CODE ANALYSIS

APPLICABLE CODES

International Building Code	2006	National Electrical Code	2006
International Mechanical Code	2006	Uniform Code for Building Conservation	
International Plumbing Code	2006	ADA Accessibility Guildelines	ICC/ANSI 117.1 2003
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: B

Change in Use: Yes ____ No ✓ Mixed Occupancy: Yes ____ No ✓

Special Use and Occupancy (e.g. High Rise, Covered Mall): ____

B. Seismic Design Category: I Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I A | I B | II A | (II B) | III A | III B | IV HT | V A | V B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: NA South: NA East: NA West: NA

E. Mixed Occupancies: ____ Nonseparated Uses: ____

F: Sprinklers:

Required: ✓ Provided: ✓ Type of Sprinkler System: Wet Pipe

G: Number of Stories: 2 Building Height: 48.5'

H: Actual Area per Floor (square feet): NEW: 6300SF ON MAIN AND 3600 SF IN BASEMENT

I: Tabular Area: UL - TABLE 503 - COVERED MALL BUILDING

J: Area Modifications: NA

a) $A_a = A_t + \left[\frac{A_t I_f}{100}\right] + \left[\frac{A_t I_s}{100}\right]$ $\quad I_f = 100\left[\frac{F}{P} - 0.25\right]\frac{W}{30}$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$ NA

c) Total Allowable Area for:

1) One Story: ____

2) Two Story: $A_a(2)$____

3) Three Story: $A_a(3)$____

d) Unlimited Area Building: Yes ✓ No ____ Code Section: 402

K. Fire Resistance Rating Requirements for Building Elements (hours).

Element	Hours	Assembly		Hours	Assembly
Exterior Bearing Walls	0	N/A	Floors - Ceiling/Floor	0	N/A
Interior Bearing Walls	0	N/A	Roofs - Ceiling/Roof	0	N/A
Exterior Non-Bearing Walls	0	N/A	Exterior Doors and Windows	0	N/A
Structural Frame	0	N/A	Shaft Enclosures	0	N/A
Partitions - Permanent	0	N/A	Fire Walls	0	N/A
Fire Barriers	Ø	N/A	Fire Partitions	0	N/A
			Smoke Partitions	0	N/A

L. Design Occupant Load, Floor 1: 36 (Egress Level)
Design Occupant Load, Floor 2: 388 (Egress Level)
Design Occupant Load, Floor 3: ____

Floor 1: Exit Width Required: 36x.15=5.4" > 30" Exit Width Provided: 36"
Floor 2: Exit Width Required: 388x.15=58.2" Exit Width Provided: 258"
Floor 3: Exit Width Required: ____ Exit Width Provided: ____

M. Minimum Number of Required Plumbing Facilities:

a) Water Closets - Required (m) 2 (f) 3 Provided (m) 3 (f) 3
b) Lavatories - Required (m) 1 (f) 1 Provided (m) 3 (f) 3
c) Bath Tubs or Showers: ___ Prov. ___
d) Drinking Fountains: 1 Prov. 2 Service Sinks: 1 Prov. 1

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through X - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.
2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
   a) High Rise Requirements.
   b) Atriums.
   c) Performance Based Criteria.
   d) Means or Egress Analysis.
   e) Fire Assembly Locator Sheet.
   f) Exterior and Interior Accessibility Route.
   g) Fire Stopping, Including Tested Design Number.

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ELECTRICAL:
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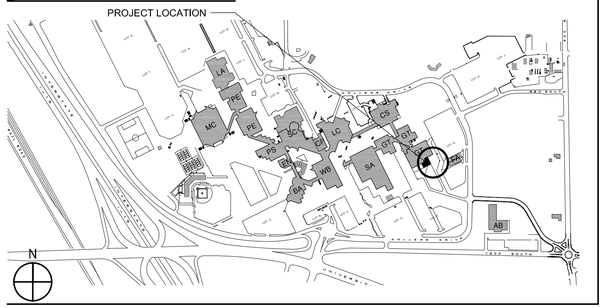
Salt Lake City, Utah 84111
phone (801)532-2196

ALTERNATES

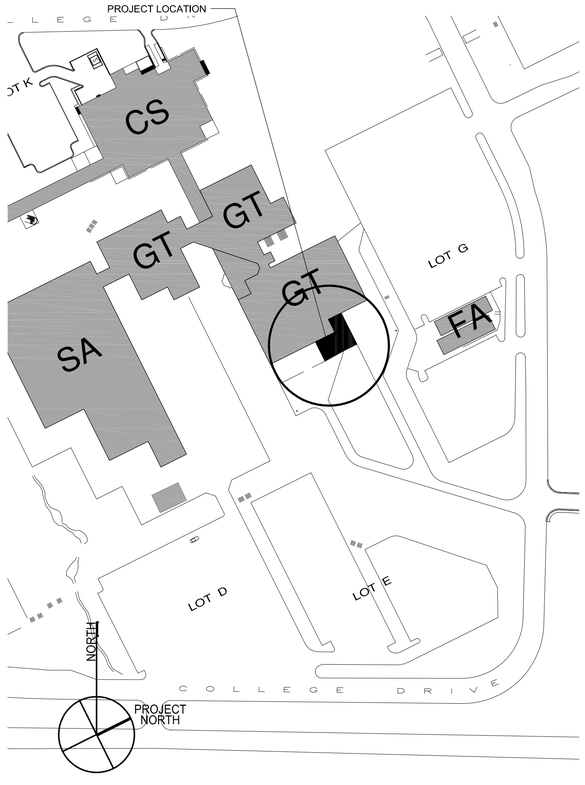
1 - WHITE BOX THEATER IMPROVEMENTS

2 - TERAZZO FLOORING @ LOBBY 105

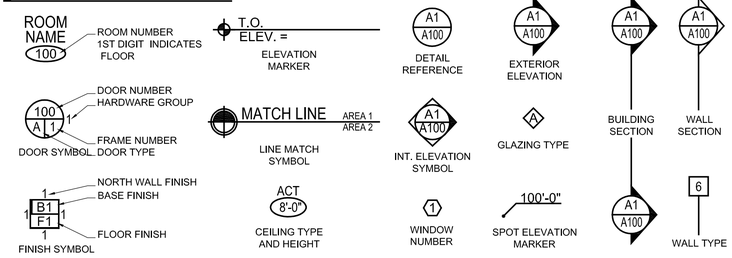
VICINITY MAP



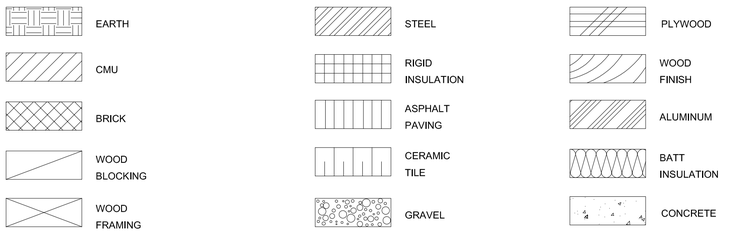
OVERALL SITE PLAN



SYMBOL LEGEND



GRAPHIC SYMBOLS



UTAH VALLEY UNIVERSITY BLACK BOX THEATER Orem, Utah

DATE 22, 2008

DFCM PROJECT # 08017790

UTAH VALLEY UNIVERSITY
ENGINEERING, FACILITIES PLANNING & CONSTRUCTION DEPARTMENT

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
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AD101 DEMOLITION FLOOR PLAN
AE001 SITE PLAN
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AE102 BALCONY FLOOR PLAN
AE111 REFLECTED CEILING PLAN
AE122 ROOF PLAN
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AE202 EXTERIOR ELEVATIONS
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QT403 ENL. UPPER LEVEL RIGGING PLAN
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QT502 THEATER EQUIPMENT DETAILS
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E3.0 POWER PLAN - BASEMENT LEVEL
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E4.1 ONE-LINE DIAGRAM
E4.2 PANEL SCHEDULES
E5.1 ELECTRICAL DIAGRAMS
E5.2 ELECTRICAL DIAGRAMS

NOTE: THE SHEETS LISTED ABOVE REPRESENT A FULL SET OF CONSTRUCTION DOCUMENTS AND INCLUDE A DETAIL BOOK AND A PROJECT MANUAL AND SHALL NOT BE SEPERATED. ANY CONTRACTOR, SUBCONTRACTOR, VENDOR OR ANY OTHER PERSON PARTICIPATING IN OR BIDDING ON THIS PROJECT SHALL BE RESPONSIBLE FOR REVIEWING ALL THE CONSTRUCTION DOCUMENTS INCLUDING BUT NOT LIMITED TO DRAWINGS, DETAILS, PROJECT MANUAL, SPECIFICATIONS AND ANY AND ALL ADDENDA ISSUED.

APPROVALS

Prime Agency ____ Date ____

DFCM ____ Date ____

____ Date ____

APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY

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Orem, UT

REVISION NUMBER AND DATE:

AXIS JOB #:	0804
OWNER JOB #:	
DATE:	July 21, 2008
DRAWN BY:	-
CHECKED BY:	-

GENERAL INFORMATION

GI101

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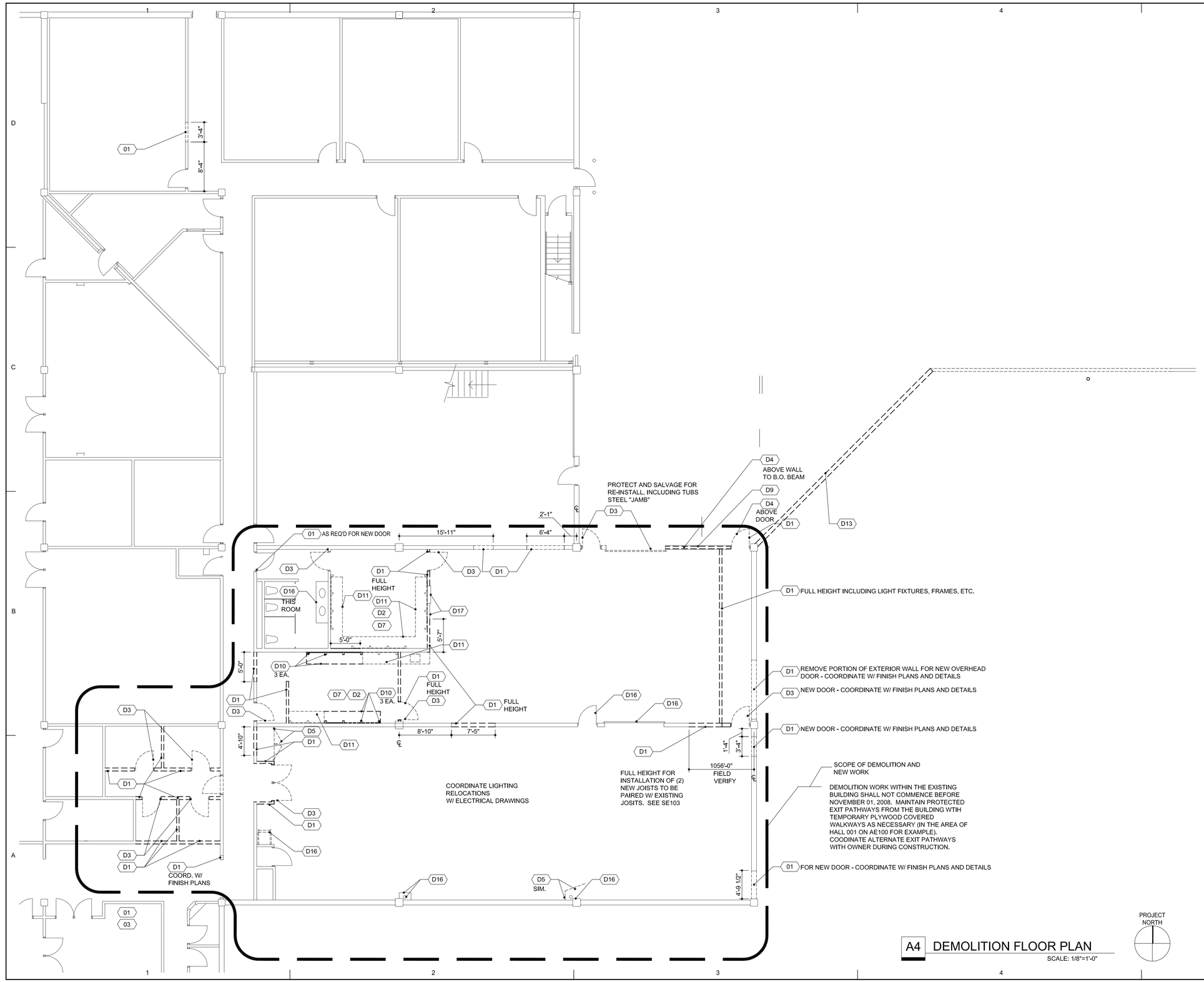

DEMOLITION KEYNOTES

REMOVE ITEMS SHOWN IN DASHED LINES

1 - DEMOLITION/EXISTING

- D1 REMOVE WALL
- D2 REMOVE CARPET
- D3 REMOVE DOOR AND FRAME - SALVAGE ALL TIMELY FRAMES FOR REUSE ON THIS PROJECT OR FOR SALVAGE TO OWNER
- D4 REMOVE WINDOW
- D5 REMOVE CABINET AND DOORS
- D6 REMOVE LIGHT FIXTURES
- D7 EXISTING CEILING TO REMAIN - PATCH AND FILL - SEE FINISH PLANS
- D8 REMOVER EXISTING ACCESS LADDER AND STORE FOR RE-INSTALLATION
- D9 EXISTING CONCRETE WALL TO REMAIN
- D10 REMOVE EXISTING MAKEUP COUNTER, MIRRIRS, LIGHTS, FOR RE-INSTALLATION IN NEW CHANGING ROOMS
- D11 REMOVE MILLWORK AND SALVAGE TO OWNER
- D12 REMOVE ASPHALT PAVING
- D13 REMOVE TOP PORTION OF RETAINING WALL AS REQ'D. TO BUILD NEW FOOTINGS, SLAB, ETC.
- D14 EXISTING CONC. COLUMN TO REMAIN
- D15 EXISTING CONC. BEAM TO REMAIN
- D16 EXISTING TO REMAIN
- D17 EXISTING WALL W/ ELECTRICAL PANEL TO REAMIN

DEMOLITION GENERAL NOTES

1. CONTRACTOR TO PROTECT EXISTING BLDG. DURING CONSTRUCTION INCLUDING CARPET AND OTHER FINISHES, DOORS AND FRAMES ETC.
2. AFTER DEMOLITION, PATCH MATERIALS TO MATCH EXISTING - TYP.
5. SALVAGE AND REINSTALL TOILET ACCESSORIES.
6. CONNECT ALL PLUMBING FIXTURES TO EXISTING LINES, EXTEND CONNECTIONS AS REQUIRED.

A4 DEMOLITION FLOOR PLAN

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

PROJECT NORTH

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DEMOLITION FLOOR PLAN

AD101

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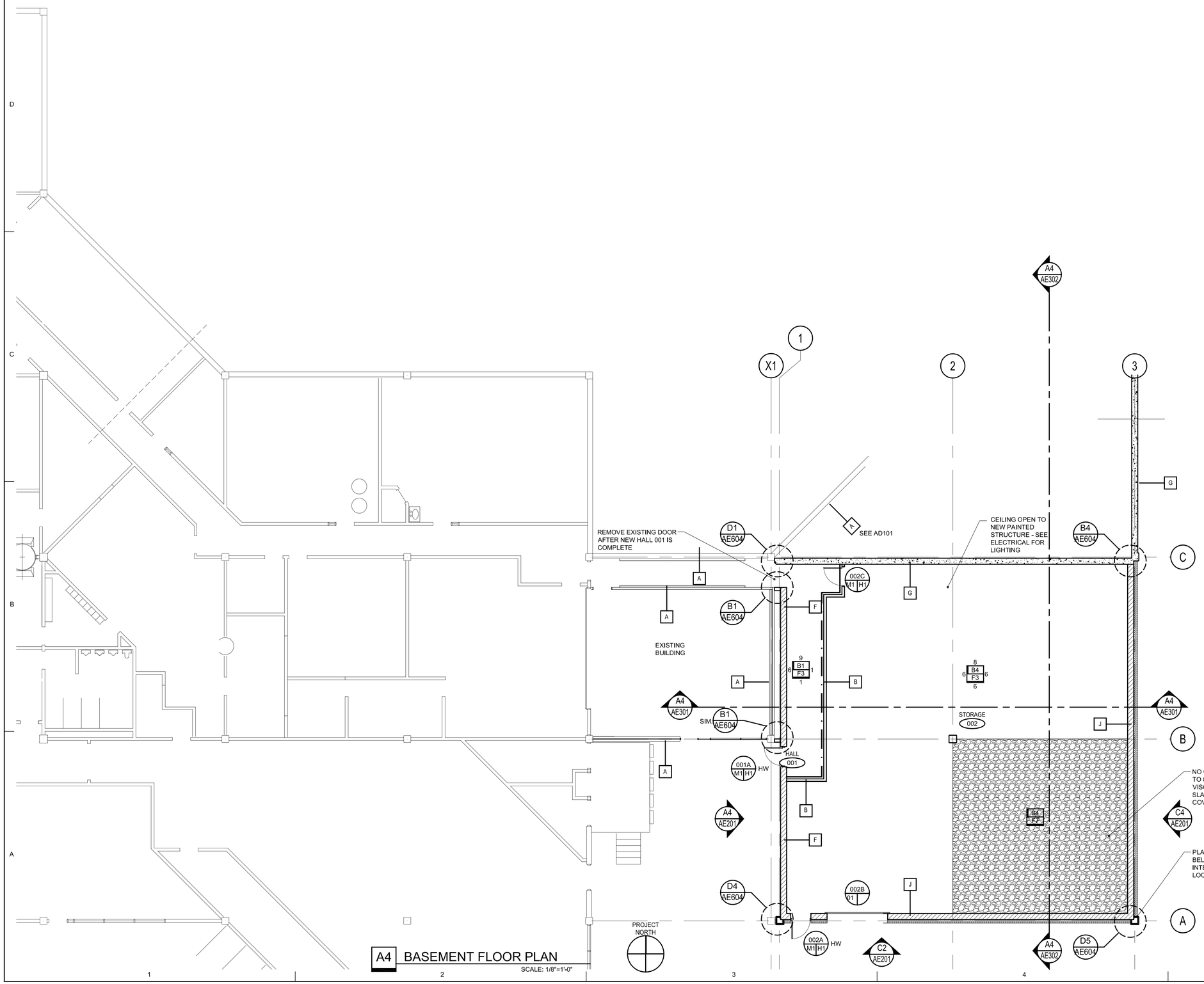

A4 BASEMENT FLOOR PLAN

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

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

FINISH LEGEND

WALL FINISH / BASE FINISH / FLOOR FINISH / WALL FINISH

WALL: 1 PAINTED GYP. BOARD - COLOR 1
2 PAINTED GYP. BOARD - COLOR 2
3 CERAMIC TILE - FULL HEIGHT
4 CMU - PAINTED MATTE BLACK
5 PAINTED GYP. BOARD - MATTE BLACK
6 CMU PAINTED COLOR 1
7 4' X 4' GLAZED CERAMIC TILE WAINSCOT TO 5'-0" W/ EPOXY PAINTED GYP. BD. ABOVE
8 ARCHITECTURAL CONCRETE
9 PAINTED CONCRETE - COLOR 1

FLOOR: F1 CARPET TILE - ALTERNATE #2 - TERAZZO FLOOR @ LOBBY 105
F2 VCT
F3 SEALED CONCRETE
F4 PORCELAIN TILE
F5 WALK-OFF MAT
F6 (2) LAYERS OF PLYWOOD OVER 2 x 4 SLEEPERS - PAINTED BLACK - SEE DETAIL
F7 GRAVEL BASE OVER CONT. VAPOR BARRIER - TAPE/SEAL @JOINTS AND EDGES

BASE: X EXISTING FLOOR SURFACE - CLEAN

B1 RUBBER BASE
B2 COVED CERAMIC TILE BASE
B3 SPECIAL FINISH - SEE INTERIOR ELEVATION
B4 NONE

1. MATERIALS IN SIMILAR LOCATIONS ARE NOT KEYNOTED AT EVERY OCCURRENCE.
2. PROVIDE CONCRETE MOISTURE SEALER ALL AREAS TO RECEIVE VCT, CAPRET, SHEET VINYL, WALK-OFF MAT AND/OR RUBBER FLOORING.
3. NO BASE AT STOREFRONT WALLS TYP.
4. SCHEDULED BASE TO BE PROVIDED AT ALL MILLWORK LOCATIONS, NEW AND EXISTING, INCLUDING ISLANDS.

WALL TYPES

- A — EXISTING WALL TO REMAIN
  INDICATES 1 HOUR FIRE RATED CONSTRUCTION
- B — METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD EA. SIDE TO ROOF DECK (SEE B2/AE603) UNLESS NOTED OTHERWISE, SOUND BATT INSUL. AND SCHED. FINISH - NUMBER INDICATES WALL THICKNESS IN INCHES - 3 5/8" STUDS WHERE NO NUMBER IS SHOWN. SEE A3/AE403 AT MEZZANINES.
- C — SAME AS TYPE "B" ABOVE, BUT WALL EXTENDS TO 6" ABOVE ADJACENT CEILING - BRACE TO STRUCTURE ABOVE. SEE B1/AE603
- CT — 3 5/8" METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD ON EXPOSED SIDE TO 16'-8" ABOVE FINISH FLOOR LEVEL. RETURN TO CMU WALL AT TOP AND SEAL TOP WITH GYP. BD. SOUND BATT INSULATION BETWEEN STUDS.
- D — EXTERIOR WALL
  6" (16 GA.) METAL STUDS @16" O.C. W/ R19 BATT INSUL. INT. TO BE PAINTED GYP. BOARD - EXT. TO BE GLASS MAT GYP SHEATHING, INFILTRATION BARRIER AND ATLAS BRICK VENEER.
- E — EXISTING WALL FURRED OUT W/ 5/8" GYP. BOARD OVER 7/8" HAT CHANNEL
- F — 12" CMU WALL - PAINT EA. SIDE
- G — CONCRETE RETAINING WALL - SEE STRUCTURAL - NO PAINT WHERE EXPOSED, ARCHITECTURAL FINISH WHERE EXPOSED.
- H — 12" ARCHITECTURAL CONCRETE WALL
- J — 12" CMU WALL, 2" EXTRUDED POLYSTYRENE RIGID INSULATION W/ 1" AIR GAP AND ATLAS BRICK VENEER

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BASEMENT FLOOR PLAN

AE100

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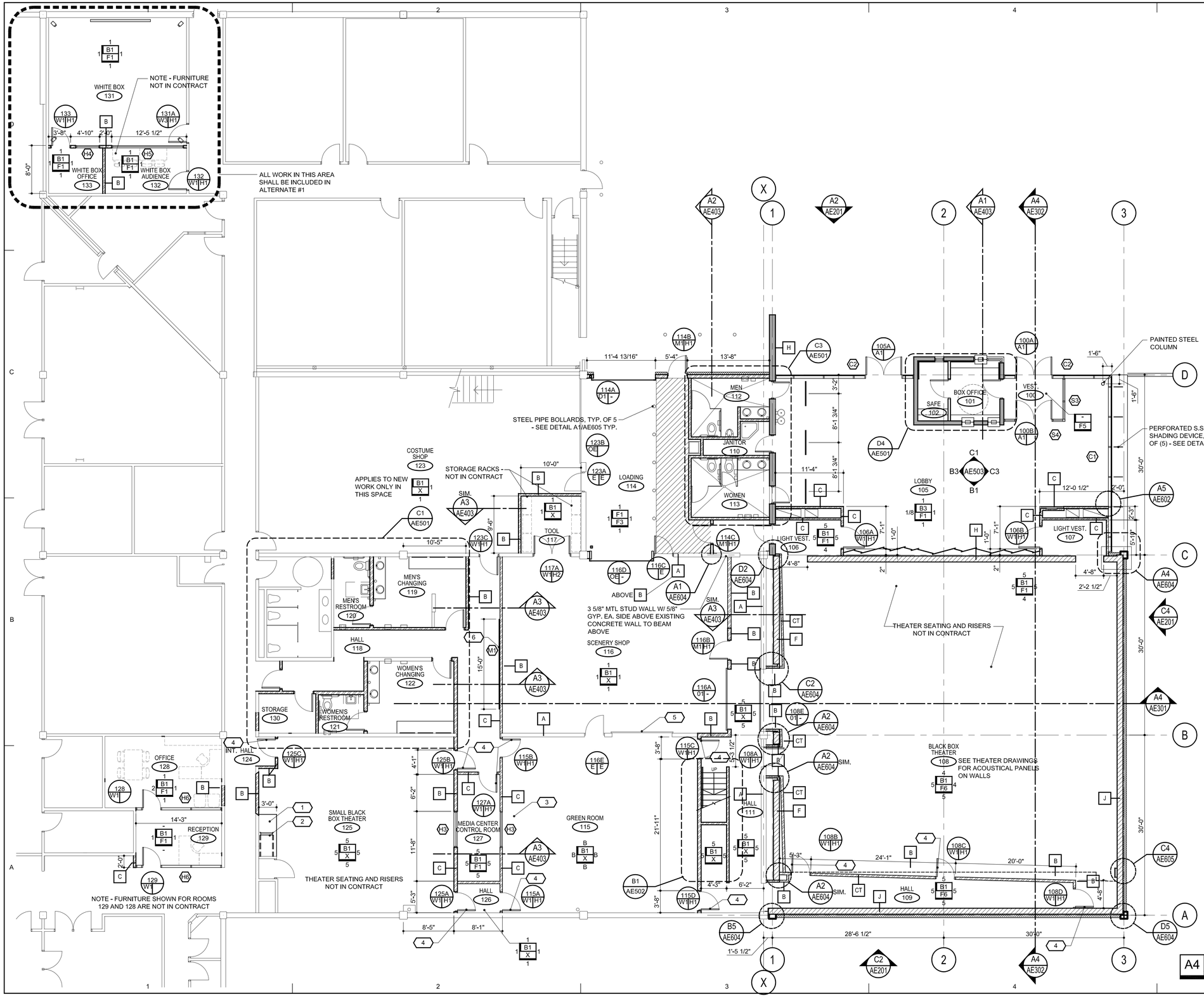

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FINISH LEGEND

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KEYNOTE LEGEND

PLAN 1A

1. NEW 6" HIGH CONCRRETE PLATFORM
2. RE-INSTALL SLAVAGED ACCESS LADDER - REDUCED SLOPE - ENSURE SECURE ATTACHMENT TO MATCH EXISTING FLOOR
3. FILL SLOPE TO ABANDONED MANHOLE AND DRAIN AND PAINT BLACK TO MATCH EXISTING FLOOR
4. PAINT BLACK
5. EXISTING OVERHEAD DOOR TO REMAIN
6. MIRROR - FULL HEIGHT, FROM 8" ABOVE FINISH FLOOR TO 7'-0" ABOVE FINISH FLOOR

A4 FLOOR PLAN — SCALE: 1/8"=1'-0"

PROJECT NORTH

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FLOOR PLAN

AE101

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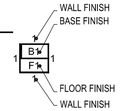
FINISH LEGEND



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9 PAINTED CONCRETE - COLOR 1

FLOOR:
F1 CARPET TILE - ALTERNATE #2 - TERAZZO FLOOR @ LOBBY 105
F2 VCT
F3 SEALED CONCRETE
F4 PORCELAIN TILE
F5 WALK-OFF MAT
F6 (2) LAYERS OF PLYWOOD OVER 2 x 4 SLEEPERS - PAINTED BLACK - SEE DETAIL
F7 GRAVEL BASE OVER CONT. VAPOR BARRIER - TAPE/SEAL @JOINTS AND EDGES

BASE:
X EXISTING FLOOR SURFACE - CLEAN

B1 RUBBER BASE
B2 COVED CERAMIC TILE BASE
B3 SPECIAL FINISH - SEE INTERIOR ELEVATION
B4 NONE

1. MATERIALS IN SIMILAR LOCATIONS ARE NOT KEYNOTED AT EVERY OCCURRENCE.
2. PROVIDE CONCRETE MOISTURE SEALER ALL AREAS TO RECEIVE VCT, CAPRET, SHEET VINYL, WALK-OFF MAT AND/OR RUBBER FLOORING.
3. NO BASE AT STOREFRONT WALLS TYP.
4. SCHEDULED BASE TO BE PROVIDED AT ALL MILLWORK LOCATIONS, NEW AND EXISTING, INCLUDING ISLANDS.

WALL TYPES

A — EXISTING WALL TO REMAIN

INDICATES 1 HOUR FIRE RATED CONSTRUCTION

B — METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD EA. SIDE TO ROOF DECK (SEE B2/AE603) UNLESS NOTED OTHERWISE, SOUND BATT INSUL. AND SCHED. FINISH - NUMBER INDICATES WALL THICKNESS IN INCHES - 3 5/8" STUDS WHERE NO NUMBER IS SHOWN. SEE A3/AE403 AT MEZZANINES.

C — SAME AS TYPE "B" ABOVE, BUT WALL EXTENDS TO 6" ABOVE ADJACENT CEILING - BRACE TO STRUCTURE ABOVE. SEE B1/AE603

CT — 3 5/8" METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD ON EXPOSED SIDE TO 16'-8" ABOVE FINISH FLOOR LEVEL. RETURN TO CMU WALL AT TOP AND SEAL TOP WITH GYP. BD. SOUND BATT INSULATION BETWEEN STUDS.

D — EXTERIOR WALL
6" (16 GA.) METAL STUDS @16" O.C. W/ R19 BATT INSUL. INT. TO BE PAINTED GYP. BOARD - EXT. TO BE GLASS MAT GYP SHEATHING, INFILTRATION BARRIER AND ATLAS BRICK VENEER.

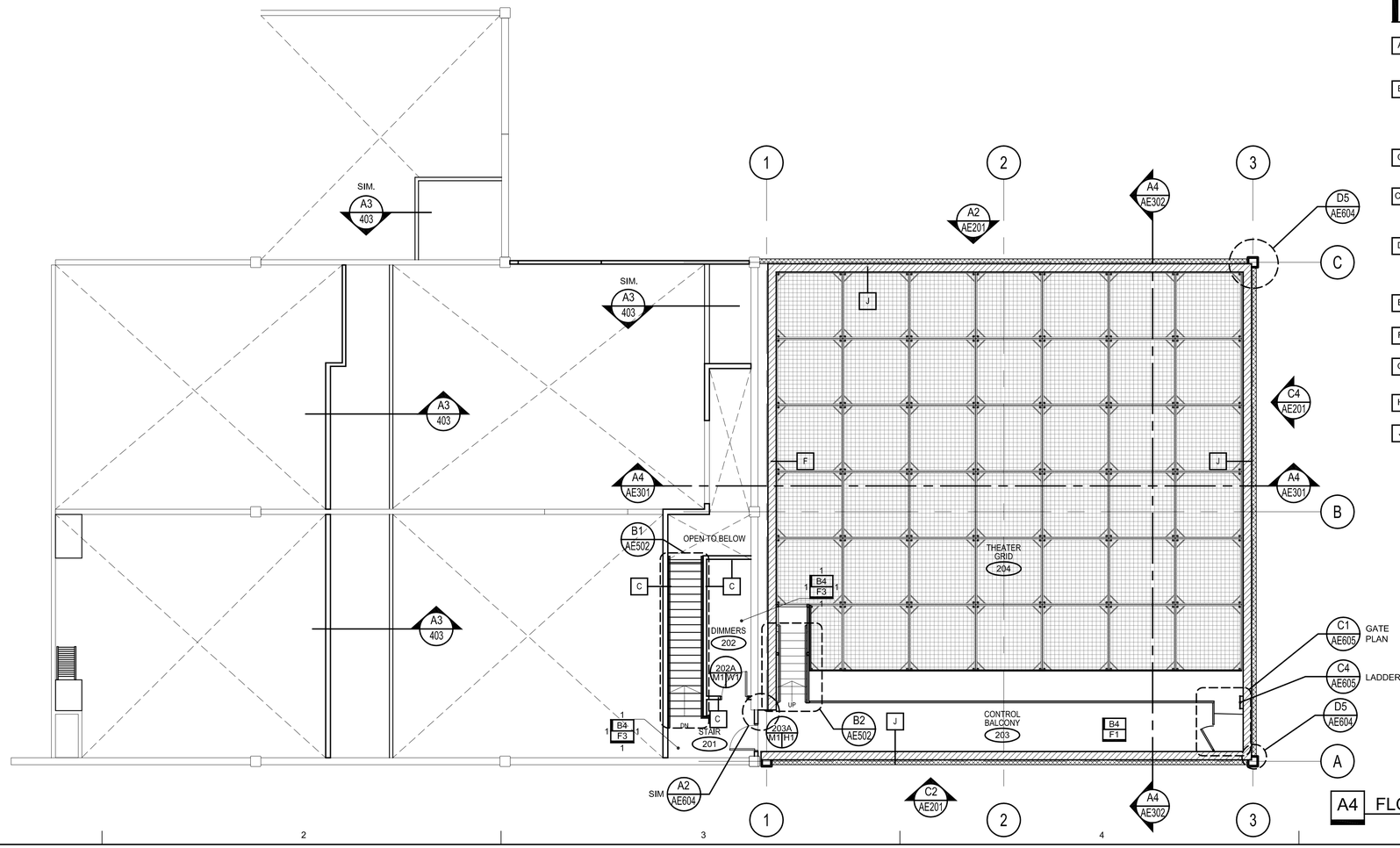
E — EXISTING WALL FURRED OUT W/ 5/8" GYP. BOARD OVER 7/8" HAT CHANNEL

F — 12" CMU WALL - PAINT EA. SIDE

G — CONCRETE RETAINING WALL - SEE STRUCTURAL - NO PAINT WHERE EXPOSED, ARCHITECTURAL FINISH WHERE EXPOSED.

H — 12" ARCHITECTURAL CONCRETE WALL

J — 12" CMU WALL, 2" EXTRUDED POLYSTYRENE RIGID INSULATION W/ 1" AIR GAP AND ATLAS BRICK VENEER



A4 FLOOR PLAN

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

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BALCONY FLOOR PLAN

AE102

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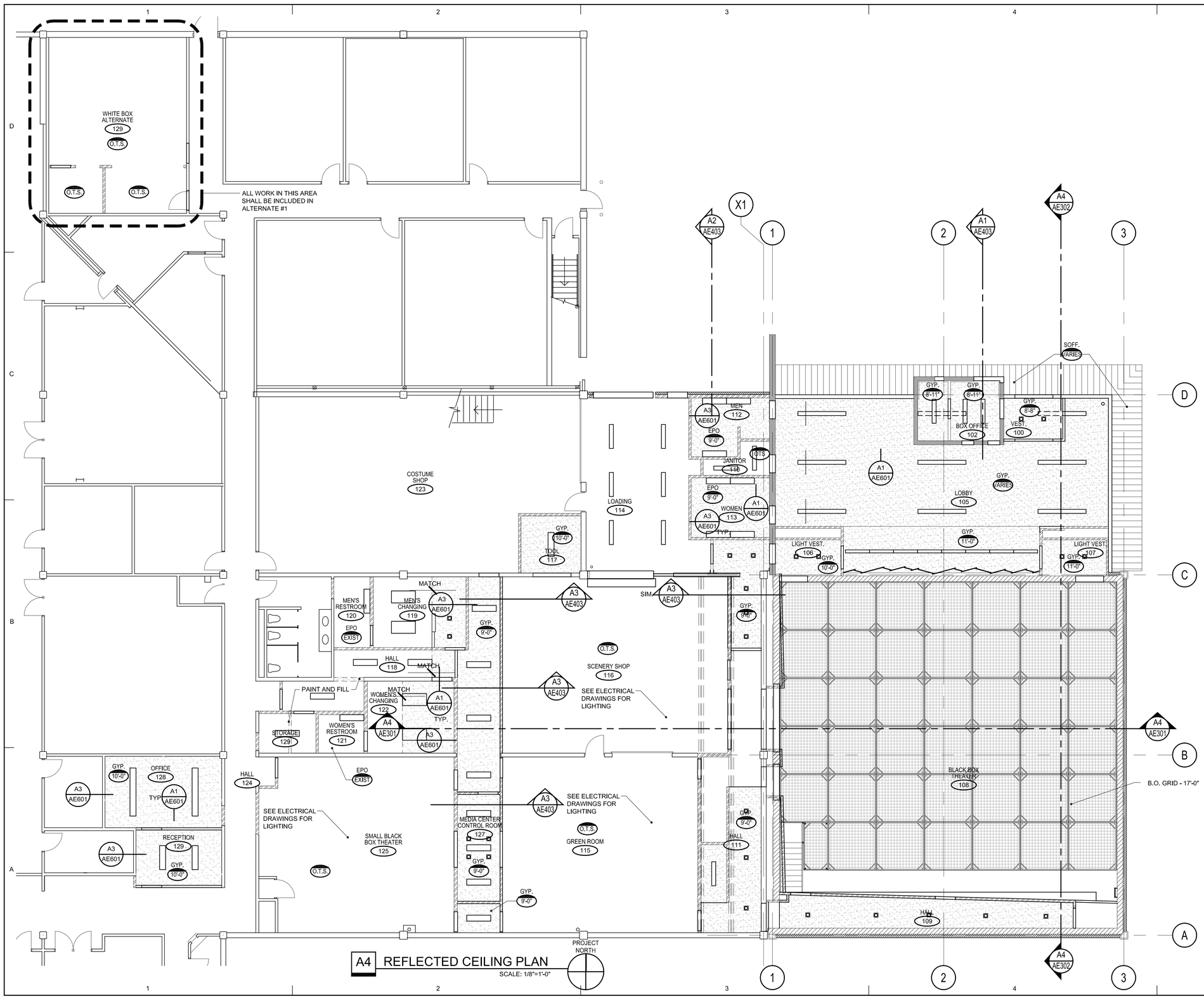

A4 REFLECTED CEILING PLAN

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

CEILING SYMBOL LEGEND

- 2x2 FLUORESCENT LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- 2x4 FLUORESCENT LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- 1x4 FLUORESCENT LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- RECESSED DOWNLIGHT FIXTURE - SEE ELECTRICAL DRAWINGS
- WALL-WASH LUMINAIRE - SEE ELECTRICAL DRAWINGS
- PENDANT FIXTURE
- WALL SCONCE
- WALL MOUNTED FIXTURE
- EMERGENCY EXIT LIGHTING
- RETURN AIR REGISTER - SEE MECHANICAL DRAWINGS
- SUPPLY AIR DIFFUSER - SEE MECHANICAL DRAWINGS
- ACCESS PANEL - SEE MECHANICAL DRAWINGS - ADDITIONAL ACCESS PANELS MAY BE REQUIRED.

CEILING SCHEDULE

A — MATERIAL
10'-0" — ELEVATION ABOVE F.F.

- SUPPLY OR RETURN AIR GRILL OR DIFFUSER
- SPRINKLER HEAD IN CENTER OF TILE

SUSPENDED CEILING PANEL PENETRATION DETAIL: NTS

- OTS — OPEN TO STRUCTURE, PAINTED UNO. INCLUDES ALL EXPOSED ITEMS INCLUDING THOSE ITEMS ABOVE ACOUSTIC CLOUDS
- EX. — EXISTING CEILING, PAINTED
- SOF. VARIES — STAINLESS STEEL SOFFIT MATERIAL
- EPO VARIES — SAME AS "GYP." WITH EPOXY PAINT
- ACT 10'-0" — 2x4 LAY-IN ACOUSTIC PANEL AND GRID
- GYP. 10'-0" — PAINTED GYPSUM BOARD CEILING

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.
6. COORDINATE WITH MECHANICAL AND ELECTRICAL FOR LIGHTING, DUCTWORK, DIFFUSERS, GRILLES, ACCESS HATCHES & ETC.

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REFLECTED CEILING PLAN

AE111

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GENERAL NOTES - ROOF

1. EAVE DIMENSIONS ARE MEASURED FROM GRID LINE TO OUTER EDGE OF STEEL

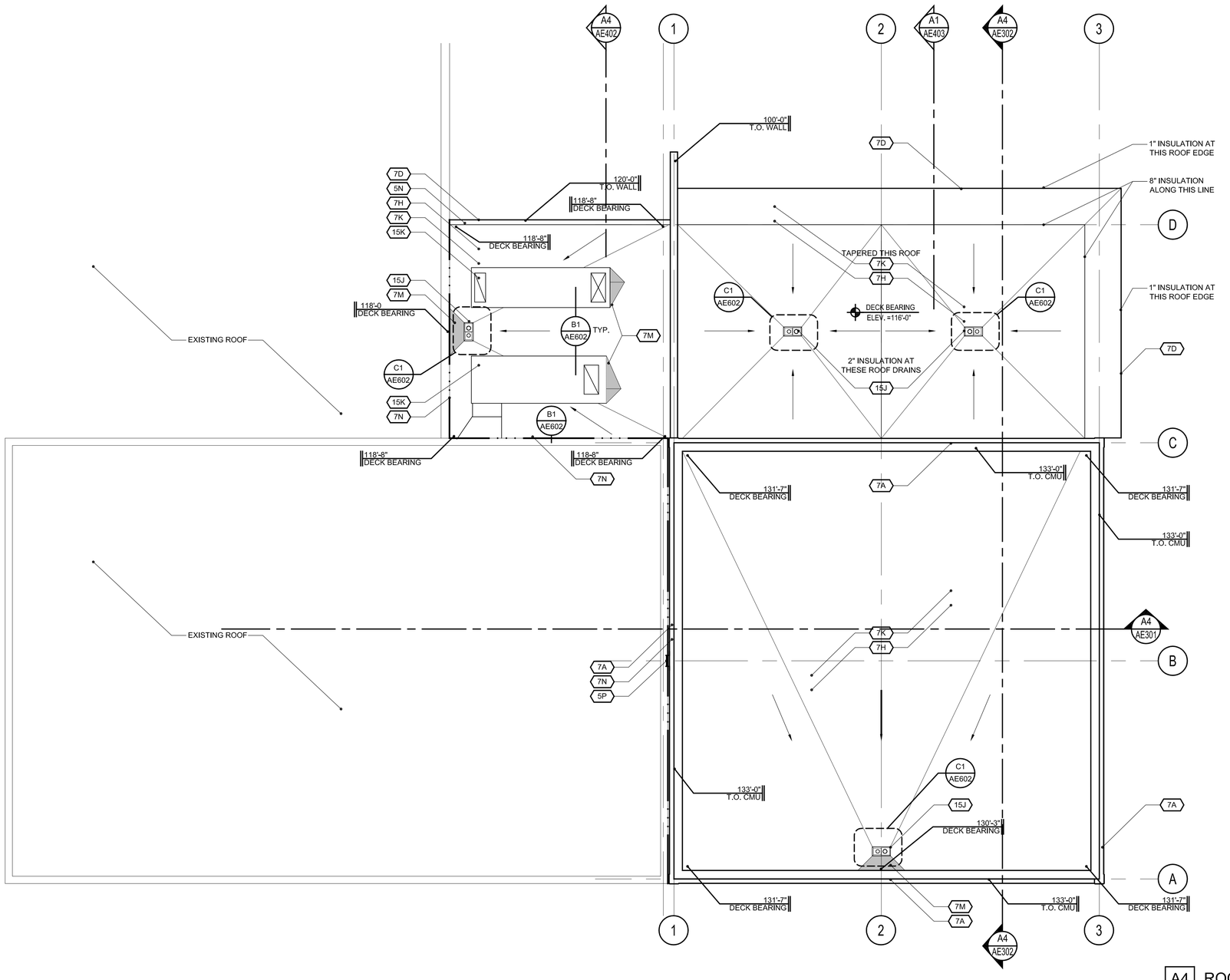
KEYNOTE LEGEND - ROOF

3 - CONCRETE
- 3H ARCHITECTURAL CONCRETE WALL

5 - METALS
- 5N STEEL TUBE AND CABLE HAND RAIL
- 5P ROOF LADDER

7 - THERMAL AND MOISTURE PROTECTION:
- 7A PRE-FINISHED METAL COPING
- 7D PRE-FINISHED GRAVEL STOP / METAL FASCIA
- 7H SINGLE PLY ROOFING MEMBRANE
- 7K R-30 POLY-ISOCYANURATE INSULATION
- 7N ISOLATION JOINT
- 7M RIGID INSULATION CRICKET

15 - MECHANICAL
- 15J ROOF DRAIN
- 15K MECHANICAL EQUIPMENT



A4 ROOF PLAN

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

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ROOF PLAN

AE122

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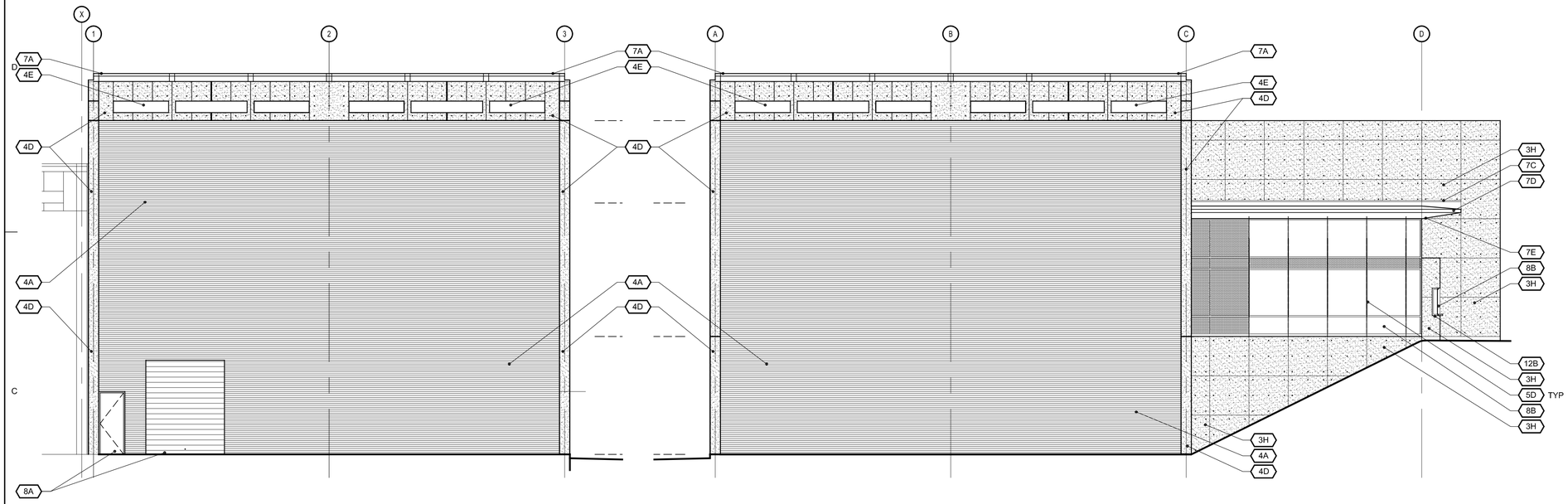
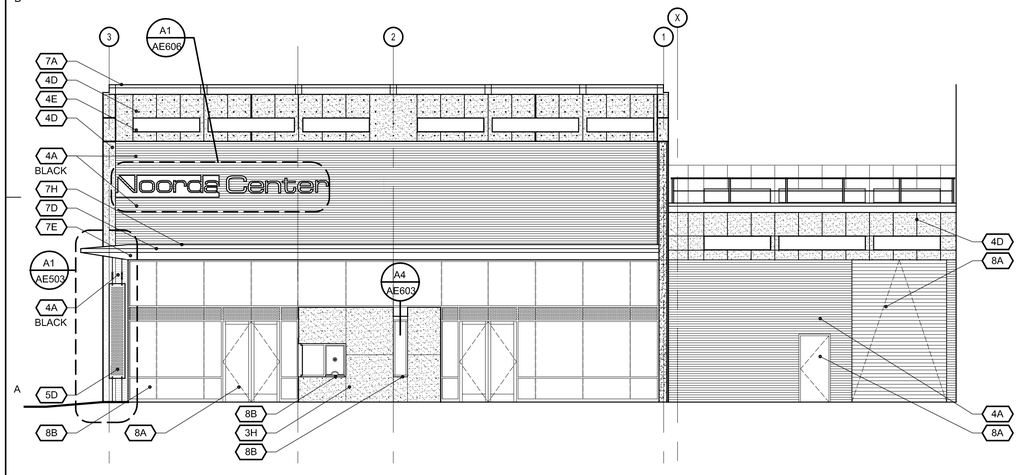


C2 SOUTH ELEVATION

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

C4 EAST ELEVATION

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



A2 NORTH ELEVATION

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

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

KEYNOTE LEGEND - ELEVATIONS

3 - CONCRETE
- 3A CONCRETE COLUMN
- 3B CONCRETE BEAM
- 3C RECESS IN CONC. BEAM, PAINTED
- 3D FORM JOINT
- 3E FORM TIE
- 3F CONCRETE SLAB
- 3G CONTROL JOINT
- 3H ARCHITECTURAL CONCRETE WALL

4 - MASONRY
- 4A BRICK VENEER
- 4D GLASS FIBER REINFORCED CONCRETE
- 4E GFRC, PAINTED

5 - METALS
- 5D PERFORATED ALUM. SHADING DEVICE - SEE DETAIL

7 - THERMAL AND MOISTURE PROTECTION
- 7A PRE-FINISHED METAL COPING
- 7C PRE-FINISHED COUNTER FLASHING AND EMBEDDED REGLET
- 7D PRE-FINISHED METAL FASCIA
- 7E PRE-FINISHED METAL SOFFIT PANEL
- 7H SINGLE PLY ROOFING MEMBRANE W/ BALLAST

8 - DOORS AND WINDOWS
- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM

12 - FURNISHINGS
- 12B S.S. COUNTERTOP

15 - MECHANICAL
- 15A MECH. LOUVER - PAINTED

16 - ELECTRICAL
- 16A LIGHT FIXTURE

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ELEVATIONS

AE201

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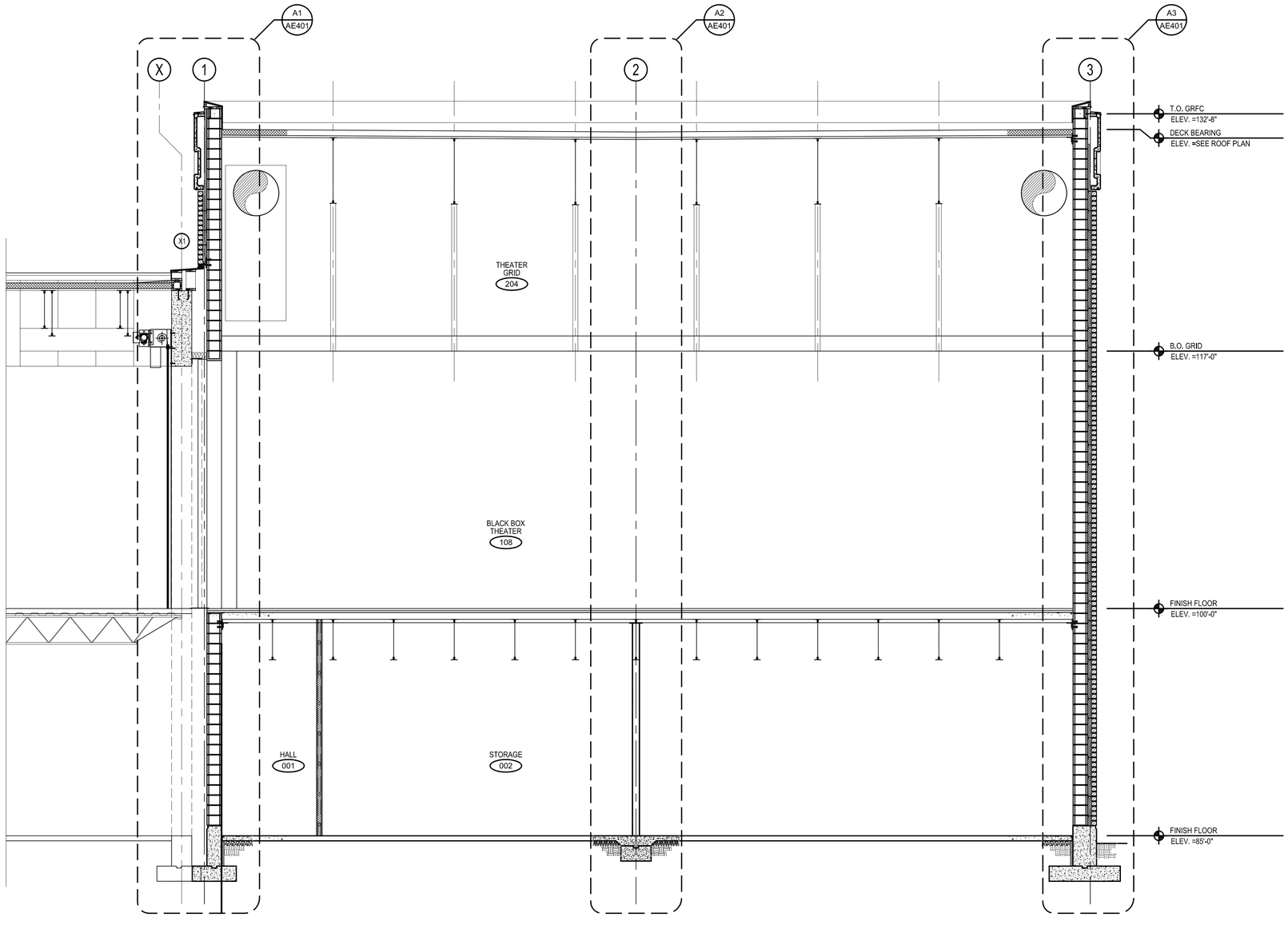

A4 BUILDING SECTION

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

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
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SECTIONS

AE301

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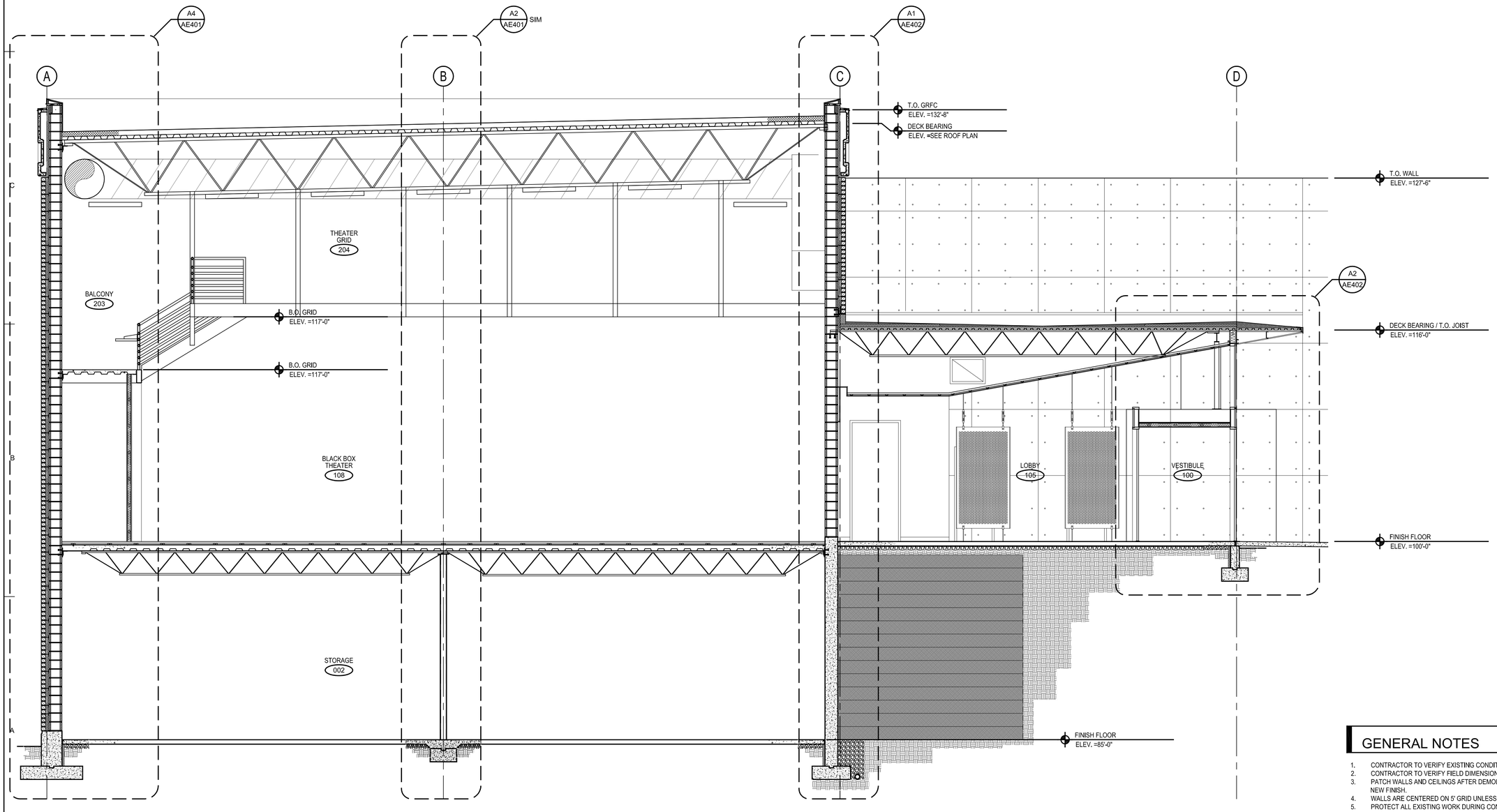

A4 BUILDING SECTION

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

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

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SECTIONS

AE302

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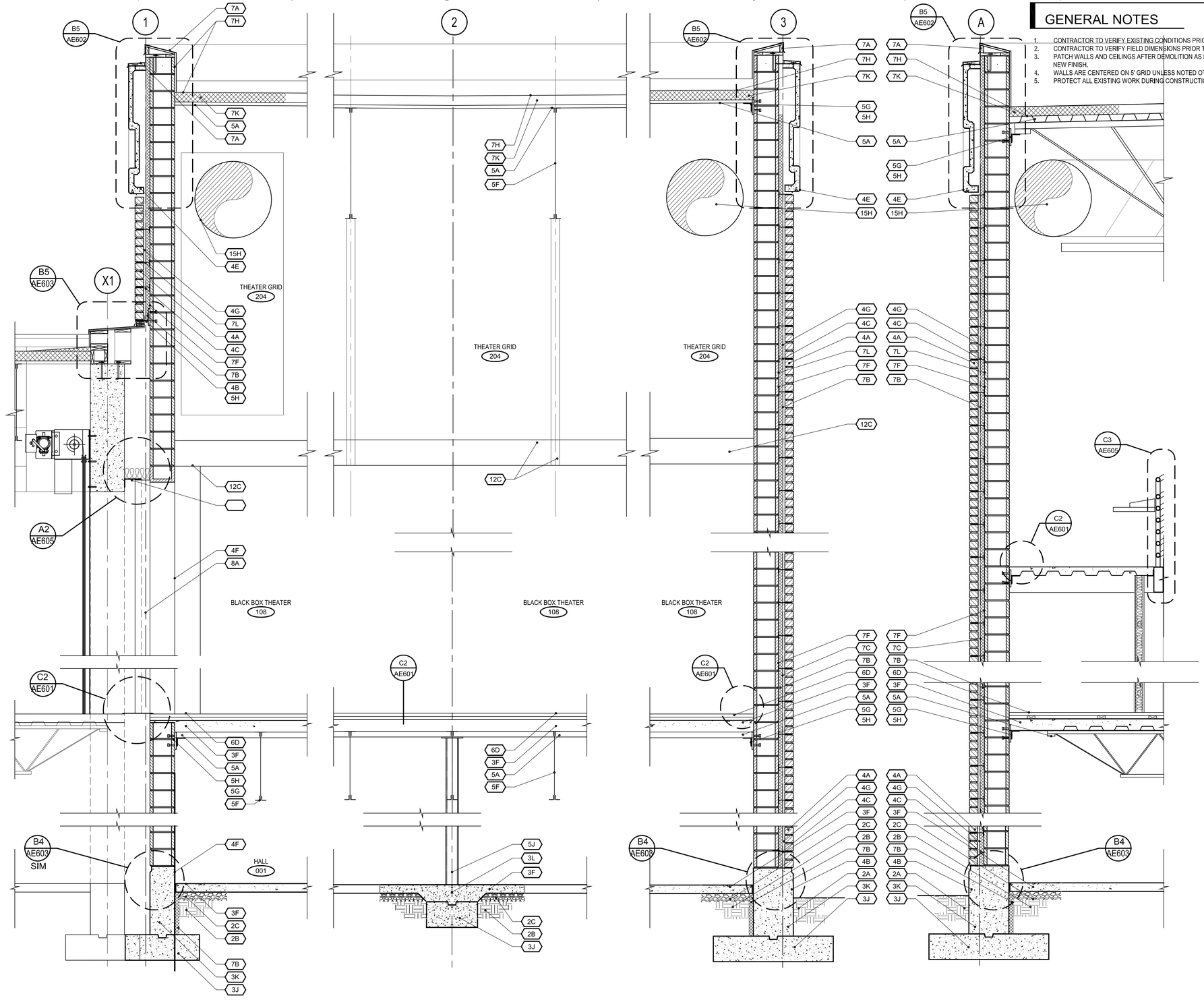

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

KEYNOTE LEGEND - WALL SECT.

