Argonne NATIONAL LABORATORY

9700 S. Cass Avenue - Argonne, IL 60439 - (630) 252-2000

U.S. DEPARTMENT OF ENERGY

Argonne National Laboratory is a U.S. Department of Energy laboratory managed by UChicago Argonne, LLC.

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

NORTHWEST PERSPECTIVE

Construction Documents For:

ENERGY SCIENCES BUILDING

ISSUED FOR CONSTRUCTION - VOLUME I

JUNE 30TH 2011

VOLUME I:

GENERAL | CIVIL
SITE STEAM & CW | SITE STEAM STRUCTURAL
LAND PLANNING | STRUCTURAL
ARCHITECTURAL | INTERIORS
ARCHITECTURAL GRAPHICS | LABORATORY

VOLUME II:

MECHANICAL | PLUMBING
FIRE PROTECTION | ELECTRICAL
TELECOMMUNICATIONS

Architect & Interior Design

HDR Architecture, Inc.
8550 West Bryn Mawr Avenue, Suite 900
Chicago, Illinois 60631-3223
(773) 380-7900

Structural Engineer

HDR Architecture, Inc.
8550 West Bryn Mawr Avenue, Suite 900
Chicago, Illinois 60631-3223
(773) 380-7900

Landscape Architect

HDR Architecture, Inc.
8550 West Bryn Mawr Avenue, Suite 900
Chicago, Illinois 60631-3223
(773) 380-7900

Mechanical, Plumbing, & Electrical Engineers

HDR Architecture, Inc.
1101 King Street, Suite 400
Alexandria, Virginia 22314-2944
(703) 518-8500

Civil Engineer

Mackie Consultants LLC
89575 W. Higgins Rd., Suite 500
Rosemont, Illinois 60018
(847) 696-1400

Fire Protection Engineer

Stanton Engineering Services
10280 Old Columbia Road, Suite 275
Columbia, Maryland 21046
(410) 290-9301

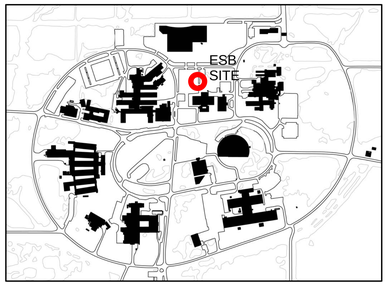
Site Mechanical & Structural Engineering

HDR Engineering, Inc.
8404 Indian Hills Drive
Omaha, Nebraska 68114
(402) 399-1000

Security and Communications Technology

HDR Architecture, Inc.
315 East Robinson Street, Suite 400
Orlando, Florida 32801
(407) 420-4111

ANL Campus - 200 Area Location Plan



G-000-I

INDEX OF DRAWINGS

VOLUME I

GENERAL:

G-000	COVER SHEET
G-001	SHEET INDEX
G-002	ABBREVIATIONS, GENERAL NOTES, SYMBOL LEGENDS AND MOUNTING HEIGHTS
G-100	GROUND FLOOR - LIFE SAFETY PLAN
G-103	THIRD FLOOR - LIFE SAFETY PLAN
G-104	PENTHOUSE - LIFE SAFETY PLAN
G-104	PENTHOUSE - COORDINATION PLAN
G-131	FIRST FLOOR - LIFE SAFETY PLAN
G-132	SECOND FLOOR - LIFE SAFETY PLAN

CIVIL:

C-01	DEMOLITION PLAN
C-02	GRADING PLAN
C-03	EROSION CONTROL PLAN
C-04	EROSION CONTROL DETAILS AND SPECIFICATIONS
C-05	UTILITY PLAN
C-06	SANITARY SEWER AND LABORATORY SEWER PLAN & PROFILE
C-07	PAVING PLAN
C-08	SPECIFICATIONS
C-09	CONSTRUCTION DETAILS
C-10	CONSTRUCTION DETAILS

SITE STEAM & CW:

CM-100	HP STEAM & COND. & CWS/R LINES PLAN TO NEW ENERGY SCIENCE BUILDING
CM-101	ROUTE 'A' HP STEAM & COND. LINES PROFILE TO NEW ENERGY SCIENCE BUILDING
CM-102	ROUTE 'B' HP STEAM & COND. PROFILE TO NEW ENERGY SCIENCE BUILDING
CM-103	CWS/R LINES PROFILE TO NEW ENERGY SCIENCE BUILDING
CM-104	ROUTE 'A' & 'B' MECHANICAL MANHOLES PLANS AND SECTIONS
CM-105	MISCELLANEOUS DETAILS

SITE STEAM STRUCTURAL:

CS-100	STRUCTURAL DETAILS

LAND PLANNING:

LP-101A	LANDSCAPE PLAN
LP-102	CONCRETE JOINTING PLAN AND FURNISHING LAYOUT PLAN
LP-501	LANDSCAPE DETAILS

STRUCTURAL:

S-001	GENERAL STRUCTURAL NOTES
S-002	SPECIAL INSPECTIONS INFORMATION
S-003	GENERAL GRID DIMENSION PLAN
S-100A	GROUND FLOOR FOUNDATION PLAN - AREA A
S-100D	GROUND FLOOR FOUNDATION PLAN - AREA D
S-101A	FIRST FLOOR FRAMING PLAN - AREA A
S-101D	FIRST FLOOR FRAMING PLAN - AREA D
S-102A	SECOND FLOOR FRAMING PLAN - AREA A
S-103A	THIRD FLOOR FRAMING PLAN - AREA A
S-104A	FOURTH FLOOR FRAMING PLAN - AREA A
S-105A	ROOF FRAMING PLAN - AREA A
S-110B	GROUND FLOOR FOUNDATION PLAN - AREA B
S-111B	FIRST FLOOR FRAMING PLAN - AREA B
S-112B	SECOND FLOOR FRAMING PLAN - AREA B
S-113B	THIRD FLOOR FRAMING PLAN - AREA B
S-114B	FOURTH FLOOR FRAMING PLAN - AREA B
S-115B	ROOF FRAMING PLAN - AREA A
S-130C	GROUND FLOOR FOUNDATION PLAN - AREA C
S-131C	FIRST FLOOR FRAMING PLAN - AREA C
S-132C	SECOND FLOOR FRAMING PLAN - AREA C
S-133C	THIRD FLOOR FRAMING PLAN - AREA C
S-201	COLUMN SCHEDULE
S-202	COLUMN SCHEDULE AND DETAILS
S-203	SHEAR WALL ELEVATIONS AND DETAILS
S-204	BRACED FRAME ELEVATIONS
S-205	CONCRETE BEAM SCHEDULES
S-206	CONCRETE BEAM AND SLAB SCHEDULES AND DETAILS
S-207	POST TENSION BEAM SCHEDULES AND DETAILS
S-301	TYPICAL CONCRETE DETAILS
S-302	CONCRETE FOUNDATION DETAILS
S-303	CONCRETE FOUNDATION DETAILS
S-304	CONCRETE SECTIONS AND DETAILS
S-305	CONCRETE SECTIONS AND DETAILS
S-306	CONCRETE SECTIONS AND DETAILS
S-501	TYPICAL STEEL DETAILS
S-502	STEEL SECTIONS AND DETAILS
S-503	STEEL SECTIONS AND DETAILS
S-504	STEEL SECTIONS AND DETAILS

ARCHITECTURAL:

AD-100C	BLDG 223 BASEMENT DEMOLITION - AREA C
AD-101C	BLDG 223 FIRST FLOOR DEMOLITION - AREA C
AD-102	BLDG 222 FIRST FLOOR - DEMO & NEW PLAN
AD-201	ELEVATIONS - DEMO
A-002	EXTERIOR PERSPECTIVE VIEWS
A-100A	GROUND FLOOR - AREA A
A-100C	GROUND FLOOR - AREA C
A-100D	SERVICE YARD PLAN
A-101A	FIRST FLOOR - AREA A
A-101D	FIRST FLOOR - AREA D - BLDG 222 & SERVICE COURTYARD
A-102A	SECOND FLOOR - AREA A
A-103A	THIRD FLOOR - AREA A
A-104A	PENTHOUSE/MAIN ROOF - AREA A
A-105A	PENTHOUSE ROOF - AREA A
A-114B	PENTHOUSE - AREA B
A-115B	ROOF - AREA B
A-120B	GROUND FLOOR - AREA B
A-121B	FIRST FLOOR - AREA B
A-122B	SECOND FLOOR - AREA B
A-123B	THIRD FLOOR - AREA B
A-131C	FIRST FLOOR - AREA C
A-132C	SECOND FLOOR - AREA C
A-133C	THIRD FLOOR - AREA C
AC-100A	RCP - GROUND FLOOR - AREA A
AC-100C	RCP - GROUND FLOOR - AREA C
AC-101A	RCP - FIRST FLOOR - AREA A
AC-102A	RCP - SECOND FLOOR - AREA A
AC-103A	RCP - THIRD FLOOR - AREA A
AC-104A	RCP - PENTHOUSE - AREA A
AC-114B	RCP - PENTHOUSE - AREA B
AC-120B	RCP - GROUND FLOOR - AREA B
AC-121B	RCP - FIRST FLOOR - AREA B
AC-122B	RCP - SECOND FLOOR - AREA B
AC-123B	RCP - THIRD FLOOR - AREA B
AC-131C	RCP - FIRST FLOOR - AREA C
AC-132C	RCP - SECOND FLOOR - AREA C
A-201A	BUILDING ELEVATIONS
A-202	BUILDING ELEVATIONS
A-301	BUILDING SECTIONS
A-302	BUILDING SECTIONS
A-303	BUILDING SECTIONS
A-304	BUILDING SECTIONS
A-310	WALL SECTIONS
A-311	WALL SECTIONS
A-312	WALL SECTIONS
A-313	WALL SECTIONS
A-314	WALL SECTIONS
A-315	WALL SECTIONS
A-316	WALL SECTIONS
A-317	WALL SECTIONS
A-318	WALL SECTIONS
A-319	WALL SECTIONS
A-320	WALL SECTIONS
A-321	WALL SECTIONS
A-322	WALL SECTIONS
A-340	WALL SECTIONS
A-350	WALL SECTIONS
A-351	WALL SECTIONS
A-352	WALL SECTIONS
A-360	WALL SECTIONS
A-361	WALL SECTIONS
A-362	WALL SECTIONS
A-401	ENLARGED TYPICAL PLANS, RCP AND ELEVATIONS
A-402	ENLARGED TYPICAL PLANS, RCP AND ELEVATIONS
A-403	ENLARGED TOILET PLANS, RCP AND ELEVATIONS
A-404	ENLARGED TOILET PLANS, RCP & ELEVATIONS
A-407	ENLARGED FIRST FLOOR REFLECTED CEILING PLANS
A-408	ENLARGED SECOND FLOOR REFLECTED CEILING PLANS
A-409	ENLARGED THIRD FLOOR REFLECTED CEILING PLANS

ARCHITECTURE: (CONT.)

A-410	INTERIOR ELEVATIONS
A-411	INTERIOR ELEVATIONS
A-412	INTERIOR ELEVATIONS
A-413	INTERIOR ELEVATIONS
A-414	INTERIOR ELEVATIONS
A-415	INTERIOR ELEVATIONS
A-416	INTERIOR ELEVATIONS
A-417	INTERIOR ELEVATIONS
A-418	INTERIOR ELEVATIONS
A-421	INTERIOR ELEVATIONS
A-424	INTERIOR ELEVATIONS
A-425	INTERIOR ELEVATIONS
A-426	INTERIOR ELEVATIONS
A-427	INTERIOR ELEVATIONS
A-430	INTERIOR ELEVATIONS
A-431	INTERIOR ELEVATIONS
A-450	INTERIOR DETAILS
A-501	EXTERIOR DETAILS
A-502	EXTERIOR DETAILS
A-503	EXTERIOR DETAILS
A-504	EXTERIOR DETAILS
A-505	EXTERIOR DETAILS
A-510	EXTERIOR DETAILS
A-511	EXTERIOR DETAILS
A-512	EXTERIOR DETAILS
A-513	WALL SECTION - SYSTEM DETAILS
A-514	WALL SECTION - DETAILS
A-515	WALL SECTION - DETAILS
A-516	WALL SECTION - DETAILS
A-517	WALL SECTION - DETAILS
A-518	WALL SECTION - DETAILS
A-519	WALL SECTION - DETAILS
A-520	EXTERIOR DETAILS
A-521	EXTERIOR DETAILS
A-522	EXTERIOR DETAILS
A-530	EXTERIOR DETAILS
A-535	WALL SECTION DETAILS
A-540	CEILING DETAILS
A-541	CEILING DETAILS
A-551	INTERIOR DETAILS
A-552	INTERIOR DETAILS
A-553	INTERIOR DETAILS & RF SHIELDING DETAILS
A-601	INTERIOR WALL TYPES
A-602	INTERIOR WALL TYPE DETAILS
A-607	DOOR AND FRAME SCHEDULE - GROUND & FIRST
A-608	DOOR AND FRAME SCHEDULE - SECOND
A-609	DOOR AND FRAME SCHEDULE - THIRD & PENTHOUSE
A-610	DOOR AND FRAME TYPES AND DETAILS
A-630	CASEWORK DETAILS
A-701	ENLARGED STAIR PLANS AND SECTIONS
A-702	ENLARGED STAIR PLANS AND SECTIONS
A-703	ENLARGED STAIR PLANS AND SECTIONS
A-704	ENLARGED STAIR PLANS AND SECTIONS
A-705	STAIR DETAILS
A-706	ENLARGED STAIR PLANS & SECTIONS
A-710	ENLARGED ELEVATOR PLANS
A-711	ELEVATOR SECTIONS
A-801	ENLARGED ELEVATIONS
A-802	ENLARGED ELEVATIONS
A-803	ENLARGED ELEVATIONS
A-804	ENLARGED ELEVATIONS
A-805	ENLARGED ELEVATIONS
A-806	ENLARGED ELEVATIONS
A-807	ENLARGED ELEVATIONS
A-808	ENLARGED ELEVATIONS
A-809	ENLARGED ELEVATIONS
A-830	ENLARGED ELEVATIONS

INTERIORS:

I-100A	GROUND FLOOR - AREA A - INTERIOR FINISH PLAN
I-100C	GROUND FLOOR - AREA C - INTERIOR FINISH PLAN
I-101A	FIRST FLOOR - AREA A - INTERIOR FINISH PLAN
I-102A	SECOND FLOOR - AREA A - INTERIOR FINISH PLAN
I-103A	THIRD FLOOR - AREA A - INTERIOR FINISH PLAN
I-120B	GROUND FLOOR - AREA B - INTERIOR FINISH PLAN
I-121B	FIRST FLOOR - AREA B - INTERIOR FINISH PLAN
I-122B	SECOND FLOOR - AREA B - INTERIOR FINISH PLAN
I-123B	THIRD FLOOR - AREA B - INTERIOR FINISH PLAN
I-131C	FIRST FLOOR - AREA C - INTERIOR FINISH PLAN
I-132C	SECOND FLOOR - AREA C - INTERIOR FINISH PLAN
IF-001	TYPICAL ENLARGED FURNITURE PLANS & ISOMETRICS
IF-100A	GROUND FLOOR - AREA A - FURNITURE PLAN
IF-101A	FIRST FLOOR - AREA A - FURNITURE PLAN
IF-102A	SECOND FLOOR - AREA A - FURNITURE PLAN
IF-103A	THIRD FLOOR - AREA A - FURNITURE PLAN
IF-120B	GROUND FLOOR - AREA B - FURNITURE PLAN
IF-121B	FIRST FLOOR - AREA B - FURNITURE PLAN
IF-122B	SECOND FLOOR - AREA B - FURNITURE PLAN
IF-123B	THIRD FLOOR - AREA B - FURNITURE PLAN
IF-131C	FIRST FLOOR - AREA C - FURNITURE PLAN
IF-132C	SECOND FLOOR - AREA C - FURNITURE PLAN
IW-100A	GROUND FLOOR - AREA A - WALL PROTECTION PLAN
IW-100C	GROUND FLOOR - AREA C - WALL PROTECTION PLAN
IW-101A	FIRST FLOOR - AREA A - WALL PROTECTION PLAN
IW-102A	SECOND FLOOR - AREA A - WALL PROTECTION PLAN
IW-103A	THIRD FLOOR - AREA A - WALL PROTECTION PLAN
IW-120B	GROUND FLOOR - AREA B - WALL PROTECTION PLAN
IW-121B	FIRST FLOOR - AREA B - WALL PROTECTION PLAN
IW-122B	SECOND FLOOR - AREA B - WALL PROTECTION PLAN
IW-123B	THIRD FLOOR - AREA B - WALL PROTECTION PLAN
IW-131C	FIRST FLOOR - AREA C - WALL PROTECTION & FLR PATT. PLAN
IW-132C	SECOND FLOOR - AREA C - WALL PROTECTION & FLR PATT. PLAN

ARCHITECTURAL GRAPHICS:

AG-501	SIGN DETAILS
AG-502	SIGN DETAILS

LABORATORY:

QL-001	LABORATORY ABBREVIATIONS, NOTES AND SYMBOLS
QL-002	CASEWORK, SERVICES, AND FUMEHOOD TYPES
QL-100A	GROUND FLOOR ENLARGED LABORATORY PLANS - AREA A
QL-101A	FIRST FLOOR ENLARGED LABORATORY PLANS - AREA A
QL-102A	SECOND FLOOR ENLARGED LABORATORY PLANS - AREA A
QL-103A	THIRD FLOOR ENLARGED LABORATORY PLANS - AREA A
QL-120B	GROUND FLOOR ENLARGED LABORATORY PLANS - AREA B
QL-121B	FIRST FLOOR ENLARGED LABORATORY PLANS - AREA B
QL-122B	SECOND FLOOR ENLARGED LABORATORY PLANS - AREA B
QL-123B	THIRD FLOOR ENLARGED LABORATORY PLANS - AREA B
QL-200	LABORATORY ELEVATIONS
QL-201	LABORATORY ELEVATIONS
QL-202	LABORATORY ELEVATIONS
QL-203	LABORATORY ELEVATIONS
QL-204	LABORATORY ELEVATIONS
QL-205	LABORATORY ELEVATIONS
QL-206	LABORATORY ELEVATIONS
QL-207	LABORATORY ELEVATIONS
QL-208	LABORATORY ELEVATIONS
QL-209	LABORATORY ELEVATIONS
QL-210	LABORATORY ELEVATIONS
QL-211	LABORATORY ELEVATIONS
QL-212	LABORATORY ELEVATIONS
QL-213	LABORATORY ELEVATIONS
QL-214	LABORATORY ELEVATIONS
QL-215	LABORATORY ELEVATIONS
QL-216	LABORATORY ELEVATIONS
QL-500	LABORATORY CASEWORK AND EQUIPMENT DETAILS
QL-501	LABORATORY CASEWORK AND EQUIPMENT DETAILS
QL-502	LABORATORY CASEWORK AND EQUIPMENT DETAILS
QL-601	LABORATORY EQUIPMENT SCHEDULES
QL-602	LABORATORY EQUIPMENT SCHEDULES

VOLUME II

GENERAL:

G-001	SHEET INDEX
G-114	PENTHOUSE COORDINATION PLAN

MECHANICAL:

M-001	SYMBOLS LIST & ABBREVIATIONS
M-100A	GROUND FLOOR - AREA A - HVAC
M-100A1	GROUND FLOOR - AREA A - LAB HVAC
M-100C	GROUND FLOOR - AREA C - HVAC
M-101A	FIRST FLOOR - AREA A - HVAC
M-101A1	FIRST FLOOR - AREA A - LAB HVAC
M-102A	SECOND FLOOR - AREA A - HVAC
M-102A1	SECOND FLOOR - AREA A - LAB HVAC
M-103A	THIRD FLOOR - AREA A - HVAC
M-103A1	THIRD FLOOR - AREA A - LAB HVAC
M-104A	PENTHOUSE - AREA A - HVAC
M-105A	ROOF - AREA A - HVAC
M-120B	GROUND FLOOR - AREA B - HVAC
M-120B1	GROUND FLOOR - AREA B - LAB HVAC
M-121B	FIRST FLOOR - AREA B - HVAC
M-121B1	FIRST FLOOR - AREA B - LAB HVAC
M-122B	SECOND FLOOR - AREA B - HVAC
M-122B1	SECOND FLOOR - AREA B - LAB HVAC
M-123B	THIRD FLOOR - AREA B - HVAC
M-123B1	THIRD FLOOR - AREA B - LAB HVAC
M-124B	PENTHOUSE - AREA B - HVAC
M-125B	ROOF - AREA B - HVAC
M-131C	FIRST FLOOR - AREA C - HVAC
M-132C	SECOND FLOOR - AREA C - HVAC
M-133C	THIRD FLOOR - AREA C - HVAC
MP-100A	GROUND FLOOR - AREA A - HVAC PIPING
MP-100C	GROUND FLOOR - AREA C - HVAC PIPING
MP-101A	FIRST FLOOR - AREA A - HVAC PIPING
MP-102A	SECOND FLOOR - AREA A - HVAC PIPING
MP-103A	THIRD FLOOR - AREA A - HVAC PIPING
MP-104A	PENTHOUSE - AREA A - HVAC PIPING
MP-120B	GROUND FLOOR - AREA B - HVAC PIPING
MP-121B	FIRST FLOOR - AREA B - HVAC PIPING
MP-122B	SECOND FLOOR - AREA B - HVAC PIPING
MP-123B	THIRD FLOOR - AREA B - HVAC PIPING
MP-124B	PENTHOUSE - AREA B - HVAC PIPING
MP-131C	FIRST FLOOR - AREA C - HVAC PIPING
MP-132C	SECOND FLOOR - AREA C - HVAC PIPING
MP-133C	THIRD FLOOR - AREA C - HVAC PIPING
M-301	MECHANICAL SECTIONS
M-302	MECHANICAL SECTIONS
M-303	MECHANICAL SECTIONS
M-304	MECHANICAL SECTIONS
M-305	MECHANICAL SECTIONS
M-401H	ENLARGED PLAN GROUND FLOOR - AREA C - HVAC
M-401HP	ENLARGED PLAN GROUND FLOOR - AREA C - HVAC PIPING
M-407H	ENLARGED PLAN PENTHOUSE - AREA A - HVAC
M-407HP	ENLARGED PLAN PENTHOUSE - AREA A - HVAC PIPING
M-408H	ENLARGED PLAN PENTHOUSE - AREA A&B - HVAC
M-408HP	ENLARGED PLAN PENTHOUSE - AREA A&B - HVAC PIPING
M-409H	ENLARGED PLAN PENTHOUSE - AREA B - HVAC
M-409HP	ENLARGED PLAN PENTHOUSE - AREA B - HVAC PIPING
M-501	AIR HANDLING UNIT DETAILS
M-502	MECHANICAL DETAILS
M-503	MECHANICAL DETAILS
M-504	MECHANICAL DETAILS
M-505	MECHANICAL DETAILS
M-601	MECHANICAL SCHEDULES
M-604	MECHANICAL SCHEDULES
M-702	MECHANICAL FLOW DIAGRAMS
M-703	MECHANICAL FLOW DIAGRAMS
M-801	MECHANICAL CONTROL DIAGRAMS
M-802	MECHANICAL CONTROL DIAGRAMS
M-803	MECHANICAL CONTROL DIAGRAMS
M-804	MECHANICAL CONTROL DIAGRAMS
M-805	MECHANICAL CONTROL DIAGRAMS
M-806	MECHANICAL CONTROL DIAGRAMS
M-807	MECHANICAL CONTROL DIAGRAMS
M-808	MECHANICAL CONTROL DIAGRAMS

PLUMBING:

P-001	SYMBOLS & ABBREVIATIONS, NOTES PLUMBING
P-10FA	FOUNDATION PLAN - AREA A - PLUMBING
P-100A	GROUND FLOOR - AREA A - PLUMBING
P-101A	FIRST FLOOR - AREA A - PLUMBING
P-102A	SECOND FLOOR - AREA A - PLUMBING
P-103A	THIRD FLOOR - AREA A - PLUMBING
P-104A	PENTHOUSE - AREA A - PLUMBING
P-105A	ROOF - AREA A - PLUMBING
P-114B	PENTHOUSE - AREA B - PLUMBING
P-115B	ROOF - AREA B - PLUMBING
P-12FB	FOUNDATION PLAN - AREA B - PLUMBING
P-120B	GROUND FLOOR - AREA B - PLUMBING
P-121B	FIRST FLOOR - AREA B - PLUMBING
P-122B	SECOND FLOOR - AREA B - PLUMBING
P-123B	THIRD FLOOR - AREA B - PLUMBING
P-13FC	FOUNDATION PLAN - AREA C - PLUMBING
P-130C	GROUND FLOOR - AREA C - PLUMBING
P-131C	FIRST FLOOR - AREA C - PLUMBING
P-132C	SECOND FLOOR - AREA C - PLUMBING
P-133C	THIRD FLOOR - AREA C - PLUMBING
P-401	GROUND FLOOR - AREA A ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-402	GROUND FLOOR - AREA B ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-403	FIRST FLOOR - AREA A ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-404	FIRST FLOOR - AREA B ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-405	SECOND FLOOR - AREA A ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-406	SECOND FLOOR - AREA B ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-407	THIRD FLOOR - AREA A ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-414	THIRD FLOOR - AREA B ENLARGED LAB PLAN - WATER AND DRAINAGE SYSTEMS
P-415	GROUND FLOOR - AREA A ENLARGED LAB PLAN - GASEOUS SYSTEMS
P-416	GROUND FLOOR - AREA B ENLARGED LAB PLAN - GASEOUS SYSTEM
P-417	FIRST FLOOR - AREA A ENLARGED LAB PLAN - GASEOUS SYSTEM
P-418	FIRST FLOOR - AREA B ENLARGED LAB PLAN - GASEOUS SYSTEM
P-419	SECOND FLOOR - AREA A ENLARGED LAB PLAN - GASEOUS SYSTEM
P-420	SECOND FLOOR - AREA B ENLARGED LAB PLAN - GASEOUS SYSTEM
P-421	THIRD FLOOR - AREA A ENLARGED LAB PLAN - GASEOUS SYSTEM
P-428	THIRD FLOOR - AREA B ENLARGED LAB PLAN - GASEOUS SYSTEM
P-429	AREA B&C ENLARGED TOILET ROOM PLANS & BUILDING 223 WATER SERVICE ROOM
P-430	ENLARGED PLANS WATER & DRAINAGE SYSTEMS PLUMBING
P-501	DETAILS - PLUMBING
P-502	DETAILS - PLUMBING
P-503	DETAILS - PLUMBING
P-601	SCHEDULES - PLUMBING
P-701	RISER DIAGRAMS - PLUMBING
P-702	RISER DIAGRAMS - PLUMBING
P-703	RISER DIAGRAMS - PLUMBING
P-704	RISER DIAGRAMS - PLUMBING
P-705	RISER DIAGRAMS - PLUMBING
P-706	RISER DIAGRAMS - PLUMBING
P-707	RISER DIAGRAMS - PLUMBING
P-708	RISER DIAGRAMS - PLUMBING

FIRE PROTECTION:

F-001	FIRE SUPPRESSION ABBREVIATIONS, LEGENDS AND GENERAL NOTES
F-100A	GROUND FLOOR - AREA A - FIRE SUPPRESSION
F-100B	GROUND FLOOR - AREA B - FIRE SUPPRESSION
F-100C	GROUND FLOOR - AREA C - FIRE SUPPRESSION
F-101A	FIRST FLOOR - AREA A - FIRE SUPPRESSION
F-101B	FIRST FLOOR - AREA B - FIRE SUPPRESSION
F-101C	FIRST FLOOR - AREA C - FIRE SUPPRESSION
F-102A	SECOND FLOOR - AREA A - FIRE SUPPRESSION
F-102B	SECOND FLOOR - AREA B - FIRE SUPPRESSION
F-103A	THIRD FLOOR - AREA A - FIRE SUPPRESSION
F-103B	THIRD FLOOR - AREA B - FIRE SUPPRESSION
F-104A	PENTHOUSE - AREA A - FIRE SUPPRESSION
F-104B	PENTHOUSE - AREA B - FIRE SUPPRESSION
F-105	GROUND FLOOR - BUILDING 223 PROPOSED - FIRE SUPPRESSION
F-131C	FIRST FLOOR - AREA C - FIRE SUPPRESSION
F-132C	SECOND FLOOR - AREA C - FIRE SUPPRESSION
F-501	FIRE SUPPRESSION DETAILS

ELECTRICAL:

E-001	ELECTRICAL SYMBOLS, ABBREVIATIONS, NOTES
E-002	LIGHTING FIXTURE SCHEDULE
ES-001	ELECTRICAL SITE PLAN
ES-002	ELECTRICAL SITE LIGHTING PLAN
EL-100A	GROUND FLOOR - AREA A - LIGHTING
EL-100C	GROUND FLOOR - AREA C - LIGHTING
EL-101A	FIRST FLOOR - AREA A - LIGHTING
EL-102A	SECOND FLOOR - AREA A - LIGHTING
EL-103A	THIRD FLOOR - AREA A - LIGHTING
EL-104A	PENTHOUSE - AREA A - LIGHTING
EL-120B	GROUND FLOOR - AREA B - LIGHTING
EL-121B	FIRST FLOOR - AREA B - LIGHTING
EL-122B	SECOND FLOOR - AREA B - LIGHTING
EL-123B	THIRD FLOOR - AREA B - LIGHTING
EL-124B	PENTHOUSE - AREA B - LIGHTING
EL-131C	FIRST FLOOR - AREA C - LIGHTING
EL-132C	SECOND FLOOR - AREA C - LIGHTING
EP-100A	GROUND FLOOR - AREA A - POWER
EP-100C	GROUND FLOOR - AREA C - POWER
EP-101A	FIRST FLOOR - AREA A - POWER
EP-102A	SECOND FLOOR - AREA A - POWER
EP-103A	THIRD FLOOR - AREA A - POWER
EP-104A	PENTHOUSE - AREA A - POWER
EP-120B	GROUND FLOOR - AREA B - POWER
EP-121B	FIRST FLOOR - AREA B - POWER
EP-122B	SECOND FLOOR - AREA B - POWER
EP-123B	THIRD FLOOR - AREA B - POWER
EP-124B	PENTHOUSE - AREA B - POWER
EP-131C	FIRST FLOOR - AREA C - POWER
EP-132C	SECOND FLOOR - AREA C - POWER
EP-133C	THIRD FLOOR - AREA C - POWER
E-404	GROUND FLOOR - PARTIAL PLAN
E-405	FIRST FLOOR - PARTIAL PLAN
E-406	SECOND FLOOR - PARTIAL PLAN
E-407	THIRD FLOOR - PARTIAL PLAN
E-411	GROUND FLOOR - GROUNDING PLANS
E-412	ROOF LIGHTING PROTECTION PLAN
E-413	ENLARGED PLANS - MAIN NORMAL & EMERGENCY ELECTRICAL ROOMS
E-501	ELECTRICAL DETAILS
E-502	GROUNDING SCHEMATIC WIRING DIAGRAM
E-503	ELECTRICAL DETAILS
E-510	LIGHTING DETAILS
E-511	LIGHTING DETAILS
E-512	LIGHTING DETAILS
E-513	ELEVATOR SECTIONS AND DETAILS - LIGHTING
E-600	POWER SCHEDULES
E-601	POWER ONE-LINE DIAGRAM
E-602	POWER ONE-LINE DIAGRAM
E-603	POWER ONE-LINE DIAGRAM
E-604	POWER ONE-LINE DIAGRAM
E-700	POWER SCHEDULES GROUND FLOOR
E-701	POWER SCHEDULES GROUND FLOOR
E-702	POWER SCHEDULES GROUND FLOOR
E-703	POWER SCHEDULES GROUND FLOOR
E-704	POWER SCHEDULES GROUND FLOOR
E-705	POWER SCHEDULES GROUND FLOOR
E-706	POWER SCHEDULES GROUND FLOOR
E-707	POWER SCHEDULES GROUND FLOOR
E-710	POWER SCHEDULES FIRST FLOOR
E-711	POWER SCHEDULES FIRST FLOOR
E-712	POWER SCHEDULES FIRST FLOOR
E-713	POWER SCHEDULES FIRST FLOOR
E-714	POWER SCHEDULES FIRST FLOOR
E-720	POWER SCHEDULES SECOND FLOOR
E-721	POWER SCHEDULES SECOND FLOOR
E-722	POWER SCHEDULES SECOND FLOOR
E-723	POWER SCHEDULES SECOND FLOOR
E-724	POWER SCHEDULES SECOND FLOOR
E-730	POWER SCHEDULES THIRD
E-731	POWER SCHEDULES THIRD
E-732	POWER SCHEDULES THIRD
E-733	POWER SCHEDULES THIRD
E-734	POWER SCHEDULES THIRD
E-740	POWER SCHEDULES PENTHOUSE
E-741	POWER SCHEDULES PENTHOUSE
E-742	POWER SCHEDULES PENTHOUSE
E-743	POWER SCHEDULES PENTHOUSE
E-744	POWER SCHEDULES PENTHOUSE
E-801	SWITCHING AND DIMMING SCHEDULES GROUND FLOOR
E-802	SWITCHING AND DIMMING SCHEDULES GROUND FLOOR
E-803	SWITCHING AND DIMMING SCHEDULES GROUND FLOOR
E-804	SWITCHING AND DIMMING SCHEDULES GROUND FLOOR
E-810	SWITCHING AND DIMMING SCHEDULES FIRST FLOOR
E-811	SWITCHING AND DIMMING SCHEDULES FIRST FLOOR
E-812	SWITCHING AND DIMMING SCHEDULES FIRST FLOOR
E-813	SWITCHING AND DIMMING SCHEDULES FIRST FLOOR
E-820	SWITCHING AND DIMMING SCHEDULES SECOND FLOOR
E-821	SWITCHING AND DIMMING SCHEDULES SECOND FLOOR
E-822	SWITCHING AND DIMMING SCHEDULES SECOND FLOOR
E-823	SWITCHING AND DIMMING SCHEDULES SECOND FLOOR
E-830	SWITCHING AND DIMMING SCHEDULES THIRD FLOOR
E-831	SWITCHING AND DIMMING SCHEDULES THIRD FLOOR
E-832	SWITCHING AND DIMMING SCHEDULES THIRD FLOOR
E-840	SWITCHING AND DIMMING SCHEDULES PENTHOUSE FLOOR
E-850	SWITCHING AND DIMMING SCHEDULES LOBBY AND PUBLIC SPACE
E-851	SWITCHING AND DIMMING SCHEDULES LOBBY AND PUBLIC SPACE
E-852	SWITCHING AND DIMMING SCHEDULES LOBBY AND PUBLIC SPACE
FA-001	FIRE ALARM SYMBOLS, ABBREVIATIONS, NOTES
FA-100A	GROUND FLOOR - AREA A - FIRE ALARM/MNS
FA-100C	GROUND FLOOR - AREA C - FIRE ALARM/MNS
FA-101A	FIRST FLOOR - AREA A - FIRE ALARM/MNS
FA-101C	FIRST FLOOR - AREA C - FIRE ALARM/MNS
FA-102A	SECOND FLOOR - AREA A - FIRE ALARM/MNS
FA-103A	THIRD FLOOR - AREA A - FIRE ALARM/MNS
FA-104A	PENTHOUSE - AREA A - FIRE ALARM/MNS
FA-120B	GROUND FLOOR - AREA B - FIRE ALARM/MNS
FA-121B	FIRST FLOOR - AREA B - FIRE ALARM/MNS
FA-122B	SECOND FLOOR - AREA B - FIRE ALARM/MNS
FA-123B	THIRD FLOOR - AREA B - FIRE ALARM/MNS
FA-124B	PENTHOUSE - AREA B - FIRE ALARM/MNS
FA-501	FIRE ALARM RISER DIAGRAM

ELECTRICAL TELECOMMUNICATIONS:

ET-001	GENERAL NOTES AND SYMBOLS LEGEND - TELECOMMUNICATIONS
ET-120A	GROUND FLOOR - AREA A - TELECOMMUNICATIONS
ET-120B	GROUND FLOOR - AREA B - TELECOMMUNICATIONS
ET-120C	GROUND FLOOR - AREA C - TELECOMMUNICATIONS
ET-121A	FIRST FLOOR - AREA A - TELECOMMUNICATIONS
ET-121B	FIRST FLOOR - AREA B - TELECOMMUNICATIONS
ET-122A	SECOND FLOOR - AREA A - TELECOMMUNICATIONS
ET-122B	SECOND FLOOR - AREA B - TELECOMMUNICATIONS
ET-123A	THIRD FLOOR - AREA A - TELECOMMUNICATIONS
ET-123B	THIRD FLOOR - AREA B - TELECOMMUNICATIONS
ET-124A	PENTHOUSE - AREA A - TELECOMMUNICATIONS
ET-124B	PENTHOUSE - AREA B - TELECOMMUNICATIONS
ET-131C	FIRST FLOOR - AREA C - TELECOMMUNICATIONS
ET-132C	SECOND FLOOR - AREA C - TELECOMMUNICATIONS
ET-400	ENLARGED PLANS - TELECOMMUNICATIONS
ET-500	DETAILS - TELECOMMUNICATIONS
ET-501	DETAILS - TELECOMMUNICATIONS
ET-502	DETAILS - TELECOMMUNICATIONS
ET-600	RISER DIAGRAMS - TELECOMMUNICATIONS

SEALS & SIGNATURES

GENERAL

LICENSED ARCHITECT WARREN J. HENDRICKSON 001-010800 STATE OF ILLINOIS 3/7/11

Expiration Date: 11/30/2012

CIVIL

DAVID A. SHINDOLL 062-045118 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS 3-7-11

expires 11/30/11

SITE STEAM & CHILLED WATER

LICENSED PROFESSIONAL ENGINEER JEFFREY A. LEWIS 062-059632 STATE OF ILLINOIS 3/7/11

EXPIRATION DATE 11/30/2011

SITE STEAM STRUCTURAL

KEITH R. KIRCHNER 081-004630 REGISTERED STRUCTURAL ENGINEER STATE OF ILLINOIS 3/7/11

Expires 11/30/2012

LAND PLANNING

STATE OF ILLINOIS JEFFREY A. FAHS 157-001177 REGISTERED LANDSCAPE ARCHITECT 3/7/11

Expiration Date: August 31, 20 11

STRUCTURAL

STATE OF ILLINOIS MARTIN J. STERR 081-004658 LICENSED STRUCTURAL ENGINEER 3/7/11

EXP. 11-30- 2012

ARCHITECTURAL

LICENSED ARCHITECT WARREN J. HENDRICKSON 001-010800 STATE OF ILLINOIS 3/7/11

Expiration Date: 11/30/2012

INTERIORS

LICENSED ARCHITECT WARREN J. HENDRICKSON 001-010800 STATE OF ILLINOIS 3/7/11

Expiration Date: 11/30/2012

ARCHITECTURAL GRAPHICS

LICENSED ARCHITECT WARREN J. HENDRICKSON 001-010800 STATE OF ILLINOIS 3/7/11

Expiration Date: 11/30/2012

LABORATORY

LICENSED ARCHITECT WARREN J. HENDRICKSON 001-010800 STATE OF ILLINOIS 3/7/11

Expiration Date: 11/30/2012

MECHANICAL

THEODORE E. ZSIRAI 062-039142 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS 3/7/2011

Expires: 11/30/2011

PLUMBING

THEODORE E. ZSIRAI 062-039142 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS 3/7/2011

Expires: 11/30/2011

ELECTRICAL & TELECOMMUNICATIONS

LICENSED PROFESSIONAL ENGINEER TIMOTHY EDWARD KOCH LICENSE #062.060987 OMAHA NEBRASKA STATE OF ILLINOIS 3/7/2011

Exp 11/30/2011

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 10:49:36 AM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

G-001

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SHEET INDEX

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. G-001	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101- G-001		REV. NO.

ABBREVIATIONS

AB	ANCHOR BOLT, AUGER BORING
ABS	AIR BREAK SWITCH
AC	AIR CONDITIONING, ASBESTOS CEMENT, ACRES
A/C	ASPHALTIC CONCRETE
ACB	AIR CIRCUIT BREAKER
ACSR	ALUMINUM CONDUCTOR STEEL REINFORCED
ACST	ACOUSTIC
AD	AREA DRAIN, ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AL	ALUMINUM
AM	ACOUSTIC MATERIAL
AMP,A	AMPERE
AP	ACCESS PANEL APPROX APPROXIMATE
ARCH	ARCHITECTURAL
ARR	ARRESTOR
ASPH	ASPHALT
ATS	AUTOMATIC TRANSFER SWITCH
B	BASELINE
BO	BOARD
BEJ	BRICK EXPANSION JOINT
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
B	BOTTOM
BRG	BEARING
BR	BOTTOM REGISTER
BSMT	BASEMENT
BTFPTM	BEAT TO FIT, PAINT TO MATCH
C	CELSIUS
CAP	CAPACITY
CB	CIRCUIT BREAKER
CD	CEILING DIFFUSER
CEM	CEMENT
CG	CORNER GUARD
C&G	CURB AND GUTTER
CH	CHILLER
CI	CAST IRON, COURTYARD INLET
CIP	CAST IRON PIPE, CAST IN PLACE
CIR	CIRCULATING
CJ	CONTROL JOINT
CKT	CIRCUIT
CLG	CEILING
C	CENTERLINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CMU	CONCRETE MASONRY UNITS
CND,C	CONDUIT
CNDS	CONDENSATE
CO	CLEANOUT
CODP	CLEANOUT W/ DECK PLUG
COL	COLUMN
COMM	COMMUNICATION
CONC	CONCRETE
COND	CONDUCTOR
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONV	CONVERTER
COP,CU	COPPER
CP	NON-REINFORCED CONCRETE PIPE
CR	CHAIR, CRASH RAIL
CRS	STAINLESS STEEL
CS	CONCRETE SEALER/SURFACE
CSK	COUNTERSUNK
CT	CERAMIC TILE, CURRENT TRANSFORMER, COOLING TOWER
CTR	CENTER, COOLING TOWER RETURN
CTS	COOLING TOWER SUPPLY
CW	COLD WATER
CWB	CAPILLARY WATER BARRIER
CONTR	CONTRACTION
CPT	CARPET
D	DEPTH, DEEP, DEGREE OF CURVATURE
DB	DRY BULB, DECIBEL, DIRECT BURIAL
DD	DIVERSION DIKE
DET	DETAIL
DH	DRILL HOLE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DL	DEAD LOAD
DMPR	DAMPER
DN	DOWN
DO	DITTO
DP	DISTRIBUTION PANEL
DS	DOWNSPOUT, STORM DRAINAGE STRUCTURE
DW	DOMESTIC WATER
DWG	DRAWING
DWD	DRINKING WATER DISPENSER
E	EAST
EA	EACH
EAN	EXCEPT AS NOTED
EAT	ENTERING AIR TEMPERATURE
EC	EMPTY CONDUIT
EF	EACH FACE, EXHAUST FAN
EG	EXHAUST GRILLE
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
EMER	EMERGENCY
E/P	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXHAUST REGISTER
EVAP	EVAPORATIVE
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
EXP JT	EXPANSION JOINT
EXT	EXTERIOR
F	FIRE, FUSE, FILTER
FA	FIRE ALARM FABX FIRE ALARM BOX
FD	FLOOR DRAIN, FIRE DAMPER
FDN	FOUNDATION
FDR	FEEDER
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FFE	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIG	FIGURE
FIN	FINISH
FL	FLOOR, FLASHING, FLOW LINE
FLUOR	FLUORESCENT
4 WAY	FOUR WAY
FPH	FROST PROOF HYDRANT
FR	FRAME
FS	FULL SIZE
FTG	FOOTING
FJ	FELT JOINT
FW	FIRE WATER
FXTR	FIXTURE
G	GROUND, GAS LINE,GRAM
GA	GAGE
GAL	GALVANIZED
GC	GLAZED COATING
GFI	GROUND FAULT INTERRUPT
GFMU	GROUND FACE MASONRY UNIT
GL	GLASS
GR	GRADE
GRD	GROUND
GSU	GLAZED STRUCTURAL UNIT
GW	GROUND WATER
GWB	GYPSUM WALL BOARD GYP GYPSUM
HGT,H	HEIGHT, HUMIDIFIER
HB	HOSE BIBB
HC	HANDICAPPED
HD	HARD DRAWN
HDW	HARDWARE
HGSW	HORN GAP SWITCH
HID	HIGH INTENSITY DISCHARGE
HORIZ	HORIZONTAL
HP	HIGH POINT
HPS	HIGH PRESSURE SODIUM
HR	HOUR
HS	HIGH STRENGTH
HW	HOT WATER, HEADWALL
HWL	HIGH WATER LEVEL
HVY	HEAVY
HZ	HERTZ
ID	INSIDE DIAMETER, INSIDE DIMENSION
IE	INVERT ELEVATION
IMC	INTERMEDIATE METAL CONDUIT
INT	INTERIOR
INSUL	INSULATION, INSULATED
INV	INVERT
INTX	INTERSECTION
IP	INLET PROTECTION
IRBF	INDUSTRIAL RESIN BASE FLOORING
JB	JUNCTION BOX
JC	JANITOR CLOSET
JCT	JUNCTION
JT	JOINT
JST	JOIST
K	KILO
KIAC	THOUSAND AMP INTERRUPT CAPACITY
KCP	KEENE'S CEMENT PLASTER
KG	KILOGRAM
KN	KILONEWTON
KO	KNOCK OUT
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KW	KILOWATT
L/S	LITERS PER SECOND
L	LOUVER, LENGTH, LENGTH OF CURVE
LA	LIGHTNING ARRESTOR
LC	LEAD COVERED
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LIGHT
LAV	LAVATORY VERTICAL
LVC	LENGTH OF VERTICAL CURVE
M/S	METERS PER SECOND
M	METER, MEGA
MACH	MACHINE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
ECH	MECHANICAL
MET	METAL
MH	MANHOLE
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MM,mm	MILLIMETER
MO	MOTOR OPERATED, MASONRY OPENING, MIDDLE ORDINATE
MP	MEDIUM PRESSURE
MTD	MOUNTED
MTG	MOUNTING
MMP	MEMBRANE WATERPROOFING
MULL	MULLION
N	NORTH
NA	NOT APPLICABLE
NC	NON CORROSIVE
NE	NORTHEAST
NDC	NOSE DOWN CURB
NEC	NATIONAL ELECTRIC CODE
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NTS	NOT TO SCALE
NW	NORTHWEST
OA	OUTSIDE AIR
OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OD	OUTSIDE DIAMETER OPNG OPENING
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OPP	OPPOSITE
OSD	OPEN SITE DRAIN
OVHD,OH	OVERHEAD
Pa	PASCALES
P	PIPE, POLE
PB	PULL BOX
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PJF	PREFORMED JOINT FILLER
PL	PLATE
PLAS	PLASTER
PLNJ	PAPER AND LEAD NEOPRENE JACKET
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT
PRELIM	PRELIMINARY
PRESS	PRESSURE
PRIM	PRIMARY
PRV	PRESSURE RELIEF VALVE
PS	PULL SWITCH
PT	POINT, POINT OF TANGENT
PTN	PARTITION
PVC	POINT OF VERTICAL CURVE, POLY VINYL CHLORIDE .
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT PVMT PAVEMENT
QT	QUARRY TILE
R	RADIUS, RISER, RUBBER SHEATH
RA	RETURN AIR
RAD	RADIUS
RB	RESILIENT VINYL BASE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN, ROAD
RECP	RECEPTACLE
RED	REDUCING
REINF	REINFORCEMENT
REG	REGULATOR, REGISTER
REQD	REQUIRED
REV	REVISION
RF	ROOF, RETURN FAN
RHC	REHEAT COIL
RI	RUBBER INSULATED
RGS	RIGID GALVANIZED STEEL
RL	RAIN LEADER
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RVT	RESILIENT VINYL TILE
S	SECOND, SOUTH, SANITARY, SEWER, STRUCTURE
SAN	SANITARY SEWER
SATC	SUSPENDED ACOUSTICAL TILE CEILING
SCH	SCHEDULE
SD	SPLITTER DAMPER, STORM DRAIN
SE	SOUTHEAST
SECT	SECTION SERV SERVICE SF SILT FENCE
SG	SUPPLY GRILLE
SH	SHEET
SIM	SIMILAR
1 PH	SINGLE PHASE
SKCP	SUSPENDED KEENE'S CEMENT PLASTER
SL	SLOPE
SMH	SANITARY MODULE
SP	STATIC PRESSURE, SINGLE POLE
SPC	SUSPENDED PLASTER CEILING
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
SQ	SQUARE
SR	SUPPLY REGISTER
SS	SANITARY SEWER
ST	STEAM, SINGLE THROW, STREET
STA	STATION STD STANDARD
STL	STEEL SUP SUPPORT
SUSP	SUSPENDED
SV	SHEET VINYL
SW	SWITCH, SIDEWALK
SWBD	SWITCHBOARD SWGR SWITCHGEAR
T	TILE,TOP,TANGENT
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
TERM	TERMINAL
3/C	THREE CONDUCTOR
3/P	THREE POLE
3 WAY	THREE WAY
TH	TOTAL HEAD (PUMPS)
THRSLD	THRESHOLD
TO	TOP OF
TP	TEST PIT
TR	TOP REGISTER
TRANS	TRANSITION
TS	TOP OF STEEL, TOP OF STONE, TOP OF SLAB
TV	TELEVISION
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UCR	UNDER COUNTER REFRIGERATOR
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UH	UNIT HEATER
V	VENT,VOLT,VALVE
VA	VOLT AMPRE
VAC	VACUUM
VCT	VINYL COMPOSITION TILE
V ASB	VINYL ASBESTOS
VC	VARNISH CAMBRIC, VITRIFIED CLAY
VCP	VITRIFIED CLAY PIPE
VENT	VENTILATING
VERT	VERTICAL
VEST	VESTIBULE
VPI	VERTICAL POINT OF INTERSECTION
VPOC	VERTICAL POINT OF CURVE
VPOT	VERTICAL POINT OF TANGENT
VS	VENT STACK
VTR	VENT THRU ROOF
VWC	VINYL WALL COVERING
W	WIDTH,WASTE,WATER,WATT,WEST
W	WIRE, WATER LINE STRUCTURE
WA	WATT
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WD	WIDTH, WINDOW DIMENSION
WOM	WALK OFF MATT
WL	WATER LEVEL WP WATERPROOF, WEATHERPROOF
WS	WASTE STACK, WATER SURFACE, WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER
X-STR	UNIT HEATER
2:1 SL	2 HORIZONTAL TO 1 VERTICAL SLOPE
1 ON 2	1 VERTICAL ON 2 HORIZONTAL SLOPE
△	DEFLECTION ANGLE
∅	DIAMETER, PHASE

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4"X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

MATERIALS LEGEND

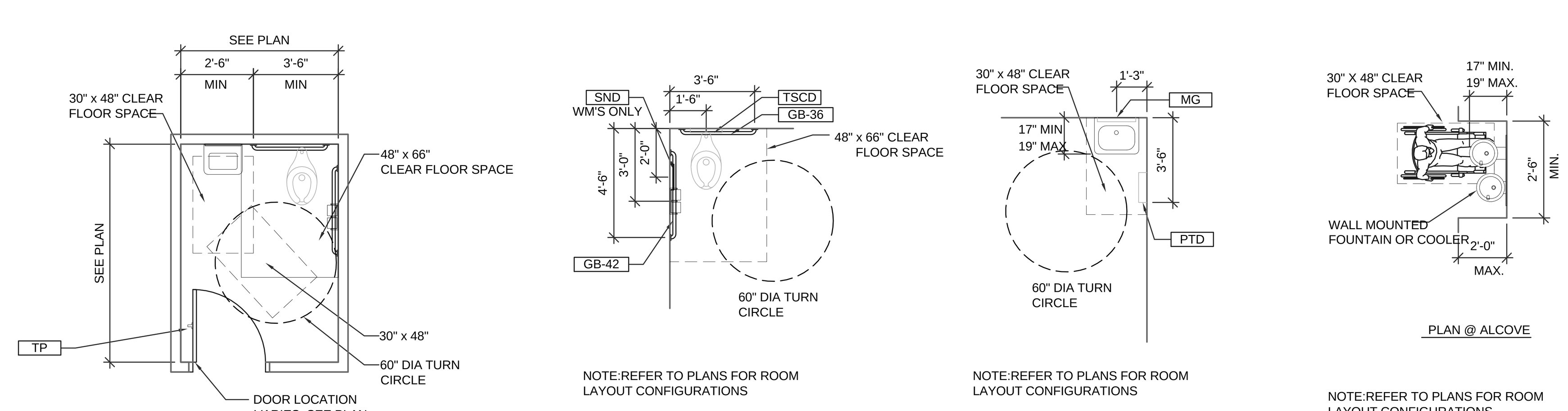
- CONCRETE (SECTION)
- GRANULAR FILL
- CONCRETE MASONRY UNITS
- BRICK
- RIGID INSULATION (SECTION)
- ACOUSTIC/THERMAL INSULATION (SECTION)
- STUD WALL (PLAN & SECTION)
- EXISTING WALL TO REMAIN (PLAN & SECTION)
- DEMO WALL (PLAN & SECTION)
- STEEL (SECTION)
- ALUMINUM (SECTION)
- WOOD - FINISH (SECTION)
- DIMENSIONAL LUMBER CONTINUOUS (SECTION)
- DIMENSIONAL LUMBER BLOCKING (SECTION)
- LUMBER - FINISH (SECTION)
- EARTHWORK (SECTION)

LIFE SAFETY LEGEND

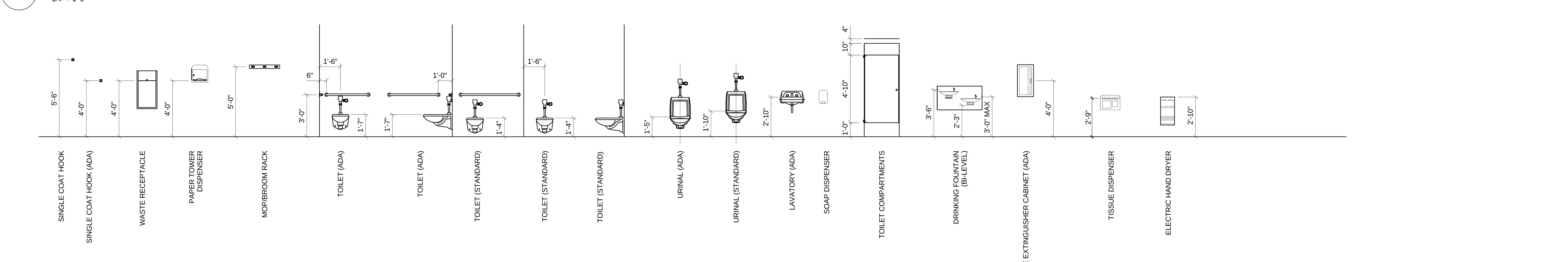
- 1/2 HOUR FIRE
- 1/2 HOUR FIRE/SMOKE BARRIER
- 3/4 HOUR FIRE
- 3/4 HOUR FIRE/ SMOKE BARRIER
- 1 HOUR FIRE
- 1 HOUR FIRE/ SMOKE BARRIER
- 2 HOUR FIRE
- 2 HOUR FIRE/ SMOKE BARRIER
- 3 HOUR FIRE
- 3 HOUR FIRE/ SMOKE BARRIER
- 4 HOUR FIRE
- 4 HOUR FIRE/ SMOKE BARRIER
- SMOKE BARRIER
- SMOKE PARTITION
- E — HORIZONTAL EXIT, EXTERIOR EXIT OR EXIT STAIR
- FEC — FIRE EXTINGUISHER CABINET

ARCHITECTURAL SYMBOLS

- COLUMN GRID LINE (EXISTING)
- COLUMN GRID LINE (NEW)
- CENTER LINE
- 7'-0" DIMENSION LINE TO FACE OF STUD, FACE OF CONCRETE, COLUMN LINE, OR AS NOTED.
- 7'-0" DIMENSION TO FINISH FACE, COUNTERTOP EDGE, CLEAR, OR AS NOTED.
- WALL LEGEND: EXISTING TO REMAIN; EXISTING TO BE REMOVED; EXISTING TO REMAIN; NEW CONSTRUCTION
- ROOM TAG (ROOM NAME 101 150 SF): ROOM NAME; ROOM NUMBER; AREA OR VOLUME
- DOOR NUMBER SYMBOL AND MINIMUM CLEARANCES (18" MIN, 1A101, 12" MIN, 4" MIN)
- WALL TYPE TAG (A1)
- FRAME TYPE - EXTERIOR & LOUVER (XX)
- FRAME TYPE - INTERIOR (XX)
- CURTAIN PANEL TYPE (1T)
- DRAWING REVISION (1)
- KEYNOTE (?)
- NORTH ARROW
- LEVEL DATUM (Name Elevation): LEVEL NAME; LEVEL ELEVATION
- DETAIL - SECTION (1 / A101, SIM): POSITION ON SHEET; SHEET NUMBER
- DETAIL - PLAN (1 / A101, SIM): POSITION ON SHEET; SHEET NUMBER
- BUILDING SECTION (X / X-XXX, SIM): POSITION ON SHEET; SHEET NUMBER
- WALL SECTION (X / X-XXX, SIM): POSITION ON SHEET; SHEET NUMBER
- EXTERIOR ELEVATION (X / X-XXX): POSITION ON SHEET; SHEET NUMBER
- INTERIOR ELEVATION (X / X-XXX): POSITION ON SHEET; SHEET NUMBER
- VIEW TITLE (A-1 View Name 1/8" = 1'-0"): DRAWING NUMBER; DRAWING SCALE
- VIEW TITLE W/ REF. (A-1 View Name 1/8" = 1'-0", R101 A101): DRAWING NUMBER; DRAWING SCALE; SHEET NUMBER REFERENCING SHEET NUMBER
- GRAPHIC SCALE (0, 4'-0", 8'-0", 16'-0")



B2 TOILET ADA CLEARANCES
1/4" = 1'-0"



A2 TOILET ACCESSORY MOUNTING HEIGHTS
1/4" = 1'-0"

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 10:49:41 AM

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

G-002

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
ABBREVIATIONS, GENERAL NOTES, SYMBOL LEGENDS AND MOUNTING HEIGHTS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. G-002	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- G-002
REV. NO.

CODE SUMMARY

Applicable Codes	
Building Code:	International Building Code (IBC) - 2009 Edition
Life Safety Code:	NFPA - Life Safety Code - 2009 Edition
Fire Code:	International Fire Code - 2009 Edition
Mechanical Code:	International Mechanical Code - 2009 Edition
Plumbing Code:	Illinois Plumbing Code - 2004 Edition
Electrical Code:	NFPA 70: National Electrical Code - 2008 Edition
Energy Code:	ASHRAE 90.1 - 2004 Edition (Plus Addenda) International Energy Conservation Code - 2009 Edition
Accessibility Code:	ICC / ANSI A117.1 - 2003 Edition Illinois Accessibility Code - 1997 Edition ADA Accessibility Guidelines - 2004 Edition (With 2007 Supplements)
Occupancy Classification:	Business Group B {per IBC 304.1} General Industrial - Ordinary Hazard {per NFPA 101 40.1.4.1.1; NFPA 101 A.3.3.178.8; NFPA 101 8.7.4.1}
Lab Unit Fire Hazard Classification:	Class C {NFPA 45 4.2.1.1}
Construction Type:	I-B {per IBC Table 601} II (222) {per NFPA 220}
Structural Fire Ratings {per IBC Table 601}:	
Primary Structural Frame =	2 hours (one hour when supporting a roof only)
Exterior Bearing Walls =	2 hours
Interior Bearing Walls =	2 hours (one hour when supporting a roof only)
Floor Construction & = Secondary Members	2 hours
Roof Construction & = Secondary Members	1 hour

Since Building 223 is not of Type IB construction, ESB will be constructed as a separate building rather than an addition to Building 223. Therefore, a 3-hour fire wall will be constructed at the interface between the two buildings.

Fire Rated Separations:	
Building 223 to ESB =	3 hours {per IBC 706}
H Occupancy Storage =	2 hours {per IBC Table 508.4}
Between Control Areas Walls=	1 hour {per IBC Table 414.2.2}
Floors=	2 hours {per IBC Table 414.2.4}
Fire Rated Enclosures:	
Exit Stairs =	2 hours {per IBC 708.4}
Elevator Shafts =	2 hours {per IBC 708.4}
Duct Shafts =	2 hours {per IBC 708.4}
Hazardous Storage =	2 hours {per IBC Table 508.4}
Elevator Equipment =	2 hours {per IBC 708.4; IBC 3006.4}
Electrical Rooms D076 & D077=	2 hours
Assembly =	1 hour {per IBC Table 508.4}
Mechanical (HP Steam) =	1 hour {per IBC Table 508.2.5}
Atrium =	1 hour {per IBC 404.6} ; 2 hours provided
Laboratories =	0 hours {per NFPA 45 Table 5.1.1}
Corridors =	0 hours {per IBC Table 1018.1}
Allowable Building Heights and Areas:	
Building Height (feet) =	180 feet max {per IBC Table 503}
Building Height (stories) =	12 stories max. {per IBC Table 503}
Building Area (per floor) =	Unlimited
Actual Building Height and Area:	
Building Height (feet) =	92 ft (to penthouse roof from service drive)
Building Height (stories) =	5 stories (including penthouse floor level)
Building Area (per floor) =	Approximately 35,000 sf on largest floor level (Ground Floor)
Ht of Highest Floor Level =	68 feet from lowest level of fire department vehicle access to highest floor elevation. Less than 75 feet, therefore, not a high rise building. {per IBC 202}
Penthouse Floor Area=	Exceeds one third of area of floor level below. Therefore, is a floor level. {per IBC 1509.2.2}
Egress Distance:	
Travel Distance =	250 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Common Path of Travel =	100 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Dead End =	50 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Occupant Loads:	
Ground Floor =	303 Occupants
First Floor =	309 Occupants (839 Occupants Total w/ Alternate 9)
Second Floor =	321 Occupants (348 Occupants Total w/ Alternate 9)
Third Floor =	359 Occupants
Penthouse Floor =	54 Occuparts
Fire Suppression System:	Building is fully sprinklered.
Fire Alarm System:	Building has a monitored fire alarm system and automatic detection systems.
Standpipe System:	Building has an automatic wet standpipe system with hose valves located on each floor level inside of each stair tower and at the entrance to the roof.
Hazardous Materials:	Argonne will control hazardous material types and quantities that are used and stored within the building to maintain compliance with NFPA 45 limitations for a class C laboratory and with IBC limitations for established control areas.
Hazardous Storage Rooms:	Group H-3 Occupancy spaces.
Atrium:	Project includes a central atrium space that connects portions of the First, Second, and Third Floor levels. Therefore, a smoke evacuation system will be provided for the atrium in compliance with IBC 909 and NFPA 92B. The atrium smoke evacuation system will activate upon detection of smoke within the atrium space. Smoke exhaust fans, located at the penthouse mezzanine level will pull air and smoke from the atrium and exhaust it to the exterior. Operable awning windows in the atrium curtain wall systems will provide make-up air for the system. Automatic operators on these windows will be activated simultaneously with the startup of the smoke exhaust fans.

FIREPROOFING NOTES:

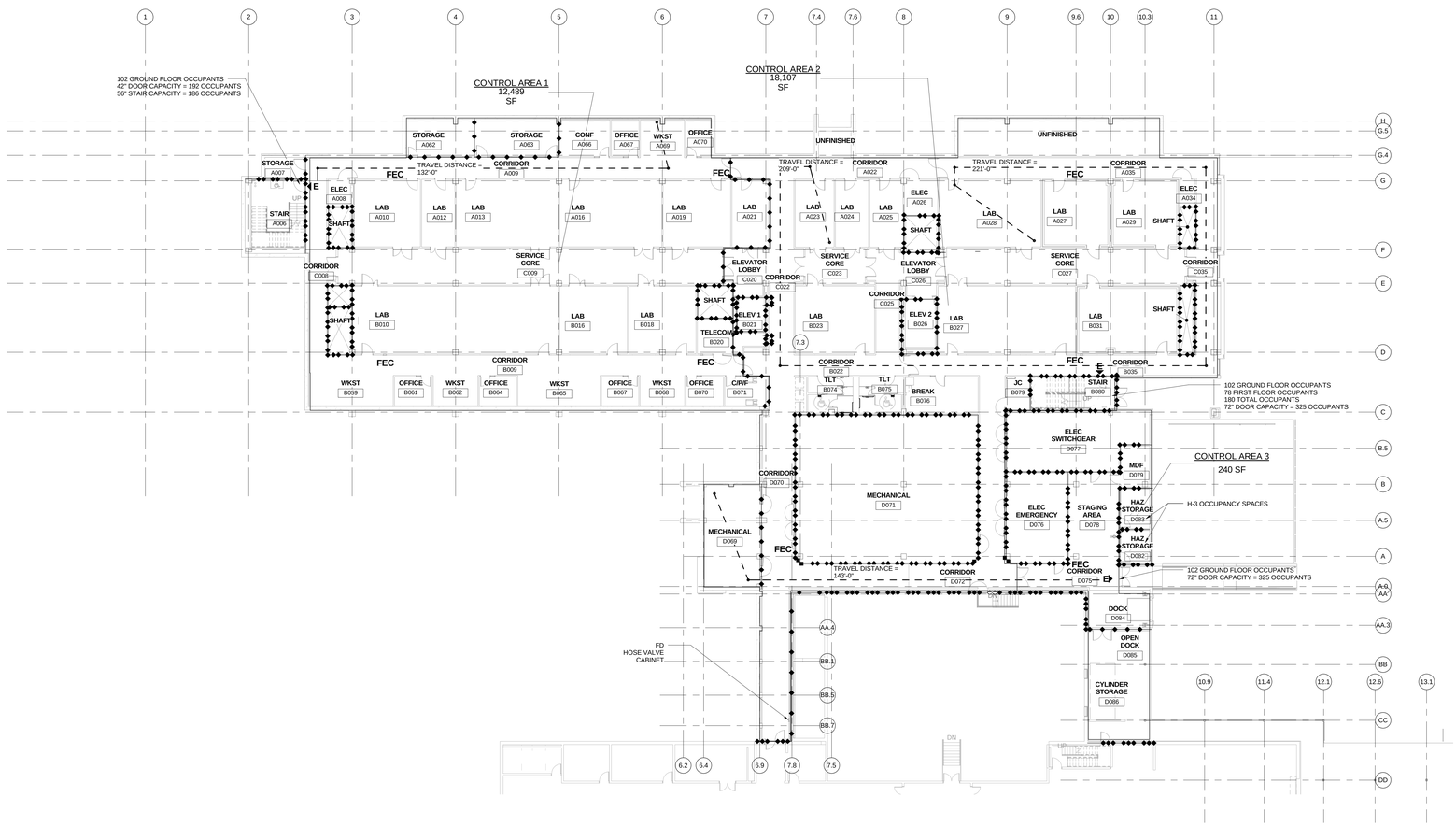
Provide fireproofing of structural steel members including, but not necessarily limited to, the following:

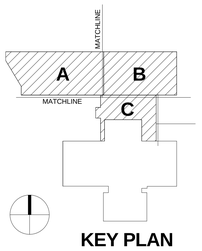
First Floor Framing Plans:	One hour exterior intumescent fireproofing of exposed exterior canopy columns - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed primary and secondary framing at exterior canopy roofs - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed metal roof decking - refer to Section 07 81 24.
Second Floor Framing Plans:	One hour interior intumescent fireproofing of exposed interior columns in Corridor D170 (supporting roof only) - refer to Section 07 81 23. One hour exterior intumescent fireproofing of exposed and concealed columns (supporting steel trellis over west Entry Vestibule D169) - refer to Section 07 81 24. One hour standard density cementitious fireproofing of concealed columns, primary roof beams, and secondary roof beams in Corridor D170 - refer to Section 07 81 16.
Penthouse/Main Roof Framing Plans:	Two hour cementitious fireproofing of concealed columns, primary floor framing, and secondary floor framing at mechanical mezzanine - refer to Section 07 81 16. One hour medium density cementitious fireproofing of exposed columns, primary roof framing, lateral bracing, and secondary roof framing in Stair B480 - refer to Section 07 81 16.
Penthouse Roof Framing Plan:	One hour medium density cementitious fireproofing of semi-exposed columns (supporting roof only), lateral bracing, and primary roof framing in Mechanical Penthouse - refer to Section 07 81 16. One hour standard density cementitious fireproofing of secondary roof framing in Mechanical Penthouse located within 20 feet of the Mechanical Mezzanine floor or Elevator Equipment Room floor elevation only - refer to Section 07 81 16. One hour high density cementitious fireproofing of columns (supporting roof only) and lateral bracing located within the plenum spaces at the Penthouse floor level - refer to Section 07 81 16.

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

G-100





KEY PLAN

LIFE SAFETY NOTES:

A. ALL FLOORS WILL BE PROVIDED WITH FIRE EXTINGUISHER CABINETS THROUGHOUT CORRIDORS AS DENOTED BY "FEC".

B. STANDPIPES WILL BE LOCATED AT EACH FLOOR LEVEL OF THE STAIRS AS REQUIRED BY ARGONNE FIRE DEPARTMENT.

LIFE SAFETY LEGEND

- 1/2 HOUR FIRE
- 1/2 HOUR FIRE/SMOKE BARRIER
- 3/4 HOUR FIRE
- 3/4 HOUR FIRE/ SMOKE BARRIER
- 1 HOUR FIRE
- 1 HOUR FIRE/ SMOKE BARRIER
- 2 HOUR FIRE
- 2 HOUR FIRE/ SMOKE BARRIER
- 3 HOUR FIRE
- 3 HOUR FIRE/ SMOKE BARRIER
- 4 HOUR FIRE
- 4 HOUR FIRE/ SMOKE BARRIER
- SMOKE BARRIER
- SMOKE PARTITION
- E — HORIZONTAL EXIT, EXTERIOR EXIT OR EXIT STAIR
- FEC — FIRE EXTINGUISHER CABINET

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
GROUND FLOOR - LIFE SAFETY PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. G-100	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- G-100** REV. NO.

A1 GROUND FLOOR - LIFE SAFETY
1/16" = 1'-0"

C:\PCWTO\2182-ALCENTRAL_dm\fly.rvt
7/6/2011 10:49:48 AM

CODE SUMMARY

Applicable Codes	
Building Code:	International Building Code (IBC) - 2009 Edition
Life Safety Code:	NFPA - Life Safety Code - 2009 Edition
Fire Code:	International Fire Code - 2009 Edition
Mechanical Code:	International Mechanical Code - 2009 Edition
Plumbing Code:	Illinois Plumbing Code - 2004 Edition
Electrical Code:	NFPA 70: National Electrical Code - 2008 Edition
Energy Code:	ASHRAE 90.1 - 2004 Edition (Plus Addenda) International Energy Conservation Code - 2009 Edition
Accessibility Code:	ICC / ANSI A117.1 - 2003 Edition Illinois Accessibility Code - 1997 Edition ADA Accessibility Guidelines - 2004 Edition (With 2007 Supplements)
Occupancy Classification:	Business Group B {per IBC 304.1} General Industrial - Ordinary Hazard {per NFPA 101 40.1.4.1.1; NFPA 101 A.3.3.178.8; NFPA 101 8.7.4.1}
Lab Unit Fire Hazard Classification:	Class C {NFPA 45 4.2.1.1}
Construction Type:	I-B {per IBC Table 601} II (222) {per NFPA 220}
Structural Fire Ratings {per IBC Table 601}:	
Primary Structural Frame =	2 hours (one hour when supporting a roof only)
Exterior Bearing Walls =	2 hours
Interior Bearing Walls =	2 hours (one hour when supporting a roof only)
Floor Construction & = Secondary Members	2 hours
Roof Construction & = Secondary Members	1 hour

Since Building 223 is not of Type IB construction, ESB will be constructed as a separate building rather than an addition to Building 223. Therefore, a 3-hour fire wall will be constructed at the interface between the two buildings.

Fire Rated Separations:	
Building 223 to ESB =	3 hours {per IBC 706}
H Occupancy Storage =	2 hours {per IBC Table 508.4}
Between Control Areas	
Walls=	1 hour {per IBC Table 414.2.2}
Floors=	2 hours {per IBC Table 414.2.4}
Fire Rated Enclosures:	
Exit Stairs =	2 hours {per IBC 708.4}
Elevator Shafts =	2 hours {per IBC 708.4}
Duct Shafts =	2 hours {per IBC 708.4}
Hazardous Storage =	2 hours {per IBC Table 508.4}
Elevator Equipment =	2 hours {per IBC 708.4; IBC 3006.4}
Electrical Rooms D076 & D077=	2 hours
Assembly =	1 hour {per IBC Table 508.4}
Mechanical (HP Steam) =	1 hour {per IBC Table 508.2.5}
Atrium =	1 hour {per IBC 404.6}, 2 hours provided
Laboratories =	0 hours {per NFPA 45 Table 5.1.1}
Corridors =	0 hours {per IBC Table 1018.1}
Allowable Building Heights and Areas:	
Building Height (feet) =	180 feet max {per IBC Table 503}
Building Height (stories) =	12 stories max. {per IBC Table 503}
Building Area (per floor) =	Unlimited
Actual Building Height and Area:	
Building Height (feet) =	92 ft (to penthouse roof from service drive)
Building Height (stories) =	5 stories (including penthouse floor level)
Building Area (per floor) =	Approximately 35,000 sf on largest floor level (Ground Floor)
Ht of Highest Floor Level =	68 feet from lowest level of fire department vehicle access to highest floor elevation. Less than 75 feet, therefore, not a high rise building. {per IBC 202}
Penthouse Floor Area=	Exceeds one third of area of floor level below. Therefore, is a floor level. {per IBC 1509.2.2}
Egress Distance:	
Travel Distance =	250 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Common Path of Travel =	100 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Dead End =	50 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Occupant Loads:	
Ground Floor =	303 Occupants
First Floor =	309 Occupants (839 Occupants Total w/ Alternate 9)
Second Floor =	321 Occupants (348 Occupants Total w/ Alternate 9)
Third Floor =	359 Occupants
Penthouse Floor =	54 Occupants
Fire Suppression System:	Building is fully sprinklered.
Fire Alarm System:	Building has a monitored fire alarm system and automatic detection systems.
Standpipe System:	Building has an automatic wet standpipe system with hose valves located on each floor level inside of each stair tower and at the entrance to the roof.
Hazardous Materials:	Argonne will control hazardous material types and quantities that are used and stored within the building to maintain compliance with NFPA 45 limitations for a class C laboratory and with IBC limitations for established control areas.
Hazardous Storage Rooms:	Group H-3 Occupancy spaces.
Atrium:	Project includes a central atrium space that connects portions of the First, Second, and Third Floor levels. Therefore, a smoke evacuation system will be provided for the atrium in compliance with IBC 909 and NFPA 92B. The atrium smoke evacuation system will activate upon detection of smoke within the atrium space. Smoke exhaust fans, located at the penthouse mezzanine level will pull air and smoke from the atrium and exhaust it to the exterior. Operable awning windows in the atrium curtain wall systems will provide make-up air for the system. Automatic operators on these windows will be activated simultaneously with the startup of the smoke exhaust fans.

FIREPROOFING NOTES:

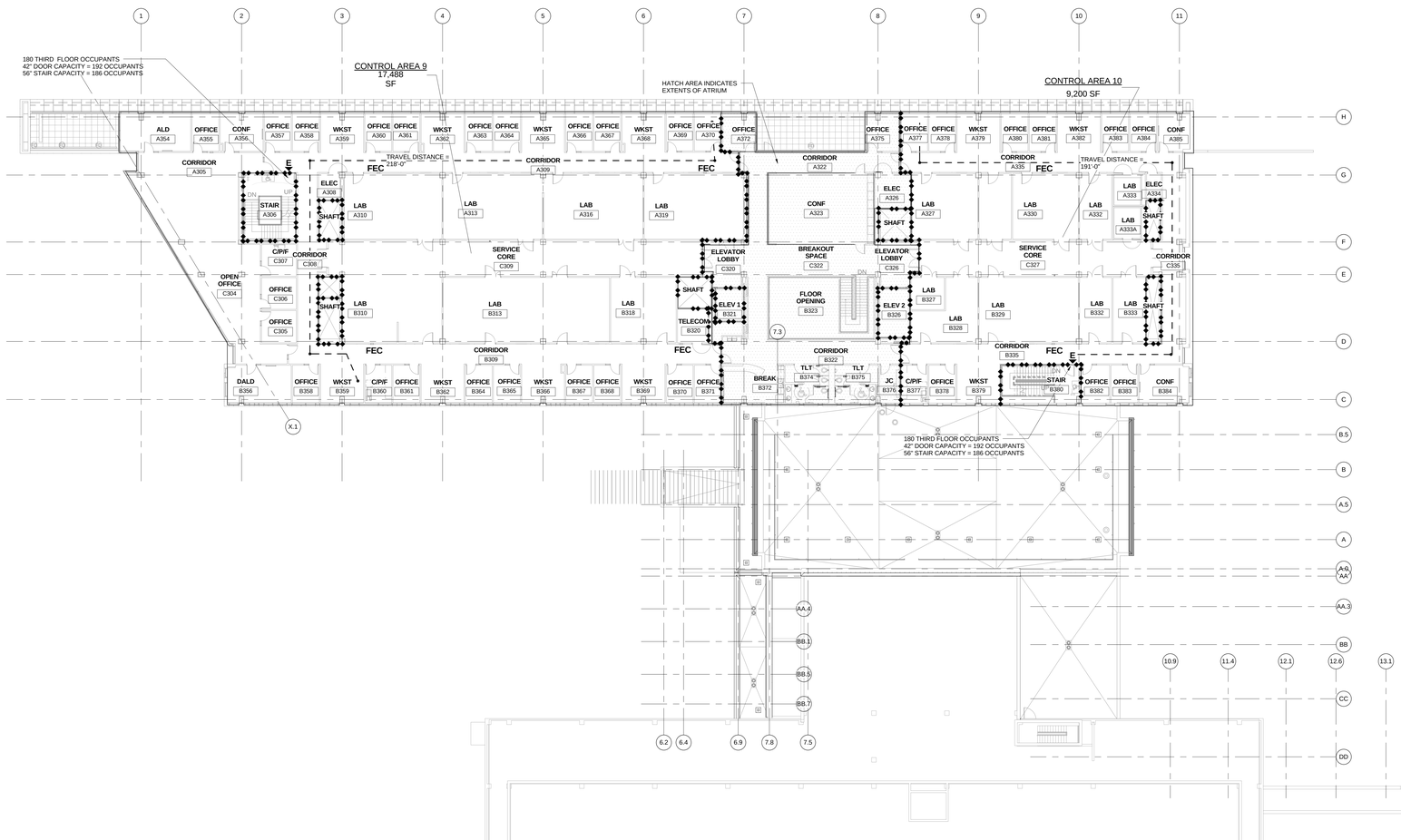
Provide fireproofing of structural steel members including, but not necessarily limited to, the following:

First Floor Framing Plans:	One hour exterior intumescent fireproofing of exposed exterior canopy columns - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed primary and secondary framing at exterior canopy roofs - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed metal roof decking - refer to Section 07 81 24.
Second Floor Framing Plans:	One hour interior intumescent fireproofing of exposed interior columns in Corridor D170 (supporting roof only) - refer to Section 07 81 23. One hour exterior intumescent fireproofing of exposed and concealed columns (supporting steel trellis over west Entry Vestibule D169) - refer to Section 07 81 24. One hour standard density cementitious fireproofing of concealed columns, primary roof beams, and secondary roof beams in Corridor D170 - refer to Section 07 81 16.
Penthouse/Main Roof Framing Plans:	Two hour cementitious fireproofing of concealed columns, primary floor framing, and secondary floor framing at mechanical mezzanine - refer to Section 07 81 16. One hour medium density cementitious fireproofing of exposed columns, primary roof framing, lateral bracing, and secondary roof framing in Stair B480 - refer to Section 07 81 16.
Penthouse Roof Framing Plan:	One hour medium density cementitious fireproofing of semi-exposed columns (supporting roof only), lateral bracing, and primary roof framing in Mechanical Penthouse - refer to Section 07 81 16. One hour standard density cementitious fireproofing of secondary roof framing in Mechanical Penthouse located within 20 feet of the Mechanical Mezzanine floor or Elevator Equipment Room floor elevation only - refer to Section 07 81 16. One hour high density cementitious fireproofing of columns (supporting roof only) and lateral bracing located within the plenum spaces at the Penthouse floor level - refer to Section 07 81 16.

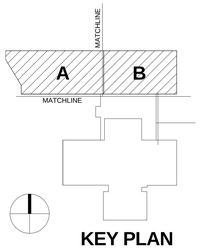
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

G-103



A1 THIRD - LIFE SAFETY
1/16" = 1'-0"



KEY PLAN

LIFE SAFETY NOTES:

A. ALL FLOORS WILL BE PROVIDED WITH FIRE EXTINGUISHER CABINETS THROUGHOUT CORRIDORS AS DENOTED BY "FEC".

B. STANDPIPES WILL BE LOCATED AT EACH FLOOR LEVEL OF THE STAIRS AS REQUIRED BY ARGONNE FIRE DEPARTMENT.

LIFE SAFETY LEGEND

	1/2 HOUR FIRE
	1/2 HOUR FIRE/SMOKE BARRIER
	3/4 HOUR FIRE
	3/4 HOUR FIRE/ SMOKE BARRIER
	1 HOUR FIRE
	1 HOUR FIRE/ SMOKE BARRIER
	2 HOUR FIRE
	2 HOUR FIRE/ SMOKE BARRIER
	3 HOUR FIRE
	3 HOUR FIRE/ SMOKE BARRIER
	4 HOUR FIRE
	4 HOUR FIRE/ SMOKE BARRIER
	SMOKE BARRIER
	SMOKE PARTITION
E	HORIZONTAL EXIT, EXTERIOR EXIT OR EXIT STAIR
FEC	FIRE EXTINGUISHER CABINET

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
THIRD FLOOR - LIFE SAFETY PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. G-103	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- G-103 REV. NO.

C:\PKT\002182-A-CENTRAL_alt-dg.rvt
7/8/2011 10:49:59 AM

CODE SUMMARY

Applicable Codes	
Building Code:	International Building Code (IBC) - 2009 Edition
Life Safety Code:	NFPA - Life Safety Code - 2009 Edition
Fire Code:	International Fire Code - 2009 Edition
Mechanical Code:	International Mechanical Code - 2009 Edition
Plumbing Code:	Illinois Plumbing Code - 2004 Edition
Electrical Code:	NFPA 70: National Electrical Code - 2008 Edition
Energy Code:	ASHRAE 90.1 - 2004 Edition (Plus Addenda) International Energy Conservation Code - 2009 Edition
Accessibility Code:	ICC / ANSI A117.1 - 2003 Edition Illinois Accessibility Code - 1997 Edition ADA Accessibility Guidelines - 2004 Edition (With 2007 Supplements)
Occupancy Classification:	Business Group B {per IBC 304.1} General Industrial - Ordinary Hazard {per NFPA 101 40.1.4.1.1; NFPA 101 A.3.3.178.8; NFPA 101 8.7.4.1}
Lab Unit Fire Hazard Classification:	Class C {NFPA 45 4.2.1.1}
Construction Type:	I-B {per IBC Table 601} II (222) {per NFPA 220}
Structural Fire Ratings {per IBC Table 601}:	
Primary Structural Frame =	2 hours (one hour when supporting a roof only)
Exterior Bearing Walls =	2 hours
Interior Bearing Walls =	2 hours (one hour when supporting a roof only)
Floor Construction & = Secondary Members	2 hours
Roof Construction & = Secondary Members	1 hour

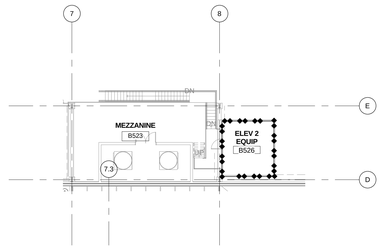
Since Building 223 is not of Type IB construction, ESB will be constructed as a separate building rather than an addition to Building 223. Therefore, a 3-hour fire wall will be constructed at the interface between the two buildings.

Fire Rated Separations:	
Building 223 to ESB =	3 hours {per IBC 706}
H Occupancy Storage =	2 hours {per IBC Table 508.4}
Between Control Areas	
Walls=	1 hour {per IBC Table 414.2.2}
Floors=	2 hours {per IBC Table 414.2.4}
Fire Rated Enclosures:	
Exit Stairs =	2 hours {per IBC 708.4}
Elevator Shafts =	2 hours {per IBC 708.4}
Duct Shafts =	2 hours {per IBC 708.4}
Hazardous Storage =	2 hours {per IBC Table 508.4}
Elevator Equipment =	2 hours {per IBC 708.4; IBC 3006.4}
Electrical Rooms D076 & D077=	2 hours
Assembly =	1 hour {per IBC Table 508.4}
Mechanical (HP Steam) =	1 hour {per IBC Table 508.2.5}
Atrium =	1 hour {per IBC 404.6} , 2 hours provided
Laboratories =	0 hours {per NFPA 45 Table 5.1.1}
Corridors =	0 hours {per IBC Table 1018.1}
Allowable Building Heights and Areas:	
Building Height (feet) =	180 feet max {per IBC Table 503}
Building Height (stories) =	12 stories max. {per IBC Table 503}
Building Area (per floor) =	Unlimited
Actual Building Height and Area:	
Building Height (feet) =	92 ft (to penthouse roof from service drive)
Building Height (stories) =	5 stories (including penthouse floor level)
Building Area (per floor) =	Approximately 35,000 sf on largest floor level (Ground Floor)
Ht of Highest Floor Level =	68 feet from lowest level of fire department vehicle access to highest floor elevation. Less than 75 feet, therefore, not a high rise building. {per IBC 202}
Penthouse Floor Area=	Exceeds one third of area of floor level below. Therefore, is a floor level. {per IBC 1509.2.2}
Egress Distance:	
Travel Distance =	250 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Common Path of Travel =	100 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Dead End =	50 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Occupant Loads:	
Ground Floor =	303 Occupants
First Floor =	309 Occupants (839 Occuparnts Total w/ Alternate 9)
Second Floor =	321 Occupants (348 Occuparnts Total w/ Alternate 9)
Third Floor =	359 Occupants
Penthouse Floor =	54 Occupants
Fire Suppression System:	Building is fully sprinklered.
Fire Alarm System:	Building has a monitored fire alarm system and automatic detection systems.
Standpipe System:	Building has an automatic wet standpipe system with hose valves located on each floor level inside of each stair tower and at the entrance to the roof.
Hazardous Materials:	Argonne will control hazardous material types and quantities that are used and stored within the building to maintain compliance with NFPA 45 limitations for a class C laboratory and with IBC limitations for established control areas.
Hazardous Storage Rooms:	Group H-3 Occupancy spaces.
Atrium:	Project includes a central atrium space that connects portions of the First, Second, and Third Floor levels. Therefore, a smoke evacuation system will be provided for the atrium in compliance with IBC 909 and NFPA 92B. The atrium smoke evacuation system will activate upon detection of smoke within the atrium space. Smoke exhaust fans, located at the penthouse mezzanine level will pull air and smoke from the atrium and exhaust it to the exterior. Operable awning windows in the atrium curtain wall systems will provide make-up air for the system. Automatic operators on these windows will be activated simultaneously with the startup of the smoke exhaust fans.

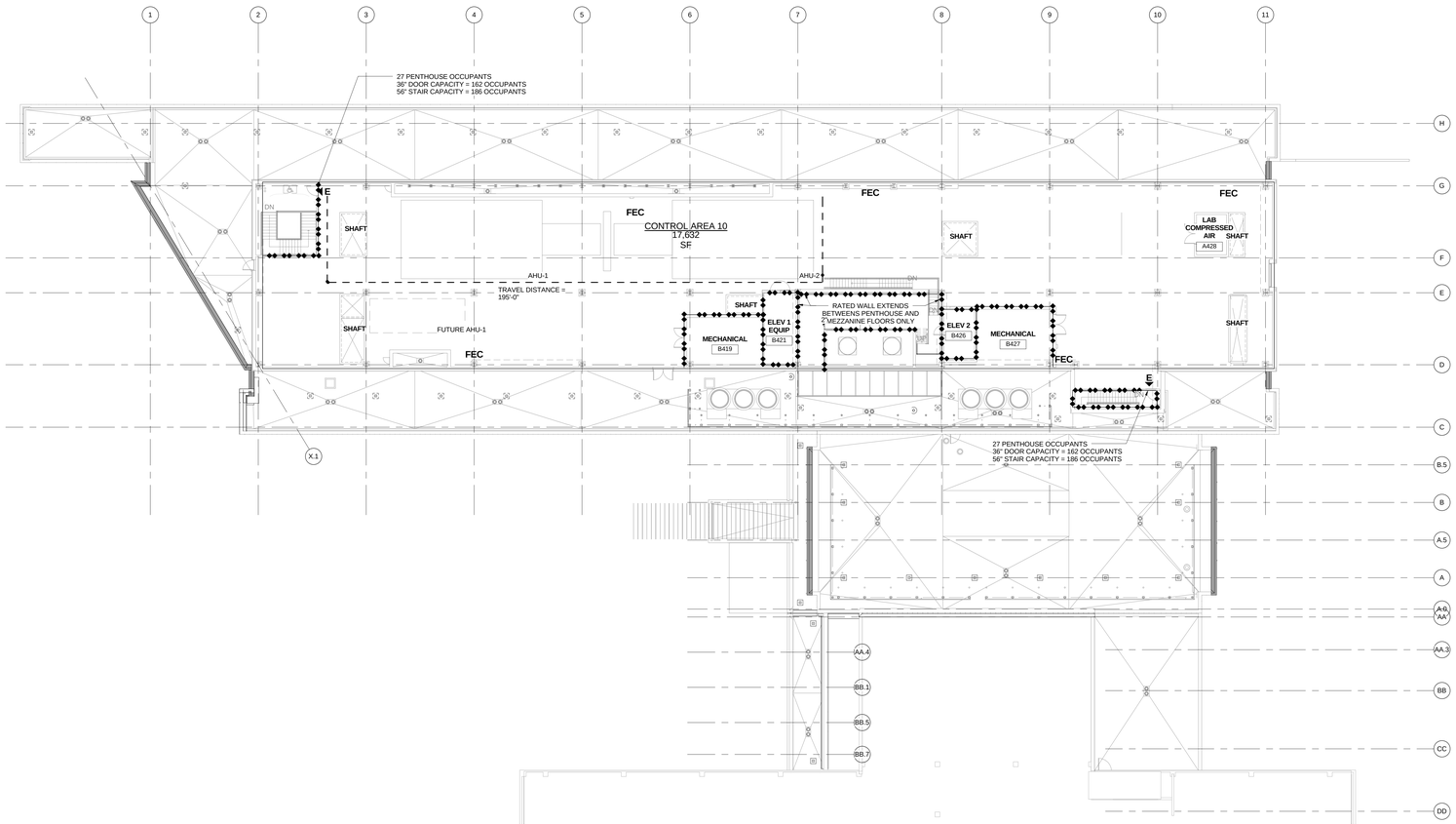
FIREPROOFING NOTES:

Provide fireproofing of structural steel members including, but not necessarily limited to, the following:

First Floor Framing Plans:	One hour exterior intumescent fireproofing of exposed exterior canopy columns - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed primary and secondary framing at exterior canopy roofs - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed metal roof decking - refer to Section 07 81 24.
Second Floor Framing Plans:	One hour interior intumescent fireproofing of exposed interior columns in Corridor D170 (supporting roof only) - refer to Section 07 81 23. One hour exterior intumescent fireproofing of exposed and concealed columns (supporting steel trellis over west Entry Vestibule D169) - refer to Section 07 81 24. One hour standard density cementitious fireproofing of concealed columns, primary roof beams, and secondary roof beams in Corridor D170 - refer to Section 07 81 16.
Penthouse/Main Roof Framing Plans:	Two hour cementitious fireproofing of concealed columns, primary floor framing, and secondary floor framing at mechanical mezzanine - refer to Section 07 81 16.
Penthouse Roof Framing Plan:	One hour medium density cementitious fireproofing of exposed columns, primary roof framing, lateral bracing, and secondary roof framing in Stair B480 - refer to Section 07 81 16. One hour medium density cementitious fireproofing of semi-exposed columns (supporting roof only), lateral bracing, and primary roof framing in Mechanical Penthouse - refer to Section 07 81 16. One hour standard density cementitious fireproofing of secondary roof framing in Mechanical Penthouse located within 20 feet of the Mechanical Mezzanine floor or Elevator Equipment Room floor elevation only - refer to Section 07 81 16. One hour high density cementitious fireproofing of columns (supporting roof only) and lateral bracing located within the plenum spaces at the Penthouse floor level - refer to Section 07 81 16.



D4 MEZZANINE - LIFE SAFETY
1/16" = 1'-0"



A1 PENTHOUSE - LIFE SAFETY
1/16" = 1'-0"

LIFE SAFETY NOTES:

A. ALL FLOORS WILL BE PROVIDED WITH FIRE EXTINGUISHER CABINETS THROUGHOUT CORRIDORS AS DENOTED BY "FEC".

B. STANDPIPES WILL BE LOCATED AT EACH FLOOR LEVEL OF THE STAIRS AS REQUIRED BY ARGONNE FIRE DEPARTMENT.

LIFE SAFETY LEGEND

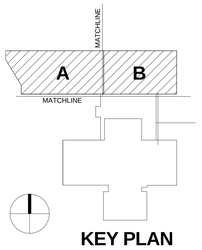
	1/2 HOUR FIRE
S	1/2 HOUR FIRE/SMOKE BARRIER
	3/4 HOUR FIRE
S	3/4 HOUR FIRE/ SMOKE BARRIER
	1 HOUR FIRE
S	1 HOUR FIRE/ SMOKE BARRIER
	2 HOUR FIRE
S	2 HOUR FIRE/ SMOKE BARRIER
	3 HOUR FIRE
S	3 HOUR FIRE/ SMOKE BARRIER
	4 HOUR FIRE
S	4 HOUR FIRE/ SMOKE BARRIER
S	SMOKE BARRIER
SP	SMOKE PARTITION
E	HORIZONTAL EXIT, EXTERIOR EXIT OR EXIT STAIR
FEC	FIRE EXTINGUISHER CABINET

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

G-104



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
PENTHOUSE - LIFE SAFETY PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. G-104	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- G-104 REV. NO.

C:\DRV7000\20.AE\CENTRAL_alerts.rvt
7/8/2011 10:50:13 AM

CODE SUMMARY

Applicable Codes	
Building Code:	International Building Code (IBC) - 2009 Edition
Life Safety Code:	NFPA - Life Safety Code - 2009 Edition
Fire Code:	International Fire Code - 2009 Edition
Mechanical Code:	International Mechanical Code - 2009 Edition
Plumbing Code:	Illinois Plumbing Code - 2004 Edition
Electrical Code:	NFPA 70: National Electrical Code - 2008 Edition
Energy Code:	ASHRAE 90.1 - 2004 Edition (Plus Addenda) International Energy Conservation Code - 2009 Edition
Accessibility Code:	ICC / ANSI A117.1 - 2003 Edition Illinois Accessibility Code - 1997 Edition ADA Accessibility Guidelines - 2004 Edition (With 2007 Supplements)
Occupancy Classification:	Business Group B {per IBC 304.1} General Industrial - Ordinary Hazard {per NFPA 101 40.1.4.1.1; NFPA 101 A.3.3.178.8; NFPA 101 8.7.4.1}
Lab Unit Fire Hazard Classification:	Class C {NFPA 45 4.2.1.1}
Construction Type:	I-B {per IBC Table 601} II (222) {per NFPA 220}
Structural Fire Ratings {per IBC Table 601}:	
Primary Structural Frame =	2 hours (one hour when supporting a roof only)
Exterior Bearing Walls =	2 hours
Interior Bearing Walls =	2 hours (one hour when supporting a roof only)
Floor Construction & Secondary Members =	2 hours
Roof Construction & Secondary Members =	1 hour

Since Building 223 is not of Type IB construction, ESB will be constructed as a separate building rather than an addition to Building 223. Therefore, a 3-hour fire wall will be constructed at the interface between the two buildings.

Fire Rated Separations:	
Building 223 to ESB =	3 hours {per IBC 706}
H Occupancy Storage =	2 hours {per IBC Table 508.4}
Between Control Areas	
Walls=	1 hour {per IBC Table 414.2.2}
Floors=	2 hours {per IBC Table 414.2.4}
Fire Rated Enclosures:	
Exit Stairs =	2 hours {per IBC 708.4}
Elevator Shafts =	2 hours {per IBC 708.4}
Duct Shafts =	2 hours {per IBC 708.4}
Hazardous Storage =	2 hours {per IBC Table 508.4}
Elevator Equipment =	2 hours {per IBC 708.4; IBC 3006.4}
Electrical Rooms D076 & D077=	2 hours
Assembly =	1 hour {per IBC Table 508.4}
Mechanical (HP Steam) =	1 hour {per IBC Table 508.2.5}
Atrium =	1 hour {per IBC 404.6} , 2 hours provided
Laboratories =	0 hours {per NFPA 45 Table 5.1.1}
Corridors =	0 hours {per IBC Table 1018.1}
Allowable Building Heights and Areas:	
Building Height (feet) =	180 feet max {per IBC Table 503}
Building Height (stories) =	12 stories max. {per IBC Table 503}
Building Area (per floor) =	Unlimited
Actual Building Height and Area:	
Building Height (feet) =	92 ft (to penthouse roof from service drive)
Building Height (stories) =	5 stories (including penthouse floor level)
Building Area (per floor) =	Approximately 35,000 sf on largest floor level (Ground Floor)
Ht of Highest Floor Level =	68 feet from lowest level of fire department vehicle access to highest floor elevation. Less than 75 feet, therefore, not a high rise building. {per IBC 202}
Penthouse Floor Area=	Exceeds one third of area of floor level below. Therefore, is a floor level. {per IBC 1509.2.2}
Egress Distance:	
Travel Distance =	250 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Common Path of Travel =	100 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Dead End =	50 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Occupant Loads:	
Ground Floor =	303 Occupants
First Floor =	309 Occupants (839 Occupants Total w/ Alternate 9)
Second Floor =	321 Occupants (348 Occupants Total w/ Alternate 9)
Third Floor =	359 Occupants
Penthouse Floor =	54 Occupants
Fire Suppression System:	Building is fully sprinklered.
Fire Alarm System:	Building has a monitored fire alarm system and automatic detection systems.
Standpipe System:	Building has an automatic wet standpipe system with hose valves located on each floor level inside of each stair tower and at the entrance to the roof.
Hazardous Materials:	Argonne will control hazardous material types and quantities that are used and stored within the building to maintain compliance with NFPA 45 limitations for a class C laboratory and with IBC limitations for established control areas.
Hazardous Storage Rooms:	Group H-3 Occupancy spaces.
Atrium:	Project includes a central atrium space that connects portions of the First, Second, and Third Floor levels. Therefore, a smoke evacuation system will be provided for the atrium in compliance with IBC 909 and NFPA 92B. The atrium smoke evacuation system will activate upon detection of smoke within the atrium space. Smoke exhaust fans, located at the penthouse mezzanine level will pull air and smoke from the atrium and exhaust it to the exterior. Operable awning windows in the atrium curtain wall systems will provide make-up air for the system. Automatic operators on these windows will be activated simultaneously with the startup of the smoke exhaust fans.

FIREPROOFING NOTES:

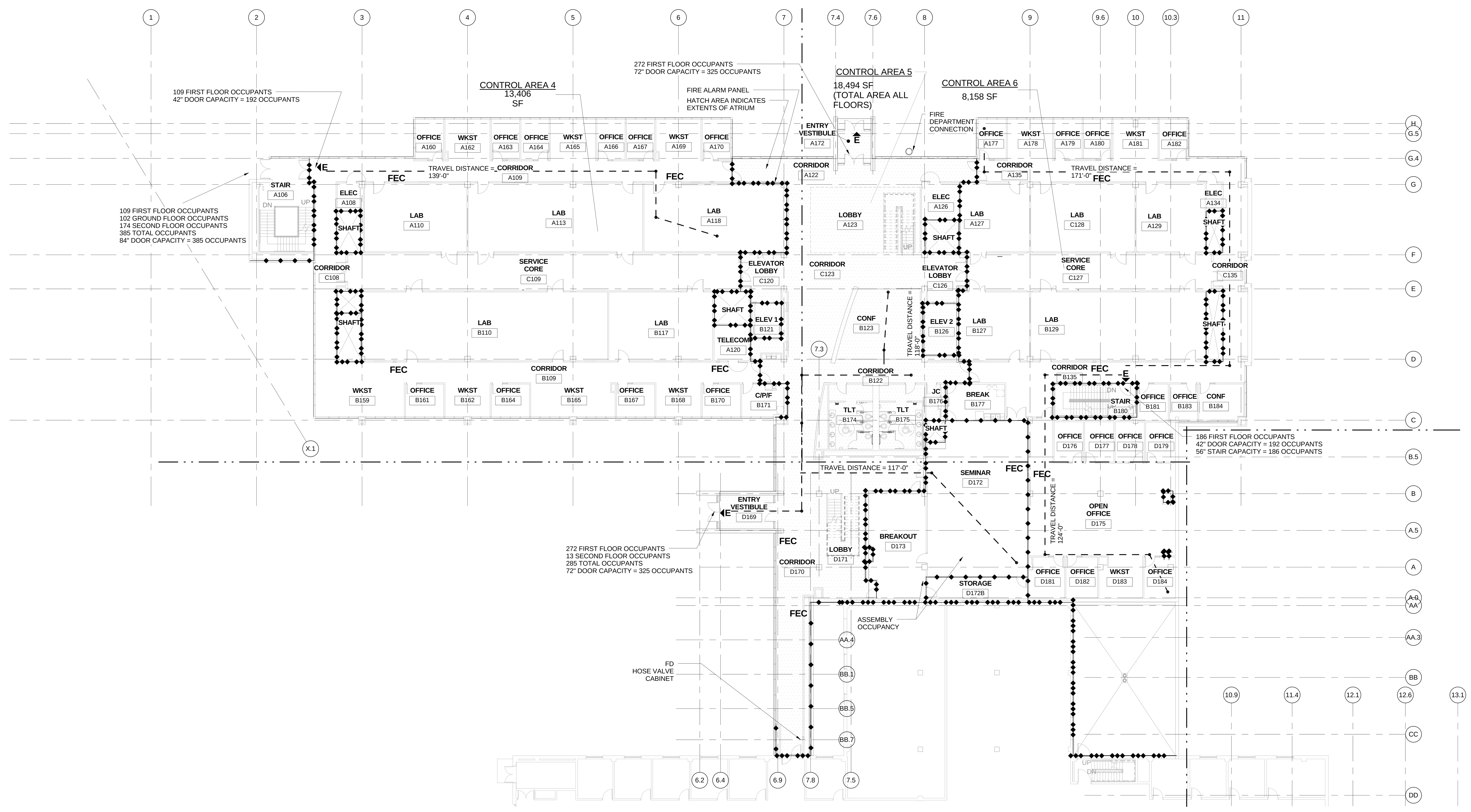
Provide fireproofing of structural steel members including, but not necessarily limited to, the following:

First Floor Framing Plans:	One hour exterior intumescent fireproofing of exposed exterior canopy columns - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed primary and secondary framing at exterior canopy roofs - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed metal roof decking - refer to Section 07 81 24.
Second Floor Framing Plans:	One hour interior intumescent fireproofing of exposed interior columns in Corridor D170 (supporting roof only) - refer to Section 07 81 23. One hour exterior intumescent fireproofing of exposed and concealed columns (supporting steel trellis over west Entry Vestibule D169) - refer to Section 07 81 24. One hour standard density cementitious fireproofing of concealed columns, primary roof beams, and secondary roof beams in Corridor D170 - refer to Section 07 81 16.
Penthouse/Main Roof Framing Plans:	Two hour cementitious fireproofing of concealed columns, primary floor framing, and secondary floor framing at mechanical mezzanine - refer to Section 07 81 16. One hour medium density cementitious fireproofing of exposed columns, primary roof framing, lateral bracing, and secondary roof framing in Stair B480 - refer to Section 07 81 16.
Penthouse Roof Framing Plan:	One hour medium density cementitious fireproofing of semi-exposed columns (supporting roof only), lateral bracing, and primary roof framing in Mechanical Penthouse - refer to Section 07 81 16. One hour standard density cementitious fireproofing of secondary roof framing in Mechanical Penthouse located within 20 feet of the Mechanical Mezzanine floor or Elevator Equipment Room floor elevation only - refer to Section 07 81 16. One hour high density cementitious fireproofing of columns (supporting roof only) and lateral bracing located within the plenum spaces at the Penthouse floor level - refer to Section 07 81 16.

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

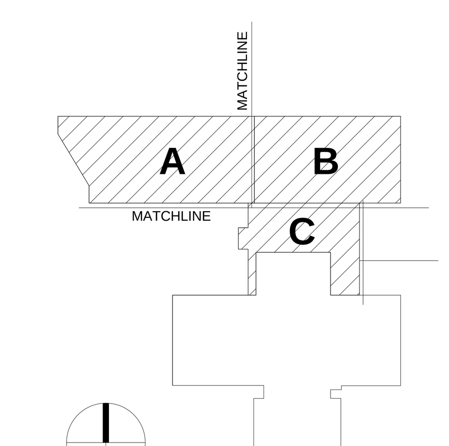


A1 FIRST FLOOR - LIFE SAFETY

1/16" = 1'-0"

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 10:50:31 AM

G-131



KEY PLAN

LIFE SAFETY NOTES:

A. ALL FLOORS WILL BE PROVIDED WITH FIRE EXTINGUISHER CABINETS THROUGHOUT CORRIDORS AS DENOTED BY "FEC".

B. STANDPIPES WILL BE LOCATED AT EACH FLOOR LEVEL OF THE STAIRS AS REQUIRED BY ARGONNE FIRE DEPARTMENT.

LIFE SAFETY LEGEND

- 1/2 HOUR FIRE
- 1/2 HOUR FIRE/SMOKE BARRIER
- 3/4 HOUR FIRE
- 3/4 HOUR FIRE/ SMOKE BARRIER
- 1 HOUR FIRE
- 1 HOUR FIRE/ SMOKE BARRIER
- 2 HOUR FIRE
- 2 HOUR FIRE/ SMOKE BARRIER
- 3 HOUR FIRE
- 3 HOUR FIRE/ SMOKE BARRIER
- 4 HOUR FIRE
- 4 HOUR FIRE/ SMOKE BARRIER
- SMOKE BARRIER
- SMOKE PARTITION
- E — HORIZONTAL EXIT, EXTERIOR EXIT OR EXIT STAIR
- FEC — FIRE EXTINGUISHER CABINET

REV. NO.	DESCRIPTION	BY	APVD	DATE
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
FIRST FLOOR - LIFE SAFETY PLAN (ALTERNATE 9)

DESIGNED: CURT FINFROCK	A/E CADD FILE	FACILITY NO(S): 241
DRAWN: NA	A/E DWG. NO.: G-131	
CHECKED: GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER: JAMES LYMAN	DWG. STATE: I	
	BIND ORDER: XXX	

FACILITY DOCUMENT NUMBER: **J241-101- G-131** — REV. NO.

CODE SUMMARY

Applicable Codes

Building Code:	International Building Code (IBC) - 2009 Edition
Life Safety Code:	NFPA - Life Safety Code - 2009 Edition
Fire Code:	International Fire Code - 2009 Edition
Mechanical Code:	International Mechanical Code - 2009 Edition
Plumbing Code:	Illinois Plumbing Code - 2004 Edition
Electrical Code:	NFPA 70: National Electrical Code - 2008 Edition
Energy Code:	ASHRAE 90.1 - 2004 Edition (Plus Addenda) International Energy Conservation Code - 2009 Edition
Accessibility Code:	ICC / ANSI A117.1 - 2003 Edition Illinois Accessibility Code - 1997 Edition ADA Accessibility Guidelines - 2004 Edition (With 2007 Supplements)
Occupancy Classification:	Business Group B {per IBC 304.1} General Industrial - Ordinary Hazard {per NFPA 101 40.1.4.1.1; NFPA 101 A.3.3.178.8; NFPA 101 8.7.4.1}
Lab Unit Fire Hazard Classification:	Class C {NFPA 45 4.2.1.1}
Construction Type:	I-B {per IBC Table 601} II (222) {per NFPA 220}

Structural Fire Ratings {per IBC Table 601}:

Primary Structural Frame =	2 hours (one hour when supporting a roof only)
Exterior Bearing Walls =	2 hours
Interior Bearing Walls =	2 hours (one hour when supporting a roof only)
Floor Construction & = Secondary Members	2 hours
Roof Construction & = Secondary Members	1 hour

Since Building 223 is not of Type IB construction, ESB will be constructed as a separate building rather than an addition to Building 223. Therefore, a 3-hour fire wall will be constructed at the interface between the two buildings.

Fire Rated Separations:

Building 223 to ESB =	3 hours {per IBC 706}
H Occupancy Storage =	2 hours {per IBC Table 508.4}
Between Control Areas	
Walls=	1 hour {per IBC Table 414.2.2}
Floors=	2 hours {per IBC Table 414.2.4}

Fire Rated Enclosures:

Exit Stairs =	2 hours {per IBC 708.4}
Elevator Shafts =	2 hours {per IBC 708.4}
Duct Shafts =	2 hours {per IBC 708.4}
Hazardous Storage =	2 hours {per IBC Table 508.4}
Elevator Equipment =	2 hours {per IBC 708.4; IBC 3006.4}
Electrical Rooms D076 & D077=	2 hours
Assembly =	1 hour {per IBC Table 508.4}
Mechanical (HP Steam) =	1 hour {per IBC Table 508.2.5}
Atrium =	1 hour {per IBC 404.6} , 2 hours provided
Laboratories =	0 hours {per NFPA 45 Table 5.1.1}
Corridors =	0 hours {per IBC Table 1018.1}

Allowable Building Heights and Areas:

Building Height (feet) =	180 feet max {per IBC Table 503}
Building Height (stories) =	12 stories max. {per IBC Table 503}
Building Area (per floor) =	Unlimited

Actual Building Height and Area:

Building Height (feet) =	92 ft (to penthouse roof from service drive)
Building Height (stories) =	5 stories (including penthouse floor level)
Building Area (per floor) =	Approximately 35,000 sf on largest floor level (Ground Floor)
Ht of Highest Floor Level =	68 feet from lowest level of fire department vehicle access to highest floor elevation. Less than 75 feet, therefore, not a high rise building. {per IBC 202}
Penthouse Floor Area=	Exceeds one third of area of floor level below. Therefore, is a floor level. {per IBC 1509.2.2}

Egress Distance:

Travel Distance =	250 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Common Path of Travel =	100 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}
Dead End =	50 feet max. {per NFPA 101 Table A.7.6 & Table 40.2.6}

Occupant Loads:

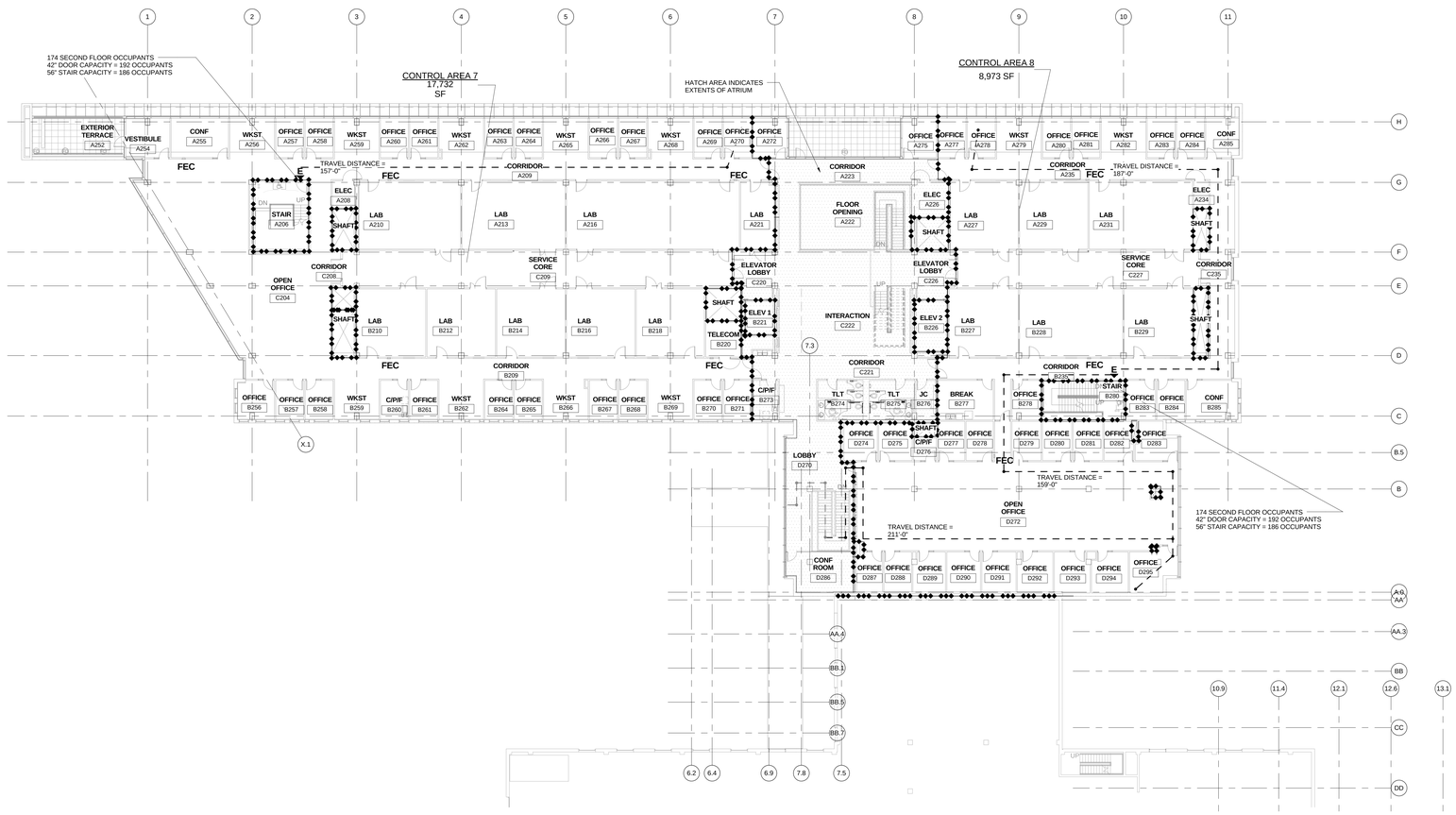
Ground Floor =	303 Occupants
First Floor =	309 Occupants (839 Occupants Total w/ Alternate 9)
Second Floor =	321 Occupants (348 Occupants Total w/ Alternate 9)
Third Floor =	359 Occupants
Penthouse Floor =	54 Occupants

Fire Suppression System:	Building is fully sprinklered.
Fire Alarm System:	Building has a monitored fire alarm system and automatic detection systems.
Standpipe System:	Building has an automatic wet standpipe system with hose valves located on each floor level inside of each stair tower and at the entrance to the roof.
Hazardous Materials:	Argonne will control hazardous material types and quantities that are used and stored within the building to maintain compliance with NFPA 45 limitations for a class C laboratory and with IBC limitations for established control areas.
Hazardous Storage Rooms:	Group H-3 Occupancy spaces.
Atrium:	Project includes a central atrium space that connects portions of the First, Second, and Third Floor levels. Therefore, a smoke evacuation system will be provided for the atrium in compliance with IBC 909 and NFPA 92B. The atrium smoke evacuation system will activate upon detection of smoke within the atrium space. Smoke exhaust fans, located at the penthouse mezzanine level will pull air and smoke from the atrium and exhaust it to the exterior. Operable awning windows in the atrium curtain wall systems will provide make-up air for the system. Automatic operators on these windows will be activated simultaneously with the startup of the smoke exhaust fans.

FIREPROOFING NOTES:

Provide fireproofing of structural steel members including, but not necessarily limited to, the following:

First Floor Framing Plans:	One hour exterior intumescent fireproofing of exposed exterior canopy columns - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed primary and secondary framing at exterior canopy roofs - refer to Section 07 81 24. One hour exterior intumescent fireproofing of exposed metal roof decking - refer to Section 07 81 24.
Second Floor Framing Plans:	One hour interior intumescent fireproofing of exposed interior columns in Corridor D170 (supporting roof only) - refer to Section 07 81 23. One hour exterior intumescent fireproofing of exposed and concealed columns (supporting steel trellis over west Entry Vestibule D169) - refer to Section 07 81 24. One hour standard density cementitious fireproofing of concealed columns, primary roof beams, and secondary roof beams in Corridor D170 - refer to Section 07 81 16.
Penthouse/Main Roof Framing Plans:	Two hour cementitious fireproofing of concealed columns, primary floor framing, and secondary floor framing at mechanical mezzanine - refer to Section 07 81 16. One hour medium density cementitious fireproofing of exposed columns, primary roof framing, lateral bracing, and secondary roof framing in Stair B480 - refer to Section 07 81 16.
Penthouse Roof Framing Plan:	One hour medium density cementitious fireproofing of semi-exposed columns (supporting roof only), lateral bracing, and primary roof framing in Mechanical Penthouse - refer to Section 07 81 16. One hour standard density cementitious fireproofing of secondary roof framing in Mechanical Penthouse located within 20 feet of the Mechanical Mezzanine floor or Elevator Equipment Room floor elevation only - refer to Section 07 81 16. One hour high density cementitious fireproofing of columns (supporting roof only) and lateral bracing located within the plenum spaces at the Penthouse floor level - refer to Section 07 81 16.



A1 SECOND FLOOR- LIFE SAFETY
1/16" = 1'-0"

LIFE SAFETY NOTES:

A. ALL FLOORS WILL BE PROVIDED WITH FIRE EXTINGUISHER CABINETS THROUGHOUT CORRIDORS AS DENOTED BY "FEC".

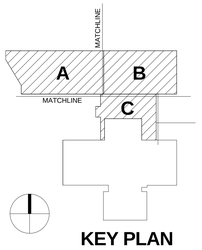
B. STANDPIPES WILL BE LOCATED AT EACH FLOOR LEVEL OF THE STAIRS AS REQUIRED BY ARGONNE FIRE DEPARTMENT.

LIFE SAFETY LEGEND

- 1/2 HOUR FIRE
- 1/2 HOUR FIRE/SMOKE BARRIER
- 3/4 HOUR FIRE
- 3/4 HOUR FIRE/ SMOKE BARRIER
- 1 HOUR FIRE
- 1 HOUR FIRE/ SMOKE BARRIER
- 2 HOUR FIRE
- 2 HOUR FIRE/ SMOKE BARRIER
- 3 HOUR FIRE
- 3 HOUR FIRE/ SMOKE BARRIER
- 4 HOUR FIRE
- 4 HOUR FIRE/ SMOKE BARRIER
- SMOKE BARRIER
- SMOKE PARTITION
- E — HORIZONTAL EXIT, EXTERIOR EXIT OR EXIT STAIR
- FEC — FIRE EXTINGUISHER CABINET

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

G-132



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
SECOND FLOOR - LIFE SAFETY PLAN (ALTERNATE 9)

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. G-132	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- G-132 REV. NO.

C:\DV70021\0-A-CENTRAL_alt+9.rvt
7/8/2011 10:50:39 AM

CONSTRUCTION STAGING AND ACCESS COORDINATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND CONSTRUCTION SITE STAGING, PHASING, AND ACCESS WITH ARGONNE NATIONAL LABORATORY (ANL) ENERGY SCIENCES BUILDING (ESB) CONSTRUCTION MANAGER PAT HOGAN. THE PLAN, AT A MINIMUM, SHALL TAKE INTO CONSIDERATION THE FOLLOWING:

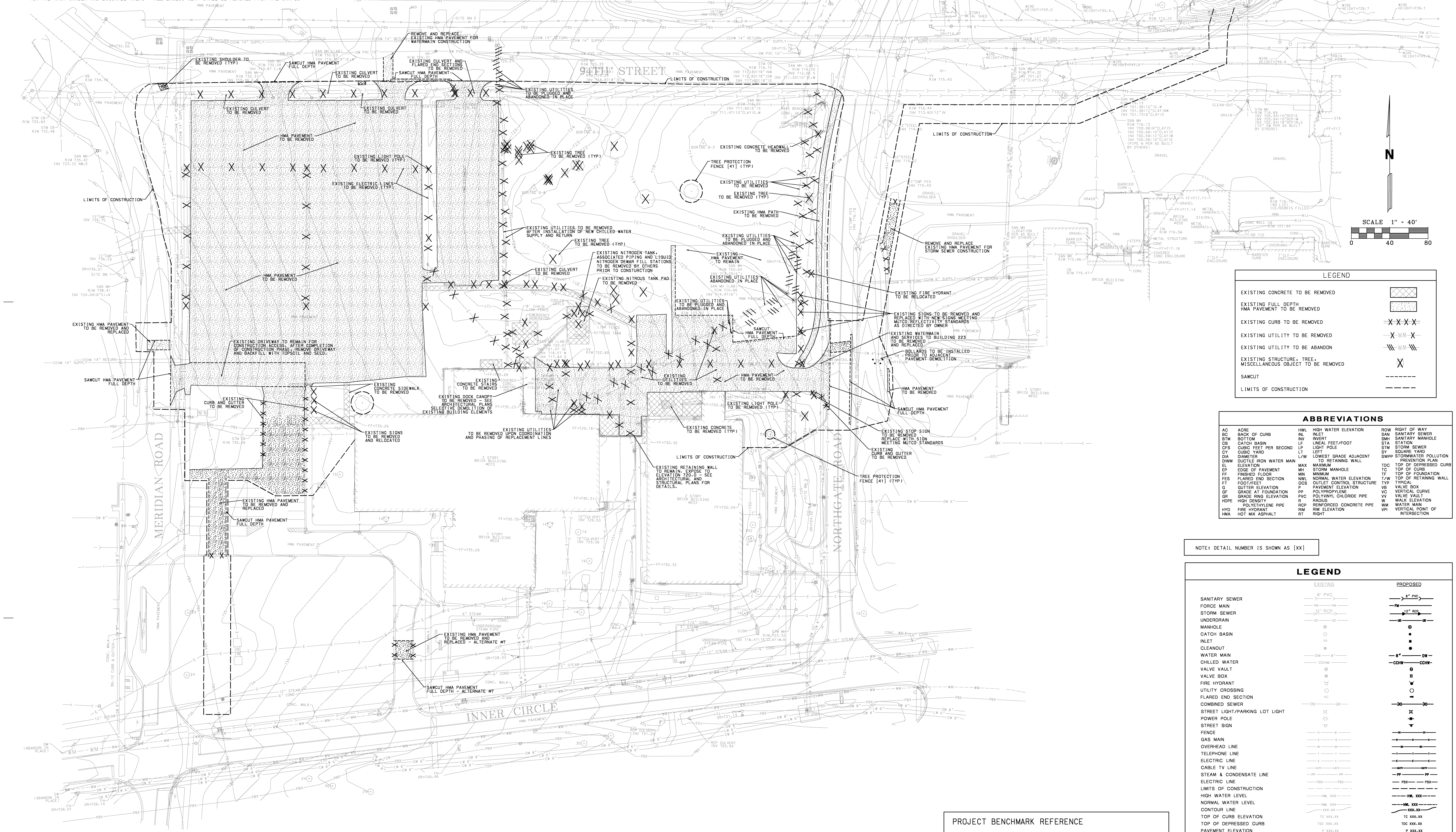
1. CONSTRUCTION FENCING - LIMITS OF CONSTRUCTION FENCING SHALL BE PLACE ALONG THE PROJECT LIMITS. FENCE PLACED ALONG ROADWAYS SHALL BE LOCATED FIVE (5) FEET OFF THE SHOULDER. THE EAST PARKING LOT, EAST LOADING DOCK AREA, AND EAST WALKING PATH SHALL REMAIN ACCESSIBLE AND THE FENCING WILL NEED TO BE ADJUSTED TO ALLOW ACCESS TO THESE AREAS AS SOON AS THE IMPROVEMENTS IN THESE AREAS ARE COMPLETED. THE FENCE SHALL BE EIGHT (8) FOOT HIGH CHAIN LINK FENCE THAT IS STABLE AND STURDY, BUT NOT NECESSARILY ANCHORED IN CONCRETE, WITH THE EXCEPTION OF THE GATES. THE CONSTRUCTION FENCE SHALL BE COVERED IN DUST CONTROL FABRIC. ANL HAS A MINIMUM OF 2,000 FEET OF EIGHT (8) FOOT GALVANIZED CHAIN LINK FENCE AVAILABLE IN THE 800-AREA THAT THE CONTRACTOR MAY BORROW.
2. LOADING DOCK ACCESS - ACCESS SHALL BE MAINTAINED TO THE BUILDING 223 LOADING DOCK UNTIL THE BUILDING 222 LOADING DOCK MODIFICATIONS HAVE BEEN COMPLETED AND TURNED OVER TO ARGONNE FOR USE. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR TURNOVER OF ALTERATIONS TO BUILDING 222 LOADING DOCK AND SUBSEQUENT SHUT-DOWN OF THE EXISTING BUILDING 223 LOADING DOCK.
3. WESTERN PEDESTRIAN ACCESS - ACCESS SHALL BE MAINTAINED FROM THE TCS BUILDING TO THE SIDEWALK ALONG THE EAST SIDE OF MERIDIAN ROAD. THE CURRENT ROUTE FROM TCS WILL BE CUTOFF DUE TO ESB CONSTRUCTION. PEDESTRIANS WILL BE ABLE TO ACCESS THE NORTHEAST CORNER OF MERIDIAN ROAD AND 94TH STREET. IT IS SUGGESTED THAT MERIDIAN ROAD BE CLOSED WEST OF THE PROJECT TO ALLOW PEDESTRIANS TO CROSS 94TH STREET AND WALK ALONG THE WESTERN HALF OF MERIDIAN ROAD. THE MINIMUM PEDESTRIAN WALKWAY WILL SHALL BE EIGHT (8) FEET WIDE. CROSSWALK STRIPING MAY BE NECESSARY ACROSS 94TH AND THE DRIVEWAY OFF MERIDIAN. THE CONTRACTOR SHALL PROVIDE PROPER BARRIERS AND PROTECTION FOR PEDESTRIAN TRAFFIC ALONG MERIDIAN ROAD, INCLUDING OVERHEAD PROTECTION IF DEEMED NECESSARY. THE CONTRACTOR MAY PARK CONSTRUCTION TRAILERS ALONG THE EAST SIDE OF MERIDIAN ROAD. NO WORK SHALL BE ALLOWED NORTH OF 94TH STREET.
4. EAST PEDESTRIAN ACCESS - PEDESTRIAN ACCESS SHALL BE MAINTAINED ALONG THE EAST SIDE OF THE PROJECT AT ALL TIMES. PEDESTRIAN ACCESS COULD BE PROVIDED ALONG THE PAVEMENT EAST OF NORTHGATE ROAD OR A TEMPORARY GRAVEL PATH MAY BE INSTALLED.
5. CONTRACTOR PARKING - OVERFLOW PARKING WILL BE AVAILABLE AT THE BUILDING 202 GRAVEL LOT OR BEHIND BUILDING 203. NO PARKING WILL BE ALLOWED ALONG STREETS OR IN PAVED LOTS BY BUILDINGS 222, 223, 240, OR SOUTH OF 201.
6. BUILDING 223 FIRE DEPARTMENT CONNECTION - A NEW FIRE DEPARTMENT CONNECTION SHALL BE INSTALLED IN THE PROPOSED LOCATION AT THE SOUTHWEST CORNER OF BUILDING 223 AND NECESSARY PIPING SHALL BE ROUTED THROUGH THE BUILDING PRIOR TO THE EXISTING FIRE DEPARTMENT CONNECTION BECOMING INACCESSIBLE.
7. TEMPORARY GENERATOR - THE CONTRACTOR SHALL MAINTAIN OPERATION OF THE EXISTING BUILDING 223 EMERGENCY GENERATOR UNTIL A TEMPORARY GENERATOR, SERVING BUILDING 223, IS IN PLACE, CONNECTED, AND OPERATIONAL. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR SWITCHOVER FROM THE BUILDING 223 EMERGENCY GENERATOR TO A TEMPORARY GENERATOR. THE GENERATOR SWITCH IS IN THE EXISTING MECHANICAL ROOM, SO THE GENERATOR SHOULD BE LOCATED WITHIN CLOSE VICINITY. A POSSIBLE LOCATION WOULD BE BETWEEN BUILDINGS 222 AND 223.
8. SANITARY AND LABORATORY SEWER SERVICES, CHILLED WATER SERVICE, AND DOMESTIC, LABORATORY, AND FIRE WATER SERVICES - BUILDING 222 AND 223 SERVICES MUST BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT PLANS FOR HOW SERVICES WILL BE MAINTAINED AND THE SWITCHOVER TO FINAL SERVICE CONFIGURATION TO ANL PM FOR APPROVAL PRIOR TO IMPLEMENTATION. THE FINAL SWITCHOVER SHALL BE COMPLETED IN OFF-HOURS AND COORDINATED THROUGH ANL. TEMPORARY WATER SERVICE COULD BE PROVIDED FROM THE PROPOSED ESB WATER SERVICE ON THE WEST SIDE OF THE PROPOSED BUILDING. CHILLED WATER COULD ALSO BE TEMPORARILY REROUTED TO BUILDING 223 VIA PERMANENT SERVICE CONNECTION TO ESB.
9. SOIL STOCKPILES - ANL TOPSOIL AND GRAVEL STOCKPILES HAVE ADEQUATE CAPACITY FOR THE ANTICIPATED PROJECT EXCAVATIONS. THE CONTRACTOR CAN PLACE TOPSOIL AND GRAVEL STOCKPILES ONSITE OR THE CONTRACTOR CAN UTILIZE THE ANL STOCKPILES. THE TOPSOIL STOCKPILE IS LOCATED IN THE 800-AREA AND CONTAINS ADDITIONAL TOPSOIL THAT MAY BE USED FOR ESB CONSTRUCTION. THE GRAVEL STORAGE AREA IS LOCATED EAST OF BUILDING 362. SAND IS AVAILABLE IN THE 500-AREA AND MAY BE USED FOR THE RAIN GARDEN AND BIOSWALE AREAS. ALL EXCESS CLAY SHALL BE REMOVED FROM THE CAMPUS.

DEMOLITION PLAN GENERAL NOTES:

1. CONTRACTOR SHALL PERFORM ALL DEMOLITION WORK IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR DEMOLITION WORK AND ASSOCIATED UTILITY DISCONNECT FEES.
3. THE OWNER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THIS PLAN WAS PREPARED FROM TOPOGRAPHIC SURVEY PREPARED BY BURKE ENGINEERING CORPORATION, DATED APRIL 16, 2009, SUPPLEMENTAL TOPOGRAPHY PREPARED BY MACKIE CONSULTANTS, DATED MAY 28, 2010 AND SEPTEMBER 23, 2010, AND AVAILABLE RECORDS. CONTRACTOR IS REQUIRED TO FIELD VERIFY AND ASSURE HIMSELF OF LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND FEATURES SHOWN AND NOT SHOWN BEFORE COMMENCING WORK. CONTRACTOR SHALL REPORT AT ONCE TO THE ENGINEER OR OWNER OF ANY DISCREPANCIES WITH RESPECT TO INFORMATION INDICATED IN THE CONTRACT DOCUMENTS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER ONE (1) WEEK PRIOR TO BEGINNING DEMOLITION WORK FOR THE EXACT LOCATIONS OF THE UTILITIES. THE CONTRACTOR SHALL ARRANGE FOR THE DISCONNECTION, PROTECTION OR RELOCATION OF ANY EXISTING UTILITY SERVICES, INCLUDING WATER, SEWER, GAS, ELECTRIC, TELEPHONE AND CABLE.
6. ALL BITUMINOUS PAVEMENT AND BUILDING MATERIALS SHALL BE REMOVED AND LEGALLY DISPOSED OF IN A LANDFILL. SEE SPECIFICATION NOTE D(11) FOR GUIDANCE REGARDING THE DISPOSAL OF CLEAN CONSTRUCTION DEBRIS AND SOIL. GRAVEL BASE MATERIALS SHALL BE STOCKPILED ONSITE AND USED FOR TEMPORARY ROADS OR GENERAL FILL, AS APPROVED BY THE OWNER OR OWNER'S GEOTECH. ANY BASE MATERIALS REMAINING UPON COMPLETION OF THE PROPOSED IMPROVEMENTS SHALL REMOVED AND STORED AT THE GRAVEL STORAGE AREA EAST OF BUILDING 362. IF TESTED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER, THE CONTRACTOR MAY USE RECYCLED PAVEMENT AS THE PROPOSED PAVEMENT BASE COURSE. ALL EXCAVATED SOILS NOT STAGED WITHIN THE BOUNDARIES OF THE SITE SHALL BE REMOVED FROM THE SITE.
7. ALL UTILITIES TO REMAIN AS NOTED SHALL BE ADJUSTED TO THE FINAL GRADES AS PROVIDED ON THE UTILITY PLANS.
8. GAS, TELEPHONE AND ELECTRIC DISTRIBUTION SYSTEM REMOVALS AND ADJUSTMENTS SHALL BE DONE BY RESPECTIVE UTILITY AND PAID FOR SEPARATELY BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THIS WORK INCIDENTAL TO THE CONTRACT. ALL ENVIRONMENTAL REMEDIATION WILL BE COMPLETED BY OWNER PRIOR TO START OF CONSTRUCTION.
9. ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE UNLESS SPECIFICALLY SHOWN TO BE REMOVED.
10. ALL UTILITIES AND STRUCTURES LOCATED WITHIN 15 FEET OF THE PROPOSED BUILDING LOCATION SHALL BE COMPLETELY REMOVED AND THE EXCAVATION BACKFILLED WITH SELECT GRANULAR MATERIAL. ALL REMAINING UTILITIES AND STRUCTURES LOCATED WITHIN THE PROJECT AREA SHALL BE REMOVED TO A DEPTH OF 2-FEET BELOW PROPOSED FINISHED GRADE.
11. ALL PIPES TO BE ABANDONED IN PLACE SHALL BE PLUGGED WITH BRICK AND MORTAR. ANY STRUCTURES TO REMAIN SHALL HAVE THE BOTTOM BROKEN TO FACILITATE DRAINAGE AND FILLED WITH SAND OR PEA GRAVEL.
12. ALL EXISTING TREES, BRUSH, AND MISCELLANEOUS APPURTENANCES, SUCH AS FENCES, WHEEL STOPS, POLES LIGHTS AND MISCELLANEOUS DEBRIS SHALL BE HAULED TO AN OFFSITE LOCATION. MATERIALS BEING REMOVED SHALL BE LEGALLY DISPOSED OF IN LANDFILLS.
13. THE CONTRACTOR SHALL ENSURE THAT ALL ADJOINING AREAS, INCLUDING ADJACENT STREETS AND DRIVEWAYS, SHALL BE FREE OF DEBRIS AT ALL TIMES.
14. PAVEMENT, CURB AND GUTTER AND SIDEWALK SHALL BE SAWCUT FULL DEPTH AT THE LIMITS OF REMOVAL.
15. ALL TREES TO REMAIN SHALL BE PROTECTED WITH SILT FENCE OR ORANGE CONSTRUCTION FENCES. PROTECTIVE FENCING SHALL BE PLACED AT THE DRIP LINE OF THE TREE TO BE SAVED. CONSTRUCTION WITHIN THE FENCE WITHOUT PERMISSION FOR THE OWNER IS STRICTLY PROHIBITED. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF PROTECTIVE TREE FENCING FOR THE DURATION OF THE PROJECT.
16. ENCOUNTERS WITH EXISTING WELLS ARE NOT ANTICIPATED; HOWEVER, EXISTING WELLS ENCOUNTERED SHALL BE EXCAVATED, SEALED AND ABANDONED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS.
17. ENCOUNTERS WITH EXISTING SEPTIC FIELDS ARE NOT ANTICIPATED; HOWEVER, EXISTING SEPTIC FIELDS ENCOUNTERED SHALL BE EXPOSED, DRAINED AND ABANDONED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS.
18. ANY DAMAGE DONE TO EXISTING STRUCTURES OR OBJECTS NOT SHOWN TO BE REMOVED OR REPLACED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
19. CONTRACTOR SHALL PROVIDE A PHASING AND STAGING PLAN OF ANY PLANNED UTILITY SHUTDOWNS OR CROSSOVERS FOR OWNER APPROVAL AND PROVIDE THE OWNER A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY UTILITY SHUTDOWN.
20. THE EMERGENCY GENERATOR SHALL BE SALVAGED AND DELIVERED TO ARGONNE NATIONAL LABORATORY AT A LOCATION DETERMINED BY THE OWNER.

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com
MACKIE CONSULTANTS



LEGEND

EXISTING CONCRETE TO BE REMOVED	
EXISTING FULL DEPTH HMA PAVEMENT TO BE REMOVED	
EXISTING CURB TO BE REMOVED	X X X X
EXISTING UTILITY TO BE REMOVED	X WM X
EXISTING UTILITY TO BE ABANDON	\\\ WM \\\
EXISTING STRUCTURE, TREE, MISCELLANEOUS OBJECT TO BE REMOVED	X
SAWCUT	
LIMITS OF CONSTRUCTION	

C-01

ABBREVIATIONS

AC	ACRE	HWL	HIGH WATER ELEVATION	ROW	RIGHT OF WAY
BC	BACK OF CURB	INL	INLET	SAN	SANITARY SEWER
BTM	BOTTOM	INV	INVERT	SMH	SANITARY MANHOLE
CB	CATCH BASIN	LF	LINEAL FEET/FOOT	STA	STATION
CFS	CUBIC FEET PER SECOND	LP	LIGHT POLE	STM	STORM SEWER
CY	CUBIC YARD	LT	LEFT	SY	SQUARE YARD
DIA	DIAMETER	L/W	LOWEST GRADE ADJACENT TO RETAINING WALL	SWPP	STORMWATER POLLUTION PREVENTION PLAN
DIWM	DUCTILE IRON WATER MAIN				
EL	ELEVATION	MAX	MAXIMUM	TDC	TOP OF DEPRESSED CURB
EP	EDGE OF PAVEMENT	MH	STORM MANHOLE	TC	TOP OF CURB
FF	FINISHED FLOOR	MIN	MINIMUM	TF	TOP OF FOUNDATION
FES	FLARED END SECTION	NWL	NORMAL WATER ELEVATION	T/W	TOP OF RETAINING WALL
FT	FOOT/FEET	OCS	OUTLET CONTROL STRUCTURE	TYP	TYPICAL
G	GUTTER ELEVATION	P	PAVEMENT ELEVATION	VB	VALVE BOX
GF	GRADE AT FOUNDATION	PP	POLYPROPYLENE	VC	VERTICAL CURVE
GR	GRADE RING ELEVATION	PVC	POLYVINYL CHLORIDE PIPE	VV	VALVE VAULT
HDPE	HIGH DENSITY POLYETHYLENE PIPE	R	RADIUS	W	WALK ELEVATION
		RCP	REINFORCED CONCRETE PIPE	WM	WATER MAIN
HYD	FIRE HYDRANT	RIM	RIM ELEVATION	VPI	VERTICAL POINT OF INTERSECTION
HMA	HOT MIX ASPHALT	RT	RIGHT		

NOTE: DETAIL NUMBER IS SHOWN AS [XX]

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER	8" PVC	8" PVC
FORCE MAIN	FM FM	FM
STORM SEWER	12" RCP	12" RCP
UNDERDRAIN	UD UD	UD UD
MANHOLE		
CATCH BASIN		
INLET		
CLEANOUT		
WATER MAIN	DW 8"	8" DW
CHILLED WATER	CCHW	CCHW CCHW
VALVE VAULT		
VALVE BOX		
FIRE HYDRANT		
UTILITY CROSSING		
FLARED END SECTION		
COMBINED SEWER		
STREET LIGHT/PARKING LOT LIGHT		
POWER POLE		
STREET SIGN		
FENCE		
GAS MAIN	G G	G G G
OVERHEAD LINE	OH OH	OH OH
TELEPHONE LINE	T T	T T T
ELECTRIC LINE	E E	E E E
CABLE TV LINE	CATV CATV	CATV CATV
STEAM & CONDENSATE LINE	PP PP	PP PP
ELECTRIC LINE	PBX PBX	PBX PBX
LIMITS OF CONSTRUCTION		
HIGH WATER LEVEL	HWL XXX	HWL XXX
NORMAL WATER LEVEL	NWL XXX	NWL XXX
CONTOUR LINE	XXX.XX	XXX.XX
TOP OF CURB ELEVATION	TC XXX.XX	TC XXX.XX
TOP OF DEPRESSED CURB	TDC XXX.XX	TDC XXX.XX
PAVEMENT ELEVATION	P XXX.XX	P XXX.XX
SPOT ELEVATION	XXX.XX	XXX.XX
FINISHED FLOOR ELEVATION	F/F XXX.XX	FF = XXX.XX
TOP OF FOUNDATION	T/F XXX.XX	TF = XXX.XX
GRADE AT FOUNDATION	G/F XXX.XX	GF = XXX.XX
HIGH OR LOW POINT		Ⓛ - Ⓗ
OVERLAND FLOOD ROUTE		
PAVEMENT FLOW DIRECTION		2.0%
SWALE FLOW DIRECTION		
DEPRESSED CURB AND GUTTER		
REVERSE CURB AND GUTTER		
TREE PROTECTION FENCE		

PROJECT BENCHMARK REFERENCE

ARGONNE NATIONAL LABORATORY SURVEY CONTROL STATION NUMBER 3 MONUMENT WITH LID LOCATED APPROXIMATELY 15 FEET EAST OF THE CENTERLINE OF MERIDIAN ROAD AND APPROXIMATELY 250 FEET SOUTH OF INNER CIRCLE ROAD.

ELEVATION: 736.06

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

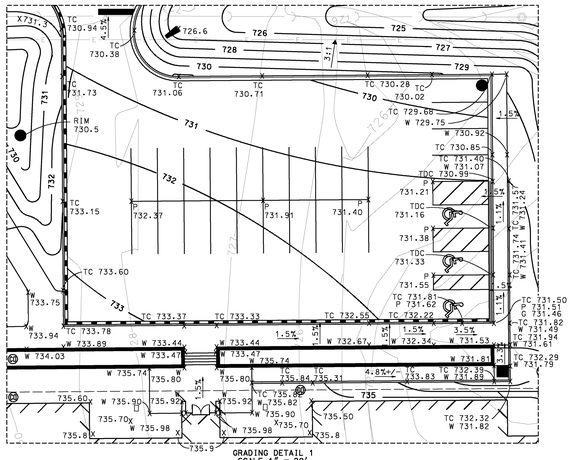
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
DEMOLITION PLAN

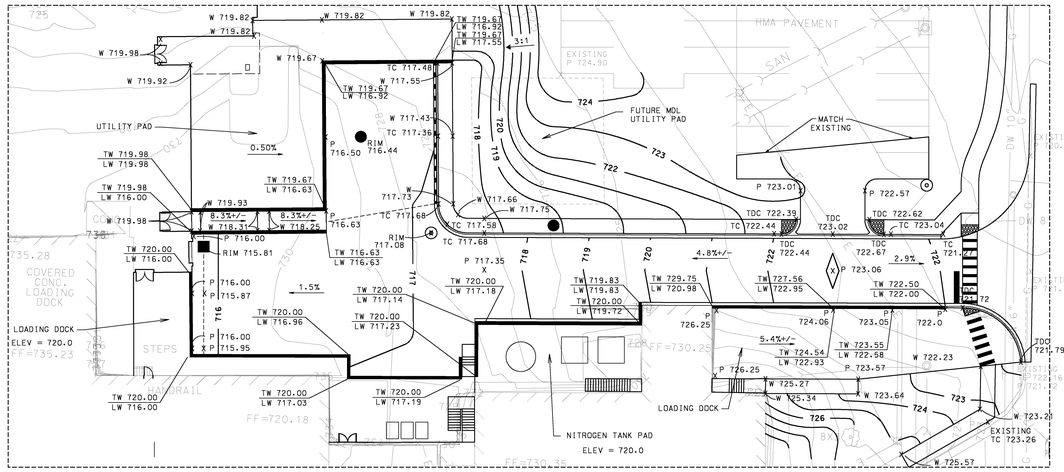
DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-01	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101- C-01 REV. NO.

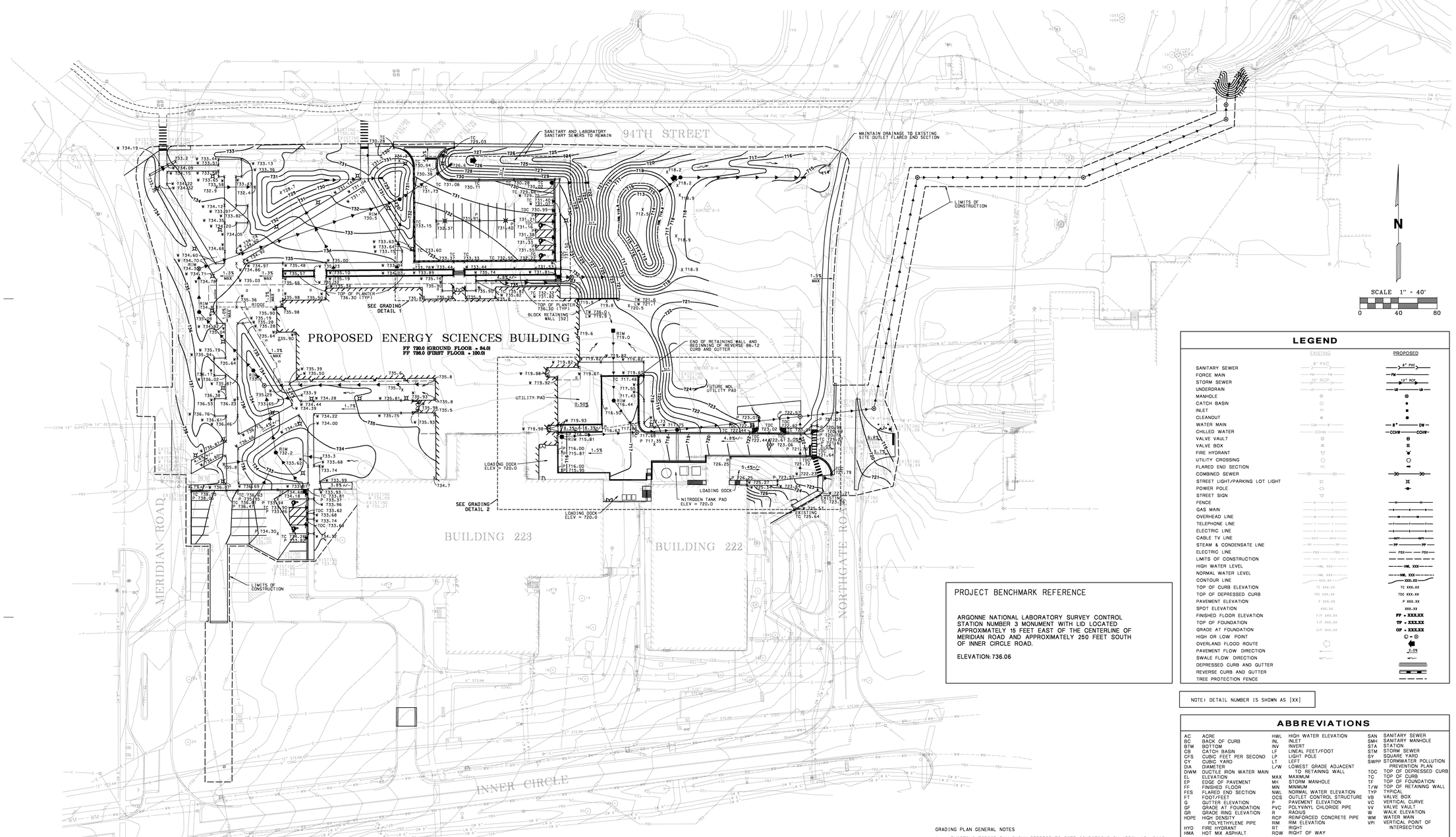
6/27/2011 1:17:17 PM
N:\1880\Engineering\Plots\01-Demolition.plt



GRADING DETAIL 1
SCALE 1" = 20'



GRADING DETAIL 2
SCALE 1" = 20'



PROJECT BENCHMARK REFERENCE

ARGONNE NATIONAL LABORATORY SURVEY CONTROL STATION NUMBER 3 MONUMENT WITH LID LOCATED APPROXIMATELY 15 FEET EAST OF THE CENTERLINE OF MERIDIAN ROAD AND APPROXIMATELY 250 FEET SOUTH OF INNER CIRCLE ROAD.

ELEVATION: 736.06

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER	8" PVC	8" PVC
FORCE MAIN	FM	FM
STORM SEWER	12" RCP	12" RCP
UNDERDRAIN	UD	UD
MANHOLE		
CATCH BASIN		
INLET		
CLEANOUT		
WATER MAIN	DW 8"	8" DW
CHILLED WATER	CCHW	CCHW
VALVE VAULT		
VALVE BOX		
FIRE HYDRANT		
UTILITY CROSSING		
FLARED END SECTION		
COMBINED SEWER		
STREET LIGHT/PARKING LOT LIGHT		
POWER POLE		
STREET SIGN		
FENCE		
GAS MAIN		
OVERHEAD LINE		
TELEPHONE LINE		
ELECTRIC LINE		
CABLE TV LINE	CATV	CATV
STEAM & CONDENSATE LINE	PP	PP
ELECTRIC LINE	PBX	PBX
LIMITS OF CONSTRUCTION		
HIGH WATER LEVEL	HWL XXX	HWL XXX
NORMAL WATER LEVEL	NWL XXX	NWL XXX
CONTOUR LINE	XXX.XX	XXX.XX
TOP OF CURB ELEVATION	TC XXX.XX	TC XXX.XX
TOP OF DEPRESSED CURB	TDC XXX.XX	TDC XXX.XX
PAVEMENT ELEVATION	P XXX.XX	P XXX.XX
SPOT ELEVATION	XXX.XX	XXX.XX
FINISHED FLOOR ELEVATION	F/F XXX.XX	FF = XXX.XX
TOP OF FOUNDATION	T/F XXX.XX	TF = XXX.XX
GRADE AT FOUNDATION	G/F XXX.XX	GF = XXX.XX
HIGH OR LOW POINT		O = O
OVERLAND FLOOD ROUTE		
PAVEMENT FLOW DIRECTION		3.0%
SWALE FLOW DIRECTION		
DEPRESSED CURB AND GUTTER		
REVERSE CURB AND GUTTER		
TREE PROTECTION FENCE		

NOTE: DETAIL NUMBER IS SHOWN AS [XX]

ABBREVIATIONS

AC	ACRE	HWL	HIGH WATER ELEVATION	SAN	SANITARY SEWER
BC	BACK OF CURB	INL	INLET	SMH	SANITARY MANHOLE
BTM	BOTTOM	INV	INVERT	STA	STATION
CB	CATCH BASIN	LF	LINEAL FEET/FOOT	STM	STORM SEWER
CFS	CUBIC FEET PER SECOND	LP	LIGHT POLE	SY	SQUARE YARD
CY	CUBIC YARD	LT	LEFT	SWPP	STORMWATER POLLUTION PREVENTION PLAN
DIA	DIAMETER	L/W	LOWEST GRADE ADJACENT TO RETAINING WALL	TDC	TOP OF DEPRESSED CURB
DWM	DUCTILE IRON WATER MAIN	MAX	MAXIMUM	TC	TOP OF CURB
EL	ELEVATION	MH	STORM MANHOLE	TF	TOP OF FOUNDATION
EP	EDGE OF PAVEMENT	MIN	MINIMUM	T/W	TOP OF RETAINING WALL
FF	FINISHED FLOOR	NWL	NORMAL WATER ELEVATION	TYP	TYPICAL
FES	FLARED END SECTION	OCS	OUTLET CONTROL STRUCTURE	VB	VALVE BOX
FT	FOOT/FEET	P	PAVEMENT ELEVATION	VC	VERTICAL CURVE
G	GUTTER ELEVATION	PVC	POLYVINYL CHLORIDE PIPE	VV	VALVE VAULT
GF	GRADE AT FOUNDATION	R	RADIUS	W	WALK ELEVATION
GR	GRADE RING ELEVATION	RCP	REINFORCED CONCRETE PIPE	WM	WATER MAIN
HDPE	HIGH DENSITY POLYETHYLENE PIPE	RIM	RIM ELEVATION	VPI	VERTICAL POINT OF INTERSECTION
HYD	FIRE HYDRANT	RT	RIGHT		
HMA	HOT MIX ASPHALT	ROW	RIGHT OF WAY		

GRADING PLAN GENERAL NOTES

1. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS ON APRIL 16, 2009, ALONG WITH SUPPLEMENTAL TOPOGRAPHY PREPARED BY MACKIE CONSULTANTS, DATED MAY 28, 2010, SEPTEMBER 23, 2010 AND FEBRUARY 1, 2011. CONTRACTOR SHALL FIELD CHECK EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION AND NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES.
2. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4-INCHES OF TOPSOIL AND SEEDED.
3. EXCAVATION AND EMBANKMENT SHALL BE PERFORMED PER THE DETAILED SPECIFICATIONS AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
4. ALL CURB ELEVATIONS ARE TO BE TOP OF CURB. ALL GUTTER ELEVATIONS ARE 0.5' BELOW TOP OF CURB ELEVATION UNLESS OTHERWISE NOTED.
5. GRADING INDICATED MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES WITH FIELD CONDITIONS PRIOR TO FINE GRADING.
6. ALL DRAIN TILES ENCOUNTERED DURING MASS GRADING/UTILITY WORK MUST BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. A RECORD MUST BE KEPT, OF ANY DRAIN TILE ENCOUNTERED, TO BE INCLUDED IN RECORD DRAWINGS.
7. OVERFLOW DRAINAGE ROUTES AND SWALES MUST BE INSTALLED AT THE ELEVATION AND LOCATION SHOWN.
8. DO NOT INTERRUPT DRAINAGE FROM OFF SITE DURING CONSTRUCTION OPERATIONS. PROVIDE TEMPORARY DRAINAGE DITCHES WHERE REQUIRED.
9. CONTRACTOR SHALL MEET EXISTING GROUND ELEVATIONS AT PROJECT LIMITS, UNLESS OTHERWISE NOTED.
10. USE DEPRESSED CURB ADJACENT TO CURB RAMP ACCESSIBLE TO THE DISABLED DETAIL AT ALL DEPRESSED CURB LOCATIONS ADJACENT TO WALKWAYS.

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

C-02

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

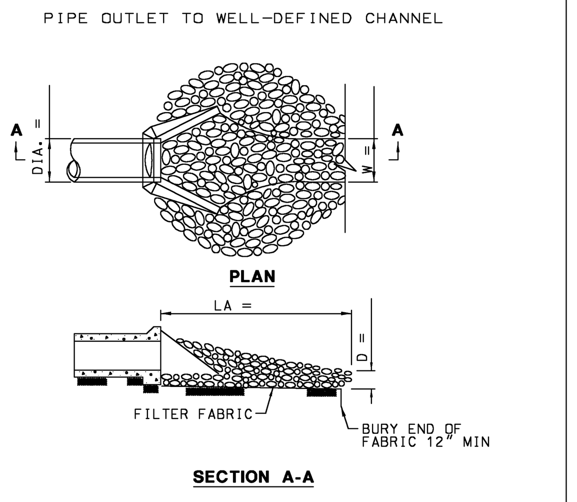
DOCUMENT TITLE
GRADING PLAN

DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WMI	A/E DWG. NO. C-02	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER
J241-101- C-02

REV. NO.

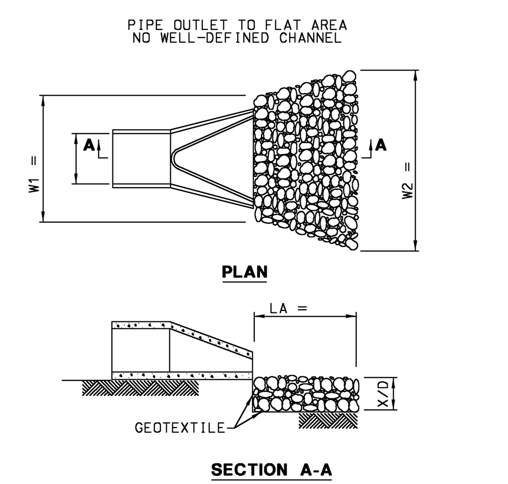
6/27/2011 1:28 PM
J:\Projects\Argonne\002182-98502-ESB\Drawings\C-02-Grading.dwg



NOTES:

1. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II, OR III.
2. THE ROCK RIPRAP SHALL MEET THE IDOT REQUIREMENTS FOR THE FOLLOWING GRADATION_________.
3. THE RIPRAP SHALL BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 61 LOOSE ROCK RIPRAP. THE ROCK MAY BE EQUIPMENT PLACED.

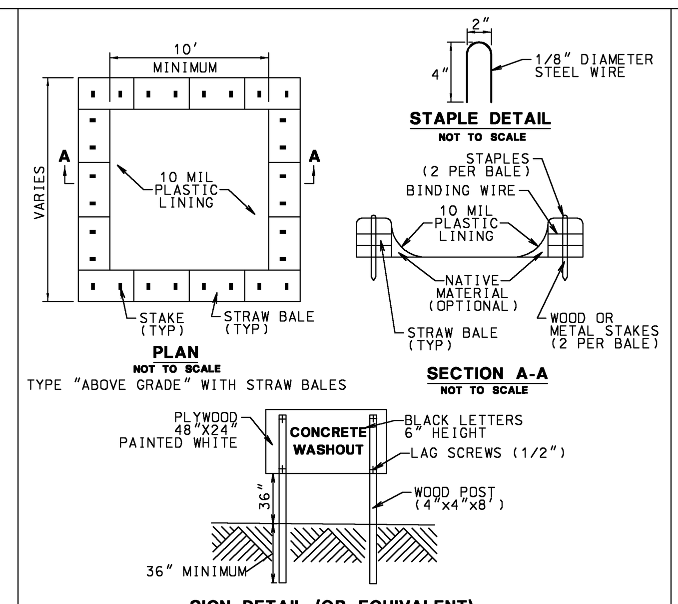
[1] - PIPE OUTLET TO CHANNEL
NOT TO SCALE



NOTES:

1. THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATIONS 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II, OR III.
2. THE ROCK RIPRAP SHALL MEET THE IDOT REQUIREMENTS FOR THE FOLLOWING GRADDATION: RR__________, QUALITY______________.
3. THE RIPRAP SHALL BE PLACED ACCORDING TO CONSTRUCTION SPECIFICATION 61 LOOSE ROCK RIPRAP. THE ROCK MAY BE EQUIPMENT PLACED.

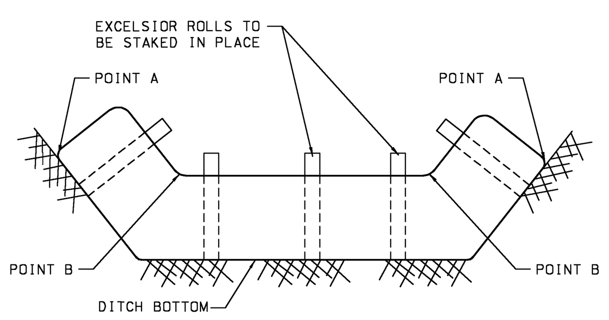
[2] - PIPE OUTLET TO FLAT AREA
NOT TO SCALE



NOTES:

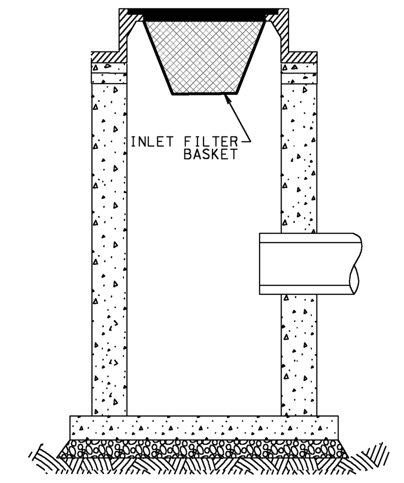
1. ACTUAL LAYOUT AND LOCATION TO BE DETERMINED IN FIELD.
2. PLASTIC (POLYETHYLENE) LINING SHOULD EXTEND OVER THE STRAW BALES.
3. STRAW BALES TO BE ENTRENCHED 4 INCHES INTO SOIL.

[3] - CONCRETE WASHOUT FACILITY
NOT TO SCALE



POINT A MUST BE HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER CHECK BEFORE FLOWING AROUND THE ENDS.

[4] - EXCELSIOR LOG DITCH CHECK DETAIL
NOT TO SCALE



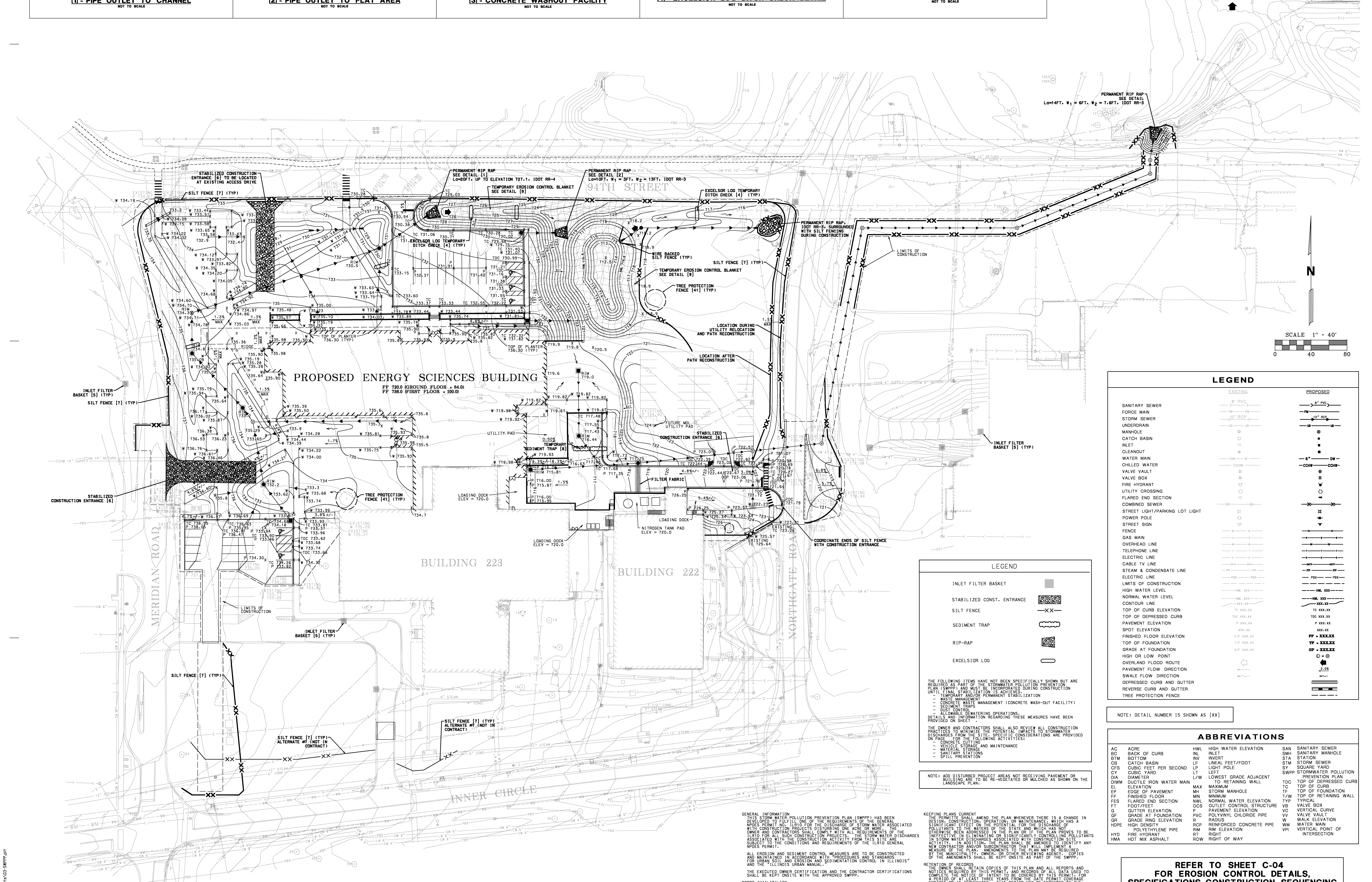
NOTES:

1. AN INLET FILTER BASKET SHALL BE INSTALLED IN ALL OPEN FRAME STRUCTURES AND SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. THE INLET BASKET SHALL BE CLEANED ON A WEEKLY BASIS AND AFTER ANY RAINFALL EVENT.
3. INLET FILTER BASKETS SHALL BE "CATCH-ALL" BY MAR-MAC MANUFACTURING OR APPROVED EQUAL.

[5] - INLET FILTER BASKET
NOT TO SCALE

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com
MACKIE CONSULTANTS



C-03

LEGEND	
INLET FILTER BASKET	
STABILIZED CONST. ENTRANCE	
SILT FENCE	—XX—
SEDIMENT TRAP	
RIP-RAP	
EXCELSIOR LOG	

THE FOLLOWING ITEMS HAVE NOT BEEN SPECIFICALLY SHOWN BUT ARE REQUIRED AS PART OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND MUST BE INCORPORATED DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
- TEMPORARY AND/OR PERMANENT STABILIZATION
- WASTE MANAGEMENT
- CONCRETE WASTE MANAGEMENT (CONCRETE WASH-OUT FACILITY)
- SEDIMENT TRAPS
- DUST CONTROL
- ALLOWABLE DEWATERING OPERATIONS.

DETAILS AND INFORMATION REGARDING THESE MEASURES HAVE BEEN PROVIDED ON SHEET .

THE OWNER AND CONTRACTORS SHALL ALSO REVIEW ALL CONSTRUCTION PRACTICES TO MINIMIZE THE POTENTIAL IMPACTS TO STORMWATER DISCHARGES FROM THE SITE. SPECIFIC CONSIDERATIONS ARE PROVIDED ON PAGE FOR THE FOLLOWING ACTIVITIES:
- CONCRETE CUTTING
- VEHICLE STORAGE AND MAINTENANCE
- MATERIAL STORAGE
- SANITARY STATIONS
- SPILL PREVENTION

NOTE: ADD DISTURBED PROJECT AREAS NOT RECEIVING PAVEMENT OR BUILDING ARE TO BE RE-VEGETATED OR MULCHED AS SHOWN ON THE LANDSCAPE PLAN.

GENERAL INFORMATION
THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN DEVELOPED TO FULFILL ONE OF THE REQUIREMENTS OF THE GENERAL NPDES PERMIT NO. ILR10 FOR THE DISCHARGE OF STORM WATER ASSOCIATED WITH CONSTRUCTION PROJECTS DISTURBING ONE ACRE OR MORE. THE OWNER AND CONTRACTORS SHALL COMPLY WITH ALL REQUIREMENTS OF THE ILR10 FOR ALL SUCH CONSTRUCTION PROJECTS. THE STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY FROM THIS SITE ARE SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE ILR10 GENERAL NPDES PERMIT.

ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH "PROCEDURES AND STANDARDS FOR URBAN SOIL AND EROSION AND SEDIMENTATION CONTROL IN ILLINOIS" AND THE "ILLINOIS URBAN MANUAL."

THE EXECUTED OWNER CERTIFICATION AND THE CONTRACTOR CERTIFICATIONS SHALL BE KEPT ONSITE WITH THE APPROVED SWPPP.

SWPPP AVAILABILITY
THE CONTRACTOR, ON BEHALF OF THE OWNER, SHALL RETAIN A COPY OF THE SWPPP AT THE CONSTRUCTION SITE FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION OR NOTICE OF TERMINATION.

KEEPING PLANS CURRENT
THE PERMITTE SHALL AMEND THE PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN OR IF THE PLAN PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SITE ACTIVITY. IN ADDITION, THE PLAN SHALL BE AMENDED TO IDENTIFY ANY NEW CONTRACTOR AND/OR SUBCONTRACTOR THAT WILL IMPLEMENT A MEASURE OF THE PLAN. AMENDMENTS TO THE PLAN MAY BE REQUIRED BY THE MUNICIPALITY, OWNER, OR OTHER REVIEWING AGENCY. COPIES OF THE AMENDMENTS SHALL BE KEPT ONSITE AS PART OF THE SWPPP.

RETENTION OF RECORDS
THE OWNER SHALL RETAIN COPIES OF THIS PLAN AND ALL REPORTS AND NOTICES REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE PERMIT COVERAGE EXPIRES OR IS TERMINATED. THIS PERIOD MAY BE EXTENDED BY THE REQUEST OF THE AGENCY AT ANY TIME. IN ADDITION, THE OWNER SHALL RETAIN A COPY OF THE PLAN REQUIRED BY THIS PERMIT AT THE CONSTRUCTION SITE FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

ILR10 NOTICE OF TERMINATION GUIDANCE
WHEN A SITE HAS BEEN FINALLY STABILIZED AND ALL STORM WATER DISCHARGES FROM CONSTRUCTION SITES THAT ARE AUTHORIZED BY THE ILR10 PERMIT ARE ELIMINATED, THE OWNER OF THE FACILITY MUST SUBMIT A COMPLETED NOTICE OF TERMINATION THAT IS SIGNED IN ACCORDANCE WITH PART II.F.1.d (SIGNATORY REQUIREMENTS) OF THE PERMIT.

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER	8" PVC	8" PVC
FORCE MAIN	FM	FM
STORM SEWER	12" RCP	12" RCP
UNDERDRAIN	UD	UD
MANHOLE		
CATCH BASIN		
INLET		
CLEANOUT		
WATER MAIN	DW 8"	8" DW
CHILLED WATER	CCHW	CCHW
VALVE VAULT		
VALVE BOX		
FIRE HYDRANT		
UTILITY CROSSING		
FLARED END SECTION		
COMBINED SEWER		
STREET LIGHT/PARKING LOT LIGHT		
POWER POLE		
STREET SIGN		
FENCE		
GAS MAIN	G	G
OVERHEAD LINE	OH	OH
TELEPHONE LINE	T	T
ELECTRIC LINE	E	E
CABLE TV LINE	CATV	CATV
STEAM & CONDENSATE LINE	PP	PP
ELECTRIC LINE	PBX	PBX
LIMITS OF CONSTRUCTION		
HIGH WATER LEVEL	HWL XXX	HWL XXX
NORMAL WATER LEVEL	NWL XXX	NWL XXX
CONTOUR LINE	XXX.XX	XXX.XX
TOP OF CURB ELEVATION	TC XXX.XX	TC XXX.XX
TOP OF DEPRESSED CURB	TDC XXX.XX	TDC XXX.XX
PAVEMENT ELEVATION	P XXX.XX	P XXX.XX
SPOT ELEVATION	XXX.XX	XXX.XX
FINISHED FLOOR ELEVATION	F/F XXX.XX	FF = XXX.XX
TOP OF FOUNDATION	T/F XXX.XX	TF = XXX.XX
GRADE AT FOUNDATION	G/F XXX.XX	GF = XXX.XX
HIGH OR LOW POINT		Ⓛ = Ⓗ
OVERLAND FLOOD ROUTE		
PAVEMENT FLOW DIRECTION		2.0%
SWALE FLOW DIRECTION		
DEPRESSED CURB AND GUTTER		
REVERSE CURB AND GUTTER		
TREE PROTECTION FENCE		

NOTE: DETAIL NUMBER IS SHOWN AS [XX]

ABBREVIATIONS

AC	ACRE	HWL	HIGH WATER ELEVATION	SAN	SANITARY SEWER
BC	BACK OF CURB	INL	INLET	SMH	SANITARY MANHOLE
BTM	BOTTOM	INV	INVERT	STA	STATION
CB	CATCH BASIN	LF	LINEAL FEET/FOOT	STM	STORM SEWER
CFS	CUBIC FEET PER SECOND	LP	LIGHT POLE	SY	SQUARE YARD
CY	CUBIC YARD	LT	LEFT	SWPP	STORMWATER POLLUTION PREVENTION PLAN
DIA	DIAMETER	L/W	LOWEST GRADE ADJACENT TO RETAINING WALL	TDC	TOP OF DEPRESSED CURB
DIWM	DUCTILE IRON WATER MAIN			TC	TOP OF CURB
EL	ELEVATION	MAX	MAXIMUM	TF	TOP OF FOUNDATION
EP	EDGE OF PAVEMENT	MH	STORM MANHOLE	T/W	TOP OF RETAINING WALL
FF	FINISHED FLOOR	MIN	MINIMUM	TYP	TYPICAL
FES	FLARED END SECTION	NWL	NORMAL WATER ELEVATION	VB	VALVE BOX
FT	FOOT/FEET	OCS	OUTLET CONTROL STRUCTURE	VC	VERTICAL CURVE
G	GUTTER ELEVATION	P	PAVEMENT ELEVATION	VV	VALVE VAULT
GF	GRADE AT FOUNDATION	PVC	POLYVINYL CHLORIDE PIPE	W	WALK ELEVATION
GR	GRADE RING ELEVATION	R	RADIUS	WM	WATER MAIN
HDPE	HIGH DENSITY POLYETHYLENE PIPE	RCP	REINFORCED CONCRETE PIPE	VPI	VERTICAL POINT OF INTERSECTION
		RIM	RIM ELEVATION		
HYD	FIRE HYDRANT	RT	RIGHT		
HMA	HOT MIX ASPHALT	ROW	RIGHT OF WAY		

REFER TO SHEET C-04 FOR EROSION CONTROL DETAILS, SPECIFICATIONS, CONSTRUCTION SEQUENCING AND GENERAL NOTES

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
EROSION CONTROL PLAN

DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-03	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101- C-03 REV. NO.

6/27/2011 1:17:51 PM
N:\1880\Engineering\Plots\03-SWPPP.plt

GENERAL INFORMATION

SITE DESCRIPTION

A. THIS PLAN COVERS THE CONSTRUCTION OF THE ENERGY SCIENCES BUILDING ALONG WITH ASSOCIATED PARKING LOT, SERVICE COURT, AND INFILTRATION BASIN. EXISTING BUILDING 223 UTILITIES WILL BE DEMOLISHED AND RELOCATED AND NEW UTILITY SERVICES WILL BE PROVIDED FOR THE ENERGY SCIENCES BUILDING.

B. THE FOLLOWING IS A DESCRIPTION OF THE INTENDED SEQUENCE OF CONSTRUCTION ACTIVITIES:
1 INSTALL PERIMETER SOIL EROSION AND SEDIMENT CONTROL MEASURES:
- SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION
- PERIMETER SILT FENCE
- CONSTRUCTION FENCING AROUND AREAS NOT TO BE DISTURBED
- STABILIZED CONSTRUCTION ENTRANCE
2. DEMOLITION OF EXISTING STRUCTURES
3. TREE REMOVAL WHERE NECESSARY (CLEAR & GRUB).
4. CONSTRUCT SEDIMENT TRAPPING DEVICES (SEDIMENT TRAPS, BASINS).
5. CONSTRUCT DETENTION FACILITIES AND OUTLET CONTROL STRUCTURE WITH OUTLET PROTECTION NOTED ON PLAN.
6. STRIP TOPSOIL, STOCKPILE TOPSOIL AND GRADE SITE.
7. TEMPORARILY STABILIZE TOPSOIL STOCKPILES (INCLUDING SEED AND SILT FENCE AROUND THE PERIMETER).
8. INSTALL STORM SEWER, SANITARY SEWER, WATER MAIN, CHILLED WATER, STEAM, AND CONDENSATE.
9. INSTALL INLET PROTECTION WITHIN ALL STORM STRUCTURES WITH "OPEN" GRATES.
9. PERMANENTLY STABILIZE DETENTION BASINS WITH SEED AND EROSION CONTROL BLANKET OR AS SHOWN ON THE APPROVED LANDSCAPE PLAN.
10. TEMPORARILY STABILIZE ALL AREAS INCLUDING AREAS THAT HAVE REACHED TEMPORARY GRADE WITHIN 7 DAYS OF LAST CONSTRUCTION ACTIVITY IN THAT AREA.
11. INSTALL ROADWAYS.
12. PERMANENTLY STABILIZE ALL OUTLET AREAS.
13. INSTALL STRUCTURES AND GRADE GRASSY AREAS.
14. PERMANENTLY STABILIZE GRASSY AREAS.
15. REMOVE ALL TEMPORARY CONTROL MEASURE AFTER SITE IS STABILIZED AND RE-SEED AREAS DISTURBED BY THEIR REMOVAL.

C. THE SITE HAS A TOTAL ACREAGE OF APPROXIMATELY 6.0 ACRES. CONSTRUCTION ACTIVITY WILL DISTURB APPROXIMATELY 6.0 ACRES OF THE SITE.

D. THE RUNOFF COEFFICIENT FOR THE SITE FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES IS: COMPOSITE "C" = 0.69. THE EXISTING SOILS FROM THE SITE MAINLY CONSIST OF SILTY CLAY SOILS.

E. PLEASE REFER TO PAGE C-03 FOR A MAP INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED BEFORE AND AFTER MAJOR GRADING ACTIVITIES, LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AND CONTROLS TO PREVENT OFFSITE SEDIMENT TRACKING, AREAS OF SOIL DISTURBANCE, THE LOCATION OF MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS IDENTIFIED IN THE PLAN, THE LOCATION OF AREAS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR, SURFACE WATERS (INCLUDING WETLANDS), AND LOCATIONS WHERE STORM WATER IS DISCHARGED TO A SURFACE WATER.

F. THE RECEIVING WATER OF THE PROPOSED DEVELOPMENT IS SAWMILL CREEK.

G. POTENTIAL SOURCES OF POLLUTION ASSOCIATED WITH THIS CONSTRUCTION ACTIVITY MAY INCLUDE:

- SEDIMENT FROM DISTURBED SOILS	- SANITARY STATIONS
- FUEL TANKS	- STAGING AREAS
- WASTE CONTAINERS	- CHEMICAL STORAGE AREAS
- OIL OR OTHER PETROLEUM PRODUCTS	- ADHESIVES
- TAR	- SOLVENTS
- DETERGENTS	- FERTILIZERS
- PAINTS	- RAW MATERIALS (I.E. BAGGED PORTLAND CEMENT)
- CONSTRUCTION DEBRIS	- LANDSCAPE WASTE
- CONCRETE AND CONCRETE TRUCKS	- LITTER

ADDITIONAL MEASURES REQUIRED:

1. STABILIZATION: STABILIZATION PRACTICES SHOULD BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED AS FOLLOWS:
A. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY IS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
B. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (EG. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURED DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
C. THE FOLLOWING PRACTICES ARE ACCEPTABLE STABILIZATION MEASURES:
- PERMANENT SEEDING: IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN.
- TEMPORARY SEEDING: MAY CONSIST OF SPRING OATS (100 LBS/ACRE) AND/OR WHEAT OR CEREAL RYE (150 LBS/ACRE).
- MULCHING
- GEOTEXTILES
- SODDING
- VEGETATIVE BUFFER STRIPS

THE APPROPRIATE STABILIZATION MEASURE SHALL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME THE CONSTRUCTION ACTIVITY HAS CEASED, INCLUDING BUT NOT LIMITED TO WEATHER CONDITIONS AND LENGTH OF TIME MEASURE MUST BE EFFECTIVE.

2. WASTE MANAGEMENT

NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT. ALL WASTE MATERIALS SHOULD BE COLLECTED AND STORED IN APPROVED RECEPTACLES. NO WASTES SHOULD BE PLACED IN ANY LOCATION OTHER THAN IN THE APPROVED CONTAINERS APPROPRIATE FOR THE MATERIALS BEING DISCARDED. THERE SHOULD BE NO LIQUID WASTES DEPOSITED INTO DUMPSTERS OR OTHER CONTAINERS WHICH MAY LEAK. RECEPTACLES WITH DEFICIENCIES SHOULD BE REPLACED AS SOON AS POSSIBLE AND THE APPROPRIATE CLEAN-UP PROCEDURE SHOULD TAKE PLACE, IF NECESSARY. CONSTRUCTION WASTE MATERIAL IS NOT TO BE BURIED ONSITE. WASTE DISPOSAL SHOULD COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS

ONSITE HAZARDOUS MATERIAL STORAGE SHOULD BE MINIMIZED AND STORED IN LABELED, SEPARATE RECEPTACLES FROM NON-HAZARDOUS WASTE. ALL HAZARDOUS WASTE SHOULD BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER.

3. CONCRETE WASTE MANAGEMENT

CONCRETE WASTE OR WASHOUT SHOULD NOT BE ALLOWED IN THE STREET OR ALLOWED TO REACH A STORM WATER DRAINAGE SYSTEM OR WATERCOURSE. A SIGN SHOULD BE POSTED AT EACH LOCATION TO IDENTIFY THE WASHOUT. TO THE EXTENT PRACTICABLE, CONCRETE WASHOUT AREAS SHOULD BE LOCATED A REASONABLE DISTANCE FROM A STORM WATER DRAINAGE INLET OR WATERCOURSE. CONCRETE WASHOUT AREAS SHOULD BE LOCATED AT LEAST 10 FEET BEHIND THE CURB, IF THE WASHOUT AREA IS ADJACENT TO A PAVED ROAD. A STABILIZED ENTRANCE THAT MEETS ILLINOIS URBAN MANUAL STANDARDS SHOULD BE INSTALLED AT EACH WASHOUT AREA.

THE CONTAINMENT FACILITIES SHOULD BE OF SUFFICIENT VOLUME TO COMPLETELY CONTAIN ALL LIQUID AND CONCRETE WASTE MATERIALS INCLUDING ENOUGH CAPACITY FOR ANTICIPATED LEVELS OF RAINWATER. THE DRIED CONCRETE WASTE MATERIAL SHOULD BE PICKED UP AND DISPOSED OF PROPERLY WHEN 75% CAPACITY IS REACHED. HARDENED CONCRETE CAN BE PROPERLY RECYCLED AS APPROVED BY THE MUNICIPALITY AND USED AGAIN ONSITE OR HAULED OFFSITE TO AN APPROPRIATE LANDFILL.

4. DEWATERING OPERATIONS
DURING DEWATERING/PUMPING OPERATIONS, ONLY UNCONTAMINATED WATER SHOULD BE ALLOWED TO DISCHARGE TO PROTECTED NATURAL AREAS, WATERS OF THE STATE, OR TO A STORM SEWER SYSTEM (IN ACCORDANCE WITH LOCAL PERMITS). INLET HOSES SHOULD BE PLACED IN A STABILIZED SUMP PIT OR FLOATED AT THE SURFACE OF THE WATER IN ORDER TO LIMIT THE AMOUNT OF SEDIMENT INTAKE. PUMPING OPERATIONS SHOULD BE DISCHARGED TO A STABILIZED AREA THAT CONSISTS OF AN ENERGY DISSIPATING DEVICE (I.E. STONE, SEDIMENT FILTER BAG, OR BOTH). WHEN NECESSARY, STABILIZED CONVEYANCE CHANNELS SHOULD BE INSTALLED TO DIRECT WATER TO THE DESIRED LOCATION. ADDITIONAL BMPS MAY BE REQUIRED AT THE OUTLET AREA AS REQUESTED BY THE MUNICIPALITY, OR OTHER REVIEWING AGENCY. REFER TO SECTION 01014 - EROSION AND SEDIMENT CONTROL - PART 1 GENERAL - DISPOSAL OF WATER FOR MORE INFORMATION.

5. DUST CONTROL

A WATER TRUCK OR OTHER APPROPRIATE METHOD SHALL BE USED ONSITE TO LIMIT THE AMOUNT OF DUST LEAVING THE SITE IF THE NEED ARISES PER ARGONNE DIRECTION. THE FOLLOWING LIST OF CONTROL MEASURES MAY BE IMPLEMENTED ONSITE TO LIMIT THE GENERATION OF DUST AS NEEDED:

- SPRINKLING/IRRIGATION	- VEGETATIVE COVER
- MULCH	- SPRAY-ON SOIL TREATMENTS
- TILLAGE	- STONE

6. OFF-SITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCE(S) SHOULD BE INSTALLED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ADJACENT ROADWAYS SHOULD BE SWEPT AS NEEDED, TO REDUCE EXCESS SEDIMENT, DIRT, OR STONE TRACKED FROM THE SITE. ACCUMULATED SEDIMENT AND STONE SHOULD BE REMOVED FROM THE STABILIZED ENTRANCE AS NEEDED. VEHICLES HAULING ERODIBLE MATERIAL TO AND FROM THE CONSTRUCTION SITE SHOULD BE COVERED WITH A TARP.

7. CONCRETE CUTTING

CONCRETE WASTE MANAGEMENT SHOULD BE IMPLEMENTED TO CONTAIN AND DISPOSE OF SAW-CUTTING SLURRIES. CONCRETE CUTTING SHOULD NOT TAKE PLACE DURING OR IMMEDIATELY AFTER A RAINFALL EVENT. WASTE GENERATED FROM CONCRETE CUTTING SHOULD BE CLEANED-UP AND DISPOSED INTO THE CONCRETE WASHOUT FACILITY AS DESCRIBED ABOVE.

8. VEHICLE STORAGE AND MAINTENANCE

WHEN NOT IN USE, VEHICLES UTILIZED IN THE DEVELOPMENT OPERATIONS OF THE SITE SHOULD BE STORED IN A DESIGNATED UPLAND AREA AWAY FROM ANY NATURAL OR CREATED WATERCOURSE, POND, DRAINAGE-WAY OR STORM DRAIN. WHENEVER POSSIBLE VEHICLE MAINTENANCE, FUELING, AND WASHING SHOULD OCCUR OFFSITE. IF ALLOWED ON-SITE; VEHICLE MAINTENANCE (INCLUDING BOTH ROUTINE MAINTENANCE AS WELL AS ON-SITE REPAIRS) SHOULD BE MADE WITHIN THE DESIGNATED AREA TO PREVENT THE MIGRATION OF MECHANICAL FLUIDS (OIL, ANTIFREEZE, ETC.) INTO WATERCOURSES, WETLANDS OR STORM DRAINS. DRIP PANS OR ABSORBENT PADS SHOULD BE USED FOR ALL VEHICLE AND EQUIPMENT MAINTENANCE ACTIVITIES THAT INVOLVE GREASE, OIL, SOLVENTS, OR OTHER VEHICLE FLUIDS. CONSTRUCTION VEHICLES SHOULD BE INSPECTED FREQUENTLY TO IDENTIFY ANY LEAKS; LEAKS SHOULD BE REPAIRED IMMEDIATELY OR THE VEHICLE SHOULD BE REMOVED FROM SITE. DISPOSE OF ALL USED OIL, ANTIFREEZE, SOLVENTS AND OTHER AUTOMOTIVE-RELATED CHEMICALS ACCORDING TO MANUFACTURER OR MSDS INSTRUCTIONS. CONTRACTORS SHOULD IMMEDIATELY REPORT SPILLS TO THE OWNER FOR PROPER REMEDIATION.

9. MATERIAL STORAGE

MATERIALS AND OR CONTAMINANTS SHOULD BE STORED IN A MANNER THAT MINIMIZES THE POTENTIAL TO DISCHARGE INTO STORM DRAINS OR WATERCOURSES. AN ONSITE AREA SHOULD BE DESIGNATED FOR MATERIAL DELIVERY AND STORAGE. ALL MATERIALS KEPT ONSITE SHOULD BE STORED IN THEIR ORIGINAL CONTAINERS WITH LEGIBLE LABELS, AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE. LABELS SHOULD BE REPLACED IF DAMAGED OR DIFFICULT TO READ. BERMED-OFF STORAGE AREAS ARE AN ACCEPTABLE CONTROL MEASURE TO PREVENT CONTAMINATION OF STORM WATER. MSDS SHEETS SHOULD BE AVAILABLE FOR REFERENCING CLEAN UP PROCEDURES. ANY RELEASE OF CHEMICALS OR CONTAMINANTS SHOULD BE IMMEDIATELY CLEANED UP AND DISPOSED OF PROPERLY. CONTRACTORS SHOULD IMMEDIATELY REPORT ALL SPILLS TO THE OWNER, WHO SHOULD NOTIFY THE APPROPRIATE AGENCIES, IF NEEDED.

TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS ONSITE, HAZARDOUS PRODUCTS SHOULD BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE-SEALABLE. THE ORIGINAL LABELS AND MSDS DATA SHOULD BE RETAINED ONSITE AT ALL TIMES. HAZARDOUS MATERIALS AND ALL OTHER MATERIAL ONSITE SHOULD BE STORED IN ACCORDANCE WITH MANUFACTURER OR MSDS SPECIFICATIONS. WHEN DISPOSING OF HAZARDOUS MATERIALS, FOLLOW MANUFACTURE'S OR LOCAL AND STATE RECOMMENDED METHODS.

6/27/2011 1:18:03 PM
N:\1880\Engineering\Plots\04-SWPPP-Details.plt

10. SANITARY STATIONS

TO THE EXTENT PRACTICABLE, PORT-A-POTTIES SHOULD BE LOCATED AT A MINIMUM 8 FEET BEHIND THE CURB AND GUTTER OF THE INTERNAL ROADS AND BE LOCATED IN AN AREA THAT DOES NOT DRAIN TO ANY PROTECTED NATURAL AREAS, WATERS OF THE STATE, OR STORM WATER STRUCTURES AND SHOULD BE ANCHORED TO THE GROUND TO PREVENT FROM TIPPING OVER. PORT-A-POTTIES LOCATED ON IMPERVIOUS SURFACES SHOULD BE PLACED ON TOP OF A SECONDARY CONTAINMENT DEVICE, OR BE SURROUNDED BY A CONTROL DEVICE (I.E. GRAVEL-BAG BERM).

11. SPILL PREVENTION
DISCHARGES OF A HAZARDOUS SUBSTANCE OR OIL CAUSED BY A SPILL (E.G., A SPILL OF OIL INTO A SEPARATE STORM SEWER OR WATERS OF THE STATE) ARE NOT AUTHORIZED BY THIS PERMIT. IF A SPILL OCCURS, NOTIFY THE OWNER IMMEDIATELY. THE CONSTRUCTION SITE SHOULD HAVE THE CAPACITY TO CONTROL, CONTAIN, AND REMOVE SPILLS IF THEY OCCUR. SPILLS SHOULD BE CLEANED IMMEDIATELY AFTER DISCOVERY IN ACCORDANCE WITH MSDS AND NOT BURIED ON SITE OR WASHED INTO STORM DRAINS OR WATERS OF THE STATE.

SPILLS IN EXCESS OF FEDERAL REPORTABLE QUANTITIES (AS ESTABLISHED UNDER 40 CFR PARTS 110 ,117, OR 302), SHOULD BE REPORTED TO THE NATIONAL RESPONSE CENTER BY CALLING (800) 424-8802. MSDS OFTEN INCLUDE INFORMATION ON FEDERAL REPORTABLE QUANTITIES FOR MATERIALS. SPILLS OF TOXIC OR HAZARDOUS MATERIALS SHOULD BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE. WHEN CLEANING UP A SPILL, THE AREA SHOULD BE KEPT WELL VENTILATED AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT SHOULD BE USED TO MINIMIZE INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
IN ADDITION TO PROPER WASTE MANAGEMENT, CONCRETE WASTE MANAGEMENT, CONCRETE CUTTING, VEHICLE STORAGE AND MAINTENANCE, MATERIAL STORAGE, AND SANITARY STATION PROTECTION, THE FOLLOWING MINIMUM PRACTICES SHOULD BE FOLLOWED TO REDUCE THE RISK OF SPILLS:
- ON-SITE VEHICLES SHOULD BE MONITORED FOR LEAKS AND SHOULD RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.
- PETROLEUM PRODUCTS SHOULD BE STORED IN TIGHTLY SEALED AND CLEARLY LABELED CONTAINERS.
- ALL PAINT CONTAINERS SHOULD BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHOULD BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS, AND SHOULD NOT BE DISCHARGED TO THE STORM SEWER.
- CONTRACTORS SHOULD FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL OF MATERIALS.

MAINTENANCE

THE FOLLOWING IS A DESCRIPTION OF PROCEDURES THAT SHOULD BE USED TO MAINTAIN, IN GOOD AND EFFECTIVE OPERATION CONDITIONS, VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE MEASURES IDENTIFIED IN THIS PLAN AND STANDARD SPECIFICATIONS.

STABILIZED CONSTRUCTION ENTRANCE: THE ENTRANCES SHOULD BE MAINTAINED TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC STREETS. MAINTENANCE INCLUDES TOP DRESSING WITH ADDITIONAL STONE AND REMOVING TOP LAYERS OF STONES AND SEDIMENT. THE SEDIMENT RUN-OFF ONTO THE PUBLIC RIGHT OF WAY SHOULD BE REMOVED IMMEDIATELY.

RIPRAP OUTLET PROTECTION: RIPRAP SHOULD BE INSPECTED FOR ANY SCOUR BENEATH THE RIPRAP OR FOR STONES THAT HAVE BEEN DISLODGED. SEDIMENT ACCUMULATION IN THE OUTFALL AREA SHOULD BE REMOVED AS NEEDED.

CONCRETE WASHOUT AREA: EXISTING FACILITIES SHOULD BE CLEANED OUT, OR NEW FACILITIES SHOULD BE CONSTRUCTED AND OPERATIONAL ONCE THE EXISTING WASHOUT IS 75% FULL. WASHOUTS SHOULD BE INSPECTED FREQUENTLY TO ENSURE THAT PLASTIC LININGS ARE INTACT AND SIDEWALLS HAVE NOT BEEN DAMAGED BY CONSTRUCTION ACTIVITIES. WHEN THE WASHOUT AREA IS ADJACENT TO A PAVED ROAD, THE PAVED ROAD SHOULD BE INSPECTED FOR ACCUMULATED CONCRETE WASTE. ANY ACCUMULATED CONCRETE WASTE ON THE ROAD, CURB, OR GUTTER SHOULD BE REMOVED AND PROPERLY DISPOSED.

EROSION CONTROL BLANKET: THE BLANKET AND STAPLES SHOULD BE INSPECTED FREQUENTLY AND SHALL BE INSTALLED TO THE ILLINOIS URBAN MANUAL, UNLESS OTHERWISE INSTRUCTED BY THE MANUFACTURER. EROSION OCCURRING UNDERNEATH THE BLANKET SHOULD BE BACK-FILLED AND SEEDED WITH THE APPROPRIATE SEED MIX. ADDITIONAL BMP'S MAY NEED TO BE INSTALLED TO REDUCE EROSION UNDER THE BLANKET.

SILT FILTER FENCE: SILT FENCES SHOULD BE INSPECTED REGULARLY FOR UNDERCUTTING WHERE THE FENCE MEETS THE GROUND, OVERTOPPING, AND TEARS ALONG THE LENGTH OF THE FENCE. DEFICIENCIES SHOULD BE REPAIRED IMMEDIATELY. REMOVE ACCUMULATED SEDIMENTS FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-HALF THE FENCE HEIGHT. DURING FINAL STABILIZATION, PROPERLY DISPOSE OF ANY SEDIMENT THAT HAS ACCUMULATED ON THE SILT FENCE. INSTANCES WHEN AREAS OF SILT FENCE CONTINUALLY FAIL, REPLACE SILT FENCE WITH ANOTHER BMP AS SEEN FIT.

CATCH BASIN AND INLET FILTERS: INLET FILTERS SHOULD BE INSPECTED FOR PROPER FILTERING. IF FILTER BAGS ARE USED, REMOVE SEDIMENT FROM THE FILTER BAGS WHEN 50% PERCENT OF THE STORAGE VOLUME HAS BEEN FILLED, UNLESS OTHERWISE INSTRUCTED BY THE MANUFACTURER. REMOVE TRASH AND DEBRIS DURING INSPECTIONS. ACCUMULATED MATERIAL IN THE FILTERS SHOULD BE DISPOSED PROPERLY. DO NOT PUNCTURE HOLES IN FILTERS IF PONDING OCCURS.

INSPECTIONS
THE CONTRACTOR SHALL DESIGNATE A QUALIFIED PERSONNEL TO BE RESPONSIBLE FOR SEDIMENT AND EROSION CONTROL OBSERVATION REPORTING. THIS QUALIFIED PERSONNEL SHALL MEET THE REQUIREMENTS NOTED IN THE ILR10 PERMIT CONDITIONS AND LOCAL CODES.
SITE OBSERVATIONS SHOULD OCCUR AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER, OR EQUIVALENT SNOWFALL. SITE OBSERVATION REPORTS SHOULD BE MAINTAINED ONSITE AS PART OF THE SWPPP.
EACH SITE OBSERVATION SHALL INCLUDE THE FOLLOWING COMPONENTS:
A. DISTURBED AREAS AND AREAS USED FOR THE STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE CHECKED FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY HAVE BEEN INSTALLED AND ARE OPERATING CORRECTLY. WHERE DISCHARGE POINTS ARE ACCESSIBLE, THEY SHOULD BE CHECKED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHOULD BE CHECKED FOR OFF-SITE SEDIMENT TRACKING. ALL PUMPING OPERATIONS AND ALL OTHER POTENTIAL NON-STORM WATER DISCHARGES SHOULD BE OBSERVED.
B. BASED ON THE RESULTS OF THE SITE OBSERVATION, THE DESCRIPTION OF POTENTIAL POLLUTANT SOURCES IDENTIFIED, AND THE POLLUTION PREVENTION MEASURES DESCRIBED IN THIS PLAN SHALL BE REVISED AS APPROPRIATE, AS SOON AS PRACTICABLE AFTER THE OBSERVATION. THE MODIFICATIONS, IF ANY, SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE PLAN WITHIN 7 CALENDAR DAYS FOLLOWING THE SITE OBSERVATION.
C. A REPORT SUMMARIZING THE SCOPE OF THE OBSERVATION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE OBSERVATION, THE DATE(S) OF THE OBSERVATION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PARAGRAPH B ABOVE SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE OF FINAL STABILIZATION OR PERMIT COVERAGE IS TERMINATED. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART VI.G (SIGNATORY REQUIREMENTS) OF THE ILR10 NPDES PERMIT.
D. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCY FIELD OPERATIONS SECTION OFFICE BY EMAIL AT EPA.SWNONCOMP@ILLINOIS.GOV, TELEPHONE, OR FAX WITHIN 24 HOURS OF ANY INCIDENCE OF NONCOMPLIANCE FOR ANY VIOLATION OF THE STORM WATER POLLUTION PREVENTION PLAN OBSERVED DURING A SITE OBSERVATION, OR FOR VIOLATIONS OF ANY CONDITION OF THE PERMIT. THE OWNER SHALL COMPLETE AND SUBMIT WITHIN 5 DAYS AN INCIDENCE OF NONCOMPLIANCE(ION) REPORT FOR ANY VIOLATION OF THE STORM WATER POLLUTION PREVENTION PLAN OBSERVED DURING AN INSPECTION CONDUCTED. SUBMISSION SHALL BE ON FORMS PROVIDED BY THE AGENCY AND INCLUDE SPECIFIC INFORMATION ON THE CAUSE OF NONCOMPLIANCE, ACTIONS WHICH WERE TAKEN TO PREVENT ANY FURTHER CAUSES OF NONCOMPLIANCE, AND A STATEMENT DETAILING ANY ENVIRONMENTAL IMPACT, WHICH MAY HAVE RESULTED FROM THE NONCOMPLIANCE.
E. ALL REPORTS OF NONCOMPLIANCE SHALL BE SIGNED BY A RESPONSIBLE AUTHORITY AS DEFINED IN PART VI.G OF THE ILR10 NPDES PERMIT (SIGNATORY REQUIREMENTS).
F. ALL REPORTS OF NONCOMPLIANCE SHALL BE MAILED TO THE AGENCY AT THE FOLLOWING ADDRESS:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION
1021 NORTH GRAND AVENUE EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

NON-STORM WATER DISCHARGES

EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER THAT MAY BE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH THE ACTIVITY ADDRESSED IN THIS PLAN, ARE DESCRIBED BELOW:

1. WATER MAIN FLUSHING
2. FIRE HYDRANT FLUSHING
3. WATERING FOR DUST CONTROL
4. IRRIGATION DRAINAGE FOR VEGETATIVE GROWTH FOR SEEDING, ETC.
5. UNCONTAMINATED GROUNDWATER

THE POLLUTION PREVENTION MEASURES, AS DESCRIBED BELOW, WILL BE IMPLEMENTED FOR NON-STORM WATER COMPONENTS OF THE DISCHARGE:

THE FIRE HYDRANT AND WATER MAIN SHOULD NOT BE FLUSHED DIRECTLY ON THE EXPOSED AREA OR SUBGRADE OF THE PAVEMENT. HOSES SHOULD BE USED TO DIRECT THE FLOW ONTO A STABILIZED AREA.

THE EROSION DUE TO IRRIGATION OF SEEDING SHALL BE CONSIDERED MINOR.

SECTION 01014 - EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

RELATED DOCUMENTS

THE GENERAL REQUIREMENTS, DIVISION 1, APPLY TO THE WORK SPECIFIED IN THIS SECTION.

EXCAVATING AND BACKFILLING IS INCLUDED IN DIVISION 31.

DESCRIPTION OF WORK

THE REQUIREMENTS OF THIS SECTION APPLY TO EARTHMOVING ACTIVITIES WHICH CREATE OR HAVE THE POTENTIAL TO CREATE ACCELERATED EROSION AND WHICH REQUIRE PLANNING AND IMPLEMENTATION OF EFFECTIVE SOIL CONSERVATION MEASURES. IT IS EXPECTED THAT EARTHMOVING ACTIVITIES WILL BE CONDUCTED IN CLOSE PROXIMITY TO SURFACE WATERS, WETLANDS, DRAINAGE DITCHES, OR THE LABORATORY'S STORM WATER SEWER SYSTEM. THUS, THE PURPOSE OF THESE REQUIREMENTS IS TO PREVENT, LIMIT, OR CONTROL ACCELERATED EROSION AND THE RESULTING SEDIMENTATION OF WATERS OF THE LABORATORY, COUNTY OF DUPAGE AND/OR STATE OF ILLINOIS.

CONTRACTORS EXECUTING THE WORK SHALL COMPLY WITH EROSION AND SEDIMENT CONTROL SPECIFICATIONS IN THE INTEREST OF PROTECTING WATERWAYS AND AIDING THE LABORATORY IN COMPLYING WITH THE SEDIMENT CONCENTRATION LIMITS OF DISCHARGED WATERS ALLOWED BY ITS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIRED BY THE CLEAN WATER ACT OF 1977 AND THE WATER QUALITY ACT OF 1987.

SPECIFICATIONS ARE CONSISTENT WITH THE PROCEDURES OUTLINED IN THE URBAN COMMITTEE OF THE ASSOCIATION OF ILLINOIS SOIL AND WATER CONSERVATION DISTRICTS MANUAL ENTITLED, "ILLINOIS PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL." CONTRACTORS ARE EXPECTED TO BE FAMILIAR WITH THIS DOCUMENT AND TO IMPLEMENT EROSION AND SEDIMENTATION CONTROLS ACCORDING TO THE PROCEDURES THAT IT DESCRIBES. THE U.S. ENVIRONMENTAL PROTECTION AGENCY MANUALS ENTITLED, "GUIDELINES FOR EROSION AND SEDIMENTATION CONTROL PLANNING AND IMPLEMENTATION" (EPA-R2-72-015) AND "PROCESSES, PROCEDURES, AND METHODS TO CONTROL POLLUTION RESULTING FROM ALL CONSTRUCTION ACTIVITY" (EPA-430/9-73-007) MAY BE CONSULTED FOR ADDITIONAL REFERENCE.

DEFINITIONS

THE FOLLOWING WORDS AND TERMS, WHEN USED IN THIS SECTION, SHALL HAVE THE FOLLOWING MEANINGS, UNLESS THE CONTEXT CLEARLY INDICATES OTHERWISE:

ACCELERATED EROSION - THE REMOVAL OF THE SURFACE OF THE LAND THROUGH THE COMBINED ACTION OF MAN'S ACTIVITIES AND THE NATURAL PROCESSES AT A GREATER RATE THAN WOULD OCCUR BECAUSE OF THE NATURAL PROCESS ALONE. SOIL EROSION IS USUALLY CAUSED BY THE FORCE OF RAIN WATER AND BY THE FORCE OF WATER FLOWING IN RILLS AND STREAMS.

DIVERSION RIDGE - A TEMPORARY RIDGE OF THE SOIL CONSTRUCTED AT THE TOP OF CUT OR FILL SLOPES TO DIVERT OVERLAND FLOW FROM SMALL AREAS AWAY FROM UNSTABILIZED SLOPES.

DIVERSION TERRACE - A DIVERSION CONSISTING OF AN EXCAVATED CHANNEL AND A CONSTRUCTED RIDGE THAT IS CONSTRUCTED UP SLOPE OF A WORK AREA FOR THE PURPOSE OF DIVERTING STORM WATER AWAY FROM THE UNPROTECTED SLOPE.

EARTHMOVING ACTIVITY - CONSTRUCTION OR OTHER ACTIVITY WHICH DISTURBS THE LAND SURFACE INCLUDING,

BUT NOT LIMITED TO, EXCAVATIONS, EMBANKMENTS, LAND DEVELOPMENT, SUBDIVISION DEVELOPMENT AND THE MOVING, DEPOSITING OR STORING OF SOIL, ROCK OR EARTH.

EMBANKMENT OR FILL - A DEPOSIT OF SOIL, ROCK OR OTHER MATERIAL PLACED BY MAN.

EROSION - THE NATURAL PROCESS BY WHICH THE LAND SURFACE IS WORN AWAY BY THE ACTION OF WATER OR WIND.

EXCAVATION - A CAVITY FORMED BY DIGGING, QUARRYING, UNCOVERING, DISPLACING, OR RELOCATION OF SOIL OR ROCK.

FILTER BERM - A TEMPORARY RIDGE OF GRAVEL OR CRUSHED ROCK CONSTRUCTED ACROSS A GRADED RIGHT-OF-WAY TO RETAIN SEDIMENT ON-SITE BY RETARDING AND FILTERING RUNOFF WHILE SIMULTANEOUSLY ALLOWING CONSTRUCTION TRAFFIC TO PROCEED ALONG THE RIGHT-OF-WAY.

INTERCEPTOR CHANNEL - A CHANNEL OR DIKE CONSTRUCTED ACROSS A SLOPE FOR THE PURPOSE OF INTERCEPTING STORM WATER, REDUCING THE VELOCITY OF FLOW, AND DIVERTING IT TO OUTLETS WHERE IT CAN BE DISPOSED.

LAND DEVELOPMENT - THE CONSTRUCTION, INSTALLATION, PLACEMENT, OR BUILDING OF SUBSTRUCTURES, SUPERSTRUCTURES, UTILITY LINES, ROADS, PARKING AREAS OR ANY OTHER SIMILAR ACTIVITY.

SEDIMENT - SOILS OR OTHER SURFICIAL MATERIALS TRANSPORTED BY SURFACE WATER AS A PRODUCT OR EROSION.

SEDIMENTATION - THE PROCESS THAT TAKES PLACE WHEN THE VELOCITY OF WATER IN WHICH SOIL PARTICLES ARE SUSPENDED IS SLOWED SUFFICIENTLY TO ALLOW THE PARTICLES TO SETTLE IN PONDS, STREAMS, OR RIVERS.

SEDIMENT RETENTION BASIN OR POND - A TEMPORARY DRAIN AND/OR BASIN THAT TRAPS AND STORES SEDIMENT THAT IS PRODUCED ON EXPOSED AREAS AND TRANSPORTED TO THE STRUCTURE BY STORM RUNOFF.

SILT FENCE - A TEMPORARY CONTROL CONSISTING OF FILTER FABRIC STRETCHED ACROSS WOOD OR METAL POSTS. THE FENCE IS INSTALLED ALONG THE DOWNSLOPE OR SIDESLOPE PERIMETER OF A DISTURBED AREA. RUNOFF PASSES THROUGH THE OPENINGS IN THE FABRIC, WHILE SEDIMENT IS TRAPPED ON THE UPHILL SIDE.

STABILIZATION - THE PROPER PLACING, GRADING, AND/OR COVERING OF SOIL, ROCK OR EARTH TO ENSURE THEIR RESISTANCE TO EROSION, SLIDING OR OTHER MOVEMENT.

STRAW BALE DIVERSIONS - TEMPORARY BERMS OR OTHER BARRIERS CONSTRUCTED OF BALED STRAW TO RETAIN SEDIMENT ON-SITE BY RETARDING AND FILTERING STORM RUNOFF.

DISPOSAL OF WATER

WATER PUMPED OR DRAINED FROM AN EXCAVATION SITE SHALL BE DISPOSED AS SPECIFIED BELOW OR AS OTHERWISE DIRECTED BY THE LABORATORY WITH PRECAUTIONS TAKEN TO LIMIT ACCELERATED EROSION AND SEDIMENTATION AND WITHOUT DAMAGE TO ADJACENT PROPERTY, TO STREETS, OR TO OTHER WORK UNDER CONSTRUCTION.

THE METHOD OF WATER DISPOSAL FROM AN EXCAVATION SHALL BE BASED ON THE CONTENT OF THE REMOVED WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SEDIMENT LEVEL PRESENT IN THE REMOVED WATER. THE CONTRACTOR SHALL SUBMIT THE METHOD IT INTENDS TO USE TO DETERMINE THE SEDIMENT LEVEL IN THE EROSION AND SEDIMENTATION CONTROL PLAN. THE LABORATORY MAY ALSO DETERMINE SEDIMENT LEVELS INDEPENDENTLY FROM THE CONTRACTOR. WATER REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISCHARGED THROUGH PIPES OR OTHER PROPOSED METHOD APPROVED BY THE LABORATORY.

IF LESS THAN OR EQUAL TO 30 MILLIGRAMS PER LITER OF SEDIMENT IS PRESENT IN THE REMOVED WATER, PUMP THE WATER TO STORM SEWERS DESIGNATED BY THE LABORATORY. IF GREATER THAN 30 MILLIGRAMS PER LITER OF SEDIMENT IS PRESENT IN REMOVED WATER, THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL DESCRIBE THE METHOD THAT WILL BE USED TO REMOVE EXCESS SEDIMENT. THE MAIN METHODS TO REMOVE SEDIMENT INCLUDE SEDIMENT BASINS, TRAPS, AND FILTERS. AFTER REMOVAL OF THE EXCESS SEDIMENT, WATER MAY BE PUMPED TO THE STORM SEWER SYSTEM.

NO WATER SHALL BE DISCHARGED TO SANITARY OR LABORATORY SEWERS, AND WATER SHALL NOT BE DISCHARGED ONTO STREETS WITHOUT ADEQUATE PROTECTION OF THE SURFACE AT THE POINT OF DISCHARGE.

PERMISSION TO USE STORM SEWERS OR DRAINS FOR WATER DISPOSAL PURPOSES SHALL BE OBTAINED FROM THE LABORATORY THROUGH THE PROJECT MANAGER. COMPLIANCE WITH APPLICABLE REQUIREMENTS AND COSTS FOR SUCH USE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOT CAUSE FLOODING BY OVERLOADING OR BLOCKING THE FLOW IN THE DRAINAGE FACILITIES, AND HE SHALL LEAVE THE FACILITIES UNRESTRICTED AND AS CLEAN AS ORIGINALLY FOUND. DAMAGE TO FACILITIES SHALL BE REPAIRED OR RESTORED AS DIRECTED BY THE LABORATORY AT NO COST TO THE LABORATORY.

EROSION AND SEDIMENTATION CONTROL

ALL EARTHMOVING ACTIVITIES SHALL BE CONDUCTED SO AS TO PREVENT OR LIMIT ACCELERATED EROSION AND THE RESULTING SEDIMENTATION. THE FOLLOWING PRINCIPLES SHALL BE IMPLEMENTED TO LIMIT EROSION AND SEDIMENTATION:

KEEP DISTURBED AREAS SMALL - AS MUCH NATURAL COVER AS POSSIBLE SHALL BE RETAINED AND PROTECTED. AREAS VULNERABLE TO EROSION (E.G., AREAS WHERE VEGETATIVE COVER HAS BEEN REMOVED, SOILS CONTAINING HIGH PROPORTIONS OF SILT AND VERY FINE SAND, AREAS WITH LONG, STEEP, AND NARROW SLOPES, AND PROJECTS CONDUCTED WHEN THE FREQUENCY, INTENSITY, AND DURATION OF STORMS ARE HIGH (IN ILLINOIS, 80% OF EROSIVE RAINS OCCUR FROM MAY 1 TO OCTOBER 1)) SHALL BE DISTURBED AT THE MINIMUM. EARTHMOVING ACTIVITIES SHALL BE PLANNED IN SUCH A MANNER AS TO MINIMIZE THE AREAL EXTENT OF DISTURBED LAND AND THE AMOUNT OF TIME THAT IT IS LEFT EXPOSED. THE PLAN SHALL BE PHASED IN WORKABLE UNITS AND IN A CONSTRUCTION SEQUENCE IN WHICH ONLY THE AREA ACTIVELY BEING DEVELOPED IS EXPOSED. ALL OTHER AREAS MUST HAVE A GOOD COVER OF VEGETATION OR MULCH.

STABILIZE DISTURBED AREAS - MECHANICAL, STRUCTURAL, OR VEGETATIVE METHODS SHALL BE USED TO STABILIZE DISTURBED AREAS. IN SOME CASES A COMBINATION OF METHODS CAN BE USED TO LIMIT SOIL EROSION.

KEEP RUNOFF VELOCITIES LOW - REMOVAL OF EXISTING VEGETATIVE COVER AND THE RESULTING INCREASE IN IMPERMEABLE SURFACE DURING DEVELOPMENT INCREASES BOTH THE VOLUME AND VELOCITY OF RUNOFF. TO HELP MINIMIZE VELOCITY INCREASE, SHORT SLOPES AND LOW GRADIENTS SHALL BE UTILIZED AND NATURAL VEGETATIVE COVER SHALL BE PRESERVED WHENEVER POSSIBLE.

PROTECT DISTURBED AREAS FROM STORM WATER RUNOFF - PROTECTIVE MEASURES SHALL BE UTILIZED TO PREVENT WATER FROM ENTERING AND RUNNING OVER DISTURBED AREAS.

RETAIN SEDIMENT WITHIN THE SITE BOUNDARIES - SEDIMENT CAN BE RETAINED BY TWO METHODS: FILTERING RUNOFF AS IT FLOWS AND DETAINING SEDIMENT-LADEN RUNOFF FOR A PERIOD OF TIME SO THAT THE SOIL PARTICLES SETTLE OUT. ONE OR BOTH OF THESE METHODS SHALL BE IMPLEMENTED ON-SITE.

IMPLEMENT A THOROUGH MAINTENANCE AND FOLLOW-UP PROGRAM - THIS IS VITAL TO THE OVERALL SUCCESS OF THE PREVIOUS PRINCIPLES. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPLACED WHEN NECESSARY THROUGHOUT THE DURATION OF THE PROJECT. CONTROL PRACTICES SHALL BE INSPECTED AT THE END OF EACH DAY TO MAKE SURE THAT THEY ARE WORKING PROPERLY.

USUALLY, THESE PRINCIPLES ARE INTEGRATED INTO A SYSTEM OF VEGETATIVE MEASURES AND STRUCTURAL MEASURES ALONG WITH MANAGEMENT TECHNIQUES TO DEVELOP A PLAN TO PREVENT EROSION AND CONTROL SEDIMENTATION. IN MOST CASES, A COMBINATION OF LIMITED GRADING, LIMITED TIME OF EXPOSURE, AND A JUDICIOUS SELECTION OF EROSION CONTROL PRACTICES AND SEDIMENT-TRAPPING FACILITIES WILL PROVE TO BE THE MOST PRACTICAL METHOD OF CONTROLLING EROSION AND THE ASSOCIATED PRODUCTION AND TRANSPORT OF SEDIMENT.

EROSION AND SEDIMENTATION CONTROL PLAN

AN EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE PREPARED AND SUBMITTED TO THE PROJECT MANAGER WITHIN 7 DAYS OF CONTRACT APPROVAL. THE APPROVED PLAN MUST BE AVAILABLE AT THE SITE OF THE ACTIVITY.

THE PLAN SHALL BE TAILORED TO THE COMPLEXITY OF THE PROJECT TO CONSIDER ALL FACTORS WHICH CONTRIBUTE TO EROSION AND SEDIMENTATION INCLUDING, BUT NOT LIMITED TO, THE EXISTING TOPOGRAPHY OF THE SITE AND ADJACENT AREAS; TYPES, DEPTH, SLOPE AND AREAL EXTENT OF THE SOIL; THE PROPOSED ALTERATION TO THE AREA; AMOUNT OF RUNOFF EXPECTED FROM THE PROJECT AREA; THE STAGING OF EARTHMOVING ACTIVITIES; DESCRIPTION OF INTERIM AND PERMANENT STABILIZATION PRACTICES TO BE USED; LOCATION, TYPE, AND CONFIGURATION OF TEMPORARY CONTROL MEASURES AND FACILITIES FOR USE DURING EARTHMOVING; LOCATION, TYPE, AND CONFIGURATION OF A PERMANENT PROGRAM FOR THE CONTROL FACILITIES FOR LONG TERM PROTECTION; AND A MAINTENANCE PROGRAM FOR THE CONTROL FACILITIES INCLUDING DISPOSAL OF MATERIALS REMOVED FROM THE CONTROL FACILITIES OR PROJECT AREA.

THE PLAN SHALL DESCRIBE, IN DETAIL, THE CONTROLS TO BE USED DURING ALL PHASES OF THE PROJECT AND ITS EARTHMOVING ACTIVITIES TO ENSURE THAT CHANGING EROSION AND SEDIMENTATION CONTROL NEEDS ARE ADDRESSED THROUGHOUT THE DURATION OF THE PROJECT.

THE PLAN MUST BE APPROVED BY THE PROJECT MANAGER BEFORE A DIGGING PERMIT CAN BE ISSUED AND BEFORE PAYMENTS CAN BE MADE. PRIOR TO COMMENCING EXCAVATION AND CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, THE LABORATORY'S CONTRACT DESIGN PLANS SHOWING THE METHODS TO PREVENT ACCELERATED EROSION AND SEDIMENTATION. BY APPROVING THE PLAN, THE LABORATORY NEITHER ACCEPTS ANY RESPONSIBILITY FOR THE ADEQUACY THEREOF NOR FOR ANY DAMAGES TO PUBLIC OR PRIVATE PROPERTY RESULTING THEREFROM, SUCH RESPONSIBILITIES REMAINING WITH THE CONTRACTOR.

THE FOLLOWING BASIC CRITERIA SHALL GUIDE THE PREPARATION OF THE PLAN REGARDLESS OF THE SCALE OR COMPLEXITY OF THE PROJECT.

STABILIZATION OF DENUDED AREAS AND SOIL STOCKPILES - PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADING OF THE SITE OR A PORTION OF THE SITE. SOIL STABILIZATION SHALL ALSO BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN 14 DAYS. SOIL STABILIZATION MEASURES PROTECT SOIL FROM THE EROSIVE FORCES OF RAIN AND FLOWING WATER. APPLICABLE MEASURES INCLUDE ESTABLISHING VEGETATION, MULCHING, AND EARLY APPLICATION OF A GRAVEL BASE ON AREAS TO BE PAVED. THE MEASURES SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND ESTIMATED DURATION OF USE. SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES TO PREVENT SOIL LOSS.

ESTABLISHMENT OF PERMANENT VEGETATION - A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL BE CONSIDERED ESTABLISHED WHEN GROUND COVER IS MATURE ENOUGH TO CONTROL SOIL EROSION SATISFACTORILY AND TO SURVIVE SEVERE WEATHER CONDITIONS.

PROTECTION OF ADJACENT PROPERTIES - PROPERTIES ADJACENT TO THE SITE OF DISTURBED LAND SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY PRESERVING A VEGETATED BUFFER STRIP AROUND THE LOWER PERIMETER OF THE LAND DISTURBANCE, BY INSTALLING PERIMETER CONTROLS SUCH AS SEDIMENT BARRIERS, FILTERS OR DIKES, OR SEDIMENT BASINS, OR BY A COMBINATION OF SUCH MEASURES. VEGETATED FILTER STRIPS MAY BE USED ALONE ONLY WHERE SHEET RUNOFF IS EXPECTED AND SHALL BE AT LEAST 15 FEET WIDE. IF A VEGETATIVE FILTER STRIP IS INEFFECTIVE ADDITIONAL PERIMETER CONTROLS MUST BE PROVIDED.

TIMING AND STABILIZATION OF SEDIMENT TRAPPING MEASURES - SEDIMENT BASINS, DIVERSIONS, SEDIMENT BARRIERS AND OTHER MEASURES INSTALLED TO TRAP SEDIMENT ON-SITE SHALL BE CONSTRUCTED AS A FIRST STEP IN GRADING AND PRIOR TO UPSLOPE LAND DISTURBANCE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS MUST BE SEEDED AND MULCHED WITHIN 15 DAYS OF INSTALLATION.

SEDIMENT BASINS OR TRAPS - STORM WATER RUNOFF CONTAINING SEDIMENT FROM DRAINAGE AREAS SHALL PASS THROUGH A SEDIMENT BASIN OR OTHER SEDIMENT TRAPPING UNIT.

SEDIMENT BASINS OR TRAPS - STORM WATER RUNOFF CONTAINING SEDIMENT FROM DRAINAGE AREAS SHALL PASS THROUGH A SEDIMENT BASIN OR OTHER SEDIMENT TRAPPING UNIT.

CUT AND FILL SLOPES - CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER WHICH WILL MINIMIZE EROSION. THE DESIGN SHALL CONSIDER THE LENGTH AND STEEPNESS OF THE SLOPE, THE SOIL TYPE, UPSLOPE DRAINAGE AREA, GROUNDWATER CONDITIONS AND OTHER APPLICABLE FACTORS. SLOPES WHICH ERODE EXCESSIVELY THE FIRST YEAR, SHALL BE FURTHER STABILIZED.

STORM WATER MANAGEMENT - PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE WORK AREA SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORM WATER RUNOFF. CONCENTRATED STORM WATER RUNOFF LEAVING THE SITE SHALL BE DISCHARGED DIRECTLY INTO A WELL-DEFINED NATURAL OR MAN-MADE OFF-SITE RECEIVING CHANNEL OR PIPE. IF NO OFF-SITE CHANNEL OR PIPE EXISTS, THE STORM WATER SHALL BE DETAINED ON SITE IN A RETENTION/DETENTION UNIT.

STABILIZATION OF WATERWAYS AND OUTLETS - ON-SITE STORM WATER CONVEYANCE CHANNELS SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND THE EXPECTED VELOCITY OF FLOW FROM A 10-YEAR FREQUENCY STORM WITHOUT EROSION. STABILIZATION TO PREVENT EROSION SHOULD ALSO BE PROVIDED AT THE OUTLETS OF ALL PIPES AND PAVED CHANNELS.

STORM SEWER INLET PROTECTION - STORM SEWER INLETS RELATED TO CONSTRUCTION SHALL BE DESIGNED SO THAT SEDIMENT-LADEN WATER ENTERS AFTER IT IS TREATED TO REMOVE SEDIMENT.

SOLIDS SEPARATION - RUNOFF SHALL NOT BE DISCHARGED TO WATERS OF THE LABORATORY, COUNTY, OR STATE WITHOUT MEANS TO PREVENT SEDIMENTATION.

WORKING IN OR CROSSING WATERCOURSES - CONSTRUCTION VEHICLES SHALL BE KEPT OUT OF WATERCOURSES TO THE EXTENT POSSIBLE. WHEN THIS IS NOT POSSIBLE, PRECAUTIONS SHOULD BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION. THE CHANNEL, INCLUDING BED AND BANKS, SHALL BE STABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED. WHEN A FLOWING WATERCOURSE MUST BE CROSSED REGULARLY DURING CONSTRUCTION, TEMPORARY STREAM CROSSING SHOULD BE PROVIDED.

MUD AND DUST CONTROL - THE TWO MOST COMMONLY USED MEASURES ARE CONSTRUCTION ENTRANCE STABILIZATION AND DUST AND TRAFFIC CONTROL. WHEREVER CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED ROADS, A STONE STABILIZED PAD SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) BY RUNOFF OR VEHICLE TRACKING ONTO THE PAVED SURFACE. LARGE QUANTITIES OF DUST GENERATED BY HEAVY CONSTRUCTION ACTIVITIES SHALL BE CONTROLLED BY PHASING PROJECT ACTIVITIES TO MINIMIZE THE AMOUNT OF SOIL EXPOSED AND BY USING DUST SUPPRESSANTS DURING DRY WEATHER CONDITIONS.

DISPOSITION OF TEMPORARY MEASURES - TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. COLLECTED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT EROSION AND SEDIMENTATION.

MAINTENANCE - THE PLAN SHALL CONTAIN INFORMATION COVERING THE WORK PROGRAM, MATERIALS, AND EQUIPMENT TO BE USED, PARTIES RESPONSIBLE FOR THE MAINTENANCE, AND THE ANTICIPATED SCHEDULE OF THE MAINTENANCE PROGRAM. IN THE EVENT THAT FACILITIES ARE DAMAGED OR INEFFECTIVE, THE CONTRACTOR WILL PROMPTLY REPAIR OR REPLACE THEM.

THE CONTRACTOR'S PLAN SHALL INCORPORATE APPROPRIATE CONTROL FACILITIES DESCRIBED IN CHAPTER 6, DESIGN PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL MANUAL (JULY, 1988) UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT OTHER FACILITIES WILL PREVENT ACCELERATED EROSION AND SEDIMENTATION.

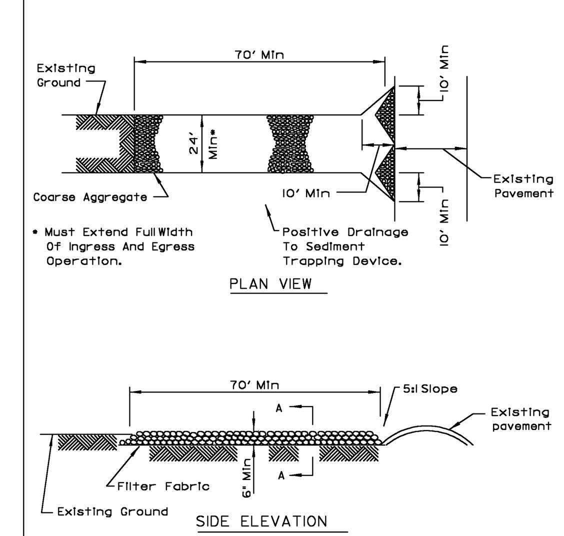
RESTORATION

STABILIZATION - UPON COMPLETION OF THE PROJECT, ALL AREAS THAT WERE DISTURBED SHALL BE STABILIZED BY THE CONTRACTOR SO THAT ACCELERATED EROSION WILL BE PREVENTED.

INTERIM CONTROL MEASURES - ANY EROSION AND SEDIMENTATION CONTROL FACILITY REQUIRED OR NECESSARY TO PROTECT AREAS FROM EROSION DURING THE STABILIZATION PERIOD SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL STABILIZATION IS COMPLETED.

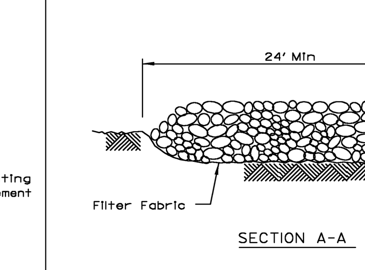
FINAL MEASURES - UPON COMPLETION OF STABILIZATION, ALL UNNECESSARY OR UNUSABLE CONTROL FACILITIES SHALL BE REMOVED WITHIN 30 DAYS. THE AREAS SHALL BE GRADED, AND THE SOILS SHALL BE STABILIZED BY THE CONTRACTOR IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

[6] - STABILIZED CONSTRUCTION ENTRANCE PLAN



REFERENCE Project / Designed ___ Date ___ / Checked ___ Date ___ / Approved ___ Date ___ — U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS — STANDARD DWG. NO. IL-630 SHEET 1 OF 2 DATE 8-18-94

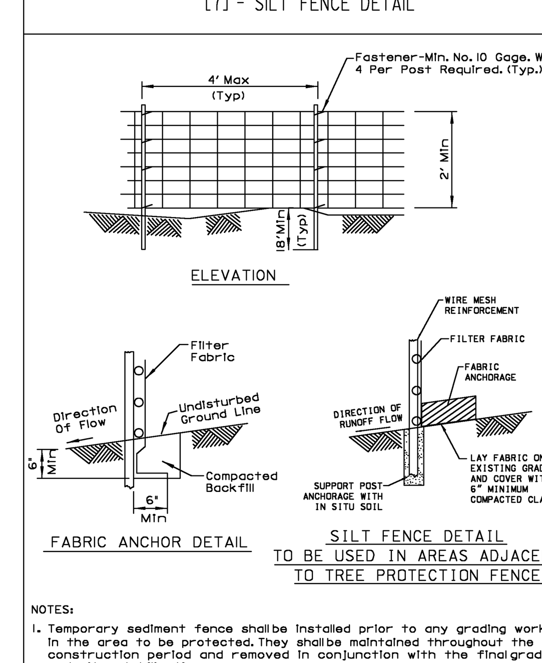
STABILIZED CONSTRUCTION ENTRANCE PLAN



NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or V and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse to construction specification 25 ROCKFILL using placement Method I and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufactures specifications.

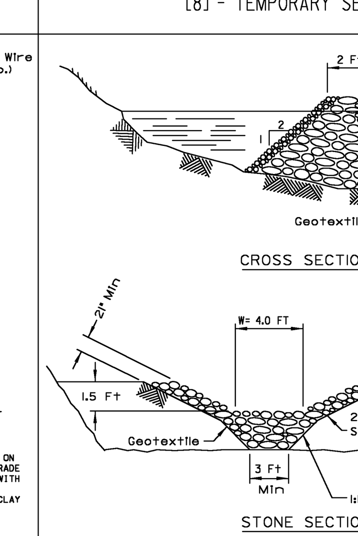
REFERENCE Project / Designed ___ Date ___ / Checked ___ Date ___ / Approved ___ Date ___ — U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS — STANDARD DWG. NO. IL-630 SHEET 2 OF 2 DATE 8-18-94

[7] - SILT FENCE DETAIL



NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements as set forth by AASHTO M--288-00
3. Fence post shall be either standard steel post or wood post with a minmum sectional area 3.0 sq.in.

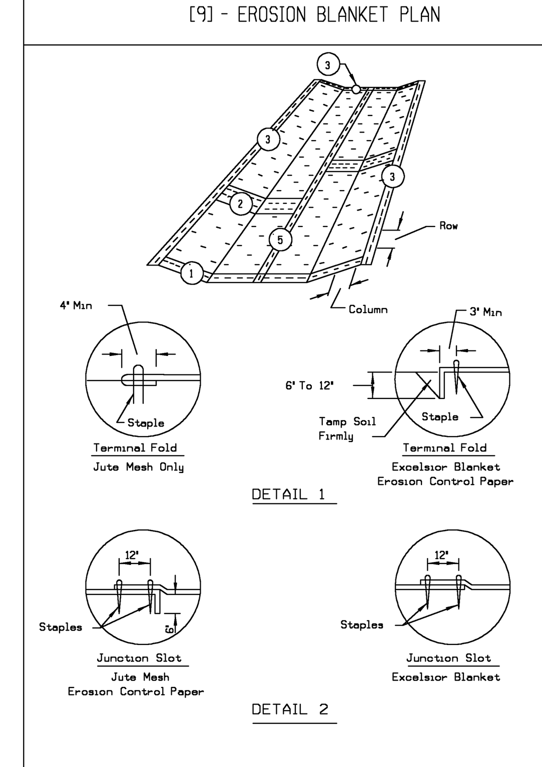
[8] - TEMPORARY SEDIMENT TRAP



NOTES:
1. If the sediment pool is formed or enlarged the side slope will be 2:1 or flatter.
2. The fill shall be constructed using IDOT RR-4 stone size. A 1' layer of IDOT CA-2 should be placed on the inside face to reduce the flow rate.
3. The rock will be placed according to construction specification 25 ROCKFILL. Placement will be by Method I and compaction will be class III .
4. The geotextile shall meet the requirements in material specification 592 GEOTEXTILE table I or 2, class I, II or IV.

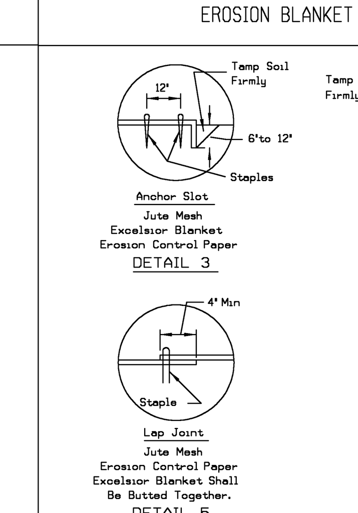
REFERENCE Project / Designed ___ Date ___ / Checked ___ Date ___ / Approved ___ Date ___ — U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE ILLINOIS

[9] - EROSION BLANKET PLAN



REFFERENCE Project / Designed ___ Date ___ / Checked ___ Date ___ / Approved ___ Date ___ — NRCS Natural Resources Conservation Service — STANDARD DWG. NO. IL-530 SHEET 1 OF 2 DATE 5-24-94

EROSION BLANKET PLAN



NOTES:
1. On erosion control paper, check slots, in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
2. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x 225' roll of material and 125 staples are required per 4'x 150' roll of material.
3. Erosion control material shall be placed loosely over ground surface. Do not stretch.
4. All terminal ends and transverse laps shall be stapled at approximately 12" intervals.

Erosion Control Blanket:
1. North American Green - SC 150BN
5401 St. Wendel-Cynthiana Road, Poseyville, IN 47633
Phone: 800-772-2040
2. American Excelsior - Curlex II
1111 N. DuPage Ave, Lombard, IL 60148
Phone: 630-627-3200
3. Propex Geosynthetics - Landlok CS2
6025 Lee Highway, Suite 425, PO Box 2278, Chattanooga, TN 37422
Phone: 800-621-1273

REFFERENCE Project / Designed ___ Date ___ / Checked ___ Date ___ / Approved ___ Date ___ — NRCS Natural Resources Conservation Service — STANDARD DWG. NO. IL-530 SHEET 2 OF 2 DATE 3-1-95

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com
MACKIE CONSULTANTS

C-04

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
EROSION CONTROL DETAILS AND SPECIFICATIONS

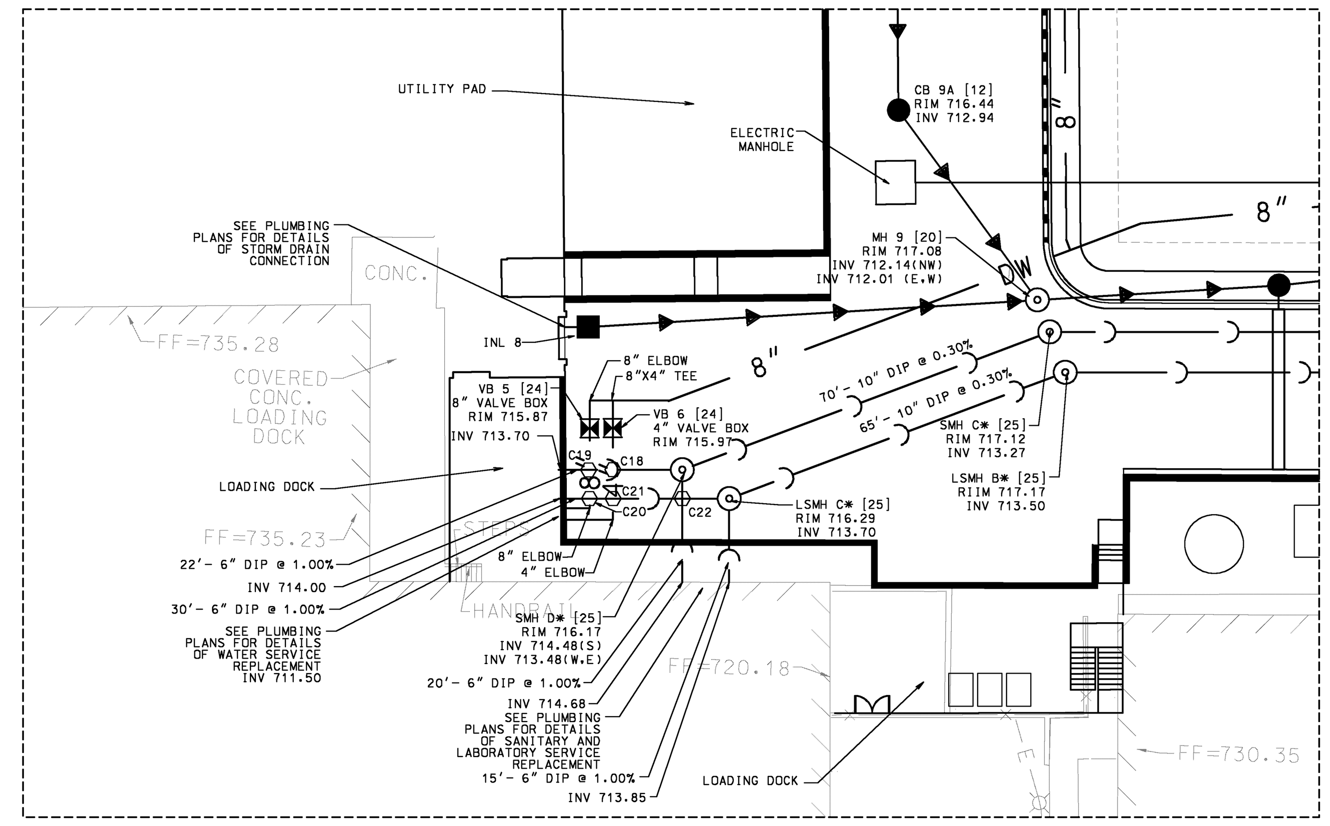
DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-04	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101- C-04 REV. NO.

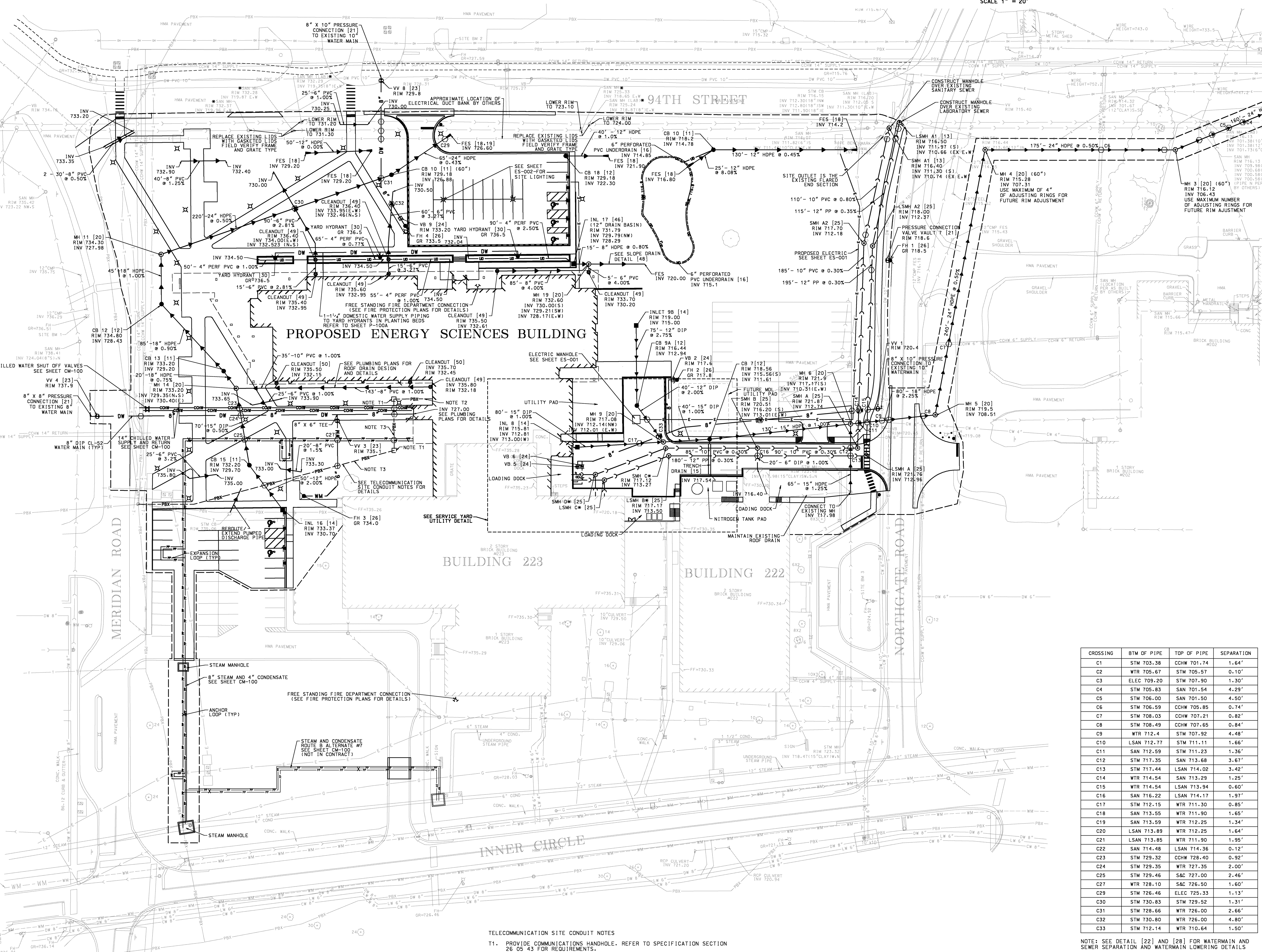
UNDERGROUND UTILITY GENERAL NOTES

1. ALL MANHOLES AND CATCH BASINS SHALL BE 48-INCH DIAMETER, UNLESS OTHERWISE INDICATED.
2. ALL SANITARY SEWER, LESS THAN 15 FEET DEEP, SHALL BE PVC, SDR 26, UNLESS OTHERWISE INDICATED. ALL DUCTILE IRON, SANITARY SEWER SHALL BE CLASS 52, UNLESS OTHERWISE INDICATED.
3. PVC SANITARY SEWER PIPE SHALL CONFORM TO ASTM D-3034 WITH ASTM D-3139 JOINTS.
4. ALL WATER MAIN SHALL BE DUCTILE IRON PIPE, CLASS 52, AWWA C-600 WITH "PUSH-ON" TYPE JOINTS, CEMENT LINEDE UNLESS OTHERWISE INDICATED. ALL WATERMAIN SHALL HAVE A MINIMUM OF 5'-6" OF COVER FROM TOP OF WATERMAIN TO FINISHED GRADE.
5. STORM SEWERS SHALL BE HDPE CONFORMING WITH AASHTO M294, TYPE S OR ASTM F2306. JOINTS SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. GASKETS SHALL BE MADE FROM POLYISOPRENE MEETING THE REQUIREMENTS OF ASTM F477. FITTINGS SHALL CONFORM TO AASHTO M294, OR ASTM F2306. BELL AND SPIGOT CONNECTIONS SHALL UTILIZE A SPUN-ON OR WELDED BELL AND VALLEY OR SADDLE GASKET MEETING THE WATERTIGHT JOINT REQUIREMENTS REQUIREMENTS OF AASHTO M294, OR ASTM F2306.
6. GRANULAR TRENCH BACKFILL (CA6) SHALL BE PROVIDED FOR ALL SANITARY, WATER AND STORM UTILITIES WHEN THE TRENCH LIMITS FALL WITHIN TWO FEET OF STREETS, SIDEWALKS, DRIVEWAYS AND AS NOTED ON THE SANITARY TRENCH DETAIL ON PAGE.
7. ALL WATERMAIN AND WATER SERVICE LINES SHALL BE PROTECTED FROM OTHER UTILITIES IN ACCORDANCE WITH SECTION 41-2.01 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS.
8. ALL DRAIN TILES ENCOUNTERED DURING MASS GRADING UTILITY WORK MUST BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM. A RECORD MUST BE KEPT, OF ANY DRAIN TILE ENCOUNTERED, TO BE INCLUDED WITH THE RECORD DRAWINGS.
9. ALL UNDERGROUND UTILITY INFORMATION NOTED ON THE PLANS IS BASED ON INFORMATION OBTAINED FROM THE MUNICIPALITY, UTILITY COMPANIES OR FIELD MEASUREMENTS. THIS INFORMATION, WHILE BELIEVED TO BE COMPLETED AND ACCURATE CANNOT BE GUARANTEED.
10. CONTRACTOR SHALL VERIFY ALL BUILDING SERVICE LOCATIONS AND SIZES WITH ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION AND NOTIFY THE ENGINEER OR OWNER OF ANY DISCREPANCIES.
11. CONTRACTOR TO VERIFY CANOPY AND ROOF DRAIN CONNECTION SEWER LOCATION AND SIZE WITH PLUMBING PLANS BEFORE CONSTRUCTION.
12. SEE PLUMBING PLANS FOR WATER AND SEWER SERVICE CONNECTION LOCATIONS.
13. CONTRACTOR SHALL PROVIDE A PHASING AND STAGING PLAN OF ANY PLANNED UTILITY SHUTDOWNS OR CROSSOVERS FOR OWNER APPROVAL AND PROVIDE A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY UTILITY SHUTDOWN.

* INDICATES SANITARY MANHOLES THAT SHALL HAVE GASKETED LIDS



SERVICE YARD UTILITY DETAIL
SCALE 1" = 20'



N

SCALE 1" = 40'
0 40 80

CROSSING	BTM OF PIPE	TOP OF PIPE	SEPARATION
C1	STM 703.38	CCHW 701.74	1.64'
C2	WTR 705.67	STM 705.57	0.10'
C3	ELEC 709.20	STM 707.90	1.30'
C4	STM 705.83	SAN 701.54	4.29'
C5	STM 706.00	SAN 701.50	4.50'
C6	STM 706.59	CCHW 705.85	0.74'
C7	STM 708.03	CCHW 707.21	0.82'
C8	STM 708.49	CCHW 707.65	0.84'
C9	WTR 712.4	STM 707.92	4.48'
C10	LSAN 712.77	STM 711.11	1.66'
C11	SAN 712.59	STM 711.23	1.36'
C12	STM 717.35	SAN 713.68	3.67'
C13	STM 717.44	LSAN 714.02	3.42'
C14	WTR 714.54	SAN 713.29	1.25'
C15	WTR 714.54	LSAN 713.94	0.60'
C16	SAN 716.22	LSAN 714.17	1.97'
C17	STM 712.15	WTR 711.30	0.85'
C18	SAN 713.55	WTR 711.90	1.65'
C19	SAN 713.59	WTR 712.25	1.34'
C20	LSAN 713.89	WTR 712.25	1.64'
C21	LSAN 713.85	WTR 711.90	1.95'
C22	SAN 714.48	LSAN 714.36	0.12'
C23	STM 729.32	CCHW 728.40	0.92'
C24	STM 729.35	WTR 727.35	2.00'
C25	STM 729.46	S&C 727.00	2.46'
C27	WTR 728.10	S&C 726.50	1.60'
C29	STM 726.46	ELEC 725.33	1.13'
C30	STM 730.83	STM 729.52	1.31'
C31	STM 728.66	WTR 726.00	2.66'
C32	STM 730.80	WTR 726.00	4.80'
C33	STM 712.14	WTR 710.64	1.50'

NOTE: SEE DETAIL [22] AND [28] FOR WATERMAIN AND SEWER SEPARATION AND WATERMAIN LOWERING DETAILS

TELECOMMUNICATION SITE CONDUIT NOTES

T1. PROVIDE COMMUNICATIONS HANDHOLE. REFER TO SPECIFICATION SECTION 26 05 43 FOR REQUIREMENTS.
T2. (3) 4" HDPE CONDUITS AT A MINIMUM OF 36" BELOW GRADE.
T3. (2) 4" HDPE CONDUITS AT A MINIMUM OF 36" BELOW GRADE. FURNISH (1) CONDUIT WITH (3) 1.25" INNERDUCTS. PROVIDE PULL CORD WITH A MINIMUM TENSILE STRENGTH OF 1250 LBS IN EACH INNERDUCT. PROVIDE PULL CORD WITH A MINIMUM TENSILE STRENGTH OF 1250 LBS IN EMPTY REMAINING CONDUIT.

LEGEND

EXISTING / PROPOSED

SANITARY SEWER
FORCE MAIN
STORM SEWER
UNDERDRAIN
MANHOLE
CATCH BASIN
INLET
CLEANOUT
WATER MAIN
CHILLED WATER
VALVE VAULT
VALVE BOX
FIRE HYDRANT
UTILITY CROSSING
FLARED END SECTION
COMBINED SEWER
STREET LIGHT/PARKING LOT LIGHT
POWER POLE
STREET SIGN
FENCE
GAS MAIN
OVERHEAD LINE
TELEPHONE LINE
ELECTRIC LINE
CABLE TV LINE
STEAM & CONDENSATE LINE
ELECTRIC LINE
LIMITS OF CONSTRUCTION
HIGH WATER LEVEL
NORMAL WATER LEVEL
CONTOUR LINE
TOP OF CURB ELEVATION
TOP OF DEPRESSED CURB
PAVEMENT ELEVATION
SPOT ELEVATION
FINISHED FLOOR ELEVATION
TOP OF FOUNDATION
GRADE AT FOUNDATION
HIGH OR LOW POINT
OVERLAND FLOOD ROUTE
PAVEMENT FLOW DIRECTION
SWALE FLOW DIRECTION
DEPRESSED CURB AND GUTTER
REVERSE CURB AND GUTTER
TREE PROTECTION FENCE

NOTE: DETAIL NUMBER IS SHOWN AS [XX]

ABBREVIATIONS

AC ACRE
BC BACK OF CURB
BTM BOTTOM
CB CATCH BASIN
CFS CUBIC FEET PER SECOND
CY CUBIC YARD
DIA DIAMETER
DIWM DUCTILE IRON WATER MAIN
EL ELEVATION
EP EDGE OF PAVEMENT
FF FINISHED FLOOR
FES FLARED END SECTION
FT FOOT/FEET
G GUTTER ELEVATION
GF GRADE AT FOUNDATION
GR GRADE RING ELEVATION
HDPE HIGH DENSITY POLYETHYLENE PIPE
HYD FIRE HYDRANT
HMA HOT MIX ASPHALT
HWL HIGH WATER ELEVATION
INL INLET
INV INVERT
LF LINEAL FEET/FOOT
LP LIGHT POLE
LT LEFT
L/W LOWEST GRADE ADJACENT TO RETAINING WALL
MAX MAXIMUM
MH STORM MANHOLE
MIN MINIMUM
NWL NORMAL WATER ELEVATION
OCS OUTLET CONTROL STRUCTURE
P PAVEMENT ELEVATION
PVC POLYVINYL CHLORIDE PIPE
R RADIUS
RCP REINFORCED CONCRETE PIPE
RIM RIM ELEVATION
RT RIGHT
ROW RIGHT OF WAY
SAN SANITARY SEWER
SMH SANITARY MANHOLE
STA STATION
STM STORM SEWER
SY SQUARE YARD
SWPP STORMWATER POLLUTION PREVENTION PLAN
TDC TOP OF DEPRESSED CURB
TC TOP OF CURB
TF TOP OF FOUNDATION
T/W TOP OF RETAINING WALL
TYP TYPICAL
VB VALVE BOX
VC VERTICAL CURVE
VV VALVE VAULT
W WALK ELEVATION
WM WATER MAIN
VPI VERTICAL POINT OF INTERSECTION

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com
MACKIE CONSULTANTS

C-05

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

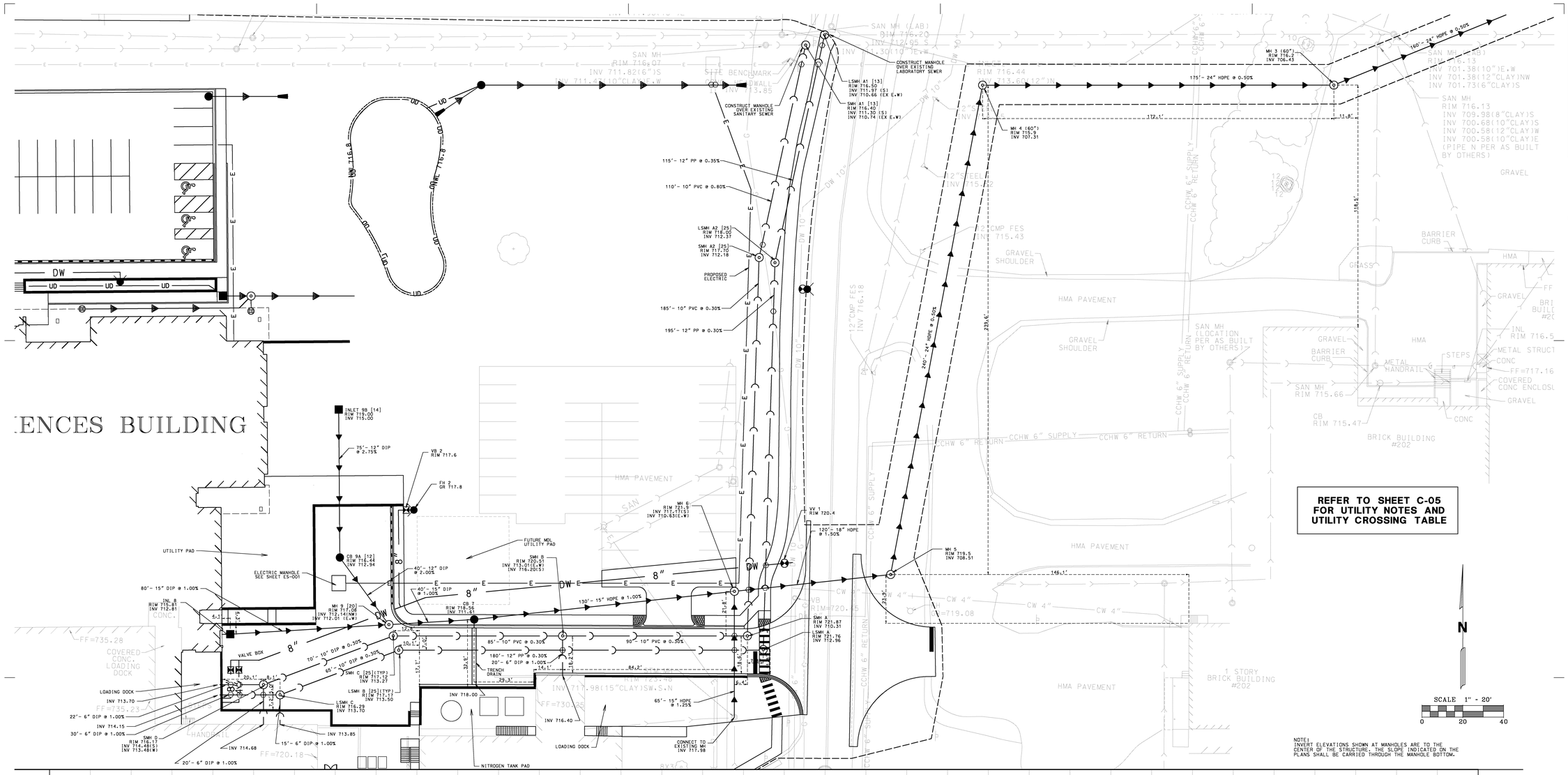
PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
UTILITY PLAN

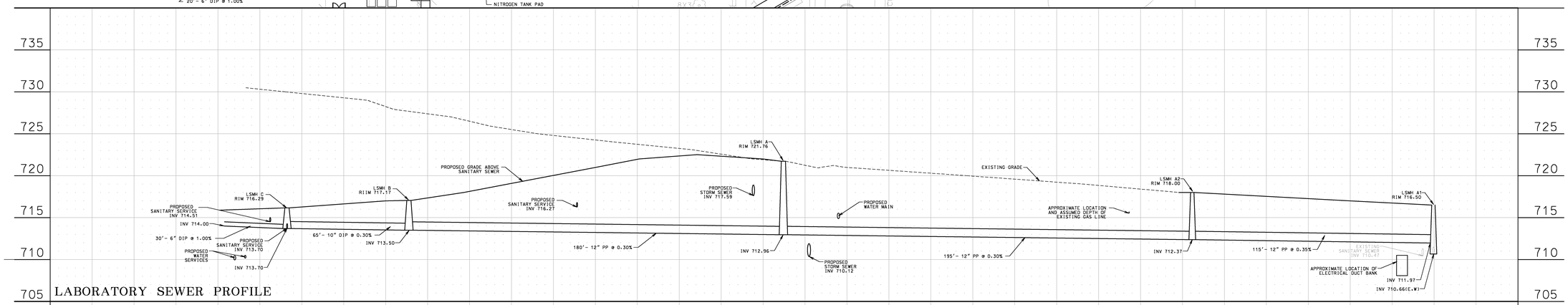
DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-05	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

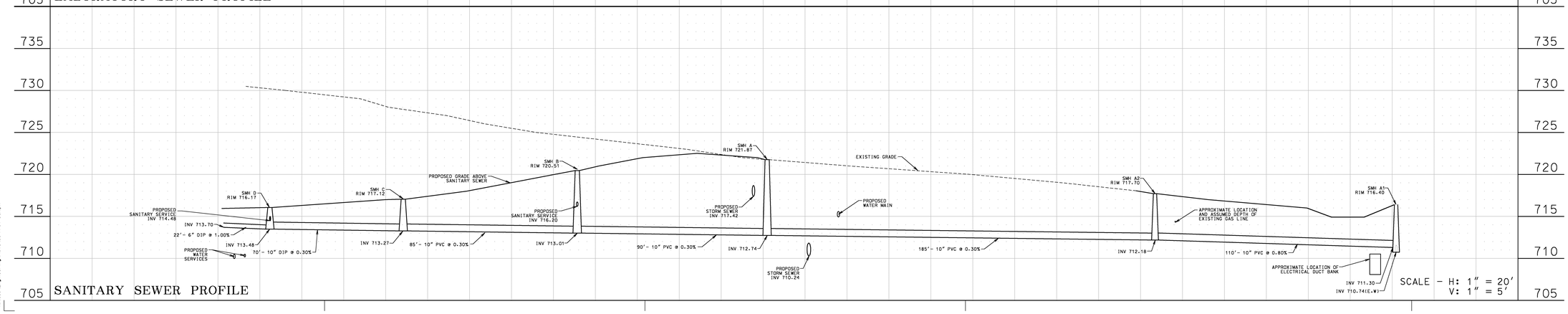
FACILITY DOCUMENT NUMBER J241-101- C-05 REV. NO.

6/27/2011 1:18:14 PM
N:\1880\Engineering\Plots\05-Utilities.plt



NOTE:
INVERT ELEVATIONS SHOWN AT MANHOLES ARE TO THE CENTER OF THE STRUCTURE. THE SLOPE INDICATED ON THE PLANS SHALL BE CARRIED THROUGH THE MANHOLE BOTTOM.





HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

C-06

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SANITARY SEWER AND LABORATORY SEWER PLAN AND PROFILE

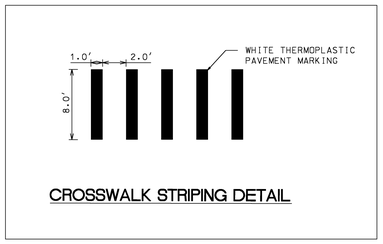
DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TRB	A/E DWG. NO. C-06	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE IL	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101-C-06 REV. NO.

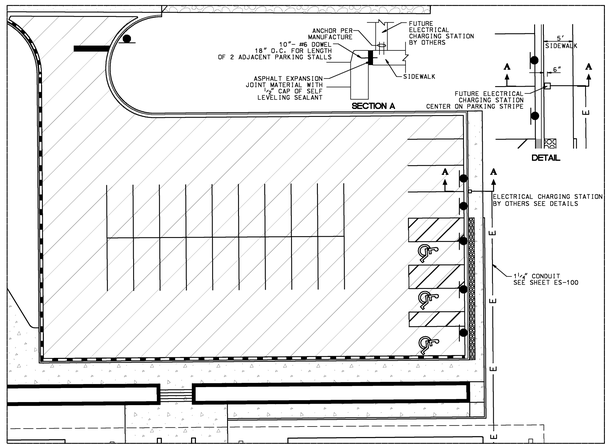
6/21/2011 18:53 PM
W:\ARG\Engineering\Drawings\Plans\06-Prof-Sanp.dwg

SITE PLAN GENERAL NOTES (DIMENSIONS AND PAVING)

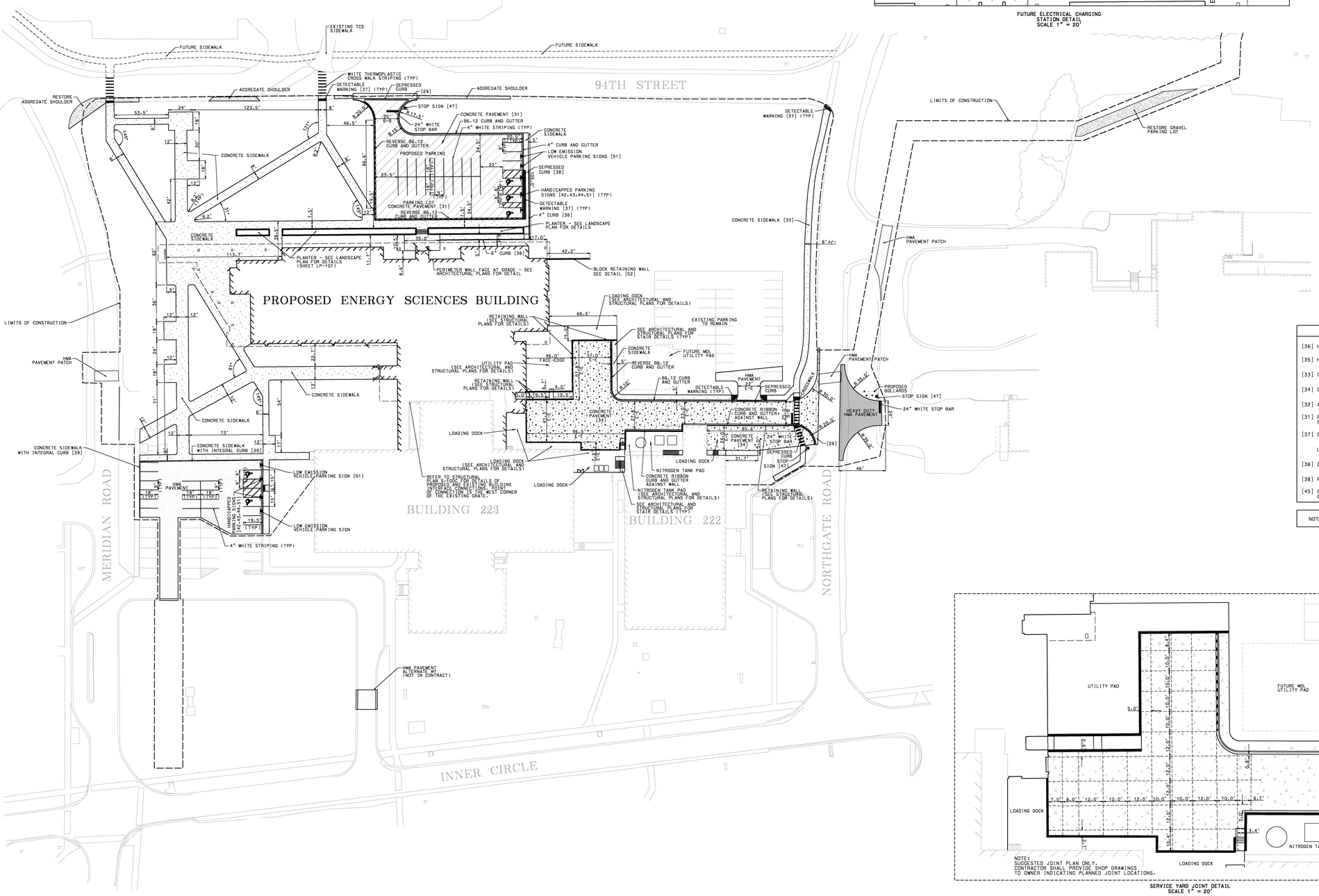
1. ALL DIMENSIONS ARE TO BACK OF CURB OR FACE OF BUILDING, UNLESS OTHERWISE NOTED.
2. ALL RADII ARE TO BACK OF CURB, UNLESS OTHERWISE NOTED.
3. ALL BUILDING DIMENSIONS ARE BASED ON ARCHITECTURAL PLANS DATED 02-10-11. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND CONTACT THE ARCHITECT FOR ANY DISCREPANCIES.
4. ALL ONSITE PAVEMENT MARKINGS SHALL BE THERMOPLASTIC, UNLESS OTHERWISE NOTED.
5. ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 AND SHALL BE DEPRESSED CURB WHERE SIDEWALK MEETS A STREET, UNLESS OTHERWISE INDICATED.
6. ALL JOINTS MADE WITH EXISTING PAVEMENT, CURB, WALK OR CURB AND GUTTER ARE TO BE SAWCUT FULL DEPTH WITHIN 24 HOURS OF PLACEMENT.
7. SEE ARCHITECTURAL PLANS FOR DETAILS OF LOADING DOCK, TRASH COMPACTORS, AND TRASH COLLECTORS. SEE LANDSCAPE/STRUCTURAL PLANS FOR DETAILS OF RETAINING WALLS.
8. ALL CURB ISLANDS TO HAVE 1-FOOT MINIMUM RADIUS ON CORNERS, UNLESS OTHERWISE SHOWN.
9. SEE LANDSCAPE PLAN FOR SIDEWALK SCORING AND JOINT PATTERN.
10. MAXIMUM JOINT SPACING FOR 8" CONCRETE SHALL BE 12'x12'. MAXIMUM JOINT SPACING FOR 7" CONCRETE SHALL BE 10.5'x 10.5'. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR CONCRETE PAVEMENT JOINT PLANS.

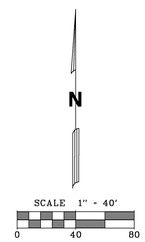


CROSSWALK STRIPING DETAIL



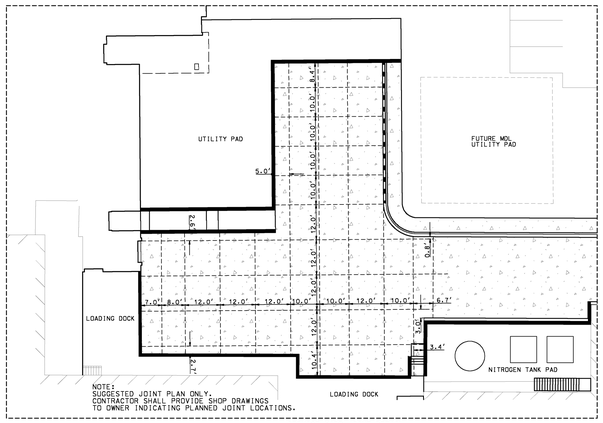
FUTURE ELECTRICAL CHARGING STATION DETAIL
SCALE 1" = 20'





LEGEND	
[36] HMA PAVEMENT	
[35] HEAVY DUTY HMA PAVEMENT	
[33] CONCRETE SIDEWALK	
[34] CONCRETE PAVEMENT	
[32] AGGREGATE SHOULDER	
[31] PARKING LOT CONCRETE PAVEMENT	
[37] DETECTABLE WARNING	
LIMITS OF CONSTRUCTION	
[38] DEPRESSED CURB	
[38] REVERSE CURB AND GUTTER	
[45] CONCRETE RIBBON CURB AND GUTTER	

NOTE: DETAIL NUMBER IS SHOWN AS [XX]



SERVICE YARD JOINT DETAIL
SCALE 1" = 20'

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

C-07

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
PAVING PLAN

DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-07	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: J241-101- C-07
REV. NO.

6/21/2011 11:55:59 PM
K:\FMS\Engineering\Projects\101-Paving\pg1.dwg

GENERAL NOTES

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:

   - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;

   - STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;

   - IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE OWNER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK.

2. THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF THE UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

C. QUALITY ASSURANCE

1. PRODUCTS USED IN THE WORK SHALL BE IN CONFORMANCE WITH THE REFERENCED SPECIFICATION AND INDIVIDUAL TECHNICAL SECTIONS OF THESE PROJECT SPECIFICATIONS.

2. EXECUTION OF THE WORK SHALL BE IN CONFORMANCE WITH THE REFERENCED SPECIFICATION AND INDIVIDUAL TECHNICAL SECTIONS OF THESE PROJECT SPECIFICATIONS.

3. TESTING SHALL BE COMPLETED AS REQUIRED BY THE INDIVIDUAL SECTIONS OF THESE PROJECT SPECIFICATION AND PERFORMED IN CONFORMANCE WITH THE METHODS PRESCRIBED IN THE REFERENCED SPECIFICATIONS. TEST RESULTS SHALL BE SUBMITTED WHEN COMPLETED DURING THE COURSE OF THE WORK.

4. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND THE PROJECT GEOTECHNICAL ENGINEER TO SCHEDULE WORK WHICH REQUIRES OBSERVATION AND TESTING.

D. SUBMITTALS

1. SHOP DRAWINGS
   A. SANITARY/LABORATORY SEWER MANHOLES
   B. WATERMAIN VAULTS
   C. STORM SEWER MANHOLES, CATCH BASINS, INLETS
   D. SEGMENTAL BLOCK RETAINING WALL
   E. TRENCH DRAIN
   F. CONCRETE PAVEMENT JOINTING PATTERN

2. PRODUCT DATA
   A. PIPE
   B. VALVES, HYDRANTS, FITTINGS AND APPURTENANCES
   C. TRENCH BEDDING AND BACKFILL MATERIAL, GRADATION AND SOURCE
   D. PAVEMENT MIX DESIGNS, GRADATIONS AND SOURCE (INCLUDING WALKS AND CURB)
   E. EROSION CONTROL BLANKET
   F. AGGREGATE SHOULDER MATERIAL, GRADATION AND SOURCE
   G. RIP RAP MATERIAL, GRADATION AND SOURCE
   H. EXPANSION JOINT FILLER
   I. FRAMES, LIDS, AND GRATES FOR SANITARY SEWER, WATERMAIN, AND STORM SEWER STRUCTURES
   J. TRUNCATED DOME/DETECTABLE WARNING PRODUCTS, IF USED

3. TEST RESULTS
   TEST RESULTS SHALL BE SUBMITTED WHEN COMPLETED DURING THE COURSE OF THE WORK, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
   A. PRESSURE TESTS
   B. DISINFECTION/CHLORINATION TESTS
   C. COMPACTION TESTS
   D. PROOF-ROLLING REPORTS

E. GENERAL NOTES

1. THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.

2. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION. INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.

3. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY THE OWNER UNLESS CHANGES ARE APPROVED BY THE OWNER OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.

4. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY UNPOLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.

5. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE OWNER.

6. THE LOCATION OF VARIOUS EXISTING UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.

7. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

8. ALL NON-PAVING CONCRETE USED ON THE PROJECT SHALL BE IDOT CLASS SI.

9. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.

10. ALL EXISTING FIELD DRAINAGE TILE ENCOUNTERED OR DAMAGED DURING CONSTRUCTION WHICH DRAIN OFFSITE PROPERTY SHALL BE CONNECTED TO THE STORM SEWER SYSTEM. ALL EXISTING FIELD DRAINAGE TILE ENCOUNTERED OR DAMAGED DURING CONSTRUCTION THAT SERVES ON-SITE PROPERTY CAN BE CAPPED AND/OR REMOVED FROM THE SITE.

11. COMPACTED GRANULAR TRENCH BACKFILL SHALL BE INSTALLED FOR ALL SEWER AND WATER MAIN WHERE THE TOP OF THE TRENCH LIES UNDER OR WITHIN 24" OF ALL ROADWAYS, SIDEWALKS, DRIVES, CURBS AND PARKING AREAS.

12. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.

13. THE CONTRACTOR IS REQUIRED TO ASSURE HIMSELF OF LOCATION AND DEPTH OF EXISTING UTILITIES AND RELATED FEATURES AND SHALL REPORT AT ONCE TO THE OWNER ANY DISCREPANCIES WITH RESPECT TO INFORMATION INDICATED IN THE CONTRACT DOCUMENTS.

14. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

F. EXCAVATION AND SITE GRADING

1. EXCAVATION AND EMBANKMENT REQUIRED FOR SITE GRADING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SOILS REPORTS PREPARED BY AECOM FOR SUBSURFACE EXPLORATION, LABORATORY TESTING, AND GEOTECHNICAL SERVICES, PROPOSED ENERGY SCIENCES BUILDING (AECOM PROJECT NO. 60097666), DATED MAY 8, 2009. COPIES OF THE SOILS REPORTS ARE AVAILABLE FROM THE OWNER.

2. FILL PLACED BELOW BUILDING PAD, BUILDING FOOTING, AND RETAINING WALL FOOTINGS SHALL BE EITHER LEAN CONCRETE OR IDOT CA-6. SOIL BACKFILL SHALL BE PLACED IN MAXIMUM 9-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR TEST (ASTM D1557). FILL IN PAVEMENT AREAS MAY BE CLAY EMBANKMENT MATERIAL AS DESCRIBED IN NOTE 3 OR WELL-GRADED IDOT CA-6.

3. ALL CLAY EMBANKMENT NECESSARY SHALL CONSIST OF COHESIVE SOIL TYPES WITH LESS THAN 25% SAND AND GRAVEL. MATERIAL SHALL HAVE A COEFFICIENT OF PERMEABILITY OF LESS THAN 10 X -7 CM/SEC. MAXIMUM PARTICLE SIZE SHALL BE 4-INCHES. THESE MATERIALS WILL BE PRACTICALLY IMPERVIOUS. MATERIAL SHALL BE TESTED FOR CLASSIFICATION, COMPACTION CHARACTERISTICS, PERMEABILITY CHARACTERISTICS AND UNCONFINED COMPRESSIVE STRENGTH BY THE PROJECT GEOTECHNICAL ENGINEER IN ORDER TO ENSURE THAT THEY MEET THE ABOVE REQUIREMENTS.

   THE MATERIAL SHALL BE CL TYPE (USING THE USC CLASSIFICATION SYSTEM, ASTM D2487) AND FREE FROM GRAVEL, ROOTS, ORGANIC MATTER, AND ANY OTHER OBJECTIONABLE MATERIALS.

