



STATE OF NEW YORK
OFFICE OF GENERAL SERVICES
DESIGN AND CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242



ADDENDUM NO. 2 TO PROJECT NO. 44808

**CONSTRUCTION WORK, HVAC WORK, PLUMBING WORK, AND ELECTRICAL WORK
RENOVATE BUILDING NO. 5
STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVENUE
ALBANY, NY**

November 19, 2013

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

CD WRITING ERRORS

1. Drawing Nos. A-171, A-203, and A-511: The attached drawings were omitted from the CDs' for this Project. Bidders are advised to examine their CDs for completeness.

CONSTRUCTION WORK SPECIFICATIONS

2. SECTION 033000 CAST-IN PLACE CONCRETE: Discard the Section bound in the Project Manual and substitute the attached Section (pages 033000-1 thru 033000-14), noted "REVISED 11/18/13".

3. Page 072100-1, PART 1 GENERAL: Add the following Article:

"1.05 RELATED WORK SPECIFIED ELSEWHERE

A. Firestopping: Section 078400."

4. Page 072100-2, Subparagraphs 2.01 A. 1. thru 5.: Delete these Subparagraphs in their entirety, and replace with the following:
 1. Minimum 2" thick foil faced curtain wall insulation (mineral wool min. 8 pcf density) securely attached to framing members per methods described in any UL or Intertek approved perimeter joint system. Curtain wall insulation to completely fill spandrel at floor level and cover vertical mullions.
 2. Minimum 4" thickness mineral wool safing (min. 4 pcf density) compressed 33%, flush with top surface of floor assembly."

5. Page 084413-1, Article 1.02 RELATED WORK: Add the following Paragraphs:
 - “F. Building Insulation: Section 072100.
 - G. Firestopping: Section 078400.”
6. SECTION 096613 TERRAZZO: Discard the Section bound in the Project Manual and substitute the attached Section (pages 096613-1 thru 096613-6) noted “REVISED 11/18/13”.
7. SECTION 122400 SOLAR SHADES: Add attached Section (pages 122400-1 thru 122400-6) to the Project Manual.

PLUMBING WORK SPECIFICATIONS

8. Page 220577-1, PART 1 GENERAL: Add the following Article:
 - “1.04 ITEMS NOT PROVIDED UNDER THIS SECTION
 - A. Openings 24 inch x 24 inch and Larger in Existing Cast-In-Place Concrete Floor: Construction Work Contract.”
9. Page 220577-1, ARTICLE 2.01 FLOOR SINK DRAIN (FD-2): Add the following Paragraph:
 - “C. Acceptable Drain Series: Model FS1790 by Mifab Inc., 1321 West 119th Street, Chicago, IL 60643, (800) 465-2736, www.mifab.com.
10. Page 220577-2, ARTICLE 3.01 INSTALLATION: Add the following Paragraph:
 - “G. Install floor drain sinks after Construction Work Contractor provides and reinforces openings in existing cast-in-place concrete floor.”

ELECTRICAL WORK SPECIFICATIONS

11. SECTION 265110 FLOURESCENT FIXTURES: Discard the Section bound in the Project Manual and substitute the attached Section (pages 265110-1 thru 265110-12) noted “REVISED 11/18/13”.
12. Page 260925-3, Subparagraphs 2.05 A. 2. and 3.: Delete these Subparagraphs in their entirety and replace with the following:
 - “2. Hubbell DLC-PC-I (5-750FC) with MP Power Pack.
 3. Sensor Switch CM ADC with PP-20 Power Pack.”

COMMON G DRAWINGS

13. Drawing No. G-003, SITE MOBILIZATION PLAN: Modify Temporary fence along the west side of Building No. 5 from “42 feet” to “30 feet +/-” off of Building No. 5 face. Refer to Addendum Drawing G-007 dated 11/18/13.
14. Addendum Drawings:
 - a. Drawing No. G-007, noted “ADDENDUM DRAWING 11/18/13”, accompanies this Addendum, and forms part of the Contract Documents.
15. Revised Drawings:

- a. Drawing Nos.G-005, and G-006 noted “REVISED DRAWING 11/18/13”, accompany this Addendum and supersede the same numbered originally issued drawings.

CONSTRUCTION WORK DRAWINGS

16. General: All drawings with North Arrow shall now be referred to as “CALLED NORTH”.
17. Drawing No. C-001, GENERAL SITE NOTES AND LEGEND, GENERAL NOTES:
 - a. General Note Nos. 2, 4, 5, 9, 11, and 16: Change “Engineer” to read “Director’s Representative”.
18. Drawing No. C-101, SITE REMOVALS PLAN: Change the Note, “Remove and salvage paver stones as necessary to install water line. Contractor to provide Engineer with existing section after demo and prior to re-construction” to read , “Remove and salvage paver stones as necessary to install water line. Contractor to provide Director’s Representative with existing section after demo and prior to re-construction”.
19. Drawing Nos AD-010 thru AD-015, DEMOLITION NOTES: Add the following Note:
“D6. All partitions shown as dashed lines on these drawings shall be removed as Asbestos Containing Material. In addition, Contractor shall remove all partitions between Column lines B and C and 1 through 4, and Column lines B and C and 14 through 17, with the exception of the stairwell perimeter walls as Asbestos Containing Material. ACM debris has been found in hollow cores of CMU under current Project Number 44802-B. Hazardous Material Removal Drawings shall be issued in upcoming addendum to further define the Work. Contractor shall be aware and conduct these removals so as not to delay other contracts. “
20. Drawing AD-018, DETAIL 1/AD-018: Change Section Title to read “STAIR SECTION ROOM G-03 TO PENTHOUSE”.
21. Drawing AD-101, FIRST FLOOR DEMO:
 - a. Change Removal Key Note No. 8 to read: “NOT USED. These walls will be removed under concurrent Project No. 44802-B”.
 - b. Delete two key Notes No. 8 shown on Floor Plan 01/AD-101.
22. Drawing AD-201, NORTH AND EAST ELEVATIONS DEMOLITION:
 - a. Change Removal Key Note No. 8 to read: “NOT USED. These walls will be removed under concurrent Project No. 44802-B”.
23. Drawing AD-202, SOUTH AND WEST ELEVATIONS DEMOLITION:
 - a. Change Removal Key Note No. 8 to read: “NOT USED. These walls will be removed under concurrent Project No. 44802-B”.
24. Drawing No. A-001, GENERAL NOTES, Notes 3, 5, 7, and 8: Change “Contractor” to read “Construction Contractor”.
25. Drawing A-104, FIRST FLOOR PLAN, EXTERIOR WALL AND ENTRANCE WOTK:

- a. Delete the word “NEW” from the Note that reads “NEW HANDRAIL ON EXIST. RAIL”.
 - b. Delete the word “NEW” from the Note that reads “NEW CONC. CURB, RAIL, AND HANDRAIL”.
 - c. Delete the Note that reads “EXIST. AREAWAY” and leader adjacent to column D3.
 - d. Delete the skylights shown on the plan and the “SKYLIGHTS” note and leaders.
 - e. Note No. 1: Delete the word “NEW” in the first line,
26. Drawing A-111, FIRST FLOOR PLAN – EAST: Change the Note, “Cover wall with white marble”, which appears above Column line 9, to read “Cover wall with adhered marble to match existing”.
27. Drawing A-201, NORTH AND EAST ELEVATIONS:
- a. Elevation 01/A-201:
 - 1) Change Callout Detail “03/A-431” to read “06/A-431”.
 - 2) Change Callout Detail “04/A-431” to read “07/A-431”.
 - b. Elevation 03/A-201: Change Callout Detail “02/A-428” to read “02/A-429”.
28. Drawing A-202, SOUTH AND WEST ELEVATIONS:
- a. Elevation 01/A-202: Change window number “S8” to read “S28”.
29. Drawing A-301, SECTIONS:
- a. Section 03/A-301: Delete canopy skylights, and infill openings.
30. Drawing A-403, WALL OPENINGS:
- a. Wall Section 01/A-403: Delete canopy skylights, and infill openings.
31. Drawing Nos. A-405, A-406, A-407, A-408, A-409, and A-409.1: Delete all skylight related Details and Notes.
32. Drawing Nos A-411, A-413, A-415, A-417, and IN-501:
- a. Note G5: Change this Note to read “Refer to casework details on Drawing No. IN-501”.
 - b. Add the following Note:
“G7. “All wall mounted components shall have wood blocking placed in walls to meet specified anchoring requirements”
33. Drawing No. A-413, INTERIOR KEY ELEVATION KEY NOTE 2: Change the Note, “Patch to match existing wall finish” to read “ Patch with adhered marble to match existing - approx. total of 200 sqft of wall surface
34. Drawing A-429, STOREFRONT MAIN ENTRANCE:
- a. Plan 01/A-429: Delete the words “SKYLIGHTS ☒” and the graphic center lines.
35. Drawing A-430, PARTIAL ELEVATIONS LOADING DOCK:
- a. Construction Key Notes 1, 3A, 4, 5, 6, and 8: add the Note “SEE DWG. A-201” after “SEE GENERAL FAÇADE NOTE X”.
36. Drawing A-502, CURTAIN WALL DETAILS:
- a. Detail 01/A-502: Change Callout Detail “16/A-502 (SIM.)” to read: “07/A-503 (SIM.)”.
37. Drawing A-670,

- a. On the Window Schedule at the West Façade: Change Window Numbers “E1” and “E2” to read “W1” and “W2” respectively.
 - b. Detail 2/A-670, Door Types “D1” and “D2”: Change the Note “VG-1 (EXT.) VG-2 (INT.)” to read “VG-1 (EXT.) GL-1 (INT.)”.
 - c. Detail 2/A-670, Door Type “D2”: Delete the Note “GL# 1&2” in its entirety.
 - d. Detail 3/A-670, Frame Type “F1” and “F2”: Change the Note “VG-1 (EXT.) VG-2 (INT.)” to read “VG-1 (EXT.) GL-1 (INT.)”.
38. Drawing S-103, CANOPY ROOF FRAMING PLAN & SECTIONS:
- a. General: Delete all skylights, skylight framing and diagonal bracing. All existing canopy steel framing and metal roof deck shall remain. Section A/S-103 with two C12x20.7 and “TYPICAL DETAIL AT ROOF DRAIN” shall remain.
 - b. Sections B, C, D, E, F and G: Delete these Sections in their entirety.
 - c. Note No. 2,: Delete this Note in its entirety.
 - d. Part Roof Framing Plan 01/5 A-103: Delete the following:
 - 1. All 4” x 4” x 3/8” and 3 ½”x 3 ½”x 5/16” diagonal steel bracing
 - 2. All C8 x 11.5 skylight framing
 - 3. W10 x 12 steel framing
 - 4. The notes which read “REMOVE EXIST. C8 x 11.5”.
39. Drawing S-502, DETAILS: Delete Detail 6/S-502 in its entirety.
40. Drawing Nos. IN-101, IN-102, IN-111, IN-112, IN-121, IN-122, IN-161, IN-162, IN-410, IN-411, and IN-412, GENERAL AND KEY NOTES: Add the following Key Notes:
 “11. Restore and refinish terrazzo flooring and base in the First Floor Lobby.
 SS. Solar shades at all exterior glazing. Ss-1 for curtain wall and SS-2 for fixed windows.”
41. Drawing Nos. IN-101, IN-102, IN-111, IN-112, IN-121, IN-122, IN-161, IN-162, IN-410, IN-411, and IN-412, ABBREVIATIONS: Add the following Abbreviation:
 “ SS – Solar Shades”
42. Drawing Nos. IN-101, IN-102, IN-111, IN-112, IN-121, IN-122, IN-161, IN-162:
- a. Finish Tag (all Copy Rooms): Change “PT-1M” wall paint finish to read “PT-1”.
 - b. Finish Tag (all Enclave Rooms): Change “PT-M” wall paint finish to read “PT-1/M” (paint and modular wall finish).
43. Drawing No. IN-101, GROUND FLOOR FINISH PLAN - EAST:
- a. Finish Tag (Training Room G08): Change “PT-1” wall paint finish to read “PT-1/M (paint and modular wall finish).
44. Revised Drawings:
- a. Drawing Nos. A-415, A-501, A-502, SR-102, SR-104, and SR-106 noted “REVISED DRAWING 11/18/13”, accompany this Addendum and supersede the same numbered originally issued drawings.
45. Reference Drawings:
- a. Drawing No. 59/113 is attached to this Addendum as a reference to show existing conditions required for window removal/installation.

HVAC WORK DRAWINGS

46. General: Drawing Nos. IN-901 thru IN-962 as shown on Drawing No. G-001, refer to Construction Work Contract on the CD. HVAC Work, Plumbing Work, and Electrical Work Contractors shall use these drawings for reference purposes and coordination.
47. Drawing No. MD-103, PARTIAL DEMOLITION PLAN, Note 2: Change "April 1, 2014" to read "May 15, 2014".

PLUMBING WORK DRAWINGS

48. General: Drawing Nos. IN-901 thru IN-962 as shown on Drawing No. G-001, refer to Construction Work Contract on the CD. HVAC Work, Plumbing Work, and Electrical Work Contractors shall use these drawings for reference purposes and coordination.
49. Drawing P-120, GENERAL NOTES: Add the following Notes:
- “3. Disconnect and remove existing active first floor level domestic water piping serving the existing plumbing fixtures in Mens Room 123 and Womens Room 125 following the completion of all domestic water piping installation work shown on Drawing 4/P-402. Cap domestic water piping at connection to existing 2 1/2" domestic cold water riser shown on drawing P-118.
 - 4. Disconnect and remove existing mop sink and existing 3/4" domestic cold water branch serving the existing mop sink located in Janitor Closet Room 124 prior to the installation of mop sink MS-1 shown on Drawing 4/P-402. Cap 3/4" piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.”
50. Drawing P-122, GENERAL NOTES: Add the following Notes:
- “3. Disconnect and remove existing active second floor level domestic water piping serving the existing plumbing fixtures in Mens Room 221 and Womens Room 224 following the completion of all domestic water piping installation work shown on drawing 4/P-402. Cap domestic water piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.
 - 4. Disconnect and remove existing mop sink and existing 3/4" domestic cold water branch serving the existing mop sink located in Janitor Closet 223 prior to the installation of mop sink MS-1 shown on Drawing 4/P-402. Cap 3/4" piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.”
51. Drawing P-124, GENERAL NOTES: Add the following Notes:
- “3. Disconnect and remove existing active third floor level domestic water piping serving the existing plumbing fixtures in Mens Room 321 and Womens Room 324 following the completion of all domestic water piping installation work shown on drawing 4/P-402. Cap domestic water piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.
 - 4. Disconnect and remove existing mop sink and existing 3/4" domestic cold water branch serving the existing mop sink located in Janitor Closet 323 prior to the installation of mop sink MS-1 shown on drawing 4/P-402. Cap 3/4" piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.”
52. Drawing P-126, GENERAL NOTES: Add the following Notes:
- “3. Disconnect and remove existing active fourth floor level domestic water piping serving the existing plumbing fixtures in Mens Room 421 and Womens Room 424 following the

- completion of all domestic water piping installation work shown on Drawing 4/P-402. Cap domestic water piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.
4. Disconnect and remove existing mop sink and existing 3/4" domestic cold water branch serving the existing mop sink located in Janitor Closet 423 prior to the installation of mop sink MS-1 shown on drawing 4/P-402. Cap 3/4" piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118."
53. Drawing P-128, GENERAL NOTES: Add the following Notes:
- “3. Disconnect and remove existing active fifth floor level domestic water piping serving the existing plumbing fixtures in Mens Room 521 and Womens Room 524 following the completion of all domestic water piping installation work shown on Drawing 4/P-402. Cap domestic water piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.
 4. Disconnect and remove existing mop sink and existing 3/4" domestic cold water branch serving the existing mop sink located in Janitor Closet 523 prior to the installation of mop sink MS-1 shown on Drawing 4/P-402. Cap 3/4" piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.”
54. Drawing P-130, GENERAL NOTES: Add the following Notes:
- “3. Disconnect and remove existing active sixth floor level domestic water piping serving the existing plumbing fixtures in Mens Room 621 and Womens Room 624 following the completion of all domestic water piping installation work shown on drawing 4/P-402. Cap domestic water piping at connection to existing 2 1/2" domestic cold water riser shown on drawing p-118.
 4. Disconnect and remove existing mop sink and existing 3/4" domestic cold water branch serving the existing mop sink located in Janitor Closet 623 prior to the installation of mop sink MS-1 shown on drawing 4/P-403. Cap 3/4" piping at connection to existing 2 1/2" domestic cold water riser shown on Drawing P-118.”
55. Revised Drawings:
- a. Drawing Nos. F-101, F-102, F-113, F-114, P-103, P-104, P-115, P-116, P-117 and P-118 noted “REVISED DRAWING 11/18/13”, accompany this Addendum and supersede the same numbered originally issued drawings.

ELECTRICAL WORK DRAWINGS

56. General: Drawing Nos. IN-901 thru IN-962 as shown on Drawing No. G-001, refer to Construction Work Contract on the CD. HVAC Work, Plumbing Work, and Electrical Work Contractors shall use these drawings for reference purposes and coordination.
57. Drawing No. E-203, FIRST FLOOR LIGHTING PLAN – EAST:
- a. Add (3) surface mounted shaded (emergency power backed) “Type O” fixtures on the underside of canopy to the west of loading dock (evenly spaced within soffit). Circuit to H2CLS Circuit 3.
 - b. LIGHTING RELAY CONTROL PANEL LCP-H1A SCHEDULE: Change “H1A-7” line feed for Relay No. 8 to read “H1A-15”.
58. Drawing E-215, PENTHOUSE FLOOR LIGHTING PLAN - EAST: Add (1) Type O shaded wall pack (emergency power backed) on the east side of building (to the south on man door). Mount fixture at 6’-6” aff. Circuit to H5CLS Circuit 7.

59. Drawing E-216, PENTHOUSE FLOOR LIGHTING PLAN - WEST: Add (1) Type O shaded wall pack (emergency power backed) on the west side of building (to the south on man door). Mount fixture at 6'-6" aff. Circuit to H5CLS Circuit 7.
60. Revised Drawings:
 - a. Drawing Nos. E-201, E-202, and E-217 and noted "REVISED DRAWING 11/18/13", accompany this Addendum and supersede the same numbered originally issued drawings.
61. Addendum Drawings:
 - a. Drawing No. ED-002 noted "ADDENDUM DRAWING 11/18/13", accompanies this Addendum, and forms part of the Contract Documents.

END OF ADDENDUM

James Dirolf, P.E.
Director of Design

JRC;jc



NYS OFFICE OF GENERAL SERVICES

Serving New York

ANDREW M. CUOMO
Governor
ROANN M. DESTITO
Commissioner

CONSULTANT

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CONTRACT: **CONSTRUCTION**

TITLE: **RENOVATE BUILDING NO. 5**

LOCATION: **STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVENUE
ALBANY, NY 12226**

CLIENT: **NEW YORK STATE
OFFICE OF GENERAL SERVICES**

MARK DATE DESCRIPTION
10/25/2013 BID DOCUMENTS
9/13/2013 100% SUBMISSION

PROJECT NUMBER: **44808 - C**

DESIGNED BY: **JM/KS**

DRAWN BY: **KS**

FIELD CHECK:

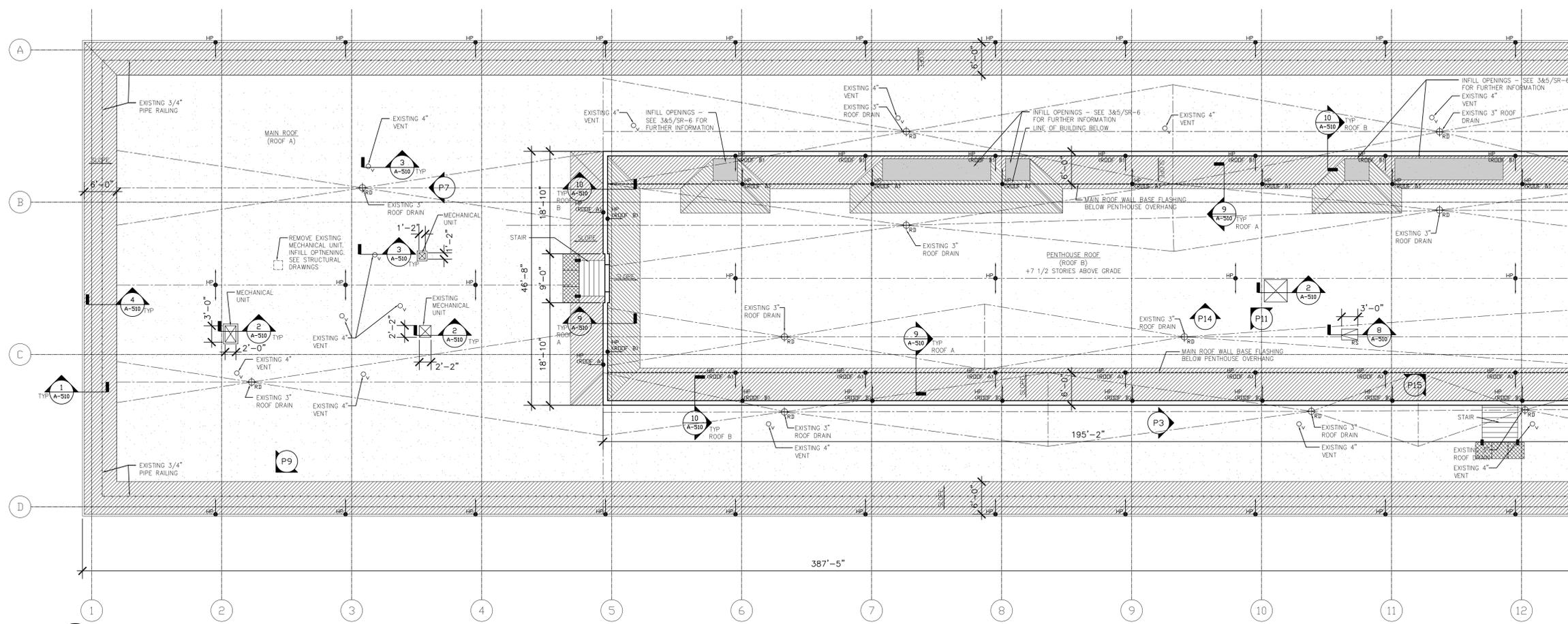
APPROVED:

SHEET TITLE:

ROOF PLAN

DRAWING NUMBER: **A-171**

SHEET 2 OF 5



1 PARTIAL ROOF PLAN
3/32" = 1'-0"

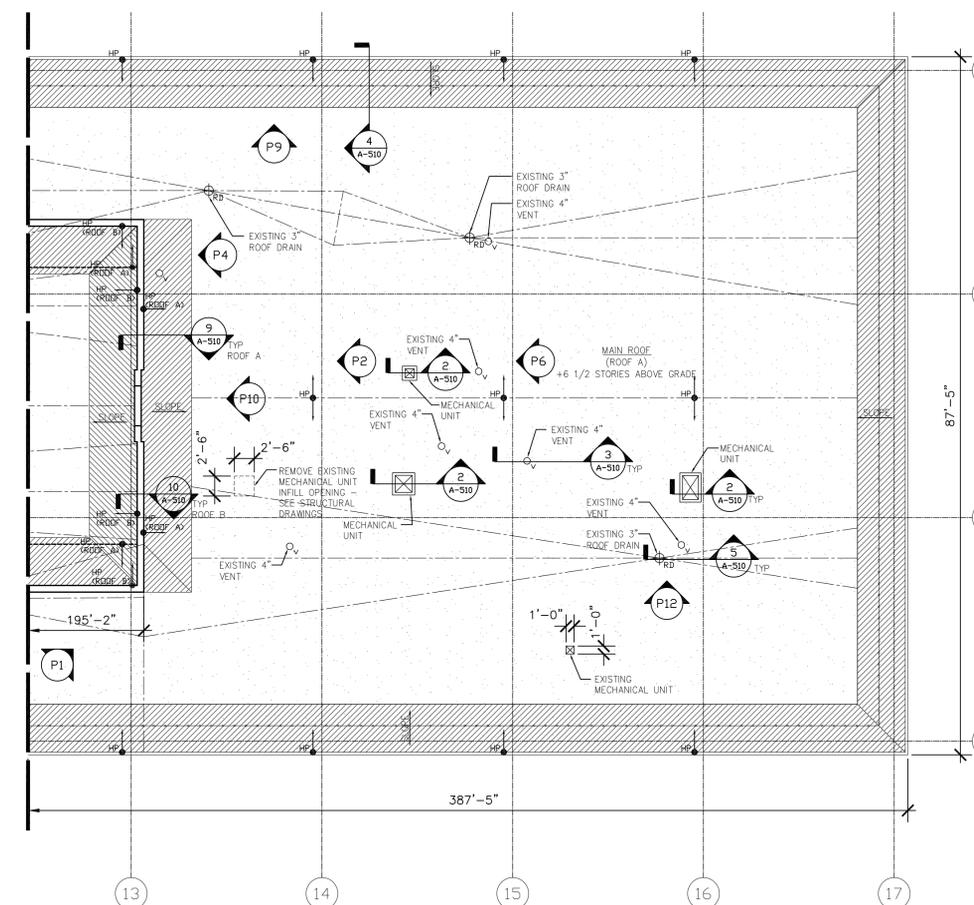
SYMBOLS LIST

- EXISTING ROOF DRAIN
SEE DETAIL 5/A-510
- EXISTING VENT PIPE
SEE DETAIL 3/A-510
- EXISTING MECHANICAL UNIT
SIM TO 2/A-510. EXISTING CURB TO REMAIN,
PROVIDE 4" INSULATION CANT
- EXISTING PIPE RAILING
SEE DETAIL 4/A-510
- EXISTING CONDITION PHOTOGRAPH
SEE DRAWING A-900
- EXISTING ROOF HATCH
SEE DETAIL 8/A-510
- EXISTING CONCRETE ROOF
DECK SLOPE
- ROOF PROTECTION PAD AT
STAIR
- CONCRETE INFILL AT EXISTING
OPENINGS - SEE STRUCTURAL
DRAWINGS
- PROVIDED MECHANICAL EQUIPMENT
PROVIDED BY
H-CONTRACTOR-COORDINATE
SIZE AND LOCATION
- SCHEMATIC TAPERED INSULATION
LAYOUT. PROVIDE TAPERED
INSULATION PLAN PRIOR TO
CONSTRUCTION
- INSULATION HIGH POINT

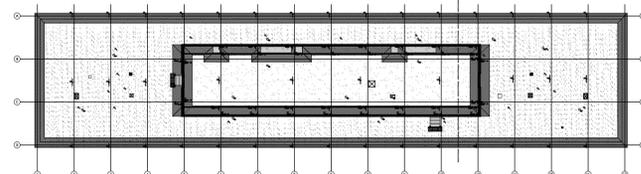
NOTES:

1. REMOVE EXISTING PROTECTED BUILT UP ROOF MEMBRANE, 2 1/2" THICK RIGID INSULATION, PITCH POCKETS, BALLAST, WOOD BLOCKING, FLASHINGS, ETC. DOWN TO THE EXISTING VAPOR RETARDER.
2. THE ROOF SYSTEM, VAPOR RETARDER, BUILT UP FLASHINGS, AND SEALANTS WERE TESTED FOR THE PRESENCE OF ASBESTOS. THE PERIMETER AND PENETRATION FLASHINGS ON THE MAIN AND PENTHOUSE ROOFS WERE POSITIVE. THE MAIN FIELD ROOF AREAS WERE NEGATIVE.
3. VAPOR RETARDER TO BE REPAIRED. PROVIDE A GRAVEL SURFACED 3-PLY SBS MODIFIED BUILT UP ROOF SYSTEM AS DETAILED AND SPECIFIED. EXISTING CONCRETE FILLED METAL ROOF DECK IS PITCHED TO DRAIN AT ROOF AND PENTHOUSE PERIMETERS. PROVIDE 1/8" TAPERED INSULATION IN ADDITION TO ACHIEVE AN AVERAGE R-VALUE OF R-22.
4. PROVIDE A TAPERED INSULATION LAYOUT (DURING THE SUBMITTAL STAGE) ACCEPTABLE TO THE MANUFACTURER TO ACHIEVE A 20 YEAR WARRANTY. TAPERED INSULATION SHOWN ON ROOF PLAN IS FOR CONCEPTUAL PURPOSES.
5. RAISE FLASHINGS AND VENT PIPES AS REQUIRED TO PROVIDE A MINIMUM 8" ABOVE THE FINISHED ROOF SYSTEM.
6. REMOVE EXISTING METAL BASE FLASHING UNDER OVERHANG OF PENTHOUSE AND PROVIDE REGLET FLASHING AS SHOWN IN DETAIL 7/A-510.
7. REMOVE EXISTING ROOF SCUTTLE ON PENTHOUSE ROOF AND PROVIDE ROOF SCUTTLE, SEE DETAIL 8/A-510.
8. REMOVE APPROXIMATELY 500 SQUARE FEET OF DETERIORATED CONCRETE DOWN TO SOLID CONCRETE (APPROXIMATELY 2" IN THICKNESS). REMOVE LOOSE RUST FROM ANY EXPOSED REBAR. APPLY REBAR COATING TO ALL EXPOSED REINFORCEMENT. APPLY BONDING AGENT TO THE CONCRETE AND PATCH WITH A TYPE C-3 PATCHING MORTAR. REFER TO SPECIFICATION SECTION 030131 FOR ACCEPTABLE PRODUCTS.
9. SEE STRUCTURAL DRAWING FOR PENTHOUSE STAIRS. PROVIDE WALKWAY PADS WHERE STAIRS SET ON ROOF SURFACE.