1 - DEMOLITION
- 1P EXISTING CONC. COLUMN TO REMAIN
- 1Q EXISTING CONC. BEAM TO REMAIN
- 1R EXISTING WALL TO REMAIN

2 - SITE
- 2A FINISHED GRADE
- 2B COMPACTED FILL
- 2C 4" FREE DRAINING GRAVEL
- 2D 4" PERIMETER DRAIN
- 2E GEOFOAM

3 - CONCRETE
- 3A CONCRETE COLUMN BEYOND
- 3B CONCRETE BEAM
- 3C RECESS IN CONC. BEAM - PAINTED
- 3F 4" CONCRETE SLAB
- 3H ARCHITECTURAL CONCRETE WALL
- 3J CONCRETE FOOTING
- 3K CONCRETE CONCRETE FOUNDATION WALL
- 3L THICKENED CONCRETE SLAB
- 3N COMPOSITE CONRETE DECK

4 - MASONRY
- 4A BRICK VENEER
- 4B WEEP HOLES AT 2' O.C.
- 4C BRICK TIES 16" HORIZONTALLY AND VERT.
- 4D GLASS FIBER REINFORCED CONCRETE
- 4F 12" SMOOTH-FACED CMU
- 4G 1" AIR GAP BETWEEN INSULATION AND BRICK

5 - METALS
- 5A 1 1/2" STEEL DECK
- 5B STEEL ANGLE - PAINTED
- 5C STEEL BEAM - PAINTED
- 5F STEEL JOIST - PAINTED
- 5G STEEL EMBED PLATE
- 5H STEEL ANGLE
- 5J STEEL COLUMN

6 - WOODS AND PLASTIC
- 6A 2x TREATED WOOD BLOCKING
- 6B SHAPED 2x TREATED WOOD BLOCKING
- 6C EXTERIOR SHEATHING
- 6D PLYWOOD FLOOR - SEE DETAIL
- 6E HARDWOOD 2x CAP
- 6F 3/4" FIRE TREATED PLYWOOD

7 - THERMAL AND MOISTURE PROTECTION
- 7A PRE-FINISHED METAL COPING
- 7B EXTRUDED POLYSTYRENE RIGID INSULATION
- 7C PRE-FINISHED COUNTER FLASHING AND EMBEDDED REGLET
- 7D PRE-FINISHED METAL FASCIA
- 7E PRE-FINISHED METAL SOFFIT PANEL
- 7F VAPOR BARRIER
- 7G R-19 BATT INSULATION
- 7H SINGLE PLY ROOFING MEMBRANE W/ BALLAST
- 7J PRE-FINISHED METAL FLASHING
- 7K R-30 POLY-ISOCYANURATE INSULATION
- 7L INFILTRATION BARRIER
- 7M SOUND BATT INSULATION
- 7P WATERPROOF MEMBRANE

8 - DOORS AND WINDOWS:
- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM

9 - FINISHES:
- 9A 5/8" GYPSUM BOARD PAINTED
- 9B SCHEDULED FLOOR FINISH
- 9C SCHEDULED CEILING SYSTEM
- 9D 4x4" GLAZED CERAMIC TILE WAINSCOT TO 5'-0" A.F.F., U.N.O.
- 9E 5/8" CEMENTITIOUS BACKER BOARD
- 9F 5/8" GYPSUM BOARD - EPOXY PAINTED
- 9G STEEL STUD FRAMING

12 - FURNISHINGS
- 12A CASEWORK
- 12B S.S. COUNTERTOP
- 12C THEATER GRID - SEE QT502

15 - MECHANICAL:
- 15H MECHANICAL DUCT

16 - ELECTRICAL:
- 16A LIGHT FIXTURE

A1 WALL SECTION
1 SCALE: 1/2"=1'-0"

A2 WALL SECTION
2 SCALE: 1/2"=1'-0"

A3 WALL SECTION
3 SCALE: 1/2"=1'-0"

A4 WALL SECTION
4 SCALE: 1/2"=1'-0"

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WALL SECTIONS

AE401

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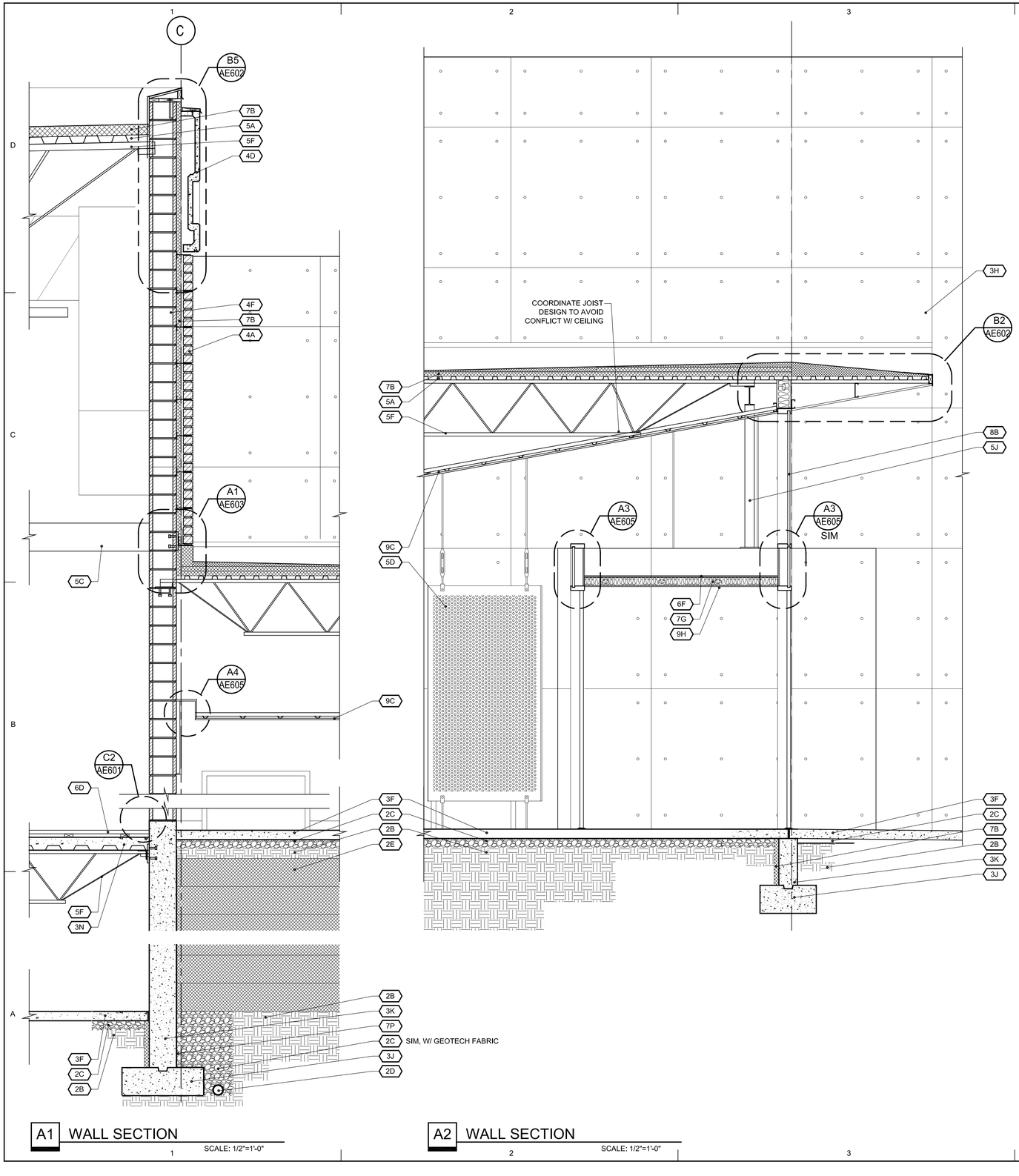

A1 WALL SECTION

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

A2 WALL SECTION

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

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
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3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

KEYNOTE LEGEND - WALL SECT.

1 - DEMOLITION
- 1P EXISTING CONC. COLUMN TO REMAIN
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- 1R EXISTING WALL TO REMAIN

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- 2A FINISHED GRADE
- 2B COMPACTED FILL
- 2C 4" FREE DRAINING GRAVEL
- 2D 4" PERIMETER DRAIN
- 2E GEOFOAM

3 - CONCRETE
- 3A CONCRETE COLUMN BEYOND
- 3B CONCRETE BEAM
- 3C RECESS IN CONC. BEAM - PAINTED
- 3F 4" CONCRETE SLAB
- 3H ARCHITECTURAL CONCRETE WALL
- 3J CONCRETE FOOTING
- 3K CONCRETE CONCRETE FOUNDATION WALL
- 3L THICKENED CONCRETE SLAB
- 3N COMPOSITE CONRETE DECK

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- 4A BRICK VENEER
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- 5C STEEL BEAM - PAINTED
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- 5H STEEL ANGLE
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- 6C EXTERIOR SHEATHING
- 6D PLYWOOD FLOOR - SEE DETAIL
- 6E HARDWOOD 2x CAP
- 6F 3/4" FIRE TREATED PLYWOOD

7 - THERMAL AND MOISTURE PROTECTION
- 7A PRE-FINISHED METAL COPING
- 7B EXTRUDED POLYSTYRENE RIGID INSULATION
- 7C PRE-FINISHED COUNTER FLASHING AND EMBEDDED REGLET
- 7D PRE-FINISHED METAL FASCIA
- 7E PRE-FINISHED METAL SOFFIT PANEL
- 7F VAPOR BARRIER
- 7G R-19 BATT INSULATION
- 7H SINGLE PLY ROOFING MEMBRANE W/ BALLAST
- 7J PRE-FINISHED METAL FLASHING
- 7K R-30 POLY-ISOCYANURATE INSULATION
- 7L INFILTRATION BARRIER
- 7M SOUND BATT INSULATION
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8 - DOORS AND WINDOWS:
- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM

9 - FINISHES:
- 9A 5/8" GYPSUM BOARD PAINTED
- 9B SCHEDULED FLOOR FINISH
- 9C SCHEDULED CEILING SYSTEM
- 9D 4x4" GLAZED CERAMIC TILE WAINSCOT TO 5'-0" A.F.F., U.N.O.
- 9E 5/8" CEMENTITIOUS BACKER BOARD
- 9F 5/8" GYPSUM BOARD - EPOXY PAINTED
- 9G STEEL STUD FRAMING

12 - FURNISHINGS
- 12A CASEWORK
- 12B S.S. COUNTERTOP
- 12C THEATER GRID - SEE QTS02

15 - MECHANICAL:
- 15H MECHANICAL DUCT

16 - ELECTRICAL:
- 16A LIGHT FIXTURE

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WALL SECTIONS

AE402

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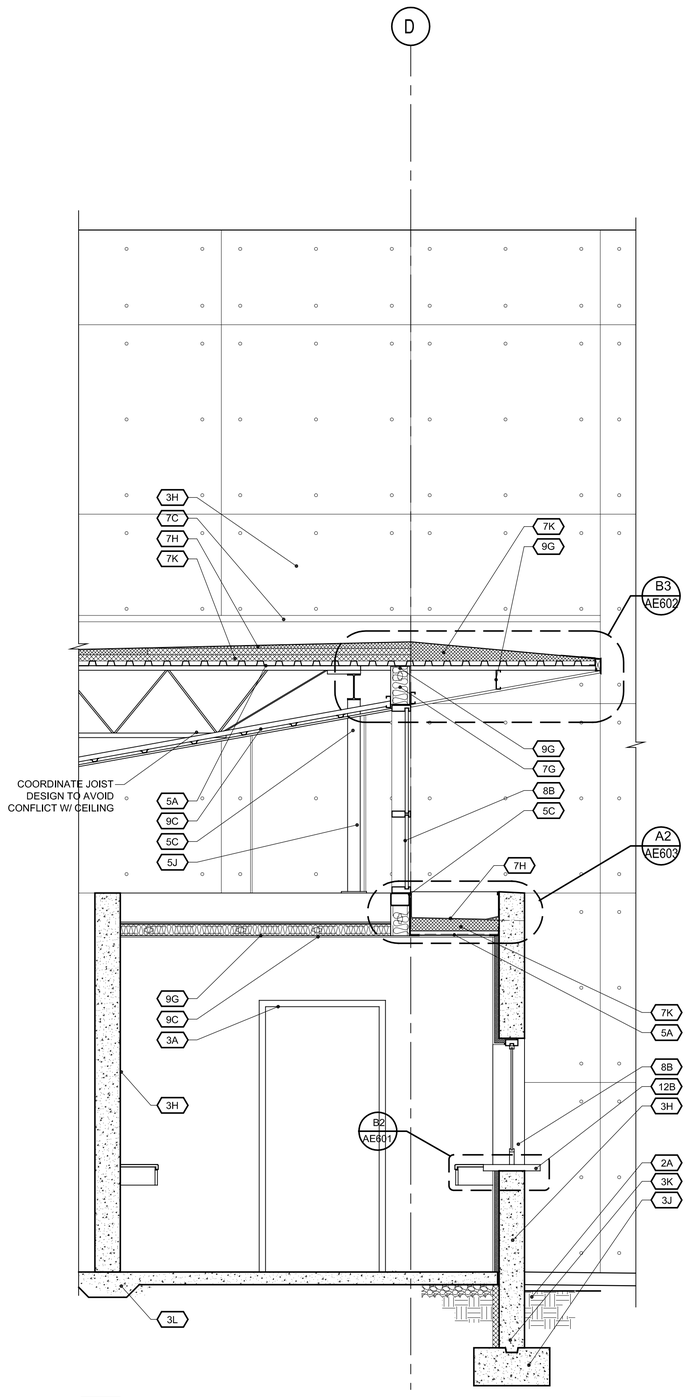
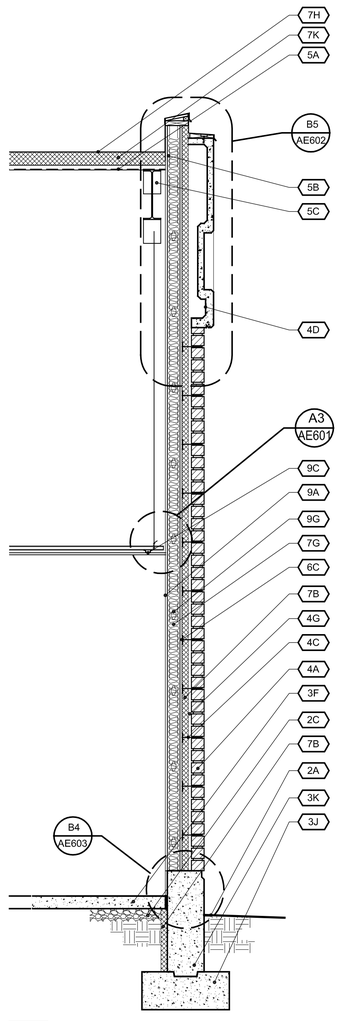


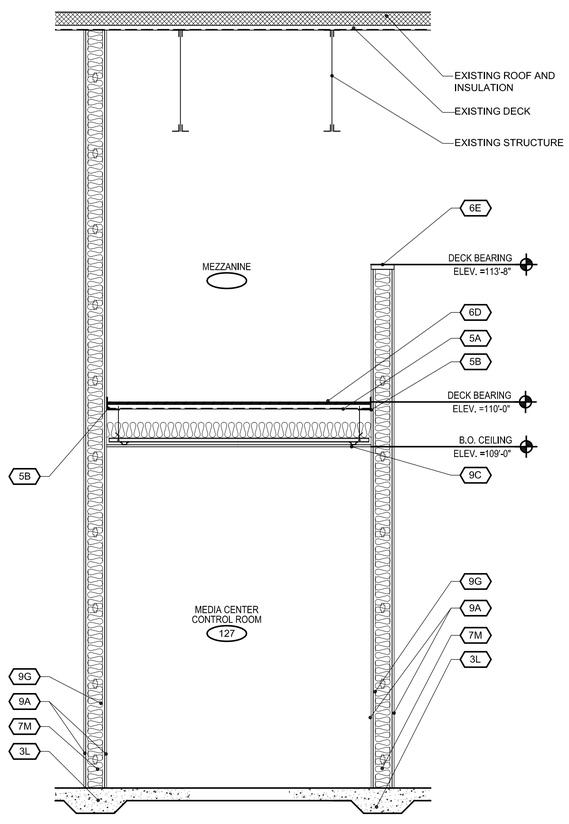
A1 WALL SECTION

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



A2 WALL SECTION

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



A3 WALL SECTION

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

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

KEYNOTE LEGEND - WALL SECT.

1 - DEMOLITION
- 1P EXISTING CONC. COLUMN TO REMAIN
- 1Q EXISTING CONC. BEAM TO REMAIN
- 1R EXISTING WALL TO REMAIN

2 - SITE
- 2A FINISHED GRADE
- 2B COMPACTED FILL
- 2C 4" FREE DRAINING GRAVEL
- 2D 4" PERIMETER DRAIN
- 2E GEOFOAM

3 - CONCRETE
- 3A CONCRETE COLUMN BEYOND
- 3B CONCRETE BEAM
- 3C RECESS IN CONC. BEAM - PAINTED
- 3F 4" CONCRETE SLAB
- 3H ARCHITECTURAL CONCRETE WALL
- 3J CONCRETE FOOTING
- 3K CONCRETE CONCRETE FOUNDATION WALL
- 3L THICKENED CONCRETE SLAB
- 3N COMPOSITE CONRETE DECK

4 - MASONRY
- 4A BRICK VENEER
- 4B WEEP HOLES AT 2' O.C.
- 4C BRICK TIES 16" HORIZONTALLY AND VERT.
- 4D GLASS FIBER REINFORCED CONCRETE
- 4F 12" SMOOTH-FACED CMU
- 4G 1" AIR GAP BETWEEN INSULATION AND BRICK

5 - METALS
- 5A 1 1/2" STEEL DECK
- 5B STEEL ANGLE - PAINTED
- 5C STEEL BEAM - PAINTED
- 5F STEEL JOIST - PAINTED
- 5G STEEL EMBED PLATE
- 5H STEEL ANGLE
- 5J STEEL COLUMN

6 - WOODS AND PLASTIC
- 6A 2x TREATED WOOD BLOCKING
- 6B SHAPED 2x TREATED WOOD BLOCKING
- 6C EXTERIOR SHEATHING
- 6D PLYWOOD FLOOR - SEE DETAIL
- 6E HARDWOOD 2x CAP
- 6F 3/4" FIRE TREATED PLYWOOD

7 - THERMAL AND MOISTURE PROTECTION
- 7A PRE-FINISHED METAL COPING
- 7B EXTRUDED POLYSTYRENE RIGID INSULATION
- 7C PRE-FINISHED COUNTER FLASHING AND EMBEDDED REGLET
- 7D PRE-FINISHED METAL FASCIA
- 7E PRE-FINISHED METAL SOFFIT PANEL
- 7F VAPOR BARRIER
- 7G R-19 BATT INSULATION
- 7H SINGLE PLY ROOFING MEMBRANE W/ BALLAST
- 7J PRE-FINISHED METAL FLASHING
- 7K R-30 POLY-ISOCYANURATE INSULATION
- 7L INFILTRATION BARRIER
- 7M SOUND BATT INSULATION
- 7P WATERPROOF MEMBRANE

8 - DOORS AND WINDOWS:
- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM

9 - FINISHES:
- 9A 5/8" GYPSUM BOARD PAINTED
- 9B SCHEDULED FLOOR FINISH
- 9C SCHEDULED CEILING SYSTEM
- 9D 4x4" GLAZED CERAMIC TILE WAINSCOT TO 5'-0" A.F.F., U.N.O.
- 9E 5/8" CEMENTITIOUS BACKER BOARD
- 9F 5/8" GYPSUM BOARD - EPOXY PAINTED
- 9G STEEL STUD FRAMING

12 - FURNISHINGS
- 12A CASEWORK
- 12B S.S. COUNTERTOP
- 12C THEATER GRID - SEE QT502

15 - MECHANICAL:
- 15H MECHANICAL DUCT

16 - ELECTRICAL:
- 16A LIGHT FIXTURE

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REVISION NUMBER AND DATE:

AXIS JOB #:	0804
OWNER JOB #:	
DATE:	July 21, 2008
DRAWN BY:	-
CHECKED BY:	-

WALL SECTIONS

AE403

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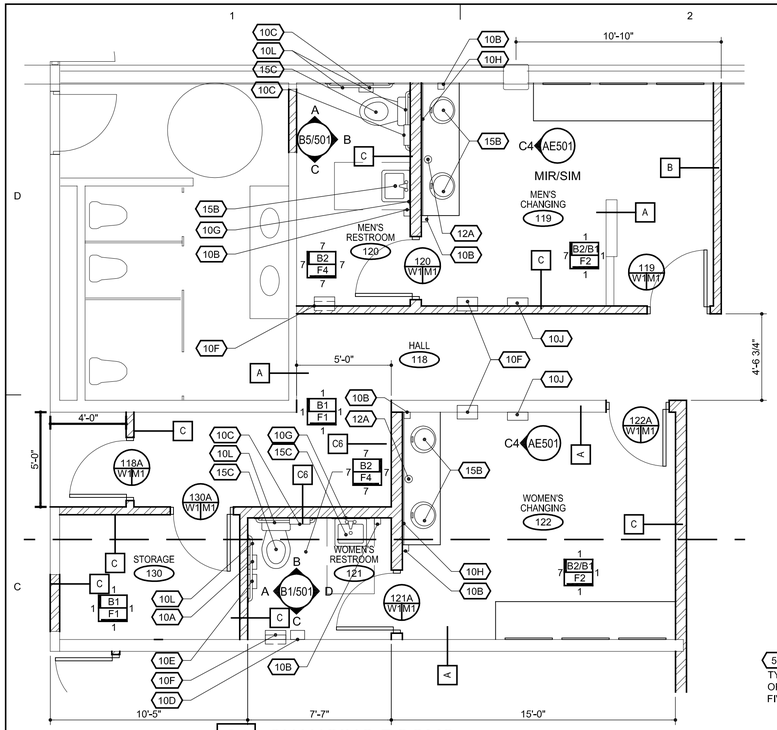
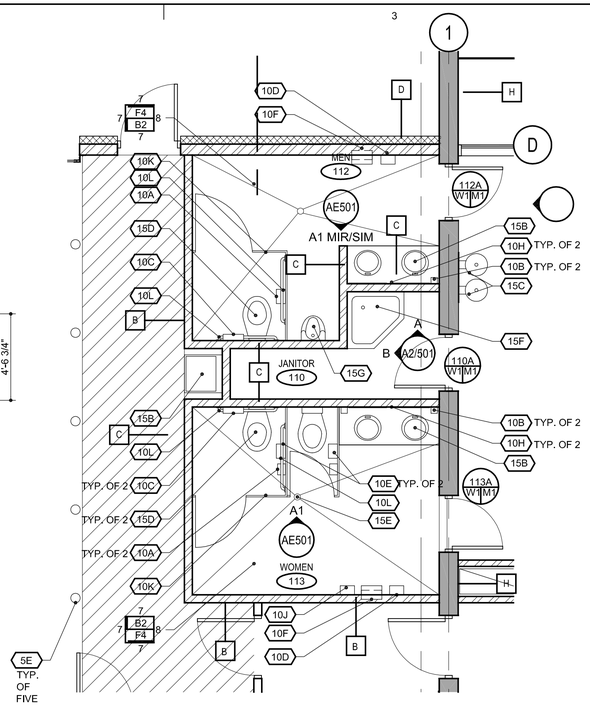


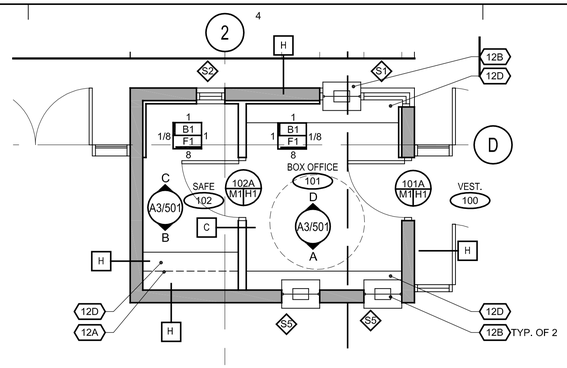
C1 CHANGING ROOMS

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



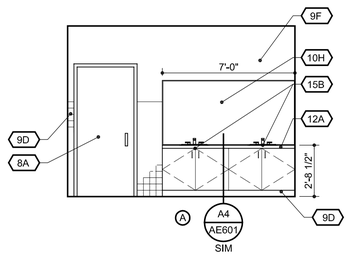
C3 PUBLIC RESTROOMS

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



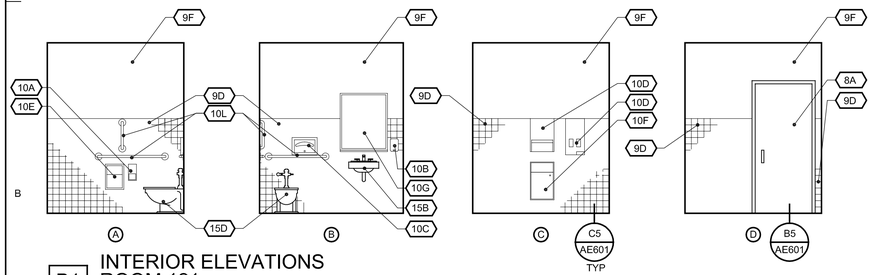
D4 BOX OFFICE

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



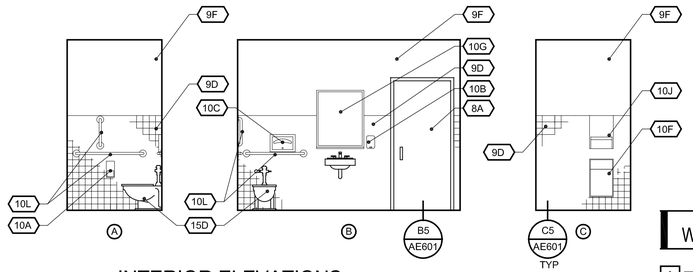
C4 PUBLIC RESTROOMS

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



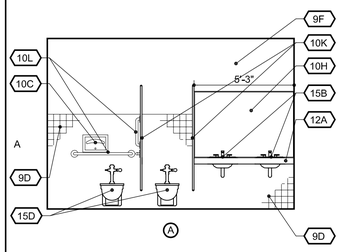
B1 INTERIOR ELEVATIONS ROOM 121

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



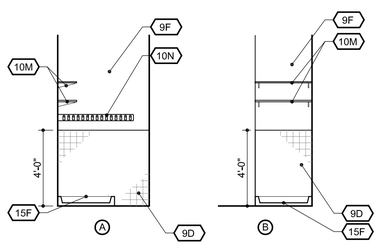
B3 INTERIOR ELEVATIONS ROOM 120

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



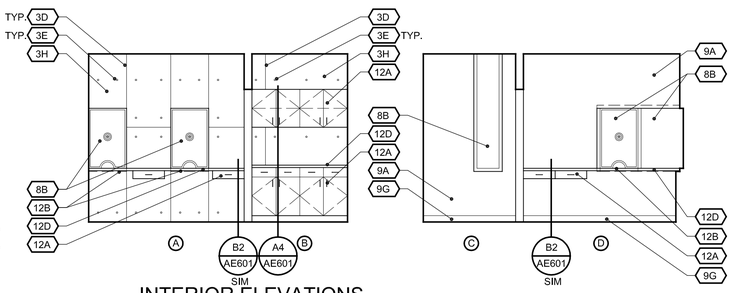
A1 INTERIOR ELEVATIONS ROOM 113/112 MIR.

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



A2 INTERIOR ELEVATIONS ROOM 110

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



A3 INTERIOR ELEVATIONS ROOM 101/102

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

KEYNOTE LEGEND - ENL. PLAN

3 - CONCRETE
- 3D FORM JOINT
- 3E FORM TIE
- 3H ARCHITECTURAL CONCRETE WALL

5 - METALS
- 5E STEEL PIPE BOLLARD - SEE DETAIL
- 5J STEEL COLUMN - PAINTED

7 - THERMAL AND MOISTURE
- 7Q COMPOSITE ALUMINUM SOFFIT AND FASCIA

8 - DOORS AND WINDOWS
- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM
- 8C SCHEDULED GLAZING SYSTEM

9 - FINISHES
- 9A GYP. BD. - PAINTED
- 9D 4 X 4" GLAZED CERAMIC TILE WAINSCOT TO 5'-0" A.F.F, U.N.O.
- 9F 5/8" GYP. BD. - EPOXY PAINTED
- 9G SCHEDULED BASE
- 9J 3" ALUMINUM LETTERS, ADHERED

10 - SPECIALTIES :
- 10A TOILET PAPER DISPENSER - N.I.C.
- 10B SOAP DISPENSER - N.I.C.
- 10C TOILET SEAT COVER DISPENSER - N.I.C.
- 10D SANITARY NAPKIN DISPENSER
- 10E SANITARY NAPKIN DISPOSAL
- 10F RECESSED S.S. TRASH RECEPTACLE
- 10G 30" X 36" MIRROR W/ 4" S.S. SHELF
- 10H 42" HIGH MIRROR - SEE INT. ELEV. FOR WIDTH
- 10J PAPER TOWEL DISPENSER - N.I.C.
- 10K ENAMELED STEEL TOILET PARTITION
- 10L S.S. GRAB BAR
- 10M ADJUSTABLE SHELVING
- 10N MOP RACK

12 - FURNISHINGS
- 12A CASEWORK
- 12B S.S. COUNTERTOP
- 12D COUNTERTOP
- 12E DONOR PORTRAIT, N.I.C.

15 - MECHANICAL
- 15B SINK
- 15C ELECTRIC DRINKING FOUNTAIN
- 15D TOILET
- 15E FLOOR DRAIN
- 15F MOP DINK
- 15G URINAL

WALL TYPES

- A — EXISTING WALL TO REMAIN
- INDICATES 1 HOUR FIRE RATED CONSTRUCTION
- B — METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD EA. SIDE TO ROOF DECK (SEE B2/AE603) UNLESS NOTED OTHERWISE, SOUND BATT INSUL. AND SCHED. FINISH - NUMBER INDICATES WALL THICKNESS IN INCHES - 3 5/8" STUDS WHERE NO NUMBER IS SHOWN. SEE A3/AE403 AT MEZZANINES.
- C — SAME AS TYPE "B" ABOVE, BUT WALL EXTENDS TO 6" ABOVE ADJACENT CEILING - BRACE TO STRUCTURE ABOVE. SEE B1/AE603
- CT — 3 5/8" METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD ON EXPOSED SIDE TO 16'-8" ABOVE FINISH FLOOR LEVEL. RETURN TO CMU WALL AT TOP AND SEAL TOP WITH GYP. BD. SOUND BATT INSULATION BETWEEN STUDS.
- D — EXTERIOR WALL 6" (16 GA.) METAL STUDS @16" O.C. W/ R19 BATT INSUL. INT. TO BE PAINTED GYP. BOARD - EXT. TO BE GLASS MAT GYP SHEATHING, INFILTRATION BARRIER AND ATLAS BRICK VENEER.
- E — EXISTING WALL FURRED OUT W/ 5/8" GYP. BOARD OVER 7/8" HAT CHANNEL
- F — 12" CMU WALL - PAINT EA. SIDE
- G — CONCRETE RETAINING WALL - SEE STRUCTURAL - NO PAINT WHERE EXPOSED. ARCHITECTURAL FINISH WHERE EXPOSED.
- H — 12" ARCHITECTURAL CONCRETE WALL
- J — 12" CMU WALL, 2" EXTRUDED POLYSTYRENE RIGID INSULATION W/ 1" AIR GAP AND ATLAS BRICK VENEER

FINISH LEGEND

WALL FINISH / BASE FINISH / FLOOR FINISH / WALL FINISH

WALL:
1 PAINTED GYP. BOARD - COLOR 1
2 PAINTED GYP. BOARD - COLOR 2
3 CERAMIC TILE - FULL HEIGHT
4 CMU - PAINTED MATTE BLACK
5 PAINTED GYP. BOARD - MATTE BLACK
6 CMU PAINTED COLOR 1
7 4' X 4' GLAZED CERAMIC TILE WAINSCOT TO 5'-0" W/ EPOXY PAINTED GYP. BD. ABOVE
8 ARCHITECTURAL CONCRETE
9 PAINTED CONCRETE - COLOR 1

FLOOR:
F1 CARPET TILE - ALTERNATE #2 - TERAZZO FLOOR @ LOBBY 105
F2 VCT
F3 SEALED CONCRETE
F4 PORCELAIN TILE
F5 WALK-OFF MAT
F6 (2) LAYERS OF PLYWOOD OVER 2 x 4 SLEEPERS - PAINTED BLACK - SEE DETAIL
F7 GRAVEL BASE OVER CONT. VAPOR BARRIER - TAPE/SEAL @JOINTS AND EDGES

BASE:
X EXISTING FLOOR SURFACE - CLEAN
B1 RUBBER BASE
B2 COVED CERAMIC TILE BASE
B3 SPECIAL FINISH - SEE INTERIOR ELEVATION
B4 NONE

1. MATERIALS IN SIMILAR LOCATIONS ARE NOT KEYNOTED AT EVERY OCCURRENCE.
2. PROVIDE CONCRETE MOISTURE SEALER ALL AREAS TO RECEIVE VCT, CAPRET, SHEET VINYL, WALK-OFF MAT AND/OR RUBBER FLOORING.
3. NO BASE AT STOREFRONT WALLS TYP.
4. SCHEDULED BASE TO BE PROVIDED AT ALL MILLWORK LOCATIONS, NEW AND EXISTING, INCLUDING ISLANDS.

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

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UTAH VALLEY UNIVERSITY NOORDA THEATRE

Orem, UT

REVISION NUMBER AND DATE:

AXIS JOB #:	0804
OWNER JOB #:	
DATE:	July 21, 2008
DRAWN BY:	-
CHECKED BY:	-

ENLARGED PLANS AND INTERIOR ELEVATIONS

AE501

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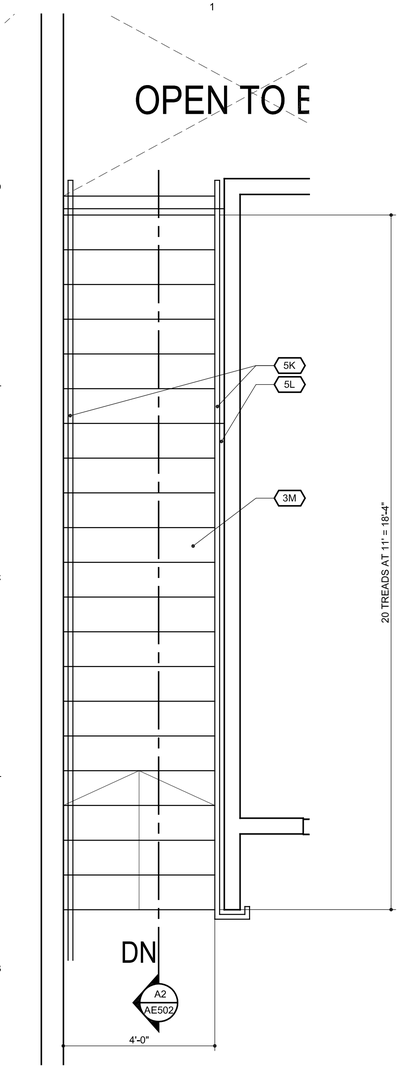
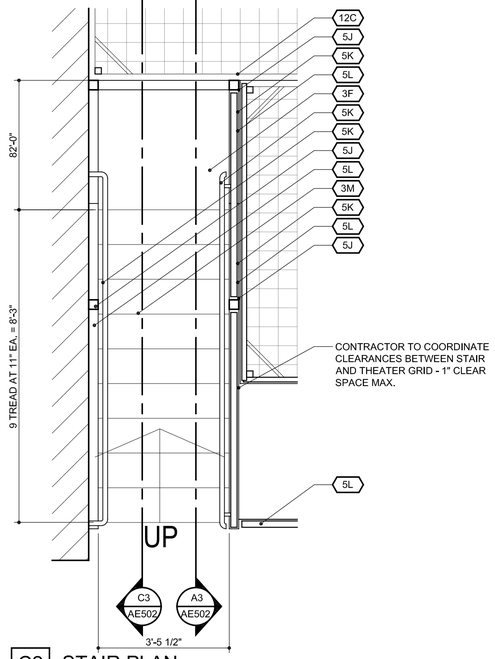


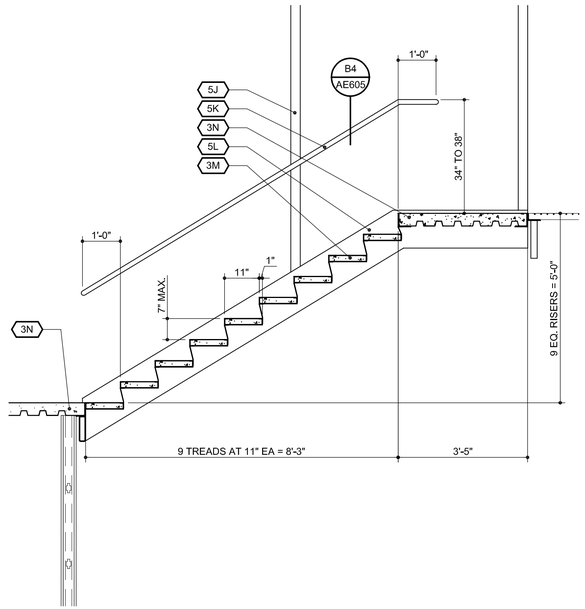
B1 STAIR PLAN

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



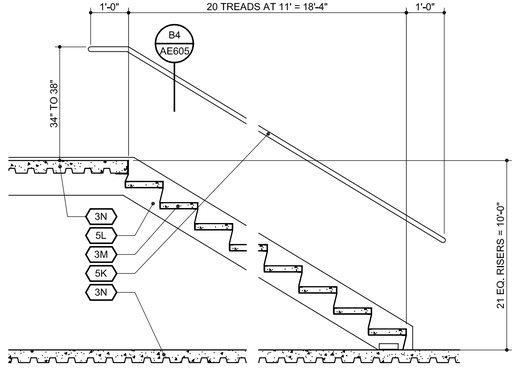
C2 STAIR PLAN

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



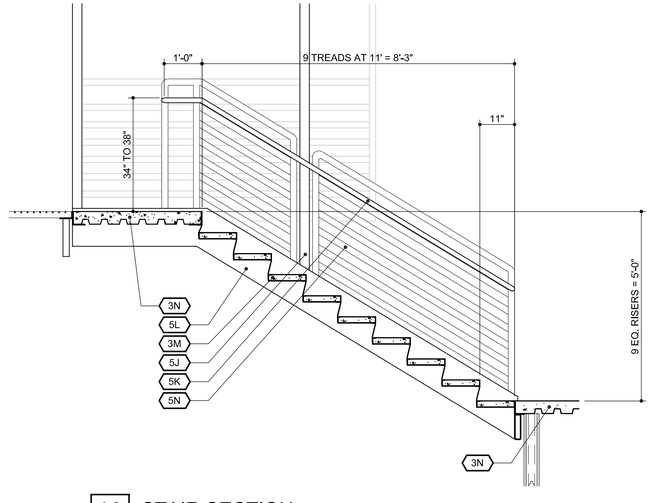
C3 STAIR SECTION

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



A2 STAIR SECTION

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



A3 STAIR SECTION

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

KEYNOTE LEGEND - STAIRS

1 - DEMOLITION

- 1P EXISTING CONC. COLUMN TO REMAIN
- 1Q EXISTING CONC. BEAM TO REMAIN
- 1R EXISTING WALL TO REMAIN

3 - CONCRETE

- 3A CONCRETE COLUMN BEYOND
- 3B CONCRETE BEAM
- 3C RECESS IN CONC. BEAM - PAINTED
- 3F 4" CONCRETE SLAB
- 3J CONCRETE FOOTING
- 3K CONCRETE CONCRETE FOUNDATION WALL
- 3M CONCRETE FILLED METAL PAN STAIR

4 - MASONRY

- 4A BRICK VENEER
- 4D GLASS FIBER REINFORCED CONCRETE
- 4F 12" SMOOTH-FACED CMU

5 - METALS

- 5A 1 1/2" STEEL DECK
- 5B STEEL ANGLE - PAINTED
- 5C STEEL BEAM - PAINTED
- 5F STEEL JOIST - PAINTED
- 5G STEEL EMBED PLATE
- 5H STEEL ANGLE
- 5J STEEL COLUMN
- 5K STEEL PIPE HAND RAIL
- 5L T.S. STRINGER
- 5M STEEL RISER
- 5N STEEL GUARDRAIL

6 - WOODS AND PLASTIC

- 6A 2x TREATED WOOD BLOCKING
- 6B SHAPED 2x TREATED WOOD BLOCKING
- 6C EXTERIOR SHEATHING
- 6D PLYWOOD FLOOR - SEE DETAIL

7 - THERMAL AND MOISTURE PROTECTION

- 7A PRE-FINISHED METAL COPING
- 7B EXTRUDED POLYSTYRENE RIGID INSULATION
- 7C PRE-FINISHED COUNTER FLASHING AND EMBEDDED REGLET
- 7F VAPOR BARRIER
- 7G R-19 BATT INSULATION
- 7L INFILTRATION BARRIER

8 - DOORS AND WINDOWS:

- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM

9 - FINISHES

- 9A 5/8" GYPSUM BOARD PAINTED
- 9B SCHEDULED FLOOR FINISH
- 9C SCHEDULED CEILING SYSTEM
- 9D 4x4" GLAZED CERAMIC TILE WAINSCOT TO 5'-0" A.F.F., U.N.O.
- 9E 5/8" CEMENTITIOUS BACKER BOARD
- 9F 5/8" GYPSUM BOARD - EPOXY PAINTED

12 - FURNISHINGS

- 12C THEATER GRID - SEE QT502

15 - MECHANICAL

- 15H MECHANICAL DUCT

16 - ELECTRICAL

- 16A LIGHT FIXTURE

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DRAWN BY:	-
CHECKED BY:	-

STAIR PLANS AND SECTIONS

AE502

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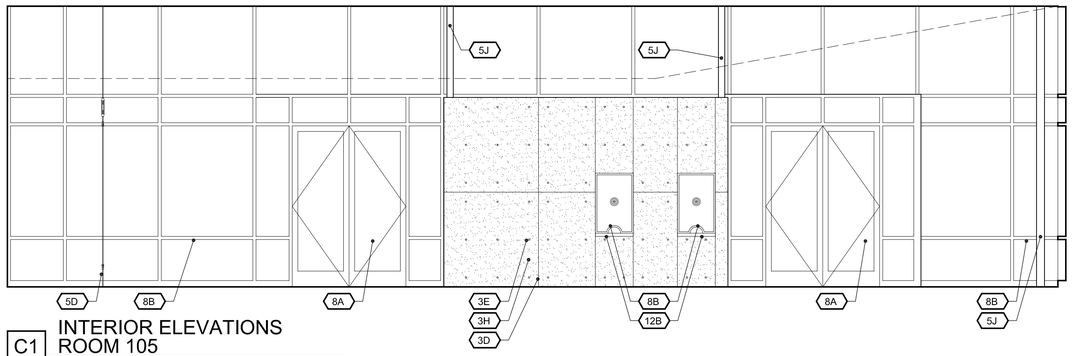
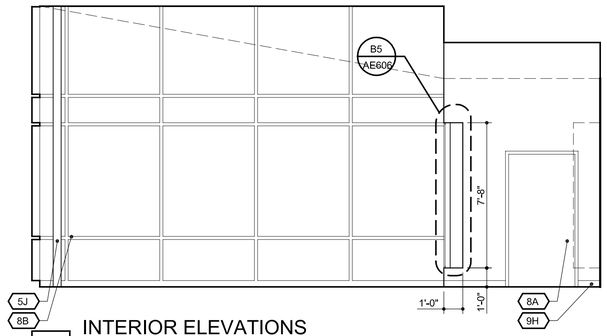


C1 INTERIOR ELEVATIONS ROOM 105

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



C3 INTERIOR ELEVATIONS ROOM 105

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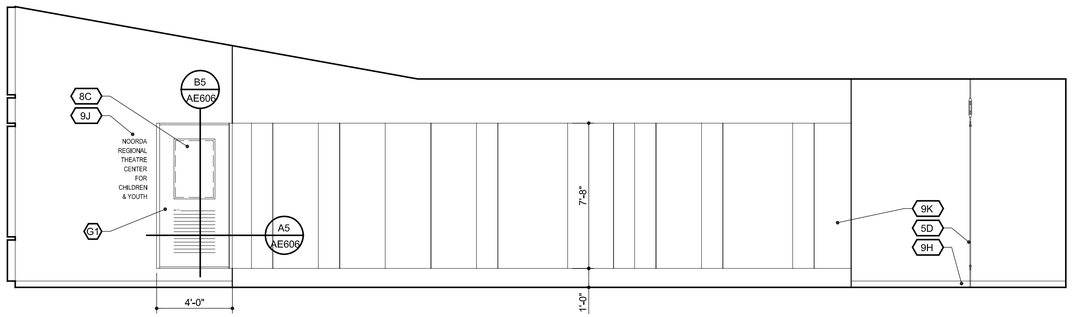
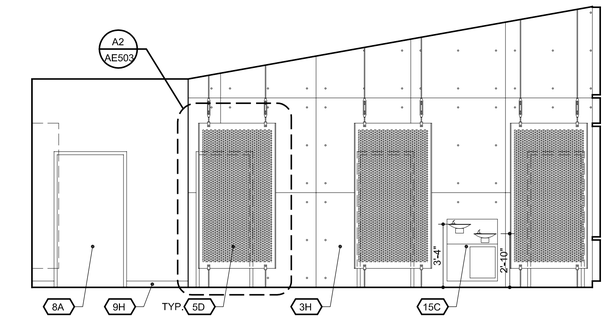


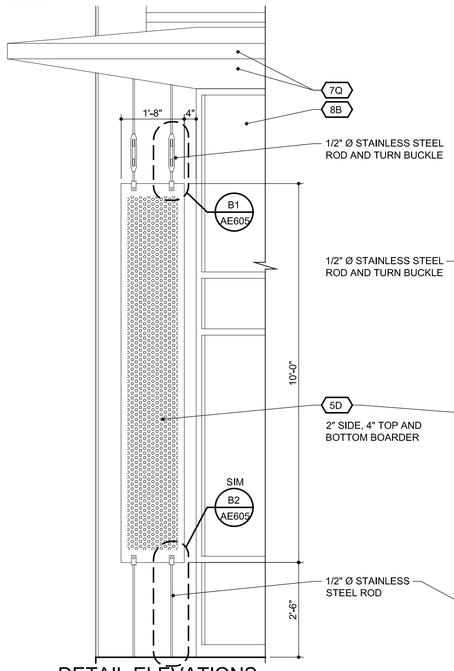
B1 INTERIOR ELEVATIONS ROOM 105

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



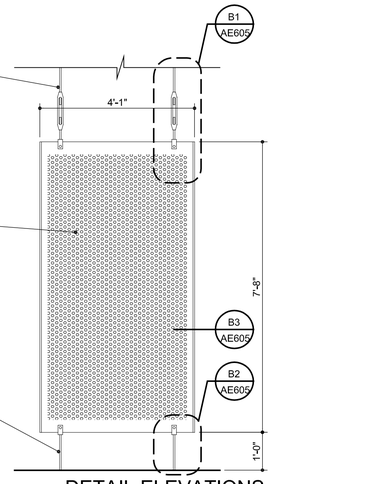
B3 INTERIOR ELEVATIONS ROOM 105

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



A1 DETAIL ELEVATIONS SUN SHADE

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



A1 DETAIL ELEVATIONS SCREEN

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

KEYNOTE LEGEND - ENL. PLAN

3 - CONCRETE
- 3D FORM JOINT
- 3E FORM TIE
- 3H ARCHITECTURAL CONCRETE WALL

5 - METALS
- 5E STEEL PIPE BOLLARD - SEE DETAIL
- 5J STEEL COLUMN - PAINTED

7 - THERMAL AND MOISTURE
- 7Q COMPOSITE ALUMINUM SOFFIT AND FASCIA

8 - DOORS AND WINDOWS
- 8A SCHEDULED DOOR AND FRAME
- 8B SCHEDULED WINDOW SYSTEM
- 8C SCHEDULED GLAZING SYSTEM

9 - FINISHES
- 9A GYP. BD. - PAINTED
- 9D 4 X 4" GLAZED CERAMIC TILE WAINSCOT TO 5'-0" A.F.F. U.N.O.
- 9F 5/8" GYP. BD. - EPOXY PAINTED
- 9G SCHEDULED BASE
- 9J 3" ALUMINUM LETTERS, ADHERED

10 - SPECIALTIES :
- 10A TOILET PAPER DISPENSER - N.I.C.
- 10B SOAP DISPENSER - N.I.C.
- 10C TOILET SEAT COVER DISPENSER - N.I.C.
- 10D SANITARY NAPKIN DISPENSER
- 10E SANITARY NAPKIN DISPOSAL
- 10F RECESSED S.S. TRASH RECEPTACLE
- 10G 30" X 36" MIRROR W/ 4" S.S. SHELF
- 10H 42" HIGH MIRROR - SEE INT. ELEV. FOR WIDTH
- 10J PAPER TOWEL DISPENSER - N.I.C.
- 10K ENAMELED STEEL TOILET PARTITION
- 10L S.S. GRAB BAR
- 10M ADJUSTABLE SHELVING
- 10N MOP RACK

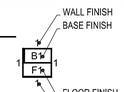
12 - FURNISHINGS
- 12A CASEWORK
- 12B S.S. COUNTERTOP
- 12D COUNTERTOP
- 12E DONOR PORTRAIT, N.I.C.

15 - MECHANICAL
- 15B SINK
- 15C ELECTRIC DRINKING FOUNTAIN
- 15D TOILET
- 15E FLOOR DRAIN
- 15F MOP DINK
- 15G URINAL

WALL TYPES

- A — EXISTING WALL TO REMAIN
  - INDICATES 1 HOUR FIRE RATED CONSTRUCTION
- B — METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD EA. SIDE TO ROOF DECK (SEE B2/AE603) UNLESS NOTED OTHERWISE, SOUND BATT INSUL. AND SCHED. FINISH - NUMBER INDICATES WALL THICKNESS IN INCHES - 3 5/8" STUDS WHERE NO NUMBER IS SHOWN. SEE A3/AE403 AT MEZZANINES.
- C — SAME AS TYPE "B" ABOVE, BUT WALL EXTENDS TO 6" ABOVE ADJACENT CEILING - BRACE TO STRUCTURE ABOVE. SEE B1/AE603
- CT — 3 5/8" METAL STUDS @16" O.C. W/ 5/8" GYP. BOARD ON EXPOSED SIDE TO 16'-8" ABOVE FINISH FLOOR LEVEL. RETURN TO CMU WALL AT TOP AND SEAL TOP WITH GYP. BD. SOUND BATT INSULATION BETWEEN STUDS.
- D — EXTERIOR WALL 6" (16 GA.) METAL STUDS @16" O.C. W/ R19 BATT INSUL. INT. TO BE PAINTED GYP. BOARD - EXT. TO BE GLASS MAT GYP SHEATHING, INFILTRATION BARRIER AND ATLAS BRICK VENEER.
- E — EXISTING WALL FURRED OUT W/ 5/8" GYP. BOARD OVER 7/8" HAT CHANNEL
- F — 12" CMU WALL - PAINT EA. SIDE
- G — CONCRETE RETAINING WALL - SEE STRUCTURAL - NO PAINT WHERE EXPOSED. ARCHITECTURAL FINISH WHERE EXPOSED.
- H — 12" ARCHITECTURAL CONCRETE WALL
- J — 12" CMU WALL, 2" EXTRUDED POLYSTYRENE RIGID INSULATION W/ 1" AIR GAP AND ATLAS BRICK VENEER

FINISH LEGEND



WALL:
1 PAINTED GYP. BOARD - COLOR 1
2 PAINTED GYP. BOARD - COLOR 2
3 CERAMIC TILE - FULL HEIGHT
4 CMU - PAINTED MATTE BLACK
5 PAINTED GYP. BOARD - MATTE BLACK
6 CMU PAINTED COLOR 1
7 4' X 4' GLAZED CERAMIC TILE WAINSCOT TO 5'-0" W/ EPOXY PAINTED GYP. BD. ABOVE
8 ARCHITECTURAL CONCRETE
9 PAINTED CONCRETE - COLOR 1

FLOOR:
F1 CARPET TILE - ALTERNATE #2 - TERAZZO FLOOR @ LOBBY 105
F2 VCT
F3 SEALED CONCRETE
F4 PORCELAIN TILE
F5 WALK-OFF MAT
F6 (2) LAYERS OF PLYWOOD OVER 2 x 4 SLEEPERS - PAINTED BLACK - SEE DETAIL
F7 GRAVEL BASE OVER CONT. VAPOR BARRIER - TAPE/SEAL @JOINTS AND EDGES

BASE:
X EXISTING FLOOR SURFACE - CLEAN

B1 RUBBER BASE
B2 COVED CERAMIC TILE BASE
B3 SPECIAL FINISH - SEE INTERIOR ELEVATION
B4 NONE

1. MATERIALS IN SIMILAR LOCATIONS ARE NOT KEYNOTED AT EVERY OCCURRENCE.
2. PROVIDE CONCRETE MOISTURE SEALER ALL AREAS TO RECEIVE VCT, CAPRET, SHEET VINYL, WALK-OFF MAT AND/OR RUBBER FLOORING.
3. NO BASE AT STOREFRONT WALLS TYP.
4. SCHEDULED BASE TO BE PROVIDED AT ALL MILLWORK LOCATIONS, NEW AND EXISTING, INCLUDING ISLANDS.

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.

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REVISION NUMBER AND DATE:

AXIS JOB #:	0804
OWNER JOB #:	
DATE:	July 21, 2008
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CHECKED BY:	-

ENLARGED PLANS AND INTERIOR ELEVATIONS

AE503

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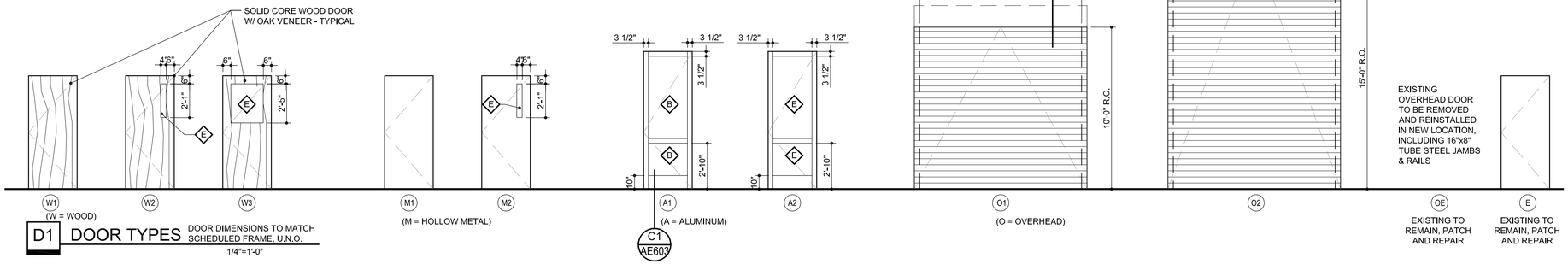
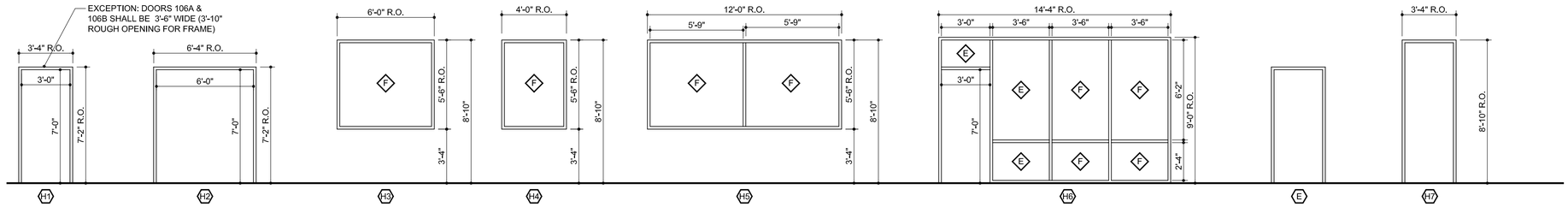


D1 DOOR TYPES

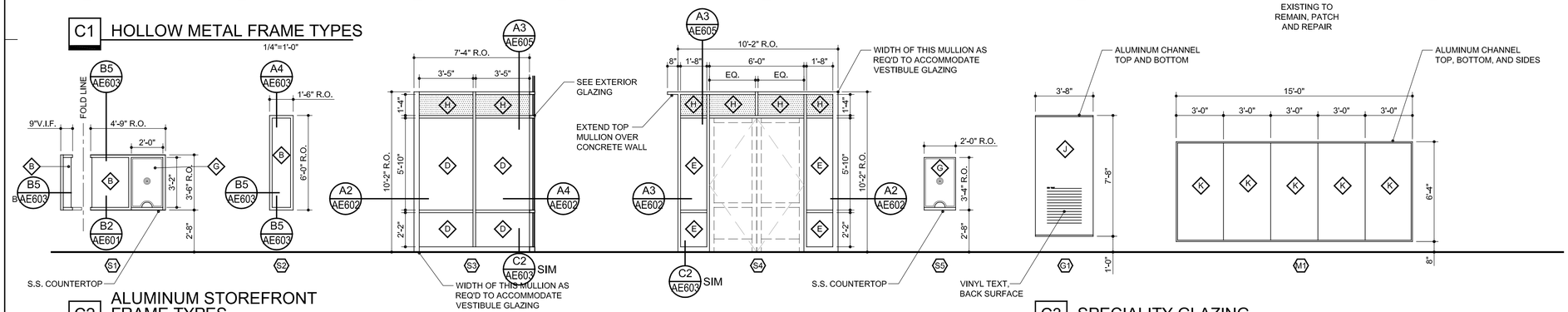
DOOR DIMENSIONS TO MATCH SCHEDULED FRAME, U.N.O.