   THE EMBANKMENT SHALL BE PLACED IN ESSENTIALLY HORIZONTAL LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS. EACH LIFT SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED IN THE LABORATORY BY THE MODIFIED PROCTOR COMPACTION TEST (ASTM D1557). EACH LIFT TO BE COMPACTED TO SPECIFIED DENSITY PRIOR TO THE PLACEMENT OF ADDITIONAL FILL. MOISTURE CONTROL IS IMPORTANT IN THE COMPACTION OF COHESIVE SOIL TYPES, AND THE WATER CONTENT OF THE EMBANKMENT FILL SHALL BE WITHIN 2 PERCENTAGE POINTS OF OPTIMUM MOISTURE AS ESTABLISHED BY THE LABORATORY COMPACTION CURVE.

4. COMPACTION TESTING SHALL MEET THE REQUIREMENTS OF THE OWNER AND PROJECT GEOTECHNICAL ENGINEER.

5. NO EQUIPMENT, MATERIAL OR WORK IS TO BE PERFORMED OUTSIDE THE LIMITS OF CONSTRUCTION.

6. THE CONTRACTOR IS REQUIRED TO MEET ALL SOIL EROSION CONTROL AND SEDIMENTATION REQUIREMENTS AS SET FORTH IN THE IEPA STANDARDS, OWNER SPECIFICATIONS, AND THE ENGINEERING PLANS.

7. ALL PAVEMENT SUBGRADES SHALL BE PROOF-ROLLED AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO ACCEPTANCE.

8. ALL UNSUITABLE MATERIAL, AS DETERMINED BY THE SOILS ENGINEER, SHALL BE REMOVED AND REPLACED WITH CRUSHED STONE, IDOT CA-6 GRADATION AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY IN PAVEMENT AREAS AND COMPACTED TO 3,000 PSF IN BUILDING PAD LIMITS.

9. LIMITS OF BUILDING PAD SHALL EXTEND FIVE (5) FEET BEYOND PROPOSED BUILDING WALLS. LIMITS OF SUITABLE PAVEMENT SUBGRADE SHALL EXTEND TWO (2) FEET BEYOND BACK OF PROPOSED CURB, OR EDGE OF PAVEMENT.

10. EXISTING MANHOLES, INLETS, CATCH BASINS, AND OTHER STRUCTURES TO REMAIN SHALL BE ADJUSTED TO FINISHED GRADE.

11. ALL REMOVAL OR EXCAVATION ITEMS BEING DISPOSED OF AT AN UNCONTAMINATED SOIL FILL OPERATION OR CLEAN CONSTRUCTION AND DEMOLITION DEBRIS (CCDD) FILL SITE SHALL MEET THE REQUIREMENTS OF PUBLIC ACT 96-1416. ALL COSTS ASSOCIATED WITH MEETING THESE REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE COST FOR THE ASSOCIATED REMOVAL OR EXCAVATION ITEMS IN THE CONTRACT. THESE COSTS SHALL INCLUDE BUT ARE NOT LIMITED TO ALL REQUIRED TESTING, LAB ANALYSIS, CERTIFICATION BY A LICENSED PROFESSIONAL ENGINEER, AND STATE AND LOCAL TIPPING FEES.

G. PAVEMENT CONSTRUCTION

1. HOT-MIX ASPHALT PAVEMENT SHALL HAVE A MINIMUM TOTAL COMPACTED THICKNESS AS SHOWN ON THE DRAWINGS AND SHALL BE COMPACTED TO 93% OF THE MAXIMUM UNIT WEIGHT AS DETERMINED BY ASTM D-2041.

2. THE PAVEMENT SUBGRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 301 (SUBGRADE PREPARATION) OF THE IDOT SS. SUBGRADE SHALL BE COMPACTED TO A MINIMUM IBR OF 3.0.

3. THE AGGREGATE BASE COURSE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 351 (AGGREGATE BASE COURSE) OF THE IDOT SS.

4. NO AGGREGATE BASE COURSE SHALL BE INSTALLED UNTIL THE SUBGRADE HAS BEEN APPROVED BY THE OWNER.

5. HOT-MIX ASPHALT PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 406 (HOT-MIX ASPHALT BINDER AND SURFACE COURSE).

6. NO HOT-MIX ASPHALT BINDER SHALL BE INSTALLED UNTIL THE AGGREGATE BASE COURSE HAS BEEN APPROVED BY THE OWNER. AGGREGATE BASE COURSE PRIME COAT SHALL BE APPLIED AT A RATE OF 0.5 GALLONS PER SQUARE YARD.

7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY SIGNS, BARRICADES, FENCES, ETC. TO KEEP THE CONSTRUCTION SITE IN COMPLIANCE WITH STATE AND FEDERAL LAWS. THE MUNICIPALITY MAY REQUIRE ADDITIONAL SIGNAGE OR BARRICADES. THE CONTRACTOR SHALL COMPLY WITH ALL SUCH MUNICIPAL REQUIREMENTS.

8. ALL EXISTING PAVEMENT, SIDEWALK, OR CURB AND GUTTER TO BE REMOVED SHALL BE SAWCUT ALONG THE LIMITS OF THE PROPOSED REMOVAL BEFORE REMOVAL OPERATIONS BEGIN.

9. PRIOR TO PLACEMENT OF BASE COURSE, THE SUBGRADE SHALL BE PROOF-ROLLED WITH A FULLY LOADED TEN WHEEL TRUCK, AND ANY SOFT YIELDING AREAS SHALL BE REMOVED AND REPLACED WITH COMPACTED CA-6 CRUSHED STONE.

10. CURB AND GUTTER REMOVAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 440 (REMOVAL OF EXISTING PAVEMENT AND APPURTENANCES) OF THE IDOT SS.

11. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PAVEMENT MARKINGS IN ACCORDANCE WITH SECTION 1095 OF THE IDOT SS.

12. P.C.C. SURFACE COURSE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 420 (PORTLAND CEMENT CONCRETE PAVEMENT) OF THE IDOT SS.

13. COMBINATION CURB AND GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 606 (CONCRETE GUTTER, CURB, MEDIAN, AND PAVED DITCH) OF THE IDOT SS.
    a. EXPANSION JOINTS SHALL BE PLACED AT THE END OF RADII AND AT INTERVALS OF NO MORE THAN 40-FEET IN STRAIGHT LINE PORTIONS OF WORK. EXPANSION JOINTS SHALL BE PROVIDED WHERE THE CURB AND GUTTER ABUTS AN EXISTING OR PROPOSED SIDEWALK, BUILDING, PERMANENT STRUCTURE OR EXISTING OR PROPOSED CONCRETE DRIVEWAY. EXPANSION JOINTS ARE REQUIRED 5-FEET ON EACH SIDE OF ANY STORM SEWER STRUCTURE IN THE CURB LINE. EXPANSION JOINTS SHALL CONSIST OF 1-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL.
    b. EXPANSION JOINTS SHALL INCLUDE 12-INCH LONG #4 DOWEL BARS WITH CAP
    c. CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NO MORE THAN 10-FEET. CONTRACTION JOINTS SHALL BE SAWED TO A DEPTH EQUIAL TO 1/3 THE THICKNESS OF THE GUTTER FLAG AND TO A WIDTH OF NOT LESS THAN 1/8 INCH.

14. SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 424 (PORTLAND CEMENT CONCRETE SIDEWALK) OF THE IDOT SS.
    a. EXPANSION JOINTS, 3/4-INCH THICK, SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 100-FEET IN THE SIDEWALK. WHERE THE SIDEWALK IS CONSTRUCTED ADJACENT TO PAVEMENT OR CURB HAVING EXPANSION JOINTS, THE EXPANSION JOINTS IN THE SIDEWALK SHALL BE PLACED IN LINE WITH THE EXISTING EXPANSION JOINTS AS NEARLY AS PRACTICLE.
    b. EXPANSION JOINTS SHALL BE PLACED WHERE THE SIDEWALK ABUTS EXISTING SIDEWALKS, BETWEEN DRIVEWAY PAVEMENT AND SIDEWALK, AND BETWEEN SIDEWALK ACCESSIBILITY RAMPS AND CURBS WHERE THE RAMP ABUTS A CURB.
    c. CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK AND/OR AS NOTED ON THE ENGINEERING PLANS.

15. HOT-MIX ASPHALT BASE COURSE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 355 (HOT-MIX ASPHALT BASE COURSE) OF THE IDOT SS.

16. ALL CONCRETE FOR SIDEWALK AND CURB AND GUTTER IS TO BE CLASS SI, 6.1 BAG MIX WITH NO FLY ASH.

17. HOT MIX ASPHALT SPECIFICATIONS SHALL BE AS FOLLOWS:

ITEM	AC TYPE	VOIDS	MAX RAP %
HMA SURFACE COURSE, MIX "D" IL-9.5MM, N50	PG 64-22	4% AT 50 GYR.	15%
HMA BINDER COURSE, IL-19.0, N50	PG 64-22 (*PG 58-22)	4% AT 50 GYR.	15% (*25%)
LEVELING BINDER (MACHINE METHOD), IL-9.5MM, N50	PG 64-22	4% AT 50 GYR.	15%

THE MINIMUM LIFT THICKNESS MUST BE PER THE LATEST IDOT SPECIFICATIONS. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SQ.YD-IN AND 115 LBS/SQ.YD-IN FOR ALL HOT-MIX ASPHALT BINDER COURSES.

* CONTRACTOR HAS OPTION TO VARY RAP % IN BINDER COURSE. WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22.

18. ALL CURBS CONSTRUCTED OVER A UTILITY TRENCH SHALL BE REINFORCED WITH TWO EQUALLY SPACED #4 REBARS CENTERED IN THE FLAG FOR A LENGTH OF 10 FEET ON EITHER SIDE OF THE TRENCH. SIDEWALKS SHALL BE TREATED IN THE SAME MANNER USING THREE EQUALLY SPACED #4 REBARS CENTERED IN THE SIDEWALK FOR A LENGTH OF 10 FEET ON EITHER SIDE OF THE TRENCH.

19. PREFORMED JOINT FILLER AT EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH SECTION 1051 OF IDOT SS.

H. WATER MAIN

1. ALL WATER MAINS SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL MUNICIPAL REQUIREMENTS AND THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS).

2. ALL WATER MAIN SHALL BE DUCTILE PIPE, CLASS 52 PER ANSI A21.51. PIPE SHALL BE CEMENT LINED PER ANSI A21.4 FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI A21.11. JOINTS SHALL BE DUCTILE IRON AND OF THE "PUSH-ON" OR "MECHANICAL" TYPE CONFORMING TO ANSI A21.11 ALL DUCTILE IRON WATERMAIN SHALL BE POLY WRAPPED UP TO AND INCLUDING THE PACKING GLAND.

3. A MINIMUM OF 5'-6" OF COVER SHALL BE MAINTAINED OVER THE WATER MAIN AND SERVICES.

4. ALL WATER VAULTS SHALL HAVE THE WORD "WATER" CAST INTO THE LID.

5. VALVES SHALL BE NON RISING STEM RESILIENT WEDGE GATE VALVES WITH OPERATING NUT, DESIGNED TO TAKE FULL PRESSURE ON EITHER FACE, FURNISHED IN FULL COMPLIANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARDS C-509. ALL VALVES SHALL OPEN BY TURNING TO THE LEFT. VALVES SHALL OPERATE AT A WORKING PRESSURE OF 150 POUNDS PER SQUARE INCH AND A TEST PRESSURE OF 300 POUNDS PER SQUARE INCH. VALVES 8 INCHES AND SMALLER SHALL BE HOUSED IN VALVE VAULTS WITH AN INTERNAL DIAMETER OF 48 INCHES; VALVES OVER 8 INCHES IN DIAMETER SHALL BE HOUSED IN VALVE VAULTS WITH AN INSIDE DIAMETER OF 60 INCHES. VALVE VAULT, SIDEWALK AND BASE CONSTRUCTION SHALL CONFORM TO THAT REQUIRED FOR CATCH BASINS. PRECAST CONCRETE VAULTS SHALL BE CONSTRUCTED AROUND ALL LINE VALVES. VALVE VAULTS ARE NOT NEEDED FOR FIRE HYDRANTS. WATEROUS OR MUELLER VALVES SHALL BE USED FOR ALL VALVES.

6. TESTING AND CHLORINATION - ALL PIPES SHALL BE TESTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION."

7. WATER MAINS SHALL BE LOCATED AT LEAST 10-FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY SEWER, STORM SEWER, COMBINED SEWER OR SEWER SERVICE CONNECTION. WATER MAINS MAY BE LOCATED CLOSER THAN 10-FEET TO A SEWER LINE WHEN:
   a. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10-FEET AND
   b. THE WATER MAIN INVERT IS AT LEAST 18-INCHES ABOVE THE CROWN OF THE SEWER; AND
   c. THE WATER MAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTRUBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.
   WHEN IT IS IMPOSSIBLE TO MEET THE CONDITIONS ABOVE, BOTH THE WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF EQUIVALENT WATER MAIN STANDARDS OF CONSTRUCTION WITH SLIP-ON OR MECHANICAL JOINTS. THE SEWER SHALL BE PRESSURE TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD BEFORE BACKFILLING.

8. WATER MAIN SHALL BE SEPARATED FROM STORM AND SANITARY SEWERS AS FOLLOWS:
   a. WATER MAINS SHALL BE SEPARATED FROM A SEWER SO THAT IT'S INVERT IS A MINIMUM OF 18-INCHES ABOVE THE CROWN OF THE SEWER WHEREVER WATER MAINS CROSS A STORM SEWER, SANITARY SEWER OR SEWER SERVICE CONNECTION. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF WATER MAIN LOCATED WITHIN 10-FEET HORIZONTALLY OF ANY SEWER CROSSED. A LENGTH OF WATER MAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER or
   b. BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINTS OF PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION WHEN IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN a) ABOVE OR THE WATER MAIN PASSES UNDER A SEWER or
   c. A VERTICAL SEPARATION OF 18-INCHES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATER MAIN SHALL BE MAINTAINED WHERE A WATER MAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER TO PREVENT SETTLING AND BREAKING THE WATER MAIN or
   d. CONSTRUCTION OF WATER MAIN QUALITY PIPE SHALL EXTEND ON EACH SIDE ON THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER IS AT LEAST 10-FEET.

9. ANY EXISTING UTILITY STRUCTURES REQUIRING ADJUSTMENT OR RECONSTRUCTION SHALL BE COMPLETED (BY THE CONTRACTOR) TO THE SATISFACTION OF THE OWNER. ADJUSTMENTS AND/OR RECONSTRUCTIONS NOT CALLED FOR ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. NO MORE THAN A TOTAL OF 8 INCHES OF ADJUSTING RINGS AND/OR 2 ADJUSTING RINGS SHALL BE ALLOWED.

10. ALL RETAINER GLANDS WHEN REQUIRED TO RESTRAIN VALVES, FITTINGS, HYDRANTS, AND PIPE JOINTS SHALL BE MECHANICAL JOINT WEDGE ACTION TYPE MEGALUG 1100 SERIES AS MANUFACTURED BY EBBA IRON, INC. OR UNI-FLANG BLOCKBUSTER 1400 SERIES AS MANUFACTURED BY FORD METER BOX CO. AND SHALL BE FOR USE ON DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51, FOR NOMINAL PIPE SIZES 3" THROUGH 48".

11. EXISTING DUCTILE IRON SYSTEMS REQUIRING RESTRAINT SHALL BE MEGALUG SERIES 1100SD (SPLIT MEGALUG) FOR MECHANICAL JOINTS.

12. RESTRAINT SYSTEM FOR RESTRAINING PUSH-ON PIPE BELLS SHALL BE MEGALUG SERIES 110HD OR FORD SERIES 1390.

13. FIRE HYDRANTS SHALL CONFORM TO THE AMERICAN WATER WORKS ASSOCIATION STANDARD C-502 AND SHALL BE OF A MAKE THAT HAS BEEN ADOPTED BY THE OWNER AS A STANDARD. HYDRANTS SHALL BE DESIGNED FOR A MINIMUM WORKING PRESSURE OF ONE HUNDRED FIFTY (150) PSI AND A TEST PRESSURE OF THREE HUNDRED (300) PSI. HYDRANT BODY CASTING SHALL BE MANUFACTURED OF CAST IRON OR DUCTILE IRON. ALL NOZZLES SHALL BE MANUFACTURED OF AN ACCEPTABLE GRADE OF BRONZE AND ACCURATELY THREADED IN ACCORDANCE WITH "NATIONAL STANDARD HOSE COUPLING THREAD SPECIFICATIONS." THE HYDRANT SHALL OPEN BY TURNING LEFT (COUNTER-CLOCKWISE) AND SHALL BE SO MARKED. HYDRANTS SHALL BE OF THE "BREAK-AWAY" OR "TRAFFIC" BASE DESIGN.

I. SANITARY SEWER

1. SANITARY SEWERS SHALL BE:
   a. POLYVINYL CHLORIDE PIPE (PVC), SDR 26 PER ASTM D-3034 WITH ELASTOMERIC JOINTS IN ACCORDANCE WITH ASTM D-3212 AND F477; or
   b. DUCTILE IRON PIPE (DIP) ANSI A21.51, CLASS 52 PER ANSI A 21.50 (AWWA C150), CEMENT LINED WITH BITUMINOUS COATING PER ANSI A21.4 (AWWA C104), WITH MECHANICAL OR RUBBER RING (SLIP SEAL OR PUSH-ON) JOINTS PER ANSI A21.11 (AWWA C111 AND C600); or
   c. POLYPROPYLENE (PP), ASTM F2736 WITH GASKETED INTEGRAL BELL AND SPIGOT JOINT. PIPE SHALL BE WATERTIGHT ACCORDING TO THE REQUIREMENTS OF ASTM D3212. SPIGOT SHALL HAVE TWO GASKETS MEETING THE REQUIREMENTS OF ASTM F477. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 AND MANUFACTURERS RECOMMENDED INSTALLATION GUIDELINES. USE ADS SANITITE HP OR APPROVED EQUAL.

3. GRANULAR PIPE BEDDING MATERIAL SHALL BE CRUSHED STONE, GRADATION CA-7 AND SHALL BE INSTALLED PER ASTM D2321-89. GRANULAR BEDDING SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

4. SANITARY SEWER TESTING SHALL INCLUDE EXFILTRATION TEST OR INFILTRATION TESTING IN ACCORDANCE WITH THE SSWS, MUNICIPAL REQUIREMENTS AND/OR SANITARY DISTRICT REQUIREMENTS. ALL SANITARY SEWERS CONSTRUCTED OF FLEXIBLE PIPE SHALL BE DEFLECTION TESTED IN ACCORDANCE WITH THE SSWS, MUNICIPAL REQUIREMENTS AND/OR SANITARY DISTRICT REQUIREMENTS. DEFLECTION TESTING SHALL NO OCCUR SOONER THAN THIRTY (30) DAYS AFTER COMPLETION OF THE SEWER INSTALLATION OF THE SECTION BEING TESTED.

5. SANITARY MANHOLES SHALL BE TESTED FOR WATERTIGHTNESS BY EITHER ASTM C969 - STANDARD PRACTICE FOR INFILTRATION AND EXFILTRATION ACCEPTANCE TESTING OF INSTALLED PRECAST CONCRETE PIPE SEWER LINES OR ASTM C 1244 - STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY NEGATIVE PRESSURE (VACUUM) TEST.

6. THE CONNECTION TO DOWNSTREAM SEWERS SHALL BE PLUGGED WITH A WATER TIGHT CONCRETE PLUG AND MAINTAINED IN PLACE UNTIL CONNECTION IS APPROVED BY THE OWNER.

7. SANITARY SEWER SERVICE FOR THE PROPOSED BUILDINGS SHALL BE COORDINATED WITH THE PLUMBING PLANS FOR SIZE AND LOCATION. LATER REVISIONS TO PLUMBING PLANS MAY EXIST, THEREFORE, CONTRACTOR SHALL VERIFY LOCATION OF SANITARY SERVICE AS SHOWN ON ENGINEERING PLANS IS CONSITANT WITH PLUMBING PLANS. NOTIFY ENGINEER OR OWNER IF DISCPREPANCY EXISTS.

J. STORM SEWER

1. ALL STORM SEWERS, SERVICES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE THE LOCAL MUNICIPAL REQUIREMENTS, THE IDOT SS AND THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.

2. STORM SEWERS SHALL BE:
   A. REINFORCED CONCRETE PIPE, ASTM C-76, MINIMUM CLASS IV WITH MASTIC OR O-RING JOINTS IN ACCORDANCE TO ASTM C-443.
   B. POLYVINYL CHLORIDE PIPE (PVC) PIPE, SDR 26, PER ASTM D-3034 WITH ELASTOMERIC JOINTS IN ACCORDANCE WITH ASTM D-3212;
   C. ALL HIGH DENSITY POLYETHYLENE (HDPE) PLASTIC PIPE SHALL CONFORM TO TYPE III, CLASS B (OR BETTER), CATEGORY 5, GRADE P34 AS DEFINED IN ASTM D-1248 AND/OR D-3350 WITH A CELL CLASSIFICATION PE 345434C OR HIGHER. THE JOINING METHOD SHALL CONFORM TO ASTM D-2657
   D. DUCTILE IRON PIPE, WHERE USED, SHALL CONFORM TO THE WATER MAIN SPECIFICATIONS (INCLUDING POLYWRAP).

3. ALL STORM STRUCTURES AND DETENTION BASINS ARE TO BE CLEANED PRIOR TO FINAL ACCEPTANCE. CLEANING MAY ALSO BE REQUIRED DURING THE COURSE OF CONSTRUCTION IF FAILURE OF EROSION AND SEDIMENT CONTROLS HAS ALLOWED SIGNIFICANT SEDIMENT TO ENTER THE STORM SEWER SYSTEM.

4. GRANULAR PIPE BEDDING MATERIAL SHALL BE CRUSHED STONE, GRADATION CA-7 AND SHALL BE INSTALLED PER ASTM D2321-89. GRANULAR BEDDING SHALL BE COMPACTED TO 95% MOFIFIED PROCTOR DENSITY.

K. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL PROVIDE THE FACILITIES SHOWN ON THE PLANS TO CONTROL EROSION AND SEDIMENTATION. ADDITIONAL MEASURES MUST BE UNDER-TAKEN AS REQUIRED TO ACCOMMODATE SPECIAL CONDITIONS THAT ARISE DURING THE INSTALLATION OF THE FACILITIES. ALSO PROVIDE SUCH EROSION AND SEDIMENTATION CONTROL AS IS NECESSARY TO MEET THE REQUIREMENTS OF THE REFERENCED SPECIFICATIONS OR ADDITIONAL REQUIREMENTS OF THE OWNER.

2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL BE IN ACCORDANCE WITH THE ILLINOIS PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.

L. LANDSCAPING

1. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" MINIMUM IN SEEDING AND PLANTING AREAS. ALL LANDSCAPING SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT.

2. EROSION CONTROL BLANKET SHALL BE CONSTRUCTED ON ALL SLOPE OF 25% OR MORE.

3. EXCEPT WHERE OTHERWISE INDICATED BY THE LANDSCAPE PLAN OR AS SHOWN ON THE GRADING PLAN, SEED ALL DISTURBED AREAS WITH IDOT CLASS 1 MIX.

M. TRAFFIC CONTROL

1. TRAFFIC CONTROL SIGNS, BOTH TEMPORARY AND PERMANENT SHALL BE INSTALLED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

2. THE SAFE AND ORDERLY PASSAGE OF TRAFFIC AND PEDESTRIANS SHALL BE MAINTAINED.

3. EXISTING TRAFFIC CONTROL SIGNS MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

6/27/2011 1:19:09 PM
N:\1880\Engineering\Plots\08-Specifications.plt

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

C-08

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

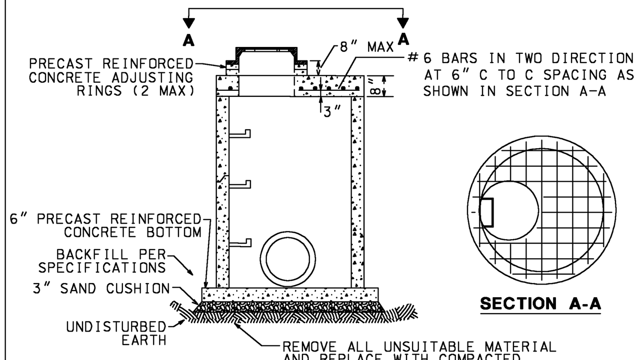
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SPECIFICATIONS

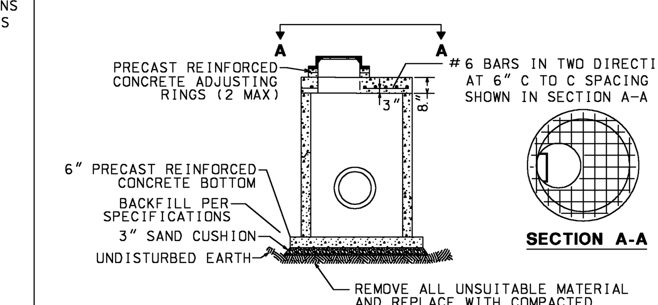
DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-8	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: **J241-101- C-08** REV. NO.



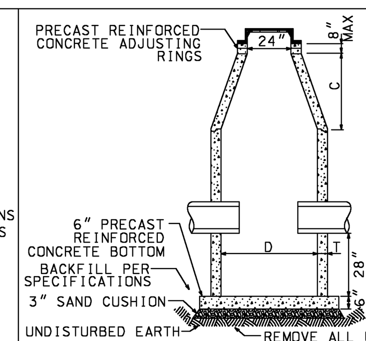
NOTES:
1. ALL NOTES ON "MANHOLE DETAILS" APPLY TO THIS DETAIL.
2. ALL MATERIALS AND CONSTRUCTION STANDARDS SHALL CONFORM TO "MANHOLE DETAILS".
3. STEPS SHALL BE SET TO LINE UP UNDER OPENING IN FLAT TOP
4. MANHOLE IN CURB WILL REQUIRE OPENING TO BE PLACED IN PROPER LOCATION WITH RESPECT TO BACK OF CURB.
5. THIS MANHOLE DETAIL SHALL APPLY WHERE DEPTH OF MANHOLE IS INSUFFICIENT TO ALLOW CONSTRUCTION WITH A CONE TOP.

[10] - RESTRICTED DEPTH MANHOLE DETAILS
NOT TO SCALE



NOTES:
1. ALL NOTES ON "CATCH BASIN DETAILS" APPLY TO THIS DETAIL
2. ALL MATERIALS AND CONSTRUCTION STANDARDS SHALL CONFORM TO "CATCH BASIN DETAILS".
3. CATCH BASIN IN CURB WILL REQUIRE OPENING TO BE PLACED IN PROPER LOCATION WITH RESPECT TO BACK OF CURB.
4. THIS CATCH BASIN DETAIL SHALL APPLY WHERE DEPTH OF CATCH BASIN IS INSUFFICIENT TO ALLOW CONSTRUCTION WITH A CONE TOP.

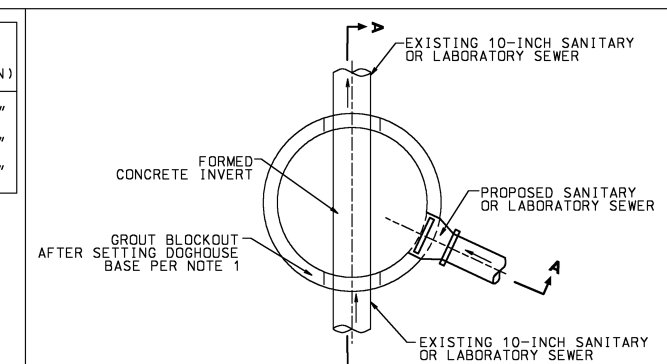
[11] - RESTRICTED DEPTH CATCH BASIN DETAILS
NOT TO SCALE



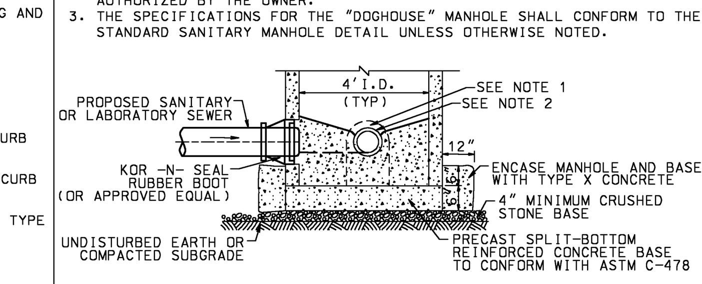
MATERIALS FOR WALLS	D	C	T (MIN)
PRECAST REINFORCED CONCRETE RISERS	36"	15"	4"
	48"	30"	5"
ASTM C-478	60"	45"	5"

NOTES:
1. PROVIDE CA-7 AGGREGATE BACKFILL AROUND CATCH BASIN TO SUBGRADE ELEVATION IN PAVED AREAS.
2. PRECAST REINFORCED CONCRETE RISERS, TOP, AND BOTTOM SHALL CONFORM TO ASTM C-478.
3. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH A CONTINUOUS LAYER OF PREFORMED BUTYL MASTIC MATERIAL (E-Z STICK OR EQUAL) TO EACH JOINT, ADJUSTING RING AND FRAME TO PREVENT INFILTRATION.
4. 1/2" PLASTER COAT IS REQUIRED ON INTERIOR AND EXTERIOR AT 12" EACH SIDE OF ALL JOINTS AND AROUND STEPS
5. FRAME TO BE SET TO FINISHED GRADE SHOWN ON THE PLANS OR GRADE ESTABLISHED BY ENGINEER.
6. CATCH BASIN FRAME AND COVERS SHALL BE:
   A. CURB (B6.12): NEENAH R-3281-A OR EJIW 7210 EWITH TYPE "M1" GRATE. CURB PLATE SHALL HAVE "TROUT LOGO".
   B. CURB (DEPRESSED): NEENAHA R-3281-A OR EJIW 7210 EWITH TYPE "M1" GRATE. CURB PLATE SHALL BE FLAT AND SHALL HAVE "TROUT LOGO".
   C. PAVEMENT: NEENAH R-2504 WITH TYPE "G" GRATE OR EJIW 1050Z1 WITH TYPE "M2" GRATE.
   D. PARKWAY OR FRONT YARD: NEENAH R-1713 WITH TYPE "B" LID OR EJIW 1022-2HD.
   E. LANDSCAPED AREAS AND REAR YARDS: NEENAH R-4340-B OR EJIW 6527.

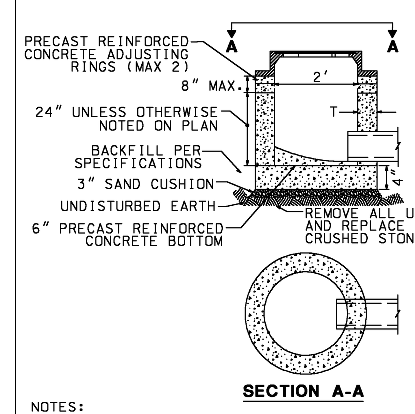
[12] - CATCH BASIN DETAILS
NOT TO SCALE



NOTES:
1. GROUT OPENING BETWEEN EXISTING PIPE AND NEWLY INSTALLED DOGHOUSE RISER WITH NON-SHRINK GROUT.
2. THE TOP PORTION OF THE EXISTING SEWER SHALL NOT BE REMOVED UNTIL AUTHORIZED BY THE OWNER.
3. THE SPECIFICATIONS FOR THE "DOGHOUSE" MANHOLE SHALL CONFORM TO THE STANDARD SANITARY MANHOLE DETAIL UNLESS OTHERWISE NOTED.



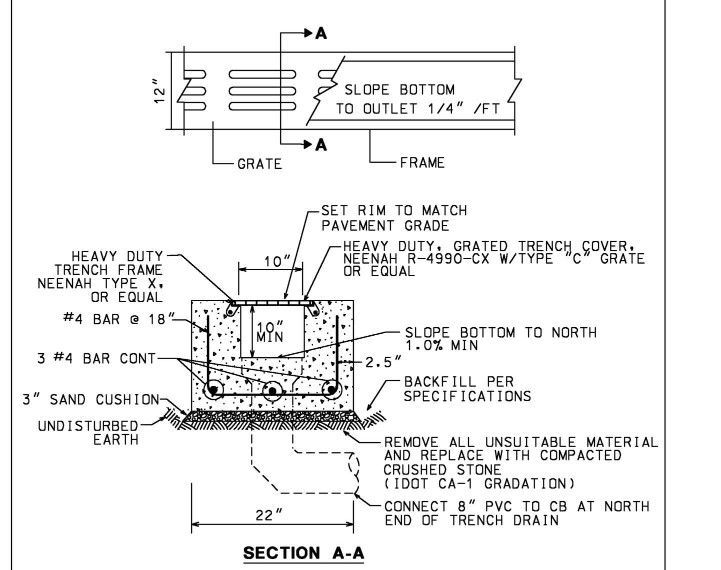
[13] - DETAIL OF "DOGHOUSE" MANHOLE
NOT TO SCALE



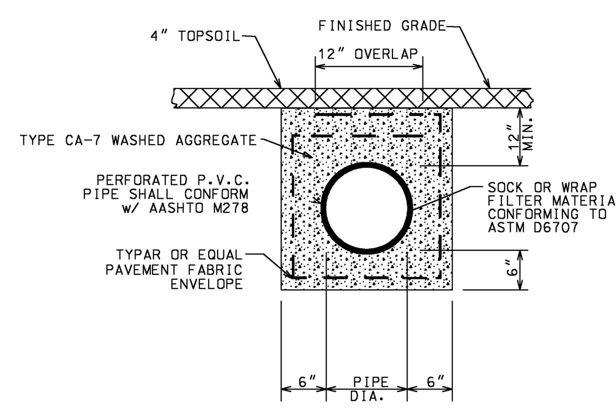
MATERIALS FOR WALLS	T (MIN)
PRECAST REINFORCED CONCRETE RISERS ASTM C-478	3"

NOTES:
1. FRAME TO BE SET TO FINISHED GRADE SHOWN ON THE PLANS OR GRADE ESTABLISHED BY ENGINEER.
2. SEE PLANS FOR THE LOCATION AND INVERT ELEVATIONS OF SEWERS AND CATCH BASIN TYPE.
3. PLACE A CONTINUOUS LAYER OF PREFORMED BUTYL MASTIC MATERIAL (E-Z STICK OR EQUAL) TO EACH JOINT, ADJUSTING RING AND FRAME TO PREVENT INFILTRATION
4. INLET FRAME AND COVERS SHALL BE:
   A. CURB (B6.12): NEENAH R-3281-A OR EJIW 7210 EWITH TYPE "M1" GRATE. CURB
   B. CURB (DEPRESSED): NEENAHA R-3281-A OR EJIW 7210 EWITH TYPE "M1" GRATE. CURB PLATE SHALL BE FLAT AND SHALL HAVE "TROUT LOGO".
   C. PAVEMENT: NEENAH R-2504 WITH TYPE "G" GRATE OR EJIW 1050Z1 WITH TYPE "M2" GRATE.
   D. PARKWAY OR FRONT YARD: NEENAH R-1713 WITH TYPE "B" LID OR EJIW 1022-2HD.
   E. LANDSCAPED AREAS AND REAR YARDS: NEENAH R-4340-B OR EJIW 6527.

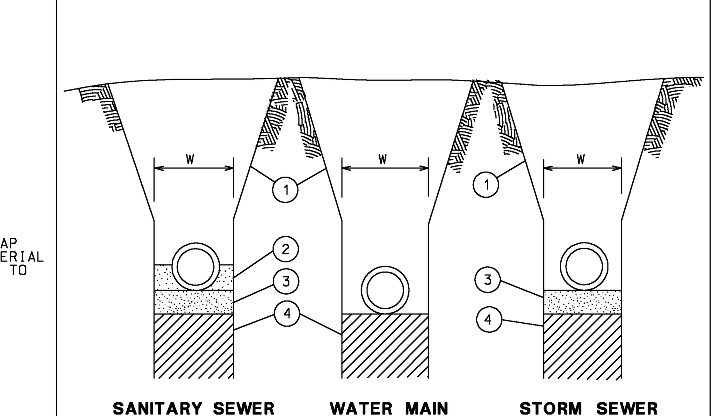
[14] - INLET DETAILS
NOT TO SCALE



[15] - TRENCH DRAIN DETAILS
NOT TO SCALE



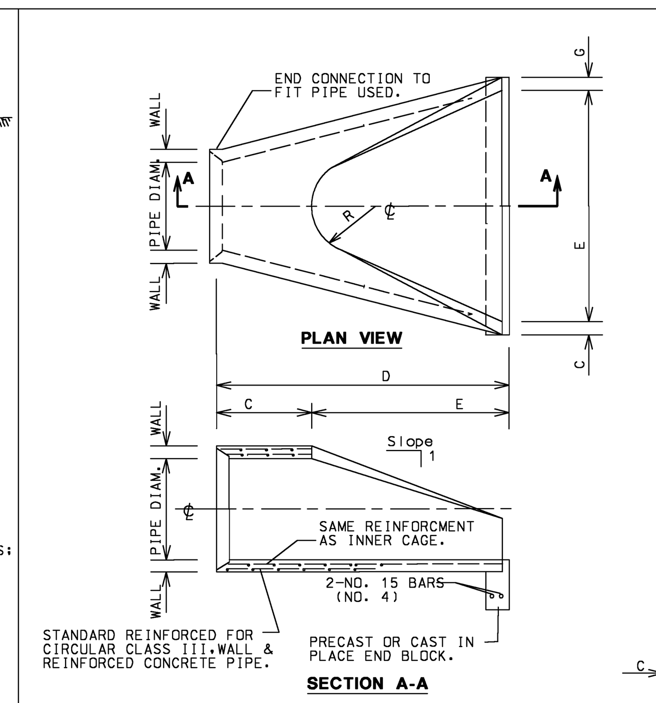
[16] - UNDERDRAIN DETAILS
NOT TO SCALE



1. SELECTED GRANULAR BACKFILL UNDER PAVEMENTS; CURBS AND GUTTERS; AND SIDEWALKS (IDOT CA-7 CRUSHED STONE) SLOPE AND/OR BRACE SIDEWALLS IN ACCORD WITH LOCAL AND/OR STATE STANDARDS.
2. GRANULAR CRADLE (IDOT CA-7 CRUSHED STONE)
3. SANITARY SEWER - 4" MINIMUM BEDDING (IDOT CA-7) STORM SEWER - 4" MINIMUM BEDDING (IDOT CA-7)
4. UNSUITABLE MATERIAL TO BE REMOVED AND REPLACED AS DIRECTED BY SOILS ENGINEER

NOTE: SEE ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION FOR "W" AND ACCEPTABLE PIPE MATERIALS

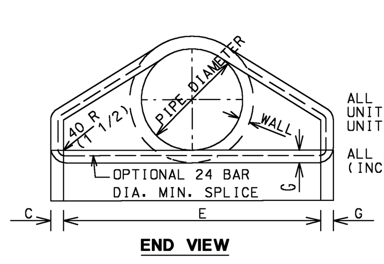
[17] - BEDDING DETAIL
NOT TO SCALE



PIPE DIA.	APPROX. QTY.kg (lbs.)	WALL	A	B	C	D	E	G	R	APPRX. SLOPE
12	530	2	4	24	4'-0 7/8"	6'-0 7/8"	24	2	9	1:2.4
24	1520	3	9 1/2	3'-7 1/2"	30	6'-1 1/2"	4'	3	14	1:2.5

∗ BAR GRATES ARE TO BE PROVIDED ON ALL FLARED END SECTIONS 15" OR GREATER UNLESS OTHERWISE NOTED.

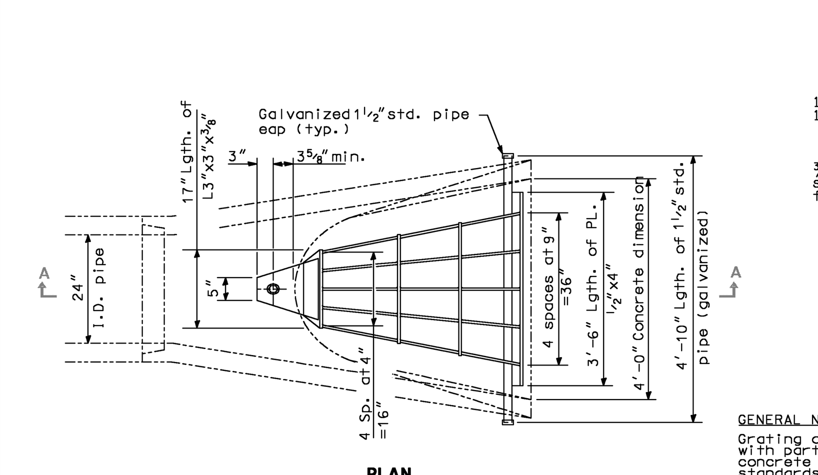
∗ RADIUS AS FURNISHED BY MANUFACTURER

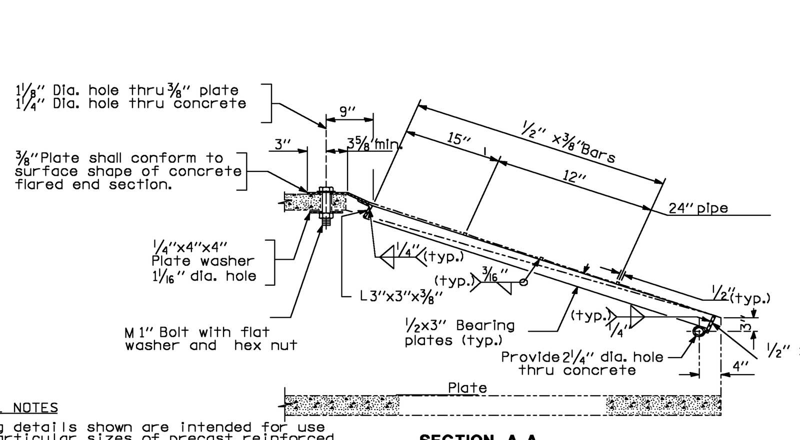


ALL SLOPES RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

[18] - FLARED END SECTION
PRECAST REINFORCED CONCRETE
STANDARD 2449-1





GENERAL NOTES

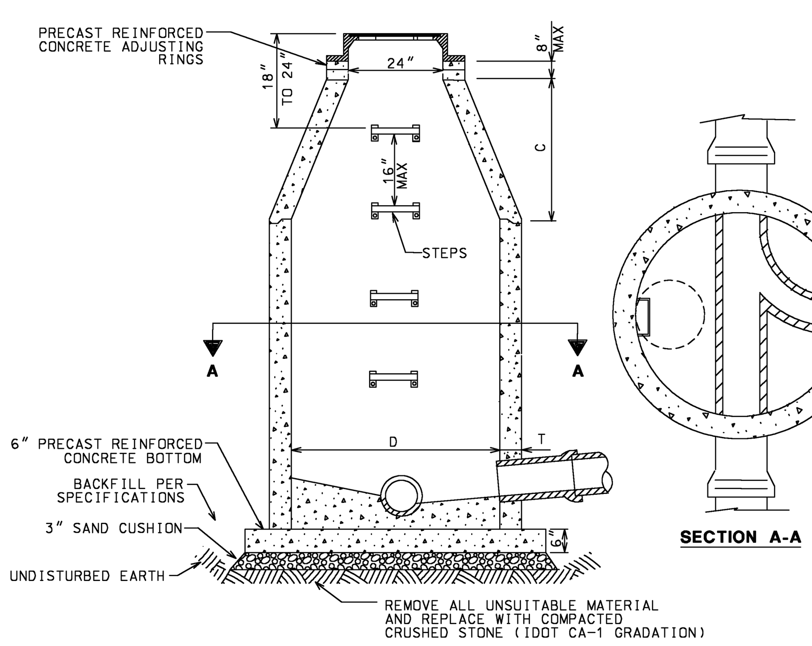
Grating details shown are intended for use with particular sizes of precast reinforced concrete flared end sections as shown on standards 542301 and 542306.

Approximate quantity of steel shown includes total quantity of grating, bolts, nuts, washers and steel pipe.

Holes in the precast concrete flared end sections shall be cored to the diameters noted. If cone-out on the other end of the hole occurs, the hole shall be filled with grout to correct the diameter of the hole.

All dimensions are in inches unless otherwise shown.

[19] - 24" FLARED END SECTION GRATING DETAILS
N.T.S.

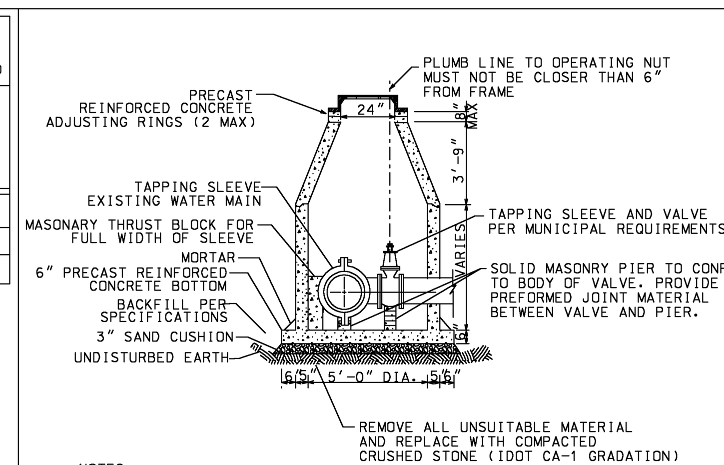


MATERIALS FOR WALLS	D	C	T (MIN)
PRECAST REINFORCED CONCRETE RISERS	48"	30"	5"
ASTM C-478	60"	45"	5"

DIAMETER OF MAIN SEWER	D
18" AND UNDER	48"
21" THRU 42"	60"

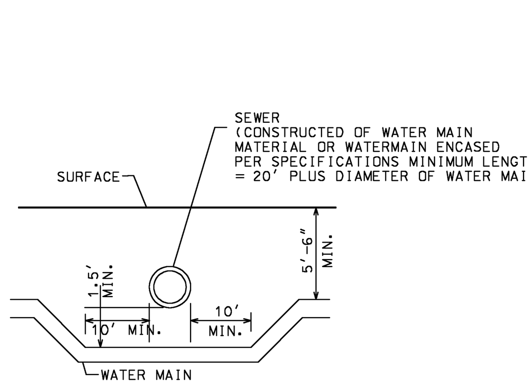
NOTES:
1. SEE PLANS FOR THE LOCATION AND INVERT ELEVATIONS OF SEWERS.
2. PROVIDE CA-7 AGRREGATE BACKFILL AROUND MH TO SUBGRADE ELEVATION IN PAVED AREAS.
3. STEPS SHALL BE NEENAH R-1980-J OR EQUAL AND SHALL BE INTEGRALLY CAST INTO MH.
4. PRECAST REINFORCED CONCRETE RISERS, TOP, AND BOTTOM SHALL CONFORM TO ASTM C-478.
5. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH A CONTINUOUS LAYER OF PREFORMED BUTYL MASTIC MATERIAL (E-Z STICK OR EQUAL) TO EACH JOINT, ADJUSTING RING AND FRAME TO PREVENT INFILTRATION.
6. FRAME TO BE SET TO FINISHED GRADE SHOWN ON THE PLANS OR GRADE ESTABLISHED BY ENGINEER.
7. ECCENTRIC CONE WITH STEPS ON SIDE SHALL BE USED.
8. STORM MANHOLE FRAME AND COVERS SHALL BE NEENAH R-1712 WITH TYPE "B" COVER, SHALL HAVE THE WORD "STORM" ON THE COVER, AND SHALL HAVE A 1" PICK HOLE.

[20] - MANHOLE DETAILS
NOT TO SCALE



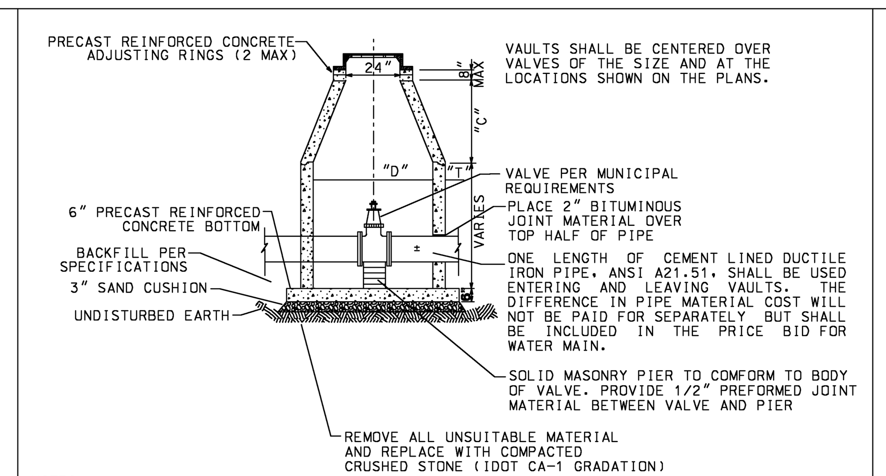
NOTES:
1. PIPE OPENINGS TO BE CAST INTO WALL.
2. PRECAST CONCRETE BASE TO BE CAST INTEGRAL WITH LOWEST WALL UNIT.
3. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH A CONTINUOUS LAYER OF PREFORMED BUTYL MASTIC MATERIAL (E-Z STICK OR EQUAL) TO EACH JOINT, ADJUSTING RING AND FRAME TO PREVENT INFILTRATION.
4. PRECAST REINFORCED CONCRETE RISERS, TOP, AND BOTTOM SHALL CONFORM TO ASTM C-478.
5. FRAMES AND COVERS SHALL BE NEENAH R-1713 WITH TYPE "B" COVER WITH THE WORD "WATER" ON THE COVER AND A 1" PICK HOLE.
6. FRAME TO BE SET TO FINISHED GRADE SHOWN THE PLANS OR GRADE ESTABLISHED BY ENGINEER.

[21] - PRESSURE CONNECTION VAULT DETAILS
NOT TO SCALE



NOTES:
1. ALL FITTINGS REQUIRED FOR LOWERING OF WATER MAIN SHALL BE RESTRAINED JOINTS.
2. SEE WATERMAIN AND SEWER SEPARATION DETAILS FOR ADDITIONAL INFORMATION.

[22] - WATER MAIN LOWERING DETAILS
NOT TO SCALE

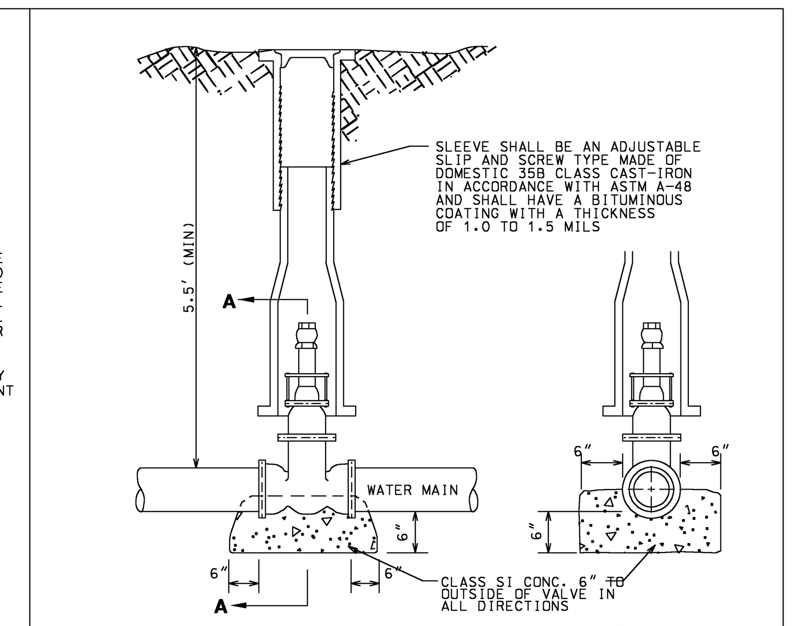


NOTES:
1. PIPE OPENING TO BE CAST INTO WALL
2. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH A CONTINOUS LAYER OF PREFORMED BUTYL MASTIC MATERIAL (E-Z STICK OR EQUAL) TO EACH JOINT, ADJUSTING RING AND FRAMETO PREVENT INFILTRATION.
3. FRAME AND COVER SHALL BE NEENAH R-1713 WITH TYPE "B" COVER WITH THE WORD "WATER" ON THE COVER AND A 1" PICK HOLE.
4. FRAME TO BE SET TO FINISHED GRADE SHOWN ON THE PLANS OR GRADE ESTABLISHED BY ENGINEER.
5. PRECAST REINFORCED CONCRETE RISERS, TOP, AND BOTTOM SHALL CONFORM TO ASTM C-478.

MATERIALS FOR WALLS	D	C	T (MIN)
PRECAST REINFORCED CONCRETE RISERS ASTM C-478	48" 60"	30" 45"	5" 6"

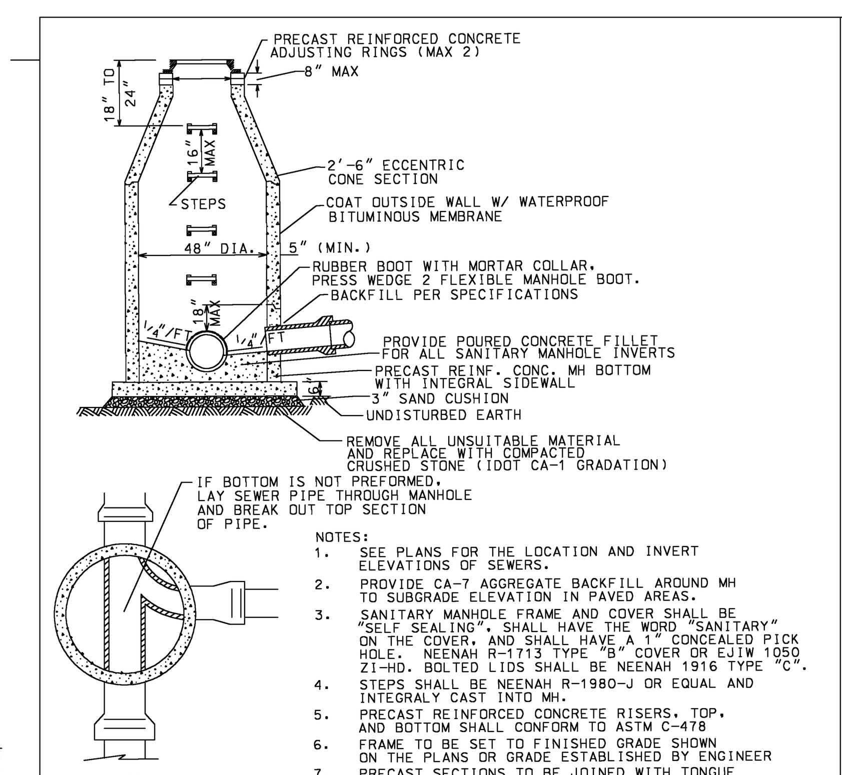
DIAMETER OF VALVE	D
8" AND UNDER	48"
10" AND OVER	60"

[23] - VALVE VAULT DETAILS
NOT TO SCALE



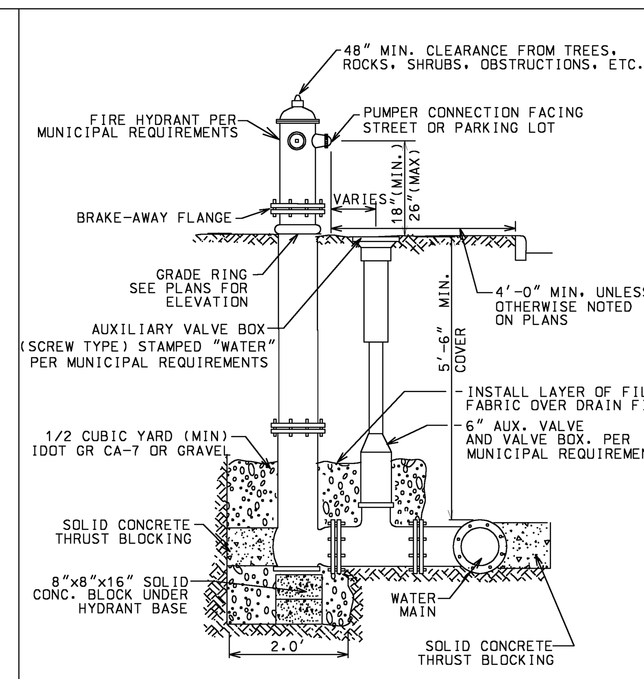
NOTE :
1. VALVE PER MUNICIPAL REQUIREMENTS
2. GRANULAR BACKFILL SHALL BE PLACED AROUND VALVE AND VALVE BOX.
3. RIM TO BE SET TO FINISHED GRADE SHOWN ON THE PLANS OR GRADE ESTABLISHED BY ENGINEER.

[24] - VALVE BOX INSTALLATION DETAILS
NOT TO SCALE

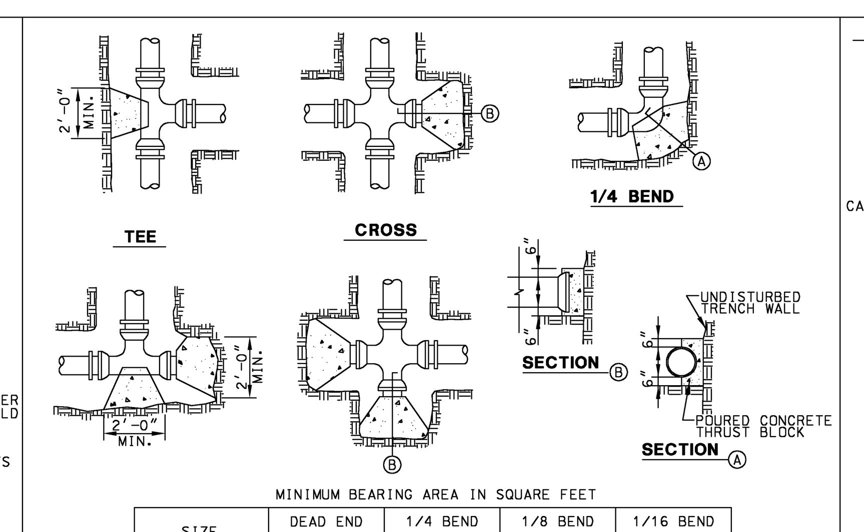


NOTES:
1. SEE PLANS FOR THE LOCATION AND INVERT ELEVATIONS OF SEWERS.
2. PROVIDE CA-7 AGGREGATE BACKFILL AROUND MH TO SUBGRADE ELEVATION IN PAVED AREAS.
3. SANITARY MANHOLE FRAME AND COVER SHALL BE "SELF SEALING", SHALL HAVE THE WORD "SANITARY" ON THE COVER, AND SHALL HAVE A 1" CONCEALED PICK HOLE. NEENAH R-1713 TYPE "B" COVER OR EJIW 1050 ZI-HD. BOLTED LIDS SHALL BE NEENAH 1916 TYPE "C".
4. STEPS SHALL BE NEENAH R-1980-J OR EQUAL AND INTEGRALY CAST INTO MH.
5. PRECAST REINFORCED CONCRETE RISERS, TOP, AND BOTTOM SHALL CONFORM TO ASTM C-478
6. FRAME TO BE SET TO FINISHED GRADE SHOWN ON THE PLANS OR GRADE ESTABLISHED BY ENGINEER
7. PRECAST SECTIONS TO BE JOINED WITH TONGUE AND GROOVE JOINTS SEALED WITH A CONTINUOUS LAYER OF PREFORMED BUTYL MASTIC MATERIAL (E-Z STICK OR EQUAL) TO EACH JOINT, ADJUSTING RING AND FRAME TO PREVENT INFILTRATION
8. ALL SANITARY SEWERS SHALL BE PLACED IN PRESS WEDGE 2 FLEXIBLE MANHOLE BOOTS.
9. 1/2" PLASTER COAT IS REQUIRED ON INTERIOR AND EXTERIOR AT 12" EACH SIDE OF ALL JOINTS AND AROUND STEPS.

[25] - 48" SANITARY MANHOLE - TYPE A - DETAILS
NOT TO SCALE



[26] - FIRE HYDRANT SETTING DETAILS
NOT TO SCALE

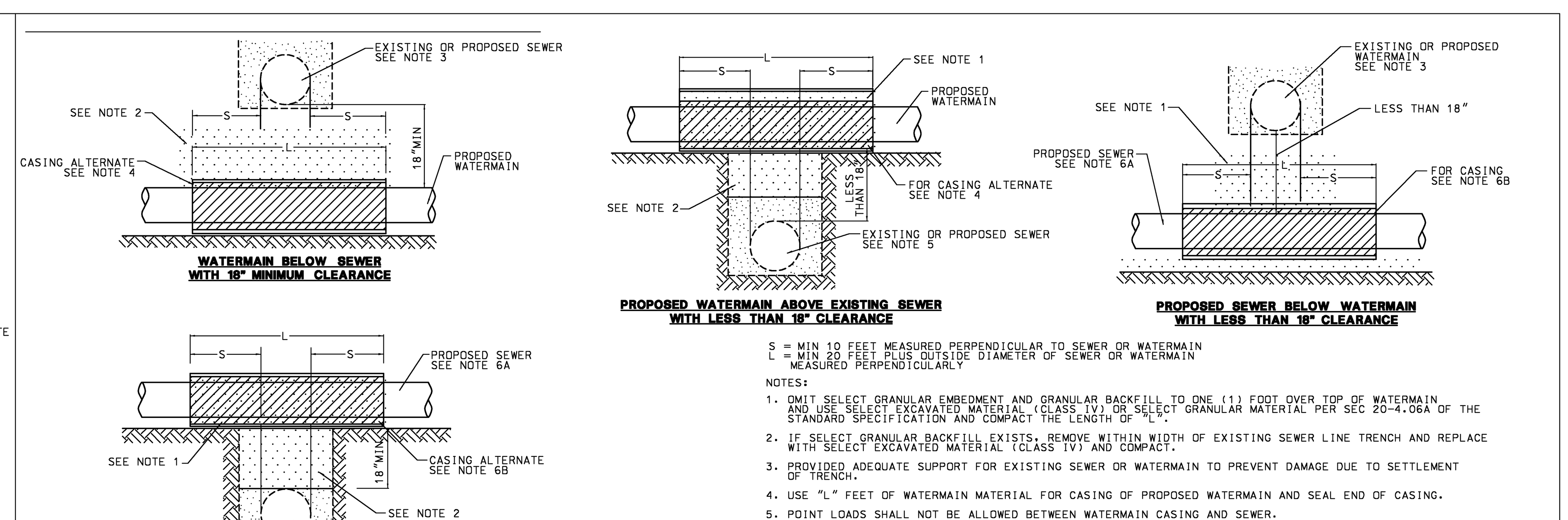


MINIMUM BEARING AREA IN SQUARE FEET

SIZE (DIA. IN INCH.)	DEAD END OR TEE (SQ. FT.)	1/4 BEND 90° BEND (SQ. FT.)	1/8 BEND 45° BEND (SQ. FT.)	1/16 BEND 22.5° BEND (SQ. FT.)
6	4.3	6.0	3.2	1.7
8	7.5	10.7	5.8	3.0
10	11.8	16.6	9.0	4.6
12	17.0	24.0	13.0	6.6
16	30.0	42.5	23.0	11.8

1. THE ABOVE TABLE IS BASED ON 2,000 PSF SOIL BEARING AGAINST THE UNDISTURBED TRENCH WALL AND REPRESENTS THE MINIMUM VERTICAL AREA OF THE THRUST BLOCK PERPENDICULAR TO THE FITTING INCLUDING THE ANGLE OF THE FITTING.
2. THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS AND AT POINTS SPECIFIED SHALL BE CLASS "SI" CONCRETE. A MIN. OF 12" THICK, PLACED BETWEEN SOLID GROUND AND FITTING, AND SHALL BE ANCHORED IN SUCH A MANNER THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRS. TRUST BLOCK SHALL BE PLACED AT BENDS OF 11° 1/4 OR MORE. RETAINER GLANDS MAY BE USED IN PLACE OF THRUST BLOCKS.
3. PROVIDE POLYETHYLENE ENCASEMENT THROUGHOUT THE ENTIRE LENGHT OF THE WATERMAIN, AS REQUIRED.

[27] - THRUST BLOCK DETAILS
NOT TO SCALE



S = MIN 10 FEET MEASURED PERPENDICULAR TO SEWER OR WATERMAIN
L = MIN 20 FEET PLUS OUTSIDE DIAMETER OF SEWER OR WATERMAIN MEASURED PERPENDICULARLY

NOTES:
1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATERMAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) OR SELECT GRANULAR MATERIAL PER SEC 20-4.06A OF THE STANDARD SPECIFICATION AND COMPACT THE LENGTH OF "L".
2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDED ADEQUATE SUPPORT FOR EXISTING SEWER OR WATERMAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF TRENCH.
4. USE "L" FEET OF WATERMAIN MATERIAL FOR CASING OF PROPOSED WATERMAIN AND SEAL END OF CASING.
5. POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATERMAIN CASING AND SEWER.
6. a. CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATERMAIN MATERIAL AND PRESSURE TEST, OR:
   b. USE "L" FEET OF WATERMAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.
7. PLACEMENT OF WATERMAIN BELOW EXISTING OR PROPOSED SEWER WITH LESS THAN 18' CLEARANCE IS NOT ALLOWED.
8. PROVIDE TRENCH COMPACTION IN ACCORD WITH SEC 20-2.20B OF STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.

[28] - WATERMAIN AND SEWER SEPARATION DETAILS
N.T.S.

6/27/2011 1:19:35 PM
N:\880\Engineering\Plots\09-Details.plt

HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

C-09

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

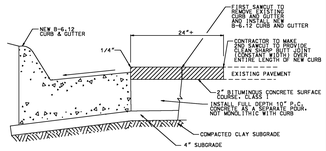
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONSTRUCTION DETAILS

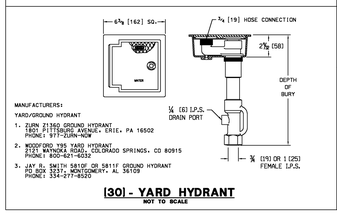
DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-9	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101- C-09 REV. NO.



[29] - PAVEMENT PATCH AT CURB AND GUTTER REMOVAL

NOT TO SCALE



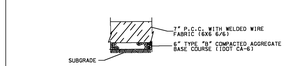
MANUFACTURERS:

YARD/GROUND HYDRANT

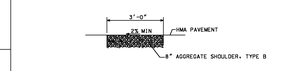
1. ZURN Z1360 GROUND HYDRANT
   1801 PITTSBURGH AVE., ERIE, PA 16502
   PHONE: 877-ZURN-NOW
2. WOODFORD Y95 YARD HYDRANT
   7101 BANNOCK ROAD, COLORADO SPRINGS, CO 80915
   PHONE 800-621-6032
3. JAY R. SMITH 5810C OR 5811C GROUND HYDRANT
   2801 3RD AVENUE, BIRMINGHAM, AL 35233
   PHONE: 334-277-8520

[30] - YARD HYDRANT

NOT TO SCALE

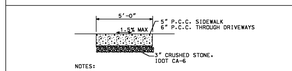


[31] - PARKING LOT CONCRETE PAVEMENT DETAIL



[32] - AGGREGATE SHOULDER DETAIL

NOT TO SCALE

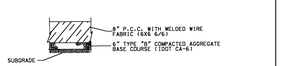


NOTES:

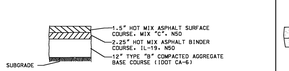
1. ALL SIDEWALK SHALL BE CONSTRUCTED WITH IDOT CLASS "SI" CONCRETE.
2. 1/2" PREFORMED EXPANSION JOINTS SHALL BE PLACED AT 50' MAX SPACING AND AT ALL LOCATIONS ADJACENT TO CURB & GUTTER OR OTHER STRUCTURES.
3. CONTROL JOINTS SHALL BE PLACED AT 5' INTERVALS.

[33] - CONCRETE SIDEWALK DETAIL

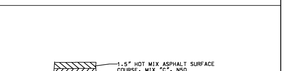
NOT TO SCALE



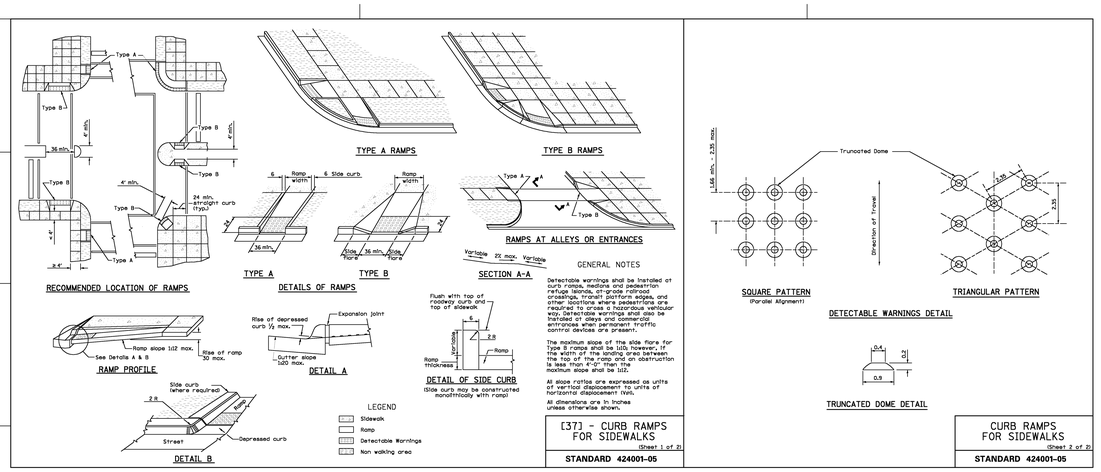
[34] - CONCRETE PAVEMENT DETAIL



[35] - HEAVY DUTY HMA PAVEMENT DETAIL



[36] - HMA PAVEMENT DETAIL



GENERAL NOTES

Detectable warnings shall be installed at curb ramps, medians and pedestrian refuge islands at grade-level pedestrian crossings at gate-controlled and other locations where pedestrians are required to cross a hazardous vehicular way. Detectable warnings shall also be installed at alleys and commercial entrances when permanent traffic control devices are present.

The maximum slope of the side flare for Type B ramps shall be 1:10; however, if the width of the landing area between the ramp and the obstruction is less than 4'-0" then the maximum slope shall be 1:12.

All slope ratios are expressed as units of vertical displacement per units of horizontal displacement (run).

All dimensions are in inches unless otherwise shown.

[37] - CURB RAMPS FOR SIDEWALKS

(Sheet 1 of 2)

STANDARD 424001-05

CURB RAMPS FOR SIDEWALKS

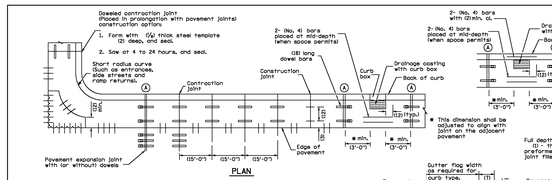
(Sheet 2 of 2)

STANDARD 424001-05

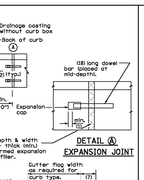
HDR

Mackie Consultants, LLC
9575 W. Higgins Road, Suite 500
Rosemont, IL 60018
(847)696-1400
www.mackieconsult.com

C-10



ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE



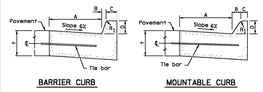
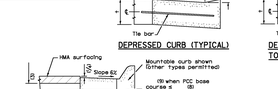
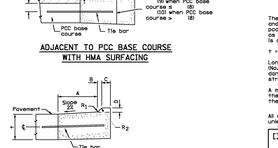


TABLE OF DIMENSIONS BARRIER CURB					
TYPE	A	B	C	D	R_1
(B-6.12)	(12)	(1)	(6)	(6)	(3)
(B-6.18)	(18)	(1)	(6)	(6)	(3)
(B-6.24)	(24)	(1)	(6)	(6)	(3)
(B-9.12)	(12)	(2)	(9)	(9)	(3)
(B-9.18)	(18)	(2)	(9)	(9)	(3)
(B-9.24)	(24)	(2)	(9)	(9)	(3)





GENERAL NOTES

The batter slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6X when subbase is omitted.

t = thickness of pavement.

Longitudinal joint tie bars shall be No. 19 (No. 6) or (24") centers in accordance with details for longitudinal construction joint shown on Standard 420001.

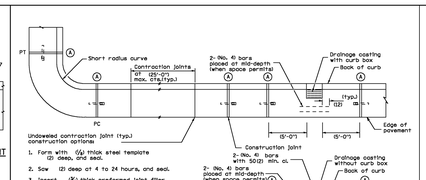
A minimum clearance of (2") between the end of the tie bar and the back of the curb shall be maintained.

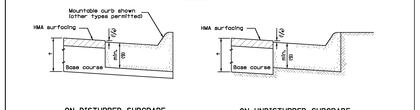
All dimensions are in millimeters (inches) unless otherwise shown.

[38] - CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

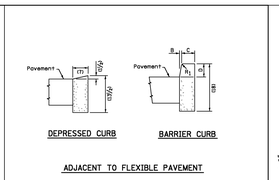
(Sheet 1 of 2)

STANDARD 606001-03

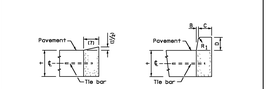




ADJACENT TO FLEXIBLE PAVEMENT



ADJACENT TO FLEXIBLE PAVEMENT



ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE

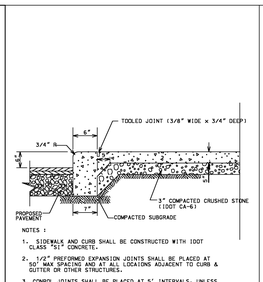
CONCRETE CURB TYPE B

All dimensions are in millimeters (inches) unless otherwise shown.

CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

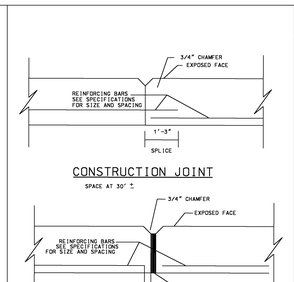
(Sheet 2 of 2)

STANDARD 606001-03



[39] - P.C.C. SIDEWALK WITH INTERGRAL CURB DETAILS

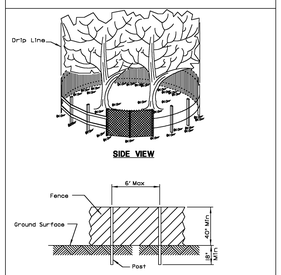
NOT TO SCALE



[40] - PCC PAVEMENT JOINT DETAILS

NOT TO SCALE

TREE PROTECTION - FENCING

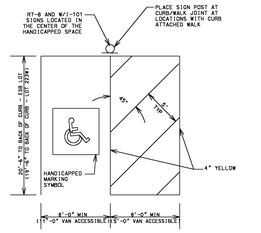


[41] - POST AND FENCE DETAIL

NOTES:

1. The fence shalbe located outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shalbe either standard steelposts or wood posts with a minimum cross sectional area of 3.0 sq.in.
3. The fence may be either 60" high snow fence, 40" plastic web fencing or any other materialas approved by the engineer/inspector.

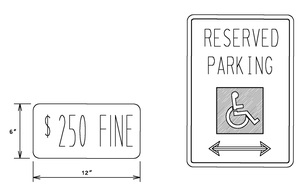
REFERENCE			
Project			
Designed	Date	U.S. DEPARTMENT OF AGRICULTURE	STANDARD DWG. NO.
Checked	Date	SOIL CONSERVATION SERVICE	L-650
Drawn	Date	ILLINOIS	SHEET 1 OF 1
Approved	Date		DATE 4-7-94



HANDICAPPED SPACE MARKING

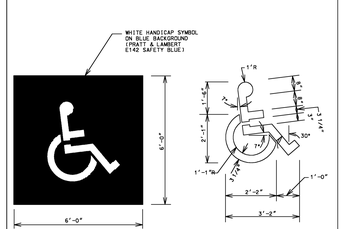
[42] - HANDICAPPED MARKING DETAILS

NOT TO SCALE



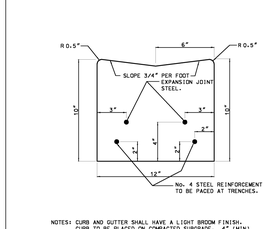
[43] - HANDICAPPED PARKING SIGNS

NOT TO SCALE



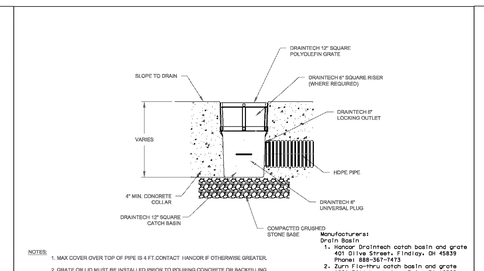
[44] - HANDICAPPED MARKING DETAILS

NOT TO SCALE



NOTES: CURB AND GUTTER SHALL HAVE A LIGHT BROOM FINISH. CURB TO BE PLACED ON COMPACTED SUBGRADE. 4" (MIN) CA-7 LIMESTONE BASE.

[45] - CONCRETE RIBBON CURB & GUTTER DETAIL



NOTES:

1. MAX COVER OVER TOP OF PIPE IS 4 FT.CONTACT HANCOR IF OTHERWISE GREATER.
2. GRATE OR LID MUST BE INSTALLED PRIOR TO POURING CONCRETE OR BACKFILLING
3. INASPHALT OR HOT MASTIC APPLICATIONS, THE CHANNEL MUST BE ENCASED IN CONCRETE FOR ADDED STRENGTH AND TO PREVENT DISTORTION DURING INSTALLATION.
4. FOR CONCRETE INSTALLATIONS, THE GRATE SHOULD BE INSTALLED AND TAPED OVER PRIOR TO POURING CONCRETE OR BACKFILL TO PREVENT DEBRIS FROM ENTERING DRAIN AND TO PREVENT DEFORMATION OF THE UNIT DURING INSTALLATION.

Manufacturers:

Drain Basin

1. Hancor Draintech catch basin and grate
   401 W. Sinnen, Findlay, OH 45839
   Phone: 888-367-7473
2. Zurn Flowthru catch basin and grate
   1801 Pittsburgh Ave, Erie, PA 16502
   Phone: 877-ZURN-NOW
3. NDS Catch basin and grate
   851 N. Harvard Ave. Lindsay, CA 93247
   Phone: 800-726-1994

[46]

© 2007 HANCOR, INC.

HANCOR, INC. HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO HANCOR. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. HANCOR HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THE SITE OF THE PROJECT INTO WHICH THE PRODUCT(S) MAY BE INCORPORATED. THE SUITABILITY OF THE PRODUCT(S) SHOWN AND GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO STRENGTHENING. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED MEET THE REQUIREMENTS OF THE PROJECT, INCLUDING ALL LOCAL, STATE, OR FEDERAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED MEETS AND ACCEPTABLE FOR THIS PROJECT.

REV.	DESCRIPTION	BY	APVD	DATE
1	UPDATED DRAWING	TJR	MHSKY	OCT

DRAINTECH 12"SQ.X 7"(VAR) PER A INSTALL (REC/CONCRETE APP)

DRAWING NUMBER: STD-110382

Hancor
401 SLUSE ST.
FINDLAY, OHIO 45839

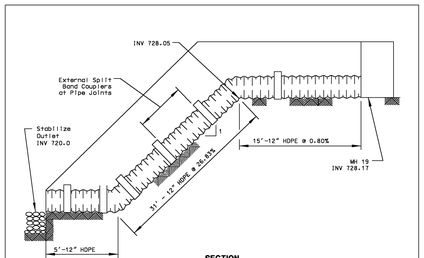
DRAWN	JTR
CHECKED	MHSKY
DATE	06.22.10
SCALE	NTS
SHEET	1OF 1

[47] - STOP SIGN DETAIL

NOT TO SCALE

R1-1130)
30"x30"

NOTE
SIGNS TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES

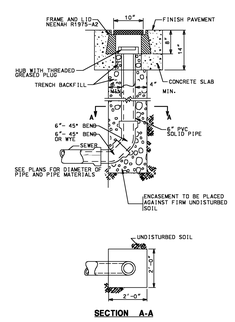


SECTION

NOTES:

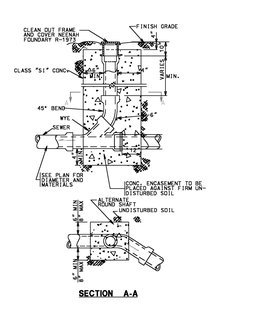
1. Conduit material shall be heavy duty flexible material such as non-perforated corrugated plastic tubing or specially designed flexible tubing.
2. The flared end section shall meet the requirements as shown on standard drawing IL-545.
3. The soil material around the pipe shall be hand compacted in 6" lifts to fill all voids in the tubing corrugations.

[48] - SLOPE DRAIN PLAN



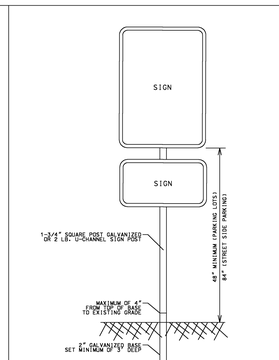
[49] - END CLEAN OUT DETAILS

NOT TO SCALE



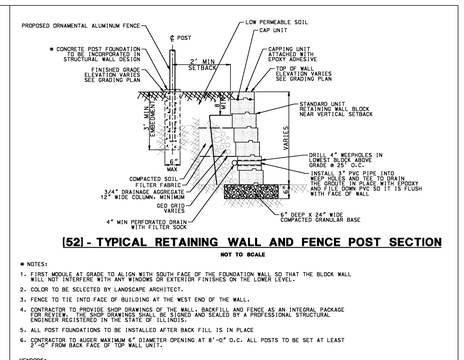
[50] - BEND CLEAN OUT DETAILS

NOT TO SCALE



[51] - SIGN POST DETAIL

NOT TO SCALE



[52] - TYPICAL RETAINING WALL AND FENCE POST SECTION

NOT TO SCALE

* NOTES:

1. FIRST MODULE AT GRADE TO ALIGN WITH SOUTH FACE OF THE FOUNDATION WALL SO THAT THE BLOCK WALL WILL NOT INTERFERE WITH ANY WINDOWS OR EXTERIOR FINISHES ON THE LOWER LEVEL.
2. COLOR TO BE SELECTED BY LANDSCAPE ARCHITECT.
3. FENCE TO TIE INTO FACE OF BUILDING AT THE WEST END OF THE WALL.
4. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF THE WALL, BACKFILL AND FENCE AS AN INTEGRAL PACKAGE SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ILLINOIS. FENCE TO BE DESIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ILLINOIS.
5. ALL POST FOUNDATIONS TO BE INSTALLED AFTER BACK FILL IS IN PLACE
6. CONTRACTOR TO AUGER MAXIMUM 6" DIAMETER OPENING AT 8'-0" O.C. ALL POSTS TO BE SET AT LEAST 2'-0" FROM BACK FACE OF TOP WALL UNIT.

VENDORS:

1. COMPAC II STRAIGHT FACE BLOCK AND CAP UNITS BY KEYSTONE RETAINING WALL SYSTEMS
   4444 W. 78TH STREET, MINNEAPOLIS, MN 55435
   PHONE: 952-897-1040
2. VERTICA STRAIGHT FACE BLOCK AND CAP UNITS BY ANCHOR WALL SYSTEMS
   5959 BAKER ROAD, SUITE 390, MINNETONKA, MN 55345
   PHONE: 877-220-5415
3. PINNACLE STANDARD UNITS AND CAP UNITS BY PINNACLE RETAINING WALL SYSTEMS
   40W852 ROUTE 20, HAMPSHIRE, IL 60140
   PHONE: 847-683-3350

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISS. FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

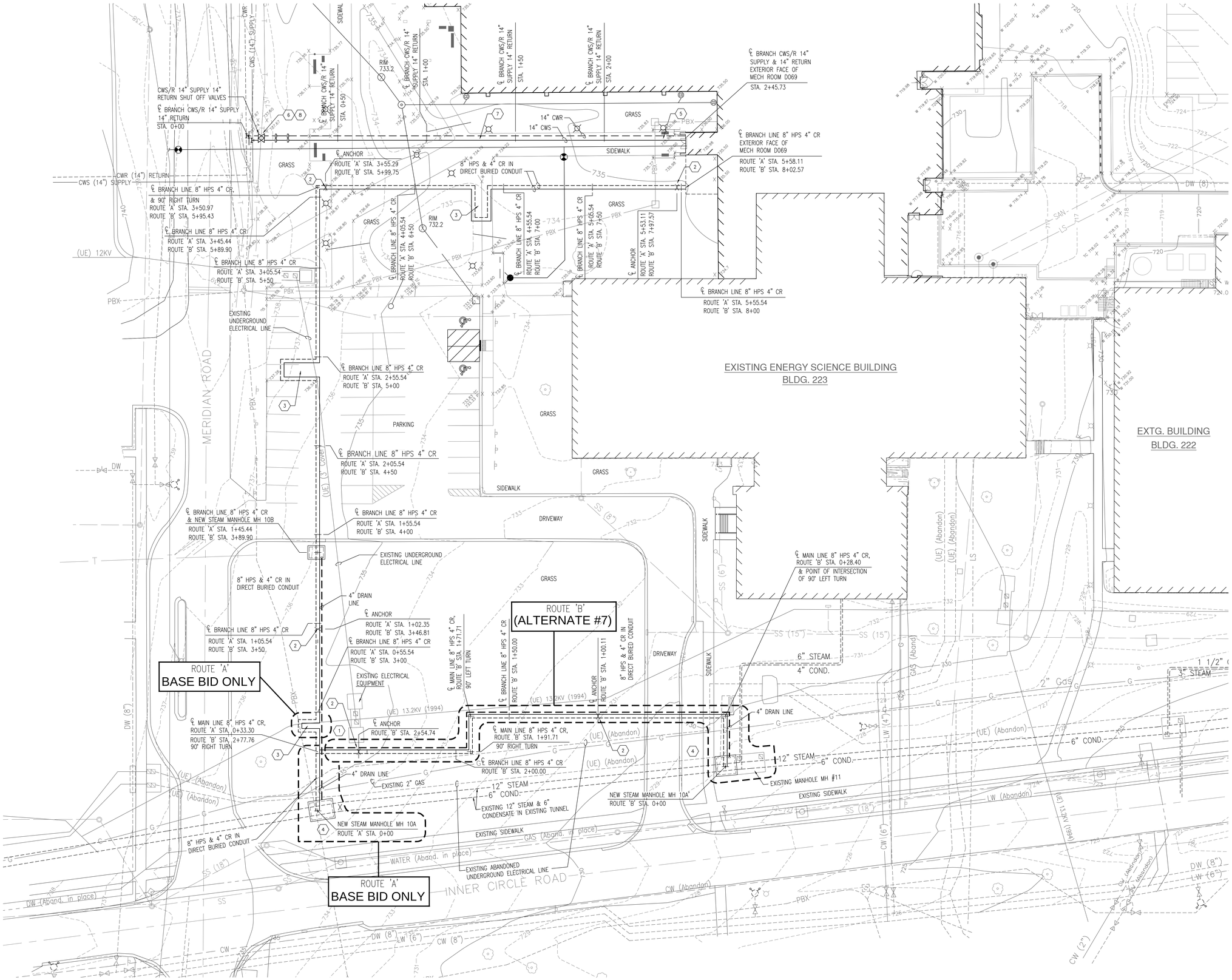
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONSTRUCTION DETAILS

DESIGNED ST	A/E CADD FILE	FACILITY NO(S) 241
DRAWN WHM	A/E DWG. NO. C-10	
CHECKED DAS	CADD NO:	
PROJECT MANAGER DAS	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101-C-10 REV. NO.

N:\21\J200 ...\J200-01 Plan Sheets\J200-01-Details.plt



1 HP STEAM & CONDENSATE BRANCH LINES PLAN TO NEW ES BUILDING AND CWS/R BRANCH LINES PLAN TO NEW ES BUILDING

1" = 20'-0"

HORIZONTAL 20' 0 20' 40'

SCALE IN FEET

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

GENERAL NOTE:

1. TWO STEAM AND CONDENSATE ROUTES ARE SHOWN ON THIS PLAN. ROUTE 'A' IS TO BE BID AS A BASE. INSTALLATION OF ROUTE 'A' REQUIRES FIELD VERIFICATION OF ANCHOR ON MAIN NEAR MAN HOLE 10A. ANCHOR WILL BE LOCATED WITHIN PIPE TUNNEL AND WILL REQUIRE CONCRETE DEMOLITION AND REPLACEMENT TO VERIFY. ROUTE 'B' IS TO BE BID AS AN ALTERNATE (#7). IF THE AFOREMENTIONED ANCHOR CANNOT BE FIELD VERIFIED, ROUTE 'B' MUST BE FOLLOWED.

KEY NOTES:

1. SOUTH OF THIS POINT IS EXCLUSIVE TO ROUTE A. EAST OF THIS POINT IS EXCLUSIVE TO ROUTE B. THE TWO ROUTES COINCIDE NORTH OF THIS POINT AT DIFFERENT BURIAL DEPTHS. REFER TO PROFILE DRAWINGS FOR INVERTS.
2. PROPOSED ANCHOR LOCATION. CONTRACTOR IS RESPONSIBLE FOR ACTUAL LOCATION, QUANTITY, FUNCTION AND INSTALLATION OF ALL ANCHORS AS PART OF COMPLETE UNDERGROUND DISTRIBUTION SYSTEM.
3. PROPOSED EXPANSION LOOP LOCATION. CONTRACTOR IS RESPONSIBLE FOR ACTUAL LOCATION, QUANTITY, SIZE, FUNCTION AND INSTALLATION OF ALL EXPANSION LOOPS OR OTHER EXPANSION DEVICES AS PART OF COMPLETE UNDERGROUND DISTRIBUTION SYSTEM.
4. NEW MAN HOLE WILL DISRUPT EXISTING TUNNEL. REMOVE AND DISPOSE OF EXISTING TUNNEL TO THE EXTENT NECESSARY PRIOR TO CONSTRUCTING VAULT. REPAIR TUNNEL TO EXISTING CONDITIONS AFTER MANHOLE IS CONSTRUCTED, INCLUDING RECONNECTION OF ANY FOUNDATION DRAIN LINES SEVERED BY DEMOLITION.
5. PROVIDE RESTRAINED MEGA-LUG JOINTS ON CHILLED WATER PIPING WITHIN 20' OR MINIMUM 2 PIPE SECTIONS FROM EXTERIOR BUILDING WALL.
6. PROVIDE BUFFALO BOX AT GRADE LEVEL AND INSTALL VALVES WITH STEM EXTENDERS UP TO BOX.
7. EXTERIOR CHILLED WATER PIPING SHALL BE HDPE ENCASED DUCTILE IRON, UNINSULATED, IN ACCORDANCE WITH ANSI A21.51. JOINTS SHALL BE PUSH-ON STYLE WITH MECHANICAL (STUFFING BOX TYPE) JOINTS AT FITTINGS AND VALVES. FITTINGS SHALL BE DUCTILE OR GREY IRON IN ACCORDANCE WITH ANSI A21.10 OR A21.53.
8. SHUTOFF VALVES FOR CHILLED WATER SHALL BE WAFER STYLE BUTTERFLY VALVES OF ASTM A 536 GRADE 65-45-12 DUCTILE IRON CONSTRUCTED IN ACCORDANCE WITH AWWA C504 WITH RESILIENT BUNA-N SEALS AND STAINLESS STEEL TRIM.

CM-100

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

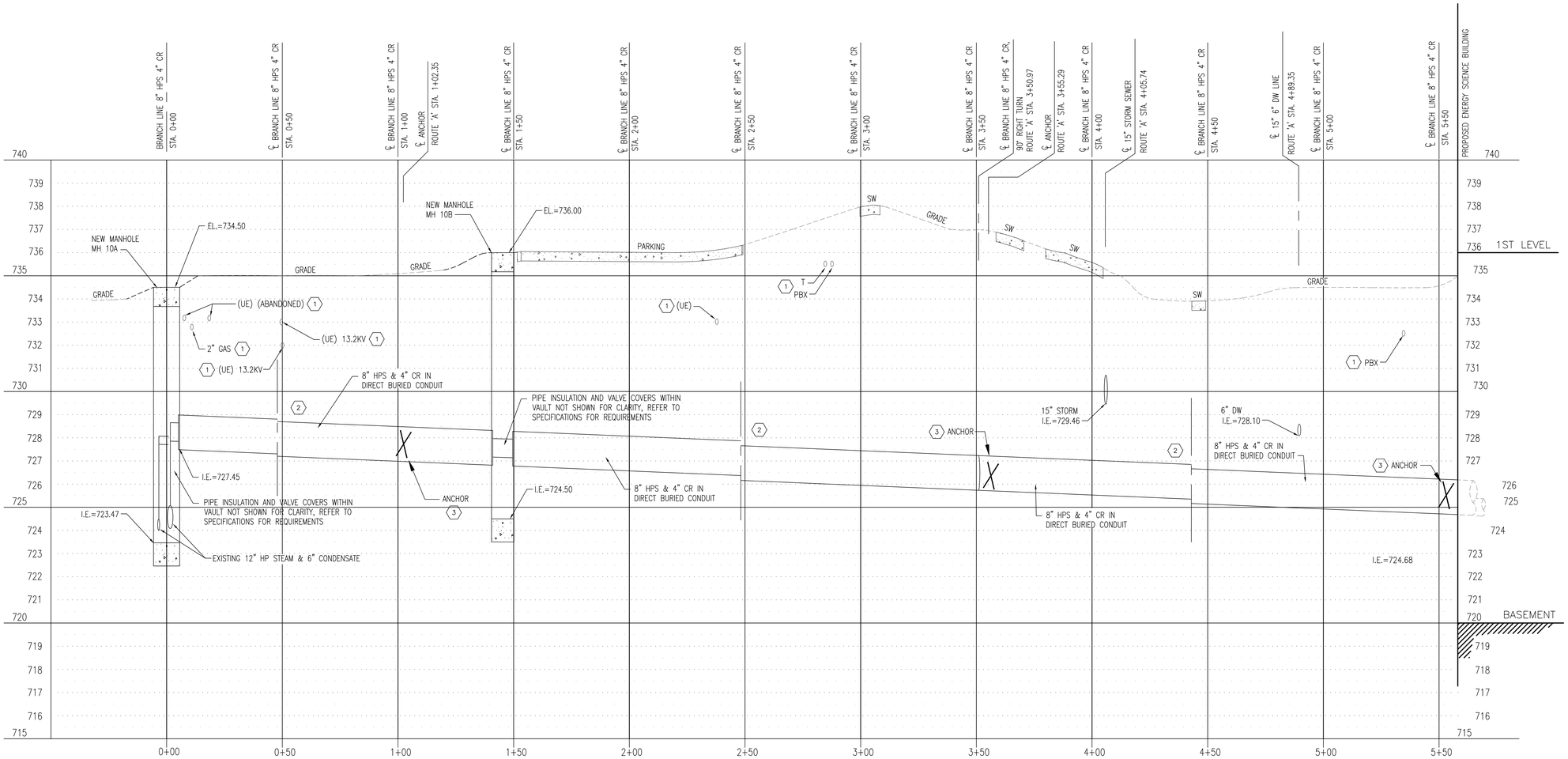
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
HP STEAM & COND. & CWS/R LINES PLAN TO NEW ENERGY SCIENCE BLDG.

DESIGNED JEFF PATRY	A/E CADD FILE	FACILITY NO(S) 241
DRAWN MONTY WIKSELL	A/E DWG. NO. CM-100	
CHECKED JEFF LEWIS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101-CM-100 REV. NO.

H:\002182-AN\13117B-ESB\DWG\13117B4.-BD
5/19/2010 1:42:11 PM



1 ROUTE 'A'
HP STEAM & CONDENSATE BRANCH LINES PROFILE
TO NEW ES BUILDING STA. 0+00 TO STA. 5+58.11

VERTICAL 5' 0 5'
HORIZONTAL 20' 0 20' 40'
SCALE IN FEET

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

KEY NOTES:

1. CONTRACTOR TO VERIFY UTILITY LOCATION. CONSULT ENGINEER BEFORE REROUTING DISTRIBUTION SYSTEM.
2. OFFSET IN PIPE DENOTES PROBABLE DROP IN ELEVATION DUE TO EXPANSION LOOP. EXPANSION LOOPS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INCLUDED IN STATIONING. ACTUAL LOOP LOCATIONS AND ASSOCIATED PIPE LENGTHS SHALL BE DETERMINED BY UNDERGROUND DISTRIBUTION SYSTEM PROVIDER.
3. ANCHORS SHOWN FOR INFORMATIONAL PURPOSES ONLY. ACTUAL ANCHOR LOCATIONS SHALL BE DETERMINED BY UNDERGROUND DISTRIBUTION SYSTEM PROVIDER.

CM-101

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

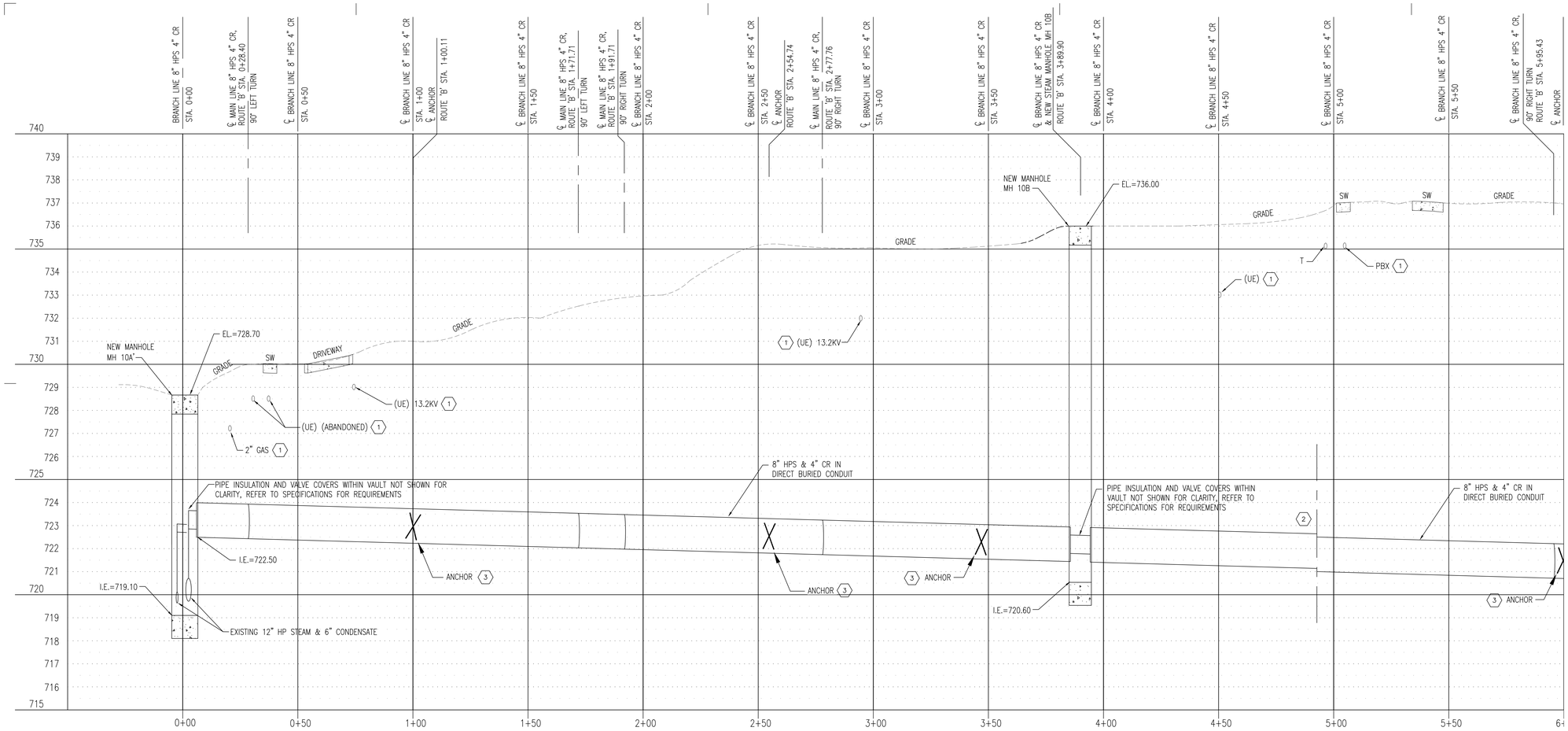
PROJECT NO. 002182-98502-ESB

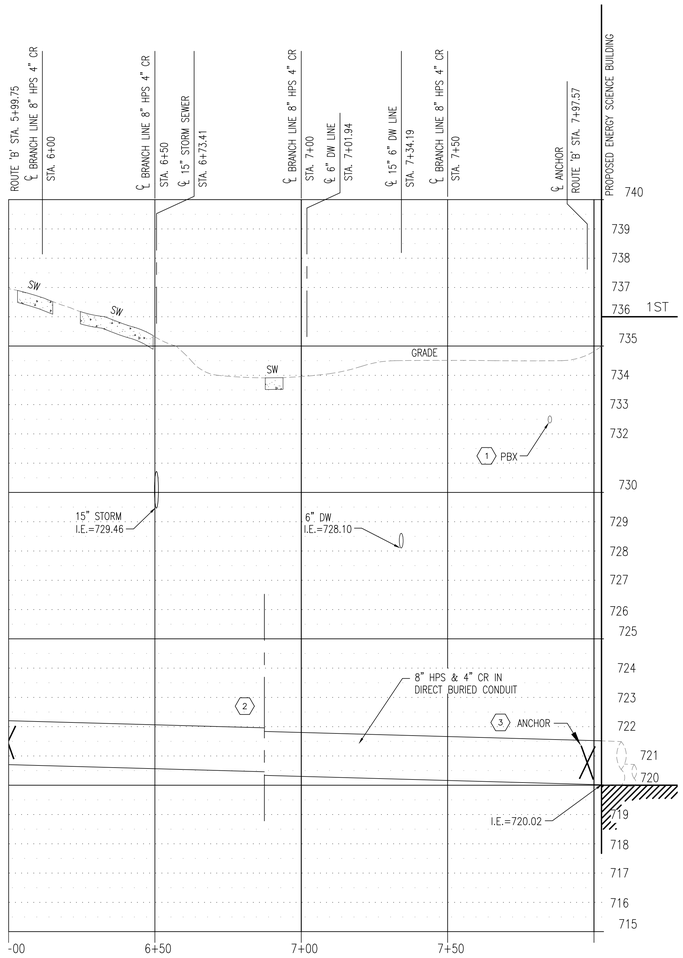
DOCUMENT TITLE
ROUTE 'A'
HP STEAM & COND. LINES
PROFILE TO NEW ES BLDG.

DESIGNED JEFF PATRY	A/E CADD FILE	FACILITY NO(S) 241
DRAWN MONTY WIKSELL	A/E DWG. NO. CM-101	
CHECKED JEFF LEWIS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101-CM-101 REV. NO.

H:\002182.ANL\13117B.ESB\DWG\13117BA.BD
5/19/2010 1:42:11 PM





1 ROUTE 'B' (ALTERNATE #7)
HP STEAM & CONDENSATE BRANCH LINE PROFILE
TO NEW ES BUILDING STA. 0+00 TO STA. 8+02.57

VERTICAL 5' 0 5'
HORIZONTAL 20' 0 20' 40'
SCALE IN FEET

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

KEY NOTES:

1. CONTRACTOR TO VERIFY UTILITY LOCATION. CONSULT ENGINEER BEFORE REROUTING DISTRIBUTION SYSTEM.
2. OFFSET IN PIPE DENOTES PROBABLE DROP IN ELEVATION DUE TO EXPANSION LOOP. EXPANSION LOOPS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INCLUDED IN STATIONING. ACTUAL LOOP LOCATIONS AND ASSOCIATED PIPE LENGTHS SHALL BE DETERMINED BY UNDERGROUND DISTRIBUTION SYSTEM PROVIDER.
3. ANCHORS SHOWN FOR INFORMATIONAL PURPOSES ONLY. ACTUAL ANCHOR LOCATIONS SHALL BE DETERMINED BY UNDERGROUND DISTRIBUTION SYSTEM PROVIDER.

CM-102

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

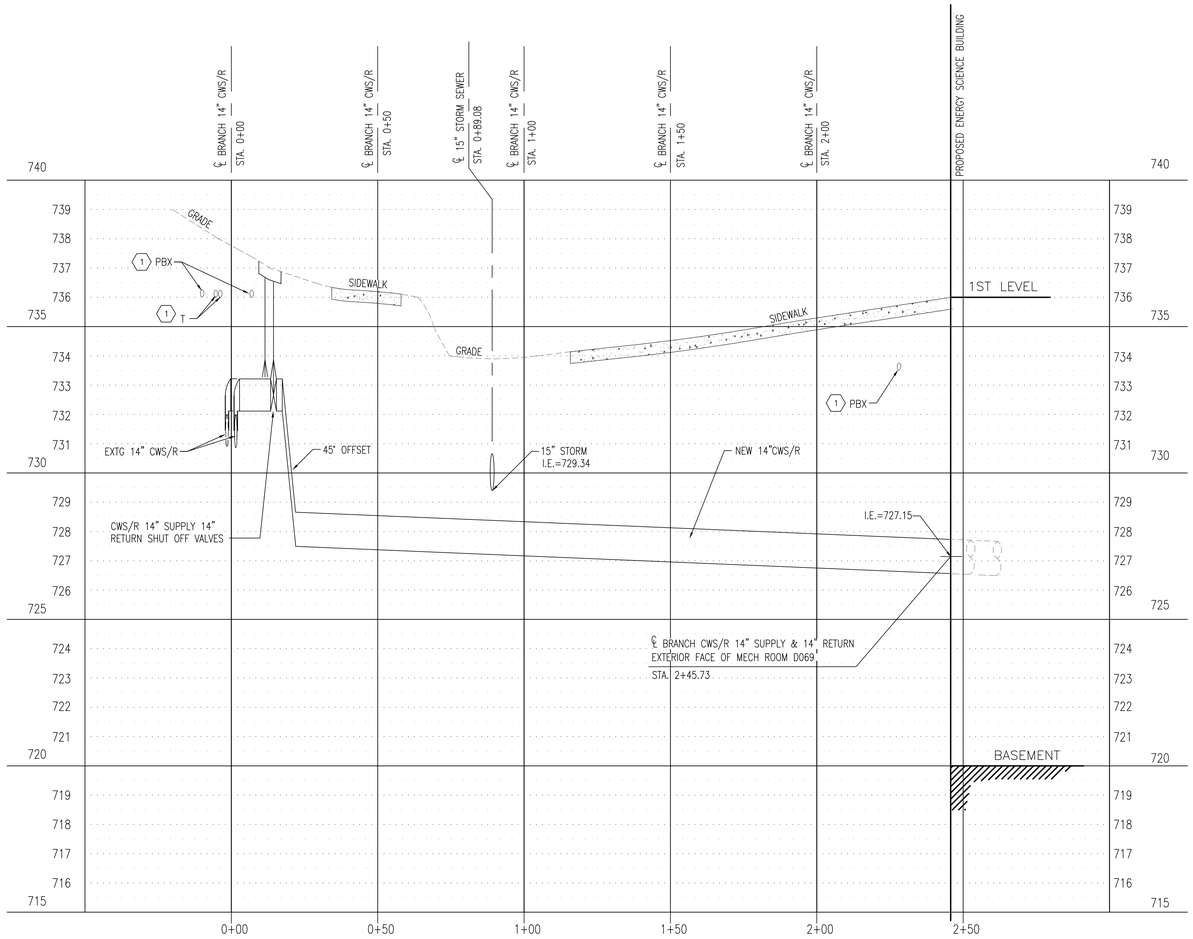
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
ROUTE 'B' (ALT. #7)
HP STEAM & COND. PROFILE
TO NEW ES BLDG.

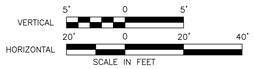
DESIGNED JEFF PATRY	A/E CADD FILE	FACILITY NO(S) 241
DRAWN MONTY WIKSELL	A/E DWG. NO. CM-102	
CHECKED JEFF LEWIS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER J241-101-CM-102 REV. NO.

H:\002182-ANL\131178-ESB\DWG\131178A-BD
5/19/2010 1:42:11 PM



1 CWS/R 14" SUPPLY & RETURN BRANCH LINES PROFILE TO NEW ES BUILDING STA. 0+00 TO STA. 2+58.93



HDR

HDR Architecture, Inc.

8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

KEY NOTES:

1. **CONTRACTOR TO VERIFY UTILITY LOCATION. CONSULT ENGINEER BEFORE REROUTING DISTRIBUTION SYSTEM.**
2. **OFFSET IN PIPE DENOTES PROBABLE DROP IN ELEVATION DUE TO EXPANSION LOOP. EXPANSION LOOPS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INCLUDED IN STATIONING. ACTUAL LOOP LOCATIONS AND ASSOCIATED PIPE LENGTHS SHALL BE DETERMINED BY UNDERGROUND DISTRIBUTION SYSTEM PROVIDER.**
3. **ANCHORS SHOWN FOR INFORMATIONAL PURPOSES ONLY. ACTUAL ANCHOR LOCATIONS SHALL BE DETERMINED BY UNDERGROUND DISTRIBUTION SYSTEM PROVIDER.**

CM-103

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

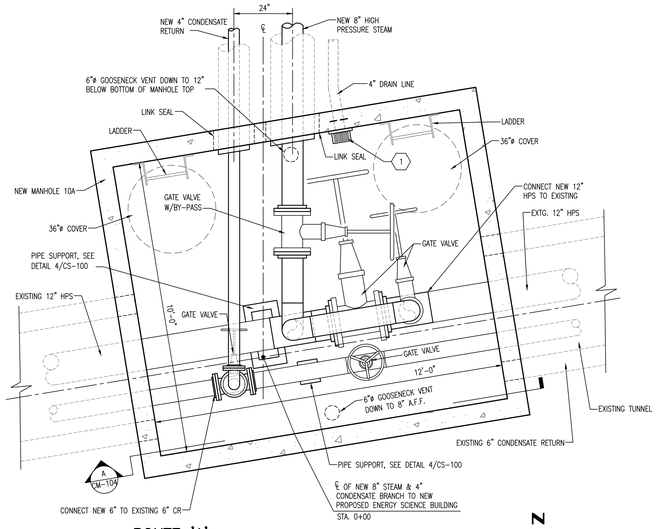
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CWS/R LINES PROFILE TO NEW ENERGY SCIENCE BUILDING

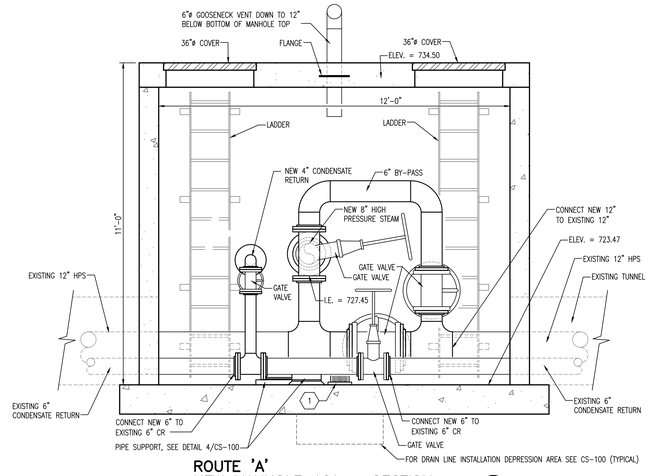
DESIGNED JEFF PATRY	A/E CADD FILE	FACILITY NO(S) 241
DRAWN MONTY WIKSELL	A/E DWG. NO. CM-103	
CHECKED JEFF LEWIS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: J241-101-CM-103 REV. NO.

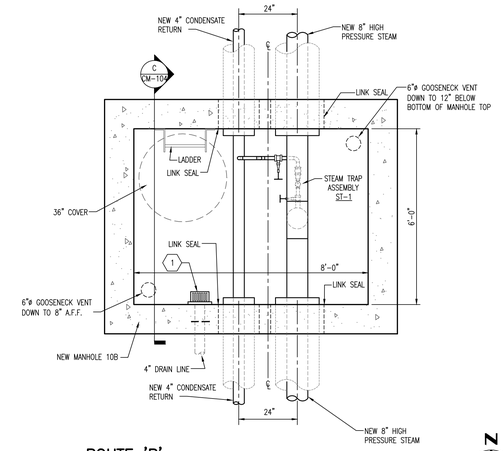
H:\002182-ANL\13117B-ESB\DWG\13117BA-BD
5/19/2010 1:42:11 PM



ROUTE 'A'
NEW MANHOLE 10A – MECHANICAL PLAN (1 / CM-104)
1/2" = 1'-0"



ROUTE 'A'
NEW MANHOLE 10A – SECTION (A / CM-104)
1/2" = 1'-0"



ROUTE 'B'
NEW MANHOLE 10B – MECHANICAL PLAN (3 / CM-104)
1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

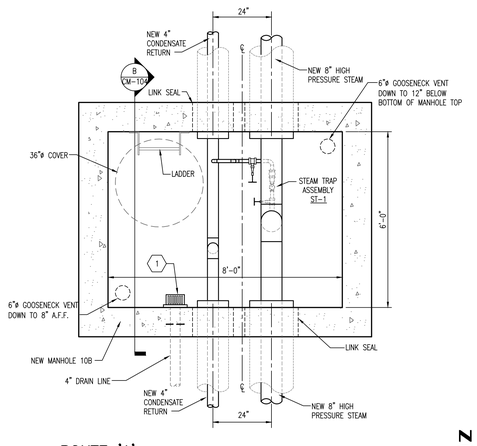
GENERAL NOTES:

1. **PIPE INSULATION AND VALVE COVERS WITHIN VAULTS NOT SHOWN FOR CLARITY. REFER TO SPECIFICATIONS FOR REQUIREMENTS.**
2. **VENTILATION PIPES (GOOSENECKS) SHALL BE SCHEDULE 40 BLACK STEEL WITH WELDED FITTINGS.**

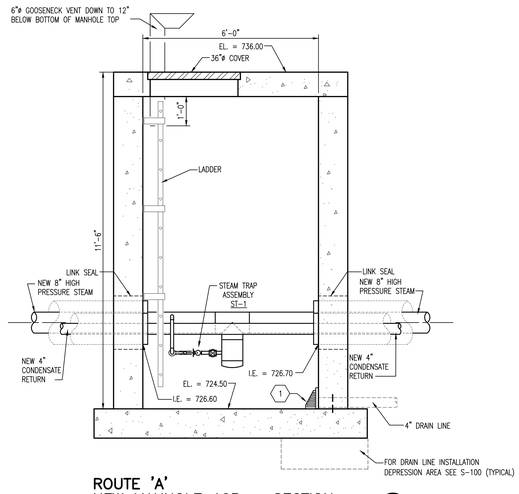
KEY NOTES:

1. **PROVIDE GUTTER DRAIN, WADE MODEL 3270 OR APPROVED EQUAL, CAST IN PLACE.**
2. **SUPPORT VERTICAL GOOSENECK RISER AT 48" AFF WITH CONCRETE INSERT AND PIPE CLAMP.**

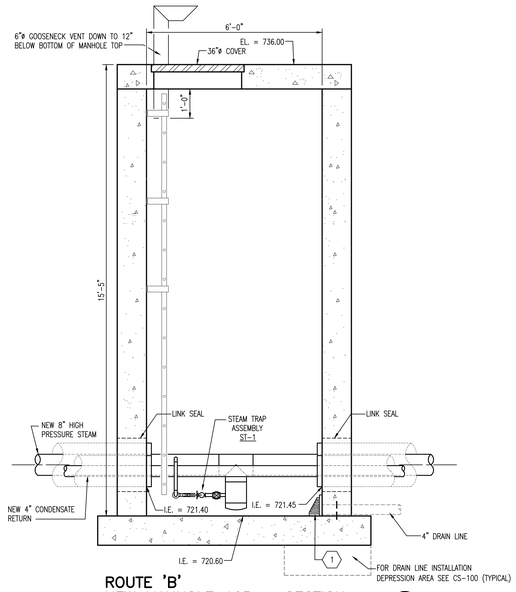
CM-104



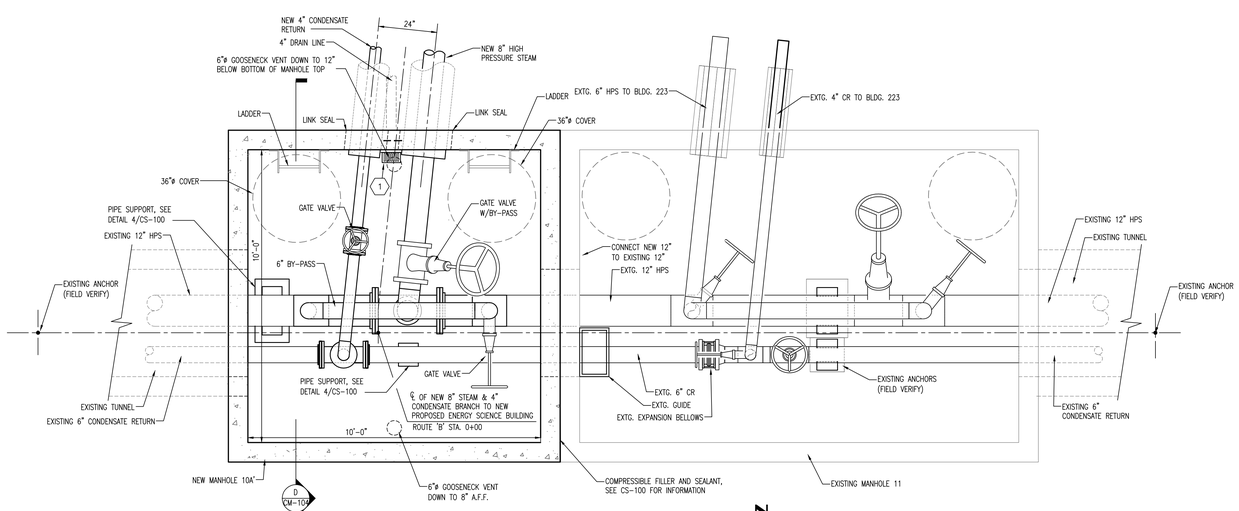
ROUTE 'A'
NEW MANHOLE 10B – MECHANICAL PLAN (2 / CM-104)
1/2" = 1'-0"



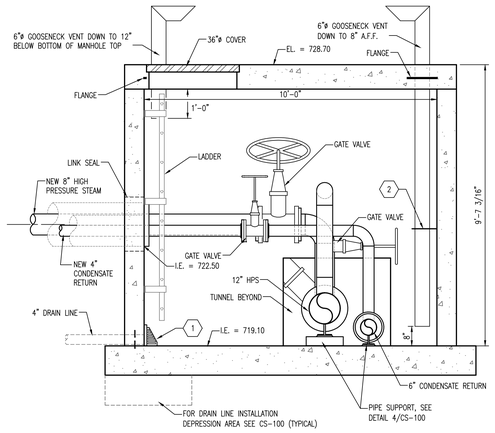
ROUTE 'A'
NEW MANHOLE 10B – SECTION (B / CM-104)
1/2" = 1'-0"



ROUTE 'B'
NEW MANHOLE 10B – SECTION (C / CM-104)
1/2" = 1'-0"



ROUTE 'B'
NEW MANHOLE 10A' – MECHANICAL PLAN (4 / CM-104)
1/2" = 1'-0"



ROUTE 'B'
NEW MANHOLE 10A' – SECTION (D / CM-104)
1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

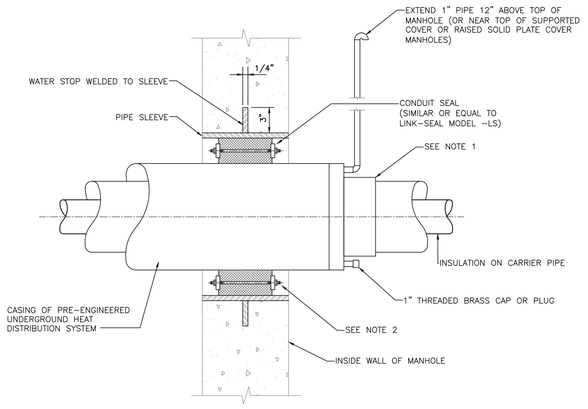
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
ROUTE 'A' & 'B'
MECHANICAL MANHOLES
PLANS & SECTIONS

DESIGNED JEFF PATRY	A/E CADD FILE	FACILITY NO(S) 241
DRAWN MONTY WIKSELL	A/E DWG. NO. CM-104	
CHECKED JEFF LEWIS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: J241-101-CM-104 REV. NO.

H:\002182-ANL\13117B-ESB\DWG\13117BA-BD
5/19/2010 1:42:11 PM



NOTES:

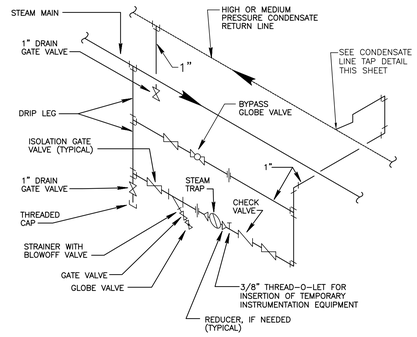
1. END SEAL OR GLAND SEAL SHALL BE PROVIDED ON ALL DDT PRE-ENGINEERED BURY SYSTEMS INSIDE MANHOLE WALLS. CASING AIR SPACE SHALL BE PROVIDED WITH DRAIN PLUG AND VENT. VENT SHALL HAVE 1" PIPE ROUTED AS INDICATED.

2. INSIDE DIAMETER (ID) OF SLEEVE SHALL BE DETERMINED AFTER CASING OUTSIDE DIAMETER (OD) HAS BEEN VERIFIED. GENERALLY, SLEEVE (ID) SHALL BE 5" MORE THAN CASING OD. VERIFY WITH SEAL MANUFACTURER.

CASING WALL PENETRATION DETAIL

1 / CM-105

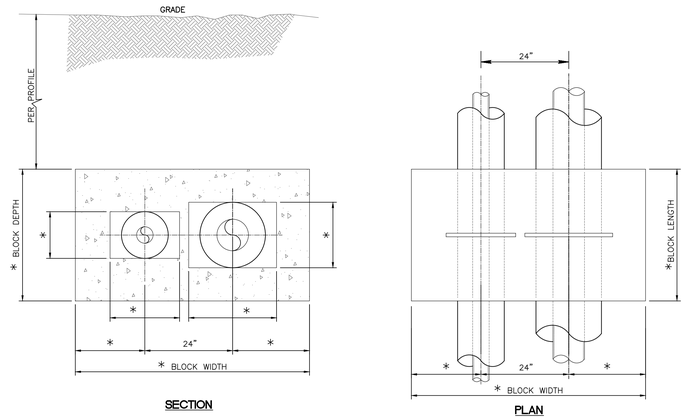
NOT TO SCALE



TRAP STATION LAYOUT ISOMETRIC

2 / CM-105

NOT TO SCALE



SECTION

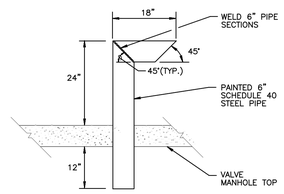
PLAN

NOTES:
1. ACTUAL ANCHOR DESIGN SHALL BE PER PRE-INSULATED PIPE MANUFACTURER, INCLUDING ANCHOR PLATE, SEALS, AND CONCRETE. DIMENSIONS MARKED WITH 'X' SHALL BE DETERMINED BY PIPING SYSTEM MANUFACTURER.

TYPICAL ANCHOR DETAIL

4 / CM-105

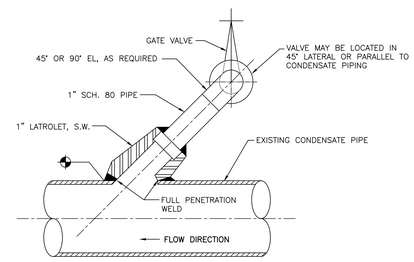
NOT TO SCALE



TYPICAL GOOSENECK DETAIL

3 / CM-105

NOT TO SCALE



CONDENSATE LINE TAP TYPE "45"

5 / CM-105

NOT TO SCALE

STEAM TRAP SCHEDULE

MARK	SERVES	CONDENSATE LOAD (LBS/HR)	TRAP SAFETY FACTOR	MIN. TRAP CAPACITY (LBS/HR)	DIFFERENTIAL PRESSURE (PSIG)	TYPE	TRAP PRESSURE RATING(PSIG)	CONNECTION SIZE(INCHES)	MANUFACTURER AND MODEL NUMBER	REMARKS
ST-1	MAIN	87	2.0	174	150	THERMODYNAMIC	600	1	SPIRAX SARCO UTD52H	1
ST-1	MAIN	243	2.0	486	150	THERMODYNAMIC	600	1	SPIRAX SARCO UTD52H	2

1. PROVIDE TRAP AT MANHOLE 10B UNDER BASE BID ONLY. DO NOT INSTALL IF ALTERNATE 7 IS ACCEPTED.
2. PROVIDE TRAP AT MANHOLE 10B UNDER ALTERNATE 7 ONLY. TO NOT INSTALL UNDER BASE BID.

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

CM-105

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

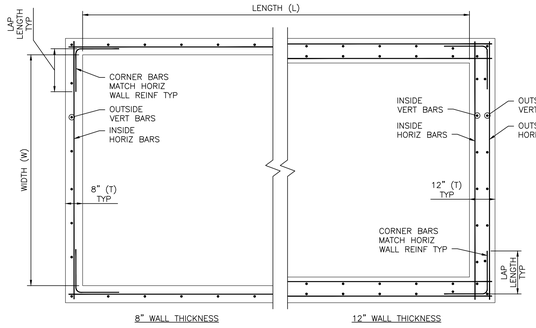
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
MISCELLANEOUS DETAILS

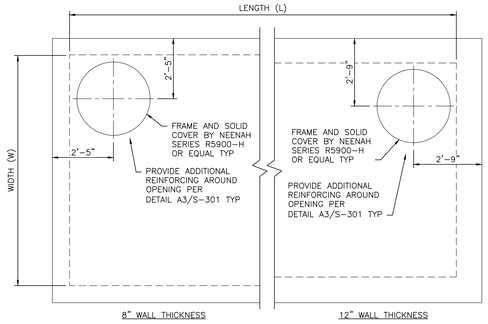
DESIGNED JEFF PATRY	A/E CADD FILE	FACILITY NO(S) 241
DRAWN MONTY WIKSELL	A/E DWG. NO.	
CHECKED JEFF LEWIS	CADD NO: CM-105	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-CM-105 REV. NO.

H:\002182.ANL\13117B.ESB\DWG\13117BA.BID
5/19/2010 1:42:11 PM

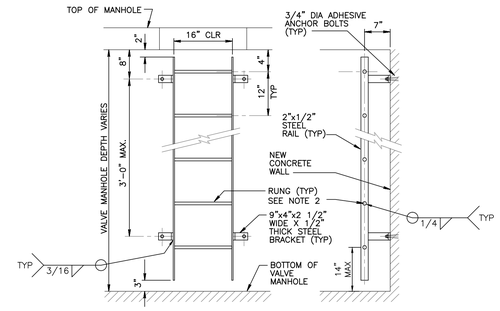


PLAN IN SECTION



NOTES:
1. LOCATE GRATE COVERS PER 'CM' DRAWINGS.
2. LOCATE GOOSE NECK VENTS PER 'CM' DRAWINGS.

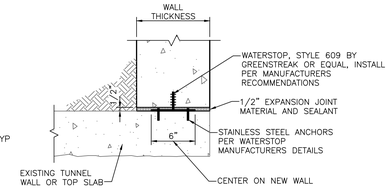
ROOF SLAB PLAN



NOTES:
1. ALL STEEL SHALL BE GALVANIZED UNLESS NOTED OTHERWISE.
2. LADDER RUNG TO BE MIN 1" DIA BAR WITH INTEGRAL SERRATED NON-SLIP FINISH. SHOP OR FIELD WELD APPLIED GRIT TAPE OR CAP TYPE NON-SLIP FINISH IS NOT ACCEPTABLE.
3. FOR LADDER LOCATIONS, SEE 'CM' DRAWINGS.

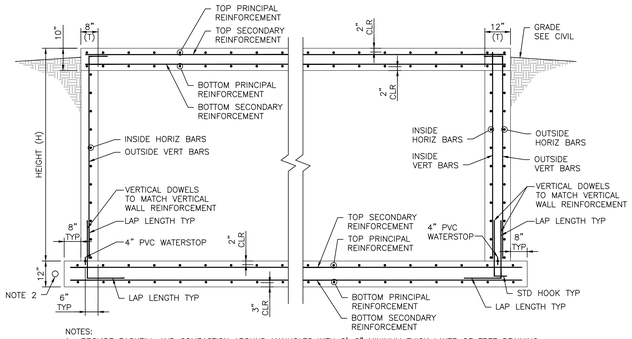
ACCESS LADDER DETAIL

NOT TO SCALE — 2 / CS-100



WATERSTOP INSTALLATION DETAIL

NOT TO SCALE — 1 / CS-100



NOTES:
1. PROVIDE BACKFILL AND COMPACTION AROUND MANHOLES WITH 2'-0" MINIMUM THICK LAYER OF FREE DRAINING, NON-FROST SUSCEPTIBLE GRANULAR MATERIAL IMMEDIATELY ADJACENT TO OUTSIDE FACE OF WALL PER SPEC REQUIREMENTS.
2. 4" PVC PERFORATED DRAIN PIPE AROUND MANHOLE 10A & 10A', CONNECT TO EXISTING 4" TILE.

SECTION

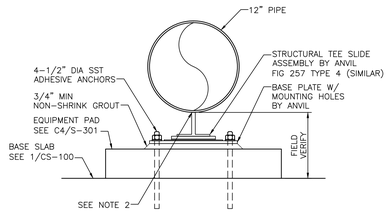
VALVE MANHOLE REINFORCEMENT SCHEDULE

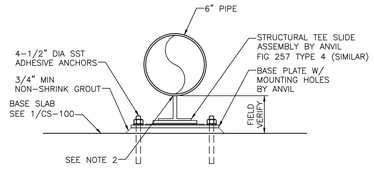
MANHOLE NUMBER (MH)	SIZE (LxWxH)	WALL THICKNESS (T)	WALL REINFORCEMENT				SLAB REINFORCEMENT			
			OUTSIDE VERTICAL	INSIDE VERTICAL	OUTSIDE HORIZONTAL	INSIDE HORIZONTAL	BOTTOM * PRINCIPAL	TOP * PRINCIPAL	BOTTOM SECONDARY	TOP SECONDARY
ROUTE 'A' MH 10A	12'-0"x10'-0"x11'-0"	8"	#5@6"	–	–	#5@6"	#5@12"	#5@12"	#5@12"	#5@12"
ROUTE 'A' MH 10B	8'-0"x6'-0"x11'-6"	12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"
ROUTE 'B' MH 10A'	10'-0"x10'-0"x9'-7"	8"	#5@12"	–	–	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"
ROUTE 'B' MH 10B	8'-0"x6'-0"x15'-5"	12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"	#5@12"

NOTES:
1. * SLAB PRINCIPAL REINFORCEMENT WILL SPAN THE SHORTER DIMENSION.
2. COORDINATE ALL DIMENSIONS WITH MECHANICAL MANHOLE PLANS.
3. PROVIDE 1" COMPRESSIBLE FILLER AND SEALANT BETWEEN WALLS AND SLABS OF EXISTING MANHOLE 11 AND NEW MANHOLE 10A' (ROUTE 'B'). BRACE ADJACENT EXISTING WALL FOR NEW WALL CONCRETE POUR, OR AT CONTRACTORS OPTION LIMIT NEW WALL CONCRETE POURS TO 4'-0" HEIGHT. PROVIDE CONTINUOUS 4" PVC WATERSTOPS AT ALL CONSTRUCTION JOINTS.
4. IN 8" WALLS, CENTER BARS SCHEDULED AS OUTSIDE VERTICAL AND INSIDE HORIZONTAL.
5. PROVIDE 2" CONCRETE COVER FOR ALL MANHOLE REINFORCEMENT UNLESS NOTED OTHERWISE.

TYPICAL VALVE MANHOLE PLAN AND SECTION

NOT TO SCALE — 1 / CS-100

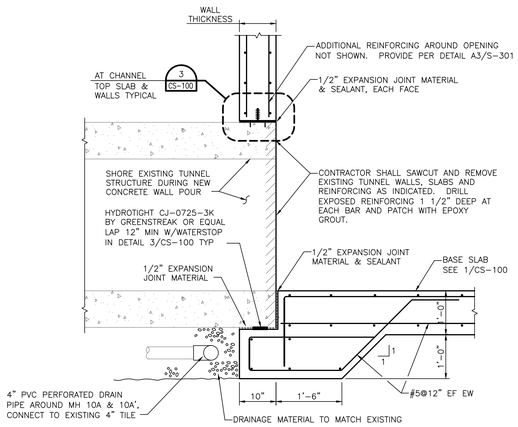




NOTES:
1. FOR PIPE SUPPORT LOCATIONS, SEE 'CM' DRAWINGS.
2. FIELD WELD TEE ASSEMBLY TO PIPE PER TEE SLIDE ASSEMBLY MANUFACTURERS RECOMMENDATIONS.

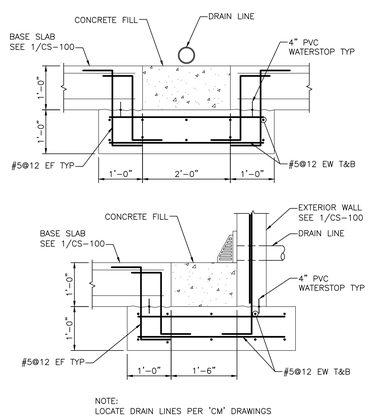
PIPE SUPPORT DETAIL AT MANHOLE 10A & 10A'

NOT TO SCALE — 4 / CS-100



DETAIL AT TUNNEL SECTION

3/4" = 1'-0" — 5 / CS-100



NOTE:
LOCATE DRAIN LINES PER 'CM' DRAWINGS

DETAIL AT DRAIN LINE

3/4" = 1'-0" — 6 / CS-100

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr | Suite 900 | Chicago, IL 60631 | 773.380.7900

CS-100

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
STRUCTURAL DETAILS

DESIGNED ARK GINZBURG	A/E CADD FILE	FACILITY NO(S) 241
DRAWN JASON SCHIEVELBEIN	A/E DWG. NO.	
CHECKED KEITH KIRCHNER	CADD NO: CS-100	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: J241-101-CS-100 — REV. NO.

H:\002182-ANL\13117B-ESB\DWG\13117BA.BD
5/19/2010 1:42:11 PM

LANDSCAPE LEGEND:

- SHADE TREE
- ORNAMENTAL TREE
- LARGE SHRUBS
- MEDIUM SHRUBS
- SMALL SHRUBS
- GROUNDCOVERS
- WET NATIVE PLANT SEED MIX
- WET NATIVE PLANT SEED MIX W/ PLUGS
- DRY NATIVE PLANT SEED MIX
- TURF
- DECOMPOSED GRANITE
- BENCH – (32) TOTAL; 4' L x 18" W x 18" H EACH
- SNUFFER – (3) TOTAL; 12" DIA x 36" H EACH
- TABLE – (2) TOTAL; 36" SQ x 18" H EACH
- BIKE RACK – (1) 7 BIKE RACK & (1) 5 BIKE RACK
- PUBLIC ART LOCATION (BY OWNER; NOT IN CONTRACT)
- EXISTING TREE TO REMAIN AND BE PROTECTED

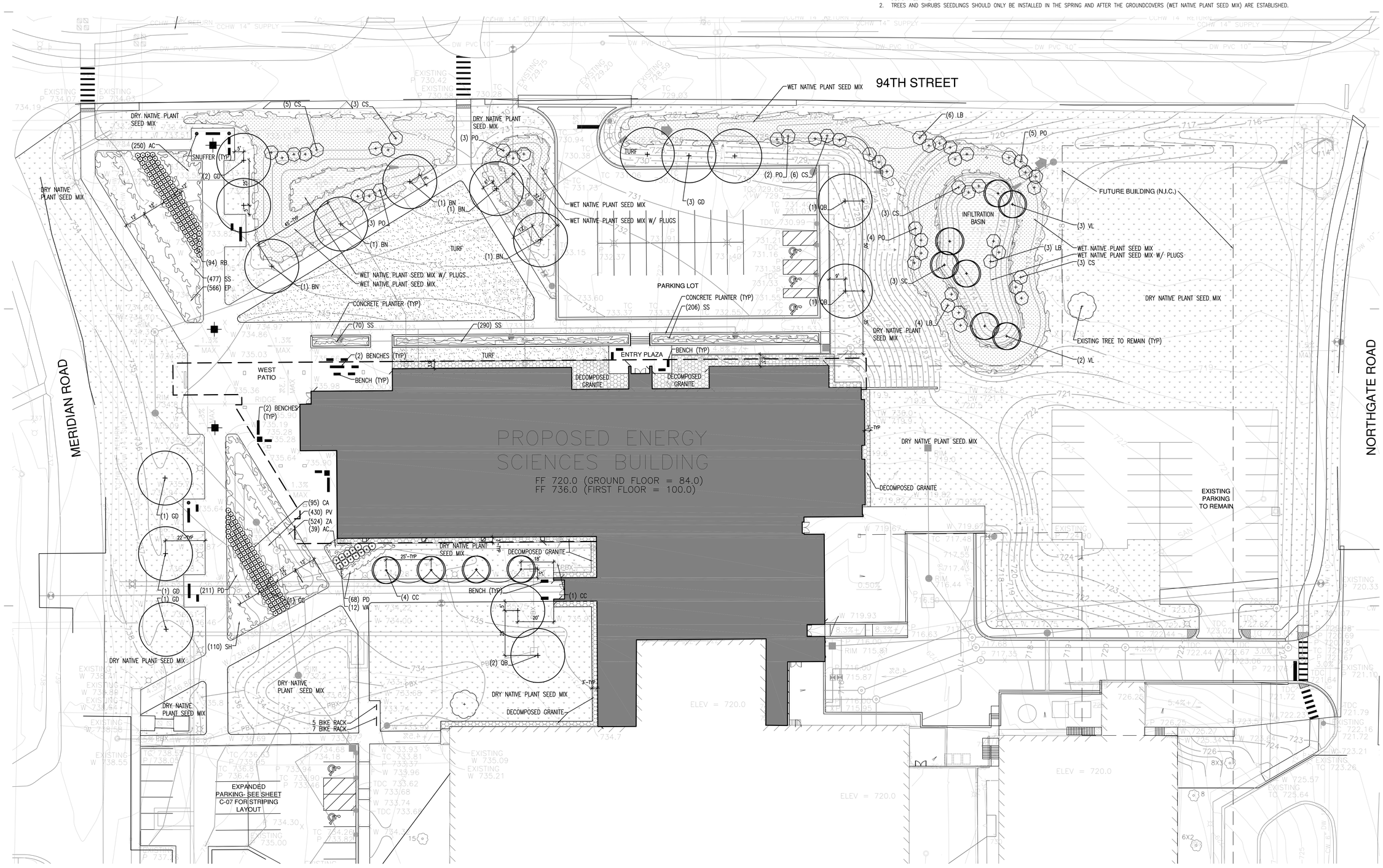
GENERAL NOTES:

1. SEE SHEET L-102 FOR CONCRETE JOINTING AND FURNISHING LAYOUT PLAN
2. SEE SHEET L-501 FOR PLANTING DETAILS, CONCRETE PLANTER LAYOUT, ELEVATIONS AND HANDRAIL DETAILS.
3. SEE SHEET C-02 GRADING PLAN FOR GRADING DETAILS.
4. SEE SHEET S-301 AND S-303 FOR CONCRETE PLANTER SECTIONS AND STAIR DETAILS.

PLANT SCHEDULE

PLANT TYPE	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
SHADE/ ORNAMENTAL TREES	BM	5	BETULA NIGRA	RIVER BIRCH	12' H.	B&B	MULTI-STEM; MATCHING HEADS
	CC	4	CERCIS CANADENSIS	EASTERN REDBUD	2.5" CAL	B&B	SINGLE STEM
	GD	5	GYMNOCLADUS DIOICA	KENTUCKY COFFEE TREE	3" CAL	B&B	SINGLE STEM; MATCHING HEADS
	QB	4	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL.	B&B	SINGLE STEM; MATCHING HEADS
	SC	3	SAMBUCUS CANADENSIS	ELDERBERRY	MIN. 2' H.	BARE ROOT	SEEDLINGS @ 10' O.C.; SPRING PLANTING ONLY
	VL	5	VIBURNUM LENTAGO	NANNYBERRY	MIN. 2' H.	BARE ROOT	SEEDLINGS @ 10' O.C.; SPRING PLANTING ONLY
SHRUBS	CA	95	CEANOTHUS AMERICANUS	NEW JERSEY TEA	3'	B&B	30" O.C.
	CS	20	CORNUS SERICEA STOLONIFERA	RED OSIER DOGWOOD	MIN. 2' H.	BARE ROOT	SEEDLINGS @ 7' O.C.; SPRING PLANTING ONLY
	LB	13	LINDERA BENZOIN	SPICE BUSH	MIN. 2' H.	BARE ROOT	SEEDLINGS @ 7' O.C.; SPRING PLANTING ONLY
	PO	17	PHYSOCARPUS OPULIFOLIUS	NINEBARK	MIN. 2' H.	BARE ROOT	SEEDLINGS @ 7' O.C.; SPRING PLANTING ONLY
	RB	94	ROSA BLANDA	EARLY WILD ROSE	3'	B&B	30" O.C.
	VA	12	VIBURNUM ACERIFOLIUM	MAPLE-LEAVED ARROW WOOD	4'	B&B	42" O.C.
GROUNDCOVERS	AC	289	ALLIUM CERNUUM	NODDING WILD ONION	#1 CONT.	CG	18" O.C.
	EP	566	ECHINACEA PALLIDA	PURPLE CONEFLOWER	#1 CONT.	CG	18" O.C.
	PD	279	PENSTEMON DIGITALIS	FOXGROVE BEARD TONGUE	#1 CONT.	CG	18" O.C.
	PV	430	PANICUM VIRGATUM	SWITCH GRASS	#1 CONT.	CG	18" O.C.
	SH	110	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	#1 CONT.	CG	18" O.C.
	SS	1,043	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUE STEM	#1 CONT.	CG	18" O.C.
	ZA	524	ZIZIA AUREA	GOLDEN ALEXANDERS	#1 CONT.	CG	18" O.C.
NATIVE PLANT SEED MIX	WET	5	WET NATIVE PLANT SEED MIX	WET NATIVE PLANT SEED MIX	PLS	PLS	10 LB PER ACRE; 19,128 SF
	WET-AS	110	ASTER SIMPLEX	PANICLED ASTER	PLUG	CG	INTERPLANTED
	WET-EM	110	EUPATORIUM MACULATUM	SPOTTED JOE-PYE WEED	PLUG	CG	INTERPLANTED
	WET-HO	275	HIEROCHLOE ODORATA	SWEET GRASS	PLUG	CG	INTERPLANTED
	WET-IV	110	IRIS VIRGINICA VAR. SHREVEI	BLUE FLAG IRIS	PLUG	CG	INTERPLANTED
	WET-JT	275	JUNCUS TENUIS	PATH RUSH	PLUG	CG	INTERPLANTED
	WET-LC	110	LOBELIA CARDINALIS	CARDINAL FLOWER	PLUG	CG	INTERPLANTED
	WET-LS	110	LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	PLUG	CG	INTERPLANTED
	DRY	21	DRY NATIVE PLANT SEED MIX	DRY NATIVE PLANT SEED MIX	PLS	PLS	10 LB PER ACRE; 90,191 SF
	TURF	25	NATIVE TURF SEED MIX		PLS	PLS	150 LB PER ACRE; 7,162 SF

NOTES:
1. FOR ALL PLUGS PLANTED AT WET NATIVE PLANT SEED MIX PLANTING AREAS, MIX GRASSES (50%), FORBS (50%) AND EQUALLLY INTERPLANT THE PLUGS AT 24" O.C. IN THE DESIGNATED AREA.
2. TREES AND SHRUBS SEEDLINGS SHOULD ONLY BE INSTALLED IN THE SPRING AND AFTER THE GROUNDCOVERS (WET NATIVE PLANT SEED MIX) ARE ESTABLISHED.



1 LANDSCAPE PLAN 1" = 20'

0 5' 10' 20' 40'

HDR

LP-101A

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LANDSCAPE PLAN

DESIGNED H. LIN	A/E CADD FILE 131178LP-101A.dwg	FACILITY NO(S) 241
DRAWN H. LIN	A/E DWG. NO. LP-101A	
CHECKED J. FAHS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

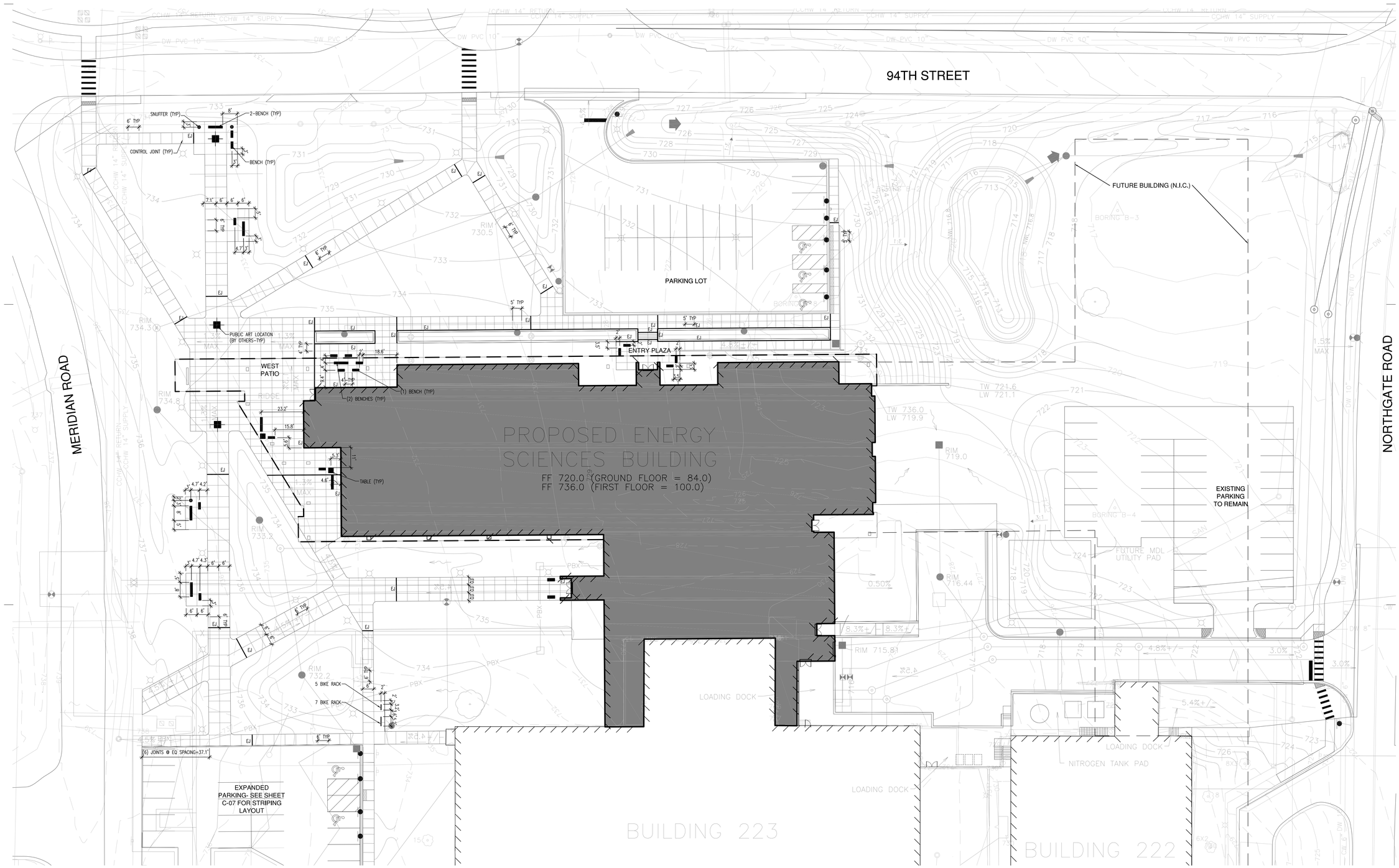
FACILITY DOCUMENT NUMBER J241-101-LP-101A REV. NO.

LEGEND:

- CONTROL JOINT (TYP)
- EJ — EXPANSION JOINT (TYP)
- BENCH – (32) TOTAL; 4' L x 18" W x 18" H EACH
- SNUFFER – (3) TOTAL; 12" DIA x 36" H EACH
- TABLE – (2) TOTAL; 36" SQ x 18" H EACH
- BIKE RACK – (1) 7 BIKE RACK & (1) 5 BIKE RACK
- PUBLIC ART LOCATION (BY OWNER; NOT IN CONTRACT)

GENERAL NOTES:

1. SEE SHEET L-501 FOR PLANTING DETAILS, CONCRETE PLANTER LAYOUT, ELEVATIONS AND HANDRAIL DETAILS.
2. SEE SHEET C-02 GRADING PLAN FOR GRADING DETAILS.
3. SEE SHEET S-301 AND S-303 FOR CONCRETE PLANTER SECTIONS AND STAIR DETAILS.



1 CONCRETE JOINTING & FURNISHING LAYOUT PLAN
1" = 20'

0 5' 10' 20' 40'

HDR

LP-102

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

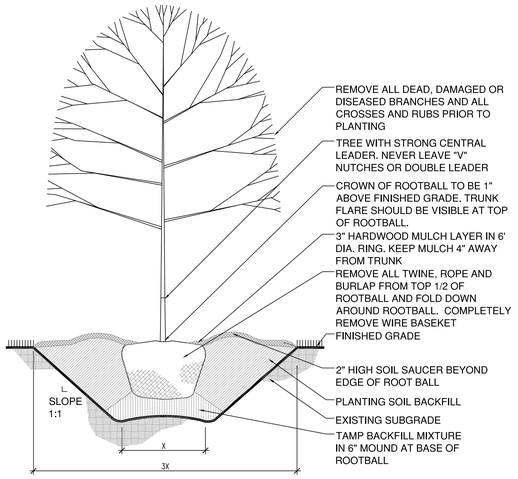
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE JOINTING & FURNISHING LAYOUT PLAN

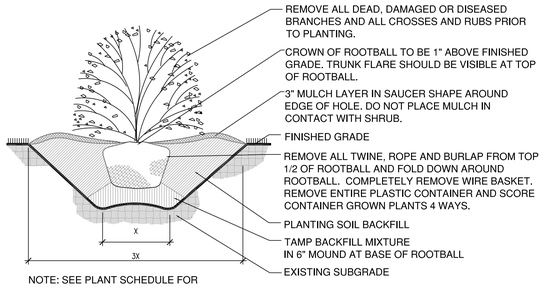
DESIGNED H. LIN	A/E CADD FILE 13117BLP-102.dwg	FACILITY NO(S) 241
DRAWN H. LIN	A/E DWG. NO. LP-102	
CHECKED J. FAHS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: J241-101-LP-102
REV. NO.



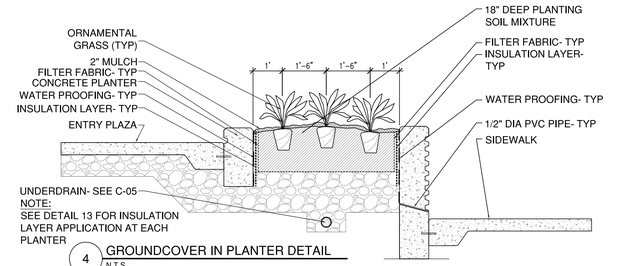
NOTE: ROOTBALL (X) SHOULD BE A MINUMUM OF 36" IN DIAMETER.

1 TYP. TREE PLANTING DETAIL
N.T.S.

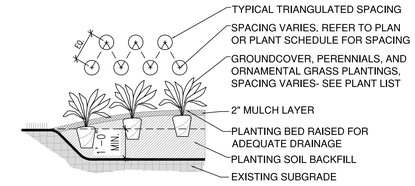


NOTE: SEE PLANT SCHEDULE FOR SIZES OF ROOTBALL (X).

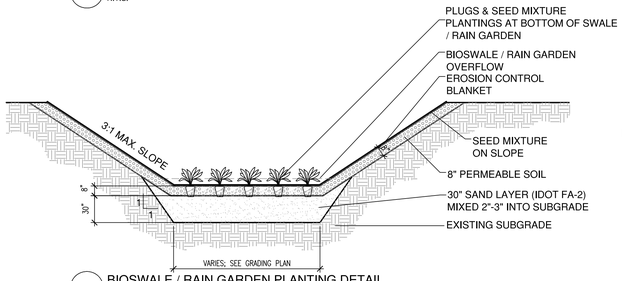
2 TYP. SHRUB PLANTING DETAIL
N.T.S.



4 GROUNDCOVER IN PLANTER DETAIL
N.T.S.



3 TYP. GROUNDCOVER PLANTING DETAIL
N.T.S.

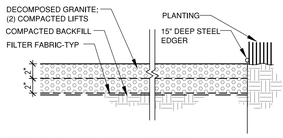


5 BIOSWALE / RAIN GARDEN PLANTING DETAIL
N.T.S.

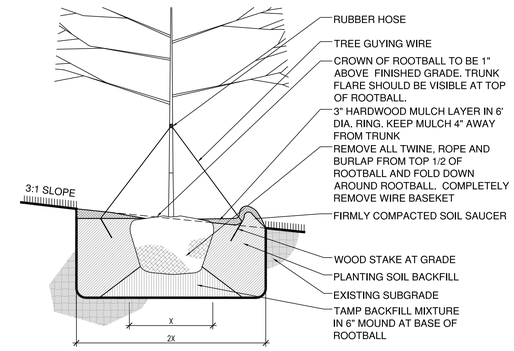
NOTES:

1. DECOMPOSED GRANITE SHALL BE LANDSCAPE GRADE. GRANITE SIZE SHALL BE BETWEEN 3/4" AND 1-1/4" DIAMETER

2. CONTRACTOR TO SUBMIT 1LB SAMPLE FOR LANDSCAPE ARCHITECT'S REVIEW & APPROVAL

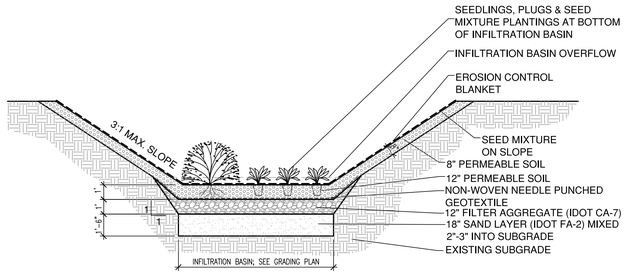


8 DECOMPOSED GRANITE DETAIL
N.T.S.

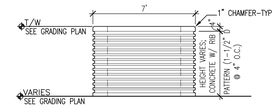


NOTE: ROOTBALL (X) SHOULD BE A MINUMUM OF 36" IN DIAMETER.

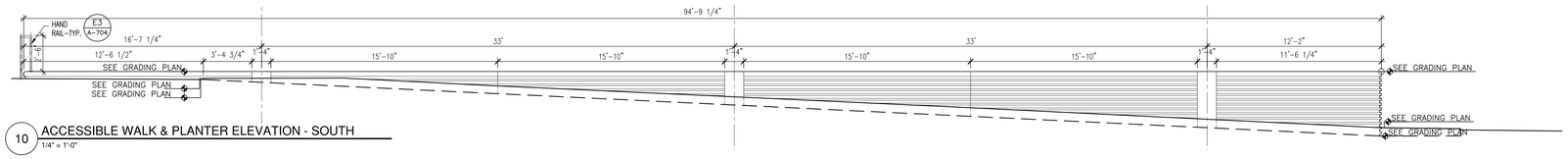
6 TYP. TREE PLANTING ON SLOPE
N.T.S.



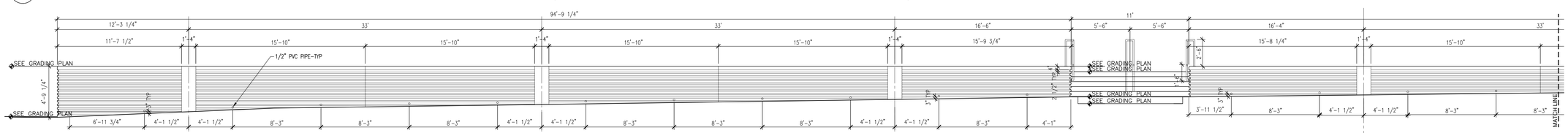
7 INFILTRATION BASIN PLANTING DETAIL
N.T.S.

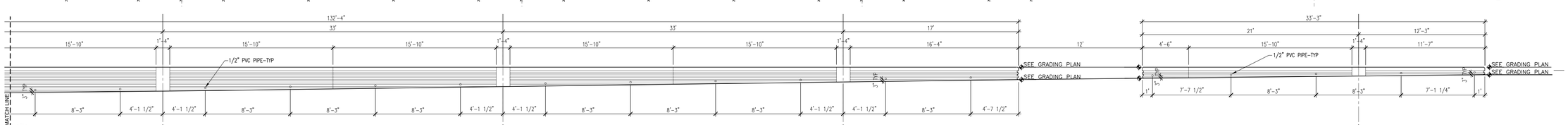


9 TYP. PLANTER ELEVATION - EAST & WEST
1/4" = 1'-0"

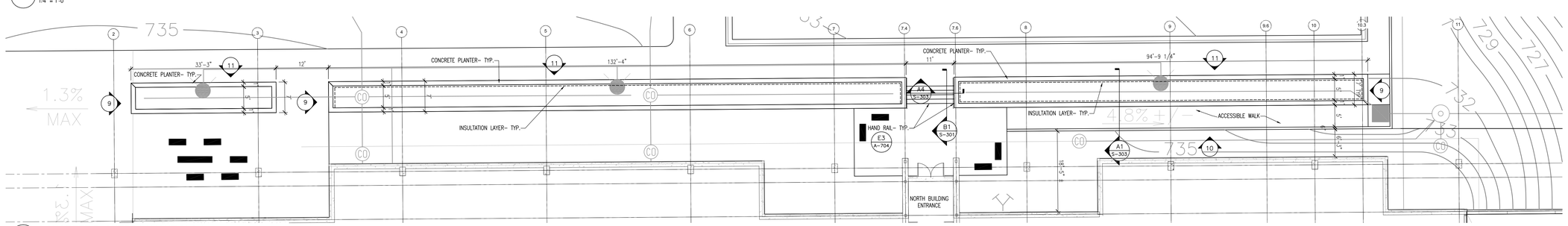


10 ACCESSIBLE WALK & PLANTER ELEVATION - SOUTH
1/4" = 1'-0"





11 PLANTER ELEVATIONS - NORTH
1/4" = 1'-0"



12 CONCRETE PLANTER LAYOUT PLAN
1" = 10'-0"

GENERAL PLANTING NOTES

SLOPE ALL PLANTING AREAS AWAY FROM BUILDING AT 2% MINIMUM GRADE.

FINISH GRADE SHALL BE 1" BELOW FINISH PAVING SURFACE IN LAWN AREAS AND 2" BELOW IN SHRUB AREAS.

PLANT QUANTITIES SHOWN ON DRAWINGS ARE FOR CONTRACTOR'S CONVENIENCE IN ESTIMATING ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PLANT MATERIALS SUFFICIENT TO COVER AREAS SHOWN ON PLANS AT THE SPACINGS INDICATED.

AT LEAST ONE PLANT OF EACH SPECIES DELIVERED TO THE SITE WILL HAVE AN IDENTIFICATION TAG FROM THE SUPPLYING NURSERY SHOWING COMMON AND BOTANICAL PLANT NAMES. ALL PLANTS SHALL BE PROTECTED AGAINST HEAT, SUN, WIND AND FROST DURING TRANSPORTATION TO THE SITE AND WHILE BEING HELD AT THE SITE. DO NOT STORE PLANTS IN TOTAL DARKNESS MORE THAN ONE DAY.

DO NOT DAMAGE PLANT ROOT BALL DURING TRANSPORTATION OR PLANTING.

CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AT THE TIME OF DELIVERY OF ANY PLANT MATERIAL THAT IS DAMAGED OR IN POOR CONDITION TO DETERMINE ACCEPTABILITY.

PLANT MATERIALS SHALL BE INSPECTED BY THE LANDSCAPE ARCHITECT BEFORE PLANTING. MATERIAL MAY BE REJECTED AT ANY TIME DUE TO CONDITION, FORM OR DAMAGE BEFORE OR AFTER PLANTING.

ALL ROCK AND DEBRIS TWO INCHES AND LARGER SHALL BE REMOVED FROM PLANTING AREAS AND THEN FROM THE SITE.

THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE OTHER TRADES AND MAINTAIN DRAINAGE DURING CONSTRUCTION.

INSTALL ALL PLANT MATERIAL IN ACCORDANCE WITH DETAILS. ALL FINISH GRADING AND PLANTING OPERATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

THE PLANTING PLANS ARE DIAGRAMMATIC. PLANT MATERIALS SHALL BE SPOTTED APPROXIMATELY AS SHOWN ON THE LANDSCAPE DRAWING AND ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE BEING REMOVED FROM CONTAINERS AND EXCAVATING SOIL FOR PLANTING.

ALL TREES SHALL BE SINGLE TRUNK STANDARDS UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL INSTALL A MIN. 3" LAYER OF HARDWOOD MULCH AROUND ALL TREES/SHRUB AREAS AND MIN. 2" LAYER IN PERENNIALS/ GROUNDCOVERS/ ORNAMENTAL GRASSES AREA. CREATE A NATURAL SPADED EDGE WHERE PLANTING BEDS MEET TURF AREAS.

FOLLOWING CONSTRUCTION, RE-SEED ALL DISTURBED AREAS AS REQUIRED.

CONTRACTOR TO WARRANTY ALL TREES AND SHRUBS FOR A PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AGAINST DEATH AND DEFECTS INCLUDING UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE BY OTHERS OR UNUSUAL PHENOMENON OR INCIDENTS WHICH ARE BEYOND THE CONTRACTOR'S CONTROL.

ALL TOP SOIL WILL BE PROVIDED BY OWNER.

MIX SPECIFIED SOIL AMENDMENTS AND FERTILIZERS WITH TOPSOIL ON A SITE SPECIFIC BASIS AT RATES APPROPRIATE FOR AREA TREES, SHRUBS AND GROUNDCOVER AREAS. CONTRACTOR TO PROVIDE A PLANTING MIX OF 1/3 COMPOST OR MANURE AND 2/3 TOPSOIL AT 12" DEPTH IN PLANTING AREAS.

HDR

LP-501

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LANDSCAPE DETAILS

DESIGNED H. LIN	A/E CADD FILE 131178LP-501.dwg	FACILITY NO(S) 241
DRAWN H. LIN	A/E DWG. NO. LP-501	
CHECKED J. FAHS	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER	

FACILITY DOCUMENT NUMBER: J241-101-LP-501
REV. NO.

LIST OF STRUCTURAL ABBREVIATIONS

@	AT	JT	JOINT
AB	ANCHOR BOLTS	K	KIPS
ADDL	ADDITIONAL	KSF	KIPS PER SQUARE FOOT
AFF	ABOVE FIN.FLOOR	L	LENGTH
AFG	ABOVE FIN. GRADE	LE	LEFT END
ARCH	ARCHITECTURAL	LF	LINEAR FEET
B	BOTTOM	LL	LIVE LOAD
BKT	BRACKET	LLH	LONG LEG HORIZ
BL	BASE LINE	LLV	LONG LEG VERT
BM	BEAM	LONG	LONGITUDINAL
BOF	BOTTOM OF FOOTING	LW	LIGHTWEIGHT
BP	BASE PLATE	MAX	MAXIMUM
BRG	BEARING	MECH	MECHANICAL
BSMT	BASEMENT	MFR	MANUFACTURER
BTWN	BETWEEN	MIN	MINIMUM
CANT	CANTILEVER	MISC	MISCELLANEOUS
CIP	CAST IN PLACE	MO	MASONRY OPENING
CJ	CONST.JT. OR CONTROL JT.	MTL	METAL
CJP	COMPLETE JOINT PENETRATION	NOM	NOMINAL
CL	CENTERLINE	N.S.	NEAR SIDE
CLR	CLEARANCE OR CLEAR	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	NWT	NORMALWEIGHT
COL	COLUMN	OC	ON CENTER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONN	CONNECTION	OF	OUTSIDE FACE
CONST	CONSTRUCTION	OPNG	OPENING
CONT	CONTINOUS OR CONTINUED	OPP	OPPOSITE
CTR	CENTER	OLS	OUTSTANDING LEG
C TO C	CENTER TO CENTER	PL	PLATE
DIA	DIAMETER	PLBG	PLUMBING
DBA	DEFORMED BAR ANCHOR	PR	PAIR
DBL	DOUBLE	PREFAB	PREFABRICATED
DET	DETAIL	PRL	PARALLEL
DIA	DIAMETER	PSF	LBS. PER SQ. FT.
DIAG	DIAGONAL	PSI	LBS. PER SQ IN.
DIM	DIMENSION	P	VMTPAVEMENT
DL	DEAD LOAD	R	RADIUS
DO	DITTO	RD	ROOF DRAIN
DWG	DRAWING	RE	RIGHT END
DWL	DOWEL	REF	REFER OR REFERENCE
EA	EACH OR EXPANSION ANCHOR	REV	REVISION
EE	EACH END	REINF	REINFORCEMENT
EF	EACH FACE	REQD	REQUIRED
EJ	EXPANSION JOINT	RO	ROUGH OPENING
EL	ELEVATION	SCH	SCHEDULE
ELEC	ELECTRICAL	SECT	SECTION
EMB	EMBEDMENT	SF	SQUARE FEET
EQ	EQUAL	SIM	SIMILAR
E.S.	EACH SIDE	SOG	SLAB ON GRADE
EW	EACH WAY	SPA	SPACES
EXP	EXPANSION	SPEC	SPECIFICATION
EXIST	EXISTING	SQ	SQUARE
EXT	EXTERIOR	SSH	SHORT SLOTTED HOLES
FD	FLOOR DRAIN	STD	STANDARD
FDN	FOUNDATION	STIFF	STIFFENER
FL	FLOOR	STIR	STIRRUP
FP	FULL PENETRATION	STRUCT	STRUCTURAL
FS	FAR SIDE	SYM	SYMMETRICAL
FT	FEET	T	TOP
FTG	FOOTING	TOC	TOP OF CONCRETE
FUT	FUTURE	TOW	TOP OF WALL
FV	FIELD VERIFY	T & B	TOP AND BOTTOM
GA	GAGE	TEMP	TEMPERATURE OR TEMPORARY
GALV	GALVANIZED	TOF	TOP OF FOOTING
G.F.	GRANULAR FILL	TOS	TOP OF STEEL
HK	HOOK	TYP	TYPICAL
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HS	HEADED STUD	VERT	VERTICAL
HSB	HIGH STRENGTH BOLT	W/	WITH
ID	INSIDE DIAMENTER	WL	WIND LOAD
IF	INSIDE FACE	WLD	WELDED
IJ	ISOLATION JOINT	W/O	WITHOUT
IN	INCHES	WT	WEIGHT
INFO	INFORMATION	WWF	WELDED WIRE FABRIC
INT	INTERIOR		

G. STRUCTURAL STEEL

1. STEEL FRAMING DESIGNATIONS AND SYMBOLS ARE DEFINED IN THE STRUCTURAL STEEL SYMBOL LEGEND.
2. ALL FIELD BOLTED SHEAR CONNECTIONS SHALL BE MADE WITH 7/8"(22) DIAMETER A325 BOLTS, UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE FULLY PRETENSIONED AND INSPECTED USING TENSION CONTROL TWIST-OFF STYLE BOLTS. UNLESS SPECIFICALLY INDICATED AS SLIP CRITICAL OR PRETENSIONED, ALL JOINTS SHALL BE DESIGNATED AS SNUG TIGHT. ROUTINE OBSERVATION TO VERIFY THE SPLINED ENDS ARE PROPERLY SEVERED DURING INSTALLATION IS REQUIRED FOR ALL BOLTS.
3. PLACE NON-SHRINK GROUT UNDER ALL COLUMN BASE PLATES BEFORE PLACING ANY ELEVATED SLABS.
4. WHERE THE WORK OF OTHER TRADES REQUIRES CUTS OR OPENINGS TO BE MADE IN STRUCTURAL STEEL MEMBERS, APPROVAL SHALL BE OBTAINED FROM THE ENGINEER. SUCH OPENINGS SHALL BE MADE IN THE SHOP AND CLEARLY INDICATED ON THE SHOP DRAWING.
5. E70XX ELECTRODES SHALL BE USED FOR ALL WELDING. ALL WELDING SHALL BE PERFORMED BY PROPERLY QUALIFIED WELDERS, AS PRESCRIBED UNDER "STANDARD QUALIFICATION PROCEDURE" OF THE AMERICAN WELDING SOCIETY.
6. ALL GROOVE WELDS INDICATED ON PLANS AND SECTIONS SHALL BE COMPLETE JOINT PENETRATION WELDS (CJP) UNLESS SPECIFICALLY INDICATED TO BE PARTIAL PENETRATION WELDS.
7. WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED BY AISC OR 3/16", WHICH EVER IS GREATER.
8. CANTILIEVER SIZE MATCHES MAIN SPAN SIZE UNLESS NOTED OTHERWISE AT ALL MOMENT CONNECTION

H. COMPOSITE METAL DECK AND ROOF DECK

1. CONCRETE WITH CALCIUM CHLORIDE OR ANY ADMIXTURE CONTAINING CHLORIDES SHALL NOT BE USED WITH COMPOSITE STEEL DECK.

2. THE GAGE OF THE DECK SHALL BE DETERMINED BY THE MANUFACTURER TO SATISFY ALL CONDITIONS OF LOADING, SPAN LENGTH, AND UL CRITERIA REQUIRED BY THE CONTRACT DOCUMENTS, BUT SHALL NOT BE LESS THAN THE GAGE INDICATED ON THE DRAWINGS.

3. PROVIDE COMPOSITE DECK AND ROOF DECK LAYOUT THAT IS CONTINUOUS OVER THREE OR MORE SUPPORTS. COMPLY WITH DECK MANUFACTURER SHORING REQUIREMENTS FOR COMPOSITE DECK.

4. TO COMPENSATE FOR DEFLECTION OF THE STRUCTURE UNDER THE LOAD OF FRESHLY PLACED CONCRETE, THE SLAB THICKNESS SHALL BE INCREASED ACCORDINGLY TO PROVIDE A LEVEL SURFACE WITHIN TOLERANCE. ADDITIONAL CONCRETE SHALL BE PLACED AT NO ADDITIONAL COST TO THE OWNER. THE MAXIMUM ADDITIONAL CONCRETE SHALL BE AN 1 INCH AT THE CENTER OF A BAY.

5. CORE DRILLED OR CUT OPENINGS IN COMPOSITE SLABS SHALL NOT EXCEED 10" IN ANY DIMENSION. LARGER OPENINGS, WHEN REQUIRED SHALL BE BOXED OUT AND REINFORCED PER TYPICAL UNFRAMED OPENING DETAIL.

CORE DRILLED OR CUT OPENINGS SHALL NOT BE PLACED CLOSER THAN 1 OPENING DIAMETER OR WIDTH TO ANY BEAM NOR SPACED CLOSER THAN 2 OPENING DIAMETERS OR WIDTHS. WHEN TWO ADJACENT OPENINGS ARE OF A DIFFERENT SIZE, SPACING SHALL BE BASED UPON THE LARGER SIZE.

WHEN TOTAL WIDTH OF ADJACENT OPENINGS REQUIRED IS LARGER THAN 30" OR WHEN REQUIRED SPACING OF OPENINGS CANNOT BE MET, CORED OR CUT OPENINGS SHALL BE SUPPORTED ALONG ALL EDGES. PROVIDE W10X12 SUPPORT BEAMS AT THESE LOCATIONS. LOCATE BEAMS 6" CLEAR OF OPENING EDGES.

6. ROOF DECK SHALL BE SCREWED OR WELDED WITH 5/8" DIA PUDDLE WELDS TO SUPPORTS IN A 36/5 PATTERN AND #10 TEK SCREW SIDELAPS AT 15" O.C. MAX. ROOF DECK SHALL DEVELOP A DIAPHRAGM CAPACITY OF 300 PLF WITH A FACTOR OF SAFETY OF 2.75.

7. COMPOSITE FLOOR DECK SHALL BE WELDED TO SUPPORTS BY 5/8" PUDDLE WELDS AT 12" O.C. MAXIMUM. BUTTON PUNCH OR WELD AT 18" O.C. MAXIMUM.

8. NO CONDUIT SHALL BE PLACED IN SLABS ON METAL DECK.

9. NO LOADS OTHER THAN CEILINGS AND LIGHTING FIXTURE SHALL BE SUSPENDED FROM METAL ROOF DECK.

10. NO LOADS HEAVIER THAN 200 LBS SHALL BE SUSPENDED FROM COMPOSITE METAL DECK SLABS. SUCH LOADS SHALL BE SPACED NO LESS THAN 5'-0" O.C. EACH WAY.

I. POST-TENSIONED CONCRETE

1. POST-TENSIONED CONCRETE WORK SHALL BE PERFORMED BY A POST-TENSIONING SPECIALTY CONTRACTOR EXPERIENCED IN THE DESIGN AND CONSTRUCTION OF POST-TENSIONED CONCRETE STRUCTURES.
2. SUPPORTS FOR TENDONS ARE TO BE LOCATED AT COLUMN LINES AND AT MIDSPAN. PROVIDE ADDITIONAL SUPPORTS AS REQUIRED TO MAINTAIN THE TENDON IN A NATURAL PARABOLIC PROFILE. TENDONS MUST BE EXACTLY LOCATED AT HIGH AND LOW POINTS.
3. PROVIDE AT A MINIMUM, #4 AT 5'-0" ON CENTER PERPENDICULAR TO TENDONS AND SECURE TENDONS TO BARS TO PREVENT MOVEMENT DURING CONCRETE POUR AND MAINTAIN TENDON LOCATION AND PROFILE.
4. MAXIMUM SPACING OF TENDONS SHALL BE 48" SLIGHT DEVIATION IS PERMITTED WHERE REQUIRED TO CLEAR OPENINGS OR INSERTS. PROPER TENDON LOCATION SHALL HAVE PRIORITY OVER OTHER MATERIALS.
5. LOCATE TENDONS TO CLEAR OPENINGS OR SLEEVES BY 3" MINIMUM.
6. TENDON PROFILES ARE PARABOLIC AND SHALL CONFORM TO CONTROL POINT LOCATIONS INDICATED. DIMENSIONS LOCATING TENDONS ARE TO THE CENTER OF GRAVITY OF THE TENDON. HIGH POINTS ARE AT COLUMN CENTER LINES AND LOW POINTS ARE AT MIDSPAN. UNLESS NOTED OTHERWISE.
7. TENDONS SHALL NOT BE FULLY STRESSED UNTIL CONCRETE ACHIEVES 3500 PSI. PARTIAL STRESSING AT LOWER STRENGTHS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. STRESSING SEQUENCE SHALL BE DETERMINED BY POST-TENSIONING SPECIALTY CONTRACTOR AND APPROVED BY THE STRUCTURAL ENGINEER.

J. MASONRY

1. ALL CONCRETE MASONRY UNITS SHALL BE HOLLOW BLOCK MADE WITH NORMAL WEIGHT AGGREGATE IN ACCORDANCE WITH ASTM C33.
2. ALL MASONRY WALLS SHALL BE REINFORCED UNLESS NOTED OTHERWISE, THE FOLLOWING SHALL CONSTITUTE MINIMUM REINFORCEMENT REQUIREMENTS:

WALL SIZE	VERTICAL REINFORCEMENT	TRUSS TYPE JOINT REINF.
6"	1-#5 AT 48" CENTERED	2-3/16" DIA. SIDE RODS AT 16"
8"	1-#5 AT 40" CENTERED	2-3/16" DIA. SIDE RODS AT 16"
10 & 12"	1-#7 AT 48" EACH FACE	2-3/16" DIA. SIDE RODS AT 16"

3. PROVIDE VERICAL REINFORCEMENT AS INDICATED. IN ADDITION , PROVIDE VERTICAL BARS AROUND ALL OPENINGS, AT CORNERS, ANCHORED INTERSECTIONS AND AT END OF WALL PANELS.
4. CONTINUOUS BOND BEAMS SHALL BE PLACED IN ONE OF THE UPPER THREE COURSES OF ALL WALLS. BOND BEAMS SHALL BE REINFORCED AS FOLLOWS:

WALL SIZE	REINFORCEMENT
6"	1-#6
8"	2-#5
10 & 12"	2-#6

5. ALL REINFORCING SHALL HAVE A MINIMUM COVERAGE OF ONE BAR DIAMETER (1/2"MIN.) OF GROUT. CENTERED BARS SHALL BE SECURLY PLACED IN THE CENTER OF A CELL. EACH FACE BARS SHALL BE PLACED 1" CLEAR OF THE FACE SHELL. WHERE TWO LAYERS ARE REQUIRED IN 8" OR SMALLER BLOCK, USE ONE BAR IN EACH OF TWO ADJACENT CELLS.
6. CONTROL JOINTS: MAXIMUM SPACING OF CONTROL JOINTS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE, (DO NOT PLACE CONTROL JOINTS IN SHEAR WALLS. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON LOCATION OF CONTROL JOINTS):

EXTERIOR WALLS	INTERIOR WALLS
25 FT	30 FT

7. ALL MASONRY WALLS SHOWN ON STRUCTURAL DRAWINGS ARE LOAD BEARING, UNLESS NOTED OTHERWISE. REFER TO ARCHITECTUREAL DRAWINGS FOR NON-LOAD BEARING MASONRY WALLS.
8. REFER TO MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF CONDUIT PIPING, DUCTWORK, AND OPENINGS IN MASONRY WALLS. PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS OR SLEEVES AS INDICATED. DO NOT CUT REINFORCEMENT.
9. CONTINUOUS REINFORCING IN WALLS MAY BE SPLICED AS REQUIRED, PROVIDED BARS ARE OF THE LONGEST PRACTICAL LENGTH AND ALL SPLICES ARE SHOWN ON REINFORCING SHOP DRAWINGS. WHEREVER POSSIBLE, SPLICES SHALL BE STAGGERED.
10. LAP ALL REINFORCING BARS IN MASONRY 48 BAR DIAMETERS AT SPLICES. HORIZONTAL MASONRY REINFORCING SHALL BE CONTINUOUS AROUND ALL CORNERS AND INTERSECTIONS.
11. ALL VERTICAL REINFORCING SHALL BE CONTINUOUS FOR FULL HEIGHT OF WALL AND DOWELED INTO FOOTING OR SLAB ON GRADE BELOW AND EXTENDED INTO BOND BEAMS ABOVE. CONTINUITY MAY BE ESTABLISHED WITH LAPPED SPLICES MEETING ALL INDICATED REQUIREMENTS.
12. FILL ALL CELLS BELOW GRADE WITH GROUT. FILL ALL CELLS CONTAINING REINFORCEMENT WITH GROUT.
13. CELLS CONTAINING BOLTS SHALL BE GROUTED SOLID WITH AT LEAST 1" GROUT COVERAGE BETWEEN THE BOLT AND THE MASONRY AT THE BLOCK FACE.
14. NO PIPES OR DUCTS SHALL BE EMBEDDED IN LOAD BEARING MASONRY UNLESS NOTED OR DETAILED SPECIFICALLY.

K. FUTURE EXPANSION PROVISIONS

1. TO BE DETERMINED UNTIL DECISION FOR THE VERTICAL EXPANSION OVER LOWER MECHANICAL AREAS IS FINALIZED.

B. EARTHWORK AND FOUNDATIONS

1. ALL EARTHWORK AND SITE PREPARATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE GEOTECHNICAL REPORT. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND APPROVED BY THE GEOTECH.
2. ANY EXISTING FILLS OR UNSUITABLE SOILS AS DETERMINED BY THE GEOTECH SHALL BE EXCAVATED AND REPLACED WITH PROPERLY COMPACTED FILL.
3. WHEN EXCAVATING OR GRADING ADJAVENT TO EXISTING STRUCTURES OR IMPROVEMENTS, EXTREME CARE SHALL BE EXERCISED NOT TO DAMAGE OR UNDERMINE FOUNDATIONS, WALLS, SLABS, UTILITIES, ETC.
4. DO NOT EXCAVATE BELOW THE BEARING ELEVATION OF ANY COMPLETED FOOTING NOR ANY CLOSER TO THE FOOTING THAN A SLOPE OF TWO HORIZONTAL (MEASURED FROM EDGE OF FOOTING TO NEAREST POINT IN EXCAVATION) TO ONE VERTICAL.
5. HORIZONTAL CONSTRUCTION JOINTS IN COLUMN FOOTINGS, PILE CAPS, SLABS ON GRADE AND MAT FOUNDATIONS ARE NOT PERMITTED.
6. BOTTOM OF ALL FOOTINGS AND PILE CAPS SUBJECT TO FROST SHALL BE PLACED AT OR BELOW FROST DEPTH.
7. PROVIDE DOWELS IN FOUNDATIONS TO MATCH REINFORCING IN ALL WALLS, COLUMNS, PIERS AND SHEAR WALLS REINFORCING U.N.O

C. CONCRETE AND REINFORCING

1. LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS INDICATED ON APPROVED SHOP DRAWINGS.
   - A. CONSTRUCTION JOINTS IN FOUNDATION WALLS SHALL BE SPACED LESS THAN 30 FEET IN EXPOSED WALLS OR LESS THAN 60 FEET IN OTHER WALLS.
   - B. PROVIDE JOINTS IN SLABS ON GRADE AROUND EACH COLUMN AND BETWEEN COLUMNS AS SHOWN, AND NOT OVER 25'-0" FOR 7" SLABS, AND NOT OVER 33'-0" FOR 10" SLABS IN EACH DIRECTION.
   - C. PLACE SLABS ON GRADE IN STRIP CAST MANNER WITH ALTERNATING STRIPS. LIMIT LENGTH OF PLACEMENT TO 120' MAXIMUM AND WIDTH TO 20' OR 25' AS NOTED ABOVE.
   - D. FOR SLABS ON GRADE RECEIVING ARCHITECTURAL FINISH VERIFY JOINT LOCATIONS WITH THE ARCHITECT.
   - E. EPOXY JOINT FILLER SHALL BE APPLIED TO ALL EXPOSED CONTROL JOINTS.
   - F. PROVIDE WATERSTOPS AT ALL JOINTS BELOW GRADE.
2. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
3. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
4. NO STAKES, STEEL OR WOOD, SHALL BE PERMITTED IN ANY CONCRETE POUR. SUSPEND FORMS FROM ABOVE GRADE.
5. ANCHOR BOLTS, DOWELS, REINFORCING STEEL, INSERTS, ETC., SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE. CONCRETE BLOCKS ONLY SHALL BE USED TO SUPPORT REINFORCING OFF GRADE.
6. ALL REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315.
7. PROVIDE MINIMUM CONCRETE COVERING FOR REINFORCEMENT PER ACI 318
8. PROVIDE DOWELS OF SAME SIZE AND NUMBER FROM ADJACENT POUR, BOTH VERTICALLY AND HORIZONTALLY, TO MATCH TYPICAL REINFORCING SHOWN. LAPS TO BE IN ACCORDANCE WITH THE DEVELOPMENT LENGTH AND LAP SPLICE SCHEDULE. DOWELS SHALL BE CLEANED AFTER POUR.
9. FIELD WELDING OR BENDING OF REINFORCING IS NOT PERMITTED EXCEPT AS INDICATED ON THE DRAWINGS OR AS APPROVED BY THE STRUCTURAL ENGINEER. USE LOW HYDROGEN ELECTRODES GRADE E70 OR E90 AS REQUIRED.
10. CORING OF SLABS, BEAMS, COLUMNS, OR SHEAR WALLS IS NOT PERMITTED, PROVIDE SLEEVES FOR ALL PENETRATIONS PRIOR TO PLACING CONCRETE.
11. CONTINUOUS REINFORCEMENT IN WALLS AND FOOTINGS MAY BE SPLICED AS REQUIRED, PROVIDED THAT BARS ARE OF THE LONGEST PRACTICAL LENGTH AND ALL SPLICES ARE SHOWN ON THE REINFORCING BAR SHOP DRAWINGS. SPLICES ARE TO BE STAGGERED WHEN POSSIBLE. PROVIDE LAP SPLICES AND DEVELOPMENT LENGTHS IN ACCORDANCE WITH THE DEVELOPMENT LENGTH AND LAP SPLICE SCHEDULE. USE CLASS B LAP SPLICES UNLESS NOTED OTHERWISE.
12. NO CONDUIT SHALL BE PLACED IN COLUMNS OR SHEAR WALLS AND NO CONDUIT SHALL BE RUN IN BEAMS PARALLEL TO THE SPAN.
13. NO CONDUIT SHALL BE PLACED IN SUPPORTED SLABS OR SLAB ON GRADE.

D. EXPANSION ANCHORS

1. EXPANSION ANCHORS SHALL BE A SINGLE-END EXPANSION SHIELD ANCHOR WHICH COMPLIES WITH THE DESCRIPTIVE PART OF FEDERAL SPECIFICATION A-A 1923A, TYPE 4, FOR WEDGE ANCHORS. WEDGE ANCHORS SHALL BE HILTI KWIK BOLT TZ. SHELL ANCHORS SHALL BE HILTI HSL. ANCHORS SHALL BE BY HILTI FASTENING SYSTEMS OF TULSA, OK. (ICC ES REPORTS ESR-1917 FOR WEDGE ANCHORS AND AND ESR 3987 FOR SHELL ANCHORS) OR EQUAL.
2. ANCHORS SHALL BE ZINC PLATED UNLESS SPECIFICALLY NOTED AS STAINLESS STEEL ON THE PLAN DETAILS.
3. WHEN DETAILS OF SECTIONS INDICATE EXPANSION ANCHORS BUT NO SIZE, PROVIDE ANCHORS WITH 3/4" (20mm) DIAMETER.
4. PROVIDE THE MINIMUM EMBEDMENT DEPTHS INDICATED IN THE TEST SCHEDULE UNLESS NOTED OTHERWISE.

ANCHOR DIAMETER	EMBEDMENT DEPTH
1/4" (6)	2" (50)
3/8" (10)	2 1/2" (65)
1/2" (12)	3 1/2" (90)
5/8" (16)	4" (100)
3/4" (19)	4 3/4" (120)
1" (25)	6" (150)

5. WHEN INSTALLING DRILLED-IN-ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO CONCRETE WITH STRESSING TENDONS (POST-TENSIONED OR PRE-TENSIONED), LOCATE THE TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION AND MAINTAIN AT LEAST 1" CLEAR BETWEEN THE TENDON AND THE ANCHOR. CUTTING A TENDON CAN CAUSE COLLAPSE.

E. ADHESIVE DOWELLED ANCHORS

1. REINFORCING, BAR DOWELS, REINFORCING BARS, THREADED RODS, BOLTS ETC. WHICH ARE INDICATED TO BE ADHESIVE DOWELED INTO CONCRETE OR SOLID MASONRY SHALL BE ACCOMPLISHED USING HIT HY 150 ADHESIVE BY HILTI FASTENING SYSTEMS OF TULSA, OK.(ICC REPORT NO. ER 1967), OR EQUAL.
2. DRILL, BRUSH, AND CLEAN ALL HOLES. INSTALL ALL ANCHORS IN COMPLETE ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDATIONS, AS WELL AS ALL APPLICABLE BUILDING CODES OR ENGINEERING REPORTS.
3. PROVIDE THE FOLLOWING MINIMUM ANCHOR EMBEDMENT DEPTHS UNLESS SPECIFICALLY NOTED OTHERWISE ON DETAILS:

A. REINFORCING BARS

BAR SIZE	EMBEDMENT DEPTH
#3 (#10)	4" (100)
#4 (#13)	6" (150)
#5 (#15)	7" (175)
#6 (#19)	9" (225)
#7 (#22)	10" (250)
#8 (#25)	12" (300)
#9 (#29)	13" (325)
#10 (#32)	16" (400)
#11 (#36)	18" (450)

B. BOLTS OR THREADED RODS

DIAMETER	EMBEDMENT DEPTH
3/8"(10)	5" (125)
1/2"(12)	7" (175)
5/8"(16)	8" (200)
3/4"(19)	10"(250)
7/8"(22)	12"(300)
1" (25)	13"(330)

C. HILTI HIS INSERTS

DIAMETER	EMBEDMENT DEPTH
3/8" (10)	4 1/4" (110)
1/2" (12)	5" (125)
5/8" (16)	6 5/8" (170)
3/4" (19)	8 1/4" (210)

4. WHEN INSTALLING DRILLED IN ANCHORS, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO CONCRETE WITH STRESSING TENDONS (POST-TENSIONED OR PRE-TENSIONED), LOCATE THE TENDONS BY USING A NONDESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION AND MAINTAIN AT LEAST 1" CLEAR BETWEEN THE TENDON AND THE ANCHOR. CUTTING A TENDON CAN CAUSE COLLAPSE.

F. HEADED STUDS AND DEFORMED BAR ANCHORS

1. HEADED STUDS AND DEFORMED BAR ANCHORS SHALL BE ELECTRIC-ARC STUD WELDED PER MANUFACTURERS RECOMMENDATIONS AND THE AWS CODE. FILLET WELDING SHALL NOT BE ALLOWED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER. WELDMENT SHALL BE IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD WIL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" DAIMETER STUDS AND SMALLER, 3/16" FOR LARGER THEN 5/8" DIAMETER.
2. HEADED STUDS SHALL BE TYPE B PER THE AWS CODE WITH A MINIMUM YIELD STRENGTH OF 51 KSI (345 Mpa). NELSON GRANULAR FLUX FILLED (OR APPROVED EQUAL). STUDS SHALL BE MANUFACTURED OF COLD DRAWN BAR STOCK CONFORMING TO ASTM A-108.
3. DEFORMED BAR ANCHORS SHALL COMPLY WITH ASTM A-496 WITH A MINIMUM YIELD STRENGTH OF 70 KSI (485 Mpa).
4. UNLESS NOTED OTHERWISE, DEFORMED BAR ANCHOR LENGTH SHALL BE AS FOLLOWS:

BAR DIAMETER	EMBEDMENT LENGTH
3/8"(10)	24" (600)
1/2"(12)	24" (600)
5/8"(16)	30" (750)

APPLICABLE CODES AND STANDARDS

1) THE INTERNATIONAL BUILDING CODE, 2009 (IBC) AND ALL OTHERS LOCAL AND STATE AGENCIES HAVING JURISDICTION OVER THIS PROJECT.
2) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-08).
3) AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, LOAD & RESISTANCE FACTOR DESIGN 13TH ED.
4) AMERICAN WELDING SOCIETY (AWS) D1.1, D1.3, D1.4.
5) MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-05) INCLUDING SUPPLEMENTS 1 AND 2.
6) STEEL DECK INSTITUTE SPECIFICATIONS AND LOAD TABLES
7) ASTM MATERIAL STANDARDS AS NOTED
8) AISI SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS
9) BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 53D-D2 AND ACI 53D.1-D2)

DESIGN LOADS

1) DEAD LOAD – ACTUAL WEIGHT OF MATERIALS USED ADDING THE FOLLOWING:

ALLOWANCE FOR CEILINGS, LIGHTING, PLUMBING, FIRE PROTECTION AND HVAC	10 PSF
ALLOWANCE FOR ROOFING SYSTEM AND BALLAST	20 PSF

2) LIVE LOAD

AREA OF BUILDING	DESIGN LIVE LOAD
MINIMUM ROOF	30 PSF
LABORATORIES	125 PSF
CORRIDORS	100 PSF
STAIRS AND LOBBIES	100 PSF
OFFICES	100 PSF
CONFERENCE ROOM	100 PSF
LIGHT STORAGE AREAS	125 PSF
MECHANICAL SPACES	150 PSF
LOADING DOCK	250 PSF

3) SNOW LOAD

GROUND SNOW LOAD	Pg = 25PSF
FLAT ROOF SNOW LOAD	Pf = 20 PSF
SNOW EXPOSURE FACTOR	Ce = 0.9
SNOW LOAD IMPORTANCE FACTOR	I = 1.0
THERMAL FACTOR	Ct = 1.0
DRIFT LOAD WHERE APPLICABLE	

4) WIND LOAD

BASIC WIND VELOCITY	V = 90 MPH
IMPORTANCE FACTOR	I =1.0
EXPOSURE FACTOR	= B
INTERNAL PRESSURE COEFFICIENT	= +/- 0.18
DESIGN WIND PRESSURES FOR COMPONENTS AND CLADDING,	
WALL ZONE 5 PER 50PSF AREA	= 30 PSF
ALL OTHERS WALL PER 50PSF AREA	= 20 PSF
ROOF ZONE 2 & 3 PER 50PSF AREA	= 40 PSF
ALL OTHER ROOF PER 50PSF AREA	= 25 PSF

5) SEISMIC LOAD

OCCUPANCY CATEGORY:	= II
SEISMIC IMPORTANCE FACTOR:	= 1.0
MAPPED SPECTRAL RESPONSE ACCELERATION:	Ss= 0.188, S1= 0.064
SITE CLASS:	= C
SPECTRAL RESPONSE COEFFICIENTS:	Sds= 0.150, Sd1= 0.073
SEISMIC DESIGN CATEGORY:	= B
BASIC SEISMIC FORCE RESISTING SYSTEM:	ORDINARY REINFORCED CONCRETE SHEAR WALL (N-S) ORDINARY REINFORCED MOMENT FRAMES (E-W)
ANALYSIS PROCEDURE:	= EQUIVALENT LATERAL FORCE
SEISMIC RESPONSE COEFFICIENTS:	Cs= 0.016 (E-W), 0.024 (N-S)
RESPONSIVE MODIFICATION FACTORS	R = 3 (E-W), 3 (N-S)
DESIGN BASE SHEAR:	= 0.016W (E-W), 0.024W (N-S)

FOUNDATION DESIGN

1) THE FOUNDATION DESIGN IS BASED UPON THE GEOTECHNICAL REPORT PREPARED BY AECOM REPORT NUMBER 60097666 DATED AUG 10 2010.
2) SPREAD FOOTING - ALLOWABLE SOIL BEARING CAPACITY = 6000 psf
   RETAINING WALLS - ALLOWABLE SOIL BEARING CAPACITY = 5000 psf
3) FROST DEPTH = 3' - 6" BELOW GRADE

MATERIALS OF CONSTRUCTION

1)	NORMAL WEIGHT CONCRETE	28 DAY COMPRESSIVE STRENGTH
	ELEVATED FLOOR SLABS, BEAMS,GIRDERS	F'c = 5,000 PSI
	SHEAR WALLS, COLUMNS	F'c = 5,000 PSI
	FOOTINGS, SLAB ON GRADE	F'c = 4,000 PSI
	CONCRETE FILL ON METAL DECK	F'c = 4,000 PSI
2)	LIGHTWEIGHT CONCRETE: 115 PCF (1920 kg/m3) PLUS OR MINUS 3 PCF (50 kg/m3)	
	CONCRETE FILL ON METAL DECK	F'c = 3,500 PSI
3)	REINFORCING STEEL – ASTM A615 - GRADE 60	Fy = 60 KSI
4)	REINFORCING STEEL TO BE WELDED - ASTM A706 GRADE 60	Fy = 60 KSI
5)	WELDED WIRE FABRIC – ASTM A185	Fy = 70 KSI
6)	PRESTRESSED OR POST-TENSIONED TENDONS	
	- ASTM A-416 GRADE 270 LOW-RELAXATION	Fy = 270 KSI
7)	STRUCTURAL STEEL	
	WIDE FLANGE AND TEE SHAPES - ASTM A992	Fy = 50 KSI
	ANGLES CHANNELS AND PLATE - ASTM A 36	Fy = 36 KSI
	TUBES - ASTM A500 GRADE B	Fy = 46 KSI
	PIPES - ASTM A500 GRADE B	Fy = 42 KSI
	BOLTS - ASTM A325	
	ANCHOR BOLTS - ASTM F1554 GRADE 36	Fy = 36 KSI
	HIGH STRENGTH ANCHOR BOLT ASSEMBLY	
	ANCHOR BOLT - ASTM F1554 GRADE 55, WELDABLE	Fy = 55 KSI
	NUTS – GRADE ASTM A563 GRADE D	
	WELDING ELECTRODES - E70XX	
	METAL ROOF DECKING (GALVANIZED)	
	ASTM A653 G60 (Z180) ZINC COATING	FY = 33 KSI, STRUCT. QUALITY
	COMPOSITE METAL FORM DECK (GALVANIZED)	
	ASTM A653 G60(Z180) ZINC COATING	FY= 40 KSI , STRUCT. QUALITY
8)	MASONRY	
	CONCRETE MASONRY UNITS: ASTM C-90	F'm = 1.5 KSI
	GROUT: ASTM C476	F'c = 2.0 KSI
	MORTAR: ASTM C270	F'c = 2.0 KSI
	JOINT REINFORCMENT: TRUSS TYPE	

CONSTRUCTION NOTES

A. GENERAL CONSTRUCTION NOTES

1. STRUCTURAL DRAWINGS SHOULD NOT BE SCALED. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
2. ALL EXISTING BUILDING INFORMATION SHALL BE FIELD VERIFIED. EXISTING BUILDING INFORMATION HAS BEEN TAKEN FROM THE FOLLOWING ORIGINAL DESIGN DOCUMENTS.
   1. SOLID STATE SCIENCE BUILDING (BUILDING 223)
   2. ELECTRONICS FACILITY (BUILDING 222)
3. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR LOCATION AND SIZE OF OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, CURBS, DIMENSIONS, ETC. NOT INDICATED ON THE STRUCTURAL DRAWINGS. THE LOCATION AND SIZE OF MECHANICAL AND ELECTRICAL OPENINGS IN SLABS, WALLS AND DECKS SHALL BE COORDINATED BY THE CONTRACTOR. PROVIDE ALL ADDITIONAL FRAMING OR REINFORCING TO ACCOMMODATE OPENINGS AS REQUIRED BY THE APPLICABLE STANDARD DETAILS SHOWN ON THE STRUCTURAL DRAWINGS OR PROVIDED BY THE STRUCTURAL ENGINEER. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL MEMBERS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
4. WHERE DIMENSIONS ARE PROVIDED FOR OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, CURBS, ETC., BUT MAY BE AFFECTED BY THE EQUIPMENT PURCHASED, THE CONTRACTOR SHALL VERIFY THE INFORMATION PROVIDED PRIOR TO CONSTRUCTION.
5. PROVIDE CONCRETE EQUIPMENT PADS AND INERTIAL BASES FOR MECHANICAL AND ELECTRICAL INSTALLATIONS. CONSTRUCT PADS AND BASES IN ACCORDANCE WITH THE TYPICAL DETAILS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR LIMITS AND LOCATIONS.
6. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. CHECK AND VERIFY EXISTING DIMENSIONS AND TAKE ADDITIONAL MEASUREMENTS AS NEEDED. NOTIFY ARCHITECT OF ANY DISCREPANCY BETWEEN ACTUAL CONDITIONS AND INDICATED CONDITIONS. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER.
7. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED BY NEW WORK.
8. ALL COLUMNS, SHEAR WALLS AND FOUNDATIONS, UNLESS NOTED OTHERWISE, SHALL BE CENTERED ON GRIDLINES IN EACH DIRECTION.
9. BEAMS SHALL BE EQUALLY SPACED IN THE STRUCTURAL BAY UNLESS NOTED OTHERWISE.
10. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING AND TEMPORARY BRACING. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION.
    - A. DO NOT PLACE CONSTRUCTION MATERIALS OR OTHER CONSTRUCTION LOADS ON THE STRUCTURE SUCH THAT THE LOADS PLACED EXCEED THE CAPACITY OF THE STRUCTURE.
    - B. TAKE INTO CONSIDERATION THAT FULL STRUCTURAL CAPACITY OF MANY STRUCTURAL MEMBERS IS NOT REALIZED UNTIL STRUCTURAL ASSEMBLY IS COMPLETE; THAT IS, UNTIL SLABS, DECKS, DIAGONAL BRACING AND SHEAR WALLS ARE INSTALLED.
    - C. PROVIDE TEMPORARY BRACING AND GUYING TO PROVIDE STABILITY AND RESIST ALL LOADS TO WHICH THE PARTIALLY COMPLETED STRUCTURE MAY BE SUBJECTED INCLUDING ERECTION EQUIPMENT AND ITS OPERATION. ADEQUACY OF TEMPORARY BRACING AND GUYING FOR THIS PURPOSE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
    - D. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL FRAMED SLAB AND SLAB ON GRADE LOCATED TOP AND BOTTOM OF BASEMENT WALL HAVE BEEN PLACED AND HAVE REACHED THEIR 28-DAY DESIGN STRENGTH.

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-001

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

GENERAL STRUCTURAL NOTES

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-001	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-001 REV. NO.

C:\RVT\002182-S-CENTRAL_rlee.rvt
7/6/2011 12:00:07 PM

SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	REFERENCE SPECIFICATION SECTION	CODE REFERENCE	REMARKS
SPRAY FIRE PROTECTION MATERIAL					
INSPECT SURFACE PREPARATION OF MEMBERS.	●		07 81 16 07 81 23 07 81 24	IBC 1704.10	ACCEPTANCE INSPECTION OF SUBSTRATE SURFACE PREPARATION BY INSTALLER AND MANUFACTURERS REPRESENTATIVE
INSPECT APPLICATION CONDITIONS AND TEST APPLIED THICKNESS		●	07 81 16	IBC 1704.10.3	TEST STANDARD AND MINIMUM TEST FREQUENCY PER ASTM-E605
TEST DENSITY & BONDING STRENGTH AND THICKNESS AT ALL BEAMS, COLUMNS, & BRACES		●	07 81 16	IBC 1704.10.5	TEST STANDARD AND MINIMUM TEST FREQUENCY PER ASTM-E736 & ASTM-736.
COLD-FORMED STEEL FRAMING					
OBSERVE & VERIFY USE OF CORRECT MEMBER SIZES, MATERIAL THICKNESS, FASTENERS, & WELDING		●	05 40 00		
GENERAL STRUCTURAL OBSERVATIONS					
CONDUCT PERIODIC VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS. PREPARE MONTHLY REPORT OF OBSERVATIONS DESCRIBING WORK PROGRESS AND NON-CONFORMING ITEMS.		●	01 45 02		
CONCRETE MASONRY					
PROPORTIONS OF MORTAR AND GROUT.		●	04 05 13		
CONSTRUCTION OF MORTAR JOINTS.		●			
LOCATION AND GRADE OF REINFORCEMENT AND CONNECTORS.		●	04 05 23		
TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.		●			
SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT		●			
PROTECTION OF MASONRY DURING COLD WEATHER OR HOT WEATHER.		●	04 05 05	ACI 530.1/ ASCE 6/ TMS 602 IBC 2104.3 & 2104.4	
INSPECTION OF GROUT SPACE AND CONCRETE FILL (GROUT) PLACEMENT.		●	04 05 13	ACI 530.1/ ASCE 6/ TMS 602	
PREPARATION OF CONCRETE FILL (GROUT) AND MORTAR SPECIMENS.	●			ACI 530.1/ ASCE 6/ TMS 602 IBC 2105.2.2 & 2105.3	
COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONTRACT DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED		●	04 22 00	ACI 530.1/ ASCE 6/ TMS 602	

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	REFERENCE SPECIFICATION SECTION	CODE REFERENCE	REMARKS
SOIL & EARTHWORK					
OBSERVE PROOF-ROLLING OF SUBGRADE PRIOR TO BEGINNING FILL PLACEMENT		●	31 23 00	IBC 1704.7	
OBSERVE PLACEMENT AND COMPACTION OF FILL AND BACKFILL MATERIAL	●				
TESTING AND EVALUATION OF IN-PLACE DENSITY OF COMPACTED FILL AS WORK PROGRESSES.		●			
OBSERVE, TEST, AND APPROVE FOOTING BEARING PRIOR TO PLACING OF REINFORCING STEEL AND CONCRETE.		●			
OBSERVE EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		●			
CONCRETE & REINFORCING STEEL					
PRECONSTRUCTION CONFERENCE					
OBSERVE PLACEMENT OF REINFORCING STEEL PRIOR TO THE CLOSING OF THE FORMS AND ARRIVAL OF CONCRETE ONSITE.	●		03 20 00	IBC 1704.4	
OBSERVE WELDING OF STEEL REINFORCEMENT, IF ANY	●			AWS D1.4; ACI 318-3.5.2	
VERIFY CORRECT MATERIAL USED, INCLUDING THE USE OF A706 IN WELDED SPLICES, IF ANY		●			
OBSERVE & VERIFY PLACEMENT OF EMBEDDED BOLTS & RODS PRIOR TO CONCRETE PLACEMENT.	●		03 31 10	IBC 1704.4	
VERIFY USE OF CORRECT CONCRETE MIX DESIGN AND REVIEW DELIVERY TICKETS		●		IBC 1704.4	
SAMPLE FRESH CONCRETE AND MEASURE SLUMP, AIR CONTENT, AND TEMPERATURE DURING CONCRETE DELIVERY.	●		03 31 00	IBC 1704.4 ACI 318 PAR. 5.6, 5.8	CYLINDERS IS REQUIRED FOR AN ACCEPTABLE TEST. A SINGLE CYLINDER BREAK IS UNACCEPTABLE FOR STRENGTH EVALUATION PURPOSES.
TAKE CONCRETE SPECIMENS FOR STRENGTH TESTS TO BE PERFORMED IN LAB. A MINIMUM OF FIVE (5) CYLINDERS SHALL BE MADE. TEST TWO AT SEVEN DAYS AND TWO AT 28 DAYS. THE 5TH CYLINDER SHALL BE TESTED AT 28 DAYS IF ONE OR BOTH OF THE 28-DAY CYLINDER RESULTS ARE BELOW REQUIRED STRENGTH.	●				
PERFORM CONCRETE STRENGTH TESTING IN LAB RECORD		●	03 31 00	ACI 318 PAR. 5.6.3.3	
MAINTAIN A SPREADSHEET SHOWING DATE, SEQUENTIAL ORDER OF STRENGTH TEST RESULTS AND INDICATE RUNNING AVERAGE	●				
OBSERVE FOR PROPER CONCRETE PLACEMENT	●		03 31 10	ACI 318 PAR. 5.9 & 5.10	
OBSERVE FOR PROPER CURING TEMPERATURE AND TECHNIQUES		●		ACI 318 PAR. 5.11, 5.12, & 5.13	
VERIFY THAT THE NECESSARY DESIGN STRENGTH HAS BEEN REACHED PRIOR TO THE REMOVAL OF FORMS.		●			
MEASURE FLOOR FLATNESS AND LEVELNESS AS NEEDED WHEN QUESTIONABLE SURFACES ARE OBSERVED.		●			
OBSERVATION DURING APPLICATIONS OF PRESTRESS AND POST TENSIONING FORCES.	●		03 38 16	ACI 318 SEC. 13.20	
OBSERVATION DURING PLACEMENT OF GROUT IN BONDED POST-TENSIONING TENDONS.	●				
INSPECTOR OF PRESTRESS & POST-TENSIONED CONCRETE TENDON PLACEMENT	●			ACI 318 3.5, 7.1-7.7	

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	REFERENCE SPECIFICATION SECTION	CODE REFERENCE	REMARKS
STRUCTURAL STEEL					
VERIFY FABRICATOR CERTIFICATION		●	05 12 10	IBC 1704.2	
HOLD PRE-CONSTRUCTION MEETINGS BETWEEN THE ENGINEER OF RECORD, THE FABRICATOR'S AND ERECTOR'S QUALITY CONTROL PERSONNEL, AND THE QUALITY ASSURANCE AGENCY TO PLAN AND DISCUSS THE PROJECT, FABRICATION PROCEDURES, ERECTION PROCEDURES, AND INSPECTION PROCEDURES.		●	05 12 10		FEMA-353 RECOMMENDATION.
INSPECT FABRICATION SHOP TO OBSERVE FABRICATION PROCEDURES		●	05 12 10		ONLY ONE INSPECTION IS REQUIRED UNLESS ON-SITE EVENTS INDICATE FURTHER INSPECTIONS ARE NECESSARY.
VERIFY CORRECT STRUCTURAL STEEL MATERIAL DELIVERED TO JOB SITE		●	05 12 10	IBC 1708.4	
VERIFY JOINT WELD PROCEDURES ARE BEING USED IN ACCORDANCE WITH AWS		●	05 12 10	AWS D1.1	
VERIFY CONTRACTOR'S RECEIPT OF WELDER CERTIFICATIONS		●			
VERIFY CORRECT FILLER MATERIAL USED IN WELDS		●	05 12 10	AISC 360-05 A3.5	
VISUALLY INSPECT ALL WELDS		●		AWS D1.1 IBC 1704.3.1	
PERFORM ULTRASONIC OR MAGNETIC PARTICLE TESTING ON ALL FULL PENETRATION WELDS	●				
OBSERVE & PERFORM ULTRASONIC OR MAGNETIC PARTICLE TESTING ON ALL WELDS (INCLUDING FULL & PARTIAL PENETRATION AND FILLET) ON CONNECTIONS WITHIN THE LATERAL FORCE RESISTING SYSTEM, BRACES & RIGID FRAMES	●				
OBSERVE ALL PARTIAL PENETRATION, MULTI-PASS FILLETS, AND SINGLE PASS FILLETS > 5/16" AND PERFORM LIQUID DYE PENETRATION TESTING ON 20% OF ALL SUCH WELDS	●				
INSPECT STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONTRACT DOCUMENTS		●		IBC 1704.3.2	
VERIFY CORRECT MATERIAL USED HIGH-STRENGTH BOLTS, NUTS, AND WASHERS		●		AISC 360-05 A3.3	
OBSERVE & CHECK TIGHTNESS OF ALL BOLTS IN BEARING CONNECTIONS		●		IBC 1704.3.3; AISC 360-05 M2.5	
OBSERVE & CHECK TORQUE OF ALL BOLTS IN SLIP-CRITICAL CONNECTIONS	●			IBC 1704.3.3; AISC 360-05 M2.5	
OBSERVE AND TEST FIELD APPLIED HEADED STUDS		●			

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-002

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SPECIAL INSPECTIONS INFORMATION

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-002	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101-S-002** REV. NO.

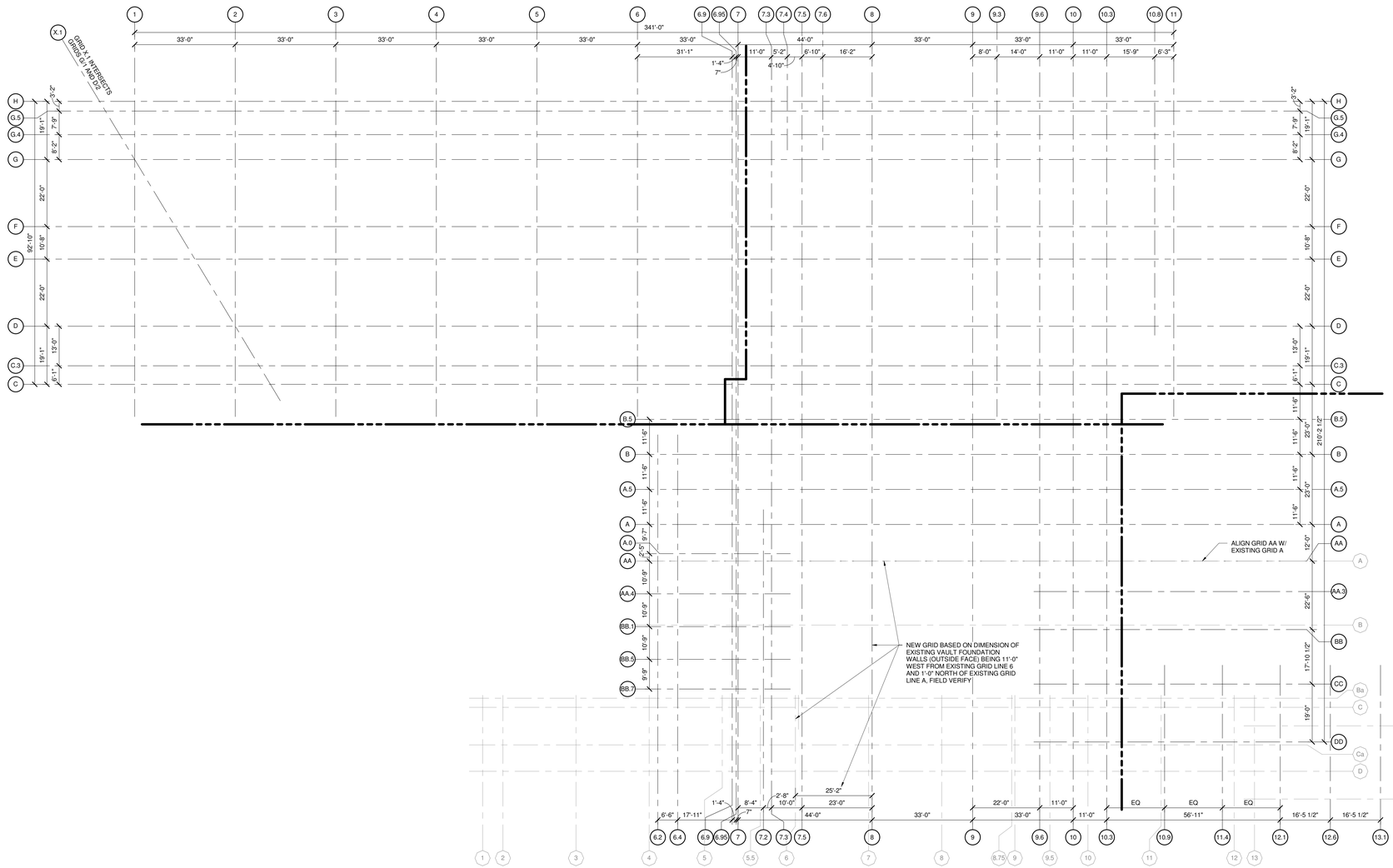
C:\v002182S-CENTRAL_basiame.rvt

7/5/2011 3:05:03 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-003



1 GENERAL GRID DIMENSION PLAN

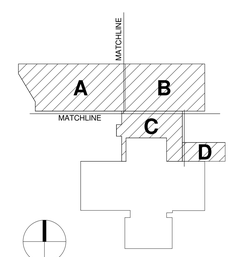
1/16" = 1'-0"

CONTRACTOR SHALL CONFIRM GRID LAYOUT AND RELATIONSHIP TO EXISTING BUILDINGS AND GRIDS PRIOR TO INSTALLATION OF ANY FOUNDATIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO PROCEEDING.

GRID LEGEND

GRID NEW GRID CALLOUT BUBBLE

GRID EXISTING GRID CALLOUT BUBBLE



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

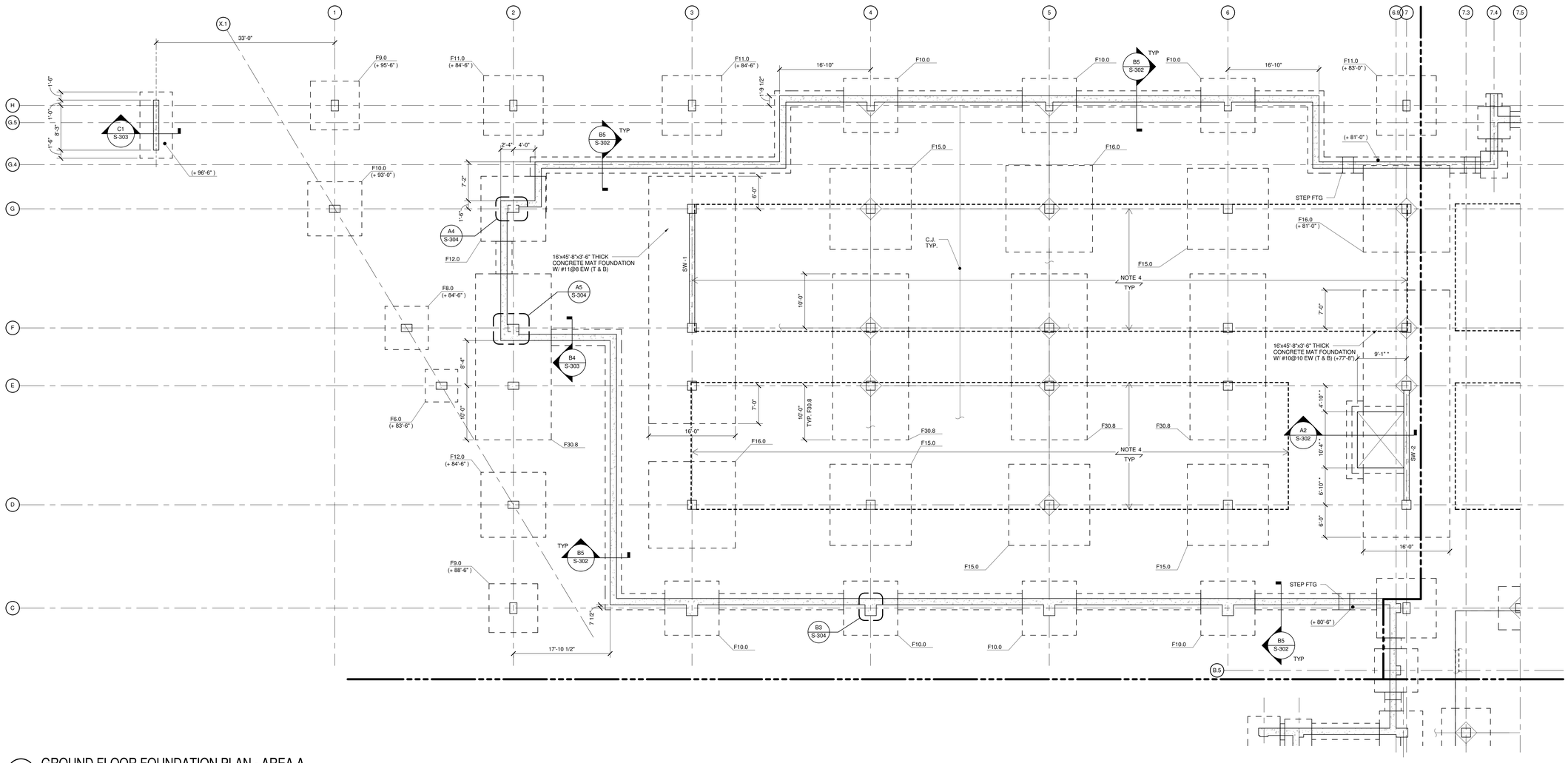
DOCUMENT TITLE
GENERAL GRID DIMENSION PLAN

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-003	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-003 REV. NO.

C:\rvt\002182-S-CENTRAL_basetrim.rvt
7/5/2011 3:05:03 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 GROUND FLOOR FOUNDATION PLAN - AREA A

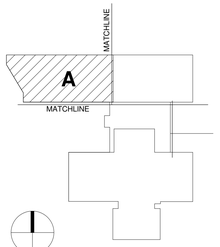
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV = + 84' - 0" UNO
2. T/FOOTING ELEV = 82' - 6" UNO (XX'-XX")
3. TYP 7" SLAB ON GRADE WITH #4@14 EW CENTERED IN SLAB OVER 15 MIL VAPOR BARRIER ON 6" COMPACTED GRANULAR FILL. UNO
4. 10" SLAB ON GRADE WITH #4@16 EW T & B OVER 15MIL VAPOR BARRIER ON 6" COMPACTED GRANULAR FILL. REFER TO ARCH. DWG FOR LAB AND MECH LOCATION. REFER TO A1/S-301 FOR SLAB ON GRADE THICKNESS TRANSITION.
5. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
6. SEE S-202 FOR FOOTING SCHEDULE
7. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
8. SEE S-203 FOR SHEAR WALLS.
9. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

S-100A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

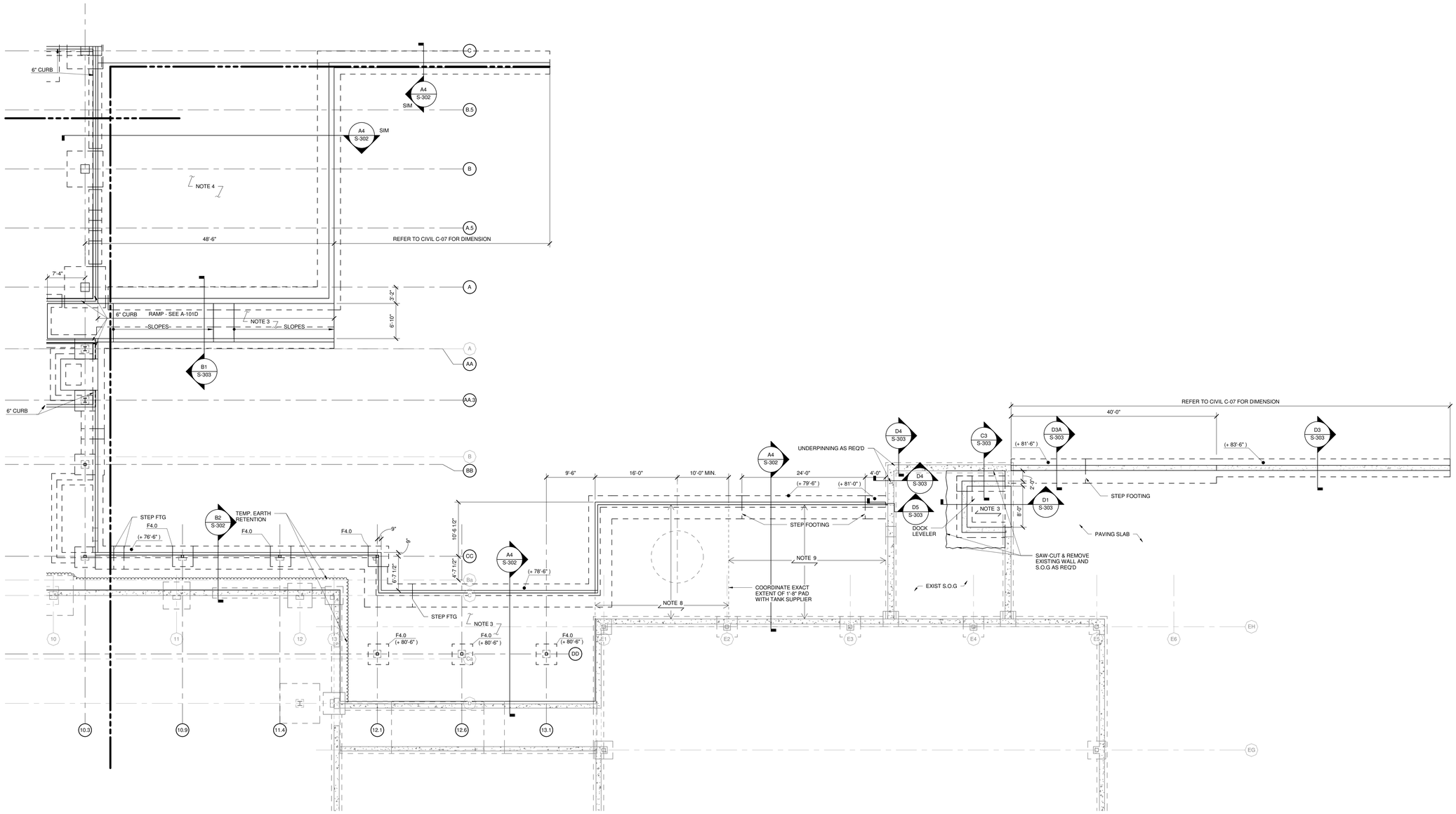
DOCUMENT TITLE
GROUND FLOOR FOUNDATION PLAN - AREA A

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-100A	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-100A REV. NO.

C:\hr\002182-S-CENTRAL_basemne.rvt
7/5/2011 3:05:05 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 GROUND FLOOR FOUNDATION PLAN - AREA D

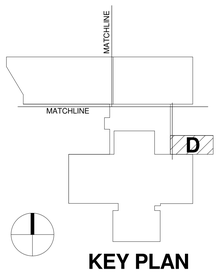
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV = + 84' - 0" UNO
2. T/FOOTING ELEV = 82' - 6" UNO (XX'-XX")
3. TYP 7" SLAB ON GRADE WITH #4@14 EW CENTERED IN SLAB ON 6" COMPACTED GRANULAR FILL, UNO
4. TYP 5" SLAB ON GRADE WITH #4@14 EW CENTERED IN SLAB ON 3'-6" COMPACTED GRANULAR FILL, UNO
   REFER TO C1/S301 FOR ISOLATION PAD AROUND EXTERIOR EQUIPENT. COORDINATE WITH ARCH & MECH DWG FOR LOCATION.
5. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
6. SEE S-202 FOR FOOTING SCHEDULE
7. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
8. NITROGEN TANK PAD - 1'-8" THICK SLAB ON GRADE WITH #8@10 (B) EACH WAY ON 3'-6" COMPACTED GRANULAR FILL, UNO
9. VAPORIZE PAD - 8" THICK SLAB ON GRADE WITH #5@12 (B) EACH WAY ON 3'-6" COMPACTED GRANULAR FILL, UNO

S-100D



KEY PLAN

REV. NO.	DESCRIPTION	BY	APV'D	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

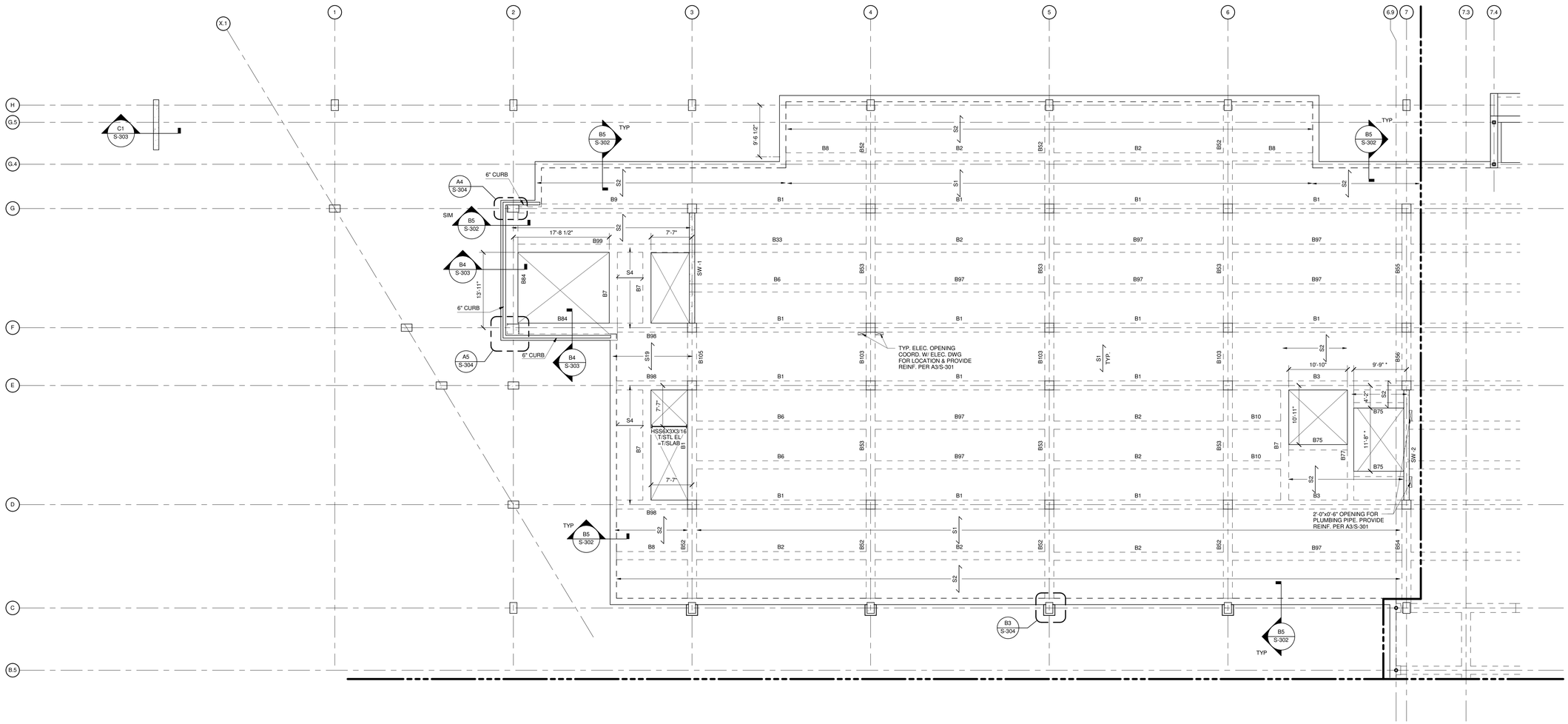
DOCUMENT TITLE
GROUND FLOOR FOUNDATION PLAN - AREA D

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-100D	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

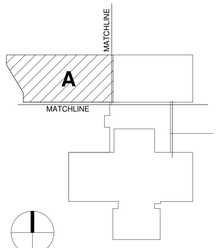
FACILITY DOCUMENT NUMBER J241-101-S-100D REV. NO.

C:\n\002182-S-CENTRAL_basemne.nt
7/5/2011 3:05:06 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-101A



KEY PLAN

1 FIRST FLOOR FRAMING PLAN - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/SLAB ELEV = + 100' - 0" UNO
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. SEE S-203 FOR SHEAR WALLS.
5. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
6. Sx INDICATES CONCRETE SLAB. SEE S-206 FOR REINFORCING.
7. *INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
FIRST FLOOR FRAMING PLAN - AREA A

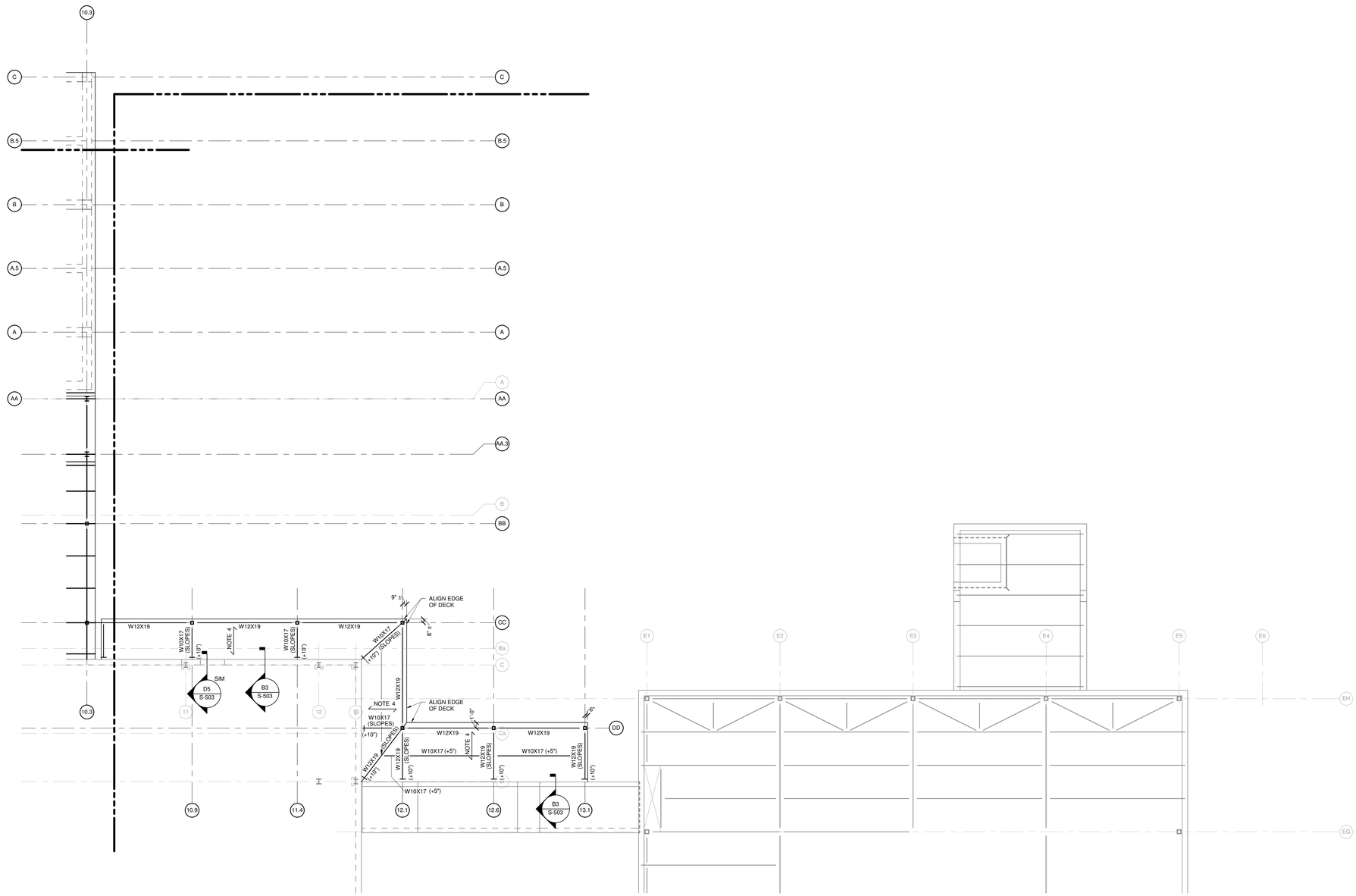
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-101A	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-101A REV. NO.

C:\vol\002182-S-CENTRAL_lcastane.rvt
7/5/2011 3:05:07 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-101D

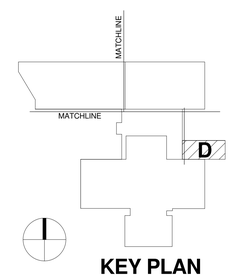


1 FIRST FLOOR FRAMING PLAN - AREA D

1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/STEEL ELEV = + 93' - 2" UNO
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. ⟵⟶ INDICATES SPAN DIRECTION OF ARCHITECURAL ROOF PANEL (CENTRA MR3-36 OR APPROVED EQUAL)



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

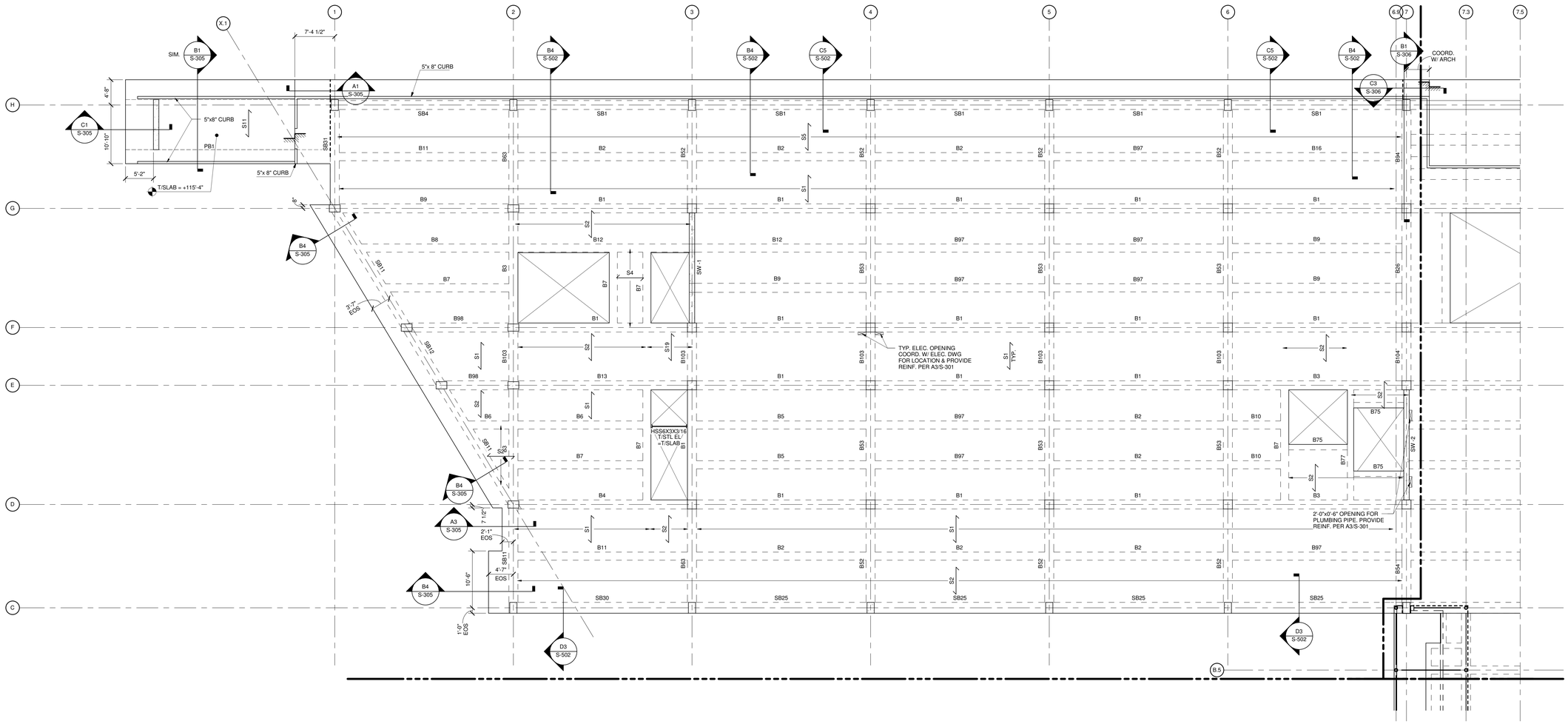
DOCUMENT TITLE
FIRST FLOOR FRAMING PLAN - AREA D

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-101D	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

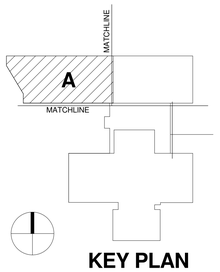
FACILITY DOCUMENT NUMBER J241-101-S-101D REV. NO.

C:\n\002182-S-CENTRAL_Eastbrne.rvt
7/5/2011 3:03:08 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-102A



KEY PLAN

1 SECOND FLOOR FRAMING PLAN - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 116' - 0" UNO
2. T/STEEL ELEV. = + 109' - 8 1/2" UNO
3. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
4. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
5. SEE S-203 FOR SHEAR WALLS.
6. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
7. Sx INDICATES CONCRETE SLAB. SEE S-204 FOR SLAB SCHEDULE.
8. SEE FIRST FLOOR FRAMING FOR DIMENSIONS OF FLOOR OPENINGS.

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

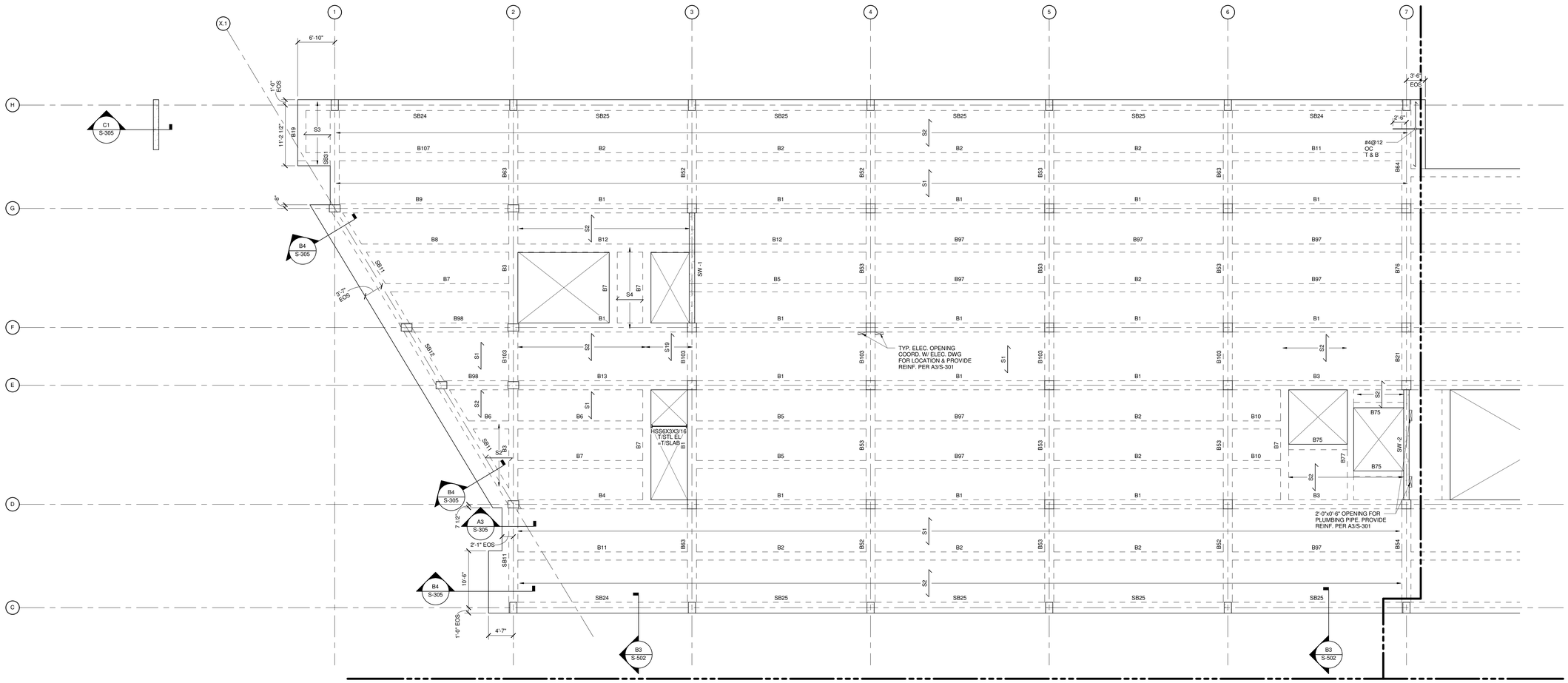
DOCUMENT TITLE
SECOND FLOOR FRAMING PLAN - AREA A

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-102A	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

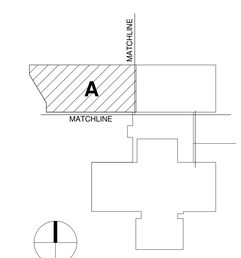
FACILITY DOCUMENT NUMBER J241-101-S-102A REV. NO.

C:\n\002182-S-CENTRAL_bsatterw.rvt
7/5/2011 3:55:10 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-103A



KEY PLAN

1 THIRD FLOOR FRAMING PLAN

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 132' - 0" UNO
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. SEE S-203 FOR SHEAR WALLS.
5. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
6. Sx INDICATES CONCRETE SLAB. SEE S-204 FOR SLAB SCHEDULE.
7. SEE FIRST FLOOR FRAMING FOR DIMENSIONS OF FLOOR OPENINGS.
8. c = x/x" INDICATED UPWARD BEAM CAMBER.

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

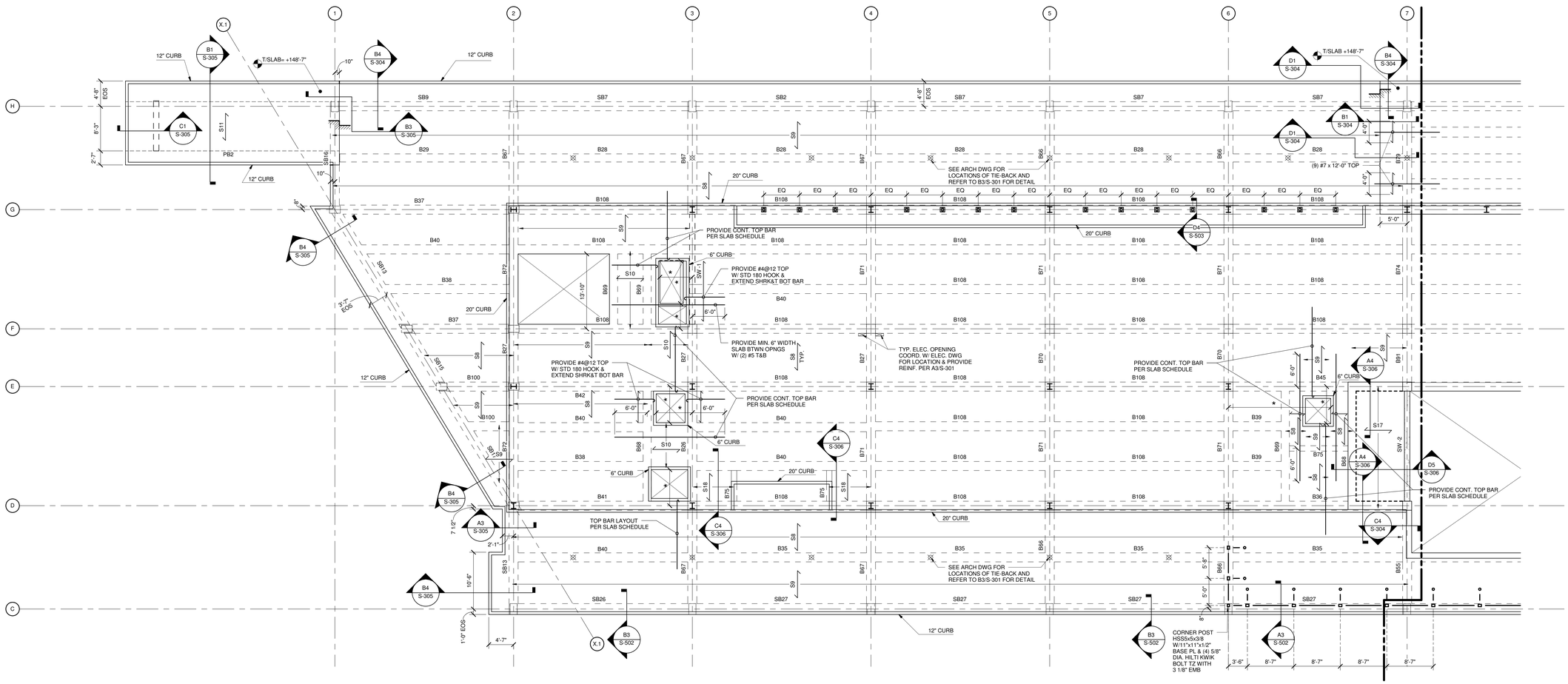
DOCUMENT TITLE
THIRD FLOOR FRAMING PLAN - AREA A

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-103A	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

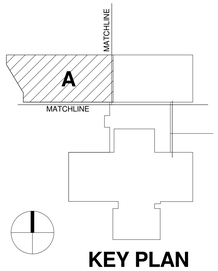
FACILITY DOCUMENT NUMBER J241-101- S-103A REV. NO.

C:\rvt\002182-S-CENTRAL_lcastane.rvt
7/5/2011 3:05:11 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-104A



KEY PLAN

1 PENTHOUSE/MAIN ROOF FRAMING PLAN - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 148' - 0" U.N.O
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. SEE S-203 FOR SHEAR WALLS.
5. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
6. Sx INDICATES CONCRETE SLAB. SEE S-206 FOR REINFORCING.
7. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.
8. ⊠ INDICATED PROPOSED TIE-BACK LOCATIONS.

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

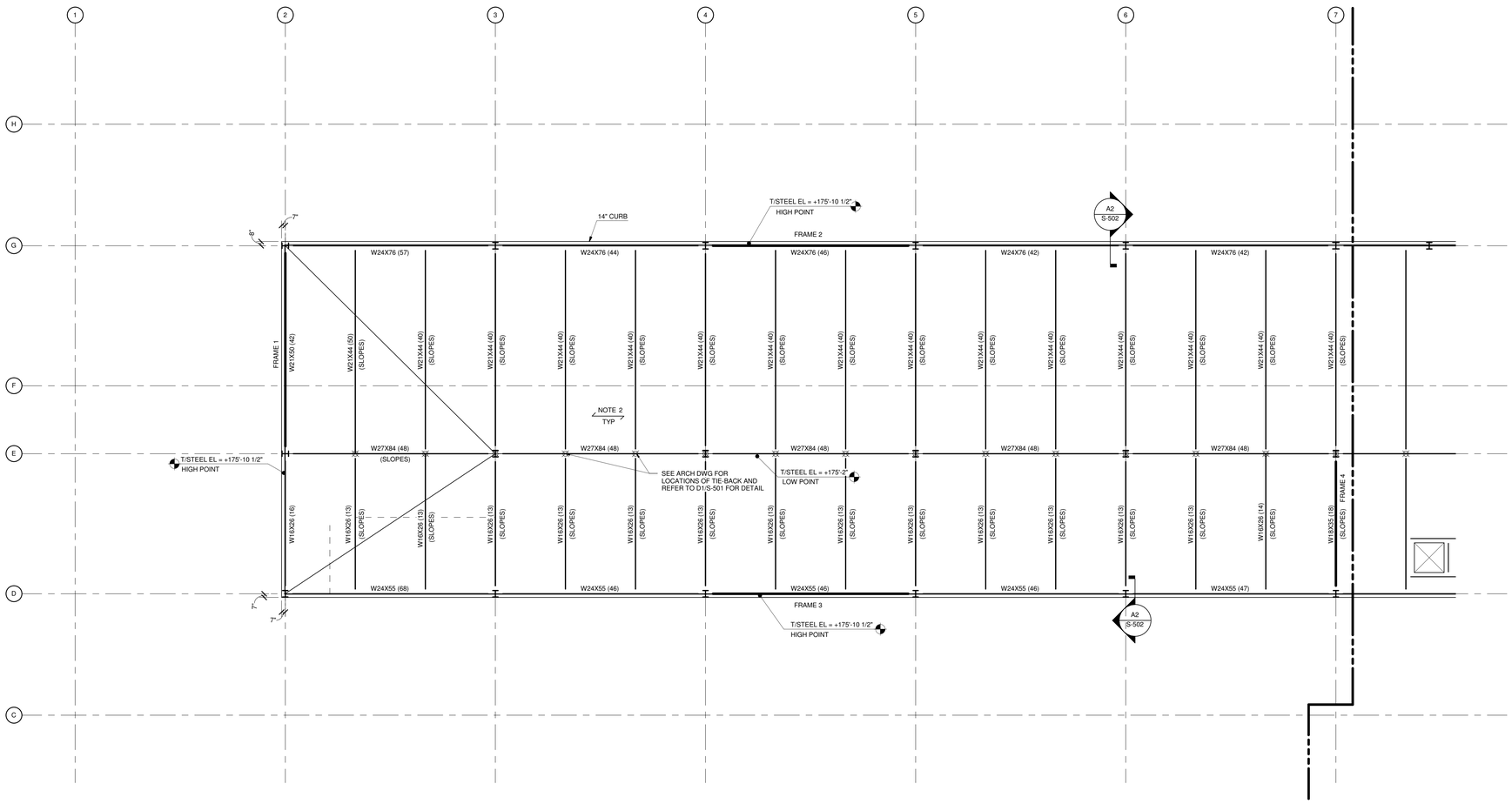
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
PENTHOUSE / MAIN ROOF FRAMING PLAN - AREA A

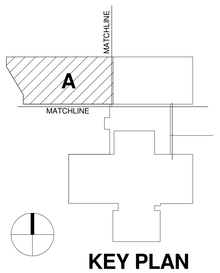
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-104A	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101-S-104A		REV. NO.

C:\rvt\002182-S-CENTRAL_Ipsalane.rvt
7/5/2011 3:05:13 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-105A



KEY PLAN

1 PENTHOUSE ROOF FRAMING PLAN - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/STEEL ELEV. = SEE PLAN
2. ⟷ INDICATES SPAN DIRECTION OF 3 1/2" LT. WT. CONC. (3500psi) ON 2" 19GA GALVANIZED COMPOSITE METAL DECK (5 1/2" OVERALL THICKNESS) REINF. WITH WWR6x6-W2.1xW2.1
3. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
4. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
5. SEE S-204 FOR BRACE FRAME ELEVATIONS.
6. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.
7. ⊠ INDICATED PROPOSED TIE-BACK LOCATIONS.

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
PENTHOUSE ROOF FRAMING PLAN - AREA A

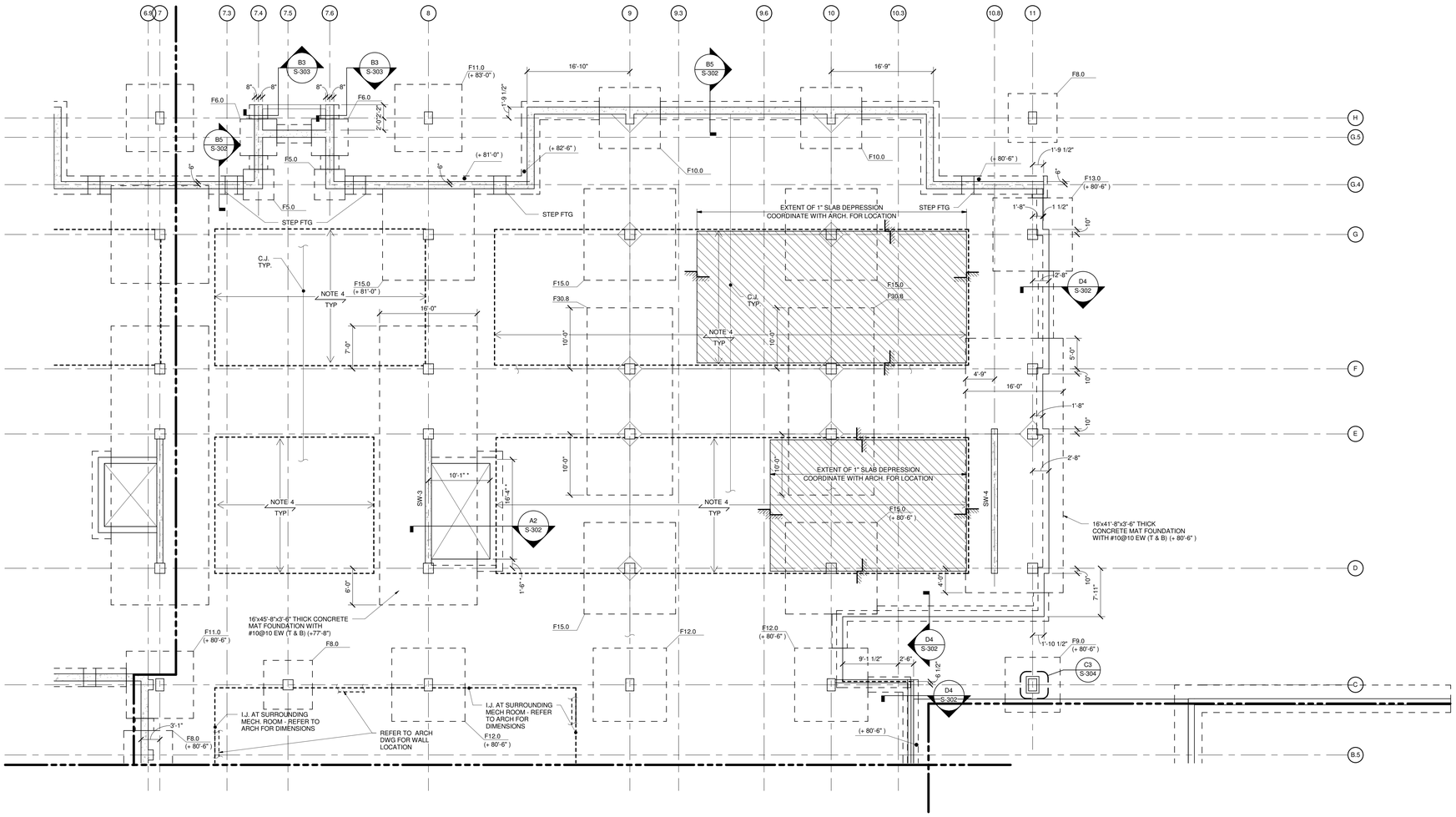
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-105A	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- S-105A REV. NO.

C:\v002182-S-CENTRAL_bsaitarre.rvt
7/5/2011 3:55:14 PM

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-110B



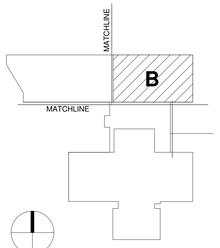
1 GROUND FLOOR FOUNDATION PLAN - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV = + 84' - 0" UNO
2. T/FOOTING ELEV = 82' - 6" UNO (XX'-XX")
3. TYP 7" SLAB ON GRADE WITH #4@14 EW CENTERED IN SLAB OVER 15 MIL VAPOR BARRIER ON 6" COMPACTED GRANULAR FILL. UNO
4. 10" SLAB ON GRADE WITH #4@16 EW T & B OVER 15MIL VAPOR BARRIER ON 6" COMPACTED GRANULAR FILL. REFER TO ARCH. DWG FOR LAB AND MECH LOCATION. REFER TO A1/S-301 FOR SLAB ON GRADE THICKNESS TRANSITION.
5. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
6. SEE S-202 FOR FOOTING SCHEDULE
7. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
8. SEE S-203 FOR SHEAR WALLS.
9. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

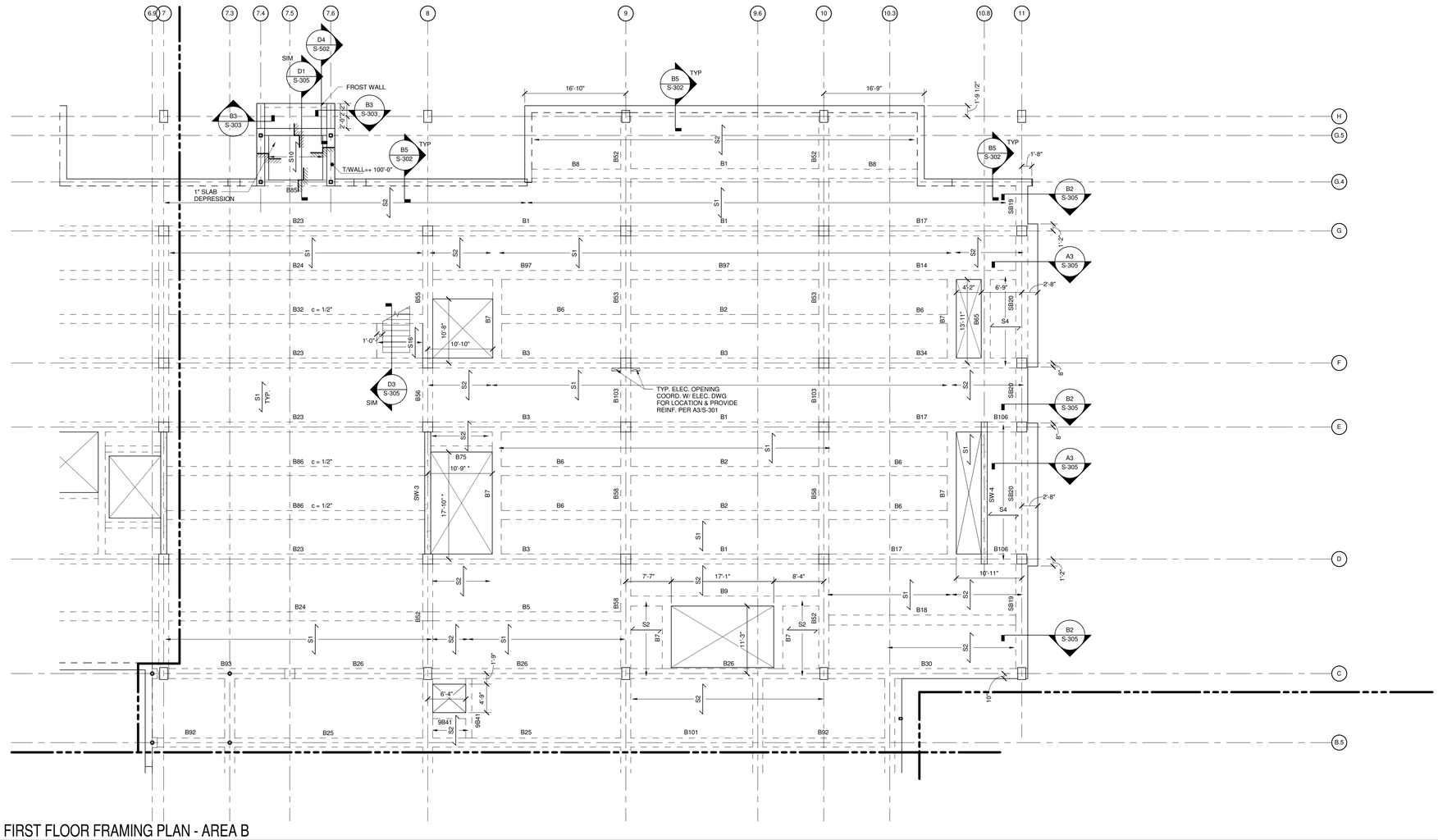
DOCUMENT TITLE
GROUND FLOOR FOUNDATION PLAN - AREA B

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-110B	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-110B REV. NO.

C:\ve\002182-S-CENTRAL.\jeslane.rvt
7/5/2011 3:05:15 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 FIRST FLOOR FRAMING PLAN - AREA B

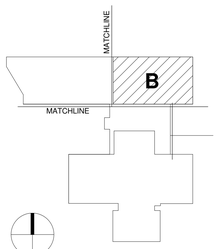
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/SLAB ELEV = + 100' - 0" UNO
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. SEE S-203 FOR SHEAR WALLS.
5. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
6. Sx INDICATES CONCRETE SLAB. SEE S-206 FOR REINFORCING.
7. *INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.
8. c = x/x" INDICATED UPWARD BEAM CAMBER.

S-111B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			05/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

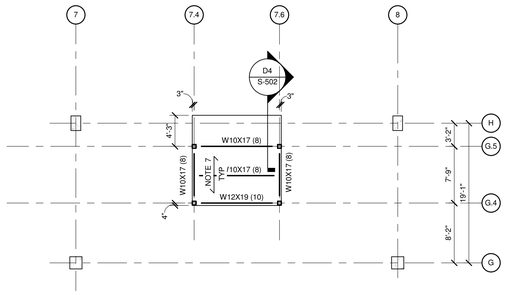
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
FIRST FLOOR FRAMING PLAN - AREA B

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-111B	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-111B REV. NO.

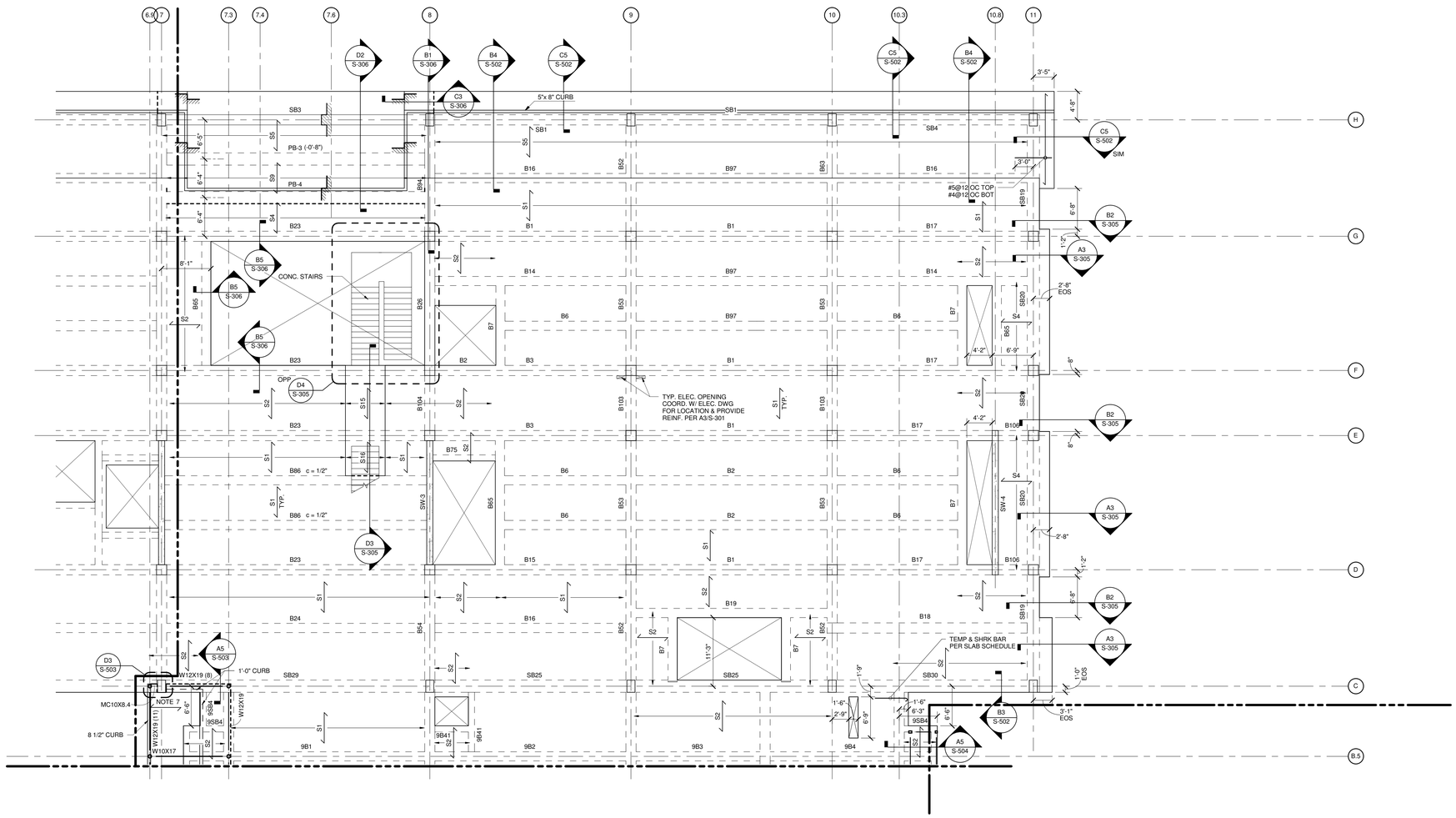
C:\vr002182\S-CENTRAL_basbane.rvt
7/5/2011 3:05:16 PM



2 MAIN ENTRY FRAMING PLAN

1/8" = 1'-0"

NOTE: T/ STEEL ELEV. TYP. AT ENTRY = +109' - 8 1/2" U.N.O



1 SECOND FLOOR FRAMING PLAN - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

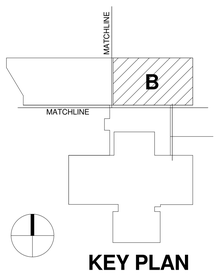
1. T/ SLAB ELEV. = + 116' - 0" UNO
2. T/STEEL ELEV. = + 109' - 8 1/2" UNO
3. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
4. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
5. SEE S-203 FOR SHEAR WALLS.
6. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
7. INDICATES SPAN DIRECTION OF 3 1/2" LT WT CONC ON 2" 18 GA GALVANIZED COMPOSITE METAL DECK (5 1/2" OVERALL THICKNESS) REINF WITH WWR6x6-W2.1xW2.1.
8. Sx INDICATES CONCRETE SLAB. SEE S-204 FOR SLAB SCHEDULE.
9. SEE FIRST FLOOR FRAMING FOR DIMENSIONS OF FLOOR OPENINGS.
10. c = x/x" INDICATED UPWARD BEAM CAMBER.

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-112B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR FRAMING PLAN - AREA B

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-112B	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.

J241-101-S-112B

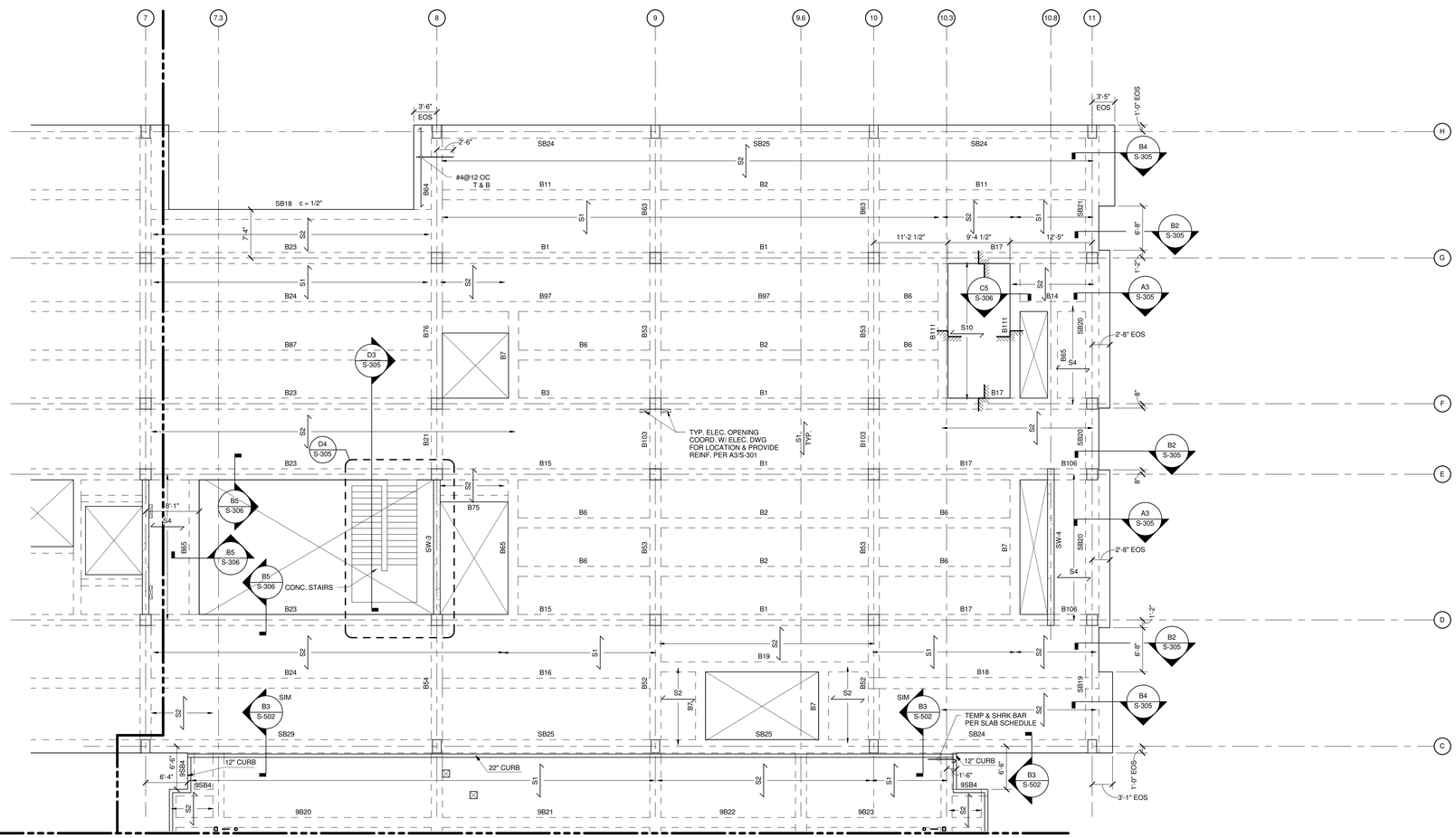
C:\n\002182-S-CENTRAL_Ipsilanes.rvt
7/5/2011 3:55:17 PM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-113B



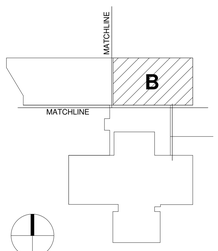
1 THIRD FLOOR FRAMING PLAN - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 132' - 0" UNO
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. SEE S-203 FOR SHEAR WALLS.
5. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
6. Sx INDICATES CONCRETE SLAB. SEE S-204 FOR SLAB SCHEDULE.
7. SEE FIRST FLOOR FRAMING FOR DIMENSIONS OF FLOOR OPENINGS.
8. c = x/x" INDICATED UPWARD BEAM CAMBER.



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

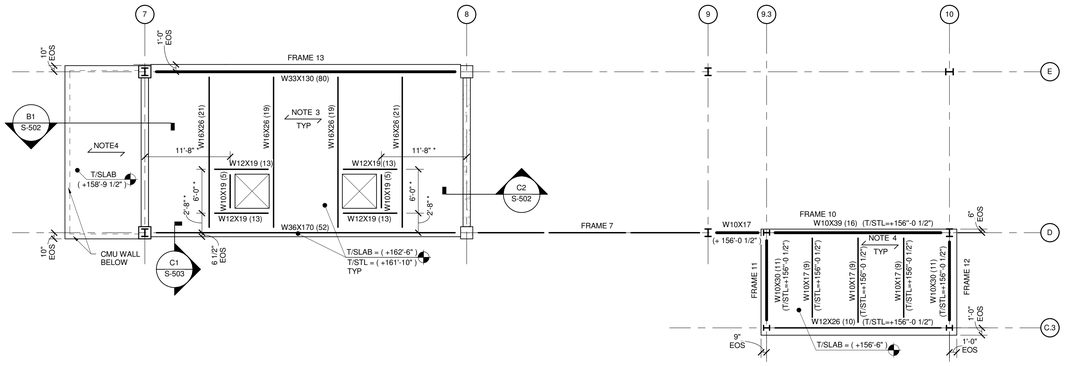
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR FRAMING PLAN - AREA B

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-113B	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

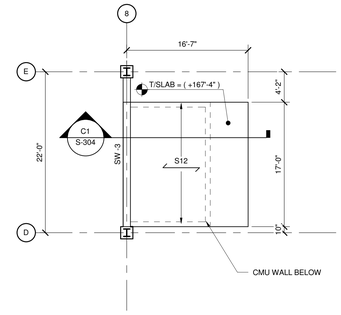
FACILITY DOCUMENT NUMBER J241-101-S-113B REV. NO.