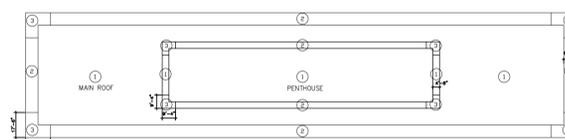
STRUCTURAL DESIGN DATA		
CONSTRUCTION LOADING	20psf	1603.2
BUILDING CATEGORY	III	1604.5
BASIC WIND SPEED	40 MPH	1609.3
W	1.0	ASCE 7-05
EXPOSURE CATEGORY	C	1609.4
INTERNAL PRESSURE COEF.	+0.18	ASCE 7-05
COMPONENTS & CLADDING		
	MAIN/PENT	
Zone 1	-30 -32	ASCE 7-05
Zone 2	-38 -40	ASCE 7-05
Zone 3	-44 -48	ASCE 7-05
Pg	40 psf	1609.2
Ce	1.0	ASCE 7-05
Ib	1.0	ASCE 7-05
Gf	1.0	ASCE 7-05
Ft	20 psf	ASCE 7-05
FLAT ROOFS NOT REQUIRED LESS THAN 5% LOAD CHANGE		



2 PARTIAL ROOF PLAN
3/32" = 1'-0"



3 KEY PLAN
N.T.S.



4 ZONE PLAN
N.T.S.



CONSULTANT

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CONTRACT: **CONSTRUCTION**

TITLE: **RENOVATE BUILDING NO. 5**

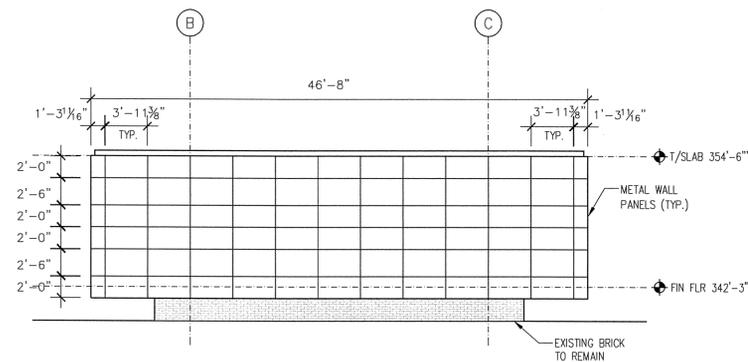
LOCATION: **STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVENUE
ALBANY, NY 12226**

CLIENT: **NEW YORK STATE
OFFICE OF GENERAL SERVICES**

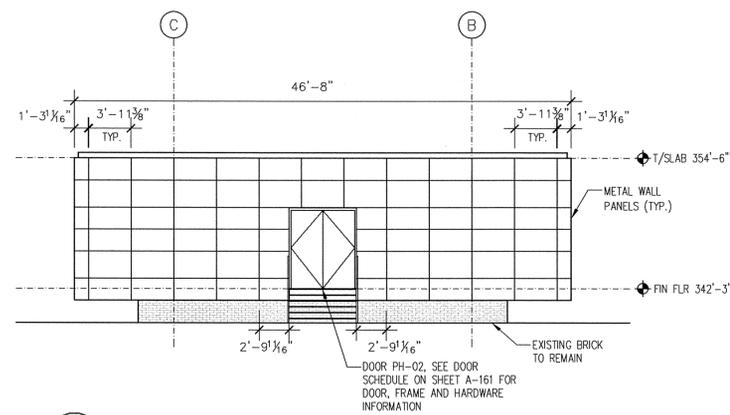
MARK	DATE	DESCRIPTION
	10/25/2013	BID DOCUMENTS
	9/13/2013	100% SUBMISSION
PROJECT NUMBER:	44808 - C	
DESIGNED BY:		
DRAWN BY:		
FIELD CHECK:		
APPROVED:		

METAL WALL PANELS
PENTHOUSE ELEVATIONS

DRAWING NUMBER:
A-203



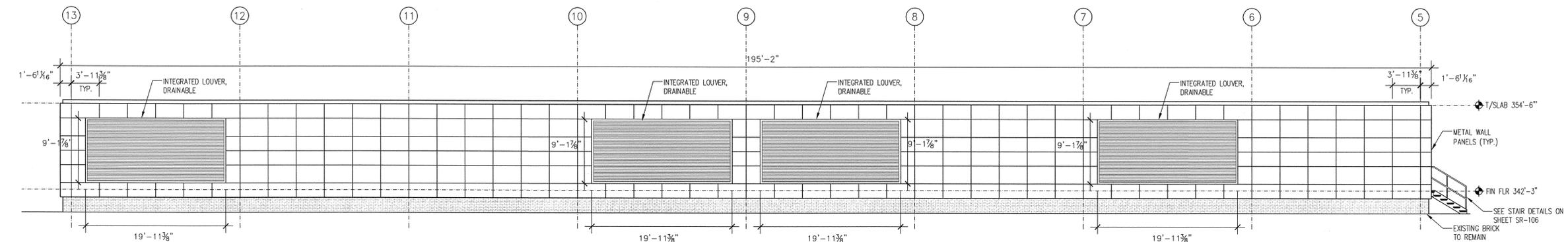
1 WEST ELEVATION
A-203 1/8" = 1'-0"



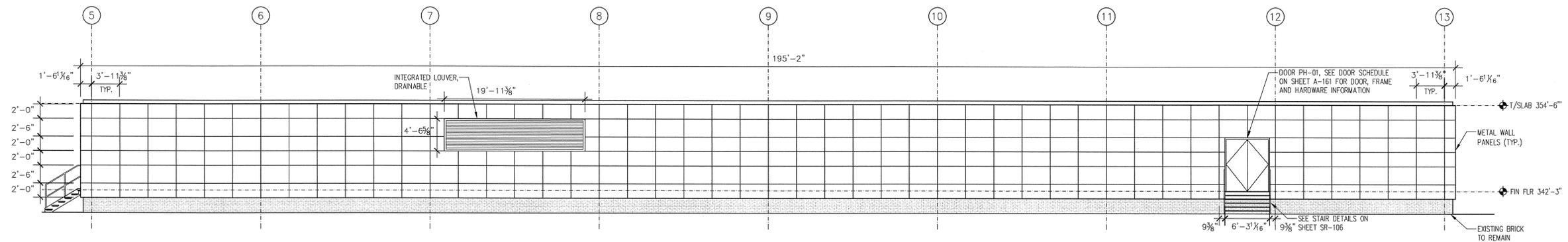
2 EAST ELEVATION
A-203 1/8" = 1'-0"

NOTES:

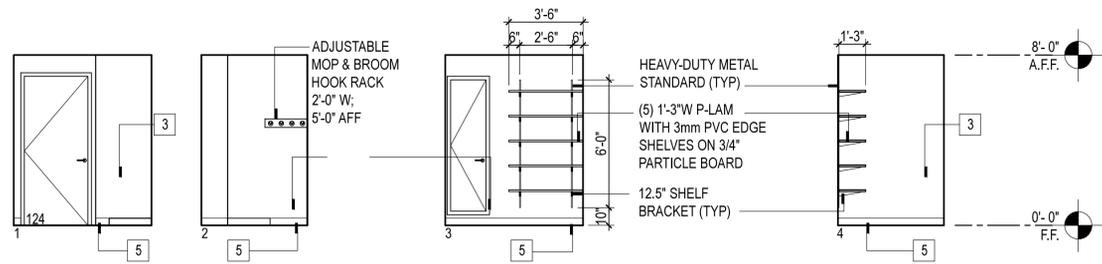
1. THE C CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING THE PENTHOUSE WALLS WHILE MAINTAINING REQUIRED BUILDING OPERATIONS AND PROVIDING PROTECTION OF THE INTERIOR EQUIPMENT FROM THE WEATHER. SUBMIT A WRITTEN WORK PLAN DETAILING PANEL REMOVAL AND REPLACEMENT TO THE DIRECTOR'S REPRESENTATIVE FOR APPROVAL TWO WEEKS PRIOR TO STARTING WORK.
2. THE C CONTRACTOR MUST PROTECT ALL INSTALLED WORK AND EXISTING PROPERTY DURING THE PERFORMANCE OF THE WORK.
3. FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND INCORPORATE VERIFIED INFORMATION INTO SHOP DRAWINGS AND SUBMITTALS. REPORT ANY DISCREPANCIES TO THE DIRECTOR'S REPRESENTATIVE.
4. SEE SHEET A-503 FOR TYPICAL METAL WALL PANEL AND LOUVER DETAILS.
5. FOR PENTHOUSE STRUCTURAL WORK SEE SHEETS SR-101 THROUGH SR-106.
6. FOR PENTHOUSE ROOF AND MAIN ROOF WORK SEE SHEETS A-171, A-510 AND A-900.
7. COORDINATE NEW PENTHOUSE EXTERIOR PANEL INSTALLATION WITH THE H, P AND ELEVATOR TRADES. ALL LARGE EQUIPMENT REMOVALS AND INSTALLATIONS MUST BE COORDINATED WITH PENTHOUSE FRAMING AND PANEL INSTALLATION.
8. THE C CONTRACTOR IS RESPONSIBLE FOR COORDINATING ROOF REMOVALS AND INSTALLATION WITH PENTHOUSE DEMOLITION AND PANEL INSTALLATION. INSTALLED ROOF WORK MUST BE PROTECTED WITH AT LEAST ONE LAYER OF RIGID INSULATION AND ONE LAYER OF EXTERIOR GRADE PLYWOOD EXTENDING 8' FROM WALL PANEL INSTALLATION. TEMPORARY PROTECTION MUST BE BALLASTED TO RESIST WIND UPLIFT, SEE SHEET A-171 FOR STRUCTURAL DESIGN DATA.
9. INTEGRATED DRAINABLE LOUVERS ARE INCLUDED IN THE C-CONTRACT.



3 SOUTH ELEVATION
A-203 1/8" = 1'-0"

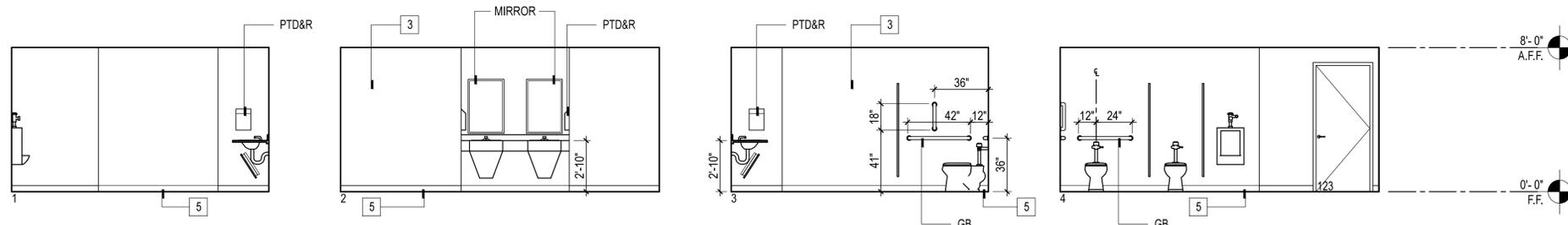


4 NORTH ELEVATION
A-203 1/8" = 1'-0"



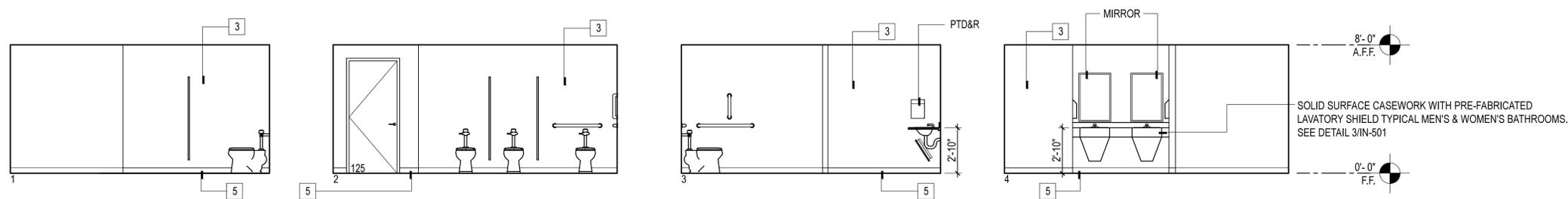
1
A-415
SCALE: 1/4" = 1'-0"

INTERIOR ELEVATION AT JANITOR CLOSET



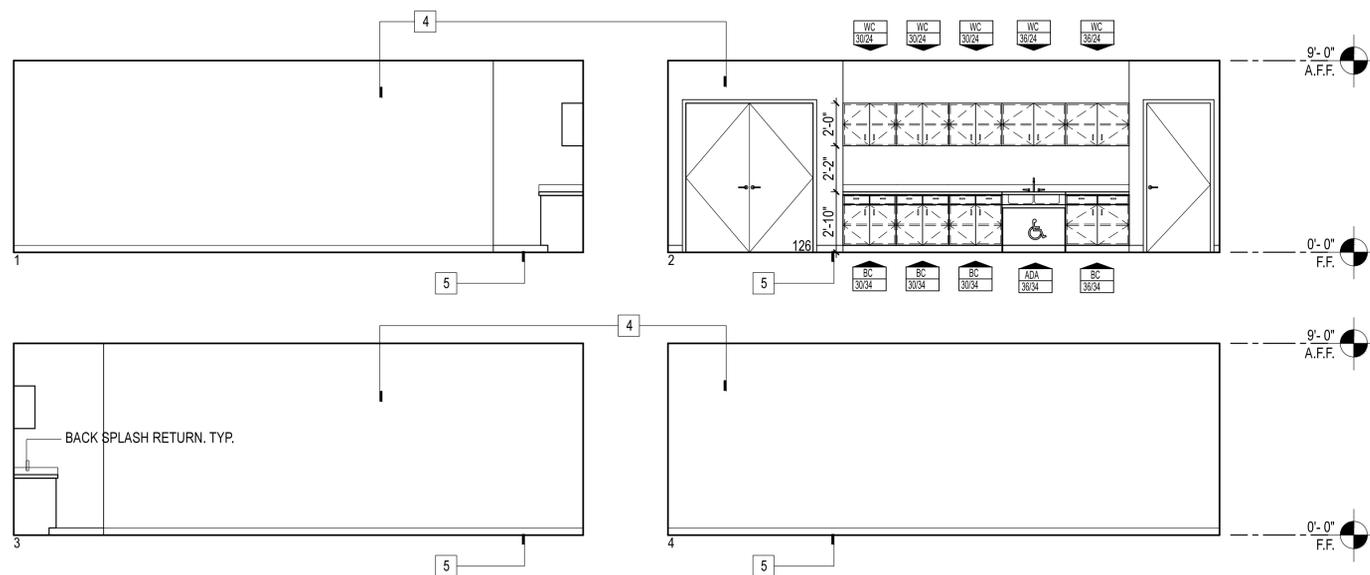
2
A-415
SCALE: 1/4" = 1'-0"

INTERIOR ELEVATIONS AT MENS ROOM



3
A-415
SCALE: 1/4" = 1'-0"

INTERIOR ELEVATIONS AT WOMENS ROOM



4
A-415
SCALE: 1/4" = 1'-0"

INTERIOR ELEVATION AT BREAK ROOM

INTERIOR ELEVATION NOTES

- G1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (P-LAM) COUNTERTOPS AND 4" BACK SPLASHES U.O.N.
- G2. PROVIDE MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT / FINISH.
- G3. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASE WORK.
- G4. COORDINATE ALL SINKS WITH PLUMBING DOCUMENTS.
- G5. REFER TO CASEWORK DETAILS DRAWING IN-501.
- G6. REFER TO INTERIOR DESIGN DRAWING IN-501 FOR ALL FINISHES AND TILE PATTERN INFORMATION.
- G7. ALL WALL MOUNTED COMPONENTS SHALL HAVE WOOD BLOCKING PLACED IN WALLS TO MEET SPECIFIED ANCHORING REQUIREMENTS.

INTERIOR ELEVATION KEY NOTES

- 1 CLEAN EXISTING MARBLE
 - 2 PATCH TO MATCH EXISTING FINISH
 - 3 PROVIDE CWT CERAMIC WALL TILE - SEE IN-410
 - 4 PAINT FINISHES
 - 5 SCHEDULED BASE
 - 6 HOLLOW METAL FRAME WITH TEMPERED GLASS TYPICAL
- CABINET TYPE
- BC - BASE CABINET
WC - WALL CABINET
ADA - ADA SINK BASE
- HEIGHT OF CASEWORK
WIDTH OF CASEWORK



OGS
NYS OFFICE OF GENERAL SERVICES
Serving New York
ANDREW M. CUOMO
Governor
ROANNY M. DESTITTO
Commissioner

CONSULTANTS:



Hamlin Design Group
163 Homestead Ave
Albany, New York 12203
Tel: 518.724.5159
Fax: 518.320.8633
Web: hamlindesigngroup.com

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CALLED NORTH



CONTRACT: CONSTRUCTION
TITLE: RENOVATE BUILDING NO. 5
LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE.
ALBANY, NY 12226
CLIENT: OFFICE OF GENERAL SERVICES

REVISED DRAWING
11/18/13

MARK	DATE	BID DOCUMENTS DESCRIPTION
	10/25/13	

PROJECT NUMBER: 44808-C
DESIGNED BY:
DRAWN BY:
FIELD CHECK BY:
APPROVED BY:
SHEET TITLE: FIRST FLOOR INTERIOR ELEVATIONS EAST CORE
DRAWING NUMBER: A-415

CONSULTANT

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CONTRACT: **CONSTRUCTION**

TITLE: **RENOVATE BUILDING NO. 5**

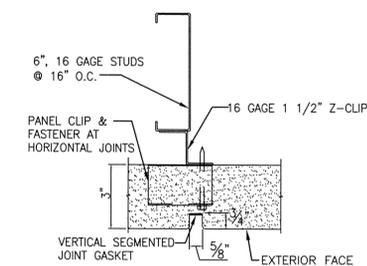
LOCATION: **STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVENUE
ALBANY, NY 12226**

CLIENT: **NEW YORK STATE
OFFICE OF GENERAL SERVICES**

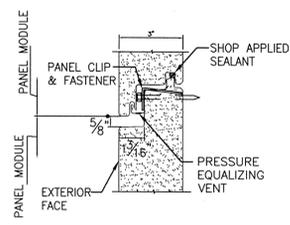
MARK	DATE	DESCRIPTION
	10/25/2013	BID DOCUMENTS
	9/13/2013	100% SUBMISSION
PROJECT NUMBER:	44808 - C	
DESIGNED BY:		
DRAWN BY:		
FIELD CHECK:		
APPROVED:		
SHEET TITLE:		

METAL PANEL DETAILS

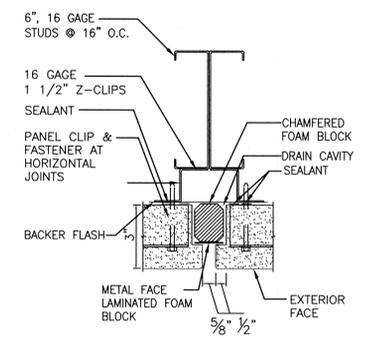
DRAWING NUMBER: **A-511**



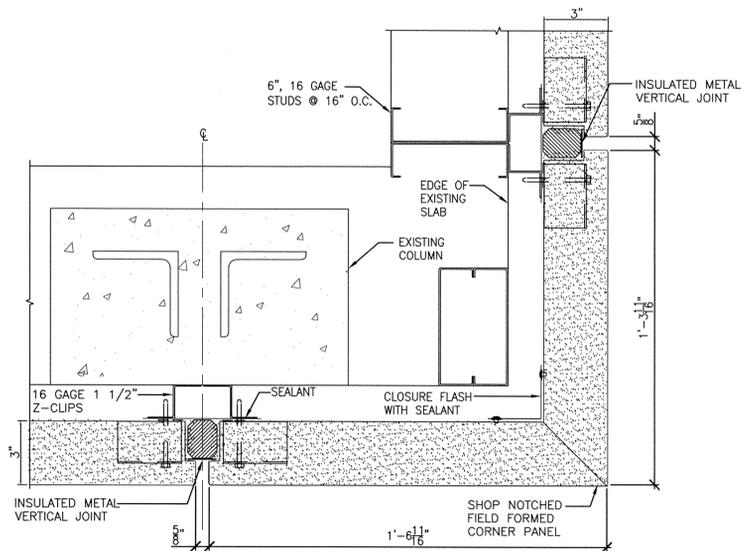
1 VERTICAL SEGMENTED JOINT W/ALIGNED SUPPORT
A-511 SCALE 3" = 1'-0"



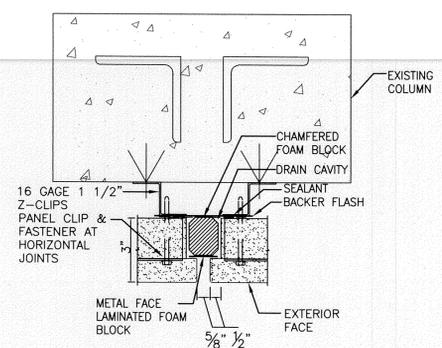
2 HORIZONTAL PANEL JOINT
A-511 SCALE 3" = 1'-0"



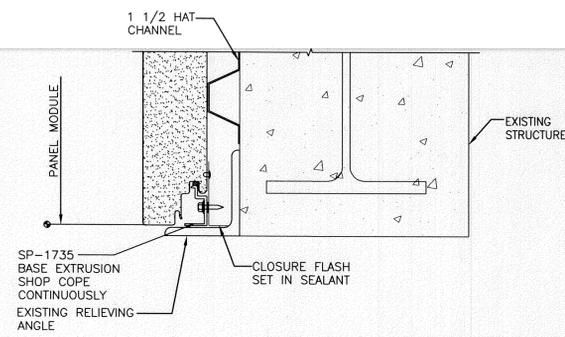
3 VERTICAL PANEL TO PANEL JOINT
A-511 SCALE 6" = 1'-0"



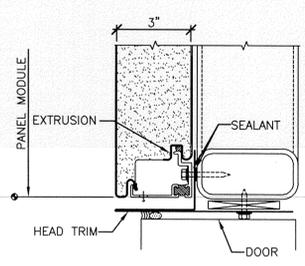
4 INSIDE CORNER DETAIL
A-511 SCALE 3" = 1'-0"



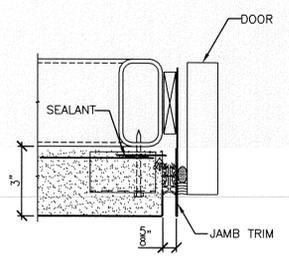
5 VERTICAL PANEL TO PANEL JOINT AT EXISTING COLUMNS
A-511 SCALE 3" = 1'-0"



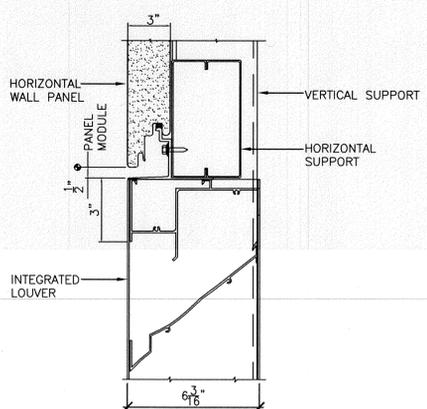
6 DETAIL AT EXISTING RELIEVING ANGLE
A-511 SCALE 3" = 1'-0"



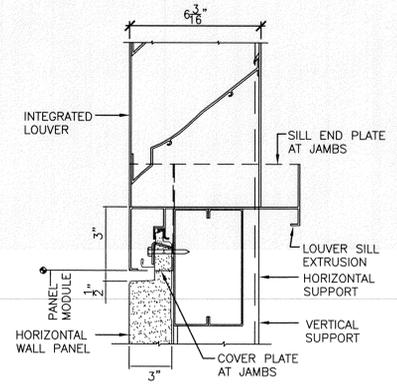
7 HEAD OPENING DETAIL
A-511 SCALE 3" = 1'-0"



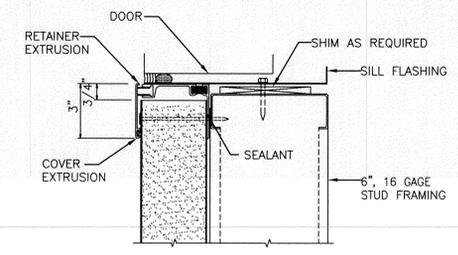
8 JAMB OPENING DETAIL
A-511 SCALE 3" = 1'-0"



9 LOUVER HEAD DETAIL
A-511 SCALE 3" = 1'-0"



10 LOUVER SILL DETAIL
A-511 SCALE 3" = 1'-0"



11 SILL OPENING, OFF MODULE
A-511 SCALE 3" = 1'-0"

NOTES:
1. REFER TO STRUCTURAL DRAWINGS SR-101 THROUGH SR-106 FOR ADDITIONAL FRAMING REQUIREMENTS.
2. SEE SHEET A-203 FOR ADDITIONAL INFORMATION ON METAL WALL PANEL INSTALLATION.
3. SEE SHEETS A-171, A-510 AND A-900 FOR PENTHOUSE ROOF AND MAIN ROOF WORK.

CONSULTANTS



SAGE ENGINEERING ASSOCIATES, LLP
 121 WESTERN AVENUE
 ALBANY, NY 12203
 (518)453-6091 FAX(518)453-6092



M/E PROFESSIONAL ENGINEERING, PLLC
 9 CHATELAIN AVENUE, 11TH FLOOR, ALBANY, NY 12205
 TEL: (518) 280-6522 FAX: (518) 280-6526

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPETENT PROFESSIONAL LE ARCHITECT FOR AN ARCHITECT, ENGINEER OR MECHANICAL CONTRACTOR, IS PROHIBITED. THE ALTERNATION OF THIS MATERIAL IS A VIOLATION OF THE PROFESSIONAL LAW AND/OR REGULATIONS AND IS A CLASS A MISDEMEANOR.



CONTRACT:
ELECTRICAL

TITLE:
 RENOVATE BUILDING
 No. 5

LOCATION:
 STATE OFFICE BUILDING CAMPUS
 1220 WASHINGTON AVE
 ALBANY, NEW YORK 12226

CLIENT:
 OFFICE OF GENERAL SERVICES

REVISED DRAWING
 11/18/13

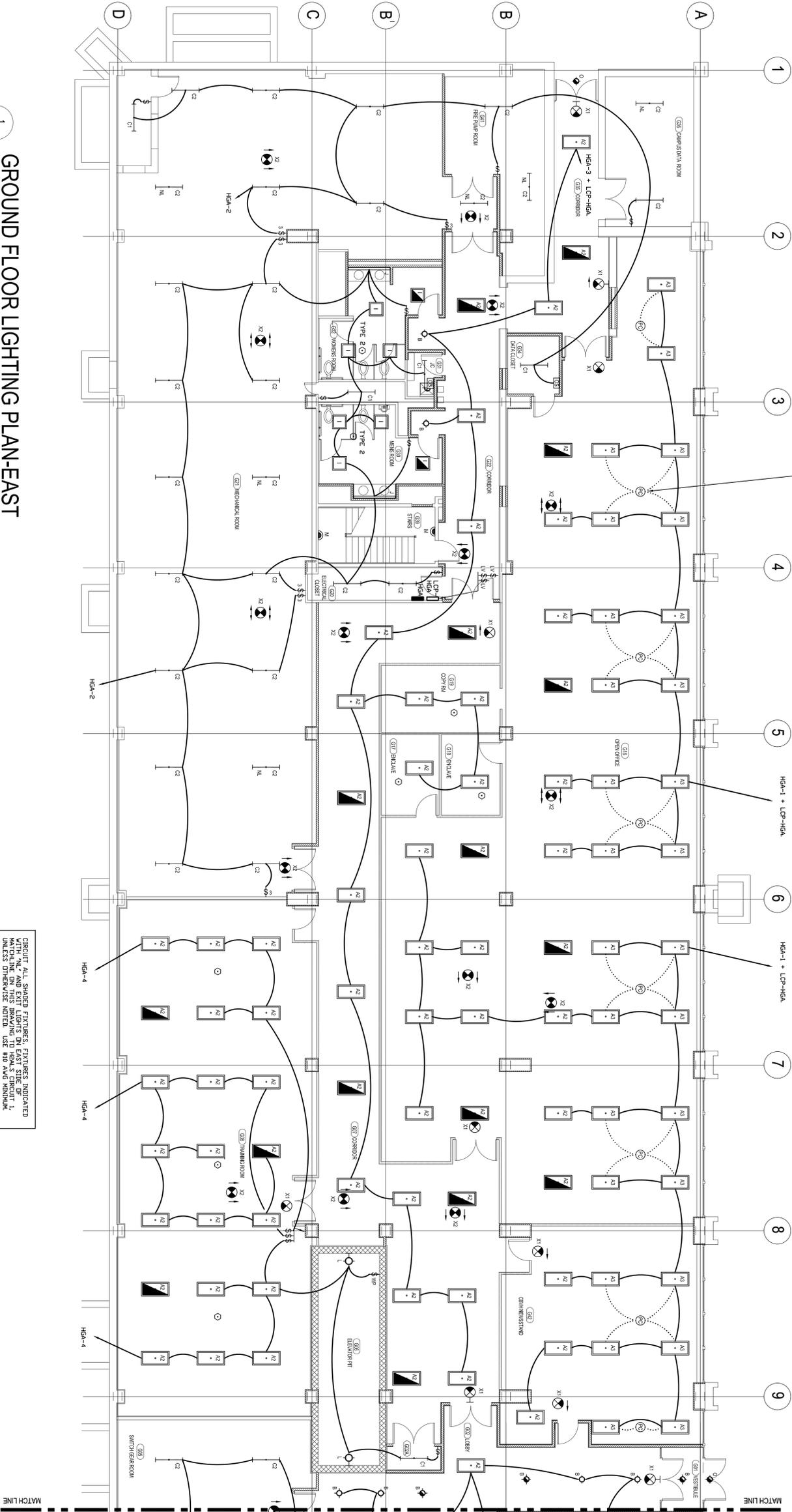
PROJECT NUMBER	DATE	DESCRIPTION
44808-E <td>11/17/13 <td>BD SUBMISSION</td> </td>	11/17/13 <td>BD SUBMISSION</td>	BD SUBMISSION
	09/27/13 <td>100% SUBMISSION</td>	100% SUBMISSION
	08/12/13 <td>60% SUBMISSION</td>	60% SUBMISSION

MARK	DATE	DESCRIPTION

DESIGNED BY:	A.P.AGELLU
DRAWN BY:	A.P.AGELLU
FIELD CHECK BY:	
APPROVED BY:	

GROUND FLOOR LIGHTING PLAN-EAST

E-201



PHOTOCELL TO DIM THE DESIGNATED TYPE A2 FIXTURES REFERENCED SPEC. TYPE A2. REFER TO SPEC. TYPE A2.

CIRCUIT A21 SHOWN FIXTURES, FIXTURES INDICATED MATCHLINE ON THIS DRAWING TO HEAD'S CIRCUIT 1, UNLESS OTHERWISE NOTED. USE R10 AND R10MINIMUM.

GROUND FLOOR LIGHTING PLAN-EAST
 SCALE: 1/8" = 1'-0"
 1
 E-201

LIGHTING RELAY CONTROL PANEL
 VOLTAGE: 277
SUPPLY CIRCUIT: HGA

RELAY	LINE FEED	TYPE	VOLTAG	SOURCE	DESCRIPTION	RELAY	LINE FEED	TYPE	VOLTAG	SOURCE	DESCRIPTION
1	HGA-1	NC	277	NORMAL	SOFT LIGHTS-SOUTH-EAST	2	HGA-1	NC	277	NORMAL	SOFT LIGHTS-SOUTH-EAST
2	HGA-3	NC	277	NORMAL	SOFT LIGHTS-EAST HALL	4	HGA-1	NC	277	NORMAL	SOFT LIGHTS-SOUTH-EAST
3	-	NC	-	-	-	8	-	NC	-	-	-
4	-	NC	-	-	-	9	-	NC	-	-	-

CONSULTANTS



SAGE ENGINEERING ASSOCIATES, LLP
 1211 WESTERN AVENUE
 ALBANY, NY 12203
 (518)453-0091 FAX:(518)453-0092



MET PROFESSIONAL ENGINEERING, PLLC
 9 COLLEGE AVENUE, 4TH FLOOR
 ALBANY, NY 12205
 TEL: (518) 280-6522 FAX: (518) 280-6526

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPETENT PROFESSIONAL, IS ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER, LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, AND/OR PROFESSIONAL DESIGNER FOR A PROFESSIONAL DESIGNER, IS A VIOLATION OF THE PROFESSIONAL LAW AND/OR REGULATIONS AND IS A CLASS A MISDEMEANOR.