1/4"=1'-0"



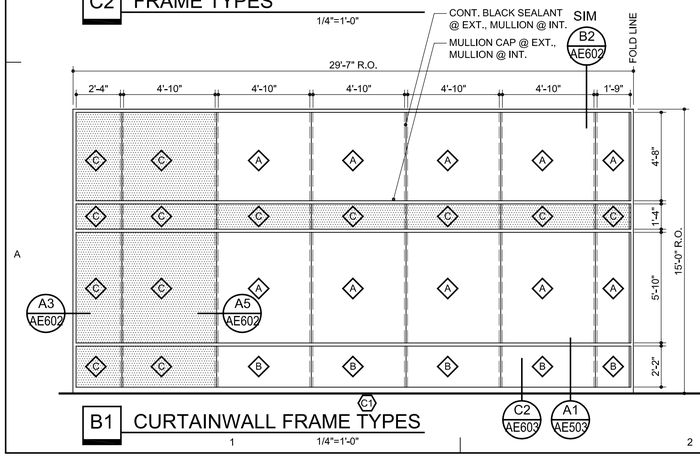
C1 HOLLOW METAL FRAME TYPES

1/4"=1'-0"



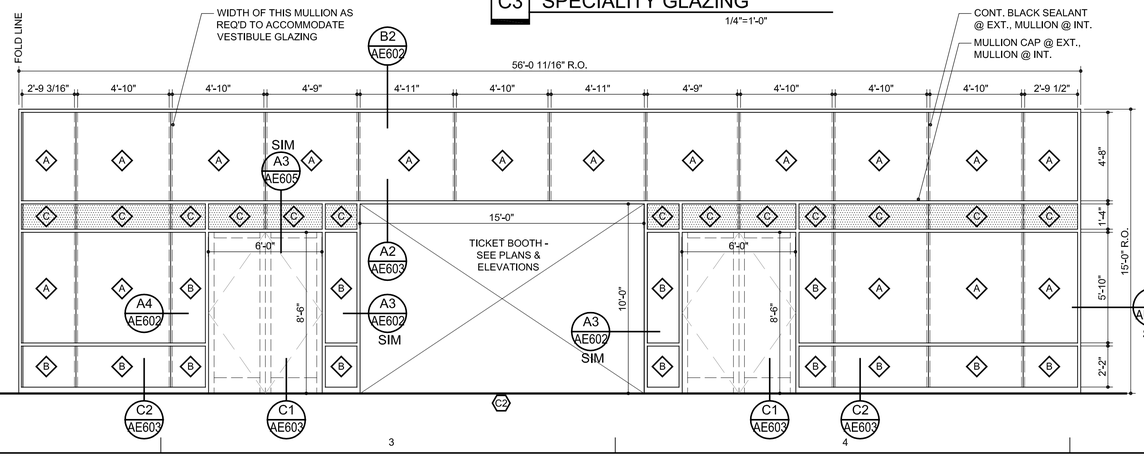
C2 ALUMINUM STOREFRONT FRAME TYPES

1/4"=1'-0"



C3 SPECIALITY GLAZING

1/4"=1'-0"



B1 CURTAINWALL FRAME TYPES

1/4"=1'-0"

GENERAL NOTES

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID.
2. CONTRACTOR TO VERIFY FIELD DIMENSIONS PRIOR TO CONSTRUCTION.
3. PATCH WALLS AND CEILINGS AFTER DEMOLITION AS REQUIRED FOR NEW FINISH.
4. WALLS ARE CENTERED ON 5' GRID UNLESS NOTED OTHERWISE.
5. PROTECT ALL EXISTING WORK DURING CONSTRUCTION.
6. TYP. INTERIOR H.M. JAMB - C3/601
7. TYP. INTERIOR H.M. HEAD - C4/AE601
8. TYP H.M. JAMB AT BRICK VENEER - A1/AE602

GLAZING SCHEDULE

- A — 1" INSULATED GLASS
- B — 1" INSULATED TEMPERED GLASS
- C — 1" INSULATED GLASS SPANDREL PANEL (OPAQUE)
- D — 1/4" CLEAR GLASS
- E — 1/4" CLEAR TEMPERED GLASS
- F — 1/4" ONE-WAY GLASS
- G — TRANSACTION WINDOW GLASS - BY MANUFACTURER
- H — 1/4" GLASS SPANDREL PANEL (OPAQUE)
- J — 1/2" CLEAR TEMPERED GLASS, POLISHED EDGES
- K — 1/4" MIRROR TEMPERED GLASS

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ANGLES PRIOR TO FABRICATION.
2. SOME DETAILS MAY BE REVERSED.
3. ALL MULLIONS ARE 2" U.N.O.
4. ALL MULLIONS AT GROUND LEVEL ARE 4" U.N.O.
5. ALL HOLLOW METAL DOORS AND FRAMES TO BE PAINTED (SPRAYED - NOT BRUSHED), INCLUDING EXISTING DOORS AND FRAMES).

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DOOR AND WINDOW DRAWINGS

AE801

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SYMBOL LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 / E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
A5 / E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING.
	BREAK, ROUND.
	NEW LINE: MEDIUM LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
WIRING METHODS	
	WIRING.
	WIRING TURNED UP OR TOWARDS OBSERVER.
	WIRING TURNED DOWN OR AWAY FROM OBSERVER.
A-1,3,5	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	JUNCTION BOX.
	WIREWAY.
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
C	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
WP	RECEPTACLE, DUPLEX, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, DUPLEX, RECESSED: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
	SWITCH, DIMMER.
$	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
$3	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
$4	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
$K	SWITCH, KEY OPERATED.
$P	SWITCH, PILOT LIGHT.
ELECTRICAL POWER AND DISTRIBUTION	
DM	DISTRIBUTION PANEL OR SWITCHBOARD.
	LIGHTING CONTROL STATION.
	DIMMING ENTRY STATION OR CONTROL STATION, FLUSH MOUNTED.
LIGHTING (REFER TO FIXTURE SCHEDULE FOR SYMBOLS)	
(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
(W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
EM	EMERGENCY.
NL	NIGHT LIGHT: DO NOT SWITCH.
↑	EGRESS DIRECTION ARROW.
LV	LOW VOLTAGE LIGHTING TRANSFORMER.

SYMBOL LEGEND

SYMBOL	DESCRIPTION
LIGHTING CONTROL	
HR / 1	HOMERUN SCHEDULE INDICATOR.
CLOCK, INTERCOM, SOUND, TV	
G	GROUND CABLE, 10 AWG, 1 CONDUCTOR, GREEN INSULATED.
M	MICROPHONE CABLE, 22 AWG, 2 CONDUCTOR, SHIELDED.
S	SPEAKER CABLE, 16 AWG, 2 CONDUCTOR.
V	VIDEO CABLE, RG59.
CP	CONTROL PANEL.
M	MICROPHONE INPUT.
M	MICROPHONE INPUT, FLOOR MOUNTED.
R	REMOTE CONTROL INPUT.
$	POWER SWITCH.
S	SPEAKER SWITCH.
SV	SOURCE SWITCH/VOLUME CONTROL.
V	VOLUME CONTROL.
	EQUIPMENT CABINET.
	MICROPHONE (ONE-LINE DIAGRAM).
4	SPEAKER, 4", SURFACE.
8	SPEAKER, 8", SURFACE.
	SPEAKER, HIGH FREQUENCY.
	SPEAKER, LOW FREQUENCY.
ADA	AUDIO DISTRIBUTION AMPLIFIER.
CMB	COMBINER.
DC	DIRECTIONAL COUPLER.
K	SIGNAL RELAY DPDT WITH SOCKET.
M	MONITOR.
PTZ	PAN/TILT/ZOOM RECEIVER.
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER, AC LINE CONDITIONER.
VCR	VIDEO CASSETTE RECORDER.
VDA	VIDEO DISTRIBUTION AMPLIFIER.
VS	VIDEO SWITCHER.
	AMPLIFIER (ONE-LINE DIAGRAM).
BB	BROAD BAND RF AMPLIFIER (ONE-LINE DIAGRAM).
SPL	SPLITTER (ONE-LINE DIAGRAM).
4W	TRANSFORMER, 4 WATT (ONE-LINE DIAGRAM).
8W	TRANSFORMER, 8 WATT (ONE-LINE DIAGRAM).
/M	TRANSFORMER, ISOLATION/MATCHING (ONE-LINE DIAGRAM).
	DIODE (ONE-LINE DIAGRAM).
	TERMINATOR.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
AC	ARMORED CABLE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE DOUBLE THROW
DS	DISCONNECT SWITCH
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
EXIST	EXISTING
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METALCONDUIT
FOB	FREIGHT ON BOARD
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ISOLATED
I/O	INPUT/OUTPUT
IR	INFRARED
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETALLIC CONDUIT
RPM	REVOLUTIONS PER MINUTE
RR	REMOVE AND RELOCATE
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
S/S	START/STOP
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC	VARIABLE FREQUENCY CONTROLLER
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

THEATRICAL SHEET INDEX

SHEET NO	SHEET TITLE
QT001	SHEET INDEX, SYMBOL LEGEND
QT401	ENLARGED LOWER LEVEL FIXED STAGE LIGHTING PLAN
QT402	ENLARGED UPPER LEVEL FIXED STAGE LIGHTING PLAN
QT403	ENLARGED UPPER LEVEL RIGGING PLAN
QT501	THEATRE EQUIPMENT DETAILS
QT502	THEATRE EQUIPMENT DETAILS
QT601	THEATRE EQUIPMENT SCHEDULES
QT602	THEATRE EQUIPMENT SCHEDULES
TA101	LOWER LEVEL AUDIO SYSTEM LAYOUT PLAN
TA301	ACOUSTICAL SECTIONS
TA401	ENLARGED UPPER LEVEL AUDIO SYSTEM LAYOUT PLAN
TA402	ENLARGED UPPER LEVEL ACOUSTICAL PLAN
TA501	AUDIO EQUIPMENT DETAILS
TA601	SOUND EQUIPMENT ONELINES & SCHEDULES
TA602	SOUND EQUIPMENT ONELINES & SCHEDULES

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

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REVISION NUMBER AND DATE:

AXIS JOB #:	0804
OWNER JOB #:	.
DATE:	July 21, 2008
DRAWN BY:	WDA
CHECKED BY:	JMG

SHEET INDEX,
SYMBOL LEGEND

QT001

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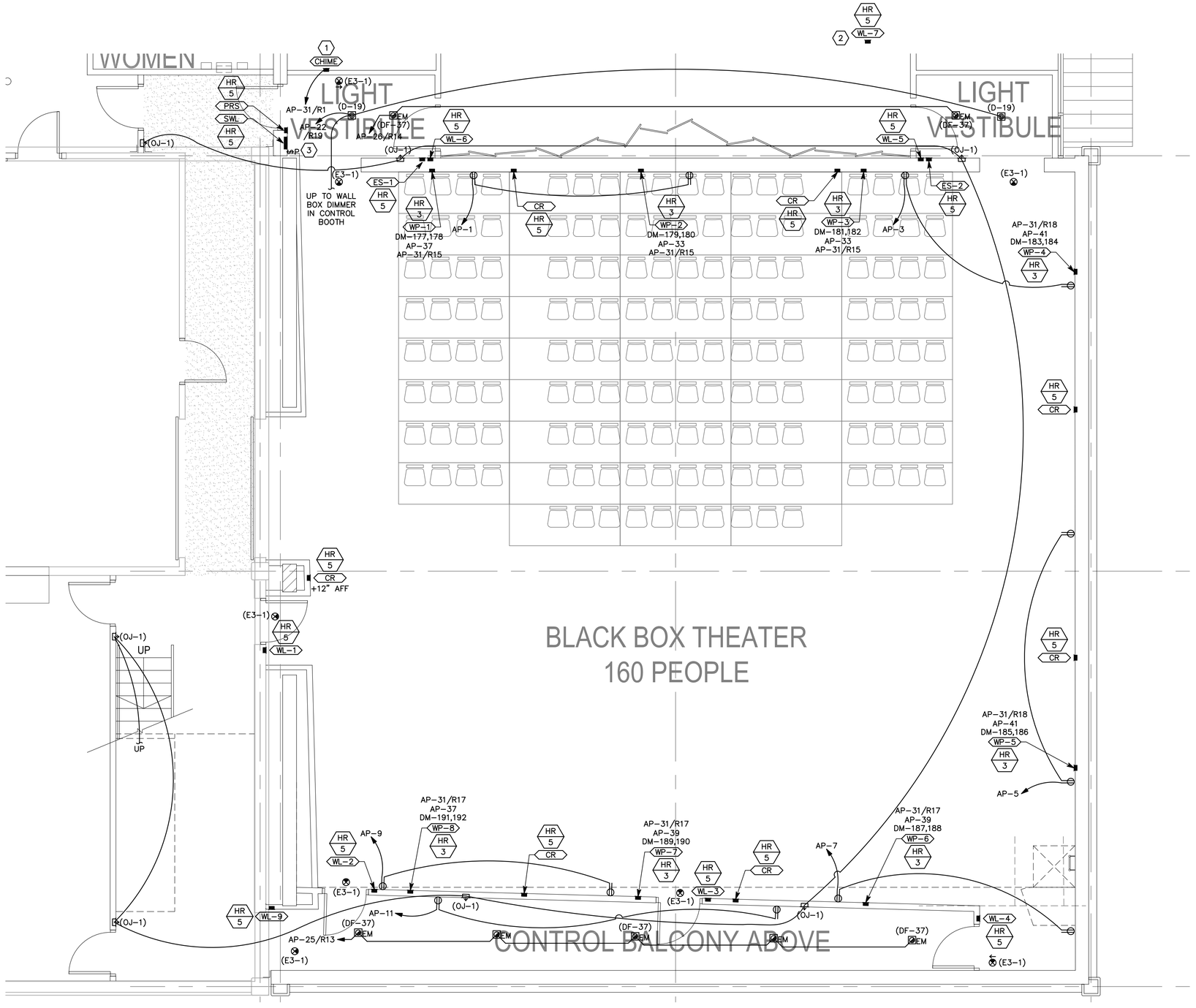

A1 ENLARGED LOWER LEVEL FIXED STAGE LIGHTING PLAN

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

GENERAL SHEET NOTES

1. CONNECT EMERGENCY BALLAST AND EXIT SIGNS CIRCUIT AP-84.

SHEET KEYNOTES

1. CHIME = EDWARDS #338-N5.
2. LOCATED IN BOX OFFICE.
3. REMOTE SWITCH FOR SOUND SYSTEM AUTOMATIC MIXER. (RCPS)

HR	HOMERUN KEY (LISTED BY TYPE, NOT QUANTITY)
HR-1	(8) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE
HR-2	(12) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE
HR-3	(8) #10 THHN +G TO "DM", "AP" OR "R" VIA 1.0" CONDUIT
HR-4	(2) #10 THHN +G TO "DM" VIA .75" CONDUIT
HR-5	.75" CONDUIT TO "DM". FILL WITH CONTROL WIRING AS REQUIRED.

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LICENSED PROFESSIONAL ENGINEER
No. 181563
DAVID E. WESEMANN
STATE OF UTAH

UTAH VALLEY UNIVERSITY NOORDA THEATRE

Orem, UT

REVISION NUMBER AND DATE:

AXIS JOB #:	0804
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DRAWN BY:	WDA
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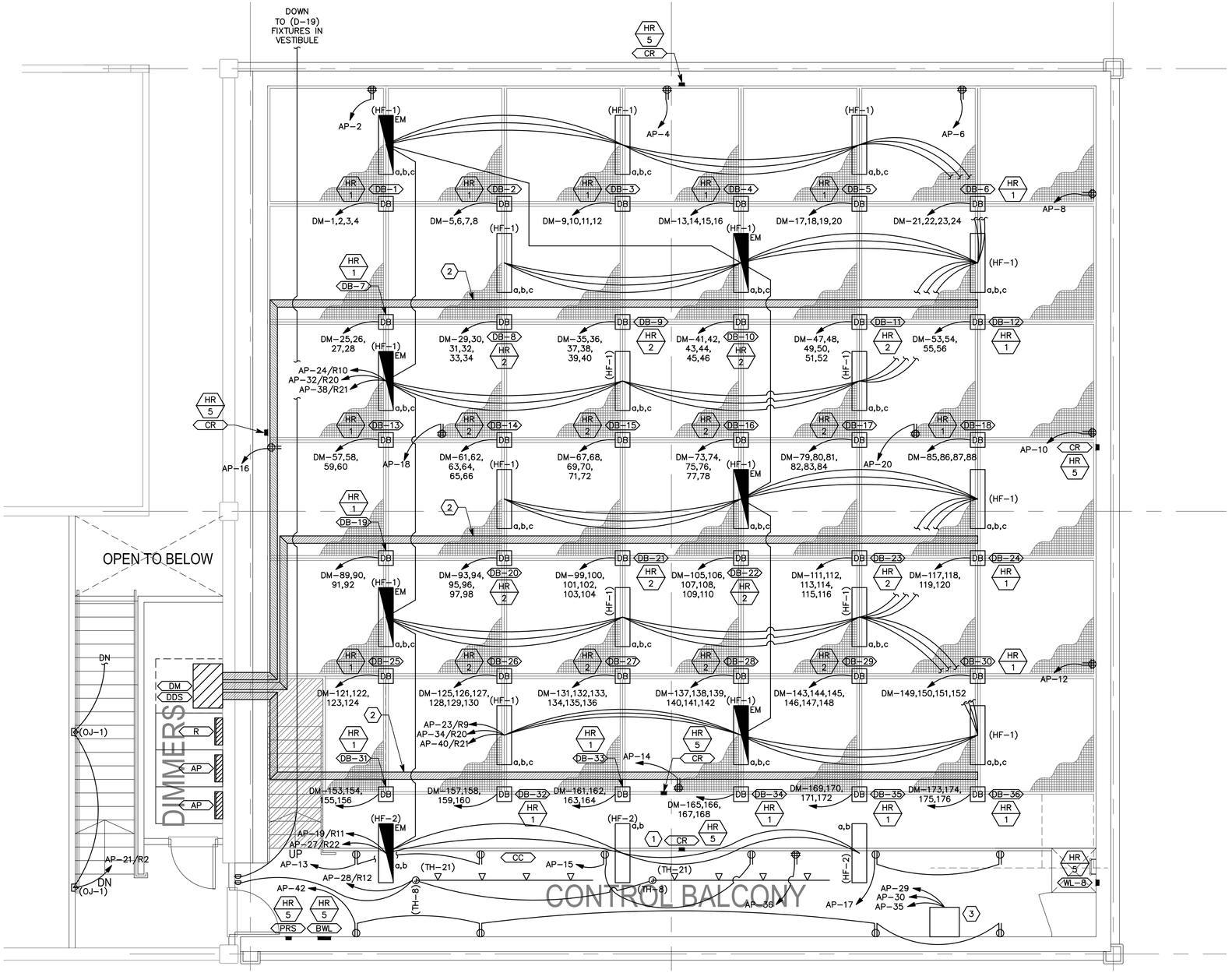
LOWER LEVEL
FIXED STAGE
LIGHTING PLAN

QT401

File Name: P:\2008\20080324\1Drawings\Sheet\24QT401.dwg Last Plotted: 2008/07/18 @ 3:01 PM By: wendy



GENERAL SHEET NOTES

1. CONNECT EMERGENCY BALLAST AND EXIT SIGNS CIRCUIT AP-84.
2. DEVICES SHOWN MOUNTED TO GRID SUPPORT LIGHTS MUST BE FED FROM STRUCTURE WITH FLEXIBLE CONDUIT. ATTACH TO GRID SUPPORTS AFTER INSTALLATION BY RIGGER. COORDINATE WITH DIVISION 11.

SHEET KEYNOTES

1. ALL DEVICES SURFACE MOUNTED TO CONTROL BALCONY HANDRAIL.
2. 6"X6" WIREWAY. MOUNTED INSIDE STRUCTURE. CORRIDNATE WITH DUCTS.
3. AUDIO EQUIPMENT RACK.

HOMERUN KEY

(LISTED BY TYPE, NOT QUANTITY)

HR-1	(8) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE
HR-2	(12) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE
HR-3	(8) #10 THHN +G TO "DM", "AP" OR "R" VIA 1.0" CONDUIT
HR-4	(2) #10 THHN +G TO "DM" VIA .75" CONDUIT
HR-5	.75" CONDUIT TO "DM". FILL WITH CONTROL WIRING AS REQUIRED.

A1 ENLARGED UPPER LEVEL FIXED STAGE LIGHTING PLAN

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

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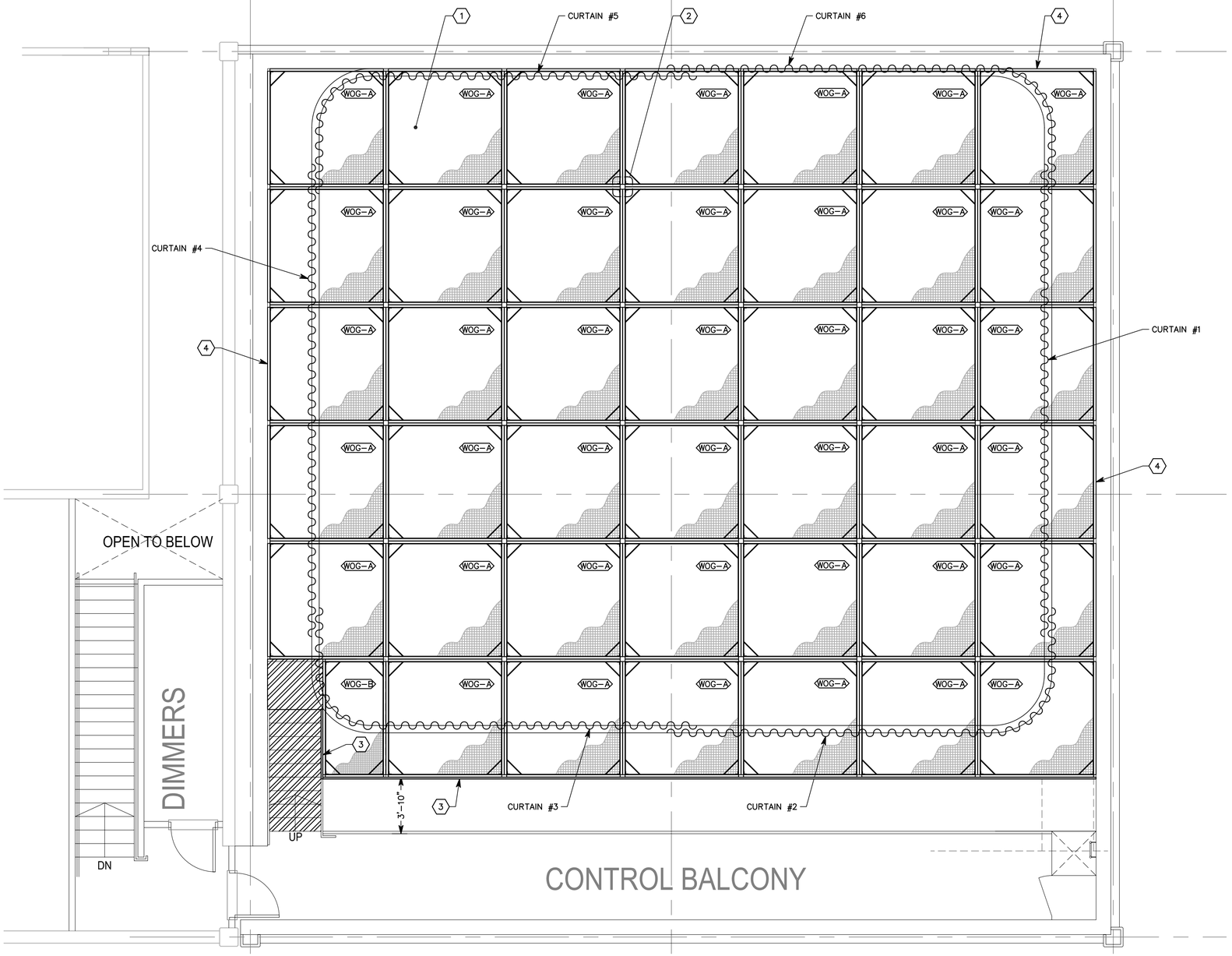
UPPER LEVEL
FIXED STAGE
LIGHTING PLAN

QT402

File Name: P:\2008\20080324\1Drawings\Sheet\24QT402.dwg Last Plotted: 2008/07/18 @ 3:00 PM By: wendy



A1 ENLARGED UPPER LEVEL RIGGING PLAN

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

GENERAL SHEET NOTES

1. PROVE (80) CHEESBORO PIPE CLAMPS, (12) 12'-0" 1.5" ID SKED 40 BLACK IRON PIPE BATTENS AND (20) 4'-0" 1.5" ID SKED 40 BLACK IRON PIPE BATTENS.

SHEET KEYNOTES

1. TYPICAL GRID PANEL. BY RIGGER.
2. TYPICAL VERTICAL GRID SUPPORT TO STRUCTURE. BY RIGGER.
3. RAILING ALONG THIS EDGE. BY RIGGER.
4. WALL CONNECTION ANGLE. BY RIGGER.

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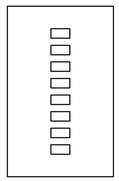
UPPER LEVEL
RIGGING PLAN

QT403

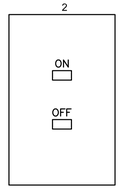
File Name: P:\2008\20080324\1Drawings\Sheet\24QT403.dwg Last Plotted: 2008/07/18 @ 3:00 PM By: wendy



PRESET RECALL STATION WITH LOCKING COVER.

PRS

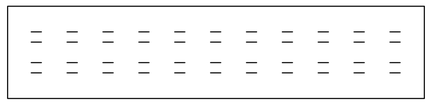
C1 PRESET RECALL STATION
NTS



ENTRY STATION WITH LOCKING COVER.
CONFIGURE TO TURN ON SELECTED CIRCUITS ONLY.
MOUNT AT +42" AFF.
TYPICAL

HR 5
ES-1
ES-2

D2 ENTRY STATION
NTS



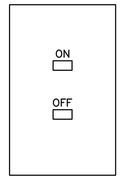
LOCKING DOOR, RECESSED BACK BOX.

PUSH BUTTONS & PILOT LIGHTS AS REQUIRED. (SEE SCHEDULE)

MOUNT ON ENTRY VESTIBULE & CONTROL BOOTH WALLS.

BWL
SWL

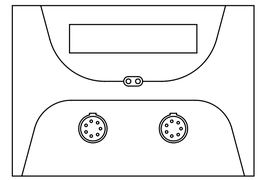
C2 WORKLIGHT STATION
NTS



HR 5
WL-1
WL-2
WL-3
WL-4
WL-5
WL-6
WL-7
WL-8

QUANTITY OF BUTTONS AS SCHEDULED.
MOUNT AT +42" AFF.
TYPICAL.

D3 WORKLIGHT STATION
NTS

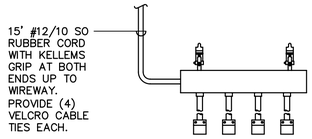


(1) DMX IN & (1) DMX OUT PER LOCATION.

MOUNT AT +18" AFF UNLESS OTHERWISE NOTED.

HR 5
CR

D4 CONTROL RECEPTACLE
NTS



DB-1	DM-	1	2	3	4
DB-2	DM-	5	6	7	8
DB-3	DM-	9	10	11	12
DB-4	DM-	13	14	15	16
DB-5	DM-	17	18	19	20
DB-6	DM-	21	22	23	24
DB-7	DM-	25	26	27	28
DB-12	DM-	53	54	55	56
DB-13	DM-	57	58	59	60
DB-18	DM-	85	86	87	88
DB-19	DM-	89	90	91	92
DB-24	DM-	117	118	119	120
DB-25	DM-	121	122	123	124
DB-30	DM-	149	150	151	152
DB-31	DM-	153	154	155	156
DB-32	DM-	157	158	159	160
DB-33	DM-	161	162	163	164
DB-34	DM-	165	166	167	168
DB-35	DM-	169	170	171	172
DB-36	DM-	173	174	175	176

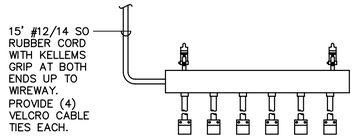
HR 1
DB-1
DB-2
DB-3
DB-4
DB-5
DB-6
DB-7
DB-12
DB-13
DB-18
DB-19
DB-24
DB-25
DB-30
DB-31
DB-32
DB-33
DB-34
DB-35
DB-36

(8) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE (EACH)

48" PIGTAILS REQUIRED

STAGE PIN CONNECTORS

B3 DROP BOX DETAIL
NTS



DB-8	DM-	29	30	31	32	33	34
DB-9	DM-	35	36	37	38	39	40
DB-10	DM-	41	42	43	44	45	46
DB-11	DM-	47	48	49	50	51	52
DB-14	DM-	61	62	63	64	65	66
DB-15	DM-	67	68	69	70	71	72
DB-16	DM-	73	74	75	76	77	78
DB-17	DM-	79	80	81	82	83	84
DB-20	DM-	93	94	95	96	97	98
DB-21	DM-	99	100	101	102	103	104
DB-22	DM-	105	106	107	108	109	110
DB-23	DM-	111	112	113	114	115	116
DB-26	DM-	125	126	127	128	129	130
DB-27	DM-	131	132	133	134	135	136
DB-28	DM-	137	138	139	140	141	142
DB-29	DM-	143	144	145	146	147	148

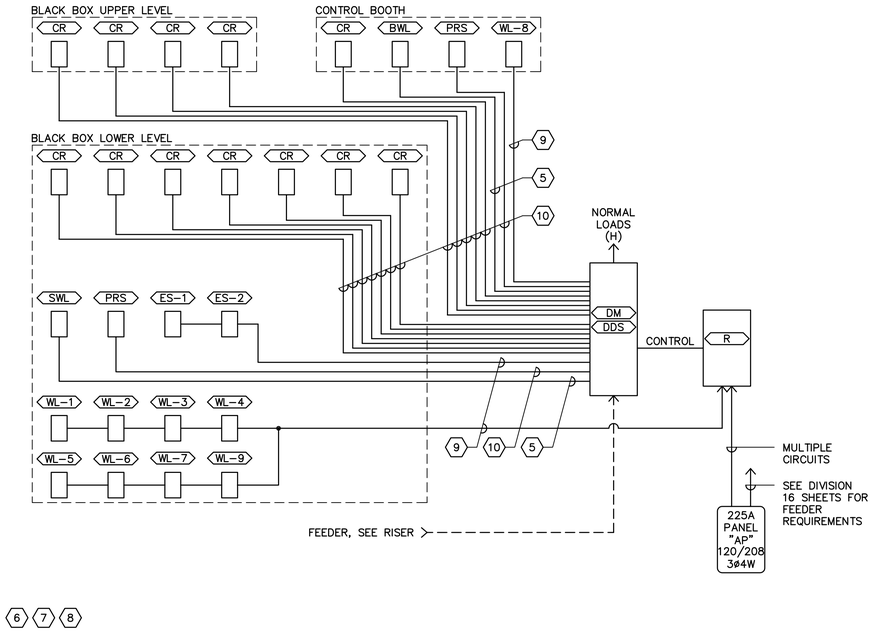
HR 2
DB-8
DB-9
DB-10
DB-11
DB-14
DB-15
DB-16
DB-17
DB-20
DB-21
DB-22
DB-23
DB-26
DB-27
DB-28
DB-29

(12) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE (EACH)

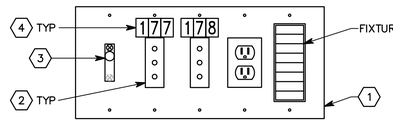
48" PIGTAILS REQUIRED

STAGE PIN CONNECTORS

B4 DROP BOX DETAIL
NTS



A1 LIGHTING CONTROL ONELINE DIAGRAM
NTS



	DM-	DM-	AP-	AP-	R-
WP-1	177	178	33	27	15
WP-2	179	180	33	27	15
WP-3	181	182	37	27	15
WP-4	183	184	37	27	17
WP-5	185	186	39	27	17
WP-6	187	188	39	27	17
WP-7	189	190	41	27	18
WP-8	191	192	41	27	18

HR 3
WP-1
WP-2
WP-3
WP-4
WP-5
WP-6
WP-7
WP-8

(8) #12 THHN +GR TO DM (EACH)

A3 WALL POCKET
NTS

GENERAL SHEET NOTES

1. .

SHEET KEYNOTES

1. BLACK STAINLESS STEEL CUSTOM WALL PLATE (0.04"), 6 GANG TO FIT COMMERCIAL 6 GANG DEEP MASONRY BACK BOX.
2. 2" X 0.75" CUT OUT FOR UNION CONNECTOR 2P&G-FL OUTLET.
3. UNIVERSAL CAST HOOK BOLTED TO COVER PLATE, BACKED BY ANGLE IRON BRACKET TO BACK BOX. SHIFFLER #BU-0111. (800-547-1539)
4. 0.50" X 0.75" SELF ADHESIVE CIRCUIT IDENTIFICATION LABELS.
5. (12) #8
6. PROVIDE CONTROL WIRING PER MANUFACTURER'S WRITTEN REQUIREMENTS. INFORMATION SHOW IN TYPICAL.
7. DIMMER RACK TO INCLUDE "DMX" SIGNAL MANAGEMENT FOR (4) LOCATIONS.
8. PROVIDE MINIMUM (4) 1" CONDUITS BETWEEN "CR" IN CONTROL BOOTH AND DIMMER RACK.
9. (5) #18
10. BELDEN #9553 OR EQUIVALENT. RUNS AS INDICATED.

HR	HOMERUN KEY (LISTED BY TYPE, NOT QUANTITY)
HR-1	(8) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE
HR-2	(12) #10 THHN +GR TO "DM" VIA WIREWAY AND "BC" SO MULTI CONDUCTOR CABLE
HR-3	(8) #10 THHN +G TO "DM", "AP" OR "R" VIA 1.0" CONDUIT
HR-4	(2) #10 THHN +G TO "DM" VIA .75" CONDUIT
HR-5	.75" CONDUIT TO "DM". FILL WITH CONTROL WIRING AS REQUIRED.

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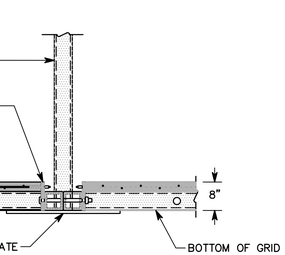
THEATRE EQUIPMENT DETAILS

QT501

File Name: P:\2008\20080324\1Drawings\Sheet\24QT501.dwg Last Plotted: 2008/07/18 @ 2:59 PM By: wendy



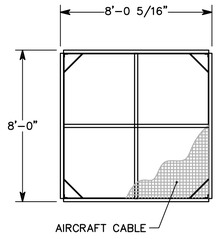
DETAIL DIMENSIONS SHOWN ARE CONTINUOUS AND REDUCTIONS NEED TO BE MADE FOR WALL AND SUSPENDED SUPPORT LOCATIONS.

WOG-B
D4 WALK ON GRID PANEL DETAIL
NTS

HANDRAIL SECTION VIEW

RIGGER TO PROVIDE RAILING FOR WALK ON GRID.
SEE SHEET QT403 FOR LOCATIONS.

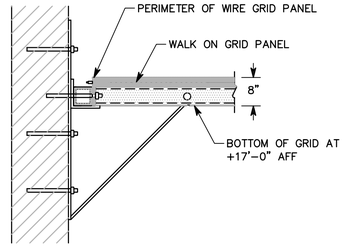
C3 WALK ON GRID GRID HANGER DETAIL
NTS



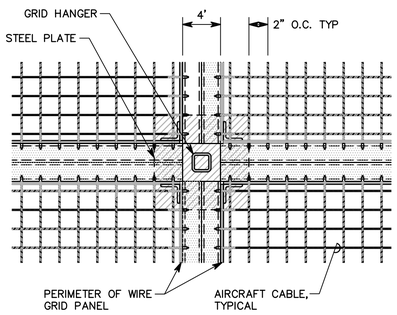
DETAIL DIMENSIONS SHOWN ARE CONTINUOUS AND REDUCTIONS NEED TO BE MADE FOR WALL AND SUSPENDED SUPPORT LOCATIONS.

WOG-A
C4 WALK ON GRID PANEL DETAIL
NTS

INTERSECTION AT GRID PANELS SECTION VIEW

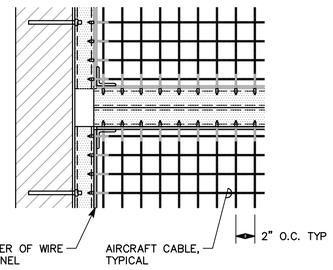


INTERSECTION AT WALL SECTION VIEW



INTERSECTION AT GRID PANELS PLAN VIEW

A3 WALK ON GRID GRID HANGER DETAIL
NTS



INTERSECTION AT WALL PLAN VIEW

A4 WALK ON GRID GRID HANGER DETAIL
NTS

GENERAL SHEET NOTES

1. .

SHEET KEYNOTES

1. .

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THEATRE EQUIPMENT DETAILS

QT502

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PANEL "AP"

UVU NOORDA THEATRE

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE & TYPE:	LOCATION:	CABINET:	NOTES:
120/208 V, 3 PH 4 WIRE	DUAL 22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS			

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, INSULATED GROUND BAR, SUBFEED LUGS TWO SECTIONS

CKT	OCP		LOAD (kVA)				LCL	PHASE LOAD			LCL		LOAD (kVA)			OCP		CKT
NO	AMP	POLE	LTG	CO	PWR	DESCRIPTION	kVA	A	B	C	kVA	DESCRIPTION	LTG	CO	PWR	AMP	POLE	NO
1	20	1		0.4		LOWER LEVEL CO	0.4	0.8			0.4	GRID LEVEL CO		0.4		20	1	2
3	20	1		0.4		LOWER LEVEL CO	0.4		0.8		0.4	GRID LEVEL CO		0.4		20	1	4
5	20	1		0.4		LOWER LEVEL CO	0.4			0.8	0.4	GRID LEVEL CO		0.4		20	1	6
7	20	1		0.4		LOWER LEVEL CO	0.4	0.8			0.4	GRID LEVEL CO		0.4		20	1	8
9	20	1		0.4		LOWER LEVEL CO	0.4		0.8		0.4	GRID LEVEL CO		0.4		20	1	10
11	20	1		0.4		LOWER LEVEL CO	0.4			0.8	0.4	GRID LEVEL CO		0.4		20	1	12
13	20	1		0.4		CONTROL BOOTH CO	0.4	0.8			0.4	GRID LEVEL CO		0.4		20	1	14
15	20	1		0.4		CONTROL BOOTH CO	0.4		0.8		0.4	GRID LEVEL CO		0.4		20	1	16
17	20	1		0.4		CONTROL BOOTH CO	0.4			0.8	0.4	GRID LEVEL CO		0.4		20	1	18
19	20	1	0.3			BOOTH WORKLIGHTS (a)	0.4	0.7			0.4	GRID LEVEL CO		0.4		20	1	20
21	20	1	0.4			RUNNING/STEP LIGHTS	0.5		0.7		0.4	VESTIBULE DOWNLIGHTS	0.3			20	1	22
23	20	1	0.9			GRID WORKLIGHTS (a)	1.1			1.8	1.1	GRID WORKLIGHTS (a)	0.9			20	1	24
25	20	1	0.5			CORRIDOR WORKLIGHTS	0.6	0.7			0.3	VESTIBULE WORKLIGHTS	0.2			20	1	26
27	20	1	0.3			BOOTH WORKLIGHTS (b)	0.4		1.1		1.0	BOOTH TRACK	0.8			20	1	28
29	20	1			1.5	SOUND RACK	1.5			3.0	1.5	SOUND RACK			1.5	20	1	30
31	20	1		0.4		< SEE NOTE 1 >	0.4	1.3			1.1	CLASSROOM LIGHTS (b)	0.9			20	1	32
33	20	1		0.4		WALL POCKET CO	0.4		1.3		1.1	CLASSROOM LIGHTS (b)	0.9			20	1	34
35	20	1			1.5	SOUND RACK	1.5			3.0	1.5	SOUND CONSOLE			1.5	20	1	36
37	20	1		0.4		WALL POCKET CO	0.4	1.3			1.1	CLASSROOM LIGHTS (c)	0.9			20	1	38
39	20	1		0.4		WALL POCKET CO	0.4		1.3		1.1	CLASSROOM LIGHTS (c)	0.9			20	1	40
41	20	1		0.4		WALL POCKET CO	0.4			1.2	0.8	BOOTH CO		0.8		20	1	42
43	20	1				spare	0.0	0.0			0.0	spare				20	1	44
45	20	1				spare	0.0		0.0		0.0	spare				20	1	46
47	20	1				spare	0.0			0.0	0.0	spare				20	1	48
49	20	1				spare	0.0	0.0			0.0	spare				20	1	50
51	20	1				spare	0.0		0.0		0.0	spare				20	1	52
53	20	1				spare	0.0			0.0	0.0	spare				20	1	54
55	20	1				spare	0.0	0.0			0.0	spare				20	1	56
57	20	1				spare	0.0		0.0		0.0	spare				20	1	58
59	20	1				spare	0.0			0.0	0.0	spare				20	1	60
61	20	1				spare	0.0	0.0			0.0	spare				20	1	62
63	20	1				spare	0.0		0.0		0.0	spare				20	1	64
65	20	1				spare	0.0			0.0	0.0	spare				20	1	66
67	20	1				spare	0.0	0.0			0.0	spare				20	1	68
69	20	1				spare	0.0		0.0		0.0	spare				20	1	70
71	20	1				spare	0.0			0.0	0.0	spare				20	1	72
73	20	1				spare	0.0	0.0			0.0	spare				20	1	74
75	20	1				spare	0.0		0.0		0.0	spare				20	1	76
77	20	1				spare	0.0			0.0	0.0	spare				20	1	78
79	20	1				spare	0.0	0.0			0.0	spare				20	1	80
81	20	1				spare	0.0		0.0		0.0	spare				20	1	82
83	20	1				spare	0.0			0.5	0.5	EM SENSE POWER			0.5	20	1	84
TOTALS:						CONNECTED kVA PER PHASE		6	7	12		CONNECTED TOTAL kVA			25			
						CONNECTED AMPS PER PHASE		53	57	99		CONNECTED AVERAGE AMPS PER PHASE			70			

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 8kVA @125% =	10 kVA	ALL OTHER LOADS @100% =	7 kVA	DIVERSIFIED TOTAL kVA =	27
RECEPTACLES 10kVA @100% =	10 kVA	25% OF LARGEST MOTOR =	0 kVA	AVERAGE AMPS PER PHASE =	75
REMAINDER 0kVA @ 50% =	0 kVA				

NOTES LEGEND:

1. AP-31 CONTROLS AUDIENCE CHIME, CUE LIGHTS, RELAY PANEL POWER, WALL POCKET PILOT LIGHT & WALL POCKET LIGHTING.

WORKLIGHT/ CUELIGHT CONTROL SCHEDULE

UVU NOORDA THEATRE

DESCRIPTION	RELAY # "R-"	CIRCUIT # "AP-"	WORK CONTROL CHANNEL	LABEL	BUTTON COLOR	SWL	BWL	FRONT SL WL-1	FRONT SL WL-2	FRONT CNTR WL-3	FRONT SR WL4	REAR SR WL5	REAR SL WL-6	BOX OFFICE WL-7	GRID STAIRS WL-8	CORR. ENTRY WL-9	REAR SR ES-1	REAR SL ES-2
AUDIENCE CHIME	R1	AP-31	1	CHIME	RED	X	X							X				
RUNNING/STEP LIGHTS	R2	AP-21	2	RUN LTS	WHITE	X	X									X		
CUE LIGHTS DOOR - SL CENTER	R3	-	3	Q L CNTR	GREY	X	X	X										
CUE LIGHTS DOOR - UP LEFT	R4	-	4	Q UP LEFT	GREY	X	X		X									
CUE LIGHTS DOOR - UP CENTER	R5	-	5	Q UP CNTR	GREY	X	X			X								
CUE LIGHTS DOOR - UP RIGHT	R6	-	6	Q UP RIGHT	GREY	X	X				X							
CUE LIGHTS DOOR - DOWN RIGHT	R7	-	7	Q DN RIGHT	GREY	X	X					X						
CUE LIGHTS DOOR - DOWN LEFT	R8	-	8	Q DN LEFT	GREY	X	X						X					
GRID WORKLIGHTS (a)	R9	AP-23	9	GRID	RED	X	X							X	X		X	X
	R10	AP-24	10	GRID	RED	X	X							X	X		X	X
BOOTH WORKLIGHTS (a)	R11	AP-19	11	BOOTH	RED	X	X				X				X			
BOOTH TRACKLIGHTS	R12	AP-28	12	BOOTH	RED	X	X								X			
CORRIDOR WORKLIGHTS	R13	AP-25	13	CORR WL	RED	X	X									X		
VESTIBULE WORKLIGHTS	R14	AP-26	14	VEST WL	RED	X	X							X			X	X
WALL POCKETS - EAST	R15	AP-31	15	WP EAST	WHITE	X	X											
WALL POCKETS - NORTH	R16	AP-31	16	WP NORTH	WHITE	X	X											
WALL POCKETS - WEST	R17	AP-31	17	WP WEST	WHITE	X	X											
WALL POCKETS - SOUTH	R18	AP-31	18	WP SOUTH	WHITE	X	X											
VESTIBULE DOWNLIGHTS	R19	AP-22	19	VEST DNLTS	WHITE	X	X											
CLASSROOM LIGHTS (b)	R20	AP-32,34	20	CLASS	WHITE	X	X											
CLASSROOM LIGHTS (c)	R21	AP-38,40,42	21	CLASS	WHITE	X	X											
BOOTH WORKLIGHTS (b)	R22	AP-27	22	BOOTH	WHITE	X	X											
SPARE	R23		23			X	X											
STATION LOCKOUT ENABLE	NOTE 2			LOCK OUT	RED	X	X											
EMERGENCY LIGHT FEED																		
RELAY PANEL POWER																		

NOTES:

1) CHANNELS DESIGNATED CUE LIGHTS "Q" OPERATE BUTTON PILOT LIGHTS ONLY.
2) STATION LOCKOUT ENABLE PROHIBITS OPERATION FROM WL-7, WL-8 AND WL-9 WHEN ACTIVATED.

DIMMING SCHEDULE

UVU NOORDA THEATRE

PANEL ID:	DM	LOCATION:	ROOM #	PAGE 1	MAIN CB:	NONE	JOB #20080324	7/18/2008
MOUNT:	FLOOR	FEEDER:	3P4W 4 250Kcl		LUGS:	INDIVIDUAL	FEEDER:	NONE

ACCESSORIES: LOCKING DOOR, CIRCUIT DIRECTORY, PANEL ID TAG, GROUND BAR, CONTROL DECODER, INDIVIDUAL NEUTRALS

DM PANEL FEEDS DIFFERENT LOADS SUCH AS DM, H, NL, AL, SS, AND WL.

SLOT			CONTROL		LOAD				TOTAL	PANEL LOADING			TOTAL			LOAD		CONTROL				SLOT
NO.	TYPE	AMPS	POLE	CH#	LIGHTING	OUTLETS	ID	LOCATION	WATTS	A	B	C	WATTS	LOCATION	ID	OUTLETS	LIGHTING	CH#	POLE	AMPS	TYPE	NO.
1	Dimmer	20	1	P 1	0	600	DM 1	DB-1	600	1200			600	DB-1	DM 2	600	0	P 2	1	20	Dimmer	2
3	Dimmer	20	1	P 3	0	600	DM 3	DB-1	600		1200		600	DB-1	DM 4	600	0	P 4	1	20	Dimmer	4
5	Dimmer	20	1	P 5	0	600	DM 5	DB-2	600			1200	600	DB-2	DM 6	600	0	P 6	1	20	Dimmer	6
7	Dimmer	20	1	P 7	0	600	DM 7	DB-2	600	1200			600	DB-2	DM 8	600	0	P 8	1	20	Dimmer	8
9	Dimmer	20	1	P 9	0	600	DM 9	DB-3	600		1200		600	DB-3	DM 10	600	0	P 10	1	20	Dimmer	10
11	Dimmer	20	1	P 11	0	600	DM 11	DB-3	600			1200	600	DB-3	DM 12	600	0	P 12	1	20	Dimmer	12
13	Dimmer	20	1	P 13	0	600	DM 13	DB-4	600	1200			600	DB-4	DM 14	600	0	P 14	1	20	Dimmer	14
15	Dimmer	20	1	P 15	0	600	DM 15	DB-4	600		1200		600	DB-4	DM 16	600	0	P 16	1	20	Dimmer	16
17	Dimmer	20	1	P 17	0	600	DM 17	DB-5	600			1200	600	DB-5	DM 18	600	0	P 18	1	20	Dimmer	18
19	Dimmer	20	1	P 19	0	600	DM 19	DB-5	600	1200			600	DB-5	DM 20	600	0	P 20	1	20	Dimmer	20
21	Dimmer	20	1	P 21	0	600	DM 21	DB-6	600		1200		600	DB-6	DM 22	600	0	P 22	1	20	Dimmer	22
23	Dimmer	20	1	P 23	0	600	DM 23	DB-6	600			1200	600	DB-6	DM 24	600	0	P 24	1	20	Dimmer	24
25	Dimmer	20	1	P 25	0	600	DM 25	DB-7	600	1200			600	DB-7	DM 26	600	0	P 26	1	20	Dimmer	26
27	Dimmer	20	1	P 27	0	600	DM 27	DB-7	600		1200		600	DB-7	DM 28	600	0	P 28	1	20	Dimmer	28
29	Dimmer	20	1	P 29	0	600	DM 29	DB-8	600			1200	600	DB-8	DM 30	600	0	P 30	1	20	Dimmer	30
31	Dimmer	20	1	P 31	0	600	DM 31	DB-8	600	1200			600	DB-8	DM 32	600	0	P 32	1	20	Dimmer	32
33	Dimmer	20	1	P 33	0	600	DM 33	DB-8	600		1200		600	DB-8	DM 34	600	0	P 34	1	20	Dimmer	34
35	Dimmer	20	1	P 35	0	600	DM 35	DB-9	600			1200	600	DB-9	DM 36	600	0	P 36	1	20	Dimmer	36
37	Dimmer	20	1	P 37	0	600	DM 37	DB-9	600	1200			600	DB-9	DM 38	600	0	P 38	1	20	Dimmer	38
39	Dimmer	20	1	P 39	0	600	DM 39	DB-9	600		1200		600	DB-9	DM 40	600	0	P 40	1	20	Dimmer	40
41	Dimmer	20	1	P 41	0	600	DM 41	DB-10	600			1200	600	DB-10	DM 42	600	0	P 42	1	20	Dimmer	42
43	Dimmer	20	1	P 43	0	600	DM 43	DB-10	600	1200			600	DB-10	DM 44	600	0	P 44	1	20	Dimmer	44
45	Dimmer	20	1	P 45	0	600	DM 45	DB-10	600		1200		600	DB-10	DM 46	600	0	P 46	1	20	Dimmer	46
47	Dimmer	20	1	P 47	0	600	DM 47	DB-11	600			1200	600	DB-11	DM 48	600	0	P 48	1	20	Dimmer	48
49	Dimmer	20	1	P 49	0	600	DM 49	DB-11	600	1200			600	DB-11	DM 50	600	0	P 50	1	20	Dimmer	50
51	Dimmer	20	1	P 51	0	600	DM 51	DB-11	600		1200		600	DB-11	DM 52	600	0	P 52	1	20	Dimmer	52
53	Dimmer	20	1	P 53	0	600	DM 53	DB-12	600			1200	600	DB-12	DM 54	600	0	P 54	1	20	Dimmer	54
55	Dimmer	20	1	P 55	0	600	DM 55	DB-12	600	1200			600	DB-12	DM 56	600	0	P 56	1	20	Dimmer	56
57	Dimmer	20	1	P 57	0	600	DM 57	DB-13	600		1200		600	DB-13	DM 58	600	0	P 58	1	20	Dimmer	58
59	Dimmer	20	1	P 59	0	600	DM 59	DB-13	600			1200	600	DB-13	DM 60	600	0	P 60	1	20	Dimmer	60
61	Dimmer	20	1	P 61	0	600	DM 61	DB-14	600	1200			600	DB-14	DM 62	600	0	P 62	1	20	Dimmer	62
63	Dimmer	20	1	P 63	0	600	DM 63	DB-14	600		1200		600	DB-14	DM 64	600	0	P 64	1	20	Dimmer	64
65	Dimmer	20	1	P 65	0	600	DM 65	DB-14	600			1200	600	DB-14	DM 66	600	0	P 66	1	20	Dimmer	66
67	Dimmer	20	1	P 67	0	600	DM 67	DB-15	600	1200			600	DB-15	DM 68	600	0	P 68	1	20	Dimmer	68
69	Dimmer	20	1	P 69	0	600	DM 69	DB-15	600		1200		600	DB-15	DM 70	600	0	P 70	1	20	Dimmer	70
71	Dimmer	20	1	P 71	0	600	DM 71	DB-15	600			1200	600	DB-15	DM 72	600	0	P 72	1	20	Dimmer	72
73	Dimmer	20	1	P 73	0	600	DM 73	DB-16	600	1200			600	DB-16	DM 74	600	0	P 74	1	20	Dimmer	74
75	Dimmer	20	1	P 75	0	600	DM 75	DB-16	600		1200		600	DB-16	DM 76	600	0	P 76	1	20	Dimmer	76
77	Dimmer	20	1	P 77	0	600	DM 77	DB-16	600			1200	600	DB-16	DM 78	600	0	P 78	1	20	Dimmer	78
79	Dimmer	20	1	P 79	0	600	DM 79	DB-17	600	1200			600	DB-17	DM 80	600	0	P 80	1	20	Dimmer	80
81	Dimmer	20	1	P 81	0	600	DM 81	DB-17	600		1200		600	DB-17	DM 82	600	0	P 82	1	20	Dimmer	82
83	Dimmer	20	1	P 83	0	600	DM 83	DB-17	600			1200	600	DB-17	DM 84	600	0	P 84	1	20	Dimmer	84
85	Dimmer	20	1	P 85	0	600	DM 85	DB-18	600	1200			600	DB-18	DM 86	600	0	P 86	1	20	Dimmer	86
87	Dimmer	20	1	P 87	0	600	DM 87	DB-18	600		1200		600	DB-18	DM 88	600	0	P 88	1	20	Dimmer	88
89	Dimmer	20	1	P 89	0	600	DM 89	DB-19	600			1200	600	DB-19	DM 90	600	0	P 90	1	20	Dimmer	90
91	Dimmer	20	1	P 91	0	600	DM 91	DB-19	600	1200			600	DB-19	DM 92	600	0	P 92	1	20	Dimmer	92
93	Dimmer	20	1	P 93	0	600	DM 93	DB-20	600		1200		600	DB-20	DM 94	600	0	P 94	1	20	Dimmer	94
95	Dimmer	20	1	P 95	0	600	DM 95	DB-20	600			1200	600	DB-20	DM 96	600	0	P 96	1	20	Dimmer	96
97	Dimmer	20	1	P 97	0	600	DM 97	DB-20	600	1200			600	DB-20	DM 98	600	0	P 98	1	20	Dimmer	98
99	Dimmer	20	1	P 99	0	600	DM 99	DB-21	600		1200		600	DB-21	DM 100	600	0	P 100	1	20	Dimmer	100
101	Dimmer	20	1	P 101	0	600	DM 101	DB-21	600			1200	600	DB-21	DM 102	600	0	P 102	1	20	Dimmer	102
103	Dimmer	20	1	P 103	0	600	DM 103	DB-21	600	1200			600	DB-21	DM 104	600	0	P 104	1	20	Dimmer	104
105	Dimmer	20	1	P 105	0	600	DM 105	DB-22	600		1200		600	DB-22	DM 106	600	0	P 106	1	20	Dimmer	106
107	Dimmer	20	1	P 107	0	600	DM 107	DB-22	600			1200	600	DB-22	DM 108	600	0	P 108	1	20	Dimmer	108
109	Dimmer	20	1	P 109	0	600	DM 109	DB-22	600	1200			600	DB-22	DM 110	600	0	P 110	1	20	Dimmer	110
111	Dimmer	20	1	P 111	0	600	DM 111	DB-23	600		1200		600	DB-23	DM 112	600	0	P 112	1	20	Dimmer	112
113	Dimmer	20	1	P 113	0	600	DM 113	DB-23	600			1200	600	DB-23	DM 114	600	0	P 114	1	20	Dimmer	114
115	Dimmer	20	1	P 115	0	600	DM 115	DB-23	600	1200			600	DB-23	DM 116	600	0	P 116	1	20	Dimmer	116
117	Dimmer	20	1	P 117	0	600	DM 117	DB-24	600		1200		600	DB-24	DM 118	600	0	P 118	1	20	Dimmer	118
119	Dimmer	20	1	P 119	0	600	DM 119	DB-24	600			1200	600	DB-24	DM 120	600	0	P 120	1	20	Dimmer	120
121	Dimmer	20	1	P 121	0	600	DM 121	DB-25	600	1200			600	DB-25	DM 122	600	0	P 122	1	20	Dimmer	122
123	Dimmer	20	1	P 123	0	600	DM 123	DB-25	600		1200		600	DB-25	DM 124	600	0	P 124	1	20	Dimmer	124
125	Dimmer	20	1	P 125	0	600	DM 125	DB-26	600			1200	600	DB-26	DM 126	600	0	P 126	1	20	Dimmer	126
127	Dimmer	20	1	P 127	0	600	DM 127	DB-26	600	1200			600	DB-26	DM 128	600	0	P 128	1	20	Dimmer	128
129	Dimmer	20	1	P 129	0	600	DM 129	DB-26	600		1200		600	DB-26	DM 130	600	0	P 130	1	20	Dimmer	130
131	Dimmer	20	1	P 131	0	600	DM 131	DB-27	600			1200	600	DB-27	DM 132	600	0	P 132	1	20	Dimmer	132
133	Dimmer	20	1	P 133	0	600	DM 133	DB-27	600	1200			600	DB-27	DM 134	600	0	P 134	1	20	Dimmer	134
135	Dimmer	20	1	P 135	0	600	DM 135	DB-27	600		1200		600	DB-27	DM 136	600	0	P 136	1	20	Dimmer	136
137	Dimmer	20	1	P 137	0	600	DM 137	DB-28	600			1200	600	DB-28	DM 138	600	0	P 138	1	20	Dimmer	138
139	Dimmer	20	1	P 139	0	600	DM 139	DB-28	600	1200			600	DB-28	DM 140	600	0	P 140	1	20	Dimmer	140
141	Dimmer	20	1	P 141	0	600	DM 141	DB-28	600		1200		600	DB-28	DM 142	600	0	P 142	1	20	Dimmer	142
143	Dimmer	20	1	P 143	0	600	DM 143	DB-29	600			1200	600	DB-29	DM 144	600	0	P 144	1	20	Dimmer	144
145	Dimmer	20	1	P 145	0	600	DM 145	DB-29	600	1200			600	DB-29	DM 146	600	0	P 146	1	20	Dimmer	146
147	Dimmer	20	1	P 147	0	600	DM 147	DB-29	600		1200		600	DB-29	DM 148	600	0	P 148	1	20	Dimmer	148
149	Dimmer	20	1	P 149	0	600	DM 149	DB-30	600			1200	600	DB-30	DM 150	600	0	P 150	1	20	Dimmer	150
151	Dimmer	20	1	P 151	0	600	DM 151	DB-30	600	1200			600	DB-30	DM 152	600	0	P 152	1	20	Dimmer	152
153	Dimmer	20	1	P 153	0	600	DM 153	DB-31	600		1200		600	DB-31	DM 154	600	0	P 154	1	20	Dimmer	154
155	Dimmer	20	1	P 155	0	600	DM 155	DB-31	600			1200	600	DB-31	DM 156	600	0	P 156	1	20	Dimmer	156
157	Dimmer	20	1	P 157	0	600	DM 157	DB-23	600	1200			600	DB-23	DM 158	600	0	P 158	1	20	Dimmer	158
159	Dimmer	20	1	P 159	0	600	DM 159	DB-23	600		1200		600	DB-23	DM 160	600	0	P 160	1	20	Dimmer	160
161	Dimmer	20	1	P 161	0	600	DM 161	DB-33	600			1200	600	DB-33	DM 162	600	0	P 162	1	20	Dimmer	162
163	Dimmer	20	1	P 163	0	600	DM 163	DB-33	600	1200			600	DB-33	DM 164	600	0	P 164	1	20	Dimmer	164
165	Dimmer	20	1	P 165	0	600	DM 165	DB-34	600		1200		600	DB-34	DM 166	600	0	P 166	1	20	Dimmer	166
167	Dimmer	20	1	P 167	0	600	DM 167	DB-34	600			1200	600	DB-34	DM 168	600	0	P 168	1	20	Dimmer	168
169	Dimmer	20	1	P 169	0	600	DM 169	DB-35	600	1200			600	DB-35	DM 170	600	0	P 170	1	20	Dimmer	170
171	Dimmer	20	1	P 171	0	600	DM 171	DB-35	600		1200		600	DB-35	DM 172	600	0	P 172	1	20	Dimmer	172
173	Dimmer	20	1	P 173	0	600	DM 173	DB-36	600			1200	600	DB-36	DM 174	600	0	P 174	1	20	Dimmer	174
175	Dimmer	20	1	P 175	0	600	DM 175	DB-36	600	1200			600	DB-36	DM 176	600	0	P 176	1	20	Dimmer	176
177	Dimmer	20	1	P 177	0	600	DM 177	WP-1	600		1200		600	WP-1	DM 178	600	0	P 178	1	20	Dimmer	178
179	Dimmer	20	1	P 179	0	600	DM 179	WP-2	600			1200	600	WP-2	DM 180	600	0	P 180	1	20	Dimmer	180
181	Dimmer	20	1	P 181	0	600	DM 181	WP-3	600	1200			600	WP-3	DM 182	600	0	P 182	1	20	Dimmer	182
183	Dimmer	20	1	P 183	0	600	DM 183	WP-4	600		1200		600	WP-4	DM 184	600	0	P 184	1	20	Dimmer	184
185	Dimmer	20	1	P 185	0	600	DM 185	WP-5	600			1200	600	WP-5	DM 186	600	0	P 186	1	20	Dimmer	186
187	Dimmer	20	1	P 187	0	600	DM 187	WP-6	600	1200			600	WP-6	DM 188

