    d. Elevator
    e. Fire Sprinkler / Fire Alarm
    f. Asbestos Removal

2. Air/water balancing contractors shall be certified by NEBB or AABC.

16.0 SALES AND USE TAX

A. Owner shall furnish Contractor with a Purchasing Agent Appointment and Exempt Sale Certificate Form, as specified in Section 00 72 13 General Conditions Article 11 Insurance and Bonds, for items incorporated into the Work considered by State of Nebraska to be exempt from Sales Tax. Contractor is responsible to monitor valid dates and notify Owner if an extension is necessary.

B. This Appointment and Exempt Sale Certificate does not apply to:

1. Purchase of materials to be used but not incorporated into the Contract work, including but not limited to form lumber, scaffolding, etc.
2. Purchase or rental of machinery, equipment or tools owned or leased by Contractor and used in performing the work.

17.0 INSURANCE

A. The successful Bidder will be required to secure and maintain during the life of the Contract insurance of the types and with the required limits of liability set forth in 00 62 17 Preparation Instructions, 00 62 16 Certificate of Insurance Form, and as specified in 00 72 13 General Conditions Article 11 Insurance and Bonds. The successful Bidder shall furnish to the Owner properly executed copies of the Certificate of Insurance Form, evidencing the required coverage prior to the start of construction. The successful Bidder will be solely responsible for any and all costs, losses, or damages due their failure to maintain the required insurance during the life of the contract.

18.0 PERMITS AND FEES

A. As an agency of the State of Nebraska, the Owner will acquire the building permit. See Section 00 40 00 Quality Requirements for information regarding the Contractor's responsibility to pay for re-inspection fees.

B. Contractor shall secure and pay for all other permits and inspections required by law, e.g. Electrical, Stormwater Runoff, etc.

C. The Work must meet the requirements of the State Electrical Act. The Contractor shall secure permits, give notice for inspection and pay all inspection fees stipulated in this Act and include all costs arising from this requirement in the Bid proposal.

D. Contractor shall be reimbursed for the cost of utility connections or "tap" fees to the City of Lincoln, required in conjunction with the project. Reimbursement will be for actual amount of fee, without mark-up, and no allowance for such fees need be included in the Bid proposal.

19.0 MODIFICATIONS OR WITHDRAWAL

A. Bidder may modify or withdraw its Bid at any time prior to time and date designated for receipt of Bids.

B. A Bid submitted may be modified or withdrawn by notice to party at place designated for receipt of Bids.

1. Notice shall be in writing and signed by authorized agent as indicated in original Proposal Form.
2. Notice of modification or withdrawal of Bid transmitted by automated electronic methods is invalid.

20.0 IMMIGRATION VERIFICATION

A. The successful bidder, on behalf of itself and any subcontractor to the Contract, agrees that it shall use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska pursuant to Neb. Rev. Stat. 4-108 to 4-114 as amended.

21.0 DISCLAIMER

A. Refer to General Conditions Section 1.2 Correlation and Intent of the Contract Documents for precedence of documents.

22.0 AMERICAN REINVESTMENT & RECOVERY ACT (ARRA)

A. Funding for the project is provided by the American Reinvestment & Recovery Act (ARRA), through the applicable federal agency. The successful bidder must comply with all provisions of the ARRA. All applicable provisions of ARRA are incorporated into the terms of the Owner-Contractor agreement with terms carrying through to all sub-contractor and sub-sub contractors and all resultant covered contracts. See and comply with requirements found in the Department of Commerce Pre-Award notification Requirements for Grants and Cooperative Agreements, contained in the Federal Register notice of February 11, 2008 (73 FR 7696) and found at: *http://edocket.access.gpo.gov/2008/pdf/E8-2482.pdf*

B. As part of the ARRA grant, the Owner must make periodic reports to the applicable federal agency. The Contractor shall assist the Owner by providing all required data and supporting documentation. This data includes compiling all man hours worked by all workers for a given period to determine the number of jobs created or saved as a result of this project. The man hour data and documentation shall be provided to the Owner no later than 5 calendar days from the end of each month.

C. ARRA Section 1606 requires compliance with the Davis-Bacon Act and related acts, including standard Davis Bacon contract clauses found in 29 CFR 5.5. **Rates in place at time of contract execution will apply, NOT date of bid**. The construction contract and all resultant sub-contracts and lower tier contracts shall comply with the Davis-Bacon Act and related acts: *http://www.dol.gov/whd/programs/dbra/*

D. Buy American Provisions under Section 1605 of ARRA **DO NOT APPLY** to this project.

E. Section 1553 of ARRA stipulates that protecting State and Local Government and Contractor Whistleblowers (123 STAT.297) shall apply to this project. The ARRA Whistleblower Poster shall be posted in a conspicuous place at the jobsite and shall be maintained through the duration of the project. *http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title02/2cfr176_main_02.tpl*

F. The contractor shall construct, erect and maintain in good condition throughout the construction period a sign satisfactory to applicable federal agency, NIH, and the Owner that identifies the project and indicates that the project is federally funded. This sign shall have "Recovery.Gov", Department of Commerce, applicable federal agency, NIH and University of Nebraska-Lincoln emblem components. The sign shall also include the name of the Architect, the Contractor, and UNL Architectural and Engineering Services and shall include space for UNL's Building Permit. The sign shall merge applicable federal agency and NIH requirements with UNL standard sign detail as found in the University of Nebraska-Lincoln Design Guidelines.

G. No Contractor, nor sub-contractor, nor any affiliated lower tier contractors who are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation by any federal department or agency shall be accepted for this project. *http://www.oig.doc.gov/recovery/FraudPreventionTraining.html*

H. The office of the Inspector General recommends all interested parties complete on-line fraud prevention training at: *http://www.oig.doc.gov/recovery/FraudPreventionTraining.html* The successful bidders Project Manager and Site Superintendent shall be required to complete this on-line training.

I. Further information or assistance with ARRA compliance can be obtained by contacting UNL Facilities Management and Planning at (402)472-3131.

END OF SECTION

SECTION 00 41 13 - BID PROPOSAL FORM

B I D P R O P O S A L

TO: THE BOARD OF REGENTS OF THE UNIVERSITY OF NEBRASKA
c/o University of Nebraska-Lincoln
Business Services Purchasing Department
1700 Y Street
Lincoln, NE 68588-0645

BID PROPOSAL FOR: **General Construction Contractor Services**

PROJECT NAME: **Ken Morrison Life Sciences Research Center Addition Project**

PROJECT NO.: **A126P003**

INVITATION NO.: **909360-12**

☐ **COMPLETE THE FOLLOWING INFORMATION – BIDDERS NAME AND TYPE OF BUSINESS**:
This Bid is offered by _____, hereinafter referred to as the Bidder,
☐ a corporation organized and existing under the laws of the State of _____.
☐ a partnership doing business as _____.
☐ an individual doing business as _____.

In response to the Bidding Requirements for the construction of the project identified above by name, quotation number, and project number, the Bidder hereby makes the following representations:

Bidder has received the drawings and specifications for the project prepared by Farris Engineering, Inc./IDC Architects.

Bidder has examined the Bidding Documents, visited the site, and otherwise familiarized itself with the local conditions affecting the construction of the project.

☐ **COMPLETE THE FOLLOWING INFORMATION – BASE BID**:
Bidder agrees to furnish all labor, materials, tools, equipment, services, transportation, and supervision required to complete the work indicated in the Bidding Documents within the time set forth herein for the lump sum Base Bid amount of

_____Dollars ($_____).

☐ **PROVIDE THE FOLLOWING INFORMATION – BID SECURITY:**
Included with this Proposal is Bid Security of the type and in the amount required by the Bidding Instructions.

☐ **COMPLETE THE FOLLOWING INFORMATION – NUMBER OF ADDENDA RECEIVED:**

Bidder has received Addenda Nos. _____, and has included their provisions in this Bid.

☐ **COMPLETE THE FOLLOWING INFORMATION – #4 CALENDAR DAYS TO COMPLETE THE WORK**:
In submitting this Bid, Bidder agrees to the following:

1. To hold this Bid open for 90 days following the bid date.
2. To enter into and execute the "University of Nebraska Standard Form Construction Agreement" based upon this Bid, if accepted by Owner.
3. To perform all work required by the Contract Documents.

4. To substantially complete the work not later than _____ calendar days from the start of construction given in the Notice to Proceed. (Bidder to enter number of days.) Time is of the essence and may be a factor in the award of this Contract.
5. That this Bid has been arrived at without collusion with other Bidders and without any effort or activity which might prevent the University of Nebraska from receiving the lowest possible competitive Bid.
6. To comply with Nebraska Fair Employment Practice Act, understanding that a breach of this provision will be regarded as a material breach of contract.
7. To comply with Davis-Bacon Act and related acts, understanding that a breach of this provision will be regarded as a material breach of contract.

COMPLETE THE FOLLOWING INFORMATION – SIGNATURE AND CONTACT INFORMATION:

Address:	Signature:
	Printed Name:
Tele. No.:	Title:
Fax. No.:	Dated this day of , 20

SECTION 05 51 00

METAL STAIRS

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. This Section includes the following:

1. Preassembled steel stairs with concrete-filled treads.
2. Steel tube railings attached to metal stairs.
3. Steel tube handrails attached to walls adjacent to metal stairs.
4. Steel welded wire mesh for railing assemblies.

B. Related Sections include the following:

1. Division 03 Section "Cast-in-Place Concrete" for concrete fill for stair treads and platforms.

2. Division 05 Section "Pipe and Tube Railings" for railings not attached to metal stairs or to walls adjacent to metal stairs.

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance of Stairs: Provide metal stairs capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Uniform Load: 100 lbf/sq. ft.

2. Concentrated Load: 300 lbf applied on an area of 4 sq. in.

3. Uniform and concentrated loads need not be assumed to act concurrently.

4. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.

5. Limit live load deflection of treads, platforms, and framing members to L/360 or 1/4 inch, whichever is less.

B. Structural Performance of Railings: Provide railings capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails:

a. Uniform load of 50 lbf/ ft. applied in any direction.
b. Concentrated load of 200 lbf applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Top Rails of Guards:

   a. Uniform load of 50 lbf/ ft. applied in any direction.
   b. Concentrated load of 200 lbf applied in any direction.
   c. Uniform and concentrated loads need not be assumed to act concurrently.

3. Infill of Guards:

   a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
   b. Infill load and other loads need not be assumed to act concurrently.

C. Seismic Performance: Provide metal stairs capable of withstanding the effects of earthquake motions determined according to the 2009 International Building Code as follows:

1. Seismic Use Group: I.
2. S_{DS}: 0.188.
3. S_{D1}: 0.078.
4. Seismic Site Class: D.
5. Seismic Design Category: B.

1.4 SUBMITTALS

A. Product Data: For metal stairs and the following:

1. Abrasive nosings.
2. Paint products.
3. Grout.

B. Submittals: Include plans, elevations, sections, details, and attachments to other work.

1. Provide templates for anchors and bolts specified for installation under other Sections.

2. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

C. Samples for Verification: For the following products, in manufacturer's standard sizes:

1. Abrasive nosings.

D. Welding certificates.

E. Qualification Data: For professional engineer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

B. Engineering Responsibility: Engage a qualified professional engineer to prepare design calculations, Shop Drawings, and other structural data.

C. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of cold-formed metal framing that are similar to those indicated for this Project in material, design, and extent.

D. NAAMM Stair Standard: Comply with "Recommended Voluntary Minimum Standards for Fixed Metal Stairs" in NAAMM AMP 510, "Metal Stairs Manual," for class of stair designated, unless more stringent requirements are indicated.

1. Preassembled Stairs: Architectural class.

E. Welding: Qualify procedures and personnel according to the following:

1. AWS D1.1, "Structural Welding Code--Steel."
2. AWS D1.3, "Structural Welding Code--Sheet Steel."

1.6 COORDINATION

A. Coordinate installation of anchorages for metal stairs. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

B. Coordinate locations of hanger rods and struts with other work so that they will not encroach on required stair width and will be within the fire-resistance-rated stair enclosure.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces, unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Steel Tubing: ASTM A 500 (cold formed).

C. Uncoated, Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, either commercial steel, Type B, or structural steel, Grade 30, unless another grade is required by design loads.

D. Welded Wire Mesh: 2 inch by 2 inch square mesh made from 0.105 inch diameter steel wire; galvanealed (A60) finish; shop primed painted.

2.3 NONFERROUS METALS

A. Aluminum Extrusions: ASTM B 221, Alloy 6063-T6.

2.4 FASTENERS

A. General: Provide zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 25 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.

B. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.

C. Anchor Bolts: ASTM F 1554, Grade 36.

1. Provide hot-dip or mechanically deposited, zinc-coated anchor bolts for exterior stairs, stairs indicated to be galvanized, and stairs indicated to be shop primed with zinc-rich primer.

D. Plain Washers: Round, ASME B18.22.1.

E. Expansion Anchors: Anchor bolt and sleeve assembly with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

1. Material for Anchors in Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.

2.5 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Compatibility: Submit all components/procedures of the paint system for metal stairs as a single coordinated submittal. Identify required surface preparation, primer, intermediate coat (if applicable), and finish coat. All items shall be coordinated with the finish coat specified in Division 9 painting Sections.

C. Primer: Fast-curing, universal modified-alkyd rust-inhibiting primer with good resistance to normal atmospheric corrosion. Primer shall comply with all federal standards for VOC, lead, and chromate levels.

D. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

E. Concrete Materials and Properties: Comply with requirements in Division 3 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi, unless otherwise indicated.

2.6 FABRICATION, GENERAL

A. Provide complete stair assemblies, including metal framing, hangers, struts, clips, brackets, bearing plates, and other components necessary to support and anchor stairs and platforms on supporting structure.

1. Join components by welding, unless otherwise indicated.

2. Use connections that maintain structural value of joined pieces.

3. Fabricate treads and platforms of exterior stairs so finished walking surfaces slope to drain.

B. Preassembled Stairs: Assemble stairs in shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

E. Form exposed work true to line and level with accurate angles and surfaces and straight edges.

F. Weld connections to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

2. Obtain fusion without undercut or overlap.

3. Remove welding flux immediately.

4. Weld exposed corners and seams continuously, unless otherwise indicated.

5. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

G. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts unless otherwise indicated. Locate joints where least conspicuous.

H. Fabricate joints that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

2.7 STEEL-FRAMED STAIRS

A. Stair Framing:

1. Fabricate stringers of steel channels.

a. Provide closures for exposed ends of channel stringers.

2. Construct platforms of steel channel headers and miscellaneous framing members as indicated.

3. Weld stringers to headers; weld framing members to stringers and headers.

4. Where stairs are enclosed by gypsum board assemblies, provide hanger rods or struts to support landings from floor construction above or below. Locate hanger rods and struts where they will not encroach on required stair width and will be within the fire-resistance-rated stair enclosure.

B. Metal-Pan Stairs: Form risers, subtread pans, and subplatforms to configurations shown from steel sheet of thickness indicated.

1. Basis of Design Product: Sharon Stairs preassembled stair system, angle tube strut landing supports, concrete filled treads and mesh rail with handrails.

2. Steel Sheet: Uncoated hot-rolled steel sheet.

3. Directly weld metal pans to stringers; locate welds on top of subtreads where they will be concealed by concrete fill. Do not weld risers to stringers.

4. Provide subplatforms of configuration indicated or, if not indicated, the same as subtreads. Weld subplatforms to platform framing.

2.8 STEEL TUBE RAILINGS

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of tube, post spacings, and anchorage, but not less than that needed to withstand indicated loads.

1. Configuration: Schedule 40, 1-1/4-inch steel pipe handrails, top rails, bottom rails and vertical posts with infill panels made from square pattern woven steel wire mesh crimped into 1-by-1/2-by-1/8-inch steel channel frames.

a. Orient wire mesh with wires horizontal and vertical.

B. Welded Connections: Fabricate railings with welded connections. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

C. Form changes in direction of railings by bending.

D. Form simple and compound curves by bending members in jigs to produce uniform curvature for each repetitive configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

E. Close exposed ends of railing members with prefabricated end fittings.

F. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.

G. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnecting components and for attaching to other work. Furnish inserts and other anchorage devices for connecting to concrete or masonry work.

1. Connect posts to stair framing by direct welding, unless otherwise indicated.

2. For galvanized railings, provide galvanized fittings, brackets, fasteners, sleeves, and other ferrous-metal components.

3. For nongalvanized railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves, except galvanize anchors embedded in exterior masonry and concrete construction.

H. Fillers: Provide fillers made from steel plate, or other suitably crush-resistant material, where needed to transfer wall bracket loads through wall finishes to structural supports. Size fillers to suit wall finish thicknesses and to produce adequate bearing area to prevent bracket rotation and overstressing of substrate.

2.9 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish metal stairs after assembly.

C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed products:

1. Exterior Stairs (SSPC Zone 1B): SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

2. Interior Stairs (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning."

D. Apply shop primer to uncoated surfaces of metal stair components, except those with galvanized finishes and those to be embedded in concrete or masonry unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

1. Touch-up paint corners, crevices, bolts, welds, and edges.

E. Exterior Stair and Railing Components: Galvanize items to minimum 1.25-ounces-per-square foot zinc coating in accordance with ASTM A386.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal stairs to in-place construction. Include threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal stairs. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.

C. Install metal stairs by welding stair framing to steel structure or to weld plates cast into concrete, unless otherwise indicated.

D. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

E. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations.

F. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.

2. Obtain fusion without undercut or overlap.

3. Remove welding flux immediately.

4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

G. Place and finish concrete fill for treads and platforms to comply with Division 3 Section "Cast-in-Place Concrete."

1. Install abrasive nosings with anchors fully embedded in concrete. Center nosings on tread width.

3.2 INSTALLING METAL STAIRS WITH GROUTED BASEPLATES

A. Clean concrete and masonry bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of baseplates.

B. Set steel stair baseplates on wedges, shims, or leveling nuts. After stairs have been positioned and aligned, tighten anchor bolts. Do not remove wedges or shims but, if protruding, cut off flush with edge of bearing plate before packing with grout.