ELECTRICAL

CONTRACT: RENOVATE BUILDING No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS 1220 WASHINGTON AVE ALBANY, NEW YORK 12226

CLIENT: OFFICE OF GENERAL SERVICES

REVISED DRAWING
 11/18/13

PROJECT NUMBER	DATE	DESCRIPTION
44808-E <td>11/17/13 <td>BD SUBMISSION</td> </td>	11/17/13 <td>BD SUBMISSION</td>	BD SUBMISSION
	09/27/13 <td>100% SUBMISSION</td>	100% SUBMISSION
	08/12/13 <td>60% SUBMISSION</td>	60% SUBMISSION

MARK: _____

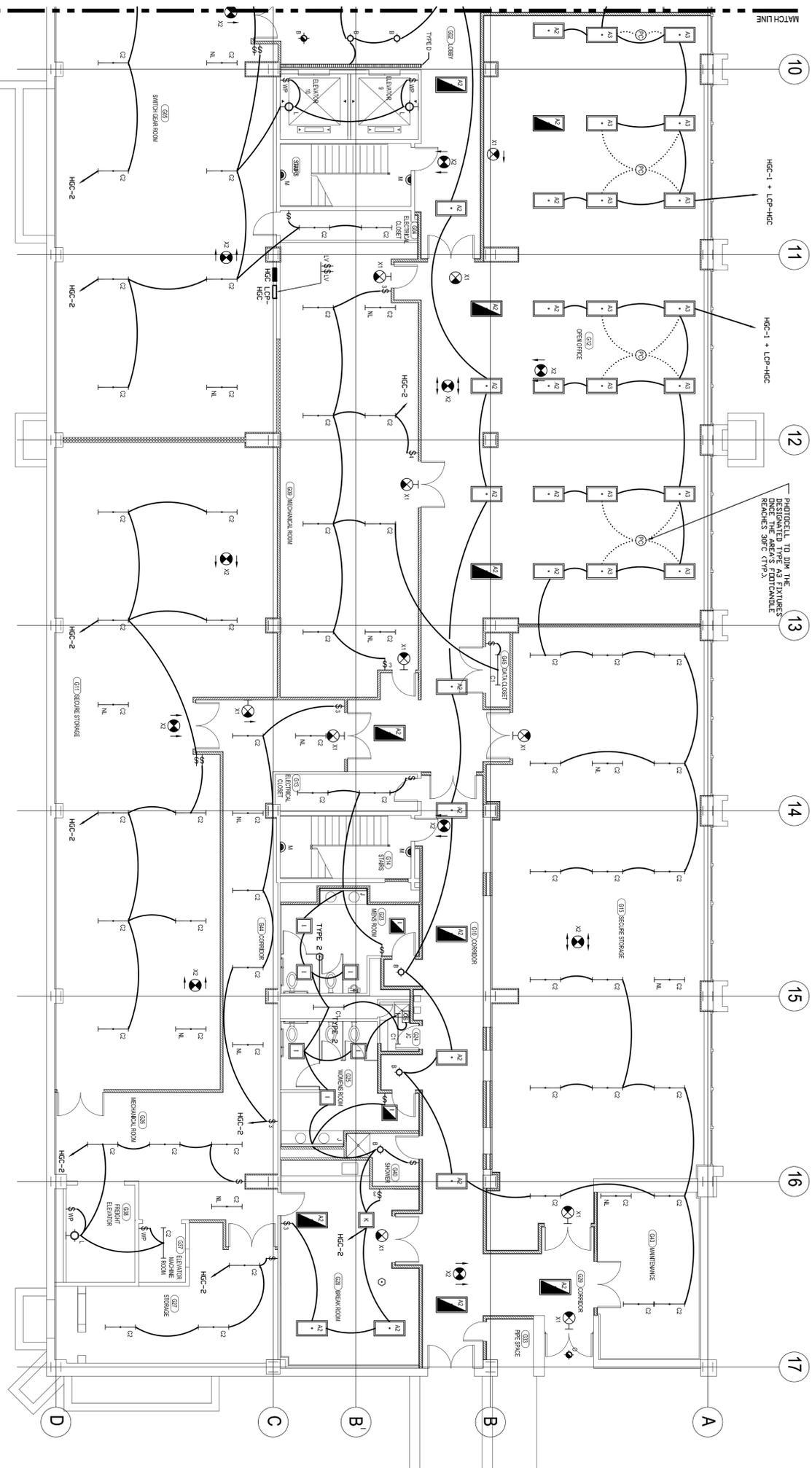
DESIGNED BY: APAGEBU

DESIGNER: APAGEBU

FIELD CHECK BY: _____

APPROVED BY: _____

SHEET TITLE: GROUND FLOOR LIGHTING PLAN-WEST

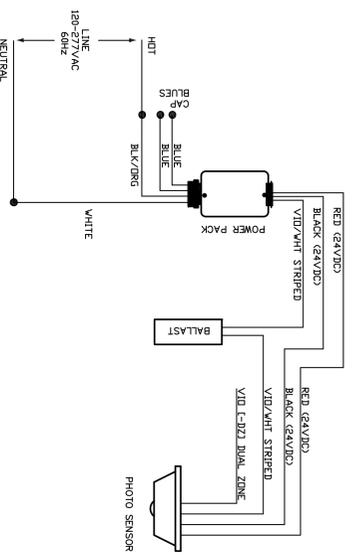


1
 E-202
 SCALE: 1/8" = 1'-0"
GROUND FLOOR LIGHTING PLAN-WEST

PANEL: LCP-HIGC LIGHTING RELAY CONTROL PANEL

VOLTS: 277 SUPPLY CIRCUIT: HIGC

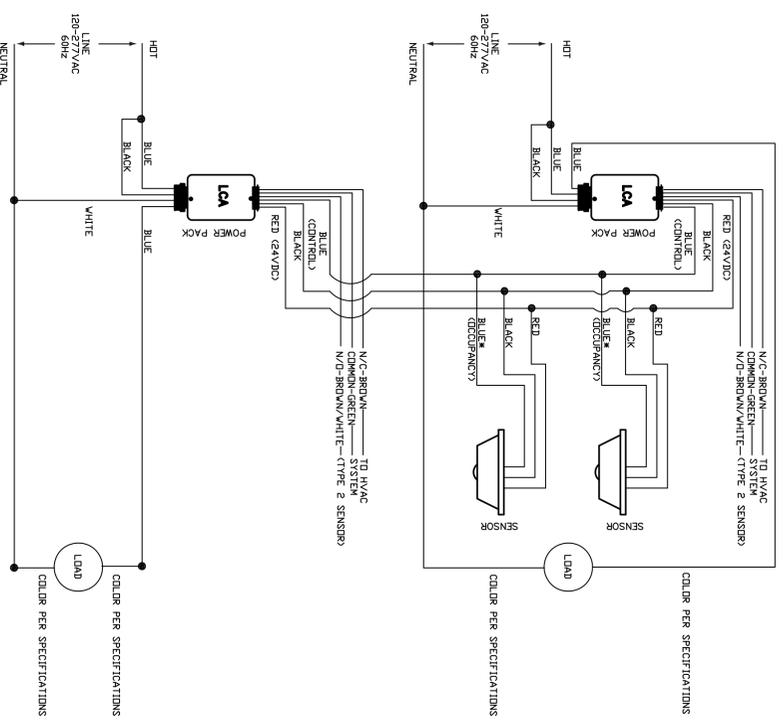
RELAY	LINE FIELD	TYPE	VOLTAJE	STAGE	DESCRIPTION	RELAY	LINE FIELD	TYPE	VOLTAJE	STAGE	DESCRIPTION
1	HGC-1	NC	277	NORMAL	SOL. LIGHTS-SOUTHWEST	2	HGC-1	NC	277	NORMAL	SOL. LIGHTS-SOUTHWEST
3	-	NC	-	-	-	4	-	NC	-	-	-
5	-	NC	-	-	-	6	-	NC	-	-	-
7	-	NC	-	-	-	8	-	NC	-	-	-



4 PHOTOCELL WIRING DIAGRAM

WIRING DIAGRAM BASED ON SENSOR SWITCH SPECIFICATION

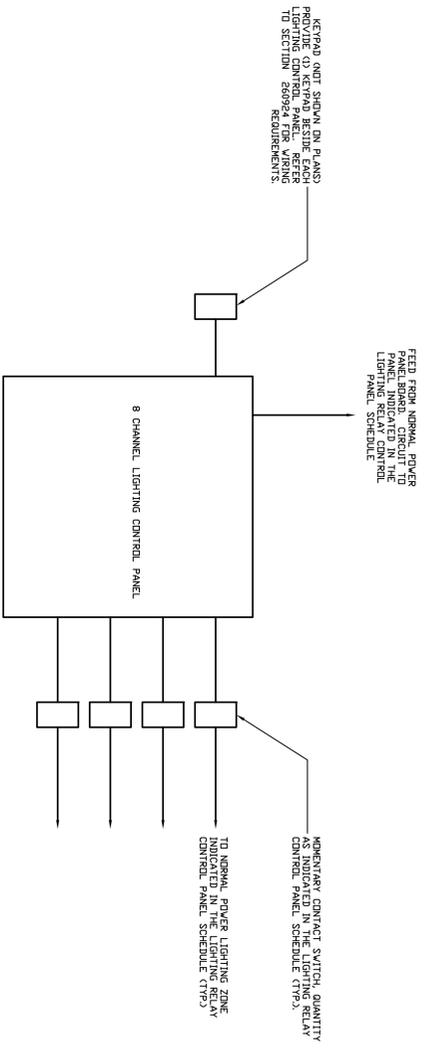
E-217 SCALE: NONE



2 CEILING OCCUPANCY WIRING DIAGRAM: MULTIPLE SENSORS, MULTIPLE POWER PACKS

WIRING DIAGRAM BASED ON PHILIPS LIGHTLIDERS SPECIFICATION

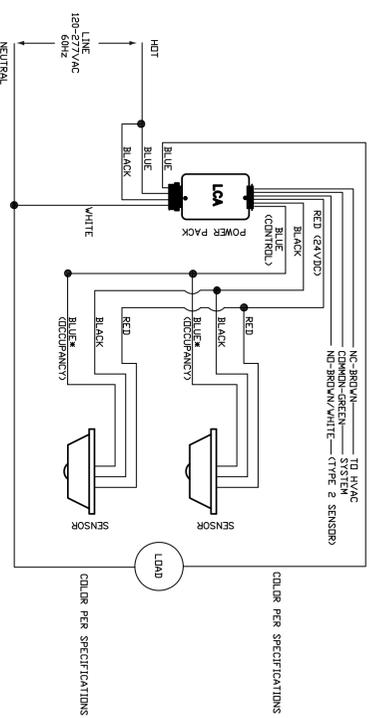
E-217 SCALE: NONE



3 LIGHTING CONTROL PANEL WIRING DIAGRAM

WIRING DIAGRAM BASED ON PHILIPS LIGHTLIDERS SPECIFICATION

E-217 SCALE: NONE



1 CEILING OCCUPANCY WIRING DIAGRAM: MULTIPLE SENSORS, SINGLE POWER PACK

WIRING DIAGRAM BASED ON PHILIPS LIGHTLIDERS SPECIFICATION

E-217 SCALE: NONE



ANDREW M. CUOMO
Governor
RODANN M. DISTITTO
Commissioner



SAGE ENGINEERING
ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518) 453-0091 FAX (518) 453-0092



MTE PROFESSIONAL ENGINEERING, PLLC
9 COLLEGE AVENUE, 11TH FLOOR
ALBANY, NY 12205
Tel: (518) 280-6522 Fax: (518) 280-6526

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPETENT PROFESSIONAL, IS ARCHITECT FOR AN ARCHITECT, ENGINEER OR PROFESSIONAL LANDSCAPE ARCHITECT. ANY SUCH ALTERATION IS UNLAWFUL UNDER THE PROFESSIONAL ENGINEERING AND SURVEYING LAW AND/OR RESOLUTIONS AND IS A CLASS A MISDEMEANOR.



ELECTRICAL

TITLE: RENOVATE BUILDING No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS 1220 WASHINGTON AVE ALBANY, NEW YORK 12226

DATE: 11/18/13

CLIENT: OFFICE OF GENERAL SERVICES

REVISED DRAWING 11/18/13

MARK	PROJECT NUMBER	PROJECT NAME	DATE	DESCRIPTION
	44808-E	APACELL	11/7/13	BD SUBMISSION
		APACELL	09/27/13	100% SUBMISSION
		APACELL	09/12/13	60% SUBMISSION

LIGHTING CONTROL DETAILS

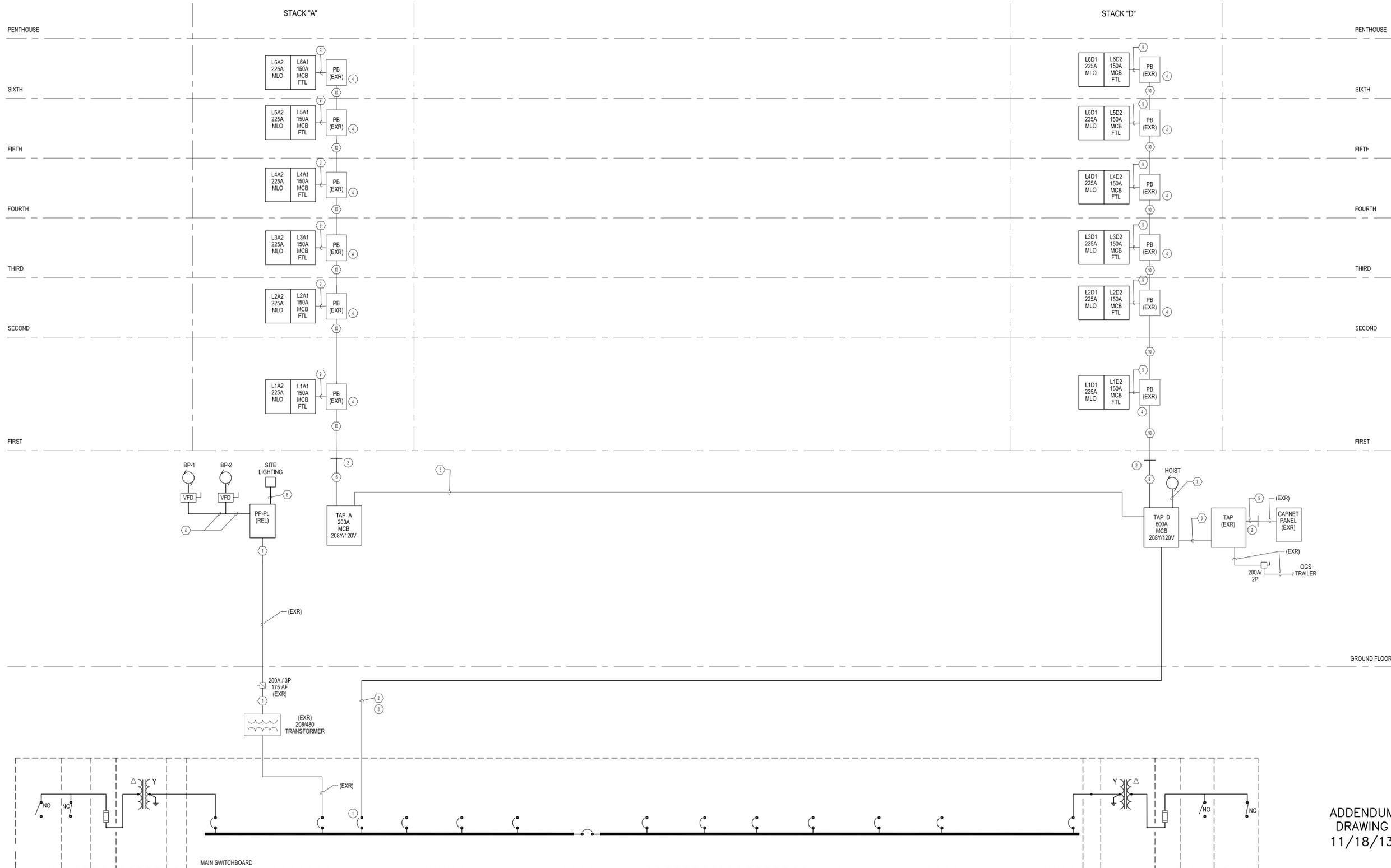
DRAWING NUMBER: E-217

SHEET 369 OF 376

TYPE	DESCRIPTION
(1)	(3) #2/0, #6G EXR
(2)	(2) SETS - (4) 3/0, #4G EXR, (1) SET - (4) 3/0, #4G
(3)	(1) SET - (4) 3/0, #4G EXR
(4)	(3) #1, #6G
(5)	(4) #6, #10G
(6)	(4) 3/0, #4G
(7)	(3) #1, #8G, 1-1/4" C
(8)	(4) #4, #10G
(9)	(4) #1/0, #6G IN EXISTING 3-1/2" C
(10)	(4) 400 KCMIL, 3-1/2" C EXR

KEYED NOTES:

- (1) ADJUST TRIP SETTING OF EXISTING BREAKER TO 600A.
- (2) SPLICE CONDUCTORS TO EXISTING CONDUCTORS. PROVIDE ENCLOSURE FOR SPLICES.
- (3) ROUTE 1 SET OF CONDUCTORS WITH (2) EXISTING SETS OF CONDUCTORS.
- (4) TAP EXISTING CONDUCTORS IN EXISTING PULLBOX.



ADDENDUM
DRAWING
11/18/13

BUILDING 7
GROUND FLOOR

O&S
NYS OFFICE OF GENERAL SERVICES
Serving New York
ANDREW M. CUOMO
Governor
ROXANN M. DESTITTO
Commissioner

CONSULTANT
SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518) 453-6091 FAX (518) 453-6092

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CONTRACT: **ELECTRICAL**
TITLE: RENOVATE BUILDING No. 5
LOCATION: STATE OFFICE BUILDING CAMPUS 1220 WASHINGTON AVE ALBANY, NEW YORK 12226
CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION

PROJECT NUMBER: **44808 - E**
DESIGNED BY: GC
DRAWN BY: CMC
FIELD CHECK: -
APPROVED: MM

SHEET TITLE:
TEMPORARY POWER ONE-LINE DIAGRAM

DRAWING NUMBER:
ED-002
SHEET 315 of 376

3.6x24 PLOT SHEET

CONSULTANT



SAGE ENGINEERING
ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT:

PLUMBING

TITLE: RENOVATE BUILDING
No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

CLIENT: OFFICE OF GENERAL SERVICES

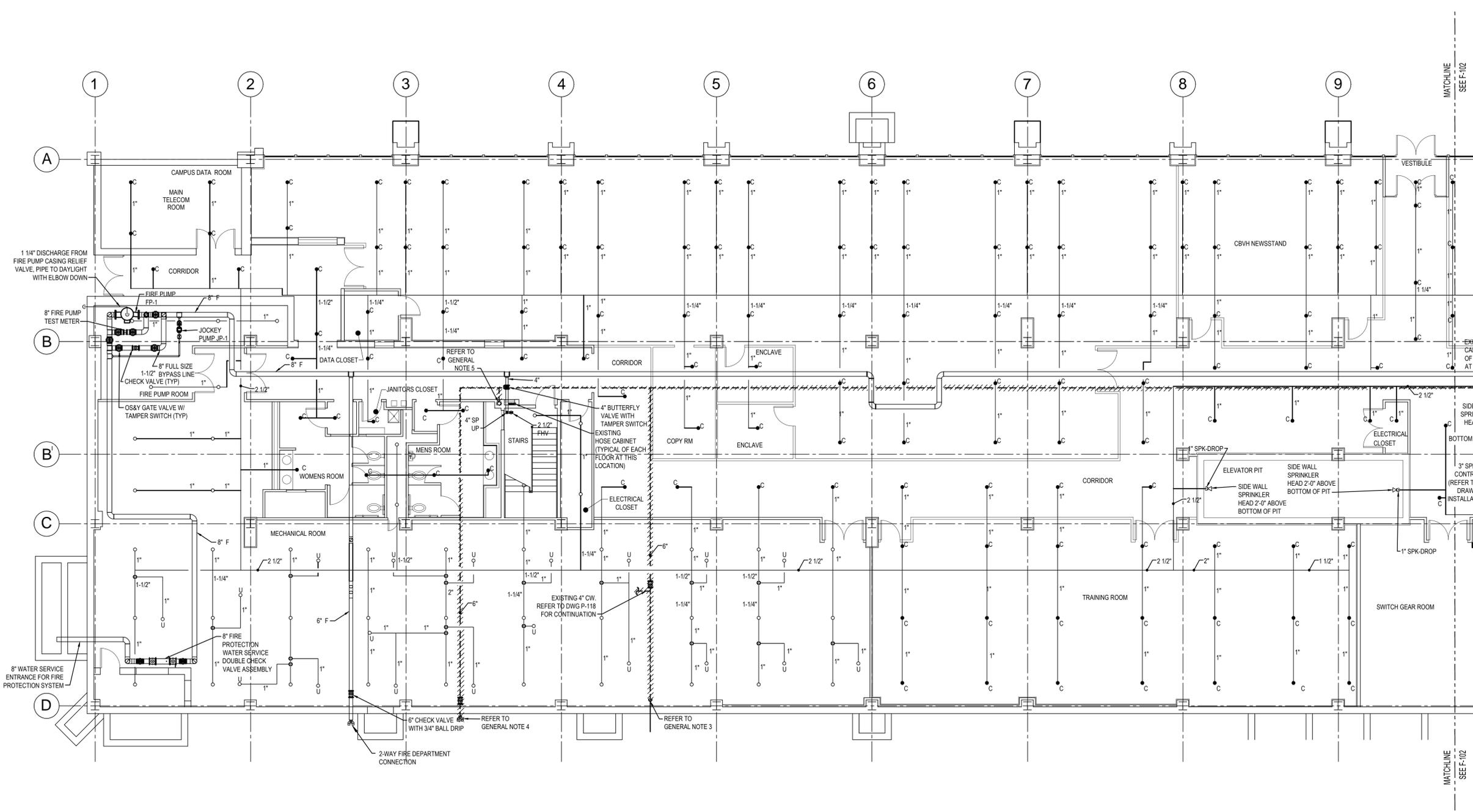
MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION
PROJECT NUMBER:	44808 - P	
DESIGNED BY:	TVK	
DRAWN BY:	JMV	
FIELD CHECK:		
APPROVED:	APPROVED	

SHEET TITLE:

GROUND FLOOR
PLAN - EAST

DRAWING NUMBER:
F-101

SHEET 246 OF 376



1 GROUND FLOOR PLAN - EAST
F-101 SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
- PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
- DISCONNECT AND REMOVE EXISTING COMBINED 6" FIRE PROTECTION/DOMESTIC WATER PIPING TO POINT OF EXTERIOR WALL PENETRATION AND PROVIDE 6" BLIND FLANGE AT WALL PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.
- DISCONNECT AND REMOVE EXISTING FIRE DEPARTMENT SIAMASE CONNECTION AND PATCH AND SEAL EXTERIOR WALL AT POINT OF 6" FIRE PROTECTION SYSTEM PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.
- DISCONNECT AND REMOVE EXISTING 6" FIRE STANDPIPE RISER FROM GROUND FLOOR UP TO 6TH FLOOR. DISCONNECT AND REMOVE EXISTING WALL RECESSED HOSE AND REEL CABINET ON GROUND FLOOR AND FLOORS 1 THROUGH 5. REFER TO DRAWING F-113 FOR CONTINUATION OF EXISTING 6" FIRE STANDPIPE RISER. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.

REVISED DRAWING
11/18/13

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT:

PLUMBING

TITLE:

RENOVATE BUILDING No. 5

LOCATION:

STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

CLIENT:

OFFICE OF GENERAL SERVICES



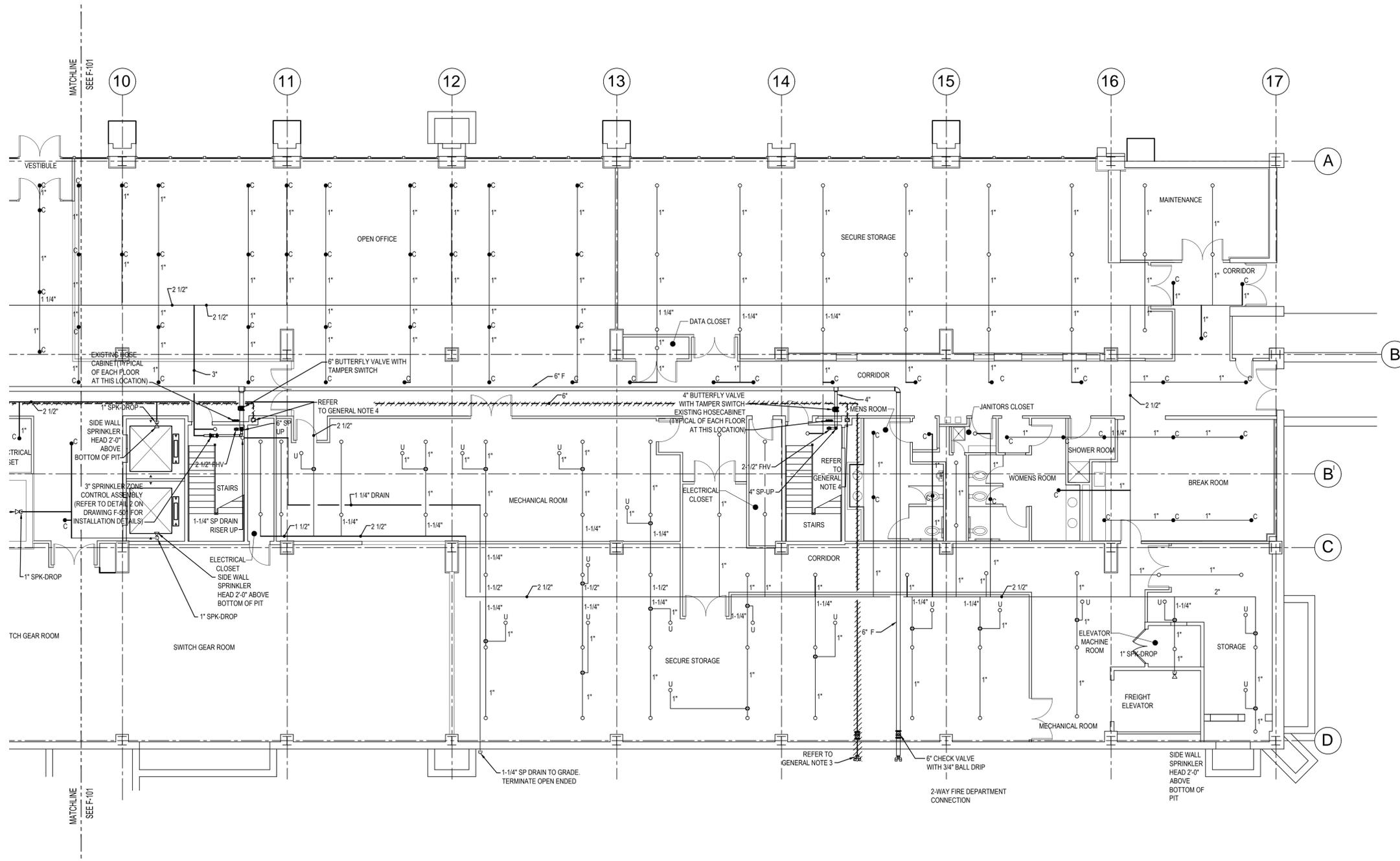
MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION

PROJECT NUMBER:	44808 - P
DESIGNED BY:	TVK
DRAWN BY:	JMV
FIELD CHECK:	
APPROVED:	APPROVED

SHEET TITLE:
GROUND FLOOR PLAN - WEST

DRAWING NUMBER:
F-102

SHEET 247 OF 376



1 GROUND FLOOR PLAN - WEST
F-102 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
1. FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
 2. PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
 3. DISCONNECT AND REMOVE EXISTING FIRE DEPARTMENT SIAMSESE CONNECTION AND PATCH AND SEAL EXTERIOR WALL AT POINT OF 6" FIRE PROTECTION SYSTEM PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.
 4. DISCONNECT AND REMOVE EXISTING 6" FIRE STANDPIPE RISER FROM GROUND FLOOR UP TO 6TH FLOOR. DISCONNECT AND REMOVE EXISTING WALL RECESSED HOSE AND REEL CABINET ON GROUND FLOOR AND FLOORS 1 THROUGH 5. REFER TO DRAWING F-114 FOR CONTINUATION OF EXISTING 6" FIRE STANDPIPE RISER. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.

REVISED DRAWING
11/18/13

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT:

PLUMBING

TITLE: RENOVATE BUILDING No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION
PROJECT NUMBER:	44808 - P	
DESIGNED BY:	TVK	
DRAWN BY:	JMV	
FIELD CHECK:		
APPROVED:	APPROVED	

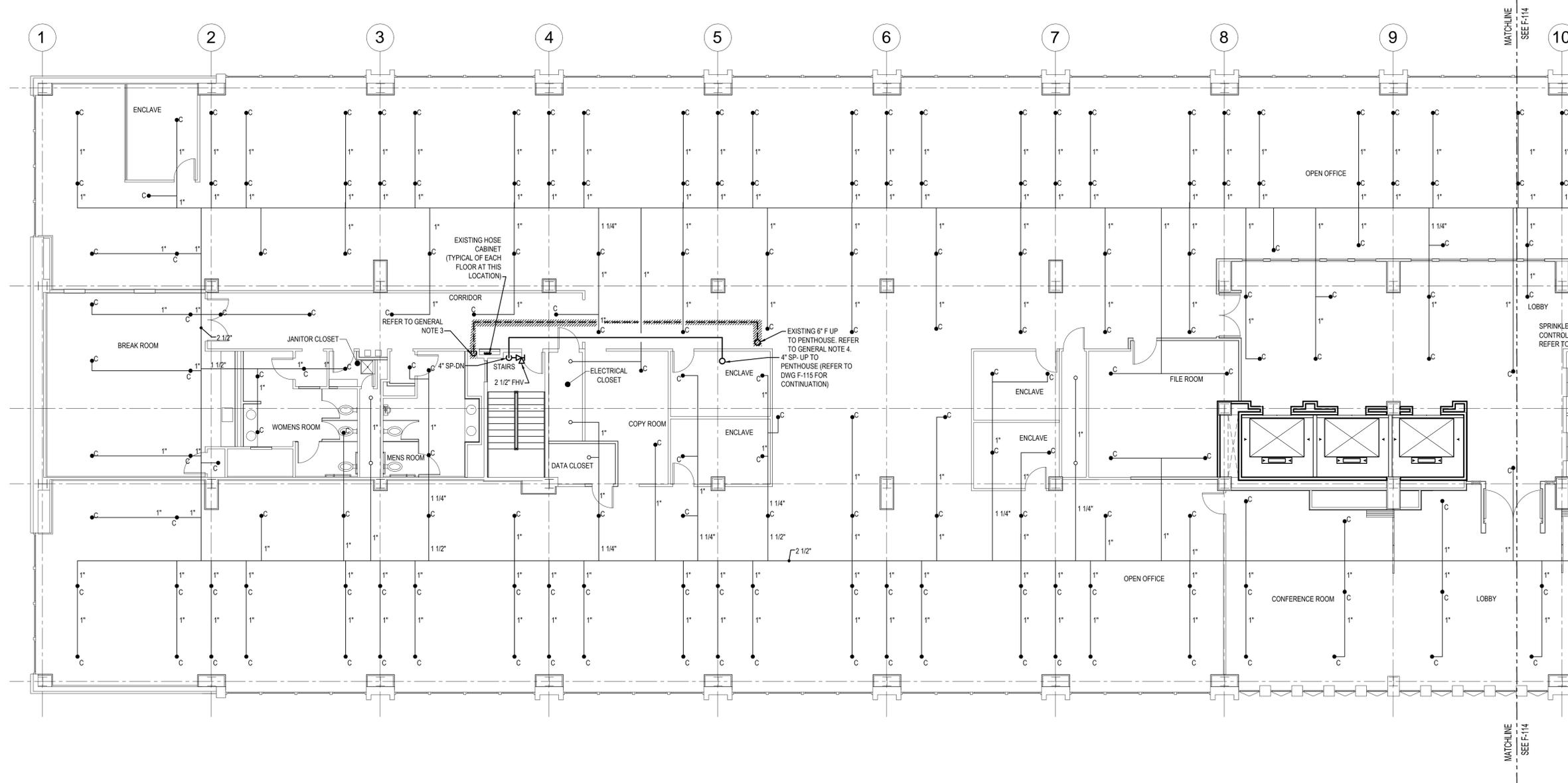
SHEET TITLE:

SIXTH FLOOR PLAN - EAST

DRAWING NUMBER:

F-113

SHEET 258 OF 376



1 SIXTH FLOOR PLAN - EAST
F-113 SCALE: 1/8"=1'-0"

GENERAL NOTES:

- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
- PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
- DISCONNECT AND REMOVE EXISTING 6" FIRE STANDPIPE RISER FROM GROUND FLOOR UP TO 6TH FLOOR. DISCONNECT AND REMOVE EXISTING WALL RECESSED HOSE AND REEL CABINET ON FLOOR 6. DISCONNECT AND REMOVE EXISTING 6" F PIPING ROUTED UP TO PENTHOUSE. REFER TO DRAWING F-101 FOR CONTINUATION OF EXISTING 6" FIRE STANDPIPE RISER. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.
- DISCONNECT AND REMOVE EXISTING 6" STANDPIPE RISER UP TO PENTHOUSE AND DISCONNECT AND REMOVE EXISTING HOSE REEL CABINET LOCATED AT PENTHOUSE FLOOR LEVEL. PATCH AND SEAL FLOOR PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.