LIGHTING FIXTURE SCHEDULE

UVU NOORDA THEATRE

NOTE TO BIDDERS: COMPLY WITH SECTIONS 16511, 16521, AND 16570 OF THE SPECIFICATIONS.
REFER TO SPECIFICATIONS FOR IMPORTANT TECHNICAL REQUIREMENTS FOR LIGHTING FIXTURES, BALLASTS, AND LAMPS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED TO ASSIST BIDDERS IN SELECTING PRODUCTS TO ACHIEVE THE DESIGN CONCEPT, HOWEVER, PRIOR TO BIDDING, EACH MANUFACTURER SHALL COMPARE THE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND REQUIREMENTS ON THE DRAWINGS, AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES. SPECIFICALLY INCLUDED IN THIS EVALUATION SHALL BE THE VERIFYING OF PROPER MOUNTING KITS OR ACCESSORIES TO FACILITATE INSTALLATION AS SHOWN AT EACH LOCATION ON THE DRAWINGS. NO ALLOWANCE OR REDRESS WILL BE ALLOWED FOR DISCREPANCIES THAT WERE NOT REPORTED TO THE ARCHITECT/ENGINEER IN TIME FOR CORRECTION OR CLARIFICATION BEFORE THE BID. THE REPORTING OF ANY AMBIGUITY IS THE RESPONSIBILITY OF THE BIDDER. PROVIDE UNIT PRICES AND FIXTURE BRAND SELECTED FOR ADD/DELETE CHANGES FOR EACH FIXTURE TYPES SHOWN WITHIN 48 BUSINESS HOURS OF THE BID DATE. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY DISQUALIFY THE PRODUCTS AND EMPOWER THE ENGINEER TO DETERMINE FAIR VALUE FOR FIXTURE AND INSTALLATION CHANGES, WITHOUT FURTHER INPUT FROM THE CONTRACTOR OR INSTALLER. SUBMITTAL PACKAGE SHALL INCLUDE LAMP MANUFACTURER AND CATALOG NUMBER ON EACH FIXTURE SHEET. ON ALL PENDANT MOUNTED FIXTURES, PROVIDE A SECOND SET OF PENDANTS, OF A DIFFERENT LENGTH, AS DIRECTED BY THE ARCHITECT/ENGINEER, PROVIDED AND INSTALLED AT NO ADDITIONAL CHARGE. ALL FIXTURES SHALL BE APPROVED BY UL OR ANOTHER ACCEPTABLE TESTING LAB FOR THE PURPOSE INTENDED AND WITH THE LAMP AND BALLAST PROPOSED. CONTRACTOR ALLOWANCE PRICES ARE ACCURATE WHEN THIS JOB WAS SPECIFIED, CONTRACTOR AND ELECTRICAL DISTRIBUTOR SHALL VERIFY THIS ALLOWANCE AND REPORT ANY PROBLEMS TO THE ENGINEER BEFORE THE BID. ALLOWANCE PRICE MAY OR MAY NOT INCLUDE LAMP(S) OR FREIGHT AS NOTED, AND DO NOT INCLUDE ANY TAXES. UNIVERSAL VOLTAGE (120/277) BALLASTS REQUIRED UNLESS NOTED OTHERWISE.

MARK	FIXTURE CHARACTERISTICS BODY / AIR / MOUNTING / DOOR LENS/LOUVER/REFLECTOR/OTHER	LAMP	WATTS	VOLTS	MANUFACTURER	CATALOG NUMBER
D	DOWNLIGHT; THERMALLY PROTECTED HOUSING; TO ACCOMMODATE MULTIPLE ALUMINUM TRIMS AND REFLECTOR ASSEMBLIES AS LISTED BELOW; MAX 8" DEEP, NON-IC HOUSINGS EXCEPT AS NOTED.					
D-19	RECESSED 150W ADJUSTABLE DOWN- LIGHT, 360 DEGREE X 35 DEGREE ADJUSTMENT, 40 DEGREE BEAM SPREAD UNLESS OTHERWISE NOTED. BLACK BAFFLE, WHITE TRIM.	100HIR PAR38FL	150W	120V	HUBBELL CAPRI LIGHTOLIER PRESCOLITE LITHONIA	A303-616W (16 X 16 X 14-5/8) CINADJ6150-RM40 (12-1/8 X 7-5/8 X 7-5/8) 1102P1-1127(30 DEG) (11-1/8 X 9 X 7-15/16) PBX-TA38 BF (11-1/2 X 7-1/2 X 7-1/2) LP6 6AB2 (13 X 12-1/4 X 7-3/4)
DF	FLUORESCENT DOWNLIGHT; THERMALLY PROTECTED HOUSING: TO ACCOMMODATE MULTIPLE TRIMS AND REFLECTOR ASSEMBLIES FOR LAMPS AS LISTED BELOW; ELECTRONIC BALLASTS; LOW IRIDESCENT REFLECTOR FINISH (EVEN IF NOT SHOWN IN CATALOG #); SELF FLANGING TRIM UNLESS NOTED.					
DF-37	RECESSED DOWNLIGHT; 8-10" APERTURE, HORIZONTAL, 2-32W CF-AMALGAM LAMPS, CLEAR.	2-CF-A32 RE835	100W	120/277V	PORTFOLIO INFINITY LIGHTOLIER LITHONIA OMEGA PRESCOLITE	C9232E-9251LI (17-15/16 X 16-1/2 X 9-3/8) PH10 232T-EB (GX24Q-3) 277 BH (23 X 17 X 9) 8039CLW/8232HU (15-5/8 X 14 X 9) AF 2/32TRT 10AR MVOLT (17-1/2 X 17-3/16 X 9-3/4) S82H32-U-T82HPLT-CS (14-11/16 X 13-1/4 X 6-11/16) CFT932HEB-STF902H (16-1/4 X 14-7/16 X 8-9/16)
E3	EXIT SIGN: CAST ALUMINIUM HOUSING; UNIVERSAL MOUNTING; UNIVERSAL ARROWS PER PLANS; EMERGENCY BATTERY PACK WITH 10 YEAR PRO-RATA WARRANTY; LED, DIFFUSE LENS PANEL; GREEN LETTERS ON BLACK BACKGROUND. MUST MEET NFPA ILLUMINATION STANDARDS.					
E3-1	SINGLE FACE:	LED	1W	120/277V	DUAL-LITE EELP LITHONIA SURE-LITES MCPHILBEN CHLORIDE LIGHTOLIER	LCSGBE CA 1G B EM LES B 1 G 120/277 ELN CX7170GB ER55L-1-12/27-BG CXLN1GB LDN1GB
E3-2	DUAL FACE:	LED	2W	120/277V	DUAL-LITE EELP LITHONIA SURE-LITES MCPHILBEN CHLORIDE LIGHTOLIER	LCDGBE CA 2G B EM LES B 2 G 120/277 ELN CX7270GB ER55L-2-12/27-BG CXLN2GB LDN2GB
E9	EXIT SIGN: METAL HOUSING; CEILING MOUNT, SEE DRAWINGS; ARROWS PER PLANS; LED LAMPS;EMERGENCY BATTERY PACK WITH 10 YEAR PRO-RATA WARRANTY; SELF-TESTING; EDGE LIGHTED CLEAR LENS; GREEN LETTERS ON CLEAR BACKGROUND. MUST MEET NFPA ILLUMINATION STANDARDS. UNITS SHOWN ARE CEILING MOUNT MODELS. CONTRACTOR TO PROVIDE MATCHING WALL MOUNTED UNITS WHERE REQUIRED.					
E9-1	SINGLE FACE:	LED	20W	120/277V	DUAL-LITE EELP LITHONIA ISOLITE HIGH-LITES CHLORIDE LIGHTOLIER	LECSGWE EDG 1 GC W EM LRP W 1 GC XX 120/277 ELN EDGL-EM-S-S-G-BK (BLACK HOUSING) LEDBPRXFO-2-GC-SX STELX-X-1-SC-X LEEC1GCX
E9-2	DUAL FACE:	LED	20W	120/277V	DUAL-LITE EELP LITHONIA ISOLITE HIGH-LITES CHLORIDE LIGHTOLIER	LECDGWE EDG 2 GC W EM LRP W 2 GMR XX 120/277 ELN EDGL-EM-D-S-GM-BK (BLACK HOUSING) LEDBPRXFO-3-GW-SX STELX-X-2-SC-X LEEC2GC7
HF	HIGH BAYFLUORESCENT FIXTURES: SPECULAR REFLECTOR, BLACK HOUSING; ELECTRONIC BALLAST; RATED FOR 55 DEGREES C. PROVIDE WIRE GUARDS EMERGENCY BATTERY WHERE INDICATED, 3 BALLASTS, 3 CIRCUIT					
HF-1	HEAVY DUTY SURFACE LUMINAIRE, 48" X 17", 6-LAMP	6-F28T5 RE841	189W	120/277V	LA LIGHTING COLUMBIA LITHONIA	HBI-600-6-4M-SR-X-3LE5-WG11-120 LHR46M4R28ST2/3EB-UNV-EL FSB628T5KDS3/2T5EL14
HF-2	HEAVY DUTY SURFACE LUMINAIRE, 48" X 17", 4-LAMP	4-F28T5 RE841	126W	120/277V	LA LIGHTING COLUMBIA LITHONIA	HBI-600-4-4M-SR-X-2LE5-WG11-120 LHR44M4R28ST2/2EB-UNV-EL FSB428T5KDS3/2T5EL14
OJ	RECESSED WALL STEP LIGHT LOUVERED STAINLESS STEEL PLATE OR FIT INTO THEATRICAL WALL POCKET					
OJ-1	LED STEPLIGHT WITH LOUVER	LED	3W	120V	P&S	TMHWL-LOUVCC/SS771
OJ-99	WALL POCKET WORKLIGHT BUILD INTO WALL POCKET	LED	3W	120V	P&S	TMHWL-LOUVCC
SP	STAGE SPOTLIGHTS: SHEET STEEL AND CAST STEEL OR ALUMINIUM, OR MOLDED HIGH TEMPERATURE PLASTIC. EACH LIGHTING INSTRUMENT WITH CLEAR HEAT TREATED LENS AS SPECIFIED, 3 WIRE LEADS WITH CONNECTOR INSTALLED TO MATCH DISTRIBUTION OUTLETS, PIPE CLAMP, SAFETY CABLE, COLOR FRAME, LENS ACCESSORY IF SPECIFIED. INSTALL LAMP, VERIFY ALIGNMENT, AND INSTALL STAGE SPOTLIGHT AS DIRECTED IN FIELD. TUNGSTEN HALOGEN LAMPS IDENTIFIED BY ANSI CODE. (USE APPROVED MANUFACTURER ONLY. MAY BE PROVIDED BY A THEATRICAL DEALER OR DIMMING EQUIPMENT MANUFACTURER, AS A RESELLER USING THEIR CATALOG #.) PROVIDE LAMP AS REQUIRED TO FIT INSTRUMENT PROVIDED, BY GE, SYLVANIA, PHILLIPS, THORN, OR OSRAM, AND AS RECOMMENDED BY THE FIXTURE MANUFACTURER.					
SP-1	FRESNEL SPOTLIGHT; 6" LENS ROUND BEAM, 10 TO 55 DEGREE ADJUSTABLE BEAM ANGLE WITH 6" SNOOT. PROVIDE (12) 36" SIDE ARMS.	BTN	500W	120V	ALTMAN STRAND LIGHTING COLORTRAN	6SQ 22D81 213-51X
TH	TRACK AND TRACK LIGHTS: LENGTH OF TRACK AND NUMBER OF FIXTURES AND ACCESSORIES AS SHOWN ON DRAWINGS. TRACK FEEDENDS, DEADENDS, TURNS, HANGING DEVICES, ETC., ARE AS REQUIRED TO INSTALL TRACKS AS SHOWN ON DRAWINGS AND/OR SPECIFIED, IN COMPLIANCE WITH NEC 410-104. INSTALLERS ARE CAUTIONED TO ENSURE TRACK HEADS AND TRACK ARE COMPATIBLE (I.E., ADAPTER FOR TWO CIRCUIT TRACK WHERE REQUIRED).					
TH-8	DUAL CIRCUIT TRACK, SURFACE MOUNT, BLACK.		180VA	/2'	HALO PRESCOLITE STAFF LIGHTOLIER CAPRI HUBBELL LITHONIA	L64X-MB SERIES TT-BL SERIES 58043-BK SERIES 6100BK SERIES CT/BK SERIES HTTRAXXBK SERIES L2T DBL SERIES
TH-21	TRACKLIGHT: LOW VOLTAGE FRAMING PROJECTOR, SOLID STATE TRANSFORMER; BLACK.	MR16 EYF	80W	120V	HALO PRESCOLITE LIGHTOLIER CAPRI	L2756BK T181BK 6298-6497-BK CR9111 (MR11)-BK
W	LOW PROFILE WRAPAROUND: SURFACE MOUNTED SUITABLE FOR MOUNTING ON LOW DENSITY CEILINGS WRAPAROUND ACRYLIC PRISMATIC DIFFUSER; WHITE ENAMEL ENDPLATES; MINIMUM CU OF 70 @ 80/50/20 AND RCR=1; PROGRAM START ELECTRONIC BALLASTS; T8 LAMPS; ONE BALLAST PER FIXTURE WHERE POSSIBLE, UNLESS TWO LEVEL SWITCHING IS SHOWN ON THE PLANS.					
W-3	NARROW BODY WRAPAROUND; 2-LAMP, APPROX; 3" X 10" X 48".	2-F32T8 RE835	65W	120/277V	LITHONIA DAYBRITE METALUX LIGHTOLIER LSI COLUMBIA	LB232-MVOLT-TUBPHP CAN232-UNV-1/2-EB-SPEC WS-232A-UNV-PROGRAM START WA232-U-SOP PR 232 SSO10PRS UE WC4-232-EBPS120/277

RIGGING SCHEDULE

UVU NOORDA THEATRE

DESCRIPTION	LOCATION	SIZE (WXH)	MATERIAL	FABRIC WEIGHT	COLOR	FULLNESS	OTHER
CURTAIN #1	SR SIDE	16'-6" H x 32'-0" W	COMMANDO CLOTH	8 oz.	BLACK	50%	
CURTAIN #2	SR FRONT	16'-6" H x 32'-0" W	COMMANDO CLOTH	8 oz.	BLACK	50%	
CURTAIN #3	SL FRONT	16'-6" H x 32'-0" W	COMMANDO CLOTH	8 oz.	BLACK	50%	
CURTAIN #4	SL SIDE	16'-6" H x 32'-0" W	COMMANDO CLOTH	8 oz.	BLACK	50%	
CURTAIN #5	SL BACK	16'-6" H x 32'-0" W	COMMANDO CLOTH	8 oz.	BLACK	50%	
CURTAIN #6	SR BACK	16'-6" H x 32'-0" W	COMMANDO CLOTH	8 oz.	BLACK	50%	
NOTE:	ALL TRACKS NET LENGTH: ADD FOR OVERLAP, PULLEYS, ETC. ALL DEADHUNG LINES TO BE SECURED TO STRUCTURE WITH SUITABLE BEAM CLAMP.					TOTALS	

LIGHTING LOAD SCHEDULE

ROOM	DESCRIPTION	FULL WATTS	DE-RATED WATTS
STAGE	WORKLIGHTS	2,100	2,100
	STAGE LIGHTS	115,120	23,000
DIMMER ROOM	DIMMER RACK	46,000	16,000

QUANTITY OF STAGE LIGHTING FIXTURES

UVU NOORDA THEATRE

TYPE	DESCRIPTION	BASE QUANTITY
SP-1	FRESNEL SPOTLIGHT	60

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Orem, UT

REVISION NUMBER AND DATE:

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THEATRE EQUIPMENT SCHEDULES

QT602

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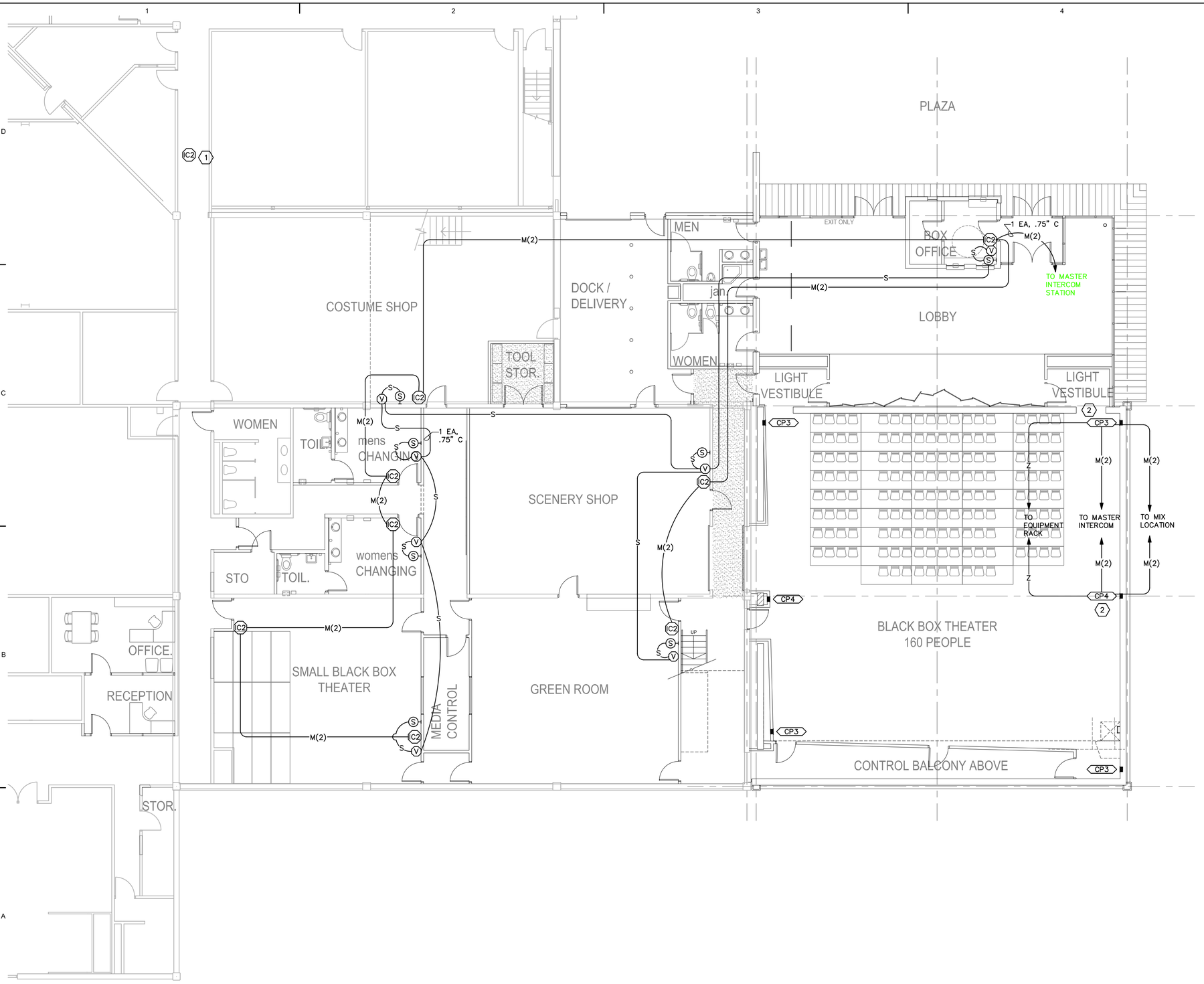

A1 LOWER LEVEL AUDIO SYSTEM LAYOUT PLAN

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

GENERAL SHEET NOTES

1. .

SHEET KEYNOTES

1. LOCATED IN WHITE BOX THEATRE.
2. CABLE AND CONDUIT ARE TYPICAL FOR EACH SYMBOL.

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LOWER LEVEL AUDIO SYSTEM LAYOUT PLAN

TA101

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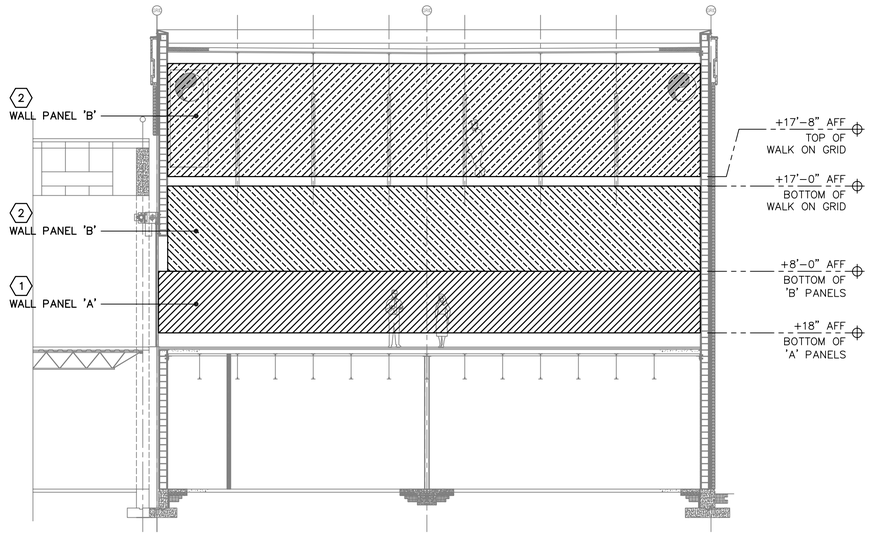

C3 ACOUSTICAL SECTION
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. .

SHEET KEYNOTES

1. TECTUM FACED, PAINTED FLAT BLACK, WITH 2" FIBERGLASS BACKING, 8 FEET TALL, BEGINNING AT APPROZIMATELY 3 FEET ABOVE THE FLOOR ELEVATION, CONTINUOUS AROUND THE ROOM PERIMETER. SEE ATTACHED CONSTRUCTION DETAILS. APPROX; 3,000 FEET SQUARE.
2. 2" THICK 3 lb. JOHNS-MANVILLE ACOUSTA SHIELD WITH HEAVY BACK FABRIC FACE. SECURE TO CEILING AND UPPER WALL SURFACES WITH "STICK-CLIPS", NOMINAL 2 FEET CENTER TO CENTER. AFTER INSTALLATION, PAINT STICK CLIPS AND ALL OTHER SURFACES SHOWING ANY DETAIL OR COLOR WITH FLAT BLACK PAINT.

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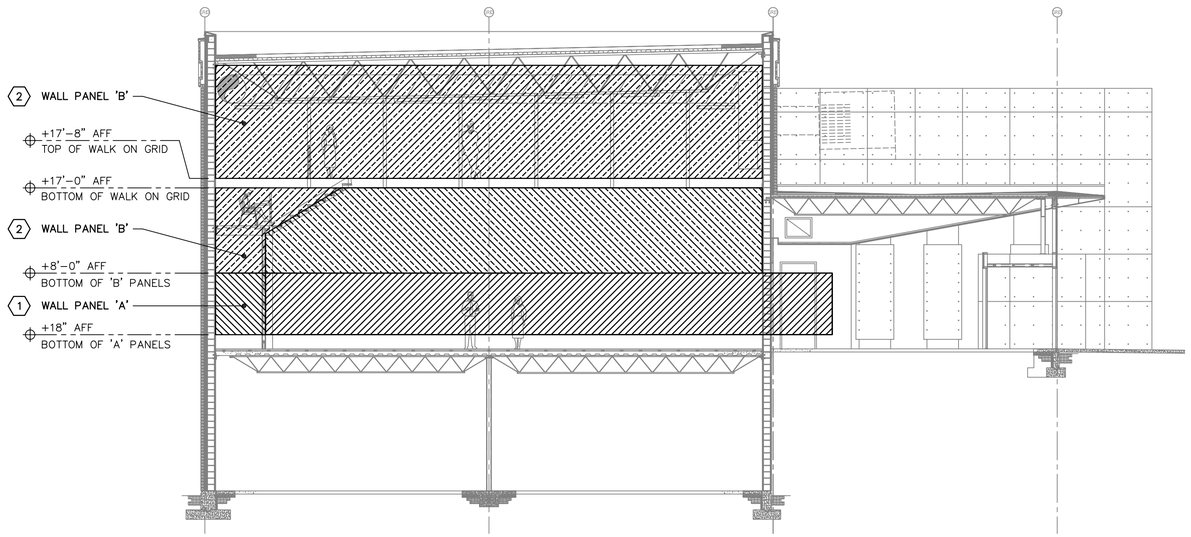

A3 ACOUSTICAL SECTION
SCALE: 1/8" = 1'-0"

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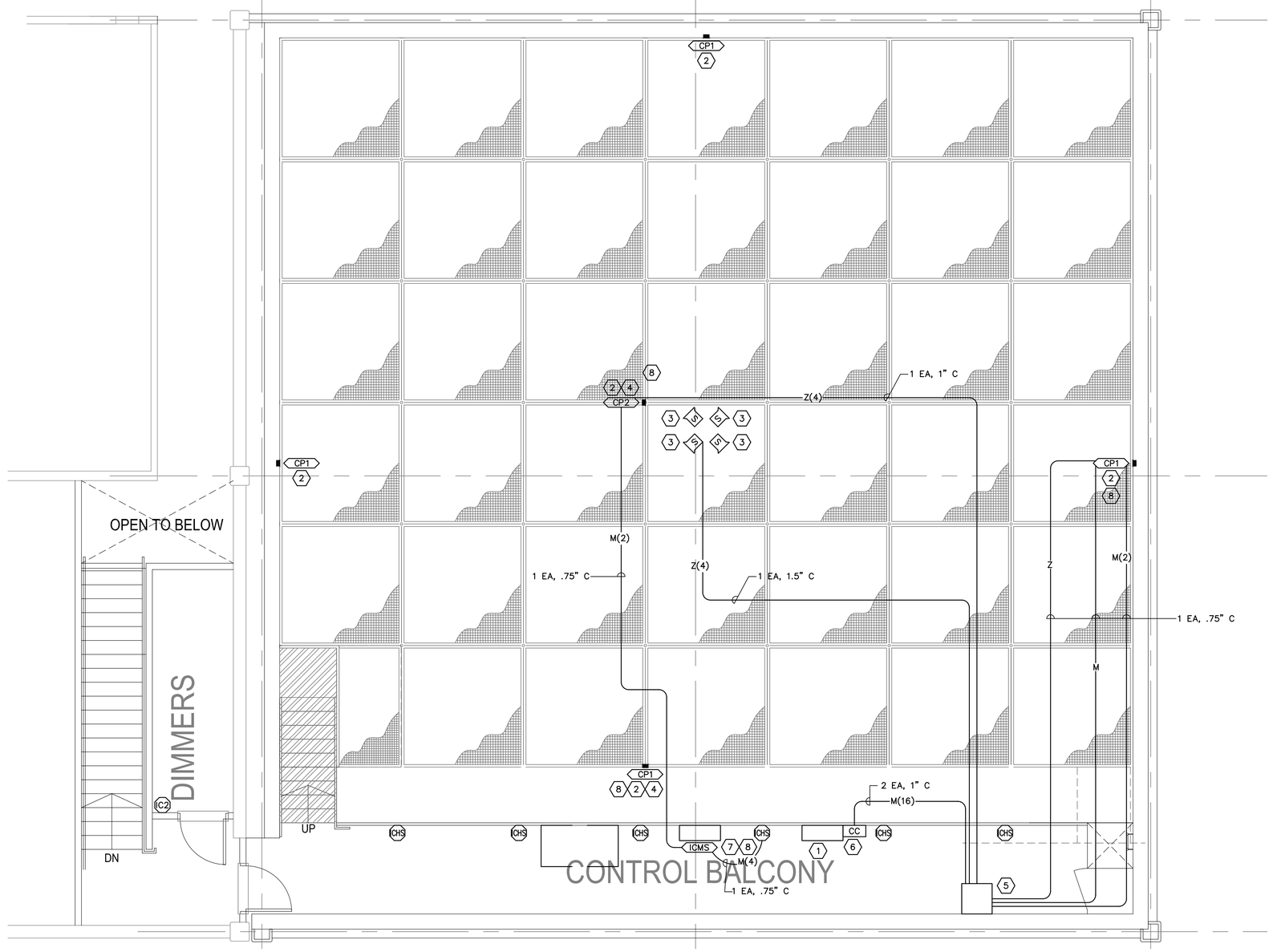
ACOUSTICAL SECTIONS

TA301

File Name: P:\2008\20080324\1Drawings\Sheet\24TA301.dwg Last Plotted: 2008/07/18 @ 2:57 PM By: wendy



A1 ENLARGED UPPER LEVEL AUDIO SYSTEM LAYOUT PLAN

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

GENERAL SHEET NOTES

1. .

SHEET KEYNOTES

1. AUDIO MIXER LOCATION, PROVIDE CONNECTION PANELS AND CABLING TO INTERFACE TO AUDIO MIXER.
2. LOCATE AT GRID LEVEL +42".
3. CLUSTER SPEAKERS. SUSPEND FROM STRUCTURE PER ACOUSTIC COVERAGE PLAN. AIM TOWARDS CORNER AT 30° BELOW HORIZONTAL.
4. MOUNTED ON PIPE AT THIS LOCATION.
5. AUDIO EQUIPMENT RACK.
6. AUDIO MIXER AND SOURCE EQUIPMENT RACK.
7. MASTER INTERCOM STATION.
8. CABLE AND CONDUIT TYPICAL FOR EACH SYMBOL SHOWN.

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UPPER LEVEL AUDIO SYSTEM LAYOUT PLAN

TA401

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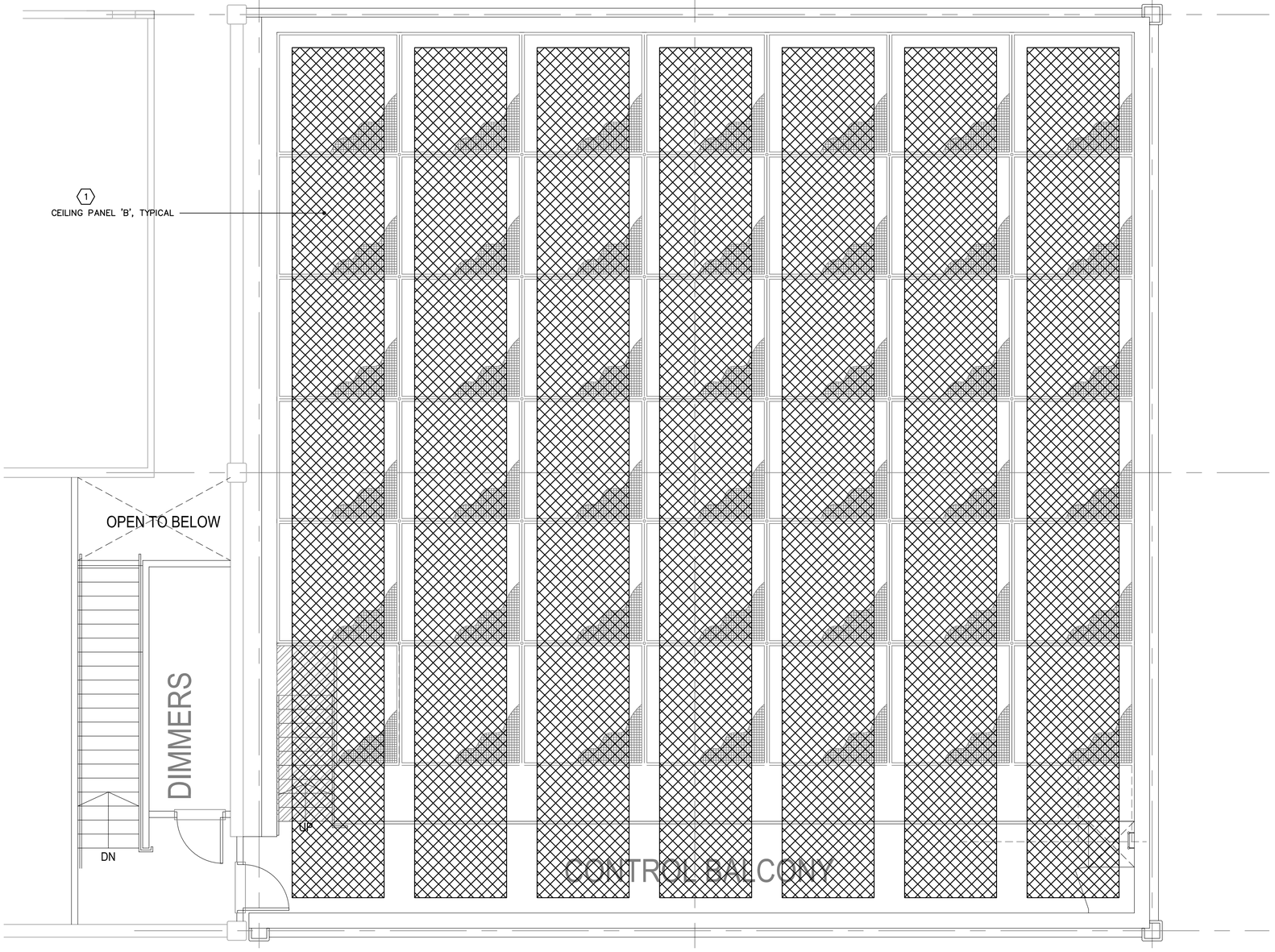

A1 ENLARGED UPPER LEVEL ACOUSTICAL PLAN

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

GENERAL SHEET NOTES

1. CEILING OF THE LIGHT VESTIBULE SHOULD BE BLACK ACOUSTIC TILE.

SHEET KEYNOTES

1. 2" THICK 3 lb. JOHNS-MANVILLE ACOUSTA SHIELD WITH HEAVY BACK FABRIC FACE. SECURE TO CEILING AND UPPER WALL SURFACES WITH "STICK-CLIPS", NOMINAL 2 FEET CENTER TO CENTER. AFTER INSTALLATION, PAINT STICK CLIPS AND ALL OTHER SURFACES SHOWING ANY DETAIL OR COLOR WITH FLAT BLACK PAINT.

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UPPER LEVEL ACCOUSTICAL PLAN

TA402

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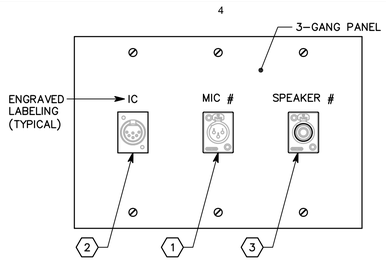


CP1 CONNECTION PANEL DETAIL

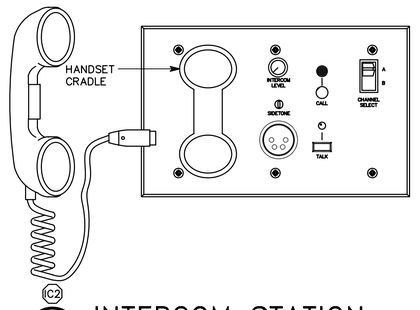
D4 NTS

GENERAL SHEET NOTES

1. PROVIDE REQUIRED BACK BOX FOR DEVICE SHOWN.

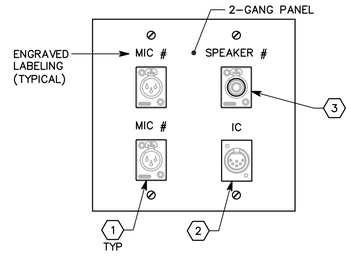
SHEET KEYNOTES

1. 3-PIN XLR-F TYPE CONNECTOR.
2. 6-PIN XLR-M FOR INTERCOM.
3. SPEAKON TYPE LOCKING SPEAKER CONNECTOR.
4. COLOR CODE AND LABEL TO AUTO MIXER.
5. MOMENTARY PUSH BUTTON SWITCH WITH LED INDICATOR.



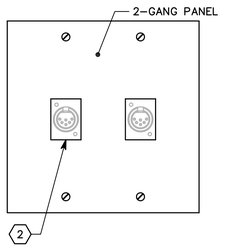
C4 INTERCOM STATION

NTS



CP3 CONNECTION PANEL DETAIL

C5 NTS



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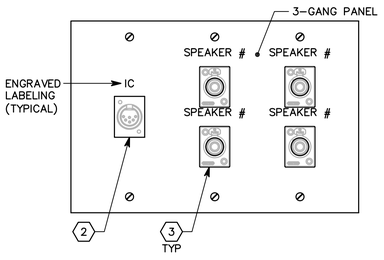
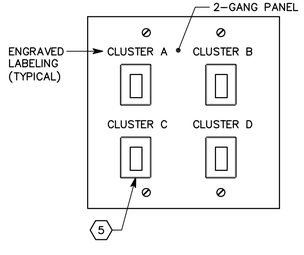
B4 INTERCOM PLATE

NTS



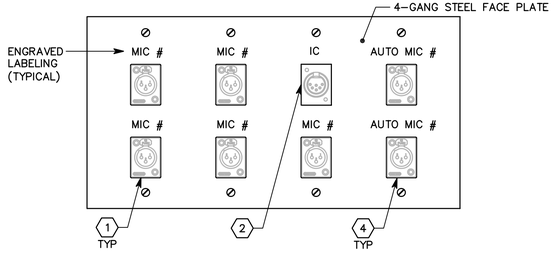
CP2 CONNECTION PANEL DETAIL

B5 NTS



DSPCC SPEAKER CONTROL SWITCH PLATE

A3 NTS



CP4 CONNECTION PANEL DETAIL

A4 NTS

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AUDIO EQUIPMENT DETAILS

TA501

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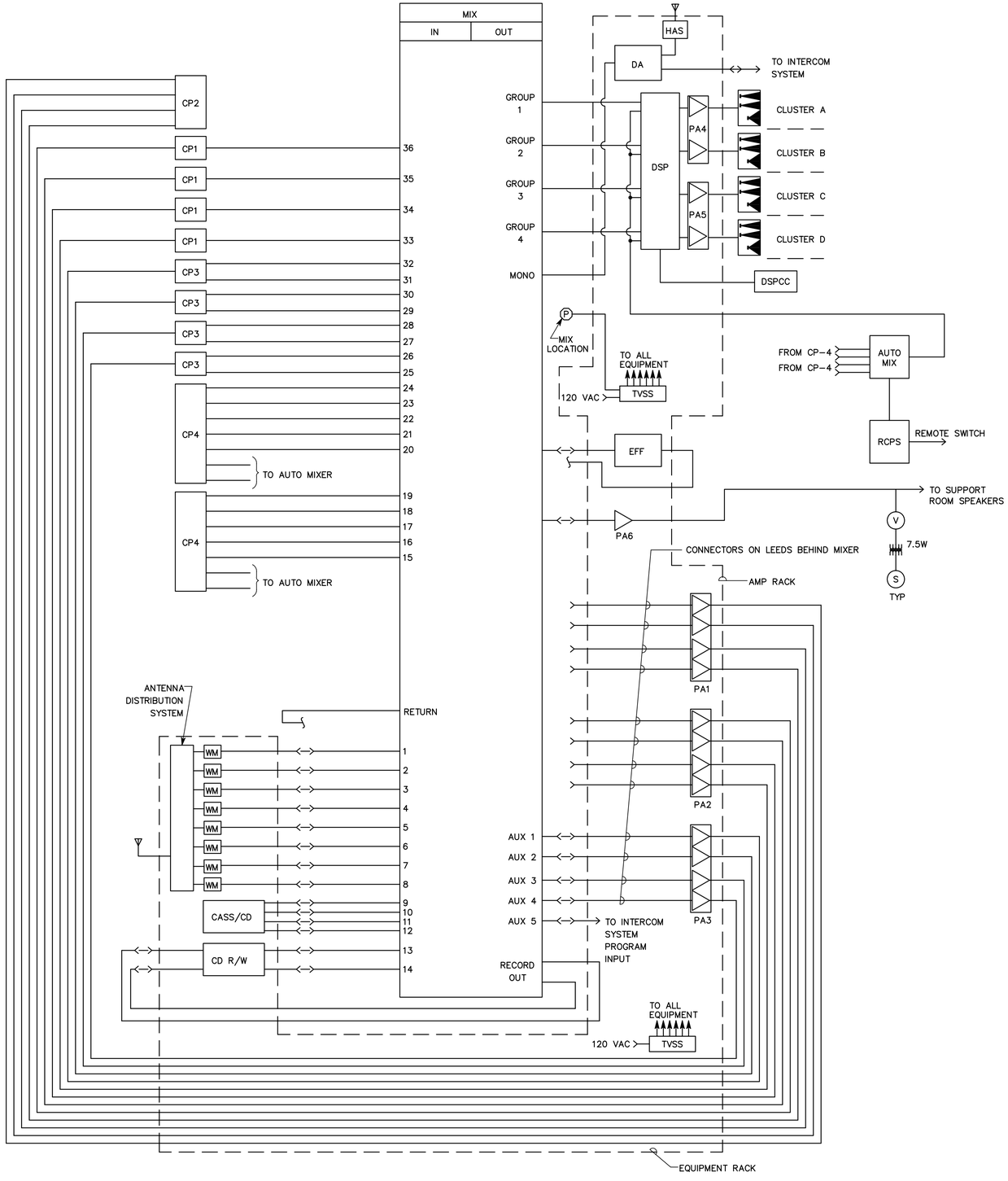
EXPERIMENTAL THEATER EQUIPMENT SCHEDULE (BY DIV. 27)

DO NOT CONSTRUE THE ITEMS LISTED BELOW AS A COMPLETE LIST OF A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE ELECTRONIC SYSTEMS INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, PROVIDE THE ENTIRE ASSEMBLY UNLESS OTHERWISE SPECIFIED. PROVIDE ALL MISCELLANEOUS HARDWARE, INTERFACES, TRANSFORMERS, POWER SUPPLIES, DISTRIBUTION EQUIPMENT, CONNECTORS, TERMINATION EQUIPMENT FASTENERS, RACK MOUNT KITS, SUPPORTS, AND/OR ANY OTHER TYPE OF EQUIPMENT WHICH MAY NOT BE LISTED HERE, BUT MAY BE NECESSARY FOR THE INSTALLATION OF A FUNCTIONAL ELECTRONIC SYSTEMS. COMPARE EQUIPMENT MODEL NUMBERS WITH DESCRIPTIONS AND PERFORMANCE SPECIFICATIONS AND NOTIFY THE ENGINEER BEFORE BID OF ANY DISCREPANCIES. IF MODEL NUMBERS DO NOT MATCH DESCRIPTIONS AND/OR SPECIFICATIONS, THE DESCRIPTIONS AND SPECIFICATIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SYMBOL	DESCRIPTION	QTY	ACCEPTABLE TYPES
MIX	AUDIO MIXING CONSOLE, 40 CHANNEL	OFP	SOUNDCRAFT LIVE 8, 40 CHANNEL CHASSIS
DSP	DIGITAL AUDIO SIGNAL PROCESSOR SPEAKER CONTROL	OPP	RANE RPM88
EFF	DIGITAL AUDIO EFFECTS PROCESSOR	OFP	YAMAHA SPX-2000
WM	WIRELESS MICROPHONE SYSTEM, HANDHELD	2	SHURE ULX52/SM58
WM	WIRELESS MICROPHONE SYSTEM, LAVALIER	6	SHURE ULX54/ULX51/WL183/WH30TQG
WM	WIRELESS MICROPHONE SYSTEM, ANTENNA DISTRIBUTION SYSTEM	A/R	SHURE UA844/UA870/UA8100
WM	WIRELESS MICROPHONE SYSTEM, RACK MOUNT KIT	A/R	SHURE UA507
CASS/CD	CASSETTE/CD COMBO PLAYER	OFP	DENON DN-T625
CD R/W	CD READ/WRITE	OFP	DENON DN-C550R
CP#	INPUT/OUTPUT PANEL	OFP	CUSTOM
DPSCC#	DIGITAL SIGNAL CONTROLLER STATION	OFP	CUSTOM
S	LOUDSPEAKER SYSTEM, CLUSTER	4	JBL AM4 315/95
	LOUDSPEAKER SYSTEM, PORTABLE	2	JBL C29AV-1
PA1,2,3	AUDIO POWER AMPLIFIER, 4 CH.	OFP	QSC CX 404 OR EQUAL
PA4,5	AUDIO POWER AMPLIFIER, 2 CH.	OFP	QSC CX 1102
PA6	AUDIO POWER AMPLIFIER, 1 CH. 70 VOLT OUTPUT	OFP	QSC CX 302V
DA	1x3 AUDIO DISTRIBUTION AMPLIFIER	OFP	RDL ST-DA3
Z(x)	INSTALLED SPEAKER CABLE, x = NUMBER OF CABLES	A/R	WEST PENN 227
M(x)	INSTALLED MICROPHONE/LINE CABLE, x = NUMBER OF CABLES	A/R	WEST PENN 454
S(x)	INSTALLED SPEAKER CABLE, 16 GAUGE x = NUMBER OF CABLES	A/R	WEST PENN 225
HAS	HEARING ASSISTIVE SYSTEM	OFP	LISTEN LS-04-072
TVSS	TVSS	A/R	SURGEX SX2120-SEQ
	MICROPHONE CABLE, 25 FT	4	PROCO AMERIQUAD
	MICROPHONE, HANDHELD	2	SHURE BETA 87C
	MICROPHONE, TABLE STAND	2	ATLAS DS5E
	MICROPHONE STAND	2	ATLAS MS-10
	MICROPHONE BOOM	2	ATLAS PB21XE
	MISC. CONNECTORS, POWER SUPPLY, ETC.	1 LOT	
P	POWER SWITCH	OFP	
AUTO MIX	AUTOMATIC MIXER, (4) IN & (1) OUT	OFP	SHURE SCM410
<-->	CONNECTORS ON RACK PANEL	A/R	CUSTOM
	EQUIPMENT RACK, MIX LOCATION	1	MIDDLE ATLANTIC WRK-24-5A-27
	EQUIPMENT RACK, MAIN LOCATION	1	MIDDLE ATLANTIC WRK AS NEEDED, WITH LOCKING DOORS
MIA	MULTI INPUT ADAPTOR	2	MEMTECH EJ8
RCPS	REMOTE CONTROL POWER SUPPLY	1	
S	SPEAKER, WALL MOUNT	OFP	JBL CONTROL 25T
V	VOLUME CONTROL, WALL MOUNT	OFP	ATLAS AT10

MANUFACTURER'S NAMES AND TELEPHONE NUMBERS ARE LISTED IN THE SPECIFICATIONS
A/R = AS REQUIRED
OFP = OBTAIN FROM PLANS



A1 BLACK BOX THEATER AUDIO SYSTEM SINGLE LINE DIAGRAM
NTS

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Orem, UT

REVISION NUMBER AND DATE:

AXIS JOB #:	0804
OWNER JOB #:	.
DATE:	July 21, 2008
DRAWN BY:	WDA
CHECKED BY:	JMG

AUDIO
ONELINES AND
SCHEDULES

TA601

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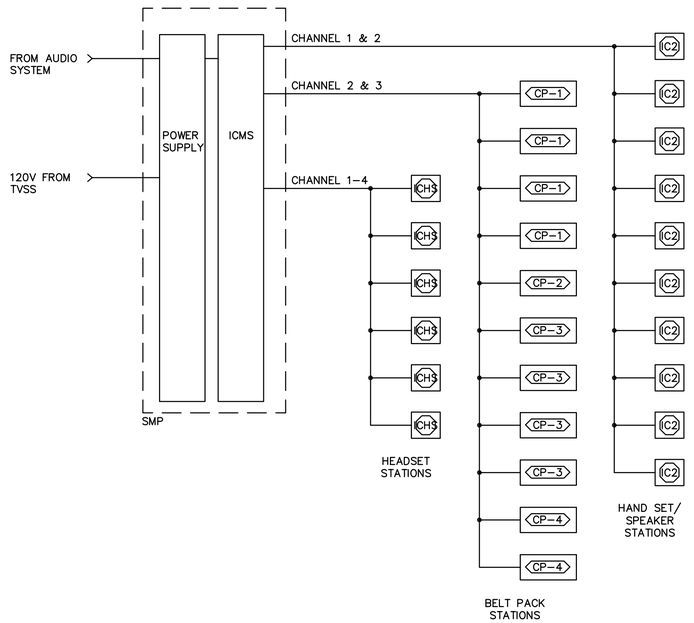
INTERCOM SYSTEM EQUIPMENT SCHEDULE (BY DIV. 27)

THE ITEMS INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS OF SIGNIFICANCE USED DURING THE DESIGN OF THE ELECTRONIC SYSTEMS INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE ENTIRE ASSEMBLY SHALL BE PROVIDED UNLESS SPECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE LISTED HERE, FOR A COMPLETE INSTALLATION. COMPARE CATALOG NUMBERS WITH DESCRIPTIONS AND NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO BID. IF CATALOG NUMBERS DO NOT MATCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR APPROVAL PRIOR TO PURCHASING ANY EQUIPMENT OR CABLE. REFER TO SPECIFICATIONS 13134 FOR ADDITIONAL REQUIREMENTS.

SYMBOL	DESCRIPTION	QTY	ACCEPTABLE TYPE
ICMS	INTERCOM MASTER STATION, 4 CHANNEL	OFP	CLEAR COM MS-704 POWER SUPPLY PS-704
MT-1	INTERFACE	OFP	CLEAR COM MT-1
IC2	INTERCOM SPEAKER STATION HANDSETS	OFP-10 4	CLEAR COM KB-702 HS-6
CP-X	INTERCOM JACK STATION ON A CONNECTION PANEL	OFP	CLEAR COM WP-6
CHS	INTERCOM HEADSET STATION	OFP-4	CLEAR COM HB-704
	INTERCOM STATION, BELTPACK	8	CLEAR COM RS-602
	HEADPHONES	8	CLEAR COM CC-95
	INTERCOM CABLE, 25'	8	CLEAR COM

MANUFACTURER'S NAMES AND TELEPHONE NUMBERS ARE LISTED IN THE SPECIFICATIONS
A/R = AS REQUIRED
OFP = OBTAIN FROM PLANS



A4 INTERCOM SYSTEM SINGLE LINE DIAGRAM
NTS

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AUDIO
ONELINES AND
SCHEDULES

TA602

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STRUCTURAL GENERAL NOTES

I. Basis of Design

B1. Governing Building Code: 2006 International Building Code (IBC)

B2. Gravity Loading
- A. Roof.....20 psf dead load
  - Snow Loads Plus Snowdrift
  - Pg= 43 psf
  - Pf= 33 psf
  - Ce= 1.0
  - Is= 1.1
  - Ct= 1.0
- B. Floor.....60 psf dead load
  - 150 psf live load

B3. Earthquake
- A. Seismic Design Category..D IE = 1.25
- B. SDS = 0.801, SD1 = 0.441, Ss = 1.16, S1 = 0.487
- C. Site Class = D
- D. Lateral Force Resisting System = Special Reinforced Masonry Shear Walls
- E. Base shear = 0.143W R= 5
- F. Analysis procedure = Equivalent Lateral-Force Procedure

B4. Wind velocity.....90 miles per hour (3 second gust speed)
- exposure B.....
- Net uplift force at roof equals 17 psf.
- Importance Factor Iw.....1.15
- Cladding and Components.....21 psf

B5. Foundation
- A. Soil Bearing Pressure.....1500 psf Assumed. See soil report for subgrade preparation.
- B. Lateral Soil Pressure Fluid Equivalent Density.
  - a. Active.....40 pcf retaining walls.
  - b. At rest.....55 pcf rigid foundation walls.
  - c. Passive.....250 pcf
- C. Frost Depth.....30 inches.

II. Site Work

SW1. A minimum of 12" of topsoil shall be removed from the entire building site including all vegetation and debris.

SW2. The Contractor shall retain a Soils Engineer to verify 1500 psf soil pressure prior to placing any footing forms. Report to Architect any findings which may affect foundation and footing stability.

SW3. All bearing earth to be undisturbed earth or compacted fill. The area on which the fill is placed must be frost free. The fill shall then be placed in layers not to exceed 8 inches in depth and compacted.

SW4. All fill and back fill shall be compacted to a minimum of 95% of maximum relative density for footings and 90% for all other structural fill based on AASHTO T180.

SW5. Any fill to be placed under the building and footings shall be a well graded granular material within the limits of the following gradation, unless otherwise specified by Soils Engineer:

Sieve Size	Percent Passing
4"	100
1"	60-90
#4	30-60
#40	10-30
#200	5-12

SW6. All water shall be removed from foundation excavation prior to placing of concrete. Do not pour concrete under water.

SW7. Any unusual soil conditions (water, clay, soft layers, etc.) encountered during excavation for footings shall be immediately brought to the attention of the architect and engineer.

SW8. All foundation excavations shall be protected from all detrimental changes in environmental conditions such as rain and freezing.

SW9. Contractor shall coordinate the architectural, structural, and civil drawings for top of footing elevations and footing steps and excavations.

SW10. Contractor shall verify all existing and future grades. Footings shall be poured to maintain the minimum frost protection or confinement indicated on details. Footing steps shall be provided as per typical details where required by site conditions.

SW11. See geotechnical report for subgrade preparation typical.