1. Use nonmetallic, nonshrink grout, unless otherwise indicated.
2. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.3 INSTALLING STEEL TUBE RAILINGS

A. Adjust railing systems before anchoring to ensure matching alignment at abutting joints. Space posts at spacing indicated or, if not indicated, as required by design loads. Plumb posts in each direction. Secure posts and rail ends to building construction as follows:

1. Anchor posts to steel by welding directly to steel supporting members.

2. Anchor handrail ends to concrete and masonry with steel round flanges welded to rail ends and anchored with post-installed anchors and bolts.

B. Attach handrails to wall with wall brackets. Provide bracket with 1-1/2-inch clearance from inside face of handrail and finished wall surface. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads. Secure wall brackets to building construction as follows:

1. Use type of bracket with flange tapped for concealed anchorage to threaded hanger bolt.

2. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.

3. For hollow masonry anchorage, use toggle bolts.

4. For steel-framed gypsum board assemblies, fasten brackets directly to steel framing or concealed steel reinforcements using self-tapping screws of size and type required to support structural loads.

3.4 ADJUSTING AND CLEANING

A. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 09 painting Sections.

END OF SECTION

IDC Master Specifications	IDC Spec Owner: Steve Beckner / PDX / 21600
Section 08010 - Door Schedule	DSC: Dennet Latham / PDX / 21799

Editor's Notes:

1) Because this is a master specification, it may contain information unrelated to your project. Read it thoroughly and revise it as necessary to meet the requirements of the project.

2) This section includes an Excel Spreadsheet (on Sheet 2 - Door Schedule) that is used to describe doors and frames for a project. When issuing the Door Schedule for a project, only print out Sheet 2, "Door Schedule".

3) The Legend at top of the Schedule includes commonly used abbreviations and notes. This information is consistent with terms and symbols used in other specifications sections and industry standards published by National Association of Architectural Metal Manufacturers (NAAMM) and The Steel Door Institute (SDI). So, it is recommended that the abbreviations and notes be used as is. If additional notes are required, add new notes rather than modifying existing notes. If a note does not apply to a project than delete the note entirely.

4) Door and frame type drawings are included on Architectural Legend, Notes, and Abbreviations Drawing Sheet. Coordinate Schedule with Legend Sheet.

Use of the Door Schedule:

1) Each project should assign Owner(s) of the Door Schedule for the project. This person is responsible for filling out the schedule, coordinating information from other disciplines, and keeping the schedule up-to-date throughout the project.

2) As soon as doors have been identified on the drawings with door numbers, the door schedule can be filled out. Usually, exterior doors are listed first since they may be issued with an exterior building "shell" construction package. Interior doors are listed next.

3) Obtain the following additional information for the schedule from the following resources:
   - Door hardware groups from the door hardware consultant.
   - Door and frame paint system and color numbers from the interior designer.
   - Life safety device codes (if any) from the Life Safety Engineer.
   - Door frame jamb, head, and sill details from the project lead architect or designers.
   - Door assembly fire ratings - coordinate with the project Code Drawings.

4) With multiple package construction projects, the Door Schedule may be issued several times throughout the project. It is important to track the changes to the Schedule with each issue. Highlight revisions to the schedule from the previous issue with a shading pattern (light green or yellow print light enough to allow faxing the schedule without blacking out the cells). Update the Revision number and date in schedule footer and save a separate copy of each updated version in the project directory for project history.

SECTION 08 06 10 - DOOR SCHEDULE

General Notes:

A. See plan drawings for additional head, jamb and sill details.

B. Door number indicates door location.

C. For glazing type(s), "G-_", refer to Specifications Section 08 80 00.

D. For door and frame types, refer to Architectural Drawing Legend Sheet, NVA-0002.

E. For Fire Rated Glazed Wall and Door Assemblies refer to Specification Section 08 43 43

F. Unless noted otherwise: Paint all interior HM doors and frames P57-A. Paint all exterior HM doors and frames P51 in a color to match adjacent siding.

G. Install rated and non-rated HM frames in walls per Specification Section 08 11 26 unless noted otherwise.

Abbreviations:

ALUM	= Aluminum	CYL	=Cylinder
CL	= Chain link	HDWR	=Hardware
CR	= Card reader	MIN	= Minute
FACT	= Factory	P-XXX-XX	= Paint-System-Color
G - #	= Glazing type	PR	= Pair
GALV	= Galvanized	SIM	= Similar
HM	= Hollow Metal	STL	= Steel
HR	= Hour	TO	= Trimmed opening
LSS	= Life safety System	WD	= Wood
		WM	= Wire mesh
		FRGW	= Fire Rated Glazed Door Assembly

Keyed Notes:

1. Undercut door bottom 1 inch.
2. Factory prep frame and door for elec. hardware.
3. Coordinate with GAF manufacturer.
4. Keyed removeable mullion between door leafs.
5. Magnetic hold-open.
6. CR and exterior actuator button on bollard.
7. Insulated door.
8. Access panel see specification section 08 31 00.
9. Use hardware salvaged from door NV433A in phase 1.
10. Confirm existing door is labled as a rated door. If not rated, provide a lable from a qualified agency or replace the door with a new rated door to match existing function and apearance.
11. 3'-0" wide door is the active leaf

Door	Door				Frame			Detail			HDWR	CYL	LSS	Glazing	Fire	
Number	Opening Size (WxHxT)	Material	Type	Finish	Material	Type	Finish	Head	Jamb	Sill	Set	Type	Code	Type	Label	Remarks
LEVEL 0																
50.1	2'-6"x2'-6"	FACT	FACT	FACT	FACT	FACT	FACT				148				2 hour	8
LEVEL 1																
122.1	Existing										135				90 min	10
122.2	3'-0"x8'-0"x1-3/4" (Existing)	HM	N		HM	D		14/7606	18/7606		149					salvaged door, 2
122.3	8'-0"x8'-0"x2"	FACT	OHC		FACT	FACT		13/7606	17/7606		123					salvaged door, repaint to match current finish.
122A.1	3'-0"x7'-0"x1-3/4"	HM	N		HM	D					119			G-4		
150.1	3'-0"x7'-0"x1-3/4"	ALUM	FG		ALUM	D/D					136			G-2		3,4
150.2	3'-0"+1'-6" x 7'-0"x 1-3/4" PR	WD	N/F		HM	D/D					135			G-5	90 min	
151.1	3'-0"x 7'-0"x1-3/4"	WD	F		HM	D					101				45 min	
152.1	3'-0"+3'-0" x 7'-0"x1-3/4" PR	FRGW	FGR/FGR		FRGW	D/DR					150			FRGW	90 min	2
152.2	3'-0"+2'-6" x 7'-0"x1-3/4" PR	ALUM	FG/FG		ALUM	D/DT					151			G-4/G-7		2,3, G-7 @ transom, 11
152.3	3'-0"+2'-6" x 7'-0"x1-3/4" PR	HM	F/F		HM	D/D					152					5, 11
153.1	3'-6"x7'-0"x1-3/4"	WD	F		HM	D					108				45 min	2
156.1	3'-0"x 7'-0"x1-3/4"	WD	F		HM	D					108				45 min	2
158.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					138				45 min	2
159.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
160.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	DSL					138			G-5	45 min	2
162.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					108				45 min	2
163.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139			G-5	45 min	2
163A.1	3'-6"x7'-0"x1-3/4"	WD	F		HM	D					119					
164.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					137				45 min	

SECTION 08 06 10 - DOOR SCHEDULE

General Notes:

A. See plan drawings for additional head, jamb and sill details.

B. Door number indicates door location.

C. For glazing type(s), "G-_", refer to Specifications Section 08 80 00.

D. For door and frame types, refer to Architectural Drawing Legend Sheet, NVA-0002.

E. For Fire Rated Glazed Wall and Door Assemblies refer to Specification Section 08 43 43

F. Unless noted otherwise: Paint all interior HM doors and frames P57-A. Paint all exterior HM doors and frames P51 in a color to match adjacent siding.

G. Install rated and non-rated HM frames in walls per Specification Section 08 11 26 unless noted otherwise.

Abbreviations:

ALUM	= Aluminum	CYL	=Cylinder
CL	= Chain link	HDWR	=Hardware
CR	= Card reader	MIN	= Minute
FACT	= Factory	P-XXX-XX	= Paint-System-Color
G - #	= Glazing type	PR	= Pair
GALV	= Galvanized	SIM	= Similar
HM	= Hollow Metal	STL	= Steel
HR	= Hour	TO	= Trimmed opening
LSS	= Life safety System	WD	= Wood
		WM	= Wire mesh
		FRGW	= Fire Rated Glazed Door Assembly

Keyed Notes:

1. Undercut door bottom 1 inch.
2. Factory prep frame and door for elec. hardware.
3. Coordinate with GAF manufacturer.
4. Keyed removeable mullion between door leafs.
5. Magnetic hold-open.
6. CR and exterior actuator button on bollard.
7. Insulated door.
8. Access panel see specification section 08 31 00.
9. Use hardware salvaged from door NV433A in phase 1.
10. Confirm existing door is labled as a rated door. If not rated, provide a lable from a qualified agency or replace the door with a new rated door to match existing function and apearance.
11. 3'-0" wide door is the active leaf

Door	Door				Frame			Detail			HDWR	CYL	LSS	Glazing	Fire	
Number	Opening Size (WxHxT)	Material	Type	Finish	Material	Type	Finish	Head	Jamb	Sill	Set	Type	Code	Type	Label	Remarks
166.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					137				45 min	
169.1	3'-0"x7'-0"x1-3/4" PR	WD	F/F		HM	D/D					140				45 min	2
169.2	3'-0"x7'-0"x1-3/4"	WD	F		HM	D/D					102				90 min	
169A.1	4'-0"x 9'-0"x 1-3/4" (3 panels)	WD	SL2		HM	D/D					141					Custom sliding barn door.
169B.1	4'-0"x 9'-0"x 1-3/4" (3 panels)	WD	SL2		HM	D/D					141					Custom sliding barn door
170A.1	3'-0"x8'-7-1/2"x1-3/4" PR	ALUM	FG/FG		ALUM	D/D					142			G-2		2,3,4,6
170.1	3'-0"x8'-0"x1-3/4" PR	ALUM	FG/FG		ALUM	D/D					143			G-4		2,3
180.1	3'-0"x7'-0"x1-3/4"	WD	N		HM	D					106				90 min	2
180.2	3'-0"x7'-5-3/4"x1-3/4"	ALUM	FG		ALUM	D					120			G-2		3
LEVEL 2																
250.1	4'-0"x7'-0"x1-3/4"	WD	F		HM	D					106				90 min	2
250A.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
251.1	3'-6"x7'-0"x1-3/4"	WD	F		HM	D	P84-A				144				45 min	
252.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					145				45 min	
253.1	3'-6"x7'-0"x1-3/4"	WD	F		HM	D					108				45 min	2
254.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					145				45 min	
256.1	3'-0"x 7'-0"x1-3/4"	WD	F		HM	D					108				45 min	2
257.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139				45 min	2
258.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					138				45 min	2
259.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
260.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	DSL					138				45 min	2

SECTION 08 06 10 - DOOR SCHEDULE

General Notes:

A. See plan drawings for additional head, jamb and sill details.

B. Door number indicates door location.

C. For glazing type(s), "G-_", refer to Specifications Section 08 80 00.

D. For door and frame types, refer to Architectural Drawing Legend Sheet, NVA-0002.

E. For Fire Rated Glazed Wall and Door Assemblies refer to Specification Section 08 43 43

F. Unless noted otherwise: Paint all interior HM doors and frames P57-A. Paint all exterior HM doors and frames P51 in a color to match adjacent siding.

G. Install rated and non-rated HM frames in walls per Specification Section 08 11 26 unless noted otherwise.

Abbreviations:

ALUM	= Aluminum	CYL	=Cylinder
CL	= Chain link	HDWR	=Hardware
CR	= Card reader	MIN	= Minute
FACT	= Factory	P-XXX-XX	= Paint-System-Color
G - #	= Glazing type	PR	= Pair
GALV	= Galvanized	SIM	= Similar
HM	= Hollow Metal	STL	= Steel
HR	= Hour	TO	= Trimmed opening
LSS	= Life safety System	WD	= Wood
		WM	= Wire mesh
		FRGW	= Fire Rated Glazed Door Assembly

Keyed Notes:

1. Undercut door bottom 1 inch.
2. Factory prep frame and door for elec. hardware.
3. Coordinate with GAF manufacturer.
4. Keyed removeable mullion between door leafs.
5. Magnetic hold-open.
6. CR and exterior actuator button on bollard.
7. Insulated door.
8. Access panel see specification section 08 31 00.
9. Use hardware salvaged from door NV433A in phase 1.
10. Confirm existing door is labled as a rated door. If not rated, provide a lable from a qualified agency or replace the door with a new rated door to match existing function and apearance.
11. 3'-0" wide door is the active leaf

Door	Door				Frame			Detail			HDWR	CYL	LSS	Glazing	Fire	
Number	Opening Size (WxHxT)	Material	Type	Finish	Material	Type	Finish	Head	Jamb	Sill	Set	Type	Code	Type	Label	Remarks
262.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	DSL					138				45 min	2
264.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					138				45 min	2
265.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139			G-5	45 min	2
265A.1	3'-6"x8'-0"x 1-3/4"	WD	F		HM	D					119					
267.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					108				45 min	2
268.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	DSL					138			G-5	45 min	2
269.1	3'-0"x 7'-0"x 1-3/4"	FACT	F		FACT	D					122					by manufacturer
270.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					138				45 min	2
271.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139			G-5	45 min	2
271A.1	3'-6"x8'-0"x1-3/4"	WD	F		HM	D					119					
273.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
280.1	3'-0"x7'-0"x1-3/4"	WD	N		HM	D					106				90 min	2
LEVEL 3																
350.1	4'-0"x7'-0"x1-3/4"	WD	F		HM	D					106				45 min	2
350A.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
351.1	3'-6"x7'-0"x1-3/4"	WD	F		HM	D	P84-A				144				45 min	
352.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					145				45 min	
353.1	3'-6"x7'-0"x1-3/4"	WD	F		HM	D					108				45 min	2
354.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					145				45 min	
356.1	3'-0"x 7'-0"x1-3/4"	WD	F		HM	D					108				45 min	2
357.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139			G-5	45 min	2

SECTION 08 06 10 - DOOR SCHEDULE

General Notes:

A. See plan drawings for additional head, jamb and sill details.

B. Door number indicates door location.

C. For glazing type(s), "G-_", refer to Specifications Section 08 80 00.

D. For door and frame types, refer to Architectural Drawing Legend Sheet, NVA-0002.

E. For Fire Rated Glazed Wall and Door Assemblies refer to Specification Section 08 43 43

F. Unless noted otherwise: Paint all interior HM doors and frames P57-A. Paint all exterior HM doors and frames P51 in a color to match adjacent siding.

G. Install rated and non-rated HM frames in walls per Specification Section 08 11 26 unless noted otherwise.

Abbreviations:

ALUM	= Aluminum	CYL	=Cylinder
CL	= Chain link	HDWR	=Hardware
CR	= Card reader	MIN	= Minute
FACT	= Factory	P-XXX-XX	= Paint-System-Color
G - #	= Glazing type	PR	= Pair
GALV	= Galvanized	SIM	= Similar
HM	= Hollow Metal	STL	= Steel
HR	= Hour	TO	= Trimmed opening
LSS	= Life safety System	WD	= Wood
		WM	= Wire mesh
		FRGW	= Fire Rated Glazed Door Assembly

Keyed Notes:

1. Undercut door bottom 1 inch.
2. Factory prep frame and door for elec. hardware.
3. Coordinate with GAF manufacturer.
4. Keyed removeable mullion between door leafs.
5. Magnetic hold-open.
6. CR and exterior actuator button on bollard.
7. Insulated door.
8. Access panel see specification section 08 31 00.
9. Use hardware salvaged from door NV433A in phase 1.
10. Confirm existing door is labled as a rated door. If not rated, provide a lable from a qualified agency or replace the door with a new rated door to match existing function and apearance.
11. 3'-0" wide door is the active leaf

Door	Door				Frame			Detail			HDWR	CYL	LSS	Glazing	Fire	
Number	Opening Size (WxHxT)	Material	Type	Finish	Material	Type	Finish	Head	Jamb	Sill	Set	Type	Code	Type	Label	Remarks
358.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					138				45 min	2
359.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
360.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	DSL					138			G5	45 min	2
362.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	DSL					138			G-5	45 min	2
364.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					138				45 min	2
365.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139			G-5	45 min	2
365A.1	3'-6"x8'-0"x1-3/4"	WD	F		HM	D					119					
367.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					108				45 min	2
368.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	DSL					138			G-5	45 min	2
369.1	3'-0"x 7'-0"x 1-3/4"	FACT	F		FACT	D					122					by manufacturer
370.1	3'-0"x 7'-0"x 1-3/4"	WD	F		HM	D					138				45 min	2
371.1	3'-0"+1'-6"x7'-0"x1-3/4" PR	WD	N/F		HM	D/D					139			G-5	45 min	2
371A.1	3'-6"x8'-0"x1-3/4"	WD	F		HM	D					119					
373.1	3'-0"x7'-0"x1-3/4"	WD	F		HM	D					113					
380.1	3'-0"x7'-0"x1-3/4"	WD	N		HM	D					106				90 min	2
LEVEL 4																
433A	3'-0"x7'-0"x1-3/4"	HM	F		HM	D					149				90 min	2,9
450.1	4'-0"x7'-0"x1-3/4"	HM	F		HM	D					101				90 min	
450.2	3'-0"x7'-0"x1-3/4"	HM	F		HM	D4		15/7606	19/7606	16/7606	130					7
454.1	3'-0"x7'-0"x1-3/4"	HM	F		HM	D					108				45 min	2
457.1	3'-0"x7'-0"x1-3/4" PR	HM	F/F		HM	D					146				45 min	2

SECTION 08 06 10 - DOOR SCHEDULE

General Notes:

A. See plan drawings for additional head, jamb and sill details.

B. Door number indicates door location.

C. For glazing type(s), "G-_", refer to Specifications Section 08 80 00.

D. For door and frame types, refer to Architectural Drawing Legend Sheet, NVA-0002.

E. For Fire Rated Glazed Wall and Door Assemblies refer to Specification Section 08 43 43

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Abbreviations:

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		WM	= Wire mesh
		FRGW	= Fire Rated Glazed Door Assembly

Keyed Notes:

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6. CR and exterior actuator button on bollard.
7. Insulated door.
8. Access panel see specification section 08 31 00.
9. Use hardware salvaged from door NV433A in phase 1.
10. Confirm existing door is labled as a rated door. If not rated, provide a lable from a qualified agency or replace the door with a new rated door to match existing function and apearance.
11. 3'-0" wide door is the active leaf

Door	Door				Frame			Detail			HDWR	CYL	LSS	Glazing	Fire	
Number	Opening Size (WxHxT)	Material	Type	Finish	Material	Type	Finish	Head	Jamb	Sill	Set	Type	Code	Type	Label	Remarks
457.2	3'-0"x7'-0"x1-3/4"	HM	F		HM	D4		15/7606	19/7606	16/7606	130					7
459.1	3'-0"x7'-0"x1-3/4"	HM	F		HM	D					108				45 min	2
459.2	3'-0"x7'-0"x1-3/4"	HM	F		HM	D					101				45 min	
459.3	3'-0"x7'-0"x1-3/4"	HM	F		HM	D4		15/7606	19/7606	16/7606	130					7

SECTION 08 80 00

GLAZING

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. This Section includes:

1. Glass glazing for metal frames, doors, and glazed aluminum framing systems.

2. Glass glazing for cabinet doors.

3. Mirror glass.

4. Plastic glazing material.

5. Glass glazing materials and installation requirements are included in this Section for other sections referencing this Section.