REVISED DRAWING
11/18/13

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



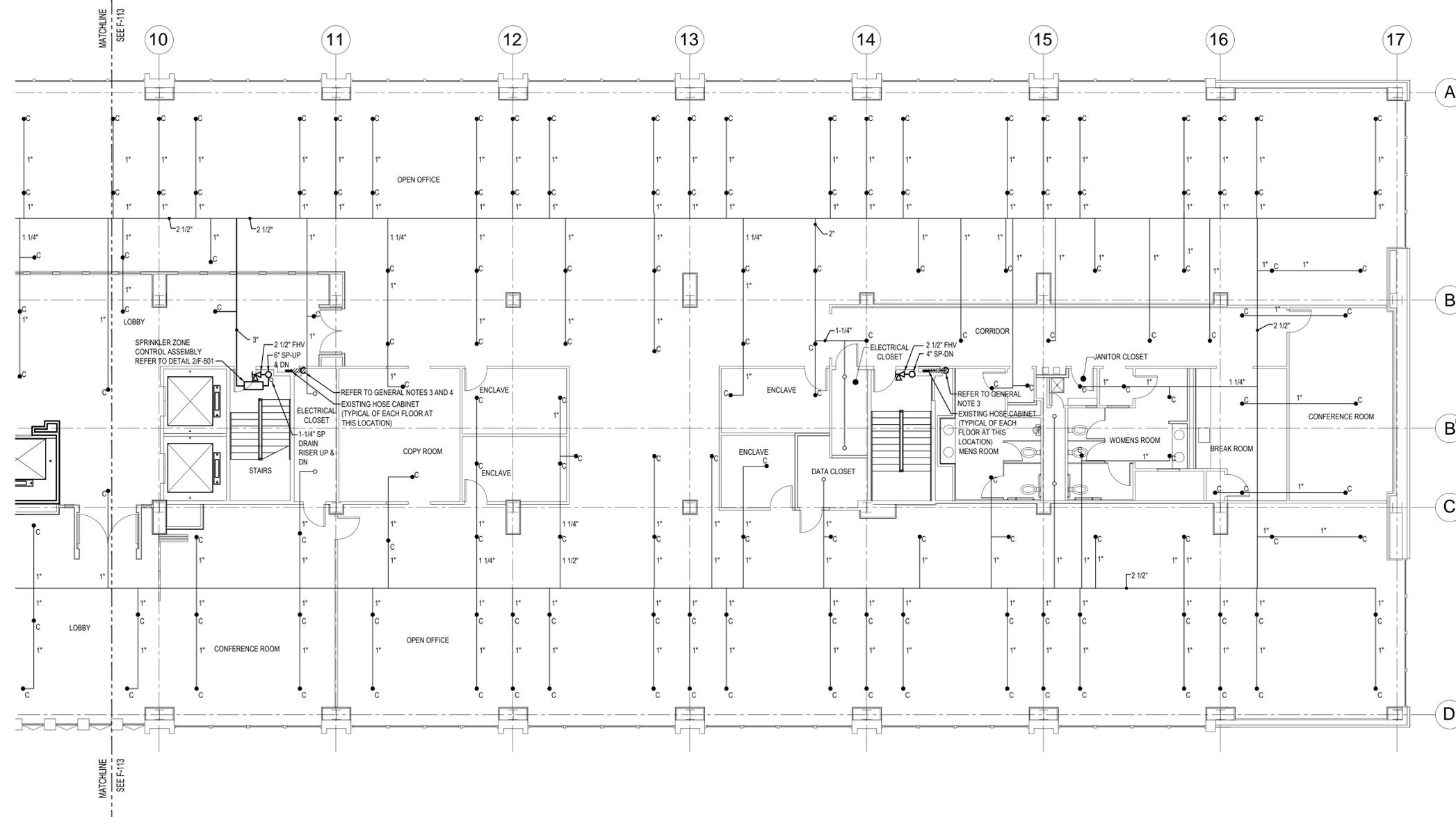
CONTRACT:

PLUMBING

TITLE: RENOVATE BUILDING No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

CLIENT: OFFICE OF GENERAL SERVICES



1 SIXTH FLOOR PLAN - WEST
F-114 SCALE: 1/8"=1'-0"

GENERAL NOTES:

1. FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
2. PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
3. DISCONNECT AND REMOVE EXISTING 6" FIRE STANDPIPE RISER FROM GROUND FLOOR UP TO 6TH FLOOR. DISCONNECT AND REMOVE EXISTING WALL RECESSED HOSE AND REEL CABINET ON FLOOR 6. DISCONNECT AND REMOVE EXISTING 6" F PIPING ROUTED UP TO PENTHOUSE. REFER TO DRAWING F-102 FOR CONTINUATION OF EXISTING 6" FIRE STANDPIPE RISER. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.
4. DISCONNECT AND REMOVE EXISTING 6" STANDPIPE RISER UP TO PENTHOUSE AND DISCONNECT AND REMOVE EXISTING HOSE REEL CABINET LOCATED AT PENTHOUSE FLOOR LEVEL. PATCH AND SEAL FLOOR PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL FIRE PROTECTION INSTALLATION WORK SHOWN ON DRAWINGS F-101 THROUGH F-115.

REVISED DRAWING
11/18/13

SHEET TITLE:

SIXTH FLOOR PLAN - WEST

DRAWING NUMBER:

F-114

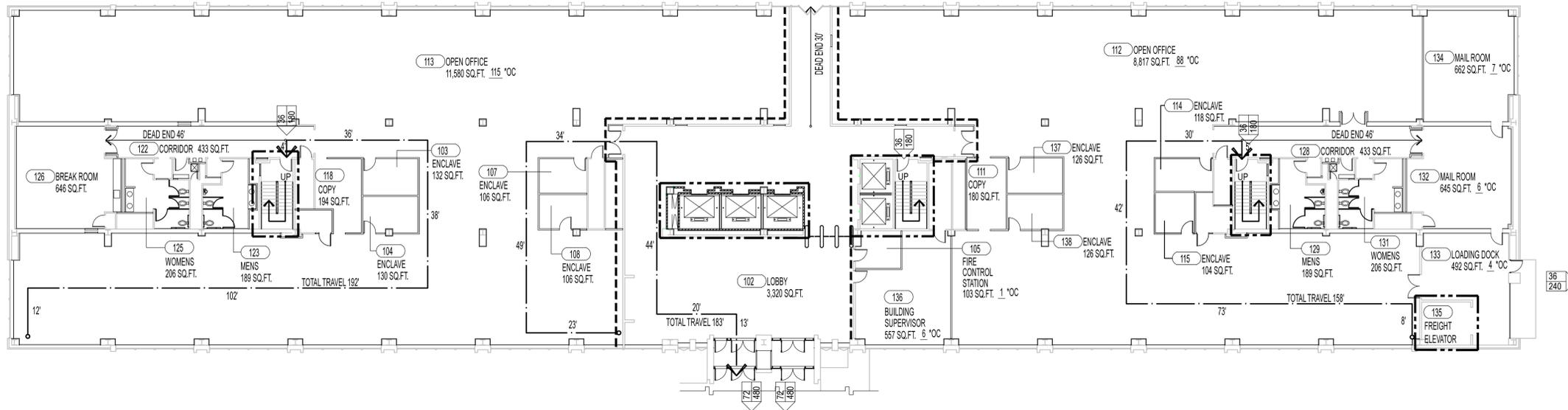
EGRESS PLAN

KEY:

- SMOKE PROOF BARRIER
- 1HR RATED WALL ASSEMBLY
- - - 2HR RATED WALL ASSEMBLY

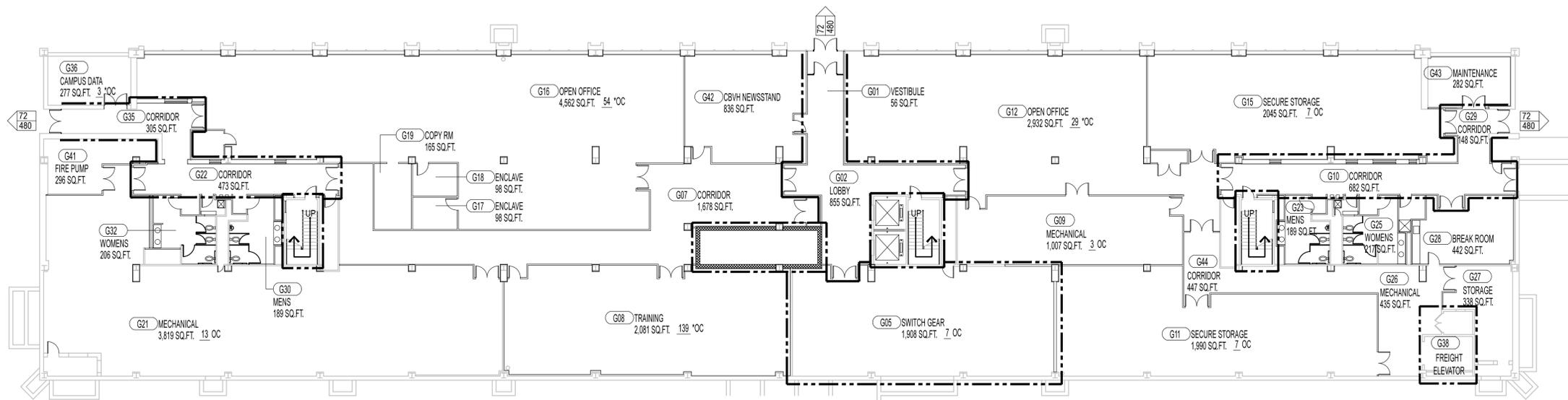
RATING PROPOSED AT INTERIOR WALLS

- EXIT PATH
- TRAVEL DISTANCE
- EXIT WIDTH (IN INCHES)
- 72/480 EXIT CAPACITY (# OF PERSON)



2
A-005
SCALE: 1/16"=1'-0"

228 *TOTAL OCCUPIABLE CAPACITY



1
G-005
SCALE: 1/16"=1'-0"

225 *TOTAL OCCUPIABLE CAPACITY



OGS
NYS OFFICE OF GENERAL SERVICES
Serving New York
ANDREW M. CUOMO
Governor
ROANNY M. DESTITTO
Commissioner

CONSULTANTS:



Hamlin Design Group
163 Homestead Ave
Albany, New York 12203
Tel: 518.724.5159
Fax: 518.320.8633
Web: hamlindesigngroup.com

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CALLED NORTH



CONTRACT: **CONSTRUCTION**

TITLE: **RENOVATE BUILDING NO. 5**

LOCATION: **STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE.
ALBANY, NY 12226**

CLIENT: **OFFICE OF GENERAL SERVICES**

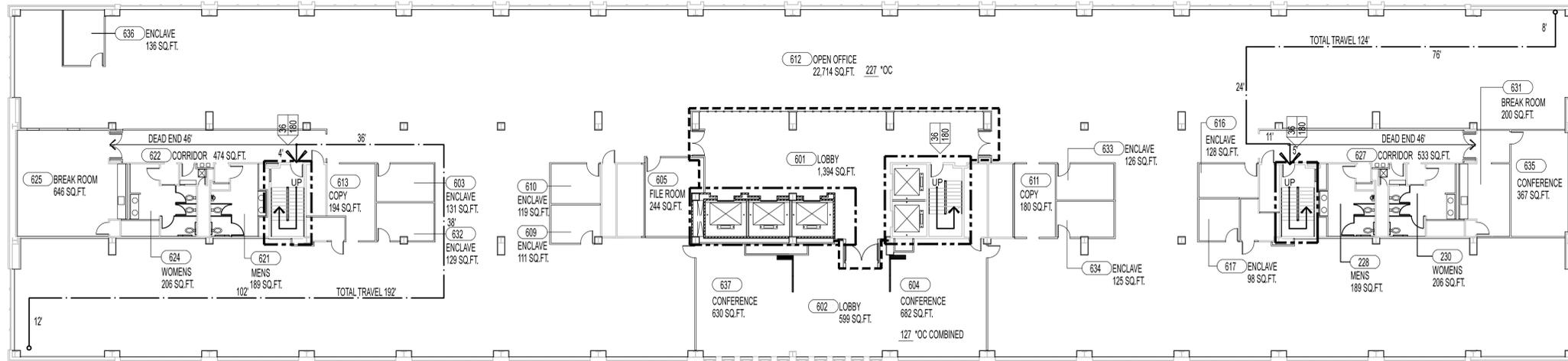
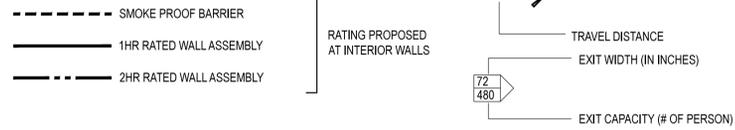
REVISED DRAWING
11/18/13

MARK	DATE	BID DOCUMENTS DESCRIPTION
	10/25/13	
PROJECT NUMBER:	44808-C	
DESIGNED BY:		
DRAWN BY:		
FIELD CHECK BY:		
APPROVED BY:		
SHEET TITLE:	EGRESS PLAN	

DRAWING NUMBER:
G-005

EGRESS PLAN

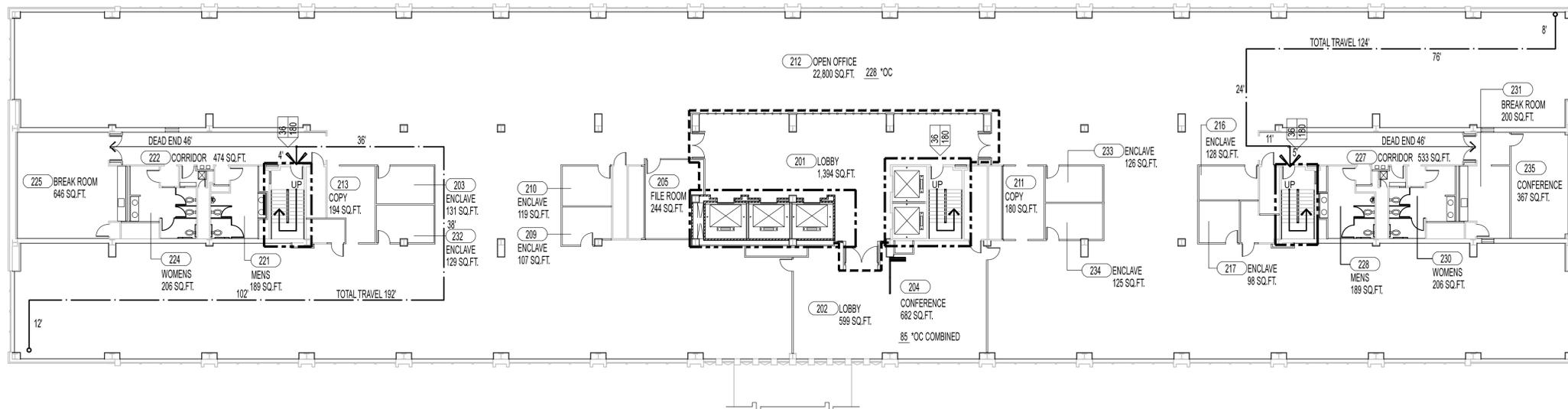
KEY:



2 SIXTH FLOOR

G-006 SCALE: 1/16"=1'-0"

354 *TOTAL OCCUPIABLE CAPACITY



1 SECOND THRU FIFTH FLOOR

G-006 SCALE: 1/16"=1'-0"

313 *TOTAL OCCUPIABLE CAPACITY



Serving New York
 ANDREW M. CUOMO
 Governor
 ROANN M. DESTITO
 Commissioner

CONSULTANTS:



Hamlin Design Group
 163 Homestead Ave
 Albany, New York 12203
 Tel: 518.724.5159
 Fax: 518.320.8633
 Web: hamlindesigngroup.com

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

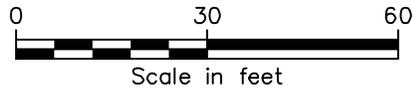
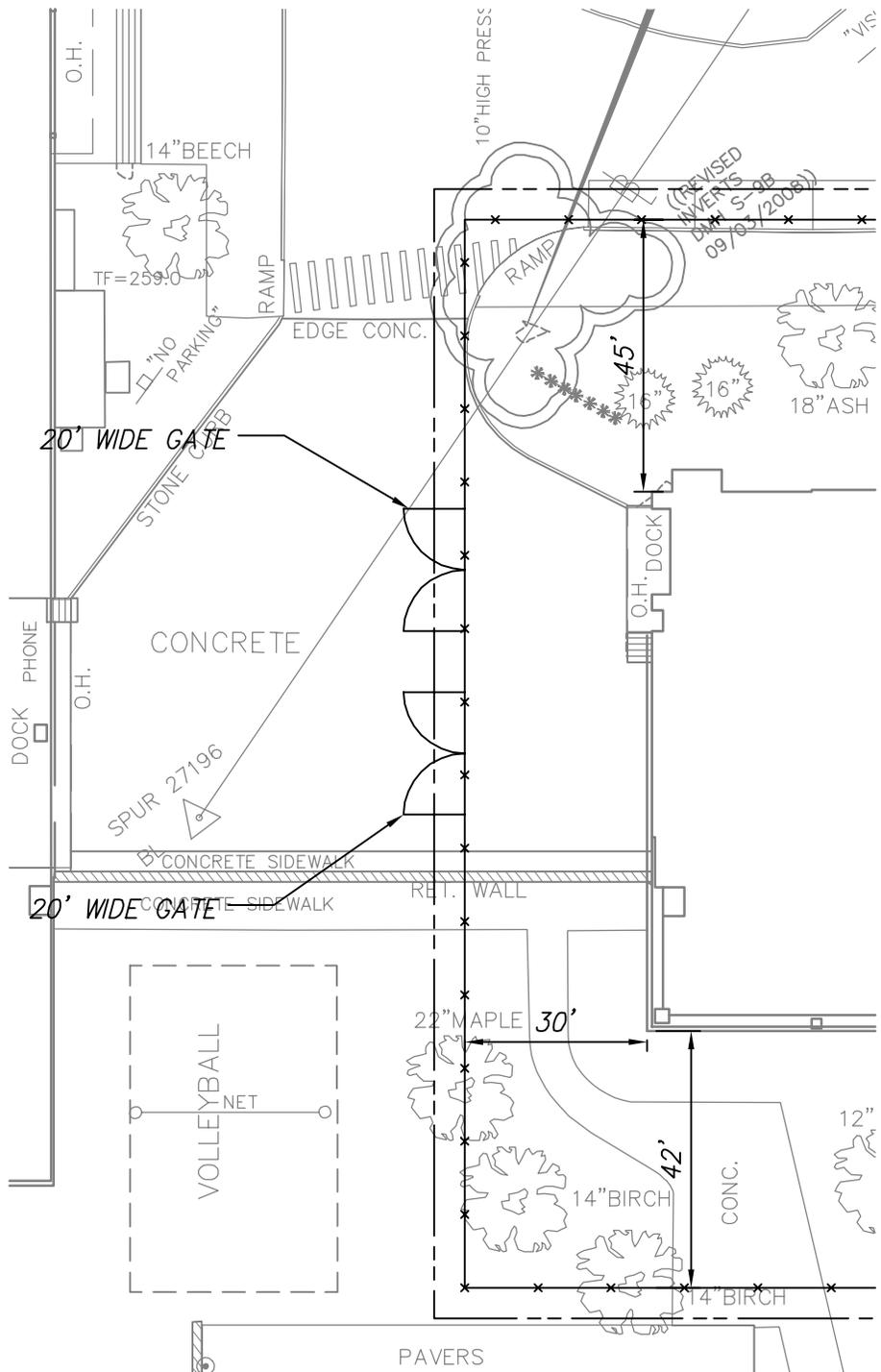


CALLED NORTH



CONTRACT:	CONSTRUCTION
TITLE:	RENOVATE BUILDING NO. 5
LOCATION:	STATE OFFICE BUILDING CAMPUS 1220 WASHINGTON AVE. ALBANY, NY 12226
CLIENT:	OFFICE OF GENERAL SERVICES

REVISED DRAWING 11/18/13		
MARK	10/25/13	BID DOCUMENTS
DATE		DESCRIPTION
PROJECT NUMBER:	44808-C	
DESIGNED BY:		
DRAWN BY:		
FIELD CHECK BY:		
APPROVED BY:		
SHEET TITLE:	EGRESS PLAN	
DRAWING NUMBER:	G-006	
SHEET	6	OF 376



ADDENDUM DRAWING
11/18/13

OGS
NYS OFFICE OF GENERAL SERVICES
Serving New York

CONTRACT:	CONSTRUCTION
PROJ. NO:	44808-C
DATE:	11/18/13
DRAWN:	SKB
APPROVED:	-

SHEET TITLE: SITE MOBILIZATION PLAN REFERENCE DRAWING G-003	
PROJECT: RENOVATE BUILDING 5	
WARNING: THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.	DWG NO: G-007



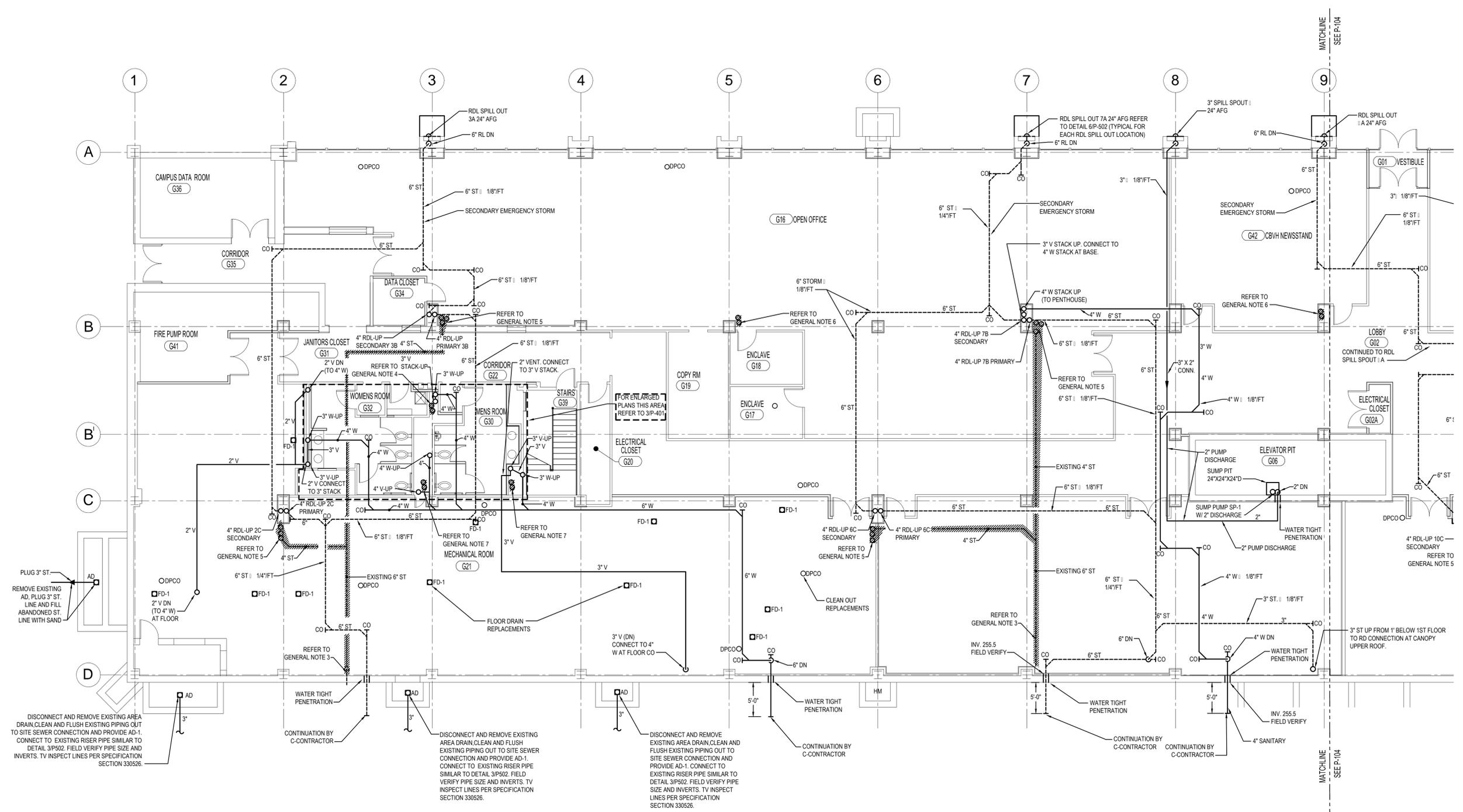
SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT: **PLUMBING**
TITLE: RENOVATE BUILDING No. 5
LOCATION: STATE OFFICE BUILDING CAMPUS 1220 WASHINGTON AVE ALBANY, NEW YORK 12226
CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION
PROJECT NUMBER:	44808 - P	
DESIGNED BY:	EC	
DRAWN BY:	SV	
FIELD CHECK:		
APPROVED:	JV	
SHEET TITLE:	GROUND FLOOR STORM, SANITARY AND VENT PIPING - EAST	
DRAWING NUMBER:	P-103	
SHEET	266	OF 376



1 GROUND FLOOR STORM, SANITARY AND VENT PIPING PLAN-EAST
P-103 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
 - PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
 - DISCONNECT AND REMOVE EXISTING STORM PIPING INDICATED TO POINT OF EXTERIOR WALL PENETRATION AND PROVIDE 6" PLUG AT WALL PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL STORM PIPING INSTALLATION WORK SHOWN ON DRAWINGS P-103 THROUGH P-117.
 - DISCONNECT AND REMOVE EXISTING EXISTING 3" VENT RISER AND 3" WASTE STACK FROM THE GROUND FLOOR TO THE 6TH FLOOR PRIOR TO THE INSTALLATION OF MOP SINK MS-1 SHOWN ON DRAWINGS 3/P-401, 3/P-402 AND 3/P-403. REFER TO DRAWING P-115 FOR CONTINUATION OF 3" VENT.
 - DISCONNECT AND REMOVE EXISTING EXISTING 2" VENT RISER, 3" WASTE STACK AND 4" STORM RISER FROM GROUND FLOOR TO THE 6TH FLOOR. COORDINATE REMOVAL OF EACH RISER WITH THE INSTALLATION OF THE STORM PIPING SHOWN ON DRAWINGS P-103 THROUGH P-117 TO MAINTAIN STORMWATER FLOW THROUGHOUT THE DURATION OF CONSTRUCTION. REFER TO DRAWING P-115 FOR CONTINUATION THE VENT AND STORM LEADER RISER.
 - DISCONNECT AND REMOVE EXISTING EXISTING 2" VENT RISER AND 3" WASTE STACK FROM GROUND FLOOR TO THE 6TH FLOOR. REFER TO DRAWING P-115 FOR CONTINUATION THE VENT RISER.
 - DISCONNECT AND REMOVE EXISTING EXISTING 3" VENT RISER AND 4" WASTE STACK FROM GROUND FLOOR TO THE 6TH FLOOR. REFER TO DRAWING P-115 FOR CONTINUATION THE VENT RISER.