C:\vr002182-S-CENTRAL_Castaneo.rvt
7/5/2011 3:05:19 PM



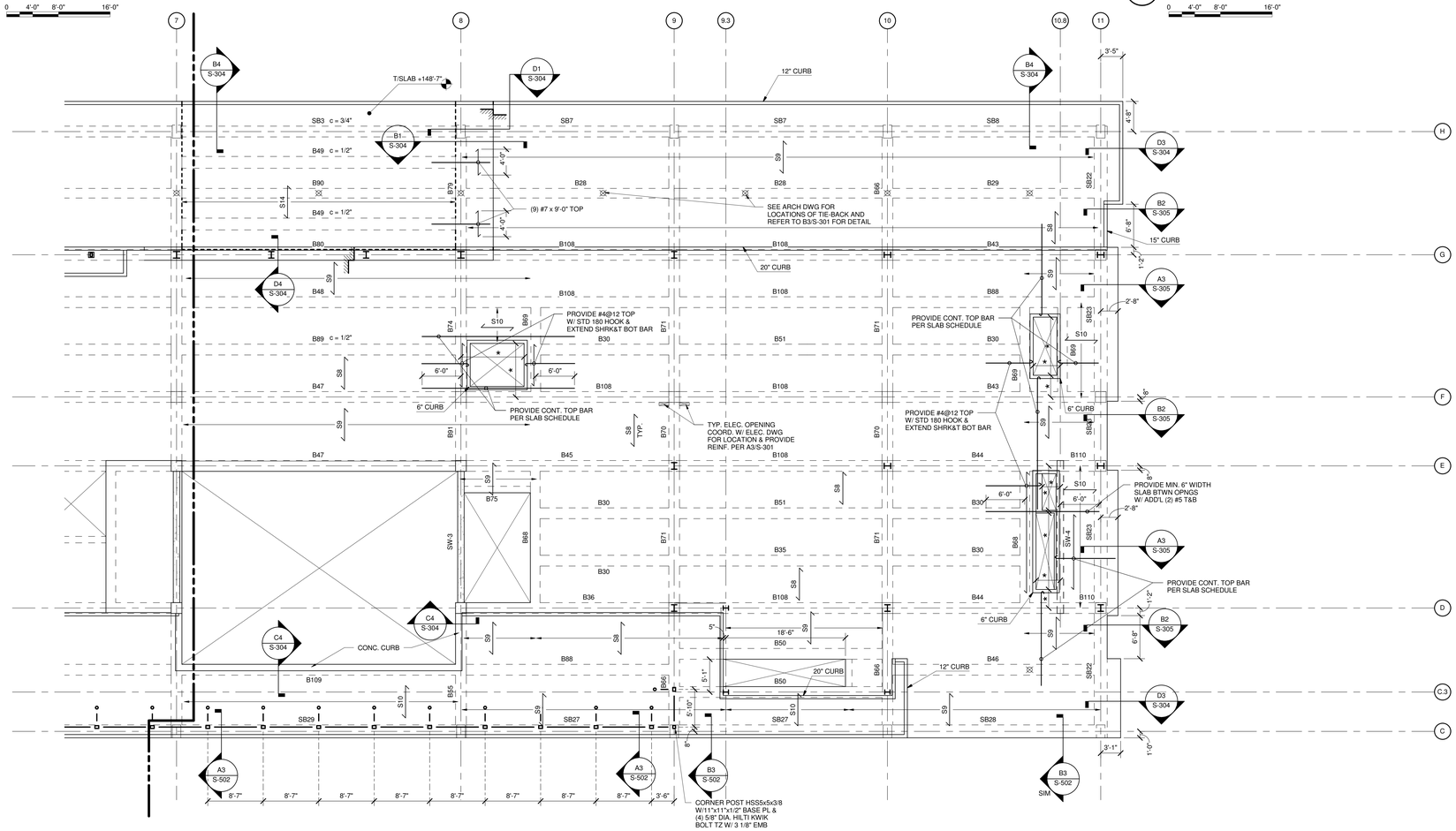
2 MEZZANINE FLOOR/STAIR ROOF FRAMING PLAN

1/8" = 1'-0"



3 ELEVATOR MACHINE ROOM PLAN

1/8" = 1'-0"



1 PENTHOUSE / MAIN ROOF FRAMING PLAN - AREA B

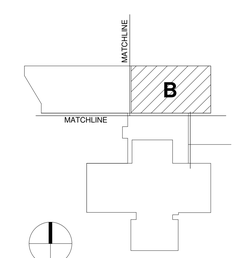
1/8" = 1'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 148' - 0" U.N.O
2. T/STEEL ELEV.= + 161' - 10" U.N.O
3. ⟵⟶ INDICATES SPAN DIRECTION OF 6" NL WT CONC (4000psi) ON 2" 18 GA GALVANIZED COMPOSITE METAL DECK (8" OVERALL THICKNESS) REINF WITH #4@12 BOTTOM EW AND #4@16 TOP EW
4. ⟵⟶ INDICATES SPAN DIRECTION OF 3 1/2" LT WT CONC (3500psi) ON 2" 18 GA GALVANIZED COMPOSITE METAL DECK (5 1/2" OVERALL THICKNESS) REINF. WITH WWR 6x6-W1.4xW1.4
5. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
6. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
7. SEE S-203 FOR SHEAR WALLS.
8. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
9. ⟵ Sx ⟶ INDICATES CONCRETE SLAB. SEE S-206 FOR REINFORCING.
10. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.
11. ⊠ INDICATED PROPOSED TIE-BACK LOCATIONS.
12. c = x/x" INDICATED UPWARD BEAM CAMBER.

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-114B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

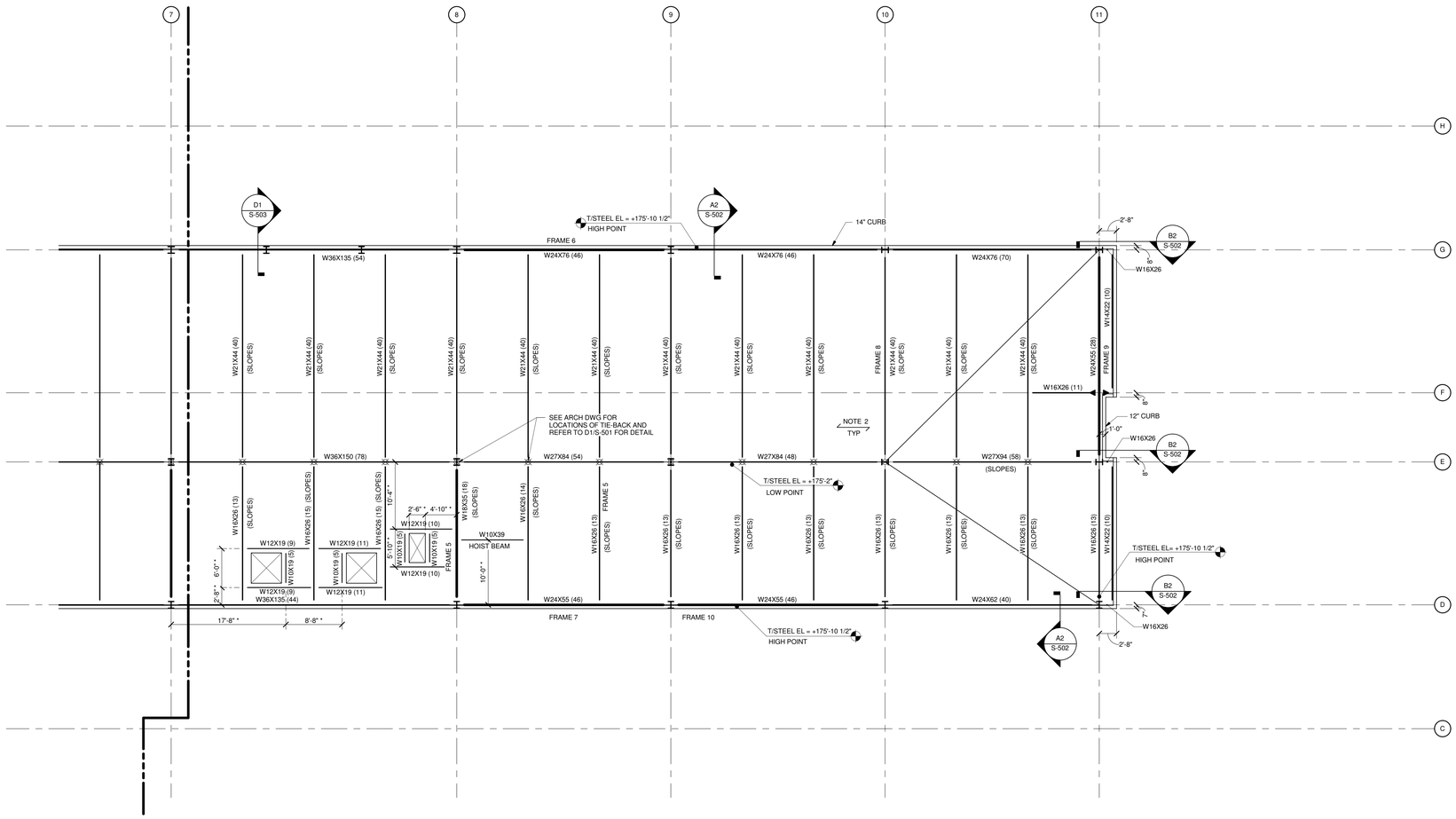
DOCUMENT TITLE
PENTHOUSE / MAIN ROOF FRAMING PLAN - AREA B

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-114B	
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-114B REV. NO.

C:\n\002182-S-CENTRAL_baseline.rvt
7/5/2011 3:05:20 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 PENTHOUSE ROOF FRAMING PLAN - AREA B

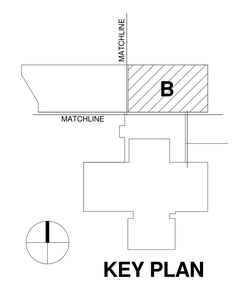
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/STEEL ELEV. = SEE PLAN
2. ⟷ INDICATES SPAN DIRECTION OF 3 1/2" LT. WT. CONC. (3500psi) ON 2" 19GA GALVANIZED COMPOSITE METAL DECK (5 1/2" OVERALL THICKNESS) REINF. WITH WWR6x6-W2.1xW2.1
3. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
4. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
5. SEE S-204 FOR BRACE FRAME ELEVATIONS.
6. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.
7. ⊠ INDICATED PROPOSED TIE-BACK LOCATIONS.

S-115B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

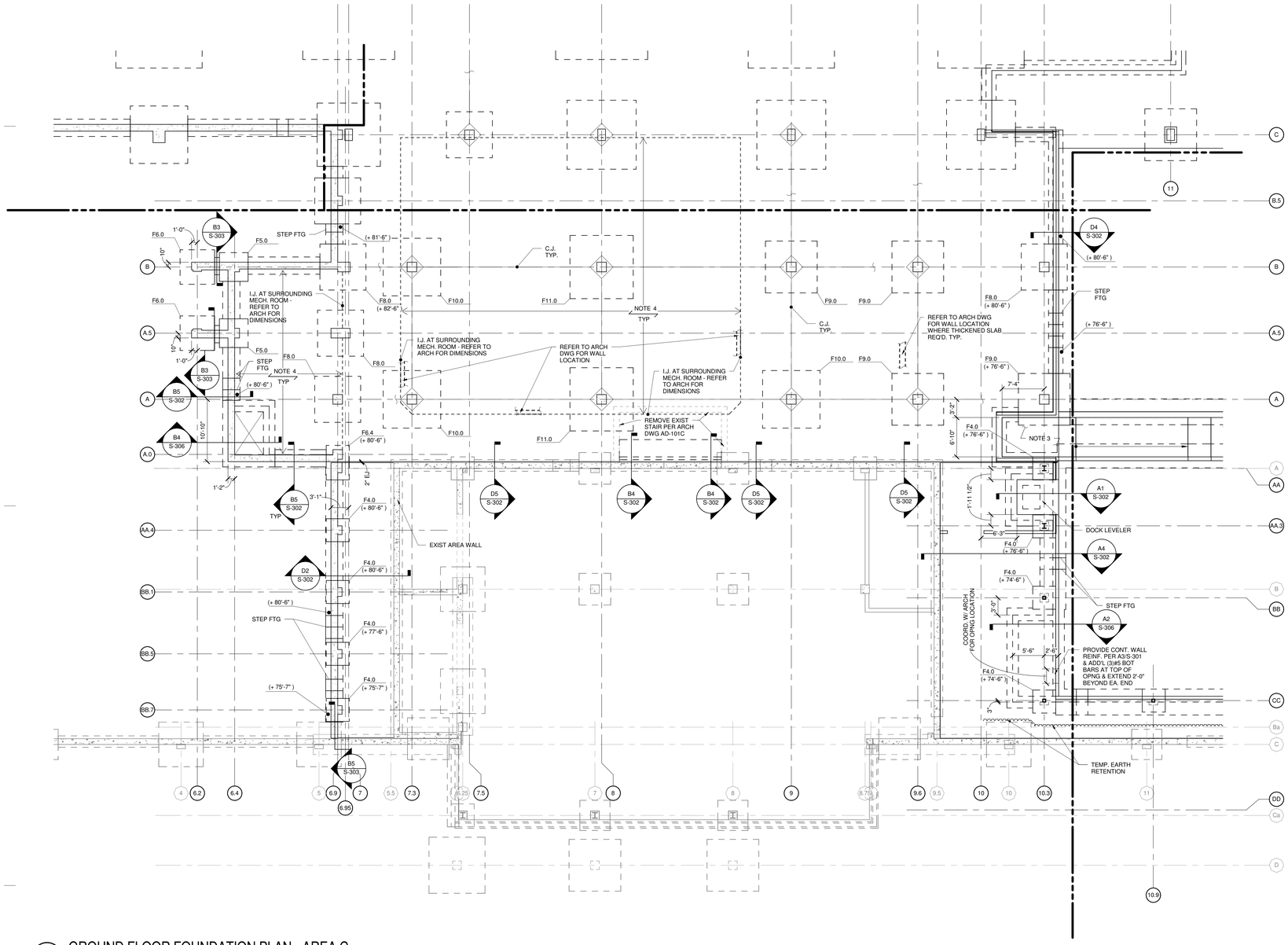
DOCUMENT TITLE
PENTHOUSE ROOF FRAMING PLAN - AREA B

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-115B	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.
J241-101- S-115B

C:\v002182-S-CENTRAL_bsplane.rvt
7/5/2011 3:55:21 PM

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 GROUND FLOOR FOUNDATION PLAN - AREA C

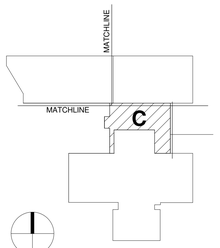
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV = + 84' - 0" UNO
2. T/FOOTING ELEV = 82' - 6" UNO (XX'-XX")
3. TYP 7" SLAB ON GRADE WITH #4@14 EW CENTERED IN SLAB OVER 15 MIL VAPOR BARRIER ON 6" COMPACTED GRANULAR FILL. UNO
4. 10" SLAB ON GRADE WITH #4@16 EW T & B OVER 15MIL VAPOR BARRIER ON 6" COMPACTED GRANULAR FILL. REFER TO ARCH. DWG FOR LAB AND MECH LOCATION.
5. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
6. SEE S-202 FOR FOOTING SCHEDULE
7. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.

S-130C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

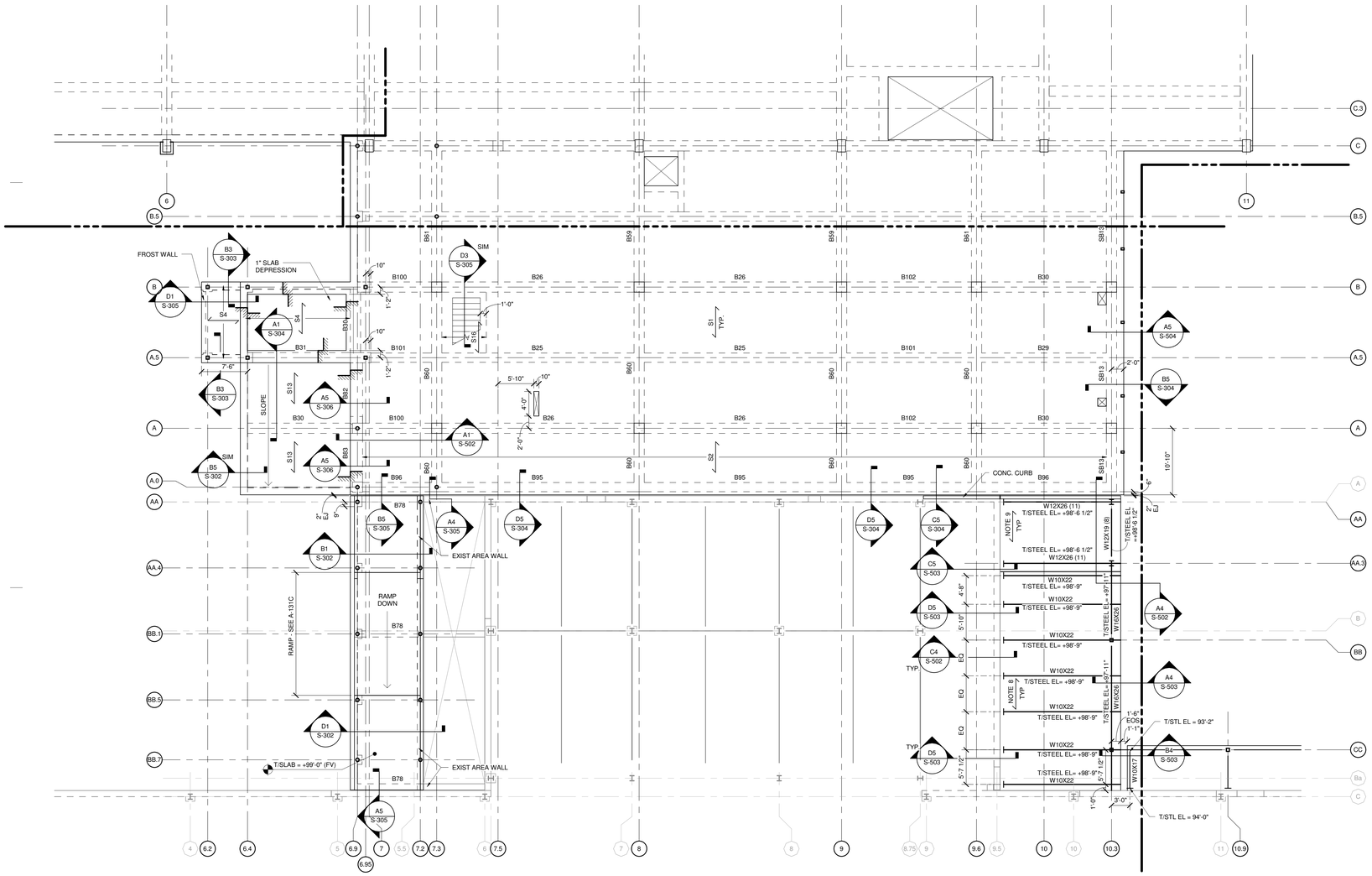
DOCUMENT TITLE
GROUND FLOOR FOUNDATION PLAN - AREA C

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-130C	
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

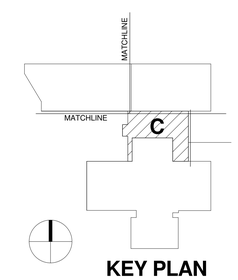
FACILITY DOCUMENT NUMBER J241-101-S-130C REV. NO.

C:\rvt\002182-S-CENTRAL_basebase.rvt
7/5/2011 3:05:23 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-131C



KEY PLAN

1 FIRST FLOOR FRAMING PLAN - AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/SLAB ELEV = + 100' - 0" UNO
2. T/STEEL ELEV = + 99' - 6 1/2" UNO
4. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
5. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
6. SEE S-203 FOR SHEAR WALLS.
7. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
8. INDICATES SPAN DIRECTION OF 3" 18 GA. GALVANIZED ROOF METAL DECK.
9. INDICATES SPAN DIRECTION OF 5 1/2" CONCRETE SLAB, 2" 18GA. GALGANIZED COMPOSITE METAL DECK WITH 3 1/2" LT WT CONC. (3500psi) REINFOCRED WITH WWR6x6-W2.1xW2.1
10. Sx INDICATES CONCRETE SLAB. SEE S-206 FOR REINFORCING.
11. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.
12. COORDINATE LOCATION OF DEPRESSIONS AND RAMPS WITH A-131C

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

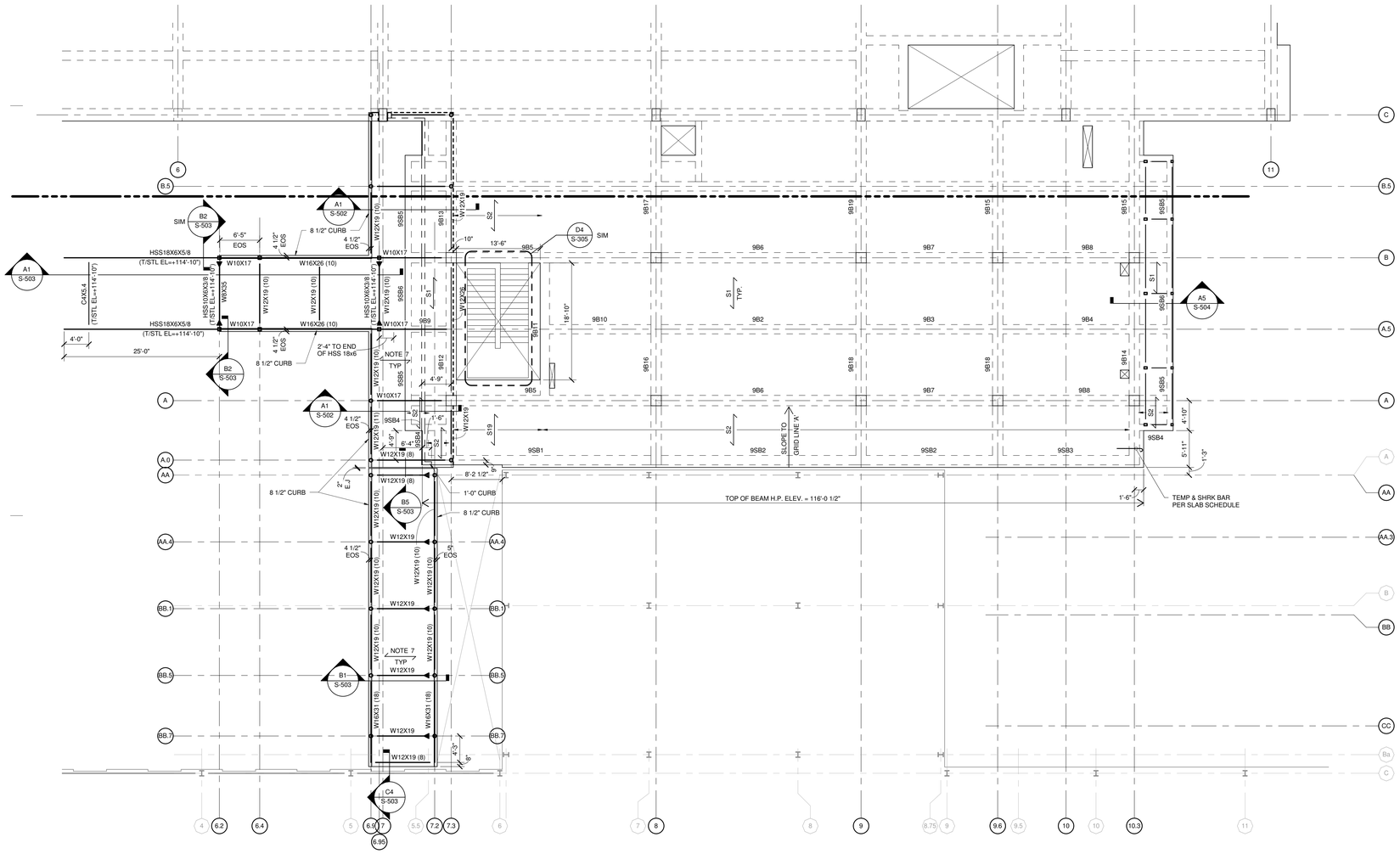
DOCUMENT TITLE
FIRST FLOOR FRAMING PLAN - AREA C

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-131C	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-131C REV. NO.

C:\RVT\002182-S-CENTRAL_rae.rvt
7/5/2011 4:15:52 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 SECOND FLOOR FRAMING PLAN - AREA C

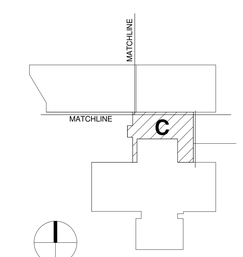
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 116' - 0" UNO
2. T/STEEL ELEV. = + 109' - 8 1/2" UNO
3. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
4. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
5. SEE S-203 FOR SHEAR WALLS.
6. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
7. ⟷ INDICATES SPAN DIRECTION OF 3 1/2" LT WT CONC ON 2" 18 GA GALVANIZED COMPOSITE METAL DECK (5 1/2" OVERALL THICKNESS) REINF WITH WWR6x6-W2.1xW2.1.
8. *INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

S-132C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SECOND FLOOR FRAMING PLAN - AREA C

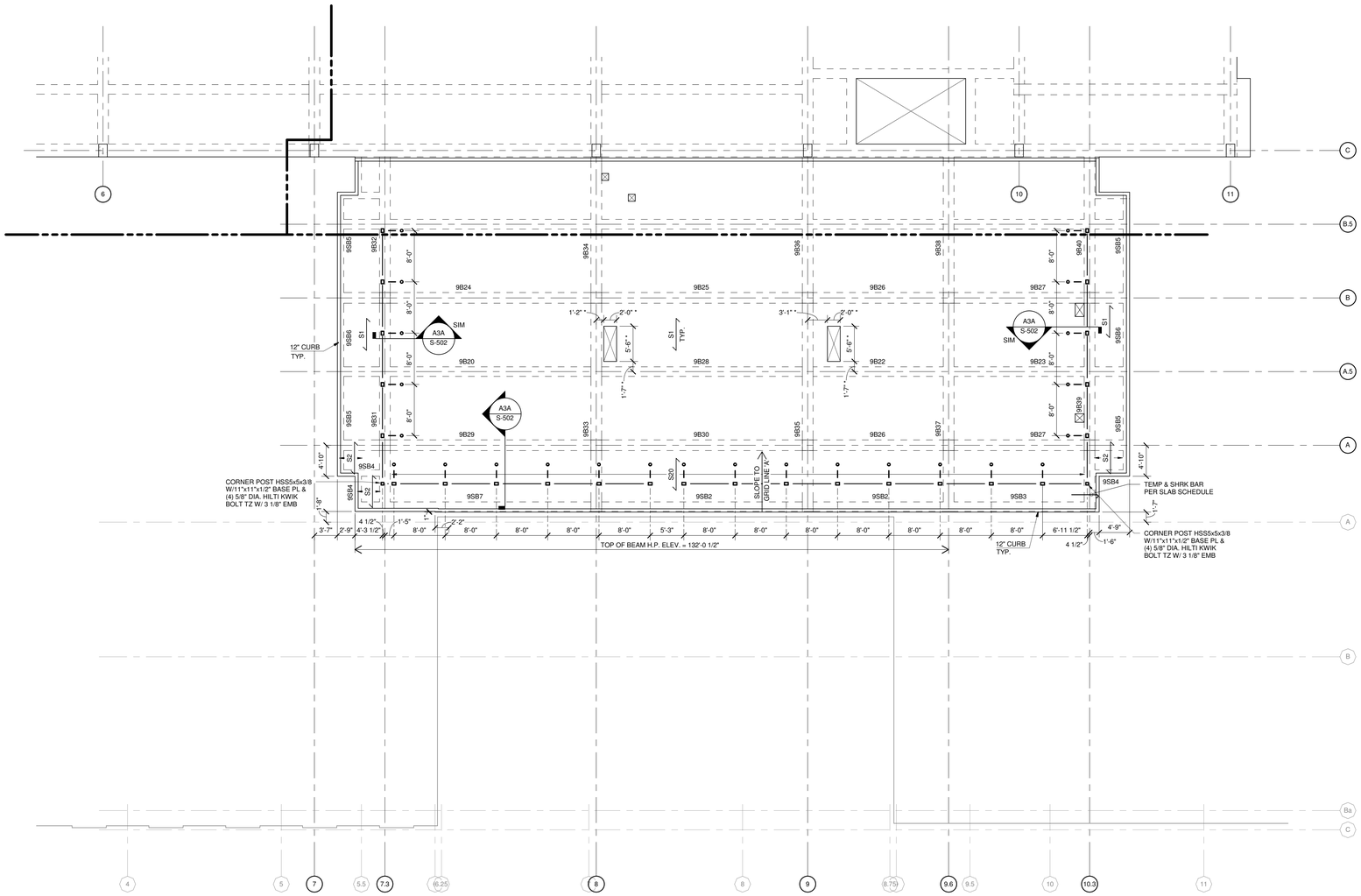
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-132C	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-132C REV. NO.

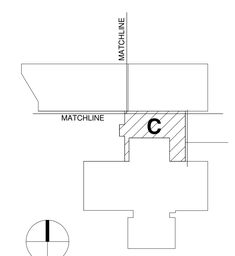
C:\vt\002182-S-CENTRAL_\castaneva.vt
7/5/2011 3:05:25 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



S-133C



KEY PLAN

1 THIRD FLOOR FRAMING PLAN - AREA C

1:8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

PLAN NOTES :

1. T/ SLAB ELEV. = + 132' - 0" UNO
2. SEE S-001 FOR STRUCTURAL GENERAL NOTES.
3. SEE S-201 AND S-202 FOR COLUMN SCHEDULES AND DETAILS.
4. SEE S-203 FOR SHEAR WALLS.
5. SEE S-205 AND S-206 FOR BEAM AND SLAB SCHEDULES.
6. Sx INDICATES CONCRETE SLAB. SEE S-204 FOR SLAB SCHEDULE.
7. SEE FIRST FLOOR FRAMING FOR DIMENSIONS OF FLOOR OPENINGS.
8. * INDICATED DIMENSION TO BE COORDINATED WITH EQUIPMENT SUPPLIER.

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR FRAMING PLAN - AREA C

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-133C	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-133C REV. NO.

C:\vol\002182-S-CENTRAL_lesslane.rvt
7/5/2011 3:55:26 PM

COLUMN SCHEDULE

	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	CONCRETE	STEEL	FLOOR
COLUMN	D-7	E-7	D-3	D-10	F-4	G-2	E-10	E-3, E-6	C-2	E-X.1, F-X.1, H-1, H-2, H-3	G-1	G-10	D-5	E-4, E-5, E-9	D-6, G-6	G-4, G-5, G-9	D-9	H-9, H-10	C-7, C-8, C-9, C-10, H-4, H-5, H-6	F-7	F-5, F-8	F-2, F-4, F-6, F-9, F-10	E-2	D-2	H-7, H-8			
ROOF 176'-4"	W12 x 53 15x15x3/4, (8) 1"Ø, D, 2 20" x 20" 8#11(T) #4@12 SEE D5/S-203	W12 x 58 15x15x3/4, (8) 1"Ø, D, 2 20" x 20" 8#11(T) #4@12 SEE D5/S-203	W12 x 53	W12 x 53		W12 x 53	W12 x 58	W12 x 58				W12 x 53	W12 x 53	W12 x 58	W12 x 53	W12 x 53	W12 x 53						W12 x 53	W12 x 53		SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	ROOF 176'-4" @H.P. MEZZANINE 162'-6"
PENTHOUSE MEZZANINE EL. 162'-6"	20" x 20" 8#11(T) #4@12 SEE D5/S-203	20" x 20" 8#11(T) #4@12 SEE D5/S-203	W12 x 53 15x15x1 (4) 3/4"Ø A 1	W12 x 53 15x15x3/4 (4) 3/4"Ø A 1		W12 x 53 15x15x3/4 (8) 1"Ø C 2	W12 x 58 15x15x1 (8) 1"Ø C 2	W12 x 58 15x15x1 (4) 3/4"Ø A 1				W12 x 53 15x15x3/4 (8) 1"Ø C 2	W12 x 53 15x15x3/4 (8) 1"Ø C 2	W12 x 58 15x15x1 (4) 3/4"Ø A 1	W12 x 53 15x15x3/4 (4) 3/4"Ø A 1	W12 x 53 15x15x3/4 (8) 1"Ø C 2	W12 x 53 15x15x3/4 (8) 1"Ø F 2						W12 x 53 15x15x1 (8) 1"Ø C 2	W12 x 53 15x15x1/2 (4) 3/4"Ø A 1		SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	PENTHOUSE MEZZANINE EL. 162'-6"
PENTHOUSE EL. 148'-0"	20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@6 C	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@9 C	20" x 20" 12#7(T) #4@12 E	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 12#7(T) #4@12 E	20" x 20" 12#7(T) #4@12 E	20" x 20" 12#7(T) #4@12 E	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#9(T) #4@6 C	20" x 20" 8#7(T) #4@6 C	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@9 C	16" x 24" 8#7(T) #4@12 C	SIZE VERT. BARS TIES TYPE		PENTHOUSE EL. 148'-0"
THIRD EL. 132'-0"					20" x 20" 8#7(T) #4@12 C				16" x 24" 8#7(T) #4@12 C		16" x 24" 8#7(T) #4@12 C	20" x 20" 12#7(T) #4@12 E					20" x 20" 12#7(T) #4@12 E			20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C		16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	SIZE VERT. BARS TIES TYPE		THIRD EL. 132'-0"
SECOND EL. 116'-0"				20" x 20" 8#7(T) #4@12 C			20" x 20" 8#7(T) #4@12 C		16" x 24" 8#7(T) (E) #4@6 (E) C	16" x 24" 8#7(T) (E) #4@12 (E) C	16" x 24" 8#7(T) (E) #4@12 (E) C	20" x 20" 12#7(T) #4@12 E	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 12#7(T) #4@12 E	20" x 20" 12#7(T) #4@12 E	20" x 20" 12#10(T) #4@12 E	16" x 24" 8#7(T) (E)* #4@12 (E)* C		20" x 20" 8#7(T) #4@12 C			16" x 24" 8#9(T) (E) #4@9 (E) C	16" x 24" 8#9(T) (E) #4@9 (E) C	16" x 24" 8#7(T) (E) #4@12 (E) C	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE	SECOND EL. 116'-0"
FIRST EL. 100'-0"	20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#10(T) #4@16 C	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#9(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@6 C	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	20" x 20" 12#10(T) #4@16 E	20" x 20" 8#11(T) #4@16 C	20" x 20" 8#10(T) #4@16 C	20" x 20" 12#10(T) #4@12 E	20" x 20" 12#10(T) #4@12 E	20" x 20" 12#10(T) #4@16 E	16" x 24" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#10(T) #4@16 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#9(T) #4@9 C	16" x 24" 8#9(T) #4@9 C	16" x 24" 8#7(T) #4@12 C	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE	FIRST EL. 100'-0"
BASEMENT EL. 84'-0"																												BASEMENT EL. 84'-0"
	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			DOWELS MATCH COL. STL. U.N.O.

	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	CONCRETE	STEEL	FLOOR
COLUMN	A-7.3, A-8, A-9, A-9.6, A-10.3, B-7.3, B-8, B-9, B-9.6, B-10.3,	BB-10.3, CC-10.3 CC-10.9, CC-11.4 CC-12.1, DD-12.1 DD-12.6, DD-13.1	AA-10.3, AA.3-10.3,	G.4-7.4, G.4-7.6, G.5-7.4, G.5-7.6	A.5-6.9	B-6.4	A.5-6.4, B-6.4	A.5-6.2, B-6.2	AA-7.2, AA.4-7.2, BB.1-7.2, BB.5-7.2, BB.7-7.2	A-R.2, A.0-7.2, A.0-R.2, A.5-R.2, B-R.1, B.5-R.1, C-R.1	AA-6.9	AA.4-6.9, BB.1-6.9, BB.5-6.9 BB.7-6.9	A-6.9, A.0-6.9, B.5-6.9, C-6.9	C-7.5, C-10.3	C.3-9.3	C.3-10, D-9.3,	G-3	D-4	G-7	C-3, C-4, C-5, C-6	G-8	F-3	E-8	D-8			
ROOF 176'-4"																	W12 x 53	W12 x 53	W12 x 65		W12 x 65		W12 x 53 15x15x3/4, (8) 1"Ø, D, 2 20" x 20" 8#9(T) #4@12 SEE D5/S-203	W12 x 53 15x15x3/4, (8) 1"Ø, E, 2 20" x 20" 8#9(T) #4@12 SEE D5/S-203	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	ROOF 176'-4" @H.P. ELEVATOR ROOM 167'-4"
PENTHOUSE MEZZANINE EL. 162'-6"															W10 x 33 12x12x1/2 (4) 3/4"Ø A 1	W10 x 33 12x12x1/2 (8) 1"Ø C 1	W12 x 53 15x15x3/4 (4) 3/4"Ø A 1	W12 x 53 15x15x3/4 (8) 1"Ø C 2	W12 x 65 15x15x3/4 (4) 3/4"Ø A 1		W12 x 65 15x15x3/4 (8) 1"Ø C 2		20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 SEE D5/S-203	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	PENTHOUSE MEZZANINE EL. 162'-6"
PENTHOUSE EL. 148'-0"																	20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 12#7(T) #4@12 E	20" x 20" 12#7(T) #4@12 E	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 SEE D5/S-203			SIZE VERT. BARS TIES TYPE		PENTHOUSE EL. 148'-0"
THIRD EL. 132'-0"	20" x 20" 8#7 #4@12 C																		20" x 20" 12#7(T) #4@12 E		20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 SEE D5/S-203			SIZE VERT. BARS TIES TYPE		THIRD EL. 132'-0"
SECOND EL. 116'-0"	20" x 20" 8#7 #4@12 C	HSS 6x6x1/2 12x12x1/2 (4) 3/4"Ø B 1	W10 x 33 16x16x3/4 (4) 3/4"Ø A 1	HSS 6x6x3/8 8x12x3/4 (4) 3/4"Ø B SEE D4/S-502	HSS 6x6x1/2 8x12x3/4 (4) 3/4"Ø B 2	HSS 6x6x1/2 8x12x3/4 (4) 3/4"Ø B 2	HSS 6x6x1/2 8x12x3/4 (4) 3/4"Ø B 2	HSS 6x6x1/2 8x12x1 (4) 3/4"Ø B 2	HSS6.625 x 0.500 12x12x3/4 (4) 3/4"Ø B 2	HSS6.625 x 0.500 SEE A1/S-502	HSS6.625 x 0.500 12x12x1 (4) 3/4"Ø B 2	HSS6.625 x 0.500 12x12x1 (4) 3/4"Ø B 2	HSS6.625 x 0.500 SEE A1/S-502				20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 12#7(T) #4@12 E	20" x 20" 12#8(T) #4@12 E	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#8(T) #4@12 C	20" x 20" 8#8(T) #4@12 SEE D5/S-203			SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	SECOND EL. 116'-0"
FIRST EL. 100'-0"	20" x 20" 8#7 #4@12 C	18" x 18" 8#7 #4@12 C	18" x 18" 8#7 #4@12 C	16" x 16" 8#7 #4@12 C	40" x 20" 12#7 #4@12 H	26" x 20" 10#7 #4@12 D	20" x 20" 8#7 #4@12 C	18" x 18" 8#7 #4@12 C			21" x 18" 8#7 #4@12 C	18" x 18" 8#7 #4@12 C	20" x 20" 8#7 #4@12 C	20" x 20" 8#7 #4@12 C			20" x 20" 8#9(T) #4@12 SEE D5/S-203	20" x 20" 12#10(T) #4@16 E	20" x 20" 12#10(T) #4@16 E	25" x 32" 8#9(T) #4@12 C	20" x 20" 8#11(T) #4@16 C	20" x 20" 8#9(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 SEE D5/S-203	20" x 20" 8#7(T) #4@12 SEE D5/S-203	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	FIRST EL. 100'-0"
BASEMENT EL. 84'-0"				LONGER DIM OF BASE PL ALONG CL-7.4, CL-7.6	LONGER DIM OF BASE PL ALONG CL-A.5	LONGER DIM OF BASE PL ALONG CL-B	LONGER DIM OF BASE PL ALONG CL-A.5, CL-B	LONGER DIM OF BASE PL ALONG CL-A.5, CL-B																			BASEMENT EL. 84'-0"
		48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26			DOWELS MATCH COL. STL. U.N.O.

NOTE: (E) DENOTES EPOXY COATED REINFORCING.
(E)* DENOTES EPOXY COATED REINFORCING FOR ALTERNATE PROPOSAL ONLY.

COLUMN SCHEDULE

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-201

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

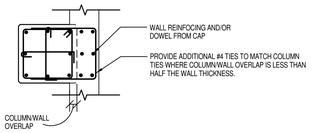
DOCUMENT TITLE
COLUMN SCHEDULE

DESIGNED RAE SUNG LEE
DRAWN LARRY CASTANEDA
CHECKED MARTY STERR
PROJECT MANAGER JAMES LYMAN

A/E CADD FILE
A/E DWG. NO. S-201
CADD NO: XXX
DWG. STATE I
BIND ORDER XXX
FACILITY NO(S) 241

FACILITY DOCUMENT NUMBER J241-101- S-201
REV. NO.

C:\rvt\002182-S-CENTRAL_lcastane.rvt
7/5/2011 3:05:27 PM



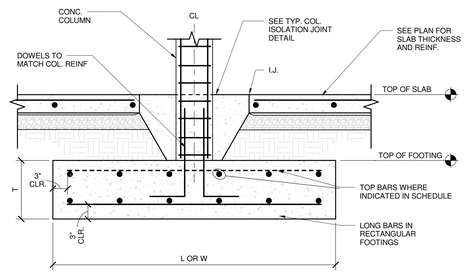
C1 TYP. COLUMN/WALL PIER DETAIL
NO SCALE

COLUMN SCHEDULE (cont'd)

	6	5	4	3	2	1	COLUMN / FLOOR: CONCRETE	STEEL	
	D-11	C-11	G-11	F-11	E-11	H-11			
ROOF									ROOF
176'-4" PENTHOUSE MEZZANINE	W12 x 53		W12 x 53		W12 x 53		SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	176'-4" @ R.P. PENTHOUSE MEZZANINE
EL. 162'-6" PENTHOUSE	W12 x 53 15x15x1/2 (4) 3/4"Ø A 1		W12 x 53 15x15x3/4 (8) 1"Ø C 2		W12 x 53 15x15x1 (8) 1"Ø C 2		SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE EMB. TYPE	EL. 162'-6" PENTHOUSE
EL. 148'-0" THIRD	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@9 C	20" x 20" 8#9(T) #4@9 C	20" x 20" 8#7(T) #4@12 C		SIZE VERT. BARS TIES TYPE		EL. 148'-0" THIRD
EL. 132'-0" SECOND			20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C		16" x 24" 8#7(T) #4@12 C	SIZE VERT. BARS TIES TYPE		EL. 132'-0" SECOND
EL. 116'-0" FIRST		16" x 24" 8#7(T) #4@12 C				16" x 24" 8#7(T) (E) #4@12 (E) C	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE	EL. 116'-0" FIRST
EL. 100'-0" BASEMENT	20" x 20" 8#7(T) #4@12 C	25" x 33" 8#9(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	20" x 20" 8#7(T) #4@12 C	16" x 24" 8#7(T) #4@12 C	SIZE VERT. BARS TIES TYPE	SIZE B.PL. SIZE ANCHOR BOLTS B.PL. TYPE	EL. 100'-0" BASEMENT
EL. 84'-0"		SEE A5/S-303 FOR REINF. DETAIL							EL. 84'-0"
7	6	5	4	3	2	1			DOWELS MATCH COL. STL. U.N.O.

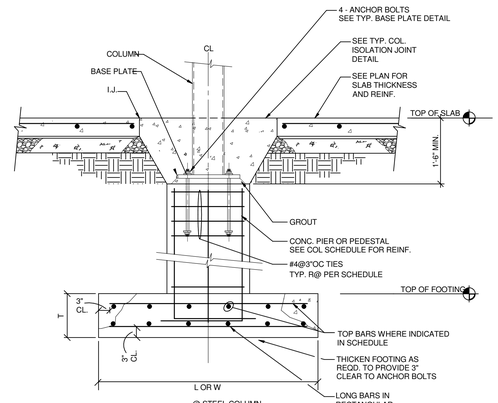
NOTE: (E) DENOTES EPOXY COATED REINFORCING.
(E)* DENOTES EPOXY COATED REINFORCING FOR ALTERNATE PROPOSAL ONLY.

COLUMN SCHEDULE (cont'd)



@ CONCRETE COLUMN

LEGEND : F X.X - INDICATES MARK BELOW AND SHOWN ON PLAN.

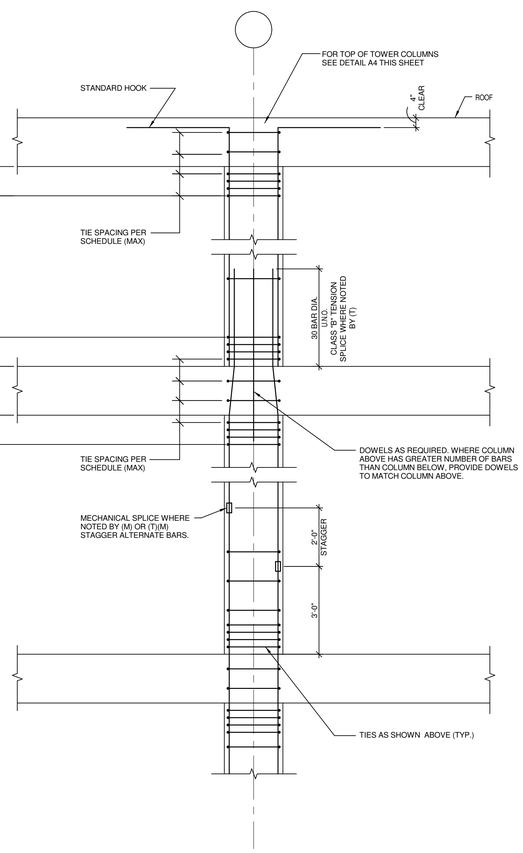


@ STEEL COLUMN

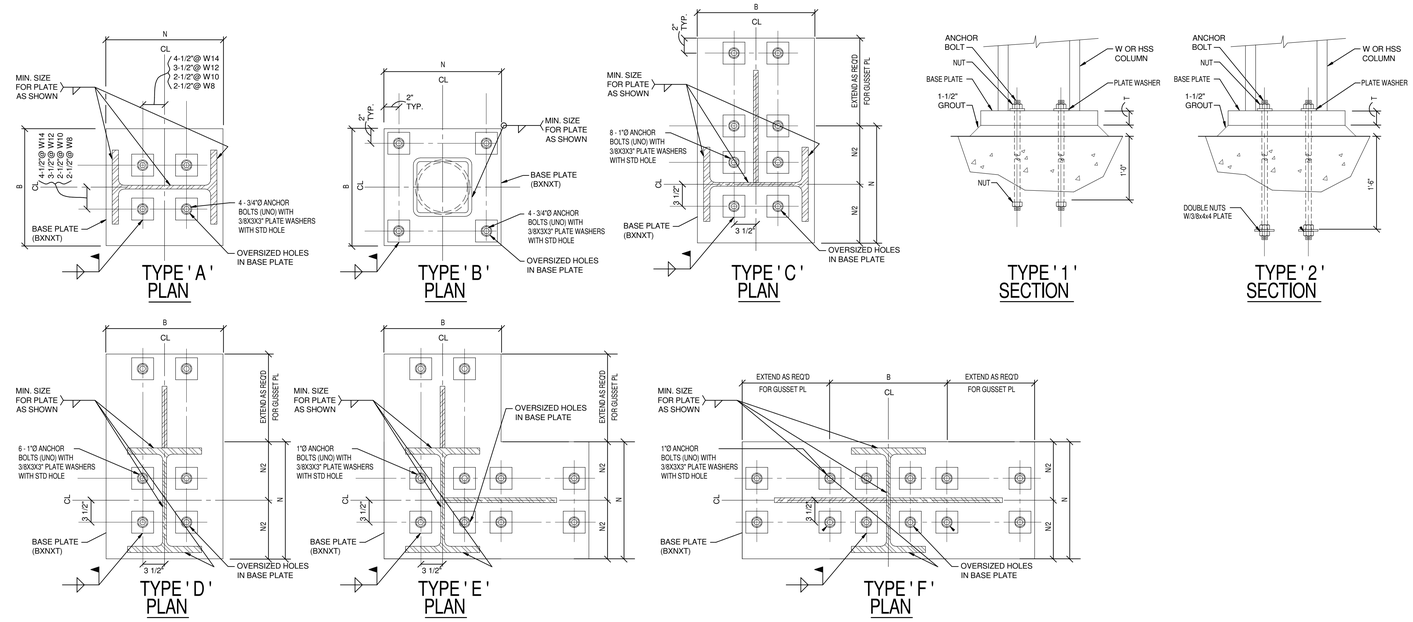
LEGEND : FX.X INDICATES MARK BELOW AND SHOWN ON PLAN.

FOOTING DETAIL AND SCHEDULE

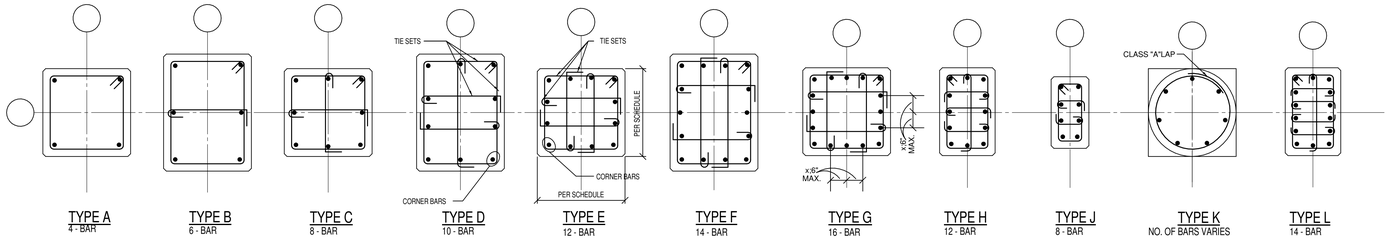
FOOTING SCHEDULE					
	SIZE				
MARK	LENGTH	WIDTH	DEPTH	REINFORCING	REMARKS
F4.0	4'-0"	4'-0"	1'-6"	(10) #5 EW - BOT	
F5.0	5'-0"	5'-0"	1'-6"	(10) #5 EW - BOT (4)#5 EW - TOP	
F6.0	6'-0"	6'-0"	1'-6"	(9) #5 EW - BOT (5)#5 EW - TOP	
F6.4	6'-0"	4'-0"	1'-6"	(10) #6 (LONG) - B & T (10) #6 (SHORT) - BOT	
F7.0	7'-0"	7'-0"	1'-6"	(9) #6 EW - BOT	
F8.0	8'-0"	8'-0"	2'-0"	(11) #6 EW - BOT (6)#5 EW - TOP	
F9.0	9'-0"	9'-0"	2'-0"	(12) #7 EW - BOT (7)#5 EW - TOP	
F10.0	10'-0"	10'-0"	2'-0"	(14) #8 EW - BOT (8)#5 EW - TOP	
F11.0	11'-0"	11'-0"	2'-6"	(14) #8 EW - BOT	
F12.0	12'-0"	12'-0"	2'-6"	(16) #8 EW - BOT	
F13.0	12'-0"	13'-0"	3'-0"	(17) #8 EW - BOT	
F15.0	15'-0"	15'-0"	3'-0"	(20) #9 EW - BOT	
F16.0	16'-0"	16'-0"	3'-0"	(24) #9 EW - BOT	
F30.8	30'-8"	14'-0"	3'-6"	#6@12 EW -TOP #10@10 EW - BOT	



A1 TYPICAL COLUMN DETAIL
NO SCALE



B2 TYPICAL BASE PLATE DETAIL
NO SCALE



TYPE A 4 - BAR | TYPE B 6 - BAR | TYPE C 8 - BAR | TYPE D 10 - BAR | TYPE E 12 - BAR | TYPE F 14 - BAR | TYPE G 16 - BAR | TYPE H 12 - BAR | TYPE J 8 - BAR | TYPE K NO. OF BARS VARIES | TYPE L 14 - BAR

A2 TYPICAL BAR ARRANGEMENT FOR COLUMNS
NO SCALE

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-202

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

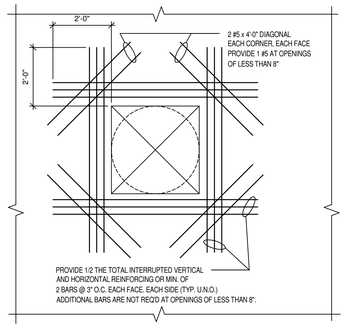
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
COLUMN SCHEDULE AND DETAILS

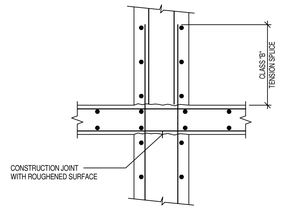
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-202	
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-202 REV. NO.

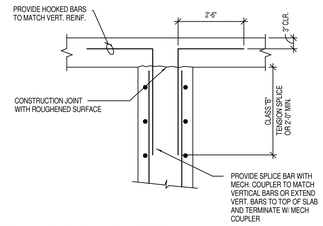
C:\vol\002182-S-CENTRAL_\castaner.rvt
7/5/2011 3:05:28 PM



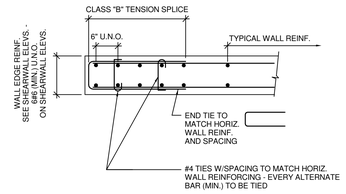
D1 TYPICAL WALL OPENING IN SHEAR WALL
NO SCALE



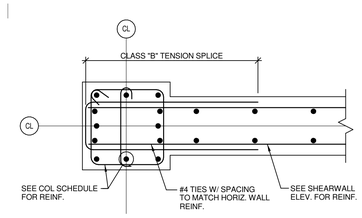
D2 SHEAR WALL AT FLOOR SLAB
NO SCALE



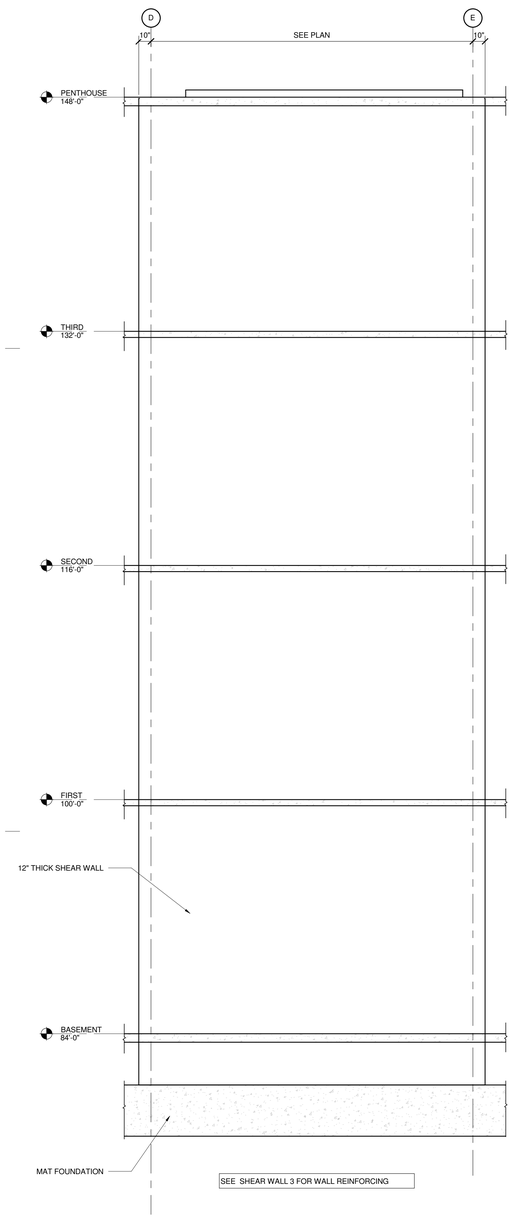
D3 SHEAR WALL AT ROOF
NO SCALE



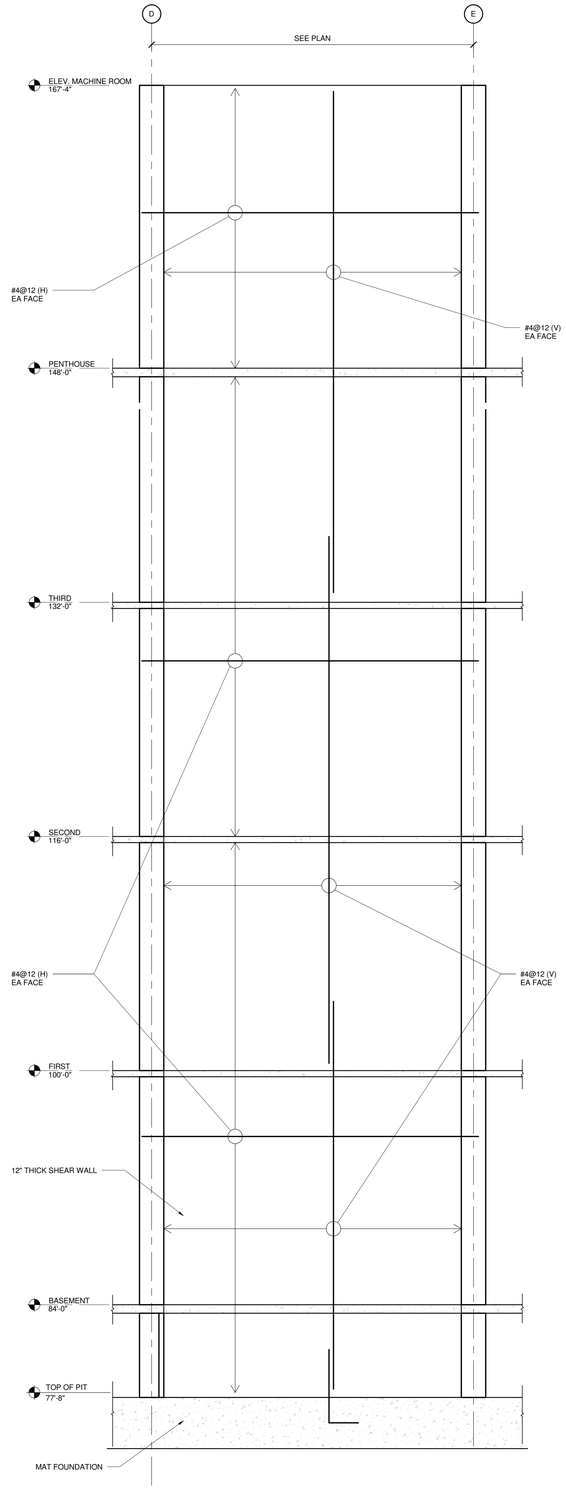
D4 TYPICAL SHEAR WALL EDGE REINFORCING
NO SCALE



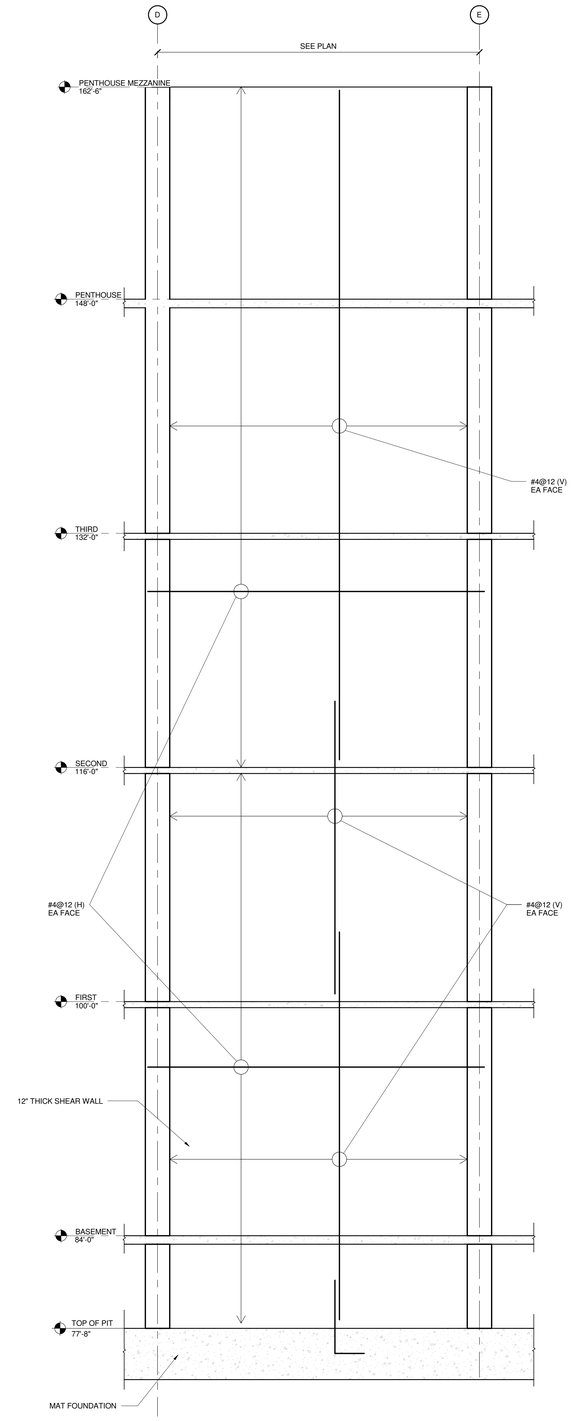
D5 TYPICAL SHEAR WALL EDGE COLUMN REINFORCING
NO SCALE



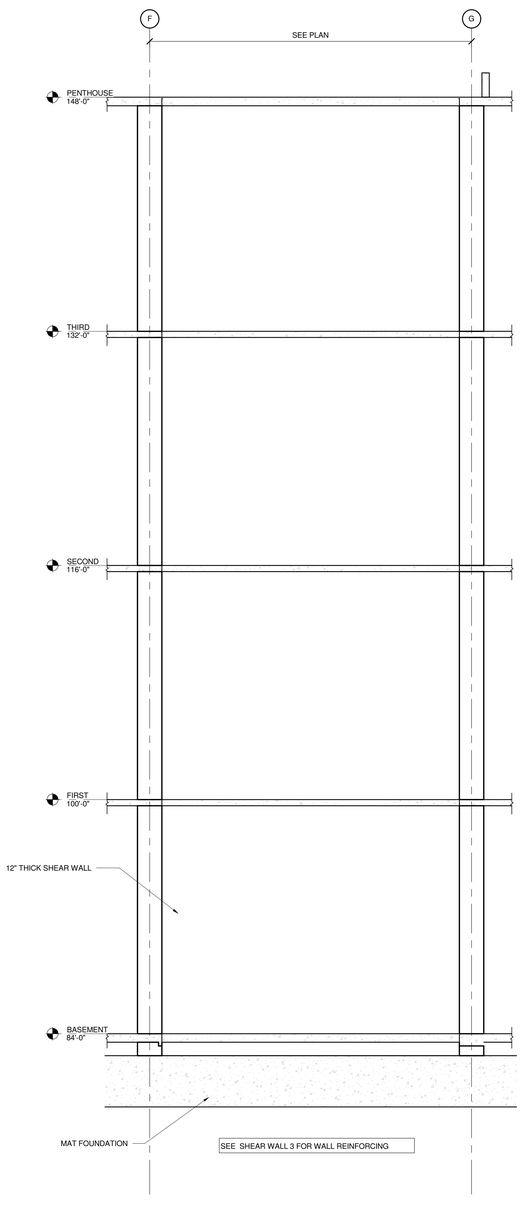
A1 SHEAR WALL ELEVATION 4
1/4" = 1'-0"
0 2'-0" 4'-0" 8'-0"



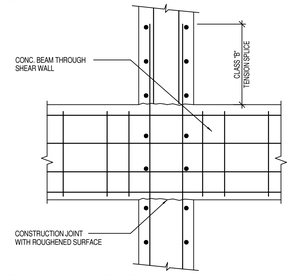
A2 SHEAR WALL ELEVATION 3
1/4" = 1'-0"
0 2'-0" 4'-0" 8'-0"



A4 SHEAR WALL ELEVATION 2
1/4" = 1'-0"
0 2'-0" 4'-0" 8'-0"



A5 SHEAR WALL ELEVATION 1
1/4" = 1'-0"
0 2'-0" 4'-0" 8'-0"



C5 SHEAR WALL AT BEAM
NO SCALE

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-203

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

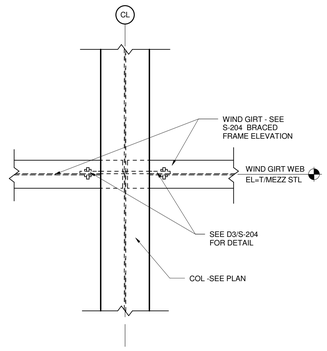
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SHEAR WALL ELEVATIONS AND DETAILS

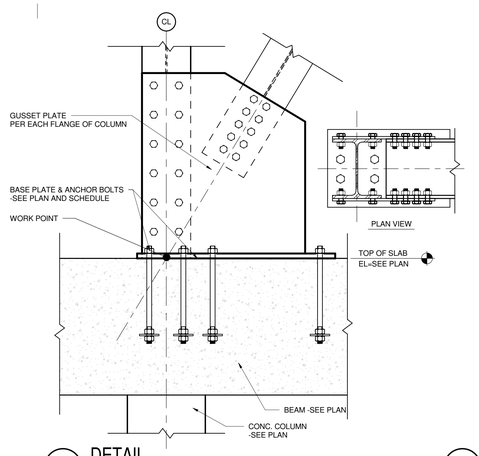
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-203	
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-203 REV. NO.

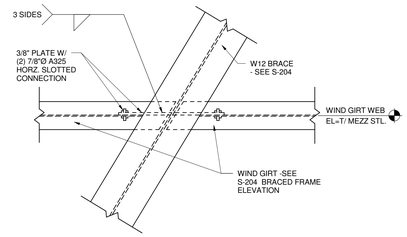
C:\rvt\002182-S-CENTRAL_basebeam.rvt
7/5/2011 3:05:30 PM



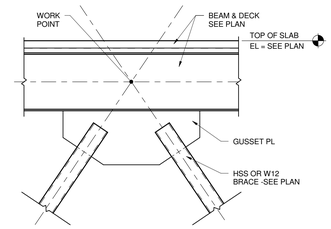
D1 DETAIL
NO SCALE



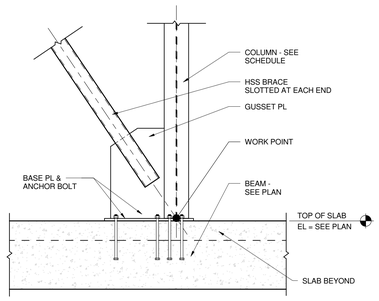
D2 DETAIL
NO SCALE



D3 DETAIL
NO SCALE



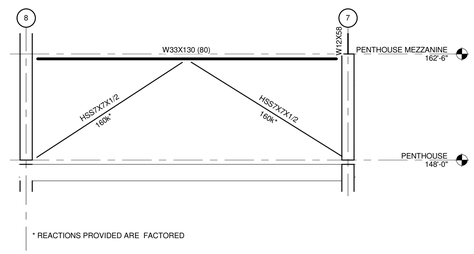
D4 DETAIL
NO SCALE



D5 DETAIL
NO SCALE

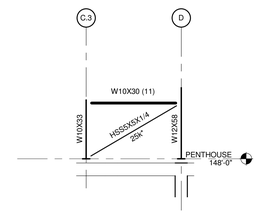
HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-204



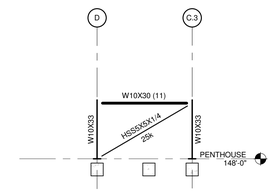
* REACTIONS PROVIDED ARE FACTORED

C3 FRAME 13
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



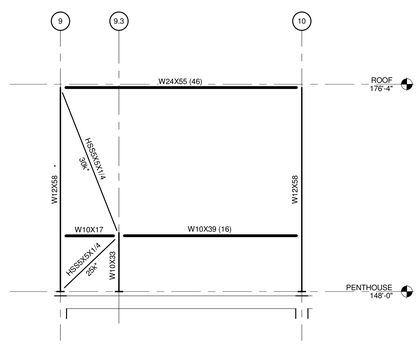
* REACTIONS PROVIDED ARE FACTORED

C4 FRAME 12
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



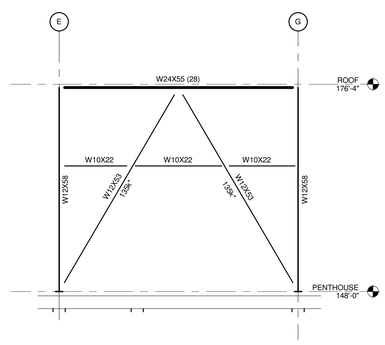
* REACTIONS PROVIDED ARE FACTORED

C5 FRAME 11
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



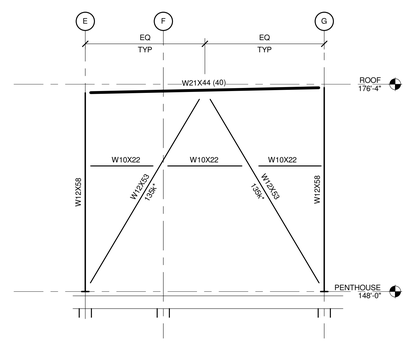
* REACTIONS PROVIDED ARE FACTORED

B1 FRAME 10
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



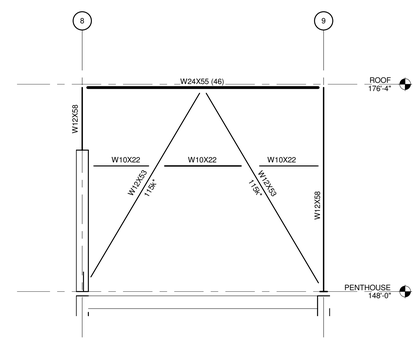
* REACTIONS PROVIDED ARE FACTORED

B2 FRAME 9
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



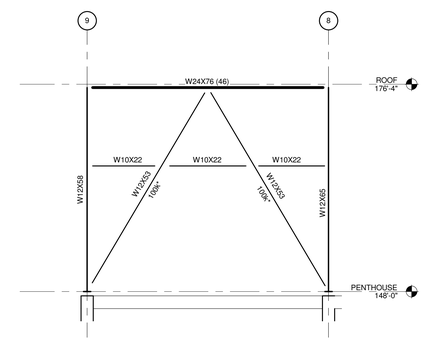
* REACTIONS PROVIDED ARE FACTORED

B3 FRAME 8
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



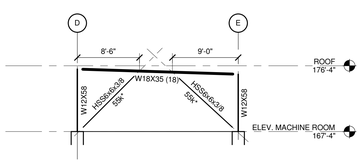
* REACTIONS PROVIDED ARE FACTORED

B4 FRAME 7
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



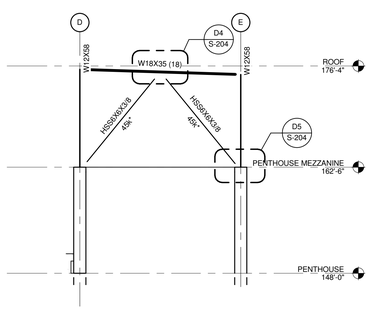
* REACTIONS PROVIDED ARE FACTORED

B5 FRAME 6
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



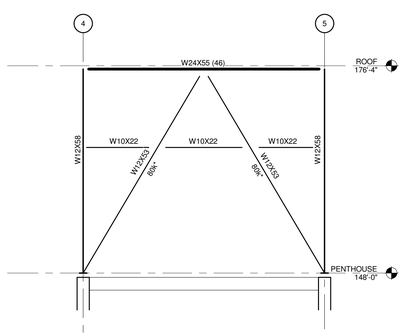
* REACTIONS PROVIDED ARE FACTORED

A1 FRAME 5
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



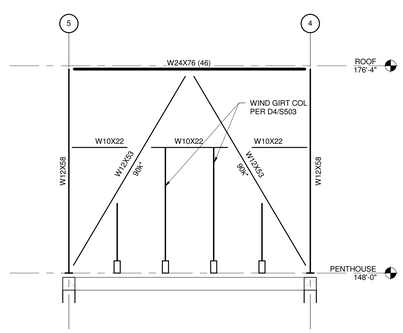
* REACTIONS PROVIDED ARE FACTORED

A2 FRAME 4
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



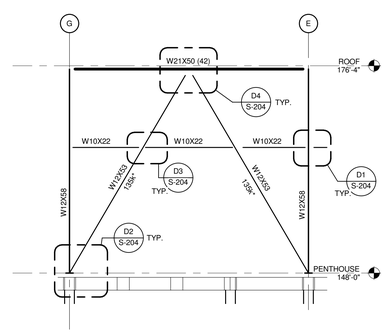
* REACTIONS PROVIDED ARE FACTORED

A3 FRAME 3
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



* REACTIONS PROVIDED ARE FACTORED

A4 FRAME 2
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



* REACTIONS PROVIDED ARE FACTORED

A5 FRAME 1
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

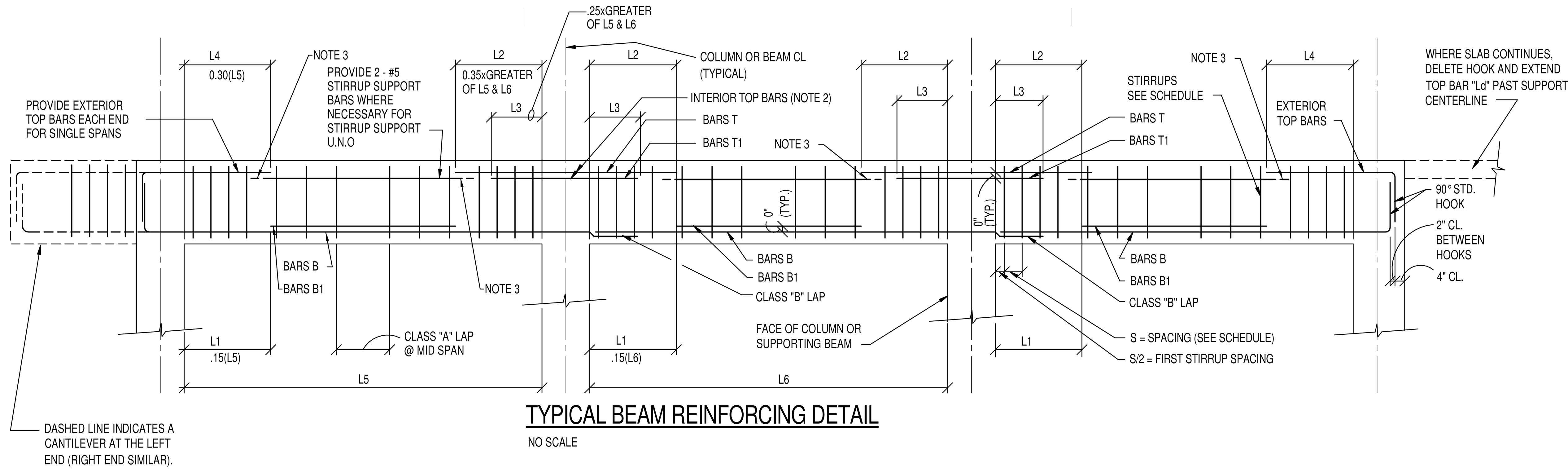
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
BRACED FRAME ELEVATIONS

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-204	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER
J241-101-S-204
REV. NO.

C:\v002182S-CENTRAL_bsaltane.rvt
7/5/2011 3:05:33 PM



TYPICAL BEAM REINFORCING DETAIL

NO SCALE

NOTES:
1. WHERE LG IS NOT GIVEN, LG = 2 x L2 + SUPPORT WIDTH AT INTERIOR, AND L4 + SUPPORT WIDTH W/HOOK @ EXTERIOR.
2. PROVIDE GREATER AREA OF SPAN L5 AND L6 T AND T1 TOP BARS.
3. PROVIDE CLASS 'A' LAP SPLICE TO ADJACENT TOP BARS.

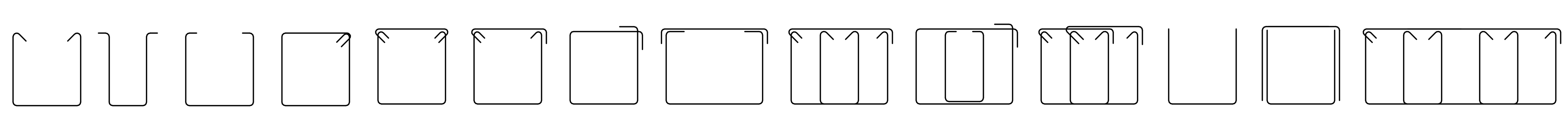
BEAM SCHEDULE

	SIZE		BOTTOM BARS						INTERIOR TOP BARS								EXTERIOR TOP BARS				"S" BARS		STIRRUPS			
			BARS "B"		BARS "B1"				BARS "T"				BARS "T1"												NO. AND SPACING	
MARK	WIDTH	DEPTH	NO.	SIZE	NO.	SIZE	LG.	L1	NO.	SIZE	LG.	L2	NO.	SIZE	LG.	L3	NO.	SIZE	LG.	L4	NO.	SIZE	SIZE	TYPE	EACH END	REMARKS
9B1	18"	26"	4	9					4	9							3	7					4	T1D	1@5 R@10	
9B2	18"	26"	3	9					4	8													4	T1D	1@5 R@10	
9B3	18"	26"	3	7					4	7													4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B4	18"	26"	3	7													3	7					4	T1D	1@5 R@10	
9B5	20"	26"	4	9													4	10					4	T1D	1@5 R@10	
9B6	20"	26"	3	8					4	10													4	T1D	1@5 R@10	
9B7	20"	26"	3	7					4	8													4	T1D	1@5 R@10	PROVIDE TOP BARS CLASS 'A' LAP SPLICE @ MID-SPAN
9B8	20"	26"	3	7					3	7													4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B9	12"	26"	2	7													2	7					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B10	18"	26"	3	7													4	9					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B11	18"	26"	3	7					3	7													4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B12	20"	26"	3	7					4	10							4	10					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B13	20"	26"	4	9													3	7					4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B14	20"	26"	3	8					4	9							4	9					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B15	20"	26"	4	8													3	7					4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B16	20"	28"	4	9					4	9							8	10					5	T1D	1@5 R@10	4 BARS PER LAYER, UPPER LAYER CONT.
9B17	20"	26"	4	10					4	9													4	T1D	1@5 R@10	
9B18	20"	26"	4	9					4	9							8	9					4	T1D	1@5 R@10	4 BARS PER LAYER, UPPER LAYER CONT.
9B19	20"	26"	4	9					4	8													4	T1D	1@5 R@10	
9B20	18"	26"	3	9					4	9							3	7					4	T1D	1@5 R@10	
9B21	18"	26"	3	8					3	8													4	T1D	1@5 R@10	
9B22	18"	26"	3	7					3	7													4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B23	18"	26"	3	7													3	7					4	T1D	1@5 R@10	
9B24	20"	26"	4	9													3	8					4	T1D	1@5 R@10	
9B25	20"	26"	4	8					4	9													4	T1D	1@5 R@10	
9B26	20"	26"	3	7					3	7													4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B27	20"	26"	3	7													3	7					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B28	18"	26"	3	9					3	9													4	T1D	1@5 R@10	
9B29	20"	26"	3	7					3	9							3	8					4	T1D	1@5 R@10	
9B30	20"	26"	3	7					3	8													4	T1D	1@5 R@10	
9B31	20"	26"	3	8					4	9							4	9			4	5	4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B32	20"	26"	3	9					3	7											4	5	4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B33	20"	30"	4	9					4	9							8	9			4	5	4	T1D	1@5 R@10	4 BARS PER LAYER, UPPER LAYER CONT.
9B34	20"	26"	4	9					4	9											4	5	4	T1D	1@5 R@10	
9B35	20"	30"	4	9					3	9							4	10			4	5	4	T1D	1@6 R@12	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B36	20"	26"	4	9					3	9											4	5	4	T1D	1@5 R@10	
9B37	20"	26"	3	8					4	8							4	9			4	5	4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B38	20"	26"	4	8													3	7			4	5	4	T1D	1@5 R@10	
9B39	20"	26"	3	7					3	8							3	8			4	5	4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9B40	20"	26"	3	8													3	7			4	5	4	T1D	1@5 R@10	PROVIDE CLASS 'A' LAP SPLICE @ MID-SPAN
9B41	12"	24"	2	6													2	6					4	T1D	1@5 R@10	TOP BARS CONTINUOUS

BEAM SCHEDULE

	SIZE		BOTTOM BARS						INTERIOR TOP BARS								EXTERIOR TOP BARS				"S" BARS		STIRRUPS			
			BARS "B"		BARS "B1"				BARS "T"				BARS "T1"												NO. AND SPACING	
MARK	WIDTH	DEPTH	NO.	SIZE	NO.	SIZE	LG.	L1	NO.	SIZE	LG.	L2	NO.	SIZE	LG.	L3	NO.	SIZE	LG.	L4	NO.	SIZE	SIZE	TYPE	EACH END	REMARKS
B1	20"	26"	3	7					4	8													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B2	18"	26"	3	8					4	8													4	T1D	1@5 R@10	
B3	20"	26"	4	8					5	9													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B4	20"	26"	3	7					5	8							5	8					4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B5	18"	26"	6	8					4	8							3	7					4	T1D	1@5 R@10	
B6	18"	26"	4	8					4	7							3	7					4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B7	18"	26"	3	8													3	7					4	T1D	1@5 R@10	
B8	18"	26"	3	8					4	7							4	7					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
B9	20"	26"	3	7					5	8							3	7					4	T1D	1@5 R@10	
B10	18"	26"	3	7					4	8							4	8					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
B11	18"	26"	4	8					5	8							4	8					4	T1D	1@5 R@10	
B12	18"	26"	3	8					4	8													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B13	20"	26"	3	7					5	8													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B14	18"	26"	6	9					5	9							3	7					4	T1D	1@5 R@10	
B15	20"	26"	5	7					5	9													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B16	18"	26"	5	9					5	9							3	7					4	T1D	1@5 R@10	
B17	20"	26"	4	8					5	8							4	8					4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B18	20"	28"	5	8													4	8					4	T1D	1@6 R@12	
B19	18"	26"	4	8													4	8					4	T1D	1@5 R@10	
B20	0"	0"																								DELETED
B21	20"	34"	3	7					5	9											6	5	4	T1D	1@7 R@14	TOP BARS CONTINUOUS
B22	0"	0"																								DELETED
B23	20"	34"	4	8					5	10											6	5	4	T1D	1@7 R@14	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B24	18"	34"	5	9					5	9											6	5	4	T1D	1@7 R@14	
B25	18"	28"	5	8					6	8													4	T1D	1@6 R@12	
B26	20"	28"	4	8					5	9													4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B27	20"	28"	3	7					3	8													4	T1D	1@6 R@12	TOP BARS CONTINUOUS
B28	18"	28"	3	7					3	8													4	T1D	1@6 R@12	
B29	18"	28"	5	9					4	8							3	8					4	T1D	1@6 R@12	
B30	20"	28"	3	7					4	9							3	8					4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B31	20"	28"	3	7					4	8							3	7					4	T1D	1@6 R@12	
B32	18"	34"	6	9					5	9							3	7			6	5	4	T1D	1@7 R@14	
B33	18"	26"	3	7					5	8													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B34	20"	26"	3	8					5	7							5	8					4	T1D	1@5 R@10	
B35	20"	28"	5	7					5	9													4	T1D	1@6 R@12	
B36	20"	28"	6	10					6	10							5	8					4	T1D	1@4 18@8 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B37	20"	28"	3	8					4	9							4	8					4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B38	20"	28"	5	7													3	7					4	T1D	1@6 R@12	
B39	20"	28"	3	7					5	8							5	8					4	T1D	1@6 R@12	TOP BARS CONTINUOUS
B40	20"	28"	5	9					5	9							3	7					4	T1D	1@6 R@12	
B41	20"	28"	6	7					5	9							4	8					5	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B42	20"	28"	5	8					5	10													4	T1D	1@3 13@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B43	20"	28"	5	8					5	8							4	9					4	T1D	1@4 10@8 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B44	20"	28"	3	8					5	8							4	8					4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B45	20"	28"	5	9					7	9													4	T1D	1@4 19@8 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B46	20"	28"	5	9													4	8					4	T1D	1@6 R@12	
B47	20"	34"	5	10					6	10											6	5	4	T1D	1@7 R@14	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B48	20"	34"	6	9					6	9											6	5	4	T1D	1@4 R@14	
B49	22"	28"	6	10					5	9													4	T1D	1@6 R@12	
B50	20"	28"	5	9													3	7					4	T1D	1@6 R@12	
B51	20"	28"	5	8					5	8													4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B52	20"	26"	4	8					3	8							3	8			4	5	4	T1D	1@5 R@10	
B53	20"	26"	6	7					5	9											4	5	4	T1D	15@6 R@10	
B54	20"	34"	5	9													3	8			6	5	4	T1D	1@7 R@14	
B55	20"	34"	6	7					5	7							3	8			6	5	4	T1D	1@5 10@10 R@14	
B56	20"	34"	3	7					5	7							5	7			6	5	4	T1D	1@7 R@14	TOP BARS CONTINUOUS
B57	0"	0"																								NOT USED
B58	20"	26"	4	8					5	8											4	5	4	T1D	1@5 R@10	
B59	20"	28"	5	9					5	8											4	5	4	T1D	1@6 R@12	
B60	20"	28"	6	8					6	8							6	10			4	5	4	T1D	1@6 R@12	
B61	20"	28"	6	8					6	9							3	8			4	5	4	T1D	1@6 R@12	
B62	0"	0"																								NOT USED
B63	20"	26"	6	7					4	8							3	7			4	5	4	T1D	1@5 R@10	
B64	20"	34"	5	7					5	9							3	7			6	5	4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B65	18"	26"	5	7													3	7					4	T1D	1@5 R@10	
B66	20"	28"	6	7					5	10							3	7			4	5	5	T1D	1@6 R@12	
B67	20"	28"	5	7					5	10							3	7			4	5	4	T1D	1@6 R@12	
B68	18"	28"	6	8													3	7					4	T1D	1@6 R@12	
B69	18"	28"	3	7													3	7					4	T1D	1@6 R@12	
B70	20"	28"	3	7					5	9													5	T1D	1@6 R@12	TOP BARS CONTINUOUS
B71	20"	28"	5	10					5	10											4	5	5	T1D	1@3 R@6	
B72	20"	28"	6	7					6	7											4	5	4	T1D	1@3 16@6 R@12	
B73	0"	0"																								NOT USED
B74	20"	34"	5	9					5	9											6	5	5	T1D	1@3 R@6	
B75	12"	24"	2	7													2	7					4	T1D	1@5 R@10	
B76	20"	34"	5	7					3	8											6	5	4	T1D	1@7 R@14	
B77	14"	26"	2	8													2	7					4	T1D	1@5 R@10	
B78	12"	30"	4	5													4	5			4	5	4	T1D	1@6 R@12	
B79	20"	35"	6	7					6	9							3	7			4	5	5	T1D	1@6 R@12	
B80	20"	35"	6	9					6	9													4	T1D	1@4 R@14	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B81	0"	0"																								NOT USED
B82	24"	34"	4	7					4	8													4	T1D	1@6 R@12	
B83	24"	34"	4	7					4	7							4	7					4	T1D	1@6 R@12	
B84	38"	31"																								SEE B4/S-303 FOR DETAIL AND REINF.
B85	12"	26"	2	7													2	7					4	T1D	1@5 R@10	SEE D1/S-305 FOR DETAIL AND REINF. & TOP BARS CONT.
B86	18"	34"	5	9													5	9			6	5	4	T1D	1@7 R@14	
B87	18"	34"	5	9					5	9							5	9			6	5	4	T1D	1@7 R@14	
B88	20"	28"	7	9					5	9							3	7					4	T1D	1@6 R@12	
B89	20"	34"	6	9					6	9							5	9			6	5	4	T1D	1@4 R@14	
B90	18"	28"	3	7					4	8													4	T1D	1@6 R@12	
B91	20"	34"	3	7					5	9							5	9					5	T1D	1@7 R@14	TOP BARS CONTINUOUS
B92	18"	28"	3	8					3	7							3	7					4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B93	20"	28"	6	7					4	8							4	7					4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B94	20"	28"/36"	6	7					4	8							4	7					4	T1D	1@6 R@12	
B95	18"	28"	3	7					3	8											4	5	4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B96	18"	28"	3	8					3	7							3	7			4	5	4	T1D	1@6 R@12	TOP BARS CONTINUOUS
B97	18"	26"	3	8					4	8													4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B98	20"	26"	3	7					5	8							3	7					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
B99	18"	26"	6	9					5	9							3	7					4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B100	20"	28"	3	7					4	9							3	8					4	T1D	1@6 R@12	TOP BARS CONTINUOUS
B101	18"	28"	3	7					3	8													4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B102	20"	28"	3	7					3	8													4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B103	20"	26"	3	7					5	8													4	T1D	1@5 R@10	TOP BARS CONTINUOUS
B104	20"	28"	3	7					4	9							3	8					4	T1D	1@6 R@12	TOP BARS CONTINUOUS
B105	20"	26"	4	8					3	8							3	8			4	5	4	T1D	1@5 R@10	TOP BARS CONTINUOUS
B106	20"	26"	4	8					5	8							4	8					4	T1D	1@5 R@10	TOP BARS CONTINUOUS
B107	18"	26"	6	8					4	8							3	7					4	T1D	1@5 R@10	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B108	20"	28"	5	7					5	9													4	T1D	1@6 R@12	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B109	20"	34"	4	8					5	10											6	5	4	T1D	1@7 R@14	PROVIDE 3#5 @MID-SPAN PER NOTE 3
B110	20"	28"	3	8					5	8							4	8					4	T1D	1@6 R@12	TOP BARS CONTINUOUS
B111	18"	26"	4	8													3	7					4	T1D	1@5 R@10	TOP BARS CONTINUOUS

STIRRUP SHAPES



C:\rvt\002182-S-CENTRAL_lcastane.rvt
7/5/2011 3:05:35 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-205

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

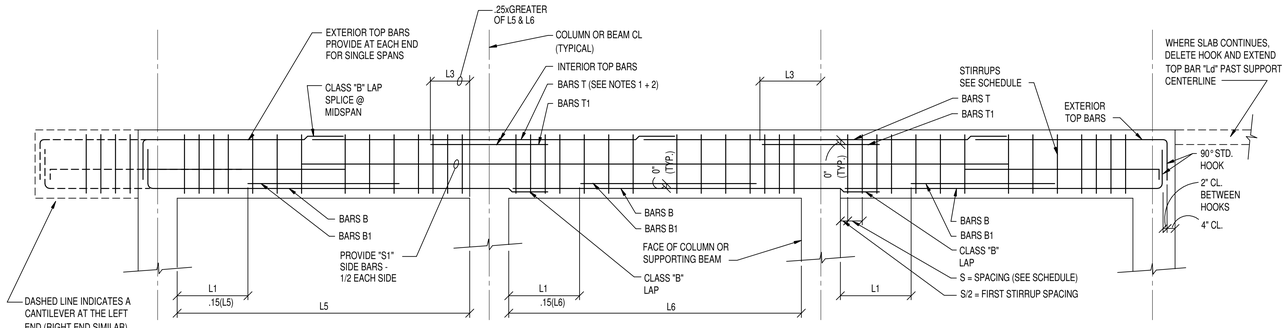
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE BEAM SCHEDULES

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-205	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER
J241-101- S-205
REV. NO.



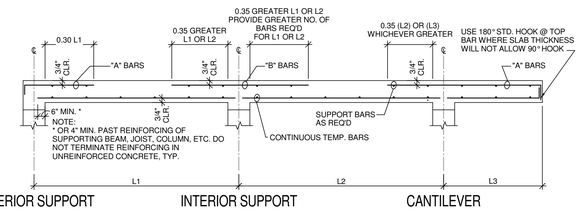
TYPICAL SPANDREL BEAM REINFORCING DETAIL

NO SCALE

NOTES:
1. PROVIDE GREATER AREA OF SPAN L5 AND L6 T BARS
2. WHERE T BARS ARE NOT SCHEDULED LAP TBARS OF ADJACENT SPANS PER DETAIL

SPANDREL BEAM SCHEDULE

MARK	SIZE		BOTTOM BARS						INTERIOR TOP BARS						EXTERIOR TOP BARS		SIDE		STIRRUPS			REMARKS
			BARS "B"		BARS "B1"				BARS "T"		BARS "T1"						BARS 'S1'				NO. AND SPACING EACH END	
	WIDTH	DEPTH	NO.	SIZE	NO.	SIZE	LG.	L1	NO.	SIZE	NO.	SIZE	LG.	L3	NO.	SIZE	NO.	SIZE	SIZE	TYPE		
SB1	20"	26"	3	8					3	8	3	8					4	5	4	T1D	1@4 R@8	
SB2	20"	34"	3	7	2	7			3	8	3	8	25				6	5	4	T1D	1@5 R@10	
SB3	20"	28"	4	9	3	9	35		3	9	3	9	32				4	5	4	T1D	1@4 R@9	
SB4	20"	26"	3	8	2	8			3	9	3	9	18		4	8	4	5	4	T1D	1@4 R@8	
SB7	20"	28"	3	8					3	7	3	7	18				4	5	4	T1D	1@4 R@9	
SB8	20"	28"	3	8					3	7	2	7	18		3	7	4	5	4	T1D	1@4 R@9	
SB9	20"	28"	3	8					3	7	2	7	18		4	8	4	5	4	T1D	1@4 R@9	
SB11	20"	26"	3	8					3	7					3	8	4	5	4	T1D	1@4 R@8	
SB12	20"	26"	3	8					3	8							4	5	4	T1D	1@4 R@8	
SB13	20"	28"	3	8					3	7					3	8	4	5	4	T1D	1@4 R@9	
SB15	20"	28"	3	7					3	7							4	5	4	T1D	1@4 R@9	
SB16	20"	28"	3	8											3	8	4	5	4	T1D	1@4 R@9	
SB17	20"	28"	3	7	2	7			3	7	2	7	18		4	8	4	5	4	T1D	1@4 R@9	
SB18	18"	34"	3	7	2	7									3	7	6	5	4	T1D	1@7 R@14	
SB19	24"	26"	3	8					3	7	2	7	18		3	8	4	5	4	T1D	1@4 R@8	
SB20	24"	26"	3	8					3	7	2	7	18				4	5	4	T1D	1@4 R@8	
SB21	24"	26"	3	7	2	7			3	7	2	7	18		4	7	4	5	4	T1D	1@4 R@8	
SB22	24"	28"	3	8					3	7	2	7			3	8	4	5	4	T1D	1@4 R@9	
SB23	24"	28"	4	8					3	7	2	7					4	5	4	T1D	1@4 R@9	
SB24	24"	26"	4	7					3	7	2	7	18		3	8	4	5	4	T1D	1@4 R@8	
SB25	24"	26"	3	7	2	7			3	7	2	7					4	5	4	T1D	1@4 R@8	
SB26	24"	28"	3	8					3	7	2	7			4	7	4	5	4	T1D	1@4 R@9	
SB27	24"	28"	3	8					3	7	2	7					4	5	4	T1D	1@4 R@9	
SB28	24"	28"	3	8					3	7	2	7			5	7	4	5	4	T1D	1@4 R@9	
SB29	24"	34"	3	9	3	9			4	9	3	9					6	5	4	T1D	1@5 R@10	
SB30	24"	26"	4	7					3	8	3	8			5	7	4	5	4	T1D	1@4 R@8	
SB31	20"	26"	3	8											3	8	4	5	4	T1D	1@4 R@8	
9SB1	18"	26"	3	8					4	8					3	7			4	T1D	1@5 R@10	
9SB2	18"	26"	3	7					3	7									4	T1D	1@5 R@10	
9SB3	18"	26"	3	7											3	7			4	T1D	1@5 R@10	
9SB4	12"	26"	2	7											2	7	2	5	4	T1D	1@5 R@10	TOP BARS CONTINUOUS
9SB5	12"	26"	2	7											2	7	2	5	4	T1D	1@5 R@10	
9SB6	12"	26"	2	7					2	7							2	5	4	T1D	1@5 R@10	
9SB7	18"	26"	3	7					3	8					3	7			4	T1D	1@5 R@10	

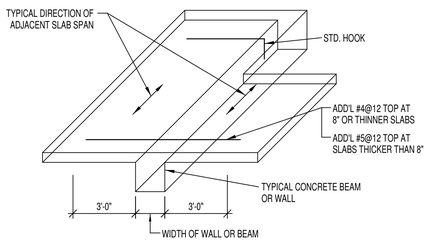


SLAB SCHEDULE

MARK	TYPE	THICKNESS (IN.)	BOTTOM BARS SIZE	BOTTOM BARS SPACING	INTERIOR TOP BARS "B" SIZE	INTERIOR TOP BARS "B" SPACING	LG.	L1	L2	EXTERIOR TOP BARS "A" SIZE	EXTERIOR TOP BARS "A" SPACING	LG.	L3	TEMP. REINF.	REMARKS
S1		5	4	12	4	12								#4@16	
S2		5	4	12	4	12				4	12			#4@16	REFER TO DETAIL C4/S502 @ COL LINE H
S3		5	4	12	5	12				4	12			#4@16	
S4		5	4	12						4	12			#4@16	
S5		7	4	12	4	12				5	12			#4@15	
S6		7	4	12	4	12								#4@15	
S7		6	4	12						5	12			#4@16	
S8		7	5	12	5	12								#4@15	
S9		7	5	12	5	12				5	12			#4@15	REFER TO DETAIL B4/S304 @ COL LINE H
S10		7	5	12						4	12			#4@15	
S11		7	5	12						5	12			#4@15	
S12		12	6	9						6	9			#5@14	T & B FOR TEMP & SHRINKAGE REINF.
S13		10	5	12	5	12				5	12			#4@16	
S14		7	5	12	5	12				5	12			#4@16	S14 APPLIES ONLY BETWEEN CL-G & CL-H, CONTINOUS TOP INTERIOR REINF. OVER BEAMS
S15		10	5	12	5	12				5	12			#4@15	REFER TO C3/S-305 FOR REINF. DETAIL
S16		10	5	12	5	12								#4@15	
S17		10	5	9						5	12			#4@16	T & B FOR TEMP & SHRINKAGE REINF.
S18		7	5	12						5	12			#4@15	
S19		5	5	12						4	12			#4@16	
S20		5	5	12	5	12				4	12			#4@16	TOP BARS CONTINUOUS

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-206

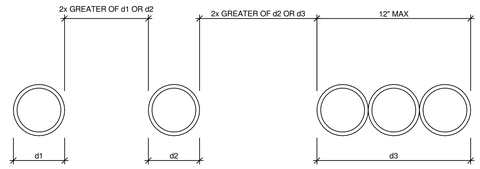


NOTE:

1. PROVIDE BARS AS SHOWN IN ALL ONE WAY SLAB AREAS AS REQ'D BY FRAMING LAYOUT
2. PROVIDE ADD'L BARS AS SHOWN IN TWO WAY SLAB AREAS IF NO TOP BARS ARE SHOWN ON PLAN

A3 ADDITIONAL SLAB REINF. - SUPPORTS PARALLEL TO SLAB SPAN

NO SCALE



1. NO SLEEVES SHALL BE PLACED IN COLUMNS OR BEAMS.
2. SPACING LIMITS APPLY IN ALL DIRECTIONS. SPACING SHALL BE DETERMINED BY SLEEVE SIZE, NOT PIPE SIZE. LIMIT SHALL APPLY UNLESS SPECIFICALLY NOTED ON STRUCTURAL DRAWINGS.
3. SLEEVES LARGER THAN 12 INCHES ARE NOT PERMITTED UNLESS SHOW SPECIFICALLY ON STRUCTURAL PLANS.
4. NO SLEEVES SHALL BE LOCATED LESS THAN 18" CLEAR FROM THE FACE OF A COLUMN UNLESS SPECIFICALLY SHOWN ON STRUCTURAL PLAN.
5. NO SLEEVES SHALL BE PLACED LESS THAN 24" FROM THE END OF OR INTERSECTION OF SHEAR WALLS

A5 SPACING OF SLEEVES IN SLABS AND WALLS

NO SCALE

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

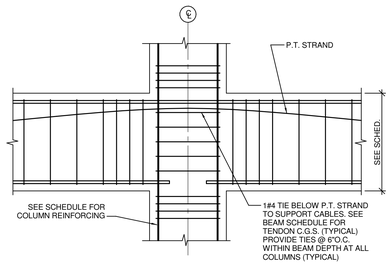
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE BEAM AND SLAB SCHEDULES AND DETAILS

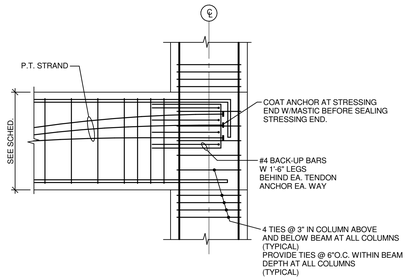
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-206	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-206 REV. NO.

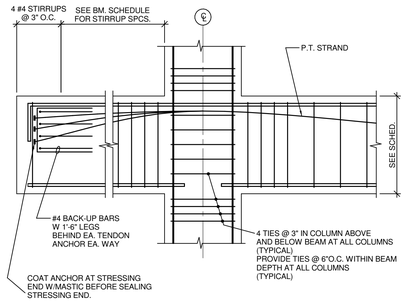
C:\n\k002182-S-CENTRAL_basisfree.rvt
7/5/2011 3:05:37 PM



TYPICAL CONTINUOUS BEAM DETAIL

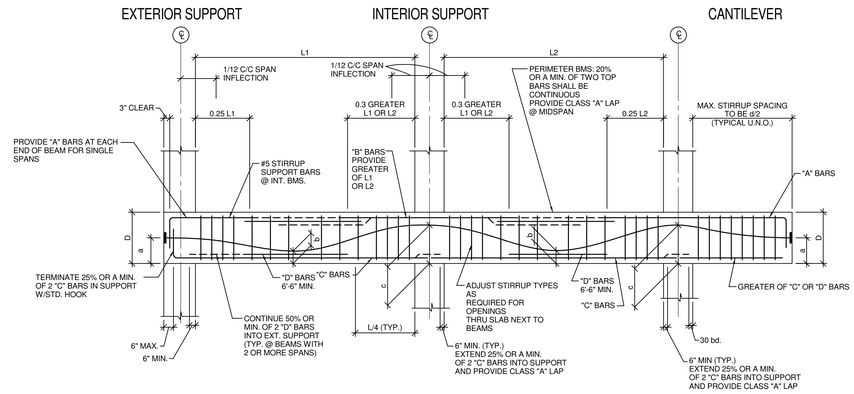


TYPICAL BEAM AND COLUMN DETAIL



TYPICAL CANTILEVERED BEAM DETAIL

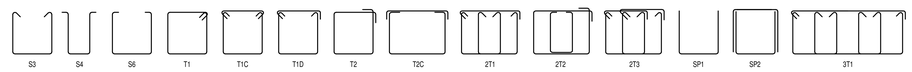
POST TENSIONED BEAM SCHEDULE



NOTE 1: PROVIDE 2#5 SIDE BARS EF.

BEAM MARK	SIZE W x D	FINAL P.T. FORCE (KIPS)	TENDON PROFILE FROM BOTT. OF BM. TO C.G.S. OF P.T.			MILD STEEL REINFORCEMENT							REMARKS
						TOP BAR		BOTTOM BAR		STIRRUPS			
			a	b	c	"A"	"B"	"C"	"D"	SIZE	SHAPE	SPACING EACH END	
PB1	111x18/26	405	10@W 13@E	3	15	9#6		7#7		4	2T1	1@6, R@12	
PB2	111x18	324	10	3	13	9#6		7#7		4	2T1	1@6, R@12	
PB3	24x28	243	17 3/4	3		4#7		4#11					
PB4	24x28	297	17 3/4	3		4#7		4#11		4	S4	1@6, R@12	

STIRRUP SHAPES



HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-207

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

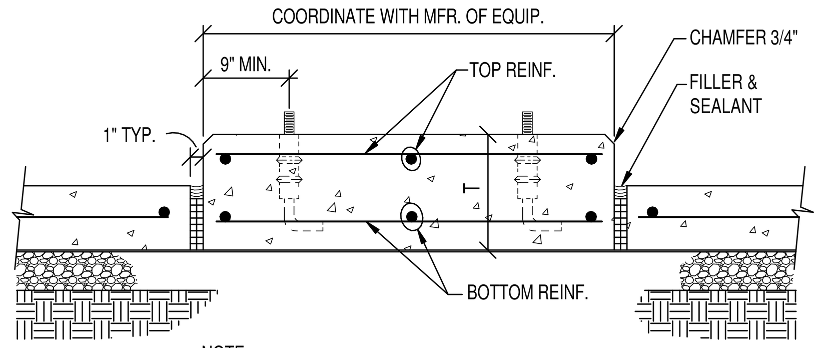
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
POST TENSION BEAM SCHEDULES AND DETAILS

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-207	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- S-207 REV. NO.

C:\vol002182-S-CENTRAL_Icastane.rvt
7/5/2011 3:05:38 PM



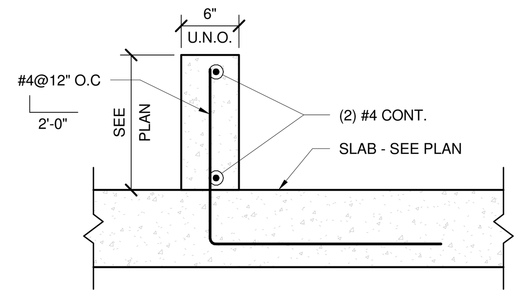
NOTE :
CENTER OF GRAVITY OF PAD & CENTER OF GRAVITY OF EQUIPMENT WHILE OPERATING SHALL COINCIDE.

ISOLATION PAD SCHEDULE			
PIECE OF EQUIP WEIGHT. (MFR. OF EQUIP. THAT PAD IS DESIGNED AROUND ✳)	MINIMUM PAD THICKNESS	REINFORCING	
		TOP	BOTTOM
LOADED LESS THAN 500 psf	10"	#4@12 E.W	#4@12 E.W
500 psf < LOADED < 1000 psf	12"	#5@14 E.W	#5@14 E.W
LOADED MORE THAN 1000 psf	14"	#5@12 E.W	#5@12 E.W

✳ IF ANOTHER MFR. IS USED, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COST INCURRED IN THE REDESIGN AND CONSTRUCTION OF THE PAD

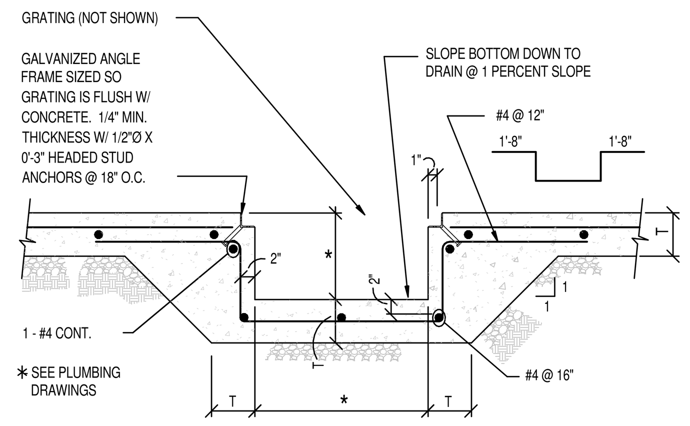
NOTES :
1. PROVIDE TYPICAL ISOLATION EQUIPMENT PADS UNDER EQUIPMENT, LOCATED OUTSIDE NOTED IN SCHEDULE ABOVE.
2. THE CONTRACTOR SHALL OBTAIN EXACT SIZES, LOCATIONS, HEIGHTS, AND ANY SPECIAL DETAILS FOR THE PADS BEFORE CONSTRUCTING THE PADS.
3. THE CONTRACTOR SHALL VERIFY THAT ALL ITEMS REQUIRED BY THE EQUIPMENT THAT ARE TO BE EMBEDDED INTO PADS ARE PLACED BEFORE PADS ARE POURED.

D1 TYPICAL ISOLATION PAD
NO SCALE

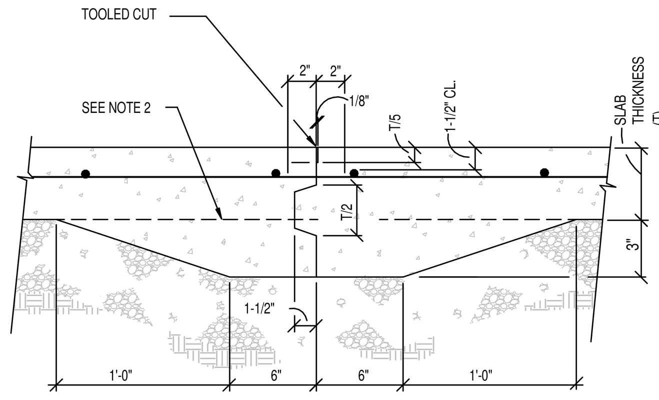


NOTES:
1. WALL CURBS SHALL BE LOCATED USING THE ARCHITECTURAL PLANS, WALLS SECTIONS, AND DETAILS.
2. PROVIDE 3/4" CHAMFER AT EXPOSED CORNERS

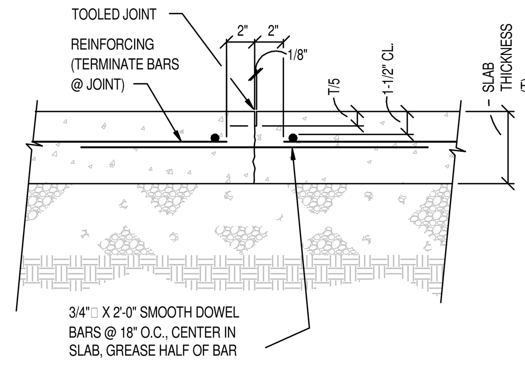
E2 TYP WALL CURB
NO SCALE



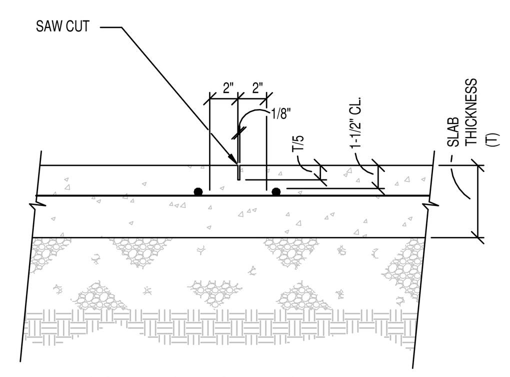
D2 TYPICAL TRENCH DRAIN
NO SCALE



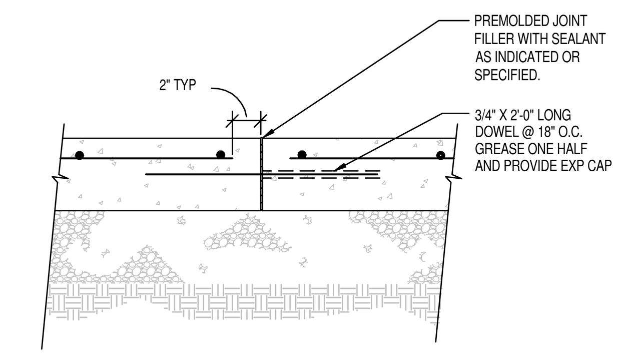
CONSTRUCTION JOINT - KEYED



CONSTRUCTION JOINT - DOWELED



CONTROL JOINT (C.J.)



EXPANSION JOINT (EJ)

NOTES :
1. CONTRACTOR HAS OPTION OF USING EITHER DOWELED OR KEYED CONSTRUCTION JOINT.
2. OMIT THICKENED PORTION OF SLAB WHERE SLAB THICKNESS IS 8" OR GREATER
3. JOINTS NOTED ON PLAN BY C.J. MAY BE EITHER CONSTRUCTION JOINTS OR CONTROL JOINTS AT CONTRACTOR'S OPTION. JOINTS TERMINATING A POUR SHALL BE CONSTRUCTION JOINTS, EXCEPT AT WALLS AND COLUMNS. THESE ARE ISOLATION JOINTS. ALL OTHER JOINTS MARKED C.J. ARE CONTROL JOINTS.
4. SEAL JOINTS IN EXPOSED FLOORS WITH JOINT SEALANT.
5. SEE PLANS FOR TYPICAL REINFORCING

D3 TYPICAL SLAB ON GRADE JOINT DETAILS
NO SCALE

BAR SIZE	LAP CLASS	WALLS & SLABS W/ MIN. CONCRETE COVER = 3/4"		BEAMS, COLUMNS, WALLS & SLABS W/ MIN. CONCRETE COVER = 1 1/2"	
		TOP	OTHER	TOP	OTHER
#3 (#10)	A	12 IN.	12	12	12
	B	16	16	16	16
#4 (#13)	A	19	15	15	12
	B	24	19	20	16
#5 (#16)	A	28	21	19	15
	B	36	28	24	19
#6 (#19)	A	37	29	22	17
	B	48	37	29	22
#7 (#22)	A	60	46	37	28
	B	78	60	48	37
#8 (#25)	A	74	57	47	36
	B	96	74	60	47
#9 (#29)	A	90	69	57	44
	B	117	90	74	57
#10 (#32)	A	108	83	70	54
	B	140	108	91	70
#11 (#36)	A	127	98	84	64
	B	165	127	109	84

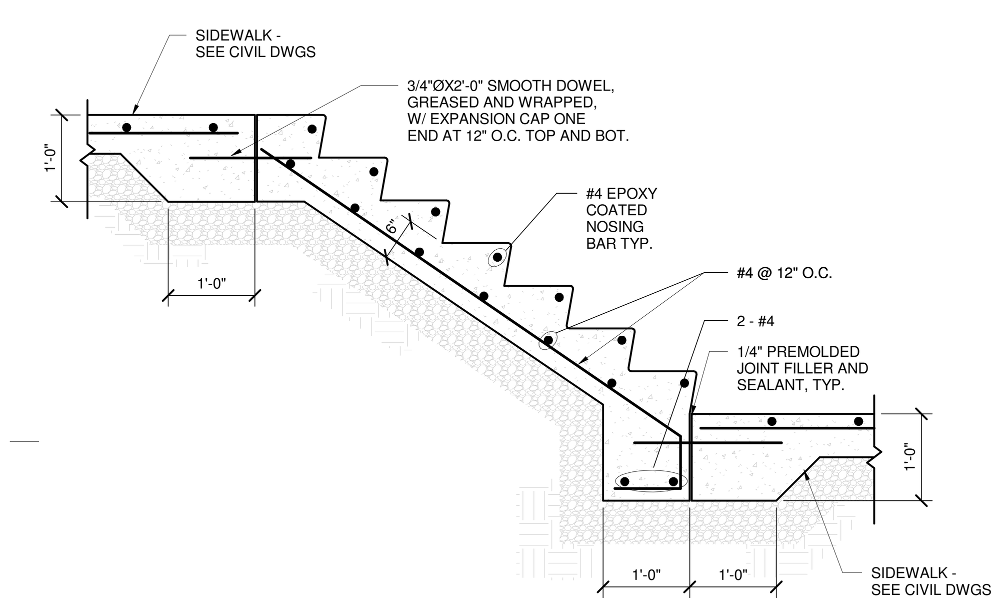
NOTES :
1. TABULATED VALUES ARE BASED ON 4000 PSI NORMAL WEIGHT CONCRETE. FOR LIGHTWEIGHT CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.3.
2. BAR SIZES INDICATED IN PARENTHESIS ( ) ARE METRIC DESIGNATIONS. ALL BARS INDICATED ON PLANS USE NON-METRIC DESIGNATIONS.
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BAR.
4. THIS SCHEDULE IS VALID ONLY FOR BARS SPACED GREATER THAN TWO TIMES (2X) THE INDICATED COVER DIMENSIONS PLUS ONE BAR DIAMETER.
5. FOR EPOXY COATED BARS, MULTIPLY THE TABULATED VALUES BY 1.5.
6. USE CLASS "B" LAP SPLICE U.N.O.
7. DEVELOPEMENT LENGTH L_d EQUALS THE "A" CLASS LAP DIMENSION.

D5 REINF. BAR DEVELOPMENT LENGTH AND LAP SPLICE SCHEDULE
NO SCALE

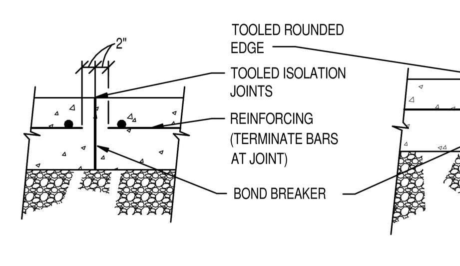
HDR

HDR Architecture, Inc.

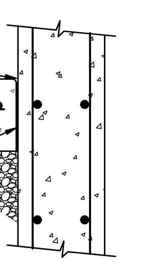
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



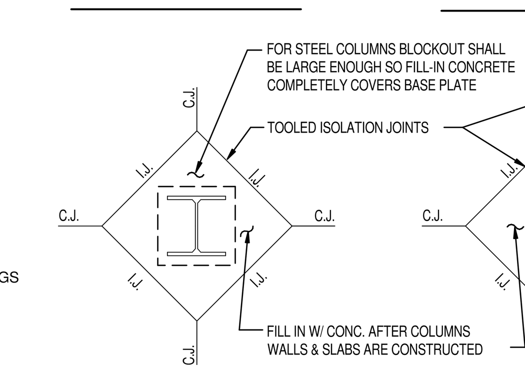
C1 CONCRETE STAIR ON GRADE
NO SCALE



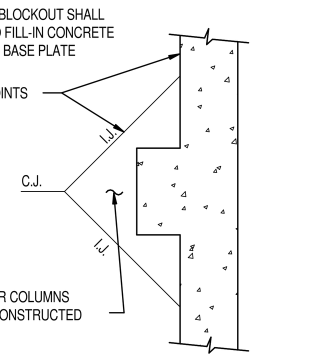
ISOLATION JOINT



ISOLATION JOINT AT WALL

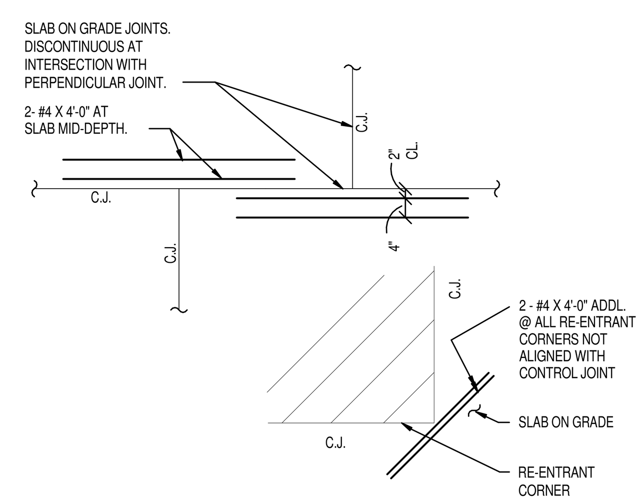


PLAN AT INTERIOR COLUMN

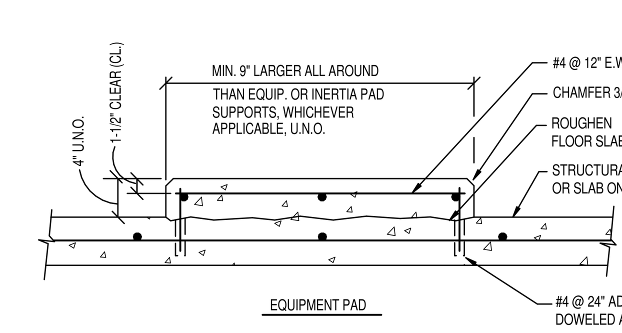


PLAN AT EXTERIOR COLUMN OR PILASTER

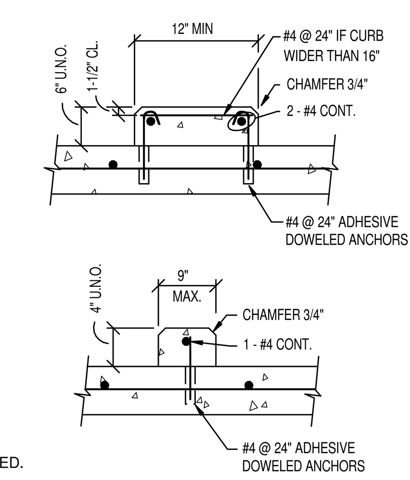
C2 TYPICAL ISOLATION JOINT (I.J)
NO SCALE



C3 JOINT INTERSECTION SLAB ON GRADE
NO SCALE



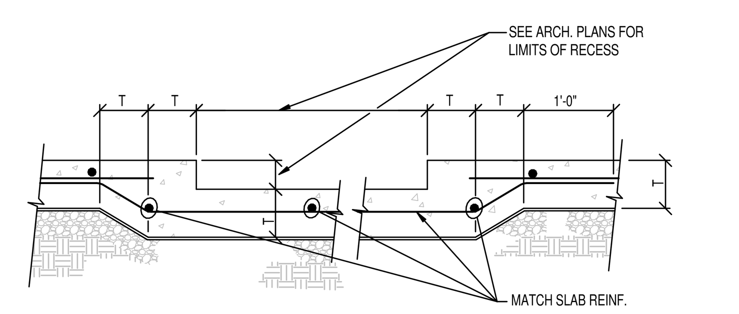
EQUIPMENT PAD



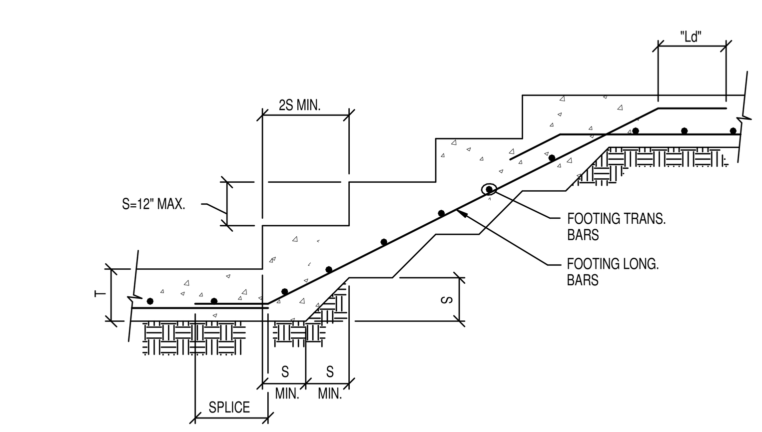
CURB DETAILS

NOTES :
1. THE CONTRACTOR SHALL OBTAIN EXACT SIZES, LOCATIONS, WEIGHTS, AND ANY SPECIAL DETAILS FOR THE PADS OR CURBS FROM THE EQUIPMENT CONTRACTOR, BEFORE CONSTRUCTING PADS OR CURBS.
2. THE CONTRACTOR SHALL VERIFY THAT ALL ITEMS REQUIRED BY EQUIP. THAT ARE TO BE EMBEDDED INTO PADS OR CURBS ARE PLACED BEFORE CONCRETE IS POURED.
3. STOP #4 HORIZ. BARS AT CONTROL JOINTS.

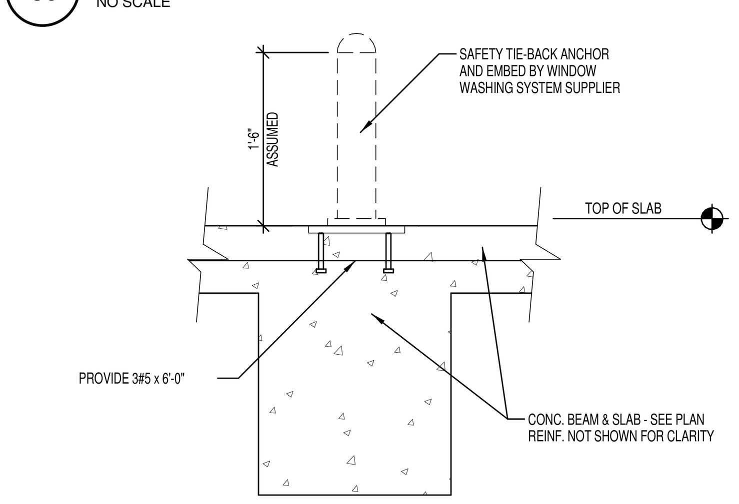
C4 CURB AND PAD DETAILS
NO SCALE



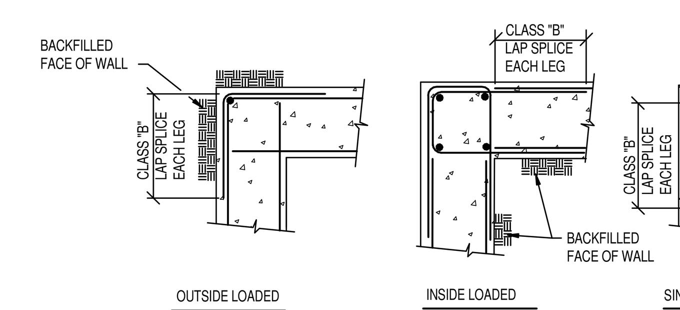
B1 TYPICAL SLAB ON GRADE RECESS/DEPRESSION
NO SCALE



B2 TYP. STEPPED FOOTING
NO SCALE



B3 TYP. CONNECTION AT SAFETY TIE-BACK
NO SCALE

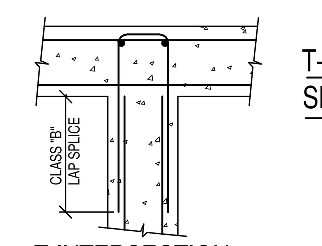


OUTSIDE LOADED

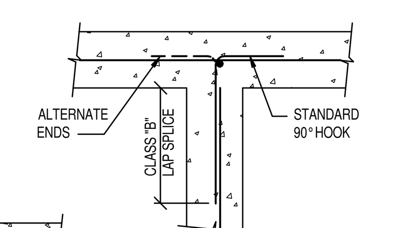
INSIDE LOADED

SINGLE CURTAIN

TYPICAL CORNER DETAILS



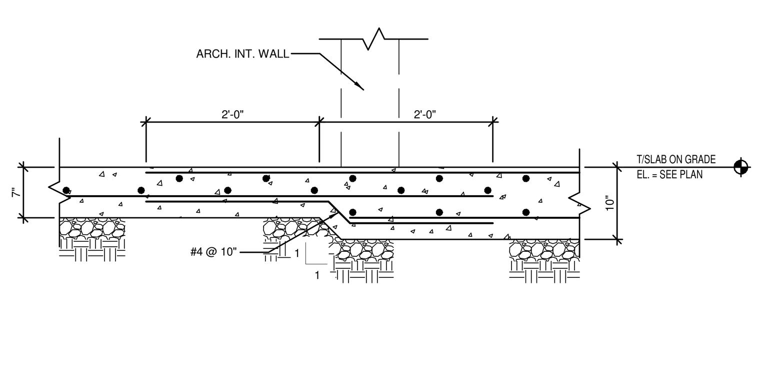
T-INTERSECTION DOUBLE CURTAIN



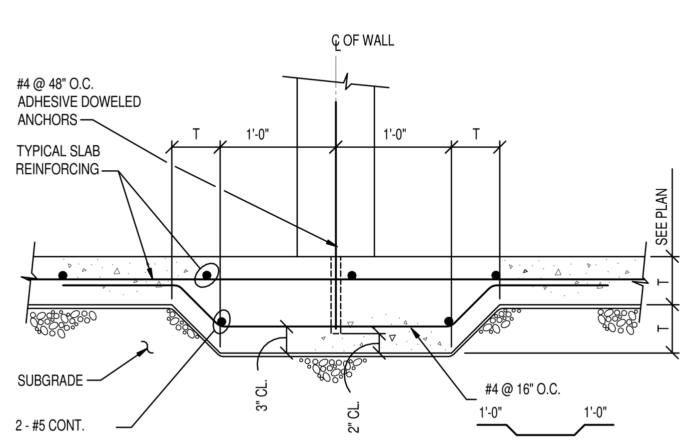
T-INTERSECTION SINGLE CURTAIN

NOTE :
WHERE WALLS ARE BACKFILLED ON BOTH SIDES, PROVIDE DETAIL SUITABLE FOR SIDE WITH GREATEST HEIGHT OF BACKFILL. WHERE HEIGHT OF BACKFILL IS THE SAME ON BOTH SIDES OR WALLS WITHOUT BACKFILL, USE OUTSIDE LOADED DETAIL.

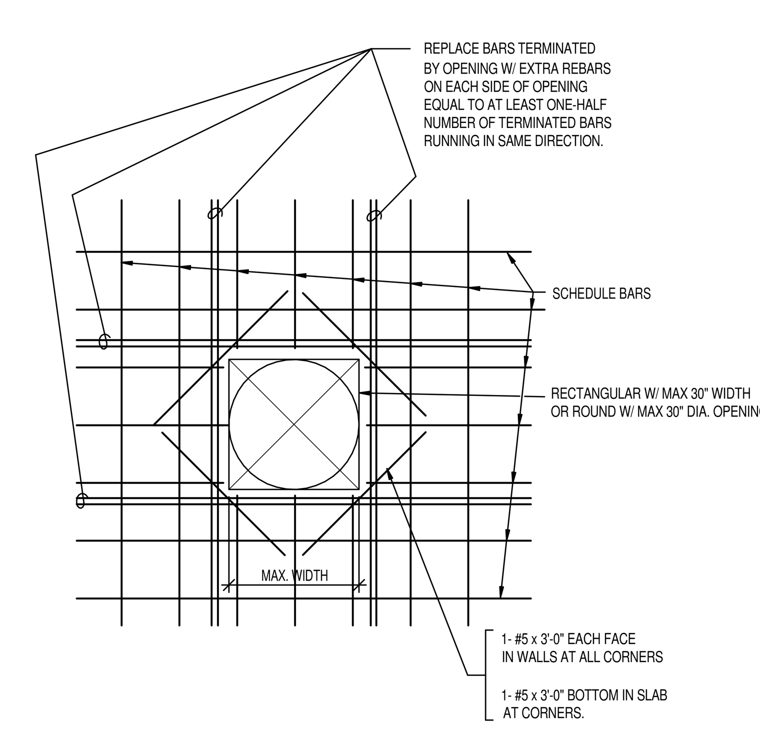
B4 PLAN-TYPICAL CORNER AND T-INTERSECTION REINFORCING
NO SCALE



A1 TYPICAL SLAB ON GRADE TRANSITION
NO SCALE

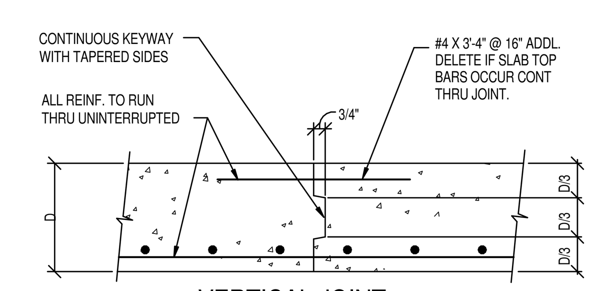


A2 TYPICAL THICKENED SLAB UNDER MASONRY WALLS
NO SCALE

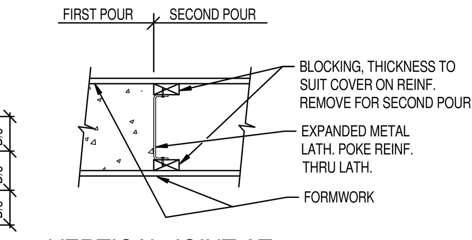


NOTE :
1. THE EXTRA REBAR SHALL EXTEND PAST THE OPENING A DISTANCE OF TWICE THE LAP LENGTH OR TO THE END OF THE BAR, WHICHEVER IS LESS.
2. BEFORE POURING CONCRETE THE CONTRACTOR SHALL VERIFY WITH OTHER TRADES THE SIZE AND THE LOCATION OF THE REQUIRED OPENINGS.
3. AT OPENINGS 18" OR LESS IN DIAMETER OR ON ANY SIDE, NO EXTRA REBARS ARE REQUIRED UNLESS SHOWN OTHERWISE, SCHEDULED REBARS SHALL BE SPREAD (NOT CUT) TO ALLOW OPENING TO BE MADE, SUCH OPENINGS SHALL BE PROVIDED WITH A MIN. OF 1 - #5 E.F. ALL SIDES TOP PLACED ALONG EDGES. SUCH BARS SHALL EXTEND AT LEAST 2'-0" BEYOND THE CORNERS OF THE OPENING.

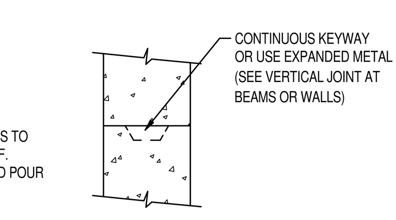
A3 TYPICAL REINF. @ OPENINGS IN WALLS AND SLABS
NO SCALE



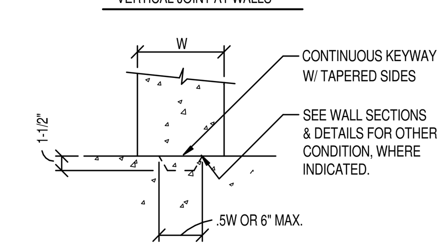
VERTICAL JOINT AT STRUCTURAL SLABS



VERTICAL JOINT AT BEAMS OR WALLS



VERTICAL JOINT AT WALLS



HORIZONTAL JOINT AT WALLS

NOTE :
1. CONSTRUCTION JOINTS ARE INTENDED TO BE MADE ROUGH EVEN THOUGH SHOWN SMOOTH IN ALL DETAILS.
2. REINFORCING NOT SHOWN FOR CLARITY. HOWEVER CONTINUE ALL REINF. THRU CONSTRUCTION JOINTS EXCEPT @ SLABS ON GRADE.
3. CONSTRUCTION JOINTS IN SLABS ON GRADE ARE DETAILED ELSEWHERE.

A4 TYPICAL CONSTRUCTION JOINTS
NO SCALE

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

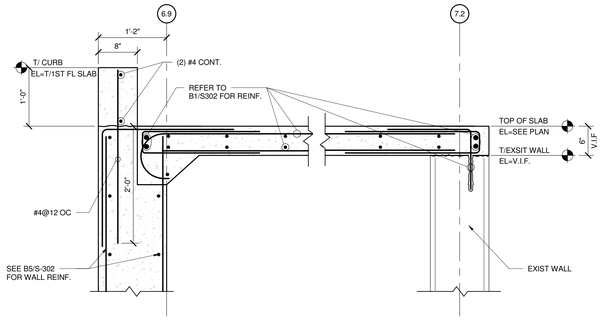
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

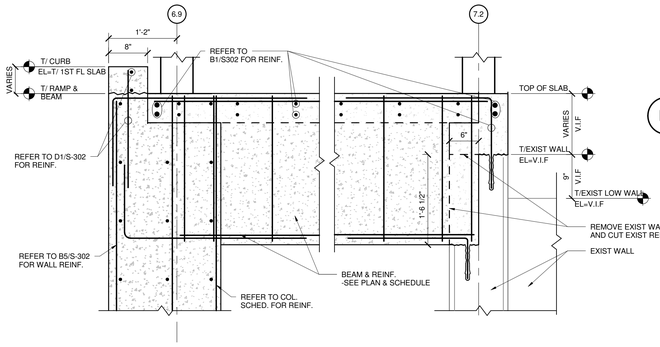
DOCUMENT TITLE
TYPICAL CONCRETE DETAILS

DESIGNED: RAE SUNG LEE
DRAWN: LARRY CASTANEDA
CHECKED: MARTY STERR
PROJECT MANAGER: JAMES LYMAN
A/E CADD FILE
A/E DWG. NO. S-301
CADD NO: XXX
DWG. STATE I
BIND ORDER XXX
FACILITY NO(S) 241
FACILITY DOCUMENT NUMBER J241-101-S-301
REV. NO.

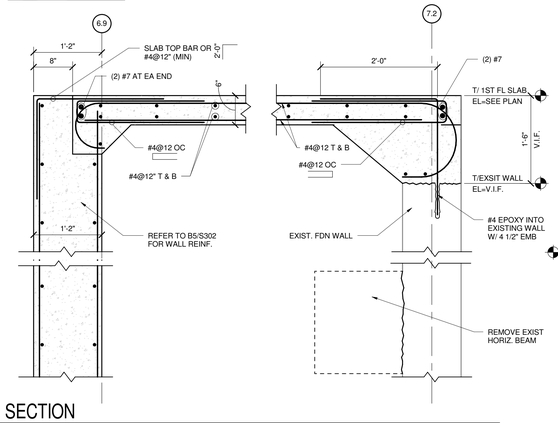
C:\rvt\002182-S-CENTRAL_lcastane.rvt
7/5/2011 3:05:39 PM



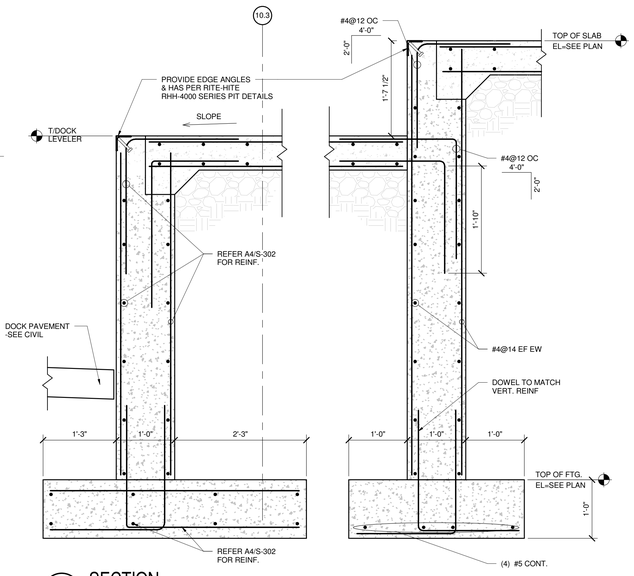
D1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



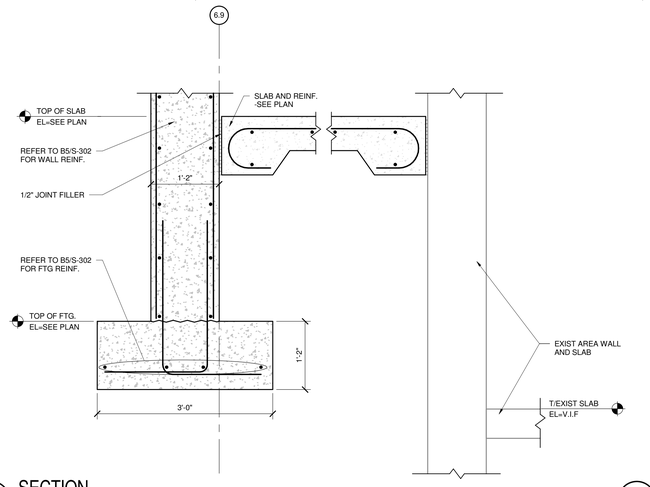
C1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



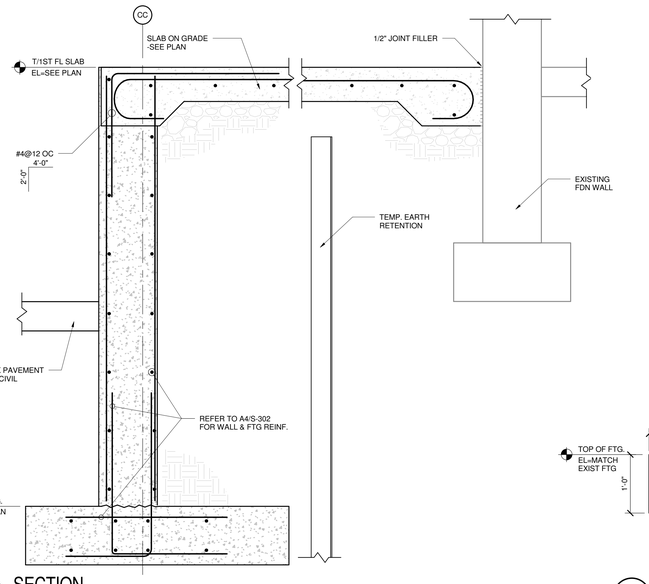
B1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



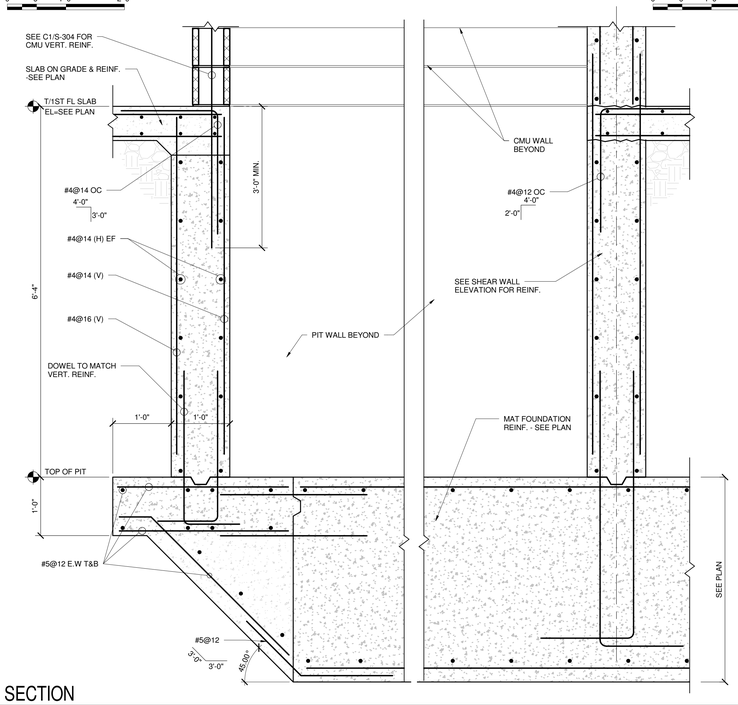
A1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



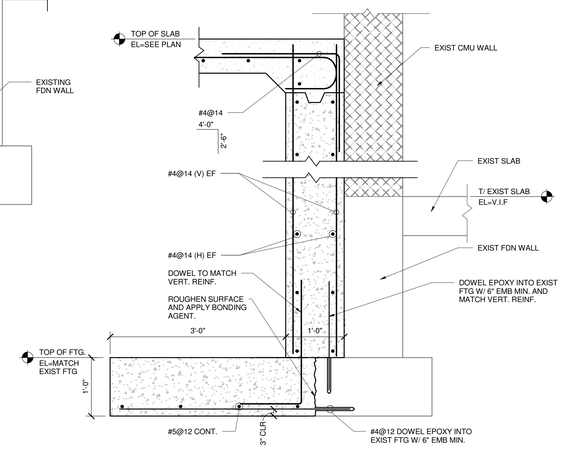
D2 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



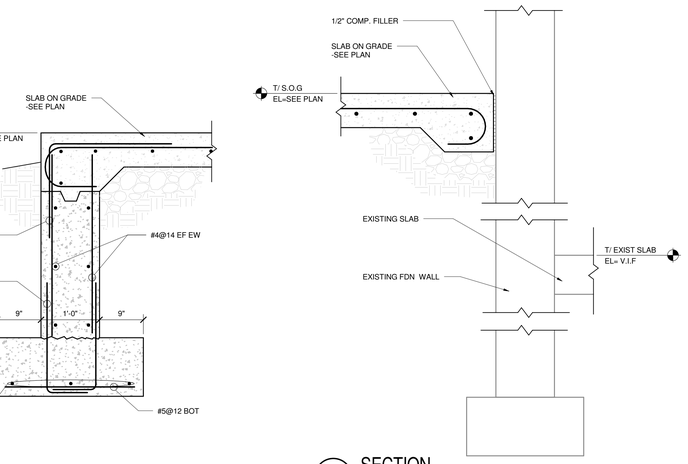
B2 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



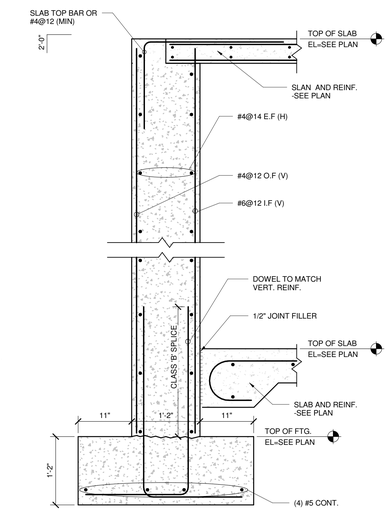
A2 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



B4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

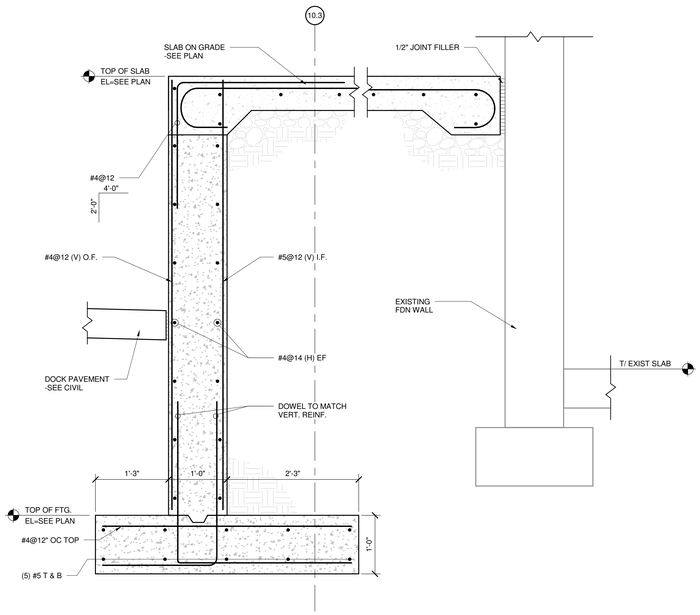


D5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



B5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

* NOTE: REFER TO GEO-TECHNICAL REPORT FOR MORE INFORMATION ON DRAINAGE AT EXTERIOR OF BASEMENT WALL



A4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-302

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

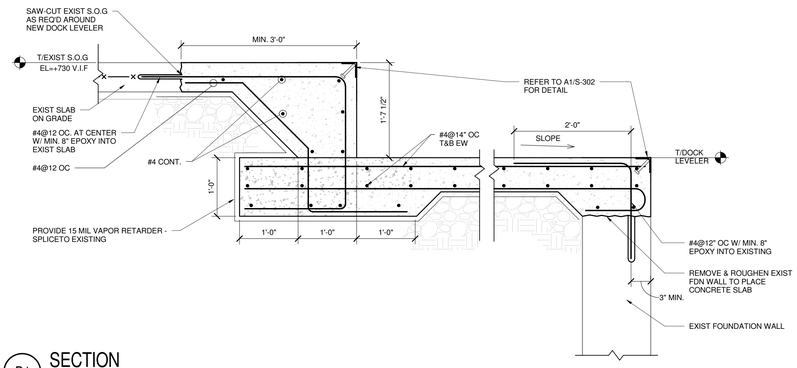
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE FOUNDATION DETAILS

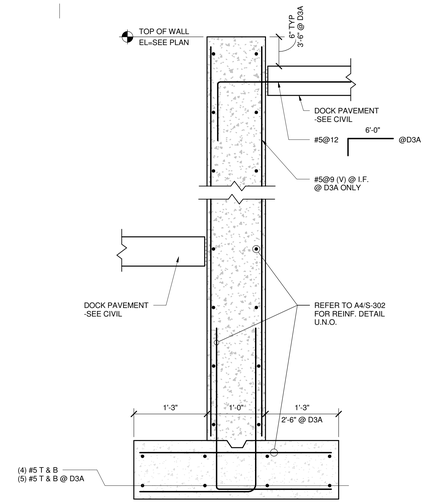
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-302	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-S-302
REV. NO.

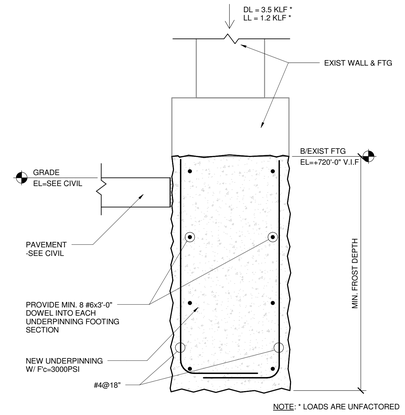
C:\rvt\002182-S-CENTRAL_Icastane.rvt
7/5/2011 3:05:43 PM



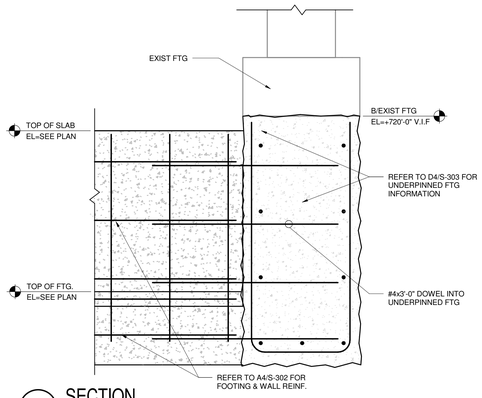
D1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



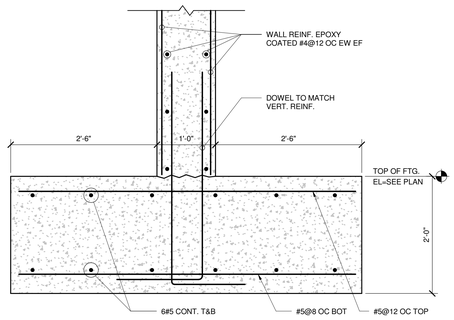
D3A D3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



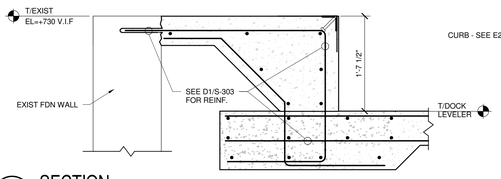
D4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



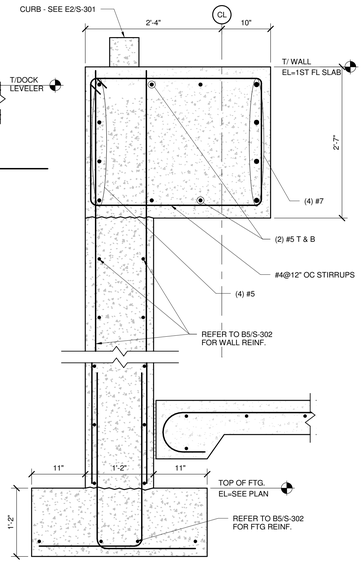
D5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



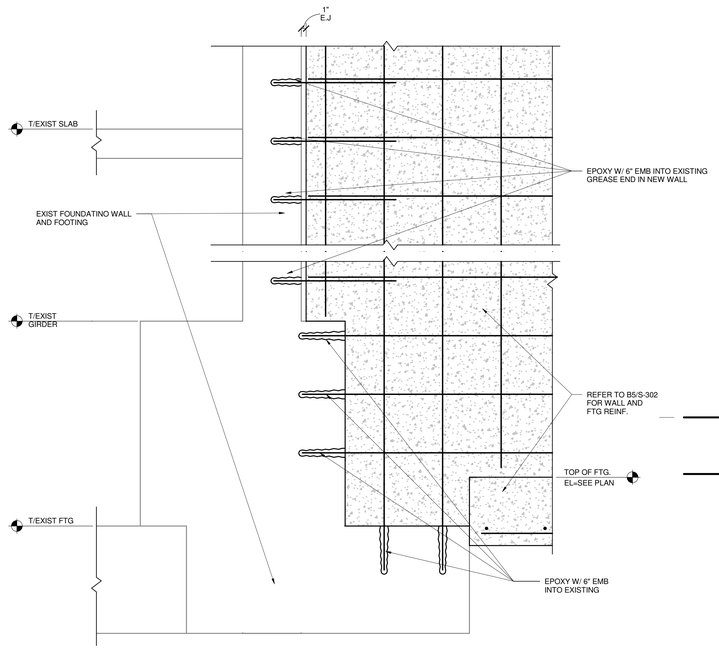
C1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



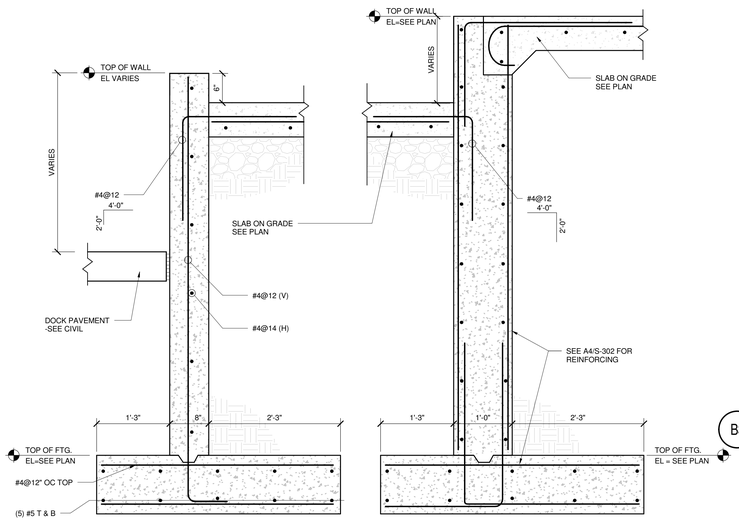
C3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



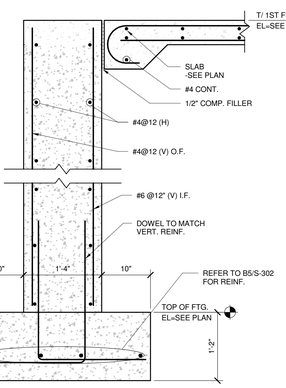
B4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



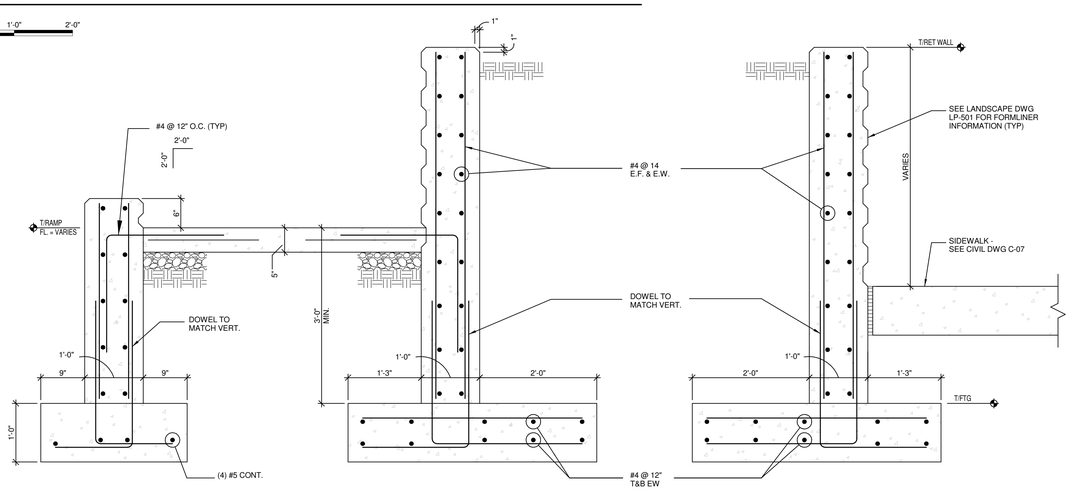
B5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



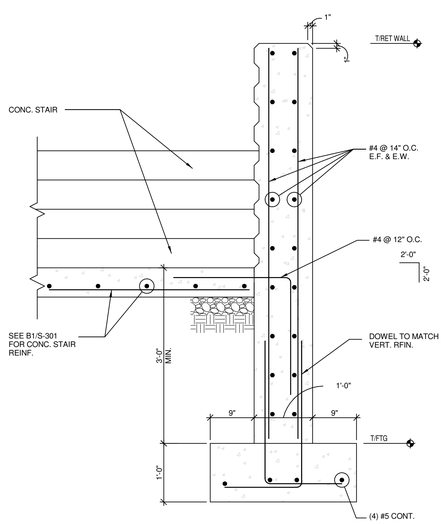
B1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



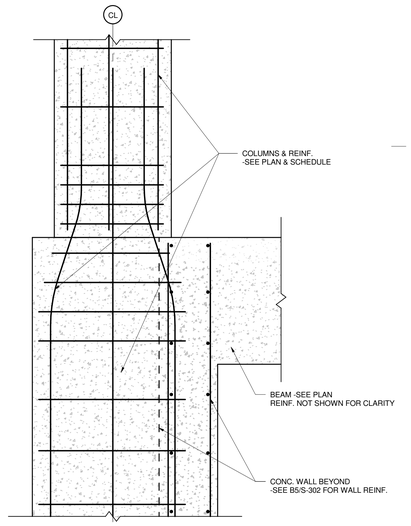
B3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-303

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

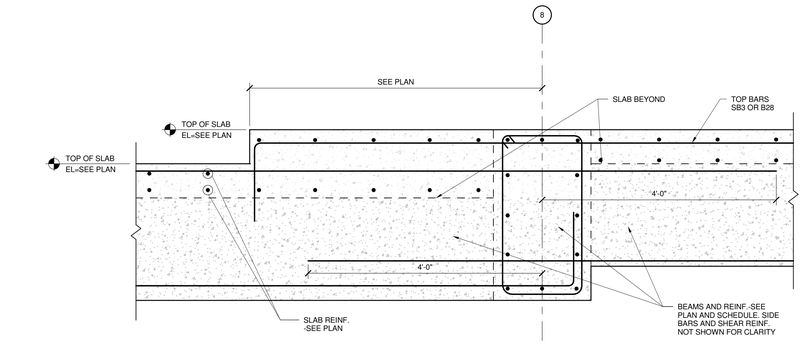
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE FOUNDATION DETAILS

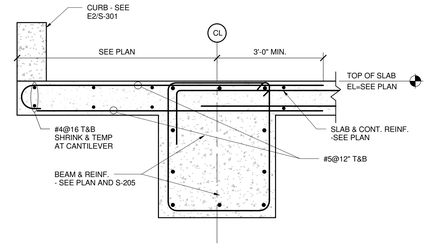
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-303	
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-303 REV. NO.

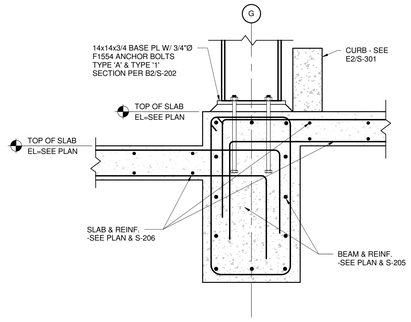
C:\rvt\002182-S-CENTRAL_basebase.rvt
7/5/2011 3:55:46 PM



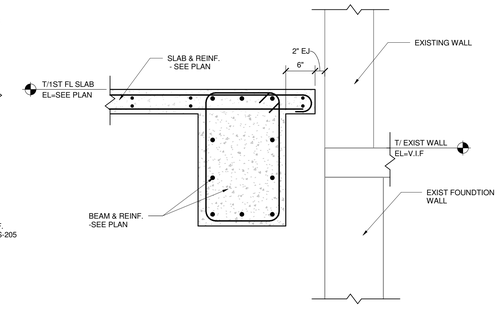
D1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



D3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



D4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

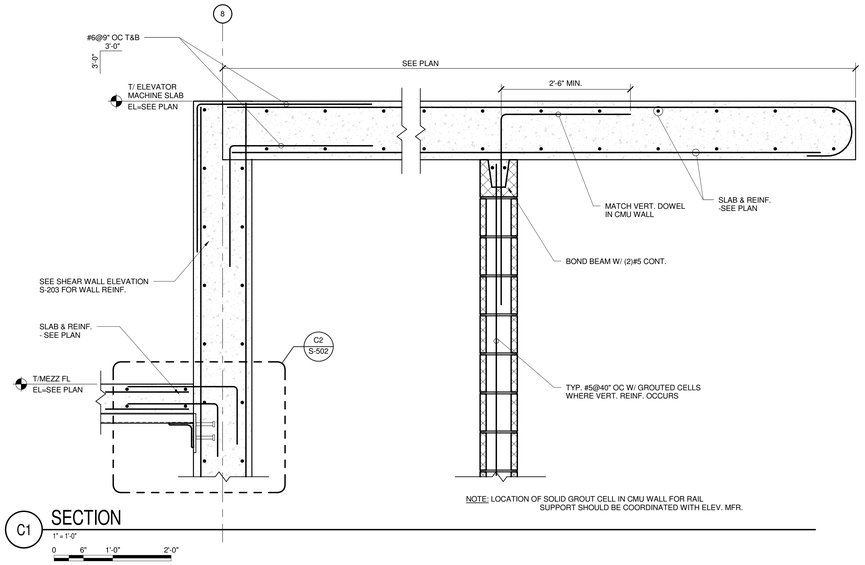


D5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

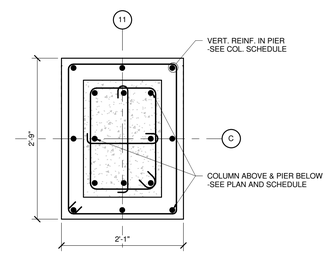
HDR

HDR Architecture, Inc.

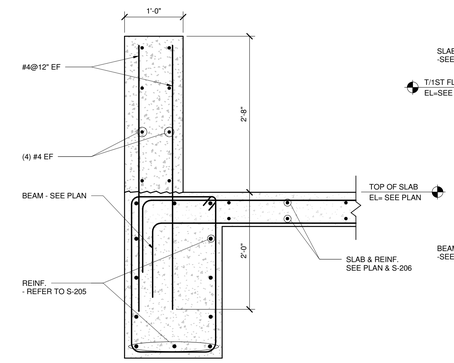
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



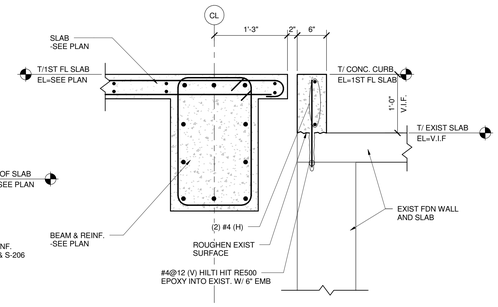
C1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



C3 DETAIL
1" = 1'-0"
0 6" 1'-0" 2'-0"

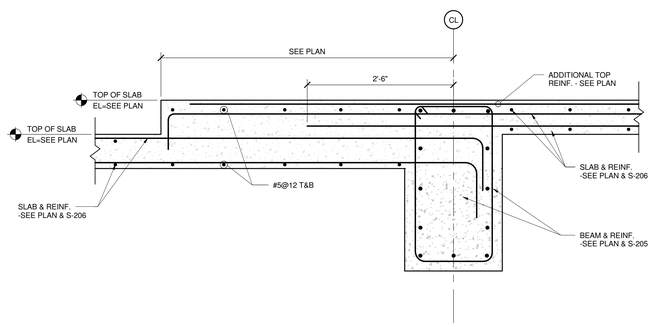


C4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

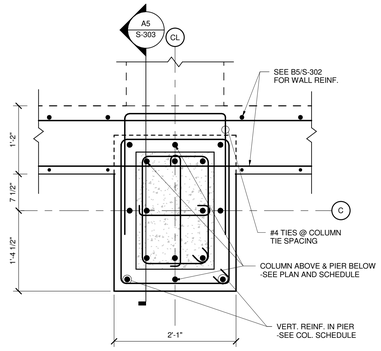


C5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

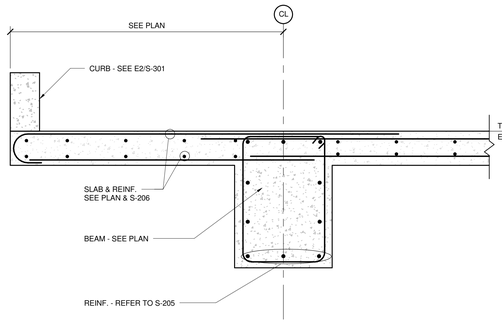
S-304



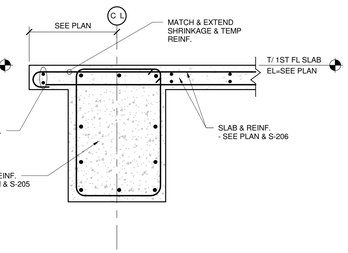
B1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



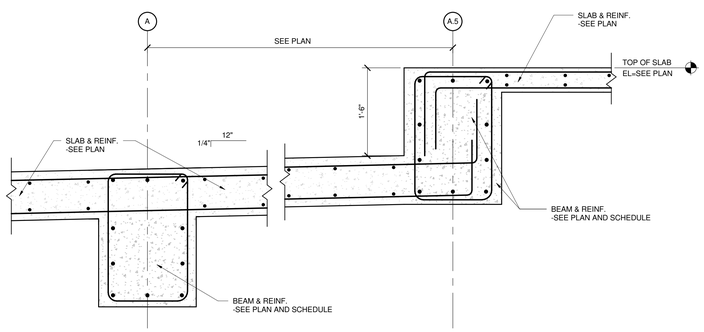
B3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



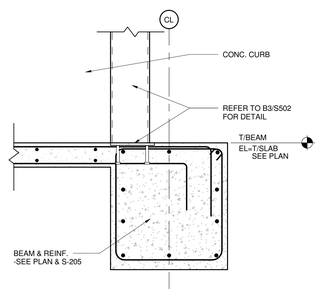
B4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



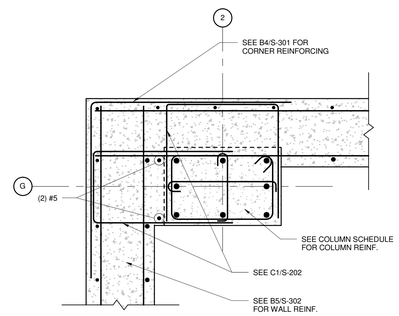
B5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



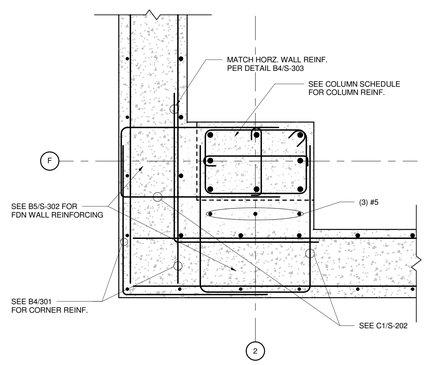
A1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A4 DETAIL
1" = 1'-0"
0 6" 1'-0" 2'-0"



A5 DETAIL
1" = 1'-0"
0 6" 1'-0" 2'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

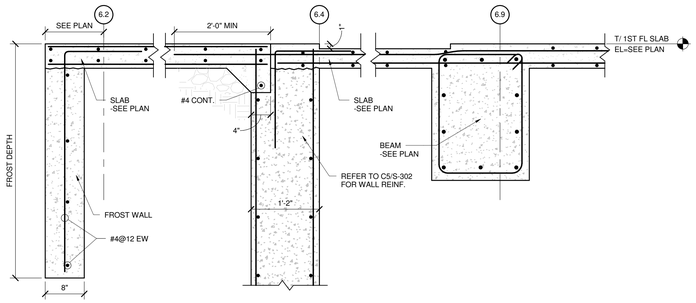
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE SECTIONS AND DETAILS

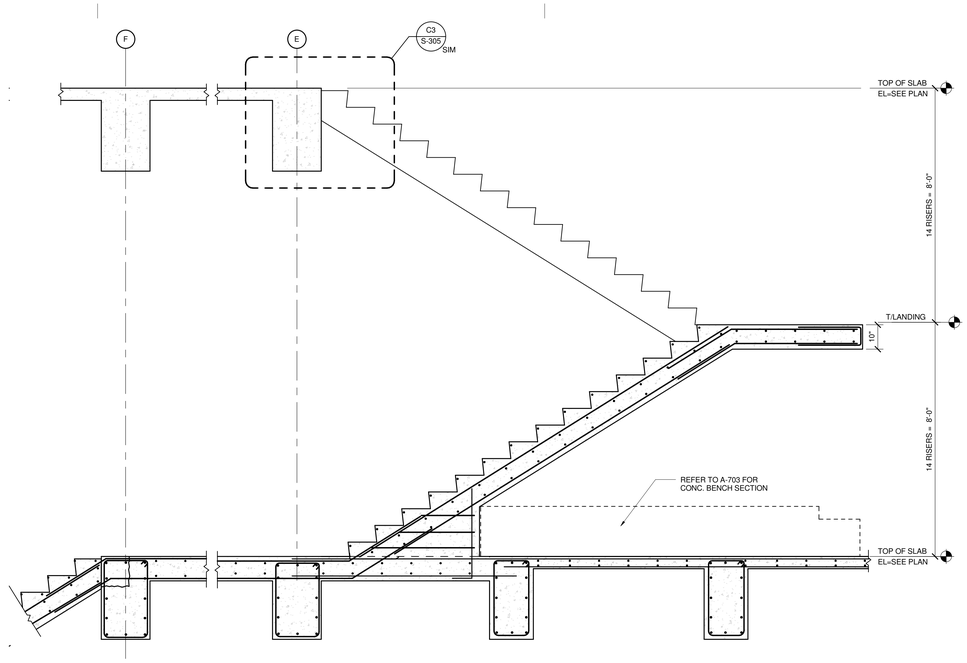
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-304	
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

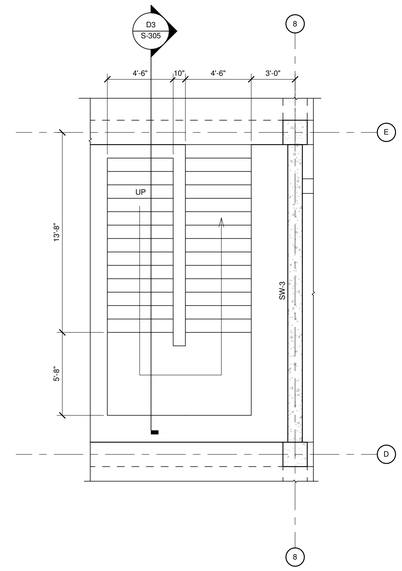
FACILITY DOCUMENT NUMBER: J241-101-S-304
REV. NO.

C:\rvt\002182-S-CENTRAL_basetrace.rvt
7/5/2011 3:05:50 PM



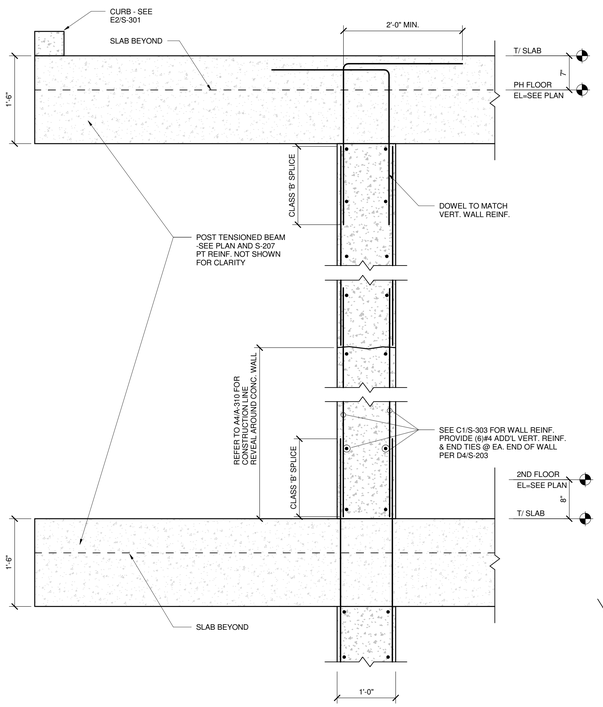
D1 SECTION
1" = 1'-0"



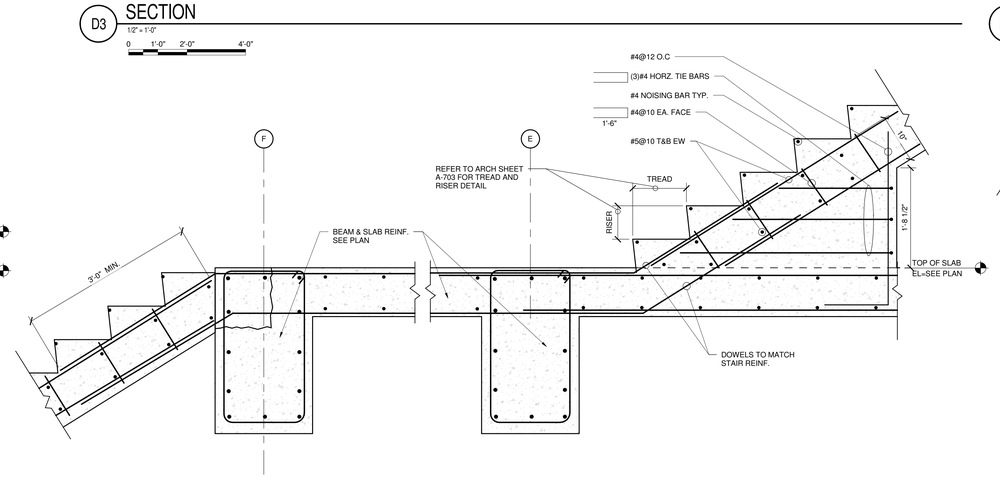


D3 SECTION
1/2" = 1'-0"

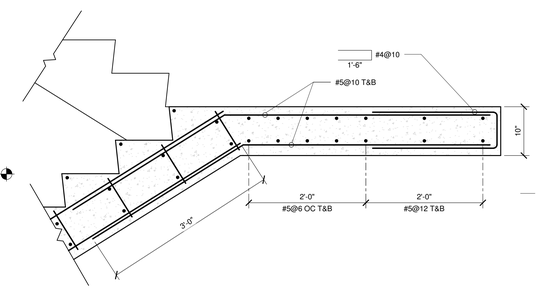
D4 CONCRETE STAIR PLAN
1/4" = 1'-0"



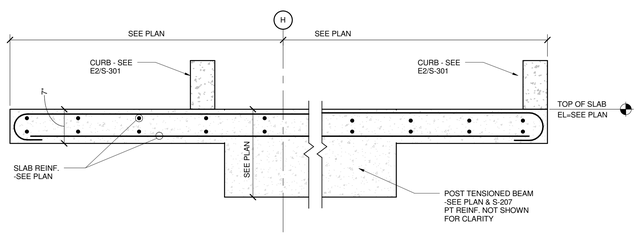
C1 SECTION
1" = 1'-0"



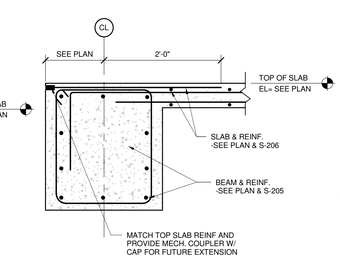
C3 SECTION
1" = 1'-0"



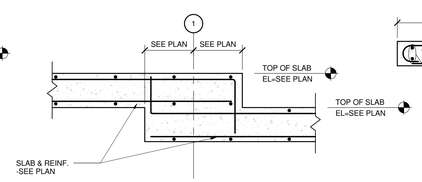
C5 SECTION
1" = 1'-0"



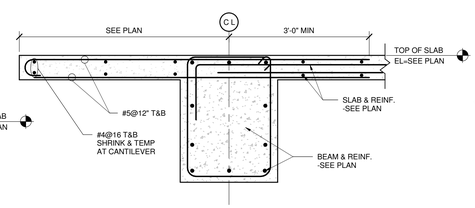
B1 SECTION
1" = 1'-0"



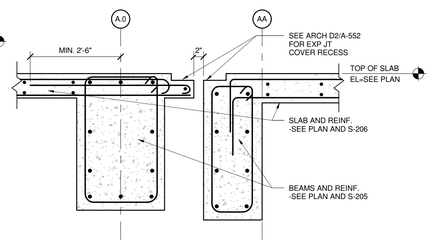
B2 SECTION
1" = 1'-0"



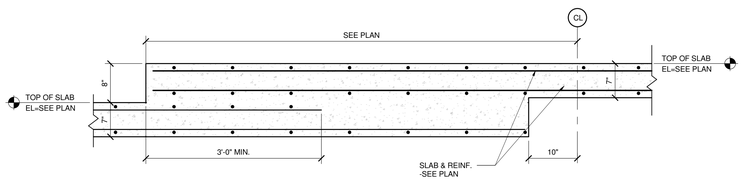
B3 SECTION
1" = 1'-0"



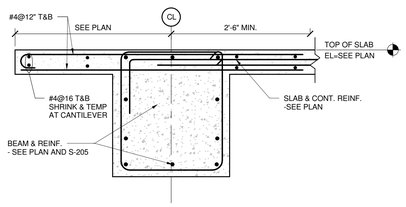
B4 SECTION
1" = 1'-0"



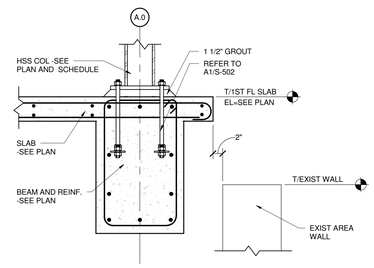
B5 SECTION
1" = 1'-0"



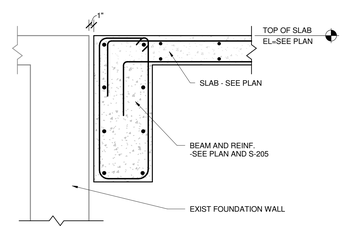
A1 SECTION
1" = 1'-0"



A3 SECTION
1" = 1'-0"



A4 SECTION
1" = 1'-0"



A5 SECTION
1" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-305

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

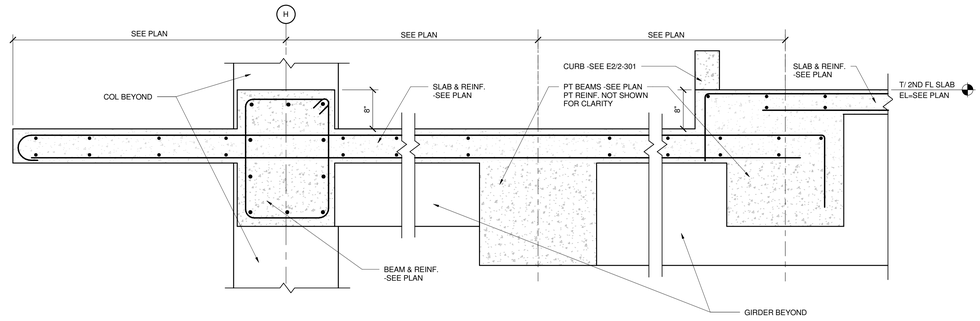
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE SECTIONS AND DETAILS

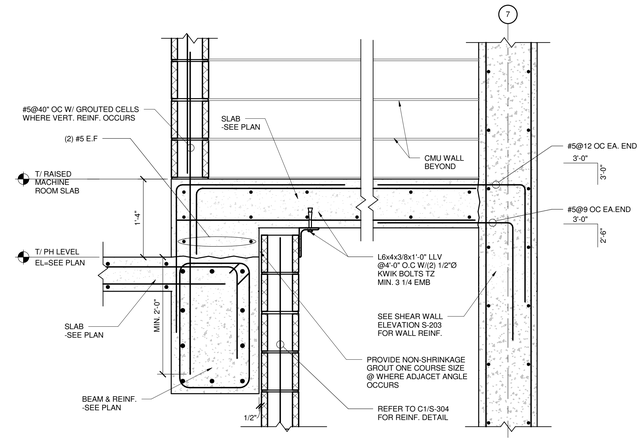
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S)
DRAWN RAE SUNG LEE	A/E DWG. NO. S-305	241
CHECKED MARTY STERR	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-305 REV. NO.

C:\rvt\002182-S-CENTRAL_basisfree.rvt
7/5/2011 3:05:54 PM

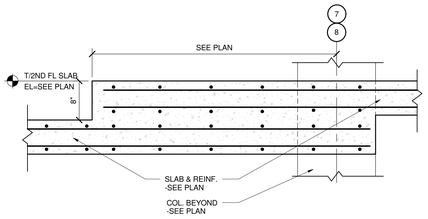


D2 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

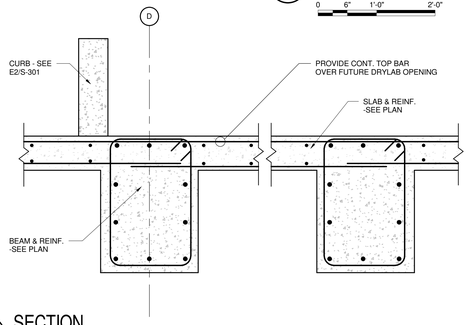


NOTE: LOCATION OF SOLID GROUT CELL IN CMU WALL FOR RAIL SUPPORT SHOULD BE COORDINATED WITH ELEV. MFR.

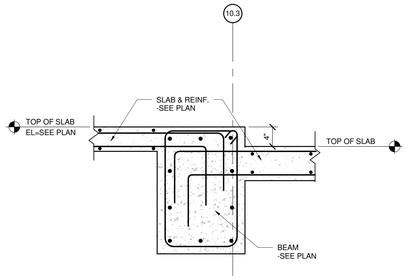
D5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



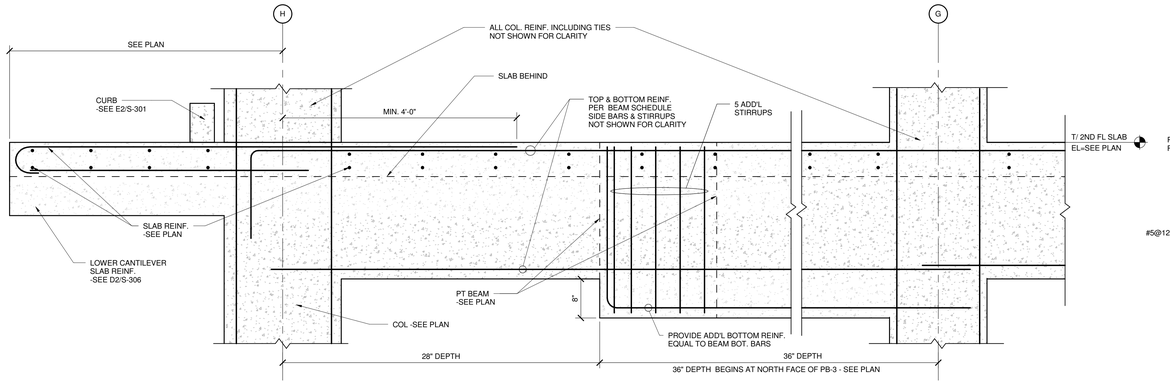
C3 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



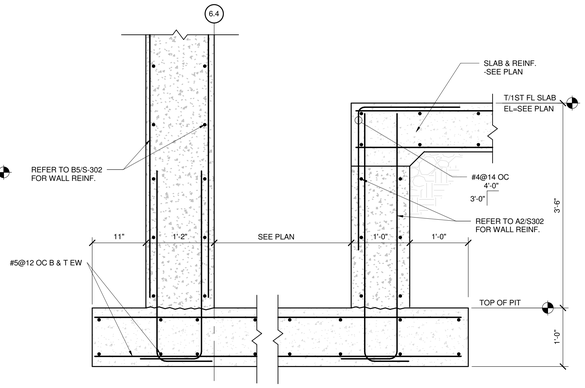
C4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



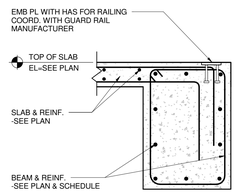
C5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



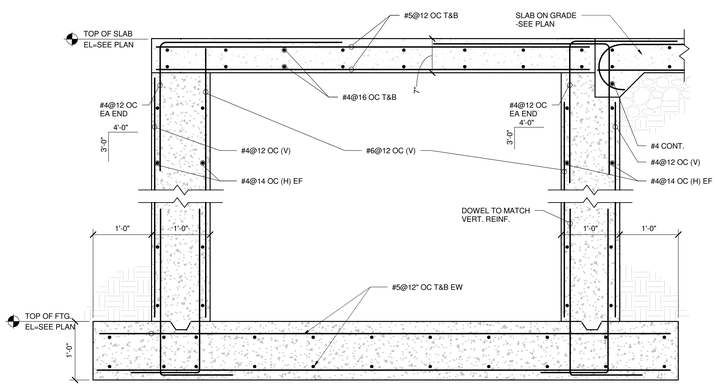
B1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



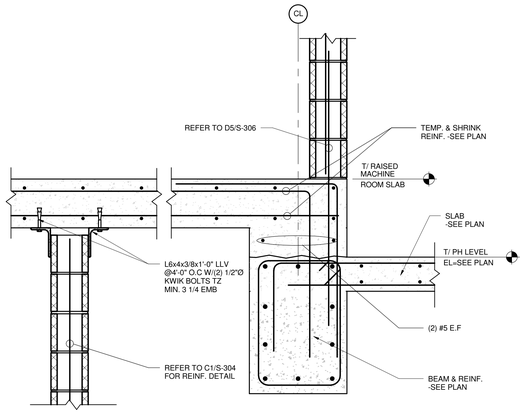
B4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



B5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

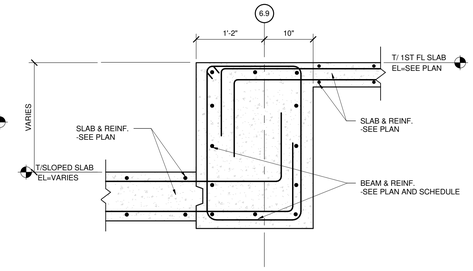


A2 SECTION
1" = 1'-0"



NOTE: LOCATION OF SOLID GROUT CELL IN CMU WALL FOR RAIL SUPPORT SHOULD BE COORDINATED WITH ELEV. MFR.

A4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-306

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

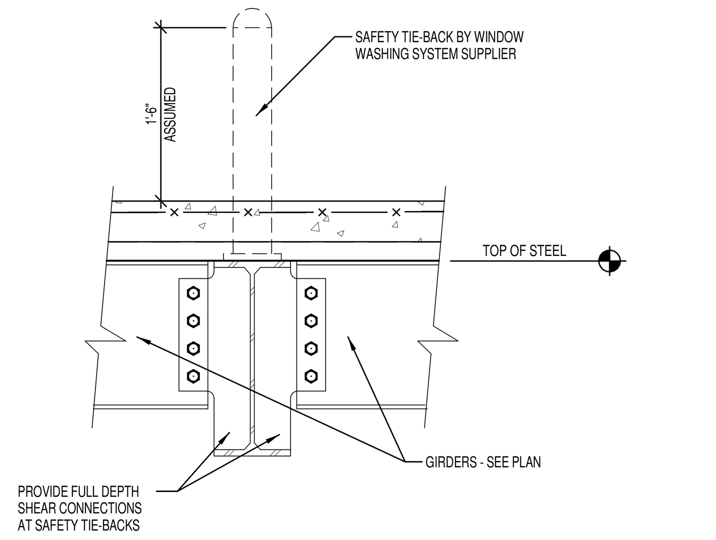
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
CONCRETE SECTIONS AND DETAILS

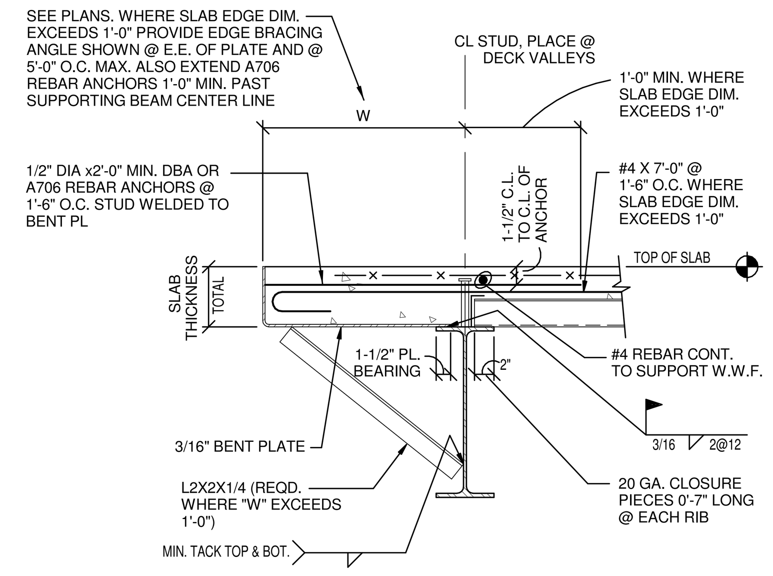
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-306	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-306 REV. NO.

C:\vn002182-S-CENTRAL.\ssilane.rvt
7/5/2011 3:05:57 PM



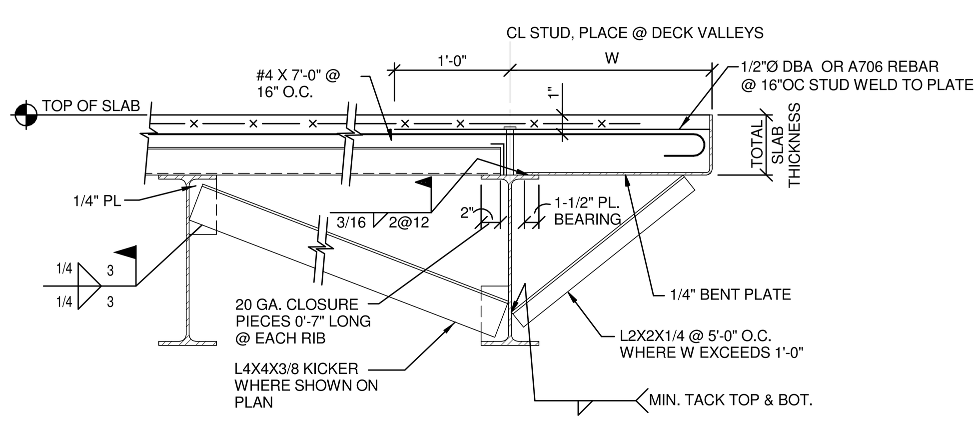
D1 TYP. CONNECTION AT SAFETY TIE-BACK
NO SCALE



NOTES:

1. REBAR ANCHORS MUST BE SHOP WELDED TO PLATE AND PLATE FIELD WELDED TO BEAM.
2. PLAN DIMENSION "W" SHALL NOT VARY BY MORE THAN + OR - 3/8" FROM INTENDED GRID LINE LOCATION REGARDLESS OF TOLERANCES PERMITTED IN SUPPORTING STEEL FRAMEWORK.

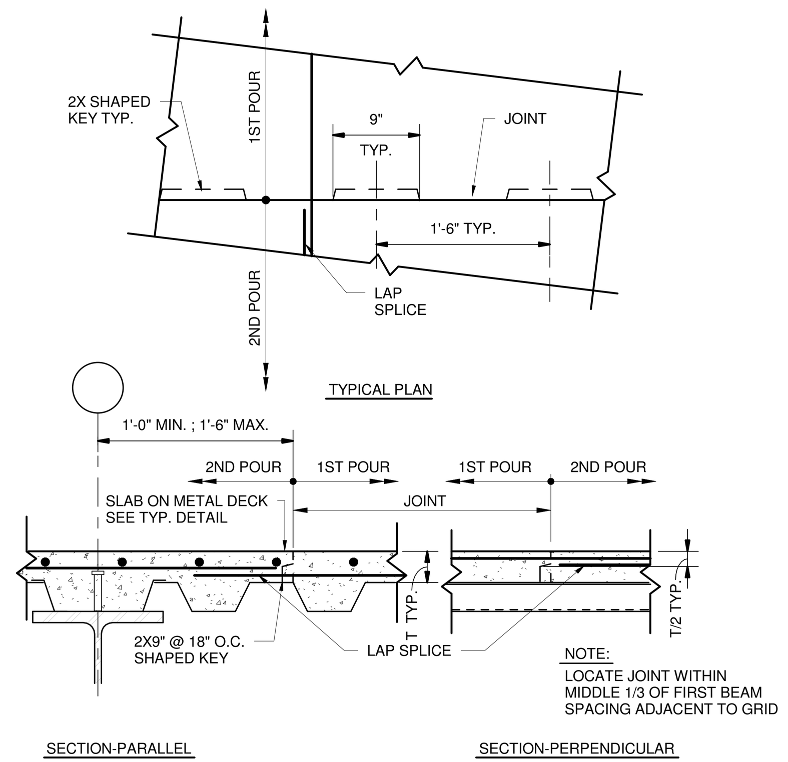
D2 SLAB EDGE DETAIL
NO SCALE



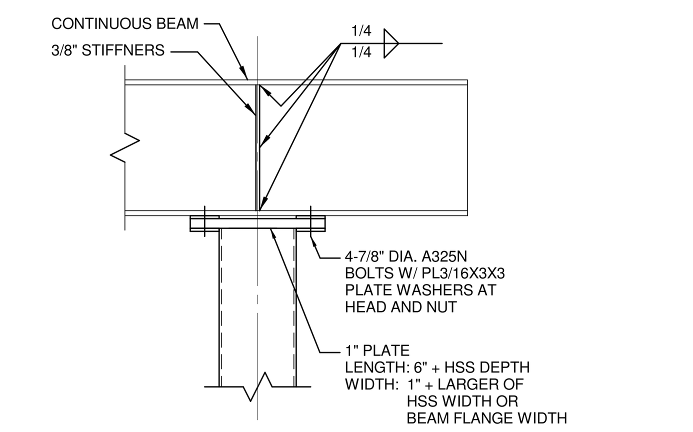
NOTES:

1. PLAN DIMENSION "W" SHALL NOT VARY BY MORE THAN + OR - 3/8" FROM INTENDED GRID LINE LOCATION REGARDLESS OF TOLERANCES PERMITTED IN SUPPORTING STEEL FRAMEWORK.

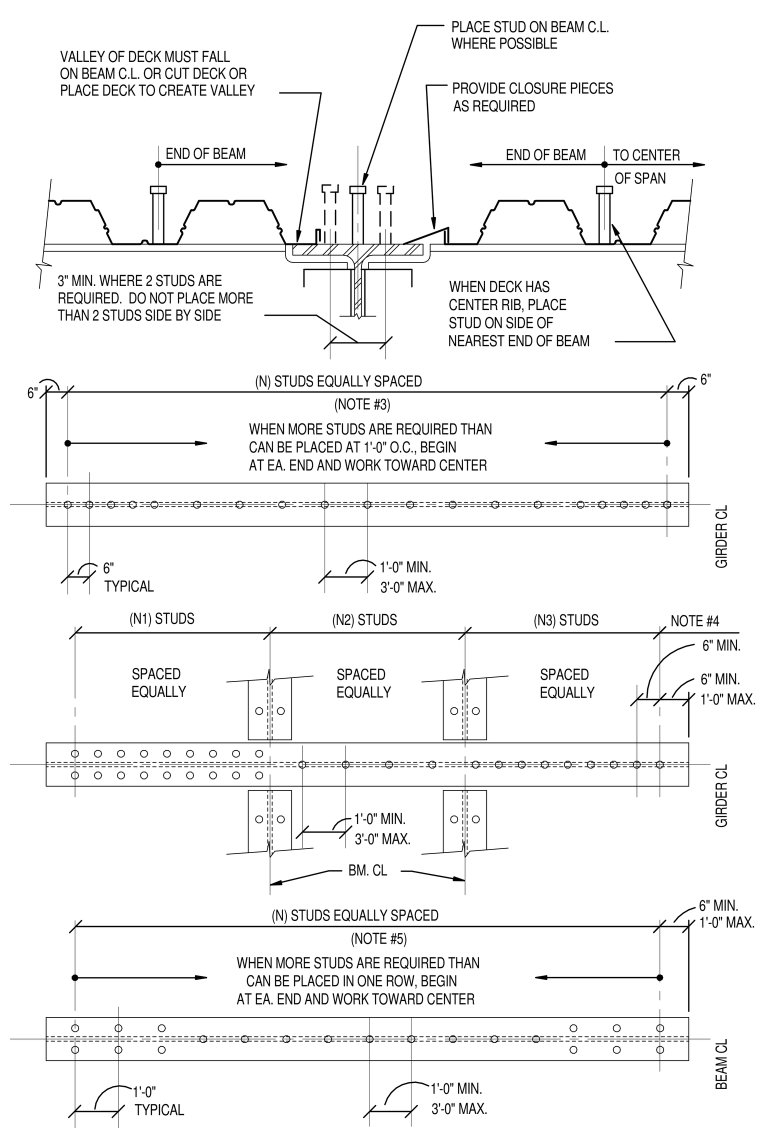
D3 EXT. SLAB EDGE DETAIL
NO SCALE



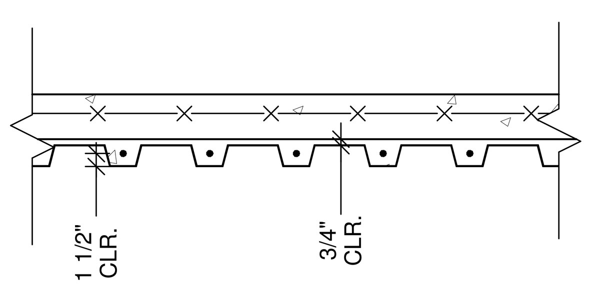
D4 TYP. COMPOSITE SLAB JOINT DETAIL
NO SCALE



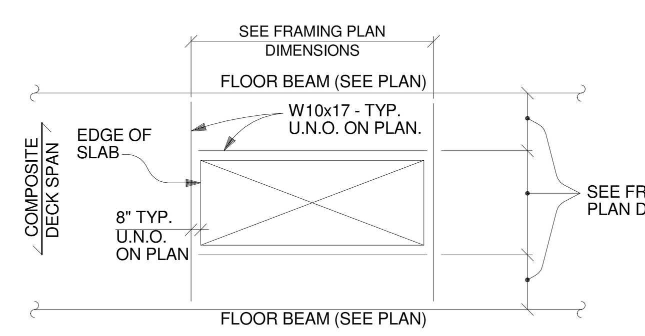
D5 CANTILEVERED BEAM OVER HSS COLUMN
NO SCALE



STUD PLACEMENT DETAILS



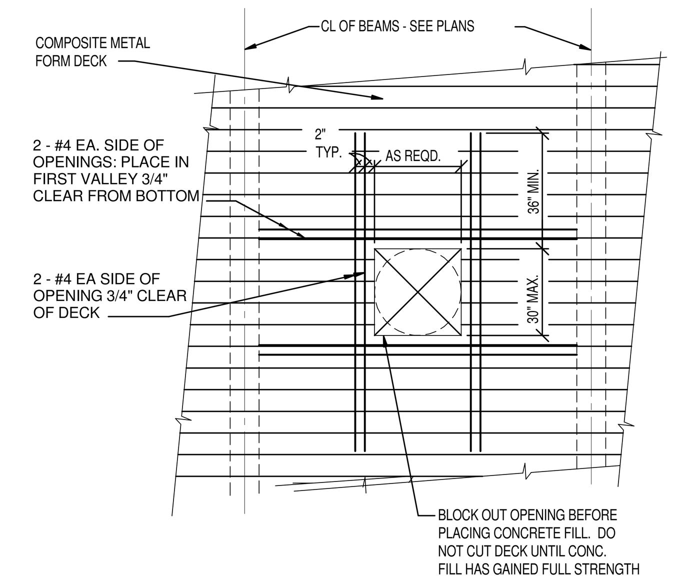
C2 TYP. MECH SLAB REINFORCING LAYOUT
NO SCALE



NOTES:

1. WHEN BEAM SIZES ARE OMITTED ON THE PLAN AT FRAMED OPENINGS, PROVIDE W10x17 BEAMS AS INDICATED BY THE DETAIL.
2. PROVIDE SLAB CLOSURE PLATES AT ALL OPENINGS ACCORDING TO THE TYPICAL EDGE OF SLAB DETAIL.

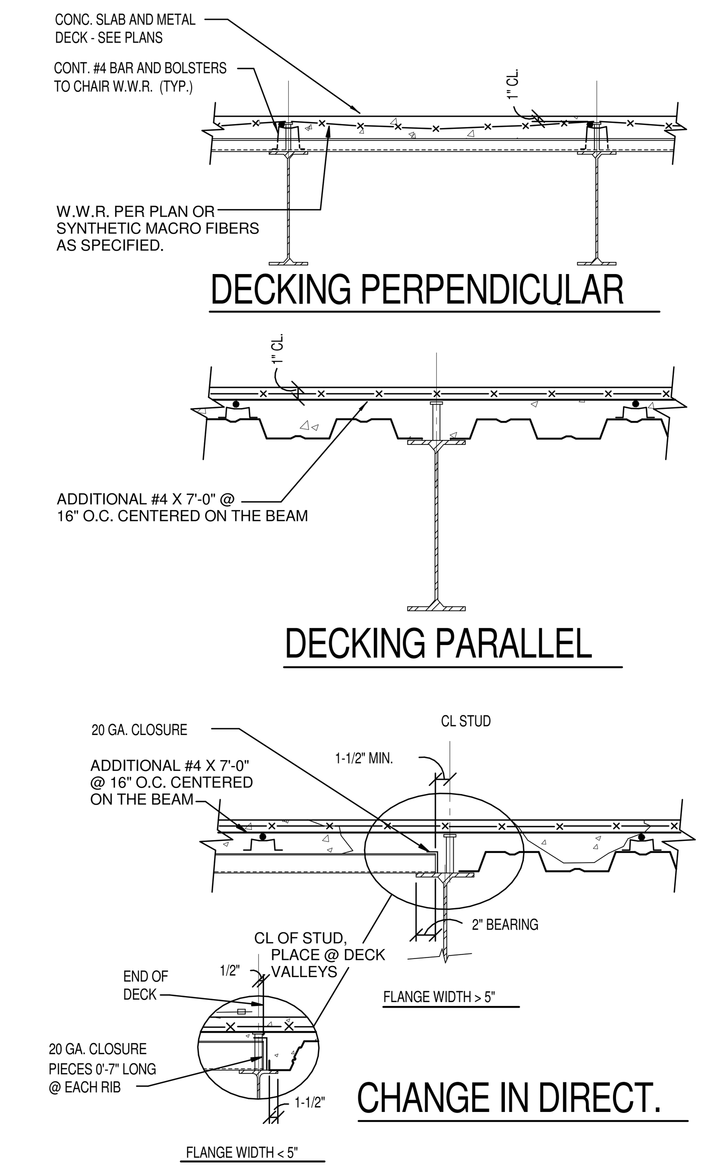
C3 TYPICAL SUPPLEMENTAL FRAMING AT COMPOSITE SLAB OPENING
NO SCALE



NOTE :

1. MULTIPLE OPENINGS WITH A CLEAR DISTANCE LESS THAN 3 TIMES THE SIZE OF THE LARGER OPENING SHALL BE TREATED AS A SINGLE OPENING. WHEN DIMENSIONAL OR STRUCTURAL SIZE LIMITATIONS ARE EXCEEDED, REFER TO TYPICAL SUPPLEMENTAL FRAMING AT COMPOSITE SLAB OPENING DETAIL.
2. NOTIFY ENGINEER WHEN BAR EXTENSION IS LIMITED.
3. DETAIL IS TYPICAL FOR ALL OPENINGS UNLESS NOTED OTHERWISE ON PLANS.
4. CONTRACTOR SHALL COORDINATE EXACT SIZE AND LOCATION OF OPENING WITH APPLICABLE DISCIPLINE(S). NOT ALL OPENINGS ARE SHOWN ON STRUCTURAL DRAWINGS.
5. OPENING TO BE MIN 2" FROM COLUMN OR BEAM FLANGE.

C4 TYP. UNFRAMED OPENING IN COMPOSITE SLAB
NO SCALE



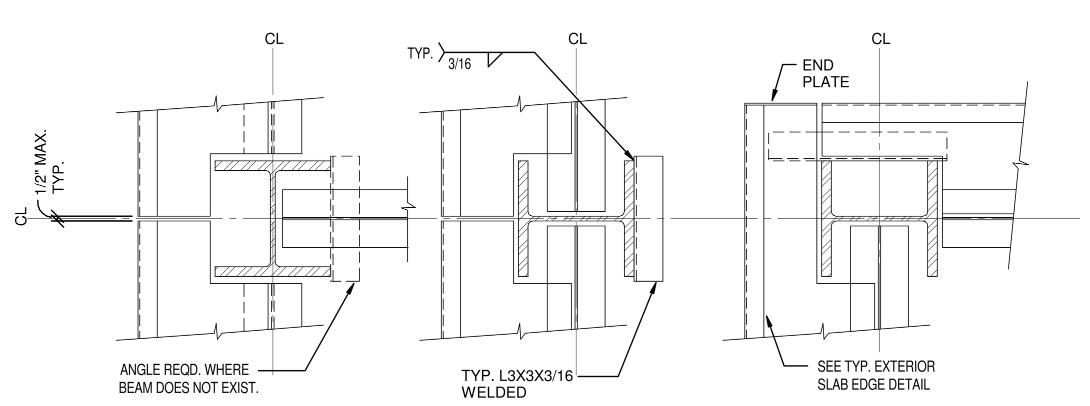
C5 TYPICAL COMPOSITE SLAB REINFORCING
NO SCALE

STUD PLACEMENT NOTES:

PLACEMENT INSTRUCTIONS: HEADED STUD TYPE SHEAR CONNECTORS FOR COMPOSITE BEAMS (REFFERRED TO AS "STUDS" IN THE FOLLOWING NOTES)

1. STUD SIZE AND HEIGHTS AFTER WELDING:
   A. 2" DECK .... 3/4"DIA. X 0'-4" @ 5 1/2" SLABS
   B. 2" DECK .... 3/4"DIA.X 0'-5 1/2" @ SLABS > 5 1/2"
2. WHEN A SINGLE NUMBER IN PARENTHESES (N) IS INDICATED ON THE FRAMING PLAN BESIDE A BEAM OR GIRDER THAT NUMBER IS THE NUMBER OF SHEAR STUDS TO BE PLACED ALONG THE BEAM LENGTH. WHEN MORE THAN ONE NUMBER IN PARENTHESES (N1) (N2) ETC. IS SHOWN BESIDE A BEAM OR GIRDER; EACH NUMBER INDICATES THE NUMBER OF SHEAR STUFS TO BE PLACED WITHIN THAT SEGMENT OF THE BEAM OR GIRDER (I.E. SEGMENTS OF GIRDER DEFINED BY INTERSECTING BEAMS).
3. WHEN DECK RIBS ARE PARALLEL, AND THE STUD SPACING IS NOT SEGMENTED, SPACE STUDS EQUALLY ALONG GIRDER CENTERLINE. AS THE NUMBER OF STUDS INCREASES, DECREASE SPACING TO 1'-0" MINIMUM. WHEN NUMBER OF STUDS IS GREATER THAN 1'-0" SPACING PERMITS, DIVIDE REMAINDER AND BEGINNING AT EACH END, INSTALL STUDS AT 6" O.C. ALONG GIRDER CENTERLINE UNTIL REQUIRED NUMBER OF STUDS ARE PROVIDED.
4. WHEN THE DECK RIBS ARE PARALLEL AND THE STUD SPACING IS "SEGMENTED", SPACE THE STUDS EQUALLY ALONG THE GIRDER CENTERLINE OVER THAT SEGMENT. WHEN THE SPACING OF A SINGLE ROW OF STUDS BECOMES LESS THAN 6", PROVIDE DOUBLE STUDS EQUALLY SPACED.
5. WHEN DECK RIBS ARE PERPENDICULAR, SPACE STUDS AT 3'-0" O.C. ALONG CENTERLINE OF BEAM. DIVIDE REMAINDER OF STUDS AND BEGINNING AT EACH END INSTALL AT 1'-0" O.C. UNTIL REQUIRED NUMBER OF STUDS ARE PROVIDED. WHEN NUMBER OF STUDS EXEED THE 1'-0" SPACING, BEGINNING AT EACH END PLACE TWO STUDS. AT 1'-0" O.C. UNTIL REQUIRED NUMBER OF STUDS ARE PROVIDED.
6. CHALK BEAM CENTERLINE WHEN DECK SPAN IS PERPENDICULAR.
7. PREPARE STUD PLACEMENT DRAWING AND INCLUDE TOTAL NUMBER OF STUDS REQUIRED FOR EACH BEAM

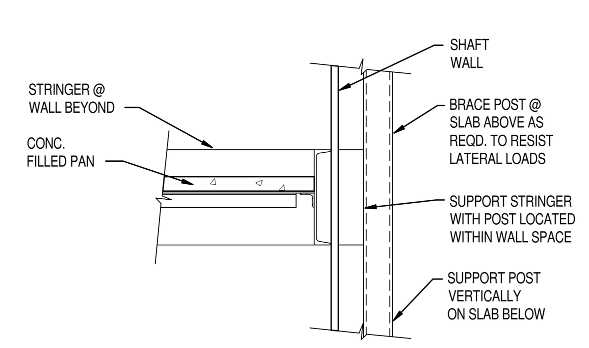
B1 HEADED STUD SHEAR CONNECTORS
NO SCALE



NOTE :

1. METAL DECK NOT SHOWN FOR CLARITY.
2. PROVIDE TYP. ANGLE AT EXT. COLUMNS AND INTERIOR COLUMNS WHERE BEAMS ARE NOT PRESENT.
3. ANGLES NOT SHOWN ON OTHER SECTIONS FOR CLARITY.
4. PROVIDE SHEET METAL DECK CLOSURE PIECE TO PREVENT CONCRETE LEAKAGE @ COLUMNS.

B2 TYPICAL DECK SUPPORT AT W COLUMNS
NO SCALE



B3 TYP. STAIR INTERMEDIATE LANDING SUPPORT
NO SCALE

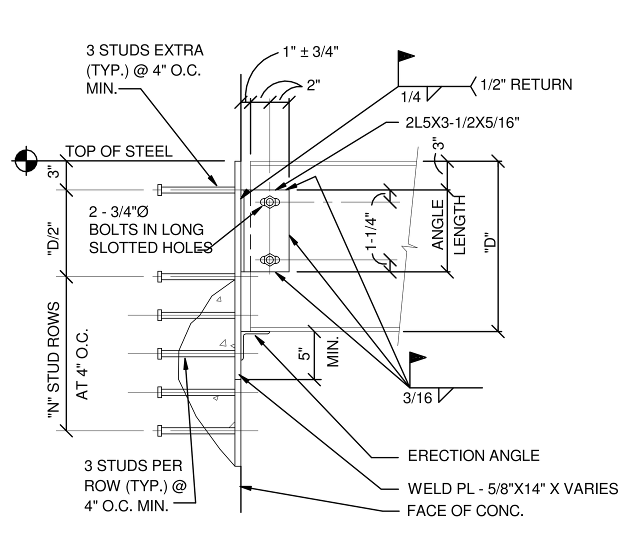
BEAM CONNECTION SCHEDULE	
BEAM TYPE	REACTION (KIPS)
C AND HSS	15
W10	25
W12	35
W14	45
W16	70
W18	90
W21	125
W24	130
W27	150
W30	175
W33	195
W36	210

NOTE: REACTIONS PROVIDED ARE FACTORED.

A1 BEAM CONNECTION SCHEDULE
NO SCALE

MIN. WELD PL SCHEDULE

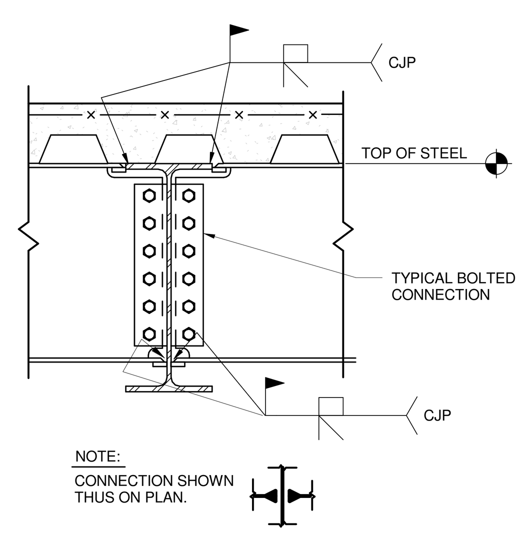
NOM. BM. DEPTH "D"	ANGLE LENGTH	NO. STUD ROWS "N"
8, 10, 12	5-1/2"	1
14, 16, 18	8-1/2"	2
21, 24	11-1/2"	3
27, 30	14-1/2"	4
33, 36	17-1/2"	5



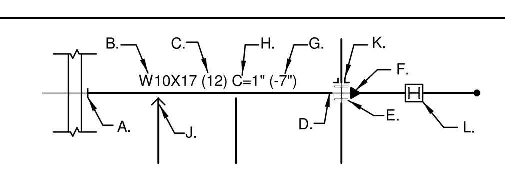
NOTES :

1. ALL STUDS SHALL BE 5/8"ØX0'-8" (CORE WALLS) AND 0'-6" (BASEMENT WALLS) FINAL LENGTH HEADED STUDS
2. PROVIDE MINIMUM WELD PLATE CONNECTIONS AS INDICATED IN ABOVE SCHEDULE TYPICAL. WHERE STUD ROWS AND ANGLE LENGTH ARE INDICATED, I.E. 5 - 17-1/2
   PROVIDE NUMBER OF ROWS AND ANGLE LENGTH AS INDICATED.
3. CONNECTION INDICATED THUS ON PLAN

A2 SUPPORT DETAILS
NO SCALE



A3 TYP. BEAM THRU BEAM CONN.
1" = 1'-0"

STEEL FRAMING	
BEAM CALL OUTS SIZE CAMBER ELEVATION STUDS CONNECTION SYMBOLS SIMPLE MOMENT SLIDE SEATED FULL DEPTH DRAG SPLICE BRACE COLUMNS	 A. TYPICAL BEAM TO CONCRETE WALL CONNECTION B. AISC STANDARD SIZE DESIGNATIONS C. NUMBER IN PARENTHESIS IS HEADED STUD SHEAR CONNECTORS D. TYPICAL SIMPLE FRAMING CONNECTIONS E. WIDE FLANGE COLUMN SYMBOL (DRAWN TO SCALE FOR COL. SIZE AT LOWEST LEVEL) F. MOMENT CONNECTION SYMBOL G. RELATIVE TOP OF BEAM ELEVATION H. BEAM CAMBER J. BRACE TO BEAM BOTTOM FLANGE K. DOUBLE ANGLE CONNECTION L. BOTTOM OF COLUMN/TRANSFER GIRDER
BOLTS	SECTION / PLAN OR ELEVATION / SECTION / PLAN OR ELEVATION
LATERAL FRAMES	FRAME A
DECK AND SLAB	PLAN NOTES: 1. INDICATES DIRECTION OF SPAN OF COMPOSITE METAL DECK W/ LIGHTWEIGHT CONCRETE FILL. REFER TO PLAN FOR CONCRETE THICKNESS AND REINFORCING.
COLUMNS	COLUMN SIZE COLUMN MARK (IF USED)
REINFORCING BARS	LAP SPLICE / OFFSET LAP SPLICE / COMPRESSION BUTT SPLICE / FULL TENSION BUTT SPLICE

NOTE: REFERENCE SPECIFICATIONS FOR KEY TO ABBREVIATIONS USED IN THE DRAWINGS.

A4 STANDARD STRUCTURAL SYMBOLS LEGEND
NO SCALE

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-501

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

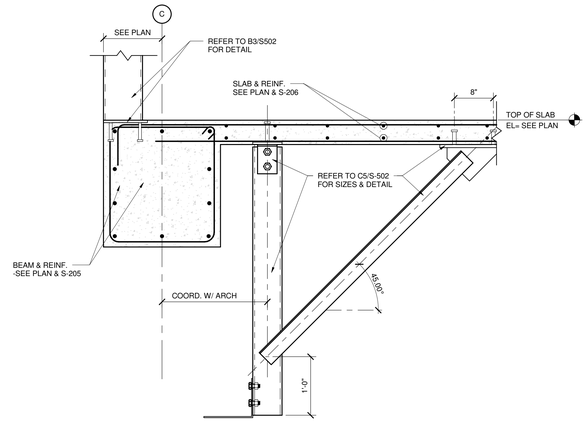
PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
TYPICAL STEEL DETAILS

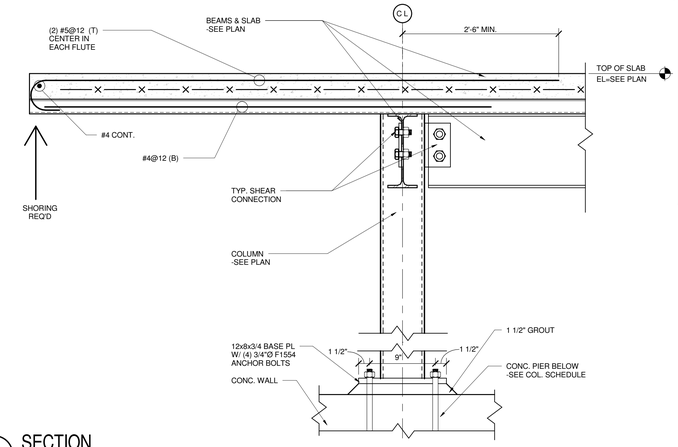
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN LARRY CASTANEDA	A/E DWG. NO. S-501	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-501 REV. NO.

C:\rvt\002182-S-CENTRAL_lcastane.rvt
7/5/2011 3:05:59 PM



D3 SECTION
1" = 1'-0"



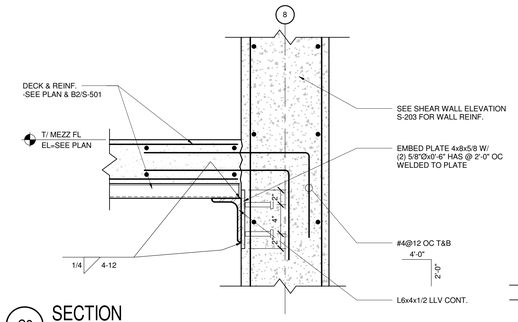
D4 SECTION
1 1/2" = 1'-0"

HDR

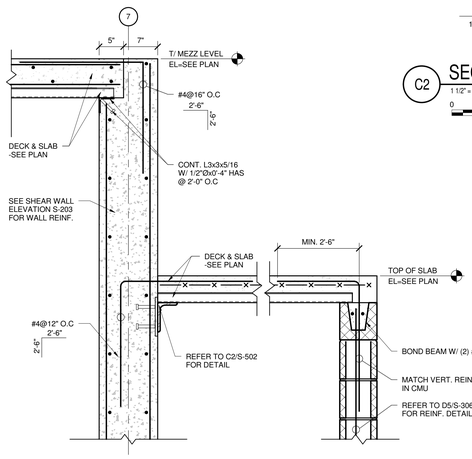
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

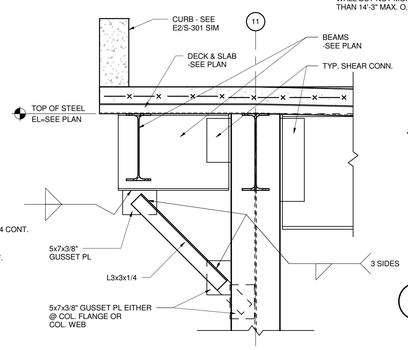
S-502



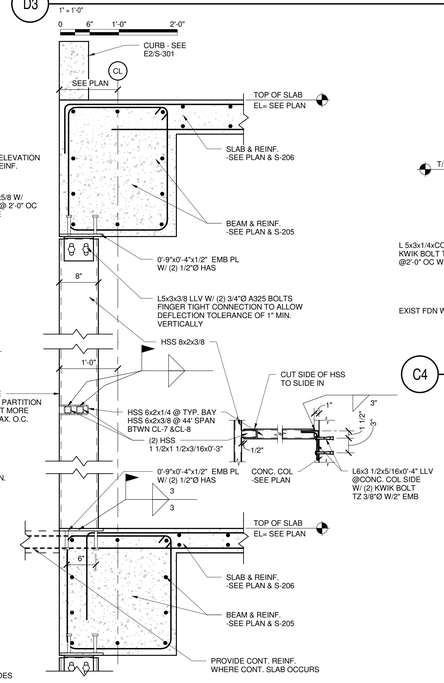
C2 SECTION
1 1/2" = 1'-0"



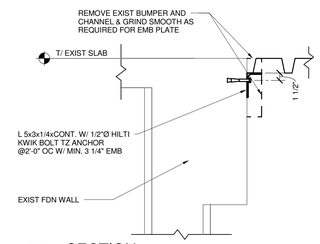
B1 SECTION
1" = 1'-0"



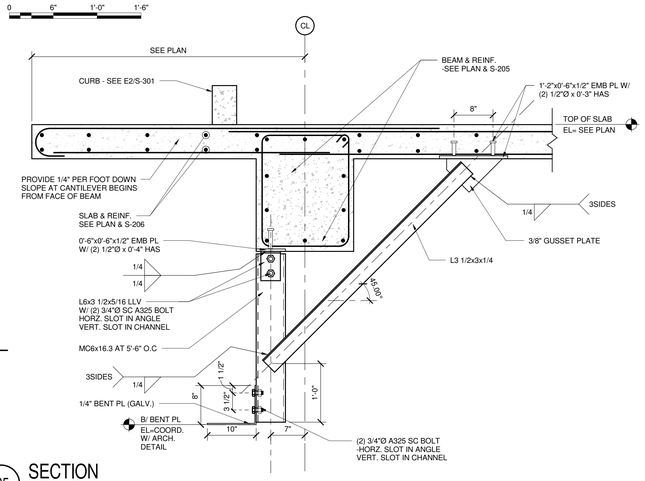
B2 SECTION
1" = 1'-0"



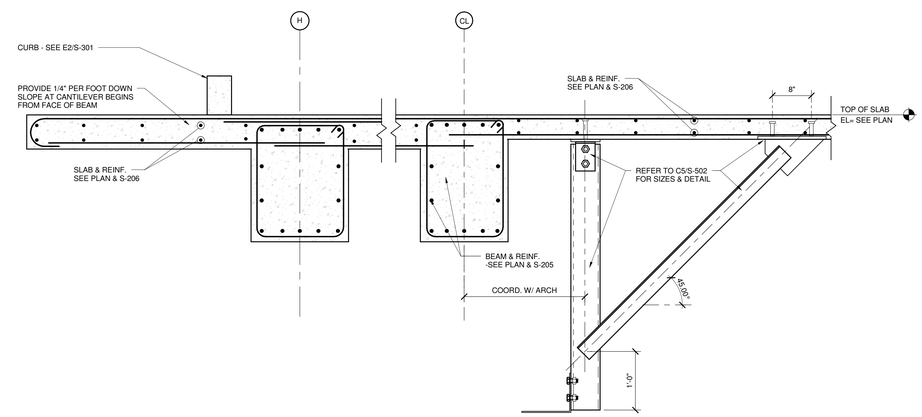
D3 SECTION
1" = 1'-0"



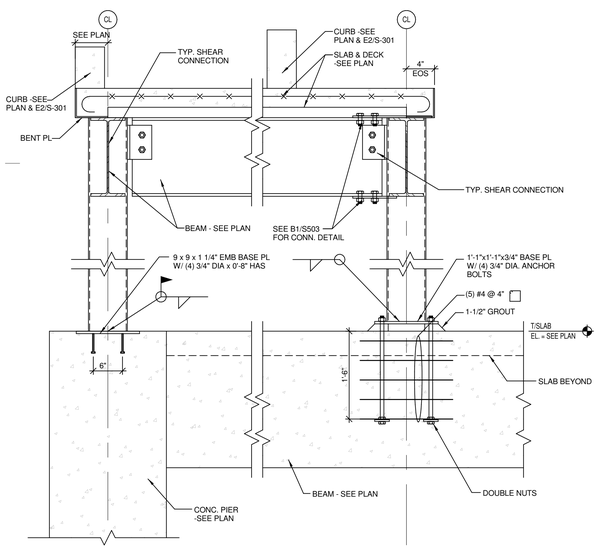
C4 SECTION
1" = 1'-0"



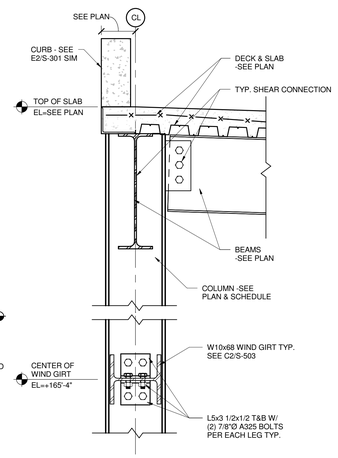
C5 SECTION
1" = 1'-0"



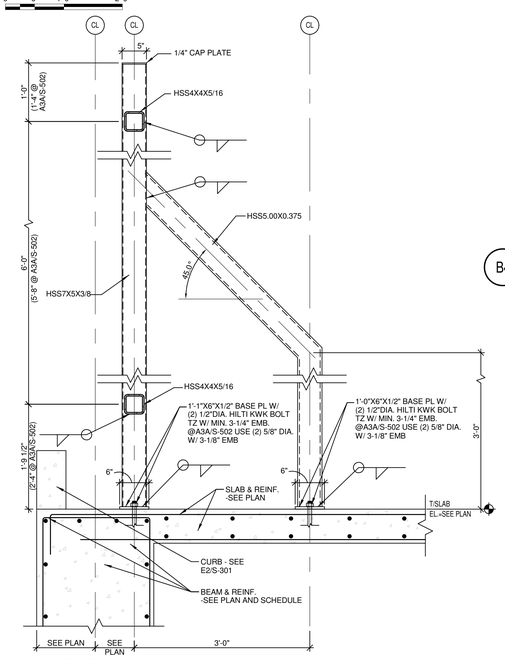
B4 SECTION
1" = 1'-0"



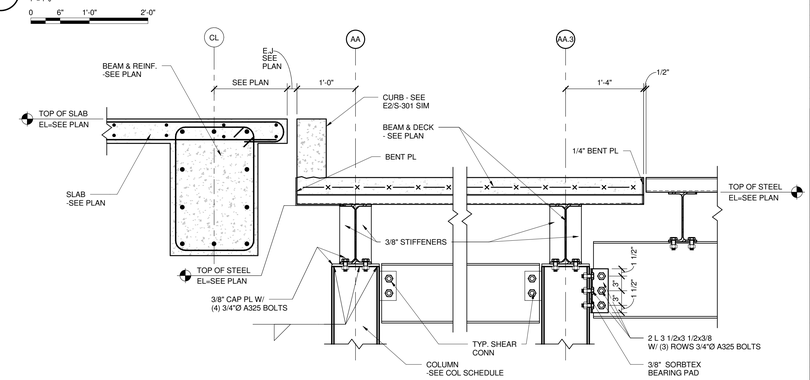
A1 SECTION
1" = 1'-0"



A2 SECTION
1" = 1'-0"



A3A A3 SECTION
1" = 1'-0"



A4 SECTION
1" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

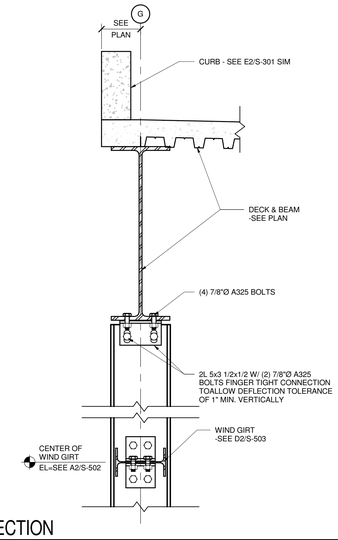
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
STEEL SECTIONS AND DETAILS

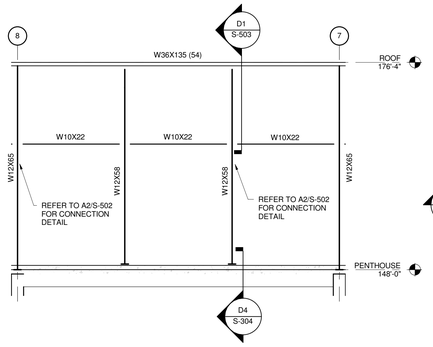
DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-502	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-S-502
REV. NO.

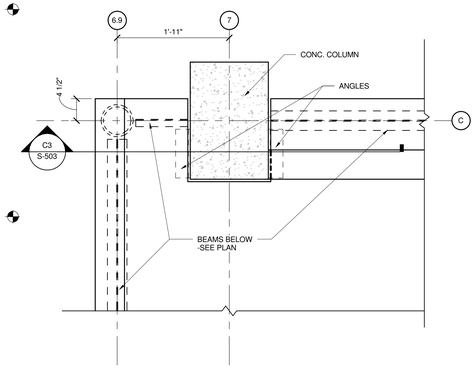
C:\vt\002182-S-CENTRAL_\sciatsmv.vt
7/5/2011 3:06:03 PM



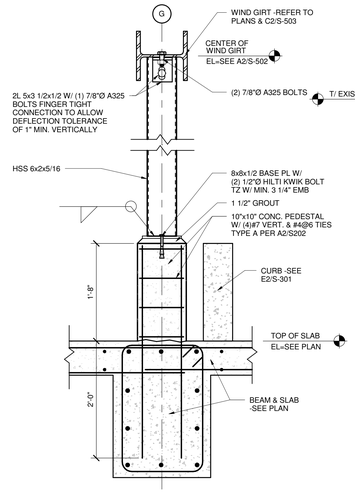
D1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



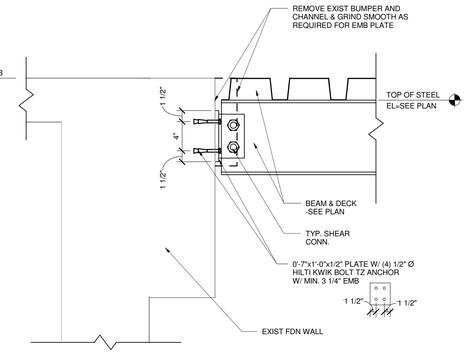
D2 WIND GIRT ELEVATION AT 44FT BAY
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



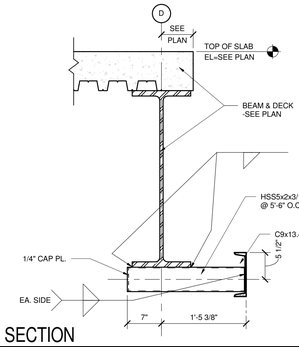
D3 ENLARGED PLAN
1" = 1'-0"
0 6" 1'-0" 2'-0"



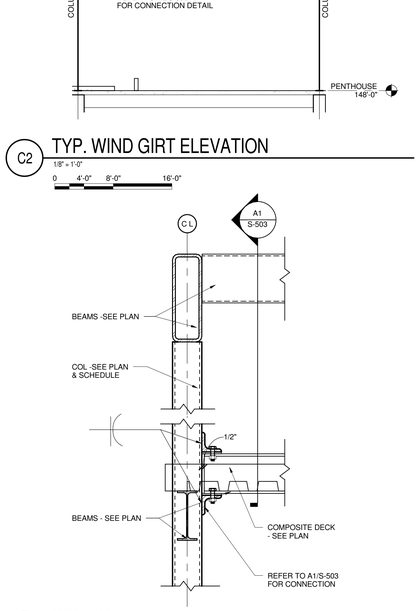
D4 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



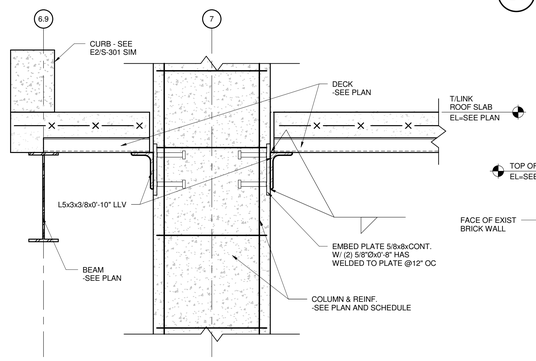
D5 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"



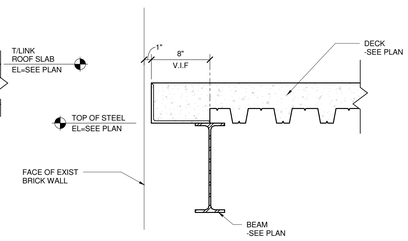
C1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



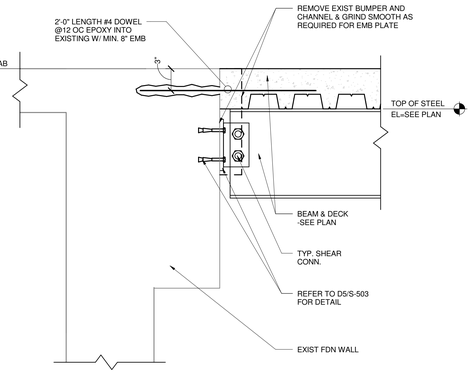
C2 TYP. WIND GIRT ELEVATION
1/8" = 1'-0"
0 4'-0" 8'-0" 16'-0"



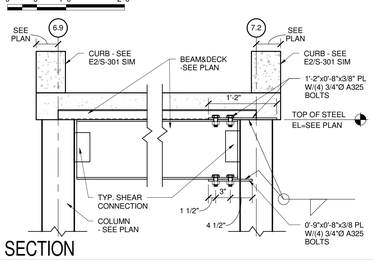
C3 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"



C4 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"

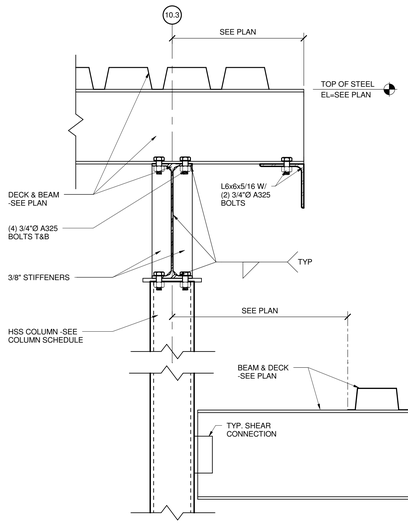


C5 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"

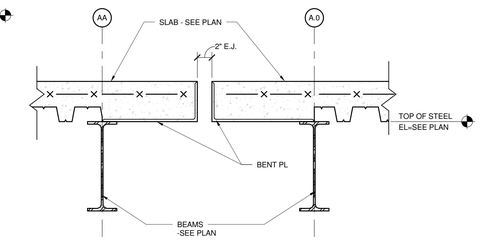


B1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

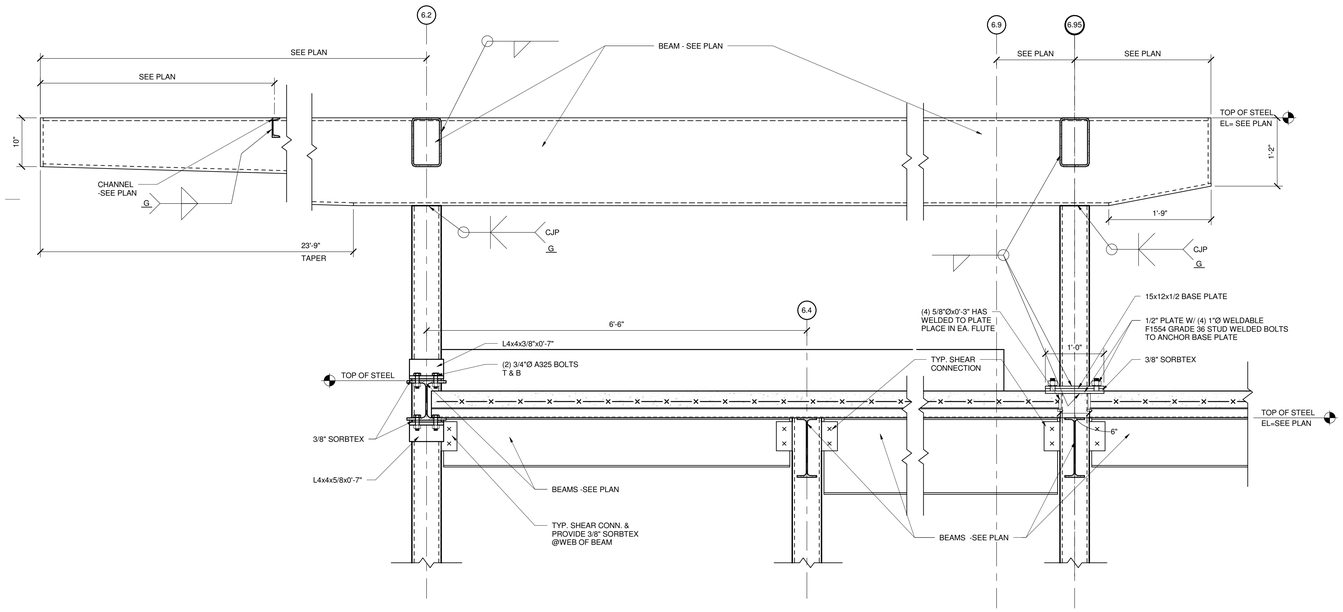
B2 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



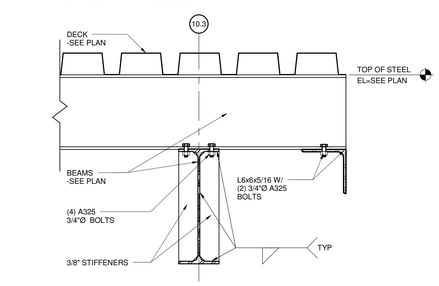
B4 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"



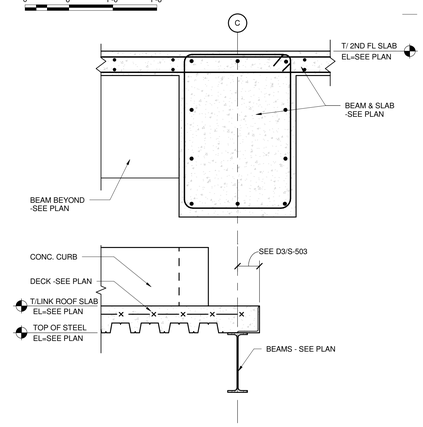
B5 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"



A1 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"



A4 SECTION
1 1/2" = 1'-0"
0 6" 1'-0" 1'-6"



A5 SECTION
1" = 1'-0"
0 6" 1'-0" 2'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-503

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			02/28/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
STEEL SECTIONS AND DETAILS

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN RAE SUNG LEE	A/E DWG. NO. S-503	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-503 REV. NO.

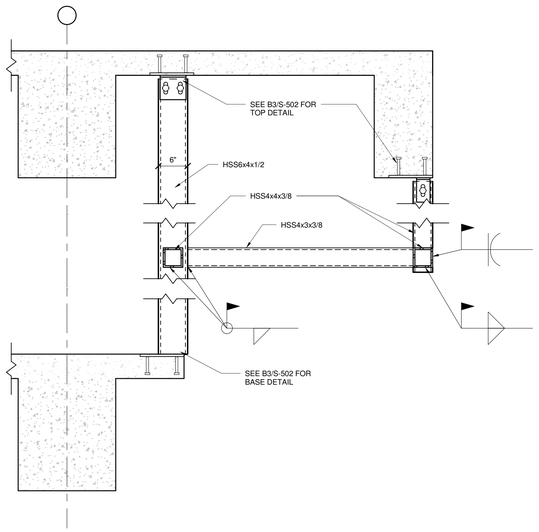
C:\ver002182-S-CENTRAL_Eastbrne.rvt
7/5/2011 3:06:08 PM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

S-504



A5 SECTION

1" = 1'-0"

0 6" 1'-0" 2'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

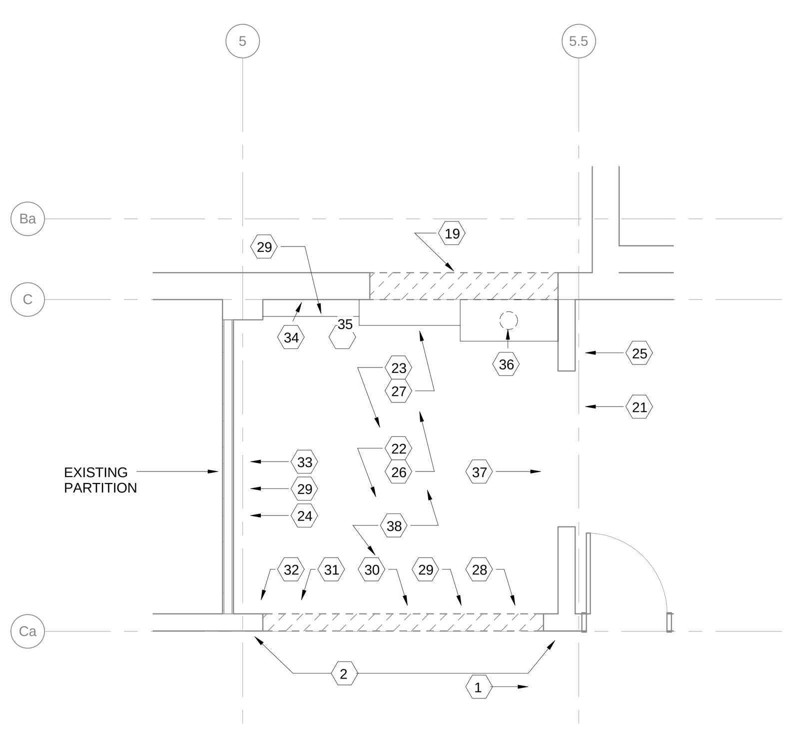
DOCUMENT TITLE

STEEL SECTIONS AND DETAILS

DESIGNED RAE SUNG LEE	A/E CADD FILE	FACILITY NO(S) 241
DRAWN ALEX BABEL	A/E DWG. NO. S-504	
CHECKED MARTY STERR	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-S-504 REV. NO.

C:\rvt\002182-S-CENTRAL_basiliane.rvt
7/5/2011 3:06:08 PM



C1 ENLARGED DEMOLITION PLAN – LAB D-009
1/4" = 1'-0"

KEYNOTES - DEMOLITION

1. REMOVE HOLLOW METAL DOOR AND FRAME.
2. REMOVE CMU WALL AND PATCH CMU AT PERPENDICULAR WALLS. IF WALL CANNOT BE REMOVED FULL HEIGHT, PROVIDE LINTEL AT OPENING HEADER IF POSSIBLE OR NOT LESS THAN 7' - 0" AFF.
3. REMOVE PORTION OF CMU & BRICK WALL TO CREATE DOOR OPENING. PROVIDE LINTEL, THRU-WALL FLASHING WITH END DAMS AND WEEPS. TOOTH IN BRICK JAMB RETURNS.
4. WHERE CONCRETE WALL IS TO REMAIN, REMOVE EXTERIOR WATERPROOFING MATERIAL AND CLEAN EXPOSED TO VIEW.
5. REMOVE STEEL STAIRS AND RAILINGS.
6. REMOVE WINDOW AND FRAME.
7. PATCH OPENING W/ CMU TO MATCH EXISTING. TOOTH INTO EXISTING CMU AT JAMBS.
8. REMOVE DOCK BUMPERS, PATCH CONC. WALL TO RECEIVE NEW WORK.
9. REMOVE CANOPY, CANOPY SUPPORT COLUMNS, DOWNSPOUTS, PATCH PERPENDICULAR EXTERIOR WALL.
10. REMOVE METAL LOUVER.
11. REMOVE CURTAIN WALL. FULL HEIGHT.
12. REMOVE EXTERIOR WALL, PATCH PERPENDICULAR WALL.
13. REMOVE FOUNDATION WALLS, FOOTING, & SLAB.
14. MOVE & REPLACE MASONRY AS NEEDED & INSTALL NEW LINE OF THRU-WALL FLASHING & WEEPS.
15. LOCATE FP SIAMESE CONNECTION.
16. LOCATE NITROGEN FILLING STATIONS & PIPING.
17. LINE OF NEW CONSTRUCTION, FOR REFERENCE ONLY.
18. REVERSE SWING OF DOOR AS INDICATED.
19. SAW - CUT DOOR OPENING IN CONCRETE FOUNDATION WALL.
20. REMOVE PORTION OF CMU WALL INSIDE OFFOUNDATION WALL. TOOTH IN CMU JAMB RETURNS. PROVIDE LINTEL.
21. PROVIDE CMU INFILL OF OPENING. TOOTH CMU INTO EXISTING CMU AT JAMBS.
22. REMOVE VINYL TILE FLOORING AND BASE.
23. REMOVE SUSPENDED ACOUSTICAL TILE CEILING.
24. PROVIDE INTERIOR STUD PARTITION ADJACENT TO EXISTING STUD PARTITION.
25. VERIFY EXISTING WALL EXTENDS TO STRUCTURE ABOVE. EXTEND WALL AS REQUIRED USING PARTITION TYPE 'B'.
26. PROVIDE VCT AND BASE TO MATCH EXISTING CORRIDOR.
27. PROVIDE SUSPENDED ACOUSTICAL TILE CEILING SYSTEM. REINSTALL HVAC DIFFUSER. PROVIDE NEW LIGHT FIXTURES.
28. COORDINATE REMOVAL OF LIGHT SWITCH WITH ELECTRICAL CONTRACTOR.
29. COORDINATE REMOVAL OF SURFACE MOUNTED RACEWAY WITH ELECTRICAL CONTRACTOR.
30. COORDINATE RELOCATION OF EMERGENCY LIGHTING TO WEST WALL OF ROOM WITH ELECTRICAL CONTRACTOR.
31. COORDINATE REMOVAL OF SPECIALTY GAS PIPING WITH PLUMBING CONTRACTOR.
32. COORDINATE REMOVAL OF ELECTRICAL PANEL BOARD WITH ELECTRICAL CONTRACTOR. IF STILL REQUIRED FOR ADJACENT LAB, RELOCATE TO ADJACENT LAB.
33. REMOVE SNORKEL EXHAUST. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
34. REMOVE EPOXY TOP AND FURRING. COORDINATE REMOVAL OF GAS OUTLETS AND PIPING WITH PLUMBING CONTRACTOR. COORDINATE REMOVAL OF CUP SINK AND WATER AND DRAINAGE PIPING WITH ELECTRICAL CONTRACTOR.
35. REMOVE AND SALVAGE LAB CASEWORK, EPOXY TOP, AND SINK AND TURN OVER TO OWNER. COORDINATE REMOVAL OF WATER SUPPLY AND DRAINAGE PIPING WITH PLUMBING CONTRACTOR.
36. REMOVE AND SALVAGE LAB CASEWORK AND FUMEHOOD AND TURN OVER TO OWNER. COORDINATE REMOVAL OF GAS, WATER SUPPLY AND DRAINAGE PIPING, WITH PLUMBING CONTRACTOR. COORDINATE ELECTRICAL DISCONNECT WITH ELECTRICAL CONTRACTOR. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
37. REINSTALL EXISTING SMOKE DETECTOR IN NEW CEILING.
38. PAINT ALL WALLS IN ROOM.
39. REMOVE CAPPED PIPE AND CAP INSIDE BUILDING. PATCH HOLE. COORDINATE WITH PLUMBING CONTRACTOR.
40. REMOVE FLOOR DRAIN AND PIPING. COORDINATE WITH PLUMBING CONTRACTOR.
41. REMOVE EXISTING THRU-WALL EXHAUST FANS AND LOUVERS. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL OPENING WITH CONCRETE.
42. REMOVE LIGHT FIXTURE. COORDINATE WITH ELECTRICAL CONTRACTOR.
43. RELOCATE EXISTING EXIT SIGN TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
44. RELOCATE FIRE ALARM PULL STATION AND ALARM BELL / STORM TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
45. RELOCATE FIRE EXTINGUISHER TO NEW DOOR LOCATION.
46. INFILL OPENING WITH BRICK AND CMU BACKUP TO MATCH EXISTING. TOOTH INTO EXISTING BRICK AND CMU AT JAMBS.
47. REMOVE OVERHEAD DOOR, STEEL CHANNEL JAMBS AND HEAD, AND ALL DOOR COMPONENTS. COORDINATE WITH ELECTRICAL.
48. INFILL OPENING AROUND NEW HOLLOW METAL ROOF ACCESS DOOR. PROVIDE RAISED CURB AS DETAILED.
49. RELOCATE TEST DRAINS TO LOWER ELEVATION AT 2' - 0" ABOVE ESB DOCK ELEVATION. PATCH HOLES IN CONCRETE FOUNDATION WALL. COORDINATE WITH PLUMBING AND FIRE PROTECTION CONTRACTORS.
50. REMOVE AND SALVAGE POWER LIFT AND TURN OVER TO OWNER. COORDINATE REMOVAL OF ASSOCIATED ELECTRICAL WITH ELECTRICAL CONTRACTOR.
51. COORDINATE NECESSARY MODIFICATION TO PERIMETER GROUNDING, CONDUCTORS TO ADDRESS LOWER DOCK AND DRIVE ELEVATION AND ELIMINATE CONFLICT AT LINKING CORRIDOR BREAK THRU TO BUILDING 223.
52. REMOVE AND CAP DRAIN PIPE INSIDE EXISTING BUILDING. CLOSE ASSOCIATED FLOOR DRAIN IN STORAGE ROOM S-106. COORDINATE WITH PLUMBING CONTRACTOR. PATCH HOLE IN CONCRETE WALL.
53. REMOVE SIDE-WALL SPRINKLER HEADS ALL ALONG EXTERIOR WALL AND CAP PIPING INSIDE EXISTING BUILDING. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
54. REMOVE ALL SURFACE MOUNTED ELECTRICAL CONDUIT, BOXES, AND DEVICES ALL ALONG EXTERIOR WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
55. REMOVE AND SALVAGE ALL SURFACE MOUNTED LOCK BOXES, SHELVES, SIGNAGE, AND CYLINDER RACKS ALL ALONG DOCK AND EXTERIOR WALL. TURN OVER TO OWNER.
56. REMOVE GUARDRAIL AND PATCH BRICK WALL AND CONCRETE SLAB.
57. REMOVE STEEL BRACKETS FROM END OF DOCK.
58. REMOVE CONCRETE STAIR AND STEEL RAILINGS.
59. RELOCATE FLOOR CLEANOUT TO LOCATION INSIDE MECHANICAL ROOM BELOW. COORDINATE WITH PLUMBING CONTRACTOR.
60. REMOVE AND SALVAGE HC PARKING SIGN, AND TURN OVER TO OWNER.
61. RELOCATE POWER RECEPTACLE TO NEW DOCK ELEVATION. PATCH HOLE IN CONCRETE WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
62. PATCH HOLE IN CONCRETE WALL WHERE GASEOUS NITROGEN PIPING HAS BEEN REMOVED BY OTHERS.
63. REMOVE STEEL GRATING AND ASSOCIATED FRAME.
64. REMOVE WINDOW AND INFILL MASONRY AT BOTH FIRST AND SECOND (1ST AND 2ND) FLOORS OF BUILDING 223.
65. PROVIDE NEW WINDOW AT SECOND (2ND) FLOOR OF BUILDING 223.
66. REMOVE CONCRETE RAMP AND HANDRAILS. PATCH CONCRETE WALL.
67. REMOVE SECTION OF CONCRETE WALL AND RAILING.
68. COORDINATE NECESSARY MODIFICATION TO BUILDING 222. PERIMETER DRAINAGE SYSTEM AND CLEAN OUTS TO ADDRESS LOWER DOCK AND DRIVE ELEVATIONS. COORDINATE WITH PLUMBING CONTRACTOR.
69. REMOVE EXIT SIGN. COORDINATE WITH ELECTRICAL CONTRACTOR.
70. REMOVE FIRE ALARM PULL STATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
71. RELOCATE GRAVITY LOUVER TO HIGHER ELEVATION ABOVE FLASHING LINE OF NEW ESB ROOF.
72. PATCH HOLE IN CONCRETE FOUNDATION WALL WHERE PIPE HAS BEEN REMOVED FROM WATER SERVICE OR CHILLED WATER SERVICE.
73. RELOCATE FIRE ALARM PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR.
74. RELOCATE UNIT HEATER TO BASEMENT LEVEL STAIR. COORDINATE WITH MECHANICAL CONTRACTOR.
75. ADD NEW LIGHT FIXTURE BELOW INTERMEDIATE LANDING AT BASEMENT LEVEL STAIR DISCHARGE.
76. REMOVE AND SALVAGE EMERGENCY GENERATOR AND TURN OVER TO OWNER. REMOVE ASSOCIATED CONCRETE PAD AND FENCING. COORDINATE WITH ELECTRICAL CONTRACTOR.
77. REMOVE UNIT HEATER. COORDINATE WITH MECHANICAL CONTRACTOR.
78. REMOVE BLINDS.
79. REMOVE SURFACE MOUNTED RACEWAY. COORDINATE WITH ELECTRICAL CONTRACTOR.
80. REMOVE DOCK LEVELER. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL CONCRETE FOUNDATION WALL AND SLAB.
81. REMOVE STEEL BOLLARD.
82. REMOVE GLYCOL WATER SYSTEM PIPING AND HEATERS. CAP AT MAIN. COORDINATE REMOVAL WITH MECHANICAL CONTRACTOR.
83. EXISTING ELECTRIC UNIT HEATER TO REMAIN. RELOCATE AS REQUIRED TO ACCOMMODATE NEW OVERHEAD DOORS. PROVIDE NEW ELECTRIC UNIT HEATER TO MATCH EXISTING HEATER. COORDINATE WITH ELECTRICAL CONTRACTOR.
84. SAW CUT LOUVER-EXHAUST FAN OPENING IN CONCRETE FOUNDATION WALL.

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY EGRESS FROM EXISTING BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A SAFE AND PROTECTED EMERGENCY EGRESS ROUTE FOR PEDESTRIANS FROM ALL EXIT DISCHARGE DOORS AROUND OR THROUGH THE CONSTRUCTION SITE TO A PEDESTRIAN WAY LOCATED OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANYTHING LESS THAN FULL COMPLIANCE AND/OR ALTERNATIVE MEANS FOR FULL COMPLIANCE SHALL BE SUBMITTED TO THE ARGONNE AUTHORITY HAVING JURISDICTION (AHJ) FOR CONSIDERATION. NO SUCH DEVIATIONS FROM FULL COMPLIANCE OR ALTERNATIVE MEANS OF COMPLIANCE SHALL BE IMPLEMENTED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ARGONNE AHJ.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING BUILDING 223 LOADING DOCK FOR CONTINUING ARGONNE OPERATIONS UNTIL THE ALTERATIONS ARE COMPLETED AT THE BUILDING 222 DOCK AND THE EAST SIDE BUILDING 222 LOADING DOCK BAYS ARE TURNED OVER TO ARGONNE FOR USE. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR TURNOVER OF ALTERATIONS TO BUILDING 222 LOADING DOCK AND SUBSEQUENT SHUT-DOWN OF THE EXISTING BUILDING 223 LOADING DOCK.

3. THE EXISTING BULK LIQUID NITROGEN TANK, ALL ASSOCIATED NITROGEN PIPING, AND THE LIQUID NITROGEN DEWAR FILL STATIONS AT THE BUILDING 223 LOADING DOCK WILL BE DECOMMISSIONED AND REMOVED BY OTHERS PRIOR TO THE BEGINNING OF CONSTRUCTION.

4. THE CONTRACTOR SHALL MAINTAIN OPERATION OF THE EXISTING BUILDING 223 EMERGENCY GENERATOR UNTIL A TEMPORARY GENERATOR IS IN-PLACE, CONNECTED, AND OPERATIONAL; SERVING BUILDING 223. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR SWITCHOVER FROM BUILDING 223 EMERGENCY GENERATOR TO TEMPORARY GENERATOR.

5. THE CONTRACTOR SHALL MAINTAIN ACTIVE BUILDING SERVICES TO BOTH BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. TEMPORARY OUTAGES OF SERVICES TO THESE BUILDINGS FOR THE PURPOSES OF FINAL CONNECTIONS OR SWITCH OVER SHALL BE COMMUNICATED TO THE ARGONNE PM IN THE FORM OF A PROPOSED SCHEDULE AND SHALL MAINTAIN THE GOAL OF MINIMIZING IMPACT UPON ONGOING SCIENCE AND OPERATIONS WITH THESE BUILDINGS. CONTRACTOR SHALL BE REQUIRED TO OBTAIN APPROVAL FROM THE ARGONNE PM FOR SUCH SERVICE OUTAGES PRIOR TO PROCEEDING WITH THE OUTAGE. BUILDING SERVICES THAT ARE EXPECTED TO BE IMPACTED BY THE SCOPE OF THIS PROJECT INCLUDE (BUT ARE NOT NECESSARILY LIMITED TO) THE FOLLOWING:
A. CHILLED WATER SERVICE TO BUILDING 223
B. DOMESTIC WATER/LABORATORY WATER/FIRE WATER SERVICE TO BUILDING 223
C. LABORATORY AND SANITARY SEWER SERVICE TO BUILDING 222 AND BUILDING 223
D. FIRE ALARM IN BUILDING 223
E. FIRE DEPARTMENT CONNECTION FOR BUILDING 223

6. DASHED BOLD LINES INDICATE EXTENT OF DEMOLITION.

7. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.

8. CONTRACTOR TO VERIFY ALL WALL CONSTRUCTION & FINISHES NOTED FOR REMOVAL. TAKE INTO ACCOUNT ANY DISCREPANCY AND MAKE PROPER ADJUSTMENT TO ACCOMPLISH REQUIRED CONSTRUCTION & FINISHES. IF STRUCTURAL INTEGRITY IS VIOLATED, CONTACT ARCHITECT. COORDINATE PHASING WITH OWNER.

9. COORDINATE REMOVAL OF FURNITURE AND EXISTING EQUIPMENT WITH OWNER.

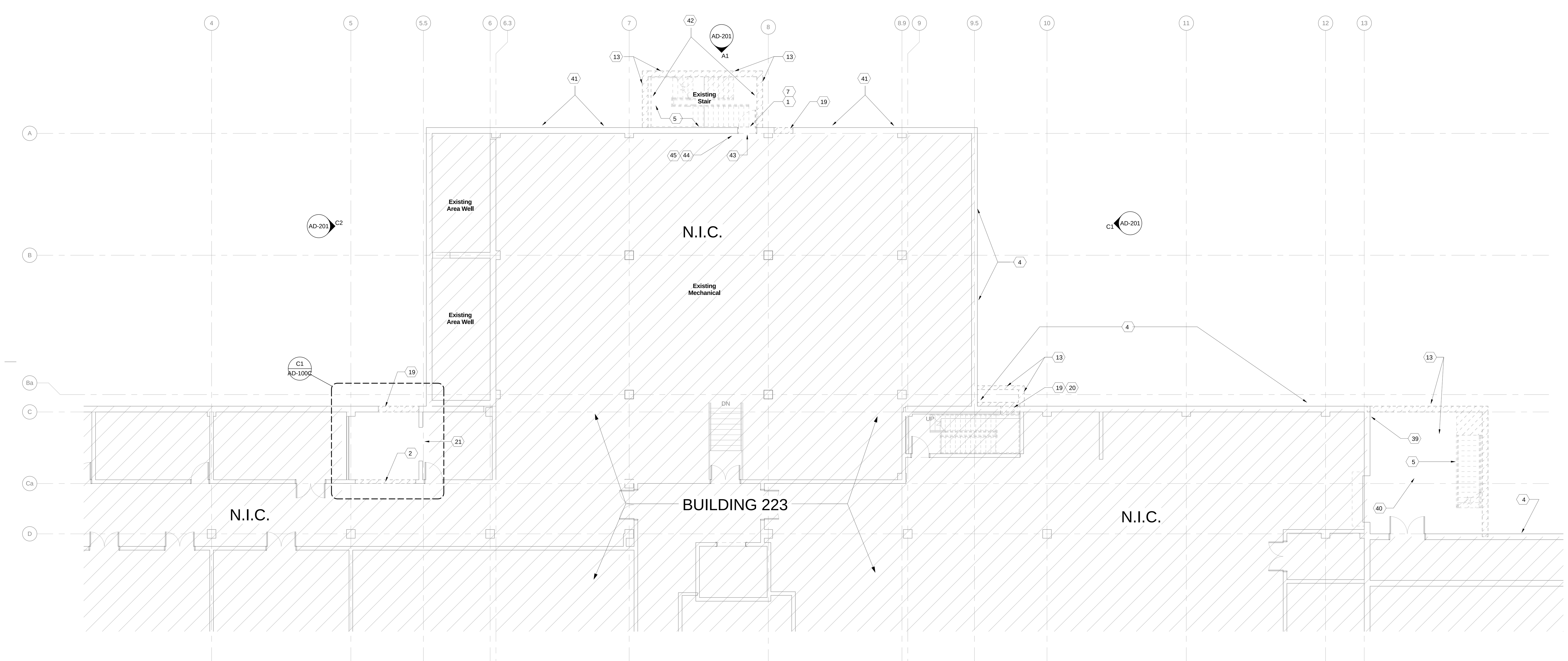
10. REMOVE FURRING OR GWB ONLY WHERE REQUIRED TO COMPLETE CONSTRUCTION. PATCH AND MATCH WALLS AS REQUIRED TO COMPLETE AND MATCH EXISTING CONDITIONS, UNLESS AN ALTERNATIVE MATERIAL AND FINISH IS INDICATED.

11. REMOVE CEILINGS ONLY AS REQUIRED FOR NEW CONSTRUCTION. REINSTALL, REPLACE OR PATCH AS REQUIRED.

12. ALL NEW CONSTRUCTION AND PATCHING OF EXISTING CONSTRUCTION SHALL BE INSTALLED AND FINISHED TO MATCH EXISTING ADJACENT CONSTRUCTION. PAINT WALLS FROM INSIDE CORNER TO INSIDE CORNER UNLESS PRECISE COLOR MATCH IS APPROVED ON-SITE BY OWNER ON CORRIDOR SIDE WHERE INSIDE CORNERS ARE NOT AVAILABLE.

13. CONTRACTOR SHALL SUBMIT SCHEDULE TO ARGONNE FOR APPROVAL INDICATING DATES WHEN WORK WILL COMMENCE WHICH AFFECTS EACH EXISTING ROOM OR SPACE.

14. CONTRACTOR SHALL MAINTAIN ADEQUATE PROTECTION OF EXISTING SPACES FROM WATER AND AIR INFILTRATION AND THERMAL BARRIER TO EXTERIOR.



A1 BLDG 223 BASEMENT - DEMO - AREA C
1/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AD-100C

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

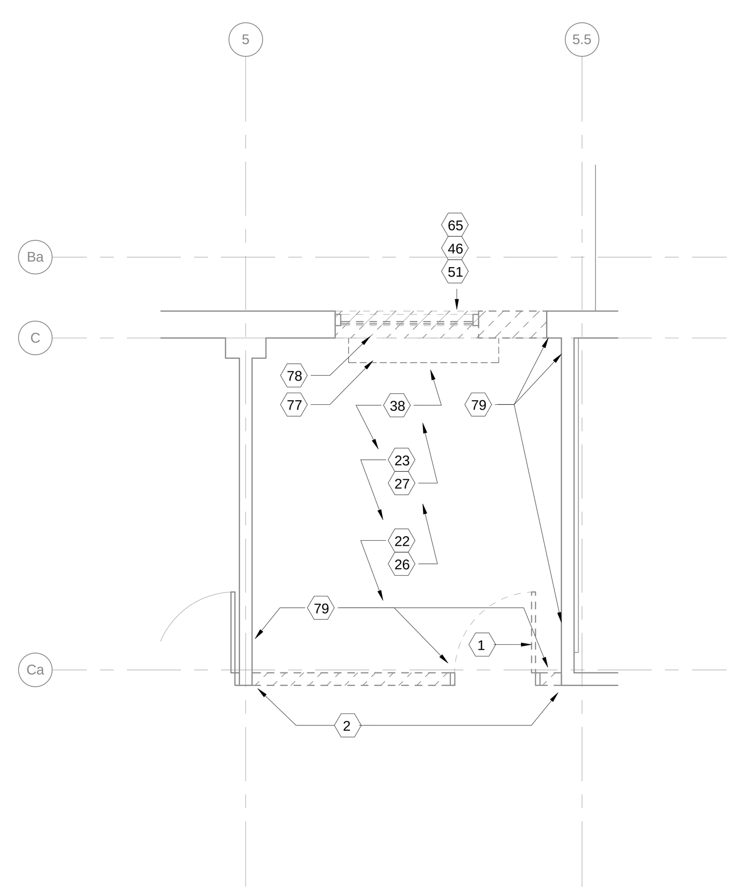
PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
BLDG 223 BASEMENT DEMOLITION - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AD-100C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- AD-100C** REV. NO.

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:20:37 AM



C1 ENLARGED DEMOLITION PLAN – OFFICE D-113
1/4" = 1'-0"

KEYNOTES - DEMOLITION

1. REMOVE HOLLOW METAL DOOR AND FRAME.
2. REMOVE CMU WALL AND PATCH CMU AT PERPENDICULAR WALLS. IF WALL CANNOT BE REMOVED FULL HEIGHT, PROVIDE LINTEL AT OPENING HEADER IF POSSIBLE OR NOT LESS THAN 7' - 0" AFF.
3. REMOVE PORTION OF CMU & BRICK WALL TO CREATE DOOR OPENING. PROVIDE LINTEL, THRU-WALL FLASHING WITH END DAMS AND WEEPS. TOOTH IN BRICK JAMB RETURNS.
4. WHERE CONCRETE WALL IS TO REMAIN, REMOVE EXTERIOR WATERPROOFING MATERIAL AND CLEAN EXPOSED TO VIEW.
5. REMOVE STEEL STAIRS AND RAILINGS.
6. REMOVE WINDOW AND FRAME.
7. PATCH OPENING W/ CMU TO MATCH EXISTING. TOOTH INTO EXISTING CMU AT JAMBS.
8. REMOVE DOCK BUMPERS, PATCH CONC. WALL TO RECEIVE NEW WORK.
9. REMOVE CANOPY, CANOPY SUPPORT COLUMNS, DOWNSPOUTS, PATCH PERPENDICULAR EXTERIOR WALL.
10. REMOVE METAL LOUVER.
11. REMOVE CURTAIN WALL. FULL HEIGHT.
12. REMOVE EXTERIOR WALL, PATCH PERPENDICULAR WALL.
13. REMOVE FOUNDATION WALLS, FOOTING, & SLAB.
14. MOVE & REPLACE MASONRY AS NEEDED & INSTALL NEW LINE OF THRU-WALL FLASHING & WEEPS.
15. LOCATE FP SIAMESE CONNECTION.
16. LOCATE NITROGEN FILLING STATIONS & PIPING.
17. LINE OF NEW CONSTRUCTION, FOR REFERENCE ONLY.
18. REVERSE SWING OF DOOR AS INDICATED.
19. SAW - CUT DOOR OPENING IN CONCRETE FOUNDATION WALL.
20. REMOVE PORTION OF CMU WALL INSIDE OFFOUNDATION WALL. TOOTH IN CMU JAMB RETURNS. PROVIDE LINTEL.
21. PROVIDE CMU INFILL OF OPENING. TOOTH CMU INTO EXISTING CMU AT JAMBS.
22. REMOVE VINYL TILE FLOORING AND BASE.
23. REMOVE SUSPENDED ACOUSTICAL TILE CEILING.
24. PROVIDE INTERIOR STUD PARTITION ADJACENT TO EXISTING STUD PARTITION.
25. VERIFY EXISTING WALL EXTENDS TO STRUCTURE ABOVE. EXTEND WALL AS REQUIRED USING PARTITION TYPE 'B'.
26. PROVIDE VCT AND BASE TO MATCH EXISTING CORRIDOR.
27. PROVIDE SUSPENDED ACOUSTICAL TILE CEILING SYSTEM. REINSTALL HVAC DIFFUSER. PROVIDE NEW LIGHT FIXTURES.
28. COORDINATE REMOVAL OF LIGHT SWITCH WITH ELECTRICAL CONTRACTOR.
29. COORDINATE REMOVAL OF SURFACE MOUNTED RACEWAY WITH ELECTRICAL CONTRACTOR.
30. COORDINATE RELOCATION OF EMERGENCY LIGHTING TO WEST WALL OF ROOM WITH ELECTRICAL CONTRACTOR.
31. COORDINATE REMOVAL OF SPECIALTY GAS PIPING WITH PLUMBING CONTRACTOR.
32. COORDINATE REMOVAL OF ELECTRICAL PANEL BOARD WITH ELECTRICAL CONTRACTOR. IF STILL REQUIRED FOR ADJACENT LAB, RELOCATE TO ADJACENT LAB.
33. REMOVE SNORKEL EXHAUST. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
34. REMOVE EPOXY TOP AND FURRING. COORDINATE REMOVAL OF GAS OUTLETS AND PIPING WITH PLUMBING CONTRACTOR. COORDINATE REMOVAL OF CUP SINK AND WATER AND DRAINAGE PIPING WITH ELECTRICAL CONTRACTOR.
35. REMOVE AND SALVAGE LAB CASEWORK, EPOXY TOP, AND SINK AND TURN OVER TO OWNER. COORDINATE REMOVAL OF WATER SUPPLY AND DRAINAGE PIPING WITH PLUMBING CONTRACTOR.
36. REMOVE AND SALVAGE LAB CASEWORK AND FUMEHOOD AND TURN OVER TO OWNER. COORDINATE REMOVAL OF GAS, WATER SUPPLY AND DRAINAGE PIPING, WITH PLUMBING CONTRACTOR. COORDINATE ELECTRICAL DISCONNECT WITH ELECTRICAL CONTRACTOR. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
37. REINSTALL EXISTING SMOKE DETECTOR IN NEW CEILING.
38. PAINT ALL WALLS IN ROOM.
39. REMOVE CAPPED PIPE AND CAP INSIDE BUILDING. PATCH HOLE. COORDINATE WITH PLUMBING CONTRACTOR.
40. REMOVE FLOOR DRAIN AND PIPING. COORDINATE WITH PLUMBING CONTRACTOR.
41. REMOVE EXISTING THRU-WALL EXHAUST FANS AND LOUVERS. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL OPENING WITH CONCRETE.
42. REMOVE LIGHT FIXTURE. COORDINATE WITH ELECTRICAL CONTRACTOR.
43. RELOCATE EXISTING EXIT SIGN TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
44. RELOCATE FIRE ALARM PULL STATION AND ALARM BELL / STORM TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
45. RELOCATE FIRE EXTINGUISHER TO NEW DOOR LOCATION.
46. INFILL OPENING WITH BRICK AND CMU BACKUP TO MATCH EXISTING. TOOTH INTO EXISTING BRICK AND CMU AT JAMBS.
47. REMOVE OVERHEAD DOOR, STEEL CHANNEL JAMBS AND HEAD, AND ALL DOOR COMPONENTS. COORDINATE WITH ELECTRICAL.
48. INFILL OPENING AROUND NEW HOLLOW METAL ROOF ACCESS DOOR. PROVIDE RAISED CURB AS DETAILED.
49. RELOCATE TEST DRAINS TO LOWER ELEVATION AT 2' - 0" ABOVE ESB DOCK ELEVATION. PATCH HOLES IN CONCRETE FOUNDATION WALL. COORDINATE WITH PLUMBING AND FIRE PROTECTION CONTRACTORS.
50. REMOVE AND SALVAGE POWER LIFT AND TURN OVER TO OWNER. COORDINATE REMOVAL OF ASSOCIATED ELECTRICAL WITH ELECTRICAL CONTRACTOR.
51. COORDINATE NECESSARY MODIFICATION TO PERIMETER GROUNDING, CONDUCTORS TO ADDRESS LOWER DOCK AND DRIVE ELEVATION AND ELIMINATE CONFLICT AT LINKING CORRIDOR BREAK THRU TO BUILDING 223.
52. REMOVE AND CAP DRAIN PIPE INSIDE EXISTING BUILDING. CLOSE ASSOCIATED FLOOR DRAIN IN STORAGE ROOM S-106. COORDINATE WITH PLUMBING CONTRACTOR. PATCH HOLE IN CONCRETE WALL.
53. REMOVE SIDE-WALL SPRINKLER HEADS ALL ALONG EXTERIOR WALL AND CAP PIPING INSIDE EXISTING BUILDING. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
54. REMOVE ALL SURFACE MOUNTED ELECTRICAL CONDUIT, BOXES, AND DEVICES ALL ALONG EXTERIOR WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
55. REMOVE AND SALVAGE ALL SURFACE MOUNTED LOCK BOXES, SHELVES, SIGNAGE, AND CYLINDER RACKS ALL ALONG DOCK AND EXTERIOR WALL. TURN OVER TO OWNER.
56. REMOVE GUARDRAIL AND PATCH BRICK WALL AND CONCRETE SLAB.
57. REMOVE STEEL BRACKETS FROM END OF DOCK.
58. REMOVE CONCRETE STAIR AND STEEL RAILINGS.
59. RELOCATE FLOOR CLEANOUT TO LOCATION INSIDE MECHANICAL ROOM BELOW. COORDINATE WITH PLUMBING CONTRACTOR.
60. REMOVE AND SALVAGE HC PARKING SIGN, AND TURN OVER TO OWNER.
61. RELOCATE POWER RECEPTACLE TO NEW DOCK ELEVATION. PATCH HOLE IN CONCRETE WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
62. PATCH HOLE IN CONCRETE WALL WHERE GASEOUS NITROGEN PIPING HAS BEEN REMOVED BY OTHERS.
63. REMOVE STEEL GRATING AND ASSOCIATED FRAME.
64. REMOVE WINDOW AND INFILL MASONRY AT BOTH FIRST AND SECOND (1ST AND 2ND) FLOORS OF BUILDING 223.
65. PROVIDE NEW WINDOW AT SECOND (2ND) FLOOR OF BUILDING 223.
66. REMOVE CONCRETE RAMP AND HANDRAILS. PATCH CONCRETE WALL.
67. REMOVE SECTION OF CONCRETE WALL AND RAILING.
68. COORDINATE NECESSARY MODIFICATION TO BUILDING 222. PERIMETER DRAINAGE SYSTEM AND CLEAN OUTS TO ADDRESS LOWER DOCK AND DRIVE ELEVATIONS. COORDINATE WITH PLUMBING CONTRACTOR.
69. REMOVE EXIT SIGN. COORDINATE WITH ELECTRICAL CONTRACTOR.
70. REMOVE FIRE ALARM PULL STATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
71. RELOCATE GRAVITY LOUVER TO HIGHER ELEVATION ABOVE FLASHING LINE OF NEW ESB ROOF.
72. PATCH HOLE IN CONCRETE FOUNDATION WALL WHERE PIPE HAS BEEN REMOVED FROM WATER SERVICE OR CHILLED WATER SERVICE.
73. RELOCATE FIRE ALARM PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR.
74. RELOCATE UNIT HEATER TO BASEMENT LEVEL STAIR. COORDINATE WITH MECHANICAL CONTRACTOR.
75. ADD NEW LIGHT FIXTURE BELOW INTERMEDIATE LANDING AT BASEMENT LEVEL STAIR DISCHARGE.
76. REMOVE AND SALVAGE EMERGENCY GENERATOR AND TURN OVER TO OWNER. REMOVE ASSOCIATED CONCRETE PAD AND FENCING. COORDINATE WITH ELECTRICAL CONTRACTOR.
77. REMOVE UNIT HEATER. COORDINATE WITH MECHANICAL CONTRACTOR.
78. REMOVE BLINDS.
79. REMOVE SURFACE MOUNTED RACEWAY. COORDINATE WITH ELECTRICAL CONTRACTOR.
80. REMOVE DOCK LEVELER. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL CONCRETE FOUNDATION WALL AND SLAB.
81. REMOVE STEEL BOLLARD.
82. REMOVE GLYCOL WATER SYSTEM PIPING AND HEATERS. CAP AT MAIN. COORDINATE REMOVAL WITH MECHANICAL CONTRACTOR.
83. EXISTING ELECTRIC UNIT HEATER TO REMAIN. RELOCATE AS REQUIRED TO ACCOMMODATE NEW OVERHEAD DOORS. PROVIDE NEW ELECTRIC UNIT HEATER TO MATCH EXISTING HEATER. COORDINATE WITH ELECTRICAL CONTRACTOR.
84. SAW CUT LOUVER-EXHAUST FAN OPENING IN CONCRETE FOUNDATION WALL.