B. Related Sections include the following:

1. Division 08 Section “Door Schedule” for opening schedule requiring glazing.

2. Division 08 Section “Glazed Aluminum-Framed Systems” for framing systems requiring glazing,

1.3 DESIGN CRITERIA

A. Size glass to withstand dead loads and positive and negative live loads acting normal to plane of glass as calculated in accordance with applicable code for Project design criteria specified on the Drawings.

B. Limit glass deflection to 1/175 or flexure limit of glass with full recovery of glazing materials, whichever is less.

C. Sealed Insulating Glass Units: comply with ASTM E774.

1.4 WARRANTY

A. Furnish 10-year warranty to include coverage for sealed glass units from seal failure, interpane dusting or misting, and replacement of same.

B. Furnish 10-year warranty to include coverage for delamination of laminated glass and replacement of same.

1.5 QUALITY ASSURANCE

A. Glazing shall conform to Consumer Product Safety Commission, CFR Title 16, Part 1201, Safety Standards for Architectural Glazing Materials.

B. Perform work in accordance with GANA Glazing Manual and GANA Sealant Manual for glazing installation methods.

C. Inspection guidelines are as follows:

1. Pinholes larger than 1/32-inch diameter are not allowed.
2. Clusters or close spacing (three or more) of smaller pinholes are not allowed.
3. Scratches are not allowed.

1.6 SUBMITTALS

A. Product Data:

1. Glass: Provide structural, physical and environmental characteristics, size limitations, special handling, or installation requirements.

2. Glazing Sealants, Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors where exposed.

B. Samples, Glass: Submit two samples 12 by 12 inch size, illustrating each glass, glazing unit, coloration, and coating design.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Flat Glass Manufacturers:

1. ACH Glass Operations.
2. AFG Industries, Inc.
3. Guardian Industries.
4. PPG Industries Inc.
5. Pilkington North America, Inc.

B. Glass Fabricators:

1. AFGD, Inc.
2. Arch Aluminum & Glass Company.
3. Cardinal LG.
4. Guardian Industries.
5. Oldcastle Glass.
6. PPG Industries, Inc.
7. Viracon.

C. Plastic Glazing:

1. Co-Ex Corporation.

D. Glazing Sealant, Gasket, Tapes, and Compounds Manufacturers:

1. Dow Corning.
2. General Electric Silicones.
3. Pecora Corporation.
4. Tremco.

2.2 COMPONENTS

A. Following paragraphs describe basic glass materials. Glass unit Types are scheduled at the end of this Section.

B. Flat Glass: Minimum 1/4 inch unless other thickness is required to meet specified design criteria.

1. Clear Float Glass: ASTM C1036, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select.

2. Clear Heat Strengthened Glass: ASTM C1048, Kind HS, heat strengthened, Condition A uncoated, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select. Provide heat strengthened glass where required to comply with project design criteria and thermal stresses due to glass shading and exposure.

3. Low-E Coated Glass: Clear float glass, with low emissivity coating on Number 2 surface.

4. Low-E and Ceramic Frit Coated Glass: ASTM C1048 Kind HS heat strengthened or FT fully tempered to meet Project design criteria, Condition B, one surface ceramic fritted and fired over top of Low-E coating, rolled; coat back (Number 2) surface.

a. Acceptable Product: Screen No. 2002, Horizontal lines with 50 percent coverage; manufactured by PPG, to match existing Morrison Center Project.

b. Glass: Clear to match adjacent nonspandrel glazing.

5. Mirror Glass: ASTM C1036, Type 1 transparent flat, Class 1 clear, Quality q1 select; eased, polished smooth edges; evenly deposit silver then copper solutions on back of mirror by chemical reaction; paint the copper coating and seal exposed edges; size noted on Drawings.

C. Safety Glass: Conform to ANSI Z97.1, minimum thickness 1/4 inch (6) mm unless otherwise indicated.

1. Clear Tempered Glass: ASTM C1048, Kind FT Fully tempered, Condition A, uncoated, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select; with horizontal tempering.

2. Clear Laminated Glass: ASTM C1172, Kind LA, clear float glass, or Kind LHS, clear heat strengthened glass; with plastic interlayer.

a. Plastic Interlayer: Polyvinyl butyral, minimum 0.030 inch thick.

D. Fire Resistive Glass: Glazing materials to by types approved for use with specified materials in fire-rated applications as indicated on Drawings. Minimum 1/4 inch (6mm) thick unless otherwise indicated.

1. Fire-Resistive Glazing: ceramic materials to be types approved for use with specified materials in fire-rated door lights indicated in Section 08 06 10, Door Schedule. Minimum 1/4 inch (6mm) thick unless otherwise indicated.

a. Framing: manufacturer's standard UL tested steel glazing stop.

b. Glazing Material and Thickness: as required to meet fire-resistance rating; minimum ¼ inch thick.

c. Impact Resistance: to meet ANSI Z 79.1 and CPSC 16 CFR 1201.

d. Materials shall be listed by UL, WH, or other testing agency acceptable to authority having jurisdiction.

e. Glazing Stop Finish: match steel frame finish.

f. Acceptable Products: fire rated products that can meet glazing applications and fire ratings indicated on Drawings and Schedules and made by one of the following manufacturers:

(1) Glavebel SA, distributed by Interedge Technologies.
(2) Technical Glass Products.
(3) Vetrotech, Division of Saint-Gobain Glass.

E. Insulating Glass Units: Total unit thickness 1 inch.

1. Double Pane Insulating Glass Units: ASTM E774 Class A and ASTM E773; with silicone sealant edge seal; purge interpane space with dry hermetic air.

2. Insulated Glass Unit Edge Seal Construction: Stainless steel, mitered and spigoted corners.

3. Insulated Glass Unit Edge Seal Material: primary seal, manufacturer's standard polyisobutylene sealant, black color; secondary seal, manufacturer's standard silicone sealant, black color.

4. Insulating Glass Unit Configurations: as specified in Glass Type Schedule at end of this Section.

2.3 ACCESSORIES

A. Elastomeric Glazing Sealants: Materials compatible with adjacent materials including glass, insulating glass seals, and glazing channels.

1. Silicone Glazing Sealant: ASTM C920, Type S, Grade NS, class and use suitable for glazing application indicated; two-component; chemical curing; capable of water immersion without loss of properties; non-bleeding, nonstaining, cured Shore A hardness of 15 to 25.

a. Color: black.

b. Structural Silicone: Furnish high-modulus structural silicone glazing materials where sealant bonds glass to substrate.

B. Glazing Splines: ASTM C864 Option II, flame propagation test is not required, resilient silicone extruded shape to suit glazing channel retaining slot.

1. Color: As selected.

C. Preformed Glazing Tape: Size to suit application. Tapes shall comply with applicable section of AAMA 800 for specified type of tape.

1. Preformed butyl compound; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.

a. Butyl Corner Sealant: ASTM C920 single component nonskinning butyl compatible with glazing tape; color to match tape.

D. Setting Blocks: manufacturer's standard material.

E. Spacer Shims: manufacturer's standard material.

F. Mirror Mounting:

1. Mechanical Fasteners: Provide round No. 4 finish stainless steel button fasteners, with spacers behind mirror, anchored through mirror into wall framing or solid backing.

2. Adhesive: Palmer Mirro-Mastic or approved.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Perform installation in accordance with GANA Glazing Manual.

1. Glazing Sealants: Comply with ASTM C1193.
2. Fire Rated Openings: Comply with NFPA 80.

B. Exterior Dry Method (Spline Glazing):

1. Cut glazing spline to length; install on glazing pane. Seal corners by butting spline and sealing junctions with compatible butyl sealant.

2. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.

3. Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.

4. Install removable stops without displacing glazing spline. Exert pressure for full continuous contact.

C. Exterior and Interior Butt Glazed Method (Sealant Only) Installation:

1. Apply sealant to open side of joint in continuous operation; thoroughly fill joint without displacing foam rod. Tool sealant surface smooth to concave profile.

2. Permit sealant to cure then remove foam backer rod. Apply sealant to opposite side, tool smooth to concave profile.

3. Remove masking tape.

D. Interior Dry Method (Tape and Tape) Installation:

1. Cut glazing tape to length and set against permanent stops, projecting 1/16 inch above sight line.

2. Place setting blocks at 1/4 points with edge block no more than 6 inches from corners.

3. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit.

4. Place glazing tape on free perimeter of glazing in same manner described above.

5. Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact.

6. Knife trim protruding tape.

E. Interior Wet Method (Compound and Compound) Installation:

1. Install glazing resting on setting blocks. Install applied stop and center pane by use of spacer shims at 24-inch centers, kept 1/4 inch below sight line.

2. Locate and secure glazing pane using spring wire clips.

3. Fill gaps between glazing and stops with glazing compound until flush with sight line. Tool surface to straight line.

F. Cleaning And Adjusting:

1. Remove glazing materials from finish surfaces.
2. Remove labels after work is complete.
3. Clean glass and adjacent surfaces.

3.2 GLASS TYPE SCHEDULE

A. Locations for Glass Types are indicated on the Drawings and in Section 08 06 10, Door Schedule.

B. Type G-1: Not Used

C. Type G2; Low-E, Insulating Glass; Both Panes Fully Tempered:

1. Acceptable Product: Solarban 60; PPG, to match existing Morrison Center Project.
2. Outer Pane: clear float glass with Low-E coating on No. 2 side.

3. Inner Pane: clear float glass.
4. Fully temper both outer and inner panes for impact resistance.
5. Thermal performance of window assembly as specified in Section 08 40 13.
6. Solar Heat Gain Coefficient (SHGC): Minimum performance (SHGC) 0.4.

D. Type G3; Low-E, Insulating Glass with Silkscreened Ceramic Frit Spandrel:

1. Acceptable Product: Solarban 60; PPG, to match existing Morrison Center Project.

2. Outer Pane: clear float glass with silkscreened ceramic frit and Low-E coating on No. 2 side.

3. Inner Pane: clear float glass with warm gray colored spandrel coating on No. 4 side.

4. Heat strengthen or fully temper both outer and inner panes as required to meet Project design criteria.
5. Thermal performance of window assembly as specified in Section 08 40 13.
6. Solar Heat Gain Coefficient (SHGC): Minimum performance (SHGC) 0.4.

E. Type G4: Clear float glass, fully tempered.

F. Type G5: Fire-resistive glass.

G. Type G6: Mirror glass.

H. Type G7: Plastic glazing.

END OF SECTION

SPECIFICATION SECTION	FINISH CODE	COLOR CODE		REMARKS
SECTION 04 72 00				
CAST STONE MASONRY	STN		ARCHITECTURAL CAST STONE	
SECTION 06 40 00				
ARCHITECTURAL WOODWORK			WALL PANELS	
	WPL-1	NUTMEG	RICHLITE, 1/4" THICK,	
	WPL-2	MAPLE	INTERLAM, ART DIFFUSION COP 001, RAW MDF WITH POLYURETHANE MATT LACQUIER FINISH	
SECTION 09 30 00			CERAMIC, GLASS, PORCELAIN AND SLATE TILE	
TILING	CT-1	D335	DAL TILE, 'KEYSTONES', COLOR: ALMOND	WALL TILE
	CT-2	MB-5A	DAL TILE, 'KEYSTONES', COLOR: ALMOND	COVED BASE TILE
	PT-4	CD60	DAL TILE, 'PORCEALTO', COLOR: GRIGIO ELBA 12x12x5/16"	FLOOR TILE (LARGE TOILETS)
	ST-1	S700	DAL TILE, NATURAL SLATE "CALIFORNIA GOLD" 12x12 x 3/8"	FLOOR TILE
SECTION 09 51 00				
ACOUSTICAL CEILINGS	SAT-1	WH	ARMSTRONG, CLEANROOM MYLAR, MINERAL FIBER, MYLAR FACED, SQUARE EDGE, COLOR: WHITE	
	SAT-2	WH	ARMSTRONG, CIRRUS OPEN PLAN, MINERAL FIBER, TEGULAR EDGE, COLOR: WHITE	
	GR-1	WH	ARMSTRONG, PRELUDE XL 15/16 EXPOSED TEE GRID SYSTEM, COLOR: WHITE	
	GR-2	WH	ARMSTRONG, SILHOUETTE XL 1/4" REVEAL 9/16 BOLT SLOT GRID SYSTEM, COLOR: WHITE	
SECTION 09 63 00			RUBBER BASE	
RESILIENT FLOORING	RB-1	P184	4" HIGH, ROPPE, COLOR: ALMOND	
	RB-2	P158	4" HIGH, ROPPE, COLOR: SAND	
	RB-3	P130	4" HIGH, ROPPE, COLOR: BUCKSIN	
	RB-4	P100	4" HIGH, ROPPE, COLOR: BLACK	
	RB-5		4" HIGH, TO MATCH FLOOR STONE	
	RB-6	CLEAR	4" PLAIN SLICED WOOD MAPLE	
			RUBBER TILE	
	RF-1	2946	NORA 'NP ENVIRONCARE', COLOR: MORNING DEW	FIELD TILE
	RF-2	2779	NORA 'NP ENVIRONCARE', COLOR: EVERGREEN PATH	ACCENT TILE
	RF-3	2949	NORA 'NP ENVIRONCARE', COLOR: SAGE	ACCENT TILE
	RF-4	2967	NORA 'NP ENVIRONCARE', COLOR: MOOR GRASS	ACCENT TILE
	RF-5	2787	NORA 'NP ENVIRONCARE', COLOR: DRIFTWOOD	ACCENT TILE
	RF-6	2785	NORA 'NP ENVIRONCARE', COLOR: SATIN WOOD	ACCENT TILE
	RF-7	2958	NORA 'NP ENVIRONCARE', COLOR: FALLEN ACORN	ACCENT TILE
	RF-8	2934	NORA 'NP ENVIRONCARE', COLOR: RAIN CLOUD	FIELD TILE (ELEVATOR)

SECTION 09 68 13			CARPET TILE	
TILE CARPETING	CPT-1	6270	INTERFACE 'PRECAST', COLOR: TRAVERTINE	FIELD CARPET
	CPT-2	6592	INTERFACE 'FLAGSTONE', COLOR: TRAVERTINE	ACCENT TILE, RANDOM
	CPT-3	6580	INTERFACE 'STONELINE', COLOR: TRAVERTINE	(INTERACTION ROOM)
	CPT-4	5847	INTERFACE 'SOLID FOUNDATION', COLOR: KELP	ACCENT TILE, RANDOM
	CPT-5	3536	INTERFACE 'PAINT BOX', COLOR: SHERWOOD	ACCENT TILE, RANDOM
	CPT-6	3580	INTERFACE 'PAINT BOX', COLOR: OCHRE	ACCENT TILE, RANDOM
	CPT-7	3589	INTERFACE 'PAINT BOX', COLOR: SABLE	ACCENT TILE, RANDOM
SECTION 09 91 26			PAINT COLORS	
BUILDING PAINTING	A	953	BENJAMIN MOORE 'CLASSIC COLORS', COLOR: FEATHER DOWN	INTERIOR-GEN. WALL COLOR
	B	1441	BENJAMIN MOORE 'CLASSIC COLORS', COLOR: AMETHYST SHADOW	ACCENT PAINT
	C	HC-8	BENJAMIN MOORE 'CLASSIC COLORS', COLOR: DORSET GOLD	ACCENT PAINT
	D	2136-40	BENJAMIN MOORE 'COLOR PREVIEW', COLOR: AEGEAN TEAL	ACCENT PAINT
	E	2143-30	BENJAMIN MOORE 'COLOR PREVIEW', COLOR: OLIVE BRANCH	ACCENT PAINT
	F	2157-30	BENJAMIN MOORE 'COLOR PREVIEW', COLOR: BUTTERSCOTCH	ACCENT PAINT
	G			OSHA SAFETY YELLOW
		NOTES:	1) REFER TO SPECIFICATION SECTION 03310 FOR CONCRETE SEALER AND HARDENER.	
			2) REFER TO SPEC SECTION 09915 - BUILDING PAINTING FOR PAINT SYSTEM. LOCATIONS AS SHOWN ON FINISH SCHEDULE AND DRAWINGS.	
			3) ACCENT COLOR DESIGNATION AS SHOWN ON DRAWINGS	
SECTION 12 48 13.13				
ENTRANCE MAT	EM-1	609023	INTERFACE 'SUPER FLOR', COLOR MID BROWN	

Section 09 06 10 - Room Finish Schedule - Legend

General Notes:

A. See plans and elevations for finish locations and patterns.
B. Refer to specifications for description of product types.
C. See interior elevations (and ceiling plans) for projection screen locations.
D. Where noted to paint surfaces black (including reveals) Use P-XXX-XX.
E. Resilient base on gypsum board walls only.
F. Paint soffits P-64A unless noted otherwise.
G. See stair details for railing and stringer paint colors and locations.
H. Not Used
I. Where multiple finishes are noted on one surface, refer to Drawings for layout of finishes and patterns.
J. Semi-colons (;) divide multiple finishes for surface in a single direction.
K. Refer to Drawings for finish substrate material: although paint system may indicate substrate materials refer to Drawings to verify.
L. All floor finishes extend wall-to-wall underneith casework and equipment.