REVISED DRAWING
11/18/13

36x24 PLOT SHEET

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX (518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT:

PLUMBING

TITLE: RENOVATE BUILDING No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION

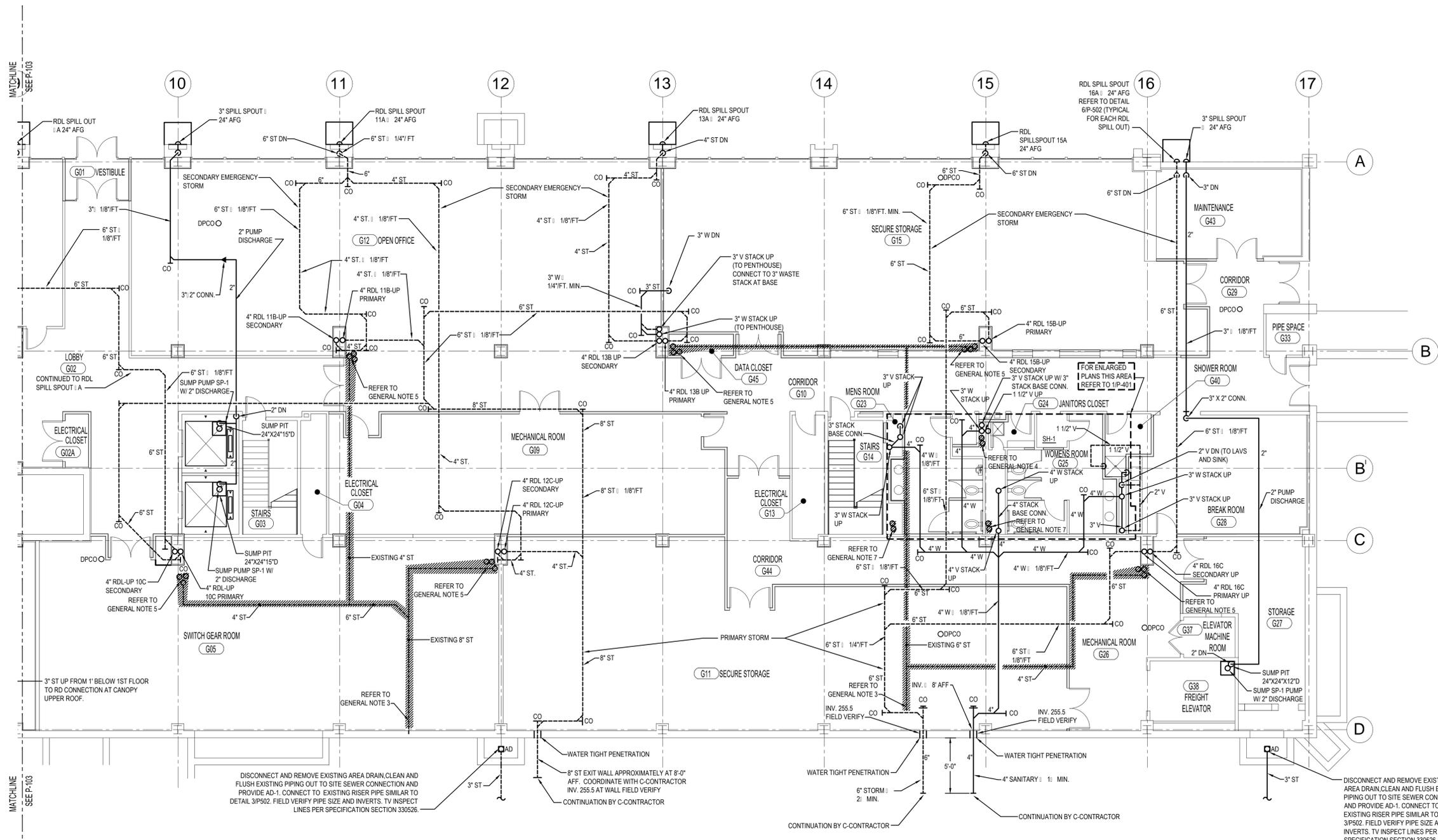
PROJECT NUMBER:	44808 - P
DESIGNED BY:	EC
DRAWN BY:	SV
FIELD CHECK:	
APPROVED:	JV

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION

GROUND FLOOR STORM, SANITARY AND VENT PIPING - WEST

DRAWING NUMBER: P-104

SHEET 267 OF 376



1 GROUND FLOOR STORM, SANITARY AND VENT PIPING PLAN-WEST
P-104 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:
- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
 - PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
 - DISCONNECT AND REMOVE EXISTING STORM PIPING INDICATED TO POINT OF EXTERIOR WALL PENETRATION AND PROVIDE 6" PLUG AT WALL PENETRATION. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE COMPLETION OF ALL STORM PIPING INSTALLATION WORK SHOWN ON DRAWINGS P-103 THROUGH P-117.
 - DISCONNECT AND REMOVE EXISTING EXISTING 3" VENT RISER AND 3" WASTE STACK FROM THE GROUND FLOOR TO THE 6TH FLOOR PRIOR TO THE INSTALLATION OF MOP SINK MS-1 SHOWN ON DRAWINGS 1P-401, 1P-402 AND 1P-403. REFER TO DRAWING P-116 FOR CONTINUATION OF 3" VENT.
 - DISCONNECT AND REMOVE EXISTING EXISTING 2" VENT RISER, 3" WASTE STACK AND 4" STORM RISER FROM GROUND FLOOR TO THE 6TH FLOOR. COORDINATE REMOVAL OF EACH RISER WITH THE INSTALLATION OF THE STORM PIPING SHOWN ON DRAWINGS P-103 THROUGH P-117 TO MAINTAIN STORMWATER FLOW THROUGHOUT THE DURATION OF CONSTRUCTION. REFER TO DRAWING P-116 FOR CONTINUATION THE VENT AND STORM LEADER RISER.
 - DISCONNECT AND REMOVE EXISTING EXISTING 2" VENT RISER AND 3" WASTE STACK FROM GROUND FLOOR TO THE 6TH FLOOR. REFER TO DRAWING P-116 FOR CONTINUATION THE VENT RISER.
 - DISCONNECT AND REMOVE EXISTING EXISTING 3" VENT RISER AND 4" WASTE STACK FROM GROUND FLOOR TO THE 6TH FLOOR. REFER TO DRAWING P-115 FOR CONTINUATION THE VENT RISER.

REVISED DRAWING
11/18/13

36x24 PLOT SHEET

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT:

PLUMBING

TITLE: RENOVATE BUILDING No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

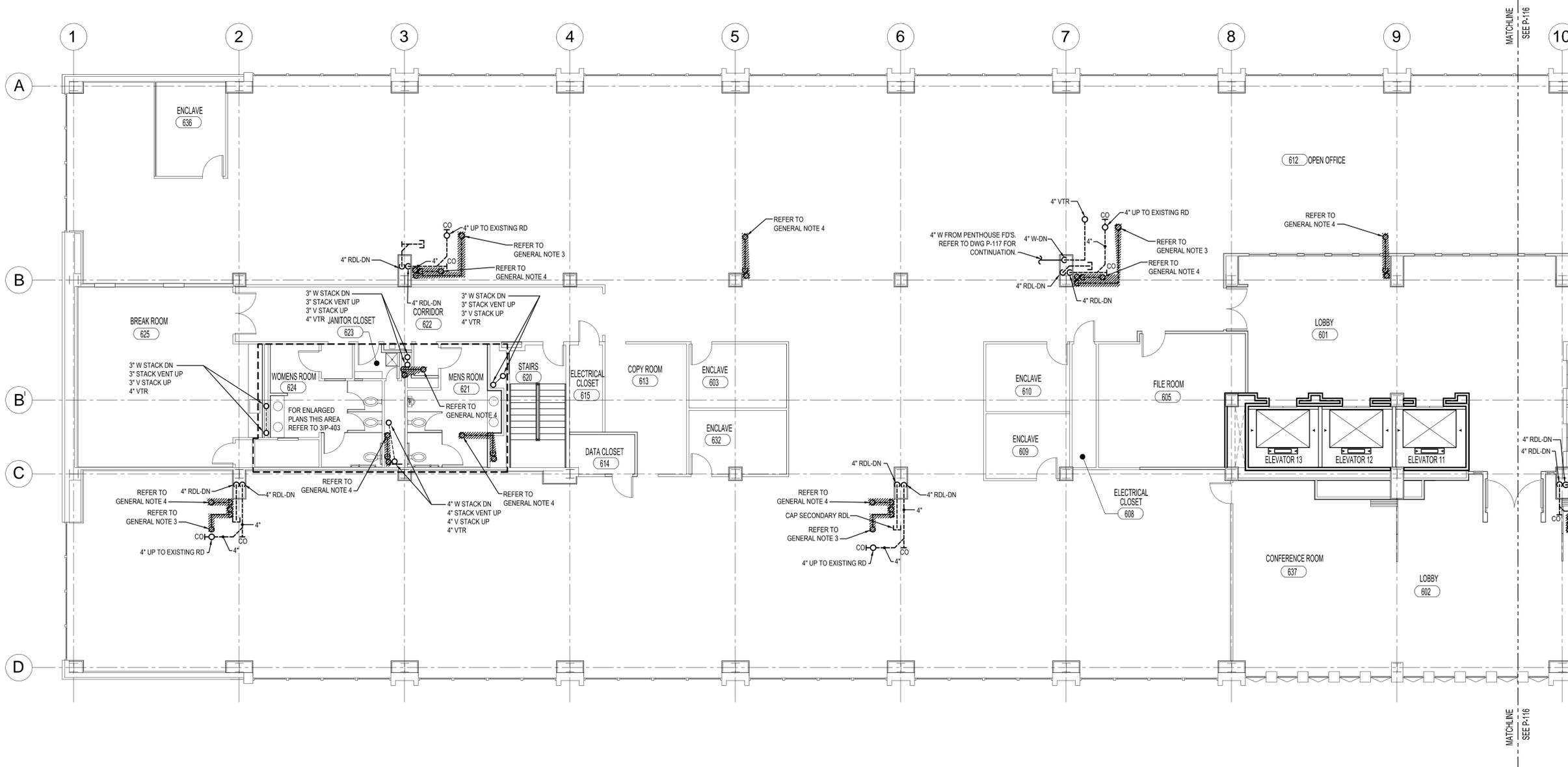
CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION
PROJECT NUMBER:	44808 - P	
DESIGNED BY:	EC	
DRAWN BY:	SV	
FIELD CHECK:		
APPROVED:	JV	

SHEET TITLE:
SIXTH FLOOR STORM, SANITARY AND VENT PIPING - EAST

DRAWING NUMBER:
P-115

SHEET 278 OF 376



1 SIXTH FLOOR STORM, SANITARY AND VENT PIPING PLAN-EAST
P-115 SCALE: 1/8"=1'-0"

GENERAL NOTES:

- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
- PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
- DISCONNECT AND REMOVE EXISTING STORM DRAIN PIPING AT CONNECTION POINT TO EXISTING ROOF DRAIN. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE REINSTALLATION OF THE STORM DRAIN PIPING TO THE EXISTING ROOF DRAINS AS SHOWN ON THIS DRAWING TO MAINTAIN STORMWATER FLOW THROUGHOUT CONSTRUCTION. REFER TO DRAWING P-103 FOR CONTINUATION OF STORM LEADER PIPING RISER.
- DISCONNECT AND REMOVE EXISTING WASTE RISER STACK, VENT PIPING AND VENT THROUGH ROOF. PATCH AND SEAL ROOF PENETRATION. REFER TO DRAWING P-103 FOR CONTINUATION OF VENT AND WASTE RISER PIPING.

REVISED DRAWING
11/18/13

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

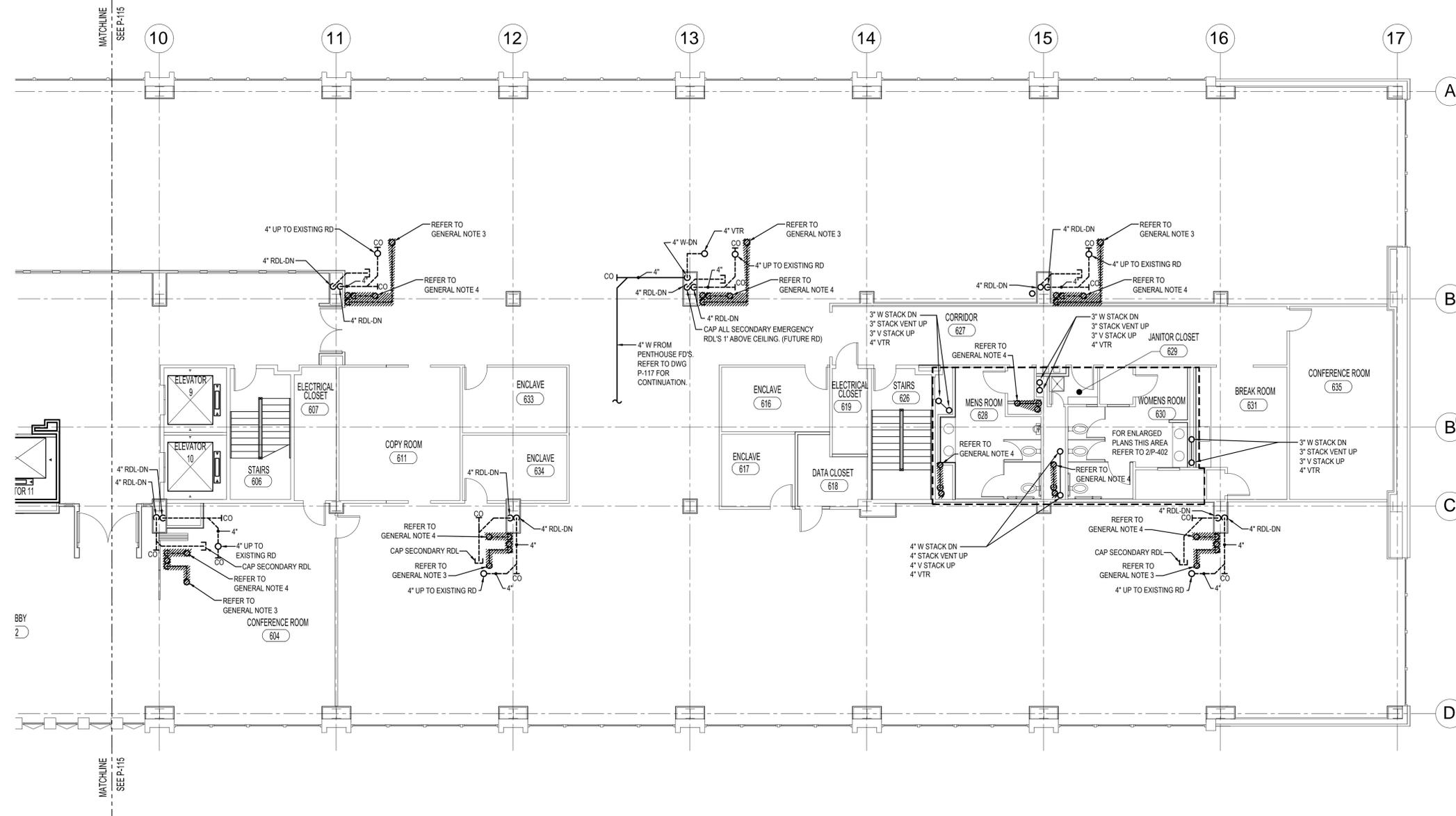


CONTRACT: **PLUMBING**
TITLE: RENOVATE BUILDING No. 5
LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226
CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION

PROJECT NUMBER: **44808 - P**
DESIGNED BY: EC
DRAWN BY: SV
FIELD CHECK: []
APPROVED: JV

SHEET TITLE:
SIXTH FLOOR STORM, SANITARY AND VENT PIPING - WEST
DRAWING NUMBER:
P-116
SHEET 279 OF 376



1 SIXTH FLOOR STORM, SANITARY AND VENT PIPING PLAN-WEST
P-116 SCALE: 1/8"=1'-0"

GENERAL NOTES:

- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
- PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
- DISCONNECT AND REMOVE EXISTING STORM DRAIN PIPING AT CONNECTION POINT TO EXISTING ROOF DRAIN. PROVIDE REMOVAL WORK INDICATED IN THIS NOTE FOLLOWING THE REINSTALLATION OF THE STORM DRAIN PIPING TO THE EXISTING ROOF DRAINS AS SHOWN ON THIS DRAWING TO MAINTAIN STORMWATER FLOW THROUGHOUT CONSTRUCTION. REFER TO DRAWING P-104 FOR CONTINUATION OF STORM LEADER PIPING RISER.
- DISCONNECT AND REMOVE EXISTING WASTE RISER STACK, VENT PIPING AND VENT THROUGH ROOF. PATCH AND SEAL ROOF PENETRATION. REFER TO DRAWING P-104 FOR CONTINUATION OF VENT AND WASTE RISER PIPING.

REVISED DRAWING
11/18/13

CONSULTANT



SAGE ENGINEERING ASSOCIATES, LLP
1211 WESTERN AVENUE
ALBANY, NY 12203
(518)453-6091 FAX(518)453-6092

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



CONTRACT:

PLUMBING

TITLE: RENOVATE BUILDING
No. 5

LOCATION: STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVE
ALBANY, NEW YORK 12226

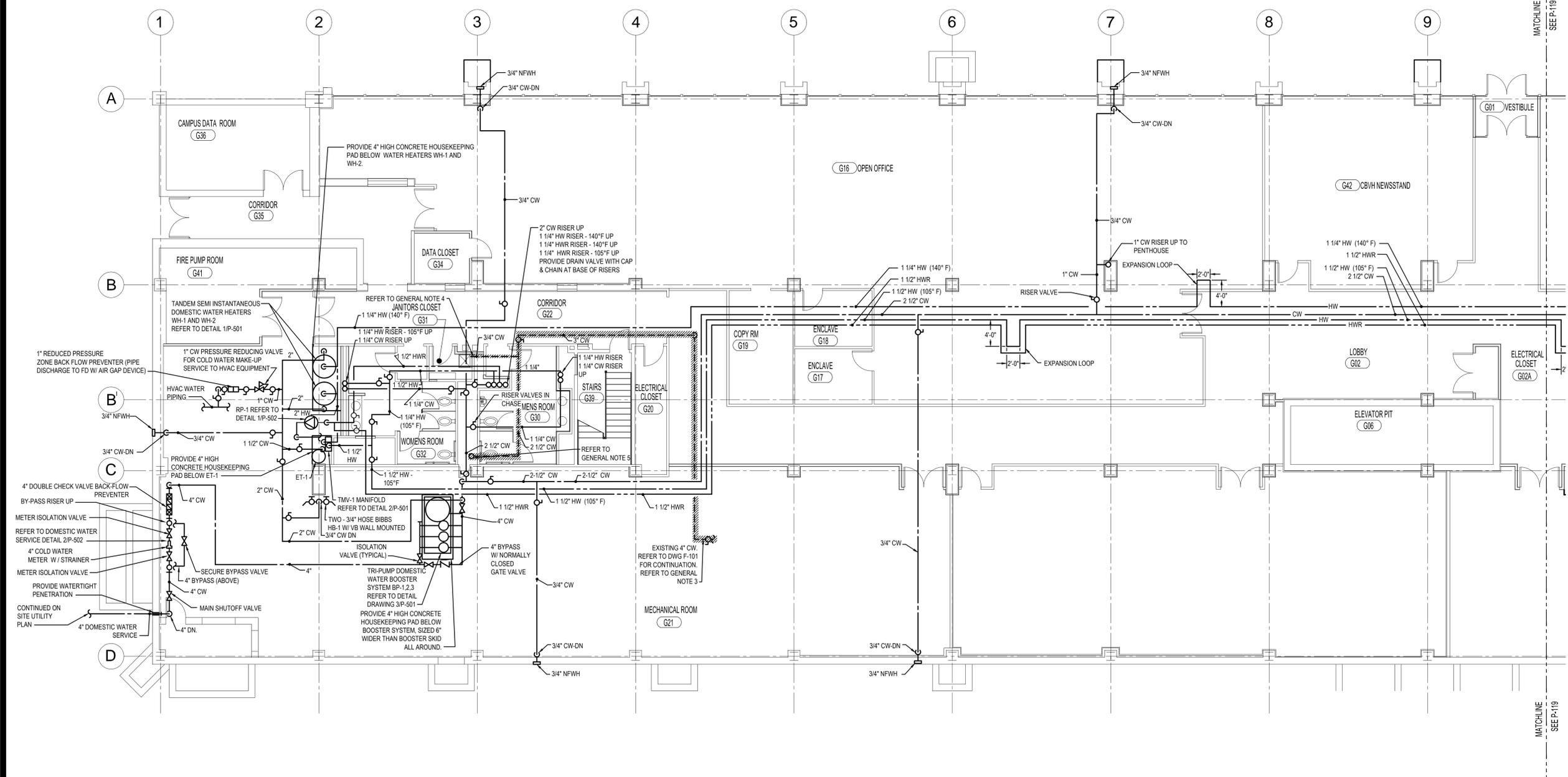
CLIENT: OFFICE OF GENERAL SERVICES

MARK	DATE	DESCRIPTION
	11/1/13	BID SUBMISSION
	09/27/13	100% SUBMISSION
	08/12/13	60% SUBMISSION
PROJECT NUMBER: 44808 - P		
DESIGNED BY:		EC
DRAWN BY:		SV
FIELD CHECK:		JV
APPROVED:		

GROUND FLOOR DOMESTIC WATER PIPING PLAN - EAST

DRAWING NUMBER:
P-118

SHEET 281 OF 376



1 GROUND FLOOR DOMESTIC WATER PIPING PLAN-EAST
P-118 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:
- FIRE STOP ALL PIPING WALL AND FLOOR PENETRATIONS WITH A 2-HOUR RATED FIRESTOPPING SYSTEM.
 - PROVIDE TYPE 1 FIREPROOFING PER SPECIFICATION SECTION 078100 AT ALL LOCATIONS WHERE PIPING SUPPORT SYSTEMS ARE CONNECTED TO EXISTING STRUCTURAL STEEL COMPONENTS.
 - DISCONNECT AND REMOVE EXISTING GROUND FLOOR LEVEL DOMESTIC WATER PIPING INDICATED AND ALL ACTIVE GROUND LEVEL DOMESTIC WATER PIPING SERVING THE EXISTING PLUMBING FIXTURES IN MENS ROOM G30 AND WOMENS ROOM G32 FOLLOWING THE COMPLETION OF ALL DOMESTIC WATER PIPING INSTALLATION WORK SHOWN ON DRAWINGS P-118 THROUGH P-132 AND DRAWING 4/P-401.
 - DISCONNECT AND REMOVE EXISTING MOP SINK AND EXISTING 3/4" DOMESTIC COLD WATER BRANCH SERVING THE EXISTING MOP SINK LOCATED IN JANITORS CLOSET G31 PRIOR TO THE INSTALLATION OF MOP SINK MS-1 SHOWN ON DRAWING 4/P-401. CAP 3/4" PIPING AT CONNECTION TO EXISTING 2 1/2" DOMESTIC COLD WATER BRANCH TO MAINTAIN FLOW THROUGH THE 2 1/2" DOMESTIC COLD WATER BRANCH AS INDICATED IN GENERAL NOTE 5.
 - LOCATION OF EXISTING 2 1/2" DOMESTIC COLD WATER RISER ROUTED FROM GROUND FLOOR TO 6TH FLOOR. DISCONNECT AND REMOVE EXISTING 2 1/2" DOMESTIC COLD RISER FOLLOWING THE COMPLETION OF ALL DOMESTIC WATER INSTALLATION WORK SHOWN ON DRAWINGS 4/P-401, 4/P-402 AND 4/P-403.

REVISED DRAWING
11/18/13

36x24 PLOT SHEET

CONSULTANT

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CONTRACT: **CONSTRUCTION**

TITLE: **RENOVATE BUILDING NO. 5**

LOCATION: **STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVENUE
ALBANY, NY 12226**

CLIENT: **NEW YORK STATE
OFFICE OF GENERAL SERVICES**

REVISED DRAWING
11/18/13

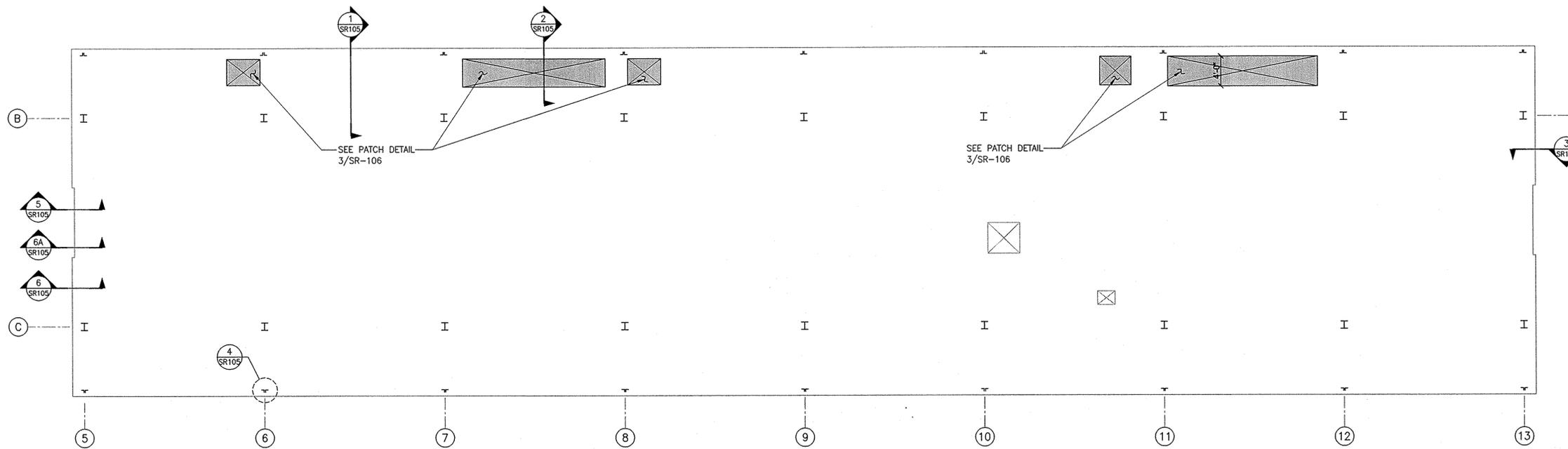
MARK	DATE	DESCRIPTION
	10/25/2013	100% SUBMISSION

PROJECT NUMBER: **44808 - C**
DESIGNED BY: C/JF
DRAWN BY: JN
FIELD CHECK:
APPROVED:
SHEET TITLE:

**PENTHOUSE -
FLOOR AND ROOF
FRAMING PLANS, DETAILS**

DRAWING NUMBER: **SR-104**

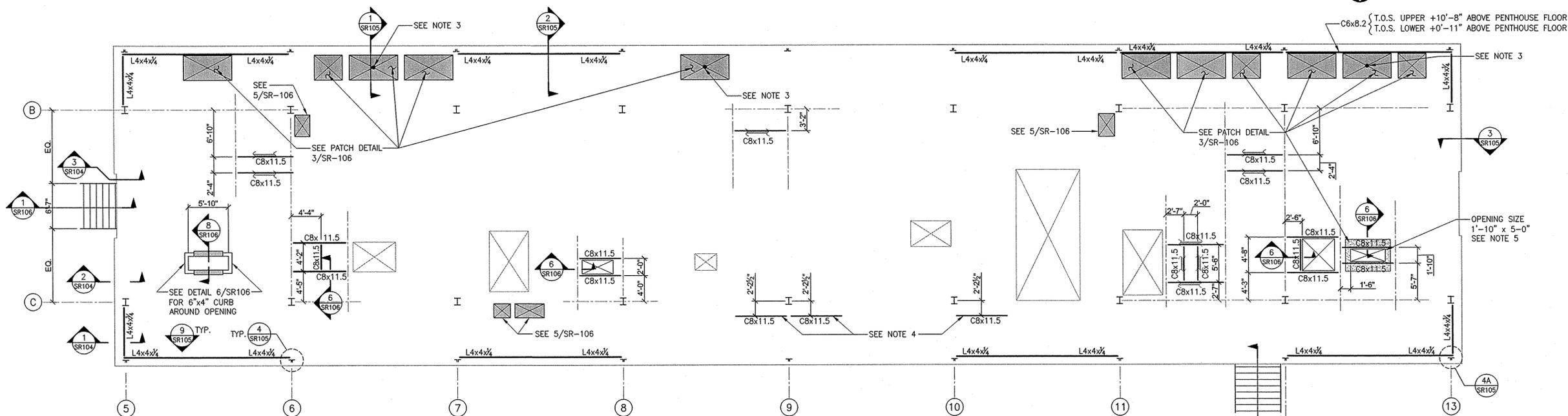
SHEET OF



PENTHOUSE ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

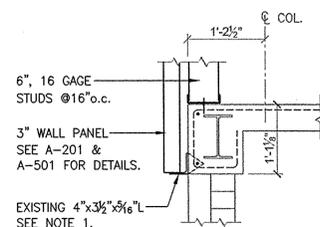
NOTE: TOP OF ROOF SLAB ELEV. 354.50
TOP OF STEEL (-2') BELOW TOP OF SLAB



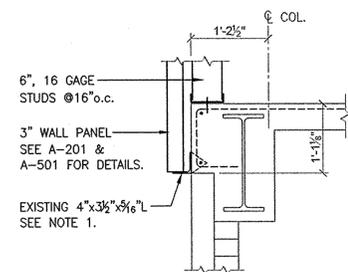
PENTHOUSE FLOOR FRAMING PLAN

SCALE: 1/8" = 1'-0"

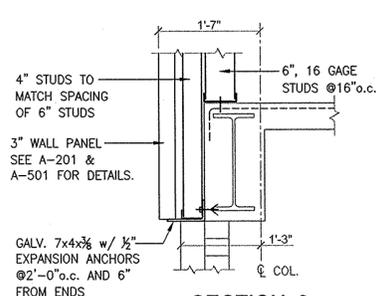
NOTE: FIN. FLR. ELEV. 342.25
TOP OF CONC. SLAB (±0)
TOP OF BEAMS (-2') UNLESS OTHERWISE NOTED
5" CONC. SLAB THROUGHOUT EXCEPT AT STAIR LANDINGS



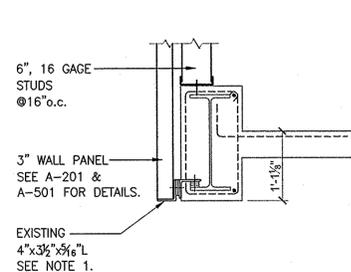
SECTION 1
SCALE: 3/4" = 1'-0"



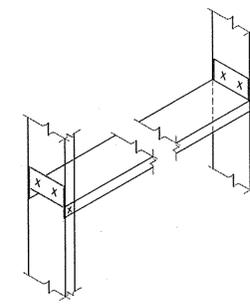
SECTION 2
SCALE: 3/4" = 1'-0"



SECTION 3
SCALE: 3/4" = 1'-0"



SECTION 4
SCALE: 3/4" = 1'-0"



**HORIZONTAL STUD
INSTALLATION DETAIL**
SCALE: 3/4" = 1'-0"

NOTES:

- CLEAN AND TOUCH UP CUT EDGES WITH BRUSH APPLIED GALVANIZATION.
- FRAME WALL WITH 6", 16 GAGE, GALVANIZED METAL STUDS AT 16" o.c., PROVIDE DOUBLE STUDS AT CORNERS, EXPANSION JOINTS, LOUVER OPENINGS AND FRAMED DOOR OPENINGS. PROVIDE HORIZONTAL STUDS AT MID HEIGHT OF THE WALL, SEE DETAIL 5-SR104
- PROVIDE 3" STANDARD WEIGHT PIPE SLEEVE (INSIDE DIAMETER 3") IN THE CENTER OF CONCRETE INFILL.
- SPAN BETWEEN EXISTING 8WF17's.
- PROVIDE L5x5x5/8" ANGLE AROUND PERIMETER OF OPENING, MITER CORNERS. WELD TO C8 BELOW WITH 1/4" WELD, 2" LONG AT 12" o.c.

CONSULTANT

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.