III. Concrete and Reinforcing

C1. All work and materials shall comply with all areas of ACI318 and ACI 347 Publications and applicable ASTM Publications.

C2. Compressive strength of concrete at 28 days shall be as follows: (only 1-grade of concrete shall be poured on the job at one time). Use type 11 cement in contact with ground.

	Minimum Compressive Strength(psi) (At 28 Days)	Slump (+/- 1/2")	% Air Entrainment	Maximum Aggregate Size	Special Inspection Required
Footings	**3000**	**4**	**3%**	**1 1/2"**	**YES**
Foundations & Wall	**4000**	**4**	**3%**	**3/4"**	**YES**
Int.Slab on Grade	**4000**	**3**	**3%**	**1 1/2"**	**NO**
Ext.Slab on Grade	**4500**	**3 5 1/2% to 7 1/2%**		**1 1/2"**	**NO**
water/cement ratio = .45 max.					
Suspended Slab	**4000**	**4**		**3/4"**	**YES**
Concrete Topping	**3000**	**3.5**	**N/R**	**3/8"**	**NO**

C3. Hardrock aggregates shall conform to ASTM C-33. Their Maximum size shall be 3/4" except 1" shall be used for footings and slabs on grade.

C4. Admixtures
- A. Concrete mix shall include Flyash as per ASTM C618 class "F" except that maximum loss on ignition shall be limited to 1% to yield specified quantities. Flyash replacement of cement shall be limited to 20% by weight.

C5. The contractor shall submit mix design and 3, 7, and 28 days strength tests for review by the structural engineer before any concrete is poured at the job site.

C6. All concrete that is placed by pumping shall be medium range-plasticized with water reducing admixture which shall comply with specifications for chemical admixtures for concrete, ASTM designation C-494 non-chloride and shall be used in strict accordance with manufacturer's recommendations. Product specification publication shall be submitted to structural engineer for review.

C7. Unless otherwise noted all reinforcement bars shall be securely anchored to the forms and spaced from them as follows: Minimum Coverage
- A. Cast against & exposed to earth.....3 inches
- B. Concrete exposed to earth or weather:
  - #6 through #18 bars.....2 inches
  - #5 bar and smaller.....1 1/2 inches
- C. Not exposed to weather or in contact with ground: slabs, walls, joists:.....3/4 inches

C8. Reinforcing Steel
- A. All reinforcing steel shall be bent, detailed and chaired as per the "ACI Manual of Standard Practice for Detailing Reinforcing Concrete Structures."
- B. All reinforcing steel to be welded shall comply with ASTM A706.
- C. All reinforcing steel shall be of new stock deformed bars conforming to ASTM A-615 grade 60 unless otherwise noted. Placement of bars in accordance with ACI 315 and ACI 318. Use bar supports per ACI 315 chapter 7 for all rebar and welded wire fabric. As per ACI 318, Section 7.5.1: "All reinforcement shall be accurately placed and adequately supported before concrete is placed and shall be secured against displacement within tolerances permitted in 7.5.2." Wet stabbing reinforcing is not allowed.
- D. Unless otherwise indicated, all anchors welded to steel plates or angles that are embedded in masonry or concrete shall be deformed bar anchors conforming to A36 Steel or ASTM A706.
- E. Minimum standard rebar lap lengths: #3=19" #4=25" #5=31" #6=37" #7=54" #8=62" #9=70" #10=78" #11=85".
  Epoxy coated bar laps, multiply above values by 1.2. For epoxy coated rebars or wires with cover less than 3db or clear spacing less than 6db, the laps shall multiply the above values by 1.5.
  Lightweight concrete bar laps, multiply above values by 1.3. (ie. #6=37"x1.3=48").
  If more than 12" concrete is below rebar (beam top reinforcing), multiply above values by 1.3. (ie. #5=31"x1.3=41").
  See shear wall schedule for seismic lap lengths.
  All vertical reinforcing bars (unless noted otherwise) shall be doweled to footing with 90 degree standard hook.
- F. Reinforcing for concrete walls as follows:(unless otherwise noted on drawings)

Thickness	Horizontal Reinf	Vertical Reinf
6"	#4 at 16" o.c. each face	#4 at 18" o.c. each face
8"	#4 at 12" o.c. each face	#4 at 18" o.c. each face
10"	#4 at 15" o.c. each face	#4 at 18" o.c. each face
12"	#4 at 12" o.c. each face	#4 at 18" o.c. each face
14"	#4 at 12" o.c. each face	#4 at 18" o.c. each face
16"	#4 at 12" o.c. each face	#4 at 18" o.c. each face
18"	#4 at 10" o.c. each face	#4 at 18" o.c. each face

- G. All dowels shall have at least 38 bar diameter embedment.
- H. Break out dowels may be used for convenience of contractor, however dowels shall be Grade 40 and spacing of dowels shall be decreased by 1/3.
- I. Provide corner bars at all intersecting corners. Use same size bar and spacing as horizontal wall reinforcing.
- J. Add 2-#5 bars around all openings (unless otherwise noted) and extend 24" beyond corner of openings. Add also 2-#5 x 4'-0 diagonally at corners. For reinforcing over opening see opening details on drawings.
- K. When called for on the drawings or when directed by engineer bars that are to be epoxy doweled are to be put in holes larger than the bar diameter (1/4" larger for rebar and 1/8" larger for threaded bars). The holes shall be ten bar diameters deep for 4000 psi concrete or above and 15 bar diameters for concrete below 4000 psi and masonry. Fill holes with "Hilti" Hi-Mod epoxy gel (or equal as approved by engineer).
  All epoxy dowels and epoxy anchors are to be either threaded or deformed bars as per drawings. Apply epoxy as per manufacturer's recommendations. Mixing shall be done using a power mixer. For cold weather application gel shall be mixed at 70 degrees and kept at 40 degrees for 72 hours after application. Impact type drilling tools shall not be used for drilling holes or tightening anchors and shear bolt nuts into or through brick. INSPECTION IS REQUIRED.
- L. The contractor shall include an "in-place" price in his bid for 3000 pounds of reinforcing bars to be used as directed by the structural engineer. This reinforcing steel need not be stockpiled at the job site. The contractor shall submit with his bid a unit price credit for the last portion of bars.
- M. Top rebar in slabs and beams including top 6" of ties and column bars exposed to weather are to be epoxy coated after fabrication as per ASTM A 775-91 "Standard Specifications for Epoxy-coated Rebar." Splice length of epoxy-coated top bars shall be 1.7 times the length in Note E. Splice length for all other epoxy coated bars shall 1.5 times Note E.
- N. Beam Rebars shall be spliced as follows, unless noted otherwise:
  - a. Top bars at midspan.
  - b. Bottom bars at support.

C9. Concrete tests shall be made by testing laboratory approved by the architect, with copies of all reports being mailed to the architect and the contractor. In general no tests shall be made for each 50 cubic yards of concrete, or each days' pour if less than 50 yards, or as directed by Architect. Each test shall consist of 5 cylinders of which one shall be tested at 7 days, 2 tested at 28 days, and two retained in reserve for later tests, if required. Specimens shall be made and tested in accordance with ASTM C-172, C-31 and C-39 standards. Slump and Air entrainment test shall also be made with each set of cylinders taken. Contractor shall provide the cylinders. The testing laboratory shall transport all cylinders. The owner shall pay for all tests.

C10. Before concrete is poured, check with all trades to insure proper placement of all openings, sleeves, curbs, conduits, bolts, inserts, etc. relating to work.

C11. Dryback concrete shall be one part Portland cement and one part sand with sufficient water to allow a small amount of paste to come to the surface. Use for grouting joists and beam pockets unless otherwise noted.

C12. Under steel column base plates, concrete grout shall be non-shrink with sufficient water to allow pouring. Ultimate compressive strength (F'C) at 28 days shall = 4,000 psi. Grout shall be non-metallic, meeting CRD-C621 and in accordance with the manufacturer's published specification for mixing and placing.

C13. Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 degrees for 24 hours after placing concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provided curing and protection operations are maintained. Formwork supporting weight of concrete, such as beam soffits, joists, slabs and other structural elements, may not be removed in less than 14 days or until concrete has attained 75% of its design minimum compressive strength at 28 days. Support formwork from facing materials with structural members spaced sufficiently close to prevent deflection. Fit forms placed in successive units for continuous surfaces to be accurately aligned free from irregularities and within allowable tolerances.
Provide 1/16" camber per every 2.5 feet in concrete formwork of exposed to view concrete unless otherwise indicated by Architect/Engineer.

C14. All exposed to view concrete shall be stoned smooth while green, or as directed by Architect. No grout plaster shall be permitted.
Exposed to view concrete shall have 3/4" deep "V" groove placed vertically at 8'-0" o.c. or as directed by Architect.

C15. Protect freshly placed concrete from premature drying and excessive cold or hot temperature as per ACI 318 and maintain without drying at a relatively constant temperature for a period of time necessary for hydration of cement and proper hardening.

C16. Cold weather curing and protection requirements for concrete shall conform to the requirements of ACI 306 when depositing concrete at freezing temperature or below, the concrete mix shall have a temperature of at least 50 degrees bxt not more than 80 degrees. The concrete shall be maintained at a temperature of not less than 50 degrees and in a moist condition for not less than 7 days after placing or as directed by the structural engineer. The use of chemicals or additives to prevent freezing will not be permitted. Contractor shall prevent frost from penetrating under footings or interior slabs on grade or postpone concrete pour. Refer also to specifications and to any directive by structural engineer for additional cold weather requirements.

C17. Architect/Engineer shall be notified 48 hours prior to pouring any concrete in order to observe reinforcing placement.

C18. All concrete shall be properly vibrated in place using internal vibrating rods.

C19. Non-shored suspended concrete slabs shall be screeded off of non-deflecting elements or make adjustments for slab joist-beam deflections. Submit deflection design for review.

C20. Unless otherwise noted all concrete slabs apply a liquid type membrane forming curing compound complying with ASTM C 309, type 1, class A Moisture loss shall be not more than 0.055 gr./sq. cm. applied at 200 sq.ft./gal. When temperature is 75 degrees or more during placement do not use membrane but moist cure slab for 7 days continuous minimum or see ACI Committee 305 Report "Hot Weather Concreting". Submit method of curing for approval.

C21. All suspended concrete slabs shall be reinforced with 6x6 - W2.9 x W2.9 welded wire mesh with #4 slab dowels at 16 inches on center unless noted otherwise on drawings.

IV. Masonry

M1. A. All masonry shall be light weight "Concrete Block" conforming to ASTM C-90 1&1 with minimum net F'm of each unit = 2500 psi established by compression tests.
PRIOR TO CONSTRUCTION, PRISM TESTS SHALL BE MADE TO ESTABLISH AN ASSEMBLED F'm= 2500 PSI. SUBMIT TEST REPORTS SHOWING CONFORMANCE WITH C-90 1&1 AND STRENGTH BEFORE SHIPPING BLOCK ON SITE. During construction, three prisms shall be built and tested for each 5,000 square feet of wall which does not require special inspection.
- B. Before any masonry work begins on the site, the block supplier shall submit a letter of certification to the contractor, architect, and structural engineer stating the strength of the structural masonry used and showing its conformance to structural drawings and specifications.
- C. All face brick shall be burned clay grade SW conforming to ISC Standard.
- D. All testings shall meet the requirements shown in IBC Section 2105, Quality Assurance.

M2. All mortar shall be Type "M" using Portland Cement and hydrated lime only and sand, compressive strength of mortar shall be 2500 psi minimum at 28 days.

M3. Grout
- A. Grout shall have an 8" to 10" slump using 3/8" max. aggregate. Size and height limitations of the grout space or cell on the overpour shall not be less than shown in ACI 530-05, Table 1.1.6.1. Provide cleanouts for pours higher than 5' as per IBC for high lift grout procedure and must meet the requirements of ACI 530.1.
- B. Grout shall be consolidated before loss of plasticity in a manner to fill the grout space. Grout shall be vibrated with an internal pencil vibrator at each lift. All grout to be properly vibrated during placement and again before final set using an internal pencil type vibrating rod.
- C. Minimum compressive grout strength = 3000 PSI.

M4. Construction
- A. Grouted masonry construction shall comply with IBC Chapter 21.
- B. All anchor bolts (and epoxy adhered threaded rods) shall be placed in grouted cells.
- C. Provide 1/16" camber per every 2.5 feet of masonry formwork unless otherwise indicated. The head sections of all masonry openings shall be shored to prevent sagging. Contractor shall provide shoring calculations for Beam spans over 10'-0".
- D. Masonry construction in cold weather shall be in compliance with IBC Section 2104.
- E. Unless otherwise noted, reinforce over all openings in masonry walls and doorways up to 6'-0" with 2-Horizontal bars to match wall reinforcing placed in horizontal bond beam unit and grout solid for at least 16" above opening. Provide 2-vertical bars at jambs of opening and wall ends to match typical wall reinforcing in 1-cell. For openings 6'-0" to 10'-0" use 4-#6 (2"-in 2-bond beams) over opening and grout solid for at least 40" above opening. Extend horizontal bars a lap length beyond opening each side typical. Provide (4) #5 vertical or 4-vertical bars at jambs of openings and wall ends to match wall reinforcing whichever is greater. Extend bars from footing to top of the wall. For openings over 10'-0", see plans and sections typical. See also plan notes and sections. Kicker angle 3 x 3 x 1/4 should be provided at the masonry lintel at every joist or at 6'o.c. maximum.
- F. Step unfinished work for later joining with new work. Vertical toothing shall not be permitted unless approved by Structural Engineer.
- G. Provide masonry wall crack control joints at 40'-0" o.c. maximum unless noted otherwise on drawings. When masonry wall is stack bond type construction, provide crack control joints at 12'-0" o.c. maximum and at all wall plane changes and jambs. Coordinate location of all crack control joints with Architect.

M5. Reinforcing
- A. UNLESS OTHERWISE NOTED ON DRAWINGS reinforce masonry walls as follows:
  - a. Running Bond:

Thickness	Horizontal Reinf	Vertical Reinf
6"	#5 @ 48" o.c.	#4 @ 24" o.c.
8"	2-#4 @ 48" o.c.	#5 @ 24" o.c.
10"	2-#4 @ 48" o.c.	#5 @ 16" o.c.
12"	2-#4 @ 48" o.c.	2-#5 @ 24" o.c.

  For walls less than 12' long or 12' high:

Thickness	Horizontal Reinf	Vertical Reinf
6"	#4 @ 24" o.c.	#4 @ 24" o.c.
8"	#4 @ 24" o.c.	#5 @ 24" o.c.
10"	#4 @ 24" o.c.	#5 @ 16" o.c.
12"	#4 @ 24" o.c.	2-#5 @ 24" o.c.

Modify these reinforcement spacings as necessary such that they are less than one third the height or one third the length of the wall or 48 inches, whichever is smallest (as per ACI 530-05, 1.14.2.2.5(a)). Terminate all reinforcement with a 90 degree standard hook, unless noted otherwise.
- B. Unless otherwise noted, all wall ends shall have 2-vertical bars matching wall steel, but #5 minimum, continuous from footing to top of wall.
- C. All 90 degree to 170 degree corners shall have 3 vertical bars to match scheduled vertical steel.
- D. Reinforcing shown is for running bond. If stack bond is used provide 9 gage hot dipped galvanized joint reinforced at 16" o.c. lapped 12" and provide .0015 bt minimum area horizontal steel, unless noted otherwise. Grout all cells full when using stack bond.
- E. All reinforcing steel shall be new stock deformed bars conforming to ASTM A-615 grade 60.
- F. Lap splice length TYP. U.N.O. 72 times bar diameter

  Low lift construction not permitted for lap splice lengths greater than 48 inches.
  Consider mechanical couplers when splice lengths become excessive.
- G. All vertical jamb, corner, and end of wall reinforcing shall have dowels the same size and spacing as vertical bars into footing below.
- H. Horizontal reinforcement shall be continuous at all intersecting walls and corners.
- I. All horizontal reinforcing and ties shall be in H-blocks and grouted solid.
- J. All reinforced cells shall be grouted solid.
- K. No electrical conduits and plumbing pipes shall be placed in the reinforced grouted cell.
- L. A minimum of 1/2" clearance shall be maintained between reinforcing steel or bolts and the surface of masonry units.
- M. Beam rebars shall be spliced as follows:
  - a. Top bars at midspan.
  - b. Bottom bars at supports.
- N. Impact type drilling tools shall not be used for drilling holes or tightening anchors and shear bolt nuts into or through brick.
- O. For wall reinforced with two curtains of vertical steel, the vertical steel shall be placed to the outside of the horizontal steel and coverage for the vertical steel shall be 2.5 times vertical bar diameter or 1 1/2" minimum. TYP. U.N.O.

V. Structural Steel

S1. All structural steel work shall comply with the latest edition of the AISC "Standard Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings", and "Code of Standard Practice". ASTM A-992 Fy=50 ksi minimum specified for structural shapes, A36 steel for miscellaneous steel, and ASTM A-500 grade B for structural tubes, typical U.N.O. Centering shall meet the standard mill practice shown on AISC "Manual of Steel Construction".

S2. Shop paint and remove all rust, oils, mill scale. Apply one coat zinc chromate 2 dry mils thick. Provide touch up field coat at all abraded and welded areas, two dry mils thick. All steel exposed to weather shall be galvanized. (Follow SSPC - Paint 20; ASTM A 780)

S3. Unless noted otherwise, all structural steel to steel bolted connections shall use 3/4" diameter high strength bolts conforming to ASTM A-325 (N) and shall have carbonized washers under the turning unit. All other bolts shall conform to ASTM A-307. A-325 bolts are to tightened by either turn of the nut method or load indicator washers. All A-325 bolt tightening shall be QA/QC supervised by an independent testing agency who shall certify in writing that all bolts are properly tightened.

S4. Unless noted otherwise on plans, all steel floor beams shall have L/480 positive camber for 25 feet or greater spans and roof beams over 30 feet or greater TYP. U.N.O.

S5. Welding
- A. All welding to be made by certified welders using E-70 series electrodes. (For all welding of ASTM A-572 steel, E70XB electrodes shall be used and welding shall be as per AWS D1.1 "Structural Welding Code".)
- B. All welders to be currently certified for all type of welds on this project under latest AWS D1.1 Structural Welding Code. Welders to have passed the Qualification Requirements within preceding 6 month period.
- C. Welds made against concrete are to be done under the supervision of an approved testing agency and that fillet welds should be made in 1/8" passes 2" long at 4" o.c.
- D. All steel to steel welds are to be made not shown bolted which is continuous, shall be welded to develop full strength capacity of connecting members.
- E. Minimum size of fillet weld (unless noted otherwise on drawings).

Material thickness of thicker part joined	Minimum size of of fillet weld
to 1/4" inclusive	1/8" all around
over 1/4" to 1/2"	3/16" all around
over 1/2" to 3/4"	1/4" all around
over 3/4" to 1 1/2"	5/16" all around

- F. Unless otherwise noted, all structural steel to steel connections shall be made in such a manner to develop full shear capacity of connecting members as per AISC specifications.
- G. Weld paint all abraded and welded surfaces for joists and metal deck. Use SSPC - Paint 20 (Galvanic).
- H. Unless otherwise indicated, all anchors welded to steel plates or angles that are embedded in masonry or concrete shall be deformed bar anchors conforming to A36 Steel or ASTM A706.
- I. All deck bearing angles or plates shall have full penetration welds at splices and corners typical unless noted otherwise.
- J. All full penetration welds shall be tested by x-ray or ultrasonic procedures by an independent testing agency approved by the architect. Where testing procedures are not physically possible, visual inspection before and during welding shall be done by an independent testing agency.
- K. 10% of all shop and field welds shall be done under the direct supervision of an independent testing agency approved by the architect and tested by magnetic particle procedures.
- L. Copies of all tests results are to be sent to structural engineer. Welds found to be defective shall be corrected at no extra cost to the owner.
- M. All weld testing shall be paid for by the owner.

S6. Steel Deck
- A. All metal deck shall meet requirements of Steel Deck Institute (SDI) for wide rib deck. See drawings for type of deck. Manufacture shall be a member of SDI.
- B. Deck manufacturer shall have ICBO certification showing lateral shear capacities of deck equaling 1400 plf TYPICAL and 2100 plf for 18 gage deck, with an F' (Flexibility Factor) less than 10.
- C. Provide 18 gage sheet metal reinforcing at all valleys, hips, ridges, deck changing directions, and openings through metal deck. For openings 15" and larger frame opening with angle 3 x 3 x 1/4" unless otherwise noted. End laps to occur at supports and shall have minimum lap of 2". The deck shall be attached to all supports and the side lap of adjacent units.
- D. All deck splices shall occur over supporting members and shall have a minimum of 4" of flat bearing surface contact.
- E. Deck Welding (unless otherwise noted):
  - a. Supports parallel to deck 3/4" diameter puddle welds at 12" o.c.
  - b. Supports perpendicular to deck 3/4" diameter at each valley.
  - c. Top seam welds 1 1/2" at 12" o.c. Deck shall be crimped prior to all side or top seam welding. For composite floor deck, side lap use 1/4" diameter button punch at 24" o.c.
  - d. Welder shall be certified as a light gage welder in accordance with AWS.
  - e. Use E60 electrodes.
  - a, b, and c are minimum deck welding, deck supplier is to indicate deck welds on shop drawings to develop stated shear capacities.
- F. Unless noted otherwise on drawings all deck shall bear on and be welded to continuous angle 3 x 3 x 1/4 x cont. at all deck boundaries fastened to concrete or masonry wall with weld plates as per typical details or 3/4" diameter x 8" x 3" J-bolts at 16" o.c. Provide angle 3 1/2 x joist depth x 3/16 under all changes in deck direction.
- G. All continuous deck bearing angles shall have full penetration welds at splices and corners.
- H. Architect/Engineer shall be notified 48 hours prior to application of roofing material in order to observe deck attachment.
- I. Roof deck and joists and girders shall be designed for 17 psf uplift force minimum, U.N.O.

S7. Steel Joists
- A. All open web steel joists, VS joist substitutes, loose outrigger and bridging shall be fabricated according to the specifications of the "Steel Joist Institute" (S.J.I) and the manufacturers shall be members of S.J.I. joists, outriggers and V5 members shall be anchored at their supports by welding unless otherwise noted. V5 joist substitutes are Vulcraft "V5" series or equal. All K series joists shall bear 4 inches minimum and LH series joists and open web and girders shall bear 6 inches minimum on steel bearing angles or plates. Joist and girder supplier shall submit shop drawings showing truss joist geometry and member sizes. Joist supplier shall submit design calculations for all joists with snow drift loading, point loads, or any non-standard loading conditions.
- B. Joist bearing sloping 1/4" per foot or more provide beveled steel shims welded to joist and support.
- C. All joist cross bridging shall be welded at each joist and at cross over points.
- D. Where steel joist are exposed, use X bridging only. Coordinate bridging location with Architect. Do not run bridging through skylights, etc., unless otherwise indicated.
- E. Live Load deflection shall be limited to L over 360 unless otherwise noted.
- F. Structural calculations shall be provided with a Utah P.E. stamp.
- G. Top chord of joist shall be designed for an additional 5k axial force TYP. U.N.O.
- H. A certification of compliance must be submitted to building official upon completion of fabrication per IBC 2206.5.
- I. The bridging which supports the masonry and concrete wall shall be designed for 280 plf.

S8. Steel Studs
- A. Structural steel studs shall be as specified in this note and shown on drawings with minimum effective properties.

Stud Size	Gage	Gross Area (in.2)	EFFECTIVE I XX (in.4)
6"x 1 5/8	18	.43	2.22
6"x 1 5/8	16	.54	2.76
4"x 1 5/8	16	.42	1.06
3 5/8 x 1 5/8	16	.41	.84

- B. All studs shall be spaced at 16" o.c. unless noted otherwise and to be standard painted unless otherwise noted.
  Fy for 16 ga. and heavier material..50 Ksi
  Fy for 18 ga. and lighter material..33 Ksi
- C. Unless otherwise noted all bridging to be 1 1/2" minimum x 1/8" minimum x continuous cold rolled channels positioned through stud punch-outs and weld attached on both sides to stud punch-out. Bridging shall be spaced at 4'-6" o.c. to match punch-outs. Where punch-outs do not line up use weld attached bridge clip angles.
- D. All track to be stud size by 1 1/2" flange by 16 gage standard painted unless noted otherwise. Attach track to concrete slab at 16" o.c. using .177" diameter x 1 1/2" powder driven fasteners. Tracks and bridging to have Fy = 33,000 psi.
- E. All splices of structural studs to be full strength. Use 2'-0" minimum section lapped 1'-0" above and below splice fully welded. Alternate all splices 24" minimum. Spot paint all welds after cleaning.
- F. Load bearing stud walls must be fabricated with the stud ends seated against the track web. Full web and flange bearing must be provided.
- G. All structural studs shall be welded to top and bottom tracks with 1/8" x 1 1/2" fillet at each stud flange and 1/8" x 3" at stud web.

S9. Steel columns and beams that are located inside concrete or masonry walls or that are in contact with the walls shall have deformed bar anchors (RSM or Nelson) welded to the steel members at the shop. The deformed bar anchors (abbreviated DBA) shall match the size and location of the horizontal or vertical wall rebar that is interrupted by the steel members and shall be of such length to lap 38 bar diameters with the concrete wall reinforcing and 48 bar diameter with the masonry wall reinforcing. Steel columns which are located inside the wood wall shall have a 3x stud with 5/8" x 2 1/2" welded stud at 48" o.c. TYP. U.N.O..

S10. Headed stud type shear connectors shall conform to ASTM A-108 grade 1015 or 1020 cold finished carbon steel with dimensions complying with AISC specifications and as shown on drawings. All beams, including built-up beams, shall have shear connectors spaced at 12" o.c. maximum unless otherwise noted. Field test 10% of all studs or as directed by structural engineer to minimum of 30 degrees. If studs fail then reweld as directed by structural engineer.

S11. Unless noted otherwise on plans, all steel stairs shall have C12 x 20.7 stringers with concrete filled 12 gage welded pans and risers.

VII. General Conditions

G1. If discrepancies exist between specifications, general notes and drawings, call the Engineer (801-575-8223)to resolve the conflict or use the more expensive option.

G2. All dimensions on structural drawings shall be checked and verified against architectural drawings. All dimensions relating to existing site, buildings, installations or construction shall be field verified, all discrepancies shall be submitted to the architect. Do not proceed with fabrication and erection of materials affected until discrepancies are resolved.

G3. All omissions or discrepancies in the working drawings and or specifications shall be brought to the attention of the Architect and/or Structural Engineer before proceeding with any work involved.

G4. Shoring
- A. Until all permanent members, including walls, slabs, floors and roof are in place and all connections are completed, stability of structure and all parts thereof shall be contractor's responsibility. During construction contractor shall keep construction loads within the design load limits shown on drawings. After construction is completed building owner shall keep loads on roof and floor within design limits shown on drawings.
- B. Do not backfill walls until floor at top of wall is in place or adequate temporary bracing is provided.
- C. Contractor shall provide shoring design calculations and drawings stamped by a Utah Registered Professional Engineer.

G5. All Construction shall be in accordance with the IBC 2006 and supplements unless a higher standard is called for.

G6. Unless a more stringent requirement is specified, design all members with minimum Live Load deflection of L/360.

G7. Contractor shall be responsible for safety and protection in and around job site and or adjacent properties.

G8. Observation visits to the site by Baumek Mu and Associates Field Representative shall neither be construed as inspection nor approval of construction.

G9. Contractor shall provide 5 sets of shop drawings for review by structural engineer for: all reinforcing bars, structural steel, and all prefab. structural items (including structural calculations) and shall also be approved by the governing authority prior to installation. See Section 106.3.4.2.

G10. All openings through floors and walls shall be verified with architectural, mechanical and electrical drawings. Do not cut openings in concrete or masonry without approval of structural engineer and architect.

G11. Contractor/Window/Door - Supplier shall provide 1/2" minimum vertical movement capability in frame system. Window/Door- Supplier shall design for wind load specified under "Basis for Design" and shall submit professional engineer stamped design calculations showing compliance with Wind Load Capacity and vertical movement capacity.

G12. Seismic bracing of electrical, mechanical equipment, and ceiling system shall be designed by their respective supplier and stamped by a Utah Professional Engineer and submitted for design review and should be submitted to the governing authority for approval prior to installation.

G13. The appearance of all exposed structural elements shall be approved by architect or owner.
All blemishes, dents, or shipping damage in structural elements that are exposed to view shall be repaired before erection and shall be approved by the architect. All sweeps in beams joists, and girders greater than 1/2" shall be corrected. Repairs shall be made at no cost to the owner. For tolerances in wide flange shapes, follow AISC specifications.

G14. Mechanical ducts, piping, and electrical conduits which supports from the bottom chord of steel joist, should be limited to 50 lbs. for single clamp on one side within 6" of each panel point.

VIII. Special Inspections and Structural Testing for Seismic Resistance

Special Inspections shall be done by Special Inspectors that are qualified and approved for each area of work stated below or as required by the Building Official. All special inspections shall be paid for by the OWNER. The special inspector shall observe the work assigned for conformance with the approved design drawings and specifications. The special inspector shall submit reports to the owner, the Building Official, the Contractor, Architect, and Baumek Mu and Associates. The special inspectors shall conform to and fulfill all other responsibilities as outlined in SECTION 1704, 1707, 1709 of the IBC 2006. The special inspector shall submit written reports of observations stating time, date, location of work and observation of work being done.

A. Special Inspections are required for the following work:
1. Concrete and reinforcing placement. Except for the following conditions:
   - a. Non-Structural slab on grade.
   - b. Site work concrete where no special hazards exist.
2. Bolts installed in concrete where indicated on drawings.
3. Welding except for the following.
   - a. Welded connections made by an approved fabricator's shop need no special inspection. When Building Official allows, periodic inspections for floor and roof deck welds and composite welded stud.
   - b. Periodic inspection may be done as outlined on drawings. See IBC 2006, Table 1704.3.
4. High strength bolting inspection for bearing type connections need be done only after installation.
5. Structural masonry:
   All masonry walls require special inspections, unless noted otherwise, and shall have a qualified special inspector present at the job site at the beginning of every day masonry work is being performed to coordinate work and grout schedule during that day. The inspector shall also be present during the following:
   - a. The taking of prism tests.
   - b. At least one hour prior to any grout being placed to inspect rebar placement and review the quality of work.
   - c. Grouting of all masonry work.

   A minimum of one prism test composed of 10 specimens, 5 to be tested at 7-days and 5 specimens to be tested at 28 days, shall be made prior to any masonry construction for each masonry strength and each type of masonry unit shown on drawings. The prisms tested shall be made up of the required number of both ungrouted and solid grouted masonry units. All masonry units used shall be cut (with full web member) prior to building prism. All specimens are to be made at the same time and under the same conditions. During construction contractor shall provide prism tests of three specimens for every 5000 sq.ft. of each different strength of masonry wall but not less than three prior to construction. Submit laboratory mix design and prism test results to structural engineer for review. Contractor/Owner shall allow costs in his bid for masonry requiring special inspection. The special masonry inspector shall have ICBO certification for "Structural Masonry" or be approved by the structural engineer. The inspector should report by phone to the Architect/Engineer any work not being done in accordance with the contract documents.
   - d. Quality Assurance Program shall meet the requirements of Level 2 Quality Assurance shown on Table 1.15.2 of ACI 530.05/TMS 402-05.
6. Section 1707. Special Inspections for seismic resistance.
7. All rebars and threaded rods epoxy doweled into concrete and/or grouted CMU.

B. Structural testing for seismic resistance, see Section 1708 of the IBC 2006.

C. Structural observations shall be done according to Section 106.3.4.1. All the seismic resisting elements shall be inspected, including footings.

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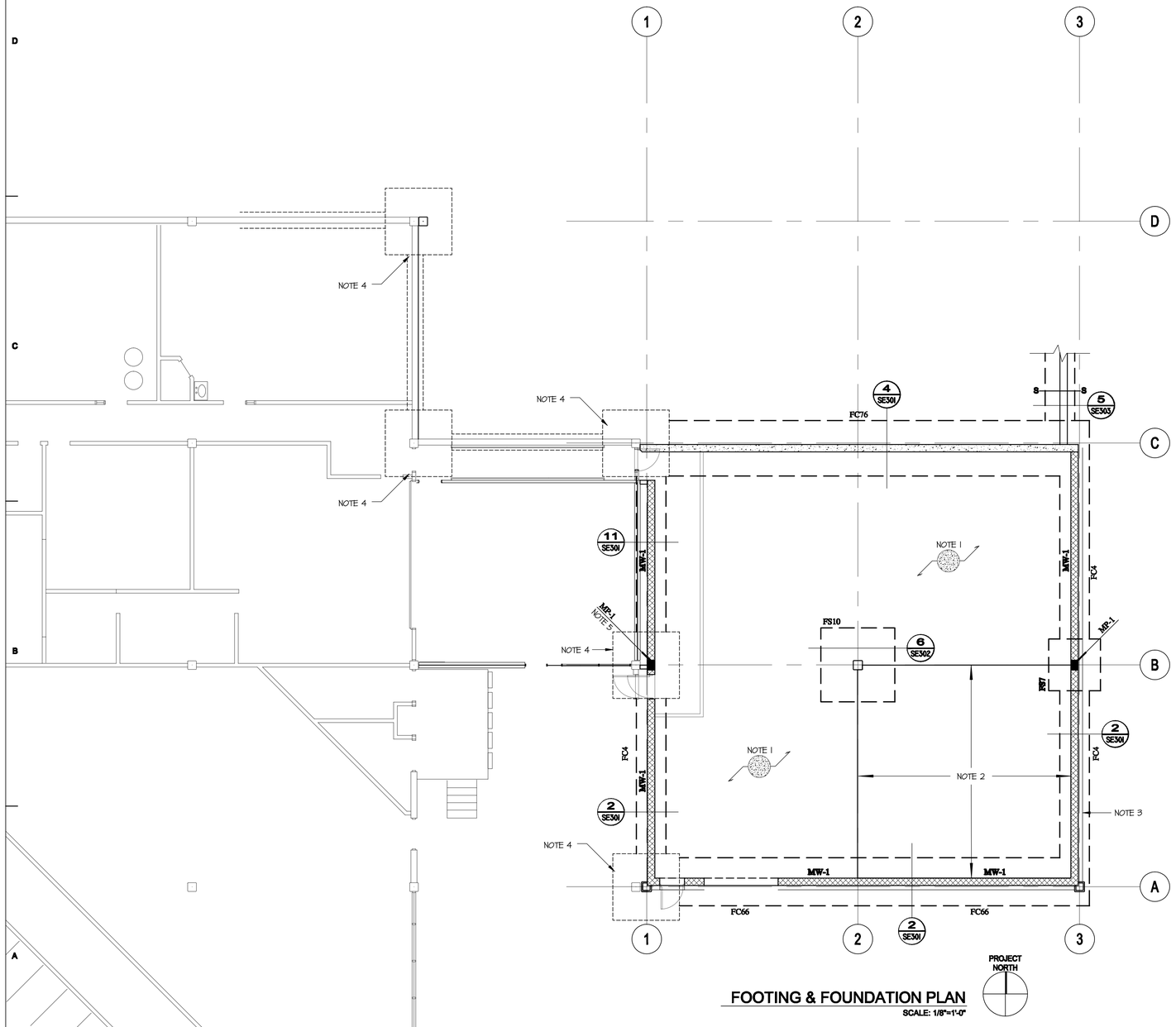
Orem, UT

REVISION NUMBER AND DATE:

AXIS JOB #: 0804
OWNER JOB #:
DATE: July 21, 2008
DRAWN BY: TT
CHECKED BY: PL

STRUCTURAL GENERAL NOTES

SE001



FOOTING & FOUNDATION PLAN

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

MASONRY PIER SCHEDULE

Mark	Pier Size	Vertical Reinforcing	Ties	REMARKS
MP-1	12" x 16"	(4) #6	#3 @ 8" O.C.	

MP-1

NOTES:

A. ALL TIES SHALL BE PLACED TO MAINTAIN A 1/2" CLEARANCE BETWEEN THE INSIDE FACE OF THE MASONRY UNIT AND EDGE OF BAR.

B. ALL TIES SHALL BE PLACED IN CUT H-BLOCK UNITS WITH A MINIMUM 3" X 3" CUT.

C. ALL VERTICAL REINFORCING SHALL DOWEL INTO FOOTINGS AND SHALL EXTEND (WITH TIES) TO TOP OF WALL UNLESS NOTED OTHERWISE.

D. ANCHOR BOLTS AT TOP OF MASONRY PIERS SHALL HAVE (2) ADDITIONAL TIES @ 3" O.C. WITHIN TOP 5" OF THE TOP OF PIER.

E. GROUT ALL MASONRY PIER SOLID.

F. CONTINUE ALL TYPICAL HORIZONTAL WALL REINFORCING THRU PIERS IN WALLS.

MASONRY SHEARWALL SCHEDULE

Mark	Thickness	Vertical Reinforcing	Horizontal Reinforcing	Remarks
MW-1	12"	(2) #5 @ 24" O.C.	(2) #4 @ 48" O.C.	
MW-2	6"	#5 @ 24" O.C.	#5 @ 48" O.C.	

NOTES:

a. FOR MASONRY F'M, GENERAL REINFORCING NOTES AND DETAILS, SEE GENERAL NOTES ON SHEET SE001 AND TYPICAL DETAILS ON SHEET SE501.

b. ALL REBARS SHALL BE TERMINATED WITH A 90 DEGREE STANDARD HOOK TYPICAL.

c. LAP ALL REBAR SPLICES PER GENERAL NOTES ON SE001, TYP. U.N.O..

FOOTING SCHEDULE

Soil Pressure — Spot Footing / Cont. Footing } = VARIES

MARK	WIDTH	LENGTH	THICK	CROSSWISE REINFORCEMENT No.	SIZE	LENGTH	SPACE	LENGTHWISE REINFORCEMENT No.	SIZE	LENGTH	SPACE	Remarks
FC2	2'-0"	CONT.	12"	NONE				2	#4	CONT.	18"	
FC3	4'-0"	CONT.	12"		#4	3'-6"	12"	4	#4	CONT.	EQ.	
FC66	6'-6"	CONT.	12"		#5	6'-0"	12"	6	#5	CONT.	EQ.	
FC76	7'-6"	CONT.	12"		#5	7'-0"	12"	7	#5	CONT.	EQ.	
FS3	3'-0"	3'-0"	12"	3	#4	2'-6"	EQ.	3	#4	2'-6"	EQ.	
FS5	5'-0"	5'-0"	12"	5	#5	4'-6"	EQ.	5	#5	4'-6"	EQ.	
FS7	7'-0"	7'-0"	12"	6	#7	6'-6"	EQ.	6	#7	6'-6"	EQ.	
FS10	10'-0"	10'-0"	18"	9	#7	9'-6"	EQ.	9	#7	9'-6"	EQ.	
FS13	13'-0"	13'-0"	18"	12	#7	12'-6"	EQ.	12	#7	12'-6"	EQ.	

PLAN NOTES

1. 4" CONCRETE SLAB ON GRADE OVER 4" GRAVEL BASE.
2. NO CONCRETE SLAB THIS AREA FOR FUTURE EXPANSION.
3. SLEEVES THROUGH WALL FOR FUTURE PLUMBING EXPANSION.
4. EXISTING FOOTING, EPOXY DOWEL ALL NEW FOOTING AND FOUNDATION WALL REINFORCING INTO EXISTING CONCRETE.
5. EPOXY DOWEL ALL VERTICAL PIER REINFORCING INTO EXISTING CONCRETE PIER.

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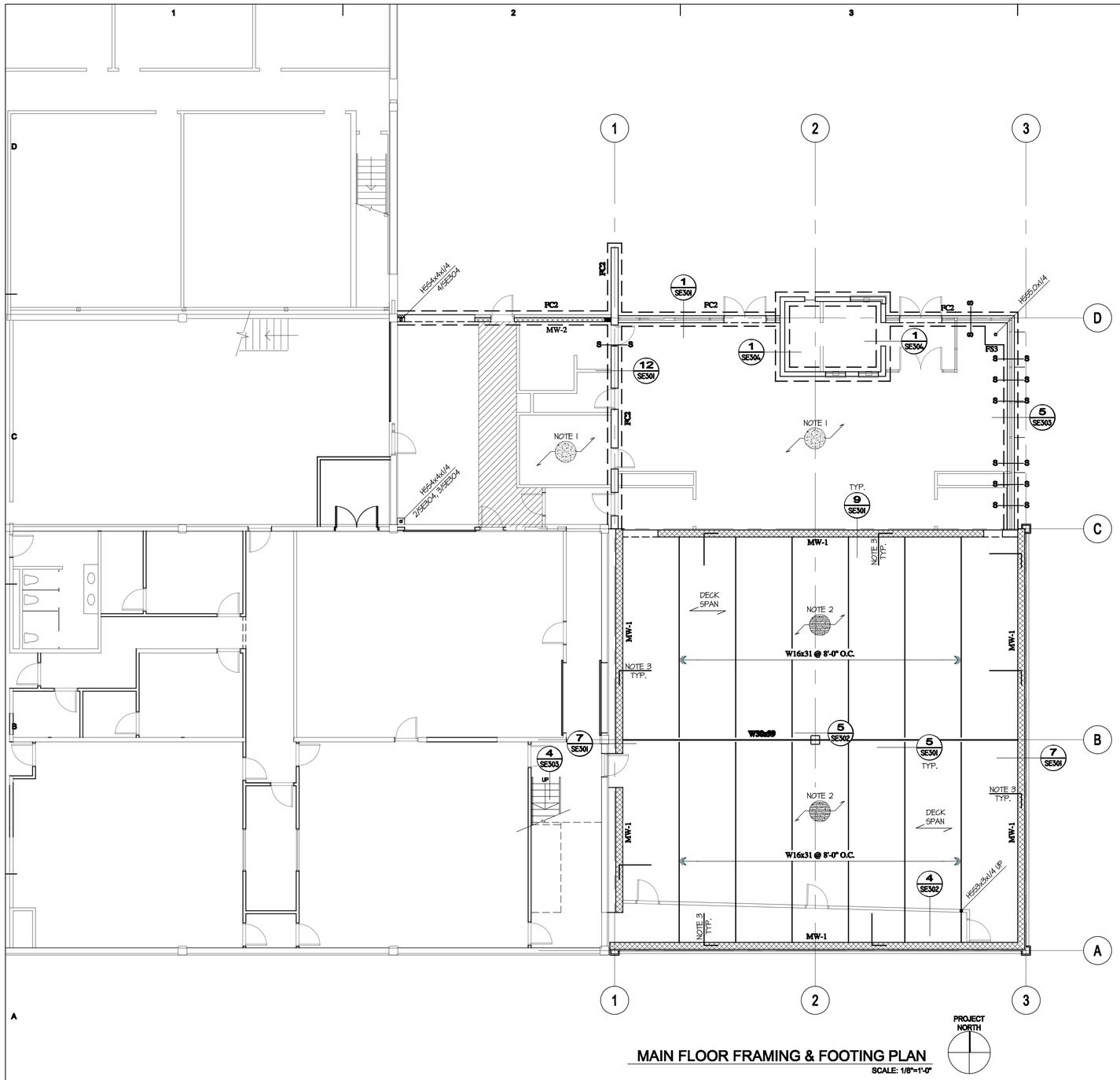
FOOTING AND FOUNDATION PLAN

SE100



MAIN FLOOR FRAMING & FOOTING PLAN

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

FOOTING SCHEDULE

Soil Pressure — Spot Footing / Cont. Footing } = VARIES

MARK	WIDTH	LENGTH	THICK	CROSSWISE REINFORCEMENT No.	SIZE	LENGTH	SPACE	LENGTHWISE REINFORCEMENT No.	SIZE	LENGTH	SPACE	Remarks
FC2	2'-0"	CONT.	12"	NONE				2	#4	CONT.	18"	
FC3	4'-0"	CONT.	12"		#4	3'-6"	12"	4	#4	CONT.	EQ.	
FC66	6'-6"	CONT.	12"		#5	6'-0"	12"	6	#5	CONT.	EQ.	
FC76	7'-6"	CONT.	12"		#5	7'-0"	12"	7	#5	CONT.	EQ.	
FS3	3'-0"	3'-0"	12"	3	#4	2'-6"	EQ.	3	#4	2'-6"	EQ.	
FS5	5'-0"	5'-0"	12"	5	#5	4'-6"	EQ.	5	#5	4'-6"	EQ.	
FS7	7'-0"	7'-0"	12"	6	#7	6'-6"	EQ.	6	#7	6'-6"	EQ.	
FS10	10'-0"	10'-0"	18"	9	#7	9'-6"	EQ.	9	#7	9'-6"	EQ.	
FS13	13'-0"	13'-0"	18"	12	#7	12'-6"	EQ.	12	#7	12'-6"	EQ.	

PLAN NOTES

1. 4" CONCRETE SLAB ON GRADE OVER 4" GRAVEL BASE.
2. 5 1/4" LIGHTWEIGHT CONCRETE SLAB ON 2" x 20 GAGE METAL DECK (3-SPANS MIN) ALL BEAMS SHALL HAVE 3/4" DIA. x 4" WELDED HEADED ANCHORS @ 12" O.C.
3. #4 x 24" x 12" SLAB DOWELS @ 24" O.C. TYPICAL.
4. 12" CONCRETE WALL REINFORCED AS PER GENERAL NOTES. REINFORCE AROUND OPENINGS AS PER 7/SE501.

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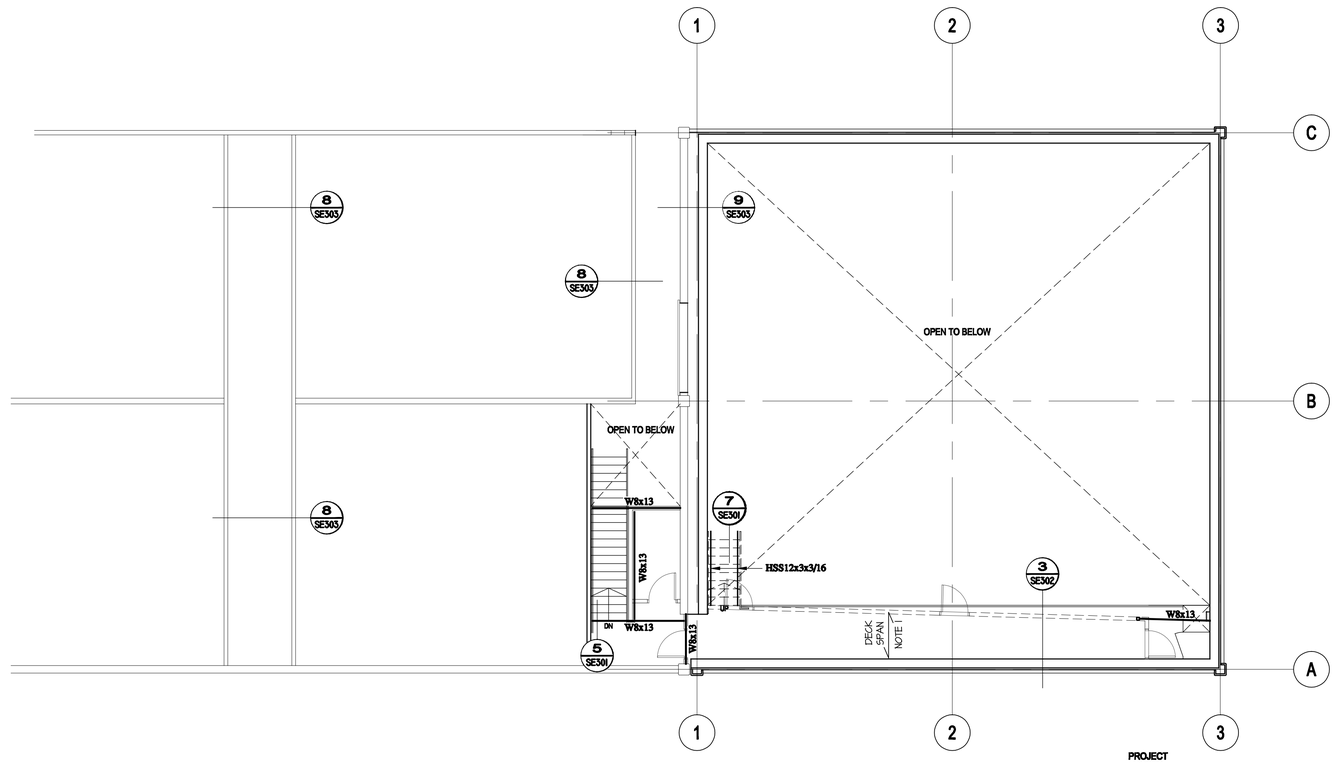
MAIN FLOOR FRAMING AND FOOTING PLAN

SE101



BALCONY FRAMING PLAN

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

PLAN NOTES

1. 4" CONCRETE SLAB REINFORCED WITH #4 @ 12" O.C. OVER 9/16" x 24 GAGE VERCO FORM DECK.

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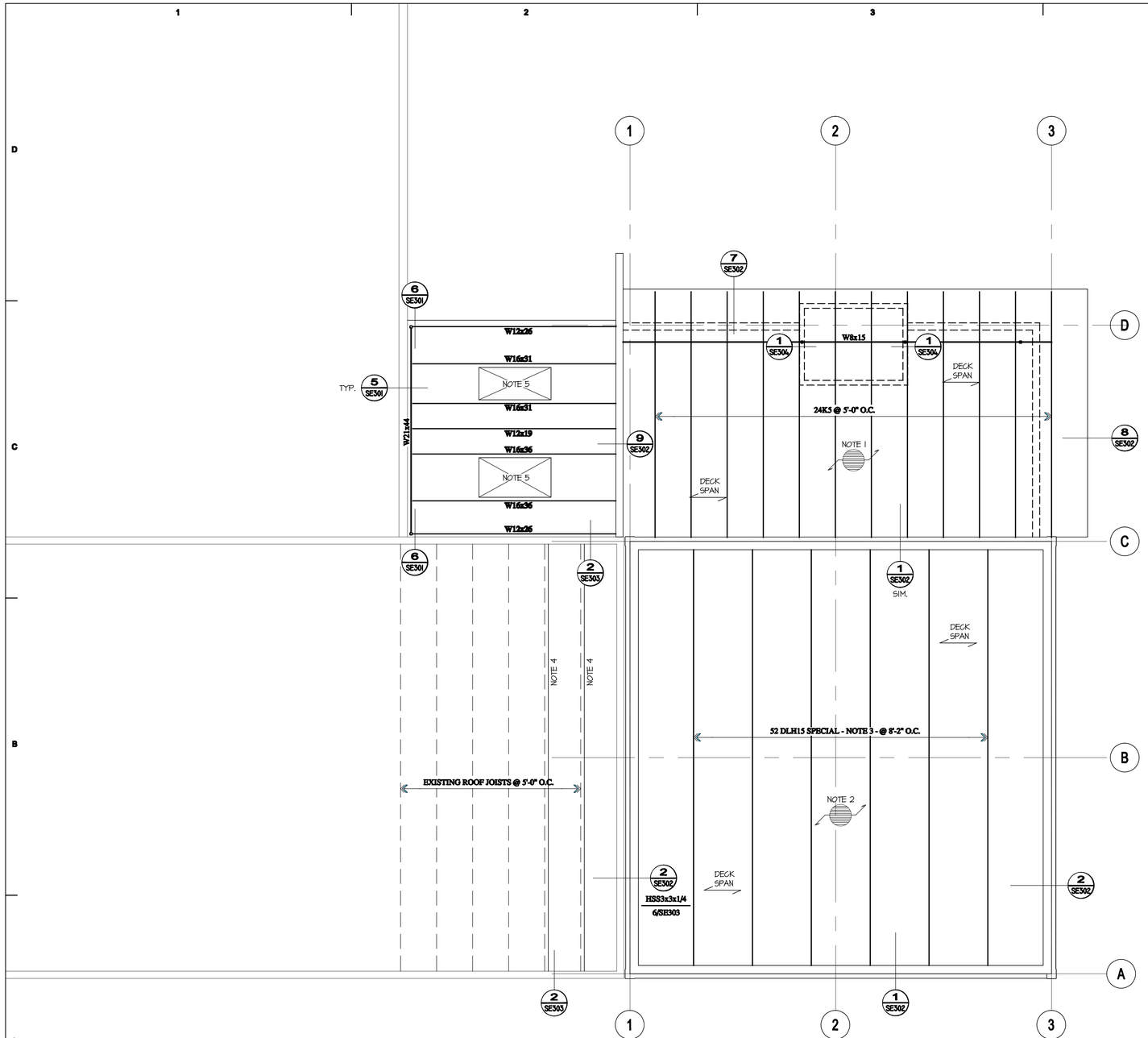
BALCONY FRAMING PLAN

SE102



PLAN NOTES

1. 1 1/2" x 20 GAGE METAL ROOF DECK (3-SPANS MIN.)
2. 3" x 20 GAGE N-DECK (3-SPANS MIN.)
3. 52 DLH15 SPECIAL OPEN WEB STEEL JOISTS. 433/270plf TL/LL TOP CHORD LOAD AND 6700# LL BOTTOM CHORD @ 8'-2" O.C. COORDINATE BOTTOM CHORD LOAD LOCATIONS / SPACING WITH SUSPENDED GRID.
4. REINFORCE JOIST AS PER DETAILS 1/SE303 AND 2/SE303.
5. ROOF TOP MECHANICAL UNIT. SEE MECHANICAL PLANS FOR EXACT LOCATION.

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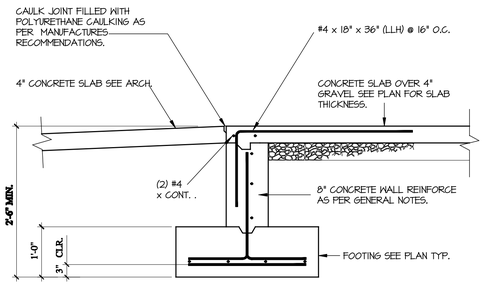
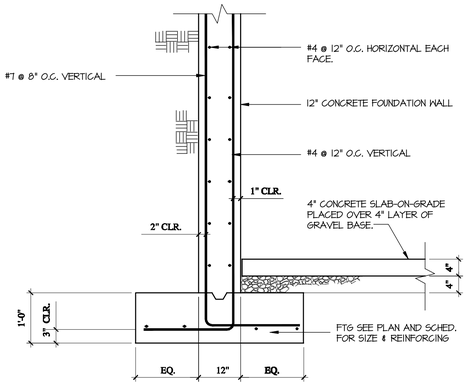
ROOF FRAMING PLAN

SE103



SCALE: 3/4" = 1'-0" 1 SE301



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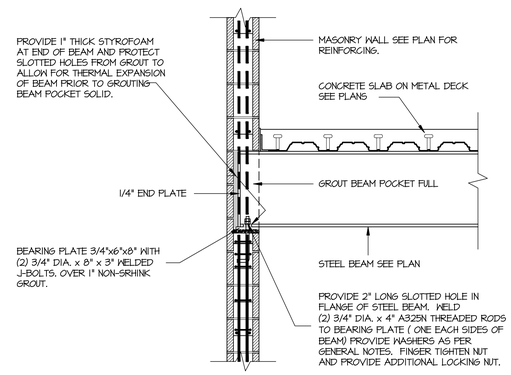

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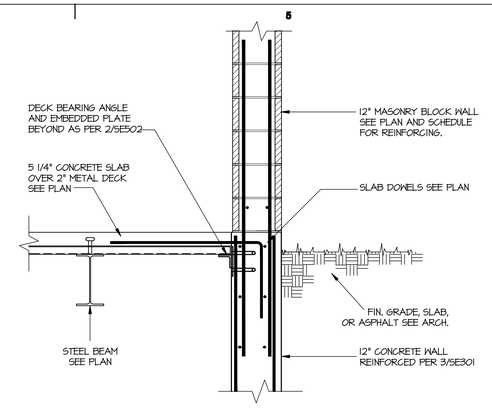
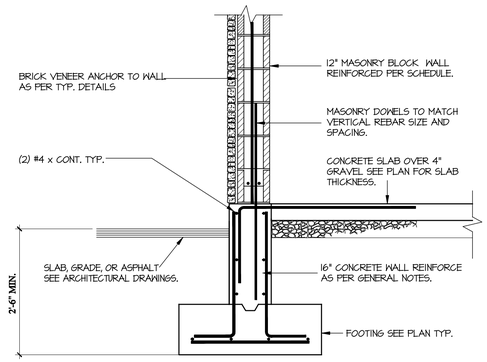


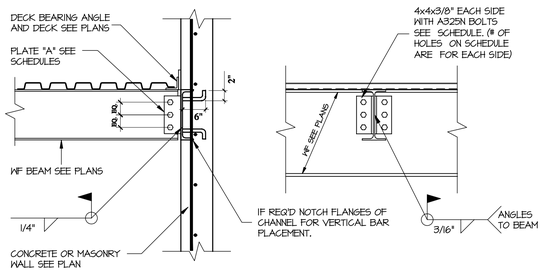
SCALE: 3/4" = 1'-0" 10 SE301



SCALE: 3/4" = 1'-0" 2 SE301

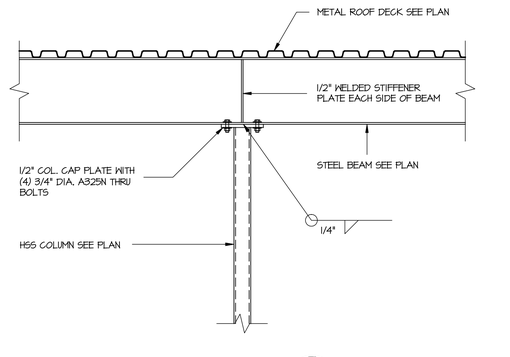
TYPICAL BOLTING SCHEDULE
UNLESS NOTED OTHERWISE

BEAM DEPTH	NUMBER OF A-325N BOLTS	PLATE "A"	CHANNEL EMBED	ANGLE ANCHORS TOP & BOTTOM	REMARKS
W8, W10	2 - 3/4" DIA.	3/8"	C12x20x12	(2) 3/4" DIA.	
W12	3 - 3/4" DIA.	3/8"	C12x20x12	(2) 3/4" DIA.	
W14	3 - 3/4" DIA.	7/16"	C12x33.8x12	(2) 3/4" DIA.	
W16	4 - 3/4" DIA.	7/16"	C15x33.9x12	(2) 3/4" DIA.	
W18	4 - 3/4" DIA.	7/16"	C15x40x12	(3) 7/8" DIA.	
W21	5 - 7/8" DIA.	1/2"	MC18x42.7x15	(3) 7/8" DIA.	