Keyed Notes:

1. Ceiling heights as noted on reflective ceiling plans.
2. Paint freestanding columns in open office P-64A
3. Maple wood base where gypsum board and WPL-2 occurs.
4. Refer to Overall Finish Plan for patterns
5. Refer to Interior Elevations for patterns
6. Refer to Interior Elevations for additional wall finish materials.
7. Future Glass Wash
8. Reception, Offices and Work Files shall have 80% CPT-1 & 20% CPT-2, non directional
9. Team and Open Offices shall have 70% CPT-1 & 30% CPT-2, non directional
11. Refer to Spec Section 09 67 23 for Resinuous Coating Flooring types
12. Extend floor finish on entire floor including under casework (per NIH)

Abbreviations:

AFF	= Above Access Floor	(E)	= Existing	RF - #	= Resilient Flooring - Type #
AF	= Access Floor	EM	= Entrance Mat	SAT - #	= Suspended Acoustical Tile Ceiling - Type #
AFF	= Above Finish Floor	EXP STR	= Exposed Structure	SCRF - #	= Static Control Resislient Flooring
AT	= Acoustic Tile (surface applied)	EXT	= Exterior	SEAL	= Concrete Sealer
AWT	= Acoustic Wall Treatment	FAC	= Factory Finish	S/H	= Concrete Sealer / Hardner
AL MTL	= Aluminum Metal	FUT	= Future	SS	= Stainless Steel
CAF - #	= Cleanroom Access Floor - Type #	GB	= Gypsum Board	STL	= Steel
CG - #	= Corner Guard - Type #	G	= Glass	STN	= Stone
CLF	= Chain Link Fence	MIR	= Mirror	ST- #	= Stone Tile - Type #
CMU	= Concrete Masonry Unit	MTL	= Metal	UNO	= Unless Noted Otherwise
CONC	= Concrete	OF/CI	= Owner Furnished / Contractor Installed	UNS	= Unsealed Concrete
CP - #	= Broadloom Carpet - Type #	OF/OI	= Owner Furnished / Owner Installed	VDB - #	= Visual Display Board - Type #
CPT - #	= Carpet Tile - Type #	P-XXX-XX	= Paint System No./ Color Letter	WC - #	= Wall Covering - Type #
CR - #	= Chair/Crash Rail - Type #	PL - #	= Plastic Laminate - Type #	WG- #	= Wall Guard - Type #
CRC	= Chemical Resistant Coating - Section 09678	PLYWD	= Plywood	WD	= Wood
CT - #	= Ceramic Tile - Type #	PT- #	= Porcelin Tile - Type #	WPL-#	= Wall Panel
CWS - #	= Cleanroom Wall System - Type #	RB - #	= Resilient Base - Type #		
DGB	= Demountable Gypsum Board Partition	RC - #	= Resinuous Coating - Section 09675		

Section 09 06 10 - Room Finish Schedule

Note: Refer to legend on preceeding pages for abbreviations and notes.

Pkg. No. or RFI	Interior Finishes									
	Room		Floor	Base	Ceiling	Walls				
						North	East	South	West	
	No.	Name	Finish	Finish	Finish	Finish	Finish	Finish	Finish	Remarks
		BASEMENT LEVEL (LEVEL 0)								
				–	–	–	–	–	–	–
		LOWER LEVEL (LEVEL 1)								
	150	CORRIDOR	RF-1 RF-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	4, 6
	122	DOCK AREA	S/H	–	EXP STR	P-59A	G-7	P-59A	P-59A	
	122A	OFFICE	CPT-1	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	151	JANITOR	S/H	RB-4	EXP STR	P-65A	P-65A	P-65A	P-65A	
	153	SHARED EQUIPEMENT ROOM	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	156	STORAGE	S/H	RB-1	–	P-64A	P-64A	P-64A	P-64A	–
	152	CORRIDOR	RF-1 RF-2	RB-1	P-64A SAT-2 GR-2 EXP. STR.	P-64A	P-64A	P-64A	P-64A	4, 6
	159	GAS	S/H	–	–	–	–	–	–	–
	158	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	160	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	162	STORAGE	S/H	RB-1	–	P-64A	P-64A	P-64A	P-64A	–
	163	LAB 1F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67C	P-67A	4,12
	163A	CELL CULTURE	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	164	WOMEN'S RESTROOM	PT-4	CT-2	P-67A	P-67A CT-1	P-67A CT-1	P-67A CT-1	P-67A CT-1	5,6

Section 09 06 10 - Room Finish Schedule

Note: Refer to legend on preceeding pages for abbreviations and notes.

Pkg. No. or RFI	Interior Finishes									
	Room		Floor	Base	Ceiling	Walls				
						North	East	South	West	
	No.	Name	Finish	Finish	Finish	Finish	Finish	Finish	Finish	Remarks
	166	MEN'S RESTROOM	PT-4	CT-2	P-67A	P-67A CT-1	P-67A CT-1	P-67A CT-1	P-67A CT-1	5,6
	169	SEMINAR	CPT-3	RB-1	P-64A SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	4,6
	169A	STORAGE	CPT-3	RB-1	P-64A	P-64A	P-64A	P-64A	P-64A	_
	169B	STORAGE	CPT-3	RB-1	P-64A	P-64A	P-64A	P-64A	P-64A	_
	180	STAIR #4	S/H	_	_	P-65A	P-65A	P-65A	P-65A	_
	170	LOBBY/ INTERACTION	ST-1	RB-1	P-64A SAT-2 GR-2	P-64A	P-64A	STN	P-64A	4,6
	170A	VESTIBULE	EM-1	RB-5	P-64A	G-7	G-7	STN	G-7	
		MIDDLE LEVEL (LEVEL 2)								
	250	CORRIDOR	RF-1 RF-2	RB-1	P-64A SAT-2 GR-2 EXP. STR.	P-64A	P-64A	P-64A	P-64A	4,6
	250A	CORRIDOR	RF-1 RF-2	RB-1	P-64A SAT-2 GR-2 EXP. STR.	P-64A	P-64A	P-64A	P-64A	4,6
	251	GLASS WASH	RC-1	RC-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	7,12
	252	WOMEN'S RESTROOM	PT-4	CT-2	P-67A	P-67A CT-1	P-67A CT-1	P-67A CT-1	P-67A CT-1	_
	253	SHARED EQUIPEMENT ROOM	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	254	MEN'S RESTROOM	PT-4	CT-2	P-67A	P-67A CT-1	P-67A CT-1	P-67A CT-1	P-67A CT-1	_
	256	STORAGE	S/H	RB-1	_	P-64A	P-64A	P-64A	P-64A	_
	257	LAB 2F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67D	P-67A	4,12
	258	OPEN OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	9

Section 09 06 10 - Room Finish Schedule						Note: Refer to legend on preceeding pages for abbreviations and notes.				
	Interior Finishes									
						Walls				
Pkg. No.	Room		Floor	Base	Ceiling	North	East	South	West	
or RFI	No.	Name	Finish	Finish	Finish	Finish	Finish	Finish	Finish	Remarks
	259	GAS	S/H	–	–	–	–	–	–	–
	260	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	262	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	264	OPEN OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	9
	265	LAB 2F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67D	P-67A	4,12
	265A	CELL CULTURE	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	267	PCR	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	268	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	269	COLD ROOM	FACT	FACT	FACT	FACT	FACT	FACT	FACT	–
	270	OPEN OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	9
	271	LAB 2F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67D	P-67A	4,12
	271A	CELL CULTURE	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	273	GAS	S/H	–	–	–	–	–	–	–
	280	STAIR #4	S/H	–	–	P-65A	P-65A	P-65A	P-65A	–
		UPPER LEVEL (LEVEL3)								
	350	CORRIDOR	RF-1 RF-2	RB-1	P-64A SAT-2 GR-2 EXP. STR.	P-64A	P-64A	P-64A	P-64A	4,6
	350A	CORRIDOR	RF-1 RF-2	RB-1	P-64A SAT-2 GR-2 EXP. STR.	P-64A	P-64A	P-64A	P-64A	4,6
	351	STORAGE	RC-1	RC-1	–	P-67A	P-67A	P-67A	P-67A	7,12
	352	WOMEN'S RESTROOM	PT-4	CT-2	P-67A	P-67A CT-1	P-67A CT-1	P-67A CT-1	P-67A CT-1	–
	353	SHARED EQUIPEMENT ROOM	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	354	MEN'S RESTROOM	PT-4	CT-2	P-67A	P-67A CT-1	P-67A CT-1	P-67A CT-1	P-67A CT-1	–

Section 09 06 10 - Room Finish Schedule

Note: Refer to legend on preceeding pages for abbreviations and notes.

Pkg. No. or RFI	Room No.	Room Name	Interior Finishes: Floor Finish	Base Finish	Ceiling Finish	Walls: North Finish	Walls: East Finish	Walls: South Finish	Walls: West Finish	Remarks
	356	STORAGE	S/H	RB-1	_	P-64A	P-64A	P-64A	P-64A	_
	357	LAB 2F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67E	P-67A	4,12
	358	OPEN OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	9
	359	GAS	S/H	_	_	_	_	_	_	_
	360	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	362	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	364	OPEN OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	9
	365	LAB 2F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67E	P-67A	4,12
	365A	CELL CULTURE	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	367	PCR	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	368	OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	8
	369	COLD ROOM	FACT	FACT	FACT	FACT	FACT	FACT	FACT	_
	370	OPEN OFFICE	CPT-1 CPT-2	RB-1	SAT-2 GR-2	P-64A	P-64A	P-64A	P-64A	9
	371	LAB 2F	RF-2 RF-3 RF-6 RF-7	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67E	P-67A	4,12
	371A	CELL CULTURE	RF-1	RB-1	SAT-1 GR-1	P-67A	P-67A	P-67A	P-67A	12
	373	GAS	S/H	_	_	_	_	_	_	_
	380	STAIR #4	S/H	_	_	P-65A	P-65A	P-65A	P-65A	_
		PENTHOUSE LEVEL (LEVEL 4)								
	450	CORRIDOR	S/H	RB-4	EXP STR	P-65A	P-65A	P-65A	P-65A	_
	454	STORAGE	S/H	RB-4	EXP STR	P-65A	P-65A	P-65A	P-65A	
	457	STORAGE	S/H	RB-4	EXP STR	P-65A	P-65A	P-65A	P-65A	_

Section 09 06 10 - Room Finish Schedule		Note: Refer to legend on preceeding pages for abbreviations and notes.							
	Interior Finishes								
	Room		Floor	Base	Ceiling	Walls				
Pkg. No.						North	East	South	West	
or RFI	No.	Name	Finish	Finish	Finish	Finish	Finish	Finish	Finish	Remarks
	459	MECHANICAL ROOM	S/H	RB-4	EXP STR	P-65A	P-65A	P-65A	P-65A	_

SECTION 09 30 00

TILING

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. This Section includes:

1. Porcelain tile floor and base finish installed using thin-set application method with cementitious grouted joints.

2. Stone floor tile and base.

3. Ceramic and porcelain tile walls and wainscot installed using thin-set application method with cementitious grouted joints.

4. Glass accent tiles.

5. Thresholds at door openings.

6. Stainless steel termination strips.

7. Installation accessories.

B. Related Sections include the following:

1. Division 07 Section “Sealants” for joint sealants.
2. Division 09 Section “Room Finish Schedule” for locations of tile.
3. Division 09 Section “Gypsum Board Assemblies” for substrate for wall tile.

1.3 QUALITY ASSURANCE

A. Tile Materials: Conform to ANSI A137.1.

B. Installation: Conform to TCA Handbook for Ceramic Tile Installation.

1.4 QUALIFICATIONS

A. Manufacturer: company specializing in the manufacture of products specified in this Section with minimum 3 years’ documented experience.

B. Installer: company specializing in applying the work of this Section with minimum 3 years’ documented experience and approved by product manufacturer.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do not install mortar, adhesives, or grout in a closed, unventilated environment.

B. Maintain 50 degrees F during installation of mortar materials.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.7 SUBMITTALS

A. Provide the following:

1. Product data: for tile products and accessories.

2. Submittals: consisting of minimum 1/4-inch scale plans indicating tile layout, patterns, and minimum 3-inch scale details indicating perimeter conditions, junctions with dissimilar materials, thresholds, and setting details.

3. Manufacturer's certificate that tile materials supplied conform to ANSI A137.1.

B. Provide the following before date of Substantial Completion:

1. Maintenance Data: manufacturer's recommended cleaning and stain removal methods, cleaning materials, and polishes and waxes.

2. Extra Materials: furnish one box of each tile used from same production run and six extra pieces of each trim used.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Ceramic Tile:

1. American Olean.
2. Dal Tile.
3. Florida Tile.

B. Porcelain Tile:

1. American Olean.
2. Dal Tile.
3. Florida Tile.

C. Stone Tile:

1. American Olean.

D. Adhesive, Mortar, and Grout:

1. Laticrete International Inc.

2. Hydroment.
3. Custom Building Products.

2.2 MATERIAL

A. Tile colors are scheduled in Section 09 06 10, Room Finish Schedule.

B. Ceramic Tile:

1. Ceramic Wall Tile (CT-1): ANSI A137.1; zero to 0.5 percent water absorption; 2-inch by 2-inch by 3/16-inch size, pattern as shown on Drawings; cushioned edge; finish to match manufacturer Dal Tile; style/pattern, Keystones; matching 6inches high by 13 inches wide coved base (CT-2).

C. Porcelain Tile:

1. Porcelain Floor Tile (PT-4): ANSI A137.1; zero to 0.5 percent water absorption; 12-inch by 12-inch by 5/16-inch size; square edge, finish to match manufacturer Dal Tile; style/pattern, Porcealto.

D. Stone Tile (ST-1): Dal Tile12-inches by 12-inches, "California Gold", natural slate.

E. Mortar Bed: ANSI A118.4, thin-set bond coat, latex/Portland cement mortar.

F. Grout Type - Cementitious type with latex additive, resistant to shrinking:

1. 3/16-inch wide, color to match Phase 1 lobby floor grout, polyblend sanded grout for porcelain tile (ST-1).

2. 3/16-inch wide, #335 Winter Gray color, polyblend sanded grout for porcelain tile (PT-4).

3. 1/8-inch wide, #333 Alabaster color, polyblend unsanded grout for ceramic tiles (CT-1, CT-2,).

2.3 ACCESSORIES

A. Thresholds:

1. Transitions of tile to carpet or resilient flooring: stainless steel trim by Schluter.
2. Size as recommended by tile manufacturer.

B. Termination Strips: extruded aluminum edge strips.

C. Waterproof Membrane: crack isolation/joint bridging composite sheet membrane of non-plasticized Chlorinated Polyethylene (CPE), nominal thickness of 30 mils, flexible synthetic elastomer with fabric laminated on both surfaces. Sheet membrane to conform to thin-bed membrane standard ANSI A118.10 and meeting heavy duty service requirements of ASTM C627.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify that substrate surfaces have been installed in accordance with Section 09 21 16, Gypsum Board Assemblies, and are ready to receive work of this Section.

B. Verify that waterproof membrane has been installed and tested.

C. Beginning of installation means installer accepts condition of existing substrate.

3.2 PREPARATION

A. Protect surrounding work from damage or disfiguration.

B. Vacuum clean existing substrate and damp clean.

C. Seal substrate surface cracks with filler. Level existing substrate to 1/8 inch in 10 feet flatness tolerance.

D. Apply sealer to surfaces as recommended by adhesive manufacturer.

3.3 INSTALLATION

A. General:

1. Lay tile to pattern indicated on Drawings. Do not interrupt tile pattern around or through openings.

2. Place thresholds at exposed tile edges at locations indicated on Drawings.

3. Cut and fit tile tight to penetrations through tile. Form corners and bases neatly. Align floor, and wall joints.

4. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.

5. Allow tile to set for a minimum of 48 hours prior to grouting.

6. Grout tile joints.

7. Apply sealant to junction of tile and dissimilar materials, and at junction of dissimilar planes. Use joint sealant materials specified in Section 07 92 00, Joint Sealants.

B. Thin-Set Method:

1. Install adhesive and dry-set mortar, ceramic tile, floor tile threshold, and grout to the following TCA Handbook for Ceramic Tile Installation numbers:

a. Wall Tile: W243, thin-set application on gypsum board with latex Portland cement mortar and grout.

b. Floor Tile: F102, thin-set application on concrete floor with latex Portland cement mortar and grout.

c. Floor Tile: F122, thin-set application on concrete floor with sheet waterproof membrane, latex Portland cement mortar and grout, where indicated on the Room Finish Schedule and located on Drawings.