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY EGRESS FROM EXISTING BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A SAFE AND PROTECTED EMERGENCY EGRESS ROUTE FOR PEDESTRIANS FROM ALL EXIT DISCHARGE DOORS AROUND OR THROUGH THE CONSTRUCTION SITE TO A PEDESTRIAN WAY LOCATED OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANYTHING LESS THAN FULL COMPLIANCE AND/OR ALTERNATIVE MEANS FOR FULL COMPLIANCE SHALL BE SUBMITTED TO THE ARGONNE AUTHORITY HAVING JURISDICTION (AHJ) FOR CONSIDERATION. NO SUCH DEVIATIONS FROM FULL COMPLIANCE OR ALTERNATIVE MEANS OF COMPLIANCE SHALL BE IMPLEMENTED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ARGONNE AHJ.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING BUILDING 223 LOADING DOCK FOR CONTINUING ARGONNE OPERATIONS UNTIL THE ALTERATIONS ARE COMPLETED AT THE BUILDING 222 DOCK AND THE EAST SIDE BUILDING 222 LOADING DOCK BAYS ARE TURNED OVER TO ARGONNE FOR USE. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR TURNOVER OF ALTERATIONS TO BUILDING 222 LOADING DOCK AND SUBSEQUENT SHUT-DOWN OF THE EXISTING BUILDING 223 LOADING DOCK.

3. THE EXISTING BULK LIQUID NITROGEN TANK, ALL ASSOCIATED NITROGEN PIPING, AND THE LIQUID NITROGEN DEWAR FILL STATIONS AT THE BUILDING 223 LOADING DOCK WILL BE DECOMMISSIONED AND REMOVED BY OTHERS PRIOR TO THE BEGINNING OF CONSTRUCTION.

4. THE CONTRACTOR SHALL MAINTAIN OPERATION OF THE EXISTING BUILDING 223 EMERGENCY GENERATOR UNTIL A TEMPORARY GENERATOR IS IN-PLACE, CONNECTED, AND OPERATIONAL; SERVING BUILDING 223. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR SWITCHOVER FROM BUILDING 223 EMERGENCY GENERATOR TO TEMPORARY GENERATOR.

5. THE CONTRACTOR SHALL MAINTAIN ACTIVE BUILDING SERVICES TO BOTH BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. TEMPORARY OUTAGES OF SERVICES TO THESE BUILDINGS FOR THE PURPOSES OF FINAL CONNECTIONS OR SWITCH OVER SHALL BE COMMUNICATED TO THE ARGONNE PM IN THE FORM OF A PROPOSED SCHEDULE AND SHALL MAINTAIN THE GOAL OF MINIMIZING IMPACT UPON ONGOING SCIENCE AND OPERATIONS WITH THESE BUILDINGS. CONTRACTOR SHALL BE REQUIRED TO OBTAIN APPROVAL FROM THE ARGONNE PM FOR SUCH SERVICE OUTAGES PRIOR TO PROCEEDING WITH THE OUTAGE. BUILDING SERVICES THAT ARE EXPECTED TO BE IMPACTED BY THE SCOPE OF THIS PROJECT INCLUDE (BUT ARE NOT NECESSARILY LIMITED TO) THE FOLLOWING:
A. CHILLED WATER SERVICE TO BUILDING 223
B. DOMESTIC WATER/LABORATORY WATER/FIRE WATER SERVICE TO BUILDING 223
C. LABORATORY AND SANITARY SEWER SERVICE TO BUILDING 222 AND BUILDING 223
D. FIRE ALARM IN BUILDING 223
E. FIRE DEPARTMENT CONNECTION FOR BUILDING 223

6. DASHED BOLD LINES INDICATE EXTENT OF DEMOLITION.

7. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.

8. CONTRACTOR TO VERIFY ALL WALL CONSTRUCTION & FINISHES NOTED FOR REMOVAL. TAKE INTO ACCOUNT ANY DISCREPANCY AND MAKE PROPER ADJUSTMENT TO ACCOMPLISH REQUIRED CONSTRUCTION & FINISHES. IF STRUCTURAL INTEGRITY IS VIOLATED, CONTACT ARCHITECT. COORDINATE PHASING WITH OWNER.

9. COORDINATE REMOVAL OF FURNITURE AND EXISTING EQUIPMENT WITH OWNER.

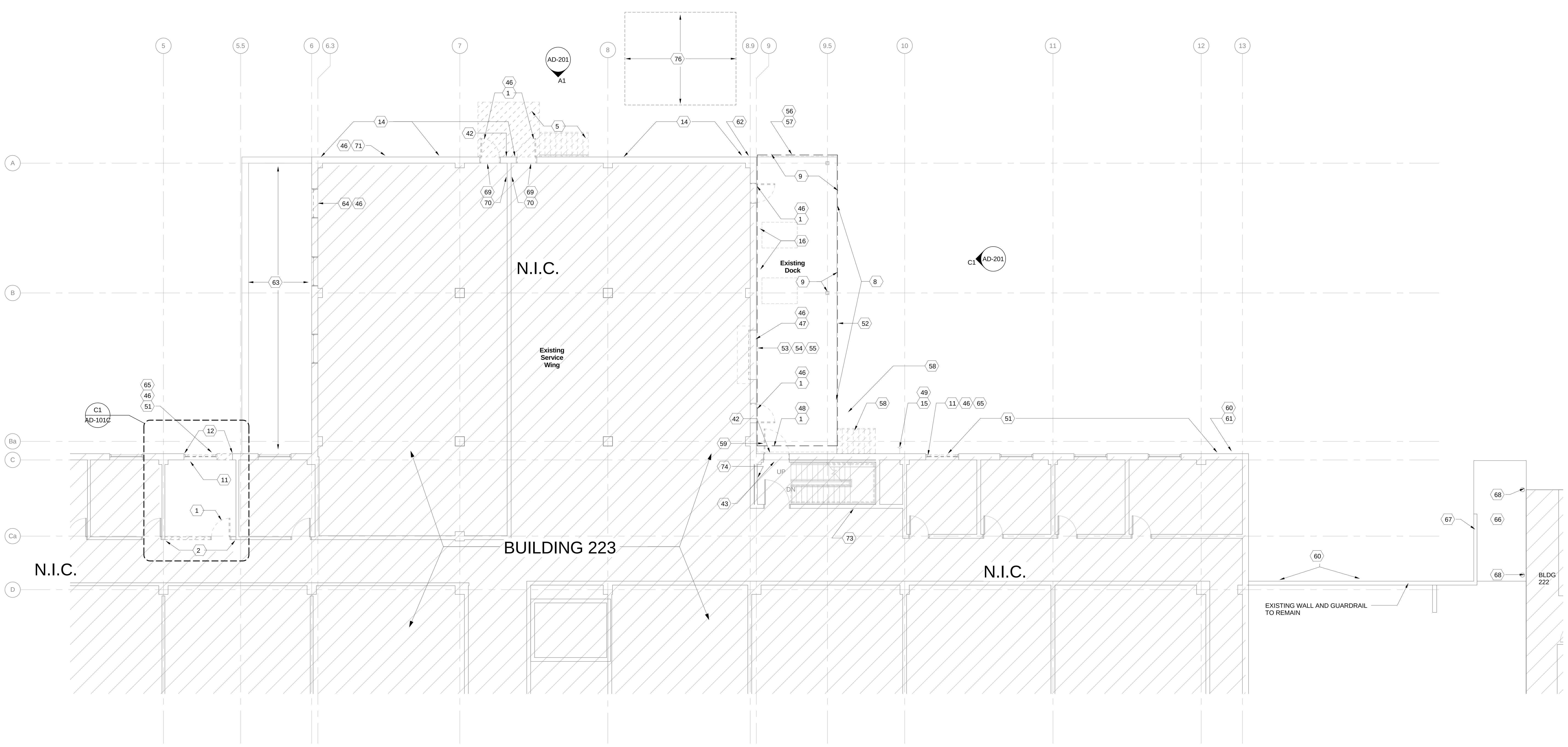
10. REMOVE FURRING OR GWB ONLY WHERE REQUIRED TO COMPLETE CONSTRUCTION. PATCH AND MATCH WALLS AS REQUIRED TO COMPLETE AND MATCH EXISTING CONDITIONS, UNLESS AN ALTERNATIVE MATERIAL AND FINISH IS INDICATED.

11. REMOVE CEILINGS ONLY AS REQUIRED FOR NEW CONSTRUCTION. REINSTALL, REPLACE OR PATCH AS REQUIRED.

12. ALL NEW CONSTRUCTION AND PATCHING OF EXISTING CONSTRUCTION SHALL BE INSTALLED AND FINISHED TO MATCH EXISTING ADJACENT CONSTRUCTION. PAINT WALLS FROM INSIDE CORNER TO INSIDE CORNER UNLESS PRECISE COLOR MATCH IS APPROVED ON-SITE BY OWNER ON CORRIDOR SIDE WHERE INSIDE CORNERS ARE NOT AVAILABLE.

13. CONTRACTOR SHALL SUBMIT SCHEDULE TO ARGONNE FOR APPROVAL INDICATING DATES WHEN WORK WILL COMMENCE WHICH AFFECTS EACH EXISTING ROOM OR SPACE.

14. CONTRACTOR SHALL MAINTAIN ADEQUATE PROTECTION OF EXISTING SPACES FROM WATER AND AIR INFILTRATION AND THERMAL BARRIER TO EXTERIOR.



A1 BLDG 223 FIRST FLOOR - DEMO - AREA C
1/8" = 1'-0"

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:20:42 AM

AD-101C

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

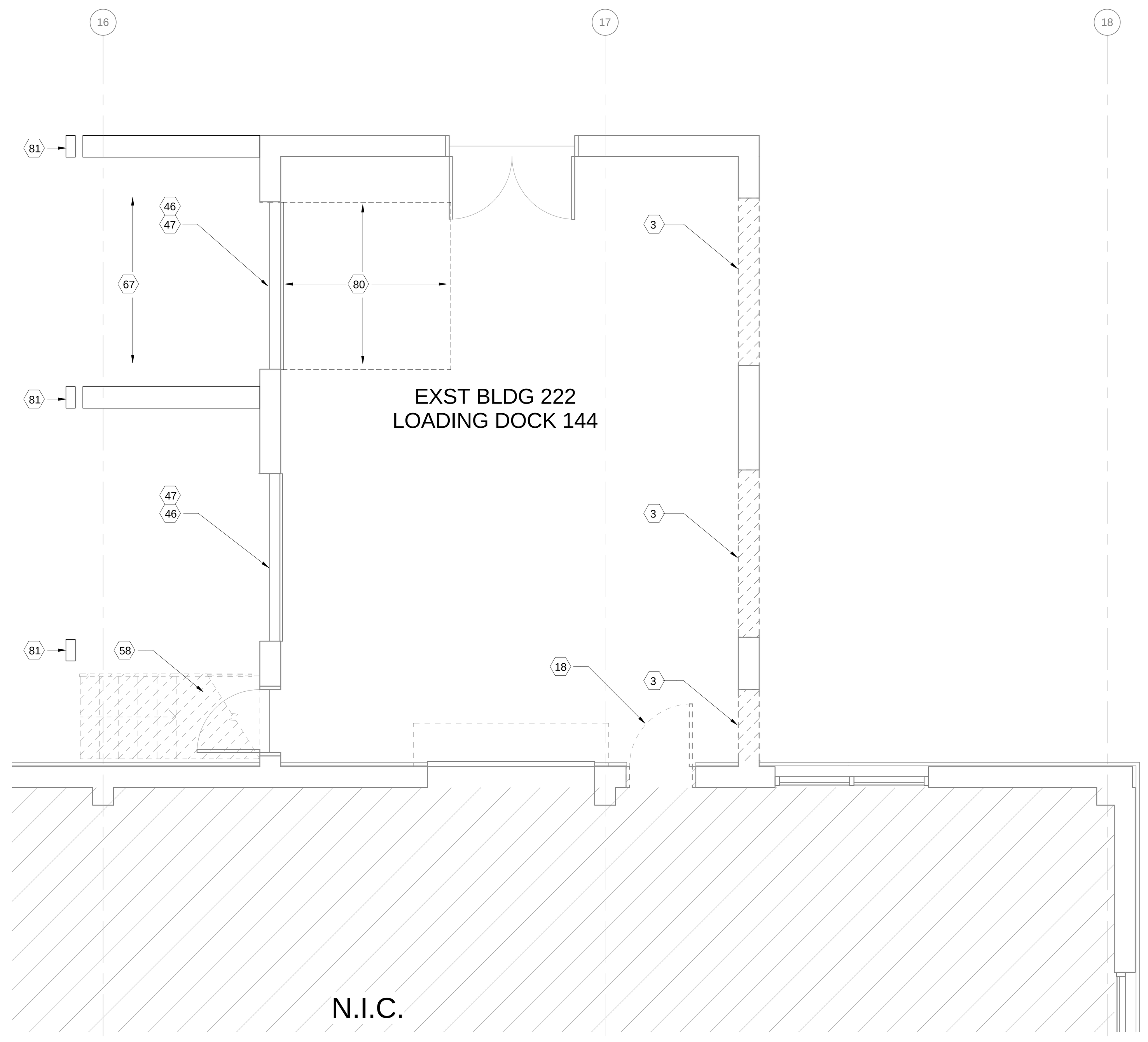
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

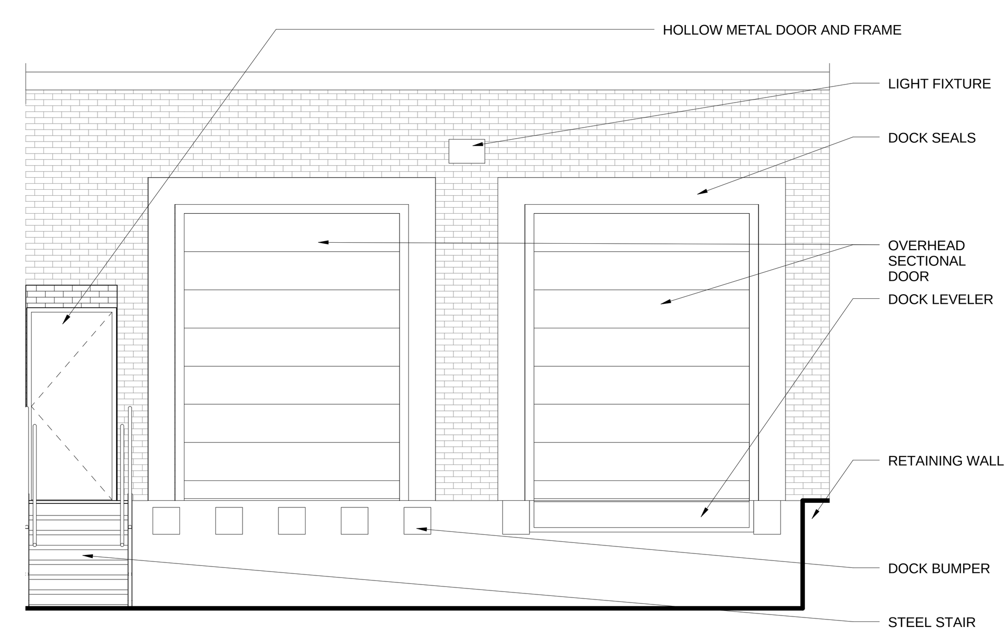
DOCUMENT TITLE
BLDG 223 FIRST FLOOR DEMOLITION - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AD-101C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER — REV. NO.
J241-101- AD-101C



C1 BLDG 222 FIRST FLOOR - DEMO - DOCK 144 PLAN
1/4" = 1'-0"



C3 BUILDING 222 LOADING DOCK EAST ELEVATION
1/4" = 1'-0"

KEYNOTES - DEMOLITION

1. REMOVE HOLLOW METAL DOOR AND FRAME.
2. REMOVE CMU WALL AND PATCH CMU AT PERPENDICULAR WALLS. IF WALL CANNOT BE REMOVED FULL HEIGHT, PROVIDE LINTEL AT OPENING HEADER IF POSSIBLE OR NOT LESS THAN 7' - 0" AFF.
3. REMOVE PORTION OF CMU & BRICK WALL TO CREATE DOOR OPENING. PROVIDE LINTEL, THRU-WALL FLASHING WITH END DAMS AND WEEPS. TOOTH IN BRICK JAMB RETURNS.
4. WHERE CONCRETE WALL IS TO REMAIN, REMOVE EXTERIOR WATERPROOFING MATERIAL AND CLEAN EXPOSED TO VIEW.
5. REMOVE STEEL STAIRS AND RAILINGS.
6. REMOVE WINDOW AND FRAME.
7. PATCH OPENING W/ CMU TO MATCH EXISTING. TOOTH INTO EXISTING CMU AT JAMBS.
8. REMOVE DOCK BUMPERS, PATCH CONC. WALL TO RECEIVE NEW WORK.
9. REMOVE CANOPY, CANOPY SUPPORT COLUMNS, DOWNSPOUTS, PATCH PERPENDICULAR EXTERIOR WALL.
10. REMOVE METAL LOUVER.
11. REMOVE CURTAIN WALL. FULL HEIGHT.
12. REMOVE EXTERIOR WALL, PATCH PERPENDICULAR WALL.
13. REMOVE FOUNDATION WALLS, FOOTING, & SLAB.
14. MOVE & REPLACE MASONRY AS NEEDED & INSTALL NEW LINE OF THRU-WALL FLASHING & WEEPS.
15. LOCATE FP SIAMESE CONNECTION.
16. LOCATE NITROGEN FILLING STATIONS & PIPING.
17. LINE OF NEW CONSTRUCTION, FOR REFERENCE ONLY.
18. REVERSE SWING OF DOOR AS INDICATED.
19. SAW - CUT DOOR OPENING IN CONCRETE FOUNDATION WALL.
20. REMOVE PORTION OF CMU WALL INSIDE OFFOUNDATION WALL. TOOTH IN CMU JAMB RETURNS. PROVIDE LINTEL.
21. PROVIDE CMU INFILL OF OPENING. TOOTH CMU INTO EXISTING CMU AT JAMBS.
22. REMOVE VINYL TILE FLOORING AND BASE.
23. REMOVE SUSPENDED ACOUSTICAL TILE CEILING.
24. PROVIDE INTERIOR STUD PARTITION ADJACENT TO EXISTING STUD PARTITION.
25. VERIFY EXISTING WALL EXTENDS TO STRUCTURE ABOVE. EXTEND WALL AS REQUIRED USING PARTITION TYPE 'B'.
26. PROVIDE VCT AND BASE TO MATCH EXISTING CORRIDOR.
27. PROVIDE SUSPENDED ACOUSTICAL TILE CEILING SYSTEM. REINSTALL HVAC DIFFUSER. PROVIDE NEW LIGHT FIXTURES.
28. COORDINATE REMOVAL OF LIGHT SWITCH WITH ELECTRICAL CONTRACTOR.
29. COORDINATE REMOVAL OF SURFACE MOUNTED RACEWAY WITH ELECTRICAL CONTRACTOR.
30. COORDINATE RELOCATION OF EMERGENCY LIGHTING TO WEST WALL OF ROOM WITH ELECTRICAL CONTRACTOR.
31. COORDINATE REMOVAL OF SPECIALTY GAS PIPING WITH PLUMBING CONTRACTOR.
32. COORDINATE REMOVAL OF ELECTRICAL PANEL BOARD WITH ELECTRICAL CONTRACTOR. IF STILL REQUIRED FOR ADJACENT LAB, RELOCATE TO ADJACENT LAB.
33. REMOVE SNORKEL EXHAUST. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
34. REMOVE EPOXY TOP AND FURRING. COORDINATE REMOVAL OF GAS OUTLETS AND PIPING WITH PLUMBING CONTRACTOR. COORDINATE REMOVAL OF CUP SINK AND WATER AND DRAINAGE PIPING WITH ELECTRICAL CONTRACTOR.
35. REMOVE AND SALVAGE LAB CASEWORK, EPOXY TOP, AND SINK AND TURN OVER TO OWNER. COORDINATE REMOVAL OF WATER SUPPLY AND DRAINAGE PIPING WITH PLUMBING CONTRACTOR.
36. REMOVE AND SALVAGE LAB CASEWORK AND FUMEHOOD AND TURN OVER TO OWNER. COORDINATE REMOVAL OF GAS, WATER SUPPLY AND DRAINAGE PIPING, WITH PLUMBING CONTRACTOR. COORDINATE ELECTRICAL DISCONNECT WITH ELECTRICAL CONTRACTOR. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
37. REINSTALL EXISTING SMOKE DETECTOR IN NEW CEILING.
38. PAINT ALL WALLS IN ROOM.
39. REMOVE CAPPED PIPE AND CAP INSIDE BUILDING. PATCH HOLE. COORDINATE WITH PLUMBING CONTRACTOR.
40. REMOVE FLOOR DRAIN AND PIPING. COORDINATE WITH PLUMBING CONTRACTOR.
41. REMOVE EXISTING THRU-WALL EXHAUST FANS AND LOUVERS. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL OPENING WITH CONCRETE.
42. REMOVE LIGHT FIXTURE. COORDINATE WITH ELECTRICAL CONTRACTOR.
43. RELOCATE EXISTING EXIT SIGN TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
44. RELOCATE FIRE ALARM PULL STATION AND ALARM BELL / STORM TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
45. RELOCATE FIRE EXTINGUISHER TO NEW DOOR LOCATION.
46. INFILL OPENING WITH BRICK AND CMU BACKUP TO MATCH EXISTING. TOOTH INTO EXISTING BRICK AND CMU AT JAMBS.
47. REMOVE OVERHEAD DOOR, STEEL CHANNEL JAMBS AND HEAD, AND ALL DOOR COMPONENTS. COORDINATE WITH ELECTRICAL.
48. INFILL OPENING AROUND NEW HOLLOW METAL ROOF ACCESS DOOR. PROVIDE RAISED CURB AS DETAILED.
49. RELOCATE TEST DRAINS TO LOWER ELEVATION AT 2' - 0" ABOVE ESB DOCK ELEVATION. PATCH HOLES IN CONCRETE FOUNDATION WALL. COORDINATE WITH PLUMBING AND FIRE PROTECTION CONTRACTORS.
50. REMOVE AND SALVAGE POWER LIFT AND TURN OVER TO OWNER. COORDINATE REMOVAL OF ASSOCIATED ELECTRICAL WITH ELECTRICAL CONTRACTOR.
51. COORDINATE NECESSARY MODIFICATION TO PERIMETER GROUNDING, CONDUCTORS TO ADDRESS LOWER DOCK AND DRIVE ELEVATION AND ELIMINATE CONFLICT AT LINKING CORRIDOR BREAK THRU TO BUILDING 223.
52. REMOVE AND CAP DRAIN PIPE INSIDE EXISTING BUILDING. CLOSE ASSOCIATED FLOOR DRAIN IN STORAGE ROOM S-106. COORDINATE WITH PLUMBING CONTRACTOR. PATCH HOLE IN CONCRETE WALL.
53. REMOVE SIDE-WALL SPRINKLER HEADS ALL ALONG EXTERIOR WALL AND CAP PIPING INSIDE EXISTING BUILDING. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
54. REMOVE ALL SURFACE MOUNTED ELECTRICAL CONDUIT, BOXES, AND DEVICES ALL ALONG EXTERIOR WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
55. REMOVE AND SALVAGE ALL SURFACE MOUNTED LOCK BOXES, SHELVES, SIGNAGE, AND CYLINDER RACKS ALL ALONG DOCK AND EXTERIOR WALL. TURN OVER TO OWNER.
56. REMOVE GUARDRAIL AND PATCH BRICK WALL AND CONCRETE SLAB.
57. REMOVE STEEL BRACKETS FROM END OF DOCK.
58. REMOVE CONCRETE STAIR AND STEEL RAILINGS.
59. RELOCATE FLOOR CLEANOUT TO LOCATION INSIDE MECHANICAL ROOM BELOW. COORDINATE WITH PLUMBING CONTRACTOR.
60. REMOVE AND SALVAGE HC PARKING SIGN, AND TURN OVER TO OWNER.
61. RELOCATE POWER RECEPTACLE TO NEW DOCK ELEVATION. PATCH HOLE IN CONCRETE WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
62. PATCH HOLE IN CONCRETE WALL WHERE GASEOUS NITROGEN PIPING HAS BEEN REMOVED BY OTHERS.
63. REMOVE STEEL GRATING AND ASSOCIATED FRAME.
64. REMOVE WINDOW AND INFILL MASONRY AT BOTH FIRST AND SECOND (1ST AND 2ND) FLOORS OF BUILDING 223.
65. PROVIDE NEW WINDOW AT SECOND (2ND) FLOOR OF BUILDING 223.
66. REMOVE CONCRETE RAMP AND HANDRAILS. PATCH CONCRETE WALL.
67. REMOVE SECTION OF CONCRETE WALL AND RAILING.
68. COORDINATE NECESSARY MODIFICATION TO BUILDING 222. PERIMETER DRAINAGE SYSTEM AND CLEAN OUTS TO ADDRESS LOWER DOCK AND DRIVE ELEVATIONS. COORDINATE WITH PLUMBING CONTRACTOR.
69. REMOVE EXIT SIGN. COORDINATE WITH ELECTRICAL CONTRACTOR.
70. REMOVE FIRE ALARM PULL STATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
71. RELOCATE GRAVITY LOUVER TO HIGHER ELEVATION ABOVE FLASHING LINE OF NEW ESB ROOF.
72. PATCH HOLE IN CONCRETE FOUNDATION WALL WHERE PIPE HAS BEEN REMOVED FROM WATER SERVICE OR CHILLED WATER SERVICE.
73. RELOCATE FIRE ALARM PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR.
74. RELOCATE UNIT HEATER TO BASEMENT LEVEL STAIR. COORDINATE WITH MECHANICAL CONTRACTOR.
75. ADD NEW LIGHT FIXTURE BELOW INTERMEDIATE LANDING AT BASEMENT LEVEL STAIR DISCHARGE.
76. REMOVE AND SALVAGE EMERGENCY GENERATOR AND TURN OVER TO OWNER. REMOVE ASSOCIATED CONCRETE PAD AND FENCING. COORDINATE WITH ELECTRICAL CONTRACTOR.
77. REMOVE UNIT HEATER. COORDINATE WITH MECHANICAL CONTRACTOR.
78. REMOVE BLINDS.
79. REMOVE SURFACE MOUNTED RACEWAY. COORDINATE WITH ELECTRICAL CONTRACTOR.
80. REMOVE DOCK LEVELER. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL CONCRETE FOUNDATION WALL AND SLAB.
81. REMOVE STEEL BOLLARD.
82. REMOVE GLYCOL WATER SYSTEM PIPING AND HEATERS. CAP AT MAIN. COORDINATE REMOVAL WITH MECHANICAL CONTRACTOR.
83. EXISTING ELECTRIC UNIT HEATER TO REMAIN. RELOCATE AS REQUIRED TO ACCOMMODATE NEW OVERHEAD DOORS. PROVIDE NEW ELECTRIC UNIT HEATER TO MATCH EXISTING HEATER. COORDINATE WITH ELECTRICAL CONTRACTOR.
84. SAW CUT LOUVER-EXHAUST FAN OPENING IN CONCRETE FOUNDATION WALL.

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY EGRESS FROM EXISTING BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A SAFE AND PROTECTED EMERGENCY EGRESS ROUTE FOR PEDESTRIANS FROM ALL EXIT DISCHARGE DOORS AROUND OR THROUGH THE CONSTRUCTION SITE TO A PEDESTRIAN WAY LOCATED OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANYTHING LESS THAN FULL COMPLIANCE AND/OR ALTERNATIVE MEANS FOR FULL COMPLIANCE SHALL BE SUBMITTED TO THE ARGONNE AUTHORITY HAVING JURISDICTION (AHJ) FOR CONSIDERATION. NO SUCH DEVIATIONS FROM FULL COMPLIANCE OR ALTERNATIVE MEANS OF COMPLIANCE SHALL BE IMPLEMENTED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ARGONNE AHJ.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING BUILDING 223 LOADING DOCK FOR CONTINUING ARGONNE OPERATIONS UNTIL THE ALTERATIONS ARE COMPLETED AT THE BUILDING 222 DOCK AND THE EAST SIDE BUILDING 222 LOADING DOCK BAYS ARE TURNED OVER TO ARGONNE FOR USE. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR TURNOVER OF ALTERATIONS TO BUILDING 222 LOADING DOCK AND SUBSEQUENT SHUT-DOWN OF THE EXISTING BUILDING 223 LOADING DOCK.

3. THE EXISTING BULK LIQUID NITROGEN TANK, ALL ASSOCIATED NITROGEN PIPING, AND THE LIQUID NITROGEN DEWAR FILL STATIONS AT THE BUILDING 223 LOADING DOCK WILL BE DECOMMISSIONED AND REMOVED BY OTHERS PRIOR TO THE BEGINNING OF CONSTRUCTION.

4. THE CONTRACTOR SHALL MAINTAIN OPERATION OF THE EXISTING BUILDING 223 EMERGENCY GENERATOR UNTIL A TEMPORARY GENERATOR IS IN-PLACE, CONNECTED, AND OPERATIONAL; SERVING BUILDING 223. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR SWITCHOVER FROM BUILDING 223 EMERGENCY GENERATOR TO TEMPORARY GENERATOR.

5. THE CONTRACTOR SHALL MAINTAIN ACTIVE BUILDING SERVICES TO BOTH BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. TEMPORARY OUTAGES OF SERVICES TO THESE BUILDINGS FOR THE PURPOSES OF FINAL CONNECTIONS OR SWITCH OVER SHALL BE COMMUNICATED TO THE ARGONNE PM IN THE FORM OF A PROPOSED SCHEDULE AND SHALL MAINTAIN THE GOAL OF MINIMIZING IMPACT UPON ONGOING SCIENCE AND OPERATIONS WITH THESE BUILDINGS. CONTRACTOR SHALL BE REQUIRED TO OBTAIN APPROVAL FROM THE ARGONNE PM FOR SUCH SERVICE OUTAGES PRIOR TO PROCEEDING WITH THE OUTAGE. BUILDING SERVICES THAT ARE EXPECTED TO BE IMPACTED BY THE SCOPE OF THIS PROJECT INCLUDE (BUT ARE NOT NECESSARILY LIMITED TO) THE FOLLOWING:
A. CHILLED WATER SERVICE TO BUILDING 223
B. DOMESTIC WATER/LABORATORY WATER/FIRE WATER SERVICE TO BUILDING 223
C. LABORATORY AND SANITARY SEWER SERVICE TO BUILDING 222 AND BUILDING 223
D. FIRE ALARM IN BUILDING 223
E. FIRE DEPARTMENT CONNECTION FOR BUILDING 223

6. DASHED BOLD LINES INDICATE EXTENT OF DEMOLITION.

7. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.

8. CONTRACTOR TO VERIFY ALL WALL CONSTRUCTION & FINISHES NOTED FOR REMOVAL. TAKE INTO ACCOUNT ANY DISCREPANCY AND MAKE PROPER ADJUSTMENT TO ACCOMPLISH REQUIRED CONSTRUCTION & FINISHES. IF STRUCTURAL INTEGRITY IS VIOLATED, CONTACT ARCHITECT. COORDINATE PHASING WITH OWNER.

9. COORDINATE REMOVAL OF FURNITURE AND EXISTING EQUIPMENT WITH OWNER.

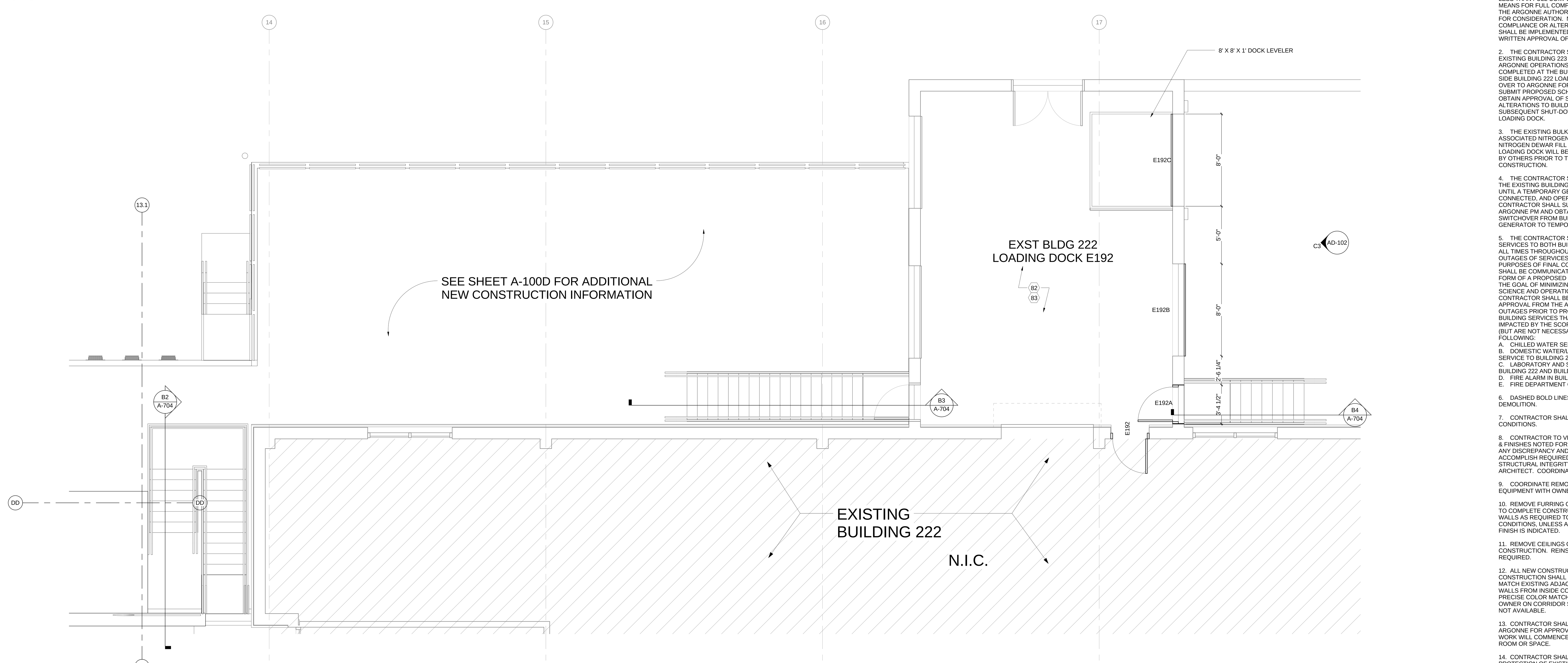
10. REMOVE FURRING OR GWB ONLY WHERE REQUIRED TO COMPLETE CONSTRUCTION. PATCH AND MATCH WALLS AS REQUIRED TO COMPLETE AND MATCH EXISTING CONDITIONS, UNLESS AN ALTERNATIVE MATERIAL AND FINISH IS INDICATED.

11. REMOVE CEILINGS ONLY AS REQUIRED FOR NEW CONSTRUCTION. REINSTALL, REPLACE OR PATCH AS REQUIRED.

12. ALL NEW CONSTRUCTION AND PATCHING OF EXISTING CONSTRUCTION SHALL BE INSTALLED AND FINISHED TO MATCH EXISTING ADJACENT CONSTRUCTION. PAINT WALLS FROM INSIDE CORNER TO INSIDE CORNER UNLESS PRECISE COLOR MATCH IS APPROVED ON-SITE BY OWNER ON CORRIDOR SIDE WHERE INSIDE CORNERS ARE NOT AVAILABLE.

13. CONTRACTOR SHALL SUBMIT SCHEDULE TO ARGONNE FOR APPROVAL INDICATING DATES WHEN WORK WILL COMMENCE WHICH AFFECTS EACH EXISTING ROOM OR SPACE.

14. CONTRACTOR SHALL MAINTAIN ADEQUATE PROTECTION OF EXISTING SPACES FROM WATER AND AIR INFILTRATION AND THERMAL BARRIER TO EXTERIOR.



A1 BLDG 222 FIRST FLOOR - DOCK 144 PLAN
1/4" = 1'-0"

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:20:49 AM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AD-102

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

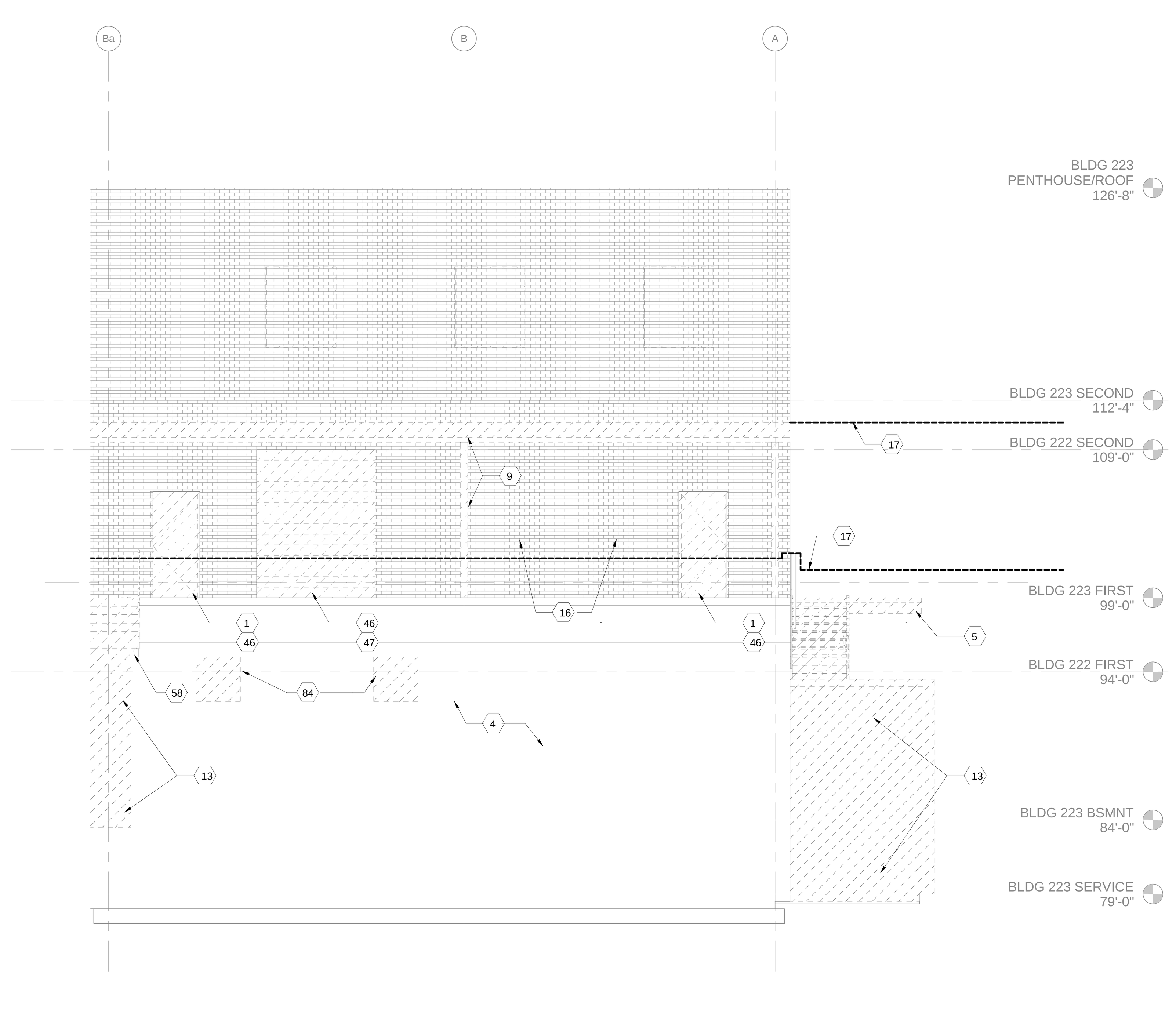
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

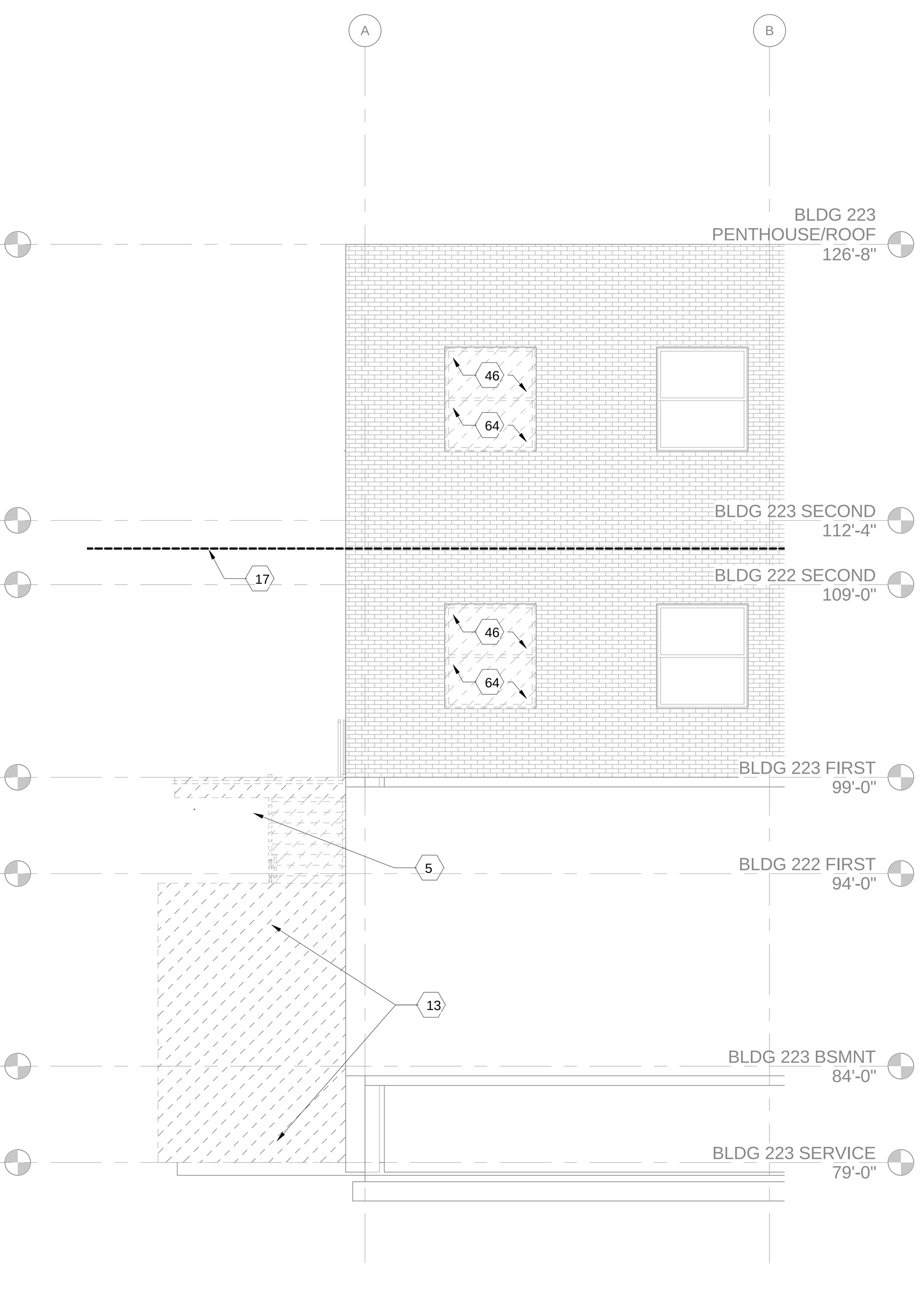
DOCUMENT TITLE
BLDG 222 FIRST FLOOR - DEMO & NEW PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AD-102	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- AD-102
REV. NO.



C1 EAST ELEVATION BUILDING 223 - DEMO
3/16" = 1'-0"



C2 WEST ELEVATION BUILDING 223 - DEMO
3/16" = 1'-0"

KEYNOTES - DEMOLITION

1. REMOVE HOLLOW METAL DOOR AND FRAME.
2. REMOVE CMU WALL AND PATCH CMU AT PERPENDICULAR WALLS. IF WALL CANNOT BE REMOVED FULL HEIGHT, PROVIDE LINTEL AT OPENING HEADER IF POSSIBLE OR NOT LESS THAN 7' - 0" AFF.
3. REMOVE PORTION OF CMU & BRICK WALL TO CREATE DOOR OPENING. PROVIDE LINTEL, THRU-WALL FLASHING WITH END DAMS AND WEEPS. TOOTH IN BRICK JAMB RETURNS.
4. WHERE CONCRETE WALL IS TO REMAIN, REMOVE EXTERIOR WATERPROOFING MATERIAL AND CLEAN EXPOSED TO VIEW.
5. REMOVE STEEL STAIRS AND RAILINGS.
6. REMOVE WINDOW AND FRAME.
7. PATCH OPENING W/ CMU TO MATCH EXISTING. TOOTH INTO EXISTING CMU AT JAMBS.
8. REMOVE DOCK BUMPERS, PATCH CONC. WALL TO RECEIVE NEW WORK.
9. REMOVE CANOPY, CANOPY SUPPORT COLUMNS, DOWNSPOUTS, PATCH PERPENDICULAR EXTERIOR WALL.
10. REMOVE METAL LOUVER.
11. REMOVE CURTAIN WALL. FULL HEIGHT.
12. REMOVE EXTERIOR WALL, PATCH PERPENDICULAR WALL.
13. REMOVE FOUNDATION WALLS, FOOTING, & SLAB.
14. MOVE & REPLACE MASONRY AS NEEDED & INSTALL NEW LINE OF THRU-WALL FLASHING & WEEPS.
15. LOCATE FP SIAMESE CONNECTION.
16. LOCATE NITROGEN FILLING STATIONS & PIPING.
17. LINE OF NEW CONSTRUCTION, FOR REFERENCE ONLY.
18. REVERSE SWING OF DOOR AS INDICATED.
19. SAW - CUT DOOR OPENING IN CONCRETE FOUNDATION WALL.
20. REMOVE PORTION OF CMU WALL INSIDE OFFOUNDATION WALL. TOOTH IN CMU JAMB RETURNS. PROVIDE LINTEL.
21. PROVIDE CMU INFILL OF OPENING. TOOTH CMU INTO EXISTING CMU AT JAMBS.
22. REMOVE VINYL TILE FLOORING AND BASE.
23. REMOVE SUSPENDED ACOUSTICAL TILE CEILING.
24. PROVIDE INTERIOR STUD PARTITION ADJACENT TO EXISTING STUD PARTITION.
25. VERIFY EXISTING WALL EXTENDS TO STRUCTURE ABOVE. EXTEND WALL AS REQUIRED USING PARTITION TYPE 'B'.
26. PROVIDE VCT AND BASE TO MATCH EXISTING CORRIDOR.
27. PROVIDE SUSPENDED ACOUSTICAL TILE CEILING SYSTEM. REINSTALL HVAC DIFFUSER. PROVIDE NEW LIGHT FIXTURES.
28. COORDINATE REMOVAL OF LIGHT SWITCH WITH ELECTRICAL CONTRACTOR.
29. COORDINATE REMOVAL OF SURFACE MOUNTED RACEWAY WITH ELECTRICAL CONTRACTOR.
30. COORDINATE RELOCATION OF EMERGENCY LIGHTING TO WEST WALL OF ROOM WITH ELECTRICAL CONTRACTOR.
31. COORDINATE REMOVAL OF SPECIALTY GAS PIPING WITH PLUMBING CONTRACTOR.
32. COORDINATE REMOVAL OF ELECTRICAL PANEL BOARD WITH ELECTRICAL CONTRACTOR. IF STILL REQUIRED FOR ADJACENT LAB, RELOCATE TO ADJACENT LAB.
33. REMOVE SNORKEL EXHAUST. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
34. REMOVE EPOXY TOP AND FURRING. COORDINATE REMOVAL OF GAS OUTLETS AND PIPING WITH PLUMBING CONTRACTOR. COORDINATE REMOVAL OF CUP SINK AND WATER AND DRAINAGE PIPING WITH ELECTRICAL CONTRACTOR.
35. REMOVE AND SALVAGE LAB CASEWORK, EPOXY TOP, AND SINK AND TURN OVER TO OWNER. COORDINATE REMOVAL OF WATER SUPPLY AND DRAINAGE PIPING WITH PLUMBING CONTRACTOR.
36. REMOVE AND SALVAGE LAB CASEWORK AND FUMEHOOD AND TURN OVER TO OWNER. COORDINATE REMOVAL OF GAS, WATER SUPPLY AND DRAINAGE PIPING, WITH PLUMBING CONTRACTOR. COORDINATE ELECTRICAL DISCONNECT WITH ELECTRICAL CONTRACTOR. COORDINATE CAPPING OF EXHAUST DUCT AT MAIN WITH MECHANICAL CONTRACTOR.
37. REINSTALL EXISTING SMOKE DETECTOR IN NEW CEILING.
38. PAINT ALL WALLS IN ROOM.
39. REMOVE CAPPED PIPE AND CAP INSIDE BUILDING. PATCH HOLE. COORDINATE WITH PLUMBING CONTRACTOR.
40. REMOVE FLOOR DRAIN AND PIPING. COORDINATE WITH PLUMBING CONTRACTOR.
41. REMOVE EXISTING THRU-WALL EXHAUST FANS AND LOUVERS. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL OPENING WITH CONCRETE.
42. REMOVE LIGHT FIXTURE. COORDINATE WITH ELECTRICAL CONTRACTOR.
43. RELOCATE EXISTING EXIT SIGN TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
44. RELOCATE FIRE ALARM PULL STATION AND ALARM BELL / STORM TO NEW DOOR LOCATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
45. RELOCATE FIRE EXTINGUISHER TO NEW DOOR LOCATION.
46. INFILL OPENING WITH BRICK AND CMU BACKUP TO MATCH EXISTING. TOOTH INTO EXISTING BRICK AND CMU ATJAMBS.
47. REMOVE OVERHEAD DOOR, STEEL CHANNEL JAMBS AND HEAD, AND ALL DOOR COMPONENTS. COORDINATE WITH ELECTRICAL.
48. INFILL OPENING AROUND NEW HOLLOW METAL ROOF ACCESS DOOR. PROVIDE RAISED CURB AS DETAILED.
49. RELOCATE TEST DRAINS TO LOWER ELEVATION AT 2' - 0" ABOVE ESB DOCK ELEVATION. PATCH HOLES IN CONCRETE FOUNDATION WALL. COORDINATE WITH PLUMBING AND FIRE PROTECTION CONTRACTORS.
50. REMOVE AND SALVAGE POWER LIFT AND TURN OVER TO OWNER. COORDINATE REMOVAL OF ASSOCIATED ELECTRICAL WITH ELECTRICAL CONTRACTOR.
51. COORDINATE NECESSARY MODIFICATION TO PERIMETER GROUNDING, CONDUCTORS TO ADDRESS LOWER DOCK AND DRIVE ELEVATION AND ELIMINATE CONFLICT AT LINKING CORRIDOR BREAK THRU TO BUILDING 223.
52. REMOVE AND CAP DRAIN PIPE INSIDE EXISTING BUILDING. CLOSE ASSOCIATED FLOOR DRAIN IN STORAGE ROOM S-106. COORDINATE WITH PLUMBING CONTRACTOR. PATCH HOLE IN CONCRETE WALL.
53. REMOVE SIDE-WALL SPRINKLER HEADS ALL ALONG EXTERIOR WALL AND CAP PIPING INSIDE EXISTING BUILDING. COORDINATE WITH FIRE PROTECTION CONTRACTOR.
54. REMOVE ALL SURFACE MOUNTED ELECTRICAL CONDUIT, BOXES, AND DEVICES ALL ALONG EXTERIOR WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
55. REMOVE AND SALVAGE ALL SURFACE MOUNTED LOCK BOXES, SHELVES, SIGNAGE, AND CYLINDER RACKS ALL ALONG DOCK AND EXTERIOR WALL. TURN OVER TO OWNER.
56. REMOVE GUARDRAIL AND PATCH BRICK WALL AND CONCRETE SLAB.
57. REMOVE STEEL BRACKETS FROM END OF DOCK.
58. REMOVE CONCRETE STAIR AND STEEL RAILINGS.
59. RELOCATE FLOOR CLEANOUT TO LOCATION INSIDE MECHANICAL ROOM BELOW. COORDINATE WITH PLUMBING CONTRACTOR.
60. REMOVE AND SALVAGE HC PARKING SIGN, AND TURN OVER TO OWNER.
61. RELOCATE POWER RECEPTACLE TO NEW DOCK ELEVATION. PATCH HOLE IN CONCRETE WALL. COORDINATE WITH ELECTRICAL CONTRACTOR.
62. PATCH HOLE IN CONCRETE WALL WHERE GASEOUS NITROGEN PIPING HAS BEEN REMOVED BY OTHERS.
63. REMOVE STEEL GRATING AND ASSOCIATED FRAME.
64. REMOVE WINDOW AND INFILL MASONRY AT BOTH FIRST AND SECOND (1ST AND 2ND) FLOORS OF BUILDING 223.
65. PROVIDE NEW WINDOW AT SECOND (2ND) FLOOR OF BUILDING 223.
66. REMOVE CONCRETE RAMP AND HANDRAILS. PATCH CONCRETE WALL.
67. REMOVE SECTION OF CONCRETE WALL AND RAILING.
68. COORDINATE NECESSARY MODIFICATION TO BUILDING 222. PERIMETER DRAINAGE SYSTEM AND CLEAN OUTS TO ADDRESS LOWER DOCK AND DRIVE ELEVATIONS. COORDINATE WITH PLUMBING CONTRACTOR.
69. REMOVE EXIT SIGN. COORDINATE WITH ELECTRICAL CONTRACTOR.
70. REMOVE FIRE ALARM PULL STATION. COORDINATE WITH ELECTRICAL CONTRACTOR.
71. RELOCATE GRAVITY LOUVER TO HIGHER ELEVATIONABOVE FLASHING LINE OF NEW ESB ROOF.
72. PATCH HOLE IN CONCRETE FOUNDATION WALL WHERE PIPE HAS BEEN REMOVED FROM WATER SERVICE OR CHILLED WATER SERVICE.
73. RELOCATE FIRE ALARM PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR.
74. RELOCATE UNIT HEATER TO BASEMENT LEVEL STAIR. COORDINATE WITH MECHANICAL CONTRACTOR.
75. ADD NEW LIGHT FIXTURE BELOW INTERMEDIATELANDING AT BASEMENT LEVEL STAIR DISCHARGE.
76. REMOVE AND SALVAGE EMERGENCY GENERATOR AND TURN OVER TO OWNER. REMOVE ASSOCIATED CONCRETE PAD AND FENCING. COORDINATE WITH ELECTRICAL CONTRACTOR.
77. REMOVE UNIT HEATER. COORDINATE WITH MECHANICAL CONTRACTOR.
78. REMOVE BLINDS.
79. REMOVE SURFACE MOUNTED RACEWAY. COORDINATE WITH ELECTRICAL CONTRACTOR.
80. REMOVE DOCK LEVELER. COORDINATE WITH ELECTRICAL CONTRACTOR. INFILL CONCRETE FOUNDATION WALL AND SLAB.
81. REMOVE STEEL BOLLARD.
82. REMOVE GLYCOL WATER SYSTEM PIPING AND HEATERS. CAP AT MAIN. COORDINATE REMOVAL WITH MECHANICAL CONTRACTOR.
83. EXISTING ELECTRIC UNIT HEATER TO REMAIN. RELOCATE AS REQUIRED TO ACCOMMODATE NEW OVERHEAD DOORS. PROVIDE NEW ELECTRIC UNIT HEATER TO MATCH EXISTING HEATER. COORDINATE WITH ELECTRICAL CONTRACTOR.
84. SAW CUT LOUVER-EXHAUST FAN OPENING IN CONCRETE FOUNDATION WALL.

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY EGRESS FROM EXISTING BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A SAFE AND PROTECTED EMERGENCY EGRESS ROUTE FOR PEDESTRIANS FROM ALL EXIT DISCHARGE DOORS AROUND OR THROUGH THE CONSTRUCTION SITE TO A PEDESTRIAN WAY LOCATED OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANYTHING LESS THAN FULL COMPLIANCE AND/OR ALTERNATIVE MEANS FOR FULL COMPLIANCE SHALL BE SUBMITTED TO THE ARGONNE AUTHORITY HAVING JURISDICTION (AHJ) FOR CONSIDERATION. NO SUCH DEVIATIONS FROM FULL COMPLIANCE OR ALTERNATIVE MEANS OF COMPLIANCE SHALL BE IMPLEMENTED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE ARGONNE AHJ.

2. THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING BUILDING 223 LOADING DOCK FOR CONTINUING ARGONNE OPERATIONS UNTIL THE ALTERATIONS ARE COMPLETED AT THE BUILDING 222 DOCK AND THE EAST SIDE BUILDING 222 LOADING DOCK BAYS ARE TURNED OVER TO ARGONNE FOR USE. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR TURNOVER OF ALTERATIONS TO BUILDING 222 LOADING DOCK AND SUBSEQUENT SHUT-DOWN OF THE EXISTING BUILDING 223 LOADING DOCK.

3. THE EXISTING BULK LIQUID NITROGEN TANK, ALL ASSOCIATED NITROGEN PIPING, AND THE LIQUID NITROGEN DEWAR FILL STATIONS AT THE BUILDING 223 LOADING DOCK WILL BE DECOMMISSIONED AND REMOVED BY OTHERS PRIOR TO THE BEGINNING OF CONSTRUCTION.

4. THE CONTRACTOR SHALL MAINTAIN OPERATION OF THE EXISTING BUILDING 223 EMERGENCY GENERATOR UNTIL A TEMPORARY GENERATOR IS IN-PLACE, CONNECTED, AND OPERATIONAL; SERVING BUILDING 223. CONTRACTOR SHALL SUBMIT PROPOSED SCHEDULE TO ARGONNE PM AND OBTAIN APPROVAL OF SCHEDULE FOR SWITCHOVER FROM BUILDING 223 EMERGENCY GENERATOR TO TEMPORARY GENERATOR.

5. THE CONTRACTOR SHALL MAINTAIN ACTIVE BUILDING SERVICES TO BOTH BUILDING 222 AND BUILDING 223 AT ALL TIMES THROUGHOUT CONSTRUCTION. TEMPORARY OUTAGES OF SERVICES TO THESE BUILDINGS FOR THE PURPOSES OF FINAL CONNECTIONS OR SWITCH OVER SHALL BE COMMUNICATED TO THE ARGONNE PM IN THE FORM OF A PROPOSED SCHEDULE AND SHALL MAINTAIN THE GOAL OF MINIMIZING IMPACT UPON ONGOING SCIENCE AND OPERATIONS WITH THESE BUILDINGS. CONTRACTOR SHALL BE REQUIRED TO OBTAIN APPROVAL FROM THE ARGONNE PM FOR SUCH SERVICE OUTAGES PRIOR TO PROCEEDING WITH THE OUTAGE. BUILDING SERVICES THAT ARE EXPECTED TO BE IMPACTED BY THE SCOPE OF THIS PROJECT INCLUDE (BUT ARE NOT NECESSARILY LIMITED TO) THE FOLLOWING:
A. CHILLED WATER SERVICE TO BUILDING 223
B. DOMESTIC WATER/LABORATORY WATER/FIRE WATER SERVICE TO BUILDING 223
C. LABORATORY AND SANITARY SEWER SERVICE TO BUILDING 222 AND BUILDING 223
D. FIRE ALARM IN BUILDING 223
E. FIRE DEPARTMENT CONNECTION FOR BUILDING 223

6. DASHED BOLD LINES INDICATE EXTENT OF DEMOLITION.

7. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.

8. CONTRACTOR TO VERIFY ALL WALL CONSTRUCTION & FINISHES NOTED FOR REMOVAL. TAKE INTO ACCOUNT ANY DISCREPANCY AND MAKE PROPER ADJUSTMENT TO ACCOMPLISH REQUIRED CONSTRUCTION & FINISHES. IF STRUCTURAL INTEGRITY IS VIOLATED, CONTACT ARCHITECT. COORDINATE PHASING WITH OWNER.

9. COORDINATE REMOVAL OF FURNITURE AND EXISTING EQUIPMENT WITH OWNER.

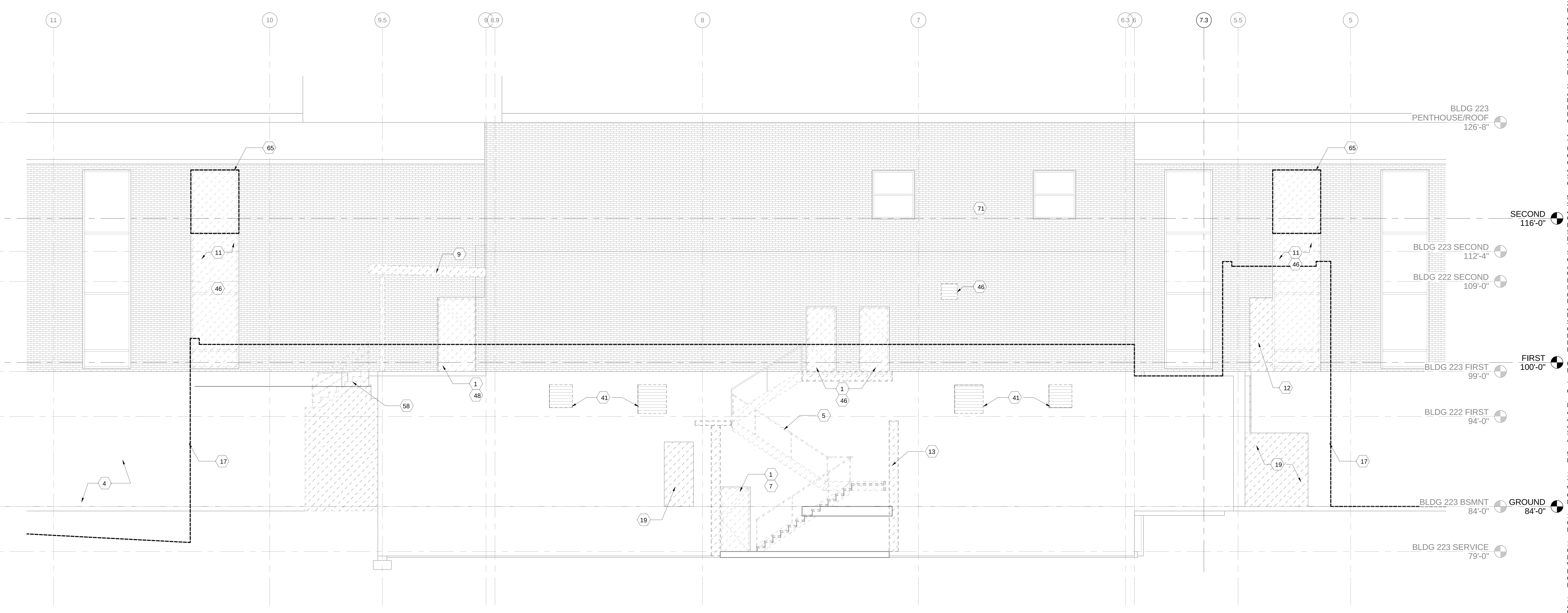
10. REMOVE FURRING OR GWB ONLY WHERE REQUIRED TO COMPLETE CONSTRUCTION. PATCH AND MATCH WALLS AS REQUIRED TO COMPLETE AND MATCH EXISTING CONDITIONS, UNLESS AN ALTERNATIVE MATERIAL AND FINISH IS INDICATED.

11. REMOVE CEILINGS ONLY AS REQUIRED FOR NEW CONSTRUCTION. REINSTALL, REPLACE OR PATCH AS REQUIRED.

12. ALL NEW CONSTRUCTION AND PATCHING OF EXISTING CONSTRUCTION SHALL BE INSTALLED AND FINISHED TO MATCH EXISTING ADJACENT CONSTRUCTION. PAINT WALLS FROM INSIDE CORNER TO INSIDE CORNER UNLESS PRECISE COLOR MATCH IS APPROVED ON-SITE BY OWNER ON CORRIDOR SIDE WHERE INSIDE CORNERS ARE NOT AVAILABLE.

13. CONTRACTOR SHALL SUBMIT SCHEDULE TO ARGONNE FOR APPROVAL INDICATING DATES WHEN WORK WILL COMMENCE WHICH AFFECTS EACH EXISTING ROOM OR SPACE.

14. CONTRACTOR SHALL MAINTAIN ADEQUATE PROTECTION OF EXISTING SPACES FROM WATER AND AIR INFILTRATION AND THERMAL BARRIER TO EXTERIOR.



A1 NORTH ELEVATION BUILDING 223 - DEMO
3/16" = 1'-0"

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:20:57 AM

AD-201

	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11
REV. NO.	DESCRIPTION	BY	APVD	DATE

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

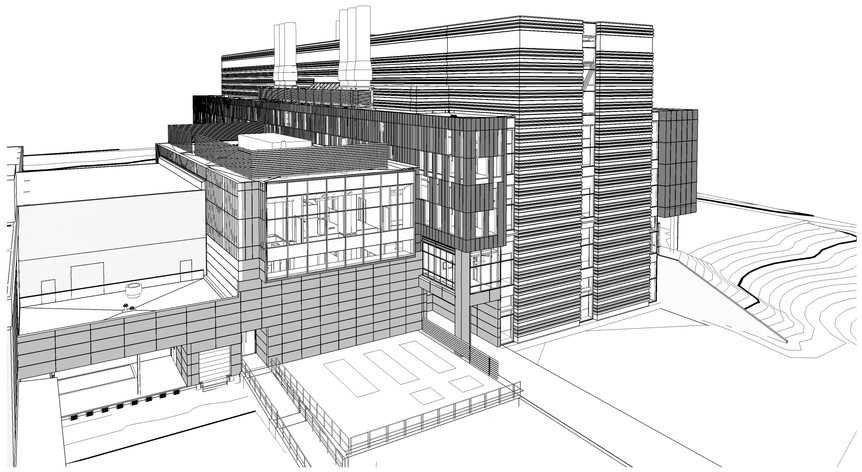
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

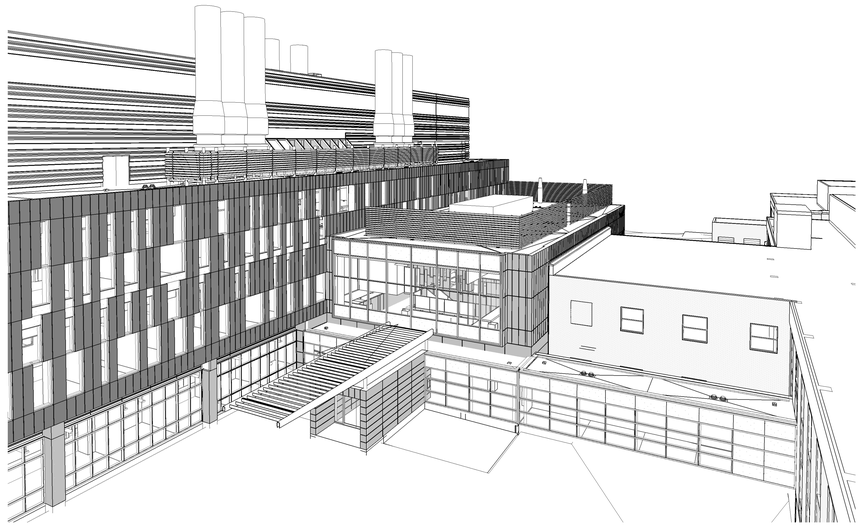
DOCUMENT TITLE
ELEVATIONS - DEMO

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AD-201	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

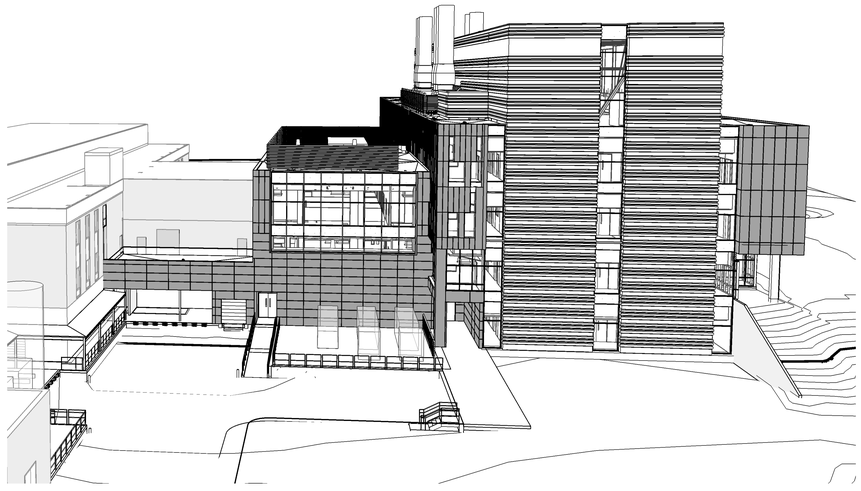
FACILITY DOCUMENT NUMBER: J241-101- AD-201
REV. NO.



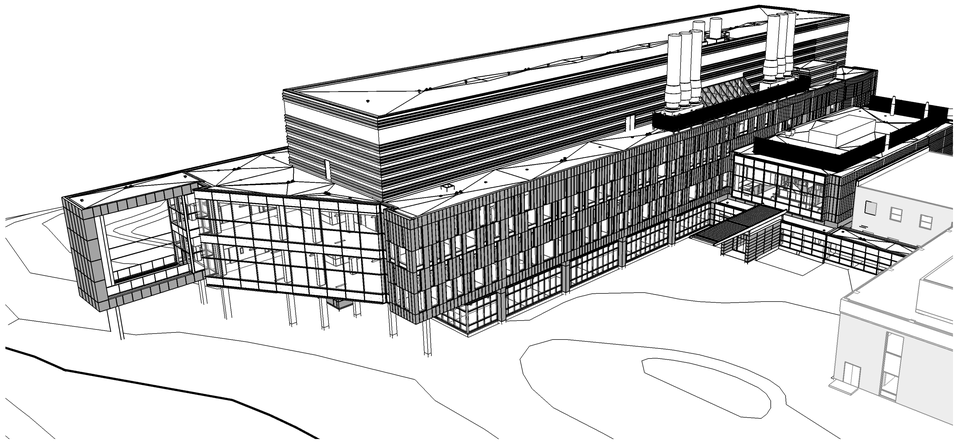
E1 PERSPECTIVE FROM SOUTHEAST



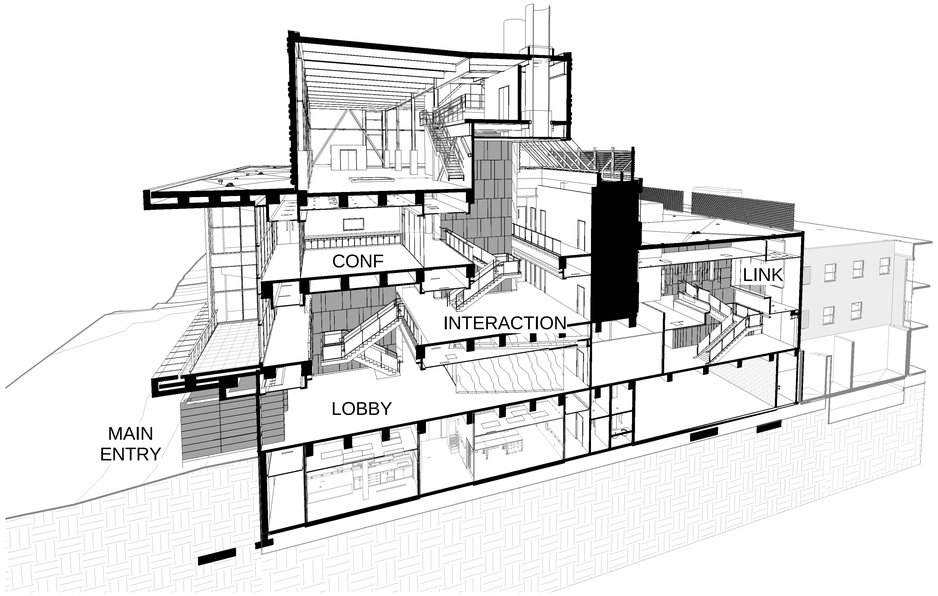
C1 PERSPECTIVE FROM SOUTHWEST



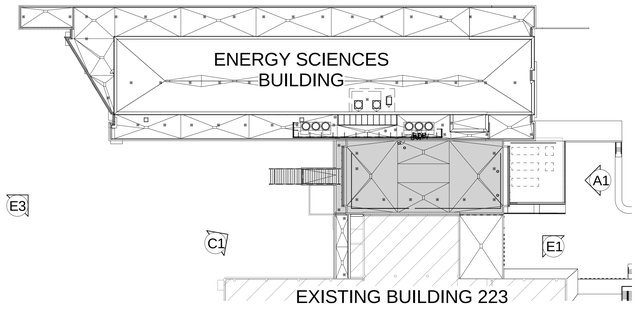
A1 PERSPECTIVE FROM EAST



E3 PERSPECTIVE FROM SOUTHWEST



C3 LOBBY SECTION PERSPECTIVE



A3 KEY PLAN
1" = 40'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-002

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR PERSPECTIVE VIEWS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-002	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.
J241-101- A-002

C:\BV70023\2-A-CENTRAL_ab49.rvt
7/8/2011 10:35:21 AM

GENERAL PLAN NOTES

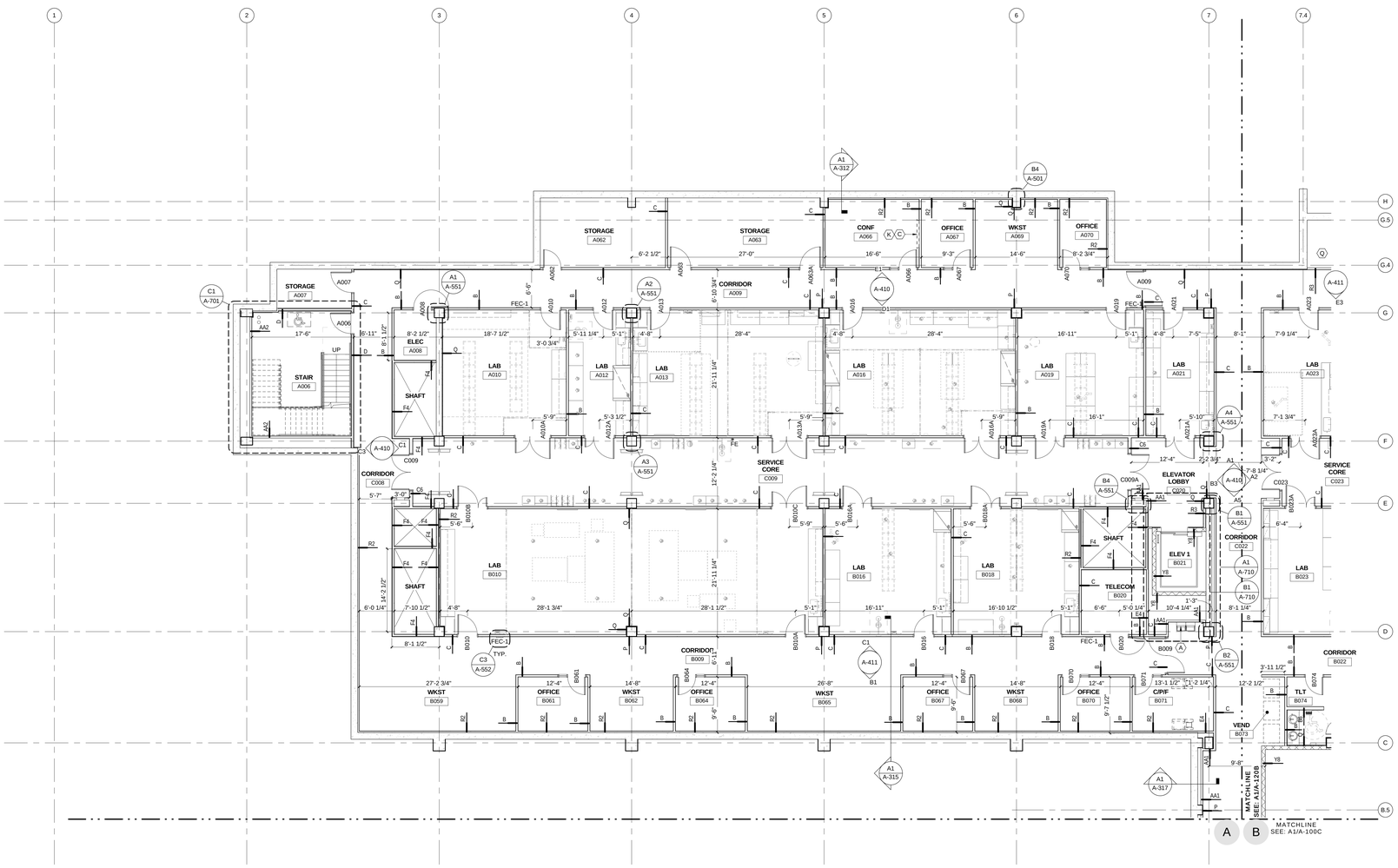
1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

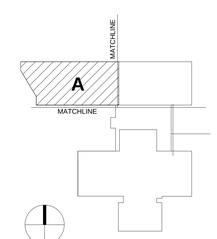
- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A-100A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
GROUND FLOOR - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-100A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.
J241-101- A-100A

A1 GROUND FLOOR - AREA A
1/8" = 1'-0"

C:\ffr700\2182-A-CENTRAL_ab+fp.rvt
7/8/2011 10:56:29 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

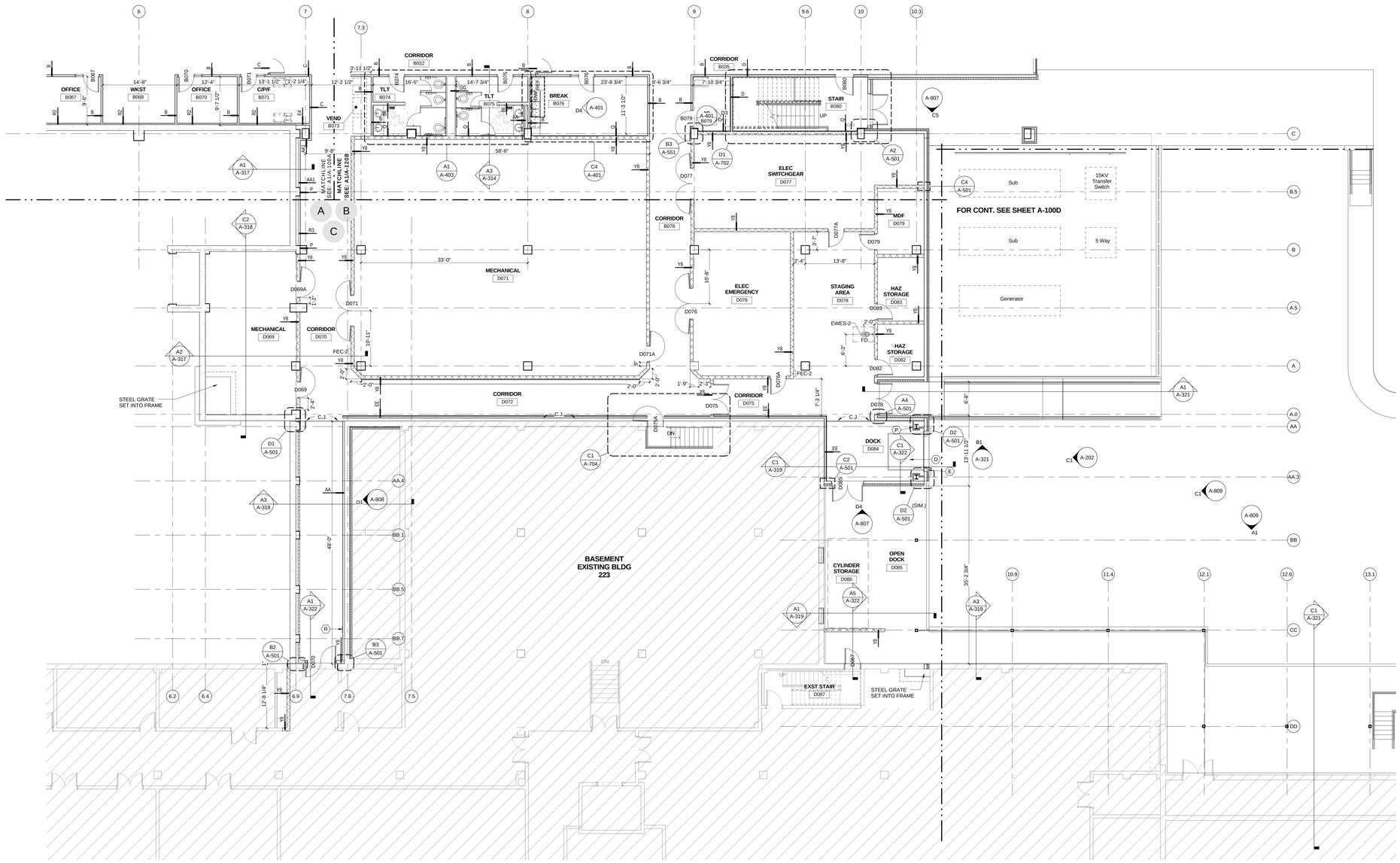
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

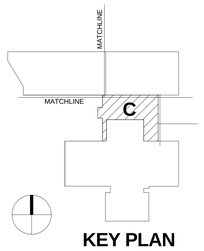
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A-100C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
GROUND FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-100C	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- A-100C** REV. NO.

A1 GROUND FLOOR - AREA C
1/8" = 1'-0"

C:\PV70\00100.AE\CENTRAL_alerts.rvt
7/8/2011 10:56:59 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

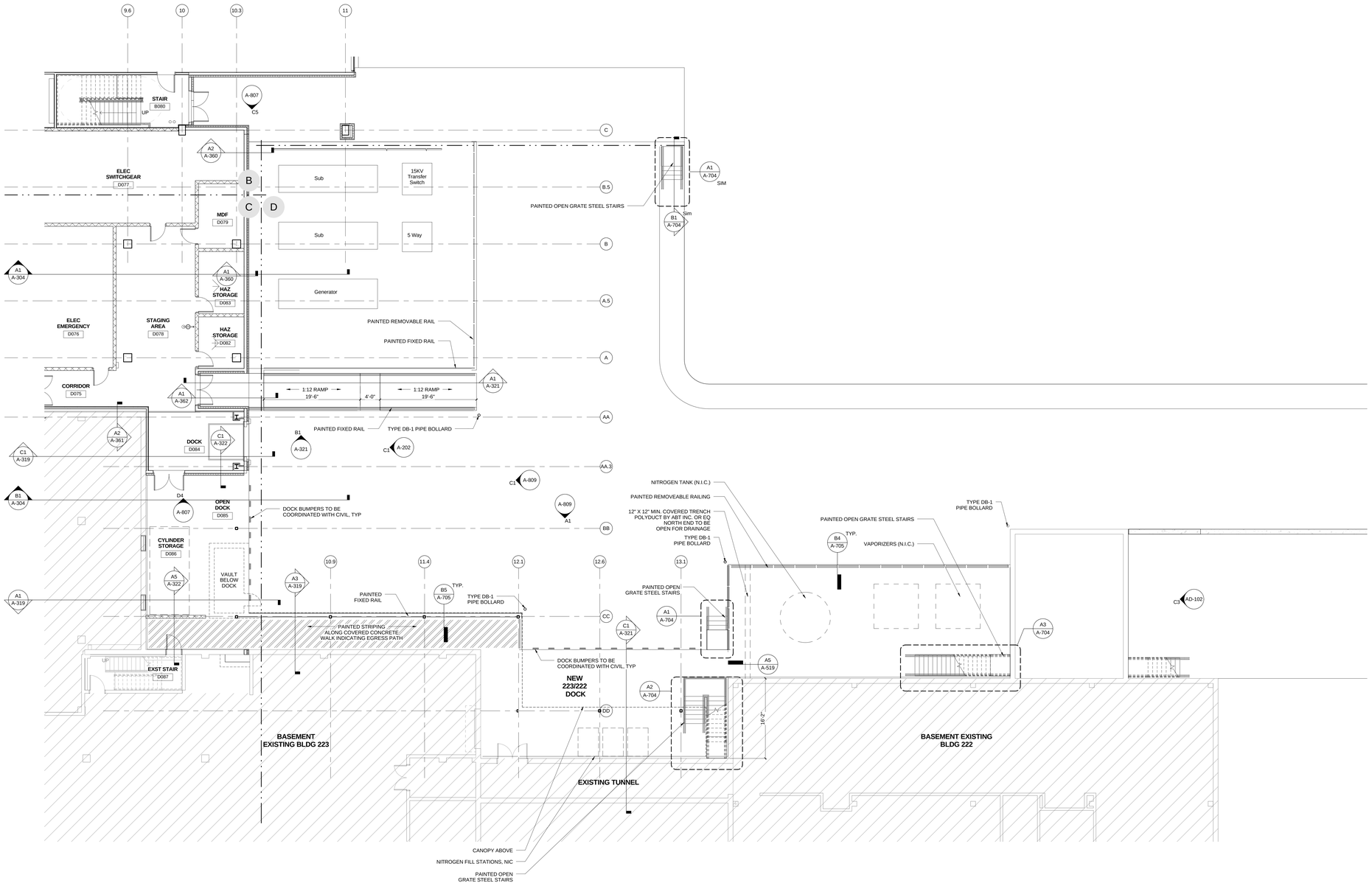
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

HDR Architecture, Inc.

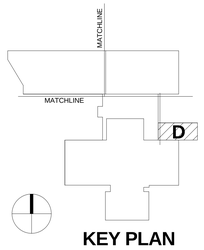
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 GROUND FLOOR - AREA D - SERVICE YARD PLAN

1/8" = 1'-0"

A-100D



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
SERVICE YARD PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-100D	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-100D — REV. NO.

C:\PW70001820.A-CENTRAL_dwg.rvt
7/8/2011 10:56:19 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

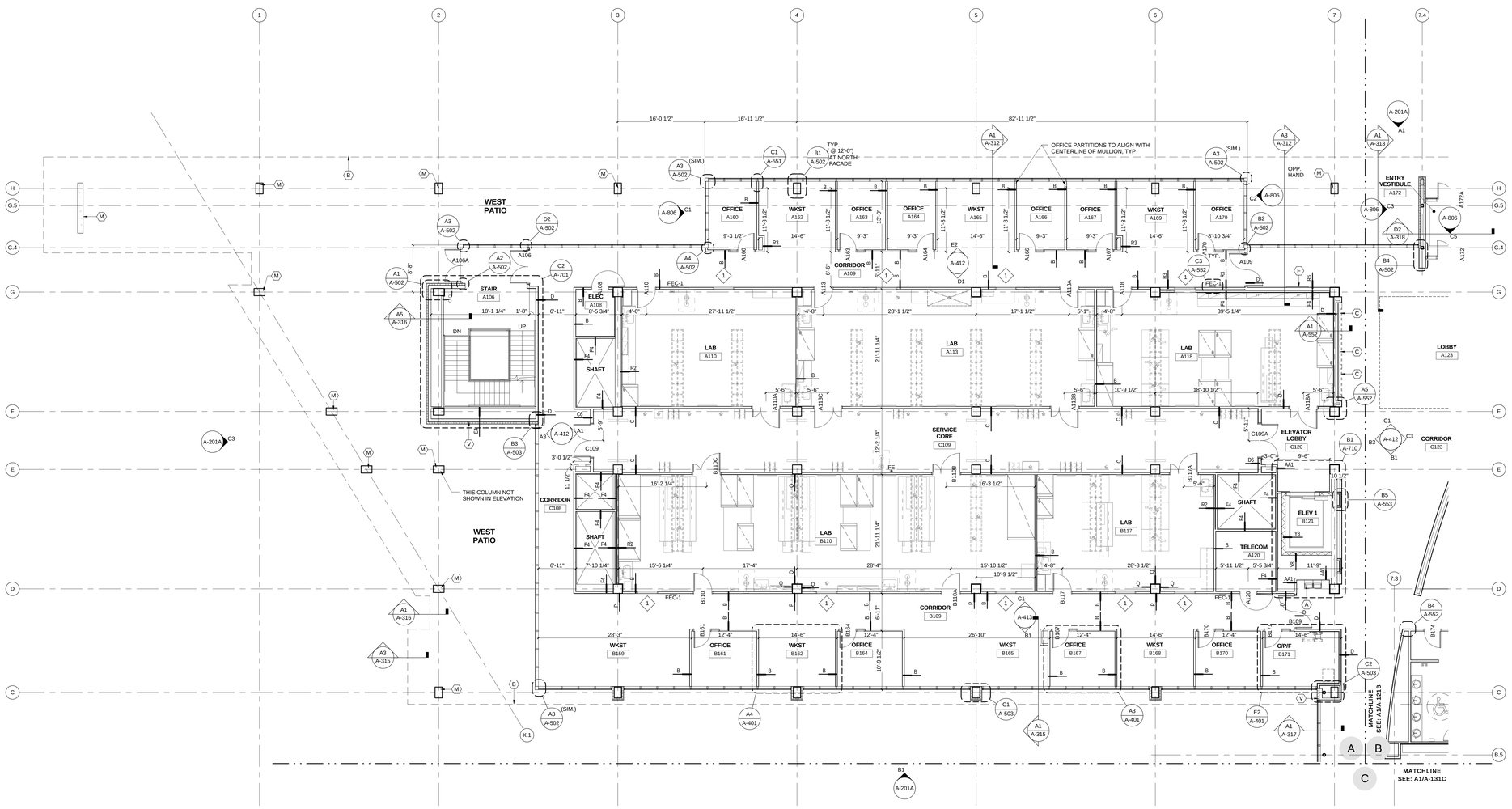
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

HDR Architecture, Inc.

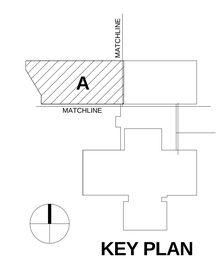
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR - AREA A

1/8" = 1'-0"

A-101A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

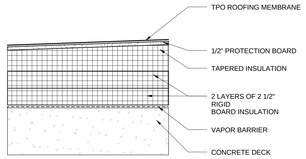
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
FIRST FLOOR - AREA A

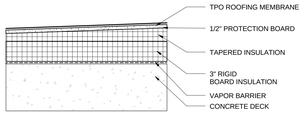
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-101A	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-101A REV. NO.

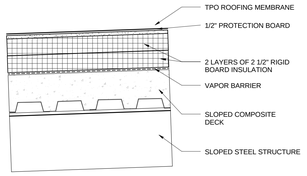
C:\PKT\002182-A-CENTRAL_alvrdy.rvt
7/8/2011 10:56:47 AM



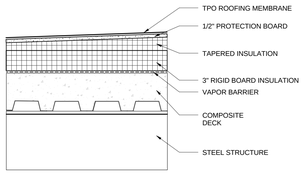
TYPE #1



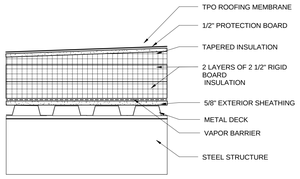
TYPE #2



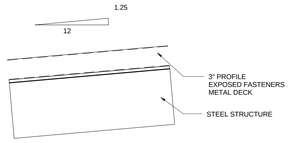
TYPE #3



TYPE #4



TYPE #5



TYPE #6

ROOF TYPES

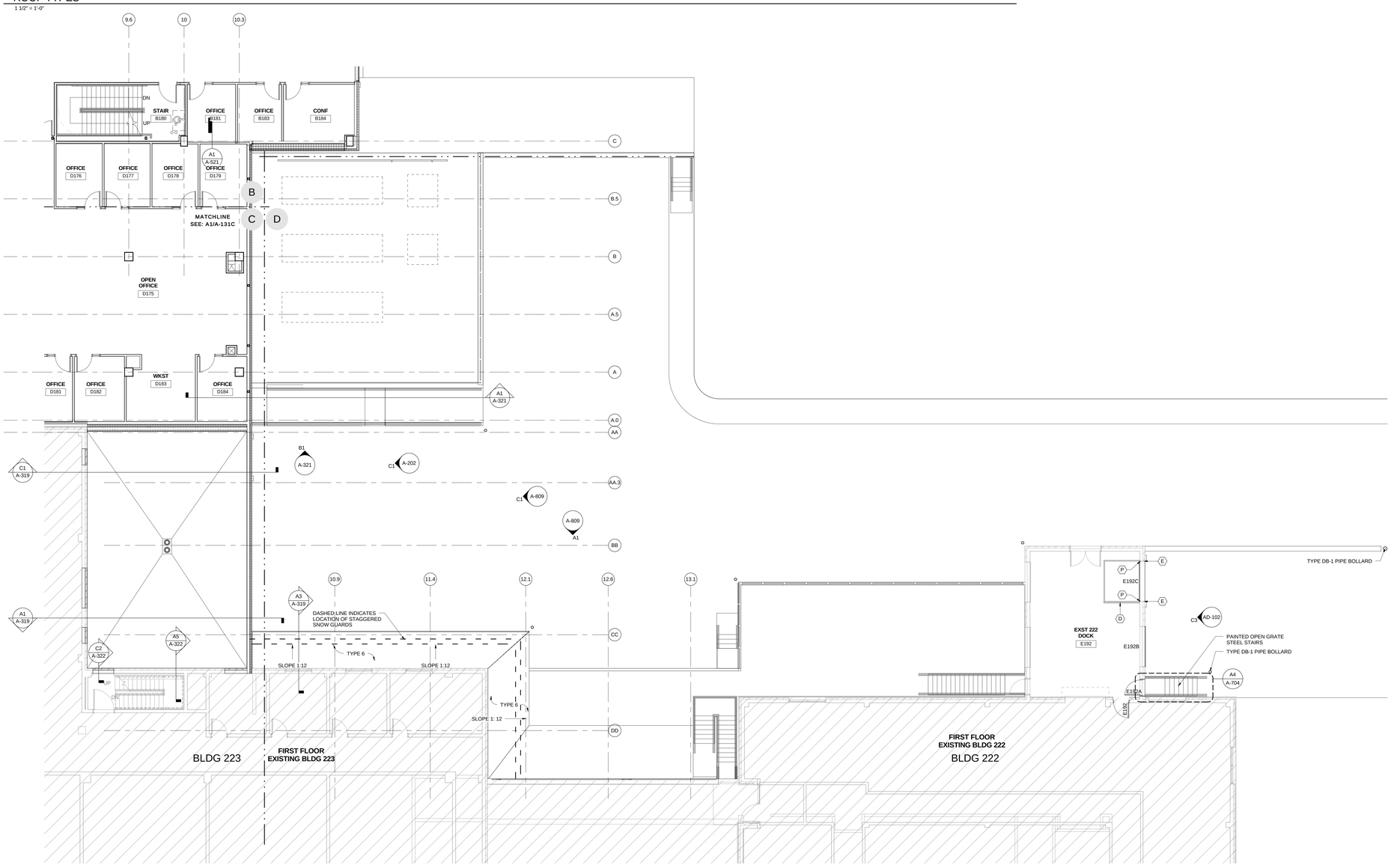
1 1/2" = 1'-0"

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522



A1 FIRST FLOOR - AREA D

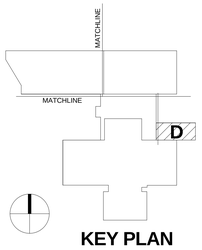
1/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-101D



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA D - BLDG 222 & SERVICE COURTYARD

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-101D	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-101D REV. NO.

C:\DV\002182-A-CENTRAL_dandy.rvt
7/8/2011 10:05:53 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

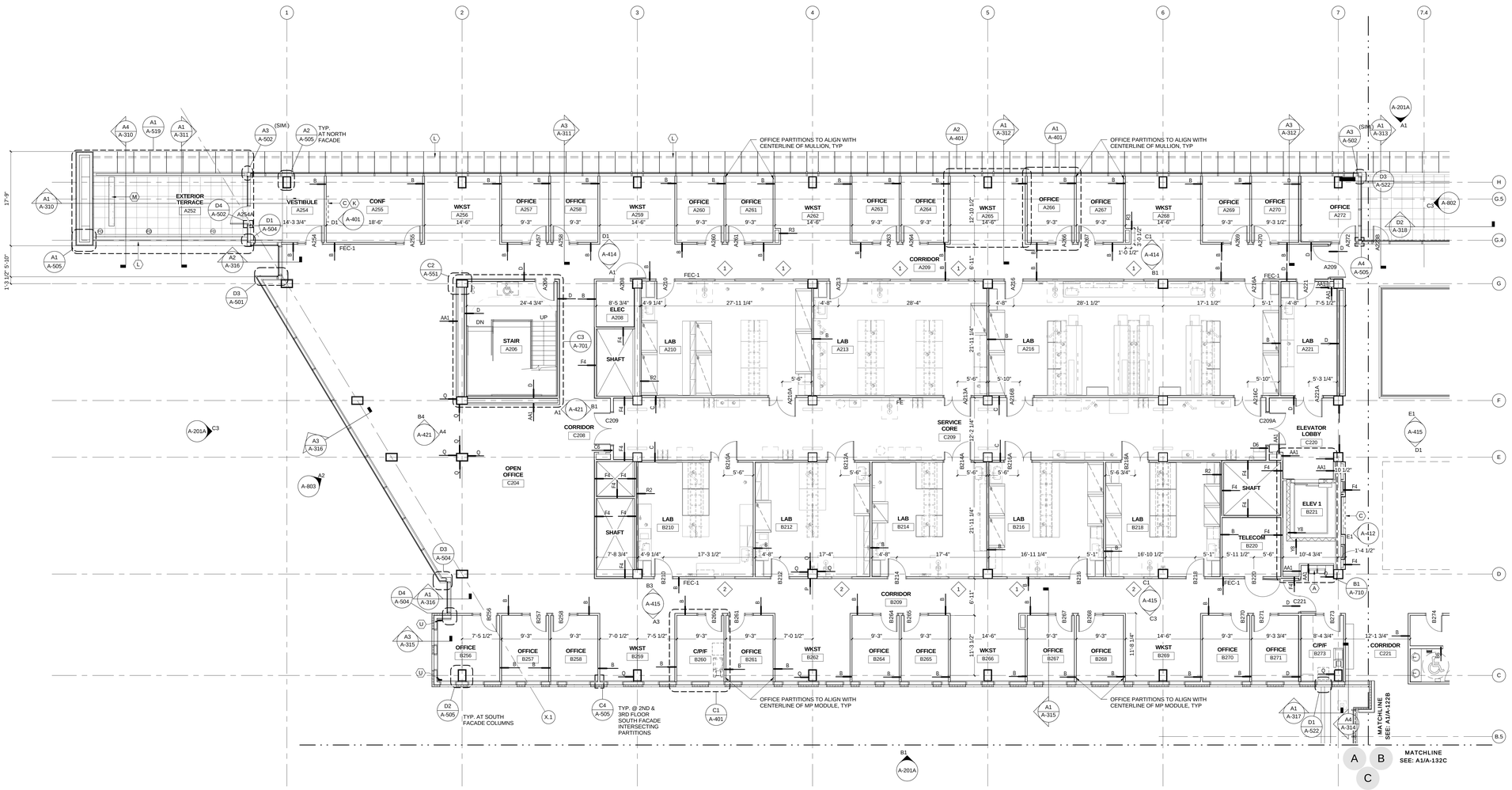
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

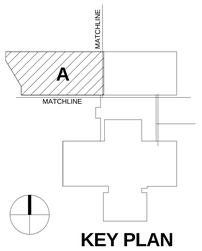
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A-102A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
SECOND FLOOR - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-102A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-102A REV. NO.

A1 SECOND FLOOR - AREA A
1/8" = 1'-0"

C:\R\TM\0182-ACENTRAL_alerts.rvt
7/8/2011 10:57:02 AM

GENERAL PLAN NOTES

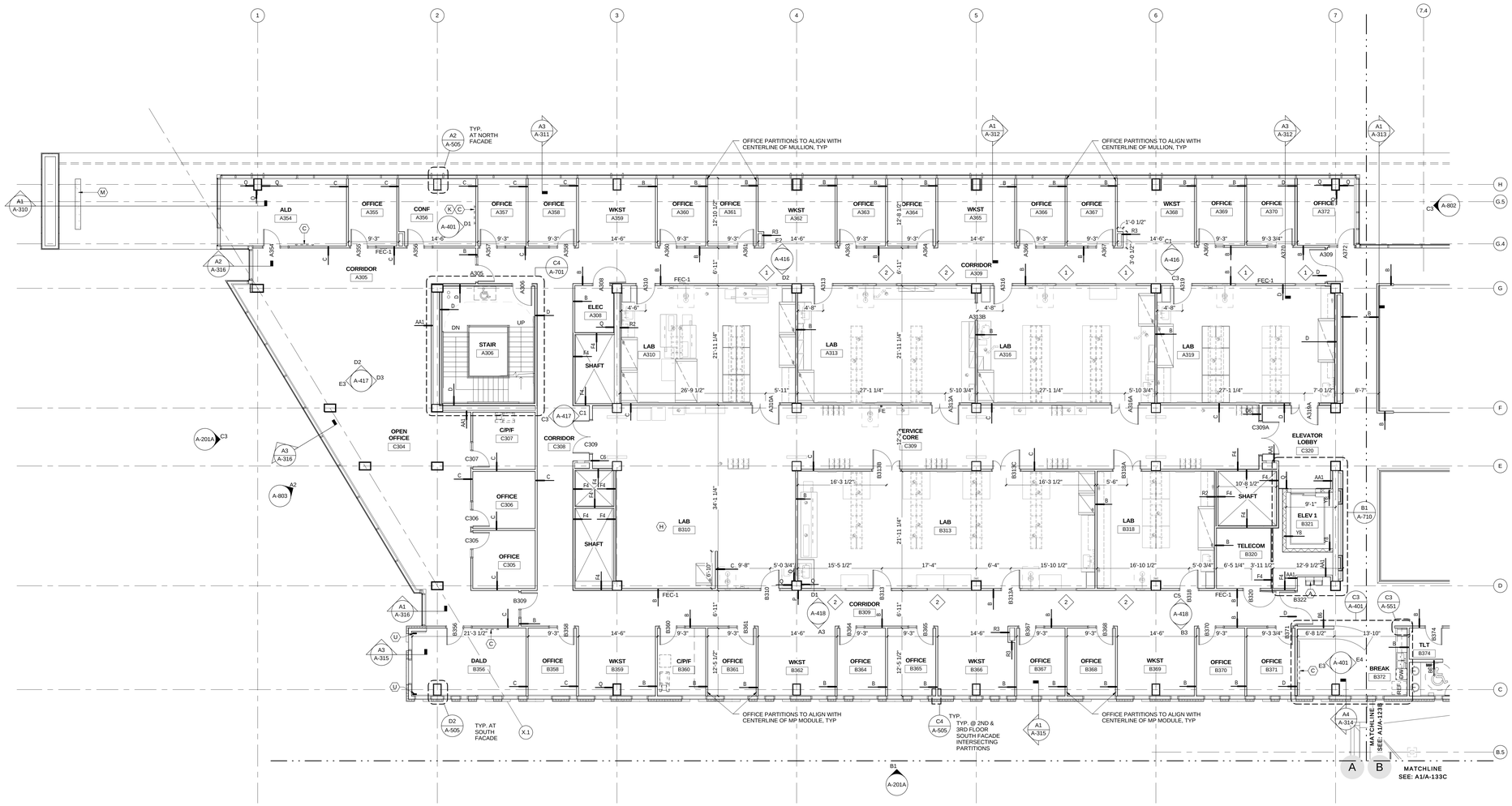
1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

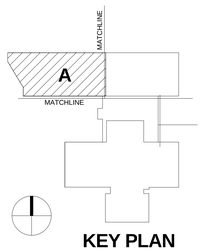
- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A-103A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
THIRD FLOOR - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-103A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-103A
REV. NO.

A1 THIRD FLOOR - AREA A
1/8" = 1'-0"

C:\R\T002182-A-CENTRAL_sheds.rvt
7/8/2011 10:57:09 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

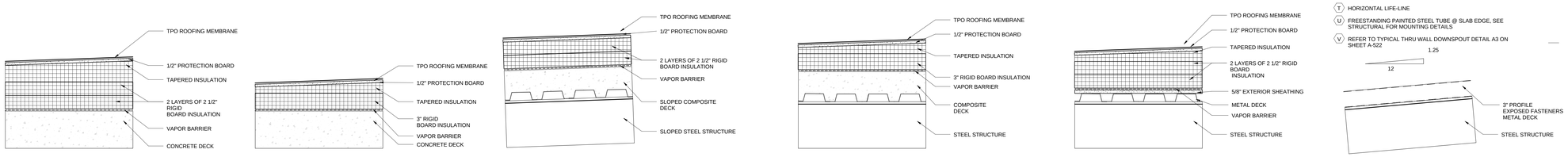
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

HDR Architecture, Inc.

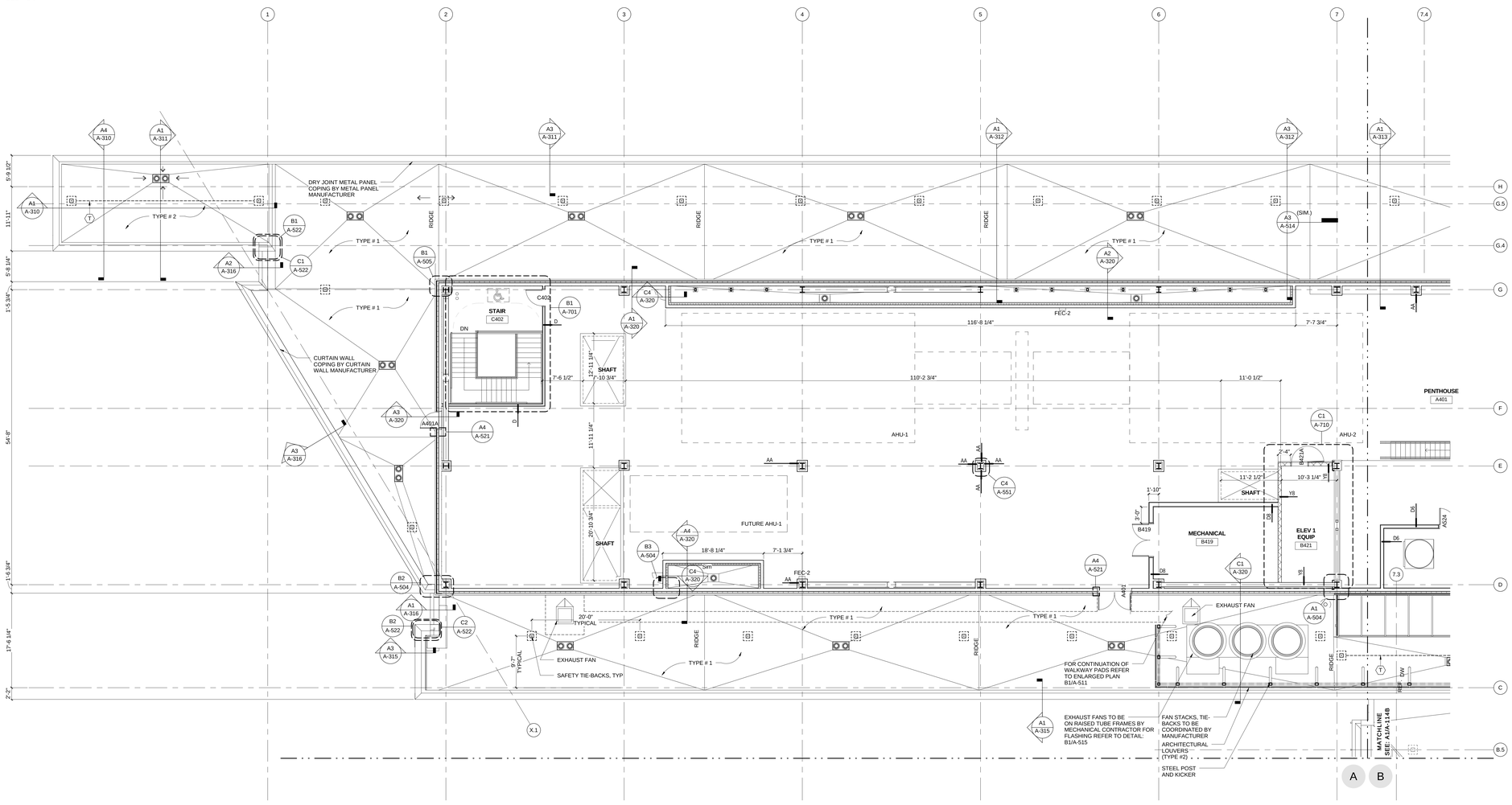
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



TYPE #1 TYPE #2 TYPE #3 TYPE #4 TYPE #5 TYPE #6

ROOF TYPES

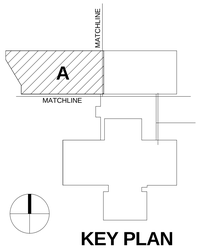
1 1/2" = 1'-0"



A1 PENTHOUSE/MAIN ROOF - AREA A

1/8" = 1'-0"

A-104A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

PENTHOUSE/MAIN ROOF - AREA A

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-104A	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-104A REV. NO.

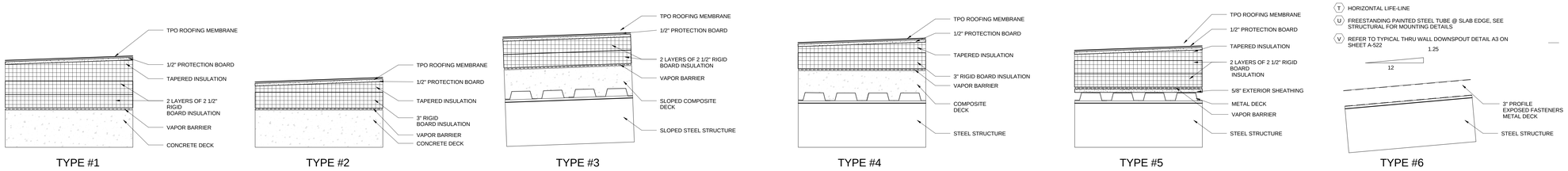
C:\PCWTO\0230-A-CENTRAL_alrxfy.rvt
7/8/2011 10:57:16 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

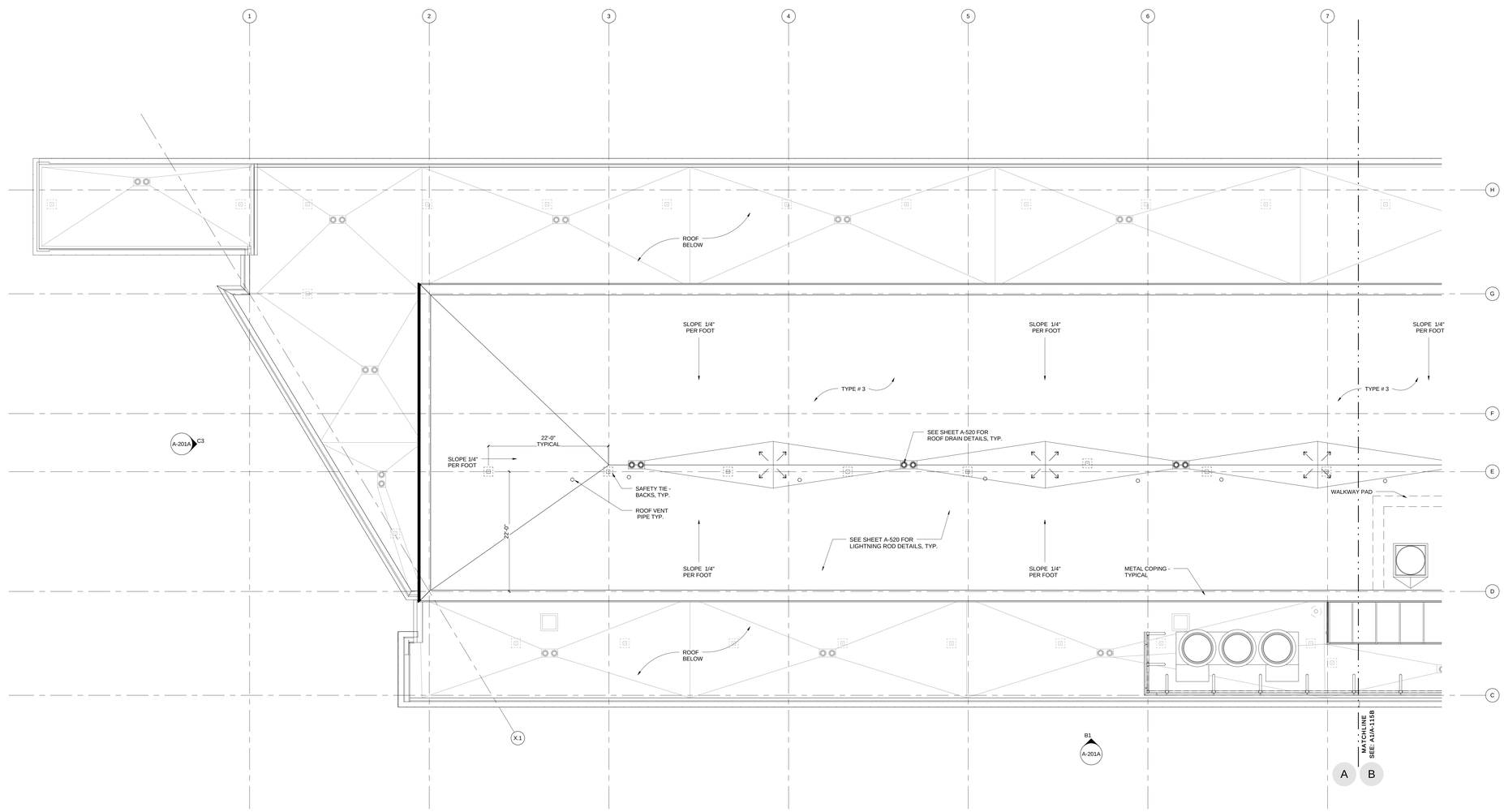
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522



ROOF TYPES

1 1/2" = 1'-0"



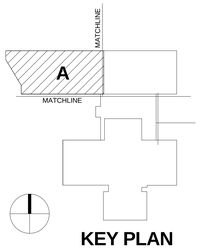
A1 PENTHOUSE ROOF PLAN - AREA A

1/8" = 1'-0"

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-105A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

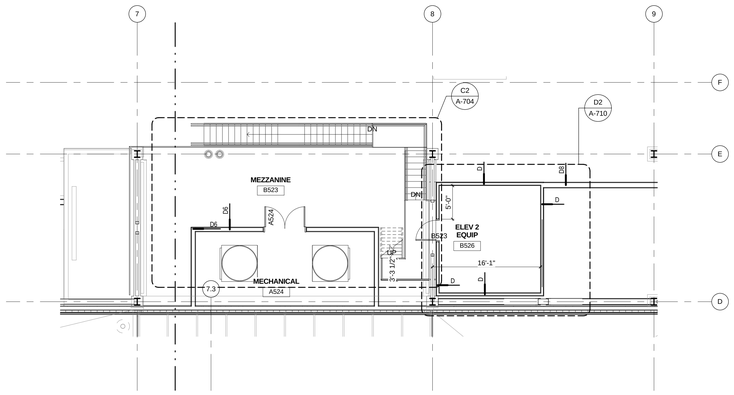
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
PENTHOUSE ROOF - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-105A	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-105A — REV. NO.

C:\PCWTO\2120-A-CENTRAL_ARch.rvt
7/8/2011 10:57:21 AM



C1 MEZZANINE PLAN
1/8" = 1'-0"

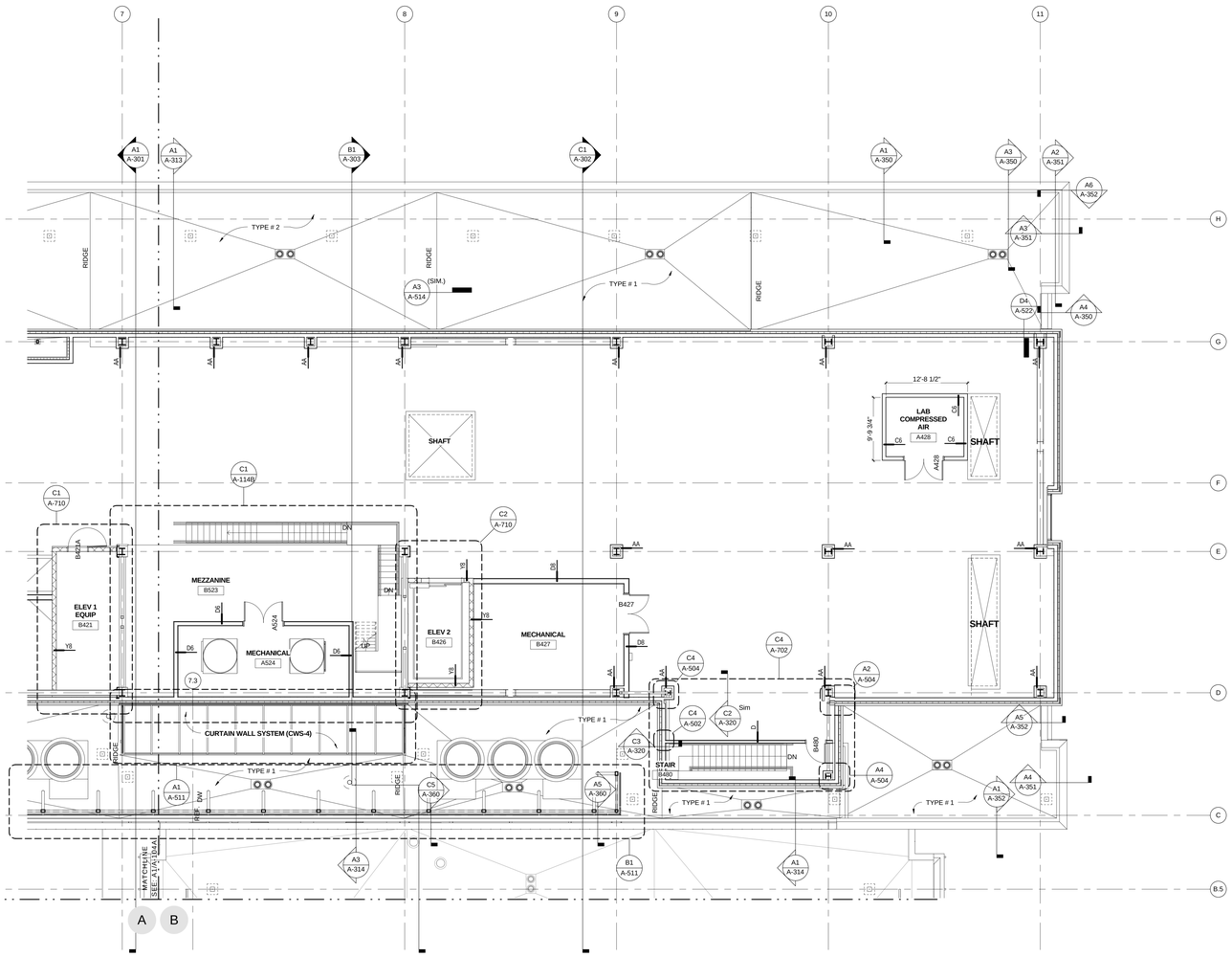
GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

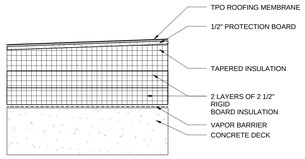
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

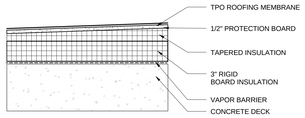
HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



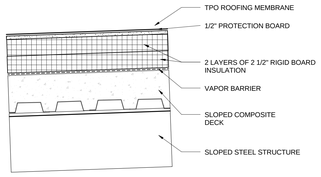
A1 PENTHOUSE/MAIN ROOF - AREA B
1/8" = 1'-0"



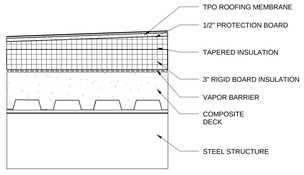
TYPE #1



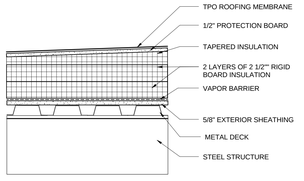
TYPE #2



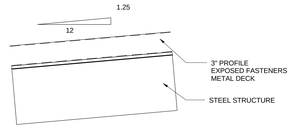
TYPE #3



TYPE #4



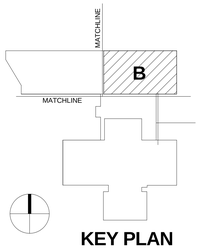
TYPE #5



TYPE #6

ROOF TYPES
1 1/2" = 1'-0"

A-114B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
PENTHOUSE/MAIN ROOF - AREA B

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-114B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-114B — REV. NO.

C:\PW70\0230.A-CENTRAL_alm9v.wt
7/8/2011 10:57:39 AM

GENERAL PLAN NOTES

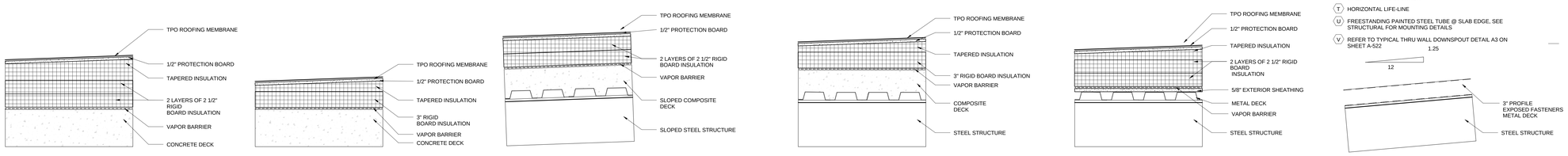
1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

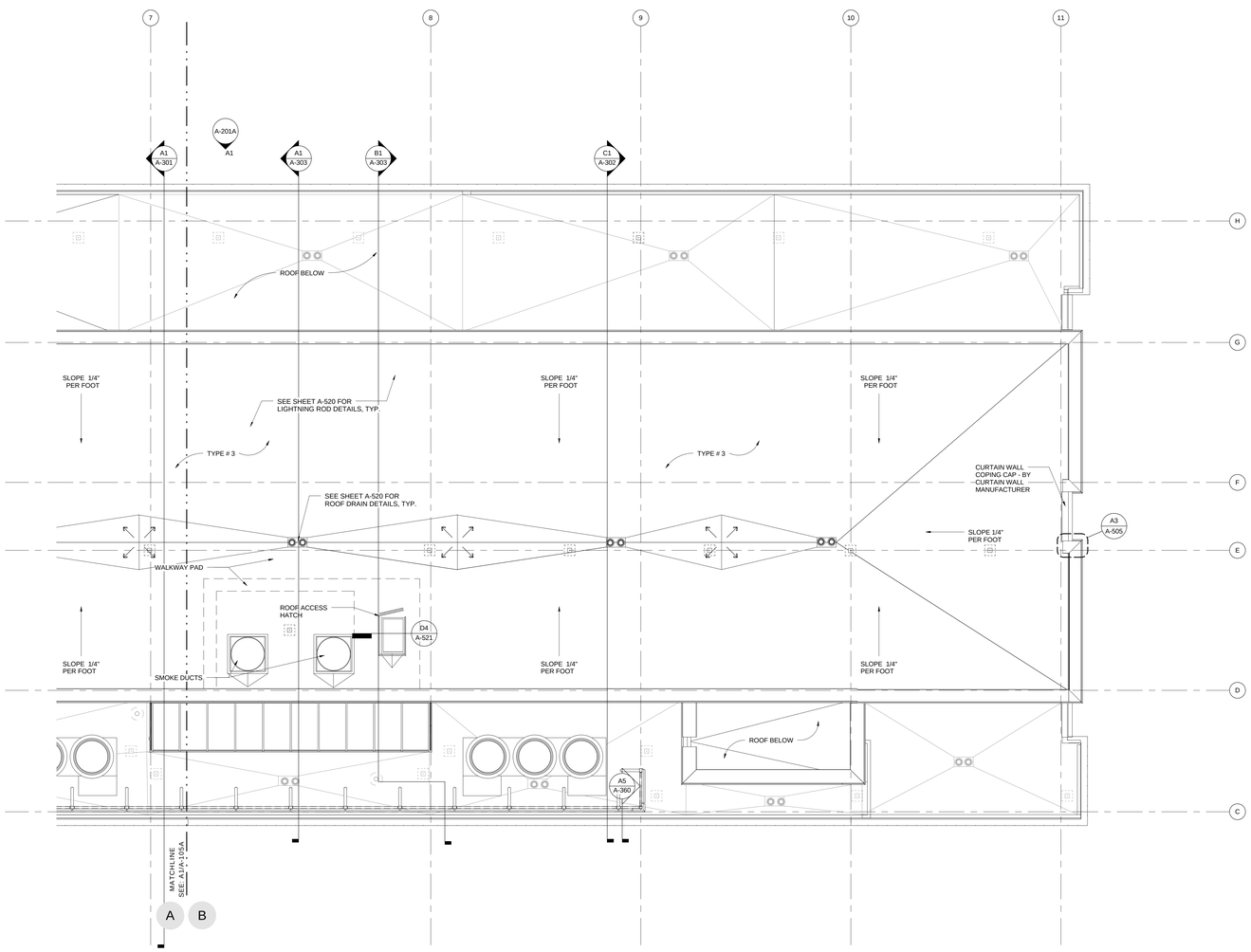
- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

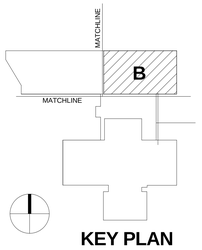


ROOF TYPES
1 1/2" = 1'-0"



A1 PENTHOUSE ROOF PLAN - AREA B
1/8" = 1'-0"

A-115B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
PENTHOUSE ROOF - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-115B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-115B
REV. NO.

C:\BV7\002182-A-CENTRAL_dwrdy.rvt
7/8/2011 10:57:35 AM

GENERAL PLAN NOTES

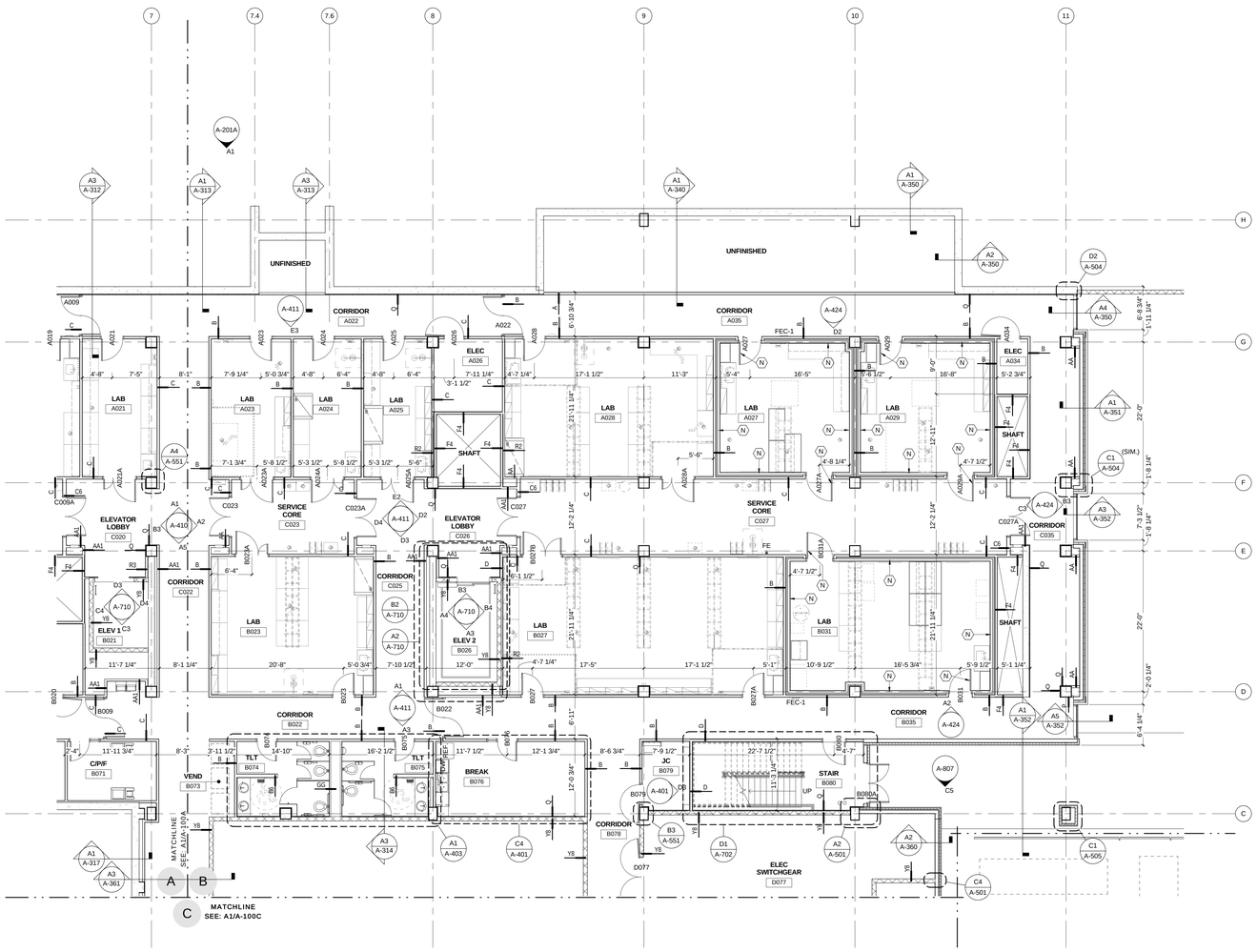
1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

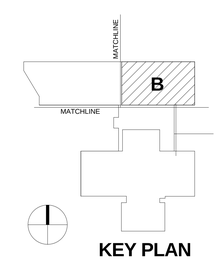
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 GROUND FLOOR - AREA B
1/8" = 1'-0"

A-120B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
GROUND FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-120B	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-120B
REV. NO.

C:\RVT\002182-A-CENTRAL_ah09.rvt
7/8/2011 10:57:41 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

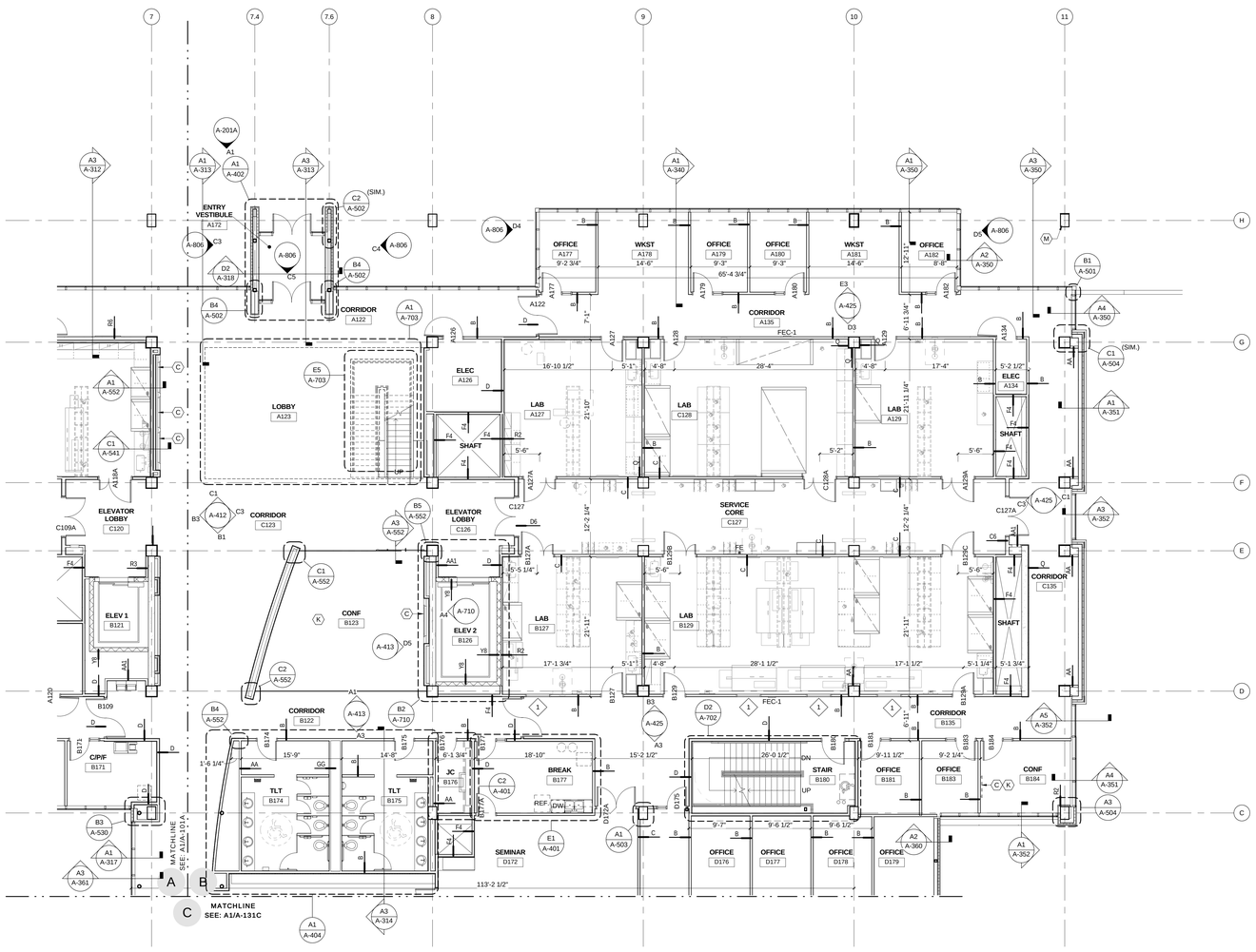
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

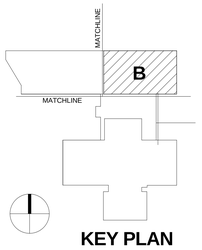
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR- AREA B
1/8" = 1'-0"

A-121B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
FIRST FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-121B	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-121B
REV. NO.

C:\DV70021SD-A-CENTRAL_dev\b.rvt
7/8/2011 10:57:49 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

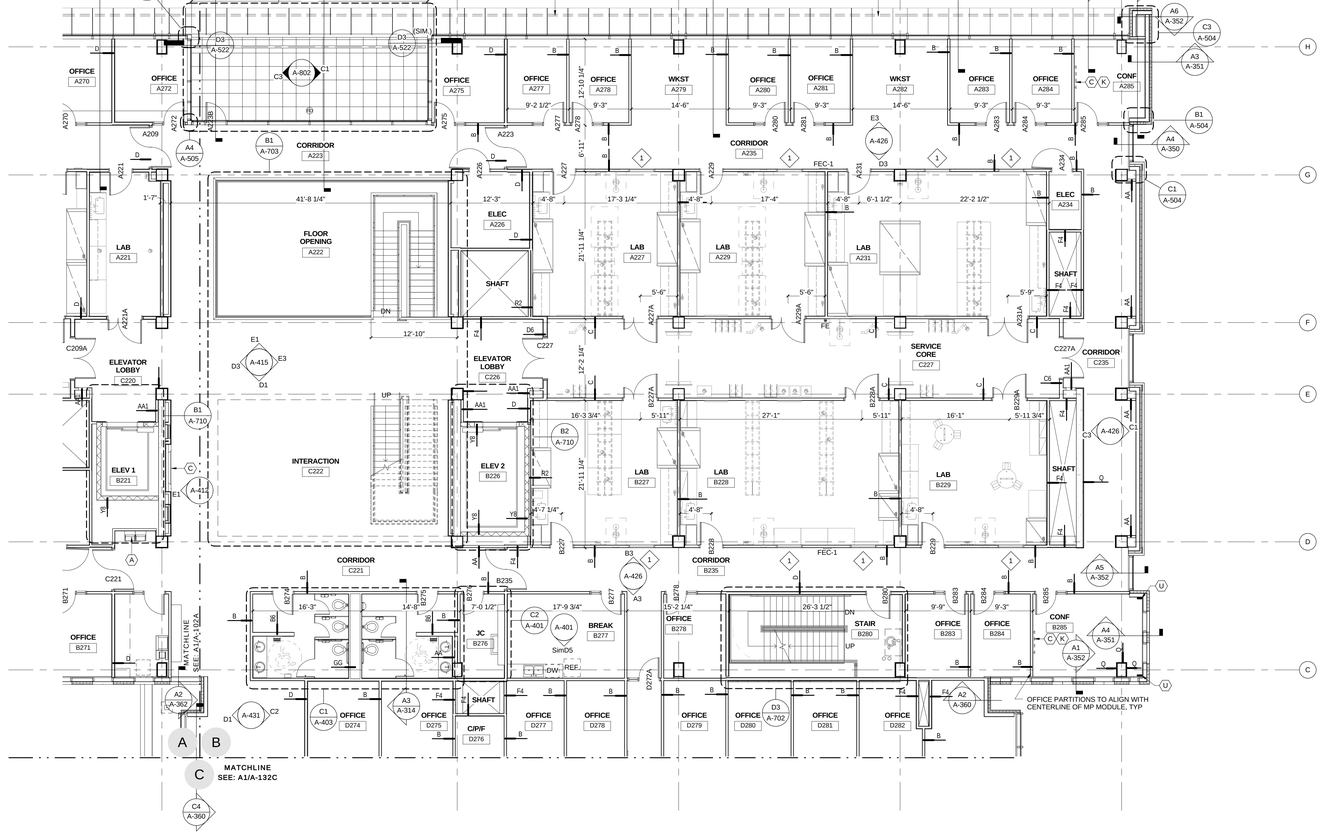
- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

HDR Architecture, Inc.

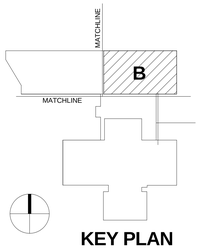
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-122B



A1 SECOND FLOOR - AREA B

1/8" = 1'-0"



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-122B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-122B REV. NO.

C:/PW70021B-A-CENTRAL_dnrfk/-04
7/8/2011 10:57:57 AM

GENERAL PLAN NOTES

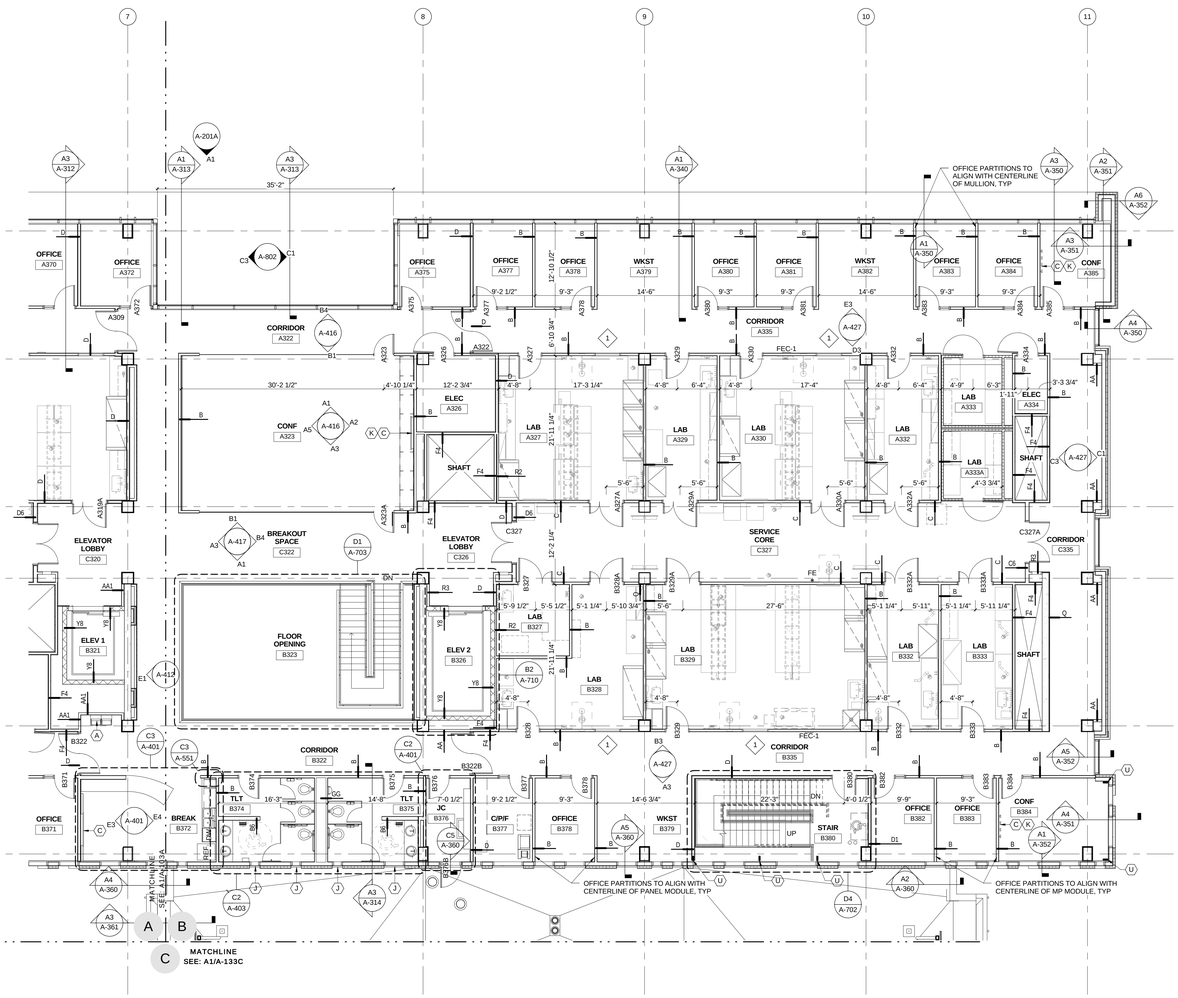
1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

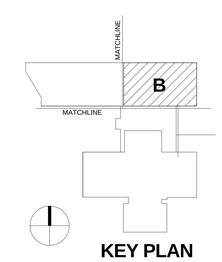
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 THIRD FLOOR - AREA B
1/8" = 1'-0"

A-123B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-123B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- A-123B** REV. NO.

C:\R\700\2182-A-CENTRAL_ainrfp.rvt
7/8/2011 10:59:54 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

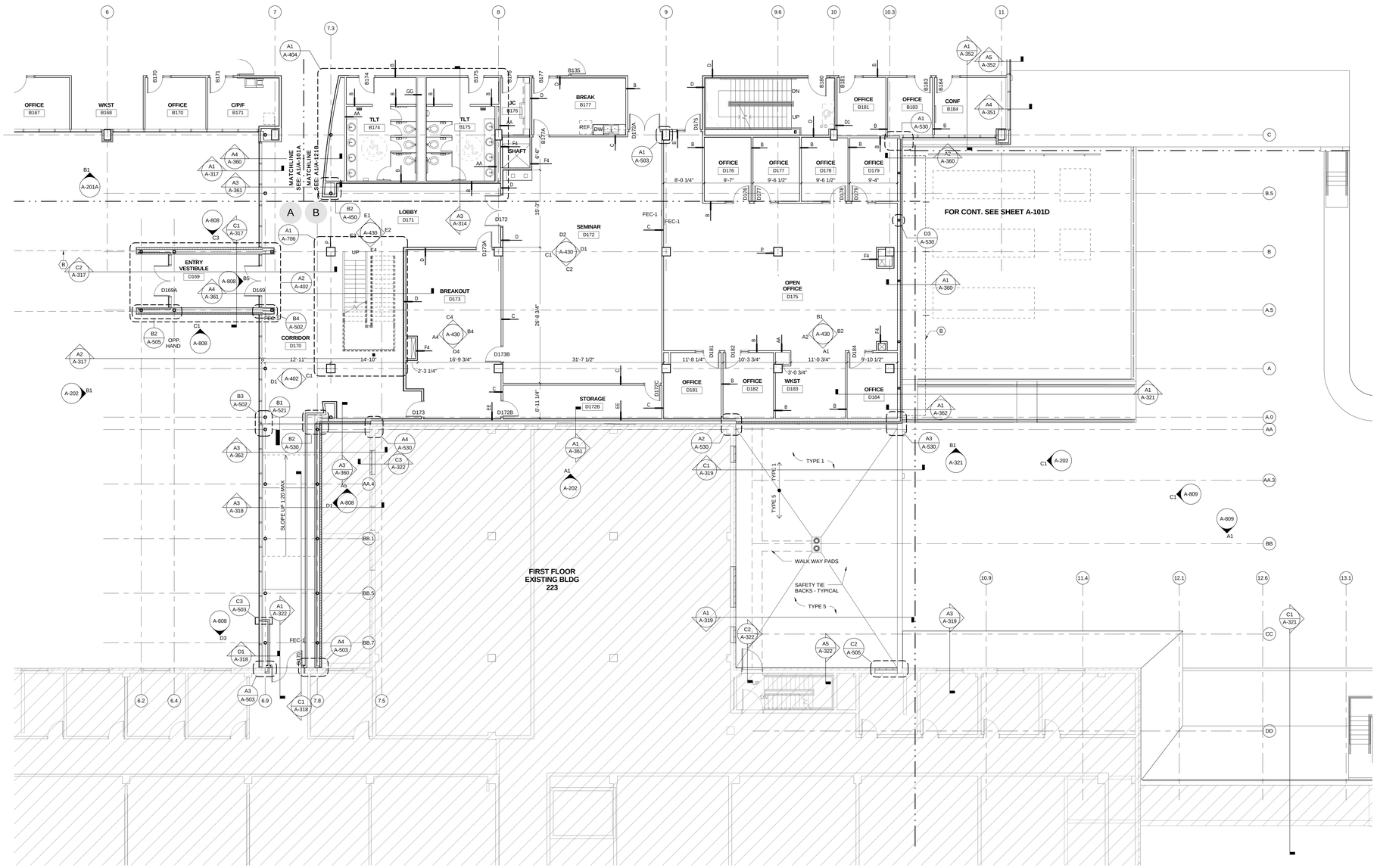
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

HDR Architecture, Inc.

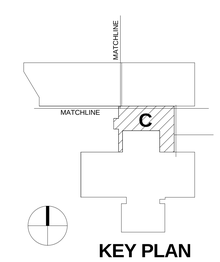
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR PLAN - AREA C

1/8" = 1'-0"

A-131C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-131C	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-131C REV. NO.

C:\RVTX\002182-AGENTRAL_alm9j.rvt

7/8/2011 10:59:11 AM

GENERAL PLAN NOTES

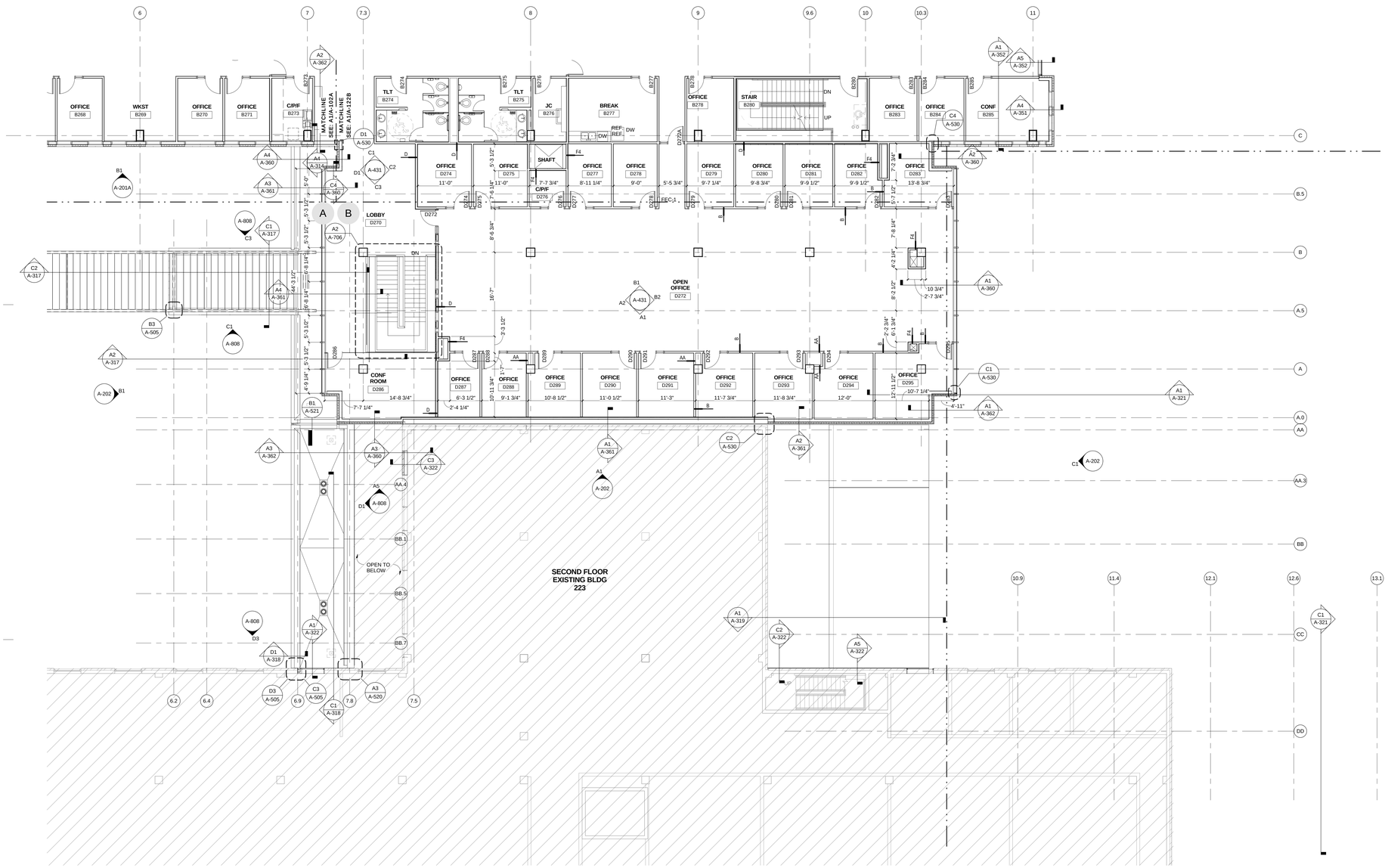
1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

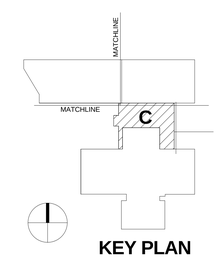
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR PLAN - AREA C
1/8" = 1'-0"

A-132C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
SECOND FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-132C	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-132C REV. NO.

C:\DV70\0230-A-CENTRAL_sheet.rvt
7/8/2011 10:08:18 AM

GENERAL PLAN NOTES

1. SEE SHEET G-001 FOR ADDITIONAL PLAN NOTES.
2. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION PRIOR TO THE CONTINUATION OF WORK.
3. THESE DRAWINGS MAY HAVE BEEN REPRODUCED AT A SIZE DIFFERENT THAN ORIGINALLY DRAWN. OWNER AND ARCHITECT ASSUME NO RESPONSIBILITY FOR USE OF INCORRECT SCALE.
4. DO NOT SCALE OFF THESE DRAWINGS. NOTIFY ARCHITECT IF BUILDING ELEMENTS ARE NOT CLEARLY LOCATED WITH DIMENSIONS.
5. FOR FURTHER INFORMATION ON LAB CONTENT AND ANNOTATION SEE SHEETS QL-001 TO QL-601.
6. FOR FURTHER INFORMATION ON INTERIOR FURNITURE AND FINISHES SEE SHEETS I-100A TO IW-123B.
7. SOME NON-RATED PARTITIONS ARE TAGGED WITH RATED PARTITION TAGS FOR STC RATING PURPOSES. REFER TO LIFE SAFETY PLANS (G-100 SERIES) FOR PARTITIONS REQUIRING FIRE-RATING.

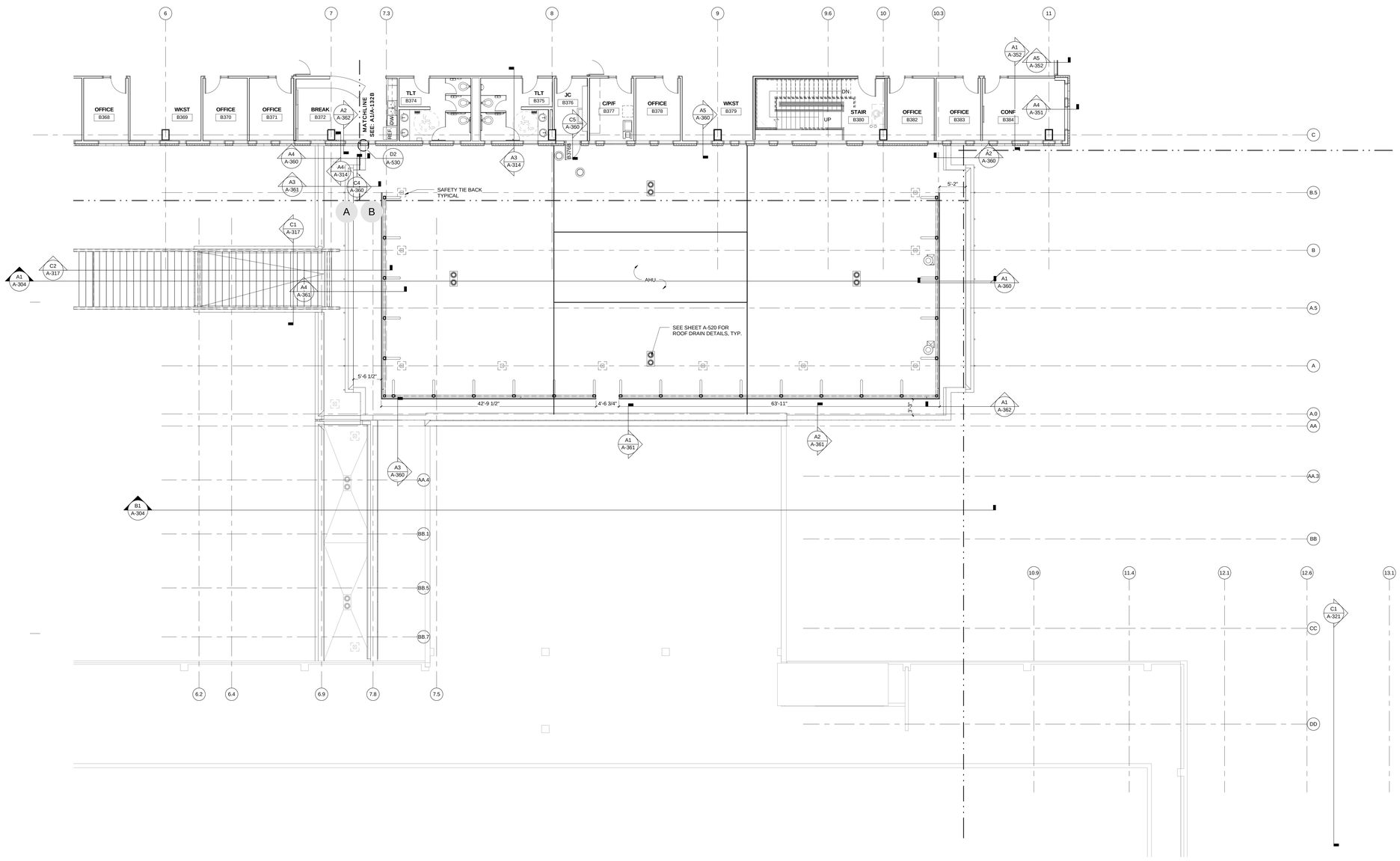
KEYNOTES - PLAN

- A DRINKING FOUNTAIN, PROVIDE ADDITIONAL BLOCKING IN WALL
- B LINE OF SOFFIT ABOVE
- C FLATSCREEN TELEVISION, OFCI. PROVIDE ADDITIONAL IN-WALL BLOCKING AND 2 PORT DUPLEX OUTLET
- D DOCK LEVELER
- E DOCK SEALS
- F FIRE ALARM PANEL
- G ROOF SAFETY TIE-BACKS
- H SHELLED SPACE TO BE FIT-OUT BY OWNER
- J INDICATES FROSTED EXTERIOR GLAZING PANEL
- K ROOM TO HAVE CENTER FLOOR OUTLET WITH ADDITIONAL EMPTY 3/4" CONDUIT LINKED TO TV FOR FUTURE WIRING
- L SNOW AND ICE GUARDS
- M PAINTED CONCRETE COATING ON EXPOSED CONCRETE COLUMN OR WALL, ALL SIDES
- N RF SHIELDING, SEE SHEET A-553 FOR ADDITIONAL DETAILS
- P DOCK SWING ARM LAMP
- Q UNACCESSIBLE UNFINISHED SPACE
- R LOCATION OF HOSE VALVE CABINET
- S TYPE "X" FIRE RATED GYPSUM & SHEATHING AT EXTERIOR WALL @ THIS LOCATION
- T HORIZONTAL LIFE-LINE
- U FREESTANDING PAINTED STEEL TUBE @ SLAB EDGE, SEE STRUCTURAL FOR MOUNTING DETAILS
- V REFER TO TYPICAL THRU WALL DOWNSPOUT DETAIL A3 ON SHEET A-522

HDR

HDR Architecture, Inc.

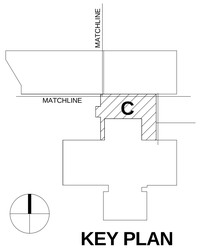
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 THIRD FLOOR PLAN - AREA C

1/8" = 1'-0"

A-133C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

THIRD FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-133C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-133C REV. NO.

C:\BV700218\A-CENTRAL_ab+fp.rvt
7/8/2011 10:58:24 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

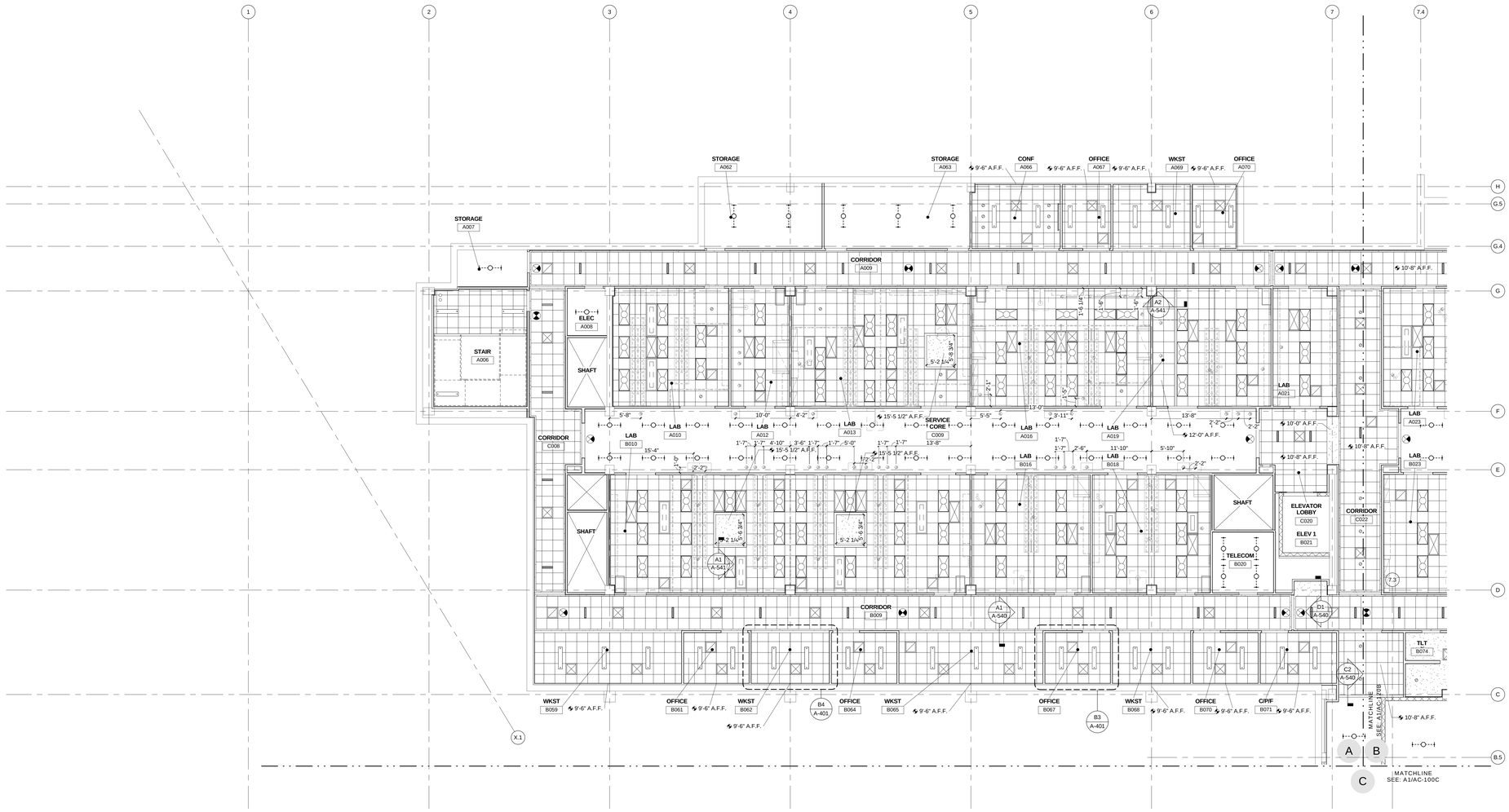
11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

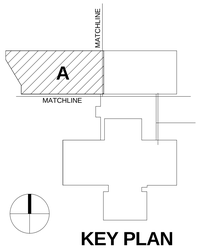
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



AC-100A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
RCP - GROUND FLOOR - AREA A

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-100A	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- AC-100A — REV. NO.

A1 GROUND FLOOR RCP AREA A
1/8" = 1'-0"

C:\PW70\0230.AC\DRT\AC_ARch.rvt
7/6/2011 11:19:11 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

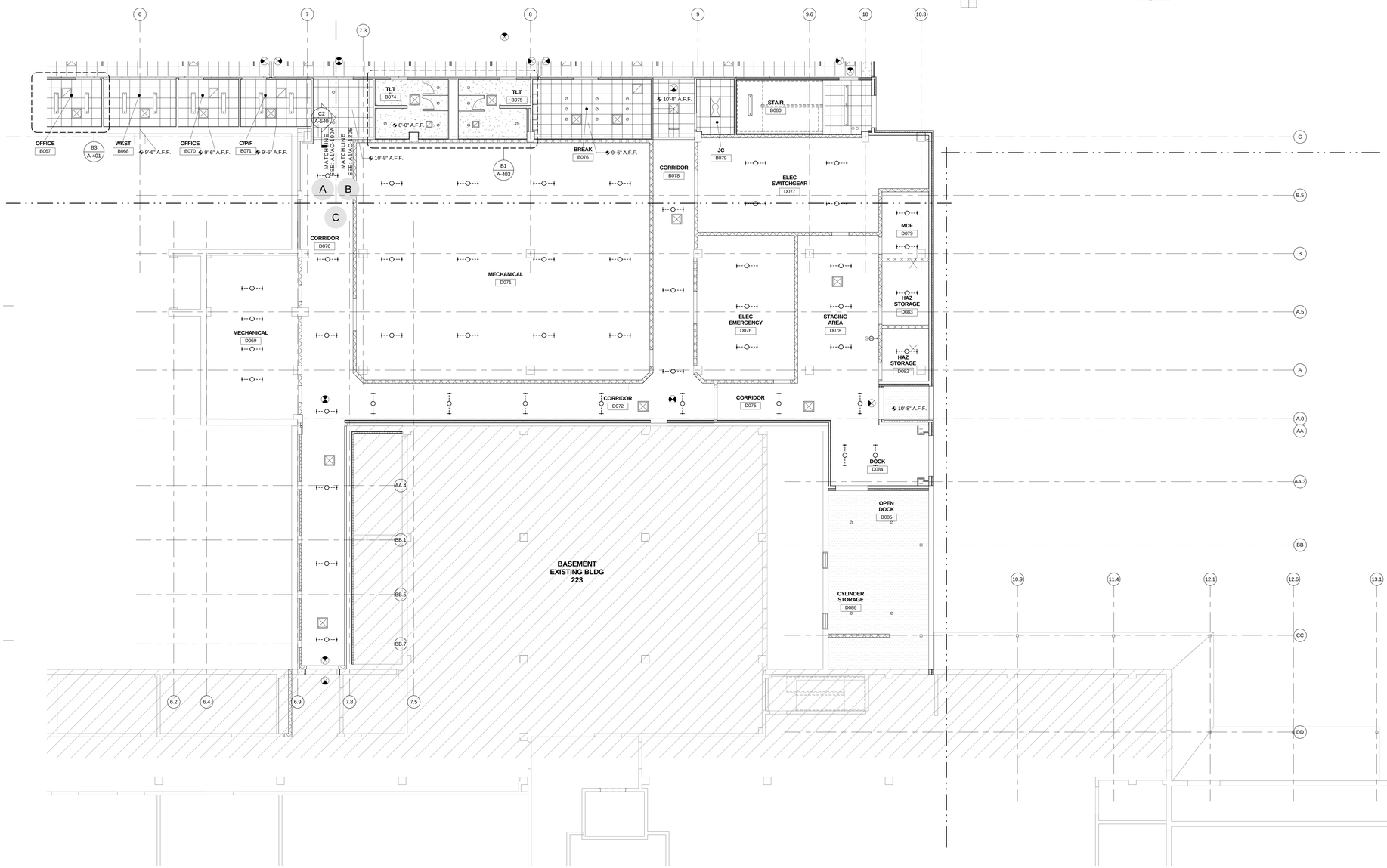
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

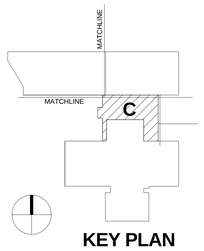
12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 GROUND FLOOR RCP AREA C
1/8" = 1'-0"

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-100C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
RCP - GROUND FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-100C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-100C REV. NO.

C:\DV\002182-A-CENTRAL_dandy.rvt
7/8/2011 11:19:16 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

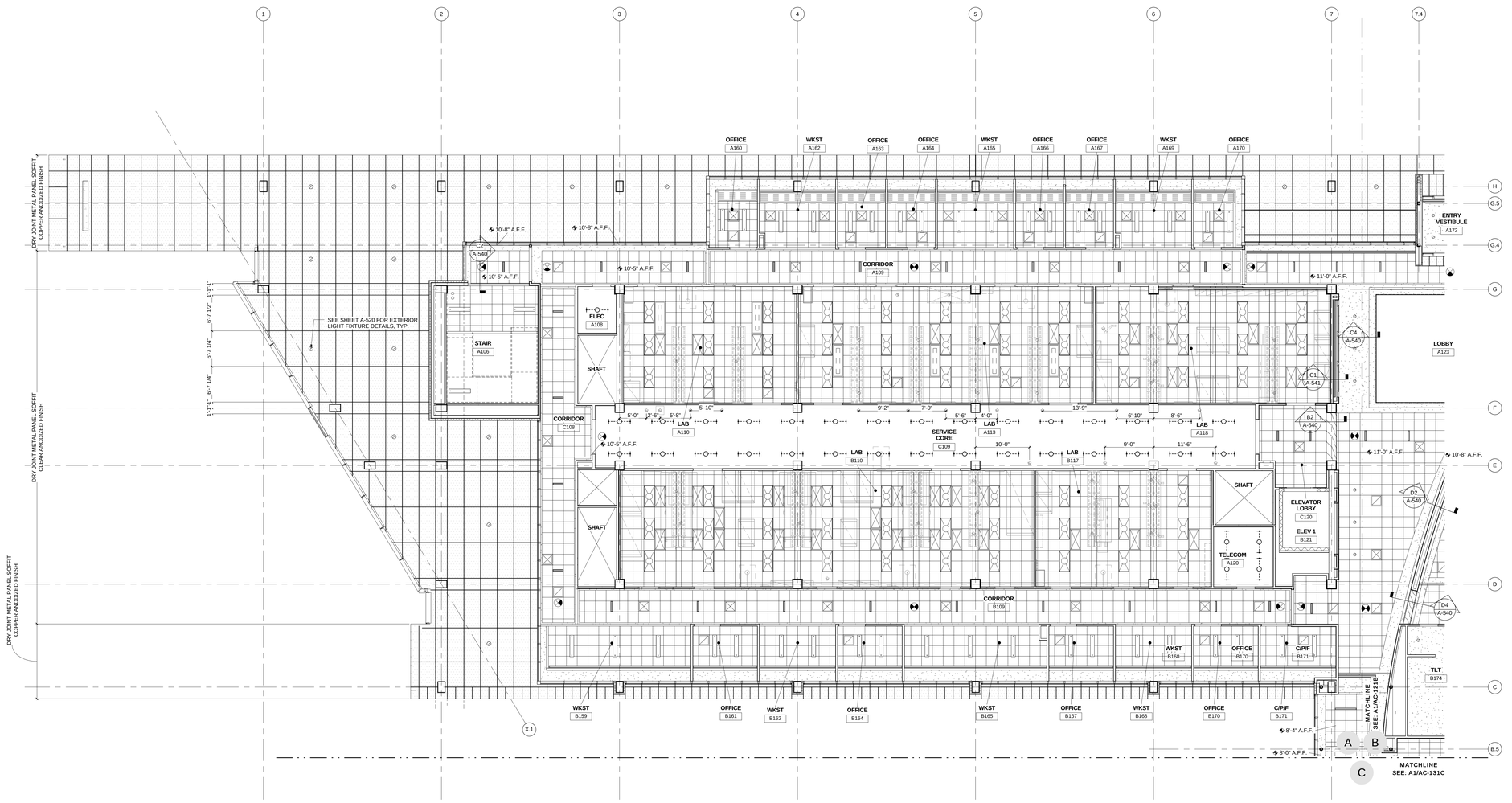
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



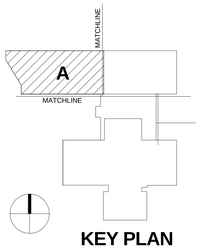
A1 FIRST FLOOR RCP AREA A
1/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-101A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
RCP - FIRST FLOOR - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-101A	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.
J241-101- AC-101A

C:\DV70023\D-A-CENTRAL_dwrdp.rvt
7/8/2011 11:19:24 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

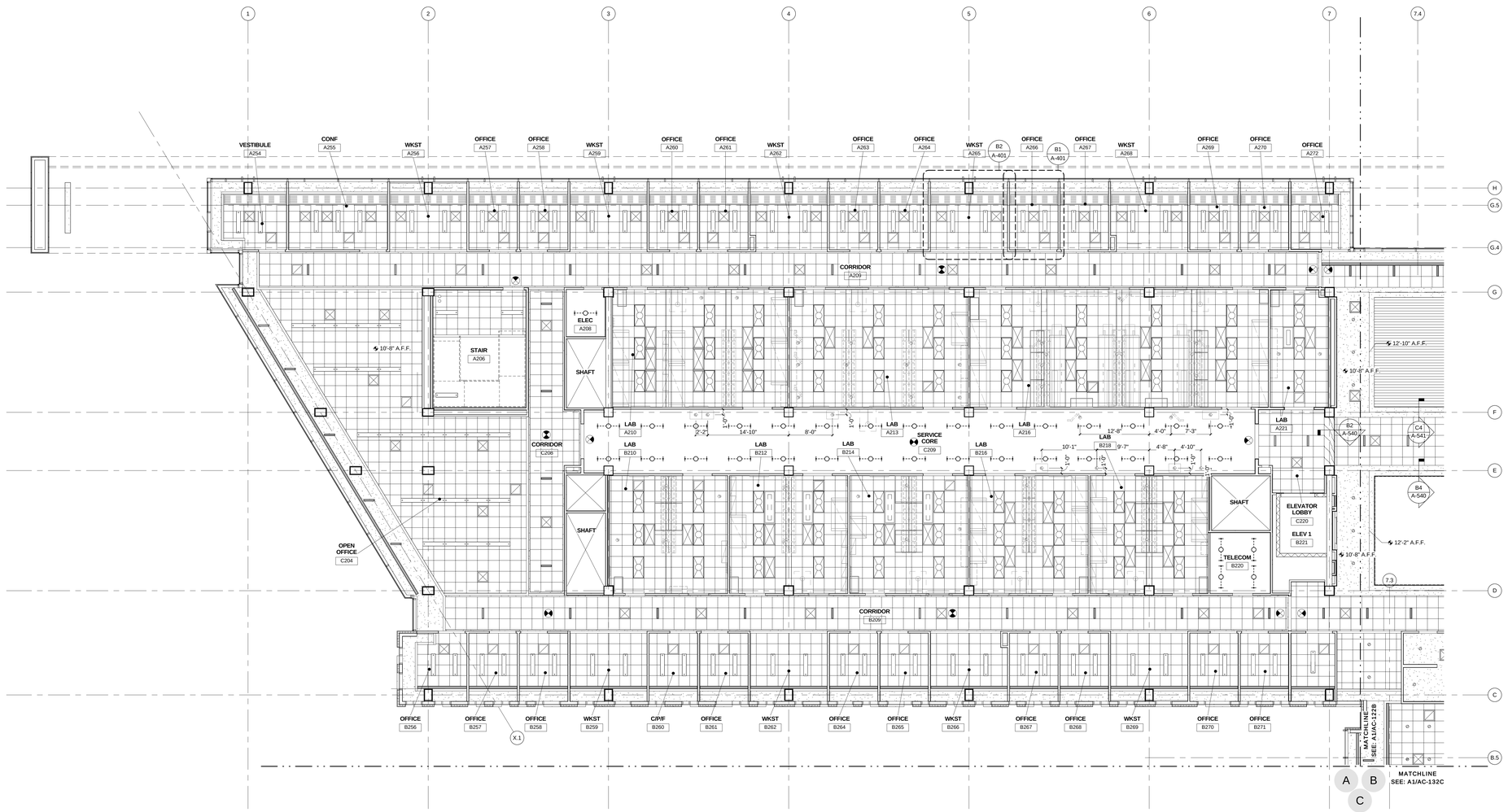
11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

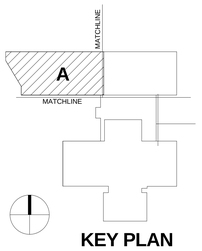
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



AC-102A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
RCP - SECOND FLOOR - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-102A	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-102A REV. NO.

A1 SECOND FLOOR RCP AREA A
1/8" = 1'-0"

C:\RVT\002182-A-CENTRAL_ab4fjr.rvt
7/8/2011 11:19:33 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

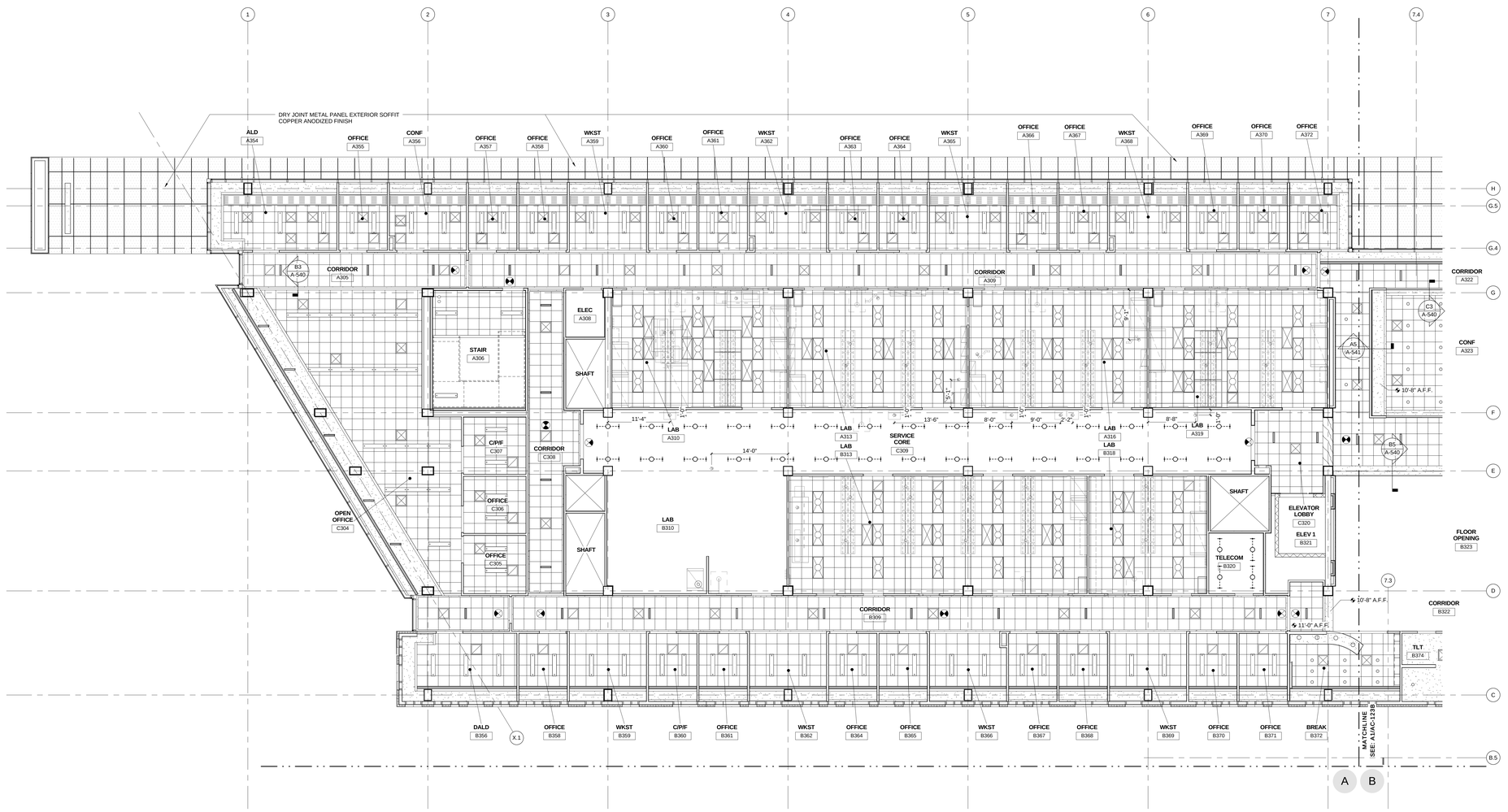
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

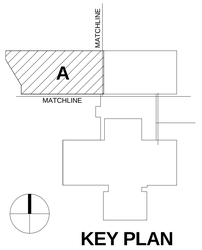
12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 THIRD FLOOR RCP AREA A
1/8" = 1'-0"

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-103A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
RCP - THIRD FLOOR - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-103A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-103A REV. NO.

C:\BV70001\SS-A-CENTRAL_ab\rfp.rvt
7/8/2011 11:19:43 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

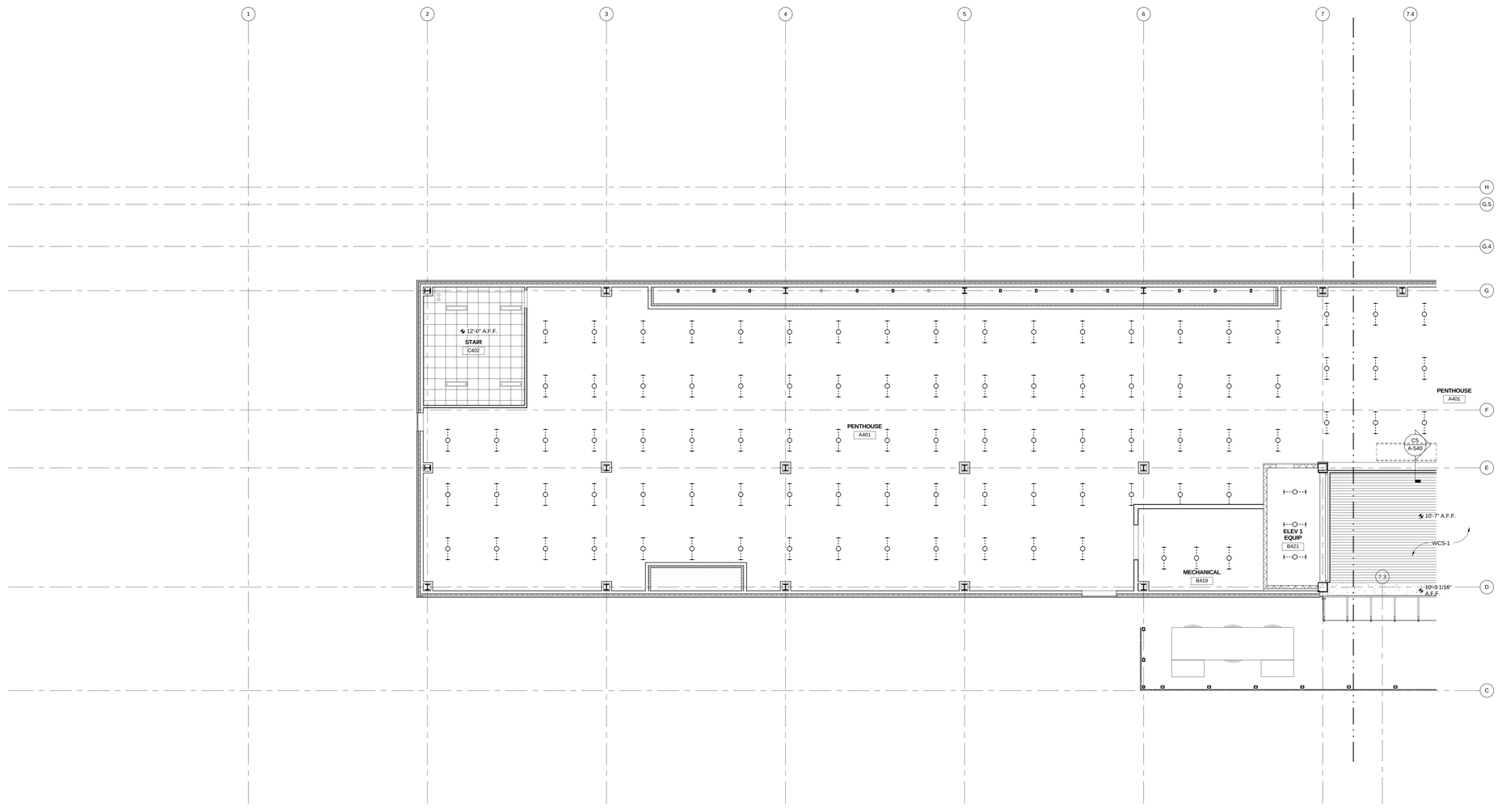
11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

HDR

HDR Architecture, Inc.

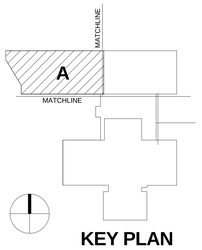
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 PENTHOUSE RCP AREA A

1/8" = 1'-0"

AC-104A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

RCP - PENTHOUSE - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-104A	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-104A REV. NO.

C:\DV70021\0-A-CENTRAL_sheet\r.rvt
7/8/2011 11:19:48 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4"X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

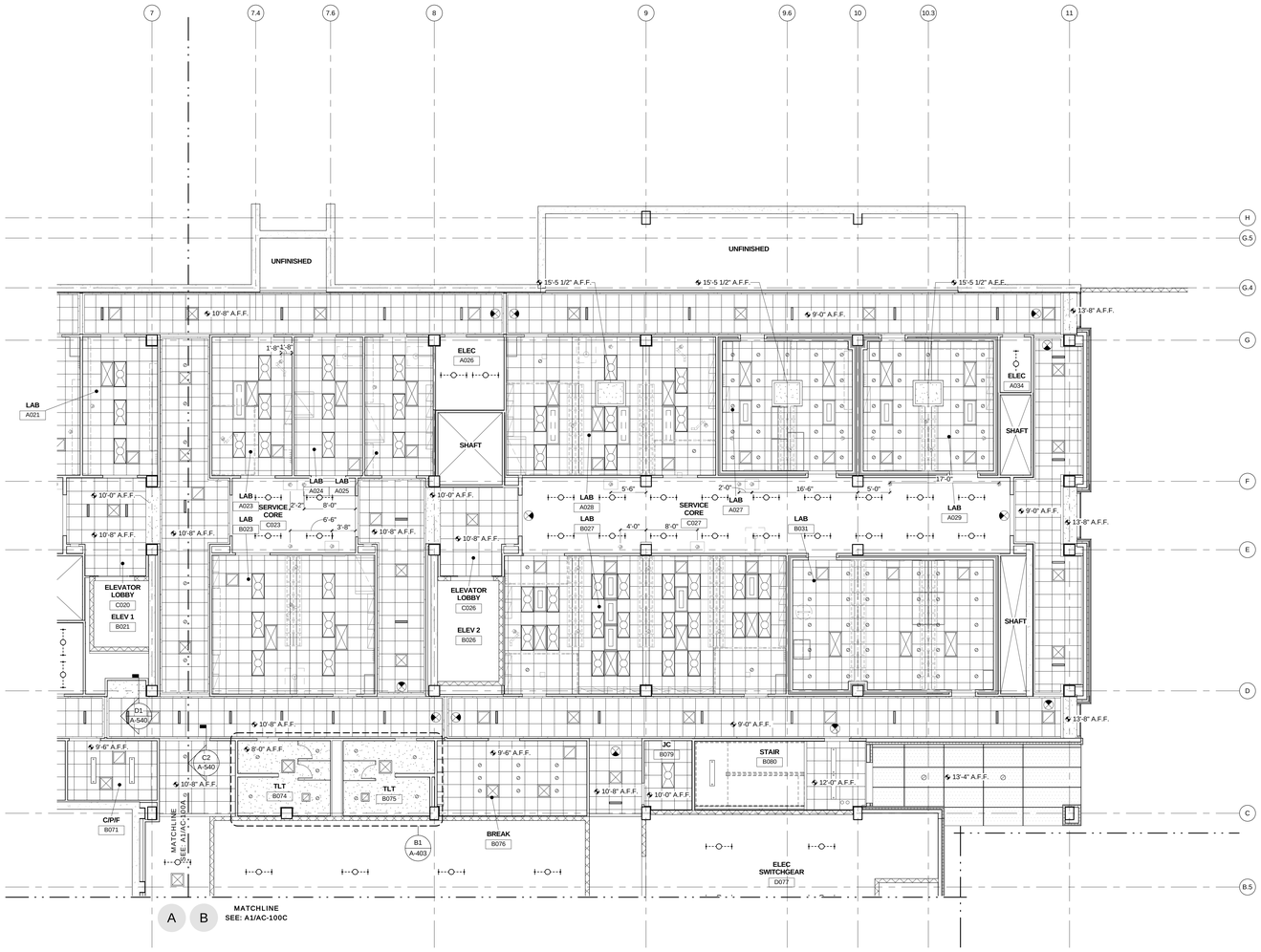
11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

HDR

HDR Architecture, Inc.

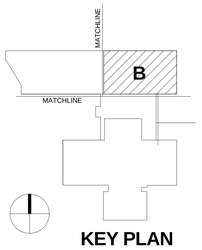
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 GROUND FLOOR RCP AREA B

1/8" = 1'-0"

AC-120B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

RCP - GROUND FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-120B	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-120B REV. NO.

C:\PCWTOOLS\D-A-C\NTR\8_ab\ntp.vt

7/8/2011 11:19:53 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

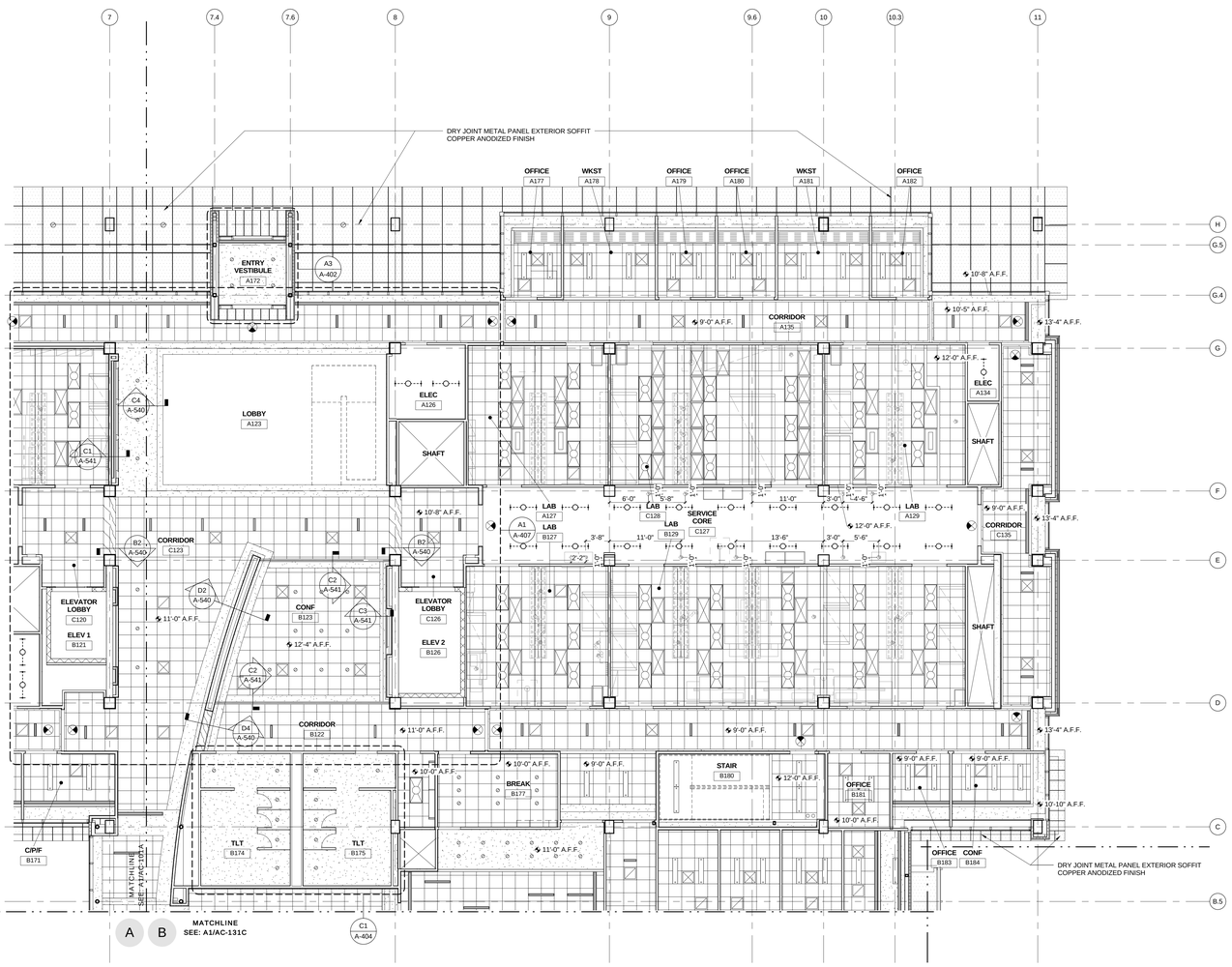
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

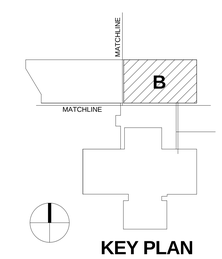
12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 FIRST FLOOR RCP AREA B
1/8" = 1'-0"

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-121B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
RCP - FIRST FLOOR - AREA B

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-121B	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- AC-121B
REV. NO.

C:\BV\002182-A-CENTRAL_ab+fp.rvt
7/8/2011 11:28:03 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

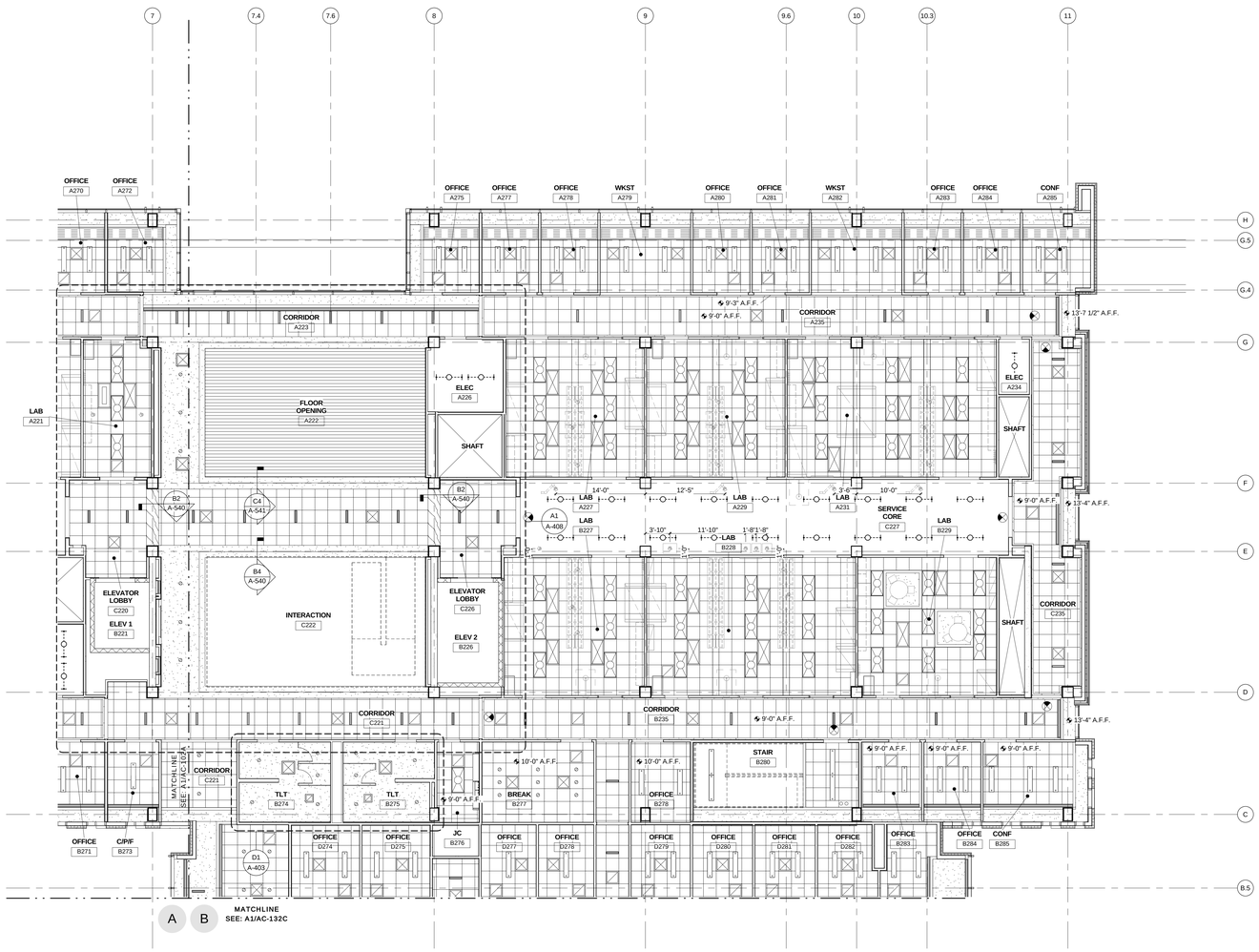
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



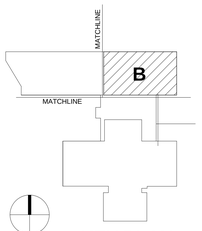
A1 SECOND FLOOR RCP AREA B
1/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-122B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
RCP - SECOND FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-122B	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-122B REV. NO.

C:\RVT\002182-A-CENTRAL_ab43b.rvt
7/8/2011 11:20:11 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

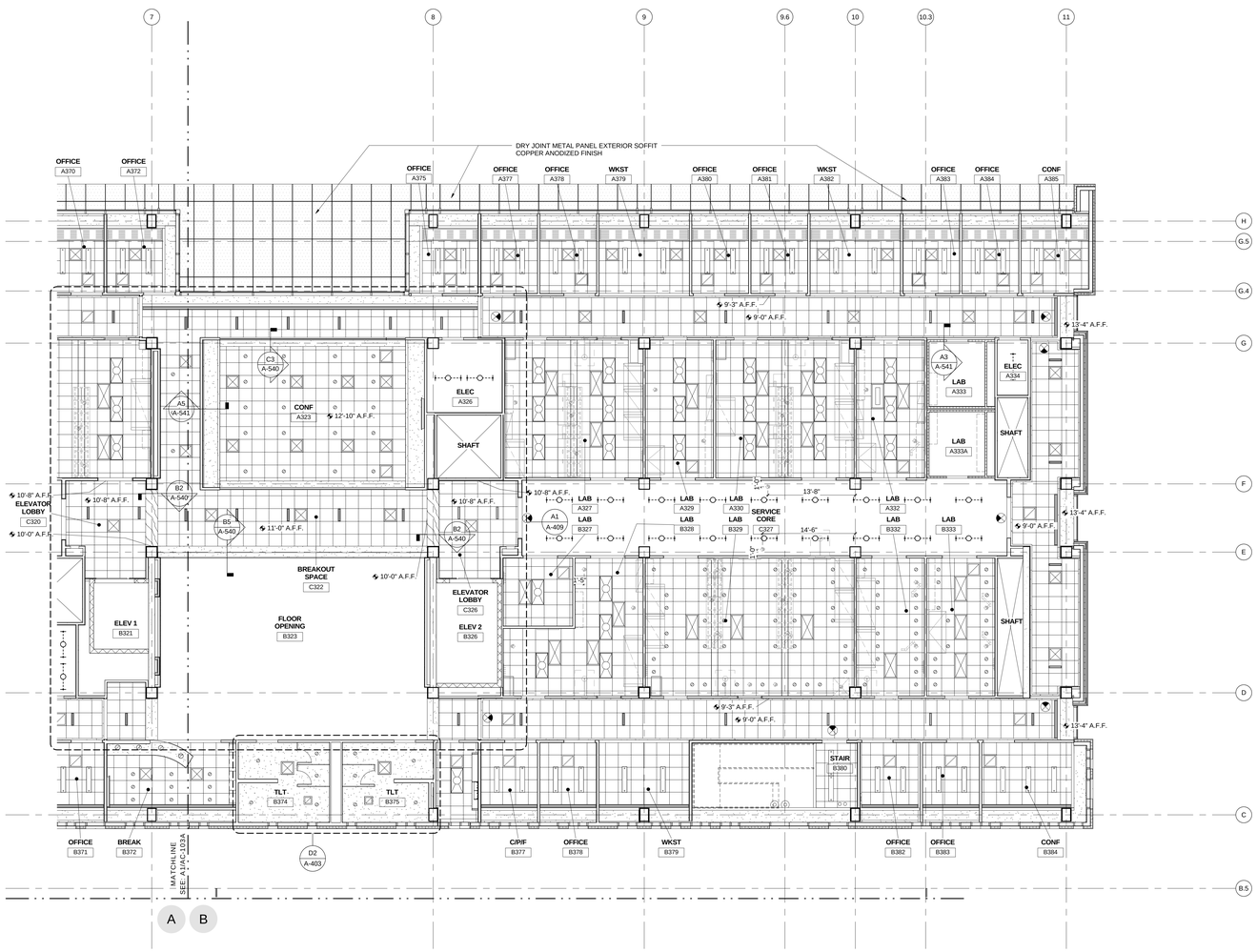
11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

HDR

HDR Architecture, Inc.

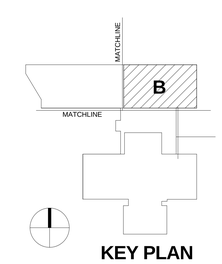
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 THIRD FLOOR RCP AREA B

1/8" = 1'-0"

AC-123B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
RCP - THIRD FLOOR - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-123B	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- AC-123B REV. NO.

C:\PV70\002182-AE\CENTRAL_alert\p.vt
7/8/2011 11:20:19 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4"X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

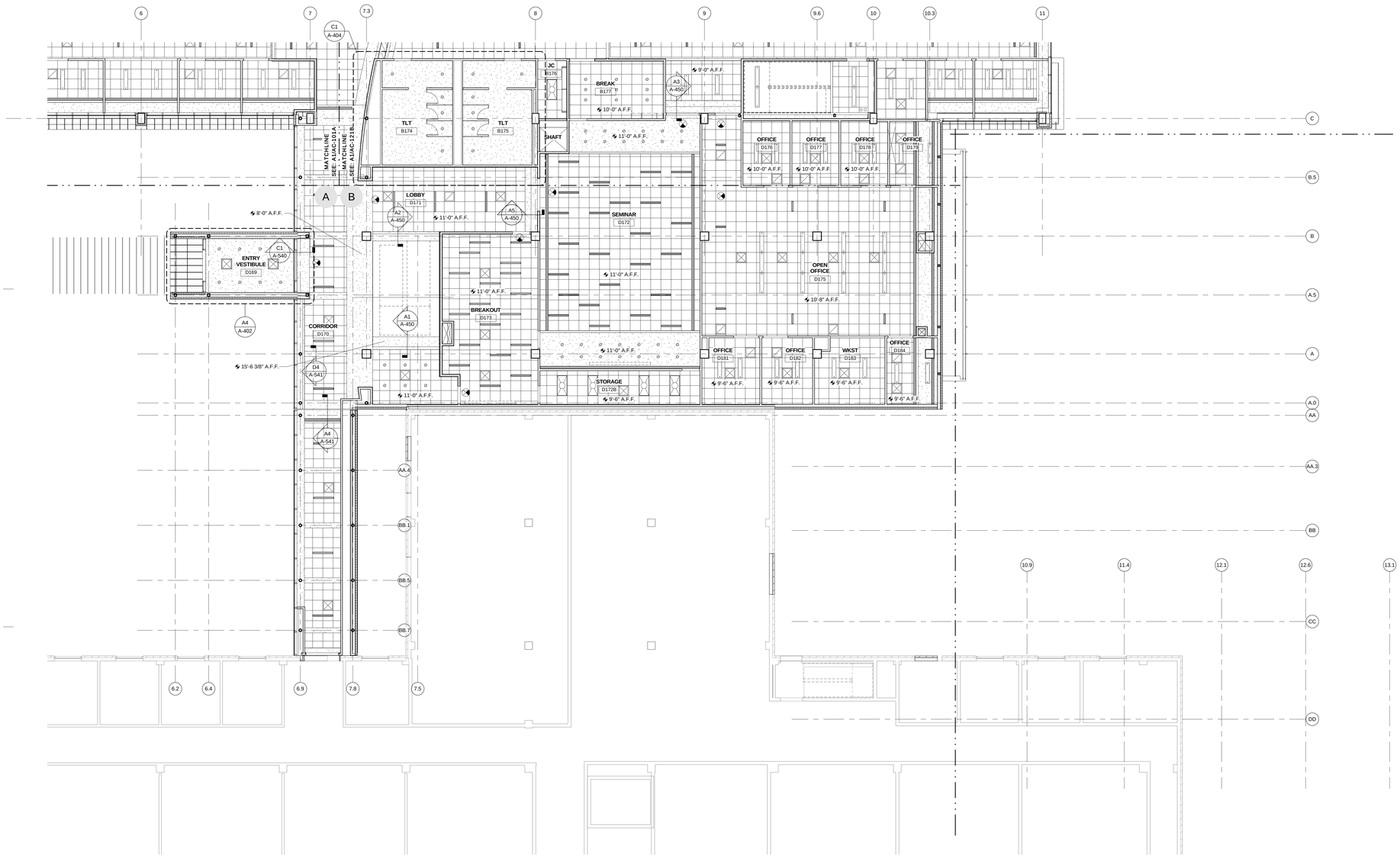
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 FIRST FLOOR RCP - AREA C
1/8" = 1'-0"

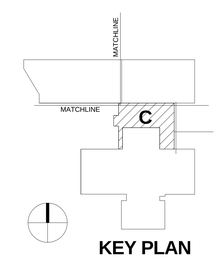
C:\RVT\002182-A-CENTRAL_ab43y.rvt
7/8/2011 11:20:25 AM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-131C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
RCP - FIRST FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-131C	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- AC-131C
REV. NO.

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

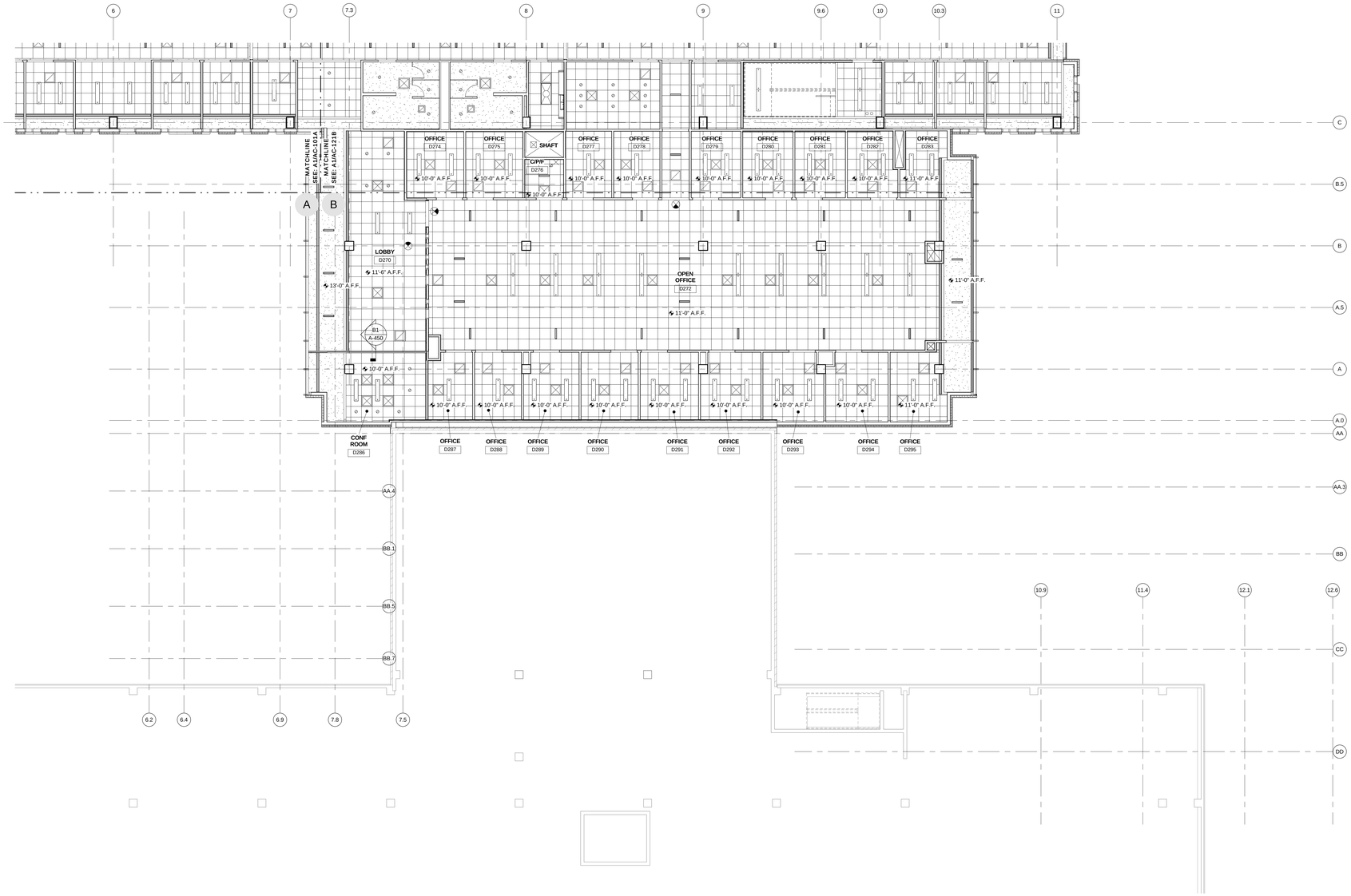
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



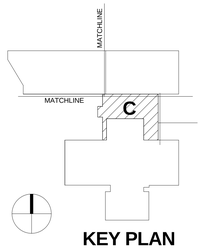
A1 SECOND FLOOR RCP - AREA C
1/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

AC-132C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

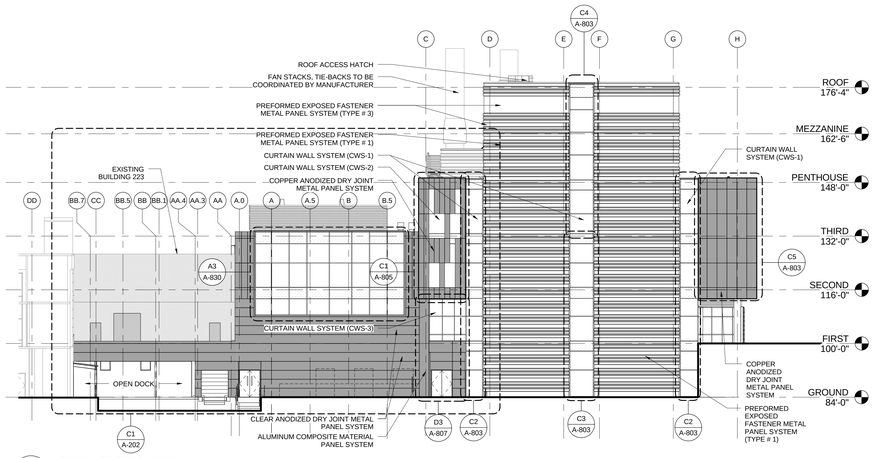
DOCUMENT TITLE
RCP - SECOND FLOOR - AREA C

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. AC-132C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

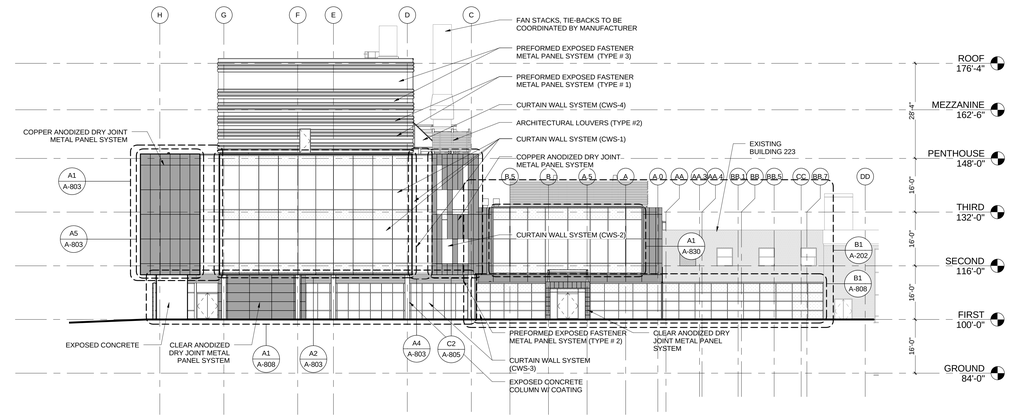
FACILITY DOCUMENT NUMBER REV. NO.
J241-101- AC-132C

C:\BV700218-A-CENTRAL_ab+fp.rvt
7/8/2011 11:20:31 AM

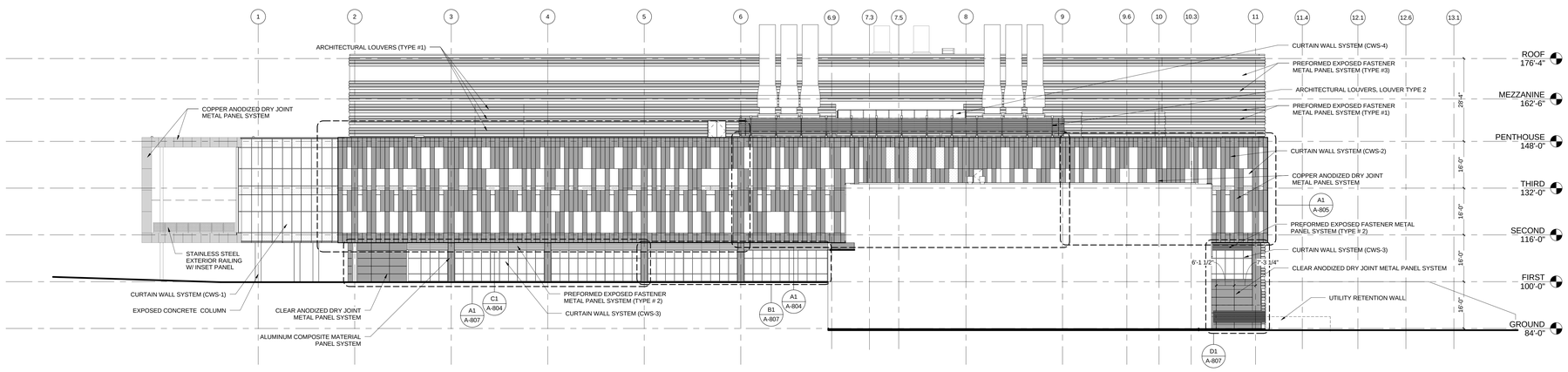
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



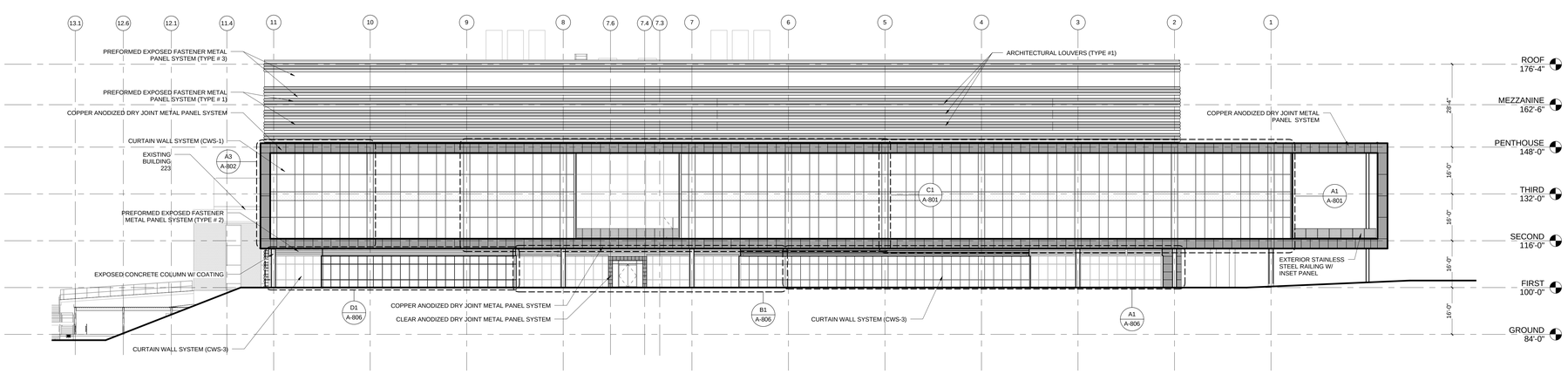
C1 EAST ELEVATION
1/16" = 1'-0"



C3 WEST ELEVATION
1/16" = 1'-0"



B1 SOUTH ELEVATION
1/16" = 1'-0"



A1 NORTH ELEVATION
1/16" = 1'-0"

A-201A

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

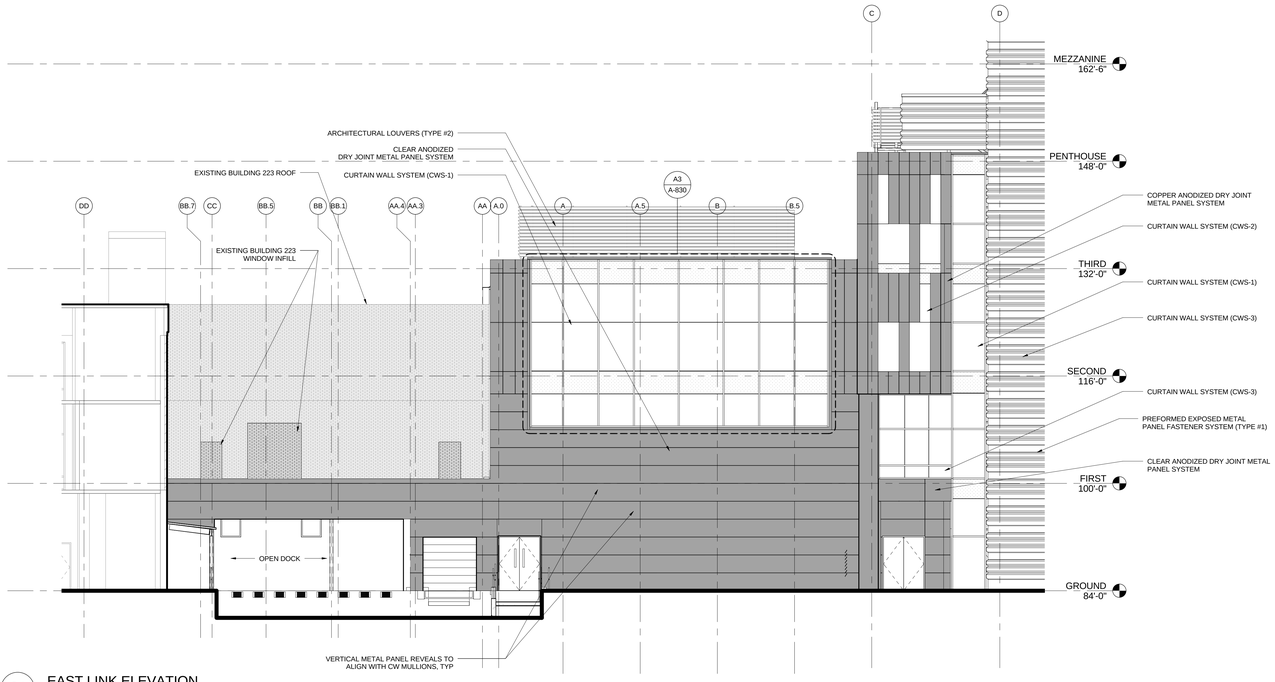
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
BUILDING ELEVATIONS

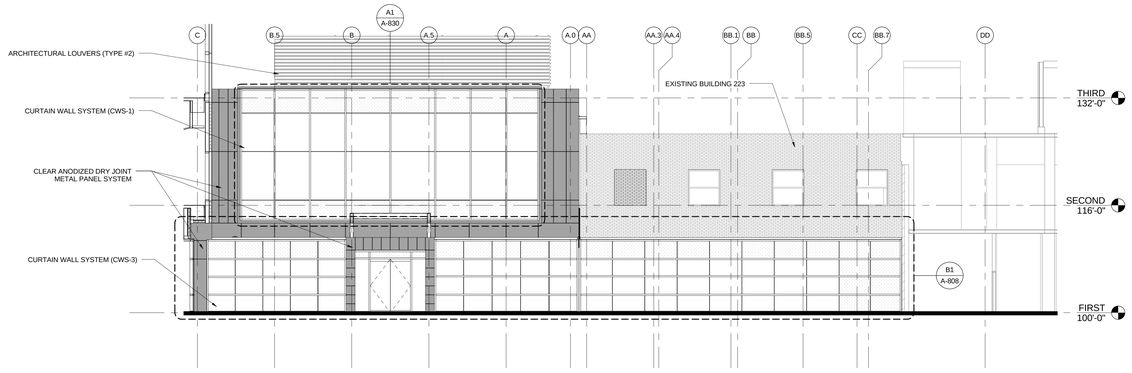
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-201A	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-201A
REV. NO.

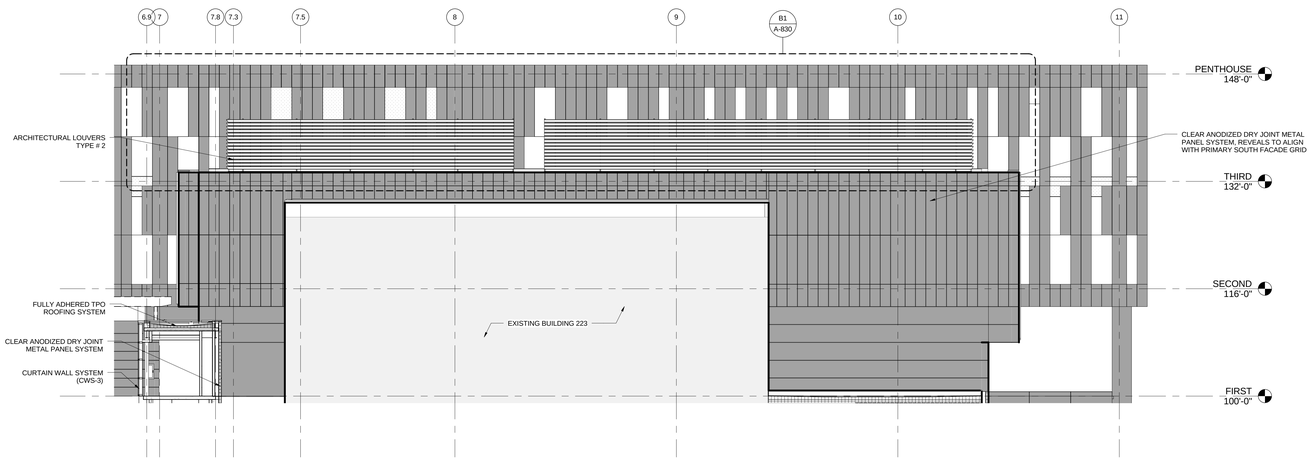
C:\RVTX\002182-ACENTRAL_alerts.rvt
7/8/2011 10:56:52 AM



C1 EAST LINK ELEVATION
1/8" = 1'-0"



B1 WEST LINK ELEVATION
1/8" = 1'-0"



A1 SOUTH LINK ELEVATION
1/8" = 1'-0"

C:\BV700218\A-CENTRAL_ab+fp.rvt
7/8/2011 10:59:04 AM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-202

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
BUILDING ELEVATIONS

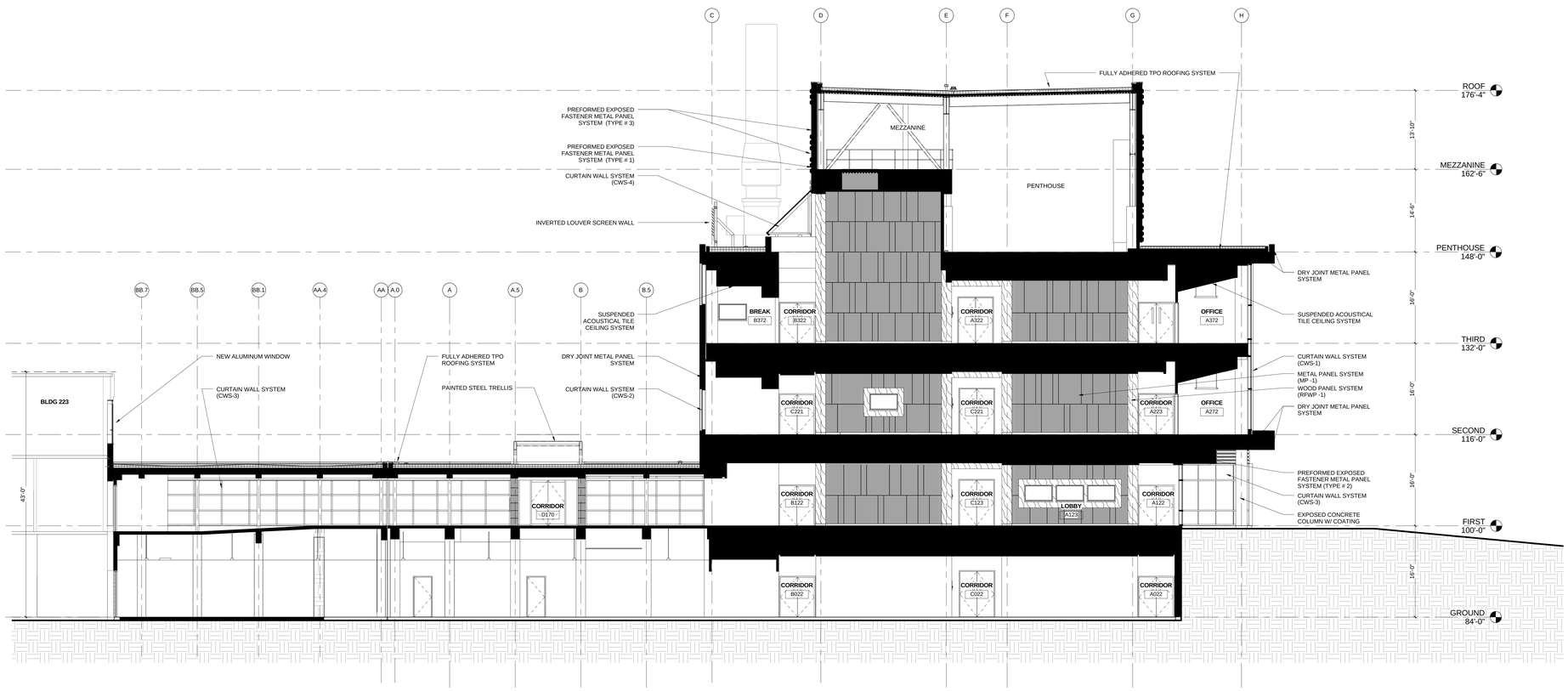
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-202	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-202 REV. NO.

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-301



A1 SECTION @ LINK LOOKING WEST

1/8" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

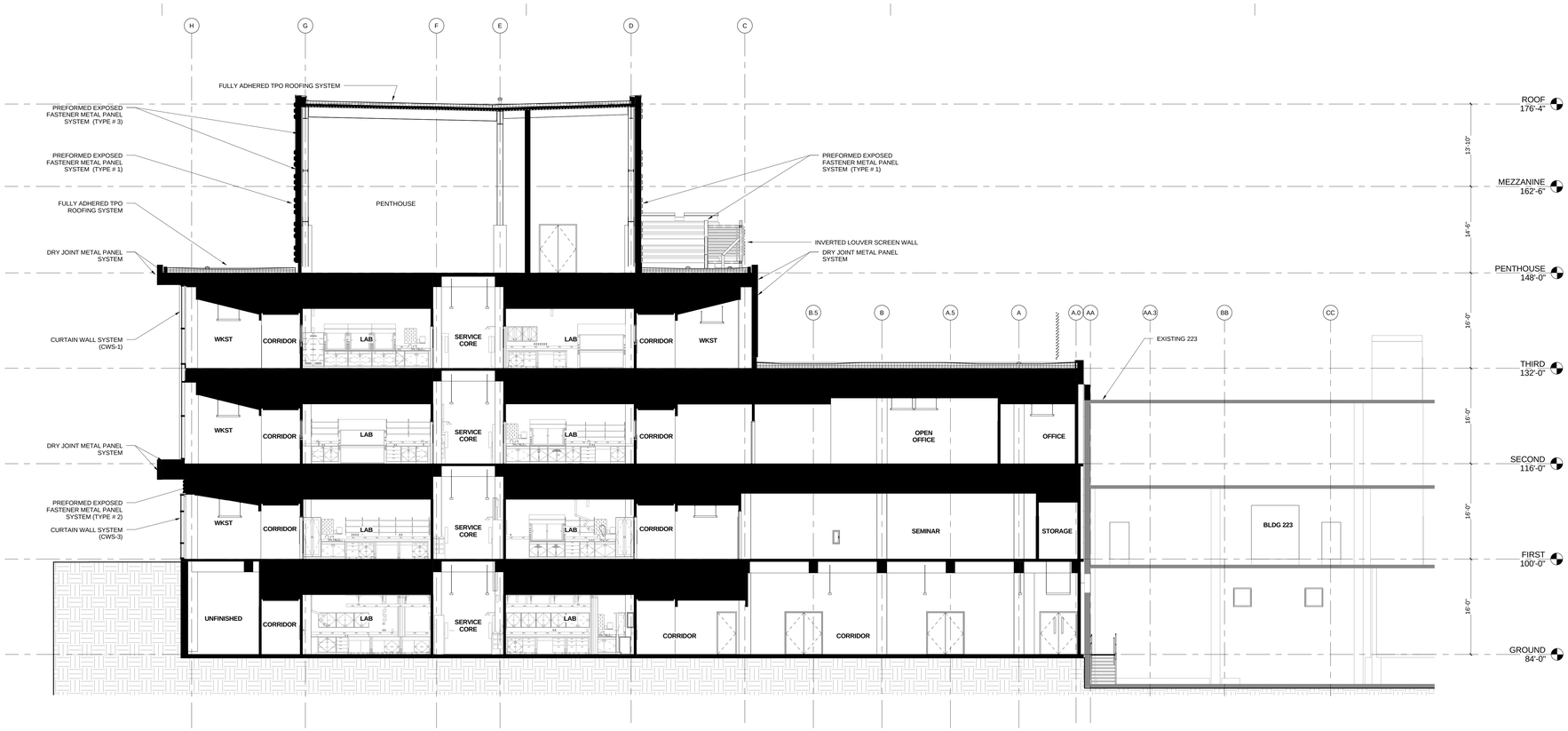
DOCUMENT TITLE

BUILDING SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-301	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-301 REV. NO.

C:\R\TW20182-A-CENTRAL_aerfp.rvt
7/8/2011 10:59:10 AM



C1 SECTION @ TYPICAL LAB WING BAY LOOKING EAST
1/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-302

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

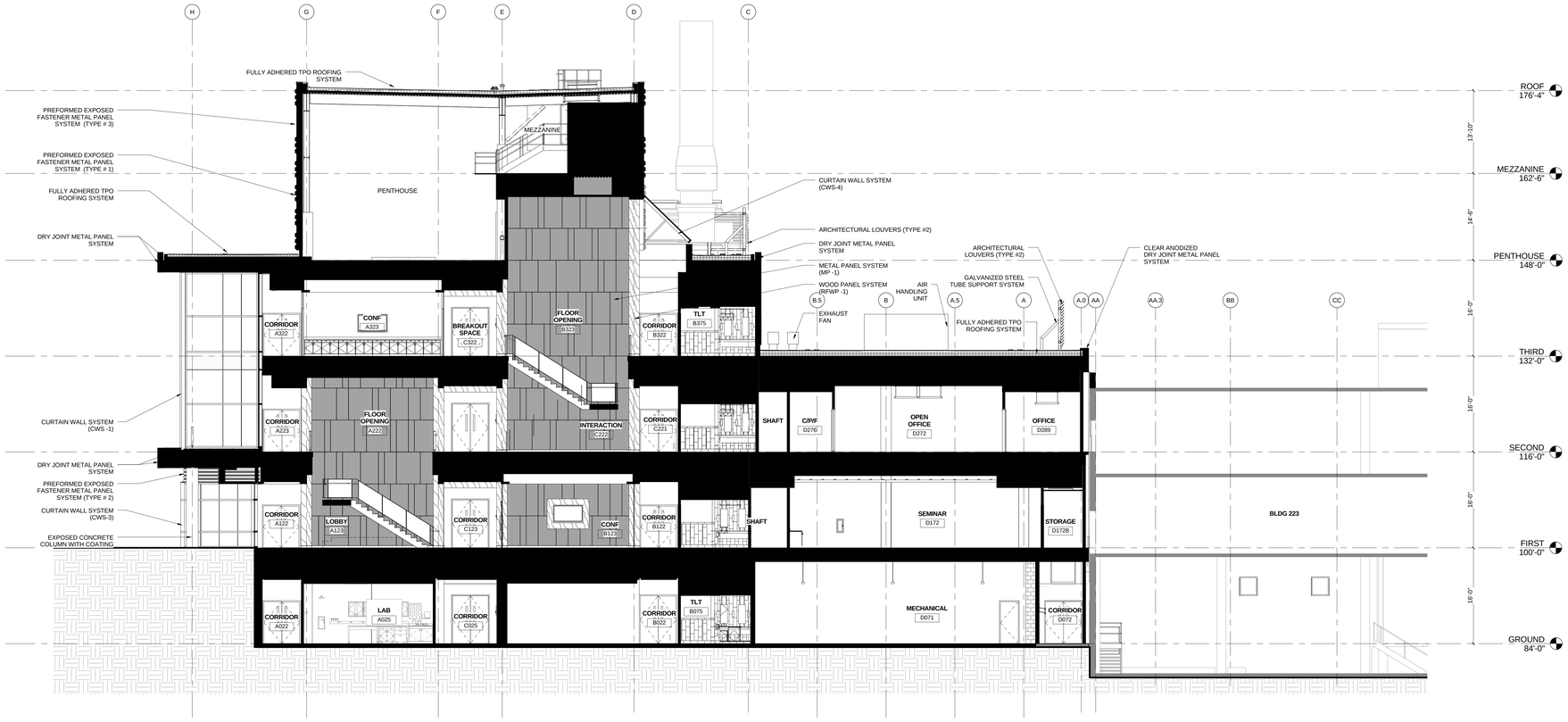
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
BUILDING SECTIONS

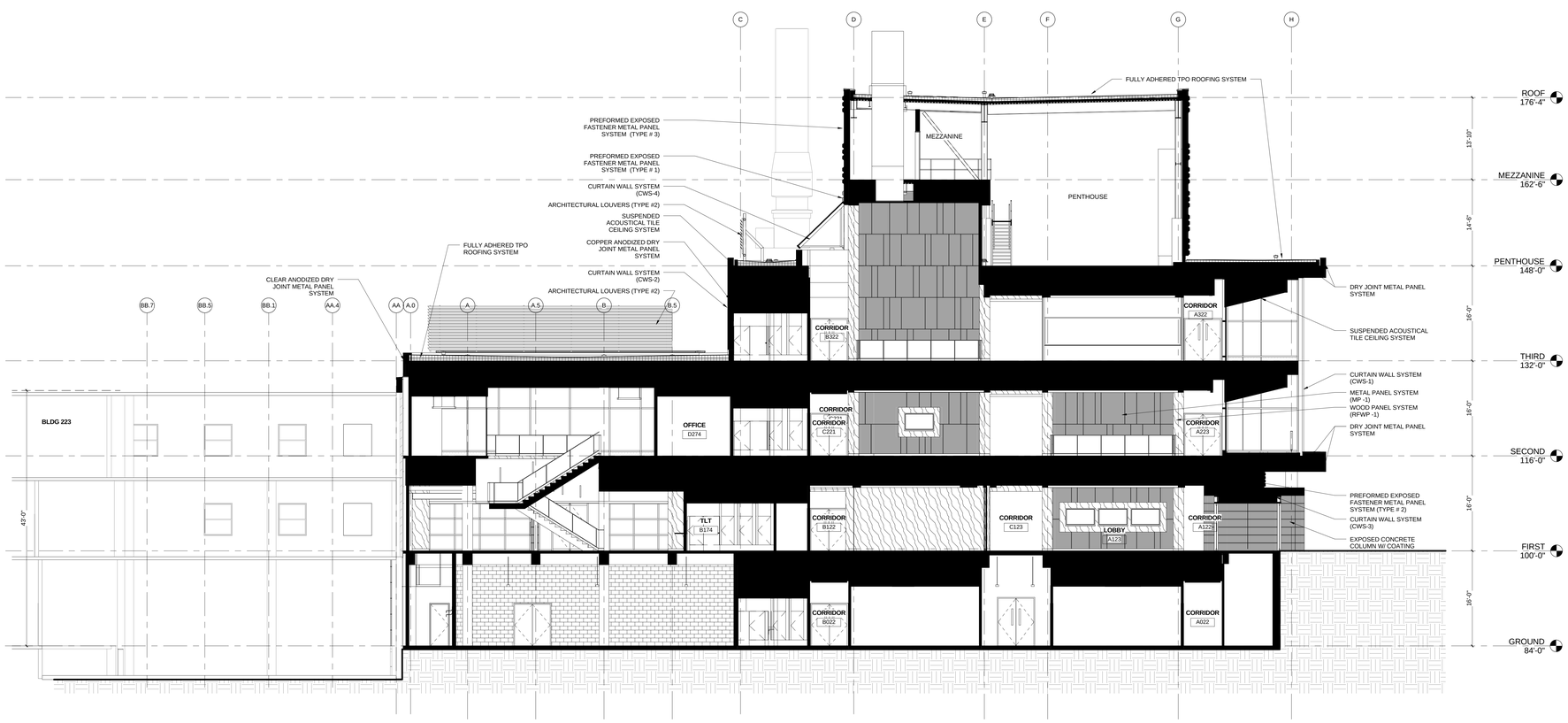
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-302	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-302
REV. NO.

C:\BV70\002182-A-CENTRAL_dwng.rvt
7/8/2011 10:59:18 AM



B1 SECTION @ LOBBY LOOKING EAST
1/8" = 1'-0"



A1 SECTION @ LOBBY LOOKING WEST
1/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-303

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
BUILDING SECTIONS

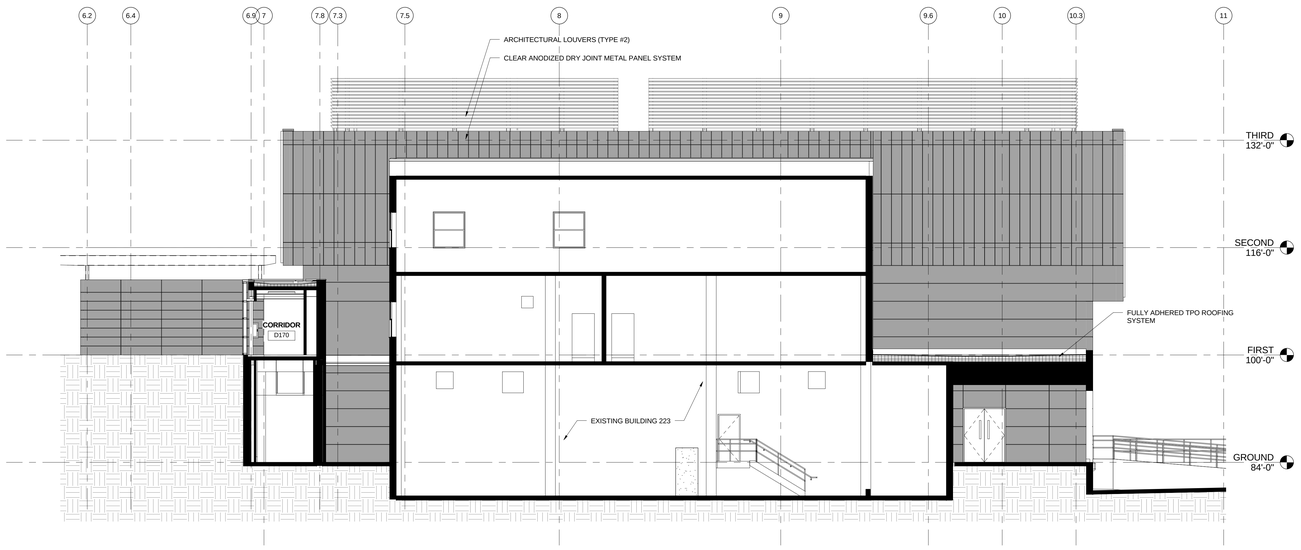
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-303	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-303
REV. NO.

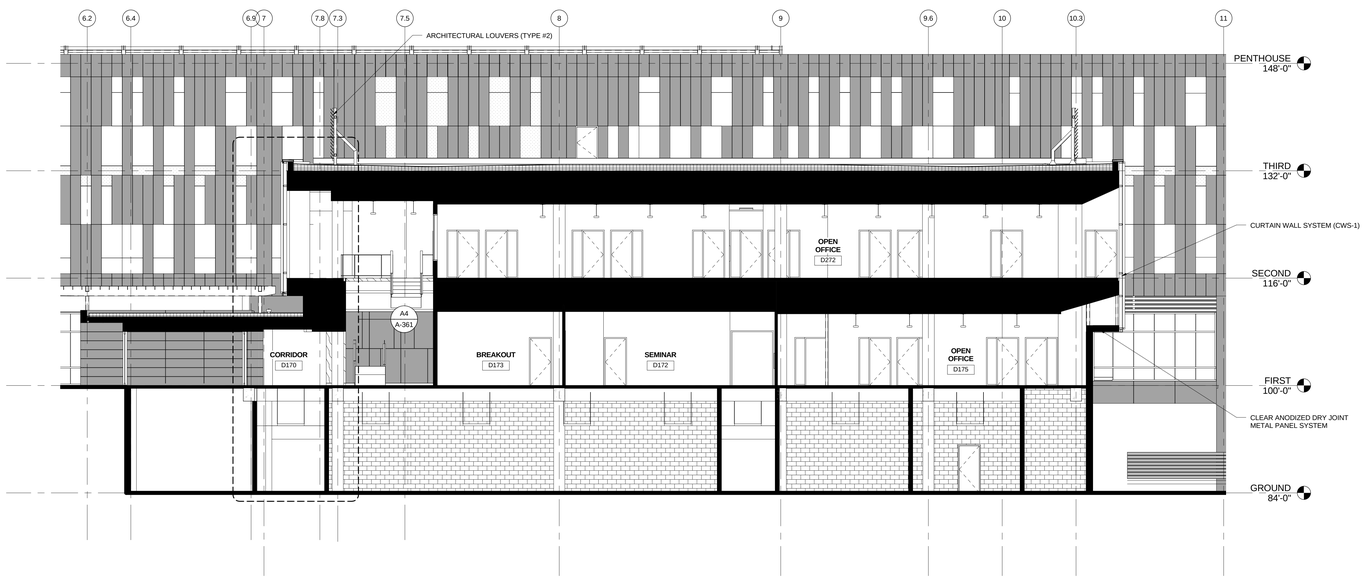
C:\BV70\0182-A-CENTRAL_alerts.rvt
7/8/2011 10:59:51 AM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



B1 SECTION THROUGH INFILL & 223 LOOKING NORTH
1/8" = 1'-0"



A1 SECTION THROUGH SEMINAR LOOKING NORTH
1/8" = 1'-0"

A-304

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
BUILDING SECTIONS

DESIGNED CURT PINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-304	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101- A-304		REV. NO.

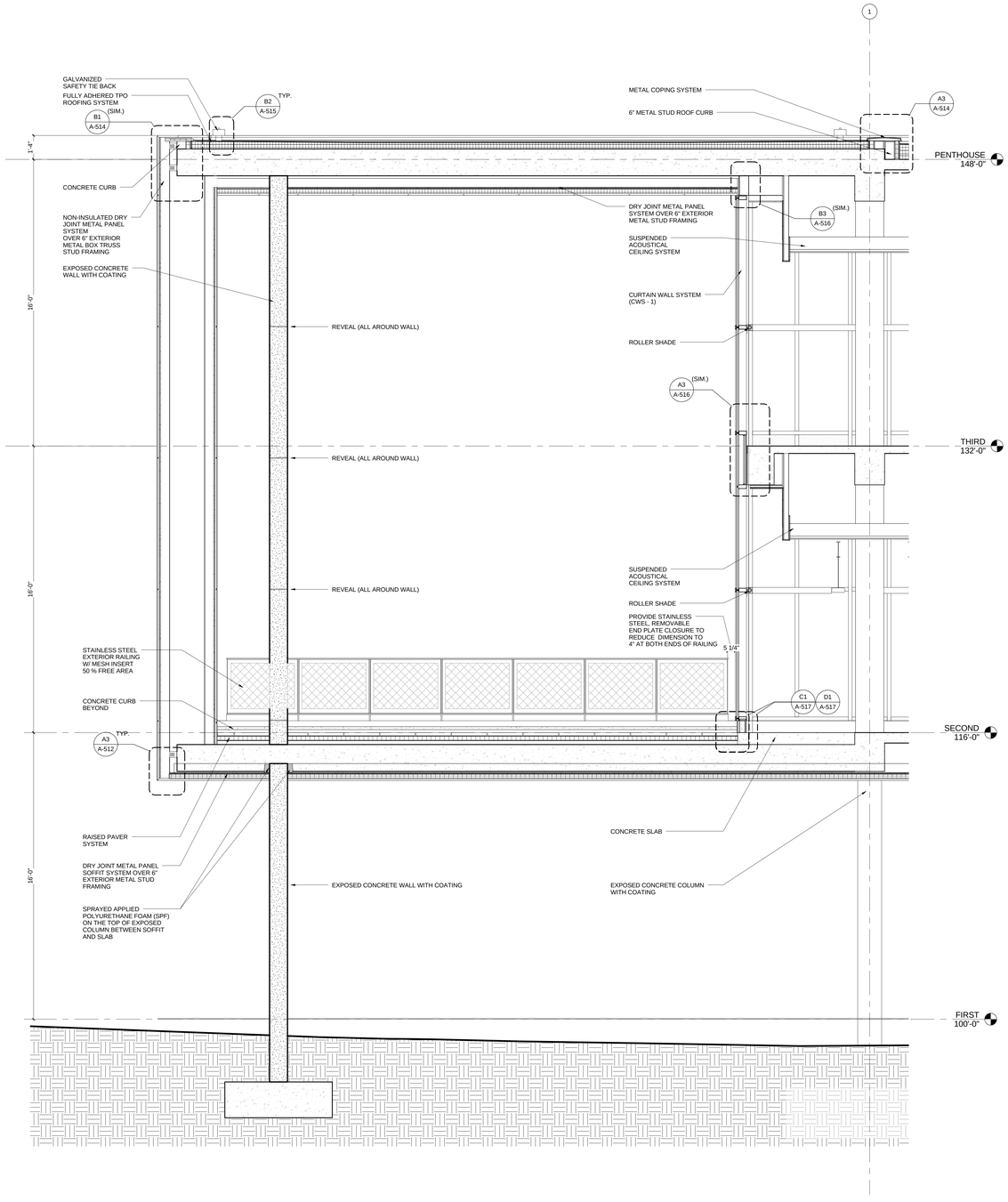
C:\PVTX\002182-A-CENTRAL_dwg\A-04
7/8/2011 10:39:38 AM

GENERAL NOTES: WALL SECTIONS

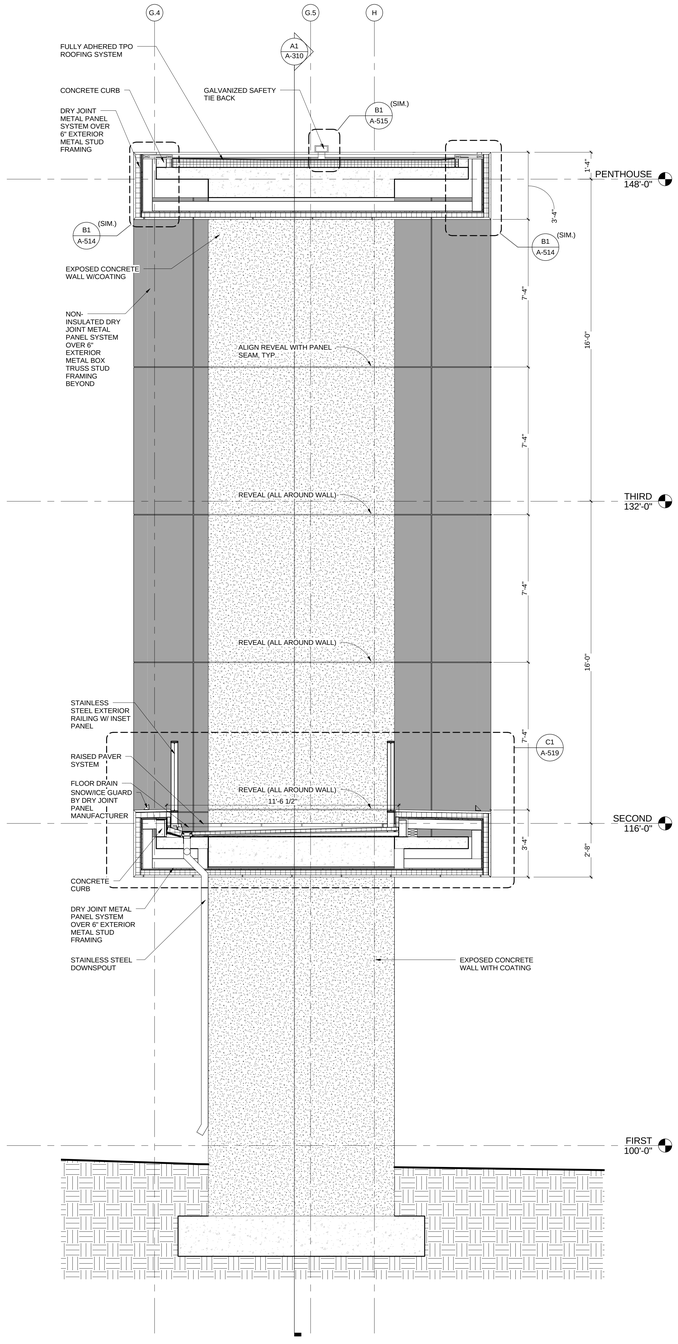
1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 WALL SECTION AT NORTHWEST TERRACE LOOKING NORTH
3/8" = 1'-0"



A4 WALL SECTION AT NORTHWEST TERRACE LOOKING WEST
3/8" = 1'-0"

A-310

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

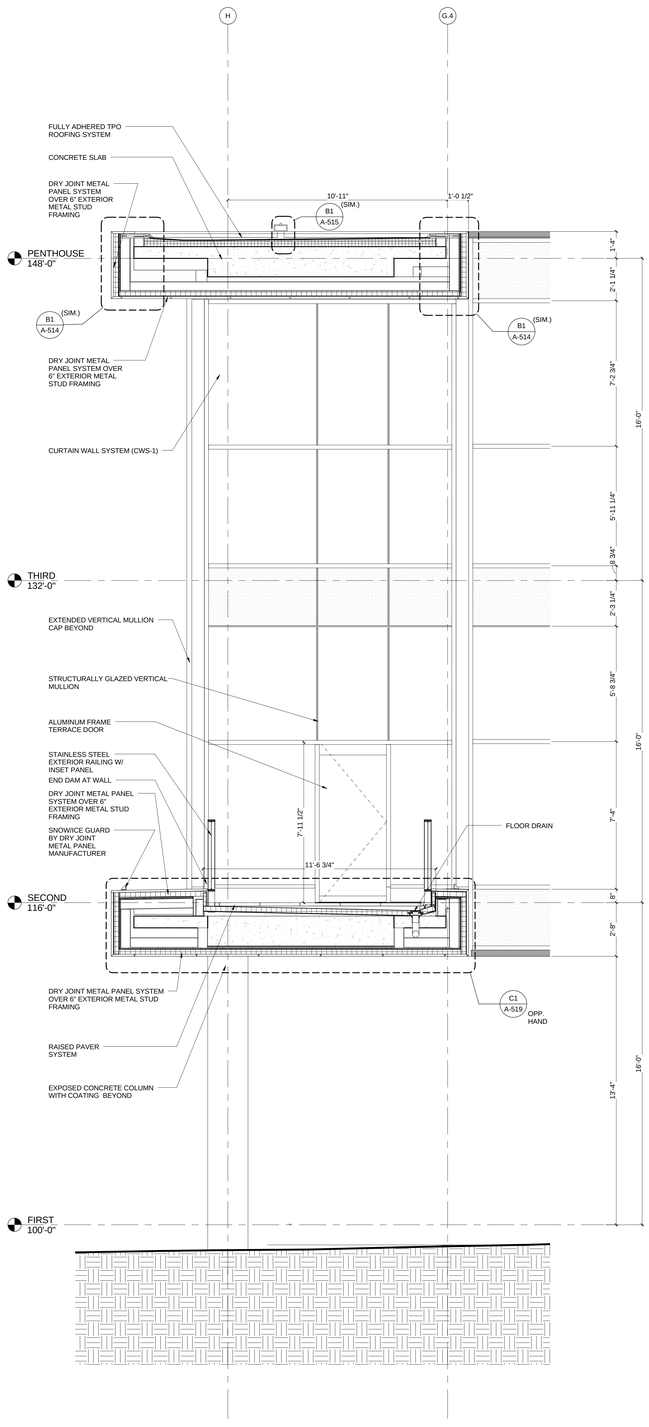
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

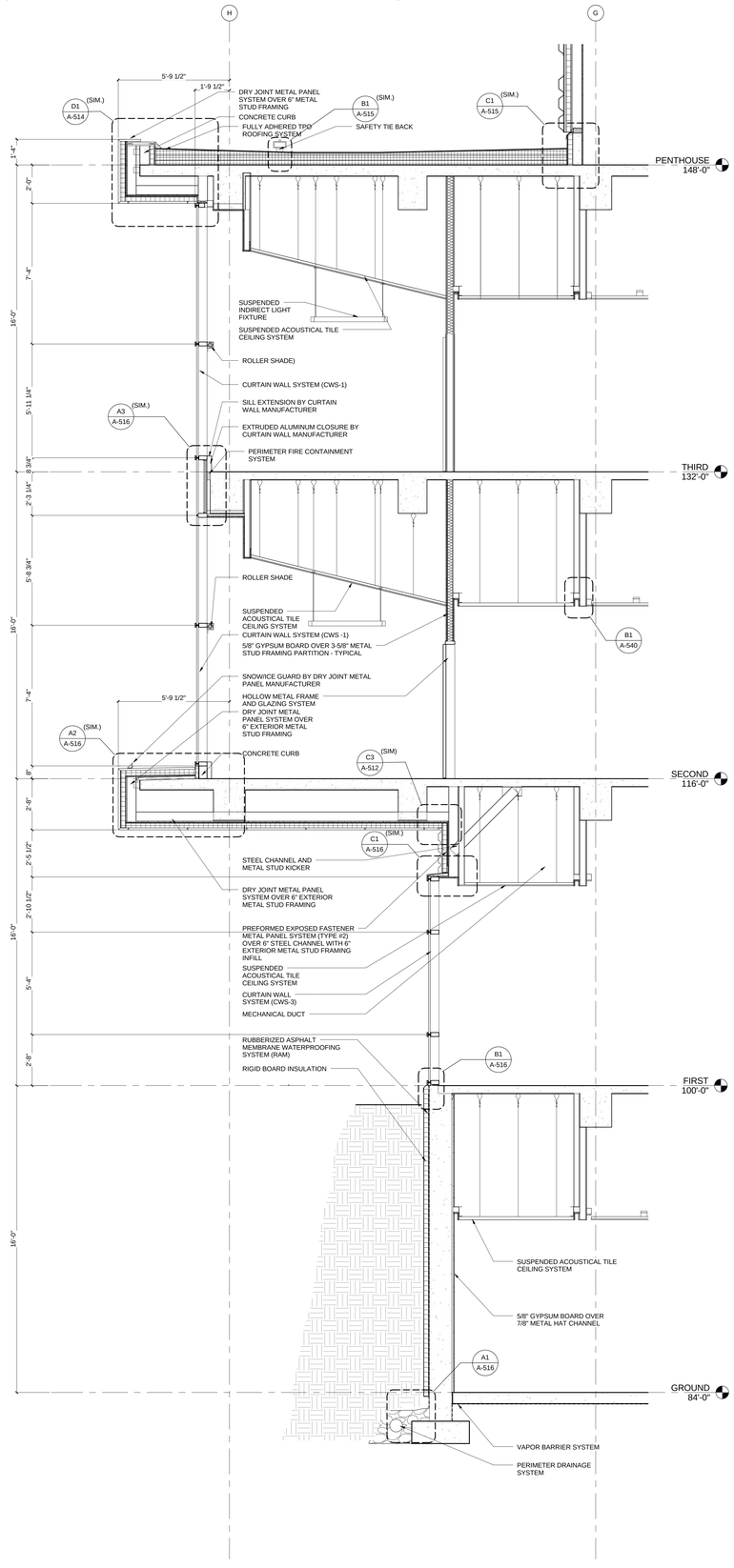
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-310	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101- A-310		REV. NO.

C:\RVT\002182-A-CENTRAL_aerdg.rvt
7/8/2011 10:59:47 AM



A1 WALL SECTION AT NORTHWEST TERRACE LOOKING EAST

3/8" = 1'-0"



A3 WALL SECTION AT NORTH FACADE

3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-311

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

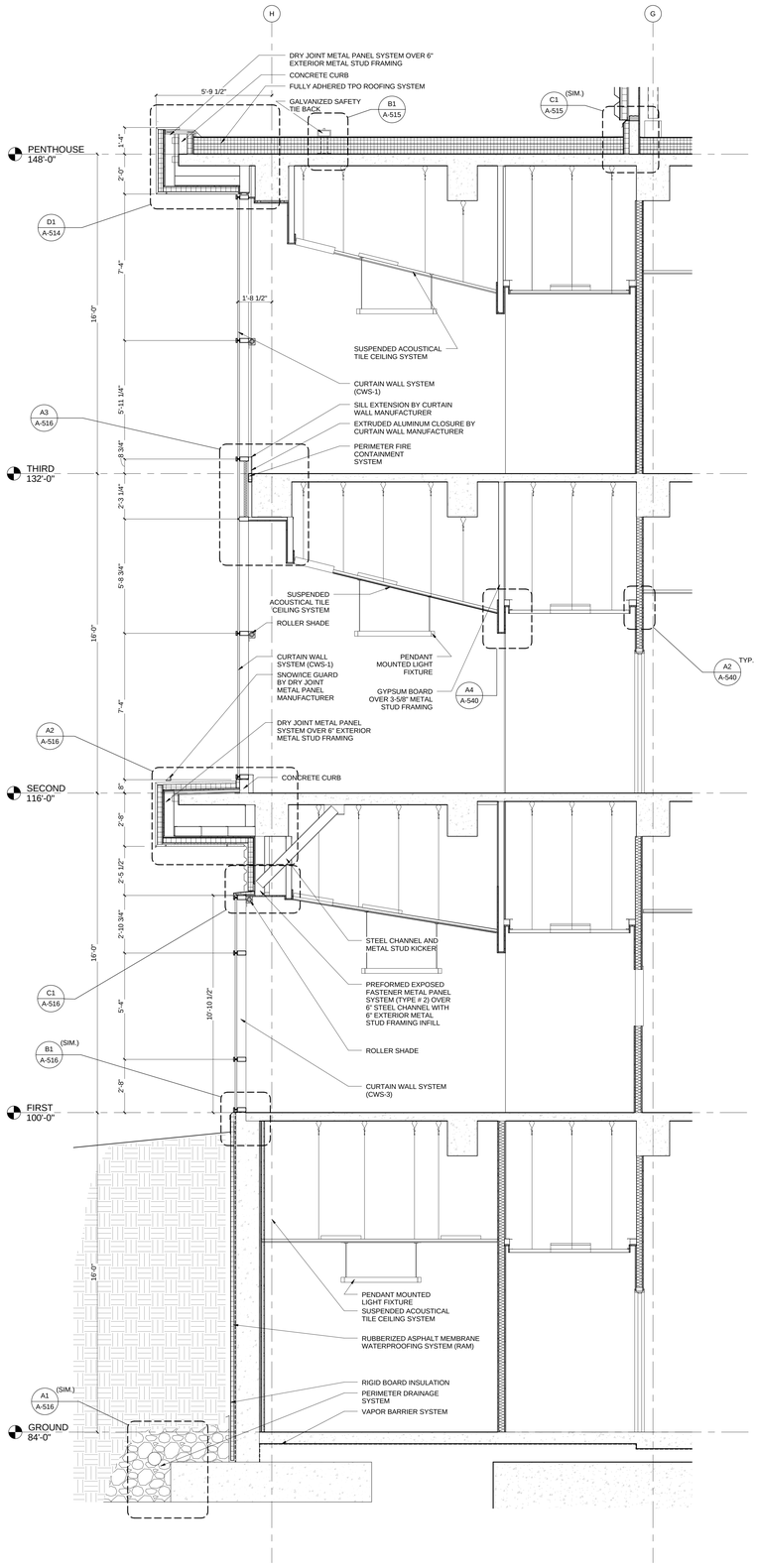
DOCUMENT TITLE

WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-311	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

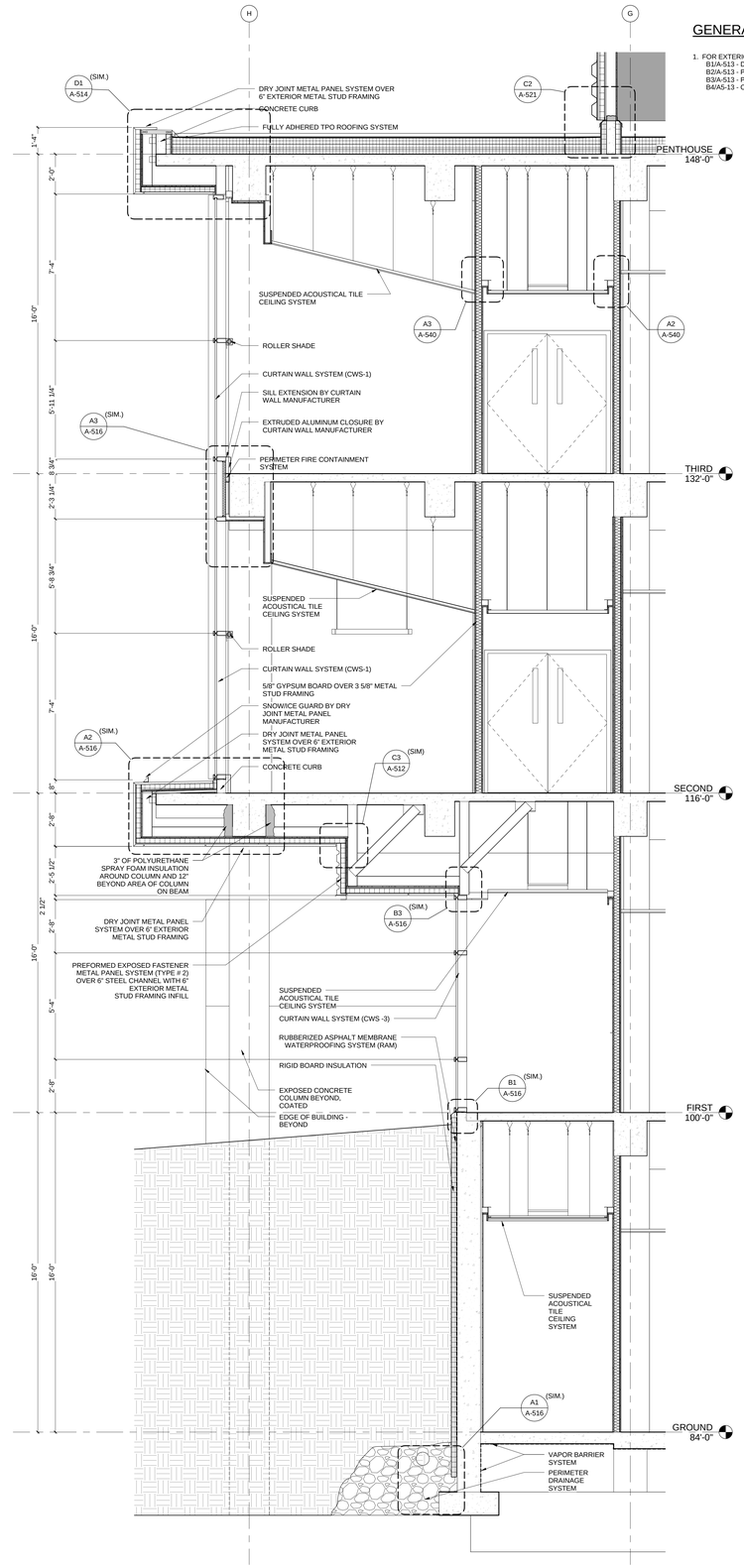
FACILITY DOCUMENT NUMBER: J241-101- A-311 REV. NO.

C:\PV70033\20-4-CENTRAL_dwg\A-4
7/8/2011 10:39:53 AM



A1 WALL SECTION AT NORTH FACADE LOOKING EAST

3/8" = 1'-0"



A3 WALL SECTION AT NORTH FACADE LOOKING EAST

3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-312

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

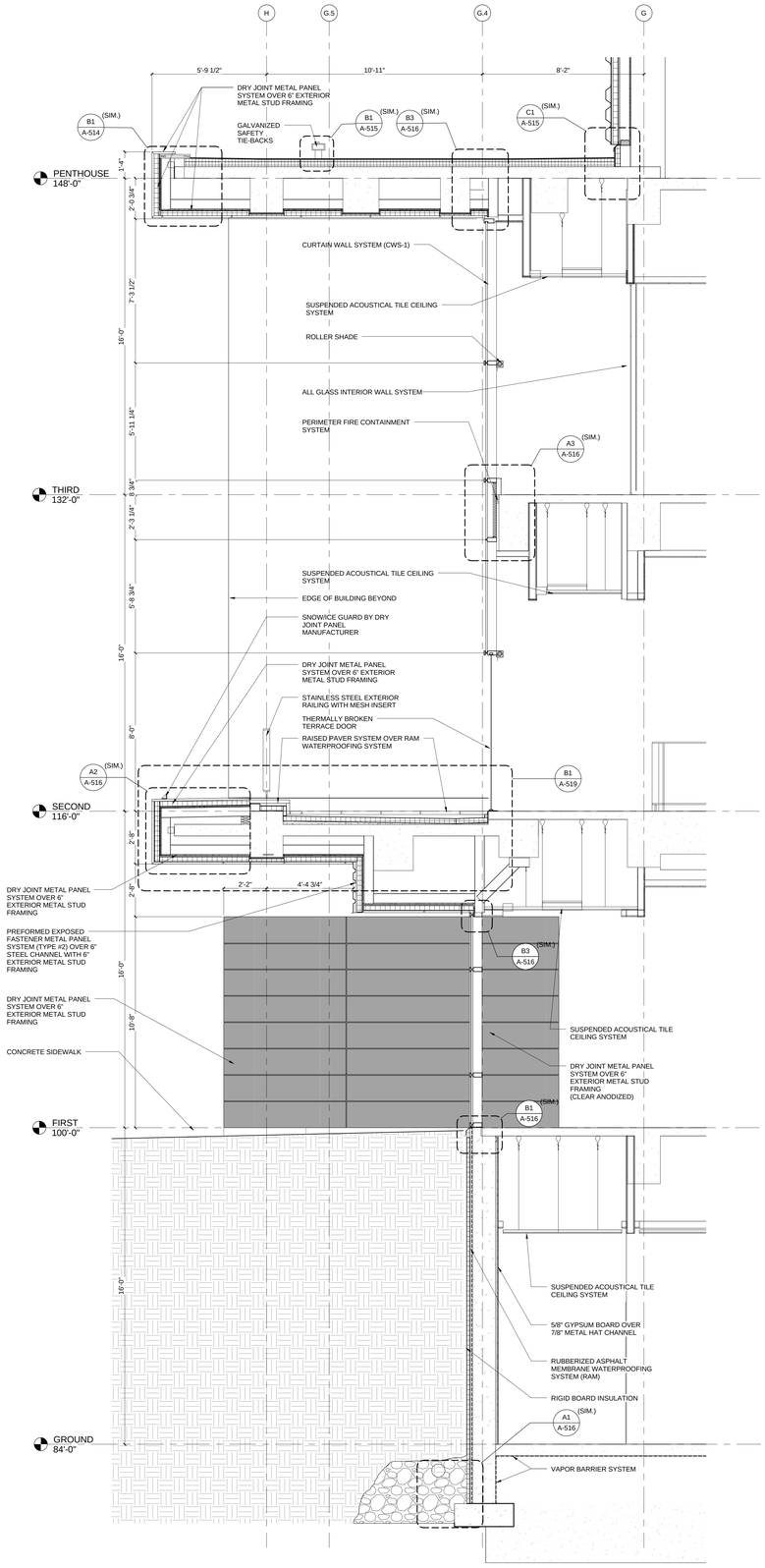
DOCUMENT TITLE

WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-312	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

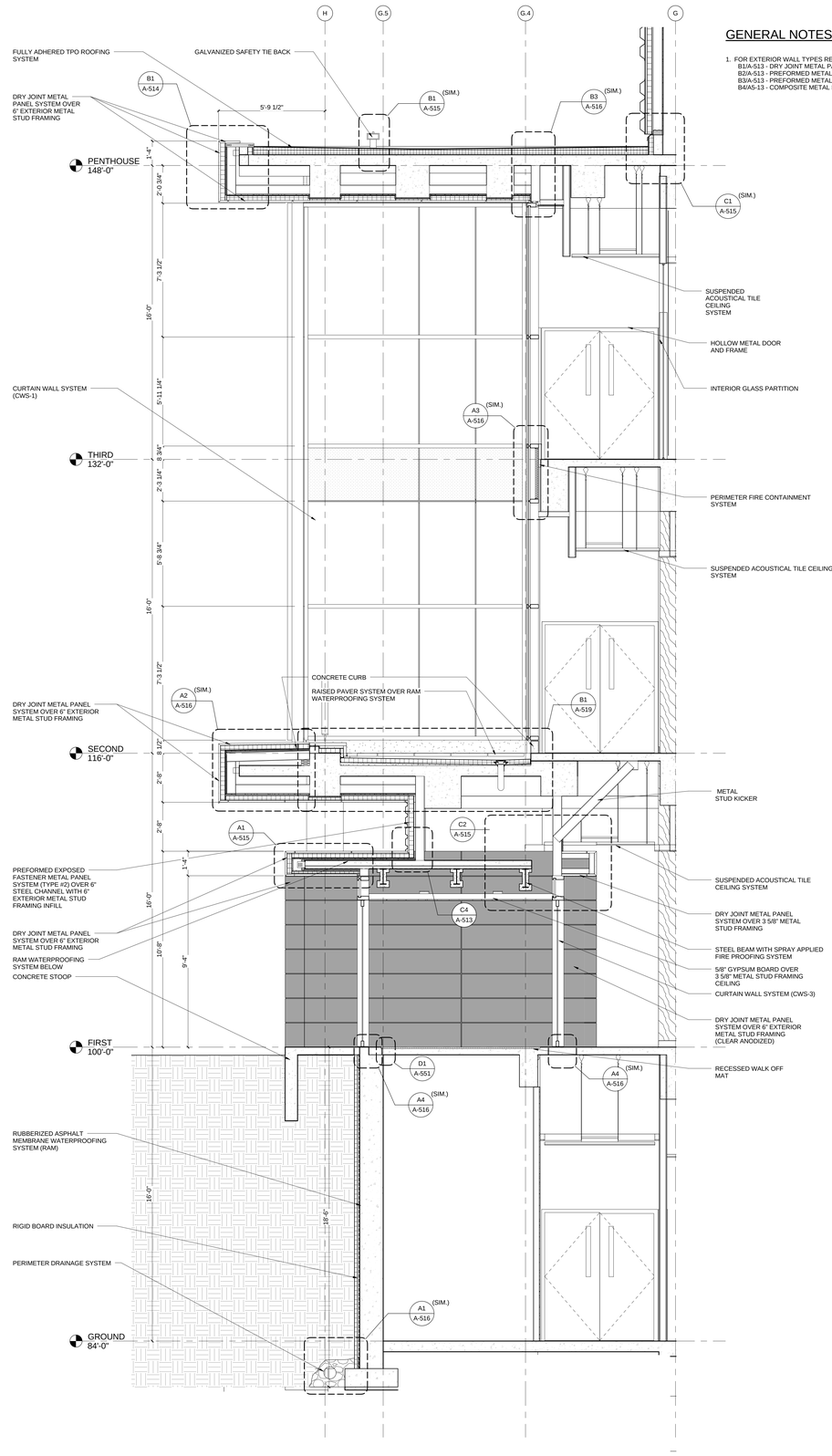
FACILITY DOCUMENT NUMBER J241-101- A-312 REV. NO.