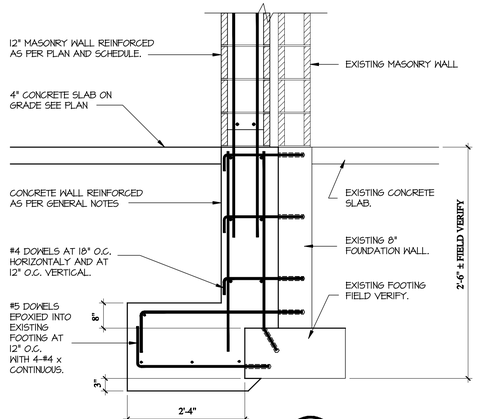


UNLESS NOTED OTHERWISE ON DRAWINGS
TYPICAL WIDE FLANGE BOLTING DETAILS

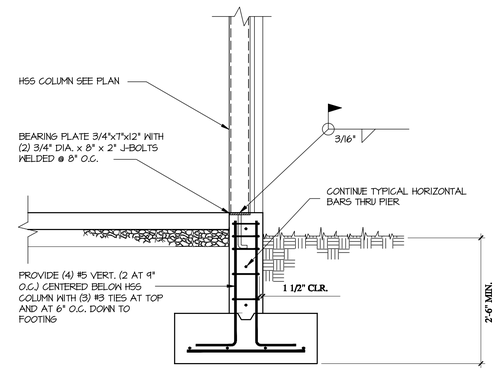
SCALE: 3/4" = 1'-0" 5 SE301



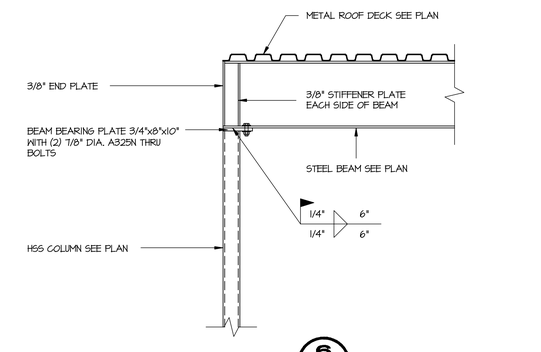
SCALE: 3/4" = 1'-0" 8 SE301



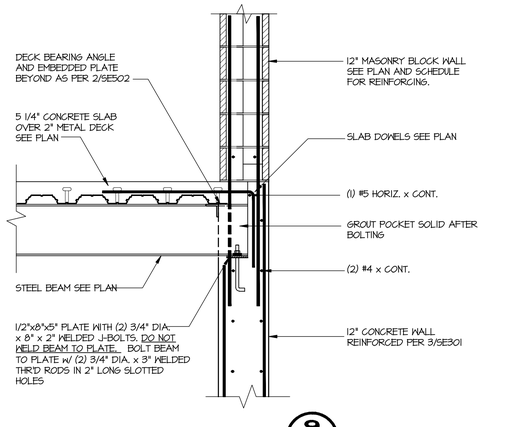
SCALE: 3/4" = 1'-0" 11 SE301



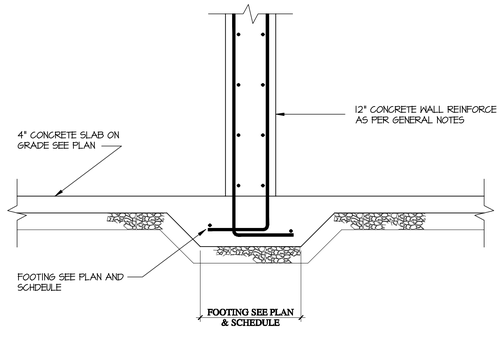
SCALE: 3/4" = 1'-0" 3 SE301



SCALE: 3/4" = 1'-0" 6 SE301



SCALE: 3/4" = 1'-0" 9 SE301



SCALE: 3/4" = 1'-0" 12 SE301

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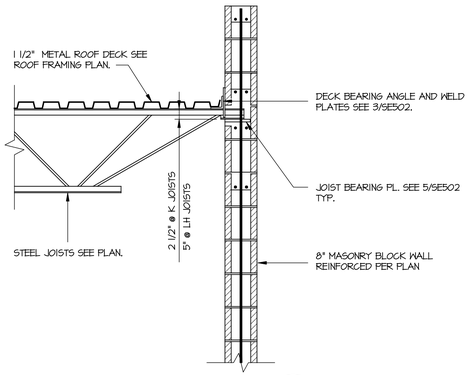
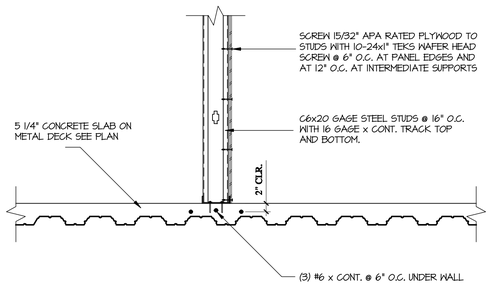
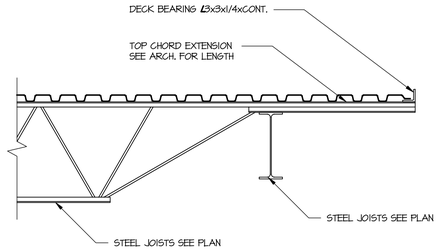
SE301



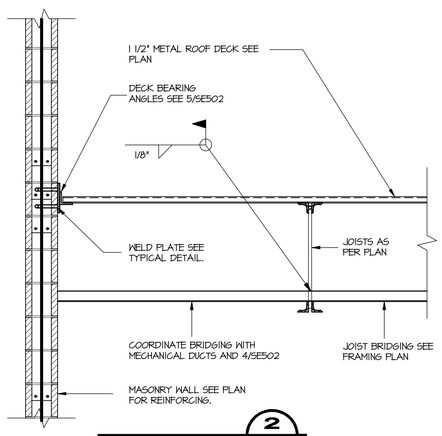
SCALE: 3/4" = 1'-0" 1 SE302



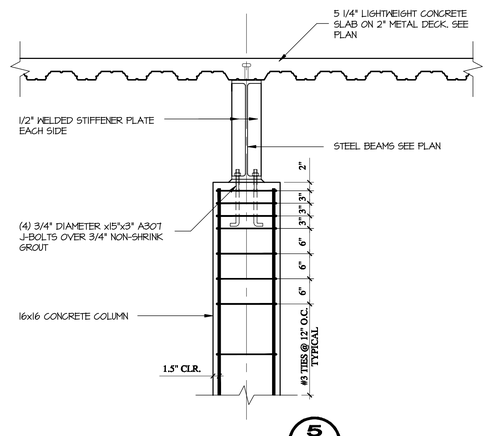
SCALE: 3/4" = 1'-0" 4 SE302



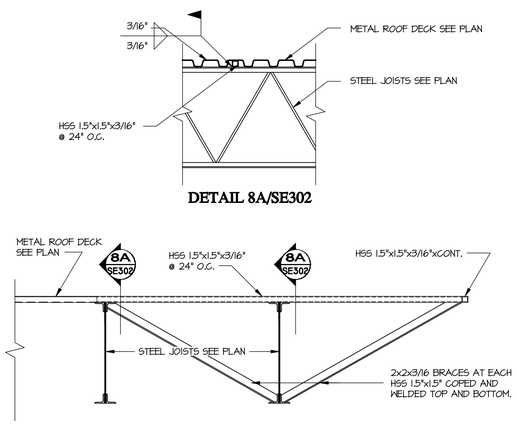
SCALE: 3/4" = 1'-0" 7 SE302



SCALE: 3/4" = 1'-0" 2 SE302

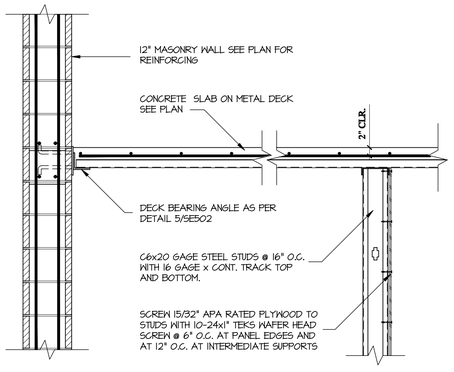


SCALE: 3/4" = 1'-0" 5 SE302

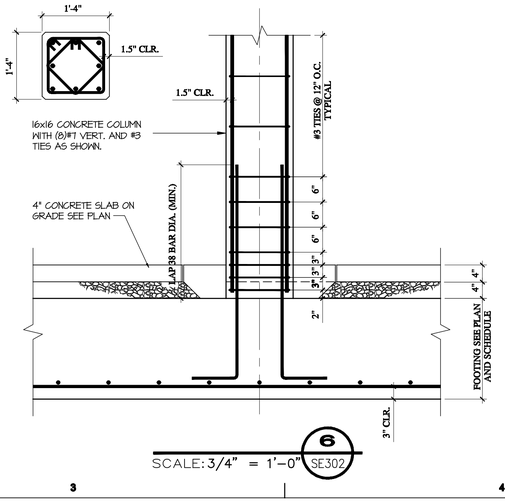


DETAIL 8A/SE302

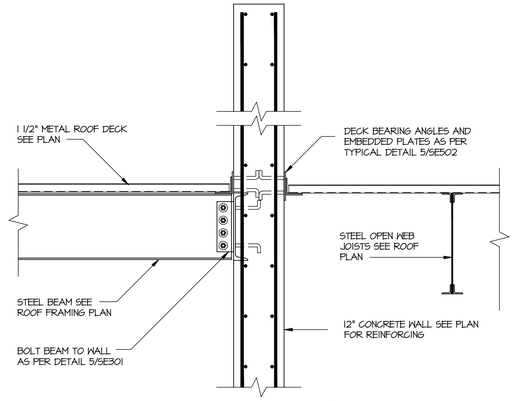
SCALE: 3/4" = 1'-0" 8 SE302



SCALE: 3/4" = 1'-0" 3 SE302



SCALE: 3/4" = 1'-0" 6 SE302



SCALE: 3/4" = 1'-0" 9 SE302

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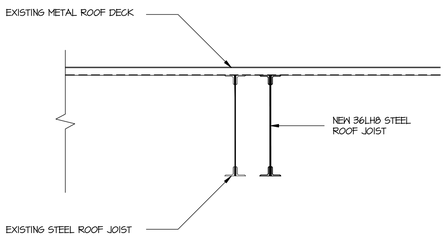
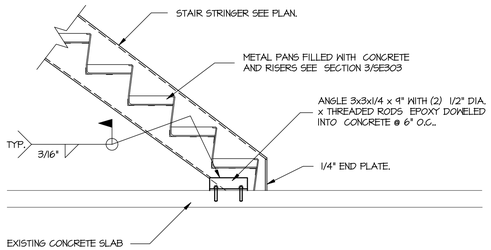


SCALE: 3/4" = 1'-0" (1 / SE303)



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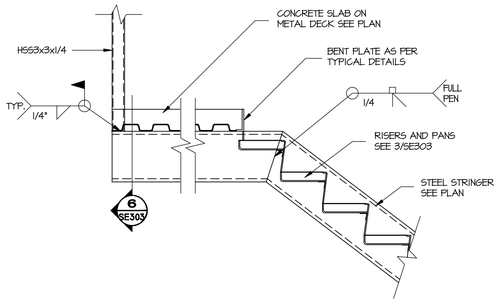

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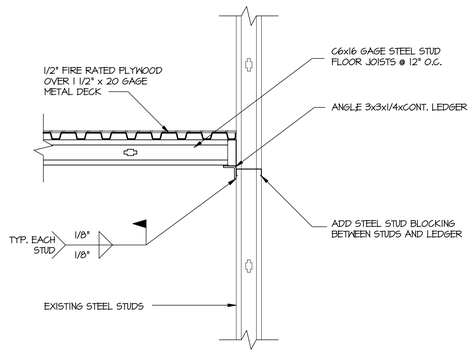

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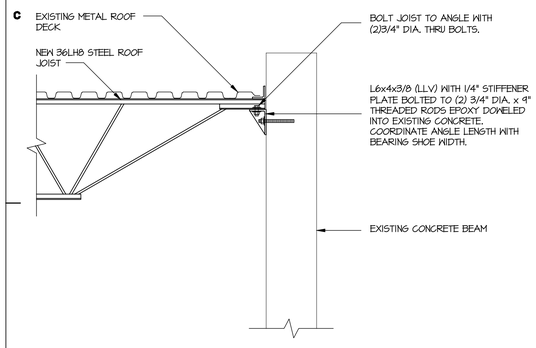
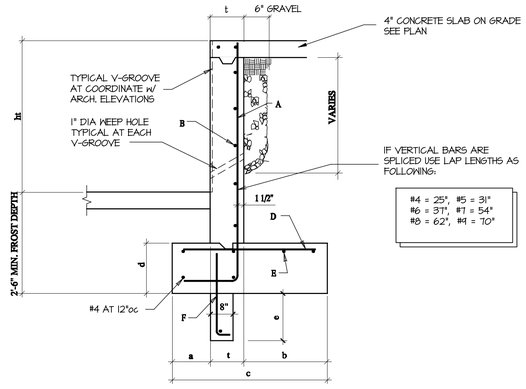


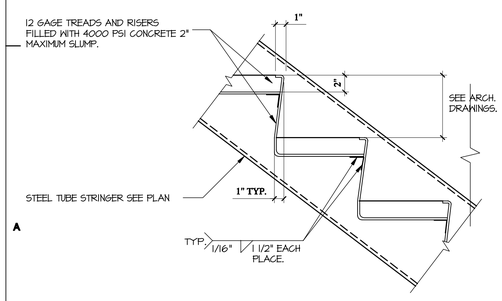
SCALE: 3/4" = 1'-0" (2 / SE303)



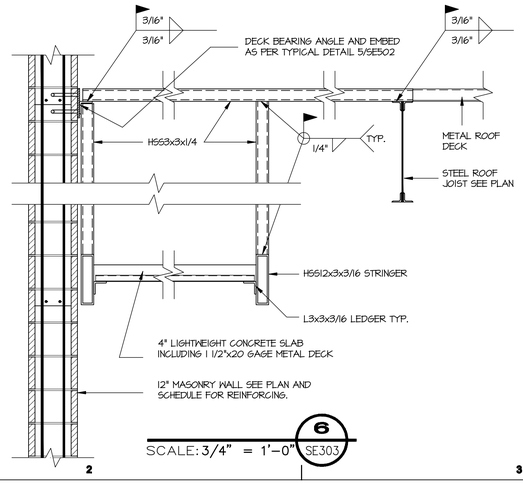
TYPICAL RETAINING WALL SCHEDULE				
Max. ht	3'-0"	7'-0"	11'-0"	15'-0"
t	12"	12"	12"	14"
d	12"	12"	14"	16"
e	3'-0"	7'-0"	10'-0"	15'-6"
a	1'-0"	2'-3"	3'-9"	5'-0"
b	1'-0"	3'-9"	5'-3"	9'-4"
c			14"	16"
A	#5 @ 12"	#5 @ 12"	#7 @ 11"	#9 @ 9"
B	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 10"
D	#4 @ 18"	#4 @ 16"	#6 @ 15"	#8 @ 8"
E	#4 @ 12"	#4 @ 12"	#5 @ 10"	#5 @ 9"
F			#4 @ 28"	#4 @ 28"

TYPICAL RETAINING WALL SECTION

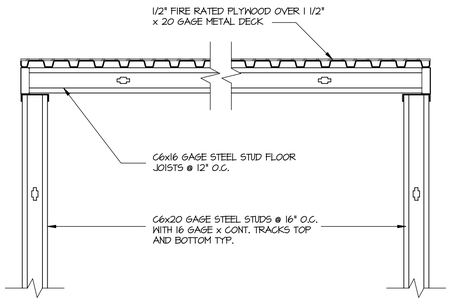
SCALE: N.T.S. = 1'-0" (5 / SE303)



SCALE: 1 1/2" = 1'-0" (3 / SE303)



SCALE: 3/4" = 1'-0" (6 / SE303)



SCALE: 3/4" = 1'-0" (8 / SE303)

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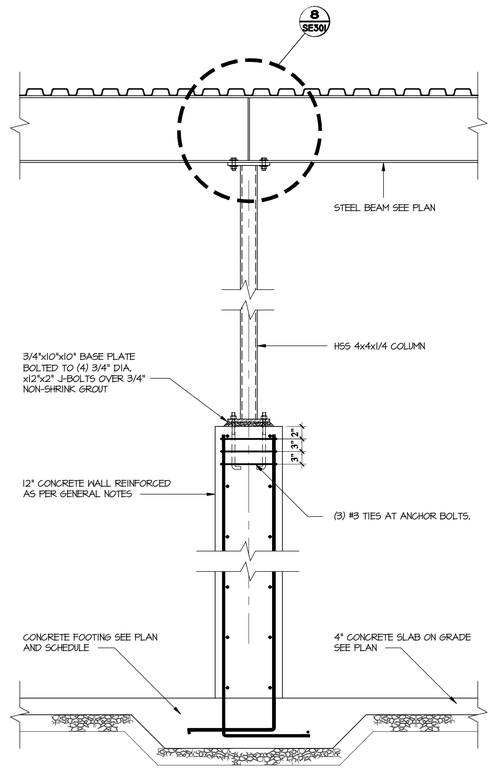
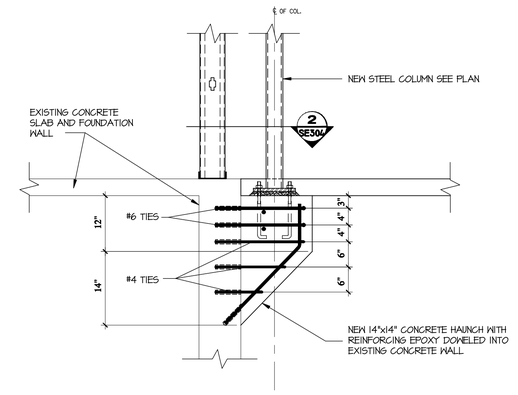
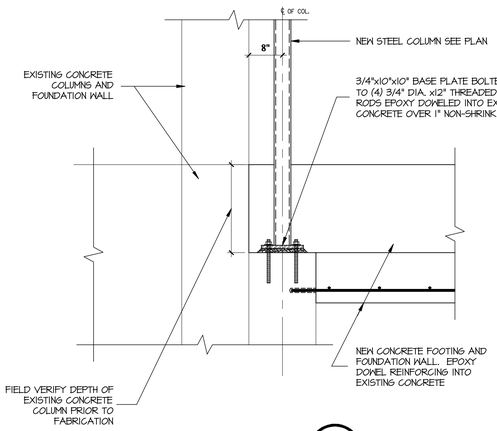
SE303



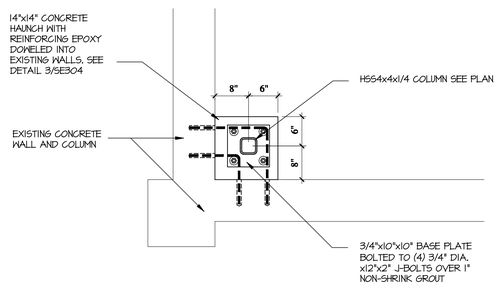
SCALE: 3/4" = 1'-0" (1 / SE304)



SCALE: 3/4" = 1'-0" (3 / SE304)



SCALE: 3/4" = 1'-0" (4 / SE304)



PLAN VIEW

SCALE: 3/4" = 1'-0" (2 / SE304)

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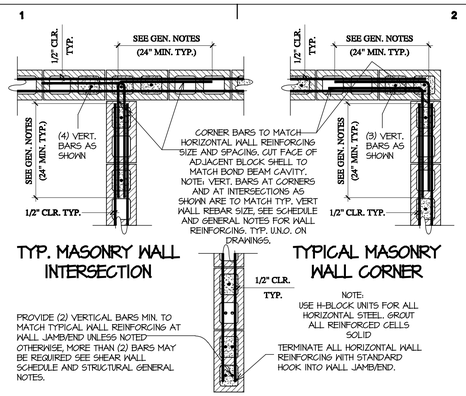
SE304

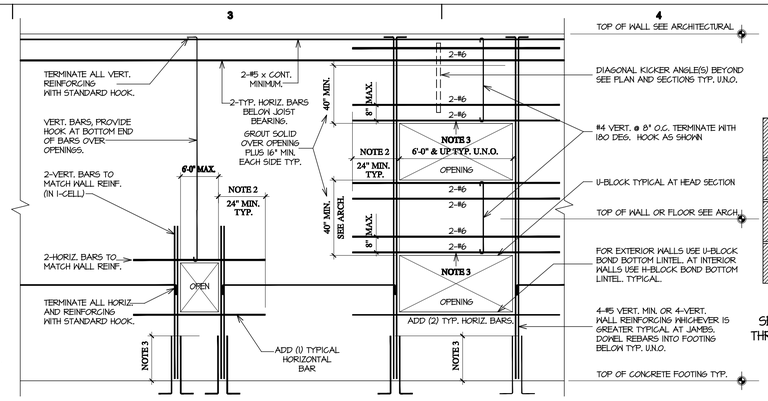


TYPICAL MASONRY WALL JAMB
TYPICAL MASONRY WALL END

SCALE: N.T.S. = 1'-0" 1 SE501

NOTES:

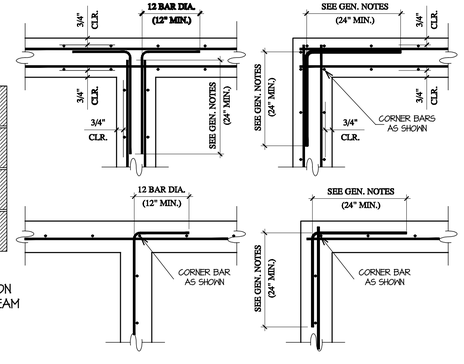
1. REINFORCING NOT SHOWN OR CALLED OUT TO BE AS PER TYPICAL WALL REINFORCING REQUIREMENTS, NOTE: CONTINUE ALL TYPICAL HORIZONTAL WALL REINFORCING THRU MASONRY BEAMS.
2. ALL HORIZONTAL LINTEL AND AND SILL REINFORCING SHALL BE EXTENDED BEYOND JAMB OF OPENING PER STRUCTURAL GENERAL NOTES AND 24" MIN.
3. TYPICAL BAR LAPS PER STRUCTURAL GENERAL NOTES (SPLICE BOTTOM BARS OVER SUPPORTS AND SPLICE TOP BARS AT MID SPAN OF BEAM).



REINFORCING AROUND OPENINGS IN MASONRY WALLS TYPICAL U.N.O..

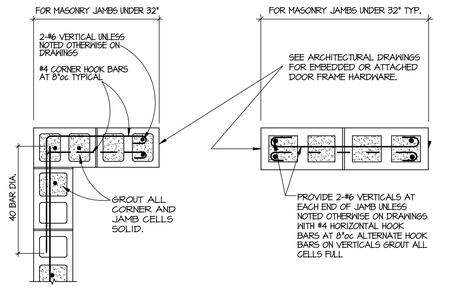
SCALE: N.T.S. = 1'-0" 4 S5.1

SECTION THRU BEAM



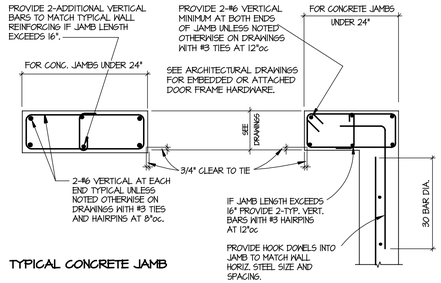
TYP. CONCRETE WALL INTERSECTION
TYP. CONCRETE WALL CORNER

SCALE: N.T.S. = 1'-0" 9 SE501



TYP. CORNER JAMB DETAILS
TYP. MASONRY JAMB

SCALE: N.T.S. = 1'-0" 2 SE501

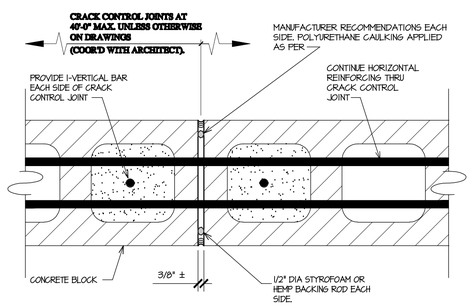


TYPICAL CONCRETE JAMB

TYP. CORNER JAMB DETAILS

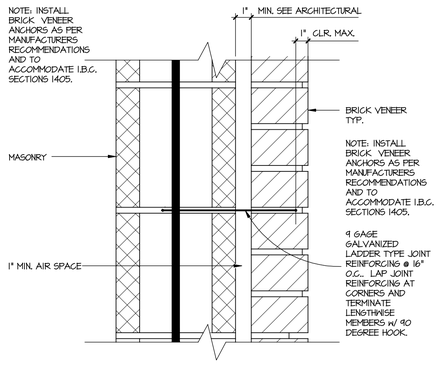
SCALE: N.T.S. = 1'-0" 5 SE501

NOTE: AT STACK BOND TYPE CONSTRUCTION: CRACK CONTROL JOINTS AT 12'-0" O.C AT ALL WALL PLAN CHANGES AND JAMBS



TYPICAL CRACK CONTROL JOINT IN CONCRETE BLOCK WALL.

SCALE: N.T.S. = 1'-0" 3 SE501



TYPICAL BRICK VENEER ATTACHMENT TO MASONRY

SCALE: N.T.S. = 1'-0" 6 SE501

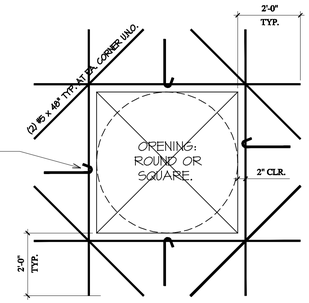
WALL OPENING SIZE AND REINFORCING:

UP TO 1'-0" ...(2)#6
1'-0" TO 10'-0" ...(2)#7
10'-0" TO 12'-0" ...(2)#8
NOTE: BARS ABOVE OPENING ONLY.

HOOK ALL REBARS AT DISCONTINUOS ENDS TYP.

SLAB OPENING SIZE AND REINFORCING:

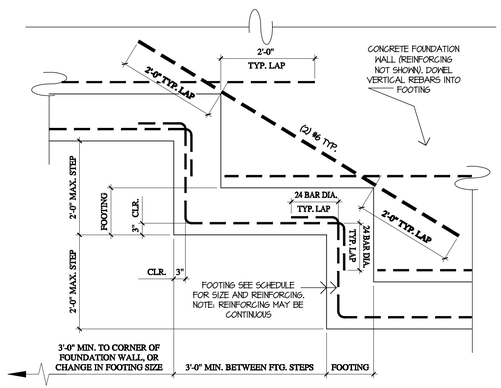
12" TO 18" ...(1)#4 T & B
19" TO 24" ...(2)#4 T & B
30" TO 48" ...(2)#5 T & B
ABOVE 48"...SEE DRAWINGS



NOTE: SLAB REINFORCING IS TOP AND BOTTOM ALL AROUND OPENING PLUS DIAGONAL BARS AS SHOWN. WHEN SLAB REINFORCING IS INTERUPTED BY AN OPENING, THEN PLACE FULL LENGTH BARS EACH SIDE OF OPENING TO EQUAL NUMBER OF BARS INTERUPTED BY OPENING.

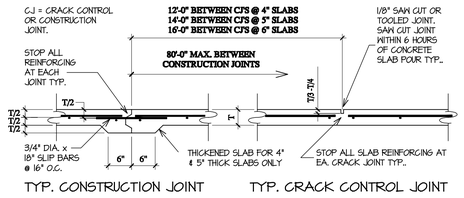
TYPICAL REINFORCING LAYOUT AROUND OPENINGS IN CONC. WALL OR SLAB.

SCALE: N.T.S. = 1'-0" 7 SE501



TYPICAL CONCRETE STEP DETAIL

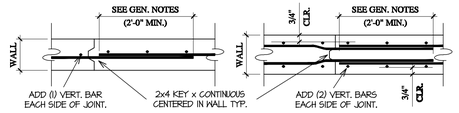
SCALE: N.T.S. = 1'-0" 8 SE501



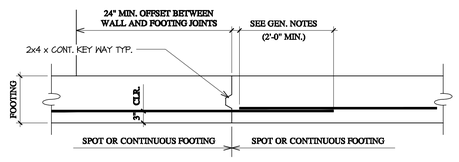
TYP. CONSTRUCTION JOINT
TYP. CRACK CONTROL JOINT

NOTE: CONCRETE SLABS TEND TO CRACK IN SQUARE PATTERNS, OFF OF WALL CORNERS, AT COLUMNS, AND AT OPENINGS IN SLAB. SUGGESTED C.J. LENGTH TO WIDTH PATTERN RATIO IS - L TO 2L = W ASSUMING L/W. PROVIDE C.J's OF WALL CORNERS, CENTERED ON COLUMNS, AND BETWEEN THICKENED SLAB FOOTINGS AND MAINTAIN L/W RATIO

TYPICAL CONSTRUCTION JOINT AND CRACK CONTROL JOINT IN CONCRETE SLAB-ON-GRADE

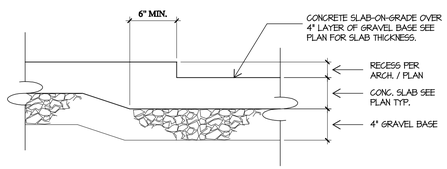


TYPICAL CONCRETE WALL CONSTRUCTION JOINT



TYPICAL FOOTING CONSTRUCTION JOINT

SCALE: N.T.S. = 1'-0" 10 SE501



TYPICAL SLAB RECESS DETAIL

SCALE: N.T.S. = 1'-0" 11 SE501

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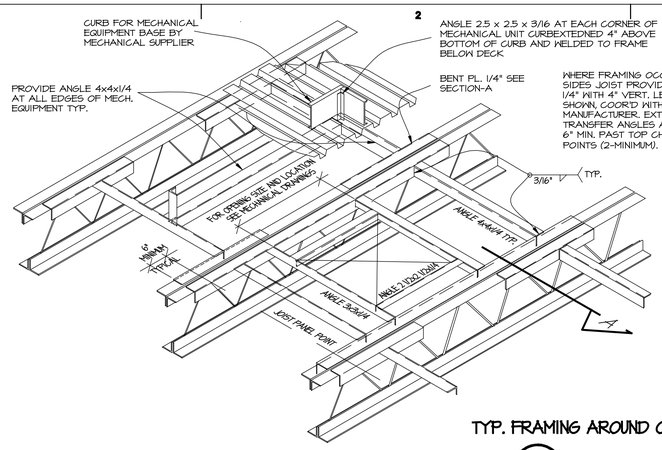
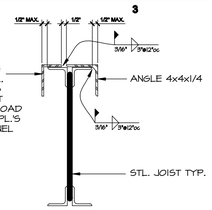
STRUCTURAL TYPICAL DETAILS

SE501



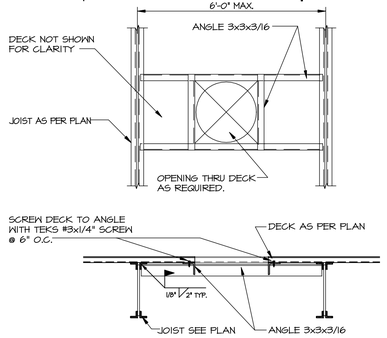


A

NOTE: FOR OPININGS SMALLER THAN 6" USE 14 GAGE SHEET METAL REINFORCING TYPICAL. EXTEND 12" PAST OPENING FASTENED WITH 2-#8 SCREWS AT 6" O.C. EACH WAY.

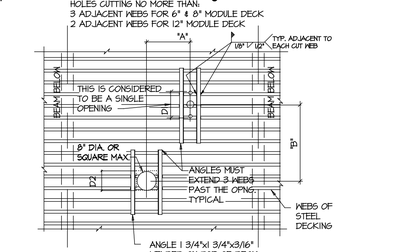
TYP. FRAMING AROUND OPENINGS IN METAL DECK

SCALE: N.T.S. = 1'-0" (1 SE502)



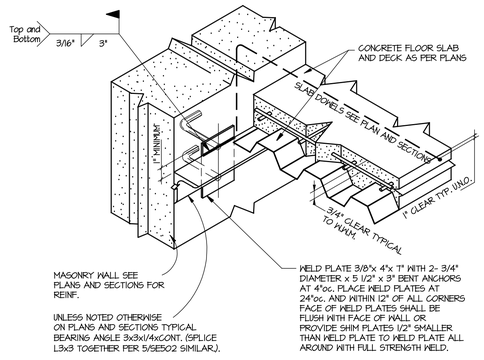
TYPICAL CONDITION REQUIRED AT ROOF AREA WITH LOADS OF 50# OR LESS AND AT ALL ROOF DRAINS.

6 SCALE: N.T.S. = 1'-0" (SE502)

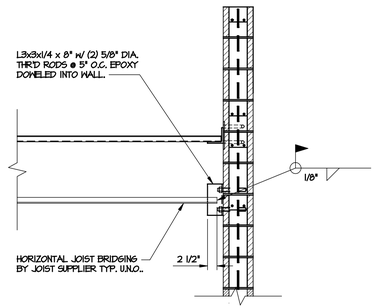


NOTES:

1. If Dimension "A" and "B" are less than 4D1, 4D2 or 32" whichever is larger, the opening group will be considered as a single hole, and must be reinforced as required for the larger opening.
2. Prior to concrete pour, small openings shall be blocked and deck left intact. Holes less than 6" in diameter and cutting no more that 1-deck web need no reinforcing After the concrete has cured, the blockout can be removed and the deck in the area of the hole removed. The holes may be cut before pouring concrete if the deck s shored appropriately around openings.

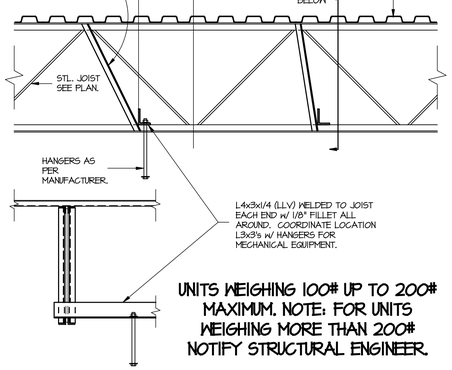


2 SCALE: N.T.S. = 1'-0" (SE502)



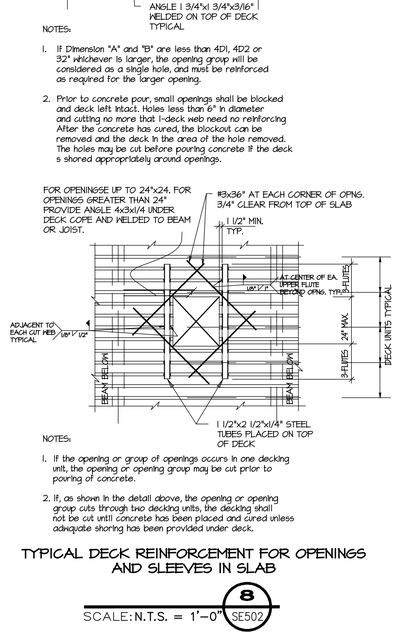
TYP. HORIZONTAL JOIST BRIDGING ATTACHMENT TO MASONRY WALL.

4 SCALE: N.T.S. = 1'-0" (SE502)



UNITS WEIGHING 100# UP TO 200# MAXIMUM. NOTE: FOR UNITS WEIGHING MORE THAN 200# NOTIFY STRUCTURAL ENGINEER.

7 SCALE: N.T.S. = 1'-0" (SE502)

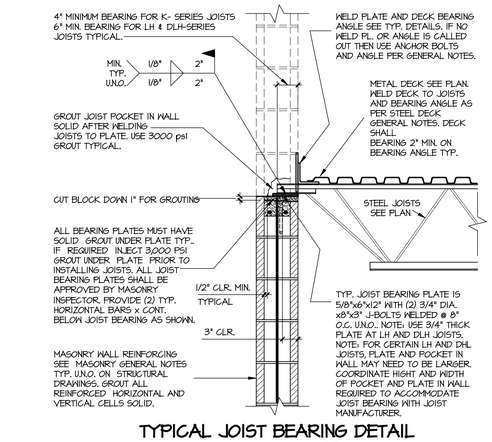


NOTES:

1. If the opening or group of openings occurs in one decking unit, the opening or opening group may be cut prior to pouring of concrete.
2. If, as shown in the detail above, the opening or opening group cuts through two decking units, the decking shall not be cut until concrete has been placed and cured unless adequate shoring has been provided under deck.

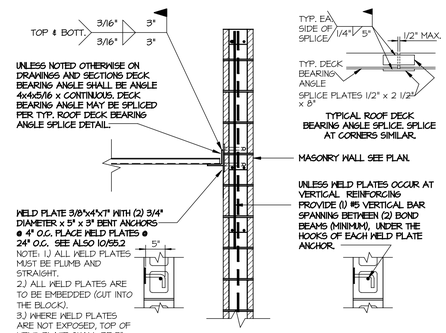
TYPICAL DECK REINFORCEMENT FOR OPENINGS AND SLEEVES IN SLAB

8 SCALE: N.T.S. = 1'-0" (SE502)



TYPICAL JOIST BEARING DETAIL

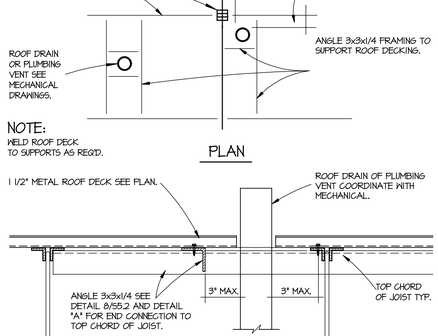
3 SCALE: N.T.S. = 1'-0" (SE502)



NOTE: 1.) ALL WELD PLATES MUST BE FLUSH AND STRAIGHT.
2.) ALL WELD PLATES ARE TO BE EMBEDDED (CUT INTO THE BLOCK).
3.) WHERE WELD PLATES ARE NOT EXPOSED, TOP OF WELD PLATE SHALL BE 5" MAX. ABOVE DECK BEARING.

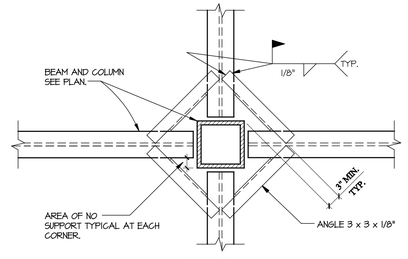
TYPICAL ROOF DECK BEARING ANGLE AND WELD PL's

5 SCALE: N.T.S. = 1'-0" (SE502)

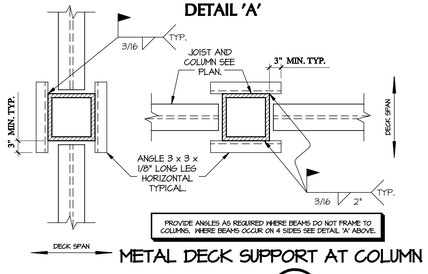


TYPICAL ROOF PENETRATION FOR ROOF DRAINS OR VENTING.

9 SCALE: N.T.S. = 1'-0" (SE502)



DETAIL 'A'



METAL DECK SUPPORT AT COLUMN

10 SCALE: N.T.S. = 1'-0" (SE502)

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DATE: July 21, 2008
DRAWN BY: TT
CHECKED BY: PL

STRUCTURAL TYPICAL DETAILS

SE502

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530B
530C
539A
541
543
MH
MH
501
530A
538
538C
540
200 occ.
DARK RM
530D
526B
542
EXISTING BUILDING
544
HALLWAY
526 MEN
ELEC
538A
542B
542A
STORAGE
HALL
001
STORAGE
002
501
519C
524
523
522
25G
518
525H
PRINTING SHOP
519
519A
WELDING STORAGE
WELDING LAB
517
520B
519B
WELDING STORAGE
SCULPTURE
516
COVERED STORAGE

A2 LEVEL 5 MECHANICAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"

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No. 4775391
SPENCER W. HOWELL
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REVISION NUMBER AND DATE:

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DATE: July 21, 2008
DRAWN BY: RG
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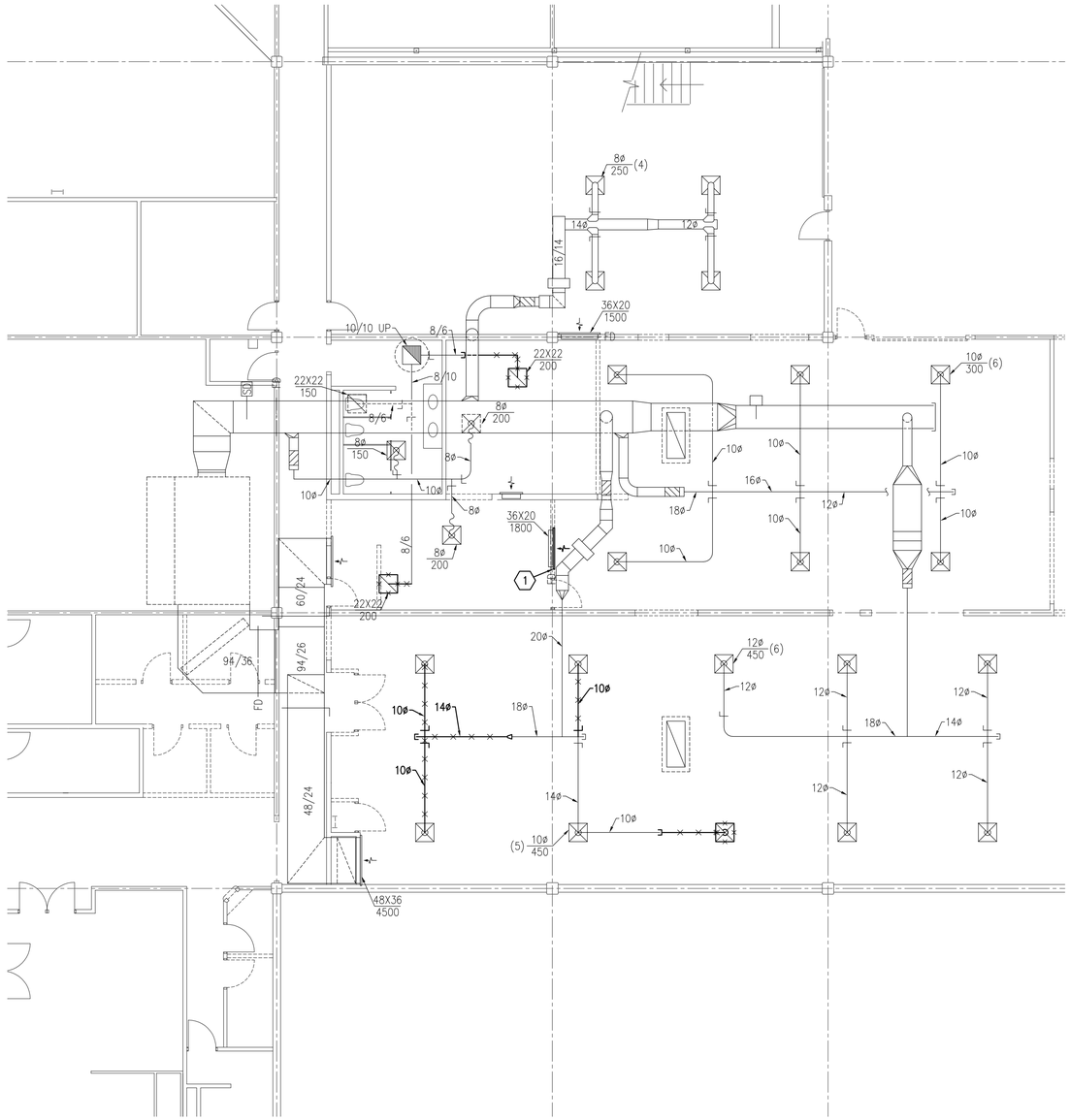
LEVEL 5
MECHANICAL DEMOLITION PLAN

MD101



A2 LEVEL 6 MECHANICAL DEMOLITION PLAN

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

KEYED NOTES

1. REMOVE AND SALVAGE EXISTING RETURN AIR GRILLE AND FIRE DAMPER. REFER TO SHEET MH102 FOR RE-INSTALLATION LOCATION.

GENERAL NOTES

1. REMOVE EXISTING SUPPLY DUCT, MANUAL VOLUME DAMPERS AND DIFFUSERS AS INDICATED.
2. FIELD VERIFY LOCATIONS OF DEMOLITION ITEMS BEFORE STARTING WORK.
3. REMOVE AND RE-INSTALL EQUIPMENT AND DIFFUSERS NOT NOTED FOR DEMOLITION AS REQUIRED TO FACILITATE DEMOLITION OF WALLS, CEILING, OR OTHER ITEMS SPECIFIED ELSEWHERE IN CONSTRUCTION DOCUMENTS.

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REVISION NUMBER AND DATE:

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DATE: July 21, 2008
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CHECKED BY:

LEVEL 6
MECHANICAL DEMOLITION PLAN

MD102

LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

MECHANICAL

- POSITIVE PRESSURE DUCT – RISE
- POSITIVE PRESSURE DUCT – DROP
- NEGATIVE PRESSURE DUCT – RISE
- NEGATIVE PRESSURE DUCT – DROP
- ROUND DUCT – RISE
- ROUND DUCT – DROP
- UNDER FLOOR DUCT
- TURNING VANES
- FRESH AIR LOUVER
- RELIEF AIR OR EXHAUST AIR LOUVER
- 12X12 200 — CEILING SUPPLY DIFFUSER
- 22X22 200 — CEILING RETURN REGISTER
- 12X12 200 — CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN)
- 24X10 200 — SIDEWALL SUPPLY REGISTER
- 24X10 200 — SIDEWALL EXHAUST OR RETURN REGISTER
- 12X12 200 — CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT
- 12X12 200 — CEILING AIR GRILLE WITH FLEXIBLE DUCT

  TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM.
- CEILING RETURN AIR GRILE W/ SOUND BOOT
- 3–1" SLOTS 48 400 — LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS & SIZE OF SLOT ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM
- FLEXIBLE DUCT CONNECTION
- FLEXIBLE DUCT
- FAN
- 12/8 FO — FLAT OVAL DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
- 12/8 — RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
- 12# — ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES.
- UP — INCLINED RISE
- DN — INCLINED DROP

  WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH RADIUS TURNS=DEPTH OF DUCT.
- W, R — R/W=1. ROUND DUCT SIMILAR TO RECTANGULAR
- 12/12 8/8 — RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE.
- 12/12 12# — RECTANGULAR TO ROUND DUCT TRANSFORMATION
- R — BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
- 450 — 200 — TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
- 12# 12/12 — HIGH EFFICIENCY FITTING
- MANUAL VOLUME DAMPER
- FD — FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD.
- FSD — COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL
- SD — SMOKE DAMPER W/ ACCESS PANEL
- BDD — BACK DRAFT DAMPER
- ATC OR — ATC DAMPER
- AD — ACCESS PANEL IN DUCT OR PLENUM
- HEATING OR COOLING COIL IN DUCT
- SINGLE DUCT AIR TERMINAL BOX VARIABLE OR CONSTANT VOLUME. MIN. 1–1/2 TERMINAL INLET SIZE STRAIGHT DUCT AT TERMINAL INLET.
- 4–WAY BLOW PATTERN
- 3–WAY BLOW PATTERN
- 2–WAY BLOW PATTERN
- 2–WAY BLOW PATTERN
- 1–WAY BLOW PATTERN
- SD — DUCT SMOKE DETECTOR
- UNIT HEATER

PLUMBING

- FLOOR SINK
- FLOOR DRAIN
- FCO / COTG — FLOOR CLEAN–OUT OR CLEAN–OUT TO GRADE
- ROOF DRAIN
- DOWNSPOUT NOZZLE
- ARROW INDICATES DIRECTION OF FLOW IN PIPE
- CHECK VALVE
- PRESSURE REDUCING, EXTERNAL PRESSURE VALVE
- PRESSURE REDUCING, SELF CONTAINED VALVE
- ATC VALVE – 2 WAY
- ATC VALVE – 3 WAY
- SOLENOID VALVE
- GATE VALVE
- GATE VALVE – NON RISING STEM
- GLOBE VALVE
- TEMPERATURE AND PRESSURE TEST PORT
- PS — PRESSURE SWITCH
- GAS COCK
- 68 GPM — CALIBRATED BALANCING VALVE WITH GPM INDICATED
- RPBP — REDUCED PRESSURE BACKFLOW PREVENTOR W/ DRAIN PAN
- BRANCH – BOTTOM CONNECTION
- BRANCH – TOP CONNECTION
- BRANCH – SIDE CONNECTION
- RISE OR DROP
- RISER – DOWN (ELBOW)
- RISER – DOWN (ELBOW)
- VTR — VENT THRU ROOF
- WATER HAMMER ARRESTOR
- INLINE PUMP
- INLINE PUMP
- CLEAN–OUT
- RELIEF VALVE
- ANGLE VALVE
- FLOW METER
- UNION
- BALANCING COCK
- SHUT–OFF COCK FOR USE WITH PRESSURE GAUGE
- FLEXIBLE EXPANSION JOINT
- THERMOMETER – TEMP RANGE AS INDICATED
- PRESSURE GAUGE WITH SHUT–OFF COCK
- PRESSURE GAUGE WITH PIGTAIL
- LATERAL STRAINER WITH BLOW–OFF VALVE, PROVIDE HOSE END WITH CAP WHERE DISCHARGE IS NOT PIPED TO DRAIN
- BALL VALVE (PIPE SIZES 2" AND SMALLER) BUTTERFLY VALVE (PIPE SIZES 2–1/2" AND LARGER)
- MOTOR OPERATED BUTTERFLY VALVE
- VALVE IN RISE
- AIR VENT–MANUAL
- AIR VENT–AUTO
- FLOW SWITCH
- REDUCER
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER

PLUMBING CONT.

- THERMOSTATIC MIXING VALVE
- HOSE BIBB
- PIPE CAP
- SWITCH
- SENSOR
- THERMOSTAT
- NIGHT THERMOSTAT
- FILL PORT
- DRAIN PAN AND P–TRAP
- (NAME) — FIXTURE FROM LEVEL ABOVE
- GPM / LB/HR. — FLOW METER ORIFICE
- FLANGE
- 90° ELBOW
- STEAM TRAP, F&T=FLOAT & THERMOSTATIC 45° ELBOW
- F&T — B=BUCKET, T=THERMOSTATIC
- DN — LEADER INDICATES DOWNWARD SLOPE
- DEMOLITION
- ALIGNMENT GUIDE
- ANCHOR
- LUBRICATED PLUG COCK

SYMBOLS

- P–1 — PLUMBING FIXTURES
- POINT OF CONNECTION
- A / M–101 — SECTION TAG – TOP FIGURE IS SECTION NO. BOTTOM FIGURE IS SHEET NO.
- A / M101 — DETAIL TAG – TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO.
- EF 1 — EQUIPMENT IDENTIFICATION
- 1 — KEYED NOTE IDENTIFICATION

FIRE

- HOSE VALVE
- NRS GATE VALVE WITH SUPERVISION
- FLOW SWITCH
- FIRE RISER
- SPRINKLER HEAD
- F — FIRE SPRINKLER WATER

LINETYPES

- AV — ACID VENT
- AW — ACID WASTE
- BBD — BOILER BLOW DOWN
- BF — BOILER FEED WATER
- B — BRINE
- CO2 — CARBON DIOXIDE
- CA — COMPRESSED AIR
- CF — CHEMICAL FEED
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- CS — CONDENSER WATER SUPPLY
- CR — CONDENSER WATER RETURN
- DOMESTIC COLD WATER (DCW)
- DOMESTIC HOT WATER (DHW)
- DOMESTIC HOT WATER RETURN (DHWR)
- DI — DEIONIZED WATER SUPPLY
- DIR — DEIONIZED WATER RETURN
- E(NAME) — EXISTING PIPING
- X (NAME) X — EXISTING PIPING TO BE REMOVED
- GHR — GLYCOL HEAT RECOVERY PIPING
- G(NAME) — GLYCOL PIPING SOLUTION
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUPPLY
- FOV — FUEL OIL VENT
- G — NATURAL GAS
- HC — HOT GAS
- HFR — HELICOPTER FUEL RETURN
- HFS — HELICOPTER FUEL SUPPLY
- HP(NAME) — HIGH PRESSURE DOMESTIC WATER
- HPC — HIGH PRESSURE CONDENSATE
- HPS — HIGH PRESSURE STEAM
- HWR — HEATING HOT WATER RETURN
- HWS — HEATING HOT WATER SUPPLY
- IA — INSTRUMENT AIR
- IA 120 — INSTRUMENT AIR AT PRESSURE INDICATED
- LA — LAB AIR
- LV — LAB VACUUM
- LPC — LOW PRESSURE CONDENSATE
- LPG — LIQUIFIED PETROLEUM GAS
- LPS — LOW PRESSURE STEAM
- MA — MEDICAL AIR
- MA 120 — MEDICAL AIR AT PRESSURE INDICATED
- MPC — MEDIUM PRESSURE CONDENSATE
- MPS — MEDIUM PRESSURE STEAM
- MUW — MAKE UP WATER
- MV — MEDICAL VACUUM
- N — NITROGEN
- N2O — NITROUS OXIDE
- OX — MEDICAL OXYGEN
- OX 120 — MEDICAL OXYGEN AT PRESSURE INDICATED
- PUMPED CONDENSATE

LINETYPES CONT.

- RO — REVERSE OSMOSIS WATER SUPPLY
- ROR — REVERSE OSMOSIS WATER RETURN
- RD — ROOF DRAIN
- ROO — ROOF DRAIN OVERFLOW
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- SEWER (BELOW GRADE)
- SEWER (ABOVE GRADE)
- SW — SOFT DOMESTIC WATER (SW)
- V — VACUUM
- VENT (SEWER)

MECHANICAL GENERAL NOTES

1. PROVIDE BALANCING DAMPER AT EACH BRANCH TAKE-OFF TO SERVE DIFFUSER OR GRILLE AS WELL AS WHERE INDICATED.
2. COORDINATE EXACT LOCATION OF DUCTS WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING, CABLE TRAY, PLUMBING, MECHANICAL PIPING, FIRE PROTECTION, ETC.
3. BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK SIZE OF THE DIFFUSER, REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL.
4. COORDINATION DRAWING SUBMITTALS ARE REQUIRED FOR THIS SHEET.
5. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION OF ALL REGISTERS, DIFFUSERS AND GRILLES.
6. INSTALL ALL HARD ELBOWS AS SHOWN ON EXPOSED DUCT. HARD ELBOWS ARE REQUIRED FOR SOUND ATTENUATION.
7. INSTALL EQUIPMENT WITH CLEARANCE PER MANUFACTURERS RECOMMENDATIONS. MAINTAIN PROPER SPACE FOR COIL PULL, CONTROLS, AND MAINTENANCE ACCESS.
8. ALL BRANCH TAKE-OFFS TO HAVE A HIGH EFFICIENCY FITTING. SEE DETAIL.
9. INSTALL TURNING VANES IN ALL SQUARE LOW PRESSURE DUCTWORK.
10. DETAILS REFERENCE ALL SHEETS.
11. UNLESS OTHERWISE NOTED, ALL SUPPLY DIFFUSERS SHALL BE OF THE CD-1 TYPE. ALL RETURN GRILLES SHALL BE OF THE RG-1 TYPE AND ALL EXHAUST GRILLES SHALL BE OF THE EG-1 TYPE.

MECHANICAL PIPING GENERAL NOTES

1. PIPING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY ALL ROUTING AND COORDINATE WITH ALL OTHER TRADES.
2. NO PIPING TO RUN DIRECTLY OVER ELECTRICAL PANELS, MCCS OF VFDS. ROUTE AROUND AS REQUIRED.
3. INSTALL A MANUAL AIR VENT AT ALL HYDRONIC SYSTEM HIGH POINTS.
4. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS RECOMMENDATION. PROVIDE A 24"X 24" ACCESS DOOR BELOW EQUIPMENT BOX AND CONTROL VALVE WHERE INSTALLED OVER NON LAY-IN CEILING AREAS.
5. COORDINATE EXACT LOCATION OF T-STATS WITH ARCHITECTURAL FURNISHINGS.
6. INSTALL A 24"X 24" ACCESS PANEL BELOW ALL VALVES CIRCUIT SETTERS, & CONTROL VALVES OVER NON-LAYIN CEILINGS.
7. MECHANICAL PIPING TO BE INSTALLED ABOVE DUCTWORK AND EQUIPMENT EXCEPT WHERE SHOWN.
8. FIELD VERIFY ALL EQUIPMENT LOCATIONS.
9. DETAILS REFERENCE ALL SHEETS.

PLUMBING GENERAL NOTES

1. SLOPE PIPE AS FOLLOWS UNLESS OTHERWISE NOTED: WASTE: BRANCHES ¼" PER FOOT. WASTE MAINS: 1/8" PER FOOT.
2. SLEEVE PIPING THRU WALLS/FOUNDATIONS WHERE REQUIRED.
3. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT ROUTING & COORDINATE WITH ALL OTHER TRADES.
4. ALL PIPING IN PLUMBING CHASES TO BE ARRANGED TO ALLOW MAINTENANCE ACCESS.
5. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S, OR MCC'S.
6. COORDINATE FAN ROOM FLOOR DRAIN LOCATIONS AND COOLING COILS.
7. NO FIRE PROTECTION LINE IS TO BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES, DUCTWORK, MECHANICAL PIPING, AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION PIPING . FAILURE TO COMPLY WILL RESULT IN FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.
8. SLEEVE/CONFIGURE CMU WALLS FOR EMBEDDED PIPING AND PIPE PENETRATIONS AS REQUIRED.
9. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS, AND OTHER REQUIREMENTS.
10. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY.
11. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES.
12. INSTALL DOMESTIC WATER LINES BELOW DUCTWORK.
13. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES & CIRCUIT SETTERS WHERE MOUNTED ABOVE HARD CEILINGS.
14. MOUNT ALL CEILING TYPE ISOLATION VALVES, CONTROL VALVES, CIRCUIT SETTERS, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.
15. DETAILS REFERENCE ALL SHEETS.

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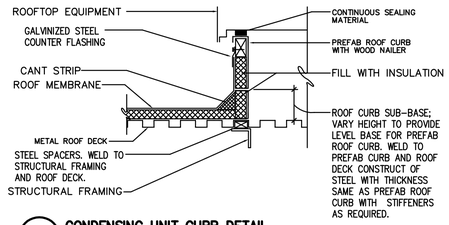
DATE: July 21, 2008
DRAWN BY: JL
CHECKED BY: SH

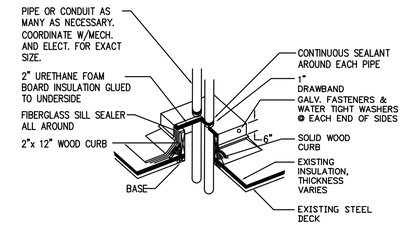
MECHANICAL SYMBOLS AND ABBREVIATIONS

ME001

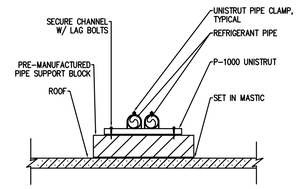
NOTE: ANCHOR ROOFTOP EQUIPMENT TO PREFAB ROOF CURB PER SEISMIC RESTRAINT REQUIREMENTS.