CONTRACT: **CONSTRUCTION**

TITLE: **RENOVATE BUILDING NO. 5**

LOCATION: **STATE OFFICE BUILDING CAMPUS
1220 WASHINGTON AVENUE
ALBANY, NY 12226**

CLIENT: **NEW YORK STATE
OFFICE OF GENERAL SERVICES**

REVISED DRAWING
11/18/13

MARK	DATE	DESCRIPTION
	10/25/2013	100% SUBMISSION

PROJECT NUMBER: **44808 - C**

DESIGNED BY: **CJF**

DRAWN BY: **JN**

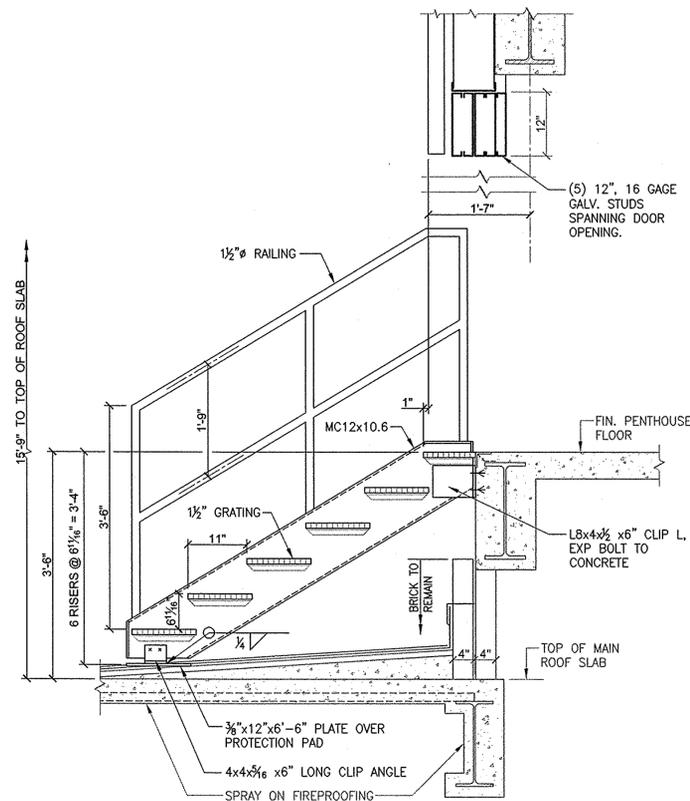
FIELD CHECK:

APPROVED:

SHEET TITLE: **PENTHOUSE - SECTIONS AND DETAILS**

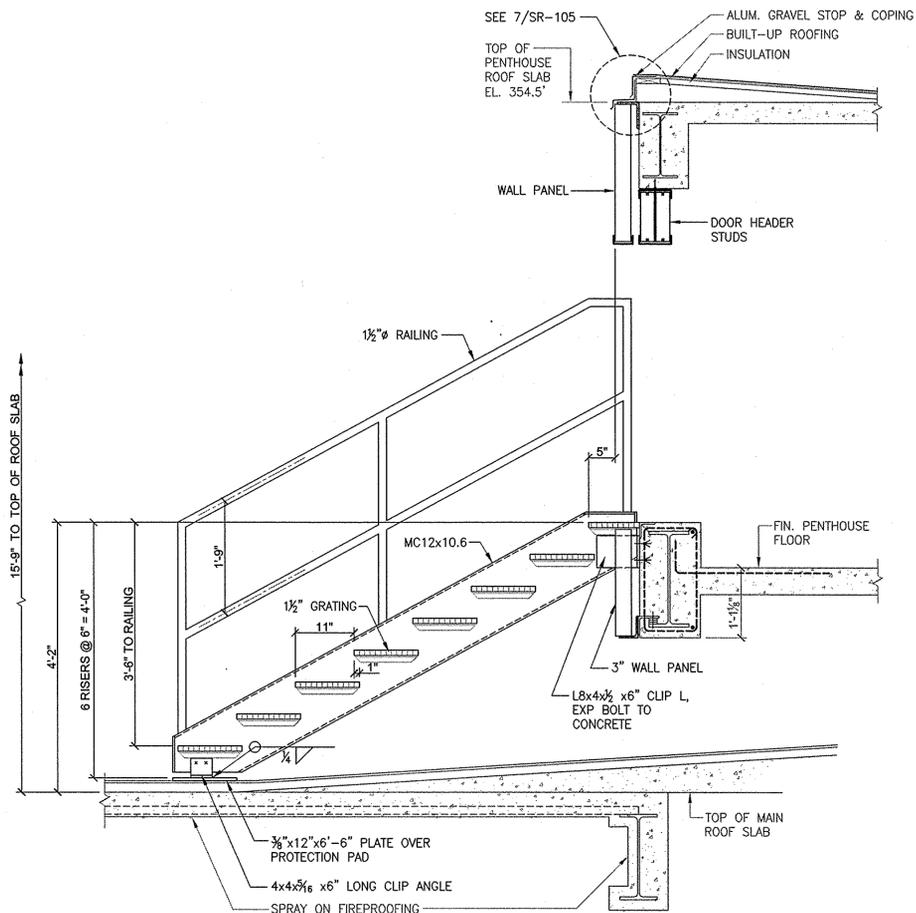
DRAWING NUMBER: **SR-106**

SHEET **OF**



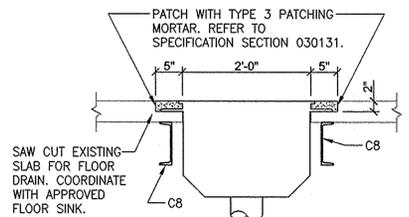
PENTHOUSE WALL SECTION @ EAST DOOR 1

SCALE: 3/4" = 1'-0"
NOTE: ALL STEEL IS TO BE GALVANIZED.



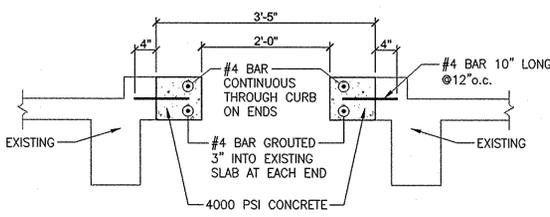
NORTH FACE STAIR SECTION 2

SCALE: 3/4" = 1'-0"
NOTE: ALL STEEL IS TO BE GALVANIZED.



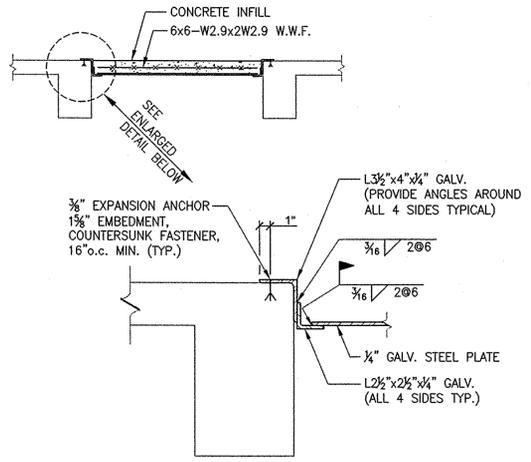
FLOOR SINK INSTALLATION 7

SCALE: 3/4" = 1'-0"
NOTE: FLOOR SINK TO BE AT LEAST 1/16" LOWER THAN ADJACENT FLOOR.



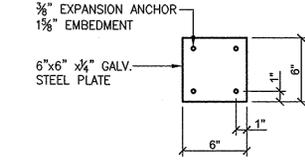
SLAB PENETRATION MODIFICATION 8

SCALE: 3/4" = 1'-0"



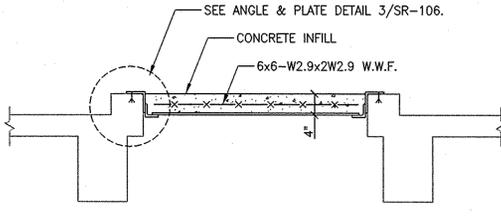
CONCRETE INFILL DETAIL 3

SCALE: 1-1/2" = 1'-0"



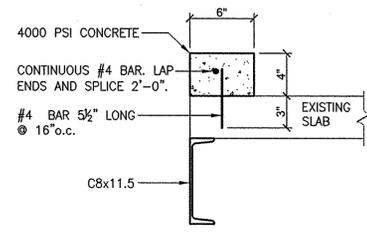
ABANDONED VENT PIPE PENETRATION COVER PLATE DETAIL 4

SCALE: 1-1/2" = 1'-0"



CONCRETE INFILL @ CURB DETAIL 5

SCALE: 3/4" = 1'-0"



CURB DETAIL 6

SCALE: 1-1/2" = 1'-0"

SECTION 096613

TERRAZZO

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Cast-In-Place Concrete: Section 033000 or 033001.

1.02 REFERENCES

- A. Except as shown or specified otherwise, the Work of this Section shall conform to the Specifications, Details, and Technical Data published by the National Terrazzo and Mosaic Association, Inc. (NTMA).

1.03 SYSTEM DESCRIPTION

- A. Floor: Cast-in-place sand cushion terrazzo system. The total thickness of terrazzo, including mortar underbed and sand cushion shall be not less than 3 inches.
- B. Stairwork: Precast terrazzo units.

1.04 SUBMITTALS

- A. Shop Drawings: Precast terrazzo stairwork. Show application to Project.
- B. Product Data:
 - 1. Portland Cement: Brand and manufacturer's name.
 - 2. Marble Chips: Name of marble and supplier, each color specified.
 - 3. Slip-Resistant Abrasive Aggregate: Brand and manufacturer's specifications and application instructions.
 - 4. Cleaner: Brand and manufacturer's name.
 - 5. Sealer: Brand and manufacturer's name and application instructions.
- C. Samples:
 - 1. Precast Terrazzo: 12 inch long tread.
 - 2. Slip-Resistant Abrasive Aggregate: One pint.
 - 3. Sealer: One pint.
 - 4. Fabric Reinforcement: 12 x 12 inch sq piece.
 - 5. Divider and Control Joint Strips: 12 inches long, each type specified
- D. Contract Closeout Submittal: NTMA terrazzo maintenance recommendations.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver factory packaged materials to the site in original, unopened bags or containers bearing manufacturer's name and brand.

- B. Handle materials in a manner to prevent damage, and store in a dry place.

1.07 PROJECT CONDITIONS

- A. Environmental Requirements: Do not install terrazzo when the ambient temperature is below 40 degrees F. Maintain the ambient temperature in the terrazzo work areas at 40 degrees F or higher until the installed terrazzo Work is cured.
- B. Close spaces to traffic and other work activities while terrazzo is being installed until the terrazzo Work is completed and protected, unless otherwise directed by the Director's Representative.
- C. Install terrazzo base before installation of wall finish above base.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Portland Cement: ASTM C 150, Type I grey or white as required by the terrazzo plate numbers or mix formula specified.
- B. Sand: Clean sand conforming to ASTM C 33, and dry when used for sand cushion.
- C. Water: Clean and free of deleterious amounts of acids, alkalis, and organic materials.
- D. Marble Chips: Sound, clean, crushed marble chips conforming to NTMA standards for sizes, abrasion resistance, absorption rate, and dust content.
- E. Isolation Membrane: ASTM D 2103, Type 13300, 0.004 inch polyethylene sheeting or ASTM C 171 waterproof paper.
- F. Reinforcement: ASTM A 185, 2 x 2 inch x 16 gage, galvanized welded steel wire fabric.
- G. Divider Strips: Half-hard brass, No. 12 B & S gage, 1-1/4 inch depth, with anchoring device. Strips adjoining existing or non-terrazzo rigid materials shall be free of projections which would prevent a close fitting joint.
 - 1. Base Divider Strips: Cove type, of material and thickness matching floor divider strips.
- H. Control Joint Strips: 1/8 inch thick white neoprene filler, bonded between 2-3/4 inch depth 14 B & S gage brass strips, with anchoring device.
- I. Slip-Resistant Abrasive Aggregate: Aluminum oxide abrasive in crystalline form, ceramically bonded and vitrified, of size and color to match surface marble chips as close as possible.

- J. Slip-Resistant Abrasive Strip Inserts: Dove-tail shaped zinc channel with 3/8 x 1/4 inch silicon carbide abrasive strip filler.
- K. Color Pigments: Chemically inert, non-fading, mineral oxides prepared for use with Portland cement.
- L. Cleaner: Neutral liquid type cleaner made for use on terrazzo, with a pH factor between 7 and 10, and free from crystallizing salts and water soluble alkaline salts.
- M. Sealer: Penetrating liquid type sealer specially prepared for use on terrazzo, colorless, and with a pH factor between 7 and 10.
- N. Curing Paper and Protective Covering: ASTM C 171 waterproof paper.

2.02 MIXES

- A. Underbed: One part grey Portland cement to 4 parts sand by volume, and sufficient water to produce workability at as low a slump as possible.
 - 1. Base Setting Bed: One part cement to 3 parts sand.
- B. Terrazzo Topping: Marble chips and Portland cement proportioned to produce terrazzo conforming to the following:
 - 1. Chip Sizes: Standard; No. 1 and No. 2, equal parts.
- C. Slip-Resistant Terrazzo: Substitute 40 percent of the marble chips in the upper 1/4 inch thickness of the terrazzo topping with slip-resistant abrasive aggregate

2.03 PRECAST TERRAZZO

- A. Reinforcement: Reinforce each precast terrazzo member.
 - 1. Treads: Reinforce with not less than three 1/4 inch diameter steel bars or approved equal welded wire fabric reinforcement, unless otherwise shown.
 - 2. Vertical Members: Reinforce with welded wire fabric reinforcement, unless otherwise shown.
- B. Stair Slip-Resistant Feature: 3 lines of slip-resistant abrasive strip inserts.
- C. Thickness:
 - 1. Stair Treads and Platforms: Not less than 1-1/2 inches total thickness, exclusive of mortar setting bed, with topping not less than 3/4 inch thick.
- D. Apply terrazzo topping so as to be monolithic with the terrazzo mortar. Surfaces of precast terrazzo that will be in contact with setting beds shall have a rough texture to produce a good bond.
- E. The underside of each tread shall have approved metal anchors spaced not to exceed 2 feet on center.

- F. Surfaces of vertical members that will be in contact with mortar setting bed shall have not lighter than No. 10 gage brass anchors spaced not to exceed 2 feet on center.
- G. Moisture cure, grind, grout, hone, and finish.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Examine substrate surfaces to receive terrazzo for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.
 - 1. Check that items required to be embedded in the terrazzo have been installed and approved.

3.02 PREPARATION

- A. Protection: Protect adjacent surfaces before starting terrazzo Work.
- B. Cleaning: Sweep or brush substrate surfaces clean and remove mortar/plaster droppings and other foreign matter.

3.03 INSTALLATION

- A. Cast-In-Place Floors: Mortar and toppings shall be freshly mixed in such size batches that the material will be used before it has started to set. Do not use mixed material that has begun to set. Install floors level unless indicated to be sloped. Where no saddle is indicated at door openings, continue terrazzo through the opening to hinged side of door. Extend terrazzo floor into recesses and other openings with the same floor elevation.
 - 1. Underbed Preparation: Cover entire surface to receive terrazzo with sand to a uniform thickness of 1/16 inch. Cover sand cushion with isolation membrane, free from breaks and tears, and with ends and edges of sheets overlapped 4 inches.
 - 2. Placing Underbed: Place mortar bed, approximately 2-1/4 inches thick, over isolation membrane. Screed underbed to elevation 1/2 inch below finished floor elevation.
 - a. Install divider strips when underbed is semi-plastic and trowel firmly along sides of strips to assure positive anchorage. Install strips straight and level, unless otherwise indicated, and at required elevation.
 - b. Install control joint strips precisely above building expansion joints and at other locations where indicated. Install strips straight and level, unless otherwise indicated, and at required elevation.

3. Placing Terrazzo Topping: Just prior to placing topping, slush underbed with neat Portland cement paste of same kind and color specified for the topping, including color pigment if contained in topping. Broom paste into underbed surface. Place terrazzo topping mixture in the panels formed by divider strips to a thickness of not less than 1/2 inch. Trowel mixture level. Seed trowelled surface with additional marble chips, of the same composition and in the same proportions as contained in the terrazzo topping mixture, as required to insure that the completed terrazzo will show a minimum of 70 percent marble chips. Trowel again. Roll seeded surface with heavy rollers until excess water has been extracted. Trowel topping to an even surface, disclosing lines of divider strips.
 - a. Slip-Resistant Terrazzo: Place standard terrazzo topping mixture in the panels to a thickness of 1/4 inch. Immediately place slip-resistant terrazzo mixture in the panels (over the standard mixture) to thickness of 1/4 inch. Then seed surface with additional marble chips and slip-resistant abrasive aggregate and roll to a compact integral mass. Comply with applicable requirements specified for standard terrazzo topping.
 4. Curing: After completing placement of terrazzo topping, install curing paper in accordance with paper manufacturer's recommendations. Cure topping until it develops sufficient strength to prevent lifting or pulling of chips during grinding.
 5. Rough Grinding: While the floor is covered with water, machine grind topping using No. 24 grit or finer abrasive stones, followed by No. 80 grit or finer abrasive stones. Continue grinding until the surface is true and free of roughness and blemishes.
 6. Tolerances:
 - a. Flatness Tolerance: 1/8 inch in 10 feet maximum variation from flat surface, in all directions.
 - b. Level Tolerance (Except for Surfaces Required to be Sloped): 1/8 inch in 10 feet maximum variation from level, in all directions.
 7. Grouting: Remove grinding residue. Thoroughly clean floor and rinse with clean water. Remove excess rinse water. Apply a coat of neat Portland cement grout. Grout shall contain the same cement and color pigments specified for the topping. Fill voids completely with grout. As soon as grout has attained initial set, install curing paper. Cure grout a minimum of 72 hours.
 8. Fine Grinding: Remove excess grout by machine grinding using No. 80 grit or finer abrasive stones while the floor is covered with water.
- B. Stairwork: Platforms, treads, and risers may be cast-in-place or precast at the option of the Contractor.
1. Precast Terrazzo:
 - a. Install divider strips in joints between precast terrazzo and cast-in-place terrazzo, and also in joints where terrazzo adjoins other types of flooring.

- b. Neatly cut and drill precast members, without chipping or otherwise damaging the slabs, as required for installation of railings and other intersecting or abutting items.
- c. Accurately set precast members in full mortar setting bed in their designed positions. Imbed anchors in the mortar setting bed and securely fasten in place.
- d. Set precast members with parallel exposed joints, not more than 1/8 inch in width. Fill and point joints with mortar colored to harmonize with the precast terrazzo. Clean off excess mortar.

3.04 REFINISHING EXISTING TERRAZZO

A Rough Grinding:

- 1. While the floor is covered with water, machine grind topping using No. 24 grit or finer abrasive stones, followed by No. 80 grit or finer abrasive stones. Continue grinding until the surface is true and free of roughness and blemishes.

B Tolerances:

- 1. Flatness Tolerance: 1/8 inch in 10 feet maximum variation from flat surface, in all directions.
- 2. Level Tolerance (Except for Surfaces Required to be Sloped): 1/8 inch in 10 feet maximum variation from level, in all directions.
- 3. Grouting: Remove grinding residue. Thoroughly clean floor and rinse with clean water. Remove excess rinse water. Apply a coat of neat Portland cement grout. Grout shall contain the same cement and color pigments specified for the topping. Fill voids completely with grout. As soon as grout has attained initial set, install curing paper. Cure grout a minimum of 72 hours.
- 4. Fine Grinding: Remove excess grout by machine grinding using No. 80 grit or finer abrasive stones while the floor is covered with water.

3.05 CLEANING AND SEALING

- A. Thoroughly wash terrazzo surfaces with cleaner after the fine grinding.
- B. Rinse terrazzo with clean water and allow surface to dry thoroughly.
- C. Apply sealer to terrazzo surfaces in accordance with manufacturer's instructions.

3.06 PROTECTION

- A. Cover the terrazzo with protective covering paper and protect from damage.

END OF SECTION

SECTION 122400

SOLAR SHADES

PART 1 GENERAL

1.01 DESIGN REQUIREMENTS

- A. General: Provide all materials, labor, equipment, and services, and perform all operations in connection with the furnishing and installing of Shades complete, in accordance with the Drawings and Specifications

1.02 RELATED WORK OF OTHER SECTIONS

- A. Wood Nailers and Blocking: Section 061053.
- B. Gypsum Board Systems: Section 092116.
- C. Suspended Acoustical Ceiling System: Section 095300.

1.03 SUBMITTALS

- A. Shop Drawings: Dimensioned Shop Drawings, including plans, elevations, sections, and details of installations, schedule, arrangement of hardware, controls, fabric types, operational clearances, and relationships to adjoining work by others.
- B. Product Data: Manufacturer's catalog sheets, specifications, and installation instructions for each type of product indicated. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions.
 - 1. Preparation instructions and recommendations.
 - 2. Styles, material descriptions, dimensions of individual components, profiles, features, finishes and operating instructions.
 - 3. Storage and handling requirements and recommendations.
 - 4. Mounting details and installation methods.
- C. Samples for Verification:
 - 1. Shade Material:
 - a. For each finish product specified, one set of shade cloth options and aluminum finish color samples representing manufacturer's full range of available colors and patterns.
 - b. Submit 3 inches square or larger samples, with specified treatments applied. Mark face of material.
- D. Quality Control Submittals:
 - 1. Product Certificates: For each type of roller shade product, signed by product manufacturer.
 - 2. Window Treatment Schedule: Use same room/space designations as shown on drawings and include opening sizes and key to typical mounting details.

- E. Contract Closeout Submittals:
 - 1. Maintenance Data: For roller shades to include in maintenance manuals. Include the following:
 - a. Methods for maintaining roller shades and finishes.
 - b. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.
 - c. Instructions for operating hardware and controls, including motorized shade operator.
 - 2. Warranties: Copy of specified warranty.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer trained and certified by the manufacturer and who has completed shade installations similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Sole Source Limitations: Obtain roller shade fabrics, hardware, and associated integral control components thru one source from a single manufacturer.
- C. Fire-Test-Response Characteristics: Provide shades that are identical to products that pass NFPA 701 Small Scale Test for flame-propagation resistance performed by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify shades with appropriate markings of applicable testing and inspecting agency.
- D. Anti-Microbial Characteristics:
 - 1. ASTM G 22 results for ATCC6538 and ATCC13388) indicating minimum 5mm (0.197 inches) “No Growth Contact Area.”
 - 2. ASTM G 21 results for ATCC9642, ATCC9644, ATCC9348, and ATCC9645 indicating “No Growth Contact Area.”

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials which are identical with approved samples, in manufacturer's original unopened and factory-labeled packages, fully identified with type, finish, performance data and compliance labels, and location of installation using same room designations indicated on Drawings and in a window treatment schedule.
- B. Handle and store in accordance with manufacturer's instructions and recommendations. Store materials under cover in a dry and clean location, off the ground. Remove materials which are damaged or otherwise not suitable for installation and replace with acceptable materials.

1.06 JOB CONDITIONS

- A. Field Measurements: Verify shade openings by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Do not install work until space has been enclosed and is weather-tight, and until wet work, including painting, in the space has been completed and is nominally dry, and until work above ceilings has been completed and tested, and until ambient conditions of temperature and humidity will be continuously maintained at values indicated for final occupancy.

1.07 WARRANTY

- A. Roller Shade Hardware, and Shadecloth: Manufacturer's standard non-depreciating 25 year limited warranty.

PART 2 PRODUCT

2.02 SOLAR SHADE MANUFACTURERS

- A. MechoShade Systems, Inc., Long Island City, NY, 11101, (732) 991-1395, jerryf@mechoshade.com.
- B. Hunter Douglas Contract, 12250 Parkway Centre Drive Poway, CA 92064; 1-800-727-8953, Patrick.Leclair@hunterdouglas.com

2.03 SOLAR SHADE APPLICATIONS

- A. Type SS-1 and SS-2: Manual operated sunscreen roller shades.
 - 1. Manual interior solar roller shades at exterior window of rooms and spaces shown on Drawings.

2.04 SHADE CLOTH

- A. Solar Shade Cloth (Type SS-1 and SS-2) Manufacturers
 - 1. EcoVeil Group, 1350 Series by MechoShade Systems, Inc.
 - 2. Green Screen Eco by Hunter Douglas Contract
- B. Weave: **5** percent open basket weave
- C. Color: As selected from manufacturer's standard colors
- D. Shade cloth seconds or shade cloth manufactured using reprocessed materials are not acceptable.

2.05 SHADE BAND

- A. Shade Bands: Construction of shade band includes the fabric, the enclosed hem weight, shade roller tube, and the attachment of the shade band to the roller tube. Sewn hems and open hem pockets are not acceptable.
 - 1. Concealed Hembar: Shall be continuous extruded aluminum for entire width of shade band and with the following characteristics:
 - a. Hembar shall be heat sealed on all sides.
 - b. Open ends shall not be accepted.
 - 2. Shade Band and Shade Roller Attachment:
 - a. Use extruded aluminum shade roller tube of a diameter and wall thickness required to support shade fabric without excessive deflection.
 - b. Provide for positive mechanical attachment of shade band to roller tube; shade band shall be made removable/replaceable with a "snap-on"- "snap-off" Spline mounting, without having to remove shade roller from shade brackets.
 - c. Mounting Spline shall not require use of adhesives, adhesive tapes, staples, and/or rivets.
 - d. Any method of attaching shade band to roller tube that requires the use of: adhesive, adhesive tapes, staples, and/or rivets, does not meet the performance requirements of this specification and shall not be accepted.

2.06 SHADE FABRICATION

- A. Fabricate shade cloth to hang flat without buckling or distortion. Fabricate with heat-sealed trimmed edges to hang straight without curling or raveling. Fabricate unguided shade cloth to roll true and straight without shifting sideways more than 1/8 inch (3.18 mm) in either direction per 8 feet (2438 mm) of shade height due to warp distortion or weave design.
 - 1. Fabricate with bottom hem weights.
- B. Provide battens in standard shades as required to ensure proper tracking and uniform rolling of the shade bands. Contractor shall be responsible to accurately calculate the width-to-height (W:H) ratios to ensure they does not exceed manufacturer's standards; in absence of manufacturer's standards, establishing appropriate standards to ensure proper tracking and rolling of the shade cloth within specified standards. Battens shall be roll-formed stainless steel or tempered steel, as required.
- C. For railroaded shade bands, provide seams in railroaded multi-width shade bands as required to meet size requirements and in accordance with seam alignment as acceptable to Director's Representative. Seams shall be properly located. Furnish battens in place of plain seams when the width, height, or weight of the shade exceeds manufacturer's standards. In absence of such standards, ensure proper use of seams or battens as required and ensure the proper tracking of the railroaded multi-width shade bands.
- D. Provide battens for railroaded shades when width-to-height (W:H) ratios meet or exceed manufacturer's standards. In absence of manufacturer's standards, be responsible for proper use and placement of battens to assure proper tracking and roll of shade bands.

2.07 COMPONENTS

- A. General Hardware Requirements:
 - 1. Provide shade hardware allowing for the removal of shade roller tube from brackets without removing hardware from opening and without requiring end or center supports to be removed.
 - 2. Provide shade hardware that allows for removal and re-mounting of the shade bands without having to remove the shade tube, drive or operating support brackets.

- B. Manual Shade Hardware and Shade Brackets:
 - 1. Provide for universal, regular and offset drive capacity, allowing drive chain to fall at front, rear or non-offset for all shade drive end brackets. Universal offset shall be adjustable for future change.
 - 2. Provide hardware capable for installation of a removable fascia, for both regular and/or reverse roll, which shall be installed without exposed fastening devices of any kind.
 - 3. Provide shade hardware system that allows for removable regular and/or reverse roll fascias to be mounted continuously across two or more shade bands without requiring exposed fasteners of any kind.
 - 4. Provide positive mechanical engagement of drive mechanism to shade roller tube. Friction fit connectors for drive mechanism connection to shade roller tube are not acceptable
 - 5. Provide shade hardware constructed of minimum 1/8-inch (3.18 mm) thick plated steel or heavier as required to support 150 percent of the full weight of each shade.
 - 6. Drive Bracket and Brake Assembly:
 - a. SS-1-MechoShade 5 Standard, without Fascia Drive Bracket Model M5 shall be fully integrated with all MechoShade accessories
 - b. SS-2-MechoShade 5 Standard, with Fascia Drive Bracket Model M5 shall be fully integrated with all MechoShade accessories, including SnapLoc fascia,
 - c. M5 drive sprocket and brake assembly shall rotate and be supported on a welded 3/8 inch (9.525 mm) steel pin.
 - d. The brake shall be an over-running clutch design which disengages to 90 percent during the raising and lowering of a shade. The brake shall withstand a pull force of 50 lbs. (22 kg) in the stopped position.
 - e. The braking mechanism shall be applied to an oil-impregnated hub on to which the brake system is mounted. The oil impregnated hub design includes an articulated brake assembly, which assures a smooth, non-jerky operation in raising and lowering the shades. The assembly shall be permanently lubricated. Products that require externally applied lubrication and or not permanently lubricated are not acceptable.
 - f. The entire M5 assembly shall be fully mounted on the steel support bracket, and fully independent of the shade tube assembly, which may be removed and reinstalled without effecting the roller shade limit adjustments.
 - g. Drive Chain: Number 10 qualified stainless steel chain rated to 90 lb. (41 kg) minimum breaking strength. Nickel plate chain shall not be accepted.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected. If substrate preparation is the responsibility of another installer, notify Director's Representative of unsatisfactory preparation before proceeding
- B. Do not begin installation until substrates have been properly prepared.
- C. Examine the Contract Drawings and specifications in order to insure the completeness of the work required under this section. Supplementary parts, necessary to complete the work, though not specifically indicated on drawings or specified herein, shall be provided.
- D. Verify dimensions taken at the job site affecting the work. Bring field dimensions which are at variance to the attention of the Director's Representative. Obtain decision regarding corrective measures before the start of installation.
- E. Starting of work shall imply acceptance of supporting construction and temperature and humidity conditions as satisfactory and it shall be construed that the Contractor shall guarantee the finished acoustical work to be true, even and in plane.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Install roller shades level, plumb, square, and true according to manufacturer's written instructions, and located so shade band is not closer than 2 inches to interior face of glass. Allow proper clearances for window operation hardware.
- B. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.
- C. Clean roller shade surfaces after installation, according to manufacturer's written instructions.

3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 265110

FLUORESCENT FIXTURES

PART 1 GENERAL

1.01 SUBMITTALS

- A. Waiver of Submittals: The “Waiver of Certain Submittal Requirements” in Section 013300 does not apply to this Section.

- B. Shop Drawings; Show:
 - 1. Details of fixture construction and finishes. Catalog cuts without required details will not be approved.
 - 2. Fixture and accessory drawings (indicate scale).
 - 3. For continuous pattern fixtures, indicate layout, provide field held dimensions, and individual section lengths and lamp quantities. Show details of connections, corners and extensions, end plates, and mounting. Include pendant or bracket locations and show remote transformers and ballasts.
 - 4. Provide as part of fixture shop drawings the lamp catalog cut sheet clearly indicating lamp selection, lamp length, lamp wattage, lumen output, color temperature, CRI, lamp life, base configuration, and TCLP compliance, with total mercury content of lamp indicated.
 - 5. Provide as part of fixture shop drawings the ballast catalog cut sheet clearly indicating ballast selection, type and quantity of lamps it operates, ballast factor, input wattage, voltage, THD, inrush current, lamp starting method, and where applicable, dimming range.

- C. Product Data:
 - 1. Catalog sheets, specifications, and installation instructions.
 - 2. For Down and Semi-down Lights Used for General Illumination: Submit photometric data by an independent testing laboratory when requested. Show optical performance developed using methods of IES of North America as follows:
 - a. Coefficients of utilization.
 - b. Visual Comfort Probability data; for a 100 footcandle room with reflectance of 80 percent at ceiling, 50 percent at walls, and 20 percent at floor.
 - c. Candlepower data presented graphically and numerically, in 10 degree increments. Develop data for up and down quadrants normal, parallel, and at 45 degree to lamp if light output is asymmetric.
 - d. Zonal lumens stated numerically in 10 degree increments as above.

- D. Samples:
 - 1. Finishes: Only when specifically requested for manufacturers or catalog numbers not indicated on documents, submit 4 x 6 inch samples of each type of finish specified, on metal to be used.
 - 2. Fixtures: Only when specifically requested for manufacturers or catalog numbers not indicated on documents; following shop drawings, deliver one sample fixture of each type requested to Designer's office: P.O. Box CN-5380, Princeton, NJ 08540-5380.
 - 3. Samples shall be complete with lamps, ballasts, cords and other accessories, ready for operation.
 - 4. After review and approval, transfer sample fixtures from Designer's office to job site for comparison with fixtures delivered for installation.

- E. Quality Control Submittals:
 - 1. Certificates: Certify that each product meets or exceeds specified requirements.
 - 2. List of Installations for Electronic Ballasts: If brand names other than those specified are proposed for use, furnish the name, address, and telephone number of at least 5 comparable installations which can prove the proposed products have operated satisfactorily for 1 year. The installations shall present a grand total of at least 5000 ballasts.

- F. Contract Closeout Submittals:
 - 1. Warranty: Copy of specified warranty.

1.02 DELIVERY, STORAGE, AND HANDLING

- A. Protect fixtures from damage using appropriate material, cartons, plastic wrapping and other protective means. Protective covers and films shall remain on fixtures until construction reaches substantial completion.

1.03 WARRANTY

- A. Manufacturer's Warranty: Warrant electronic ballasts for three years from Date of Substantial Completion. Include labor allowance for full cost of ballast installation.