C:\PCTOOl\218\A-CENTRAL_alm\fy-v4
7/6/2011 10:59:59 AM



A1 WALL SECTION AT NORTH FACADE LOOKING EAST

3/8" = 1'-0"



A3 WALL SECTION AT NORTH FACADE LOOKING EAST

3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-313

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

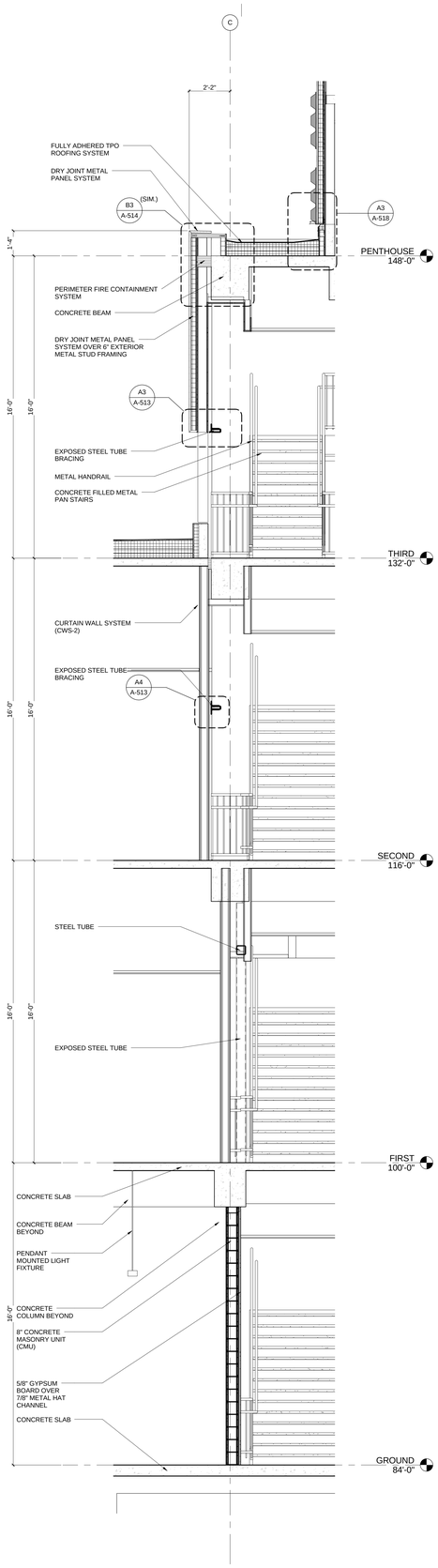
DOCUMENT TITLE

WALL SECTIONS

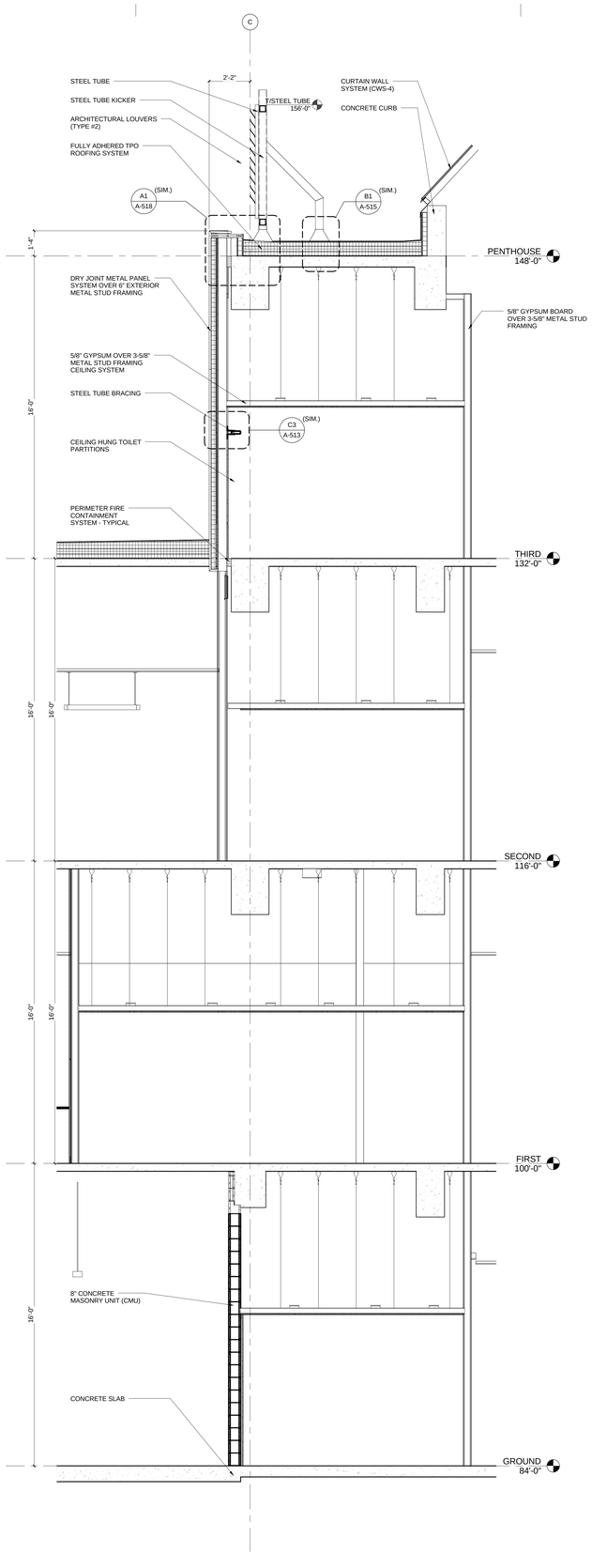
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-313	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-313 REV. NO.

C:\DV70\0230-A-CENTRAL_sheet\p.txt
7/8/2011 11:00:05 AM



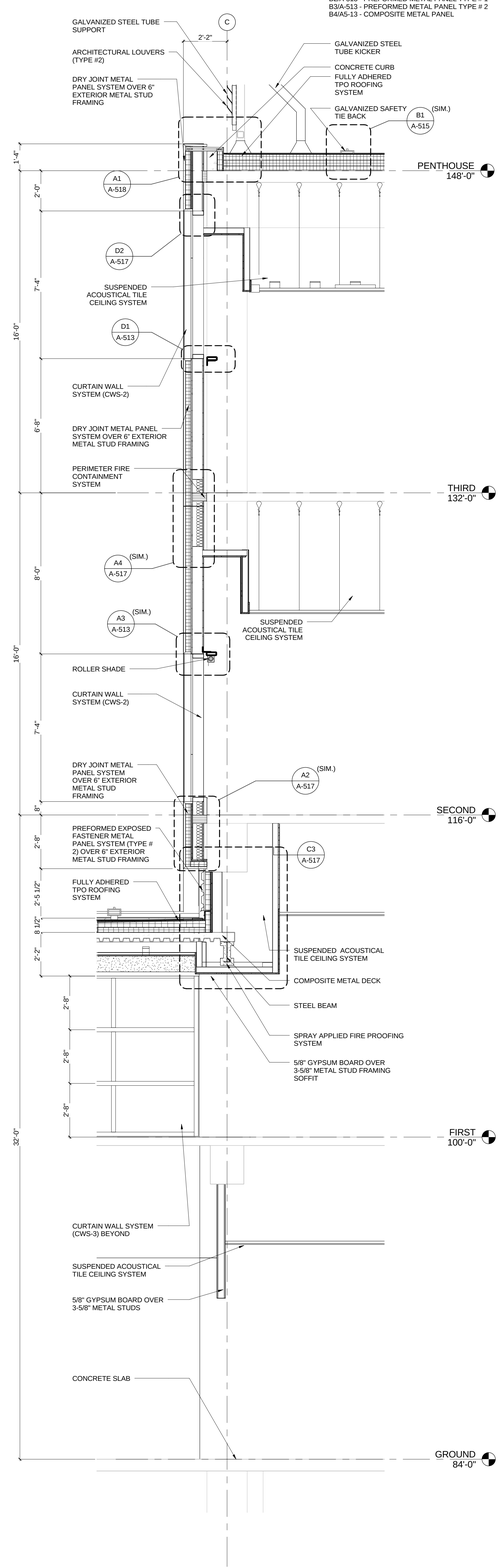
A1 WALL SECTION AT EAST STAIR – SOUTH FACADE LOOKING WEST
3/8" = 1'-0"



A3 WALL SECTION AT TOILET ROOMS – SOUTH FACADE LOOKING WEST
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL



A4 WALL SECTION AT LINK CORRIDOR – SOUTH FACADE LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-314

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

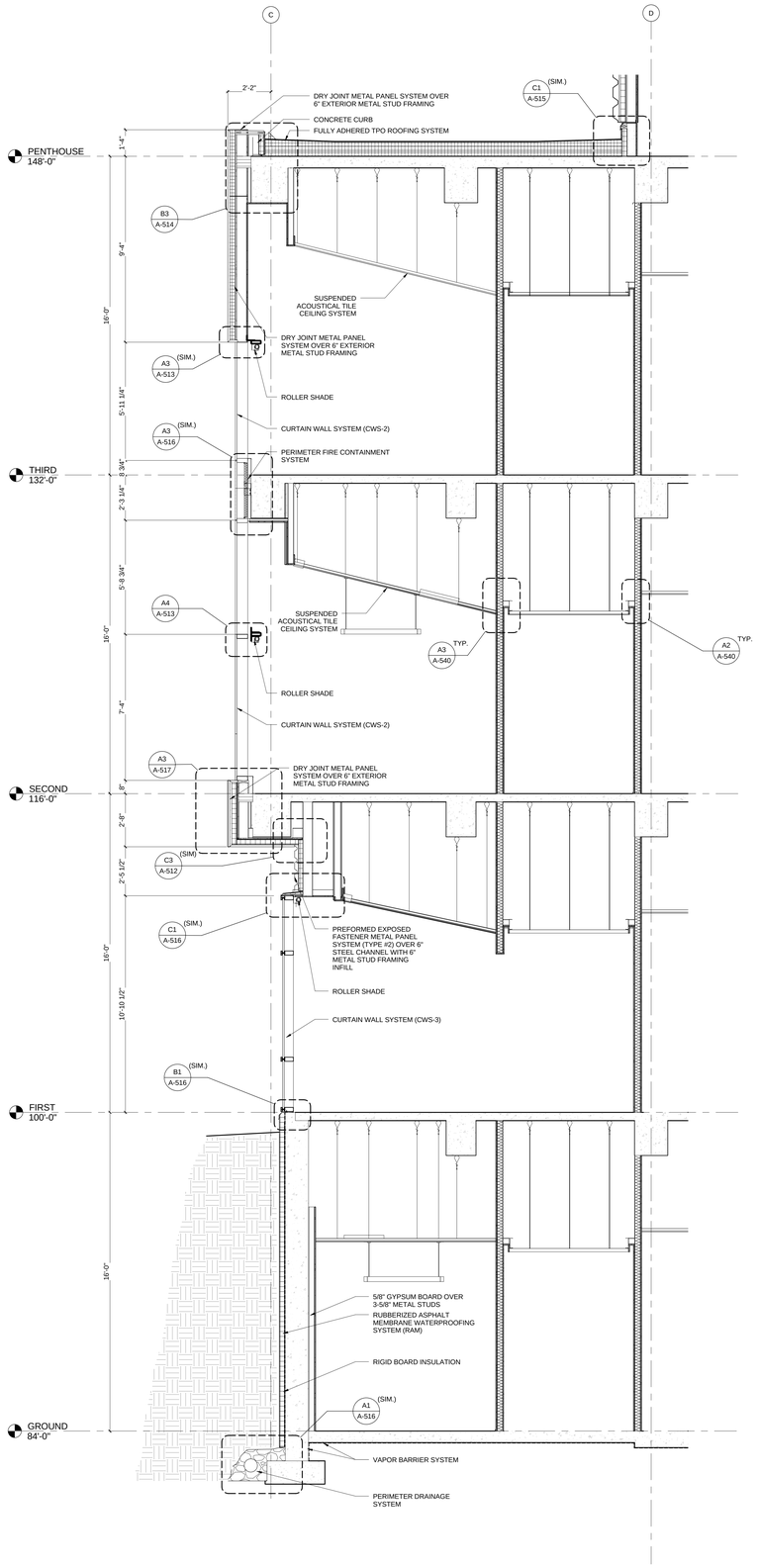
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-314	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-314
REV. NO.

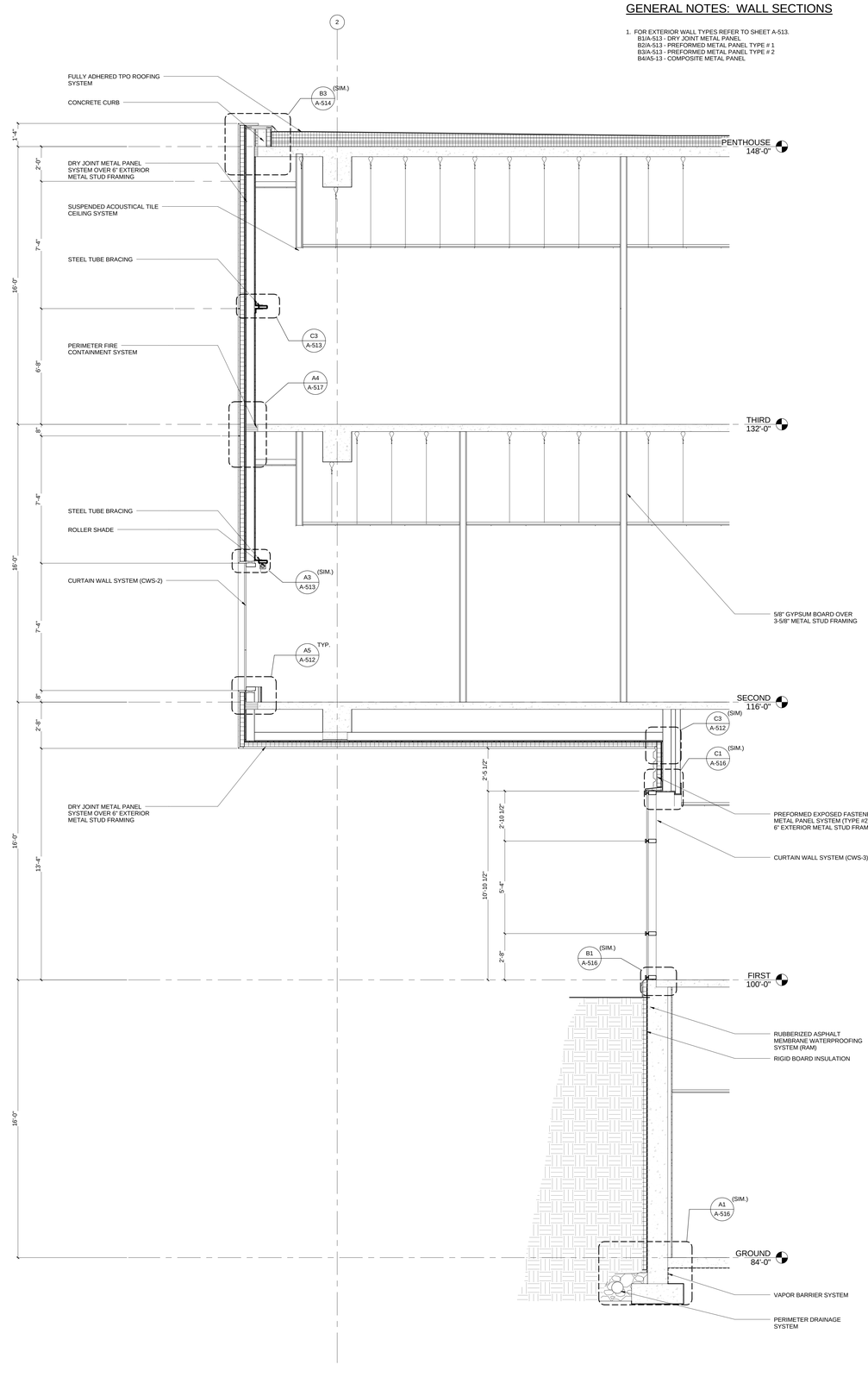
C:\PCTOOLS\D_A-CENTRAL_admin.v4
7/6/2011 11:10:13 AM

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL



A1 WALL SECTION AT SOUTH FACADE LOOKING WEST
3/8" = 1'-0"



A3 WALL SECTION AT WEST FACADE LOOKING NORTH
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-315

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-315	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-315
REV. NO.

C:\BIM\002182-ACENTRAL_ARch.rvt
7/8/2011 11:00:19 AM

GENERAL NOTES: WALL SECTIONS

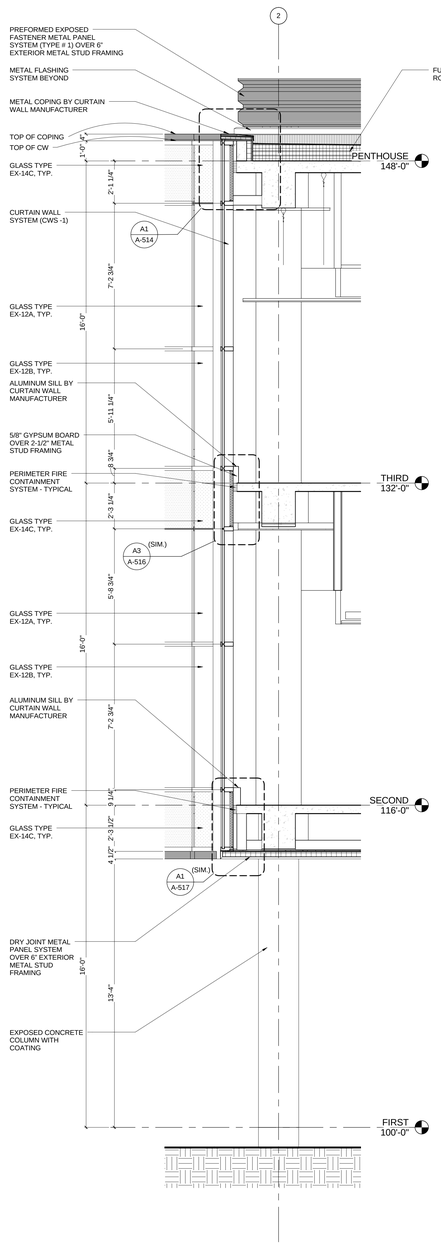
1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR

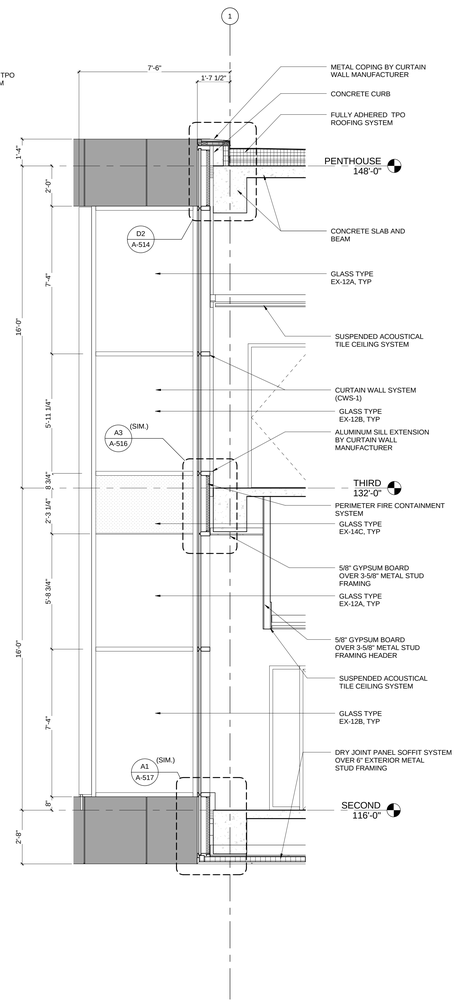
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

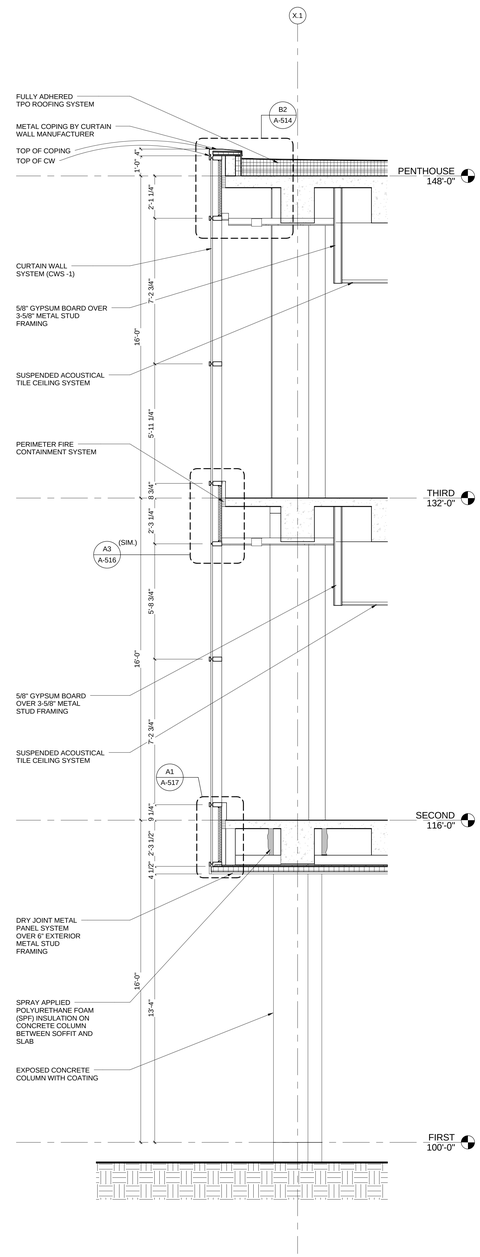
A-316



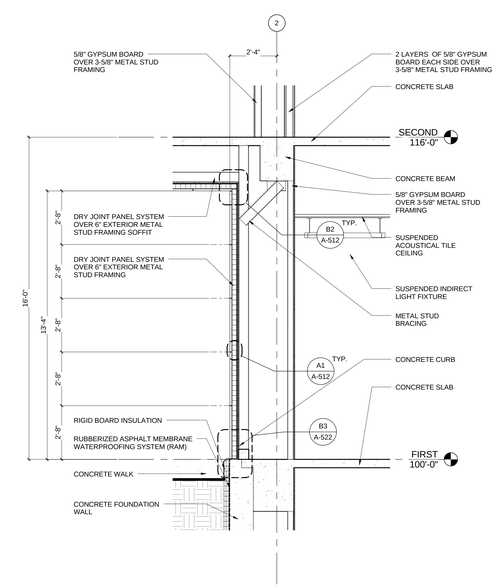
A1 WALL SECTION AT WEST FACADE LOOKING NORTH
3/8" = 1'-0"



A2 WALL SECTION AT WEST FACADE LOOKING NORTH
3/8" = 1'-0"



A3 WALL SECTION AT WEST ELEVATION LOOKING NORTH
3/8" = 1'-0"



A5 PARTIAL WALL SECTION AT WEST STAIR LOOKING NORTH
3/8" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-316	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-316 REV. NO.

C:\PCTOOLS\DATA\ZIXTRAE_ahrdy.rvt
7/8/2011 11:07:07 AM

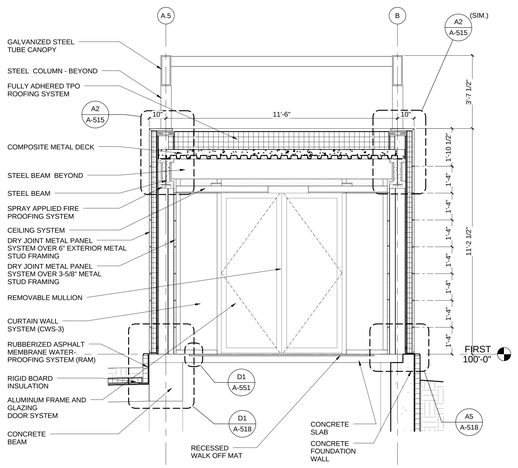
GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

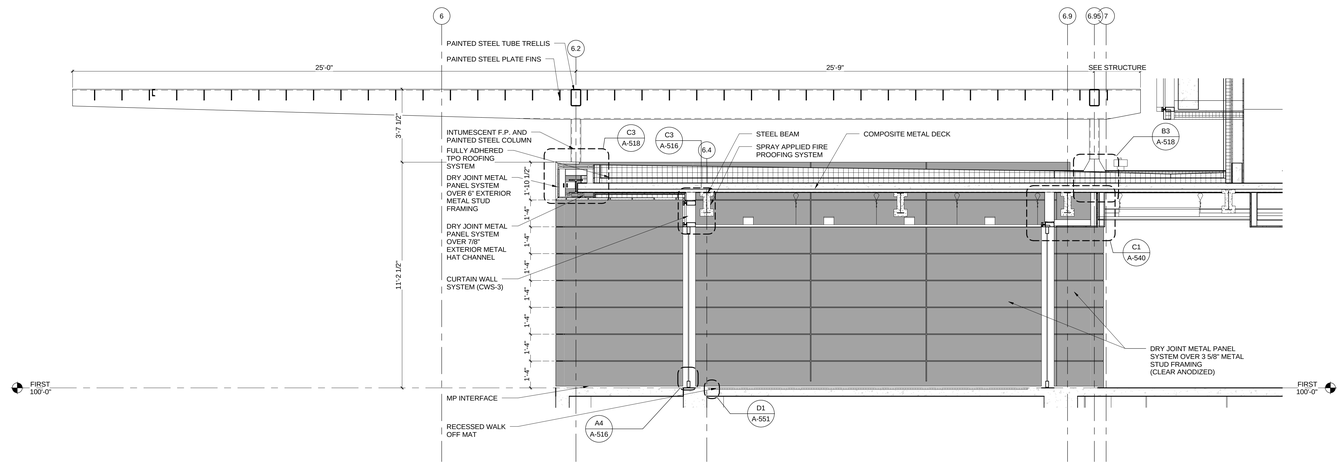
HDR

HDR Architecture, Inc.

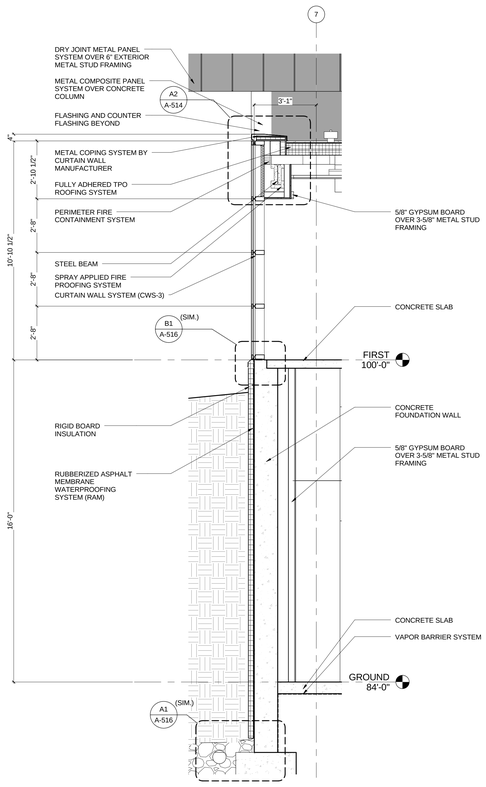
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



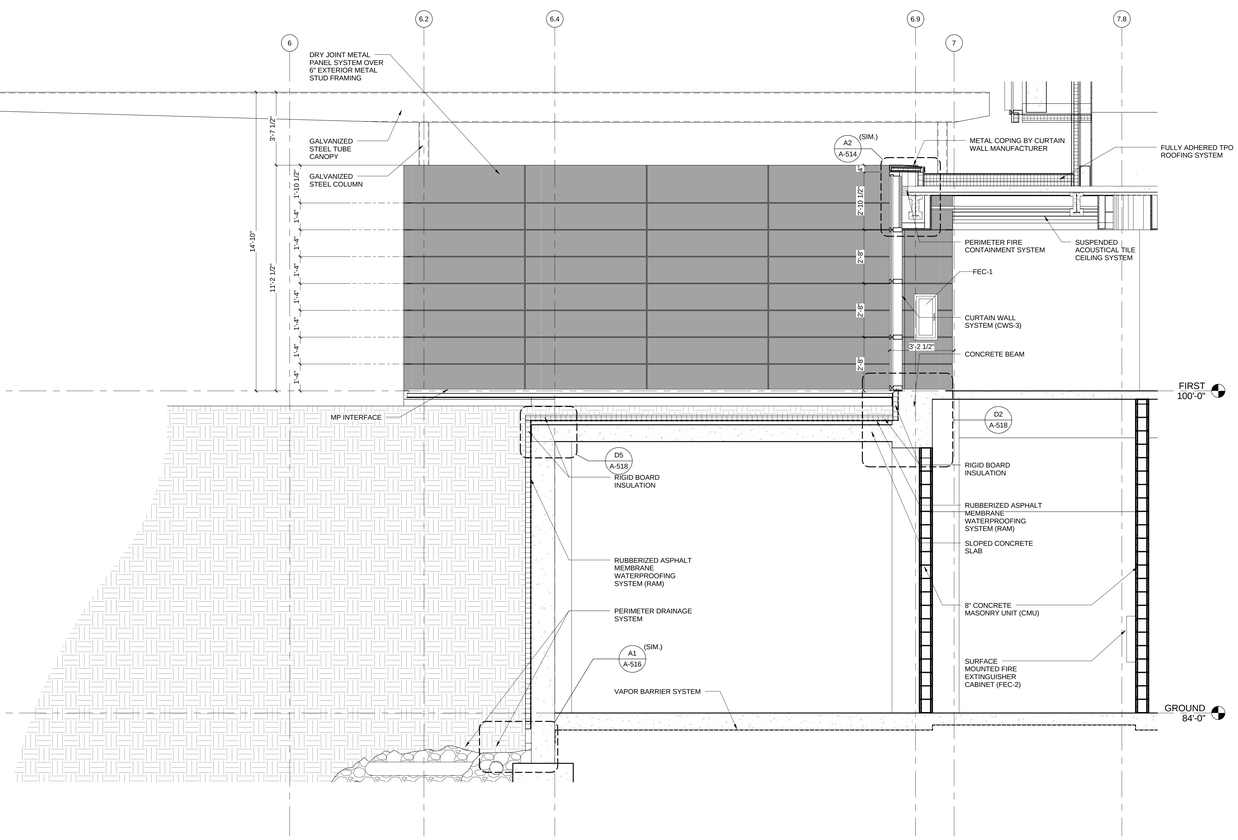
C1 WALL SECTION AT WEST VESTIBULE LOOKING WEST
3/8" = 1'-0"



C2 WALL SECTION AT WEST VESTIBULE LOOKING NORTH
3/8" = 1'-0"



A1 WALL SECTION AT LINK CORRIDOR LOOKING NORTH
3/8" = 1'-0"



A2 WALL SECTION AT LINK CORRIDOR LOOKING NORTH
3/8" = 1'-0"

A-317

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

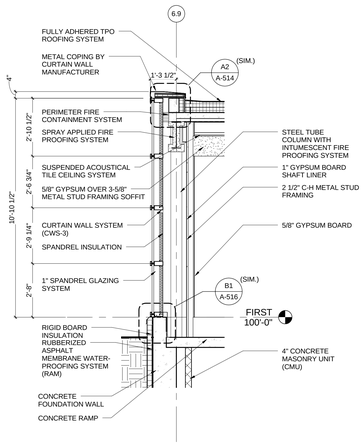
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
WALL SECTIONS

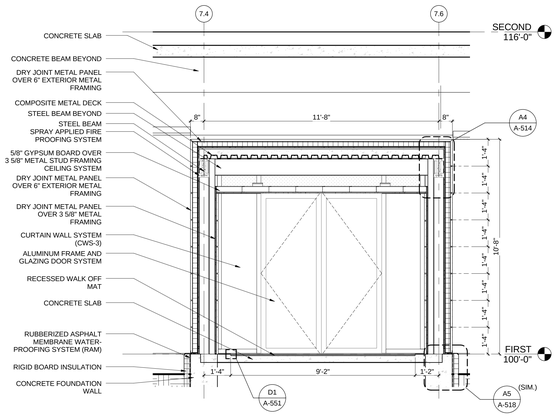
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-317	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-317 REV. NO.

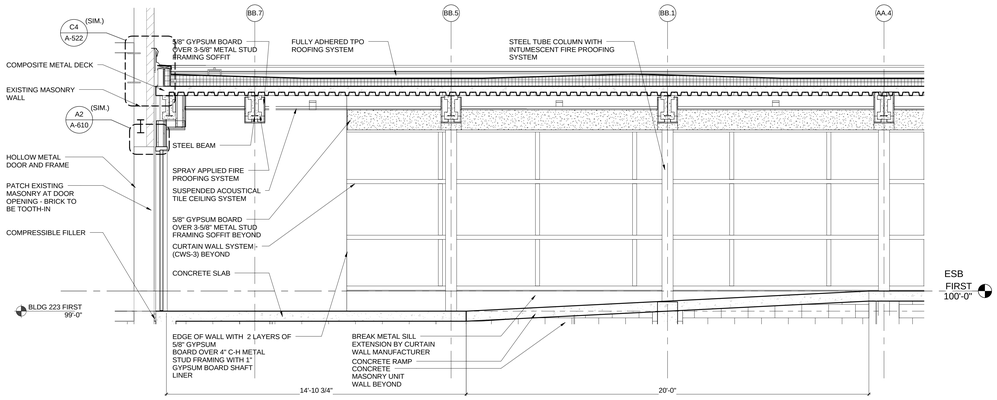
C:\DRV\000\30-A-CENTRAL_alert\b.rvt
7/8/2011 11:00:39 AM



D1 WALL SECTION AT 1 HOUR RATED WALL AT BLDG 223 LOOKING NORTH
3/8" = 1'-0"



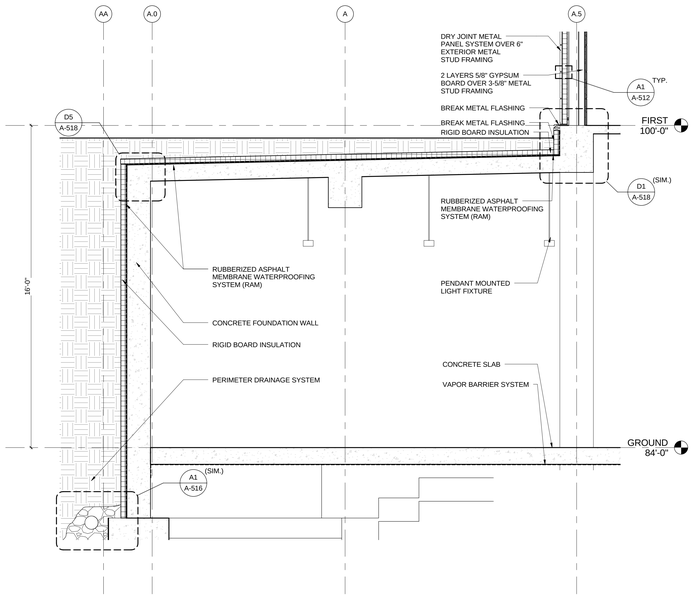
D2 WALL SECTION AT ENTRY VESTIBULE
3/8" = 1'-0"



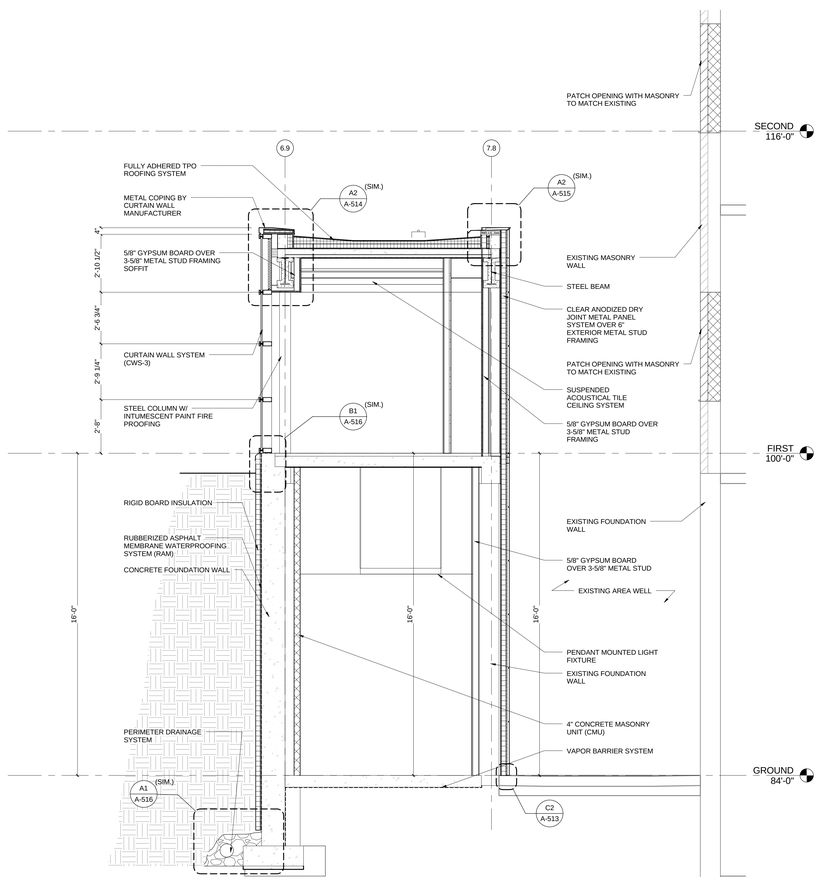
C1 WALL SECTION AT FIRST FLOOR LINK RAMP LOOKING WEST
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL



C2 WALL SECTION AT MECHANICAL SERVICE ENTRY ROOM LOOKING NORTH
3/8" = 1'-0"



A3 WALL SECTION AT LINK CORRIDOR LOOKING NORTH
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-318

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

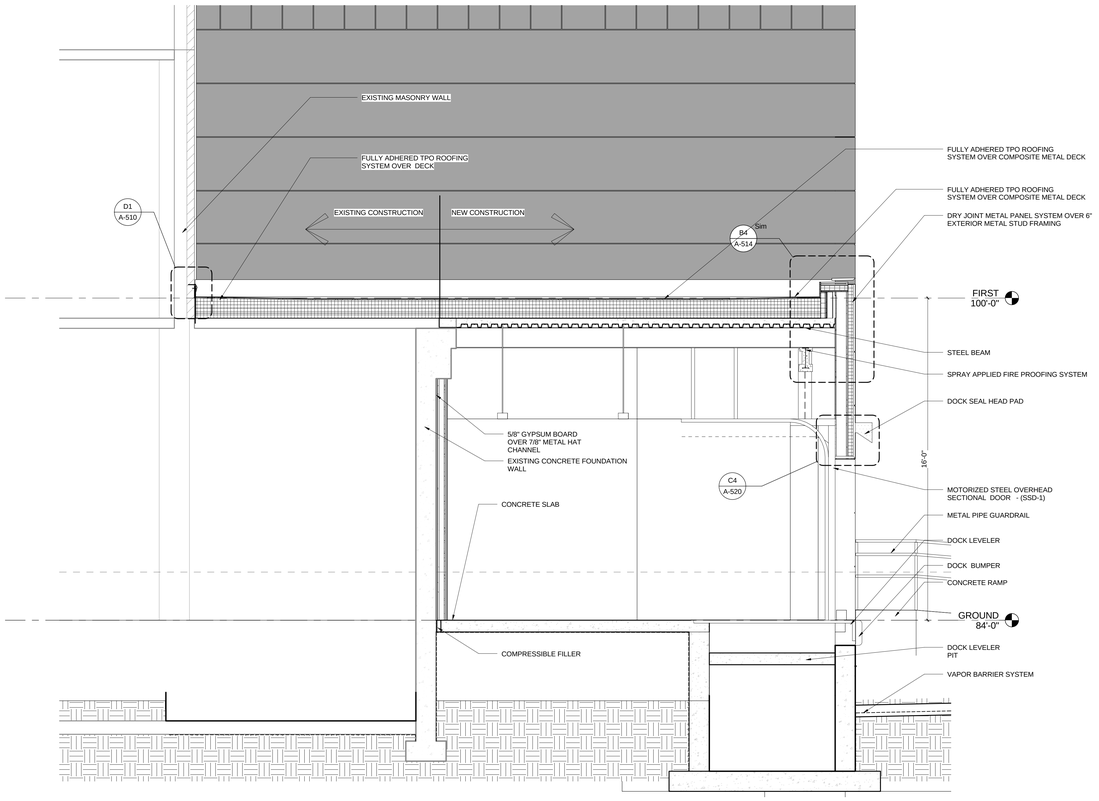
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

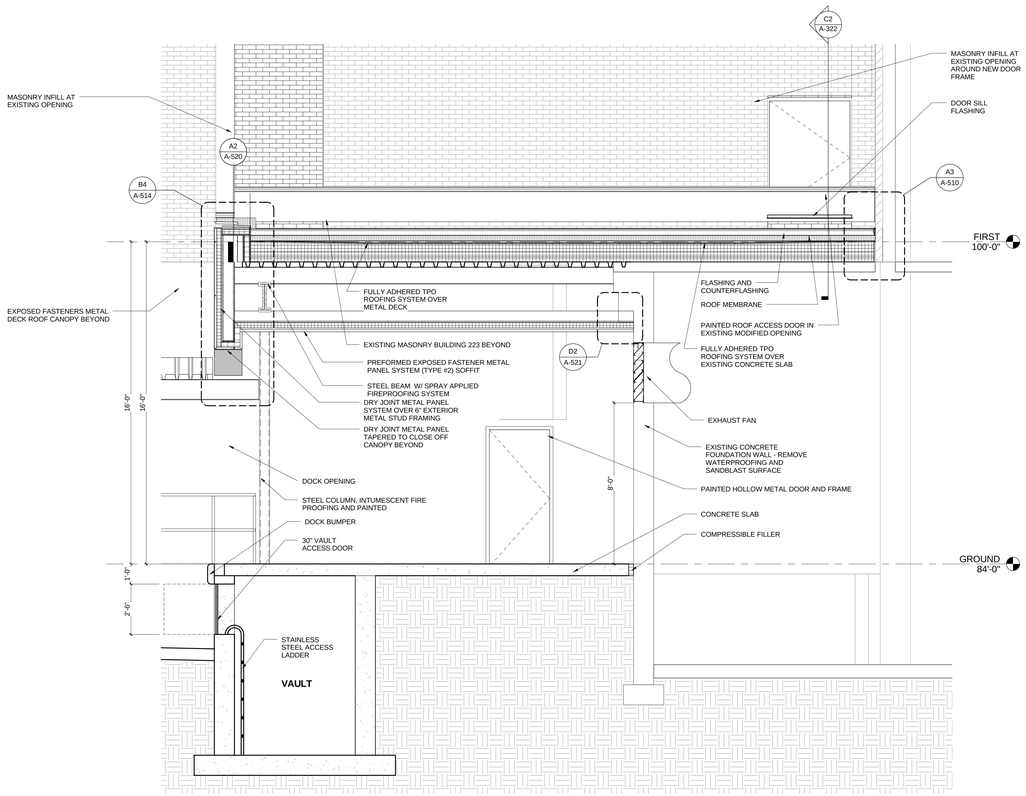
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-318	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-318 REV. NO.

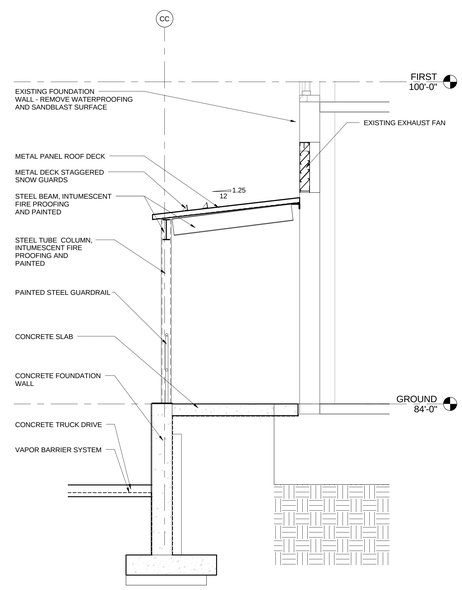
C:\PKY\0031\82-A-CENTRAL_alvrdy.rvt
7/8/2011 11:00:46 AM



C1 WALL SECTION AT LOADING DOCK OH DOOR LOOKING NORTH
3/8" = 1'-0"



A1 WALL SECTION AT LOADING DOCK LOOKING SOUTH
3/8" = 1'-0"



A3 WALL SECTION AT DOCK CANOPY LOOKING EAST
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-319

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

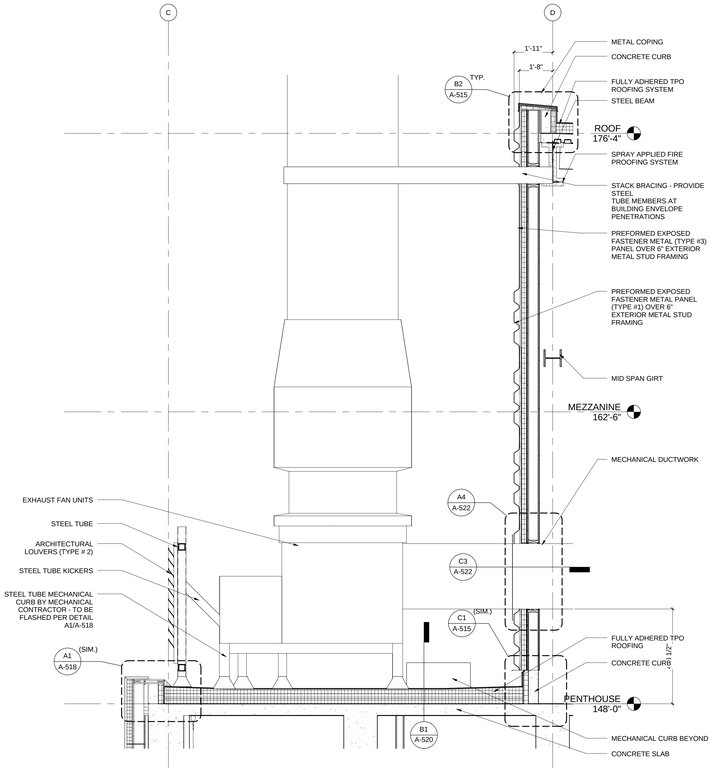
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

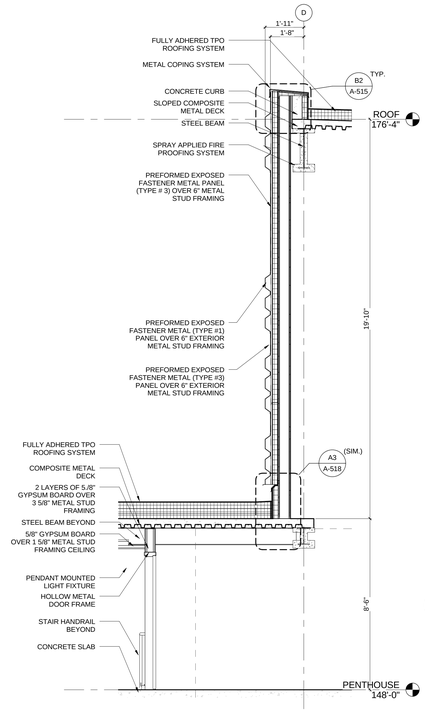
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-319	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER — REV. NO.
J241-101- A-319

C:\R\TW20182-ACENTRAL_ahrfp.rvt
7/8/2011 11:00:53 AM



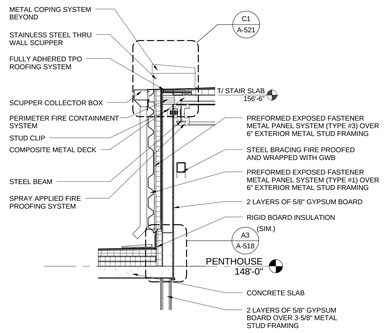
C1 SOUTH WALL SECTION @ EXHAUST FANS
3/8" = 1'-0"



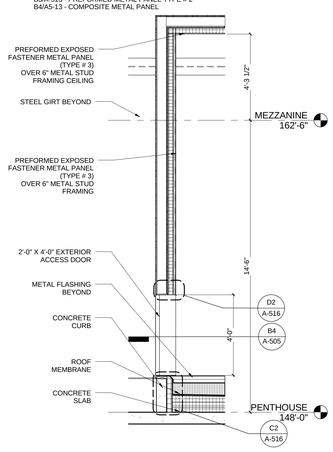
C2 WALL SECTION @ NORTH WALL OF EAST STAIRS
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL



C3 WALL SECTION
3/8" = 1'-0"



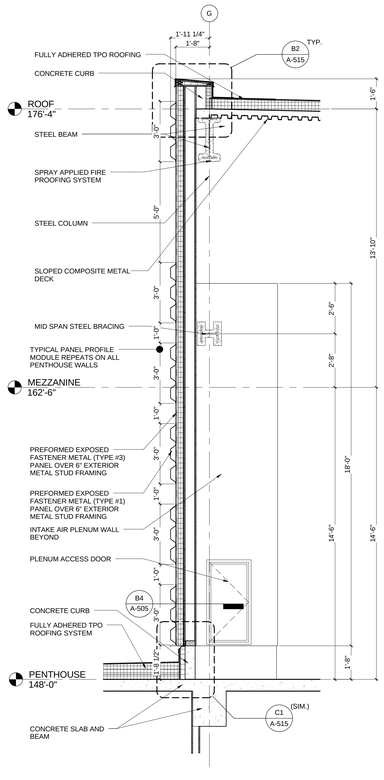
C4 WALL SECTION - PLENUM END WALL
3/8" = 1'-0"

HDR

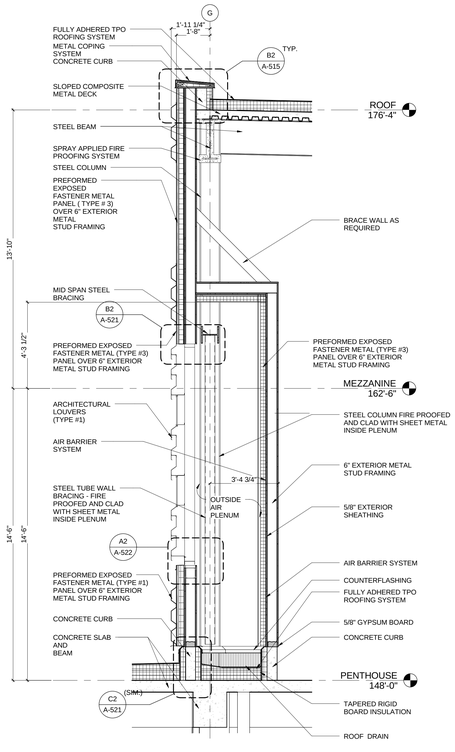
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

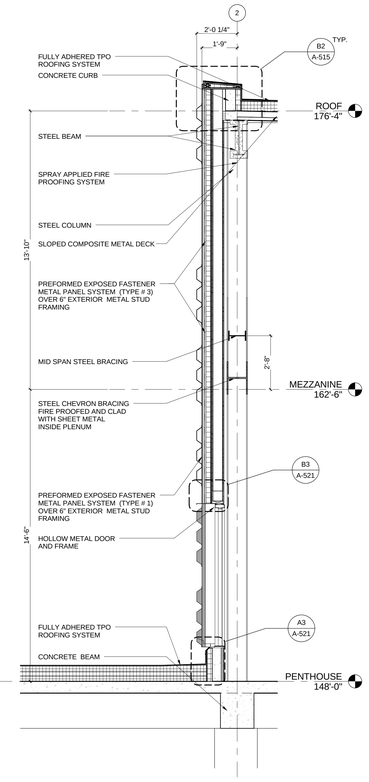
A-320



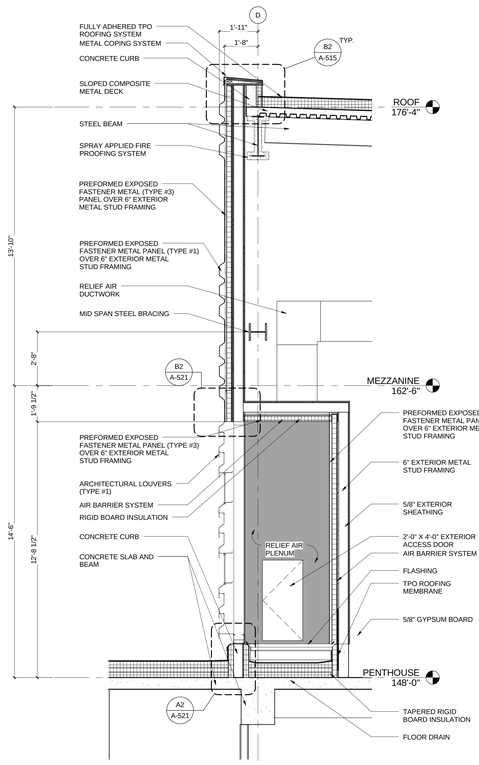
A1 WALL SECTION
3/8" = 1'-0"



A2 WALL SECTION
3/8" = 1'-0"



A3 WALL SECTION
3/8" = 1'-0"



A4 WALL SECTION
3/8" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

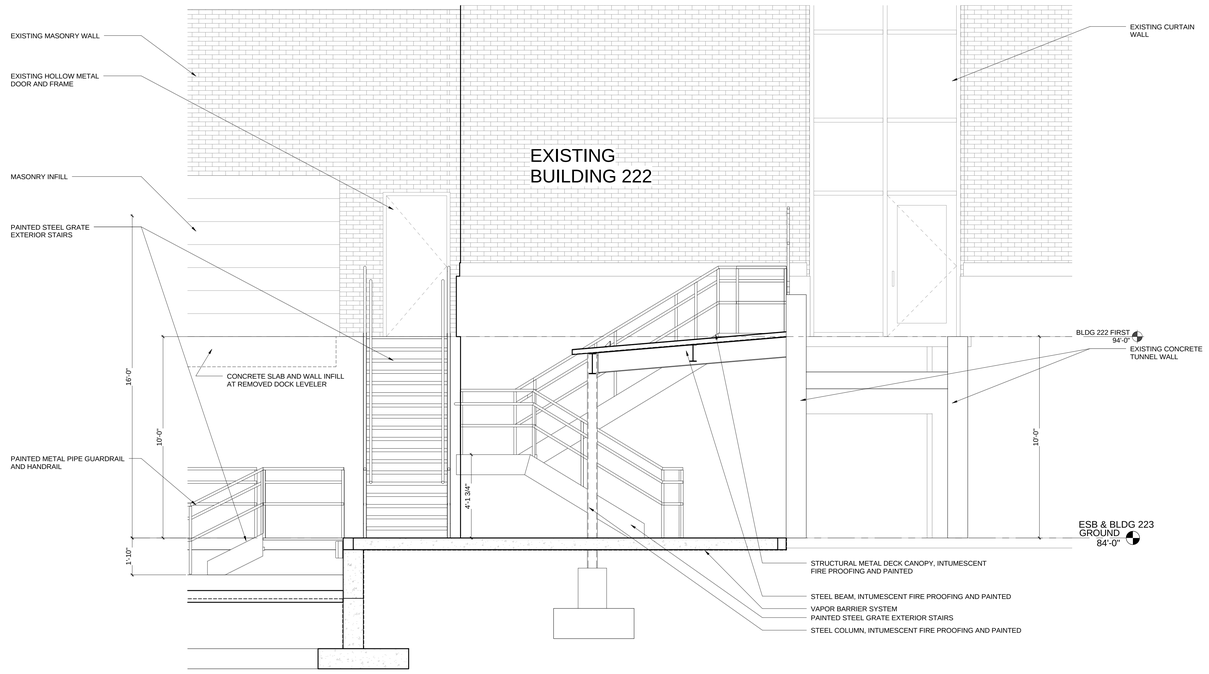
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

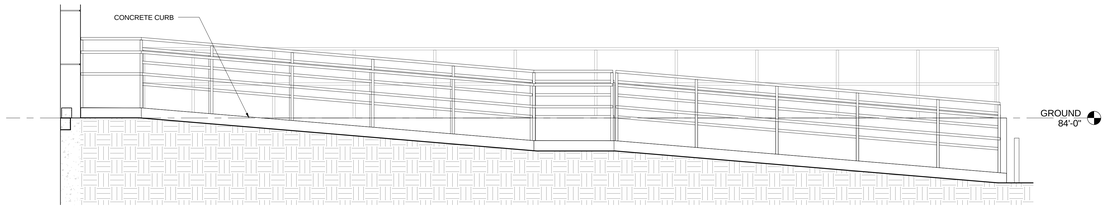
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-320	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-320
REV. NO.

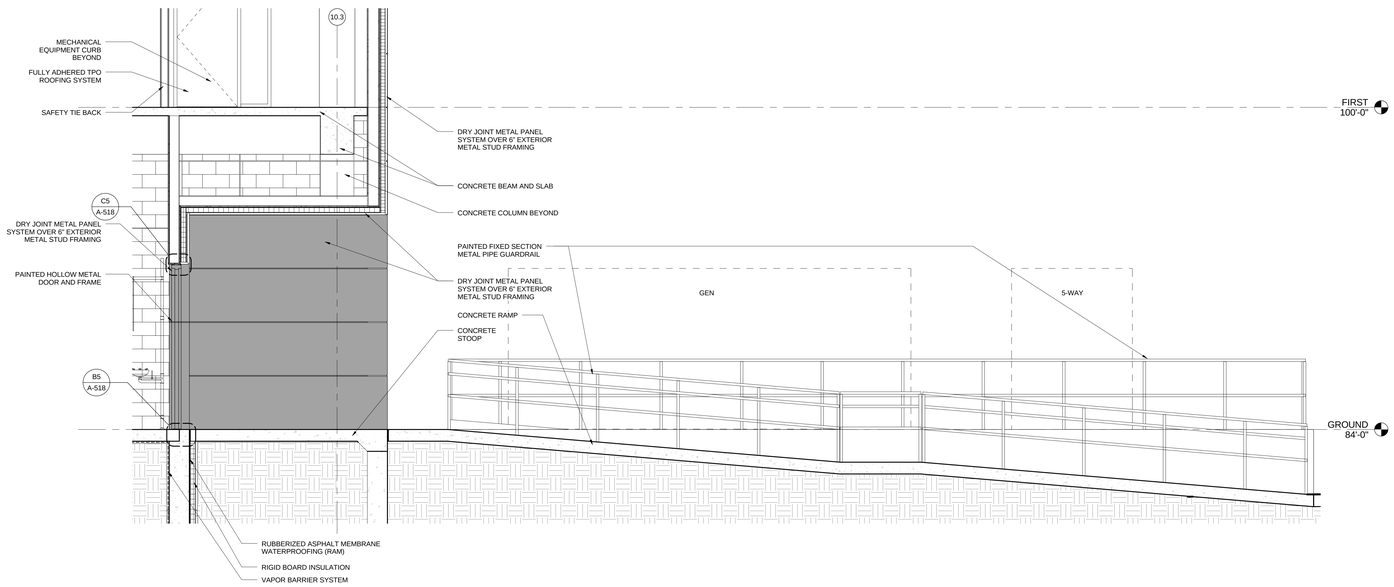
C:\PW70\002182-ACENTRAL_dmrjly-vt
7/6/2011 11:01:06 AM



C1 WALL SECTION AT SIDE DOCK LOOKING EAST
3/8" = 1'-0"



B1 RAMP ELEVATION
3/8" = 1'-0"



A1 WALL SECTION AT DOCK
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-321

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-321	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-321 REV. NO.

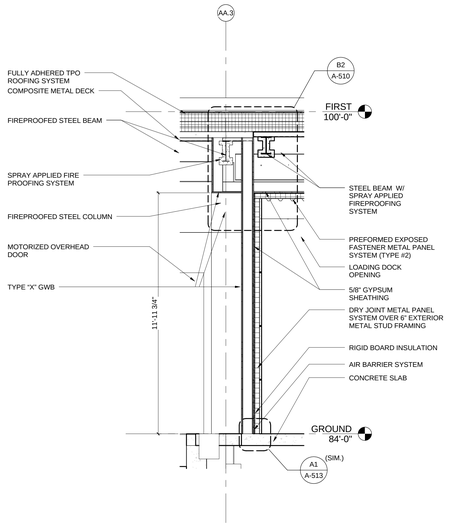
C:\PW70\0230.AJ\CENTRAL_ARch\A-V4
7/6/2011 11:01:12 AM

GENERAL NOTES: WALL SECTIONS

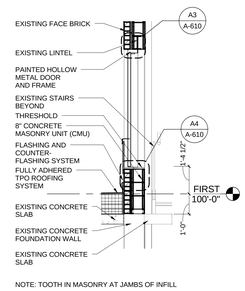
1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

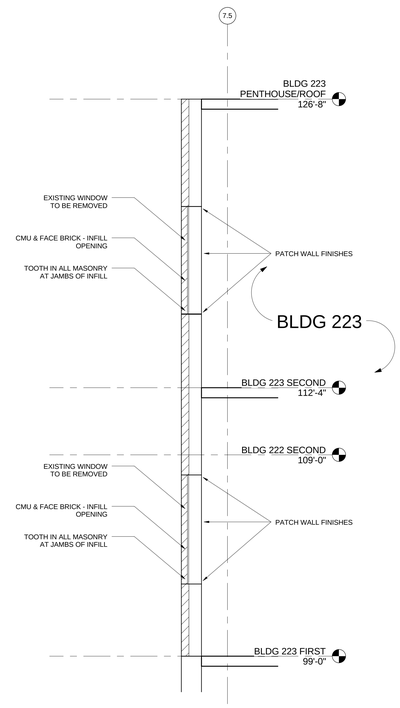


C1 WALL SECTION AT OPEN LOADING DOCK LOOKING EAST
3/8" = 1'-0"



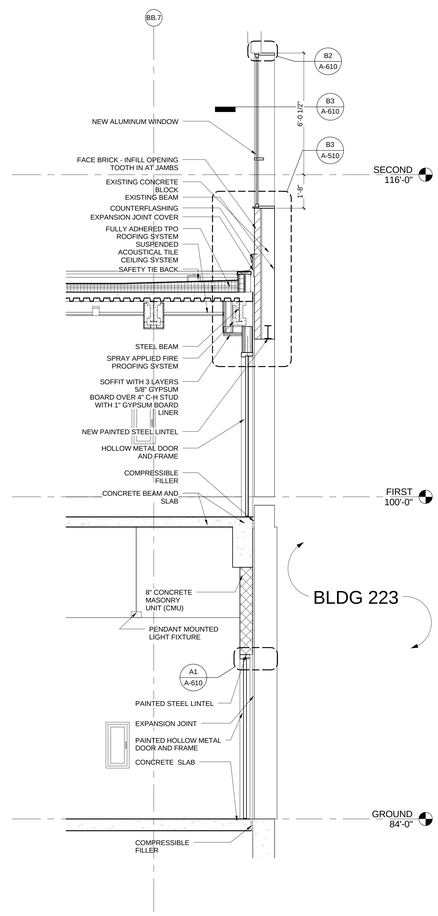
NOTE: TOOTH IN MASONRY AT JAMBS OF INFILL

C2 PARTIAL WALL SECTION AT BLDG 223 ROOF ACCESS DOOR
3/8" = 1'-0"

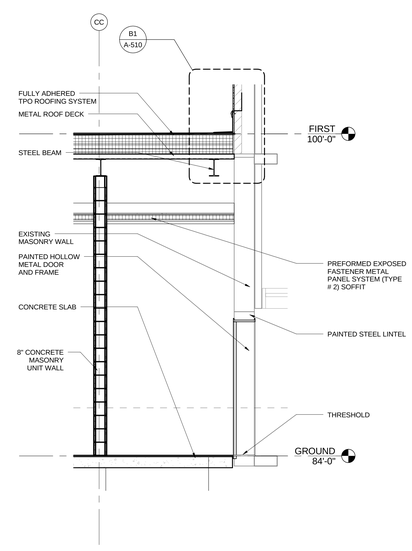


C3 WALL SECTION AT WINDOW INFILL WEST WALL LOOKING NORTH
3/8" = 1'-0"

A-322



A1 WALL SECTION AT LINK CORRIDOR LOOKING EAST
3/8" = 1'-0"



A5 WALL SECTION
3/8" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

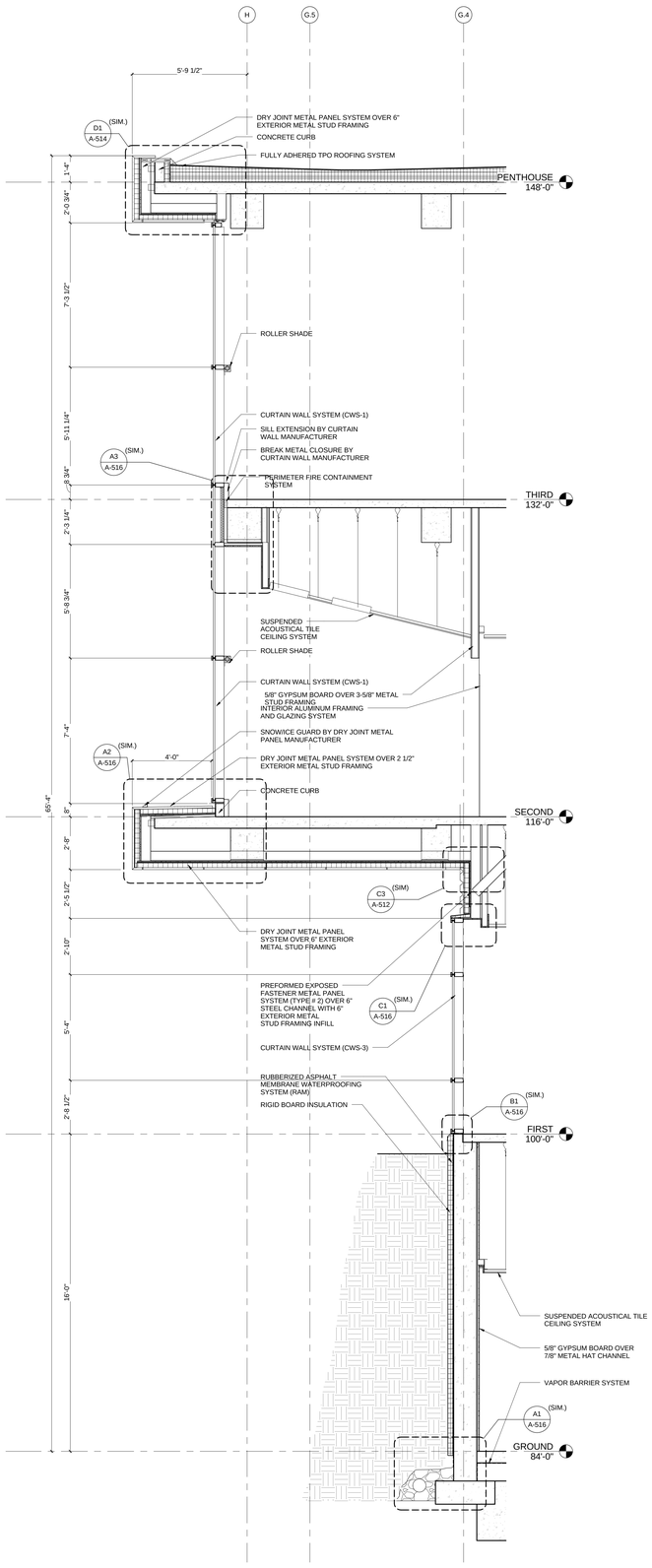
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-322	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-322 REV. NO.

C:\DV70\0230-A-CENTRAL_sheet\r.rvt
7/8/2011 11:03:21 AM



A1 WALL SECTION - NORTH FACADE
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-340

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

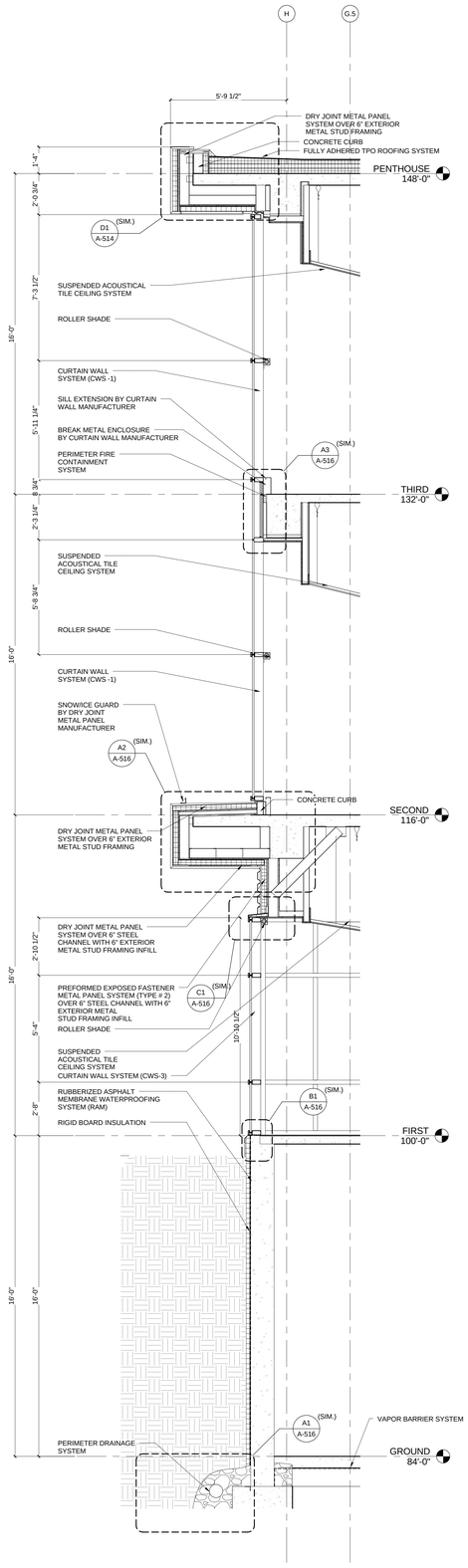
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-340	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-340
REV. NO.

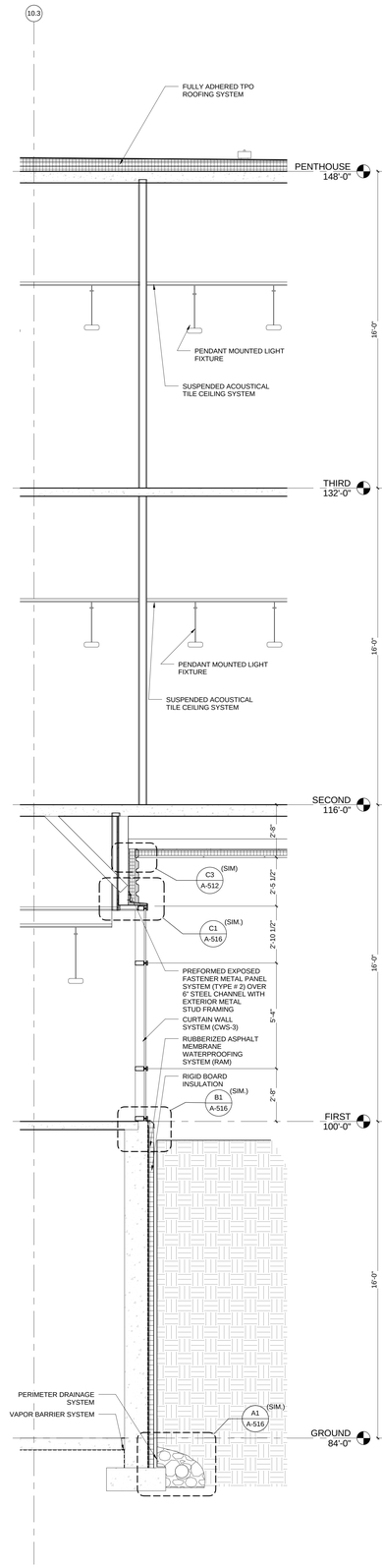
C:\PCTOOLS\D:\ACDWT\Ab_ab\ab.wt
7/6/2011 11:01:23 AM

GENERAL NOTES: WALL SECTIONS

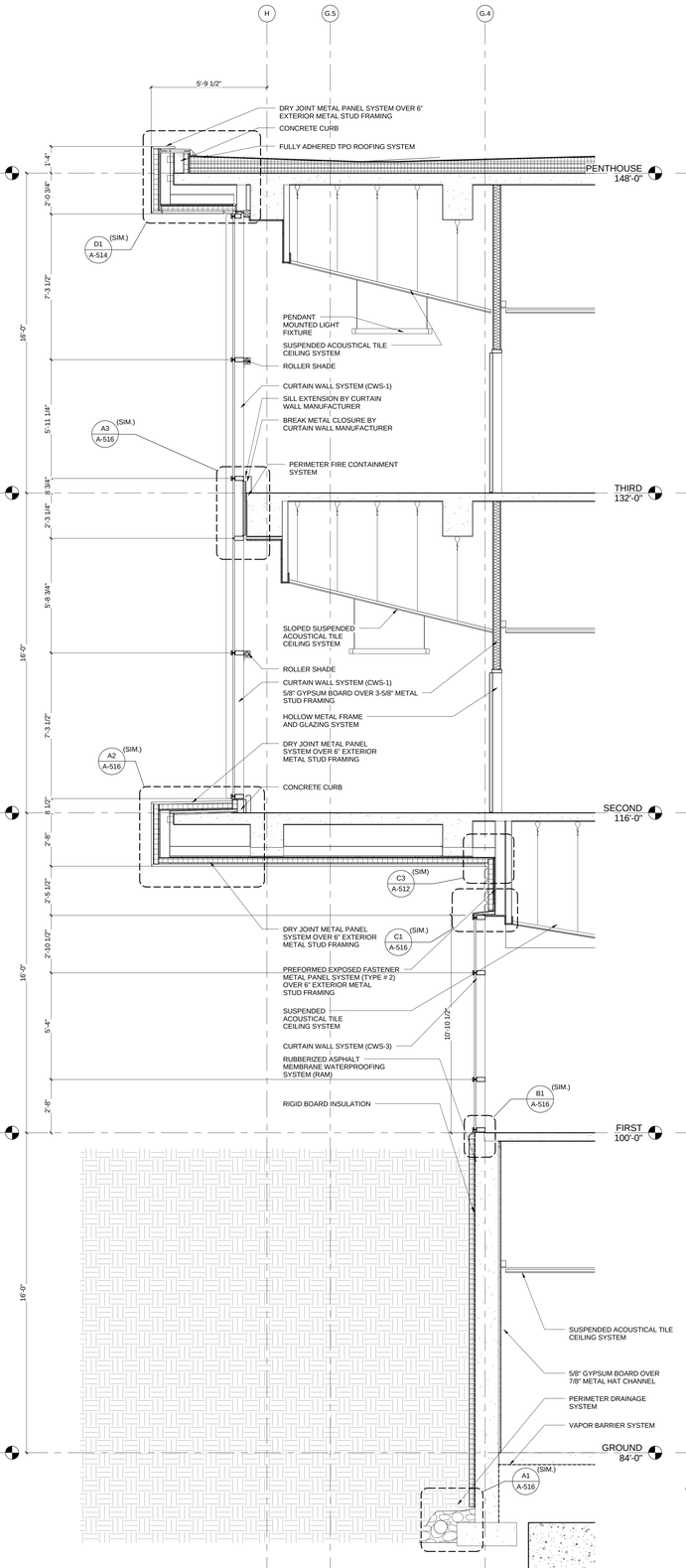
1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL



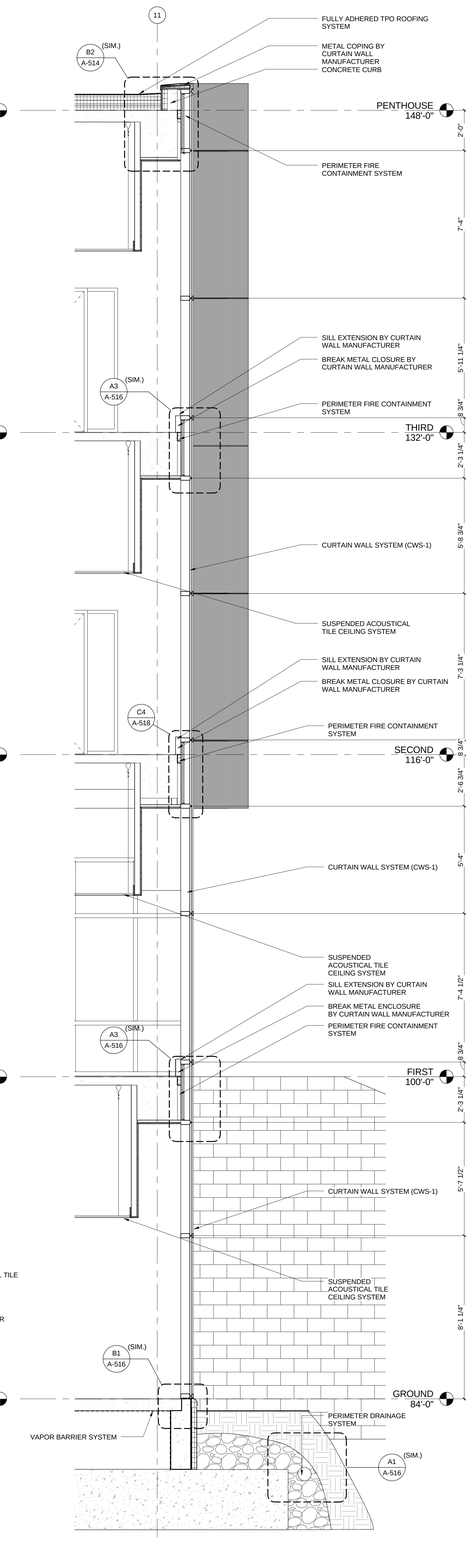
A1 WALL SECTION
3/8" = 1'-0"



A2 WALL SECTION
3/8" = 1'-0"



A3 WALL SECTION
3/8" = 1'-0"



A4 WALL SECTION
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-350

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FNFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-350	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-350
REV. NO.

C:\BV70002\B2-A-CENTRAL_alvrdy.rvt
7/8/2011 11:01:33 AM

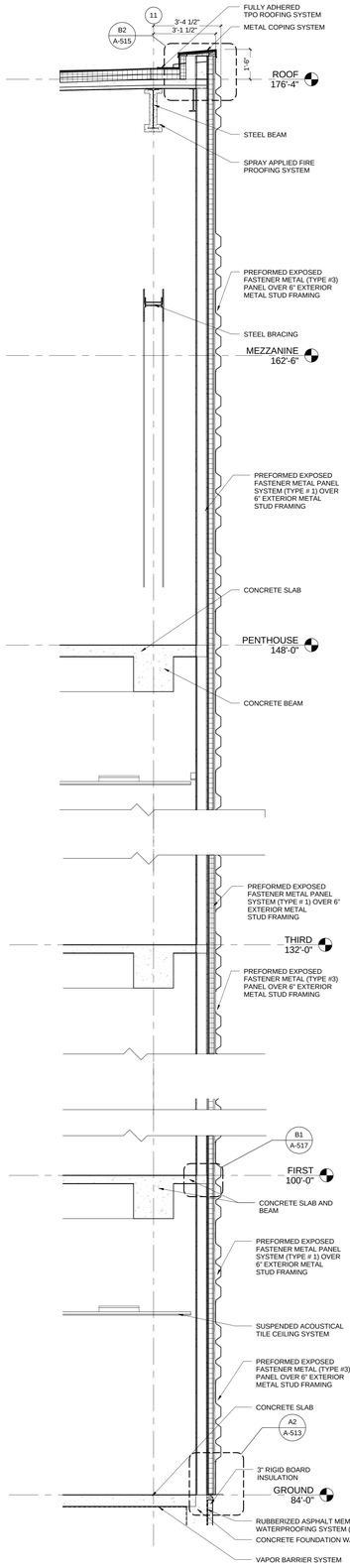
GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

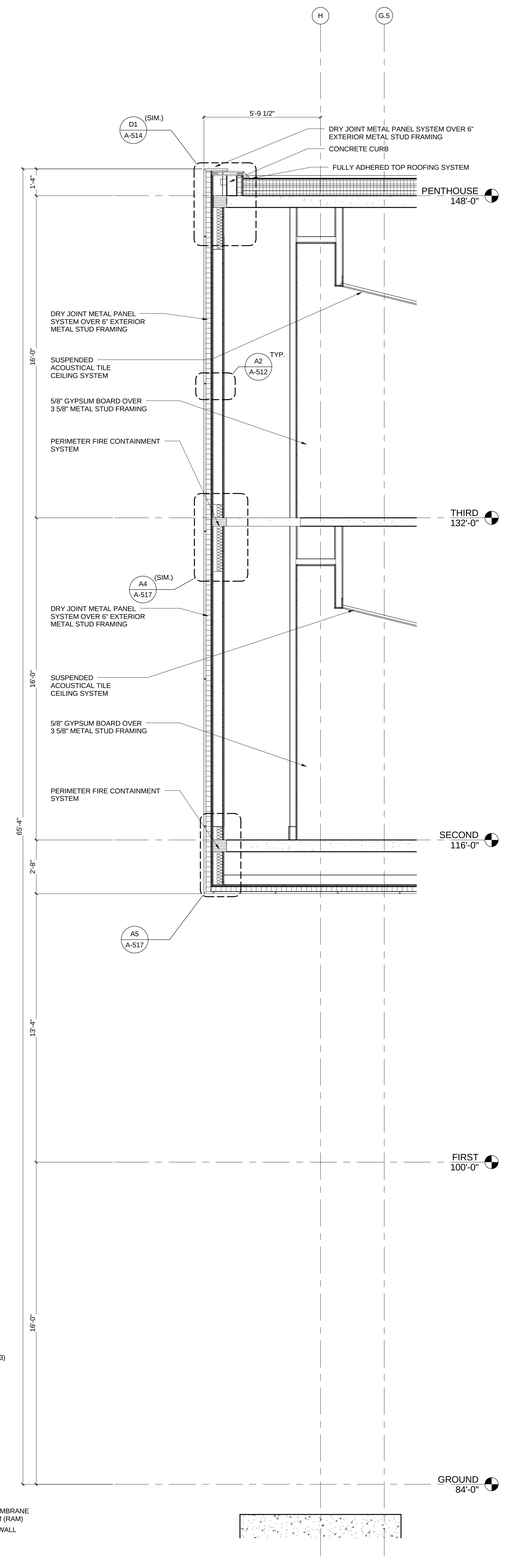
HDR

HDR Architecture, Inc.

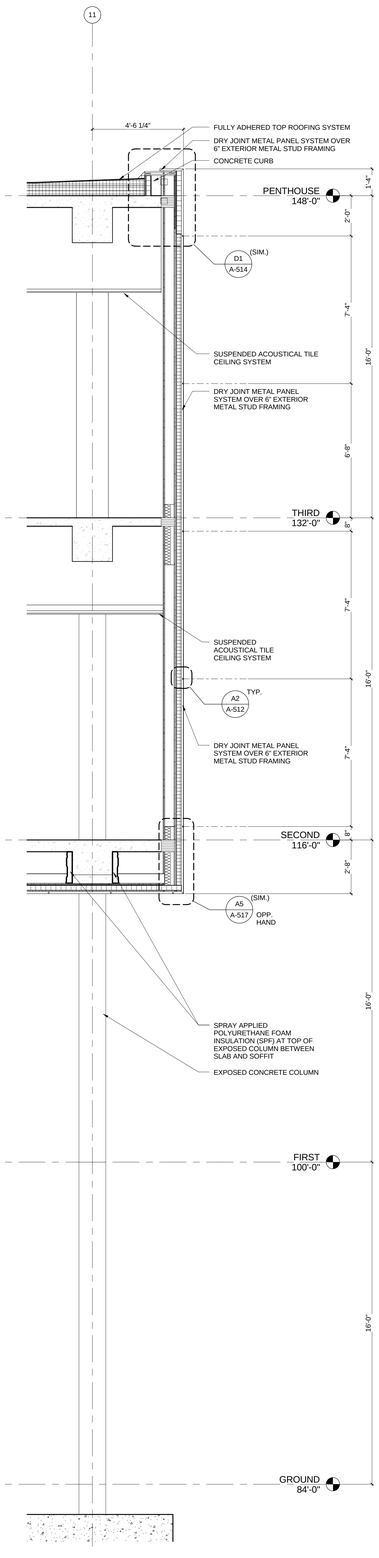
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



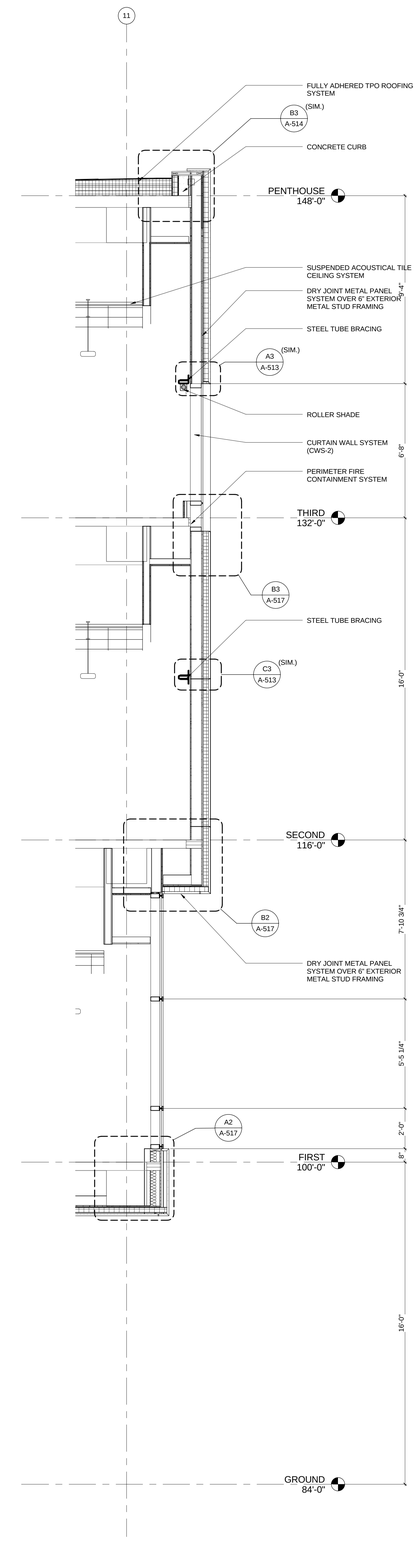
A1 WALL SECTION
3/8" = 1'-0"



A2 WALL SECTION
3/8" = 1'-0"



A3 WALL SECTION
3/8" = 1'-0"



A4 WALL SECTION
3/8" = 1'-0"

A-351

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

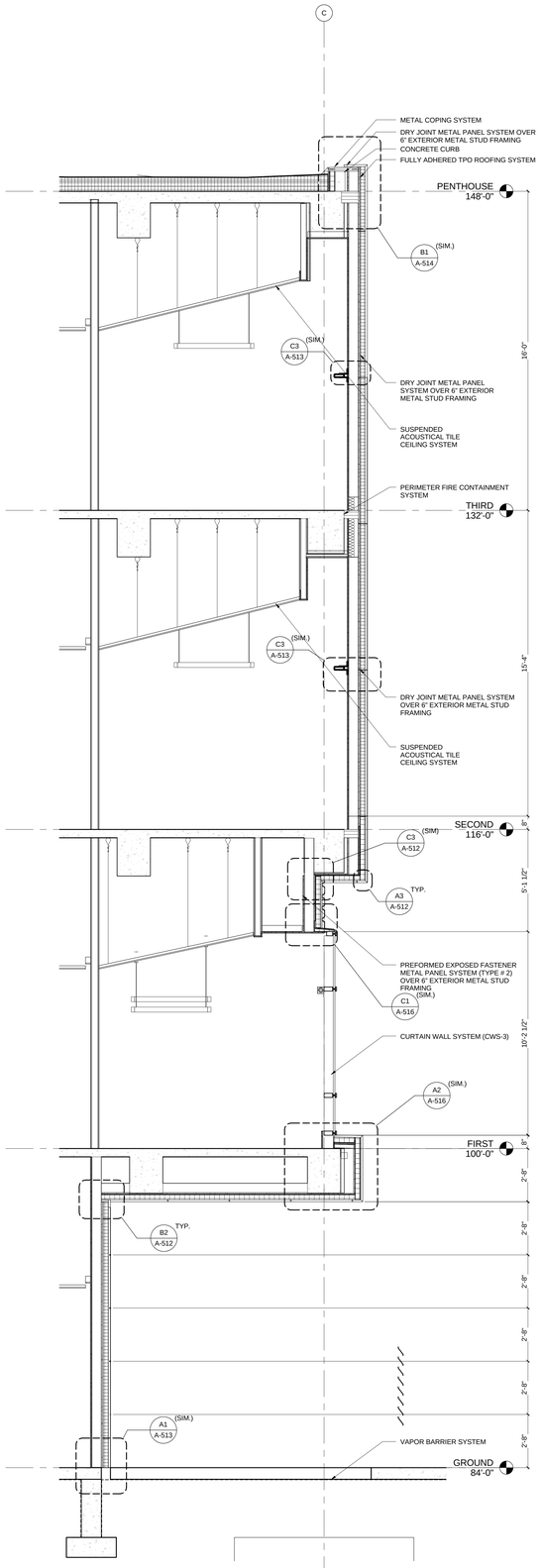
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

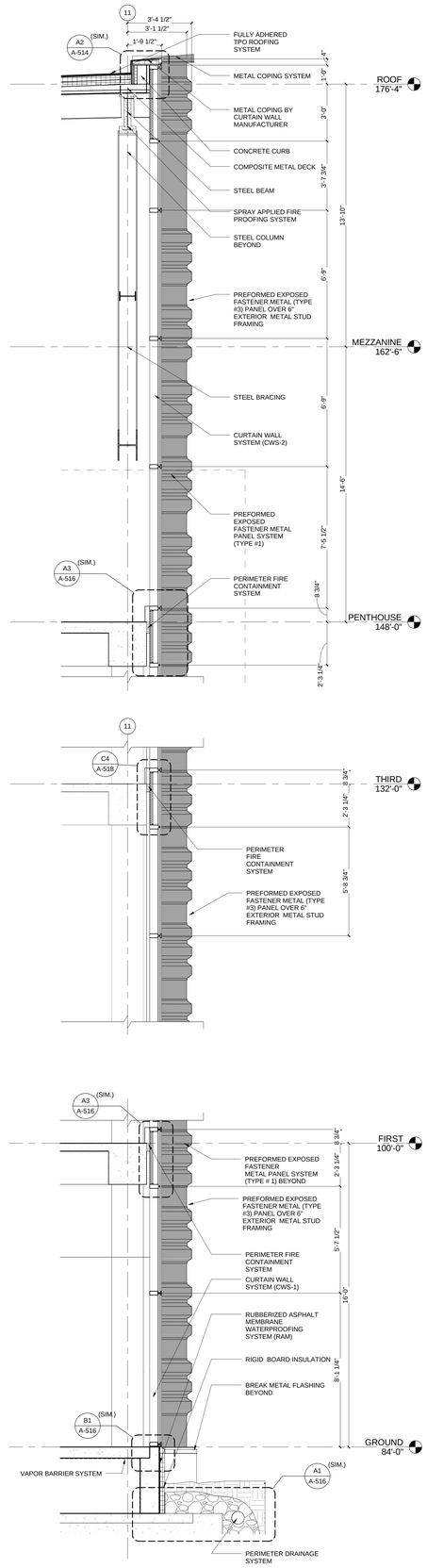
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-351	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-351
REV. NO.

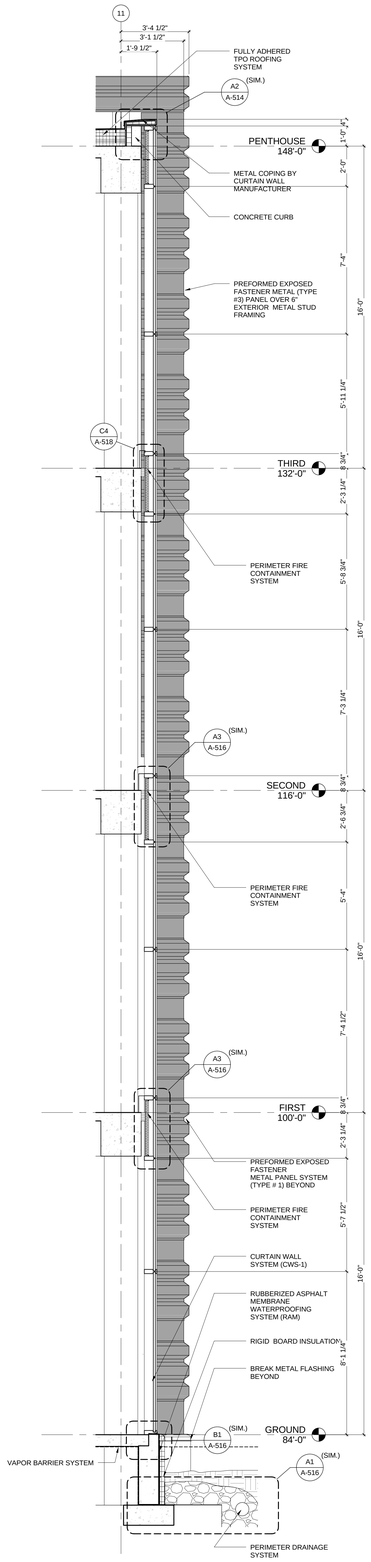
C:\PVTX\003\20-4-CENTRAL_dwfx\r.rvt
7/8/2011 11:01:43 AM



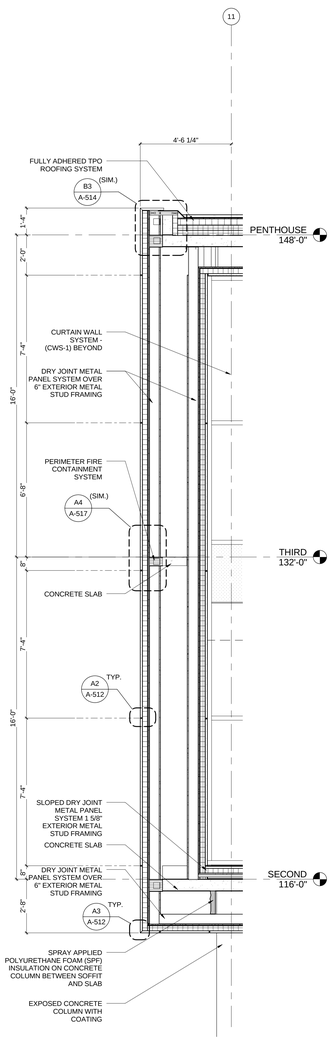
A1 WALL SECTION - SOUTH FACADE
3/8" = 1'-0"



A3 WALL SECTION - EAST FACADE
3/8" = 1'-0"



A5 WALL SECTION - EAST FACADE
3/8" = 1'-0"



A6 WALL SECTION
3/8" = 1'-0"

GENERAL NOTES: WALL SECTIONS

1. FOR EXTERIOR WALL TYPES REFER TO SHEET A-513.
   B1/A-513 - DRY JOINT METAL PANEL
   B2/A-513 - PREFORMED METAL PANEL TYPE # 1
   B3/A-513 - PREFORMED METAL PANEL TYPE # 2
   B4/A5-13 - COMPOSITE METAL PANEL

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-352

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

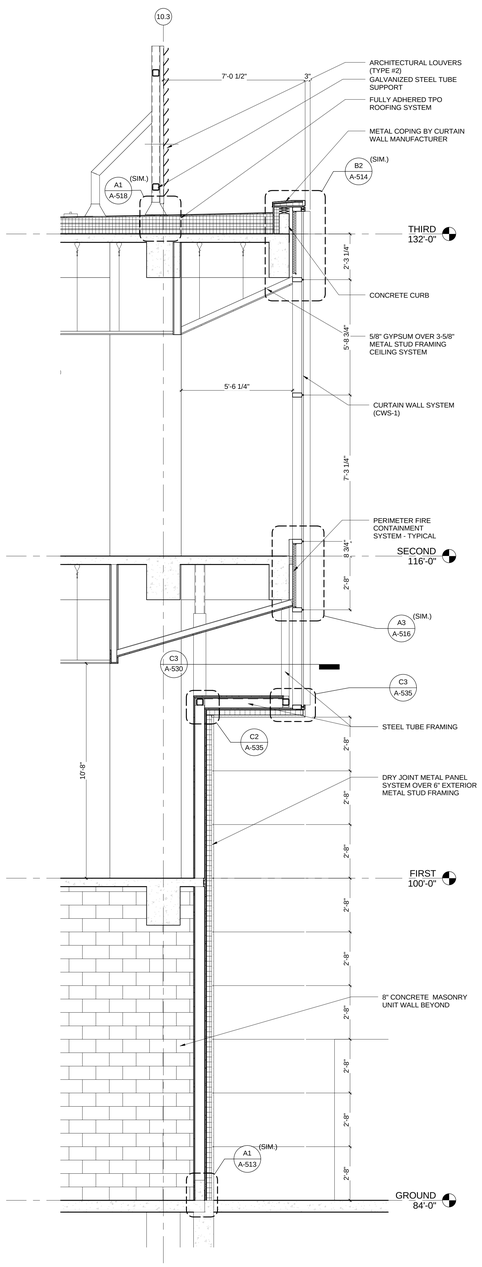
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-352	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

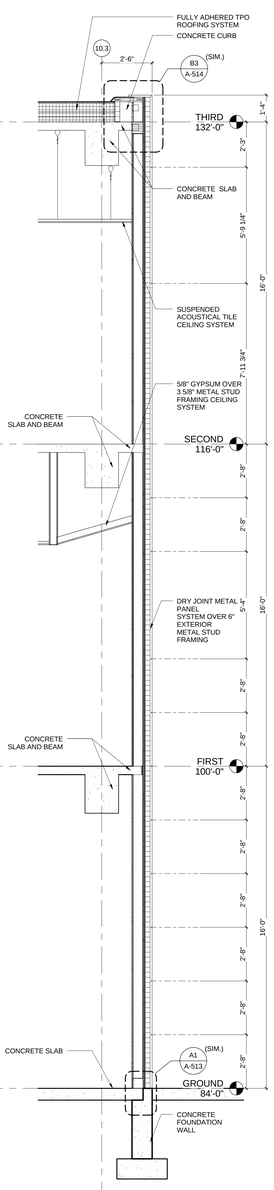
FACILITY DOCUMENT NUMBER: J241-101- A-352
REV. NO.

C:\BV70\0182-A-CENTRAL_ARP\9.04
7/6/2011 11:01:53 AM

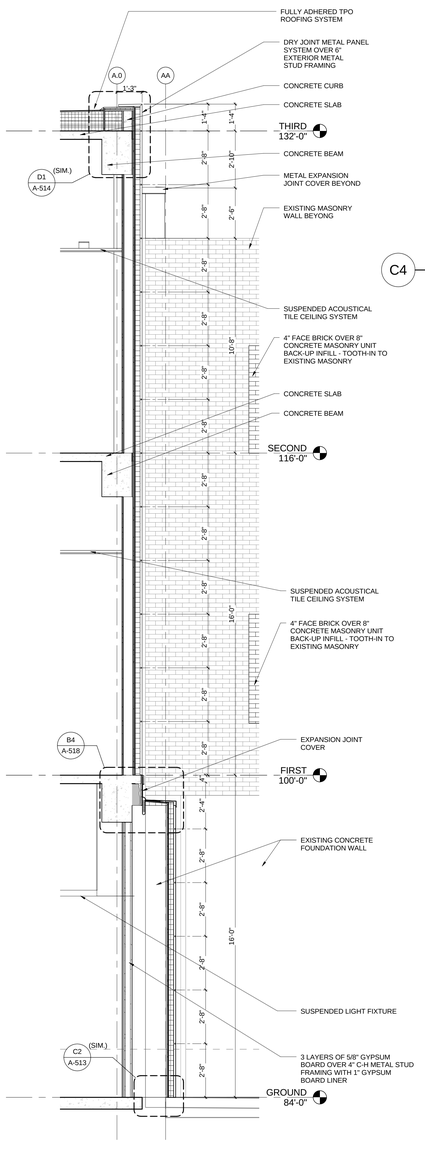
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



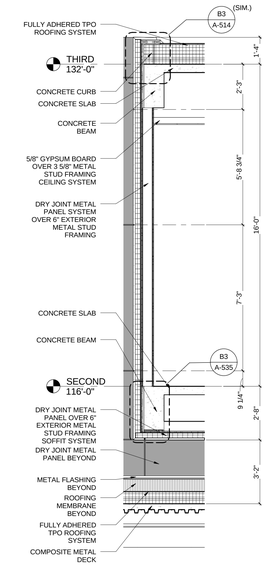
A1 EAST WALL SECTION N OF A.5 LOOKING NORTH
3/8" = 1'-0"



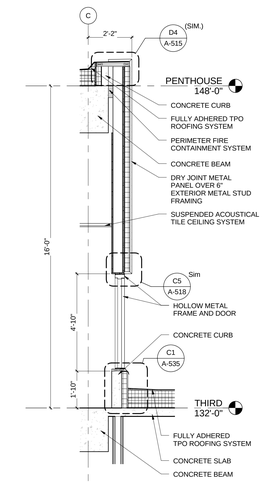
A2 EAST WALL SECTION @ NOTCH
3/8" = 1'-0"



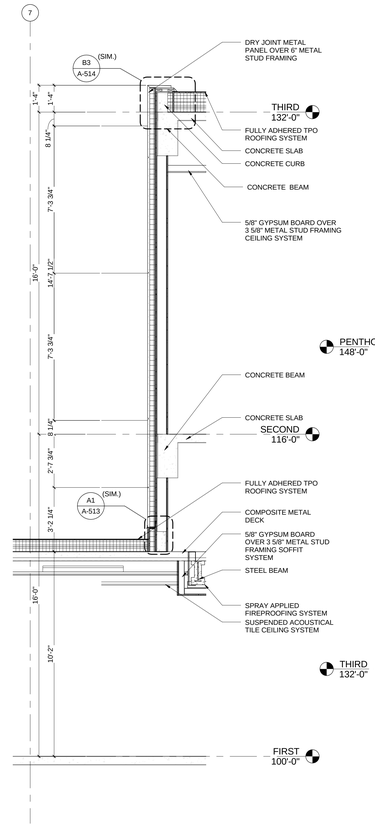
A3 SOUTH WALL SECTION @ AREAWELL
3/8" = 1'-0"



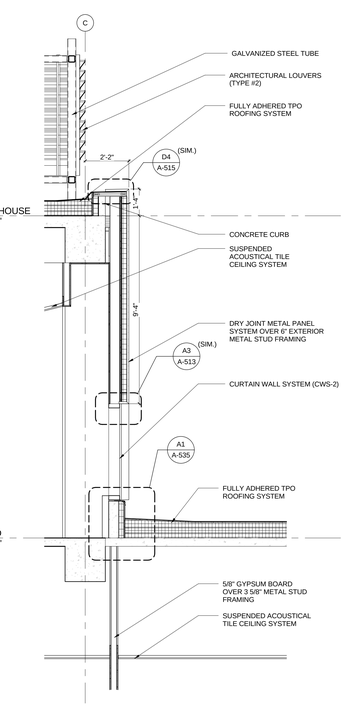
C4 TYPICAL NORTH AND SOUTH WALL @ CORNERS
3/8" = 1'-0"



C5 NORTH WALL SECTION @ ROOF ACCESS DOOR
3/8" = 1'-0"



A4 WEST WALL SECTION S OF C
3/8" = 1'-0"



A5 NORTH WALL SECTION W OF 9 LOOKING EAST
3/8" = 1'-0"

A-360

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

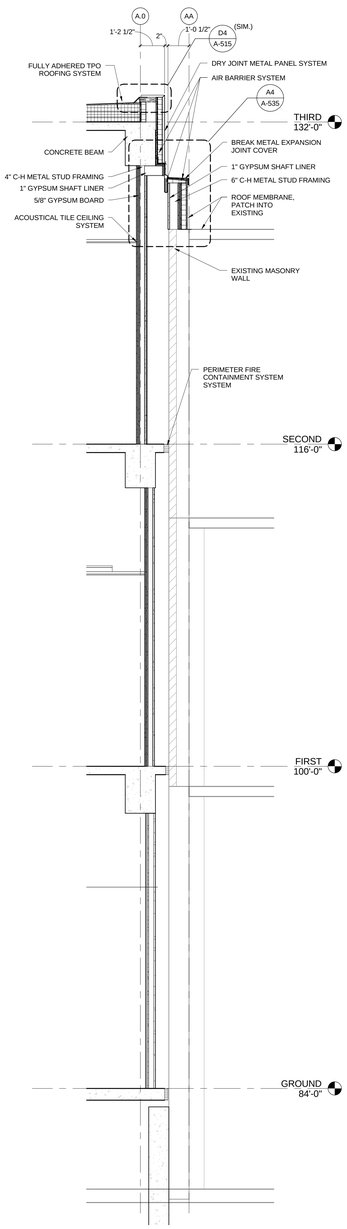
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-360	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

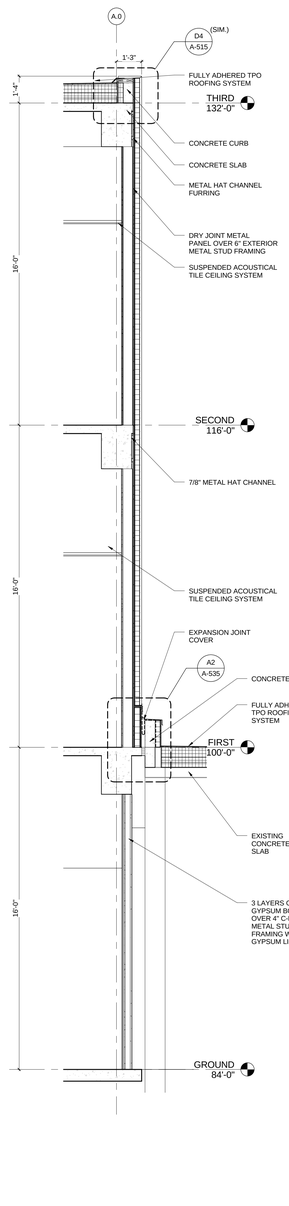
FACILITY DOCUMENT NUMBER J241-101- A-360 REV. NO.

C:\BV70\002182-ACENTRAL_aknlp.rvt
7/8/2011 11:02:55 AM

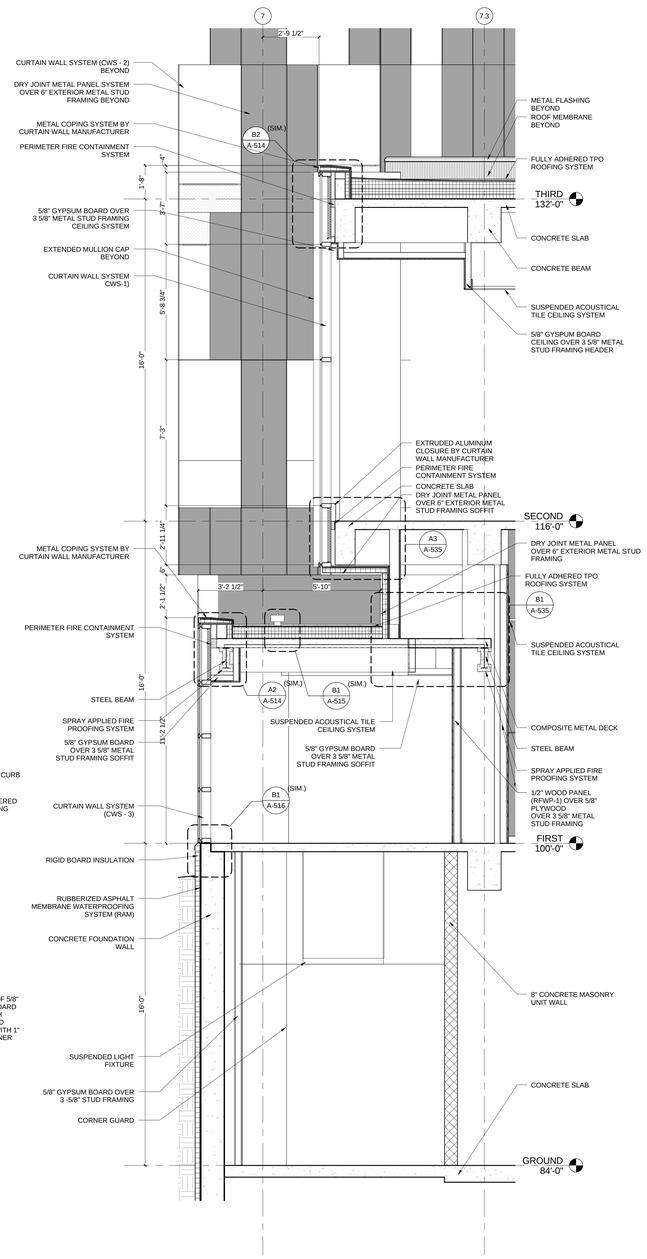
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



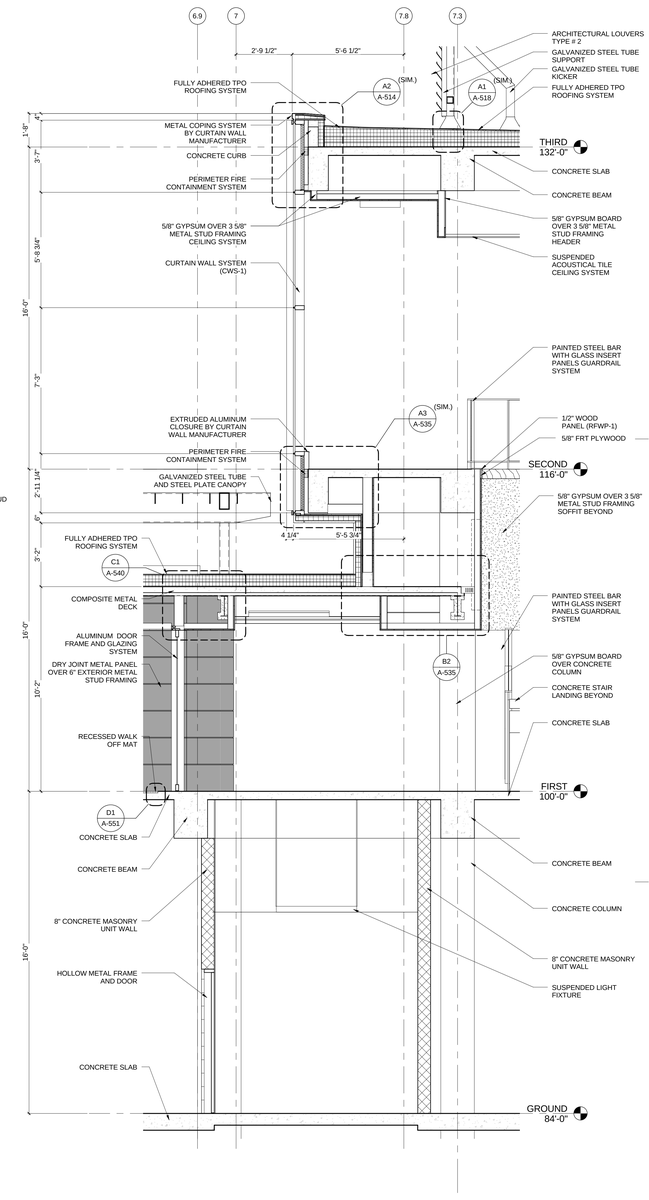
A1 SOUTH WALL SECTION W OF 9 LOOKING EAST
3/8" = 1'-0"



A2 SOUTH WALL SECTION @ DOCK
3/8" = 1'-0"



A3 WEST WALL SECTION N OF B.5 LOOKING NORTH
3/8" = 1'-0"



A4 WEST WALL SECTION N OF A.5 LOOKING NORTH
3/8" = 1'-0"

A-361

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

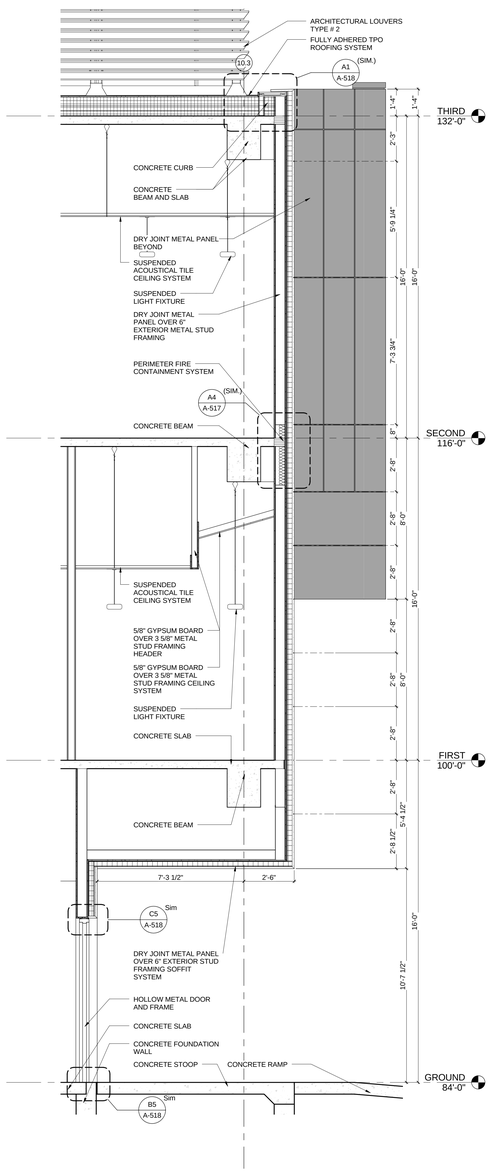
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-361	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

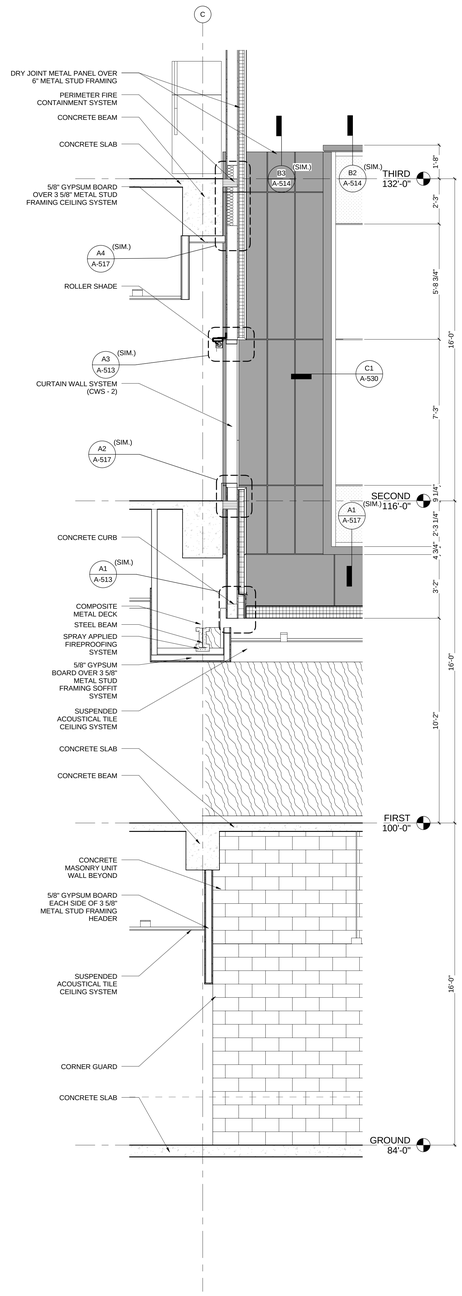
FACILITY DOCUMENT NUMBER J241-101- A-361 REV. NO.

C:\PV70\002182-ACENTRAL_alerts.rvt
7/8/2011 11:02:14 AM

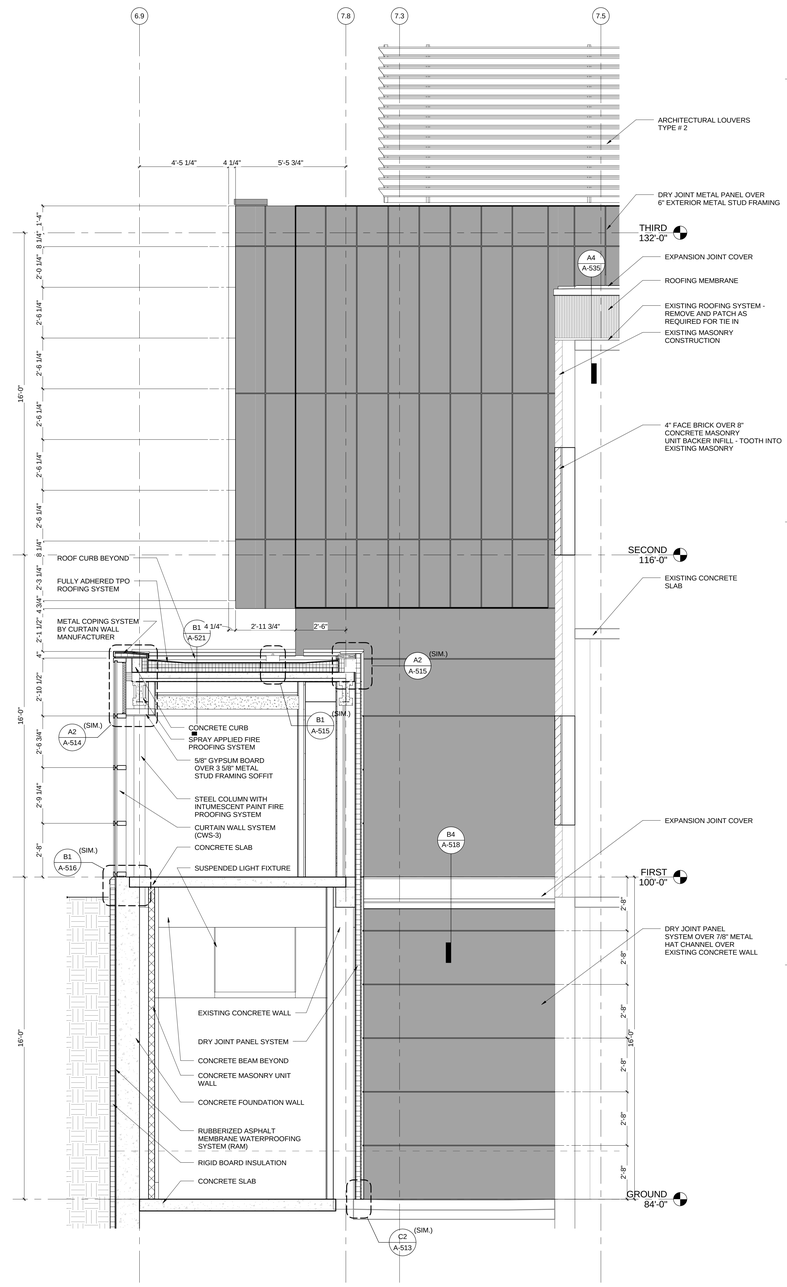
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 EAST WALL SECTION NORTH OF A.0
3/8" = 1'-0"



A2 NORTH WALL SECTION AT 7 & C LOOKING EAST
3/8" = 1'-0"



A3 WEST WALL SECTION THRU AREA WELL
3/8" = 1'-0"

A-362

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

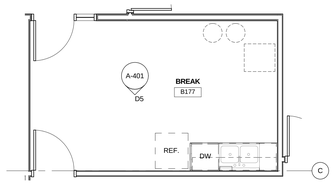
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTIONS

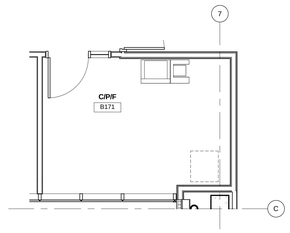
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-362	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-362
REV. NO.

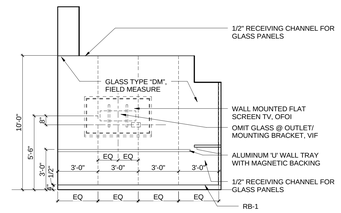
C:\DV70\002182-FCENTRAL_arch.rvt
7/8/2011 11:02:22 AM



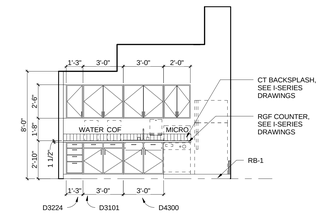
E1 ENLARGED PLAN BREAK B177
1/4" = 1'-0"



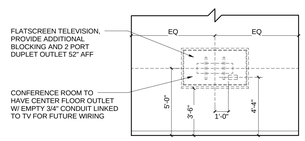
E2 ENLARGED PLAN C/P/F B171
1/4" = 1'-0"



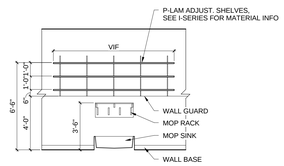
E3 Break B372 West Elevation
1/4" = 1'-0"



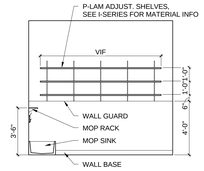
E4 BREAK B372 EAST ELEVATION
1/4" = 1'-0"



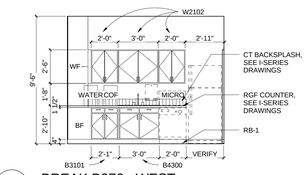
D1 ENLARGED TV ELEV
1/4" = 1'-0"



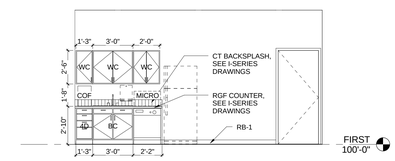
D2 TYPICAL JC ELEVATION
1/4" = 1'-0"



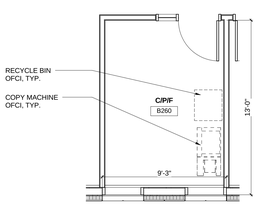
D3 JC B078 - EAST
1/4" = 1'-0"



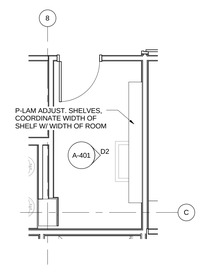
D4 BREAK B076 - WEST
1/4" = 1'-0"



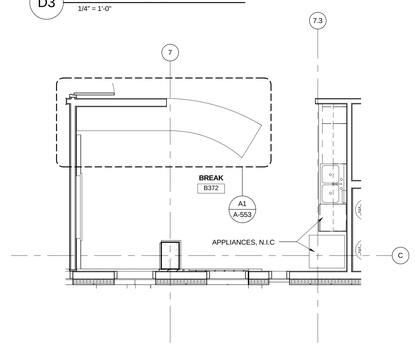
D5 BREAK B176 - SOUTH
1/4" = 1'-0"



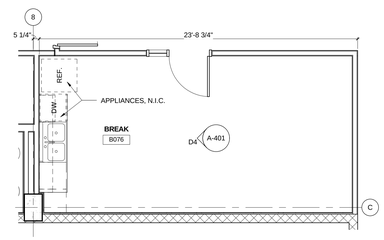
C1 ENLARGED PLAN - C/P/F
1/4" = 1'-0"



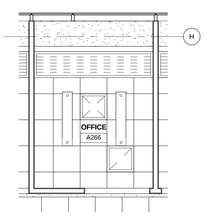
C2 ENLARGED PLAN - JC
1/4" = 1'-0"



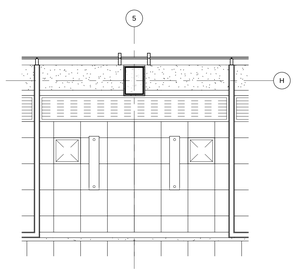
C3 ENLARGED PLAN - BREAK UPPER
1/4" = 1'-0"



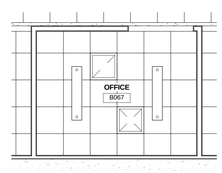
C4 ENLARGED PLAN BREAK B076
1/4" = 1'-0"



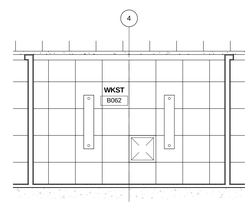
B1 ENLARGED RCP - TYPICAL UPPER OFFICE
1/4" = 1'-0"



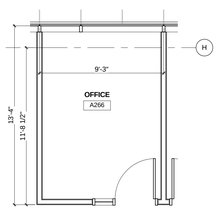
B2 ENLARGED RCP - TYPICAL UPPER WKST
1/4" = 1'-0"



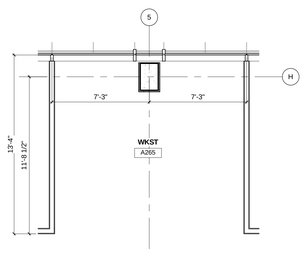
B3 ENLARGED RCP - TYPICAL LOWER OFFICE
1/4" = 1'-0"



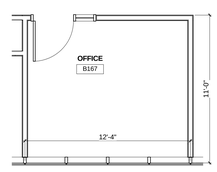
B4 ENLARGED RCP - TYPICAL LOWER WKST
1/4" = 1'-0"



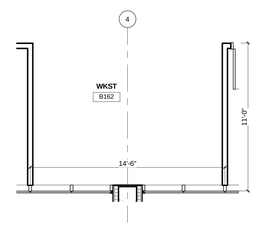
A1 ENLARGED PLAN - TYPICAL UPPER OFFICE
1/4" = 1'-0"



A2 ENLARGED PLAN - TYPICAL UPPER WKST
1/4" = 1'-0"



A3 ENLARGED PLAN - TYPICAL LOWER OFFICE
1/4" = 1'-0"



A4 ENLARGED PLAN - TYPICAL LOWER WKST
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-401

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

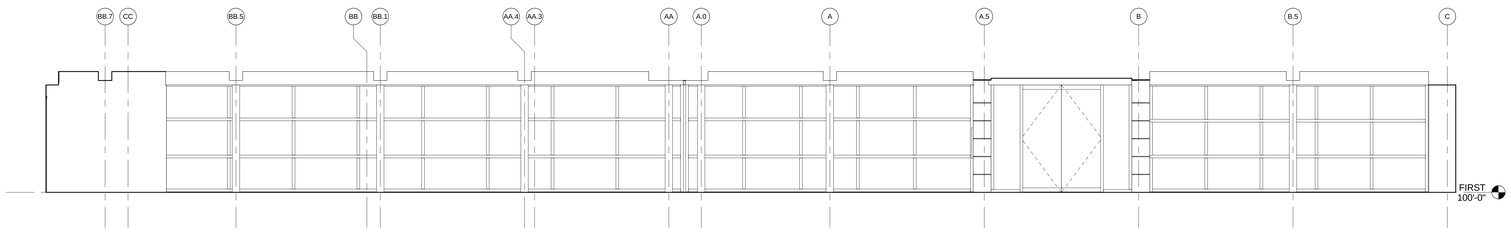
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED TYPICAL PLANS, RCP AND ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-401	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

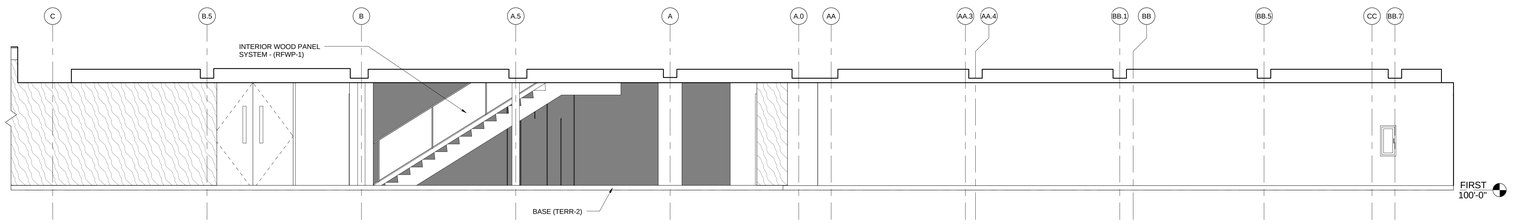
FACILITY DOCUMENT NUMBER: J241-101- A-401
REV. NO.

C:\RVT\002182-A-CENTRAL_ab4fjk.rvt
7/8/2011 11:02:47 AM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

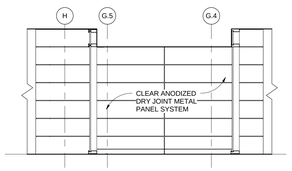


D1 LINK CORRIDOR - WEST
1/4" = 1'-0"

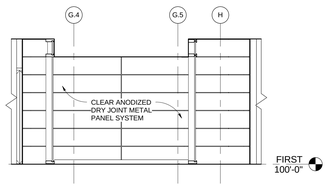


C1 LINK CORRIDOR - EAST
1/4" = 1'-0"

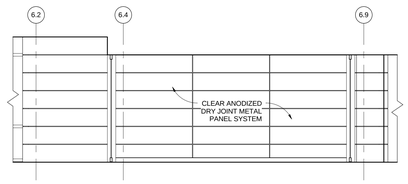
A-402



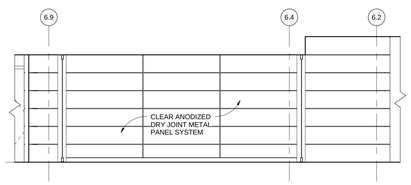
B1 NORTH ENTRY - EAST
1/4" = 1'-0"



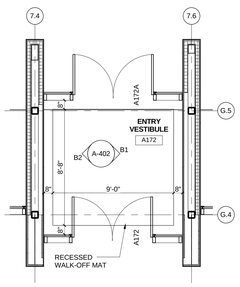
B2 NORTH ENTRY - WEST
1/4" = 1'-0"



B3 WEST ENTRY - NORTH
1/4" = 1'-0"

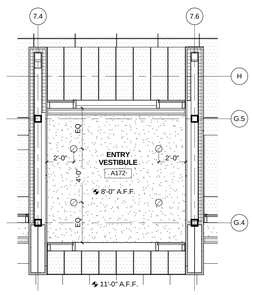


B4 WEST ENTRY - SOUTH
1/4" = 1'-0"

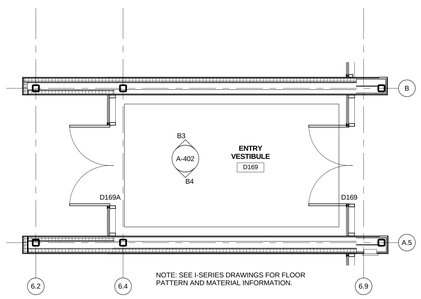


NOTE: SEE I-SERIES DRAWINGS FOR FLOOR PATTERN AND MATERIAL INFORMATION.

A1 ENLARGED PLAN - NORTH ENTRY
1/4" = 1'-0"

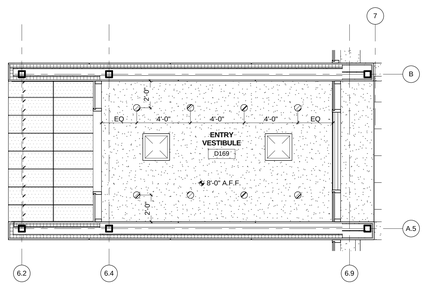


A3 ENLARGED RCP - NORTH ENTRY
1/4" = 1'-0"



NOTE: SEE I-SERIES DRAWINGS FOR FLOOR PATTERN AND MATERIAL INFORMATION.

A2 ENLARGED PLAN - WEST ENTRY
1/4" = 1'-0"



A4 ENLARGED RCP - WEST ENTRY
1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

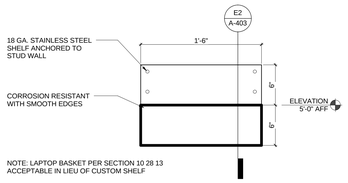
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED TYPICAL PLANS, RCP AND ELEVATIONS

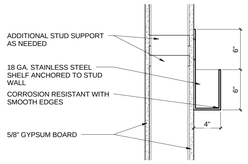
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-402	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-402
REV. NO.

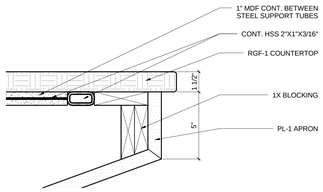
C:\DV70023\D-A-CENTRAL_sheb.rvt
7/8/2011 11:03:02 AM



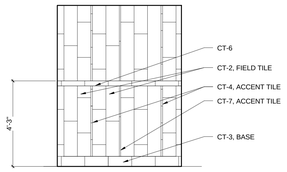
E1 SHELF ELEVATION
1 1/2" = 1'-0"



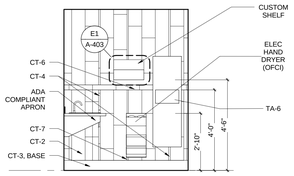
E2 SHELF SECTION
1 1/2" = 1'-0"



E3 COUNTERTOP SECTION
3" = 1'-0"

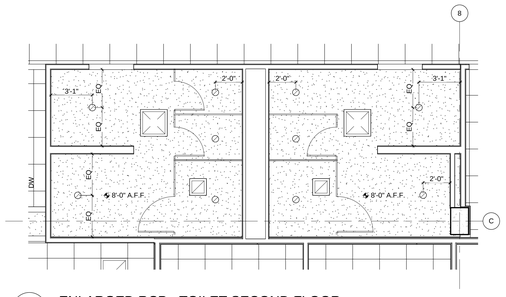


E4 TYPICAL TLT WING WALL - NORTH
3/8" = 1'-0"

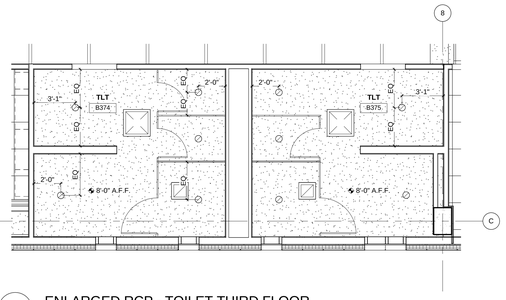


E5 TYPICAL TLT WING WALL - SOUTH
3/8" = 1'-0"

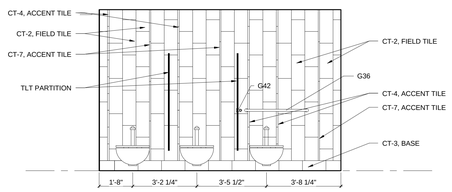
HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



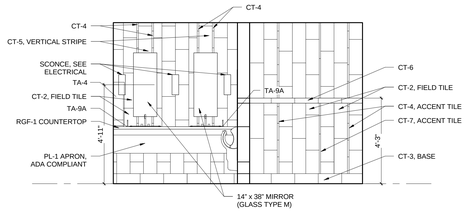
D1 ENLARGED RCP - TOILET SECOND FLOOR
1/4" = 1'-0"



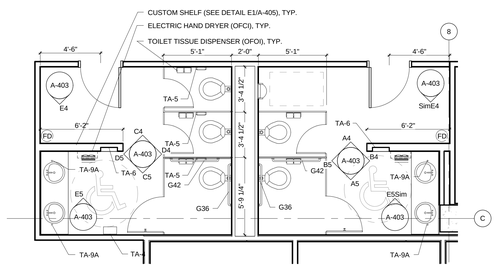
D2 ENLARGED RCP - TOILET THIRD FLOOR
1/4" = 1'-0"



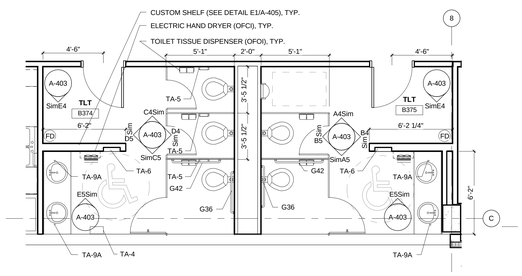
D4 TLT TYPICAL WOMEN - EAST
3/8" = 1'-0"



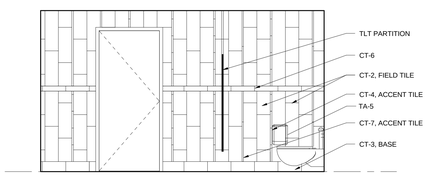
D5 TLT TYPICAL WOMEN - WEST
3/8" = 1'-0"



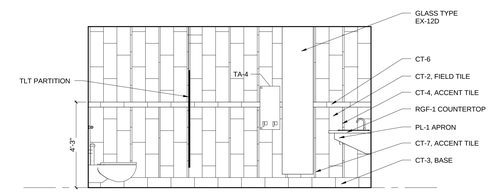
C1 ENLARGED PLAN - TOILET ROOM SECOND FLOOR
1/4" = 1'-0"



C2 ENLARGED PLAN - TOILET ROOM THIRD FLOOR
1/4" = 1'-0"

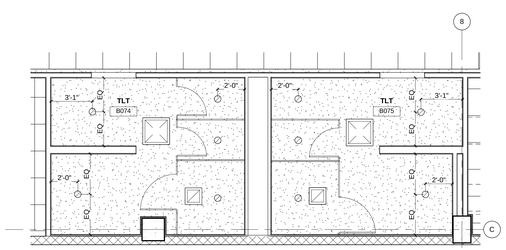


C4 TLT TYPICAL WOMEN - NORTH
3/8" = 1'-0"

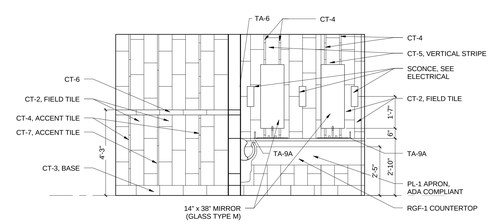


C5 TLT TYPICAL WOMEN - SOUTH
3/8" = 1'-0"

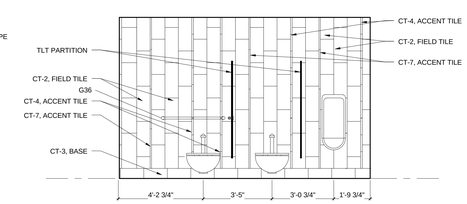
A-403



B1 ENLARGED RCP - TOILET GROUND FLOOR
1/4" = 1'-0"

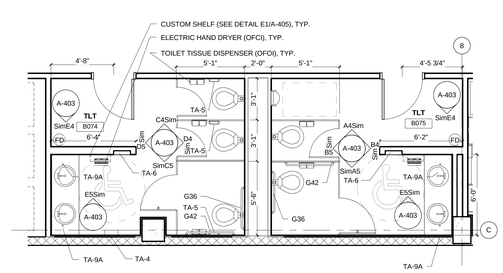


B4 TLT TYPICAL MEN - EAST
3/8" = 1'-0"

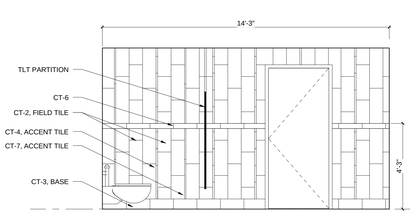


B5 TLT TYPICAL MEN - WEST
3/8" = 1'-0"

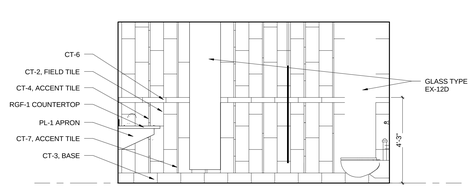
ADDED TA DESIGNATIONS



A1 ENLARGED PLAN - TOILET ROOM GROUND FLOOR
1/4" = 1'-0"



A4 TLT TYPICAL MEN - NORTH
3/8" = 1'-0"



A5 TLT TYPICAL MEN - SOUTH
3/8" = 1'-0"

A-403

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

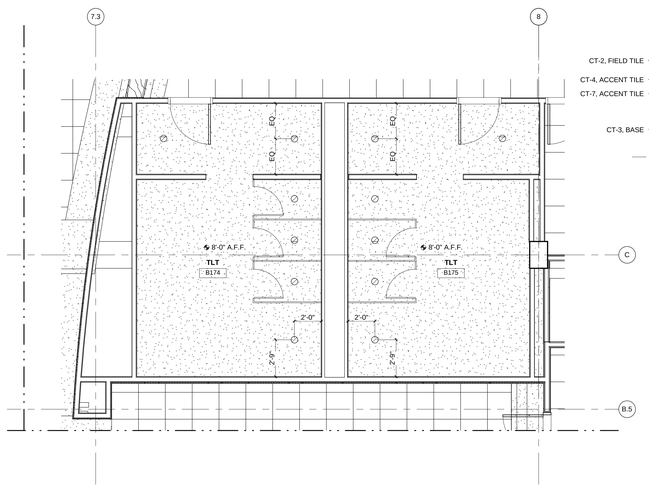
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED TOILET PLANS, RCP AND ELEVATIONS

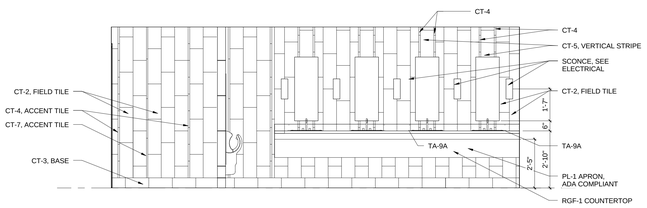
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-403	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.
J241-101- A-403

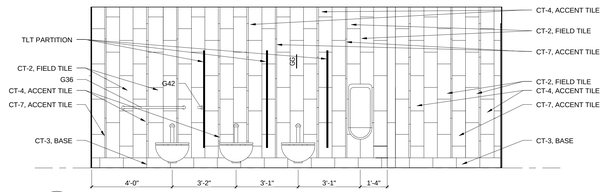
C:\R\TV0\0182-A-CENTRAL_ab\rfb.rvt
7/8/2011 11:03:27 AM



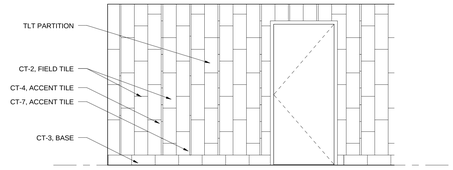
C1 ENLARGED RCP - INFILL TOILET FIRST FLOOR
1/4" = 1'-0"



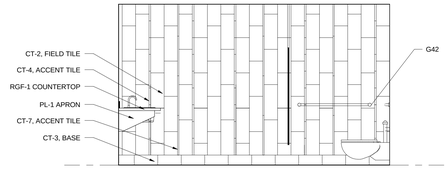
D2 TOILET B175 EAST ELEVATION
3/8" = 1'-0"



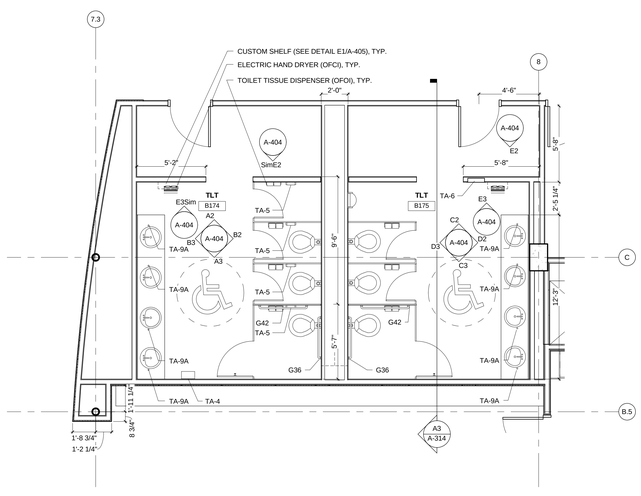
D3 TOILET B175 WEST ELEVATION
3/8" = 1'-0"



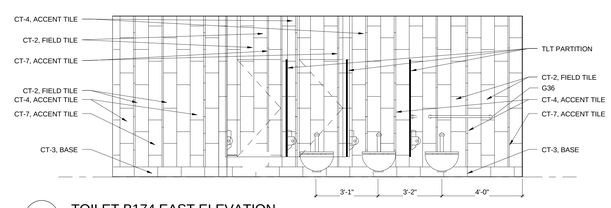
C2 TOILET B175 NORTH ELEVATION
3/8" = 1'-0"



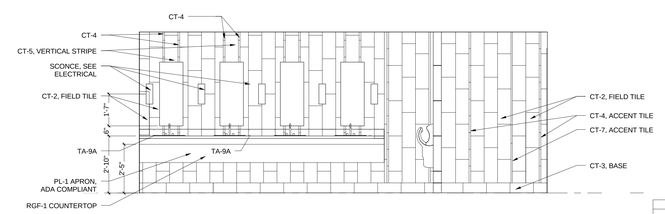
C3 TOILET B175 SOUTH ELEVATION
3/8" = 1'-0"



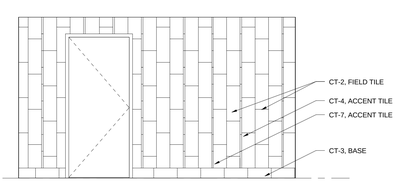
A1 ENLARGED TOILET ROOM PLAN
1/4" = 1'-0"



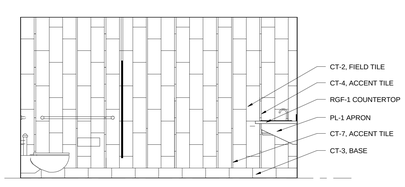
B2 TOILET B174 EAST ELEVATION
3/8" = 1'-0"



B3 TOILET B174 WEST ELEVATION
3/8" = 1'-0"



A2 TOILET B174 NORTH ELEVATION
3/8" = 1'-0"



A3 TOILET B174 SOUTH ELEVATION
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-404

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED TOILET PLANS, RCP & ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-404	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-404 REV. NO.

C:\PW70033\20-4-CENTRAL_dwg\A-04
7/8/2011 11:03:44 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4"X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

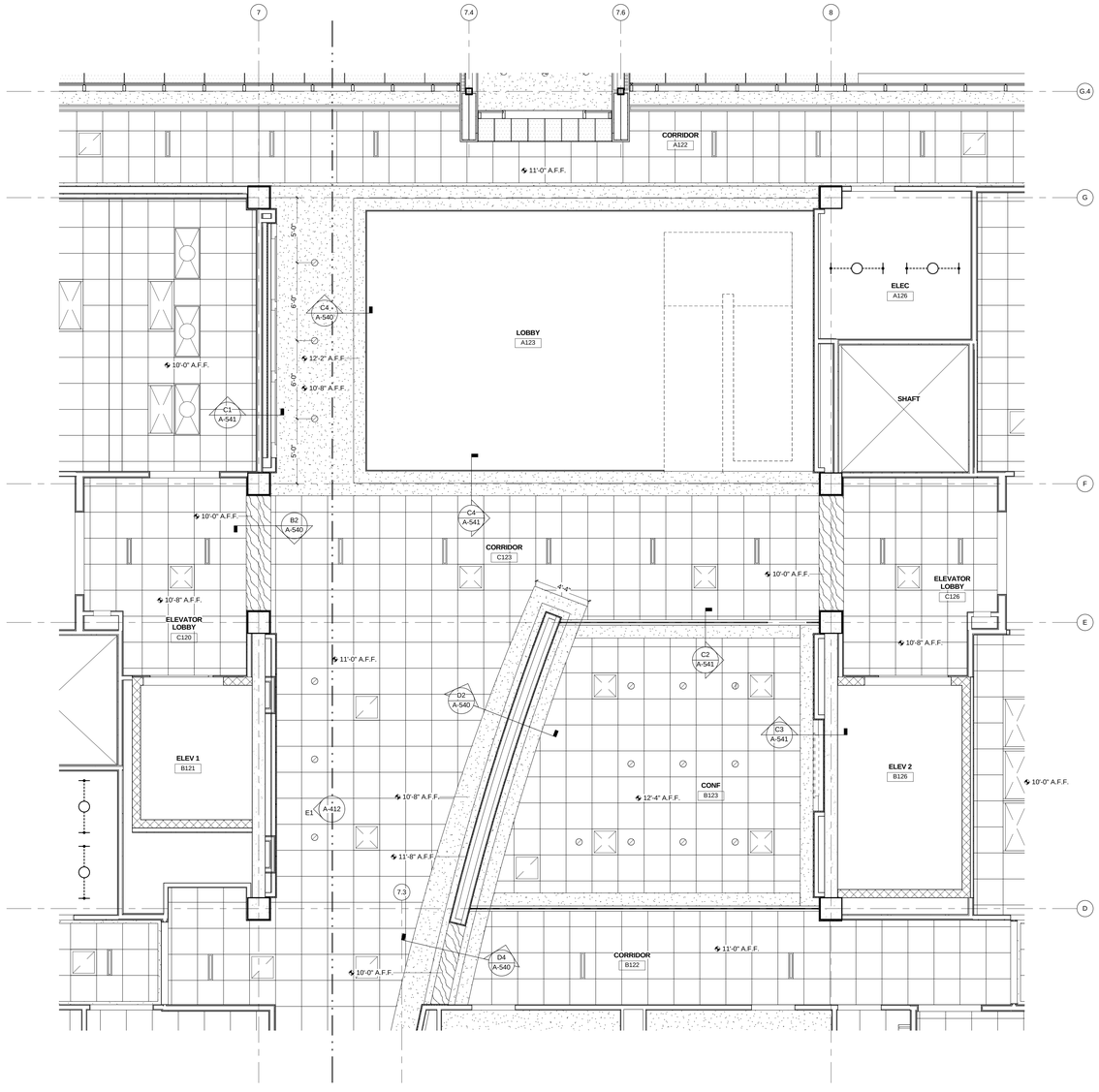
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 ENLARGED RCP - LOBBY FIRST FLOOR
1/4" = 1'-0"

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-407

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED FIRST FLOOR REFLECTED CEILING PLANS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-407	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-407 REV. NO.

C:\DV700\0182-A-CENTRAL_dwrdy.rvt
7/8/2011 11:03:50 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4"X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

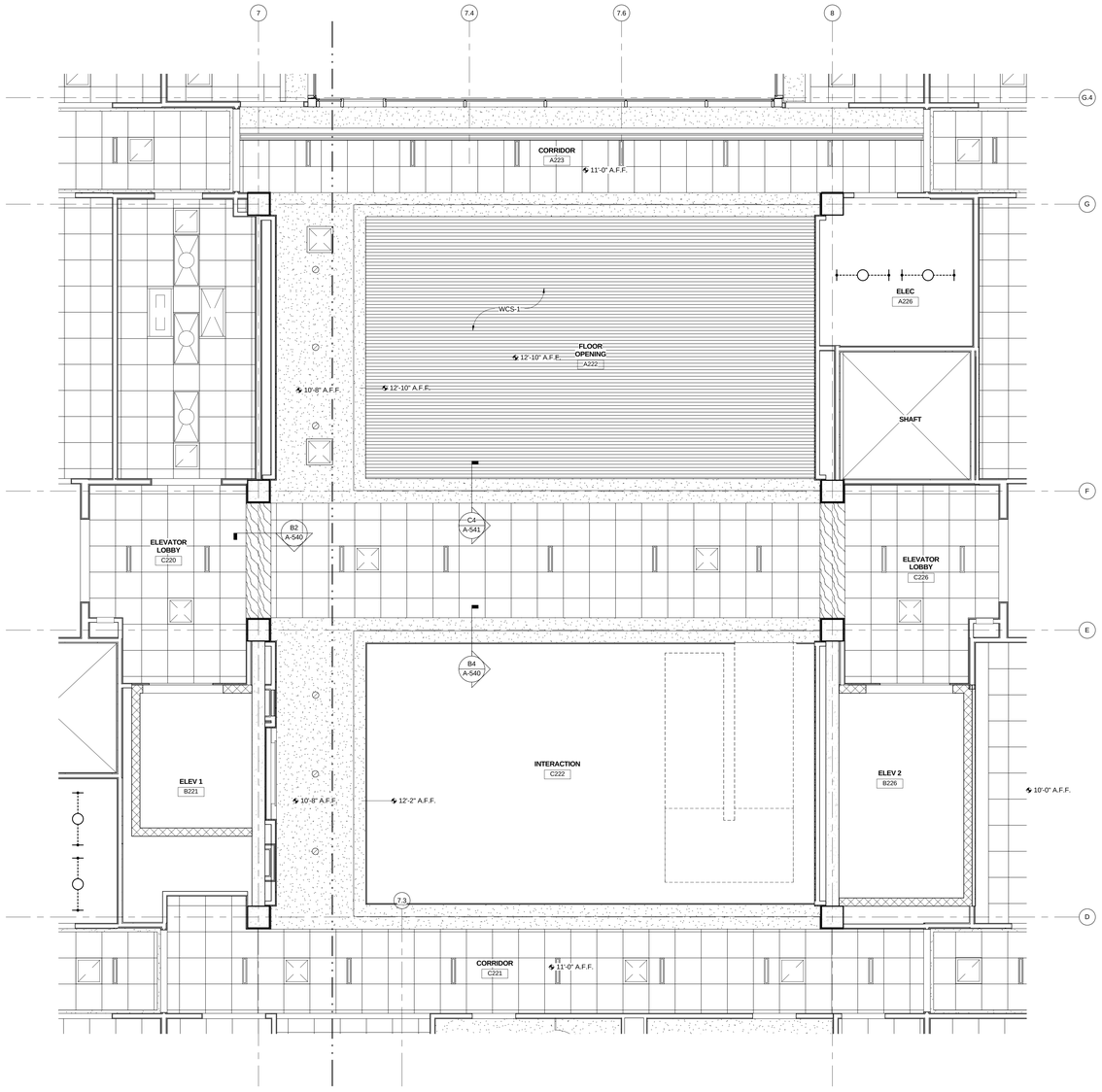
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 ENLARGED RCP - LOBBY SECOND FLOOR
1/4" = 1'-0"

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-408

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED SECOND FLOOR REFLECTED CEILING PLANS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-408	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-408
REV. NO.

C:\BV700218\A-CENTRAL_ab+fp.rvt
7/8/2011 11:03:55 AM

RCP SYMBOL LEGEND

- ACOUSTICAL TILE CEILING
- GWB CEILING - PAINTED
- WOOD CEILING SYSTEM (WCS-1)
- 4'X2' FLUORESCENT LIGHT FIXTURE
- 2'X4' FLUORESCENT LIGHT FIXTURE
- FLUORESCENT STRIP LIGHT FIXTURE
- RECESSED DOWNLIGHT FIXTURE
- SMOKE DETECTOR
- SPEAKER
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- RADIANT HEAT PANEL
- ACTIVE CHILLED BEAM
- PENDANT MOUNTED LIGHT FIXTURE
- LINEAR DIFFUSER
- POINT EXHAUST
- DRY JOINT METAL PANEL EXTERIOR SOFFIT

GENERAL RCP NOTES

1. REFER TO ROOM FINISH SCHEDULE FOR CEILING MATERIAL LOCATIONS.

2. PROVIDE GYPSUM WALL BOARD AND METAL STUD BULKHEADS WHERE CEILINGS OF DIFFERENT HEIGHTS ABUT. DO NOT BUILD BULKHEADS OF ACOUSTICAL CEILING MATERIALS UNLESS SPECIFICALLY DETAILED.

3. REFER TO MECHANICAL DRAWINGS (M SERIES) FOR QUANTITY AND TYPE OF DIFFUSERS, RETURN AIR GRILLES, AND EXHAUST GRILLES. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

4. REFER TO ELECTRICAL DRAWINGS (E SERIES) FOR QUANTITY AND TYPE OF LIGHTS, SPEAKERS, DETECTORS, POWER OUTLETS, ETC. SCRIBE CEILING MATERIALS CAREFULLY. WHERE NO DEVICES ARE SHOWN ON PLANS, FEILD VERIFY LOCATION & QUANTITY OF DEVICES IN EXISTING CEILING. THESE DEVICES WILL BE RELOCATED TO THE NEW CEILING.

5. ALTHOUGH NOT SPECIFICALLY SHOWN, THE ENTIRE PROJECT HAS FIRE SPRINKLER HEADS IN CEILING. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.

6. REFER TO ROOM FINISH SCHEDULE FOR THE EXTENT OF GRID SYSTEM. REFLECTED CEILING PLANS SHOW TILE PATTERNS.

7. CONTRACTOR TO FIELD VERIFY EXTENT OF CEILING REPLACEMENT. CONTRACTOR TO COORDINATE WITH ALL TRADES.

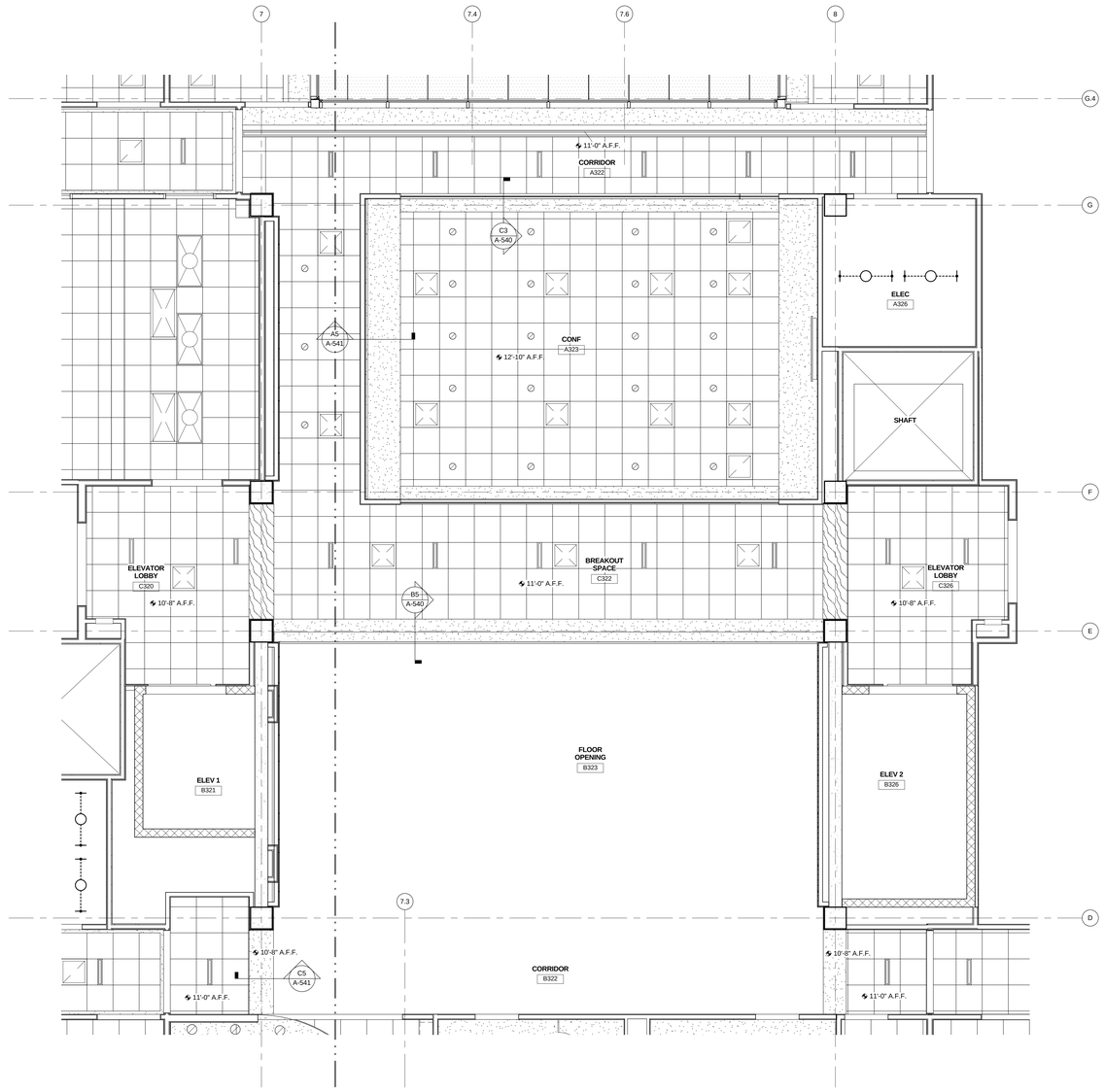
8. ALL LAB CEILINGS TO BE 10'-0" AFF UNO

9. ALL CORRIDOR CEILING TO BE 9'-0" AFF UNO

10. ALL POINT EXHAUSTS WITHIN LAB ROOMS TO BE LOCATED 1'-6" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL AND CENTERED WITHIN CEILING TILE U.N.O.

11. ALL POINT EXHAUSTS IN SERVICE CORES TO BE LOCATED 1'-0" TO CENTERLINE OF EXHAUST FROM FACE OF ADJACENT WALL U.N.O.

12. ALL RECESSED DOWNLIGHTS IN LAY-IN CEILING TO BE CENTERED IN TILE. SCRIBE CEILING MATERIALS CAREFULLY FOR A TIGHT FIT.



A1 ENLARGED RCP - LOBBY THIRD FLOOR
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-409

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

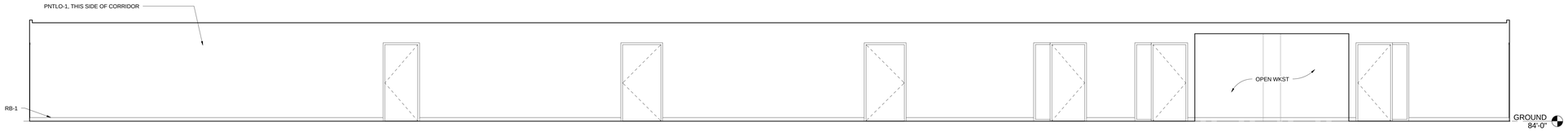
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
ENLARGED THIRD FLOOR REFLECTED CEILING PLANS

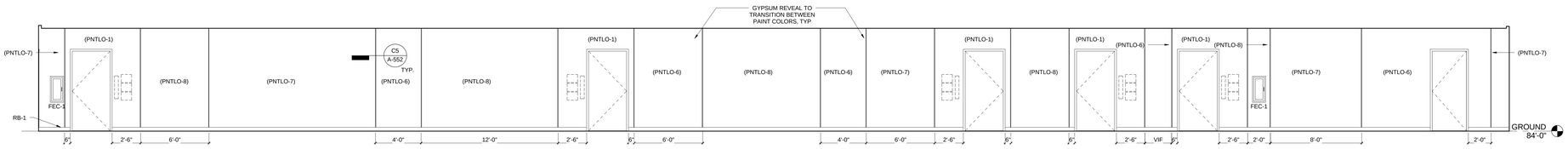
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-409	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-409 REV. NO.

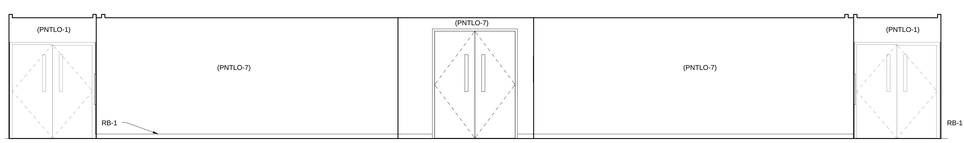
C:\PVTX\002182-A-CENTRAL_dwrdy.rvt
7/8/2011 11:03:59 AM



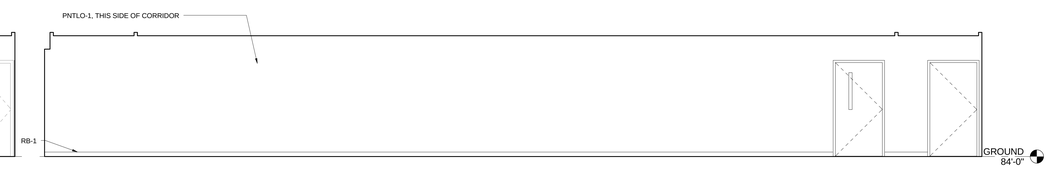
E1 Corridor A009 North Elevation
1/4" = 1'-0"



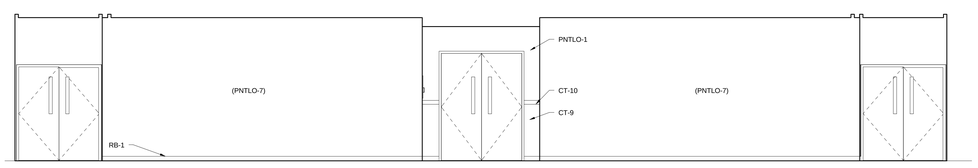
D1 Corridor A009 South Elevation
1/4" = 1'-0"



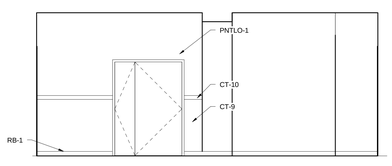
C1 Corridor C008 East Elevation
1/4" = 1'-0"



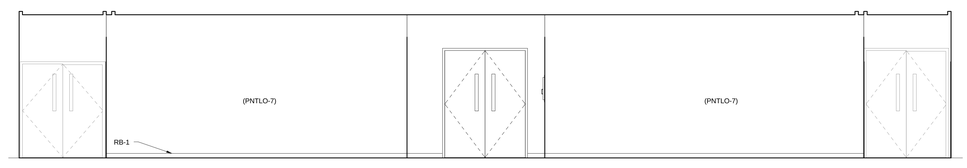
C3 Corridor C008 West Elevation
1/4" = 1'-0"



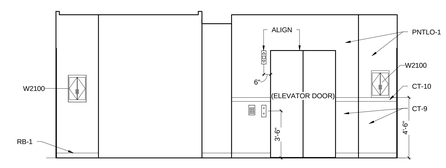
B3 CORRIDOR C022 WEST
1/4" = 1'-0"



A1 Corridor C022 North Elevation
1/4" = 1'-0"



A2 Corridor C022 East Elevation
1/4" = 1'-0"



A5 CORRIDOR C022 SOUTH
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-410

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

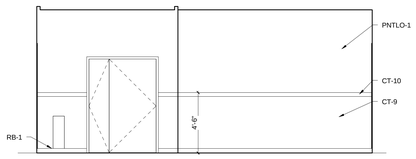
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

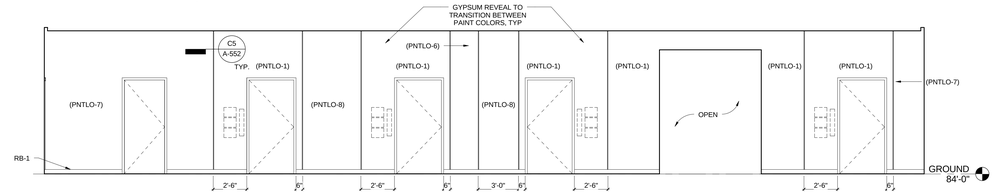
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-410	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-410 REV. NO.

C:\DV70\02182-A-CENTRAL_ab+fp.rvt
7/8/2011 11:08:12 AM

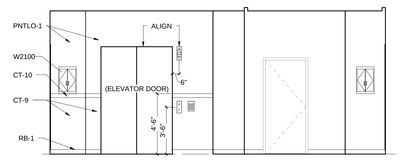


E2 Corridor C025 North Elevation
1/4" = 1'-0"

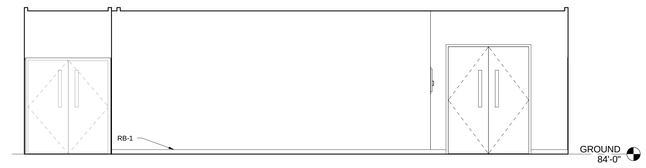


E3 Corridor A022 South Elevation
1/4" = 1'-0"

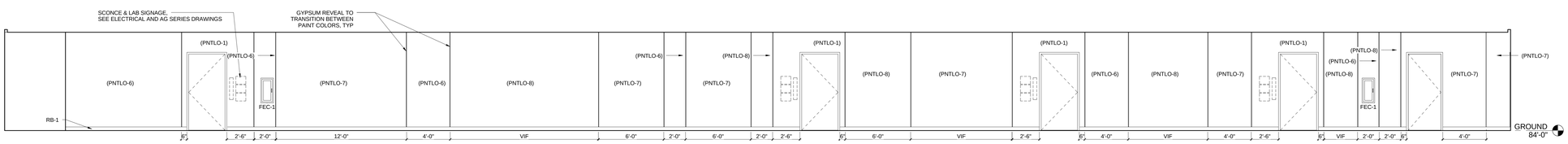
D2 Corridor C025 East Elevation
1/4" = 1'-0"



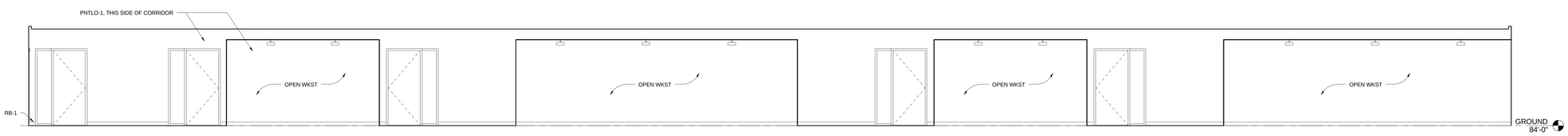
D3 Corridor C025 South Elevation
1/4" = 1'-0"



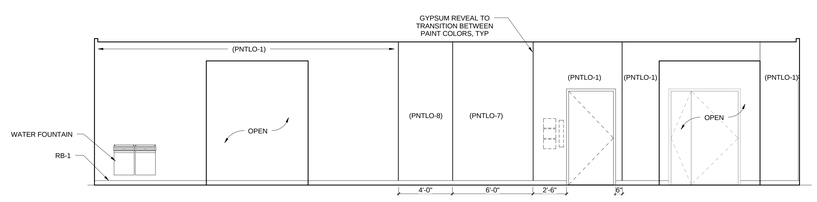
D4 Corridor C025 West Elevation
1/4" = 1'-0"



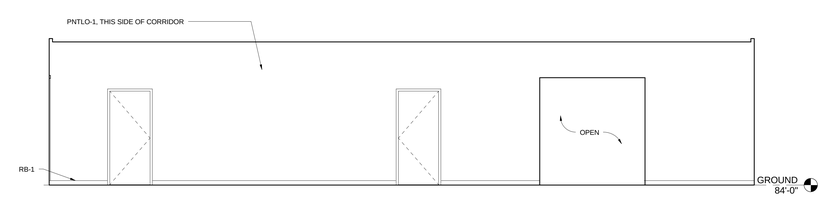
C1 Corridor B009 North Elevation
1/4" = 1'-0"



B1 Corridor B009 South Elevation
1/4" = 1'-0"



A1 Corridor B022 North Elevation
1/4" = 1'-0"



A3 Corridor B022 South Elevation
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-411

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

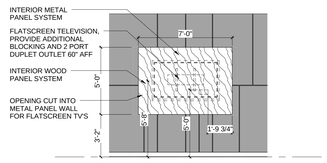
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

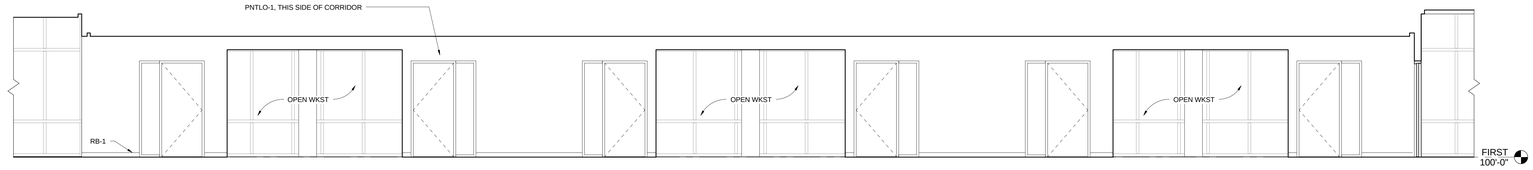
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-411	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-411
REV. NO.

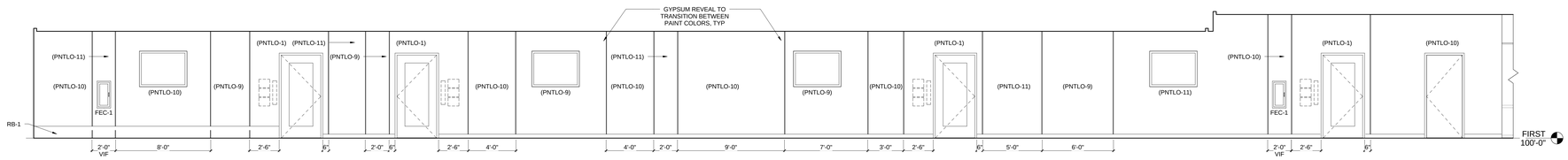
C:\BV70002\B2-A-CENTRAL_alvrdy.rvt
7/8/2011 11:04:25 AM



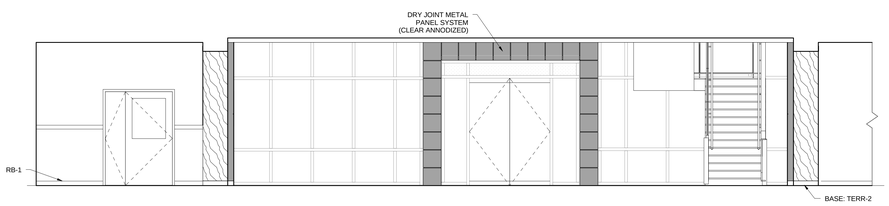
E1 ENLARGED ELEVATION
1/4" = 1'-0"



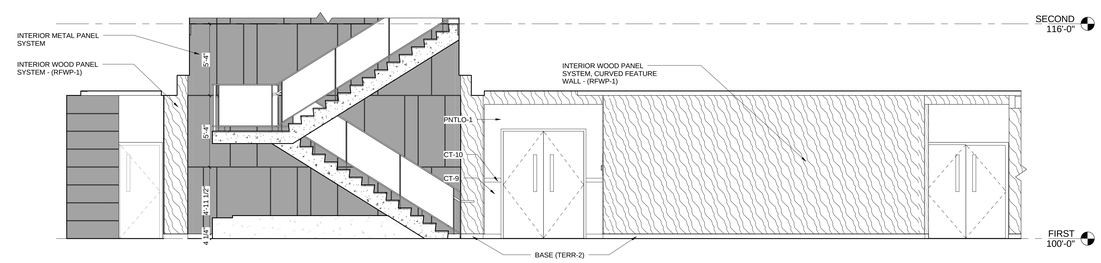
E2 Corridor A109 North Elevation
1/4" = 1'-0"



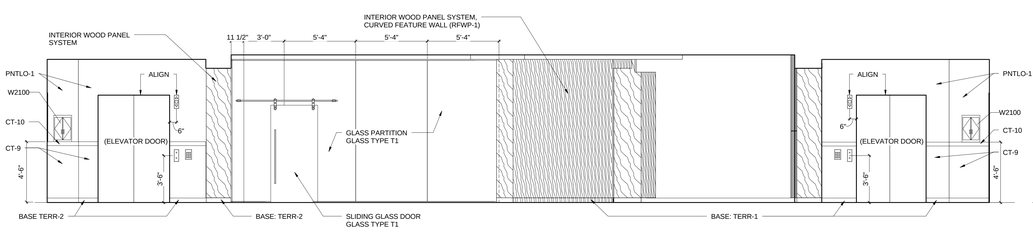
D1 Corridor A109 South Elevation
1/4" = 1'-0"



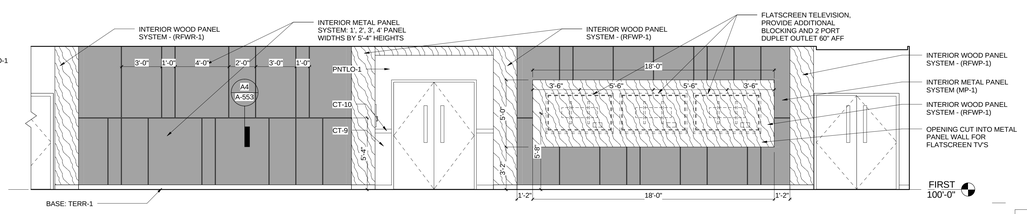
C1 Lobby A123 North Elevation
1/4" = 1'-0"



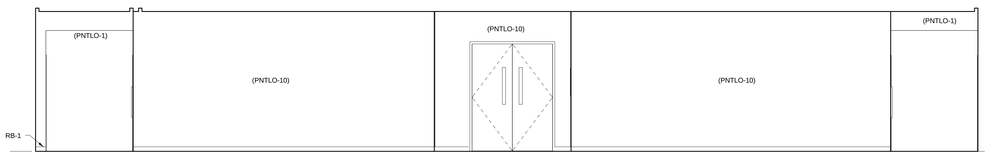
C3 Lobby A123 East Elevation
1/4" = 1'-0"



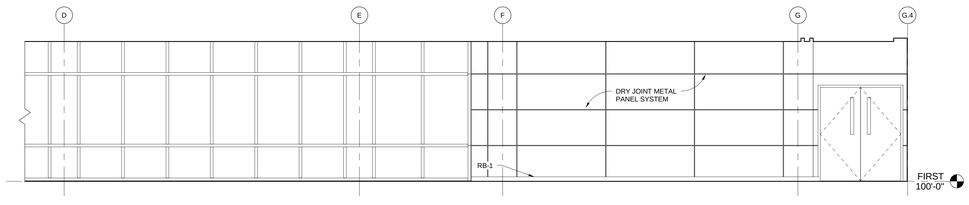
B1 Lobby A123 South Elevation
1/4" = 1'-0"



B3 Lobby A123 West Elevation
1/4" = 1'-0"



A1 Corridor C108 East Elevation
1/4" = 1'-0"



A3 Corridor C108 West Elevation
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-412

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

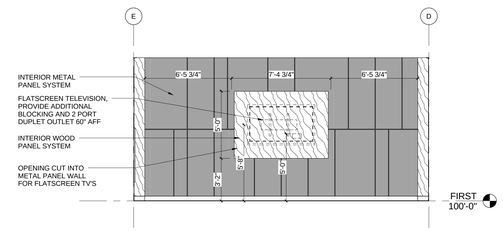
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-412	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

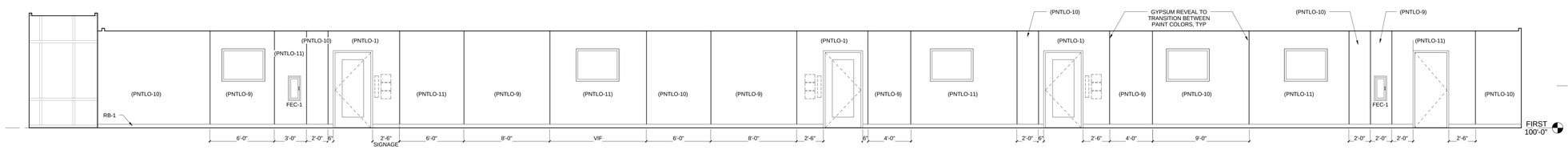
FACILITY DOCUMENT NUMBER
J241-101- A-412
REV. NO.

C:\BOY\002182-A-CENTRAL_ab+fp.rvt
7/8/2011 11:04:41 AM

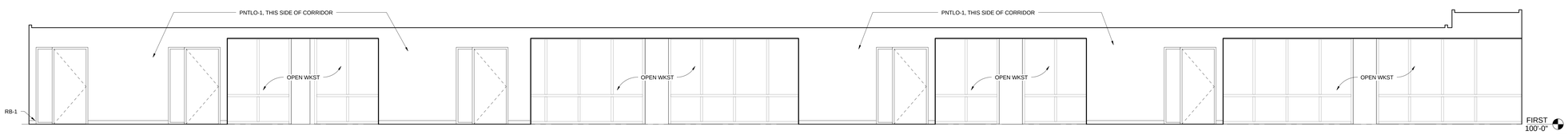
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



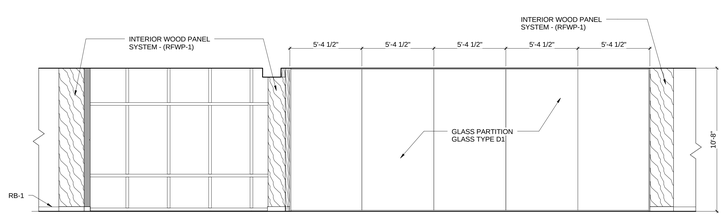
D5 ENLARGED ELEVATION
1/4" = 1'-0"



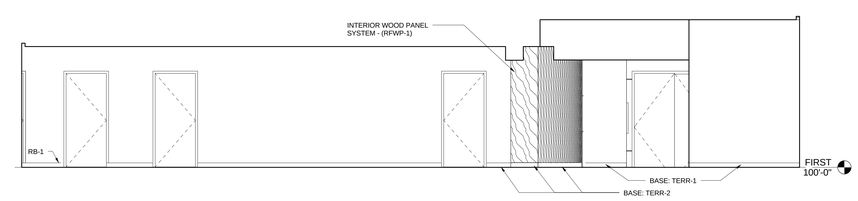
C1 Corridor B109 North Elevation
1/4" = 1'-0"



B1 Corridor B109 South Elevation
1/4" = 1'-0"



A1 Corridor B122 North Elevation
1/4" = 1'-0"



A3 Corridor B122 South Elevation
1/4" = 1'-0"

A-413

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

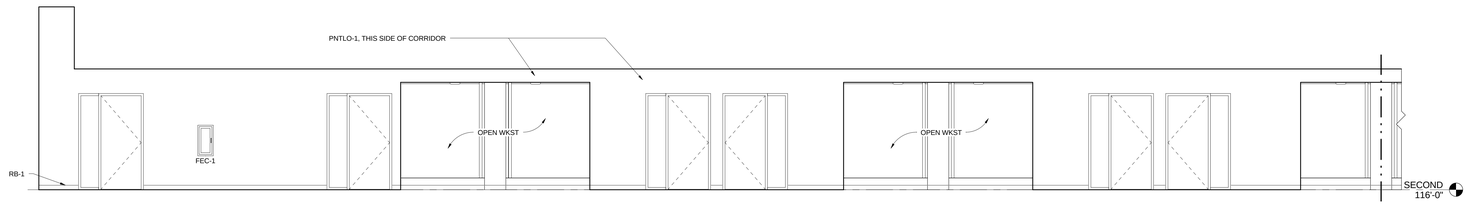
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-413	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-413
REV. NO.

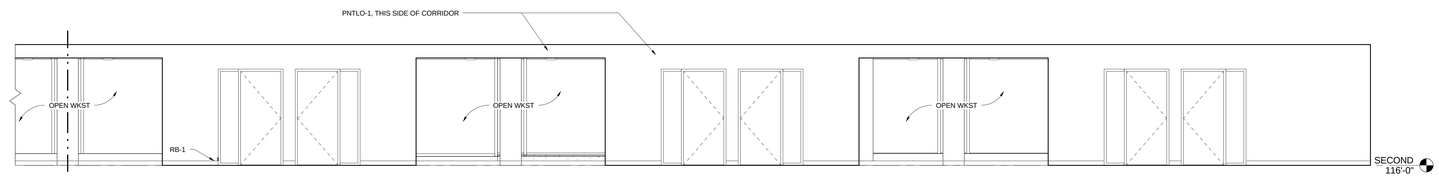
C:\DV70\002182-A-CENTRAL_sheet\p.txt
7/8/2011 11:04:50 AM

HDR Architecture, Inc.

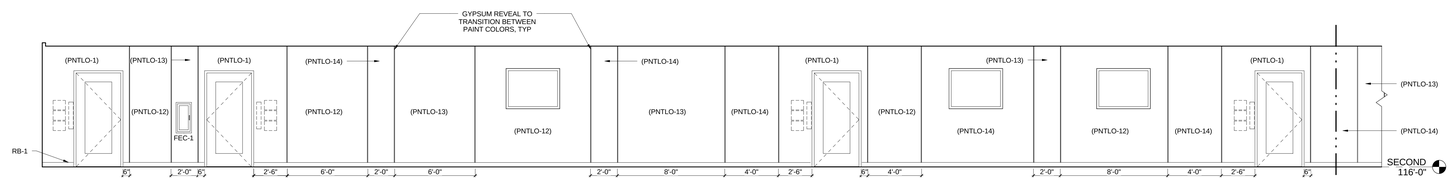
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



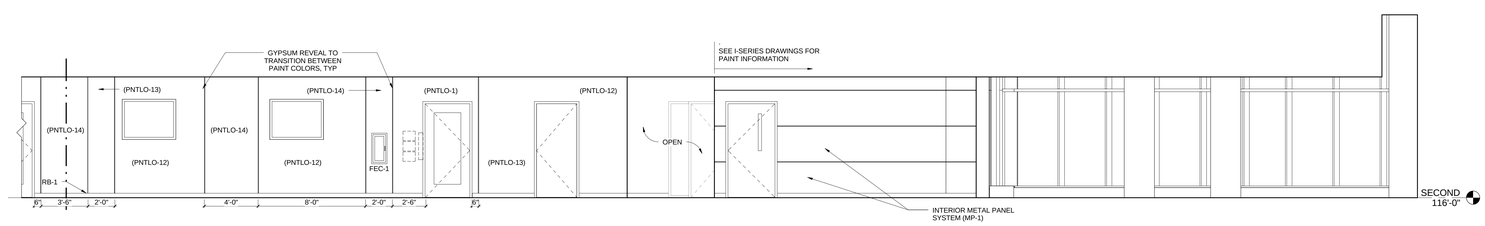
D1 Corridor A209 North Partial Elevation
1/4" = 1'-0"



C1 Corridor A209 North Partial Elevation
1/4" = 1'-0"



B1 Corridor A209 South Partial Elevation
1/4" = 1'-0"



A1 Corridor A209 South Partial Elevation
1/4" = 1'-0"

A-414

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

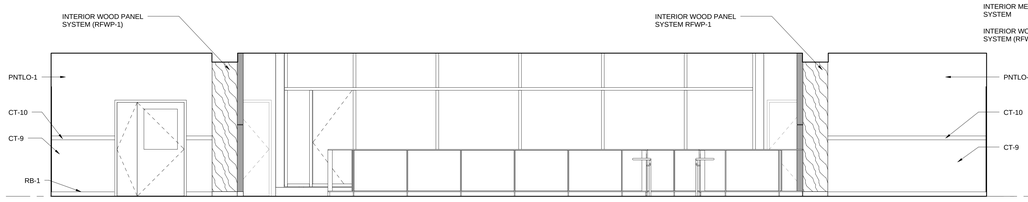
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

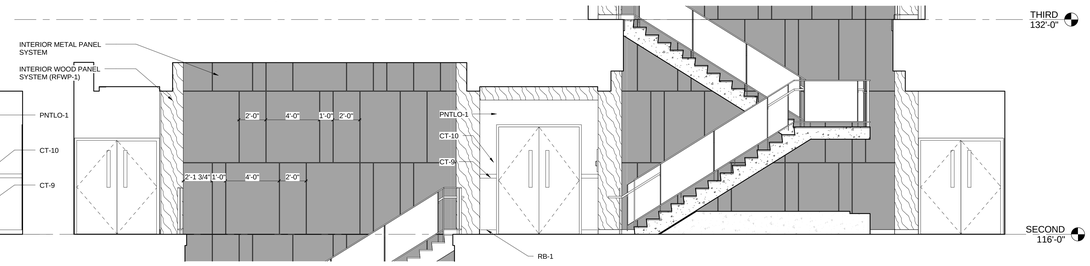
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-414	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-414
REV. NO.

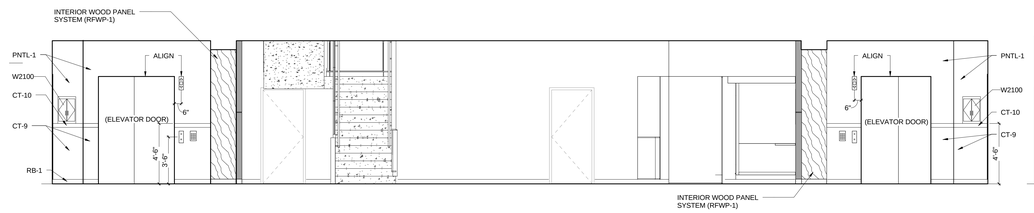
C:\BV70\002182-A-CENTRAL_arch.rvt
7/8/2011 11:04:57 AM



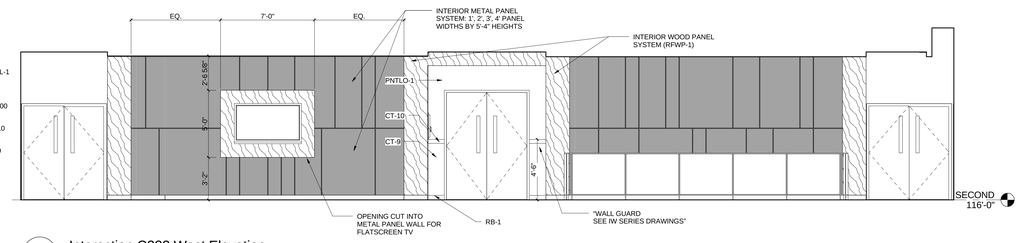
E1 Interaction C222 North Elevation
1/4" = 1'-0"



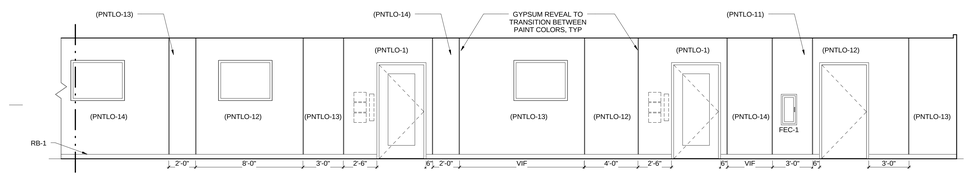
E3 Interaction C222 East Elevation
1/4" = 1'-0"



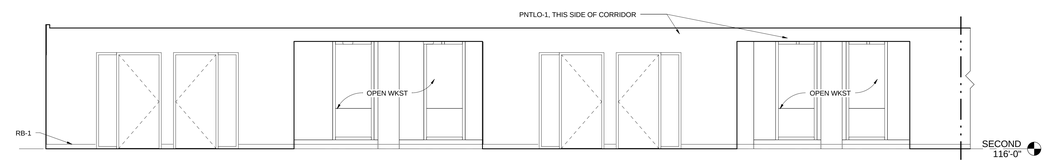
D1 Interaction C222 South Elevation
1/4" = 1'-0"



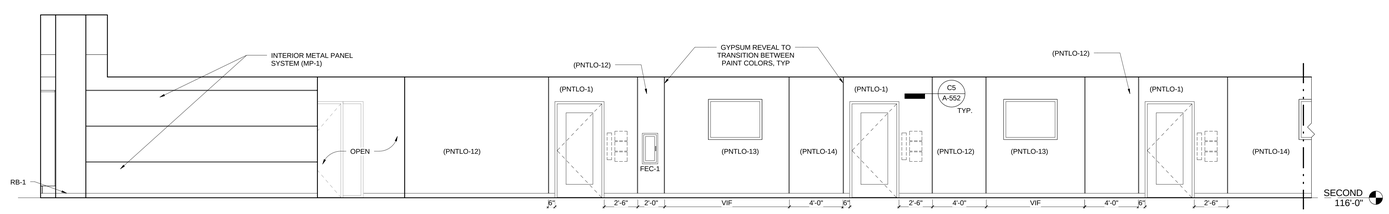
D3 Interaction C222 West Elevation
1/4" = 1'-0"



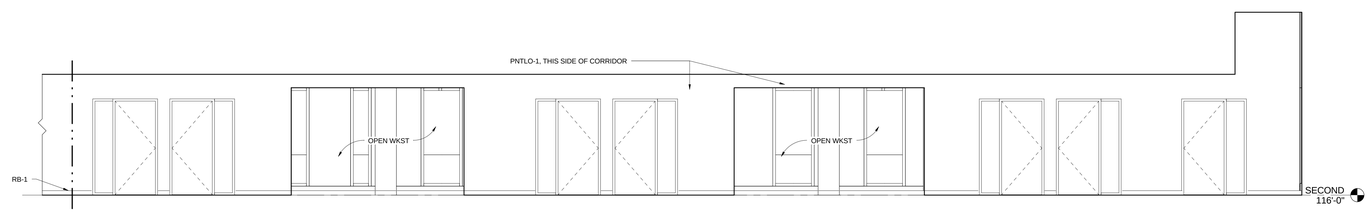
C1 Corridor B209 North Partial Elevation
1/4" = 1'-0"



C3 Corridor B209 South Partial Elevation
1/4" = 1'-0"



B3 Corridor B209 North Partial Elevation
1/4" = 1'-0"



A3 Corridor B209 South Partial Elevation
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-415

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

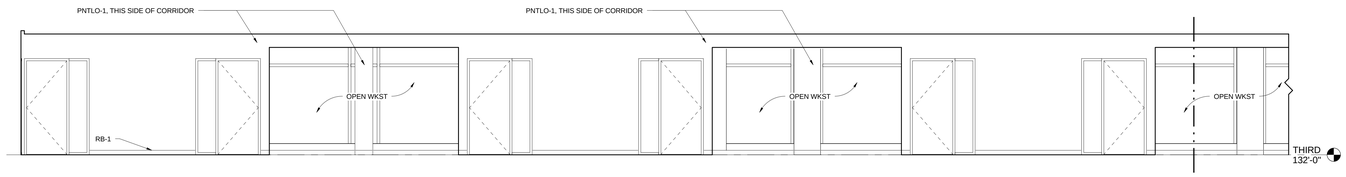
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

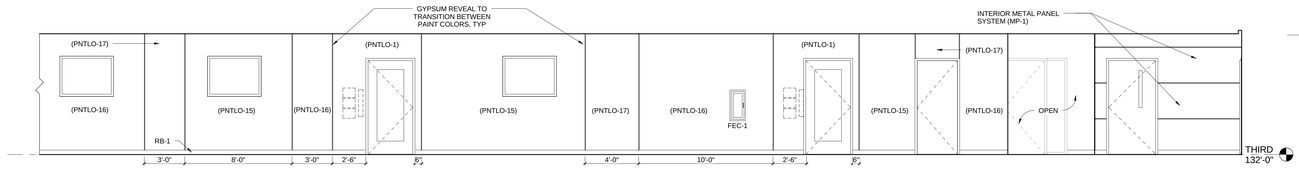
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-415	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: **J241-101- A-415**
REV. NO.

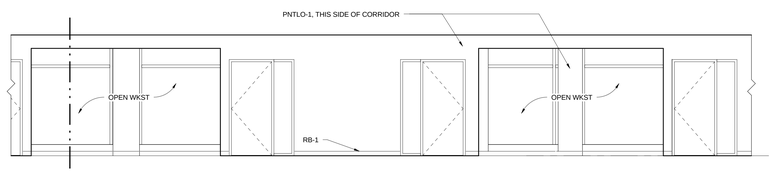
C:\PW70\0235\ACDI70\ai_allnfp.vt
7/6/2011 11:10:11 AM



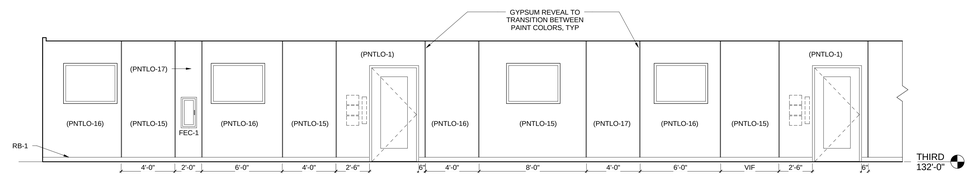
E2 Corridor A309 North Partial Elevation
1/4" = 1'-0"



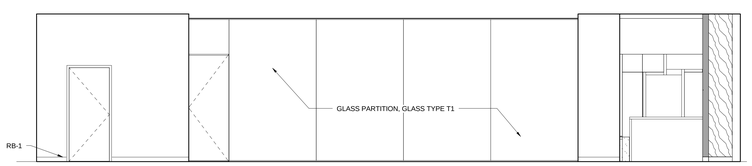
D2 Corridor A309 South Partial Elevation
1/4" = 1'-0"



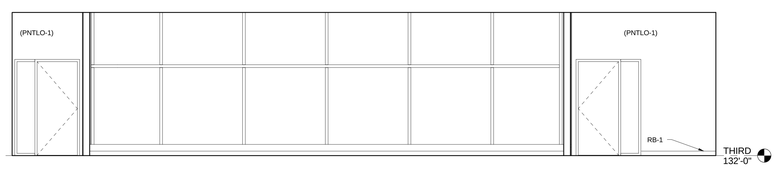
C1 Corridor A309 North Partial Elevation
1/4" = 1'-0"



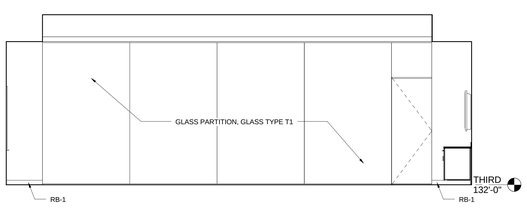
C3 Corridor A309 South Partial Elevation
1/4" = 1'-0"



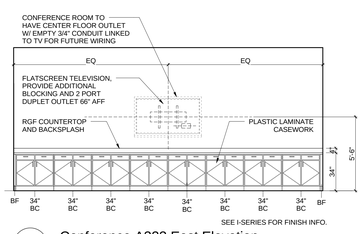
B1 Corridor A322 South Elevation
1/4" = 1'-0"



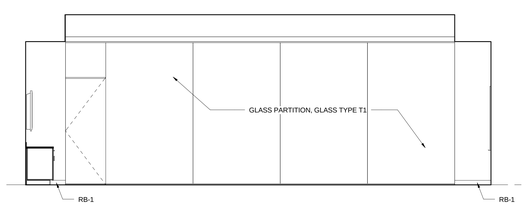
B4 Corridor A322 North Elevation
1/4" = 1'-0"



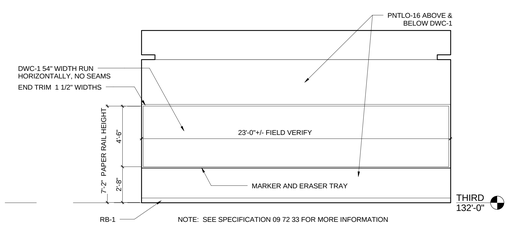
A1 Conference A323 North Elevation
1/4" = 1'-0"



A2 Conference A323 East Elevation
1/4" = 1'-0"



A3 Conference A323 South Elevation
1/4" = 1'-0"



A5 Conference A323 West Elevation
1/4" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-416

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

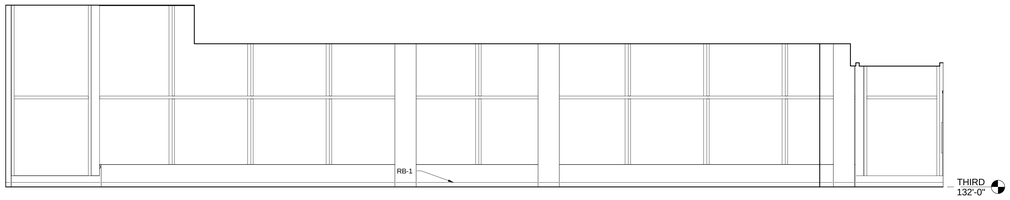
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

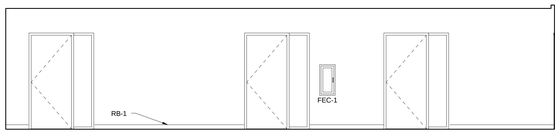
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-416	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-416 REV. NO.

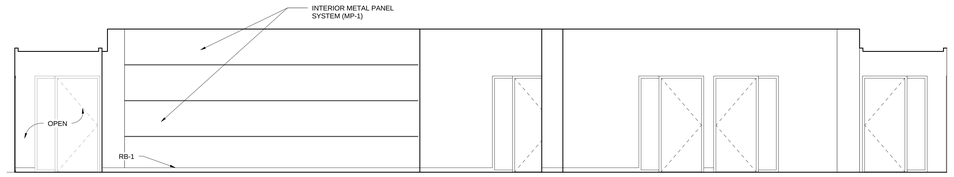
C:\DRV70\002182-ACENTRAL_alvrdy.rvt
7/8/2011 11:05:59 AM



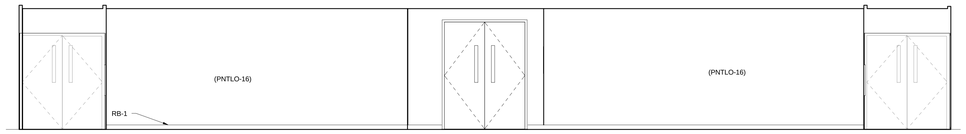
E3 Corridor A353 West Elevation
1/4" = 1'-0"



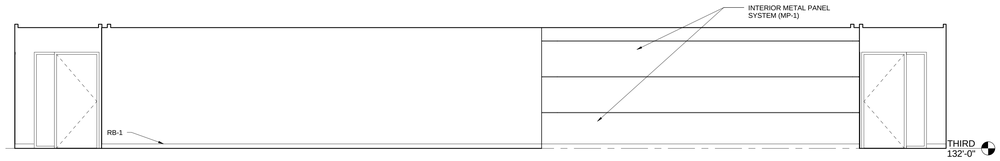
D2 Corridor A353 North Elevation
1/4" = 1'-0"



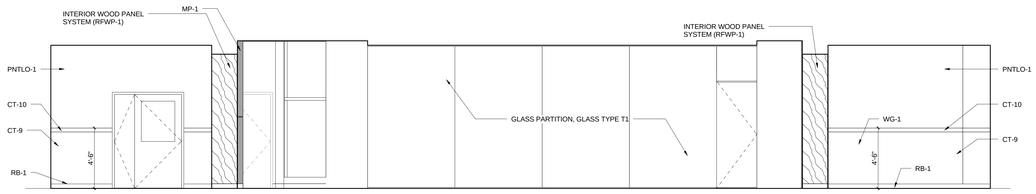
D3 Corridor A353 East Elevation
1/4" = 1'-0"



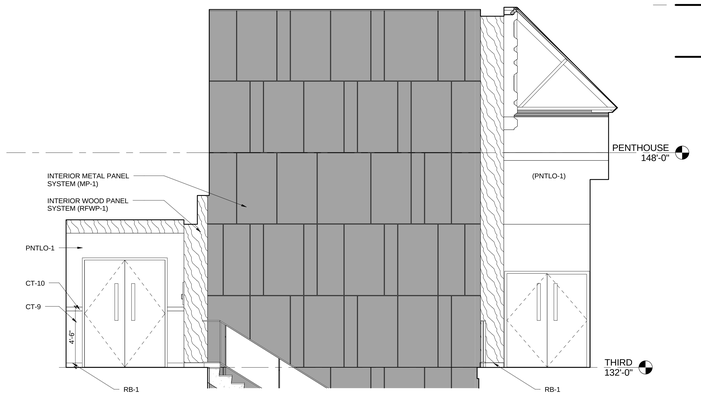
C1 Corridor C306 East Elevation
1/4" = 1'-0"



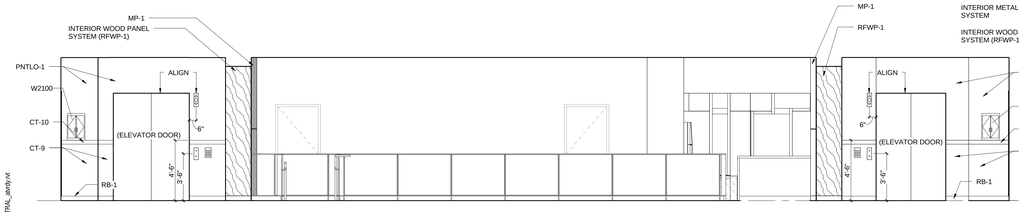
C3 Corridor C306 West Elevation
1/4" = 1'-0"



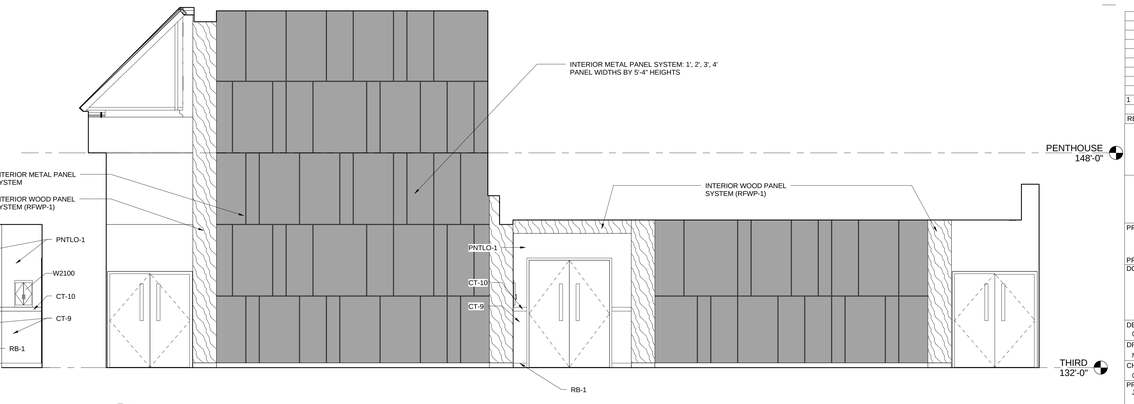
B1 Breakout Space C322 North Elevation
1/4" = 1'-0"



B4 Breakout Space C322 East Elevation
1/4" = 1'-0"



A1 Breakout Space C322 South Elevation
1/4" = 1'-0"



A3 Breakout Space C322 West Elevation
1/4" = 1'-0"

C:\PCWTO\0230-A-CENTRAL_alnrdy.rvt
7/6/2011 11:09:43 AM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-417

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

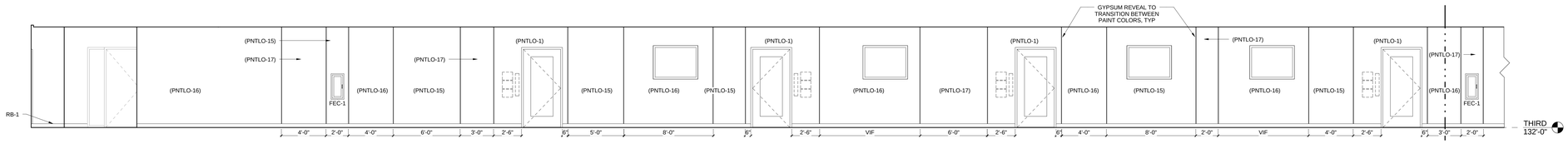
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

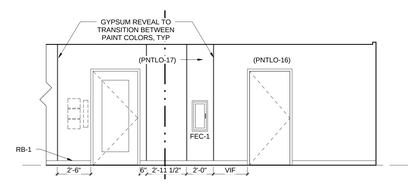
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-417	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-417
REV. NO.

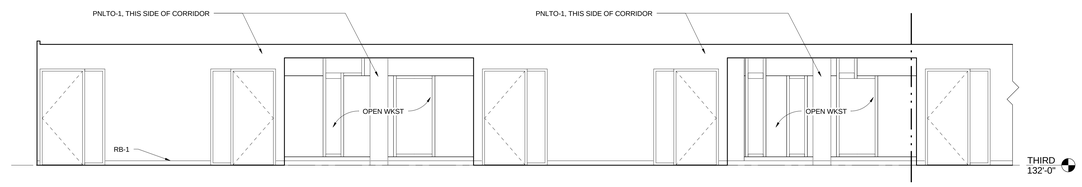
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



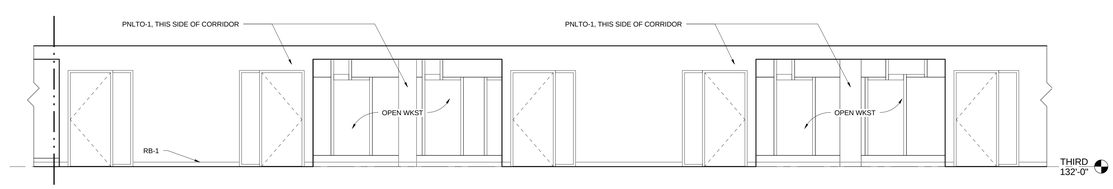
D1 Corridor B309 North Partial Elevation
1/4" = 1'-0"



C5 Corridor B309 North Partial Elevation
1/4" = 1'-0"



B3 Corridor B309 South Partial Elevation
1/4" = 1'-0"



A3 Corridor B309 South Partial Elevation
1/4" = 1'-0"

A-418

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-418	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

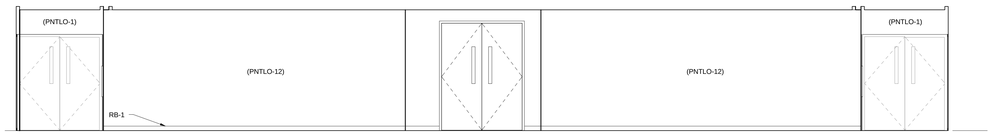
FACILITY DOCUMENT NUMBER J241-101- A-418 REV. NO.

C:\PCTOOZ\20_&_CENTRAL_dirv5v.rvt
7/6/2011 11:05:49 AM

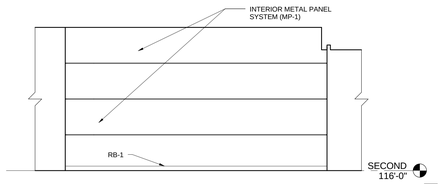
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

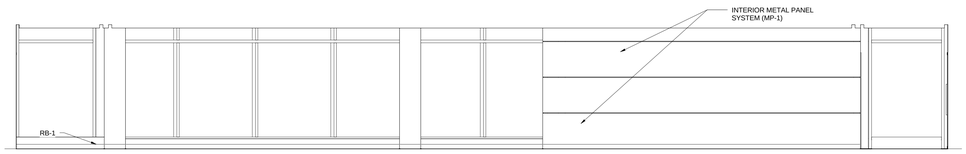
A-421



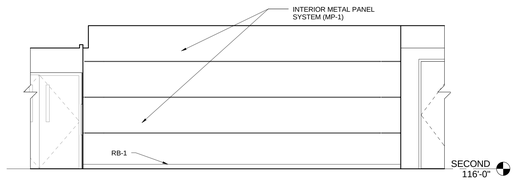
B1 Corridor C207 East
1/4" = 1'-0"



B4 Second Floor Stair South
1/4" = 1'-0"



A1 Corridor C207 West
1/4" = 1'-0"



A4 Second Floor Stair West
1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

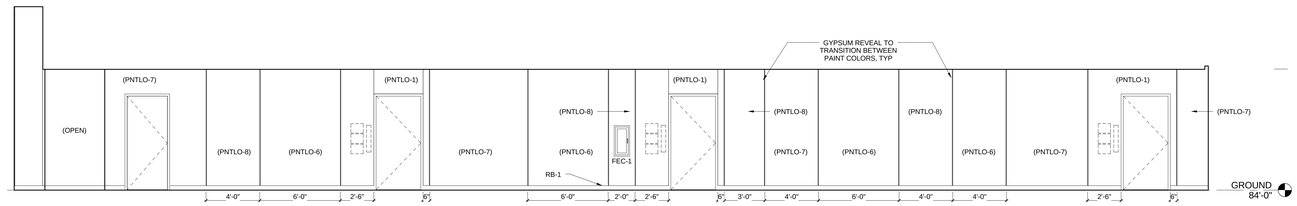
INTERIOR ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-421	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

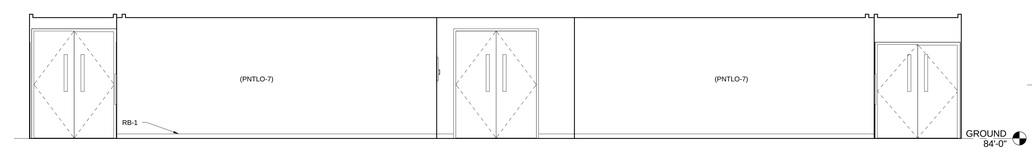
FACILITY DOCUMENT NUMBER: J241-101- A-421 REV. NO.

C:\R\TV00183-A-CENTRAL_ab\rfp.rvt
7/8/2011 11:05:56 AM

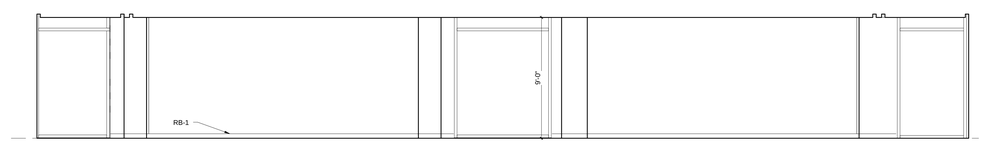
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



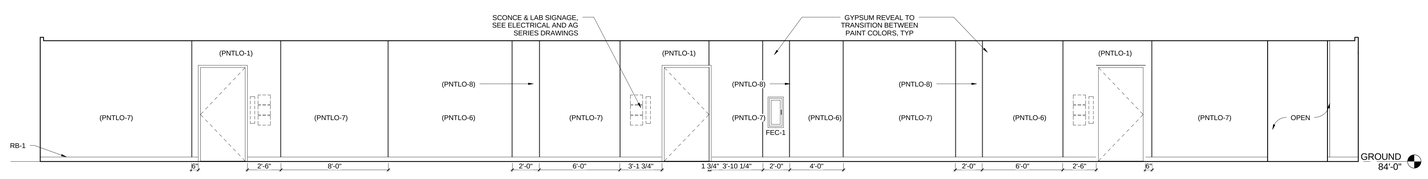
D2 Corridor A035 South Elevation
1/4" = 1'-0"



C3 Corridor C035 West Elevation
1/4" = 1'-0"



B3 Corridor C035 East Elevation
1/4" = 1'-0"



A2 Corridor B035 North Elevation
1/4" = 1'-0"

A-424

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

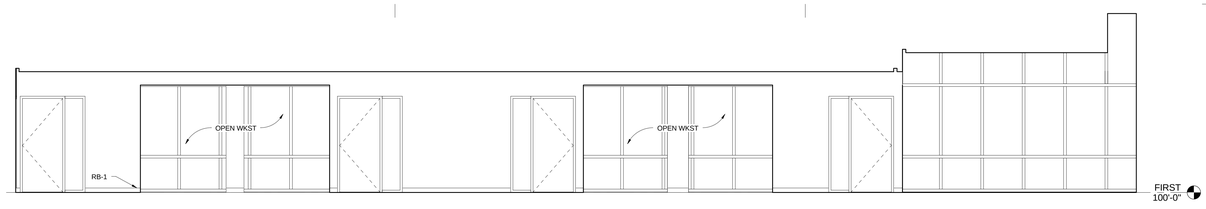
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

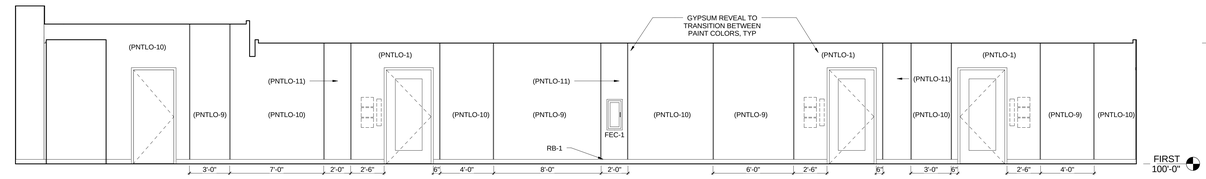
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-424	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-424
REV. NO.

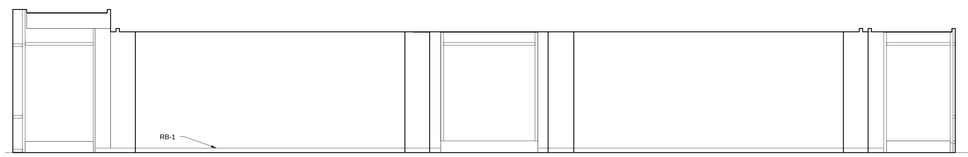
C:\DV70\0230-A-CENTRAL_ab+fp.rvt
7/8/2011 11:08:04 AM



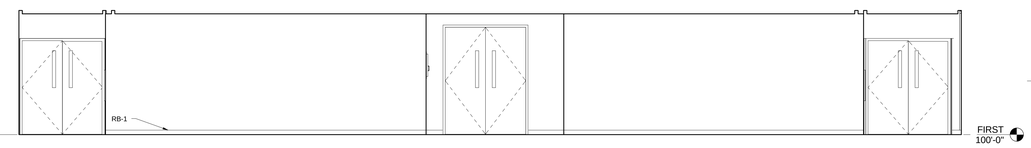
E3 Corridor A135 North Elevation
1/4" = 1'-0"



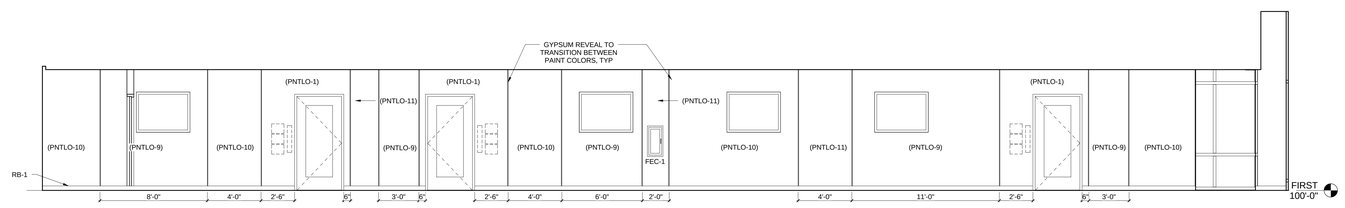
D3 Corridor A135 South Elevation
1/4" = 1'-0"



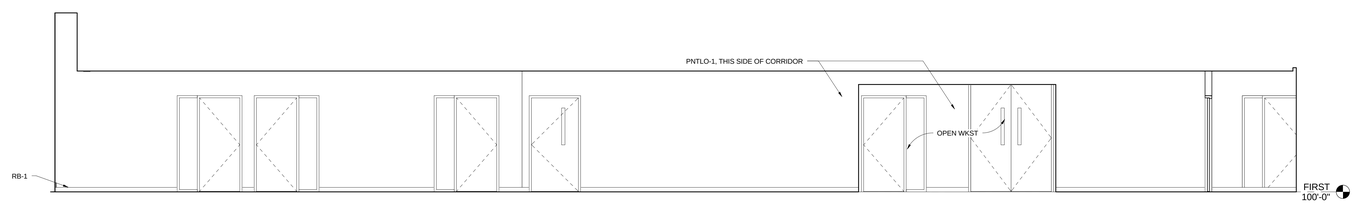
C1 Corridor C135 East Elevation
1/4" = 1'-0"



C3 Corridor C135 West Elevation
1/4" = 1'-0"



B3 Corridor B135 North Elevation
1/4" = 1'-0"



A3 Corridor B135 South Elevation
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-425

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

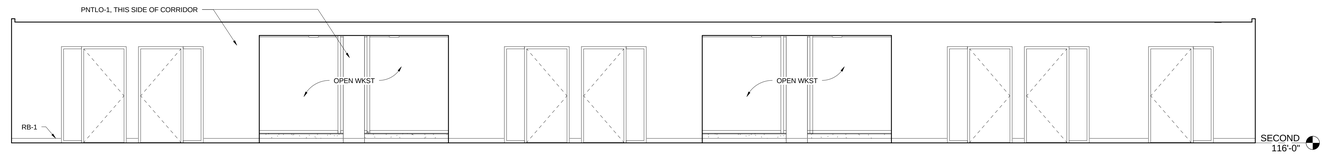
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

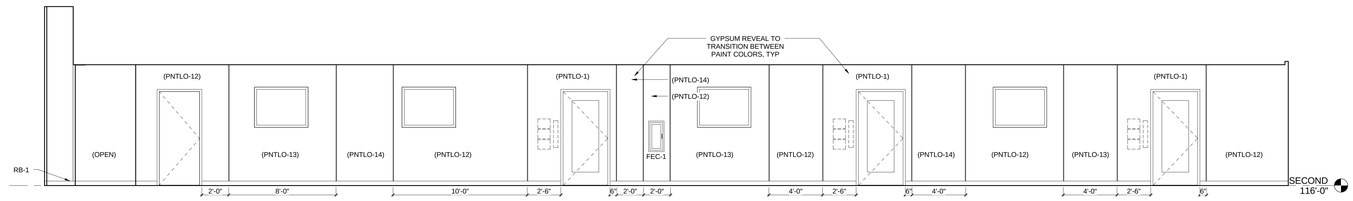
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-425	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-425
REV. NO.

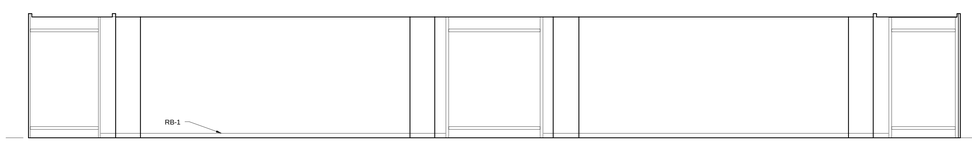
C:\RVT\002182-A-CENTRAL_ab4fjk.rvt
7/8/2011 11:06:15 AM



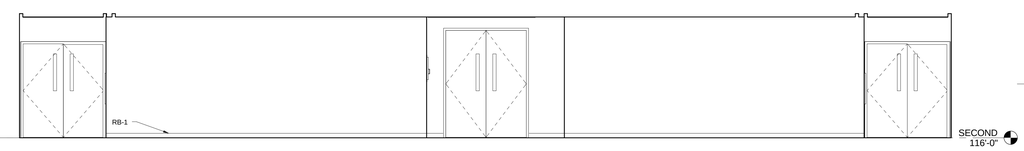
E3 Corridor A235 North Elevation
1/4" = 1'-0"



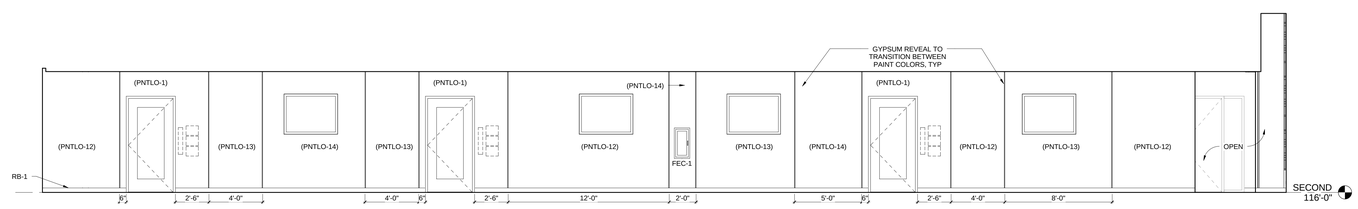
D3 Corridor A235 South Elevation
1/4" = 1'-0"



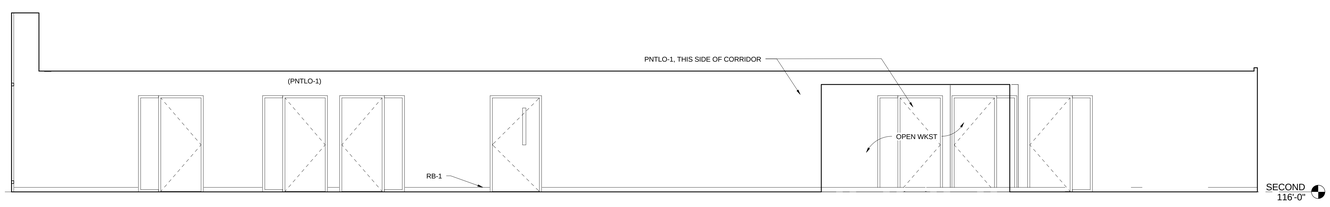
C1 Corridor C235 East Elevation
1/4" = 1'-0"



C3 Corridor C235 West Elevation
1/4" = 1'-0"



B3 Corridor B235 North Elevation
1/4" = 1'-0"



A3 Corridor B235 South Elevation
1/4" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-426

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

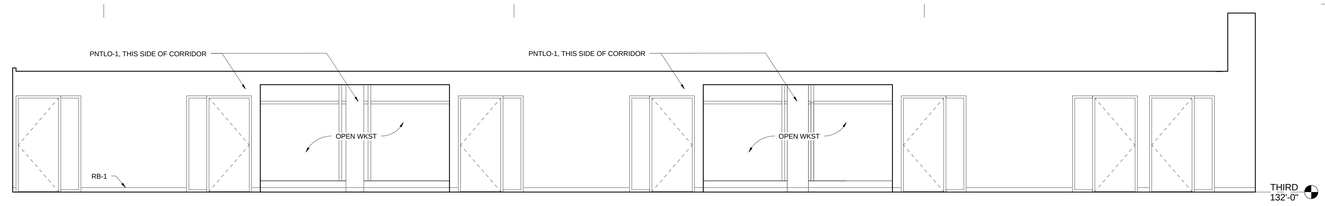
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

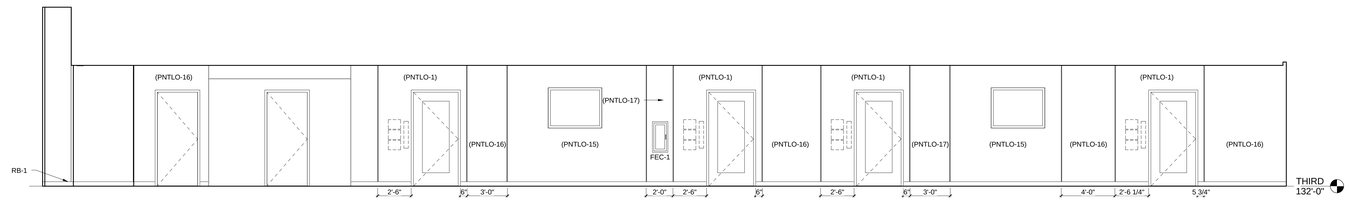
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-426	
CHECKED GREG SLOINGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-426
REV. NO.

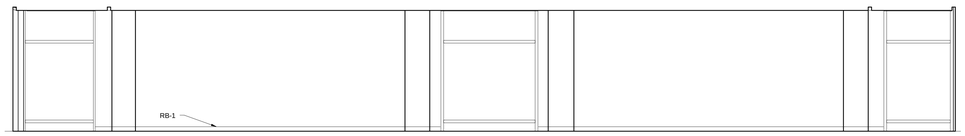
C:\RVT\002182-A-CENTRAL_ab4dr.rvt
7/8/2011 11:06:27 AM



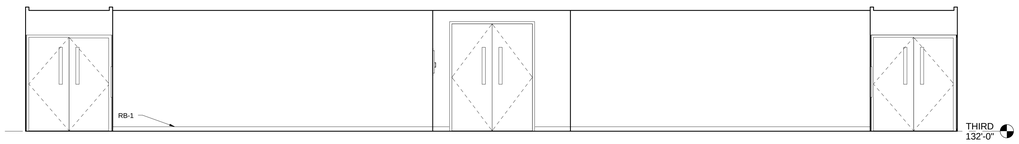
E3 Corridor A335 North Elevation
1/4" = 1'-0"



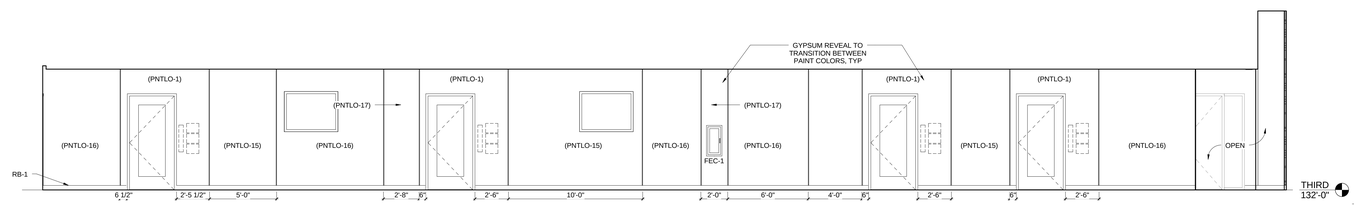
D3 Corridor A335 South Elevation
1/4" = 1'-0"



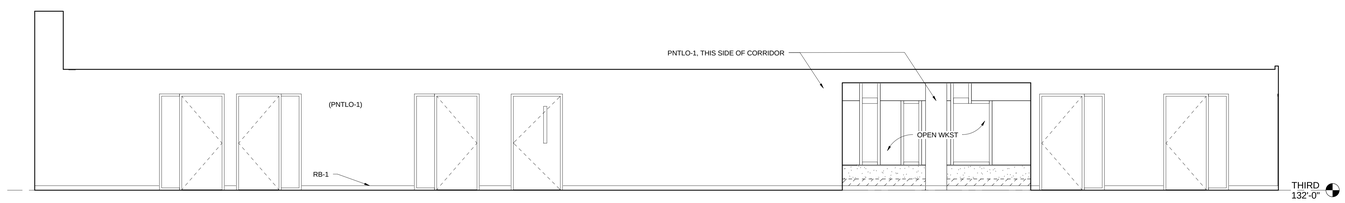
C1 Corridor C335 East Elevation
1/4" = 1'-0"



C3 Corridor C335 West Elevation
1/4" = 1'-0"



B3 Corridor B335 North Elevation
1/4" = 1'-0"



A3 Corridor B335 South Elevation
1/4" = 1'-0"

C:\BVT\002182-A-CENTRAL_WHS.rvt
7/8/2011 11:08:38 AM

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-427

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

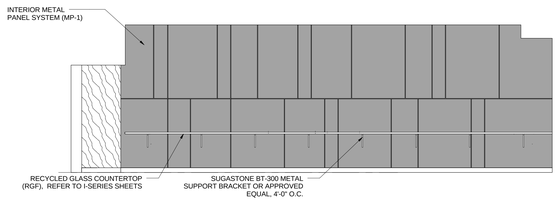
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

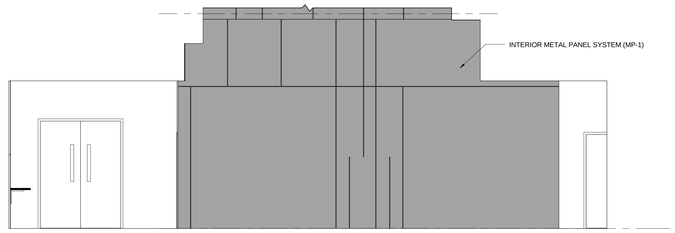
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-427	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-427
REV. NO.

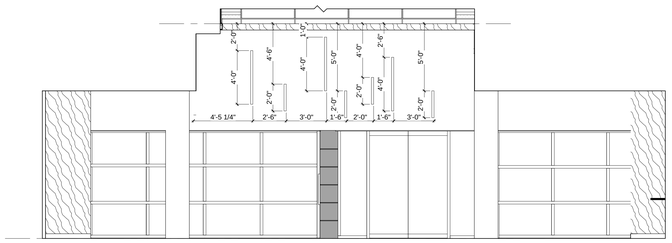
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



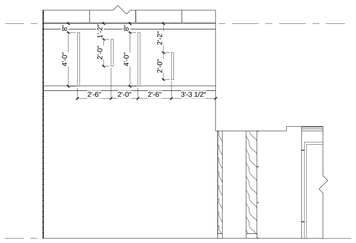
E1 Lobby D171 North Elevation
1/4" = 1'-0"



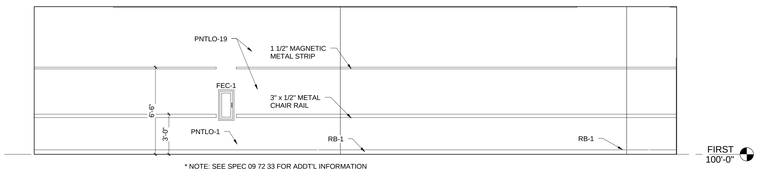
E2 Lobby D171 East Elevation
1/4" = 1'-0"



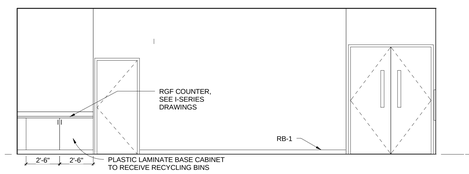
E3 Lobby D171 West Elevation
1/4" = 1'-0"



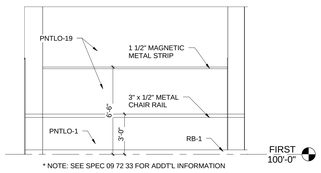
E4 Lobby D171 South Elevation
1/4" = 1'-0"



D1 Seminar D172 East Elevation
1/4" = 1'-0"

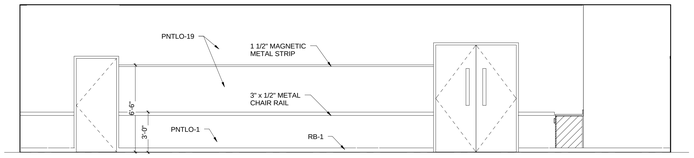


D2 Seminar D172 North Elevation
1/4" = 1'-0"

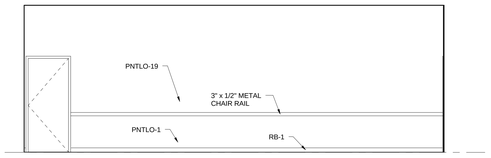


D4 Breakout D173 South Elevation
1/4" = 1'-0"

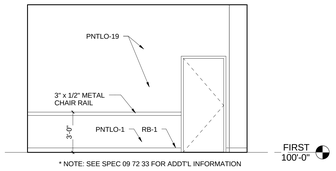
A-430



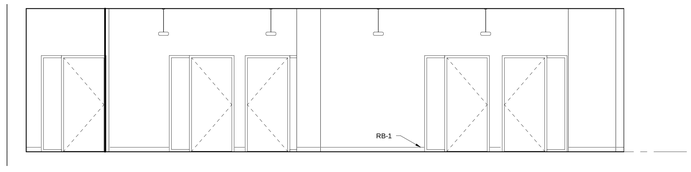
C1 Seminar D172 West Elevation
1/4" = 1'-0"



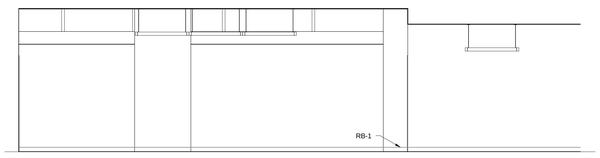
C2 Seminar D172 South Elevation
1/4" = 1'-0"



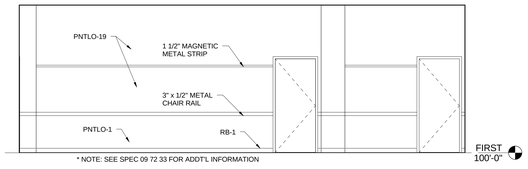
C4 Breakout D173 North Elevation
1/4" = 1'-0"



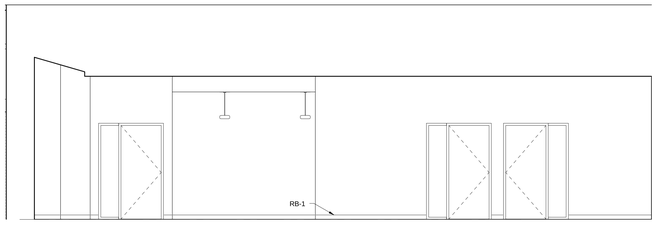
B1 Open Office D175 North Elevation
1/4" = 1'-0"



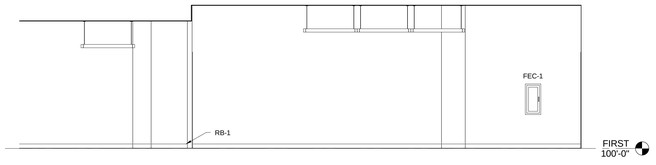
B2 Open Office D175 East Elevation
1/4" = 1'-0"



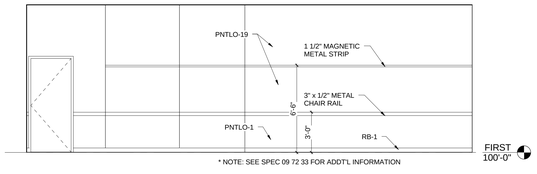
B4 Breakout D173 East Elevation
1/4" = 1'-0"



A1 Open Office D175 South Elevation
1/4" = 1'-0"



A2 Open Office D175 West Elevation
1/4" = 1'-0"



A4 Breakout D173 West Elevation
1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

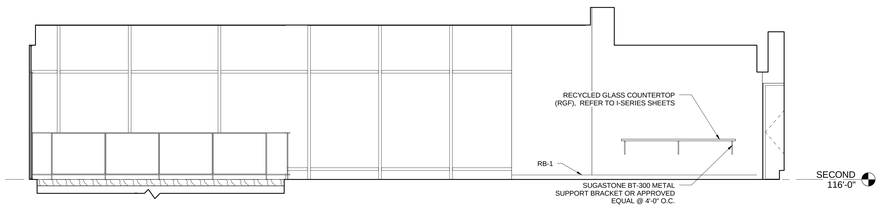
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-430	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

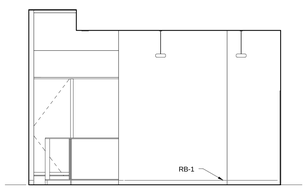
FACILITY DOCUMENT NUMBER J241-101- A-430 REV. NO.

C:\BV\002182-A-CENTRAL_ab+fp.rvt
7/8/2011 11:06:57 AM

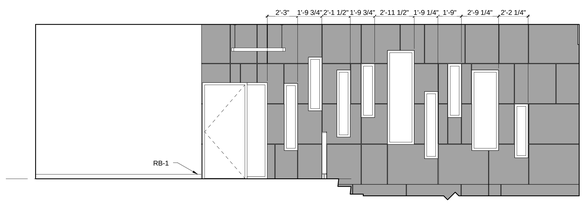
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



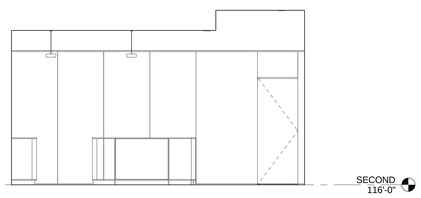
D1 Lobby D270 West Elevation
1/4" = 1'-0"



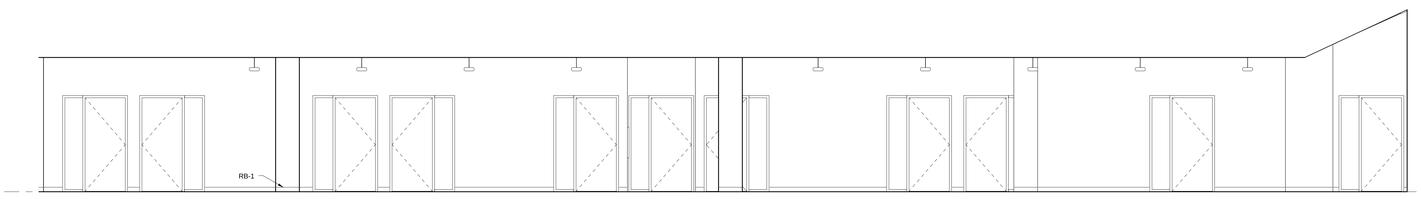
C1 Lobby D270 North Elevation
1/4" = 1'-0"



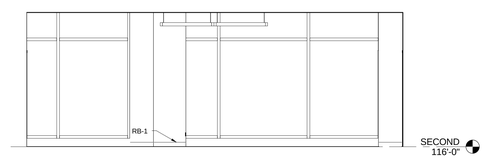
C2 Lobby D270 East Elevation
1/4" = 1'-0"



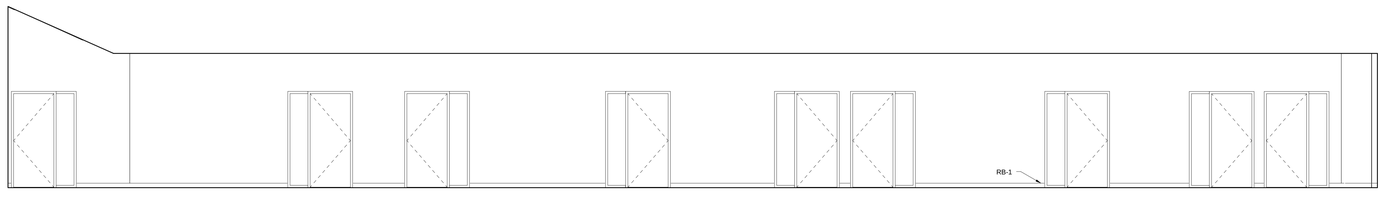
C3 Lobby D270 South Elevation
1/4" = 1'-0"



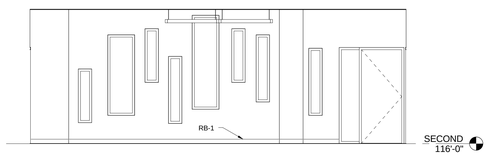
B1 Open Office D272 North Elevation
1/4" = 1'-0"



B2 Open Office D272 East Elevation
1/4" = 1'-0"



A1 Open Office D272 South Elevation
1/4" = 1'-0"



A2 Open Office D272 West Elevation
1/4" = 1'-0"

A-431

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR ELEVATIONS

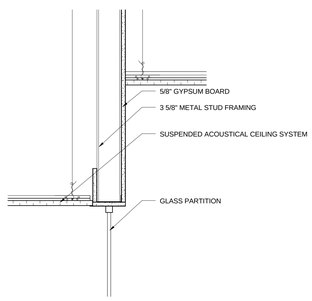
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-431	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-431
REV. NO.

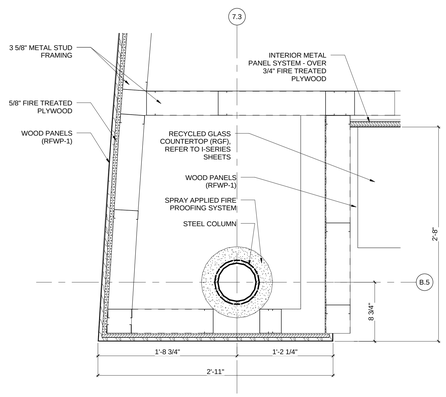
C:\BV700218\A-CENTRAL_ab+fp.rvt
7/8/2011 11:07:09 AM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

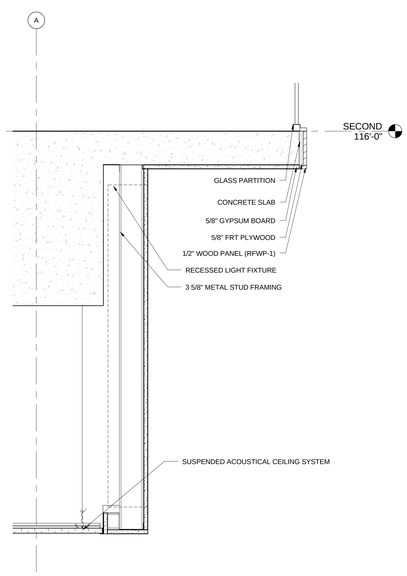
A-450



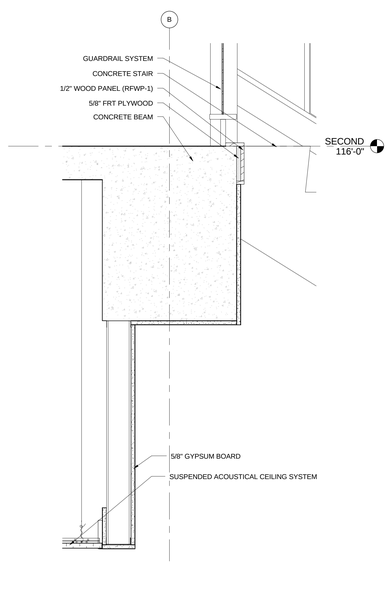
B1 CEILING DETAIL
1 1/2" = 1'-0"



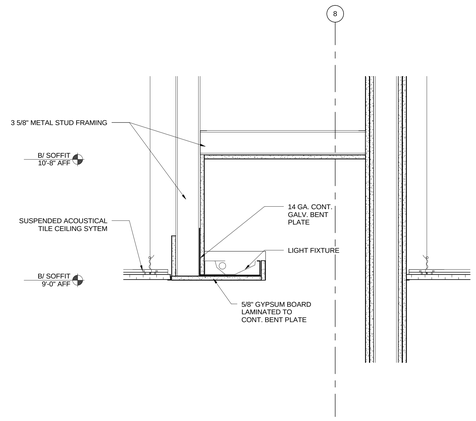
B2 PLAN DETAIL @ 7.3 & B.5
1 1/2" = 1'-0"



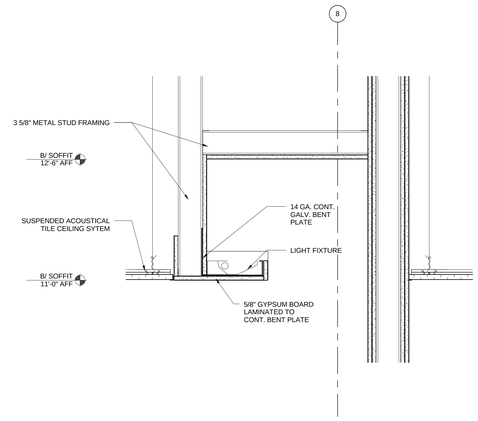
A1 CEILING DETAIL
1 1/2" = 1'-0"



A2 CEILING DETAIL
1 1/2" = 1'-0"



A3 CEILING DETAIL
1 1/2" = 1'-0"



A5 CEILING DETAIL
1 1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

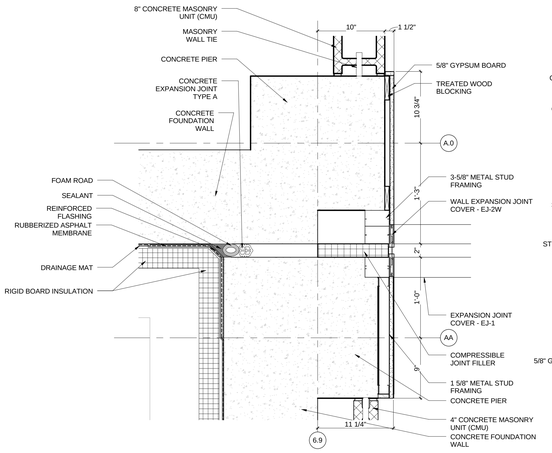
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR DETAILS

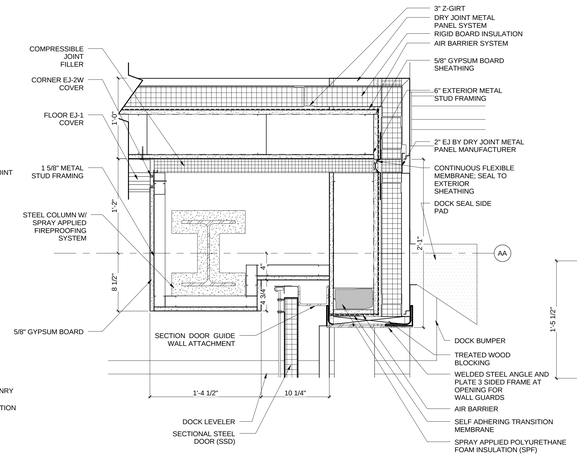
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-450	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-450 REV. NO.

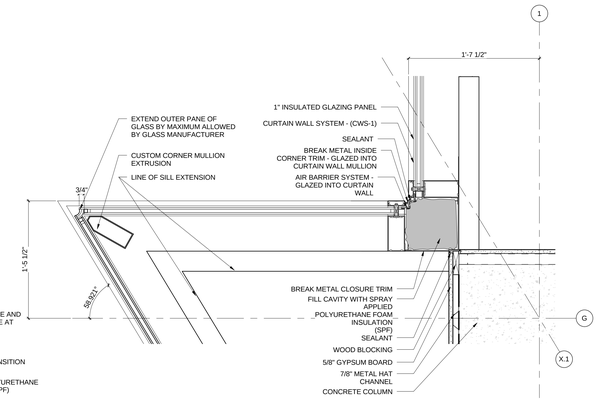
C:\BOY\002182-A-CENTRAL_sbrody.rvt
7/8/2011 11:07:19 AM



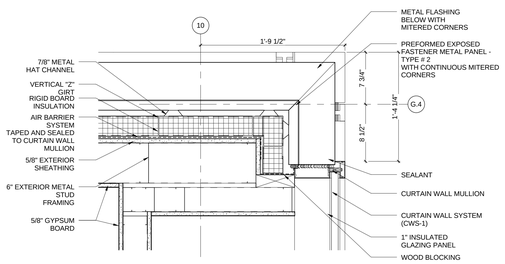
D1 EXPANSION JOINT DETAIL @ GROUND FLOOR
1 1/2" = 1'-0"



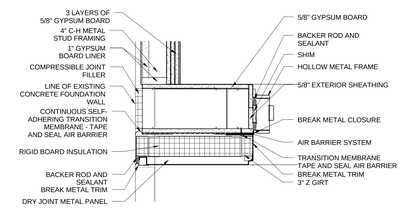
D2 GROUND FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



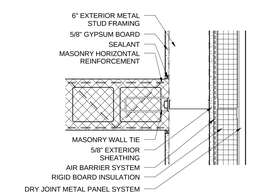
D3 PLAN DETAIL
1 1/2" = 1'-0"



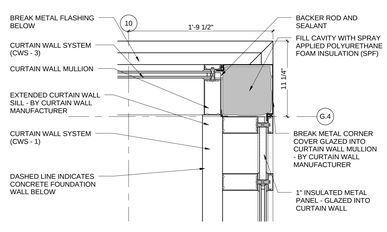
PLAN DETAIL (BASE PROPOSAL ONLY @ 12')



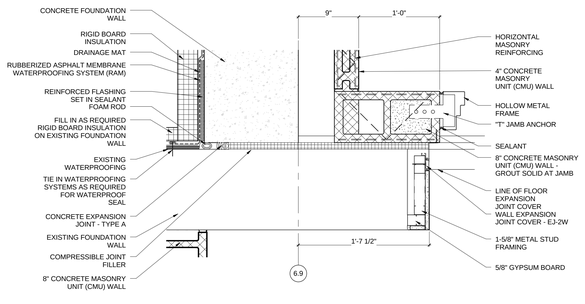
C2 PLAN DETAIL
1 1/2" = 1'-0"



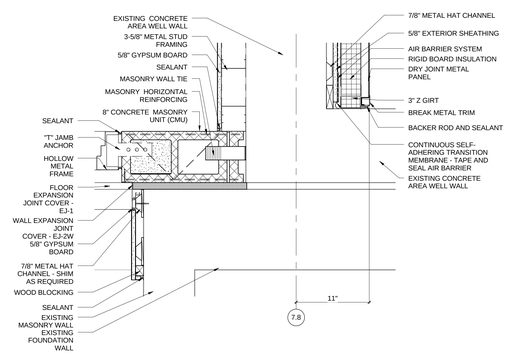
C4 GROUND FLOOR PLAN DETAIL
1 1/2" = 1'-0"



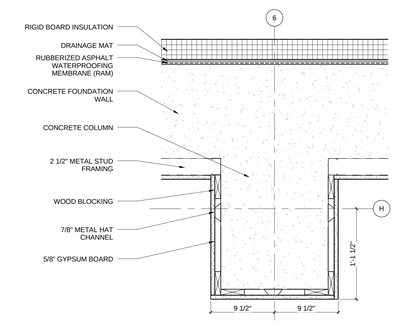
B1 FIRST FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



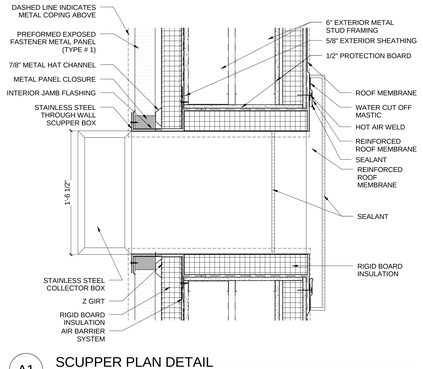
B2 EXPANSION JOINT @ EXISTING BUILDING
1 1/2" = 1'-0"



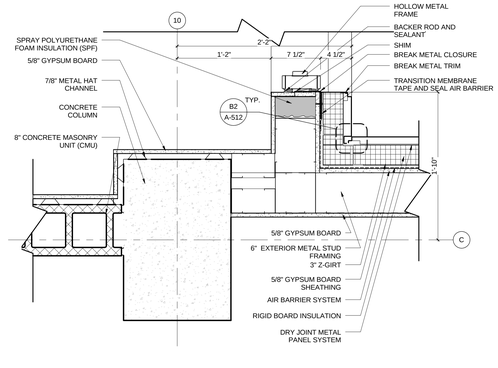
B3 EXPANSION JOINT @ AREA WELL
1 1/2" = 1'-0"



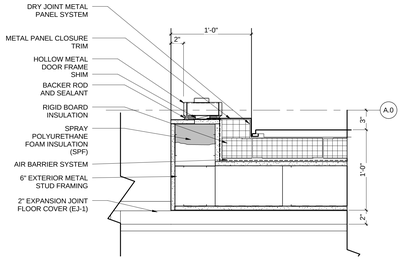
B4 GROUND FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



A1 SCUPPER PLAN DETAIL
1 1/2" = 1'-0"



A2 GROUND FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



A4 GROUND FLOOR - PLAN DETAIL
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-501

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

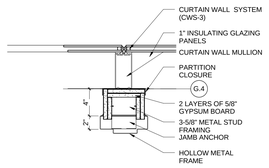
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

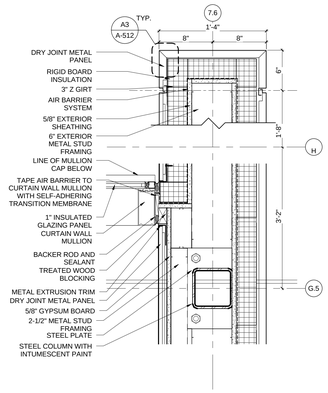
DESIGNED CURT PINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-501	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-501
REV. NO.

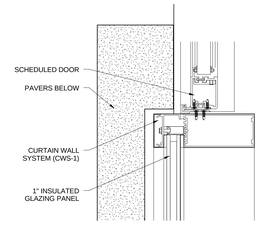
C:\PVTX\002182-A-CENTRAL_dwg\A-501
7/8/2011 11:07:38 AM



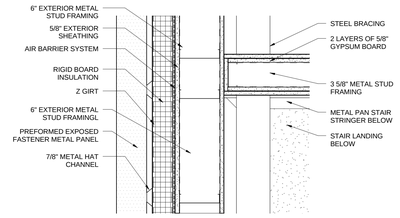
D2 FIRST FLOOR - JAMB DETAIL
1 1/2" = 1'-0"



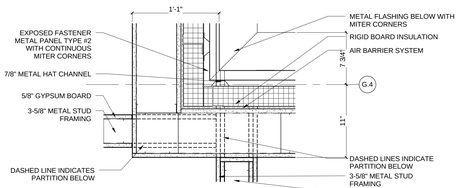
C2 PLAN DETAIL @ ENTRY VESTIBULE
1 1/2" = 1'-0"



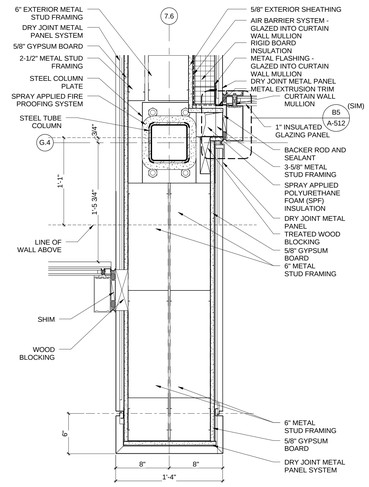
D4 PLAN DETAIL
3" = 1'-0"



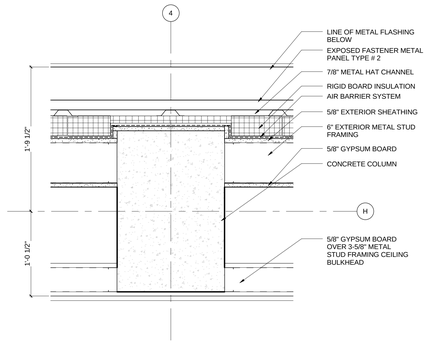
C4 PENTHOUSE PLAN DETAIL @ EAST STAIR
1 1/2" = 1'-0"



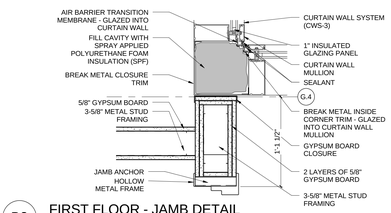
FIRST FLOOR - PLAN DETAIL @ 12'-0"



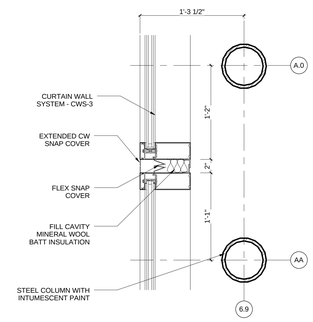
B4 PLAN DETAIL @ ENTRY VESTIBULE
1 1/2" = 1'-0"



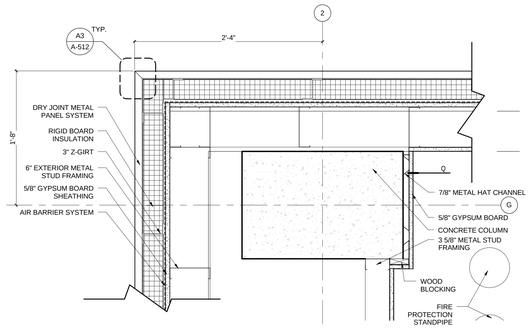
B1 PLAN DETAIL (BASE PROPOSAL ONLY @ 12')
1 1/2" = 1'-0"



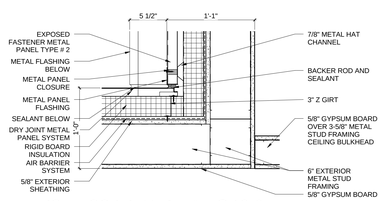
B2 FIRST FLOOR - JAMB DETAIL
1 1/2" = 1'-0"



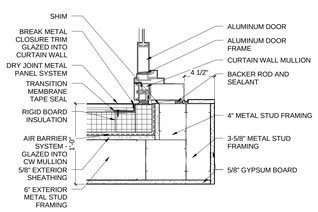
B3 PLAN DETAIL - @ CW EXPANSION JOINT
1 1/2" = 1'-0"



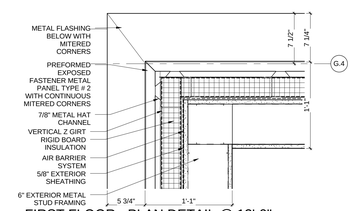
A1 PLAN DETAIL
1 1/2" = 1'-0"



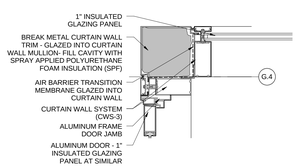
FIRST FLOOR PLAN DETAIL @ 12'-0"



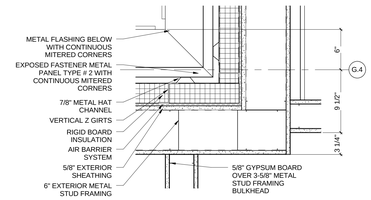
A2 FIRST FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



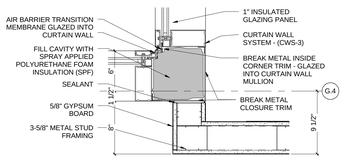
FIRST FLOOR - PLAN DETAIL @ 12'-0"



A3 FIRST FLOOR - PLAN DETAIL CW CORNER
1 1/2" = 1'-0"



FIRST FLOOR PLAN DETAIL @ 12' - 0"



A4 1ST PLAN DETAIL @ CW INSIDE CORNER
1 1/2" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-502

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

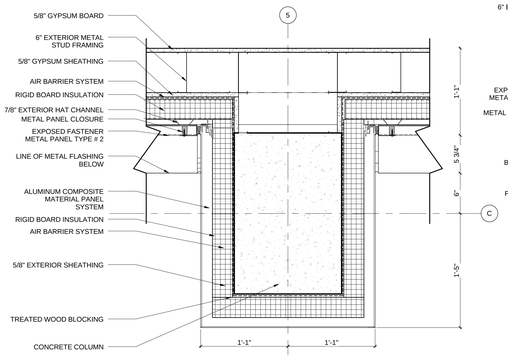
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

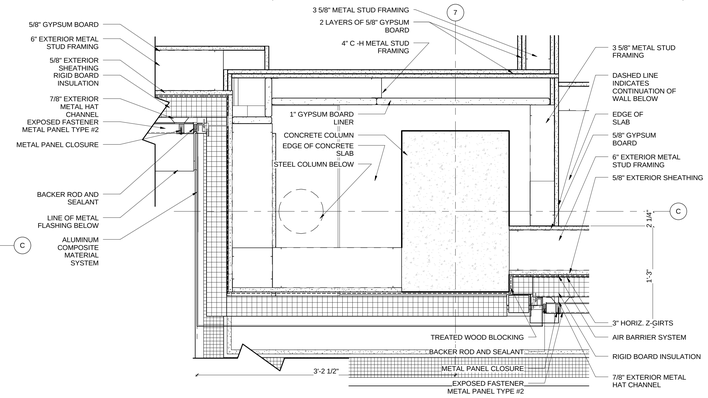
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-502	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-502
REV. NO.

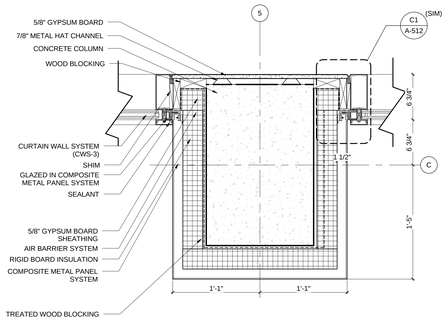
C:\R\70\0182-A-CENTRAL_ab\rfp.rvt
7/8/2011 11:07:59 AM



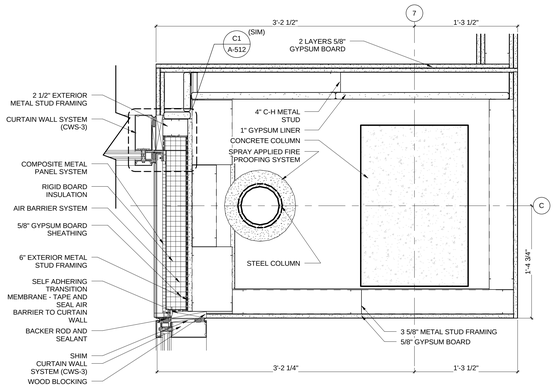
FIRST FLOOR PLAN DETAIL @ 12'-0"



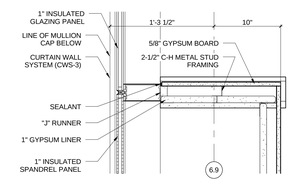
FIRST FLOOR PLAN DETAIL @ 12'-0"



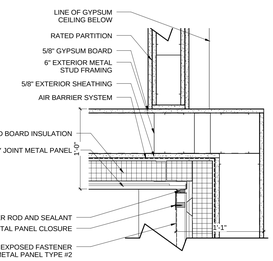
C1 FIRST FLOOR PLAN DETAIL
1 1/2" = 1'-0"



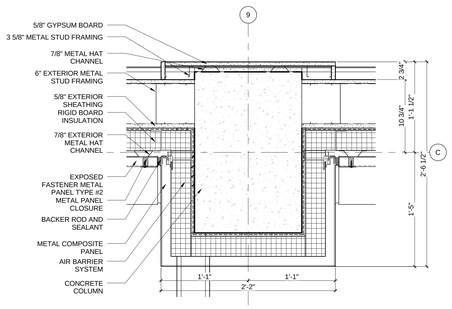
C2 PLAN DETAIL
1 1/2" = 1'-0"



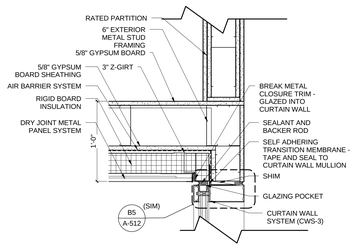
C3 FIRST FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



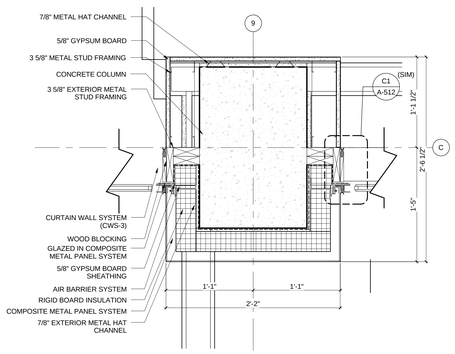
FIRST FLOOR - PLAN DETAIL @ 12'-0"



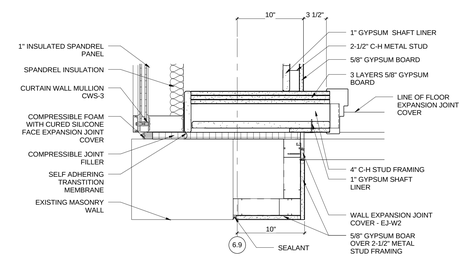
FIRST FLOOR - PLAN DETAIL @ 12'-0"



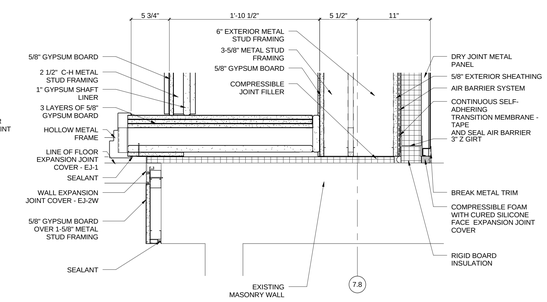
B3 FIRST FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



A1 PLAN DETAIL
1 1/2" = 1'-0"



A3 FIRST FLOOR - PLAN DETAIL
1 1/2" = 1'-0"



A4 FIRST FLOOR - PLAN DETAIL
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-503

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

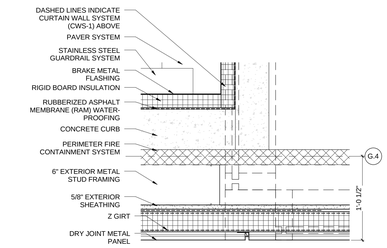
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

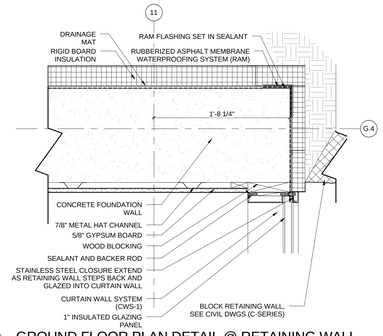
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-503	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-503
REV. NO.

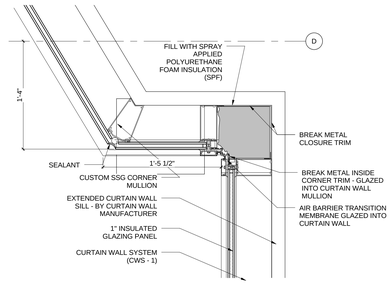
C:\DV7\000320.AE\CENTRAL_alerts.rvt
7/8/2011 11:08:17 AM



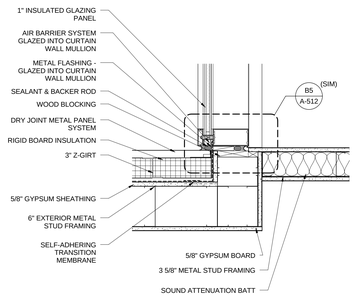
D1 PLAN DETAIL
1 1/2" = 1'-0"



D2 GROUND FLOOR PLAN DETAIL @ RETAINING WALL
1 1/2" = 1'-0"



D3 SECOND FLOOR PLAN DETAIL @ D
1 1/2" = 1'-0"

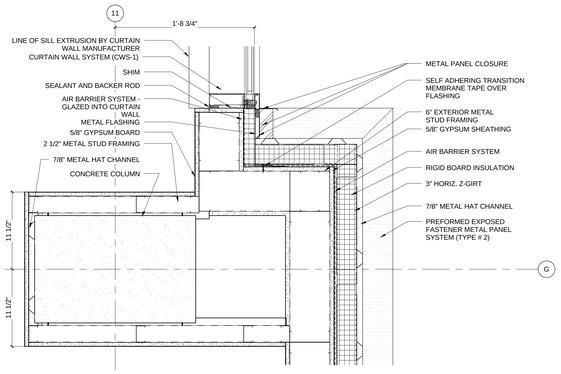


D4 SECOND FLOOR PLAN DETAIL - SOUTH OF D
1 1/2" = 1'-0"

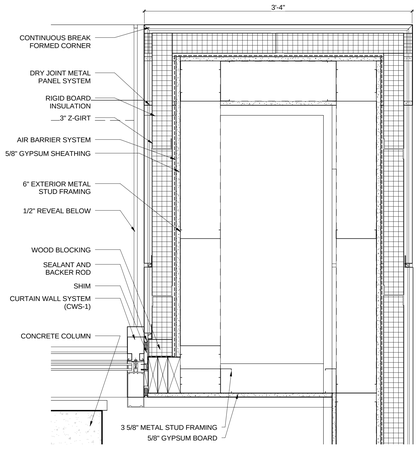
HDR

HDR Architecture, Inc.

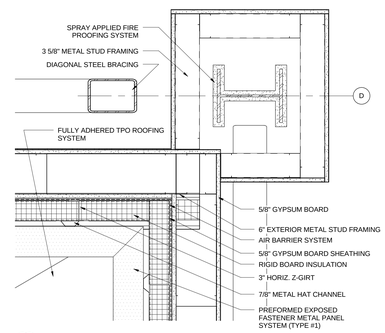
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



C1 EAST PLAN DETAIL @ 11 & G
1 1/2" = 1'-0"

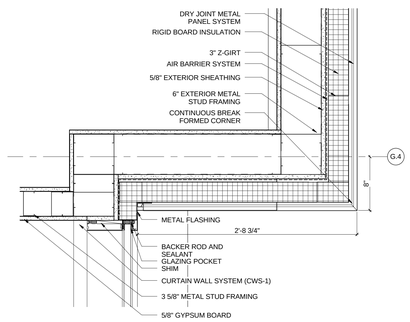


C3 SECOND FLOOR PLAN DETAIL @ 11 NORTH OF H
1 1/2" = 1'-0"

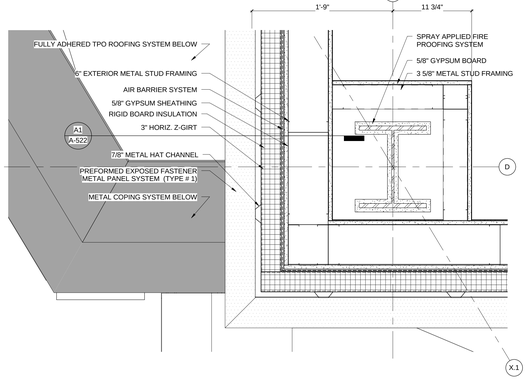


C4 PENTHOUSE PLAN DETAIL @ D
1 1/2" = 1'-0"

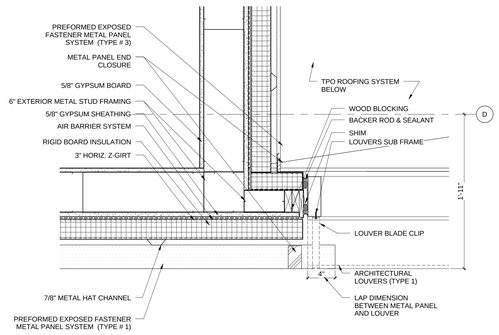
A-504



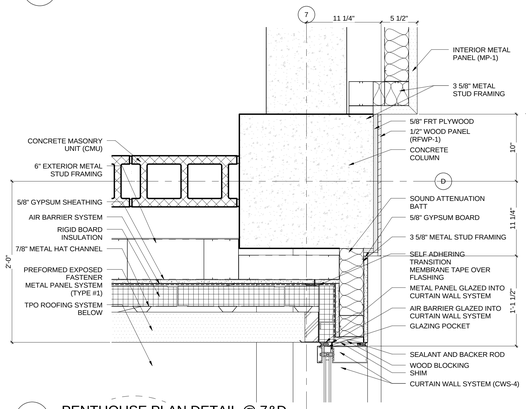
B1 EAST WALL PLAN DETAIL @ 11 NORTH OF G
1 1/2" = 1'-0"



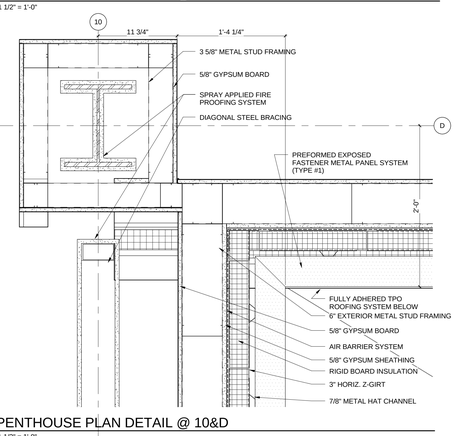
B2 PENTHOUSE PLAN DETAIL @ 2&D
1 1/2" = 1'-0"



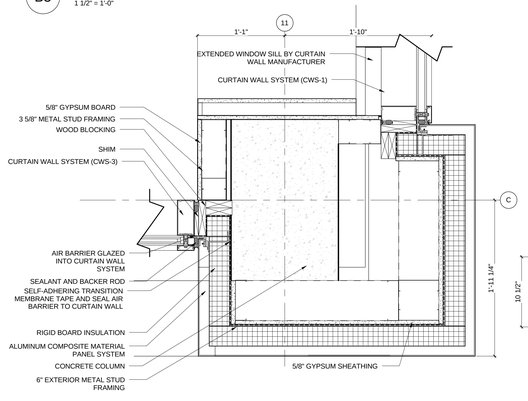
B3 PENTHOUSE LOUVER JAMB DETAIL
1 1/2" = 1'-0"



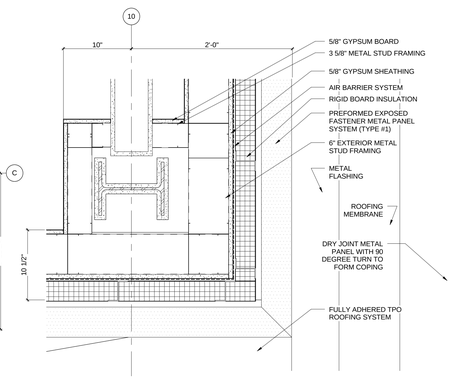
A1 PENTHOUSE PLAN DETAIL @ 7&D
1 1/2" = 1'-0"



A2 PENTHOUSE PLAN DETAIL @ 10&D
1 1/2" = 1'-0"



A3 FIRST FLOOR PLAN DETAIL @ 11&C
1 1/2" = 1'-0"



A4 PENTHOUSE FLOOR PLAN DETAIL @ 10
1 1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

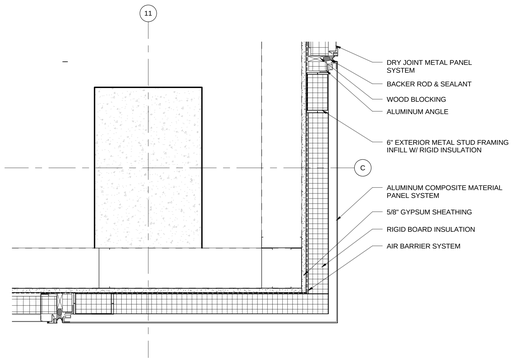
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

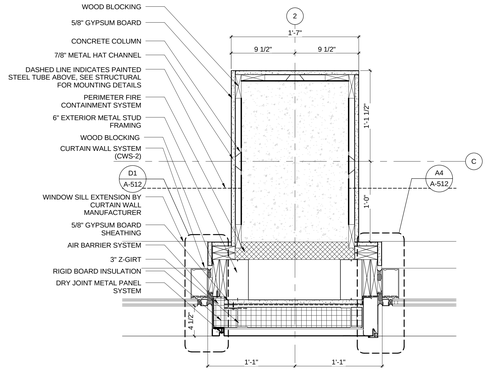
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-504	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-504
REV. NO.