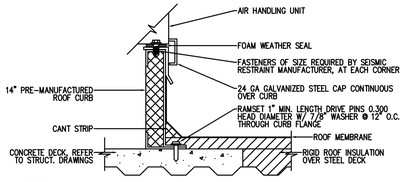
11 / ME501 **CONDENSING UNIT CURB DETAIL**
NO SCALE



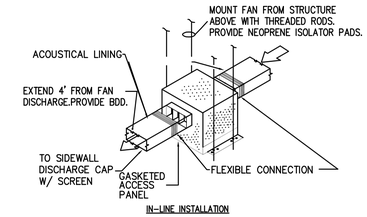
11 / ME501 **REFRIGERANT PIPING ROOF PENETRATION DETAIL**
NO SCALE



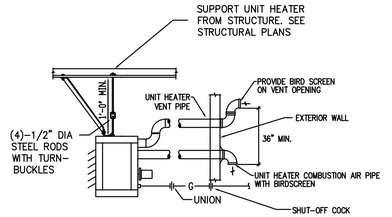
12 / ME501 **REFRIGERANT PIPE SUPPORT ON ROOF DETAIL**
NO SCALE



13 / ME501 **ROOF MOUNTED AIR HANDLER CURB DETAIL**
NO SCALE

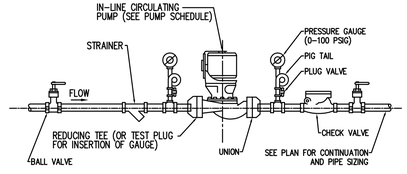


6 / ME501 **INLINE EXHAUST FAN DETAIL**
NO SCALE

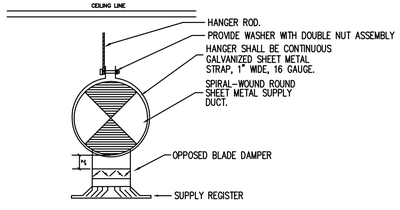


7 / ME501 **GAS FIRED UNIT HEATER DETAIL**
NO SCALE

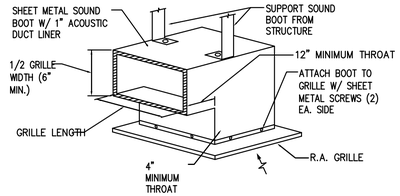
8 / ME501 **NOT USED**
NO SCALE



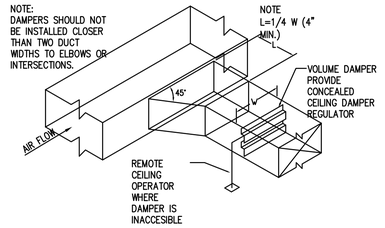
9 / ME501 **IN-LINE CIRCULATING PUMP**
NO SCALE



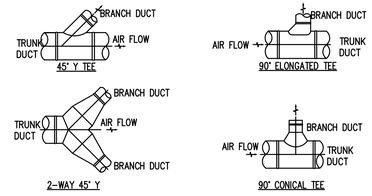
10 / ME501 **RIGID DUCT DIFFUSER CONNECTION DETAIL**
NO SCALE



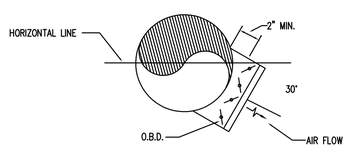
1 / ME501 **R.A. GRILLE WITH SOUND BOOT**
NO SCALE



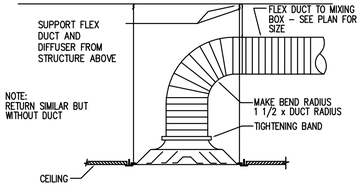
2 / ME501 **BRANCH DUCT TAKE-OFF & DAMPER DETAIL**
NO SCALE



3 / ME501 **ROUND DUCT BRANCH TAKE-OFF DETAILS**
NO SCALE



4 / ME501 **SUPPLY REGISTER DETAIL**
NO SCALE



5 / ME501 **DIFFUSER CONNECTION DETAIL**
NO SCALE

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MECHANICAL
DETAILS

ME501

PUMP SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	FLUID			PUMP		WEIGHT	ELECTRICAL				NOTES
				FLOW RATE	WORKING	HEAD LOSS	EFFICIENCY			MOTOR SIZE	MOTOR BHP	MOTOR SPEED		
				(GPM)	FLUID	(FT)	(%)	CONSTRUCTION	(LBS)	(HP)	(HP)	(RPM)	VOLT/PH/HZ	
P-CC-1	B&G 60 1-1/4x5-1/4	SEE MH102	INLINE	26.0	WATER	20	54.85	BRONZE	100	1/2	0.25	1750	120/1/60	1
P-CC-2	B&G 60 1-1/4x5-1/4	SEE MH102	INLINE	17.0	WATER	15	43.88	BRONZE	100	1/4	0.15	1750	120/1/60	1
P-HC-1	B&G 60 1-1/4x5-1/4	SEE MH102	INLINE	41.0	WATER	16	57.82	BRONZE	250	1/2	0.3	1750	120/1/60	1
P-HC-2	B&G 60 1x5-1/4	SEE MH102	INLINE	15.5	WATER	10	32.56	BRONZE	100	1/4	0.13	1750	120/1/60	1

1. STARTER BY DIVISION 26.

AIR HANDLER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	AIR			COMPONENTS				ELECTRICAL	PHYSICAL		NOTES
			MAXIMUM SUPPLY AIRFLOW	UNOCCUPIED MIN. OUTSIDE AIRFLOW	OCCUPIED MIN. OUTSIDE AIRFLOW	FANS	COILS	FILTERS	OTHER	SINGLE POINT VOLT/PH/HZ	CABINET LENGTH/ WIDTH/HEIGHT (IN)	WEIGHT (LB)	
AH-1	TEMTROL	ROOF	9600	230	1,200	SFA-1	HC-1, CC-1	MERV 8	-	460/3/60	223 / 84 / 76	10,000	
AH-2	TEMTROL	ROOF	5000	500	650	SFA-2	HC-2, CC-2	MERV 8	-	460/3/60	229 / 66 / 59	8,000	

1. AIRFLOWS AT DESIGN ELEVATION OF 4,600'.

AIR HANDLER SOUND POWER SCHEDULE

ID	SOUND DATA LOCATION	OPENING AREA SQ FT.	OCTAVE BAND FREQUENCY SOUND POWER (dB RE: 10 E-12 WATTS)									
			63	125	250	500	1k	2k	4k	8k	LwA	Lw
AH-1	SUPPLY FAN	INLET	72	75	68	73	74	73	70	60	79	81
		OUTLET	71	72	69	63	67	64	59	53	71	77
	RA OPENING	8	67	75	63	65	64	64	61	54	70	77
	SA OPENING	13.4	69	74	73	65	67	66	62	55	73	79
	CASING RADIATED		72	74	67	57	52	46	40	32	64	77
AH-2	SUPPLY FAN	INLET	72	75	68	73	74	73	70	60	79	81
		OUTLET	71	72	69	63	67	64	59	53	71	77
	RA OPENING	6	65	66	55	59	58	58	55	45	64	70
	SA OPENING	5.6	64	65	62	56	58	56	51	44	62	69
	CASING RADIATED		73	71	62	54	49	42	35	27	60	76

GAS UNIT HEATER SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	USE TYPE	VENT/ FLUE SIZE (IN)	AIRFLOW RATE (CFM)	INPUT HEATING LOAD (BTU/H)	OUTPUT HEATING LOAD (BTU/H)	ELECTRICAL					NOTES
									MOTOR SIZE (HP)	MOTOR SPEED (RPM)	FLA	MOCP	VOLT/PH/HZ	
UH-1	REZNOR UDAS 60	SEE PLANS	NATURAL GAS	HEATING	4 / 4	835	60000	49800	0.03	-	2.4	15	120 / 1 / 60	1, 2

1. GAS HEATING INPUT/OUTPUT AT SEA LEVEL, ALL OTHER CAPACITIES AT ELEVATION.
2. SEALED COMBUSTION.

GRILLES, REGISTERS AND DIFFUSERS

ID	MANUFACTURER	MODEL	MAX NC	DESCRIPTION
CD-1	EH PRICE	SPD	30	SQUARE PLAQUE FACE CEILING DIFFUSERS. REMOVABLE FACE, C.W./O.B.D. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE.
CD-2	EH PRICE	RCDA	25	ROUND CONE CEILING DIFFUSERS, FULLY ADJUSTABLE AIR PATTERN. PROVIDE UNIT SUITABLE FOR RIGID CONNECTION TO EXPOSED DUCTWORK. COLOR AND FINISH TO BE SELECTED BY ARCHITECT.
CD-3	EH PRICE	SDS 100	30	3 SLOT LINEAR CEILING DIFFUSER WITH FULLY ADJUSTABLE AIR PATTERN AND FLOW CONTROL VANES FOR ONE OR TWO WAY THROW PATTERN. UNITS SHALL HAVE 1" SLOTS, END CAPS AND INSULATED PLENUM (PRICE MODEL SDB), WITH ROUND DUCT CONNECTION. FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED.
RG-1 EG-1	EH PRICE	PDDR	30	PERFORATED FACE RETURN/EXHAUST AIR UNIT, REMOVABLE FACE & CORE. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES HSLL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE. AIR QUANTITY SHALL MATCH ROOM SUPPLY OR EXHAUST AIR QUANTITY.
SWR-1	EH PRICE	96	25	HEAVY DUTY SIDE WALL RETURN AIR GRILLE. STATIONARY HORIZONTAL 45 DEG DEFLECTION VANES SPACED AT 3/4 INCH O.C. 1 1/4 INCH FLANGE. FRAME MADE OF 16 GAUGE STEEL. INSTALL INTERMEDIATE SUPPORT CHANNELS AS REQUIRED.

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ME601

COIL SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	USAGE	AIR						FLUID				PHYSICAL				NOTES
				MAX. AIRFLOW RATE (CFM)	LOAD (BTU/H)	SENSIBLE LOAD (BTU/H)	ENTERING TEMP. DB/WB (°F)	LEAVING TEMP. DB/WB (°F)	STATIC PRESSURE (IN. WATER)	FLOW RATE (GPM)	ENTERING/ LEAVING TEMP. (°F)	WORKING FLUID	HEAD LOSS (FT)	NO. COILS	EACH COIL FIN WIDTH/ HEIGHT (IN)	MINIMUM FACE AREA (FT^2)	MINIMUM NO. ROWS/ FINS PER INCH	
CC-1	TEMTROL 5WC	AH-1	COOLING	9,600	173,930	173,930	74.9 / 58.3	55 / 51	0.5	22.0	48 / 64	WATER	12.5	2	47 / 28.5	18.6	8 / 7	
CC-2	TEMTROL 5WC	AH-2	COOLING	5,000	135,800	135,800	82 / 60	52 / 49	0.6	17.0	48 / 64	WATER	9.8	1	36 / 45	11.3	8 / 10	
HC-1	TEMTROL 5WC	AH-1	HEATING	6,800	305,390	305,390	48 / -	95 / -	0.25	41.0	105 / 90	WATER	4.0	2	47 / 28.5	18.6	4 / 11	
PHC-2	TEMTROL 5WC	AH-2	HEATING	5,000	114,330	114,330	48 / -	87 / -	0.1	15.5	105 / 90	WATER	4.5	1	36 / 45	11.3	3 / 8	

1. AIRFLOWS AT DESIGN ELEVATION OF 4,600'.

SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

ID	MANUFACTURER	INDOOR / OUTDOOR MODEL	LOCATION	INDOOR UNIT					CONDENSING UNIT		ELECTRICAL			NOTES
				TOTAL AIR FLOW RATE (CFM)	ENTERING AIR TEMP. DB/WB (DEG. F)	LEAVING AIR TEMP. DB/WB (DEG. F)	MINIMUM TOTAL COOLING LOAD (MBH)	MINIMUM TOTAL HEATING LOAD (MBH)	REFRIG LIQUID/ SUCTION LINE (IN)	REFRIG.	VOLT/PH	INDOOR UNIT MCA	OUTDOOR UNIT MCA	
AC-1 / CU-1	MITSUBISHI	MSZ-A24NA / MUZ-A24NA	SEE PLANS	430	72 / 58	52 / 49	22.0	23.2	1/4 / 5/8	R-410A	208/1/60	1	17	1,2,3,4,5,6

1. DUCTLESS SPLIT SYSTEM WITH REMOTE CONDENSING UNIT
2. PROVIDE REFRIGERANT PIPING SIZED AS PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE FACTORY SNOW STAND FOR CONDENSING UNIT
4. PROVIDE VIBRATION ISOLATION HANGERS FOR FAN COIL UNIT
5. CONDENSING UNIT TO BE SIZE MATCHED TO INDOOR UNIT AND TO BE BY SAME MANUFACTURER AS FAN COIL UNIT.
6. AIRFLOW AT SEA LEVEL AND MEDIUM FAN SPEED SETTING.

FAN SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	TYPE	AIR TYPE	AIR				ELECTRICAL				PHYSICAL	NOTES
					MAXIMUM AIRFLOW RATE (CFM)	STATIC PRESSURE (IN. WATER)	FAN SPEED (RPM)	FAN WHEEL DIAMETER (IN)	MOTOR SIZE (HP)	MOTOR BHP (HP)	MOTOR SPEED (RPM)	VOLT/PH/HZ	LENGTH/ WIDTH/ HEIGHT (IN)	
EF-1	COOK GN-720	MH102	INLINE	EXHAUST	575	0.5	1321	-	1/4	-	1750	120/1/60		3
SFA-1	HUNTAIR	AH-1	ARRAY, 4 FAN	SUPPLY	9600	2.8	2268	16	8	6.4	1750	460/3/60	21.5 / 40 / 31	1, 2
SFA-2	HUNTAIR	AH-2	ARRAY, 2 FAN	SUPPLY	5000	1.5	1686	16	2	1.8	1750	460/3/60	22 / 31 / 40	1, 2

1. AIRFLOW AT DESIGN ELEVATION OF 4,600'.
2. MOTOR SIZE AND MOTOR BHP ARE THE SUM OF THE INDIVIDUAL FAN MOTORS.
3. PROVIDE COMPLETE WITH FACTORY SPRING HANGER KIT, MANUFACTURER'S ALUMINUM WALL CAP, FACTORY MOUNTED AND PREWIRED DISCONNECT AND FAN SPEED CONTROL.

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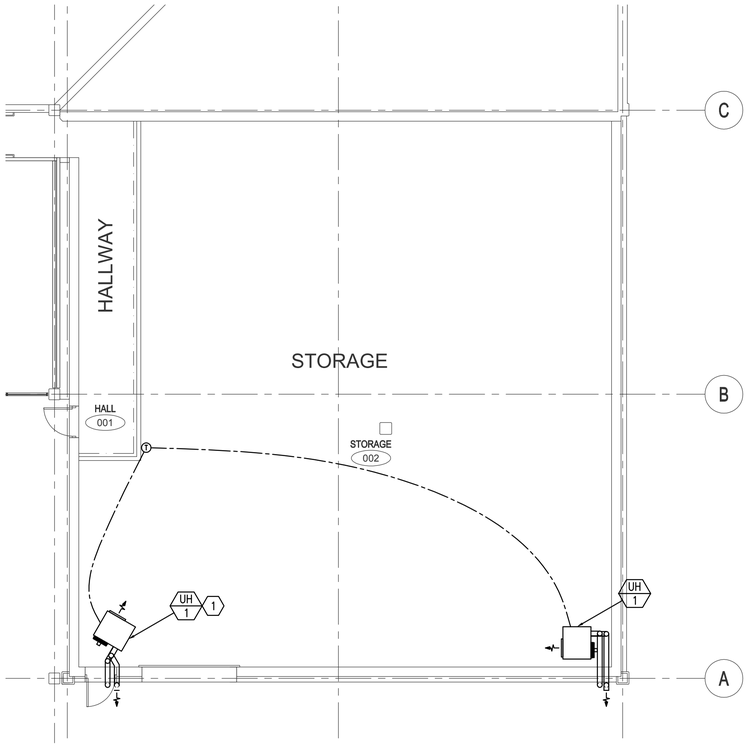
ME602

KEYED NOTES

1. UNIT HEATER SHALL BE MOUNTED TO KEEP DOOR ACCESS CLEAR.



A2 LEVEL 5 MECHANICAL FLOOR PLAN

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

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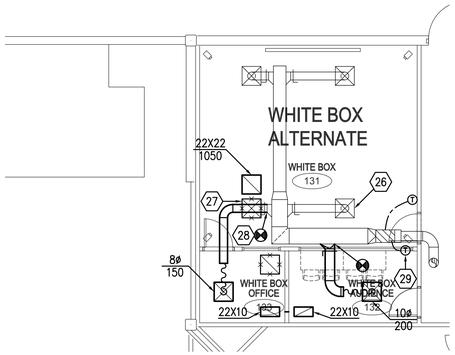
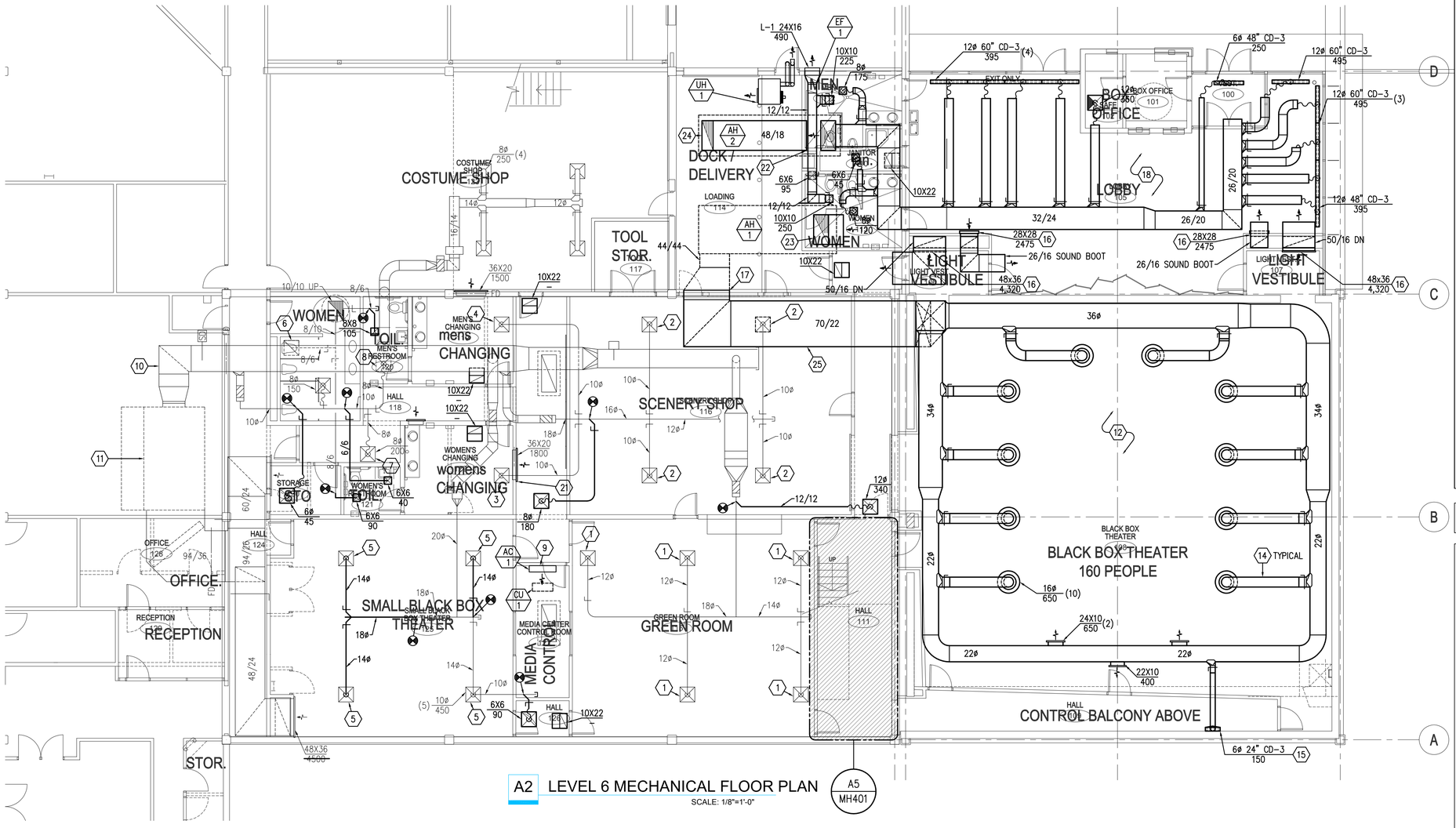
LEVEL 5
MECHANICAL FLOOR PLAN

MH101



C1 WHITE BOX ALTERNATE

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



A2 LEVEL 6 MECHANICAL FLOOR PLAN

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

A5 MH401

KEYED NOTES

1. REBALANCE SUPPLY DIFFUSER TO 270 CFM.
2. REBALANCE SUPPLY DIFFUSER TO 340 CFM.
3. REBALANCE SUPPLY DIFFUSER TO 125 CFM.
4. REBALANCE SUPPLY DIFFUSER TO 115 CFM.
5. REBALANCE SUPPLY DIFFUSER TO 520 CFM.
6. REBALANCE EXHAUST GRILLE TO 150 CFM.
7. REBALANCE SUPPLY DIFFUSER TO 120 CFM.
8. REBALANCE SUPPLY DIFFUSER TO 55 CFM.
9. WALL MOUNTING AIR CONDITIONING COIL LOCATED IN MEDIA CONTROL ROOM ABOVE DOOR. REFER TO SCHEDULE FOR SPECIFICS. PIPE REFRIGERANT LINES TO CONDENSING UNIT ON ROOF. PIPE CONDENSATE TO FLOOR BELOW, SEE P101 FOR CONTINUATION.
10. CLEAN EXISTING SUPPLY AND RETURN DUCTS FROM AIR HANDLING UNIT TO CONNECTIONS TO NEW DUCTS OR EXISTING RANCH DUCTS.
11. CLEAN EXISTING AIR HANDLER COILS.
12. EXPOSED ROUND DUCT IN BLACK BOX THEATER SHALL BE DOUBLE WALL, SPIRAL WRAP CONSTRUCTION WITH 2" DUCT LINER.
13. LINE RECTANGULAR SUPPLY DUCT WITH 2" ACCOUSTIC LINER.
14. BRANCH SUPPLY DUCTS SHALL BE DOUBLE WALL SPIRAL WRAP. CONSTRUCTION WITH 1" LINER.
15. DROP SUPPLY DOWN WALL TRANSITION TO FIT BACK OF SLOT DIFFUSER.
16. LOW SIDEWALL RETURN. LOCATE BOTTOM OF GRILLE 8" ABOVE FINISHED FLOOR.
17. PENETRATE EXISTING WALL AT EXISTING 30" OPENING IN STRUCTURE.
18. ROUTE SUPPLY DUCT BETWEEN STRUCTURAL AND COORDINATE LATERAL BRANCH DUCTS TO USE OPEN PANELS IN STRUCTURE.
19. SEAL AROUND DUCT WALL PENETRATION AIRTIGHT.
20. 32/24 RETURN AIR SOUND BOOT, SEAL AROUND WALL PENETRATION AIR TIGHT.
21. RELOCATE EXISTING RETURN OPENING AND DAMPER ASSEMBLY TO NEW LOCATION AS INDICATED. REFER TO MD102.
22. STUB RETURN THROUGH WALL TO PLENUM SPACE ABOVE CEILING.
23. 24/48 RETURN SOUND BOOT FROM PLENUM SPACE TO AIR HANDLER AH-1; LINE RETURN BOOT WITH 2" DUCT LINER.
24. LINE RETURN AIR DUCT WITH 2" DUCT LINER.
25. LINE SUPPLY AIR DUCT WITH 2" DUCT LINER.
26. REBALANCE REMAINING CEILING SUPPLY DIFFUSERS TO 350 CFM EACH.
27. REMOVE EXISTING SUPPLY DIFFUSER AND BRANCH DUCT, HET AND BALANCING DAMPER TO REMAIN.
28. PROVIDE TRANSITION FROM EXISTING BRANCH TAKE-OFF TO NEW 8ø BRANCH SUPPLY DUCT.
29. RELOCATE EXISTING SPACE THERMOSTAT TO LOCATION SHOWN.

GENERAL NOTES

1. CEILING SUPPLY DIFFUSERS SHALL BE CD-1 UNLESS NOTED OTHERWISE; REFER TO MECHANICAL SCHEDULES.
2. DUCT MOUNTED SUPPLY DIFFUSERS SHALL BE CD-2 UNLESS NOTED OTHERWISE; REFER TO MECHANICAL SCHEDULES.
3. CEILING SLOT TYPE SUPPLY DIFFUSERS SHALL BE CD-3 UNLESS NOTED OTHERWISE; REFER TO MECHANICAL SCHEDULES.
4. SIDEWALL RETURN GRILLES SHALL BE SWR-1 UNLESS NOTED OTHERWISE.
5. COORDINATE DUCT RUNS ABOVE CEILING TO LINE UP WITH STRUCTURAL STEEL. RUN DUCTS BETWEEN STEEL JOISTS AND THROUGH OPEN PANELS.
6. CEILING RETURN GRILLES SHALL BE RG-1 UNLESS NOTED OTHERWISE; PROVIDE SOUND BOOT AT UNDUCTED RETURNS; REFER TO MECHANICAL DETAILS AND SCHEDULES.
7. CEILING EXHAUST GRILLES SHALL BE EG-1 UNLESS NOTED OTHERWISE; REFER TO MECHANICAL DETAILS AND SCHEDULES.

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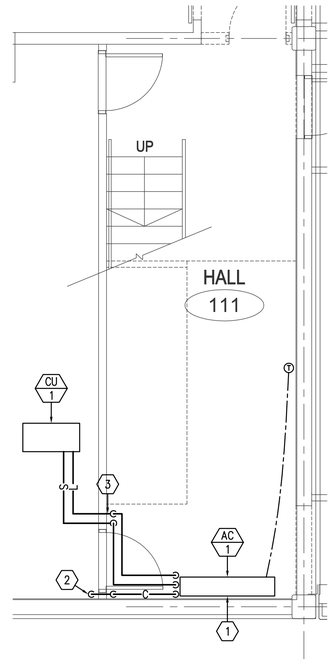
LEVEL 6
MECHANICAL FLOOR PLAN

MH102

KEYED NOTES

1. MOUNT INDOOR UNIT HIGH ON SIDE WALL, FOLLOW MANUFACTURER'S WRITTEN RECOMMENDATIONS.
2. ROUTE CONDENSATE PIPE TO 12" ABOVE ROOF DECK, TERMINATE WITH 90° ELBOW DIRECTED DOWNWARD. INSULATE CONDENSATE PIPE THROUGH FULL RUN.
3. ROUTE REFRIGERANT LINES DOWN TO DECK BEFORE WALL PENETRATION, KEEP CLEAR OF ELECTRICAL EQUIPMENT AND CLEARANCE AREAS.



A5 DIMMER ROOM MECHANICAL PLAN

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

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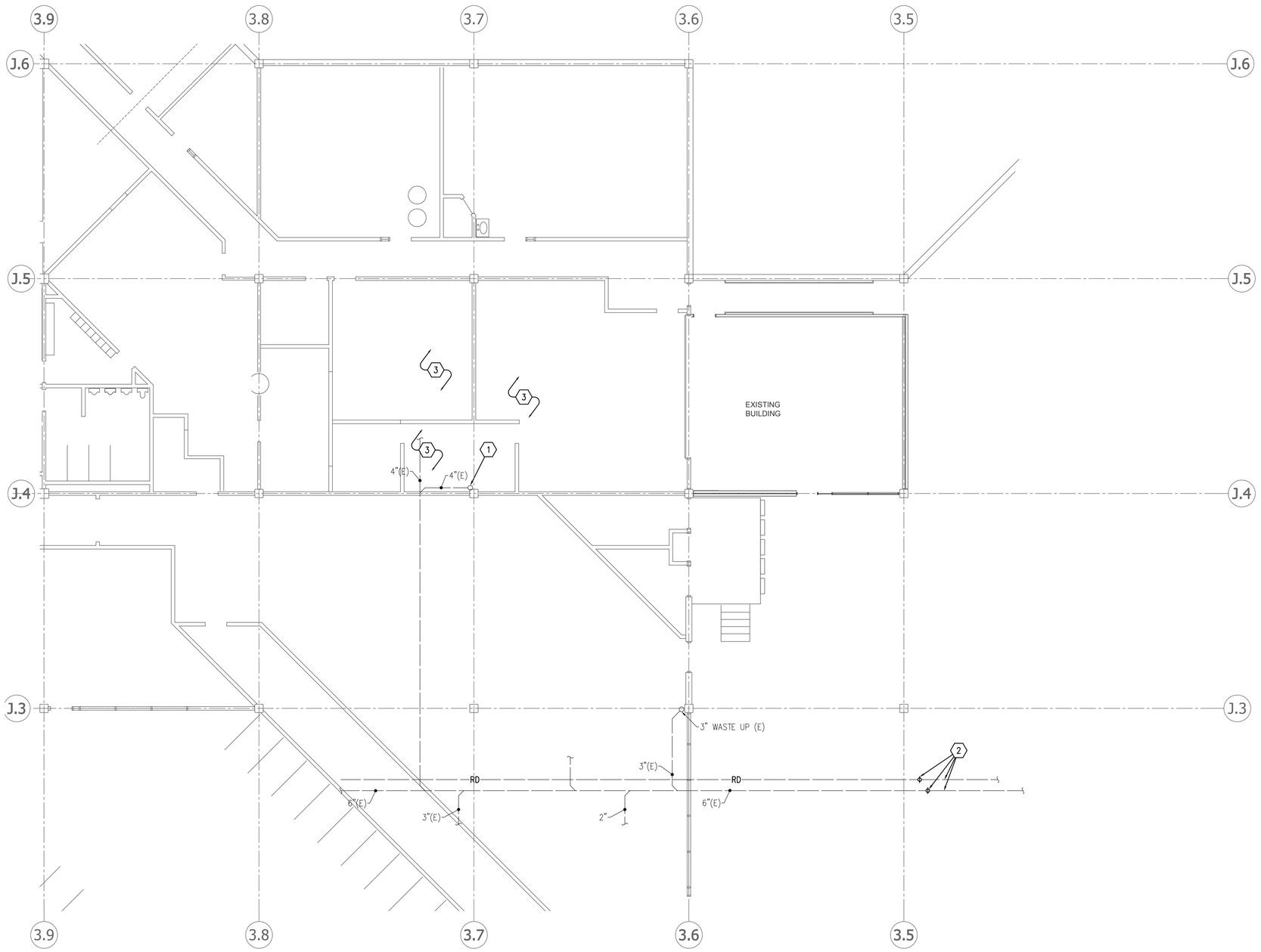
LEVEL 6
MECHANICAL FLOOR PLAN

MH401



KEYED NOTES

1. EXISTING 4" WASTE STACK FROM EXISITNG WOMENS TOILET ABOVE TO REMAIN. CONNECT NEW TOILET ROOM ASTE TO EXISTING STACK.
2. POINT OF CONNECTION TO EXISTING WASTE AND ROOF DRAIN PIPING LEAVING THE EXISTING BUILDING. FIELD DETERMINE DEPTH OF PIPING. EXISTING CLEANOUTS NEAR NEW CONNECTION POINT. SEE LEVEL 5 PLUMBING PLAN.
3. NEW WASTE PIPING SERVING NEW FIXTURES ABOVE TO RUN AT CEILING LEVEL IN THESE SPACES. REMOVE, PATCH AND REPAIR EXISTING CEILING(S).

A1 LEVEL 5 PLUMBING DEMOLITION PLAN

1/8" = 1'-0"

PROJECT NORTH

TRUE NORTH

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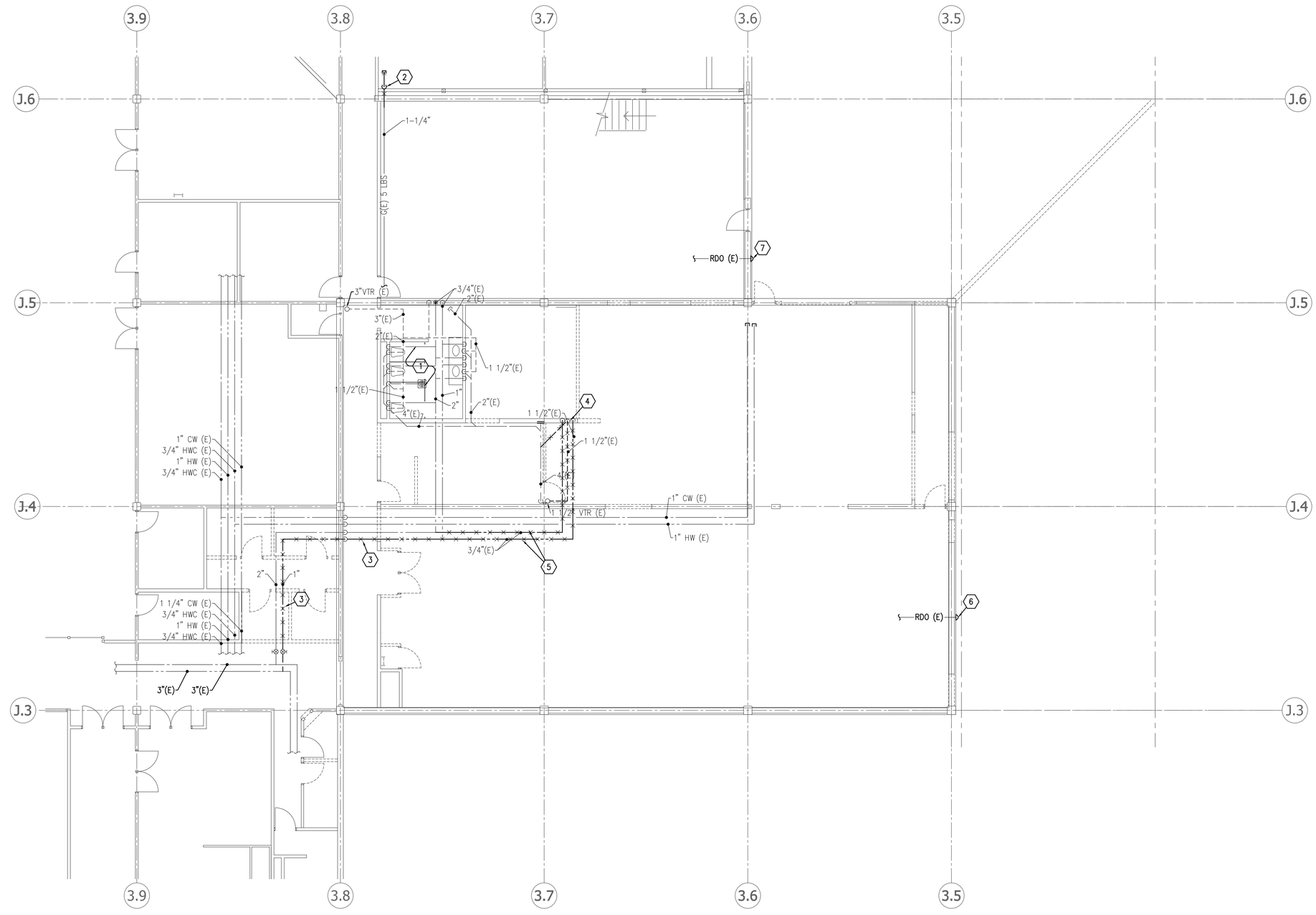

KEYED NOTES

1. EXISTING FIXTURES AND RELATED PIPING IN WOMEN'S RESTROOM TO REMAIN.
2. REMOVE EXISTING CAPPED GAS PIPE FROM MECHANICAL ROOM BACK INTO COSTUME STORAGE.
3. REMOVE EXISTING HOT WATER PIPING.
4. REMOVE EXISTING SINK. REMOVE RELATED COLD WATER, HOT WATER, WASTE AND VENT PIPING BACK TO MAIN.
5. REMOVE EXISTING COLD AND HOT WATER PIPING.
6. REMOVE EXISTING DOWNSPOUT NOZZLE. EXTEND ROOF DRAIN OVERFLOW TO NEW LOCATION.
7. RELOCATE EXISTING DOWNSPOUT NOZZLE. EXTEND ROOF DRAIN OVERFLOW PIPING TO NEW LOCATION.

A1 LEVEL 6 PLUMBING DEMOLITION PLAN

1/8" = 1'-0"

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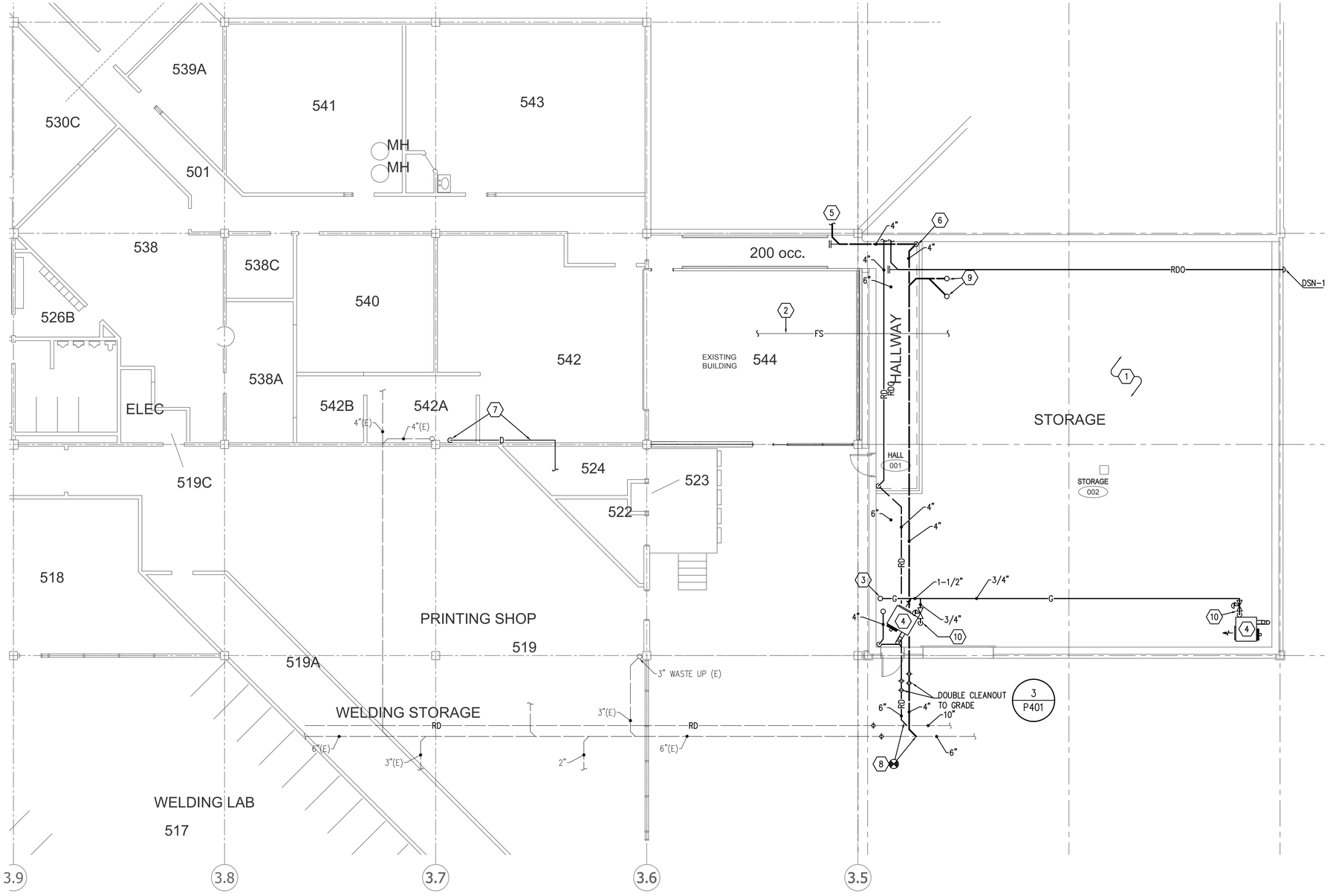

KEYED NOTES

1. PROVIDE FIRE SPRINKLER COVERAGE IN THE NEW ADDITION.
2. CONNECT NEW FIRE SPRINKLERS TO EXISTING MAIN FIRE SPRINKLER, 2 1/2" OR LARGER. CONTRACTOR TO FIELD VERIFY EXISTING SYSTEM.
3. GAS PIPE UP TO LEVEL 6. SEE LEVEL 6 PLUMBING PLAN FOR CONTINUATION.
4. MECHANICAL EQUIPMENT SEE MECHANICAL PLANS
5. WASTE PIPNG FROM LEVEL 6 TOILET ROOMS. SEE P-401 AND P102 FOR CONTINUATION.
6. DROP PIPING IN CORNER OF HALL
7. CONDENSATE DRAIN LINE FROM SPLIT SYSTEM A/C UNIT ON LEVEL 6 ABOVE. SEE MECHANICAL PLANS FOR UNIT LOCATION. EXTEND OVER TO SINK ON LEVEL 5.
8. CONNECT NEW WASTE AND ROOF DRAIN PIPING TO EXISTING UTILITY LINES EXITING THE BUILDING. FIELD DETERMINE DEPTH OF EXISTING LINES.
9. ROUGH IN WASTE PIPING FOR FUTURE TOILET AND SINK. COORDINATE EXACT LOCATION WITH ARCHITECTURAL.
10. BRANCH LINE TO UNIT HEATER. PROVIDE 5 LB TO 4 OZ PRESSURE REGULATOR.

A1 LEVEL 5 PLUMBING PLAN
1/8" = 1'-0"

PROJECT NORTH
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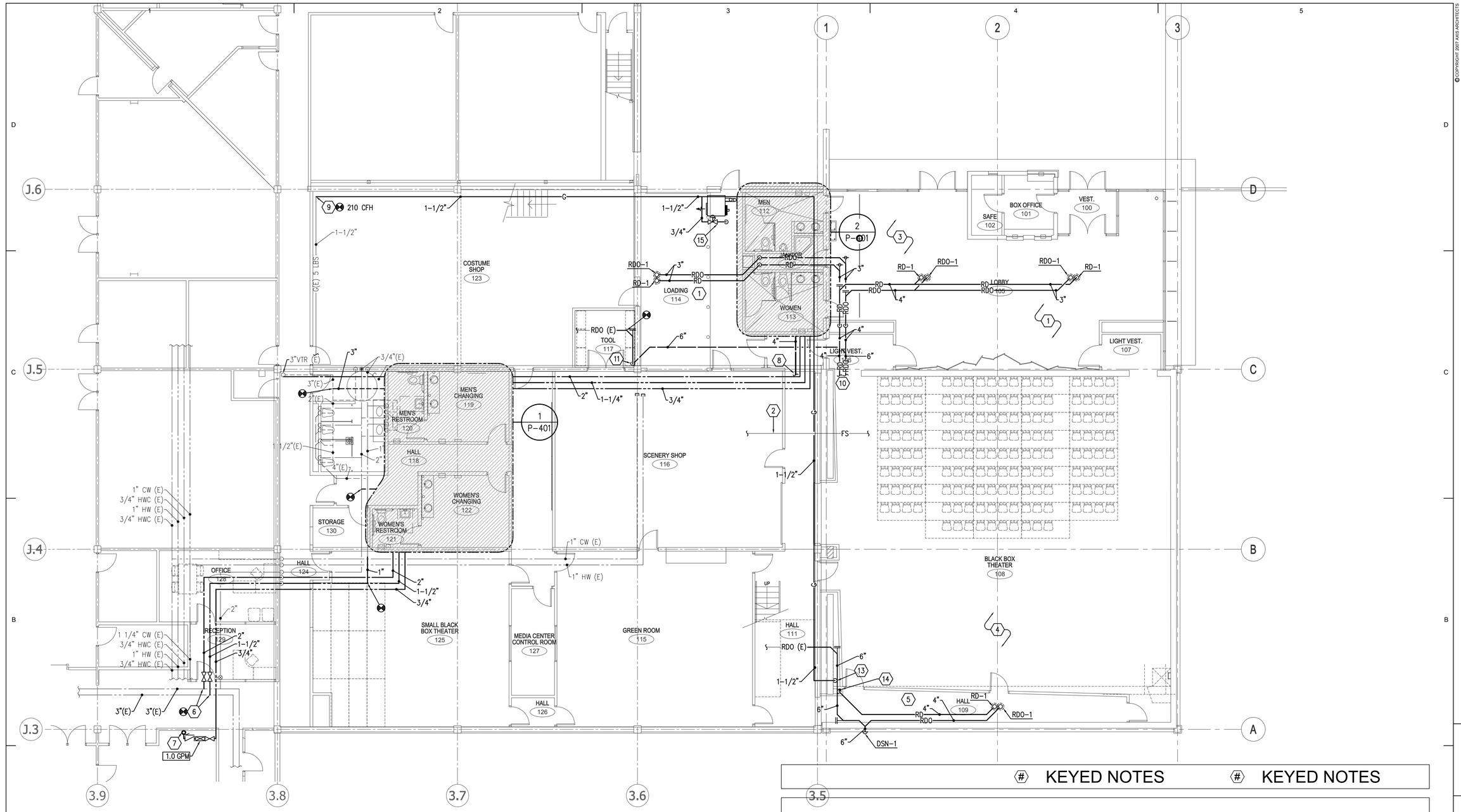

A1 LEVEL 6 PLUMBING PLAN

1/8" = 1'-0"

PROJECT NORTH

TRUE NORTH

KEYED NOTES

13. GAS PIPING DOWN TO UNIT HEATERS IN STORAGE ROOM ON LEVEL 5. SEE P101 FOR CONTINUATION.
14. ROOF DRAIN PIPING DOWN TO FLOOR BELOW. SEE P101 FOR CONTINUATION.
15. BRANCH LINE TO UNIT HEATER. PROVIDE 5 LB TO 4 OZ PRESSURE REGULATOR.

KEYED NOTES

7. CONNECT NEW HOT WATER RICIRCULATION LINE INTO EXISTING RECIRCULATION RISER IN ROOM. PROVIDE SHUT OFF VALVE, BALANCING VALVE AND CHECK VALVE AT CONNECTION POINT.
8. DROP WASTE LINE DOWN IN HALL BELOW. SEE LEVEL 5 PLUMBING PLAN FOR CONTINUATION.
9. CONNECT NEW GAS PIPE TO EXISTING AT COSTUME STORAGE MEZZANINE. NEW PIPING UP HIGH AGAINST WALL.
10. ROOF DRAIN PIPING INTO STORAGE ROOM BELOW. SEE LEVEL 5 PLUMBING PLAN FOR CONTINUATION.
11. CONNECT NEW ROOF DRAIN OVERFLOW TO EXISTING AND DROP DOWN BELOW GRADE.
12. MECHANICAL EQUIPMENT. SEE MECHANICAL PLANS
13.

1. PROVIDE FIRE SPRINKLER COVERAGE IN THE NEW ADDITION. HYDRAULICALLY CALCULATE.
2. CONNECT NEW FIRE SPRINKLER TO EXISTING FIRE SPRINKLER MAIN, 2 1/2" OR LARGER. CONTRACTOR TO FIELD VERIFY EXISTING SYSTEM.
3. PROVIDE CONCEALED TYPE FIRE SPRINKLER HEADS IN THE LOBBY AREA AND TOILET ROOM.
4. PROVIDE BLACK SPRINKLER HEADS IN THE BLACKBOX.
5. PROVIDE FIRE SPRINKLER COVERAGE ABOVE AND BELOW BALCONY.
6. CONNECT NEW COLD WATER AND HOW WATER INTO EXISTING 3" COLD WATER NAD 1-1/2" HOT WATER PIPING ABOVE HALL. PROVIDE SHUT OFF VALVE AT CONNECTION POINT

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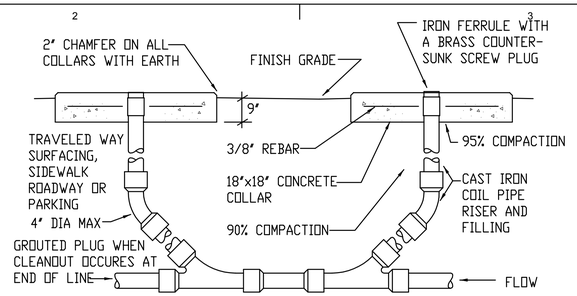


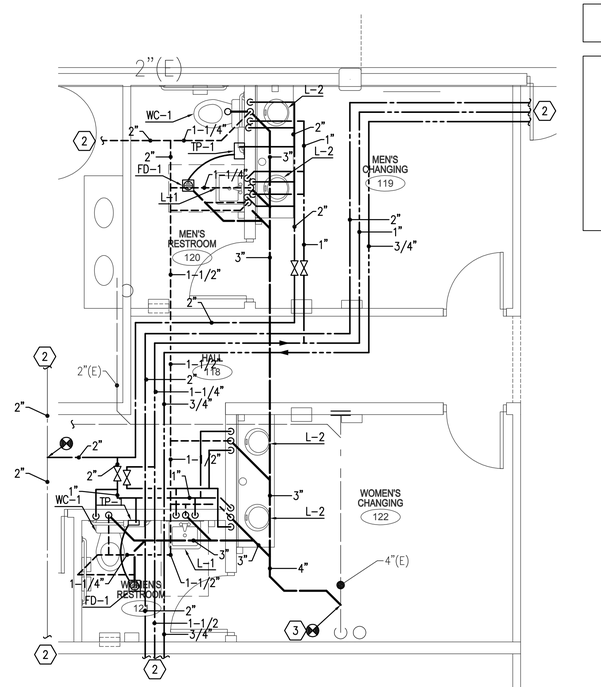
3 CLEANOUT TO GRADE DETAIL

NOT TO SCALE

PLUMBING FIXTURE SCHEDULE

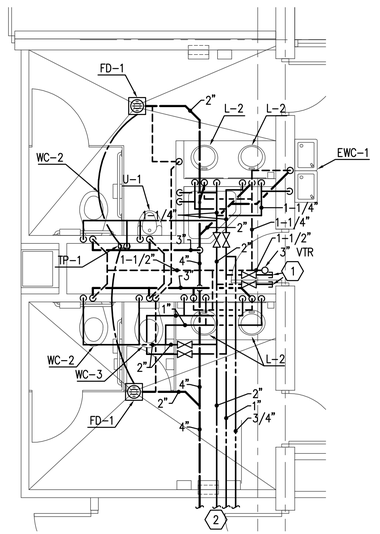
ID	FIXTURE	CW (IN)	HW (IN)	W (IN)	V (IN)	NOTES	DESCRIPTION
DSN-1	DOWNSPOUT NOZZLE					SEE PLANS	DOWNSPOUT NOZZLE: SMITCH FIGURE 1770 DOWNSPOUT NOZZLE, CAST BRONZE BODY AND FLANGE
EWC-1	ELECTRIC WATER COOLER	1/2		2	1 1/2		WATER COOLER: ELKAY MODEL ERFPM28C FULLY RECESSED WALL MOUNTED BARRIER FREE SPLIT LEVEL STAINLESS STEEEL WATER COOLER WITH PUSH BUTTON ACTUATOR AND VANCDAL RESISTANT BOTTOM PLATE. HERMITEICALLY SEALED MOTOR AND COMPRESSOR WITH OVERLOAD PROTECTION, 1/5 HP 115v1 PH FAN COOLED CONDENSOR, PERMANANENTLY LUBICATED FAN MOTOR, COOLER SHALL DELIVER 7.8 GPH OF 50 DEG F DRINDING WATER WITH 80 DEG F INLET TEMPERATURE AND 90 DEG F ROOM TEMPERATURE ADA COMPLIANT
FD-1	FLOOR DRAIN			2	1 1/2		FLOOR DRAIN: SMITH FIGURE 2010-BP CAST IRON BODY AND FLASSING COLLAR WITH SQUARE NICKEL BRONZE ADJUSTABLE STRAINER HEAD WITH SECURED SQUARE HOLE GRATE AND TRAP PRIMER CONNECTION
HB-1	HOSE BIBB	3/4					CHICAGO NO 387-CP 3/4" SIZE, CHROME PLATED, ESCUTCHEON PLATE, 327 VACUUM BREAKER AND REMOVABLE TEE HANDLER.
L-1	LAVATORY	1/2	1/2	1 1/2	1 1/2		LAVATORY (WALL HUNG) (ADA): KOHLER #K-2031 "GREENWICH' VITREOUS CHINA, 21"X18" FOR CONCEILD ARMS SINGLE HOLE DRILLING, CHICAGO 333-665 METERING FAUCET WITH AERATOR, CHROME FINISH POWERS 3490 THERMOSTATIC MIXING VALVE WITH DUAL CHECK VALVES IN COLD AND HOT WATER INLETS, #K-7715 INTEGRAL PERFORATED GRID DRAIN 1-1/4" C.P. CAST BRASS "P" TRAP & BRASSCRAFT C.P. PIPES AND STOPS, WITH "700 SMITH CONCEALED ARM SUPPORT, HEIGHT SET BY ARCHITECT. COVER ALL EXPOAST PIPING WITH LIGHT GRAY "HANDI-LAV GUARD" PROTECTOR TO MEET ADA REQUIREMENTS
L-2	LAVATORY	1/2	1/2	1 1/2	1 1/2		LAVATORY: GERBER LAVA OVAL 1Z-844, FAUCET: MOEN 4621 WITH PUP UP ASSEMBLY, ANGLE STOPS: BRASSCRAFT STOP, P-TRAP: PLASTIC, P-TRAP PROTECTOR
RD-1	ROOF DRAIN					SEE PLANS	ROOF DRAIN: SMITH FIGURE 1010-ERC CAST IRON BODY WITH COMBINED FLASHING CLAMP AND CAST IRON GRAVEL STOP, CAST IRON DOME, EXTENSION, SUMP RECEIVER AND UNDERDECK CLAMP.
RDO-1	ROOF DRAIN OVERFLOW					SEE PLANS	OVERFLOW ROOF DRAIN: SMITH FIGURE 1010-ERC CAST IRON BODY WITH FLASHING CLAMP, GRAVEL STOP, CAST IRON DOME, 2" HIGH WATER COLLAR, EXTENSION, SUMP RECEIVER AND UNDERDECK CLAMP.
SS-1		1/2	1/2	2	1 1/2		MOP SINK: KOHLER K-6710 WHITBY ENAMELED CAST IRON CORNER SERVICE SING, K-8940 COATED WIRE RIM GUARD, K-9146 STRAINER, 3" CAST INRON "P" TRAP. CHICAGO NO. 897 COMBINATION SERVICE SINK FITTING WITH VACUUM BREAKER, 3/4" HOSE THREAD AND PAIL HOOK ON SPOUT, NO. 369 HANDLES, WALL BRACE, AND NO 4 1/2" FLANGED FEMALE ADJUSTABLE ARMS WITH INTEGRAL STOPS. POLISHED CHROME PLATED FINISH. PROVIDE 5'-0" OF 3/8" DIAMETER WHITE RUBBER HOSE ON SPOUT OUTLET AND CHROME PLATED WALL HOOK.
TP-1	TRAP PRIMER	1/2					PPP INC. PR-500 PRESSURE ACUATED TRAP PRIMER. PROVIDE DU-4 MANIFOLD WHERE APPLICABLE
U-1	URINAL	3/4		2	1 1/2	SEE ARCHITECT FOR MOUNTING HEIGHTS	URINAL (WALL HUNG): KOHLER #K-5016-T "DEXTER", VITREOUS CHINA, 1.0 GAL FLUSH, SIPHON JET, 3/4" TOP SPUD. SLOAN REAGAL 186-XL FLUSH VALVE. DIAPHRAGM OPERATED, SCREW DRIVER STOP WITH VANDAL RESISTANT COVER. SMITH 0637 URINAL SUPPORT.
WC-1	(ADA) WATER CLOSET	1		3	2		ACCESSIBLE WATER CLOSET (FLOOR MOUNTED) KOHLER - K-4302 HIGHCREST VITREOUS CHINA, ELONGATED BOWL, 1-1/2 TOP SPUD, SLOAN 186 FLUSH VALVE, ACTUATOR TO BE INSTALLED ON WIDE SIDE OF STALL.
WC-2	(ADA) WATER CLOSET	1		3	2		ACCESSIBLE WATER CLOSET: KOHLER K-4330 KINGSTON LITE VITREOUS CHINA SHIPHON JET, ELONGATED BOWL, WALL HUNG WITH 1-1/2" TOP SPUD. SLOAN 111 FLUSH VALVE. ACTUATOR TO BE INSTALLED ON WIDE SIDE OF STALL.

1. ALL UNDER GROUND WASTE AND VENT SHALL BE 2" OR GREATER PER DRAWINGS.



1 LEVEL 6 TOILET ROOMS PLUMBING PLAN

1/8" = 1'-0"



2 LEVEL 6 PLUMBING PLAN

1/8" = 1'-0"

KEYED NOTES

1. CAP 1-1/2" CW AND 1" HW FOR EXTENTION TO FUTURE TOILET ROOM ON LEVEL 5.
2. SEE P101 FOR CONTINUATION.
3. CONNECT NEW WASTE PIPING TO EXISTING WASTE PIPING IN CEILING SPACE BELOW.

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GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER DIVISION 15 WITH APPROVED MECHANICAL SHOP DRAWINGS BEFORE BEGINNING ROUGH IN.
4. SEE SECTION 16510 OF THE SPECIFICATION REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 165' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH MINIMUM #10 CONDUCTORS.