1.04 MAINTENANCE

- A. Maintenance Material:
 - 1. Lamps: 25 lamps of each type used.
 - 2. Ballasts: 20 of each type and size used.

PART 2 PRODUCTS

2.01 COMPONENT DESCRIPTIONS

- A. Ballasts:

1. Electronic Ballasts for Long Tube 32 watt T8 Fluorescent Lamps: Instant, start, high power factor, Class P, UL listed; Universal Lighting Technologies"ULTim8"- B132PUNVHE-A, B232PUNVHE-A, B332PUNVHE-A, B432PUNVHE-A; Osram Sylvania "Quicktronic PROStart PSN"- QTP132T8UNVPSNTC, QTP232T8UNVPSNTC, QTP332T8UNVPSNSC, QTP432T8UNVPSNSC; or GE Lighting "Ultramax"- GE132MAX-N/ULTRA, GE232MAX-N/ULTRA, GE332MAX-N/ULTRA, GE432MAX-N/ULTRA.
 - a. Comply with UL and ANSI specifications. Show display labels and/or symbols of approval by UL.
 - b. Provide required voltage, frequency and power factor.
 - c. Ballasts shall comply with U.S. Federal Efficiency laws.
 - d. Manufacturer shall maintain ISO 9001 certified facility.
 - e. Equipment shall not contain PCBs.
 - f. Total harmonic distortion not greater than 20 percent. Ballast and lamp combination shall match so that total harmonic distortion remains below specified percentage.
 - g. RFI and EMI in accordance with FCC Regulation CFR47 Part 18.
 - h. Ballast factor shall be between 0.87 and 1.0 unless otherwise noted in fixture schedule.
 - i. Lamp current crest factor shall be 1.7 or less.
 - j. Use quietest NEMA rated noise level and highest sound rating available; Class A+.
 - k. Ballasts shall provide transient immunity as recommended by ANSI C62.41.
 - l. Ballasts shall operate lamps with no visible flicker. Frequency of operation shall be greater than 30,000 Hz.
 - m. Ballasts shall be capable of withstanding sustained open and short circuit conditions without damage.
 - n. Use multi-lamp ballasts in fixtures with multiple lamps, unless otherwise noted. Rapid-start lamps on single-lamp ballasts shall have one circuit-interrupting socket per lamp.
 - o. Use identical ballasts within each fixture type. Fixture design, fabrication, and assembly shall prevent overheating or cycling of lamps and ballasts under all conditions.
 - p. Mount lamps on rapid-start circuits within 1 inch of grounded metal, minimum 1 inch wide, as long as lamp.
 - q. Sockets with open-circuit voltage over 300 volts: Safety type, designed to open supply circuit on lamp removal.
 - r. Mount to inside top of fixture housings, with ballast surfaces and housing in complete contact for efficient conduction of ballast heat.
 - s. Integral leads shall be color coded to ANSI standards.
2. Solid State Electronic T4, T5 Compact Fluorescent Ballasts:
 - a. High frequency; Class P with automatically reclosable thermal device; High power factor; UL listed, 120V or 277V as required; Compatible with lamping; Universal Lighting Technologies, Philips Advance "Mark 10 Powerline", Osram Sylvania "Quicktronic PROStart", or GE Lighting "Ultramax".

- b. Frequency: In accordance with NEMA recommendations, above 30kHz, and avoid frequency ranges of 27-31 kHz, 34-41 kHz, and 55-61 kHz.
 - c. Features: Programmed rapid start; ballast factor between 0.80 and 1.15 depending on lamp; end-of-lamp life sensing cut-off.
 - d. Ballast inrush current shall not exceed 20 times operating current.
 - e. Ballast shall allow for re-lamping without the need to cycle power.
 - f. Provide five year manufacturer warranty.
3. Solid State Electronic Long-Tube Compact Fluorescent Biax Lamp Ballasts:
- a. High frequency; Class P with automatically reclosable thermal device; High power factor; UL listed, 120V or 277V as required; Compatible with lamping; Universal Lighting Technologies, Osram Sylvania "Quicktronic PROStart", or GE Lighting "Ultramax",
 - b. Frequency: In accordance with NEMA recommendations, above 30kHz, and avoid frequency ranges of 27-31 kHz, 34-41 kHz, and 55-61 kHz.
 - c. Features: Instant start; ballast factor between 0.87 and 1.0, unless otherwise noted.
 - d. Ballast inrush current shall not exceed 20 times operating current.
 - e. Ballast shall allow for re-lamping without the need to cycle power.
 - f. Provide five year manufacturer warranty.
4. Fluorescent One Percent Dimming Ballasts; Long tube T8 lamps, Line Voltage:
- a. LUTRON "HI-LUME" or Osram Sylvania "Professional".
 - b. Dimming shall be smooth and continuous without flicker, down to one percent light output for T8 fluorescent lamps. Lamps shall be capable of striking in any dimming range without first flashing on at full output.
 - c. High power factor.
 - d. Ballast Factor at Full Light Output: 0.93 minimum.
 - e. Wall Box Dimming Controls: Compatible with ballast. Same dimming ballast must be used with all fixtures controlled by same wall box dimming switch.
 - f. Class A sound rating.
 - g. Class P thermally protected.
 - h. Lead length between ballast and lamps must be less than 7 feet.
 - i. Provide three year manufacturer's warranty.
 - j. Provide 32-watt T8 3500 degrees Kelvin, 85 CRI lamps in fixtures with dimming ballasts.
- B. Lamps: By GE Lighting, Osram, Sylvania, or Philips Lighting Co. Note: Unless otherwise indicated lamp designations in fixture descriptions are GE Lighting lamp ordering abbreviations.
- 1. Lamps shall be provided with 3500 degree Kelvin color temperature.

2. Provide a minimum color rendering index of 82.
3. All lamps shall be TCLP compliant.

GE Lighting	Osram Sylvania	Philips Lighting Company
F32T8XL/SPX35	FO32/835/XPS/ECO	F32T8/TL835/XLL/ALTO
F30T8XL/SPX35	FO30/835/XPS/ECO	F30T8/ADV835/ALTO
F26TBX/835/A/ECO	CF26DT/E/IN/835	PL-T 26W/835/4P
F32TBX/835/A/ECO	CF32DT/E/IN/835	PL-T 32W/835/4P
F42TBX/835/A/ECO	CF42DT/E/IN/835	PL-T 42W/835/4P

- C. Labels: Equip each fixture with a label, located conspicuously inside of fixture, which states the type of lamps required for the fixture.
- D. Additional Components: Equip fixtures with the following additional components, as applicable:
 1. Plaster frames as required for installation of recessed and semi-recessed fixtures.
 2. Safety clips for fixtures installed in grid ceilings.
 3. End caps for individually mounted fixtures and end of continuous row fixtures.
 4. Finishing collar or combination finishing collar/outlet box for surface mounted fixture used with exposed raceway:
 - a. Finishing Collar: Same finish and peripheral dimensions as the fixture base, including provisions for mounting, slots to fit over raceway and of depth to cover outlet box and extend back to ceiling or wall.
 - b. Combination Finishing Collar/Outlet Box: Same finish and peripheral dimensions as the fixture base, gage or thickness of metal as required by National Electrical Code, including provisions for mounting and knockouts or threaded bosses for entrance of raceway.

2.02 FLUORESCENT FIXTURE CONSTRUCTION

- A. All fluorescent fixture housings shall: Use a minimum 22 gage sheet steel or 16 gage sheet aluminum; have integral end plates and trim flanges to suit ceiling construction. Provide wire way covers with captive retainers to allow access to electrical components without use of tools.
- B. Recessed compact fluorescent down lights shall provide an accessible auxiliary junction box secured to mounting frame.
- C. Linear fluorescent fixtures using extruded aluminum housings, shall be at least 1/8 inch thick.
- D. Punch and form housings prior to finishing (post-paint).

- E. Trim: For square and rectangular fixtures, miter and continuously weld corners. Miter perimeter inverted T-Bar angles at corners. Do not butt or overlap squared ends. Finish joints smooth.
- F. Castings: Uniform quality, free from imperfections affecting strength and appearance. Exterior surfaces, if not receiving a finish coat, shall be smooth and match adjacent surfaces. Apply at least one coat of clear methacrylate lacquer unless a painted finish is specified.
- G. Lens/Louver Frames: Extruded aluminum with mitered corners unless scheduled otherwise. Hinging or other normal motion shall not cause lens or louver to drop out.
- H. Gaskets: Provide gaskets at face plates or frames of recessed fixtures which serve as ceiling trim and which allow interior access. Provide moisture seal gaskets at exterior locations and in other areas designated. Secure frames to fixture bodies to result in tight installation, without light leaks.
- I. Ventilation: Provide ventilation openings of adequate size and quantity to permit operation of lamps and ballast without affecting rated output or life expectancy. Include wire mesh screens.
- J. Lampholders: Position sockets so that lamps are in optically correct relation to fixture components. Secure sockets by screws to fixture enclosure or husk. Spring mounted sockets are not approved. Use white urea plastic body; silver plated phosphor bronze or beryllium copper contacts.
- K. Finish:
 - 1. Painted surfaces, except as noted otherwise in fixture descriptions, shall utilize manufacturer's standard metal pretreatment and baked or air dried, light stabilized enamel finish; acrylic, alkyd, epoxy, polyester or polyurethane. White finishes shall have minimum 85 percent reflectance.
 - 2. Unpainted Interior fixtures' aluminum surfaces shall utilize a clear anodic coating, satin finish, except as noted otherwise in fixture descriptions.
 - 3. Unpainted Exterior fixtures' aluminum surfaces shall utilize a clear anodic coating.
- L. Reflectors: High-purity No. 12 aluminum reflector sheet, 0.047 inch (15 gage) or heavier if specified, free from fabrication or assembly damages. No exposed rivets, springs or other hardware after installation. Shape reflectors in modified elliptical or parabolic contour to produce no apparent brightness. Lamp image or any part of lamp shall not be visible in 45 degree zone. Reflector and baffle finish shall be first-quality "Alzak" anodized finish, of specular color as specified.
- M. Lenses: Extruded 100 percent virgin acrylic male conical prismatic, minimum thickness 0.150 inch. ICI Acrylics Inc. Type K19; or ALP Inc. Type ALP 19.

- N. Mounting Accessories: Provide all necessary mounting accessories for each fixture compatible with various structural and field conditions encountered. Provide fastening clips (earthquake clips) for lighting fixtures attached to framing members of suspended ceilings.
 - O. Provide quick disconnect in compliance with NEC requirements for ballasted fixtures.
- 2.03. Miscellaneous Fluorescent Fixtures:
- A. Type A1: High performance recessed fixture, diffuse shield, 4" maximum depth, 87.6% efficiency, recessed ceiling.
 - 1. Ballast: One 1-lamp.
 - 2. Lamp: One 32 watt.
 - 3. Voltage: 277.
 - 4. Manufacturers and Catalog Number:
 - a. Finelite #HPR-A-2X4-DCO-1T8-277-SC-IS-N/A
 - b. Pinnacle Architectural Lighting
 - c. Philips Day-Brite.
 - B. Type A2: High performance recessed fixture, diffuse shield, 4" maximum depth, 84.8% efficiency, recessed ceiling.
 - 1. Ballast: One 2-lamp.
 - 2. Lamp: Two 32 watt.
 - 3. Voltage: 277.
 - 4. Manufacturers and Catalog Number:
 - a. Finelite #HPR-A-2X4-DCO-2T8-277-SC-IS-N/A
 - b. Pinnacle Architectural Lighting
 - c. Philips Day-Brite.
 - C. Type A3: High performance recessed fixture, diffuse shield, 4" maximum depth, 84.8% efficiency, 0-10% dimming, recessed ceiling.
 - 1. Ballast: One 2-lamp Lutron "Hi-Lume" dimming ballast.
 - 2. Lamp: Two 32 watt.
 - 3. Voltage: 277.
 - 4. Manufacturers and Catalog Number:
 - a. Finelite # HPR-A-2X4-DCO-2T8-277-SC-C1-DI-N/A
 - b. Pinnacle Architectural Lighting
 - c. Philips Day-Brite.
 - D. Type B: 7" aperture recessed downlight, 7.75" max. depth, horizontal lamp, clear iridescence free, white flange, recessed ceiling.
 - 1. Ballast: One 1-lamp.
 - 2. Lamp: One 32 watt compact fluorescent, triple tube.
 - 3. Voltage: 277.
 - 4. Manufacturers and Catalog Number:
 - a. Philips Lightolier #8037CLW-S7142BU-26W
 - b. Atlantic Lighting
 - c. Lucifer Lighting.
 - E. Type B1: 7" aperture recessed downlight, 7.75" max. depth, horizontal lamp, clear iridescence free, white flange, recessed ceiling.
 - 1. Ballast: One 1-lamp.
 - 2. Lamp: One 42 watt compact fluorescent, triple tube.
 - 3. Voltage: 277.

4. Manufacturers and Catalog Number:
 - a. Philips Lightolier #8037CLW-S7142BU-42W
 - b. Atlantic Lighting
 - c. Lucifer Lighting.
- F. Type C1: 4' industrial strip fixture, chain hung, chain mount.
 1. Ballast: One 1-lamp.
 2. Lamp: One 32 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Day-Brite #T132-277 / FL-123
 - b. Lumax Industries
 - c. Legion Lighting Co.
- G. Type C2: 4' industrial strip fixture, chain hung, chain mount.
 1. Ballast: One 2-lamp.
 2. Lamp: Two 32 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Day-Brite # T232-277 / FL-123
 - b. Lumax Industries
 - c. Legion Lighting Co.
- H. Type E: 2' x 4' recessed prismatic fluorescent - acrylic lens, flat steel frame, white, recessed ceiling.
 1. Ballast: One 3-lamp.
 2. Lamp: Three 32 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Day-Brite #2TG8-332-01-277-1/3-EB10I
 - b. Lumax Industries
 - c. Legion Lighting Co.
- I. Type F: 4' industrial strip fixture, wet location, 25 degree c ballast ballast, polycarbonate lens, ceiling surface mount.
 1. Ballast: One 3-lamp.
 2. Lamp: Three 32 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Stonco #WBS-3-32-EB-1-4-PL-WBSM
 - b. Lumax Industries
 - c. Legion Lighting Co.
- J. Type G: 5" aperture recessed downlight, 4" max height, round, clear iridescent free, white flange, recessed ceiling.
 1. Ballast: One 1-lamp.
 2. Lamp: One 26 watt compact fluorescent, triple tube.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Lightolier #1050RN26ES / 1050DLCDW
 - b. Lithonia Gotham
 - c. Philips Omega
- K. Type H: 6" aperture, continuous row linear fixture, staggered lamps, satine flush lens, single circuit, white finish

1. Ballast: One 2-lamp per 4' section.
 2. Lamp: (4) 32 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Pinnacle Lighting #EV6SA-2T8-8'-G1-277-1C-W
 - b. Forum Forecast Lighting
 - c. Selux
- L. Type I: 2x2 recessed troffer, prismatic lens, 4-3/8" maximum depth, 81% efficiency, recessed ceiling.
1. Ballast: One 2-lamp.
 2. Lamp: Two 17 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Day-Brite #2DPGA-217-FA01-277-1/2-EB
 - b. Lumax Industries
 - c. Legion Lighting Co.
- M. Type J: Restroom recessed linear wall grazer, adjustable continuous row, recessed ceiling.
1. Ballast: One lamp (quantity lamp as required)
 2. Lamp: 17 + 32 watt (as required)
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Philips Ledalite (Re-Branded from Lightolier 11/25/13) #PTS8-2-0-2-A
 - b. Pinnacle Architectural Lighting
 - c. Philips Day-Brite
- N. Type K: High performance recessed fixture, diffuse shield, 4" maximum depth, 86.2% efficiency, recessed lighting.
1. Ballast: One 2-lamp.
 2. Lamp: Two 17 watt.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Finelite #HPR-A-2X2-DCO-2T8-277-SC-IS-N/A
 - b. Pinnacle Architectural Lighting
 - c. Philips Day-Brite
- O. Type L: Elevator pit light, die cast aluminum enclosure, corrosion resistant polyester powder finish, surface wall.
1. Ballast: One 1-lamp.
 2. Lamp: One 26 watt compact fluorescent, triple tube.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:
 - a. Stonco #VWXL-26-HFL-4
 - b. GE Lighting Solutions
 - c. Barron Lighting Group
- P. Type M: Marine grade die-cast aluminum baseplate, ADA compliant, full face round fixture, surface wall.
1. Ballast: One 2-lamp.
 2. Lamp: Two 42 watt compact fluorescent, triple tube.
 3. Voltage: 277.
 4. Manufacturers and Catalog Number:

- a. Kenall #MR13FL-PP-XX-42P-2-277
- b. Design Plan
- c. Lithonia.

PART 3 EXECUTION

3.01 COORDINATION

- A. Coordinate fixture mounting type with ceiling types and suspended ceiling grid profiles prior to submission of shop drawings. Notify Designer and Director's Representative of any discrepancy. Failure to do so will result in correction or fixture replacement at no additional cost to Director.
- B. Coordinate locations of all fixtures shown on reflected ceiling plan with other trades. Coordination shall include confirmation of suspended grid systems as specified and shown on reflected ceiling plan; confirmation of required plenum clearances for fixtures with ductwork, piping and structural steel; in exposed areas, coordinate fixture locations, mounting heights, and supports for fixtures with ductwork, piping, and equipment. Provide shop drawing submittal showing any changes that result from this coordination, include in submittal the reason for change.

3.02 INSTALLATION

- A. Install fixtures at locations indicated on the reflected ceiling plan.
- B. Assemble, wire and install lighting fixtures, with lamps, in such manner to ensure correct operation.
- C. Lighting fixtures weighing less than 50 pounds shall have, in addition to requirements specified, two 12 gage steel wire safety hangers connected from opposite diagonal ends of fixture housing to structure above. These wires may be slack. Refer to Section 260529 for fixture mounting hardware specification.
- D. Support lighting fixtures weighing 50 pounds or more directly from structure with approved hangers. Refer to Section 260529 for fixture mounting hardware specification.
- E. Ground entire fixture to building grounding system.
- F. Surface Mounted and Pendant Hung Fixtures:
 - 1. Attach surface-mounted lighting fixtures to ceiling system with positive clamping devices that completely surround supporting members. Attach safety wires between clamping device and adjacent ceiling hanger or to structure above. In no case shall fixture load exceed design carrying capacity of supporting member.
 - 2. Support pendant-hung lighting fixtures directly from structure above, using 9 gage steel wire, without relying on ceiling suspension system for support.

3. Pierce ceiling material for hangers and outlet boxes as required.
 4. Do not remove ceiling material above surface mounted fixtures.
 5. Hang fixtures plumb with continuous rows in alignment.
 6. Unless otherwise noted, suspend fixtures in each finished room or area at the same height regardless of varying clear height conditions. Provide various stem lengths as required.
 7. Finishing Collar or Combination Finishing Collar/Outlet Box (Surface Mounted Fixture Used With Exposed Raceway):
 - a. Provide finishing collar where surface mounted fixture is installed on an exposed raceway outlet box and the fixture base is larger than the outlet box.
 - b. Provide combination finishing collar/outlet box where surface mounted fixture is not indicated to be installed on an exposed raceway outlet box, but raceway cannot be run directly into fixture body due to fixture design.
- G. Recessed Fixtures:
1. Note that specifications for recessed fixtures generally do not include mounting accessories, and that each fixture type may be used in several different ceiling types. Verify mounting details for each space; provide correct fixture flange mounting accessories for each condition.
 2. Attach lay-in fluorescent troffers to ceiling suspension system, for alignment only.
 3. Attach fixtures to suspension system following NEC, provide independent fixture support.
 4. Support downlights and exit signs with rails spanning between runners of suspension system.
 5. Support fluorescent troffers in gypsum board ceilings from plaster frames, with adjustable lugs on side of fixture or yoke mounting as recommended by fixture manufacturer.
 6. Support down lights in metal pan and gypsum board ceilings from plaster frames.
 7. Center fixtures in acoustical tile unless shown otherwise.
- H. Continuous Fixture Patterns:
1. Fasten sections together for continuously aligned appearance, with no dimpling or light leakage. Provide end extensions where required.
 2. Where fixtures run continuously around inside or outside corners, provide prefabricated corner pieces. Run fixture lenses, baffles or louvers continuously with fixture. Miter and/or fan at corners as directed.
 3. Where continuous runs do not end at a wall or fascia, provide a finished end plate, with no visible holes and concealed fasteners.
 4. Coordinate pendant location to permit alignment between rows or patterns.
 5. Use long tube lamps in 3 and 4 foot lengths. Utilize combinations to provide a continuous light appearance over total length of assembly. Only where fixture length is less than 3 feet can a 2 foot lamp be used.

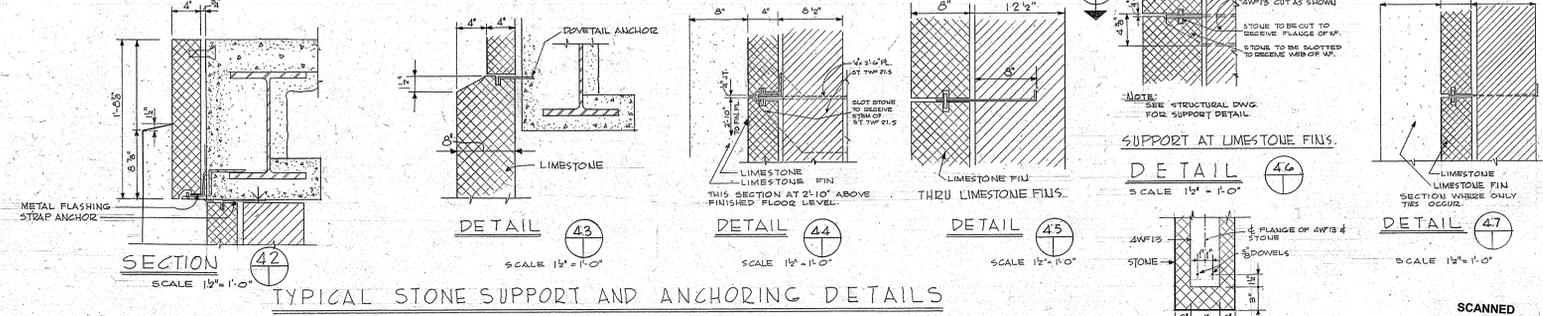
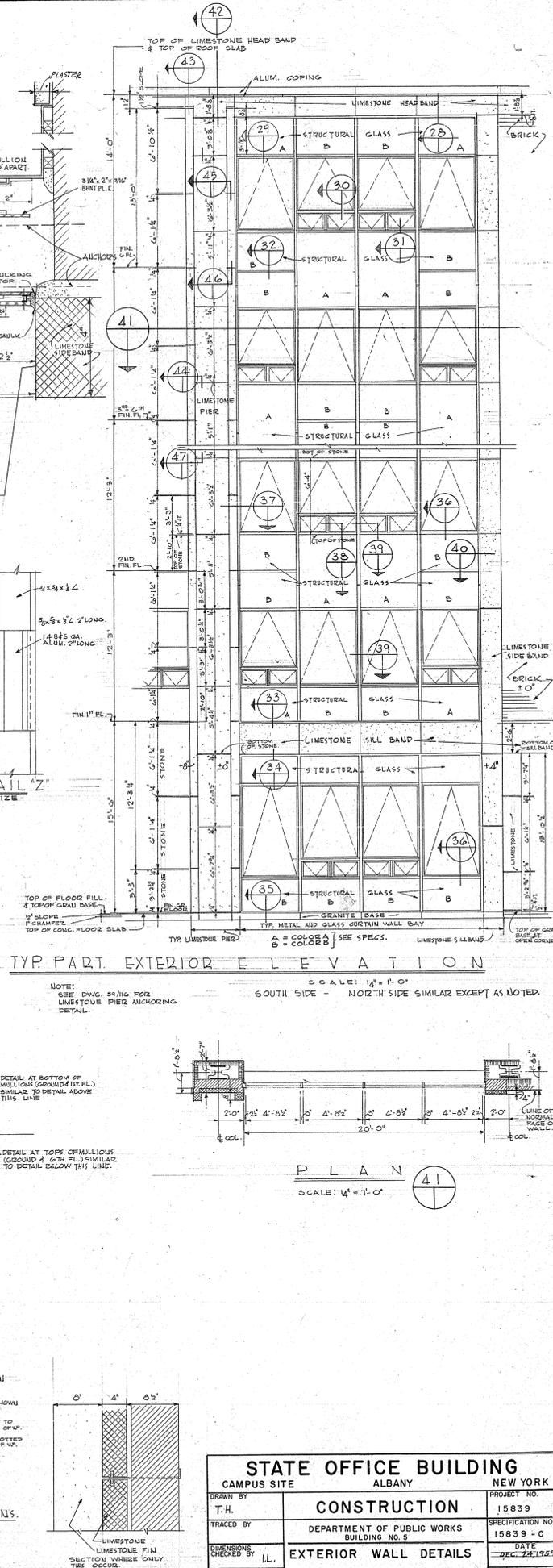
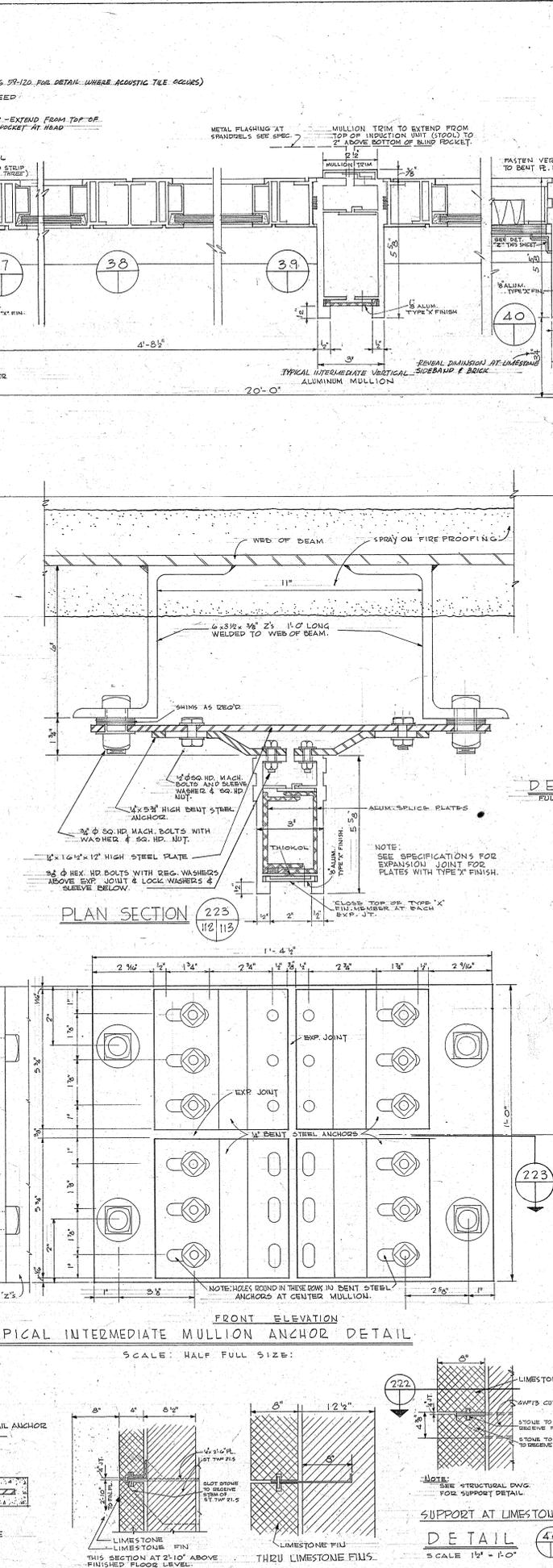
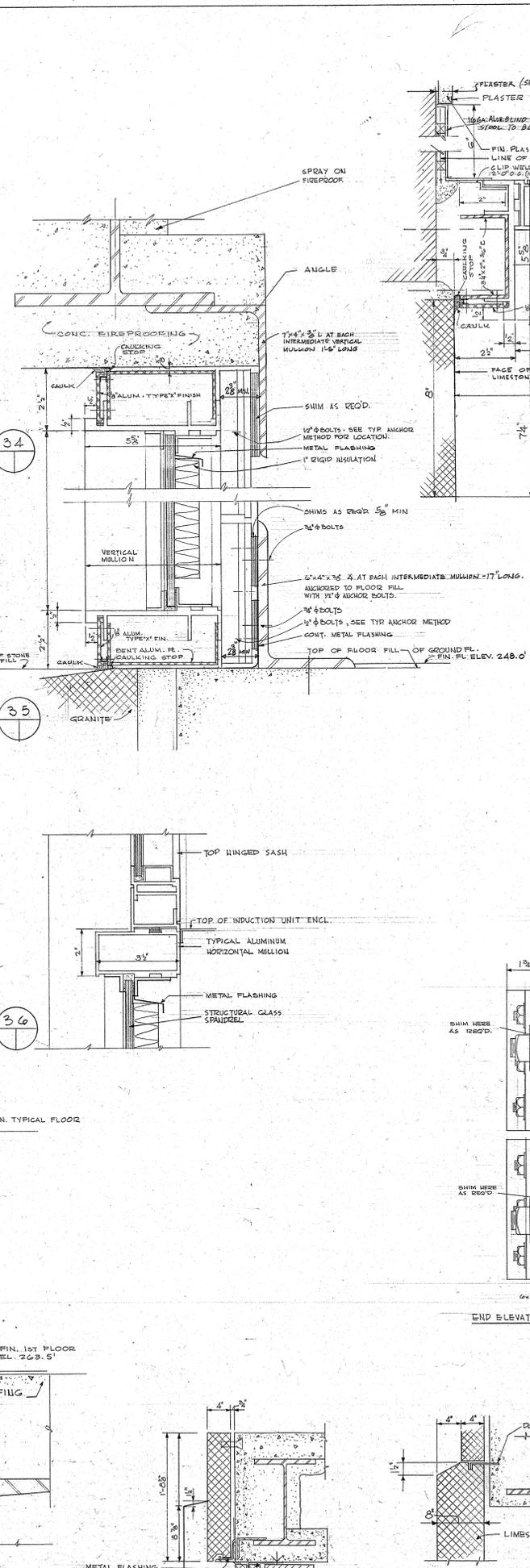
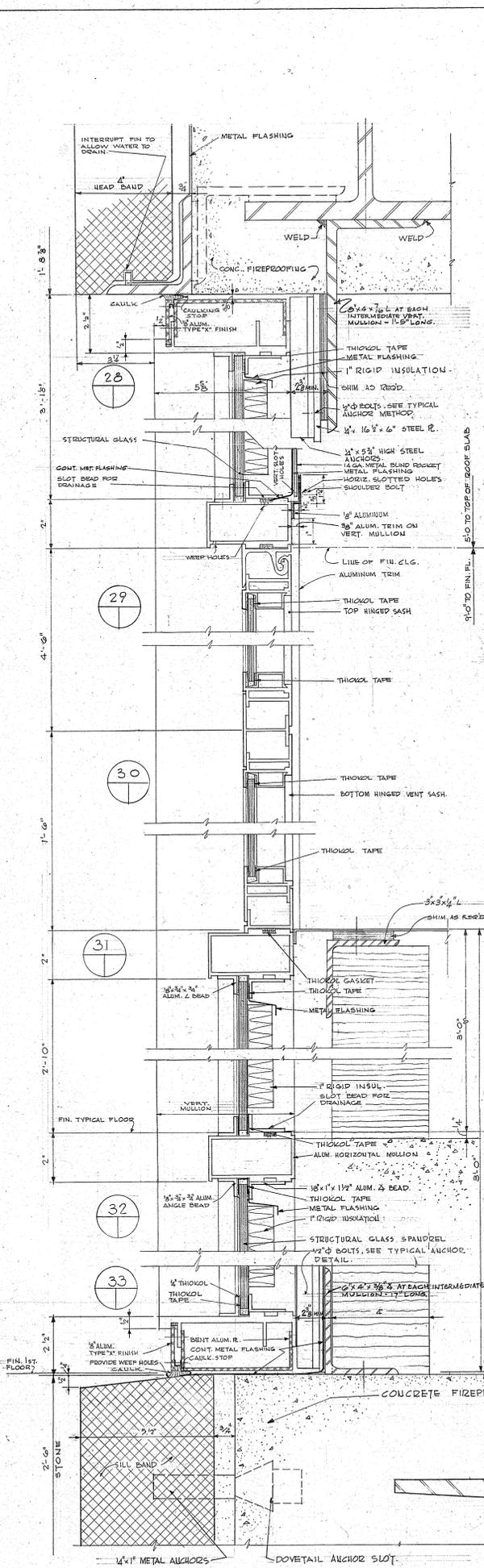
6. Total lamped length shall equal total continuous length minus 12 inches maximum. Six inch maximum non-lamped end lengths. Un-lamped end lengths shall be of equal dimension.