3.4 CLEANING

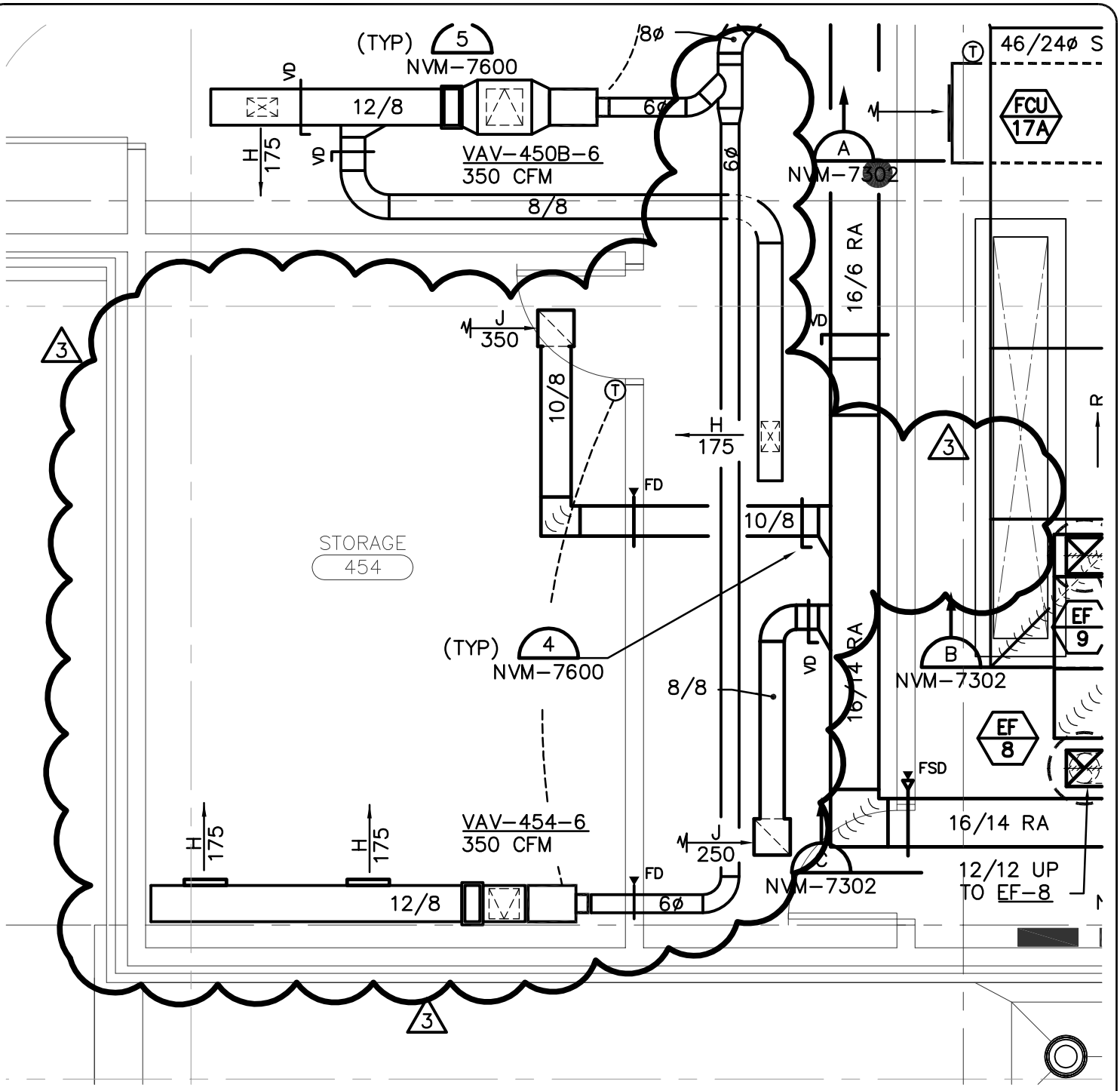
A. Clean tile surfaces.

B. Apply a protective coat of neutral cleaning solution (one part cleaner to one part water) to clean completed tile walls and floors. After solution has dried, cover with heavy-duty, non-staining construction paper, masked in place. Just prior to final acceptance of tile work, remove paper and rinse protective coat of neutral cleaner from tile surfaces.

3.5 PROTECTION

A. Prohibit traffic near wall tile and across floor tile for 7 days.

END OF SECTION



MECHANICAL – HVAC SECTOR E
FOURTH LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center		Project No: 102002	Addenda No: 3	Dwg Ref No: NVMH4-E- Addenda Sht: M-1
Sheet Title: MECH. HVAC FOURTH LEVEL PLAN		Date: 3-30-2012	Checked By: JMM	Drawn By: MDB

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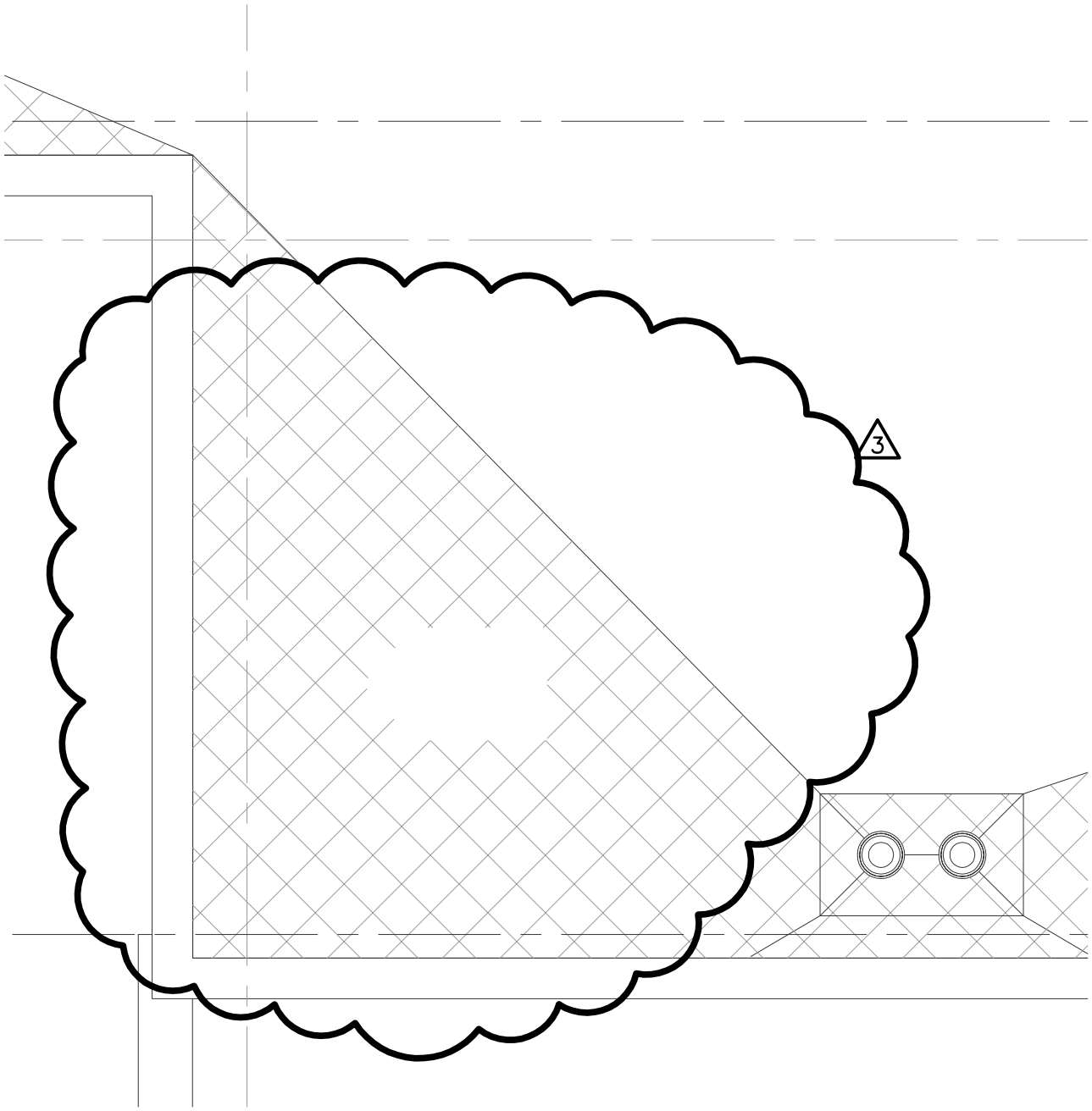

MECHANICAL – HVAC SECTOR E ROOF PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center		Project No: 102002	Addenda No: 3	Dwg Ref No: NVMH5-E- Addenda Sht: M-2
Sheet Title: MECH. HVAC ROOF PLAN		Date: 3-30-2012	Checked By: JMM	Drawn By: MDB

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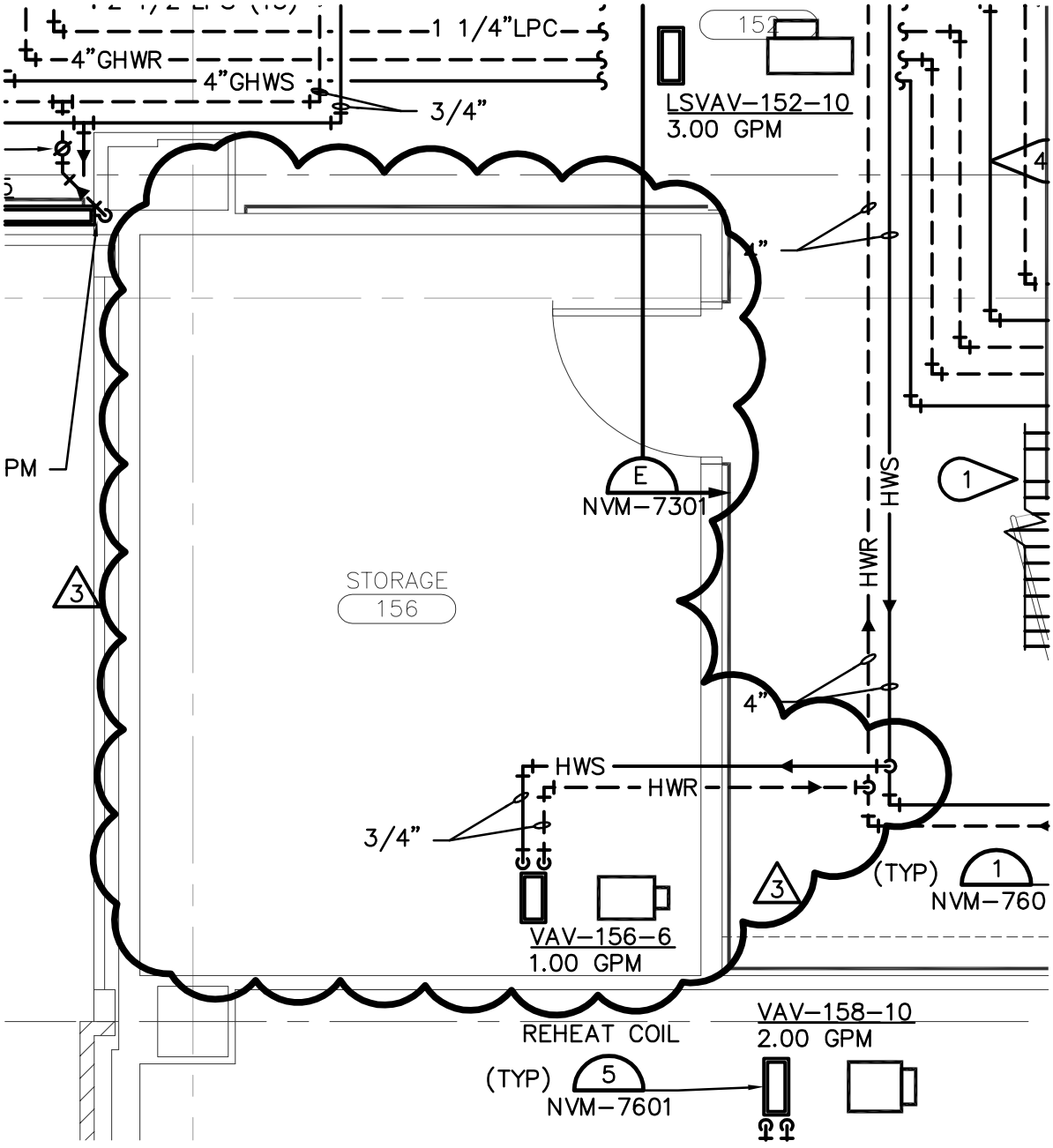

MECHANICAL – PIPING SECTOR E
FIRST LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: 3	Dwg Ref No: NVMP1-E- Addenda Sht: M-3
Sheet Title: MECH. PIPING FIRST LEVEL PLAN	Date: 3-30-2012	Checked By: JMM	Drawn By: MDB

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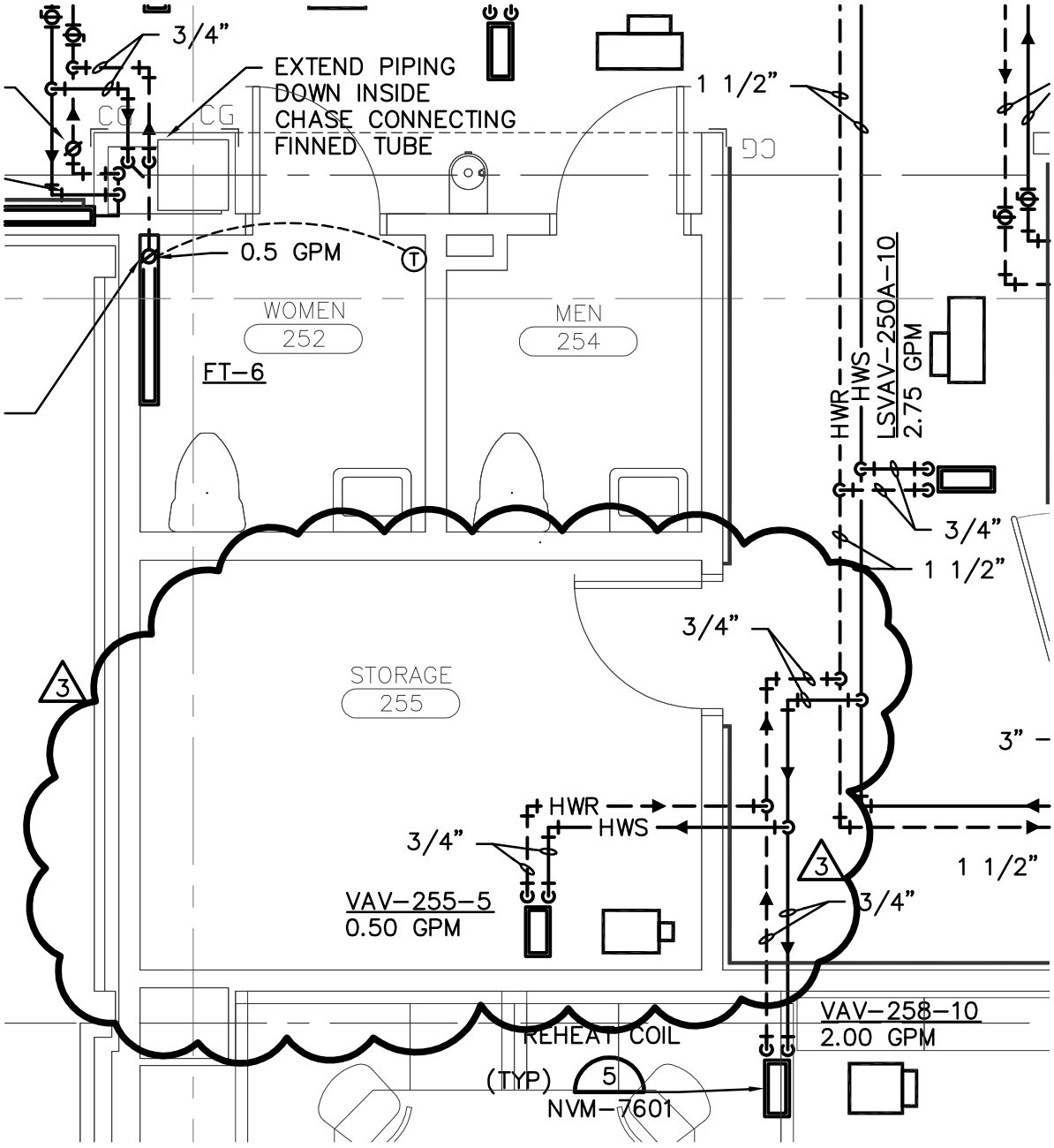

MECHANICAL – PIPING SECTOR E
SECOND LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center			
Sheet Title: MECH. PIPING SECOND LEVEL PLAN			
Project No: 102002	Addenda No: 3	Dwg Ref No: NVMP2-E-	Addenda Sht: M-4
Date: 3-30-2012	Checked By: JMM	Drawn By: MDB	

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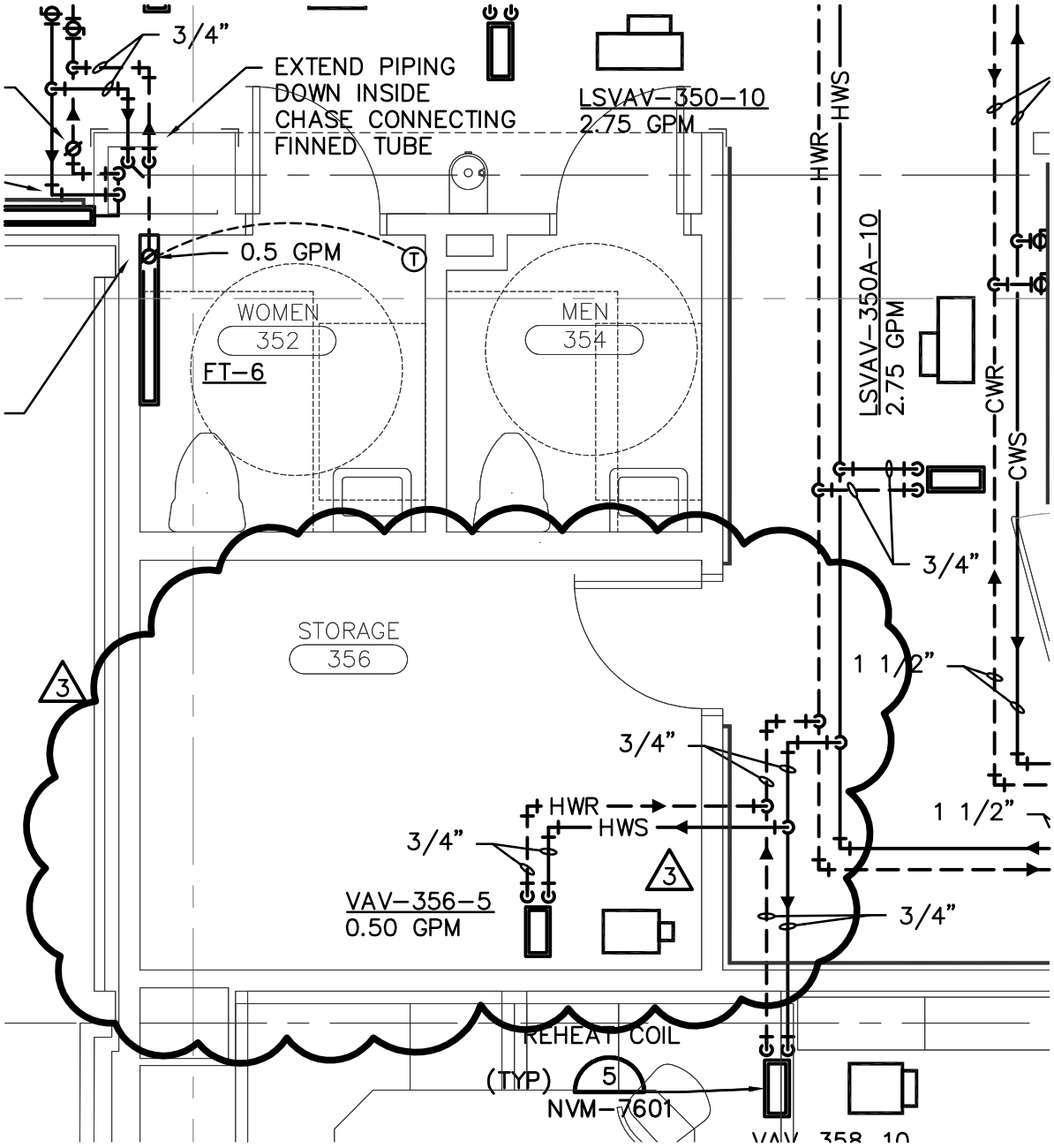