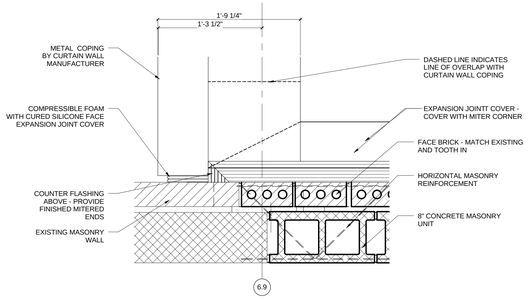
C:\PV70\002182-AE\CENTRAL_alvm9.rvt
7/8/2011 11:08:37 AM



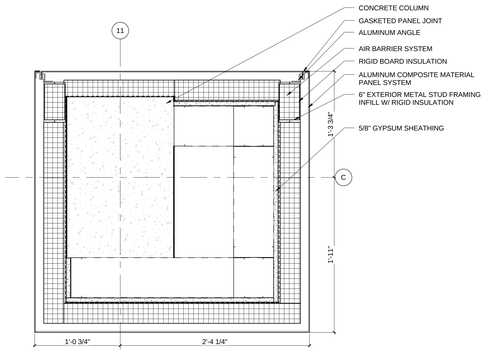
D1 PLAN DETAIL - 11&C @ 13'-6"
1 1/2" = 1'-0"



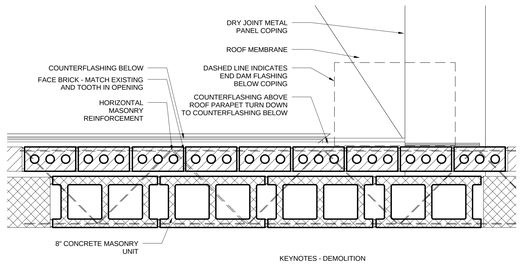
D2 SECOND FLOOR PLAN DETAIL @ 2&C
1 1/2" = 1'-0"



D3 PLAN DETAIL - CW COPING TERMINATION @ EXISTING 223
1 1/2" = 1'-0"



C1 GROUND FLOOR PLAN DETAIL @ 11 & C
1 1/2" = 1'-0"

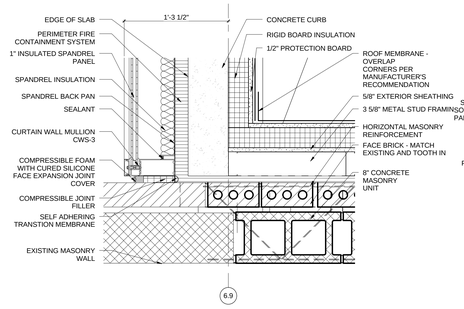


KEYNOTES - DEMOLITION

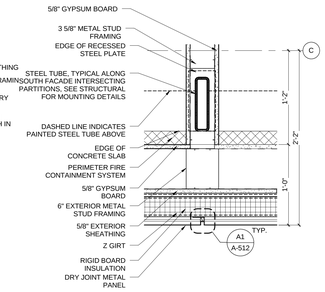
F REMOVE WINDOW AND FRAME.

G PATCH OPENING W/ MASONRY TO MATCH EXISTING.

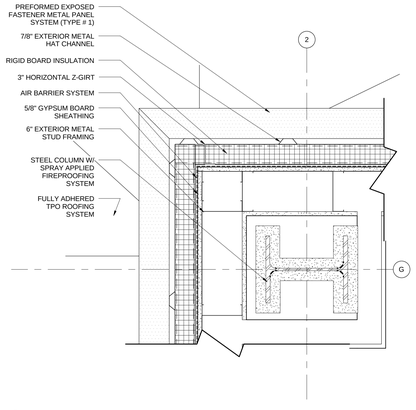
C2 PLAN DETAIL - EXISTING MASONRY INFILL
1 1/2" = 1'-0"



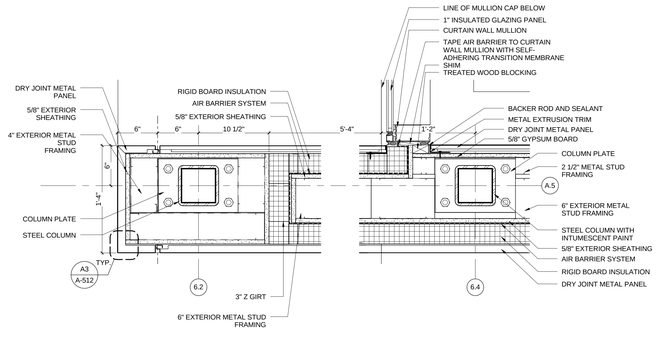
C3 PLAN DETAIL @ CURTAN WALL COPING
1 1/2" = 1'-0"



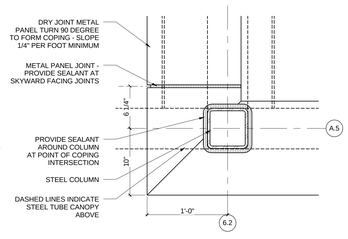
C4 TYPICAL PLAN DETAIL @ SOUTH OFFICE PARTITIONS
1 1/2" = 1'-0"



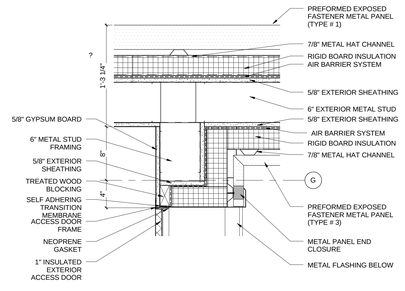
B1 PLAN DETAIL
1 1/2" = 1'-0"



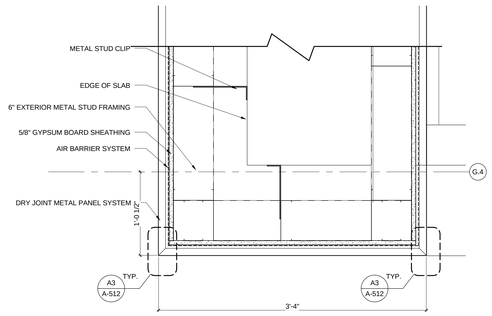
B2 WEST ENTRY VESTIBULE - COLUMN DETAIL
1 1/2" = 1'-0"



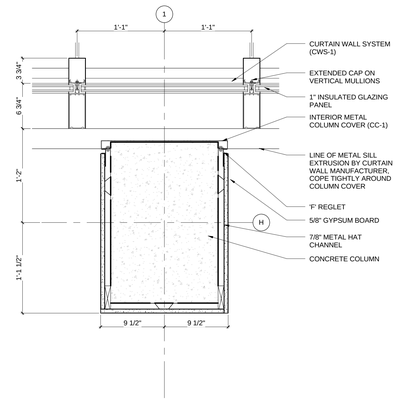
B3 PLAN DETAIL COPING DETAIL @ WEST ENTRY CANOPY
1 1/2" = 1'-0"



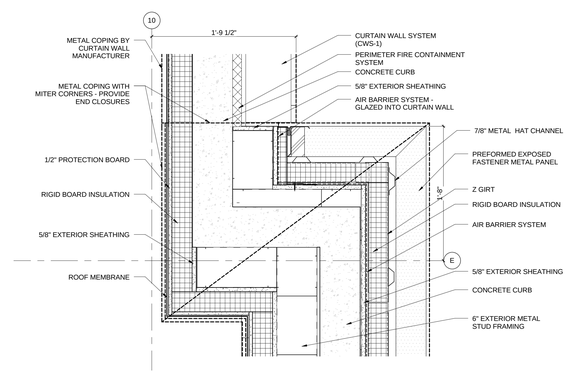
B4 PLENUM ACCESS DOOR JAMB
1 1/2" = 1'-0"



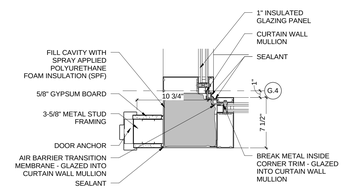
A1 PLAN DETAIL - END WALL @ WEST TERRACE
1 1/2" = 1'-0"



A2 2nd FLOOR PLAN DETAIL @ EXTENDED MULLION CAP
1 1/2" = 1'-0"



A3 EAST ROOF COPING PLAN DETAIL
1 1/2" = 1'-0"



A4 2ND & 3RD FLOOR PLAN DETAIL - CW INSIDE CORNER
1 1/2" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-505

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

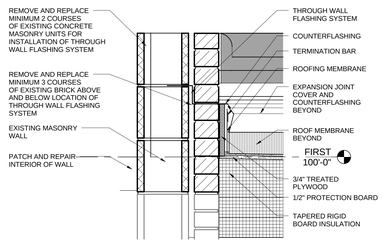
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-505	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

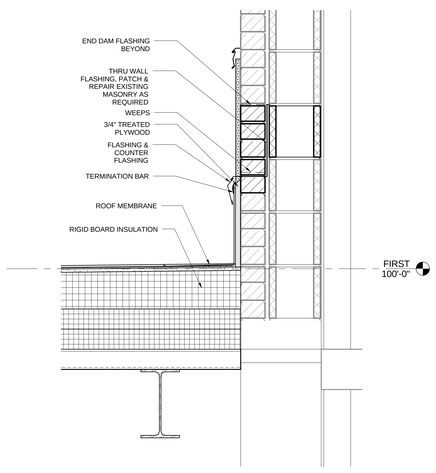
FACILITY DOCUMENT NUMBER: J241-101- A-505
REV. NO.

C:\BV70\02182-A-CENTRAL_sheb.rvt
7/8/2011 11:09:50 AM

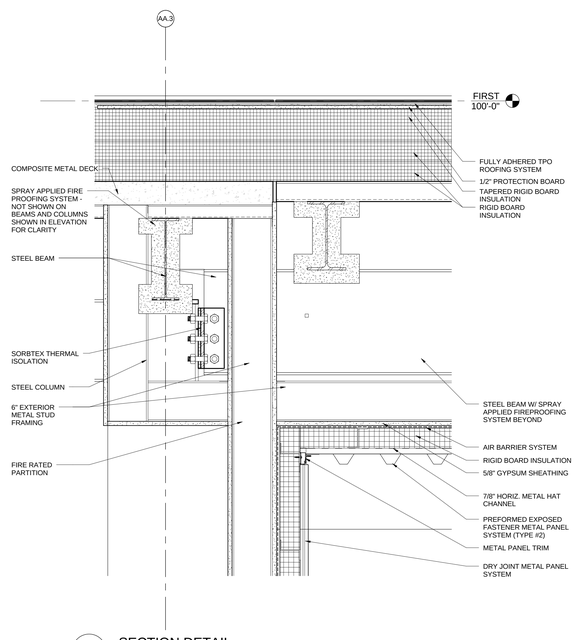
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



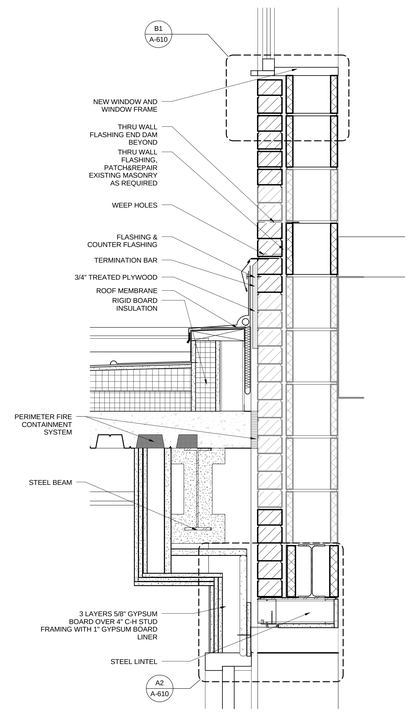
D1 SECTION DETAIL - COUNTERFLASHING @ EXISTING
1 1/2" = 1'-0"



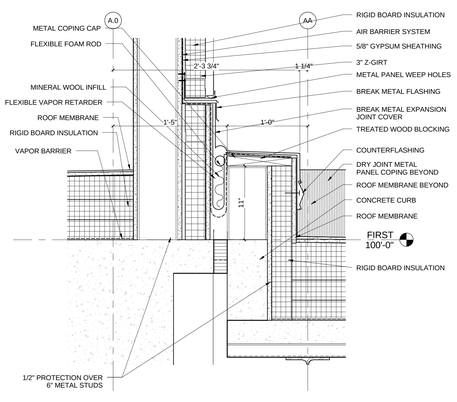
B1 SECTION DETAIL
1 1/2" = 1'-0"



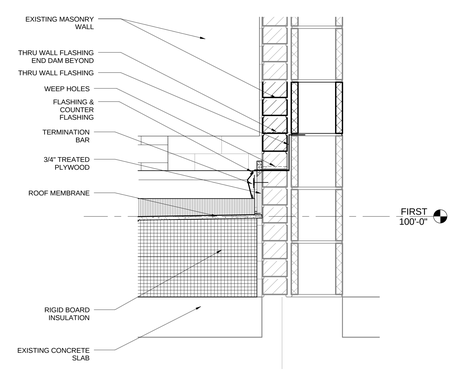
B2 SECTION DETAIL
1 1/2" = 1'-0"



B3 SECTION DETAIL
1 1/2" = 1'-0"



A1 SECTION DETAIL - ROOF EXPANSION JOINT @ LOADING DOCK
1 1/2" = 1'-0"



A3 SECTION DETAIL
1 1/2" = 1'-0"

A-510

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

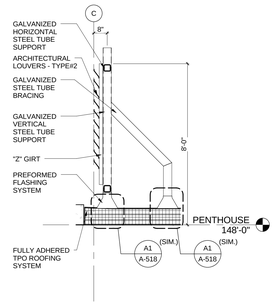
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

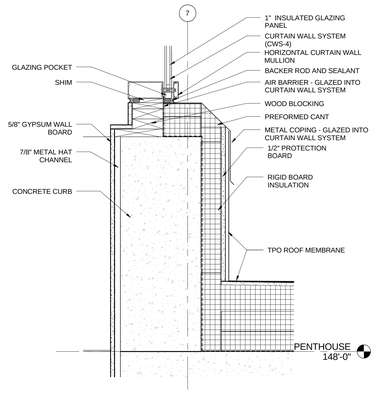
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-510	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-510
REV. NO.

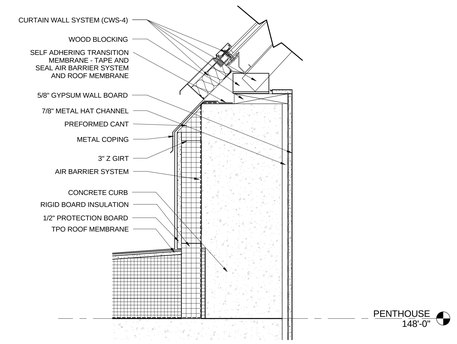
C:\DV70023\D-A-CENTRAL_sheb.rvt
7/8/2011 11:09:10 AM



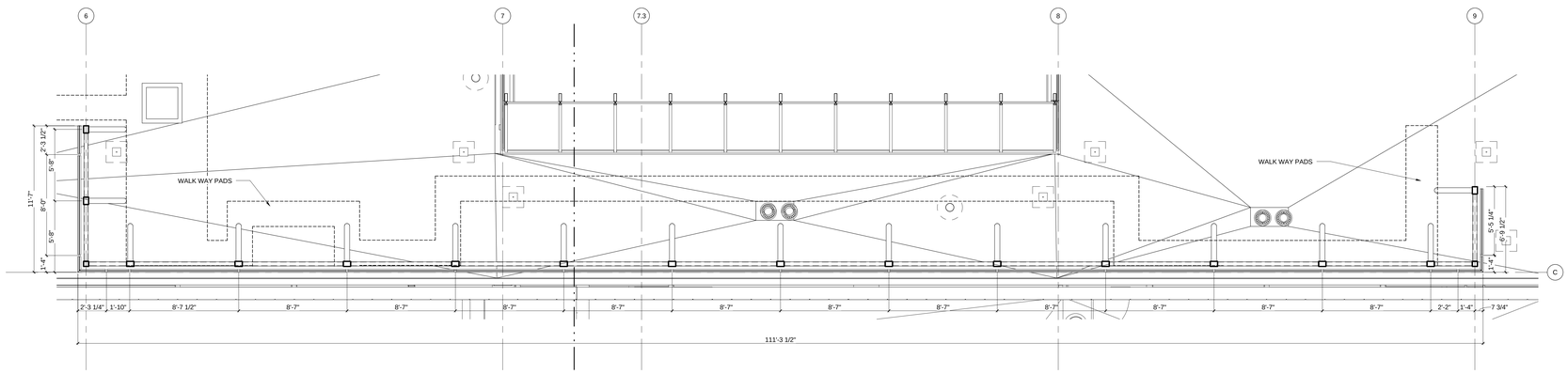
D1 SCREEN WALL SECTION
3/8" = 1'-0"



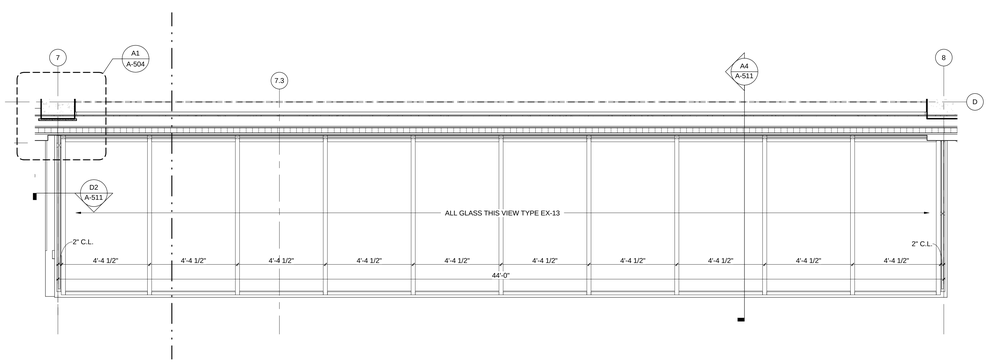
D2 SKYLIGHT E/W SECTION
1 1/2" = 1'-0"



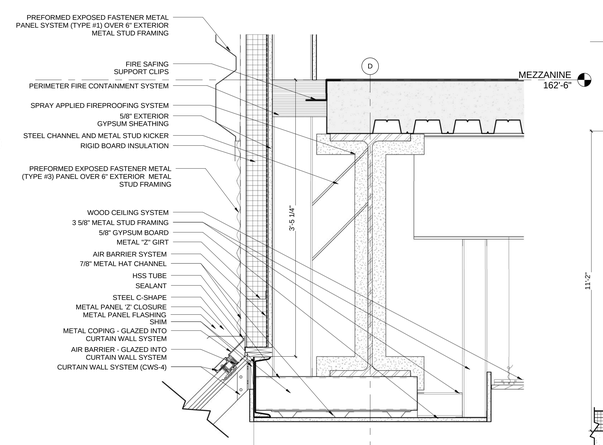
D3 SKYLIGHT E/W SILL
1 1/2" = 1'-0"



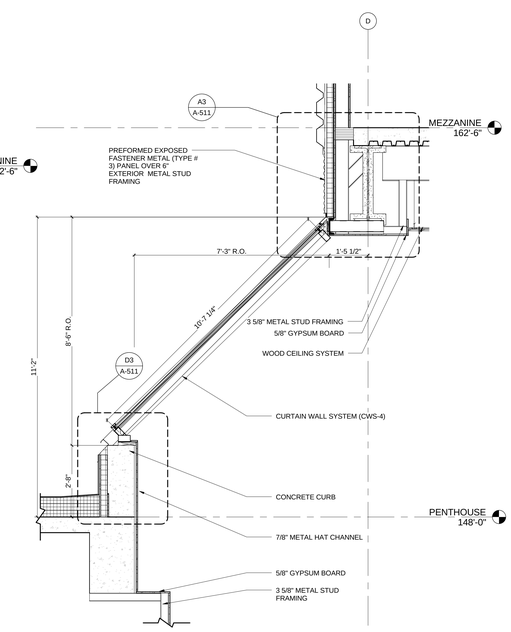
B1 ENLARGED PLAN - LOUVER SCREEN
1/4" = 1'-0"



A1 SKYLIGHT ENLARGED PLAN
3/8" = 1'-0"



A3 SKYLIGHT HEAD DETAIL
1 1/2" = 1'-0"



A4 SKYLIGHT N/S SECTION
1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-511

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ISSUED FOR CPR #001			06/03/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

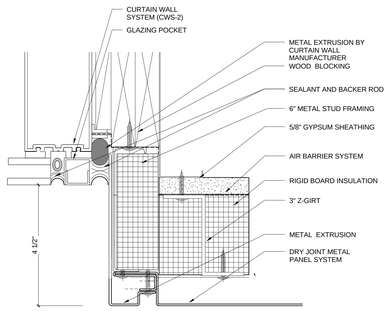
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
EXTERIOR DETAILS

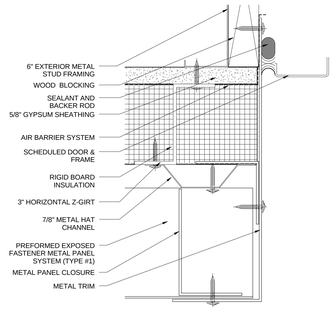
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-511	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-511 REV. NO.

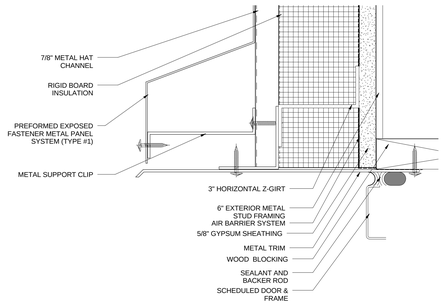
C:\R\70\0182-A-CENTRAL_ab\rfp\A1
7/8/2011 11:09:29 AM



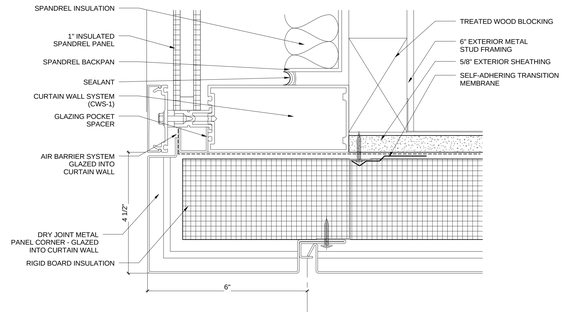
D1 DETAIL
6" = 1'-0"



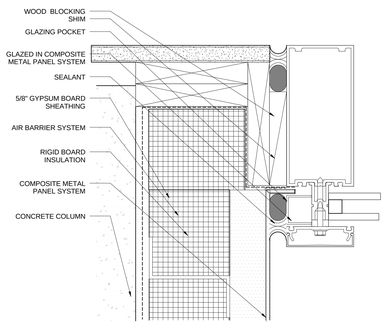
D2 DETAIL
6" = 1'-0"



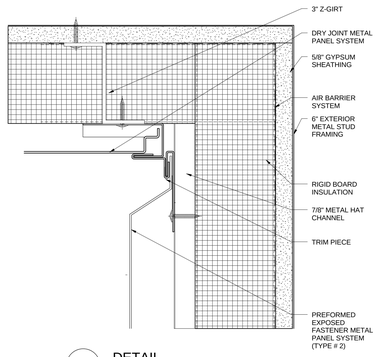
D3 DETAIL
6" = 1'-0"



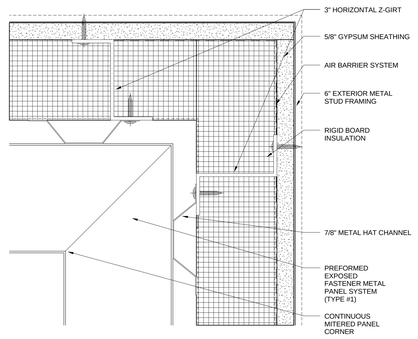
D4 DETAIL
6" = 1'-0"



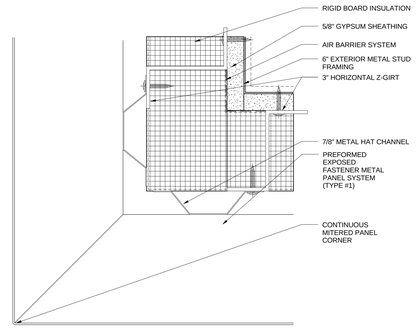
C1 DETAIL
6" = 1'-0"



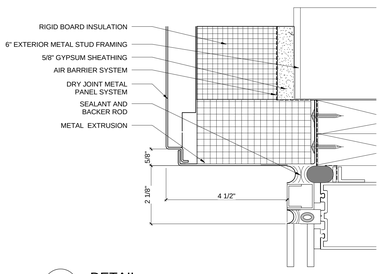
C3 DETAIL
6" = 1'-0"



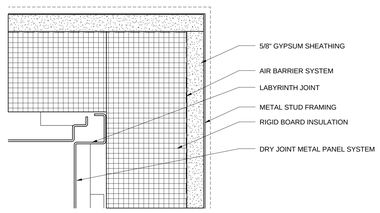
C4 DETAIL
6" = 1'-0"



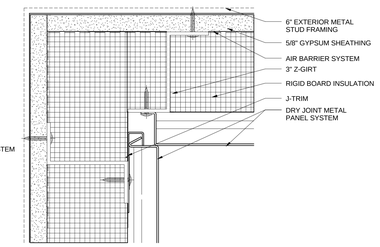
C5 DETAIL
6" = 1'-0"



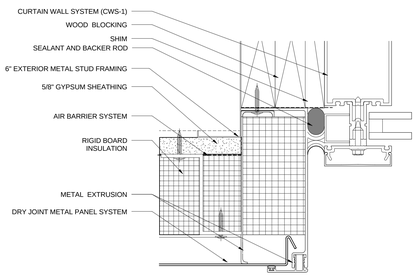
B1 DETAIL
6" = 1'-0"



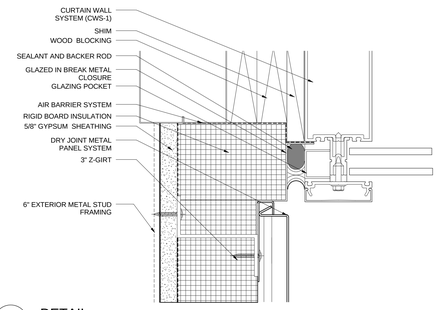
B2 DETAIL
6" = 1'-0"



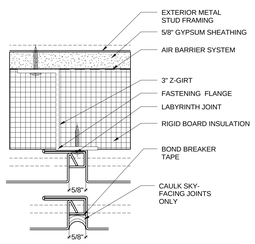
B3 DETAIL
6" = 1'-0"



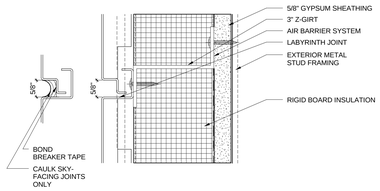
B4 DETAIL
6" = 1'-0"



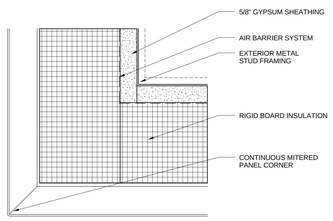
B5 DETAIL
6" = 1'-0"



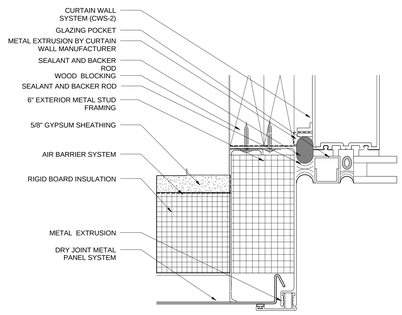
A1 DETAIL
6" = 1'-0"



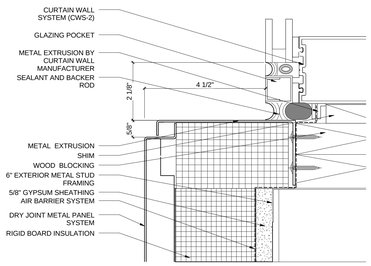
A2 DETAIL
6" = 1'-0"



A3 DETAIL
6" = 1'-0"



A4 DETAIL
6" = 1'-0"



A5 DETAIL
6" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-512

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

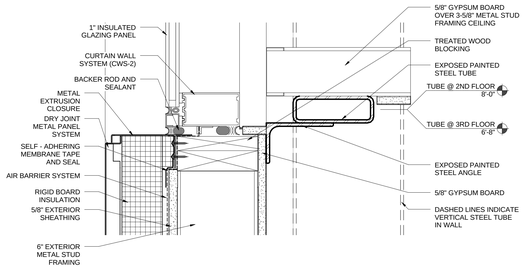
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

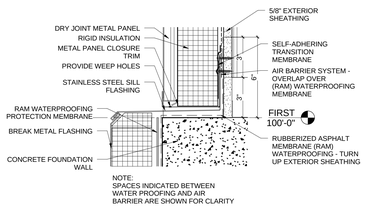
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-512	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-512
REV. NO.

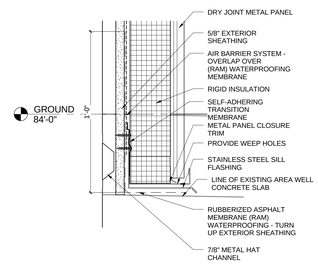
C:\R\TX0218S-A-CENTRAL_ab\fb.txt
7/8/2011 11:09:37 AM



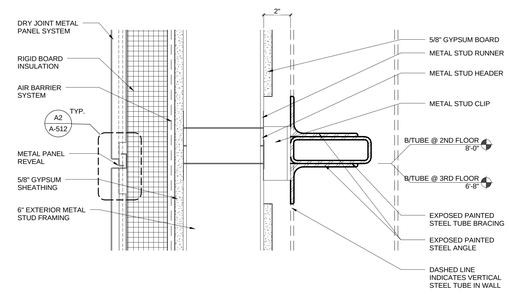
D1 SECTION DETAIL - CW SILL - CW OVER PANEL @ BRACING
3" = 1'-0"



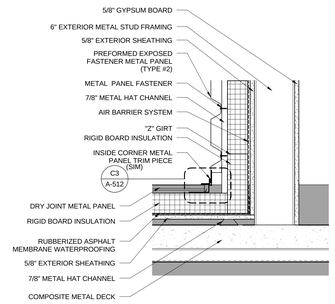
C1 SECTION DETAIL - WATERPROOFING TERMINATION @ METAL PANEL
3" = 1'-0"



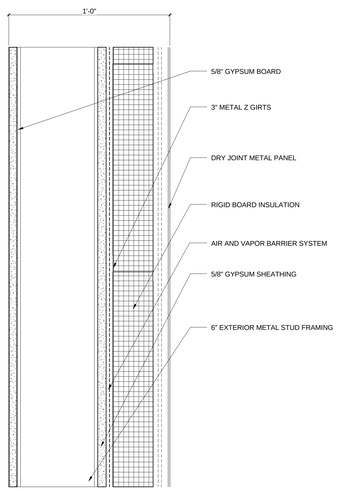
C2 SECTION DETAIL - WATERPROOFING @ EXIST. AREA WELL
3" = 1'-0"



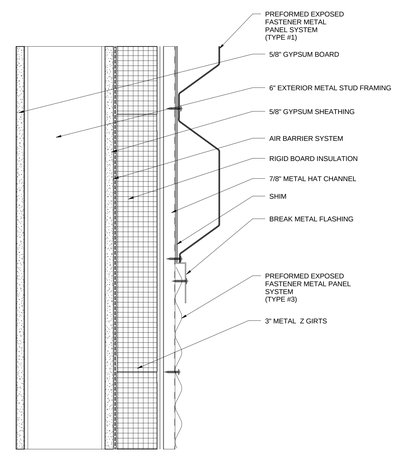
C3 SECTION DETAIL - PANEL TO PANEL @ BRACING
3" = 1'-0"



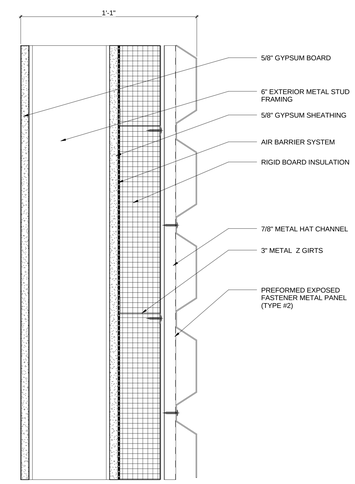
C4 SECTION DETAIL - WALL BASE ABOVE ENTRY
1 1/2" = 1'-0"



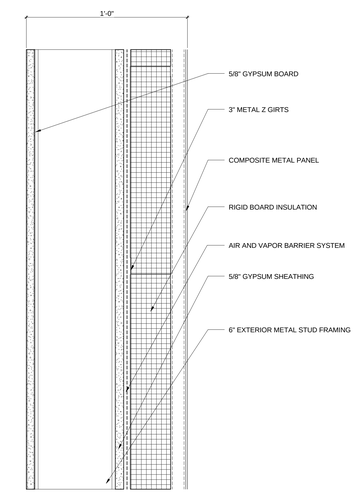
B1 SYSTEM DETAIL - DRY JOINT METAL PANEL
3" = 1'-0"



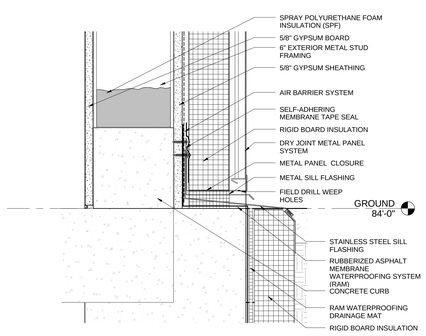
B2 SYSTEM DETAIL - INTERFACE OF TYPE #1 AND TYPE #3
3" = 1'-0"



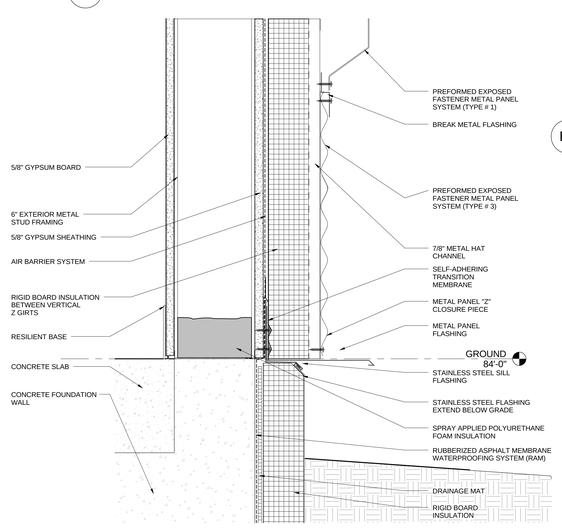
B3 SYSTEM DETAIL -PREFORMED METAL PANEL TYP #2
3" = 1'-0"



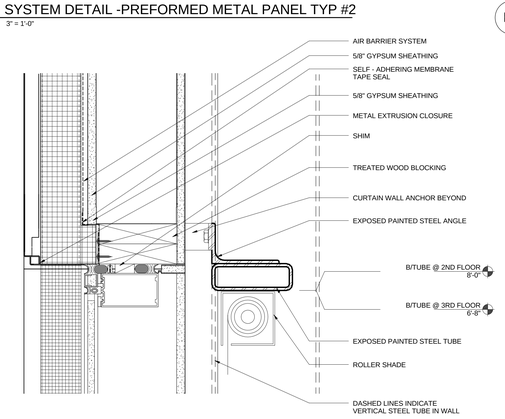
B4 SYSTEM DETAIL - COMPOSITE METAL PANEL
3" = 1'-0"



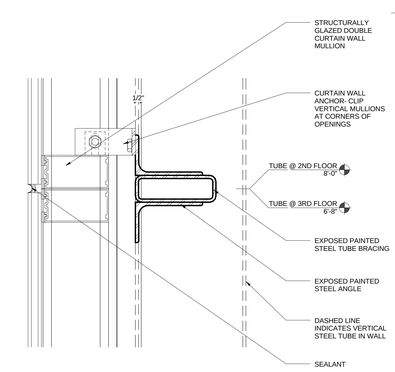
A1 METAL PANEL - BASE DETAIL
3" = 1'-0"



A2 PREFORMED METAL PANEL TYPE #1 BASE
3" = 1'-0"



A3 SECTION DETAIL - PANEL OVER CW @ BRACING
3" = 1'-0"



A4 SECTION DETAIL - CW TO CW @ BRACING
3" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-513

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

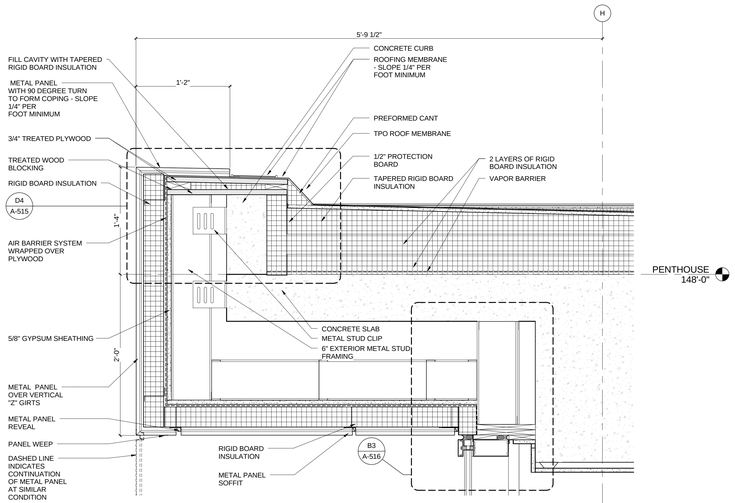
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION - SYSTEM DETAILS

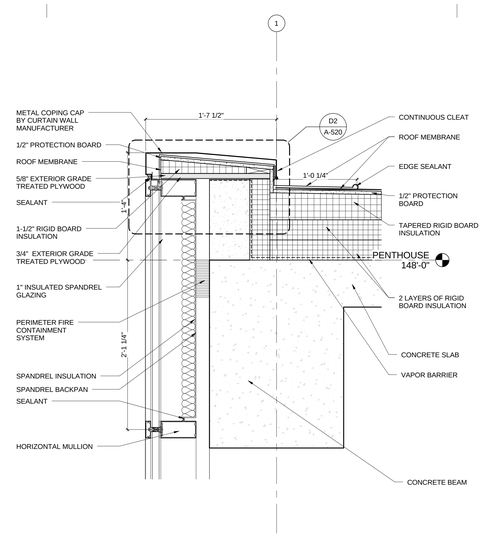
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-513	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-513 REV. NO.

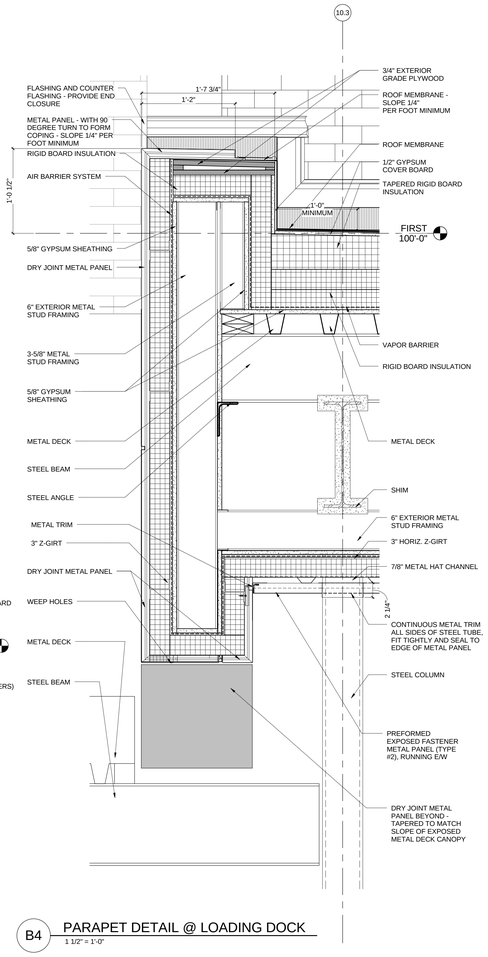
C:\PCI\T002182-ALCENTRAL_dmfy.rvt
7/6/2011 11:09:50 AM

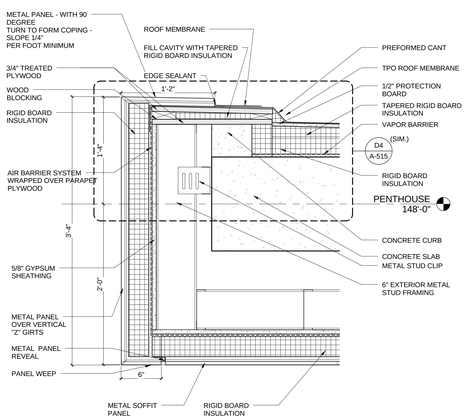


D1 SECTION DETAIL - ROOF EDGE @ NORTH OVERHANG
1 1/2" = 1'-0"

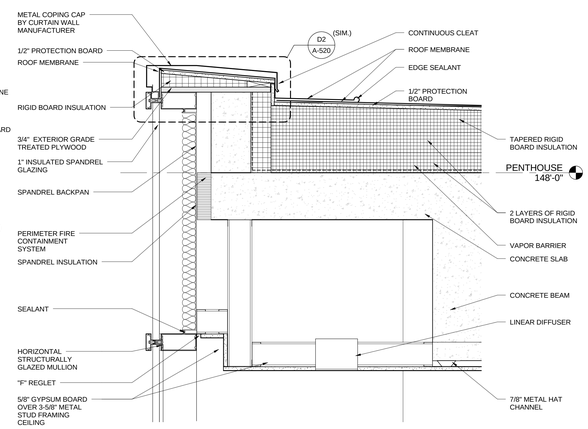


D2 SECTION DETAIL - CW ROOF EDGE
1 1/2" = 1'-0"

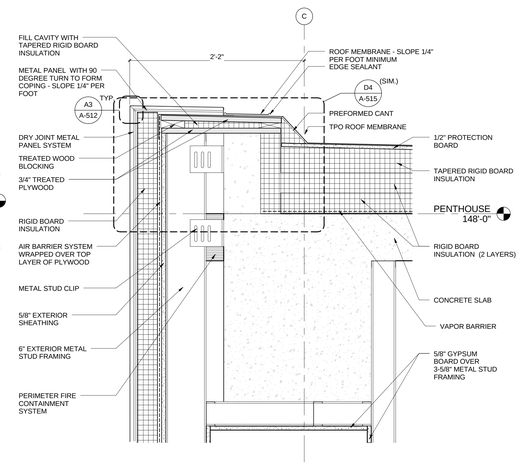




B1 ROOF EDGE DETAIL @ WEST TERRACE AND ENTRY VESTIBULE
1 1/2" = 1'-0"

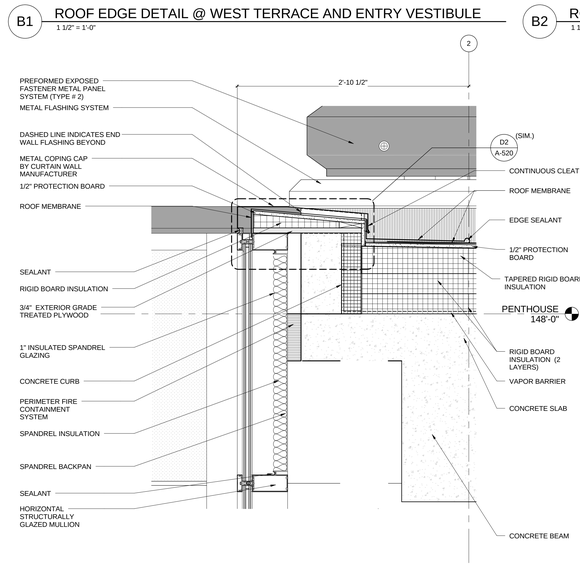


B2 ROOF EDGE DETAIL @ WEST CURTAIN WALL
1 1/2" = 1'-0"

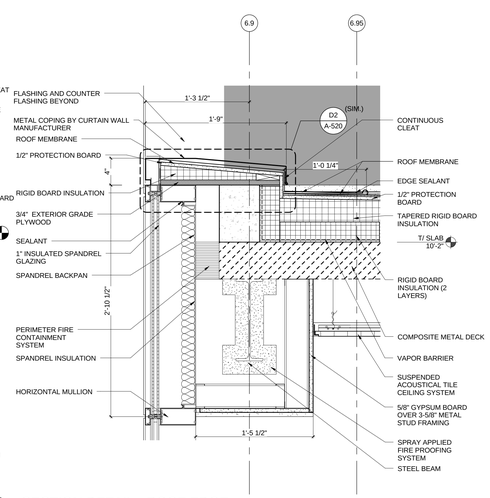


B3 SECTION DETAIL - ROOF EDGE
1 1/2" = 1'-0"

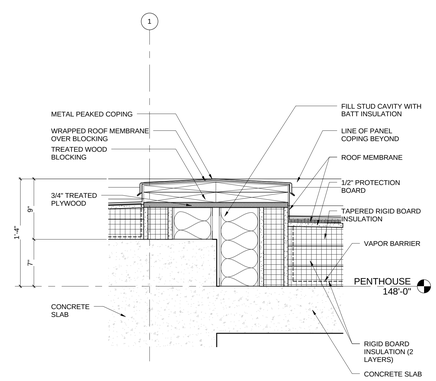
B4 PARAPET DETAIL @ LOADING DOCK
1 1/2" = 1'-0"



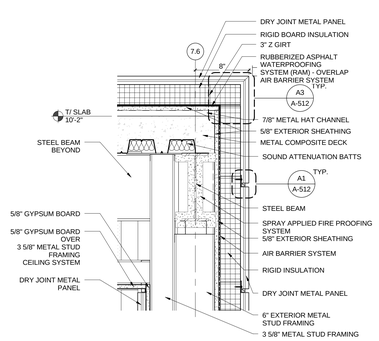
A1 ROOF EDGE DETAIL @ SOUTHWEST CORNER
1 1/2" = 1'-0"



A2 SECTION DETAIL - ROOF EDGE
1 1/2" = 1'-0"



A3 ROOF TRANSITION DETAIL
1 1/2" = 1'-0"



A4 ENTRY VESTIBULE ROOF EDGE
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-514

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

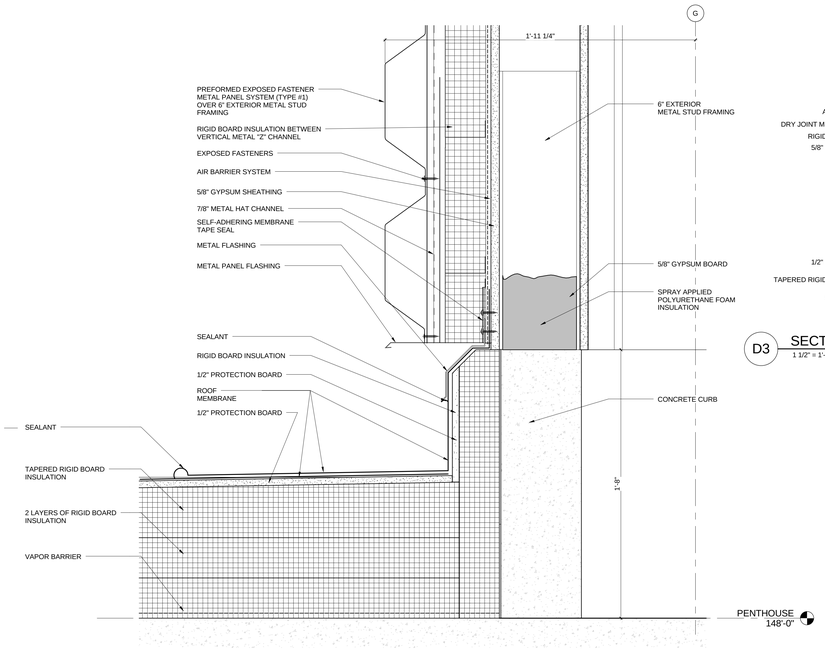
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION - DETAILS

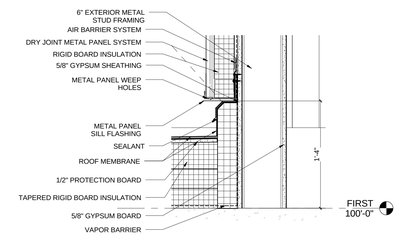
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-514	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- A-514** REV. NO.

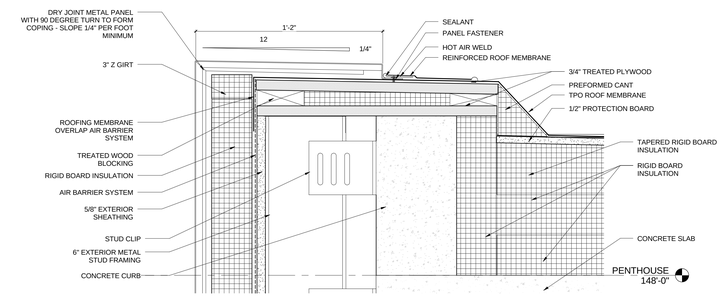
C:\BV700\235-A-CENTRAL_ainrdy.rvt
7/8/2011 11:10:05 AM



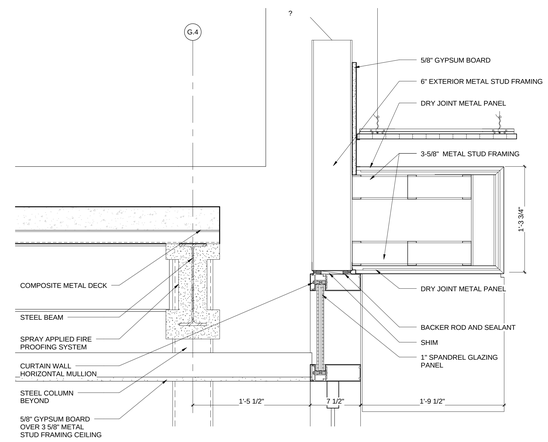
C1 WALL BASE DETAIL @ PENTHOUSE
3" = 1'-0"



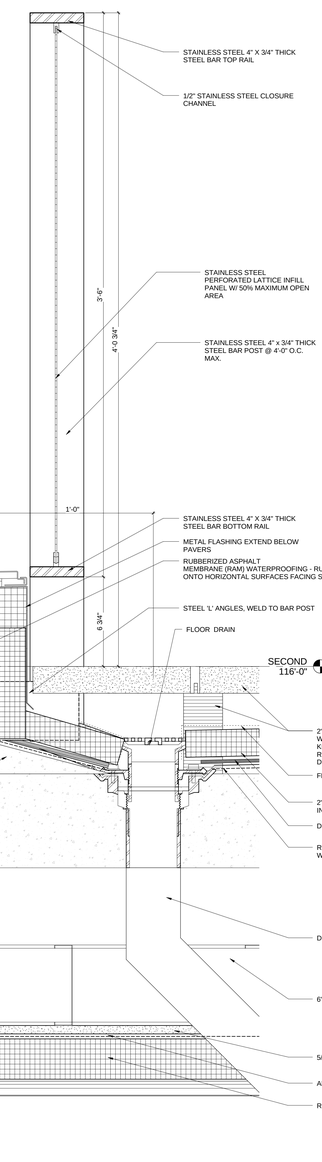
D3 SECTION DETAIL - ROOF TERMINATION @ METAL PANEL
1 1/2" = 1'-0"

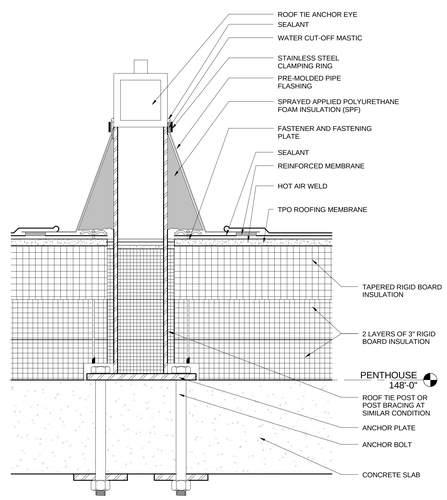


D4 ENLARGED METAL PANEL COPING DETAIL
3" = 1'-0"

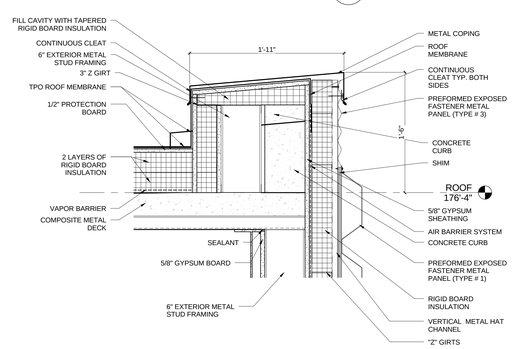


C2 SECTION DETAIL - WALL BASE OVER ENTRY VESTIBULE
1 1/2" = 1'-0"

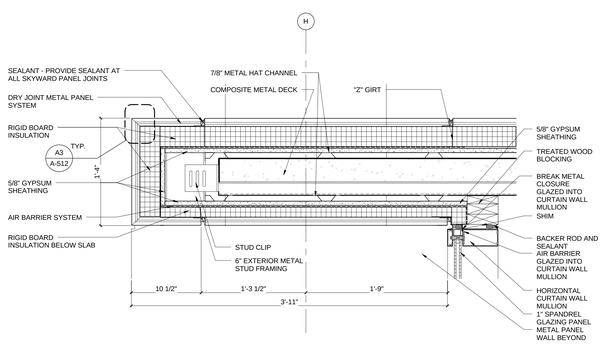




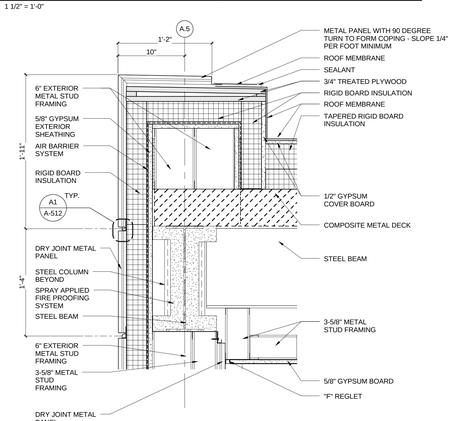
B1 SECTION DETAIL - SAFETY TIE BACK
3" = 1'-0"



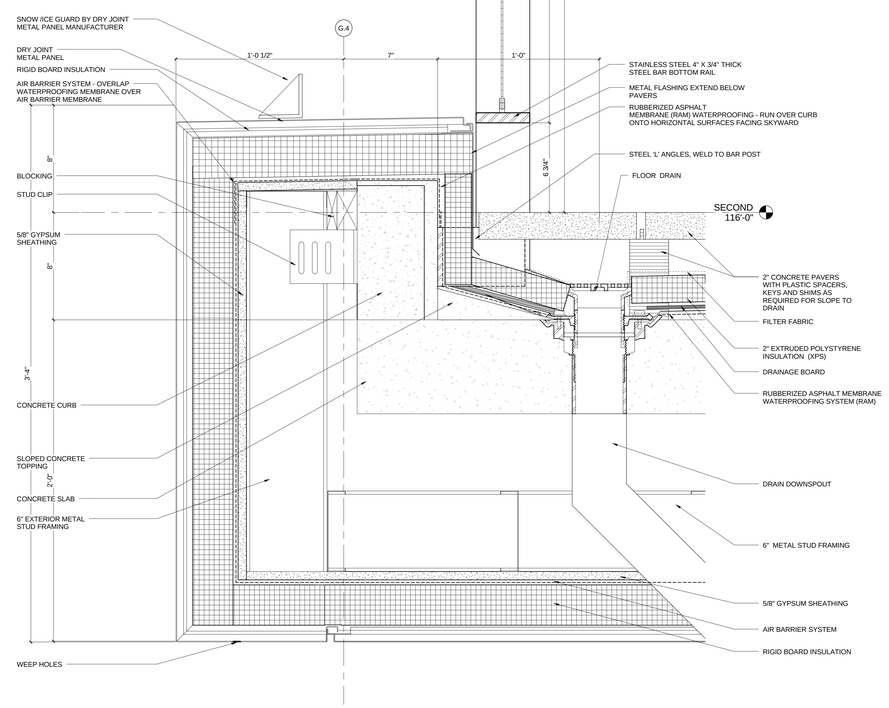
B2 SECTION DETAIL - ROOF EDGE @ EAST SIDE OF PENTHOUSE
1 1/2" = 1'-0"



A1 SECTION DETAIL - ROOF EDGE @ ENTRY VESTIBULE
1 1/2" = 1'-0"



A2 SECTION DETAIL - ROOF EDGE @ WEST VESTIBULE
1 1/2" = 1'-0"



A3 FLOOR DRAIN DETAIL @ PAVERS
3" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-515

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

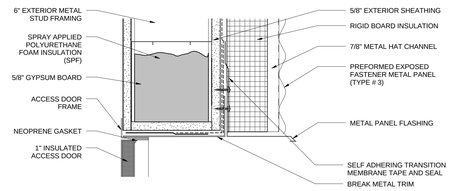
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION - DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-515	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

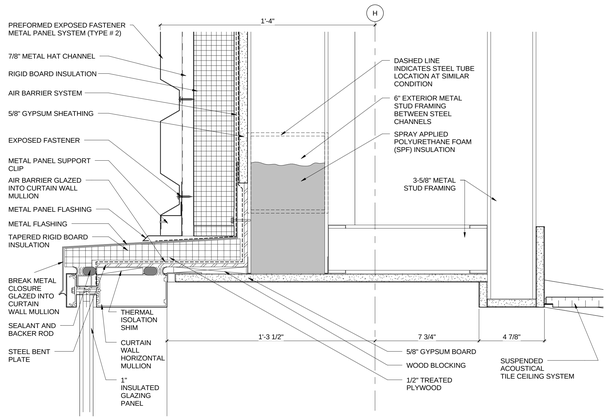
FACILITY DOCUMENT NUMBER: J241-101- A-515 REV. NO.

C:\PW700195\A-CENTRAL_ajwdy.rvt
7/8/2011 11:01:19 AM

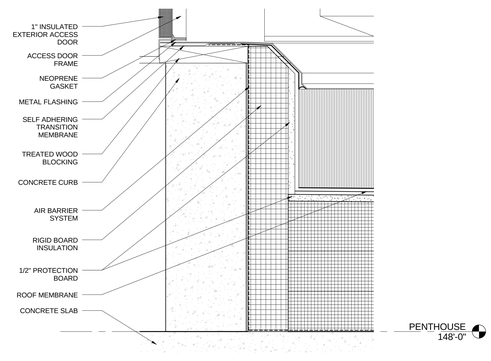


D2 SECTION DETAIL - PLENUM ACCESS DOOR HEAD
3" = 1'-0"

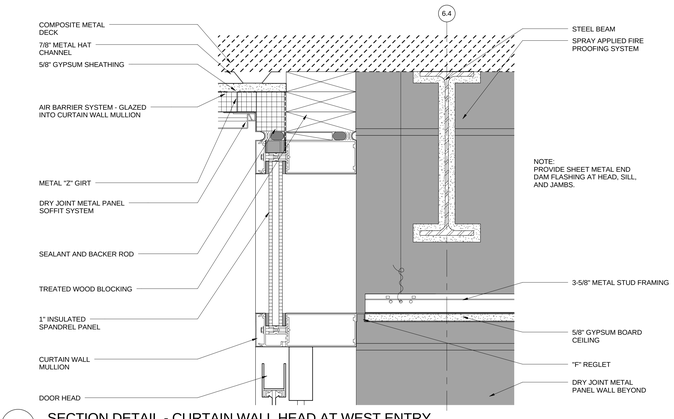
HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



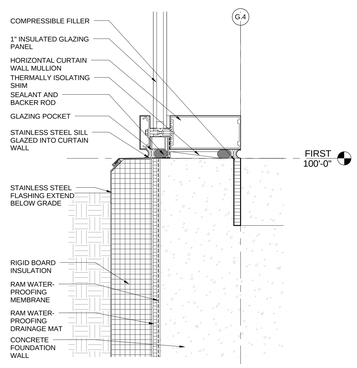
C1 CURTAIN WALL - HEAD DETAIL @FIRST FLOOR
3" = 1'-0"



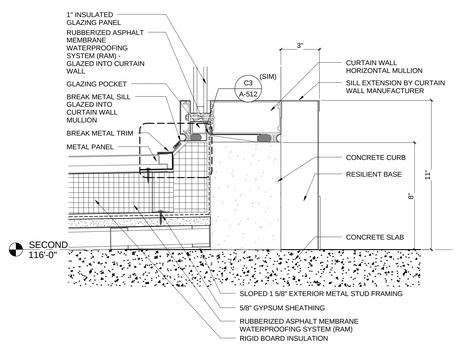
C2 SECTION DETAIL - PLENUM ACCESS DOOR SILL
3" = 1'-0"



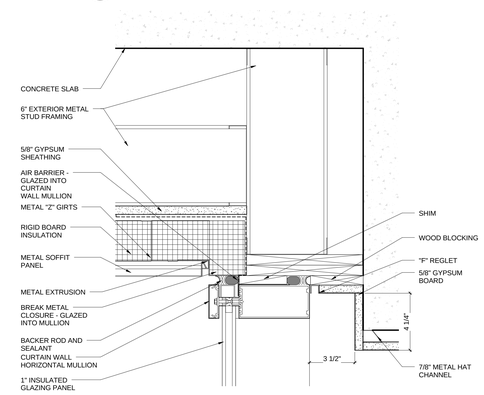
C3 SECTION DETAIL - CURTAIN WALL HEAD AT WEST ENTRY
3" = 1'-0"



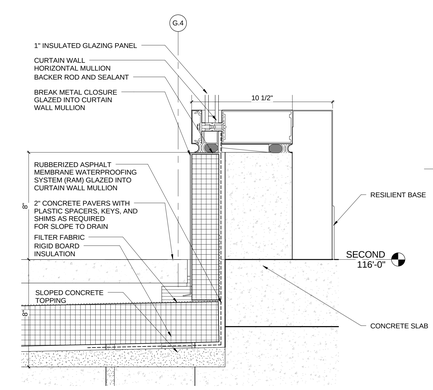
B1 SECTION DETAIL FOUNDATION INSULATION TERMINATION
3" = 1'-0"



B2 SECTION DETAIL - CURTAIN WALL SILL @ SECOND FLOOR
3" = 1'-0"

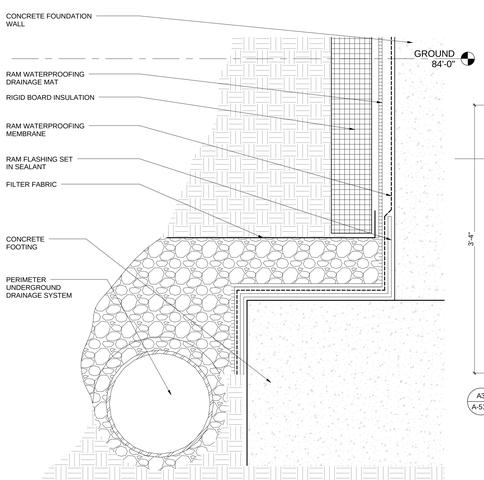


B3 SECTION DETAIL - CURTAIN WALL HEAD @ PENTHOUSE
3" = 1'-0"

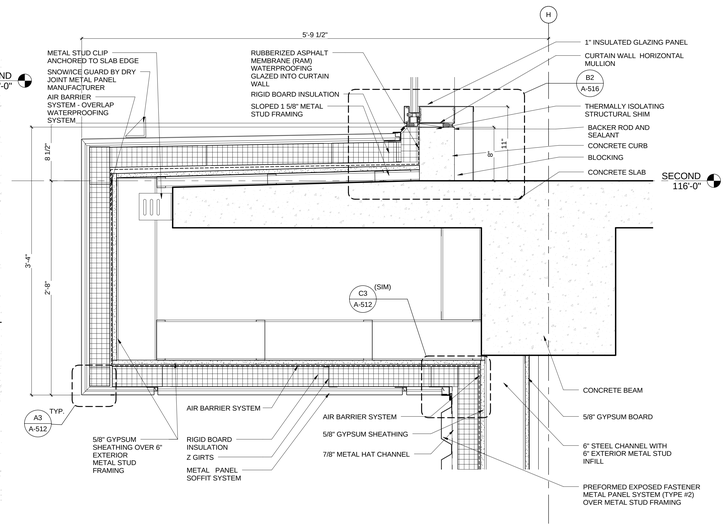


B4 CURTAIN WALL SILL DETAIL
3" = 1'-0"

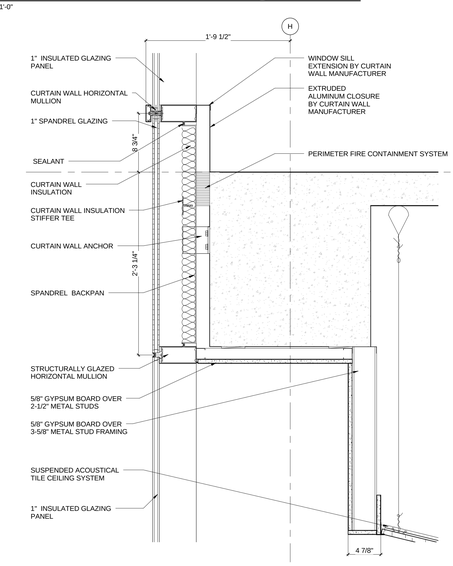
A-516



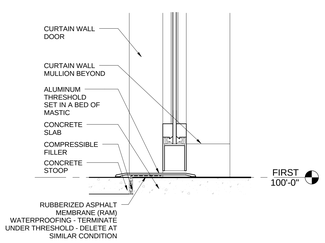
A1 SECTION DETAIL - PERIMETER DRAINAGE
3" = 1'-0"



A2 OVERHANG DETAIL
1 1/2" = 1'-0"



A3 TYP. CURTAIN WALL DETAIL @ SLAB
1 1/2" = 1'-0"



A4 SECTION DETAIL - CURTAIN WALL DOOR SILL
3" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

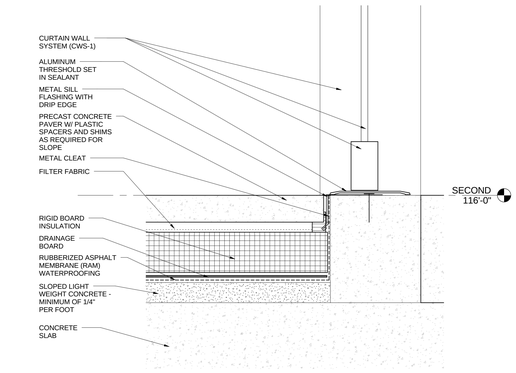
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION - DETAILS

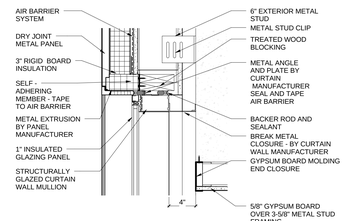
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-516	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-516 REV. NO.

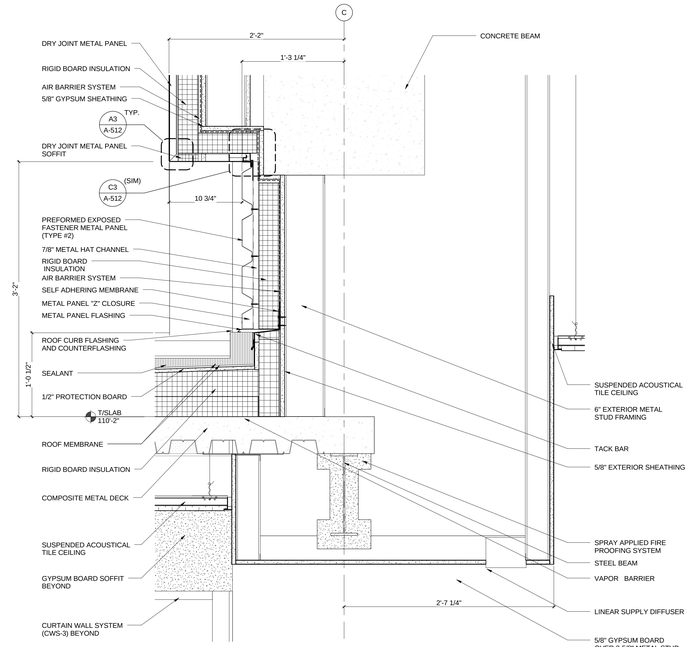
C:\PW70002182-ACENTRAL_dmfp.v4
7/6/2011 11:10:28 AM



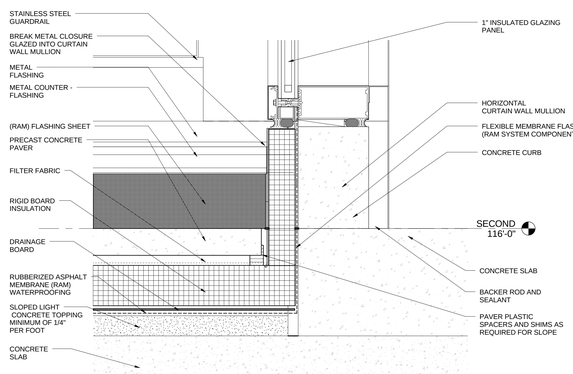
D1 SECTION DETAIL
3" = 1'-0"



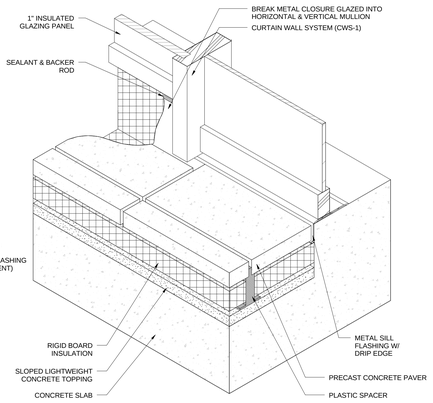
D2 CURTAIN WALL HEAD DETAIL @ SOUTH WALL
1 1/2" = 1'-0"



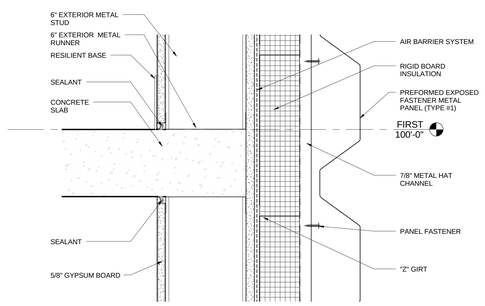
C3 SECTION DETAIL - LINK ROOF TERMINATION
1 1/2" = 1'-0"



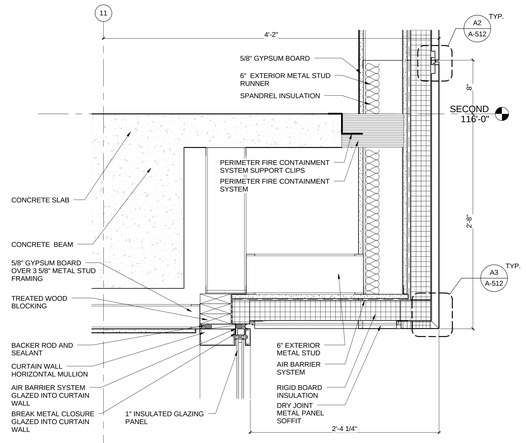
C1 CURTAIN WALL SILL DETAIL @ TERRACE
3" = 1'-0"



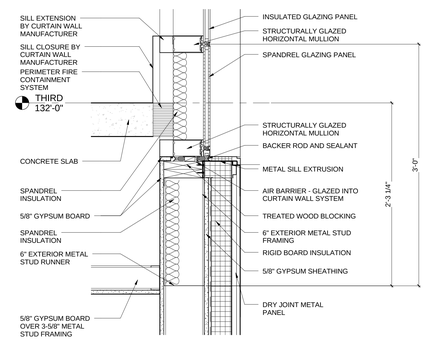
C2 TERRACE SILL
1 1/2" = 1'-0"



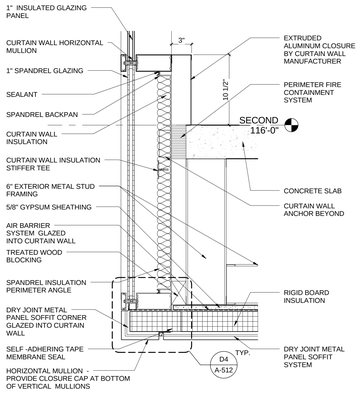
B1 SECTION DETAIL
3" = 1'-0"



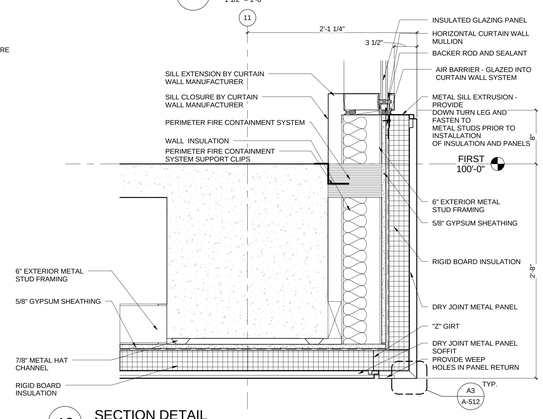
B2 SECTION DETAIL
1 1/2" = 1'-0"



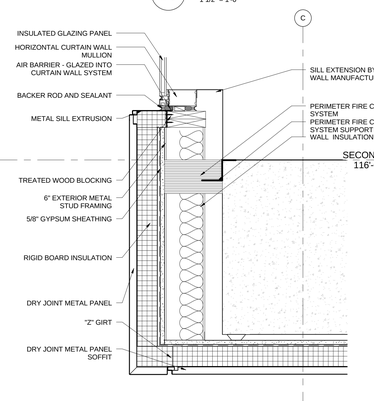
B3 SECTION DETAIL
1 1/2" = 1'-0"



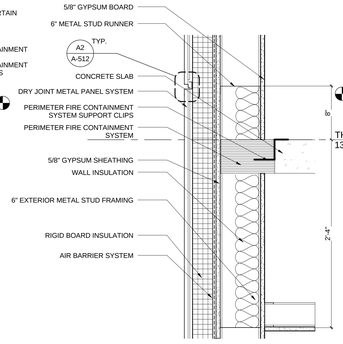
A1 SECTION DETAIL - WEST CURTAIN WALL BASE
1 1/2" = 1'-0"



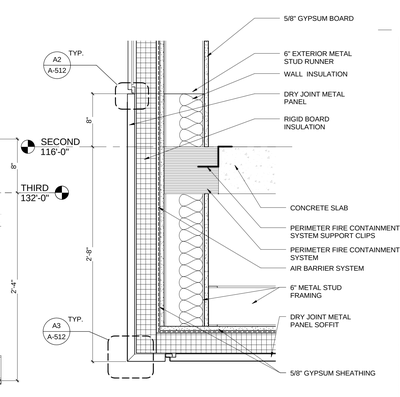
A2 SECTION DETAIL
1 1/2" = 1'-0"



A3 SECTION DETAIL - SOUTH WALL BASE
1 1/2" = 1'-0"



A4 SECTION DETAIL
1 1/2" = 1'-0"



A5 SECTION DETAIL
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-517

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

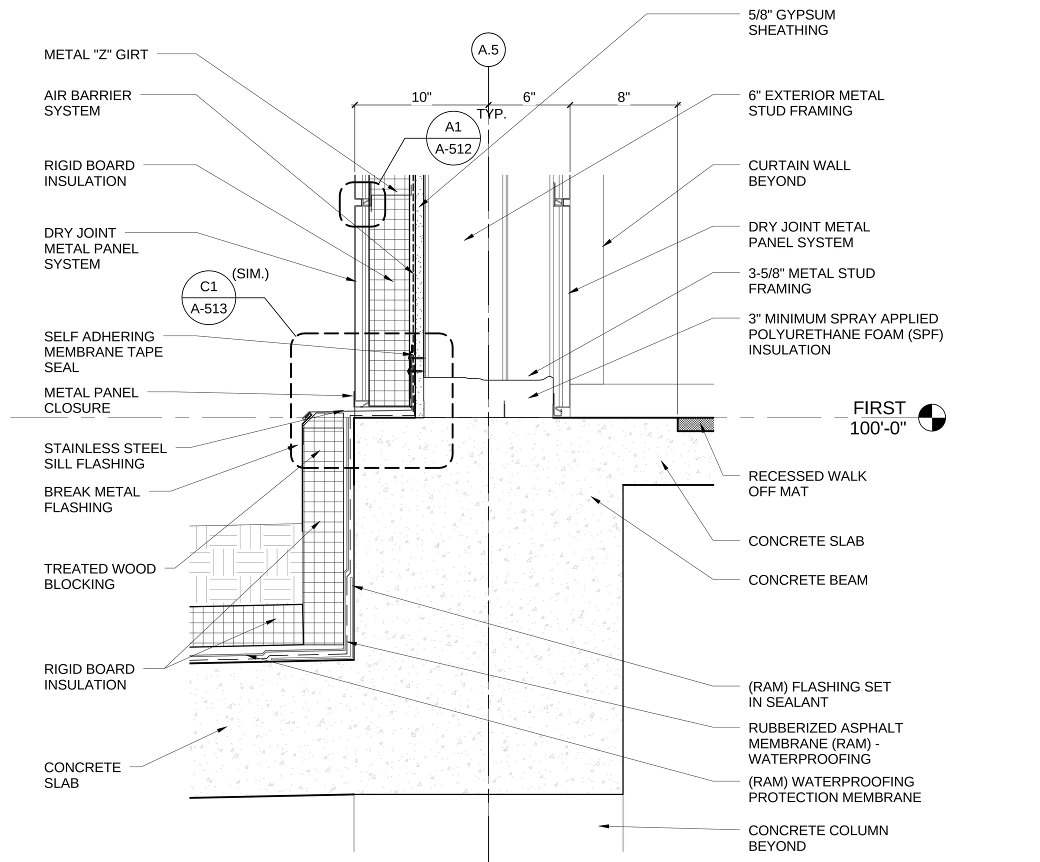
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION - DETAILS

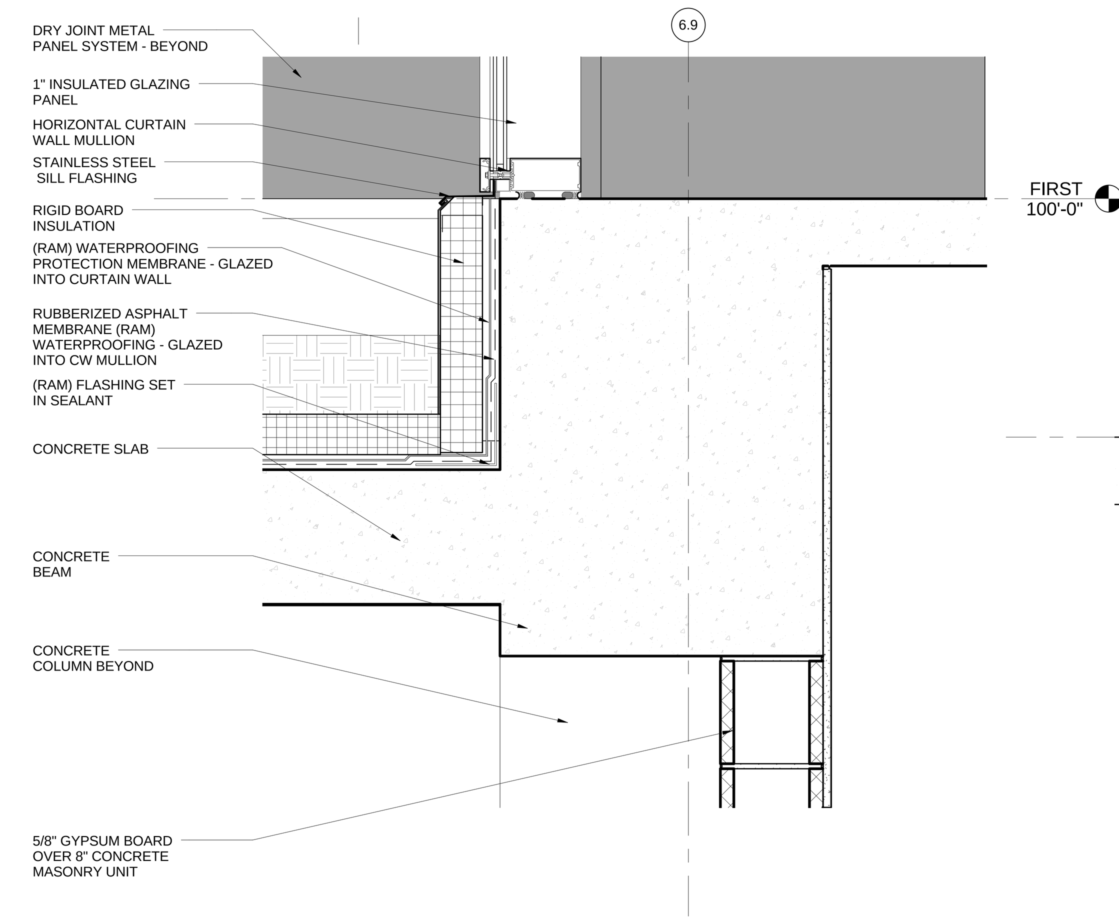
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-517	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-517
REV. NO.

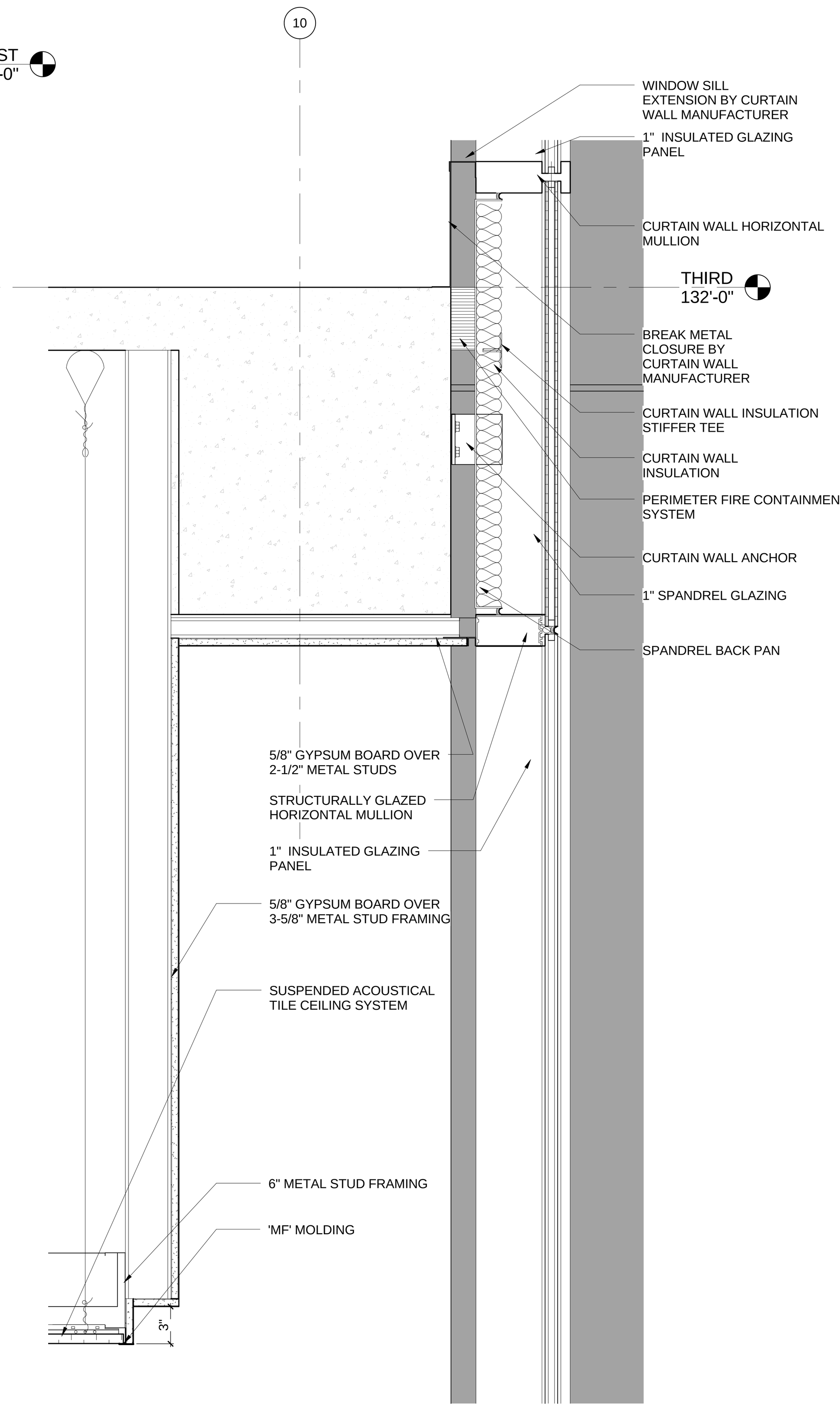
C:\RVT\002182-A-CENTRAL_ab4fjh.rvt
7/8/2011 11:10:54 AM



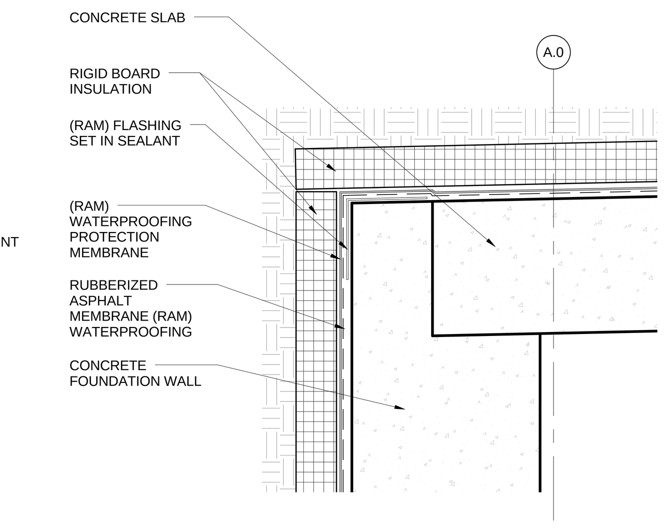
D1 SECTION DETAIL - WATERPROOFING TERMINATION @ METAL PANEL
1 1/2" = 1'-0"



D2 WATERPROOFING TERMINATION @ CURTAIN WALL
1 1/2" = 1'-0"



C4 SECTION DETAIL - EAST SPANDREL
1 1/2" = 1'-0"

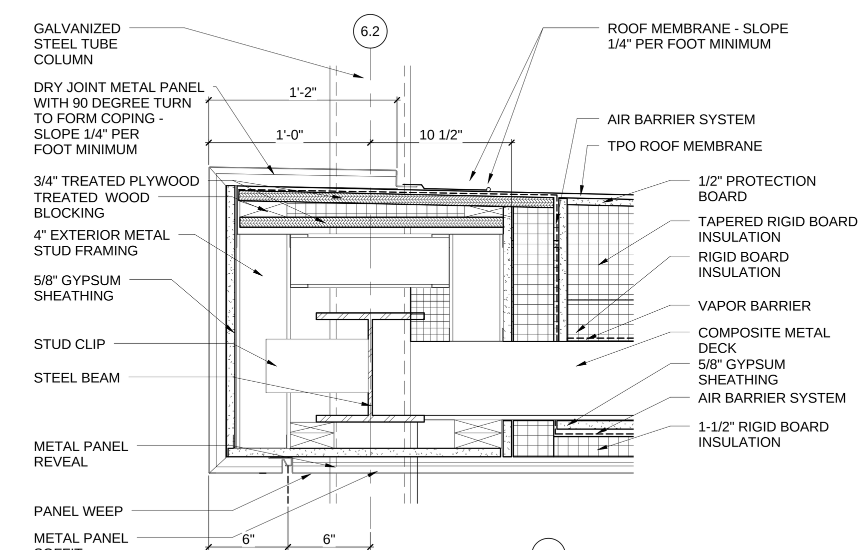


D5 WATERPROOFING DETAIL
1 1/2" = 1'-0"

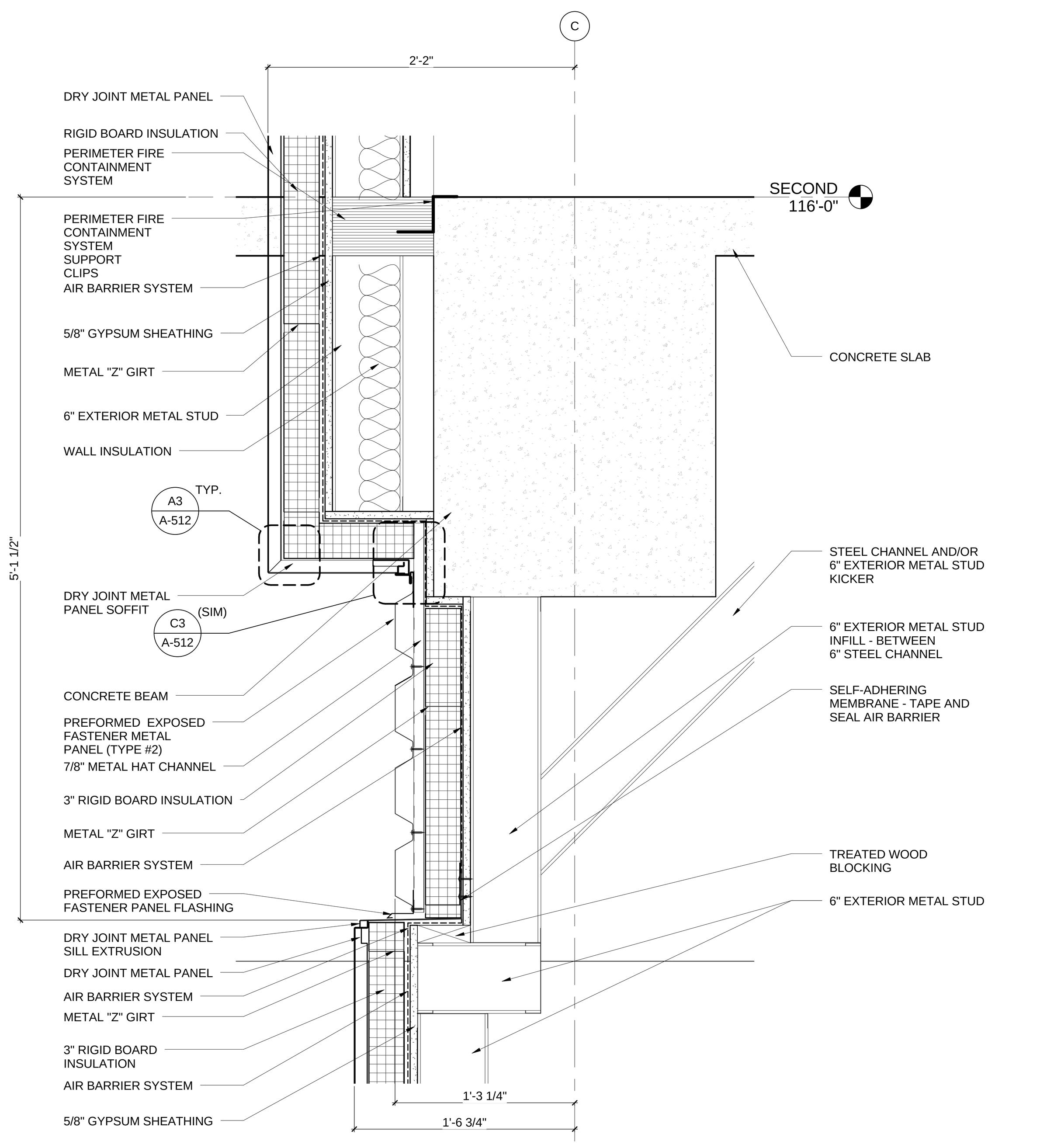
HDR

HDR Architecture, Inc.

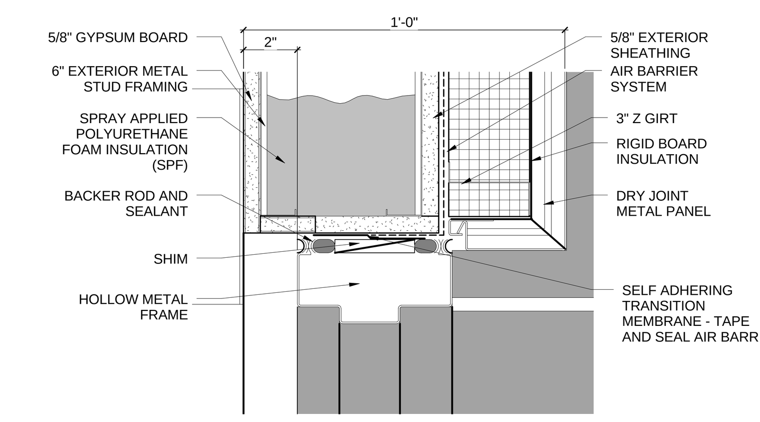
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



C3 ROOF EDGE DETAIL @ LINK VESTIBULE
1 1/2" = 1'-0"

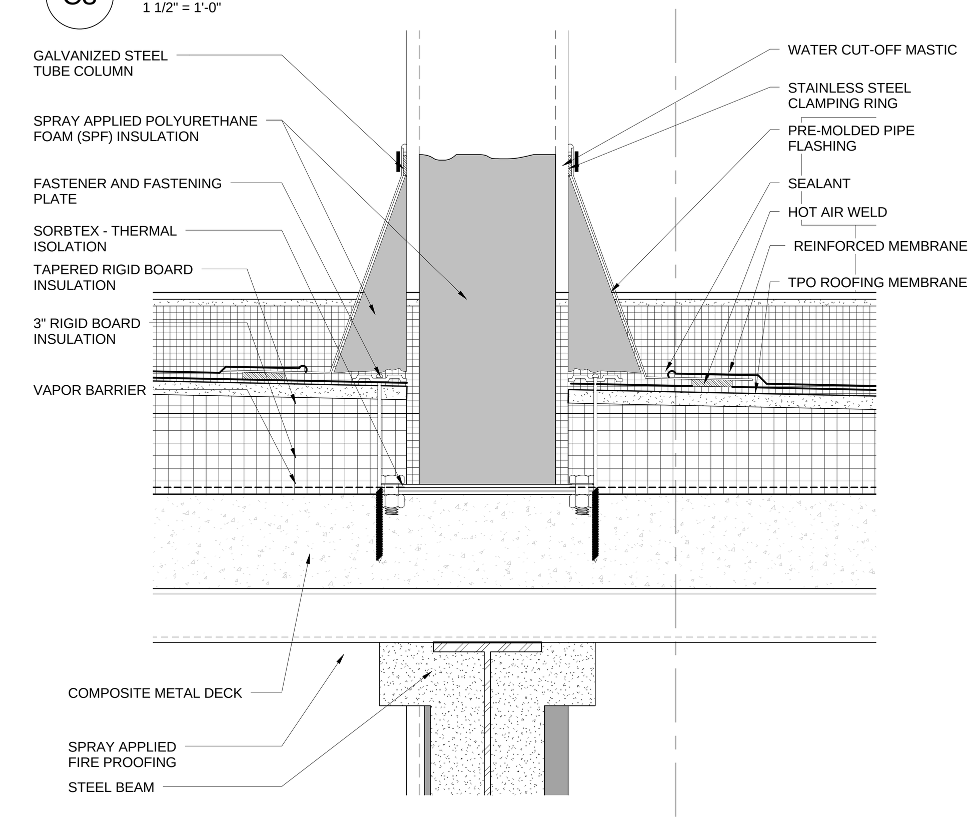


B1 SECTION DETAIL - 5TH MODULE @ TOILETS
1 1/2" = 1'-0"

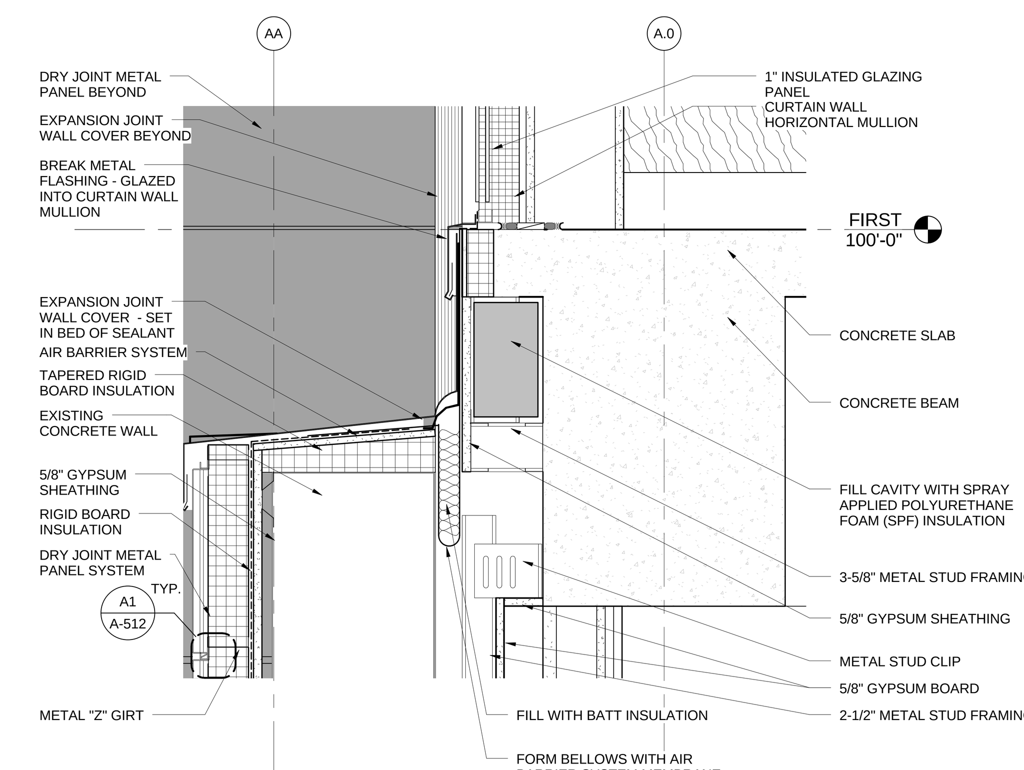


C5 HEAD DETAIL @ LOADING DOCK
3" = 1'-0"

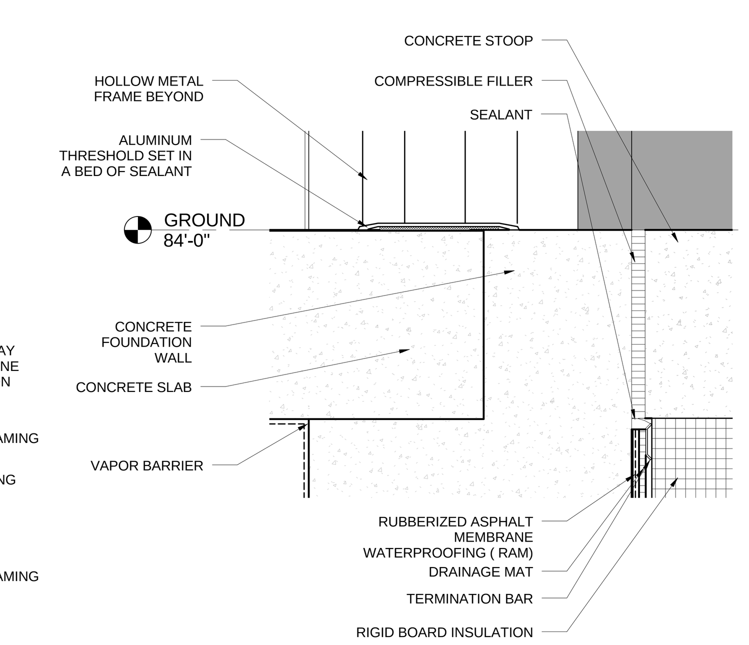
A-518



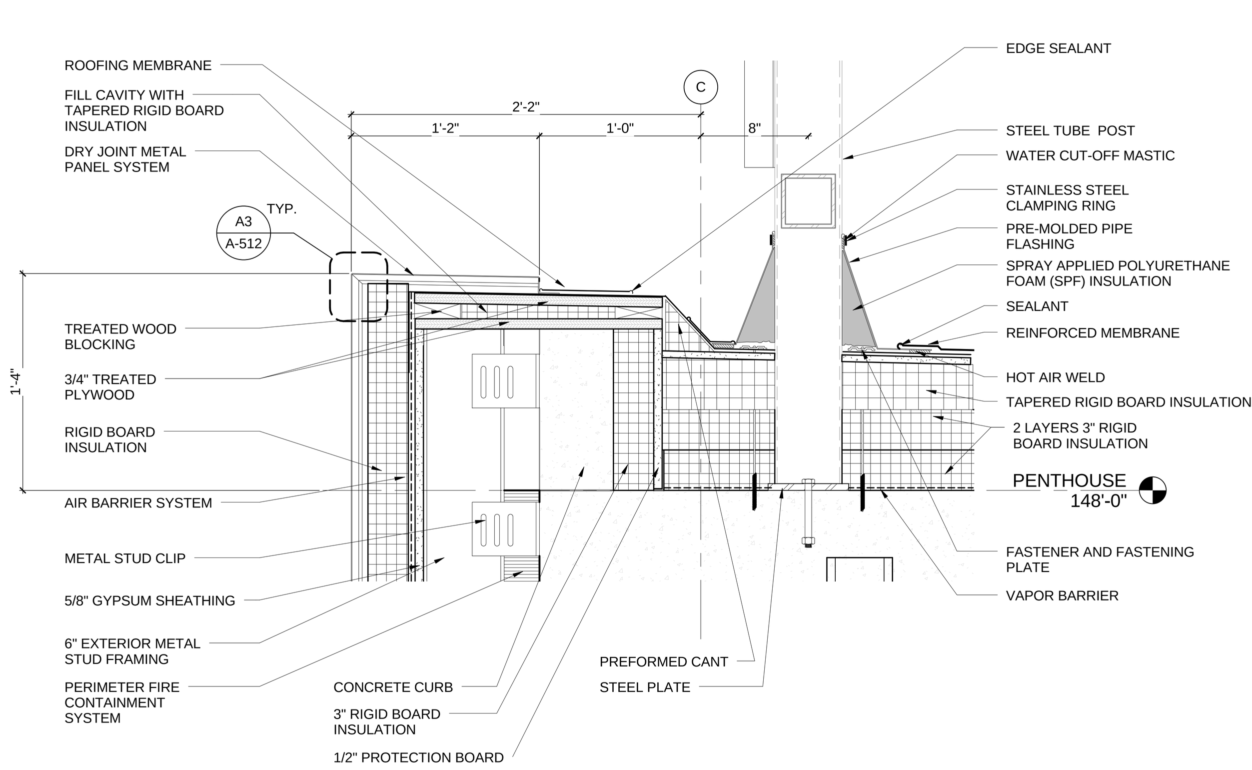
B3 CANOPY COLUMN BASE @ ROOF
3" = 1'-0"



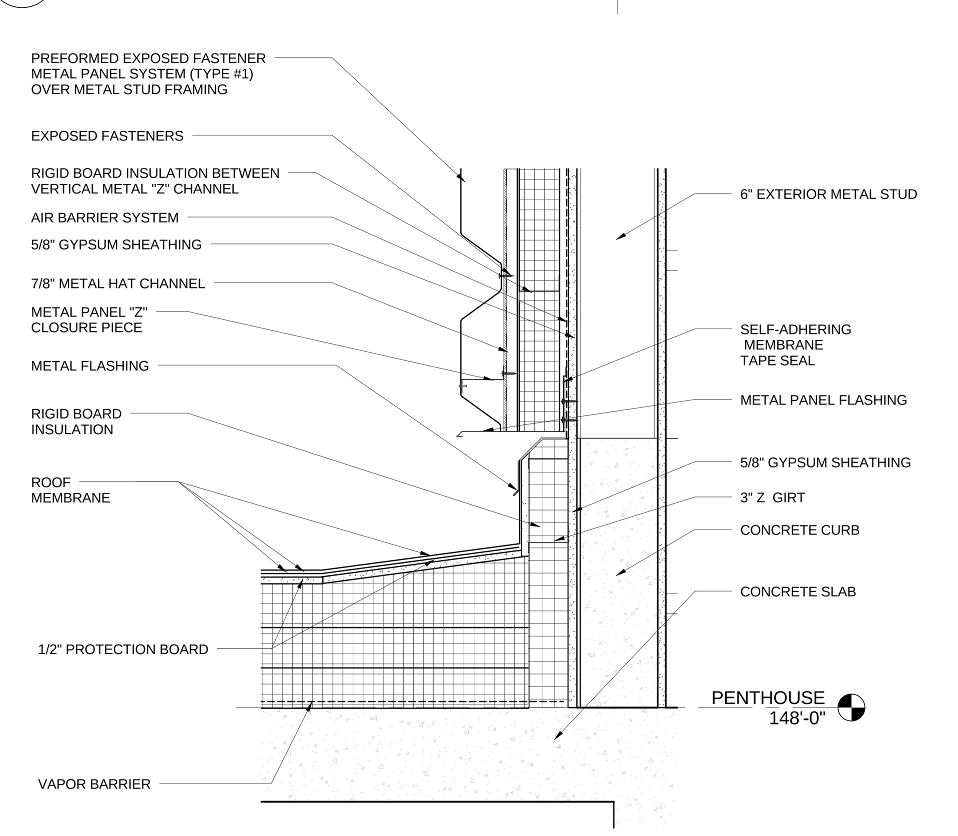
B4 EXPANSION JOINT DETAIL
1 1/2" = 1'-0"



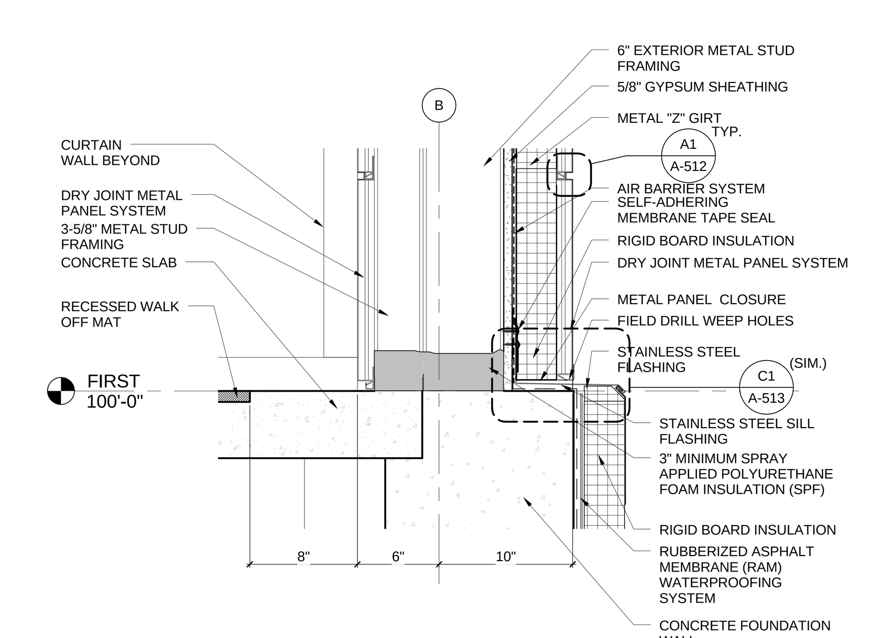
B5 SILL DETAIL @ LOADING DOCK
3" = 1'-0"



A1 SECTION DETAIL - SCREEN WALL POST FLASHING
1 1/2" = 1'-0"



A3 SECTION DETAIL - EAST STAIR WALL BASE @ PENTHOUSE
1 1/2" = 1'-0"



A5 SECTION DETAIL - WALL BASE @ WEST VESTIBULE
1 1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

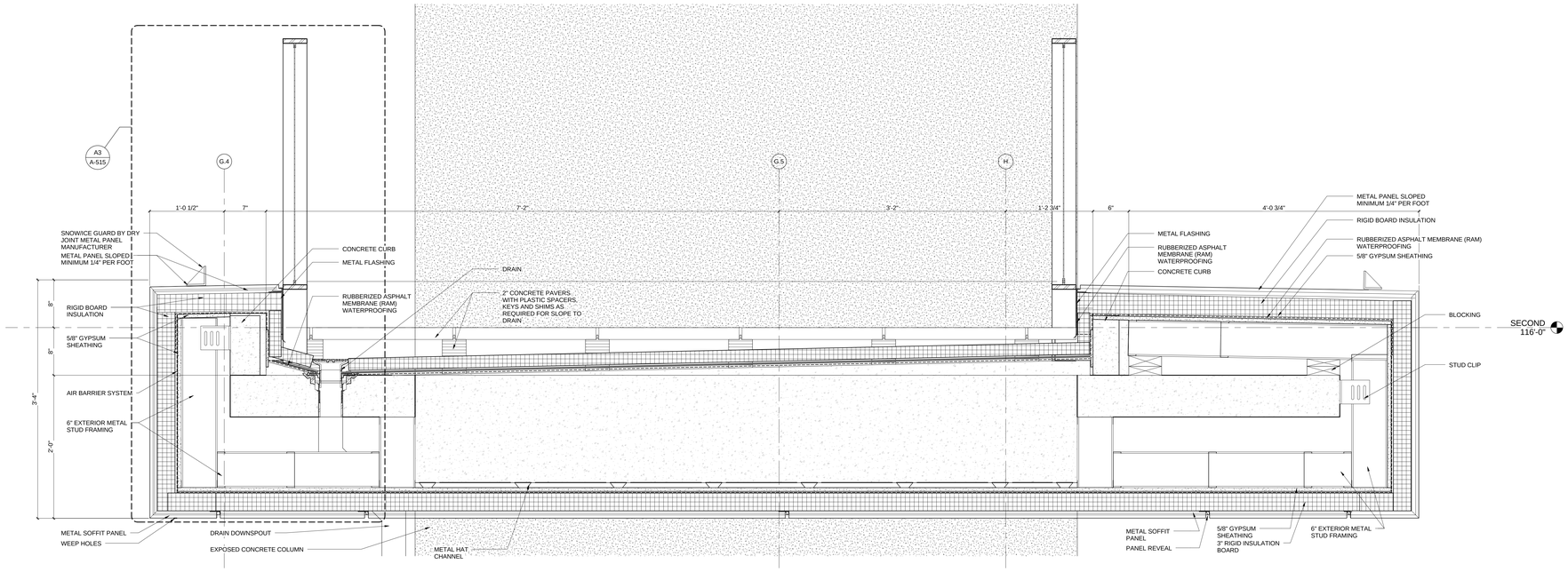
DOCUMENT TITLE
WALL SECTION - DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-518	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

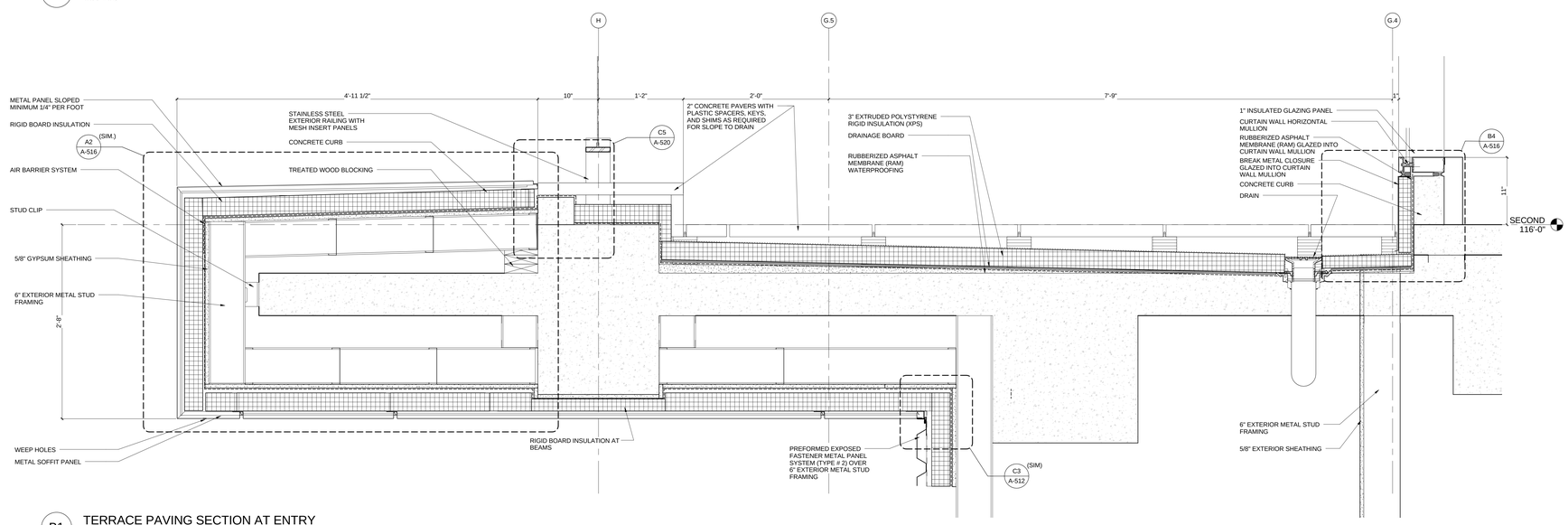
FACILITY DOCUMENT NUMBER | REV. NO.
J241-101- A-518

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:11:14 AM

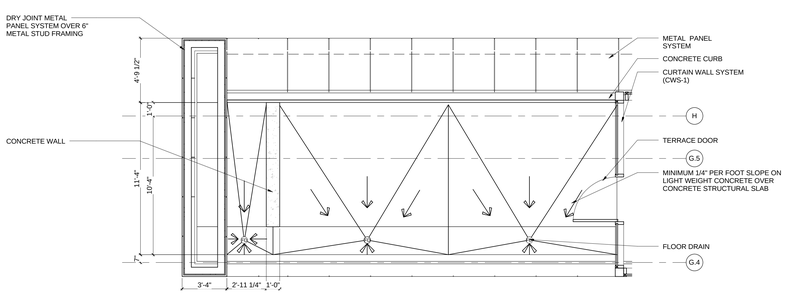
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



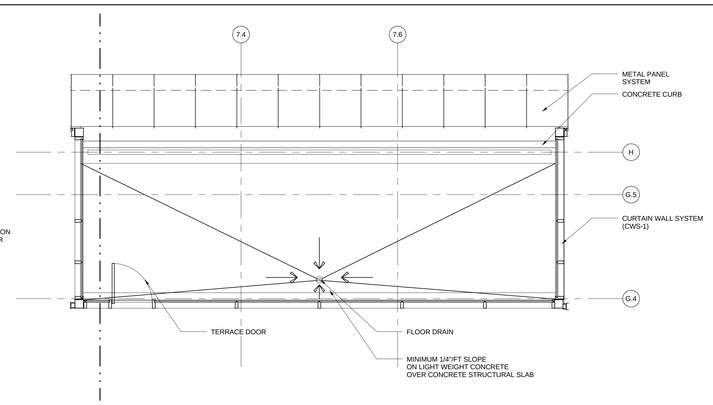
C1 WEST TERRACE PAVING SECTION
1 1/2" = 1'-0"



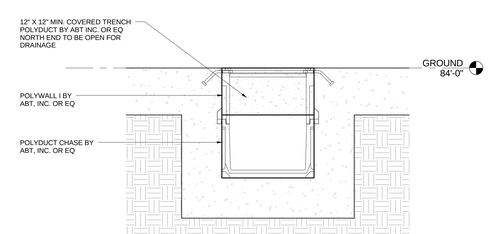
B1 TERRACE PAVING SECTION AT ENTRY
1 1/2" = 1'-0"



A1 ENLARGED PLAN - WEST TERRACE DRAINAGE PLAN
1/4" = 1'-0"



A3 ENGALRGED PLAN - ENTRY TERRACE DRAINAGE PLAN
1/4" = 1'-0"



A5 COVERED TRENCH DETAIL
1 1/2" = 1'-0"

A-519

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

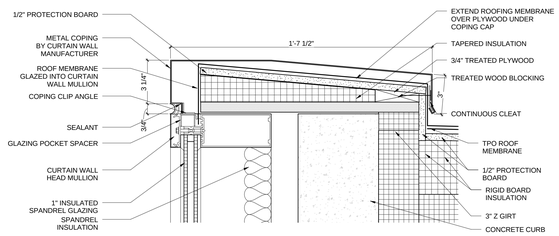
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION - DETAILS

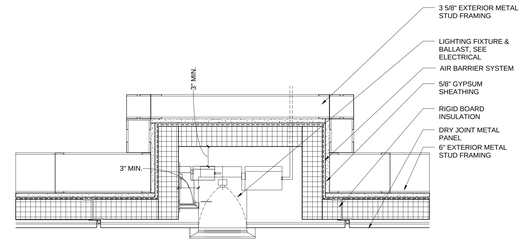
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-519	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-519
REV. NO.

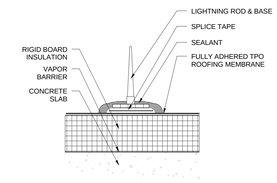
C:\DV700210\A-CENTRAL_arch.rvt
7/8/2011 11:11:32 AM



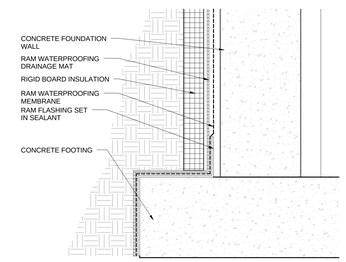
D2 ENLARGED CW COPING DETAIL
3" = 1'-0"



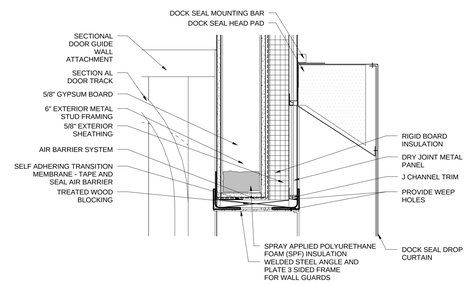
D4 EXTERIOR LIGHT FIXTURE DETAIL
1 1/2" = 1'-0"



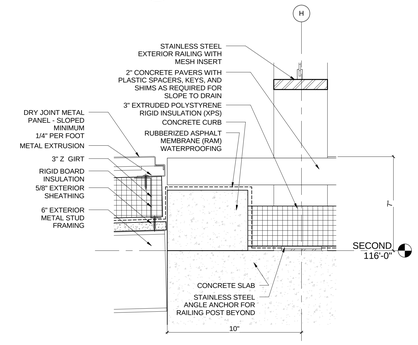
D5 LIGHTNING ROD DETAIL
1 1/2" = 1'-0"



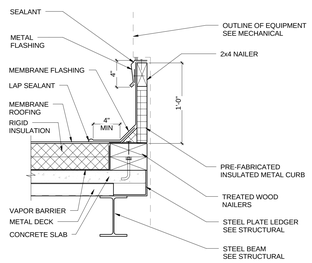
C2 SECTION DETAIL
1 1/2" = 1'-0"



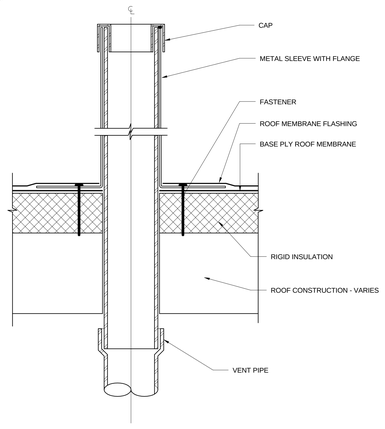
C4 SECTIONAL DOOR HEAD DETAIL
1 1/2" = 1'-0"



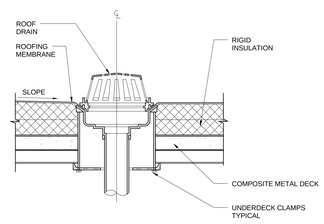
C5 CURB DETAIL
3" = 1'-0"



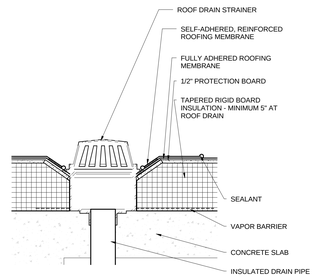
B1 TYPICAL MECHANICAL EQUIPMENT CURB DETAIL
1 1/2" = 1'-0"



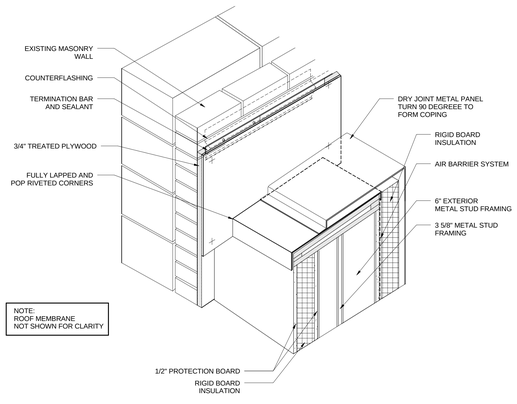
B2 TYPICAL- VENT PIPE THROUGH ROOF
3" = 1'-0"



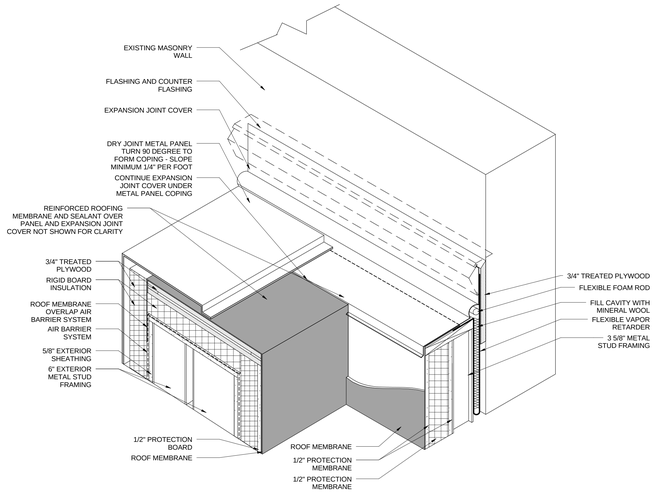
B4 ROOF DRAIN DETAIL
1 1/2" = 1'-0"



B5 ROOF DRAIN DETAIL
1 1/2" = 1'-0"



A2 ENDWALL FLASHING DETAIL
NTS



A3 EXPANSION JOINT DETAIL @ DRY JOINT METAL PANEL
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-520

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

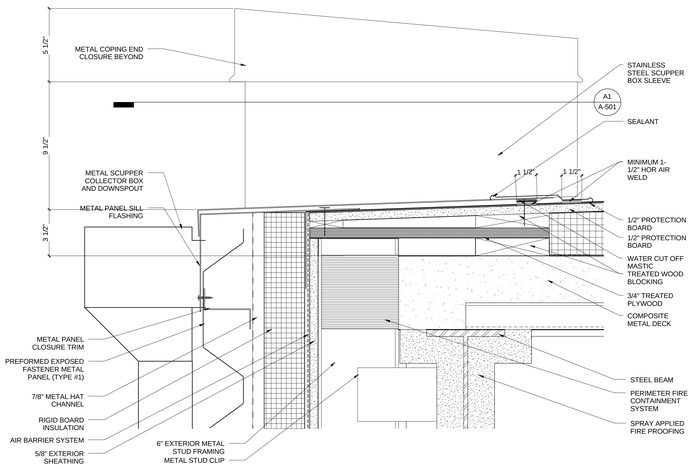
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-520	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

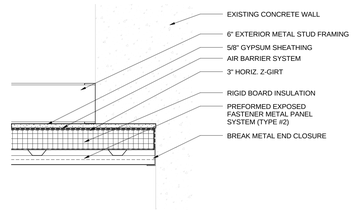
FACILITY DOCUMENT NUMBER: J241-101- A-520
REV. NO.

C:\DV70023\2-A-CENTRAL_ab4fjk.rvt
7/8/2011 11:11:43 AM

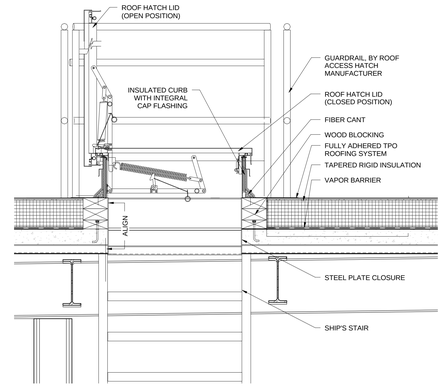
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



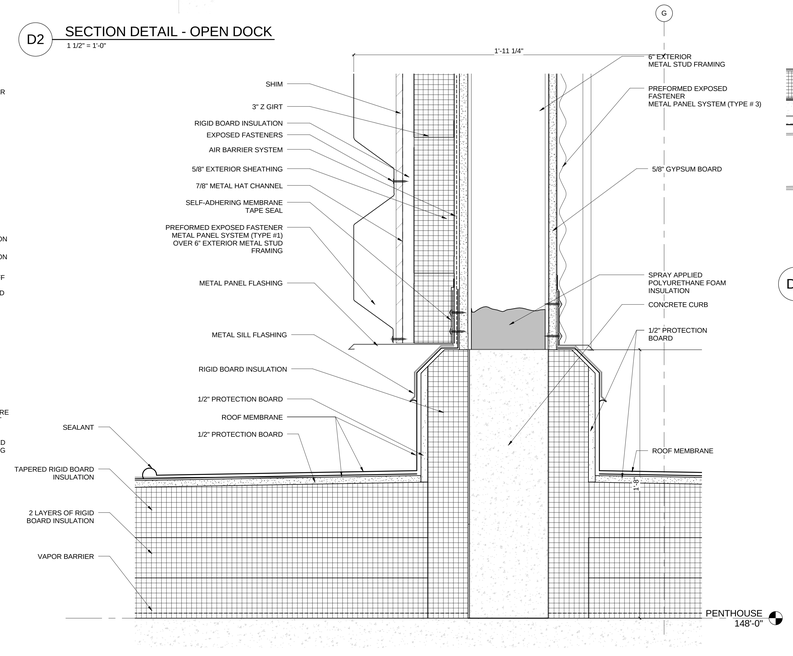
C1 SCUPPER DETAIL
3" = 1'-0"



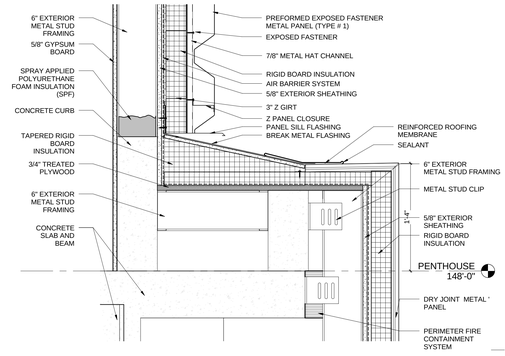
D2 SECTION DETAIL - OPEN DOCK
1 1/2" = 1'-0"



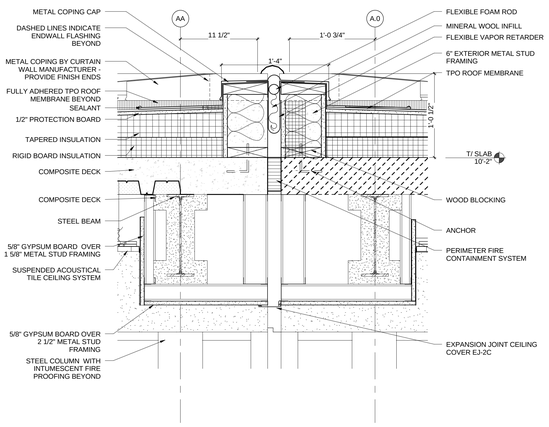
D4 SECTION DETAIL
1" = 1'-0"



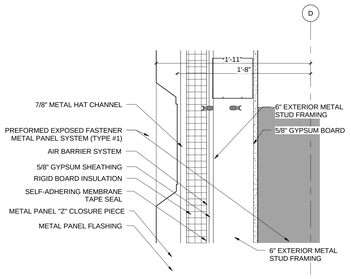
C2 WALL BASE DETAIL @ PENTHOUSE PLENUMS
3" = 1'-0"



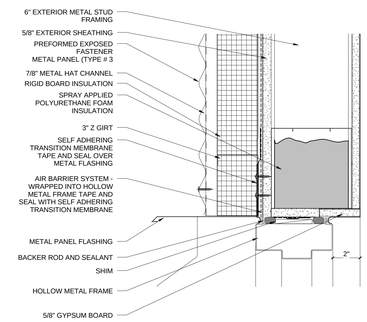
C4 ROOF EDGE DETAIL @ SOUTH EAST CORNER
1 1/2" = 1'-0"



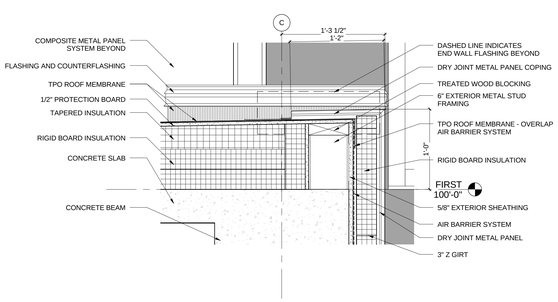
B1 ROOF EXPANSION JOINT DETAIL @ LINK
1 1/2" = 1'-0"



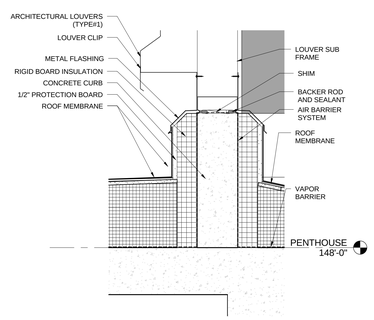
B2 SECTION DETAIL - LOUVER HEAD
1 1/2" = 1'-0"



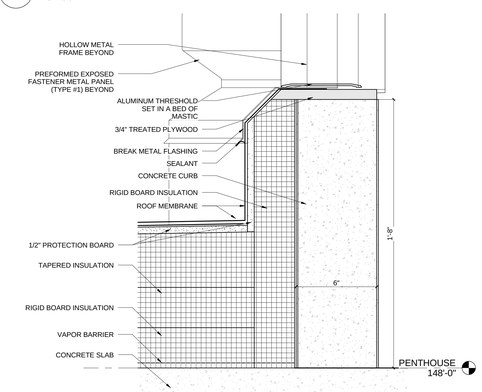
B3 SECTION DETAIL - PENTHOUSE DOOR HEAD DETAIL
3" = 1'-0"



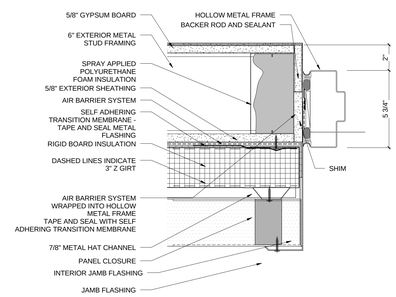
A1 ROOF EDGE DETAIL
1 1/2" = 1'-0"



A2 SECTION DETAIL - LOUVER SILL
1 1/2" = 1'-0"



A3 SECTION DETAIL - PENTHOUSE DOOR SILL
3" = 1'-0"



A4 SECTION DETAIL - DOOR JAMB @ PENTHOUSE
3" = 1'-0"

A-521

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

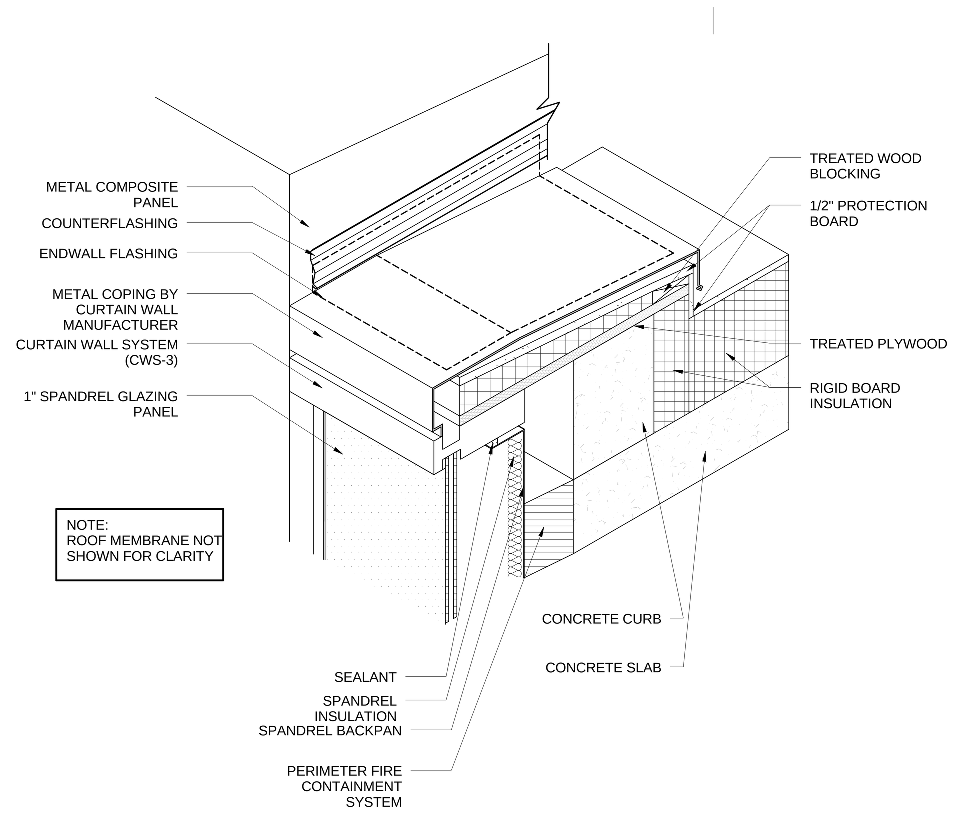
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION DETAILS

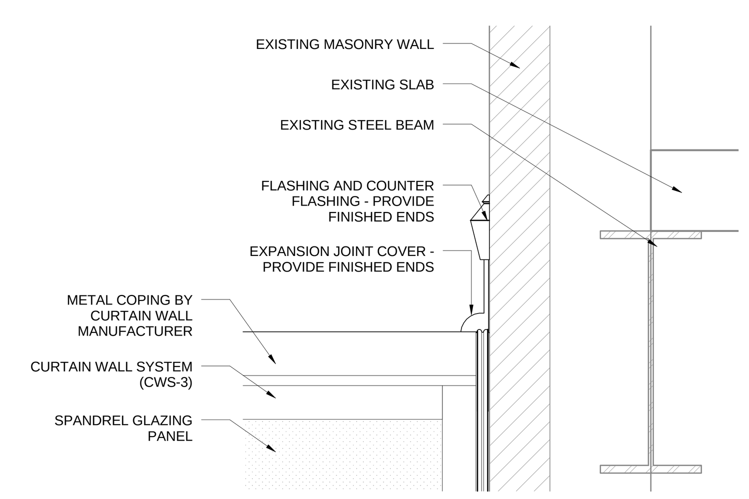
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-521	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-521 REV. NO.

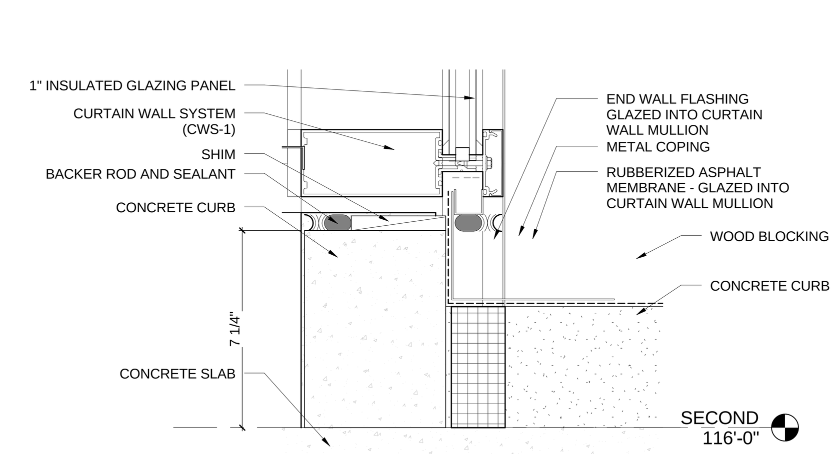
C:\DV70023\0-A-CENTRAL_dwrdp.rvt
7/8/2011 11:12:00 AM



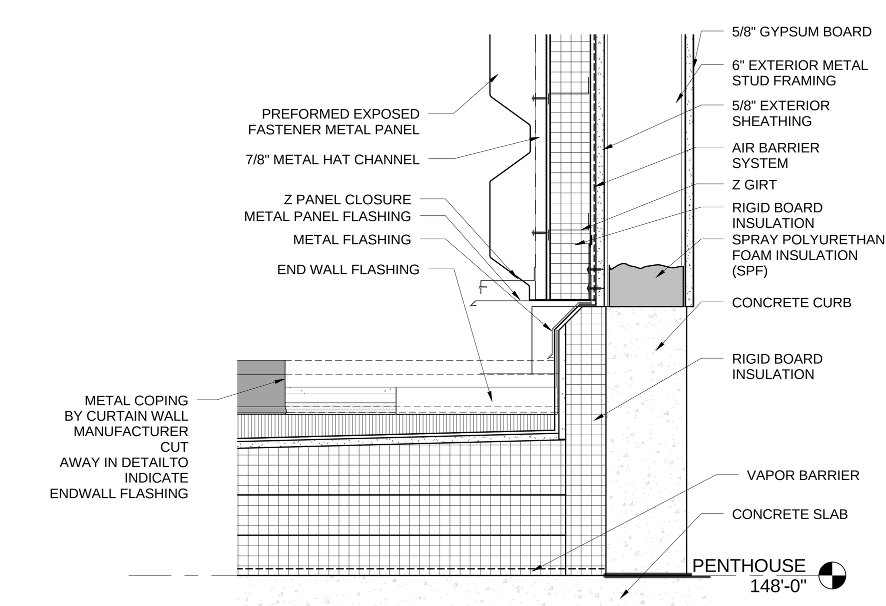
D1 COPING TERMINATION @ 7&C
NTS



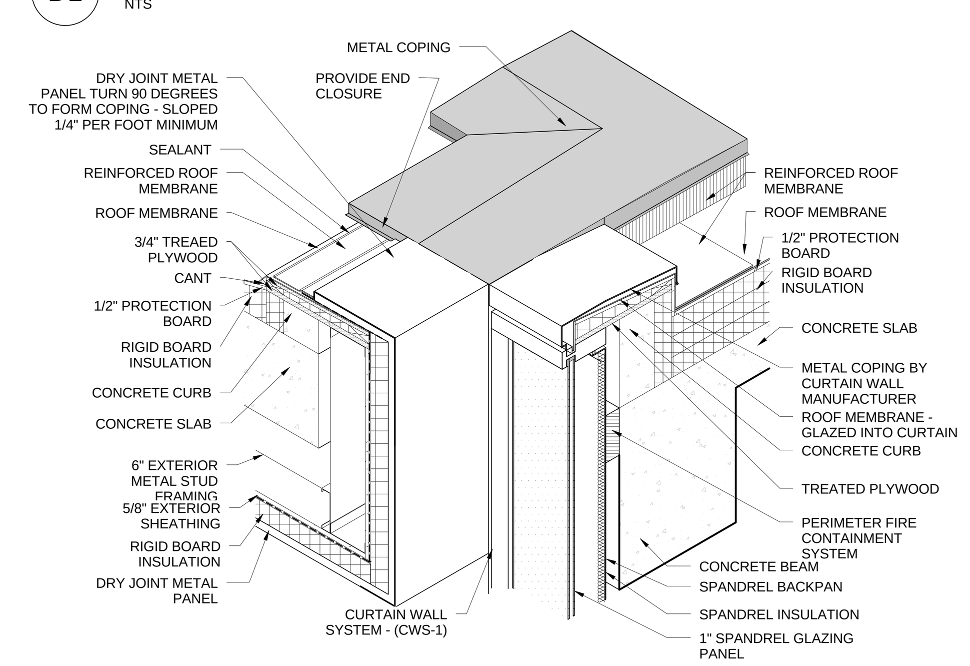
D2 EXPANSION JOINT @ LINK LOOKING EAST
1 1/2" = 1'-0"



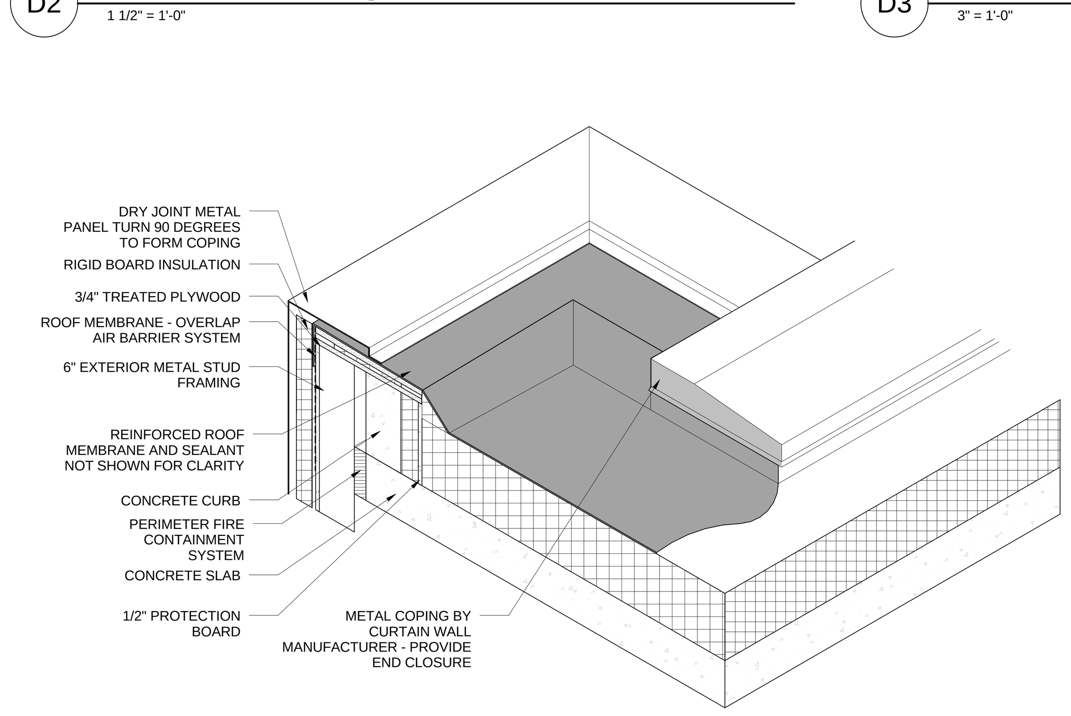
D3 CURTAIN WALL SILL DETAIL @ 7 & H
3" = 1'-0"



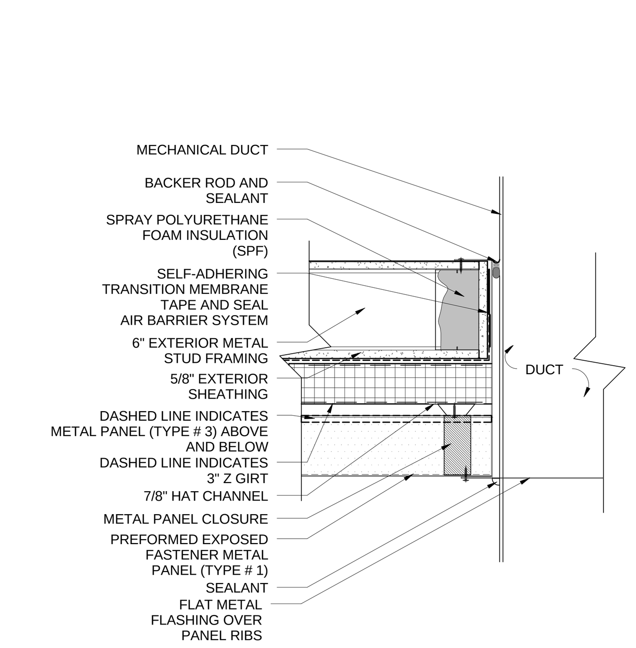
D4 ENDWALL FLASHING DETAIL
1 1/2" = 1'-0"



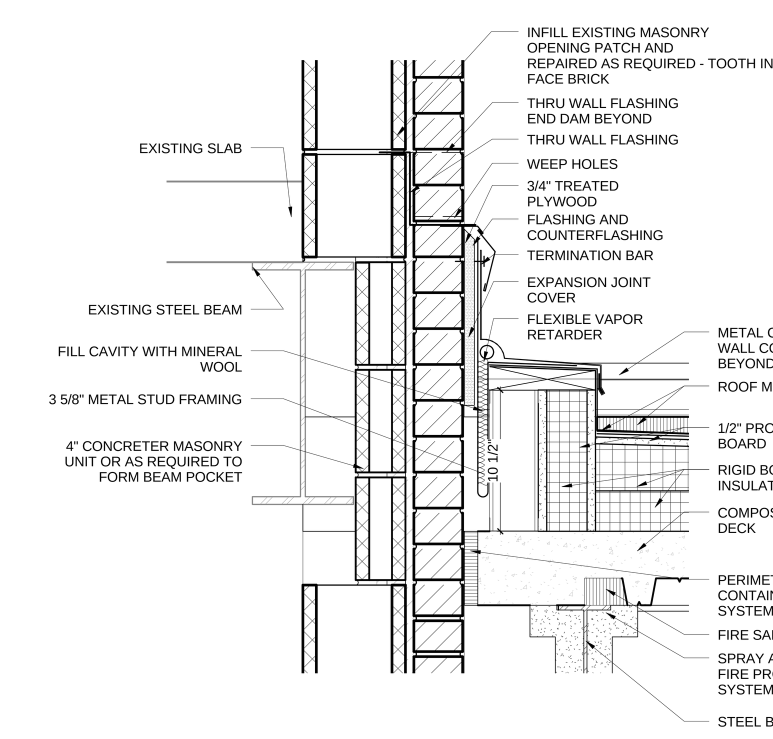
C1 ISOMETRIC OF COPING DETAIL @ 1 & G.4
NTS



C2 DRY JOINT PANEL AND CURTAIN WALL COPING INTERFACE
NTS

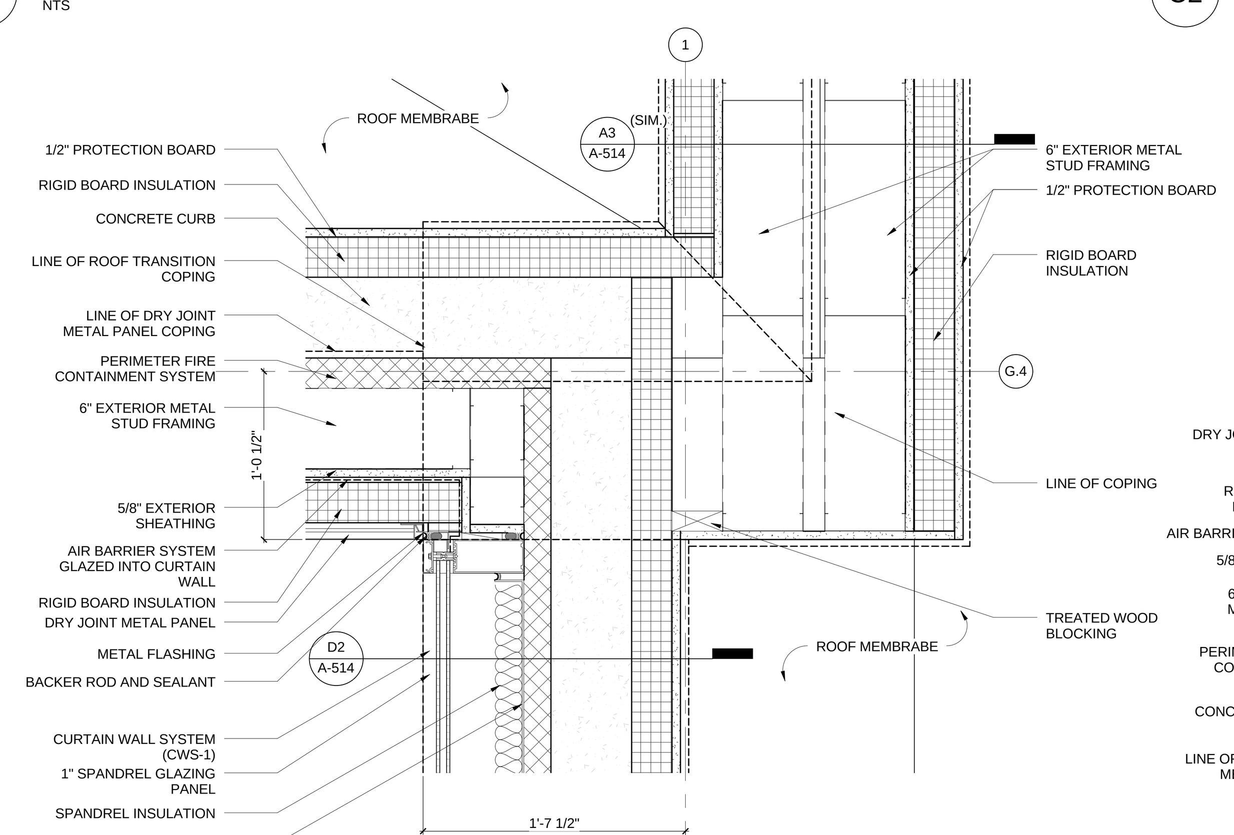


C3 JAMB DETAIL @ DUCT PENETRATION
1 1/2" = 1'-0"

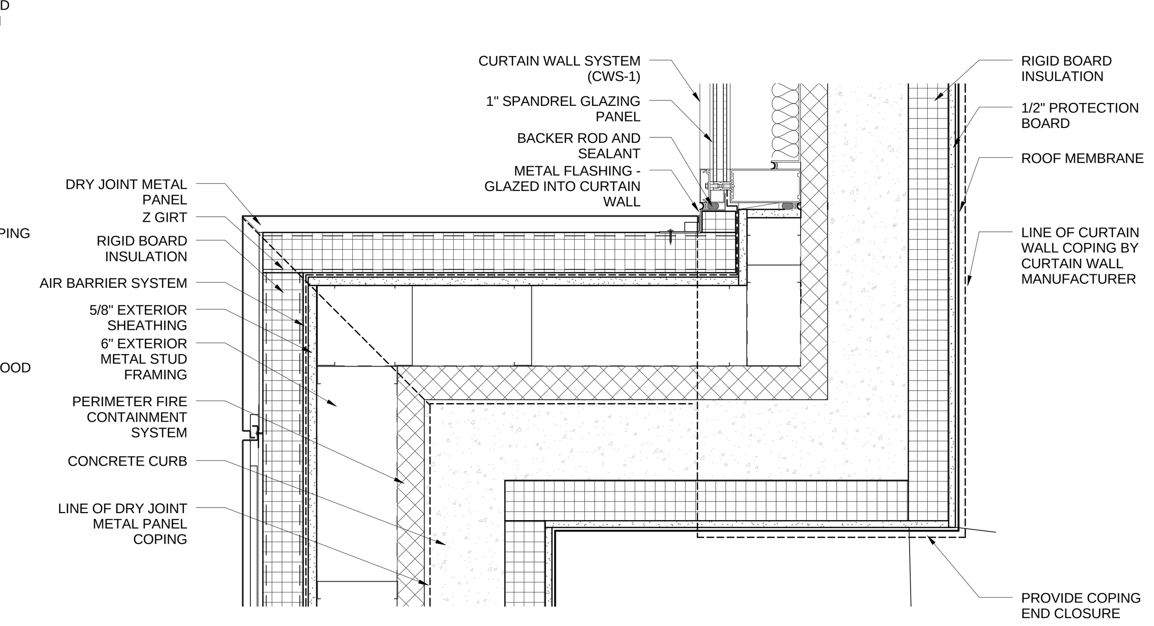


C4 EXPANSION JOINT @ LINK LOOKING WEST
1 1/2" = 1'-0"

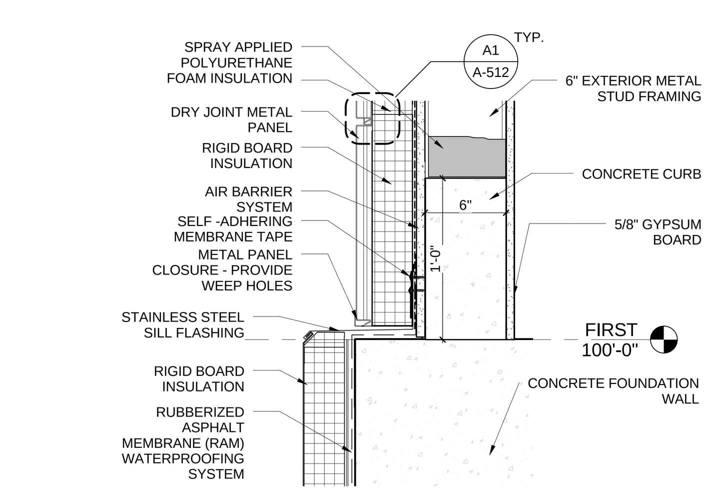
A-522



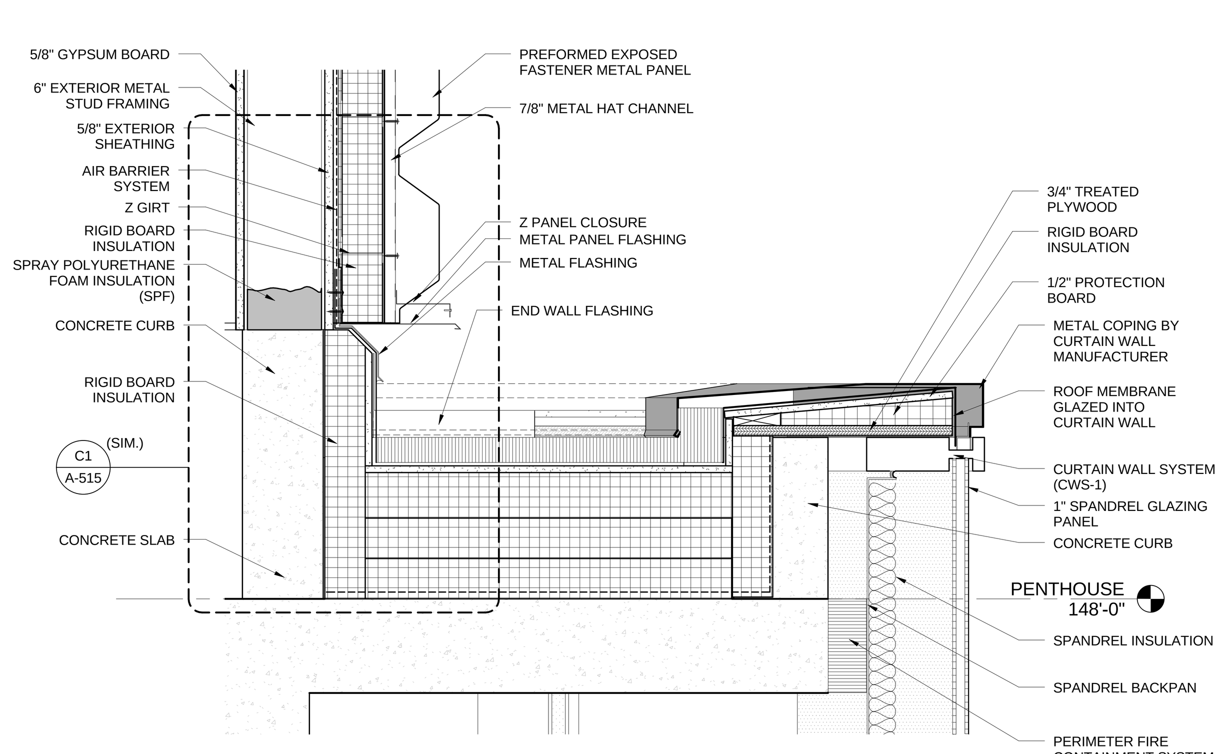
B1 COPING PLAN DETAIL @ 1 & G.4
1 1/2" = 1'-0"



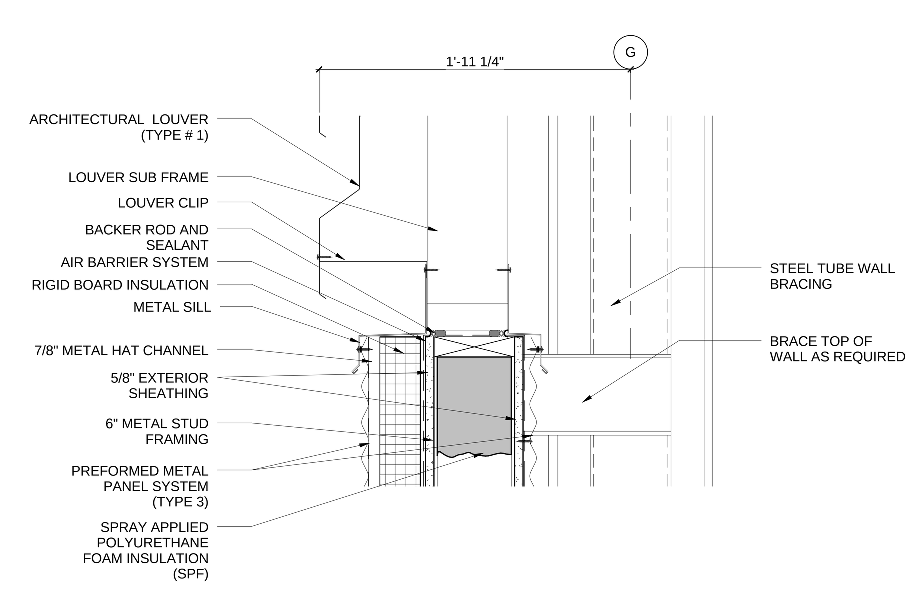
B2 COPING PLAN DETAIL @ DRY JOINT PANEL AND CURTAIN WALL INTERFACE
1 1/2" = 1'-0"



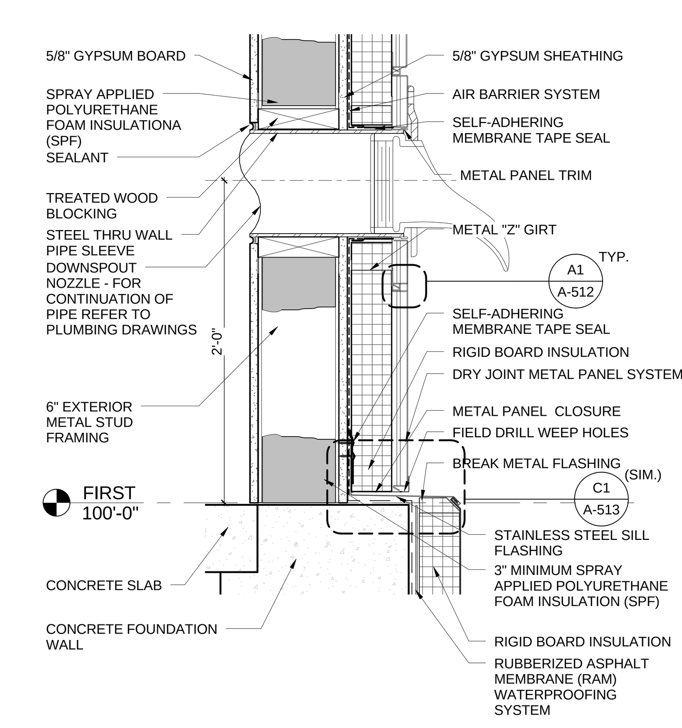
B3 SECTION DETAIL - WALL BASE @ WEST STAIR
1 1/2" = 1'-0"



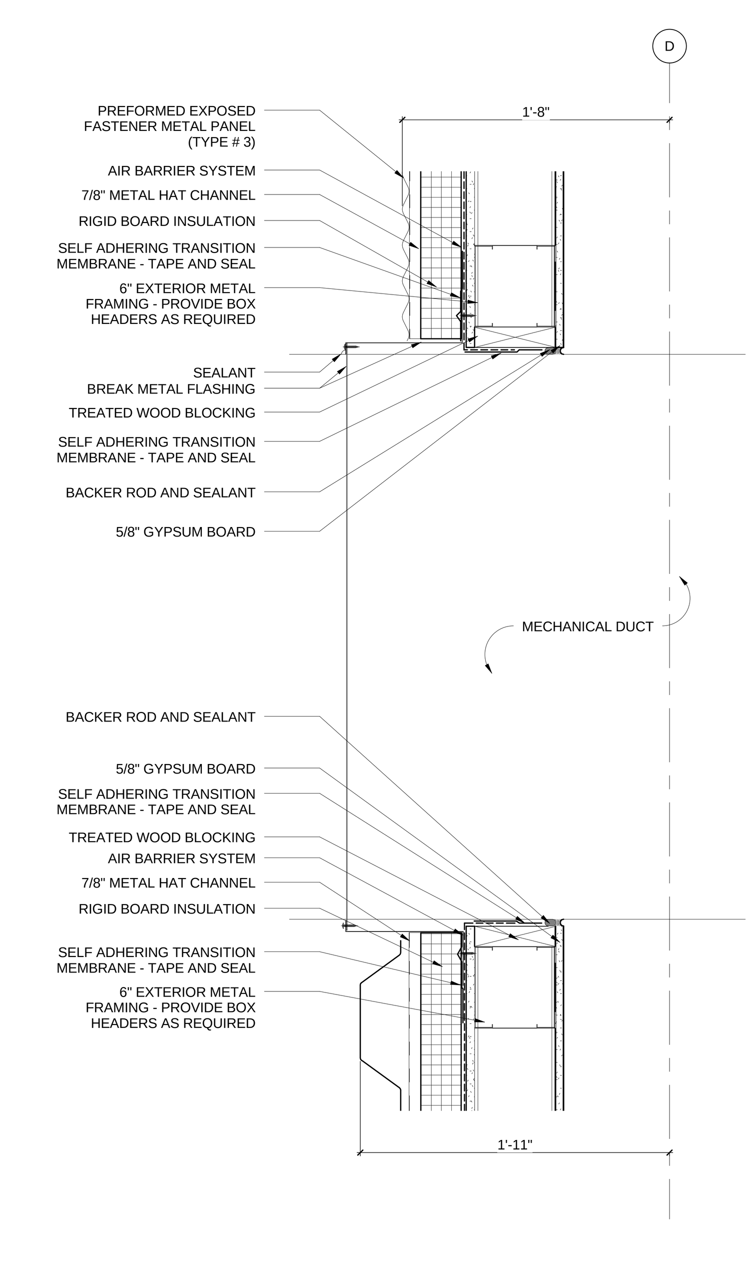
A1 ENDWALL FLASHING DETAIL
1 1/2" = 1'-0"



A2 LOUVER SILL DETAIL @ NORTH WALL
1 1/2" = 1'-0"



A3 TYPICAL THRU WALL DOWNSPOUT DETAIL
1 1/2" = 1'-0"



A4 DUCT PENETRATION @ PENTHOUSE
1 1/2" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

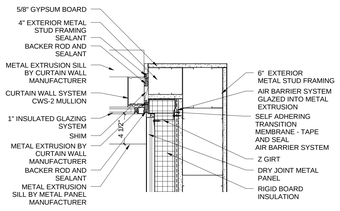
DOCUMENT TITLE
WALL SECTION DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-522	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

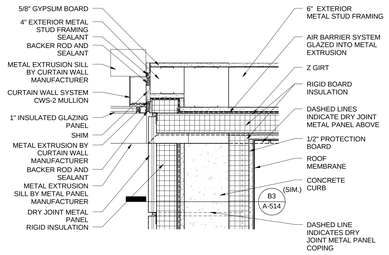
FACILITY DOCUMENT NUMBER **J241-101- A-522** REV. NO.

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:12:20 AM

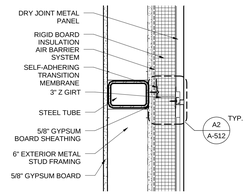
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



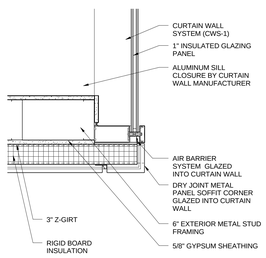
D1 2ND PLAN DETAIL @ NW CORNER
1 1/2" = 1'-0"



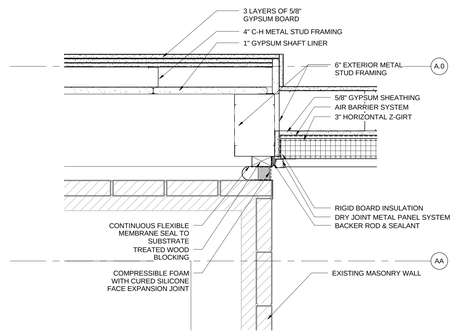
D2 3RD PLAN DETAIL @ NW CORNER
1 1/2" = 1'-0"



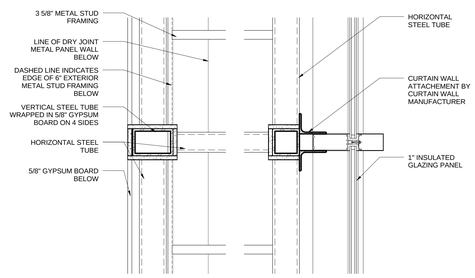
D3 PLAN DETAIL @ STEEL TUBE
1 1/2" = 1'-0"



C1 PLAN DETAIL
1 1/2" = 1'-0"

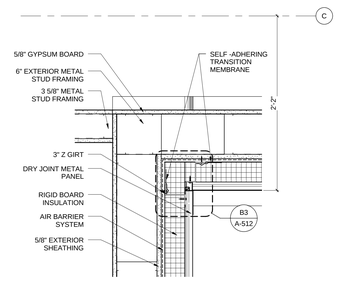


C2 2ND DTL @ SE CORNER 223
1 1/2" = 1'-0"

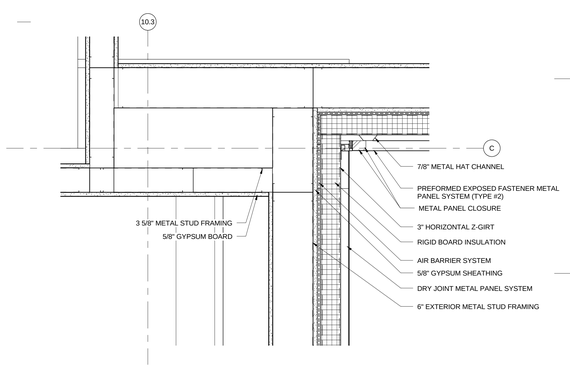


NOTE:
FIRE RATED PLYWOOD AND GYPSUM BOARD ON TOP OF FRAMING NOT SHOWN FOR CLARITY

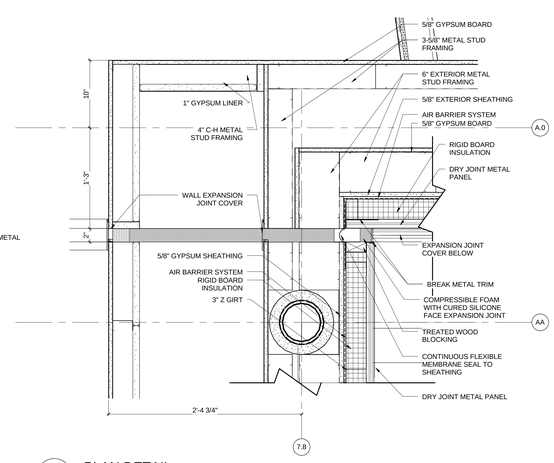
C3 PLAN DETAIL @ STEEL TUBE @ 12'
1 1/2" = 1'-0"



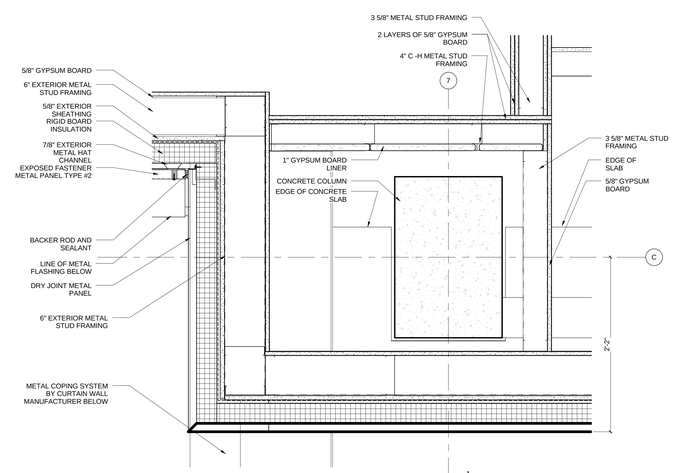
C4 2ND PLAN DETAIL NE CORNER S OF C
1 1/2" = 1'-0"



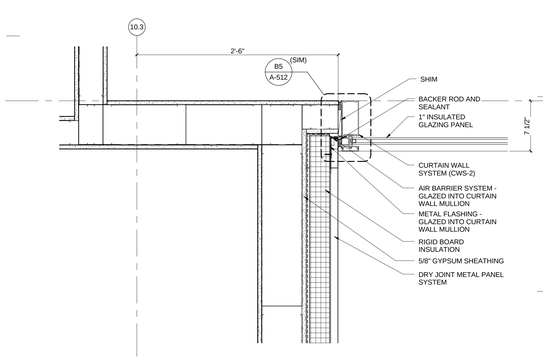
1ST DTL @ 10.3 & C @ 12'



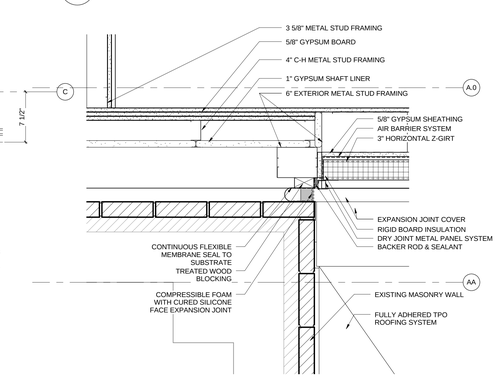
B2 PLAN DETAIL
1 1/2" = 1'-0"



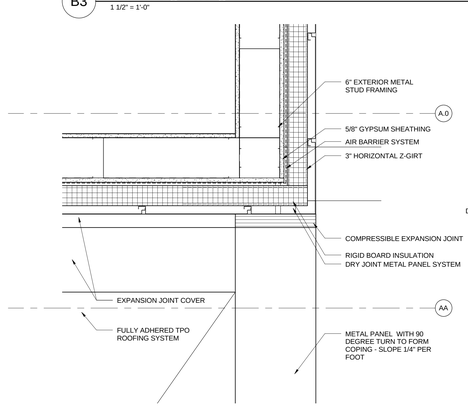
B3 1ST DTL @ 7&C @ 12'
1 1/2" = 1'-0"



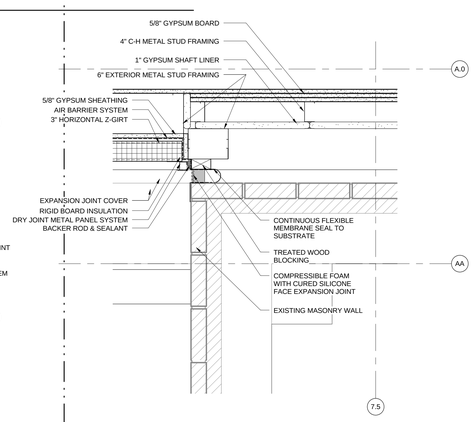
A1 PLAN DETAIL
1 1/2" = 1'-0"



A2 PLAN DETAIL
1 1/2" = 1'-0"



A3 PLAN DETAIL
1 1/2" = 1'-0"



A4 PLAN DETAIL
1 1/2" = 1'-0"

A-530

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

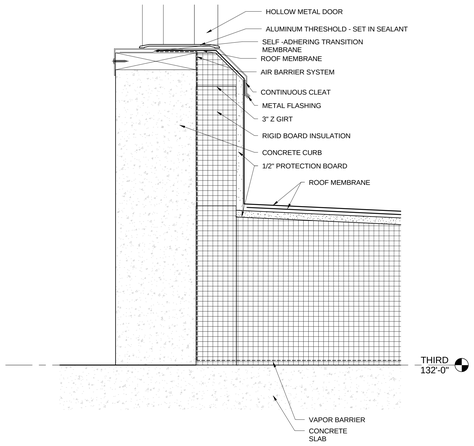
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
EXTERIOR DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-530	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

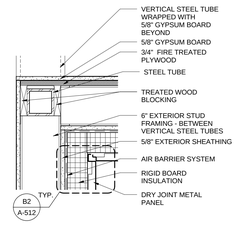
FACILITY DOCUMENT NUMBER
J241-101- A-530
REV. NO.

C:\BV700235-A-CENTRAL_ab\rdy\A4
7/8/2011 11:12:41 AM

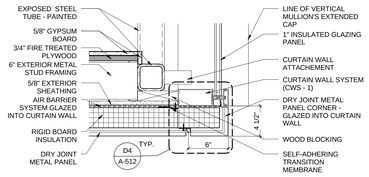
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



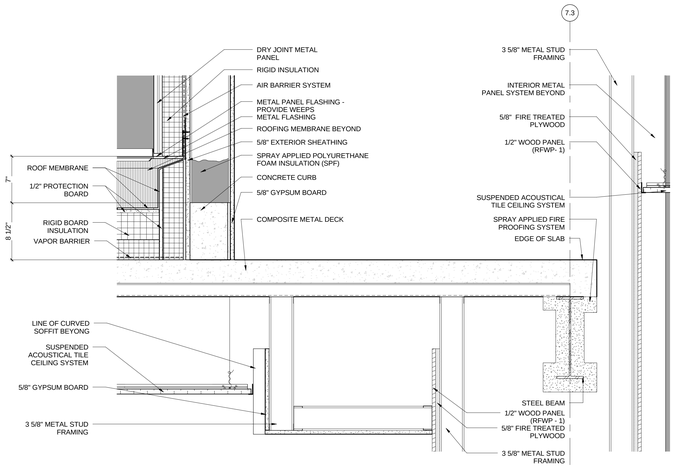
C1 SILL DETAIL @ ROOF ACCESS DOOR
3" = 1'-0"



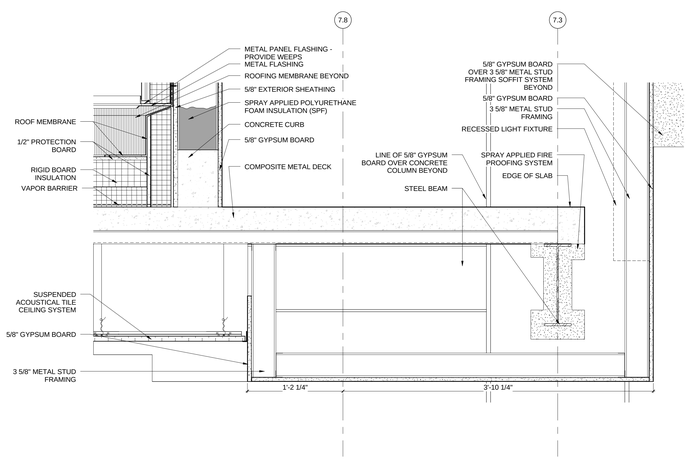
C2 SECTION DETAIL @ FIRST FLOOR EAST WALL
1 1/2" = 1'-0"



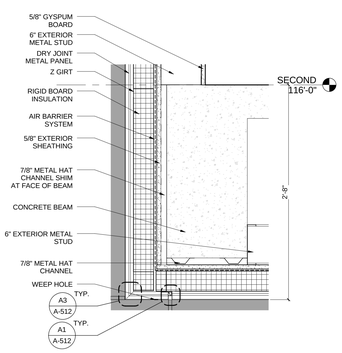
C3 SECTION DETAIL - CURTAIN WALL BASE @ EAST WALL
1 1/2" = 1'-0"



B1 SECTION DETAIL - LOBBY INT
1 1/2" = 1'-0"

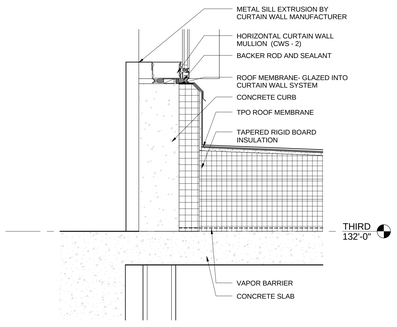


B2 SECTION DETAIL - SOFFIT AT STAIR ATRIUM
1 1/2" = 1'-0"

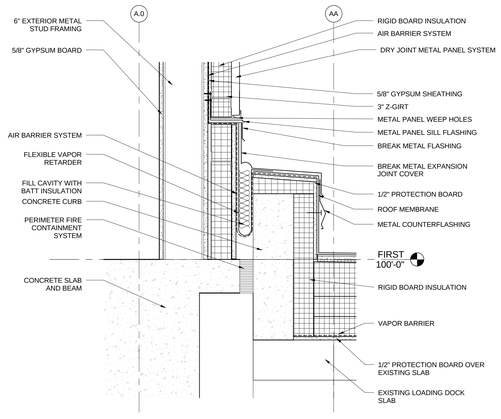


B3 EXTERIOR SOFFIT DETAIL
1 1/2" = 1'-0"

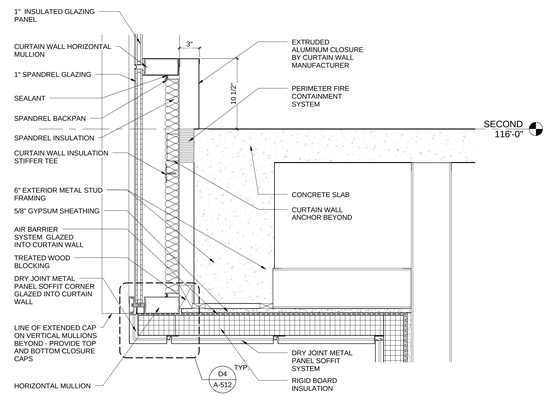
A-535



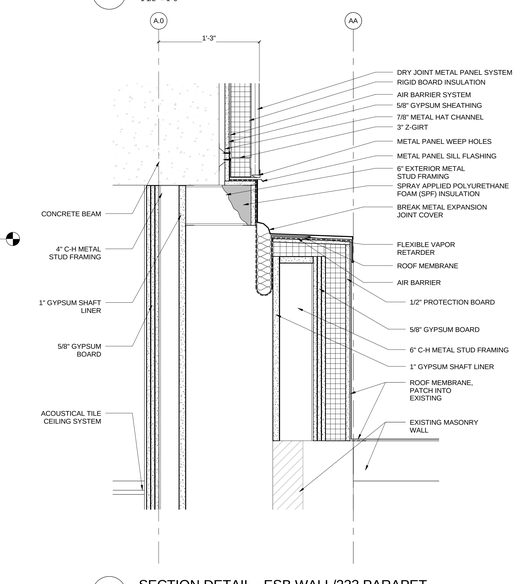
A1 SECTION DETAIL - INFILL ROOF @ MAIN SOUTH WALL
1 1/2" = 1'-0"



A2 SECTION DETAIL - SOUTH WALL @ DOCK EJ
1 1/2" = 1'-0"



A3 SECTION DETAIL - LOBBY 2ND
1 1/2" = 1'-0"



A4 SECTION DETAIL - ESB WALL/223 PARAPET
1 1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

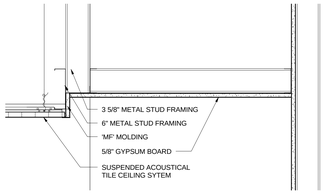
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
WALL SECTION DETAILS

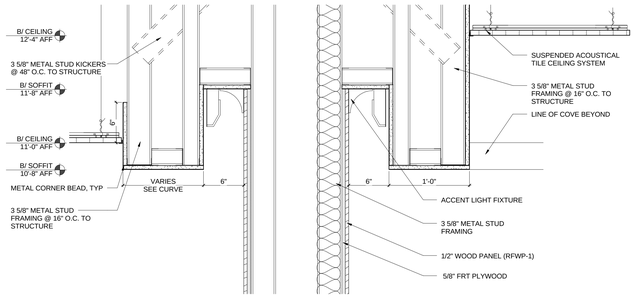
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-535	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-535 REV. NO.

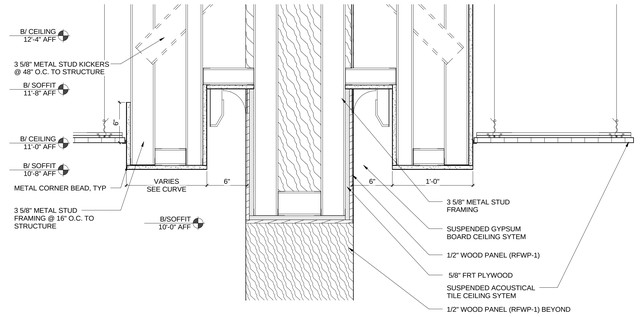
C:\R\TV002182-A-CENTRAL_alerts.rvt
7/8/2011 11:12:54 AM



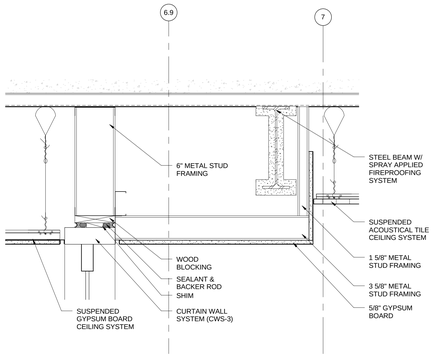
D1 CEILING DETAIL - WATER FOUNTAINS
1 1/2" = 1'-0"



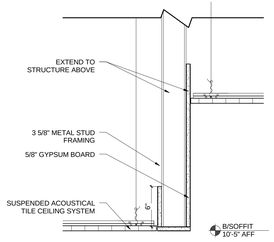
D2 CEILING DETAIL - 1ST FLR CONF ROOM
1 1/2" = 1'-0"



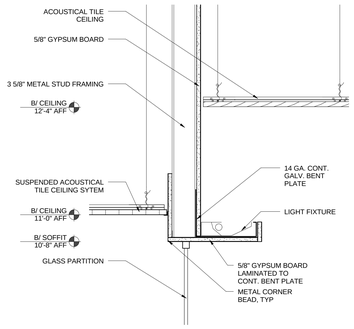
D4 CEILING DETAIL - CORR B122
1 1/2" = 1'-0"



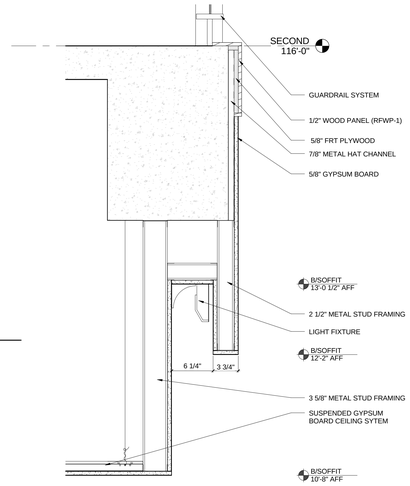
C1 CEILING DETAIL - LINK VESTIBULE
1 1/2" = 1'-0"



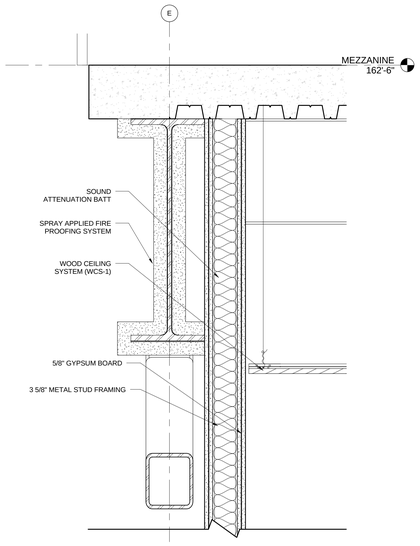
C2 CEILING DETAIL - ACT TO EXP
1 1/2" = 1'-0"



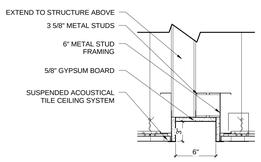
C3 SECTION DETAIL - GLASS PARTITION HEAD
1 1/2" = 1'-0"



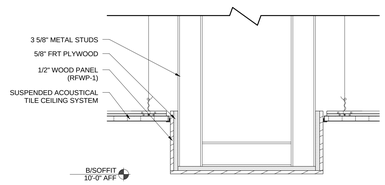
C4 CEILING DETAIL - LOBBY WEST
1 1/2" = 1'-0"



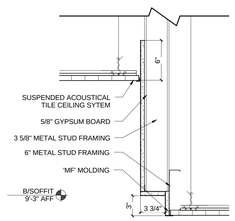
C5 Lobby Under Mezzanine
1 1/2" = 1'-0"



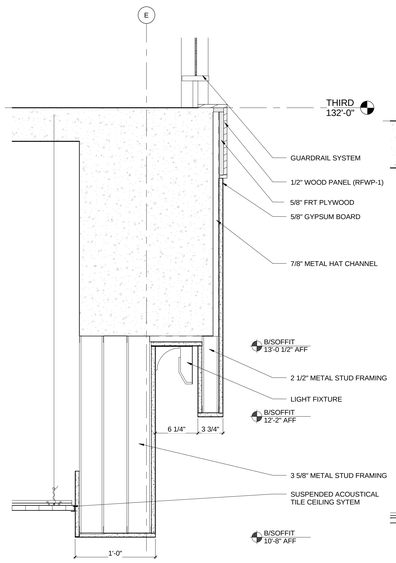
B1 CEILING DETAIL
1 1/2" = 1'-0"



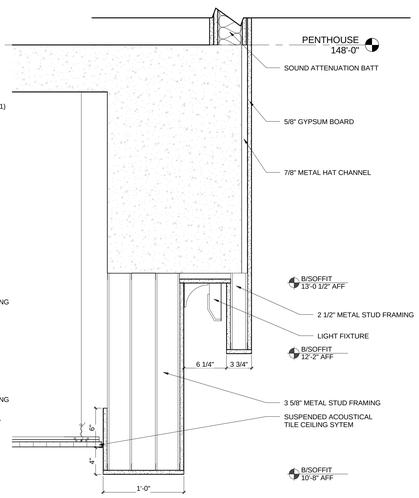
B2 CEILING DETAIL
1 1/2" = 1'-0"



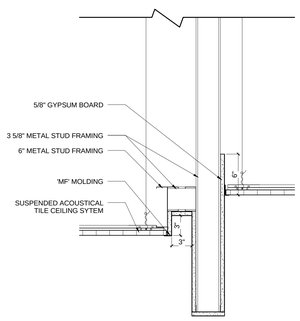
B3 CEILING DETAIL
1 1/2" = 1'-0"



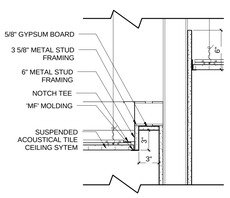
B4 CEILING DETAIL
1 1/2" = 1'-0"



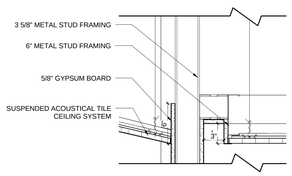
B5 CEILING DETAIL
1 1/2" = 1'-0"



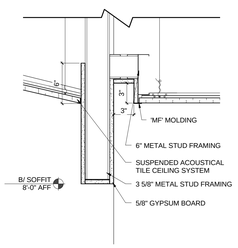
A1 CEILING DETAIL
1 1/2" = 1'-0"



A2 CEILING DETAIL
1 1/2" = 1'-0"



A3 CEILING DETAIL
1 1/2" = 1'-0"



A4 CEILING DETAIL
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-540

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

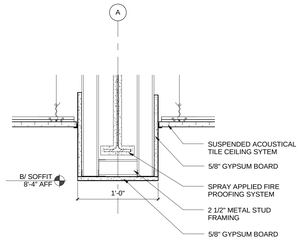
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
CEILING DETAILS

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-540	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

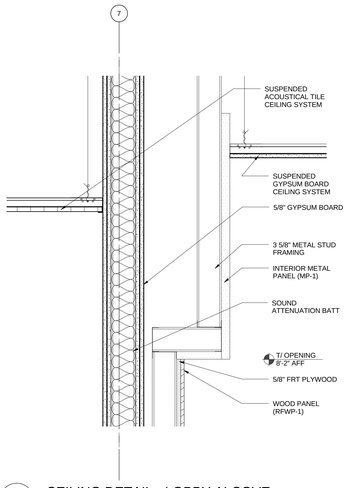
FACILITY DOCUMENT NUMBER J241-101- A-540 REV. NO.

C:\PCTOOLS\D-A-C\NTR\A_ahrdy.v4
7/8/2011 11:11:11 AM

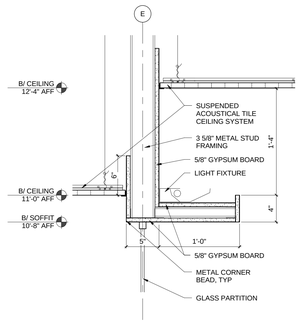
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



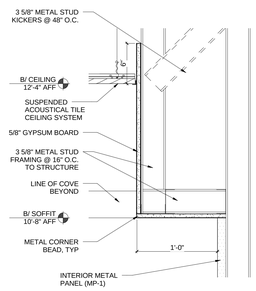
D4 CEILING DETAL - LINK @ TYP BEAM
1 1/2" = 1'-0"



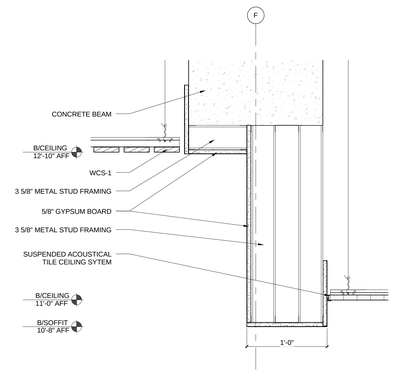
C1 CEILING DETAIL - LOBBY ALCOVE
1 1/2" = 1'-0"



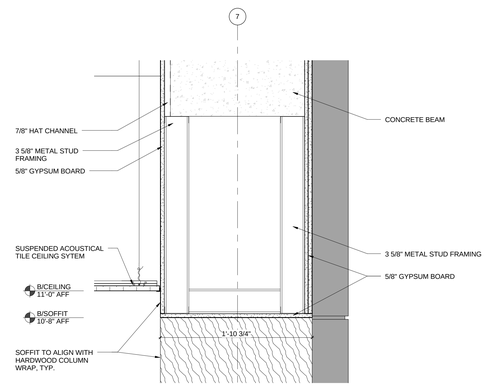
C2 CEILING DETAIL - 1ST CONF ROOM HEAD
1 1/2" = 1'-0"



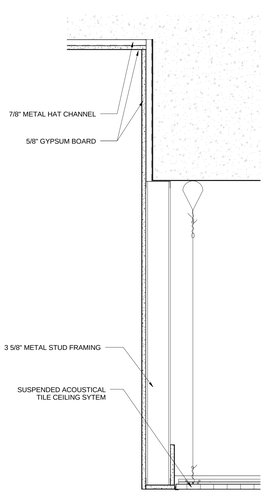
C3 CEILING DETAIL - 1ST CONF ROOM TO MTL
1 1/2" = 1'-0"



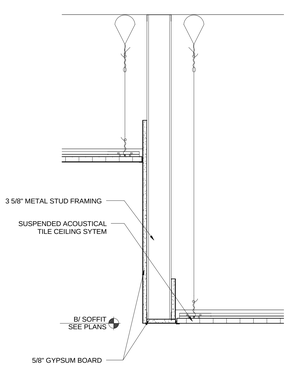
C4 CEILING DETAIL - 2ND FLOOR ATRIUM
1 1/2" = 1'-0"



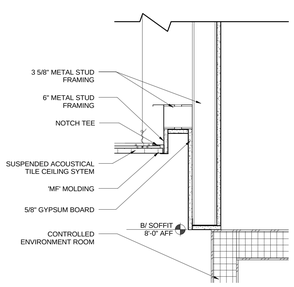
C5 CEILING DETAIL - THIRD FLOOR
1 1/2" = 1'-0"



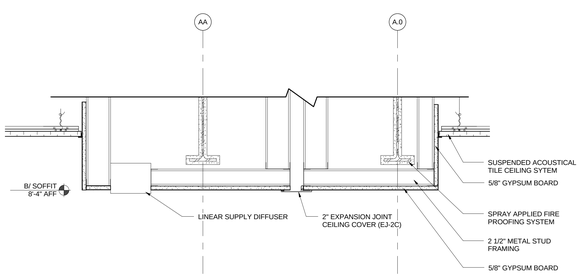
A1 CEILING DETAIL - LAB RAISED AREA
1 1/2" = 1'-0"



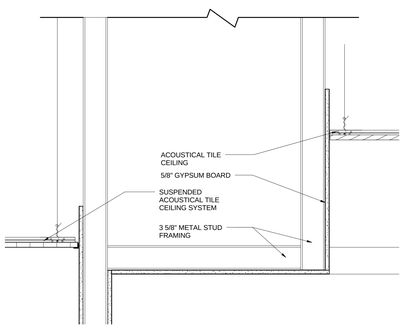
A2 CEILING DETAIL
1 1/2" = 1'-0"



A3 CEILING DETAIL - @ COLDROOM
1 1/2" = 1'-0"



A4 CEILING DETAL - LINK @ EJ
1 1/2" = 1'-0"



A5 CEILING DETAIL-CONF ROOM GYP
1 1/2" = 1'-0"

A-541

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

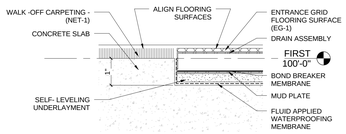
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
CEILING DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-541	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

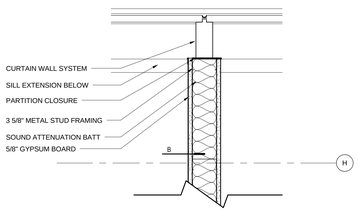
FACILITY DOCUMENT NUMBER: J241-101- A-541 REV. NO.

C:\ffr700\2182-A-CENTRAL_ajwdy.rvt
7/8/2011 11:13:31 AM

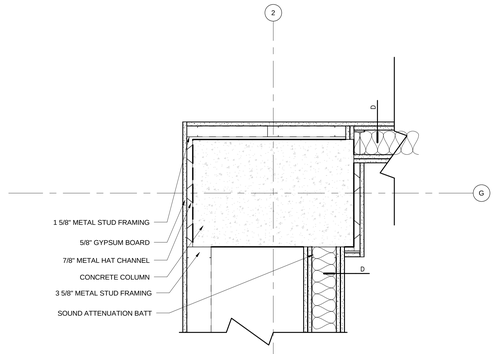
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



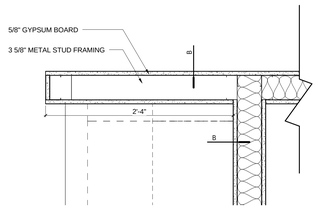
D1 RECESSED WALK OFF MAT DETAIL
6" = 1'-0"



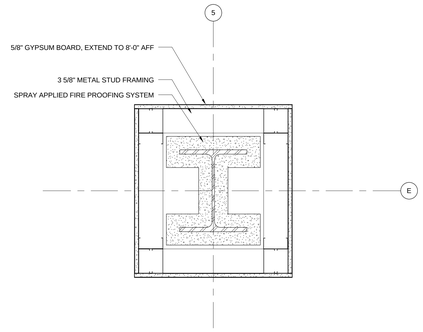
C1 PLAN DETAIL
1 1/2" = 1'-0"



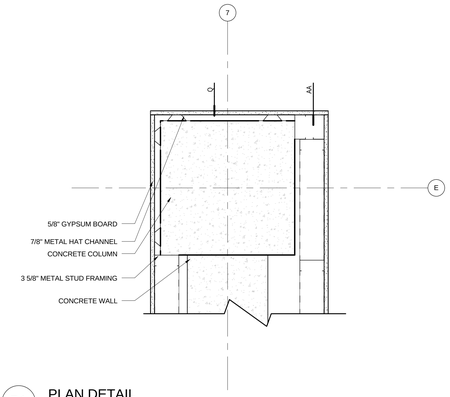
C2 PLAN DETAIL
1 1/2" = 1'-0"



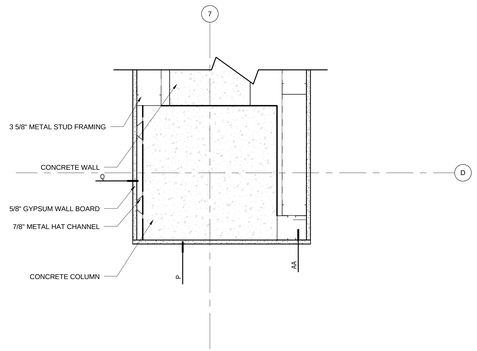
C3 PLAN DETAIL
1 1/2" = 1'-0"



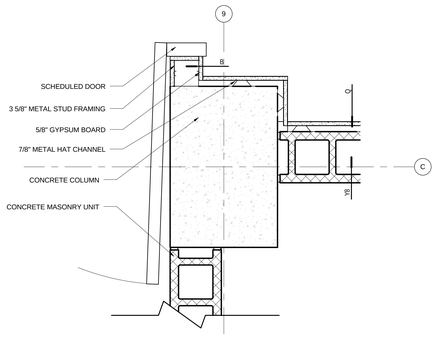
C4 PLAN DETAIL
1 1/2" = 1'-0"



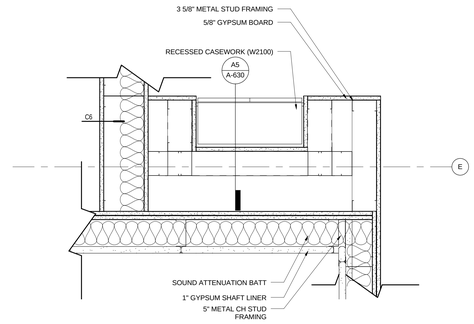
B1 PLAN DETAIL
1 1/2" = 1'-0"



B2 PLAN DETAIL
1 1/2" = 1'-0"

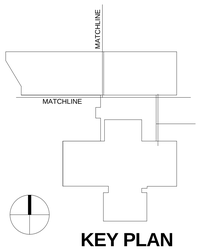


B3 PLAN DETAIL
1 1/2" = 1'-0"

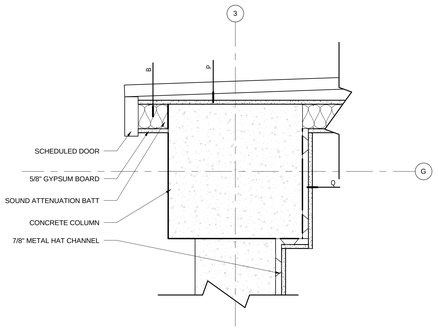


B4 PLAN DETAIL
1 1/2" = 1'-0"

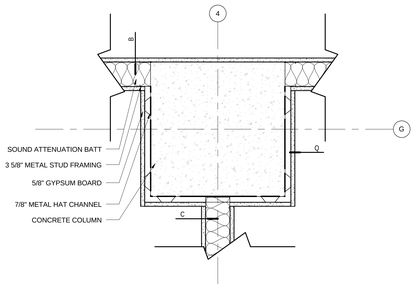
A-551



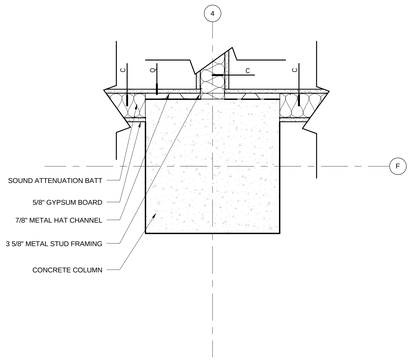
KEY PLAN



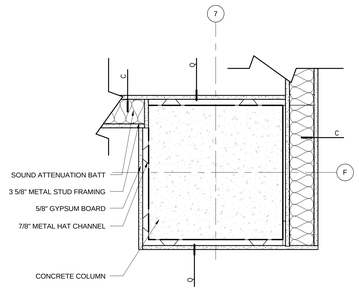
A1 PLAN DETAIL
1 1/2" = 1'-0"



A2 PLAN DETAIL
1 1/2" = 1'-0"



A3 PLAN DETAIL
1 1/2" = 1'-0"



A4 Ground Int @7&F 2
1 1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

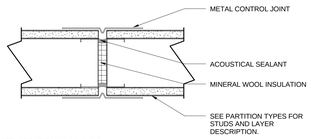
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR DETAILS

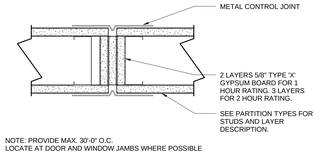
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-551	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-551
REV. NO.

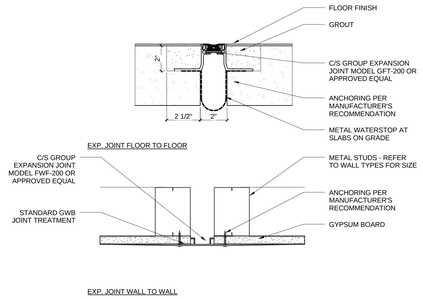
C:\R\TW20182-A-CENTRAL_alerts.rvt
7/8/2011 11:13:49 AM



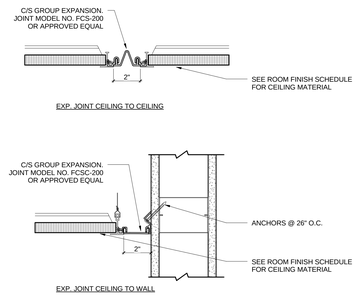
E1 WALL CONTROL JOINT (TYP) - NO RATING
3" = 1'-0"



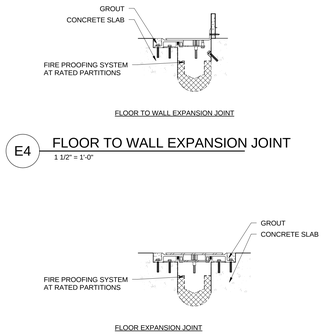
D1 WALL CONTROL JOINT (TYP) - 1 OR 2 HR. RATING
3" = 1'-0"



D2 INTERIOR EXPANSION JOINTS
3" = 1'-0"

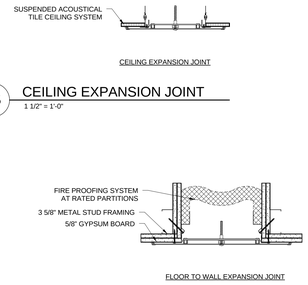


D3 EXPANSION JOINT - CEILING
3" = 1'-0"



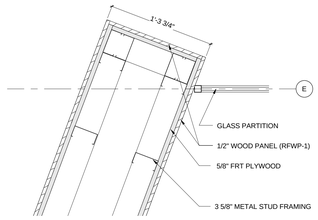
E4 FLOOR TO WALL EXPANSION JOINT
1 1/2" = 1'-0"

D4 FLOOR EXPANSION JOINT
1 1/2" = 1'-0"

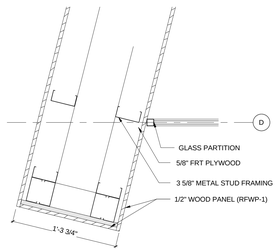


E5 CEILING EXPANSION JOINT
1 1/2" = 1'-0"

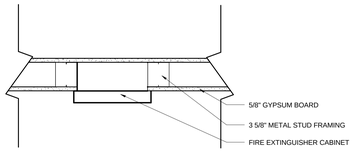
D5 WALL EXPANSION JOINT
1 1/2" = 1'-0"



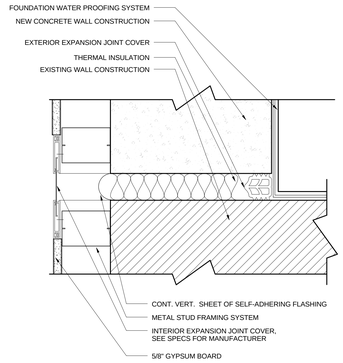
C1 GLAZING TRACK JAMB DETAIL
1 1/2" = 1'-0"



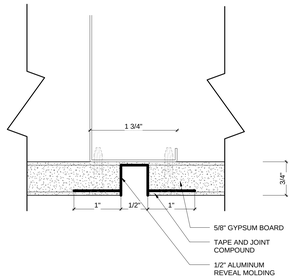
C2 GLAZING TRACK JAMB DETAIL
1 1/2" = 1'-0"



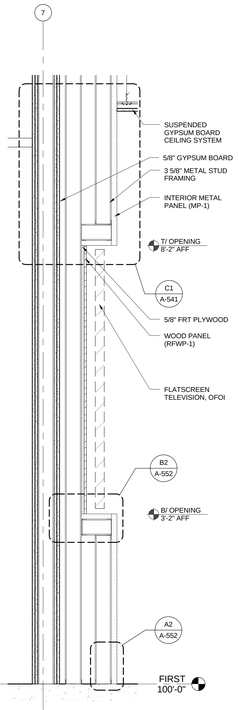
C3 FIRE EXTINGUISHER CABINET
1 1/2" = 1'-0"



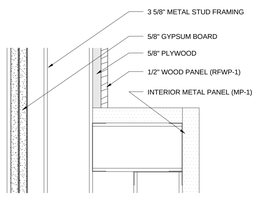
C4 EXPANSION JOINT DETAIL (TYP)
3" = 1'-0"



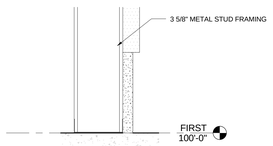
C5 TYPICAL GYPSUM REVEAL
12" = 1'-0"



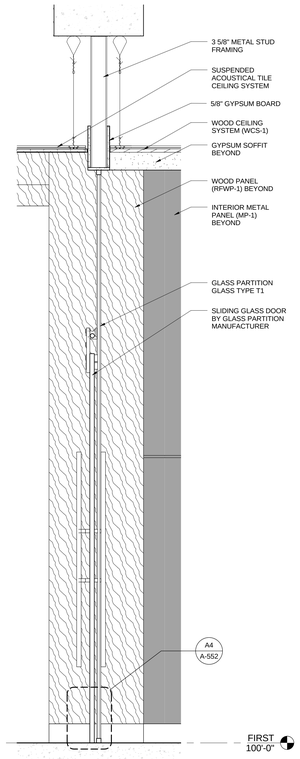
A1 SECTION DETAIL - TV ALCOVE
1" = 1'-0"



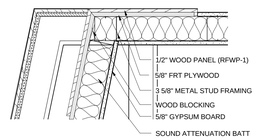
B2 SECTION DETAIL - TV ALCOVE B/OPENING
3" = 1'-0"



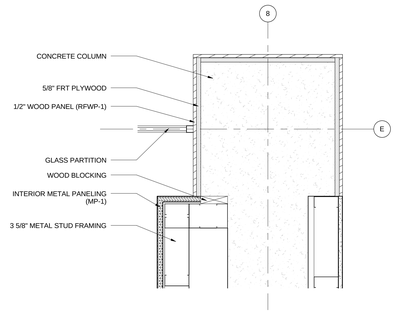
A2 SECTION DETAIL - TV ALCOVE BASE
3" = 1'-0"



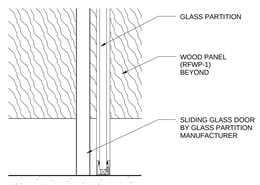
A3 CONF B123 GLASS FRONT
1" = 1'-0"



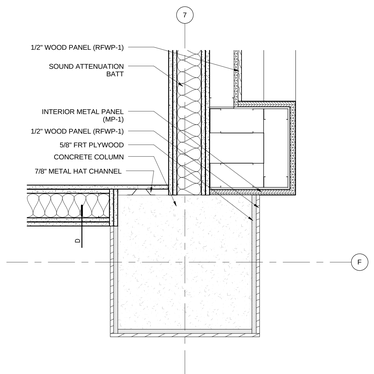
B4 1ST DETAIL NEAR TLT B174
1 1/2" = 1'-0"



B5 GLAZING TRACK JAMB DETAIL
1 1/2" = 1'-0"



A4 GLAZING TRACK SILL DETAIL
3" = 1'-0"



A5 FIRST FLOOR PLAN DETAIL @ CL F/7
1 1/2" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-552

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-552	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

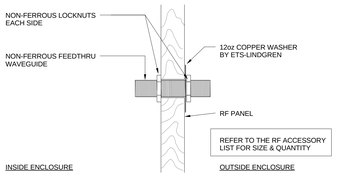
FACILITY DOCUMENT NUMBER J241-101- A-552 REV. NO.

C:\DV70021\DA-CENTRAL_dwfx\rvt
7/8/2011 11:14:05 AM

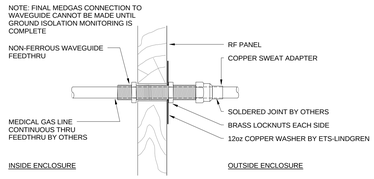
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

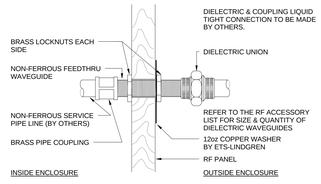
A-553



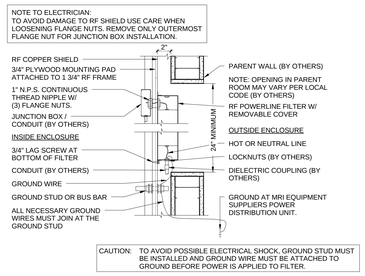
C1 WAVEGUIDE FEEDTHRU
3" = 1'-0"



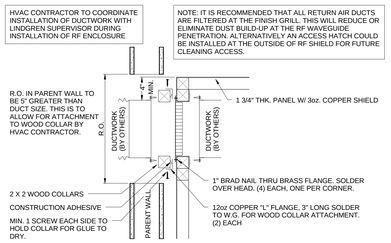
C2 LABORATORY PENETRATION DETAIL
1 1/2" = 1'-0"



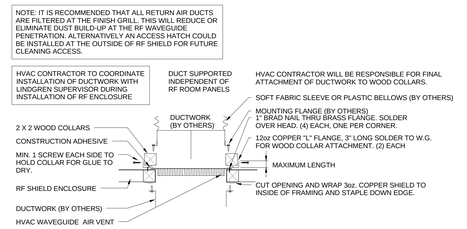
C3 DIELECTRIC WAVEGUIDE
1 1/2" = 1'-0"



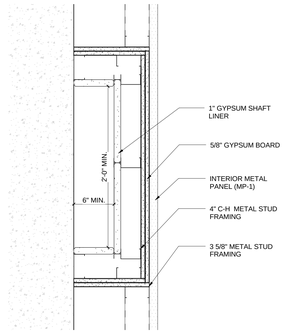
B1 RF POWERLINE FILTER
1 1/2" = 1'-0"



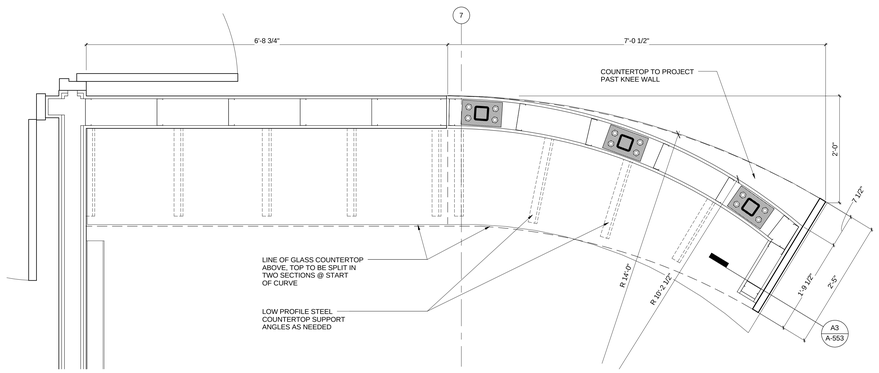
B2 AIRVENT WAVEGUIDE WALL PENETRATIONS
1 1/2" = 1'-0"



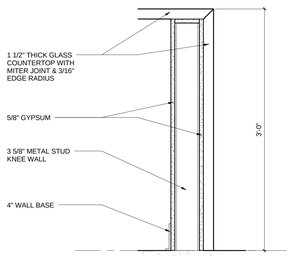
B3 W.G. AIRVENT CONNECTION
1 1/2" = 1'-0"



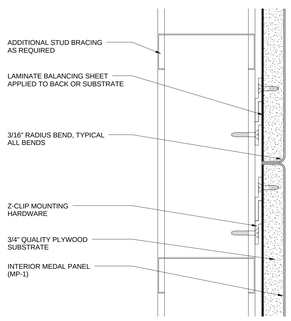
B5 PLAN DETAIL
1 1/2" = 1'-0"



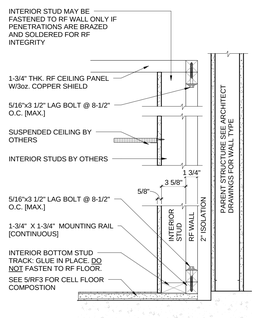
A1 ENLARGED BREAK ROOM PLAN
1" = 1'-0"



A3 SECTION DETAIL
1 1/2" = 1'-0"



A4 TYPICAL METAL PANEL SECTION
6" = 1'-0"



A5 RF SHIELDING - WALL SECTION
1 1/2" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

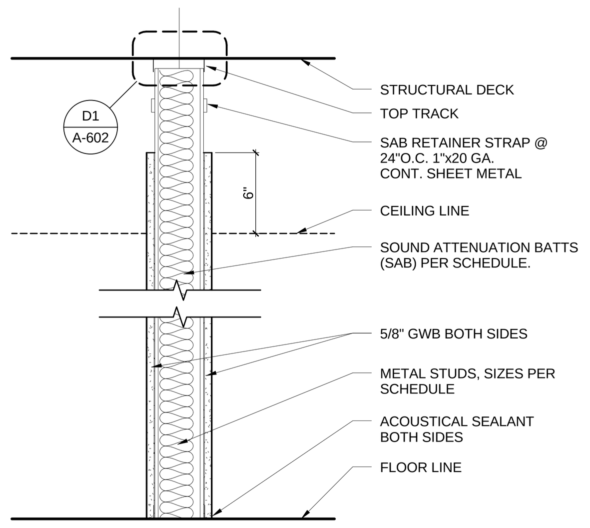
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR DETAILS & RF SHIELDING DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-553	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

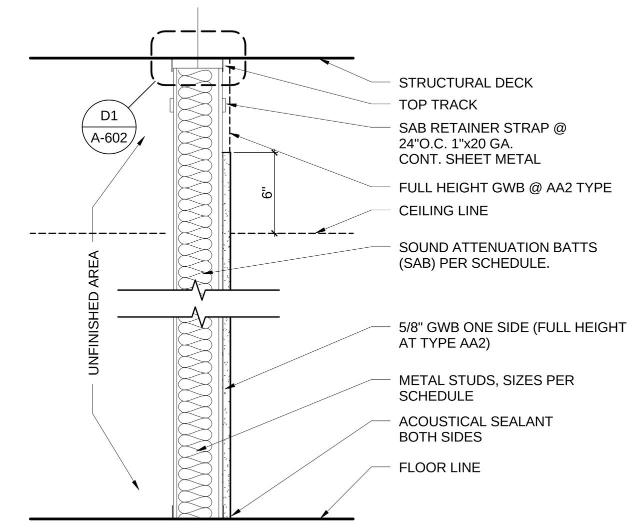
FACILITY DOCUMENT NUMBER J241-101- A-553 REV. NO.

C:\R\7002182-A-CENTRAL_alerts-v4.
7/8/2011 11:14:15 AM



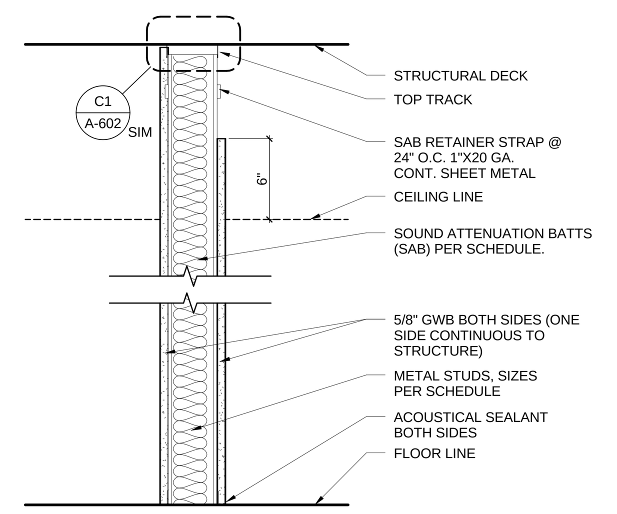
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
A	3 5/8"	-	3 1/2"	-	-
A1	3 5/8"	-	-	-	-

NON-FIRE RATED WALL — A
NTS



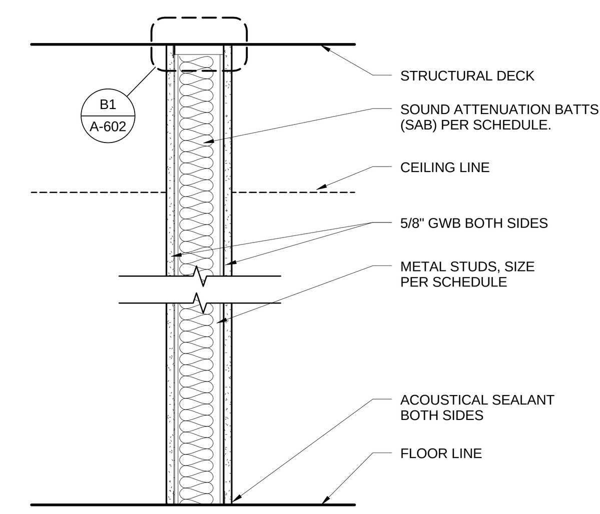
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
AA	3 5/8"	-	3 1/2"	-	-
AA1	3 5/8"	-	-	-	-
AA2	3 5/8"	-	-	-	-

NON-FIRE RATED WALL — AA
NTS



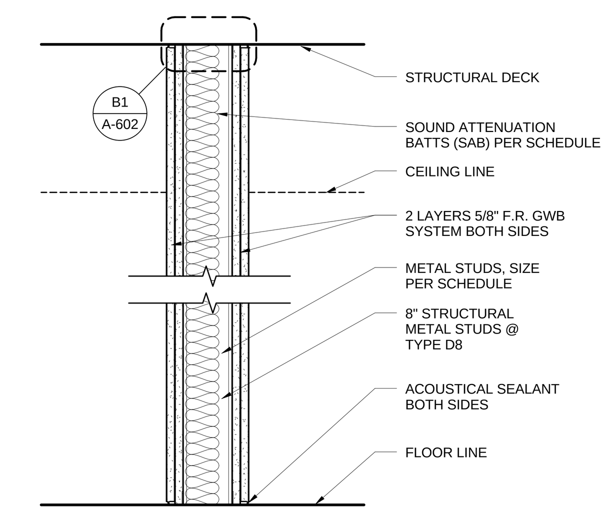
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
B	3 5/8"	-	3 1/2"	-	-
B1	3 5/8"	-	-	-	-
B6	6"	-	3 1/2"	-	-

NON-FIRE RATED WALL — B
NTS



MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
C	3 5/8"	U465, U450	3 1/2"	48	TL99-103
C6	6"	U465, U450	3 1/2"	48	TL99-103

1-HOUR WALL — C
NTS



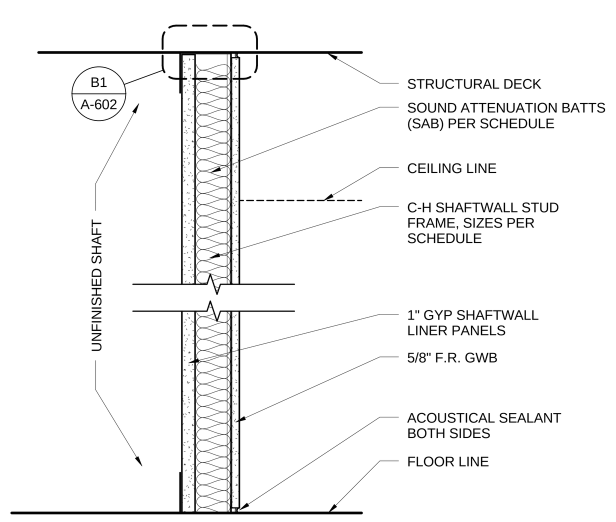
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
D	3 5/8"				
D6	6"	U419, U450	3 1/2"	56	TL99-103
D8	8"	U419, U450	3 1/2"	56	TL99-103

2-HOUR WALL — D
NTS

A. GENERAL NOTES:

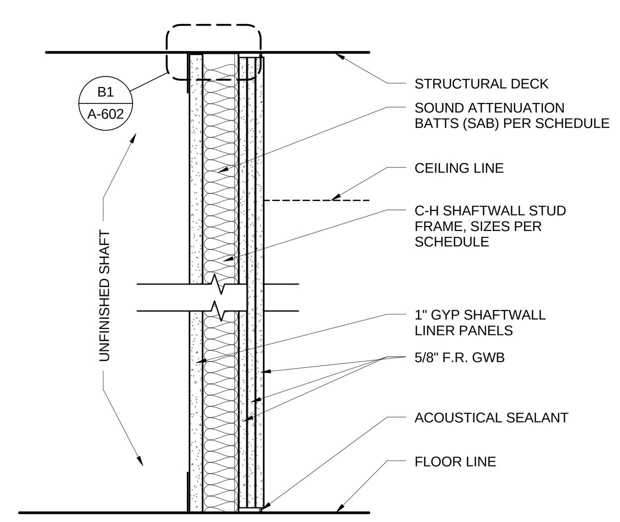
1. SEE FLOOR PLANS FOR EXTENT OF EACH WALL TYPE. SOME WALL TYPES MAY NOT BE USED ON PROJECT.
2. WALL TYPES ARE TITLED TO GENERALLY DESCRIBE AN ASSEMBLY'S FIRE-RESISTIVE "CAPABILITY". IN SOME CASES, ARCHITECT MAY HAVE EMPLOYED A GIVEN WALL TYPE FOR ITS SOUND CONTROL OR OTHER PROPERTIES. THUS IT IS POSSIBLE THAT WALL TYPES CHOSEN MAY PROVIDE GREATER FR CAPABILITY THAN ACTUALLY REQUIRED BY BUILDING CODE. UTILIZE WALL TYPES INDICATED BY FLOOR PLAN CALL-OUTS.
3. CONTACT ARCHITECT WHERE WALLS LACK A WALL TYPE CALL-OUT.
4. "METAL STUDS" INDICATED ON THIS SHEET FOR INTERIOR PARTITIONS REFER TO THOSE SPECIFIED IN SECTION 09 22 16 / NON-STRUCTURAL METAL FRAMING. REFER TO SPECIFICATIONS FOR ADDITIONAL CRITERIA SUCH AS STUD SPACING, MINIMUM GAUGE OF METAL AND PERMISSIBLE DEFLECTION LIMITS.
5. "STC" REFERS TO SOUND TRANSMISSION CLASS; A RATING SYSTEM THAT DESCRIBES THE ABILITY OF AN ASSEMBLY TO REDUCE THE TRANSMISSION OF SOUND. CONFIGURE SOUND-RATED WALL ASSEMBLIES ACCORDING TO THE MINIMUM REQUIREMENTS STIPULATED IN THE STC TESTS LISTED.
6. "SAB" REFERS TO SOUND ATTENUATION BATTS SPECIFIED IN SECTION 09 29 00. WHERE SAB ARE INDICATED, THEY SHALL EXTEND CONTINUOUSLY FROM FLOOR TO STRUCTURE ABOVE.
7. WALLS ARE INDICATED WITH CONVENTIONAL GYPSUM WALLBOARD; UPGRADE TO PREMIUM TYPES OF WALLBOARD (I.E. MOISTURE-RESISTANT, TILE-BACKER, ETC) BASED ON THEIR LOCATION AND ACCORDING TO REQUIREMENTS OF SECTION 09 29 00.
8. HEAD-OF-WALL FIRESTOPPING AND SEALING OF THRU-WALL PENETRATIONS: REFER TO SECTION 07 84 00 / FIRESTOPPING.
9. ACOUSTICAL SEALANTS: SPECIFIED IN SECTION 09 29 00.

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



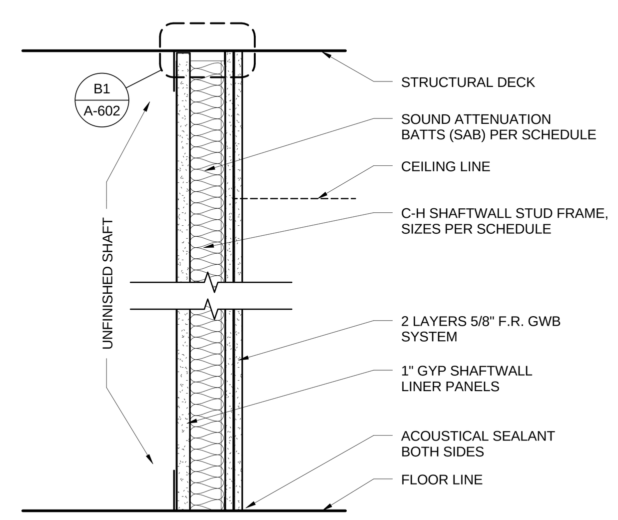
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
E4	4"	U469	2 1/2"	48	OT-04-019

1-HOUR WALL (UNFINISHED SHAFT) — E4
NTS



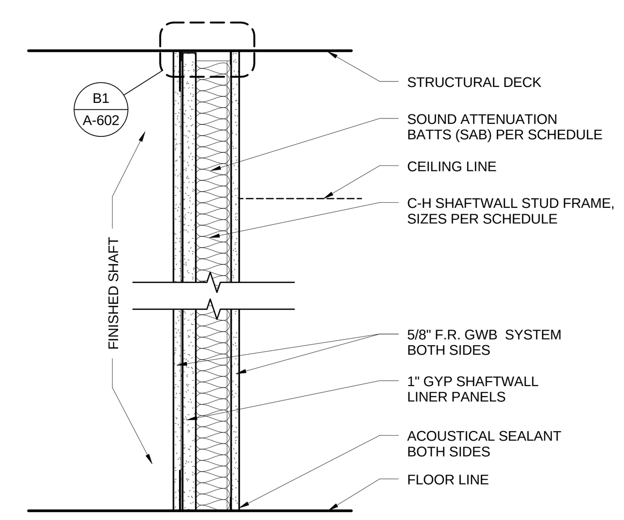
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
EE	4"	U415	3 1/2"	39	USG-040901

3-HOUR WALL (UNFINISHED SHAFT) — EE
NTS



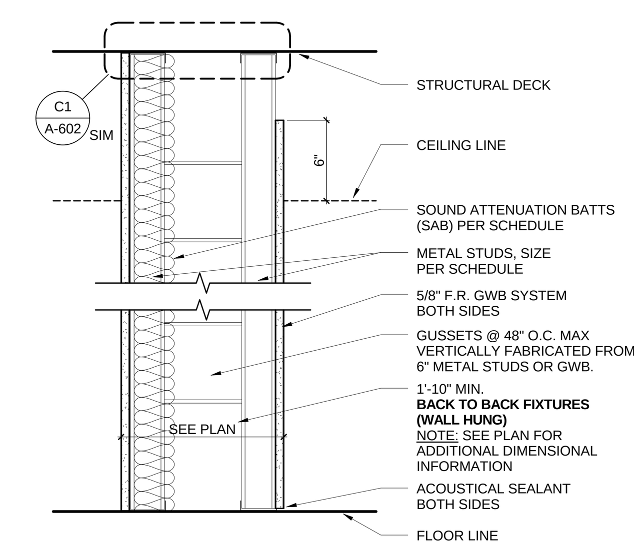
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
F4	4"	U438	3 1/2"	48	OT-04-019

2-HOUR WALL (UNFINISHED SHAFT) — F4
NTS



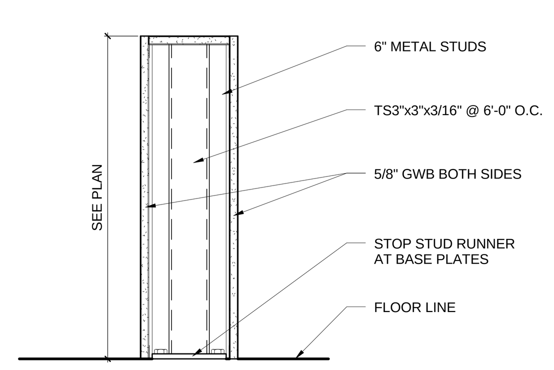
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
FF4	4"	U438	3 1/2"	48	OT-04-019

2-HOUR WALL (FINISHED SHAFT) — FF
NTS

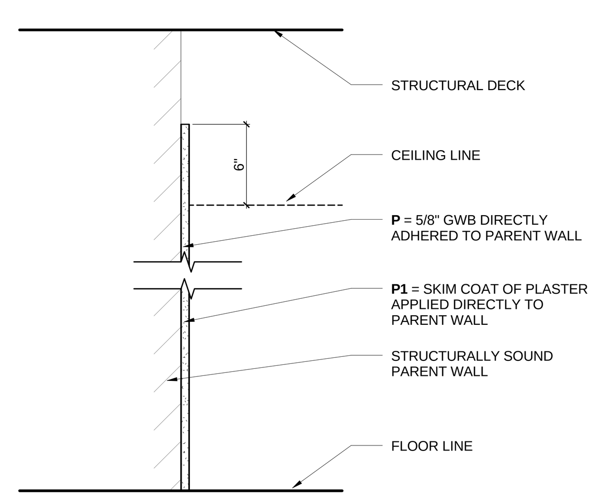


MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
GG	2 1/2"	-	2 1/2"	-	-

NON FIRE RATED CHASE (BACK TO BACK FIXTURES) — GG
NTS

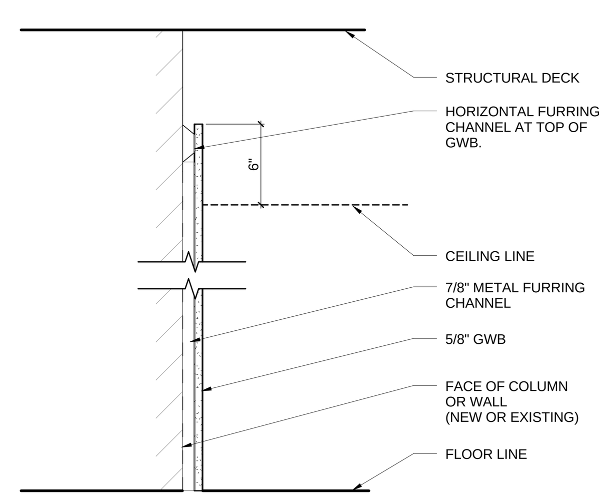


REINFORCED KNEE WALL — L
NTS



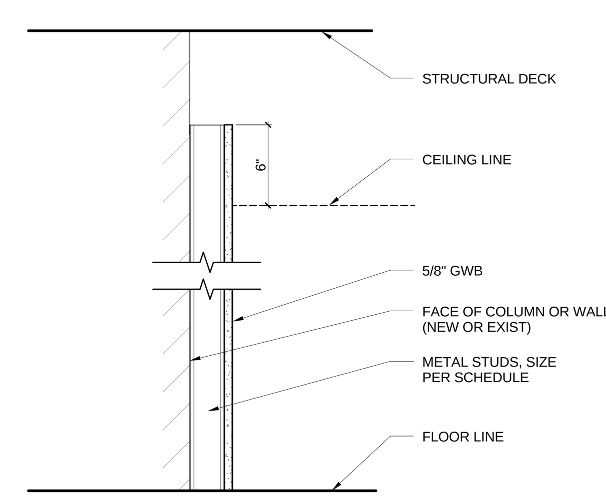
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
P		-		N/A	

DIRECT APPLIED — P
NTS



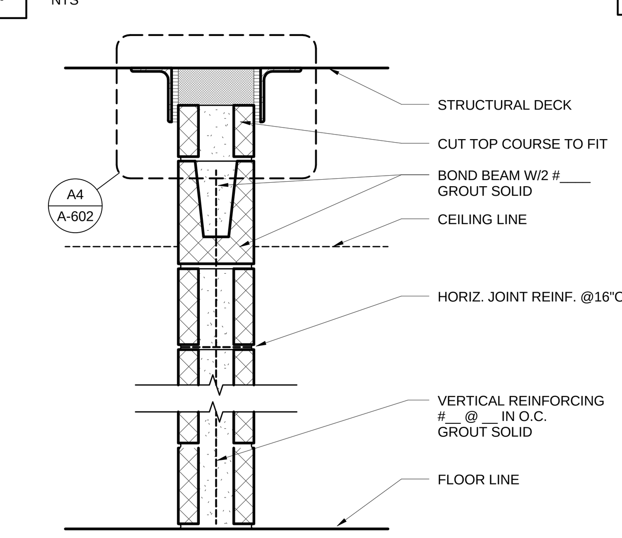
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
Q				N/A	

CHANNEL FURRING — Q
NTS



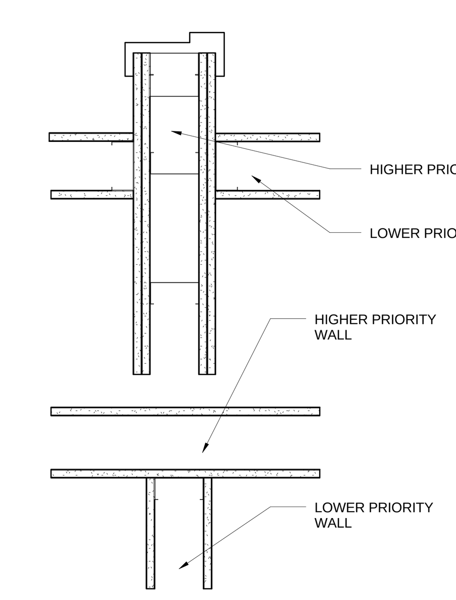
MARK	STUD SIZE	FIRE-RESISTANCE TEST	SOUND ATTENUATION SAB	STC	TEST
R1	1 5/8"	-	-	-	-
R2	2 1/2"	-	-	-	-
R3	3 5/8"	-	-	-	-
R6	6"	-	-	-	-
~~RF~~	~~3 5/8"~~	~~-~~	~~-~~	~~-~~	~~-~~

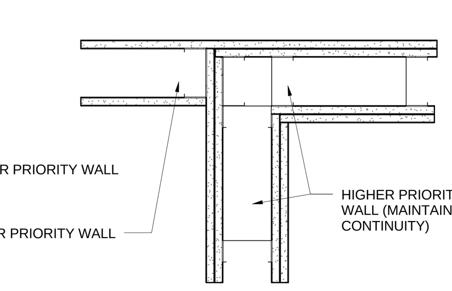
STUD FURRING — R
NTS



MARK	CMU SIZE	TEST	STC
Y8	7 5/8"	-	48

CMU PARTITION WALL — Y
NTS





WALL PRIORITY LEGEND	
WALL FUNCTION	PRIORITY
4 HR FIRE & SMOKE	HIGHER
3 HR FIRE & SMOKE	↑
2 HR FIRE & SMOKE	
2 HR FIRE	
1 HR FIRE & SMOKE	
1 HR FIRE	
SMOKE PARTITIONS (NON FR)	
SOUND CONTROL WALLS (NON FR)	↓
OTHER WALLS	LOWER

NOTES:
WHERE WALLS OF DIFFERENT FUNCTIONS/ RATINGS INTERSECT: WALLS OF HIGHER PRIORITY SHALL BE CONTINUOUS.

LOWER PRIORITY WALLS SHALL "ABUT" AND BE "SEALED TO" HIGHER PRIORITY WALLS, BUT SHALL NOT INTERRUPT CONTINUITY OF THE HIGHER PRIORITY WALL.

WALL PRIORITY LEGEND — 6
NTS

A-601

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING
PROJECT NO. 002182-98502-ESB

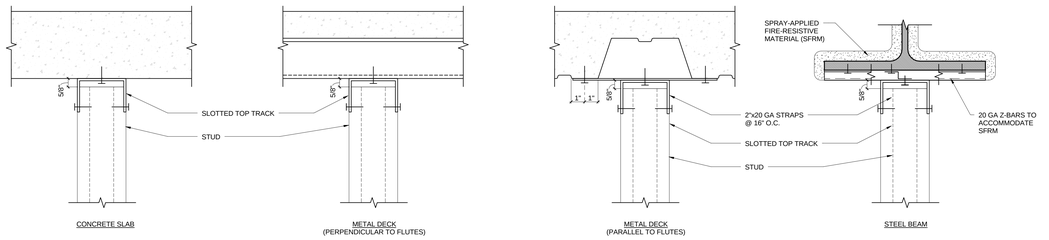
DOCUMENT TITLE
INTERIOR WALL TYPES

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-601	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: **J241-101- A-601** REV. NO.

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:15:02 AM

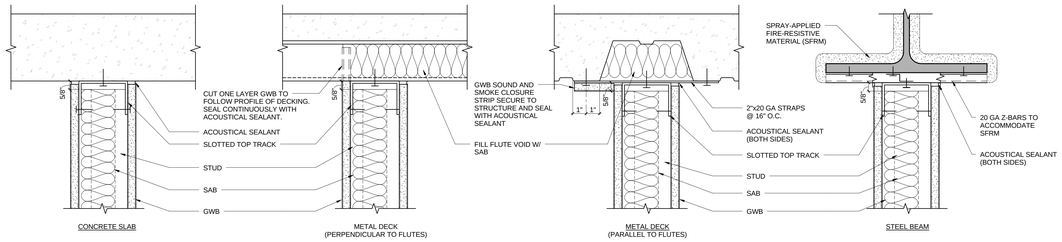
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



DETAIL 1C - "OTHER WALLS" - ADDITIONAL NOTES:
1. UPGRADE TO DETAIL "1A" WHERE WALL IS DESIGNATED WITH A FIRE-RESISTANCE RATING.
2. UPGRADE TO DETAIL "1B" WHERE WALL IS DESIGNATED AS A "SMOKE PARTITION" OR "SOUND-CONTROL" WALL.

D1 HEAD-OF-WALL CONDITIONS - STUD WALLS - NON-FIRE, NON-SMOKE, NON-SOUND CONTROL WALLS

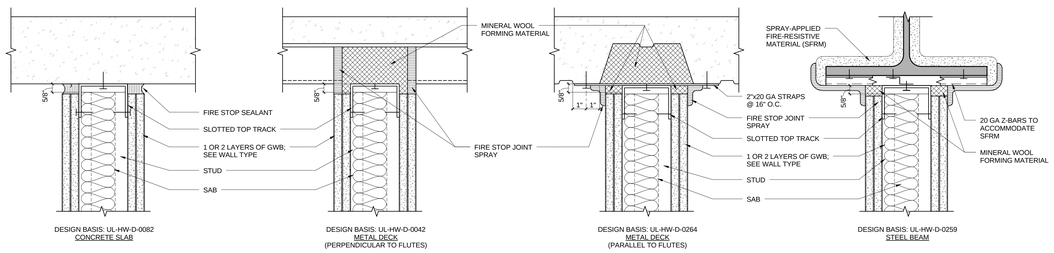
NTS



DETAIL 1B - "SMOKE PARTITIONS AND SOUND-CONTROL WALLS"- ADDITIONAL NOTES:
1. UPGRADE TO DETAIL "1A" WHERE WALL IS DESIGNATED WITH A FIRE-RESISTANCE RATING.
2. FILL VOIDS WITH SOUND ATTENUATION BATTS (SAB).
3. SOUND WALLS AND SMOKE PARTITIONS REQUIRE THAT AT LEAST ONE LAYER OF GWB BE CUT TO FOLLOW UNDULATING SURFACES OF SUPERSTRUCTURES INCLUDING BUT NOT LIMITED TO FLUTES METAL DECKING. JOINT GWB TO SUPERSTRUCTURE WITH A CONTINUOUS BEAD OF ACOUSTICAL SEALANT.
4. BUILDING CODE REQUIRES THAT "SMOKE PARTITIONS" BE SEALED TO STRUCTURE AS INDICATED TO SUCCESSFULLY "....LIMIT THE PASSAGE OF SMOKE....".

C1 HEAD-OF-WALL CONDITIONS - STUD WALLS - SMOKE PARTITIONS AND SOUND CONTROL WALLS

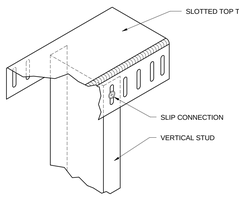
NTS



DETAIL 1A - "FIRE-RATED WALLS"- ADDITIONAL NOTES:
1. CONDITIONS INDICATED TO SHOW DESIGN INTENT. THEY ARE NOT INTENDED TO BE PROPRIETARY. CONTRACTOR MAY EMPLOY SIMILAR A UL-APPROVED TOP-OF-WALL DESIGNS THAT ARE APPROPRIATE FOR CONDITIONS.
2. REFER TO SECTION 07270 / FIRESTOPPING FOR ADDITIONAL REQUIREMENTS REGARDING HEAD-OF-WALL CONDITION FOR FIRE-RATED WALLS.

B1 HEAD-OF-WALL CONDITIONS - STUD WALLS - FIRE RATED WALLS

NTS

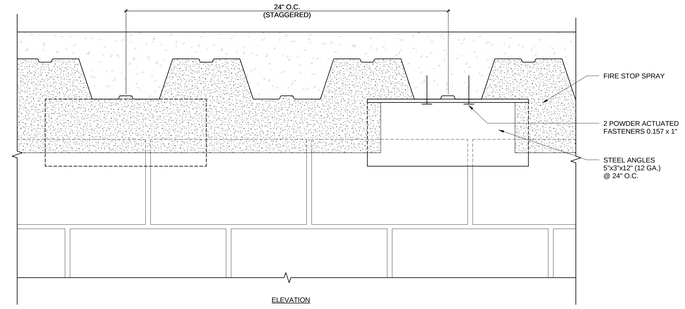


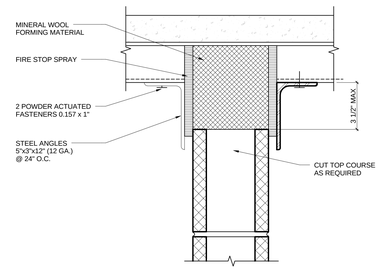
ISOMETRIC VIEW OF SLOTTED TOP TRACK

GENERAL NOTES (COMMON TO ALL DETAILS)
1. CONDITIONS INDICATED SHOW DESIGN INTENT, ESPECIALLY IN REGARD TO ACCOMMODATION OF STRUCTURAL DEFLECTION AND COMPLETING INTEGRITY OF SOUND, SMOKE AND FIRE WALLS.
2. DESIGN-INTENT DETAILS ARE NOT INTENDED TO BE PROPRIETARY. CONTRACTOR MAY EMPLOY SIMILAR HEAD-OF-WALL DESIGNS AND COMPONENTS AS APPROPRIATE FOR CONDITIONS.
3. DESIGN-INTENT DETAILS MAY NOT SHOW ALL CONDITIONS TO BE ENCOUNTERED ON SUBJECT PROJECT. COMPLY WITH MANUFACTURER AND UL-APPROVED METHODS FOR ATYPICAL CONDITIONS.
4. SECURE TOP OF INTERIOR PARTITIONS TO SUPERSTRUCTURE IN A WAY THAT PROVIDES LATERAL STABILITY (PERPENDICULAR-TO AND IN-PLANE WITH WALL) YET ALLOWING FOR UP TO 3/4 IN OF VERTICAL DEFLECTION OF THE SUPERSTRUCTURE.
5. RIGIDLY SECURE SLOTTED TOP TRACK TO BUILDING SUPERSTRUCTURE IN APPROVED MANNER. EMPLOY Z-BARS, COLD-ROLLED CHANNELS OR SIMILAR SPACERS TO ACCOMMODATE THICKNESS OF SPRAY-APPLIED FIRE-RESISTIVE MATERIALS (SFRM).
6. SLOTTED TOP TRACK, INDICATED ON THESE DETAILS, IS BASIS FOR DESIGN AND REFERS TO LONG-LEG TRACK WITH VERTICALLY SLOTTED HOLES. OPTIONAL MANUFACTURERS MAY PROVIDE SIMILAR, PROPRIETARY METHODS IN ACCORDANCE WITH PROVISIONS OF SPECIFICATION SECTION 09110.
7. SECURE VERTICAL STUDS TO TOP TRACK USING VERTICAL SLOTS IN TRACK. COMPONENTS INTENDED TO SLIDE VERTICALLY AS SUPERSTRUCTURE DEFLECTS.
8. DO NOT SCREW GYPSUM WALLBOARD TO TOP TRACK OR SUPERSTRUCTURE.
9. REFER TO SPECIFIC WALL TYPES FOR SIZE OF STUD, SAB, GWB CONDITIONS ETC.

A1 HEAD-OF-WALL CONDITIONS - STUD WALLS - GENERAL REQUIREMENTS

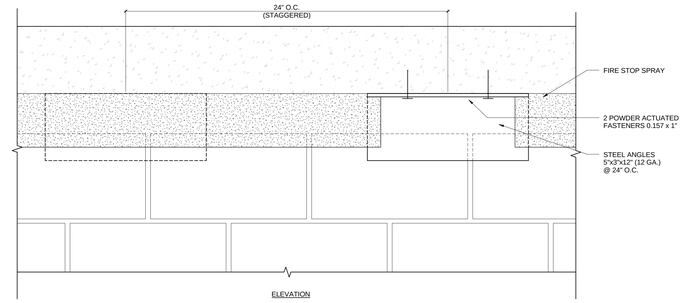
NTS

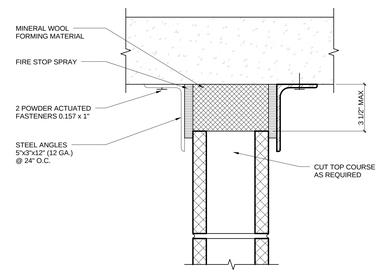




SECTION
DESIGN BASIS: UL-HW-D-1044

AT METAL DECK





SECTION
DESIGN BASIS: UL-HW-D-1045

AT CONCRETE DECK

A4 HEAD OF WALL CONDITIONS - CMU

NTS

A-602

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
INTERIOR WALL TYPE DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-602	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-602
REV. NO.

C:\PW70\0230.A.CENTRAL_admin.rvt
7/6/2011 11:15:08 AM

WINDOW SCHEDULE - ALTERNATE 2 - FIRST FLOOR

LEVEL	TYPE	HEIGHT	WIDTH	HEAD HEIGHT	SILL HEIGHT	FIRE RATING (MIN)	MATERIAL	GLAZING	WINDOW AREA	NOTES
GROUND	13	3'-2"	3'-2"	11'-2"	8'-0"			Hurricane Louver	10 SF	
FIRST	1	3'-0"	4'-0"	7'-4"	4'-4"	--	HM	T	12 SF	

DOOR AND FRAME SCHEDULE - ALTERNATE 2 - GROUND & FIRST LEVELS

IDENTIFICATION				DOOR								FRAME				HARDWARE		
LEVEL	ROOM NAME	ROOM NO.	DOOR NO.	NO. OF PANELS	W1	W2	H	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	FIRE RATING	SET	ELECTRICAL	NOTES
GROUND	STAIR	A006	A006	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.1		
GROUND	STORAGE	A007	A007	1	3'-6"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	3.3		
GROUND	ELEC	A008	A008	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
GROUND	CORRIDOR	A009	A009	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	45 MIN	E1.2	Y	MHO TO FIRE ALARM
GROUND	LAB	A010	A010	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.1	Y	INTERLOCK SYSTEM
GROUND	LAB	A010	A010A	2	3'-6"	2'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	A012	A012	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	A012	A012A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4		
GROUND	LAB	A013	A013	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	A013	A013A	2	3'-6"	2'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	A016	A016	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	A016	A016A	2	3'-6"	2'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	A019	A019	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	A019	A019A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4		
GROUND	LAB	A021	A021	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	45 MIN	ES2.1		
GROUND	LAB	A021	A021A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	45 MIN	ES2.6		
GROUND	CORRIDOR	A022	A022	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	T	2	HM	PNT	--	11.3		
GROUND	LAB	A023	A023	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	A023	A023A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.5	Y	INTERLOCK SYSTEM
GROUND	LAB	A024	A024	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	A024	A024A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.5		
GROUND	LAB	A025	A025	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	A025	A025A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.6		
GROUND	ELEC	A026	A026	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
GROUND	LAB	A027	A027	1	3'-4"		7'-0"	RF	STL	STL	--	RF	STL	STL	--	ES2.2		BY RF SHIELDING CONTRACTOR
GROUND	LAB	A027	A027A	1	4'-0"		7'-0"	RF	STL	STL	--	RF	STL	STL	--	ES2.4		BY RF SHIELDING CONTRACTOR
GROUND	LAB	A028	A028	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	A028	A028A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	A029	A029	1	3'-4"		7'-0"	RF	STL	STL	--	RF	STL	STL	--	ES2.2		BY RF SHIELDING CONTRACTOR
GROUND	LAB	A029	A029A	1	4'-0"		7'-0"	RF	STL	STL	--	RF	STL	STL	--	ES2.4		BY RF SHIELDING CONTRACTOR
GROUND	ELEC	A034	A034	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		
GROUND	STORAGE	A062	A062	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	3.3		
GROUND	STORAGE	A063	A063	1	3'-6"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	3.3		
GROUND	STORAGE	A063	A063A	1	3'-6"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	3.3		
GROUND	CONF	A066	A066	1	3'-0"		7'-0"	F	WD	STN	D	1	HM	PNT	--	1.1		
GROUND	OFFICE	A067	A067	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
GROUND	OFFICE	A070	A070	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
GROUND	CORRIDOR	B009	B009	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	45 MIN	E1.2	Y	MHO TO FIRE ALARM
GROUND	LAB	B010	B010	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	B010	B010A	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	B010	B010B	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	B010	B010C	2	3'-6"	2'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	B016	B016	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	B016	B016A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4		
GROUND	LAB	B018	B018	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	B018	B018A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4		
GROUND	TELECOM	B020	B020	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	ES2.7		180 SWING
GROUND	CORRIDOR	B022	B022	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	2	HM	PNT	--	11.4		
GROUND	LAB	B023	B023	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2		
GROUND	LAB	B023	B023A	2	3'-6"	1'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4		
GROUND	LAB	B027	B027	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	B027	B027A	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.2	Y	INTERLOCK SYSTEM
GROUND	LAB	B027	B027B	2	3'-6"	2'-6"	7'-0"	F/F	WD	STN	T	1	HM	PNT	--	ES2.4	Y	INTERLOCK SYSTEM
GROUND	LAB	B031	B031	1	3'-4"		7'-0"	RF	STL	STL	--	RF	STL	STL	--	ES2.2		BY RF SHIELDING CONTRACTOR
GROUND	LAB	B031	B031A	1	4'-0"		7'-0"	RF	STL	STL	--	RF	STL	STL	--	ES2.4		BY RF SHIELDING CONTRACTOR
GROUND	OFFICE	B061	B061	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
GROUND	OFFICE	B064	B064	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
GROUND	OFFICE	B067	B067	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
GROUND	OFFICE	B070	B070	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
GROUND	C/P/F	B071	B071	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
GROUND	TLT	B074	B074	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
GROUND	TLT	B075	B075	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
GROUND	BREAK	B076	B076	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.3		
GROUND	JC	B079	B079	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	3.2		180 SWING
GROUND	STAIR	B080	B080	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.2		
GROUND	STAIR	B080	B080A	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	1	HM	PNT	--	E3.2		INSULATED DOOR
GROUND	SERVICE CORE	C009	C009	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
GROUND	SERVICE CORE	C009	C009A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	45 MIN	ES1.2		
GROUND	SERVICE CORE	C023	C023	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
GROUND	SERVICE CORE	C023	C023A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
GROUND	SERVICE CORE	C027	C027	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
GROUND	SERVICE CORE	C027	C027A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT		ES1.1		
GROUND	DOCK	D084	C402B		8'-0"		8'-0"	OS	STL	PNT		OS	HM	PNT	--	13.1		INSULATED DOOR
GROUND	MECHANICAL	D069	D069	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	45 MIN	ES3.1		180 SWING
GROUND	MECHANICAL	D069	D069A	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	45 MIN	7.1		180 SWING
GROUND	CORRIDOR	D070	D070	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	12	HM	PNT	180 MIN	E6.1	Y	AUTO OPERATOR TIED TO FIRE ALARM
GROUND	MECHANICAL	D071	D071	2	3'-0"	3'-0"	7'-0"	F/F	HM	PNT	--	12	HM	PNT	90 MIN	8.1		
GROUND	CORRIDOR	D072	D071A	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	90 MIN	7.1		180 SWING
GROUND	CORRIDOR	D075	D075	2	3'-0"	3'-0"	7'-0"	N/N	HM	PNT	--	12	HM	PNT	--	E7.1	Y	AUTO OPERATOR; INSULATED DOOR
GROUND	CORRIDOR	D072	D075A	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	180 MIN	7.1		
GROUND	ELEC EMERGENCY	D076	D076	2	3'-0"	3'-0"	7'-0"	F/F	HM	PNT	--	12	HM	PNT	90 MIN	8.1		180 SWING
GROUND	ELEC EMERGENCY	D076	D076A	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	90 MIN	7.1		180 SWING
GROUND	ELEC SWITCHGEAR	D077	D077	2	3'-0"	3'-0"	7'-0"	F/F	HM	PNT	--	12	HM	PNT	90 MIN	8.1		180 SWING
GROUND	ELEC SWITCHGEAR	D077	D077A	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	90 MIN	7.1		180 SWING
GROUND	CORRIDOR	D075	D078	2	3'-0"	3'-0"	8'-0"	N/N	HM	PNT	--	11	HM	PNT	--	ES4.1		INSULATED DOOR
GROUND	MDF	D079	D079	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	--	ES2.7		
GROUND	HAZ STORAGE	D082	D082	1	3'-0"		7'-0"	N	HM	PNT	C8	11	HM	PNT	90 MIN	4.1		
GROUND	HAZ STORAGE	D083	D083	1	3'-0"		7'-0"	N	HM	PNT	C8	11	HM	PNT	90 MIN	4.1		
GROUND	OPEN DOCK	D085	D085	2	3'-0"	3'-0"	8'-0"	N/N	HM	PNT	--	11	HM	PNT	45 MIN	E5.2		INSULATED DOOR
GROUND	EXST STAIR	D087	D087	1	3'-0"		6'-10"	F	HM	PNT	--	11	HM	PNT	--	E5.1		INSULATED DOOR
FIRST	STAIR	A106	A106	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	10.1		
FIRST	STAIR	A106	A106A	2	3'-0"	3'-0"	8'-0"	AN	AL	ANOD	T	-	AL	ANOD	--	ES3.1		
FIRST	ELEC	A108	A108	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
FIRST	CORRIDOR	A109	A109	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	--	E1.4	Y	MHO TO FIRE ALARM
FIRST	LAB	A110	A110	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A110	A110A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	A113	A113	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A113	A113A	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A113	A113B	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	A113	A113C	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	A118	A118	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A118	A118A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.6		
FIRST	TELECOM	A120	A120	1	3'-0"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.8		180 SWING
FIRST	CORRIDOR	A122	A122	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.4	Y	MHO TO FIRE ALARM
FIRST	ELEC	A126	A126	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
FIRST	LAB	A127	A127	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A127	A127A	2	3'-6"	1'-6"	8'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	C128	A128	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A129	A129	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	A129	A129A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	ELEC	A134	A134	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.7		180 SWING
FIRST	OFFICE	A160	A160	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A163	A163	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A164	A164	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A166	A166	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A167	A167	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A170	A170	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	ENTRY VESTIBULE	A172	A172	2	3'-0"	3'-0"	8'-0"	AN	AL	ANOD	T	-	AL	ANOD	--	ES3.1		RM
FIRST	ENTRY VESTIBULE	A172	A172A	2	3'-0"	3'-0"	8'-0"	AN	AL	ANOD	T	-	AL	ANOD	--	E2.1		RM
FIRST	OFFICE	A177	A177	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A179	A179	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A180	A180	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	A182	A182	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	CORRIDOR	B109	B109	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
FIRST	LAB	B110	B110	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	B110	B110A	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	B110	B110B	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	B110	B110C	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	B117	B117	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	B117	B117A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	CONF	B123	B123		3'-0"		7'-0"								--			ALL-GLASS SLIDING DOOR
FIRST	LAB	B127	B127	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	B127	B127A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	B129	B129	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	B129	B129A	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
FIRST	LAB	B129	B129B	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	LAB	B129	B129C	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	CORRIDOR	B135	B135	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
FIRST	OFFICE	B161	B161	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	B164	B164	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	B167	B167	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	B170	B170	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	C/P/F	B171	B171	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
FIRST	TLT	B174	B174	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
FIRST	TLT	B175	B175	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
FIRST	JC	B176	B176	1	3'-0"		7'-0"	F	WD		--							
FIRST	BREAK	B177	B177	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	90 MIN	1.2		
FIRST	BREAK	B177	B177A	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	1.2		
FIRST	STAIR	B180	B180	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.2		
FIRST	CORRIDOR	B135	B181	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	B183	B183	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	CONF	B184	B184	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.1		
FIRST	SERVICE CORE	C109	C109	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
FIRST	SERVICE CORE	C109	C109A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	ES1.2		
FIRST	SERVICE CORE	C127	C127	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	ES1.2		
FIRST	SERVICE CORE	C127	C127A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
FIRST	LAB	C128	C128A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
FIRST	ENTRY VESTIBULE	D169	D169	2	3'-0"	3'-0"	8'-0"	AN	AL	ANOD	T	-	AL	ANOD	--	ES3.1		RM
FIRST	ENTRY VESTIBULE	D169	D169A	2	3'-0"	3'-0"	8'-0"	AN	AL	ANOD	T	-	AL	ANOD	--	E2.1		RM
FIRST	CORRIDOR	D170	D170	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	2	HM	PNT	180 MIN	E6.1		
FIRST	SEMINAR	D172	D172	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	--	1	HM	PNT	90 MIN	12.1		
FIRST	SEMINAR	D172	D172A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	--	1	HM	PNT	45 MIN	12.1		
FIRST	STORAGE	D172B	D172B	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	3.2		
FIRST	SEMINAR	D172	D172C	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	45 MIN	1.1		
FIRST	BREAKOUT	D173	D173	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	90 MIN	1.1		
FIRST	BREAKOUT	D173	D173A	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	90 MIN	1.1		
FIRST	BREAKOUT	D173	D173B	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	1.1		
FIRST	OPEN OFFICE	D175	D175	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	3.2		
FIRST	OFFICE	D176	D176	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	D177	D177	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	D178	D178	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	D179	D179	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	D181	D181	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	D182	D182	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	OFFICE	D184	D184	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
FIRST	EXST STAIR	D187	D187	1	4'-0"		5'-8"	F	HM	PNT	--	11	HM	PNT	--	E5.1		INSULATED DOOR; VERIFY WIDTH IN FIELD
FIRST	EXST 222 DOCK	E192	E192	1	3'-0"		7'-0"	F	HM	PNT	--	1	HM	PNT	--	E5.1		
FIRST	EXST 222 DOCK	E192	E192A	1	3'-0"		7'-0"	F	HM	PNT	--	1	HM	PNT	--	E5.1		
FIRST	EXST 222 DOCK	E192	E192B		8'-0"		10'-8"	OS	STL	PNT		OS	STL	PNT	--	13.1		
FIRST	EXST 222 DOCK	E192	E192C		8'-0"		10'-8"	OS	STL	PNT		OS	STL	PNT	--	13.1		

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-607

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

DOOR AND FRAME SCHEDULE - GROUND & FIRST

DESIGNED CURT FINFROCK

DRAWN NA

CHECKED GREG SLONIGER

PROJECT MANAGER JAMES LYMAN

A/E CADD FILE

A/E DWG. NO. A-607

CADD NO: XXX

DWG. STATE I

BIND ORDER XXX

FACILITY NO(S) 241

FACILITY DOCUMENT NUMBER J241-101- A-607

REV. NO.

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:15:13 AM

WINDOW SCHEDULE - ALTERNATE 2 - SECOND FLOOR										
LEVEL	TYPE	HEIGHT	WIDTH	HEAD HEIGHT	SILL HEIGHT	FIRE RATING (MIN)	MATERIAL	GLAZING	WINDOW AREA	NOTES
SECOND	1	3'-0"	4'-0"	7'-4"	4'-4"	--	HM	T	12 SF	
SECOND	2	3'-0"	4'-0"	7'-4"	4'-4"		HM	T	12 SF	BLACKOUT SHADES
SECOND	3	4'-0"	1'-0"			90 MIN.	HM	C8	4 SF	
SECOND	4	6'-0"	2'-0"	8'-1 1/4"	2'-1 1/4"	90 MIN.	HM	C8	12 SF	
SECOND	5	5'-0"	1'-0"			90 MIN.	HM	C8	5 SF	
SECOND	6	7'-0"	2'-0"	9'-6 3/4"	2'-6 3/4"	90 MIN.	HM	C8	14 SF	

DOOR AND FRAME SCHEDULE - ALTERNATE 2 - SECOND																		
IDENTIFICATION				DOOR								FRAME				HARDWARE		
LEVEL	ROOM NAME	ROOM NO.	DOOR NO.	NO. OF PANELS	W1	W2	H	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	FIRE RATING	SET	ELECTRICAL	NOTES
SECOND	STAIR	A206	A206	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.1		
SECOND	ELEC	A208	A208	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
SECOND	CORRIDOR	A209	A209	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
SECOND	LAB	A210	A210	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A210	A210A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	A213	A213	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A213	A213A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	A216	A216	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A216	A216A	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A216	A216B	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	A216	A216C	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	A221	A221	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A221	A221A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.6		
SECOND	CORRIDOR	A223	A223	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
SECOND	CORRIDOR	A223	A223B	1	3'-0"		8'-0"	AG	ALUM	ANOD	<By Category>		AL	ANOD		E1.4		7" TOP RAIL TO ACCEPT HD CLOSER
SECOND	ELEC	A226	A226	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
SECOND	LAB	A227	A227	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A227	A227A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	A229	A229	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A229	A229A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	A231	A231	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	A231	A231A	2	3'-6"	2'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	ELEC	A234	A234	1	3'-0"		7'-0"	F	WD	PNT	--	1	HM	PNT	--	4.5		180 swing
SECOND	VESTIBULE	A254	A254	1	3'-0"		7'-0"	F	WD	STN	T	4	HM	PNT	--	1.1		
SECOND	VESTIBULE	A254	A254A	1	3'-4"		8'-0"	AG	ALUM	ANOD	T		AL	ANOD	--	E4.1		7" TOP RAIL TO ACCEPT HD CLOSER
SECOND	CONF	A255	A255	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	3.10		
SECOND	OFFICE	A257	A257	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A258	A258	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A260	A260	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A261	A261	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A263	A263	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A264	A264	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A266	A266	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A267	A267	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A269	A269	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A270	A270	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A272	A272	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A275	A275	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A277	A277	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A278	A278	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A280	A280	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A281	A281	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A283	A283	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	A284	A284	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	CONF	A285	A285	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.1		
SECOND	LAB	B210	B210	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
SECOND	LAB	B210	B210A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
SECOND	LAB	B212	B212	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
SECOND	LAB	B212	B212A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
SECOND	LAB	B214	B214	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	B214	B214A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	B216	B216	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	B216	B216A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	B218	B218	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
SECOND	LAB	B218	B218A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
SECOND	TELECOM	B220	B220	1	3'-4"		7'-0"	F	WD	STN	T	1	HM	PNT	--	ES2.8		180 SWING
SECOND	LAB	B227	B227	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	B227	B227A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	B228	B228	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	B228	B228A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	LAB	B229	B229	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
SECOND	LAB	B229	B229A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
SECOND	CORRIDOR	B235	B235	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
SECOND	OFFICE	B256	B256	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B257	B257	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B258	B258	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	C/P/F	B260	B260	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
SECOND	OFFICE	B261	B261	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B264	B264	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B265	B265	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B267	B267	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B268	B268	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B270	B270	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	B271	B271	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	C/P/F	B273	B273	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
SECOND	TLT	B274	B274	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
SECOND	TLT	B275	B275	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
SECOND	JC	B276	B276	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	3.9		
SECOND	BREAK	B277	B277	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
SECOND	OFFICE	B278	B278	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	STAIR	B280	B280	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.2		
SECOND	OFFICE	B283	B283	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
SECOND	OFFICE	B284	B284	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
SECOND	CONF	B285	B285	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		1.1		
SECOND	SERVICE CORE	C209	C209	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
SECOND	SERVICE CORE	C209	C209A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	ES1.2		
SECOND	CORRIDOR	B209	C221	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
SECOND	SERVICE CORE	C227	C227	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	ES1.2		
SECOND	SERVICE CORE	C227	C227A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT		ES1.1		
SECOND	OPEN OFFICE	D272	D272	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	90 MIN	3.2		
SECOND	OPEN OFFICE	D272	D272A	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	3.2		
SECOND	OFFICE	D274	D274	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D275	D275	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	C/P/F	D276	D276	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D277	D277	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D278	D278	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D279	D279	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D280	D280	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D281	D281	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D282	D282	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D283	D283	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND			D286	1	3'-0"		8'-0"	AG	ALUM		T				90 MIN	13.2		
SECOND	OFFICE	D287	D287	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D288	D288	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D289	D289	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D290	D290	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D291	D291	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D292	D292	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D293	D293	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D294	D294	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
SECOND	OFFICE	D295	D295	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-608

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

DOOR AND FRAME SCHEDULE - SECOND

DESIGNED CURT FINFROCK

DRAWN NA

CHECKED GREG SLONIGER

PROJECT MANAGER JAMES LYMAN

A/E CADD FILE

A/E DWG. NO. A-608

CADD NO: XXX

DWG. STATE I

BIND ORDER XXX

FACILITY NO(S) 241

FACILITY DOCUMENT NUMBER J241-101- A-608

REV. NO.

C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:15:20 AM

WINDOW SCHEDULE - ALTERNATE 2 - THIRD FLOOR										
LEVEL	TYPE	HEIGHT	WIDTH	HEAD HEIGHT	SILL HEIGHT	FIRE RATING (MIN)	MATERIAL	GLAZING	WINDOW AREA	NOTES
THIRD	1	3'-0"	4'-0"	7'-4"	4'-4"	--	HM	T	12 SF	
THIRD	2	3'-0"	4'-0"	7'-4"	4'-4"		HM	T	12 SF	BLACKOUT SHADES

DOOR AND FRAME SCHEDULE - ALTERNATE 2 - THIRD & PENTHOUSE																		
IDENTIFICATION				DOOR								FRAME				HARDWARE		
LEVEL	ROOM NAME	ROOM NO.	DOOR NO.	NO. OF PANELS	W1	W2	H	TYPE	MATERIAL	FINISH	GLAZING	TYPE	MATERIAL	FINISH	FIRE RATING	SET	ELECTRICAL	NOTES
THIRD	CORRIDOR	A305	A305	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	3.2		
THIRD	STAIR	A306	A306	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.1		
THIRD	ELEC	A308	A308	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
THIRD	CORRIDOR	A309	A309	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
THIRD	LAB	A310	A310	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
THIRD	LAB	A310	A310A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
THIRD	LAB	A313	A313	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
THIRD	LAB	A313	A313A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
THIRD	LAB	A313	A313B	0	3'-0"		7'-0"	--	--	STN		3	HM	PNT	--	--		CASED OPENING
THIRD	LAB	A316	A316	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
THIRD	LAB	A316	A316A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		
THIRD	LAB	A319	A319	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
THIRD	LAB	A319	A319A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.6		
THIRD	CORRIDOR	A322	A322	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
THIRD	CONF	A323	A323	1	3'-0"		8'-0"	AG	ALUM		T				--	13.2		ALL-GLASS SWING DOOR
THIRD	CONF	A323	A323A	1	3'-0"		8'-0"	AG	ALUM		T				--	13.2		ALL-GLASS SWING DOOR
THIRD	ELEC	A326	A326	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	4.5		180 SWING
THIRD	LAB	A327	A327	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		
THIRD	LAB	A327	A327A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	LAB	A329	A329	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		
THIRD	LAB	A329	A329A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	LAB	A330	A330	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		
THIRD	LAB	A330	A330A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	LAB	A332	A332	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		
THIRD	LAB	A332	A332A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	ELEC	A334	A334	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT		4.5		
THIRD	ALD	A354	A354	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A355	A355	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	CONF	A356	A356	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.1		
THIRD	OFFICE	A357	A357	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A358	A358	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A360	A360	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A361	A361	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A363	A363	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A364	A364	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A366	A366	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A367	A367	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A369	A369	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A370	A370	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A372	A372	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A375	A375	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	A377	A377	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	OFFICE	A378	A378	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	OFFICE	A380	A380	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	OFFICE	A381	A381	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	OFFICE	A383	A383	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	OFFICE	A384	A384	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	CONF	A385	A385	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		1.1		
THIRD	OPEN OFFICE	C304	B309	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	3.2		
THIRD	LAB	B310	B310	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		
THIRD	LAB	B313	B313	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
THIRD	LAB	B313	B313A	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
THIRD	LAB	B313	B313B	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
THIRD	LAB	B313	B313C	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
THIRD	LAB	B318	B318	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT	--	ES2.2		BLACKOUT SHADES
THIRD	LAB	B318	B318A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT	--	ES2.4		BLACKOUT SHADES
THIRD	TELECOM	B320	B320	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	ES2.7		180 SWING
THIRD	CORRIDOR	B322	B322	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	E1.2	Y	MHO TO FIRE ALARM
THIRD	CORRIDOR	B322	B322B	2	3'-0"	3'-0"	7'-0"	N/N	WD	STN	C8	2	HM	PNT	90 MIN	11.2	Y	MHO TO FIRE ALARM
THIRD	LAB	B327	B327	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	LAB	B328	B328	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		
THIRD	LAB	B328	B328A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	LAB	B329	B329	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		
THIRD	LAB	B329	B329A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		
THIRD	LAB	B332	B332	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		BLACKOUT SHADES
THIRD	LAB	B332	B332A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		BLACKOUT SHADES
THIRD	LAB	B333	B333	1	3'-4"		7'-0"	FG	WD	STN	T	1	HM	PNT		ES2.2		BLACKOUT SHADES
THIRD	LAB	B333	B333A	2	3'-6"	1'-6"	7'-0"	G/F	WD	STN	T	1	HM	PNT		ES2.4		BLACKOUT SHADES
THIRD	DALD	B356	B356	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B358	B358	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	C/P/F	B360	B360	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
THIRD	OFFICE	B361	B361	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B364	B364	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B365	B365	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B367	B367	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B368	B368	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B370	B370	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	B371	B371	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	TLT	B374	B374	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
THIRD	TLT	B375	B375	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	5.1		
THIRD	JC	B376	B376	1	3'-0"		7'-0"	F	WD	STN	--	1	HM	PNT	--	3.9		
THIRD	JC	B376	B376B	1	3'-0"		4'-8"	F	HM	PNT	--	11	HM	PNT	--	E5.1	Y	INSULATED DOOR
THIRD	C/P/F	B377	B377	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
THIRD	OFFICE	B378	B378	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	STAIR	B380	B380	1	3'-6"		7'-0"	N	WD	STN	C8	1	HM	PNT	90 MIN	6.2		
THIRD	CORRIDOR	B335	B382	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	CORRIDOR	B335	B383	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		2.1		
THIRD	CONF	B384	B384	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT		1.1		
THIRD	OFFICE	C305	C305	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	2.1		
THIRD	OFFICE	C306	C306	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
THIRD	C/P/F	C307	C307	1	3'-0"		7'-0"	F	WD	STN	D	4	HM	PNT	--	1.2		
THIRD	SERVICE CORE	C309	C309	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT	--	ES1.1		
THIRD	SERVICE CORE	C309	C309A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	ES1.2		
THIRD	SERVICE CORE	C327	C327	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	C8	1	HM	PNT	90 MIN	ES1.2		
THIRD	SERVICE CORE	C327	C327A	2	3'-0"	3'-0"	8'-0"	N/N	WD	STN	T	1	HM	PNT		ES1.1		
PENTHOUSE			A401	2	3'-0"	3'-0"	7'-0"	F/F	HM		D							
PENTHOUSE			A401A	1	3'-0"		7'-0"	F	HM	PNT	--	11	HM	PNT	--	E5.1		INSULATED DOOR
PENTHOUSE	LAB COMPRESSED AIR	A428	A428	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	1	HM	PNT	--	7.1		
PENTHOUSE	MECHANICAL	B419	B419	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	1	HM	PNT	90 MIN	4.8		
PENTHOUSE	ELEV 1 EQUIP	B421	B421A	1	3'-0"		7'-0"	F	HM	PNT	--	1	HM	PNT	90 MIN	4.7		
PENTHOUSE	MECHANICAL	B427	B427	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	1	HM	PNT	90 MIN	4.8		
PENTHOUSE	STAIR	B480	B480	1	3'-0"		6'-8"	N	HM	PNT	C8	1	HM	PNT	90 MIN	6.3		
PENTHOUSE	STAIR	C402	C402	1	3'-0"		7'-0"	N	HM	PNT	C8	1	HM	PNT	90 MIN	6.3		
MEZZANINE	MECHANICAL	A524	A524	2	3'-0"	3'-0"	8'-0"	F/F	HM	PNT	--	1	HM	PNT	90 MIN	4.8		
MEZZANINE	MEZZANINE	B523	B523	1	3'-0"		6'-8"	F	HM	PNT	--	1	HM	PNT	90 MIN	4.7		

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-609

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

DOOR AND FRAME SCHEDULE - THIRD & PENTHOUSE

DESIGNED CURT FINFROCK | A/E CADD FILE | FACILITY NO(S) 241

DRAWN NA | A/E DWG. NO. A-609

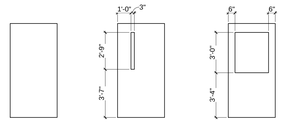
CHECKED GREG SLONIGER | CADD NO: XXX

PROJECT MANAGER JAMES LYMAN | DWG. STATE I

BIND ORDER XXX

FACILITY DOCUMENT NUMBER J241-101- A-609 | REV. NO.