- I. Dimmed Fluorescent Lamps: In accordance with NEMA recommendations, lamps must be operated at full output for a minimum of 12 hours prior to dimming.

- J. Relamping, Cleaning and Adjusting:
 1. Replace failed lamps immediately prior to occupancy.
 2. Replace audible ballasts prior to occupancy.
 3. Clean lenses, reflectors and louvers of fingerprints, paint splatters, dirt and debris in accordance with manufacturer's instructions. Do not scratch or damage finish.
 4. Touch up damages to painted finishes.

- K. Special Protection: Wherever fixtures are provided with protective covers suitable for use after installation, leave such covers in place throughout construction period, and remove immediately prior to occupancy.

END OF SECTION



STATE OFFICE BUILDING		
CAMPUS SITE	ALBANY	NEW YORK
DRAWN BY	T.H.	PROJECT NO. 15839
TRACED BY	J.L.	SPECIFICATION NO. 15839 - C
DIMENSIONS CHECKED BY	J.L.	DATE DEC. 24, 1959
STRUCTURAL CHECKED BY	J.L.	SCALE AS NOTED
FIELD CHECK BY	J.L.	DRAWING NO. 59
APPROVED BY	J.L.	STATE OF NEW YORK DEPARTMENT OF PUBLIC WORKS DIVISION OF ARCHITECTURE
APPROVED	J.L.	CARL W. LARSON STATE ARCHITECT
APPROVED	J.L.	APPROVED BOULGASS, C. COOPER, COMMISSIONER, DIV. OF STANDARDS & PURCHASE
DATE	MARCH 3, 1960	LETTER NO. 2147

SCANNED 2005

SECTION 033000

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

- A. Concrete Formwork: Section 031100.
- B. Steel Concrete Reinforcement: Section 032100.

1.02 REFERENCES

- A. Except as shown or specified otherwise, the Work of this Section shall conform to the requirements of American Concrete Institute (ACI) and American Society for Testing and Materials (ASTM) documents.
 - 1. ACI 301-99: Specification for Structural Concrete for Buildings.
 - 2. ACI 302.1R-96: Guide for Concrete Floor and Slab Construction.
 - 3. ACI 302.2R-06: Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
 - 4. ACI 304.2R-96: Placing Concrete by Pumping Methods.
 - 5. ACI 305R-99: Hot Weather Concreting.
 - 6. ACI 306R-88: Cold Weather Concreting (Re-approved 1997).
 - 7. ACI 308.1-98: Standard Specification for Curing Concrete.
 - 8. ACI 318 Building Code Requirements for Reinforced Concrete.
 - 9. ASTM C 94/C 94M - 04: Standard Specification for Ready-Mixed Concrete.
 - 10. ASTM C 494/C 494M - 04: Standard Specification for Chemical Admixtures for Concrete.
 - 11. ASTM F 710- 08: Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

1.03 DEFINITIONS

- A. ACI 301, Section 1.2 - Definitions:
 - 1. Add the following definitions:
 - Cementitious Material: Cementitious materials include cement, ground blast furnace slag and fly ash.
 - Corrosion Inhibitor Admixture: A liquid admixture, calcium nitrite that inhibits corrosion of concrete-embedded steel in the presence of chloride ions.
 - Pumped Concrete: Concrete that is conveyed by pumping pressure through rigid pipe or flexible hose.
 - Water-to-Cementitious Ratio (w/c): An equational value representing quantity in pounds of free moisture available for cement hydration divided by quantity of cementitious materials in pounds per cubic yard concrete.

1.04 SUBMITTALS

- A. Submittals Package: Submit product data for design mix(es) and materials for concrete specified below at the same time as a package.

- B. Product Data:
 - 1. Mix Design: Submit proposed concrete design mix(es) together with name and location of batching plant at least 28 days prior to the start of concrete work.
 - a. Include test results of proposed concrete proportions based on previous field experience or laboratory trial batches in accordance with ACI 301, Section 4.
 - b. Pumped Concrete: Include test results of proposed design mix(es) tested under actual field conditions with the maximum horizontal run and vertical lift required for this project.
 - 2. Portland Cement: Brand and manufacturer's name.
 - 3. Fly Ash: Name and location of source, and DOT test numbers.
 - 4. Air-entraining Admixture: Brand and manufacturer's name.
 - 5. Water-reducing Admixture: Brand and manufacturer's name.
 - 6. High Range Water-reducing Admixture (Superplasticizer): Brand and manufacturer's name.
 - 7. Accelerating Admixture: Brand and manufacturer's name.
 - 8. Aggregates: Name and location of source, and DOT test numbers.
 - 9. Chemical Hardener (Dustproofing): Brand and manufacturer's name, and application instructions.
 - 10. Chemical Curing and Anti-Spalling Compound: Brand and manufacturer's name, and application instructions.
 - 11. Bonding Agent (Adhesive): Brand and manufacturer's name, and preparation and application instructions.
 - 12. Waterstop: Brand and manufacturer's name, and installation instructions.

- C. Quality Control Submittals:
 - 1. Batching Plant Records: At the end of each day of placing concrete, furnish the Director's Representative with a legible copy of all batch records for the concrete placed.
 - 2. Concrete Pumping Equipment Data: Include manufacturer's name and model of principal components, type of pump, and type and diameter of pipe/hose.
 - 3. Minutes of the previous pre-installation conference.

1.05 QUALITY ASSURANCE

- A. Qualifications of Crew Pumping Concrete: Workers pumping concrete shall have had at least one year of experience pumping concrete.

- B. Concrete batching plants shall be currently approved as concrete suppliers by the New York State Department of Transportation.

- C. Truck mixers for concrete shall be currently approved by the New York State Department of Transportation.
- D. Pumping equipment for pumped concrete shall be subject to the approval of the Director.
- E. Fly ash supplier shall be on the New York State Department of Transportation's current "Approved List of Suppliers of Fly Ash".
- F. Source Quality Control: The Director reserves the right to inspect and approve the following items, at his own discretion, either with his own forces or with a designated inspection agency:
 - 1. Batching and mixing facilities and equipment.
 - 2. Sources of materials.
- G. ACI 301, Section 1.3 Reference standards and cited publications:
 - 1. Add the following to the list of ASTM Standards:
 - C 311-77 Standard Methods of Sampling and Testing Fly Ash or Natural Pozzolans For Use As A Mineral Admixture in Portland Cement Concrete.
- H. Pre-Construction Conference: A minimum of 14 days prior to the initial submission of shop drawings, a conference will be held by the Director's Representative at the Site for the purpose of reviewing the Contract Documents, and discussing the requirements and procedures for submittals and for the Work. The conference shall be attended by the Contractor, the concrete supplier representative, and the reinforcement fabricator's project coordinator.
 - 1. If resilient flooring is to be placed on slab-on-grade, the meeting will also include discussion of curing procedures and moisture mitigation measures.

1.06 DELIVERY

- A. ASTM C 94/C 94M - 04, Article 13.1 - Batch Ticket Information: In addition to the information required by Paragraph 16.1, also include the following:
 - 1. Type and brand, and amount of cement.
 - 2. Weights of fine and coarse aggregates.
 - 3. Class and brand, and amount of fly ash (if any).

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cement: ASTM C 150, Type I or II Portland cement.
- B. Water: Potable
- C. Air-entraining Admixture: ASTM C 260, and on the New York State Department of Transportation's current "Approved List".

- D. Water-reducing Admixture: ASTM C 494/C 494M - 04, Type A, and on the New York State Department of Transportation's current "Approved List".
- E. High Range Water-reducing Admixture (Superplasticizer): ASTM C 494/C 494M - 04, Type F, and on the New York State Department of Transportation's current "Approved List".
- F. Retarding Admixture: ASTM C 494, Type D, Water-reducing and retarding, for use in hot weather concreting, and on the New York State Department of Transportation's current "Approved List".
- G. Accelerating Admixture: Non-corrosive admixture, containing no chloride, complying with ASTM C 494, Type C or E, and on the New York State Department of Transportation's current "Approved List".
- H. Fly Ash: ASTM C 618, including Table 1 (except for footnote A), Class F except that loss on ignition shall not exceed 4.0 percent.
- I. ACI 301, Section 4.2.1.2 - Aggregates:
1. Add the following paragraph:
 - Fine aggregate for pumped concrete shall meet the requirements of ASTM C 33, except 15 to 30 percent shall pass the No. 50 sieve and 5 to 10 percent shall pass the No. 100 sieve. The fineness modulus of the fine aggregate for pumped concrete shall not vary more than 0.20 from the average value used in proportioning.
 2. Change paragraph 7.2.1 to read as follows:
 - Aggregates for lightweight concrete shall meet the requirements of ASTM C 330, except that fine aggregate for lightweight concrete shall meet the requirements of ASTM C 33.
 3. Add the following paragraph:
 - Aggregates shall be taken from storage silos or other approved locations that have been tested and approved by the New York State Department of Transportation, unless otherwise approved in writing by the Director.
- J. Moisture-Retaining Cover: Waterproof paper, or polyethylene film.
- K. Chemical Curing and Anti-Spalling Compound: ASTM C-309, Type 1D, Class B, with a minimum 18 percent total solids content. No thinning of material allowed.
1. SureCure Emulsion, Kaufman Products, Inc. 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372.
 2. Cure & Seal by Symons Corp., 200 East Touhy Ave., PO Box 5018, Des Plaines, IL 60017-5018, (847) 298-3200.
 3. Kure-N-Seal by Sonneborn/ BASF Building Systems, 889 Valley Park Dr., Shakopee, MN 55379, (800) 433-9517.

4. Day-Chem Cure & Seal UV 26 percent (J-22 UV) by Dayton Superior Corp., 721 Richard St., Miamisburg, OH 45342, (800) 745-3700.
 5. Acrylseal HS by Master Builders/ BASF Building Systems, 23700 Chagrin Blvd., Cleveland, OH 44122, (800) 628-9990.
- L. Chemical Hardener (Dustproofing): Colorless aqueous solution of magnesium-zinc fluosilicate.
1. Lapidolith by Sonneborn/ BASF Building Systems, 889 Valley Park Dr., Shakopee, MN 55379, (800) 433-9517.
 2. Surfhard by The Euclid Chemical Co., 19218 Redwood Rd., Cleveland, OH 44110, (216) 531-9222.
 3. Pena-Lith by W.R. Meadows, Inc., PO Box 543, Elgin, IL 60121, (847) 683-4500.
 4. FluoHard by L & M Construction Chemicals, Inc., 14851 Calhoun Rd., Omaha, NE 68152, (402) 453-6600.
 5. Armortop by Anti Hydro International, Inc., 265 Badger Ave., Newark, NJ 07108, (800) 777-1773.
 6. Diamond by Kaufman Products , Inc., 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372.
- M. Epoxy Bonding Agent (Adhesive): 100 percent solids epoxy-resin-base bonding compound, complying with ASTM C 881, Types I, II, IV and V, Grade 2 (horizontal areas) or Grade 3 (overhead/vertical areas), and Class B (40-60 degrees Fahrenheit) or Class C (60 degree Fahrenheit and above).
1. SurePoxy HM Series by Kaufman Products, Inc., 3811 Curtis Avenue, Baltimore, MD 21226, (800) 637-6372.
 2. Sikadur Hi-Mod 32 by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, (800) 933-7452.
 3. Epogrip by Sonneborn/-BASF Building Systems, 889 Valley Park Drive, Shakopee, MN 55379, (800) 433-9517.
- N. Waterstop: Extruded from virgin polyvinyl chloride plastic compound containing no scrap or reclaimed material or pigment.
1. Size: Minimum 6 inches wide by 3/8 inch thick, unless otherwise indicated.
 2. Minimum Tensile Strength (ASTM D 412): 2000 psi.
 3. Minimum Ultimate Elongation (ASTM D 412): 350 percent.
 4. Shore A/10 Durometer Hardness (ASTM D 2240): Minimum 65; Maximum 83.
 5. Maximum 24 Hour Water Absorption (ASTM D 570): 0.15.
- O. Waterstop: Water swelling sealant; minimum 3/4 inch wide by 3/8 inch thick, unless otherwise indicated; minimum tensile strength (ASTM D 412) 100 psi minimum ultimate elongation (ASTM D 412) 500 percent.
1. MC-2010M by Adeka Ultra Seal Corporation, PO Box 459, Spearfish, SD 57783, (605) 642-3959.
 2. Volclay Waterstop RX-101 by Colloid Environmental Technologies Company, Building Materials Division, 1350 W. Shure Drive, Arlington Heights, IL 60004, (708) 392-5800.

2.02 PROPORTIONING OF MIXES

- A. Cast-in-place concrete shall be air-entrained normal weight concrete except where lightweight concrete is indicated on the drawings.
 - 1. Normal weight concrete, except as otherwise specified, shall have a minimum compressive strength of 4000 psi, with a minimum of 611 pounds of cement per cubic yard. Slump: Maximum 4 inches; minimum 2 inches before the addition of any water-reducing admixtures or high-range water-reducing admixtures (superplasticizers) at the Site.
 - 2. Normal weight concrete for garage floors, and for exterior slabs, ramps and stairs shall have a minimum compressive strength of 4000 psi, with a minimum of 611 pounds of cement per cubic yard. Slump: Maximum 3 inches; minimum 2 inches before the addition of any water-reducing admixtures or high-range water-reducing admixtures (superplasticizers) at the Site.
 - 3. Optional Material: Fly ash may be substituted for (Portland) cement in normal weight and lightweight concrete up to a maximum of 15 percent by weight of the required minimum (Portland) cement. If fly ash is incorporated in a concrete design mix, make necessary adjustments to the design mix to compensate for the use of fly ash as a partial replacement for (Portland) cement.
 - a. Adjustments shall include the required increase in air-entraining admixture to provide the specified air content.
 - b. Lower early strength of the concrete shall be considered in deciding when to remove formwork.

- B. Lightweight concrete shall be air-entrained concrete having a minimum compressive strength of 4000 psi and an air-dry unit weight between 95 and 115 lb/cu ft, with a minimum of 611 pounds of cement per cu yd. Lightweight concrete shall be made with normal fine aggregate; lightweight fine aggregate shall not be used. Slump: Maximum 4 inches; minimum 1 inch before the addition of any water-reducing admixtures or high-range water-reducing admixtures (superplasticizers) at the Site.

- C. Slump for Pumped Concrete: When a water-reducing admixture is not used, maximum slump shall be 4 inches. When a water-reducing admixture is used, maximum slump shall be 6 inches and when a high-range water-reducing admixture (superplasticizers) is used, maximum slump shall be 8 inches.

- D. Design Air Content: Design air content for concrete shall be 6 percent by volume, with an allowable tolerance of plus or minus 1.5 percent for total air content, except as otherwise specified. Use air-entraining admixture, not air-entrained cement.

- E. Water-Cement Ratio: Cast-in-place concrete shall have a maximum water-cement ratio of 0.40.

- F. ACI 301, Section 4.2.2.3: Change article to read as follows:
 - 4.2.2.3 - Size of Coarse Aggregates:
 - 4.2.2.3.a Normal Weight Concrete: Coarse aggregates shall conform to gradation requirements for various sizes as

tabulated in Table No. 2 of ASTM C 33. The sizes of coarse aggregates for various classes of Work shall be as follows with all percentages being determined by weight.

- 4.2.2.3.b For concrete floors, floor and roof slabs, reinforced beams and girders, columns and piles, concrete encasing underground electric conduits, and concrete in which the space between restricting objects is 2 inches or less, the coarse aggregate shall be Size No. 67.
- 4.2.2.3.c For other concrete Work having a minimum cross-sectional dimension of not more than 6 inches, the coarse aggregate shall be a well graded mixture of No. 67 and No. 57, provided that not more than 50 percent nor less than 30 percent shall be Size No. 67 and not more than 70 percent nor less than 50 percent shall be Size No. 57.
- 4.2.2.3.d For other concrete Work having a minimum cross-sectional dimension greater than 6 inches and not more than 12 inches, the coarse aggregate shall consist of a mixture of No. 67, No. 57 and No. 467, providing that not more than 25 percent nor less than 10 percent shall be Size No. 67 and not more than 40 percent shall be Size No. 467.
- 4.2.2.3.e For other concrete Work having a minimum cross-sectional dimension of more than 12 inches, the coarse aggregate shall consist of a mixture of No. 67, No. 57 and No. 357, providing not more than 25 percent nor less than 10 percent shall be Size No. 67 and not more than 40 percent shall be Size No. 357.
- 4.2.2.3.f Lightweight Concrete: Lightweight aggregates shall be graded from 3/4 inch to No. 4 sieve size in conformance with Table No. 1 of ASTM C 330.

G. Admixtures: Do not use admixtures in concrete unless specified or approved in writing by the Director.

H. ACI 301, Section 4.1.2.1 - Mixture Proportions:

1. Add the following to paragraph 4.1.2.1:
 - Proposed design mix(es) for pumped concrete and the pumping equipment shall have been tested under actual field conditions with the maximum horizontal run and vertical lift required for this project.

I. Application Rate for Integral Water Repellent Admixture:

1. Hydrocide Powder, 1 lb. for each 94 lb. of cement
2. Darapel, 3 to 6 oz. for each 100 lb. of cement.

2.03 JOINTS

A. ACI 301, Section 5.3.2.6 - Construction joints and other bonded joints:

1. Delete the following subparagraphs:

- Use an acceptable adhesive applied in accordance with the manufacturer's recommendations;
 - Use an acceptable surface retarder in accordance with manufacturer's recommendations;
 - Roughen the surface in an acceptable manner that exposes the aggregate uniformly and does not leave laitance, loosened particles of aggregate, or damaged concrete at the surface; or
 - Use Portland-cement grout of the same proportions as the mortar in the concrete in an acceptable manner.
2. Add the following in place of the above subparagraph:
- The use of bonding agent (adhesive).
 - The use of cement grout.
- B. ACI 301, Section 10.2.5 – Isolation-joint filler materials:
1. Add the following paragraphs:
- Except as otherwise shown on the Drawings, expansion joints shall be as follows:
 - In joints required to receive a sealant, the joint filler shall be 1/2 inch thick and recessed as required to form a caulking slot.
 - In joints not required to receive a sealant, the joint filler shall be 1/2 inch thick and extend through the full cross-section of the concrete.
 - Tool edges of concrete with 1/8 inch radius edging tool.

2.04 PRODUCTION OF CONCRETE

- A. Provide ready-mixed concrete, either central-mixed or truck-mixed, unless otherwise approved in writing by the Director.
- B. ACI 301, Section 7 - Lightweight Concrete:
1. Add the following paragraph:
- Lightweight coarse aggregate shall be presoaked with water a minimum of 24 hours prior to use in a concrete mix to be pumped. Presoaking may be accomplished by suitable sprinkling.
- C. ACI 301, Section 5.3.2.1 Weather considerations
1. Delete paragraph under 5.3.2.1.c - Hot Weather, and add the following:
- 5.3.2.1.c Provide adequate controls to insure that the temperature of the concrete when placed does not exceed 90 degrees F., and make every effort to place it at a lower temperature. The temperature of the concrete as placed shall not be so high as to cause difficulty from loss of slump, flash set or cold joints. Ingredients may be cooled before mixing by shading the aggregates, fog spraying the coarse aggregate, chilling the mixing water or other approved means. Mixing water may be chilled with flake ice or well-crushed ice of a size that will melt

completely during mixing, providing the water equivalent of the ice is calculated into the total amount of mixing water.

- D. Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placement and curing.
 - 1. In cold weather, comply with ACI 306R.
 - a. When air temperature is below 40 degrees F (4 degrees C) heat the mixing water and, if necessary, the aggregates to obtain a concrete mixture temperature of not less than 50 degrees F (10 degrees C) and not more than 80 degrees F (27 degrees C) at point of placement. If the mixing water is heated, do not exceed a temperature of 140 degrees F at the time it is added to the cement and aggregates.
 - 2. In hot weather, comply with ACI 305R.
 - a. When air temperature is between 85 degrees F (30 degrees C) and 90 degrees F (32 degrees C), reduce mixing and delivery time from 1 1/2 hours to 75 minutes, and when air temperature is above 90 degrees F (32 degrees C), reduce mixing and delivery time to 60 minutes.

PART 3 EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Do not use items of aluminum for mixing, chuting, conveying, forming or finishing concrete, except magnesium alloy tools may be used for finishing.
- B. Check items of aluminum required to be embedded in the concrete and insure that they are coated, painted or otherwise isolated in an approved manner.
- C. Install waterstops in accordance with manufacturer's printed instructions.
- D. Hardened concrete, reinforcement, forms, and earth which will be in contact with fresh concrete shall be free from frost at the time of concrete placement.
- E. Do not deposit concrete in water. Keep excavations free of water by pumping or by other approved methods.
- F. Prior to placement of concrete, remove all hardened concrete spillage and foreign materials from the space to be occupied by the concrete.
- G. Prior to placement of a concrete slab-on-grade, insure roof is watertight and install polyethylene or other preventative measures to mitigate exposure to external moisture sources such as rainwater; runoff from adjacent slopes; landscaping water; water from curing; or wet grinding, sawing, and cleaning.
- H. Place vapor barrier directly under concrete slab-on-grade with no cushion or blotter layer.

3.02 ADMIXTURE ADDITIONS AT THE SITE

- A. Site additions shall be limited to high-range water-reducers, non-chloride accelerators, and corrosion inhibitors. Comply with manufacturers' printed instructions for discharge of admixtures shall be furnished.
- B. High-Range Water-Reducers:
 - 1. Concrete shall arrive at a slump of 2 to 4 inches (50 to 100 mm). Water additions at the Site shall be limited to comply with water-to-cementitious ratio requirements.
 - 2. Following addition of high-range water-reduced concrete, a minimum of 70 revolutions or 5 minutes of mixing shall be completed to assure a consistent mixture.
- C. All concrete with other admixture additions shall mix a minimum of 70 revolutions or 5 minutes to assure a consistent mixture.

3.03 PLACING

- A. ACI 301, Section 5.3.2.3 Conveying equipment:
 - 1. Add the following paragraphs:
 - 5.3.2.3.d When pumping concrete, the lubricating mortar for the delivery line shall not be discharged into an area of concrete placement.
 - 5.3.2.3.e The inside diameter of the delivery lines for pumped concrete shall be the greater of either a minimum of 5 inches or 3 times the maximum size of coarse aggregate.
- B. ACI 301, Section 5.3.2.2 - Conveying:
 - 1. Add the following paragraph:
 - Operation of truck mixers and agitators and discharge limitations shall conform to the requirements of ASTM C 94.
- C. ACI 301, Section 5.3.2.4 - Depositing:
 - 1. Add the following paragraph:
 - Do not allow concrete to free fall more than 4 feet.

3.04 REPAIRING SURFACE DEFECTS

- A. ACI 301, Section 5.3.7 – Repair of surface defects:
 - 1. Add the following paragraph:
 - 5.3.7.1.a Finish patched areas to match the texture of the surrounding surface.
- B. ACI 301, Section 5.3.7.2 - Repair of tie holes:
 - 1. Delete last paragraph in 5.3.7.2 and replace with the following:
 - The patch mixture shall consist of a mixture of dry-pack mortar, consisting of one part Portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water

as required for placing and handling. For surfaces exposed to view, blend white Portland cement and standard Portland cement so that, when dry, patching mortar will match surrounding color. Provide test areas at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.

3.05 FINISHING FORMED SURFACES

- A. Finish Schedule: Except where indicated otherwise on the Drawings, provide the finishes below:
 - 1. Rough Form Finish for concrete surfaces not exposed to view.
 - 2. Smooth Form Finish for concrete surfaces exposed to view.
 - 3. Smooth Rubbed Finish for exterior concrete surfaces exposed to view.
 - 4. Grout Cleaned Finish for interior concrete surfaces exposed to view.
- B. ACI 301, Section 5.3.3.3 - As-cast Finishes:
 - 1. Add the following to paragraph 5.3.3.3:
 - Fins shall be completely removed on surfaces to receive waterproofing.

3.06 SLABS

- A. Slabs On Grade: Provide key type joints unless otherwise shown. Tool exposed joints.
- B. ACI 301, Section 5.3.4 – Finishing unformed surfaces:
 - 1. Add the following paragraph to section 5.3.4.1 Placement:
 - Provide monolithic finishes on concrete floors and slabs without the addition of mortar or other filler material. Finish surfaces in true planes, true to line, with particular care taken during screeding to maintain an excess of concrete in front of the screed so as to prevent low spots. Screed and darby concrete to true planes while plastic and before free water rises to the surface. Do not perform finishing operations during the time free water (bleeding) is on the surface.
- C. Finish Schedule: Except where indicated otherwise on the Drawings, provide the finishes below:
 - 1. Floated Finish for:
 - a. Treads and platforms of exterior steps and stairs.
 - b. Slabs and fill over which waterproofing, roofing, vapor barrier, insulation, terrazzo, or resin bound flooring is required.
 - 2. Troweled Finish for:
 - a. Interior slabs that are to be exposed to view.
 - b. Slabs and fill over which resilient wood flooring, resilient tile or sheet flooring, carpet, or thin-film coating system is required.

- c. Slabs and fill over which thin-set ceramic tile is required, except fine-broom finished surface.
 - d. Treads and platforms of interior steps and stairs.
 3. Broom or Belt Finish for:
 - a. Exterior slabs. Texture as approved by the Director's Representative.
 4. Scratched Finish for:
 - a. Surfaces to be covered with ceramic tile set in a bonded thick mortar bed, except screed to a Class B tolerance.
 - b. Surfaces to be covered with floor topping.
 5. Integral Emery Aggregate Surfacing with Floated Finish for:
 - a. Interior pedestrian ramps.
- D. ACI 302 Chapter 8.2.8.2 - Tools for jointing; Saw-cutting.
 1. Add the following paragraph:
 - Early-entry dry-cut saws are preferred in place of conventional wet-cut saws.
- E. ACI 302 Chapter 8.3.12
 1. Add the following to Conventional wet-cut saw cutting:
 - Begin saw-cutting as soon as the saw will not dislodge the aggregate or ravel the edge of the saw-cut, but in no case longer than 12 hours after the slab is placed. Saw-cut a minimum of one quarter of the slab depth leaving a clean, sharp edge in the pattern shown on the Contract Documents. Provide sufficient personnel and equipment to complete saw-cutting operations within 18 hours after the slab is placed.
- F. Exposed surfaces with fibrous reinforcement: After curing of the concrete, remove any protruding fibers in a manner which will not harm the parent concrete.
- G. Floor flatness and levelness tolerances: For flatness and levelness tolerances of floor slabs refer to ACI 302 Chapter 8.15. Floor surface tolerances shall be 1/8 inch over a horizontal distance of 10 feet in any direction, unless otherwise specified by floor profile quality classifications in ACI 302..
 1. When flatness or levelness tolerances are not met then the floor shall be ground or scarified and repoured to meet specifications.

3.07 CURING AND PROTECTION

- A. Hot Weather Concreting: Comply with ACI 305R whenever the atmospheric temperature or the form surface temperature is at or above 90 degrees F., or climatic conditions of wind and/or low humidity will cause premature drying of the concrete.
- B. Curing Temperature: Maintain the temperature of the concrete at 50 degrees F. or above during the curing period. Keep the concrete temperature as uniform as

possible and protect from rapid atmospheric temperature changes. Avoid temperature changes in concrete which exceeds 5 degrees F. in any one hour and 50 degrees F. in any 24-hour period.

- C. Curing and Moisture Mitigation for Resilient Flooring:
1. Acceptable curing and drying conditions include a minimum ambient temperature of 70 degrees F and a maximum relative humidity of 50%.
 - a. Air movement at 15 mph.
 2. Do not cure slabs by adding water; ponding or wet burlap method.
 3. Do not use curing compounds or cure-and-seal materials unless such use is approved in writing by the adhesive and floor covering manufacturers. The curing product manufacturer's conformance to ASTM c 1315 is not a substitute for the adhesive and floor covering manufacturer's approval.
 4. Cure the slab by covering with waterproof paper, plastic sheets, or a combination of the two for 3 to 7 days.

3.08 CHEMICAL HARDENER (DUSTPROOFING)

- A. Apply chemical hardener to all troweled finished interior floors which are to be left exposed.
- B. Do not apply chemical hardener until concrete has cured the number of days recommended in manufacturer's instructions.
- C. Prepare surfaces and apply chemical hardener in accordance with manufacturer's printed instructions and recommendations.

3.09 FIELD QUALITY CONTROL

- A. ACI 301, Section 1.6.4.2 - Testing Services:
1. Add the following paragraph:
 - 1.6.4.2.e Strength Tests for Pumped Concrete: Prepare strength test specimens and make strength tests from concrete samples obtained at the truck discharge chute and at the end of the pump delivery line in accordance with paragraph 16.3.4.4.
- B. ACI 301, Section 1.6.3.3 – Tests required of Contractor's testing agency:
1. Add the following paragraph:
 - 1.6.3.3.c Make available to the Director's Representatives whatever test samples are required to make tests. Furnish shipping boxes for compression test cylinders.
- C. Adjustment to Concrete Mixes: Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, at no additional cost to the State and as

accepted by the Director. Laboratory test data for revised mix design and strength results must be submitted to and accepted by the Director's Representative before using in the work.

- D. Test results will be reported in writing to the Director's Representative, Ready-Mix Producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.
- E. Nondestructive Testing: Impact hammer, Windsor probe, or other nondestructive device may be permitted but shall not be used as the sole basis for acceptance or rejection.
- F. Additional Tests: The State shall make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Director's Representative. The testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed. Pay for such tests when unacceptable concrete is verified, including all inspection and Engineering fees when non-conforming work is verified.
- G. Moisture Testing: Test all slabs-on-grade for moisture content that will receive resilient flooring. For a preferred moisture testing method and limits; consult the written instructions of the floor covering manufacturer, the adhesive manufacturer, the patching/underlayment manufacturer, or combination thereof. Test repeatedly until the desired moisture content is obtained.
- H. pH Testing: Test concrete floors for pH level prior to the installation of resilient flooring. Do not exceed the recommended pH level of the resilient flooring manufacturer or the adhesive manufacturer, or both.

END OF SECTION