MECHANICAL – PIPING SECTOR E
THIRD LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

FARRIS ENGINEERING | OMAHA | LINCOLN | DES MOINES | COLORADO SPRINGS | farris-usa.com

Project: Morrison Life Sciences Research Center			
Sheet Title: MECH. PIPING THIRD LEVEL PLAN			
Project No: 102002	Addenda No: 3	Dwg Ref No: NVMP3-E-	Addenda Sht: M-5
Date: 3-30-2012	Checked By: JMM	Drawn By: MDB	

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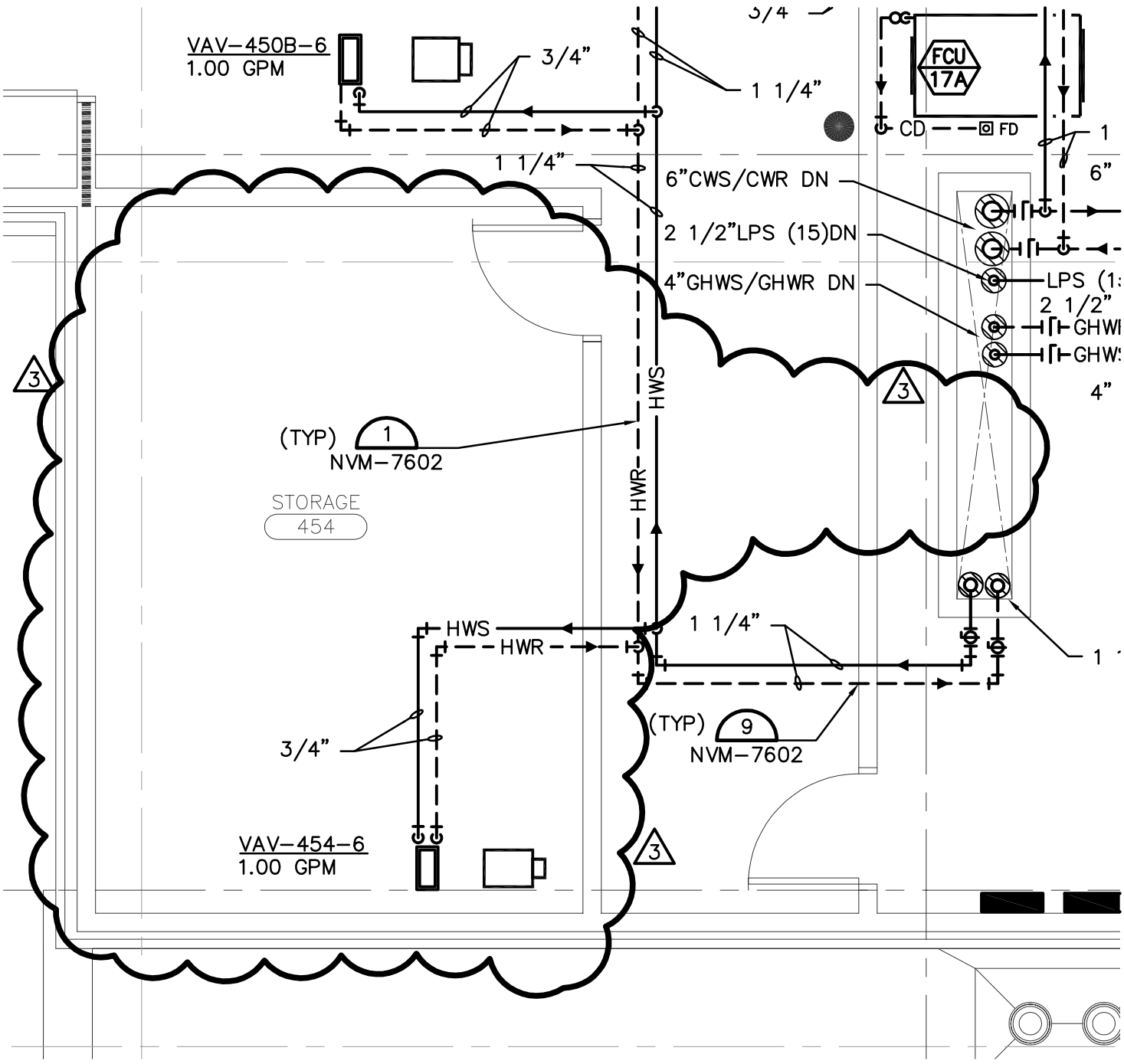

MECHANICAL – PIPING SECTOR E
FOURTH LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: 3	Dwg Ref No: NVMP4-E- / Addenda Sht: M-6
Sheet Title: MECH. PIPING FOURTH LEVEL PLAN	Date: 3-30-2012	Checked By: JMM	Drawn By: MDB

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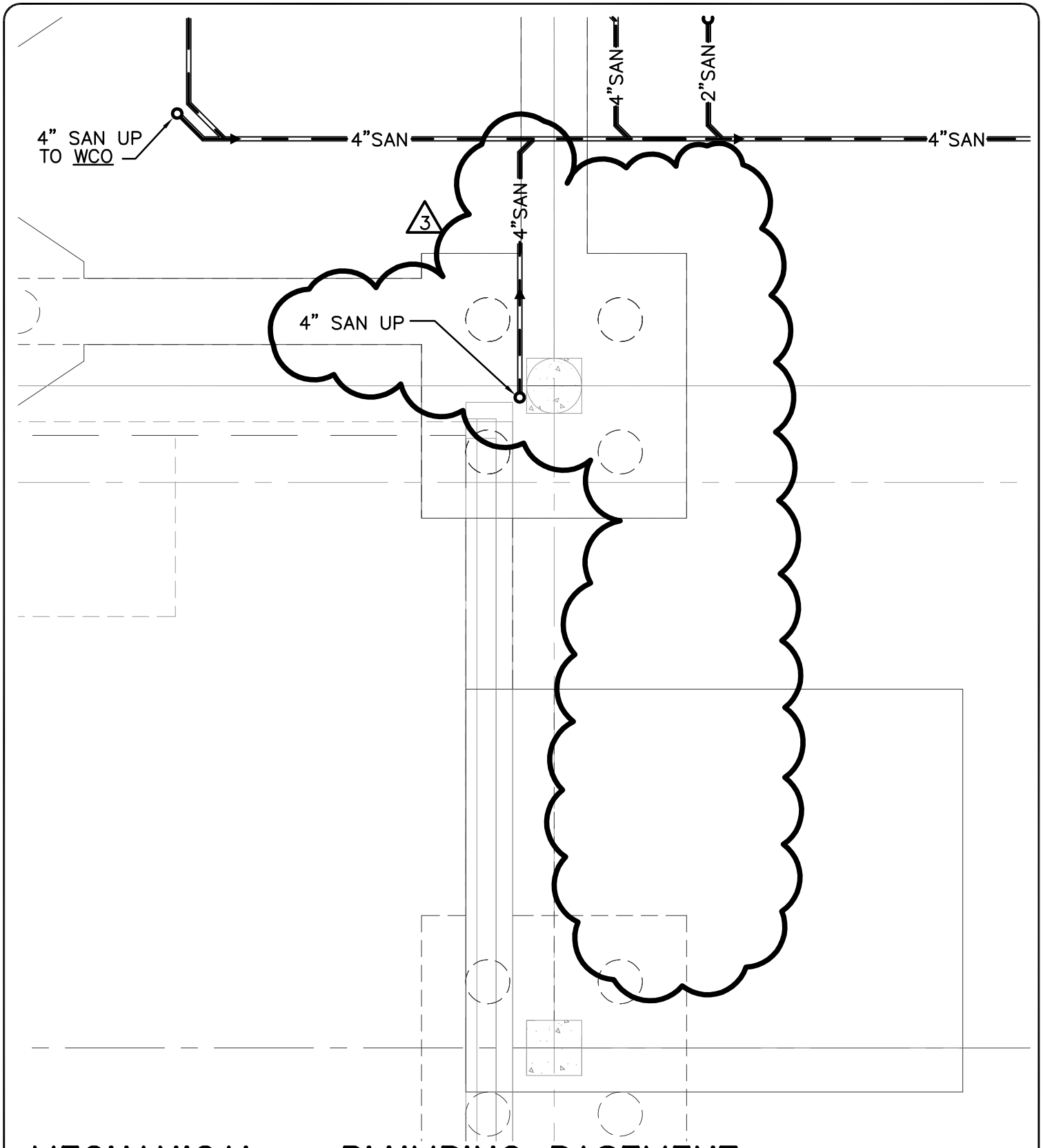

MECHANICAL – PLUMBING BASEMENT LEVEL FLOOR PLAN

SCALE: 1/4 INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center			
Sheet Title: MECH. PLUMBING BASEMENT PLAN			
Project No: 102002	Addenda No: 3	Dwg Ref No MVMW0-0-	Addenda Sht: M-7
Date: 3-30-2012	Checked By: GTK	Drawn By: DMM	

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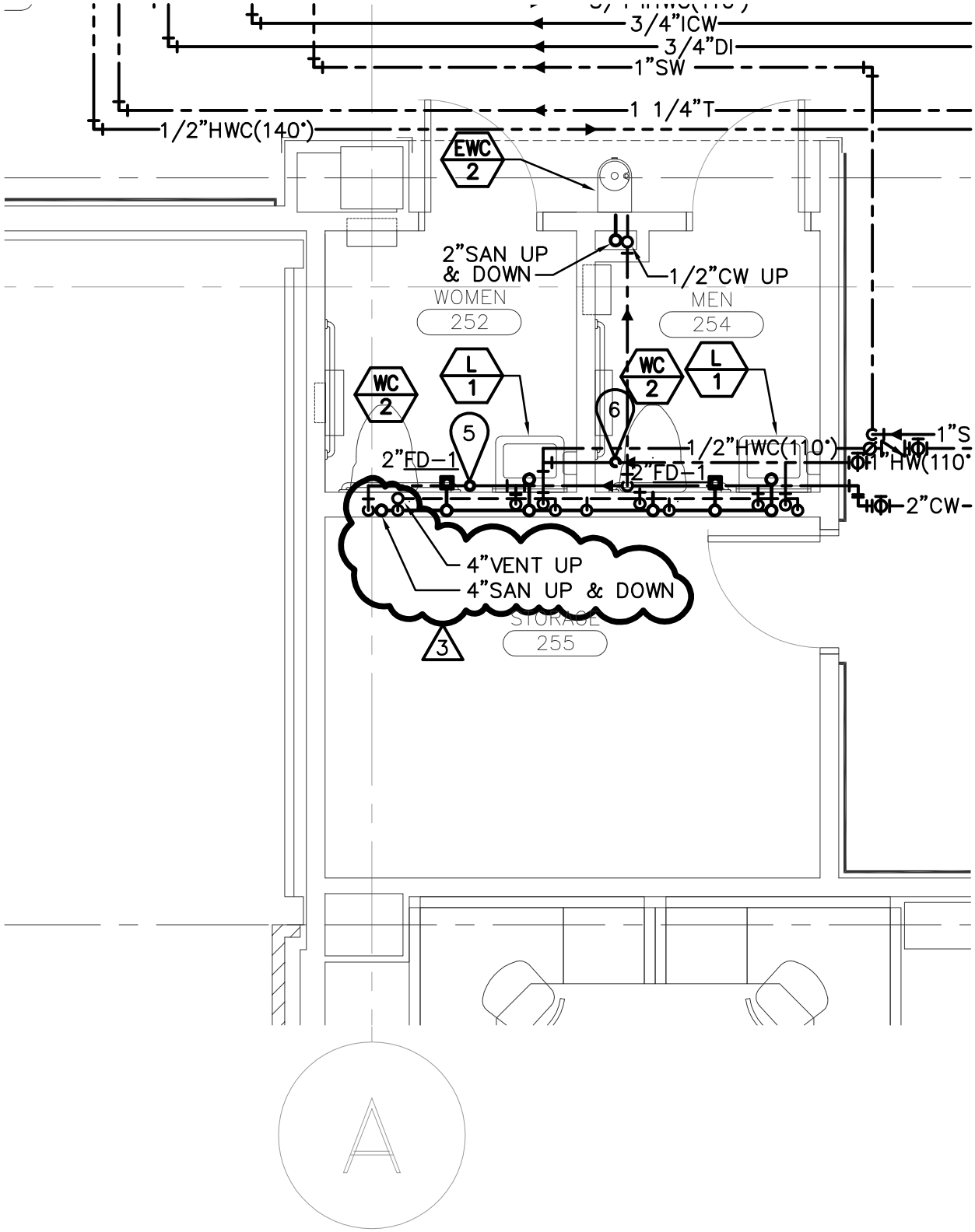

MECH. – PLUMBING SECOND LEVEL FLOOR PLAN

SCALE: 1/4 INCH = 1 FOOT

12" 0 5'

N

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: 3	Dwg Ref No MVMW2-0- Addenda Sht: M-8
Sheet Title: MECH. - PLUMBING 2ND LEVEL PLAN	Date: 3-30-2012	Checked By: GTK	Drawn By: DMM

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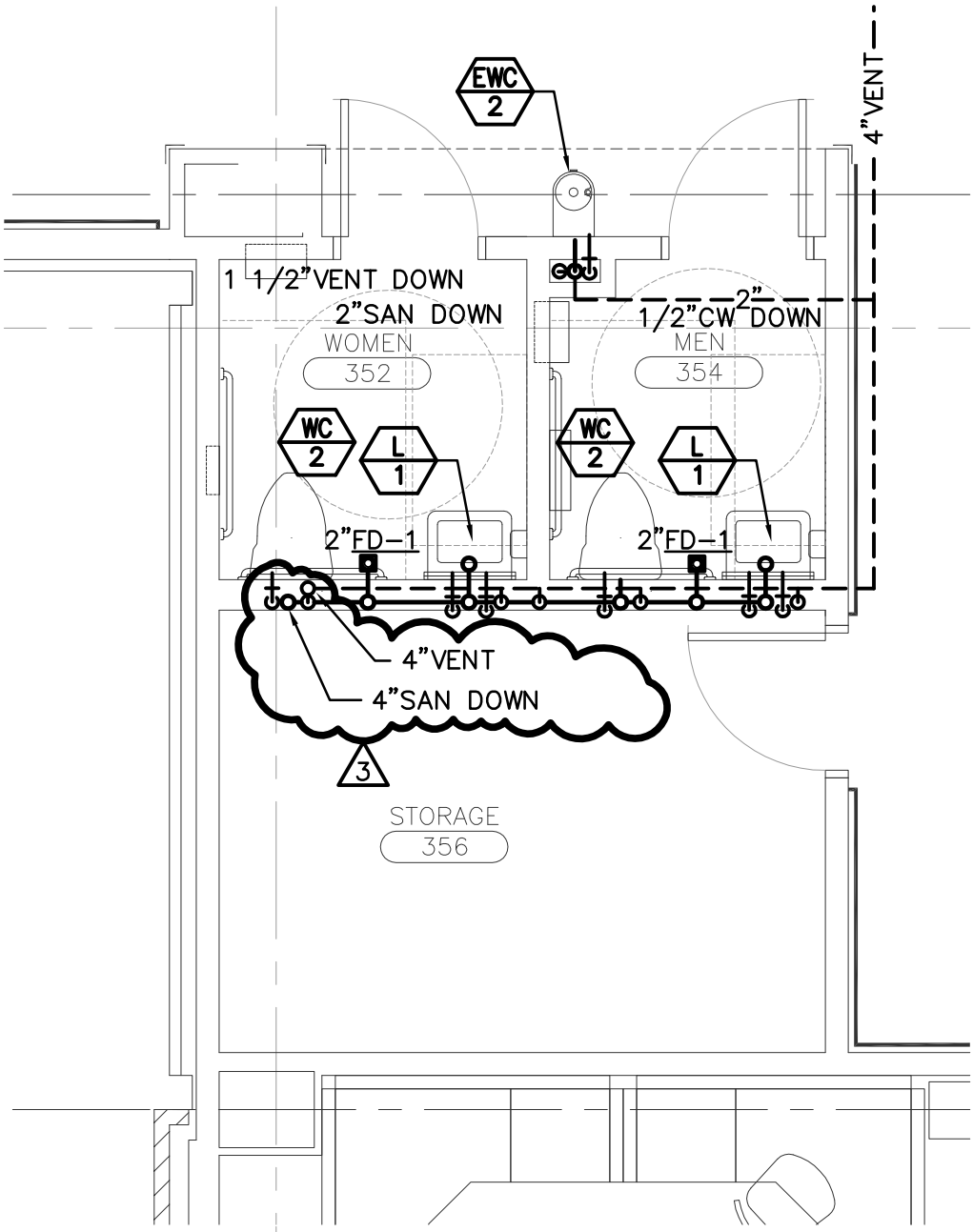