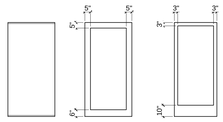
C:\RVT\002182-A-CENTRAL_atvrdy.rvt
7/8/2011 11:15:27 AM



F
FLUSH

N
NARROW VISION

G
HALF GLASS



AG
ALL -GLASS

FG
FULL GLASS

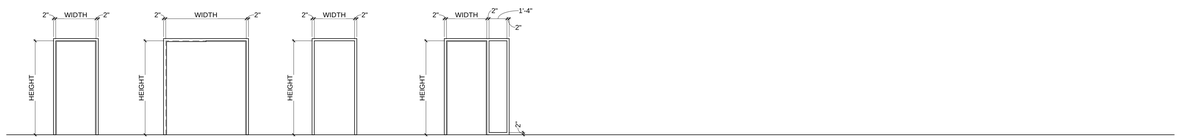
AN
FULL GLASS
NARROW ALUMINUM

SIDE-HINGED DOOR TYPES
1/4" = 1'-0"

OS
OVERHEAD SECTIONAL

SPECIALTY DOOR TYPES
1/4" = 1'-0"

FRAME TYPE ELEVATIONS



TYPICAL FRAME

DUAL EGRESS

CASED OPENING

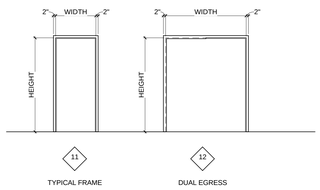
W/ (1) SIDELIGHT

WRAPPED FRAME TYPES ELEVATIONS
1/4" = 1'-0"

FRAME TYPE NOMENCLATURE

X x
- DENOTES FRAME SUB-TYPE
- DENOTES FRAME TYPE *(SEE ADJACENT FRAME TYPE ELEVATIONS)*

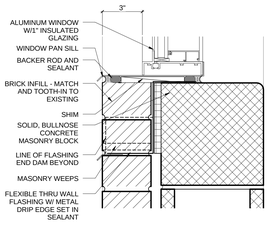
NOTES
1. SEE DOOR SCHEDULE FOR DOOR WIDTH AND HEIGHT
2. INSET FRAME DEPTH/THROAT IS 6" UNLESS OTHERWISE NOTED
3. INSET FRAME'S HEAD WIDTH IS 2" UNLESS DENOTED AS MASONRY HEAD
4. WRAPPED FRAME'S HEAD WIDTH IS 2"



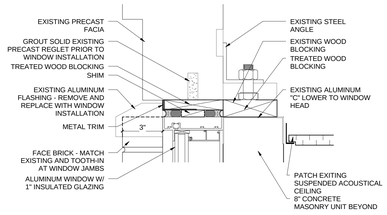
TYPICAL FRAME

DUAL EGRESS

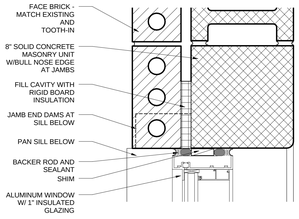
INSET FRAME TYPE ELEVATIONS
1/4" = 1'-0"



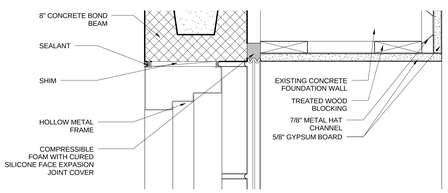
B1 WINDOW SILL @ EXISTING BLDG 223
3" = 1'-0"



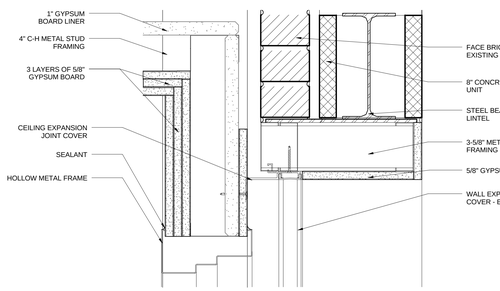
B2 WINDOW HEAD DETAIL @ EXISTING BLDG 223
3" = 1'-0"



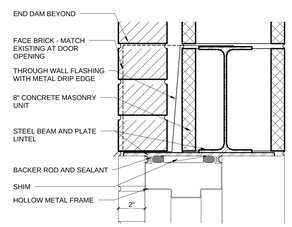
B3 JAMB DETAIL @ EXSTING BLDG 223
3" = 1'-0"



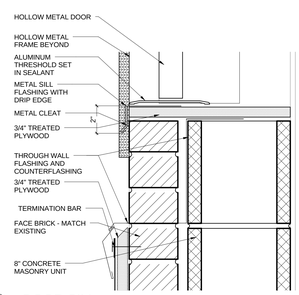
A1 INTERIOR H.M. DOOR HEAD
3" = 1'-0"



A2 INTERIOR H.M. DOOR HEAD
3" = 1'-0"



A3 EXTERIOR H.M. DOOR HEAD
3" = 1'-0"



A4 DOOR SILL
3" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-610

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
DOOR AND FRAME TYPES AND DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-610	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

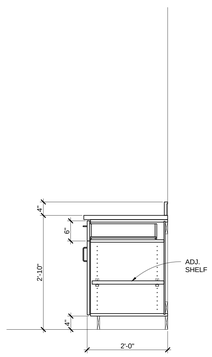
FACILITY DOCUMENT NUMBER J241-101- A-610 REV. NO.

C:\BK7000193-A-CENTRAL_ab\rdy\A1
7/8/2011 11:15:39 AM

HDR Architecture, Inc.

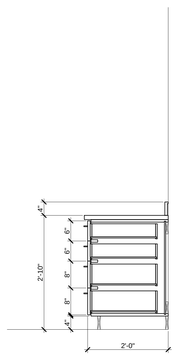
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-630



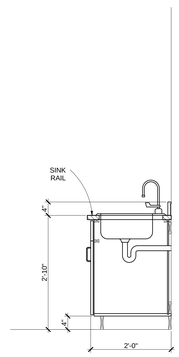
B3101

A1 B3101- 34" TALL
3/4" = 1'-0"



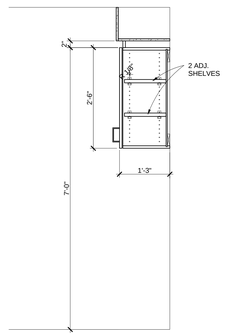
D3224

A2 D3224- 34" TALL
3/4" = 1'-0"



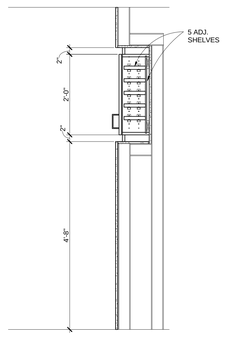
B4300

A3 B4300- 34" TALL
3/4" = 1'-0"



W2102

A4 W2102
3/4" = 1'-0"



A5 W2100
3/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

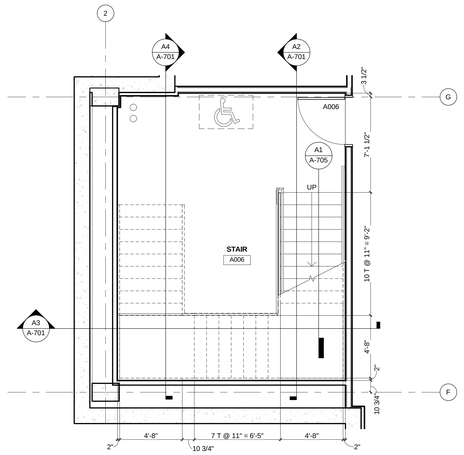
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

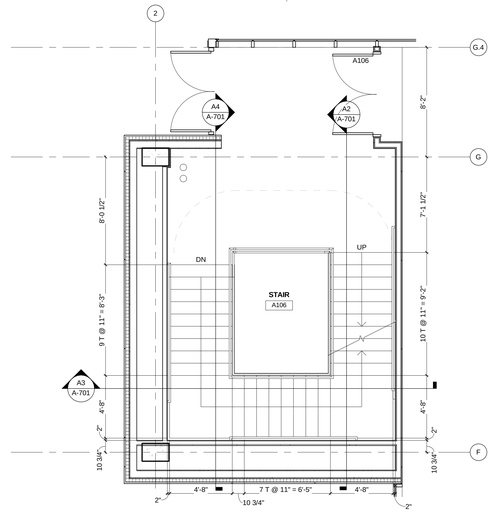
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
CASEWORK DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-630	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101- A-630		REV. NO.

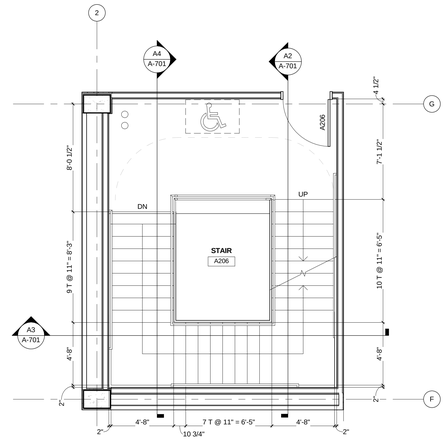
C:\R\TV00183-A-CENTRAL_amrfp.rvt
7/8/2011 11:15:42 AM



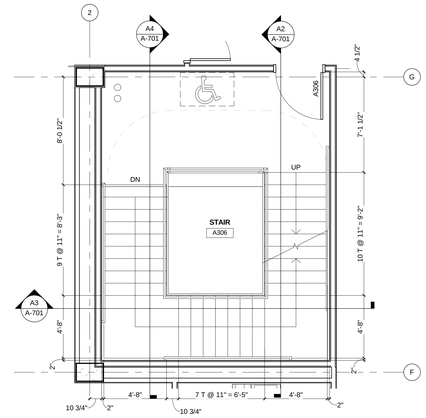
C1 ENLARGED STAIR PLAN - GROUND FLOOR
1/4" = 1'-0"



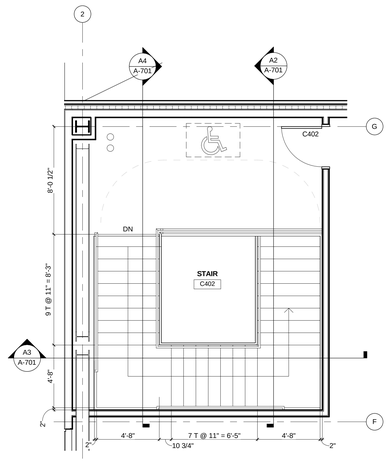
C2 ENLARGED STAIR PLAN - FIRST FLOOR
1/4" = 1'-0"



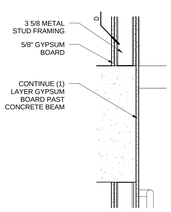
C3 ENLARGED STAIR PLAN - SECOND FLOOR
1/4" = 1'-0"



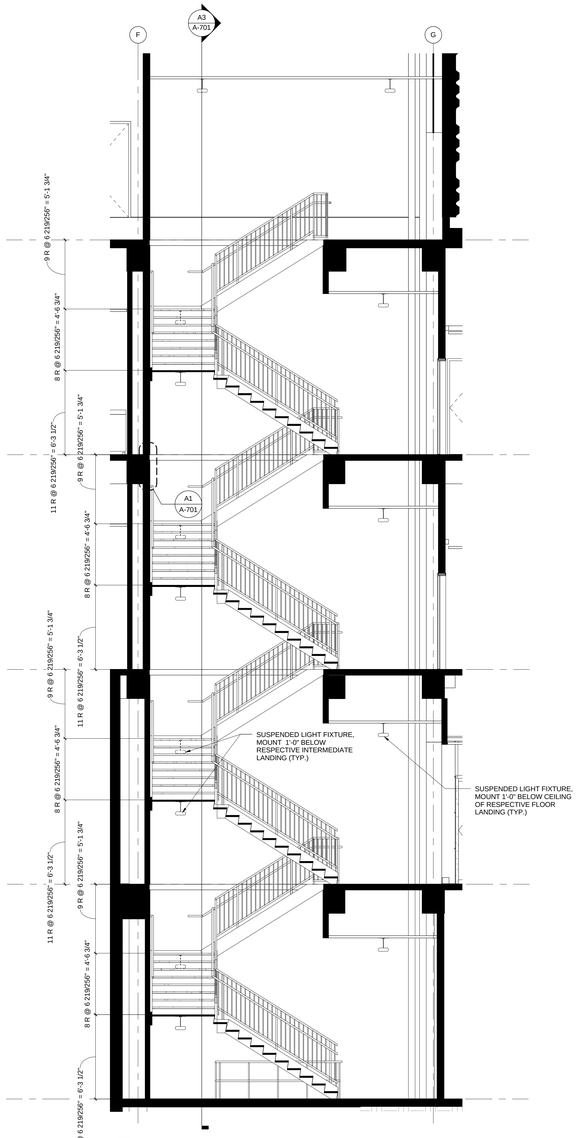
C4 ENLARGED STAIR PLAN - THIRD FLOOR
1/4" = 1'-0"



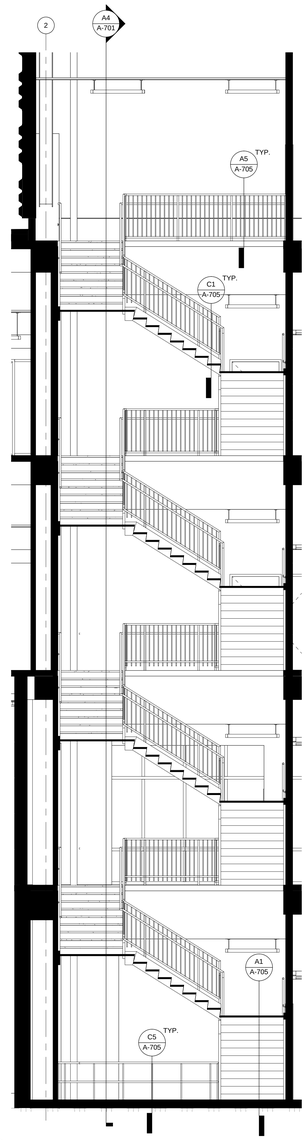
B1 ENLARGED STAIR PLAN - PENTHOUSE
1/4" = 1'-0"



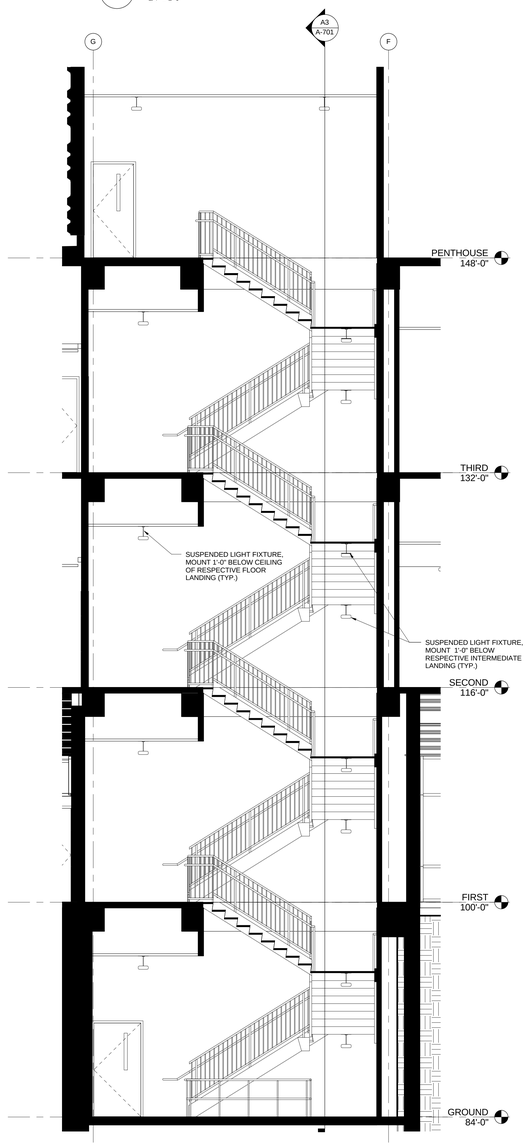
A1 SECTION DETAIL - GYP BD @ FLOOR
1" = 1'-0"



A2 STAIR SECTION
1/4" = 1'-0"



A3 STAIR SECTION
1/4" = 1'-0"



A4 STAIR SECTION
1/4" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-701

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

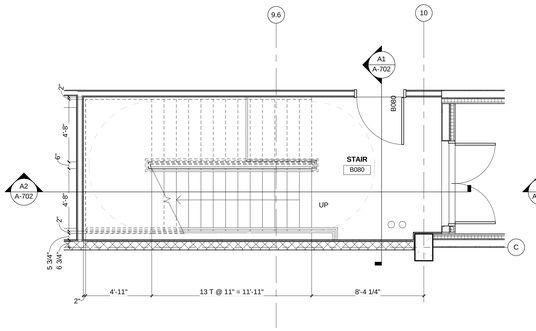
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED STAIR PLANS AND SECTIONS

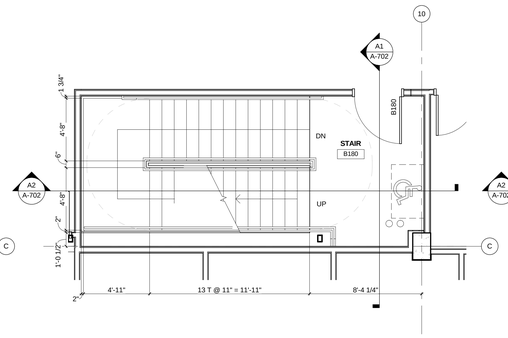
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-701	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-701
REV. NO.

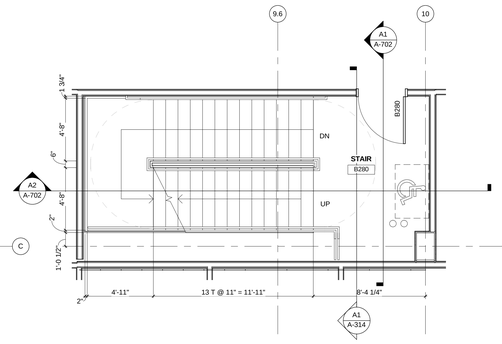
C:\ffr700\0185-A-CENTRAL_ab+fp.rvt
7/8/2011 11:15:56 AM



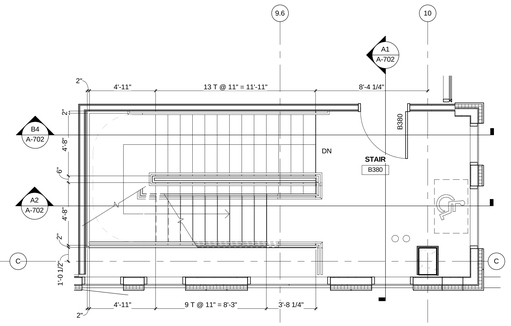
D1 STAIR ENLARGED PLAN - GROUND FLOOR
1/4" = 1'-0"



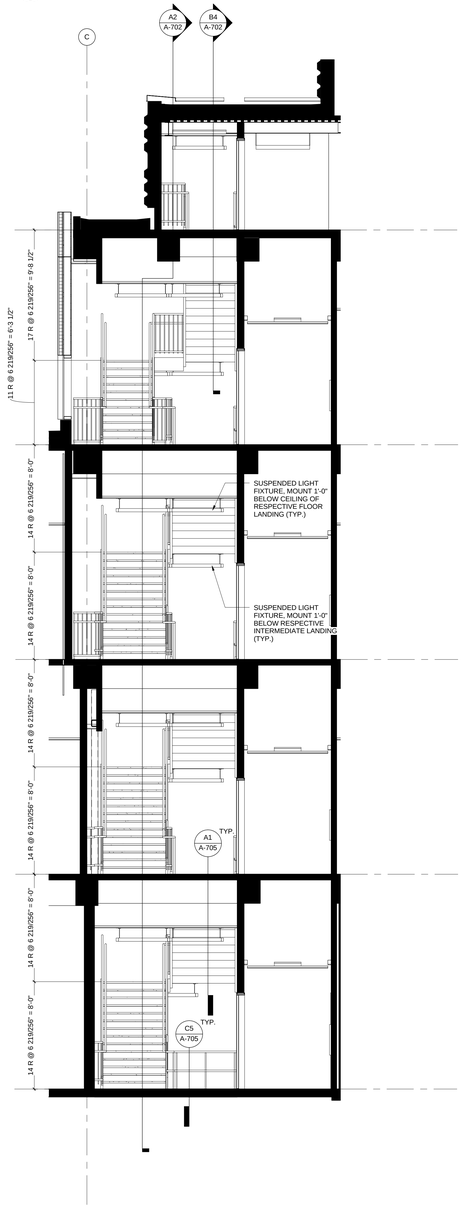
D2 STAIR ENLARGED PLAN - FIRST FLOOR
1/4" = 1'-0"



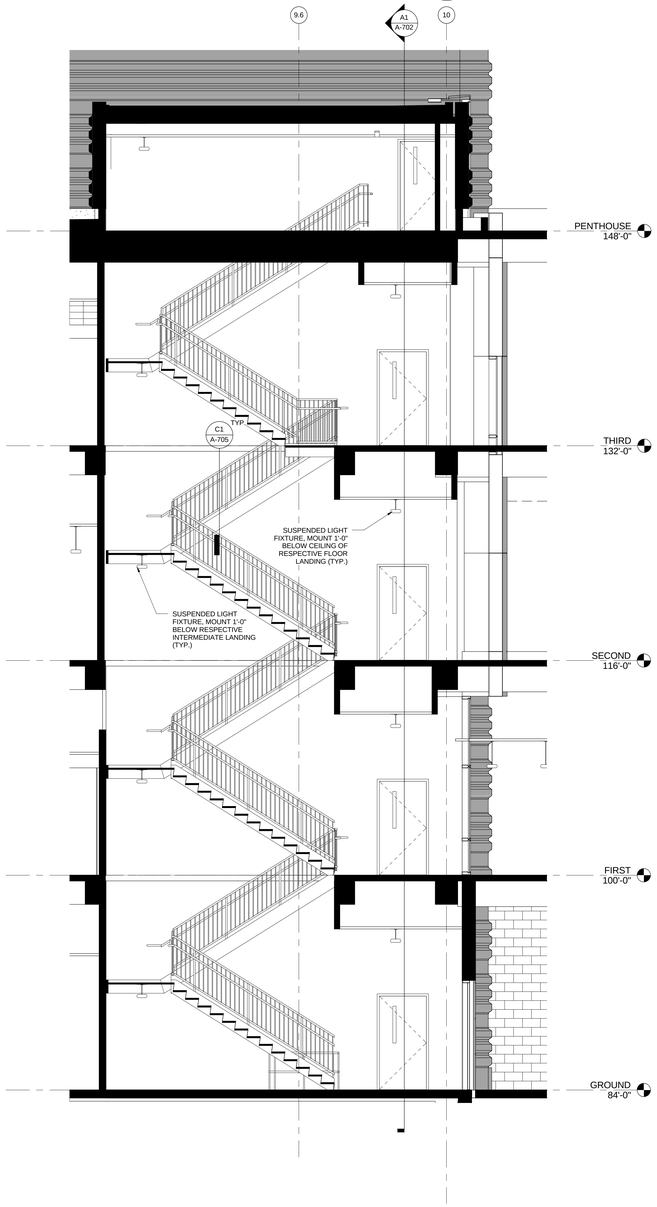
D3 STAIR ENLARGED PLAN - SECOND FLOOR
1/4" = 1'-0"



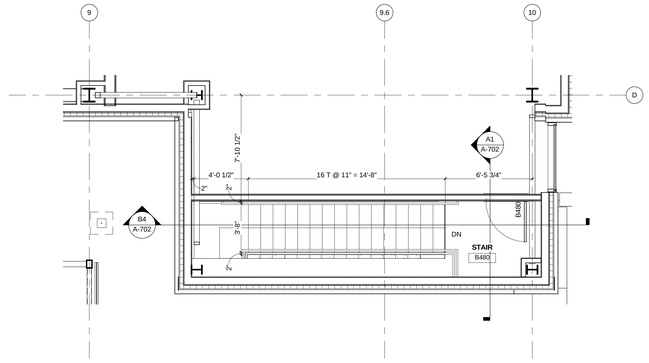
D4 STAIR ENLARGED PLAN - THIRD FLOOR
1/4" = 1'-0"



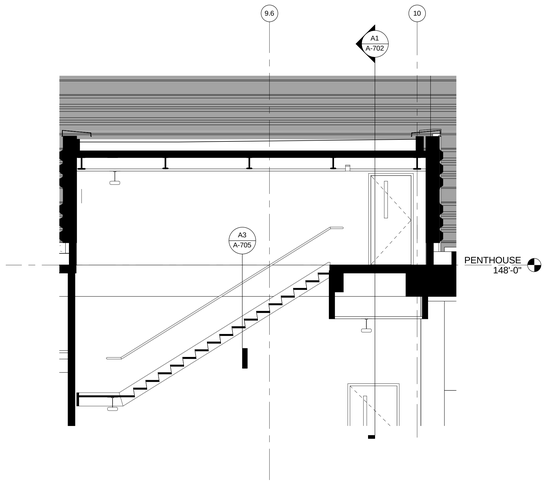
A1 STAIR SECTION
1/4" = 1'-0"



A2 STAIR SECTION
1/4" = 1'-0"



C4 STAIR ENLARGED PLAN - PENTHOUSE
1/4" = 1'-0"



B4 STAIR SECTION
1/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-702

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

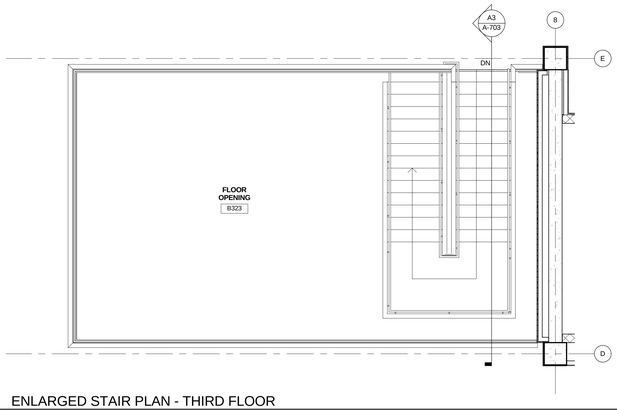
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

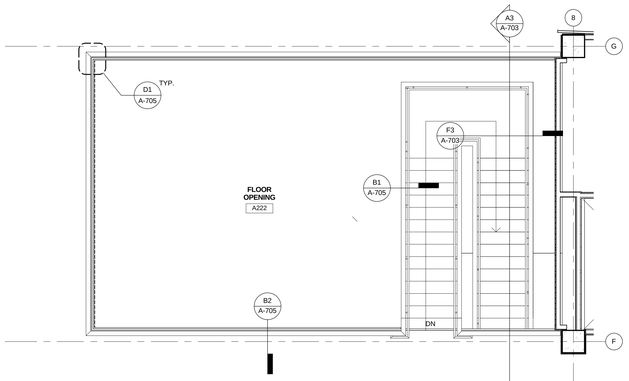
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED STAIR PLANS AND SECTIONS

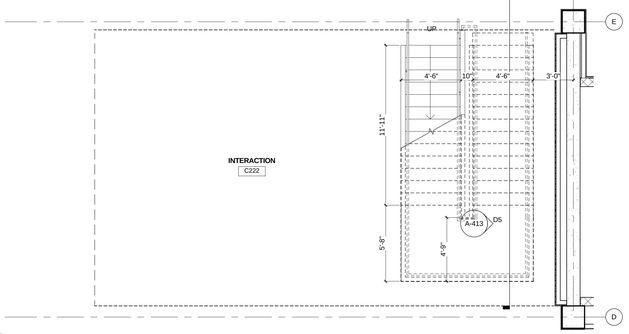
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-702	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101- A-702		REV. NO.

C:\PVT\002182-A-CENTRAL_dwg.rvt
7/8/2011 11:10:12 AM

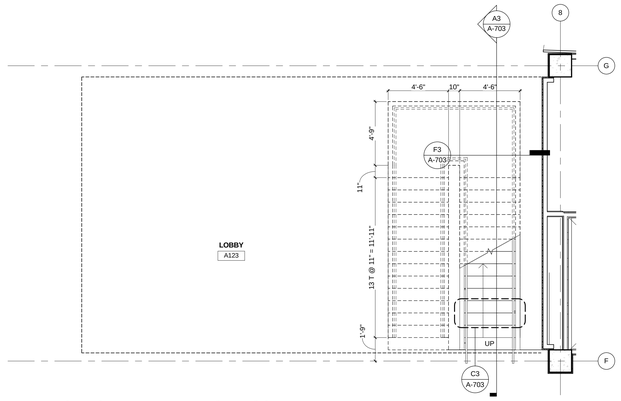


D1 ENLARGED STAIR PLAN - THIRD FLOOR
1/4" = 1'-0"

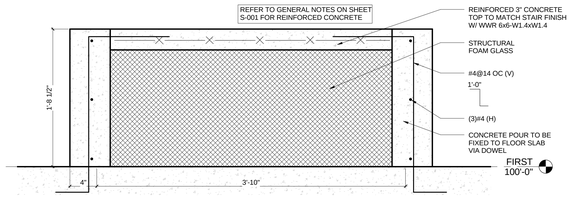




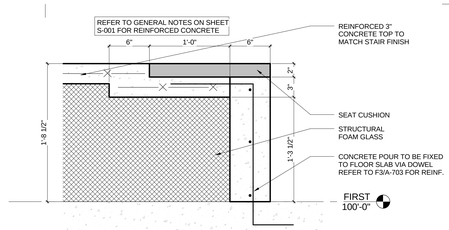
B1 ENLARGED STAIR PLAN - SECOND FLOOR
1/4" = 1'-0"



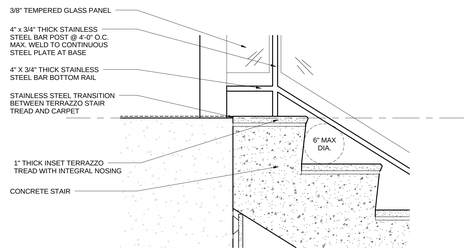
A1 ENLARGED STAIR PLAN - FIRST FLOOR
1/4" = 1'-0"



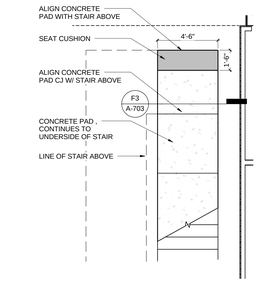
F3 CONCRETE BENCH SECTION DETAIL
1 1/2" = 1'-0"



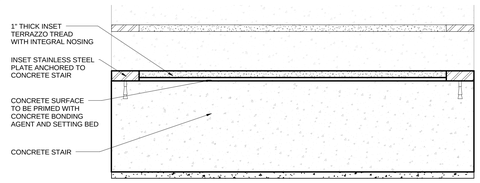
F5 CONCRETE BENCH SECTION DETAIL
1 1/2" = 1'-0"



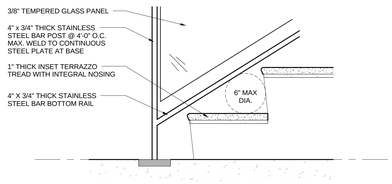
E3 STAIR SECTION @ FLOOR
1 1/2" = 1'-0"



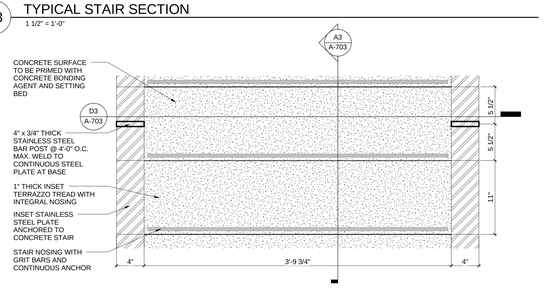
E5 FIRST FLOOR UNDER STAIR
1/4" = 1'-0"



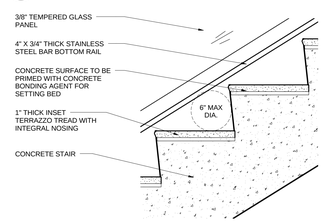
D3 TYPICAL STAIR SECTION
1 1/2" = 1'-0"



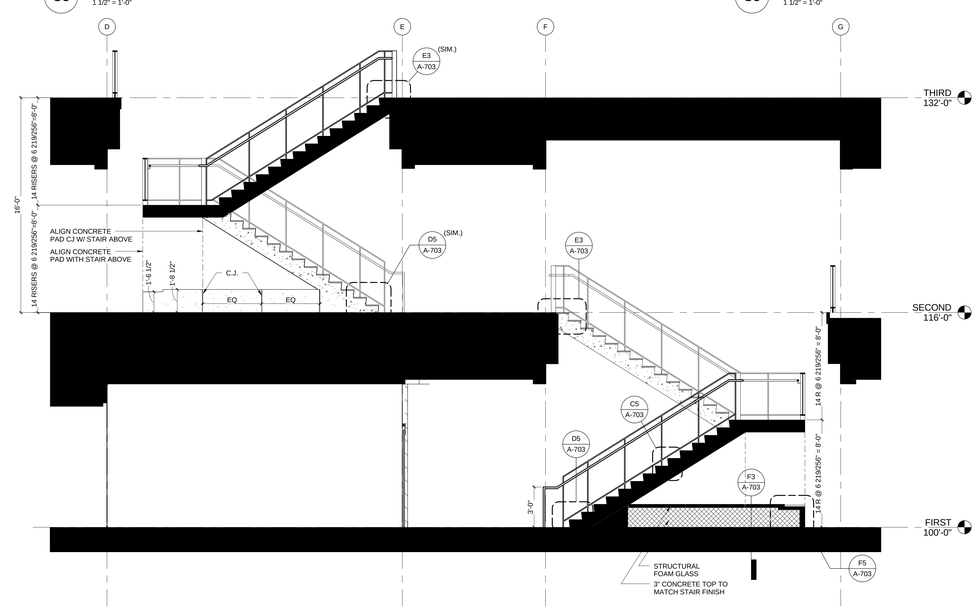
D5 STAIR SECTION @ FLOOR
1 1/2" = 1'-0"



C3 ENLARGED STAIR TREAD
1 1/2" = 1'-0"



C5 LOBBY STAIR SECTION
1 1/2" = 1'-0"



A3 LOBBY STAIR SECTION
1/4" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-703

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

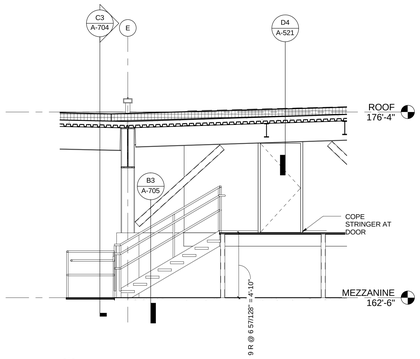
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED STAIR PLANS AND SECTIONS

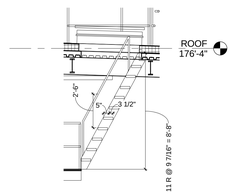
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-703	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-703
REV. NO.

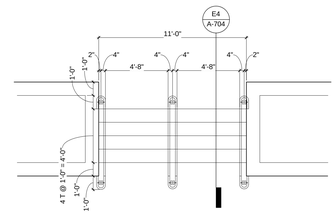
C:\BV70\002182-ACENTRAL_dwg\r.rvt
7/8/2011 11:16:26 AM



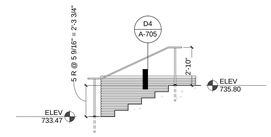
E1 MEZZANINE STAIR SECTION
1/4" = 1'-0"



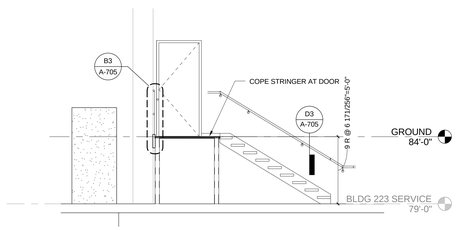
E2 STAIR SECTION - SHIP'S LADDER
1/4" = 1'-0"



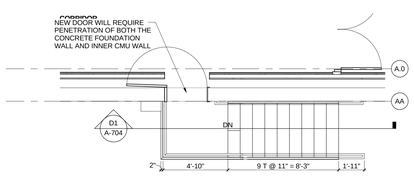
E3 NORTH EXTERIOR STAIR PLAN
1/4" = 1'-0"



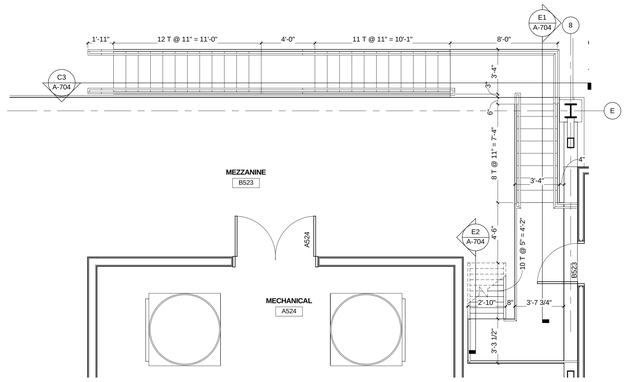
E4 NORTH EXTERIOR STAIR SECTION
1/4" = 1'-0"



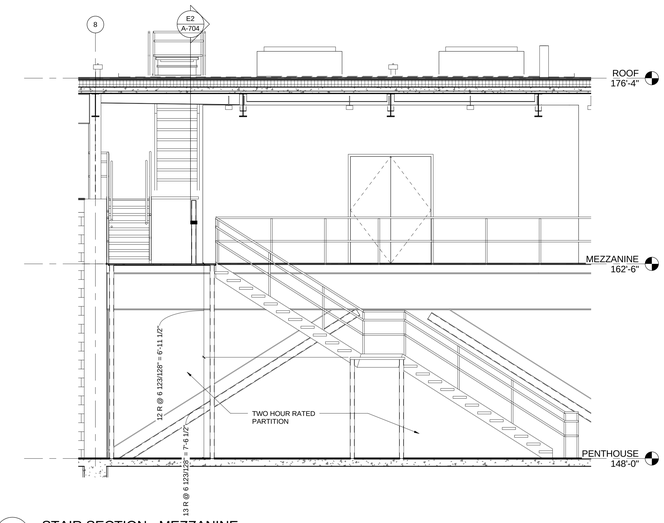
D1 STAIR SECTION - BLDG 223 MECH ROOM
1/4" = 1'-0"



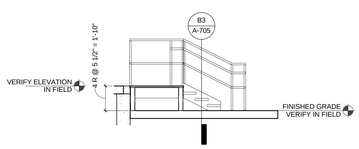
C1 ENLARGED STAIR PLAN - BLDG 223 MECH ROOM
1/4" = 1'-0"



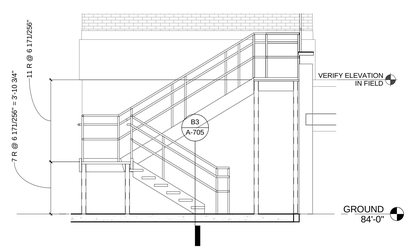
C2 MEZZANINE STAIR PLAN
1/4" = 1'-0"



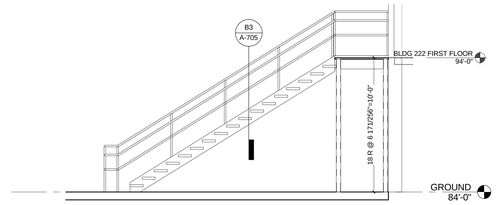
C3 STAIR SECTION - MEZZANINE
1/4" = 1'-0"



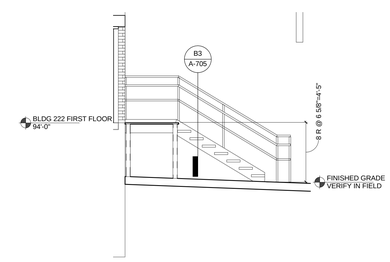
B1 STAIR SECTION - DOCK TO GRADE E/W
1/4" = 1'-0"



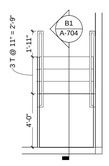
B2 STAIR SECTION - SERVICE YARD N OF TUNNEL E/W
1/4" = 1'-0"



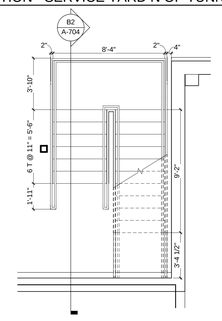
B3 STAIR SECTION - WEST SIDE OF 222 DOCK E/W
1/4" = 1'-0"



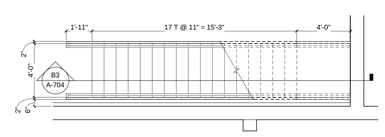
B4 STAIR SECTION - EAST SIDE OF 222 DOCK E/W
1/4" = 1'-0"



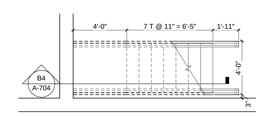
A1 STAIR PLAN - DOCK TO GRADE
1/4" = 1'-0"



A2 STAIR PLAN - SERVICE YARD N OF TUNNEL
1/4" = 1'-0"



A3 STAIR PLAN - WEST SIDE OF 222 DOCK
1/4" = 1'-0"



A4 STAIR PLAN - EAST SIDE OF 222 DOCK
1/4" = 1'-0"

C:\RVT\002182-A-CENTRAL_ab4fjh.rvt
7/8/2011 11:18:44 AM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-704

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

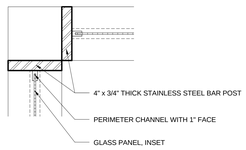
FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

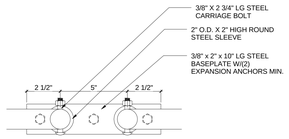
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED STAIR PLANS AND SECTIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-704	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

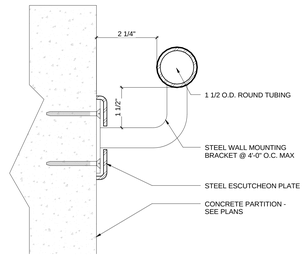
FACILITY DOCUMENT NUMBER: J241-101- A-704
REV. NO.



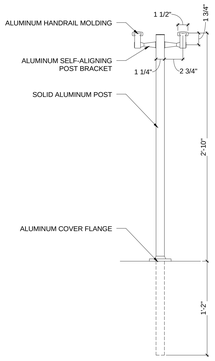
D1 PLAN DETAIL
3" = 1'-0"



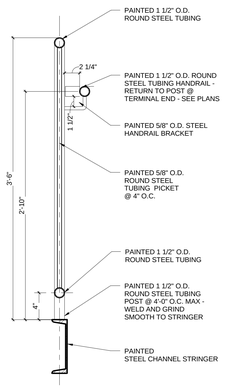
D2 PLAN DETAIL @ REMOVABLE GUARDRAIL
3" = 1'-0"



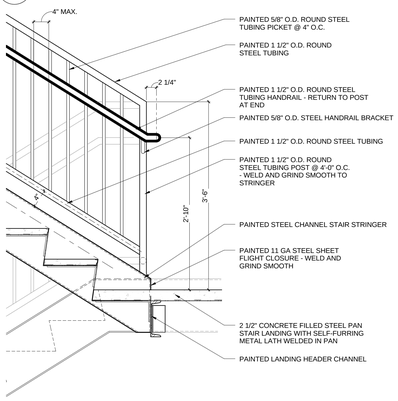
D3 SECTION DETAIL
6" = 1'-0"



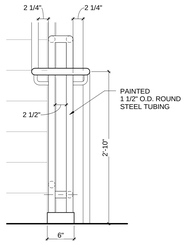
D4 SECTION DETAIL
1 1/2" = 1'-0"



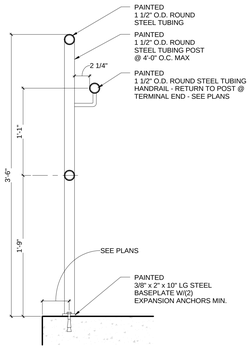
C1 SECTION DETAIL
1 1/2" = 1'-0"



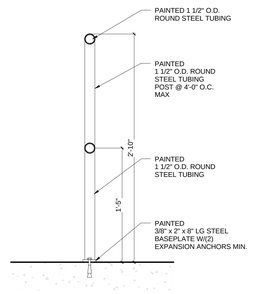
C2 SECTION DETAIL
1" = 1'-0"



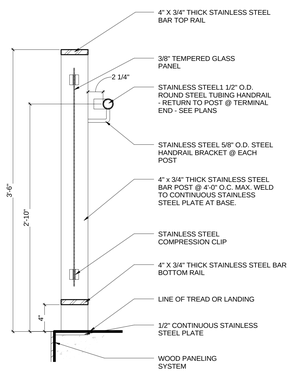
C3 SECTION DETAIL @ STAIR TOWERS
1" = 1'-0"



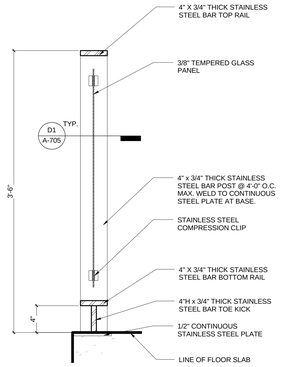
C4 SECTION DETAIL
1 1/2" = 1'-0"



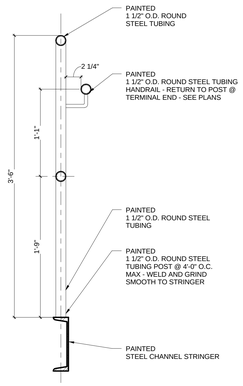
C5 SECTION DETAIL @ GROUND FLOOR STAIR TOWERS
1 1/2" = 1'-0"



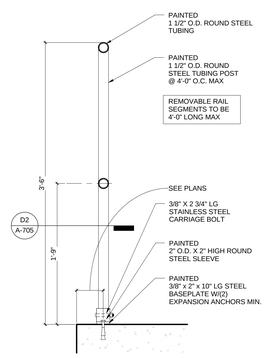
B1 SECTION DETAIL @ ATRIUM STAIR
1 1/2" = 1'-0"



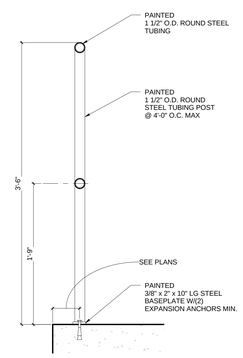
B2 SECTION DETAIL @ ATRIUM OPENING
1 1/2" = 1'-0"



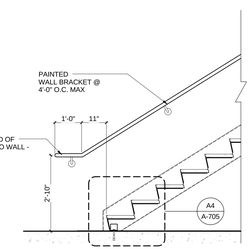
B3 SECTION DETAIL
1 1/2" = 1'-0"

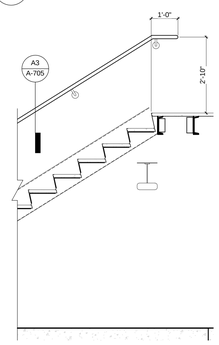


B4 SECTION DETAIL @ DOCK
1 1/2" = 1'-0"

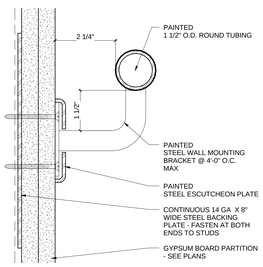


B5 SECTION DETAIL
1 1/2" = 1'-0"

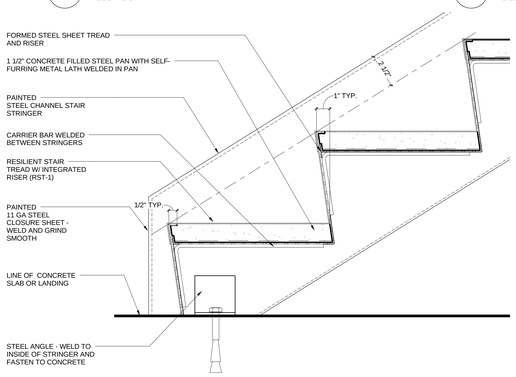




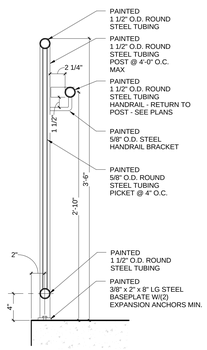
A1 SECTION DETAIL
1/2" = 1'-0"



A3 SECTION DETAIL
6" = 1'-0"



A4 SECTION DETAIL
3" = 1'-0"



A5 SECTION DETAIL @ STAIR TOWERS
1 1/2" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-705

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
STAIR DETAILS

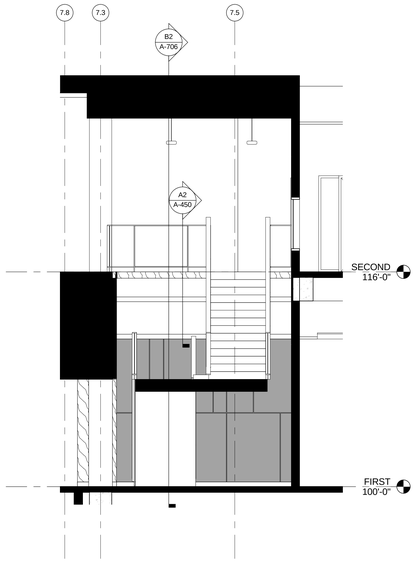
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-705	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- A-705 REV. NO.

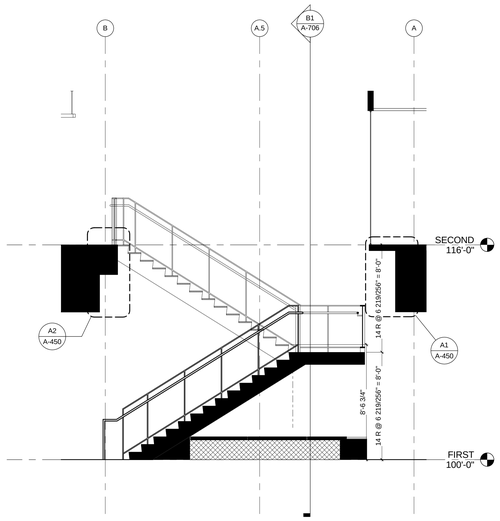
C:\R\V\002182-A-CENTRAL_ainrfp.rvt
7/8/2011 11:16:58 AM

HDR Architecture, Inc.

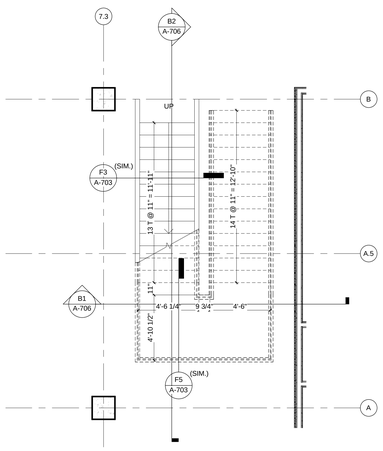
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



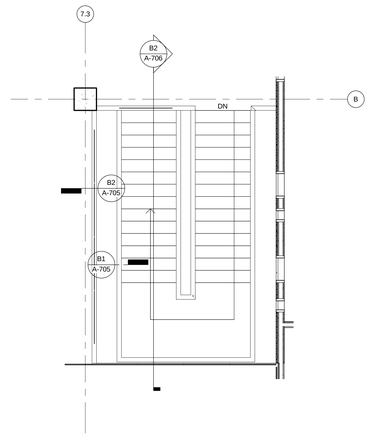
B1 LOBBY E/W SECTION
1/4" = 1'-0"



B2 LOBBY N/S SECTION
1/4" = 1'-0"



A1 ENLARGED FIRST FLOOR LOBBY PLAN
1/4" = 1'-0"



A2 ENLARGED SECOND FLOOR PLAN
1/4" = 1'-0"

A-706

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

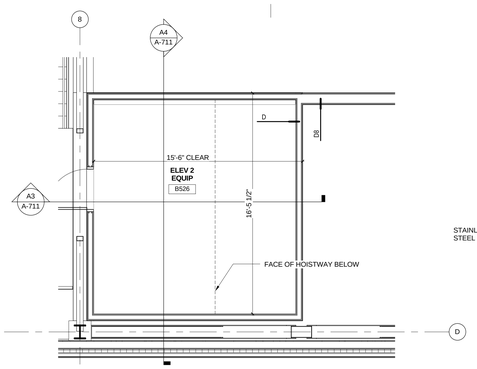
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
ENLARGED STAIR PLANS & SECTIONS

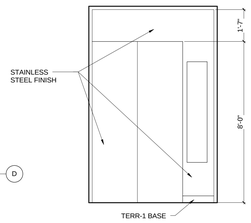
DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-706	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-706 REV. NO.

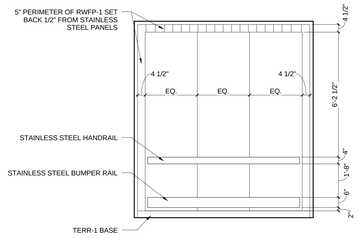
C:\PCTOOLS\D_A-CENTRAL_admin.v4
7/8/2011 11:17:06 AM



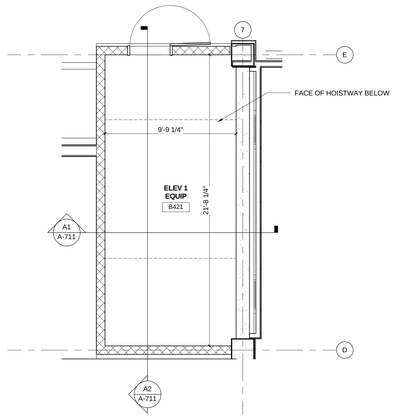
D2 ELEVATOR 2 EQUIP ROOM B526 PLAN
1/4" = 1'-0"



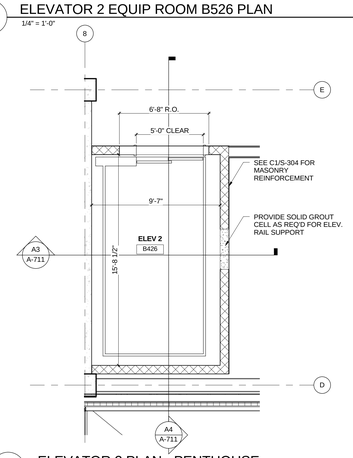
D3 ELEVATOR 1 NORTH ELEVATION
3/8" = 1'-0"



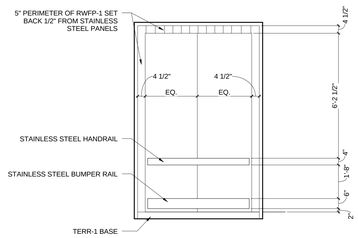
D4 ELEVATOR 1 EAST ELEVATION
3/8" = 1'-0"



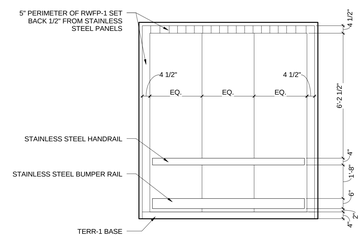
C1 ELEVATOR 1 EQUIP ROOM B421 PLAN
1/4" = 1'-0"



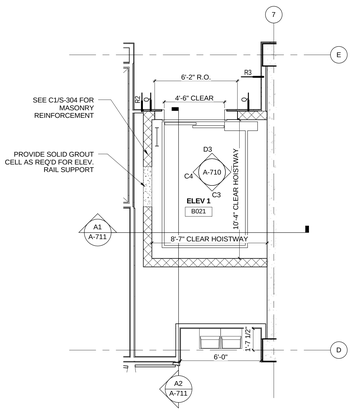
C2 ELEVATOR 2 PLAN - PENTHOUSE
1/4" = 1'-0"



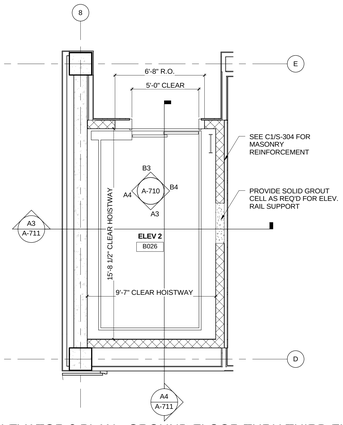
C3 ELEVATOR 1 SOUTH ELEVATION
3/8" = 1'-0"



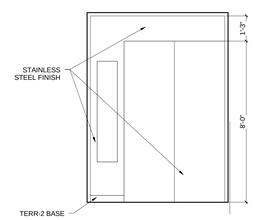
C4 ELEVATOR 1 WEST ELEVATION
3/8" = 1'-0"



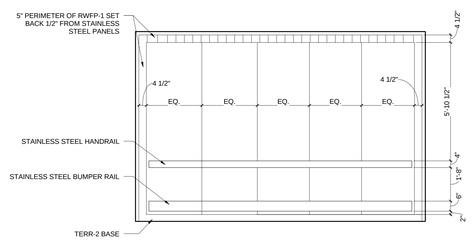
B1 ELEVATOR 1 PLAN - GROUND FLOOR THRU THIRD FLOOR
1/4" = 1'-0"



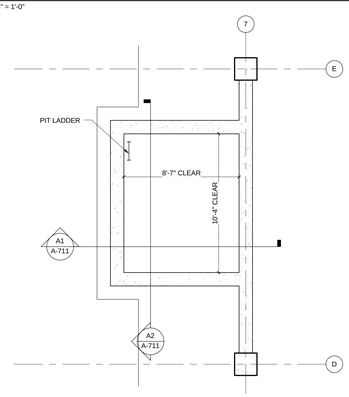
B2 ELEVATOR 2 PLAN - GROUND FLOOR THRU THIRD FLOOR
1/4" = 1'-0"



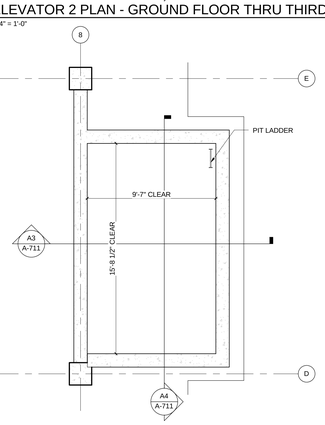
B3 ELEVATOR 2 NORTH ELEVATION
3/8" = 1'-0"



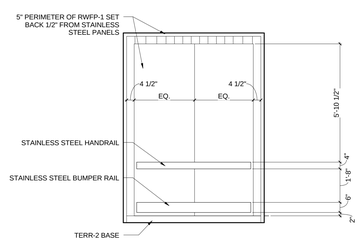
B4 ELEVATOR 2 EAST ELEVATION
3/8" = 1'-0"



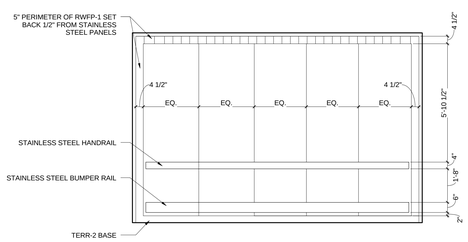
A1 ELEVATOR 1 PLAN - PIT LEVEL
1/4" = 1'-0"



A2 ELEVATOR 2 PLAN - PIT LEVEL
1/4" = 1'-0"



A3 ELEVATOR 2 SOUTH ELEVATION
3/8" = 1'-0"



A4 ELEVATOR 2 WEST ELEVATION
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-710

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

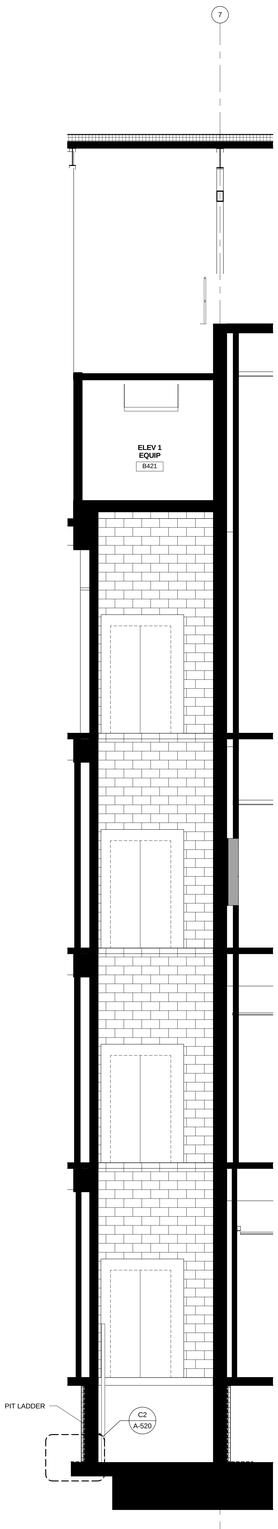
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED ELEVATOR PLANS AND ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-710	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

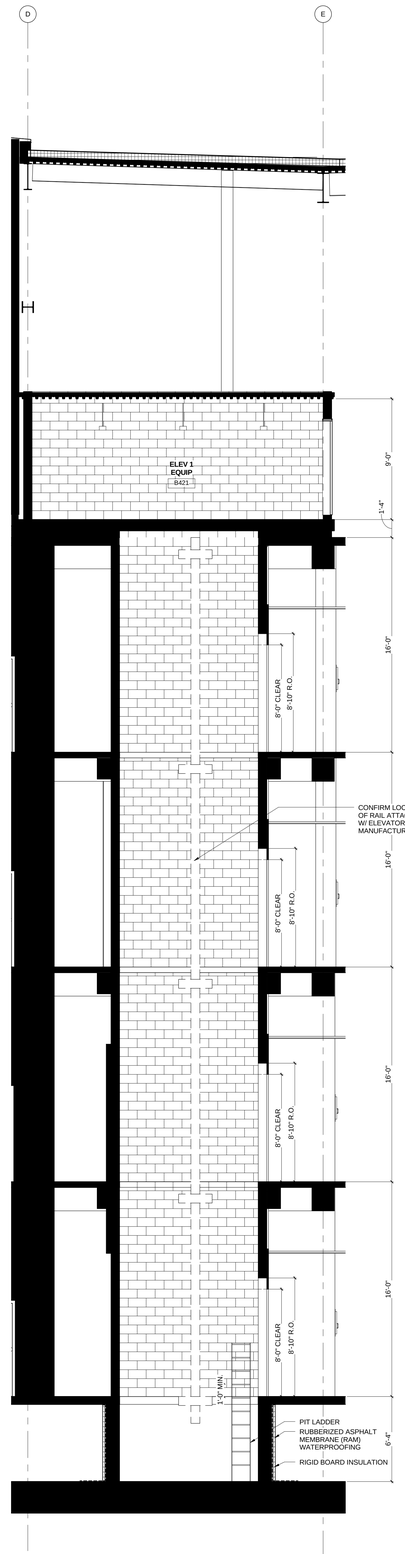
FACILITY DOCUMENT NUMBER J241-101- A-710 REV. NO.

C:\BV70021B3-A-CENTRAL_ab4fy-r4
7/8/2011 11:17:25 AM

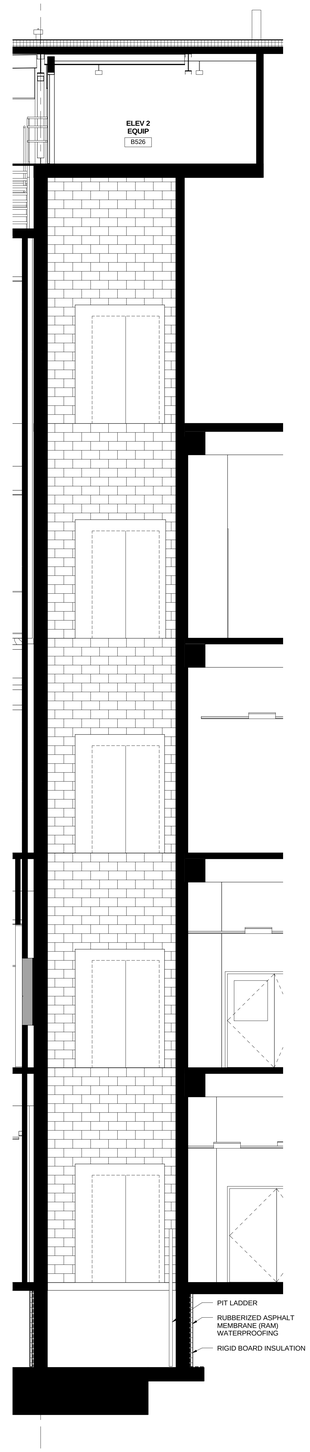
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



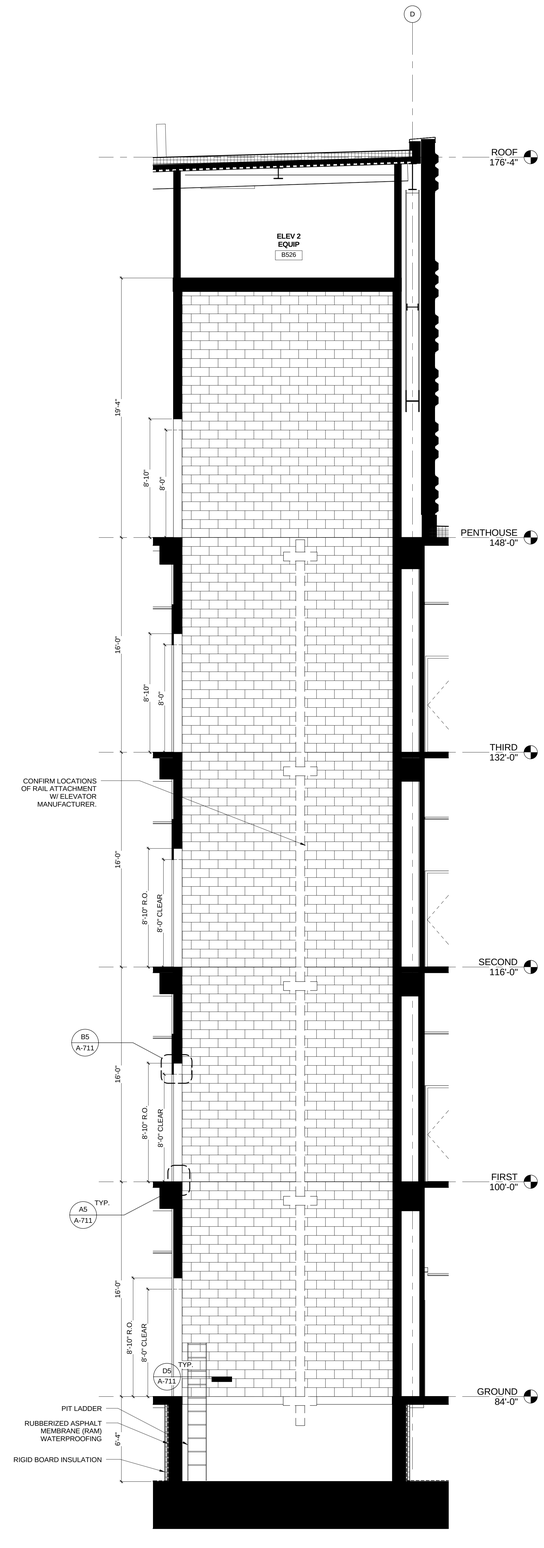
A1 ELEVATOR 1 - NORTH SECTION
1/4" = 1'-0"



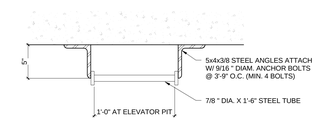
A2 ELEVATOR 1 - EAST SECTION
1/4" = 1'-0"



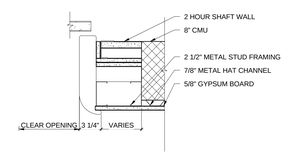
A3 ELEVATOR 2 - NORTH SECTION
1/4" = 1'-0"



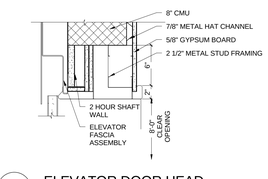
A4 ELEVATOR 2 - WEST SECTION
1/4" = 1'-0"



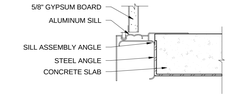
D5 TYPICAL PIT LADDER
1 1/2" = 1'-0"



C5 ELEVATOR DOOR JAMB
1 1/2" = 1'-0"



B5 ELEVATOR DOOR HEAD
1 1/2" = 1'-0"



A5 ELEVATOR DOOR SILL
1 1/2" = 1'-0"

A-711

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ELEVATOR SECTIONS AND DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-711	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-711
REV. NO.

C:\PVTX\003182-A-CENTRAL_dwrdy.rvt
7/8/2011 11:17:35 AM

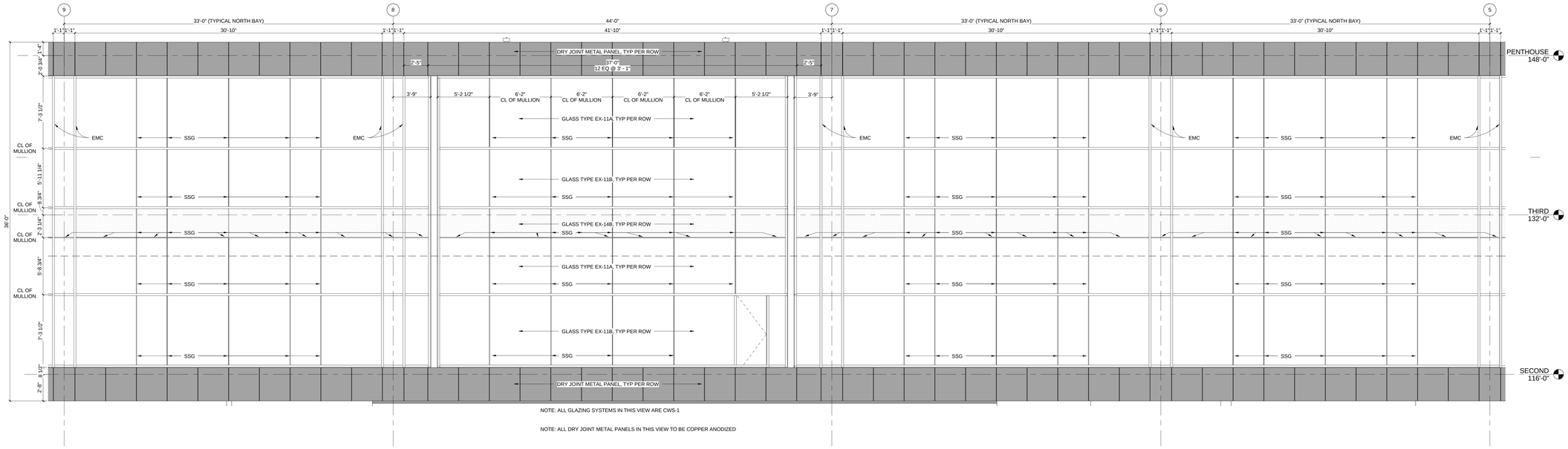
GENERAL NOTES:

1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



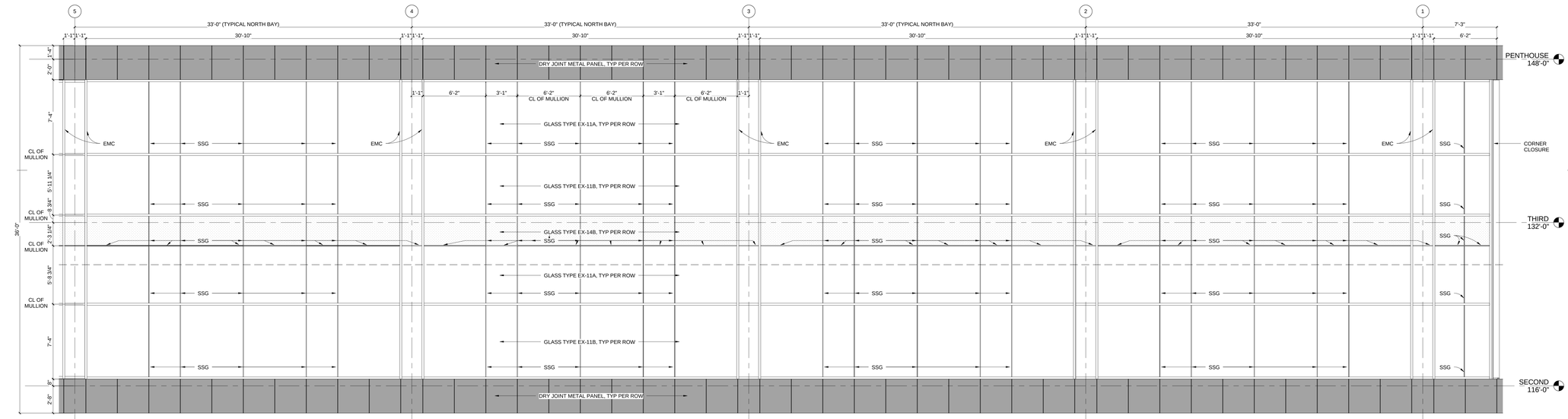
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

C1 ENLARGED NORTH ELEVATION CL 5 - CL 9

1/4" = 1'-0"

A-801



NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

A1 ENLARGED NORTH ELEVATION CL 1 - CL5

1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

ENLARGED ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-801	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.

J241-101- A-801

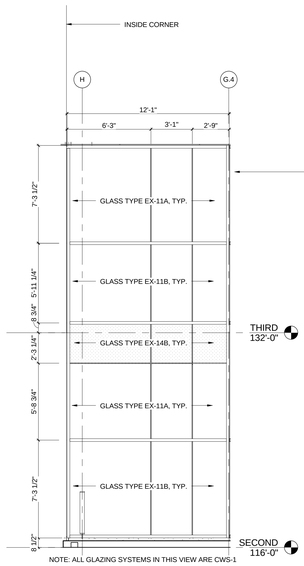
C:\R\TV002182-A-CENTRAL_ARch.rvt
7/8/2011 11:17:41 AM

GENERAL NOTES:

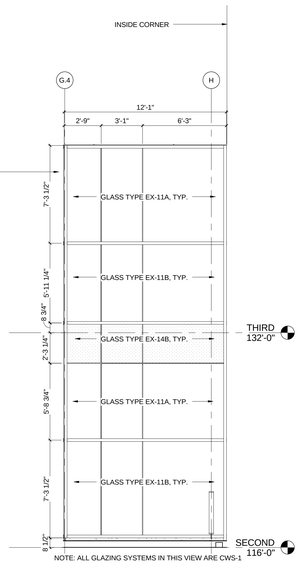
1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

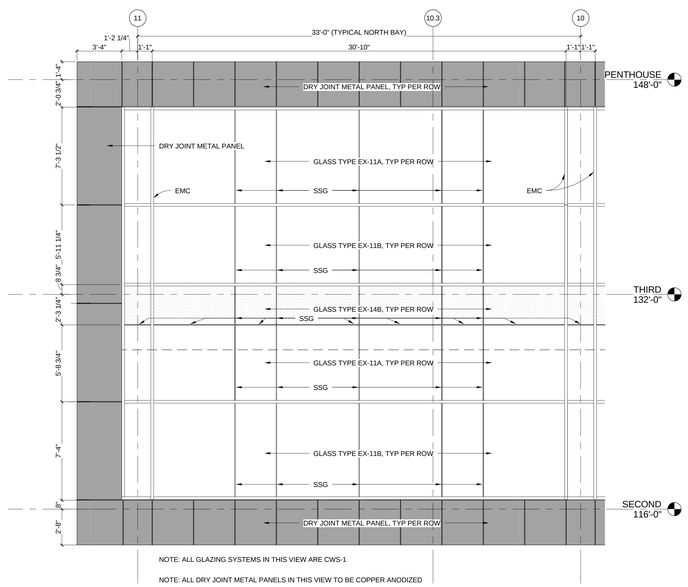


C1 ENLARGED EAST ELEVATION ABOVE LOBBY LOOKING WEST
1/4" = 1'-0"



C3 ENLARGED WEST ELEVATION ABOVE LOBBY LOOKING EAST
1/4" = 1'-0"

A-802



A3 ENLARGED NORTH ELEVATION CL 10 - CL 11
1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED ELEVATIONS

DESIGNED CURT RINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-802	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-802 REV. NO.

C:\DV70021\D-A-CENTRAL_ab=fp.rvt
7/8/2011 11:17:47 AM

GENERAL NOTES:

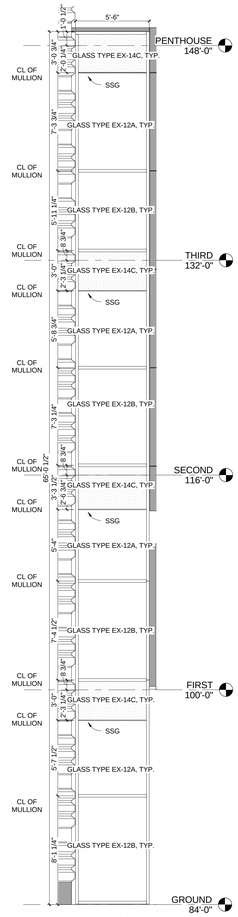
1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR

HDR Architecture, Inc.

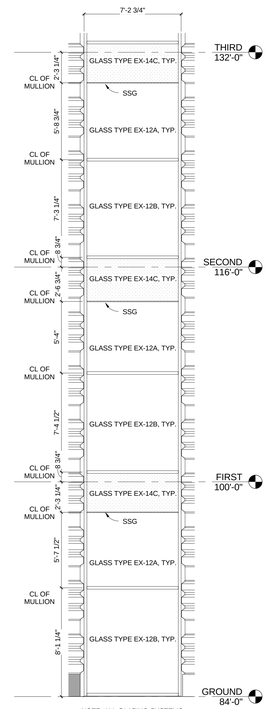
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

NOTE: WIDTH OF CURTAIN WALL IS 5' - 2" AT SIMILAR CONDITION NEAR COLUMN LINE D (ALTERNATE 1)



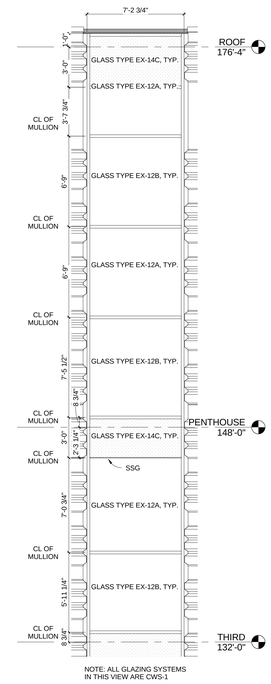
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

C2 ENLARGED EAST ELEVATION @ CL G
1/4" = 1'-0"



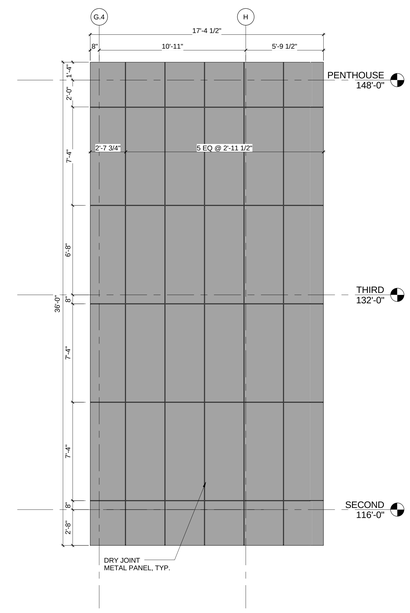
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

C3 ENLARGED EAST ELEVATION @ CL E - CL F
1/4" = 1'-0"



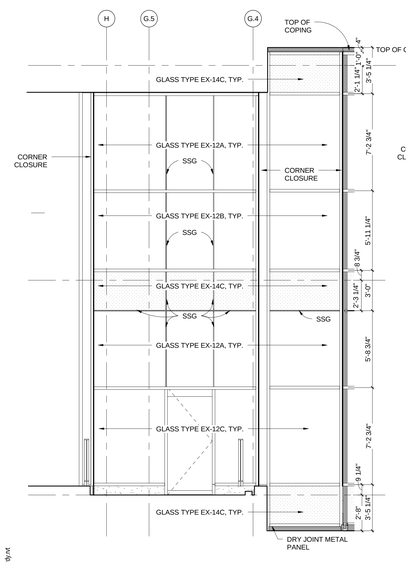
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

C4 ENLARGED EAST ELEVATION @ CL E - CL F CONT.
1/4" = 1'-0"



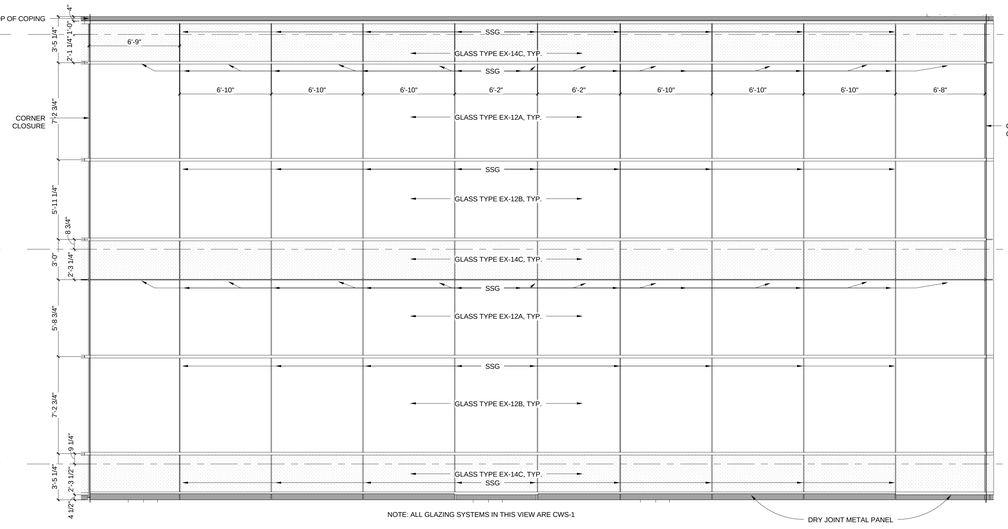
C5 ENLARGED EAST ELEVATION @ CL H
1/4" = 1'-0"

A-803



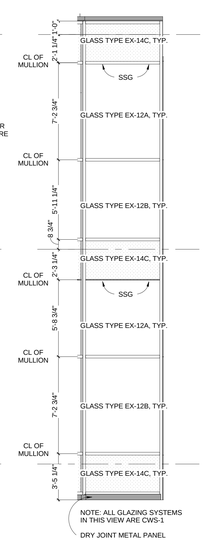
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

A1 ENLARGED WEST ELEVATION @ CL H
1/4" = 1'-0"



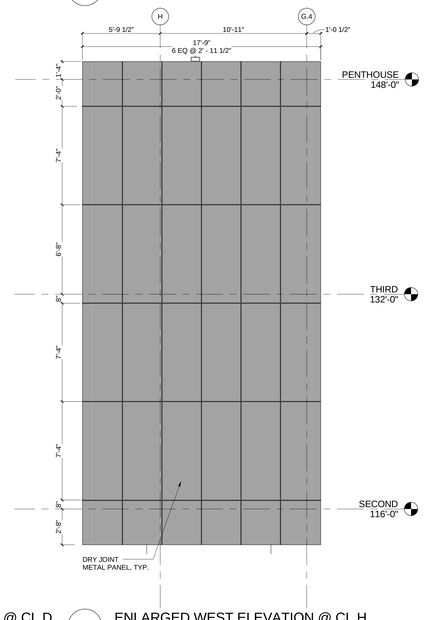
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

A2 ENLARGED WEST ELEVATION CL D - CL G
1/4" = 1'-0"



NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-1

A4 ENLARGED WEST ELEVATION @ CL D
1/4" = 1'-0"



A5 ENLARGED WEST ELEVATION @ CL H
1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ISSUED FOR CPR #001			06/03/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

ENLARGED ELEVATIONS

DESIGNED CURT FINROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-803	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- A-803** REV. NO.

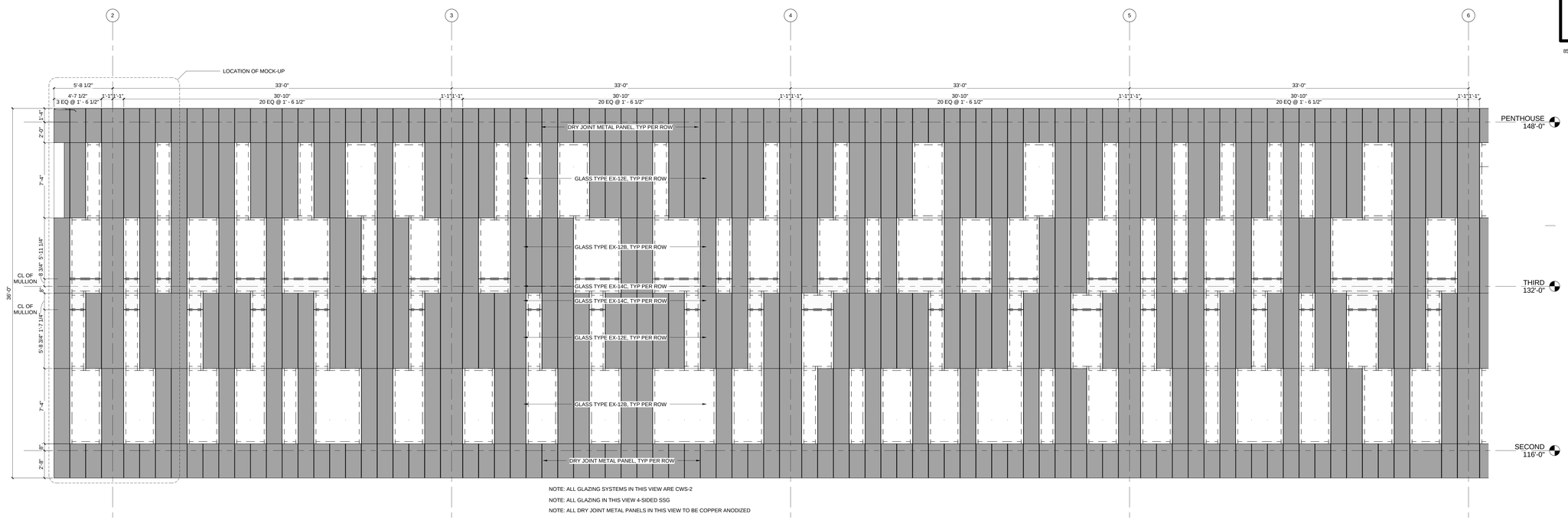
C:\DV\002182-A-CENTRAL_dwrdy.rvt
7/8/2011 11:17:59 AM

GENERAL NOTES:

1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-2

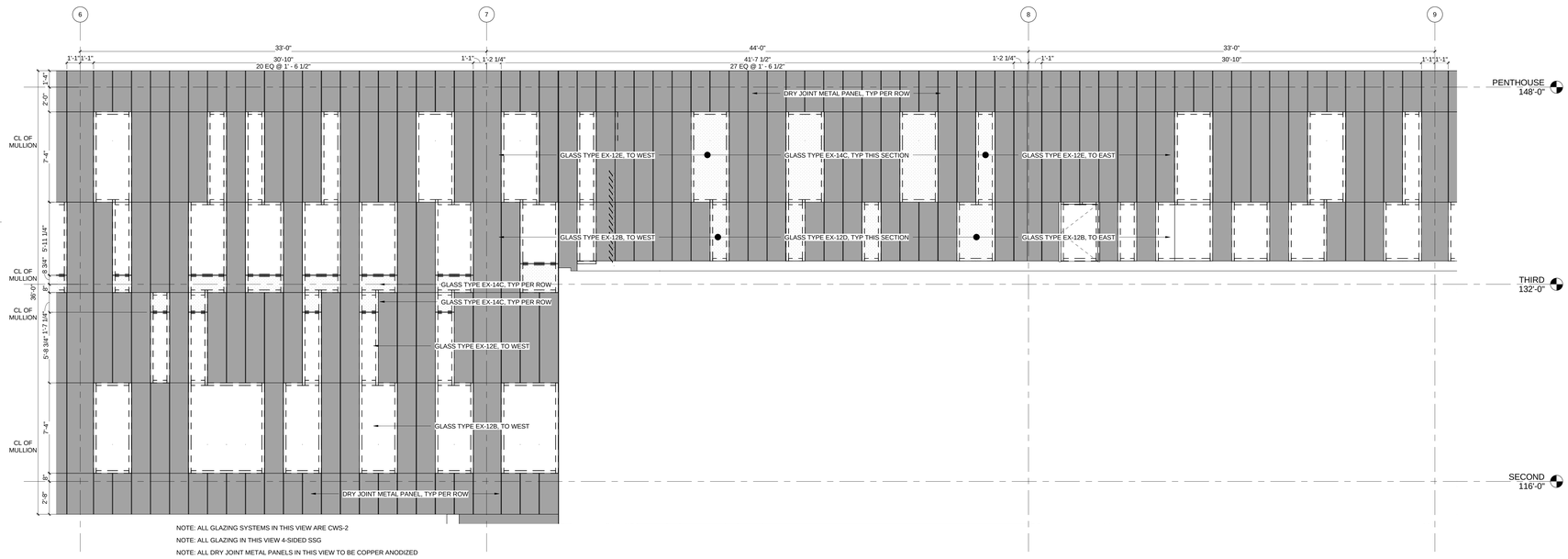
NOTE: ALL GLAZING IN THIS VIEW 4-SIDED SSG

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

C1 ENLARGED ELEVATION CL 2 - CL 6

1/4" = 1'-0"

A-804



NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-2

NOTE: ALL GLAZING IN THIS VIEW 4-SIDED SSG

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

A1 ENLARGED ELEVATION CL 6 - CL 9

1/4" = 1'-0"

C:\R\V\002182-A-CENTRAL_alerts.rvt
7/8/2011 11:18:55 AM

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ISSUED FOR CPR #001			06/03/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
ENLARGED ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-804	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

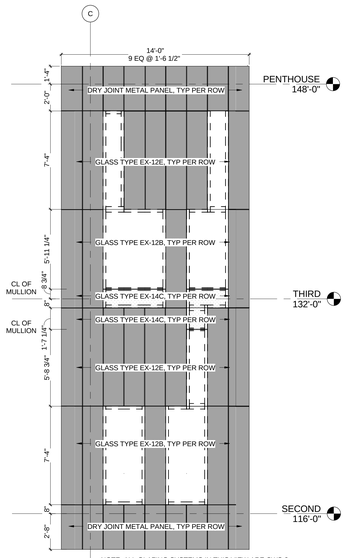
FACILITY DOCUMENT NUMBER: J241-101- A-804 REV. NO.

GENERAL NOTES:

1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



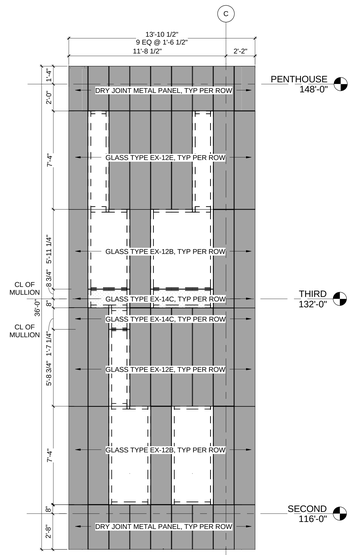
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-2

NOTE: ALL GLAZING IN THIS VIEW 4-SIDED SSG

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

C1 ENLARGED EAST ELEVATION @ CL C

1/4" = 1'-0"



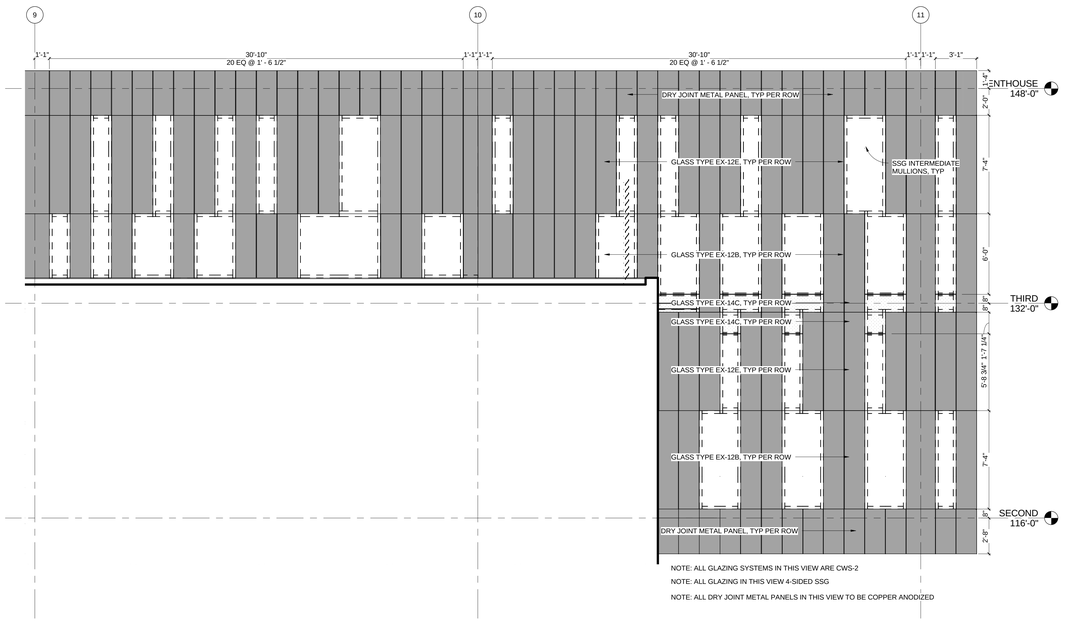
NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-2

NOTE: ALL GLAZING IN THIS VIEW 4-SIDED SSG

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

C2 ENLARGED WEST ELEVATION @ CL C

1/4" = 1'-0"



NOTE: ALL GLAZING SYSTEMS IN THIS VIEW ARE CWS-2

NOTE: ALL GLAZING IN THIS VIEW 4-SIDED SSG

NOTE: ALL DRY JOINT METAL PANELS IN THIS VIEW TO BE COPPER ANODIZED

A1 ENLARGED SOUTH ELEVATION ALT 1 CL10-CL11

1/4" = 1'-0"

C:\R\70\0218\A-CENTRAL_ainrfp.rvt
7/8/2011 11:18:10 AM

A-805

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ISSUED FOR CPR #001			06/03/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

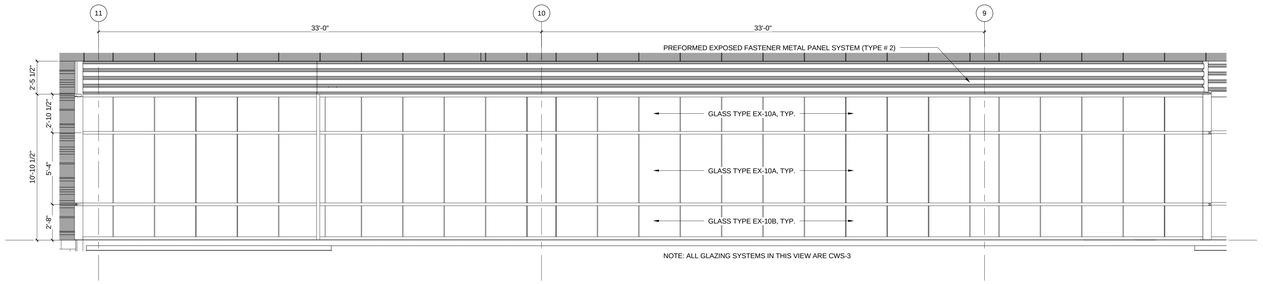
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

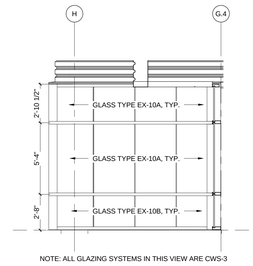
ENLARGED ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-805	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

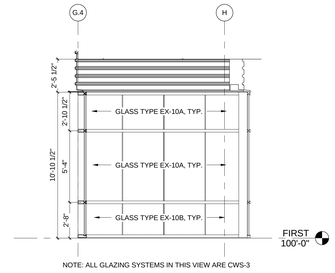
FACILITY DOCUMENT NUMBER: J241-101- A-805 REV. NO.



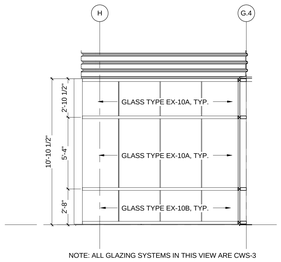
D1 ENLARGED NORTH ELEVATION @ FIRST FLOOR CL8 - CL 11
1/4" = 1'-0"



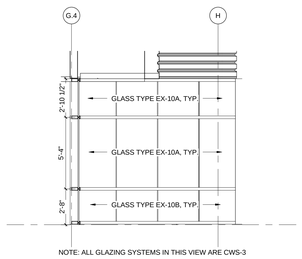
D4 ENLARGED ELEVATION @ ALT 1 WEST OFFICE
1/4" = 1'-0"



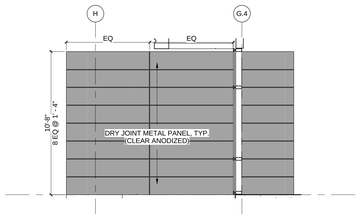
D5 ENLARGED ELEVATION @ ALT 1 EAST OFFICE
1/4" = 1'-0"



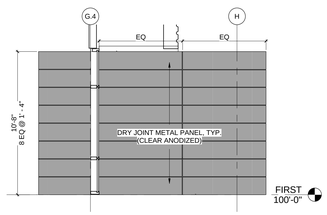
C1 ENLARGED ELEVATION @ WEST OFFICE
1/4" = 1'-0"



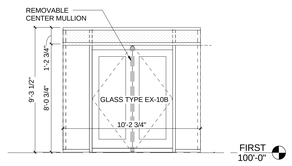
C2 ENLARGED ELEVATION @ EAST OFFICE
1/4" = 1'-0"



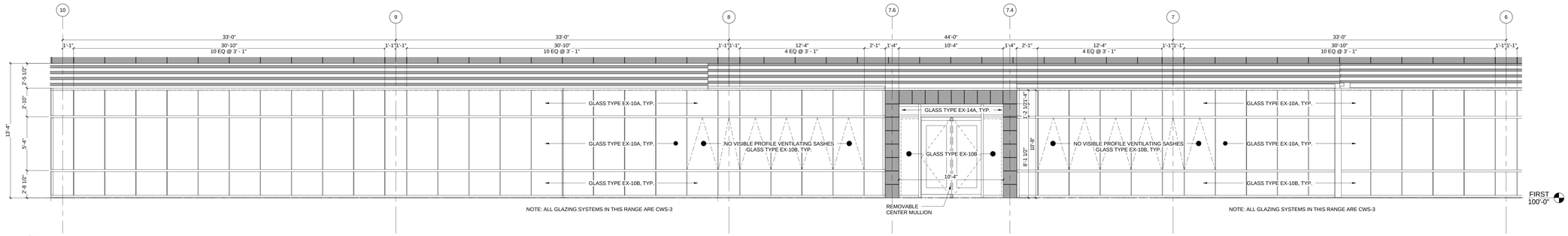
C3 ENLARGED ELEVATION AT NORTH ENTRY LOOKING WEST
1/4" = 1'-0"



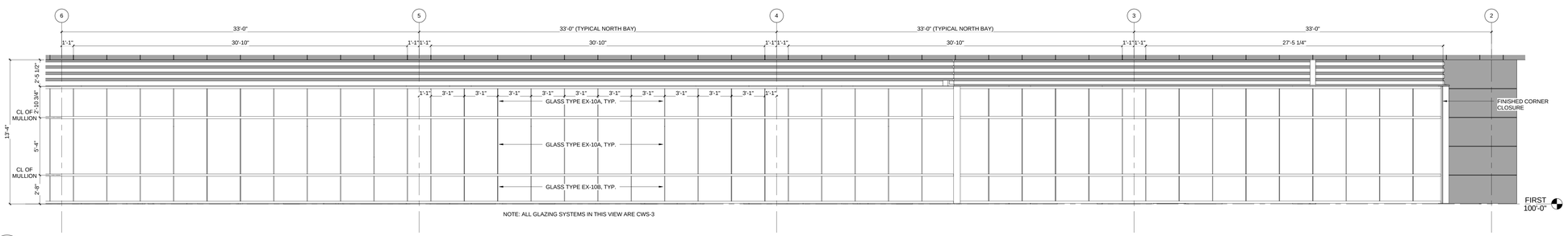
C4 ENLARGED ELEVATION AT NORTH ENTRY LOOKING EAST
1/4" = 1'-0"



C5 ENLARGED ELEVATION AT NORTH ENTRY LOOKING SOUTH
1/4" = 1'-0"



B1 ENLARGED NORTH ELEVATION @ FIRST FLOOR CL6 - CL 10
1/4" = 1'-0"



A1 ENLARGED NORTH ELEVATION @ FIRST FLOOR CL2 - CL6
1/4" = 1'-0"

C:\PW\00235-A-CENTRAL_dandy.rvt
7/8/2011 11:18:23 AM

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-806

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-806	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-806
REV. NO.

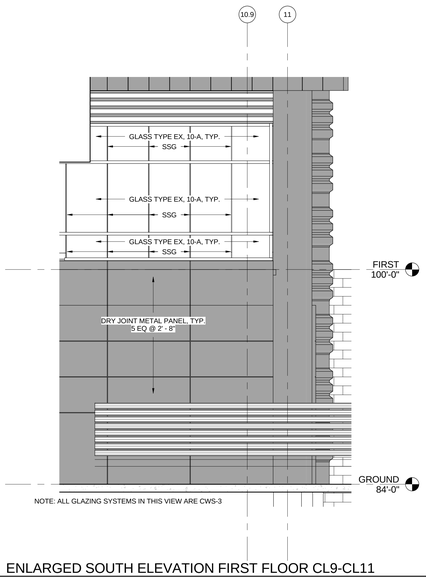
GENERAL NOTES:

1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR

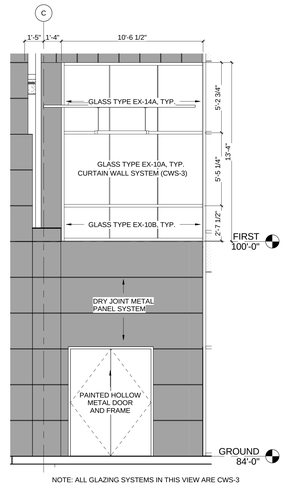
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



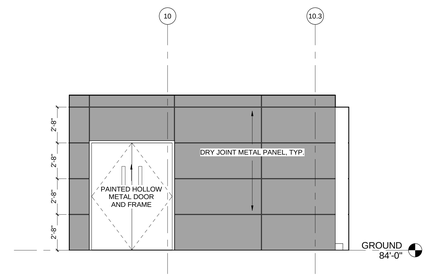
D1 ENLARGED SOUTH ELEVATION FIRST FLOOR CL9-CL11

1/4" = 1'-0"



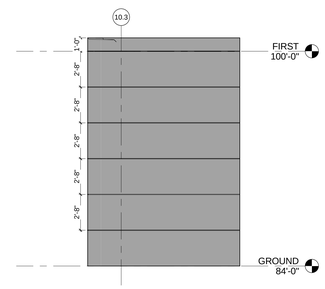
D3 ENLARGED EAST ELEVATION AT CL C - CL D

1/4" = 1'-0"



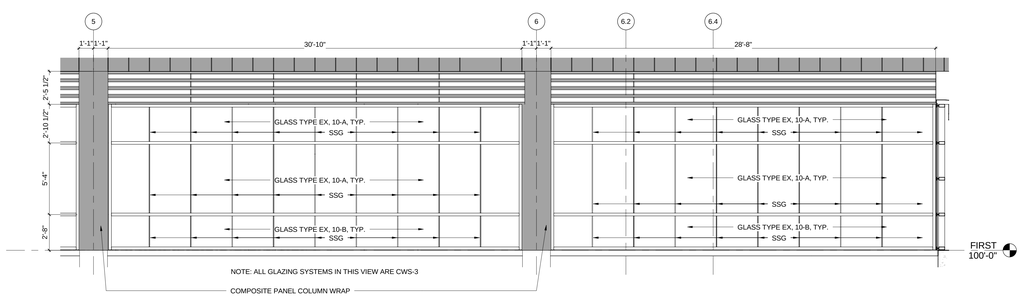
D4 SOUTH ELEVATION AT ENCLOSED DOCK

1/4" = 1'-0"



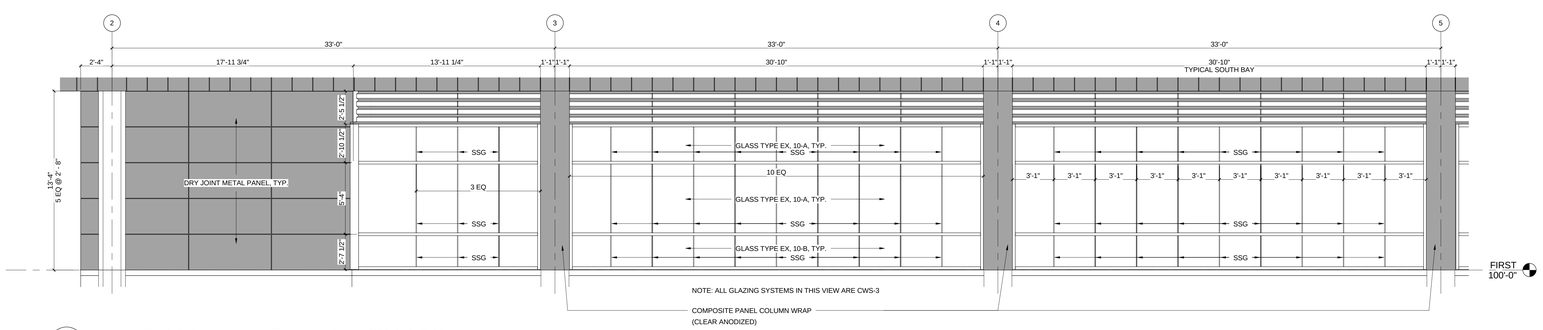
C5 ELEVATION AT GROUND FLOOR STAIR LOOKING SOUTH

1/4" = 1'-0"



B1 ENLARGED SOUTH ELEVATION FIRST FLOOR CL5-CL7

1/4" = 1'-0"



A1 ENLARGED SOUTH ELEVATION FIRST FLOOR CL2-CL5

1/4" = 1'-0"

C:\PCWTO02182-ALCENTRAL_dmdy.rvt
7/6/2011 11:18:32 AM

A-807

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

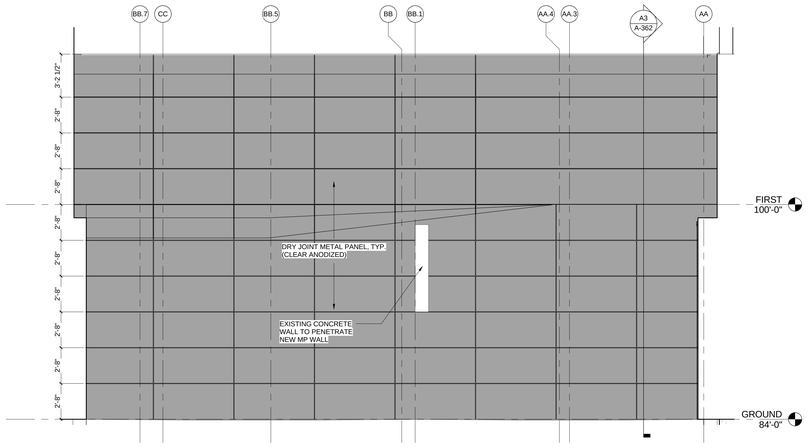
DOCUMENT TITLE

ENLARGED ELEVATIONS

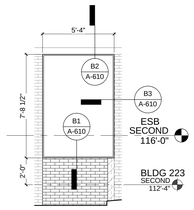
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-807	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER REV. NO.

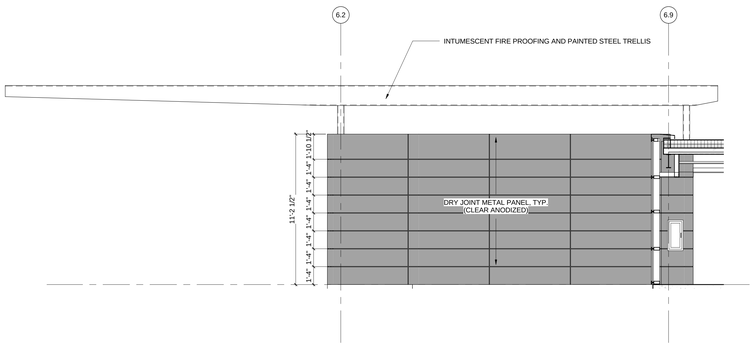
J241-101- A-807



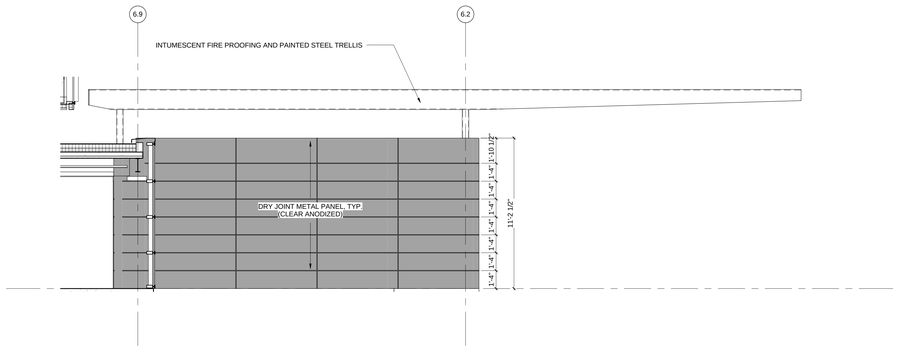
D1 ENLARGED ELEVATION @ WEST AREA WAY
1/4" = 1'-0"



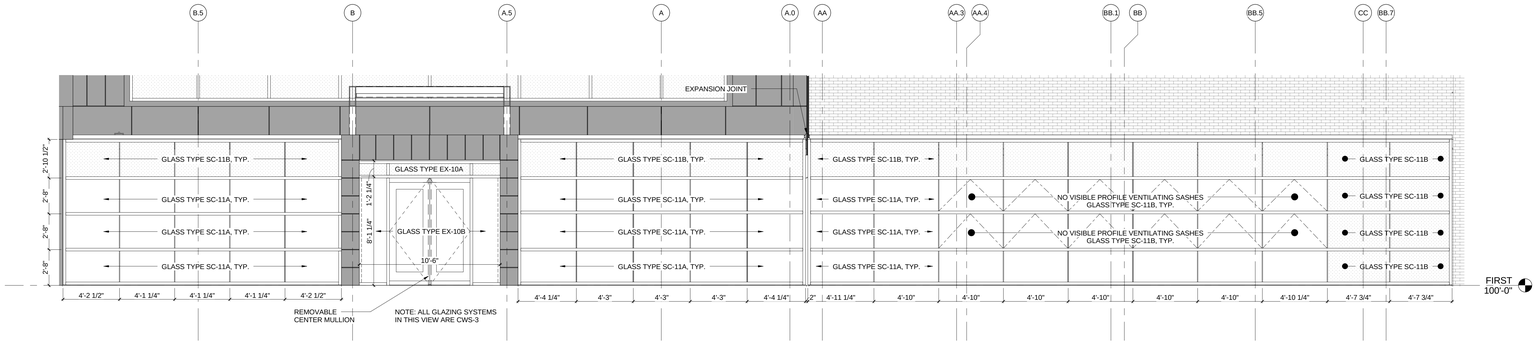
D3 NEW 223 WINDOW
1/4" = 1'-0"



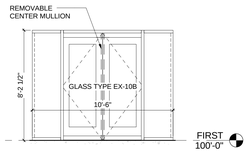
C1 NORTH ELEVATION @ WEST ENTRY
1/4" = 1'-0"



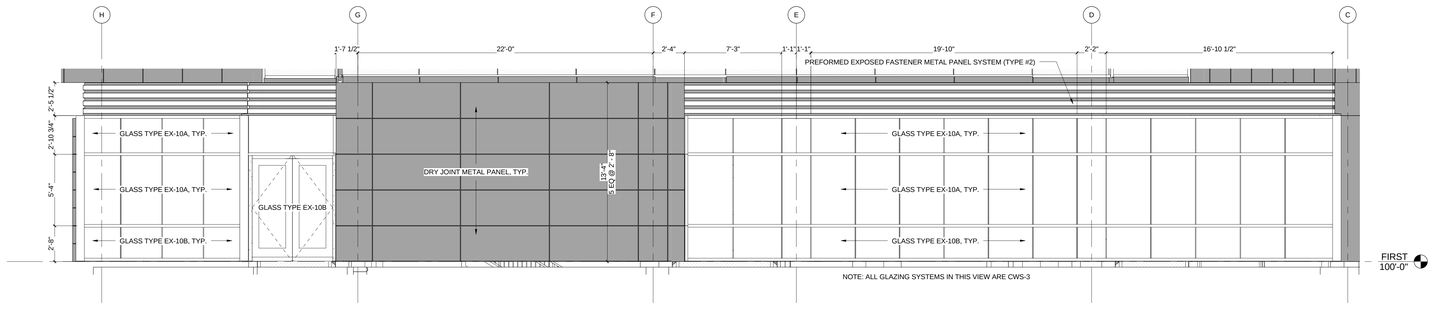
C3 SOUTH ELEVATION @ WEST ENTRY
1/4" = 1'-0"



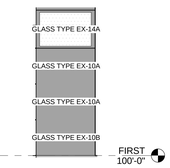
B1 ENLARGED WEST ELEVATION @ LINK
1/4" = 1'-0"



B5 ENLARGED ELEVATION @ WEST ENTRY
1/4" = 1'-0"



A1 ENLARGED WEST ELEVATION @ FIRST FLOOR
1/4" = 1'-0"



A5 ENLARGED ELEVATION @ AREA WAY
1/4" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

A-808

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ISSUED FOR CPR #001			06/03/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

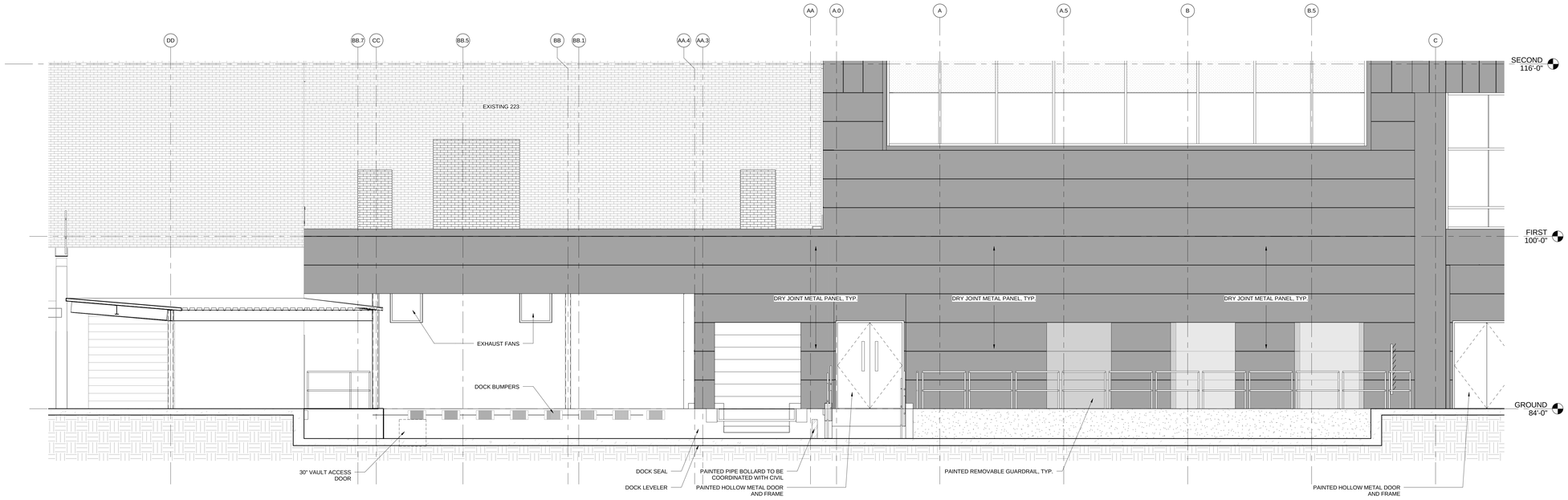
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-808	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

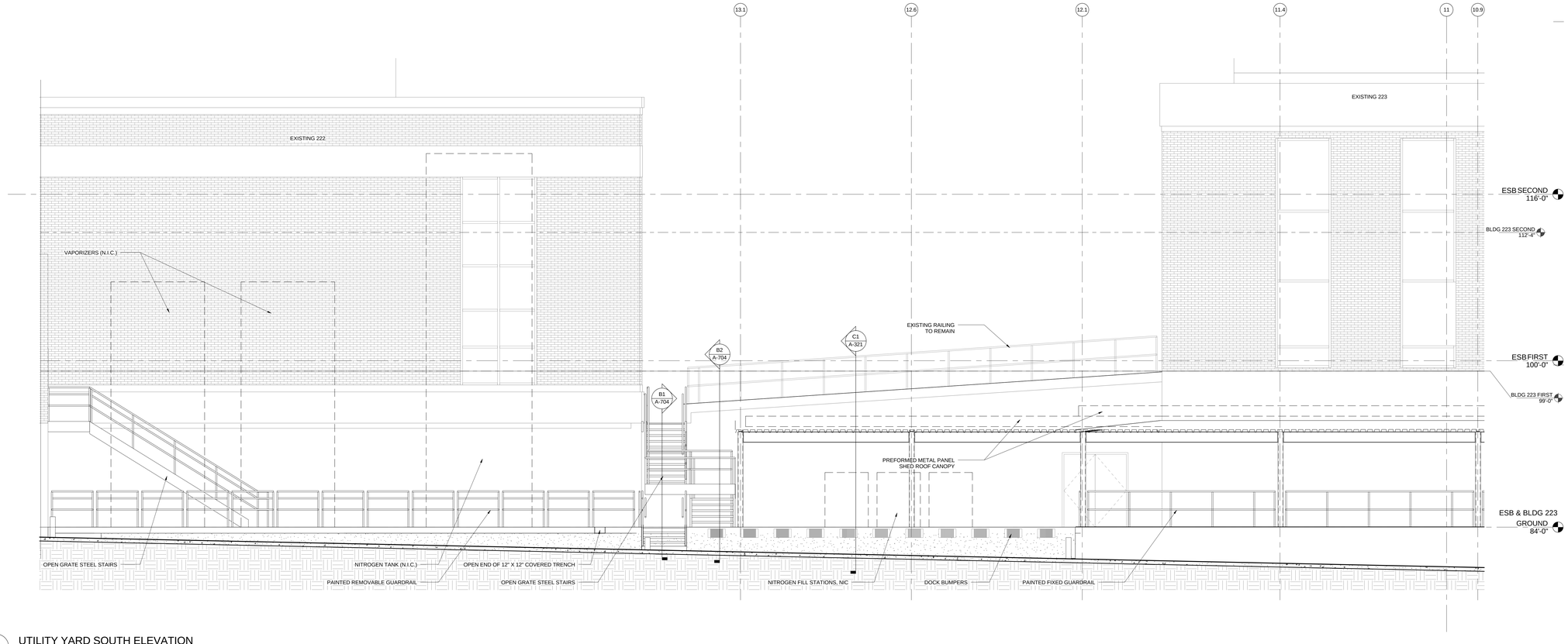
FACILITY DOCUMENT NUMBER: J241-101- A-808
REV. NO.

C:\PCTOOLS\D:\ACDWT\ai_allnfp.v4
7/8/2011 11:18:49 AM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



C1 UTILITY YARD EAST ELEVATION
1/4" = 1'-0"



A1 UTILITY YARD SOUTH ELEVATION
1/4" = 1'-0"

A-809

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-809	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- A-809** REV. NO.

C:\BK7\002182-A-CENTRAL_ayrdy.rvt
7/8/2011 11:18:57 AM

GENERAL NOTES:

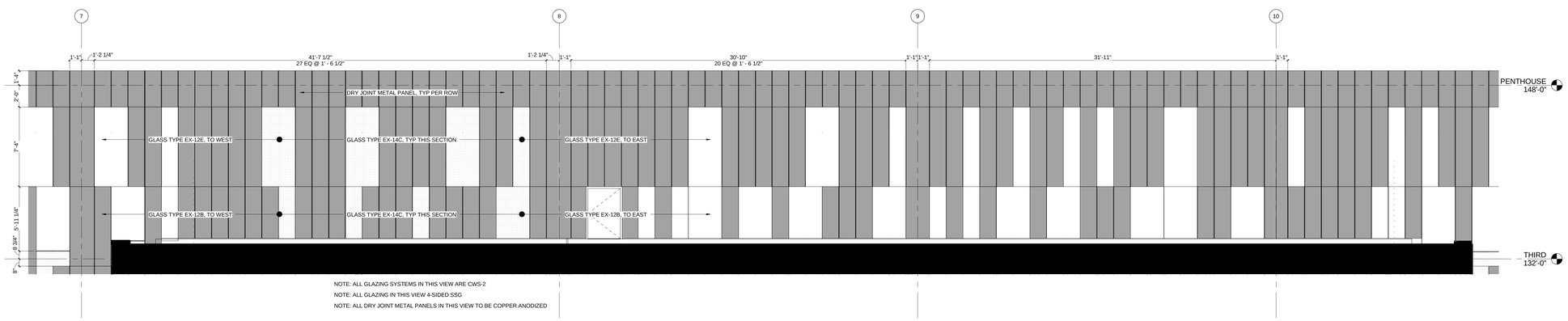
1. SSG = STRUCTURAL SILICONE GLAZED
2. PRESSURE PLATE AND 3/4" MULLION CAP UNLESS NOTED OTHERWISE
3. EMC = PRESSURE PLATE WITH 4" EXTENDED MULLION CAP FULL HEIGHT OF CURTAIN WALL

HDR

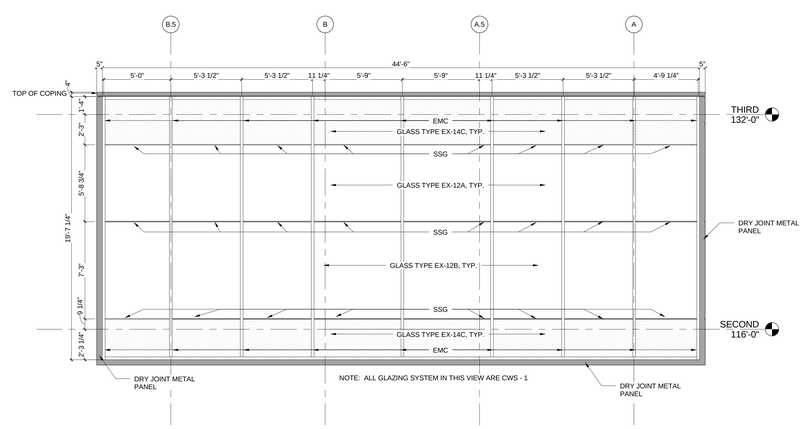
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

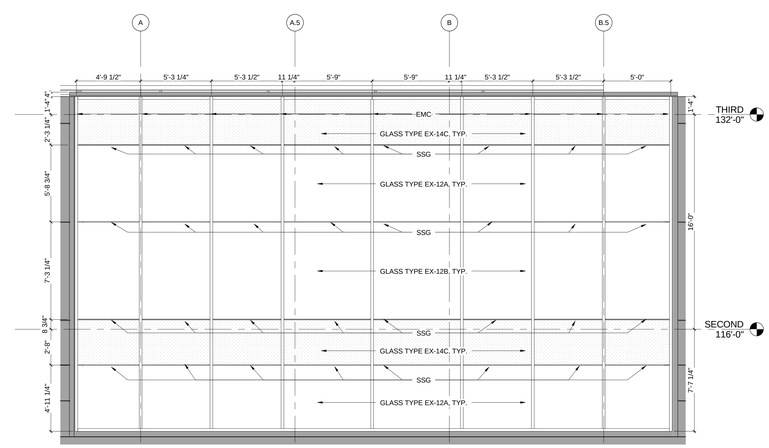
A-830



B1 ENLARGED SOUTH ELEVATION @ LINK
1/4" = 1'-0"



A1 ENLARGED WEST ELEVATION CL A - CL B.5
1/4" = 1'-0"



A3 ENLARGED EAST ELEVATION CL A - CL B.5
1/4" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ISSUED FOR CPR #001			06/03/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
ENLARGED ELEVATIONS

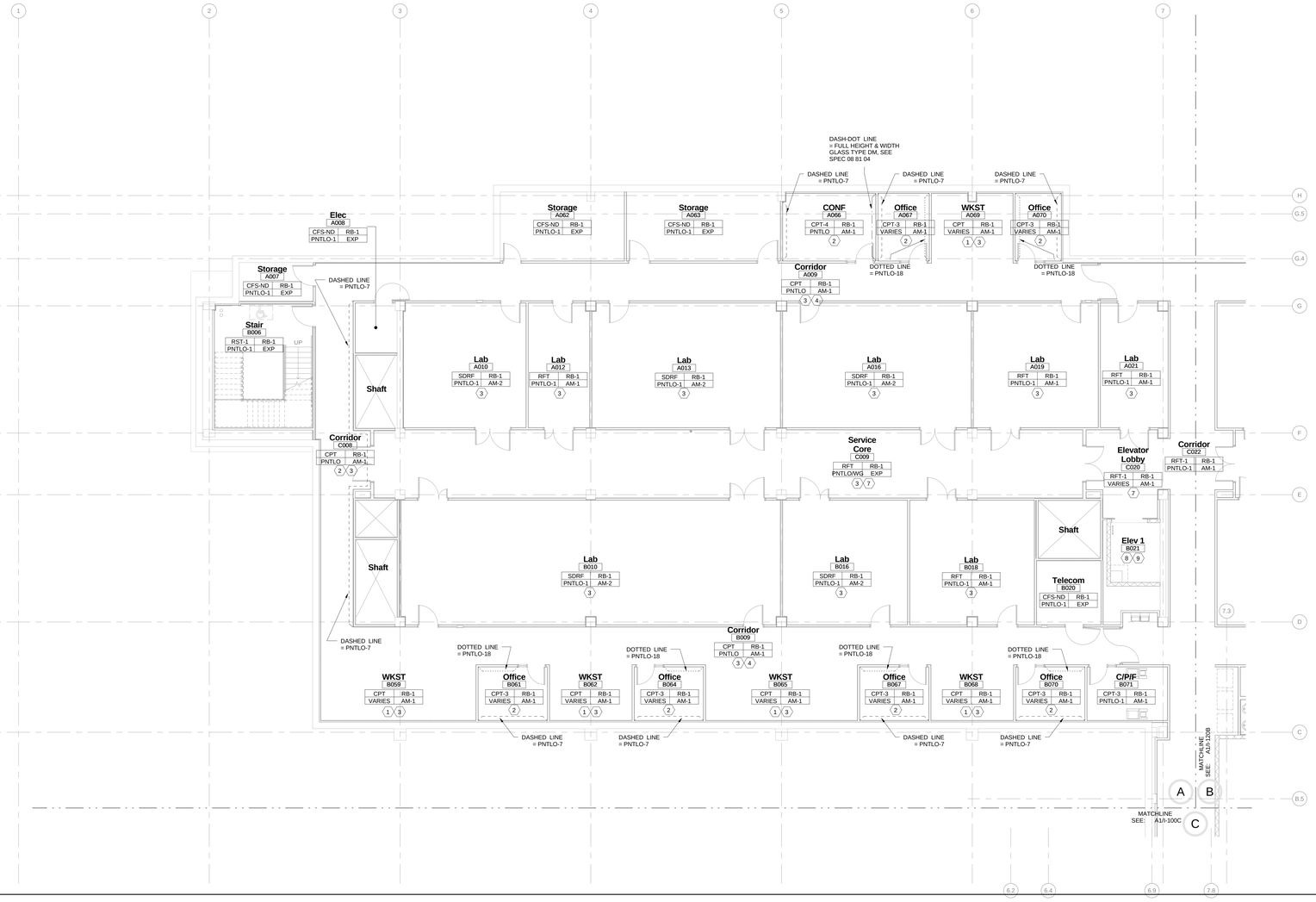
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. A-830	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- A-830 REV. NO.

C:/PCI70/22182-A-CENTRAL_sinrfp.rvt
7/8/2011 11:19:04 AM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

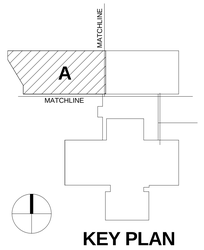
FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

A1 GROUND FLOOR - AREA A FINISH PLAN

1/8" = 1'-0"

I-100A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

GROUND FLOOR - AREA A - INTERIOR FINISH PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-100A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- I-100A REV. NO.

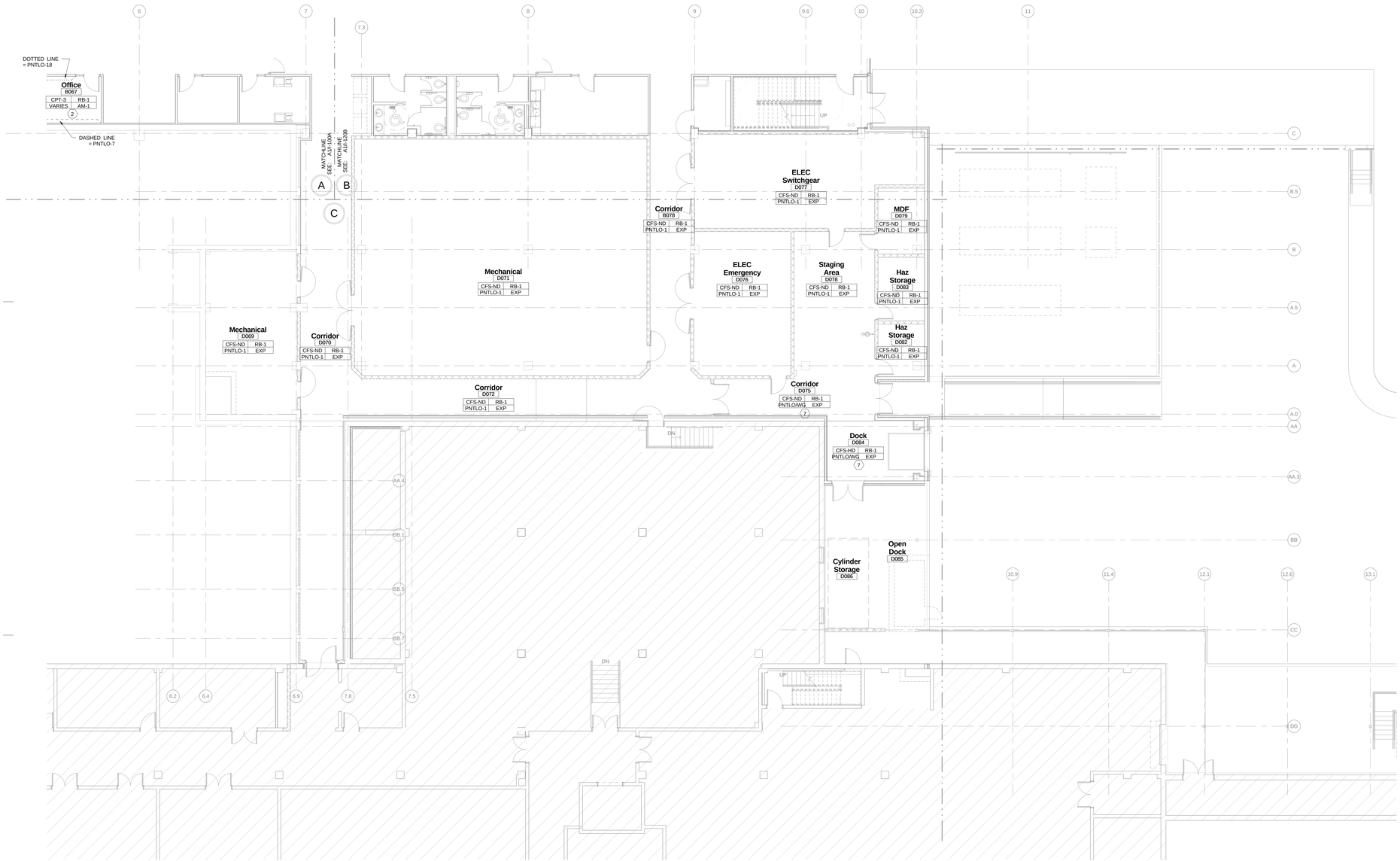
C:\BV\002182-CENTRAL_alanfp.rvt
7/7/2011 5:59:16 PM

KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD. SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH. SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

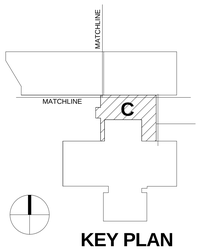


A1 GROUND FLOOR - AREA C FINISH PLAN
1/8" = 1'-0"

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

I-100C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
GROUND FLOOR - AREA C - INTERIOR FINISH PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-100C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- I-100C
REV. NO.

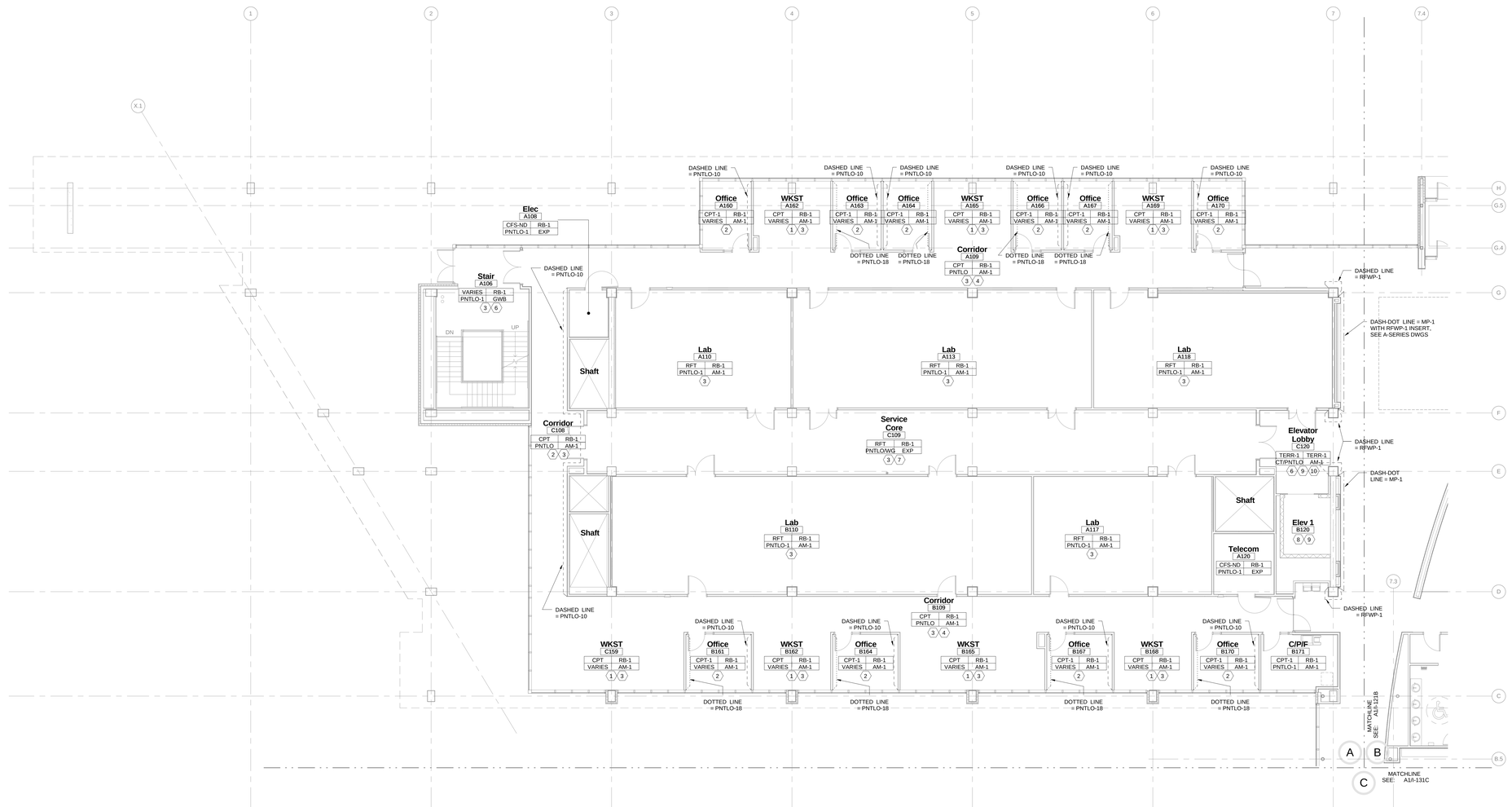
C:\BOT\002182-CENTRAL_alerts.rvt
7/7/2011 5:59:31 PM

KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING



A1 FIRST FLOOR - AREA A FINISH PLAN

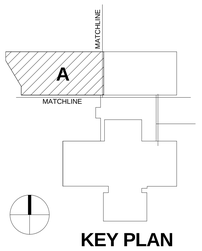
1/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

I-101A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA A - INTERIOR FINISH PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-101A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- I-101A** REV. NO.

C:\DV\002182-CENTRAL_alerts.rvt
7/7/2011 5:59:35 PM

KEYNOTE LEGEND

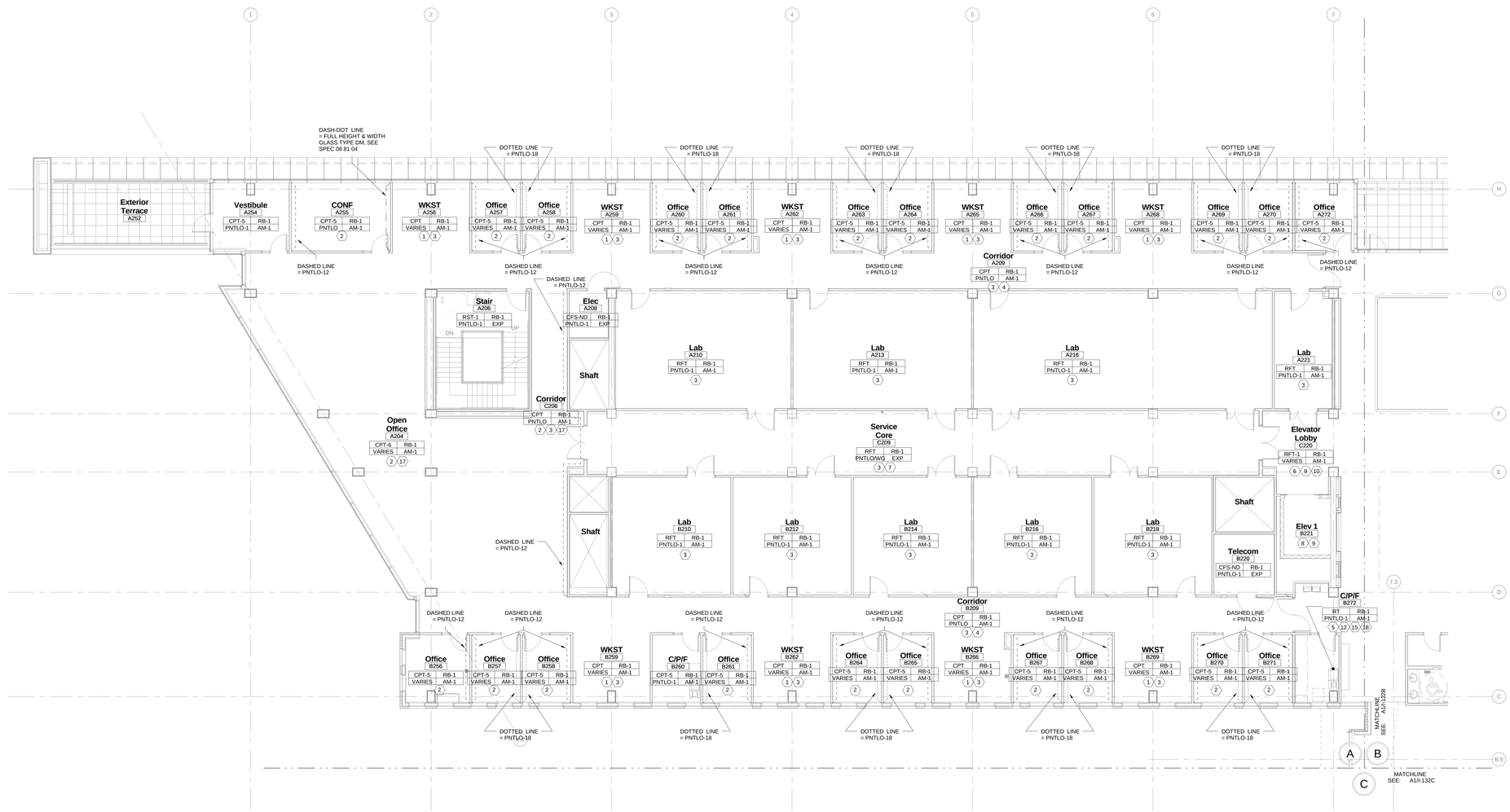
1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

HDR Architecture, Inc.

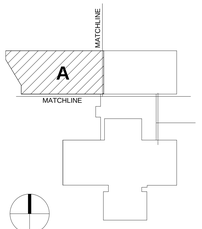
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR - AREA A FINISH PLAN

1/8" = 1'-0"

I-102A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR - AREA A - INTERIOR FINISH PLAN

DESIGNED CURT PINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-102A	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-I-102A REV. NO.

C:\BV2\002182-ICENTRAL_ab\dg.rvt
7/7/2011 5:59:40 PM

KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

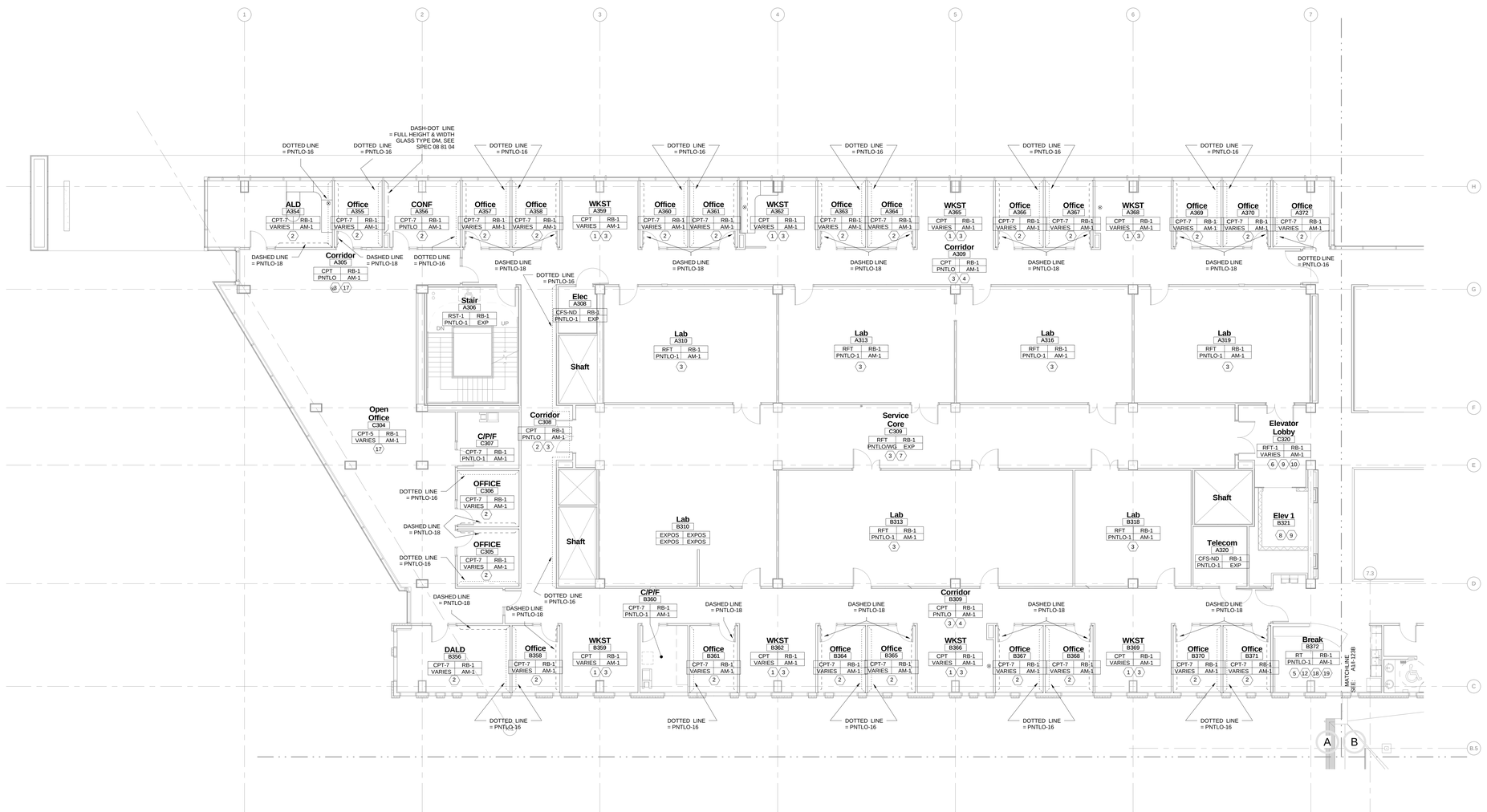
FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

HDR

HDR Architecture, Inc.

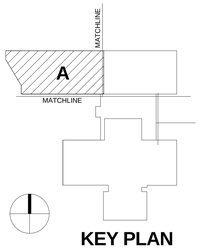
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 THIRD FLOOR - AREA A FINISH PLAN

1/8" = 1'-0"

I-103A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

THIRD FLOOR - AREA A - INTERIOR FINISH PLAN

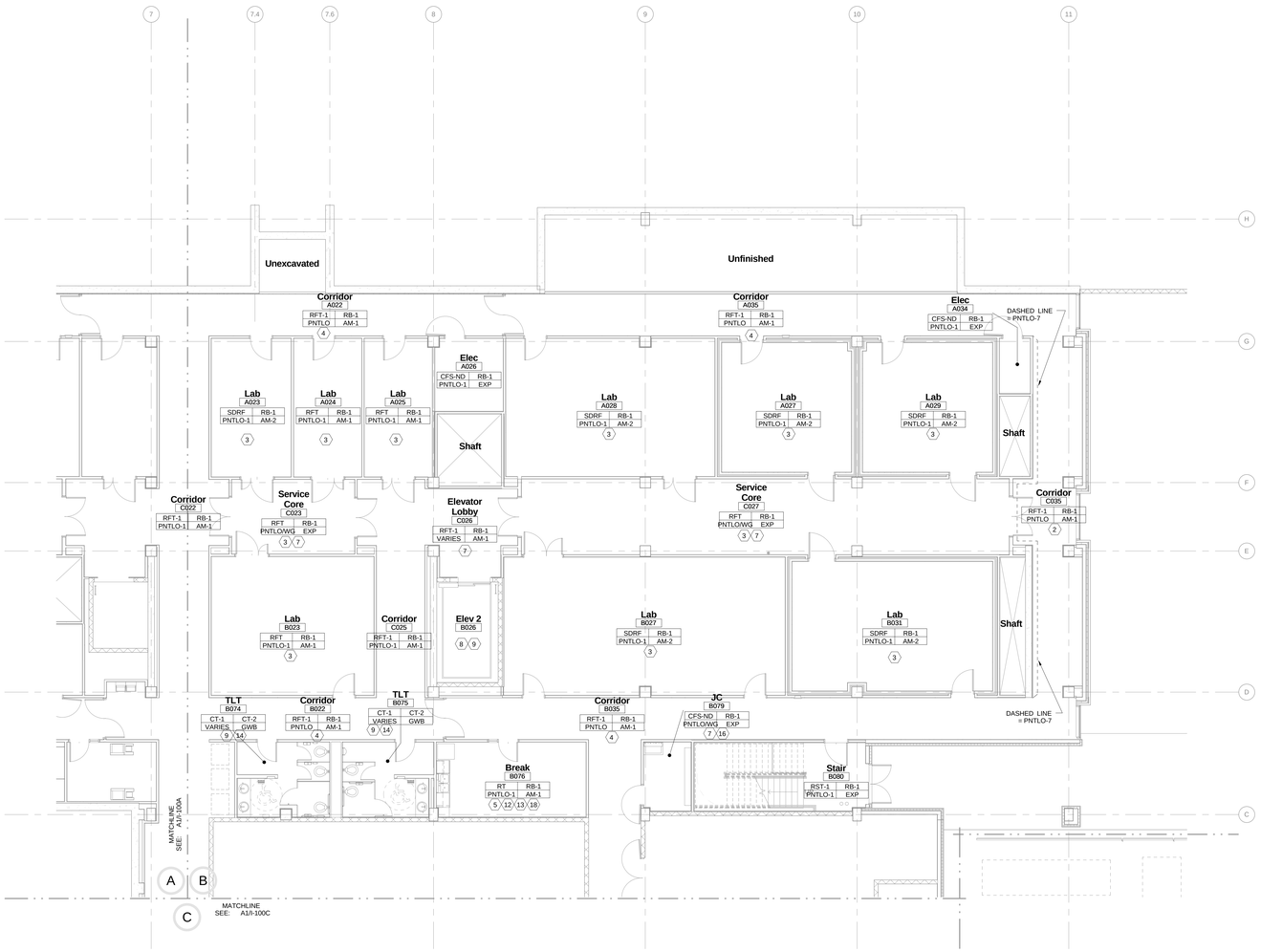
DESIGNED CURT PINRICK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-103A	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-I-103A — REV. NO.

C:\PW70031824\CENTRAL_ab4fjr.rvt
7/7/2011 5:59:45 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 GROUND FLOOR - AREA B FINISH PLAN

1/8" = 1'-0"

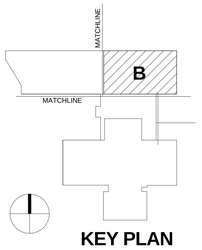
KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

I-120B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

GROUND FLOOR - AREA B - INTERIOR FINISH PLAN

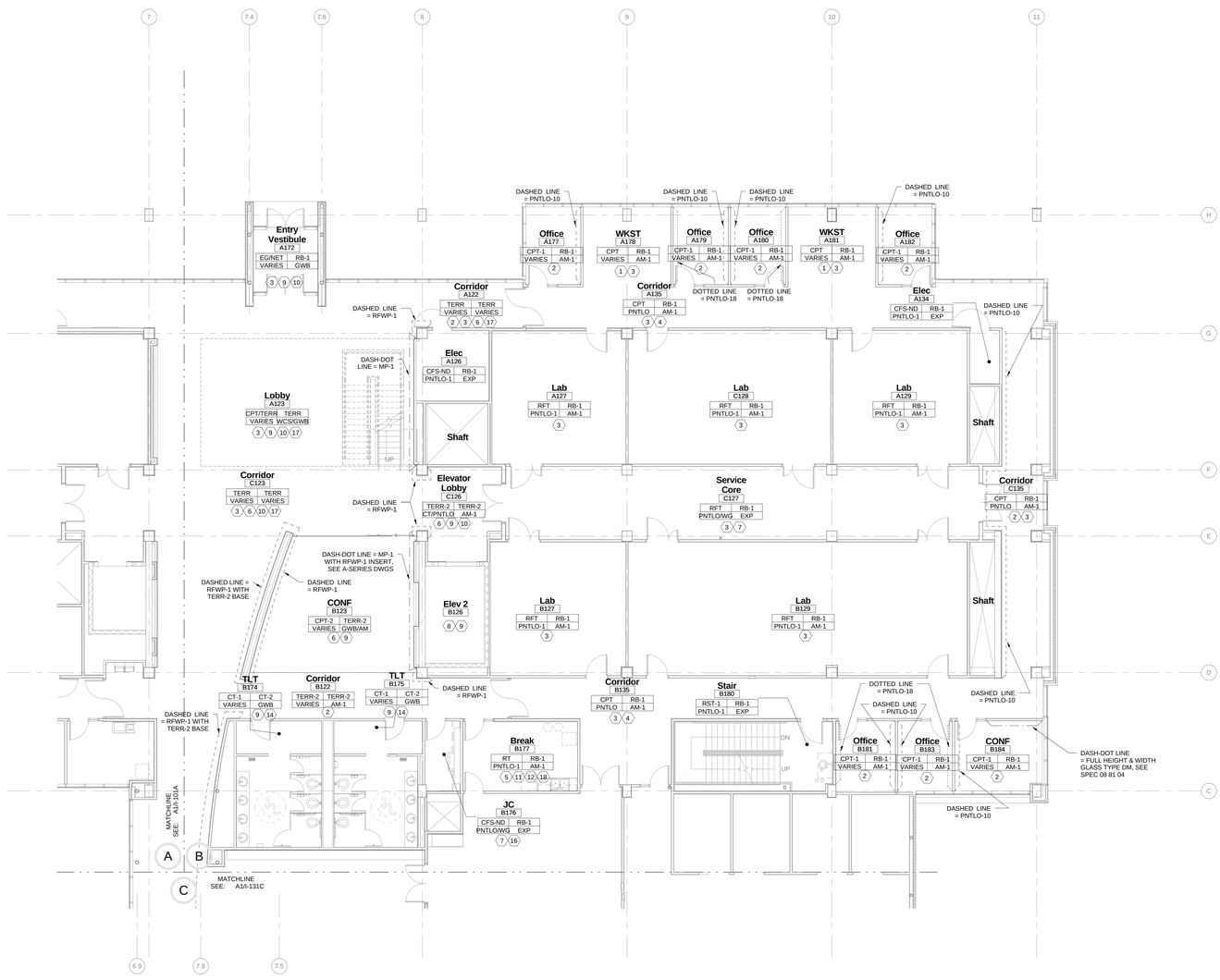
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-120B	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-I-120B

REV. NO.

C:\RVT\002182-\CENTRAL_ab.rdy.rvt
7/7/2011 5:59:49 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR FINISH PLAN
1/8" = 1'-0"

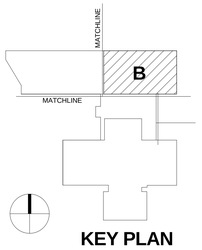
KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

I-121B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
FIRST FLOOR - AREA B - INTERIOR FINISH PLAN

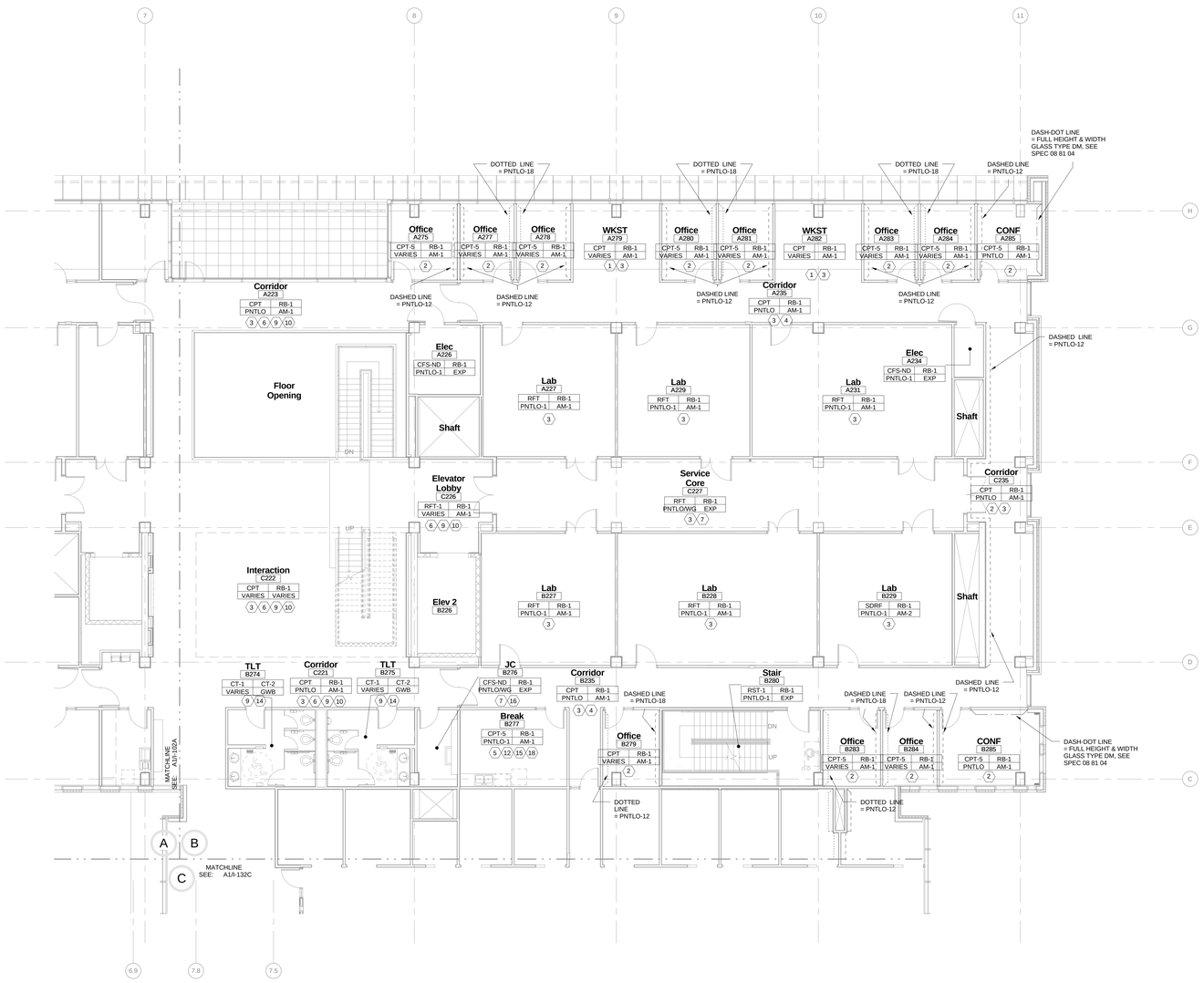
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-121B	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-I-121B
REV. NO.

C:\PV70\0392\<EN\FRAL_ahn9p.rvt
7/7/2011 5:59:54 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR FINISH PLAN

1/8" = 1'-0"

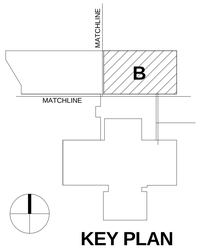
KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

I-122B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR - AREA B - INTERIOR FINISH PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-122B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- I-122B

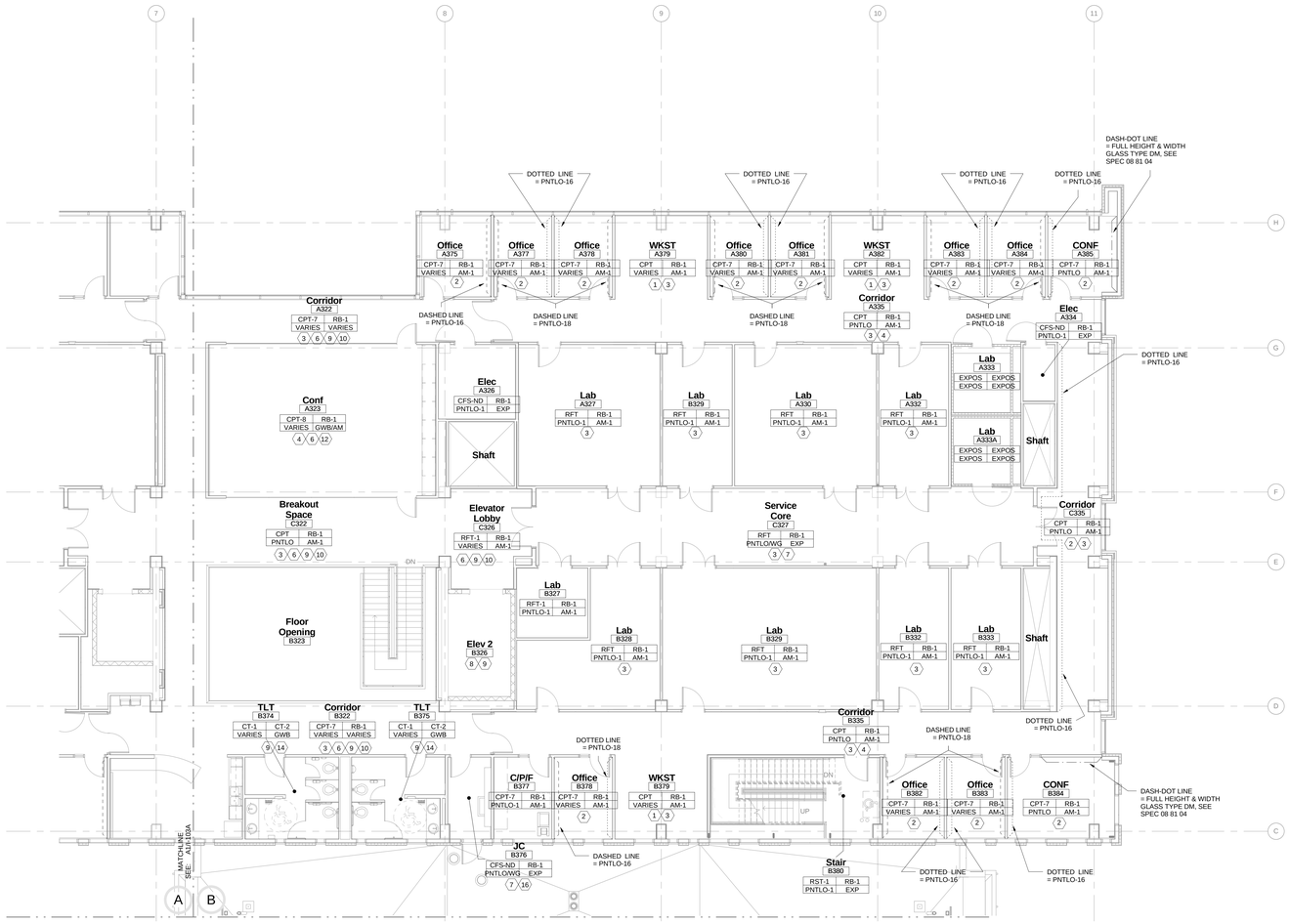
REV. NO.

C:\PV70\02182*\CENTRAL_alim9j.rvt

7/7/2011 5:55:55 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 THIRD FLOOR - AREA B FINISH PLAN

1/8" = 1'-0"

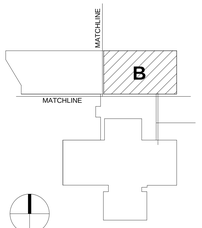
KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS, ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH, SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

I-123B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

THIRD FLOOR - AREA B - INTERIOR FINISH PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-123B	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-I-123B REV. NO.

C:\RVT\003363-ESNTRAL_ab+fp.rvt
7/7/2011 6:00:04 PM

KEYNOTE LEGEND

1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS. ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH. SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

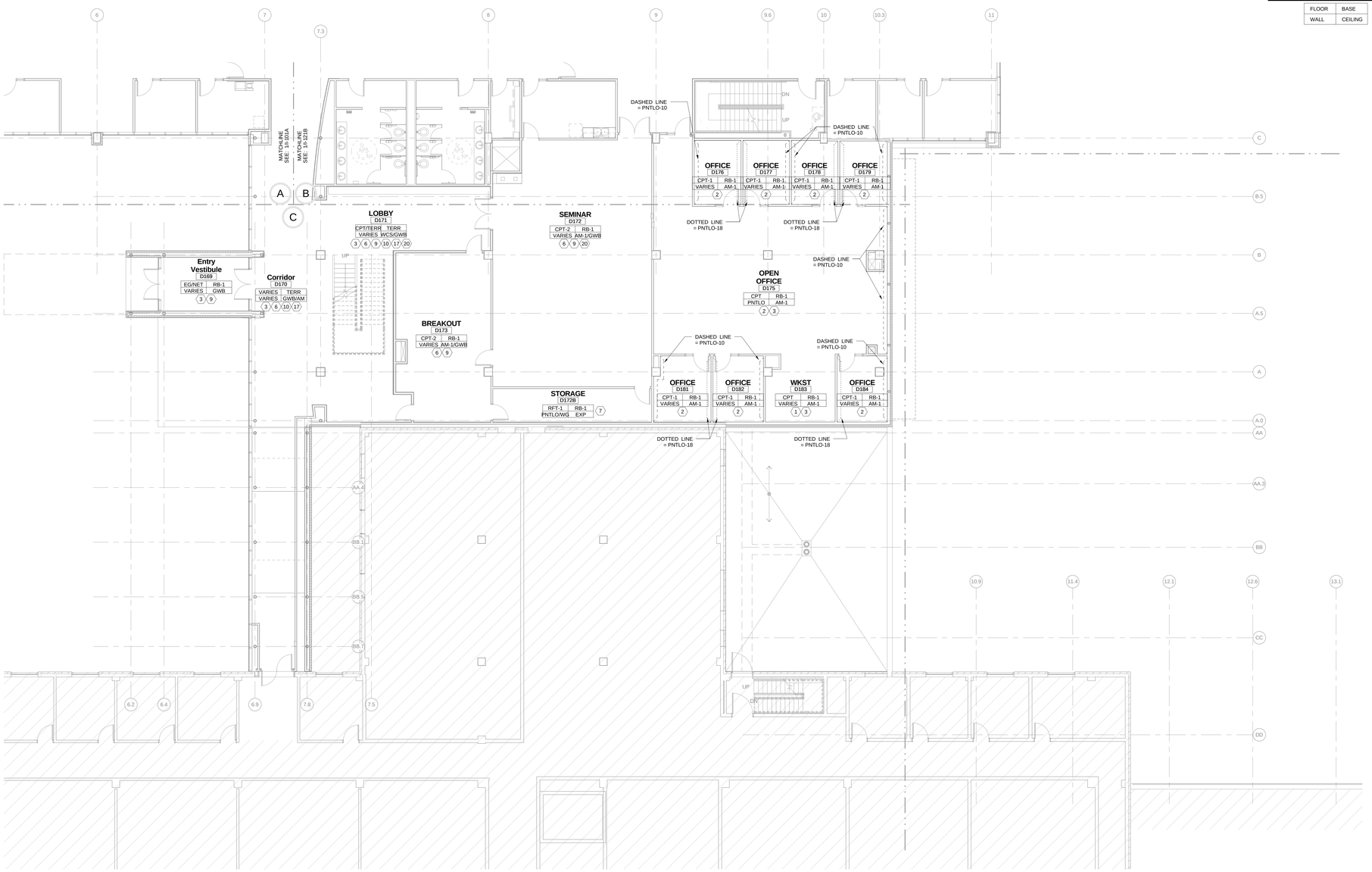
FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

HDR Architecture, Inc.

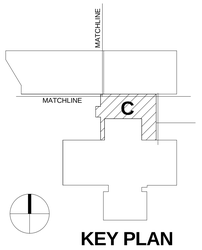
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

I-131C



A1 FIRST FLOOR - AREA C FINISH PLAN

1/8" = 1'-0"



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA C - INTERIOR FINISH PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-131C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-I-131C REV. NO.

C:/BV70/02182-CENTRAL_all-v9.rvt
7/7/2011 6:00:08 PM

KEYNOTE LEGEND

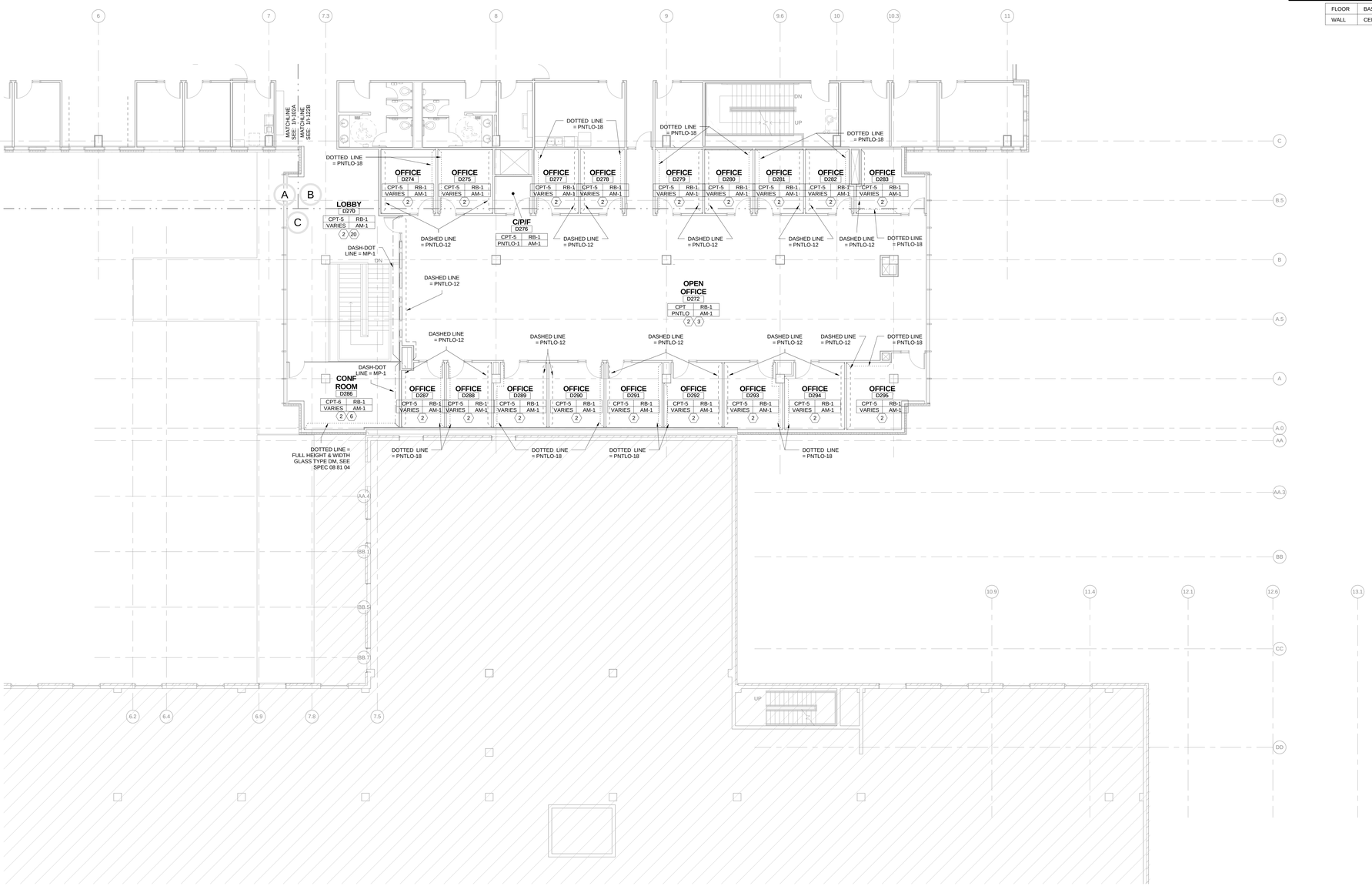
1. ALL WALLS WITHIN WORKSTATION PNTLO-1, SEE I-SERIES FOR CORRIDOR PAINT.
2. ALL WALLS PNTLO-1 EXCEPT AS NOTED ON I-SERIES SHEETS.
3. SEE IW-SERIES SHEETS FOR FLOOR PATTERNING AND MATERIAL CALLOUTS.
4. SEE A-400 SERIES SHEETS FOR PAINT PATTERNING AND MATERIAL CALLOUTS. ALL WALLS NOT LISTED ARE PNTLO-1.
5. SEE A-400 SERIES SHEETS FOR GLASS FEATURE WALL INFO.
6. SEE AC-SERIES SHEETS FOR CEILING TYPES. LAY-IN = AM-1.
7. ALL WALLS PNTLO-1 WITH 48" HIGH WALL GUARD, SEE IW SHEETS.
8. SEE SPEC 09 06 10 FOR ELEVATOR FINISH INFO.
9. SEE A-400 SERIES ELEVATIONS FOR MATERIAL APPLICATION AND INFO.
10. ALL EXPOSED GWB WALLS TO BE PAINTED PNTLO-1, NOT INCLUDING CEILING.
11. RT-DIAMOND INSERT WITH 50% RT-2 & 50% RT-3 CIRCLES. RANDOM INSTALL.
12. RGF-1 COUNTERTOP WITH PL-1 CASEWORK.
13. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-4 CIRCLES. RANDOM INSTALL.
14. RGF-2 COUNTERTOP WITH PL-2 CASEWORK.
15. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-5 CIRCLES. RANDOM INSTALL.
16. PL-1 SHELVES.
17. TERRAZZO BASE COLOR TO MATCH ADJACENT TERRAZZO FLOOR PATTERN COLOR.
18. CT-8 BACKSPLASH. SEE A-400 SERIES.
19. RT-1 DIAMOND INSERT WITH 50% RT-2 & 50% RT-6 CIRCLES. RANDOM INSTALL.
20. RGF-1 COUNTERTOP.

FINISH TAG LEGEND

FLOOR	BASE
WALL	CEILING

HDR Architecture, Inc.

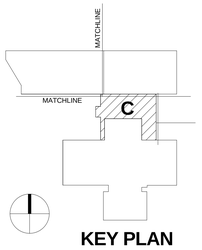
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR - AREA C FINISH PLAN

1/8" = 1'-0"

I-132C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR - AREA C - INTERIOR FINISH PLAN

DESIGNED CURT PINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. I-132C	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

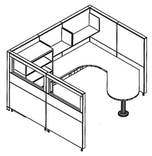
FACILITY DOCUMENT NUMBER: J241-101-I-132C

REV. NO.

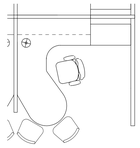
C:\PW70001823-\CENTRAL_ab40j.rvt
7/7/2011 6:00:12 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

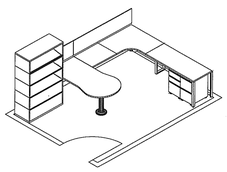


D1 TYPICAL CUBICLE 0-16 ISOMETRIC
O-17 & O-18 SIMILAR

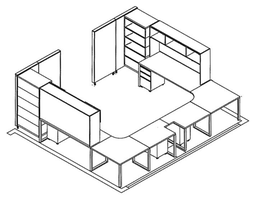


C1 ENLARGED PLAN TYP. CUBICLE 0-16
1/4" = 1'-0"

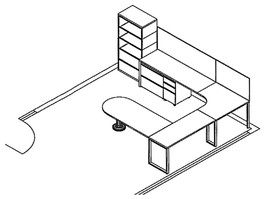
IF-001



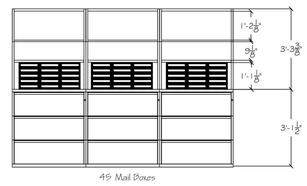
B1 TYPICAL OFFICE 0-1 ISOMETRIC,
0-2, 0-4, 0-5 SIMILAR



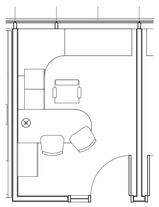
B2 TYPICAL 2 PERSON WKST ISOMETRIC, 0-14
0-6 THRU 0-13 & 0-15 SIMILAR



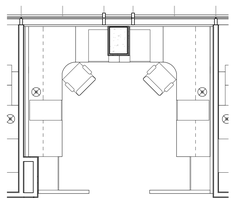
B3 ALD / DALD ISOMETRIC, 0-3



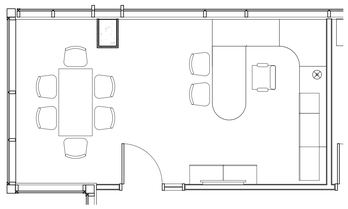
B4 C/P/F ISOMETRIC, 0-19



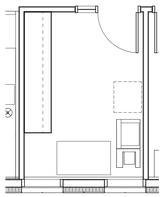
A1 ENLARGED PLAN - TYPICAL OFFICE, 0-1
1/4" = 1'-0"



A2 ENLARGED PLAN - TYPICAL 2 PERSON WKST, 0-14
1/4" = 1'-0"



A3 ENLARGED PLAN - ALD/ TYPICAL DALD SIMILAR, 0-3
1/4" = 1'-0"



A4 ENLARGED PLAN - C/P/F, 0-19
1/4" = 1'-0"

GENERAL NOTES

1. SYSTEMS FURNITURE DRAWINGS ARE BASED ON HERMAN MILLER CANVAS PRODUCT LINES. ALL ITEMS MUST BE PRICED USING THE FEDERAL SUPPLY SCHEDULE.
2. ALL CUBICLES ARE ELECTRIFIED WITH 3 CIRCUIT SEPARATE NEUTRAL SYTEM.
3. ALL PANEL HEIGHTS ARE 68 INCHES HIGH.
4. ARTICULATING KEYBORAD TRAYS ARE NOT INCLUDED.
5. KEY ALL LOCKS WITHIN A SINGLE WORKSTATION/OFFICE/CUBICLE THE SAME. LOCK SETS WILL BE ASSIGNED AT RANDOM. ALL WORKSTATIONS, OFFICES AND CUBICLES WILL BE KEYED TO A MASTER. MASTER KEY SHALL BE PROVIDED TO OWNER.
6. FURNITURE DEALER TO FIELD VERIFY ALL CRITICAL DIMENSIONS OF AREAS WHERE FURNITURE IS TO BE INSTALLED.
7. GROMMET LOCATIONS TBV BY ANL.
8. PROVIDE ONE GREEN POWER STRIP & ASSOCIATED PASSIVE INFRARED OCCUPANCY SENSOR PER WORKSTATION, OFFICE & CUBICLE FOR TASK LIGHTING & OTHER NON-ESSENTIAL LOADS THAT CAN BE SWITCHED. POWER STRIP TO INCLUDE 8 OUTLETS WITH SURGE PROTECTION. DEVICE TO HAVE ON/OFF SWITCH. SENSOR TO BE POSITIONED UNDER WORK SURFACE, TO HAVE SWIVEL BASE AND ADJUSTABLE TIME DELAY FROM 1 TO 30 MINUTES, 7-8" CORD. UL LISTED & CSA CERTIFIED.
9. REFER TO EP SERIES SHEETS FOR ELECTRICAL INFORMATION.
10. CONTACT HDR, KRYSIA LYNCH 773.380.7954 IF THERE ARE QUESTIONS REGARDING THE SPECIFICATIONS.

FURNITURE KEY:
O-O FURNITURE KEY CODE

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
TYPICAL ENLARGED FURNITURE PLANS & ISOMETRICS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-001	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

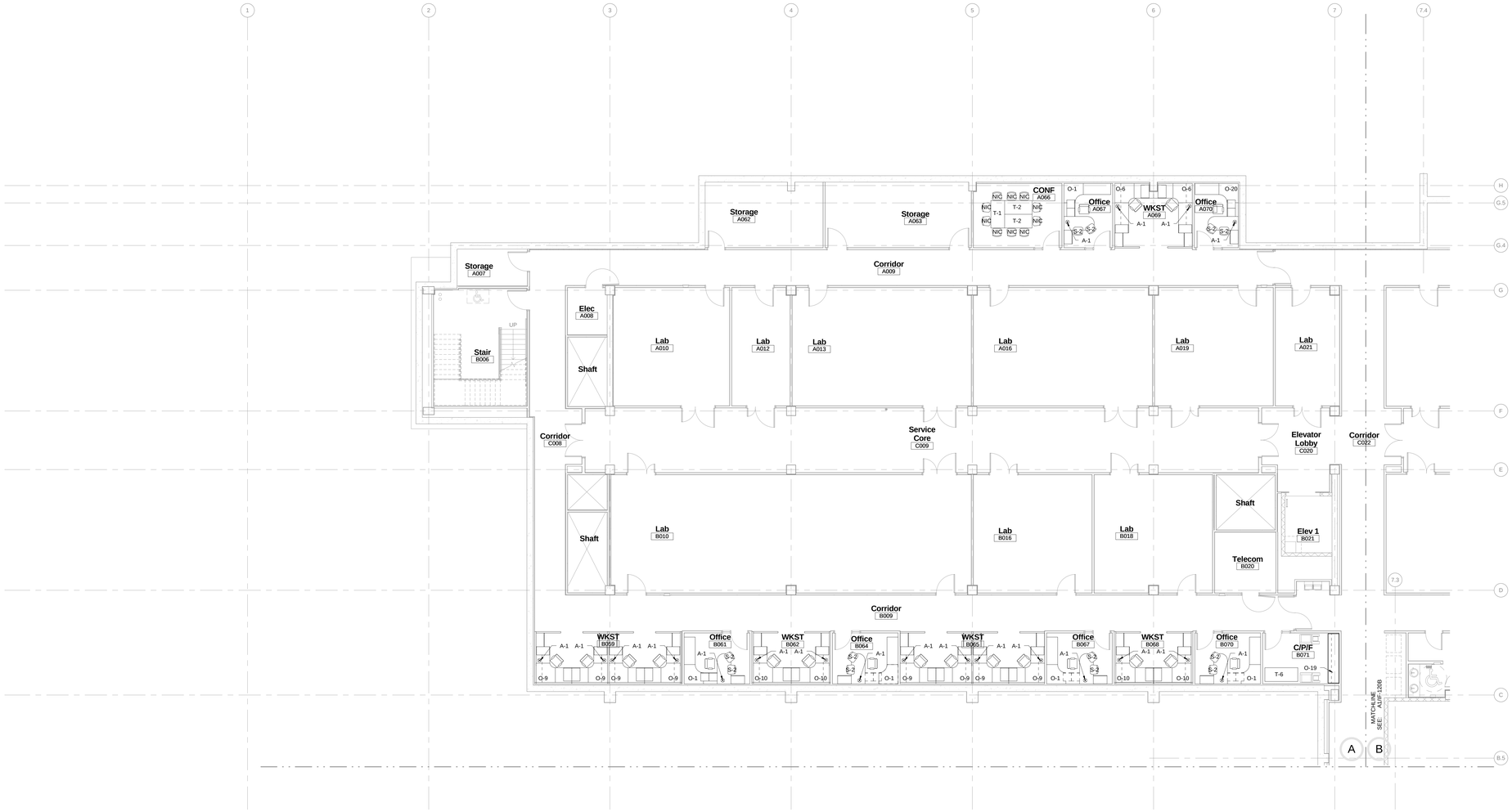
FACILITY DOCUMENT NUMBER: J241-101- IF-001
REV. NO.

C:\BV70\02182-CENTRAL_alex\b.rvt
7/7/2011 6:00:23 PM

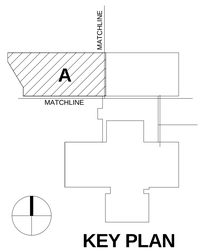
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IF-100A



A1 GROUND FLOOR - AREA A FURNITURE PLAN
1/8" = 1'-0"



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
GROUND FLOOR - AREA A - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-100A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

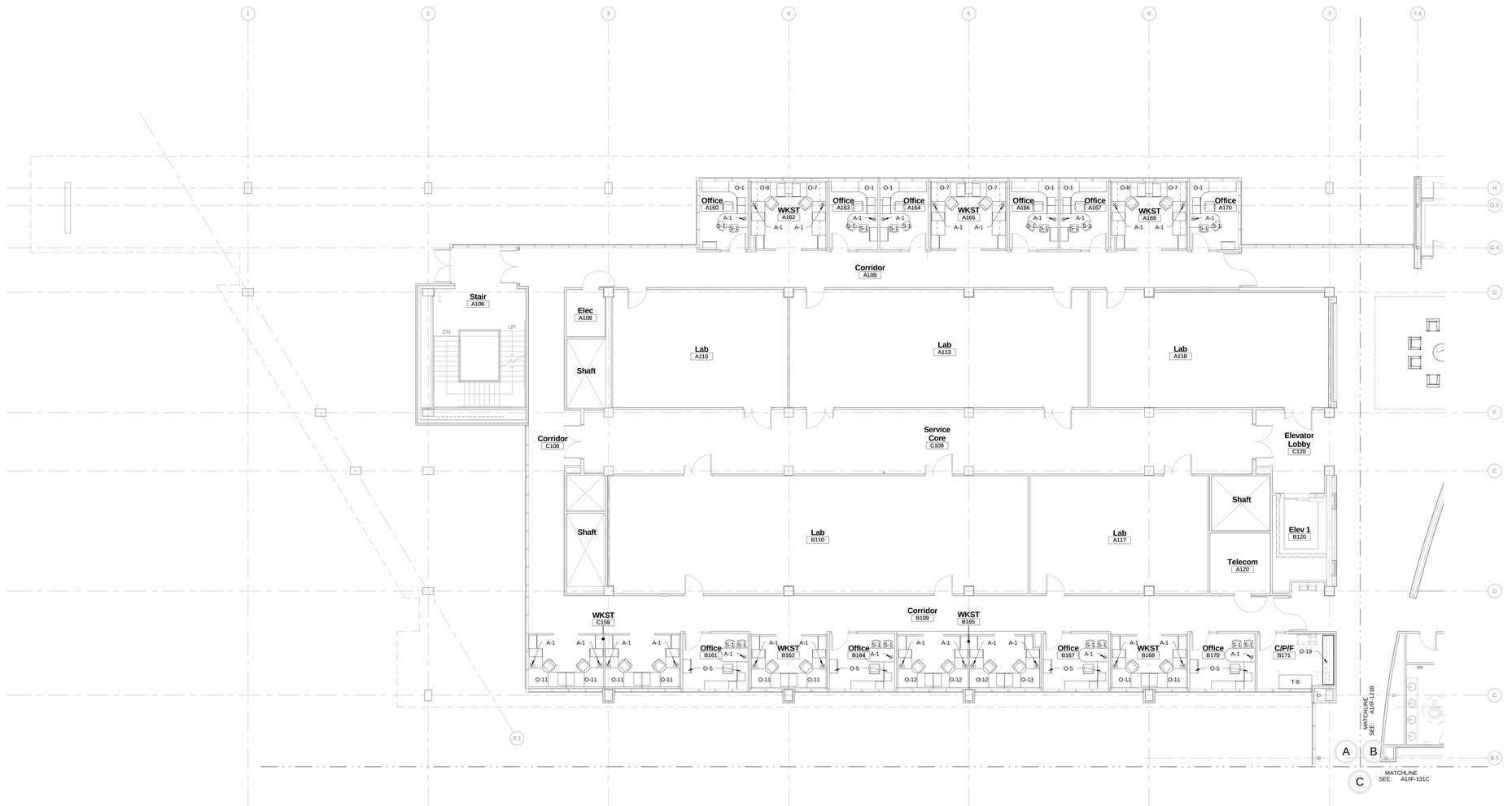
FACILITY DOCUMENT NUMBER: J241-101- IF-100A
REV. NO.

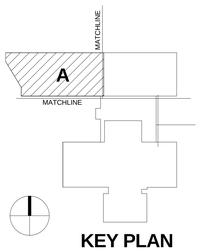
C:\BV70\02182-ESNTRAL_abrdy.rvt
7/7/2011 6:00:28 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IF-101A





KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA A - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-101A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER **J241-101- IF-101A** REV. NO.

A1 FIRST FLOOR - AREA A FURNITURE PLAN

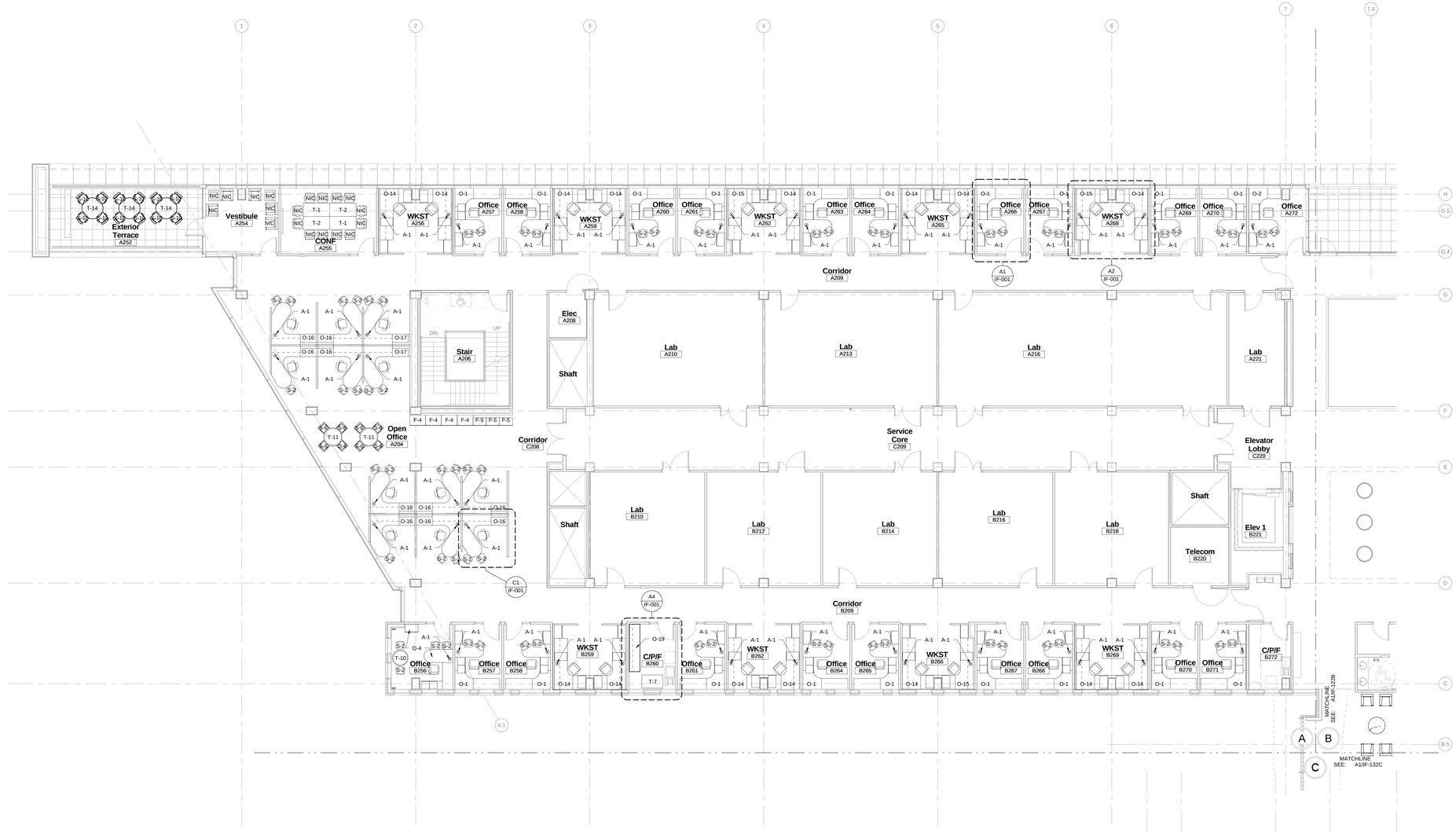
1/8" = 1'-0"

C:\DV\002182-CENTRAL_alex\p.rvt
7/7/2011 6:00:13 PM

HDR

HDR Architecture, Inc.

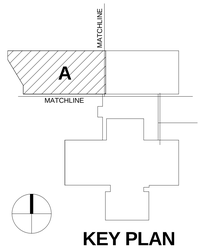
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR - AREA A FURNITURE PLAN

1/8" = 1'-0"

IF-102A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR - AREA A - FURNITURE PLAN

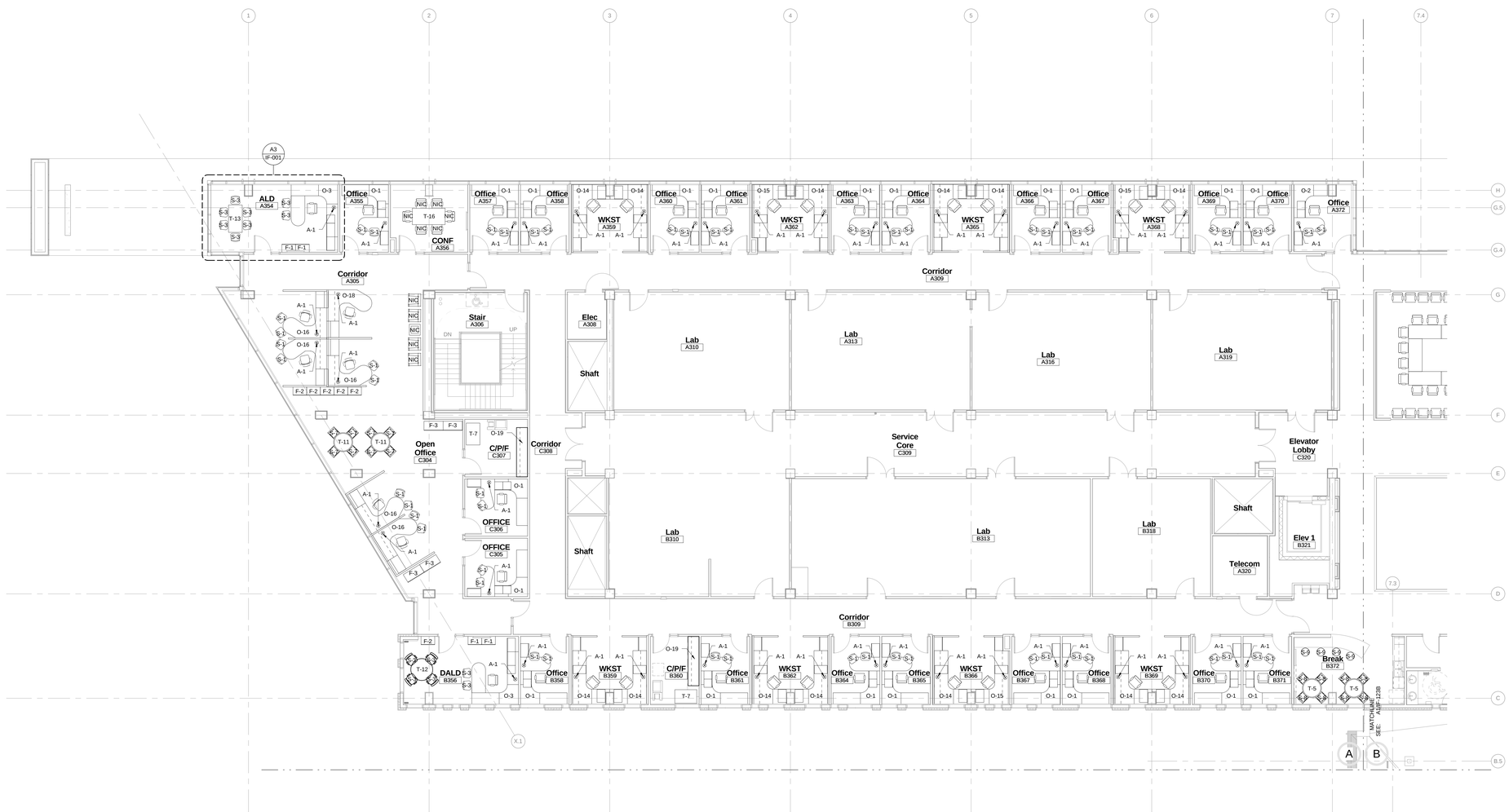
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-102A	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- IF-102A REV. NO.

C:\PV7\0201\0201-FENTRAL_ipm\fp.rvt
7/7/2011 1:03:39 PM

HDR Architecture, Inc.

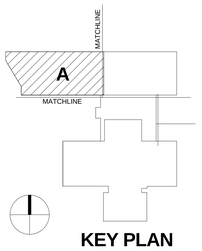
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 THIRD FLOOR - AREA A FURNITURE PLAN

1/8" = 1'-0"

IF-103A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

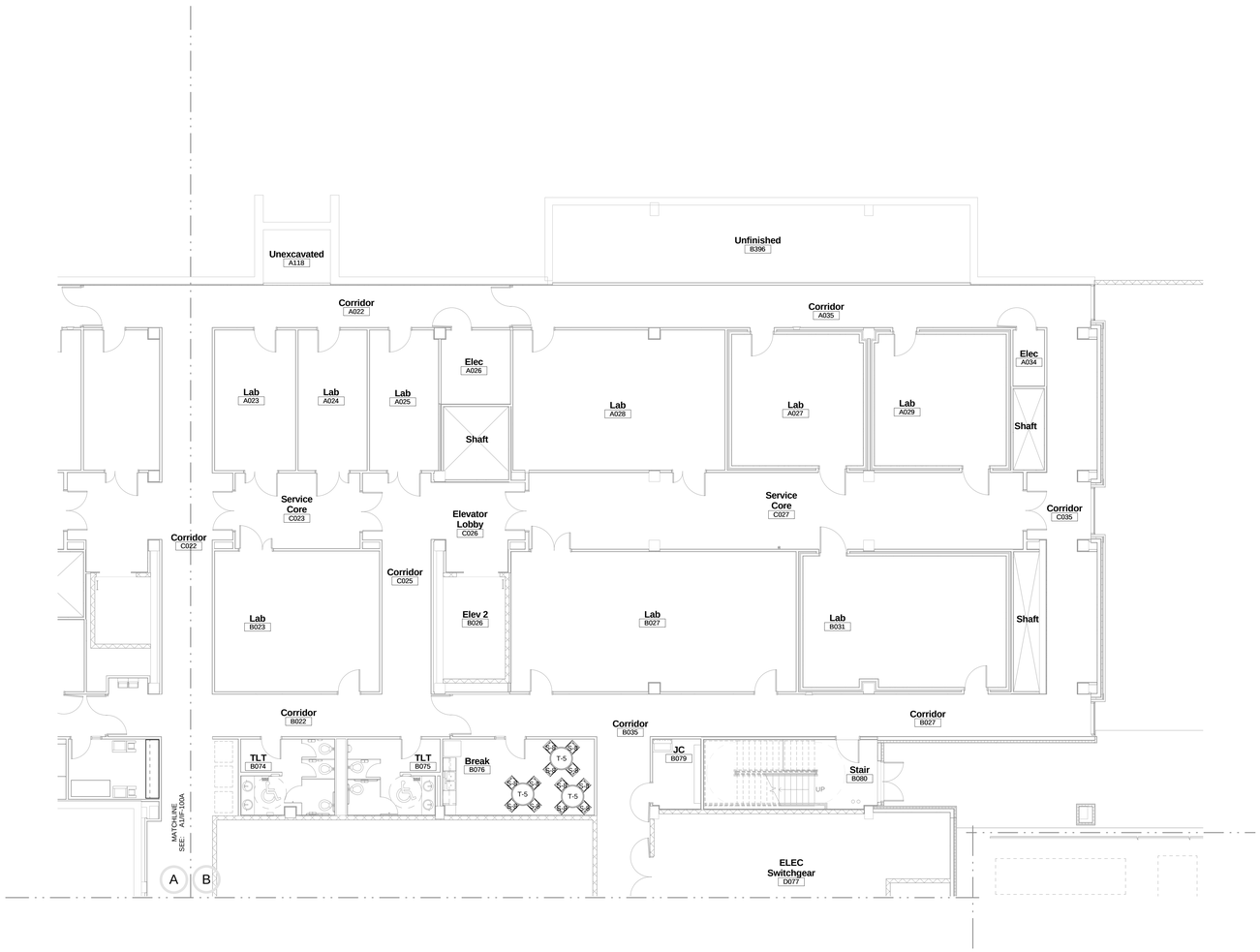
THIRD FLOOR - AREA A - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-103A	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-IF-103A REV. NO.

C:\RVT\002182-HZENTRAL_alindy.rvt
7/7/2011 6:00:45 PM

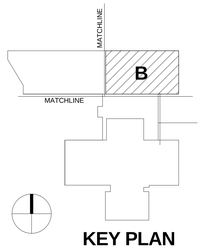
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 GROUND FLOOR - AREA B FURNITURE PLAN
1/8" = 1'-0"

C:\RVT\002182-CENTRAL_alerdy.rvt
7/7/2011 6:00:49 PM

IF-120B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

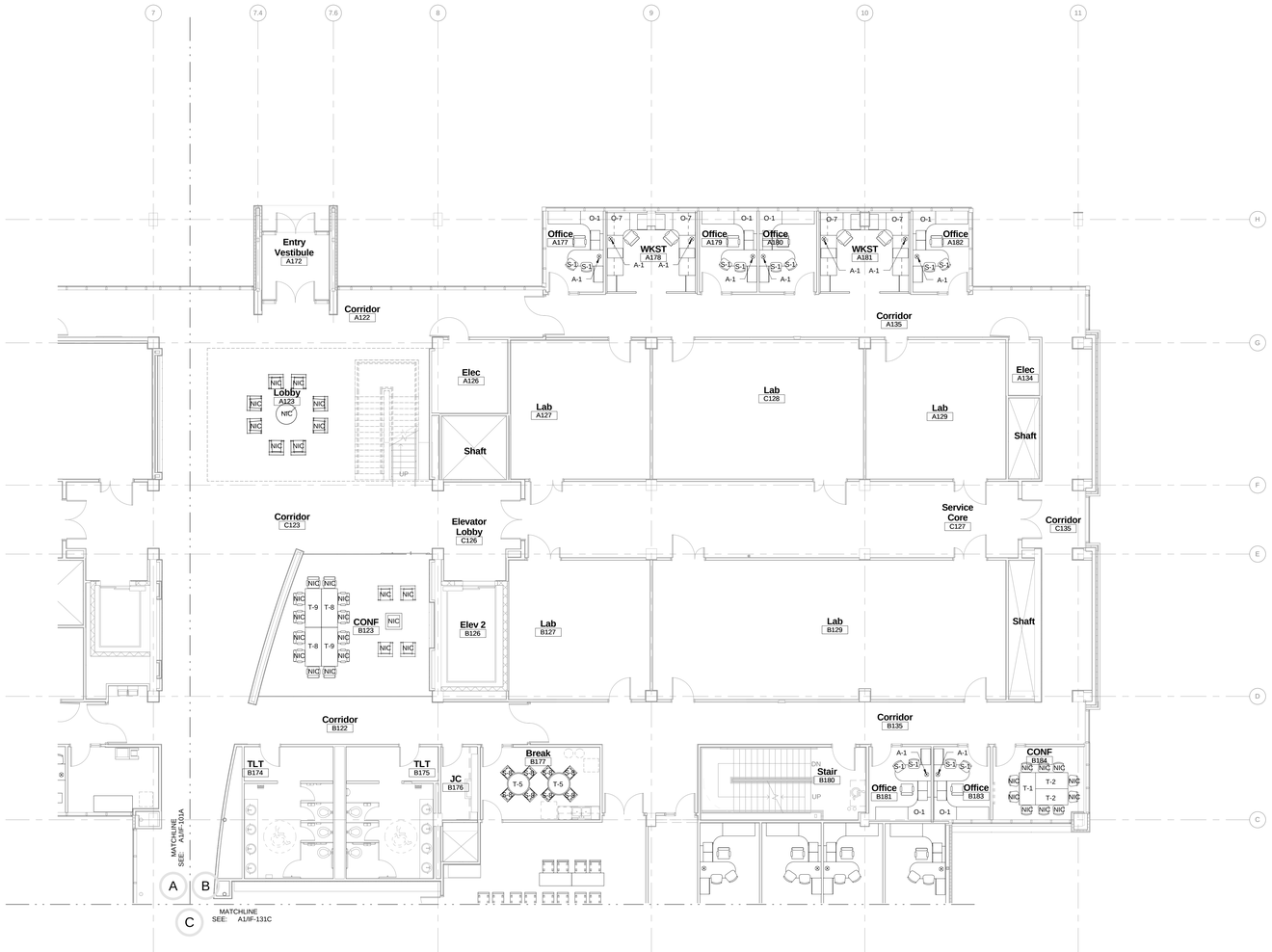
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
GROUND FLOOR - AREA B - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-120B	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- IF-120B
REV. NO.

HDR Architecture, Inc.

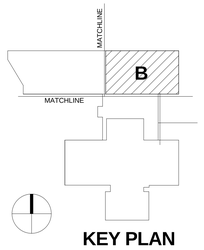
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR - AREA B FURNITURE PLAN

1/8" = 1'-0"

IF-121B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA B - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-121B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

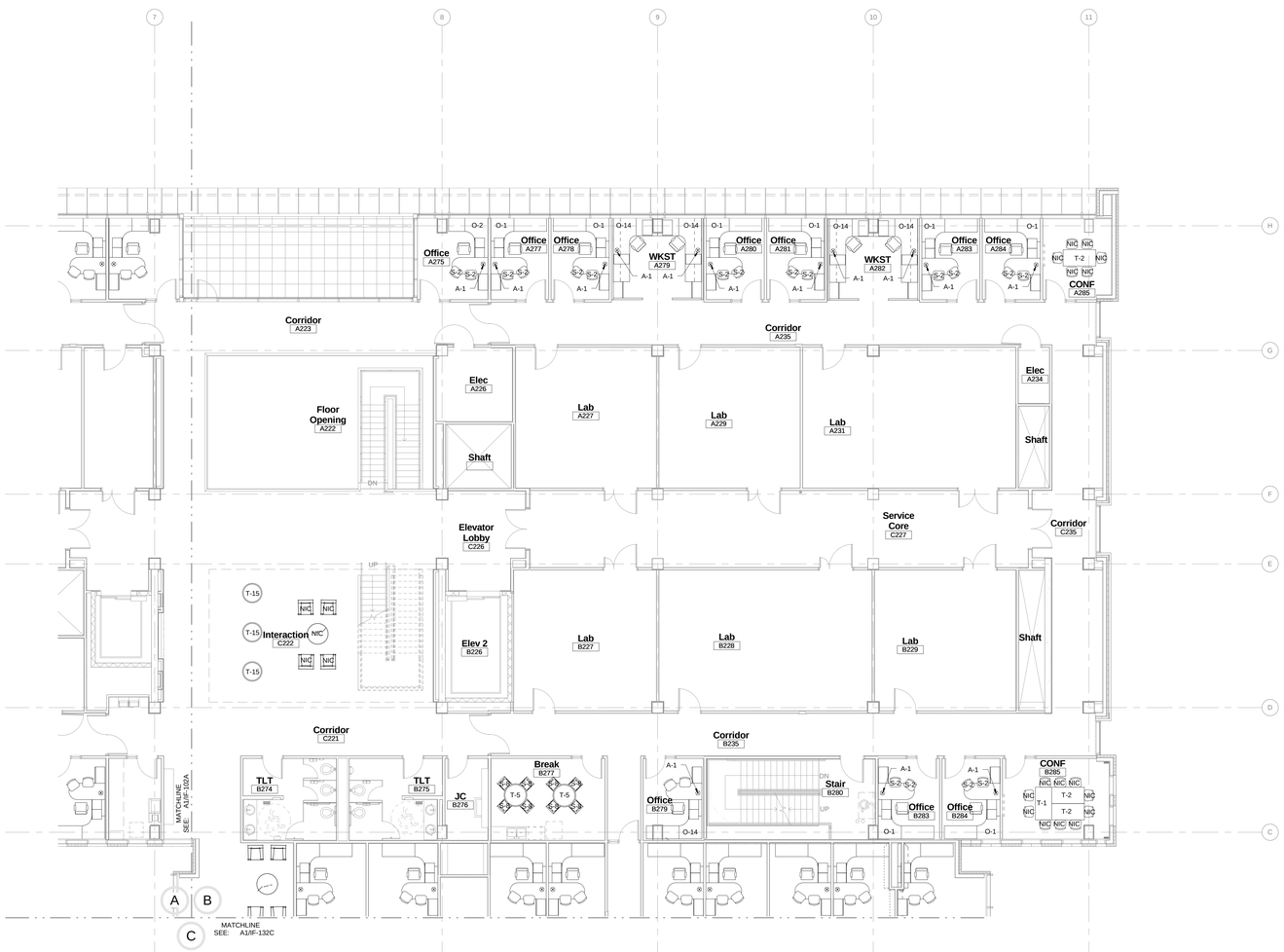
FACILITY DOCUMENT NUMBER J241-101- IF-121B — REV. NO.

C:\PV70\02182\+CENTRAL_alln9j.rvt

7/7/2011 6:00:55 PM

HDR Architecture, Inc.

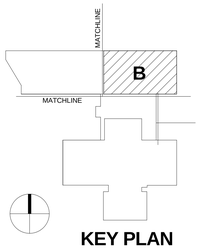
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR - AREA B FURNITURE PLAN

1/8" = 1'-0"

IF-122B



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

SECOND FLOOR - AREA B - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-122B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

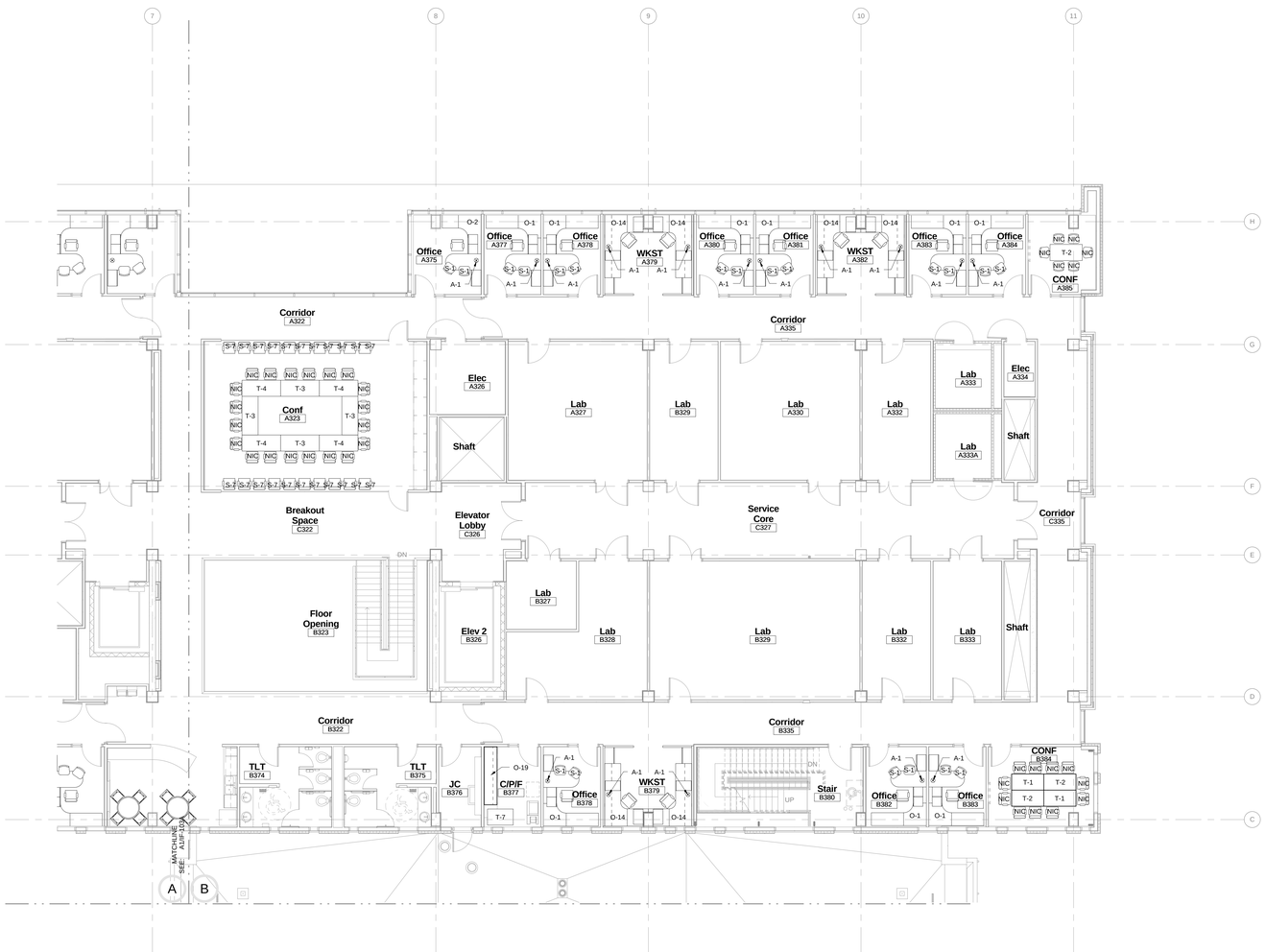
FACILITY DOCUMENT NUMBER J241-101- IF-122B REV. NO.

C:\Pw\7002183-CENTRAL_ave\ly.rvt
7/7/2011 6:01:00 PM

HDR Architecture, Inc.

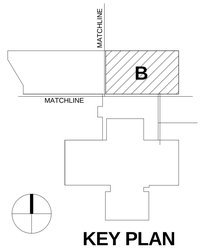
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IF-123B



A1 THIRD FLOOR - AREA B FURNITURE PLAN

1/8" = 1'-0"



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

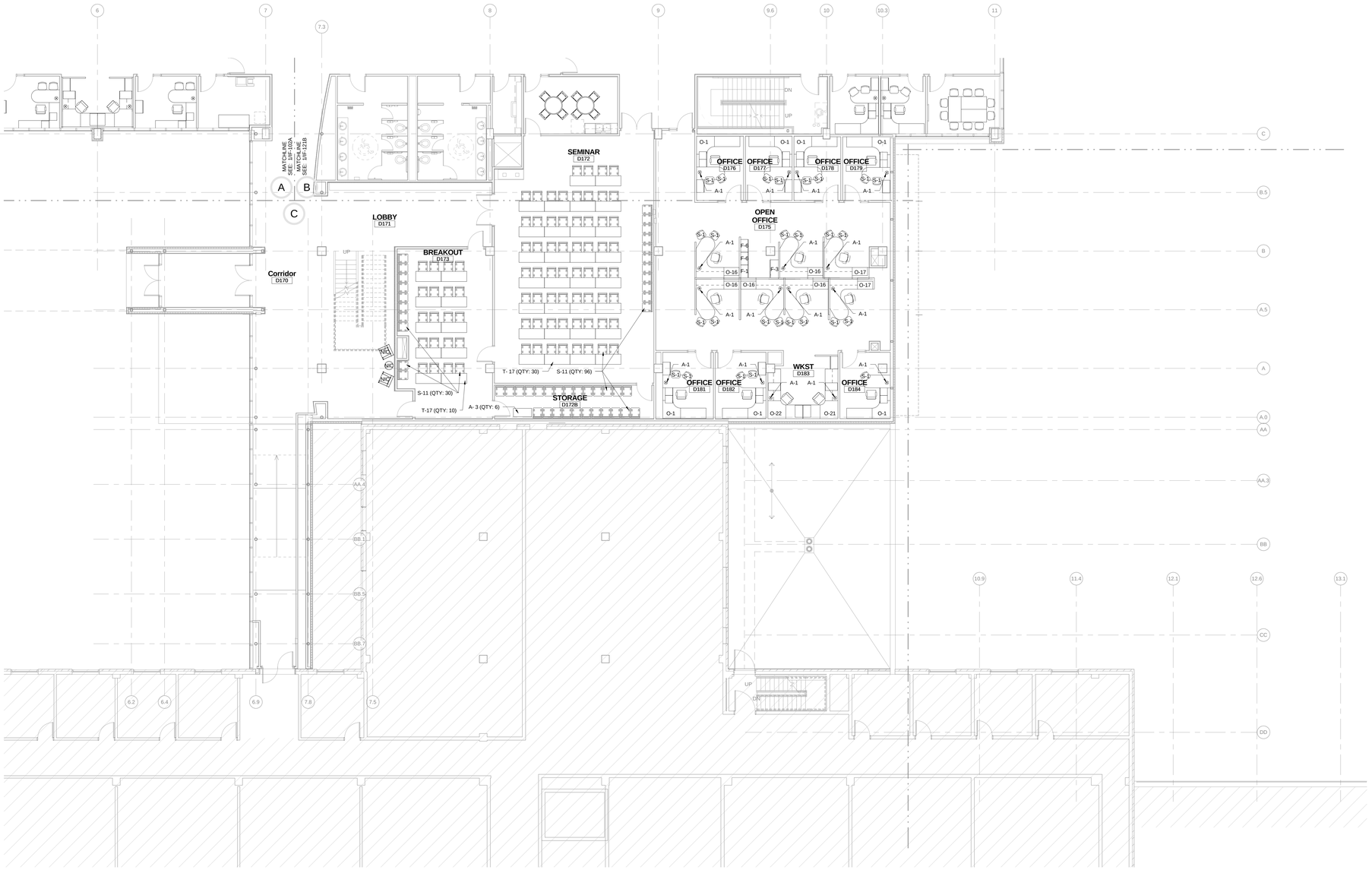
THIRD FLOOR - AREA B - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-123B	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- IF-123B REV. NO.

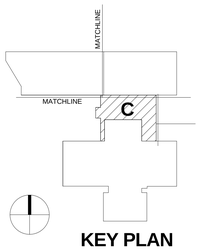
C:\BK7\002182-CENTRAL_ab\fp.rvt
7/7/2011 6:01:05 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR - AREA C FURNITURE PLAN
1/8" = 1'-0"

IF-131C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

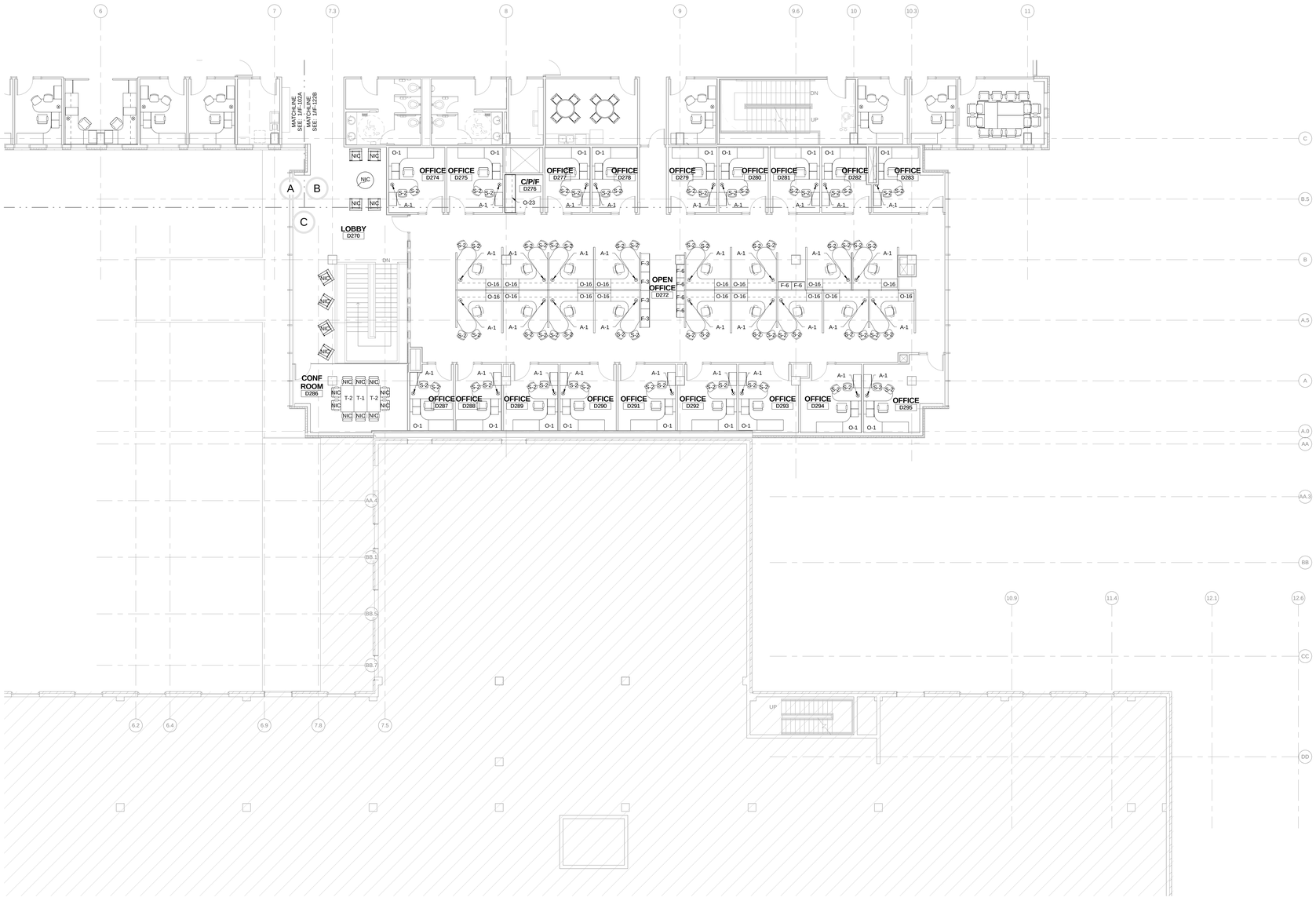
DOCUMENT TITLE
FIRST FLOOR - AREA C - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-131C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- IF-131C
REV. NO.

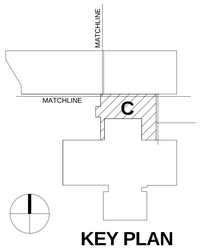
C:\R7\W2182\J-CENTRAL_alwdy.rvt
7/7/2011 6:01:11 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR - AREA C FURNITURE PLAN
1/8" = 1'-0"

IF-132C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
SECOND FLOOR - AREA C - FURNITURE PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IF-132C	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-IF-132C REV. NO.

C:\PW70031824\CENTRAL_ab49j.rvt
7/7/2011 6:01:16 PM

FLOOR FINISH LEGEND
GROUND FLOOR

- CPT-3
- CPT-4
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

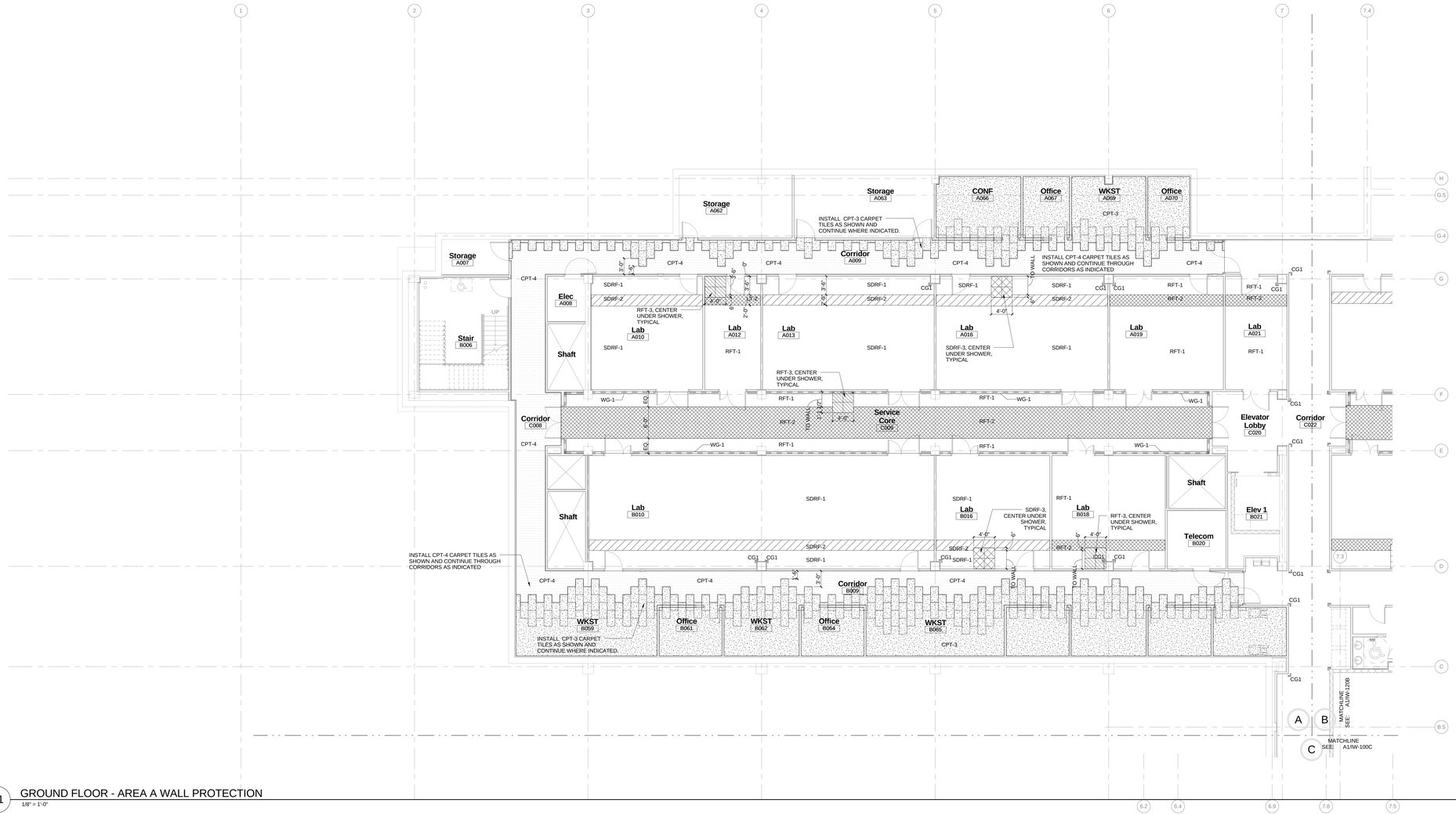
SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

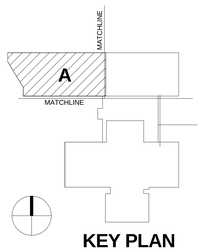
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IW-100A



A1 GROUND FLOOR - AREA A WALL PROTECTION
1/8" = 1'-0"



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
GROUND FLOOR - AREA A - WALL PROTECTION & FLOOR PATTERN PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-100A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER — REV. NO.
J241-101- IW-100A

C:/BV70/02182-1-CENTRAL_alindly.rvt
7/7/2011 6:01:15 PM

FLOOR FINISH LEGEND
GROUND FLOOR

- CPT-3
- CPT-4
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

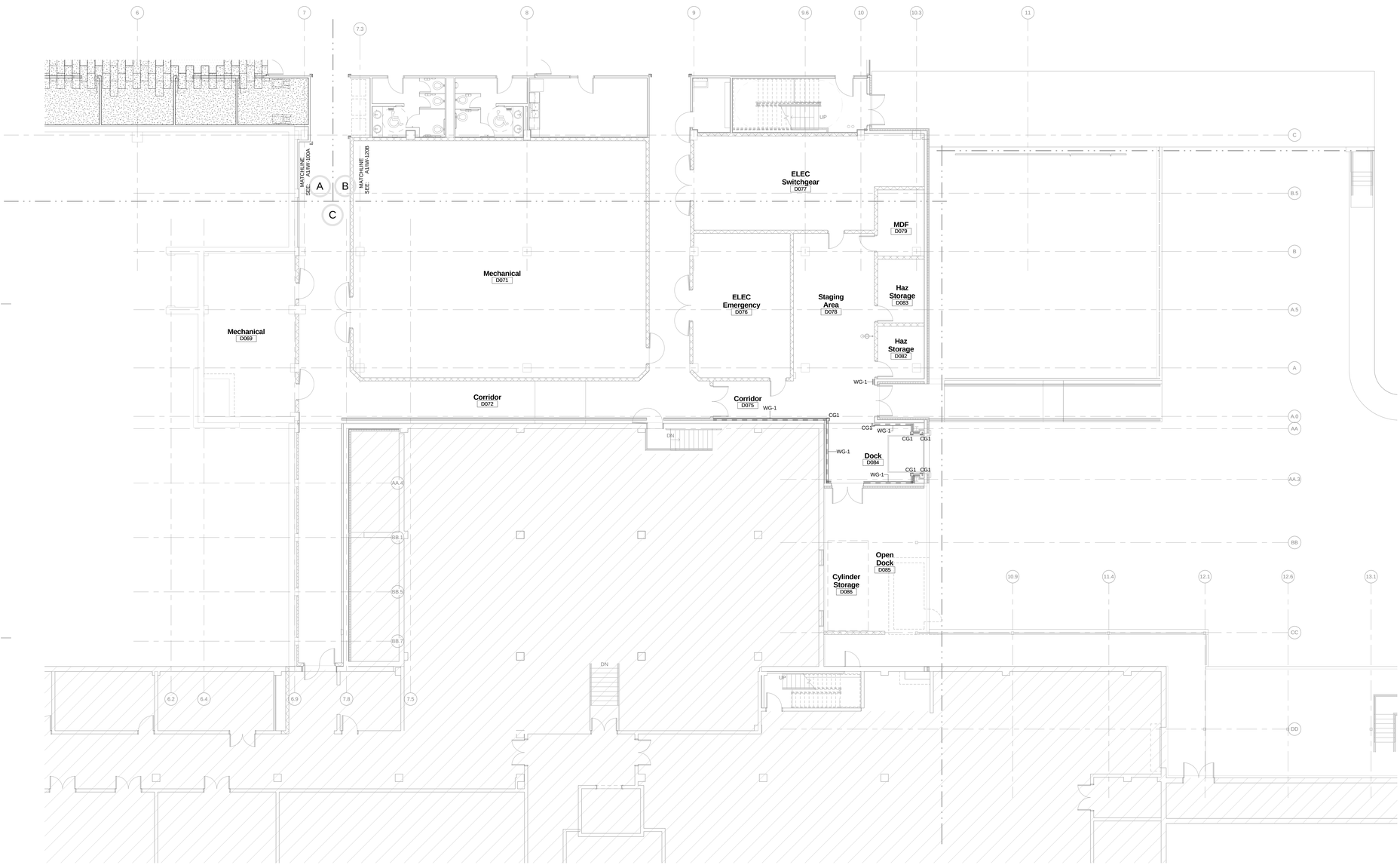
SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

HDR

HDR Architecture, Inc.

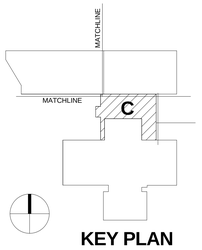
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 GROUND FLOOR - AREA C WALL PROTECTION

1/8" = 1'-0"

IW-100C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

GROUND FLOOR - AREA C - WALL PROTECTION & FLOOR PATTERN PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-100C	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER — REV. NO.

J241-101- IW-100C

C:\SRV700\02182-\CENTRAL_all-fdg.rvt
7/7/2011 6:01:29 PM

FLOOR FINISH LEGEND
FIRST FLOOR

- CPT-1
- CPT-2
- RFT-2
- RFT-3
- NET-1
- TERR-2

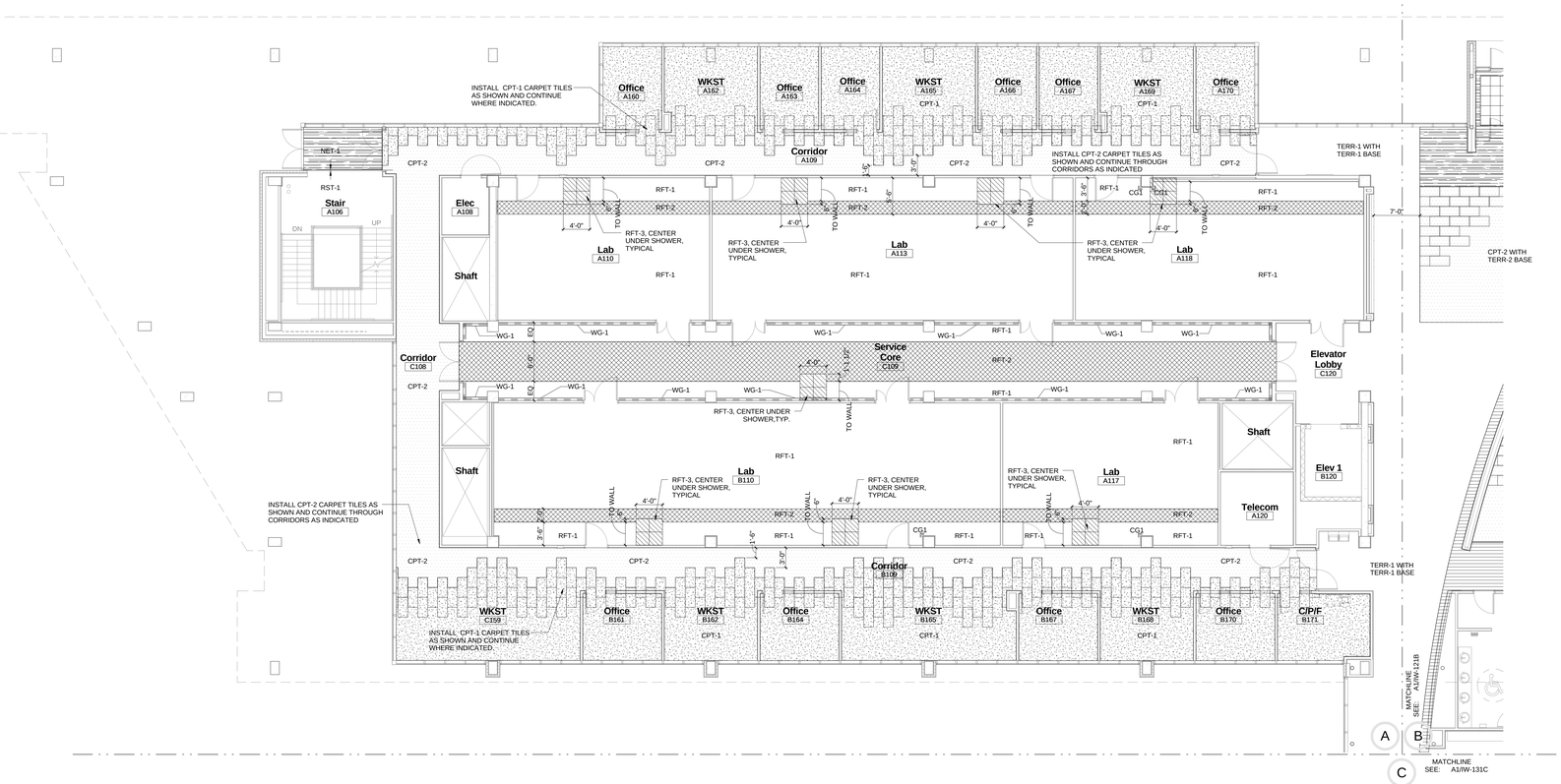
SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

HDR

HDR Architecture, Inc.

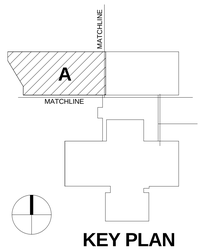
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR - AREA A WALL PROTECTION

1/8" = 1'-0"

IW-101A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA A - WALL PROTECTION & FLOOR PATTERN PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-101A	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER — REV. NO.

J241-101- IW-101A

C:\INTA\002182-CENTRAL_alerts.rvt
7/7/2011 6:01:35 PM

FLOOR FINISH LEGEND
SECOND FLOOR

- CPT-5
- CPT-6
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

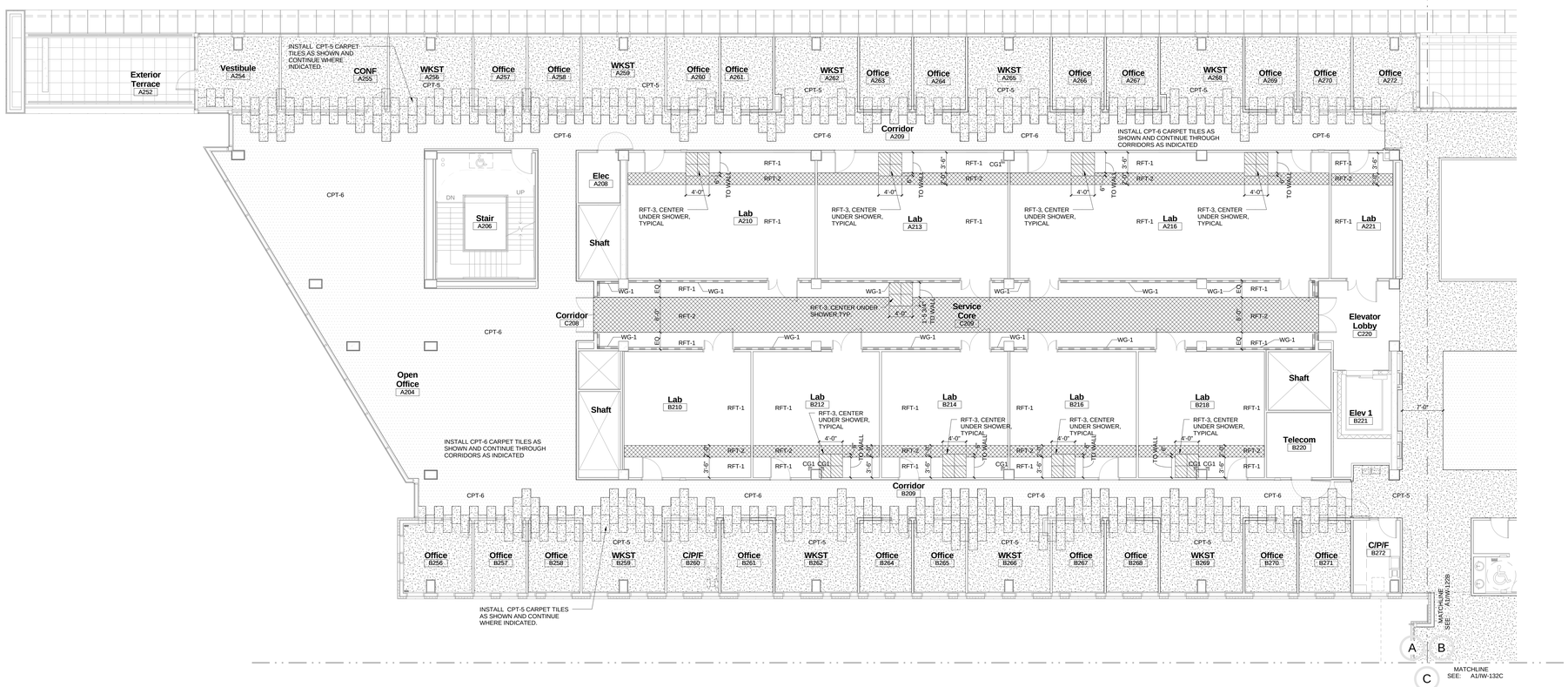
SYMBOL LEGEND

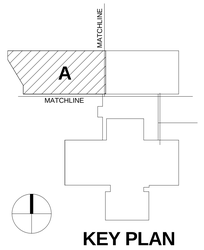
CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IW-102A





KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SECOND FLOOR - AREA A - WALL PROTECTION & FLOOR PATTERN PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S)
DRAWN NA	A/E DWG. NO. IW-102A	241
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-IW-102A
REV. NO.

A1 SECOND FLOOR - AREA A WALL PROTECTION
1/8" = 1'-0"

C:\PV70\0192\<CENTRAL_db>\fp.rvt
7/7/2011 6:01:47 PM

FLOOR FINISH LEGEND
THIRD FLOOR

- CPT-7
- CPT-8
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

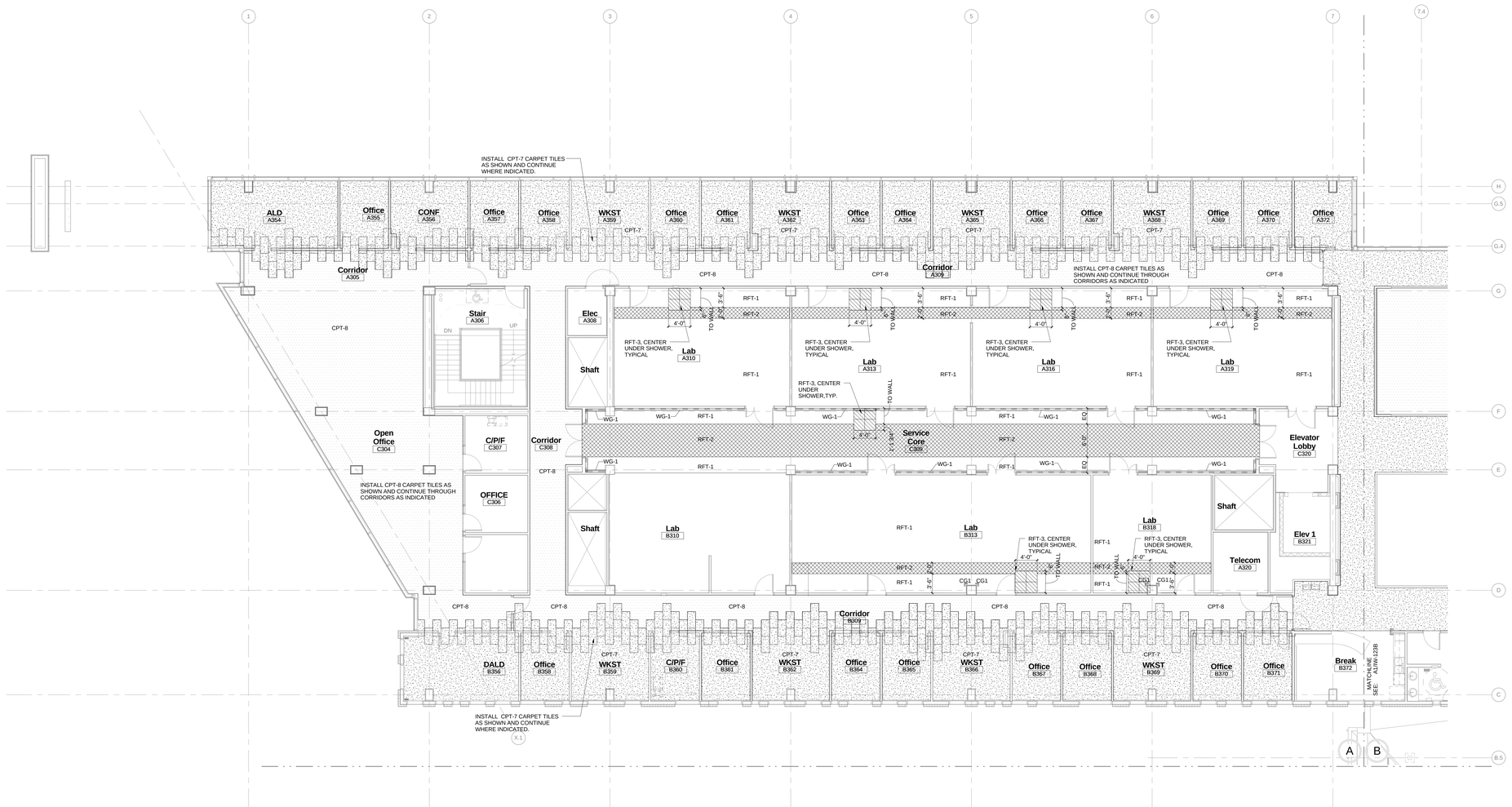
SYMBOL LEGEND

- CG-1 — CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
- CG-2 — CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
- WG-1 — WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

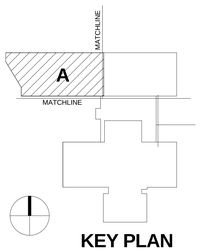
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



IW-103A



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR - AREA A - WALL PROTECTION & FLOOR PATTERN PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-103A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

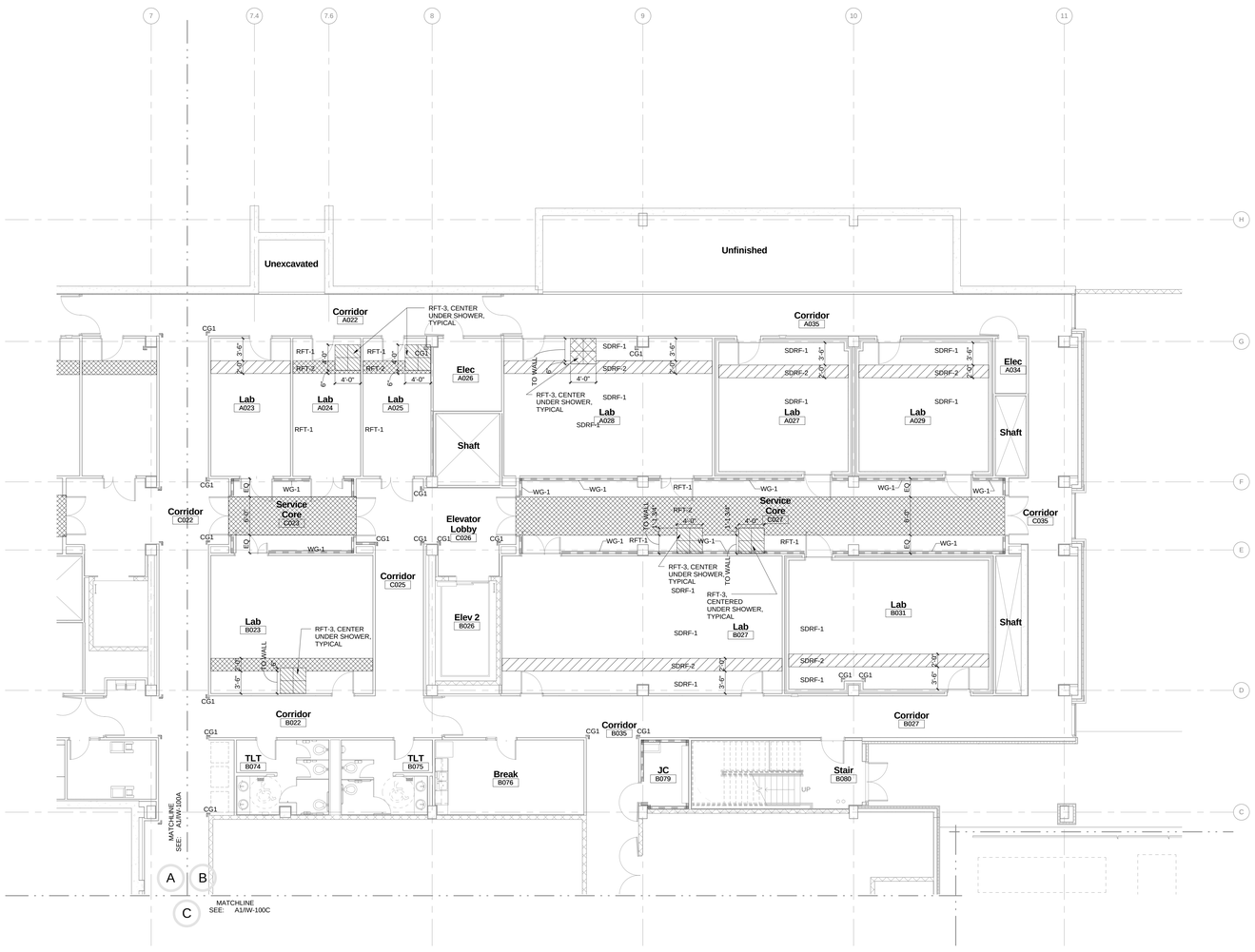
FACILITY DOCUMENT NUMBER — REV. NO.
J241-101- IW-103A

A1 THIRD FLOOR - AREA A WALL PROTECTION
1/8" = 1'-0"

C:\BK7002183-CENTRAL_ab\ifp.rvt
7/7/2011 10:11:55 PM

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IW-120B



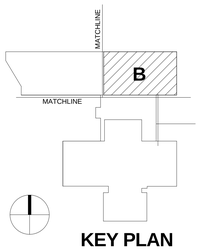
A1 GROUND FLOOR - AREA B WALL PROTECTION
1/8" = 1'-0"

FLOOR FINISH LEGEND
GROUND FLOOR

- CPT-3
- CPT-4
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
GROUND FLOOR - AREA B - WALL PROTECTION & FLR PATT. PLAN

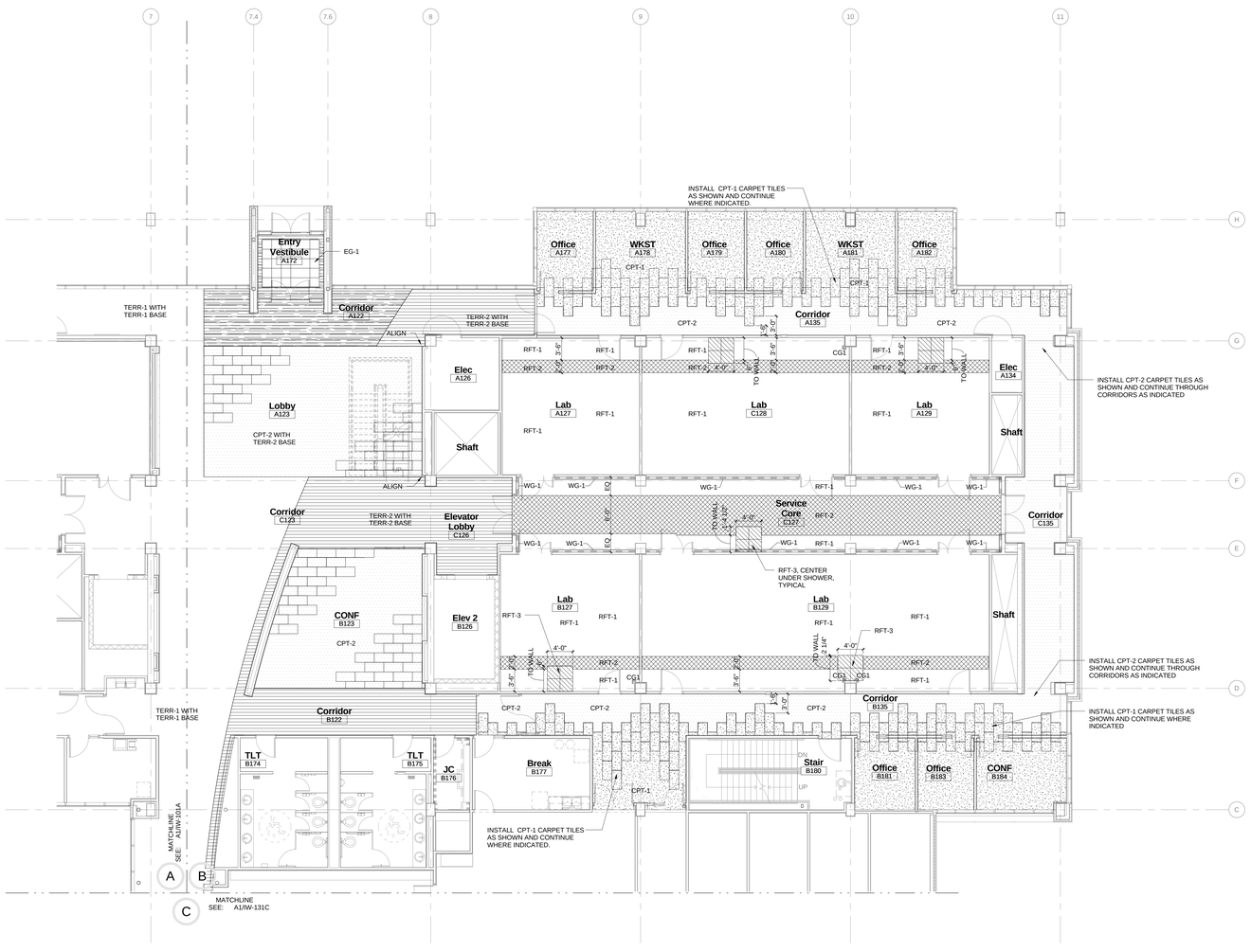
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-120B	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-IW-120B
REV. NO.

C:\BV70031821-CENTRAL_ajwrdy.rvt
7/7/2011 6:02:00 PM

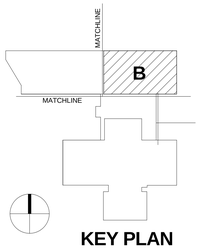
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR - AREA B WALL PROTECTION
1/8" = 1'-0"

IW-121B



KEY PLAN

FLOOR FINISH LEGEND FIRST FLOOR

- CPT-1
- CPT-2
- RFT-2
- RFT-3
- NET-1
- TERR-2

SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
FIRST FLOOR - AREA B - WALL PROTECTION & FLR PATT. PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-121B	
CHECKED GREG SLONGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

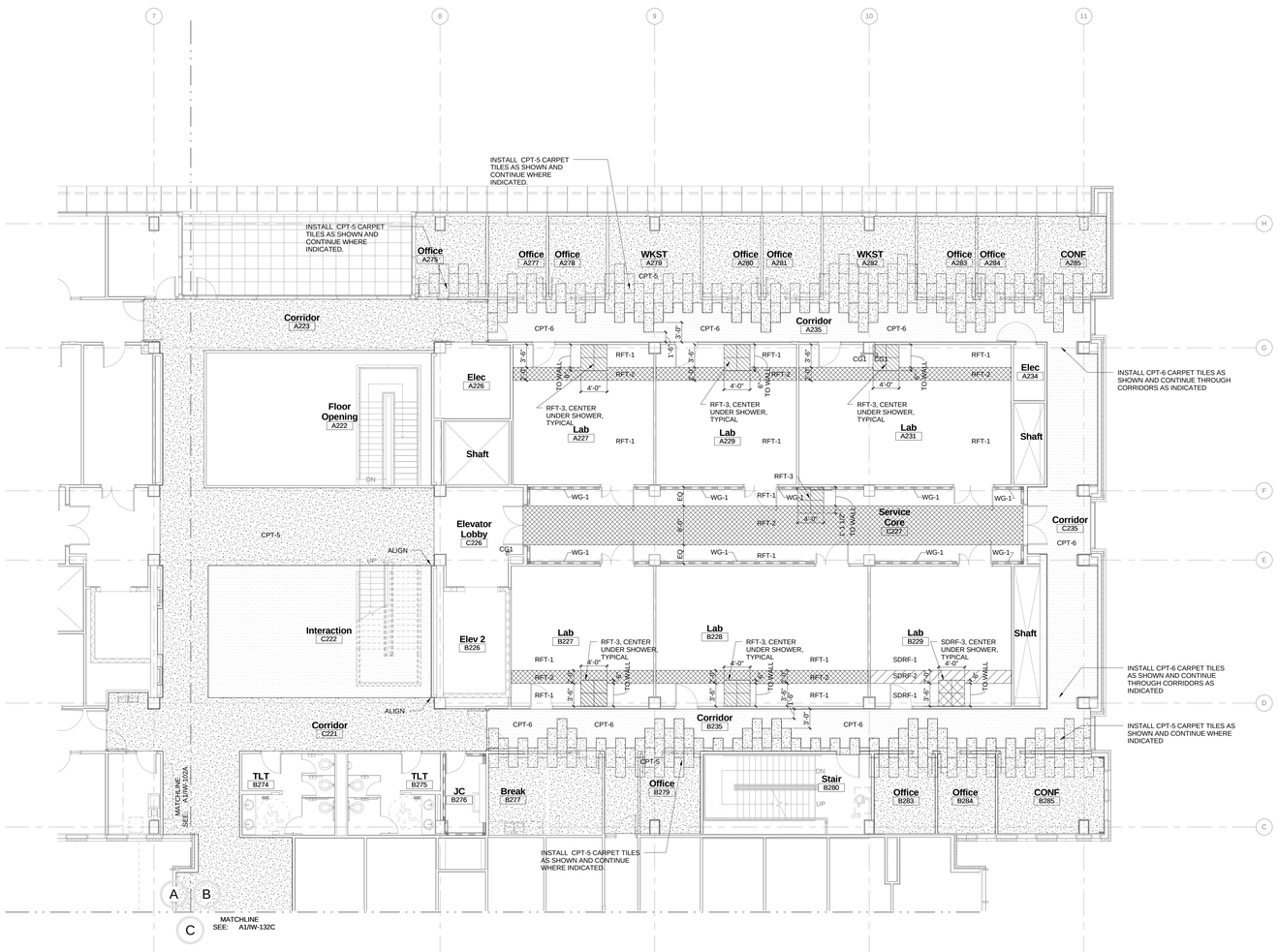
FACILITY DOCUMENT NUMBER J241-101- IW-121B REV. NO.

C:\BVN\002182-CENTRAL_ab4fp.rvt
7/7/2011 6:02:06 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IW-122B



A1 SECOND FLOOR - AREA B WALL PROTECTION

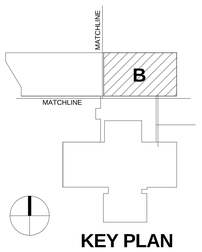
1/8" = 1'-0"

FLOOR FINISH LEGEND SECOND FLOOR

- CPT-5
- CPT-6
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
2	ADDENDUM #4			05/09/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
SECOND FLOOR - AREA B - WALL PROTECTION & FLR PATT. PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-122B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

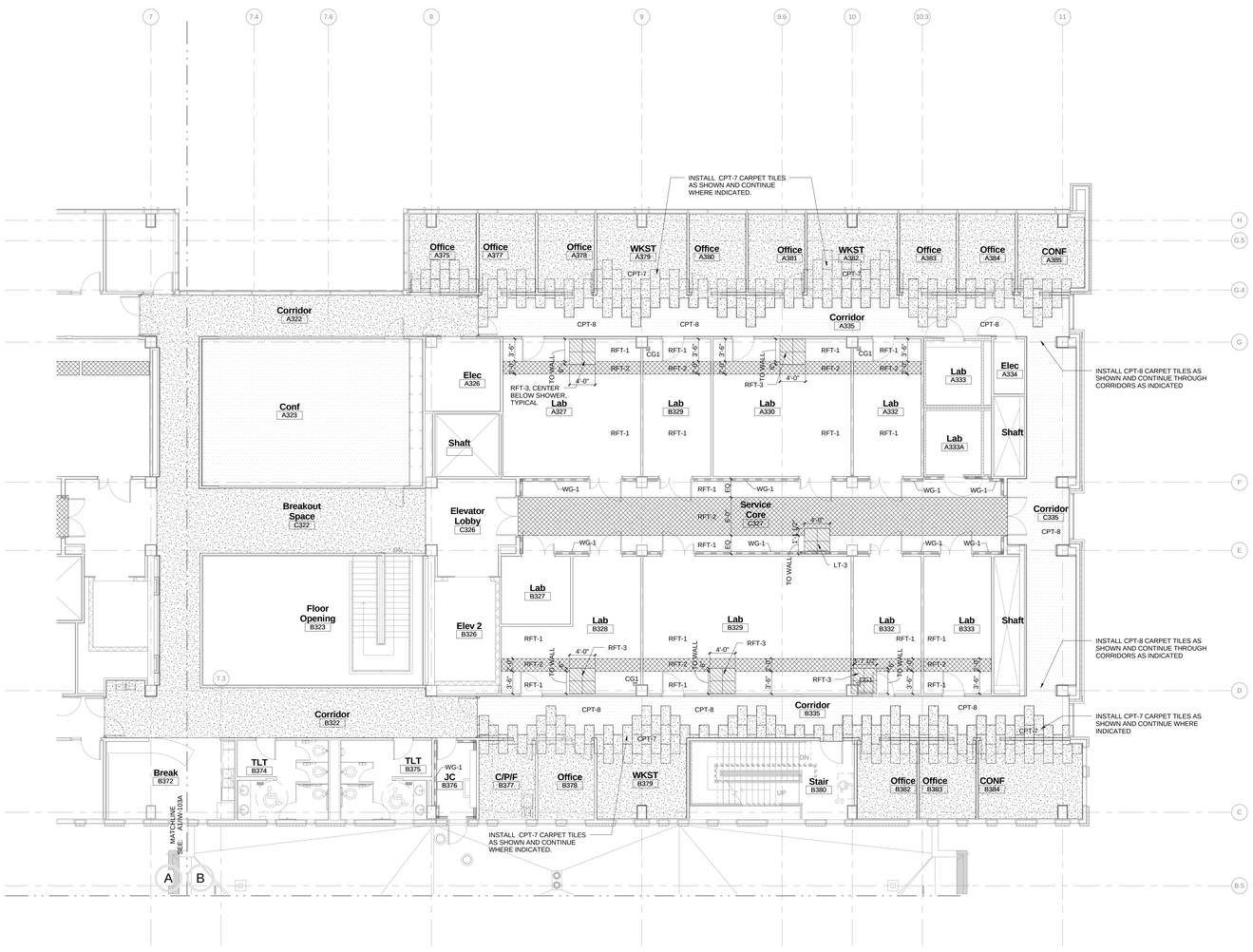
FACILITY DOCUMENT NUMBER: J241-101- IW-122B
REV. NO.

C:\R\TW32\B1-CENTRAL_dirxfp.rvt
7/7/2011 6:02:13 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

IW-123B



A1 THIRD FLOOR - AREA B WALL PROTECTION

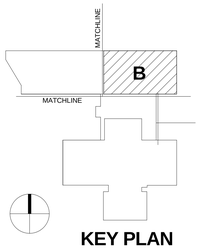
1/8" = 1'-0"

FLOOR FINISH LEGEND THIRD FLOOR

- CPT-7
- CPT-8
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR - AREA B - WALL PROTECTION & FLR PATT. PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-1238	
CHECKED GREG SLONGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-IW-123B REV. NO.

C:\PVTX\03\3\3D-CENTRAL_ah-fp.rvt
7/7/2011 6:03:19 PM

FLOOR FINISH LEGEND
FIRST FLOOR

- CPT-1
- CPT-2
- RFT-2
- RFT-3
- NET-1
- TERR-2

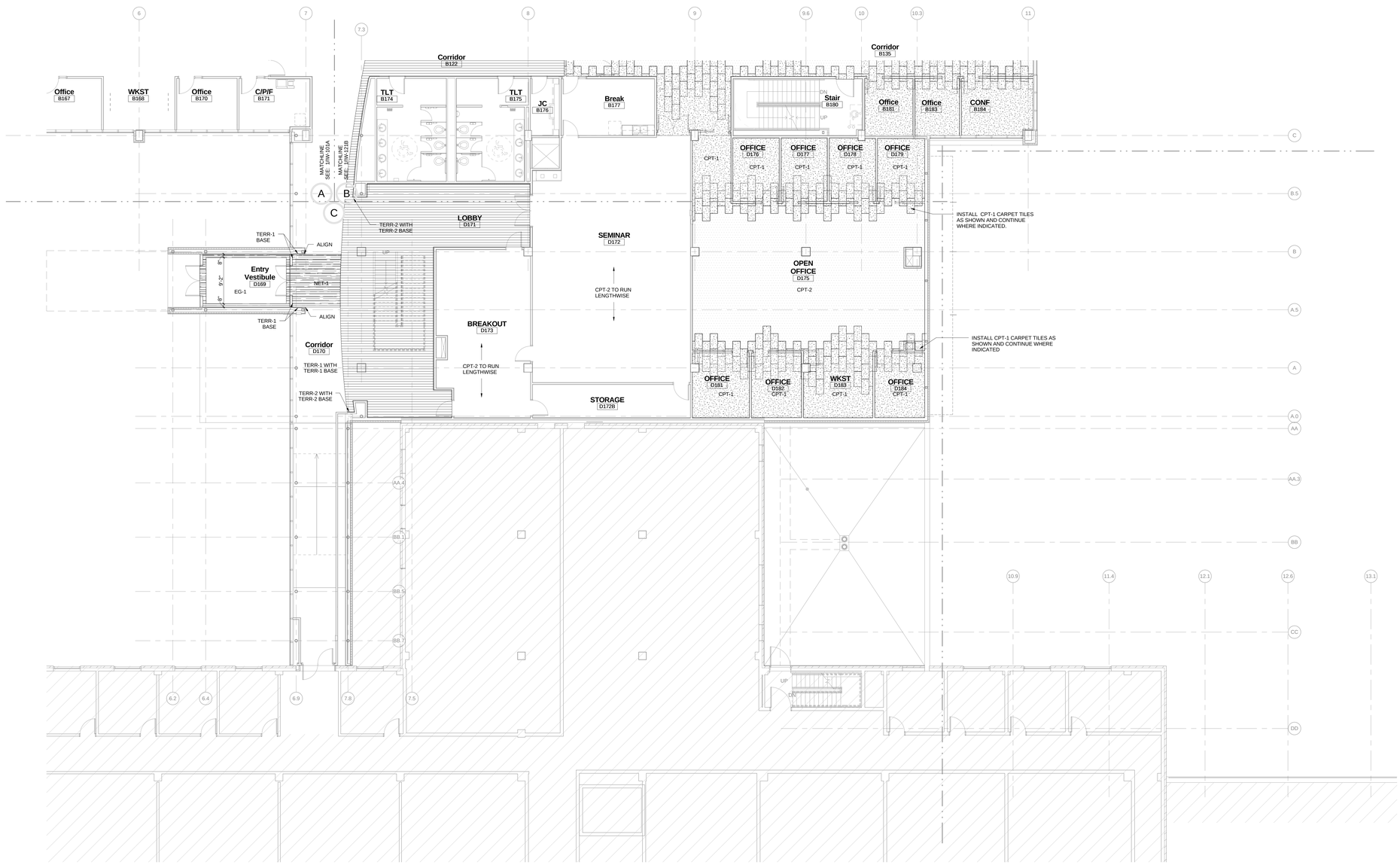
SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

HDR

HDR Architecture, Inc.

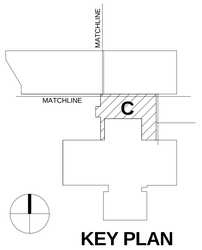
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 FIRST FLOOR - AREA C WALL PROTECTION

1/8" = 1'-0"

IW-131C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

FIRST FLOOR - AREA C - WALL PROTECTION & FLR PATT. PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-131C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- IW-131C REV. NO.

C:\R\700180-\CENTRAL_alrxfp.rvt
7/7/2011 6:02:23 PM

FLOOR FINISH LEGEND
SECOND FLOOR

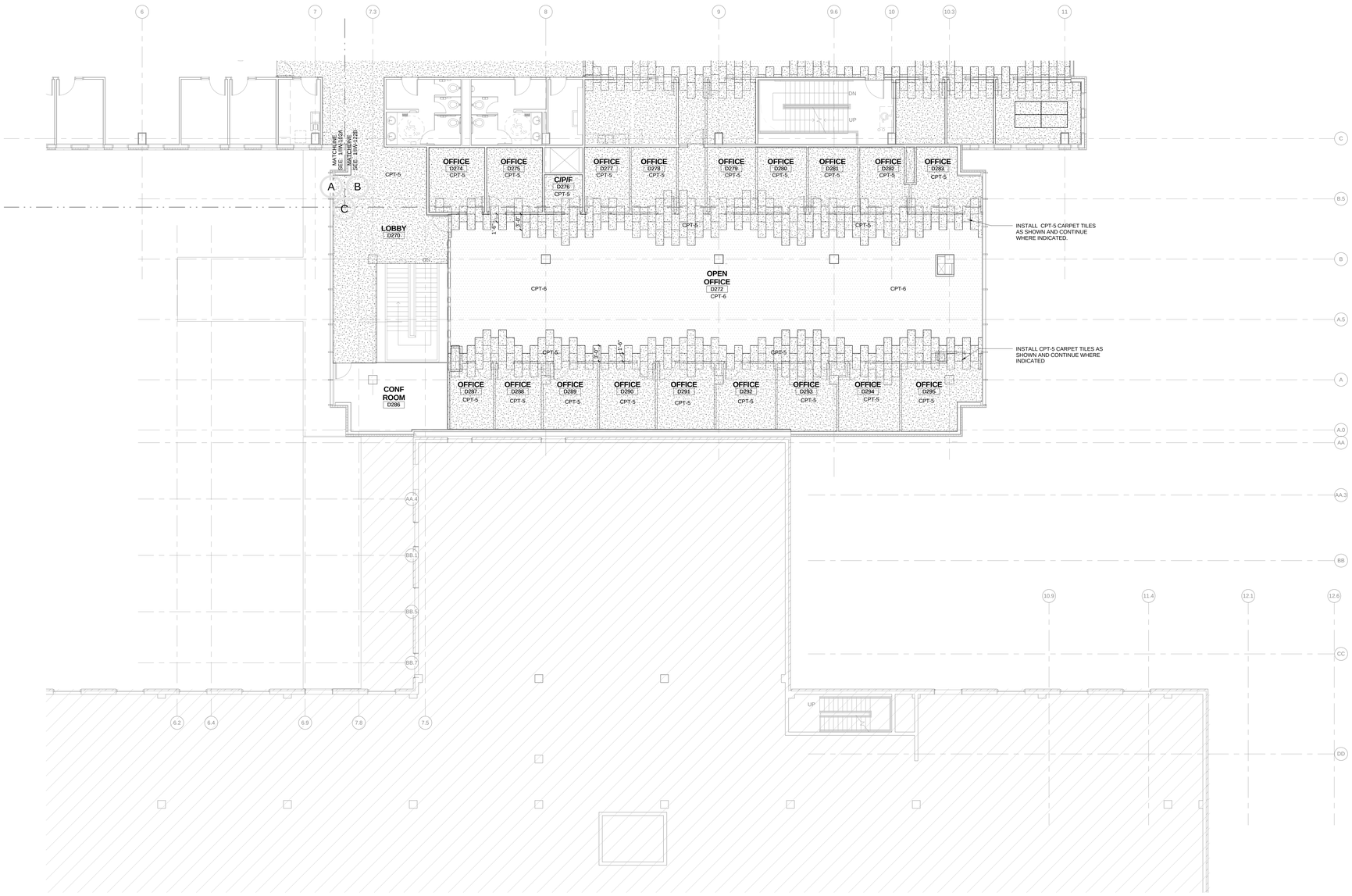
- CPT-5
- CPT-6
- RFT-2
- RFT-3
- SDRF-2
- SDRF-3

SYMBOL LEGEND

CG-1	CORNER GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
CG-2	CORNER END GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR
WG-1	WALL GUARD SEE FINISH SCHEDULE FOR STYLE AND COLOR

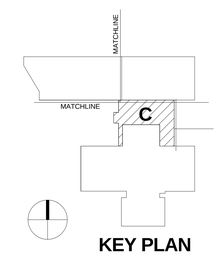
HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



A1 SECOND FLOOR - AREA C WALL PROTECTION
1/8" = 1'-0"

IW-132C



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #4			05/09/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

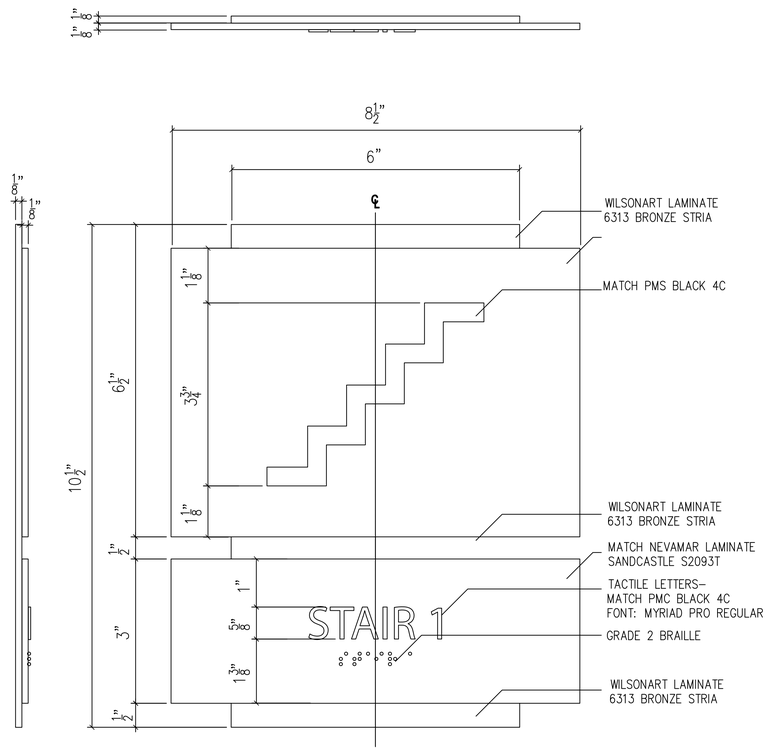
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SECOND FLOOR - AREA C - WALL PROTECTION & FLR PATT. PLAN

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN NA	A/E DWG. NO. IW-132C	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-IW-132C
REV. NO.

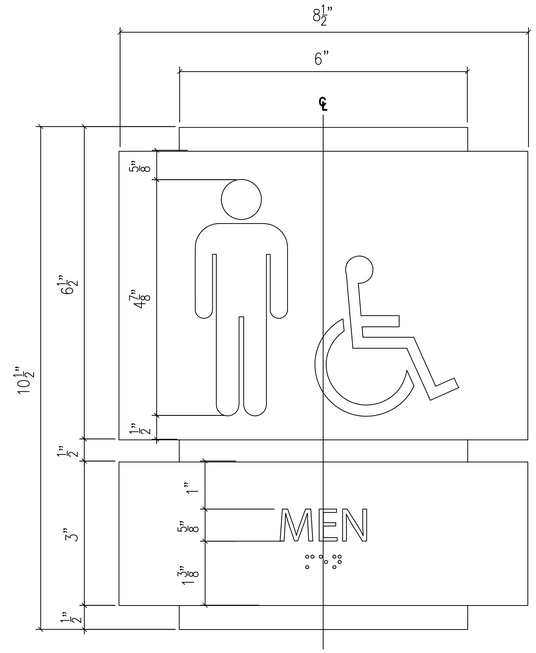
C:\BV70\002182-FENTRAL_ajerdy.rvt
7/7/2011 6:02:23 PM



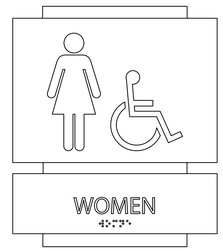
1 SIGN TYPE ST-1 STAIR SIGN

NOTE:

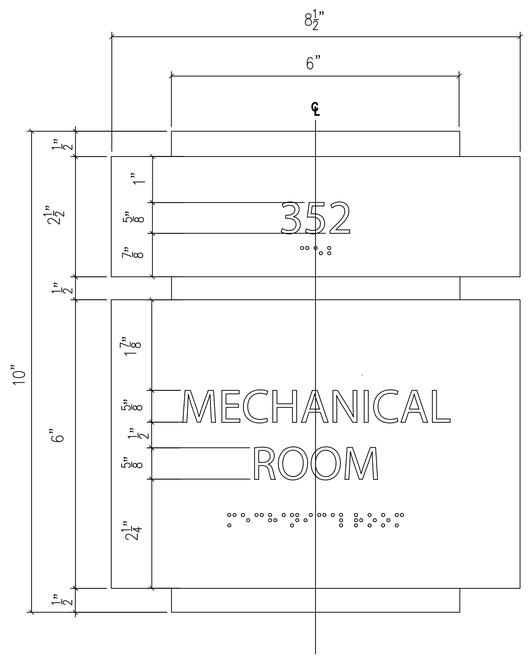
1. TYPICAL COLORS AND FONTS SHOWN ON THIS DETAIL APPLY TO REMAINING SIGNS UNLESS OTHERWISE NOTED.