FIXTURE SCHEDULE

TYPE	DESCRIPTION	CATALOG NUMBER	VOLTS	LAMPS
A	4' FLUORESCENT CORRIDOR LIGHT	LITHONIA LB 232 277 EB	277	(2) F32 T8 835
A3	4' FLUORESCENT ACRYLIC WRAPAROUND	LITHONIA ZLB 332 277 EB	277	(3) F32 T8 835
AE	4' FLUORESCENT CORRIDOR LIGHT WITH EM BATTERY PACK	LITHONIA LB 232 277 EB ELI4	277	(1) F32 T8 835
B	4' STRIP LIGHT WITH WIRE GUARD	LITHONIA C232 277 EB WG	277	(2) F32 T8 835
BE	4' STRIP LIGHT WITH WIRE GUARD WITH EM BATTERY PACK	LITHONIA C232 277 EB WG PS1400	277	(2) F32 T8 835
C4	SURFACE MOUNTED 8' X 1'	LITHONIA AVSM 232 SBL MVOLT EB	277	(2) F32 T8 835
C8	SURFACE MOUNTED 8' X 1'	LITHONIA TAVSM 232 SBL MVOLT EB	277	(2) F32 T8 835 PER 4'
D	4' WALL WASHER FLANGE MOUNT	PEERLESS 8LWR9G154T8H0 HOL UI 277 EB LILP DHSGS4	277	(1) F54T5HO 35K
E	RECESSED FLUORESCENT DOWNLIGHT; ELECTRONIC DIMMING BALLAST	LITHONIA AF 18DTT 4 AR LD 277 ADEZ	277	(
F	RECESSED TRIMLESS FLUORESCENT	XAL 636 98407	277	(2) F54T5 HO 35K PER 4'
G	WALL MOUNT VANITY LIGHT	PRUDENTIAL WAL 14 P 2T8 04 BAL SC 277 WM	277	(2) F32 T8 835
H	WALL MOUNT VANITY LIGHT	PRUDENTIAL WAL 14 P 2T8 R12 BAL SC 277 WM	277	(2) F32 T8 835 PER 4'
J	RECESSED FLUORESCENT DOWNLIGHT;	LITHONIA AF 2 42 TRT 8AR LD CGL 277	277	(2) 42W TT
JE	RECESSED FLUORESCENT DOWNLIGHT W/ EMERGENCY BATTERY	LITHONIA AF 142 TRT 8AR LD CGL 277 ELSD	277	(2) 42W TT
OA	EXTERIOR WALL LIGHT	LITHONIA WFL2 175 BP 277 SF DNA	277	(1) 175W MH
OE	EMERGENCY WALL LIGHT	LITHONIA AFN BN EXT	277	INCLUDED
X	EDGE LIT LED EXIT LIGHT	LITHONIA EDG 1 G 120/277 ELN	277	INCLUDED
X1	DIECAST LED EXIT LIGHT W/EM BATTERY SINGLE FACE	LITHONIA LES W 1 G ELN	277	INCLUDED
X2	DIECAST LED EXIT LIGHT W/EM BATTERY DOUBLE FACE	LITHONIA LES W 2 G ELN	277	INCLUDED
XE	RECESSED EMERGENCY LIGHT	CONCEALITE F550 90 PT SD NC	277	INCLUDED

DEMOLITION NOTES

1. COORDINATE ALL NEW ELECTRICAL EQUIPMENT REQUIREMENTS AND MAKE CONNECTION TO EXISTING SYSTEMS. THIS INCLUDES LIGHTING, POWER, SIGNAL, RACEWAY AND OTHER SYSTEMS INCLUDED UNDER DIVISION 16.
2. RELOCATE, REWIRE AND/OR RECONNECT EXISTING ELECTRICAL DEVICES AND/OR EQUIPMENT THAT FOR ANY REASON OBSTRUCTS CONSTRUCTION.
3. CONCEAL ALL RACEWAY AND WIRING IN EXISTING WALLS, CEILINGS, FLOORS, ETC. EXCEPT WHERE THE USE OF SURFACE METAL RACEWAYS (E.G. WIRE MOLD) IS INDICATED ON DRAWINGS OR IN SPEC.
4. LEAVE ALL EXISTING EQUIPMENT, IN PORTIONS OF THE BUILDING NOT BEING REMODELED, IN WORKING CONDITION. RESTORE ALL INTERRUPTED BRANCH CIRCUITS, FEEDERS, ETC. TO WORKING CONDITION.
5. EXISTING RACEWAYS MAY BE REUSED (IN PLACE) WHERE POSSIBLE, AND WHERE IN COMPLIANCE WITH THE SPECIFICATIONS AND THE INTENT OF THE CONTRACT DOCUMENTS. INSURE INTEGRITY OF EXISTING RACEWAY BEFORE REUSE.
6. REMOVE ALL RACEWAYS, CONDUCTORS, BOXES, DEVICES, EQUIPMENT, ETC. THAT ARE NOT TO BE REUSED.
7. REMOVE EXISTING LIGHT FIXTURES WHICH ARE NOT TO BE REUSED, PLACE IN CARTON, LABEL APPROPRIATELY, AND RETURN TO OWNER, OR PROPERLY DISPOSE OF FIXTURES THAT THE OWNER CHOOSES NOT TO KEEP.
8. DO NOT PENETRATE STRUCTURAL ELEMENTS OF FLOORS, WALLS, CEILINGS, ROOFS, ETC.
9. DISCONNECT AND RECONNECT ANY/ALL FIXTURES, DEVICES, EQUIPMENT, ETC. REQUIRED FOR PROPER COMPLETION OF THE WORK.

INDEX OF ELECTRICAL DRAWINGS

E0.1 SYMBOLS, SCHEDULES AND NOTES

E2.0 LIGHTING PLAN – BASEMENT LEVEL
E2.1 LIGHTING PLAN – MAIN LEVEL
E2.2 LIGHTING PLAN – UPPER LEVEL

E3.0 POWER PLAN – BASEMENT LEVEL
E3.1 POWER PLAN – MAIN LEVEL
E3.2 POWER PLAN – UPPER LEVEL

E4.1 ONE–LINE DIAGRAM
E4.2 PANELBOARD SCHEDULES

E5.1 ELECTRICAL DIAGRAMS
E5.2 ELECTRICAL DIAGRAMS

ELECTRICAL SYMBOL SCHEDULE

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
5. NEMA TYPE 'ND' NON–FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT TO BE THE LOWER OF EITHER 80" A.F.F. OR 6" BELOW CEILING.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.

* TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, TWO WIRE HOME RUN TO PANEL		
	2 CIRCUIT, 3 WIRE, COMMON NEUTRAL HOME RUN		
	3 CIRCUIT, 4 WIRE, COMMON NEUTRAL HOME RUN		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION	CAP CONDUIT	
	CABLE TRAY	AS NOTED	
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	FLUORESCENT LIGHT FIXTURE	AS NOTED	1
	FLUORESCENT EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	AREA LIGHT POLE AND FIXTURE	CONCRETE BASE	SEE DIAGRAM
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING MOUNTED EXIT LIGHT	CEILING	1.3.8.
	WALL MOUNTED EXIT LIGHT	AS NOTED	1.3.8.
$	SINGLE POLE SWITCH	+4'–0"	2.
$a	SINGLE POLE SWITCH	+4'–0"	4. 2.
$3	THREE–WAY SWITCH	+4'–0"	2.
$4	FOUR–WAY SWITCH	+4'–0"	2.
$K	KEY OPERATED SWITCH	+4'–0"	2.
$P	SWITCH WITH PILOT LIGHT	+4'–0"	2.
$D	VARIABLE INTENSITY SWITCH	+4'–0"	2.
$TM	TIMER SWITCH	+4'–0"	2.
$	MOMENTARY CONTACT SWITCH, CENTER POSITION OFF	+4'–0"	2.
	OCCUPANCY SENSOR	CEILING	
	OCCUPANCY SENSOR	+4'–0"	2.
PP	POWER PACK	CEILING	SEE DIAGRAM, SPEC.
A	AUTOMATIC RELAY PACK	CEILING	SEE DIAGRAM. SPEC.
T	LOW VOLTAGE TRANSFORMER		
	DUPLEX RECEPTACLE UPPER OUTLET SWITCH CONTROLLED	+16" OR AS NOTED	9. 11.
	SIMPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
A	DUPLEX RECEPTACLE		9.
W	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
IG	ISOLATED GROUND RECEPTACLE	+16" OR AS NOTED	9. 11.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	DUPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE EMERGENCY POWER (RED)	+16" OR AS NOTED	9. 11.
	FLOOR OUTLET WITH 20A DEVICE	FLOOR	
	MULTIPLE SERVICE FLOOR BOX	FLOOR	
	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11.
	CORD DROP		SEE DIAGRAM
	PLUGMOLD	+46" OR AS NOTED	
	TELEVISION OUTLET	+16" OR AS NOTED	11.
	DATA OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE/DATA OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE OUTLET	FLOOR	
	CALL SWITCH	+4'–0"	2.
C	CLOCK OUTLET	+7'–6"	8.
C	CLOCK/SPEAKER COMBINATION	+7'–6"	

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
J	JUNCTION BOX ('F' IN FLOOR)	AS NOTED	
	MOTOR OUTLET	TO SUIT EQUIP.	
P	PHOTO–ELECTRIC CONTROL	AS NOTED	TORK 2000A
TC	TIME CLOCK	+5'–0"	2.
	PUSHBUTTON	+4'–0"	2.
J	NON–FUSED DISCONNECT SWITCH	+5'–0"	5.
FJ	FUSED DISCONNECT SWITCH	+5'–0"	5.
$T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'–0"	2.
	MAGNETIC STARTER	+5'–0"	7.
J	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'–0"	
VFD	VARIABLE FREQUENCY DRIVE	+6'–6"	
	PANEL BOARD	TOP AT +6'–0"	
	MAIN DISTRIBUTION PANEL		
	TELEPHONE TERMINAL BOARD		
	BELL	+7'–6"	
	CHIME	+7'–6"	
F	FIRE ALARM MANUAL STATION	+4'–0"	2.
H	FIRE ALARM SIGNAL HORN/STROBE PROJECTORS	+6'–8"	6.
H	FIRE ALARM SIGNAL HORN/STROBE	+6'–8"	6.
E	FIRE ALARM SIGNAL SPEAKER/STROBE	+6'–8"	6.
S	SMOKE DETECTOR	CEILING	
D	DUCT SMOKE DETECTOR		MTD. IN DUCT
H	HEAT DETECTOR	CEILING	
D	FIRE/SMOKE DAMPER		
	DOOR HOLDER	AS NOTED	
FS	FLOW SWITCH		
TS	TAMPER SWITCH		
WF	WATER FLOOD INDICATOR		
	O.S. & Y. VALVE		SEE DIAGRAM
R	FIRE ALARM RELAY		
CM	FIRE ALARM CONTROL MODULE		
MM	FIRE ALARM MONITOR MODULE		
S	FIRE ALARM STROBE	+6'–8"	6.
D	DURESS PUSHBUTTON	+4'–0"	
D 1	SECURITY SYSTEM DOOR SWITCH	DOOR JAMB	
D 2	SECURITY SYSTEM OVERHEAD DOOR SWITCH	CEILING	MOUNT AS PER. MAN
ML	MAGNETIC SHEAR LOCK		
A	SECURITY SYSTEM KEYED ACCESS SWITCH	+4'–0"	2.
I	INFRARED SENSOR	AS NOTED	
M	SECURITY MOTION DETECTOR		MOUNT AS PER. MAN
G	GLASS BREAK DETECTOR	CEILING	
ES	ELECTRIC DOOR STRIKE		
CR	ACCESS CONTROL CARD READER	+4'–0"	2.
	CLOSED CIRCUIT TELEVISION CAMERA	AS NOTED	
	DOOR POSITION INDICATING SWITCH		
#	SOUND SYSTEM SPEAKER	+8'–0" OR AS NOTED	
IC	INTERCOM SPEAKER	AS NOTED	
V	VOLUME CONTROL	+4'–0"	2.
M	MICROPHONE OUTLET	+16"	11.
M	MICROPHONE FLOOR OUTLET	FLOOR	
M	MICROPHONE CEILING OUTLET	CEILING	
	SOUND EQUIPMENT CABINET		CIRCUIT TO 120V
842	ARCHITECTURAL ROOM NUMBER		
A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
EQ 42	EQUIPMENT NUMBER		

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SYMBOLS, SCHEDULES AND NOTES

E0.1

By: bhammond; Jul 21, 2008 – 3:45pm
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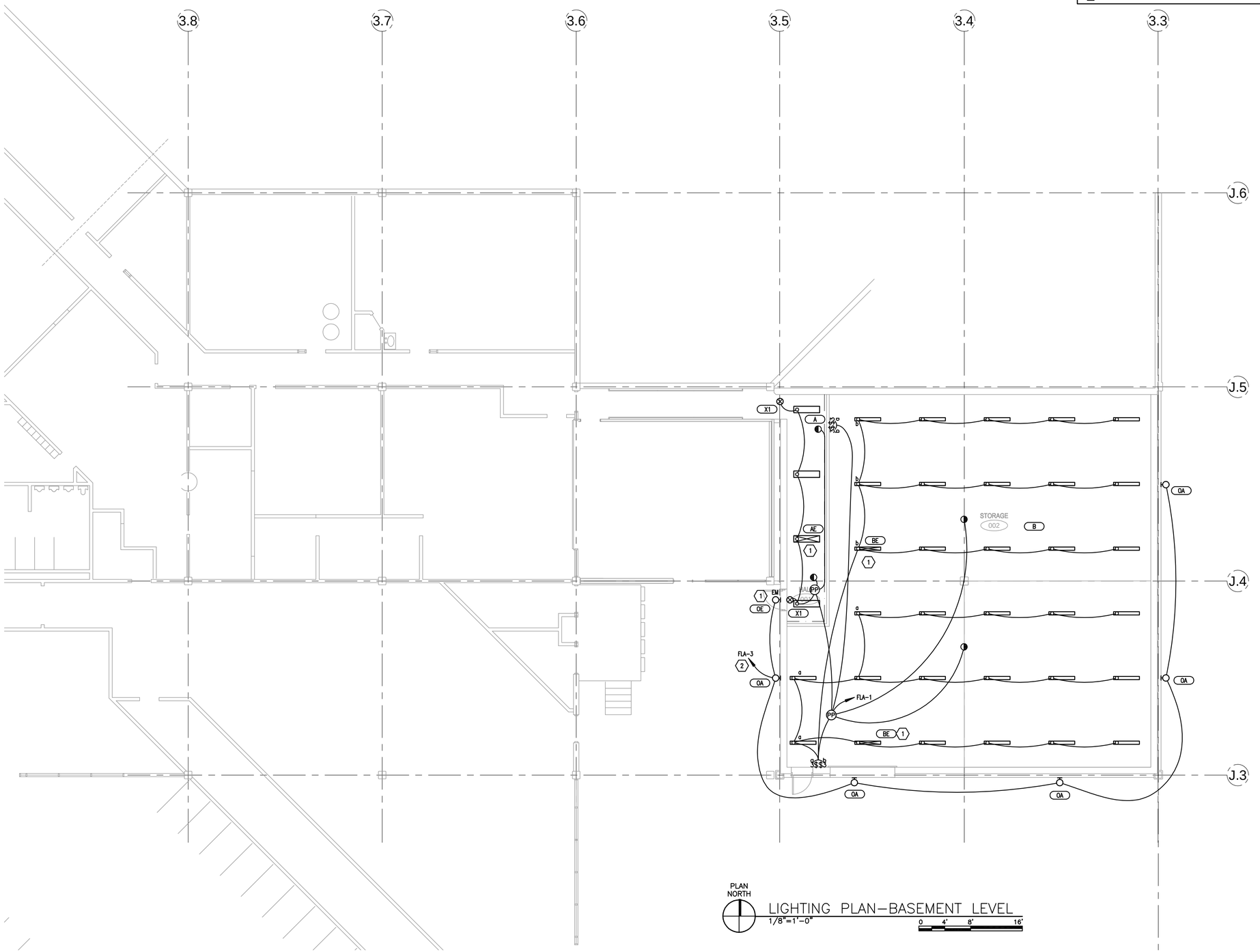
SHEET KEYNOTES

1. EXTEND A HOT CONDUCTOR AHEAD OF THE OCCUPANCY SENSOR TO THE EMERGENCY BATTERY PACK. USE SAME CIRCUIT PROVIDED FOR NORMAL OPERATION OF THE FIXTURES.
2. CIRCUIT THROUGH LIGHTING CONTACTOR. SEE LIGHTING CONTROL DIAGRAM.



PLAN NORTH

LIGHTING PLAN—BASEMENT LEVEL
1/8"=1'-0"
0 4' 8' 16'

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LIGHTING PLAN
BASEMENT LEVEL

E2.0

By: bhammond, Jul 21, 2008 - 3:45pm
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SHEET KEYNOTES

1. EXTEND A HOT CONDUCTOR AHEAD OF THE SWITCH OR OCCUPANCY SENSOR TO THE EMERGENCY BATTERY PACK. USE SAME CIRCUIT PROVIDED FOR NORMAL OPERATION OF THE FIXTURES.
2. RELOCATE EXISTING FIXTURES FROM AREA ABOVE NEW MEDIA CONTROL ROOM TO THE NORTH AS SHOWN.
3. RELOCATE EXISTING FIXTURES FROM AREA ABOVE EXISTING HALL 111 TO THE NORTH AS SHOWN.
4. CONNECT NEW LIGHTING TO EXISTING LIGHTING CIRCUIT PREVIOUSLY FEEDING THIS AREA.
5. RELOCATE EXISTING DIMMING CONTROL STATION TO NEW DOOR IN BLACK BOX.
6. CIRCUIT THROUGH LIGHTING CONTACTOR. SEE LIGHTING CONTROL DIAGRAM.
7. RELOCATE EXISTING INCANDESCENT MAKE–UP LIGHTS TO NEW MIRRORS. NEW LIGHTS VERTICALLY BETWEEN MIRRORS AND HORIZONTALLY ABOVE MIRRORS. CIRCUIT TO EXISTING LIGHTING CIRCUITS PREVIOUSLY FEEDING MAKE–UP LIGHTS.
8. SEE QT DRAWINGS FOR WORK IN THIS AREA.

ADD ALTERNATE

PLAN NORTH

LIGHTING PLAN–MAIN LEVEL
1/8"=1'–0"

0 4' 8' 16'

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LIGHTING PLAN
MAIN LEVEL

E2.1

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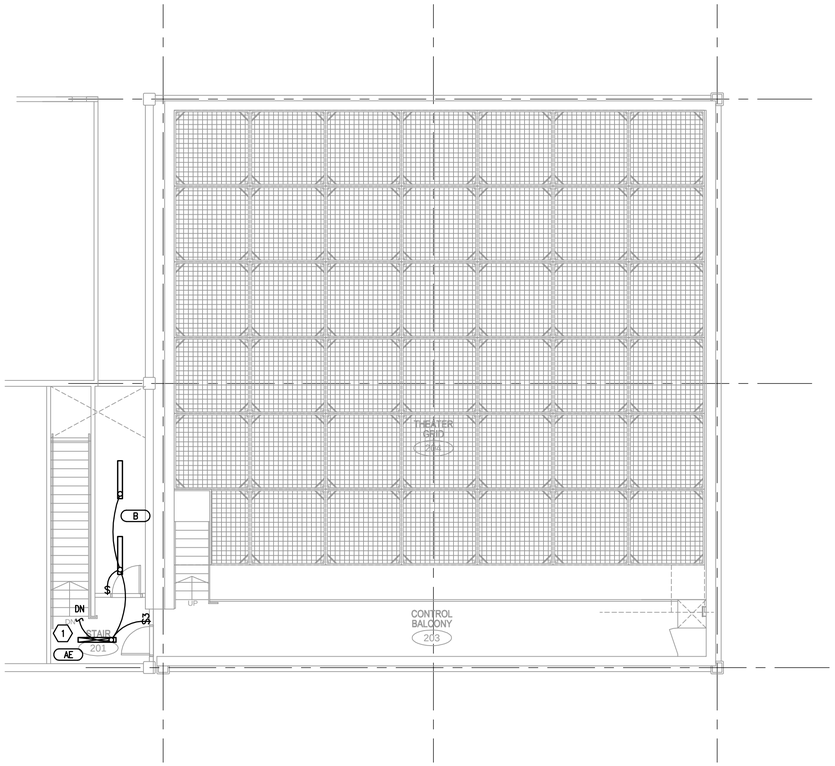
SHEET KEYNOTES

1. EXTEND A HOT CONDUCTOR AHEAD OF THE SWITCH TO THE EMERGENCY BATTERY PACK. USE SAME CIRCUIT PROVIDED FOR NORMAL OPERATION OF THE FIXTURES.



PLAN NORTH

LIGHTING PLAN–UPPER LEVEL

1/8"=1'-0"

0 4' 8' 16'

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LIGHTING PLAN
UPPER LEVEL

E2.2

By: bhammond, Jul 21, 2008 – 3:45pm
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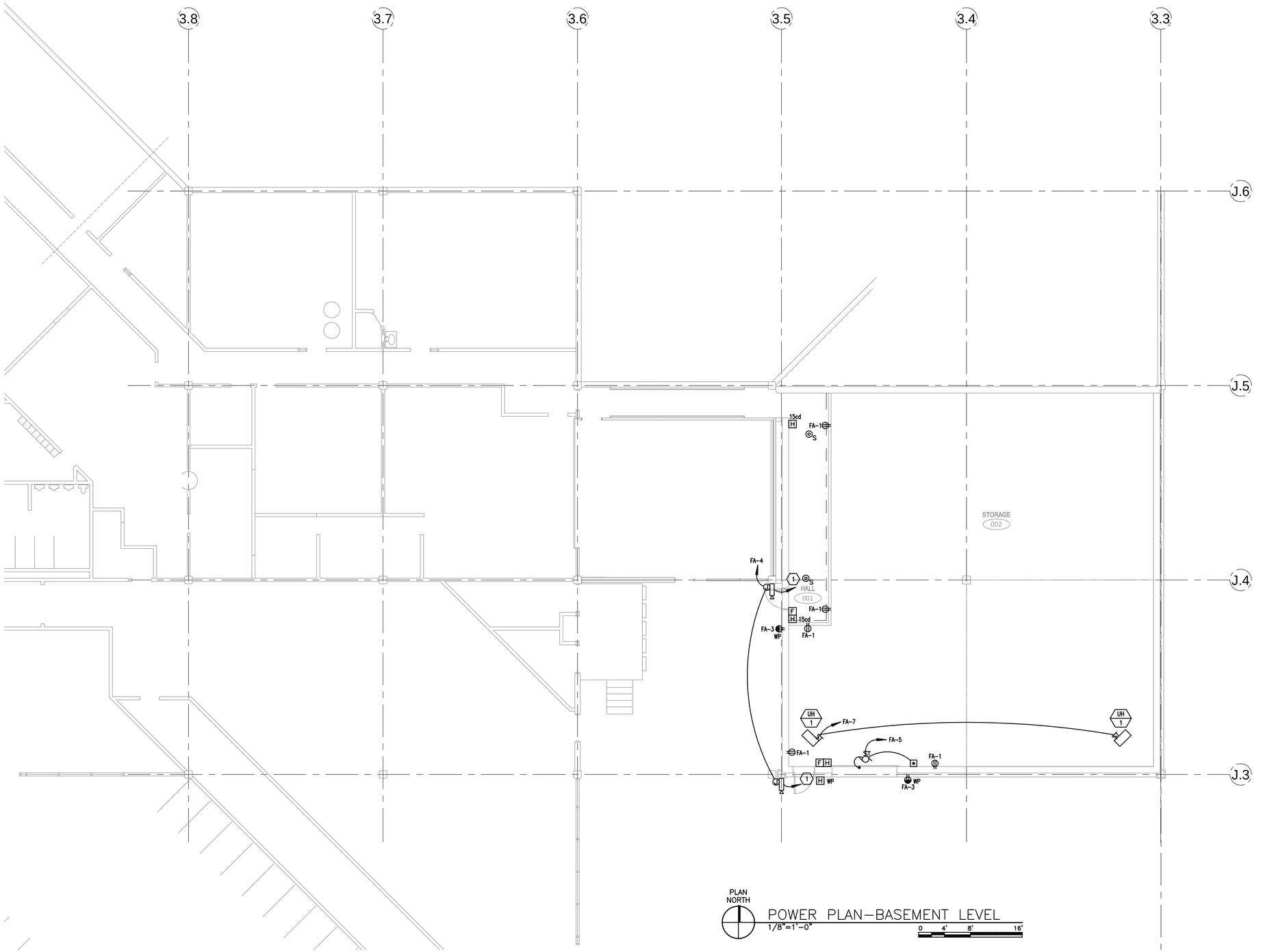
SHEET KEYNOTES

1. PROVIDE 3/4" CONDUIT WITH PULL STRING TO NEW IDF RACK FOR FUTURE CCTV CABLE.



PLAN NORTH

POWER PLAN–BASEMENT LEVEL

1/8"=1'-0"

0 4' 8' 16'

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POWER PLAN
BASEMENT LEVEL

E3.0

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SHEET KEYNOTES

1. PROVIDE A 3/4" CONDUIT WITH PULL STRING TO NEW IDF RACK FOR FUTURE CCTV CABLE.
2. CIRCUIT TO A NEW 30 AMP 2 POLE CIRCUIT BREAKER IN EXISTING SHOP PANEL.
3. CIRCUIT TO A NEW 30 AMP 3 POLE CIRCUIT BREAKER IN EXISTING SHOP PANEL.
4. SEE QT DRAWINGS FOR WORK IN THIS AREA.

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POWER PLAN
MAIN LEVEL

E3.1

PLAN NORTH

POWER PLAN—MAIN LEVEL
1/8"=1'-0"
0 4' 8' 16'

By: bhammond; Jul 21, 2008 - 3:46pm
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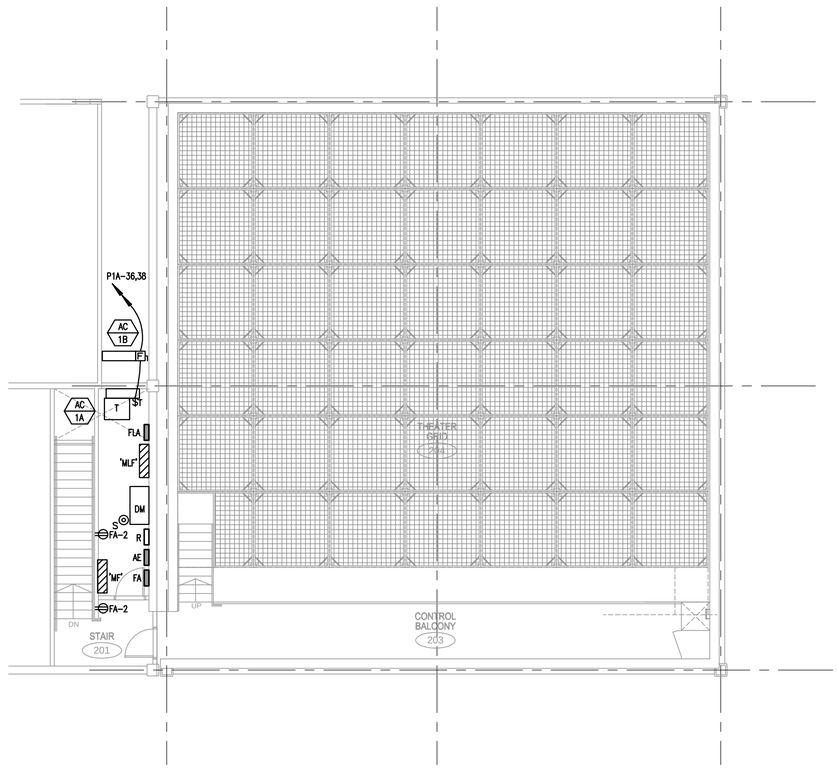
SHEET KEYNOTES

1. EXTEND A HOT CONDUCTOR AHEAD OF THE SWITCH TO THE EMERGENCY BATTERY PACK. USE SOME CIRCUIT PROVIDED FOR NORMAL OPERATION OF THE FIXTURES.



PLAN NORTH

POWER PLAN–UPPER LEVEL

1/8"=1'-0"

0 4' 8' 16'

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POWER PLAN
UPPER LEVEL

E3.2

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COPPER CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY

TRANS KVA	O.C. PROT.	TYPE COND.*	GND. COND.
30	50	38	8
45	70	34	4
75	125	31	2
112.5	175	32X	1/0
150	300	335	2/0
225	400	350	2/0
300	600	325-2	3/0
500	800	350-2	3/0
750	1500	335-5	3/0

COPPER CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY △480/208/120Y

O.C. PROT.	TYPE COND.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND COND.
100	142-1	104	1	4	2	1-1/4"	8
175	143X-1	180	1	4	3/0	2"	6
225	1425-1	232	1	4	250	2-1/2"	4
400	144X-2	416	2	4	4/0	2-1/2"	3
600	1440-2	608	2	4	400	3"	1
800	1435-3	840	3	4	350	3"	1/0
1200	1440-4	1216	4	4	400	3"	3/0
1600	1450-5	1720	5	4	500	4"	4/0
3000	1450-9	3096	9	4	500	4"	400

COPPER CONDUCTOR & O.C. PROT. FOR TRANSFORMER PRIMARY

TRANS KVA	O.C. PROT.	TYPE COND.*	GND. COND.
30	50	38	8
45	70	34	4
75	125	31	2
112.5	175	32X	1/0
150	300	335	2/0
225	400	350	2/0
300	600	325-2	3/0
500	800	350-2	3/0
750	1500	335-5	3/0

COPPER CONDUCTOR & O.C. PROT. FOR TRANSFORMER SECONDARY (200% NEUTRAL) △480/208/120Y

O.C. PROT.	TYPE COND.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND COND.
100	152-1	104	1	5	2	1-1/2"	8
175	153X-1	180	1	5	3/0	2-1/2"	6
225	1525-1	232	1	5	250	3"	4
400	154X-2	416	2	5	4/0	2-1/2"	3
600	1540-2	608	2	5	400	3-1/2"	1
800	1535-3	840	3	5	350	3"	1/0
1200	1540-4	1216	4	5	400	3"	3/0
1600	1550-5	1720	5	5	500	4"	4/0
3000	1550-9	3096	9	5	500	4"	400

* SEE SCHEDULE FOR CONDUIT AND WIRE SIZE

COPPER CONDUCTOR & CONDUIT SCHEDULE FOR PARALLEL RUNS

TYPE	MAX. O.C. PROT.	COND. AMPS	SETS	CONDUCTOR QUAN.	CONDUCTOR SIZE	CONDUIT SIZE	EQ. GND. COND.
325-2	600	510	2	3	250	2-1/2"	1
425-2	600	510	2	4	250	2-1/2"	1
525-2	600	510	2	5	250	2-1/2"	1
435-2	700	620	2	4	350	3"	1/0
440-2	700	670	2	4	400	3"	1/0
350-2	800	760	2	3	500	3"	1/0
450-2	800	760	2	4	500	4"	1/0
550-2	800	760	2	5	500	4"	1/0
460-2	800	840	2	4	600	4"	1/0
335-3	900	930	3	3	350	3"	2/0
435-3	900	930	3	4	350	3"	2/0
535-3	900	930	3	5 *	350	3"	2/0
340-3	1000	1005	3	3	400	3"	2/0
440-3	1000	1005	3	4	400	3"	2/0
540-3	1000	1005	3	5	400	3"	2/0
435-4	1200	1240	4	4	350	3"	3/0
535-4	1200	1240	4	5	350	3"	3/0
460-3	1200	1260	3	4	600	4"	3/0
335-5	1500	1550	5	3	350	3"	4/0
440-5	1600	1675	5	4	400	3"	4/0
540-5	1600	1675	5	5	400	3"	4/0
460-4	1600	1680	4	4	600	4"	4/0
440-6	2000	2010	6	4	400	3"	250
460-6	2500	2520	6	4	600	4"	350
450-8	3000	3040	8	4	500	4"	400
450-10	4000	4180	11	4	500	4"	500

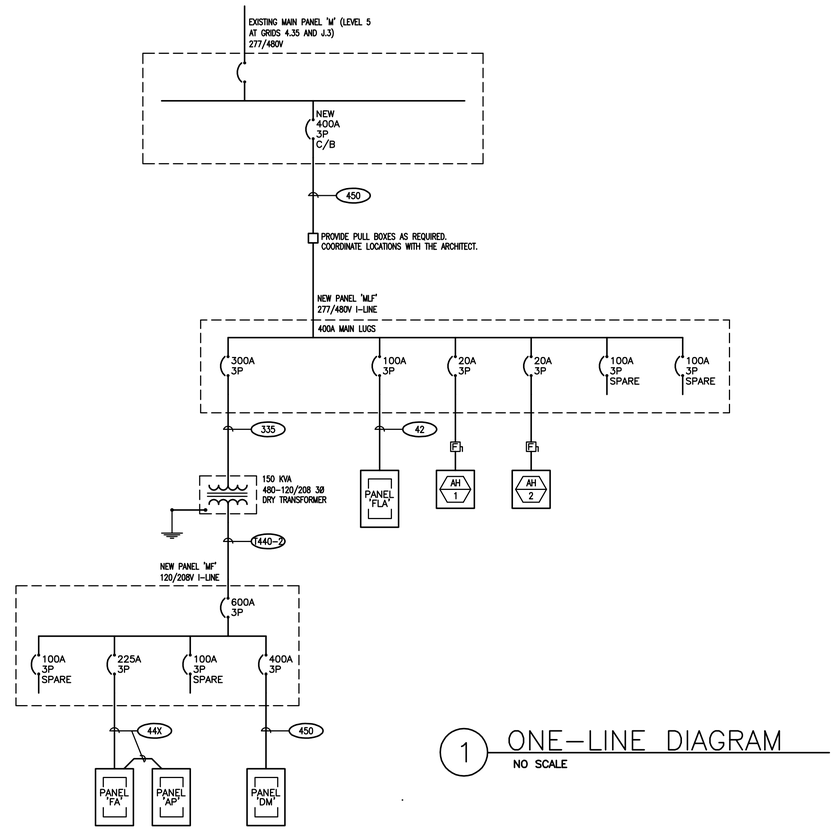
NOTES
IN PARALLEL RUNS SIZE GND. COND. IN ACCORDANCE WITH NEC PARA. 250-122.

GND. CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS

* 200% NEUTRAL

COPPER CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR QUAN.	CONDUCTOR SIZE	INSUL-ATION	EQ. GND. COND.
20	30	3/4"	2	10	THHN THWN	10
30	30	3/4"	3	10	THHN THWN	10
40	30	3/4"	4	10	THHN THWN	10
28	40	3/4"	2	8	THHN THWN	10
38	40	3/4"	3	8	THHN THWN	10
48	40	3/4"	4	8	THHN THWN	10
26	55	3/4"	2	6	THHN THWN	8
36	55	3/4"	3	6	THHN THWN	8
46	55	1"	4	6	THHN THWN	8
24	70	3/4"	2	4	THHN THWN	8
34	70	1"	3	4	THHN THWN	8
44	70	1-1/4"	4	4	THHN THWN	8
23	85	1"	2	3	THHN THWN	8
33	85	1"	3	3	THHN THWN	8
43	85	1-1/4"	4	3	THHN THWN	8
32	95	1-1/4"	3	2	THHN THWN	6
42	95	1-1/4"	4	2	THHN THWN	6
31	110	1-1/4"	3	1	THHN THWN	6
41	110	1-1/2"	4	1	THHN THWN	6
51	110	2"	5	1	THHN THWN	6
31X	150	1-1/2"	3	1/0	THHN THWN	6
41X	150	1-1/2"	4	1/0	THHN THWN	6
51X	150	2"	5	1/0	THHN THWN	6
32X	175	1-1/2"	3	2/0	THHN THWN	6
42X	175	2"	4	2/0	THHN THWN	6
52X	175	2"	5 *	2/0	THHN THWN	6
33X	200	2"	3	3/0	THHN THWN	6
43X	200	2"	4	3/0	THHN THWN	6
53X	200	2-1/2"	5	3/0	THHN THWN	6
34X	230	2"	3	4/0	THHN THWN	4
44X	230	2-1/2"	4	4/0	THHN THWN	4
54X	230	2-1/2"	5	4/0	THHN THWN	4
325	255	2"	3	250	THHN THWN	4
425	255	2-1/2"	4	250	THHN THWN	4
525	255	2-1/2"	5	250	THHN THWN	4
335	310	2-1/2"	3	350	THHN THWN	3
435	310	3"	4	350	THHN THWN	3
535	310	3"	5	350	THHN THWN	3
340	335	3"	3	400	THHN THWN	3
440	335	3"	4	400	THHN THWN	3
540	335	3"	5	400	THHN THWN	3
350	380	3-1/2"	3	500	XHHW	3
450	380	3-1/2"	4	500	XHHW	3
550	380	3-1/2"	5	500	XHHW	3



1 ONE-LINE DIAGRAM
NO SCALE

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ONE-LINE DIAGRAM

E4.1

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EQUIPMENT SCHEDULE

UNIT #	FUNCTION	LOAD	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES				OCPD		REF. NOTES			REMARKS
							NO. SETS	NO.	SIZE	EQUIP. GND (1)	TYPE	AMPS	STARTER	DISCONNECT	OTHER	
AC-1A	SPLIT AC SYSTEM INDOOR	1 FLA	208	1	1.00	3/4"	1	2	12	12	CB	15	B	4A		
AC-1B	SPLIT AC SYSTEM INDOOR	17 FLA	208	1	17.00	3/4"	1	2	10	10	CB	25	B	2A		
AH-1	AIR HANDLER	13.6 FLA	480	3	13.60	3/4"	1	3	12	12	CB	20		2A		
AH-2	AIR HANDLER	2 HP	480	3	3.40	3/4"	1	3	12	12	CB	15		2A		
EF-1	EXHAUST FAN	.25 HP	120	1	5.80	3/4"	1	2	12	12	CB	15	B	B		
PCC-1	CIRCULATING PUMP	.5 HP	120	1	9.80	3/4"	1	2	12	12	CB	20		7A		
PCC-2	CIRCULATING PUMP	.25 HP	120	1	5.80	3/4"	1	2	12	12	CB	15		7A		
PHC-1	CIRCULATING PUMP	.75 HP	120	1	13.80	3/4"	1	2	12	12	CB	25		7A		
PHC-2	CIRCULATING PUMP	.25 HP	120	1	5.80	3/4"	1	2	12	12	CB	15		7A		
UH-1	UNIT HEATER	2.4 FLA	120	1	2.40	3/4"	1	2	12	12	CB	15		4A		

NOTES:

1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER W/THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER, COORDINATE W/MOTOR TYPE

A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 16
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 16.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 16.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.

CB = CIRCUIT BREAKER - THERMAL MAGNETIC
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.

PANELBOARD SCHEDULE

PANEL FA | TYPE NQOD | 120/208 VOLTS | 3 PH | 4 W

MOUNTING: ___ FLUSH, X SURFACE

DIMENSIONS: 20 W, 6 D (in.), ___ H

LOCATION: DIMMER RM.

AMP: 225

MAINS: X LUGS, ___ BREAKER, ___ SUBFEED LUGS, ___ ISO GROUND, ___ 200% NEUTRAL

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	LEFT PHASE LOAD A	LEFT PHASE LOAD B	LEFT PHASE LOAD C	RIGHT PHASE LOAD A	RIGHT PHASE LOAD B	RIGHT PHASE LOAD C	CIR. NO.	AMPS	POLE	WIRE SIZE	ITEM
BASEMENT CO'S	20	1	10	1	900			360			2	20	1	12	DIMMER RM CO'S
BASEMENT CO'S	20	1	10	3		360			200		4	20	1	12	FUTURE CCTV CAMERA
OVERHEAD DOOR	20	1	10	5			1200			1260	6	20	1	12	LOBBY CO'S
UH-1	20	1	10	7	288						8	20	1		SPARE
OFFICE CO'S	20	1	12	9		900					10	20	1		SPARE
RECEPTION CO'S	20	1	12	11			720				12	20	1		SPARE
OFFICE, AUDIENCE CO'S	20	1	10	13	1080						14	20	1		SPARE
HALL RR CO'S	20	1	12	15		1080					16	20	1		SPARE
MAKE UP COUNTER CO'S	20	1	12	17			540				18	20	1		SPARE
MAKE UP COUNTER CO'S	20	1	12	19	540						20	20	1		SPARE
DRESSING CO'S	20	1	12	21		360					22	20	1		SPARE
DRESSING CO'S	20	1	12	23			360				24	20	1		SPARE
SMALL THEATER CO'S	20	1	12	25	540			1200			26	20	1	12	OVER HEAD DOOR
GREEN ROOM CO'S	20	1	12	27		900			1200		28	20	1	12	PCC1
MEDIA CONTROL	20	1	12	29			1080			696	30	20	1	12	PCC2
IDF CO'S	20	1	12	31	360			1656			32	25	1	10	PHC1
LOADING DOCK CO'S	20	1	12	33		1260			696		34	20	1	12	PHC2
RR, JANITOR CO;S	20	1	12	35			720			2160	36	25	2	10	AC-1A, AC-1B
DRINK FTN	20	1	12	37	540			2160			38				
UH-1, EF-1	20	1	12	39		984			2160		40	25	2	12	AC-1A, AC-1B
AH UNIT CONTR, LTG	20	1	12	41			200			2160	42				
					4248	5844	4520	5376	4296	6276					
					9624	10100	11096	TOTAL							CONNECTED LOAD TOTAL
					80	84	92	AMPS/PHASE							30820 VA

EQUIP RATING: 10,000 AMPS RMS SYM.

JOB NAME:

PANELBOARD SCHEDULE

PANEL FLA | TYPE NF | 277/480 VOLTS | 3 PH | 4 W

MOUNTING: ___ FLUSH, X SURFACE

DIMENSIONS: 20 W, 6 D (in.), ___ H

LOCATION: DIMMER RM.

AMP: 100

MAINS: X LUGS, ___ BREAKER, ___ SUBFEED LUGS, ___ ISO GROUND, ___ 200% NEUTRAL

BRANCH BREAKERS

ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	LEFT PHASE LOAD A	LEFT PHASE LOAD B	LEFT PHASE LOAD C	RIGHT PHASE LOAD A	RIGHT PHASE LOAD B	RIGHT PHASE LOAD C	CIR. NO.	AMPS	POLE	WIRE SIZE	ITEM
BASEMENT HALL, STOR	20	1	12	1	2700			1500			2	20	1	12	RR, LOADING LTG
EXTERIOR LIGHTING	20	1	12	3		1075			1625		4	20	1	12	GREEN RM, HALL LTG
EXTERIOR LIGHTING	20	1	12	5			810			1965	6	20	1	12	CHANGING, OFF, REC
LOBBY LIGHTING	20	1	12	7	3000						8				SPACE ONLY
SPARE				9							10				SPACE ONLY
SPARE				11							12				SPACE ONLY
SPARE				13							14				SPACE ONLY
SPARE				15							16				SPACE ONLY
SPARE				17							18				SPACE ONLY
SPARE				19							20				SPACE ONLY
SPARE				21							22				SPACE ONLY
SPARE				23							24				SPACE ONLY
SPACE ONLY				25							26				SPACE ONLY
SPACE ONLY				27							28				SPACE ONLY
SPACE ONLY				29							30				SPACE ONLY
					5700	1075	810	1500	1625	1965					
					7200	2700	2775	TOTAL							CONNECTED LOAD TOTAL
					26	10	10	AMPS/PHASE							12675 VA

EQUIP RATING: 14,000 AMPS RMS SYM.

JOB NAME:

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REVISION NUMBER AND DATE:

AXIS JOB #: 0804
OWNER JOB #:
DATE: July 21, 2008
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PANEL SCHEDULES

E4.2

By: bbammond, Jul 21, 2008 – 3:46pm
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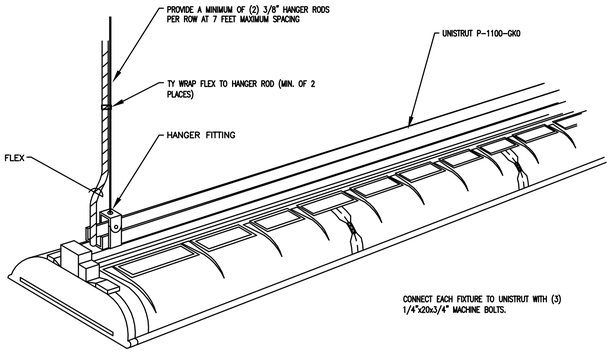

DIAGRAM A010 FIXTURE MOUNTING
NTS

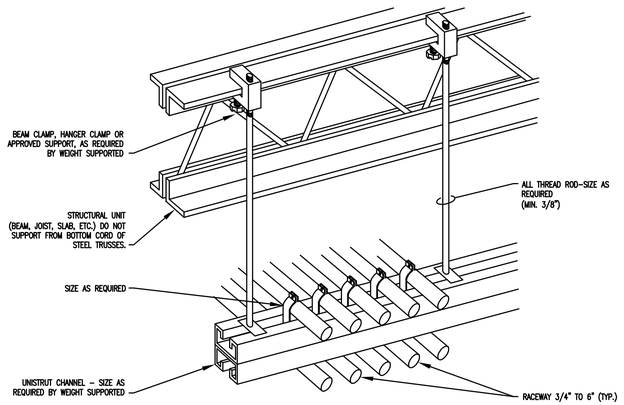

DIAGRAM H001 TYPICAL TRAPEZE CONDUIT RACK
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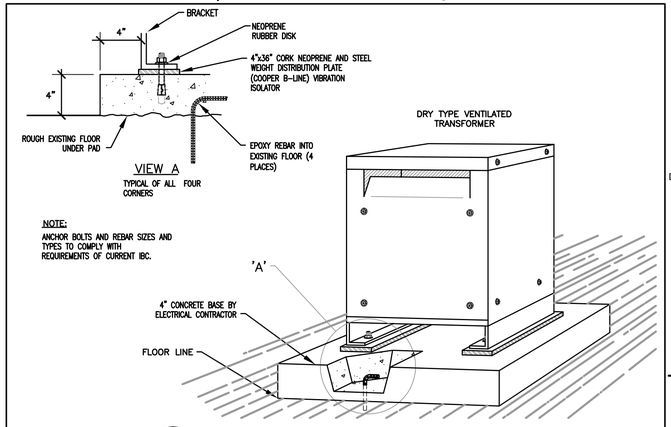

DIAGRAM Q003 DRY TYPE TRANSFORMER MOUNTING
NTS

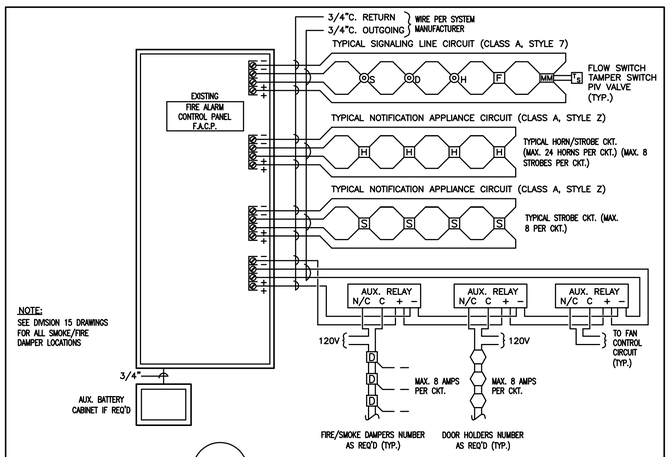

DIAGRAM D002 TYPICAL FIRE ALARM RISER
NTS

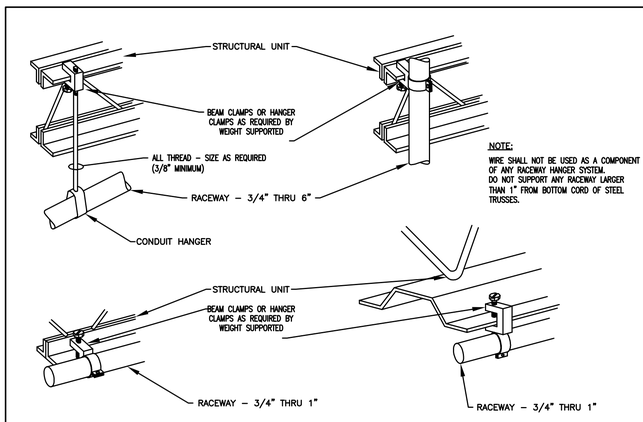

DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS
NTS

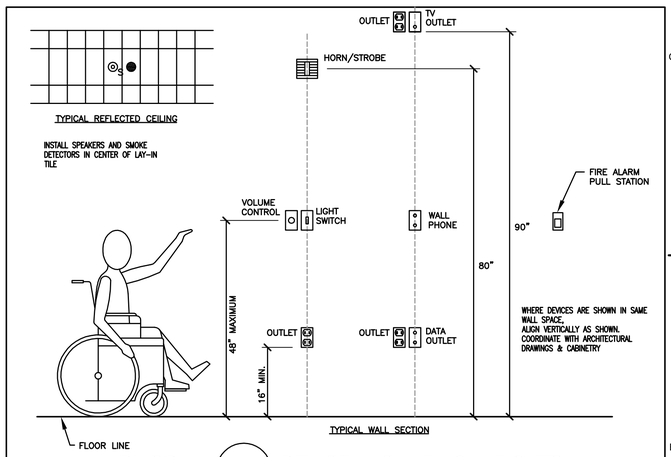

DIAGRAM R001 DEVICE MOUNTING HEIGHTS
NTS

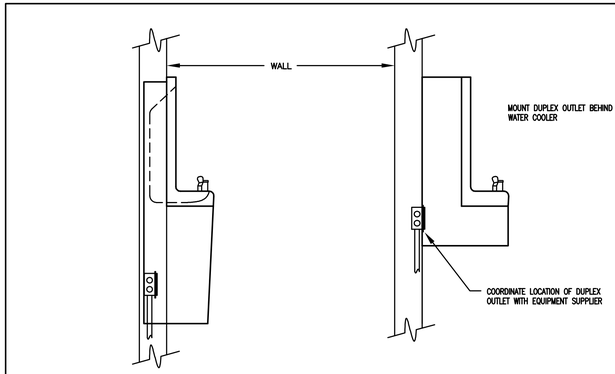

DIAGRAM R002 ELECTRIC WATER COOLER (EWC)
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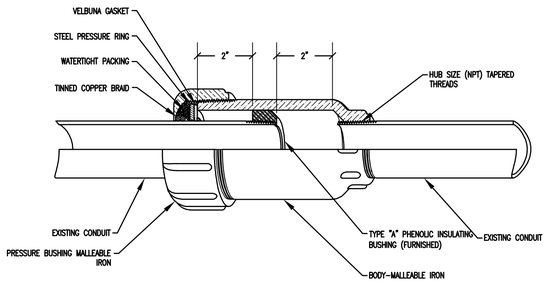
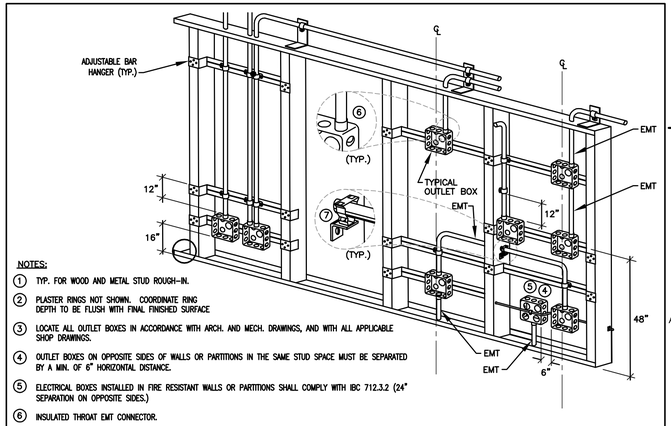


O-Z/GEDNEY 'TYPE AX'

NOTE:
INSTALL CONDUIT TO ALLOW FOR 2" MOVEMENT IN EITHER DIRECTION FOR A TOTAL MOVEMENT OF 4".

DIAGRAM H011 EXPANSION & PULL BOX FITTING
NTS



NOTES:
1. TYP. FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN. COORDINATE RING DEPTH TO BE FLUSH WITH FINAL FINISHED SURFACE
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCH. AND MECH. DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 6" HORIZONTAL DISTANCE.
5. ELECTRICAL BOXES INSTALLED IN FIRE RESISTANT WALLS OR PARTITIONS SHALL COMPLY WITH IBC 712.3.2 (24" SEPARATION ON OPPOSITE SIDES.)
6. INSULATED THROAT EMT CONNECTOR.
7. CADDY FASTENER, THROUGH STUD CABLE/CONDUIT SUPPORT 'FB12P'.

DIAGRAM H004 TYPICAL ROUGH IN REQUIREMENTS
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ELECTRICAL DIAGRAMS

E5.1

By: bhammond; Jul 21, 2008 - 3:46pm
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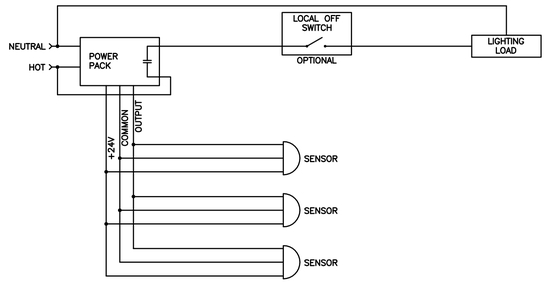


DIAGRAM S009 MULTIPLE SENSOR CONTROLLING ONE POWER PACK

NTS

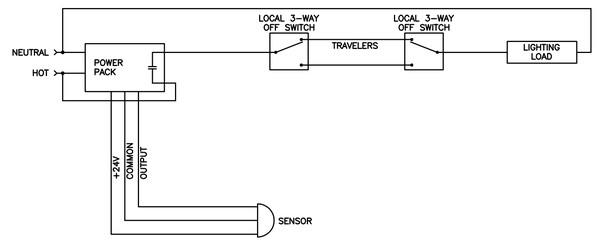


DIAGRAM S011 SENSOR WITH 3-WAY SWITCHING

NTS

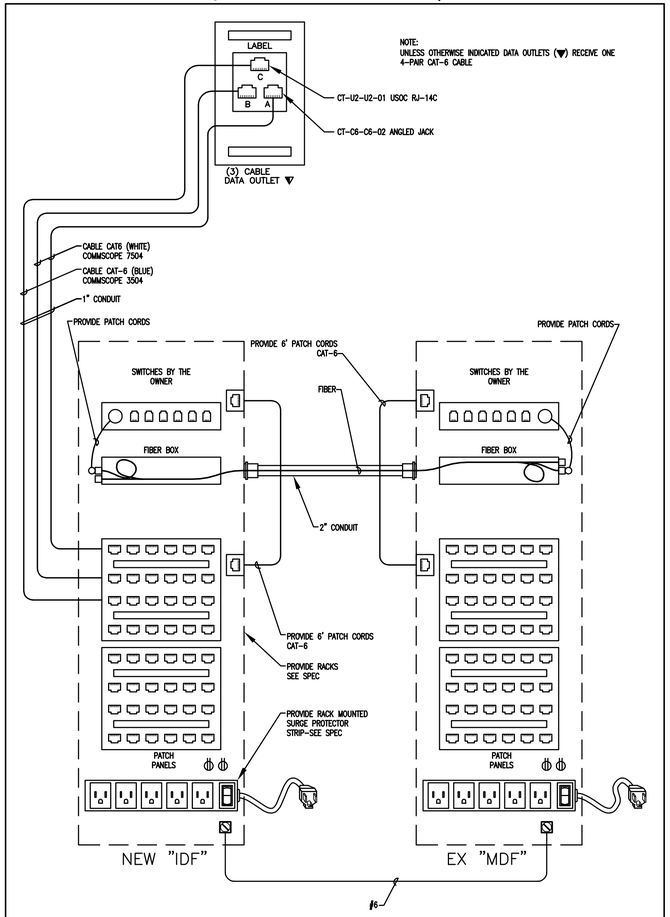
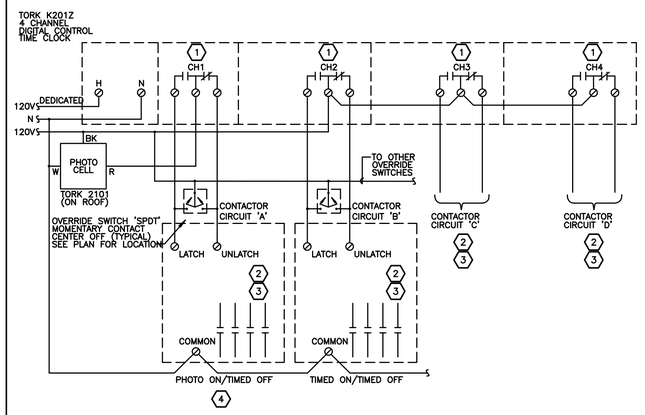


DIAGRAM F013 DATA RISER (TYPICAL)

NTS



REFERENCE NOTES

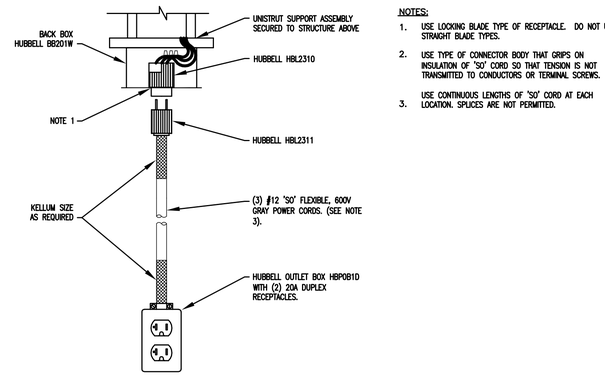
1. TIMED ON/TIMED OFF EACH CHANNEL CAN BE SET FOR MULTIPLE ON/OFF SCHEDULING.
2. SEE CONTACTOR SCHEDULE FOR NUMBER OF POLES REQUIRED AND CIRCUIT.
3. MECHANICALLY HELD CONTACTORS WITH COIL CLEARING CONTACTS SQUARE-D CLASS 8903.
4. CONTACTOR CAN BE PROGRAMMED FOR PHOTO ON / PHOTO OFF.

CONTACTOR SCHEDULE

CONTACTOR #	CIRCUITS CONTROLLED	CONTACTOR SIZE	CONTACTOR PANEL	CONTACTOR CIRCUIT CONTROLLED
1	FLA-3	20A-2P	LCC	'A' (PHOTO ON/TIMED OFF)
2	FLA-5	20A-2P	LCC	'B' (TIMED ON/TIMED OFF)
				'C' (TIMED ON/TIMED OFF)
				'D' (TIMED ON/TIMED OFF)

DIAGRAM P005 LIGHTING CONTROL

NTS



NOTES:

1. USE LOCKING BLADE TYPE OF RECEPTACLE. DO NOT USE STRAIGHT BLADE TYPES.
2. USE TYPE OF CONNECTOR BODY THAT GRIPS ON INSULATION OF 'SO' CORD SO THAT TENSION IS NOT TRANSMITTED TO CONDUCTORS OR TERMINAL SCREWS.
3. USE CONTINUOUS LENGTHS OF 'SO' CORD AT EACH LOCATION. SPLICES ARE NOT PERMITTED.

DIAGRAM K007 TWIST LOCK CORD DROP

NTS

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