MECH. – PLUMBING THIRD LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: 3	Dwg Ref No MVMW3-0- / Addenda Sht: M-9
Sheet Title: MECH. - PLUMBING 3RD LEVEL PLAN	Date: 3-30-2012	Checked By: GTK	Drawn By: DMM

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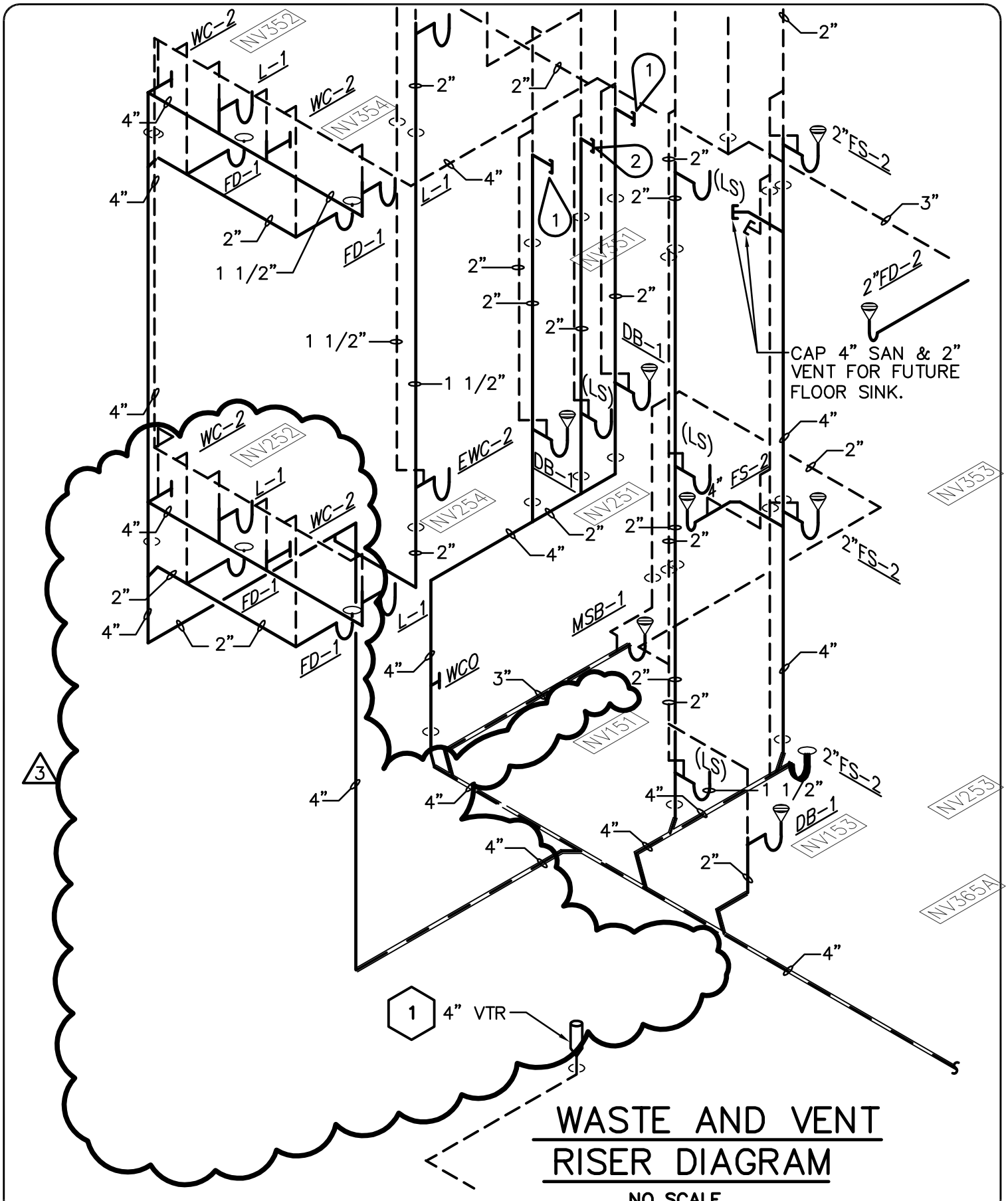

WASTE AND VENT RISER DIAGRAM

NO SCALE

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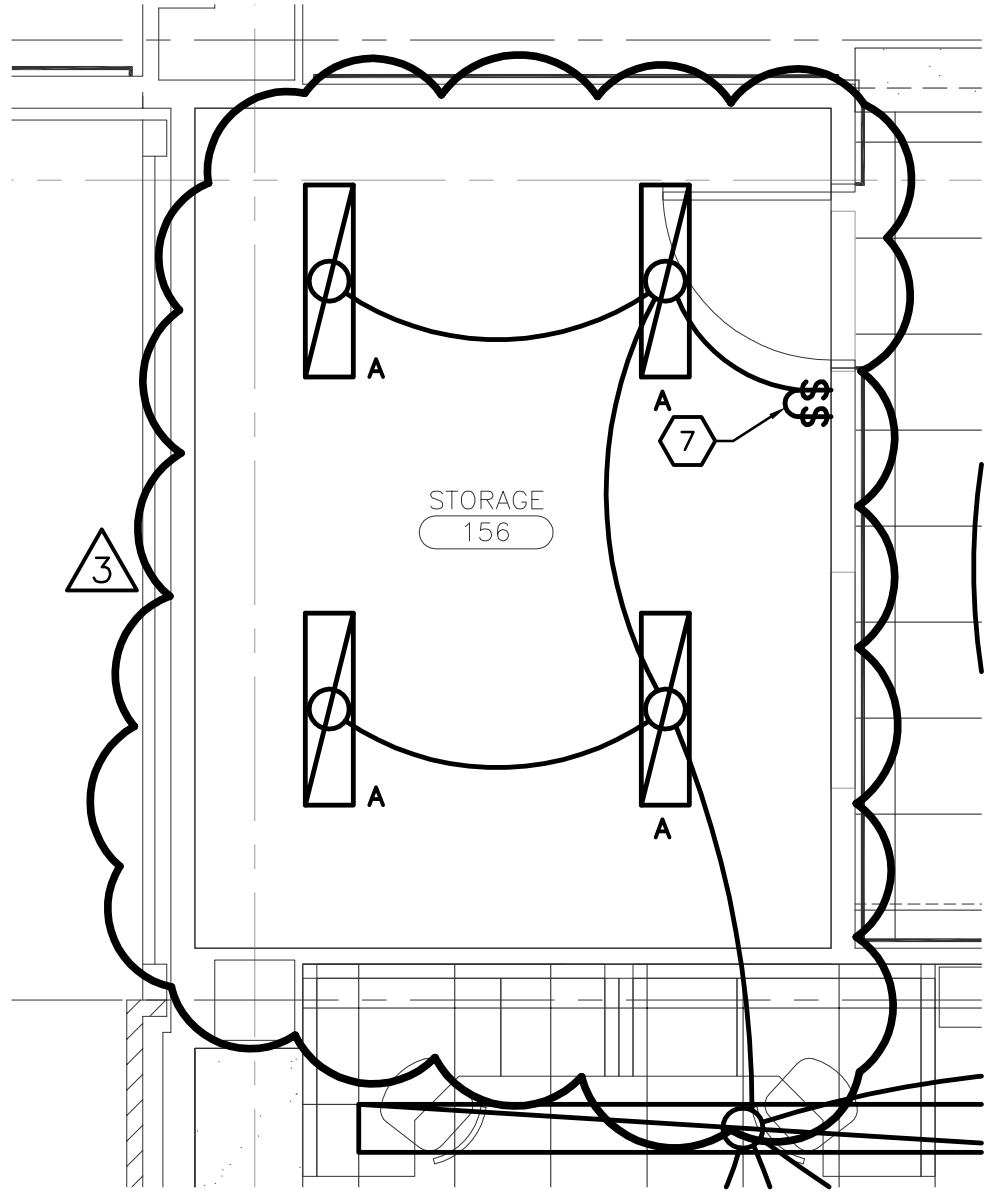
Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: 3	Dwg Ref No: MVMW0300
Sheet Title: MECH. - PLUMBING RISER DIAGRAM	Date: 3-30-2012	Checked By: GTK	Addenda Sht: M-10
			Drawn By: DMM



ELECTRICAL - LIGHTING SECTOR E FIRST LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVEL1-E- / Addenda Sht: E-1
Sheet Title: ELECTRICAL - LIGHITNG SECTOR E FIRST LEVEL FLOOR PLAN	Date: 3-30-2012	Checked By: KMA	Drawn By: BEL

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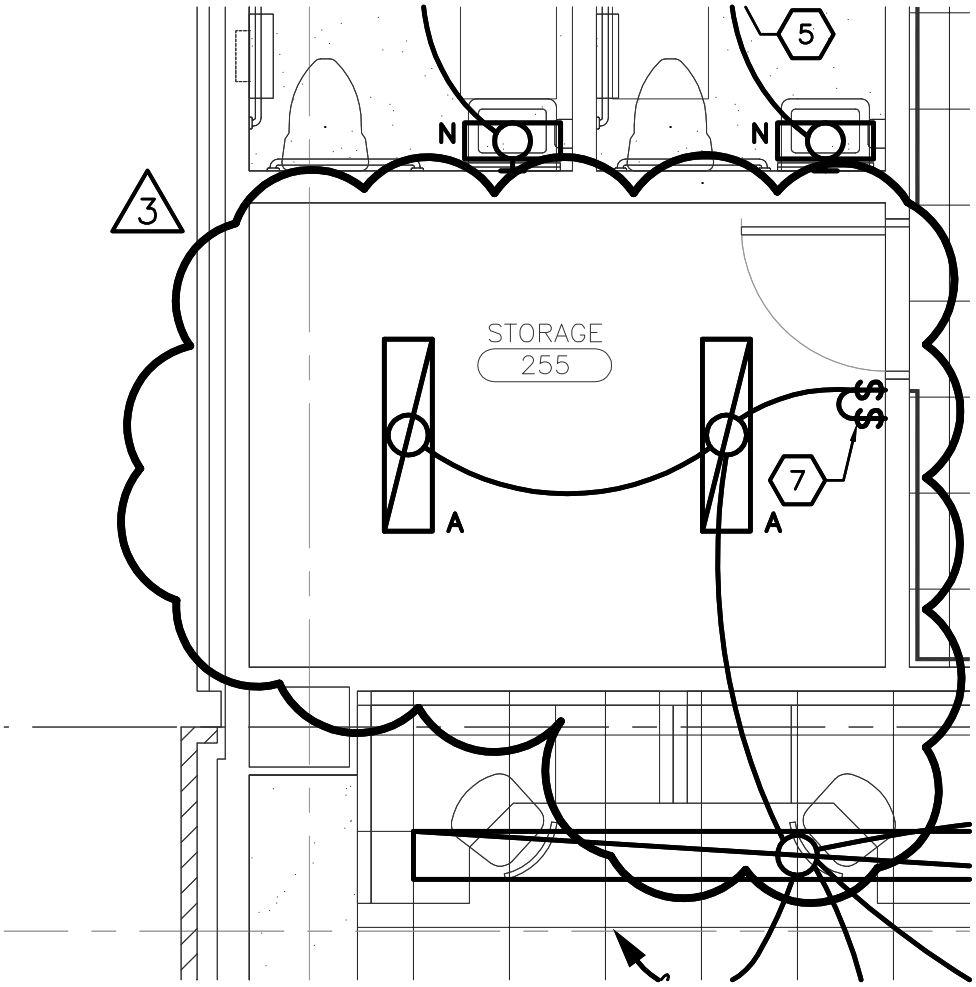

ELECTRICAL - LIGHTING SECTOR E SECOND LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVEL2-E- Addenda Sht: E-2
Sheet Title: ELECTRICAL - LIGHTING SECTOR E SECOND LEVER FLOOR PLAN	Date: 3-30-2012	Checked By: KMA	Drawn By: BEL

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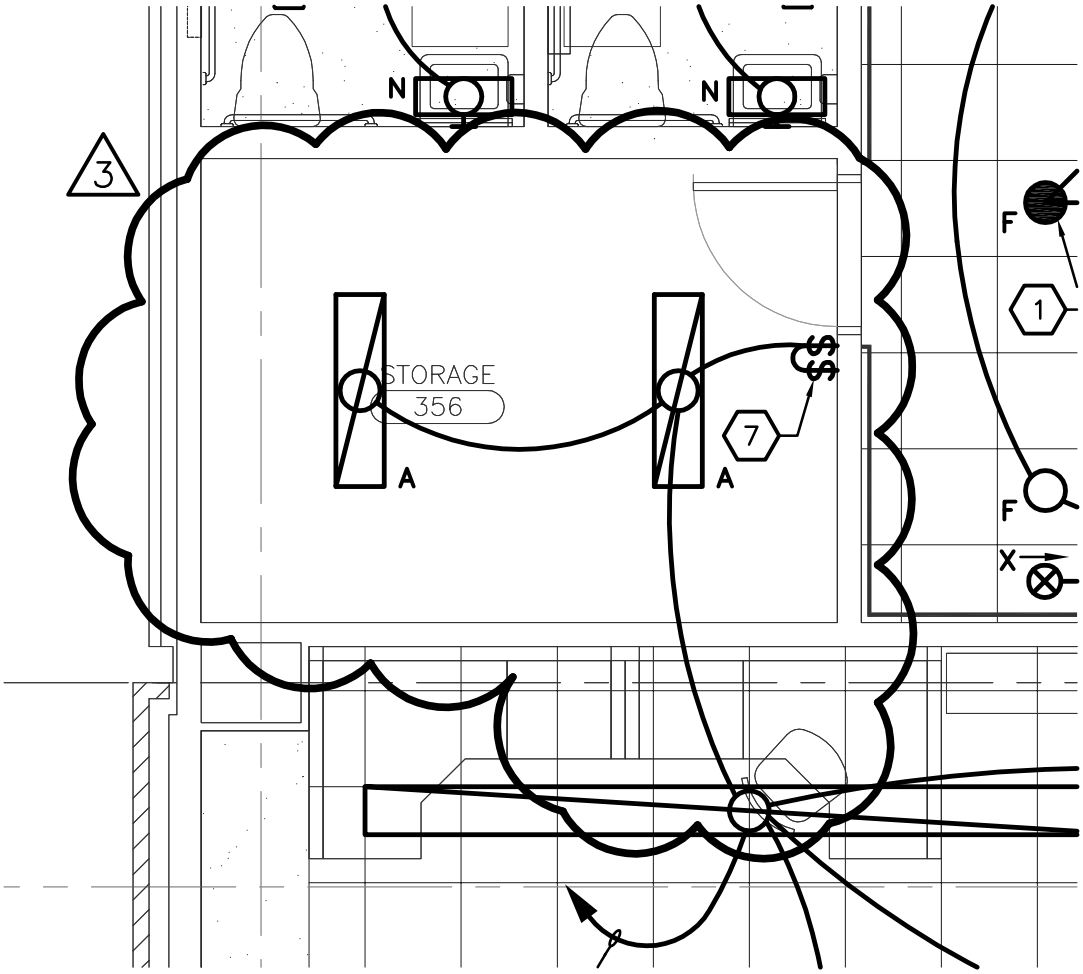

ELECTRICAL - LIGHTING SECTOR E THIRD LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center		Project No: 102002	Addenda No: ADD003	Dwg Ref No: NVEL3-E- Addenda Sht: E-3
Sheet Title: ELECTRICAL - LIGHTING SECTOR E THIRD LEVEL FLOOR PLAN		Date: 3-30-2012	Checked By: KMA	Drawn By: BEL

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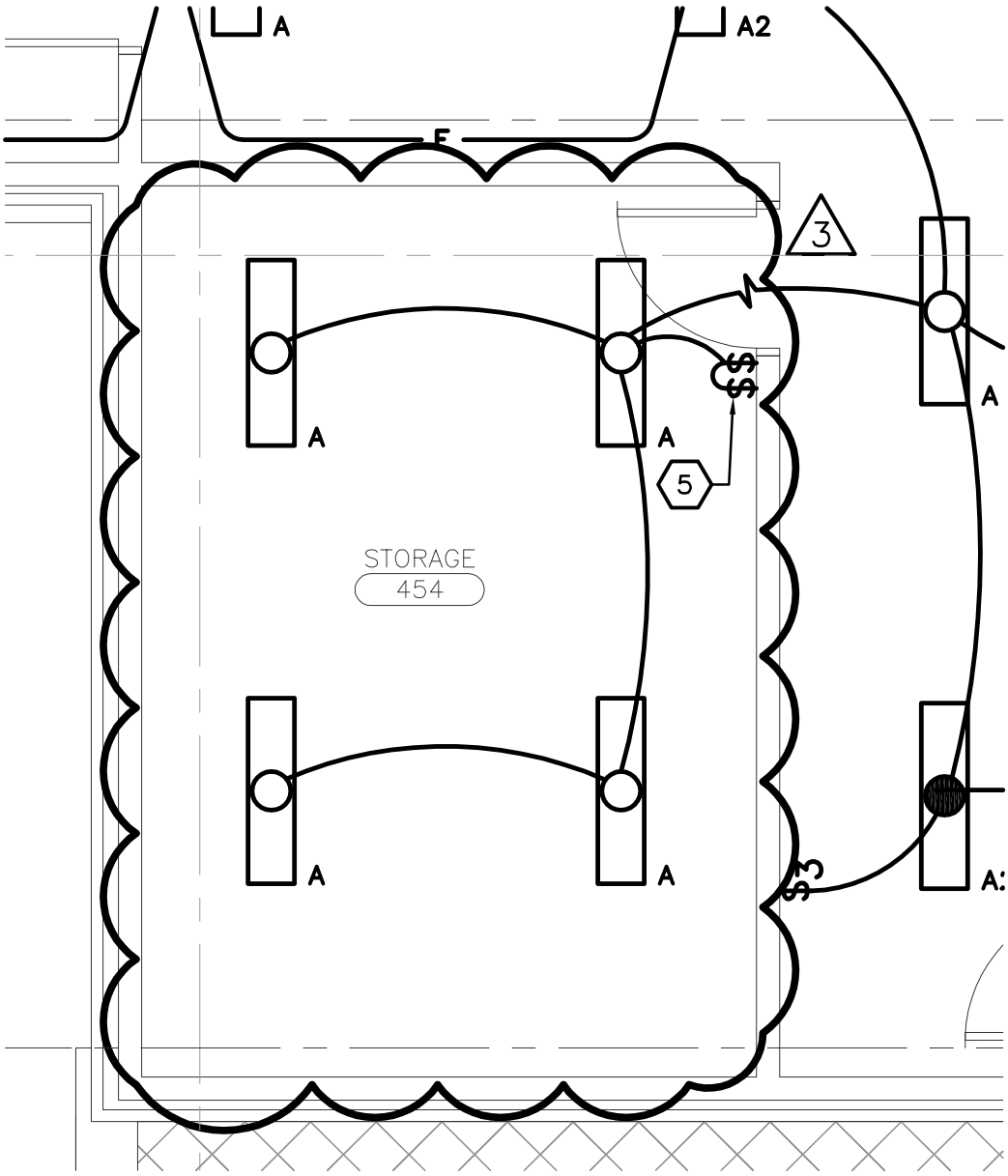