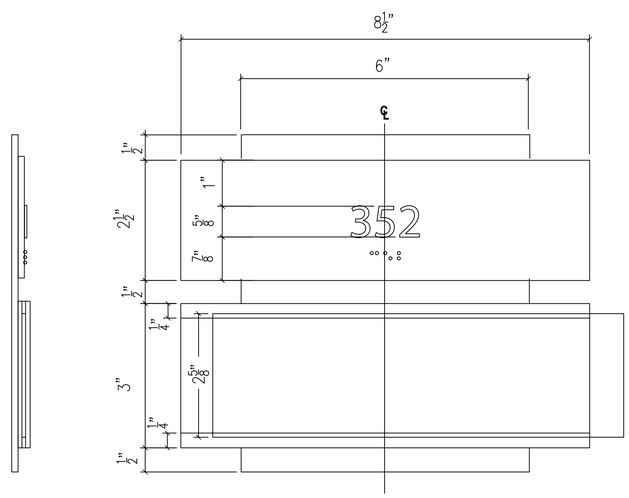
2 SIGN TYPE TR-1 TOILET ROOM SIGN



ALTERNATE LAYOUT



3 SIGN TYPE RM-P1 - PERMANENT ROOM SIGN



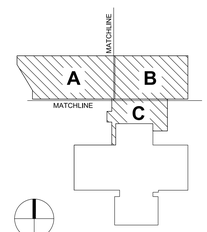
4 SIGN TYPE RM-C1 - CHANGEABLE ROOM SIGN

NOTE:

1. REFER TO SPECIFICATION SECTION 10 14 00 FOR SIGNAGE MESSAGE SCHEDULE.

HDR

AG-501



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

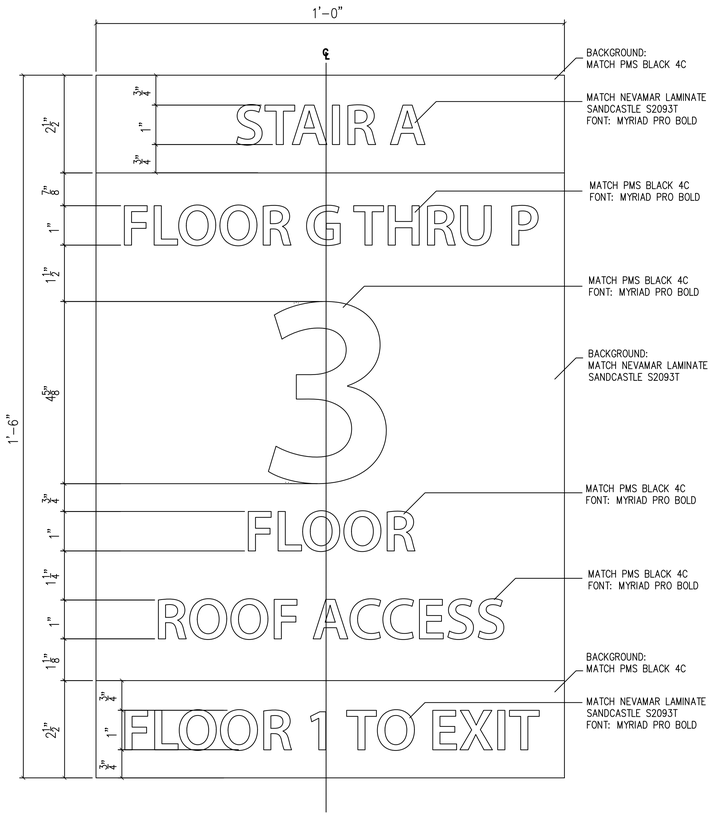
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

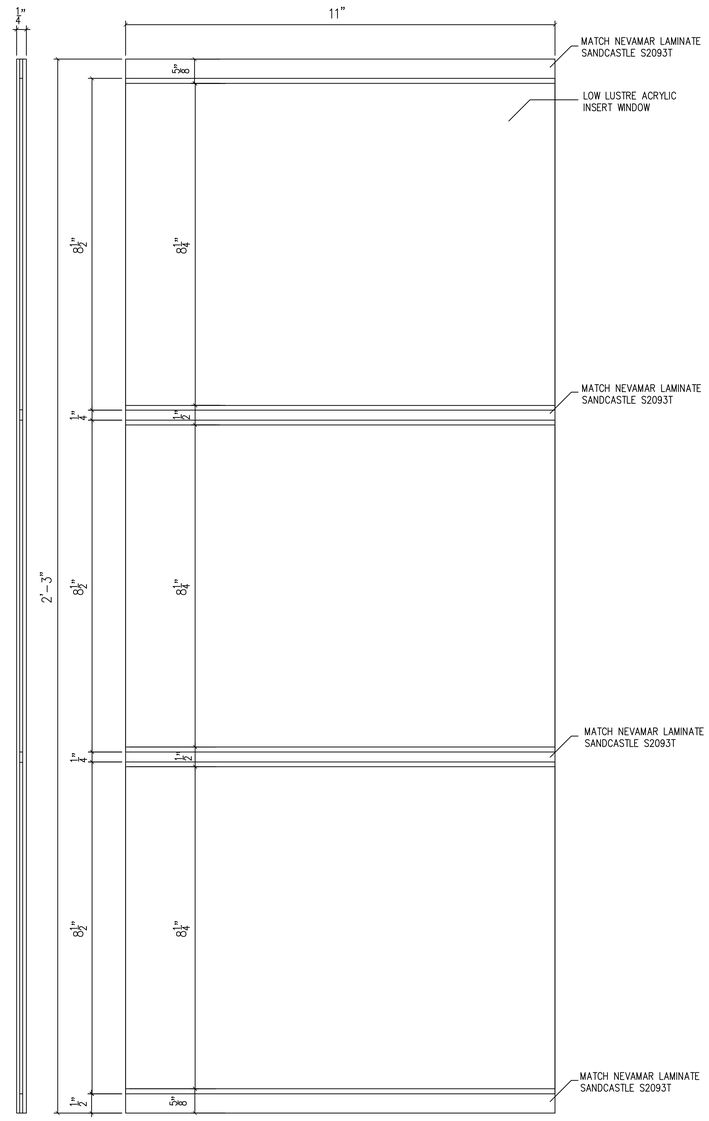
DOCUMENT TITLE
SIGNAGE DETAILS

DESIGNED	A/E CADD FILE	FACILITY NO(S) 241
DRAWN J. ZOLL	A/E DWG. NO. AG-501	
CHECKED L. GURETZKY	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

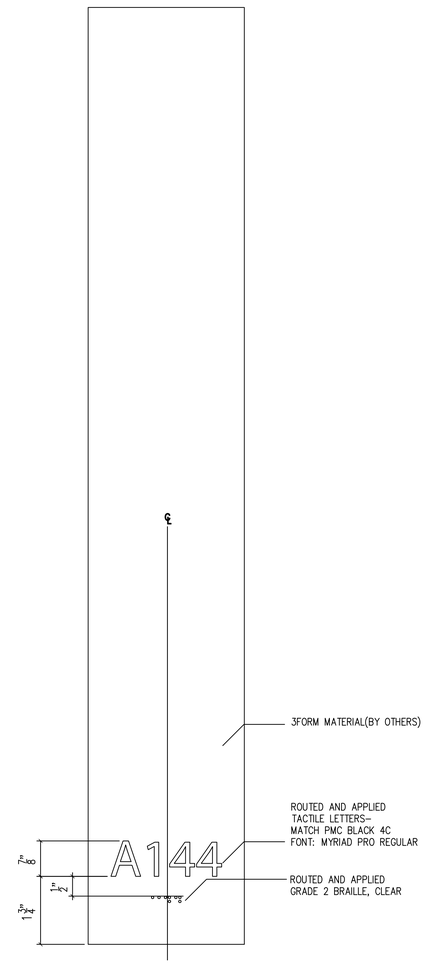
FACILITY DOCUMENT NUMBER **J241-101-**AG-501 REV. NO.



1 SIGN TYPE LV-1 LEVEL SIGN

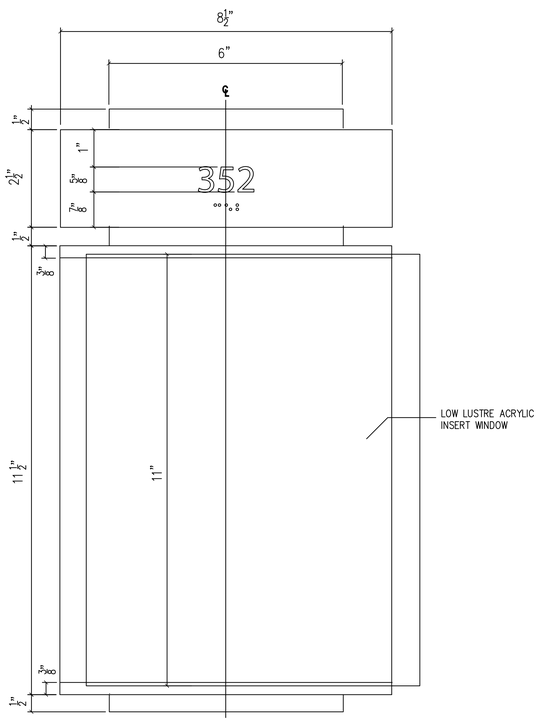


2 SIGN TYPE LS-1 LAB SAFETY INSERT SIGN



3 SIGN TYPE SS-1 SCONCE SIGN

NOTE:
3FORM MATERIAL FOR SCONCE SIGN WILL BE SHIPPED TO SIGN MANUFACTURER FOR INSTALL-ATION OF TACTILE LETTERS AND BRAILLE. 3FORM MATERIAL WILL THEN BE SHIPPED BACK TO LIGHTING MANUFACTURER FOR ASSEMBLY.



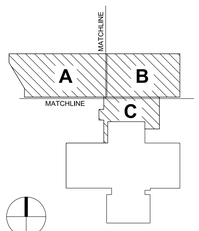
4 SIGN TYPE CR-1 - CONFERENCE ROOM SIGN

NOTES:

1. TYPICAL COLORS AND FONTS SHOWN IN DETAIL 1, SHEET AG-501 APPLY TO REMAINING SIGNS UNLESS OTHERWISE NOTED.
2. SEE SPECIFICATION SECTION 10 14 00 FOR SIGNAGE MESSAGE SCHEDULE.

HDR

AG-502



KEY PLAN

REV. NO.	DESCRIPTION	BY	APVD	DATE
	ISSUED FOR CONSTRUCTION			06/30/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

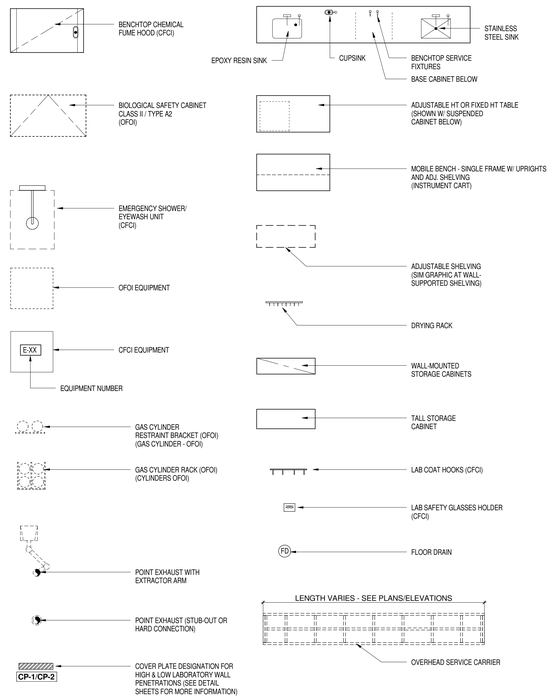
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SIGNAGE DETAILS

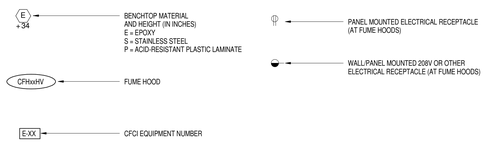
DESIGNED	A/E CADD FILE	FACILITY NO(S) 241
DRAWN J. ZOLL	A/E DWG. NO. AG-502	
CHECKED L. GURETZKY	CADD NO:	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER	

FACILITY DOCUMENT NUMBER **J241-101-**AG-502 REV. NO.

LABORATORY SYMBOLS



NOTATION SYMBOLS



LABORATORY GENERAL NOTES

1. FOR ROOM DIMENSIONS, REFER TO THE ARCHITECTURAL PLANS.
2. OVERALL LENGTH OF TOPS SHALL BE DETERMINED BY CASEWORK AND DIMENSIONS AS INDICATED ON PLANS. SUCH LENGTHS SHALL REMAIN CONSTANT REGARDLESS OF SUCCESSFUL BIDDERFS STANDARDS. TOPS TYPICALLY SHALL OVERHANG 1" AT EACH END AND 1" FROM FRONT OF BASE CABINET. WHEN OVERALL DIMENSIONS ARE GIVEN, 1" OVERHANG IS INCLUDED.
3. ON WALL-TO-WALL CASEWORK ASSEMBLIES, THE "OPEN" SPACE DIMENSION SHALL BE DETERMINED IN THE FIELD. IF THERE IS MORE THAN ONE "OPEN" SPACE INDICATED, SPACE AVAILABLE FOR "OPEN" SPACE SHALL BE EVENLY DISTRIBUTED - U.O.N.
4. LOCATION OF EQUIPMENT, SUCH AS PENINSULA BENCH SHELF SUPPORTS, OVERHEAD EQUIPMENT SUPPORT STRUCTURES, SERVICE COLUMNS, FUME HOODS, BRACES, OR ANY OTHER ITEMS THAT MAY INTERFERE WITH LIGHTING, STRUCTURAL OR MECHANICAL SYSTEMS SHALL BE CAREFULLY COORDINATED BY THE LAB FURNISHINGS CONTRACTOR, AND ANY DISCREPANCIES BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY.
5. ANY TYPE OF EQUIPMENT SUPPORT STRUCTURES OR SLOTTED STANDARD FRAME SUPPORTS (USED FOR RACKS, SHELVING, ETC.) SHALL BE SPACED AND POSITIONED TO CLEAR FITTINGS, SINKS AND CUPSINKS.
6. ON WALLS WHERE EQUIPMENT SUPPORT STRUCTURES OR SLOTTED STANDARDS RUN FULL HEIGHT AND INTERFERE WITH ELECTRICAL SERVICES, RACEWAYS SHALL BE WALL MOUNTED AND EQUIPMENT SUPPORT STRUCTURES/ STANDARDS CUT AS REQUIRED UNLESS OTHERWISE NOTED.
7. FOR LOCATION OF OVERHEAD EQUIPMENT SUPPORT STRUCTURES, FUME HOODS, SNORKEL EXHAUSTS AND ANY OTHER FURNISHINGS THAT PENETRATE THE CEILING, SEE ARCHITECTURAL REFLECTED CEILING PLANS. SERVICE COLUMN CEILING PENETRATIONS ARE SHOWN APPROXIMATE ON THE ARCHITECTURAL REFLECTED CEILING PLANS.
8. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL/DATA RACEWAYS. FOR INSTALLATION SEE ELECTRICAL AND LAB FURNISHINGS DRAWINGS AND SPECIFICATIONS FOR QUANTITY, TYPE AND LOCATION
9. MARINE-EDGE SHALL BE PROVIDED AT ALL BENCHTOPS WHERE SINKS ARE LOCATED AND WILL RUN THE LENGTH OF THE SINK CABINET BELOW. MARINE EDGE SHALL BE 1" WIDE AND 1/4" HIGH W/ CHAMFERED TRANSITION AND BE AN INTEGRAL PART OF THE WORK SURFACE.
10. ALL PLAN ITEMS LISTED AS O.F.O.I. IN THE KEYNOTES LEGEND ARE TO BE PROVIDED BY OWNER. ALL ITEMS NOT LISTED AS O.F.O.I. IN THE LAB KEYNOTES LEGEND ARE TO BE PROVIDED FOR AND COORDINATED BY THE LAB FURNISHINGS CONTRACTOR.
11. SEE SPECIFICATION #13 21 14 FOR ALL INFORMATION REGARDING CONTROLLED ENVIRONMENTAL ROOMS A333 & A333A LOCATED SHEET QL-123B.
12. AT ALL ADJUSTABLE SHELVING LOCATIONS, PROVIDE ADJUSTABLE SHELVES IN 6" INCREMENTS NOT TO EXCEED 42" WIDE. PROVIDE EQUAL SPACING AS ALLOWABLE TO MEET AS CLOSE TO THE LENGTHS SHOWN ON PLAN & ELEVATION WHEN POSSIBLE.

LABORATORY ABBREVIATIONS

NOTE: REFER TO GENERAL ABBREVIATIONS FOR ADDITIONAL ABBREVIATIONS - SEE SHEET G-001

@	AT
&	AND
(+)	POSITIVE PRESSURE
(-)	NEGATIVE PRESSURE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
APR	AIR PRESSURE RELATIONSHIP
AR	ARGON
BSC	BIOSAFETY CABINET
BT	BALANCE TABLE
CDA	COMPRESSED DRY AIR (LETTER OR # SUFFIX DENOTES MOUNTING TYPE)
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CFH	CHEMICAL FUME HOOD
CHROM	CHROMATOGRAPHY REFRIGERATOR
CL	CENTERLINE
CLG	CEILING
CO2	CARBON DIOXIDE
CP	COVER PLATE (AT WALL PENETRATION)
CS	CUPSINK
CW	LABORATORY COLD WATER
DBL	DOUBLE
EMI	ELECTROMAGNETIC INTERFERENCE
EQ	EQUAL
ES	EMERGENCY SHOWER
EW	EYEWASH
EWES	EYEWASH / EMERGENCY SHOWER
FLAM	FLAMMABLE
FP	FILLER PANEL
FRZR	FREEZER
FTIR	FOURIER TRANSFORM INFRARED SPECTROCOPY
GW	GLASSWARE WASHER
H	HYDROGEN
HE	HELIUM
HP	HIGH PRESSURE
HT	HEIGHT
HCW	LABORATORY HOT/COLD MIXED WATER
HW	LABORATORY HOT WATER
L/R	LEFT/RIGHT
LFH	LAMINAR FLOW HOOD
LN2	LIQUID NITROGEN
MFR	MANUFACTURER
MTD	MOUNTED
NC	NOT IN CONTRACT
NG	NATURAL GAS
NO2	NITROUS OXIDE
O2	OXYGEN
OFOI	OWNER FURNISHED, OWNER INSTALLED
OH	OVERHEAD
OSC	OVERHEAD SERVICE CARRIER
PCWS	PROCESS COOLING WATER SUPPLY (LETTER OR # SUFFIX DENOTES MOUNTING TYPE)
PCWR	PROCESS COOLING WATER RETURN (LETTER OR # SUFFIX DENOTES MOUNTING TYPE)
PE	POINT EXHAUST
REF	REFRIGERATOR
REF-FRZ	REFRIGERATOR/FREEZER
RFI	RADIO FREQUENCY INTERFERENCE
RO	REVERSE OSMOSIS WATER
SG	SPECIALTY GAS (LETTER OR # SUFFIX DENOTES MOUNTING TYPE) OFOI
SIM	SIMILAR
SS	STAINLESS STEEL
STM	STEAM
TYP	TYPICAL
UC	UNDER COUNTER
UN2	NITROGEN (LETTER OR # SUFFIX DENOTES MOUNTING TYPE)
UON	UNLESS OTHERWISE NOTED
V	VACUUM
W/	WITH
W/O	WITHOUT

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-001

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

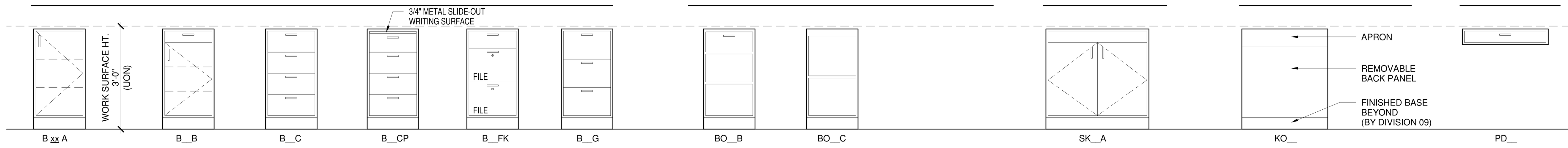
LABORATORY ABBREVIATIONS, NOTES AND SYMBOLS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-001	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

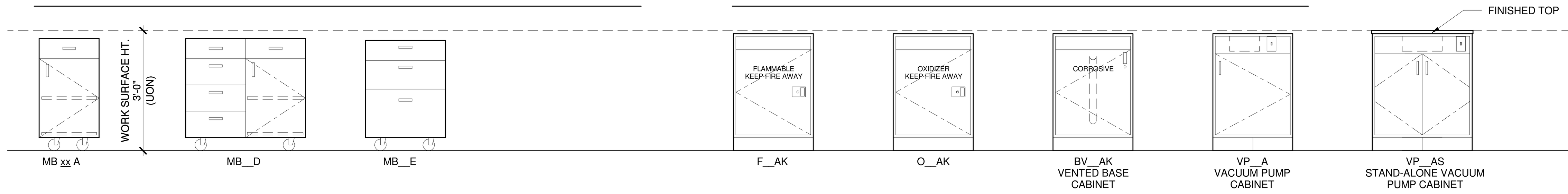
FACILITY DOCUMENT NUMBER: J241-101- QL-001 REV. NO.

C:/R/T/002182-Q-Central_mballar.rvt
5/23/2011 3:16:45 PM

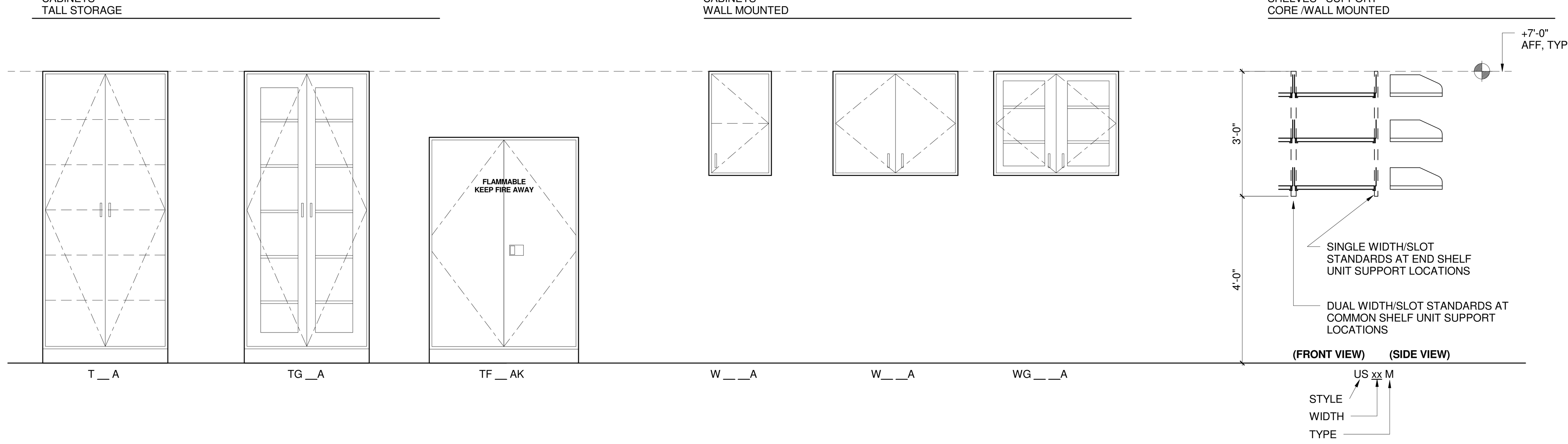
BASE CABINETS - FIXED WITH FLUSH FRONTS | BASE CABINETS - FIXED WITH OPEN FRONTS | BASE CABINET- SINK | KNEE SPACE | PENCIL DRAWER



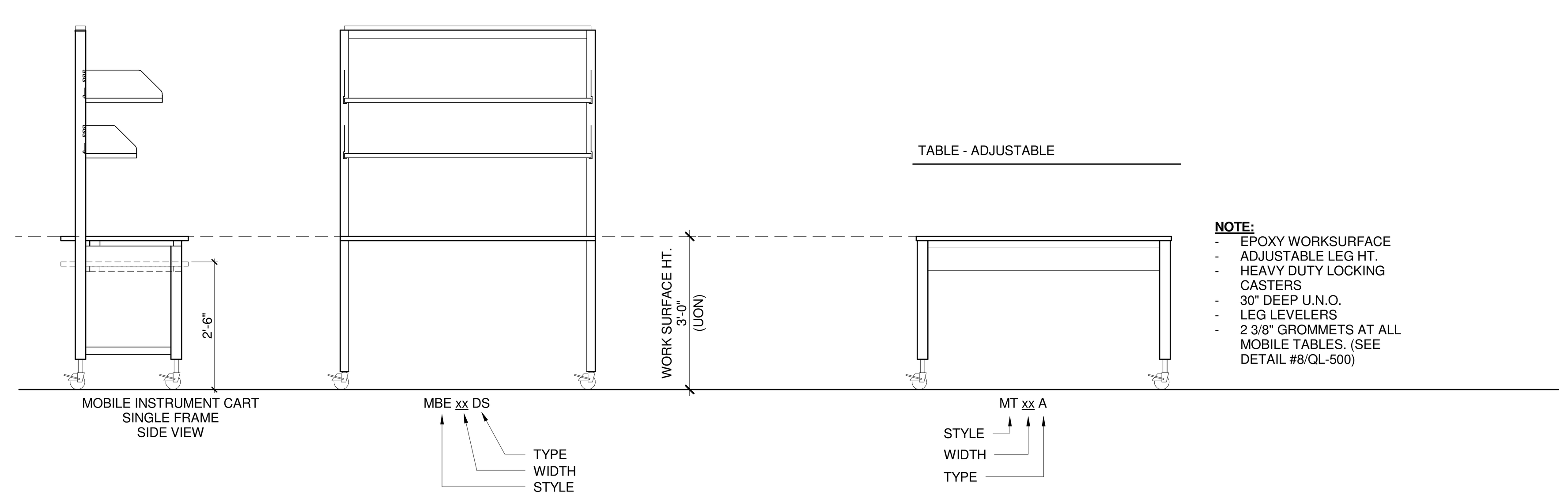
MOBILE BASE CABINETS | BASE CABINETS - SPECIALTY



CABINETS - TALL STORAGE | CABINETS - WALL MOUNTED | SHELVES - SUPPORT CORE /WALL MOUNTED

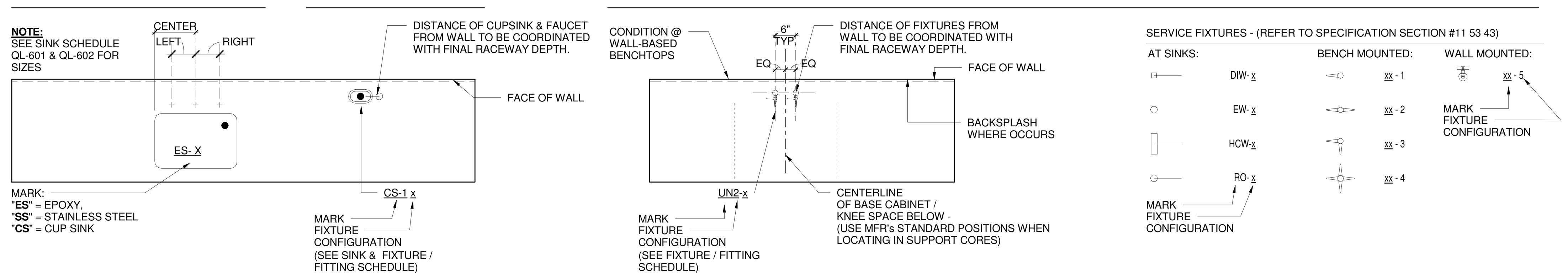


MOBILE BENCHES | TABLE - ADJUSTABLE

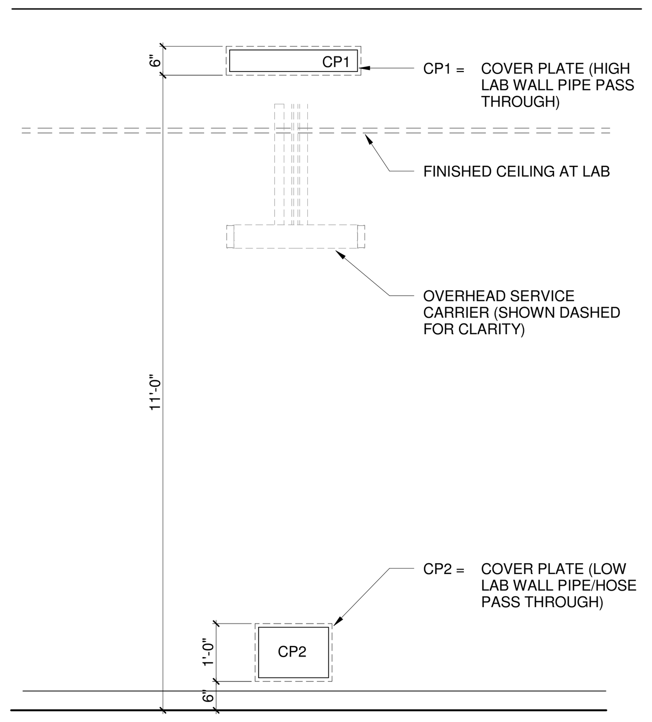


NOTE:
- EPOXY WORKSURFACE
- ADJUSTABLE LEG HT.
- HEAVY DUTY LOCKING CASTERS
- 30" DEEP U.N.O.
- LEG LEVELERS
- 2 3/8" GROMMETS AT ALL MOBILE TABLES. (SEE DETAIL #8/QL-500)

SINKS / FIXTURES | CUPSINKS / FIXTURES | SERVICE FIXTURES

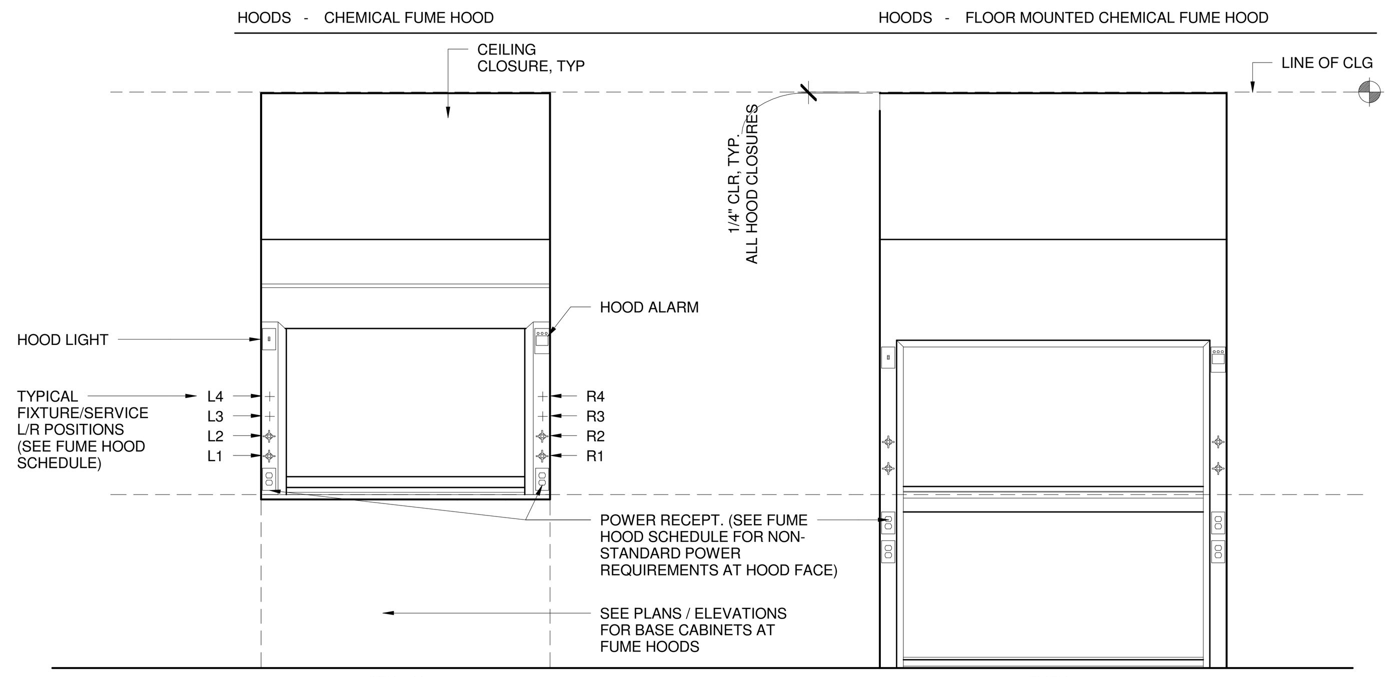


SERVICE CORRIDOR WALL PENETRATIONS

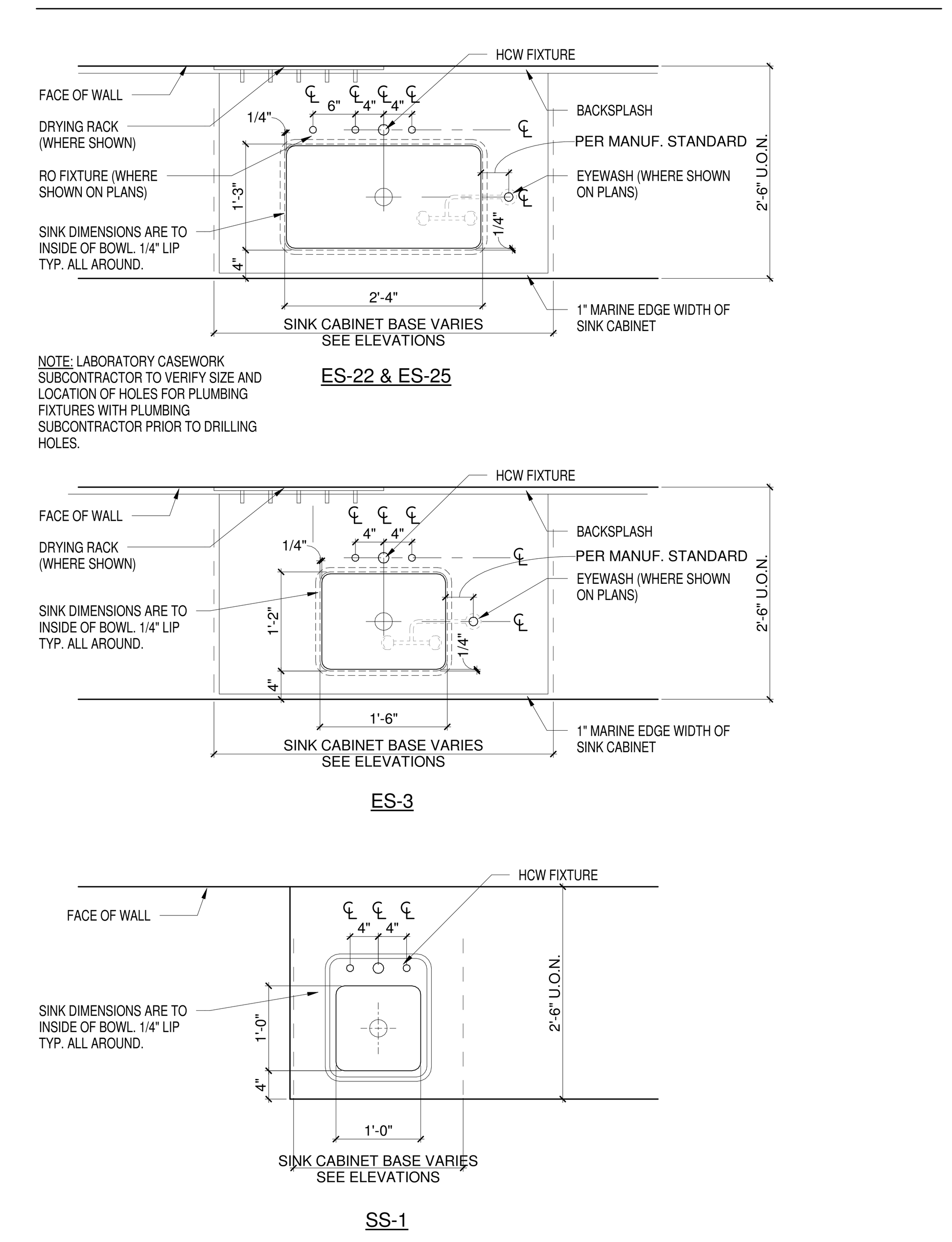


SEE DETAIL SHEETS FOR MORE INFORMATION ON PENETRATION COVER PLATE CONSTRUCTION AND DIMENSIONS

HOODS - CHEMICAL FUME HOOD | HOODS - FLOOR MOUNTED CHEMICAL FUME HOOD



TYPICAL SINK DETAILS



CASEWORK / ACCESSORIES STYLE KEY:

B:	BASE CABINET
BO:	OPEN BASE CABINET
BV:	CORROSIVE BASE CABINET
F:	FLAMMABLE BASE CABINET
KO:	KNEE SPACE
K:	KEYED LOCKING CABINET
LT:	FIXED LAB TABLE
MB:	MOBILE BASE CABINET
MBE:	MOBILE INSTRUMENT CART
MT:	MOBILE TABLE
O:	OXIDIZER BASE CABINET
PD:	PENCIL DRAWER
SF:	SUPPORT CORE
SB:	SUSPENDED BASE CABINET
SK:	SINK BASE CABINET
T:	TALL STORAGE CABINET
TG:	TALL GLASS CABINET
TO:	TALL OPEN CABINET
US:	SHELF UNIT (ADJUSTABLE)
UC:	SERVICE COLUMN
VP:	VACUUM PUMP BASE CABINET
W:	WALL CABINET
WG:	WALL GLASS CABINET
WO:	OPEN WALL CABINET

BASE CABINET NOMENCLATURE

A X L xx X K
- DENOTES KEYED LOCK ON CABINET (SEE ADJACENT TYPE ELEVATIONS)
- DENOTES CABINET TYPE (SEE ADJACENT TYPE ELEVATIONS)
- DENOTES CABINET WIDTH
- DENOTES SEATED HT. CASEWORK / WORKSURFACE - 30" A.F.F. TO WORK SURFACE (WHERE INCLUDED IN CASEWORK TAG (SEE BELOW)
- DENOTES CASEWORK STYLE
- DENOTES ACCESSIBLE HT. CASEWORK / WORKSURFACE - 34" A.F.F. TO WORK SURFACE (WHERE INCLUDED IN CASEWORK TAG)

A = ACCESSIBLE HT. WORKSURFACE (34" A.F.F.)
L = SEATED HT. WORKSURFACE (30" A.F.F.)

TALL & WALL CABINET NOMENCLATURE

T xx xx A
- DENOTES CABINET TYPE (SEE ADJACENT TYPE ELEVATIONS)
- DENOTES CABINET DEPTH
- DENOTES CABINET WIDTH
- DENOTES CASEWORK STYLE

CASEWORK GENERAL NOTES:

1. SEE ALSO SHT. QL-001 FOR LABORATORY GENERAL NOTES
2. REFER TO ARCHITECTURAL FLOOR PLANS FOR ROOM DIMENSIONS, CONSTRUCTION TYPES, AND FINISHES
3. DIMENSIONS ARE NOMINAL, COORDINATE VARIATIONS BASED UPON MANUFACTURER, SUBJECT TO ARCHITECT'S APPROVAL
4. WORK SURFACES SHALL BE 36" AFF, UNLESS OTHERWISE NOTED
5. CASEWORK, HOODS, FIXTURES AND FITTINGS AS DESCRIBED IN THE SPECIFICATIONS
6. LOCATE / INSTALL BLOCKING /BACKING AT ALL LABORATORY WALLS PER SPECIFICATION SECTION 09 22 16
7. INSTALL ALL FILLER AND END PANELS AS REQUIRED TO PROVIDE A COMPLETE INSTALLATION. FILLER AND END PANELS NOT TAGGED ON PLANS
8. PROVIDE BACKSLPASHES AND SIDESPLASHES AT ALL COUNTER EDGES ABUTTING WALLS, COLUMN FURRING AND FUME HOODS AND TALL CABINETS.
9. AT ALL PENINSULA END-CAP CASEWORK, PROVIDE CONTINUOUS TOE KICK AT END AND SIDE ELEVATIONS OF END-CAP BASE CABINETS
10. ALL BENCHTOPS ARE TO BE EPOXY RESIN U.O.N.
11. KNEE OPENINGS TO BE 30" WIDE U.O.N.

TABLE GENERAL NOTES:

1. EPOXY WORKSURFACES AT ALL FIXED HT. & ADJUSTABLE HT. TABLES U.O.N.
2. REFER TO LABORATORY FURNISHINGS PLANS FOR LOCATIONS

SINK / SERVICE FIXTURE GENERAL NOTES:

1. REFER TO LABORATORY FURNISHINGS PLANS FOR LOCATIONS
2. WALL MOUNTED FIXTURES - LOCATE CENTER LINE OF FIXTURE +48" AFF, TYP., WHERE OCCURS
3. AT PENINSULA / ISLAND BENCHTOPS, LOCATE PLAN C.L. OF FIXTURE(S) ALONG AXIAL CENTERLINE OF BENCHTOP
4. SEE SINK AND FIXTURE & FITTING SCHEDULES FOR ADDITIONAL INFORMATION

HOOD STYLE KEY:

CFH:	CHEMICAL FUME HOOD - BENCH
FMFH:	CHEMICAL FUME HOOD - FLOOR MOUNTED
RFH:	RADIOISOTOPE FUME HOOD
BSC:	BIO-SAFETY CABINET (OFOI, TYP.)
CBH:	CLEAN BENCH HOOD (OFOI, TYP.)

HOOD NOMENCLATURE

A XX(X) xx X x
- DENOTES HOOD SERVICES GROUPING (SEE HOOD SCHEDULE(S))
- DENOTES HOOD TYPE (SEE ADJACENT TYPE ELEVATIONS)
- DENOTES HOOD WIDTH
- DENOTES CASEWORK STYLE
- DENOTES ACCESSIBLE HT. HOOD / WORKSURFACE (WHERE INCLUDED IN CASEWORK TAG) (+ 34" A.F.F to WORKSURFACE)

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-002

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

CASEWORK, SERVICES, AND FUMEHOOD TYPES

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-002	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

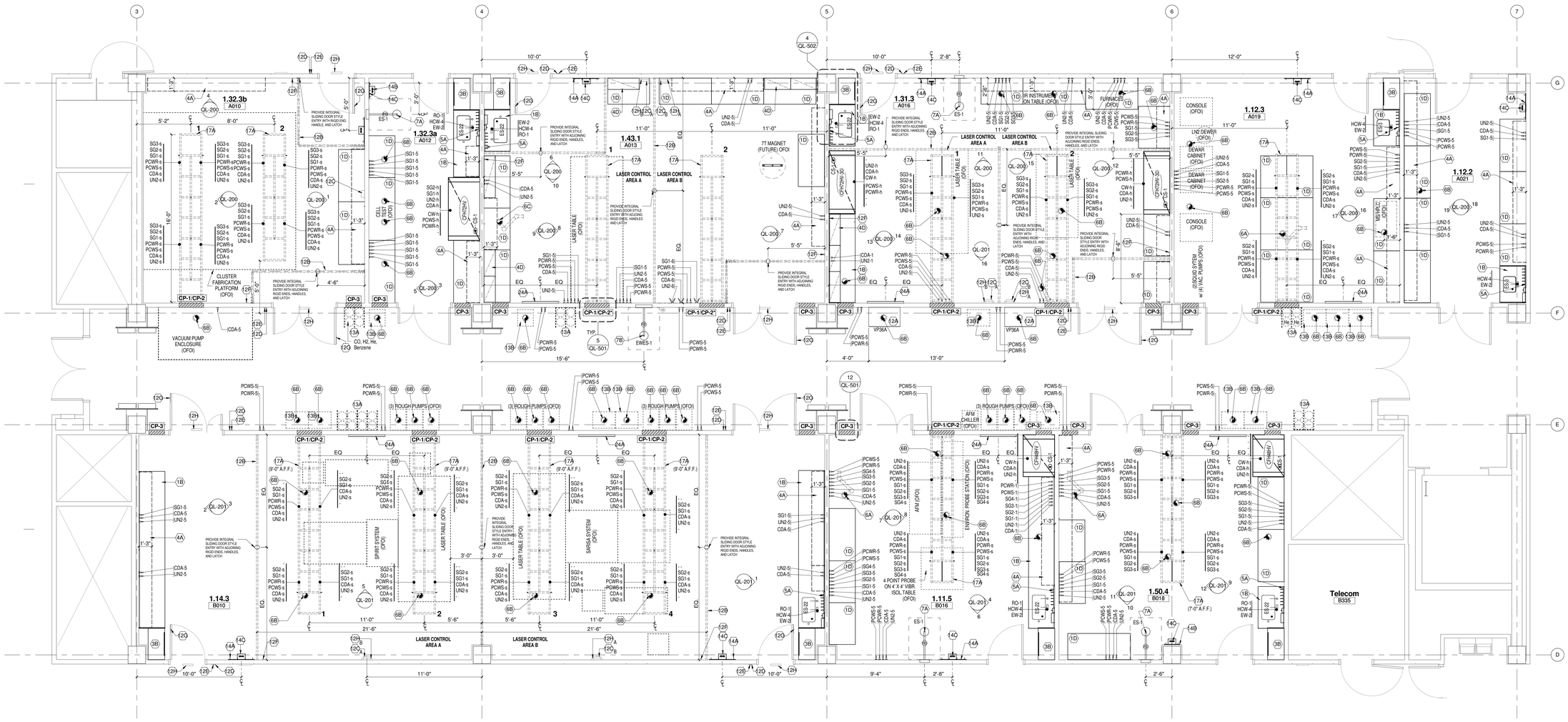
FACILITY DOCUMENT NUMBER: **J241-101- QL-002** REV. NO.

C:\RVT\002182-Q-Central_miballar.rvt
6/29/2011 3:16:47 PM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



LAB KEYNOTES

#	ITEM DESCRIPTION
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
4A	ADJ. HEIGHT METAL WALL SHELVING
4D	FIXED UPPER WALL CABINET W/ SOLID SWINGING METAL DOORS AND ADJUSTABLE HEIGHT SHELF
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6C	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - ALL METAL CONTRUCTION FOR HIGH TEMPERATURE USE
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
12A	VACUUM PUMP CABINET W/ EPOXY TOP - STAND ALONE
12B	LASER CURTAIN (SEE SPEC. #11 53 33) (LOCATIONS TO BE COORDINATED DURING CONSTRUCTION)
12C	LASER INTERLOCK, CONTROL PANEL (SEE SPEC. #11 53 33)
12D	LASER INTERLOCK, ENTRY KEYPAD (SEE SPEC. #11 53 33)
12E	LASER INTERLOCK, EMERGENCY ACCESS BUTTON (SEE SPEC. #11 53 33)
12F	LASER INTERLOCK, REMOTE REQUEST TO EXIT BUTTON (SEE SPEC. #11 53 33)
12G	LASER INTERLOCK, MAGNETIC LOCK (SEE SPEC. #11 53 33)
12H	LASER INTERLOCK, ILLUMINATED SAFETY SIGN (SEE SPEC. #11 53 33)
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14B	LAB COAT HOOKS (18"W - 2 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

QL-100A

KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.

1 GROUND FLOOR - ENLARGED LABORATORY PLAN - AREA A

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
GROUND FLOOR ENLARGED LABORATORY PLANS - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-100A	
CHECKED GREG SLOMIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE -	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101-QL-100A REV. NO.

C:\R\T\002182-Q-Central_mballar.rvt
5/23/2011 3:16:48 PM

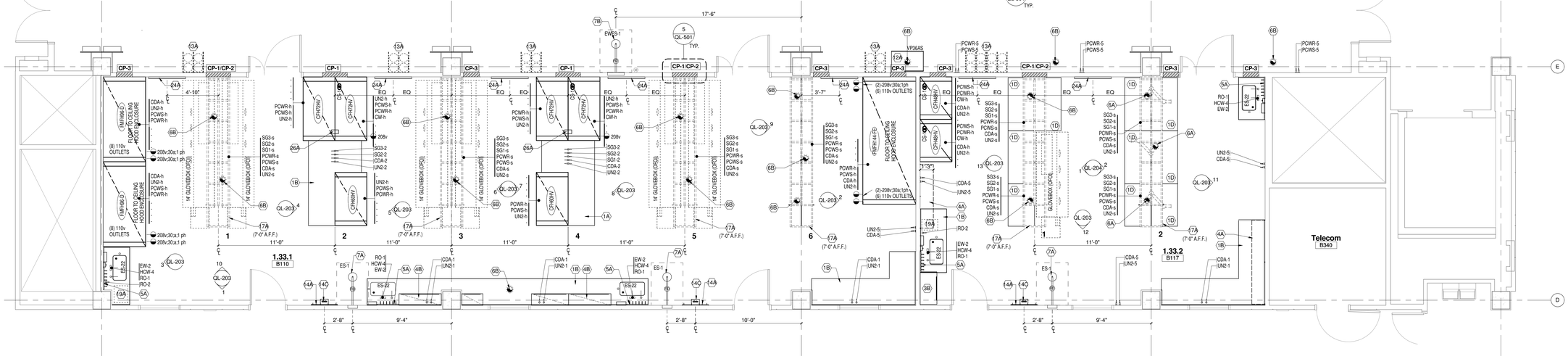
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
3D	TALL METAL STORAGE CABINET, FLAMMABLE
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6E	CANOPY EXHAUST HOOD
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
12A	VACUUM PUMP CABINET W/ EPOXY TOP - STAND ALONE
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD
26A	4" DIA FUME HOOD PASS-THRU PORT

QL-101A

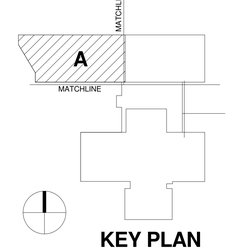


1 FIRST FLOOR ENLARGED LABORATORY PLAN - AREA A

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
FIRST FLOOR ENLARGED LABORATORY PLANS - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-101A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	
FACILITY DOCUMENT NUMBER J241-101-QL-101A		REV. NO.

C:\RVT\002182-Q-Central_exhaller.rvt
5/29/2011 3:16:49 PM

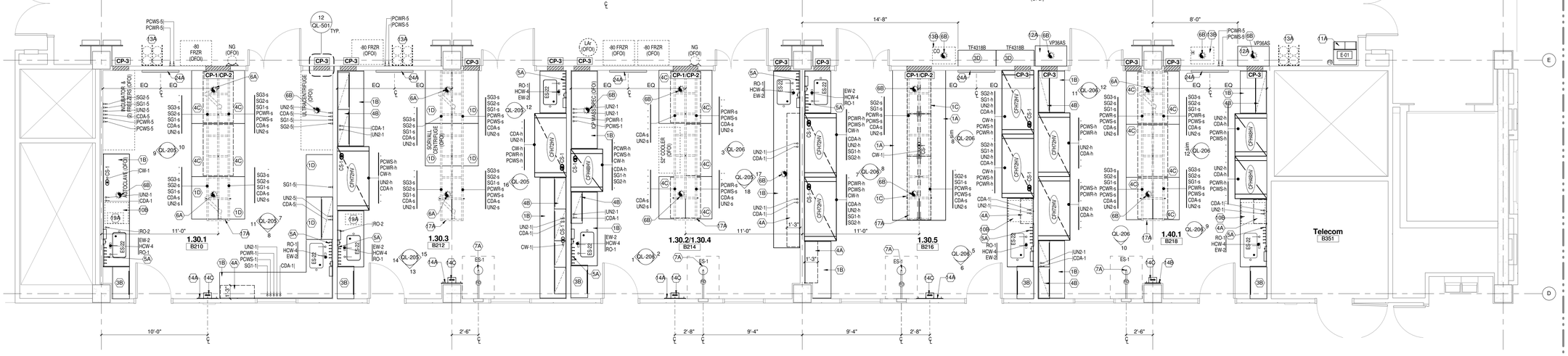
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1C	ADJUSTABLE HEIGHT, ISLAND REAGENT SHELVING
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
3D	TALL METAL STORAGE CABINET, FLAMMABLE
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
4C	ADJUSTABLE HEIGHT MOBILE LAB INSTRUMENT CART WITH UPPER FRAME AND ADJUSTABLE SHELVING W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL CARTS
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
10B	UNDER-COUNTER GLASSWARE WASHER (OFOI)
11A	ICE MAKER (CFCI)
12A	VACUUM PUMP CABINET W/ EPOXY TOP - STAND ALONE
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14B	LAB COAT HOOKS (18"W - 2 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD

QL-102A

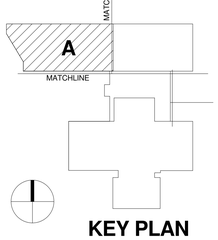


1 SECOND FLOOR - ENLARGED LABORATORY PLAN - AREA A

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-S, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SECOND FLOOR ENLARGED LABORATORY PLANS - AREA A

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVROY/BALLARD/LINK	A/E DWG. NO. QL-102A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-102A REV. NO.

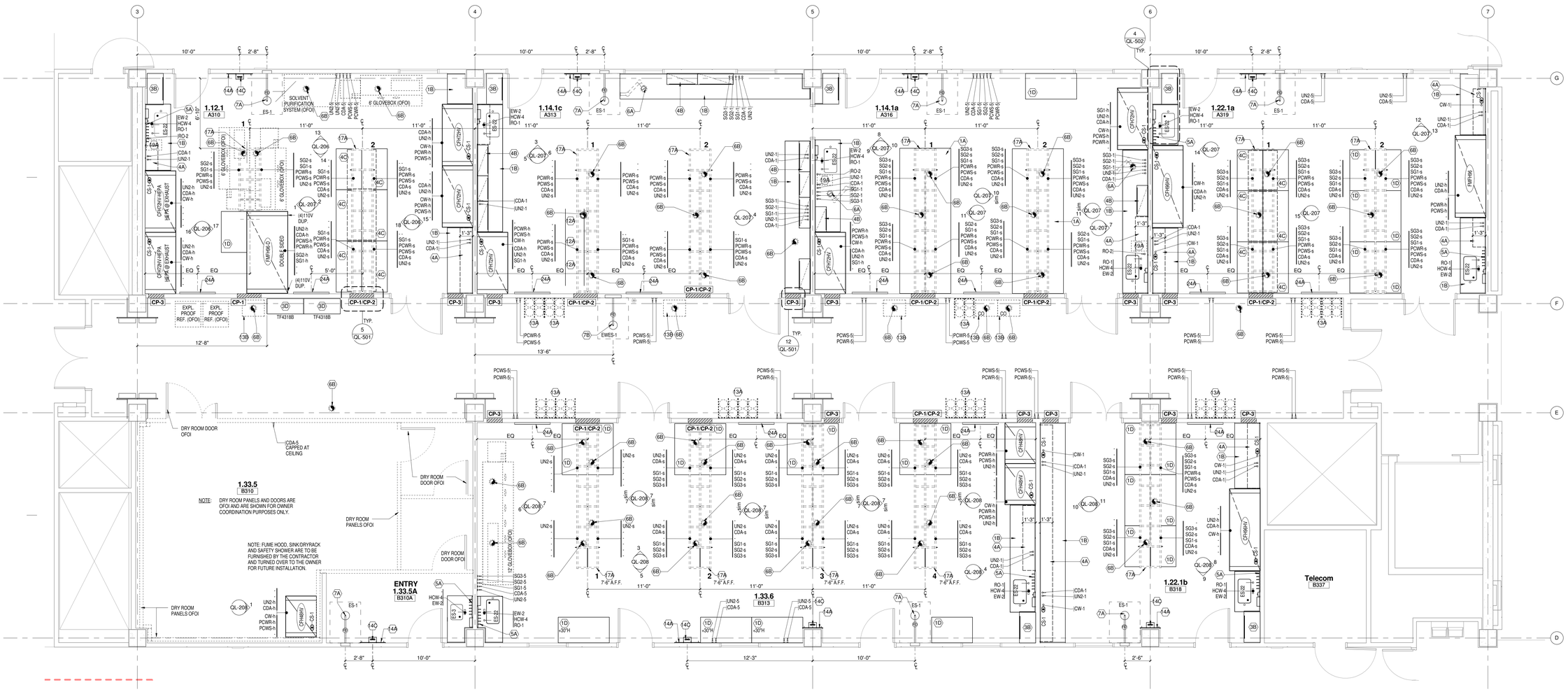
C:\RVT\002182-Q-Central_mballer.rvt
6/29/2011 3:16:50 PM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
3D	TALL METAL STORAGE CABINET, FLAMMABLE
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
4C	ADJUSTABLE HEIGHT MOBILE LAB INSTRUMENT CART WITH UPPER FRAME AND ADJUSTABLE SHELVING W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL CARTS
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
12A	VACUUM PUMP CABINET W/ EPOXY TOP - STAND ALONE
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD



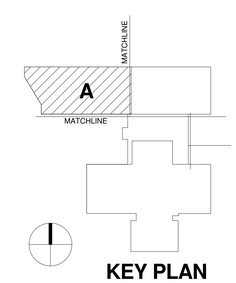
1 THIRD FLOOR - ENLARGED LABORATORY PLAN - AREA A

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HO'FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL

QL-103A



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR ENLARGED LABORATORY PLANS - AREA A

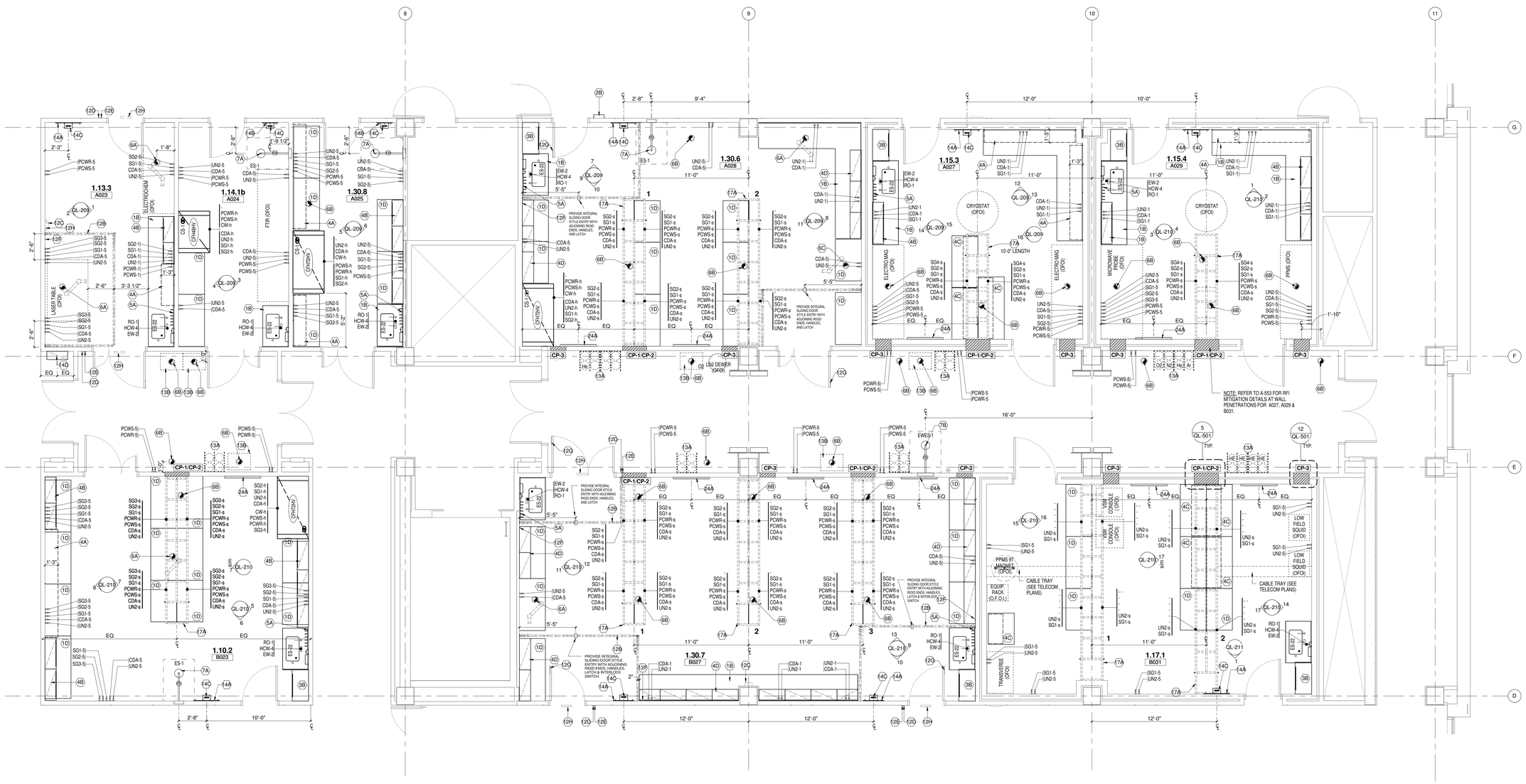
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-103A	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-QL-103A REV. NO.

C:\RVT\002182-Q-Central_mballar.rvt
6/29/2011 3:16:53 PM

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900



1 GROUND FLOOR - ENLARGED LABORATORY PLAN - AREA B
1/4" = 1'-0"

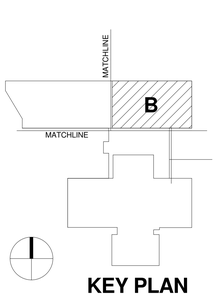
NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL

LAB KEYNOTES

#	ITEM DESCRIPTION
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
2B	LASER INTERLOCK
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
4C	ADJUSTABLE HEIGHT MOBILE LAB INSTRUMENT CART WITH UPPER FRAME AND ADJUSTABLE SHELVING W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL CARTS
4D	FIXED UPPER WALL CABINET W/ SOLID SWINGING METAL DOORS AND ADJUSTABLE HEIGHT SHELF
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6C	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - ALL METAL CONTRUCTION FOR HIGH TEMPERATURE USE
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
12B	LASER CURTAIN (SEE SPEC. #11 53 33) (LOCATIONS TO BE COORDINATED DURING CONSTRUCTION)
12C	LASER INTERLOCK, CONTROL PANEL (SEE SPEC. #11 53 33)
12D	LASER INTERLOCK, ENTRY KEYPAD (SEE SPEC. #11 53 33)
12E	LASER INTERLOCK, EMERGENCY ACCESS BUTTON (SEE SPEC. #11 53 33)
12F	LASER INTERLOCK, REMOTE REQUEST TO EXIT BUTTON (SEE SPEC. #11 53 33)
12G	LASER INTERLOCK, MAGNETIC LOCK (SEE SPEC. #11 53 33)
12H	LASER INTERLOCK, ILLUMINATED SAFETY SIGN (SEE SPEC. #11 53 33)
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14B	LAB COAT HOOKS (18"W - 2 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
14D	SAFETY GLASSES CABINET
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

QL-120B



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
GROUND FLOOR ENLARGED LABORATORY PLANS - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-120B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-120B REV. NO.

C:\R\T\002182-Q-Central_mBallar.rvt
5/29/2011 3:16:54 PM

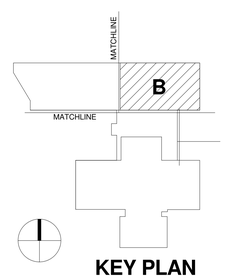
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

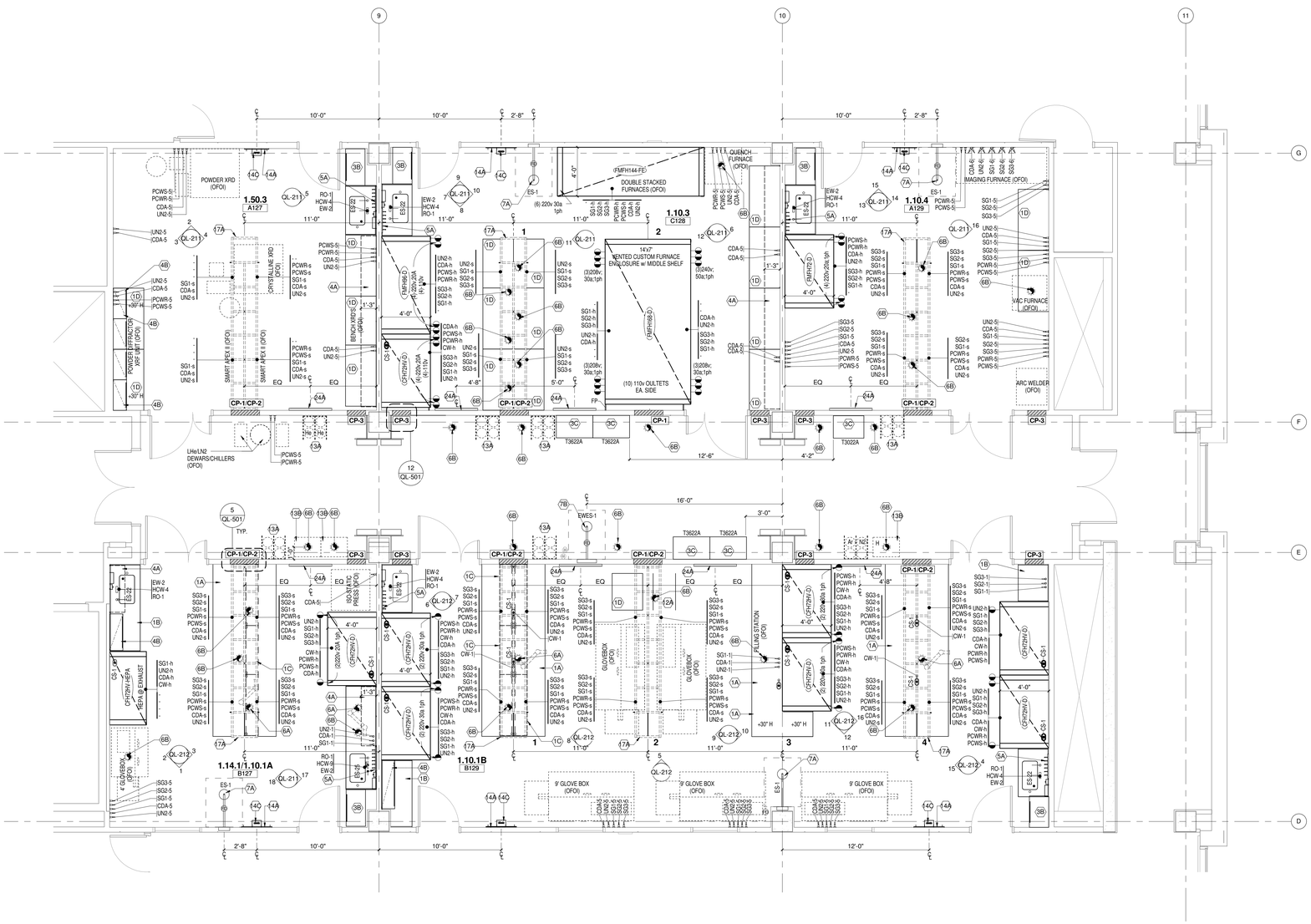
LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1C	ADJUSTABLE HEIGHT, ISLAND REAGENT SHELVING
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
3C	TALL METAL STORAGE CABINET W/ SOLID SWINGING DOORS AND ADJUSTABLE HEIGHT SHELVES
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
12A	VACUUM PUMP CABINET W/ EPOXY TOP - STAND ALONE
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

QL-121B



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.



1 FIRST FLOOR - ENLARGED LABORATORY PLAN - AREA B

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
FIRST FLOOR ENLARGED LABORATORY PLANS - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-121B	
CHECKED GREG BLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-121B REV. NO.

C:\R\V70\2182-Q-Central_mBallar.rvt
5/29/2011 3:16:58 PM

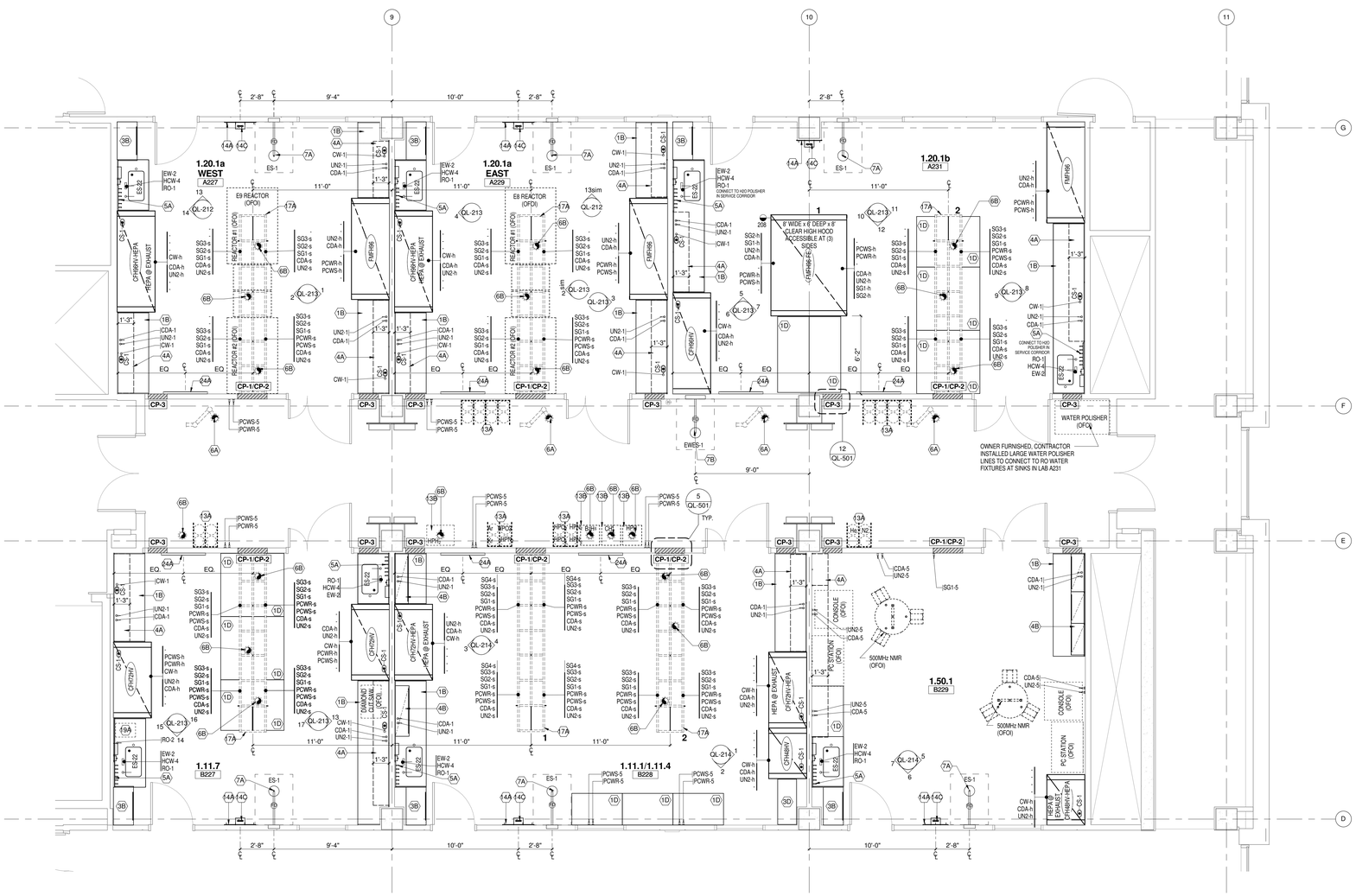
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

LAB KEYNOTES

#	ITEM DESCRIPTION
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
3D	TALL METAL STORAGE CABINET, FLAMMABLE
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
13A	CYLINDER STORAGE - MULTI-STORAGE RACKS (OFOI)
13B	EXHAUSTED, SPRINKLERED GAS CYLINDER STORAGE CABINET (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD



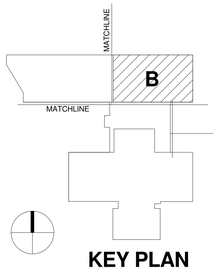
1 SECOND FLOOR - ENLARGED LABORATORY PLAN - AREA B

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL

QL-122B



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
SECOND FLOOR ENLARGED LABORATORY PLANS - AREA B

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-122B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-122B

REV. NO.

C:\RVT\002182-Q-Cores\j_mbaillar.rvt
6/29/2011 3:17:01 PM

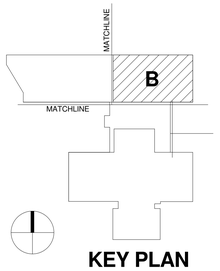
HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

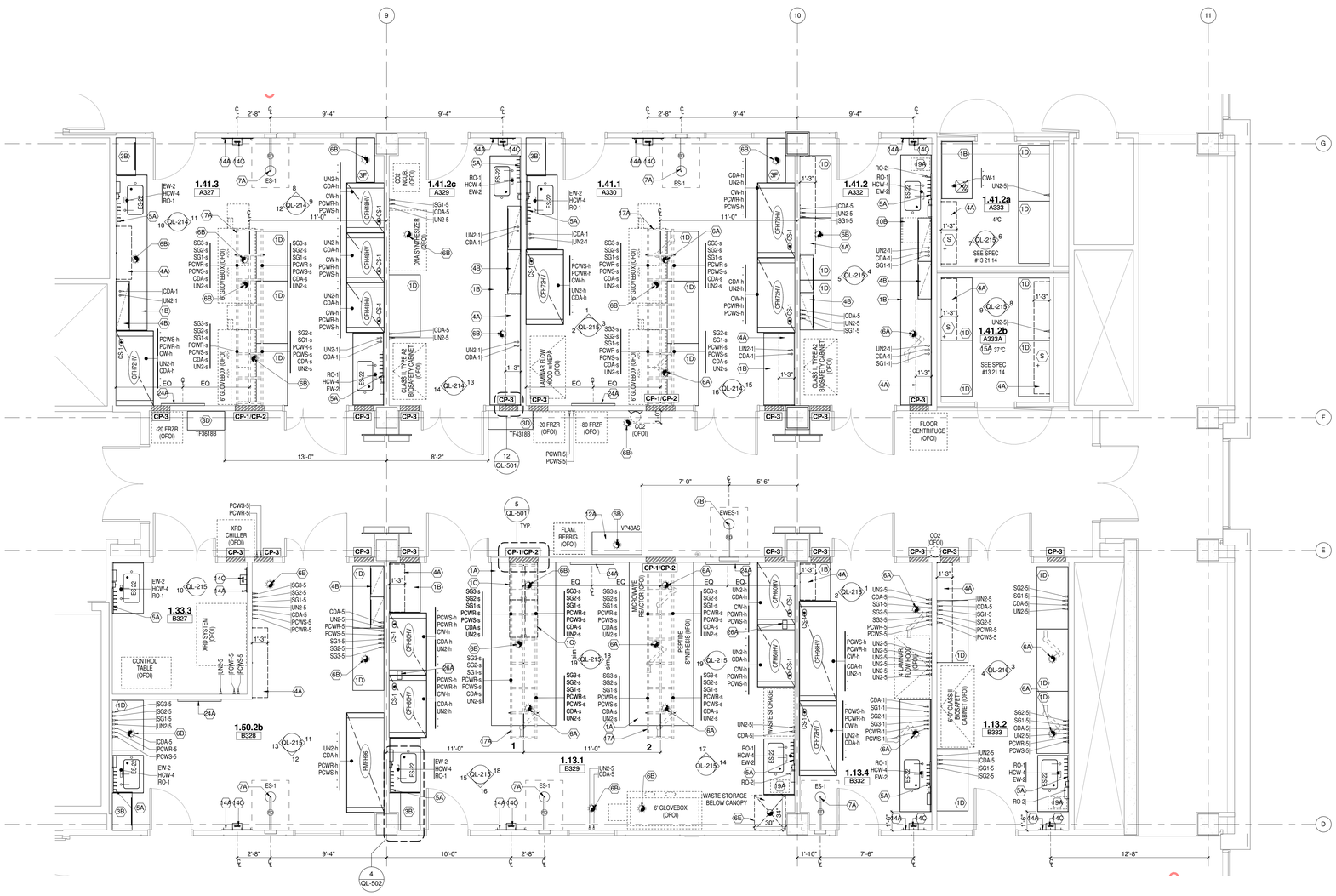
LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1B	BENCHTOP - FIXED AT WALL W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1C	ADJUSTABLE HEIGHT, ISLAND REAGENT SHELVING
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3B	TALL GLASSWARE STORAGE CABINET W/ SWINGING FRAMED GLASS DOORS AND ADJUSTABLE HEIGHT SHELVES
3D	TALL METAL STORAGE CABINET, FLAMMABLE
3F	TALL VENTED ACID STORAGE CABINET
4A	ADJ. HEIGHT METAL WALL SHELVING
4B	FIXED UPPER WALL CABINET W/ FRAMED, SWINGING GLASS DOORS AND ADJUSTABLE HEIGHT SHELF
5A	DRYING RACK
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6E	CANOPY EXHAUST HOOD
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
7B	WALL-RECESSED SAFETY SHOWER W/EYEWASH STATION (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
10B	UNDER-COUNTER GLASSWARE WASHER (OFOI)
12A	VACUUM PUMP CABINET W/ EPOXY TOP - STAND ALONE
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
15A	CONTROLLED ENVIRONMENT ROOM (SEE SPEC. #13 21 14)
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD
26A	4" DIA FUME HOOD PASS-THRU PORT

QL-123B



KEY PLAN

NOTE: SEE SHEETS QL-001 AND QL-002 FOR SYMBOL & ABBREVIATION DEFINITIONS AND FOR CASEWORK TYPES.



1 THIRD FLOOR - ENLARGED LABORATORY PLAN - AREA B

1/4" = 1'-0"

NOTE - ALL NON-FUME HOOD SPECIALTY GAS CONNECTIONS (SG#-1, SG#-5, SG#-S) ARE SHOWN FOR OWNER INFORMATION ONLY AND WILL BE CONSIDERED OWNER FURNISHED/OWNER INSTALLED FOR BIDDING PURPOSES. FUME HOOD SPECIALTY GAS CONNECTIONS ARE SHOWN FOR HOOD MANUFACTURER PRE-PIPING PURPOSES ONLY. ALL FINAL SPECIALTY GAS CONNECTIONS TO THE FUME HOOD FROM A SPECIALTY GAS SOURCE WILL BE OFOI.

DIMENSIONS AT WALLS ARE TO THE CENTER LINE OF THE WALL

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

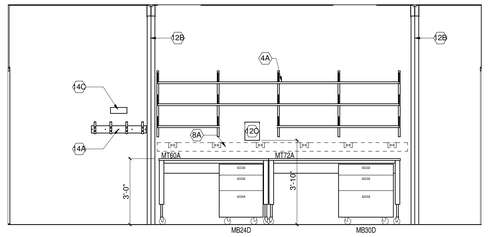
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
THIRD FLOOR ENLARGED LABORATORY PLANS - AREA B

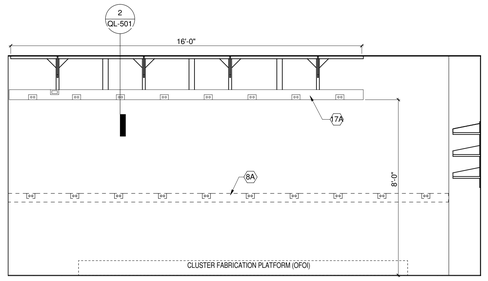
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-123B	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-123B — REV. NO.

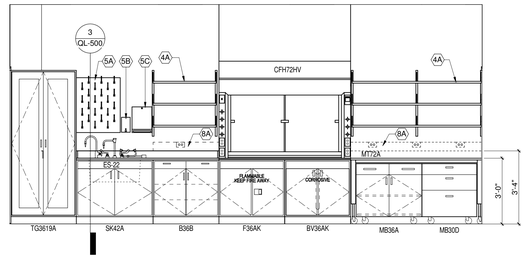
C:\RVT\002182-Q-Central_mBallar.rvt
5/29/2011 3:17:02 PM



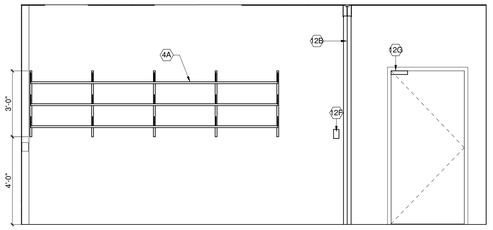
1 1.32.3b - EAST WALL ELEVATION
3/8" = 1'-0"



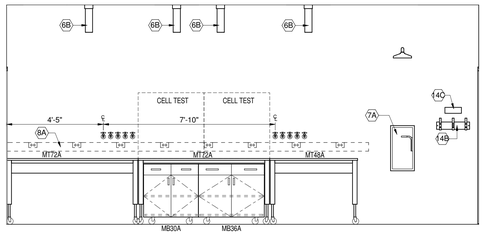
2 1.32.3b - WEST WALL ELEVATION
3/8" = 1'-0"



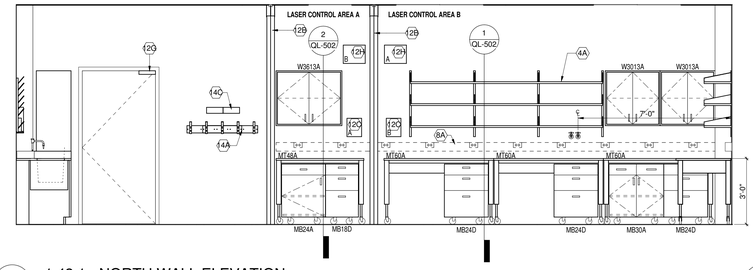
3 1.32.3a - EAST WALL ELEVATION
3/8" = 1'-0"



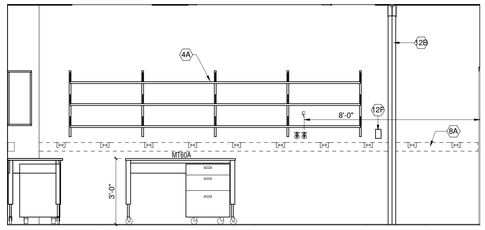
4 1.32.3b - NORTH WALL ELEVATION
3/8" = 1'-0"



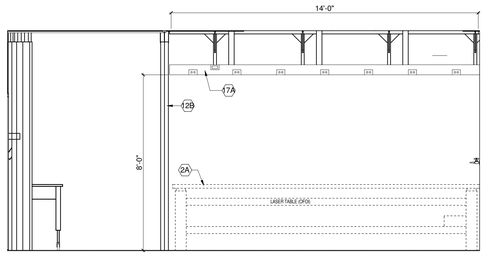
5 1.32.3a - WEST WALL ELEVATION
3/8" = 1'-0"



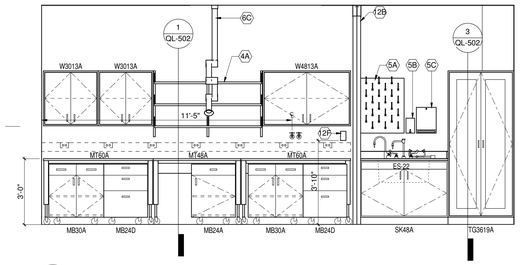
6 1.43.1 - NORTH WALL ELEVATION
3/8" = 1'-0"



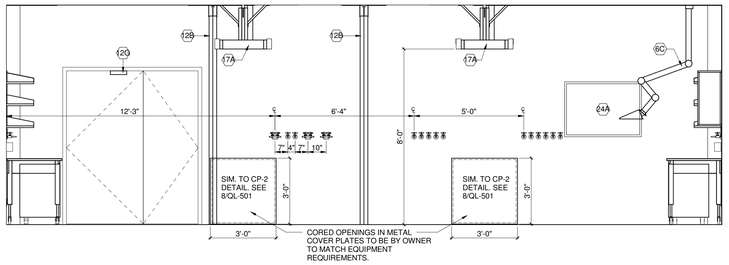
7 1.43.1 - EAST WALL ELEVATION
3/8" = 1'-0"



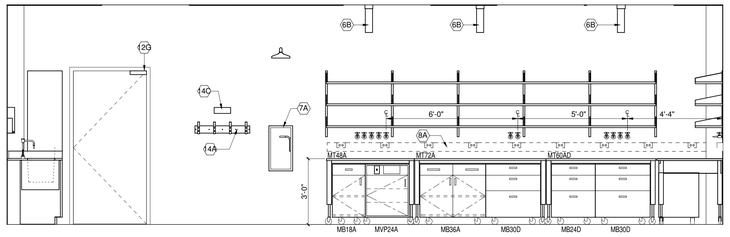
8 1.43.1 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



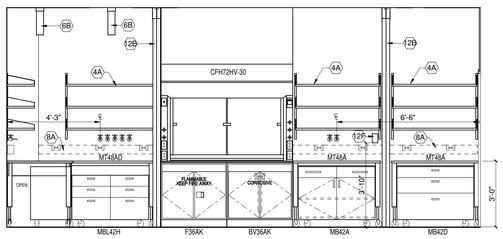
9 1.43.1 - WEST WALL ELEVATION
3/8" = 1'-0"



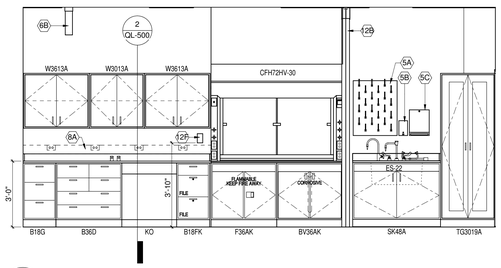
10 1.43.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



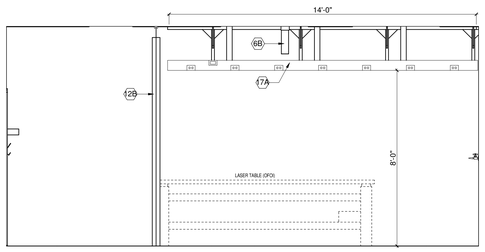
11 1.31.3 - NORTH WALL ELEVATION
3/8" = 1'-0"



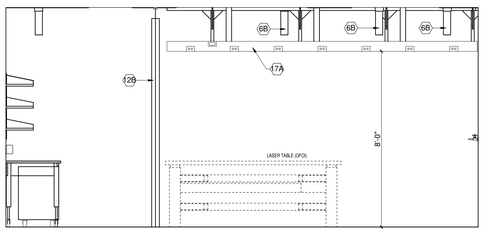
12 1.31.3 - EAST WALL ELEVATION
3/8" = 1'-0"



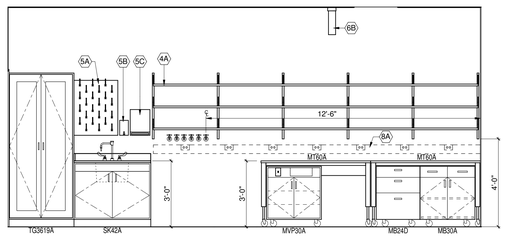
13 1.31.3 - WEST WALL ELEVATION
3/8" = 1'-0"



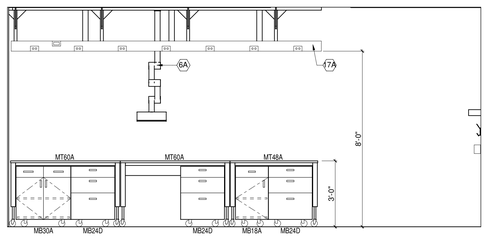
14 1.31.3 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



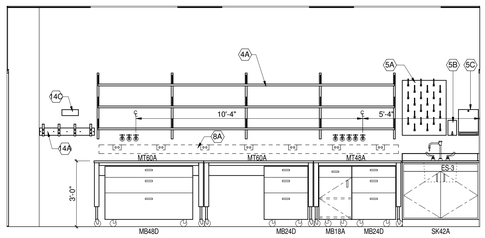
15 1.31.3 - EAST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



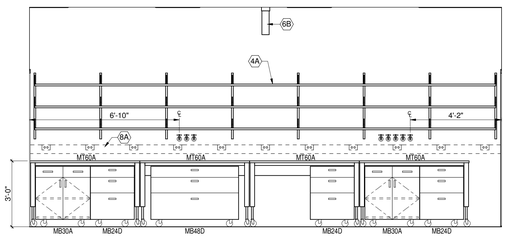
16 1.12.3 - WEST WALL ELEVATION
3/8" = 1'-0"



17 1.12.3 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



18 1.12.2 - EAST WALL ELEVATION
3/8" = 1'-0"



19 1.12.2 - WEST WALL ELEVATION
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-200

LAB KEYNOTES	
#	ITEM DESCRIPTION
2A	LASER TABLE (OFOI)
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6C	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - ALL METAL CONTRUCTION FOR HIGH TEMPERATURE USE.
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
12B	LASER CURTAIN (SEE SPEC. #11 53 33) (LOCATIONS TO BE COORDINATED DURING CONSTRUCTION)
12C	LASER INTERLOCK, CONTROL PANEL (SEE SPEC. #11 53 33)
12F	LASER INTERLOCK, REMOTE REQUEST TO EXIT BUTTON (SEE SPEC. #11 53 33)
12G	LASER INTERLOCK, MAGNETIC LOCK (SEE SPEC. #11 53 33)
12H	LASER INTERLOCK, ILLUMINATED SAFETY SIGN (SEE SPEC. #11 53 33)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14B	LAB COAT HOOKS (18"W - 2 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

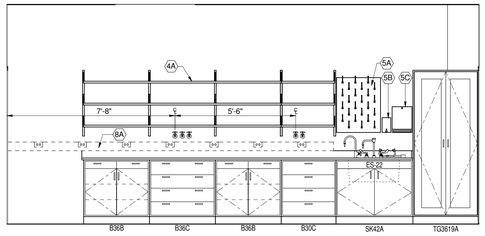
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

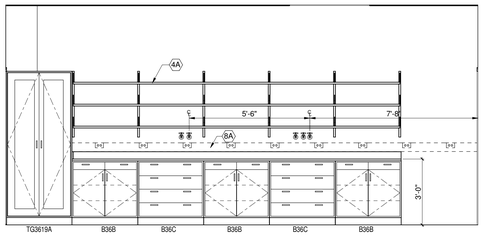
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-200	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101-QL-200 REV. NO.

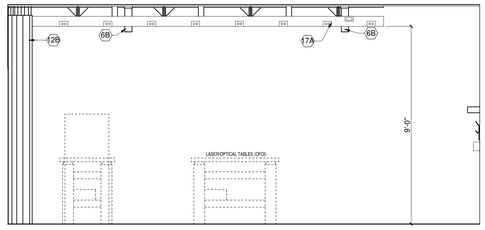
C:\RVT\002182-Q-Central_mballar.rvt
6/29/2011 3:17:19 PM



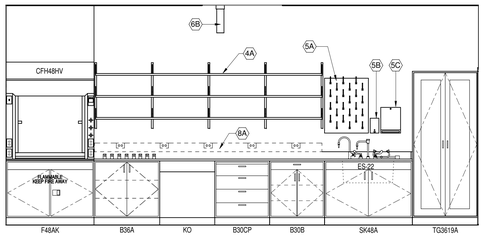
1 1.14.3 - EAST WALL ELEVATION
3/8" = 1'-0"



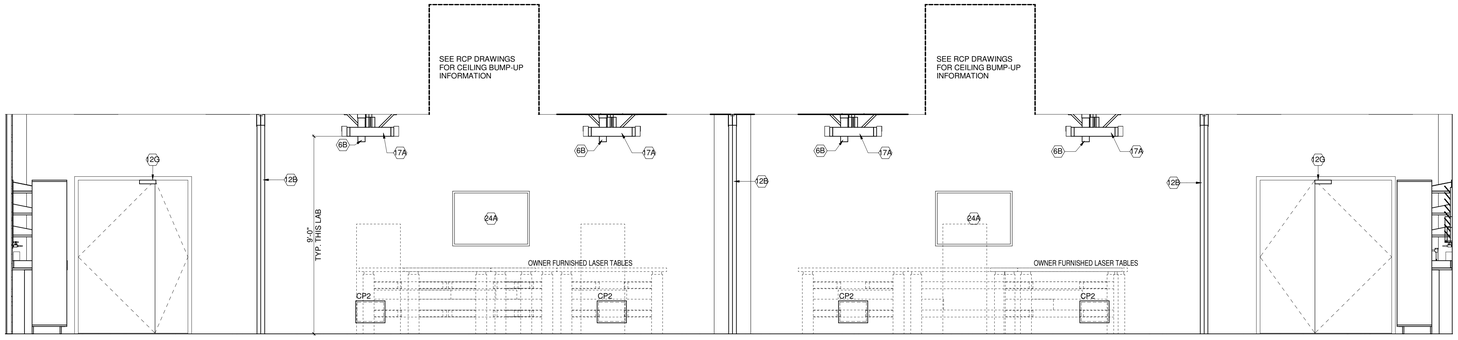
2 1.14.3 - WEST WALL ELEVATION
3/8" = 1'-0"



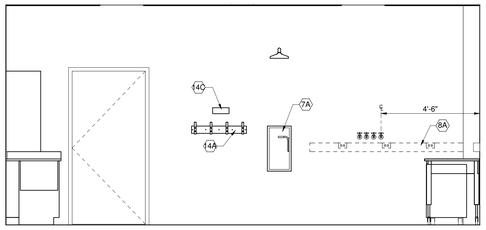
3 1.14.3 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



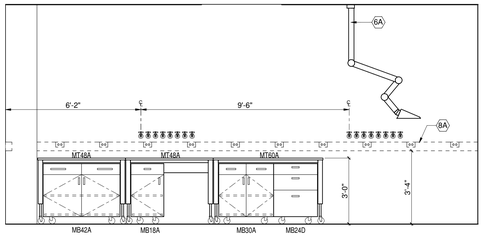
4 1.11.5 - EAST WALL ELEVATION
3/8" = 1'-0"



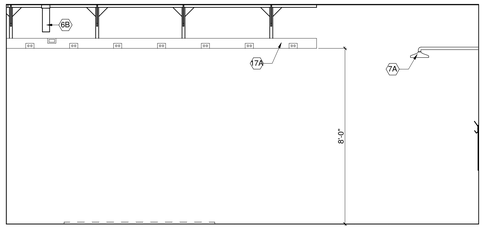
5 1.14.3 - ISLAND ELEVATION LOOKING NORTH
3/8" = 1'-0"



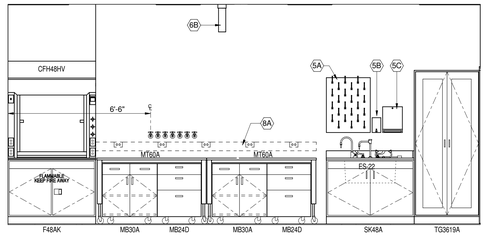
6 1.11.5 - SOUTH WALL ELEVATION
3/8" = 1'-0"



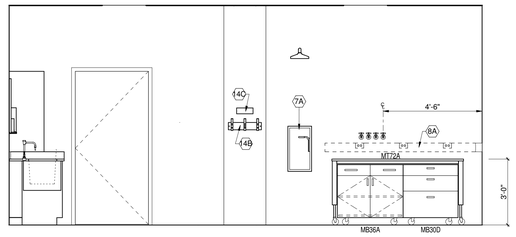
7 1.11.5 - WEST WALL ELEVATION
3/8" = 1'-0"



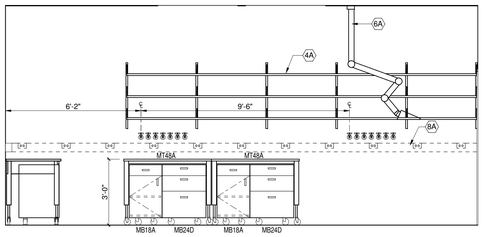
8 1.11.5 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



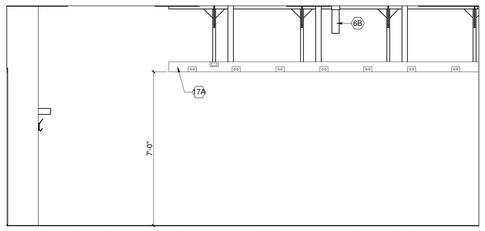
9 1.50.4 - EAST WALL ELEVATION
3/8" = 1'-0"



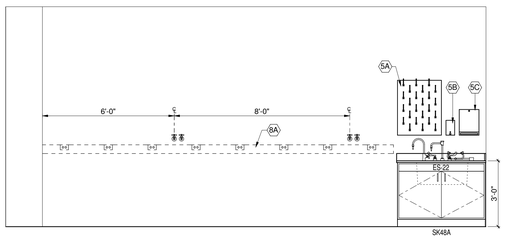
10 1.50.4 - SOUTH WALL ELEVATION
3/8" = 1'-0"



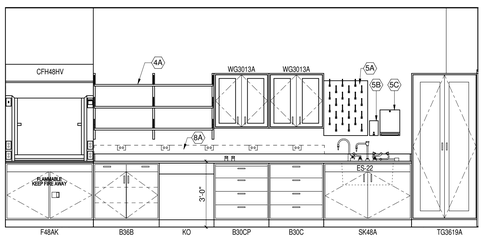
11 1.50.4 - WEST ELEVATION
3/8" = 1'-0"



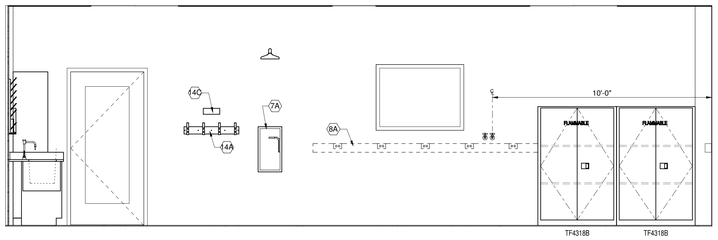
12 1.50.4 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



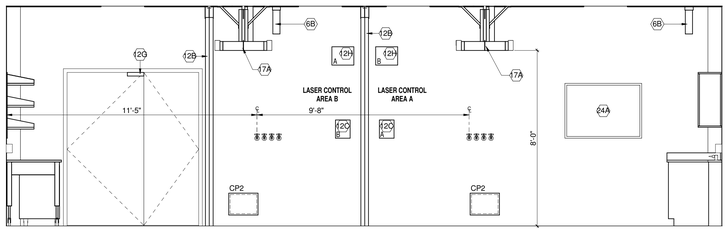
13 1.11.2 - EAST WALL ELEVATION
3/8" = 1'-0"



14 1.11.2 - WEST WALL ELEVATION
3/8" = 1'-0"



15 1.11.2 - NORTH WALL ELEVATION
3/8" = 1'-0"



16 1.31.3 - SOUTH WALL ELEVATION
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-201

LAB KEYNOTES	
#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
12B	LASER CURTAIN (SEE SPEC. #11 53 33) (LOCATIONS TO BE COORDINATED DURING CONSTRUCTION)
12C	LASER INTERLOCK, CONTROL PANEL (SEE SPEC. #11 53 33)
12G	LASER INTERLOCK, MAGNETIC LOCK (SEE SPEC. #11 53 33)
12H	LASER INTERLOCK, ILLUMINATED SAFETY SIGN (SEE SPEC. #11 53 33)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14B	LAB COAT HOOKS (18"W - 2 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

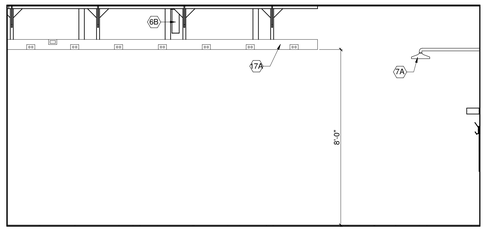
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

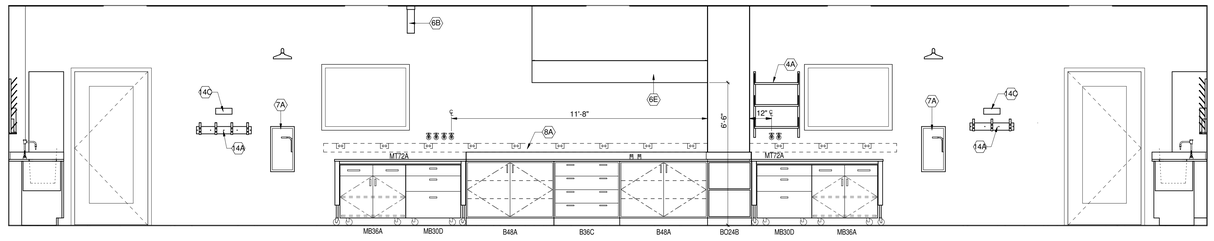
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-201	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-201 REV. NO.

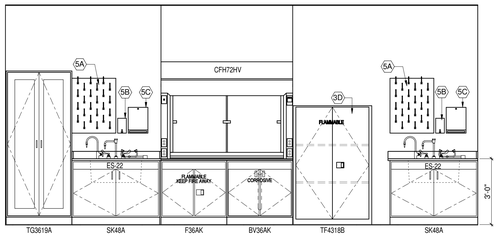
C:\RVT\002182-Q-Center\J_mballar.rvt
6/29/2011 3:17:33 PM



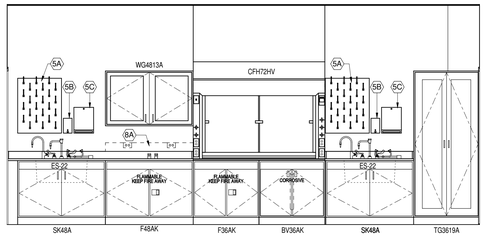
1 1.11.2 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



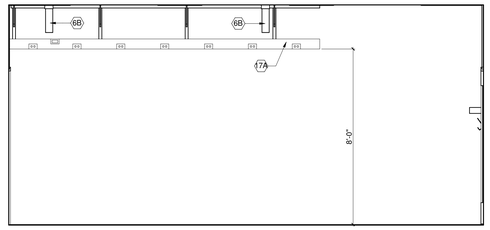
2 1.11.3 - NORTH WALL ELEVATION
3/8" = 1'-0"



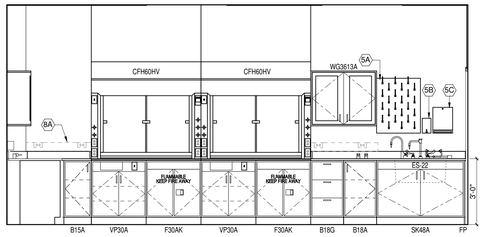
3 1.11.3 - EAST WALL ELEVATION
3/8" = 1'-0"



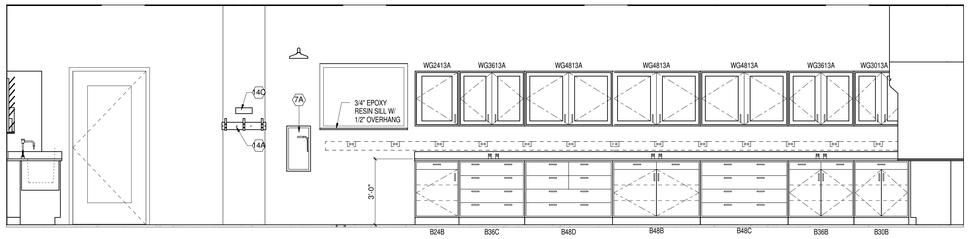
4 1.11.3 - WEST WALL ELEVATION
3/8" = 1'-0"



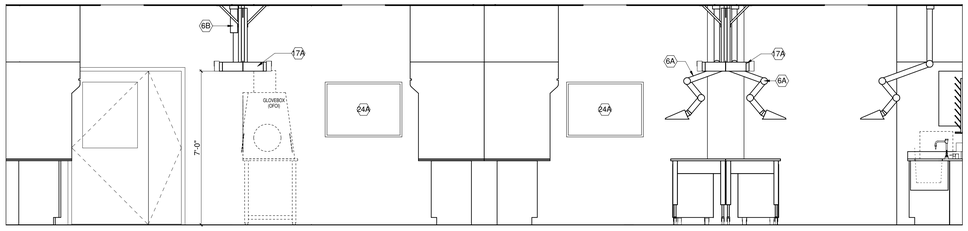
5 1.11.3 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



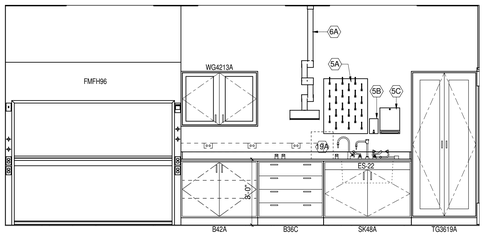
6 1.33.4 - EAST WALL ELEVATION
3/8" = 1'-0"



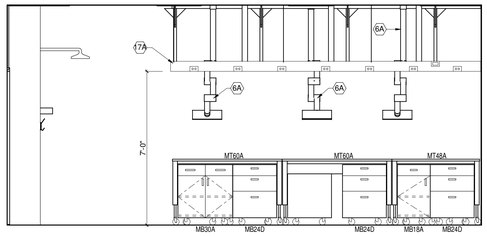
7 1.33.4 - NORTH WALL ELEVATION
3/8" = 1'-0"



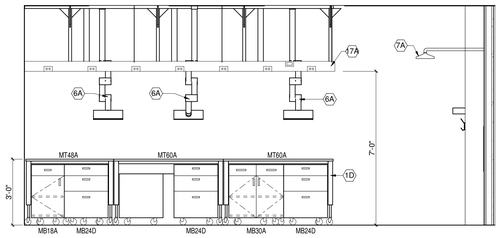
8 1.33.4 - SOUTH ELEVATION AT ISLANDS
3/8" = 1'-0"



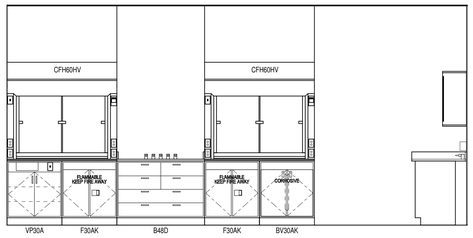
9 1.33.4 - WEST WALL ELEVATION
3/8" = 1'-0"



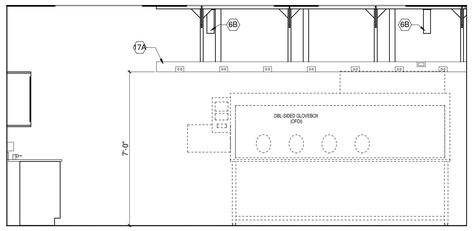
10 1.33.4 - ISLAND ELEVATION LOOKING EAST AT MOBILE TABLES
3/8" = 1'-0"



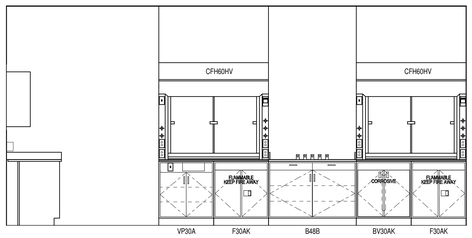
11 1.33.4 - ISLAND ELEVATION LOOKING WEST AT MOBILE TABLES
3/8" = 1'-0"



12 1.33.4 - ISLAND ELEVATION LOOKING WEST AT FUME HOODS
3/8" = 1'-0"



13 1.33.4 - ISLAND ELEVATION LOOKING EAST AT GLOVEBOX
3/8" = 1'-0"



14 1.33.4 - ISLAND ELEVATION LOOKING EAST AT FUME HOODS
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-202

LAB KEYNOTES

#	ITEM DESCRIPTION
1D	ADJUSTABLE HEIGHT MOBILE LAB TABLE W/ LOCKING CASTERS AND LEVELERS; GROMMETS AT ALL TABLES
3D	TALL METAL STORAGE CABINET, FLAMMABLE
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6E	CANOPY EXHAUST HOOD
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

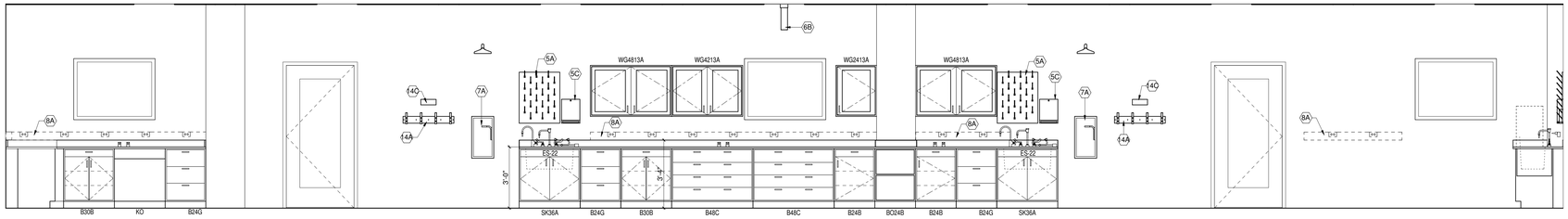
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

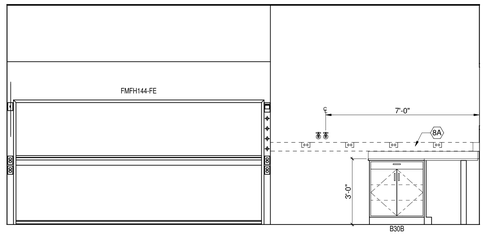
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVR0Y/BALLARD/LINK	A/E DWG. NO. QL-202	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-202 REV. NO.

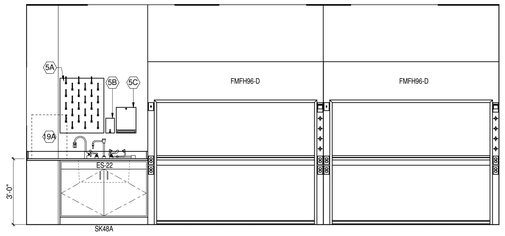
C:/R/IT/002182-Q-Central_mballar.rvt
6/29/2011 3:17:45 PM



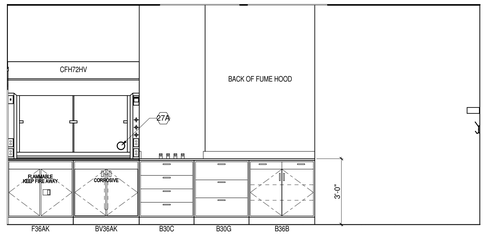
1 1.33.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



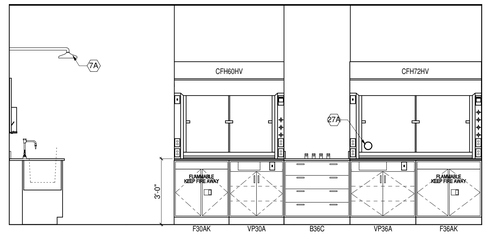
2 1.33.1 - EAST WALL ELEVATION
3/8" = 1'-0"



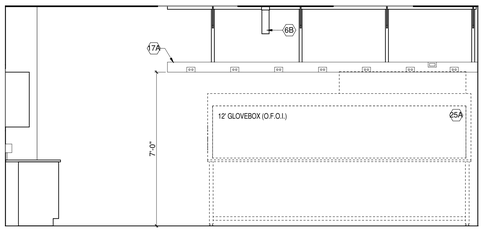
3 1.33.1 - WEST WALL ELEVATION
3/8" = 1'-0"



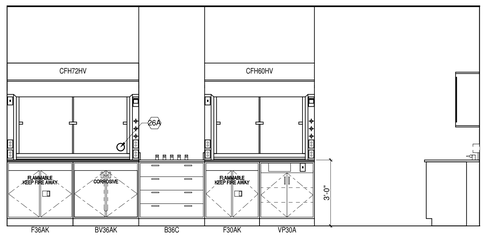
4 1.33.1 - ISLAND ELEVATION LOOKING EAST AT FIXED BENCH
3/8" = 1'-0"



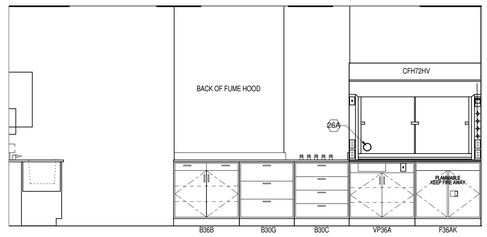
5 1.33.1 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



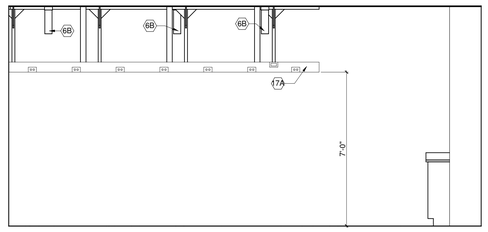
6 1.33.1 - ISLAND ELEVATION LOOKING WEST AT GLOVE BOX
3/8" = 1'-0"



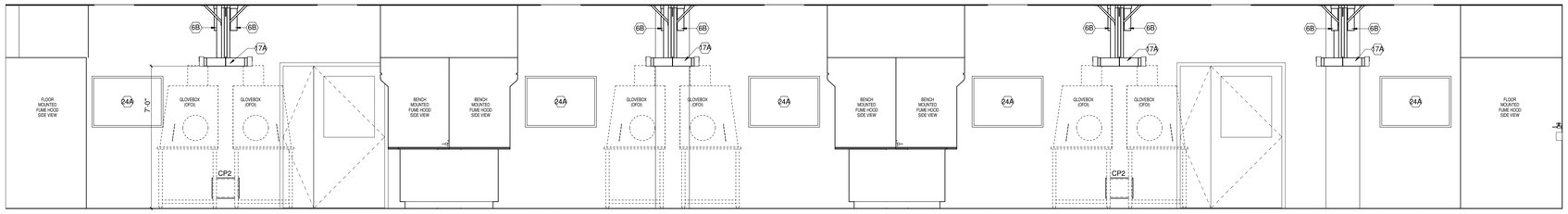
7 1.33.1 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



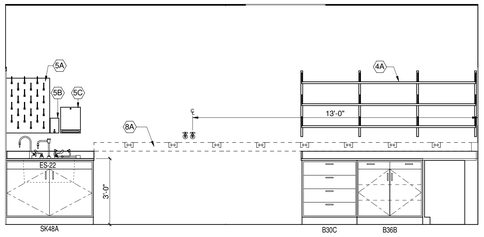
8 1.33.1 - ISLAND ELEVATION LOOKING WEST AT FIXED BENCH
3/8" = 1'-0"



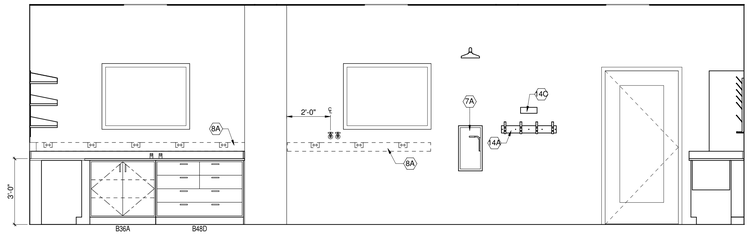
9 1.33.1 - ISLAND ELEVATION AT OVERHEAD SERVICE CARRIER
3/8" = 1'-0"



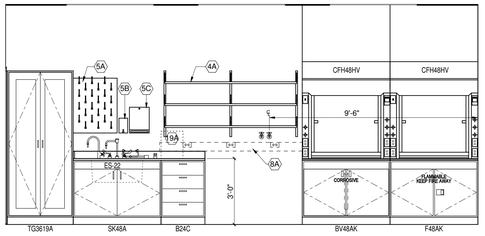
10 1.33.1 - NORTH ELEVATION AT ISLANDS
3/8" = 1'-0"



11 1.33.2 - EAST WALL ELEVATION
3/8" = 1'-0"



12 1.33.2 - SOUTH WALL ELEVATION
3/8" = 1'-0"



13 1.33.2 - WEST WALL ELEVATION
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-203

LAB KEYNOTES	
#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD
25A	GLOVE BOX (OFOI)
26A	4" DIA FUME HOOD PASS-THRU PORT
27A	

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

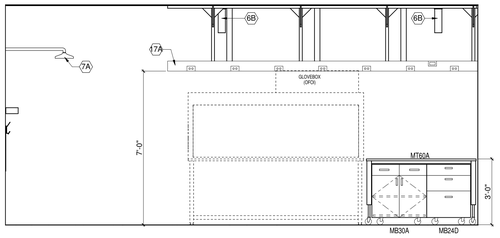
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

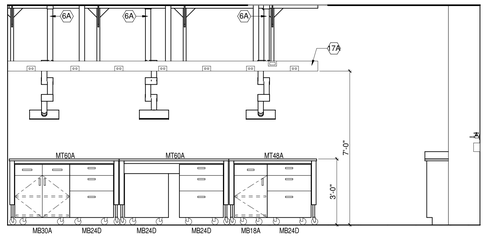
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-203	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-203 REV. NO.

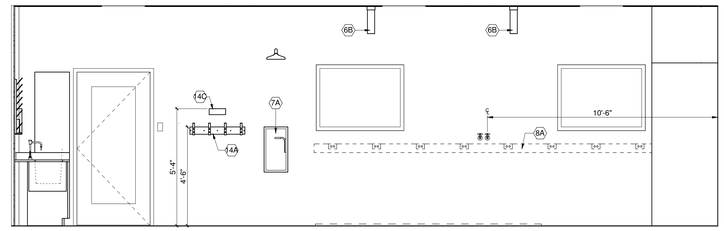
C:\RVT\002182-Q-Central_mballar.rvt
6/29/2011 3:17:57 PM



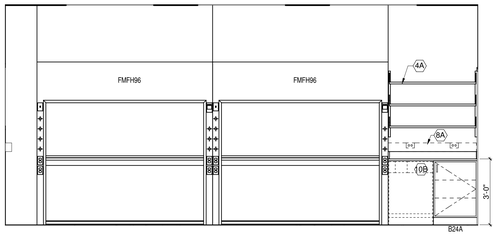
1 1.33.2 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



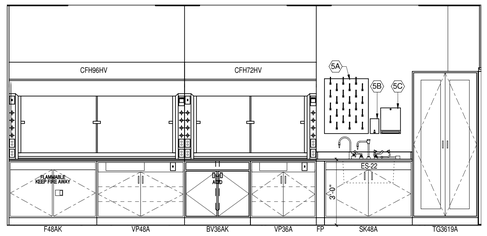
2 1.33.2 - EAST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



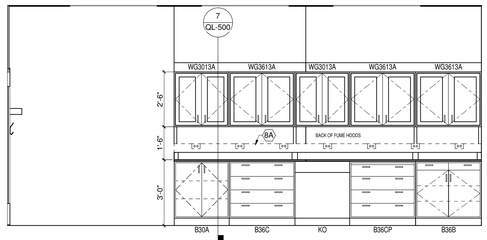
3 1.31.1 - NORTH WALL ELEVATION
3/8" = 1'-0"



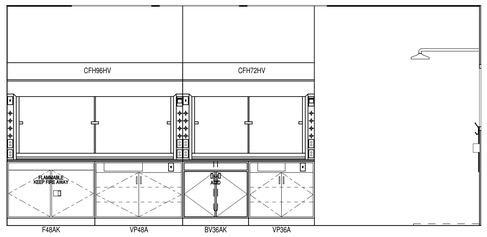
4 1.31.1 - EAST WALL ELEVATION
3/8" = 1'-0"



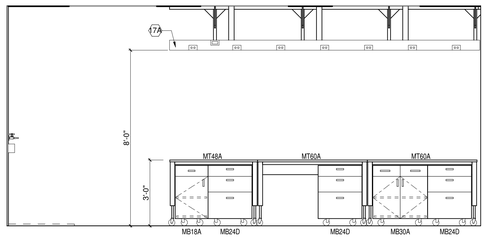
5 1.31.1 - WEST WALL ELEVATION
3/8" = 1'-0"



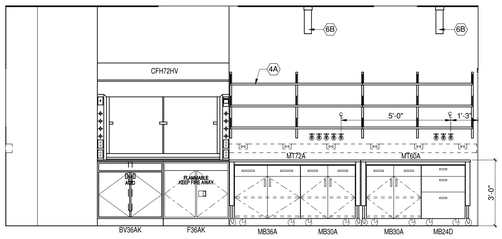
6 1.31.1 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



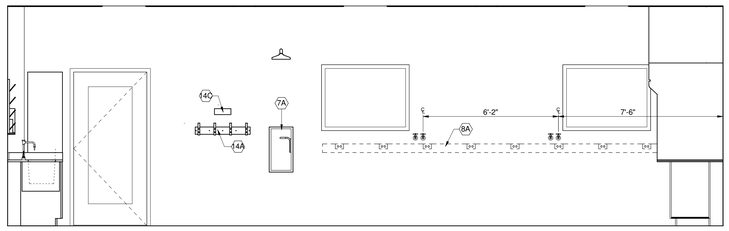
7 1.31.1 - WEST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



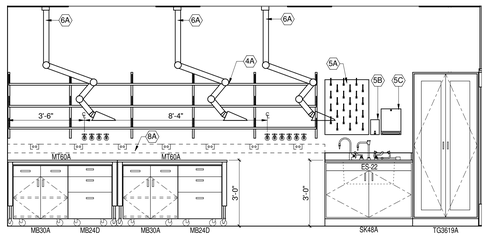
8 1.31.1 - EAST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



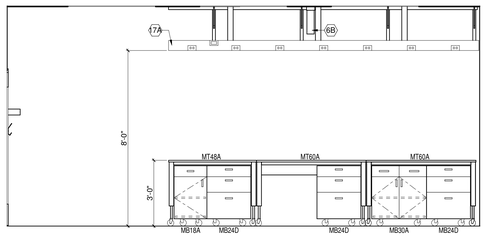
9 1.31.2 - EAST WALL ELEVATION
3/8" = 1'-0"



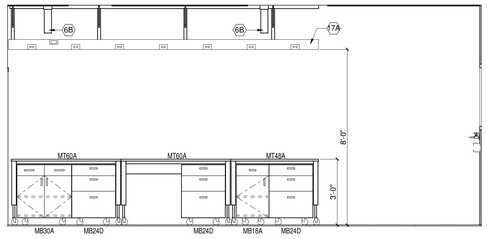
10 1.31.2 - NORTH WALL ELEVATION
3/8" = 1'-0"



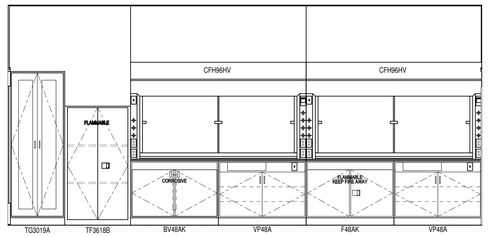
11 1.31.2 - WEST WALL ELEVATION
3/8" = 1'-0"



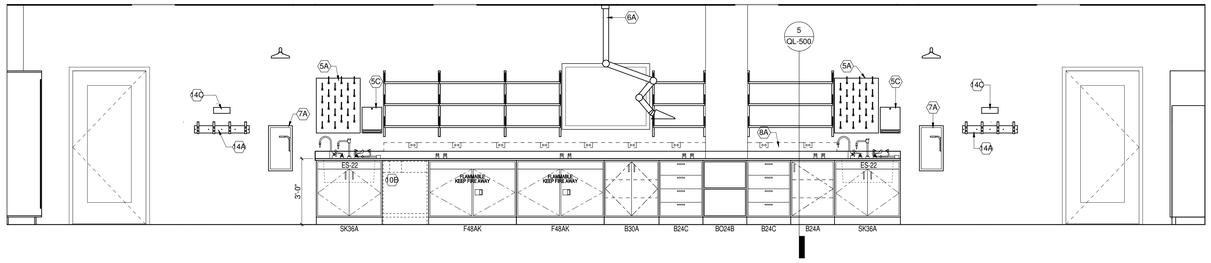
12 1.31.2 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



13 1.31.2 - EAST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



14 1.32.1 - EAST WALL ELEVATION
3/8" = 1'-0"



15 1.32.1 - NORTH WALL ELEVATION
3/8" = 1'-0"

C:\RVT\002182-Q-Central_mhaller.rvt
6/29/2011 3:18:10 PM

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-204

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL".
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
10B	UNDER-COUNTER GLASSWARE WASHER (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

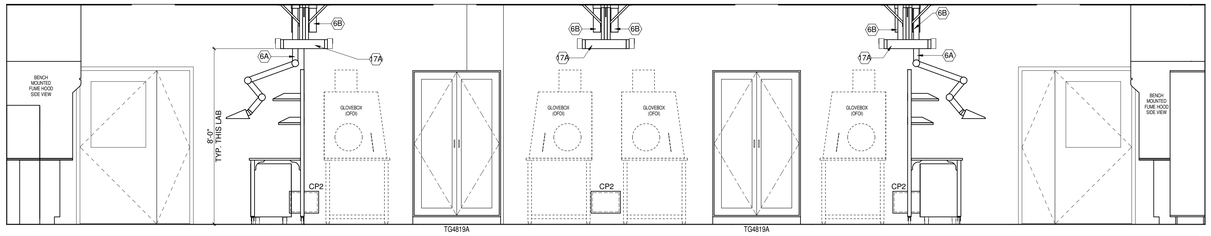
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

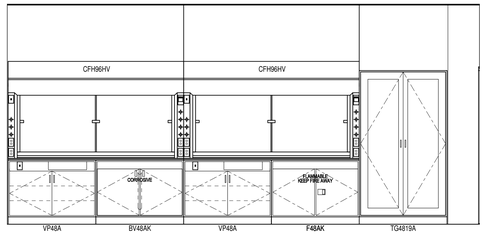
DOCUMENT TITLE
LABORATORY ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-204	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

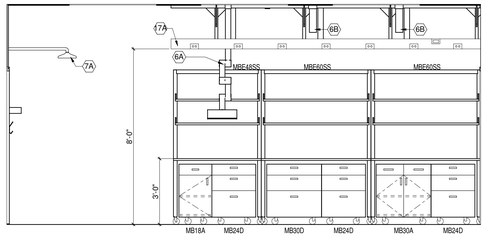
FACILITY DOCUMENT NUMBER J241-101- QL-204 REV. NO.



1 1.32.1 - SOUTH ELEVATION AT ISLANDS
3/8" = 1'-0"

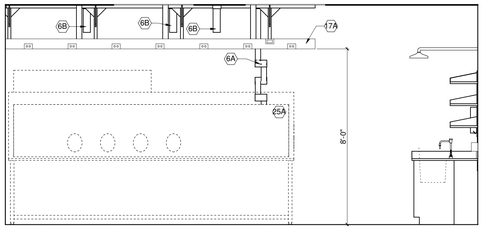


2 1.32.1 - WEST WALL ELEVATION
3/8" = 1'-0"

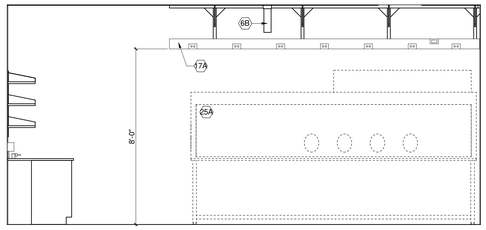


* MIRROR FOR ISLAND #3 ELEVATION LOOKING WEST

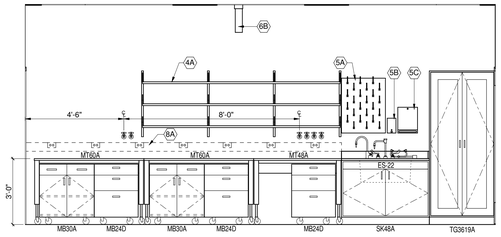
3 1.32.1 - ISLAND #1 ELEVATION LOOKING EAST
3/8" = 1'-0"



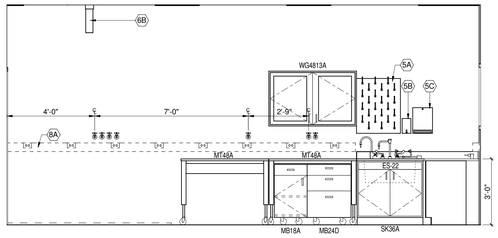
4 1.32.1 - ISLAND #1 ELEVATION LOOKING WEST
3/8" = 1'-0"



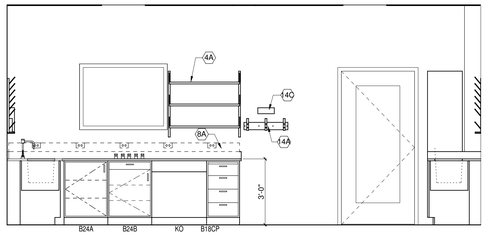
5 1.32.1 - ISLAND #2 ELEVATION LOOKING EAST
3/8" = 1'-0"



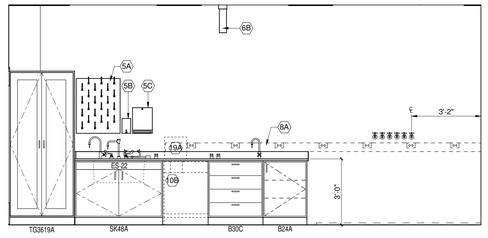
6 1.50.2a - WEST WALL ELEVATION
3/8" = 1'-0"



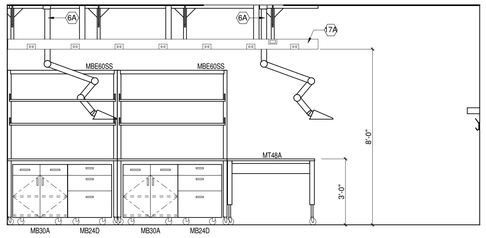
7 1.30.1 - EAST WALL ELEVATION
3/8" = 1'-0"



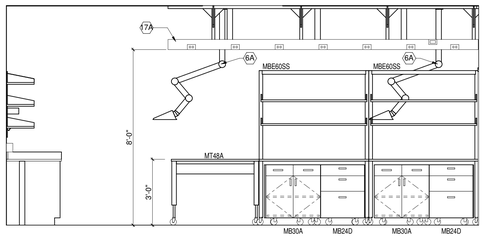
8 1.30.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



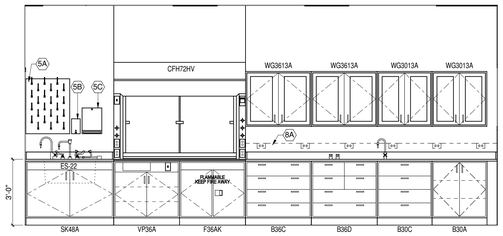
9 1.30.1 - WEST WALL ELEVATION
3/8" = 1'-0"



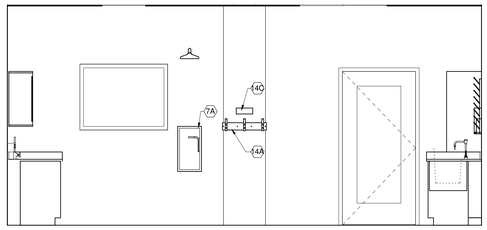
10 1.30.1 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



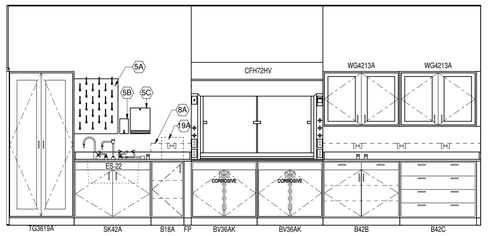
11 1.30.1 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



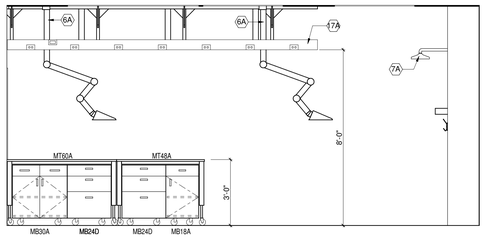
12 1.30.3 - EAST WALL ELEVATION
3/8" = 1'-0"



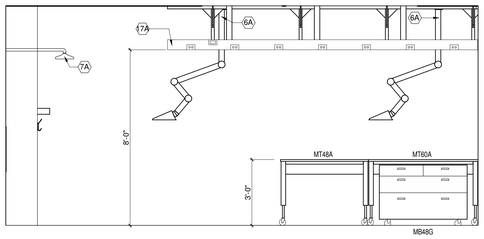
13 1.30.3 - SOUTH WALL ELEVATION
3/8" = 1'-0"



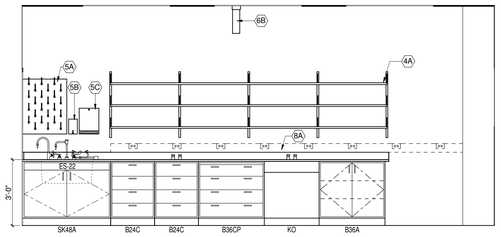
14 1.30.3 - WEST WALL ELEVATION
3/8" = 1'-0"



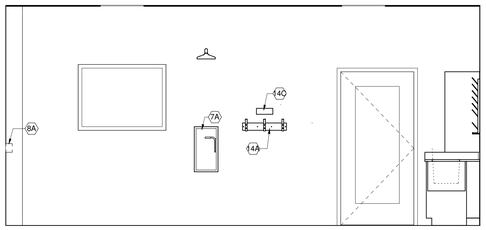
15 1.30.3 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



16 1.30.3 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



17 1.30.2/1.30.4 - EAST WALL ELEVATION
3/8" = 1'-0"



18 1.30.2/1.30.4 - SOUTH WALL ELEVATION
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-205

LAB KEYNOTES	
#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
10B	UNDER-COUNTER GLASSWARE WASHER (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
25A	GLOVE BOX (OFOI)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

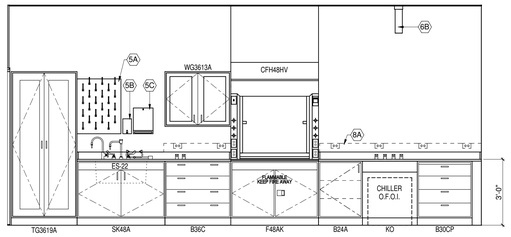
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

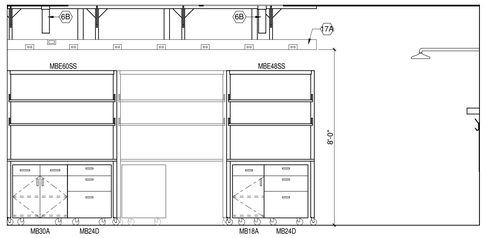
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-205	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-205 REV. NO.

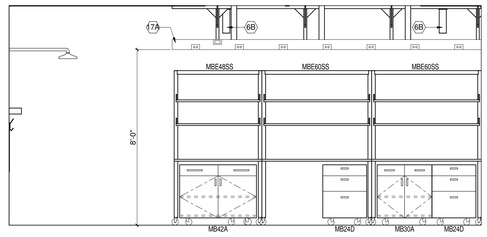
C:\R17\002182-Q-Central_mballar.rvt
6/29/2011 3:18:26 PM



1 1.30.2/1.30.4 - WEST WALL ELEVATION
3/8" = 1'-0"

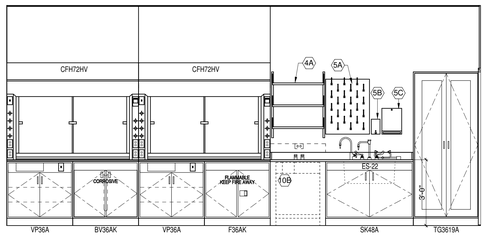


2 1.30.2/1.30.4 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"

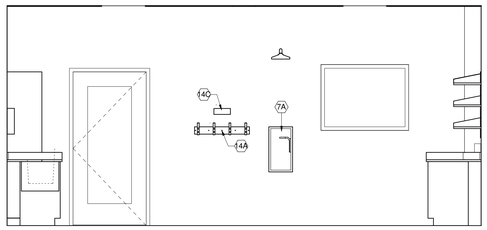


3 1.30.2/1.30.4 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

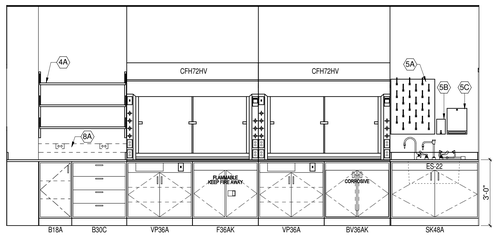
4 NOT USED



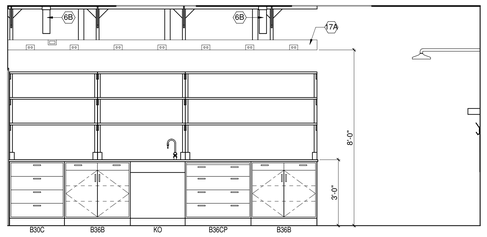
5 1.30.5 - EAST WALL ELEVATION
3/8" = 1'-0"



6 1.30.5 - SOUTH WALL ELEVATION
3/8" = 1'-0"

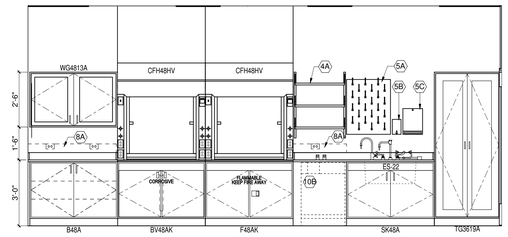


7 1.30.5 - WEST WALL ELEVATION
3/8" = 1'-0"

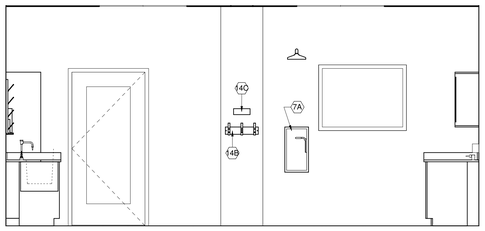


*NOTE: MIRROR ELEVATION FOR OPPOSITE SIDE CASEWORK

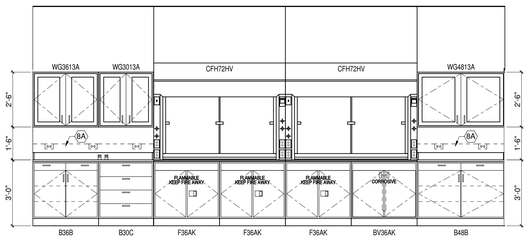
8 1.30.5 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



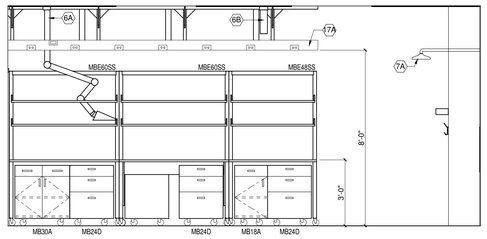
9 1.40.1 - EAST WALL ELEVATION
3/8" = 1'-0"



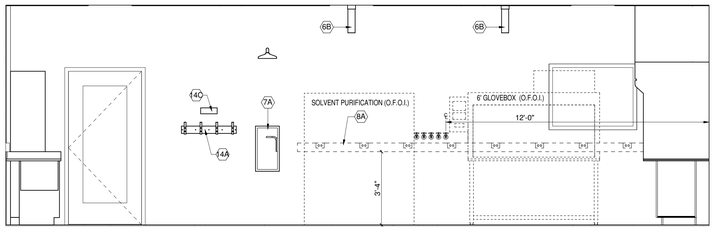
10 1.40.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



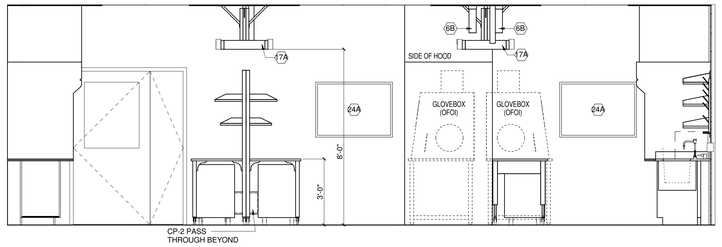
11 1.40.1 - WEST WALL ELEVATION
3/8" = 1'-0"



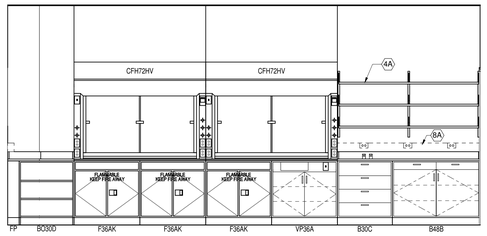
12 1.40.1 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



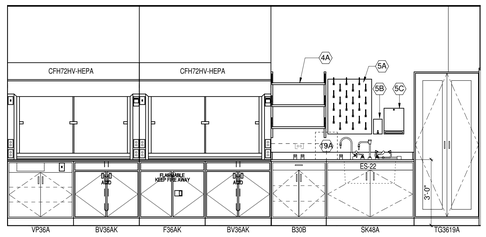
13 1.12.1 - NORTH WALL ELEVATION
3/8" = 1'-0"



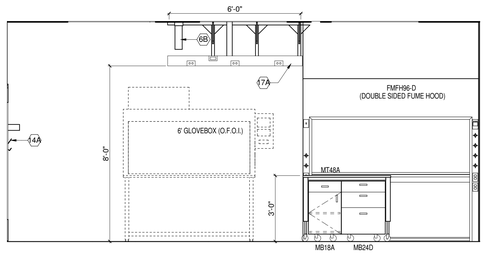
14 1.12.1 - SOUTH ELEVATION AT ISLANDS
3/8" = 1'-0"



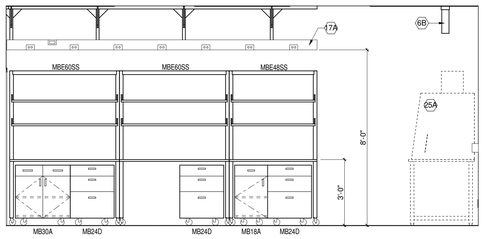
15 1.12.1 - EAST WALL ELEVATION
3/8" = 1'-0"



16 1.12.1 - WEST WALL ELEVATION
3/8" = 1'-0"



17 1.12.1 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



18 1.12.1 - ISLAND #2 ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-206

LAB KEYNOTES	
#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
10B	UNDER-COUNTER GLASSWARE WASHER (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14B	LAB COAT HOOKS (18"W - 2 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD
25A	GLOVE BOX (OFOI)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

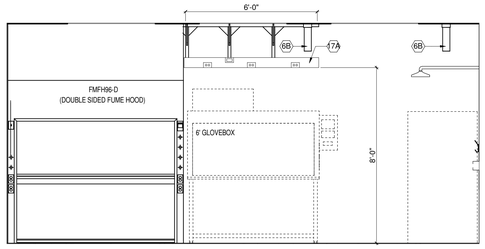
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

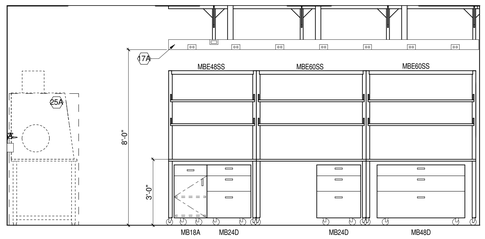
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-206	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-206 REV. NO.

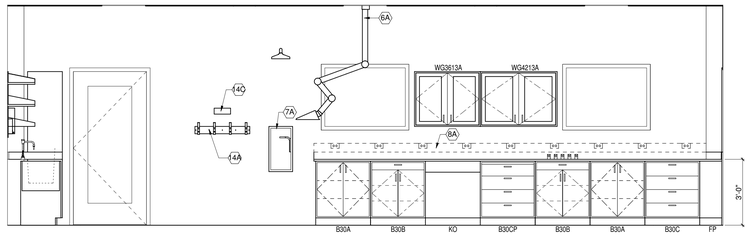
C:/DV7/00215D-Q-Central_mbaltar.rvt
5/25/2011 3:18:41 PM



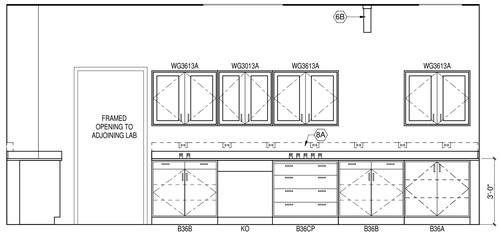
1 1.12.1 - WEST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



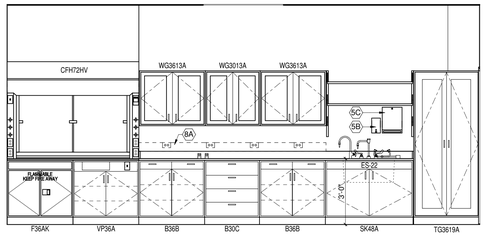
2 1.12.1 - EAST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



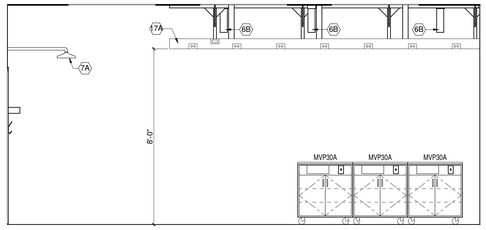
3 1.14.1c - NORTH WALL ELEVATION
3/8" = 1'-0"



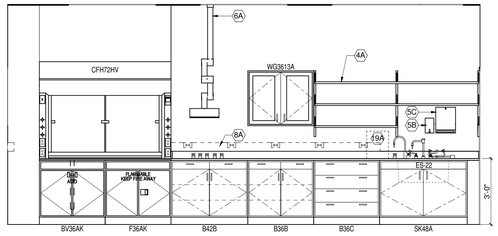
4 1.14.1c - EAST WALL ELEVATION
3/8" = 1'-0"



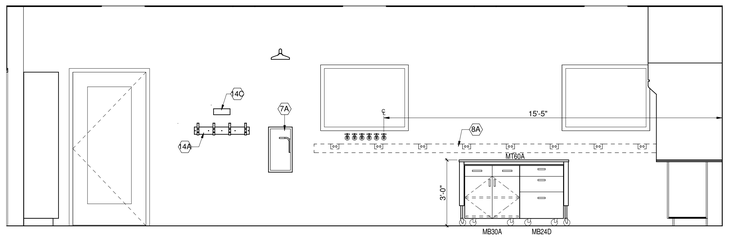
5 1.14.1c - WEST WALL ELEVATION
3/8" = 1'-0"



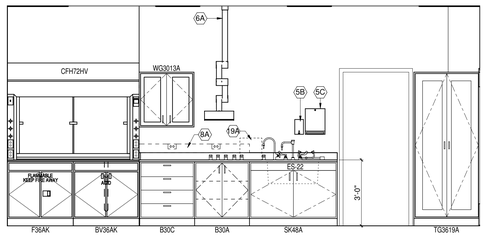
6 1.14.1c - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



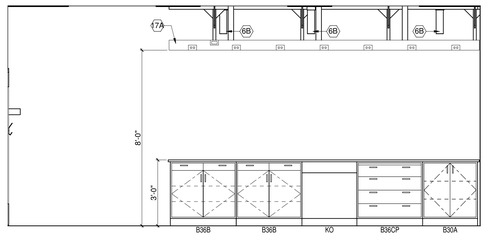
7 1.14.1a - EAST WALL ELEVATION
3/8" = 1'-0"



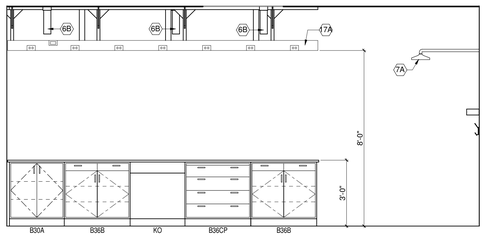
8 1.14.1a - NORTH WALL ELEVATION
3/8" = 1'-0"



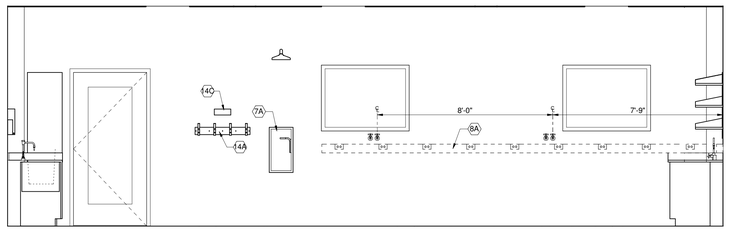
9 1.14.1a - WEST WALL ELEVATION
3/8" = 1'-0"



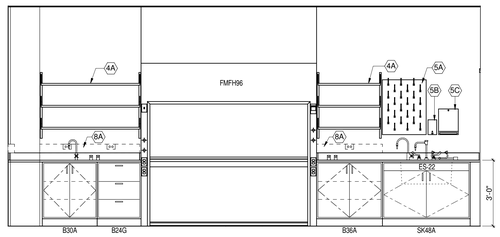
10 1.14.1a - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



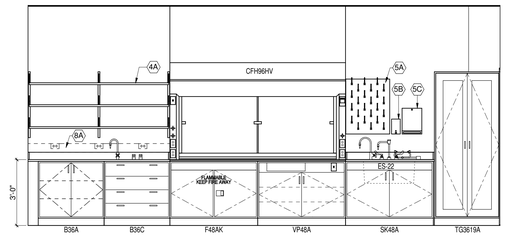
11 1.14.1a - EAST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



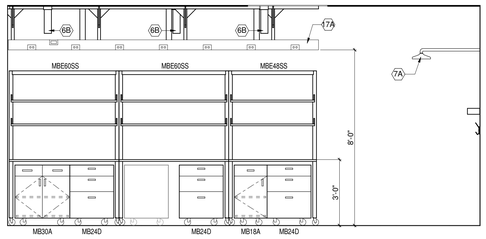
12 1.22.1a - NORTH WALL ELEVATION
3/8" = 1'-0"



13 1.22.1a - EAST WALL ELEVATION
3/8" = 1'-0"



14 1.22.1a - WEST WALL ELEVATION
3/8" = 1'-0"



15 1.22.1a - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-207

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFCI)
25A	GLOVE BOX (OFCI)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

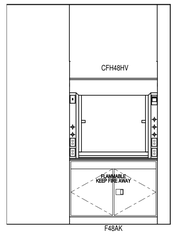
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-207	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

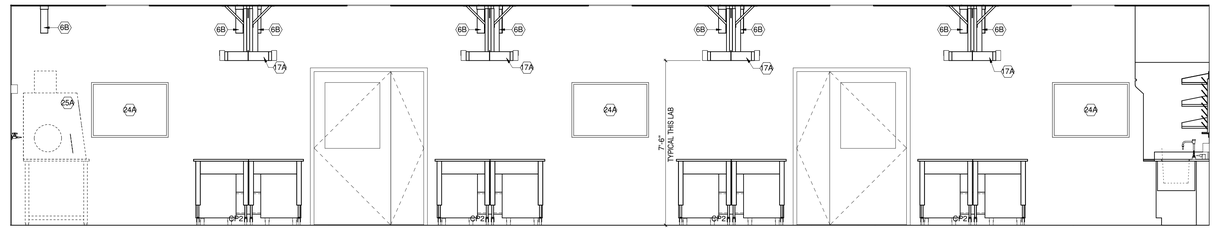
FACILITY DOCUMENT NUMBER J241-101- QL-207 REV. NO.

C:\RVT\002182-Q-Central_mballar.rvt
6/29/2011 3:18:54 PM

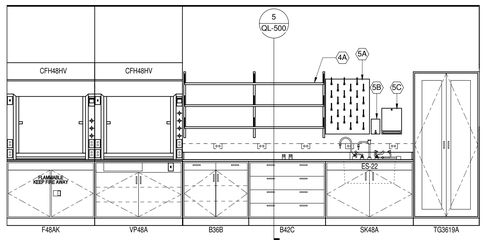
NOTE: DRY ROOM PANELS ARE OFOI AND ARE SHOWN FOR OWNER COORDINATION PURPOSES ONLY. FUME HOOD SHALL BE PROVIDED TO OWNER FOR FUTURE INSTALLATION BY OWNER.



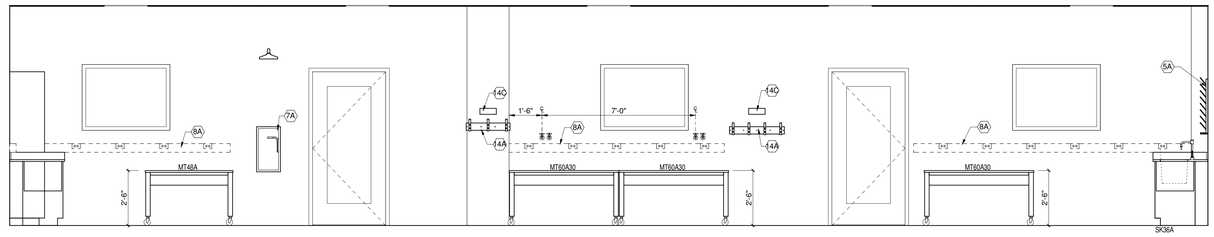
1 1.33.5 - EAST WALL ELEVATION
3/8" = 1'-0"



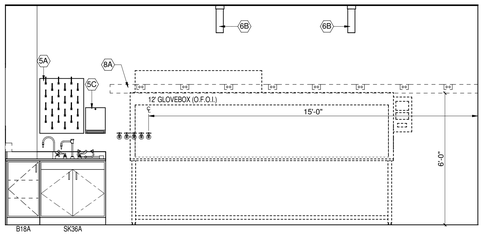
3 1.33.6 - NORTH ELEVATION AT ISLANDS
3/8" = 1'-0"



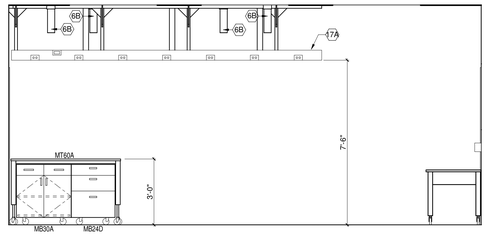
4 1.33.6 - EAST WALL ELEVATION
3/8" = 1'-0"



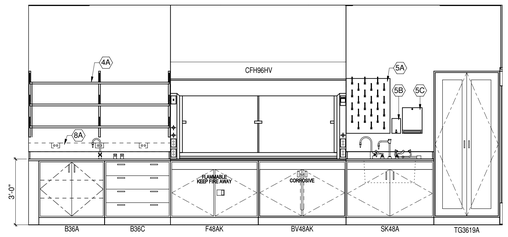
5 1.33.6 - SOUTH WALL ELEVATION
3/8" = 1'-0"



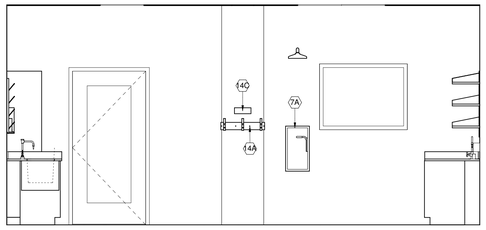
6 1.33.6 - WEST WALL ELEVATION
3/8" = 1'-0"



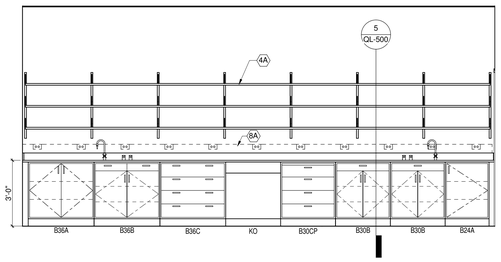
7 1.33.6 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



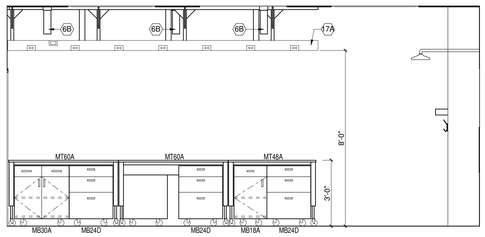
8 1.22.1b - EAST WALL ELEVATION
3/8" = 1'-0"



9 1.22.1b - SOUTH WALL ELEVATION
3/8" = 1'-0"



10 1.22.1b - WEST WALL ELEVATION
3/8" = 1'-0"



11 1.22.1b - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-208

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD
25A	GLOVE BOX (OFOI)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

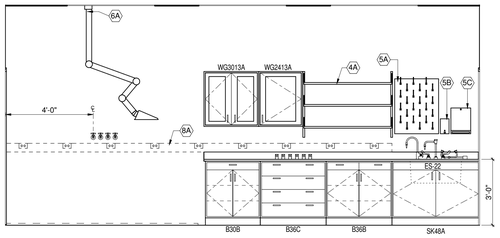
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

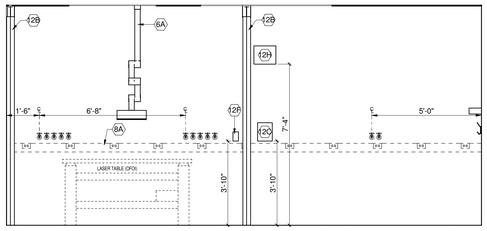
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-208	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-208 REV. NO.

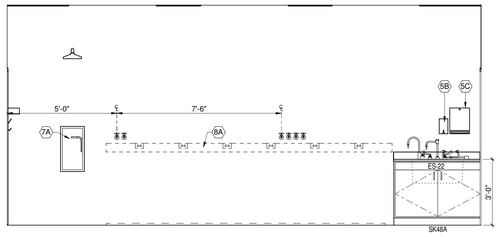
C:\R\170023\82-Q-Central_mballar.rvt
6/29/2011 3:19:03 PM



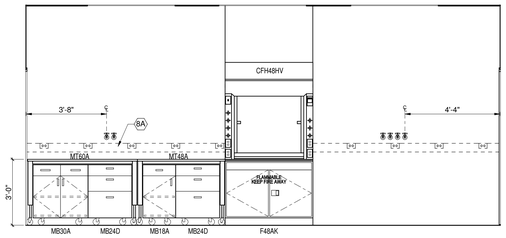
1 1.13.3 - EAST WALL ELEVATION
3/8" = 1'-0"



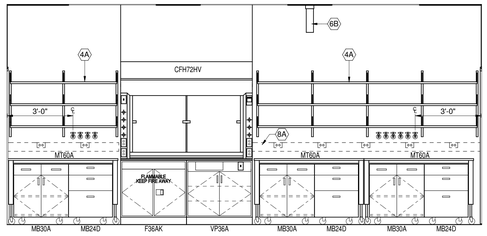
2 1.13.3 - WEST WALL ELEVATION
3/8" = 1'-0"



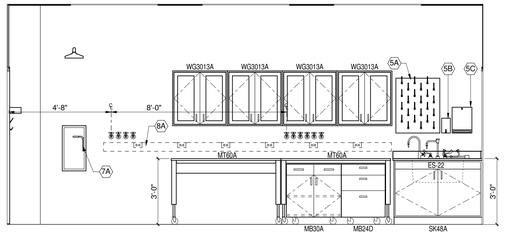
3 1.14.1b - EAST WALL ELEVATION
3/8" = 1'-0"



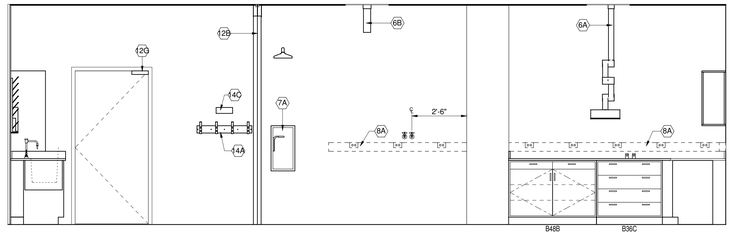
4 1.14.1b - WEST WALL ELEVATION
3/8" = 1'-0"



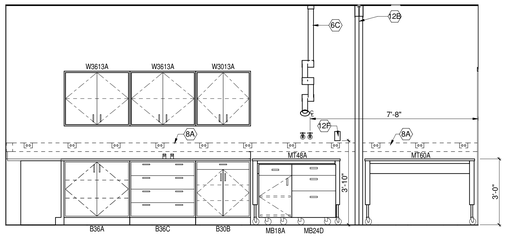
5 1.30.8 - EAST WALL ELEVATION
3/8" = 1'-0"



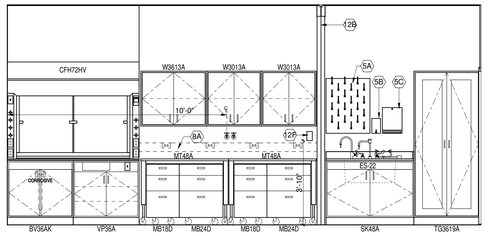
6 1.30.8 - WEST WALL ELEVATION
3/8" = 1'-0"



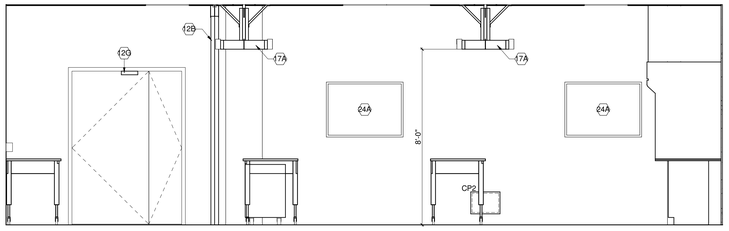
7 1.30.6 - NORTH WALL ELEVATION
3/8" = 1'-0"



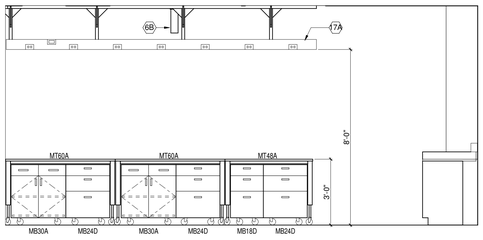
8 1.30.6 - EAST WALL ELEVATION
3/8" = 1'-0"



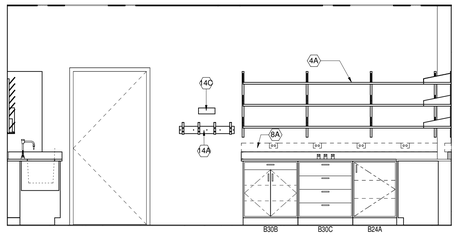
9 1.30.6 - WEST WALL ELEVATION
3/8" = 1'-0"



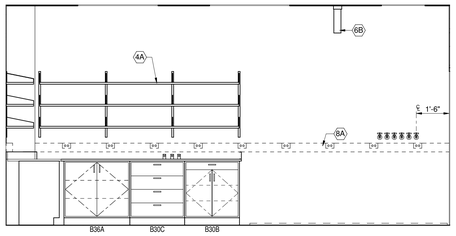
10 1.30.6 - SOUTH ELEVATION AT ISLANDS
3/8" = 1'-0"



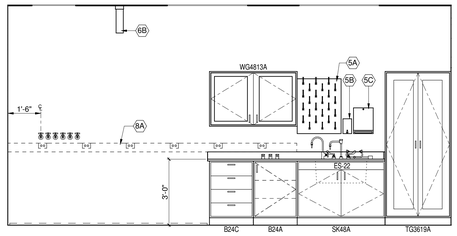
11 1.30.6 - EAST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



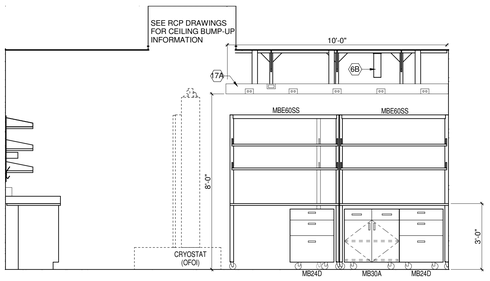
12 1.15.3 - NORTH WALL ELEVATION
3/8" = 1'-0"



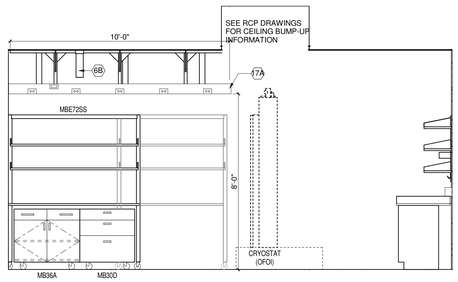
13 1.15.3 - EAST WALL ELEVATION
3/8" = 1'-0"



14 1.15.3 - WEST WALL ELEVATION
3/8" = 1'-0"



15 1.15.3 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



16 1.15.3 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-209

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6C	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - ALL METAL CONTRUCTION FOR HIGH TEMPERATURE USE
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
12B	LASER CURTAIN (SEE SPEC. #11 53 33) (LOCATIONS TO BE COORDINATED DURING CONSTRUCTION)
12C	LASER INTERLOCK, CONTROL PANEL (SEE SPEC. #11 53 33)
12F	LASER INTERLOCK, REMOTE REQUEST TO EXIT BUTTON (SEE SPEC. #11 53 33)
12G	LASER INTERLOCK, MAGNETIC LOCK (SEE SPEC. #11 53 33)
12H	LASER INTERLOCK, ILLUMINATED SAFETY SIGN (SEE SPEC. #11 53 33)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

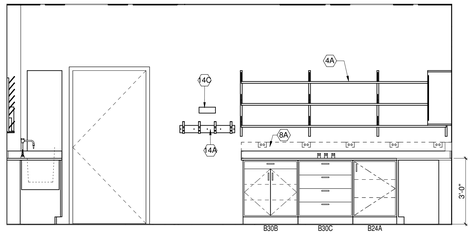
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

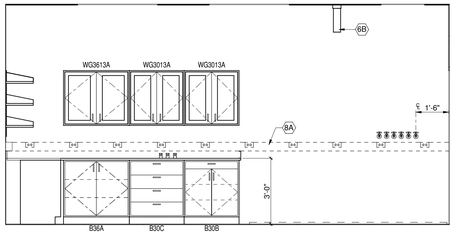
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-209	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-209
REV. NO.

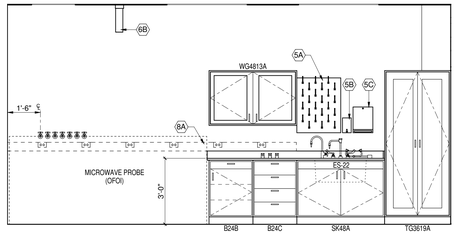
C:\R\T\002182-Q-central_mbalfar.rvt
5/29/2011 3:19:18 PM



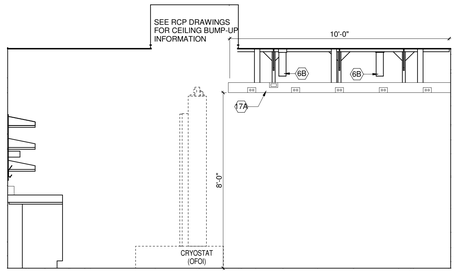
1 1.15.4 - NORTH WALL ELEVATION
3/8" = 1'-0"



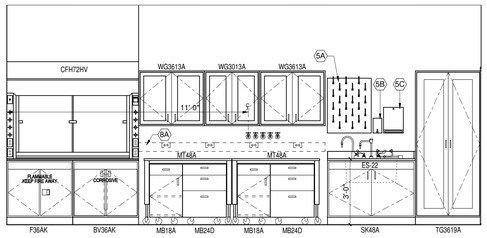
2 1.15.4 - EAST WALL ELEVATION
3/8" = 1'-0"



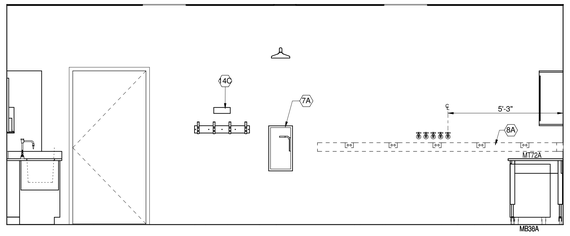
3 1.15.4 - WEST WALL ELEVATION
3/8" = 1'-0"



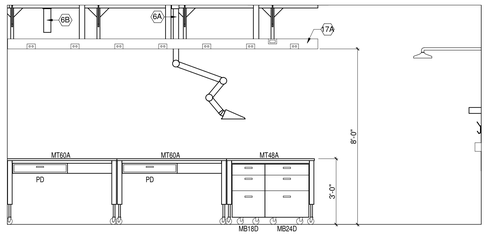
4 1.15.4 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



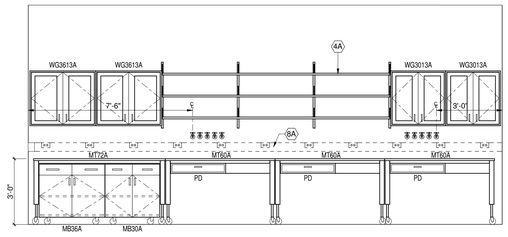
5 1.10.2 - EAST WALL ELEVATION
3/8" = 1'-0"



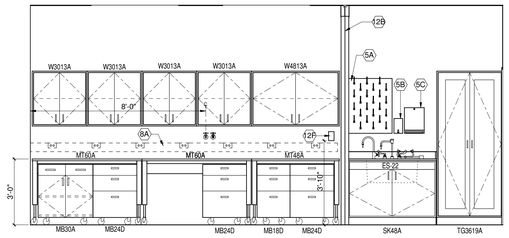
6 1.10.2 - SOUTH WALL ELEVATION
3/8" = 1'-0"



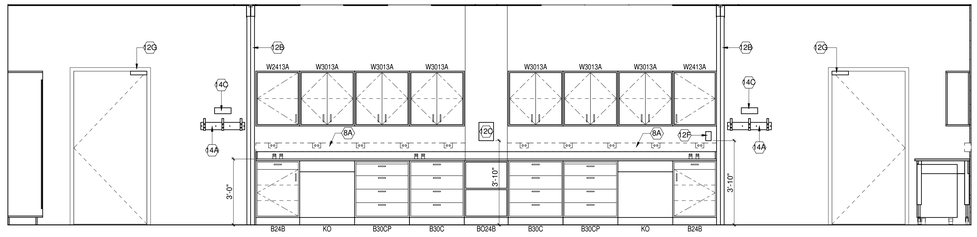
7 1.10.2 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



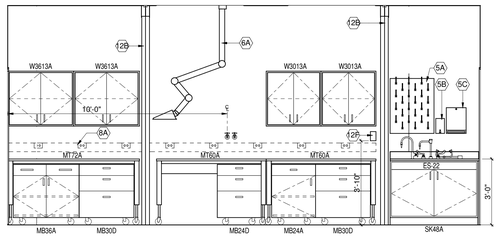
8 1.10.2 - WEST WALL ELEVATION
3/8" = 1'-0"



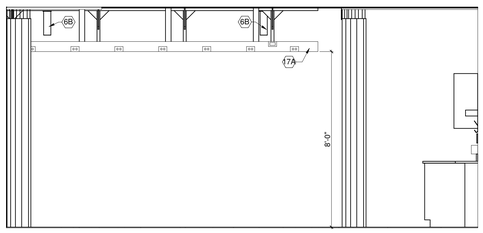
9 1.30.7 - EAST WALL ELEVATION
3/8" = 1'-0"



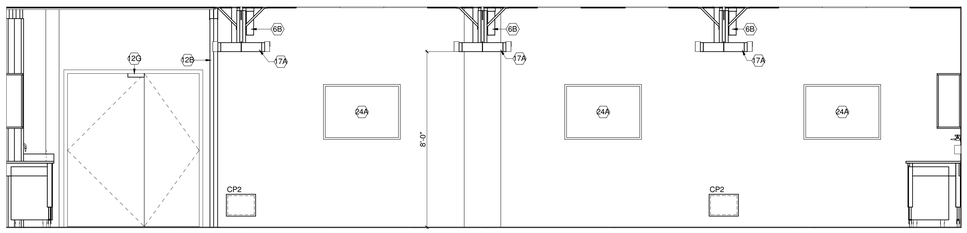
10 1.30.7 - SOUTH WALL ELEVATION
3/8" = 1'-0"



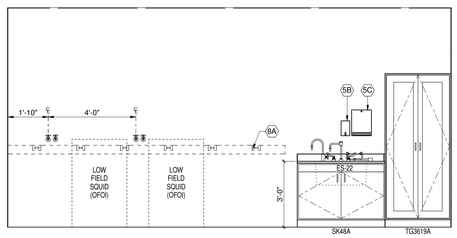
11 1.30.7 - WEST WALL ELEVATION
3/8" = 1'-0"



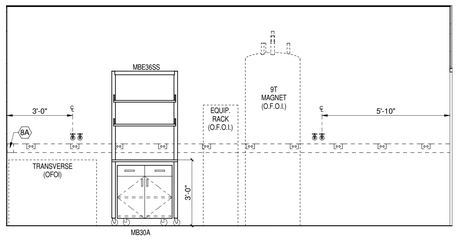
12 1.30.7 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



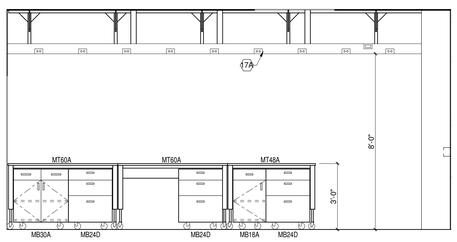
13 1.30.7 - NORTH ELEVATION AT ISLANDS
3/8" = 1'-0"



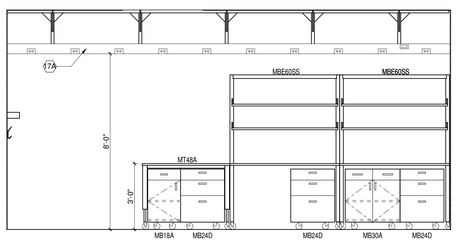
14 1.17.1 - EAST WALL ELEVATION
3/8" = 1'-0"



15 1.17.1 - WEST WALL ELEVATION
3/8" = 1'-0"



16 1.17.1 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



*MIRROR ELEVATION FOR OTHER SIDE

17 1.17.1 - EAST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-210

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
12B	LASER CURTAIN (SEE SPEC. #11 53 33) (LOCATIONS TO BE COORDINATED DURING CONSTRUCTION)
12C	LASER INTERLOCK, CONTROL PANEL (SEE SPEC. #11 53 33)
12F	LASER INTERLOCK, REMOTE REQUEST TO EXIT BUTTON (SEE SPEC. #11 53 33)
12G	LASER INTERLOCK, MAGNETIC LOCK (SEE SPEC. #11 53 33)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

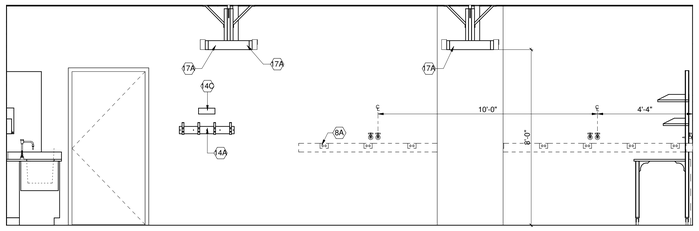
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

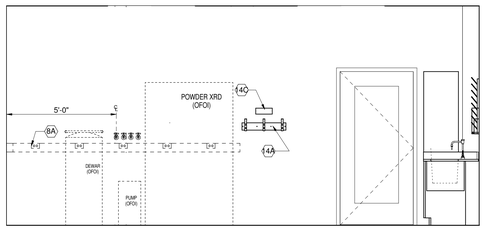
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVROY/BALLARD/LINK	A/E DWG. NO. QL-210	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE 1	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-210 REV. NO.

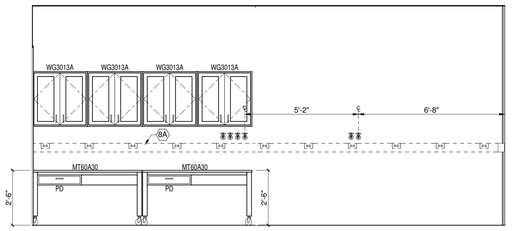
C:\RVT\002182-Q-Central_mbaillar.rvt
6/29/2011 3:19:33 PM



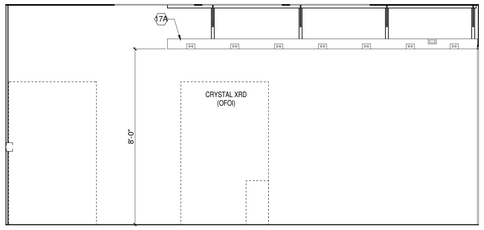
1 1.17.1 - SOUTH ELEVATION
3/8" = 1'-0"



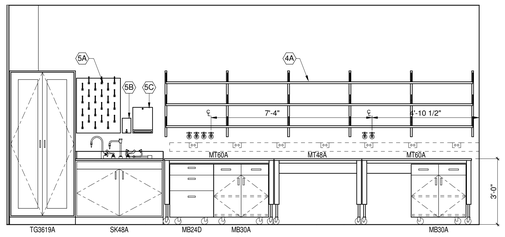
2 1.50.3 - NORTH WALL ELEVATION
3/8" = 1'-0"



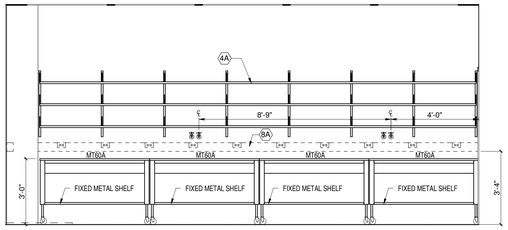
3 1.50.3 - WEST WALL ELEVATION
3/8" = 1'-0"



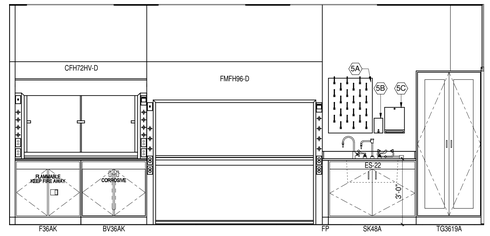
4 1.50.3 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



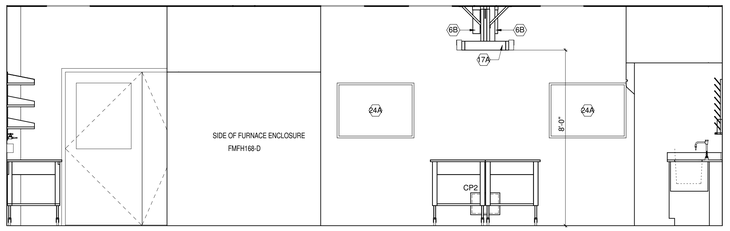
5 1.50.3 - EAST WALL ELEVATION
3/8" = 1'-0"



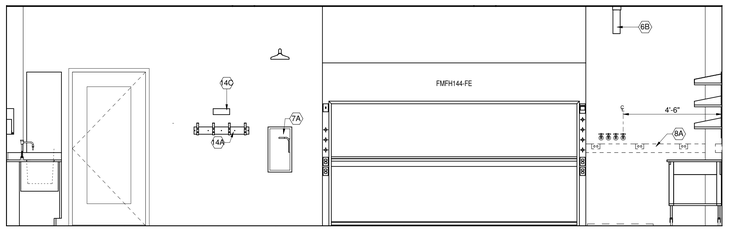
6 1.10.3 - EAST WALL ELEVATION
3/8" = 1'-0"



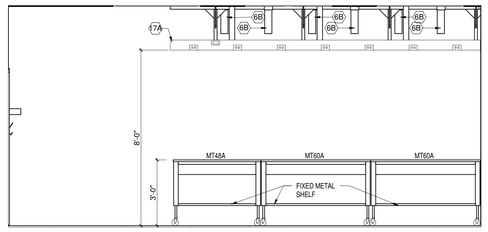
7 1.10.3 - WEST WALL ELEVATION
3/8" = 1'-0"



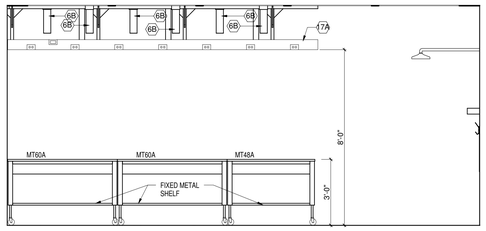
8 1.10.3 - SOUTH ELEVATION AT ISLANDS
3/8" = 1'-0"



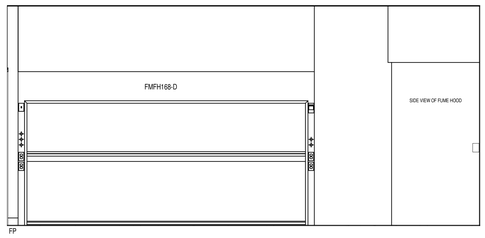
9 1.10.3 - NORTH WALL ELEVATION
3/8" = 1'-0"



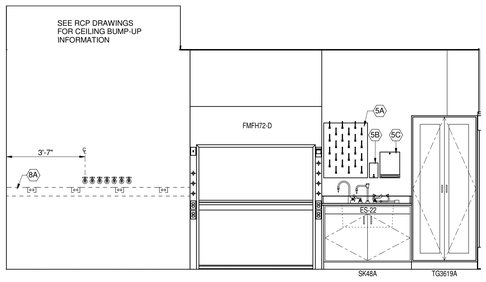
10 1.10.3 - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



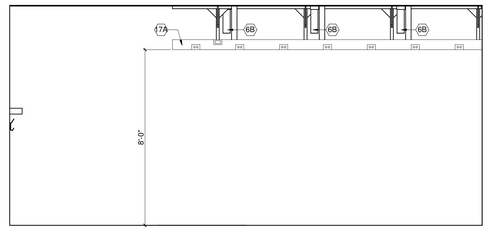
11 1.10.3 - WEST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



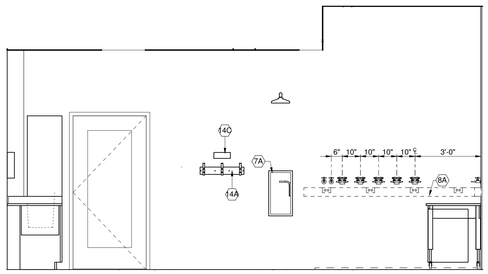
12 1.10.3 - EAST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



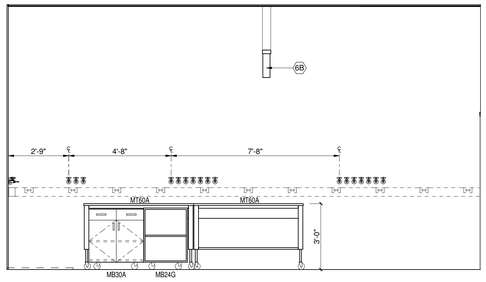
13 1.10.4 - WEST WALL ELEVATION
3/8" = 1'-0"



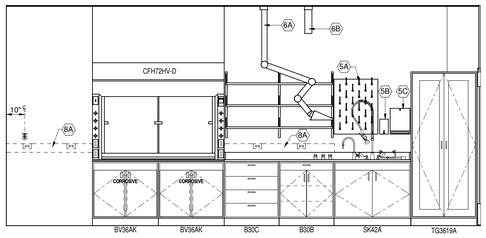
14 1.10.4 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



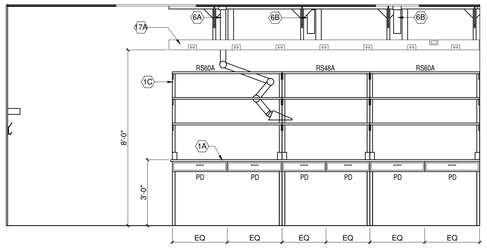
15 1.10.4 - NORTH WALL ELEVATION
3/8" = 1'-0"



16 1.10.4 EAST WALL ELEVATION
3/8" = 1'-0"



17 1.10.1A/1.14.1 - EAST WALL ELEVATION
3/8" = 1'-0"



18 1.10.1A/1.14.1 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-211

LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
1C	ADJUSTABLE HEIGHT, ISLAND REAGENT SHELVING
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

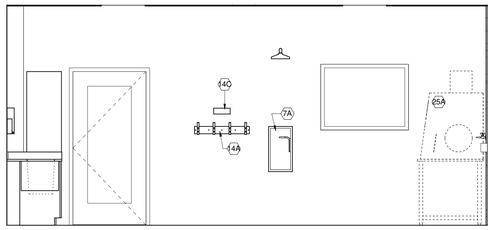
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

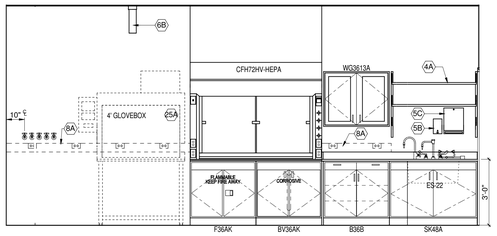
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-211	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-211 REV. NO.

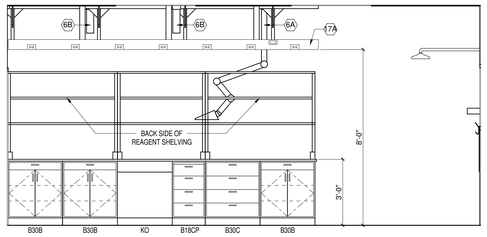
C:\R\V70\2182-Q-Central_mBallar.rvt
5/29/2011 3:19:35 PM



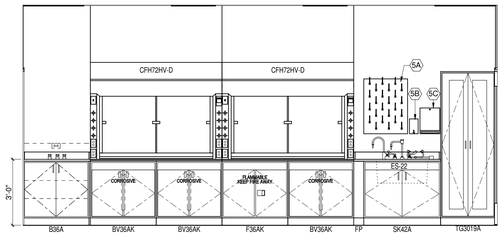
1 1.10.1A/1.14.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



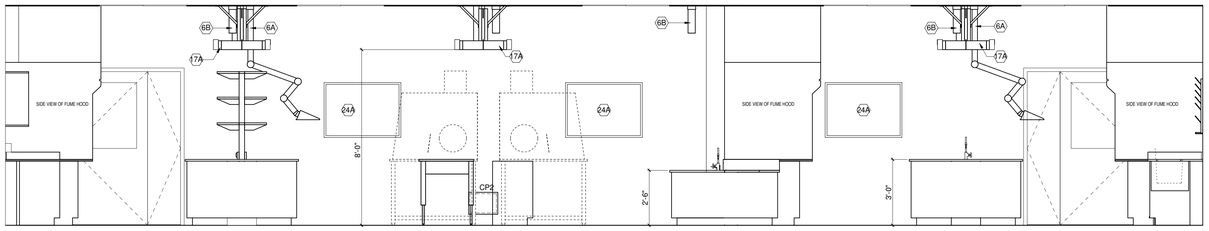
2 1.10.1A/1.14.1 - WEST WALL ELEVATION
3/8" = 1'-0"



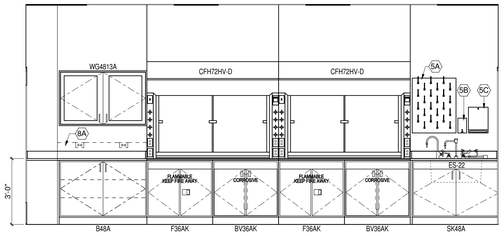
3 1.10.1A/1.14.1 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



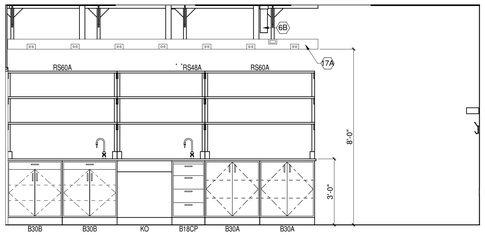
4 1.10.1B - EAST WALL ELEVATION
3/8" = 1'-0"



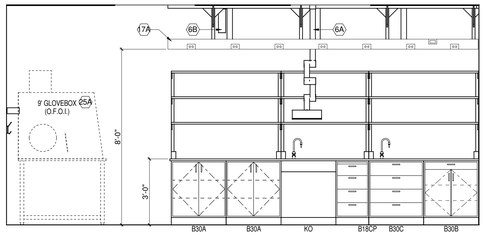
5 1.10.1B - NORTH ELEVATION AT ISLANDS
3/8" = 1'-0"



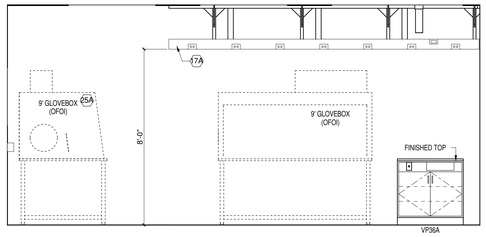
6 1.10.1B - WEST WALL ELEVATION
3/8" = 1'-0"



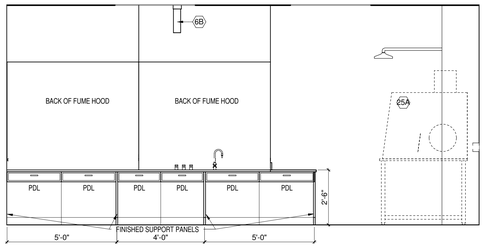
7 1.10.1B - ISLAND ELEVATION LOOKING EAST AT FIXED BENCH
3/8" = 1'-0"



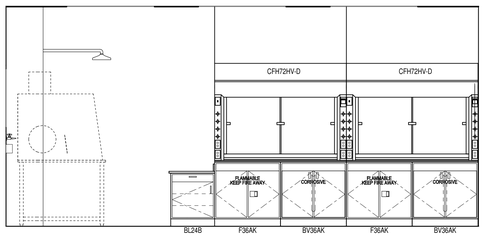
8 1.10.1B - ISLAND ELEVATION LOOKING WEST AT FIXED BENCH
3/8" = 1'-0"



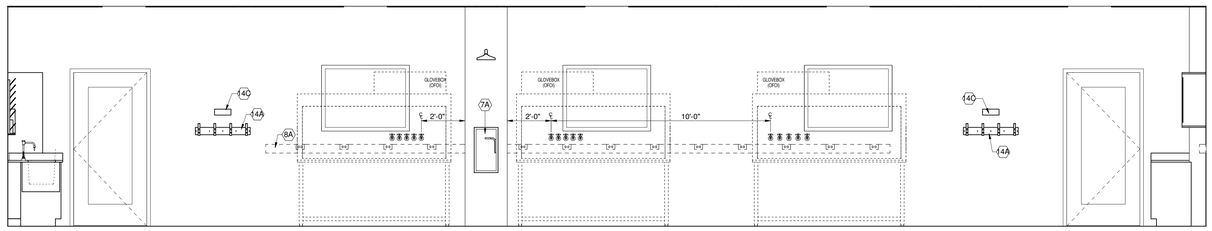
9 1.10.1B - ISLAND ELEVATION LOOKING WEST AT GLOVE BOX
3/8" = 1'-0"



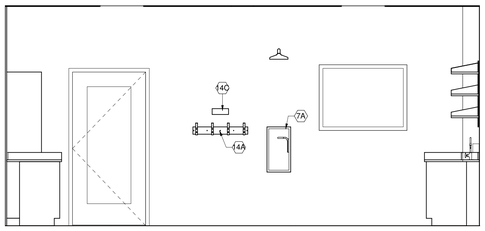
10 1.10.1B - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



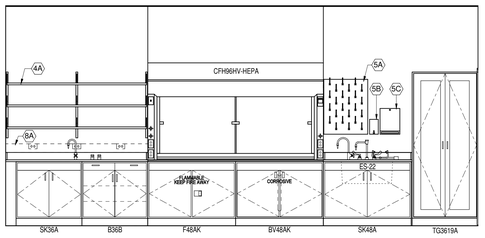
11 1.10.1B - ISLAND ELEVATION LOOKING WEST AT FUME HOODS
3/8" = 1'-0"



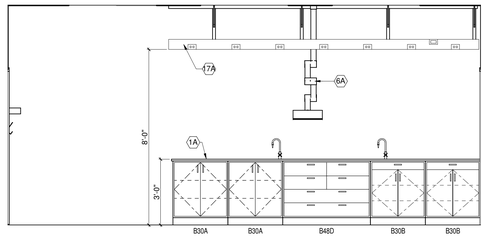
12 1.10.1B - SOUTH WALL ELEVATION
3/8" = 1'-0"



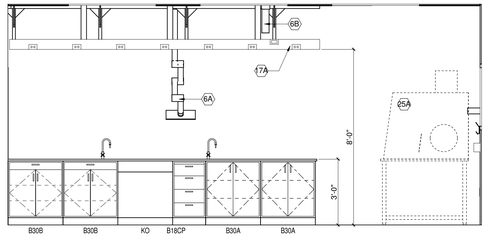
13 1.20.1a WEST - NORTH WALL ELEVATION
3/8" = 1'-0"



14 1.20.1a WEST - WEST WALL ELEVATION
3/8" = 1'-0"



15 1.10.1B - ISLAND #4 - ELEVATION LOOKING WEST
3/8" = 1'-0"



16 1.10.1B - ISLAND #4 - ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-212

LAB KEYNOTES	
#	ITEM DESCRIPTION
1A	BENCHTOP - FIXED ISLAND W/ CASEWORK BELOW. SEE PLANS/ELEVATIONS FOR HEIGHT
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
24A	WALL MOUNTED WHITE MARKER BOARD
25A	GLOVE BOX (OFOI)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

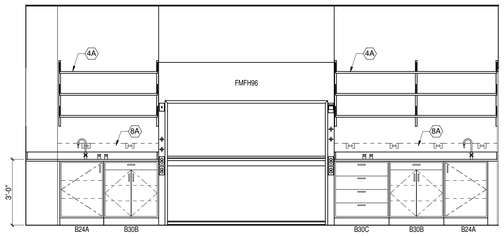
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

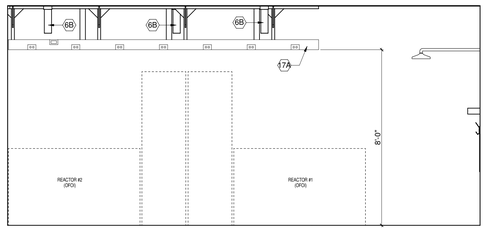
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-212	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-212
REV. NO.

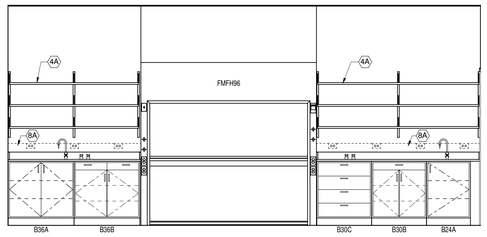
C:\R\170021B2-Q-Central_mballar.rvt
6/29/2011 3:19:49 PM



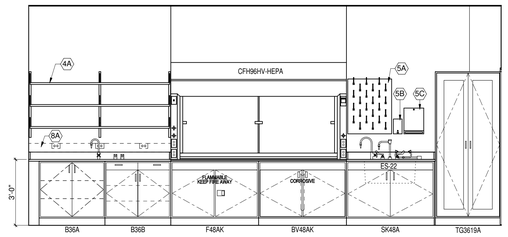
1 1.20.1a WEST - EAST WALL ELEVATION
3/8" = 1'-0"



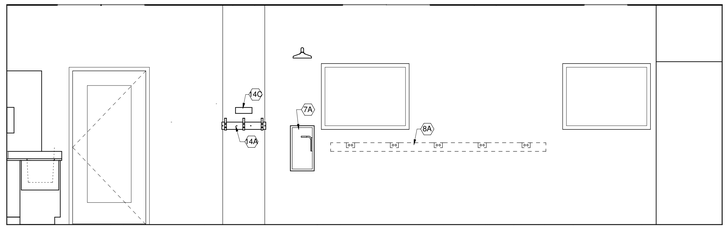
2 1.20.1a WEST- ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



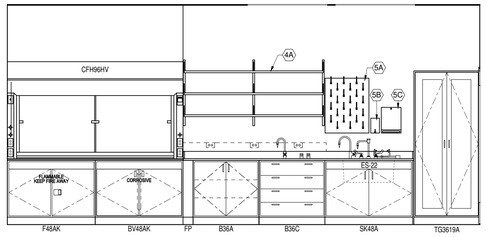
3 1.20.1a EAST - EAST WALL ELEVATION
3/8" = 1'-0"



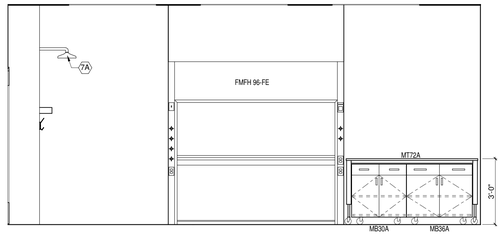
4 1.20.1a EAST - WEST WALL ELEVATION
3/8" = 1'-0"



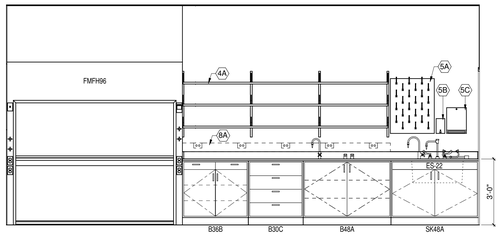
5 1.20.1b - NORTH WALL ELEVATION
3/8" = 1'-0"



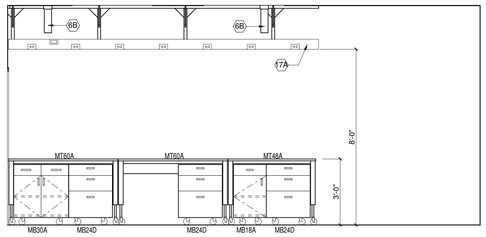
6 1.20.1b - WEST WALL ELEVATION
3/8" = 1'-0"



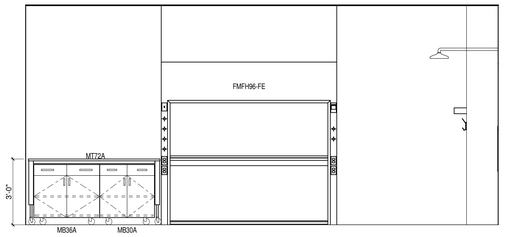
7 1.20.1b - WEST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



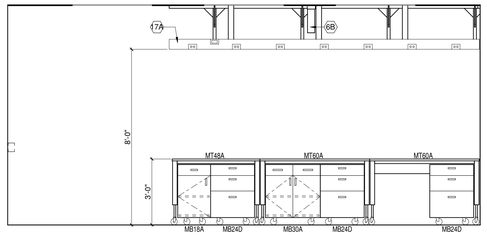
8 1.20.1b - EAST WALL ELEVATION
3/8" = 1'-0"



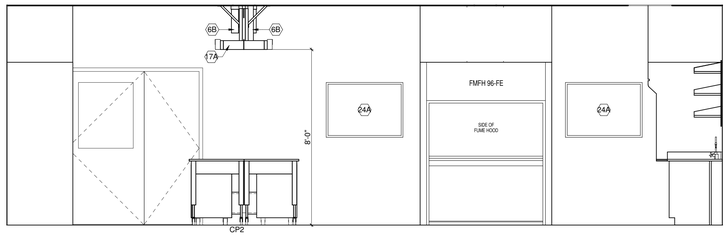
9 1.20.1b - EAST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



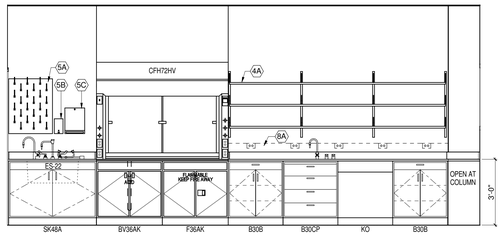
10 1.20.1b - WEST ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



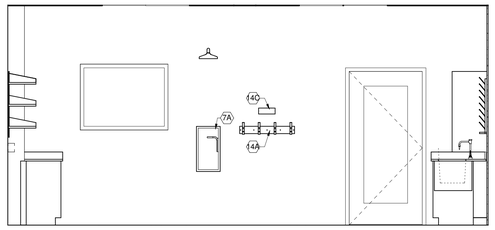
11 1.20.1b - EAST ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



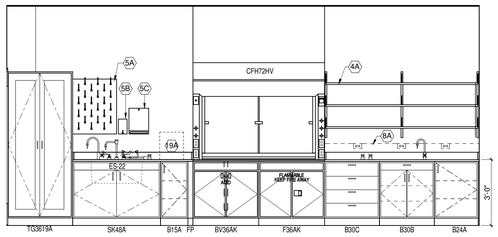
12 1.20.1b - SOUTH ELEVATION AT ISLANDS
3/8" = 1'-0"



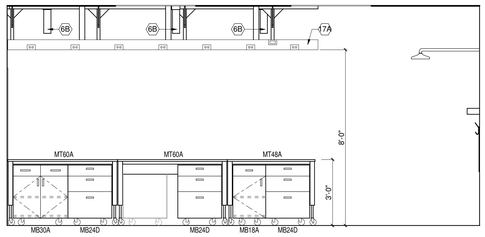
13 1.11.7 - EAST WALL ELEVATION
3/8" = 1'-0"



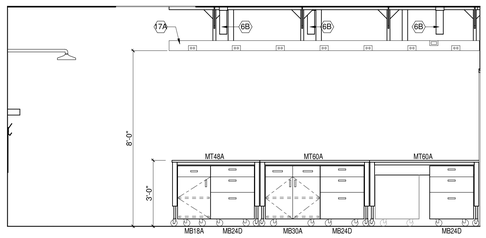
14 1.11.7 - SOUTH WALL ELEVATION
3/8" = 1'-0"



15 1.11.7 - WEST WALL ELEVATION
3/8" = 1'-0"



16 1.11.7 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



17 1.11.7 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-213

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

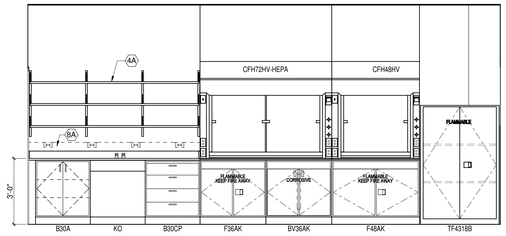
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

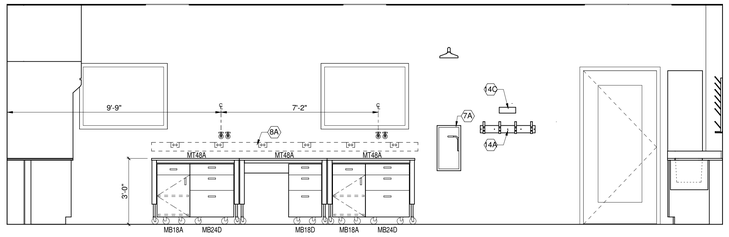
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-213	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-213 REV. NO.

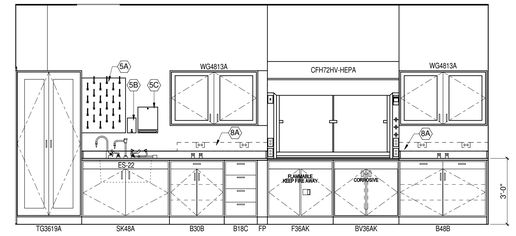
C:/DV7/00218/Q-Central_installer.rvt
5/29/2011 3:20:04 PM



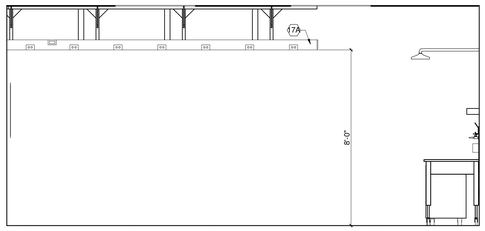
1 1.11.1/1.11.4 - EAST WALL ELEVATION
3/8" = 1'-0"



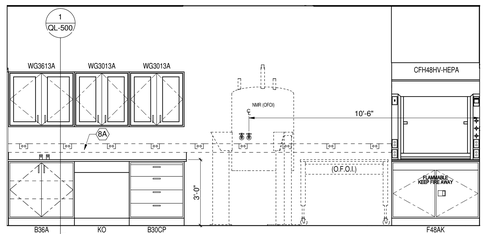
2 1.11.1/1.11.4 - SOUTH WALL ELEVATION
3/8" = 1'-0"



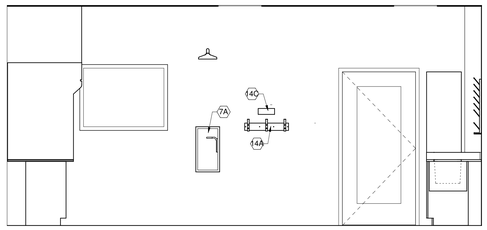
3 1.11.1/1.11.4 - WEST WALL ELEVATION
3/8" = 1'-0"



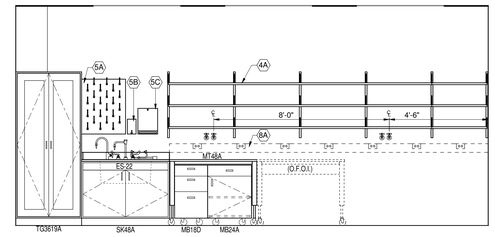
4 1.11.1/1.11.4 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



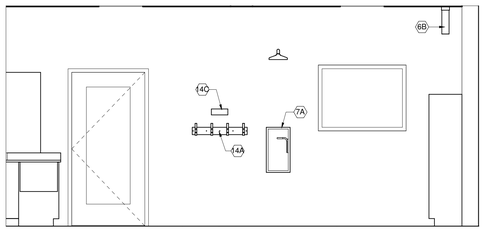
5 1.50.1 - EAST WALL ELEVATION
3/8" = 1'-0"



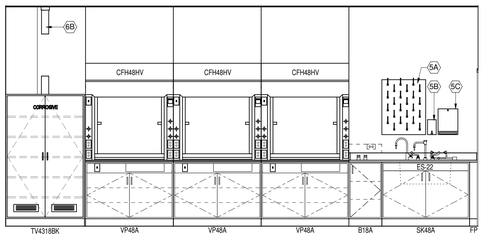
6 1.50.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



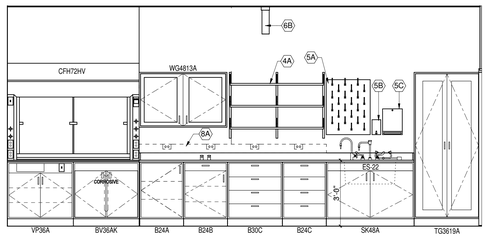
7 1.50.1 - WEST WALL ELEVATION
3/8" = 1'-0"



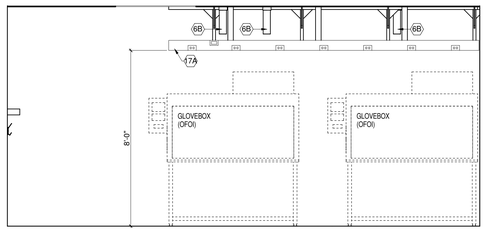
8 1.41.3 - NORTH WALL ELEVATION
3/8" = 1'-0"



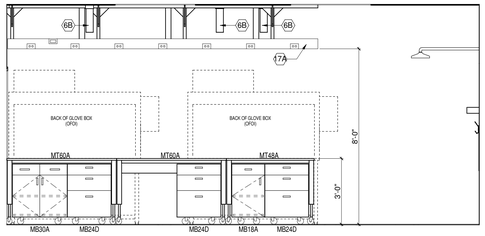
9 1.41.3 - EAST WALL ELEVATION
3/8" = 1'-0"



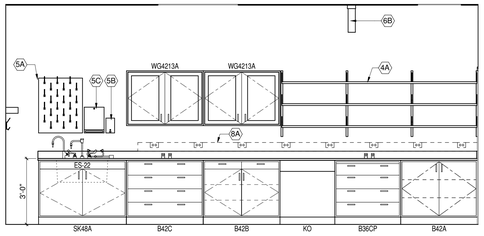
10 1.41.3 - WEST WALL ELEVATION
3/8" = 1'-0"



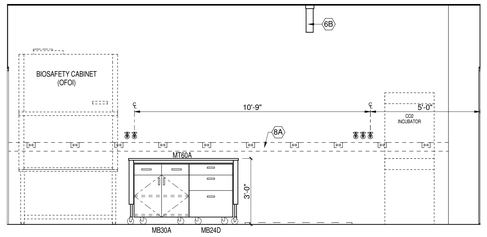
11 1.41.3 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



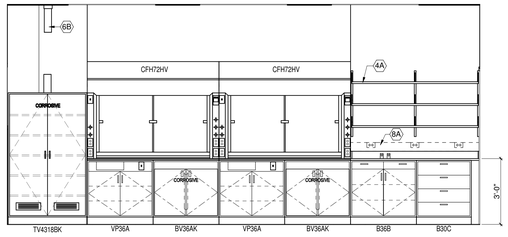
12 1.41.3 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"



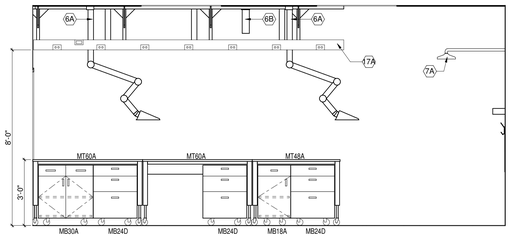
13 1.41.2c - EAST WALL ELEVATION
3/8" = 1'-0"



14 1.41.2c - WEST WALL ELEVATION
3/8" = 1'-0"



15 1.41.1 - EAST WALL ELEVATION
3/8" = 1'-0"



16 1.41.1 - ISLAND ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-214

LAB KEYNOTES

#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

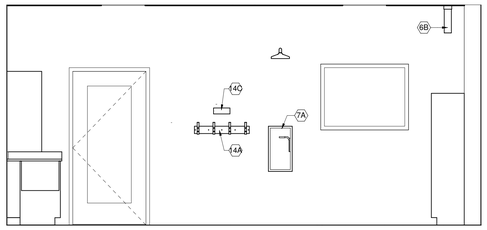
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

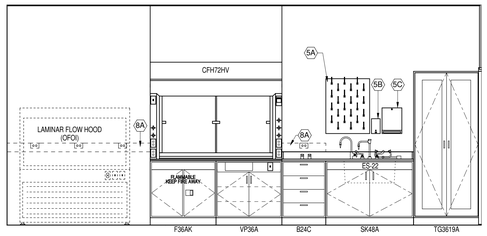
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-214	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-214
REV. NO.

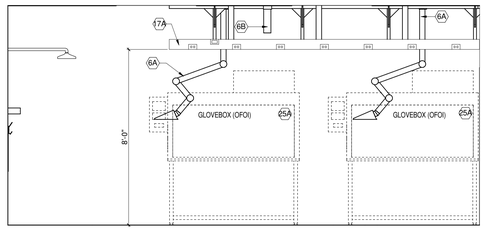
C:/DV7/002182-Q-Central_installer.rvt
5/29/2011 3:20:18 PM



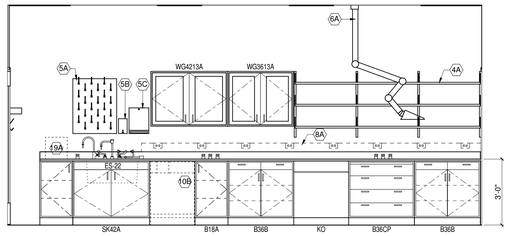
1 1.41.1 - NORTH WALL ELEVATION
3/8" = 1'-0"



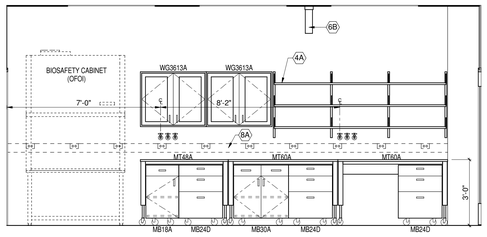
2 1.41.1 - WEST WALL ELEVATION
3/8" = 1'-0"



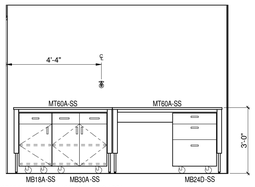
3 1.41.1 - ISLAND ELEVATION LOOKING EAST
3/8" = 1'-0"



4 1.41.2 - EAST WALL ELEVATION
3/8" = 1'-0"

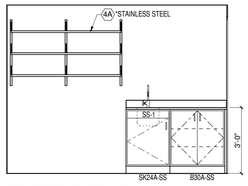


5 1.41.2 - WEST WALL ELEVATION
3/8" = 1'-0"



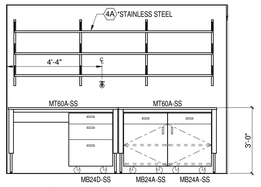
*STAINLESS STEEL CASEWORK THIS AREA

6 1.41.2a - EAST WALL ELEVATION
3/8" = 1'-0"



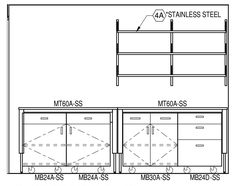
*STAINLESS STEEL CASEWORK THIS AREA

7 1.41.2a - WEST WALL ELEVATION
3/8" = 1'-0"



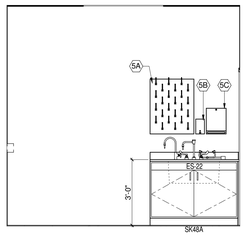
*STAINLESS STEEL CASEWORK THIS AREA

8 1.41.2b - EAST WALL ELEVATION
3/8" = 1'-0"

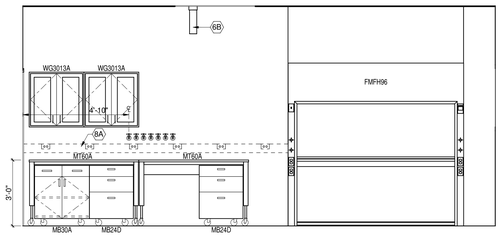


*STAINLESS STEEL CASEWORK THIS AREA

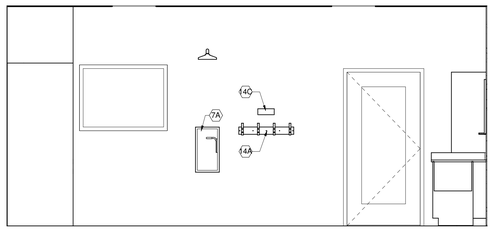
9 1.41.2b - WEST WALL ELEVATION
3/8" = 1'-0"



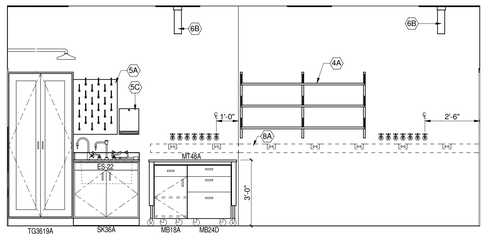
10 1.33.3 - WEST WALL ELEVATION
3/8" = 1'-0"



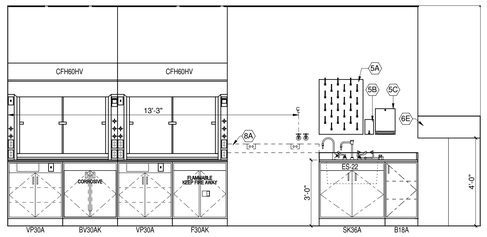
11 1.50.2b - EAST WALL ELEVATION
3/8" = 1'-0"



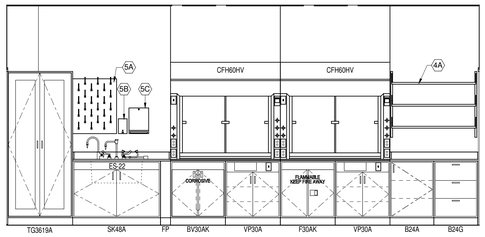
12 1.50.2b - SOUTH WALL ELEVATION
3/8" = 1'-0"



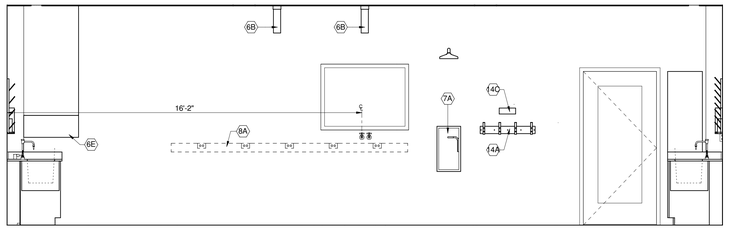
13 1.50.2b - WEST WALL ELEVATION
3/8" = 1'-0"



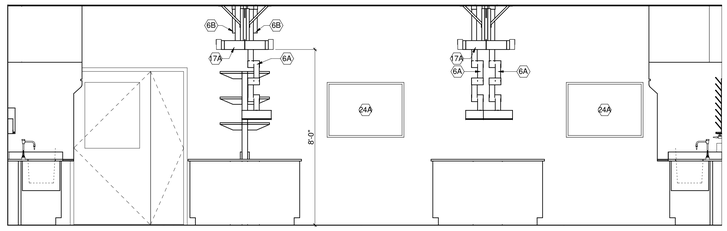
14 1.13.1 - EAST WALL ELEVATION
3/8" = 1'-0"



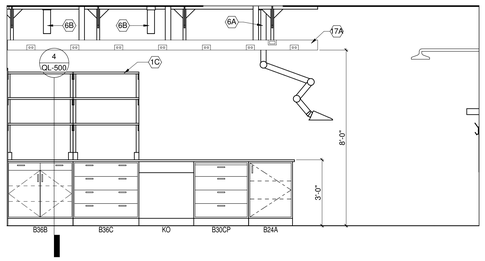
15 1.13.1 - WEST WALL ELEVATION
3/8" = 1'-0"



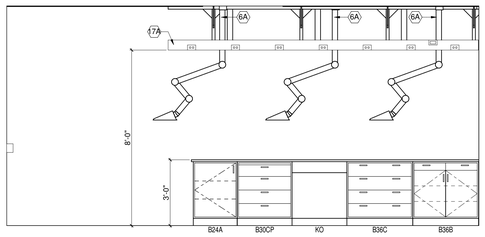
16 1.13.1 - SOUTH WALL ELEVATION
3/8" = 1'-0"



17 1.13.1 - NORTH ELEVATION AT ISLANDS
3/8" = 1'-0"



18 1.13.1 - ISLAND #1 - ELEVATION LOOKING EAST
3/8" = 1'-0"



19 1.13.1 - ISLAND #2 - ELEVATION LOOKING WEST
3/8" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-215

LAB KEYNOTES

#	ITEM DESCRIPTION
1C	ADJUSTABLE HEIGHT, ISLAND REAGENT SHELVING
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
6B	POINT EXHAUST, CAPPED BELOW FINISHED CEILING
6E	CANOPY EXHAUST HOOD
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)
10B	UNDER-COUNTER GLASSWARE WASHER (OFOI)
14A	LAB COAT HOOKS (30"W - 4 HOOK)
14C	LAB ENTRY SAFETY GLASSES HOLDER
17A	OVERHEAD SERVICE CARRIER
19A	WATER POLISHER (OFOI)
24A	WALL MOUNTED WHITE MARKER BOARD
25A	GLOVE BOX (OFOI)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

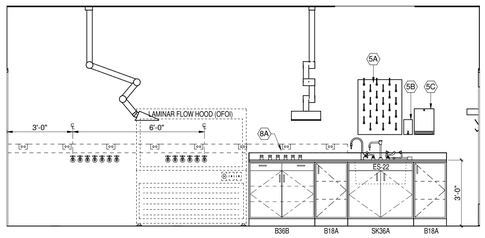
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY ELEVATIONS

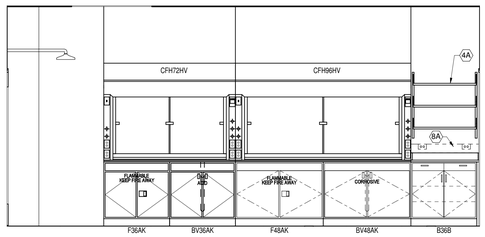
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-215	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-215 REV. NO.

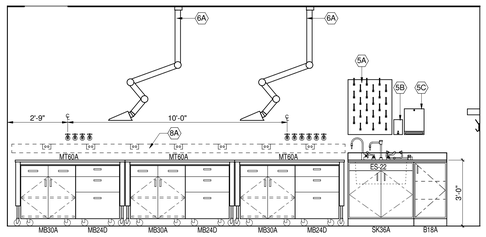
C:\RVT\002182-Q-Central_mballar.rvt
6/29/2011 3:20:35 PM



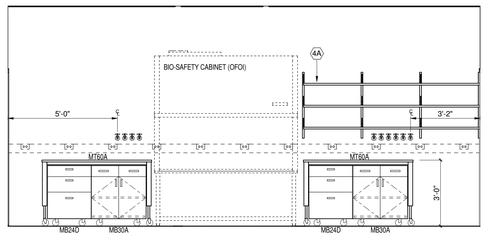
1 1.13.4 - EAST WALL ELEVATION
3/8" = 1'-0"



2 1.13.4 - WEST WALL ELEVATION
3/8" = 1'-0"



3 1.13.2 - EAST WALL ELEVATION
3/8" = 1'-0"



4 1.13.2 - WEST WALL ELEVATION
3/8" = 1'-0"

HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-216

LAB KEYNOTES	
#	ITEM DESCRIPTION
4A	ADJ. HEIGHT METAL WALL SHELVING
5A	DRYING RACK
5B	SURFACE-MOUNTED SOAP DISPENSER
5C	SURFACE-MOUNTED PAPER TOWEL DISPENSER
6A	POINT EXHAUST, ARTICULATING ARM W/ CAPTURE HOOD - "SNORKEL"
7A	WALL-RECESSED SAFETY SHOWER (BY LAB FURNISHINGS CONTRACTOR-SEE LAB FURNISHIINGS SPECS)
8A	WALL MOUNTED ELECTRICAL/DATA RACEWAY (BY ELECTRICAL CONTRACTOR)

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

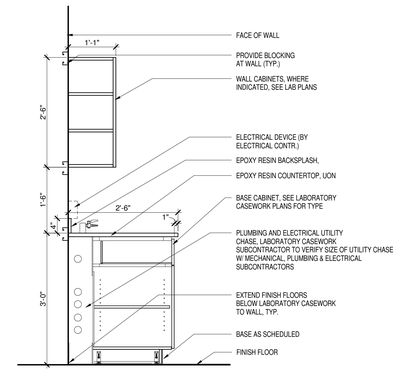
PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY ELEVATIONS

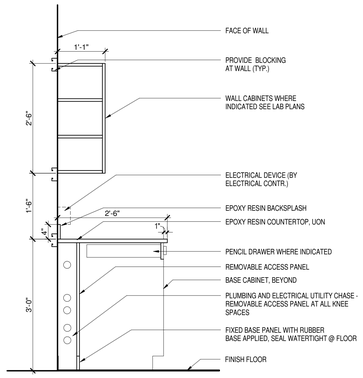
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVR2Y/BALLARD/LINK	A/E DWG. NO. QL-216	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYNMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-216
REV. NO.

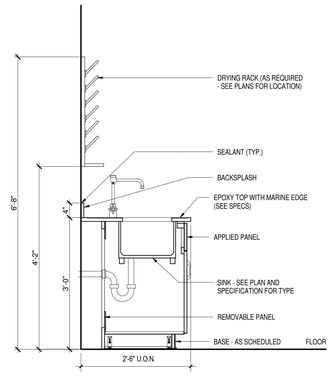
C:\RVT\002182-Q-Cerest_mballar.rvt
6/29/2011 3:20:40 PM



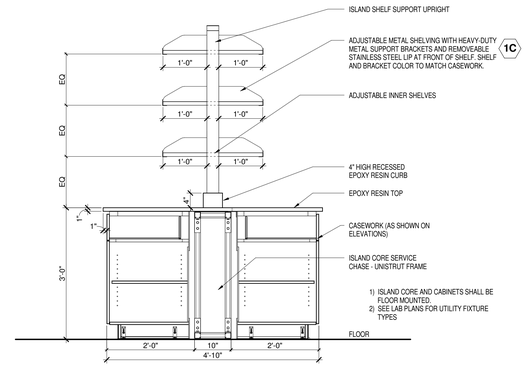
1 SECTION @ FIXED WALL CASEWORK (1B)
3/4" = 1'-0"



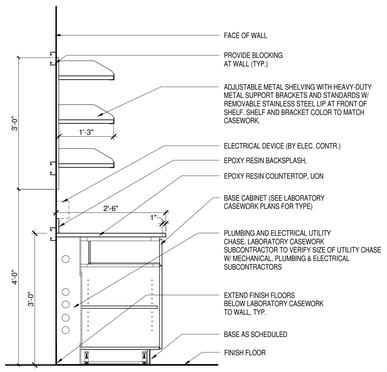
2 SECTION DETAIL @ FIXED WALL CASEWORK W/ KNEE SPACE
3/4" = 1'-0"



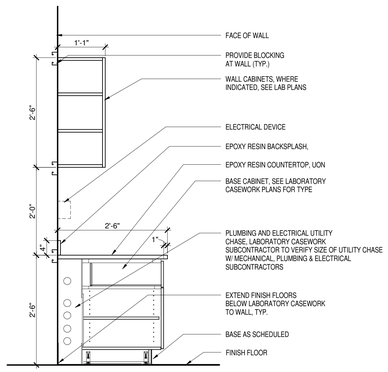
3 SECTION @ TYPICAL WALL CASEWORK SINK
3/4" = 1'-0"



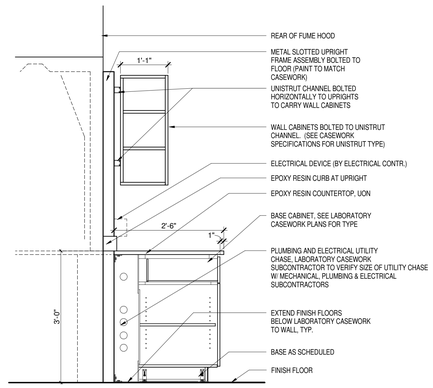
4 SECTION DETAIL @ ISLAND CASEWORK (1A)
3/4" = 1'-0"



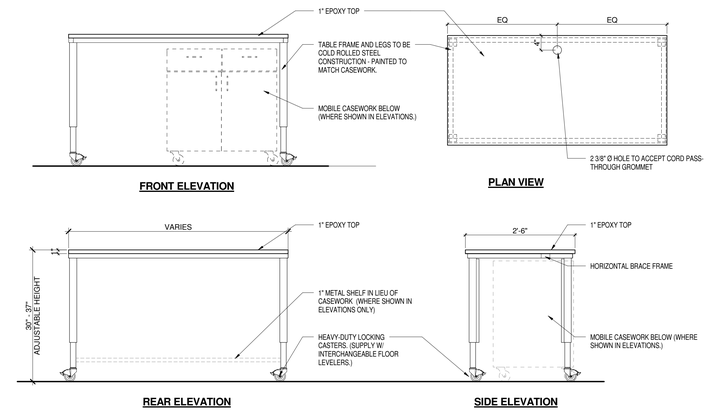
5 SECTION @ FIXED WALL CASEWORK
3/4" = 1'-0"



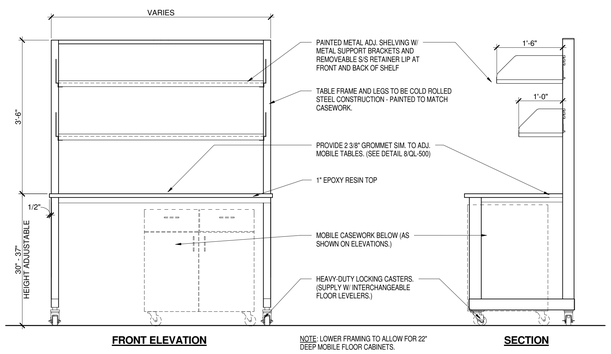
6 SECTION @ SITTING HEIGHT FIXED WALL CASEWORK
3/4" = 1'-0"



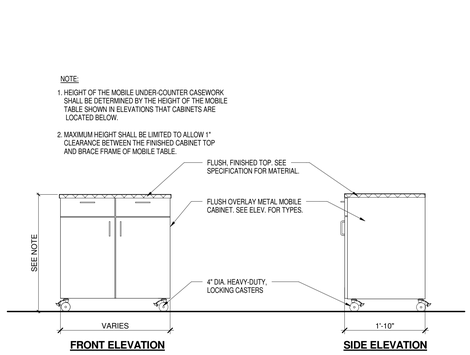
7 SECTION @ UPRIGHT-HUNG CASEWORK
3/4" = 1'-0"



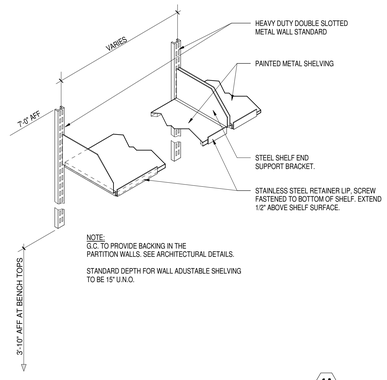
8 ADJUSTABLE HEIGHT MOBILE LAB TABLE (1D)
3/4" = 1'-0"



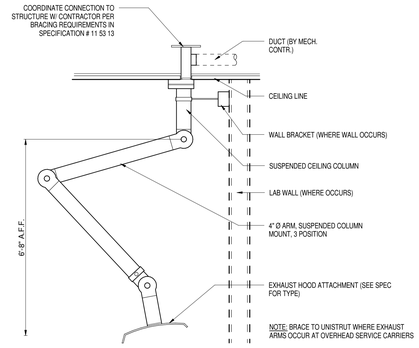
9 LABORATORY INSTRUMENT CART - DETAIL (4C)
3/4" = 1'-0"



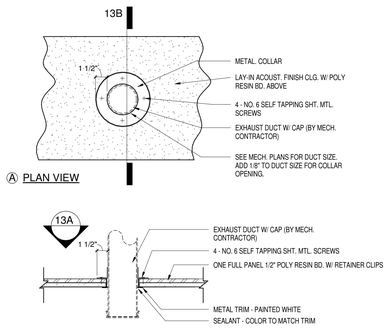
10 MOBILE UNDER-COUNTER CASEWORK - DETAIL
3/4" = 1'-0"



11 ADJUSTABLE WALL SHELVING - DETAIL (4A)
1" = 1'-0"

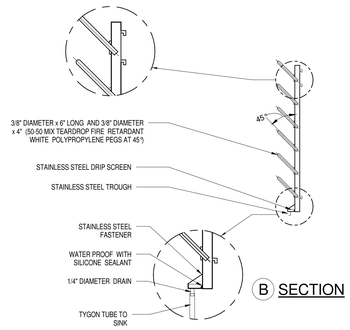


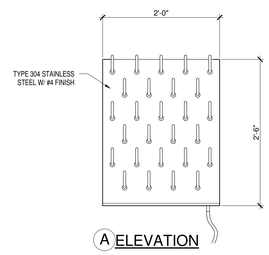
12 POINT EXHAUST EXTRACTOR ARM - DETAIL (6A)
3/4" = 1'-0"



NOTE: REFER TO MECH. DRAWINGS & DETAILS FOR FURTHER INFORMATION. DETAIL SHOWN HERE IS FOR DUCT COLLAR ATTACHMENT REFERENCE ONLY.

13 CEILING COLLAR DETAIL @ CAPPED POINT EXHAUST
1 1/2" = 1'-0"





14 DRYING RACK - DETAIL (5A)
1" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-500

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

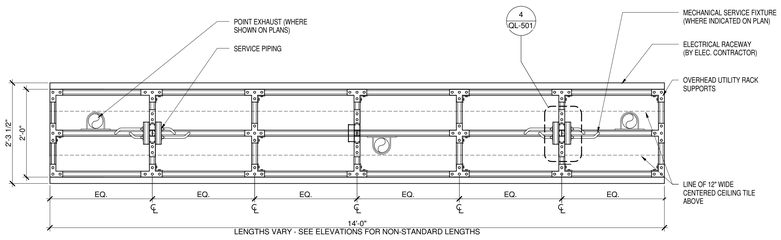
PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY CASEWORK AND EQUIPMENT DETAILS

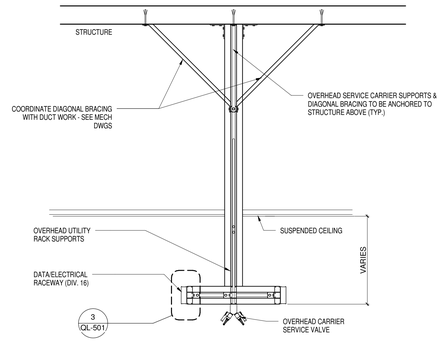
DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVR/DY/BALLARD/LINK	A/E DWG. NO. QL-500	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER: J241-101- QL-500
REV. NO.

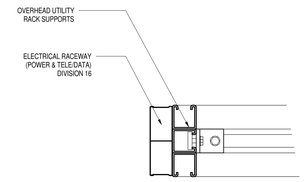
C:\RVT\002182-Q-Central_inhabitat.rvt
6/29/2011 3:20:42 PM



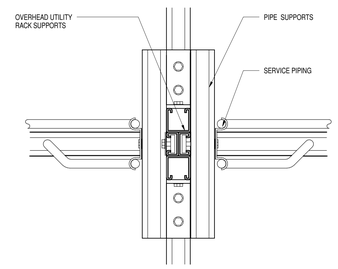
1 TYPICAL PLAN SECTION DETAIL @ OVERHEAD SERVICE CARRIER 17A
3/4" = 1'-0"



2 SECTION @ OVERHEAD SERVICE CARRIER
3/4" = 1'-0"

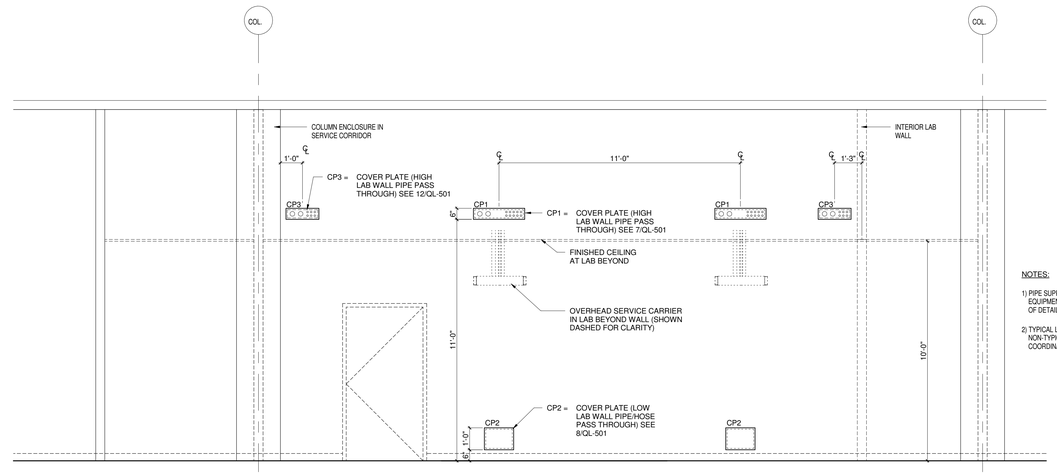


3 DETAIL @ OVERHEAD SERVICE CARRIER
3/4" = 1'-0"



4 DETAIL @ OVERHEAD SERVICE CARRIER
3/4" = 1'-0"

HDR
HDR Architecture, Inc.
8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

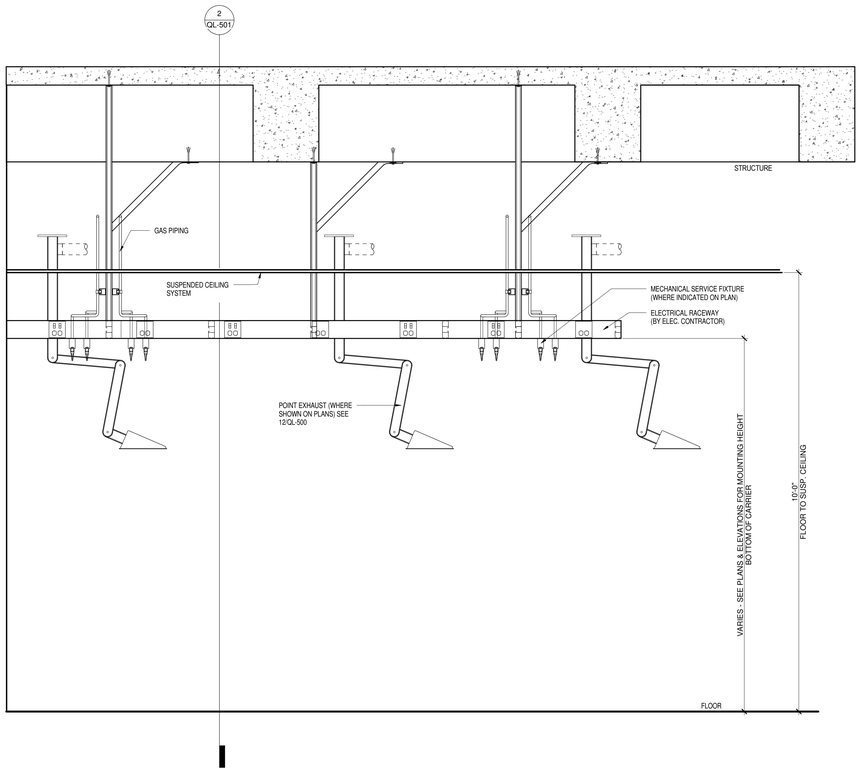


NOTES:

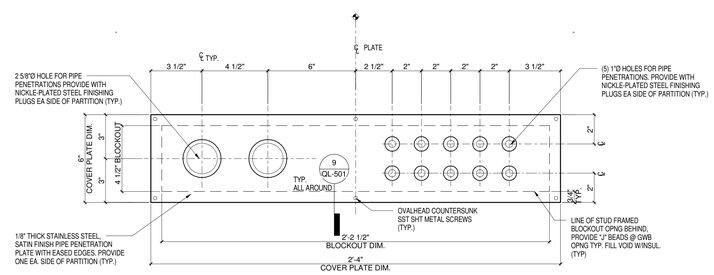
1) PIPE SUPPORTS IN SERVICE CORRIDOR EQUIPMENT NOT SHOWN FOR CLARITY OF DETAIL

2) TYPICAL LAB CONDITIONS ARE SHOWN, OTHER NON-TYPICAL CONDITIONS OCCURING SHALL BE COORDINATED WITH ARCHITECT.

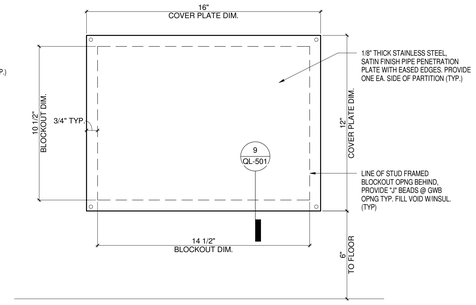
5 TYPICAL MOUNTING HEIGHT PENETRATION COVER PLATE
3/8" = 1'-0"



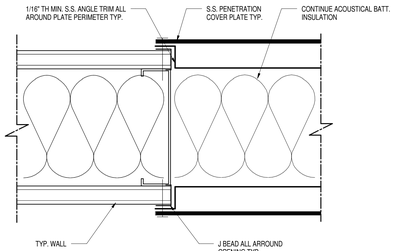
6 ELEVATION @ OVERHEAD SERVICE CARRIER
3/4" = 1'-0"



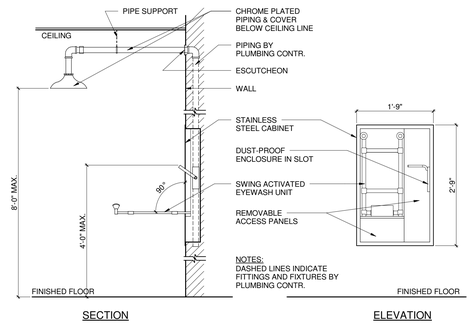
7 HIGH PENETRATION COVER PLATE DETAILS - CP1
3" = 1'-0"



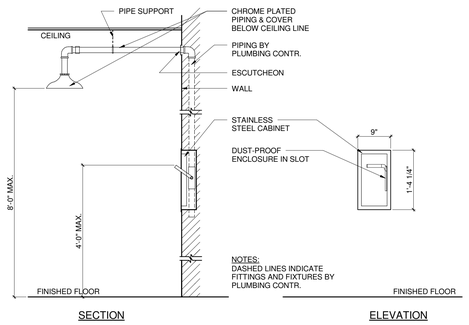
8 LOW PENETRATION COVER PLATE DETAILS - CP2
3" = 1'-0"



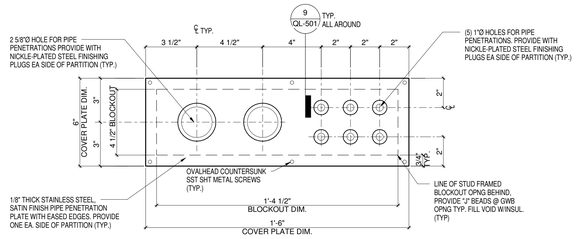
9 PENETRATION COVER PLATE MOUNTING DETAIL
6" = 1'-0"



10 SAFETY SHOWER EYEWASH DETAIL 7B
3/4" = 1'-0"



11 SAFETY SHOWER EYEWASH DETAIL 7A
3/4" = 1'-0"



12 HIGH PENETRATION COVER PLATE DETAILS - CP3
3" = 1'-0"

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

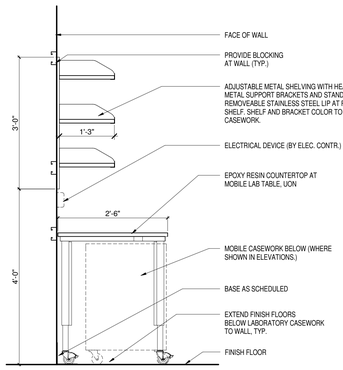
PROJECT NO. 002182-98502-ESB
DOCUMENT TITLE
LABORATORY CASEWORK AND EQUIPMENT DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-501	
CHECKED GREG SLONIGER	CADD NO. XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

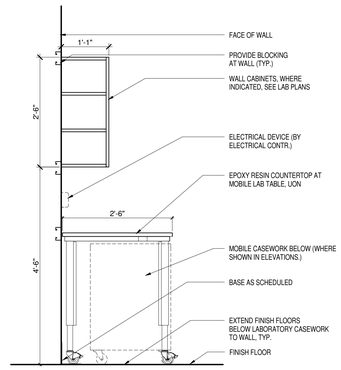
FACILITY DOCUMENT NUMBER J241-101-QL-501 REV. NO.

QL-501

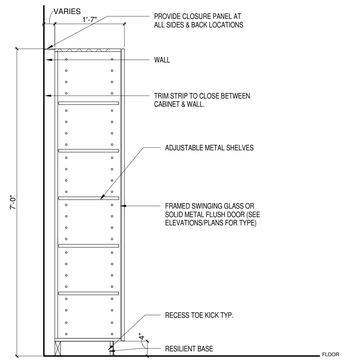
C:\RVT\00218 2-Q-Central_Lab\ballar.rvt
6/29/2011 3:20:45 PM



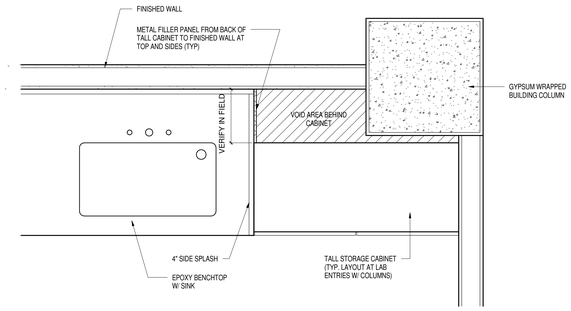
1 SECTION @ MOBILE TABLE W/ ADJ. WALL SHELVING
3/4" = 1'-0"



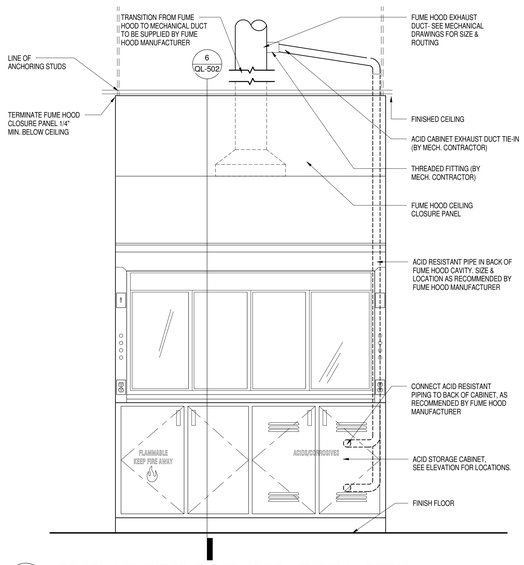
2 SECTION @ MOBILE TABLE W/ UPPER WALL CABINET
3/4" = 1'-0"



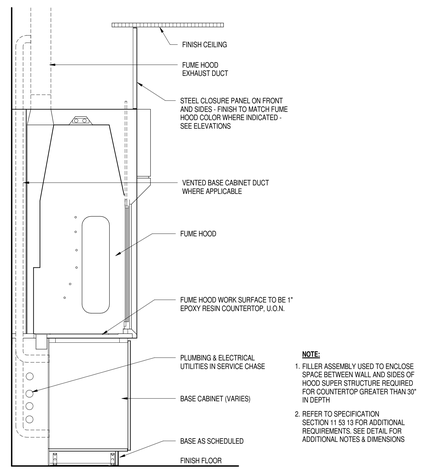
3 TALL STORAGE CABINET DETAIL
3/4" = 1'-0"



4 TALL STORAGE CABINET AT LAB ENTRY
1" = 1'-0"

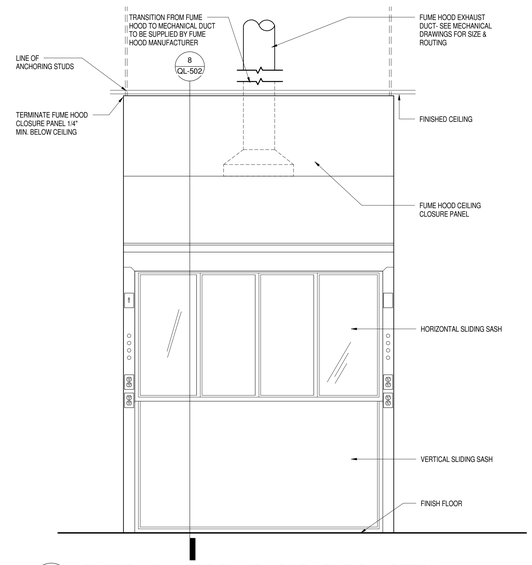


5 BENCH MOUNTED FUME HOOD - TYPICAL DETAIL
3/4" = 1'-0"

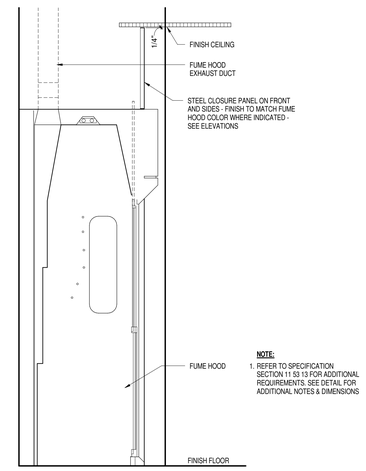


NOTE:
1. FILLER ASSEMBLY USED TO ENCLOSE SPACE BETWEEN WALL AND SIDES OF HOOD SUPER STRUCTURE REQUIRED FOR COUNTERTOP GREATER THAN 30" IN DEPTH
2. REFER TO SPECIFICATION SECTION 11 53 13 FOR ADDITIONAL REQUIREMENTS. SEE DETAIL FOR ADDITIONAL NOTES & DIMENSIONS

6 BENCH MOUNTED FUME HOOD - TYPICAL SECTION
3/4" = 1'-0"

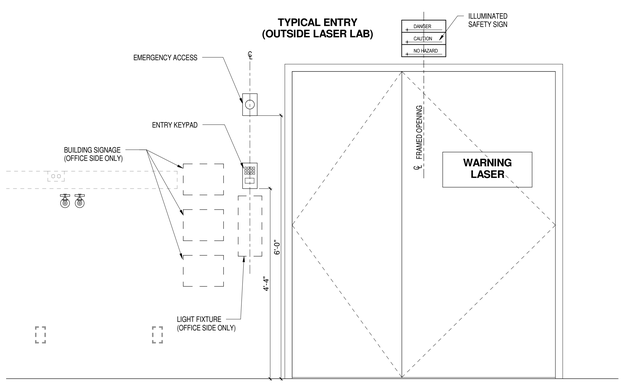


7 FLOOR MOUNTED FUME HOOD - TYPICAL DETAIL
3/4" = 1'-0"

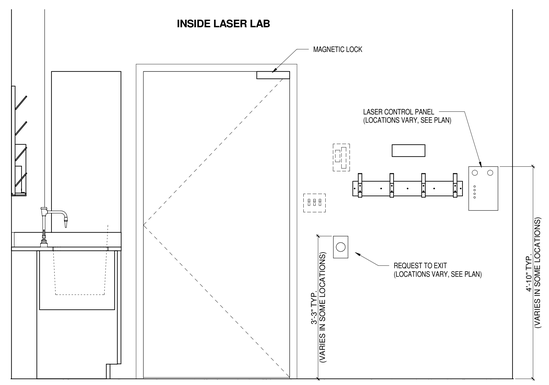


NOTE:
1. REFER TO SPECIFICATION SECTION 11 53 13 FOR ADDITIONAL REQUIREMENTS. SEE DETAIL FOR ADDITIONAL NOTES & DIMENSIONS

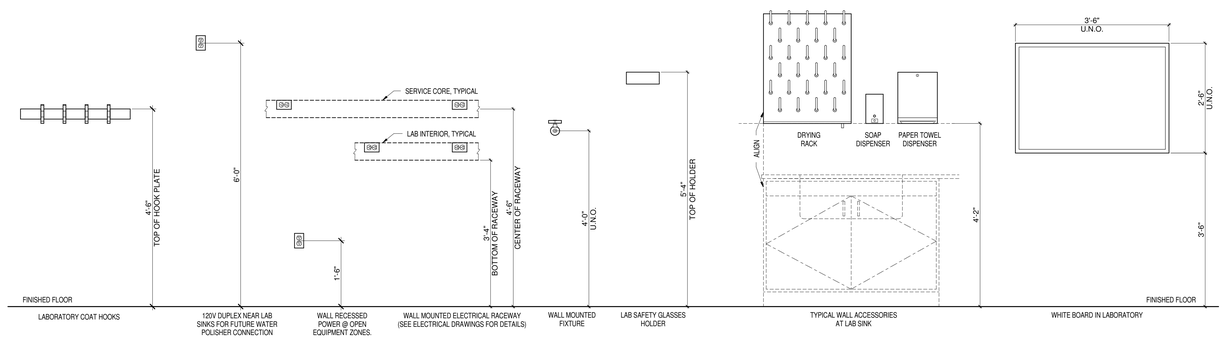
8 FLOOR MOUNTED FUME HOOD - TYPICAL SECTION
3/4" = 1'-0"



9 LASER INTERLOCK ENTRANCE
3/4" = 1'-0"



10 LASER INTERLOCK EXIT
3/4" = 1'-0"



11 DETAIL FOR WALL MOUNTED ITEMS
3/4" = 1'-0"

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-502

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
1	ADDENDUM #1			04/12/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS
Facilities Management & Services

PROJECT TITLE
ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE
LABORATORY CASEWORK AND EQUIPMENT DETAILS

DESIGNED CURT FINFROCK	A/E CADD FILE	FACILITY NO(S) 241
DRAWN TVRDY/BALLARD/LINK	A/E DWG. NO. QL-502	
CHECKED GREG SLONIGER	CADD NO: XXX	
PROJECT MANAGER JAMES LYMAN	DWG. STATE I	
	BIND ORDER XXX	

FACILITY DOCUMENT NUMBER J241-101- QL-502 REV. NO.

C:\RVT\002182-Q-Central_inhabitat.rvt
6/29/2011 3:20:49 PM

LABORATORY FUME HOOD SCHEDULE

HOOD TYPE	LEVEL	ROOM #	ROOM NAME	HOOD WIDTH	HOOD DEPTH	NO. OF VERTICAL SASHES	HORIZONTAL SASHES NO.	HORIZONTAL SASHES NO. OF TRACKS	FACE VELOCITY (FPM)	DESIGN EXHAUST @ 80 fpm (CFM)	VAV MIN EXHAUST (CFM)	EXHAUST MAXIMUM STATIC PRESSURE	CUPSINK TYPE & LOC.	FIXTURES LEFT SIDE L1	L2	L3	L4	FIXTURES RIGHT SIDE R1	R2	R3	R4	ELECTRICAL LEFT CONV. OUTLET	ELECTRICAL RIGHT CONV. OUTLET	REMARKS
CFH72HV	GROUND	B023	1.10.2	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	SG3-h	Yes	Yes	BENCHTOP; (2) 220v,20a 1ph @ FRONT
CFH48HV	GROUND	B016	1.11.5	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH48HV	GROUND	A024	1.14.1b	48"	3'-0"	1	1	1	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	GROUND	A028	1.30.6	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	GROUND	A025	1.30.8	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	PCWS-h	PCWR-h	SG1-h	SG2-h	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH72HV-30	GROUND	A016	1.31.3	72"	2'-6"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	PCWS-h	PCWR-h	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP - NARROW DEPTH
CFH72HV-30	GROUND	A016	1.31.3	72"	2'-6"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	PCWS-h	PCWR-h	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP - NARROW DEPTH
CFH72HV	GROUND	A012	1.32.3a	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH48HV	GROUND	B018	1.50.4	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH72HV-D	FIRST	B129	1.10.1B	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	DEEP BENCHTOP, (2)-220v;30a;1ph
CFH72HV-D	FIRST	B129	1.10.1B	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	DEEP BENCHTOP, (2)-220v;30a;1ph
CFH72HV-D	FIRST	B129	1.10.1B	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	DEEP BENCHTOP, (2)-220v;30a;1ph
CFH72HV-D	FIRST	B129	1.10.1B	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	DEEP BENCHTOP, (2)-220v;30a;1ph
CFH72HV-D	FIRST	B129	1.10.1B	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	DEEP BENCHTOP, (2)-220v;30a;1ph
CFH72HV-D	FIRST	B129	1.10.1B	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	DEEP BENCHTOP, (2)-220v;30a;1ph
CFH72HV-D	FIRST	C128	1.10.3	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CW-h	PCWR-h	PCWS-h	CDA-h	Yes	Yes	DEEP BENCHTOP, (4)-220v,20A (4)-110v
FMFH96-D	FIRST	C128	1.10.3	96"	4'-0"	2	4	2	80	1560	624	0.30	NA	SG3-h	SG2-h	SG1-h	-	PCWR-h	PCWS-h	CDA-h	UN2-h	Yes	Yes	DEEP FLOOR MOUNTED, (4)-220v;20a EA SIDE, (2)-110v DUP. EA SIDE
FMFH144-FE	FIRST	C128	1.10.3	144"	4'-0"	2	6	2	100	2000	338	0.20	NA	SG3-h	SG2-h	SG1-h	-	PCWR-h	PCWS-h	CDA-h	UN2-h	Yes	Yes	DEEP FLOOR MOUNTED CUSTOM FURNACE ENCLOSURE, (6)-220v;30a;1ph; CONSTANT VOLUME (DESIGN AND MECHANICAL REQUIREMENTS TO BE DEFINED FURTHER WITH CONTRACTOR)
FMFH168-D	FIRST	C128	1.10.3	162"	7'-0"	2	6	2	100	2000	338	0.20	NA	SG3-h	SG2-h	SG1-h	-	UN2-h	CDA-h	-	-	Yes	Yes	DEEP FLOOR MOUNTED DOUBLE-SIDED CUSTOM FURNACE ENCLOSURE, (9)-208v; 30a;1ph, (3)-240v;50a,1ph, (5)-110V DUP. EA. SIDE CONSTANT VOLUME (DESIGN AND MECHANICAL REQUIREMENTS TO BE DEFINED FURTHER WITH CONTRACTOR)
FMFH72-D	FIRST	A129	1.10.4	72"	4'-0"	2	4	2	80	1120	448	0.20	NA	SG3-h	SG2-h	SG1-h	-	UN2-h	CDA-h	PCWR-h	PCWS-h	Yes	Yes	DEEP FLOOR MOUNTED
CFH48HV	FIRST	A110	1.11.2	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	FIRST	A113	1.11.3	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	FIRST	A113	1.11.3	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
VFH9636	FIRST	A113	1.11.3	96"	3'-0"					1925		0.57												96"L x 36"D CANOPY HOOD
CFH72HV-D	FIRST	B127	1.14.1/1.10.1A	72"	4'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CW-h	PCWR-h	PCWS-h	CDA-h	Yes	Yes	DEEP BENCHTOP, (4)-220v,20A (4)-110v
CFH72HV-HEPA	FIRST	B127	1.14.1/1.10.1A	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	SG1-h	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
CFH60HV	FIRST	B110	1.33.1	60"	3'-0"	1	2	2	80	490	196	0.07	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	B110	1.33.1	60"	3'-0"	1	2	2	80	490	196	0.07	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH72HV	FIRST	B110	1.33.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	PCWR-h	PCWS-h	UN2-h	Yes	Yes	BENCHTOP
CFH72HV	FIRST	B110	1.33.1	72"	3'-0"	1	4	2	80	600	240	0.11	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH72HV	FIRST	B110	1.33.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	PCWR-h	PCWS-h	UN2-h	Yes	Yes	BENCHTOP
CFH72HV	FIRST	B110	1.33.1	72"	3'-0"	1	4	2	80	600	240	0.11	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	-	Yes	Yes	BENCHTOP
FMFH96-D	FIRST	B110	1.33.1	96"	4'-0"	2	4	2	80	1560	624	0.30	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	CDA-h	Yes	Yes	DEEP FLOOR MOUNTED, (2)-208v;30;a;1 ph EA. SIDE, (4)-110V EA SIDE
FMFH96-D	FIRST	B110	1.33.1	96"	4'-0"	2	4	2	80	1560	624	0.30	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	CDA-h	Yes	Yes	DEEP FLOOR MOUNTED, (2)-208v;30;a;1 ph EA. SIDE, (4)-110V EA SIDE
FMFH144-FE	FIRST	B110	1.33.1	144"	5'-0"	2	6	2	100	2000	338	0.20	NA	-	-	-	-	PCWR-h	PCWS-h	CDA-h	UN2-h	Yes	Yes	DEEP FLOOR MOUNTED CUSTOM FURNACE ENCLOSURE / (4) 208V; 30A RECEPTS; (DESIGN AND MECHANICAL REQUIREMENTS TO BE DEFINED FURTHER WITH CONTRACTOR)
CFH48HV	FIRST	B117	1.33.2	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH48HV	FIRST	B117	1.33.2	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	A118	1.33.4	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	A118	1.33.4	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	A118	1.33.4	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	A118	1.33.4	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	A118	1.33.4	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	FIRST	A118	1.33.4	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
FMFH96	FIRST	A118	1.33.4	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
CFH48HV	SECOND	B228	1.11.1/1.11.4	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH72HV-HEPA	SECOND	B228	1.11.1/1.11.4	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
CFH72HV-HEPA	SECOND	B228	1.11.1/1.11.4	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
CFH72HV	SECOND	B227	1.11.7	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B227	1.11.7	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH96HV-HEPA	SECOND	A229	1.20.1a EAST	96"	3'-0"	2	4	2	80	850	340	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	-	-	-	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
FMFH96	SECOND	A229	1.20.1a EAST	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
CFH96HV-HEPA	SECOND	A227	1.20.1a WEST	96"	3'-0"	2	4	2	80	850	340	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	-	-	-	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
FMFH96	SECOND	A227	1.20.1a WEST	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
CFH96HV	SECOND	A231	1.20.1b	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	-	-	-	Yes	Yes	BENCHTOP
FMFH96	SECOND	A231	1.20.1b	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
FMFH96-FE	SECOND	A231	1.20.1b	96"	6'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	SG1-h	SG2-h	-	PCWR-h	PCWS-h	-	Yes	Yes	THREE-SIDED, DEEP FLOOR MOUNTED FURNACE ENCLOSURE, (1)208v;20a,1 ph; 8' CLEAR HEIGHT INSIDE OF HOOD.
CFH48HV	SECOND	B214	1.30.2/1.30.4	48"	3'-0"	1	2	2	80	400	120	0.07	CS-1 : Right Rear	CDA-h	SG1-h	SG2-h	-	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B212	1.30.3	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B212	1.30.3	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B216	1.30.5	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B216	1.30.5	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B216	1.30.5	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B216	1.30.5	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	SG2-h	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	A210	1.31.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP
CFH72HV	SECOND	A210	1.31.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP
CFH96HV	SECOND	A210	1.31.1	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP
CFH96HV	SECOND	A210	1.31.1	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP
FMFH96	SECOND	A210	1.31.1	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
FMFH96	SECOND	A210	1.31.1	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
CFH72HV	SECOND	A213	1.31.2	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	SG3-h	SG2-h	SG1-h	UN2-h	CDA-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP
CFH96HV	SECOND	A216	1.32.1	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	SG2-h	SG1-h	UN2-h	-	UN2-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP, (2) CIRCUITS @ 115V (1) CIRCUIT (PUMP CAB.)
CFH96HV	SECOND	A216	1.32.1	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	SG2-h	SG1-h	UN2-h	-	UN2-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP, (2) CIRCUITS @ 115V (1) CIRCUIT (PUMP CAB.)
CFH96HV	SECOND	A216	1.32.1	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	SG2-h	SG1-h	UN2-h	-	UN2-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP, (2) CIRCUITS @ 115V (1) CIRCUIT (PUMP CAB.)
CFH96HV	SECOND	A216	1.32.1	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	SG2-h	SG1-h	UN2-h	-	UN2-h	CW-h	PCWR-h	PCWS-h	Yes	Yes	BENCHTOP, (2) CIRCUITS @ 115V (1) CIRCUIT (PUMP CAB.)
CFH48HV	SECOND	B218	1.40.1	48"	3'-0"	1	2	2	80	380	152	0.07	NA	CDA-h	UN2-h	-	-	PCWR-h	PCWS-h	-	-	Yes	Yes	BENCHTOP
CFH48HV	SECOND	B218	1.40.1	48"	3'-0"	1	2	2	80	380	152	0.07	NA	CDA-h	UN2-h	-	-	PCWR-h	PCWS-h	-	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B218	1.40.1	72"	3'-0"	1	4	2	80	600	240	0.11	NA	UN2-h	CDA-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	SECOND	B218	1.40.1	72"	3'-0"	1	4	2	80	600	240	0.11	NA	UN2-h	CDA-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH48HV-HEPA	SECOND	B229	1.50.1	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	HEPA AT HOOD EXHAUST
CFH72HV	THIRD	A310	1.12.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A310	1.12.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV-HEPA	THIRD	A310	1.12.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
CFH72HV-HEPA	THIRD	A310	1.12.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	-	-	-	-	CW-h	CDA-h	UN2-h	-	Yes	Yes	BENCHTOP / HEPA AT HOOD EXHAUST
FMFH96-D	THIRD	A310	1.12.1	96"	4'-0"	2	4	2	80	1560	624	0.30	NA	SG2-h	SG1-h	-	-	PCWR-h	PCWS-h	CDA-h	UN2-h	Yes	Yes	DOUBLE SIDED, DEEP FLOOR MOUNTED W/ VAC PUMP
CFH60HV	THIRD	B329	1.13.1	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	THIRD	B329	1.13.1	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	THIRD	B329	1.13.1	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH60HV	THIRD	B329	1.13.1	60"	3'-0"	1	4	2	80	490	196	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
VFH3030	THIRD	B329	1.13.1	34"	2'-6"					1050		0.17												30"L x 30"D CANOPY HOOD
CFH72HV	THIRD	B332	1.13.4	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP W/ STAINLESS STEEL TOP AND LINER (450W U.V.)
CFH96HV	THIRD	B332	1.13.4	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A316	1.14.1a	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	-	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A316	1.14.1a	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	-	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A313	1.14.1c	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	CDA-h	UN2-h	SG1-h	-	CW-h	PCWS-h	PCWR-h	-	Yes	Yes	BENCHTOP
CFH96HV	THIRD	A319	1.22.1a	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	-	-	-	Yes	Yes	BENCHTOP
FMFH96	THIRD	A319	1.22.1a	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	-	-	-	PCWR-h	PCWS-h	-	Yes	Yes	FLOOR MOUNTED
CFH96HV	THIRD	B318	1.22.1b	96"	3'-0"	1	4	2	80	850	340	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	-	-	-	Yes	Yes	BENCHTOP
CFH48HV	THIRD	B310	1.33.5	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH48HV	THIRD	B313	1.33.6	48"	3'-0"	1	2	2	80	380	152	0.07	NA	-	-	-	-	PCWR-h	PCWS-h	UN2-h	-	Yes	Yes	BENCHTOP
CFH48HV	THIRD	B313	1.33.6	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	-	-	-	-	CW-h	PCWR-h	PCWS-h	UN2-h	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A330	1.41.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A330	1.41.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A330	1.41.1	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH48HV	THIRD	A327	1.41.3	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH48HV	THIRD	A327	1.41.3	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH48HV	THIRD	A327	1.41.3	48"	3'-0"	1	2	2	80	380	152	0.07	CS-1 : Right Rear	CDA-h	UN2-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
CFH72HV	THIRD	A327	1.41.3	72"	3'-0"	1	4	2	80	600	240	0.11	CS-1 : Right Rear	UN2-h	CDA-h	-	-	CW-h	PCWR-h	PCWS-h	-	Yes	Yes	BENCHTOP
FMFH96	THIRD	B328	1.50.2b	96"	3'-0"	2	4	2	80	1560	624	0.30	NA	CDA-h	UN2-h	-	-	PCWR-h	PCWS-h	-	-	Yes	Yes	FMFH96

LABORATORY FIXTURE & FITTINGS SCHEDULE

Mark	Service	Mounting	Gas/Air/ Liquid	Fixture Type
CDA-1	Compressed Dry Air	Deck	air	SINGLE VALVE BENCH MOUNTED
CDA-2	Compressed Dry Air	Deck	air	180° DOUBLE VALVE BENCH MOUNTED
CDA-5	Compressed Dry Air	Panel	air	WALL MOUNTED SINGLE VALVE
CDA-6	Compressed Dry Air	Panel	air	WALL MOUNTED 90 DEGREE WYE VALVE
CDA-h	Compressed Dry Air	Hood	air	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
CDA-s	Compressed Dry Air	Service Carrier	Air	OVERHEAD SERVICE CARRIER MOUNTED DUAL 90 DEG. WYE VALVES
CW-1	Industrial Cold Water	Deck	liquid	BENCH MOUNTED COLD WATER FAUCET
CW-h	Industrial Cold Water	Hood	liquid	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
EW-2	Eye Wash, Tempered Water	Deck	liquid	BENCH MOUNTED SWING ACTIVATED EYE WASH FIXTURE
HCW-4	Hot/Cold Mixed Water	Deck	liquid	BENCH MOUNTED HOT & COLD WATER MIXING FAUCET
HCW-9	Hot/Cold Mixed Water Pre-Rinse Unit	Deck	liquid	BENCH MOUNTED PRE-RINSE FAUCET
PCWR-1	Process Cooling Water Return	Deck	liquid	BENCH MOUNTED PROCESS COOLING RETURN VALVE
PCWR-5	Process Cooling Water Return	Panel	liquid	WALL MOUNTED PROCESS COOLING RETURN VALVE
PCWR-h	Process Cooling Water Return	Hood	liquid	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
PCWR-s	Process Cold Water Return	Service Carrier	liquid	OVERHEAD SERVICE CARRIER MOUNTED PROCESS COOLING RETURN VALVE
PCWS-1	Process Cooling Water Supply	Deck	liquid	BENCH MOUNTED PROCESS COOLING SUPPLY VALVE
PCWS-5	Process Cooling Water Supply	Panel	liquid	WALL MOUNTED PROCESS COOLING SUPPLY VALVE
PCWS-h	Process Cooling Water Supply	Hood	liquid	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
PCWS-s	Process Cold Water Supply	Service Carrier	liquid	OVERHEAD SERVICE CARRIER MOUNTED PROCESS COOLING SUPPLY VALVE
RO-1	Purified Water Faucet	Deck	liquid	BENCH MOUNTED RO FAUCET
RO-2	Purified Water Valve	Deck	liquid	BENCH MOUNTED RO VALVE
SG1-1	Specialty Gas 1	Deck	gas	SINGLE VALVE BENCH MOUNTED (OFOI)
SG1-2	Specialty Gas 1	Deck	gas	180° DOUBLE VALVE BENCH MOUNTED (OFOI)
SG1-5	Specialty Gas 1	Panel	gas	WALL MOUNTED SINGLE VALVE (OFOI)
SG1-6	Specialty Gas 1	Panel	gas	WALL MOUNTED 90 DEGREE WYE VALVE (OFOI)
SG1-h	Specialty Gas 1	Hood	gas	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
SG2-1	Specialty Gas 2	Deck	gas	SINGLE VALVE BENCH MOUNTED (OFOI)
SG2-2	Specialty Gas 2	Deck	gas	180° DOUBLE VALVE BENCH MOUNTED (OFOI)
SG2-5	Specialty Gas 2	Panel	gas	WALL MOUNTED SINGLE VALVE (OFOI)
SG2-6	Specialty Gas 2	Panel	gas	WALL MOUNTED 90 DEGREE WYE VALVE (OFOI)
SG2-h	Specialty Gas 2	Hood	gas	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
SG3-1	Specialty Gas 3	Deck	gas	SINGLE VALVE BENCH MOUNTED (OFOI)
SG3-2	Specialty Gas 3	Deck	gas	180° DOUBLE VALVE BENCH MOUNTED (OFOI)
SG3-5	Specialty Gas 3	Panel	gas	WALL MOUNTED SINGLE VALVE (OFOI)
SG3-6	Specialty Gas 3	Panel	gas	WALL MOUNTED 90 DEGREE WYE VALVE (OFOI)
SG3-h	Specialty Gas 3	Hood	gas	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
SG4-1	Specialty Gas 4	Deck	gas	SINGLE VALVE BENCH MOUNTED (OFOI)
SG4-5	Specialty Gas 4	Panel	gas	WALL MOUNTED SINGLE VALVE (OFOI)
SG4-s	Specialty Gas 4	Service Carrier	Gas	WYE VALVE PANEL MOUNTED
UN2-1	Nitrogen	Deck	gas	SINGLE VALVE BENCH MOUNTED
UN2-2	Nitrogen	Deck	gas	180° DOUBLE VALVE BENCH MOUNTED
UN2-5	Nitrogen	Panel	gas	WALL MOUNTED SINGLE VALVE
UN2-6	Nitrogen	Panel	gas	WALL MOUNTED 90 DEGREE WYE VALVE
UN2-h	Nitrogen	Hood	gas	REMOTE CONTROL PANEL MOUNTED FUME HOOD FIXTURE
UN2-s	Nitrogen	Service Carrier	Gas	OVERHEAD SERVICE CARRIER MOUNTED DUAL 90 DEG. WYE VALVES

LABORATORY SINK SCHEDULE

Level	Mark	Description	Bowl Dim L (Left-Right)	Bowl Dim W (Front-Back)	Bowl Dim D (Depth)	Fixtures Types Left	Fixtures Types Center/ End	Fixtures Types Right	Type Comments
GROUND									
GROUND	CS-1	Fume Hood Cupsink	6"	3"	8"	-	-	-	Drop-In Fume Hood Bench Mounted
GROUND	ES-3	Epoxy Lab Sink	1'-6"	1'-2"	10 1/2"	-	HCW-4	EW-2	Undermount Lab Sink
GROUND	ES-22	Epoxy Lab Sink	2'-4"	1'-3"	1'-0"	RO-1	HCW-4	EW-2	Undermount Lab Sink
FIRST									
FIRST	CS-1	Fume Hood Cupsink	6"	3"	8"	-	-	-	Drop-In Fume Hood Bench Mounted
FIRST	CS-1	Bench Cupsink	6"	3"	8"	-	CW-1	-	Drop-In Bench Mounted Epoxy
FIRST	ES-22	Epoxy Lab Sink	2'-4"	1'-3"	1'-0"	RO-1	HCW-4	EW-2	Undermount Lab Sink
FIRST	ES-25	Epoxy Lab Sink	2'-4"	1'-3"	1'-6"	RO-1	HCW-9	EW-2	Undermount Lab Sink
SECOND									
SECOND	CS-1	Fume Hood Cupsink	6"	3"	8"	-	-	-	Drop-In Fume Hood Bench Mounted
SECOND	CS-1	Bench Cupsink	6"	3"	8"	-	CW-1	-	Drop-In Bench Mounted Epoxy
SECOND	ES-22	Epoxy Lab Sink	2'-4"	1'-3"	1'-0"	RO-1	HCW-4	EW-2	Undermount Lab Sink
THIRD									
THIRD	CS-1	Fume Hood Cupsink	6"	3"	8"	-	-	-	Drop-In Fume Hood Bench Mounted
THIRD	CS-1	Bench Cupsink	6"	3"	8"	-	CW-1	-	Drop-In Bench Mounted Epoxy
THIRD	SS-1	Stainless Lab Sink	1'-0"	1'-0"	9"	-	CW-1	-	Undermount Lab Sink
THIRD	ES-3	Epoxy Lab Sink	1'-6"	1'-2"	10 1/2"	-	HCW-4	EW-2	Undermount Lab Sink
THIRD	ES-22	Epoxy Lab Sink	2'-4"	1'-3"	1'-0"	RO-1	HCW-4	EW-2	Undermount Lab Sink

CONTROLLED ENVIRONMENT ROOM SCHEDULE

Room Number	Interior Width	Interior Depth	Interior Height	Temp. Range	Heat Load (Watts/SF)	Ventilation (CFM/SF)	Comments
A333A	8'-8"	10'-0"	7'-8"	37°C ±1°	7	0.25	On Standby Power
A333	8'-8"	10'-0"	7'-8"	4°C ±1°	7	0.25	On Standby Power

HDR

HDR Architecture, Inc.

8550 West Bryn Mawr Ave | Suite 900 | Chicago, IL 60631| 773.380.7900

QL-602

REV. NO.	DESCRIPTION	BY	APVD	DATE
2	FOR CONSTRUCTION			06/30/11
	ISSUED FOR PROPOSAL			03/07/11

Argonne NATIONAL LABORATORY

FMS

Facilities Management & Services

PROJECT TITLE

ENERGY SCIENCES BUILDING

PROJECT NO. 002182-98502-ESB

DOCUMENT TITLE

LABORATORY EQUIPMENT SCHEDULES

DESIGNED CURT FINFROCK

DRAWN TVRDY/BALLARD/LINK

CHECKED GREG SLONIGER

PROJECT MANAGER JAMES LYMAN

A/E CADD FILE

A/E DWG. NO. QL-602

CADD NO: XXX

DWG. STATE I

BIND ORDER XXX

FACILITY NO(S) 241

FACILITY DOCUMENT NUMBER J241-101- QL-602

REV. NO.

C:\RVT\002182-Q-Central_miballar.rvt
6/29/2011 3:20:52 PM