ELECTRICAL - LIGHTING SECTOR E PENTHOUSE LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center		Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVEL4-E- Addenda Sht: E-4
Sheet Title: ELECTRICAL - LIGHTING SECTOR E PENTHOUSE LEVEL FLOOR PLAN		Date: 3-30-2012	Checked By: KMA	Drawn By: BEL

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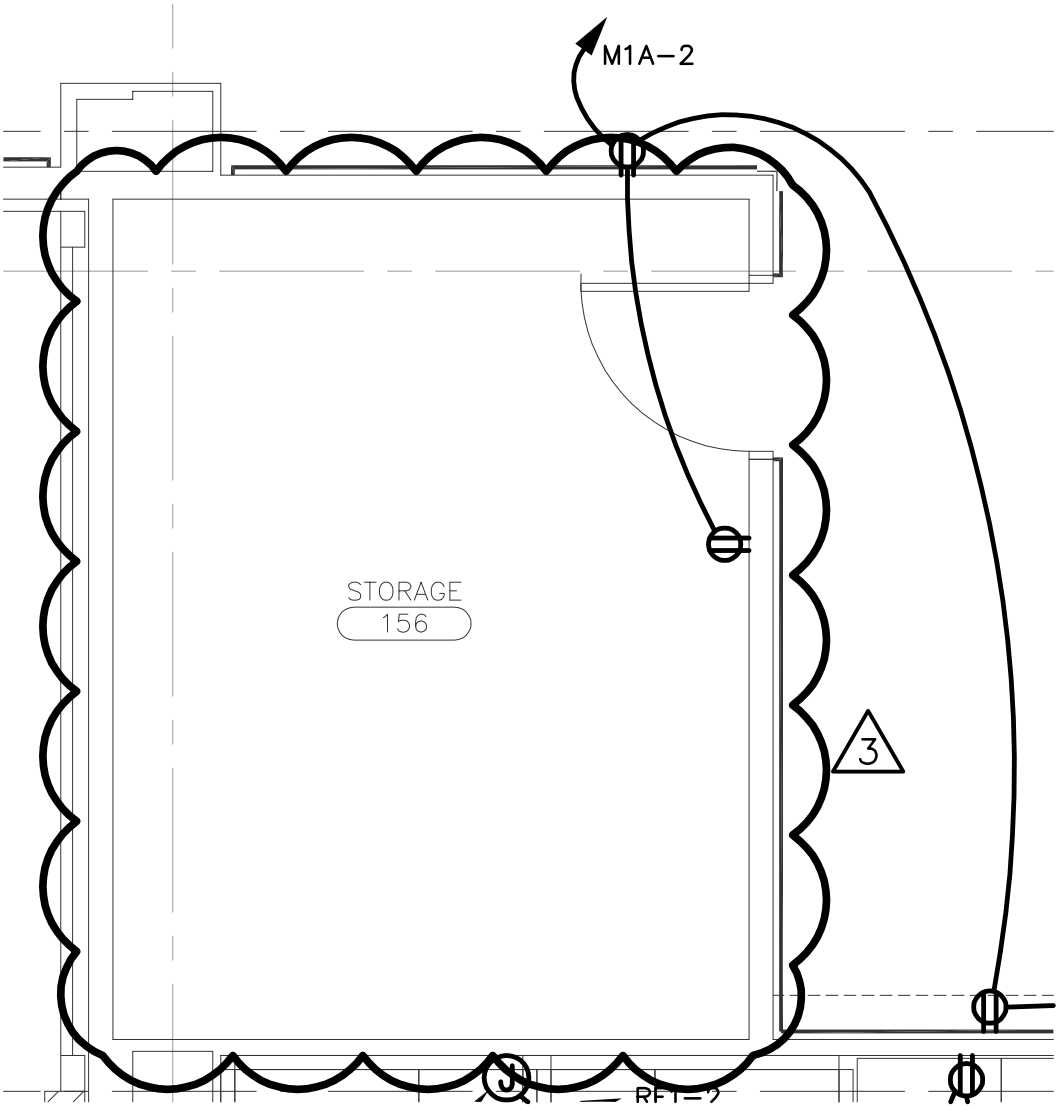

ELECTRICAL – POWER SECTOR E FIRST LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVP1-E-	
Sheet Title: ELECTRICAL - POWER SECTOR E FIRST LEVEL FLOOR PLAN	Date: 3-30-2012	Checked By: KMA	Addenda Sht: E-5	Drawn By: BEL

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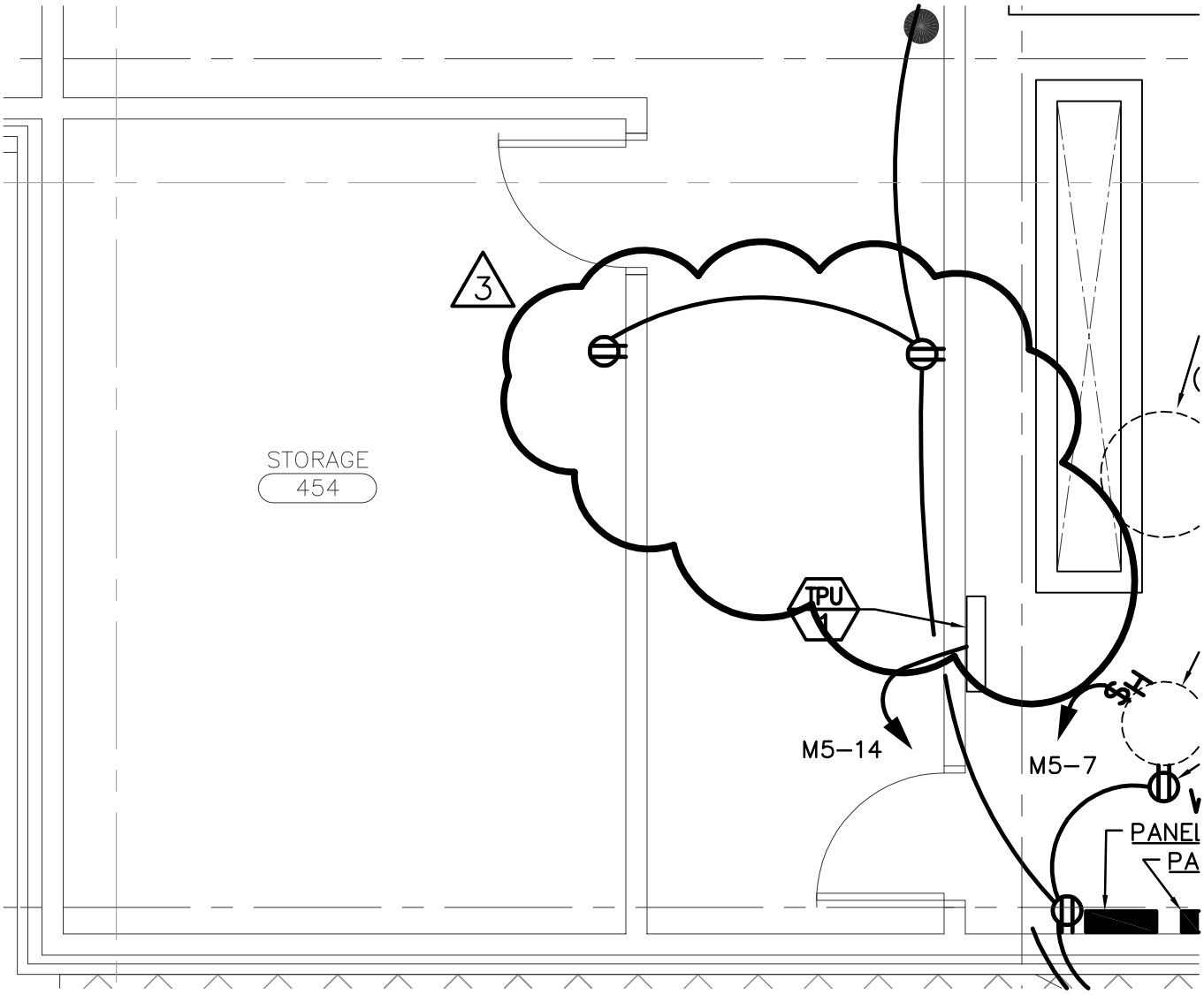

ELECTRICAL – POWER SECTOR E PENTHOUSE LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVP4-E- Addenda Sht: E-6	
Sheet Title: ELECTRICAL - POWER SECTOR E PENTHOUSE LEVEL FLOOR PLAN	Date: 3-30-2012	Checked By: KMA	Drawn By: BEL	

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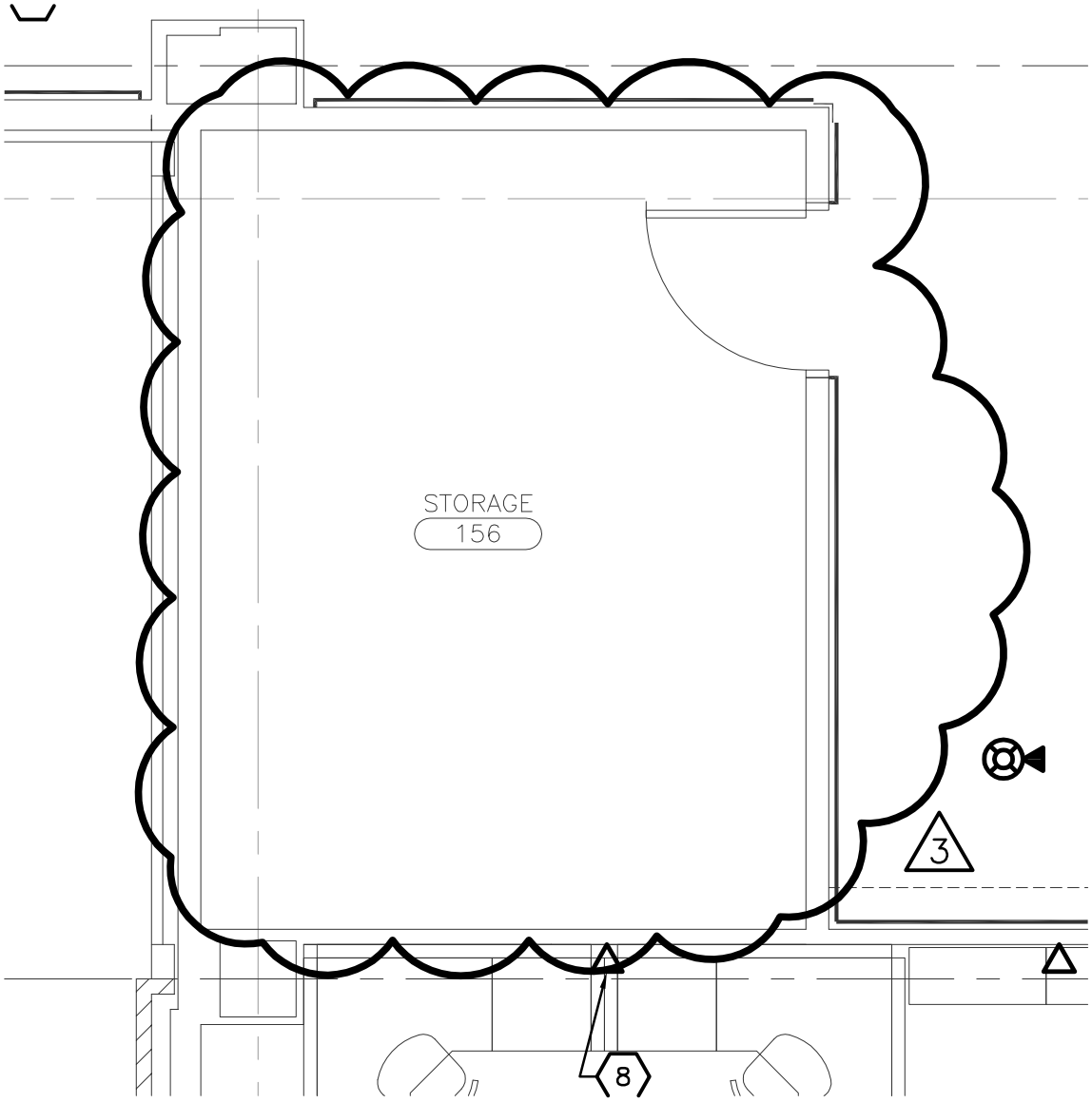

ELECTRICAL - SPECIAL SYSTEMS SECTOR E FIRST LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVEY1-E- / Addenda Sht: E-7
Sheet Title: ELECTRICAL SPECIAL SYSTEMS SECTOR E FIRST LEVEL FLOOR PLAN	Date: 3-30-2012	Checked By: KMA	Drawn By: BEL

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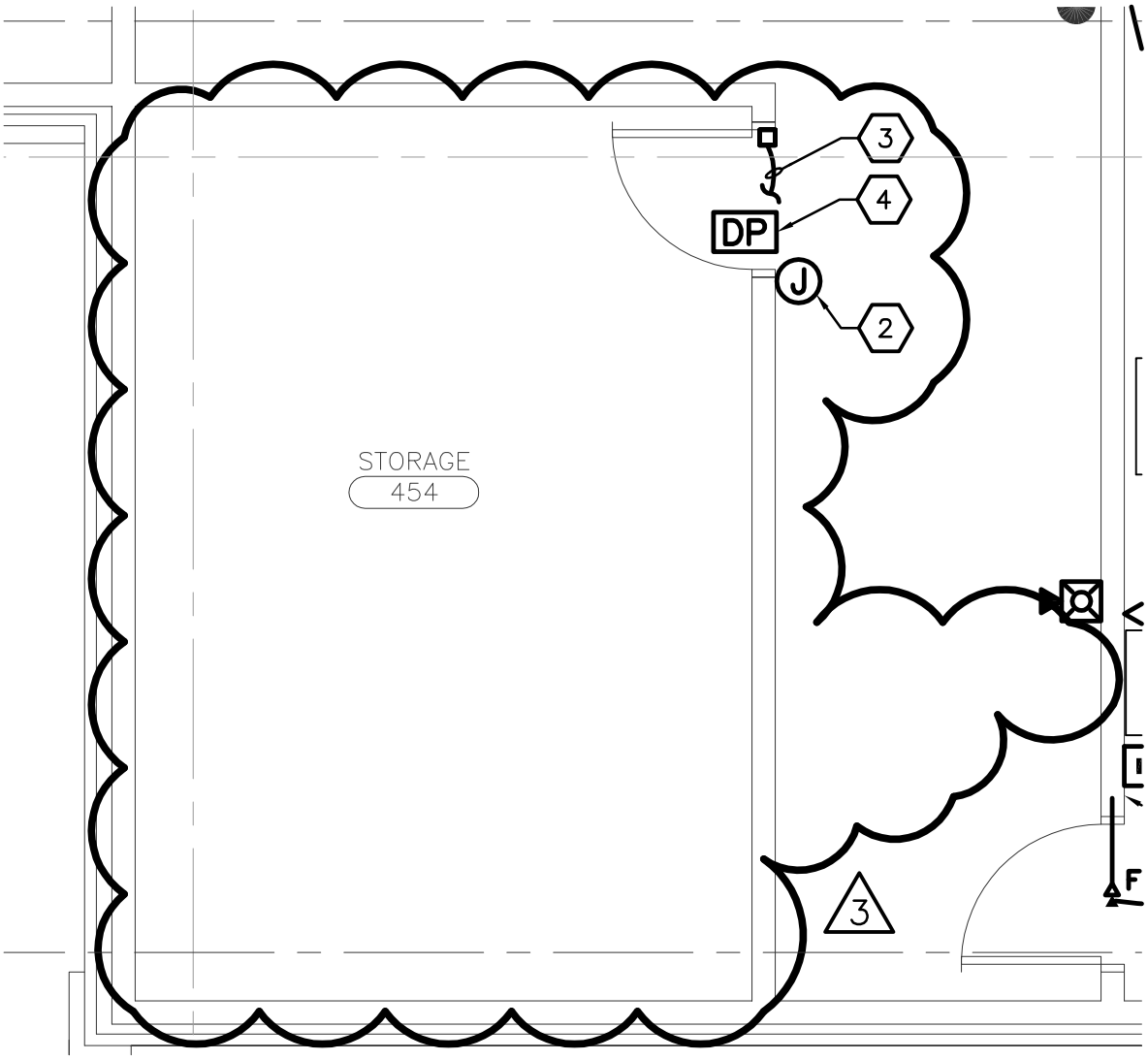

ELECTRICAL - SPECIAL SYSTEMS SECTOR E PENTHOUSE LEVEL FLOOR PLAN

SCALE: $\frac{1}{4}$ INCH = 1 FOOT

12" 0 5'

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Project: Morrison Life Sciences Research Center	Project No: 102002	Addenda No: ADD03	Dwg Ref No: NVEY4-E- Addenda Sht: E-8
Sheet Title: ELECTRICAL - SPECIAL SYSTEMS SECTOR E PENTHOUSE LEVEL FLOOR PLAN	Date: 3-30-2012	Checked By: KMA	Drawn By: BEL

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